MLR.R

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```
emp_churn <- read.csv("C:/Users/Amisha Sancheti/Desktop/MITA</pre>
sem2/Multivariate Analysis/Project/attritiondata.csv", header=TRUE,
stringsAsFactors=FALSE)
str(emp churn)
## 'data.frame':
                   1470 obs. of 35 variables:
## $ i..Age
                             : int 41 49 37 33 27 32 59 30 38 36 ...
                             : chr "Yes" "No" "Yes" "No" ...
## $ Attrition
                             : chr "Travel_Rarely" "Travel_Frequently"
## $ BusinessTravel
"Travel Rarely" "Travel_Frequently" ...
                             : int 1102 279 1373 1392 591 1005 1324 1358
## $ DailyRate
216 1299 ...
                             : chr "Sales" "Research & Development"
## $ Department
"Research & Development" "Research & Development" ...
                            : int 1 8 2 3 2 2 3 24 23 27 ...
## $ DistanceFromHome
## $ Education
                             : int 2 1 2 4 1 2 3 1 3 3 ...
## $ EducationField
                             : chr "Life Sciences" "Life Sciences" "Other"
"Life Sciences" ...
## $ EmployeeCount
                             : int 111111111...
                            : int 1 2 4 5 7 8 10 11 12 13 ...
## $ EmployeeNumber
## $ EnvironmentSatisfaction : int 2 3 4 4 1 4 3 4 4 3 ...
                             : chr "Female" "Male" "Female" ...
## $ Gender
## $ HourlyRate
                             : int 94 61 92 56 40 79 81 67 44 94 ...
## $ JobInvolvement
                             : int 3 2 2 3 3 3 4 3 2 3 ...
## $ JobLevel
                             : int 2 2 1 1 1 1 1 1 3 2 ...
## $ JobRole
                             : chr "Sales Executive" "Research Scientist"
"Laboratory Technician" "Research Scientist" ...
## $ JobSatisfaction
                            : int 4 2 3 3 2 4 1 3 3 3 ...
## $ MaritalStatus
                            : chr "Single" "Married" "Single" "Married"
## $ MonthlyIncome
                           : int 5993 5130 2090 2909 3468 3068 2670 2693
9526 5237 ...
                             : int 19479 24907 2396 23159 16632 11864 9964
## $ MonthlyRate
13335 8787 16577 ...
## $ NumCompaniesWorked
                             : int 8 1 6 1 9 0 4 1 0 6 ...
                                   "Y" "Y" "Y" "Y" ...
## $ Over18
                             : chr
## $ OverTime
                                   "Yes" "No" "Yes" "Yes" ...
                             : chr
## $ PercentSalarvHike
                             : int 11 23 15 11 12 13 20 22 21 13 ...
                            : int 3 4 3 3 3 3 4 4 4 3 ...
## $ PerformanceRating
## $ RelationshipSatisfaction: int 1 4 2 3 4 3 1 2 2 2 ...
## $ StandardHours : int 80 80 80 80 80 80 80 80 80 ...
```

```
## $ StockOptionLevel : int 0 1 0 0 1 0 3 1 0 2 ...
## $ TotalWorkingYears
                             : int 8 10 7 8 6 8 12 1 10 17 ...
## $ TrainingTimesLastYear : int 0 3 3 3 3 2 3 2 2 3 ...
## $ WorkLifeBalance
                                   1 3 3 3 3 2 2 3 3 2 ...
                             : int
## $ YearsAtCompany
                             : int 6 10 0 8 2 7 1 1 9 7 ...
## $ YearsInCurrentRole
                             : int 4707270077...
## $ YearsSinceLastPromotion : int 0 1 0 3 2 3 0 0 1 7 ...
## $ YearsWithCurrManager : int 5 7 0 0 2 6 0 0 8 7 ...
library(data.table)
setDT(emp churn)
class(emp churn)
## [1] "data.table" "data.frame"
library(dplyr)
##
## Attaching package: 'dplyr'
## The following objects are masked from 'package:data.table':
##
##
      between, first, last
## The following objects are masked from 'package:stats':
##
##
      filter, lag
## The following objects are masked from 'package:base':
##
##
      intersect, setdiff, setequal, union
library(ggplot2)
library(ggpubr)
## Loading required package: magrittr
library(car)
## Warning: package 'car' was built under R version 3.6.3
## Loading required package: carData
##
## Attaching package: 'car'
## The following object is masked from 'package:dplyr':
##
##
      recode
emp_churn
```

##		ïAge	Attrition	Busine	essTrave	el DailyRa	ate			Department	
##	1:	41	Yes	Trave	el_Rare	ly 1:	102			Sales	;
##	2:	49	No	Travel_Fr	requent	ly 2	279	Research	&	Development	:
##	3:	37	Yes		el_Rare		373	Research	&	Development	:
##	4:	33	No	Travel_Fr	requent	ly 13	392	Research	&	Development	:
##	5:	27	No	Trave	el_Rare	ly !	591	Research	&	Development	;
##											
##	1466:	36	No	Travel_Fr		•	884	Research	&	Development	:
##	1467:	39	No		el_Rare	•	613	Research	&	Development	;
##	1468:	27	No	Trave	el_Rare	ly :	155	Research	&	Development	-
##	1469:	49	No	Travel_Fr	requent	ly 10	ð23			Sales	;
##	1470:	34	No	Trave	el_Rare	ly (628	Research	&	Development	:
##		Distand	ceFromHome	Education	n Educat	tionField	Emp	loyeeCour	١t		
Emp	loyee	Number									
##	1:		1	2	2 Life	Sciences			1		
1											
##	2:		8	1	Life	Sciences			1		
2											
##	3:		2	2	<u>)</u>	Other			1		
4											
##	4:		3	4	l Life	Sciences			1		
5											
##	5:		2	1	1	Medical			1		
7											
##											
	1466:		23	2)	Medical			1		
206				_	_				_		
	1467:		6	1	L	Medical			1		
206				_	_				_		
	1468:		4	3	3 Life	Sciences			1		
206			·	_		5020005			_		
	1469:		2	3	3	Medical			1		
206			_	_					_		
	1470:		8	3	3	Medical			1		
206				_					_		
##	. •	Enviror	nmentSatisf	Faction Ge	ender Ho	ourlyRate	Joh	Involveme	n-	t JobLevel	
##	1:	2			emale	94	500	2		3 2	
##	2:			3	Male	61				2 2	
##	3:			4	Male	92				2 1	
##	4:				emale	56				3 1	
##	5:			1	Male	40				3 1	
##					·IGIC	70					
	1466:			3	Male	41			,	4 2	
	1467:			4	Male	42				2 3	
	1468:			2	Male	87				4 2	
	1469:			4	Male	63				2 2	
	1470:			2	Male	82				2 4 2	
##	14/0.					isfaction	Man	i+a1C+a+ı		-	
	nthlyIn	1COMP		JODKOTE	JUUSAL.	LSTACLIUII	nai	ıcaıstatl	15		
##	1:	TCOME	Sales	Executive		4		Singl	ء ا		
π#	Ι.		Sates [rvecutive		4		2TIIR	rc		

599	12						
##	2:	Research Scientist			2	Married	
513		Research Sciencisc			2	Married	
##	3:	Laboratory Technician			3	Single	
209		Laboratory recilifician			3	Stilgte	
##	4:	Research Scientist			3	Married	
290		Research Sciencisc			3	Married	
##	5:	Laboratory Technician			2	Married	
346		Laboratory recimizeran			2	nai i ieu	
##							
	1466:	Laboratory Technician			4	Married	
257		Laboratory recimiteran			7	nai i ica	
		Healthcare Representative			1	Married	
999		neareneare Representative			-	nai i ica	
	1468:	Manufacturing Director		2	Married		
614		rianaracear ing bir eccor			_	mai Titeu	
	1469:	Sales Executive			2	Married	
539		Jules Excedeive			-	nan red	
	1470:	Laboratory Technician			3	Married	
440					-		
##		MonthlyRate NumCompaniesWor	rked	0ver18	OverTime	PercentSalarvHike	
##	1:	19479	8	Υ	Yes	11	
##	2:	24907	1	Υ	No	23	
##	3:	2396	6	Υ	Yes	15	
##	4:	23159	1	Υ	Yes		
##	5:	16632	9	Υ	No	12	
##							
##	1466:	12290	4	Υ	No	17	
##	1467:	21457	4	Υ	No	15	
##	1468:	5174	1	Υ	Yes	20	
##	1469:	13243	2	Υ	No	14	
##	1470:	10228	2	Υ	No	12	
##		PerformanceRating Relations	shipS	Satisfac	ction Sta	ndardHours	
Sto	ck0pt	ionLevel					
	1:	3			1	80	
0							
##	2:	4			4	80	
1							
##	3:	3			2	80	
0							
##	4:	3			3	80	
0	_	_				20	
##	5:	3			4	80	
1							
##	1466	2			2	00	
	1466:	3			3	80	
1	1467	3			1	00	
	1467:	3			1	80	
1	1460	4			2	00	
##	1468:	4			2	80	

```
1
## 1469:
                          3
                                                     4
                                                                   80
0
## 1470:
                          3
                                                     1
                                                                   80
0
##
         TotalWorkingYears TrainingTimesLastYear WorkLifeBalance
YearsAtCompany
##
      1:
                          8
                                                  0
6
##
                         10
                                                  3
                                                                   3
      2:
10
##
                          7
                                                  3
      3:
                                                                   3
0
##
      4:
                          8
                                                  3
                                                                   3
8
                                                  3
                                                                   3
##
      5:
                          6
2
##
## 1466:
                         17
                                                  3
                                                                   3
5
                          9
                                                  5
                                                                   3
## 1467:
7
## 1468:
                          6
                                                  0
                                                                   3
6
                                                  3
                                                                   2
## 1469:
                         17
9
## 1470:
                          6
                                                  3
                                                                   4
4
##
         YearsInCurrentRole YearsSinceLastPromotion YearsWithCurrManager
##
      1:
                                                                            7
                           7
##
      2:
                                                     1
##
      3:
                           0
                                                     0
                                                                            0
                           7
                                                     3
                                                                            0
##
      4:
                           2
                                                     2
                                                                            2
      5:
##
##
## 1466:
                           2
                                                     0
                                                                            3
                           7
                                                                            7
## 1467:
                                                     1
## 1468:
                           2
                                                     0
                                                                            3
                                                                            8
## 1469:
                           6
                                                     0
## 1470:
                           3
                                                     1
                                                                            2
emp_churn[,1:35][emp_churn[,1:35] == "Yes"] = 1
emp_churn[,1:35][emp_churn[,1:35] == "No"] = 0
emp_churn$Gender[emp_churn$Gender=="Male"]=1;
emp_churn$Gender[emp_churn$Gender=="Female"]=0;
emp_churn$MaritalStatus[emp_churn$MaritalStatus=="Single"]=0;
emp_churn$MaritalStatus[emp_churn$MaritalStatus=="Married"]=1;
emp_churn$MaritalStatus[emp_churn$MaritalStatus=="Divorced"]=2;
```

```
x=lm(Attrition~i..Age+BusinessTravel+DailyRate+DistanceFromHome+EnvironmentSa
tisfaction+MaritalStatus+HourlyRate+JobInvolvement+JobLevel+JobSatisfaction+M
aritalStatus+MonthlyIncome+OverTime+PercentSalaryHike+StandardHours+TotalWork
ingYears+WorkLifeBalance+YearsAtCompany+YearsInCurrentRole+YearsSinceLastProm
otion+YearsWithCurrManager, data=emp churn)
##
## Call:
   lm(formula = Attrition ~ ï..Age + BusinessTravel + DailyRate +
       DistanceFromHome + EnvironmentSatisfaction + MaritalStatus +
##
##
       HourlyRate + JobInvolvement + JobLevel + JobSatisfaction +
##
       MaritalStatus + MonthlyIncome + OverTime + PercentSalaryHike +
##
       StandardHours + TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
##
       YearsInCurrentRole + YearsSinceLastPromotion + YearsWithCurrManager,
##
       data = emp churn)
##
## Coefficients:
##
                        (Intercept)
                                                               ï..Age
##
                          8.341e-01
                                                           -3.162e-03
                                         BusinessTravelTravel Rarely
  BusinessTravelTravel Frequently
                                                            6.512e-02
##
                          1.514e-01
##
                          DailyRate
                                                     DistanceFromHome
##
                         -2.791e-05
                                                            3.460e-03
##
           EnvironmentSatisfaction
                                                       MaritalStatus1
##
                         -4.029e-02
                                                           -1.102e-01
##
                    MaritalStatus2
                                                           HourlyRate
##
                         -1.349e-01
                                                           -2.170e-04
##
                    JobInvolvement
                                                             JobLevel
                         -6.229e-02
                                                           -2.387e-02
##
##
                   JobSatisfaction
                                                        MonthlyIncome
##
                         -4.033e-02
                                                           -3.525e-07
##
                          OverTime1
                                                    PercentSalaryHike
##
                          2.024e-01
                                                           -1.674e-03
                      StandardHours
##
                                                    TotalWorkingYears
##
                                 NΔ
                                                           -1.479e-03
##
                   WorkLifeBalance
                                                       YearsAtCompany
##
                         -2.903e-02
                                                            2.603e-03
##
                YearsInCurrentRole
                                              YearsSinceLastPromotion
##
                         -9.064e-03
                                                            1.187e-02
##
              YearsWithCurrManager
                         -1.092e-02
##
summary(x)
##
## Call:
```

```
## lm(formula = Attrition ~ ï..Age + BusinessTravel + DailyRate +
##
       DistanceFromHome + EnvironmentSatisfaction + MaritalStatus +
##
       HourlyRate + JobInvolvement + JobLevel + JobSatisfaction +
##
      MaritalStatus + MonthlyIncome + OverTime + PercentSalaryHike +
       StandardHours + TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
##
      YearsInCurrentRole + YearsSinceLastPromotion + YearsWithCurrManager,
##
##
       data = emp churn)
##
## Residuals:
##
       Min
                  10
                      Median
                                   30
                                           Max
## -0.56216 -0.20840 -0.09171 0.05753
                                       1.11567
##
## Coefficients: (1 not defined because of singularities)
                                     Estimate Std. Error t value Pr(>|t|)
##
## (Intercept)
                                    8.341e-01 9.065e-02
                                                          9.201 < 2e-16 ***
## ï..Age
                                   -3.162e-03 1.326e-03 -2.384 0.01726 *
## BusinessTravelTravel_Frequently 1.514e-01 3.360e-02
                                                         4.505 7.18e-06 ***
## BusinessTravelTravel Rarely
                                   6.512e-02 2.904e-02 2.243 0.02507 *
## DailyRate
                                   -2.791e-05 2.154e-05 -1.295
                                                                 0.19538
## DistanceFromHome
                                   3.460e-03 1.068e-03
                                                          3.239
                                                                 0.00123 **
## EnvironmentSatisfaction
                                   -4.029e-02 7.927e-03 -5.083 4.20e-07 ***
## MaritalStatus1
                                   -1.102e-01 2.014e-02 -5.474 5.17e-08 ***
## MaritalStatus2
                                   -1.349e-01 2.399e-02 -5.622 2.26e-08 ***
## HourlyRate
                                   -2.170e-04 4.271e-04
                                                         -0.508 0.61150
## JobInvolvement
                                  -6.229e-02 1.220e-02 -5.107 3.71e-07 ***
## JobLevel
                                  -2.387e-02
                                              2.604e-02 -0.917
                                                                 0.35937
                                  -4.033e-02 7.858e-03 -5.132 3.25e-07 ***
## JobSatisfaction
## MonthlyIncome
                                  -3.525e-07
                                              6.016e-06 -0.059 0.95329
                                                         10.522
                                                                 < 2e-16 ***
## OverTime1
                                   2.024e-01
                                              1.924e-02
## PercentSalaryHike
                                  -1.674e-03
                                              2.365e-03 -0.708
                                                                 0.47918
## StandardHours
                                          NA
                                                     NA
                                                             NA
                                                                      NA
                                  -1.479e-03 2.358e-03
                                                         -0.627
                                                                 0.53049
## TotalWorkingYears
## WorkLifeBalance
                                  -2.903e-02 1.227e-02
                                                         -2.365
                                                                 0.01815 *
## YearsAtCompany
                                   2.603e-03 2.931e-03
                                                          0.888
                                                                 0.37455
## YearsInCurrentRole
                                   -9.064e-03
                                              3.914e-03 -2.316
                                                                 0.02070 *
## YearsSinceLastPromotion
                                                          3.435
                                                                 0.00061 ***
                                   1.187e-02 3.455e-03
## YearsWithCurrManager
                                  -1.092e-02 4.019e-03 -2.718
                                                                 0.00666 **
## ---
                  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
## Signif. codes:
## Residual standard error: 0.33 on 1448 degrees of freedom
## Multiple R-squared: 0.207, Adjusted R-squared:
                  18 on 21 and 1448 DF, p-value: < 2.2e-16
## F-statistic:
coefficients(x)
##
                       (Intercept)
                                                            ï..Age
##
                     8.340952e-01
                                                     -3.162131e-03
## BusinessTravelTravel Frequently
                                       BusinessTravelTravel Rarely
                      1.513585e-01
                                                     6.511584e-02
```

```
##
                          DailyRate
                                                    DistanceFromHome
##
                      -2.790598e-05
                                                        3.460081e-03
##
           EnvironmentSatisfaction
                                                      MaritalStatus1
                      -4.029278e-02
##
                                                       -1.102275e-01
##
                     MaritalStatus2
                                                          HourlyRate
##
                      -1.348629e-01
                                                       -2.169636e-04
##
                     JobInvolvement
                                                             JobLevel
                                                       -2.387418e-02
##
                      -6.228668e-02
##
                   JobSatisfaction
                                                       MonthlyIncome
##
                      -4.032920e-02
                                                       -3.524515e-07
                                                   PercentSalaryHike
##
                          OverTime1
                       2.024277e-01
##
                                                       -1.673733e-03
##
                      StandardHours
                                                   TotalWorkingYears
##
                                 NA
                                                       -1.479393e-03
                   WorkLifeBalance
##
                                                      YearsAtCompany
##
                      -2.902711e-02
                                                        2.603135e-03
##
                YearsInCurrentRole
                                             YearsSinceLastPromotion
##
                      -9.064494e-03
                                                        1.186648e-02
##
              YearsWithCurrManager
##
                      -1.092202e-02
confint(x,level=0.95)
                                             2.5 %
##
                                                          97.5 %
## (Intercept)
                                     6.562756e-01
                                                    1.011915e+00
## i..Age
                                     -5.764031e-03 -5.602314e-04
## BusinessTravelTravel Frequently
                                     8.544889e-02
                                                    2.172681e-01
## BusinessTravelTravel Rarely
                                     8.158859e-03
                                                    1.220728e-01
## DailyRate
                                     -7.016314e-05
                                                    1.435117e-05
## DistanceFromHome
                                                   5.555650e-03
                                     1.364512e-03
## EnvironmentSatisfaction
                                     -5.584194e-02 -2.474362e-02
## MaritalStatus1
                                     -1.497255e-01 -7.072952e-02
                                    -1.819177e-01 -8.780814e-02
## MaritalStatus2
## HourlyRate
                                    -1.054670e-03 6.207427e-04
## JobInvolvement
                                    -8.621223e-02 -3.836112e-02
## JobLevel
                                    -7.495230e-02 2.720393e-02
## JobSatisfaction
                                    -5.574372e-02 -2.491468e-02
## MonthlyIncome
                                    -1.215266e-05
                                                    1.144776e-05
## OverTime1
                                     1.646890e-01
                                                    2.401664e-01
                                    -6.312332e-03
                                                    2.964866e-03
## PercentSalaryHike
## StandardHours
                                                NA
                                                               NA
## TotalWorkingYears
                                    -6.104789e-03
                                                    3.146003e-03
## WorkLifeBalance
                                    -5.309978e-02 -4.954450e-03
## YearsAtCompany
                                    -3.145522e-03
                                                    8.351792e-03
## YearsInCurrentRole
                                    -1.674191e-02 -1.387078e-03
## YearsSinceLastPromotion
                                     5.089351e-03 1.864361e-02
## YearsWithCurrManager
                                    -1.880587e-02 -3.038171e-03
# Predicted Values
fitted(x)
```

```
1
                 2 3 4
##
                                                                         5
                  0.1088964172
                               0.3793985321 0.3144159878
##
    0.3111588999
                                                              0.2253711977
                            7
##
                                     8
                                                         9
              6
    0.1448865005
                  0.2188562052
                               0.0834714682
                                               0.1950318406
                                                             0.0900237044
##
                           12
##
              11
                                          13
                                                        14
                                                                        15
                  0.3597485848
##
    0.1243176550
                                 0.2735026265
                                               0.0784328548
                                                              0.5315178089
                            17
                                           18
##
              16
                                                                        20
                                 0.1600552155 -0.0577612664
##
    0.0820002774
                  0.3154608474
                                                              0.2990033452
                            22
              21
                                           23
    0.0380092819
                  0.2665637077
                                 0.1647833301
                                               0.2490906171
                                                              0.2963090395
##
##
              26
                            27
                                           28
                                 0.0809190839 -0.0192496627
                                                              0.1783704651
##
   -0.2253646186
                  0.7505317121
                            32
##
                                           33
                                                         34
                                                                        35
              31
##
    0.1429540363
                  0.0980954566
                                 0.2094957527 -0.0770425620
                                                              0.3648419845
              36
                            37
                                           38
                                                         39
##
                                                                        40
   -0.1049756472
                  0.3429867784
                                -0.0174171019
                                               0.4278622276
                                                              0.1046317662
##
##
              41
                           42
                                           43
                                                         44
                                                                        45
    0.0386338614
                  0.1233518167
                                 0.5190283006
                                               0.1090965683
                                                              0.1176655981
##
              46
                            47
                                           48
                                                         49
                                                                        50
##
    0.0083114529
                  0.1842653551
                                 0.2059972158
                                               0.3051387087 -0.0611066104
##
                                                         54
              51
                            52
                                           53
                                                                        55
    0.4149493599
                  0.4319158526
##
                                0.2716626670
                                               0.3227872667
                                                             0.3721552098
##
              56
                            57
                                           58
                                                         59
                                                                        60
    0.3331763637
                  0.1722428014
                                 0.4194457516 -0.1168185335
                                                              0.0127686609
##
                                           63
##
              61
                            62
##
    0.2456011314
                  0.2656716557
                                 0.3327768550
                                               0.1723394650
                                                             -0.0342622153
##
              66
                                           68
                                                         69
                            67
##
    0.0699245895
                  0.3396764819
                                 0.0633647890
                                               0.2924128606
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  0.4982294928 -0.0286319386 -0.0286419273 0.2409071712 0.4396260477
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##
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##
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## -0.1243176550 -0.3597485848 -0.2735026265 -0.0784328548 0.4684821911
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## -0.0820002774 -0.3154608474 -0.1600552155 0.0577612664 -0.2990033452
          21 22 23 24
```

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## -0.0380092819 0.7334362923 -0.1647833301 -0.2490906171 0.7036909605
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 -0.1429540363 -0.0980954566 -0.2094957527 1.0770425620 0.6351580155
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                                    74
## -0.2765315573 -0.0360459575 -0.2308134822 -0.0247452104 -0.0523367516
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## -0.0242730611 -0.1517311781 -0.2238663285 -0.1757717258 -0.2201337034
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##
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## -0.2071632692 -0.3535933482 -0.2681475675 -0.4337673123 -0.1388419689
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## -0.0313016956 -0.1496215495 0.0167208440 0.0519242562 -0.0579210680
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  0.7360501604 -0.1527822331 -0.2993736255 -0.3093774242 -0.0425972004
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## -0.1188073914 -0.2306715809 -0.1438254400 -0.1199240848 -0.3175230235
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## -0.0977595793 -0.0810039955 -0.1760364155 -0.1163975666 -0.2758180389
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## -0.0496371741 -0.0341415474 -0.0203630529 -0.1196207861 -0.1649792687
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## -0.4102747752 0.5105865409 -0.3021116422 -0.0095840280 -0.1950038379
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## -0.2505801702 -0.2477791341 0.5243387513 -0.0921901964 0.0423499517
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## -0.0209703795 0.1098725501 0.2078037404 -0.0339113213 -0.0076599592
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## -0.3324987041 -0.3396345849 0.0390533551 0.0262382184 0.0143902490
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## -0.3151268087 0.0307800798 -0.3096346735 -0.1619965052 0.5758278107
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## -0.1506259101 0.2207854318 -0.0680654637 0.2355972539 0.7231085231
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## -0.1136854084 -0.1158401697 -0.0611451878 -0.1882844240 -0.0855292824
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## -0.1509508120 -0.3148121774 0.1026378604 -0.0178701131 0.5858717898
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## -0.2060142314 0.0821373486 -0.2402045019 -0.2995359354 0.6423888508
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## -0.2242217165 -0.1817295036 -0.0106205817 -0.0784945454 0.0972270793
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## -0.1298468089 0.6651234941 0.0078252577 0.0380357866 -0.2144979813
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## -0.1192052398 -0.0926033215 -0.3611609774 -0.1410344221 0.0437188665
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##
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## -0.4098426635 -0.2428756244 -0.1952453457 0.6227753637 -0.4002812616
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## -0.1265633489 -0.1640519184 0.7847981688 -0.3247208131 0.1335796573
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## -0.1119317073 -0.2115163498 -0.1755205356 -0.1197350513 0.0800169447
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## -0.3277094737 0.5145173951 -0.2899097304 -0.0185721196 -0.0414362426
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## -0.1194743766 -0.3851421661 -0.2291558590 -0.1926496780 0.0394012798
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## -0.2510100829 -0.0593967490 -0.1924733132 -0.1838994307 -0.2100228851
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## -0.0300989940 -0.1948816839 0.3180322695 -0.0109935569 -0.0489342573
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   0.5359160863 -0.0663434080 0.0279732285 -0.1354341108 -0.4214808316
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## -0.0528764175 -0.1110091511 -0.0706018548 0.0441034699 -0.1174034898
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## -0.1032406277 -0.1739497990 -0.4172453946 -0.2547272557 -0.2061997136
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## -0.3512428963 -0.1229273497 -0.0283898678 -0.1858067483 0.1122566652
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## -0.2074838618 -0.2164198589 -0.1650084125 -0.1164128323 0.5391861482
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## -0.2186845506 -0.2473982831 -0.2666388757 0.0039246045 -0.2411107553
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## -0.2918711212 -0.1906152094 -0.0598230784 -0.2018660223 -0.2498969812
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## -0.2826650098 -0.1734711631 -0.0644891008 -0.0423226506 0.6484561246
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## -0.0572345264 -0.3546154702 -0.3075958693 0.5686265956 0.3802659308
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## -0.0875404402 -0.1557289684 -0.0120876318 -0.0580491088 -0.1612799546
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## -0.0614140041 -0.2237739439 0.6968676382 -0.1235255239 -0.2315003538
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## -0.2031359502 -0.0536890023 0.1235348044 -0.3535420932 -0.2359284560
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## -0.0809421665 -0.0114273816 0.0454321339 -0.1871800336 -0.2887796817
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## -0.1947157980 0.0899261602 0.7162620442 -0.1926026950 -0.2731836768
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## -0.3647329527 -0.3117233832 1.1156721956 0.8989134341 -0.1087195463
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## -0.1355347750 -0.0149250368 -0.3269101359 -0.0564687694 0.6518167107
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## -0.0153711739 0.0477288683 -0.1600198383 -0.3367105138 0.0159310470
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## -0.4083240174 -0.1034532109 -0.0847952593 -0.1878973566 -0.1932219412
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## -0.1709556116 -0.0108123956 -0.0288963952 -0.0925406175 -0.1076556041
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## -0.1566662966 -0.2269702300 -0.2107440105 -0.0920956333 -0.1796775542
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## -0.0639319839 -0.1514738862 -0.3653566506 -0.0975354648 0.0634245470
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## -0.1324781168 -0.1703386324 -0.1809546420 -0.2191622991 -0.2700649486
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## -0.3288555492 -0.0112271457 -0.4258893165 0.7798296920 0.4855238195
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## -0.4590061726 -0.0406933530 -0.2261421337 -0.1268139715 0.6633974119
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## -0.1419740512 -0.1972281534 -0.0054481853 -0.2223740324 0.0940643842
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## -0.0516294703 -0.2044274226 0.0887047621 0.1319920148 0.0262833018
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## -0.1522559525 -0.1815810963 -0.5227344197 -0.1424856679 -0.4714365747
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## -0.0129612610 -0.0868571111 -0.0532207906 0.0127311155 -0.3063258935
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## -0.1322639252 -0.2168485311 -0.2442813956 0.5113333752 -0.2623225392
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## -0.3521006850 -0.1282945146 -0.1573520281 -0.2443843665 -0.3403342218
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## -0.0824248540 0.1835446768 0.6304162994 -0.0511417928 -0.2132094459
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## -0.1856895616 -0.2878379229 0.0263593186 -0.2980583407 -0.2360352244
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## -0.2765364775 0.8056427894 -0.1290263283 -0.2732603491 -0.1389830547
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                                    1128
                                                 1129
## -0.0815041516 -0.1381656894 -0.0271051543 -0.3970915269 -0.0067396465
          1131
                      1132
                                    1133
                                                 1134
## -0.0715843779 -0.2238520577 -0.0988736840 0.0027575069 -0.1216451682
          1136
                       1137
                                    1138
                                                 1139
## -0.0195573804 0.5709279329 -0.4484630749 -0.3039858820 -0.0071442778
                       1142
          1141
                                    1143
                                                1144
## -0.0346003137 -0.2840443983 -0.4696453888 -0.2248406333 -0.2631778468
  1146 1147 1148 1149 1150
```

```
## -0.2819919634 -0.0749672079 -0.1500338300 -0.1253960303 -0.1049292726
                      1152
##
          1151
                                  1153
                                              1154
##
  0.0331579043 -0.3956581239 -0.1871161406 0.4784078502 0.0577553892
                      1157
                                  1158
                                              1159
          1156
  0.0364967009 -0.1217059832 0.1213368875 -0.0836049220 -0.3288328166
##
          1161
                      1162
                                  1163
                                               1164
  0.1515538167 -0.1664978025 0.8623785116 -0.2086988742 -0.3416376714
          1166
                      1167
                                  1168
                                               1169
## -0.2934429488 -0.0261810694 0.5425286629 -0.5322853886 -0.0681364609
                      1172
                                  1173
##
          1171
                                               1174
1176
                      1177
                                  1178
                                              1179
## -0.0568666082 -0.1055483960 0.0826827574 -0.2178661477 0.0395439392
          1181
                     1182
                                  1183
                                              1184
## -0.2864512639 -0.0372393800 0.0130407926 0.0927960187 0.0894179206
                                  1188
         1186
               1187
##
   0.0644631904 0.7060624479 0.1627036462 -0.3937680406 0.0888235475
##
                                  1193
          1191
                      1192
                                              1194
   0.0154797860 -0.1084428410 -0.3040252602 -0.3240647026 0.1069638581
##
##
          1196
                      1197
                                  1198
                                               1199
## -0.0005310306 -0.2958580827 -0.2786915381 -0.1324129699 -0.1838334717
                                  1203
                                             1204
          1201
                      1202
## -0.1726884722 0.5785445372 -0.0277985632 0.0652702719 0.7511184314
                      1207
                                  1208
##
          1206
                                              1209
   0.8098992203 -0.0102861297 -0.1986049858 0.0693614765 0.0472340456
          1211
                     1212
                                  1213
                                               1214
## 0.0217146106 -0.1762379218 -0.1702849493 0.7676905819 -0.0268478965
                      1217
##
          1216
                                  1218
                                              1219
## -0.5076368836 -0.0754361013 -0.0190061175 -0.0632475051 -0.0419529333
          1221
                      1222
                                  1223
                                              1224
## -0.1048730708 -0.0053914180 0.7033034536 0.7077170061 -0.1943061996
                     1227
                                  1228
                                              1229
         1226
## -0.2406696624 -0.2863196904 -0.0623995220 -0.1118273466 -0.3666419245
                     1232
                                  1233
                                              1234
## -0.2626781604 -0.0589029132 0.0570187194 -0.1122686033 -0.0594866678
                      1237
                                  1238
                                              1239
          1236
## -0.0737219727 0.6024818242 0.5931364187 -0.3358390449 -0.2405622275
                      1242
                                  1243
##
          1241
                                               1244
## -0.0056138661 -0.2021671178 -0.2109557262 -0.0799310957 -0.2471429207
                                  1248
          1246
                      1247
                                              1249
## -0.2679399607 0.7821023575 -0.1156567211 -0.1837477436 0.5557859049
          1251
                      1252
                                  1253
                                              1254
## -0.3071646404 -0.0806886658 -0.1518284297 -0.0073610139 0.0181202145
                                               1259
##
          1256
                     1257
                                  1258
   0.4192189101 -0.2354259977 0.8426492181 -0.1918711598 -0.0127380867
                      1262
##
          1261
                                  1263
                                              1264
## -0.0866243046 -0.4217003395 0.5415678496 -0.1007820299 -0.0289054736
                      1267
                                        1269
          1266
                                  1268
   0.1230551372 \ -0.0715870831 \ \ 0.0436900138 \ -0.1811427171 \ \ -0.0492544448
   1271 1272 1273 1274 1275
```

```
## -0.2191518852 0.6278753323 -0.0369981195 0.5909234704 -0.2111467662
         1276
                    1277
                                1278
                                           1279
## -0.0372057765 -0.1858764275 -0.0495268435 -0.2017081347 0.6394289631
         1281
                    1282
                               1283
                                          1284
## -0.0726866241 0.6239577930 -0.0244185659 0.0293541423 -0.1058897254
##
         1286
                    1287
                                1288
                                           1289
## -0.2651650826 -0.1221285753 -0.1263285351 0.1780411460 0.0474453572
         1291
                    1292
                               1293
                                           1294
  1296
                    1297
                                1298
                                           1299
##
## -0.1652781713 -0.1805171483 0.6578065408 1.0380403801 0.1026092977
##
         1301
                    1302
                               1303
                                           1304
##
  0.0576958190 0.1239645661 -0.2365242091 -0.2486078572 -0.1503844072
         1306
                    1307
                               1308
                                          1309
   0.1031459319 -0.2805129931 -0.1285384211 -0.3258465131 -0.1668073112
##
                   1312
                               1313
                                          1314
## -0.2885672164 -0.3098769283 0.8675425800 0.4390491299 0.1482447163
                               1318
        1316
                    1317
                                           1319
## -0.2342738393 -0.0787835615 -0.4026013253 -0.0218212071 -0.1624270535
         1321
                    1322
                               1323
                                           1324
## -0.0354612397 -0.2423084992 0.1729913399 0.0219296439 -0.1708557079
                    1327
         1326
                              1328
                                           1329
1332
                               1333
##
         1331
                                           1334
  0.0675679620 0.0141482106 0.4064543411 1.0953723573 -0.3542955230
         1336
                    1337
                               1338
                                           1339
  ##
         1341
                    1342
                               1343
                                          1344
## -0.2435127317 -0.0812594156 -0.1739857478 -0.2423632962 -0.2168011329
                    1347
                               1348
                                          1349
         1346
## -0.3610277404 -0.0857195145 -0.2302930583 -0.0231714515 -0.4618015134
                    1352
                               1353
        1351
                                          1354
## -0.1128360509 0.1186297752 -0.0921728807 0.5622450928 0.7786621464
                   1357
                               1358
                                          1359
## -0.2394848989 -0.0301978711 0.0156533458 -0.1811949676 -0.2497382554
                               1363
                                          1364
         1361
                    1362
## -0.1227732386 -0.0461768891 -0.1973916312 -0.1711558424 -0.2654803580
         1366
                    1367
                                1368
##
                                           1369
   0.6028113831 -0.2040426374 -0.1815862129 -0.3141521362 0.6288198723
##
         1371
                    1372
                               1373
                                           1374
   0.1380110552 -0.0919313365 -0.2037649208 -0.2266004877 -0.1169080380
##
         1376
                    1377
                                1378
                                           1379
   1383
##
         1381
                    1382
                                           1384
  -0.2261218877 -0.1712666782 -0.2428075661 -0.0178018983 -0.1613155170
                    1387
##
         1386
                               1388
                                           1389
##
   0.0280804656 -0.3031665749 -0.2374755229 0.0451144634 -0.2605224817
               1392 1393
##
                                          1394
##
   0.8614033021 -0.3919812839 -0.0751604643 -0.0077094257 -0.1301544523
    1396 1397 1398 1399 1400
```

```
##
                         1402
           1401
                                       1403
                                                    1404
                                                                  1405
  -0.3196101139 -0.0534443786 -0.3138456835 -0.2624130405 -0.1003577340
##
                         1407
                                       1408
                                                    1409
##
           1406
                                                                  1410
   0.1154654068 -0.3778845050 -0.3091638947 -0.1187916247 -0.0909045795
##
##
           1411
                         1412
                                       1413
                                                    1414
                                                                  1415
  -0.0127405667 -0.1532334517 0.0016480742 -0.2257393556 -0.1401771592
##
##
           1416
                         1417
                                       1418
                                                    1419
                                                                  1420
  -0.1120924685
                 0.1039356059 -0.1346418123 -0.2905070556 -0.3085142198
##
##
           1421
                         1422
                                       1423
                                                    1424
                                                                  1425
                 0.1294879850 -0.2501345512 -0.1467317748 -0.0738832961
##
   0.0497787906
##
           1426
                         1427
                                       1428
                                                    1429
                                                                  1430
##
  -0.3464924332 -0.4456164272 -0.1205184899 -0.2334951146 -0.1614587326
##
           1431
                         1432
                                       1433
                                                    1434
   0.0070072037
                 0.0967790389 -0.0607678518 -0.2991583746 -0.0406510123
##
##
           1436
                         1437
                                       1438
                                                    1439
##
  -0.3316179434 -0.5218375707
                               ##
                                       1443
           1441
                         1442
                                                    1444
                                                                  1445
##
  -0.0670738391
                 0.2578636605
                               0.7056375919
                                            0.0461242415
                                                          0.9861413980
##
           1446
                         1447
                                       1448
                                                    1449
                                                                  1450
  -0.1039018860 -0.0399709847
                               0.0043765507 -0.0366185750 -0.2260382784
##
##
           1451
                         1452
                                       1453
                                                    1454
                                                                  1455
## -0.3300927552
                               0.9349201123 -0.1404654879 -0.1372329617
                 0.0101398273
##
           1456
                         1457
                                       1458
                                                    1459
                                                                  1460
                              0.0145924372 -0.1619828322 -0.3075050433
  -0.2067861190 -0.3316886044
##
           1461
                         1462
                                       1463
                                                    1464
                                                                  1465
  -0.3974245918
                 0.6408875759 -0.1535395602 -0.1581261000 -0.2312473107
##
##
           1466
                         1467
                                       1468
                                                    1469
                                                                  1470
## -0.0488467000 -0.0236654686 -0.2716603595 -0.0439633563 -0.0019872194
#Anova Table
anova(x)
## Analysis of Variance Table
##
## Response: Attrition
                                Sum Sq Mean Sq F value
                            Df
                                                          Pr(>F)
                                 5.039 5.0386 46.2810 1.495e-11 ***
## ï..Age
                             1
                                 3.150 1.5750 14.4672 6.011e-07 ***
## BusinessTravel
                             2
## DailyRate
                             1
                                 0.560 0.5598
                                                5.1418 0.0235033 *
                                 1.219 1.2189 11.1958 0.0008408 ***
## DistanceFromHome
                             1
## EnvironmentSatisfaction
                                 1.913 1.9135
                                               17.5757 2.928e-05 ***
                             1
                             2
                                 4.838 2.4192 22.2215 3.122e-10 ***
## MaritalStatus
                                 0.004 0.0040
## HourlyRate
                             1
                                                0.0366 0.8483270
## JobInvolvement
                             1
                                 2.961 2.9613
                                               27.2009 2.100e-07 ***
## JobLevel
                                 2.060 2.0600 18.9218 1.457e-05 ***
                             1
## JobSatisfaction
                             1
                                 2.491 2.4912
                                               22.8830 1.897e-06 ***
## MonthlyIncome
                             1
                                 0.026 0.0256
                                                0.2351 0.6278600
                                12.738 12.7377 116.9998 < 2.2e-16 ***
## OverTime
                             1
```

1

0.078 0.0783

0.7196 0.3964267

PercentSalaryHike

```
0.260 0.2598
                                                   2.3864 0.1226173
## TotalWorkingYears
## WorkLifeBalance
                              1
                                  0.682 0.6816
                                                   6.2606 0.0124551 *
## YearsAtCompany
                              1
                                  0.245 0.2448
                                                   2.2490 0.1339161
## YearsInCurrentRole
                              1
                                  0.849 0.8488
                                                   7.7965 0.0053035 **
                                  1.231 1.2310 11.3072 0.0007922 ***
## YearsSinceLastPromotion
                              1
## YearsWithCurrManager
                                  0.804
                                         0.8040
                                                   7.3850 0.0066553 **
## Residuals
                           1448 157.642
                                         0.1089
## ---
                   0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
## Signif. codes:
vcov(x)
##
                                      (Intercept)
                                                         ï..Age
## (Intercept)
                                    8.217447e-03 -4.587345e-05
## i..Age
                                    -4.587345e-05
                                                  1.759376e-06
## BusinessTravelTravel Frequently -7.832938e-04
                                                   1.210830e-06
## BusinessTravelTravel_Rarely
                                    -7.779041e-04
                                                   7.680367e-07
## DailyRate
                                    -3.236291e-07
                                                   5.822814e-10
## DistanceFromHome
                                    -8.923988e-06
                                                  2.003963e-08
## EnvironmentSatisfaction
                                   -1.768855e-04 -2.016756e-07
## MaritalStatus1
                                   -8.869642e-05 -2.346843e-06
## MaritalStatus2
                                   -1.627878e-04 -1.710370e-06
## HourlyRate
                                   -1.209702e-05 -1.677270e-08
## JobInvolvement
                                   -3.615797e-04 -6.877000e-07
## JobLevel
                                   -3.547658e-04 -1.014789e-06
## JobSatisfaction
                                   -1.859123e-04 -1.866018e-07
## MonthlyIncome
                                    5.503220e-08 4.198699e-10
## OverTime1
                                   -5.620376e-05 -4.932077e-07
## PercentSalaryHike
                                   -8.833011e-05 -6.574737e-08
## StandardHours
                                              NA
                                                             NA
## TotalWorkingYears
                                    4.694684e-05 -1.721348e-06
## WorkLifeBalance
                                   -4.347923e-04 3.967790e-07
## YearsAtCompany
                                   -1.610852e-05
                                                   3.942483e-07
## YearsInCurrentRole
                                    1.166849e-05 9.954890e-08
## YearsSinceLastPromotion
                                   -2.082766e-06 -1.209516e-07
## YearsWithCurrManager
                                   -2.079536e-05 2.149618e-07
                                   BusinessTravelTravel Frequently
##
## (Intercept)
                                                      -7.832938e-04
## ï..Age
                                                       1.210830e-06
## BusinessTravelTravel Frequently
                                                       1.128950e-03
## BusinessTravelTravel_Rarely
                                                       7.352349e-04
## DailyRate
                                                       1.165134e - 08
## DistanceFromHome
                                                       5.766290e-07
## EnvironmentSatisfaction
                                                       3.123618e-06
## MaritalStatus1
                                                       6.387327e-07
## MaritalStatus2
                                                       3.020544e-05
                                                      -1.149903e-08
## HourlyRate
## JobInvolvement
                                                      -1.639430e-05
## JobLevel
                                                       1.037559e-05
## JobSatisfaction
                                                      -1.037144e-07
```

```
## MonthlyIncome
                                                       5.731211e-10
## OverTime1
                                                      -2.932895e-05
## PercentSalaryHike
                                                       2.434235e-06
## StandardHours
                                                                  NA
## TotalWorkingYears
                                                      -3.436764e-06
## WorkLifeBalance
                                                      -1.266489e-06
## YearsAtCompany
                                                      -2.557210e-07
## YearsInCurrentRole
                                                       9.746342e-07
## YearsSinceLastPromotion
                                                       3.485045e-07
## YearsWithCurrManager
                                                       1.242096e-06
                                                                     DailyRate
##
                                    BusinessTravelTravel_Rarely
## (Intercept)
                                                  -7.779041e-04 -3.236291e-07
## i..Age
                                                   7.680367e-07
                                                                 5.822814e-10
## BusinessTravelTravel_Frequently
                                                   7.352349e-04 1.165134e-08
## BusinessTravelTravel_Rarely
                                                   8.430850e-04 9.414516e-09
## DailvRate
                                                   9.414516e-09 4.640641e-10
## DistanceFromHome
                                                   7.480913e-07
                                                                  2.184513e-10
## EnvironmentSatisfaction
                                                   2.314696e-07 -3.616916e-09
## MaritalStatus1
                                                  -1.292047e-05 -2.758185e-08
## MaritalStatus2
                                                   3.022079e-05 -3.214523e-08
## HourlyRate
                                                  -1.768757e-07 -2.062499e-10
## JobInvolvement
                                                  -1.619339e-05 -1.092100e-08
## JobLevel
                                                   2.551660e-05 7.213168e-09
## JobSatisfaction
                                                   5.032649e-06 -5.734762e-09
## MonthlyIncome
                                                  -4.946546e-09 -1.350323e-12
## OverTime1
                                                  -1.852194e-05 -2.513401e-09
                                                   2.462461e-06 -1.023290e-09
## PercentSalaryHike
                                                             NA
## StandardHours
                                                                            NΑ
## TotalWorkingYears
                                                  -3.196968e-06 -2.053824e-09
## WorkLifeBalance
                                                   2.542400e-06 1.039512e-08
## YearsAtCompany
                                                   7.144439e-07
                                                                  3.317002e-09
## YearsInCurrentRole
                                                  -6.489010e-07 -4.917253e-09
## YearsSinceLastPromotion
                                                   2.635400e-06 1.774525e-09
## YearsWithCurrManager
                                                   1.788793e-06 1.410178e-09
##
                                    DistanceFromHome EnvironmentSatisfaction
## (Intercept)
                                       -8.923988e-06
                                                                -1.768855e-04
## i..Age
                                        2.003963e-08
                                                                -2.016756e-07
## BusinessTravelTravel_Frequently
                                        5.766290e-07
                                                                 3.123618e-06
## BusinessTravelTravel_Rarely
                                        7.480913e-07
                                                                 2.314696e-07
## DailyRate
                                                                -3.616916e-09
                                        2.184513e-10
## DistanceFromHome
                                        1.141251e-06
                                                                 1.317086e-07
## EnvironmentSatisfaction
                                        1.317086e-07
                                                                 6.283349e-05
## MaritalStatus1
                                       -6.770980e-07
                                                                 2.832406e-06
## MaritalStatus2
                                       -2.419215e-07
                                                                -4.836457e-07
## HourlyRate
                                       -1.503358e-08
                                                                 1.646817e-07
## JobInvolvement
                                       -9.669465e-08
                                                                 7.018349e-07
## JobLevel
                                       -1.864018e-06
                                                                -4.278873e-06
## JobSatisfaction
                                        3.339314e-08
                                                                 7.802353e-07
## MonthlyIncome
                                        4.730435e-10
                                                                 1.087957e-09
## OverTime1
                                       -6.056618e-07
                                                                -1.086495e-05
```

	PercentSalaryHike	-1.026604e-0		940381e-07
	StandardHours	N		NA
	TotalWorkingYears	-3.147735e-0		274742e-07
	WorkLifeBalance	3.623714e-0		.670335e-06
	YearsAtCompany	2.123615e-0		786113e-07
	YearsInCurrentRole	-5.325585e-0		.424603e-07
##	YearsSinceLastPromotion	-1.620465e-0	8 -4.	.616829e-07
##	YearsWithCurrManager	4.191782e-0		.075633e-07
##		MaritalStatus1	MaritalStatus2	
Ηοι	urlyRate			
##	(Intercept)	-8.869642e-05	-1.627878e-04	-1.209702e-
05				
##	ïAge	-2.346843e-06	-1.710370e-06	-1.677270e-
80				
##	<pre>BusinessTravelTravel_Frequently</pre>	6.387327e-07	3.020544e-05	-1.149903e-
98				
##	BusinessTravelTravel_Rarely	-1.292047e-05	3.022079e-05	-1.768757e-
07	- ,			
##	DailyRate	-2.758185e-08	-3.214523e-08	-2.062499e-
10	,			
	DistanceFromHome	-6.770980e-07	-2.419215e-07	-1.503358e-
08				
	EnvironmentSatisfaction	2.832406e-06	-4.836457e-07	1.646817e-
07		210321000 00	110301376 07	2.0.00276
	MaritalStatus1	4.054413e-04	2.407750e-04	-2.647387e-
07	That I cais ca cas I	1.05111256 01	2.1077500 01	2.01/30/6
	MaritalStatus2	2.407750e-04	5.754201e-04	-9 7224700-
08	That I cais cacase	2.4077500 04	3.734201C 04	J. / ZZ-/ OC
	HourlyRate	-2.647387e-07	-9.722470e-08	1.823732e-
97	nour Lynace	-2.04/30/6-0/	-3.7224706-00	1.023/326-
	JobInvolvement	-8.272755e-06	-9.304247e-06	_1 8080650_
07	JOBINVOIVEMENTE	0.2727550 00	J.304247C 00	1.000000
_	JobLevel	4.906730e-06	-5.057602e-06	/ Q37135 ₀ _
97	Joblevei	4.5007506-00	-3.0370026-00	4.03/1336-
	JobSatisfaction	3.099200e-06	4.962067e-06	2 2256070
## 07	JODSACISTACCION	3.0992000-00	4.9620676-06	2.3330976-
	MonthlyIncome	-3.167241e-09	7 5605400 10	7 2555220
11	MonthlyIncome	-3.10/2416-09	-7.560540e-10	-7.3333238-
	OverTime1	1 100770 00	0 700103. 00	F 050570°
	overlimer	1.189778e-06	-8.708183e-06	5.058579e-
98	Donasant Callany Hills	4 077000 07	0 227665 07	1 2004000
	PercentSalaryHike	-4.077890e-07	9.327665e-07	1.288490e-
80	Ctandandllours	RI A	A.I.A.	
	StandardHours	NA	NA	
NA	Totallianis never	1 760050- 06	0 712060- 07	C 24C004=
	TotalWorkingYears	1.760958e-06	8.713968e-07	-6.2468046-
99	Hamlet & CaDallance	2 075027- 06	4 121240 - 26	4 207200-
	WorkLifeBalance	2.875027e-06	4.121349e-06	-1.20/2886-
98	Vacant At Campany	1 000053 - 00	0.206420- 07	1 207564-
	YearsAtCompany	1.800053e-08	-9.286138e-07	-1.29/564e-
80				

## 08	YearsInCurrentRole	-4.465508e-06	-3.069283e-06	1.747047e-
	YearsSinceLastPromotion	-9.816226e-07	1.530337e-06	2.487540e-
	YearsWithCurrManager	1.668243e-06	1.634790e-06	1.036277e-
##	oSatisfaction	JobInvolvement	JobLevel	
	(Intercept)	-3.615797e-04	-3.547658e-04	-1.859123e-
04 ##	ïAge	6 9770000 07	-1.014789e-06	-1.866018e-
77	1Age	-0.877000e-07	-1.0147896-00	-1.800018E-
## 07	BusinessTravelTravel_Frequently	-1.639430e-05	1.037559e-05	-1.037144e-
	BusinessTravelTravel_Rarely	-1.619339e-05	2.551660e-05	5.032649e-
	DailyRate	-1.092100e-08	7.213168e-09	-5.734762e-
##	DistanceFromHome	-9.669465e-08	-1.864018e-06	3.339314e-
	EnvironmentSatisfaction	7.018349e-07	-4.278873e-06	7.802353e-
	MaritalStatus1	-8.272755e-06	4.906730e-06	3.099200e-
06 ##	MaritalStatus2	-9.304247e-06	-5.057602e-06	4.962067e-
06 ##	HourlyRate	-1.898965e-07	4.837135e-07	2.335697e-
07	•			
## 06	JobInvolvement	1.487653e-04	-1.185577e-06	1.589518e-
##	JobLevel	-1.185577e-06	6.780274e-04	-4.195367e-
	JobSatisfaction	1.589518e-06	-4.195367e-06	6.175006e-
05 ##	MonthlyIncome	4.751016e-10	-1.370500e-07	5.616626e-
10 ##	OverTime1	6.883557e-07	9.614957e-06	-3.525717e-
06				
## 07	PercentSalaryHike	5.874303e-07	2.044729e-06	-3.357832e-
##	StandardHours	NA	NA	
NA ##	TotalWorkingYears	4.278776e-07	-8.861944e-06	6.094021e-
07 ##	WorkLifeBalance	1 6/05100-06	-1.156541e-05	2.039518e-
06	WOINCLITEDATAILCE			2.0333100-
## 07	YearsAtCompany	1.746125e-06	-8.546891e-07	-7.298850e-
	YearsInCurrentRole	-9.221737e-07	-2.508702e-06	-5.130289e-

<pre>## YearsSinceLastPromotion 07</pre>	8.608065e-07 1.511086e-06	5.806329e-
## YearsWithCurrManager 06	-2.950698e-06 -4.840760e-06	1.285825e-
##	MonthlyIncome OverTime1	
PercentSalaryHike ## (Intercept) 8.833011e-05	5.503220e-08 -5.620376e-05	-
## ïAge 6.574737e-08	4.198699e-10 -4.932077e-07	-
<pre>## BusinessTravelTravel_Frequently 2.434235e-06</pre>	5.731211e-10 -2.932895e-05	
<pre>## BusinessTravelTravel_Rarely 2.462461e-06</pre>	-4.946546e-09 -1.852194e-05	
## DailyRate 1.023290e-09	-1.350323e-12 -2.513401e-09	-
<pre>## DistanceFromHome 1.026604e-07</pre>	4.730435e-10 -6.056618e-07	-
## EnvironmentSatisfaction 5.940381e-07	1.087957e-09 -1.086495e-05	
## MaritalStatus1 4.077890e-07	-3.167241e-09 1.189778e-06	-
## MaritalStatus2 9.327665e-07	-7.560540e-10 -8.708183e-06	
## HourlyRate 1.288490e-08	-7.355523e-11 5.058579e-08	
## JobInvolvement 5.874303e-07	4.751016e-10 6.883557e-07	
## JobLevel	-1.370500e-07 9.614957e-06	
2.044729e-06 ## JobSatisfaction	5.616626e-10 -3.525717e-06	-
3.357832e-07 ## MonthlyIncome	3.618738e-11 -1.699460e-09	-
3.272641e-10 ## OverTime1	-1.699460e-09 3.701273e-04	
1.332188e-07 ## PercentSalaryHike	-3.272641e-10 1.332188e-07	
5.591793e-06 ## StandardHours	NA NA	
NA ## TotalWorkingYears	-2.194054e-09 -4.034777e-07	-
2.699628e-08 ## WorkLifeBalance	7.108992e-10 5.930020e-06	
4.808115e-09 ## YearsAtCompany	-4.574143e-10 -1.309809e-06	
2.895243e-07 ## YearsInCurrentRole	7.367261e-10 1.221700e-06	-
3.126255e-07 ## YearsSinceLastPromotion	-7.023626e-10 1.352270e-07	
6.474514e-08		

*** ***	4 060000 00	2 222274 24	
## YearsWithCurrManager	1.863922e-09	3.000276e-06	-
1.437782e-07 ##	Ctandandlloung	TotalWorkingVoons	
## WorkLifeBalance	Standarundurs	TotalWorkingYears	
	NA	4.694684e-05	
## (Intercept) 4.347923e-04	IVA	4.0940846-05	-
	NA	1 7212490 06	
## ïAge 3.967790e-07	IVA	-1.721348e-06	
## BusinessTravelTravel_Frequently	NA	-3.436764e-06	_
1.266489e-06	IVA	-3.4307046-80	_
## BusinessTravelTravel_Rarely	NA	-3.196968e-06	
2.542400e-06		312303000 00	
## DailyRate	NA	-2.053824e-09	
1.039512e-08		_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
## DistanceFromHome	NA	-3.147735e-08	
3.623714e-07			
## EnvironmentSatisfaction	NA	2.274742e-07	_
2.670335e-06			
## MaritalStatus1	NA	1.760958e-06	
2.875027e-06			
## MaritalStatus2	NA	8.713968e-07	
4.121349e-06			
## HourlyRate	NA	-6.246804e-09	_
1.207288e-08			
## JobInvolvement	NA	4.278776e-07	
1.649519e-06			
## JobLevel	NA	-8.861944e-06	-
1.156541e-05			
## JobSatisfaction	NA	6.094021e-07	
2.039518e-06			
## MonthlyIncome	NA	-2.194054e-09	
7.108992e-10			
## OverTime1	NA	-4.034777e-07	
5.930020e-06			
## PercentSalaryHike	NA	-2.699628e-08	
4.808115e-09			
## StandardHours	NA	NA	
NA	NI A	F FC0007- 0C	
## TotalWorkingYears	NA	5.560007e-06	
5.851571e-07 ## WorkLifeBalance	NA	5.851571e-07	
1.506003e-04	IVA	3.0313/1e-0/	
## YearsAtCompany	NA	-1.816779e-06	
6.878569e-07	IVA	-1.010//96-00	
## YearsInCurrentRole	NA	-6.156472e-09	_
3.450352e-06	IVA	-0.1304/26-03	
## YearsSinceLastPromotion	NA	9.082512e-08	
4.293284e-07	14/7	5.0025120 00	
## YearsWithCurrManager	NA	-3.057660e-07	
1.589336e-06	. 47 1	2.02.0000 07	

##			YearsInCurrentRol	e
##	(Intercept)	-1.610852e-05	1.166849e-0	5
##	ïAge	3.942483e-07	9.954890e-0	8
##	BusinessTravelTravel_Frequently	-2.557210e-07	9.746342e-0	7
##	BusinessTravelTravel_Rarely	7.144439e-07	-6.489010e-0	7
##	DailyRate	3.317002e-09	-4.917253e-0	9
##	DistanceFromHome	2.123615e-08	-5.325585e-0	8
##	EnvironmentSatisfaction	1.786113e-07	-8.424603e-0	7
##	MaritalStatus1	1.800053e-08	-4.465508e-0	6
##	MaritalStatus2	-9.286138e-07	-3.069283e-0	6
##	HourlyRate	-1.297564e-08	1.747047e-0	8
##	JobInvolvement	1.746125e-06	-9.221737e-0	7
##	JobLevel	-8.546891e-07	-2.508702e-0	6
##	JobSatisfaction	-7.298850e-07	-5.130289e-0	7
##	MonthlyIncome	-4.574143e-10	7.367261e-1	.0
	OverTime1	-1.309809e-06	1.221700e-0	6
##	PercentSalaryHike	2.895243e-07	-3.126255e-0	7
	StandardHours	NA		Α
	TotalWorkingYears	-1.816779e-06	-6.156472e-0	9
	WorkLifeBalance	6.878569e-07	-3.450352e-0	
	YearsAtCompany	8.588361e-06	-4.204054e-0	
	YearsInCurrentRole	-4.204054e-06	1.531820e-0	
	YearsSinceLastPromotion	-2.721619e-06	-1.927062e-0	
	YearsWithCurrManager	-5.124263e-06	-4.743655e-0	
##	rear switchear rhanager	YearsSinceLastF		.0
		icai ssincelasti	I OIIIO CIOTI	
Ve	arsWithCurrManager			
	arsWithCurrManager (Intercent)	-2 08	32766e-06 -	2 079536e-
##	arsWithCurrManager (Intercept)	-2.08	32766e-06 -	2.079536e-
## 05	(Intercept)			
## 05 ##	•			2.079536e- 2.149618e-
## 05 ## 07	(Intercept) ïAge	-1.20	99516e-07	2.149618e-
## 05 ## 07 ##	(Intercept)	-1.20	99516e-07	
## 05 ## 07 ## 06	<pre>(Intercept) ïAge BusinessTravelTravel_Frequently</pre>	-1.20 3.48	99516e-07 35045e-07	2.149618e- 1.242096e-
## 05 ## 07 ## 06 ##	(Intercept) ïAge	-1.20 3.48	99516e-07 85045e-07	2.149618e-
## 05 ## 07 ## 06 ## 06	<pre>(Intercept) ïAge BusinessTravelTravel_Frequently BusinessTravelTravel_Rarely</pre>	-1.26 3.48 2.63	09516e-07 095045e-07 085400e-06	2.149618e- 1.242096e- 1.788793e-
## 05 ## 07 ## 06 ##	<pre>(Intercept) ïAge BusinessTravelTravel_Frequently</pre>	-1.26 3.48 2.63	09516e-07 095045e-07 085400e-06	2.149618e- 1.242096e-
## 05 ## 07 ## 06 ## 06 ##	<pre>(Intercept) ïAge BusinessTravelTravel_Frequently BusinessTravelTravel_Rarely DailyRate</pre>	-1.26 3.48 2.63 1.77	09516e-07 85045e-07 85400e-06 74525e-09	2.149618e- 1.242096e- 1.788793e- 1.410178e-
## 05 ## 07 ## 06 ## 09 ##	<pre>(Intercept) ïAge BusinessTravelTravel_Frequently BusinessTravelTravel_Rarely</pre>	-1.26 3.48 2.63 1.77	09516e-07 85045e-07 85400e-06 74525e-09	2.149618e- 1.242096e- 1.788793e-
## 05 ## 07 ## 06 ## 09 ##	<pre>(Intercept) ïAge BusinessTravelTravel_Frequently BusinessTravelTravel_Rarely DailyRate DistanceFromHome</pre>	-1.26 3.48 2.63 1.77 -1.62	09516e-07 09516e-07 035045e-07 035400e-06 04525e-09 00465e-08	2.149618e- 1.242096e- 1.788793e- 1.410178e- 4.191782e-
## 05 ## 07 ## 06 ## 09 ## 09	<pre>(Intercept) ïAge BusinessTravelTravel_Frequently BusinessTravelTravel_Rarely DailyRate</pre>	-1.26 3.48 2.63 1.77 -1.62	09516e-07 09516e-07 035045e-07 035400e-06 04525e-09 00465e-08	2.149618e- 1.242096e- 1.788793e- 1.410178e-
## 05 ## 07 ## 06 ## 09 ## 09 ##	<pre>(Intercept) ïAge BusinessTravelTravel_Frequently BusinessTravelTravel_Rarely DailyRate DistanceFromHome EnvironmentSatisfaction</pre>	-1.26 3.48 2.63 1.77 -1.62	09516e-07 85045e-07 85400e-06 74525e-09 20465e-08 16829e-07	2.149618e- 1.242096e- 1.788793e- 1.410178e- 4.191782e- 5.075633e-
## 05 ## 07 ## 06 ## 09 ## 09 ## 07 ##	<pre>(Intercept) ïAge BusinessTravelTravel_Frequently BusinessTravelTravel_Rarely DailyRate DistanceFromHome</pre>	-1.26 3.48 2.63 1.77 -1.62	09516e-07 85045e-07 85400e-06 74525e-09 20465e-08 16829e-07	2.149618e- 1.242096e- 1.788793e- 1.410178e- 4.191782e-
## 05 ## 06 ## 06 ## 09 ## 07 ## 06	<pre>(Intercept) ïAge BusinessTravelTravel_Frequently BusinessTravelTravel_Rarely DailyRate DistanceFromHome EnvironmentSatisfaction MaritalStatus1</pre>	-1.26 3.48 2.63 1.77 -1.62 -4.63	09516e-07 09516e-07 09516e-07 09516e-07 09516e-08 09516e-08 09516e-08 09516e-09	2.149618e- 1.242096e- 1.788793e- 1.410178e- 4.191782e- 5.075633e- 1.668243e-
## 05 ## 07 ## 06 ## 09 ## 07 ## 06 ##	<pre>(Intercept) ïAge BusinessTravelTravel_Frequently BusinessTravelTravel_Rarely DailyRate DistanceFromHome EnvironmentSatisfaction</pre>	-1.26 3.48 2.63 1.77 -1.62 -4.63	09516e-07 09516e-07 09516e-07 09516e-07 09516e-08 09516e-08 09516e-08 09516e-09	2.149618e- 1.242096e- 1.788793e- 1.410178e- 4.191782e- 5.075633e-
## 05 ## 07 #6 ## 06 ## 09 ## 07 ## 06 ## 06 ## 09 ## 06 ## 09 ## 06 ## 07 ## 06 ## 09 ## 09 ## 09 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ## 06 ##	<pre>(Intercept) ïAge BusinessTravelTravel_Frequently BusinessTravelTravel_Rarely DailyRate DistanceFromHome EnvironmentSatisfaction MaritalStatus1 MaritalStatus2</pre>	-1.26 3.48 2.63 1.77 -1.62 -4.61 -9.81 1.53	09516e-07 09516e-07 09516e-07 09516e-08 09465e-08 16829e-07 16226e-07	2.149618e- 1.242096e- 1.788793e- 1.410178e- 4.191782e- 5.075633e- 1.668243e- 1.634790e-
## 05 #07 #06 #06 #09 #07 #06 #06 #06 #06 #06 #07	<pre>(Intercept) ïAge BusinessTravelTravel_Frequently BusinessTravelTravel_Rarely DailyRate DistanceFromHome EnvironmentSatisfaction MaritalStatus1</pre>	-1.26 3.48 2.63 1.77 -1.62 -4.61 -9.81 1.53	09516e-07 09516e-07 09516e-07 09516e-08 09465e-08 16829e-07 16226e-07	2.149618e- 1.242096e- 1.788793e- 1.410178e- 4.191782e- 5.075633e- 1.668243e-
## 05 ## 07 ## 06 ## 09 ## 06 ## 06 ## 06 ## 06 ## 08	<pre>(Intercept) ïAge BusinessTravelTravel_Frequently BusinessTravelTravel_Rarely DailyRate DistanceFromHome EnvironmentSatisfaction MaritalStatus1 MaritalStatus2 HourlyRate</pre>	-1.26 3.48 2.63 1.77 -1.62 -4.61 -9.81 1.53 2.48	09516e-07 09516e-07 09516e-07 09516e-08 074525e-09 00465e-08 06829e-07 06226e-07 09337e-06	2.149618e- 1.242096e- 1.788793e- 1.410178e- 4.191782e- 5.075633e- 1.668243e- 1.634790e- 1.036277e-
## 05 #07 #06 #06 #09 #07 #06 #06 #08 ##	<pre>(Intercept) ïAge BusinessTravelTravel_Frequently BusinessTravelTravel_Rarely DailyRate DistanceFromHome EnvironmentSatisfaction MaritalStatus1 MaritalStatus2</pre>	-1.26 3.48 2.63 1.77 -1.62 -4.61 -9.81 1.53 2.48	09516e-07 09516e-07 09516e-07 09516e-08 074525e-09 00465e-08 06829e-07 06226e-07 09337e-06	2.149618e- 1.242096e- 1.788793e- 1.410178e- 4.191782e- 5.075633e- 1.668243e- 1.634790e-
## 05 #07 #06 #09 #07 #06 #06 #06 #06 #06 #06 #06 #06	<pre>(Intercept) ïAge BusinessTravelTravel_Frequently BusinessTravelTravel_Rarely DailyRate DistanceFromHome EnvironmentSatisfaction MaritalStatus1 MaritalStatus2 HourlyRate JobInvolvement</pre>	-1.26 3.48 2.63 1.77 -1.62 -4.61 -9.81 1.53 2.48 8.66	09516e-07 85045e-07 85400e-06 74525e-09 20465e-08 16829e-07 16226e-07 80337e-06 87540e-08	2.149618e- 1.242096e- 1.788793e- 1.410178e- 4.191782e- 5.075633e- 1.668243e- 1.634790e- 1.036277e- 2.950698e-
## 05 #07 #06 #09 #07 #06 #06 #06 #06 #06 #06 #06 #06	<pre>(Intercept) ïAge BusinessTravelTravel_Frequently BusinessTravelTravel_Rarely DailyRate DistanceFromHome EnvironmentSatisfaction MaritalStatus1 MaritalStatus2 HourlyRate</pre>	-1.26 3.48 2.63 1.77 -1.62 -4.61 -9.81 1.53 2.48 8.66	09516e-07 85045e-07 85400e-06 74525e-09 20465e-08 16829e-07 16226e-07 80337e-06 87540e-08	2.149618e- 1.242096e- 1.788793e- 1.410178e- 4.191782e- 5.075633e- 1.668243e- 1.634790e- 1.036277e-

```
## JobSatisfaction
                                               5.806329e-07
                                                                    1.285825e-
06
## MonthlyIncome
                                              -7.023626e-10
                                                                    1.863922e-
09
## OverTime1
                                               1.352270e-07
                                                                    3.000276e-
06
## PercentSalaryHike
                                               6.474514e-08
                                                                   -1.437782e-
## StandardHours
                                                         NA
NA
                                               9.082512e-08
## TotalWorkingYears
                                                                   -3.057660e-
## WorkLifeBalance
                                              4.293284e-07
                                                                    1.589336e-
06
## YearsAtCompany
                                              -2.721619e-06
                                                                   -5.124263e-
## YearsInCurrentRole
                                              -1.927062e-06
                                                                   -4.743655e-
06
## YearsSinceLastPromotion
                                              1.193628e-05
                                                                   -3.744738e-
07
                                              -3.744738e-07
## YearsWithCurrManager
                                                                    1.615303e-
05
cov2cor(vcov(x))
## Warning in cov2cor(vcov(x)): diag(.) had 0 or NA entries; non-finite
result is
## doubtful
##
                                     (Intercept)
                                                      ï..Age
## (Intercept)
                                    1.000000000 -0.38151678
## ï..Age
                                    -0.381516783 1.00000000
## BusinessTravelTravel Frequently -0.257169187 0.02716855
## BusinessTravelTravel_Rarely
                                    -0.295543836 0.01994192
## DailyRate
                                    -0.165725796 0.02037814
## DistanceFromHome
                                    -0.092150963 0.01414229
## EnvironmentSatisfaction
                                    -0.246166086 -0.01918132
## MaritalStatus1
                                    -0.048592994 -0.08787002
## MaritalStatus2
                                    -0.074861886 -0.05375490
## HourlyRate
                                   -0.312485256 -0.02961032
## JobInvolvement
                                    -0.327027872 -0.04250782
## JobLevel
                                   -0.150296786 -0.02938143
## JobSatisfaction
                                   -0.260988250 -0.01790267
## MonthlyIncome
                                    0.100918273 0.05262072
## OverTime1
                                   -0.032227109 -0.01932747
## PercentSalaryHike
                                   -0.412064128 -0.02096156
## StandardHours
                                              NA
## TotalWorkingYears
                                    0.219634336 -0.55036612
## WorkLifeBalance
                                    -0.390841341 0.02437566
## YearsAtCompany
                                    -0.060636223 0.10142273
```

```
## YearsInCurrentRole
                                     0.032888371 0.01917579
## YearsSinceLastPromotion
                                    -0.006650244 -0.02639354
## YearsWithCurrManager
                                    -0.057078293 0.04032318
                                    BusinessTravelTravel Frequently
##
## (Intercept)
                                                      -0.2571691874
## i..Age
                                                       0.0271685518
## BusinessTravelTravel Frequently
                                                       1.0000000000
## BusinessTravelTravel Rarely
                                                       0.7536212222
## DailyRate
                                                       0.0160971748
## DistanceFromHome
                                                       0.0160645463
## EnvironmentSatisfaction
                                                       0.0117280276
## MaritalStatus1
                                                       0.0009440996
## MaritalStatus2
                                                       0.0374761759
## HourlyRate
                                                      -0.0008013890
## JobInvolvement
                                                      -0.0400041115
## JobLevel
                                                       0.0118591020
## JobSatisfaction
                                                      -0.0003928103
## MonthlyIncome
                                                       0.0028355054
## OverTime1
                                                      -0.0453715524
## PercentSalaryHike
                                                       0.0306372410
## StandardHours
                                                                 NA
                                                      -0.0433785127
## TotalWorkingYears
## WorkLifeBalance
                                                      -0.0030715051
## YearsAtCompany
                                                      -0.0025970119
## YearsInCurrentRole
                                                       0.0074114043
## YearsSinceLastPromotion
                                                       0.0030021790
                                                       0.0091979424
## YearsWithCurrManager
                                    BusinessTravelTravel_Rarely
##
                                                                    DailyRate
                                                   -0.295543836 -0.165725796
## (Intercept)
## i..Age
                                                    0.019941918 0.020378143
## BusinessTravelTravel_Frequently
                                                    0.753621222 0.016097175
## BusinessTravelTravel_Rarely
                                                    1.000000000 0.015051277
## DailyRate
                                                    0.015051277
                                                                 1.000000000
## DistanceFromHome
                                                    0.024117276 0.009492378
## EnvironmentSatisfaction
                                                    0.001005687 -0.021181361
## MaritalStatus1
                                                   -0.022099297 -0.063587295
                                                    0.043388796 -0.062206403
## MaritalStatus2
## HourlyRate
                                                   -0.014264353 -0.022419411
## JobInvolvement
                                                   -0.045724732 -0.041564520
## JobLevel
                                                    0.033749203 0.012859186
## JobSatisfaction
                                                    0.022056788 -0.033877221
## MonthlyIncome
                                                   -0.028319645 -0.010420056
## OverTime1
                                                   -0.033156996 -0.006064532
                                                    0.035863956 -0.020087888
## PercentSalaryHike
## StandardHours
                                                             NA
## TotalWorkingYears
                                                   -0.046694411 -0.040433063
## WorkLifeBalance
                                                    0.007135021 0.039321278
## YearsAtCompany
                                                    0.008396095 0.052541398
## YearsInCurrentRole
                                                   -0.005710037 -0.058321649
## YearsSinceLastPromotion
                                                    0.026270981 0.023842872
```

шш	Vacant little Communication		0.015330410 0.016307630
	YearsWithCurrManager		0.015328418
##	/T		EnvironmentSatisfaction
##	(Intercept)	-0.0921509625	-0.246166086
	iAge	0.0141422874	-0.019181320
	BusinessTravelTravel_Frequently	0.0160645463	0.011728028
	BusinessTravelTravel_Rarely	0.0241172759	0.001005687
	DailyRate	0.0094923781	-0.021181361
	DistanceFromHome	1.0000000000	0.015553494
	EnvironmentSatisfaction	0.0155534938	1.00000000
	MaritalStatus1	-0.0314772539	0.017745811
	MaritalStatus2	-0.0094404196	-0.002543544
	HourlyRate	-0.0329527229	0.048648470
	JobInvolvement	-0.0074209743	0.007259196
	JobLevel	-0.0670094287	-0.020730520
	JobSatisfaction	0.0039778456	0.012525968
	MonthlyIncome	0.0736091539	0.022815887
	OverTime1	-0.0294689005	-0.071245376
	PercentSalaryHike	-0.0406384012	0.031691527
##	StandardHours	NA	NA
	TotalWorkingYears	-0.0124959668	0.012170232
	WorkLifeBalance	0.0276407841	-0.027450942
##	YearsAtCompany	0.0067831281	0.007688793
	YearsInCurrentRole	-0.0127371659	-0.027155014
##	YearsSinceLastPromotion	-0.0043905045	-0.016858294
##	YearsWithCurrManager	0.0009762947	0.015931899
##		MaritalStatus1 Ma	
##	(Intercept)	-0.0485929943	-0.074861886 -0.312485256
	ïAge	-0.0878700245	-0.053754903 -0.029610321
	BusinessTravelTravel_Frequently	0.0009440996	0.037476176 -0.000801389
##	BusinessTravelTravel_Rarely	-0.0220992969	0.043388796 -0.014264353
##	DailyRate	-0.0635872952	-0.062206403 -0.022419411
	DistanceFromHome	-0.0314772539	-0.009440420 -0.032952723
##	EnvironmentSatisfaction	0.0177458112	-0.002543544 0.048648470
##	MaritalStatus1	1.0000000000	0.498488180 -0.030787393
##			
	MaritalStatus2	0.4984881796	1.000000000 -0.009490817
	MaritalStatus2 HourlyRate		
##		0.4984881796	1.000000000 -0.009490817
## ##	HourlyRate	0.4984881796 -0.0307873929	1.000000000 -0.009490817 -0.009490817 1.000000000
## ## ##	HourlyRate JobInvolvement	0.4984881796 -0.0307873929 -0.0336849034	1.000000000 -0.009490817 -0.009490817 1.000000000 -0.031800787 -0.036457393
## ## ## ##	HourlyRate JobInvolvement JobLevel	0.4984881796 -0.0307873929 -0.0336849034 0.0093584643	1.000000000 -0.009490817 -0.009490817 1.000000000 -0.031800787 -0.036457393 -0.008097082 0.043499483
## ## ## ##	HourlyRate JobInvolvement JobLevel JobSatisfaction	0.4984881796 -0.0307873929 -0.0336849034 0.0093584643 0.0195869543	1.000000000 -0.009490817 -0.009490817 1.000000000 -0.031800787 -0.036457393 -0.008097082 0.043499483 0.026323974 0.069601293
## ## ## ## ##	HourlyRate JobInvolvement JobLevel JobSatisfaction MonthlyIncome	0.4984881796 -0.0307873929 -0.0336849034 0.0093584643 0.0195869543 -0.0261480054	1.000000000 -0.009490817 -0.009490817 1.000000000 -0.031800787 -0.036457393 -0.008097082 0.043499483 0.026323974 0.069601293 -0.005239402 -0.028632183
## ## ## ## ##	HourlyRate JobInvolvement JobLevel JobSatisfaction MonthlyIncome OverTime1	0.4984881796 -0.0307873929 -0.0336849034 0.0093584643 0.0195869543 -0.0261480054 0.0030713290	1.000000000 -0.009490817 -0.009490817 1.000000000 -0.031800787 -0.036457393 -0.008097082 0.043499483 0.026323974 0.069601293 -0.005239402 -0.028632183 -0.018869459 0.006157047
## ## ## ## ## ##	HourlyRate JobInvolvement JobLevel JobSatisfaction MonthlyIncome OverTime1 PercentSalaryHike	0.4984881796 -0.0307873929 -0.0336849034 0.0093584643 0.0195869543 -0.0261480054 0.0030713290 -0.0085643806	1.000000000 -0.009490817 -0.009490817 1.000000000 -0.031800787 -0.036457393 -0.008097082 0.043499483 0.026323974 0.069601293 -0.005239402 -0.028632183 -0.018869459 0.006157047 0.016443903 0.012759250
## ## ## ## ## ##	HourlyRate JobInvolvement JobLevel JobSatisfaction MonthlyIncome OverTime1 PercentSalaryHike StandardHours	0.4984881796 -0.0307873929 -0.0336849034 0.0093584643 0.0195869543 -0.0261480054 0.0030713290 -0.0085643806 NA	1.000000000 -0.009490817 -0.009490817 1.000000000 -0.031800787 -0.036457393 -0.008097082 0.043499483 0.026323974 0.069601293 -0.005239402 -0.028632183 -0.018869459 0.006157047 0.016443903 0.012759250 NA NA
## ## ## ## ## ## ##	HourlyRate JobInvolvement JobLevel JobSatisfaction MonthlyIncome OverTime1 PercentSalaryHike StandardHours TotalWorkingYears	0.4984881796 -0.0307873929 -0.0336849034 0.0093584643 0.0195869543 -0.0261480054 0.0030713290 -0.0085643806 NA 0.0370891812	1.000000000 -0.009490817 -0.009490817 1.000000000 -0.031800787 -0.036457393 -0.008097082 0.043499483 0.026323974 0.069601293 -0.005239402 -0.028632183 -0.018869459 0.006157047 0.016443903 0.012759250 NA NA 0.015405853 -0.006203541
## ## ## ## ## ## ##	HourlyRate JobInvolvement JobLevel JobSatisfaction MonthlyIncome OverTime1 PercentSalaryHike StandardHours TotalWorkingYears WorkLifeBalance	0.4984881796 -0.0307873929 -0.0336849034 0.0093584643 0.0195869543 -0.0261480054 0.0030713290 -0.0085643806 NA 0.0370891812 0.0116349644	1.000000000 -0.009490817 -0.009490817 1.000000000 -0.031800787 -0.036457393 -0.008097082 0.043499483 0.026323974 0.069601293 -0.005239402 -0.028632183 -0.018869459 0.006157047 0.016443903 0.012759250 NA NA 0.015405853 -0.006203541 0.014000192 -0.002303655
## ## ## ## ## ## ##	HourlyRate JobInvolvement JobLevel JobSatisfaction MonthlyIncome OverTime1 PercentSalaryHike StandardHours TotalWorkingYears WorkLifeBalance YearsAtCompany	0.4984881796 -0.0307873929 -0.0336849034 0.0093584643 0.0195869543 -0.0261480054 0.0030713290 -0.0085643806 NA 0.0370891812 0.0116349644 0.0003050466	1.000000000 -0.009490817 -0.009490817 1.000000000 -0.031800787 -0.036457393 -0.008097082 0.043499483 0.026323974 0.069601293 -0.005239402 -0.028632183 -0.018869459 0.006157047 0.016443903 0.012759250 NA NA 0.015405853 -0.006203541 0.014000192 -0.002303655 -0.013209533 -0.010367956
## ## ## ## ## ## ## ##	HourlyRate JobInvolvement JobLevel JobSatisfaction MonthlyIncome OverTime1 PercentSalaryHike StandardHours TotalWorkingYears WorkLifeBalance YearsAtCompany YearsInCurrentRole	0.4984881796 -0.0307873929 -0.0336849034 0.0093584643 0.0195869543 -0.0261480054 0.0030713290 -0.0085643806 NA 0.0370891812 0.0116349644 0.0003050466 -0.0566634618	1.000000000 -0.009490817 -0.009490817 1.000000000 -0.031800787 -0.036457393 -0.008097082 0.043499483 0.026323974 0.069601293 -0.005239402 -0.028632183 -0.018869459 0.006157047 0.016443903 0.012759250 NA NA 0.015405853 -0.006203541 0.014000192 -0.002303655 -0.013209533 -0.010367956 -0.032691934 0.010452504
## ## ## ## ## ## ## ##	HourlyRate JobInvolvement JobLevel JobSatisfaction MonthlyIncome OverTime1 PercentSalaryHike StandardHours TotalWorkingYears WorkLifeBalance YearsAtCompany YearsInCurrentRole YearsSinceLastPromotion	0.4984881796 -0.0307873929 -0.0336849034 0.0093584643 0.0195869543 -0.0261480054 0.0030713290 -0.0085643806 NA 0.0370891812 0.0116349644 0.0003050466 -0.0566634618 -0.0141106172	1.000000000 -0.009490817 -0.009490817 1.000000000 -0.031800787 -0.036457393 -0.008097082 0.043499483 0.026323974 0.069601293 -0.005239402 -0.028632183 -0.018869459 0.006157047 0.016443903 0.012759250 NA NA 0.015405853 -0.006203541 0.014000192 -0.002303655 -0.013209533 -0.010367956 -0.032691934 0.016859903

<pre>JobSatisfaction ## (Intercept)</pre>	-0.327027872 -0.150296786 -	
0.2609882499	-0.327027072 -0.130230700 -	
## iAge	-0.042507823 -0.029381432 -	
0.0179026665		
<pre>## BusinessTravelTravel_Frequently</pre>	-0.040004112 0.011859102 -	
0.0003928103		
## BusinessTravelTravel_Rarely	-0.045724732 0.033749203	
0.0220567877	0.0445645000.040050406	
## DailyRate	-0.041564520 0.012859186 -	
0.0338772207 ## DistanceFromHome	-0.007420974 -0.067009429	
0.0039778456	-0.007420374 -0.007003423	
## EnvironmentSatisfaction	0.007259196 -0.020730520	
0.0125259680	0,00,23,230 0,020,30320	
## MaritalStatus1	-0.033684903 0.009358464	
0.0195869543		
## MaritalStatus2	-0.031800787 -0.008097082	
0.0263239737		
## HourlyRate	-0.036457393 0.043499483	
0.0696012930		
## JobInvolvement	1.000000000 -0.003732976	
0.0165842495	0.002722076 1.00000000	
## JobLevel 0.0205034860	-0.003732976 1.000000000 -	
## JobSatisfaction	0.016584250 -0.020503486	
1.000000000	0.010304230 -0.020303400	
## MonthlyIncome	0.006475258 -0.874936863	
0.0118816904		
## OverTime1	0.002933503 0.019193234 -	
0.0233213236		
## PercentSalaryHike	0.020367135 0.033207538 -	
0.0180702758		
## StandardHours	NA NA	
NA ## TotalWorkingVoans	0.014877537 -0.144333694	
<pre>## TotalWorkingYears 0.0328887688</pre>	0.0140//55/ -0.144555094	
## WorkLifeBalance	0.011020302 -0.036193007	
0.0211493023	0.011020302 0.030133007	
## YearsAtCompany	0.048850530 -0.011200294 -	
0.0316942581		
## YearsInCurrentRole	-0.019317819 -0.024616239 -	
0.0166808958		
## YearsSinceLastPromotion	0.020427732 0.016796974	
0.0213869274		
## YearsWithCurrManager	-0.060193114 -0.046255449	
0.0407132732	Monthly Income OverTime1	
## PercentSalaryHike	MonthlyIncome OverTime1	
## (Intercept)	0.100918273 -0.032227109 -	
"" (Incorcept)	0,100J102/J 0,0J222/10J	

0.4120641276	0 052620724	-0.019327469	
## ïAge 0.0209615570	0.052620724	-0.01932/409	-
<pre>## BusinessTravelTravel_Frequently</pre>	0.002835505	-0.045371552	
0.0306372410			
<pre>## BusinessTravelTravel_Rarely 0.0358639557</pre>	-0.028319645	-0.033156996	
## DailyRate	-0.010420056	-0.006064532	_
0.0200878879	0.010.120030	0.000001332	
## DistanceFromHome	0.073609154	-0.029468901	-
0.0406384012			
<pre>## EnvironmentSatisfaction 0.0316915268</pre>	0.022815887	-0.071245376	
## MaritalStatus1	-0.026148005	0.003071329	_
0.0085643806	0.0202.0003	0.0030, 1323	
## MaritalStatus2	-0.005239402	-0.018869459	
0.0164439027			
## HourlyRate 0.0127592503	-0.028632183	0.006157047	
## JobInvolvement	0.006475258	0.002933503	
0.0203671351	0.000173230	0.002333303	
## JobLevel	-0.874936863	0.019193234	
0.0332075378			
<pre>## JobSatisfaction 0.0180702758</pre>	0.011881690	-0.023321324	-
## MonthlyIncome	1 . 000000000	-0.014684418	_
0.0230061660	1.00000000	0.011001110	
## OverTime1	-0.014684418	1.000000000	
0.0029282919			
<pre>## PercentSalaryHike 1.00000000000</pre>	-0.023006166	0.002928292	
## StandardHours	NA	NA	
NA	IVA	IVA	
## TotalWorkingYears	-0.154678874	-0.008894187	-
0.0048416203			
<pre>## WorkLifeBalance 0.0001656862</pre>	0.009629785	0.025116995	
## YearsAtCompany	-0.025946333	-0.023231508	
0.0417786397	0.0233 10333	0.023231300	
## YearsInCurrentRole	0.031291304	0.016225016	-
0.0337788632			
## YearsSinceLastPromotion	-0.033794675	0.002034479	
<pre>0.0079249610 ## YearsWithCurrManager</pre>	0.077094285	0.038802402	_
0.0151283143	0.0//004200	3.030002-02	
##	StandardHours	TotalWorkingYears	
WorkLifeBalance			
## (Intercept)	NA	0.2196343357	-
0.3908413414 ## ïAge	NA	-0.5503661187	
ππ 1Age	INA	-0.73000118/	

0.0243756616			
<pre>## BusinessTravelTravel_Frequently 0.002071F0F1</pre>	NA	-0.0433785127	-
<pre>0.0030715051 ## BusinessTravelTravel_Rarely</pre>	NA	-0.0466944105	
0.0071350207	IVA.	0.0400044100	
## DailyRate	NA	-0.0404330635	
0.0393212780			
## DistanceFromHome	NA	-0.0124959668	
0.0276407841			
## EnvironmentSatisfaction	NA	0.0121702323	-
0.0274509422	NIA.	0.0270004042	
## MaritalStatus1 0.0116349644	NA	0.0370891812	
## MaritalStatus2	NA	0.0154058533	
0.0140001920	IVA	0.0154050555	
## HourlyRate	NA	-0.0062035413	_
0.0023036550		0,000=000 .=0	
## JobInvolvement	NA	0.0148775368	
0.0110203019			
## JobLevel	NA	-0.1443336941	-
0.0361930071			
## JobSatisfaction	NA	0.0328887688	
0.0211493023	NIA	0 1546700736	
<pre>## MonthlyIncome 0.0096297847</pre>	NA	-0.1546788736	
## OverTime1	NA	-0.0088941871	
0.0251169951	IVA	0.0000541071	
## PercentSalaryHike	NA	-0.0048416203	
0.0001656862			
## StandardHours	1	NA	
NA			
## TotalWorkingYears	NA	1.0000000000	
0.0202218978			
## WorkLifeBalance	NA	0.0202218978	
1.0000000000 ## YearsAtCompany	NA	-0.2629113150	
0.0191262598	INA	-0.2029113130	
## YearsInCurrentRole	NA	-0.0006670992	_
0.0718367546		0.0000070332	
## YearsSinceLastPromotion	NA	0.0111489444	
0.0101260998			
## YearsWithCurrManager	NA	-0.0322644594	
0.0322237337			
##		/earsInCurrentRole	
## (Intercept)	-0.0606362226	0.0328883714	
## ïAge	0.1014227334	0.0191757923	
## BusinessTravelTravel_Frequently	-0.0025970119	0.0074114043	
## BusinessTravelTravel_Rarely	0.0083960946	-0.0057100371	
## DailyRate	0.0525413985	-0.0583216486	
## DistanceFromHome	0.0067831281	-0.0127371659	

## EnvironmentSatisfaction	0.0076887933	-0.0271550141	
## MaritalStatus1	0.0003050466	-0.0566634618	
## MaritalStatus2	-0.0132095325	-0.0326919338	
## HourlyRate	-0.0103679560	0.0104525039	
## JobInvolvement	0.0488505305	-0.0193178187	
## JobLevel	-0.0112002936	-0.0246162388	
## JobSatisfaction	-0.0316942581	-0.0166808958	
## MonthlyIncome	-0.0259463327	0.0312913041	
## OverTime1	-0.0232315081	0.0162250158	
## PercentSalaryHike	0.0417786397	-0.0337788632	
## StandardHours	NA	NA	
## TotalWorkingYears	-0.2629113150	-0.0006670992	
## WorkLifeBalance	0.0191262598	-0.0718367546	
## YearsAtCompany	1.0000000000	-0.3665298014	
## YearsInCurrentRole	-0.3665298014	1.0000000000	
## YearsSinceLastPromotion	-0.2688052208	-0.1425139339	
## YearsWithCurrManager	-0.4350600190	-0.3015658692	
##	YearsSinceLastPro	motion	
YearsWithCurrManager			
## (Intercept)	-0.006	650244 -	
0.0570782928			
## ïAge	-0.026	393543	
0.0403231811			
<pre>## BusinessTravelTravel_Frequently 0.0001070424</pre>	0.003	002179	
0.0091979424	0.036	270001	
<pre>## BusinessTravelTravel_Rarely 0.0153284177</pre>	0.026	270981	
## DailyRate	0 023	842872	
0.0162876291	0.023	042072	
## DistanceFromHome	-0.004	300501	
0.0009762947	-0.004	330304	
## EnvironmentSatisfaction	-0.016	0E0201	
0.0159318992	-0.010	030294	
## MaritalStatus1	-0.014	110617	
0.0206142787	-0.014	110017	
## MaritalStatus2	0 010	465450	
0.0169567421	0.010	40,440	
## HourlyRate	0 016	859903	
0.0060376552	0.010	639863	
## JobInvolvement	0 020	427732 -	
0.0601931138	0.020	42//32 -	
## JobLevel	0.016	796974 -	
	0.010	790974 -	
0.0462554487	0 021	206027	
## JobSatisfaction	0.021	386927	
0.0407132732	0.033	704675	
## MonthlyIncome	-0.033	/946/5	
0.0770942847	0.000	024470	
## OverTime1	0.002	034479	
0.0388024016	0.007	024061	
## PercentSalaryHike	0.007	924961 -	

```
0.0151283143
## StandardHours
                                                       NA
                                              0.011148944
## TotalWorkingYears
0.0322644594
## WorkLifeBalance
                                              0.010126100
0.0322237337
## YearsAtCompany
                                             -0.268805221
0.4350600190
## YearsInCurrentRole
                                             -0.142513934
0.3015658692
## YearsSinceLastPromotion
                                              1.000000000
0.0269686876
## YearsWithCurrManager
                                             -0.026968688
1.0000000000
temp <- influence.measures(x)</pre>
## Warning in abbreviate(vn): abbreviate used with non-ASCII chars
temp
## Influence measures of
     lm(formula = Attrition ~ ï..Age + BusinessTravel + DailyRate +
##
DistanceFromHome + EnvironmentSatisfaction + MaritalStatus +
                                                                 HourlyRate
+ JobInvolvement + JobLevel + JobSatisfaction +
                                                    MaritalStatus +
MonthlyIncome + OverTime + PercentSalaryHike +
                                                   StandardHours +
TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
YearsInCurrentRole + YearsSinceLastPromotion + YearsWithCurrManager,
data = emp churn) :
##
##
          dfb.1
                  dfb.ï.Ag dfb.BTT F dfb.BTT R dfb.DlyR dfb.DsFH dfb.EnvS
        1.80e-02 6.13e-02 -5.36e-03 1.79e-02 3.96e-02 -5.94e-02 -4.01e-02
## 1
## 2
        1.06e-02 -1.90e-02 -1.34e-02 -1.19e-03 1.09e-02 2.41e-03 -3.16e-03
## 3
        -2.66e-02 1.77e-02 -2.89e-03 1.87e-02 7.38e-02 -4.29e-02 5.17e-02
        -3.95e-03 5.64e-03 -3.06e-02 4.70e-03 -3.43e-02 1.86e-02 -2.42e-02
## 4
## 5
        -3.42e-02 1.76e-02 1.97e-03 -5.04e-03 9.23e-03 1.42e-02 2.88e-02
## 6
        -2.10e-03 1.88e-03 -1.55e-02 3.56e-04 -5.23e-03 9.51e-03 -1.47e-02
## 7
        2.95e-02 -4.80e-02 1.76e-03 -3.48e-03 -2.00e-02 1.54e-02 -3.24e-03
## 8
        1.15e-02 -7.12e-04 -1.58e-03 -4.72e-03 -8.72e-03 -1.27e-02 -8.43e-03
## 9
        1.14e-02 -1.19e-02 -2.44e-02 -3.59e-03 2.04e-02 -2.70e-02 -1.99e-02
        9.67e-04 8.01e-03 9.29e-05 -2.95e-03 -7.74e-03 -1.50e-02 -2.67e-03
## 10
## 11
        2.02e-03 -2.78e-03 8.45e-04 -2.76e-03 4.24e-04 -8.17e-03 1.48e-02
## 12
        -2.44e-02 2.29e-02 2.62e-03 -1.26e-02 4.12e-02 -2.01e-02 -2.96e-02
## 13
        -2.11e-02 2.11e-03 -2.67e-03 -1.46e-02 6.76e-03 -4.72e-02 3.42e-02
## 14
        4.75e-03 -3.35e-03 -7.45e-04 -3.71e-03 -8.07e-03 -8.27e-03 3.96e-03
        3.98e-02 -2.29e-02 -3.48e-03 1.60e-02 -5.88e-02 7.04e-02
## 15
                                                                    5.63e-03
## 16
        -1.23e-03 5.07e-03 -6.83e-04 -3.82e-03 -9.77e-03 -1.00e-02 5.24e-03
## 17
        -2.22e-02 7.57e-03 3.82e-03 -7.40e-03 3.21e-02 1.37e-02 4.08e-02
## 18
        -4.04e-03 1.75e-02 3.35e-02 3.84e-02 -6.29e-03 -9.71e-03 -1.52e-02
## 19
       -2.23e-03 1.59e-03 -1.41e-04 1.62e-03 5.24e-03 -4.02e-03 -6.85e-03
```

```
## 20
        -6.77e-03 -2.01e-02
                             3.68e-03 -7.07e-03 2.41e-02
                                                           1.62e-02 -2.35e-02
## 21
        -1.87e-03
                   4.54e-03
                             7.64e-03
                                       8.67e-03
                                                 1.67e-03
                                                           2.39e-04
                                                                      4.36e-03
## 22
        -1.96e-02
                   7.07e-03
                             5.27e-03
                                       2.77e-02
                                                 6.79e-02
                                                           1.30e-03
                                                                      2.09e-02
## 23
        -1.66e-02
                   1.04e-03
                             5.20e-04 -4.90e-03
                                                 9.19e-03
                                                           1.04e-03
                                                                      2.04e-02
## 24
         3.38e-03
                   2.24e-02
                             6.46e-04 -8.99e-03
                                                 1.94e-02 -1.43e-02 -7.74e-03
## 25
         5.56e-02
                   2.06e-03 -5.18e-03
                                       1.66e-02 -4.67e-03 -1.54e-02 -3.59e-02
## 26
        -1.88e-03
                   1.49e-02
                             2.60e-03
                                       8.51e-03
                                                 1.71e-02 -7.83e-03
                                                                     2.91e-03
## 27
         1.08e-02 -4.04e-03
                             2.82e-02
                                       2.64e-03
                                                 2.45e-02
                                                           1.72e-02 -1.36e-02
## 28
        -2.54e-03 -6.46e-03
                             6.24e-05 -2.24e-03
                                                 1.74e-03
                                                           2.63e-04 -1.03e-03
   29
         8.00e-04 -1.55e-05 -3.90e-05
                                       7.66e-04 -8.29e-04 -3.64e-04 -2.28e-03
##
## 30
        -1.46e-02
                   2.25e-03
                             4.86e-04 -3.23e-03
                                                 3.65e-03
                                                           1.20e-02 8.78e-03
                   2.24e-03
                             1.02e-03 -3.86e-03 -3.64e-03
## 31
        -2.00e-03
                                                           8.59e-03 -3.01e-03
## 32
         1.25e-02 -9.93e-03
                             3.58e-04 -3.01e-03 -1.30e-02 -1.75e-03 -7.30e-03
## 33
        -8.71e-03
                  1.12e-02
                            8.02e-04 -7.50e-03 2.35e-02 -1.38e-03 -2.27e-02
        -7.61e-02 -1.19e-01 -1.18e-02
                                       2.87e-02 8.84e-03 -5.64e-02
## 34
                                                                     9.89e-02
## 35
        4.79e-02 -8.70e-02 -9.49e-03
                                       1.38e-02 -6.01e-03 -5.71e-02 -3.59e-02
##
  36
        -7.49e-03
                   1.26e-02
                             6.06e-04
                                       4.02e-03
                                                 8.54e-03 -6.57e-03
## 37
                   1.57e-01
        -3.24e-02
                             4.22e-05
                                       2.10e-02
                                                 1.30e-02 -4.12e-02 -9.07e-02
## 38
        -1.65e-03
                   8.92e-04
                             2.58e-05
                                       5.67e-04 1.74e-04 -1.22e-03
                                                                      1.74e-03
## 39
        -8.89e-03 -1.17e-02
                             3.13e-03 -9.02e-03 -6.89e-03
                                                           1.65e-02
                                                                     2.77e-02
                  4.96e-03 -1.10e-02
                                      9.62e-04 -6.62e-03
                                                           9.09e-03 -2.42e-03
## 40
         2.73e-03
## 41
         1.43e-03 -2.51e-03 -2.59e-04 -1.72e-03 2.78e-03
                                                           1.69e-03 -8.17e-04
                  2.75e-03 -9.94e-04 -5.21e-03 -1.11e-02
## 42
        -7.51e-03
                                                           7.04e-03 -1.03e-02
## 43
         8.72e-02 -5.03e-03 4.74e-03
                                       2.40e-02 6.46e-02
                                                           8.11e-02 -6.17e-02
## 44
        -1.65e-04
                  7.20e-03 -1.24e-02 -6.95e-04 -4.90e-03
                                                           1.05e-03 -9.94e-03
## 45
         9.16e-03
                  8.66e-03 -1.30e-02 -1.16e-03
                                                 1.55e-03
                                                           1.10e-02 -3.14e-03
## 46
        -2.67e-03 -2.90e-02 4.11e-03
                                       3.80e-02 1.16e-01
                                                           3.34e-02 -6.44e-02
## 47
         1.29e-03
                  2.69e-03
                             3.65e-02
                                       4.03e-02 -1.21e-02 -2.29e-02
                                                                     9.28e-03
## 48
         6.94e-03 -1.27e-03 -4.45e-05 -6.10e-03 1.71e-02 -1.94e-02
                                                                      8.04e-03
## 49
         4.70e-02 -2.99e-02 -3.21e-02
                                       2.32e-04 -2.58e-02
                                                           1.65e-02
                                                                      3.87e-02
                            1.97e-04
## 50
        -7.88e-03
                  3.79e-03
                                       2.24e-03 4.76e-03 -3.62e-04
                                                                      5.82e-03
         1.03e-02 -1.74e-02 -9.82e-03
                                       1.38e-02 -1.86e-02 -6.19e-02 -8.25e-02
## 51
## 52
         3.89e-02 -5.43e-03 -3.98e-03
                                       1.67e-02 7.44e-02 -1.85e-02
                                                                      3.03e-03
## 53
         1.75e-02 -2.61e-02 -2.08e-03 -1.13e-02 -3.51e-02 2.54e-02
                                                                     1.77e-02
## 54
        -3.27e-02
                  8.09e-03 6.65e-02
                                       7.85e-02 -2.10e-02 -2.60e-03 -3.96e-03
## 55
                  3.34e-02 -1.19e-03 -1.57e-02 -4.46e-02 -4.56e-02 -4.53e-03
        -2.33e-03
                  1.26e-02 -3.32e-02 3.51e-03 1.93e-02 2.61e-02
## 56
        -5.88e-03
                                                                     4.41e-02
## 57
         6.31e-03 -2.60e-03 -2.09e-02 -9.69e-04 -9.68e-04 -1.20e-02
                                                                     6.73e-03
## 58
        -1.38e-02 -1.93e-02 1.37e-03 -1.17e-02 -3.05e-02 -6.14e-02 -2.04e-03
## 59
        -5.30e-03 -7.16e-03
                            1.57e-03 5.96e-03 -5.96e-03 -3.05e-03
                                                                      1.18e-02
## 60
         5.84e-04 -8.56e-04 -2.14e-04 -7.23e-04 -9.00e-04
                                                           9.59e-04
                                                                      1.70e-03
## 61
         3.87e-03
                  8.49e-03
                            1.25e-03 -9.20e-03 1.95e-02
                                                           2.29e-02
                                                                      3.41e-02
## 62
         1.75e-02 -1.14e-02 -3.00e-02 -5.59e-03 3.85e-04 -5.21e-02 -2.50e-02
## 63
        -1.69e-02 -5.45e-03 -1.59e-04 -1.61e-02 -2.27e-02
                                                           5.71e-03
                                                                      2.25e-02
         2.23e-03 -2.33e-02 2.64e-04 -5.76e-03 -2.34e-02 -2.52e-02
## 64
                                                                      2.34e-02
## 65
        -6.83e-04 -1.49e-03 3.19e-04 1.74e-03 2.70e-03 -3.36e-04
                                                                      2.57e-04
## 66
         4.87e-03 -7.25e-03 -1.10e-04 -2.37e-03 -1.11e-04
                                                           8.55e-05 -5.43e-03
        -2.66e-03 -2.39e-02 -3.95e-02 -1.26e-03 -3.17e-02 -7.92e-03
## 67
                                                                      1.66e-02
## 68
        -1.31e-03 5.30e-03 -1.16e-05 -1.89e-03 -6.01e-03
                                                           1.40e-03
                                                                      3.44e-03
        -2.54e-02 -8.03e-03 -3.07e-02 3.36e-03 8.39e-03 2.50e-02
## 69
```

```
## 70
                  3.88e-02 -3.06e-04 1.85e-02 -6.53e-02 -2.62e-03
         3.53e-03
        -2.20e-02 -4.90e-02 -2.98e-02 9.90e-04 -2.60e-02
## 71
                                                            2.14e-02
                                                                      3.64e-02
## 72
         2.62e-03
                   1.82e-03 -1.44e-04 -1.18e-03 -3.45e-03
                                                            2.75e-03 -1.08e-03
         8.57e-03 -6.99e-03 -5.50e-04 -8.00e-03 -1.48e-02
## 73
                                                            1.74e-02 -5.23e-03
## 74
        -2.09e-04
                  8.71e-04
                             3.79e-05 -7.21e-04 1.15e-03
                                                            2.06e-03
                                                                      1.05e-03
## 75
        -3.26e-04 -1.36e-03
                             5.65e-04 -1.07e-03
                                                  7.40e-03
                                                            1.26e-03
                                                                      2.49e-03
## 76
                   1.22e-03 -9.26e-05 -1.10e-03
                                                  1.96e-04
                                                            4.88e-04 -6.62e-04
         2.34e-03
##
  77
        -1.91e-02
                   4.87e-03
                             8.30e-05 -5.38e-03 -9.69e-04
                                                            1.24e-02 -8.06e-04
## 78
         1.38e-04 -2.29e-03
                             2.78e-03 -1.74e-03
                                                 2.86e-02
                                                            3.97e-03 -1.90e-02
## 79
        -1.49e-02
                   5.54e-03
                             1.35e-03 -3.94e-03
                                                  1.21e-02 -9.55e-04
                                                                      2.26e-02
## 80
         2.33e-02 -7.06e-03 -9.21e-06 -8.07e-03 -3.73e-03
                                                            1.22e-02
                                                                      1.34e-02
                             2.12e-03 -7.01e-03
## 81
        -2.26e-02
                   2.08e-02
                                                 8.23e-04
                                                            2.37e-02 -2.05e-02
## 82
        -1.06e-02 -1.15e-02 -1.19e-03 -9.06e-03 -2.05e-02
                                                            1.44e-02
                                                                      1.25e-02
## 83
         1.23e-06 -2.00e-04
                             5.73e-05 -8.07e-05
                                                 7.59e-04
                                                            4.14e-04
                                                                      5.98e-04
                   4.21e-03
                             2.66e-02
                                       3.00e-02
                                                 7.51e-03
                                                            5.87e-03
                                                                      8.88e-03
## 84
        -1.83e-02
## 85
         4.63e-03 -2.65e-03 -1.40e-04 -4.29e-03 -9.65e-03
                                                            1.19e-02
                                                                      1.58e-02
## 86
        -7.33e-03
                   4.19e-03
                             5.01e-04 -1.74e-03 -7.36e-03
                                                            1.56e-03 -5.74e-03
## 87
                   1.90e-02 -3.08e-04 -6.45e-03 1.01e-02
                                                            1.19e-02 -3.61e-03
        -1.77e-02
## 88
        -1.93e-02
                   1.39e-02
                             5.02e-04 3.20e-03 -7.70e-03 -7.89e-04
                                                                     9.85e-03
                   4.30e-03 -2.29e-04 -2.27e-03 5.43e-03
## 89
         2.69e-03
                                                            4.54e-03 -1.37e-03
## 90
        -7.44e-02
                   1.55e-01
                             1.36e-02 4.86e-02 -1.27e-02
                                                            3.14e-03
                                                                      1.55e-02
## 91
         5.74e-03
                   1.01e-02 -2.42e-02 -2.16e-03 6.66e-03
                                                            2.01e-02 -8.82e-03
## 92
         3.37e-02 -6.29e-02 -5.70e-04 -1.35e-02 1.50e-02 -3.72e-02 -5.78e-03
## 93
        -2.53e-02
                   1.78e-02 -7.14e-04 -1.10e-02 -2.72e-02
                                                            1.53e-02 -8.62e-04
## 94
        -6.05e-02 -3.16e-03 -4.42e-02
                                       5.32e-03 1.55e-02
                                                            3.80e-02 -1.30e-03
## 95
         4.42e-03
                   6.72e-03 1.69e-04 -5.28e-03 -9.03e-03
                                                            5.07e-03
                                                                      7.16e-03
## 96
        -2.46e-03 -4.78e-03 -3.23e-05 -6.00e-04 -2.17e-03
                                                            1.86e-03
                                                                      3.76e-03
## 97
        -8.12e-03
                   1.40e-02 -6.01e-04 -5.81e-03 -1.56e-02
                                                            1.06e-02
                                                                      1.85e-02
## 98
         1.43e-03 -8.93e-04 -3.45e-03 -3.96e-03 -2.30e-03 -1.04e-03 -9.34e-04
## 99
         7.43e-04
                   2.64e-03 -6.43e-04
                                       1.22e-03 -1.79e-04
                                                            8.94e-04
                                                                      5.27e-03
                             1.24e-02
## 100
        -2.76e-03
                   8.09e-04
                                       1.41e-02 3.74e-03 -6.90e-03
                                                                      3.29e-03
## 101
        -4.20e-02
                   1.89e-02
                                       2.76e-02 -3.71e-03 -2.68e-02
                             2.10e-03
                                                                      7.16e-03
## 102
        -6.03e-03 -1.13e-02
                             3.24e-05 -7.04e-03 -4.49e-03
                                                            1.62e-02 -2.23e-02
## 103
         4.48e-03 -4.81e-02
                             4.96e-02
                                       1.05e-03
                                                  9.91e-03 -1.35e-02
                                                                      4.25e-02
## 104
        -6.98e-03
                   3.90e-03
                             5.59e-04 -3.11e-03
                                                  1.89e-03
                                                            3.05e-03
                                                                      1.23e-02
                                                                      1.89e-03
## 105
         1.46e-03 -8.10e-03 -1.62e-02 -1.86e-02
                                                  2.64e-03 -6.23e-03
                   8.61e-03 -4.17e-02 -5.05e-02
## 106
         3.92e-05
                                                  2.26e-02 -1.57e-02
                                                                      4.20e-03
## 107
         3.24e-03
                   6.24e-03 -2.32e-02 4.38e-03 -1.18e-02
                                                                      2.81e-02
                                                            2.25e-02
                                       1.65e-02 -5.56e-02 -2.06e-02
## 108
         7.15e-02 -4.22e-02 -5.14e-03
                                                                      2.53e-03
## 109
                   6.10e-03 -3.40e-04 -3.74e-03 -9.70e-03
        -3.90e-03
                                                            1.15e-03 -9.72e-03
## 110
        -1.31e-02
                   2.26e-02
                             7.32e-04 -1.03e-02 1.33e-02 -1.92e-02
                                                                      1.35e-02
## 111
        -2.59e-02 -2.60e-02 -4.21e-02 -5.38e-03 -5.28e-02
                                                            3.46e-02
                                                                      5.16e-02
                                       5.11e-03 -6.79e-03 -1.44e-02 -5.87e-02
## 112
         3.84e-03
                   8.87e-03
                             5.17e-02
## 113
        -3.26e-03 -9.56e-03
                             2.65e-02
                                       3.08e-02 1.69e-02 -2.23e-02 -1.02e-02
                   1.91e-02
                             8.61e-04 -5.15e-03 -1.14e-02 -1.67e-02
## 114
        -1.33e-02
                                                                     9.11e-03
## 115
        -8.59e-03
                   9.12e-03 -1.10e-03 -6.17e-03 -6.02e-03
                                                           4.11e-03 -1.93e-03
## 116
         2.47e-03
                   3.95e-04
                             3.73e-05 -1.33e-03 -3.03e-03
                                                            2.42e-03 -7.21e-04
                   3.48e-03 -1.08e-03 -6.61e-03 -2.28e-02
                                                           4.68e-03 -1.66e-03
## 117
        -1.95e-02
## 118
         5.95e-04 -9.98e-05 -6.64e-04 -1.81e-05 -7.40e-04 -7.34e-05
                                                                      2.49e-04
         2.60e-03 -9.84e-04 -6.49e-04 -3.94e-03 -1.30e-03 4.68e-03 1.03e-02
## 119
```

```
## 120
         1.54e-02
                   1.92e-03 -1.30e-02 1.76e-03 1.03e-02 -2.25e-02 -3.46e-03
## 121
                   1.36e-02 -3.74e-02 -8.01e-03 -2.76e-02 -3.53e-02
         2.27e-03
                                                                     2.97e-02
## 122
        -1.17e-04 -5.65e-04 -1.12e-02 -1.33e-02 -8.95e-04
                                                           6.76e-03
                                                                     1.52e-03
## 123
                  1.84e-01 -5.23e-04
                                      1.91e-02 -4.78e-02
        -6.79e-02
                                                           3.57e-02 -4.14e-02
## 124
         2.07e-04 -1.68e-03 -1.06e-04 -6.50e-04 1.51e-04
                                                           3.49e-04
                                                                    2.04e-03
## 125
         6.37e-02 -4.97e-02 -5.82e-04
                                      2.07e-02 -6.53e-02 -2.69e-02 -3.20e-02
## 126
                  1.79e-02 -1.25e-03 -9.19e-03 -1.49e-03
                                                           8.25e-03 -5.63e-03
        -2.44e-02
## 127
        -4.77e-02 -9.60e-03 -1.70e-02
                                      2.42e-02 -1.17e-01
                                                           1.31e-01
                                                                     1.09e-01
## 128
         1.91e-02 -5.67e-02 -2.46e-03
                                       1.74e-02 -2.64e-02
                                                           6.03e-02
## 129
         8.91e-04
                  1.08e-02 4.84e-04 -2.37e-03 4.51e-03
                                                           6.44e-03 -2.95e-03
## 130
         1.12e-03 -5.24e-03 -1.39e-04 -1.32e-03 3.09e-03 -4.50e-03 -1.37e-03
## 131
                  1.41e-03 -2.64e-02
                                      4.67e-03 -8.08e-03 -5.57e-02
         2.47e-04
                                                                    1.17e-02
## 132
         1.02e-02 -1.54e-02 -1.68e-02
                                      3.65e-04 -7.28e-04 -5.08e-03 -3.45e-03
                                      2.00e-02 -2.12e-02
## 133
         4.06e-02 -3.14e-03 6.38e-04
                                                           5.04e-02 -3.27e-02
## 134
         8.44e-03 -3.56e-03 -2.48e-04 -3.14e-03 7.59e-04
                                                           1.02e-03 -7.89e-04
## 135
                  8.84e-03 -6.43e-04 -4.00e-03 -9.45e-03 -1.40e-02 -2.73e-03
## 136
         5.47e-03 -1.35e-03 -9.24e-04 -4.36e-03
                                                1.20e-02
                                                           3.92e-03
                                                                     4.50e-03
## 137
                  8.23e-02 8.38e-02
                                      5.93e-03
                                                 6.12e-02 -9.63e-04 -9.00e-02
         2.65e-02
## 138
        -3.04e-03 -8.20e-04
                             2.69e-04
                                      3.35e-03 9.61e-03 -4.05e-03
                                                                     7.47e-03
## 139
        -2.41e-02
                   2.66e-02 -2.43e-03 -1.21e-02 -1.02e-02 -5.85e-02
                                                                     3.55e-02
## 140
                   1.87e-02 9.78e-04 -6.16e-03 -1.36e-02
                                                           3.13e-03 -3.19e-03
        -7.53e-03
## 141
         1.21e-02 -2.21e-02 -8.65e-04 2.39e-02 4.40e-02
                                                           7.27e-03 -9.42e-02
         8.38e-03 -2.04e-02 -6.32e-04 -5.62e-03 -1.56e-02 -3.18e-02 -4.14e-03
## 142
## 143
        -1.13e-03
                   2.93e-02
                            4.62e-03 -7.58e-03
                                                 2.71e-02
                                                           2.09e-02 -2.40e-02
## 144
        -2.64e-02
                   2.60e-03
                            8.22e-04 -1.02e-02
                                                 2.08e-02 -2.76e-02
## 145
         8.78e-04
                   6.18e-04 -5.52e-03 -1.22e-03
                                                 8.05e-04 -8.91e-05 -3.82e-03
## 146
        -4.65e-03
                   8.22e-03 -1.74e-04 -3.89e-03
                                                 1.51e-02
                                                          4.21e-03 -1.18e-02
## 147
        -2.06e-02
                   2.99e-03 -1.48e-04 -9.25e-03 -3.20e-02
                                                           1.28e-02
                                                                    1.43e-02
                   6.59e-03 -1.78e-02 -5.20e-04 -3.04e-04 -2.50e-03 -1.52e-02
## 148
        -8.91e-03
## 149
         1.32e-02 -9.54e-03 -5.38e-04 -4.01e-03 -3.71e-03
                                                           8.53e-04 -4.11e-03
## 150
                   3.67e-02 1.38e-03 -1.00e-02 -2.75e-02
        -1.98e-02
                                                           1.87e-02
                                                                     1.63e-02
## 151
        -3.79e-04
                  6.51e-04 -1.15e-02 -1.16e-03 -1.36e-02 -1.75e-02
                                                                     4.99e-03
## 152
        -2.50e-03 -3.55e-04
                             5.55e-05
                                      1.64e-03 -1.84e-03 -5.29e-03
                                                                     1.28e-03
         8.89e-03 -3.58e-02 -9.02e-05 -9.01e-03 -2.64e-02
## 153
                                                           1.33e-02
                                                                     1.66e-02
## 154
         2.09e-03
                   1.24e-03
                            2.80e-04
                                      2.45e-03 -6.74e-03 -1.31e-03
                                                                    -2.28e-03
## 155
                  6.38e-04 -1.78e-02 -1.44e-03 -6.75e-03
                                                           1.55e-03
                                                                     8.96e-03
         1.87e-04
         1.47e-02 -1.49e-02 -3.94e-02 -4.57e-02 2.55e-02 -1.72e-02
## 156
                                                                     1.73e-02
## 157
         2.22e-03 -1.81e-02 -9.55e-04 -4.28e-03 -8.45e-03
                                                           1.60e-03
                                                                     6.30e-03
## 158
         2.23e-02 -9.65e-02 -1.22e-03 -1.17e-02 -2.53e-02
                                                           2.10e-03
                                                                     2.24e-02
## 159
                                      3.32e-03 -4.57e-03 -5.01e-03
         5.90e-03
                  2.30e-03 5.09e-04
                                                                     2.56e-03
## 160
         4.82e-03 -3.26e-04 -1.53e-02
                                      7.70e-04 1.53e-02
                                                           1.09e-02 -4.63e-03
                   1.03e-02 -7.50e-04 -4.27e-03 -7.79e-03 -8.75e-03 -3.47e-03
## 161
         1.18e-02
## 162
        -1.35e-02
                   7.88e-03
                            1.59e-02 1.85e-02 3.53e-03
                                                           1.01e-03 -8.24e-03
## 163
        -2.52e-02
                   9.68e-03
                            6.62e-04 -5.08e-03
                                                 1.44e-02 -2.13e-02 -5.42e-03
         1.69e-02 -2.54e-02 -7.14e-04 -4.82e-03 1.33e-02 -1.60e-02 -2.41e-03
## 164
## 165
        -3.15e-02
                  9.08e-03 5.45e-02 6.26e-02 -3.25e-02
                                                          1.90e-02 -2.88e-03
## 166
         2.54e-03 -3.52e-03 -3.85e-04 -1.65e-03 -6.81e-03 -1.69e-03 -8.19e-04
## 167
        -1.50e-03 -1.46e-03 -6.20e-05 -1.37e-03 2.49e-03 -1.81e-03
                                                                     4.40e-03
## 168
        -6.63e-04 1.74e-03 1.19e-05 -7.30e-04 -2.08e-03
                                                           8.47e-04
                                                                     1.29e-03
         5.99e-03 -4.14e-03 -6.14e-04 -4.98e-03 4.08e-04 8.04e-03
## 169
```

```
## 170
                   3.56e-03
                             3.47e-04 -5.66e-03 2.17e-02 4.08e-03 -4.06e-03
        -3.10e-03
                             3.53e-03 -9.64e-03 -2.67e-02 -3.06e-02 -5.91e-03
## 171
        -2.76e-02
                   3.26e-02
## 172
         1.57e-02 -5.62e-02
                             6.02e-02
                                        3.77e-03 -1.05e-02 -4.20e-02
                                                            1.62e-02 -2.50e-02
## 173
                   6.88e-03 -3.15e-02
                                       1.00e-03 -4.27e-02
        -3.40e-02
                                                            1.76e-04 -1.42e-04
## 174
        -1.39e-03
                   8.39e-04
                             1.94e-03
                                        2.17e-03 1.34e-03
## 175
         5.47e-03 -2.44e-02 -2.64e-04 -7.48e-03 -1.96e-02
                                                            8.53e-03
                                                                      2.52e-03
## 176
         1.15e-02 -3.04e-02
                             1.06e-03 -6.72e-03
                                                  7.51e-03
                                                            1.73e-03 -2.30e-03
## 177
         7.92e-03 -2.99e-03
                             5.41e-04 -3.70e-03
                                                  1.43e-02
                                                            7.15e-03 -3.09e-03
## 178
         6.53e-02 -7.90e-02
                             1.94e-03
                                       2.97e-02 -6.05e-02 -4.98e-02 -2.94e-02
## 179
         9.35e-03 -1.67e-04 -7.93e-04 -4.37e-03
                                                 4.70e-03
                                                            8.34e-03
                                                                      4.51e-03
## 180
         9.75e-03 -1.68e-02 -4.90e-04 -6.05e-03 -1.88e-02 -1.56e-03 -2.48e-03
## 181
                   1.34e-02
         2.62e-02
                             1.93e-03 -6.14e-03
                                                  3.72e-02 -4.77e-03 -7.88e-03
## 182
         9.66e-03
                   4.95e-03
                             3.07e-04 -7.91e-03
                                                  7.34e-03 -4.47e-02 -2.58e-02
## 183
        -3.50e-02
                   6.92e-02
                             1.38e-03
                                       1.96e-02
                                                  6.11e-02
                                                            5.51e-02 -3.10e-02
## 184
         8.31e-04 -1.96e-02 -6.57e-04 -2.96e-03
                                                  9.05e-03
                                                            7.02e-03 -2.79e-03
## 185
        -5.52e-03
                   1.09e-02
                             5.51e-04
                                       1.97e-03
                                                  2.62e-03
                                                            1.92e-03
## 186
         1.68e-04
                   1.89e-04
                             7.97e-06 -5.81e-04 -4.16e-04 -1.08e-03 -2.03e-03
## 187
        -5.22e-03 -3.13e-03
                             4.63e-04
                                                 5.09e-03 -4.84e-03
                                        3.94e-03
                                                                      1.03e-02
                                                            1.15e-02
## 188
        -8.09e-03
                  4.14e-03 -1.90e-03
                                        3.61e-03 -4.46e-03
                                                                      4.56e-03
## 189
        -1.95e-03 -2.55e-04 -4.04e-03
                                        3.73e-05 -1.50e-03
                                                            2.04e-03 -3.53e-03
## 190
         7.75e-04 -4.79e-04 -7.76e-06 -1.89e-04 8.20e-04
                                                            4.99e-04 -7.55e-04
## 191
        -1.87e-04
                  9.66e-04
                             1.97e-05
                                        3.06e-03 -1.87e-03 -8.15e-03
                                                                      1.84e-03
## 192
                             2.37e-04 -4.85e-03 -1.96e-03
        -3.39e-03
                   1.21e-02
                                                            7.30e-04 -1.77e-02
## 193
         3.31e-02 -4.52e-03 -2.61e-03
                                       1.75e-02 -2.58e-02
                                                            7.75e-02 -3.54e-02
## 194
        -1.70e-02
                   2.41e-02 -4.49e-02 -5.09e-02
                                                  2.22e-02 -3.01e-03
                                                                      1.82e-02
## 195
         3.11e-05
                   3.34e-04 -4.30e-03 -4.99e-03
                                                  1.87e-03 -1.68e-03 -2.65e-03
## 196
        -2.18e-02 -1.23e-02 4.73e-03 -4.60e-03
                                                  3.68e-02 -3.81e-02
                                                                      1.90e-02
## 197
        -3.90e-02
                   1.12e-03 -3.40e-02
                                       1.79e-03
                                                  3.86e-02
                                                            2.31e-02
                                                                      1.94e-02
## 198
         1.30e-03
                   2.06e-03 -7.51e-03 -8.61e-03
                                                  6.57e-04
                                                            4.53e-03
                                                                      5.96e-04
## 199
        -1.29e-03 -1.36e-03 -1.24e-04
                                        5.30e-04
                                                  2.03e-03 -1.80e-03
                                                                      2.66e-03
## 200
                            1.61e-04
                                       6.01e-04
        -4.99e-04
                   5.32e-04
                                                  5.50e-04
                                                            2.77e-03
                                                                      1.53e-03
## 201
        -1.92e-02
                   2.71e-02 -3.56e-02 -3.51e-04
                                                  2.00e-02
                                                            2.95e-02 -7.82e-03
## 202
        -3.82e-03
                   6.04e-03 -5.95e-03 -6.91e-03
                                                  7.66e-04
                                                            2.59e-03
                                                                      2.63e-03
## 203
         2.51e-02 -8.69e-03 -3.44e-02 -2.02e-03 -4.13e-03 -5.90e-03 -2.44e-02
##
   204
         2.87e-02
                   4.27e-03
                             1.63e-03 -5.36e-03 -3.58e-03 -1.28e-02 -2.73e-03
## 205
        -6.13e-03 -4.78e-02 -5.72e-03
                                       1.09e-02 3.92e-02
                                                            1.09e-01 -3.16e-02
                                       4.54e-02 -1.28e-01
        -1.50e-02 -7.35e-02
##
   206
                             6.75e-03
                                                            1.50e-01 -3.51e-02
## 207
        -3.67e-03
                   3.25e-02
                             1.42e-03 -8.24e-03 -1.34e-02
                                                            1.16e-02 -2.18e-02
## 208
         6.36e-03 -1.16e-02 -2.90e-02 -1.11e-03 3.70e-03 -2.58e-02
                                                                      1.11e-02
## 209
                   4.80e-04 -1.12e-03 -1.33e-03
         5.75e-04
                                                 3.34e-04 -7.35e-05
                                                                      5.79e-04
## 210
        -4.70e-03
                   1.67e-03
                             4.26e-04
                                       2.04e-03 -2.48e-03 -4.99e-03
                                                                       5.91e-03
## 211
         1.23e-01 -5.77e-02
                             8.00e-03
                                       4.22e-02 5.15e-02 -4.05e-02
                                                                      8.08e-02
## 212
        -6.85e-04
                   3.47e-03
                             8.92e-03
                                       1.02e-02 -4.42e-04
                                                            4.57e-03 -1.19e-03
## 213
                                       4.61e-04 -1.35e-02 -1.94e-02 -1.67e-02
         5.87e-03
                   6.05e-03 -1.75e-02
## 214
        -2.57e-03 -9.80e-03 -9.00e-04 -2.39e-03 -8.79e-03
                                                                      3.28e-03
                                                            7.63e-04
## 215
         2.27e-02 -2.93e-02 -8.83e-03
                                       1.06e-02 3.05e-02 -3.43e-02
                                                                      5.15e-02
## 216
         1.77e-02
                  3.47e-03
                             1.77e-03 -4.45e-03 -2.47e-03
                                                            4.12e-03 -2.11e-02
## 217
         7.40e-02 -2.17e-02
                             5.59e-02
                                        3.81e-04 -3.95e-02
                                                            8.54e-02
                                                                      1.46e-02
## 218
         3.20e-02 -4.01e-02 -3.62e-03
                                       2.55e-02 3.56e-02 -6.52e-02
                                                                      2.41e-02
## 219
        -3.13e-03 -3.13e-05 1.00e-02 1.10e-02 -3.48e-03 1.60e-03 -4.25e-03
```

```
## 220
        -2.18e-03 6.55e-03 2.13e-05 1.12e-03
                                                 3.17e-03 -2.43e-03
                                                 1.91e-04 -5.39e-05
## 221
        -1.01e-04 -4.66e-05 -1.17e-06
                                       5.11e-05
                                                                      1.31e-04
## 222
        -9.20e-03
                  4.07e-03 -5.44e-04 -6.52e-03
                                                 2.51e-02
                                                           9.96e-03 -4.98e-03
         4.44e-03 -8.41e-03 -2.19e-02 -1.02e-03
## 223
                                                 6.87e-03 -4.99e-03
                                                                      1.21e-02
## 224
         1.69e-03 -3.80e-04 8.56e-05
                                       9.65e-04 -3.33e-03 -1.50e-03 -2.84e-03
## 225
        -6.98e-03
                   1.42e-03
                             1.14e-02
                                       1.33e-02 -2.09e-03
                                                            5.41e-03 -1.25e-03
## 226
         4.02e-03 -1.12e-02 -2.99e-04 -1.50e-03 5.13e-03
                                                            2.26e-03 -9.48e-04
## 227
        -3.32e-03
                   1.03e-03 -1.17e-02 -1.17e-03 1.09e-02
                                                            5.24e-03
                                                                      1.32e-02
## 228
                  7.26e-03 -9.08e-03 -8.94e-05 -9.49e-03
                                                            7.59e-03
                                                                      5.22e-03
## 229
         5.60e-03 -1.10e-03 -5.52e-03 -1.18e-04 -1.99e-03
                                                            4.02e-03 -1.19e-03
## 230
         2.44e-02 -9.87e-03 -2.28e-03
                                       1.73e-02 1.11e-02
                                                            4.50e-02
                                                                      8.01e-03
## 231
         9.47e-03 -3.60e-02 -1.54e-03 -6.44e-03 -1.67e-02
                                                            9.20e-03 -3.35e-03
## 232
        -6.70e-03 4.71e-04 9.06e-04
                                       7.96e-03 -1.28e-02 -1.06e-02
                                                                      3.86e-03
         4.38e-03 -2.00e-02 -4.58e-04 -2.52e-03 -5.55e-05
## 233
                                                            2.06e-03
                                                                      3.67e-03
## 234
         1.54e-03 -1.82e-02 -1.10e-04
                                       6.07e-03 -2.02e-03 -1.67e-02
                                                                      2.52e-02
## 235
         5.83e-02 -2.29e-02 -7.58e-03
                                       1.61e-02 -1.13e-02
                                                            2.96e-02
                                                                      1.33e-02
## 236
        -1.11e-02 -8.61e-04
                             5.68e-05
                                       1.67e-03
                                                 1.49e-03
                                                            3.83e-03
                                                                      5.98e-03
## 237
         4.04e-02 -5.39e-02 -5.75e-03
                                       2.31e-02 -5.89e-02 -6.49e-02 -1.14e-01
## 238
         4.49e-03 -6.90e-03
                             6.60e-02
                                       7.17e-02 -1.18e-02
                                                            2.39e-02
                                                                      4.22e-02
                             2.89e-04 -2.25e-03 -1.12e-02
## 239
        -5.10e-03
                   8.52e-04
                                                            3.58e-03 -1.70e-03
## 240
         7.13e-02
                   7.77e-03 -2.63e-03
                                       1.50e-02 -3.01e-02 -4.07e-02
                                                                      4.73e-02
## 241
        -9.21e-04
                   5.79e-04
                             8.15e-05
                                       4.53e-04 1.26e-03 -8.31e-04
                                                                      2.30e-04
                                       3.12e-03 -3.48e-04 -2.06e-03 -4.61e-04
## 242
         9.88e-04
                   1.34e-04
                             2.70e-03
## 243
        -7.56e-03
                   7.15e-03 -7.92e-04 -6.33e-03 -1.70e-02 -1.34e-02 -2.16e-03
## 244
         2.94e-03 -1.90e-03 -4.26e-04 -1.70e-03 -2.63e-03 -3.68e-03
## 245
        -1.33e-02 -2.65e-03 -2.17e-03
                                       3.04e-03 -1.70e-02 -1.27e-02
                                                                      6.98e-03
## 246
        -2.41e-03
                  5.18e-03 -1.34e-02 -2.36e-04 -1.11e-02
                                                           4.89e-03
                                                                      5.46e-03
                                                           4.14e-03 -2.97e-03
## 247
        -7.02e-03 -4.46e-03 -5.98e-04 -4.13e-03 -1.13e-04
                                                            4.53e-03 -5.90e-03
## 248
        -3.09e-03
                   2.61e-03 -8.82e-05 -1.83e-03 3.99e-03
## 249
        -2.60e-02
                   1.63e-02 1.37e-03 -2.78e-03 -6.32e-03
                                                            1.48e-02 -5.98e-03
## 250
        9.53e-03 -9.14e-03 -9.22e-03 6.35e-04 -6.20e-03
                                                            2.12e-03
                                                                     1.01e-02
                                                            9.23e-03 -9.94e-02
## 251
         6.33e-02 -6.76e-02 8.70e-02 -2.06e-03 -5.49e-02
## 252
         2.12e-02
                   7.45e-03 -2.41e-02 -2.10e-03 8.74e-03
                                                            1.62e-02 -7.19e-03
## 253
         5.40e-03
                   4.12e-03 -2.20e-04 -5.47e-03
                                                 3.26e-03 -8.18e-03 -3.51e-03
## 254
         2.43e-02 -2.23e-02
                             3.49e-03 -6.05e-03 -8.71e-03
                                                          -2.67e-02 -2.76e-02
## 255
        -3.68e-04 -1.83e-03
                             1.63e-04 8.84e-04
                                                 1.52e-03
                                                            2.37e-03
                                                                      1.86e-03
                             8.37e-04 -4.34e-03
## 256
        -1.16e-02
                  1.37e-02
                                                 3.31e-03
                                                            1.28e-02
                                                                      1.89e-02
## 257
        -2.01e-02 -2.62e-02 -2.90e-04 -1.29e-02
                                                 3.08e-02
                                                            2.07e-02 -2.31e-02
## 258
        -5.84e-03 -2.55e-03 1.28e-03
                                       4.93e-03
                                                 1.34e-02 -6.69e-03 -1.28e-02
## 259
         1.48e-03 -4.60e-03 -7.83e-05 -5.57e-04 -2.06e-05
                                                            1.36e-03 -4.80e-04
## 260
         2.76e-02
                  4.88e-03 6.52e-02
                                       1.64e-03 -4.55e-02
                                                            1.25e-01
                                                                      1.50e-02
## 261
         6.15e-03
                   2.41e-03 -2.23e-02
                                       1.96e-03 -1.83e-02
                                                            7.19e-03
                                                                      5.83e-03
## 262
         3.57e-03 -1.30e-03 -1.62e-02 -1.85e-02 8.00e-03 -6.53e-03
                                                                      7.12e-03
## 263
        -1.24e-02
                   8.98e-03
                             2.49e-04 -8.67e-03
                                                 2.79e-02
                                                            1.95e-02 -2.29e-02
                            2.05e-03 -5.00e-03 2.23e-02
                   2.26e-02
## 264
        -4.78e-02
                                                            2.13e-02 -4.51e-03
## 265
         1.22e-01 -3.67e-02 -5.95e-03 1.40e-02 -3.62e-02 -4.26e-02 -7.48e-02
## 266
        -1.24e-02
                   2.42e-02 -2.98e-04 -6.60e-03 -1.74e-02
                                                            1.68e-02
                                                                      2.65e-02
## 267
                   1.01e-02 -2.01e-03 -1.02e-02 -2.72e-02 -2.43e-02
         1.43e-02
                                                                      7.50e-03
## 268
        -9.76e-04
                   1.09e-03
                            2.18e-03
                                      2.49e-03 3.29e-04
                                                            5.93e-04
                                                                      5.52e-04
        1.13e-02 -2.02e-03 2.80e-04 -2.59e-03 -9.62e-03 -7.91e-03 -1.30e-03
## 269
```

```
## 270
         4.50e-04 -4.09e-03 -4.19e-04 3.24e-03 1.10e-02 -2.29e-03
## 271
         7.15e-03 -3.76e-03 2.16e-03 -2.01e-03 5.60e-03
                                                           1.04e-02 -1.22e-02
## 272
         4.07e-02
                   9.98e-02 -1.37e-01 -1.60e-01 -1.63e-02
                                                            1.27e-01 -8.86e-02
        -8.90e-04 -4.92e-04 4.43e-05
                                       2.95e-04 4.32e-04 -1.00e-04
## 273
                                                                      9.01e-04
## 274
        -4.17e-03
                   1.26e-03 -4.79e-05
                                       1.05e-03 -4.64e-03 -1.13e-03
                                                                      1.08e-03
## 275
         8.25e-03
                   2.26e-02 -5.17e-04 -7.85e-03 -1.01e-02
                                                            1.11e-02 -2.14e-02
                                                            9.77e-03
## 276
        -5.90e-03
                   6.26e-03
                             2.48e-02
                                      2.90e-02 4.13e-03
                                                                      1.53e-02
## 277
         4.40e-03
                   7.82e-04 -1.20e-03 -4.14e-03 -8.09e-03 -1.21e-02
                                                                      4.68e-03
## 278
         2.89e-02 -1.53e-02 -3.79e-04 -1.74e-02 3.04e-02
                                                            1.18e-02
                                                                      4.94e-02
## 279
        -2.72e-03
                   1.11e-02 -1.74e-02 -1.47e-03 -1.66e-02
                                                            1.29e-02 -4.77e-03
## 280
         6.36e-04 -7.38e-04
                            1.72e-04
                                      1.26e-03 -5.91e-04 -2.31e-03 -5.01e-03
## 281
                             5.48e-04 -1.74e-03 -4.30e-03
         9.94e-04 -9.30e-03
                                                            5.90e-03 -1.58e-03
## 282
        -5.28e-04 -9.21e-05
                             7.51e-07
                                       1.50e-04 -1.95e-04 -4.28e-04 -1.97e-04
## 283
        -8.53e-03 9.59e-03 -1.75e-02 -7.34e-04 1.12e-02
                                                           1.28e-02
                                                                      7.29e-03
## 284
         1.61e-02 -2.98e-02
                             5.31e-05 -4.99e-03
                                                 1.79e-02 -1.36e-02
                                                                      8.49e-03
## 285
        -5.11e-02
                  4.13e-02 -5.52e-02
                                       5.24e-03
                                                 2.96e-02 -2.68e-03
                                                                      7.65e-02
## 286
         1.50e-04 -2.52e-04 -7.50e-05
                                       3.12e-04
                                                 1.13e-03 -6.86e-04
                                                                      7.93e-04
## 287
         8.55e-03 -2.50e-02 6.76e-02 -8.42e-04 -1.92e-03
                                                            8.88e-02
                                                                      6.14e-02
##
  288
        -1.97e-03
                  9.28e-05
                             2.02e-04
                                       9.54e-04 -7.31e-04
                                                            2.88e-03
                                                                      2.05e-03
## 289
         4.43e-02 -4.26e-02 -1.69e-03
                                       2.24e-02 7.65e-02
                                                            4.19e-02 -8.57e-02
## 290
                  3.55e-03 -3.11e-04 -3.60e-03 -5.80e-03
                                                            3.48e-04 -9.38e-03
         7.55e-03
## 291
        -2.34e-02 -1.52e-02 -4.15e-02
                                       6.95e-03
                                                 9.80e-03 -6.90e-03 -1.70e-03
## 292
        -1.50e-02 -3.24e-03 9.27e-04 -9.94e-03
                                                 6.67e-03
                                                            1.31e-02 -3.21e-03
## 293
        -9.56e-03 -2.51e-03 -2.26e-02 -8.32e-04
                                                 1.54e-02
                                                           7.18e-03 -1.98e-02
## 294
         3.64e-02 -5.26e-02 -3.38e-03
                                       2.38e-02
                                                 2.43e-02 -2.93e-02
                                                                      4.47e-02
## 295
        -1.42e-02 -2.62e-02 -4.00e-02
                                       3.11e-03 -5.61e-03
                                                            1.88e-03
                                                                      2.40e-02
## 296
         1.10e-02
                  3.53e-03 -1.23e-02
                                       2.67e-04 3.32e-03 -1.90e-02 -4.00e-03
## 297
         7.12e-02 -8.88e-02 -4.73e-03
                                       2.30e-02 -7.68e-02 -4.03e-02
                                                                     1.54e-02
## 298
                   8.66e-04 -2.40e-04 -1.36e-03 -2.78e-03 -1.75e-03 -9.38e-04
         1.67e-03
## 299
         1.42e-02 -4.45e-03 -1.22e-02
                                       7.35e-04 6.65e-03 -1.02e-02 -4.44e-03
## 300
         4.35e-03 -8.08e-03 -1.21e-03 -3.11e-03 -5.87e-03
                                                           3.89e-03 -5.26e-03
## 301
        -6.44e-04 -1.59e-04 -1.34e-05 2.38e-04 -9.35e-04 -6.78e-04
                                                                      1.09e-03
## 302
        -2.42e-02
                   3.53e-02 -3.35e-04 -1.17e-02 -4.14e-03 -4.51e-03 -2.84e-02
## 303
         8.48e-03
                   1.15e-02
                             1.39e-04 -5.97e-03 -2.59e-02 -1.18e-02
##
  304
        -2.62e-04
                   1.32e-03
                             1.76e-04 -4.28e-04
                                                 2.51e-03
                                                            5.18e-04
                                                                      7.45e-04
## 305
        -1.10e-02 -7.46e-03
                             6.21e-04 8.23e-03 9.94e-03 -1.71e-02
                                                                      4.06e-03
                   2.26e-05 -2.15e-03 -2.53e-03 5.97e-04
## 306
         8.81e-04
                                                            1.50e-03 -5.70e-04
## 307
        -7.78e-04
                   2.14e-03 -9.33e-05 -1.09e-03 -4.77e-04
                                                            9.20e-04 -3.23e-03
## 308
        -8.97e-03
                   1.15e-02 -4.73e-04 -4.99e-03 -1.25e-04 -3.02e-02 2.25e-02
## 309
                                                 1.29e-02
        -1.34e-02 -3.86e-02
                             3.10e-02
                                      3.56e-02
                                                            1.27e-02 -1.08e-02
## 310
         1.99e-03
                   6.05e-03
                             2.92e-03 -3.73e-03
                                                 6.80e-03
                                                            7.66e-03 -4.53e-03
## 311
        -5.40e-02
                   1.96e-02
                             1.46e-03 -6.92e-03
                                                 4.12e-02
                                                            2.14e-02
                                                                      3.83e-02
## 312
         1.50e-02
                   1.01e-03 -1.75e-02 -2.91e-03 -1.63e-02
                                                            7.63e-03
                                                                      1.91e-02
## 313
        -2.51e-02
                   2.54e-03 -1.58e-04 -1.22e-02
                                                 4.11e-02
                                                            2.21e-02 -3.62e-03
                   4.53e-03 -1.18e-02 6.65e-04 4.98e-03
                                                            3.71e-03 -1.10e-02
## 314
        -1.68e-03
## 315
         3.47e-03
                   1.26e-02
                             2.69e-03 -5.49e-03
                                                 3.62e-02 -2.09e-03 -6.22e-03
## 316
         5.98e-03 -1.66e-02 -1.54e-02 -9.48e-04 1.63e-02 -2.02e-03 -3.21e-03
## 317
                             2.01e-03 -4.99e-03 -1.50e-02
         4.90e-03 -1.17e-03
                                                           1.77e-02 -3.32e-03
## 318
        -3.29e-02
                   1.54e-01
                             8.23e-03
                                      3.76e-02 -2.34e-03 -1.57e-02 2.26e-02
        -3.07e-02 2.05e-02 4.93e-03 -1.05e-02 -3.95e-02 1.90e-02 -4.97e-03
## 319
```

```
## 320
                   2.28e-02
                             2.43e-03 -1.12e-02 1.37e-02 7.44e-03 -1.09e-04
        -2.78e-02
## 321
         5.13e-03
                   1.32e-02
                             2.14e-03 -7.95e-03 -3.26e-02
                                                            1.96e-02 -2.09e-02
## 322
        -1.11e-03 -1.24e-02
                             5.32e-04
                                       5.18e-03 -5.72e-03 -1.60e-03
                                                                      1.38e-02
## 323
                             2.21e-04 -1.18e-03 -1.37e-03
         2.36e-04
                   1.51e-03
                                                            3.05e-03
                                                                      4.71e-03
## 324
         7.04e-02 -2.83e-02 -2.07e-03
                                       1.62e-02
                                                 3.66e-02 -3.91e-02 -6.91e-02
## 325
        -4.52e-03 -5.15e-03
                             2.71e-04
                                       2.83e-03
                                                 6.54e-03
                                                            1.42e-02
                                                                      7.57e-03
## 326
         7.51e-03
                   5.61e-03 -1.58e-02 -2.50e-03 -1.10e-04
                                                            4.50e-03 -3.20e-03
## 327
         9.16e-04
                   7.20e-03 -1.91e-02 -1.24e-03
                                                 2.50e-03
                                                            3.09e-03 -3.62e-03
## 328
        -6.18e-03 -1.75e-02 -6.12e-03
                                       1.86e-02
                                                 4.53e-02 -5.47e-02
## 329
        -3.68e-02
                   3.23e-03 -3.60e-02 -1.66e-03
                                                 1.83e-02 -1.76e-03
                                                                      1.75e-02
## 330
        -4.02e-03
                   4.43e-04 3.00e-04
                                       3.26e-03
                                                 1.69e-02 -4.20e-03
                                                                      1.19e-02
## 331
         6.31e-03 -1.24e-02 -1.35e-02 -1.36e-03
                                                 5.33e-03 -1.46e-03 -1.70e-03
## 332
                  1.72e-02
                            4.56e-02
                                       5.34e-02
                                                 2.70e-02
                                                           1.97e-02 -2.91e-03
        -2.69e-02
                                       6.56e-04 -4.70e-03 -2.00e-02 -1.62e-02
## 333
        -4.15e-03 -1.91e-02 -1.87e-02
## 334
        -3.99e-03 -7.88e-03 -6.14e-04 -3.44e-03 -4.45e-03
                                                           2.47e-03 -2.51e-03
## 335
        -9.28e-03
                   6.69e-03 2.50e-04
                                      3.41e-03 -4.38e-03 -1.77e-03
## 336
        -1.25e-03 -2.94e-02 -3.09e-03 -1.36e-02 -1.98e-02
                                                           2.81e-02
                                                                      1.93e-02
## 337
         1.08e-01 -2.28e-02 -2.71e-03 1.30e-02 -4.90e-02 -1.04e-02 -3.10e-02
## 338
        -2.32e-02
                   2.20e-03 -1.15e-03 -1.26e-02 -3.50e-04 -4.42e-03
                                                                      1.59e-02
## 339
        -1.65e-03
                   1.05e-03 -1.74e-04 -8.45e-04 1.01e-03
                                                           5.95e-04 -1.53e-03
## 340
        -4.58e-04
                   3.10e-03 -1.09e-04 -1.35e-03 -2.51e-03
                                                           6.14e-04
                                                                      2.03e-03
## 341
        -4.71e-03
                   2.62e-03
                             1.03e-03 4.00e-03 5.65e-03 -3.00e-03
                                                                      8.26e-03
## 342
         6.74e-03 -3.60e-03 -1.09e-03 -5.43e-03 1.25e-02 -7.14e-03 -1.88e-03
## 343
        -2.83e-03
                   1.04e-02
                            8.53e-04 -9.48e-03 -2.08e-02
                                                           7.59e-03 -2.34e-04
## 344
        -2.14e-02
                   8.26e-03 -1.40e-03 -1.00e-02 3.37e-02 -4.83e-03 -2.01e-02
## 345
         4.71e-05
                   1.83e-04
                            6.87e-06 -1.66e-04 -5.55e-04
                                                           1.91e-04 -1.01e-04
## 346
        -2.25e-03
                   1.20e-02 -9.08e-04 -5.38e-03 -1.06e-02 -2.07e-02 -3.64e-03
         1.45e-02 -3.34e-02 5.71e-04 -1.19e-02 2.12e-02
## 347
                                                           1.25e-02 -3.24e-02
## 348
         3.95e-02 -4.00e-02 -2.70e-02 -2.43e-03 -2.57e-02
                                                           1.47e-02
                                                                      1.13e-02
## 349
        -3.23e-03 -2.37e-03 -2.26e-04 -6.25e-03 -1.45e-03 -2.98e-02
                                                                      2.39e-02
## 350
         4.08e-03 -1.65e-03 -7.96e-03 -9.40e-03 -9.70e-04 -3.29e-03
                                                                      3.84e-03
## 351
         6.14e-04 -3.13e-02 4.77e-04 -8.93e-03 1.36e-02
                                                            1.56e-02
                                                                      5.59e-05
## 352
        -3.10e-04
                   1.49e-03
                             2.84e-04 -1.58e-03 -3.62e-03
                                                            3.97e-03 -1.77e-03
## 353
         3.25e-03 -1.21e-02 -1.22e-03 -5.43e-03 1.43e-02 -3.70e-02
                                                                      1.94e-02
## 354
         2.82e-03
                   3.94e-03
                             8.81e-04 -6.04e-03 -1.77e-02
                                                            5.96e-03
                                                                      4.78e-04
## 355
                   7.21e-03
                             4.41e-02 5.05e-02 7.57e-03 -3.06e-02 -1.80e-02
         4.93e-03
                   3.01e-03 -3.74e-05 -1.15e-03 -6.85e-04
## 356
         2.19e-04
                                                            2.62e-03 -5.97e-04
## 357
         1.60e-02 -3.32e-03 -9.04e-04 -7.49e-03 -2.09e-02
                                                            1.42e-02
                                                                     2.25e-02
## 358
                             3.08e-02 -3.05e-03 1.95e-03 -2.70e-02 -4.21e-02
         4.10e-02 -3.23e-02
## 359
                                       2.59e-03 -9.71e-05
        -6.13e-04 -2.25e-04
                             2.23e-03
                                                           8.06e-04 -1.01e-03
## 360
        -4.32e-03
                   1.37e-03 -5.34e-03
                                       2.25e-05 2.38e-03
                                                            3.05e-03
                                                                     6.01e-03
## 361
        -7.95e-03
                   1.61e-02 -2.22e-04
                                       1.90e-03 -4.55e-03 -6.71e-03
                                                                      8.81e-03
## 362
         4.64e-03 -2.97e-03
                             8.13e-04 -1.38e-03 -4.12e-03 -5.68e-04 -5.29e-03
                                       5.47e-02 -4.06e-03
## 363
        -3.18e-02
                   2.75e-02
                             4.88e-02
                                                           2.49e-03
                                                                      2.89e-02
                   3.36e-02 -5.29e-03
                                       1.72e-02 -4.76e-02 -1.72e-02
## 364
         2.05e-02
                                                                      4.64e-02
## 365
         2.21e-03
                   7.16e-03
                             5.16e-04 -1.46e-03 -7.05e-04 -2.51e-04 -3.03e-03
## 366
        -2.13e-04
                   8.21e-03 -1.23e-02 -1.44e-02 4.38e-03 -1.14e-03
                                                                      5.72e-04
## 367
                   7.91e-02 7.60e-02
                                      1.78e-03 -7.80e-02 -2.62e-02 -8.26e-02
         1.66e-02
## 368
         2.21e-03 -1.38e-03 -9.95e-05 -7.79e-04 -1.08e-03 -3.28e-04 -2.33e-03
         2.85e-03 4.19e-02 -1.47e-03 1.89e-02 -2.81e-02 8.07e-02 5.99e-03
## 369
```

```
-4.23e-02 -9.52e-03 1.86e-03 -1.89e-02 3.32e-02 -2.28e-03 -2.42e-03
## 370
## 371
         5.84e-03 -7.26e-02 -6.19e-03
                                      1.79e-02 -9.24e-02
                                                            2.34e-02
                                                                      2.40e-02
## 372
         7.29e-03
                   6.80e-03 -3.46e-04 -6.70e-03 -1.63e-02 -2.38e-02 -1.55e-02
## 373
                   5.38e-03 -1.21e-03 -9.02e-03 1.17e-03
         4.19e-03
                                                            1.64e-04 -7.81e-03
## 374
        -5.88e-05
                   4.27e-04 -4.16e-05 -2.92e-04 -1.04e-03
                                                            5.31e-04 -7.68e-04
## 375
         3.60e-03
                   5.40e-03
                            9.47e-05 -3.97e-03
                                                  1.02e-02
                                                            6.14e-04
                                                                      4.43e-03
## 376
         1.63e-04
                   2.49e-03 -2.63e-04 -5.25e-03 -1.44e-02
                                                            2.46e-03
                                                                      8.21e-03
##
  377
        -6.30e-03
                   1.04e-02 -1.78e-04
                                       3.20e-03
                                                  6.78e-03
                                                            4.94e-03
                                                                      3.14e-03
## 378
                             1.08e-04 -7.28e-04
         1.14e-03 -4.76e-04
                                                  3.04e-03
                                                            2.06e-03 -3.03e-03
## 379
         4.78e-02 -1.25e-02 -1.53e-01 -1.71e-01
                                                  7.76e-02
                                                            6.09e-02 -9.47e-02
## 380
         9.15e-03 -1.05e-03
                             1.82e-03 -1.10e-03 -1.05e-02
                                                            7.58e-03 -1.73e-03
## 381
                   1.68e-02 -1.34e-05 -7.17e-03 -1.93e-02 -1.05e-03 -1.33e-02
         1.50e-02
## 382
                   6.05e-05
                             1.31e-05 -4.36e-03 1.82e-02
                                                            1.08e-02 -4.42e-03
         7.49e-04
## 383
         7.65e-03 -5.33e-02
                             7.46e-02 -2.74e-03 -2.70e-02 -4.26e-02
                                                                      2.28e-02
## 384
        -3.92e-02
                   2.71e-02
                             1.74e-03 -8.00e-03
                                                 2.94e-02 -5.71e-03
                                                                      3.50e-02
## 385
        -1.09e-02
                   4.38e-04 -5.33e-04 -7.85e-03 2.41e-02
                                                           1.60e-02
                                                                      1.23e-02
##
  386
        -2.57e-02 -4.73e-03
                             5.54e-02
                                       6.85e-04 -3.40e-02 -2.89e-02
                                                                      8.32e-03
## 387
                   2.93e-03 -2.71e-04 -3.11e-03 -4.81e-03 -3.40e-03 -7.02e-03
        -7.62e-04
                   1.94e-03
##
  388
        -6.95e-05
                             2.45e-04
                                       1.18e-03 -3.18e-04 -1.72e-03
                                                                      2.35e-03
## 389
         2.13e-03 -1.13e-02 -5.54e-04 -4.90e-03 1.64e-02
                                                            1.09e-02
                                                                      6.41e-03
## 390
                   4.16e-02
                             7.39e-03 -7.88e-03 -4.24e-02 -1.11e-03 -2.19e-03
        -4.31e-02
## 391
        -3.72e-03
                   5.49e-04 -3.58e-04 -2.30e-03 -2.70e-03 -1.83e-03
                                                                      6.88e-03
                             4.83e-04 -3.28e-03
## 392
         1.19e-03
                   1.19e-02
                                                  6.85e-03
                                                            1.02e-02
                                                                      4.76e-03
## 393
        -4.15e-03 -4.05e-03
                             1.61e-04 -9.42e-04
                                                  3.05e-04
                                                            2.86e-03
                                                                      8.41e-03
## 394
         1.25e-03
                   1.02e-04 -8.81e-03 -1.05e-02
                                                  4.72e-03 -2.40e-03
                                                                      1.01e-03
## 395
        -2.43e-02
                   8.54e-03
                             4.83e-04 -3.39e-03
                                                  7.92e-03
                                                            3.93e-03
                                                                      6.24e-03
## 396
         1.25e-02 -8.93e-03 -1.17e-02 -3.47e-04
                                                 1.09e-02 -1.19e-02 -1.11e-02
         1.95e-02 -1.69e-02 -7.19e-04 -7.50e-03 -2.27e-02
## 397
                                                            2.72e-03 -5.89e-04
## 398
                             3.09e-03 -1.40e-02 -1.09e-02
        -1.25e-02
                   3.10e-02
                                                            2.44e-02
                                                                      2.65e-02
## 399
        -8.00e-03
                   1.08e-02
                             5.40e-02
                                       6.01e-02 -1.16e-02 -3.42e-02
                                                                      1.76e-02
## 400
                   2.07e-03 -4.37e-05 -5.81e-03 1.84e-02
        -1.08e-02
                                                            1.66e-02 -2.06e-02
## 401
                   4.62e-03 -1.78e-02
                                       1.29e-05 -1.39e-02
                                                            1.26e-02
         4.10e-03
                                                                      1.03e-02
## 402
         7.78e-05 -2.52e-04
                             3.67e-04 -1.12e-04 -9.37e-06 -1.77e-04
                                                                      1.10e-04
## 403
        -3.18e-03
                   3.54e-03
                             3.41e-05 -8.06e-03 -1.51e-02 -8.15e-03
## 404
        -2.19e-03
                   3.89e-03 -6.70e-08
                                       1.49e-03 -1.65e-03 -4.71e-03 -2.95e-03
## 405
                   9.51e-03 -6.97e-04 -5.16e-03 -1.29e-02 -8.82e-03 -2.96e-03
         2.34e-04
## 406
         8.23e-02 -7.96e-02 -6.50e-03
                                       1.23e-02 -2.02e-02 -4.46e-02 -8.90e-02
## 407
        -4.33e-03
                   3.39e-03 1.74e-03 -2.07e-03
                                                 1.32e-02
                                                           8.64e-03 -9.58e-03
## 408
         3.46e-03 -1.13e-02 -1.41e-04 -3.55e-03
                                                  1.45e-02 -8.81e-05
                                                                      1.21e-02
## 409
         1.23e-02 -7.80e-03 -9.22e-04 2.20e-03
                                                  1.74e-02 -6.19e-03
                                                                      1.57e-02
## 410
        -1.35e-03
                   8.06e-03 -2.24e-02 -2.68e-04
                                                  1.35e-02 -3.94e-02
                                                                      2.46e-02
## 411
        -1.74e-02
                   1.61e-02 -1.30e-03 -9.50e-03
                                                  1.95e-02
                                                            1.45e-02 -4.78e-03
## 412
        -1.85e-02 -1.41e-02
                            7.95e-04 -3.31e-03
                                                  7.73e-03
                                                            2.58e-03
                                                                      1.70e-02
## 413
        -5.69e-03
                   2.68e-03
                             7.20e-04
                                       3.90e-03
                                                  1.11e-02
                                                            7.49e-03
                                                                      2.34e-03
## 414
         1.03e-02 -7.73e-03 -8.20e-03 -7.68e-04 -8.01e-03 -1.28e-02 -6.56e-03
## 415
         3.65e-02 -4.81e-02 -6.43e-03
                                       1.33e-02 7.34e-02 -4.13e-02 -7.33e-02
## 416
         8.50e-02
                  3.28e-02
                             9.09e-02
                                       1.52e-02 -7.23e-02 -1.75e-02
                                                                      6.69e-02
## 417
         4.12e-02 -2.52e-02 -2.87e-02 -1.19e-03 -3.40e-02 1.98e-02 -2.18e-02
## 418
        -2.42e-02 -4.68e-03
                            1.79e-03
                                       8.56e-03 3.11e-02 -2.15e-02
                                                                      6.47e-03
## 419
         2.95e-03 1.14e-02 -2.77e-03 -9.96e-03 -1.72e-02 -2.44e-02
```

```
## 420
         2.95e-03 -1.56e-03 -3.80e-03 -4.43e-03 1.82e-03 -1.31e-03
                                                                       5.16e-04
## 421
         1.18e-03
                   3.74e-03 -3.93e-04 -2.00e-03 -2.45e-03
                                                            3.37e-03
                                                                       1.98e-03
## 422
         4.94e-03 -4.19e-02
                             2.21e-03
                                        2.69e-02 -5.63e-02
                                                            1.21e-01
                                                                       2.02e-02
## 423
                                       2.45e-02 -2.89e-02 -3.80e-02 -8.64e-02
         7.76e-02 -7.01e-02 -3.05e-03
## 424
        -4.68e-03
                   3.57e-03 1.09e-02
                                        1.27e-02 -6.67e-03 -6.35e-03 -8.61e-04
## 425
        -1.13e-02
                   1.59e-03 -1.86e-04 -4.04e-03 1.61e-02 -2.36e-02
                                                                       1.41e-02
## 426
         1.03e-02 -5.63e-03 -9.84e-04 -7.55e-03 -1.43e-02 -3.76e-02
                                                                      8.31e-03
## 427
        -1.10e-02
                   5.78e-03
                             1.50e-02
                                       1.68e-02 -4.43e-03
                                                            5.13e-03 -1.35e-03
## 428
         2.76e-02 -3.04e-02 -1.86e-02 -2.62e-03 -2.30e-02 -2.70e-02 -2.57e-03
## 429
        -3.07e-04
                   2.23e-04 -6.56e-05
                                       9.58e-04 8.03e-04 -1.83e-03 -3.27e-03
## 430
        -8.48e-03
                   3.50e-03
                             4.33e-04 -3.95e-04 -8.73e-04
                                                            3.16e-03
                                                                      5.89e-03
## 431
        -3.01e-02 -1.81e-02 -3.56e-03 -1.67e-02
                                                 3.97e-02 -5.16e-02 -3.32e-02
## 432
        -1.65e-03 -1.22e-02
                             1.09e-03 -3.34e-03 5.46e-03
                                                            8.89e-04 -1.44e-03
## 433
        -1.15e-03
                  1.91e-03 -1.51e-04 -1.28e-03 -2.86e-03
                                                            1.70e-03 -2.60e-03
## 434
         2.50e-02 -7.95e-03 -2.13e-04 -6.18e-03 -1.01e-02
                                                            1.04e-03 -3.24e-03
## 435
        -1.30e-02 -6.58e-03
                             1.94e-03
                                        6.03e-03
                                                  1.05e-02
                                                            2.27e-04
                                                                      2.16e-03
## 436
        -4.18e-03 -5.99e-02 -6.46e-03
                                        1.78e-02
                                                  7.27e-02
                                                            5.45e-02 -5.06e-02
## 437
         1.12e-01 -6.05e-03
                             8.47e-03
                                        4.07e-02 -3.01e-02
                                                            1.73e-02 -1.02e-01
## 438
        -8.76e-03
                   1.24e-03
                             4.60e-04 -6.60e-03
                                                 1.45e-02
                                                            1.91e-03 -2.02e-02
## 439
         1.23e-02
                   3.41e-03
                             8.24e-04 -4.80e-03 -1.49e-02 -9.87e-03 -1.37e-02
## 440
         4.59e-02 -7.40e-02
                             7.58e-02 -6.83e-03 -4.11e-02
                                                            7.65e-02 -8.43e-02
## 441
         1.66e-02 -2.02e-02
                             6.24e-02
                                        2.16e-03
                                                 2.08e-02
                                                            7.57e-02 -3.64e-02
## 442
         1.64e-02 -1.19e-02 -1.84e-02
                                        6.13e-04 -2.14e-02
                                                            7.91e-03
                                                                       7.54e-03
## 443
        -2.07e-02 -3.09e-03
                             3.21e-02
                                        3.56e-02
                                                  2.56e-03 -1.41e-03
                                                                       8.85e-03
## 444
         1.46e-02 -6.58e-02
                             7.44e-02
                                        6.03e-04
                                                 7.93e-02 -2.90e-02
                                                                       2.15e-02
## 445
        -3.36e-04
                   2.27e-03
                            -6.00e-05
                                        8.51e-04 -2.92e-03 -1.77e-03
                                                                     -1.37e-03
                                                                       1.18e-02
## 446
         5.72e-03
                   4.87e-03
                             3.29e-04 -2.45e-03 -5.42e-03 -8.89e-03
                                                            7.76e-04
## 447
         2.51e-03
                   1.41e-03 -1.30e-02 -1.47e-02 -5.88e-03
                                                                       6.44e-03
## 448
        -1.07e-05
                   2.99e-05
                             3.63e-06 -1.32e-05
                                                  1.98e-05
                                                            4.33e-05
                                                                       2.48e-05
## 449
         1.40e-03
                   1.49e-03
                             1.67e-04 -1.85e-03
                                                  3.85e-03
                                                            1.66e-03
                                                                       2.17e-03
## 450
        -3.16e-03 -7.35e-03 -1.08e-02
                                       8.02e-04
                                                  6.78e-03 -1.12e-04 -2.90e-03
                                                            1.70e-02
## 451
                             3.31e-03 -6.26e-03 -2.51e-03
         9.02e-03
                   1.22e-02
                                                                      1.66e-02
## 452
         2.06e-02 -2.04e-02 -1.61e-03 -1.10e-02
                                                 2.68e-02 -3.30e-02 -2.29e-02
## 453
        -1.46e-02
                   1.21e-02
                             6.89e-04
                                        3.83e-03 -4.53e-03 -7.35e-03
                                                                      8.89e-03
## 454
         7.29e-02 -5.52e-02
                             5.36e-02 -2.72e-03 -4.88e-02
                                                            3.97e-02 -3.34e-02
## 455
        -5.22e-05 -1.84e-04
                             1.14e-05
                                        1.16e-04 -2.77e-04
                                                            2.49e-04
                                                                      2.09e-04
        -8.71e-03 -2.32e-03
## 456
                             7.25e-04
                                        2.98e-03
                                                 1.23e-03 -5.94e-03 -8.53e-03
## 457
        -1.15e-03
                   2.24e-03 -6.51e-04 -1.89e-03
                                                  1.43e-03
                                                            6.33e-04 -9.81e-04
## 458
         2.57e-02 -4.49e-02
                             3.79e-02 -2.88e-03 4.32e-02 -1.66e-02 -2.43e-02
## 459
                             3.39e-02
        -3.03e-02
                   1.33e-02
                                       4.03e-02 -9.94e-03 -3.41e-02 -4.01e-03
## 460
        -3.18e-02 -2.54e-02
                             6.23e-02
                                       7.14e-02
                                                  1.57e-02
                                                            2.33e-02
                                                                       4.20e-02
## 461
        -1.81e-02
                   2.84e-02 -8.88e-04 -1.09e-02
                                                  1.73e-03 -4.62e-02
                                                                       3.03e-02
## 462
         9.24e-04 -9.50e-03
                             1.22e-04 -6.92e-03
                                                  2.17e-02
                                                            1.65e-02
                                                                       2.40e-02
## 463
         3.24e-03
                  4.01e-04
                             1.99e-04 -1.54e-03
                                                  4.55e-03 -5.21e-03
                                                                      -4.24e-03
## 464
         4.25e-02 -1.09e-02
                                       1.59e-02 -2.12e-02
                             1.55e-03
                                                            5.06e-02
                                                                       7.72e-03
## 465
         3.89e-03
                   2.04e-04
                             9.25e-06 -1.80e-03 -2.79e-04
                                                            3.87e-03
                                                                       2.74e-03
## 466
        -1.52e-02
                   1.89e-02 -1.74e-02
                                       4.19e-03 -4.75e-03 -1.48e-02
                                                                       2.02e-02
## 467
                   1.12e-05 -9.40e-07 -9.25e-06 -3.07e-05
         6.22e-06
                                                            2.59e-05
                                                                       1.97e-05
## 468
        -6.97e-03 -2.20e-03
                             1.45e-02
                                       1.64e-02 9.43e-03
                                                            8.82e-04
                                                                       9.66e-03
## 469
         8.06e-03 -1.43e-02 1.14e-05 -4.42e-03 -3.16e-03 4.31e-03 -9.20e-03
```

```
## 470
         3.46e-03 -3.02e-02 -2.29e-01 -2.68e-01 1.39e-01 1.35e-02
## 471
                   1.80e-02 -2.29e-02 -1.68e-04
        -6.37e-03
                                                 1.21e-02 -3.25e-02 -2.12e-02
## 472
         8.73e-04
                   1.97e-03
                             7.74e-05 -4.07e-04 -2.69e-03 -4.32e-04 -7.76e-04
## 473
        -1.32e-02 -3.99e-03
                             3.47e-04 -3.77e-03
                                                 1.09e-02 1.19e-02
                                                                     7.50e-03
## 474
         3.19e-03 -2.74e-04 -2.06e-04 -1.38e-03 -3.33e-03 -3.20e-03 -3.03e-03
## 475
         4.85e-03
                   3.04e-02
                             4.71e-03 -4.61e-03
                                                 9.49e-03 -3.49e-02
                                                                      1.42e-02
## 476
         1.00e-02
                   1.59e-02 -9.00e-04 -8.07e-03
                                                 2.85e-03 -3.81e-02
                                                                      2.43e-02
## 477
         1.05e-02
                   1.54e-02 -2.07e-03 -8.64e-03 -5.55e-04 -1.55e-02 -2.36e-02
## 478
         6.60e-03
                   1.42e-03 -1.69e-02 1.66e-03 -2.02e-02
                                                           1.09e-02
## 479
        -1.22e-02
                   1.12e-02
                             8.36e-04 -3.25e-03
                                                 3.96e-03 -4.96e-03
                                                                      5.94e-03
## 480
         2.70e-02 -5.73e-02
                             5.21e-02 -5.82e-03 5.15e-02 -1.43e-02 -7.16e-02
## 481
                             7.13e-02
                                       1.62e-03 -3.57e-02
         1.15e-03
                   8.65e-03
                                                            1.65e-02 -2.82e-02
## 482
        -1.21e-02 -4.28e-03
                             2.74e-03 -7.11e-03
                                                 3.47e-02
                                                            2.46e-02
                                                                      1.76e-02
## 483
         8.35e-02 -5.20e-02
                             7.53e-03
                                       3.59e-02
                                                  8.26e-02
                                                            2.21e-02 -4.09e-02
## 484
        -1.46e-02 -3.63e-04 -8.93e-04 -1.47e-02
                                                 1.20e-02 -4.90e-02
                                                                      4.03e-02
## 485
        -9.52e-03 -7.72e-03
                             1.88e-04
                                       3.60e-03 -5.34e-03 -3.08e-03 -9.56e-03
## 486
        -3.31e-02
                   1.45e-02 -1.20e-03 -9.53e-03
                                                 8.25e-04
                                                            6.40e-03
                                                                      2.71e-02
## 487
                   2.31e-02
                            4.83e-03 -7.31e-04 1.66e-02
                                                            1.55e-02 -2.36e-02
        -2.20e-02
## 488
        -9.31e-03
                   2.56e-02 -9.87e-05 -8.99e-03 -1.27e-02
                                                            1.78e-02 -2.50e-02
## 489
        -3.15e-04
                   2.53e-04 -1.10e-05
                                       1.29e-04 -1.28e-04 -3.01e-04
                                                                      9.58e-05
## 490
                   1.26e-02 -4.92e-06 -7.29e-03 5.11e-03
                                                            5.55e-03
        -2.17e-02
                                                                      1.46e-02
## 491
        -3.11e-02 -8.97e-03 1.16e-03 -7.64e-03 2.41e-02
                                                            2.18e-02 -6.19e-03
## 492
         1.88e-02 -1.77e-02 -2.16e-02 -1.69e-03 -6.48e-03
                                                            7.14e-04 -1.52e-02
## 493
        -9.76e-03 -1.03e-03 -2.02e-04 -1.17e-03 -4.59e-03
                                                            4.37e-03 -5.68e-03
        -6.57e-03 -2.20e-02 -2.04e-04 -7.41e-03 -1.66e-02
## 494
                                                            1.33e-02
                                                                      2.81e-02
## 495
         1.03e-03 -1.90e-04
                             2.98e-04 -1.05e-02
                                                 2.95e-02 -1.27e-02 -2.97e-03
## 496
         3.97e-02 -5.22e-02
                             3.46e-03
                                       3.07e-02
                                                 1.07e-01 -5.55e-02
## 497
        -2.01e-02
                   2.63e-02
                             4.55e-04 -9.70e-03 -3.29e-02 -4.01e-02 -5.27e-03
## 498
        -7.22e-04 -1.51e-03 -1.91e-04
                                      1.93e-04
                                                 1.36e-03 -7.97e-04
                                                                      1.22e-03
## 499
        -5.12e-03
                   2.26e-02
                             3.45e-04 -6.48e-03
                                                  8.91e-03
                                                            7.30e-03
                                                                      2.30e-02
## 500
        -6.95e-04 -5.72e-04 -4.63e-04 -2.42e-03 -4.65e-03 -3.03e-04 -8.31e-04
## 501
                   2.97e-03
                             2.64e-03 -6.55e-03
                                                            3.22e-03
        -7.40e-03
                                                 1.13e-02
                                                                      3.55e-02
## 502
         8.82e-03 -6.70e-04 -2.05e-02 -2.14e-03
                                                  2.33e-02
                                                            1.09e-02 -5.38e-03
## 503
         4.97e-03 -1.04e-02 -1.45e-04 -2.42e-03
                                                 5.76e-03
                                                            4.11e-03 -5.76e-03
## 504
        -3.19e-03
                   6.59e-04
                             1.18e-04 -1.47e-03 -4.77e-03
                                                            3.33e-03
                                                                      2.51e-03
## 505
                   9.46e-02
                             7.40e-02 -7.71e-04 -6.06e-02
        -3.29e-02
                                                            1.01e-01 -7.56e-02
                             2.60e-03 -5.84e-03 -7.34e-03
## 506
         1.95e-03
                   1.56e-02
                                                            7.90e-03 -3.34e-03
## 507
        -1.19e-04
                   2.82e-04
                             4.89e-05
                                       4.54e-04 -6.67e-04 -6.90e-04
                                                                      1.79e-04
## 508
        -7.05e-03
                   6.98e-03
                             1.78e-04 -4.34e-03 -1.05e-02
                                                            8.79e-03
                                                                      6.43e-03
## 509
                   1.11e-02 -8.94e-04 -1.25e-02 -1.63e-02
                                                            7.05e-03
        -1.80e-02
                                                                      1.50e-02
## 510
        -5.89e-04
                   1.41e-03 -2.49e-03 -3.00e-04 -1.51e-03
                                                            6.93e-04 -5.48e-04
## 511
         8.01e-03 -8.76e-03 -2.29e-04 -1.83e-03 4.59e-03 -5.71e-03 -1.12e-03
## 512
        -4.39e-02
                   1.15e-02
                             7.14e-04 -1.07e-02 -7.03e-03 -4.80e-03
                                                                      2.43e-02
## 513
        -3.12e-02
                   1.44e-02
                             5.61e-04 -1.20e-02 -2.36e-02
                                                            1.61e-02
                                                                      4.01e-02
                                                            8.59e-03
## 514
         3.69e-02 -5.88e-02 -5.84e-03
                                       1.85e-02 7.08e-02
                                                                      4.12e-02
## 515
         3.87e-02 -3.32e-03
                             3.62e-02 -3.59e-03
                                                  2.81e-02 -2.26e-02 -5.52e-02
## 516
        -7.24e-03 -5.41e-03
                             1.71e-02
                                       1.99e-02
                                                 1.20e-03
                                                            5.84e-03 -1.63e-03
## 517
                             1.63e-03 -3.05e-03 -2.65e-03
        -4.46e-03
                   1.81e-02
                                                            7.65e-03
                                                                     1.95e-02
## 518
         1.13e-03
                   1.11e-03 -2.17e-05 -4.03e-04 9.34e-05
                                                            2.60e-04 -1.22e-03
         2.94e-03 -3.51e-03 -5.66e-04 -2.86e-03 6.19e-03 1.43e-03 -5.34e-03
## 519
```

```
## 520
        -6.86e-03 1.01e-02 -1.98e-02 -3.29e-03 2.82e-05
                                                           1.32e-02
## 521
         1.26e-04 -1.31e-03 8.30e-05 -2.06e-04 3.85e-05
                                                           7.24e-04
                                                                     6.58e-04
## 522
         1.67e-02
                  7.55e-03 -1.10e-02 -7.34e-04 -1.02e-02
                                                           7.41e-03 -8.71e-03
## 523
                             1.36e-05 -1.49e-03 -4.04e-03 -1.24e-03 -5.04e-03
         6.77e-03 -3.38e-03
## 524
         1.41e-02 -1.02e-02
                             1.97e-03 -2.06e-03 -9.48e-03 -2.25e-02 -1.04e-02
         5.52e-03 -2.67e-03 -1.75e-03 -7.51e-03 -2.18e-02 -9.07e-04 -1.11e-02
## 525
## 526
         4.73e-02 -6.05e-02 -2.77e-03 2.49e-02 -8.40e-03 -4.45e-02 -9.07e-02
## 527
        -4.94e-03
                   6.06e-03
                             1.00e-03 -7.00e-03 8.93e-03
                                                           1.23e-02 -1.62e-02
## 528
        -4.83e-04
                   4.05e-04
                             5.06e-07 -6.48e-04 -4.76e-04 -2.35e-04 -1.72e-03
## 529
         1.12e-03
                   4.66e-02
                             6.59e-02 -1.23e-02 -3.83e-02 -9.41e-03 -4.23e-02
## 530
        -2.70e-05 -3.42e-05
                             3.10e-06 -1.87e-05 -3.02e-06
                                                           4.39e-05
                                                                     3.53e-05
## 531
        -1.03e-03
                   1.59e-03
                             3.50e-05 -4.82e-04 6.80e-04
                                                           1.62e-03 -3.40e-04
## 532
                   1.49e-03 -2.65e-04 -2.60e-03 -3.06e-03
                                                           3.00e-03 -8.56e-04
         1.05e-04
        -3.56e-03 -3.24e-03 4.24e-04 -2.30e-03 1.23e-03 -4.61e-03 -7.38e-03
## 533
## 534
                   3.20e-03 -2.18e-02
                                      1.31e-03
                                                 9.49e-03
                                                           1.04e-02 -1.77e-02
         1.51e-03
## 535
        -1.61e-02 -1.05e-02 -1.83e-03 2.16e-03
                                                 2.15e-03 -3.90e-03
## 536
        -2.39e-03
                  4.69e-03 -1.36e-03 -5.93e-03
                                                 7.16e-03 -1.12e-03
                                                                     5.03e-03
## 537
         2.25e-02 -7.72e-02 -1.80e-03 -1.00e-02 -2.47e-02 -1.88e-02
                  9.28e-03 -1.38e-02 -1.72e-03 1.21e-02 9.49e-05 -1.11e-02
## 538
        -4.45e-03
## 539
         1.56e-03 -1.78e-03 4.17e-04 3.74e-03 -1.06e-02 -8.88e-03
                                                                     1.27e-02
## 540
         3.22e-03 -1.23e-02 -3.05e-04 -1.75e-03 5.25e-03 -6.79e-05 -5.18e-03
## 541
         7.86e-02 -3.26e-02 -3.57e-03
                                      1.40e-02 -5.82e-03 -3.59e-02 -6.21e-02
## 542
                  1.33e-04 -3.32e-03 -4.03e-03 -1.35e-03 -2.41e-04 -1.97e-03
         1.73e-03
## 543
         2.31e-02 -1.93e-03
                             3.40e-03 -8.11e-03
                                                 3.63e-02
                                                           2.69e-02 -2.33e-03
## 544
        -6.33e-02 -4.47e-02
                             6.87e-02
                                      7.85e-02
                                                 2.16e-02 -5.52e-02
## 545
        -2.94e-03
                   7.41e-03 -2.45e-02 -1.08e-03
                                                 2.40e-02
                                                           1.53e-02 -2.23e-02
## 546
         7.07e-03
                  4.98e-03 -9.80e-04 -3.66e-03
                                                 4.78e-03 -9.90e-03 -2.34e-03
## 547
         5.88e-03 -1.99e-03
                            6.18e-05 -7.32e-03 -2.85e-02 -4.22e-03 -5.37e-03
                   6.25e-02
                             7.35e-02 1.94e-04
## 548
        -5.02e-02
                                                 1.29e-02
                                                           7.16e-02
                                                                     5.56e-03
## 549
         8.99e-03 -1.35e-02 -1.50e-02 -1.27e-03
                                                 7.32e-04 -7.85e-03 -1.23e-02
## 550
                             1.12e-03 -7.28e-03 -1.08e-02
        -4.56e-04
                  5.11e-03
                                                           1.41e-03
                                                                     1.12e-02
## 551
                  2.17e-02
                             1.25e-03 -5.16e-03 4.90e-03 -1.02e-03
        -1.88e-02
                                                                     1.15e-02
## 552
        -4.57e-03 -2.36e-04
                             3.86e-04 -1.15e-03
                                                7.57e-03
                                                           3.50e-03 -1.65e-03
## 553
        -3.19e-03
                   6.37e-04 -1.07e-03 2.32e-03 -2.18e-03 -2.15e-03
                                                                     2.78e-03
## 554
         2.46e-02 -3.45e-02 -5.77e-04 -1.41e-02 -1.29e-03
                                                           2.65e-02 -3.21e-02
## 555
                  1.80e-02 -1.99e-03 -8.76e-03 -8.51e-03
                                                           4.97e-03 -2.42e-02
        -3.22e-02
                   9.27e-04 -8.38e-04 -3.66e-03 -4.27e-03 -1.12e-03 -7.63e-03
## 556
         3.25e-03
## 557
         1.50e-03 -8.82e-04 4.91e-05 -3.96e-04 1.09e-03
                                                           5.03e-04 -1.11e-03
## 558
         4.30e-03 -4.98e-03 -9.42e-03 -1.10e-02 3.49e-03 -3.21e-03
                                                                     3.89e-03
## 559
                  7.06e-03 -2.04e-02 -6.59e-04
         4.75e-03
                                                 1.44e-02 -2.55e-02
                                                                     2.14e-02
## 560
        -1.36e-02 -8.57e-03 3.33e-03 -4.29e-03
                                                 3.60e-02
                                                           2.25e-02 -2.85e-02
## 561
        -1.88e-02
                   2.17e-03 -8.82e-04 -7.84e-03
                                                 2.43e-02
                                                           1.56e-03
                                                                     1.16e-02
## 562
         4.83e-03
                   2.91e-03 -6.70e-04 2.00e-03
                                                 2.70e-04 -3.46e-03
                                                                     2.53e-03
## 563
         2.94e-02 -1.68e-02 -8.60e-03
                                      2.08e-02 -4.11e-02 -5.81e-02
                                                                     5.84e-02
## 564
                   1.48e-02 -1.74e-03 -9.43e-03 -3.03e-03 -3.22e-02 -5.39e-03
         1.66e-03
## 565
        -2.16e-02 -4.13e-02 -2.75e-03 -1.24e-02 -1.35e-02
                                                          1.57e-02
                                                                     1.85e-02
## 566
        -1.14e-03
                   1.83e-02
                            1.69e-03 -6.83e-03 2.37e-02 -2.84e-03
                                                                     2.80e-02
                             5.78e-02 -3.84e-03 -5.02e-03
## 567
        -5.77e-02
                   9.48e-02
                                                           1.02e-01 -3.47e-02
## 568
         2.29e-03 -6.46e-04 -1.44e-04 -9.83e-04 2.33e-03
                                                           1.62e-03 -2.34e-03
        -5.18e-02 6.49e-02 -5.98e-03 9.44e-03 -2.07e-02 -6.17e-02 8.06e-02
## 569
```

```
-1.47e-02 -5.41e-03 2.92e-02 3.38e-02 -2.18e-02
                                                            3.70e-03
                                                                       1.97e-02
                   2.17e-02 -1.75e-02 -2.08e-02 -2.21e-03
## 571
        -5.04e-03
                                                            9.60e-03
                                                                       8.67e-03
## 572
        -4.64e-02
                   2.39e-02 -4.10e-02 -4.51e-03
                                                  1.58e-02
                                                            2.44e-02
                                                                       4.20e-02
## 573
                             7.46e-04 -5.37e-03
                                                  7.57e-03 -3.05e-02
        -1.55e-02
                   1.92e-02
                                                                       8.97e-03
## 574
         8.17e-02 -4.76e-02
                             5.24e-03
                                       2.85e-02
                                                  5.57e-02 -5.91e-03
                                                                       6.25e-02
## 575
         1.35e-03
                   3.31e-03
                             1.30e-03 -2.29e-03
                                                  1.27e-02
                                                            7.55e-03
                                                                       4.43e-03
## 576
         2.51e-02 -5.12e-02 -1.18e-03 -8.65e-03
                                                  1.91e-02 -2.22e-02 -1.88e-02
## 577
         1.14e-02
                   9.33e-03 -1.39e-02 -4.10e-04
                                                  2.47e-04
                                                            3.17e-03 -4.22e-03
## 578
                             4.54e-05 -1.21e-02
        -8.05e-03 -1.49e-02
                                                  1.78e-02 -2.55e-03 -2.95e-02
  579
        -2.05e-02
                   6.68e-03 -3.77e-02
                                       8.16e-03
                                                  4.12e-02
                                                            3.35e-02
                                                                      5.72e-02
##
## 580
        -3.49e-02 -1.17e-02
                             5.14e-04 -7.74e-03
                                                  3.68e-02
                                                            1.67e-02 -6.85e-03
## 581
        -3.72e-03 -6.82e-03 6.53e-05 -4.61e-03
                                                  1.31e-02
                                                            2.18e-03
                                                                      1.66e-02
## 582
                   6.25e-03 -1.24e-03 -5.07e-03 -2.72e-03
                                                            9.20e-03 -1.24e-02
        -7.23e-03
## 583
         3.80e-04 -2.02e-04 -3.27e-04 -1.48e-05
                                                  2.02e-05
                                                            2.45e-04 -6.49e-05
## 584
         6.00e-03 -7.17e-04 -5.00e-04 -3.36e-03 -6.85e-03
                                                            1.60e-03 -3.28e-03
## 585
         7.42e-04
                   3.68e-03 -1.32e-02 -1.96e-03
                                                  3.82e-03
                                                            1.38e-03
                                                                       5.19e-03
## 586
        -3.57e-02 -6.32e-02 -6.07e-03
                                        1.52e-02
                                                  5.39e-02 -2.91e-02
                                                                      9.09e-03
## 587
                   9.45e-03
                             3.02e-02
                                        3.49e-02 -9.09e-03 -7.45e-04 -2.55e-03
        -2.75e-02
                                                            4.57e-04
## 588
        -1.85e-02
                   1.52e-02
                             9.38e-04
                                        3.67e-03
                                                  8.42e-03
                                                                      7.90e-03
                                        1.15e-03 -6.05e-03 -7.98e-03
## 589
         2.60e-04 -8.43e-03 -1.08e-03
                                                                       4.31e-03
## 590
                   3.34e-04 -3.85e-03
                                        1.24e-02 6.37e-03 -3.85e-02 -3.67e-02
         7.84e-02
## 591
         1.20e-03 -2.89e-03 -2.32e-04
                                        1.40e-03 -6.55e-03 -5.31e-04
                                                                      1.08e-03
## 592
                   7.27e-03 -8.63e-04
                                        2.09e-02 -7.68e-02
         4.13e-02
                                                            4.28e-02 -7.86e-02
## 593
        -1.25e-02 -4.69e-04
                             2.30e-03 -1.07e-03 1.78e-02
                                                            8.57e-03 -6.53e-04
## 594
         2.37e-04
                   5.96e-05 -6.10e-06
                                       2.17e-04 -2.05e-04 -6.05e-04
                                                                       1.14e-04
## 595
        -7.26e-03 -3.95e-03
                             4.25e-05
                                       1.56e-03
                                                 3.51e-03
                                                            6.09e-03
                                                                       1.81e-03
## 596
         2.96e-02
                  7.46e-03 -1.53e-02
                                       1.44e-02 -7.20e-02 -5.23e-02
                                                                       5.63e-02
## 597
         1.10e-03 -8.38e-04
                             4.12e-04 -1.74e-03 -5.79e-03
                                                            4.11e-03 -5.32e-03
## 598
                             3.15e-04 -5.23e-03 -3.94e-03
         2.81e-03 -1.46e-02
                                                            1.31e-02 -1.30e-02
## 599
         6.54e-02 -3.44e-02 -1.13e-03
                                       2.39e-02 1.36e-02 -4.44e-02
                                                                      1.78e-02
## 600
                             1.95e-04 -3.00e-03 -5.22e-03 -4.56e-03 -1.85e-03
        -3.80e-03 -1.82e-03
## 601
                  1.03e-03 -5.98e-06 -4.60e-04 -4.36e-05
        -3.62e-04
                                                            8.23e-04 -3.22e-04
## 602
        -2.75e-02 -2.09e-02 -4.70e-02 -2.37e-03 -5.38e-04 -3.02e-02
                                                                       5.36e-02
## 603
                   4.65e-02 1.56e-03 -1.32e-02 -8.81e-03
                                                            3.07e-02 -7.31e-03
## 604
         7.02e-03 -5.65e-02 -1.59e-03 -1.10e-02
                                                 2.55e-02
                                                            1.76e-02
                                                                       1.37e-02
## 605
         6.37e-03 -1.25e-02 -1.03e-03 -6.71e-03 -4.24e-03 -3.00e-02
                                                                       7.65e-03
## 606
        -6.06e-02
                   3.32e-03 -4.27e-02 -2.64e-03
                                                 2.42e-02 -1.02e-02
                                                                       4.54e-02
## 607
         1.52e-02 -8.82e-03 -3.53e-02 -2.37e-03
                                                  2.71e-03 -2.21e-02 -1.10e-02
                                                  9.32e-02
## 608
        -2.33e-01
                   2.02e-01
                             1.60e-02
                                       6.14e-02
                                                            1.53e-02
                                                                      9.25e-03
## 609
                                       3.94e-02 -6.02e-02 -6.20e-02
        -3.10e-02
                   1.98e-01
                             3.43e-03
                                                                      9.24e-03
## 610
         6.95e-03
                   6.86e-03 -1.85e-04 -2.10e-03
                                                  6.05e-03 -5.05e-03
                                                                       3.40e-03
## 611
        -6.60e-03
                   9.50e-03 -9.56e-04 -5.76e-03
                                                  1.58e-02
                                                            4.26e-03 -1.56e-03
## 612
         1.40e-03
                   1.05e-03 -1.59e-05 -5.35e-04 -5.18e-04
                                                            2.65e-04 -3.52e-04
## 613
         1.18e-02
                   2.80e-02
                             2.04e-03 -1.03e-02
                                                  4.12e-03
                                                            3.02e-02
                                                                      2.03e-02
## 614
         3.96e-04 -1.05e-03 -1.77e-04 -1.68e-03
                                                  8.15e-04
                                                            3.68e-03 -2.26e-03
## 615
         2.03e-02 -6.15e-02
                             6.59e-02 -5.75e-03
                                                  7.31e-03 -3.27e-02
                                                                     1.24e-02
## 616
        -2.34e-03
                   5.49e-04
                             3.18e-03
                                       3.71e-03
                                                  1.30e-03
                                                            9.91e-04 -1.50e-03
                                       1.52e-03
## 617
                   1.37e-03
                             4.72e-05
                                                  5.43e-03
        -7.22e-04
                                                            8.35e-03 -5.21e-03
## 618
        -7.31e-03 -1.62e-02
                             4.89e-05 -5.03e-03
                                                  3.97e-03
                                                            6.66e-03 -1.45e-02
                             5.03e-03 -4.94e-03
## 619
        -5.77e-02 3.09e-02
                                                  4.14e-02 2.25e-02 4.08e-02
```

```
## 620
        -5.85e-04 -2.65e-04 1.05e-04 7.11e-04 -8.08e-04 -1.52e-03 -2.06e-03
## 621
        -5.22e-02 -2.15e-02 -2.47e-03 -1.58e-02 -5.05e-02 -7.73e-02 -5.95e-03
                   6.08e-03
## 622
        -5.12e-03
                             1.37e-03 -2.30e-03 -9.87e-04
                                                            9.55e-03
                                                                      6.64e-03
## 623
                   3.38e-03 -2.34e-04 -3.62e-03 1.23e-02 -2.80e-03
        -4.67e-03
                                                                      3.91e-03
## 624
        -2.10e-02
                   1.36e-02 -2.13e-02 -8.86e-04 -5.51e-03
                                                            6.52e-03
                                                                      8.34e-03
## 625
        -2.92e-03
                   1.85e-02
                             3.74e-03 -2.01e-03 9.25e-03
                                                            6.18e-03
                                                                      2.43e-02
## 626
         2.89e-03 -2.36e-03
                             3.95e-04 -4.30e-03 -2.31e-03 -2.95e-04 -1.36e-02
## 627
         7.98e-05
                   6.50e-04
                             8.64e-05 -2.23e-04 5.13e-04
                                                            2.18e-04 -3.46e-04
## 628
         3.10e-03
                   1.26e-03 -3.30e-03 1.58e-04 2.20e-04 -4.22e-03 -1.03e-03
## 629
         3.77e-03 -2.75e-04 -1.39e-03 -4.64e-03
                                                 9.05e-03 -6.62e-03 -9.31e-03
## 630
        -6.11e-03
                   4.75e-03 -9.43e-04 -4.91e-03 -8.01e-03 -8.33e-04
                                                                      5.19e-03
                   1.32e-02 -1.13e-03 -4.76e-03 -7.40e-03
## 631
        -7.05e-03
                                                            9.49e-03 -1.03e-02
## 632
         2.28e-02 -1.45e-02
                             2.04e-03 -5.30e-03 -3.74e-03
                                                            5.53e-03
                                                                      2.75e-02
## 633
         1.43e-03 -4.13e-02 -4.37e-02 1.47e-03 -4.62e-02
                                                            2.80e-02
                                                                      3.14e-02
## 634
         6.64e-05 -1.01e-02 -1.92e-03 -8.77e-03 -2.31e-02
                                                            4.09e-03
                                                                      2.84e-02
## 635
         5.32e-03
                   3.29e-02 2.99e-03 -7.33e-03 4.49e-02
                                                            2.73e-02 -6.72e-03
## 636
         3.76e-03
                   3.19e-03 -1.81e-04 -2.41e-03
                                                 3.04e-03
                                                            7.76e-04 -5.90e-03
                                                                      5.78e-02
## 637
        -3.55e-02 -9.30e-03 6.15e-02 6.29e-03 -7.36e-02
                                                            7.99e-02
## 638
         5.96e-03 -3.67e-04 -1.63e-02 -1.86e-02 -8.89e-03
                                                           -6.26e-03
                                                                      7.80e-03
## 639
        -5.79e-03
                   1.44e-02 -9.40e-05 -5.47e-03 5.45e-03
                                                            9.54e-03 -3.82e-03
## 640
         1.50e-03 -1.19e-02 -2.73e-04 -1.87e-03 -8.11e-03
                                                            4.28e-03 -8.42e-04
## 641
        -3.17e-02
                   1.76e-02
                             3.18e-02
                                       3.64e-02 -1.40e-02
                                                            8.91e-03
                                                                      1.90e-02
                   8.71e-03 -2.38e-02
## 642
        -1.76e-02
                                       1.51e-03 1.92e-02
                                                            9.59e-03
                                                                      1.21e-02
## 643
         6.98e-03 -1.81e-02 -1.68e-03 -7.73e-03
                                                 1.67e-02
                                                            1.08e-03
                                                                      8.59e-03
                             1.71e-03 -1.09e-03 -6.30e-03
## 644
         6.51e-03
                   3.43e-03
                                                            6.94e-03 -1.68e-03
## 645
         1.21e-02
                   9.49e-03
                             1.23e-03 -5.12e-03 -1.28e-02 -2.63e-03 -1.53e-02
## 646
         3.61e-02 -2.69e-02
                             1.08e-03
                                       2.76e-02 -6.23e-02 -5.31e-02 -4.16e-02
## 647
        -9.72e-04 -6.44e-04 -2.05e-04
                                       5.58e-04 4.65e-05 -5.58e-04 -2.93e-03
                  2.73e-03 -4.55e-04 -1.95e-03 1.52e-03 -8.27e-03 -5.42e-03
## 648
         7.57e-04
## 649
         4.83e-03 -4.91e-04 -1.52e-02
                                        5.76e-04 -1.07e-02 -1.72e-02 -3.66e-03
## 650
        -7.71e-03 -2.43e-03 -3.42e-04
                                       2.38e-03 -1.29e-02
                                                            1.17e-02
                                                                     9.02e-03
## 651
        -2.17e-03 -3.00e-03 -6.76e-03
                                       3.65e-04 5.31e-03
                                                            5.10e-03 -6.21e-03
## 652
         1.99e-02 -2.22e-02 -1.85e-04 -6.66e-03
                                                  1.70e-02
                                                            1.29e-02 -7.97e-04
## 653
        -3.41e-02 -1.52e-02
                             7.73e-02
                                       8.53e-02 -4.50e-02 -3.34e-02
                                                                      5.30e-02
## 654
        -1.00e-02 -3.20e-05
                             2.09e-02
                                       2.40e-02 -3.89e-03
                                                            6.28e-03
                                                                      1.22e-02
                                                                      5.53e-03
## 655
         1.35e-03 -6.65e-05
                             9.62e-05
                                       2.12e-03 7.05e-03 -4.11e-03
                             7.85e-04 -5.98e-03 -9.62e-03
## 656
         4.21e-03
                   1.90e-03
                                                            9.53e-03 -1.32e-02
## 657
        -1.04e-02
                   1.48e-02 -8.01e-05
                                       1.72e-02 -3.87e-02
                                                            6.29e-02 -5.06e-02
                   8.48e-03 -8.41e-04 -6.07e-03 -6.83e-03
## 658
        -8.87e-03
                                                            2.04e-03
                                                                      1.65e-02
## 659
        -1.08e-02 -4.87e-02
                                                            2.00e-03
                                                                      3.19e-02
                             4.00e-03 -1.03e-02 1.06e-02
## 660
         4.52e-03
                   6.00e-03
                             3.20e-04 -7.26e-03 -2.35e-03
                                                            8.89e-03
                                                                      2.39e-02
                                       1.05e-02 -4.17e-03 -4.71e-02
## 661
        -5.82e-02
                   2.37e-01
                             8.76e-02
                                                                      5.76e-02
## 662
         1.30e-02 -1.72e-02 -1.75e-03 -6.77e-03 1.51e-02
                                                            1.77e-03
                                                                      1.66e-02
         1.21e-01 -7.33e-02 -6.56e-04
## 663
                                       2.45e-02 -3.64e-02 -4.46e-02
                                                                      1.50e-02
                                       3.28e-02 9.69e-02
## 664
        -1.54e-02 -7.32e-02
                             4.00e-03
                                                            7.26e-02
                                                                      8.13e-02
## 665
         6.27e-03
                   7.60e-03
                             9.77e-04 -4.08e-03 -1.60e-02 -5.36e-03 -2.69e-03
## 666
         2.58e-02 -6.86e-02 -2.08e-03 -1.35e-02 -4.40e-02
                                                            2.05e-02 -2.61e-02
        -9.19e-03 -8.77e-02 -6.08e-03
                                       2.27e-02 -2.57e-02 -5.20e-02 -4.88e-02
## 667
## 668
         7.04e-02
                  4.13e-02
                             3.13e-03
                                       2.84e-02 3.05e-02 -4.57e-02 -4.86e-02
         2.98e-03 5.25e-03 -5.46e-04 -3.25e-03 -1.99e-03 6.08e-05 -1.81e-03
## 669
```

```
## 670
                   1.68e-02 -2.16e-03 1.58e-02
                                                  3.20e-02 -3.00e-02
                                                                      6.08e-02
         4.92e-03
## 671
                                                            1.25e-02
                                                                      1.19e-02
         3.05e-03
                   4.94e-03 -1.02e-04 -9.18e-03
                                                  7.79e-03
## 672
         2.30e-03 -1.04e-02 -1.54e-03 -8.34e-03
                                                  9.30e-03 -2.11e-03
                                                                      9.54e-03
## 673
         3.65e-03 -1.56e-02 -1.30e-03 -7.49e-03
                                                  1.07e-02 -9.86e-03 -4.33e-03
## 674
        -2.81e-02 -4.95e-03 4.00e-03 -1.12e-02 -4.50e-02
                                                            3.74e-02 -4.18e-03
## 675
        -7.74e-04 -2.09e-02 -1.36e-04 -6.34e-03 -1.79e-02
                                                            5.80e-03 -1.80e-04
## 676
                   1.83e-02
                             1.20e-03 -5.60e-03
                                                 2.39e-02
                                                            3.53e-03
        -1.73e-02
                                                                      1.08e-02
## 677
         1.53e-02
                   2.87e-03 -6.11e-04 -6.75e-03 -8.04e-03 -1.51e-02 -1.57e-02
## 678
                            8.37e-04 -1.11e-03 2.71e-03
                   6.09e-04
                                                            1.39e-03
## 679
         2.61e-03 -4.31e-03 -1.15e-04 -1.69e-03 -6.59e-03 -6.02e-03 -5.40e-03
## 680
         1.23e-03 -4.67e-04 -1.89e-03 -2.27e-03
                                                 5.40e-04
                                                            9.95e-04
                                                                      8.75e-04
## 681
                             8.07e-04 -5.80e-03
         2.74e-04 -5.61e-03
                                                  2.27e-02
                                                            1.57e-03
                                                                      8.35e-03
## 682
        -2.06e-03
                   1.41e-03
                             4.66e-04
                                       2.61e-03
                                                  1.11e-02 -7.43e-03
                                                                      1.05e-02
                             1.68e-02
## 683
        -5.62e-03
                   1.13e-03
                                       1.98e-02 -6.46e-03
                                                            7.53e-03 -2.31e-03
## 684
         2.94e-02 -2.68e-02 -1.98e-04
                                       1.84e-02
                                                  9.68e-03
                                                            5.05e-02
                                                                      5.16e-03
## 685
        -2.55e-02 -5.67e-03 -2.43e-03 -9.78e-03
                                                  6.71e-03 -2.18e-03
                                                                      2.85e-02
## 686
        -3.12e-02
                   1.63e-02 -3.22e-02 -1.08e-03 -3.23e-02
                                                            2.29e-02 -3.85e-03
## 687
        -1.11e-02 -1.93e-03
                            2.99e-03 -3.05e-03 1.92e-02
                                                            4.07e-03 -1.63e-02
                                                            3.14e-03 -1.20e-03
## 688
         2.48e-03
                   2.02e-03
                             1.43e-04 -1.43e-03 -1.13e-03
## 689
         3.76e-02 -4.69e-02 -2.87e-03
                                       1.50e-02 -2.40e-02
                                                            5.57e-02
                                                                     3.35e-02
## 690
         5.01e-02 -6.03e-02 -2.63e-03
                                       1.67e-02 -7.17e-02 -2.99e-02 -6.73e-02
## 691
        -3.04e-02
                  2.00e-02
                             2.71e-03 -8.24e-03 1.43e-02 -6.07e-03 -2.38e-02
## 692
         1.11e-02 -3.95e-02 -3.83e-02 -1.80e-03 -4.42e-02 -3.93e-03 -2.49e-02
## 693
         1.36e-03
                   2.88e-03
                             3.23e-04 -2.86e-03 6.60e-03
                                                            6.73e-03 -2.17e-03
         4.01e-02 -3.10e-02 -7.22e-03
## 694
                                      2.19e-02 -4.00e-02 -4.89e-02
## 695
        -1.02e-02 -5.58e-03 -8.98e-04 -8.82e-03 -1.53e-02
                                                            1.32e-02
## 696
         1.43e-01 -3.63e-02 -2.18e-03
                                      2.56e-02 -1.22e-02 -5.75e-02 -8.59e-02
## 697
         8.79e-03
                   1.20e-02 -1.93e-02 -2.29e-02 -5.09e-04 -6.04e-03
                                                                      1.80e-03
                   3.34e-03 -1.81e-02 -3.70e-04 -1.89e-02 -1.73e-02 -5.44e-03
## 698
         1.32e-02
## 699
         9.94e-03 -2.67e-03 -5.46e-04 -3.66e-03 -7.82e-03 -7.67e-03 -2.45e-03
## 700
                   4.65e-03
                             2.40e-04
                                       4.77e-03 5.67e-03 -1.49e-02
        -9.40e-03
                                                                      2.07e-02
## 701
        -1.56e-01
                   2.68e-01
                             8.07e-03
                                       3.91e-02 -8.93e-02 -5.99e-02
                                                                     8.94e-02
## 702
        -6.38e-03
                   6.60e-03
                             6.96e-04
                                       3.17e-03
                                                  7.27e-03 -3.74e-03 -3.64e-04
                                                           2.32e-04 -2.25e-04
## 703
         5.29e-04
                   1.16e-03 -9.26e-05 -8.49e-04
                                                  1.71e-03
##
  704
        -5.64e-03 -1.64e-02
                             5.44e-02
                                       6.17e-02
                                                  3.28e-02 -2.17e-04 -3.38e-03
## 705
        -2.49e-02 -5.49e-03
                             2.38e-03
                                       1.08e-02 -6.63e-05 -1.60e-02
                                                                     2.23e-02
         9.28e-04 -1.00e-03 -2.30e-05 -5.63e-04 -3.85e-04
## 706
                                                           1.09e-03
                                                                      1.90e-03
## 707
         2.13e-02 -7.99e-02 -1.54e-01 -1.80e-01 8.53e-02
                                                            9.01e-02 -3.73e-02
## 708
         2.06e-02 -5.22e-03 -1.02e-02 -4.21e-04 -1.06e-02 -5.76e-03 -7.27e-04
  709
         5.39e-03 -2.69e-03 -2.49e-02 -2.85e-02 8.72e-03 -2.72e-03 -1.60e-02
##
## 710
         6.31e-02
                  4.31e-04 -1.05e-01 -1.19e-01 -4.19e-02 -5.06e-03
                   3.94e-04
## 711
        -1.14e-02
                             1.89e-02
                                       2.25e-02
                                                  1.19e-03 -9.31e-03 -8.20e-03
## 712
        -1.03e-02 -1.02e-02 -1.42e-04
                                       1.57e-02
                                                  1.44e-02
                                                           2.51e-03
                                                                      4.26e-02
## 713
         1.12e-03 -4.32e-03
                             1.92e-05 -7.57e-03
                                                  1.27e-02 -9.84e-03
                                                                      9.67e-03
## 714
        -1.43e-02
                  1.35e-02
                             9.12e-04
                                       4.81e-03
                                                  2.57e-03 -8.50e-03
                                                                      1.09e-02
## 715
        -1.44e-02 -2.06e-02
                             1.16e-03
                                       6.63e-03
                                                  6.36e-03 -1.75e-02
                                                                      2.53e-02
## 716
         1.50e-02
                   1.22e-03 -2.67e-02
                                       5.11e-03
                                                  1.16e-03
                                                            2.55e-02 -3.68e-03
## 717
                   1.08e-03
                             1.92e-02
                                       1.38e-03 -5.27e-04
                                                           2.07e-04 -1.97e-02
        -1.36e-02
##
  718
        -1.02e-02
                   9.84e-03 -1.99e-05 -5.75e-03 -1.20e-02 -1.35e-02 -3.28e-03
        -4.64e-03 -1.85e-02 3.06e-02 3.55e-02 1.68e-02 -1.78e-02 -1.17e-02
## 719
```

```
## 720
         3.39e-02 -2.83e-02 4.51e-04 -7.17e-03 -8.77e-03 1.02e-02 -1.62e-02
## 721
         5.69e-02 -2.91e-02 -9.18e-03
                                       1.12e-02 -7.16e-02
                                                            6.85e-02 -7.40e-02
## 722
                             1.51e-05 -9.69e-04 -2.35e-04 -5.27e-03 -3.55e-03
         6.84e-03 -1.86e-03
## 723
         6.94e-03 -1.45e-02 -1.91e-02 -1.95e-04 -1.87e-02 -1.38e-03 -5.08e-03
## 724
        -1.55e-02
                   1.86e-02
                             2.22e-03
                                       7.51e-03 -1.05e-02 -2.30e-03
                                                                     1.72e-02
                   1.30e-02 -2.14e-03 -8.01e-03 -1.13e-02 -1.08e-02 -1.18e-02
## 725
        -2.73e-03
## 726
         3.82e-02
                   1.99e-02
                             6.82e-03
                                       2.79e-02 -2.64e-02
                                                            2.59e-02
                                                                      1.02e-02
## 727
         1.33e-03
                   8.25e-04 -1.92e-02
                                       1.22e-03 -2.10e-03
                                                            1.61e-02 -4.70e-03
## 728
                   2.71e-02
                             4.31e-02
                                                                      9.71e-03
        -2.67e-02
                                       4.84e-02
                                                 2.09e-02
                                                            1.00e-02
## 729
        -8.12e-03
                   1.49e-02
                             1.04e-04
                                       3.73e-03
                                                 1.73e-02
                                                            1.23e-02
                                                                      2.80e-03
## 730
        -2.20e-02
                   2.33e-02
                             7.90e-04 -1.48e-02
                                                 1.89e-02 -5.76e-02 -9.09e-04
## 731
                             3.40e-03 -2.86e-03
        -2.11e-02
                   1.46e-02
                                                  3.67e-02
                                                            4.66e-03
                                                                      1.44e-02
## 732
         1.80e-02 -4.48e-02 -1.78e-03
                                       1.28e-02
                                                 3.12e-02
                                                            8.41e-03
                                                                      3.87e-02
## 733
         3.40e-02 -2.98e-03
                             6.57e-02 -1.24e-03 -7.84e-02 -2.40e-02 -2.88e-02
## 734
         2.43e-05 -1.30e-02 -8.98e-04
                                       3.21e-03
                                                 4.84e-03 -8.57e-03
                                                                      1.11e-02
## 735
        -7.89e-02
                  4.70e-02 -1.19e-03 -1.28e-02
                                                 4.71e-02
                                                            7.76e-03
                                                                      1.64e-02
## 736
        -9.80e-03 -7.96e-03
                             1.71e-03 -7.64e-03
                                                 2.53e-02
                                                            9.80e-03
                                                                      3.17e-02
## 737
                  2.17e-06
                             1.25e-05 -4.07e-04 -1.52e-03
                                                            6.03e-04 -2.48e-04
         1.68e-05
                                                            1.77e-03 -1.11e-02
## 738
         2.26e-03 -9.74e-03 -1.52e-04 -4.79e-03 5.36e-03
## 739
        -3.13e-04 -3.69e-04 1.88e-05
                                      2.90e-04 -3.43e-04 -5.71e-04
                                                                      6.46e-04
## 740
                  6.15e-03 -1.55e-04 -4.12e-03 -5.02e-03
                                                            8.13e-03
                                                                      1.29e-02
         7.80e-04
## 741
         9.43e-04 -4.86e-03 -1.14e-03 -4.37e-03 8.52e-04 -1.35e-03
                                                                      4.11e-03
## 742
        -9.81e-03 -8.62e-03 -3.87e-04 2.04e-03 -1.38e-02 -4.47e-03
                                                                      1.20e-02
## 743
         7.23e-03 -1.43e-02 -1.06e-04 -2.92e-03
                                                 2.40e-04
                                                            9.01e-05
                                                                      1.05e-02
         5.35e-03 -1.22e-02
                                                 3.96e-03
                                                            1.61e-02 -1.35e-03
## 744
                            2.54e-03 -5.25e-03
## 745
         1.34e-01 -4.43e-02
                             1.74e-03
                                       2.12e-02
                                                 4.14e-02
                                                            4.38e-03 -7.75e-02
## 746
         1.62e-02 -5.04e-02 -3.33e-02
                                       3.07e-03 4.40e-02 -2.69e-02 -3.94e-03
                  4.62e-04 -2.00e-02 -2.38e-02 -1.33e-02 -2.95e-03 -5.90e-03
## 747
         9.09e-03
                            7.29e-03 -5.12e-03 -1.53e-02
## 748
        -2.70e-02
                   3.14e-02
                                                            1.82e-02 2.34e-02
## 749
         9.95e-02 -4.93e-02 -1.06e-01 -1.22e-01 -4.98e-02
                                                            1.02e-01 -2.53e-02
## 750
                             1.92e-03
                                       3.44e-02 -9.73e-02 -6.91e-02 -1.26e-01
         6.09e-02
                   2.54e-02
## 751
         3.01e-03
                   6.30e-04
                             4.20e-05 -5.93e-04 -1.86e-03 -2.85e-03 -1.33e-03
## 752
        -8.71e-04
                   2.62e-02 -5.68e-02 -6.73e-02 -3.63e-02 -2.35e-02
                                                                      2.95e-02
         1.32e-02 -3.92e-02 -5.89e-03
## 753
                                       3.10e-02 2.59e-02
                                                            5.94e-02
                                                                      1.05e-02
## 754
                   1.19e-02 -4.24e-02
         1.13e-02
                                       5.14e-03 -2.21e-02 -5.64e-02 -4.07e-02
## 755
        -1.58e-02 -6.68e-03 4.16e-02
                                       4.77e-02 -1.02e-02
                                                            4.06e-03
                                                                      9.47e-03
        -1.78e-02 -1.03e-02 -8.55e-04
                                       2.36e-03 1.17e-02
                                                            5.71e-03
## 756
                                                                      1.68e-02
## 757
        -9.94e-03
                  4.35e-03
                             2.76e-02
                                       3.15e-02 -8.93e-03 -2.80e-02 -1.29e-02
                                       1.81e-03 -8.89e-03 -4.74e-03 -2.37e-03
## 758
         3.82e-03 -4.89e-03 -6.17e-04
## 759
                             2.09e-04 -2.71e-03 -5.16e-03
         3.89e-03 -2.84e-02
                                                           9.92e-03
                                                                      7.16e-03
## 760
         4.14e-03 -4.51e-02 -1.32e-03 -1.10e-02 -4.65e-03 -4.11e-02
                                       3.56e-04 8.46e-03
## 761
        -5.13e-03 -3.30e-04 -6.83e-03
                                                            5.38e-03 -1.37e-03
## 762
         2.83e-02 -1.27e-02
                             4.25e-03
                                       3.46e-02 -3.09e-02
                                                           4.20e-02 -9.87e-02
## 763
         5.85e-02 -4.26e-02
                             4.15e-02 -8.32e-03 -4.06e-02 -3.63e-02 -6.04e-02
## 764
         3.41e-02 -1.34e-02
                             3.13e-04 -8.78e-03 -2.79e-02 -2.03e-04 -4.35e-03
## 765
         1.10e-02
                  3.08e-03 -7.64e-04 -4.30e-03 -7.15e-03 -1.31e-05 -1.14e-02
## 766
         1.49e-03 -4.02e-03 -1.43e-02 4.89e-04 -9.61e-03
                                                            7.42e-03 -2.87e-03
## 767
        -5.13e-03 7.33e-03
                             2.11e-03 -2.83e-03 -2.21e-02
                                                            1.23e-02 1.03e-02
##
  768
        -1.36e-02 -5.22e-03
                             2.32e-04 -5.97e-03 2.36e-02
                                                            1.12e-02 -1.62e-02
        -8.17e-03 -1.66e-02 -1.34e-03 -7.08e-03 2.25e-02 -3.76e-02 -6.20e-03
## 769
```

```
-2.61e-02 1.70e-02 -3.10e-02 -3.20e-03 -7.26e-03
                                                            2.13e-02
                                                                      3.39e-02
                                       7.30e-03 -1.85e-02 -1.36e-02
##
  771
        -9.56e-03 -6.97e-03 1.74e-03
                                                                      1.87e-02
## 772
         5.23e-04 -1.74e-02 -6.75e-04 -3.48e-03 -6.10e-03
                                                            5.24e-03 -6.24e-04
## 773
         7.82e-03 -1.55e-02 -1.14e-02 8.35e-04 -8.44e-03
                                                            3.37e-04
                                                                      1.29e-02
## 774
        -8.22e-03
                   2.54e-03 -5.83e-04 -6.08e-03 -1.61e-03 -4.18e-03 -1.20e-02
## 775
        -1.17e-02 -1.45e-03
                             1.71e-02
                                       2.04e-02 5.47e-03
                                                            4.78e-03 -8.01e-04
  776
                   1.62e-03 -6.26e-04 -3.00e-03
                                                  6.26e-03 -1.17e-02 -2.08e-03
##
         7.31e-04
##
  777
         1.25e-02 -6.14e-02
                             5.51e-02 -2.77e-03 -2.14e-03
                                                            1.03e-03
                                                                      4.85e-02
## 778
         1.03e-01 -4.62e-02
                             1.80e-03
                                       2.21e-02 6.93e-02
                                                            8.75e-03
         1.33e-02 -6.33e-03 -1.19e-03 -6.03e-03 -3.85e-03
## 779
                                                            3.86e-03 -1.08e-02
## 780
        -1.78e-02
                   7.74e-02 -1.35e-02
                                       1.72e-02 9.43e-02 -3.36e-02 -1.12e-01
  781
         1.45e-01 -4.67e-02 -1.50e-01 -1.75e-01
##
                                                  9.75e-02
                                                            1.07e-01 -3.97e-02
## 782
        -4.99e-02
                   2.36e-02 8.97e-04 -7.83e-03
                                                 3.52e-02
                                                            2.34e-02
                                                                     3.65e-02
## 783
        -8.87e-03
                   6.78e-03 -6.76e-04 -4.46e-03 -1.38e-02 -2.32e-02 -7.26e-03
## 784
                   4.04e-03 -4.41e-04
                                       1.25e-03 -3.38e-03 -7.20e-04 -2.77e-03
        -2.53e-04
## 785
        -7.20e-04
                   1.44e-03 -8.86e-05 -9.80e-04 2.57e-03 -1.75e-03 -9.15e-04
##
  786
         1.21e-02 -1.32e-03 -1.03e-03 -5.97e-03 -1.72e-02 -1.32e-02
                                                                      1.72e-02
## 787
                   8.23e-03
                             4.24e-02
                                       5.04e-02 -2.10e-02
                                                           2.90e-03
                                                                      2.55e-02
        -2.82e-02
                             1.30e-03 -1.65e-04 5.41e-04 -8.39e-04
## 788
        -1.04e-03
                   8.24e-04
                                                                      1.22e-03
## 789
         1.59e-03
                   5.50e-03
                             2.02e-04 -2.68e-03 -1.52e-03 -5.64e-04 -9.90e-04
## 790
         2.14e-02 -1.90e-02 -2.78e-03
                                       2.21e-02
                                                 1.16e-01 -7.48e-02 -4.29e-02
## 791
        -4.24e-05 -5.83e-04
                             2.23e-04
                                       8.71e-04 -4.95e-04 -6.62e-04
                                                                      1.32e-03
## 792
                                       2.70e-02
                                                  6.26e-02 -4.42e-02
        -9.12e-02
                   1.20e-02
                             2.77e-03
                                                                      6.10e-02
##
  793
        -4.39e-03 -2.55e-02
                             7.19e-02
                                       1.15e-02
                                                  1.52e-02
                                                            1.16e-01 -7.28e-02
## 794
        -1.66e-02
                  8.80e-03 -1.63e-03 -1.07e-02 -3.34e-03 -1.30e-02
                                                                      2.76e-02
##
  795
        -1.76e-02 -8.00e-03 -3.05e-02 -2.42e-04
                                                  7.79e-03
                                                            1.48e-02
                                                                      3.25e-02
## 796
         1.05e-02 -2.41e-03 -8.21e-04 -9.51e-03
                                                  2.58e-02 -2.50e-03 -2.14e-02
## 797
        -2.27e-02 -8.46e-02 -7.90e-03
                                        2.48e-02
                                                  6.66e-02 -3.69e-02
                                                                     6.41e-02
## 798
         2.99e-02 -2.73e-02
                             1.05e-02
                                       4.13e-02
                                                  7.59e-02
                                                            9.06e-02 -9.57e-02
## 799
         9.82e-03
                   7.90e-03
                             2.38e-04
                                       1.55e-02
                                                  2.20e-02
                                                            5.68e-02 -5.05e-02
## 800
                             8.25e-05 -2.46e-03
        -1.93e-03
                   2.28e-03
                                                  4.06e-03
                                                            4.70e-03 -8.13e-03
## 801
         6.88e-02 -1.17e-03
                             7.84e-02
                                       9.23e-03
                                                  3.26e-02 -4.81e-02 -8.48e-02
## 802
        -8.81e-02
                   1.38e-01
                             6.97e-02 -1.28e-03
                                                  2.62e-02 -5.37e-02
                                                                      5.27e-02
## 803
         3.05e-03 -2.53e-03 -1.49e-02 -5.03e-04 -4.68e-03
                                                            3.19e-03 -1.20e-02
## 804
        -4.89e-03
                   4.03e-04
                             8.55e-03
                                       9.99e-03
                                                  1.22e-03
                                                            2.56e-03 -9.47e-04
## 805
         4.06e-03 -2.61e-03 -1.16e-02 -1.38e-02
                                                  3.91e-03 -4.43e-03 -6.78e-03
                  6.21e-03 -1.45e-02 -1.67e-02
                                                  3.88e-03 -6.58e-04 -3.98e-03
## 806
         5.16e-03
## 807
         1.43e-02 -1.80e-02 -4.04e-04 -5.06e-03 -6.51e-03
                                                            3.41e-03
                                                                      8.44e-03
## 808
         8.54e-03 -8.92e-03 -1.96e-03 -9.21e-03
                                                  1.46e-03 -3.61e-04 -9.28e-04
## 809
        -9.63e-04 -7.15e-04
                             8.21e-05
                                       3.75e-04
                                                  3.28e-04
                                                            1.32e-03
                                                                      2.71e-04
## 810
        -2.76e-03 -6.57e-03
                             8.55e-04
                                       3.22e-03
                                                  1.04e-03 -5.32e-03
                                                                      7.00e-03
## 811
         3.80e-03
                   5.29e-04 -2.71e-04
                                       1.17e-03 -5.20e-03 -2.95e-03 -7.48e-03
## 812
        -2.42e-03 -1.49e-03
                             3.16e-05 -5.16e-03
                                                 1.82e-02
                                                           1.05e-02 -1.29e-02
## 813
                                       2.63e-03 -8.40e-03 -3.14e-02 -4.69e-03
        -1.56e-04 -7.59e-04 -1.90e-02
## 814
         2.37e-04 -5.54e-02
                             9.37e-02
                                       9.31e-03 -9.81e-02 -7.03e-02 -1.08e-01
## 815
         2.08e-03 -2.62e-04 -4.65e-04 -2.21e-03 -6.57e-03 -3.41e-03 -8.57e-04
## 816
        -2.49e-02
                  4.27e-02
                             3.82e-03 -1.38e-02 -2.44e-02
                                                           3.33e-02 -3.41e-02
                             2.50e-02
## 817
                                       2.96e-02 9.13e-03
        -1.48e-02 -6.15e-03
                                                           3.96e-04 -3.19e-03
## 818
        -1.42e-03
                   1.42e-03
                             4.64e-03
                                       5.35e-03
                                                 2.81e-03 -1.83e-03
                                                                     2.49e-03
## 819
         7.00e-03 2.40e-04 -1.37e-02 7.07e-04 1.19e-03 -1.46e-02 -3.89e-03
```

```
## 820
        -4.06e-02
                   1.44e-02 -8.71e-04 -8.14e-03 -3.21e-02 1.94e-02 3.00e-02
## 821
         2.06e-03 -1.48e-03 -4.14e-03 -5.29e-04 -2.58e-03 -8.76e-04 -3.16e-03
## 822
        -2.67e-04
                   7.70e-04 1.42e-04
                                       8.46e-04 -3.77e-03 -4.87e-04
                                                                      2.62e-03
## 823
         2.65e-03 -5.24e-03 -2.21e-02
                                       2.13e-04 -8.80e-03
                                                            1.53e-02 -2.03e-02
## 824
        -1.61e-02
                   1.26e-02 -2.17e-02 -1.82e-04 1.46e-02 -2.52e-03 -1.95e-02
## 825
        -1.23e-02
                   1.86e-03 -2.07e-03 -1.71e-02
                                                  3.99e-02 -6.93e-02
                                                                      1.69e-02
## 826
                   2.89e-02
                             2.38e-03 -9.25e-03
                                                  9.21e-03
                                                            9.18e-03
        -2.04e-02
                                                                      1.91e-02
## 827
         3.86e-04 -5.33e-04
                             1.01e-04 -2.75e-04
                                                  8.65e-04
                                                            8.02e-04 -1.08e-04
## 828
                  9.81e-03 -4.75e-02 -3.89e-03
                                                  1.13e-03
                                                            1.08e-02 -3.13e-03
## 829
         1.19e-01 -1.00e-01 -1.64e-01 -1.88e-01 -8.46e-02 -1.01e-02
                                                                      2.08e-02
                                                            1.38e-03 -6.39e-02
## 830
         1.56e-02
                   1.10e-02 -3.42e-03
                                       1.18e-02 -1.21e-02
## 831
        -1.36e-02 -2.73e-02 4.19e-03 -5.98e-03
                                                 4.19e-02 -1.32e-02
                                                                      1.99e-02
## 832
                  9.12e-03
                             8.31e-02 -1.94e-03
                                                  7.48e-03
                                                            4.43e-02
         2.80e-02
                                                                      2.30e-02
        -5.53e-04 -2.86e-03 -1.42e-03 -5.98e-03
## 833
                                                  9.18e-03 -1.82e-02 -2.43e-03
## 834
                   8.54e-03
                             6.40e-06 -5.10e-03
                                                  1.82e-02
                                                            3.88e-03 -1.50e-02
        -1.22e-02
## 835
         3.09e-03 -9.97e-04 -5.36e-04 -2.64e-03 -7.54e-03
                                                            7.53e-04
                                                                      3.18e-03
## 836
        -6.66e-03 -7.01e-03 -2.31e-04 -6.06e-03
                                                 1.25e-02
                                                            1.82e-03 -7.94e-03
## 837
         1.29e-01 -6.63e-02
                                       3.47e-02 -6.47e-02
                            7.22e-03
                                                            1.03e-01
                                                                      8.29e-02
## 838
        -4.26e-04
                  4.49e-05 -1.51e-02
                                       8.31e-04 4.46e-03 -9.48e-04
                                                                      3.93e-03
## 839
         3.95e-02
                   4.72e-04
                             5.22e-02
                                       1.18e-04 -1.80e-02
                                                            1.27e-02
                                                                      4.42e-03
## 840
        -9.64e-04 -1.88e-02
                             1.31e-04 -6.21e-03
                                                 1.35e-03
                                                            7.58e-03
                                                                      1.16e-02
## 841
        -1.50e-03
                   4.19e-04
                             5.66e-05 -1.47e-03 -2.11e-03
                                                            3.23e-03 -4.42e-03
## 842
        -4.77e-04
                   2.66e-02 -6.88e-04 -1.01e-02 1.63e-02 -4.16e-02 -2.77e-02
## 843
         6.58e-03 -1.66e-02 -5.06e-03
                                       1.74e-02
                                                  8.68e-02
                                                            1.82e-02
                                                                      9.60e-03
## 844
        -6.16e-03 -6.80e-03 -2.59e-04
                                       1.86e-03
                                                  6.84e-03 -4.50e-03 -7.85e-03
## 845
         6.22e-04
                   6.92e-03 -4.71e-04 -3.94e-03 -1.48e-03 -8.65e-04 -3.37e-03
## 846
        -2.46e-02
                   2.61e-02 -4.68e-02 4.55e-03 -3.92e-04 -6.79e-02 -1.24e-02
## 847
         8.42e-05
                   2.38e-03 -5.33e-04 -2.05e-03 -1.14e-04
                                                            2.67e-03 -3.91e-04
                   7.90e-03 -2.59e-02 -9.96e-04
                                                 3.50e-03
## 848
         6.28e-03
                                                            2.03e-02 -2.35e-02
## 849
         4.12e-03 -8.67e-03 -1.45e-02 -7.78e-04
                                                  3.33e-03
                                                            5.12e-03 -1.17e-02
## 850
                             8.38e-03
         4.23e-02
                   8.94e-02
                                       3.20e-02
                                                  8.77e-02
                                                            3.68e-05 -8.49e-02
## 851
        -9.10e-03 -2.63e-03
                             1.68e-02
                                        1.98e-02 -8.08e-04
                                                            5.77e-03 -1.56e-03
## 852
        -4.93e-03
                   3.03e-03
                             5.16e-04
                                        2.27e-03 -2.37e-03 -3.47e-03
                                                                      8.22e-03
## 853
         1.25e-03 -3.00e-03 -1.90e-04
                                        1.25e-03
                                                 4.89e-03 -1.13e-03 -2.26e-03
## 854
        -4.75e-03
                   3.83e-02 -1.22e-03 -1.26e-02
                                                  8.09e-03
                                                            7.38e-04 -9.15e-03
## 855
                             1.05e-03 -7.57e-03 -3.73e-02
                                                            7.48e-03
         1.65e-02 -3.93e-02
                                                                      3.95e-02
## 856
         3.33e-03 -4.53e-04
                             2.81e-04
                                       2.97e-03
                                                 2.65e-03 -6.41e-03
                                                                      8.12e-03
## 857
                   4.06e-02
                             8.10e-04 -1.28e-02 -3.36e-03
                                                            2.21e-02
                                                                      4.65e-02
        -6.58e-02
## 858
        -4.73e-02
                   9.96e-02 -5.07e-03
                                       1.71e-02
                                                 4.40e-02
                                                            1.00e-02
                                                                      5.64e-03
## 859
                   9.59e-03
                             3.82e-03
        -3.01e-02
                                       1.11e-02
                                                  1.67e-02 -4.07e-03
                                                                      2.26e-02
## 860
        -3.25e-02
                   2.16e-02 -6.83e-04 -1.72e-02 -1.04e-02 -2.09e-02
                                                                      2.46e-02
## 861
         4.89e-02 -5.01e-02
                             5.76e-02 -3.68e-03
                                                  5.13e-02 -3.19e-02
                                                                      5.40e-03
                                                  1.08e-03 -6.40e-04
## 862
        -7.61e-04 -2.02e-04
                             4.12e-05
                                       2.98e-04
                                                                      1.88e-04
## 863
        -2.79e-02 -3.25e-02
                             4.87e-02
                                       5.66e-02
                                                  3.13e-02 -2.08e-02 -2.40e-02
        -6.96e-04 -7.81e-04
                             4.01e-04 -1.86e-03
                                                            5.60e-03
## 864
                                                  1.11e-02
                                                                      3.29e-03
## 865
         1.28e-01
                  6.79e-02 -1.44e-01 -1.71e-01
                                                  9.59e-03 -4.15e-02 -8.98e-02
## 866
         7.43e-03
                   8.14e-03 -2.11e-03 -7.50e-03 -1.47e-02 -2.70e-02 -3.00e-03
## 867
         1.05e-03 -1.63e-02 -2.17e-02
                                       6.57e-04 -1.59e-02
                                                            1.47e-02
                                                                     1.09e-02
## 868
         1.95e-06
                  4.84e-04 -5.89e-04
                                       1.21e-04 -5.77e-04
                                                            3.32e-04 -5.64e-04
        -1.33e-02 1.13e-02 -9.20e-04 -7.16e-03 -1.74e-02 -2.31e-02 -2.13e-02
## 869
```

```
## 870
        -8.25e-04 -4.43e-03
                             2.23e-05
                                      1.83e-03 1.13e-02 6.48e-03
## 871
                             1.88e-03 -3.48e-03 -2.37e-02 -1.87e-02 -4.58e-03
         3.95e-03
                   1.45e-02
## 872
         5.26e-02 -6.05e-02
                             6.97e-04
                                       2.12e-02 1.90e-02
                                                            5.64e-02
                                                                      8.67e-02
## 873
                   7.50e-03 -2.48e-02
                                      9.29e-04 -1.38e-02 -3.34e-02
        -5.40e-03
                                                                      1.02e-02
## 874
        -3.77e-03 -3.84e-03 -1.29e-03 -4.03e-03 -1.78e-03
                                                           1.59e-03 -1.16e-03
## 875
        -2.12e-03
                   3.13e-03 -3.51e-04 -2.50e-03 -3.96e-04
                                                           1.38e-03 -6.68e-04
## 876
         7.76e-03 -1.82e-03 -4.34e-04 -3.30e-03 5.33e-03 -9.99e-03 -5.21e-03
## 877
         2.17e-03
                   2.31e-02
                             8.46e-04 -7.58e-03 5.24e-03 -2.57e-02 -5.27e-03
## 878
                                      3.29e-03 -1.26e-02 -5.22e-03
         1.00e-03
                   8.39e-03
                             4.33e-04
## 879
        -4.20e-03
                   6.70e-03 -2.77e-02 -3.34e-02 -1.78e-02 -1.02e-02
## 880
        -5.52e-03
                   7.50e-03
                            1.12e-04
                                      1.21e-03 -7.09e-04 -6.84e-04 -1.83e-03
## 881
         2.21e-03 -8.16e-03 -3.67e-02 -1.60e-03 4.20e-02 -1.06e-02 -1.10e-02
                                                           2.04e-02 -2.18e-02
## 882
                   7.29e-03 -2.91e-02
                                      1.09e-03 -3.07e-02
         1.24e-03
## 883
        -1.36e-02
                   2.58e-02 -3.39e-03 -1.63e-02 3.14e-02
                                                           3.20e-02 -3.48e-03
## 884
        -2.87e-03
                   2.84e-03
                            4.32e-04 -1.03e-03
                                                 5.57e-03
                                                            1.19e-04
                                                                      4.72e-03
## 885
         1.30e-03 -1.32e-02 -1.61e-03 -6.96e-03 1.91e-02 -2.98e-03
## 886
         1.24e-03
                   1.15e-02 -1.29e-04 -6.06e-03 -1.76e-02 -1.89e-03 -2.55e-03
## 887
                   1.63e-02
                            1.28e-03 -4.61e-03 -2.20e-02
                                                           1.58e-02 -1.53e-02
         8.82e-03
                                       1.26e-02 3.96e-02 -8.88e-02
## 888
        -3.18e-02
                   2.86e-02 -5.09e-02
                                                                     6.47e-02
                                       3.44e-02 -1.25e-02
## 889
        -1.53e-02
                   9.15e-03
                             3.01e-02
                                                           3.00e-03 -3.17e-03
## 890
        -7.08e-02
                   4.35e-02
                             5.36e-03 -1.24e-02 -2.96e-02 -1.85e-02
                                                                     6.62e-02
## 891
         3.10e-03 -3.53e-03
                             6.62e-03 -5.69e-04 -6.74e-05 -5.25e-03
                                                                      6.42e-03
                   1.62e-04 -1.17e-05 5.32e-05 1.09e-04 -1.21e-04 -2.13e-04
## 892
        -1.33e-04
## 893
         2.13e-02 -5.72e-02 -9.59e-02 -1.08e-01 -2.39e-02 -4.98e-03 -5.95e-02
## 894
         2.13e-03
                  1.35e-03 -4.42e-04 -3.21e-03 -2.52e-03
                                                           5.73e-03
                                                                      9.08e-03
## 895
        -1.66e-02 -2.05e-02 -3.29e-03
                                       2.01e-03 -1.92e-02 -1.74e-02
                                                                      3.74e-02
## 896
        -1.92e-02
                  7.40e-03 2.22e-03 -6.38e-03 -3.43e-02 -4.93e-03 -3.97e-03
## 897
         5.12e-03
                  5.31e-03 -2.60e-03 -9.82e-03 -1.43e-02 -3.44e-02 -6.88e-03
## 898
         5.21e-03 -1.66e-02 -4.79e-04 -2.93e-03 4.93e-03
                                                            3.45e-03 -1.25e-03
## 899
         1.12e-04 -7.70e-03 9.94e-04
                                       3.49e-03 1.22e-03 -7.05e-03
                                                                      3.97e-03
## 900
         6.24e-04 -2.89e-05 -2.92e-05 -4.30e-04 -1.01e-03
                                                           8.30e-04
                                                                      2.19e-03
                                                            5.78e-03 -2.56e-03
## 901
                  3.05e-04 -1.04e-02
                                      1.61e-03 7.92e-03
        -1.29e-02
## 902
         3.20e-03 -1.80e-02
                             6.10e-04 -2.44e-03 -3.87e-03
                                                            6.67e-03 -1.04e-02
                   6.08e-03 -1.98e-04 -4.33e-03 -7.74e-03
## 903
        -5.91e-03
                                                            4.98e-03
                                                                      1.41e-02
## 904
         9.57e-03
                   1.17e-02
                             5.28e-04 -8.81e-03 -2.44e-02
                                                            3.88e-03 -2.42e-03
## 905
        -1.52e-03 -7.51e-04 -1.86e-05
                                       7.72e-04 -4.60e-04 -1.99e-03
                                                                      2.75e-03
                             2.24e-03
                                       5.46e-03 -4.45e-03 -8.50e-03
## 906
         1.09e-03 -6.36e-03
                                                                      1.21e-02
## 907
         8.76e-03 -3.10e-03 -1.70e-04 -2.79e-03 -8.35e-03 -9.58e-03 -3.16e-03
## 908
        -2.36e-03 -2.74e-03 -2.74e-04
                                       2.25e-03 6.44e-03 -4.19e-03 -4.54e-03
## 909
        -4.00e-04 -1.10e-04 -2.13e-06
                                       1.22e-04 -2.37e-04 -9.40e-06
                                                                     2.88e-04
## 910
        -2.08e-02
                   5.63e-02
                            8.22e-03 -1.15e-02 4.90e-02 -7.79e-02
## 911
         2.05e-03
                   6.48e-03 -1.23e-04 -2.62e-03
                                                 6.59e-03
                                                            6.26e-03 -7.33e-03
                                       3.51e-03 -6.76e-03
## 912
         1.58e-02 -1.15e-02
                             3.38e-02
                                                            4.47e-02
                                                                     4.65e-03
## 913
        -1.55e-02
                   3.78e-02
                             4.37e-03 -1.10e-02
                                                 1.86e-02
                                                            2.12e-02 -5.71e-03
## 914
                   1.25e-02
                             1.30e-03
                                                 1.08e-01 -5.14e-02 -9.38e-02
         3.55e-03
                                       2.37e-02
## 915
        -2.99e-02 -2.60e-03
                             6.57e-02
                                       7.17e-02
                                                 3.36e-02
                                                            6.08e-03 -2.17e-02
## 916
         8.94e-02 -4.24e-02
                             5.09e-02
                                       3.65e-03 -4.69e-02
                                                            1.73e-03 -5.13e-02
## 917
         5.54e-03 -2.98e-03
                             1.58e-04
                                       2.28e-03 -1.14e-02 -3.95e-03 9.04e-03
## 918
        -9.79e-03 -1.60e-02
                             4.32e-03 -1.04e-02 5.29e-02
                                                           3.35e-02 -3.70e-03
## 919
         2.67e-02 -1.33e-03 -2.37e-02 -1.37e-03 2.33e-02 2.72e-03 -2.12e-02
```

```
## 920
                   4.64e-04 1.71e-06 1.17e-04
                                                  4.41e-04
                                                            3.54e-04 3.35e-04
        -2.39e-04
## 921
        -4.58e-05
                   6.18e-03 -1.17e-02 -1.34e-03
                                                  1.33e-02 -1.00e-02 -1.87e-03
## 922
        -4.86e-02
                   1.96e-02 -4.42e-02
                                        5.29e-03 -1.09e-03
                                                            3.56e-02 -3.83e-02
## 923
        -4.21e-03 -1.68e-03
                                        2.65e-03
                             4.04e-04
                                                  5.59e-03 -3.31e-03
                                                                      1.71e-03
## 924
        -5.07e-03
                   5.45e-03 -1.23e-02
                                        2.59e-04
                                                  2.97e-03 -1.79e-03 -2.03e-03
## 925
         4.68e-03 -1.05e-02
                             2.37e-03 -6.85e-03
                                                  4.74e-03
                                                            8.18e-03 -3.32e-03
## 926
         1.23e-02
                   1.76e-02
                             5.63e-03 -3.12e-03
                                                  1.36e-02
                                                            1.20e-02
                                                                      1.54e-02
## 927
         2.49e-03 -5.73e-05 -6.29e-05 -2.00e-03
                                                  6.48e-04
                                                            1.53e-03 -3.57e-03
## 928
        -1.88e-02
                   1.12e-02
                             3.87e-03 -5.57e-03
                                                  1.71e-02
                                                            1.82e-02
                                                                      1.09e-04
## 929
        -5.24e-02
                   1.11e-01
                             2.57e-03
                                        3.66e-02 -3.62e-02
                                                            5.14e-02 -1.28e-01
## 930
        -2.59e-02
                   8.53e-03 -3.95e-02
                                        2.93e-03
                                                 4.77e-02
                                                            2.49e-02 -3.39e-02
## 931
        -1.64e-02 -8.95e-02 -4.58e-02 -6.01e-03 -2.59e-02
                                                            7.26e-03
                                                                      2.11e-02
## 932
                   1.64e-02
                             5.12e-02
                                        5.74e-02 -4.65e-03
                                                            4.13e-03 -3.32e-03
        -6.73e-03
## 933
         5.48e-02 -5.84e-02 -4.01e-03
                                       2.73e-02 -3.22e-03 -1.20e-02 -5.18e-02
## 934
        -2.75e-02
                   1.26e-02
                             1.53e-03 -6.20e-03
                                                 7.03e-03
                                                            2.00e-02 -2.54e-02
## 935
        -2.45e-02
                   1.45e-02
                             1.53e-04 -9.10e-03
                                                 2.70e-02
                                                            2.04e-02 -2.50e-02
## 936
        -1.78e-02 -6.58e-03 -9.07e-04
                                       4.88e-03 -8.20e-03 -1.48e-03
                                                                      4.29e-03
## 937
                   8.90e-03 -3.12e-02
                                       7.91e-04 2.43e-02 -4.14e-02
         2.20e-02
## 938
        -8.72e-03
                   2.30e-02 -7.27e-04 -1.66e-02 3.03e-02 -1.82e-02 -3.56e-03
         1.66e-02 -4.39e-02 -2.18e-03 -6.81e-03 -1.96e-03 -1.83e-02
## 939
                                                                       1.62e-02
## 940
        -8.58e-02 -5.50e-02
                             6.26e-04
                                        3.24e-02 5.14e-02 -2.89e-02
                                                                       1.00e-01
## 941
        -2.03e-03
                   6.52e-02 -2.53e-05
                                        2.05e-02 -5.15e-02
                                                            1.06e-01
                                                                       2.12e-02
                             6.20e-06 -7.68e-03 -1.47e-02
## 942
        -1.26e-02
                   1.15e-02
                                                            5.78e-03
                                                                       2.25e-02
## 943
        -3.19e-03 -1.53e-04
                             2.02e-04
                                        3.06e-03 -8.88e-03 -1.26e-04
                                                                       8.23e-03
## 944
         2.16e-03 -1.50e-02
                             2.63e-05 -3.39e-03 -5.95e-03
                                                            6.12e-03 -8.14e-03
## 945
        -9.01e-03
                   4.41e-03
                             9.95e-03
                                        1.15e-02 -6.74e-03
                                                            4.06e-03 -6.02e-04
## 946
        -3.92e-03
                   4.43e-04
                             1.92e-03 -2.67e-03 -2.24e-02 -4.68e-02 -1.92e-02
## 947
         1.07e-02
                   3.69e-02
                             2.33e-04
                                        1.90e-02 -4.61e-02 8.51e-02
                                                                      4.11e-02
## 948
        -5.72e-02
                   1.38e-01
                             3.23e-03
                                        2.89e-02
                                                  3.78e-02 -3.51e-02 -4.68e-02
## 949
         2.77e-02
                   1.63e-02
                            -4.10e-05 -9.22e-03
                                                  8.86e-03 -2.24e-02
                                                                      1.29e-02
## 950
                             1.00e-04 -7.75e-03
        -1.20e-02 -1.47e-02
                                                  7.58e-03 -1.78e-02
                                                                      2.62e-02
## 951
        -6.84e-03
                   8.29e-03
                             2.54e-02
                                        2.86e-02
                                                  7.57e-03
                                                            1.13e-02 -1.04e-02
## 952
        -6.99e-02 -1.80e-03
                             6.95e-02
                                        7.58e-02
                                                  2.21e-02 -4.83e-03 -6.40e-03
## 953
        -4.63e-03
                   1.19e-02
                             5.42e-02 -3.92e-03
                                                  3.81e-02 -3.87e-02
                                                                      4.06e-02
## 954
        -1.26e-02
                   7.07e-02
                            -5.45e-03
                                        1.81e-02
                                                  2.77e-02 -4.96e-02 -1.09e-01
                                                            2.09e-03 -5.41e-04
## 955
                   1.15e-04
                             6.74e-03
                                        8.04e-03
        -4.66e-03
                                                  2.10e-03
## 956
        -1.45e-03
                   8.25e-03
                             8.80e-04
                                        2.67e-03 -5.20e-03 -3.74e-03
                                                                      5.61e-03
## 957
         6.09e-05
                   6.12e-05
                             1.18e-05 -2.44e-05
                                                  1.77e-04
                                                            8.07e-06 -1.56e-04
## 958
                             2.92e-03
        -3.44e-04 -1.15e-03
                                        3.40e-03
                                                  1.19e-03 -1.06e-03 -3.80e-04
## 959
        -5.20e-03 -2.23e-03
                             1.38e-03
                                       5.82e-03
                                                  1.63e-03 -7.06e-04
                                                                      1.22e-02
## 960
         5.35e-03 -4.51e-03 -8.24e-05 -2.62e-03
                                                  2.96e-03
                                                            4.62e-03 -1.23e-03
## 961
         5.50e-03 -6.13e-03 -1.03e-02 -1.17e-03 -4.38e-03
                                                            7.45e-03 -1.87e-03
## 962
         3.19e-03 -3.23e-03 -4.14e-02
                                       4.44e-03
                                                 2.52e-02
                                                            2.59e-02 -3.86e-03
## 963
         1.56e-03 -1.66e-05
                             4.25e-04 -8.27e-04 -1.27e-04
                                                            1.52e-03 -5.54e-04
## 964
        -1.16e-03 -6.25e-04 -1.73e-04 -8.24e-04 -7.85e-04
                                                            1.23e-03
                                                                      1.26e-03
## 965
        -1.84e-03 -7.58e-04
                             2.27e-04 -9.83e-03 9.64e-03 -1.73e-02 -2.95e-03
## 966
        -6.49e-03
                   1.13e-02
                             4.48e-04 -2.39e-03 -1.78e-04 -9.96e-03 -9.99e-03
## 967
                   2.95e-02 -8.39e-03
                                       1.29e-02 -4.00e-02 -2.46e-02
         7.07e-02
                                                                       5.82e-03
## 968
         6.63e-03 -5.62e-03 -8.35e-05 -2.68e-03 8.89e-03
                                                            8.02e-03
                                                                       3.54e-03
## 969
        -4.12e-03 1.01e-02 -1.67e-02 1.49e-03 6.03e-03 6.89e-03
```

```
## 970
                   2.05e-02
                            7.35e-04 5.07e-03 2.05e-03 -5.76e-03 1.03e-02
        -1.11e-02
## 971
                             9.45e-05 -2.98e-04 -1.07e-03 -2.30e-04 -4.27e-04
         1.12e-03
                   1.14e-03
                   2.55e-03 -1.24e-04 -2.41e-03 -1.02e-02 -1.38e-03 -8.79e-03
## 972
        -1.42e-04
                                                           4.41e-03 -5.26e-03
## 973
                   6.95e-03
                                      1.26e-02 -3.46e-03
         1.13e-04
                             1.10e-02
## 974
         2.60e-04 -1.48e-04
                             1.07e-05
                                       3.96e-04 -6.97e-05 -1.01e-03
                                                                    1.14e-03
## 975
        -1.23e-02
                   2.34e-02 -3.62e-02 -4.39e-03 -3.57e-03
                                                           2.13e-02 -2.97e-02
## 976
        -6.67e-02
                   8.62e-02 -9.48e-03
                                       1.76e-02 -7.53e-02
                                                           2.01e-02 -9.57e-02
## 977
         1.08e-02 -1.82e-03
                             1.14e-03 -3.80e-03 -1.48e-02 -1.80e-02 -1.00e-02
## 978
                             3.24e-02
                                       3.71e-02 -5.50e-03 -2.70e-02
        -4.55e-03 -3.81e-03
## 979
        -1.09e-02
                   5.88e-06
                             5.18e-04
                                       3.64e-03 5.03e-03 -6.09e-03 -4.20e-03
                                                                     7.09e-03
## 980
         3.19e-03
                   3.83e-03 -1.22e-04 -5.97e-03 1.63e-02 -2.98e-02
## 981
                             7.92e-02
                                       2.14e-03 -4.21e-03 -4.32e-02
        -2.74e-02
                   1.08e-02
                                                                     1.92e-02
## 982
        -3.90e-02
                   1.30e-02
                            6.63e-02
                                       5.36e-04 -2.03e-02
                                                                     5.71e-02
                                                           4.37e-02
## 983
         8.63e-04 -1.26e-03 -1.68e-03 -5.33e-05 4.06e-04
                                                           1.45e-04 -1.42e-03
## 984
        -2.47e-03 -1.25e-03 -2.70e-04
                                       1.35e-03 -3.28e-03 -2.84e-03
                                                                     1.03e-03
## 985
        -2.48e-02
                  9.35e-03 -1.53e-03 -9.75e-03 1.54e-04 -4.26e-02 -4.91e-03
## 986
        -2.48e-02 -4.64e-02 -5.01e-03
                                       1.99e-02 -6.38e-02
                                                           7.85e-02
                                                                     6.96e-02
## 987
         8.24e-03 -2.09e-02 1.47e-04 -1.19e-02 -4.62e-02 -3.81e-02
                                                                     4.57e-02
                                      1.45e-03 7.19e-03
## 988
        -2.86e-03 -2.01e-02 -1.62e-02
                                                           9.80e-03
                                                                     8.12e-03
## 989
         2.36e-02 -7.91e-03 -3.27e-02 -2.71e-03 -2.04e-02 -3.56e-02 -2.63e-02
## 990
         6.39e-03 -5.91e-03 1.79e-03 -5.24e-03 -2.64e-02
                                                           1.07e-02 -1.39e-03
## 991
         2.01e-03
                  3.59e-04 -8.74e-03
                                      7.65e-04 -4.73e-03
                                                           1.75e-03
                                                                     3.88e-03
## 992
        -2.86e-02
                   1.24e-03
                            2.66e-03 -8.76e-03 2.05e-02
                                                           2.70e-02 -1.55e-03
## 993
        -5.25e-03
                   9.79e-05 -1.75e-02 -2.11e-02 1.13e-02
                                                           1.36e-02
                                                                     2.92e-03
                            9.26e-04 -3.42e-03 -1.52e-02 -1.22e-02
## 994
        -4.52e-03
                  1.59e-02
                                                                     1.70e-02
## 995
         7.94e-03 -3.82e-03 -1.99e-02
                                      4.87e-03
                                                2.44e-02 -3.74e-02 -1.97e-02
## 996
        -4.97e-02 -7.08e-03
                             5.26e-03 -1.33e-02 -1.78e-02
                                                           2.08e-02
                                                                     5.89e-02
## 997
         3.30e-04
                   2.39e-02
                             2.07e-03 -9.15e-03 3.59e-02 -7.31e-04 -2.84e-02
## 998
         2.34e-02 -4.37e-02 -7.23e-03
                                       1.80e-02 -6.26e-02
                                                           4.52e-02
                                                                     4.67e-02
## 999
        -5.19e-02
                   1.65e-02
                             1.19e-03 -1.08e-02
                                                 3.43e-03
                                                           1.67e-02
                                                                     4.15e-02
                  5.38e-04
                             5.99e-05
## 1000
         1.56e-03
                                      1.16e-03
                                                 3.93e-03
                                                           1.23e-03
                                                                     1.14e-03
                                                           1.31e-03 -3.28e-03
## 1001 -1.32e-02 -2.01e-02
                            2.97e-04 -2.54e-03 1.47e-02
## 1002
         1.21e-02 -8.19e-03 -8.13e-05 -7.46e-03 -3.06e-02 -5.41e-03
                                                                     2.66e-02
## 1003 -2.70e-03
                   2.92e-03 -2.62e-02 -2.46e-04 2.75e-02 -2.26e-02 -6.09e-03
## 1004 -1.61e-02
                   1.64e-02
                             1.39e-03 -2.73e-03 -2.26e-03
                                                           1.10e-02
                                                                     1.58e-02
## 1005 -3.56e-03
                                                           1.91e-03 -3.63e-03
                            1.33e-03 -2.09e-03 3.91e-03
                   1.05e-02
## 1006 -4.44e-02
                   1.28e-02 -1.65e-03 -1.13e-02 2.23e-02 -2.00e-02
                                                                     1.50e-02
                   2.95e-02
                             6.67e-02
                                      3.22e-03 8.54e-02
                                                           1.02e-01 -6.89e-02
## 1007 -3.00e-02
                             5.97e-02
## 1008 -2.16e-02 -3.67e-02
                                      2.22e-03 -4.95e-02
                                                           2.00e-02
                                                                     6.95e-03
        2.50e-04 -2.08e-04 -1.72e-06 -1.39e-04 -1.67e-04
## 1009
                                                           2.66e-04 -3.94e-04
## 1010 -1.22e-03
                  2.69e-04 -5.50e-05
                                       1.12e-04 2.90e-04 -9.32e-04
## 1011 -3.49e-02 -3.27e-03 -1.78e-03
                                       5.66e-03 1.02e-02 -2.11e-02 -1.60e-02
## 1012 -9.68e-03
                   2.05e-02
                            6.01e-03 -5.16e-03 -2.97e-02
                                                           2.33e-02
                                      5.50e-03 -9.90e-04 -3.85e-02 -3.04e-02
## 1013
        7.09e-02
                   2.40e-02
                            6.10e-02
                   4.04e-03 -4.21e-04 -2.45e-03 -3.38e-04
## 1014 -1.36e-04
                                                           1.38e-03 -5.73e-03
## 1015 -7.65e-03
                   8.82e-03 5.47e-04 -5.99e-03 2.77e-02 -9.05e-04
                                                                    3.04e-02
## 1016 -1.21e-03
                   4.82e-03 -1.49e-02
                                      4.01e-04 7.68e-03
                                                           1.05e-02 -1.38e-02
                   2.55e-02 -3.70e-04
                                      2.37e-02 -5.31e-02
## 1017
         6.92e-02
                                                           2.73e-04 -8.11e-02
## 1018
         4.83e-03
                   1.31e-02 6.32e-04 -5.24e-03 -2.33e-02 -3.58e-03
                                                                     8.58e-03
## 1019 -2.58e-02 -6.85e-03 -4.41e-04 -9.74e-03 2.44e-02 1.08e-02 2.75e-02
```

```
## 1020 -2.07e-02 7.03e-03 -2.31e-04 -6.07e-03 2.33e-02 -1.42e-02 -8.01e-03
## 1021 -4.52e-03 -2.29e-03 7.28e-04 -9.03e-04 4.96e-03 4.69e-03
## 1022 1.20e-01 -6.04e-02 -2.83e-03
                                     1.52e-02 -4.92e-02 4.28e-03 -7.71e-02
## 1023 -4.19e-03 -2.03e-03 9.84e-03
                                     1.16e-02 -5.15e-03
                                                         2.06e-03 -1.30e-03
## 1024
       2.15e-02 -3.15e-02 -1.01e-03 -4.12e-03 -1.09e-02
                                                        9.38e-03
## 1025 -8.83e-03
                 2.50e-04 -3.03e-04 2.58e-03 -1.33e-02 -8.84e-03 -1.56e-02
## 1026 -2.26e-03 1.92e-02 1.47e-03 -5.30e-03 -2.47e-02
                                                         1.08e-02 -1.42e-02
        5.16e-05 -6.09e-04 -1.06e-05 5.19e-04 -1.40e-03 -2.83e-04
## 1028 -6.44e-03 4.96e-04 -3.24e-04 -3.29e-03 1.10e-02 1.00e-02 -1.29e-02
        9.76e-03 -1.55e-02 3.10e-03 -3.51e-03 -1.85e-02
## 1029
                                                         1.07e-02
## 1030 -1.96e-03 7.21e-03 -3.56e-02 -4.07e-02 -6.36e-03 -1.58e-03
                                                                   2.72e-03
## 1031 -1.22e-03 3.86e-03 -5.00e-04 -3.15e-03 5.17e-03
                                                         4.69e-04
                                                                   7.27e-03
## 1032
        3.49e-02 -8.78e-02 -7.90e-03 3.18e-02 -1.05e-01
                                                         3.64e-03 -1.42e-01
## 1033
        5.26e-02 7.25e-03 -1.08e-01 -1.24e-01 -1.54e-02 -3.82e-02 -7.12e-02
## 1034 -6.51e-02 -3.51e-02 9.52e-02 -2.51e-03 1.21e-01 -8.12e-02 1.80e-02
## 1035 -5.79e-03 1.06e-02 -2.45e-03 -1.20e-02 -1.21e-02 -3.15e-02
## 1036
        9.61e-03 4.66e-03 4.14e-04 -2.45e-03 -1.07e-02 1.02e-03 -9.39e-03
## 1037
        5.34e-02 -3.32e-02 5.44e-02 -1.11e-02 -4.36e-02 -4.67e-02 -2.58e-02
## 1038
        4.18e-02 -2.21e-02 -6.93e-04 -8.99e-03 -2.95e-02 -4.31e-02 1.44e-02
## 1039
        1.77e-03 -3.22e-03 -2.19e-04 -1.58e-03 -3.52e-03 8.84e-04 -7.98e-04
## 1040
        9.33e-03 4.38e-02 1.66e-03 2.97e-02 5.27e-02 2.38e-03 -1.05e-01
## 1041
        1.26e-02 4.66e-04 -1.52e-02 -1.83e-02 -9.91e-03
                                                         3.38e-04
                                                                  7.40e-03
        2.14e-03 6.91e-03 -6.20e-04 -5.18e-03 -3.12e-03
## 1042
                                                         5.35e-03 -1.78e-02
## 1043 -5.02e-03 -1.58e-02 2.29e-02 2.68e-02 -5.29e-03
                                                         4.12e-03 -2.73e-03
       3.94e-03 -2.75e-03 -7.20e-04 4.53e-04 -3.92e-03 -2.71e-03
## 1045 -8.78e-05 -1.32e-03 3.91e-04 -1.10e-03 -7.24e-03
                                                         2.73e-03
## 1046 -8.64e-04 6.31e-04 5.32e-05 4.63e-04 2.03e-04 -6.63e-04
       2.88e-04 -3.26e-02 -1.27e-03 -7.93e-03 -3.06e-02 -2.62e-02 -1.92e-02
## 1047
## 1048 -2.24e-03 -1.71e-03 -1.84e-02 6.03e-04 1.19e-02 4.41e-03 -1.60e-02
## 1049 -2.99e-03 5.46e-03 -1.63e-03 -7.12e-03 -1.88e-02 9.89e-03 -1.44e-02
        5.06e-03 2.50e-03 -5.26e-04 -2.96e-03 -8.29e-03 -4.93e-03 -8.55e-03
## 1050
        5.24e-04 -2.01e-02 -2.40e-02 -6.59e-05 1.80e-04 -1.53e-03
## 1052 -1.24e-02 -1.24e-02 -2.27e-02 2.64e-03 2.00e-02 2.03e-02
## 1053 -6.11e-03
                  9.90e-05
                           1.08e-02
                                     1.24e-02 -1.50e-03 1.44e-03 -1.12e-03
## 1054 -3.06e-02
                  3.39e-02
                           7.28e-04
                                     5.19e-03 -1.44e-02 -1.55e-02 -6.10e-03
        3.33e-03 -6.59e-03
                           1.54e-04 4.69e-03 1.84e-02 -2.06e-03
## 1055
## 1056 -1.21e-02 8.42e-03 -2.17e-02 -1.16e-03 -1.03e-03 -1.18e-02 7.66e-03
## 1057 -3.83e-02 -4.19e-02 8.61e-02 -5.09e-03 1.14e-01 -6.55e-02 -9.74e-02
## 1058 1.14e-01 -2.32e-02 5.20e-02 -4.15e-03 -6.67e-02 1.86e-02 -6.08e-02
## 1059 -1.16e-02 -2.37e-02 -4.31e-04 2.41e-02 1.21e-02
                                                         6.32e-02 -6.71e-02
        3.00e-03 -4.12e-03 -8.58e-05 -2.01e-03 2.00e-03 1.04e-03 -6.51e-03
        4.78e-02 -2.79e-02 2.79e-02 -6.01e-03 -2.37e-02 -9.03e-04 -1.60e-02
## 1061
## 1062 -8.21e-03 7.06e-03 1.88e-02 2.22e-02 1.57e-05 -3.09e-03 -9.24e-03
        1.48e-02 -8.81e-03 -4.26e-02 3.96e-03 -3.08e-02 3.35e-02 2.31e-02
## 1063
## 1064 -1.05e-03
                 3.71e-03 -8.56e-04 -2.87e-03 -5.20e-03 -7.05e-03 -1.58e-03
## 1065
        3.25e-04 1.94e-04 -3.60e-05 -2.49e-04 5.08e-04 4.05e-04 -1.03e-04
## 1066
        1.99e-02 -3.76e-02 -6.49e-04 -5.33e-03 -1.20e-02 7.17e-03 -9.16e-03
## 1067 -2.35e-02 2.89e-03 5.98e-04 -5.16e-03 -1.30e-02 9.51e-03 2.68e-02
## 1068
        1.69e-02 -2.41e-02 1.09e-03 -6.73e-03 1.42e-02 -7.58e-03 -3.76e-03
## 1069 1.29e-01 -4.18e-02 5.23e-02 -5.07e-03 -4.66e-02 -3.16e-02 1.10e-02
```

```
## 1070 -3.47e-02 4.16e-03 -3.11e-03 -1.29e-02 -3.13e-02 2.21e-02 3.27e-02
## 1071 -2.22e-02
                 1.18e-02 -3.79e-02
                                     1.83e-04 1.73e-02 7.11e-03 -7.65e-03
## 1072
        6.99e-03 -1.81e-02 -1.53e-03 -5.44e-03
                                               1.31e-02
                                                         9.08e-03 -2.82e-03
## 1073 -2.55e-04
                 5.50e-03 -1.65e-02 2.10e-03 1.32e-02
                                                        1.09e-02 -1.71e-02
## 1074 -1.88e-02
                 1.43e-02 -3.32e-03 -1.04e-02 -1.43e-02 -4.75e-02 -8.58e-03
## 1075
        2.10e-03
                  3.58e-02 4.76e-03 -6.76e-03 2.11e-02 4.08e-03 -3.02e-02
## 1076
         1.18e-02
                  3.61e-03 -4.78e-04 -3.33e-03 4.81e-03 -1.12e-03 -2.49e-03
## 1077 -3.10e-02
                  1.48e-02 2.26e-02
                                     1.69e-03 6.50e-03
                                                         3.65e-03 -6.85e-03
        1.45e-01 -4.92e-02 -4.07e-03 1.49e-02 -7.16e-02 -5.62e-02 -7.20e-02
## 1079
         1.31e-03
                 1.23e-04 -1.18e-04 -2.09e-03 5.33e-03 -1.07e-02 -5.16e-03
## 1080
        2.32e-03 -1.02e-02 -1.15e-03 -9.19e-03 -1.61e-02 6.31e-03
        1.09e-03 -6.17e-05 -2.86e-04 7.71e-04 -6.34e-03 -2.46e-03
## 1081
                                                                   5.96e-04
## 1082 -2.80e-03 8.19e-04 -3.09e-03 -1.07e-02 -1.08e-02 -1.31e-02 -2.42e-02
## 1083 -2.80e-03 3.50e-02 9.18e-04 -1.28e-02 1.57e-02 -2.91e-02
        7.86e-02 -1.51e-02 -5.83e-03
                                     1.40e-02 -2.47e-02 -3.58e-03
## 1084
                                                                  7.47e-02
## 1085
        6.48e-03 4.83e-03 -1.50e-04 -8.71e-03 -7.37e-03 2.10e-02 -1.55e-02
## 1086
        1.05e-01 -8.76e-03 7.17e-02 -5.80e-06 -2.43e-02 -3.19e-02
## 1087
        9.26e-03 -3.05e-03 -5.85e-02 -4.31e-03 2.87e-02 -7.36e-02 -1.26e-02
        1.89e-02 9.19e-03 8.29e-04 -7.52e-03 -2.52e-02 7.97e-03
## 1088
## 1089 -1.66e-03 -1.93e-02 -9.75e-04 -4.54e-03 -1.28e-02 8.08e-03 -3.25e-03
## 1090 9.45e-04 -6.83e-04 -6.38e-05 -1.35e-03 8.78e-04 -9.12e-04
                                                                  4.13e-03
## 1091 -3.59e-02 8.23e-03 -1.39e-03 -5.63e-03 1.25e-02 -1.37e-03 -4.13e-03
## 1092 -1.19e-02 -9.49e-03 -2.39e-03 -1.33e-02 7.28e-03 -4.69e-02 -2.56e-02
## 1093 -5.44e-03
                 3.07e-03 2.29e-04 1.05e-03
                                               4.67e-04 4.81e-03
                                                                   2.87e-03
## 1094 -2.28e-02 1.96e-02 -2.84e-02 2.51e-03 3.18e-02 2.49e-02 -2.72e-02
## 1095 -2.01e-03 -1.52e-02
                           1.46e-04 -8.27e-03 -3.00e-02 -6.69e-04
## 1096 -2.04e-03 2.03e-02
                           3.10e-03 -7.19e-03 1.49e-02 -4.82e-02
## 1097
        1.76e-02 4.16e-03 1.12e-03 -8.40e-03 -8.31e-03 5.57e-03 -2.83e-03
## 1098 -3.37e-02 2.12e-02 -3.33e-03 -1.44e-02 2.66e-02 -3.83e-02 -6.47e-03
        4.34e-03 -2.15e-03 1.12e-02 1.26e-02 -2.95e-03 1.59e-03 -4.55e-03
## 1099
        9.68e-04 -6.47e-03 -5.70e-04 -2.75e-03 2.39e-03
## 1100
                                                         4.64e-03
                                                                  7.30e-03
        2.85e-02 -5.23e-03 -3.23e-03 -1.19e-02 -2.92e-02 -4.31e-02 9.57e-03
## 1101
## 1102 -6.01e-03
                 7.58e-03 8.88e-05 -3.15e-03 -1.28e-03
                                                         3.92e-03 -1.03e-02
## 1103
        1.82e-02 -6.94e-03
                           1.80e-03 -1.06e-02 -2.18e-02
                                                         2.48e-02 -5.12e-03
## 1104 -1.56e-03
                  1.02e-03
                           1.17e-04 8.00e-04 -1.34e-03
                                                         1.26e-03
                                                                   4.55e-04
        2.97e-03
                 5.77e-03
                           5.07e-04 -1.84e-03 4.89e-03
                                                         7.89e-04 -3.21e-03
## 1105
## 1106 -4.94e-02 8.01e-03 2.41e-04 -7.19e-03 -2.31e-02 3.91e-03
                                                                  3.46e-02
        1.23e-01 -3.64e-02 3.74e-04 2.09e-02 -4.76e-03 -5.32e-02 -4.30e-02
## 1107
        1.23e-03 -2.60e-03 -1.37e-02 9.71e-04 -2.03e-03 -1.37e-03 -3.33e-03
## 1108
        2.49e-03 -1.88e-02 -2.36e-03 -1.14e-02 -1.58e-02 1.99e-02 -2.59e-02
## 1109
## 1110 -4.42e-03 8.67e-03 -6.22e-04 -5.09e-03 -1.42e-02 -2.80e-02 -2.51e-03
## 1111
       4.02e-02
                  3.77e-02 -2.47e-03
                                     1.79e-02 -7.46e-02 -3.97e-02 -7.84e-02
## 1112 -5.93e-02
                  4.14e-03 -1.10e-02
                                     2.85e-02 -2.90e-02 -8.31e-02
                                     2.77e-02 2.29e-02 -6.94e-02
## 1113 -1.97e-02
                  4.62e-02 -5.93e-04
                                                                   2.09e-02
                 4.07e-04 1.47e-03
## 1114 -9.49e-04
                                     1.75e-03 -4.83e-04 6.99e-04 -6.59e-04
## 1115 -2.84e-03 -2.87e-02 -2.99e-04 -6.78e-03 -1.46e-02 -1.22e-02 -4.31e-03
## 1116 -5.08e-02 -2.33e-02 4.96e-04 -1.17e-02 1.95e-02
                                                         4.03e-03
                                                                   4.14e-02
## 1117 -1.58e-02 4.02e-03 5.85e-04 4.70e-03 1.51e-04
                                                         2.04e-02
                                                                   5.37e-03
## 1118 -1.38e-03 2.22e-03 -2.26e-05 -1.98e-03 -5.75e-03
                                                         5.04e-03
                                                                   3.08e-03
## 1119 7.29e-03 7.94e-03 4.15e-05 -5.15e-03 1.09e-02 1.06e-02
```

```
## 1120 3.66e-04 -2.82e-03 -2.07e-04 -1.78e-03 -5.49e-03 -4.05e-03 -1.43e-03
## 1121 1.11e-02 -1.07e-02 5.29e-04 -8.17e-03 1.32e-02 -1.60e-02
## 1122 -9.52e-03
                  1.23e-02
                           1.85e-03 -3.79e-03 -3.16e-03
                                                        1.31e-02
                                                                  9.03e-03
## 1123 -9.23e-03
                  2.33e-02
                           4.12e-03 -7.79e-03 -4.57e-02
                                                        2.36e-02
                                                                  2.49e-02
## 1124 -1.18e-02
                  1.78e-03
                           4.37e-03 -1.21e-02 6.24e-03 -3.56e-03
                                                                  5.74e-02
## 1125 -7.70e-03
                  2.39e-03
                           4.33e-05
                                    3.86e-03 1.41e-02 -3.40e-03
                                                                  8.92e-03
## 1126
        7.80e-03
                  2.42e-03 -9.72e-03 -8.33e-04 -2.69e-03
                                                        5.10e-03
                           1.68e-03 -1.40e-03 1.74e-02 4.46e-04 -2.54e-03
## 1127
        3.24e-03
                  6.58e-03
## 1128
                  3.18e-03 1.40e-04 -7.64e-04 -6.61e-04 -2.69e-04 -2.61e-03
        5.29e-04
## 1129
        4.66e-03
                  2.25e-03 -3.75e-02 8.23e-03 -3.85e-02 1.68e-02
## 1130
        7.41e-04
                  6.06e-04 -5.63e-05 -2.28e-04 -2.91e-04 -1.74e-05 -7.55e-04
## 1131
                  8.37e-04 -1.01e-04 -2.99e-03 1.28e-03 -1.22e-02 3.69e-03
        2.36e-03
## 1132
        9.99e-04
                  1.08e-03 -2.59e-02 -1.93e-03 4.88e-03 1.08e-04 -2.45e-02
## 1133
        5.75e-03 -8.99e-03 -4.67e-04 -3.19e-03 1.34e-02 -4.04e-03 -9.74e-03
## 1134 -2.85e-04
                 3.00e-04 1.76e-05
                                    9.50e-05 7.49e-05
                                                        5.39e-04
                                                                 2.76e-04
## 1135 2.11e-03 -8.39e-03 -1.37e-03 -5.25e-03 -1.29e-02
                                                        2.32e-03 -3.34e-03
## 1136 -1.06e-03 -8.12e-05 2.06e-04 -3.00e-04 4.68e-04
                                                        1.28e-03 -2.41e-03
        5.82e-03 -1.22e-02 -3.02e-03 1.63e-02 -5.45e-02
                                                        8.20e-02
## 1137
## 1138 -8.32e-02 5.54e-02 9.47e-02 1.09e-01 3.43e-02 -6.87e-02
                                                                  2.19e-02
## 1139
        2.18e-02 5.16e-03 -3.01e-02 -1.03e-03 -3.50e-02 -2.80e-02
                                                                  1.96e-02
## 1140
        7.11e-05
                 1.62e-04 5.05e-05 -1.82e-04 3.13e-04
                                                        2.52e-04
                                                                  3.50e-04
## 1141
        2.77e-04 -4.61e-04 -1.06e-04 -1.41e-03 -3.66e-03
                                                        5.63e-04
                                                                  2.24e-03
## 1142 -5.36e-02 9.78e-03 7.79e-04 -8.06e-03 3.15e-02
                                                        6.01e-03
                                                                  1.47e-02
## 1143 -3.07e-02 -6.86e-02 -1.78e-03 -1.81e-02 -3.11e-02
                                                        1.72e-02
                                                                  2.01e-03
## 1144 -2.76e-02 -2.71e-02 4.42e-02 5.12e-02 1.84e-02 -3.47e-02
## 1145 -1.65e-02 1.38e-02 -2.74e-02
                                     1.92e-03 1.16e-03
                                                        1.73e-02 -2.49e-02
## 1146
       7.87e-03 -2.38e-03 2.57e-03 -6.95e-03 1.47e-02 -5.37e-03 -3.02e-03
        2.65e-03 1.21e-03 -8.34e-03 -8.73e-04 6.25e-03 -5.22e-04 -1.05e-03
## 1147
        2.25e-03 -2.45e-02 -5.03e-04 -4.19e-03 2.78e-03 -2.38e-02 -4.36e-03
## 1148
## 1149
        1.39e-03 -5.00e-03 -3.91e-04 -4.39e-03 -1.52e-02 -4.93e-04 7.24e-03
## 1150 -8.26e-03 5.60e-03 -1.31e-03 -4.55e-03 -1.03e-02 -1.20e-02 -9.74e-03
## 1151 1.75e-03 -1.47e-03 -2.78e-04 6.80e-04 -2.06e-04 2.76e-03 -1.97e-03
## 1152 -5.16e-02 2.02e-02 -8.93e-03 -2.44e-02 1.56e-02 -6.81e-02
                 2.15e-02 4.25e-04 -6.37e-03 9.76e-03 7.28e-03 -6.29e-03
## 1153
        5.14e-03
## 1154
        1.24e-02 -5.73e-02 4.48e-02 -3.52e-03 -1.94e-02 -2.88e-02 -3.01e-02
## 1155 -4.25e-03 -3.84e-03 -9.00e-05 9.80e-04 3.39e-03 1.01e-02
                                                                 6.22e-03
## 1156 -7.19e-04 1.26e-03 4.02e-04 1.86e-03 -4.77e-03 -2.63e-03
                                                                  6.99e-04
## 1157 -2.25e-03 -3.63e-04 -7.44e-04 -5.48e-03 -2.75e-03 -6.43e-03
                                                                  1.59e-02
2.95e-03 -3.75e-04 -2.62e-04 -2.62e-03 3.23e-03 -7.42e-03 -2.87e-03
## 1159
## 1160 -2.51e-02 -1.80e-02 -3.53e-02 -5.73e-04 1.13e-03 1.92e-02
                 1.98e-02 3.38e-03 9.41e-03
## 1161 -2.02e-02
                                               1.57e-02 -1.02e-02
                                                                  1.37e-02
## 1162
       1.53e-02 -1.95e-03 -6.03e-05 -5.87e-03 1.36e-02 1.38e-02 -1.32e-02
## 1163
        4.06e-02 -4.52e-02 5.26e-03
                                    2.84e-02 -1.70e-02 4.96e-03
                                                                  7.53e-02
## 1164 -2.16e-02 -7.95e-03 2.94e-06 -6.40e-03 -2.81e-02 -2.63e-03
                                                                  9.86e-03
## 1165
       7.04e-03 1.99e-02 3.99e-03 -9.58e-03 2.56e-02 -1.81e-02 -6.05e-03
## 1166 -1.45e-02 -1.75e-02 -2.75e-02 4.71e-03 1.33e-02
                                                        2.49e-02
                                                                 4.23e-02
        3.13e-03 5.61e-04 -3.06e-03 6.84e-05 2.80e-03
## 1167
                                                        1.60e-03 -1.13e-03
## 1168
        5.56e-02 6.27e-03 5.17e-03
                                    2.90e-02 -4.33e-03 2.88e-02 -7.58e-02
## 1169 -6.78e-02 4.62e-02 -4.90e-02 5.49e-03 1.94e-02 3.31e-02 7.35e-02
```

```
## 1170 2.18e-03 5.19e-03 5.37e-04 -1.42e-03 5.14e-03 8.51e-04 2.57e-03
## 1171 -8.63e-03
                1.63e-02 -2.38e-02 1.43e-03 1.02e-02 1.57e-02 -2.48e-02
## 1172 5.52e-02
                 2.10e-02 -5.25e-03
                                   9.57e-03 5.01e-02 -1.25e-02 -6.14e-02
                1.18e-02 2.34e-05 -9.41e-03 1.20e-02 -5.06e-03 -4.43e-03
## 1173 -2.85e-02
                                                               7.62e-03
## 1174 -8.69e-03 -7.28e-05 8.25e-05 -3.68e-03
                                             1.66e-03 5.76e-03
## 1175 -7.83e-03 -8.78e-03
                         1.01e-02 5.24e-04 -2.16e-03 -6.84e-03
                                                                9.03e-03
## 1176 5.53e-03 -3.00e-03 -3.89e-04 -2.03e-03 3.89e-03 -1.19e-03 -5.60e-03
## 1177 -2.76e-03 4.37e-03 6.43e-04 -1.61e-03
                                             1.17e-02 -1.38e-02
                                                                1.19e-02
                          1.57e-03
## 1178 -4.49e-04
                 1.03e-02
                                   3.70e-03
                                             5.62e-05 8.08e-03
## 1179 -9.84e-03
                 2.30e-02 -1.38e-04 -8.57e-03 -1.63e-02 1.34e-02 -3.76e-03
## 1180 -7.36e-04 -7.43e-04
                          3.34e-04
                                   1.87e-03
                                             2.58e-03 -2.29e-03
                                                                3.41e-03
## 1181 -3.38e-02
                1.70e-02 4.36e-03 -5.53e-03
                                             2.63e-02
                                                      5.36e-03
                                                                3.55e-02
        2.16e-04
                1.34e-03
                          2.21e-04 -9.36e-04
                                             2.92e-03
                                                      1.54e-03 -4.51e-04
## 1182
## 1183
        1.09e-03 6.57e-04 -2.54e-03 -2.96e-03
                                             2.56e-04 -1.12e-03
                                                                1.13e-03
## 1184 -8.98e-03 -4.10e-03 4.61e-04
                                   3.05e-03
                                             2.78e-03 -5.66e-03
                                                                9.29e-03
## 1185 -1.03e-02 -6.10e-03 -1.67e-04
                                    1.78e-03 -6.35e-03 1.11e-02 -2.67e-03
## 1186 -8.93e-03
                5.75e-03
                          1.51e-03
                                    3.26e-03
                                             6.42e-03
                                                      4.24e-03
                                                                1.99e-03
## 1187 -1.11e-01 -1.75e-02
                          7.62e-02
                                   8.09e-03
                                             1.55e-02
                                                      1.34e-02
                                                                5.62e-02
## 1188 -2.20e-02 -1.01e-02 1.71e-02 -1.07e-03 1.03e-02 -1.47e-02
                                                                1.62e-02
## 1189 -5.53e-02 2.77e-02
                          1.64e-04 -1.80e-02 -2.14e-02 1.93e-02
                                                                5.45e-02
## 1190 -7.87e-03 -1.00e-05
                          7.02e-04
                                   3.94e-03 -7.92e-03 -6.20e-03
                                                                9.09e-03
## 1191 9.42e-04 -6.16e-04
                          1.07e-04 6.46e-04 4.50e-04 -1.04e-03
                                                                1.40e-03
                          8.66e-04 -3.04e-03 -7.61e-03 4.33e-03
## 1192 -3.24e-03 6.39e-03
                                                                1.31e-02
                           1.38e-03 -8.50e-03 2.55e-02 -1.94e-02 -2.66e-02
## 1193 -1.71e-03 -1.48e-02
## 1195
        1.96e-03 -9.80e-03 -6.04e-04
                                   2.12e-03 6.83e-03 -6.46e-03 -5.86e-03
## 1196 -1.26e-05 -1.75e-05
                          1.90e-06 -1.15e-05 1.94e-06 3.55e-05 -6.38e-06
## 1197 2.72e-02 2.49e-02 3.14e-03 -8.23e-03 -2.36e-02 -3.70e-02 -2.59e-02
                2.86e-02
                          1.20e-03 -7.65e-03 1.00e-03 -3.33e-03 -2.55e-02
## 1198 -3.24e-02
## 1199 4.16e-03
                 2.35e-03 2.60e-02 2.90e-02 9.52e-03 -6.88e-03 -1.26e-03
                 2.94e-03 -2.17e-04 -5.94e-03 -1.88e-02 -2.92e-02 2.14e-02
## 1200 -2.34e-03
## 1201 1.10e-02 -1.69e-02 -6.86e-05 -6.96e-03 1.13e-02 1.32e-02 -9.67e-04
                                   1.51e-02 6.28e-02 -7.96e-04
## 1202
        2.74e-02 -5.40e-02 -4.38e-03
2.73e-03 7.55e-03 9.16e-03 -3.85e-03
## 1204 -1.17e-02 1.18e-02
                          3.87e-04
## 1205 -4.03e-02 2.78e-02
                          7.00e-02 -1.34e-02 -2.15e-02 -2.06e-02 6.73e-02
                                   2.64e-02 8.25e-02 -5.25e-02 7.59e-02
## 1206 -3.14e-02 3.28e-02
                          3.17e-04
## 1207 -1.16e-04 8.80e-04 2.08e-03
                                   2.35e-03 9.09e-05 2.81e-04 -1.04e-03
## 1208 1.13e-02 -5.18e-02 -3.40e-03 -1.00e-02 -2.73e-02 -2.80e-02 2.56e-02
## 1209 -2.16e-03 -3.23e-03
                          1.24e-04
                                   3.05e-03 5.51e-03 -3.26e-03 -3.98e-03
## 1210 -7.09e-03 8.32e-03 8.80e-04 2.39e-03 -4.34e-03 -3.56e-03 1.22e-03
## 1211 -9.31e-04 -1.34e-03 -1.52e-04 5.71e-04 -2.54e-03 2.32e-03 -8.43e-04
## 1212 -1.83e-02 -1.45e-02 -2.32e-02 -3.56e-03 -1.74e-02 1.02e-02 -3.54e-03
## 1213 -1.49e-02 1.42e-03 -2.85e-04 -7.21e-03 3.52e-03 -1.78e-02
## 1214 -7.16e-02 -8.16e-02 1.42e-04 3.13e-02 -7.05e-02 -2.49e-02
## 1215 6.41e-03 -2.58e-03 4.92e-05 -9.46e-04 -3.35e-04 2.51e-03 -3.47e-04
## 1216 -1.11e-02 -2.65e-02 -5.09e-02 3.29e-03 5.97e-02 3.05e-02 6.74e-02
        1.04e-02 -7.04e-03 6.96e-06 -2.55e-03 -5.03e-03 5.34e-03 -6.21e-03
## 1217
        5.32e-05 1.88e-03 1.37e-04 -4.03e-04 1.04e-03 -1.11e-04 -6.18e-04
## 1218
## 1219 1.59e-03 -5.74e-03 -3.94e-04 -2.89e-03 -2.48e-03 1.37e-03 -5.01e-03
```

```
## 1220 -2.40e-04 3.62e-03 1.02e-04 -1.21e-03 -2.00e-03 -1.69e-04 -4.04e-03
                           7.17e-04 -3.75e-03 5.23e-03 7.91e-03 -2.15e-03
## 1221 -5.13e-03
                 6.36e-03
## 1222 -2.49e-04
                  1.80e-04
                           1.09e-03
                                     1.27e-03 -4.07e-04
                                                        5.55e-04 -1.09e-04
        8.20e-02 -4.40e-02
                           4.45e-03
                                     2.91e-02 -7.30e-02 9.37e-02 6.92e-02
## 1223
## 1224
        6.11e-02
                 6.61e-03 8.35e-02 8.88e-03 5.96e-02 -7.93e-03
                 9.58e-03 -1.61e-03 -8.31e-03 1.43e-02 -1.65e-02 -1.90e-02
## 1225 -5.69e-03
## 1226 -5.42e-03 -1.42e-02 -1.74e-03 -1.01e-02 -1.81e-02 -5.15e-02 -2.25e-02
                                     3.41e-03 1.36e-02 -2.71e-03
## 1227 -3.71e-02
                 1.62e-02 -2.87e-02
                           3.26e-04 -1.60e-03 6.01e-04
## 1228 8.72e-04
                 1.32e-03
                                                        3.85e-03
## 1229 -1.27e-02 -5.29e-03 2.16e-02
                                     2.58e-02 5.52e-03
                                                        6.38e-03 -2.66e-03
## 1230 -1.10e-02 2.86e-02 6.69e-03 -2.77e-03 3.58e-02 8.20e-03
                                                                   1.94e-02
                 2.59e-02 -8.44e-04 -1.01e-02 1.40e-02 -5.48e-02
## 1231 -4.48e-03
                                                                  1.18e-02
## 1232 -1.59e-03 -3.02e-03 2.04e-04 -1.82e-03
                                               4.51e-04 -2.68e-03 -9.33e-04
## 1233 -1.81e-03 -4.83e-03 6.43e-05 1.71e-03 5.65e-03 1.03e-02
## 1234 -1.17e-02 7.12e-03 7.69e-04 -3.48e-03 -6.42e-04 -8.54e-03
                                                                  4.70e-03
## 1235 -6.58e-03 -9.92e-03 1.20e-02 1.46e-02 3.69e-03
                                                        5.04e-03 -1.62e-03
## 1236
        4.09e-03 -7.17e-03 -1.95e-04 -2.64e-03 -5.93e-03
                                                        5.20e-03 -4.95e-04
        2.66e-02 -5.05e-02 -8.59e-04
                                     1.98e-02 7.57e-02 2.02e-02 -3.89e-02
## 1237
## 1238
        1.12e-01 -2.61e-02 1.90e-03
                                     2.24e-02 3.07e-02 -4.09e-02 -7.93e-02
## 1239 -6.92e-02 2.81e-02 1.89e-03 -8.79e-03 4.24e-02 1.50e-02 -9.32e-03
## 1240 -2.28e-03
                 1.08e-02 -2.73e-02 -2.26e-03 3.08e-02 -3.50e-02 -2.52e-02
## 1241 1.37e-04 -2.50e-04 1.17e-03
                                     1.35e-03 8.65e-05
                                                        5.19e-04 -4.74e-04
## 1242 -2.66e-02 1.19e-02 -2.17e-03 -7.57e-03 1.92e-02 -1.85e-02 -2.21e-02
## 1243 -5.02e-03
                 3.32e-03 -3.84e-04 -7.55e-03 3.66e-03
                                                        3.68e-03
                                                                  9.65e-03
## 1244 6.39e-03 -9.85e-03 -1.28e-03 -3.90e-03 8.76e-03
                                                        3.94e-03 -2.05e-03
## 1245 -1.32e-02 8.72e-03 -2.78e-02
                                     1.24e-03 -2.75e-02
                                                        1.41e-02 -2.51e-02
## 1246 -1.30e-02 2.27e-02 -2.81e-02 4.52e-04 -4.40e-03 -1.78e-03
## 1247 7.66e-02 -2.85e-02 9.05e-02 8.64e-03 -3.59e-02 -5.72e-03
                                                                  2.08e-02
                 1.79e-03 -2.63e-04 -3.61e-03 -4.52e-03 3.96e-03
## 1248 -8.65e-04
                                                                  1.38e-02
## 1249 -1.38e-02
                 1.01e-02 8.99e-04 -5.65e-03 -1.02e-02 -2.40e-04 -4.91e-03
                           3.66e-03
                                     2.44e-02 -2.79e-02 6.11e-03 -3.17e-02
## 1250
        8.86e-02 8.64e-03
        1.35e-02
                 2.83e-02 -2.74e-02 6.20e-03 2.07e-02 2.37e-02 -2.63e-02
## 1251
## 1252 -2.57e-03
                  6.98e-03 -1.01e-03 -3.86e-03 -2.75e-03 -3.87e-03 -1.52e-03
## 1253
        1.54e-02
                  1.57e-03 2.68e-03 -2.24e-03 2.05e-02 1.13e-02 -1.49e-02
## 1254 -8.34e-04
                  3.79e-04 1.51e-03
                                     1.76e-03 -7.00e-04
                                                        5.76e-04 -6.92e-04
## 1255 -3.49e-03
                  3.43e-03 9.82e-05
                                     7.84e-04 2.18e-03
                                                        5.15e-04 1.63e-03
                                     1.12e-02 -4.83e-02
## 1256 2.60e-02 -2.86e-02 -3.31e-03
                                                        2.10e-02 -5.40e-02
## 1257 -1.85e-02 -7.52e-03 -2.56e-02
                                     1.32e-03 8.83e-03
                                                         1.70e-02 -8.14e-03
## 1258 1.35e-02 -7.12e-02 -1.45e-03
                                     2.62e-02 4.50e-02
                                                         5.05e-02 -1.04e-01
                 5.18e-04 -2.16e-03 -8.34e-03
## 1259 -6.71e-03
                                              7.61e-03
                                                        8.78e-03 -1.84e-02
## 1260
       5.62e-04
                 1.05e-03 8.34e-05 -3.71e-04 1.25e-03 -8.18e-04 -4.43e-04
                           1.82e-02 2.12e-02 -2.54e-03
## 1261 -1.28e-02
                 4.96e-03
                                                        3.63e-03
## 1262 -2.23e-02
                 2.39e-02 1.65e-03 -1.39e-02 -1.92e-03 -3.46e-02
                 6.07e-02 5.85e-02 -3.58e-04 3.08e-03 4.29e-02
## 1263 -2.23e-03
                                                                  5.57e-03
       3.60e-03 -1.03e-02 -1.44e-03 -4.96e-03 -3.96e-04 -2.75e-03
## 1264
                                                                  4.71e-03
## 1265 -2.93e-03 1.71e-03 2.20e-04 -2.41e-04 2.21e-03 1.91e-03 -7.03e-04
## 1266
       7.39e-03 -6.84e-03 -2.42e-02 -2.80e-02 -3.10e-03 -9.14e-03
        7.28e-03 -7.88e-03 -9.56e-04 -3.28e-03 3.79e-03 2.62e-04 -2.03e-03
## 1267
## 1268 -2.18e-04 -2.87e-03 -9.04e-03 -1.03e-02 3.92e-03 -5.41e-04
                                                                  3.39e-03
## 1269 -2.06e-02 2.58e-03 3.88e-02 4.57e-02 8.84e-03 1.96e-02 2.41e-02
```

```
## 1270 1.82e-03 -5.29e-03 2.15e-04 -1.44e-03 5.32e-03 3.11e-03 2.21e-03
## 1271 -2.19e-02 -6.21e-03 -1.80e-03 -1.02e-02 9.03e-03 9.87e-03 -1.87e-02
## 1272 9.56e-02 -5.35e-02 -3.77e-03 1.97e-02 -4.80e-02 -5.39e-03 -3.56e-02
## 1273 -1.51e-03 -3.21e-03 -2.07e-04 -1.27e-03 -2.70e-03 5.02e-04 -3.28e-03
1.72e-02 -9.79e-05 -8.51e-03 2.49e-02 -3.96e-02
## 1275 -5.53e-03
                                                                2.39e-02
## 1276 -9.54e-04 -4.55e-03 5.41e-05 -8.02e-04 -9.21e-04
                                                       1.63e-03
## 1277 -8.96e-03 -1.23e-02 -1.17e-03 -7.52e-03 5.48e-03
                                                       8.18e-04
       2.64e-03 2.52e-03 1.15e-05 -1.58e-03 1.60e-03
                                                       3.35e-03 -4.92e-04
## 1279
        1.18e-02
                 9.57e-03 1.21e-03 -5.13e-03 -2.31e-02 1.23e-03 -1.64e-02
## 1280 -8.01e-03
                 8.29e-02 6.89e-02 -1.25e-03 -5.19e-02 -5.54e-02
                 6.91e-03 1.25e-05 -2.93e-03 -6.49e-03 1.45e-03 -2.13e-03
## 1281 -8.75e-04
## 1282 -6.35e-02
                 1.65e-03 -2.07e-03
                                    2.60e-02 -5.77e-02
                                                      1.06e-01
                                                                1.05e-02
## 1283    1.65e-03    2.17e-03    1.71e-04    -5.31e-04    2.80e-06    4.33e-04    -2.51e-03
## 1284 -1.51e-03 -1.49e-03 -1.53e-04 8.16e-04 2.15e-03 -2.21e-03
                                                                6.33e-04
## 1286 -8.06e-03 -4.62e-02 5.09e-02 6.06e-02 -6.04e-03 -4.62e-02
## 1287 -2.16e-04 -7.80e-03 7.50e-06 -2.64e-03 5.72e-03 9.06e-03 -4.11e-03
## 1288
       7.59e-03 -4.52e-03 1.96e-04 -2.82e-03 -6.61e-03 -3.30e-03
                                                                5.13e-03
## 1289
        6.79e-03 -1.29e-02 -3.58e-02 -4.12e-02 9.58e-03 -1.43e-02 -8.98e-03
## 1290
        3.58e-03 1.66e-04 -9.59e-03 -1.11e-02 4.48e-03 -3.76e-03 -6.12e-03
## 1291
       8.38e-04 -3.63e-02 9.08e-02 -7.10e-03 -9.62e-02 -1.16e-02
                                                                9.91e-02
        6.55e-02 2.41e-02 8.26e-04 2.81e-02 -5.93e-02 2.21e-03 8.26e-02
## 1292
        1.59e-02 -5.38e-03 -1.35e-02 -2.35e-03 1.41e-03 -1.08e-02 -3.20e-03
## 1293
## 1294 -3.76e-02 -2.54e-02 4.67e-02 5.36e-02 1.95e-02
                                                      2.90e-04
## 1295 -1.70e-02 -8.31e-03 1.86e-03 -3.79e-03
                                              1.60e-02
                                                       8.45e-03
                                                                8.99e-03
## 1296 1.25e-02 8.40e-03 1.09e-03 -6.17e-03 6.81e-04
                                                       9.03e-03
                                                                 5.62e-04
## 1297 -5.61e-03 7.21e-03 -1.59e-04 -6.20e-03 -1.12e-02 -1.86e-03
                                                                 2.35e-02
## 1298 1.63e-02 -5.91e-02 -7.59e-03
                                    1.49e-02 1.71e-02
                                                      7.05e-02
                                                                 5.80e-02
## 1299 -1.61e-01
                 1.07e-01 8.59e-03
                                    3.63e-02 -1.15e-01
                                                       1.32e-01
                                                                1.09e-01
                 2.16e-03 8.60e-04 4.51e-03 6.82e-03 -7.53e-03
## 1300 -6.73e-03
                                                                1.93e-03
## 1301 -7.55e-03 -1.15e-03 2.02e-05
                                    1.81e-03 -6.16e-04 -1.21e-03 -2.28e-03
        9.81e-03 -1.83e-03 -2.53e-02 -2.91e-02 -1.31e-02 -1.01e-02 -5.89e-03
## 1302
        1.62e-03 -8.08e-03 -1.99e-03 -9.89e-03 2.73e-02 -3.30e-02
## 1303
                7.25e-03 8.57e-04 -9.95e-03 -1.16e-02 1.41e-02 -9.42e-04
## 1304
        1.09e-03
                1.02e-03 -5.44e-04 -6.86e-03 3.55e-04 -4.13e-03
## 1305 -8.45e-03
                                                                9.36e-03
                 1.73e-02 2.26e-04 3.22e-03 -8.07e-03 -1.77e-03
## 1306 -8.52e-03
                                                                1.11e-02
## 1307 -1.45e-02
                 1.56e-02 -3.06e-02 1.74e-03 -1.93e-02 7.44e-03
                                                                3.44e-02
## 1308 7.19e-03
                 4.39e-03 -8.44e-04 -4.35e-03 -1.01e-02 1.07e-02 -3.80e-03
                 3.69e-02 2.42e-03 -8.77e-03 9.78e-03
## 1309 -2.34e-02
                                                       2.92e-02
                                                                1.67e-02
## 1310 -5.07e-03 1.02e-02 2.90e-04 -6.45e-03 6.11e-03 -2.09e-03 -2.91e-03
## 1311 2.49e-02 -3.19e-02 -2.96e-02
                                    5.02e-03 -2.11e-02 -1.62e-02
                                                                3.74e-02
## 1312 -7.33e-02
                3.88e-02 6.32e-02
                                   7.19e-02 -3.90e-02 -1.33e-02
## 1313 -6.10e-02 -2.00e-03 -1.68e-03
                                    2.03e-02 -8.22e-02 7.61e-02
                                                                9.40e-02
       5.48e-02 -1.38e-02 2.32e-04 1.78e-02 -3.74e-02 1.59e-02 -6.25e-02
## 1314
## 1315 -1.48e-02 1.54e-02 -2.91e-02 -3.38e-02 -7.00e-03 -1.26e-02
                                                               3.05e-03
## 1316
        1.07e-02 2.23e-02 2.73e-03 -3.57e-03 2.13e-02 1.88e-02 -2.24e-02
        1.26e-02 -9.58e-03 -9.41e-03 -9.31e-04 -9.63e-03 6.56e-03 9.52e-03
## 1317
## 1318 -1.54e-02 2.53e-02 -3.98e-02 2.93e-03 -3.84e-02 1.61e-02 -3.42e-02
## 1319 4.12e-04 1.57e-03 -2.32e-03 3.80e-05 1.00e-03 -2.63e-03 -2.19e-03
```

```
## 1320 1.99e-02 -1.63e-03 -1.82e-02 -9.24e-04 -1.84e-02 -2.32e-03 -1.53e-02
## 1321 -2.55e-03 -1.87e-03 7.16e-03 8.35e-03 3.57e-03 8.52e-06 -1.01e-03
## 1322 -1.93e-03 -3.85e-02 8.33e-04 -7.81e-03 2.61e-02 -1.82e-03
                                                                 1.38e-02
## 1323 -1.68e-02 1.78e-02 2.45e-03 8.67e-03 -5.92e-03 -1.33e-02
       2.31e-03 -8.54e-04 -4.36e-03 -4.93e-03 -2.51e-03 -1.72e-03
                                                                 4.15e-04
                 1.53e-02 -3.21e-03 -1.00e-02 1.30e-03 -3.45e-02 -1.91e-02
## 1325
        3.30e-03
## 1326
        6.25e-03 -1.09e-02 1.51e-04 -3.61e-03 -9.15e-03 -7.62e-04 -1.25e-02
        6.80e-02 -5.20e-03 -3.26e-03 1.02e-02 -3.63e-02 -2.87e-02 8.28e-03
## 1327
## 1328
        3.31e-03 6.50e-04 1.25e-04 4.88e-03 1.42e-02 -1.03e-02 -2.33e-02
## 1329 -2.08e-03
                 1.50e-02 -1.67e-03 -8.93e-03 1.83e-03 -2.04e-02 8.85e-03
## 1330 -1.09e-02
                 1.11e-03 -2.68e-04 -5.53e-03 1.68e-02 4.78e-03 -1.95e-02
                  1.12e-03 6.12e-04
## 1331 1.81e-04
                                    2.50e-03 4.75e-04 -2.09e-03 -8.25e-03
## 1332 -5.59e-04 -2.34e-04
                           6.89e-05
                                    4.65e-04 1.33e-03 1.88e-04
                                                                 1.38e-03
## 1333 -2.32e-02 6.83e-04 4.68e-02 4.83e-03 -2.66e-02 5.70e-02
                                                                 4.13e-02
## 1334 -1.55e-01 8.76e-02 1.09e-02
                                    4.44e-02 9.26e-02 -8.12e-03
                                                                 2.35e-02
## 1335 -2.47e-02
                 3.07e-02 -4.13e-02 -1.01e-05 -2.19e-02 -2.09e-02 -3.80e-02
## 1336 -1.21e-03
                 8.15e-04 2.02e-04
                                    8.74e-04 2.84e-05
                                                        1.57e-03
## 1337 -5.96e-03
                 4.66e-03 -2.42e-05
                                    1.24e-03 7.89e-05 -2.95e-03 -1.71e-03
## 1338 4.22e-03
                 3.32e-03 -4.03e-04 -5.35e-03 -1.23e-02 1.05e-02 7.68e-03
## 1339
        1.03e-02 9.08e-03 -7.15e-04 2.72e-02 2.46e-02 -1.94e-03 -3.45e-02
## 1340 -2.31e-02 -4.87e-02 -2.98e-03
                                    1.70e-02 -4.32e-02 -1.47e-02
                                                                 5.11e-02
## 1341 -4.06e-03 -4.48e-03 5.02e-04 -7.77e-03 -2.22e-02 -6.64e-04
                                                                 1.67e-02
## 1342 -9.04e-04 4.60e-03 -2.27e-04 -3.31e-03 8.80e-03 -8.17e-03
## 1343 9.27e-03
                 4.44e-03
                          1.03e-03 -4.52e-03 -2.21e-02 9.38e-03 -1.08e-03
## 1344 -2.05e-02
                 2.50e-02 2.10e-03 -5.76e-03 8.63e-03
                                                       3.63e-03 -2.28e-02
## 1345
        1.64e-02
                  1.75e-02
                           1.91e-03 -4.70e-03 3.28e-03
                                                        9.20e-03 -1.99e-02
## 1346 -2.00e-02 -1.56e-02 7.19e-04 -1.15e-02 3.94e-02 -2.39e-02 -2.84e-02
3.63e-03
## 1348 1.55e-02 -4.69e-03 -2.71e-02 -3.49e-03 -2.29e-02 1.97e-02
                                                                 8.00e-03
## 1349 -2.79e-04 6.52e-04 -1.39e-04 -9.55e-04 -1.97e-03
                                                        1.67e-03
                                                                  2.82e-03
                          3.72e-03 -1.10e-02 3.11e-02
## 1350 -4.88e-02
                 2.28e-02
                                                        4.01e-02
                                                                  2.49e-02
## 1351 -6.15e-03
                  9.36e-03 1.05e-03 -2.54e-03 7.21e-03
                                                        8.40e-03
                                                                  1.30e-02
## 1352 -4.16e-03
                  6.52e-03
                           1.42e-02 2.73e-04 -1.86e-02
                                                        1.73e-02
                                                                  1.16e-02
## 1353
        3.13e-03 -6.12e-03 6.95e-04 -1.90e-03 1.17e-02
                                                        8.13e-03
                                                                  4.38e-03
## 1354
        2.22e-02
                  6.83e-03 -1.11e-01 -1.30e-01 2.04e-02
                                                        2.91e-02
                                                                 5.10e-02
                                                        1.21e-01 -9.72e-02
## 1355 -1.32e-01
                  2.38e-01 6.68e-03
                                    3.52e-02 6.70e-02
                  8.75e-03 -7.43e-04 -8.07e-03
## 1356 -3.97e-02
                                              2.34e-02 -1.73e-02 -6.72e-03
## 1357
        1.36e-03
                 5.78e-05 -4.44e-06 -9.64e-04 3.01e-03 7.15e-04 -7.67e-04
                 2.37e-04 -1.22e-06 3.52e-04 1.94e-03 -2.51e-04 3.48e-04
## 1358 -8.70e-04
                          3.26e-04 -6.65e-03 -8.65e-03 -2.02e-03 -2.28e-03
## 1359 7.96e-03
                  8.17e-03
## 1360 -1.42e-02
                  6.89e-03 1.62e-03 -5.15e-03 6.36e-03 1.42e-02 -2.28e-02
## 1361 -1.01e-02
                  1.31e-03
                           1.97e-04 -4.04e-03 9.58e-03
                                                        5.25e-03
                                                                 1.51e-02
## 1362 3.03e-03
                 4.94e-03 -4.83e-03
                                    7.13e-05 -2.13e-03 1.68e-03 -1.29e-03
## 1363 -1.94e-03 -1.92e-02 -2.10e-02
                                    3.71e-04 -2.20e-02 1.43e-02
                                                                 1.16e-02
## 1364 -1.58e-02
                 1.50e-03 4.70e-04 -6.10e-03 1.76e-02 -1.86e-03
                                                                 8.00e-03
## 1365 -1.88e-02
                  1.31e-02 -2.77e-02
                                    1.57e-03 2.08e-03 2.11e-02 -2.59e-03
## 1366 -8.00e-03
                 4.95e-03 6.55e-02 9.11e-04 1.98e-03 9.02e-02
                                                                  1.40e-02
## 1367 -2.71e-02 -6.27e-03 3.90e-02 4.52e-02 -1.96e-02 -2.29e-02
                                                                 2.65e-02
## 1368 -2.73e-02 1.32e-02 1.08e-03 -4.48e-03 -1.96e-02 1.22e-02
## 1369 1.23e-02 2.07e-02 -3.29e-02 -4.38e-04 4.53e-03 -3.60e-02 -6.68e-03
```

```
## 1370 -6.49e-03 -3.03e-02 -4.43e-03 1.47e-02 8.91e-02 3.70e-02
                                                                    5.58e-02
## 1371 -6.72e-03 9.38e-03 -2.77e-02 -3.27e-02 9.22e-03
                                                         5.48e-03
## 1372
        1.26e-02 -2.48e-02 -1.55e-03 -3.76e-03 -1.25e-02 -1.80e-03 -8.61e-03
        2.39e-02 -7.84e-03 -1.45e-03 -9.42e-03 -6.75e-03
## 1373
                                                         3.57e-03
                                                                   2.28e-02
## 1374
        6.26e-03 1.21e-02 -2.52e-02 -2.13e-03 -2.70e-02 7.03e-03 -1.75e-02
## 1375
         3.20e-03 -3.23e-03
                           1.45e-03 -6.87e-04 7.86e-03 -1.50e-02 -1.16e-02
## 1376
         2.77e-02 -1.44e-02 4.39e-02 -8.18e-03 -5.25e-02 -2.05e-02 -6.71e-02
## 1377 -3.34e-03
                  6.92e-04
                            2.18e-04
                                     1.25e-03 2.14e-03
                                                         3.76e-04 -1.37e-03
                            3.05e-03 -3.42e-04 1.10e-03 -1.95e-03 -1.44e-03
## 1378 -2.76e-04 -1.32e-03
## 1379
        4.92e-03
                  1.73e-03
                            1.85e-03 -7.61e-03
                                                2.17e-02 -5.54e-03
## 1380
        5.61e-02 -7.67e-03
                            6.38e-02
                                     1.42e-03
                                                6.69e-02 7.52e-02 -6.89e-02
## 1381 -1.81e-02 -5.52e-03 -1.06e-03 -7.12e-03 6.36e-03 -1.74e-02
                                                                   9.17e-03
## 1382 -2.51e-02 6.64e-03
                            3.48e-02
                                     3.98e-02 -1.08e-02 -1.17e-02 -3.75e-03
## 1383 -2.15e-02 4.61e-04
                            5.01e-02
                                     5.71e-02 -9.32e-03
                                                         1.39e-02
                                                                   4.85e-04
## 1384 2.24e-04 -7.21e-04
                            3.62e-03
                                     4.28e-03 -1.76e-03
                                                          2.27e-04
                                                                    2.17e-03
## 1385 -7.18e-03 6.33e-03 -5.32e-05 -6.17e-03 -4.60e-03
                                                          1.36e-02
                                                                    2.09e-02
## 1386 -9.18e-04 -2.87e-04
                           4.72e-04
                                      1.47e-03 2.04e-03
                                                          9.77e-04
                                                                    2.47e-03
## 1387 -3.82e-02 2.86e-02
                           2.24e-03 -7.80e-03
                                                          2.50e-02 -8.16e-03
                                                3.81e-02
## 1388 -3.15e-02 1.28e-02 1.53e-03 -4.76e-03
                                                3.22e-02
                                                          2.17e-02
                                                                   2.78e-02
## 1389 1.78e-03 -2.10e-03 -8.71e-03 -9.90e-03 2.74e-03
                                                          2.75e-03
                                                                   9.20e-04
## 1390 -9.70e-03 1.17e-02 -3.24e-02 -4.20e-03 -1.98e-02
                                                          2.36e-02 -2.40e-02
## 1391
       8.98e-02 -4.65e-02 9.43e-03
                                     4.49e-02 1.03e-01
                                                          7.75e-02
                                                                   1.57e-02
## 1392 -8.32e-02 3.92e-02 4.49e-03 -7.41e-03 -4.92e-02
                                                          3.00e-02
                                                                   5.01e-02
        2.14e-03 -1.22e-04 5.85e-04 -2.07e-03 -5.86e-03
                                                          1.89e-03 -4.44e-04
## 1393
## 1394
        1.02e-04 4.50e-04 -1.36e-05 -3.19e-04 -2.55e-04 -1.49e-07 -6.87e-04
## 1395
        8.18e-03
                  3.21e-03 -1.50e-03 -5.45e-03 -1.50e-02
                                                         3.02e-03 -1.35e-02
## 1396
        1.14e-02 -2.80e-02 6.45e-02 -4.22e-03 -6.88e-03
                                                         1.04e-01 -8.45e-02
        1.28e-02 7.49e-02 -1.81e-03 1.32e-02 4.07e-02
## 1397
                                                          7.22e-02 -6.85e-02
## 1398 -5.90e-04 -2.48e-02 4.33e-06 -4.11e-03 1.51e-02
                                                          1.72e-03
                                                                   1.52e-02
## 1399 -2.40e-03 -1.83e-04
                            3.76e-03
                                     6.04e-04 2.84e-03 -5.75e-04
                                                                   2.82e-03
                            2.85e-04
## 1400 -1.25e-03 4.05e-03
                                     1.64e-03 -1.67e-03
                                                         3.11e-04 -5.03e-03
        1.36e-02 -1.58e-02 -3.16e-02 5.28e-03 -4.10e-02 2.54e-02 -2.78e-02
## 1401
## 1402
        4.52e-03
                  2.64e-03 8.35e-04 -2.12e-04 8.23e-03 -8.56e-03 -1.14e-03
## 1403 -9.80e-03 -7.47e-03 -2.76e-03 -1.62e-02 -3.10e-02 2.07e-02 -2.30e-02
## 1404 -1.08e-02 8.79e-03 9.76e-04 -9.51e-03 2.81e-02 -1.49e-02
## 1405 -1.33e-02 -7.12e-04 2.09e-02 2.33e-02 7.72e-03 -1.38e-02 -9.00e-03
        1.33e-03 -9.10e-03 -2.31e-02 -2.69e-02 -2.75e-03 6.36e-04 2.66e-03
## 1406
        4.41e-02 -8.71e-02 4.62e-04 -1.30e-02 4.25e-02 1.52e-04 -3.91e-03
## 1407
## 1408 -5.15e-02 2.22e-02 -3.63e-04 -1.22e-02 -1.84e-03 2.45e-02 1.79e-02
                  1.15e-02 5.69e-04 -4.04e-03 4.28e-03 -4.79e-03 -1.18e-02
## 1409
        4.75e-03
        7.53e-03 -5.25e-03 -1.00e-02 -4.75e-05 1.81e-03 -2.06e-03 -8.15e-03
## 1410
## 1411
        1.37e-04 -2.85e-05
                           5.26e-05 -3.46e-04
                                                9.28e-04
                                                         1.01e-03
                                                                   5.86e-04
## 1412 -8.40e-03
                  1.79e-02 1.26e-03 -3.36e-03
                                                1.55e-02
                                                         1.11e-02 -4.76e-03
        1.24e-04 -1.37e-04 -1.07e-05
## 1413
                                     3.05e-05 1.52e-05 -1.29e-04
## 1414 -6.81e-03 2.77e-02 3.62e-04 -7.45e-03 -3.09e-03 1.58e-02 -2.01e-02
## 1415
        1.85e-02 -7.69e-04 -7.51e-04 -7.06e-03 -1.14e-02 -1.99e-02
                                                                   1.78e-02
## 1416 -1.88e-02 -5.15e-03 2.14e-02 2.48e-02 -1.09e-02 9.07e-03
                                                                    6.62e-03
## 1417 -6.86e-03 -2.67e-03 -5.15e-05 3.13e-03 9.62e-03 -9.64e-03
                                                                   9.42e-03
        2.13e-04 -3.91e-04 -2.32e-04 -4.59e-03 -9.11e-03 9.34e-03
                                                                    1.66e-02
## 1419 -1.72e-02 -9.14e-03 -3.18e-02 -1.42e-03 1.22e-02 1.01e-02
```

```
## 1420 -3.73e-03 -2.21e-02 -1.70e-03 -1.27e-02 1.69e-02 -2.60e-02 -2.42e-02
## 1421 -5.79e-03 5.49e-04 -7.18e-05 1.42e-03 -2.46e-03 -4.19e-03
## 1422
        3.56e-03 1.42e-02 -2.53e-02 -3.10e-02 7.83e-03 -1.21e-02
## 1423
        1.68e-03 -6.48e-03 1.78e-03 -6.61e-03 -3.37e-02 -6.34e-03 -1.88e-02
## 1424 -4.08e-03 1.49e-02 1.01e-03 -4.09e-03 5.08e-03 9.30e-03 -1.36e-02
## 1425
        3.49e-03 -1.46e-03 -3.65e-04 -3.20e-03 -9.44e-03
                                                         1.08e-04
                                                                   4.06e-03
## 1426
        1.32e-02 1.82e-02 3.96e-03 -9.97e-03 2.33e-02 -1.46e-02
                                                                   2.18e-02
## 1427 -4.28e-02 -3.86e-03 -1.06e-03 -1.87e-02 3.70e-02 -9.37e-02 -9.00e-03
        1.09e-03 -4.23e-03 3.92e-04 -3.33e-03 7.81e-03
                                                         1.07e-02
## 1429 -2.01e-02 -3.14e-03 -2.16e-04 -7.56e-03 2.51e-02
                                                         1.86e-02
                                                                   1.18e-02
## 1430 -8.22e-03 6.74e-03
                           1.33e-03 -5.46e-03 2.18e-02 -2.31e-02
                                                                   2.03e-02
        6.45e-04 -2.08e-04 3.04e-05
                                     1.86e-04 -9.20e-04 9.79e-05 -2.99e-04
## 1431
## 1432 -4.01e-03 -6.95e-03
                           2.27e-04
                                     3.48e-03 -8.78e-04 -8.08e-03
                                                                   2.13e-03
## 1433
        7.24e-03 1.82e-03 3.68e-04 -1.59e-03 8.88e-03 -4.58e-04 -1.25e-03
## 1434
        1.21e-02 3.03e-02 -1.41e-03 -1.37e-02 -3.09e-02 9.38e-03
                                                                   3.85e-02
## 1435 -4.57e-03 -5.29e-03 8.22e-03 9.50e-03 2.68e-03 -8.19e-03
        1.57e-03 -4.83e-02 3.12e-03 -9.98e-03 -1.89e-02
## 1436
                                                         2.36e-02
                                                                   2.51e-02
                                                        1.90e-02 -2.78e-03
## 1437 -6.69e-02 5.03e-02
                           7.45e-03 -1.11e-02 2.49e-02
## 1438
        2.72e-03 -2.77e-03 -6.61e-03 -7.90e-03 -4.68e-03 -1.71e-05
                                                                   3.61e-03
## 1439
        5.96e-02 -5.64e-02 7.59e-02 -1.08e-03 -2.32e-02 -3.86e-03
                                                                   6.94e-02
## 1440
        4.13e-03 -2.10e-06 -5.10e-04 -2.95e-03 3.50e-03
                                                         5.45e-03
                                                                   8.09e-03
## 1441
        6.44e-04 7.42e-03 -7.16e-03
                                     3.70e-04 2.53e-03
                                                         3.77e-03 -6.97e-03
## 1442 -9.02e-03 6.03e-02 -4.84e-02 -5.73e-02 -1.23e-02 -2.35e-02 4.93e-03
        1.65e-02 -1.95e-02 -8.28e-03 1.70e-02 4.15e-02 -4.85e-02 -1.01e-01
## 1443
        3.72e-03 -1.21e-03 -1.99e-04 1.23e-03 -4.05e-03 -3.23e-03 -5.27e-03
## 1444
## 1445
        1.86e-02 1.94e-01 -3.85e-04
                                     3.08e-02 -1.09e-01 -2.40e-02
                                                                  9.57e-02
## 1446
        4.69e-03 1.08e-03 -1.10e-03 -4.60e-03 3.16e-03 -1.85e-02
        4.69e-03 -2.98e-04 -6.05e-04 -1.80e-03 1.03e-03 -7.27e-03 -4.45e-03
## 1447
## 1448
        1.11e-04 -1.78e-04 -8.00e-04 -8.91e-04 -5.00e-04 1.61e-04
                                                                  4.63e-04
## 1449 -2.99e-03 -1.01e-03 -2.87e-04 -1.30e-03 -7.87e-04
                                                         1.47e-03 -6.38e-04
## 1450 -4.67e-03 -4.19e-03 4.74e-04 -6.51e-03 9.52e-03
                                                         1.42e-02 -2.15e-02
## 1451 2.47e-02 -8.10e-03 8.91e-06 -1.52e-02 -3.10e-02 -5.66e-02 -3.33e-03
## 1452 -3.11e-04 3.58e-04 -3.09e-05 3.08e-04 -9.51e-04 1.51e-05 -1.17e-03
## 1453 -6.46e-02 1.38e-01 1.08e-01 1.81e-03 9.00e-03 -7.09e-02 -4.63e-02
## 1454 -2.31e-03 -2.11e-03 -5.82e-04 -4.54e-03 -7.88e-03 -2.31e-03
       9.01e-03 -1.86e-02 -6.21e-04 -5.53e-03 1.03e-02 -1.55e-02 -1.25e-02
## 1456 -6.29e-03 -1.52e-02 -6.83e-04 -7.99e-03 -2.39e-02 1.17e-02 -2.71e-03
        3.71e-02 2.45e-03 -3.34e-02 2.60e-03 -2.88e-02 -2.79e-02 -5.44e-03
## 1457
## 1458 -2.71e-04 -1.32e-03 -1.94e-04 2.09e-04 8.83e-04 -1.11e-03 4.33e-04
## 1459 -1.39e-02 -7.89e-03 -8.04e-04 -6.05e-03 1.61e-02 1.16e-02 -3.41e-03
## 1460 -1.51e-02 2.99e-02 1.44e-03 -9.27e-03 -3.54e-02 -9.41e-03 -2.36e-02
                 6.08e-03 -2.56e-03 -1.40e-02 2.43e-02 -7.77e-02 -4.27e-02
## 1461 -6.18e-02
## 1462 2.95e-02
                  3.17e-02 2.10e-03 2.30e-02 -5.18e-02 1.26e-01
                  8.18e-03 -3.89e-04 -6.67e-03 1.17e-03 -2.12e-02
## 1463 -9.40e-03
                                                                   8.00e-03
                                     3.87e-02 1.38e-02 5.33e-03
## 1464 -1.97e-02
                  5.29e-03 3.25e-02
                                                                   6.31e-03
## 1465 -1.37e-02
                 1.36e-02 -9.44e-04 -9.35e-03 -1.92e-02 6.25e-03 -2.07e-02
## 1466
       3.58e-03
                 5.11e-03 -4.93e-03 1.97e-04 -2.45e-04 -5.98e-03 -1.37e-03
## 1467 -6.91e-04 -1.54e-03 -2.76e-04 -8.87e-04 7.96e-04 6.52e-04 -2.13e-03
        1.54e-02 2.28e-02 3.60e-03 -4.87e-03 3.72e-02 1.80e-02 1.32e-02
## 1469 -1.00e-03 -3.99e-03 -4.97e-03 1.82e-04 -1.78e-03 3.30e-03 -4.40e-03
```

```
## 1470
         1.81e-04 -3.85e-06
                             1.28e-05 -5.29e-05 7.29e-05
                                                          3.21e-05
##
                             dfb.HrlR
                                                 dfb.JbLv
         dfb.MrS1
                  dfb.MrS2
                                       dfb.JbIn
                                                           dfb.JbSt
                                                                     dfb.MntI
## 1
        -8.48e-02 -7.19e-02
                             8.03e-02
                                       1.20e-02
                                                 2.39e-02
                                                           6.15e-02 -4.95e-03
        -8.14e-03 -3.45e-04
                                       9.87e-03 -4.76e-03
## 2
                             1.88e-03
                                                           6.78e-03
                                                                     4.32e-03
## 3
        -6.69e-02 -5.72e-02
                             6.81e-02 -5.37e-02 -2.89e-03
                                                           1.19e-02 -1.56e-02
## 4
        -2.35e-02
                  3.04e-03
                             1.23e-02 -1.07e-02
                                                2.13e-02 -1.04e-03 -7.84e-03
        -2.04e-02 -3.45e-03
                             2.64e-02 -7.50e-03
                                                 1.78e-02
                                                           1.14e-02 -1.23e-02
## 5
## 6
         1.53e-02
                   1.30e-02 -9.67e-03 -3.82e-03
                                                 1.19e-02 -1.35e-02 -7.94e-03
## 7
                  4.86e-03 -6.61e-03 -2.77e-02
                                                 1.03e-02 2.85e-02 1.00e-03
         3.50e-04 -1.12e-02 -1.31e-05 -2.32e-03
                                                 2.71e-03 -1.60e-03 -3.44e-03
## 8
## 9
         2.02e-02
                  1.65e-02 1.32e-02 1.54e-02 -1.05e-02 -1.60e-03 -2.43e-03
                  3.49e-04 -9.52e-03 -1.18e-03 -1.90e-03 -3.44e-03
## 10
        -5.44e-03
                                                                    5.87e-03
## 11
        -8.04e-03
                  3.20e-04 -5.64e-03 -1.64e-02 4.65e-03 5.48e-03 -1.48e-03
## 12
         3.04e-02 2.81e-02 1.79e-02 2.77e-02 -3.08e-02 -6.86e-03 3.38e-02
        -6.29e-04 -3.90e-02 4.14e-02 -9.35e-03 1.82e-02 -4.45e-03 -1.30e-02
## 13
## 14
         8.19e-04 -1.01e-02 -7.81e-03 -1.12e-03 3.32e-03 -8.15e-03 -2.97e-03
## 15
        -4.09e-02 -3.43e-02 -2.74e-02 -3.32e-02 -1.30e-02
                                                          8.28e-03 -3.34e-04
                                                           1.00e-02 -1.07e-03
         1.86e-03 -9.67e-03 5.90e-03 -1.09e-02 -3.59e-03
## 16
        -2.13e-03 -4.24e-02 -1.24e-02 -4.31e-02 2.39e-02
## 17
                                                           1.30e-02 -1.65e-02
## 18
        -1.71e-03 -1.94e-02 -2.02e-02 -2.46e-02 6.74e-03 -1.56e-02 -8.23e-03
## 19
         3.32e-03 -8.63e-04
                             2.50e-03 -4.34e-03 -2.25e-03
                                                          5.13e-03
                                                                     1.02e-03
## 20
         2.94e-02 2.52e-02
                             2.23e-02 -1.19e-02 3.40e-02 -2.68e-02 -2.94e-02
        -4.04e-04 -4.87e-03 -4.67e-03 -5.81e-03 -5.18e-03 -9.66e-04
## 21
                                                                    4.35e-03
## 22
        -8.46e-02 -6.62e-02
                            3.97e-02 -6.20e-02 -6.42e-02 -9.29e-02
                                                                     3.51e-02
## 23
         1.78e-02
                   1.46e-02
                            9.34e-03 -4.71e-03 1.04e-02
                                                          7.80e-03 -1.98e-02
## 24
         2.26e-02
                   1.77e-02 -3.23e-02 -9.69e-03 -1.25e-02 -2.58e-02
                                                                     1.14e-02
## 25
        -7.57e-02 -6.19e-02
                            3.68e-02
                                      1.94e-02 -4.46e-02 -8.15e-02
                                                                     2.16e-02
## 26
        -8.74e-03
                   2.26e-02 -5.91e-03
                                      3.53e-03 6.13e-03
                                                           3.91e-03
                                                                     1.26e-02
## 27
        -2.51e-02 -2.05e-02
                            5.18e-03 -4.84e-02 -3.10e-02 -3.36e-02
                                                                     2.14e-02
## 28
        -5.06e-03
                   5.08e-04
                            6.53e-03 -2.61e-03 2.52e-03
                                                           4.65e-03 -2.63e-03
                   2.46e-04 -1.82e-03 -1.69e-03 -5.52e-04
## 29
         1.75e-03
                                                           2.01e-03 -1.09e-04
         2.26e-02
                   1.88e-02 -1.17e-02 -5.40e-03 -1.54e-02 2.18e-02 -5.01e-03
## 30
## 31
         1.45e-02
                   1.20e-02 -7.44e-03 -4.81e-03 4.92e-03 -1.39e-02 -3.44e-04
## 32
        -6.76e-03
                   7.99e-04 9.79e-03 -2.32e-03
                                                 1.26e-03 -8.35e-03 -2.23e-03
## 33
         1.63e-02
                   1.40e-02 -1.62e-02
                                       1.60e-02
                                                 1.01e-02 -8.08e-03
                                                                    1.30e-03
                   1.25e-02 -3.33e-02
                                       3.74e-02 1.97e-01
## 34
         1.06e-01
                                                           1.10e-01 -2.93e-01
                                       2.52e-02 -2.94e-03
## 35
         6.10e-02
                   9.82e-03 -1.07e-02
                                                           5.73e-02 -1.70e-02
        -1.42e-03
                   1.25e-02
                            1.79e-03
                                       1.33e-02 -5.17e-03
                                                           2.72e-03
## 36
                                                                     3.07e-03
## 37
         4.07e-02 -3.05e-03
                            4.37e-02 -6.58e-02 -1.93e-02
                                                           1.07e-02
                                                                    1.91e-02
                            2.23e-03
## 38
         1.34e-03
                   1.20e-04
                                      3.66e-04 9.34e-05
                                                           1.83e-03 -1.49e-04
## 39
        -3.36e-02 -1.64e-03 -1.98e-02
                                      3.79e-02 2.97e-02
                                                           5.23e-02 -2.06e-02
## 40
        -8.56e-03
                   2.33e-04
                            1.09e-02 -1.50e-02 -5.30e-03
                                                           1.43e-02
                                                                     5.32e-03
## 41
        -3.90e-04 -5.48e-03 -1.56e-03 -1.11e-03 -2.74e-04 -3.89e-03
                                                                     2.49e-04
        -1.35e-03 -1.65e-02 1.70e-02 -3.73e-03 1.15e-03
## 42
                                                           1.63e-02 -1.28e-03
## 43
        -5.00e-02 -3.97e-02 -3.68e-02 -9.51e-02 -6.33e-03
                                                           2.55e-03
                                                                     9.97e-03
## 44
         1.10e-02
                  1.01e-02
                            1.03e-02 -3.78e-03 -1.17e-02 -3.98e-04
                                                                     5.00e-03
## 45
         1.13e-02
                  9.63e-03 8.99e-04 -5.01e-03 -1.16e-02 -9.67e-03
                                                                     1.44e-02
         3.62e-02 -2.11e-02 -6.35e-02 3.98e-02 1.63e-02 1.37e-02
## 46
                                                                     6.96e-02
## 47
         2.11e-02 1.83e-02 -5.60e-03 -8.19e-03 -1.26e-02 -3.28e-03
                                                                     1.41e-02
        -1.61e-02 -2.53e-03 -1.98e-03 -6.56e-03 1.31e-02 9.41e-03 -6.28e-03
## 48
```

```
3.74e-02 3.12e-02 -4.01e-02 -5.23e-03 -3.12e-03 -2.67e-02
## 49
## 50
         4.67e-03
                  2.13e-04 -7.42e-03 8.76e-03 -6.64e-04
                                                            5.18e-03
                                                                      9.22e-04
## 51
        -6.03e-02 -5.37e-02 8.04e-02 -4.96e-02 1.58e-01
                                                            1.45e-02 -1.88e-01
## 52
        -6.25e-02 -5.34e-02 -3.55e-02
                                      1.77e-02 -3.50e-02
                                                           4.20e-03
                                                                      4.07e-02
## 53
         5.56e-03 -3.11e-02 -6.54e-03 -3.73e-03 -1.79e-02
                                                            3.65e-02
                                                                      1.41e-02
## 54
        -2.69e-02
                   4.58e-03 -1.61e-02
                                       2.53e-02 -2.30e-02
                                                            4.23e-02
                                                                      3.82e-03
## 55
        -3.01e-02 -1.06e-03 2.51e-02
                                       3.02e-02 -4.90e-02 -2.74e-02
                                                                      4.08e-02
## 56
        4.10e-02
                   3.23e-02 -4.80e-02 -9.03e-03 4.72e-02 -3.40e-02 -6.61e-02
## 57
        -1.12e-02
                   1.21e-03 -2.46e-03 -2.75e-03 -1.75e-02
                                                           2.34e-02
## 58
        -2.89e-02
                   1.61e-03
                             6.97e-02 -1.08e-02 4.74e-02
                                                            5.71e-02 -4.66e-02
                                                           1.10e-02 -7.59e-04
## 59
         8.00e-04
                   1.63e-02 -6.35e-03
                                      3.30e-03 1.43e-03
## 60
         1.35e-06 -1.73e-03
                             7.55e-04
                                       1.21e-03 -2.31e-04 -2.21e-04 -3.35e-05
## 61
        -2.00e-02 -3.43e-03
                             3.00e-02 -9.02e-03 -2.78e-03 -2.14e-02
                                                                      1.25e-03
## 62
         2.64e-02
                  2.20e-02
                             1.23e-02 -8.67e-03 -4.17e-02 -2.55e-02
                                                                      4.72e-02
         2.70e-03 -4.09e-02
                             2.87e-02
                                       2.05e-02 -1.61e-02 -3.89e-03
## 63
                                                                      2.81e-03
## 64
         2.95e-02
                  2.31e-02 -1.93e-02 -2.21e-03 -1.62e-02
                                                            2.24e-02
                                                                      2.82e-02
## 65
        -8.21e-04
                  4.11e-03 -6.16e-04
                                       1.06e-03 5.40e-04
                                                            7.97e-04 -4.03e-04
         4.50e-04 -8.25e-03
                             9.01e-03 -2.17e-03 -1.92e-03 -9.33e-04 -1.85e-03
## 66
## 67
         4.03e-02
                  3.36e-02 -3.87e-02 3.10e-02 -6.93e-04
                                                            2.06e-02 -1.25e-02
## 68
         2.98e-04 -7.84e-03
                             2.77e-03 -1.61e-03 -2.45e-03
                                                            7.68e-03
                                                                      4.76e-03
        -2.42e-02 -1.02e-03 -1.12e-02 -6.21e-03 3.07e-03
                                                            3.69e-02
                                                                      1.47e-03
## 69
## 70
                  7.26e-03
                             3.45e-02 -5.23e-02 -3.47e-02
                                                            1.28e-02
                                                                      4.11e-02
         5.44e-02
## 71
         3.35e-02
                  2.89e-02
                             1.13e-02 2.65e-02 -1.51e-03 -1.89e-03
                                                                      1.64e-02
## 72
        -2.70e-03 -1.42e-04 -1.15e-03 -8.44e-04 1.32e-03
                                                            1.85e-03 -4.88e-04
## 73
         2.58e-02
                  2.04e-02 -1.86e-02 -7.19e-03
                                                 1.05e-03
                                                            1.20e-02 -3.17e-03
##
  74
        -2.15e-03 -2.44e-04
                             1.48e-04 -5.86e-04 -8.44e-05
                                                            1.10e-03 -2.74e-05
## 75
        -4.58e-03 -7.47e-04
                             2.72e-03 -7.79e-03 3.14e-03 -5.23e-03 -2.15e-03
                   2.01e-03
## 76
         2.51e-03
                             8.64e-05 -8.87e-04 -1.96e-03 -2.18e-03
                                                                      2.28e-03
## 77
         1.68e-02
                   1.46e-02
                             1.99e-02
                                       1.20e-02 -9.31e-03
                                                            2.13e-02
                                                                     1.71e-02
## 78
        -1.81e-02 -3.58e-04
                             1.50e-02 -8.00e-03 2.56e-02
                                                            2.66e-02 -3.42e-02
## 79
         1.83e-02
                   1.48e-02
                             2.63e-02 -8.44e-03 2.53e-02 -3.03e-03 -3.27e-02
         1.52e-03 -2.76e-02 -1.06e-02 -5.17e-03 -1.28e-02
                                                           1.13e-02
## 80
                                                                      2.12e-02
## 81
        -2.16e-02
                   5.88e-05
                             6.89e-03
                                       1.85e-02 -1.81e-02 -2.05e-02
                                                                      2.18e-02
## 82
        2.23e-02
                  1.81e-02
                             2.98e-02
                                       1.66e-02 1.24e-02 -6.22e-04 -7.57e-03
## 83
        -3.92e-04 -3.69e-05 -5.45e-05 -1.61e-04 -7.28e-05 -5.29e-04
                                                                      2.08e-04
        -1.52e-03 -1.62e-02 -9.27e-03
                                      2.57e-02 -3.62e-07 -1.22e-02
                                                                      6.63e-03
## 84
                   9.42e-05 -1.31e-02 -2.43e-03 -1.71e-02
## 85
        -9.16e-03
                                                           6.39e-03
                                                                      1.41e-02
## 86
         6.98e-03
                   6.51e-03
                             3.50e-03
                                       1.29e-02 -6.69e-03 -5.79e-03
                                                                      1.52e-02
## 87
        -3.85e-03 -2.67e-02
                             4.02e-03 -6.01e-03 1.50e-03
                                                           2.15e-02
                                                                      5.20e-04
                  5.70e-04
## 88
        6.20e-03
                             1.06e-02
                                       1.99e-03 -2.74e-03
                                                            9.39e-03 -1.53e-03
## 89
        -4.11e-03 -9.91e-04 -7.76e-03
                                       4.09e-03 -5.26e-03 -5.55e-03
                                                                      6.37e-03
## 90
        -1.18e-01 -8.85e-02
                            9.25e-03 -8.09e-02 6.33e-02
                                                            8.21e-02
                                                                      8.80e-04
## 91
        -1.87e-02 -2.24e-03 -1.31e-02
                                       1.47e-02 -1.96e-02
                                                            1.05e-02
                                                                      1.30e-02
## 92
         4.97e-02
                  3.88e-02 -8.33e-03 -1.41e-02 -1.49e-02 -2.52e-02
                                                                      1.51e-02
         4.42e-05 -3.30e-02
                             1.88e-03
                                       2.51e-02 -1.34e-02
## 93
                                                           1.57e-02
                                                                      1.60e-02
## 94
        -3.12e-02
                  3.12e-03
                             4.39e-02
                                       3.56e-02 4.19e-03
                                                           6.01e-02 -1.84e-03
## 95
                   1.27e-02 -1.23e-02 -4.06e-03 -7.77e-03 -3.47e-03
                                                                      1.03e-02
         1.63e-02
                             1.34e-03 -4.19e-04 3.85e-03 -4.55e-04 -5.61e-03
## 96
        -1.50e-03
                   5.76e-04
## 97
        -1.24e-02 -1.04e-03
                            1.99e-02 -4.87e-03 -1.54e-02 -3.24e-04
                                                                     1.05e-02
## 98
        1.73e-03 1.19e-04 -1.39e-03 8.18e-04 1.77e-03 2.51e-04 -1.52e-03
```

```
-6.64e-03 -6.34e-03 -6.33e-03 3.40e-03 -6.46e-04 -5.67e-05 -3.74e-03
                                                           2.80e-03
## 100
        -5.06e-03
                   3.93e-04 3.08e-04 -2.16e-03 -9.74e-03
                                                                     1.40e-02
## 101
         6.75e-04
                   9.28e-02 -1.53e-02
                                      1.88e-02 -8.25e-03 -8.99e-02 -1.43e-02
## 102
                   2.14e-02 -3.43e-03 -7.95e-03 8.01e-03
         2.55e-02
                                                           3.03e-02 -1.09e-02
## 103
        -3.78e-02 -3.43e-02
                             1.08e-02 -3.16e-02 -1.57e-02
                                                           3.81e-02
                                                                     2.06e-02
## 104
         1.04e-02
                   8.55e-03
                             8.92e-03 -3.01e-03 -2.84e-03 -1.16e-03
                                                                     7.18e-03
## 105
         1.58e-03
                   1.05e-02
                             1.20e-02 -5.97e-03
                                                2.94e-03
                                                           8.57e-03 -7.28e-03
## 106
         1.42e-02 -4.66e-03 -2.62e-02 -1.52e-02 8.82e-03
                                                           1.65e-02
                                                                     2.73e-03
## 107
                  3.71e-03 -5.61e-03 -4.18e-03 -2.17e-02
                                                           1.37e-02
                                                                     4.74e-03
## 108
        -4.82e-02 -4.38e-02 -3.57e-02 -3.82e-02
                                                 2.31e-02
                                                           6.34e-03 -1.01e-02
## 109
        -9.07e-03 -1.19e-03
                             1.98e-05
                                      8.73e-03
                                                 4.26e-03 -9.78e-03 -3.92e-03
## 110
                                                 1.06e-02 -2.65e-02 -1.28e-02
         2.64e-02
                   2.05e-02
                             6.83e-03 -1.24e-02
## 111
         4.85e-02
                  3.87e-02
                             5.03e-02
                                      3.09e-02 -4.88e-02
                                                           5.43e-02
                                                                     6.20e-02
## 112
        -4.56e-02 -3.77e-02
                             6.36e-03 -8.65e-02
                                                 6.48e-03 -1.44e-04
                                                                     1.01e-03
## 113
         1.44e-02
                   1.37e-02
                             1.69e-02 -2.05e-02
                                                 1.64e-02 -1.10e-02 -2.38e-02
## 114
        -1.48e-02 -1.39e-03
                             1.21e-02 -5.65e-03
                                                 1.01e-02 -3.52e-03 -4.62e-03
## 115
        -2.03e-03 -1.89e-02
                             1.11e-02
                                       1.11e-02 -1.23e-02
                                                           7.50e-03
                                                                     1.54e-02
## 116
                  3.56e-03 -3.67e-03 -1.04e-03 -6.90e-03 -3.52e-03
         4.18e-03
                                      1.57e-02 7.85e-03
## 117
         2.26e-02
                   1.86e-02
                             1.50e-02
                                                           2.42e-02 -1.61e-02
## 118
        -3.69e-04
                  5.20e-05 -6.25e-04 -6.32e-05 -3.57e-04 -5.37e-04 -1.12e-05
## 119
        -5.74e-04 -1.17e-02
                             9.08e-03 -2.90e-03 4.04e-03 -7.10e-03 -1.41e-03
## 120
        -8.52e-03
                  1.50e-03 -1.39e-02 -4.37e-03
                                                 1.72e-02 -1.32e-02 -2.18e-02
        -3.56e-04 -3.92e-02 -3.37e-02
                                       6.08e-02 1.98e-02 -5.49e-03 -8.28e-03
## 121
## 122
         4.11e-03 -6.98e-04
                             6.08e-03
                                       1.45e-03 -6.38e-04 -2.36e-03
                                                                      1.58e-03
## 123
         3.33e-02 -5.07e-03
                             5.20e-04
                                       1.37e-02 -1.13e-01 -3.52e-02
## 124
         2.25e-03
                   1.61e-03
                             7.03e-04 -3.78e-04 -2.84e-05 -3.20e-04 -1.46e-03
## 125
         5.04e-02
                   1.09e-02
                             3.07e-02 -1.12e-01 6.01e-03
                                                           1.53e-02 -1.06e-02
        -2.06e-02 -3.50e-03
## 126
                             1.87e-02
                                       1.86e-02 4.65e-03
                                                           1.37e-02 8.00e-04
                             1.07e-01
                                       7.01e-02 -7.63e-02
## 127
         5.82e-02 -9.31e-03
                                                           1.03e-01 -8.52e-02
## 128
        -4.41e-02 -3.74e-02 -2.67e-02
                                       2.26e-02
                                                 1.39e-02
                                                           5.24e-03 -8.65e-03
## 129
        -8.30e-03 -1.79e-03 -1.25e-02 -2.93e-03
                                                 1.17e-03 -9.70e-03 -1.88e-04
## 130
                   5.38e-04 -4.54e-03 -4.06e-04
                                                 2.36e-03 4.89e-03 -1.24e-03
        -2.17e-03
## 131
         3.22e-02
                   2.65e-02 -8.17e-04 -3.91e-02
                                                5.73e-02 -7.47e-03 -3.51e-02
## 132
         1.82e-02
                   1.53e-02 -8.36e-03 -4.44e-03 -1.13e-02 -1.43e-02
## 133
         4.44e-02
                   6.41e-03
                            1.27e-02 -1.01e-01 5.45e-02
                                                           9.39e-03 -3.93e-02
## 134
         8.25e-04 -9.37e-03 -9.95e-03 -1.04e-03 -1.06e-02 -2.17e-03
                                                                     7.52e-03
        -6.33e-03 -6.17e-04 2.36e-03 -2.35e-03 7.23e-03 -2.19e-03 -3.85e-03
## 135
## 136
        -4.12e-04 -1.36e-02 -6.81e-03 -2.98e-03 -8.67e-03
                                                           4.37e-03
                                                                     7.13e-03
## 137
        -7.94e-02 -6.64e-02 -3.14e-02 -1.42e-01 -2.90e-03
                                                           5.51e-02
                                                                     1.81e-02
         6.24e-03 -2.73e-04 -6.17e-03 -7.78e-03 -2.17e-03
## 138
                                                           1.74e-03 -2.48e-03
## 139
        -2.36e-02 -4.13e-03
                             3.27e-02 2.36e-02 3.05e-02 -4.66e-03 -4.36e-02
## 140
        -1.42e-02
                   8.60e-04
                             1.29e-02 -5.81e-03 1.13e-03 -1.65e-02
                                                                      1.93e-04
                                                                     7.22e-02
## 141
        -8.21e-02 -6.39e-02 -8.79e-02 2.63e-02 -1.01e-01 -9.72e-02
## 142
                   1.61e-02 -8.73e-03 -2.96e-03 1.73e-02 -1.40e-02 -1.27e-02
         2.09e-02
## 143
                   2.39e-02
                             3.62e-02 -1.47e-02 -2.24e-02 -4.50e-03
         2.66e-02
                                                                     4.24e-02
## 144
         3.34e-02
                   2.57e-02 -8.70e-03 -9.29e-03 1.42e-02 -6.95e-03 -1.02e-02
## 145
        -1.08e-03 -6.28e-03
                            4.11e-03 8.47e-03 -2.37e-03 -3.60e-03
                                                                     2.45e-03
        -1.72e-03 -1.72e-02 -7.90e-03 -3.66e-03 8.86e-03 1.25e-02 -4.67e-03
## 146
## 147
         2.35e-02 1.96e-02
                            2.72e-02
                                      1.74e-02
                                                 1.15e-02 -1.80e-02 -4.82e-03
         1.30e-03 -1.81e-02 -1.53e-02 1.39e-02 1.31e-02 1.61e-02 -2.44e-02
## 148
```

```
-8.49e-03 -3.29e-04 -1.11e-02 -2.26e-03 2.38e-03
                                                            1.38e-02
## 149
                                                                      1.15e-03
                  2.59e-02 -1.55e-02 -1.13e-02 -1.48e-02
                                                            1.68e-02
## 150
         3.06e-02
                                                                      1.55e-02
## 151
         2.00e-04 -1.22e-02
                             6.43e-03 -1.57e-03
                                                 4.33e-03
                                                            5.33e-03
                                                                      2.36e-03
## 152
                             6.39e-03
                                       1.07e-03
         3.95e-03 -2.84e-04
                                                 1.07e-02 -2.61e-03 -8.43e-03
## 153
        -1.18e-02
                  4.20e-03
                             2.96e-02 -3.50e-03 -4.36e-02
                                                            9.48e-04
                                                                      5.13e-02
## 154
         2.80e-04
                   6.94e-03 -1.32e-03
                                       6.07e-04 7.25e-03 -2.36e-03 -1.13e-02
## 155
         1.72e-02
                   1.47e-02
                             1.16e-02 -5.13e-03 -1.50e-02 -1.23e-02
                                                                      5.08e-03
## 156
         1.72e-02 -2.64e-03 -1.73e-02
                                       6.03e-03
                                                 1.48e-02
                                                            1.95e-03 -1.72e-02
## 157
                                       9.53e-03 -1.48e-03 -6.37e-04
        -7.29e-03
                   2.10e-04
                             1.47e-02
## 158
        -2.00e-02
                   4.32e-03 -5.49e-03
                                       3.75e-02
                                                 2.82e-02
                                                            2.37e-02 -1.74e-02
## 159
         7.13e-03 -1.50e-04
                            1.65e-03 -1.00e-02 -1.55e-03
                                                            1.00e-02
                                                                      5.43e-03
        -1.32e-02 -2.08e-03 -5.58e-03 -4.68e-03
                                                  3.38e-03 -3.12e-03
## 160
                                                                      3.81e-04
## 161
        -7.76e-03 -1.38e-03 -5.63e-03 -2.99e-03
                                                  8.57e-04 -9.47e-03 -6.47e-04
## 162
        -1.44e-03 -1.06e-02
                             2.44e-03 -3.45e-03
                                                  1.20e-03 4.54e-03
                                                                      9.59e-04
## 163
        -1.58e-02 -2.16e-03
                             1.73e-02 -6.18e-03
                                                  9.29e-03 -1.58e-02 -6.00e-03
## 164
         3.17e-03 -1.34e-02 -7.76e-03 -1.51e-02 -8.68e-03 -1.13e-02
## 165
        -3.02e-03 -3.34e-02 -1.66e-02
                                       2.22e-02
                                                 4.50e-03 -2.76e-03 -6.73e-03
                  5.64e-03
                             2.60e-03 -1.34e-03 -9.31e-04 2.91e-03 -5.27e-03
## 166
         7.01e-03
## 167
         9.95e-05 -4.57e-03
                             1.77e-03 -5.87e-04
                                                 2.93e-03 -1.03e-03 -5.24e-04
## 168
        -1.36e-03
                   6.55e-05
                             1.85e-03 -7.12e-04 -1.62e-03 -1.72e-03
                                                                      9.72e-04
## 169
         1.24e-02
                   9.29e-03
                             2.83e-03 9.27e-03
                                                  1.50e-02 -1.12e-02 -1.61e-02
## 170
         1.55e-02
                   1.21e-02
                             1.41e-02 -7.24e-03
                                                  1.26e-02 -3.28e-03 -7.04e-03
                             2.97e-02 -1.37e-02
## 171
        -3.24e-02 -1.63e-04
                                                  2.38e-02
                                                            2.56e-02 -1.40e-02
## 172
        -4.06e-02 -3.39e-02
                             7.55e-02 -9.62e-02
                                                  2.97e-03 -6.41e-02
                                                                      8.36e-04
## 173
         3.42e-02
                  3.02e-02
                             4.27e-02 -1.18e-02
                                                  1.48e-02
                                                            2.18e-02
                                                                      8.17e-03
## 174
        -1.69e-04 -1.24e-03 -7.68e-05 -3.52e-04 -1.20e-03
                                                            1.10e-03
                                                                      1.55e-03
## 175
         1.81e-03 -2.25e-02
                             3.02e-02 -3.85e-03 -1.14e-02
                                                            2.70e-02
                                                                      1.13e-02
## 176
         3.34e-03 -3.14e-02 4.56e-03 -5.00e-03
                                                  4.22e-02
                                                            2.95e-02 -1.92e-02
                  8.47e-03 -1.21e-02 -4.46e-03
## 177
         1.09e-02
                                                  3.62e-03 -1.24e-02 -1.97e-03
## 178
        -5.01e-02 -3.89e-02 -3.61e-02 -3.91e-02
                                                  4.28e-02
                                                            5.37e-02 -4.57e-02
## 179
         2.55e-03 -1.09e-02 -8.97e-03 -4.07e-03
                                                  3.13e-04
                                                            1.03e-02
                                                                     3.35e-03
## 180
                   1.44e-02 -5.57e-03 -3.89e-03
                                                  2.34e-03 -1.36e-02 -2.43e-03
         1.83e-02
## 181
        -2.20e-02 -4.44e-03 -2.94e-02 -9.32e-03
                                                  2.54e-02 -2.62e-02 -1.99e-02
## 182
         2.74e-02
                   2.14e-02 -2.67e-02 -7.44e-03
                                                  1.16e-02
                                                           9.58e-03 -1.29e-03
## 183
        -7.04e-02 -5.51e-02
                            1.13e-04
                                       1.29e-02 -3.04e-02 -3.62e-02
                                                                      3.16e-02
## 184
        -6.44e-03 -4.09e-04 -6.84e-03
                                       8.69e-03
                                                  7.98e-03 -2.31e-03 -7.60e-03
                  4.70e-03 -2.22e-03
                                                  4.04e-03 -5.39e-03 -2.77e-03
## 185
        -1.06e-03
                                        5.28e-03
## 186
        -1.50e-03
                   1.39e-05 -3.00e-04 -4.00e-04
                                                  1.50e-03
                                                            9.31e-04 -7.32e-04
         7.04e-03 -9.80e-04 -7.34e-03
## 187
                                       4.56e-03
                                                  5.74e-03
                                                            1.97e-03
                                                                      5.19e-03
## 188
        -2.95e-02 -2.55e-02 -5.23e-03
                                       2.87e-02 -2.79e-03 -9.69e-03
                                                                      6.19e-03
## 189
        -2.66e-03
                   3.27e-07
                            2.57e-03
                                       3.16e-03
                                                 5.88e-03 -3.39e-04 -7.02e-03
## 190
         1.01e-03
                   8.04e-04 -1.04e-03 -2.93e-04 -7.08e-04
                                                            3.84e-04
                                                                      3.28e-04
## 191
         4.60e-03 -2.24e-03
                             5.32e-04 -6.62e-03 -4.85e-03
                                                            1.44e-03
                                                                      6.20e-03
## 192
         1.95e-02
                   1.60e-02 -2.27e-02 -5.11e-03 4.47e-03
                                                            8.33e-03
                                                                      5.61e-04
## 193
                   5.35e-03 -3.91e-02 -4.70e-02 1.47e-02
                                                            9.12e-03 -6.26e-03
         4.93e-02
## 194
        -1.03e-03
                   2.55e-02 -2.59e-02 3.46e-02 -1.11e-02
                                                            1.92e-02
                                                                      1.42e-03
## 195
         1.33e-03 -3.15e-04
                             1.16e-04 -1.31e-03 -1.70e-03
                                                            1.86e-03
                                                                      2.73e-03
## 196
                   1.94e-03
                             1.02e-02 -4.36e-02 3.72e-02
        -2.19e-02
                                                            4.00e-02 -2.88e-02
## 197
         2.93e-02
                   2.75e-02
                             3.76e-02 -1.53e-02 -2.97e-02
                                                            2.19e-02
                                                                      3.28e-02
         3.31e-05 4.55e-03 -4.70e-03 1.60e-03 9.36e-04
## 198
                                                           3.13e-04 -1.38e-03
```

```
## 199
         2.02e-03 3.06e-06
                             2.22e-03
                                       6.50e-04 -1.98e-04
                                                            8.09e-04 -3.02e-04
## 200
         8.71e-04 -8.39e-05 -6.80e-04
                                        2.31e-04 -1.70e-04
                                                            1.28e-03
                                                                      4.69e-04
## 201
        -3.15e-02 -5.22e-03
                             5.27e-03
                                        2.37e-02 -4.04e-02
                                                            4.23e-02
                                                                      3.54e-02
## 202
                             3.43e-03
                                        5.92e-04 -1.30e-03
        -6.36e-04
                  3.21e-03
                                                            2.91e-03
                                                                      2.39e-03
## 203
        -2.65e-03 -4.14e-02
                             2.73e-02 -1.24e-02 3.42e-02 -2.56e-03 -2.93e-02
## 204
        -1.32e-02 -8.22e-04 -2.20e-02 -3.03e-03 -2.45e-02 -1.81e-02
                                                                      3.30e-02
## 205
         3.96e-02 -2.77e-03 -6.03e-03
                                       1.53e-02 -1.80e-02 -7.18e-02 -1.92e-03
## 206
         8.65e-02
                   1.71e-02 -1.07e-01
                                       3.30e-02
                                                  1.49e-01
                                                            8.43e-02 -1.06e-01
## 207
        -2.24e-03 -3.39e-02
                             6.55e-03 -3.74e-02
                                                  2.88e-03
                                                            1.37e-02
##
  208
                   2.20e-02 -7.81e-03 -7.90e-03
                                                  1.38e-02 -2.64e-02 -4.00e-03
         2.61e-02
## 209
         4.60e-04 -7.78e-05
                             7.63e-06 -4.75e-04
                                                  4.98e-04
                                                            4.53e-04 -3.11e-04
                   7.45e-03
## 210
        -2.79e-04
                             7.19e-03
                                       1.14e-03
                                                  4.55e-03 -6.47e-03 -3.56e-03
## 211
                   7.57e-03 -1.02e-01 -1.74e-01
                                                  1.65e-02
         7.63e-02
                                                            7.89e-02
                                                                      8.39e-03
## 212
         4.74e-03
                   4.41e-03 -5.29e-03
                                        3.08e-03 -5.75e-03 -7.83e-04
                                                                      4.07e-03
## 213
         1.79e-02
                   1.49e-02 -1.51e-02 -3.32e-03
                                                  2.89e-02 -3.60e-03 -3.79e-02
## 214
        -2.61e-03
                   1.56e-03 -3.41e-03
                                       7.54e-03
                                                  5.54e-03 4.05e-03 -9.01e-03
## 215
        -6.23e-02 -5.68e-02 4.97e-02
                                       1.62e-02 -2.80e-02 -7.23e-02
                                                                      7.18e-03
## 216
                  2.14e-02 -1.02e-02 -9.12e-03 2.73e-02 -2.14e-02 -3.91e-02
         2.58e-02
## 217
        -4.85e-02 -4.22e-02 -2.88e-02 -3.48e-02 -1.18e-02 -6.93e-02
                                                                     2.10e-02
## 218
        -8.28e-02 -6.96e-02
                             6.49e-02
                                        2.35e-02 -1.02e-02
                                                           2.19e-02 -1.56e-02
## 219
                   5.11e-03
                             5.58e-04
                                        2.74e-03 -2.43e-03 -4.36e-03
         5.32e-03
                                                                      4.64e-03
## 220
         2.87e-03 -5.21e-04 -3.20e-03
                                        6.45e-04 -2.58e-04 -5.50e-03 -1.14e-03
## 221
        -1.90e-04 -1.58e-04 -2.06e-05
                                        4.69e-05 -2.30e-05 -8.45e-05 -3.91e-05
## 222
        -1.81e-02 -4.18e-03
                             1.46e-02
                                        1.38e-02
                                                 7.56e-03
                                                            1.02e-02 -9.86e-04
## 223
         4.53e-04 -2.40e-02
                             1.30e-02 -4.99e-03
                                                  1.33e-02 -1.57e-02 -2.84e-02
## 224
        -4.18e-05
                   3.19e-03
                             1.03e-03
                                       4.76e-04 -2.08e-04
                                                            8.86e-04
                                                                      6.92e-04
## 225
        -5.38e-03
                   1.09e-04 -6.48e-03
                                        1.13e-02 -6.35e-03 -1.09e-03
                                                                      5.53e-03
## 226
        -2.84e-03 -3.29e-04 -5.64e-04
                                        3.47e-03 9.79e-04 -3.72e-03
                                                                      1.99e-04
## 227
        -1.33e-03 -1.53e-02
                             9.89e-03 -3.09e-03 1.03e-02 -1.00e-02 -3.05e-03
## 228
        -6.07e-03
                   6.32e-04
                             6.79e-03 -3.38e-03 -1.32e-02 -5.66e-03
                                                                      1.08e-02
## 229
         5.38e-03
                   4.75e-03 -5.86e-03 -1.14e-03 -5.28e-03 -1.01e-03
                                                                      2.46e-03
## 230
        -5.49e-02 -4.53e-02 4.49e-02 -4.13e-02 -1.17e-02
                                                           4.53e-02
                                                                      6.40e-03
## 231
         1.98e-02
                   1.49e-02 -1.41e-02
                                       1.46e-02
                                                  1.00e-02 -1.37e-02 -8.50e-03
## 232
         1.17e-02 -2.25e-03 -2.73e-03
                                        5.86e-03
                                                  4.29e-03
                                                            2.25e-02
                                                                      1.79e-02
## 233
        -3.67e-03
                   4.69e-04
                             4.89e-03 -1.04e-03
                                                  2.08e-03 -9.20e-04 -3.43e-04
## 234
                             4.64e-03
                                                                      1.08e-02
         9.84e-04
                   2.97e-02
                                        5.98e-03
                                                  9.15e-04
                                                            2.62e-02
## 235
         5.81e-02
                   1.21e-03 -2.40e-02
                                        1.73e-02 -3.07e-02
                                                            6.43e-02
                                                                      6.02e-03
## 236
         3.07e-03 -1.18e-03
                             4.01e-03
                                        1.66e-03 -3.20e-03
                                                            5.66e-03
                                                                      6.71e-03
## 237
         7.70e-02
                   1.10e-02 -1.13e-01
                                        2.79e-02 -7.15e-02 -1.11e-01
                                                                      4.69e-03
## 238
                                       1.29e-02 -1.86e-03 -4.65e-03 -2.03e-03
         3.70e-02
                   3.45e-02 -2.02e-02
## 239
        -6.97e-03
                   2.10e-04
                             5.20e-03 -2.25e-03 1.01e-02
                                                            5.08e-03 -8.23e-03
## 240
        -5.23e-02 -4.47e-02 -2.33e-03 -4.12e-02 -4.19e-02
                                                            6.55e-03
                                                                      4.33e-02
## 241
        -9.17e-05
                   1.37e-03
                             1.24e-03
                                       1.62e-04 -2.30e-04
                                                            3.33e-04 -1.23e-04
## 242
        -1.04e-03
                   9.16e-05 -1.95e-03 -4.95e-04 -1.42e-03 -1.33e-03
                                                                      9.99e-04
                             1.99e-02 -3.59e-03 -2.08e-02
## 243
         1.62e-04 -1.86e-02
                                                            1.99e-02
                                                                      2.97e-02
## 244
         5.44e-04 -3.34e-03
                             4.63e-04 -4.02e-04 -3.47e-03 -2.45e-03
                                                                      3.71e-03
## 245
         1.51e-02 -5.14e-04
                             3.17e-03
                                       2.96e-02 6.45e-03
                                                            1.77e-02
                                                                      6.31e-03
## 246
         2.31e-04 -1.46e-02 -3.27e-03 -2.74e-03
                                                  1.26e-02 -2.46e-03 -2.34e-02
## 247
        -9.67e-03 -1.23e-03
                            9.29e-04
                                       1.02e-02 4.70e-03 -1.05e-02 -5.20e-03
## 248
        -4.86e-03 -3.89e-04 -4.52e-03 5.65e-03 -1.33e-04 6.68e-03 1.24e-03
```

```
-1.59e-02 -1.05e-03 -9.62e-03 1.71e-02 2.39e-02 2.15e-02 -8.06e-03
## 250
        -5.29e-03
                   7.91e-04 -2.43e-03 -1.12e-02 -1.04e-04 -1.30e-03 -1.51e-03
## 251
         1.25e-02
                   1.12e-01 -1.70e-02
                                       2.64e-02
                                                  2.91e-02
                                                            1.89e-02 -1.59e-02
## 252
                   1.80e-02 -2.01e-03 -1.23e-02
         2.31e-02
                                                 4.77e-03 -3.71e-03 -3.90e-03
## 253
         1.38e-02
                   1.06e-02 2.18e-03 -4.82e-03
                                                  5.61e-03 -1.25e-02 -2.24e-03
## 254
         4.11e-02
                   3.51e-02 -1.63e-02 -4.53e-02
                                                  3.35e-03
                                                            4.03e-02 -8.16e-03
## 255
         1.18e-04
                   2.65e-03 -1.56e-03
                                       6.03e-04 -7.98e-04
                                                            1.86e-03
                                                                      9.17e-04
## 256
        -1.37e-02 -1.90e-03
                             2.58e-03 -4.97e-03 -1.48e-02 -3.14e-03
                                                                      1.17e-02
## 257
                                                 2.20e-02
        -2.10e-03 -4.33e-02
                             1.24e-02
                                       2.86e-02
                                                            3.63e-02 -5.51e-03
## 258
        -1.77e-03
                   1.19e-02 -6.88e-03
                                       3.73e-03
                                                  3.54e-03
                                                            1.01e-03
                                                                      6.67e-03
## 259
        -1.08e-03
                   9.42e-05 -2.02e-03 -2.50e-04 4.11e-04 -1.74e-03 -6.71e-04
        -5.71e-02 -4.66e-02 9.71e-03 -4.75e-02 -6.83e-02 -2.86e-02
## 260
                                                                      5.86e-02
## 261
                  8.99e-04 -2.46e-02 -2.71e-02 6.65e-03
                                                            1.13e-02 -5.30e-03
        -1.47e-02
         6.63e-03 -5.83e-04 -7.24e-03 -5.74e-03 2.52e-03
## 262
                                                            6.69e-03 -4.95e-03
## 263
                   1.87e-02 -2.02e-02
                                       1.90e-02 -5.10e-02
                                                            2.85e-02
         2.07e-02
                                                                      5.48e-02
## 264
        -2.22e-02 -1.82e-04 -1.31e-02
                                       6.13e-02 2.61e-02
                                                            1.20e-02 -3.40e-02
## 265
        -6.41e-02 -5.19e-02
                             3.01e-02
                                       2.18e-02 -3.97e-02
                                                            1.47e-02
                                                                      3.55e-02
## 266
        -1.86e-02 -2.27e-03 -8.75e-03
                                       1.90e-02 -2.79e-03
                                                            1.14e-02
                                                                      1.34e-03
##
  267
        -1.49e-02 -2.73e-03
                             1.12e-03
                                       1.57e-02 -5.88e-03 -1.80e-02
                                                                      6.63e-03
        -1.48e-04 -1.31e-03 -7.63e-04 -1.58e-03 -1.31e-03
## 268
                                                            1.25e-03
                                                                      1.18e-03
## 269
                   1.47e-03 -4.21e-03 -1.95e-03 -5.91e-03 -7.21e-03
                                                                      2.88e-03
        -4.41e-03
## 270
         6.36e-03 -2.25e-04 -6.98e-03
                                       2.15e-03 -1.31e-02
                                                            9.91e-03
                                                                      3.97e-03
## 271
         1.65e-02
                  1.55e-02 -7.86e-03 -6.71e-03 1.25e-03
                                                            1.69e-02 -8.95e-04
## 272
         3.17e-02 -1.70e-02
                             5.00e-02
                                       1.59e-02 -3.48e-02 -3.38e-02
                                                                      8.80e-02
## 273
         6.33e-04
                   7.57e-05
                             9.14e-04
                                       1.94e-04 -2.20e-05
                                                            7.80e-04 -1.22e-04
## 274
         2.94e-03
                   3.30e-04
                             4.98e-03
                                       1.22e-03
                                                  1.21e-04
                                                            4.03e-03
                                                                      6.65e-04
## 275
         2.06e-02
                   1.63e-02 -3.16e-02
                                       1.55e-02
                                                  1.08e-02 -6.03e-03 -9.46e-03
## 276
        -4.85e-04 -1.44e-02 -7.15e-03 -5.53e-03
                                                  1.50e-02 -1.11e-02 -2.11e-02
         3.23e-03 -1.06e-02 -6.90e-04 -1.30e-02
## 277
                                                 3.25e-03
                                                            5.02e-03 -1.02e-02
## 278
        -1.47e-03 -5.14e-02
                             3.63e-02 -5.43e-02 -1.77e-02
                                                            4.51e-02
                                                                      1.32e-02
## 279
         2.50e-04 -1.78e-02 -1.09e-02 -2.79e-03 -3.48e-03
                                                            8.58e-03 -2.18e-03
## 280
                   5.07e-03
                             4.92e-03 8.35e-04 1.90e-03 -1.71e-03
        -7.99e-04
## 281
        -6.33e-03
                   1.96e-03
                             1.01e-02 -2.95e-03
                                                  1.10e-02 -1.27e-03 -1.99e-02
## 282
         1.99e-04 -1.50e-05
                             5.47e-04
                                       1.59e-04
                                                 1.61e-04
                                                            1.00e-04 -4.86e-04
## 283
         1.44e-02
                   1.30e-02
                             1.11e-02 -5.58e-03 -1.19e-02 -1.32e-02
                                                                      1.19e-02
## 284
                   4.26e-04
                             1.63e-02 -3.01e-03 -1.41e-03 -1.14e-02
                                                                      2.59e-03
        -8.68e-03
                             1.77e-02 -1.78e-02 -5.55e-02
## 285
        -5.13e-02 -3.91e-03
                                                            7.53e-02
                                                                      4.12e-02
## 286
        -1.14e-03 -9.63e-04 -8.42e-04
                                       3.74e-04 -7.61e-04
                                                            8.25e-04 -2.97e-04
## 287
                                       1.99e-02 -7.37e-02
         4.59e-03
                   8.27e-02 -6.09e-02
                                                            6.74e-03
                                                                      1.44e-02
## 288
        -1.67e-05
                             1.41e-03
                                       4.90e-04 3.70e-04
                   2.77e-03
                                                            2.20e-03 -3.10e-04
## 289
         1.31e-03
                   7.63e-02 -5.93e-02
                                       1.45e-02 -1.73e-02 -3.59e-02
## 290
         9.77e-03
                   7.76e-03 -8.40e-04 -3.72e-03 6.71e-03 -8.23e-03 -5.42e-03
## 291
         4.72e-02
                   4.45e-02
                             5.01e-02 -1.47e-02 -3.06e-02
                                                            5.86e-02 -1.57e-02
## 292
         2.23e-02
                   1.89e-02
                             3.35e-02 -9.82e-03 -2.04e-02
                                                            1.25e-02
                                                                     2.32e-02
## 293
        -2.54e-03 -2.71e-02 -1.46e-02 -4.56e-03 7.77e-03
                                                            8.78e-03 -9.22e-03
## 294
        -6.27e-02 -5.27e-02 -2.86e-02 -4.30e-02
                                                 1.86e-02
                                                            5.28e-02 -1.40e-02
## 295
        -3.31e-02 -3.58e-04 2.14e-02 -1.05e-02 1.03e-02 -3.14e-02 -6.05e-03
## 296
                  3.21e-04 -4.42e-03 -4.43e-03 -6.68e-03
        -9.02e-03
                                                            5.46e-03
                                                                     4.13e-03
## 297
        -5.69e-02 -4.86e-02 -2.66e-02 3.43e-02 3.13e-02
                                                            1.53e-02 -2.99e-02
## 298
        -1.93e-03 3.54e-04 -4.14e-03 -4.02e-04 -5.07e-03 1.52e-03 3.76e-03
```

```
-9.05e-03 -9.33e-04 -6.03e-03 -1.63e-02 1.06e-02 -1.10e-02 -1.05e-02
## 300
         4.24e-04 -7.22e-03 -4.23e-03
                                       1.19e-02 -2.25e-03
                                                           2.86e-03
                                                                      3.19e-03
## 301
        -1.29e-03 -1.09e-03 9.73e-04
                                       5.66e-04 -3.54e-04 -6.04e-04
                                                                      8.34e-04
## 302
                                       2.21e-02 -1.55e-02 -6.27e-03
         2.53e-02
                  2.17e-02 -7.73e-03
                                                                      1.49e-02
## 303
         2.06e-02
                   1.72e-02 1.37e-03 -2.42e-02 -5.95e-03
                                                           2.22e-02
                                                                      3.91e-03
## 304
        -1.39e-03 -1.73e-04 -2.60e-03 -2.61e-03
                                                 5.37e-04 -2.22e-03 -7.04e-04
  305
                   2.39e-02 -1.30e-02
                                       3.02e-02 8.09e-03
                                                           1.74e-02 -9.59e-03
##
        -2.65e-03
##
  306
        7.53e-04 -1.95e-04 -9.40e-04
                                       2.99e-04 -4.03e-05 -6.63e-04 -1.47e-05
## 307
        -2.42e-03 -1.10e-04 -3.39e-03
                                       2.81e-03 -8.84e-04 -9.24e-04
##
  308
        -1.09e-02
                  1.41e-03 -8.14e-03
                                       1.55e-02 1.37e-02
                                                           1.06e-02 -1.61e-02
## 309
        -1.11e-03 -1.90e-02 1.95e-02
                                       3.01e-02 -1.29e-03 -3.34e-04
                                                                      3.42e-03
## 310
        -1.89e-02 -1.68e-03 -1.72e-02 -6.38e-03 3.29e-02 -2.29e-02 -3.02e-02
## 311
        -2.80e-02 -4.85e-03
                            7.90e-03
                                       2.36e-02 -4.65e-03
                                                           3.71e-02
                                                                      2.37e-03
         1.78e-03 -1.81e-02 -1.83e-02 -3.65e-03 -3.62e-02
## 312
                                                           1.89e-02
                                                                     4.69e-02
## 313
        -5.22e-03 -4.32e-02
                             3.64e-02 -1.12e-02 8.69e-03 -2.51e-02 -8.01e-03
## 314
        -8.78e-03 -5.12e-04 -4.24e-03 -3.02e-03
                                                 5.18e-03
                                                           4.49e-03 -1.16e-02
## 315
        -1.77e-02
                   1.18e-03 -3.60e-02 -1.09e-02
                                                 2.39e-02
                                                           3.03e-02 -4.07e-02
## 316
                            1.68e-02 -4.83e-03
         1.41e-02
                   1.14e-02
                                                 1.06e-02 -1.14e-02 -5.25e-03
## 317
         2.45e-02
                   2.23e-02 -2.33e-02 2.04e-02 -1.40e-02 -6.27e-03
                                                                     7.47e-03
## 318
         5.58e-02
                   7.46e-04 6.12e-02 -8.44e-02 5.63e-02 -3.66e-02 -6.12e-02
## 319
                   4.37e-02 -3.32e-02 -1.29e-02 7.48e-03
                                                            2.56e-02 -3.34e-03
         5.04e-02
## 320
        -2.56e-02 -1.34e-03 -1.39e-03
                                       2.96e-02 -1.16e-02
                                                            1.59e-02
                                                                      2.17e-02
                   2.63e-02 -1.21e-02 -7.31e-03 -3.03e-02 -3.90e-03
## 321
         2.86e-02
                                                                      2.32e-02
## 322
         9.25e-04
                   1.92e-02
                             5.42e-03
                                       3.18e-03 -1.18e-02
                                                            1.55e-02
                                                                      1.09e-02
## 323
         4.53e-03
                   3.68e-03 -1.36e-03 -5.31e-03 -2.48e-03 -3.60e-03
                                                                      2.34e-03
## 324
         4.54e-02
                   6.19e-03
                             3.91e-02 -1.06e-01 -3.24e-02
                                                           4.80e-02
                                                                      2.52e-02
## 325
         5.38e-03 -1.49e-04 -4.89e-04
                                       1.27e-03 -4.31e-04
                                                           7.53e-03
                                                                      4.36e-05
## 326
        -1.04e-02 -1.46e-03
                             6.28e-03
                                       1.05e-02 -1.31e-02 -1.48e-03
                                                                      6.27e-03
## 327
        -1.14e-02
                  3.09e-04
                             4.01e-03
                                       8.70e-03 -7.73e-03 -1.31e-02 -7.84e-03
## 328
         6.41e-02 -1.14e-03 -7.61e-02
                                       2.50e-02 5.03e-02
                                                            6.25e-03 -6.05e-02
## 329
                             2.04e-02
         3.24e-02
                  2.81e-02
                                       2.30e-02 -2.48e-02 -2.29e-02
                                                                      2.43e-02
## 330
         8.26e-03 -2.29e-03 -1.22e-02
                                       3.61e-03 1.38e-02
                                                           1.78e-03
                                                                      4.33e-04
## 331
         3.08e-04 -1.42e-02 -7.85e-03
                                       9.34e-03 -4.46e-03 -1.64e-03
                                                                      4.63e-03
## 332
        -2.06e-02
                   3.68e-04 -7.15e-03 -9.29e-03 -2.65e-03
                                                           1.11e-02 -3.25e-03
## 333
         1.99e-02
                   1.80e-02
                             2.46e-02 -4.71e-03 -2.48e-03 -1.17e-03
                                                                      1.27e-02
                             1.23e-02 -3.14e-03 -9.05e-03
                                                           1.63e-02
## 334
        -8.05e-03
                   9.05e-04
                                                                      1.29e-03
## 335
         5.30e-03
                   2.26e-04
                             3.96e-03
                                       1.74e-03 8.53e-03
                                                           8.46e-03 -1.08e-02
## 336
        -2.39e-02 -9.34e-04
                             9.13e-03
                                       6.55e-02
                                                 7.74e-03 -2.43e-02 -2.16e-02
## 337
         4.66e-02
                   5.28e-03
                             1.98e-02 -1.08e-01 -1.22e-02 -6.33e-02 -3.68e-03
         2.79e-02
## 338
                   2.12e-02
                             3.95e-02
                                       1.99e-02
                                                 3.10e-02 -2.39e-02 -2.95e-02
## 339
        -1.67e-04 -2.52e-03
                             2.41e-03
                                       1.33e-03 3.96e-05 -1.78e-04
## 340
        -3.08e-03 -5.12e-05
                             1.94e-03 -9.08e-04 -3.74e-04
                                                            2.27e-03 -3.26e-04
                                       2.01e-03 4.44e-04
## 341
        -1.18e-05
                   1.08e-02 -9.72e-04
                                                           7.74e-03
## 342
         9.89e-04 -1.58e-02 -1.44e-02
                                       1.15e-02 4.67e-03 -1.27e-02 -1.21e-02
                  2.26e-02
                             1.95e-02 -6.27e-03 -4.26e-02 -1.80e-02
## 343
         2.57e-02
                                                                     3.39e-02
## 344
        -3.54e-03 -3.52e-02
                             2.47e-02
                                      2.08e-02 2.52e-02
                                                           1.29e-02 -3.46e-02
## 345
         4.98e-04
                  4.59e-04
                             5.99e-05 -9.75e-05 -5.22e-04
                                                            2.40e-04
                                                                      5.00e-04
        -2.02e-04 -1.61e-02 -7.70e-03 -2.81e-03 6.91e-03 -1.21e-02 -5.63e-03
## 346
## 347
         4.37e-02
                  3.60e-02 -4.73e-02 3.16e-02 -1.11e-02 2.01e-02
                                                                     3.11e-03
## 348
         2.80e-02 2.30e-02 -3.12e-02 -4.57e-03 -4.45e-02 -2.35e-03 3.85e-02
```

```
## 349
         2.31e-02 1.82e-02 1.75e-02 -7.65e-03
                                                 2.80e-03 -1.67e-02 -2.14e-02
## 350
         3.62e-03 -2.36e-04 -2.92e-04
                                      1.67e-03
                                                 4.04e-03
                                                            4.25e-04 -2.85e-03
                                                 1.04e-02 -4.07e-03 -6.85e-03
## 351
        -2.69e-04 -3.27e-02
                             1.46e-02 -7.52e-03
## 352
        -5.33e-03 -4.77e-04 -1.43e-03 -1.21e-03
                                                 2.28e-03
                                                            2.43e-03
                                                                      1.29e-04
## 353
        -1.04e-02 6.12e-04 -1.56e-02 -4.38e-03
                                                 1.25e-02 -5.00e-03 -2.39e-02
## 354
         2.56e-03 -2.16e-02
                             1.28e-02 -2.40e-02 -3.04e-04
                                                            2.24e-02
                                                                      3.29e-03
## 355
                   1.32e-03 -1.73e-02 -8.25e-03 -1.75e-02 -5.08e-03
        -1.83e-02
                                                                      1.14e-02
## 356
        -2.45e-03 -3.23e-04
                             7.74e-04 -9.03e-04 -1.76e-03 -7.52e-04
                                                                      1.60e-03
                  1.72e-02 -2.52e-02 1.61e-02 1.95e-03 -1.83e-02
## 357
                                                                      4.04e-04
  358
        -2.81e-02 -2.55e-02
                             4.29e-02 -2.59e-02
                                                 6.71e-04 -1.73e-02 -2.59e-03
##
## 359
         1.05e-03
                   1.06e-03
                             7.38e-04 -5.92e-04
                                                 9.98e-05 -8.84e-04 -3.78e-04
        -4.48e-03 -3.83e-04
                             2.97e-03
## 360
                                       4.59e-03 -1.45e-03 -4.45e-03
                                                                      4.10e-04
                                                            3.08e-03
## 361
         5.76e-03 -5.52e-04
                             7.34e-03
                                       1.54e-03 -3.26e-03
                                                                      1.48e-03
                             5.93e-03 -8.73e-03 3.74e-03 -1.28e-03 -3.11e-04
## 362
        -4.54e-03
                  6.85e-04
## 363
                   2.05e-02
                             2.38e-02 -1.43e-02
                                                 7.51e-03 -1.80e-02 -5.85e-03
         2.22e-02
## 364
        -5.66e-02 -4.94e-02 -7.29e-02
                                       2.68e-02 -2.31e-02
                                                            5.51e-03
## 365
        -6.15e-03 -1.68e-04 -9.06e-03 -1.90e-03
                                                 9.54e-03
                                                            9.24e-03 -2.15e-03
         4.81e-03 -8.59e-04 -9.03e-03
                                                 3.06e-03
                                                            2.33e-04 -2.31e-03
## 366
                                       2.47e-03
##
   367
        -7.87e-02 -5.76e-02 -2.82e-02
                                       2.33e-02 -1.02e-01 -3.74e-02
                                                                     1.32e-01
##
  368
         2.80e-03
                   2.23e-03 -3.37e-03
                                       2.04e-03 -9.35e-05 -2.37e-03 -6.65e-05
## 369
         4.45e-02 -1.28e-03
                             2.64e-03 -5.12e-02 -2.54e-05
                                                           8.70e-03
                                                                     9.26e-03
## 370
         5.09e-02
                  4.18e-02
                             4.87e-02
                                       3.88e-02 1.83e-02
                                                            3.29e-02 -1.62e-02
                                       1.15e-01 -1.63e-02 -2.94e-02 2.26e-02
## 371
        -6.97e-02 -5.56e-02
                             6.73e-02
## 372
         1.74e-02
                   1.40e-02
                             7.07e-03 -5.73e-03
                                                 5.68e-03 -1.46e-02 -1.23e-03
## 373
         2.82e-02
                   2.20e-02 -3.26e-02
                                       2.07e-02 -1.78e-03
                                                           1.23e-02 -1.22e-03
## 374
        -3.41e-05 -1.05e-03 -4.65e-04 -1.48e-04
                                                 7.82e-04
                                                            3.32e-04 -6.86e-04
## 375
         1.06e-02
                  8.34e-03 -1.23e-02 -3.24e-03 -6.22e-03 -1.11e-02
                                                                     3.99e-03
## 376
         1.79e-02
                   1.46e-02
                             2.17e-02
                                       1.06e-02 4.73e-03 -5.52e-04
                                                                     7.51e-04
## 377
         6.74e-03 -1.59e-03
                             9.29e-03
                                       4.94e-04
                                                 3.28e-03
                                                           1.22e-02 -8.86e-03
## 378
        -2.48e-03 -3.68e-04 -3.54e-03 -7.55e-04
                                                 9.88e-04 -1.15e-03 -2.50e-04
## 379
                            7.85e-04
        -8.03e-02 -8.01e-02
                                       1.07e-01
                                                 3.17e-02
                                                           5.61e-02 -2.51e-02
## 380
         1.61e-02 1.36e-02 -1.53e-02 -3.27e-03
                                                 9.64e-03 -1.21e-02 -1.14e-02
## 381
        -1.80e-03 -2.23e-02 -8.96e-03 -4.42e-03 -2.01e-02 -4.05e-03
                                                                      1.71e-02
## 382
        -1.37e-02 -2.65e-03 -2.89e-03 -5.31e-03 8.52e-04
                                                           7.07e-03 -1.58e-03
##
   383
        -6.49e-02 -5.56e-02
                             1.89e-02
                                       2.62e-02 -4.71e-02 -8.90e-02
                                                                      3.15e-02
        -2.78e-02 -6.18e-03
                             2.91e-02 -1.03e-02 2.87e-03
                                                            1.42e-02 -8.65e-04
## 384
                                       1.28e-02 -3.59e-02 -2.67e-03
                             9.19e-04
## 385
        -1.41e-02 -1.45e-03
                                                                      3.03e-02
## 386
        -4.59e-02 -4.02e-02 -4.70e-02
                                       2.67e-02 -6.40e-03
                                                            3.96e-02
                                                                      4.12e-03
## 387
         3.04e-04 -8.98e-03 -7.16e-03 -5.23e-04 8.75e-03
                                                            6.11e-03 -2.12e-03
## 388
        -8.86e-06
                  3.57e-03 -2.19e-03
                                       7.06e-04 8.40e-04 -1.48e-03 -4.96e-04
## 389
         2.40e-05 -1.85e-02 -1.36e-02 -3.37e-03 5.46e-03
                                                            1.49e-02 -4.32e-04
## 390
         4.34e-02
                  4.10e-02
                             3.00e-02 -1.32e-02 -3.77e-02
                                                            2.54e-02
                                                                      6.12e-02
## 391
         7.32e-04 -6.15e-03
                             1.87e-03
                                       4.20e-03 -9.18e-04
                                                            3.08e-03
                                                                      3.76e-04
## 392
        -1.06e-02 -1.98e-03 -5.70e-03
                                       8.80e-03 -1.46e-02 -3.11e-03
                                                                      2.34e-02
                                                            8.46e-03 -3.55e-03
## 393
        -3.58e-03 1.35e-03 -4.34e-03 -1.25e-03 -3.74e-03
## 394
         3.37e-03 -5.90e-04
                             1.08e-03
                                      1.55e-03 1.74e-04
                                                            6.35e-04
                                                                      1.15e-03
## 395
        -9.73e-03 -2.68e-04
                             1.72e-02 -2.22e-03 -8.74e-03
                                                            1.51e-02
                                                                      1.17e-02
## 396
                            1.79e-03 -3.23e-03 5.16e-03 -9.58e-03 -1.49e-03
        -8.69e-03 -1.23e-03
## 397
         2.10e-03 -2.02e-02 -5.19e-03 -3.13e-03 -1.70e-02 -2.53e-03
                                                                      1.59e-02
         4.17e-02 3.56e-02 -6.20e-02 3.42e-02 -4.94e-02 -3.91e-02
## 398
```

```
## 399
        -1.58e-02 4.81e-03 -6.22e-03 -9.90e-03 -1.33e-02 -4.22e-03
                                                                      2.56e-02
## 400
        -1.84e-02 -3.00e-03 -2.57e-02
                                       1.76e-02 1.23e-03
                                                            2.25e-02
                                                                      2.38e-03
## 401
         1.36e-03 -1.76e-02
                             7.61e-03 -6.62e-03 -7.49e-03
                                                            4.22e-04 -9.39e-03
## 402
                             2.74e-04
                                       4.96e-04 2.17e-04 -4.22e-04 -3.91e-04
         2.34e-04 -7.09e-05
## 403
         2.62e-02
                  2.04e-02 -1.52e-02 -6.28e-03 -2.29e-04 -5.79e-03 -7.15e-03
## 404
         3.43e-03 -5.29e-04 -4.19e-03
                                       7.14e-03 7.12e-03 -6.96e-03 -4.43e-03
                                                           1.27e-02
## 405
        -1.10e-03 -1.49e-02 -4.59e-03 -2.03e-03 -8.84e-03
                                                                      9.84e-03
## 406
         6.40e-02
                  8.05e-03
                             5.96e-02
                                       1.86e-02 -7.37e-02 -8.50e-02
                                                                      6.15e-02
## 407
                                       9.99e-03 -1.16e-02 -2.53e-03
        -1.10e-02 -3.92e-04
                             1.18e-02
                                                                      1.99e-02
## 408
        -7.98e-03 -1.27e-03 -3.39e-04 -2.88e-03 5.07e-03 -1.03e-02
                                                                     -1.71e-03
## 409
         1.04e-02 -2.09e-03 -2.22e-02
                                       3.90e-03 -1.34e-02
                                                           1.40e-02
                                                                       1.44e-02
## 410
        -1.29e-04 -2.72e-02 -1.94e-02 -4.45e-03 -8.11e-03 -6.51e-03
                                                                       2.10e-02
## 411
                   1.49e-02
                             1.46e-02
                                       3.83e-02 -2.70e-03 -1.81e-02
                                                                       3.96e-03
         1.85e-02
## 412
        -6.86e-03
                   2.83e-03
                             1.63e-02 -6.06e-03 1.84e-03
                                                            1.84e-02 -5.59e-03
## 413
        -1.76e-03
                   1.05e-02
                             6.99e-03
                                       4.86e-04 2.57e-03
                                                            2.70e-03 -7.69e-03
## 414
        -4.55e-03
                   4.92e-04 -6.23e-03
                                        6.87e-03 -4.73e-03 -6.20e-03
                                                                      3.73e-03
## 415
        -5.58e-02 -4.78e-02 -1.30e-02
                                       1.65e-02 -3.14e-02 -3.18e-02
                                                                      2.06e-02
## 416
                   1.07e-01 -8.15e-02 -1.35e-01 -1.90e-02
                                                                       1.45e-02
         1.86e-02
                                                            3.83e-03
## 417
        -2.08e-02
                   5.54e-05
                             2.24e-02 -7.75e-03 -6.31e-03 -1.75e-02
                                                                       5.14e-03
## 418
         1.35e-02 -7.42e-03
                             1.73e-02
                                       4.50e-03 2.72e-02
                                                            5.01e-03
                                                                      2.66e-03
## 419
         1.63e-03 -2.55e-02 -1.67e-02 -4.03e-03
                                                  6.97e-03 -1.78e-02 -7.51e-03
## 420
         1.62e-03 -1.44e-04 -8.67e-04
                                       6.70e-04 -5.45e-04
                                                            1.53e-03 -3.24e-04
## 421
        -4.75e-03 -4.93e-04 -6.28e-03
                                       5.00e-03 1.36e-03 -1.63e-03 -5.52e-03
## 422
         6.68e-02
                   1.39e-02
                             8.34e-03 -6.08e-02 -3.63e-02 -3.23e-02
                                                                      1.37e-02
## 423
        -5.25e-02 -4.26e-02 -3.10e-02 -4.35e-02 -1.23e-02
                                                            6.08e-02
                                                                      1.11e-02
## 424
        -3.62e-03
                   1.16e-03 -4.96e-04 -1.51e-03 -6.42e-03
                                                            6.95e-03
                                                                       3.86e-03
## 425
         2.22e-04 -1.58e-02
                             5.33e-03
                                       9.93e-03 -2.26e-03 -1.23e-02
                                                                      4.34e-03
## 426
        -6.97e-03
                   2.62e-03 -1.44e-02
                                       1.25e-02
                                                 2.22e-02 -4.78e-03 -2.29e-02
                             3.87e-03 -3.53e-03
## 427
         7.11e-03
                   6.95e-03
                                                  5.52e-03 -6.13e-03 -6.19e-04
## 428
        -4.27e-03
                   3.46e-03 -6.46e-03
                                        1.50e-02
                                                  4.17e-03
                                                            1.84e-02 -2.09e-03
## 429
                                       5.71e-04
         1.52e-04
                   3.48e-03 -2.44e-04
                                                  7.47e-04
                                                            2.69e-03 -2.53e-03
## 430
                   4.75e-04
                             3.71e-03 -1.47e-03
                                                  5.97e-03 -9.36e-04 -8.36e-03
        -3.30e-03
## 431
         3.49e-02
                   2.54e-02
                             2.48e-02
                                        6.47e-02
                                                  4.97e-02 -6.92e-03 -4.44e-02
## 432
         1.32e-02
                   1.13e-02
                             1.20e-02 -4.15e-03 -1.11e-02 -2.24e-03
                                                                      1.94e-02
## 433
        -3.65e-04
                  -4.00e-03
                             3.00e-04
                                        2.61e-03
                                                  2.44e-03 -9.96e-04 -1.92e-04
## 434
                   7.26e-04 -2.22e-02
                                        1.70e-02 -1.91e-02 -1.75e-02
        -1.25e-02
                                                                      1.42e-02
                   1.44e-02 -1.47e-02
                                        3.63e-03 4.98e-04 -7.03e-03
## 435
        -5.55e-04
                                                                      4.09e-03
## 436
         4.97e-02 -2.54e-03 -3.56e-02
                                       1.95e-02 -1.08e-01
                                                                      1.45e-01
                                                            2.14e-02
## 437
         1.36e-02
                   1.18e-01 -8.47e-02 -1.52e-01 -7.75e-02
                                                            7.15e-02
                                                                      4.82e-02
## 438
         2.08e-02
                   1.71e-02
                             7.37e-03 -8.33e-03
                                                 1.21e-02
                                                            1.07e-02 -1.02e-02
## 439
        -1.10e-02
                   3.08e-03 -5.05e-03 -5.30e-03 -3.14e-02 -1.22e-03
                                                                      2.45e-02
## 440
         6.56e-02
                   6.71e-03 -3.38e-03
                                       2.44e-02
                                                 4.63e-02
                                                            1.44e-02 -1.21e-02
## 441
         8.74e-04
                   6.87e-02 -5.60e-02
                                       1.50e-02
                                                 2.91e-02 -7.75e-02
                                                                      3.28e-03
## 442
        -1.10e-02
                   7.83e-04 -1.90e-02 -3.05e-03
                                                 2.51e-03 -3.20e-03
                                                                      3.77e-03
                             1.89e-02 -8.86e-03 -7.33e-03 -1.30e-02 -1.68e-03
## 443
         1.65e-02
                   1.52e-02
## 444
        -6.45e-02 -5.43e-02
                             9.34e-02 -5.55e-02 -5.99e-02
                                                            1.41e-02
                                                                      6.08e-02
## 445
         1.78e-03
                   2.04e-04 -2.50e-03
                                       6.71e-04 1.91e-03
                                                            2.18e-03 -2.83e-03
## 446
                   1.08e-02 -5.51e-03 -2.85e-03 1.27e-02
         1.48e-02
                                                            4.04e-03 -9.75e-03
## 447
        -5.52e-03 -5.80e-03 -1.64e-03
                                       3.09e-03 -3.03e-03
                                                            6.01e-03
                                                                      7.79e-04
## 448
        -3.67e-05 -2.60e-06 -3.74e-05 -9.70e-06 -2.69e-05 -1.80e-05
```

```
## 449
                  4.43e-03 -2.34e-03 -1.89e-03 -4.40e-03 -1.57e-03 2.75e-03
         5.33e-03
## 450
        -9.40e-03 -9.02e-04
                            7.99e-03 -2.45e-03 1.34e-02 -2.18e-03 -1.05e-02
## 451
         2.65e-02
                   2.25e-02 -1.33e-02 -8.18e-03
                                                  3.33e-03 -2.44e-02 -4.88e-03
## 452
                             1.03e-02 -6.08e-03 -4.70e-02
        -1.62e-02
                   1.99e-03
                                                            3.54e-02
                                                                      3.36e-02
## 453
         6.77e-03
                   8.70e-05 -1.79e-03
                                        2.12e-03
                                                  6.55e-03 -4.73e-03 -6.43e-03
## 454
         5.88e-03
                   7.12e-02 -1.73e-02
                                        2.06e-02 -3.48e-02
                                                            5.24e-03
                                                                      1.34e-02
## 455
         5.77e-05
                   3.57e-04 -2.72e-04
                                        9.61e-05
                                                  2.09e-04
                                                            2.37e-04 -2.21e-04
## 456
        -6.98e-04
                   9.84e-03
                             8.68e-03
                                        1.06e-02
                                                  1.07e-03
                                                            2.45e-03
                                                                      9.37e-03
## 457
        -2.09e-04 -5.17e-03
                             2.64e-03
                                        2.69e-03
                                                  2.96e-04 -3.08e-03 -2.88e-03
## 458
        -3.53e-02 -3.32e-02
                             5.01e-03
                                        1.36e-02
                                                  1.03e-02 -2.56e-02 -5.87e-03
## 459
        -1.37e-03 -2.17e-02
                             6.73e-03
                                        3.41e-02
                                                  5.51e-03
                                                            2.28e-02 -6.13e-03
                             2.62e-03
                                        2.23e-02
## 460
         3.24e-02
                  3.10e-02
                                                  1.08e-02 -1.88e-03 -1.47e-02
## 461
        -2.88e-03 -3.34e-02
                             2.14e-02 -7.55e-03 -2.33e-02 -5.03e-03
                                                                      2.32e-02
## 462
         2.07e-02
                   1.61e-02 -1.16e-02 -6.66e-03 -1.85e-02 -3.96e-03
                                                                      1.28e-02
## 463
                   3.76e-03 -1.83e-03 -6.45e-03 -1.08e-03 -4.59e-03
         4.83e-03
                                                                      1.18e-03
## 464
        -3.28e-02 -2.61e-02
                             5.16e-03 -6.57e-02 -1.69e-03
                                                            2.86e-02
                                                                       5.99e-03
## 465
         4.97e-03
                   4.07e-03
                             5.64e-04 -1.85e-03 -8.13e-03 -3.90e-03
                                                                      6.94e-03
## 466
                   9.42e-04 -1.20e-02 -3.37e-03 4.11e-03 -5.48e-03
        -1.33e-02
                                                                       3.79e-03
## 467
        -1.16e-05
                   8.12e-06 -3.29e-05 -9.04e-06 2.17e-05
                                                            4.30e-05
                                                                     -4.02e-05
## 468
        -3.37e-04 -9.47e-03 -1.24e-03 -2.96e-03 -7.91e-03
                                                            3.51e-03
                                                                      3.84e-03
                                                                      5.29e-03
## 469
         2.69e-03 -1.42e-02 -5.18e-03 -9.98e-04
                                                 5.57e-04
                                                            1.42e-02
## 470
         8.65e-02 -2.02e-02 -2.66e-02
                                       1.67e-01
                                                  9.30e-02
                                                            1.46e-02 -7.59e-02
## 471
        -2.11e-02 -3.89e-03 2.22e-02 -8.33e-03
                                                  8.92e-03 -1.88e-02 -6.71e-03
## 472
        -1.56e-03
                   1.59e-05 -5.74e-04 -6.33e-04
                                                 4.07e-03 -6.38e-04 -3.59e-03
## 473
        -1.05e-02 -3.70e-04
                             1.49e-03 -4.09e-03 -1.41e-03
                                                            7.34e-03 -1.15e-03
## 474
         5.97e-04 -3.53e-03
                             9.56e-04
                                       2.35e-03
                                                 6.42e-04 -1.44e-04 -1.89e-03
## 475
        -2.08e-02 -1.19e-03 -2.18e-02 -3.70e-02 1.52e-02 -2.79e-02 -8.05e-03
## 476
        -1.60e-02 -2.35e-03
                            3.21e-03 -6.31e-03 -1.94e-03
                                                            9.94e-03 -3.72e-03
## 477
        -1.89e-02 -3.52e-03 -2.38e-02
                                       1.78e-02 -2.17e-03
                                                            9.89e-03
                                                                      1.35e-03
## 478
                   3.49e-03 -2.06e-02 -8.27e-03 -1.13e-02
                                                            9.45e-03
                                                                      8.85e-03
        -1.01e-02
## 479
                             1.29e-02 -3.41e-03
                                                 4.28e-03 -2.68e-03
        -1.10e-02 -1.69e-03
                                                                      3.64e-04
## 480
                   2.47e-03 -2.76e-02
                                       1.82e-02 -2.80e-02
                                                            2.96e-03
         4.79e-02
## 481
         5.85e-02
                   1.07e-02
                             1.39e-02 -5.09e-02
                                                  2.63e-03 -7.95e-02 -7.98e-04
## 482
        -2.59e-02 -3.81e-03 -2.15e-02
                                        2.50e-02
                                                  2.66e-02 -2.96e-02 -2.03e-02
## 483
        -7.69e-04
                   9.90e-02 -7.05e-02
                                        1.81e-02
                                                  9.23e-02 -1.05e-01 -9.12e-02
## 484
         3.22e-02
                   2.52e-02
                             1.37e-02
                                        2.46e-02 -3.89e-02 -2.77e-02
                                                                     4.07e-02
## 485
         2.18e-04
                   1.11e-02
                             3.94e-04
                                        1.12e-02
                                                  2.05e-03
                                                           8.37e-03 -3.94e-03
## 486
        -2.91e-03 -3.11e-02
                             5.79e-04
                                       1.90e-02
                                                  4.22e-03 -4.82e-03
                                                                      2.28e-03
## 487
        -2.14e-02 -9.82e-04 -7.94e-03 -9.04e-03
                                                  4.08e-02 -7.46e-03 -3.63e-02
## 488
                  2.01e-02 -1.99e-02
                                        1.98e-02
         2.37e-02
                                                  6.87e-03
                                                            1.25e-02 -8.02e-03
## 489
         3.11e-04
                   1.43e-05
                             2.51e-04
                                        1.35e-04
                                                  4.45e-04
                                                            3.76e-04 -5.16e-04
## 490
        -6.80e-04 -3.15e-02
                             1.35e-02
                                        1.92e-02
                                                  1.08e-02 -2.17e-02 -2.73e-02
## 491
         2.91e-02
                   2.41e-02
                             2.89e-02 -1.12e-02
                                                  1.11e-02
                                                            3.81e-02 -1.86e-03
## 492
         1.28e-03 -2.30e-02 -6.27e-03 -2.86e-03 -2.54e-03 -3.71e-03
                                                                      1.37e-03
                   8.91e-04
## 493
                             6.54e-03
                                        5.56e-03 -8.27e-04 8.12e-03 -3.05e-03
        -4.01e-03
## 494
         2.27e-02
                   1.85e-02
                             1.35e-02
                                       1.74e-02 -3.19e-03 -2.64e-03
                                                                      2.60e-03
## 495
        -5.03e-03 -3.62e-02
                             3.50e-02 -9.02e-03
                                                 1.63e-02 -4.78e-03 -6.31e-03
## 496
                                       1.68e-02 -4.82e-02 -1.05e-01
        -9.20e-04
                   1.14e-01
                             5.60e-02
                                                                      3.24e-02
## 497
         2.88e-02
                   2.39e-02
                             1.99e-02 -9.76e-03 2.33e-02 -4.57e-03 -2.26e-02
## 498
         1.18e-03 -1.74e-04 -1.79e-03 5.49e-04 4.32e-04 1.41e-03 8.33e-04
```

```
## 499
        -1.79e-02 -4.18e-03 -1.38e-03 -6.94e-03 5.41e-03 -5.07e-03 -3.83e-03
## 500
        -2.32e-04 -7.01e-03 5.84e-03 -1.67e-03
                                                 1.47e-03 -8.51e-04 -3.09e-03
## 501
        -2.13e-02 -4.84e-04 -2.86e-02 -5.63e-03 -5.95e-03 -2.75e-02 -3.73e-03
## 502
        -4.05e-03 -2.61e-02 -4.98e-03 -6.40e-03 -6.24e-04 -3.64e-03 -2.85e-04
         7.70e-03
## 503
                  5.82e-03
                             8.51e-03 -2.50e-03
                                                 9.63e-03 7.85e-03 -7.45e-03
## 504
        -2.88e-03 -2.07e-05
                             4.05e-03 -9.19e-04
                                                 2.95e-03 -3.88e-03 -6.40e-04
## 505
         4.34e-02 -1.43e-03
                             7.47e-02
                                       1.11e-02
                                                 7.46e-02 -8.06e-02 -5.37e-02
## 506
        -2.15e-02 -1.88e-03 -5.39e-03 -7.15e-03
                                                 7.24e-03 -2.31e-02 -5.19e-03
## 507
                  7.19e-05 -1.23e-03
                                       3.57e-04
                                                 8.78e-04
                                                          2.23e-04 -2.94e-04
## 508
        -1.15e-02 -6.14e-04
                             2.70e-03 -4.35e-03 -9.22e-03 -2.08e-03
                                                                     6.23e-03
## 509
         3.07e-02
                  2.25e-02 -2.12e-02
                                       4.96e-02
                                                 1.25e-02 -2.57e-02
                                                                      1.60e-04
         1.16e-04 -2.58e-03
                             2.67e-03 -6.63e-04
## 510
                                                 1.97e-03 -1.51e-03 -1.66e-03
## 511
                  5.75e-04 -4.40e-03 -1.82e-03
                                                 1.35e-04
                                                           2.50e-03 -1.34e-03
        -2.59e-03
## 512
        -1.71e-03 -4.64e-02
                             2.87e-02
                                       3.04e-02
                                                 4.66e-02
                                                           1.90e-02 -4.73e-02
## 513
         2.99e-02
                   2.43e-02
                             1.32e-02
                                       2.26e-02
                                                 1.96e-03 -2.58e-02
                                                                      6.48e-03
## 514
        -5.15e-02 -4.85e-02 -7.23e-02
                                       2.25e-02
                                                 3.01e-02
                                                           3.73e-03 -3.41e-02
## 515
        -4.42e-02 -3.68e-02
                             2.53e-03
                                       1.07e-02 -3.76e-02 -4.94e-02
        -8.36e-03 -2.69e-04
                             8.17e-03
                                       5.90e-03 -3.16e-03 -3.53e-04
## 516
## 517
        -1.33e-02 -1.45e-03
                             8.58e-03 -2.26e-02 6.53e-03
                                                           1.88e-02 -2.89e-03
                             4.23e-04 -1.80e-03 -1.25e-03
## 518
        -1.01e-03 -9.91e-05
                                                            6.44e-04
                                                                      8.58e-04
## 519
                             3.21e-03
                                       4.36e-03 -6.18e-03 -4.86e-03
         5.85e-03
                  4.66e-03
                                                                      5.90e-03
## 520
        -3.51e-03 -2.42e-02 -9.18e-03
                                       3.27e-02 1.20e-02 -1.55e-02 -3.88e-03
                             7.42e-04 -1.64e-03 1.10e-03
## 521
        -7.46e-04
                  8.61e-05
                                                           5.77e-04 -1.18e-03
## 522
        -5.55e-04 -1.25e-02 -3.69e-03 -1.39e-02 -9.57e-03 -8.38e-03
                                                                      7.39e-03
## 523
         5.93e-03
                   4.63e-03 -2.58e-03 -7.17e-03 6.61e-03 -4.73e-03 -6.92e-03
## 524
        -6.14e-03
                   2.56e-03 -9.37e-04 -1.62e-02
                                                 1.82e-02 -2.93e-03 -4.39e-03
## 525
         1.69e-02
                   1.36e-02 9.29e-03
                                       1.21e-02 -1.69e-02
                                                           8.43e-03
                                                                      9.13e-03
## 526
        -6.95e-02 -5.60e-02
                             1.44e-03
                                       2.96e-02 8.53e-02
                                                           1.12e-02 -6.56e-02
                   1.39e-02 -1.28e-02
## 527
         1.71e-02
                                       1.21e-02 -7.02e-03 -6.09e-03
                                                                      2.14e-02
## 528
         1.92e-03
                   1.66e-03
                             5.42e-04 -4.98e-04 -5.13e-04 -1.62e-03
                                                                      4.67e-04
## 529
         5.46e-02 -1.48e-03 -4.92e-02
                                       1.80e-02 -3.88e-02
                                                           1.01e-02
                                                                      1.23e-02
## 530
                   6.23e-05
                             8.42e-05 -9.21e-05 4.96e-05 -5.55e-05 -6.17e-05
         7.57e-05
## 531
        -1.51e-03 -1.73e-05 -1.78e-04 -4.00e-04 -3.36e-03
                                                            2.17e-03
                                                                      2.52e-03
## 532
         7.01e-03
                   5.42e-03
                             5.46e-03 -2.20e-03 1.98e-04 -5.50e-03 -4.32e-03
## 533
         9.91e-03
                   8.52e-03
                             8.81e-03 -1.97e-03 -9.34e-04
                                                            1.06e-02
                                                                     6.27e-03
                                                            2.77e-02 -4.25e-03
## 534
                   1.41e-03
                             1.30e-02
                                       1.75e-02 3.66e-03
        -1.56e-02
         1.15e-02 -1.29e-03 -6.19e-03
                                       2.44e-02 -1.92e-04
## 535
                                                            5.18e-03 -2.46e-03
## 536
         8.92e-04 -1.46e-02 -5.10e-03
                                       6.75e-03 -5.61e-03 -1.07e-02 -3.69e-03
## 537
         3.88e-02 2.95e-02 -1.21e-02 -2.85e-03 -1.16e-02
                                                            3.35e-02
                                                                     8.85e-03
## 538
                             1.36e-02 -3.75e-03 -1.23e-02
        -1.80e-03 -1.53e-02
                                                            1.53e-02
                                                                      5.21e-03
## 539
         1.01e-02 -1.54e-04 -1.58e-03 -8.97e-03 4.61e-03
                                                            2.61e-03
                                                                      7.31e-03
## 540
        -3.69e-03 -1.19e-04
                             3.29e-03 -1.30e-03 5.82e-03
                                                            2.72e-03 -5.83e-03
## 541
        -4.13e-02 -3.41e-02
                             3.66e-03 -8.61e-02 -1.59e-02 -2.31e-02 -7.09e-03
## 542
                                       2.42e-03 -5.47e-04 -2.08e-03
         1.09e-03 -3.03e-04 -4.56e-04
                                                                      1.69e-03
## 543
                  2.61e-02 -2.29e-02 -1.26e-02 -5.52e-02 -7.12e-03
         2.99e-02
                                                                      4.09e-02
## 544
         3.54e-02
                  3.17e-02
                            2.54e-02 6.41e-02 4.74e-02 -3.90e-03 -3.51e-02
## 545
        -5.24e-03 -3.29e-02
                            1.19e-02 -1.01e-02 -9.23e-03 -6.91e-03
                                                                      1.05e-02
         3.65e-04 -8.80e-03 -8.86e-03 -1.62e-03 -2.65e-03 -6.90e-03
## 546
                                                                      2.57e-03
## 547
         2.53e-02
                  2.06e-02 -2.84e-02 -5.80e-03 4.33e-03 -5.57e-03 -6.43e-03
        -2.88e-03 8.65e-02 -3.15e-02 9.39e-02 -4.98e-02 1.25e-02 3.21e-02
## 548
```

```
## 549
        -9.92e-03 -9.17e-04 8.05e-03 1.05e-02 3.03e-03 -1.03e-02 -6.96e-03
## 550
                  2.03e-02 -2.73e-02 -7.09e-03 -3.97e-03 -7.38e-03
         2.55e-02
                                                                     3.19e-03
## 551
        -1.89e-02 -2.80e-03
                             2.66e-02 -7.37e-03
                                                 7.63e-03
                                                            2.57e-02 -1.95e-03
## 552
        -4.41e-03 -3.04e-04
                             5.09e-03 -7.77e-03
                                                 3.62e-04
                                                            2.65e-03 -1.47e-04
## 553
         7.25e-03 -2.19e-03
                             7.92e-03
                                       3.50e-03
                                                 2.26e-02
                                                            1.17e-02 -2.66e-02
                                       2.91e-02
## 554
         3.84e-02
                   3.05e-02 -3.37e-02
                                                 5.33e-03 -3.16e-02 -9.30e-04
## 555
         2.50e-02
                   2.13e-02
                             9.07e-03
                                       2.03e-02
                                                 3.76e-03
                                                            3.16e-02 -9.73e-03
## 556
        -5.76e-05 -1.08e-02 -5.24e-03 -1.72e-03
                                                 1.07e-03
                                                           3.38e-03 -9.56e-04
## 557
                   9.93e-04 -1.08e-03 -3.49e-04 -1.85e-03 -1.21e-03
## 558
         7.86e-04
                   5.47e-03 -1.04e-03
                                      1.83e-03
                                                 1.74e-03 -5.57e-03 -3.97e-03
## 559
        -1.46e-02 -1.61e-03 -1.06e-02 -4.84e-03 -5.33e-03 -1.82e-02
                                                                      5.67e-03
        -2.45e-02 -1.83e-03 -2.98e-02 -7.21e-03 1.33e-02 -8.27e-03 -9.26e-03
## 560
## 561
        -3.02e-03 -2.77e-02
                             2.79e-02 -6.88e-03 -1.41e-02
                                                           2.47e-02
                                                                      1.13e-02
## 562
         7.85e-03 -6.67e-04 -1.45e-02 -6.77e-03 -1.42e-02 -1.16e-02
                                                                      1.10e-02
## 563
        -7.62e-02 -6.18e-02
                             4.12e-03
                                       2.45e-02 -4.94e-02
                                                            6.93e-02
                                                                      1.42e-02
## 564
         2.08e-02
                   1.61e-02
                             2.41e-02 -8.30e-03 -2.06e-03 -1.50e-02 -4.24e-03
## 565
         3.35e-02
                   2.61e-02
                             2.01e-02
                                       5.19e-02 3.64e-03 -2.05e-04 -6.29e-03
## 566
                   1.86e-02 -1.11e-02 -3.73e-02 1.63e-02 -6.76e-03 -1.84e-02
         2.48e-02
## 567
        -7.39e-02 -6.13e-02
                             1.91e-02
                                       7.82e-02 -9.23e-03
                                                           7.11e-03
                                                                     2.57e-02
## 568
         2.43e-03
                   1.88e-03
                             9.17e-05 -9.90e-04 -3.69e-04 -2.12e-03 -3.95e-04
## 569
         5.39e-02 -1.72e-02
                             3.85e-02
                                       1.88e-02 2.10e-02 -1.08e-01
                                                                      7.56e-02
## 570
         1.77e-02
                  1.73e-02 -6.02e-03
                                       1.32e-02 -2.48e-02
                                                           2.10e-02
                                                                      1.74e-02
## 571
         5.88e-03 -1.24e-03 -9.43e-03
                                       3.46e-03 -1.35e-02
                                                           7.34e-03
                                                                      1.29e-02
## 572
        -8.83e-03 -5.35e-02 -1.07e-02
                                       6.58e-02 4.15e-02 -3.20e-02 -3.78e-02
## 573
        -1.34e-02 -3.04e-05 1.23e-03 -6.23e-03 -1.62e-02 -3.09e-03
## 574
        -7.06e-02 -6.13e-02 -7.31e-02 -5.23e-02
                                                 4.90e-02 -9.83e-02 -3.10e-02
## 575
         9.87e-03
                  7.71e-03 -2.48e-03 -1.55e-02 8.76e-03 -1.06e-02 -4.17e-03
## 576
         4.26e-03 -2.67e-02 -2.36e-02 -2.39e-03 -7.49e-03
                                                            2.60e-02
                                                                     4.25e-03
        -1.13e-02 -1.45e-03 -1.06e-02 -4.29e-03 -1.52e-02 -1.12e-02
## 577
                                                                      1.23e-02
## 578
         1.00e-03 -4.50e-02 -1.95e-02 -8.05e-03
                                                 1.68e-02
                                                           4.08e-02 -9.58e-03
## 579
                  4.06e-02 -1.17e-02 -6.12e-02
         4.45e-02
                                                 9.17e-03
                                                            5.19e-02
                                                                     7.01e-03
## 580
                  2.48e-02 -2.24e-02
                                      2.40e-02
                                                 3.89e-02
                                                            3.50e-02 -3.54e-02
         3.14e-02
## 581
        -1.15e-02 -1.77e-03 -2.54e-03 -3.97e-03
                                                 3.63e-03 -1.37e-02 -3.08e-03
## 582
        -1.22e-02 -2.57e-03
                             1.30e-02
                                       2.42e-02
                                                 1.27e-02 -1.74e-03 -9.46e-03
## 583
        -2.10e-04
                   3.38e-06
                             3.15e-04 -3.97e-04 -2.84e-04
                                                            1.88e-04
                                                                     2.60e-04
## 584
                  2.99e-04 -1.08e-02 -2.32e-03 -2.25e-03
                                                           1.36e-02 -1.69e-03
        -7.67e-03
         6.24e-04 -1.45e-02 -2.20e-03 -5.49e-03 -7.90e-03 -1.06e-02 -6.68e-04
## 585
## 586
                   1.42e-03 -1.70e-02
                                       9.62e-02 3.02e-02 -8.78e-02 -2.99e-02
         5.44e-02
                             3.60e-03
                                       1.13e-02
## 587
        -3.17e-03 -2.02e-02
                                                 5.61e-03
                                                           8.99e-03 -5.87e-03
## 588
         4.67e-03 -7.93e-04
                             4.99e-03
                                       1.02e-03
                                                 1.28e-02
                                                            1.62e-03 -1.31e-02
## 589
         9.43e-03 -4.60e-04 -1.75e-03
                                       3.98e-03 -1.77e-02
                                                            4.41e-03
                                                                      2.00e-02
## 590
         4.64e-02
                   4.17e-03 -6.56e-02 -4.09e-02
                                                 6.51e-05 -6.95e-02
                                                                      4.43e-04
## 591
         4.49e-03
                   3.30e-04 -3.58e-03
                                       2.11e-03 -3.07e-03
                                                            1.49e-03
                                                                      5.06e-03
## 592
        -6.76e-02 -5.31e-02
                            4.46e-04
                                       2.24e-02 4.13e-02 -7.92e-02 -2.38e-02
## 593
                   2.81e-03
                             1.68e-02 -8.83e-03 1.18e-02 -8.62e-03 -1.33e-02
        -7.56e-03
## 594
         5.86e-04
                   3.31e-06 -9.34e-04
                                       2.22e-04 3.49e-04 -4.52e-04 -3.95e-04
## 595
         3.12e-03 -3.36e-05
                             2.21e-03
                                       6.46e-03 -3.48e-03
                                                           1.28e-03
                                                                      1.16e-03
        -1.09e-01 -9.36e-02 -1.05e-01
                                       5.36e-02 -2.61e-02 -5.24e-02
## 596
                                                                     2.81e-03
## 597
         6.76e-03
                   5.73e-03
                             6.42e-03 -9.06e-03 2.68e-03 -1.02e-03 -7.24e-04
        -1.36e-02 1.99e-05 1.38e-02 1.44e-02 -3.50e-03 -1.38e-02 1.01e-03
## 598
```

```
## 599
        -7.86e-02 -6.26e-02 -5.90e-02 3.15e-02 -8.87e-02
                                                            1.05e-02
                                                                      8.49e-02
                                                                       4.01e-04
## 600
        -8.12e-03 -2.96e-04
                            1.35e-02 -2.46e-03
                                                 3.87e-03
                                                            5.56e-03
## 601
        -9.83e-04 -3.03e-06 -1.97e-03
                                        1.33e-03
                                                  1.84e-04 -4.78e-04
                                                                       2.25e-04
## 602
                             2.51e-02
                                        3.31e-02 -2.40e-02 -2.66e-03
         4.24e-02
                  3.59e-02
                                                                      2.34e-02
         3.78e-02
## 603
                   3.18e-02
                             1.54e-02
                                        2.73e-02
                                                  2.98e-03 -3.26e-02 -3.30e-03
## 604
         3.06e-02
                   2.28e-02 -3.19e-02
                                        2.33e-02
                                                  3.74e-04 -6.50e-03 -3.22e-03
## 605
        -8.01e-03
                   1.44e-03 -1.87e-02 -1.26e-03 -1.29e-02
                                                            6.54e-03
                                                                      1.32e-02
## 606
        -3.60e-03 -4.98e-02
                             3.39e-02
                                        3.09e-02
                                                  3.72e-03
                                                            4.90e-02
                                                                      1.29e-05
## 607
                  2.48e-02 -4.52e-02
                                        2.56e-02
                                                  1.52e-02 -3.00e-02 -9.02e-03
## 608
         5.88e-02 -8.99e-03 -9.27e-02
                                        2.37e-02
                                                  1.79e-01
                                                            9.65e-02 -1.25e-01
## 609
        -1.16e-01 -8.73e-02 -9.46e-02
                                        3.55e-02
                                                  3.94e-02
                                                            7.22e-02 -5.32e-02
## 610
        -6.75e-03
                   2.22e-04 -1.03e-02 -3.90e-03
                                                  7.22e-03
                                                            1.26e-02 -1.44e-02
## 611
        -1.84e-03 -1.93e-02
                             1.03e-02
                                       1.09e-02
                                                  1.17e-02 -1.24e-02 -2.33e-02
                             2.88e-04 -5.56e-04 -3.24e-04 -3.17e-04
## 612
         1.62e-03
                  1.32e-03
                                                                      7.49e-05
## 613
        -2.45e-02 -1.79e-03 -2.05e-02 -1.03e-02 -3.22e-02
                                                            1.64e-02
                                                                      3.11e-02
## 614
        -4.21e-03 -3.58e-04 -4.93e-03 -1.37e-03 4.20e-03 -5.42e-03 -4.33e-03
## 615
         6.08e-02
                  5.35e-03
                             6.20e-02 -6.05e-02 -2.90e-02
                                                            1.44e-02
                                                                      4.70e-03
                                                                      2.17e-04
        -1.61e-03 -8.45e-05
                             7.83e-04 -7.26e-04 -2.79e-04 -1.34e-03
## 616
## 617
         2.62e-03 -6.88e-04 -9.41e-04
                                       3.99e-04 -4.95e-03
                                                            1.61e-03
                                                                       5.80e-03
                             9.97e-03 -5.14e-03 -3.03e-03
## 618
         1.78e-02
                   1.50e-02
                                                            9.05e-03
                                                                      1.88e-03
## 619
         3.39e-02
                   2.80e-02
                             6.75e-03 -5.22e-02
                                                 2.36e-02
                                                            4.17e-02 -1.73e-02
## 620
        -3.46e-05
                   2.10e-03 -1.29e-03
                                       2.17e-03
                                                  1.78e-03 -2.04e-03 -1.81e-03
## 621
         5.13e-02
                   4.18e-02
                             2.77e-02
                                       3.49e-02
                                                  2.15e-02
                                                            5.74e-02 -1.20e-02
## 622
        -7.03e-03
                   8.04e-04
                             3.64e-03 -2.56e-03
                                                  3.47e-03 -9.16e-03
                                                                      1.81e-03
## 623
        -1.30e-03 -1.22e-02 -2.93e-03 -2.55e-03 -8.27e-03 -8.69e-03
                                                                      7.91e-03
## 624
        -2.72e-03 -2.62e-02 -7.70e-03
                                       1.68e-02
                                                  2.19e-02 -1.76e-02 -1.43e-02
## 625
        -1.60e-02 -8.38e-04 -8.36e-03
                                       1.68e-02
                                                  1.14e-02 -2.08e-02
                                                                      6.34e-03
## 626
         2.00e-03 -1.95e-02 -4.11e-03 -3.73e-03
                                                  2.36e-04
                                                            2.07e-02 -3.11e-03
        -8.31e-04 -1.77e-05 -1.03e-03 -1.49e-03 -7.31e-04 -3.48e-04
## 627
                                                                      6.79e-04
## 628
        -1.78e-03
                   3.09e-04 -1.92e-03
                                        2.28e-03 -1.04e-03 -2.51e-03
                                                                      1.53e-03
## 629
        -1.07e-03 -1.34e-02 -7.12e-04
                                       7.24e-03 -4.01e-04 -2.44e-03 -7.02e-04
## 630
        -1.30e-03 -1.54e-02
                             1.45e-03
                                        9.37e-03 1.74e-02 -1.07e-02 -1.60e-02
## 631
        -9.68e-03 -1.58e-03
                             1.12e-02
                                       7.88e-03 -1.20e-02 -7.87e-03
                                                                      8.51e-03
## 632
        -1.40e-02
                   5.74e-04
                             6.61e-03 -3.04e-02
                                                  1.18e-02 -1.88e-02 -2.43e-03
## 633
         4.63e-02
                   4.11e-02
                             5.31e-02 -1.42e-02
                                                  2.18e-02 -3.25e-02 -6.93e-03
        -1.54e-02 -3.05e-05 -5.47e-03
                                                            3.03e-02
                                                                      1.05e-03
## 634
                                       2.21e-02
                                                 4.73e-03
        -3.03e-02 -3.68e-03 -4.22e-02 -1.04e-02 -4.64e-02
## 635
                                                            3.86e-02
                                                                      3.90e-02
## 636
        -4.74e-03 -4.78e-05 -1.10e-03
                                        6.13e-03
                                                 1.23e-03 -1.69e-03 -2.68e-03
## 637
         7.81e-03
                   8.01e-02
                             6.75e-02
                                       1.53e-02 -2.33e-02 -2.00e-02 -3.77e-03
## 638
                   1.11e-02 -4.81e-04
         2.35e-03
                                       3.76e-03 -2.82e-03
                                                            7.96e-03
                                                                      1.23e-03
## 639
        -1.64e-02 -2.33e-03 -1.43e-02
                                       1.47e-02 -2.17e-02
                                                            1.99e-02
                                                                      1.87e-02
## 640
        -3.76e-03
                   7.42e-04
                             9.07e-03 -1.20e-03
                                                  5.95e-03
                                                            8.70e-03 -4.50e-03
## 641
        -1.51e-02 -8.35e-04
                             1.19e-02
                                       1.09e-02
                                                  1.09e-02 -1.29e-02 -6.72e-03
## 642
        -1.85e-02 -1.25e-03
                             1.65e-02 -9.08e-03
                                                  3.57e-03
                                                            1.39e-02 -3.47e-03
## 643
        -1.57e-02 -2.56e-03 -2.47e-02
                                                  7.90e-03
                                                            8.95e-03 -7.92e-03
                                       1.91e-02
## 644
        -6.23e-03
                  1.00e-03 -1.03e-02 -1.22e-02 -4.11e-03 -9.31e-03
                                                                      8.13e-03
## 645
        -1.45e-02 -3.82e-04
                             1.23e-02 -6.23e-03
                                                  6.94e-03 -1.49e-02
                                                                      8.91e-04
## 646
                   9.72e-02 -4.27e-02 -4.94e-02 -2.72e-02
         1.44e-02
                                                            1.07e-02
                                                                      1.42e-02
## 647
         1.75e-03 -2.62e-05
                             6.26e-04
                                       5.89e-04 3.88e-03
                                                            2.50e-03 -4.14e-03
## 648
        -3.47e-03 6.67e-05 -2.58e-03 4.64e-03 1.22e-03 2.33e-03 -2.61e-03
```

```
## 649
        -1.05e-02 2.00e-04
                             7.63e-03 -4.36e-03 1.26e-02 -1.16e-02 -5.58e-03
## 650
                                       3.11e-03 -9.02e-04
                                                            9.26e-03 -1.07e-03
        -1.03e-02 -8.09e-03
                             3.10e-03
## 651
        -5.92e-03 -4.88e-04
                             7.64e-03 -2.32e-03 -1.63e-03 -5.30e-03
                                                                       2.42e-03
## 652
        -1.13e-02 -1.25e-03
                             1.67e-02 -4.72e-03 -1.35e-02 -1.32e-02
                                                                       1.25e-02
         3.77e-02
## 653
                  4.09e-02
                             5.17e-02 -1.42e-02 -5.68e-02
                                                            2.75e-02
                                                                       3.97e-02
## 654
         1.98e-03 -1.04e-02 -1.12e-02 -6.42e-03
                                                  1.65e-02
                                                            1.18e-02 -1.49e-02
## 655
                   3.20e-05 -5.48e-03 -5.74e-03
                                                  2.44e-03
                                                            5.58e-03 -3.99e-03
         5.20e-03
## 656
        -1.48e-03 -2.37e-02
                             7.12e-03 -4.40e-03
                                                  6.70e-03
                                                            9.01e-03
                                                                      1.78e-04
        -4.91e-02 -3.57e-02
                                                            3.82e-02
## 657
                             3.58e-02
                                       1.55e-02 -9.49e-03
                                                                       1.87e-02
## 658
        -1.45e-03 -1.86e-02
                             2.08e-03
                                       1.14e-02
                                                  6.21e-03 -1.25e-02 -7.27e-04
## 659
        -2.44e-02
                   3.51e-03
                             1.68e-02 -1.33e-02
                                                 1.97e-02
                                                            5.63e-02 -7.02e-04
                   1.68e-02 -2.67e-02 -6.43e-03 -2.03e-02 -1.93e-02
## 660
         2.12e-02
                                                                       1.35e-02
## 661
                   8.94e-02 -2.01e-02 -6.87e-02 -1.95e-02
                                                            5.51e-02
                                                                       2.19e-02
        -3.44e-03
## 662
        -1.37e-04 -1.80e-02 6.56e-03 -4.16e-03 -1.29e-02
                                                            6.91e-03
                                                                      8.78e-03
## 663
        -5.67e-02 -4.87e-02 -3.74e-02 -4.97e-02
                                                 3.31e-03
                                                            1.04e-02 -5.28e-03
## 664
        -8.12e-02 -6.56e-02 2.96e-03
                                       3.00e-02 -1.81e-02
                                                            6.72e-02
                                                                      2.62e-02
## 665
        -9.27e-03
                   1.00e-03 -1.14e-03 -2.89e-03
                                                 6.55e-03 -1.28e-02 -1.28e-03
## 666
                   3.24e-02 -1.39e-03
                                       2.87e-02
                                                  1.92e-02 -2.45e-02 -2.19e-02
         4.02e-02
## 667
         7.21e-02
                   1.19e-02 -8.63e-02
                                       3.01e-02
                                                  9.69e-02
                                                            6.96e-03 -8.18e-02
                   8.40e-02 -1.98e-02 -1.30e-01 -4.04e-02
## 668
        -3.17e-03
                                                            5.10e-02
                                                                       5.09e-03
## 669
        -4.69e-04 -1.01e-02 -3.16e-03 -1.96e-03
                                                 1.95e-03 -2.19e-03
                                                                      4.01e-05
## 670
         4.50e-02 -3.65e-03
                             3.16e-03
                                       1.37e-02 -1.24e-02 -8.63e-02 -6.91e-03
                   1.96e-02 -1.06e-02 -9.97e-03 -4.23e-04 -4.84e-03 -1.17e-03
## 671
         2.55e-02
## 672
        -4.20e-04 -2.60e-02 -1.08e-02 -4.81e-03 -1.65e-03
                                                            8.20e-03
                                                                       1.15e-03
                   1.59e-02 -2.38e-03
## 673
         2.05e-02
                                        1.47e-02
                                                 4.32e-04 -3.37e-03 -2.08e-03
## 674
         5.36e-02
                   4.66e-02 -6.28e-02
                                       4.43e-02
                                                  1.84e-02
                                                            6.01e-02 -9.02e-03
## 675
         1.04e-03 -2.16e-02
                             2.28e-02
                                        1.71e-02
                                                  3.07e-03
                                                            1.07e-02
                                                                       1.17e-03
## 676
        -1.72e-02 -4.11e-03
                             1.80e-02
                                        1.24e-02
                                                  1.11e-02 -4.40e-03
                                                                       4.63e-03
                             8.27e-03 -4.13e-03 -1.77e-02 -1.26e-02
## 677
        -1.17e-02
                   6.44e-04
                                                                       1.83e-02
## 678
        -4.06e-03
                   7.45e-04
                             4.30e-03 -2.33e-03 -6.27e-03
                                                            3.58e-03
                                                                       1.16e-02
## 679
                             4.09e-03 -1.08e-03
        -3.52e-03
                   3.66e-04
                                                 2.81e-03 -9.04e-04
                                                                       8.24e-04
## 680
         6.50e-04 -2.09e-04 -7.89e-04
                                       4.52e-04 -4.00e-04 -1.18e-05
                                                                       4.76e-04
## 681
         1.98e-02
                   1.49e-02
                             9.27e-04 -9.14e-03
                                                 2.91e-02 -1.81e-02
                                                                      -2.41e-02
## 682
         5.39e-03 -1.92e-03
                             5.19e-03
                                       1.46e-03 -1.55e-02 -1.27e-02
                                                                       2.13e-02
## 683
        -7.79e-03
                   9.73e-05 -1.25e-03
                                        6.32e-03
                                                 1.74e-03
                                                            5.06e-03
                                                                       1.74e-04
## 684
                   6.62e-03 -6.50e-02 -3.97e-02 -6.63e-03 -3.43e-02
                                                                       8.10e-03
         4.77e-02
                                        2.01e-02 -1.91e-02
## 685
         6.92e-05 -3.00e-02
                             3.51e-04
                                                            1.20e-02
                                                                       6.61e-03
## 686
         2.79e-02
                   2.65e-02
                             1.35e-02
                                       2.59e-02 -2.86e-02
                                                            4.00e-02
                                                                       2.42e-02
## 687
         2.08e-02
                   1.81e-02
                             6.69e-03 -3.48e-03 4.41e-02
                                                            2.13e-02 -2.64e-02
## 688
         4.75e-03
                   3.72e-03 -2.37e-03 -1.22e-03
                                                 3.42e-03 -1.28e-03
                                                                       3.16e-04
## 689
        -3.48e-02 -3.11e-02 -4.75e-02 -2.78e-02 -4.20e-03 -2.60e-02
                                                                       3.41e-03
## 690
        -5.32e-02 -4.08e-02
                             3.69e-02
                                       2.57e-02 -1.30e-02 -6.98e-02
                                                                       1.88e-02
## 691
        -2.29e-02 -9.98e-04
                             2.49e-02 -1.04e-02 -5.86e-03 -2.54e-02
                                                                       6.35e-03
## 692
         9.18e-04 -4.02e-02
                             4.36e-02 -7.78e-03
                                                  3.02e-02
                                                            2.41e-02 -3.19e-02
                                                  9.12e-04
## 693
        -7.98e-03 -3.48e-04 -1.14e-02 -3.48e-03
                                                            1.26e-02 -2.28e-03
## 694
         7.00e-02
                   2.60e-03 -3.77e-02 -5.99e-02
                                                  1.28e-02
                                                            7.13e-02 -1.96e-03
## 695
         1.99e-02
                   1.65e-02
                            1.76e-02
                                       1.56e-02
                                                  3.05e-03 -1.71e-02 -9.92e-03
## 696
                   9.43e-03 -5.51e-02 -5.16e-02
                                                  1.33e-02
         6.21e-02
                                                            1.56e-02 -5.89e-03
## 697
         6.92e-03 -2.01e-03 -3.67e-03
                                       2.23e-03
                                                  7.22e-03 -5.92e-03 -6.89e-03
        -1.31e-02 -6.66e-04 -1.12e-02 -3.53e-03 2.98e-03 -1.49e-02 -1.92e-03
## 698
```

```
## 699
        -6.24e-03 3.40e-04 -7.07e-03 -2.58e-03 -1.01e-02 -1.76e-03
                                                                      8.02e-03
## 700
         1.07e-02 -2.28e-03 4.91e-03
                                                            2.14e-02
                                                                      2.90e-02
                                       4.04e-03 -2.07e-02
## 701
        -1.11e-01 -8.28e-02 -5.55e-02
                                       3.35e-02 -3.62e-02
                                                            1.17e-02
                                                                      1.42e-02
## 702
                   6.73e-03 -4.83e-03
                                       2.72e-03 8.72e-04
                                                            7.61e-04
        -2.77e-03
                                                                      8.09e-04
## 703
        -2.78e-04 -2.39e-03 -1.79e-05 -5.37e-04 -2.96e-03 -6.07e-04
                                                                      2.42e-03
## 704
         2.59e-02
                   2.53e-02 -2.34e-02 -1.22e-02 -9.20e-03 -2.33e-02
                                                                      2.01e-03
## 705
        -7.62e-04
                   2.95e-02
                             2.88e-02
                                       3.63e-03 3.47e-02
                                                            2.44e-02 -2.68e-02
##
  706
         1.74e-03
                   1.43e-03
                             1.39e-03 -2.01e-03 -2.30e-03 -9.60e-05
                                                                      1.48e-03
## 707
        -8.84e-02 -8.78e-02
                             9.07e-02
                                       1.07e-01 8.20e-02 -4.00e-02 -5.03e-02
## 708
         1.75e-03 -1.04e-02
                             1.35e-03 -1.36e-02
                                                  6.30e-05 -8.85e-04
                                                                      7.00e-03
## 709
        -2.81e-04
                   1.45e-02
                             9.42e-03
                                       2.93e-03
                                                 4.58e-03
                                                            1.22e-02 -6.56e-03
        -4.62e-02 -4.60e-02 -3.86e-02 -2.99e-02 -1.27e-02 -7.32e-02
## 710
                                                                     6.16e-03
## 711
         1.18e-02
                   1.08e-02
                             9.33e-03 -6.37e-03 7.81e-03
                                                            1.33e-06 -2.03e-02
        -4.92e-02 -4.06e-02
## 712
                             4.93e-02 -3.83e-02 -2.07e-03 -6.01e-02
                                                                     1.56e-03
## 713
         2.10e-02
                   1.59e-02
                             1.04e-02 -8.20e-03 1.76e-02 -1.85e-02 -1.52e-02
## 714
        -7.57e-04
                   1.46e-02
                             1.16e-02
                                       2.25e-03 -4.05e-03
                                                            1.17e-02 -4.47e-04
## 715
        -2.68e-03
                   2.90e-02
                             1.94e-03
                                       7.11e-03 -2.91e-02
                                                            2.41e-02
                                                                      3.04e-02
## 716
        -2.10e-02
                   2.30e-03 -1.92e-02 -3.88e-02 -1.71e-02
                                                            1.62e-02
                                                                      9.77e-03
                                                                      1.63e-02
## 717
        -3.65e-03
                   1.73e-02 -1.52e-04
                                       3.24e-03 1.74e-03
                                                            1.94e-03
                             2.26e-02 -5.21e-03 9.03e-03
## 718
        -1.45e-02 -1.29e-03
                                                            9.89e-03 -6.51e-03
                                                                      1.52e-02
## 719
        -1.13e-02
                   2.83e-03
                             1.49e-02 -4.50e-03 -1.48e-02
                                                            2.06e-02
## 720
         2.00e-02
                   1.74e-02 -1.45e-02 -4.59e-03 -1.95e-02 -1.69e-02
                                                                      1.89e-02
                   7.03e-03 -4.68e-02 2.13e-02 -1.66e-02
## 721
         5.00e-02
                                                            9.94e-03 -5.89e-03
## 722
        -1.63e-03
                   9.71e-04 -4.54e-03 -8.15e-04 -2.14e-03 -8.01e-04
                                                                      3.99e-04
                             1.12e-03 -2.96e-03 6.06e-03 -1.62e-03 -6.58e-03
## 723
        -1.21e-02
                   4.41e-04
## 724
        -2.17e-03
                   2.21e-02
                             7.44e-03
                                       2.84e-03 -1.34e-03
                                                            5.52e-03
                                                                      1.07e-02
## 725
        -1.88e-03 -1.91e-02
                             1.17e-02
                                       1.07e-02 -1.45e-02 -2.07e-03
                                                                      1.22e-02
## 726
         2.37e-03
                   7.98e-02 -6.43e-02 -4.68e-02 -5.12e-02 -3.95e-02
                                                                      4.88e-02
## 727
                   3.09e-05 -2.06e-02 -3.15e-03 -2.36e-02
                                                                      1.79e-02
        -1.47e-02
                                                            2.18e-02
## 728
         1.56e-02
                   1.59e-02 -9.13e-03 -1.19e-02 -1.15e-02 -1.88e-02
                                                                      1.17e-02
## 729
         7.20e-03 -2.96e-03 -7.59e-03
                                       1.27e-03 -5.68e-03
                                                            3.12e-03
                                                                      4.65e-03
## 730
         6.57e-03 -4.48e-02 1.18e-02 -1.86e-02 -4.72e-03 -4.79e-03
                                                                      1.20e-03
## 731
        -1.88e-02
                   1.16e-03 -4.40e-03 -3.57e-02 6.30e-04
                                                            3.13e-02 -2.19e-02
## 732
        -4.29e-02 -3.72e-02 5.59e-02 -3.49e-02 -3.26e-03 -5.43e-02
                                                                      7.28e-03
##
  733
        -5.57e-02 -4.64e-02 -1.40e-02
                                       2.57e-02 -1.77e-02 -3.55e-02
                                                                      1.18e-02
## 734
                   1.82e-05 -1.61e-02
                                       1.91e-02 5.33e-03
                                                            1.08e-02 -5.01e-03
         1.04e-02
        -3.92e-02 -8.92e-03 -4.38e-02
                                       7.93e-02 4.17e-03
## 735
                                                            4.83e-02
                                                                      1.98e-03
## 736
         2.73e-02
                   2.12e-02 -3.19e-02
                                       2.19e-02 -2.07e-02 -8.88e-03
                                                                      3.67e-02
                   1.44e-03 -7.14e-04
## 737
         1.77e-03
                                       1.18e-03
                                                 7.62e-04 -3.05e-04 -1.88e-04
## 738
         1.36e-02
                             1.10e-02 -4.89e-03 -8.75e-03 -1.84e-03
                   1.12e-02
                                                                      7.46e-03
## 739
         5.55e-04
                   6.86e-05
                             1.41e-04 -4.10e-04 8.32e-04
                                                           6.44e-04 -6.93e-04
## 740
        -8.67e-03 -1.23e-03
                             7.16e-03 -3.41e-03 -1.37e-02 -8.60e-03
## 741
         6.67e-05 -1.19e-02
                             7.31e-03 -2.61e-03 8.35e-03 -7.53e-03 -8.78e-03
## 742
                   4.38e-04
         9.39e-03
                             1.23e-02 4.06e-03
                                                  1.28e-02 4.42e-03 -6.16e-04
## 743
        -5.73e-03 -2.74e-04
                             1.94e-03 -2.08e-03
                                                  2.99e-03 -7.87e-03
                                                                      2.06e-04
## 744
         2.67e-02
                   2.26e-02 -6.10e-03 1.83e-02 -1.30e-02 -2.19e-02
                                                                      1.49e-02
## 745
         5.38e-02
                   4.08e-03 -1.83e-02 -1.31e-01 5.26e-02 -3.90e-02 -7.43e-02
## 746
                   1.49e-03
                             7.63e-03 -6.58e-03 1.62e-02
        -2.18e-02
                                                           1.62e-02 -5.55e-03
##
  747
        -1.30e-03
                   1.30e-02 -2.13e-03 -1.98e-02 -1.22e-03
                                                            7.27e-04
                                                                      1.37e-02
                  3.05e-02 3.22e-02 -1.41e-02 1.57e-02 -3.01e-02 1.40e-03
## 748
         3.37e-02
```

```
## 749
        -4.99e-02 -4.60e-02 3.10e-02 -9.73e-02 3.78e-02 -7.02e-02 -2.87e-02
## 750
         6.39e-02 -7.67e-03 -2.71e-02 -1.78e-01 -3.55e-02
                                                            8.48e-02
                                                                      5.56e-02
## 751
        -7.32e-04
                   2.82e-04
                             7.15e-04 -2.17e-03 -1.14e-03 -1.60e-03
                                                                      6.40e-04
## 752
         2.30e-02 -2.99e-03
                             3.19e-02
                                      7.74e-03 -1.72e-02
                                                            1.00e-02
                                                                      2.89e-03
## 753
        -1.05e-01 -7.69e-02 -8.39e-02
                                       1.20e-01 -1.02e-01 -9.36e-02
                                                                      1.43e-02
                   4.68e-02 -2.50e-02 -1.68e-02 1.76e-02
## 754
         4.92e-02
                                                            5.72e-02 -1.50e-02
## 755
         2.25e-02
                   2.00e-02 -2.11e-02
                                       1.54e-02
                                                 3.65e-03 -1.83e-02 -3.09e-03
                                       5.70e-03 -2.01e-02
##
  756
         9.98e-03 -1.65e-03
                             1.50e-02
                                                            1.70e-02
                                                                      2.53e-02
## 757
                   1.40e-02 -1.73e-03 -5.41e-03 2.20e-02 -3.52e-03 -1.63e-02
         1.57e-02
                                       1.08e-02 -1.42e-02
## 758
         1.26e-03
                   1.04e-02
                             2.19e-03
                                                            8.39e-03
                                                                      1.32e-02
## 759
                             7.90e-04 -1.54e-03 4.56e-03 -9.96e-03 -1.18e-02
        -5.61e-03
                   2.76e-03
         3.16e-02
                   2.47e-02
                             3.55e-02 -7.33e-03
## 760
                                                 1.15e-02
                                                            1.66e-02 -5.50e-03
## 761
        -6.43e-03 -5.60e-04
                             7.00e-03
                                       5.87e-03 -5.92e-03
                                                            3.12e-03
                                                                     1.17e-02
                                       2.06e-02 7.14e-02
## 762
         9.83e-04
                   1.11e-01
                             4.35e-02
                                                            2.17e-02 -6.82e-02
## 763
         4.56e-02
                   6.04e-03 -2.12e-02
                                       1.53e-02 -3.03e-03 -5.92e-02 -1.02e-02
## 764
        -1.92e-02
                   7.23e-04 -2.16e-02 -6.34e-03 -2.06e-03 -4.61e-03
##
  765
        -9.01e-03 -9.02e-04 -3.12e-03 -3.28e-03 -7.05e-03
                                                            5.98e-03
## 766
        -1.09e-02 -5.62e-04
                             1.20e-02 -3.48e-03 8.37e-03 -1.59e-03 -3.80e-03
## 767
        -1.08e-02
                   2.53e-03
                             2.96e-03 -3.74e-03 -6.75e-03 -4.41e-03 -4.30e-03
## 768
         1.77e-02
                   1.54e-02
                             2.06e-02 -7.88e-03 -2.13e-02
                                                            1.16e-02
                                                                      2.04e-02
  769
        -1.21e-02
                   4.28e-04 -3.37e-03 -5.06e-03
                                                 2.30e-02
                                                            2.54e-02 -3.08e-02
##
## 770
        -5.62e-03 -3.90e-02 -9.11e-04
                                       2.31e-02
                                                  3.14e-03 -4.61e-03
                                                                      3.68e-03
                   2.60e-02 -1.63e-02
                                       7.46e-03
                                                 5.96e-03
                                                            1.92e-02
## 771
         3.64e-04
                                                                      1.44e-02
## 772
        -4.97e-03
                   9.70e-04
                             8.99e-03
                                       7.00e-03 -1.67e-03 -5.92e-04 -1.59e-03
        -6.50e-03
                             3.53e-03 -1.70e-03
                                                 1.16e-02 -1.47e-03 -1.68e-03
## 773
                   9.44e-04
##
  774
         1.45e-02
                   1.19e-02
                             4.81e-03
                                       1.00e-02 -1.10e-02 -1.18e-02
                                                                     8.72e-03
## 775
                   9.03e-03
         9.65e-03
                             8.36e-03
                                       4.41e-03
                                                  9.15e-03
                                                            1.08e-02 -8.76e-03
## 776
        -2.91e-04 -9.88e-03 -3.97e-03
                                        5.91e-03
                                                  7.52e-04 -7.66e-03 -1.85e-03
## 777
        -4.60e-02 -4.38e-02 -1.63e-02
                                       2.33e-02 -1.16e-02
                                                            4.63e-02
                                                                      1.21e-02
## 778
        -5.31e-02 -4.66e-02 -6.78e-02 -4.23e-02
                                                 2.33e-02 -7.86e-02 -2.40e-02
## 779
         2.62e-03 -1.55e-02 -4.38e-03
                                       1.24e-02 -5.94e-03
                                                            1.82e-02
                                                                     1.47e-02
## 780
         6.07e-02 -1.91e-03 -1.16e-01
                                       1.76e-02 -6.86e-02
                                                            1.43e-02 -1.56e-02
## 781
        -8.78e-02 -8.67e-02
                             1.83e-02 -6.50e-02
                                                 7.84e-02 -1.05e-01 -3.41e-02
## 782
                             1.24e-02
                                       2.36e-02
                                                            3.68e-02 -2.39e-02
        -2.89e-02 -6.41e-03
                                                  3.01e-02
                   1.22e-03 -1.02e-02 -4.85e-03
##
  783
        -1.23e-02
                                                  3.11e-02
                                                            2.38e-02 -4.11e-02
## 784
                   7.51e-05 -5.95e-03
                                       7.48e-03 -6.37e-03
                                                            1.34e-03
                                                                      3.84e-03
         4.10e-03
        -2.14e-03 -8.94e-05 -4.87e-05
                                       2.11e-03 -1.84e-03 -5.08e-04
## 785
                                                                      2.26e-03
## 786
        -5.01e-03
                   1.50e-03
                             2.91e-03 -5.04e-03 -4.31e-03 -1.07e-02
                                                                      9.79e-04
## 787
        -1.87e-02 -4.69e-04 -1.78e-02
                                       4.18e-02 2.77e-02 -3.37e-03 -2.89e-02
  788
         8.20e-04 -1.22e-04 -1.06e-04
                                       2.67e-04 -3.28e-04 -6.44e-04
##
                                                                      2.25e-04
## 789
         7.14e-03
                  6.09e-03
                             1.25e-03 -2.17e-03 -8.05e-03 -1.60e-03
## 790
         5.77e-02 -1.21e-02
                             7.64e-02 -7.56e-02 -3.22e-03 -1.13e-01 -3.03e-02
## 791
         3.01e-04
                  2.20e-03 -1.55e-03 -1.18e-03
                                                 3.10e-03
                                                           1.33e-03 -2.45e-03
## 792
        -9.18e-02 -7.48e-02
                             6.32e-02
                                       1.80e-02
                                                  6.76e-02 -9.33e-02 -1.58e-02
## 793
        -6.49e-02 -5.18e-02 -2.73e-02 -4.75e-02
                                                  3.14e-02 4.55e-03 -5.05e-02
## 794
        -9.60e-04 -3.10e-02
                             1.59e-02 -6.75e-03
                                                  3.63e-03 -3.85e-03
                                                                     1.08e-04
## 795
         2.76e-02
                  2.33e-02
                             2.17e-02 -1.08e-02
                                                  1.69e-02 -2.17e-02 -2.81e-02
## 796
        -3.07e-03 -3.39e-02 -2.43e-02
                                       1.95e-02 9.86e-04 -2.47e-02 -6.01e-03
##
  797
         7.33e-02
                  7.20e-03 -1.09e-01
                                       2.90e-02 -9.51e-02
                                                           7.77e-02
                                                                      6.66e-02
        -1.05e-03 1.04e-01 -9.68e-02 2.30e-02 -9.55e-03 5.08e-03
## 798
```

```
-4.15e-02 -3.18e-02 -1.99e-02 -2.96e-02 -9.31e-03 -2.36e-02
## 800
        -5.84e-03
                   1.00e-05
                             1.06e-02 -4.87e-03 1.01e-02
                                                            1.05e-02 -1.36e-02
## 801
         1.21e-02
                   9.34e-02 -5.72e-02 -5.43e-02 -1.34e-02 -4.33e-02
                                                                      1.72e-02
## 802
        -7.52e-02 -6.67e-02
                             4.51e-02
                                       1.56e-02 6.58e-02
                                                            4.97e-03 -4.11e-02
## 803
        -1.15e-02 -4.39e-04
                             1.80e-02 -3.98e-03 -1.48e-02
                                                            9.18e-03
                                                                      1.08e-02
## 804
        -4.26e-03 -3.09e-04
                             4.04e-03
                                        2.76e-03
                                                 2.75e-03 -3.54e-03 -1.60e-03
## 805
        -6.95e-03 -6.44e-03 -6.76e-03
                                        9.37e-03 -4.76e-03
                                                            4.12e-03
                                                                      6.47e-03
## 806
         5.08e-03 -1.18e-03 -2.64e-04 -6.53e-03 -9.97e-04
                                                            1.34e-03 -1.47e-03
## 807
                   1.70e-02 -1.20e-02 -5.56e-03 -3.65e-03
                                                            9.03e-03
                                                                       1.60e-03
## 808
         8.90e-04 -2.32e-02 -7.57e-03
                                        1.75e-02 -2.14e-02 -3.72e-03
                                                                       1.02e-02
## 809
        -8.28e-06
                   1.01e-03
                             7.71e-04
                                        1.42e-04 -5.20e-04
                                                            8.03e-04
                                                                       1.22e-04
                             8.41e-03
## 810
        -6.32e-06
                   8.88e-03
                                        1.31e-03 1.25e-02 -3.11e-03 -9.19e-03
## 811
         3.82e-03 -2.50e-04 -3.77e-03
                                        1.60e-03 -7.28e-03
                                                            1.73e-03
                                                                      1.07e-02
## 812
         1.36e-02
                   1.20e-02
                             1.78e-02 -6.82e-03 -2.89e-02
                                                            9.05e-03
                                                                      2.25e-02
## 813
        -9.76e-03
                   3.51e-03 -8.62e-03 -3.93e-03
                                                 3.51e-03
                                                            2.28e-02 -6.46e-03
## 814
         4.49e-03
                   1.18e-01
                             7.82e-02
                                        4.10e-02
                                                 1.33e-01
                                                            8.62e-02 -1.16e-01
## 815
         6.13e-03
                   5.17e-03
                             3.86e-03
                                        3.51e-03 -5.60e-04 -4.53e-04 -4.74e-03
## 816
                   3.65e-02 -1.20e-02
                                        3.51e-02 -1.59e-03
         4.08e-02
                                                            2.37e-02
                                                                     4.78e-03
## 817
         1.34e-02
                   1.29e-02 -2.14e-03 -5.38e-03
                                                  3.23e-03
                                                            7.35e-03 -5.73e-03
## 818
         2.37e-03
                   2.12e-03 -1.14e-03 -9.92e-04
                                                  2.79e-03 -2.19e-03 -2.05e-03
## 819
        -1.07e-02 -8.54e-04
                             3.46e-05 -1.83e-02
                                                  7.43e-03 -1.26e-02 -7.03e-03
## 820
        -1.98e-02 -7.92e-04
                             2.36e-03
                                       2.44e-02
                                                  1.38e-02 1.54e-02 -9.58e-03
## 821
        -2.66e-04 -4.46e-03
                             1.25e-03 -9.07e-04 -2.36e-03 -2.91e-03
                                                                      1.42e-03
## 822
         1.95e-03 -7.48e-05 -8.77e-04 -2.19e-03
                                                 2.91e-03 -1.52e-03 -1.98e-03
## 823
         2.10e-02
                   1.91e-02 -2.63e-02 -4.97e-03 -2.73e-02 -3.34e-03
## 824
        -2.51e-03 -2.64e-02
                             3.72e-03 -7.08e-03
                                                 1.75e-02
                                                            1.08e-02 -1.09e-02
## 825
         3.39e-02
                  2.55e-02
                             1.11e-02
                                       6.59e-02 -2.66e-02 -3.27e-02
                                                                      4.28e-02
## 826
        -2.65e-02 -1.08e-03 -2.00e-02
                                        2.54e-02 -2.40e-02 -2.78e-02
                                                                      2.70e-02
## 827
        -8.31e-04 -5.20e-05
                             1.38e-03 -1.77e-03
                                                  7.27e-04 -2.06e-04 -2.38e-04
## 828
        -1.12e-02 -6.09e-02
                             4.20e-02
                                        3.40e-02
                                                  1.86e-02 -3.16e-03 -1.62e-02
## 829
                             5.29e-02
        -6.10e-02 -6.33e-02
                                        4.31e-02
                                                  8.52e-03
                                                            1.81e-02 -4.13e-03
## 830
        -5.55e-02 -4.49e-02
                             1.42e-02
                                        1.62e-02 -3.26e-02 -6.26e-02
## 831
        -2.71e-02 -3.24e-03
                             2.89e-02 -1.12e-02
                                                 4.90e-02 -2.99e-02 -4.52e-02
## 832
         6.20e-02
                   4.23e-03
                             1.55e-02
                                        1.71e-02 -2.59e-02
                                                            1.41e-02
## 833
        -1.11e-03 -1.57e-02
                             5.45e-03
                                        8.84e-03 -1.45e-03 -1.06e-02
                                                                       1.04e-03
## 834
                             5.55e-03
                                        1.14e-02 5.26e-03 -3.98e-03 -2.30e-03
        -1.57e-02 -3.62e-03
                   3.92e-04 -7.52e-04 -1.54e-03 -3.70e-03 -7.66e-04
## 835
        -4.21e-03
                                                                      1.71e-03
## 836
         2.37e-02
                   1.80e-02 -2.75e-02 -5.44e-03
                                                 2.43e-02 -5.75e-03 -2.39e-02
## 837
         7.02e-02
                   3.65e-03 -6.50e-02 -7.69e-02
                                                  1.43e-01 -1.07e-01 -1.09e-01
## 838
         1.56e-02
                   1.31e-02 -1.24e-02 -3.83e-03
                                                  2.26e-02 -3.68e-03 -2.67e-02
## 839
        -5.85e-02 -5.14e-02 -4.04e-02
                                       1.92e-02
                                                  2.74e-02 -6.76e-02 -6.82e-03
## 840
         2.03e-02
                   1.68e-02
                             1.67e-02 -5.17e-03 -9.20e-03
                                                            2.33e-02
                                                                      8.43e-03
## 841
        -4.38e-03 -6.28e-04
                             1.38e-03
                                        3.97e-03
                                                  2.04e-03 -1.28e-03
                                                                       4.77e-04
## 842
         2.67e-02
                   2.06e-02
                             1.86e-02 -1.26e-02
                                                  2.66e-02
                                                            1.45e-02 -2.18e-02
## 843
                             3.37e-02
                                        1.52e-02 -7.23e-03
         5.14e-02 -2.09e-03
                                                            6.13e-02
                                                                       1.24e-02
## 844
         4.83e-03
                   1.83e-04
                             3.74e-03
                                        9.48e-03 -9.55e-03
                                                            7.03e-03
                                                                       7.78e-03
## 845
        -9.18e-03 -1.13e-03 -2.76e-03
                                        8.32e-03 1.00e-03 -2.28e-03 -1.05e-03
                   1.14e-04 -5.00e-02
                                        4.24e-02 -3.64e-02 -4.17e-02
## 846
        -3.83e-02
                                                                       5.31e-02
## 847
        -3.72e-05 -5.56e-03
                             3.14e-03
                                        3.15e-03 -1.16e-03
                                                            2.09e-03
                                                                       2.61e-04
## 848
         2.36e-02 2.00e-02 -3.09e-02 1.92e-02 -6.64e-03 2.77e-02
```

```
## 849
        -1.23e-02 -2.14e-03
                             7.93e-03 1.04e-02
                                                  4.07e-03 -1.12e-02 -3.58e-03
## 850
                             5.07e-02 -1.39e-01
        -8.26e-02 -6.44e-02
                                                  4.38e-02
                                                            7.54e-03 -2.68e-02
## 851
        -7.89e-04 -1.04e-02 -2.71e-03 -3.09e-03
                                                  3.15e-03
                                                            1.07e-02 -3.70e-03
## 852
                             8.36e-03
                                       2.04e-03
                                                  4.19e-04 -8.92e-03
        -1.74e-03
                   9.63e-03
                                                                      6.00e-03
## 853
         3.36e-03
                   4.86e-05 -2.34e-03
                                       8.56e-04 -4.28e-03
                                                            4.12e-03
                                                                      2.06e-03
## 854
         3.14e-02
                   2.47e-02
                             1.64e-02 -1.56e-02
                                                  2.68e-03
                                                            4.39e-02 -5.15e-03
## 855
        -1.64e-02
                   3.54e-03 -1.43e-02 -4.47e-03
                                                  3.77e-02 -4.38e-03 -3.45e-02
## 856
         6.67e-03
                   3.09e-04 -2.24e-03 -7.59e-03 -2.88e-03
                                                            7.88e-03
                                                                      1.21e-03
## 857
         3.72e-02
                   2.95e-02 -3.36e-02
                                        3.15e-02
                                                 1.33e-02 -9.14e-03 -1.54e-02
## 858
        -8.51e-02 -7.01e-02
                             7.45e-02
                                        1.51e-02 -4.09e-02
                                                            1.25e-02
                                                                      2.87e-02
## 859
        -5.97e-03
                   2.84e-02 -1.32e-02
                                        4.74e-03
                                                  1.42e-02
                                                            5.98e-03
                                                                      6.35e-03
                                       8.73e-02
                                                  6.98e-03 -3.75e-02
## 860
        -3.77e-02 -5.45e-03 -7.85e-03
                                                                       5.20e-03
## 861
         5.85e-02
                  7.06e-03 -3.48e-02 -4.57e-02 -1.85e-02
                                                            4.46e-02
                                                                      2.20e-02
## 862
         2.98e-04 -1.89e-04
                             5.24e-05
                                        3.77e-04 -9.33e-04 -1.14e-03
                                                                      1.00e-03
## 863
                   2.19e-02 -1.07e-02
                                       4.51e-02
                                                 1.09e-02 -4.59e-03 -5.01e-03
         2.33e-02
## 864
        -6.66e-03 -1.10e-03 -1.01e-02 -2.00e-03
                                                  6.84e-03 -3.12e-03 -5.88e-03
## 865
        -1.85e-03
                   8.99e-02
                             7.75e-02 -6.50e-02 -4.92e-04 -9.89e-02 -1.04e-02
## 866
         8.85e-04 -1.80e-02
                             4.48e-03 -3.02e-03 -1.52e-02
                                                            1.80e-02
                                                                      1.46e-02
## 867
        -1.54e-02
                   7.04e-04
                             4.50e-03 -3.91e-03 -2.41e-02
                                                            1.25e-02
                                                                      1.87e-02
## 868
        -3.91e-04
                   5.57e-05
                             8.45e-04 -1.75e-04
                                                 8.24e-04
                                                            7.28e-04 -8.76e-04
## 869
        -1.63e-02 -3.91e-04 -7.95e-03
                                        2.00e-02
                                                  1.72e-02
                                                            2.65e-02 -1.17e-02
## 870
         5.80e-03 -1.68e-03 -5.79e-03
                                       2.08e-03
                                                  4.24e-03 -4.84e-03
                                                                      4.17e-03
## 871
                   3.16e-03 -2.17e-02 -2.59e-03
        -1.38e-02
                                                  3.51e-02
                                                            2.72e-02 -3.44e-02
## 872
         6.25e-02
                   3.49e-03
                             9.02e-02
                                        1.80e-02
                                                  6.98e-03 -3.58e-02
                                                                      2.45e-04
                   2.46e-03 -1.29e-02 -6.21e-03 -1.80e-02 -1.80e-03
## 873
        -1.53e-02
                                                                      1.99e-02
## 874
        -3.36e-04 -1.01e-02
                             1.26e-03
                                       1.53e-02
                                                 5.07e-03 -1.68e-03 -2.90e-03
## 875
        -2.85e-04 -6.37e-03
                             2.53e-03 -1.13e-03 -5.90e-03 -1.22e-03
                                                                      6.70e-03
## 876
         5.94e-03
                   4.08e-03
                             6.21e-03 -2.02e-03 -3.22e-04 -5.39e-03
                                                                      4.12e-03
                             1.79e-02 -3.25e-02 8.39e-03 -1.90e-02 -8.20e-03
## 877
         1.94e-02
                   1.52e-02
## 878
         4.08e-04
                   1.20e-02 -1.41e-03
                                        2.45e-03 -5.85e-03
                                                            9.11e-03
                                                                      5.98e-03
## 879
                             5.90e-03
                                       2.02e-02 -6.60e-04 -1.55e-02
         1.08e-02 -1.27e-03
                                                                      1.17e-03
                                                            2.36e-03 -8.77e-04
## 880
                   3.02e-03 -1.61e-03
                                        3.33e-03
                                                  6.52e-04
        -6.67e-04
## 881
        -2.90e-02 -6.43e-03 -1.41e-02
                                       2.57e-02
                                                  1.17e-02
                                                            1.59e-02 -1.35e-02
## 882
         2.89e-02
                   2.82e-02
                             2.74e-02 -8.09e-03 -1.45e-02 -1.76e-04
                                                                      1.41e-02
## 883
        -2.25e-03 -4.92e-02 -2.02e-02
                                       6.90e-02 -1.22e-02
                                                            4.01e-02
                                                                      5.77e-03
## 884
        -3.37e-03 -6.18e-04
                             1.08e-03 -1.18e-03 4.10e-03 -4.19e-03 -6.41e-04
## 885
        -1.07e-03 -2.16e-02 -1.01e-02
                                       1.31e-02 3.14e-03
                                                            5.69e-03 -6.93e-03
## 886
         1.61e-02
                   1.35e-02
                             3.69e-03 -5.85e-03 -1.32e-02 -1.27e-02
                                                                      9.52e-03
## 887
        -1.27e-02
                   6.55e-04
                             2.66e-03 -4.95e-03 1.97e-02
                                                            9.83e-03 -8.74e-03
## 888
                   6.25e-04
                             2.55e-02 -1.74e-02
        -4.02e-02
                                                  6.64e-02
                                                            6.74e-02 -7.92e-02
## 889
        -1.33e-02
                   1.25e-03 -8.80e-03
                                       1.20e-02 -1.29e-03 -1.40e-02 -2.21e-03
## 890
        -3.53e-02 -3.25e-04
                             5.39e-02 -1.06e-02
                                                 1.85e-02
                                                            6.13e-02
                                                                      4.14e-03
                                       1.41e-03 -2.50e-03
## 891
         1.10e-04
                   7.56e-03 -2.85e-03
                                                            1.36e-03 -1.97e-03
## 892
         1.03e-04 -2.69e-06
                             1.98e-05
                                       2.23e-04 -5.65e-05
                                                            1.72e-04 -4.23e-05
## 893
        -4.04e-02 -3.81e-02
                             5.84e-02 -2.66e-02 1.13e-02 -2.74e-02 -1.12e-02
## 894
        -5.50e-05 -1.06e-02 -9.16e-03 -1.79e-03 5.97e-03 -8.01e-03 -6.01e-03
## 895
         2.16e-02 -3.21e-03
                             2.65e-02
                                       6.06e-03 -6.10e-02
                                                            4.01e-02
                                                                      5.51e-02
## 896
                   5.58e-03 -1.43e-02 -7.81e-03 -7.94e-04
        -2.15e-02
                                                            4.70e-02 -1.15e-02
## 897
         2.92e-02
                   2.25e-02 -2.66e-02
                                       2.18e-02 8.42e-03
                                                            2.82e-02 -1.20e-02
         7.08e-03 5.62e-03 4.07e-03 5.41e-03 -2.29e-03 -5.69e-03 3.28e-03
## 898
```

```
## 899
         8.53e-03 -2.99e-04 1.66e-02 -2.52e-02 2.06e-03
                                                            1.27e-02 9.46e-03
## 900
        -1.16e-03
                   1.11e-04 -1.30e-03
                                       1.58e-03 -1.59e-03 -4.75e-04 -1.35e-04
                   2.02e-05
## 901
        -8.31e-03
                             8.73e-03 -2.45e-03
                                                  1.38e-02
                                                             5.95e-03 -8.42e-03
## 902
                   1.14e-02 -3.08e-03 -1.52e-02
                                                  4.13e-03
         1.37e-02
                                                            5.70e-03 -1.58e-03
## 903
        -4.94e-04 -1.49e-02 -3.43e-03 -2.46e-03
                                                  3.72e-03 -2.93e-03 -1.15e-03
## 904
        -8.73e-04 -3.06e-02 -1.62e-02 -7.95e-03 -2.41e-03 -2.22e-02 -3.58e-03
## 905
        -3.11e-03 -2.68e-03
                              1.81e-03 -2.17e-03
                                                  2.80e-03
                                                            2.94e-03 -4.05e-04
## 906
        -3.00e-05
                   1.54e-02
                              1.27e-02 -1.06e-02
                                                  7.19e-04
                                                            1.19e-02
                                                                      1.59e-02
## 907
                   4.17e-04 -6.88e-03 -1.22e-02
        -5.68e-03
                                                  1.86e-03 -2.15e-03 -2.36e-03
## 908
         5.52e-03 -1.98e-03
                              8.08e-03
                                        2.54e-03
                                                  7.66e-03 -4.69e-03 -1.07e-03
## 909
        -9.90e-06
                   4.18e-04
                              2.53e-04
                                        4.48e-04
                                                  4.31e-04
                                                            9.92e-05 -2.52e-04
                              1.77e-02 -7.57e-02
## 910
         4.34e-02
                   3.60e-02
                                                  2.44e-02 -4.54e-02 -2.85e-02
## 911
        -7.52e-03 -1.83e-03
                              4.74e-03 -3.04e-03 -3.82e-03 -1.39e-03
                                                                      4.24e-03
## 912
        -2.56e-02 -2.22e-02
                              1.44e-02 -5.74e-02
                                                  1.26e-02
                                                            2.53e-02 -1.28e-02
## 913
         3.76e-02
                   3.13e-02
                              1.51e-02 -1.96e-02
                                                  2.09e-02 -3.15e-02 -6.02e-03
## 914
        -9.29e-02 -8.12e-02
                              8.16e-02 -1.39e-01
                                                  3.87e-02 -4.58e-02
                                                                       1.53e-02
## 915
         1.48e-03 -3.37e-02
                              3.23e-02
                                       5.24e-03 -9.85e-03
                                                            2.38e-02
                                                                       3.40e-02
## 916
        -3.76e-02 -3.01e-02 -3.32e-02 -3.10e-02 -1.03e-02
                                                            2.01e-03
                                                                       1.39e-02
## 917
         8.01e-03
                   3.01e-04 -1.11e-02 -7.19e-03 4.28e-03 -4.60e-03
                                                                       2.81e-03
## 918
         4.44e-02
                   3.87e-02 -3.55e-02 -1.41e-02 -5.22e-02
                                                             5.39e-02
                                                                       3.66e-02
## 919
         3.25e-03 -2.45e-02 -1.69e-02 -1.07e-02 4.17e-03
                                                            1.15e-02 -1.38e-02
## 920
        -5.32e-04 -4.24e-04
                             1.90e-05
                                       8.77e-05 -1.07e-04
                                                            3.37e-04
                                                                       8.06e-06
## 921
        -1.85e-03 -1.49e-02
                              7.74e-03 -2.84e-03 -3.83e-03
                                                            4.37e-03
                                                                       8.24e-03
## 922
                   4.04e-02
                              3.51e-02 -1.81e-02
                                                  8.54e-03 -1.77e-03 -2.97e-04
         4.03e-02
## 923
        -2.01e-03
                   6.98e-03
                              6.47e-03
                                        9.04e-03
                                                  2.16e-03 -6.96e-03
                                                                       2.53e-03
## 924
        -1.03e-02 -6.23e-04
                             4.14e-03
                                        1.05e-02 -5.62e-03
                                                            5.99e-03
                                                                       9.61e-03
## 925
        -2.25e-02 -1.36e-03
                              1.52e-03 -8.11e-03
                                                  2.16e-02 -6.12e-03 -1.96e-02
## 926
        -2.10e-02 -8.65e-05 -9.27e-03 -3.60e-02 -4.70e-02
                                                            1.16e-02
                                                                       6.53e-02
                              5.47e-04
## 927
         3.84e-03
                   2.89e-03
                                       2.89e-03
                                                  9.67e-04 -4.41e-03
                                                                       2.18e-04
## 928
         2.72e-02
                   2.36e-02
                              1.09e-02 -7.10e-03
                                                  1.08e-03
                                                            1.25e-02
                                                                       1.20e-02
## 929
         6.19e-02 -7.34e-03
                              2.56e-02
                                        2.09e-02
                                                  1.47e-01
                                                            9.14e-02 -1.01e-01
## 930
        -4.14e-02 -8.21e-03
                              1.50e-02
                                        2.93e-02
                                                  3.66e-02 -3.44e-02 -3.97e-02
## 931
         4.29e-02
                   3.42e-02
                             4.09e-02
                                        3.46e-02
                                                  2.95e-02 -3.75e-03 -1.84e-02
## 932
         2.33e-02
                   2.42e-02 -9.03e-03 -1.07e-02 -1.70e-02 -3.30e-03
                                                                       1.81e-02
## 933
         4.61e-03
                   9.87e-02 -7.60e-02
                                        2.04e-02 -7.36e-02
                                                            1.79e-02
                                                                       3.76e-02
                                                                       4.10e-03
## 934
                   2.24e-02 -1.82e-02 -8.07e-03 6.39e-04
         2.60e-02
                                                             3.08e-02
## 935
         2.36e-02
                   1.94e-02
                              2.47e-02 -1.23e-02 -1.30e-03
                                                             1.56e-02
                                                                       1.78e-03
## 936
         1.42e-02
                   9.88e-04 -6.75e-03
                                       2.47e-02 -2.41e-03
                                                             1.77e-02
                                                                       2.35e-03
## 937
         3.17e-02
                   2.57e-02 -1.94e-02 -1.04e-02 -3.10e-02
                                                             1.47e-02
                                                                       2.34e-04
## 938
         8.48e-03 -5.26e-02 -4.99e-02
                                        2.48e-02
                                                  3.28e-02
                                                            1.87e-02 -5.36e-02
## 939
         4.32e-03 -1.48e-02 -8.11e-03 -6.55e-04
                                                  4.30e-03 -3.29e-03 -5.15e-03
## 940
         7.59e-02 -7.81e-05
                              5.44e-02
                                        3.77e-02
                                                  7.87e-02
                                                             1.75e-02 -9.18e-02
                                                                      7.51e-02
## 941
        -8.25e-02 -6.39e-02
                              6.23e-02
                                        1.90e-02 -8.22e-02 -8.02e-02
## 942
        -1.60e-02 -2.70e-03
                              1.17e-02
                                        1.47e-02 -1.43e-02 -1.65e-02
                                                                       1.70e-02
## 943
                   3.20e-04
                              6.42e-05
                                        1.92e-03
         7.13e-03
                                                  1.65e-02
                                                            2.31e-03 -1.28e-02
## 944
         1.24e-02
                   9.92e-03
                              9.90e-03 -2.40e-03
                                                  1.18e-02
                                                            1.26e-02 -7.32e-03
## 945
        -4.29e-03
                   2.29e-04
                              1.23e-03
                                        9.34e-03
                                                  1.34e-03 -4.25e-03 -1.11e-03
                   5.16e-03
                             2.63e-02 -5.23e-03
## 946
        -1.27e-02
                                                  2.19e-02
                                                            2.96e-02 -3.26e-02
## 947
        -6.08e-02 -5.12e-02 -1.53e-02 -3.87e-02
                                                  5.34e-02 -3.45e-02 -2.05e-02
## 948
        -9.30e-02 -7.21e-02 -3.30e-03 1.31e-02 9.19e-02 -4.31e-02 -5.21e-02
```

```
## 949
        -2.48e-02 -1.22e-03 -3.32e-02 -7.98e-03 6.72e-03 3.78e-02 -3.44e-02
## 950
                             2.68e-02 -5.35e-03 -1.26e-02 -2.27e-03
         2.19e-02
                   1.77e-02
                                                                      1.23e-02
## 951
        -5.03e-04 -1.56e-02
                             1.26e-03 -6.38e-03 -8.28e-03 -1.70e-03
                                                                      1.23e-03
## 952
                   2.84e-02
                                       5.52e-02 1.56e-02
         2.85e-02
                             3.16e-02
                                                           1.88e-02
                                                                      7.90e-03
## 953
        -5.30e-02 -4.98e-02 -2.33e-02
                                       1.89e-02 -1.28e-02 -3.48e-02
                                                                      8.69e-03
## 954
         5.71e-02 -1.48e-03
                             5.44e-02
                                       1.37e-02 -3.30e-02 -9.64e-02 -1.23e-02
## 955
                   6.84e-04
                             3.52e-03 -1.59e-03
                                                 4.46e-03 -1.92e-04 -6.59e-03
        -2.44e-03
## 956
         3.83e-03 -1.21e-04 -7.06e-04 -1.16e-02
                                                  1.86e-03
                                                            1.41e-03
                                                                      3.77e-03
## 957
                   1.38e-04 -2.01e-04 -4.56e-05
                                                  2.85e-05
                                                            3.09e-05 -6.92e-05
## 958
        -3.89e-05 -1.85e-03 -4.11e-04 -6.48e-04
                                                  1.56e-03 -3.08e-04 -1.24e-03
                                                            1.26e-02 -9.31e-03
## 959
        -6.97e-04
                   1.57e-02 1.21e-02 2.34e-03
                                                  1.58e-02
## 960
         7.32e-03
                   5.41e-03 -8.93e-03 -1.55e-03 -4.83e-03 -6.67e-03
                                                                      4.71e-03
                                                            1.10e-02
## 961
        -4.21e-04 -1.09e-02
                             1.96e-04 -1.49e-03 -8.68e-03
                                                                      9.15e-03
## 962
         4.49e-02
                  4.14e-02 -4.16e-02 -1.74e-02 -4.55e-02 -4.15e-03
                                                                      4.70e-02
## 963
         3.61e-04 -3.79e-03 -2.30e-03 -1.44e-03 -2.78e-04
                                                            1.92e-03
                                                                      1.91e-03
## 964
         1.29e-04 -2.50e-03
                             3.01e-03 -3.70e-04 8.32e-04
                                                            2.58e-03 -9.09e-04
## 965
         3.08e-02
                  2.33e-02
                             6.98e-04 -9.53e-03
                                                  1.35e-03
                                                            3.04e-02 -7.56e-04
## 966
        -8.28e-03 -1.05e-03 -3.01e-04 -2.86e-03
                                                  9.70e-03 -9.65e-03 -7.26e-03
## 967
         4.94e-02 -9.11e-03 -4.71e-02 -7.68e-02 -1.40e-02 -9.46e-02 -3.87e-02
## 968
        -7.03e-03 -9.97e-04 -6.86e-03 -2.33e-03
                                                 2.12e-03
                                                            3.90e-03
                                                                      5.37e-04
## 969
        -1.32e-02 -2.58e-04 -9.04e-03 -2.16e-02 -8.20e-03
                                                            1.89e-02
                                                                      1.59e-02
## 970
        -1.53e-02 -1.29e-02 -3.82e-03
                                       2.49e-03
                                                 1.68e-02
                                                            1.05e-02 -1.12e-02
## 971
        -1.00e-03 -5.71e-05 -1.55e-03 -1.80e-03 3.25e-04 -1.37e-03 -5.38e-05
## 972
                   9.25e-03 -5.86e-03
                                       7.76e-03 -8.10e-03
                                                            4.43e-03
         1.06e-02
                                                                      8.10e-03
                   4.68e-03 -7.67e-03 -2.68e-03 -1.61e-03 -5.18e-03
## 973
         4.56e-03
                                                                      1.52e-03
## 974
         1.02e-03
                   1.76e-05 -1.44e-04 -9.52e-04 6.09e-04
                                                            1.07e-03 -7.59e-04
## 975
         2.43e-02
                   2.24e-02
                             1.87e-02
                                       5.32e-02 -2.22e-02 -2.17e-02
                                                                      2.05e-02
## 976
        -1.02e-01 -8.37e-02
                             5.30e-02
                                       1.13e-01 5.08e-02
                                                            1.34e-02 -2.86e-02
                   4.38e-03 -8.14e-04 -3.34e-03 -4.81e-03
## 977
        -4.15e-03
                                                            6.80e-03
                                                                      1.06e-02
## 978
         9.34e-04 -2.12e-02 -1.67e-02
                                       1.30e-02 3.89e-03 -2.51e-03
                                                                      5.07e-04
## 979
                                       1.04e-02 -1.58e-03
        -2.17e-03
                  9.51e-03
                             7.07e-03
                                                            2.72e-03 -7.40e-04
## 980
        -1.10e-02 -1.45e-03 -1.18e-02 -3.69e-03 -4.14e-03 -6.15e-03
                                                                      4.52e-03
## 981
        -6.43e-02 -5.39e-02
                             7.88e-02 -5.49e-02 -2.87e-02
                                                            6.78e-02
                                                                      2.60e-02
## 982
         5.03e-02
                   1.50e-03
                             7.66e-03
                                       1.87e-02
                                                  6.21e-02
                                                            5.99e-03 -4.32e-02
## 983
        -1.11e-04 -1.96e-03
                             5.57e-04 -2.05e-03
                                                  8.18e-04
                                                           -3.22e-04 -6.78e-04
## 984
        -4.87e-03 -3.82e-03
                             6.25e-03
                                       1.20e-03 -2.30e-03
                                                            5.06e-03
                                                                      1.39e-03
                                       2.24e-02 -2.07e-02
## 985
        -2.15e-02 -1.63e-03
                             2.05e-02
                                                            3.24e-02
                                                                      1.45e-02
## 986
         5.71e-02
                   7.20e-03
                             8.85e-02
                                       2.06e-02 4.62e-03
                                                            2.58e-02 -1.83e-03
## 987
        -2.07e-02
                   1.56e-03
                             2.97e-02
                                       2.91e-02 -8.60e-04 -2.54e-02 -3.22e-03
## 988
                   6.59e-04
        -1.09e-02
                             9.49e-03 -3.94e-03 -2.46e-03
                                                           8.70e-03 -3.81e-03
## 989
         5.86e-04 -3.60e-02 -1.27e-02 -6.78e-03 -7.39e-03 -2.61e-02
## 990
        -1.52e-02
                   1.35e-03
                             1.21e-02 -5.31e-03
                                                 1.45e-02 -2.58e-03 -6.42e-03
## 991
        -6.22e-03 -1.78e-04
                             1.87e-03 -2.53e-03 1.45e-02 -7.26e-03 -1.77e-02
## 992
        -2.95e-02 -1.52e-03
                             3.88e-02 -1.07e-02 -4.67e-02
                                                            2.16e-02
                                                                      3.73e-02
                                       2.84e-03 -9.36e-04
## 993
         5.68e-03 -1.89e-03
                             1.43e-03
                                                            1.26e-03
                                                                      5.55e-03
## 994
        -9.89e-03
                  5.77e-04 -1.35e-02 -1.96e-02 -4.35e-03 -4.11e-03 -2.54e-04
## 995
        -1.48e-02
                   3.10e-03
                             6.36e-03 -2.98e-02 -1.68e-02 -3.62e-03
                                                                      1.01e-02
                                       3.55e-02 -3.39e-02 -2.53e-03
## 996
                  4.51e-02 -1.22e-02
         5.02e-02
                                                                      6.72e-02
## 997
        -2.96e-02 -5.71e-03 -4.41e-02
                                       2.42e-02 -1.39e-02 -3.31e-02
                                                                      7.16e-03
## 998
        -4.69e-02 -3.87e-02 -2.74e-02 2.45e-02 -2.94e-02 1.64e-02
```

```
2.92e-02 2.34e-02 3.62e-02 2.13e-02 3.22e-02 -2.62e-02 -2.71e-02
## 1000
        3.07e-03 -8.53e-04 -7.63e-03 1.61e-03 -4.26e-03 -6.70e-03
                                                                  7.17e-03
## 1001 -8.38e-03
                  5.62e-04 8.68e-03 -2.12e-03 1.05e-02 1.56e-02 -4.14e-03
                 2.13e-02 -2.17e-02 -5.23e-03 2.06e-02 -5.06e-03 -1.49e-02
## 1002
        2.80e-02
## 1003
        2.34e-02
                 1.99e-02 1.70e-03 -9.54e-03 -1.92e-02 -2.23e-02 4.44e-03
## 1004 -1.20e-02 -1.57e-03 -7.34e-03 -3.63e-03 8.51e-03 -1.38e-02 -4.54e-03
## 1005
         1.40e-02
                 1.15e-02 -1.54e-02 -1.69e-02 1.29e-02
                                                         1.34e-02 -9.66e-03
## 1006
        2.95e-02
                  2.49e-02
                            1.54e-02
                                     2.42e-02 -3.99e-02
                                                         3.69e-02
                                                                   2.51e-02
## 1007 -7.46e-02 -6.01e-02
                            6.18e-02 -5.70e-02
                                               3.64e-02 -7.52e-02 -7.15e-02
## 1008 -5.84e-02 -4.98e-02
                            5.84e-02
                                     2.02e-02
                                                1.01e-01
                                                         5.56e-02 -6.95e-02
## 1009
        5.30e-04 4.07e-04
                            1.38e-04 -2.07e-04
                                               4.90e-04 -3.63e-04 -5.35e-04
        4.85e-04 -2.86e-04
                            3.68e-04
                                     2.28e-04 3.17e-05 -1.33e-03 5.33e-04
## 1010
## 1011 -7.19e-03
                 3.05e-02
                            1.54e-02
                                     3.95e-02
                                               4.53e-05
                                                         2.86e-02 -4.67e-03
## 1012
        5.15e-02 4.21e-02 -4.87e-02 -1.31e-02 5.81e-02
                                                         2.13e-02 -5.64e-02
## 1013 -4.44e-02 -3.93e-02 -2.72e-02 -1.01e-01
                                               1.92e-02
                                                         1.91e-03 -1.93e-02
## 1014 -4.78e-04 -8.18e-03 -1.61e-03 -1.55e-03 -5.39e-03
                                                         7.24e-03 4.96e-03
## 1015 2.83e-02 2.20e-02 -2.65e-02 -1.05e-02 -5.66e-04
                                                         1.09e-02 -3.42e-02
## 1016 -1.80e-03 -1.85e-02 -1.30e-02 -3.13e-03 1.03e-02
                                                         1.51e-02 -4.32e-03
## 1017 -5.25e-02 -4.23e-02 -7.74e-02 -4.13e-02 2.13e-02 -3.60e-02 -2.54e-02
## 1018 -1.49e-02 -9.90e-04 -1.43e-02 -3.68e-03 2.44e-03
                                                         2.06e-02
                                                                   3.54e-03
## 1019 2.10e-02 1.68e-02 2.35e-02 1.69e-02 -3.81e-03 -1.93e-02
                                                                   2.99e-03
## 1020 -1.90e-02 -1.60e-03 -2.78e-02 2.15e-02 -9.30e-03
                                                         2.65e-02
                                                                   9.53e-03
## 1021 -4.20e-03 -1.67e-04 -1.14e-03 -1.54e-03 6.77e-03 -5.87e-03 -1.50e-03
        5.83e-02
                 1.19e-02 -6.19e-03 -5.20e-02 -7.86e-02 -7.43e-02
## 1022
                                                                   6.76e-02
## 1023
         5.94e-03 5.59e-03 -3.20e-03 -7.04e-03 4.39e-03 -5.45e-04 -3.52e-03
## 1024 -4.83e-03
                  1.42e-03 -7.37e-03 -1.60e-03 -2.96e-05
                                                         1.43e-02
                                                                   2.15e-03
                           7.57e-03 5.00e-03 -1.42e-02
## 1025
         5.38e-03 -1.73e-03
                                                         2.87e-03
                                                                   1.74e-02
## 1026 -1.64e-02 4.69e-04 1.66e-02 -5.43e-03 -2.40e-02 -1.37e-03
                                                                   2.07e-02
                 1.26e-04 3.06e-03
                                     5.98e-04 -3.00e-03
## 1027
        1.85e-03
                                                         2.60e-03
                                                                   4.14e-03
## 1028 -1.02e-02 -1.27e-03 -9.62e-03
                                     1.03e-02 8.31e-03
                                                          5.65e-03 -5.30e-03
                 2.65e-03 -1.71e-02 -2.76e-02 2.80e-03 -4.99e-03
## 1029 -1.37e-02
                                                                   3.55e-03
       7.95e-04 2.13e-02 1.20e-02 4.88e-03 1.48e-02 5.12e-03 -1.84e-02
## 1030
## 1031 -3.70e-04 -8.34e-03 7.25e-03 -2.38e-03 9.72e-05 -5.50e-03 -2.20e-03
        1.78e-04
                 1.42e-01 -5.86e-02
                                     3.73e-02 -1.81e-02 1.13e-01 -4.87e-02
## 1033 -4.90e-02 -4.74e-02 -2.91e-02 -3.04e-02 -5.28e-02 -7.13e-02
                                                                   2.70e-02
## 1034 -1.08e-01 -9.64e-02 1.30e-01
                                     1.20e-01 1.64e-01 -4.73e-02 -1.22e-01
        4.00e-03 -3.83e-02 -3.35e-02 6.80e-02 9.99e-03
## 1035
                                                         3.62e-02 -5.29e-03
## 1036
        1.07e-02
                 8.82e-03 -1.03e-02 -1.29e-02 1.53e-03
                                                         4.11e-03
                                                                   1.84e-03
## 1037
         5.17e-02
                  5.33e-03 6.61e-02
                                     1.49e-02 -4.89e-02 5.55e-02
                                                                   3.98e-02
## 1038 -1.26e-02
                 2.30e-03 1.14e-02 -5.14e-03 -1.83e-02 -1.85e-02
                                                                    5.71e-03
## 1039
        7.34e-04 -5.38e-03 -4.73e-03 -4.56e-04 -1.36e-03 4.98e-03
                                                                    2.65e-03
                 4.17e-03 -5.73e-02 2.00e-02 -2.82e-02
## 1040
         5.93e-02
                                                         1.33e-02
                                                                    2.84e-02
## 1041
        3.85e-04
                  9.73e-03 -2.77e-03 -5.99e-03 -1.36e-02 -3.52e-03
                                                                   1.73e-02
                  1.60e-02 -1.23e-02 -5.97e-03 1.43e-02 2.14e-02 -2.28e-02
## 1042
         2.00e-02
## 1043
                  1.19e-02 -1.12e-02 8.90e-03 9.60e-03 -2.00e-03 -6.81e-03
        1.27e-02
## 1044 -5.75e-03 -4.74e-03 -4.97e-03 6.93e-03 -5.36e-03 -1.83e-03
                                                                  4.44e-03
## 1045 -3.37e-03
                  6.47e-04 -5.94e-03 -7.31e-04 1.89e-03 -1.73e-03
                                                                   1.13e-03
                  1.50e-03 4.47e-05 2.77e-04 -4.44e-04 3.33e-04 -3.15e-05
## 1046
        4.81e-05
## 1047
        2.70e-02
                  2.20e-02 1.71e-02 -4.76e-03 2.01e-02 1.32e-02 -1.75e-02
## 1048 -1.52e-02 -9.29e-04 7.81e-03 -4.62e-03 -1.77e-02 2.18e-02 1.33e-02
```

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## 1049 1.66e-02 1.39e-02 -1.07e-02 3.20e-02 -7.77e-03 1.86e-02 1.28e-02
## 1050 -5.68e-03 6.02e-05 -9.71e-03 -1.54e-03 -6.61e-03 -2.18e-03
## 1051 2.70e-02 2.10e-02 -6.97e-03 -6.10e-03 3.19e-02 -2.13e-02 -1.97e-02
## 1052 -1.89e-02 -1.17e-03 -1.05e-02 -5.54e-03 -1.91e-02 -4.28e-03
## 1053 -7.35e-04 -6.89e-03 2.36e-04 -2.13e-03 -2.03e-03 -7.48e-04
## 1054
       7.02e-03 -1.73e-03 1.52e-02 1.94e-02 8.94e-03 3.70e-03 -1.11e-02
## 1055 -1.76e-03 1.75e-02 -2.02e-02 2.45e-03 -6.30e-03 -7.69e-03 -2.24e-03
        2.27e-03 -2.18e-02 -2.78e-03 -4.39e-03 1.34e-02
## 1056
                                                         2.22e-02 -3.20e-02
        6.64e-02 4.10e-03 7.70e-02 1.77e-02 -3.82e-02 1.85e-02 2.32e-02
## 1058 -4.89e-02 -4.34e-02 -3.14e-02 2.23e-02 2.07e-02 -3.51e-02 -7.97e-03
## 1059 -5.24e-02 -3.88e-02 -4.74e-02 -3.33e-02 2.11e-02 -2.76e-02 -4.52e-02
## 1060 -5.37e-03 -5.26e-04 -2.44e-03 -1.81e-03 7.96e-04 -1.70e-03 -1.13e-03
## 1061 -2.74e-02 -2.52e-02 2.56e-02 1.05e-02 -1.50e-02 -3.82e-02
                                                                  1.50e-02
## 1062 -8.67e-03 9.10e-05 -4.19e-03 -3.88e-03 7.28e-05 4.72e-03
        4.93e-02 4.26e-02 -3.60e-02 -1.11e-02 -2.03e-02 -4.61e-03
                                                                  4.99e-03
## 1063
## 1064 4.86e-04 -8.07e-03 -2.62e-03 5.51e-03 7.81e-03 -1.43e-03 -8.85e-03
## 1065 -1.02e-04 -7.86e-04 3.84e-04 -2.08e-04 1.06e-04 -1.28e-04
## 1066 -7.80e-03 2.04e-03 1.92e-02 -2.55e-03 -1.72e-02 2.11e-04
## 1067 -1.60e-02 -5.29e-04 -9.93e-03 1.99e-02 2.22e-02 1.06e-02 -1.52e-02
## 1068 -1.57e-02 1.58e-03 -1.09e-02 -5.73e-03 -2.11e-02 -4.15e-03
                                                                  2.30e-02
## 1069 -3.93e-02 -3.79e-02 -5.61e-02 -3.65e-02 -2.20e-02 -6.93e-02
                                                                  4.59e-03
## 1070 -1.09e-03 -3.55e-02 -5.64e-03 2.43e-02 -1.24e-02 -3.32e-03
                                                                   1.18e-02
## 1071 3.21e-02 2.92e-02 1.40e-02 -1.31e-02 -2.97e-02 4.68e-02
                                                                   1.87e-02
## 1072 -9.93e-03 -1.11e-03 1.23e-02
                                     1.06e-02 -1.08e-02 1.72e-02
                                                                   1.10e-02
## 1073 -1.48e-02 -1.85e-03 -1.93e-02 -4.21e-03 9.56e-03
                                                         6.59e-03 -8.68e-03
## 1074 -1.78e-02 -8.23e-04 -2.83e-02 5.23e-02 3.16e-03
                                                         1.11e-02 -9.10e-03
       3.20e-02 2.79e-02 -7.11e-03 -1.45e-02 9.23e-04 -8.09e-03
## 1075
                                                                  4.91e-03
## 1076 8.73e-03 6.64e-03 -4.91e-04 -4.45e-03 -6.21e-04 -7.30e-03 -4.79e-03
                 2.14e-02 1.61e-02 1.82e-03 -1.35e-02 1.87e-02
## 1077 -3.93e-03
                                                                  2.09e-02
## 1078 -6.42e-02 -5.24e-02 8.18e-02 -5.66e-02 -2.47e-02 -7.38e-02 -7.36e-03
## 1079 -3.97e-03 -4.68e-04 7.43e-03 -1.72e-03 5.27e-03
                                                         5.32e-03 -7.16e-03
## 1080 2.38e-02 1.96e-02 2.86e-02 -7.61e-03 -3.22e-02 1.44e-02
## 1081
        2.83e-03 -5.40e-04 -3.14e-03 2.35e-03 -3.65e-03 -2.73e-03
                                                                   5.60e-03
                 2.43e-02 -2.64e-02 1.90e-02 -3.17e-02 1.51e-02
## 1082
        3.04e-02
                                                                  1.99e-02
                 2.56e-02 -4.10e-02 -1.11e-02 -7.03e-02 -8.36e-03
## 1083
        3.22e-02
                                                                   6.74e-02
## 1084 -8.51e-02 -7.14e-02 5.18e-02 2.40e-02 -2.43e-02 -9.06e-02 -3.49e-02
## 1085 -1.58e-02 2.69e-04 -3.17e-03 1.81e-02 -4.41e-02 -3.21e-03
                                                                  3.67e-02
## 1086 -6.04e-02 -5.25e-02 -8.13e-02 2.59e-02 -8.71e-02 1.06e-02
                                                                   7.64e-02
## 1087 6.12e-02 5.25e-02 -6.17e-02 9.41e-02 6.87e-03 -5.24e-02
                                                                  1.54e-02
## 1088 -1.37e-02 7.13e-04
                           1.05e-02 -5.84e-03 1.08e-02 -2.48e-03
                                                                   4.02e-03
## 1089 -1.03e-02 2.83e-05
                           9.91e-04 1.37e-02 2.02e-02 8.08e-03 -2.08e-02
## 1090 -2.34e-03 -1.60e-04
                            2.44e-03 -8.70e-04 -2.77e-03 -2.89e-03
## 1091 -1.64e-02 -2.26e-03
                           2.10e-02
                                     3.74e-02 3.24e-02 2.34e-02 -3.88e-02
                 2.49e-02
                           2.37e-02
                                     2.18e-02 -2.86e-02
## 1092
        2.98e-02
                                                         1.81e-02
                                                                   2.18e-02
        1.54e-03 -6.33e-05
                           3.07e-03 4.65e-04 -1.07e-03
## 1093
                                                        2.69e-03
                                                                   1.24e-04
## 1094 -2.62e-02 -1.26e-03 2.48e-02 -1.46e-02 2.55e-04 -2.64e-02
                                                                   1.07e-02
## 1095 -1.40e-02 1.80e-03 2.30e-02 -7.52e-03 -1.12e-02 3.16e-02
                                                                   1.28e-02
## 1096 -1.67e-02 2.12e-03 -1.30e-02 -7.61e-03 -4.23e-03 -6.50e-03
                                                                  1.57e-02
        2.84e-02 2.35e-02 2.31e-02 -1.41e-02 1.33e-02 -1.82e-02 -2.59e-02
## 1098 -5.49e-03 -4.55e-02 1.32e-02 2.45e-02 5.60e-03 3.74e-02 -4.25e-03
```

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## 1099 -1.87e-04 -6.65e-03 -2.33e-03 -2.03e-03 -6.43e-03 -4.96e-03 6.24e-03
## 1100 8.10e-04 -6.57e-03 -7.23e-05 -1.01e-03 -9.39e-03 2.57e-03
                                                                  7.25e-03
## 1101 -1.45e-02 -9.34e-04 -2.80e-02 2.18e-02 7.70e-03 -5.82e-03 -1.39e-03
## 1102 -9.81e-03 -1.20e-03 -5.70e-04 8.81e-03 -1.81e-03 4.51e-03
## 1103  3.66e-02  2.98e-02  -7.60e-03  -1.10e-02  1.09e-02  -2.77e-02  -2.85e-03
## 1104 -2.79e-04 2.42e-03 2.18e-03 3.16e-04 -8.70e-04 8.52e-04
                                                                   6.58e-05
## 1105 -6.82e-03 -8.40e-04 -7.61e-03 -1.19e-02 1.24e-03 -2.59e-03
## 1106 -1.91e-02 1.22e-03 2.75e-02 -5.82e-03 -5.65e-03
                                                        3.72e-02 -6.71e-04
                 3.97e-03 -1.45e-02 -7.01e-02 -1.34e-01 -9.50e-02
        5.91e-02
                 1.24e-04 -2.27e-03 -3.47e-03 -7.62e-04 -2.27e-03
## 1108 -1.02e-02
## 1109
        2.85e-02
                 2.31e-02 -1.98e-03 2.21e-02 4.01e-03 3.53e-02 -3.11e-03
                  4.50e-04 1.96e-02 -3.78e-03 -1.23e-02 8.36e-03
## 1110 -1.03e-02
                                                                  3.99e-03
        5.30e-03
## 1111
                  7.68e-02 -1.41e-03
                                     1.59e-02 6.35e-03 -6.83e-02 -4.55e-03
## 1112
        9.22e-02 -5.40e-03 5.44e-02 -7.26e-02 -5.05e-02 1.08e-01 -7.98e-02
        7.25e-02 -5.12e-04 5.15e-02
                                     1.76e-02 8.30e-02 -4.33e-02 -6.91e-02
## 1113
## 1114 -5.78e-04
                  1.30e-04 1.11e-04 -2.72e-04 -8.36e-04 9.92e-04 8.81e-04
## 1115 -1.20e-02
                  1.20e-03
                           5.37e-03 -3.04e-03 1.04e-02
                                                         2.36e-02 -4.25e-04
       3.43e-02
                 2.72e-02 4.15e-02 -1.30e-02 1.25e-02 -2.60e-02 -1.72e-02
## 1116
## 1117 8.02e-03 -1.13e-03 -3.08e-03 -7.47e-03 -5.82e-03 1.05e-02 6.24e-03
## 1118 -4.49e-03 -1.68e-04 4.78e-03 -1.75e-03 -3.56e-03 -4.91e-03
                                                                  3.29e-03
## 1119 -1.35e-02 -3.25e-03 -1.37e-02 -5.30e-03 -3.20e-03 -1.49e-02
                                                                  3.02e-03
## 1120 -3.16e-03 5.95e-04 -2.58e-03 -1.00e-03 1.17e-02 2.54e-03 -1.35e-02
## 1121 2.62e-02 2.07e-02 -2.14e-02 -6.96e-03 -2.54e-02 1.01e-02 2.43e-02
## 1122
        1.85e-02 1.56e-02 -4.67e-03 -6.59e-03 4.54e-03 -4.61e-03 -3.97e-04
## 1123
        5.02e-02 4.14e-02 -2.79e-02 -1.12e-02 6.14e-02 5.20e-02 -4.76e-02
                  3.67e-02 2.61e-02 -1.50e-02 -4.53e-03 -5.26e-03
## 1124
        4.37e-02
## 1125
        6.75e-03 -1.20e-03 -1.17e-02 1.48e-02 1.46e-02 1.95e-03 -1.04e-02
## 1126 -2.12e-04 -1.13e-02 -7.12e-03 -2.47e-03 8.89e-03 -7.83e-03 -1.26e-02
## 1127 -1.06e-02 3.72e-04 3.46e-03 -5.22e-03 -5.85e-03 -3.39e-03 -5.07e-03
## 1128 -2.39e-03 -3.02e-04 2.30e-03 -3.99e-03 2.78e-04 -6.17e-04
## 1129 -2.79e-02 5.18e-03 -1.38e-02 -5.20e-02 -2.07e-02 5.25e-02
## 1130 7.76e-04 6.22e-04 -8.76e-04 5.17e-04 -2.96e-04 -6.80e-04 -4.15e-04
## 1131 -4.46e-03
                 1.34e-04 6.14e-03 -9.78e-03 -8.73e-03 -1.36e-03
## 1132 -2.04e-02 -3.04e-03 -2.64e-02 2.01e-02 -1.49e-02 -6.71e-03
## 1133 -7.09e-03 -1.73e-04 -6.45e-03 -2.58e-03 -9.69e-03 1.17e-02
## 1134 -6.79e-05 3.23e-04 1.65e-04 3.63e-04 -5.00e-04 -1.11e-04
                                     1.09e-02 2.43e-03 -1.03e-02 -3.74e-03
## 1135 -9.27e-03 -7.73e-04 1.28e-03
## 1136 2.16e-03
                 2.09e-03 1.05e-03 -3.23e-03 2.67e-03 2.53e-03 -3.33e-03
## 1137 4.91e-02 6.42e-03 -3.98e-02 2.06e-02 -1.01e-02 -3.25e-02 1.29e-02
## 1138 -4.38e-02 -2.08e-03 -3.37e-02 3.22e-02 2.40e-02 -9.26e-03 -1.88e-02
## 1139 -2.15e-02 4.30e-03 3.06e-02 -1.28e-02 -4.19e-02 -2.48e-03
## 1140 -6.07e-04 -8.38e-05 9.29e-04 -1.06e-03 5.62e-04 -6.48e-04 -3.92e-04
## 1141 4.72e-04 -3.80e-03 4.64e-03 -1.18e-03 -1.39e-03 -2.59e-03 -1.88e-03
## 1142 -2.58e-02 -4.00e-03 2.21e-02
                                     2.15e-02 4.84e-03 1.64e-02
                                                                   4.66e-03
       5.67e-02 4.86e-02
                           3.00e-02 9.30e-02 -1.10e-02 6.91e-02
## 1143
                                                                   9.83e-03
## 1144 -1.56e-02 2.64e-03
                           1.57e-02
                                     1.72e-02 -1.54e-02
                                                         3.09e-02
                                                                   1.81e-02
## 1145 2.38e-02 2.30e-02
                           1.14e-02 -9.65e-03 -1.23e-02 3.48e-02
                                                                   1.20e-02
## 1146 -2.24e-02 -5.92e-04 -1.12e-02 -8.01e-03 -2.72e-02 -6.14e-03
                                                                   2.39e-02
## 1147 -3.64e-04 -1.02e-02 6.21e-03 -1.18e-02 -4.91e-03 -6.59e-03
                                                                   5.53e-03
## 1148 -7.48e-03 1.95e-03 -6.50e-03 -2.22e-03 1.51e-02 1.82e-02 -8.94e-03
```

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## 1149 -6.84e-03 1.14e-03 -3.11e-03 -1.34e-03 -5.51e-03 1.48e-02 5.56e-03
                                     1.06e-02 1.47e-02 1.23e-02 -1.25e-02
## 1150 1.85e-04 -1.35e-02 6.79e-04
## 1151 1.92e-03 -5.27e-04 -3.08e-03
                                     4.38e-03 9.92e-05 -4.22e-03 -1.57e-03
## 1152 -3.34e-03 -5.66e-02 4.41e-02
                                     7.51e-02 -3.40e-02 5.65e-02 2.65e-02
## 1153
       1.76e-02 1.33e-02 -2.54e-02 -7.43e-03 8.61e-03 -1.98e-02 -8.25e-03
## 1154 -3.65e-02 -3.43e-02
                           1.48e-02
                                     2.12e-02
                                               1.57e-02
                                                         4.23e-02 -1.37e-02
        3.15e-03 -9.92e-04
                           7.10e-03
                                     1.58e-03
                                               8.07e-04
                                                         1.96e-03
## 1155
## 1156
        3.40e-04
                 5.07e-03
                           1.97e-03 -3.31e-03
                                               5.24e-03
                                                         1.00e-03 -6.12e-03
## 1157 -6.00e-03 4.19e-04 -7.09e-03
                                     1.13e-02
                                               9.03e-04 -3.88e-03 -1.45e-03
## 1158
       1.09e-02 -7.39e-04 -5.74e-03 5.00e-03
                                               7.04e-03 2.35e-03 -1.30e-02
## 1159 -5.84e-03 -1.23e-04 -5.87e-03 -2.04e-03 -2.86e-03 -2.08e-03
## 1160 3.43e-02 2.95e-02 -2.06e-02 -7.52e-03 -2.09e-02 -5.91e-03
                                                                  1.83e-02
## 1161 -1.53e-03
                 1.93e-02 -2.01e-03 -1.50e-02 1.83e-03 1.41e-02 -1.29e-03
## 1162 -1.47e-02 -1.20e-03 4.97e-03 1.27e-02 -2.92e-02 -1.99e-03 2.24e-02
        5.18e-02 -6.78e-03 -3.63e-02 -5.86e-02 2.69e-02 -1.20e-01 -1.17e-02
## 1163
## 1164 -1.26e-02 1.20e-03 -2.24e-04 -2.67e-03 2.37e-02 9.89e-03 -1.85e-02
## 1165
        3.62e-02
                 3.04e-02 -2.95e-02 -1.22e-02 -4.83e-02 -3.37e-02
## 1166 -2.33e-02 1.67e-03 3.43e-02 -1.05e-02 -1.91e-03 -2.11e-02 1.06e-02
## 1167 -2.14e-03 -2.75e-04 -2.88e-03 2.12e-03 -4.33e-04 -2.63e-03 -9.06e-04
## 1168 3.96e-03 7.64e-02 -1.02e-02 -1.09e-01 3.19e-02 4.69e-02 -2.10e-02
        4.45e-02 4.12e-02 6.87e-02 -2.55e-02 5.57e-02 -4.08e-02 -4.51e-02
## 1169
## 1170 -5.62e-03 -8.41e-04 -4.63e-03 -9.78e-03 5.16e-03 -2.29e-03 -4.24e-03
       2.05e-02 1.82e-02 -2.31e-02 -8.69e-03 8.95e-03 -2.20e-02 -4.17e-03
## 1171
## 1172 -5.56e-02 -4.77e-02
                           3.10e-03 8.75e-03 -8.73e-03 -6.16e-02 -1.04e-02
                  1.89e-02
                           2.11e-02
                                     1.82e-02 -5.32e-03 -4.45e-03
## 1173
        2.21e-02
## 1174 -1.02e-02
                  4.54e-05
                           1.33e-02 -3.51e-03 -2.15e-02
                                                         1.70e-02
## 1175
       1.08e-03
                 1.19e-02
                           5.11e-03 1.20e-02 4.83e-03
                                                         2.32e-03 -3.00e-03
## 1176 -3.99e-03 -1.10e-04 1.03e-04 -2.02e-03 -3.72e-03
                                                         3.21e-03
                                                                  2.83e-03
                 1.21e-04 -4.54e-04 -3.26e-03 7.15e-03 4.16e-03 -1.01e-02
## 1177 -6.91e-03
## 1178 -1.93e-03
                 9.59e-03 -6.05e-03 -8.39e-03 -1.36e-02 -1.02e-02
                           2.86e-02 -9.55e-03 6.93e-03 -2.08e-03 -6.73e-03
## 1179
       2.04e-02
                  1.67e-02
## 1180 -1.87e-04
                  5.06e-03 2.19e-04 7.47e-04 1.10e-03 -1.63e-03 -1.53e-03
                  2.32e-02 -9.11e-03 -9.33e-03 1.25e-02
## 1181
        2.85e-02
                                                         1.14e-02
                                                                   1.21e-02
                  1.37e-04 3.34e-03
## 1182 -2.79e-03
                                     3.27e-03 -8.09e-04 -7.30e-04
        1.21e-03 -4.63e-05 -1.52e-03 -9.17e-04 1.42e-03
## 1183
                                                         3.33e-05 -1.08e-03
                 1.16e-02
                           3.95e-03
                                     1.25e-02 -2.68e-03 -1.06e-02
                                                                  2.03e-03
## 1184 -6.51e-04
        4.62e-03 -4.81e-04 7.98e-03
                                     2.41e-03 -1.39e-02
## 1185
                                                         3.74e-03
                                                                   1.21e-02
## 1186
        2.90e-03 -6.32e-04 -7.11e-07 -6.07e-03 -6.37e-03
                                                         1.17e-03
                                                                  1.42e-02
## 1187 -7.43e-02 -6.24e-02 -6.77e-02
                                     3.14e-02 3.88e-02
                                                         5.44e-02 -5.82e-02
        1.27e-02 -5.54e-04
                           1.77e-02
                                     3.00e-03 4.59e-03
## 1188
                                                         1.66e-02 -1.52e-02
## 1189 -9.63e-03 -5.53e-02
                           3.71e-02
                                     3.59e-02 -4.18e-02
                                                         2.30e-02 4.56e-02
## 1190
        1.13e-03
                 1.26e-02
                           1.08e-02
                                     2.46e-03 4.80e-03
                                                         9.64e-03 -2.68e-03
## 1191
        9.94e-05
                 2.00e-03 -1.23e-03
                                     3.94e-04 5.65e-04 -8.37e-04 -5.93e-04
## 1192 -9.39e-03 -5.98e-04 2.74e-04 -3.98e-03 -5.31e-03 -9.87e-03
                                                                  6.63e-03
        1.40e-03 -3.89e-02 -5.24e-03 -6.38e-03 2.41e-02 3.47e-02
## 1193
## 1194
        3.00e-02 2.41e-02 2.66e-02 2.30e-02 1.11e-02 2.11e-02 -8.49e-03
## 1195 -1.16e-03
                 1.27e-02 -9.53e-03 1.51e-02 -5.05e-03 -4.84e-03
                                                                  6.14e-03
        6.70e-05 5.69e-05 6.10e-05 -2.39e-05 3.12e-06 -2.52e-06 -2.52e-05
## 1196
## 1197
        3.24e-02 2.90e-02 -1.84e-02 -8.78e-03 -5.03e-02 -6.92e-03 5.74e-02
## 1198 2.58e-02 2.26e-02 1.40e-02 -1.02e-02 1.01e-02 3.46e-02 -1.04e-02
```

```
## 1199 -1.27e-03 -1.68e-02 1.38e-02 -7.25e-03 -5.88e-03 -9.82e-03 4.06e-03
## 1200 -1.15e-02 1.01e-03 -7.02e-03 -3.07e-03 -9.26e-03 -3.81e-03
## 1201 -7.10e-04 -2.37e-02 1.44e-02 -5.34e-03 1.36e-02 -1.58e-02 -7.92e-03
## 1202 -6.07e-02 -5.23e-02 6.62e-02 -4.70e-02 -5.85e-02 1.25e-02
                                                                5.26e-02
## 1203 -1.90e-03 5.07e-05 -2.13e-03 -5.55e-04 1.70e-03 -6.48e-04 -1.12e-03
## 1204
        3.04e-03 -1.24e-03 -5.35e-03 8.56e-03 1.25e-02 5.36e-03 -1.01e-02
## 1205
        5.60e-02 -2.00e-03 8.67e-02
                                    1.33e-02 -7.80e-02 2.71e-02 -1.44e-03
## 1206 -8.94e-02 -7.53e-02 9.27e-02
                                    2.11e-02 3.69e-02 -4.01e-02 -3.55e-02
        1.01e-03 9.21e-04 -6.25e-04 -4.83e-04 6.23e-04 -9.98e-04 -2.92e-04
## 1208
        6.65e-03 -2.30e-02 -1.65e-02 2.19e-02 2.11e-02 9.56e-03 -1.59e-02
## 1209
        5.71e-03
                 5.02e-04 -1.84e-03 -6.64e-03 5.08e-03 6.90e-03 -8.53e-03
                 6.58e-03 5.48e-03 -9.56e-03 -2.17e-04
## 1210 -1.59e-04
                                                       5.03e-03 7.78e-04
## 1211
        1.59e-03
                 1.22e-04
                           7.69e-04
                                    2.83e-03 -1.56e-03 -7.05e-04 -1.31e-04
                                    3.52e-02 2.66e-02 -1.29e-02 -3.61e-02
## 1212 -1.26e-03 -2.38e-02
                          2.24e-02
## 1213 -1.30e-02 -2.13e-03 2.09e-02
                                    1.40e-02 1.67e-02 -1.61e-02 -7.05e-03
## 1214 1.32e-02
                 1.14e-01 1.10e-01
                                    2.60e-02 -3.48e-03 8.07e-02 -3.02e-03
## 1215 -1.48e-03
                 2.66e-04 -3.52e-03 -3.53e-03 -4.67e-03 -2.66e-03
                 3.88e-02 -3.01e-02 3.93e-02 8.37e-02 -4.73e-02 -8.03e-02
## 1216 4.79e-02
## 1217 -4.17e-03 5.92e-04 -2.75e-03 -1.53e-03 5.97e-03 -7.27e-03 -7.13e-03
## 1218 -1.65e-03 -2.38e-04 4.64e-04 -2.77e-03 2.46e-03 -5.64e-04 -2.29e-03
        7.75e-03 6.17e-03 6.82e-03 -2.12e-03 -5.11e-03 -8.04e-04
## 1219
## 1220 -3.59e-03 -3.59e-04
                           3.93e-03 -1.49e-03 3.05e-03 -7.61e-04 -1.07e-03
## 1221 1.06e-02 8.74e-03 4.51e-03 -4.50e-03 -6.28e-03 -9.70e-03 1.22e-02
## 1222 -2.69e-04 1.34e-04 -2.47e-04 2.88e-04 1.43e-04 -2.36e-05
                                                                 1.28e-04
        7.45e-02 1.87e-02 -1.72e-02 -1.34e-01 1.31e-02 1.63e-02 -1.70e-02
## 1223
## 1224
        5.36e-02 -1.72e-03
                          5.72e-02 -1.39e-01
                                              7.38e-02
                                                       1.40e-02 -6.87e-02
## 1225 -1.97e-02 -4.92e-03
                          1.59e-03 3.72e-02 5.40e-03 -4.95e-03 -2.66e-03
## 1226 3.16e-02 2.56e-02 1.79e-02 1.56e-02 2.17e-02 1.48e-02 -3.49e-02
## 1227 -2.63e-02 -3.36e-03
                          1.45e-02 -8.73e-03
                                              2.85e-02 -5.16e-03 -1.61e-02
## 1228 -5.37e-03 -7.55e-04 -1.71e-04 -1.87e-03
                                              5.29e-03 -1.76e-03 -3.72e-03
## 1229 -1.01e-02 -9.49e-05
                          2.02e-03
                                    2.07e-02 5.49e-04
                                                       6.77e-03 -1.10e-03
## 1230 -3.02e-02 -1.62e-03 -3.15e-02 -1.08e-02
                                              5.07e-03 4.11e-02 1.06e-02
## 1231 -1.45e-03 -3.73e-02 -2.04e-02 -8.28e-03
                                              3.11e-02
                                                        2.81e-02 -2.51e-02
## 1232
        6.65e-03 5.66e-03 7.84e-03 -1.46e-03
                                              1.13e-03
                                                        3.21e-03
## 1233
        3.93e-03 -2.59e-04 -4.30e-03 1.07e-03 -4.22e-03
                                                        1.36e-03
                                                                 2.29e-03
## 1234 -1.11e-02 -1.75e-03 1.58e-02 -3.40e-03 9.68e-03 -1.07e-02 -3.81e-03
## 1235 -4.34e-03 1.05e-03 -4.78e-03 -1.75e-03 -5.75e-03 3.50e-03
## 1237 -3.33e-03 7.51e-02 6.45e-02 -5.92e-02 1.83e-03 -6.96e-02 -2.14e-02
## 1238 -5.59e-02 -4.65e-02 -7.52e-02 -1.11e-01 -2.90e-03 -3.93e-02 7.15e-03
        3.03e-02 2.54e-02 1.93e-02 -1.42e-02 1.92e-02 1.84e-02 -2.01e-02
## 1240 2.18e-02
                 1.85e-02 2.99e-02 -1.09e-02 -8.76e-03 -1.92e-02
## 1241 -4.24e-04 7.33e-05 -3.36e-04 -1.87e-04 1.00e-04 -5.27e-04 -1.66e-04
## 1242 -1.75e-02 -2.02e-03 -1.41e-02 4.03e-02 -1.75e-02 -4.35e-03
       2.83e-02 2.17e-02 -2.00e-02 -9.97e-03 -5.80e-03 1.03e-02 -1.76e-02
## 1243
## 1244 -7.16e-03 -1.40e-03 2.28e-03 1.53e-02 -6.29e-03 -1.42e-03
## 1245
        2.63e-02 2.32e-02 -1.15e-02 2.23e-02 4.50e-02 3.19e-02 -3.81e-02
## 1246 -2.49e-02 -4.11e-03 7.57e-03 -8.83e-03 2.79e-03 -2.35e-02
## 1247
        1.83e-02 1.14e-01 9.61e-03 -6.53e-02 -2.28e-02 7.26e-02
                                                                 1.44e-03
## 1248 -8.68e-03 -6.54e-04 8.09e-03 -3.91e-03 8.61e-03 -1.52e-03 -1.33e-02
```

```
## 1249 1.84e-02 1.55e-02 -1.38e-03 -6.12e-03 1.57e-02 -1.73e-02 -1.23e-02
## 1250 -5.18e-02 -4.00e-02 -2.92e-02 -1.05e-01 -2.08e-02 -3.15e-02 2.15e-02
## 1251 2.71e-02 2.64e-02 -8.56e-03 -4.77e-02 -2.78e-04 -6.65e-03 -1.52e-03
        4.86e-05 -1.03e-02 -9.29e-03 8.27e-03 -1.51e-02 9.13e-03
## 1252
## 1253 -1.37e-02 -1.76e-03 -1.91e-02 -2.26e-02 7.54e-03 -1.67e-02 -3.70e-03
## 1254 7.87e-04 8.18e-04 5.27e-05 -2.97e-04 -2.68e-04
                                                         4.72e-04
                                                                  4.21e-04
## 1255 -2.22e-03 -1.82e-03 1.09e-03
                                     3.63e-04 1.50e-03 1.73e-03 -1.33e-03
## 1256 -4.44e-02 -3.66e-02
                           1.15e-02
                                     1.64e-02 6.36e-02 -5.50e-02 -4.12e-02
## 1257 -2.23e-02 -2.55e-03 -7.62e-03
                                     2.16e-02 1.10e-02 1.20e-02 -1.83e-03
## 1258 6.58e-02 2.37e-03 8.20e-03
                                     2.36e-02 1.36e-01
                                                         1.70e-02 -9.80e-02
                                                                  1.10e-03
## 1259 -2.59e-03 -2.72e-02 -1.88e-02
                                     1.67e-02 -1.68e-03 2.19e-02
## 1260 -1.22e-03 -2.08e-04 4.55e-04 -1.85e-03 -5.32e-04 -4.34e-04
                                                                   5.74e-04
        8.93e-03 8.83e-03 6.94e-04 -3.15e-03 7.53e-03
                                                         4.70e-03 -2.28e-03
## 1261
## 1262 -3.77e-02 -5.49e-03 8.49e-03 8.16e-02 -7.10e-03 -3.81e-02
                                                                  2.08e-02
                 2.46e-03 -6.25e-02 -4.53e-02 -2.34e-02
## 1263
        4.63e-02
                                                         1.26e-03
                                                                   1.11e-02
        9.54e-04 -1.31e-02 5.00e-03 -2.08e-03 5.69e-03
                                                         5.57e-03 -3.31e-03
## 1265 -2.25e-03
                 1.14e-04
                           8.82e-04
                                     2.40e-03 -1.02e-03
                                                         3.37e-03
## 1266
                 1.44e-02
                           1.34e-02
                                     3.51e-03 1.80e-02 -6.01e-03 -2.06e-02
        7.83e-04
## 1267
        5.31e-04 -9.43e-03 -7.04e-03 -1.25e-03 1.76e-03 8.12e-03 -6.82e-04
## 1268 -4.61e-04 4.39e-03 4.20e-03
                                     1.34e-03 3.20e-03 5.44e-04 -5.30e-03
## 1269 -1.46e-02
                 2.71e-03 3.43e-03
                                     1.34e-02 -2.06e-02 -1.50e-03
## 1270
        5.62e-03
                 4.25e-03 -6.13e-03 -1.10e-03 5.68e-03 -5.37e-03 -3.78e-03
        1.95e-02 1.61e-02 2.42e-02 4.05e-02 -5.30e-03 -1.84e-02 -6.12e-04
## 1271
## 1272 -5.37e-02 -4.47e-02 -8.86e-02
                                     3.06e-02 -1.61e-02 -3.70e-02
                                     3.39e-03 3.93e-03 -5.42e-04 -3.47e-03
## 1273 -2.85e-03 -5.57e-05
                           3.93e-03
## 1274 4.87e-02 1.73e-03
                           2.30e-02
                                     1.65e-02 3.10e-03 -7.53e-02 -3.85e-04
## 1275 -1.71e-02 -3.50e-03 -2.10e-02
                                     1.74e-02 -3.28e-03 -2.30e-02 8.83e-03
## 1276 -2.16e-03 2.85e-04 2.50e-03 -7.93e-04 3.87e-03 -7.99e-04 -5.79e-03
## 1277 -1.56e-02 -1.46e-03
                           1.55e-02
                                     1.59e-02 -2.22e-02 1.12e-02
                                                                  1.84e-02
## 1278  2.51e-05  -6.33e-03  3.18e-03  -1.77e-03  -2.44e-03  -4.68e-03  -2.36e-03
## 1279 -1.22e-02 3.37e-03 -1.87e-02 -3.69e-03 -2.55e-02 2.45e-02
                                                                  2.25e-02
## 1280 1.34e-04 8.15e-02 8.28e-02 1.12e-02 -1.79e-02 -3.10e-02
## 1281 -6.00e-04 -9.67e-03 -6.34e-03 -1.49e-03 -6.19e-03
                                                         2.51e-03
                                                                   1.12e-02
## 1282 -7.26e-02 -5.34e-02 5.19e-02
                                     2.30e-02 6.17e-03
                                                         6.30e-02 -4.37e-03
## 1283 -1.61e-03 -5.25e-06 -2.01e-03 -3.43e-03
                                               2.35e-03
                                                         2.61e-03 -4.93e-04
                 2.29e-04 1.89e-03
                                     7.36e-04 -3.77e-04
                                                         3.00e-03 -4.90e-04
## 1284
        2.50e-03
                 1.05e-02 3.40e-04 -3.68e-03 1.04e-02 -1.42e-03 -2.05e-02
## 1285
        1.38e-02
## 1286
        3.43e-02
                 2.91e-02 -3.16e-02 2.17e-02 2.15e-02
                                                        1.43e-02 -3.49e-02
                  7.47e-05 -1.39e-02 -2.39e-03 8.37e-03
## 1287 -8.29e-03
                                                         1.41e-02 -5.93e-03
                  1.27e-03 -1.14e-02 -1.63e-02 -7.54e-03
## 1288 -7.23e-03
                                                         1.51e-02 6.48e-03
       4.88e-04
                  2.12e-02 1.86e-02 4.75e-03 -2.85e-04
                                                         1.83e-02 -5.27e-03
## 1289
## 1290 -6.34e-04
                  5.22e-03 5.93e-03
                                     9.67e-04 -3.92e-03 -2.12e-03
## 1291 8.09e-02
                  9.06e-03 8.88e-02
                                     1.84e-02 3.79e-02 -9.53e-02 -3.66e-02
                                     2.27e-02 7.90e-02 -1.03e-01 -7.88e-02
## 1292 -8.19e-02 -7.26e-02 -2.52e-02
## 1293 -4.00e-04 -1.49e-02 -8.46e-03 -2.59e-03 -1.19e-02 -1.05e-02 1.03e-02
## 1294
        2.38e-02 2.21e-02 1.38e-02 -1.00e-02 1.12e-02 -2.25e-03 -4.66e-03
## 1295
        2.50e-02 2.03e-02 -1.36e-02 -2.95e-02 3.24e-03 9.81e-03 -5.93e-03
        3.65e-03 -1.98e-02 -1.15e-02 -7.85e-03 2.24e-03 -4.27e-03
## 1296
## 1297
        2.19e-02 1.78e-02 1.20e-03 -6.35e-03 -1.48e-02 -1.48e-03
        5.87e-02 3.95e-03 1.97e-03 1.73e-02 -1.73e-02 -3.00e-02 -2.61e-03
```

```
## 1299 6.48e-02 2.99e-03 -1.07e-02 2.81e-02 -1.65e-01 -4.26e-02
## 1300 -1.09e-04 1.33e-02 -5.21e-03 2.73e-03 -1.65e-03 9.38e-03
                                                                 8.58e-04
## 1301 3.55e-03
                 1.36e-05 5.61e-03
                                    7.76e-03 -1.37e-03
                                                       1.90e-03
                                                                  1.92e-03
                 1.52e-02 -6.51e-03
                                    5.00e-03 -1.47e-02 -4.56e-03
## 1302 -1.30e-03
                                                                 9.81e-03
## 1303 -2.00e-02 -4.61e-03 -2.25e-02 4.73e-02 1.42e-02 -7.57e-03 -7.85e-03
## 1304 4.31e-03 -3.01e-02 -2.72e-02
                                    2.07e-02 5.88e-03
                                                       9.39e-03
                                                                  1.05e-02
## 1305 -6.37e-05 -2.01e-02
                          1.28e-02 -3.27e-03 -9.59e-03
                                                        1.73e-02
                                                                 1.59e-02
## 1306
       7.63e-03
                 2.49e-04
                          7.98e-04
                                    1.93e-03 -4.95e-03
                                                        1.07e-02
                                                                  3.98e-03
## 1307 -2.17e-02 4.91e-04 6.34e-04 -6.93e-03 -2.59e-02
                                                        3.70e-02
                          1.03e-03 -3.76e-03 7.98e-03
## 1308 -9.71e-03 -8.19e-04
                                                       1.64e-02 -8.19e-03
## 1309 -3.11e-02 -4.83e-03 -1.79e-02 6.43e-02 -1.07e-02 -3.09e-02
                                                                 3.13e-02
## 1310 1.57e-02 1.32e-02 1.07e-02 -7.42e-03 -1.54e-02 -1.44e-02
                                                                 1.19e-02
## 1311 -1.45e-02 5.94e-03 -2.05e-02 -4.05e-03 6.32e-03 -5.54e-03 -2.31e-02
## 1312
       2.91e-02 2.99e-02 3.98e-02 -1.57e-02 -1.05e-02 1.63e-03
                                                                 8.04e-03
        6.72e-02
                 6.13e-03 6.40e-02 1.24e-01 -3.58e-02 -9.73e-02
## 1313
## 1314
        4.99e-03
                 6.28e-02 -2.24e-02 -3.47e-02 -7.02e-03 -5.63e-02 -6.70e-04
## 1315
        1.09e-02 -1.01e-03
                          1.79e-03
                                    5.45e-03 6.24e-03 3.05e-03 -7.01e-03
## 1316 -2.10e-02 -2.38e-03 -6.40e-03 -9.00e-03 5.62e-03 1.09e-02 -5.91e-04
## 1317 -4.40e-03 3.73e-04 -8.44e-03 -9.36e-04 -3.36e-03 -7.29e-03
## 1319 -2.08e-03 -3.22e-04 2.17e-03 -6.35e-04 3.57e-03 -2.19e-03 -2.41e-03
## 1320
        1.65e-02 1.46e-02 -1.09e-02 -5.07e-03 -1.62e-02 -1.44e-02
                 1.29e-05 4.02e-03 -1.75e-03 2.96e-03 -3.70e-04 -1.20e-03
## 1321 -3.01e-03
        2.76e-02
                  2.10e-02 3.40e-03 -8.34e-03 6.24e-03 -5.15e-03
## 1322
## 1323 -2.52e-03
                 2.13e-02 1.41e-02 2.85e-03 2.00e-02 1.74e-02 -1.27e-02
## 1324
        6.01e-04
                 3.07e-03 -1.70e-03
                                    1.13e-03 -1.08e-03
                                                       2.01e-03
## 1325 -3.10e-03 -2.57e-02 -1.99e-02 3.46e-02 2.97e-03 -6.65e-03 -2.81e-03
## 1326 1.51e-02 1.21e-02 -7.03e-03 -3.47e-03 1.46e-02 -3.32e-03 -1.16e-02
## 1327 -5.26e-02 -4.29e-02 3.34e-02 -3.94e-02 -7.36e-02 -2.47e-02
                                                                 1.01e-01
## 1328 -6.36e-03 1.54e-02 -1.59e-02 2.17e-02 1.19e-02 -2.22e-02 -1.01e-02
## 1329 -1.40e-02 -2.57e-03 1.88e-02 1.38e-02 -2.06e-02 -2.54e-03
                                                                 2.25e-02
## 1330 -1.80e-02 -3.15e-03 -1.59e-02 1.61e-02 5.26e-03 8.04e-03 -6.50e-03
## 1331
        3.70e-03 -5.82e-04 4.48e-03 -6.84e-03 2.00e-03
                                                       2.08e-03
                                                                  5.90e-03
## 1332 6.79e-04 -2.45e-04 1.48e-03 -1.15e-03 -4.13e-05 -5.91e-04
                                                                 8.00e-04
## 1333 -3.81e-02 -3.08e-02 1.89e-02 -2.85e-02 -6.58e-03
                                                       3.25e-02
                                                                 1.29e-02
       6.30e-02 -1.40e-02 -1.21e-02 1.43e-02 1.89e-01 -6.36e-02 -1.65e-01
## 1334
## 1335 -2.69e-02 -1.92e-03 -1.39e-02 2.95e-02 5.46e-02 4.52e-02 -4.67e-02
        3.62e-05
                 2.12e-03 -1.42e-03 4.32e-04 1.80e-03 1.45e-03 -1.69e-03
## 1336
## 1337
        2.95e-03 2.82e-04 4.85e-03 -3.87e-03 -3.59e-03 4.46e-03 -7.21e-04
## 1338 -1.32e-02 -1.19e-03 -5.98e-03 -4.67e-03 3.12e-03
                                                       8.93e-03 -4.47e-03
## 1339 -7.88e-02 -6.30e-02 7.00e-02 2.26e-02 4.44e-02
                                                       6.87e-02 -4.40e-02
## 1340 -4.99e-02 -4.12e-02 2.39e-02
                                    2.57e-02 -6.11e-04 -3.00e-02
                                                                 5.22e-03
## 1341 -1.61e-02 1.99e-03 3.27e-03 2.34e-02 -5.59e-03 -2.89e-03
                                                                 5.60e-03
## 1342 1.15e-04 -1.07e-02 -7.39e-03 -2.57e-03 -7.54e-03 -2.24e-03
                                                                 8.87e-03
## 1343 -1.20e-02 1.71e-03
                          2.61e-04 -5.51e-03 -1.59e-02 -1.41e-02
                                                                 5.55e-03
## 1344 2.26e-02 1.96e-02 7.66e-03 -9.33e-03 7.56e-03 2.89e-02
                                                                 7.14e-03
## 1345 -1.79e-02 -2.56e-04 -9.45e-03 -5.69e-03 -2.01e-02
                                                       2.62e-02
                                                                 2.96e-02
## 1346 -3.26e-02 -2.87e-03 3.05e-02 2.96e-02 -3.22e-02 2.13e-02
                                                                 2.06e-02
## 1347 -5.02e-03 7.28e-05 -9.06e-03 8.82e-03 -1.28e-04 -8.83e-03 -6.43e-04
## 1348 2.24e-02 1.96e-02 -2.97e-02 2.06e-02 -2.87e-02 -2.02e-02 2.92e-02
```

```
## 1349 4.06e-04 -2.90e-03 -2.76e-03 -2.86e-04 1.92e-03 2.27e-03 -3.29e-03
## 1350 -4.29e-02 -7.22e-03 -4.46e-02 3.79e-02 7.93e-03 -1.08e-02 -1.21e-02
## 1351 1.25e-02 1.01e-02 -1.02e-02 -1.59e-02 1.03e-04 -3.22e-03 -2.19e-03
## 1352 -2.83e-03 1.37e-02 -2.51e-03 4.74e-03 -1.74e-02 1.07e-02 2.26e-02
## 1353 -7.04e-03 -4.30e-04 -2.88e-03 -1.28e-02 -7.10e-03 1.04e-02 7.22e-03
## 1354 4.68e-02 -2.91e-03 4.30e-02 -1.03e-01 -1.09e-02 -7.79e-02 -2.65e-03
## 1355 -1.16e-01 -8.34e-02 8.31e-02 1.57e-02 -3.65e-02 7.05e-02
## 1356 -2.13e-02 -2.80e-03
                           3.20e-02
                                     1.93e-02 -8.28e-03
                                                         1.41e-02
                                                                    1.06e-02
## 1357 -2.46e-03 -2.62e-04
                            1.51e-03 -9.10e-04 -2.46e-03
                                                         1.50e-03
## 1358 8.20e-04 -2.29e-04
                           7.83e-04 3.35e-04 -2.11e-03 -1.79e-03
## 1359 -7.02e-04 -2.37e-02 -1.54e-02 -4.06e-03 9.66e-04 -1.85e-02 -4.35e-03
## 1360 -2.12e-02 -1.14e-03 -1.13e-02 2.03e-02 1.74e-02 -2.30e-02 -2.32e-02
## 1361 -3.41e-04 -1.70e-02
                           3.36e-03 -1.73e-02 1.21e-02 -3.54e-03 -1.18e-02
## 1362 -3.84e-03 -4.59e-04 6.16e-04 -6.54e-03 2.65e-03 -4.52e-03 -8.17e-04
        2.16e-02 1.95e-02 1.73e-02 -5.19e-03 -6.38e-03 -9.31e-04 8.02e-03
## 1363
## 1364 1.62e-02 1.37e-02 1.50e-02 -5.69e-03 -4.58e-03 -3.24e-03
## 1365 -2.56e-02 -2.03e-03 2.09e-02
                                     2.32e-02 7.25e-03 -2.15e-02 -1.49e-02
## 1366 -6.19e-02 -5.34e-02 -5.75e-02 9.14e-02 2.28e-02 -8.39e-02 -2.16e-02
## 1367 -1.66e-02 9.39e-04 2.84e-02
                                     3.84e-02 -3.49e-03 2.11e-04
                                                                   3.82e-03
## 1368 -1.48e-02 -2.12e-04 2.03e-02 -5.05e-03 3.05e-03
                                                         1.11e-02
                                                                   2.74e-03
## 1369 -2.55e-02 -1.49e-03 -2.88e-02 2.85e-02 5.61e-03 -3.11e-02
                                                                   6.16e-03
## 1370 -7.21e-02 -6.07e-02 4.50e-02 1.92e-02 -9.53e-02 1.54e-02
                                                                    1.32e-01
## 1371 9.07e-03 -2.79e-03 -2.33e-03 3.70e-03 -5.07e-04 -7.46e-03 -4.88e-03
## 1372 -4.48e-03 1.52e-03 -7.06e-03 9.81e-03 -6.33e-03
                                                         1.18e-02
                                                                    3.24e-03
## 1373 -1.50e-02 -2.08e-03 -1.41e-02 -4.67e-03 -1.41e-02
                                                          2.33e-02
                                                                   1.44e-02
## 1374 -1.04e-03 -2.66e-02 5.10e-03
                                     1.94e-02 -3.48e-02
                                                          1.68e-02
                                                                    5.65e-02
## 1375 -7.21e-03 1.38e-03 -2.11e-03 -3.31e-03 1.70e-02 -1.21e-02 -2.06e-02
## 1376 -4.43e-02 -4.07e-02 -3.99e-02 7.79e-02 -2.27e-02 6.28e-03
                                                                   4.71e-03
## 1377 -1.01e-04 3.88e-03 3.23e-04 7.53e-04 -4.82e-03
                                                          2.91e-03
                                                                    3.70e-03
                                                          2.50e-03
## 1378 2.03e-03 -2.04e-04 -2.48e-03 9.41e-04 9.80e-04
                                                                    1.01e-03
## 1379 -1.89e-03 -3.28e-02 -1.08e-02 -6.69e-03 -1.26e-02 -2.48e-02
                                                                    1.93e-02
## 1380 4.69e-02 3.31e-03 -2.73e-02 -5.00e-02 -2.40e-02 -3.62e-02
                                                                   2.90e-02
## 1381 -1.55e-02 5.35e-04 -7.31e-04 -4.22e-03 -1.29e-02
                                                         2.88e-02
                                                                   5.24e-03
## 1382     1.71e-02     1.70e-02     1.11e-02     -7.56e-03     5.78e-03     -1.39e-03     -2.31e-03
## 1383 -3.19e-03 -2.96e-02 1.90e-02 -9.80e-03 1.70e-02
                                                         3.20e-02 -1.32e-02
                                                         1.16e-03 -5.99e-04
## 1384 -1.13e-03 3.26e-04
                           3.71e-04 -2.67e-03 9.20e-04
## 1385
       1.92e-02
                 1.56e-02 2.05e-02 -9.22e-03 -1.00e-02 -1.04e-02 5.92e-03
## 1386 -3.50e-04
                  3.36e-03 -2.74e-03 9.63e-04 3.61e-03 5.10e-05 -2.08e-03
## 1387
        3.14e-02 2.39e-02 -3.55e-02 -9.98e-03 1.69e-02 3.25e-02 -6.60e-03
## 1388 -2.01e-02 -2.01e-03 -1.89e-02 -6.74e-03 -1.89e-02
                                                         2.81e-02
                                                                   1.31e-02
       5.45e-04 5.67e-03 -5.43e-03 2.22e-03 -1.27e-03
                                                         3.69e-03
                                                                    1.59e-03
## 1390 -2.26e-02 -2.48e-03 1.50e-02 5.16e-02 -1.65e-02
                                                          3.59e-02
                                                                    1.81e-02
## 1391
        1.14e-02
                 1.20e-01 -1.15e-01 -7.46e-02 -3.68e-02
                                                         7.42e-02
                                                                    1.17e-02
                                     3.28e-02 3.22e-02
## 1392
        4.11e-02
                  3.56e-02 1.85e-02
                                                          5.06e-02
                                                                    1.12e-02
                  5.26e-04
                           2.96e-03 -1.15e-03 -2.91e-03 -6.71e-03
## 1393 -5.56e-03
                                                                   3.09e-03
## 1394
        7.72e-04
                  6.68e-04 5.26e-04 -2.36e-04 -7.83e-04 -6.73e-04
                                                                   7.03e-04
## 1395
        1.41e-02
                  1.09e-02 3.63e-03 9.24e-03 1.86e-02 -1.10e-02 -2.42e-02
        5.33e-02 1.38e-04 -9.89e-03 1.35e-02 5.14e-03 5.72e-02 -3.61e-03
## 1396
## 1397 -6.96e-02 -5.61e-02 -1.10e-02 8.81e-03 1.21e-02 -6.59e-02 9.59e-03
## 1398 -7.86e-03 1.03e-04 5.15e-04 -2.08e-03 -2.00e-02 -2.48e-03 2.08e-02
```

```
## 1399 1.17e-04 3.91e-03 -3.24e-03 7.01e-04 1.28e-05
                                                        2.94e-04 3.41e-04
## 1400 2.54e-03 -1.33e-04 -5.51e-03
                                                        3.10e-04 -4.39e-03
                                     7.25e-04
                                                6.15e-03
## 1401 -2.42e-02
                 3.24e-03 -2.55e-02 -6.40e-03
                                                1.95e-02
                                                         1.81e-02 -1.08e-02
                 1.09e-03 -4.18e-04 -7.88e-03 1.30e-03
## 1402 -2.67e-03
                                                          2.41e-03 -2.92e-03
## 1403 -5.54e-03 -4.38e-02 3.32e-03 6.29e-02 -1.62e-02 -2.67e-02
                 2.41e-02 -1.18e-02 -1.15e-02 -2.29e-02
## 1404
        3.09e-02
                                                          2.99e-02
                                                                   1.37e-02
## 1405
         1.00e-02
                 1.03e-02 1.06e-02
                                     5.37e-03 -1.95e-03 -6.17e-04
                                                                   1.05e-02
                                     5.65e-03 -2.58e-03
## 1406
        9.87e-03 -3.48e-04 -1.09e-02
                                                         1.84e-03
                                                                   7.18e-03
                 3.69e-02 -1.42e-02 -9.86e-03 -3.65e-02 4.84e-02
## 1407
        4.60e-02
## 1408
         2.86e-02
                 2.47e-02 2.16e-02
                                     2.27e-02 -3.50e-02 -2.24e-03
                                                                   2.56e-02
## 1409
        1.06e-02 8.61e-03 -6.98e-03 -4.70e-03 6.20e-03 -1.27e-02 -3.52e-03
                  1.14e-04 -3.13e-03 -2.83e-03 1.73e-03 -2.20e-03 -1.52e-03
## 1410 -6.13e-03
## 1411 -9.16e-04 -5.14e-05 -1.24e-03 -2.06e-04 -1.23e-04 4.11e-04
                                                                   5.10e-04
## 1412 -1.53e-02 -3.22e-03 -9.11e-03 -5.03e-03 1.48e-03 5.52e-03
                                                                   3.23e-03
        1.29e-04 1.71e-07 5.48e-05
                                     3.96e-05 -2.02e-04 -7.35e-05
                                                                   1.07e-04
## 1413
## 1414 -3.25e-03 -3.13e-02 6.82e-03 -7.31e-03 2.27e-02 -4.51e-03 -1.81e-02
## 1415
        2.10e-02
                 1.47e-02 -1.02e-02 -3.76e-03 -8.20e-03 -3.73e-03
## 1416 -8.95e-04 -1.36e-02 2.83e-03 8.92e-03 -4.55e-04 -7.33e-04
                                     1.94e-03 6.77e-03 -4.97e-03 -1.21e-02
## 1417
       5.98e-03 -1.37e-03 8.40e-03
## 1418 -1.02e-02 -1.09e-03
                           7.81e-03 -3.64e-03 5.98e-03 -2.07e-03 -5.46e-03
## 1419 -2.59e-02 -4.16e-03 -7.76e-03
                                     2.59e-02 -1.23e-02 -7.61e-03
                                                                   1.32e-02
                           4.00e-02 -8.81e-03 -1.35e-02 4.19e-02
## 1420
        1.29e-03 -3.84e-02
                                                                   1.05e-02
        3.92e-03 4.56e-04 2.14e-03 1.88e-03 -3.08e-03 4.85e-03 -1.83e-04
## 1421
## 1422
        6.91e-03 -3.52e-03
                            1.65e-02
                                     2.25e-03 -7.18e-03 -6.40e-03
                 1.14e-03
                            2.43e-02 -5.71e-03 1.15e-02 -3.30e-03 -6.58e-03
## 1423 -1.85e-02
## 1424
        1.28e-02
                  1.08e-02
                           4.46e-04 -6.32e-03 1.09e-02 -4.11e-03 -9.08e-03
## 1425
        8.72e-03
                  7.16e-03
                            5.22e-03 -1.87e-03 -3.55e-03 -6.43e-04
## 1426 -2.40e-02 -1.14e-03 -4.19e-02 -1.35e-02 -2.70e-02 -3.44e-02
                                                                   3.22e-02
                 3.44e-02
                           3.25e-02 2.98e-02 3.10e-02 2.42e-02 -1.84e-02
## 1427
        4.53e-02
## 1428 -9.55e-03 -1.43e-03 -7.31e-03 -3.44e-03 2.36e-03 -1.17e-02
                                                                   1.98e-03
## 1429 -2.12e-02 -4.41e-03 -1.02e-03
                                     1.94e-02 1.86e-03
                                                         1.08e-02
                                                                   4.78e-04
        1.68e-02 1.32e-02 8.77e-03 -5.08e-03 -9.10e-03 -1.61e-02
                                                                   1.86e-02
## 1430
## 1431
        4.62e-04 -3.19e-06
                           9.57e-04 -1.47e-03 -1.08e-03
                                                         2.38e-04
                                                                   1.19e-03
## 1432
        7.07e-03 2.96e-04 -5.55e-03 3.75e-03 2.05e-03 8.56e-03
                           5.50e-03 -9.86e-03 9.41e-03 -5.50e-03 -1.20e-02
## 1433 -3.97e-03 -8.13e-05
        2.86e-04 -3.91e-02 -2.29e-02 -6.65e-03 -3.07e-02 -4.81e-03
                                                                   2.32e-02
## 1434
        7.62e-04 -4.52e-03 4.95e-03 -1.82e-03 6.35e-03 -3.18e-03 -2.76e-03
## 1435
## 1436
        3.83e-02
                 3.20e-02 3.18e-02 -1.04e-02 1.25e-02 -2.60e-02 -4.22e-03
        4.74e-02 4.24e-02 1.77e-02 -2.00e-02 5.98e-03
## 1437
                                                         6.60e-02 -5.38e-03
## 1438 -3.09e-03 -3.16e-03
                           3.46e-03
                                     1.81e-03
                                               1.38e-03
                                                          3.20e-03
                                                                   2.39e-03
       6.90e-02 1.04e-02 -9.09e-02 2.69e-02 1.37e-02 -9.56e-02 -1.16e-02
## 1440 -4.89e-03 -4.90e-04 -8.38e-03
                                     5.64e-03 -1.25e-02 -6.34e-03
                                                                   9.79e-03
## 1441 -1.14e-03 -9.08e-03 -8.56e-03 -1.72e-03 -2.32e-03
                                                         2.52e-03
                                                                   5.82e-03
                 2.70e-02 -8.17e-03 6.63e-03 -9.50e-03
## 1442 -6.02e-03
                                                          2.19e-03
                                                                   7.52e-03
        5.96e-02 6.92e-03 -8.95e-02
                                     2.39e-02 -9.86e-02
                                                         6.17e-02
                                                                   9.53e-02
## 1443
## 1444
        3.64e-03 -4.85e-05 -1.79e-03
                                     1.45e-03 2.19e-03
                                                         1.23e-03
                                                                   1.87e-03
                           2.09e-02
## 1445
        5.57e-02 -4.45e-03
                                     1.44e-02 -7.21e-02
                                                          3.28e-02
                                                                   1.90e-04
## 1446 -7.15e-03 1.82e-04 3.52e-03 8.40e-03 -7.32e-03
                                                         6.16e-03
                                                                   3.02e-03
## 1447 -2.71e-03 -2.10e-04 -4.71e-03
                                     3.77e-03 1.08e-03 -1.23e-03 -2.09e-03
## 1448 2.18e-05 6.07e-04 5.36e-04 -8.25e-04 2.22e-05 4.56e-04 -1.82e-04
```

```
4.19e-05 -4.73e-03 1.55e-03 3.37e-03 5.34e-03 1.70e-03 -5.26e-03
                                                          2.71e-02 -2.44e-03
## 1450
        2.32e-02
                  1.92e-02 -1.00e-02 -7.73e-03 5.07e-03
## 1451
         3.51e-02
                  3.08e-02
                            4.36e-02 -1.20e-02 -3.41e-02 -2.61e-02 1.41e-02
## 1452
                  5.53e-05
                            1.34e-03
                                      1.44e-04 3.60e-04
        7.48e-04
                                                          1.12e-03 -3.59e-04
## 1453 -9.75e-03
                  1.13e-01
                            9.93e-02
                                      1.86e-02 -2.51e-02 2.03e-02 2.33e-02
                  2.21e-04 -1.87e-02
## 1454 -9.45e-03
                                      1.23e-02 -5.83e-04 -1.30e-02 -2.04e-03
## 1455
         1.57e-02
                  1.27e-02
                            8.29e-03 -5.19e-03 -8.86e-03 -1.69e-03
                                      1.74e-02 1.20e-02 -2.92e-03 -4.96e-03
## 1456
         2.28e-02
                  1.84e-02
                            1.12e-02
                  1.78e-03 -1.69e-02 -1.08e-02 -7.87e-03 -4.09e-03
## 1457 -2.65e-02
## 1458
        1.14e-03
                  1.49e-05
                            1.71e-03
                                      3.27e-04 -7.44e-04 5.39e-04 -1.02e-03
## 1459 -1.52e-02 -3.26e-03
                            9.17e-04
                                      3.11e-02 8.68e-03 -1.51e-02 -6.19e-03
                  7.21e-05
                            2.37e-02
                                      2.69e-02 -3.49e-02
## 1460 -2.68e-02
                                                          1.91e-02
                                                                    3.88e-02
        4.34e-02
                  3.46e-02 -8.15e-03
                                      3.40e-02 4.24e-02
                                                          4.97e-02 -4.23e-02
## 1461
## 1462 -3.47e-03
                  8.05e-02 -7.50e-02 -5.19e-02 -1.68e-02 -8.22e-02
                                                                    1.86e-02
## 1463 -1.02e-02
                  4.91e-04
                            2.20e-03
                                      1.09e-02 -2.31e-02 -1.35e-02
                                                                    2.00e-02
## 1464
        1.61e-02
                  1.51e-02 -4.03e-03 -7.68e-03 2.92e-02 1.96e-02 -3.43e-02
## 1465
         2.19e-02
                  1.86e-02
                            3.09e-02
                                      1.52e-02 1.26e-02 -8.04e-04 -7.76e-03
## 1466 -4.53e-03 -2.85e-04
                            4.82e-03 -7.20e-03 -7.06e-03 -4.33e-03
## 1467 -1.74e-03
                  2.62e-05
                            2.21e-03
                                      2.19e-03 -1.27e-03
                                                          3.08e-03 -3.75e-04
## 1468 -2.36e-02 -2.67e-03 -2.11e-02 -4.08e-02 -1.11e-02
                                                          1.25e-02
                                                                    3.38e-03
## 1469 -3.38e-03
                 2.98e-04 4.87e-04 4.50e-03 -4.36e-04
                                                          2.52e-03
                                                                    2.04e-03
  1470 -1.50e-04 -6.14e-06 -1.13e-04 -2.77e-04 -2.14e-04 -5.96e-05
                                                                    1.89e-04
         dfb.0vT1
                 dfb.PrSH dfb.TtWY dfb.WrLB dfb.YrAC
##
                                                          dfb.YICR
                                                                    dfb.YSLP
## 1
         8.96e-02 -6.43e-02 -6.68e-02 -1.35e-01 -3.13e-03
                                                          1.77e-02 -3.95e-02
## 2
         5.56e-03 -1.85e-02
                            1.29e-02 -1.92e-03 -3.54e-03 -4.71e-03
## 3
         7.42e-02 -2.40e-03
                            1.62e-02
                                      2.20e-02 -9.48e-03 -1.79e-02
## 4
        -3.57e-02
                 2.92e-02 -6.43e-03 -7.36e-03 -2.27e-02 -3.94e-02 -2.09e-03
                  1.68e-02 -1.28e-02 -6.61e-03 9.99e-03 1.55e-03 -1.03e-02
## 5
        8.31e-03
                  7.24e-03 -3.32e-03
## 6
         8.68e-03
                                      1.35e-02 8.38e-03 -1.25e-02 -1.55e-03
## 7
        -2.62e-02 -2.26e-02
                            5.17e-03
                                      1.44e-02 -6.04e-03 8.53e-03
                                                                    1.88e-04
                            5.54e-03 -3.15e-03 -4.38e-03
## 8
         5.68e-03 -1.24e-02
                                                          5.06e-03 -9.71e-04
## 9
         1.13e-02 -2.44e-02
                            2.26e-02 -1.90e-03 7.16e-03 -9.39e-03
## 10
         4.75e-03
                  5.35e-03 -1.25e-02
                                      7.06e-03 1.37e-02 -3.43e-03 -1.29e-02
## 11
         5.00e-03
                  6.88e-03
                            1.81e-03 -4.28e-03 -3.84e-03 -3.52e-03
## 12
        -4.65e-02
                  2.36e-02 -1.02e-02 -8.06e-03 4.61e-03
                                                          6.50e-03
                                                                    3.30e-02
        1.48e-02 -8.72e-03
                            4.51e-03
                                      1.94e-02 -4.17e-03
                                                          1.51e-02 -2.56e-02
## 13
## 14
         4.35e-03
                  7.80e-03
                            4.45e-03 -3.26e-03 7.59e-04
                                                          8.78e-04 -2.14e-03
         5.81e-02 -1.46e-02
                            1.93e-02
                                      1.46e-02 5.68e-04 -8.87e-03 -1.59e-02
## 15
                            5.76e-03 -1.89e-03 7.50e-03 -5.16e-03 -1.19e-02
## 16
         3.34e-03
                  7.45e-03
                  2.01e-02 -2.71e-03
                                      2.30e-02 -8.15e-03
## 17
        -4.28e-02
                                                          1.71e-02 1.33e-02
## 18
        -1.94e-02
                  8.15e-03 -2.90e-04
                                      1.25e-02 -3.91e-03
                                                          6.64e-03 -1.51e-03
## 19
        -2.97e-03
                  1.35e-03
                            2.71e-03
                                      2.19e-03 1.59e-02 -4.62e-03 -7.69e-03
## 20
        -3.54e-02
                  2.74e-02
                            8.50e-03 -9.18e-03 1.82e-03
                                                          9.15e-05 -1.08e-03
        1.26e-03 -2.39e-03 -2.72e-04
## 21
                                      3.37e-03 -5.21e-05
                                                          1.30e-03 -3.53e-04
                  1.23e-01
                            3.19e-02
                                      2.27e-02 1.95e-02 -3.86e-03 -3.27e-02
## 22
        -3.72e-02
## 23
        4.99e-03
                  1.51e-02
                            1.15e-02 -4.13e-03 3.96e-03
                                                          7.39e-03
                                                                   1.04e-02
## 24
        1.29e-02
                  5.67e-03
                            5.60e-05 -5.78e-03 -6.37e-04
                                                          6.85e-03 -4.82e-03
        -3.01e-02 -6.39e-02 2.18e-02 2.09e-02 1.34e-03 -1.56e-02 2.24e-04
## 25
## 26
        -1.24e-02 -2.05e-02 -1.28e-02 -2.37e-02 -2.17e-02 4.65e-02 -1.10e-02
       3.24e-02 3.66e-02 5.74e-03 1.15e-02 9.88e-03 -3.85e-02 2.64e-02
```

```
## 28
                             5.67e-03 -1.47e-03 -4.17e-03 -7.61e-03 -2.01e-03
         4.27e-03
                  7.46e-03
## 29
        -6.64e-04 -5.05e-04
                             9.85e-04 9.73e-04 1.37e-03 -4.69e-03 -8.80e-04
## 30
         8.30e-03
                   1.10e-02
                             1.13e-03
                                       1.88e-02
                                                 2.33e-02 -5.44e-03 -6.08e-03
                   1.31e-02 -7.35e-03 -4.17e-03 1.13e-03 -9.54e-05 -5.26e-04
## 31
         7.80e-03
                                                            5.48e-03
## 32
        -1.18e-02
                   5.25e-03
                             6.79e-03 -1.52e-02 -4.86e-04
                                                                      3.12e-04
## 33
         1.13e-02
                   8.02e-03 -1.44e-02 -7.91e-03 -1.73e-02
                                                           4.48e-02
                                                                      8.25e-03
## 34
        -6.24e-02 -2.26e-02
                             2.76e-01
                                      1.58e-01 -5.67e-02 -7.10e-02
                                                                      1.17e-02
##
  35
         8.17e-02
                  1.26e-02
                             5.67e-02 -4.86e-02 4.66e-03 -3.67e-02
                                                                      4.18e-02
## 36
        -6.66e-03 -6.80e-03 -7.76e-03 -8.03e-03 2.82e-03 -2.17e-03 -8.13e-04
  37
         8.93e-02 -2.44e-02 -1.12e-01
                                       2.72e-02 2.52e-02 -1.79e-03 -1.84e-02
##
## 38
        -9.54e-04 -8.06e-04 -1.19e-03
                                       4.88e-04 -1.82e-04 -3.09e-04
                                                                      8.68e-04
                             3.78e-04 -6.30e-02 -4.95e-04
## 39
        -5.80e-02
                  1.31e-02
                                                            2.84e-03
                                                                      2.49e-03
## 40
         5.19e-03 -9.49e-03 -2.57e-03 -2.30e-03 -1.39e-03
                                                            2.20e-03
                                                                      1.95e-03
## 41
         2.25e-03
                  2.45e-03
                             3.15e-03 -1.14e-03 -1.41e-03
                                                            1.51e-03 -3.70e-04
                  4.71e-03
                             5.21e-03 -3.30e-03 -5.45e-03
                                                            6.16e-03 -8.26e-04
## 42
         7.20e-03
## 43
        -2.43e-02 -4.22e-02 -2.29e-02 -3.66e-02 5.51e-03 -1.98e-02
                                                                      1.66e-03
## 44
         5.64e-03 -8.07e-05
                            6.14e-03 -5.47e-04 3.60e-03 -9.43e-03
                                                                      8.54e-03
         5.72e-03 -2.11e-02 -5.58e-03 -1.77e-03 -3.27e-03 -5.35e-03
                                                                      3.16e-03
## 45
## 46
        -4.45e-02 -6.80e-02 -9.51e-02
                                      1.10e-02 9.33e-03
                                                            1.34e-01
                                                                      2.35e-01
## 47
         6.43e-03 -1.72e-02
                            7.26e-05 -6.21e-03
                                                 6.86e-03
                                                            1.07e-02 -3.11e-02
         1.06e-02 -2.48e-02 -9.09e-03 -7.32e-03 -2.68e-03
                                                           8.98e-03 -1.04e-04
## 48
## 49
        -4.18e-02 -3.69e-02
                             6.75e-03 -1.19e-02 4.63e-03 -4.83e-03
                                                                      2.84e-02
        -3.67e-03 5.01e-03 -5.26e-03
                                      2.25e-03 2.77e-03 -4.49e-03
## 50
                                                                      2.68e-04
## 51
         8.13e-02 -2.54e-02
                             1.19e-01
                                       1.81e-02 -5.25e-02 -1.54e-02
                                                                      5.86e-03
## 52
        7.10e-02 -2.90e-02 -2.91e-02 -4.48e-02 -1.03e-02 -4.21e-04
                                                                      2.86e-02
## 53
        -3.55e-02 -3.60e-02
                             2.13e-02
                                       2.13e-02
                                                 7.67e-04 -6.39e-04
                                                                      1.19e-06
## 54
        -4.53e-02 1.70e-02
                             1.55e-02 -9.36e-03
                                                 3.44e-03
                                                           3.64e-02 -8.71e-03
## 55
        -4.46e-02 -2.83e-02
                             2.48e-03
                                       3.06e-02 -2.71e-03 -3.40e-03
                                                                      4.09e-03
## 56
        -4.94e-02
                  2.54e-02
                             1.73e-02 -4.60e-03
                                                 4.87e-02 -6.25e-02 -2.17e-02
## 57
        7.31e-03 -2.53e-02
                             2.05e-02
                                       1.74e-02
                                                 5.90e-03 -1.35e-02
                                                                     1.46e-02
## 58
        -5.22e-02
                   6.72e-03
                             2.31e-02 -1.70e-02
                                                 5.90e-03
                                                            6.58e-03 -1.67e-02
                                                            7.84e-03 -5.51e-03
## 59
                             2.16e-03 -1.10e-02 -8.19e-03
        -6.62e-03
                   1.78e-02
## 60
        4.46e-04 -7.47e-04
                             1.20e-03 -1.85e-03
                                                 1.29e-04
                                                            1.02e-04
                                                                     8.64e-04
## 61
        -3.65e-02 -3.58e-02
                             5.24e-03 -6.88e-03
                                                 2.30e-02 -1.13e-02 -2.97e-02
## 62
         1.65e-02
                   2.41e-02
                             6.26e-03 -1.00e-02
                                                 7.92e-03
                                                            4.40e-02 -5.35e-02
                             2.00e-02
                                      2.21e-02 -9.58e-02
                                                            1.09e-01 -6.68e-02
## 63
        -3.92e-02
                   1.46e-02
                                       1.55e-02 -6.75e-03 -3.93e-02
## 64
         7.81e-03
                   1.78e-02 -8.86e-03
                                                                      1.79e-03
## 65
        -1.70e-03 -1.46e-03 -2.47e-04
                                       5.12e-04 -1.51e-03
                                                            5.43e-03
                                                                      6.68e-03
## 66
        -7.66e-03
                   1.18e-03
                             2.21e-03 -2.45e-03 -1.82e-04
                                                            6.91e-03
                                                                      2.71e-03
                             3.80e-02 -6.18e-03 -9.23e-03 -2.37e-02
## 67
         1.69e-02
                   1.80e-02
                                                                      2.36e-02
## 68
         3.46e-03 -2.76e-03 -1.42e-02 -2.24e-03 5.40e-03
                                                            2.85e-03 -3.85e-04
                                      2.62e-02 -1.94e-03
## 69
         1.42e-02
                   1.36e-02
                             6.39e-03
                                                            3.60e-04
                                                                      2.27e-04
## 70
         7.36e-02
                   2.51e-02 -5.25e-02 -5.33e-02 1.73e-02 -1.89e-02 -3.58e-03
## 71
         1.52e-02
                   2.90e-02 -1.78e-02
                                      2.16e-02 1.82e-02 -7.10e-03
                                                                      4.18e-03
         1.60e-03 -6.12e-03 -6.91e-04 -1.05e-03 -5.92e-04 -8.48e-05
## 72
                                                                      1.67e-03
## 73
         1.13e-02 -1.01e-02
                             1.67e-02 -5.56e-03 -6.16e-03
                                                           1.76e-03 -7.88e-03
## 74
         8.48e-04 -1.09e-03
                             3.50e-04 -7.22e-04 -7.48e-04
                                                            2.16e-03
                                                                      2.34e-03
                  3.73e-03 1.59e-04 -1.71e-03 -9.76e-04
## 75
         2.65e-03
                                                           1.97e-03 -1.04e-04
##
  76
         1.08e-03 -4.22e-03 -4.88e-04 -5.50e-04 -6.04e-04 -3.15e-04
                                                                      1.81e-03
         6.04e-03 3.73e-03 -1.04e-02 -8.32e-04 -2.41e-03 -3.04e-02 1.72e-02
## 77
```

```
## 78
        -2.75e-02
                   5.12e-03 -9.20e-03 -3.09e-02
                                                  1.88e-02
                                                            5.77e-03
                                                                      2.11e-03
                                                                      8.53e-03
## 79
         7.63e-03
                   9.16e-03 -4.76e-03 -2.45e-02
                                                  2.01e-03
                                                            3.16e-03
## 80
        -2.81e-02 -3.40e-02 -1.64e-02 -8.52e-03
                                                  1.47e-03
                                                            4.99e-03
                                                                      5.19e-03
                                       2.69e-02 -2.12e-02 -3.96e-02
## 81
        -3.11e-02
                   1.70e-02 -5.30e-03
                                                                      2.65e-03
## 82
         9.47e-03 -1.13e-02 7.21e-03 -6.49e-03 -8.08e-03 -2.29e-03
                                                                      1.20e-02
## 83
         2.44e-04
                   1.46e-04 -7.53e-04 -1.64e-04
                                                 4.86e-04
                                                            1.66e-04 -1.38e-04
## 84
        -1.89e-02
                   1.11e-02 -1.23e-02 -3.02e-03
                                                  6.76e-03 -1.92e-02
                                                                      1.60e-02
## 85
         4.39e-03
                   5.73e-06
                             1.08e-02 -3.74e-03 -6.02e-03
                                                            6.82e-03
                                                                      2.93e-04
## 86
         4.65e-03
                   6.45e-03 -2.60e-02
                                        5.35e-03
                                                  7.02e-03 -2.75e-03
                                                                      3.84e-03
## 87
         9.24e-03
                   6.70e-03 -7.35e-03 -4.07e-03
                                                  1.58e-03
                                                            5.44e-03 -2.88e-03
## 88
        -5.45e-03
                   1.50e-02 -1.51e-03
                                        3.25e-03
                                                  2.11e-03 -3.48e-03 -3.03e-03
         1.91e-03 -4.39e-03 -2.08e-03 -6.32e-04
## 89
                                                  5.47e-03 -4.12e-03 -9.71e-03
## 90
        -4.45e-02
                   1.30e-02 -1.77e-01
                                        1.39e-02 -4.24e-02
                                                            7.66e-02
                                                                      1.62e-02
                                        1.73e-02 -3.40e-02
## 91
         1.11e-02 -3.68e-02
                             5.78e-03
                                                            6.42e-02 -3.35e-02
## 92
        -3.89e-02 -5.21e-02
                             4.10e-02
                                        7.23e-02 -5.05e-02 -5.00e-02
                                                                      2.52e-02
## 93
        -3.46e-02
                   1.73e-02 -3.10e-03
                                        2.36e-02 -6.42e-04 -1.81e-02
## 94
        -5.44e-02
                   2.07e-02 -2.56e-02
                                       4.33e-02
                                                 5.14e-02 -5.25e-02 -6.64e-02
## 95
         5.33e-03 -2.70e-03 -3.74e-03 -3.27e-03
                                                  1.97e-03 -6.80e-03 -6.95e-03
## 96
         1.62e-03
                   2.60e-03
                             2.77e-03
                                        6.07e-03
                                                 1.48e-03 -8.82e-04
                                                                      1.66e-03
         5.79e-03 -1.88e-02
## 97
                             4.41e-03
                                       1.30e-02 -2.25e-03
                                                            3.10e-03
                                                                      2.81e-03
        -4.34e-04 -1.67e-04 -2.74e-04
                                        2.14e-03 -9.17e-05
                                                            1.91e-04 -9.68e-04
## 98
## 99
        -4.19e-03 -1.27e-03
                             4.81e-03 -4.40e-03
                                                 2.94e-02 -6.09e-03 -1.62e-02
## 100
         2.16e-03
                   4.89e-03 -9.73e-03 -8.49e-03
                                                  3.02e-03
                                                            1.52e-03 -2.19e-04
## 101
         8.87e-02
                   1.09e-01
                             4.06e-03
                                       2.43e-02
                                                 1.12e-02 -9.80e-03 -1.32e-02
## 102
         1.31e-02
                   9.62e-03
                             1.99e-02 -5.21e-03 -1.12e-02
                                                            8.18e-03 -9.72e-05
## 103
         5.43e-02
                   3.06e-02
                             5.83e-04
                                       1.18e-02
                                                 4.16e-03 -1.93e-02
                                                                      1.58e-02
## 104
         2.86e-03
                   2.84e-03 -6.07e-03 -1.57e-03 -6.55e-04 -1.54e-02
                                                                      1.06e-02
                                        1.17e-02 -4.79e-03 -4.09e-03
## 105
        -3.88e-03 -2.43e-03
                             1.62e-02
                                                                      6.03e-04
## 106
                   2.39e-02
                             2.05e-02
                                        5.53e-03 -3.04e-02 -5.55e-03
        -1.06e-02
                                                                      3.75e-03
## 107
        -3.12e-02 -2.00e-02 -1.29e-02
                                        1.94e-02
                                                  2.01e-02
                                                            1.51e-02
                                                                      2.00e-02
## 108
         7.36e-02 -4.83e-02 -1.02e-02
                                       8.55e-03
                                                  8.25e-03
                                                            2.04e-02 -3.37e-02
                                                            1.06e-03 -5.12e-03
## 109
                   9.95e-03
                             1.21e-03 -2.89e-03
                                                  9.96e-04
         6.01e-03
## 110
         1.41e-02
                   2.31e-03
                             1.48e-04 -8.09e-03
                                                  2.70e-04
                                                            7.54e-03 -4.52e-03
## 111
         1.43e-02 -3.64e-02 -2.10e-02
                                       3.50e-02
                                                  4.82e-02 -5.22e-02 -8.05e-02
## 112
         6.22e-02
                   8.38e-02 -2.32e-02
                                       9.22e-03
                                                  3.20e-03
                                                            3.64e-02 -4.69e-02
## 113
                   1.04e-02 -1.57e-03 -3.70e-03
                                                  1.53e-02
                                                            1.65e-03 -6.91e-03
        -1.46e-02
## 114
         8.75e-03
                   1.39e-02 -1.04e-02 -6.21e-03 -6.11e-03
                                                            1.58e-03
                                                                      1.42e-03
## 115
         7.70e-03 -2.65e-04 -1.33e-02 -3.78e-03
                                                  3.43e-03
                                                            6.35e-03 -1.03e-03
                             4.80e-04 -7.79e-04
## 116
         1.81e-03
                   2.32e-03
                                                  5.97e-04
                                                            4.05e-04
                                                                      2.28e-04
                   1.32e-02
                             7.69e-03 -2.13e-03
## 117
         7.48e-03
                                                  1.42e-02 -2.14e-02 -3.91e-03
## 118
         2.58e-04
                   1.84e-04
                             5.93e-04 -1.42e-04
                                                 2.41e-04 -1.58e-04
## 119
         4.14e-03 -1.20e-02 -2.43e-03 -3.34e-03 -1.33e-03
                                                            3.89e-03 -1.07e-03
## 120
        -1.59e-02
                   9.08e-03 3.83e-03 -1.86e-02 -1.85e-02 -1.08e-03
                                                                      1.79e-02
## 121
         1.42e-02 -5.67e-02 -1.31e-02
                                       2.14e-02
                                                 3.06e-03 -6.99e-03
                                                                      2.92e-02
## 122
        -1.83e-03 -3.61e-03 -1.62e-03
                                       7.48e-03 -2.61e-03
                                                            3.60e-03 -5.19e-03
## 123
         8.62e-02
                   3.32e-02 -1.05e-01
                                       2.85e-02 3.56e-03
                                                            1.56e-02
                                                                     4.48e-02
## 124
         3.82e-04
                   7.83e-04
                             2.31e-03 -9.26e-05
                                                 2.83e-03 -3.02e-03 -3.26e-03
                             3.41e-02 -5.21e-02 -8.78e-02 3.32e-02 7.68e-02
## 125
         7.96e-02
                  3.23e-02
## 126
         1.17e-02 -1.94e-02 -5.63e-03
                                       2.13e-02 3.39e-03 -2.68e-03 -1.79e-02
        -8.58e-02 -4.39e-02 1.94e-01 -6.70e-02 5.21e-01 -1.87e-01 1.31e-01
## 127
```

```
## 128
         5.77e-02
                   4.20e-02 1.34e-03 -4.27e-02 2.14e-03 -1.23e-02 6.76e-03
## 129
                   1.85e-03 -3.48e-03 -2.29e-03
                                                            3.55e-03 -5.27e-03
         4.29e-03
                                                 5.78e-04
## 130
         2.10e-03
                   1.42e-03
                             1.94e-03
                                      3.91e-03
                                                 8.51e-04 -3.81e-03
                                                                     7.80e-04
## 131
                   2.39e-02 -5.06e-02 -1.27e-02
                                                 1.51e-02 1.02e-03 -1.05e-03
         1.78e-02
## 132
         9.91e-03
                   1.47e-02
                             5.02e-04 -3.63e-03
                                                 1.20e-02 -2.23e-03 -6.15e-03
         6.70e-02 -5.02e-02 -3.15e-02
## 133
                                      1.38e-02 -2.56e-02 -2.83e-03
                                                                      2.18e-02
## 134
        -1.03e-02
                  3.16e-03
                             6.22e-03 -1.83e-03
                                                 1.64e-03 -4.46e-03
                                                                      7.36e-03
## 135
         4.46e-03 -1.45e-02 -5.28e-03 -3.34e-03
                                                 4.50e-03 -1.78e-03 -6.80e-03
## 136
         4.59e-03 -1.12e-02
                            3.73e-03 -1.94e-03 -1.59e-03 -3.22e-04
## 137
        -3.82e-02 -1.28e-02 -2.39e-03
                                       2.24e-02 -3.88e-02 -1.10e-02 -3.24e-02
                                                            6.71e-03 -6.51e-04
## 138
        -4.25e-03 -2.62e-03
                             5.24e-03
                                       1.22e-02
                                                 7.44e-05
## 139
         1.37e-02 -1.30e-02
                             4.52e-03 -9.90e-03
                                                 1.61e-02
                                                           4.57e-03 -1.25e-02
## 140
        -2.57e-02 -1.60e-02 -6.46e-03
                                       4.04e-02
                                                 5.59e-03 -1.86e-02 -1.10e-03
## 141
        -2.62e-02
                   1.04e-01
                             4.97e-02
                                       1.09e-01 -2.81e-03
                                                           1.12e-02 -3.60e-02
## 142
         1.02e-02
                   1.01e-02
                             6.56e-03
                                       1.13e-02 -5.15e-03 -1.01e-02
                                                                     9.45e-03
## 143
        -3.68e-02 -3.39e-02 -6.48e-02 -8.15e-03 2.46e-02
                                                           4.94e-03 -1.24e-02
## 144
         1.34e-02
                   1.07e-02
                             3.48e-03
                                       2.60e-02 -4.28e-04 -1.20e-02
                                                                      1.48e-02
## 145
         2.48e-03 -1.67e-03
                             2.71e-04 -5.53e-03 1.66e-03 -2.32e-03
                                                                      4.07e-03
## 146
         6.71e-03
                   1.67e-03 -8.77e-03 -2.64e-03 3.26e-03
                                                           1.62e-03 -4.92e-03
## 147
         1.13e-02
                   1.27e-02 -2.68e-03 -7.56e-03 -8.67e-03 -2.60e-04
                                                                     1.55e-03
## 148
         9.07e-03
                   6.22e-03 -2.13e-03
                                      1.45e-02 2.77e-02 -4.17e-03 -1.83e-02
         5.88e-03 -1.56e-02 4.32e-03 -4.89e-03 -8.04e-03
## 149
                                                           1.66e-02 -9.37e-05
## 150
                   6.48e-03 -4.98e-03 -8.15e-03 -1.06e-02
         1.32e-02
                                                            1.32e-02 -4.36e-03
## 151
         5.65e-03
                   9.46e-03 -6.81e-03 -5.13e-03 -1.36e-02
                                                            1.37e-02
                                                                     1.23e-02
        -2.12e-03 -2.08e-03 -4.18e-03
## 152
                                       3.62e-04 1.23e-03
                                                            4.92e-03 -6.13e-03
## 153
        -2.96e-02 -2.23e-02
                             9.26e-03
                                       4.37e-02
                                                 9.89e-03 -1.82e-02 -1.08e-02
## 154
        -2.19e-03
                  3.61e-03
                             4.56e-03 -1.02e-02
                                                 6.16e-04 -1.34e-03 -8.96e-03
                                                 7.79e-03 -1.31e-02
## 155
         6.97e-03
                  4.42e-03
                             1.44e-02 -2.00e-03
                                                                     1.90e-03
                             6.33e-03
                                       4.41e-03 -1.31e-03
                                                            8.76e-04 -2.16e-02
## 156
        -6.90e-03 -1.07e-02
## 157
         5.82e-03 -3.15e-03
                             7.69e-03 -4.00e-03 -9.82e-04
                                                            4.97e-03
                                                                      5.69e-04
## 158
        -4.58e-02 -3.50e-02
                             3.39e-02
                                      2.47e-02 -1.04e-02
                                                            1.20e-02
                                                                      2.23e-03
## 159
        -4.44e-03 -1.01e-02 -4.96e-03 -1.01e-02 -1.04e-02
                                                            1.30e-02 -9.33e-03
## 160
         7.76e-03 -9.15e-03 -1.38e-03 -3.01e-03 -1.81e-03 -1.80e-03
                                                                      1.56e-03
         5.08e-03 -1.82e-02 -9.86e-04 -3.34e-03
## 161
                                                 1.17e-03
                                                            3.29e-03 -5.54e-03
## 162
         4.44e-03 -4.82e-03 -6.03e-03
                                       1.66e-02
                                                 3.58e-03
                                                            3.81e-07 -3.64e-03
## 163
                  1.73e-02 -2.40e-03
                                       3.44e-02 -9.42e-03
                                                            3.29e-03
                                                                     7.50e-03
         1.12e-02
                                                 2.34e-03 -1.17e-05
## 164
        -1.30e-02 -2.17e-03
                             1.93e-02
                                       2.25e-02
                                                                      2.06e-03
## 165
        -3.62e-02
                   3.23e-03
                             1.04e-02
                                       2.23e-02
                                                 7.75e-04
                                                            3.39e-03
                                                                      3.79e-04
                             4.45e-03 -9.53e-04
## 166
         2.60e-03
                   2.56e-04
                                                 5.91e-03 -4.04e-04 -3.12e-03
## 167
         1.45e-03
                   2.74e-03 -2.20e-03 -1.22e-03
                                                 1.72e-03 -2.82e-03
                                                                      2.29e-03
## 168
         8.67e-04
                   1.46e-03
                            2.43e-04 -3.33e-04
                                                 7.42e-04 -2.20e-03 -2.29e-03
## 169
         4.41e-03 -1.71e-02
                             2.36e-03 -1.79e-02 -1.44e-03
                                                           9.31e-03
                                                                      8.65e-03
## 170
         8.04e-03 -1.73e-02 -7.57e-03 -3.73e-03 2.73e-03 -3.76e-03
                                                                      3.26e-03
## 171
                                       3.10e-02 -2.77e-02
        -4.94e-02 -6.09e-03 -1.26e-02
                                                           1.05e-02
                                                                      2.48e-03
## 172
                   6.92e-02 8.13e-03
                                       6.47e-02 -2.46e-03 -1.45e-02
                                                                      3.62e-03
        -2.38e-02
## 173
         2.01e-02
                   2.13e-02 -3.21e-02
                                      2.79e-02 3.57e-03 -2.97e-02 -4.06e-02
## 174
         2.88e-04
                   8.52e-04 -6.54e-04 -1.27e-04 6.89e-04 -4.06e-04 -5.49e-04
                   1.72e-02 1.56e-02 -2.84e-02 -3.35e-03 -4.33e-03
## 175
        -2.52e-02
                                                                     9.59e-03
## 176
        -2.98e-02 -1.46e-02 -3.30e-02 -1.18e-02 2.08e-02 2.43e-04 -1.13e-02
         5.60e-03 2.43e-03 2.63e-03 -1.61e-02 -3.18e-03 4.92e-03 1.74e-03
```

```
## 178
        -3.04e-02
                   9.92e-02 1.77e-02 -6.03e-02 8.00e-03 -2.31e-02 2.67e-02
## 179
         4.10e-03 -2.07e-02 -2.30e-03 -1.63e-03 -1.13e-02 -5.12e-03 -2.14e-02
## 180
         8.45e-03
                   1.14e-02
                            1.54e-02 -5.10e-03 -2.13e-03 -6.96e-05 -8.12e-03
## 181
        -3.13e-02 -4.27e-02 -9.47e-03 -8.53e-03 -5.51e-03
                                                            5.37e-03
                                                                     7.72e-03
         1.51e-02
## 182
                   1.82e-03 -1.69e-02 -7.63e-03 2.78e-03
                                                           2.89e-03 -2.34e-03
## 183
         6.56e-02
                   7.27e-02 -6.00e-02 -3.82e-02
                                                 2.88e-02
                                                           1.25e-02 -1.85e-02
## 184
         5.23e-03
                   8.70e-04
                             1.20e-02
                                       7.81e-03 -2.16e-03 -5.66e-04
                                                                      3.29e-03
## 185
        -2.60e-03 -3.61e-03 -8.86e-03
                                       1.36e-03
                                                 2.02e-03 -1.75e-03 -6.84e-05
## 186
         1.09e-03
                  1.10e-03 -3.26e-04 -5.40e-04
                                                 2.86e-05 -1.33e-03
## 187
        -5.80e-03 -9.94e-04 -1.21e-02
                                       1.85e-03
                                                 1.03e-02 -9.50e-03
                                                                      9.63e-03
## 188
        -9.40e-03 -1.86e-02
                             1.54e-02
                                       3.44e-03
                                                 1.27e-03
                                                           2.36e-02 -4.33e-02
                                       3.31e-03
## 189
         1.93e-03 -1.06e-03
                             2.08e-03
                                                 1.80e-03 -3.33e-03
                                                                      3.58e-03
## 190
         4.45e-04 -5.62e-04
                             6.67e-05
                                       1.01e-05
                                                 8.72e-05 -1.26e-03
                                                                      4.27e-04
## 191
        -5.75e-03 -1.38e-03 -8.72e-04
                                       5.82e-04
                                                 2.38e-02
                                                           1.60e-02
                                                                      1.20e-04
## 192
         9.45e-03 -3.55e-03 -6.82e-03
                                       1.70e-02 -4.54e-03 -2.21e-02
                                                                      1.30e-02
## 193
        7.23e-02 -3.27e-02 -2.52e-03
                                       2.07e-02 -1.66e-02 -2.84e-02 -2.30e-03
## 194
        -1.24e-02 -8.00e-03 -5.79e-03
                                       3.39e-02
                                                 8.32e-03
                                                           2.78e-03
                                                                      3.96e-03
## 195
                  3.64e-03 -1.30e-03
                                       6.93e-04
                                                 2.15e-03 -1.79e-03
        -7.60e-04
                                                                      3.37e-03
## 196
        -4.49e-02
                   2.63e-02
                             7.17e-03
                                       2.67e-02
                                                 6.77e-03 -2.54e-02
                                                                      2.19e-02
## 197
         1.67e-02
                   2.80e-02 -5.13e-03 -5.60e-03 -1.63e-02
                                                           8.95e-03
                                                                      7.48e-03
## 198
                   2.33e-04
                             3.43e-06
                                       1.22e-03
                                                 1.10e-03 -1.93e-05 -1.89e-03
        -2.10e-03
## 199
        -1.56e-03 -6.01e-04
                             2.70e-03
                                       8.14e-04 -7.44e-04 -1.32e-03
                                                                     7.10e-05
                  6.80e-04 -8.47e-04 -2.86e-03 -7.68e-04
## 200
        -9.17e-04
                                                           1.01e-03 -8.29e-04
## 201
         1.54e-02 -2.93e-02 -4.42e-03 -2.41e-03 5.29e-03 -3.64e-03 -1.26e-02
## 202
         3.93e-03 -6.00e-04 -5.23e-03
                                      1.01e-03 -1.23e-03
                                                           2.20e-03 -1.81e-03
##
  203
        -3.38e-02 -1.35e-02
                            1.15e-02 -4.48e-02 -2.17e-02 -3.42e-03 -6.14e-03
## 204
        -2.14e-02
                  5.76e-04 -1.58e-02 -2.63e-02 5.88e-03
                                                           2.27e-02 -7.71e-03
## 205
         7.20e-02
                  4.25e-02 9.08e-02 2.60e-02 -2.33e-02 -2.78e-02 6.08e-04
                   1.40e-01 -3.55e-02 -8.10e-02 8.94e-03 -8.84e-02 -5.89e-02
## 206
        -4.13e-02
## 207
        -3.07e-02 -8.03e-03 -8.76e-03
                                      2.09e-02 -6.09e-03
                                                           8.43e-03 -1.13e-02
## 208
                            9.71e-04 -1.21e-02 -1.51e-02
         1.48e-02
                  1.43e-02
                                                           4.02e-02
                                                                     8.08e-03
## 209
        -3.24e-04 -2.26e-04 -5.87e-04 -1.19e-03 5.53e-05 -2.59e-05 -2.14e-04
## 210
        -3.33e-03
                   1.99e-03
                             1.57e-03
                                      1.20e-03 -2.36e-03 -1.71e-03 -2.03e-03
## 211
        -5.04e-02 -8.25e-02 -2.19e-02 -8.65e-02 -2.08e-02 -7.14e-03
## 212
         1.35e-03 -6.83e-03
                             5.32e-04 -4.02e-04
                                                 2.10e-03 -1.78e-03 -1.70e-03
## 213
                             1.02e-02 -3.00e-03
                                                 8.09e-03 -1.25e-02
                                                                      1.43e-02
         9.04e-03
                  5.39e-03
## 214
         3.50e-03 -3.37e-04
                             7.97e-03
                                       1.44e-02
                                                 4.43e-03 -8.27e-03
                                                                      1.73e-04
## 215
         7.79e-02 -5.12e-02
                             3.06e-02
                                       1.94e-02
                                                 1.02e-02 -2.71e-02 -2.34e-02
## 216
        -2.59e-02 -1.43e-02 -6.20e-03 -6.87e-03
                                                 1.25e-02
                                                           7.07e-03
                                                                     1.03e-03
        -3.17e-02 -2.72e-03 -1.27e-03 -4.93e-02
                                                 2.86e-02
## 217
                                                           1.52e-02 -3.27e-02
## 218
        -4.06e-02 -1.72e-02 2.92e-02 -6.68e-02
                                                 1.96e-02 -5.65e-02 -8.44e-03
## 219
         2.50e-03
                   3.37e-03 -3.57e-03 -1.49e-03 -3.60e-03
                                                            5.22e-03 -1.00e-02
## 220
        -2.46e-03 -1.12e-03 -4.78e-05
                                       1.61e-03
                                                 6.23e-04 -3.50e-03 -2.60e-03
## 221
        -7.27e-05
                   2.91e-05 9.94e-05
                                       2.01e-04
                                                 1.22e-05
                                                           2.07e-04 -7.56e-05
## 222
         9.57e-03 -2.44e-02 -7.94e-03 -4.18e-03 -1.84e-03
                                                           8.41e-04 -4.81e-04
## 223
        -2.42e-02 5.54e-03
                             2.61e-02 -4.22e-03 2.04e-03 -1.79e-02
                                                                     2.32e-02
## 224
        -8.19e-04 -1.52e-03 -5.06e-04 -2.15e-03 -1.28e-03
                                                            6.38e-04 -2.77e-04
                            1.61e-03 -9.40e-04 1.44e-03 -7.46e-04
## 225
         2.02e-03 4.58e-03
                                                                      1.55e-03
## 226
         2.36e-03 -1.29e-03
                            4.34e-03 -1.36e-03 -1.19e-03
                                                           1.34e-03
                                                                      2.82e-04
         4.77e-03 -3.52e-03 -9.83e-03 -3.24e-03 9.74e-03 -6.84e-03 -5.97e-03
## 227
```

```
## 228
                             1.68e-03 -3.96e-04 -4.86e-03 -1.52e-02 -3.65e-04
         4.14e-03
                   1.94e-03
## 229
                             4.77e-03 -6.19e-03 -7.71e-05 -1.66e-03
         2.09e-03
                   9.13e-04
                                                                      5.44e-03
## 230
         6.12e-02 -2.79e-02 -8.49e-03 -4.25e-02 1.74e-02
                                                            2.14e-02 -1.65e-02
## 231
                             1.85e-02
         9.05e-03
                   2.12e-03
                                       1.15e-02 2.37e-03 -6.58e-04 -6.87e-03
## 232
        -8.11e-03 -1.97e-02 -2.66e-02
                                       7.20e-04 -2.26e-02
                                                            3.42e-02
                                                                     1.88e-02
## 233
         3.72e-03 -1.87e-03
                             8.86e-03
                                       4.97e-03
                                                 3.85e-04
                                                            1.95e-04 -2.72e-03
## 234
        -1.59e-02 -1.86e-02
                             3.57e-02 -1.93e-02 -2.19e-02 -3.67e-02 -1.32e-02
## 235
         8.67e-02 -4.06e-02
                             2.97e-02 -1.37e-01 -1.15e-02
                                                            2.23e-02 -3.72e-02
## 236
         7.74e-03
                   9.16e-03 -2.04e-03
                                       1.10e-03 1.24e-03
                                                            9.95e-03 -1.05e-02
## 237
        -2.54e-02
                   9.04e-02
                             1.08e-01
                                       1.28e-01 -1.28e-02
                                                            3.77e-02 -6.01e-02
                                                            9.21e-02 -5.83e-02
## 238
        -4.54e-02 -2.40e-02
                             6.54e-03 -4.92e-02 -9.20e-02
## 239
                             8.07e-05 -3.05e-03 -1.82e-03 -3.57e-04
         4.86e-03
                   9.16e-03
                                                                      5.92e-04
## 240
         6.26e-02 -1.28e-02 -2.15e-02 -1.08e-01 -3.13e-03
                                                            7.84e-03
                                                                      9.11e-04
        -6.04e-04 -2.48e-04 -7.37e-05 4.03e-04
## 241
                                                 7.09e-05 -2.42e-04
                                                                      2.08e-04
## 242
         6.25e-04 -6.66e-04
                             8.35e-04 -3.95e-04
                                                  9.06e-06
                                                            4.74e-04 -5.28e-04
## 243
         9.50e-03 -2.97e-03 -2.48e-02
                                       1.14e-02
                                                  4.71e-03
                                                            7.14e-03 -1.44e-03
## 244
         1.19e-03 -8.09e-04
                             1.69e-03 -9.68e-04
                                                  8.30e-04 -1.61e-03 -1.03e-03
## 245
        -1.06e-02 -1.06e-02 -1.39e-02
                                                  6.86e-02 -6.17e-02 -2.74e-02
                                       6.45e-03
## 246
         6.28e-03
                   7.84e-03
                             8.05e-03 -2.66e-03
                                                  8.95e-03
                                                            3.97e-04 -4.67e-03
## 247
         6.33e-03
                   6.33e-03
                             7.79e-03
                                       9.82e-03
                                                  5.00e-04 -4.26e-04
                                                                      2.32e-03
## 248
                   2.64e-03 -2.01e-03 -7.81e-04
                                                  4.51e-03 -3.97e-03 -1.64e-03
         2.55e-03
## 249
         1.02e-02
                   5.40e-03 -3.95e-02
                                       1.47e-02
                                                 7.15e-03
                                                            7.18e-03
                                                                      4.52e-03
         4.10e-03 -2.85e-03 6.12e-03 -2.96e-03 -7.01e-04
## 250
                                                            1.18e-03
                                                                      2.43e-03
## 251
        -4.45e-02 -7.23e-02
                             8.92e-02
                                       2.11e-02 -5.83e-02 -2.33e-02 -5.87e-04
## 252
         1.20e-02 -5.08e-02 -3.76e-03 -5.65e-03 -2.49e-02
                                                            2.94e-02 -3.85e-02
## 253
         6.72e-03 -1.04e-02 -2.23e-03 -3.70e-03
                                                 1.04e-03
                                                          -3.84e-03
                                                                      3.57e-03
## 254
                  1.47e-02
                             1.27e-02 -1.01e-02 8.06e-04
                                                            9.81e-04
                                                                      8.93e-03
        -3.96e-02
## 255
        -1.32e-03 -5.41e-04
                             1.07e-03
                                       6.46e-04 -4.81e-04 -4.64e-04 -3.64e-04
## 256
         5.29e-03
                   9.92e-03
                             1.81e-03 -3.45e-03 -2.23e-03
                                                            4.13e-03 -6.87e-04
## 257
        -4.01e-02
                   2.69e-02
                             2.94e-03 -9.86e-03
                                                 2.04e-02
                                                            3.49e-03 -3.96e-02
## 258
                                                 1.90e-02 -1.07e-02 -9.73e-03
        -4.49e-03
                   1.02e-02 -1.15e-02
                                       2.95e-03
## 259
         1.08e-03
                   1.71e-03
                             3.57e-03
                                       1.40e-03 -1.04e-03
                                                            5.64e-04
                                                                      3.33e-05
## 260
        -3.33e-02 -6.03e-02 -9.60e-04
                                       8.11e-02 -1.00e-02
                                                            1.49e-02 -1.74e-02
## 261
         1.14e-02 -2.22e-02
                             5.81e-03
                                       3.94e-02 -1.57e-02
                                                            1.49e-02
                                                                      7.32e-03
##
  262
        -3.71e-03
                   4.04e-03
                             4.32e-03
                                       1.90e-03 -5.68e-03
                                                            3.32e-03
                                                                      1.05e-02
                                                            1.27e-02
## 263
                   7.23e-03 -6.65e-03 -2.79e-03 -7.24e-03
                                                                      1.16e-02
         1.11e-02
                   2.25e-02 -4.36e-02
                                       2.85e-02 7.53e-02 -2.11e-02 -3.60e-02
## 264
        -3.94e-02
        -3.03e-02 -6.02e-02 2.24e-02 -1.28e-01 -1.64e-02
                                                            7.18e-04
                                                                      7.89e-03
## 265
## 266
         8.69e-03 -1.79e-02 -1.71e-02 -6.53e-03 9.96e-03
                                                            8.20e-03 -2.60e-03
## 267
         8.69e-03 -2.23e-02 -3.07e-04 -1.00e-02 -3.05e-03
                                                            4.80e-02 -3.03e-02
## 268
         3.09e-04
                  6.75e-04 -5.98e-05 -2.23e-04 -7.95e-05
                                                            4.57e-04
                                                                      1.86e-04
## 269
        -9.79e-03
                   1.68e-03
                             5.55e-03 -3.27e-03 -1.16e-02
                                                            9.06e-03
                                                                      4.52e-03
## 270
        -4.92e-03 -9.95e-03
                             1.14e-02 3.16e-03 -9.16e-03
                                                            1.07e-02
                                                                      1.42e-02
  271
##
        -1.61e-02 -9.98e-04 -1.01e-03 -3.80e-03 -5.33e-02
                                                            2.24e-02
                                                                      2.74e-02
         9.92e-02 -6.24e-02 -1.31e-01 -5.28e-02 -6.16e-02
                                                            1.33e-03
## 272
                                                                      1.09e-01
## 273
        -4.52e-04 1.35e-03 1.02e-04 -6.20e-04 3.15e-04 -5.17e-04 -2.65e-04
## 274
        -1.90e-03 -8.90e-04 -2.33e-03 4.98e-03
                                                 1.45e-03
                                                            1.82e-03 -1.90e-03
         1.13e-02 -9.74e-03 -4.80e-03 -2.85e-02 -7.82e-03
## 275
                                                            6.11e-05 -3.51e-03
## 276
        -1.67e-02 -6.61e-03 -1.98e-03 -3.89e-03 1.66e-03
                                                            2.24e-03
                                                                     5.37e-03
         5.17e-03 -5.66e-03 9.36e-03 8.51e-03 2.44e-03 -9.75e-03 -1.07e-02
```

```
## 278
        -5.18e-02 -7.61e-02
                             2.93e-02 -1.70e-02 -9.79e-03 8.04e-02 -6.37e-02
## 279
         8.21e-03 -1.62e-02
                             6.26e-03
                                       2.97e-02 2.96e-04 -6.87e-03
                                                                      4.21e-03
## 280
        -2.03e-03 -7.21e-04
                             1.58e-03 -3.88e-03 -1.95e-03 -1.58e-03 -2.80e-03
## 281
        -1.35e-02 -1.59e-03
                             5.07e-03
                                       9.41e-03
                                                 7.38e-03 -3.36e-04
                                                                      3.62e-03
## 282
        -1.65e-04 8.83e-04
                             3.38e-04
                                       4.75e-05
                                                  2.33e-04
                                                           9.07e-04
                                                                      5.36e-04
## 283
         7.02e-03 -1.03e-02
                            -2.64e-03
                                       1.57e-02
                                                  3.27e-03 -6.07e-03
                                                                      1.78e-02
## 284
        -1.77e-02 -9.55e-03
                             1.54e-02 -5.09e-03 -2.21e-03 -4.97e-03
                                                                      1.57e-02
## 285
        -7.92e-02
                   2.51e-02
                             1.82e-02 -1.28e-02
                                                 3.50e-03
                                                            6.90e-03 -2.54e-02
## 286
        -5.52e-04 -6.86e-04
                             1.20e-03
                                       2.52e-04
                                                 7.75e-04
                                                            1.26e-03 -1.59e-04
## 287
         5.86e-02
                   9.05e-02
                             1.43e-01 -1.14e-01 -3.15e-02 -1.86e-02 -7.68e-04
## 288
        -1.37e-03 -5.38e-04
                             2.97e-04
                                       6.31e-04 -1.12e-03 -2.14e-04
                                                                      4.09e-04
## 289
         7.85e-02 -3.16e-02
                             1.75e-02
                                       2.60e-02 5.73e-03 -9.47e-03 -7.25e-03
## 290
         5.48e-03 -1.18e-02
                            -1.37e-04 -2.58e-03 -5.42e-03
                                                            1.58e-04
                                                                      3.52e-03
## 291
        -5.03e-02
                   3.57e-02
                             1.30e-02 -5.34e-03 4.54e-02 -3.71e-03
                                                                      7.01e-03
## 292
         1.10e-02
                   1.40e-02
                             2.81e-03 -8.57e-03 -1.44e-03
                                                            5.21e-02 -4.07e-02
## 293
         1.27e-02
                   1.61e-02
                             1.10e-02
                                       1.84e-02 5.09e-03 -1.20e-03 -8.34e-03
## 294
         7.84e-02 -4.14e-02
                             1.61e-03
                                       1.12e-02 -3.20e-02
                                                            4.41e-02
                                                                      8.56e-02
## 295
                   3.07e-02
                                       3.02e-02 -1.36e-02
        -4.82e-02
                             2.48e-02
                                                            6.09e-03
                                                                      2.15e-03
##
  296
         6.70e-03
                   1.51e-03
                             1.16e-06 -1.67e-02 -2.34e-02
                                                            2.28e-02
                                                                      5.89e-03
## 297
        -3.42e-02 -2.87e-02
                             1.45e-02
                                       1.21e-02 -6.08e-04 -1.77e-02
                                                                      1.11e-02
## 298
                   1.13e-04
                             1.93e-03
                                       3.26e-03
                                                 2.44e-03 -1.85e-03 -2.31e-03
         1.47e-03
## 299
         7.32e-03 -6.42e-03
                             4.18e-03 -3.88e-03 -3.49e-03
                                                            5.07e-03
                                                                      2.88e-04
## 300
         3.61e-03 -3.74e-03
                             1.76e-03 -1.87e-03 -8.42e-04
                                                            3.68e-03 -2.50e-04
## 301
        -6.17e-04
                   1.09e-03 -5.32e-04
                                       1.87e-05
                                                  2.92e-03
                                                            8.58e-04 -2.27e-03
## 302
         1.65e-02
                   1.97e-02 -4.59e-03 -5.91e-03
                                                  1.29e-04
                                                            9.25e-03 -4.62e-03
##
  303
         6.83e-03 -1.51e-02
                             8.21e-04 -6.22e-03 -7.65e-03
                                                            1.55e-02
                                                                      1.11e-02
## 304
                   1.72e-03 -2.18e-04
                                       1.72e-03 2.00e-03 -8.59e-04 -2.53e-03
         7.76e-04
## 305
        -1.17e-02
                   1.08e-02 2.97e-03 -1.84e-02 2.59e-02
                                                            1.19e-02 -1.57e-02
        -3.51e-04 -2.98e-04 -5.54e-06
                                       2.95e-04 -3.21e-04
## 306
                                                            7.73e-04 -1.23e-03
##
  307
         1.63e-03
                   6.98e-04 -1.10e-03
                                       2.87e-03 -4.90e-04 -7.14e-04
                                                                      2.39e-04
## 308
         9.43e-03 -5.24e-03 -1.12e-02 -3.65e-03 -9.53e-03 -2.92e-02
                                                                      2.19e-02
## 309
                             1.39e-02 -4.37e-03 -1.42e-03 -2.50e-03
        -1.95e-02
                   9.05e-03
                                                                      4.83e-03
## 310
        -2.80e-02
                   1.61e-02
                             5.52e-04 -8.54e-03 -7.38e-03
                                                            8.69e-03
                                                                      9.08e-03
## 311
         1.12e-02
                   2.10e-02 -1.12e-02 -4.64e-03 9.69e-03 -9.21e-03 -2.79e-03
##
  312
         6.44e-03 -1.26e-02 -9.75e-03 -5.38e-03 -2.64e-02
                                                            1.72e-02 -1.14e-02
## 313
        -3.50e-02 -1.97e-02
                             8.72e-03
                                       5.86e-02 1.02e-02 -2.59e-03 -1.47e-02
## 314
         5.62e-03
                   9.06e-03
                             6.09e-03 -1.63e-03
                                                  8.42e-03
                                                            3.48e-03 -1.48e-02
## 315
        -3.79e-02
                   2.78e-03
                             1.75e-02 -6.15e-03 -1.90e-02
                                                            1.67e-02 -3.84e-02
## 316
         7.71e-03 -1.04e-02
                             3.61e-03 -3.31e-03 2.75e-03 -9.93e-03
                                                                      9.43e-03
## 317
                   1.43e-02 -1.67e-02 -8.06e-03
        -2.88e-02
                                                 1.61e-02
                                                           2.85e-02
                                                                      1.32e-02
## 318
        -4.37e-02 -2.27e-03 -8.83e-02 -6.42e-02 -1.00e-02 -1.20e-01
                                                                      1.28e-01
## 319
        -5.82e-02
                   3.06e-02
                             3.88e-03
                                       3.84e-02 -8.20e-03 -1.10e-02 -3.29e-04
## 320
        -4.84e-02
                   3.20e-02 -1.36e-02 -6.14e-03 4.11e-02 -4.40e-02 -6.67e-02
## 321
        -3.50e-02
                   2.27e-02
                             1.18e-02 -6.09e-03 5.24e-04 -4.75e-03
                                                                      1.19e-02
## 322
        -7.82e-03 -9.58e-03
                             1.02e-02
                                       3.12e-03 -1.37e-02 9.79e-03 -6.77e-03
## 323
         1.35e-03 -5.82e-04 -4.67e-04
                                       3.46e-03 2.15e-03 -3.24e-03
                                                                      2.85e-03
## 324
         7.10e-02 -3.09e-02
                             6.86e-03 -3.96e-02 -1.43e-02 -4.82e-03
                                                                      2.20e-02
                                       2.34e-03 -2.79e-03
        -4.11e-03 -4.47e-03
## 325
                             1.76e-03
                                                           2.76e-03 -6.02e-03
## 326
         5.45e-03 -2.46e-02
                             8.33e-03 -1.33e-03 1.44e-02 -6.27e-03 -1.63e-02
## 327
         1.05e-02 -1.93e-03
                            1.72e-02 -1.06e-03 -2.57e-02 1.25e-04 -3.37e-02
```

```
## 328
                   5.07e-02
                             4.83e-02 -6.26e-02 -1.22e-02 -3.56e-02
         9.14e-02
                                                                       4.97e-04
## 329
         1.85e-02
                   9.84e-03
                             1.82e-03
                                        3.44e-02 -9.98e-03 -5.28e-02
                                                                       2.74e-02
## 330
        -8.02e-03 -1.18e-02 -3.57e-03
                                       2.32e-03 -1.05e-02 -1.56e-03
                                                                      -6.82e-04
## 331
                             9.69e-03 -1.41e-02 -1.28e-02 -1.53e-02
         7.18e-03
                   9.88e-03
                                                                       1.09e-02
## 332
        -3.10e-02
                   1.05e-02
                             2.54e-03 -3.31e-03 6.36e-03 -4.81e-03
                                                                       6.45e-03
## 333
         1.31e-02
                   1.39e-02 -1.90e-02
                                        1.43e-02
                                                  9.66e-03 -3.34e-03
                                                                       8.75e-03
## 334
         6.51e-03 -2.48e-03
                             1.06e-02
                                        1.09e-02
                                                  4.44e-04
                                                            4.50e-03
                                                                       1.13e-03
## 335
        -3.98e-03 -2.04e-03 -2.13e-03
                                        1.78e-03 -7.64e-03
                                                            4.65e-03
                                                                       1.37e-02
## 336
        -4.20e-02 -4.60e-02
                             4.04e-02
                                        2.72e-02 -4.69e-03 -6.89e-03
                                                                       1.44e-02
##
  337
         7.32e-02 -5.14e-02
                             1.36e-02 -4.75e-02 -3.09e-02
                                                            4.93e-02 -4.71e-02
                                                            4.01e-03 -1.14e-02
## 338
         1.44e-02 -8.80e-03
                             4.97e-03 -8.89e-03
                                                 1.90e-03
## 339
         1.13e-03
                   7.82e-04 -1.59e-04 -1.16e-04 -1.02e-03 -3.14e-03
                                                                       1.49e-03
## 340
         1.47e-03 -2.36e-03
                             5.29e-04 -9.15e-04
                                                 7.59e-04 -2.22e-03
                                                                       3.73e-03
## 341
        -5.43e-03
                   2.07e-03 -5.28e-03 -6.76e-03
                                                  3.73e-03 -5.46e-03 -3.67e-03
## 342
        -1.57e-02
                   3.43e-03
                             1.22e-02 -2.30e-03
                                                  9.27e-03 -1.51e-02
                                                                      8.56e-03
## 343
        -3.15e-02
                   5.48e-03
                             1.06e-02
                                       2.12e-02
                                                  1.74e-02 -1.37e-02 -1.55e-03
## 344
        -3.16e-02
                   6.01e-03
                             1.38e-02 -4.09e-03
                                                  1.85e-02 -2.03e-02
                                                                       1.51e-02
## 345
                   1.78e-04 -3.63e-05 -1.44e-04 -3.03e-04
                                                                       6.88e-04
         1.79e-04
                                                            5.57e-04
## 346
         7.77e-03
                   8.86e-03 -2.53e-03 8.94e-03 -3.99e-03
                                                            2.89e-03
                                                                       2.33e-03
## 347
        -4.75e-02 -4.96e-04
                             3.15e-02 -6.88e-03 -3.98e-03 -2.03e-02
                                                                       8.76e-03
## 348
         1.19e-02 -1.97e-02
                             2.95e-02 -6.28e-03 -3.02e-03
                                                            6.97e-03 -2.86e-03
## 349
         1.02e-02
                   6.95e-03
                             7.07e-03 -5.58e-03
                                                 1.16e-02
                                                            5.60e-03
                                                                       1.14e-03
## 350
        -1.78e-03 -1.09e-03 -1.86e-03 -3.97e-03 8.32e-04
                                                            6.05e-04 -1.78e-03
## 351
        -2.98e-02
                   2.19e-02
                             2.20e-02 -8.24e-03 -1.13e-02 -3.81e-03 -2.83e-03
## 352
         2.71e-03
                   2.51e-03 -1.41e-03 -2.63e-03 -4.95e-03
                                                            1.16e-02
                                                                      3.18e-03
##
  353
         1.13e-02 -2.18e-02
                             5.31e-03
                                       3.72e-02
                                                  1.28e-02
                                                            2.21e-03
                                                                      3.84e-04
## 354
        -2.45e-02
                  7.99e-03 -6.40e-03 -6.04e-03
                                                  2.11e-02 -7.93e-03 -2.11e-02
## 355
        -2.83e-02
                  1.68e-02
                             8.24e-03 -2.96e-02
                                                  8.11e-03
                                                            4.76e-03 -8.62e-03
         1.16e-03 -1.30e-03 -3.07e-04 -5.91e-04
## 356
                                                  2.52e-03 -6.22e-04 -4.07e-03
## 357
         9.16e-03 -3.22e-02 -1.24e-02 -7.26e-03
                                                  4.85e-03
                                                            7.58e-03 -1.79e-03
## 358
                                       7.80e-03 -3.65e-03
                                                            1.59e-03
         4.45e-02 -2.87e-02
                             7.02e-03
                                                                       3.00e-03
## 359
                             2.74e-04 -2.40e-04 -3.08e-05
                                                            4.12e-04
         5.65e-04
                   1.03e-04
                                                                       6.67e-05
## 360
         1.69e-03
                   4.86e-03 -1.20e-04 -9.99e-04
                                                 3.33e-03 -1.77e-03
                                                                       6.01e-03
## 361
        -5.49e-03 -8.34e-03 -1.44e-03
                                       2.75e-03 -3.07e-03 -9.00e-04 -1.98e-04
##
   362
        -8.49e-03
                   3.72e-03 -1.64e-03 -2.53e-03
                                                  3.00e-03 -4.00e-03
                                                                       3.44e-03
                                                            3.70e-03 -1.02e-02
## 363
         8.37e-03 -4.33e-02 -8.71e-03
                                       2.05e-02
                                                  1.44e-04
         7.22e-02 -2.64e-02 -4.87e-02
## 364
                                       1.64e-02
                                                  2.17e-02 -1.80e-02 -7.02e-04
## 365
         4.28e-03 -8.62e-03 -1.70e-02 -2.79e-03
                                                  2.27e-03 -2.10e-03
                                                                      4.21e-03
## 366
        -2.76e-03 -2.41e-03 -4.78e-03
                                       8.94e-03
                                                  1.52e-03 -3.53e-03 -5.24e-04
                  3.80e-02 -8.97e-02
## 367
        -2.65e-02
                                       1.25e-02 -5.42e-02
                                                            3.99e-02
                                                                      7.90e-02
##
  368
         1.43e-03
                   1.67e-04 -1.23e-03 -6.19e-04
                                                  1.87e-03 -1.54e-04
         7.51e-02 -4.81e-02 -4.82e-02
##
  369
                                       1.71e-02
                                                  4.17e-02
                                                            3.41e-02 -1.95e-02
                             1.97e-02 -1.40e-02
## 370
        -6.87e-02 -8.55e-03
                                                  1.46e-02 -1.44e-03 -2.31e-02
  371
##
        -3.63e-02
                   3.73e-03
                             6.58e-04
                                       1.51e-02
                                                  2.25e-02 -2.40e-02
                                                                       5.52e-03
## 372
         1.03e-02 -1.73e-03 -6.24e-03 -5.75e-03 -7.38e-04
                                                            4.06e-03 -2.33e-03
## 373
         1.36e-02 -2.21e-02 -6.94e-03 -5.41e-03 7.02e-03 -7.23e-04
                                                                      9.58e-04
## 374
         4.55e-04
                  6.75e-04
                             9.47e-06 -2.70e-04 -2.61e-04
                                                            4.82e-04
                                                                       2.67e-04
         4.05e-03 -2.09e-03
                             2.38e-03 -2.20e-03 2.91e-03 -1.10e-03
## 375
                                                                       7.24e-03
## 376
         8.92e-03 -2.90e-02 -2.78e-02 -5.08e-03 8.64e-04
                                                            1.12e-03
                                                                       6.41e-03
        -6.49e-03 -1.24e-02 7.60e-03 -9.35e-03 -1.00e-02 9.04e-03 -1.01e-02
## 377
```

```
## 378
                   1.30e-03 -2.86e-04 -7.21e-04
                                                  1.08e-03
                                                            2.64e-04 -1.33e-03
         1.59e-03
                                                  6.66e-03 -3.08e-02 -2.68e-02
## 379
         9.95e-02 -4.51e-02 -6.71e-04 -4.98e-02
## 380
        -1.44e-02
                   6.10e-03 -1.73e-02 -3.85e-03
                                                  1.36e-02 -6.31e-03
                                                                      2.82e-03
## 381
                             2.66e-03 -2.48e-02 -6.51e-03
        -2.13e-02
                   9.83e-03
                                                            1.06e-02
                                                                      4.43e-03
## 382
         7.24e-03 -1.02e-02
                             7.77e-03 -3.27e-03 -5.99e-03
                                                            6.22e-03 -5.16e-06
## 383
        -3.36e-02
                   1.07e-01
                             3.23e-02
                                       1.19e-02
                                                  1.67e-02
                                                            1.20e-02 -4.31e-02
## 384
         1.04e-02
                   1.43e-02 -4.24e-03 -7.78e-03
                                                  1.71e-03
                                                            1.12e-02 -5.77e-03
##
  385
         8.42e-03
                   7.68e-03
                             1.35e-02
                                        1.77e-04 -3.33e-03 -3.09e-02 -3.36e-02
                                                  1.38e-02 -1.90e-02
## 386
         6.43e-02
                   9.34e-02 -7.06e-03
                                        1.51e-02
##
  387
         3.43e-03
                   4.23e-03 -7.74e-03
                                        4.05e-03
                                                  3.97e-03
                                                            1.33e-02 -1.46e-02
## 388
        -1.60e-03 -1.70e-03 -1.87e-03
                                        5.58e-04
                                                  5.43e-05
                                                            7.19e-04 -5.32e-04
  389
         6.52e-03 -3.67e-03
                             2.50e-03 -3.94e-03 -6.97e-03
##
                                                            3.22e-03
                                                                      5.74e-04
## 390
                   2.91e-02 -8.57e-02
                                       3.20e-02
                                                 2.94e-02
                                                            1.82e-02 -2.49e-03
        -5.16e-02
## 391
         2.51e-03
                   4.34e-03
                             8.93e-04 -1.46e-03 -1.24e-02
                                                            1.23e-03
                                                                      7.48e-03
## 392
         5.29e-03 -1.69e-02 -2.79e-02 -3.36e-03
                                                  6.97e-03
                                                            5.31e-03 -7.73e-04
## 393
         3.12e-03
                   6.41e-03 2.26e-03
                                        6.64e-03
                                                  6.05e-03
                                                            2.23e-04
                                                                       1.26e-03
## 394
        -1.81e-03 -6.29e-04 -2.22e-03
                                       1.18e-03 -2.48e-05 -1.11e-03
                                                                       4.05e-05
## 395
                   8.34e-03 -5.30e-03
                                       2.46e-02 7.54e-03 -8.19e-03
                                                                       6.79e-03
         4.00e-03
##
   396
         7.18e-03 -1.01e-02 -3.88e-05 -3.27e-03 -4.96e-05
                                                            2.01e-03
                                                                       2.01e-04
## 397
        -2.09e-02
                   3.57e-03
                             1.45e-02 -6.78e-03 -1.05e-02
                                                            6.63e-03
                                                                       5.21e-03
## 398
        -5.75e-02
                   3.70e-02
                             1.11e-02 -9.14e-03 4.94e-03 -1.47e-02
                                                                       3.84e-03
## 399
        -3.68e-02
                   5.79e-03 -1.73e-02 -7.93e-03 1.51e-02 -2.76e-02 -4.35e-02
## 400
         1.03e-02
                   1.25e-02
                             3.63e-03 -3.85e-03 -2.68e-03
                                                            6.11e-03 -1.22e-02
## 401
        -1.98e-02
                   1.07e-03
                             1.96e-02 -2.99e-03 -3.69e-02
                                                            2.25e-03
                                                                       2.73e-02
## 402
        -2.11e-04 -3.56e-04
                             1.11e-03 -3.57e-04 -1.00e-03
                                                            2.25e-04
                                                                       4.97e-04
## 403
         9.72e-03
                   2.11e-02
                             1.30e-02 -5.87e-03
                                                 9.26e-03 -1.64e-03 -1.81e-02
## 404
        -1.77e-03
                   1.33e-03 -6.77e-03
                                       7.84e-04 1.96e-03
                                                            2.22e-03 -5.91e-03
## 405
         5.62e-03
                   6.38e-03 -1.82e-03 -5.00e-03 -1.04e-02
                                                            2.65e-02
                                                                      3.34e-03
                             4.61e-02
## 406
        -2.63e-02 -3.84e-02
                                       2.10e-02 -2.16e-02
                                                            3.11e-03 -1.23e-02
## 407
        -1.47e-02
                   3.07e-03 -2.90e-02 -3.21e-03
                                                  1.49e-02 -2.83e-03
                                                                       7.35e-03
## 408
                             1.27e-03
                                       8.35e-03
                                                 1.99e-03 -9.66e-04
         5.17e-03 -1.25e-02
                                                                       2.03e-03
## 409
        -1.10e-02 -8.26e-03
                             2.94e-02 -2.97e-02 -1.91e-02 -7.50e-03 -3.71e-03
## 410
         1.22e-02
                   2.07e-02 -3.50e-02 -6.95e-03
                                                  8.94e-03 -1.05e-02
                                                                       9.64e-03
## 411
         1.11e-02 -2.28e-02 -1.39e-02 -2.84e-03
                                                 3.04e-03 -1.09e-02
## 412
         7.17e-03
                   1.05e-02
                             8.38e-03
                                       2.70e-02 -3.49e-02
                                                            2.20e-02 -1.04e-02
## 413
        -5.36e-03 -2.82e-03
                             8.16e-03 -6.79e-03 -2.32e-03
                                                            2.90e-03 -9.03e-03
                             6.93e-03 -9.64e-03 -1.06e-03 -1.91e-03
## 414
         4.36e-03
                   7.06e-03
                                                                      4.75e-03
## 415
         7.57e-02
                   8.08e-03
                             2.06e-02
                                       2.00e-02 2.21e-03 -9.50e-03 -2.35e-03
## 416
        -5.14e-02
                   1.39e-02 -3.42e-02 -6.96e-02 3.95e-03
                                                            2.30e-02
                                                                      4.53e-03
        -2.91e-02 -4.37e-02
                             2.74e-02 -9.49e-03 -1.52e-02
## 417
                                                            1.51e-02
                                                                       1.41e-07
## 418
        -1.09e-02 -6.22e-03 -3.26e-02
                                       9.85e-04 6.91e-03
                                                            4.85e-02 -5.80e-02
                                       3.52e-02 -4.07e-03
## 419
         1.06e-02 -2.67e-02
                             3.62e-03
                                                            1.62e-03
                                                                       1.80e-03
## 420
        -8.66e-04 -3.30e-04
                             1.79e-03 -3.54e-03 -1.99e-04 -3.67e-04 -3.02e-04
## 421
         2.31e-03 -3.83e-03
                             4.57e-03 -1.70e-03 -4.11e-03
                                                            7.97e-03
                                                                       4.88e-03
                                       1.07e-01 -1.21e-02 -3.54e-03
## 422
        -3.92e-02
                   7.28e-03
                             3.95e-02
                                                                       1.00e-02
## 423
        -2.53e-02 -4.75e-02
                             1.17e-02
                                       9.24e-02
                                                 1.02e-02 -2.50e-02
                                                                       6.34e-03
## 424
         1.72e-03
                   5.70e-03
                             2.29e-03 -1.00e-03
                                                  5.38e-03 -2.05e-03 -6.10e-03
         7.85e-03
                   9.64e-03 -2.76e-02
                                       9.02e-03
## 425
                                                  1.77e-02
                                                            2.09e-03
                                                                      6.34e-04
## 426
         1.13e-02
                   5.68e-04
                             4.97e-03 -7.14e-03 -3.89e-02
                                                            1.49e-02 -4.08e-02
## 427
         3.01e-03
                   2.60e-03 -8.02e-03 5.98e-03 8.78e-04 -1.16e-03 -5.60e-03
```

```
## 428
         7.80e-03 -1.03e-02
                             1.18e-02 -2.14e-02 7.32e-03 -9.87e-03 -2.95e-02
## 429
                             3.96e-03
                                        1.28e-03 -4.07e-04 -3.26e-03 -5.27e-04
        -1.29e-03 -1.22e-03
## 430
         2.72e-03
                   2.84e-03 -6.38e-03
                                        1.02e-02
                                                  5.43e-03 -1.28e-03
                                                                      1.98e-03
## 431
                   5.00e-03
                             1.07e-02 -8.16e-03
                                                  9.38e-03 -9.57e-03 -2.35e-02
         2.20e-02
## 432
         7.35e-03
                   1.14e-02 -1.56e-02 -4.06e-03
                                                  5.16e-03
                                                            3.85e-03 -7.28e-05
## 433
         1.64e-03
                   1.91e-03 -4.09e-03 -1.20e-03
                                                  1.92e-03
                                                            2.83e-03 -2.95e-03
## 434
        -2.30e-02 -1.50e-02
                             8.34e-04 -6.13e-03
                                                  9.84e-03
                                                            4.01e-03 -1.09e-03
## 435
        -5.13e-03
                   2.50e-02 -4.80e-03
                                        1.53e-02
                                                  7.22e-03
                                                            1.91e-03 -1.48e-02
## 436
         1.06e-01 -6.18e-02
                              9.48e-03
                                        1.15e-01 -1.13e-01 -7.07e-04
## 437
        -3.84e-02 -4.64e-02
                              3.26e-02
                                        2.74e-02 -2.50e-02
                                                            5.90e-03 -2.61e-03
## 438
         1.16e-02
                   4.60e-03
                              3.09e-03 -4.46e-03 -1.84e-03
                                                            1.53e-03 -1.15e-03
## 439
                   1.17e-02
                              1.09e-02 -2.53e-03 -1.41e-02 -2.33e-02
        -2.12e-02
                                                                      1.50e-02
## 440
        -3.66e-02 -5.38e-02
                              3.25e-02
                                        1.73e-02 -3.31e-02 -2.62e-02 -4.46e-03
## 441
         6.83e-02 -1.84e-03 -1.58e-02
                                        1.53e-02 -1.89e-02 -3.82e-03 -1.72e-02
## 442
         9.25e-03 -5.55e-03 -1.06e-03 -5.97e-03 -7.02e-04 -8.93e-04 -8.25e-03
## 443
         6.15e-03
                   5.00e-03
                             1.53e-02
                                        1.36e-02 2.19e-03
                                                            2.00e-02 -3.08e-02
                                        1.62e-02 -2.09e-02 -7.77e-04
## 444
        -3.59e-02
                   1.03e-02
                             1.95e-02
                                                                      1.05e-02
## 445
        -9.49e-04 -6.51e-04
                             9.47e-05
                                        6.06e-04 -1.52e-03
                                                            6.71e-04
## 446
         4.48e-03 -1.60e-02 -2.52e-02 -3.24e-03
                                                 2.03e-02 -9.75e-03 -1.03e-02
                                                 5.88e-03 -1.05e-02 -6.00e-03
## 447
        -2.98e-03 -1.76e-03
                             2.54e-03
                                        2.26e-03
## 448
                   4.36e-05 -4.07e-05 -1.10e-05 4.39e-05 -2.77e-05 -3.35e-05
         1.62e-05
## 449
         1.89e-03 -5.96e-04
                             7.03e-04 -1.44e-03 -4.36e-03
                                                            8.45e-03
                                                                       1.19e-03
## 450
                             2.99e-03 -3.59e-03 -3.91e-03
         5.70e-03
                   9.89e-03
                                                            7.56e-03
                                                                       8.63e-03
## 451
        -3.56e-02
                   1.24e-02 -4.89e-03 -3.60e-02
                                                 9.28e-03 -9.39e-03
                                                                       1.49e-02
                             3.49e-02
                                        2.66e-02
## 452
        -3.47e-02 -3.47e-02
                                                  1.47e-02 -2.30e-02 -8.73e-03
## 453
        -4.28e-03
                   8.50e-03 -8.87e-03
                                        1.29e-02 -2.73e-03
                                                            3.58e-03 -4.14e-05
## 454
         6.16e-02 -4.97e-02
                             3.96e-02 -4.96e-02
                                                 2.02e-02
                                                            8.92e-02 -2.38e-02
## 455
        -1.44e-04 -1.52e-04
                             1.08e-04
                                        3.27e-04 -6.61e-05 -6.69e-05
                                                                      3.22e-05
## 456
                   7.43e-03 -1.14e-02
                                        2.06e-03
        -3.01e-03
                                                  9.24e-04 -8.37e-03 -3.15e-03
## 457
         2.28e-03 -4.88e-03
                              1.73e-03
                                        3.70e-03 -1.54e-04 -2.17e-03
                                                                       1.90e-03
## 458
         5.08e-02 -8.96e-03
                             3.11e-04
                                        1.08e-02
                                                  1.84e-03 -1.02e-02
                                                                       5.60e-03
## 459
                   3.66e-03 -2.62e-02 -5.53e-03
                                                  1.73e-02 8.88e-03
         9.82e-03
                                                                       2.21e-03
## 460
        -4.63e-02 -6.81e-03
                             1.80e-02 -7.18e-03
                                                  1.10e-02 -2.58e-02
                                                                       3.08e-02
## 461
         1.19e-02
                   1.75e-02 -1.78e-02 -8.04e-03
                                                  9.65e-03
                                                            8.49e-03 -4.82e-03
## 462
         6.76e-03 -4.21e-03
                             1.79e-02 -3.08e-03 -3.50e-03 -8.72e-03
                                                                       9.15e-03
## 463
                   2.89e-03
                             6.27e-04 -9.54e-04
                                                  9.17e-04 -1.16e-03 -2.44e-03
         2.37e-03
## 464
                   1.91e-02 -1.42e-02 -6.96e-02
                                                  5.47e-03 -6.04e-03
         4.05e-02
                                                                       2.49e-04
## 465
         1.86e-03 -2.06e-03
                             6.60e-04 -5.82e-03 -1.73e-04 -2.59e-03
                                                                       1.06e-03
## 466
                   1.90e-02 -4.94e-02
                                       1.40e-02
         1.02e-02
                                                  2.89e-02 -1.55e-03 -1.18e-03
## 467
         1.28e-05 -6.65e-06
                             1.19e-05 -1.72e-06
                                                  2.18e-05 -8.34e-05 -4.69e-05
## 468
         2.00e-03
                   3.57e-03
                             7.84e-03 -1.48e-03
                                                  3.44e-03
                                                            2.80e-03 -9.70e-03
## 469
        -1.58e-02
                   8.34e-03 -2.96e-03 -3.97e-03
                                                  1.41e-02 -9.07e-03 -9.19e-03
## 470
        -5.28e-02 -8.41e-02 -2.96e-02
                                       3.08e-02
                                                  3.58e-02 -4.84e-02 -2.68e-03
## 471
         1.42e-02
                   1.15e-02 -5.59e-03 -5.34e-03
                                                  3.65e-03
                                                            1.21e-03 -8.77e-03
## 472
         1.35e-03 -1.68e-03 -3.55e-03 -9.15e-04
                                                  1.09e-03
                                                            1.14e-03
                                                                      9.09e-06
## 473
         6.35e-03
                   9.84e-03
                             8.35e-03
                                       1.38e-02
                                                  2.80e-03 -7.61e-03 -8.51e-03
## 474
        -3.59e-03 -2.02e-03
                             1.69e-03 -1.17e-03 -1.37e-02
                                                            3.87e-03
                                                                       9.58e-03
## 475
                  2.63e-02 -1.42e-02 -9.91e-03
                                                 1.38e-03 -9.95e-03
        -3.49e-02
                                                                       6.18e-03
## 476
         7.60e-03 -2.01e-02
                             4.75e-03 -3.01e-02 -7.08e-04
                                                            7.76e-03
                                                                       2.59e-03
         1.22e-02 -2.78e-02 3.60e-03 -5.49e-03 -8.08e-03 1.16e-02 -7.33e-04
## 477
```

```
## 478
                   1.06e-02 3.75e-03 -6.65e-03 -7.30e-02 4.82e-02 -8.61e-03
         9.42e-03
## 479
                   1.13e-02 -7.52e-03 -3.81e-03 -1.10e-03
         4.89e-03
                                                            3.14e-03
                                                                      7.64e-03
## 480
         7.15e-02
                   6.94e-03
                             2.50e-02
                                       2.01e-02
                                                 3.13e-02 -7.12e-03 -9.66e-03
## 481
                   3.75e-02 -3.42e-02
                                       8.51e-02 2.44e-02 -2.82e-02 -3.67e-03
        -2.92e-02
## 482
        -4.03e-02
                   1.59e-02
                             5.41e-03 -8.37e-03 -2.17e-03 -1.91e-02
                                                                      9.99e-03
## 483
        -4.17e-02
                   3.48e-02
                             2.24e-02 -1.52e-01 -2.04e-03 -3.69e-02
                                                                      1.56e-02
                                                            1.37e-03
## 484
         1.47e-02
                   1.15e-02 -5.42e-03 -9.46e-03 5.78e-03
                                                                      6.42e-03
## 485
        -2.62e-03
                   1.17e-02
                             7.26e-03
                                       1.10e-02 -8.90e-03
                                                            2.92e-03
                                                                      7.09e-03
## 486
         1.01e-02
                   1.56e-02 -8.03e-03
                                       1.79e-02 -3.30e-03 -1.26e-03
                                                                      7.96e-03
## 487
        -2.79e-02
                   2.17e-02 -3.42e-02
                                        1.98e-02
                                                 5.34e-03
                                                            1.22e-02 -2.46e-03
## 488
         1.34e-02
                   1.07e-02 -4.58e-04 -3.55e-02 -7.18e-03
                                                            1.20e-02 -1.70e-03
## 489
        -2.16e-04 -1.44e-04 -1.93e-04
                                       1.19e-04
                                                  6.33e-04 -3.68e-04 -3.86e-05
                                                            5.07e-03
## 490
        -2.83e-02
                   6.31e-03 -1.49e-02
                                       2.01e-02
                                                  2.52e-02
                                                                      1.31e-03
## 491
         1.56e-02 -1.26e-02 -1.20e-02
                                       2.61e-02
                                                  4.61e-03
                                                            3.41e-03 -1.40e-03
## 492
        -2.24e-02
                   8.61e-03
                             1.38e-02 -5.35e-03
                                                  1.17e-02 -9.33e-03 -6.44e-03
## 493
         3.75e-03
                   5.45e-03 -9.91e-04
                                       1.26e-02
                                                  5.16e-03 -4.30e-04
                                                                      2.77e-03
## 494
         7.93e-03
                   2.03e-02
                             7.30e-03 -2.91e-02
                                                  7.47e-03 -6.50e-04
                                                                      3.51e-03
## 495
        -3.06e-02 -1.65e-02 -3.24e-03 -1.06e-02 -1.60e-02
                                                            2.59e-02
                                                                      1.55e-02
## 496
        -4.56e-02 -7.65e-02
                             1.07e-02
                                       2.51e-02
                                                 2.40e-02
                                                            1.02e-02 -2.51e-02
## 497
         1.52e-02
                   2.75e-02 -3.67e-03 -9.16e-03 -2.20e-03
                                                            5.13e-03 -3.52e-03
## 498
         1.91e-03 -1.08e-03
                             1.66e-03
                                       2.17e-03 -2.16e-03 -1.67e-05 -4.43e-04
## 499
         7.21e-03 -2.03e-02 -6.25e-03 -5.70e-03 5.59e-03
                                                            3.15e-03 -1.05e-02
## 500
                             4.09e-03 -1.91e-03 -3.98e-03
         3.16e-03
                   3.38e-03
                                                            6.02e-03 -3.22e-04
## 501
        -3.91e-02
                   2.10e-02
                             2.01e-02
                                       2.29e-02
                                                 1.78e-03 -3.04e-03
                                                                      1.64e-02
## 502
         1.04e-02 -2.01e-02
                             8.76e-03 -3.68e-03 -5.84e-03
                                                            6.50e-03 -5.17e-04
## 503
         3.14e-03 -7.21e-03
                             1.91e-03 -9.27e-03
                                                  1.68e-04
                                                            3.78e-03 -6.76e-03
## 504
                   3.40e-03 -1.63e-03
                                       3.35e-03
                                                  3.40e-03 -2.86e-03 -6.05e-03
         1.81e-03
## 505
        -3.18e-02 -2.08e-02 -8.22e-02
                                       1.60e-02 8.50e-03
                                                            2.93e-03 -8.50e-03
## 506
        -3.15e-02
                   1.22e-02
                             5.80e-04 -8.56e-03 -3.38e-03
                                                            4.32e-03
                                                                      4.78e-03
## 507
        -4.62e-04
                   7.49e-06 -1.15e-03
                                        1.89e-04 -6.50e-04 -1.14e-05
                                                                      1.23e-03
## 508
         6.69e-03
                   2.73e-03
                             5.94e-03
                                       1.11e-02 -1.38e-02
                                                            1.65e-02
                                                                      2.49e-04
## 509
                   1.36e-02 -1.59e-02 -6.48e-03 8.00e-04 -1.83e-02 -4.63e-02
         1.17e-02
## 510
         1.32e-03 -3.44e-03 -9.80e-04
                                       4.22e-03
                                                  2.52e-04 -3.02e-03
                                                                      4.57e-04
## 511
         3.19e-03
                   3.07e-04
                             4.86e-03 -7.58e-03 -9.20e-04 -5.06e-03 -6.84e-03
## 512
        -4.43e-02
                   3.40e-02 -1.80e-02 -1.27e-02
                                                 1.74e-02 -2.00e-04
                                                                      9.81e-03
                                                            2.93e-03 -2.99e-03
## 513
                   1.64e-02 -7.78e-03 -9.71e-03 -1.18e-02
         1.33e-02
                                       1.88e-02 3.82e-03 -3.59e-02
## 514
         6.99e-02 -5.04e-02
                             7.95e-03
                                                                      2.38e-02
## 515
         5.42e-02 -3.65e-02
                             1.06e-02
                                       1.20e-02 -2.51e-02
                                                            2.26e-02
                                                                      6.69e-02
## 516
         3.80e-03 -4.46e-03
                             5.76e-03 -2.26e-03 -3.92e-03
                                                            4.16e-03
                                                                       5.95e-04
## 517
                                                            3.88e-03
         4.90e-03 -2.87e-03 -9.06e-03 -2.24e-02 -2.80e-03
                                                                      2.82e-03
## 518
         6.00e-04 -1.93e-03
                             3.29e-04 -2.24e-04 -1.71e-04
                                                            4.17e-04 -1.26e-04
## 519
         3.03e-03 -6.16e-03
                             3.11e-03 -5.73e-04
                                                 7.23e-04 -5.81e-03
                                                                      4.88e-03
                                                 4.08e-03 -4.60e-03
## 520
         7.95e-03 -9.46e-03 -1.10e-02 -4.45e-03
                                                                      6.54e-03
## 521
         5.74e-04
                  9.03e-04
                             3.50e-04 -4.02e-04 6.63e-04
                                                            7.34e-05 -4.77e-04
## 522
                             2.51e-03 -2.46e-03 -1.20e-03 -3.01e-03
        -1.19e-02 -1.17e-02
                                                                      5.31e-03
## 523
         3.19e-03 -1.86e-03
                             3.03e-03 -1.81e-03 -1.96e-03
                                                            2.17e-03 -2.99e-04
## 524
        -1.30e-02
                   1.14e-02 -8.32e-03 -6.69e-03 -2.54e-02
                                                            5.98e-03
                                                                      1.06e-02
                             1.40e-02 -1.85e-02 1.21e-02 -3.02e-03 -1.87e-02
## 525
         6.30e-03
                   3.42e-03
## 526
        -2.60e-02 -1.49e-02 -1.04e-02
                                       1.21e-02 -6.26e-03
                                                            1.30e-02
                                                                      4.01e-02
## 527
         9.09e-03 1.30e-02 -1.73e-02 -5.24e-03 -1.58e-02 2.21e-02 -2.96e-02
```

```
## 528
         9.79e-04
                   1.25e-03
                             2.16e-04
                                       1.65e-03 -4.57e-05 -7.41e-04
                                                                      1.90e-03
## 529
                             5.83e-02
                                        2.53e-02 -4.59e-02 6.91e-03 -1.28e-02
         8.53e-02 -2.38e-02
## 530
         2.84e-05
                   3.40e-05
                             4.03e-05
                                        5.62e-05
                                                  1.59e-05 -3.53e-05
                                                                      4.48e-05
## 531
                             6.99e-04 -9.46e-05
                                                  2.02e-04 -9.22e-04
         6.00e-04
                   1.42e-03
                                                                      1.80e-03
## 532
         2.68e-03
                   2.96e-04
                             4.29e-03 -1.04e-03
                                                  7.90e-03 -2.78e-03 -8.44e-03
## 533
         4.50e-03
                   6.36e-03 -1.11e-02 -2.00e-03
                                                  8.79e-03 -6.67e-03
                                                                      4.98e-03
## 534
        -2.62e-02 -2.60e-02 -2.53e-03 -2.11e-03 -2.02e-03 -2.53e-02
                                                                      3.76e-02
## 535
        -9.79e-03
                   1.46e-02
                             3.83e-02
                                       6.22e-03 -1.44e-02 -1.51e-02 -1.65e-03
         6.48e-03 -1.82e-03
                                        9.96e-03 -1.54e-02
## 536
                             8.87e-03
                                                           1.39e-02 -2.16e-02
## 537
         1.18e-02
                   9.69e-03
                             3.88e-02 -9.89e-03
                                                  5.85e-03 -4.67e-04 -1.13e-02
## 538
         6.18e-03 -1.58e-02
                             6.18e-03
                                        1.24e-02
                                                  2.42e-03 -6.31e-03
                                                                      8.47e-03
        -6.51e-03 -6.20e-03 -1.37e-02
                                        1.58e-03
## 539
                                                  2.29e-02 -1.35e-02 -1.89e-02
## 540
         3.25e-03
                   4.73e-04
                             7.85e-03 -1.59e-03
                                                  1.85e-04
                                                            3.26e-04 -1.84e-03
                                       1.15e-02 -4.34e-02
## 541
         6.47e-02 -2.43e-02
                             4.10e-02
                                                            3.48e-02 6.23e-03
## 542
        -3.84e-04 -5.81e-04 -1.50e-03
                                       1.89e-04 -5.15e-05
                                                            1.54e-03 -1.70e-03
## 543
        -4.09e-02
                   3.69e-03
                             8.80e-03 -4.04e-02 7.38e-03
                                                            1.06e-02 -9.55e-04
## 544
         1.43e-02
                   1.94e-02
                             5.47e-03 -1.36e-02 -7.13e-04
                                                            1.28e-02
                                                                      8.36e-03
## 545
        -2.71e-02
                   9.57e-03 -1.35e-02
                                       1.64e-02 -2.46e-02
                                                            8.49e-02 -4.00e-02
## 546
         3.42e-03 -1.06e-02 -1.36e-03
                                       5.34e-03 6.00e-03 -1.92e-03 -8.83e-03
## 547
         1.21e-02
                   2.06e-02
                             1.37e-02 -7.21e-03 -9.30e-03
                                                            9.09e-03 -2.27e-03
## 548
         7.81e-02 -5.16e-02 -1.54e-02
                                       2.97e-02 -2.26e-02 -5.17e-03
                                                                      3.29e-02
## 549
         8.30e-03 -6.54e-03
                             1.14e-02 -3.16e-03 5.09e-03
                                                            1.68e-03 -3.90e-03
## 550
                  2.03e-02 -1.96e-03 -7.72e-03 1.02e-03
         1.07e-02
                                                            2.03e-02 -2.26e-02
## 551
         7.83e-03
                   5.55e-03 -1.11e-02 -2.80e-02 -4.91e-03 -7.83e-04
                                                                      7.43e-03
         2.77e-03 -2.12e-04 -7.96e-05
## 552
                                       1.07e-02 -3.07e-04
                                                            3.49e-03 -9.26e-04
## 553
        -7.81e-03 -1.11e-02
                             1.98e-02 -1.19e-02
                                                 6.42e-04
                                                            1.41e-02 -9.02e-03
## 554
        -4.19e-02 -3.77e-02
                             2.39e-02
                                       2.83e-02 -3.62e-03
                                                            9.93e-03 -1.15e-02
## 555
         1.21e-02 -2.01e-02
                             3.43e-04
                                       5.05e-02
                                                  1.09e-02 -1.33e-02
                                                                     2.02e-02
                             3.31e-03 -2.28e-03
## 556
         4.68e-03
                   1.62e-03
                                                  1.02e-03
                                                            1.42e-03 -4.42e-03
## 557
         6.83e-04 -5.07e-04 -1.61e-03 -3.14e-04
                                                  1.04e-03
                                                            6.88e-05 -5.91e-04
## 558
        -2.22e-03 -4.10e-03
                             8.62e-03
                                       6.43e-03 -1.93e-03 -2.44e-03
                                                                      9.82e-05
## 559
                             3.08e-04 -4.63e-03
                                                  6.37e-03 -1.20e-02 -2.60e-03
         8.17e-03
                   2.68e-03
## 560
        -3.35e-02
                   1.26e-02
                             1.79e-03
                                        5.66e-02
                                                  3.16e-03
                                                            8.72e-03
                                                                      1.24e-03
## 561
         9.37e-03
                   3.53e-03
                             7.78e-04 -4.09e-03
                                                  5.18e-03
                                                            4.78e-03 -1.80e-03
## 562
        -4.67e-03 -6.83e-03
                             3.17e-03
                                       1.50e-02
                                                  3.71e-02 -3.10e-02 -2.57e-02
                                                           6.59e-02
## 563
         9.10e-02 -3.37e-02
                             3.20e-02 -6.35e-02 -6.11e-02
                                                                      7.82e-02
                                       1.74e-02 -1.66e-04 -7.73e-03
## 564
         1.09e-02 -3.16e-02
                             5.44e-03
                                                                      5.69e-03
## 565
         1.38e-02
                  1.52e-02
                             3.10e-02 -4.37e-03 -1.35e-02 -3.63e-02 -7.94e-04
                             1.87e-03 -6.38e-03 1.11e-03 -1.97e-03
## 566
         9.30e-03 -1.48e-02
                                                                      2.31e-03
## 567
         6.89e-02 -4.52e-02 -7.29e-02
                                       1.95e-02 4.29e-03
                                                            2.39e-02 -1.45e-02
## 568
         1.23e-03 -3.64e-03
                             1.87e-03 -3.06e-04 -1.16e-04 -1.03e-03
## 569
         1.14e-01 -3.53e-02 -4.35e-02
                                       1.91e-02 -8.17e-02 -4.23e-02 -2.84e-02
## 570
         2.72e-03
                   2.30e-03
                             1.44e-02 -2.80e-03
                                                 1.19e-03 -4.06e-03
                                                                      1.70e-02
## 571
        -5.35e-03
                   3.44e-03 -1.26e-02
                                       3.24e-03
                                                  3.98e-03
                                                            5.86e-04 -2.04e-03
## 572
                   1.05e-02 -1.14e-02 -8.56e-03
                                                  1.05e-02 -9.06e-03 -1.66e-02
         1.84e-02
## 573
         9.86e-03
                   1.40e-02 -1.20e-02
                                       1.75e-02 -8.17e-03 -2.38e-02
                                                                     9.56e-03
## 574
        -3.77e-02
                   3.10e-02 -1.26e-02 -6.91e-02 4.03e-03
                                                            1.13e-02 -5.56e-03
         4.67e-03 -2.02e-03 -8.65e-03 -3.18e-03 1.23e-03
## 575
                                                            2.53e-03 -5.14e-04
## 576
        -2.68e-02
                   1.99e-02
                             3.29e-02 -7.45e-03 -7.90e-04
                                                            2.23e-03
                                                                      4.46e-03
         6.89e-03 -1.12e-02 2.45e-03 -2.43e-03 -4.69e-03 3.11e-03 -2.46e-04
```

```
## 578
                   1.37e-02
                              1.25e-02 2.85e-02 6.62e-04
                                                             3.45e-03 -2.91e-02
        -4.09e-02
## 579
        -6.38e-02
                   2.68e-02 -2.35e-02 -1.42e-02 -1.15e-03
                                                             2.34e-02
                                                                       1.05e-02
## 580
         1.41e-02
                   2.71e-02
                              1.05e-02 -4.21e-03 -4.33e-03 -2.31e-02
                                                                       1.17e-02
## 581
         6.51e-03 -1.53e-03
                              8.78e-03
                                       1.17e-02 -3.23e-03
                                                             2.32e-04
                                                                       3.41e-03
## 582
         7.10e-03 -1.54e-02 -6.72e-03 -3.25e-03
                                                  3.76e-03
                                                             1.24e-03
                                                                       2.96e-03
## 583
         1.28e-04 -5.62e-04
                              2.23e-04 -5.22e-05
                                                  5.69e-05 -1.11e-04
                                                                       3.72e-06
## 584
         5.36e-03 -4.88e-03
                              7.61e-03 -2.78e-03 -5.48e-04
                                                             2.57e-03 -6.01e-04
## 585
         6.86e-03
                   2.70e-03
                              9.49e-03
                                        1.00e-02 -1.60e-02
                                                             1.84e-02 -2.59e-02
## 586
                   8.94e-02 -6.37e-04
                                        2.16e-02 1.56e-02 -3.22e-02
         8.90e-02
## 587
         7.35e-03
                   1.53e-02
                              1.97e-03 -4.20e-03 -3.94e-03
                                                             6.57e-03 -1.32e-04
## 588
        -4.63e-03
                   8.59e-03 -8.67e-03
                                        2.94e-03
                                                  3.11e-03 -6.20e-03 -6.19e-04
                              2.49e-02
## 589
        -7.46e-03
                   1.98e-03
                                        3.40e-03 -1.85e-02
                                                             1.48e-03 -7.15e-03
## 590
         6.81e-02 -4.62e-02 -2.68e-02
                                        1.50e-02
                                                  1.62e-02 -1.86e-02 -1.17e-03
## 591
        -2.41e-03 -4.97e-03 -1.40e-03
                                        7.01e-03
                                                  6.74e-04
                                                             4.04e-03 -2.93e-03
## 592
        -2.39e-02 -2.15e-03 -3.24e-02
                                        1.24e-02
                                                  1.23e-03
                                                             3.51e-03 -1.67e-02
## 593
        -1.44e-02
                   1.05e-02
                              3.08e-03
                                        1.45e-02 -4.51e-02 -3.01e-02
                                                                      2.32e-02
## 594
        -3.28e-04 -1.21e-05 -1.48e-04
                                        1.19e-04
                                                  2.66e-04
                                                             5.36e-04 -7.52e-04
## 595
        -2.36e-03
                   8.81e-03
                              3.29e-03
                                        1.77e-03
                                                  2.16e-03
                                                             1.05e-03 -4.63e-03
## 596
         9.46e-02 -3.92e-02
                              8.26e-02
                                        1.07e-02
                                                  1.50e-01
                                                             6.51e-02
                                                                       7.78e-02
## 597
         3.49e-03
                   2.86e-03 -1.70e-03 -1.93e-03
                                                  1.61e-03
                                                             8.61e-04 -3.19e-03
## 598
                   8.46e-03
                              1.22e-02 -4.74e-03 -1.09e-03 -2.20e-03
        -2.04e-02
                                                                       7.44e-03
## 599
        -4.18e-02
                   2.94e-02
                              1.03e-02 -6.71e-02 -1.41e-02
                                                             9.79e-03
                                                                       3.66e-02
## 600
         5.20e-03
                   5.37e-03 -2.35e-03 -3.83e-03 -3.14e-03
                                                             6.22e-03
                                                                       4.31e-03
## 601
         6.05e-04
                   1.06e-03 -6.84e-04 -1.69e-04
                                                  7.13e-04 -2.67e-03 -3.60e-04
## 602
         2.24e-02
                   1.46e-02 -2.56e-03 -1.23e-02
                                                  6.13e-03
                                                             1.15e-02
                                                                       1.67e-03
## 603
        -4.92e-02 -7.80e-02 -4.43e-02
                                        3.40e-02
                                                  2.51e-02
                                                             9.09e-03 -4.73e-03
## 604
         1.35e-02
                   7.43e-03
                              4.41e-02 -7.34e-03 -1.28e-02
                                                             5.92e-03
                                                                       7.03e-05
## 605
         7.27e-03
                   9.64e-03
                              1.07e-02
                                        1.35e-02
                                                  1.32e-02 -8.31e-03 -1.95e-02
                   2.30e-03 -1.84e-02
## 606
         1.95e-02
                                        3.30e-02
                                                  1.37e-02 -1.19e-02
                                                                       4.98e-03
## 607
         1.90e-02 -4.16e-03
                              4.07e-03 -9.47e-03 -9.61e-03
                                                             1.15e-02
                                                                       3.16e-03
## 608
                   6.42e-02 -2.08e-01
        -4.98e-02
                                       1.55e-01 -5.46e-02
                                                             4.03e-02
                                                                       1.33e-01
## 609
                   1.61e-02 -9.26e-02 -8.35e-02
                                                  1.07e-02
                                                             7.74e-02
                                                                       1.12e-01
        -5.27e-02
## 610
         5.58e-03 -2.14e-02 -6.36e-03 -2.47e-03
                                                  2.54e-03
                                                             3.88e-03
                                                                       6.70e-04
## 611
        -1.79e-02 -2.64e-03
                              1.15e-02 -1.95e-03
                                                  9.01e-03 -1.23e-02
                                                                       1.51e-02
## 612
         6.60e-04 -1.94e-03 -9.22e-04 -2.02e-03
                                                  4.98e-04
                                                             1.50e-04
                                                                       6.98e-04
## 613
        -4.73e-02 -3.64e-02
                              3.18e-04 -6.97e-03
                                                  1.65e-02 -1.62e-02 -4.56e-02
                                        1.11e-02 -1.08e-03
## 614
         3.26e-03 -4.56e-03
                              2.62e-03
                                                             9.90e-05
                                                                       1.41e-03
## 615
         8.56e-02 -1.97e-02
                              4.15e-02
                                        1.68e-02 -2.76e-02
                                                             4.02e-02 -4.06e-02
                   1.51e-03
                                        1.43e-03 -6.83e-05
## 616
         7.76e-04
                              3.76e-04
                                                             4.16e-04 -2.46e-05
        -2.07e-03 -1.78e-03
                              1.28e-03 -2.68e-03
                                                  3.74e-04 -1.04e-02 -3.23e-03
## 617
## 618
         9.43e-03
                   1.01e-02
                              9.06e-03
                                        1.43e-02 -1.99e-03
                                                             5.30e-03 -2.61e-03
## 619
         1.32e-02
                   1.45e-02 -1.68e-02
                                        3.19e-02 -9.77e-03 -1.76e-02
                                                                       1.15e-02
## 620
        -4.61e-04
                   2.51e-03 -3.41e-04
                                        3.04e-04 -2.21e-04
                                                             1.20e-03 -1.52e-03
## 621
         2.50e-02
                   4.25e-02
                              1.56e-02
                                        3.54e-02 -2.64e-02 -3.52e-02
                                                                       1.33e-02
## 622
        -1.44e-02
                   3.20e-03 -7.68e-03
                                                  2.57e-04 -1.68e-02
                                                                       7.79e-03
                                        9.09e-03
## 623
         4.53e-03
                   7.19e-03 -1.88e-04
                                        7.40e-03 -1.11e-03
                                                             2.44e-03
                                                                       2.81e-03
## 624
         1.14e-02
                   1.41e-02 -1.71e-02
                                        1.57e-02
                                                  4.29e-03 -8.32e-03
                                                                       9.19e-03
        -2.55e-02 -9.95e-03 -6.97e-02 -9.37e-03
## 625
                                                  2.70e-02
                                                             8.82e-03
                                                                       8.74e-03
## 626
        -2.00e-02
                   1.05e-02 -5.72e-03 -4.16e-03
                                                  6.02e-03 -8.18e-03
                                                                       9.16e-03
## 627
         5.46e-04
                  6.83e-04 -1.87e-04 9.63e-04 -1.14e-05 7.99e-05
                                                                       1.15e-04
```

```
## 628
         2.09e-03 -4.08e-03 -5.54e-03 -4.53e-04 5.83e-04 -4.87e-03
## 629
         6.14e-03 -8.11e-03 -2.73e-04 -2.31e-03 1.14e-03
                                                            3.81e-03 -9.96e-05
## 630
         5.78e-03
                   5.68e-03 -7.99e-04 -4.65e-03 -3.05e-03
                                                            9.69e-03
                                                                      3.18e-03
## 631
         5.87e-03 -1.57e-02
                             3.91e-04
                                       2.14e-02 4.16e-03
                                                            1.71e-03 -4.92e-03
## 632
        -2.84e-02 -4.00e-02 -5.25e-03
                                       1.42e-02 -1.85e-03
                                                            2.59e-03
                                                                      4.16e-03
## 633
        -5.43e-02
                   1.49e-02
                             8.67e-04 -1.89e-02
                                                 1.09e-02
                                                            1.69e-02 -2.24e-02
## 634
         8.71e-03 -2.75e-02
                             6.98e-03 -7.54e-03 -8.30e-03 -5.46e-03
                                                                      1.15e-02
## 635
        -4.60e-02 -2.53e-02
                             5.48e-03 -4.82e-03 -7.31e-03
                                                            1.50e-03
                                                                      1.46e-02
                             7.50e-04 -1.10e-03 6.97e-03 -7.52e-03
        -9.17e-03 -6.78e-03
                                                                      3.26e-03
## 636
## 637
         6.20e-02
                   5.21e-02
                             1.86e-02 -3.87e-02
                                                  6.65e-03 -9.25e-02
                                                                      7.85e-02
## 638
        -4.29e-03 -5.59e-03
                             2.65e-06
                                       2.27e-03
                                                  2.77e-03 -6.56e-03 -1.30e-03
                             3.05e-03 -2.23e-02 -6.17e-03
## 639
         6.64e-03
                  1.02e-02
                                                            8.78e-03
                                                                      6.94e-03
## 640
         3.37e-03 -7.54e-04
                             5.93e-03 -2.38e-03 -4.10e-03
                                                            1.76e-03
                                                                      2.50e-03
                                       1.19e-02 1.60e-03
## 641
         5.28e-03 -3.31e-03 -1.00e-02
                                                            1.06e-02 -8.29e-03
## 642
                   5.47e-03
                             1.64e-03 -2.37e-03 -5.51e-03 -2.49e-02 -9.44e-03
         1.08e-02
## 643
         9.27e-03 -1.64e-02
                             1.70e-02 -5.75e-03
                                                 1.36e-03
                                                            3.97e-04 -2.31e-03
## 644
        -1.13e-02
                  4.25e-03 -1.11e-02
                                       6.76e-03
                                                 2.95e-03
                                                            9.82e-04
                                                                      5.99e-04
## 645
        -2.11e-02 -1.43e-02 -9.45e-03 -6.46e-03 -1.01e-02 -2.71e-03
                                                                      9.39e-03
## 646
         8.49e-02
                   5.63e-02
                             1.12e-02
                                       1.99e-02 -1.15e-03 -3.29e-03 -1.26e-02
## 647
        -1.11e-03 -6.86e-04
                             4.49e-03
                                       8.93e-04 -3.21e-03 -2.02e-03
                                                                      1.36e-03
## 648
         2.79e-03 -7.10e-04
                             8.19e-05 -7.80e-04 1.56e-03 -4.83e-03
                                                                      1.44e-03
## 649
         9.62e-03
                   2.41e-03 -8.27e-03 -4.71e-03 -7.61e-03 -7.72e-03
                                                                      7.27e-03
                                       1.69e-03 -1.04e-02
## 650
        -5.23e-03
                   5.02e-03
                             1.68e-02
                                                            7.26e-03 -3.91e-03
## 651
         4.33e-03
                   2.80e-03 -7.22e-04
                                       5.79e-03 -5.19e-04
                                                            1.97e-03 -7.33e-04
                             1.71e-02 -4.40e-03 1.20e-02 -4.42e-04 -2.15e-02
## 652
        -2.04e-02 -2.27e-02
## 653
        -5.61e-02
                   2.06e-02
                             3.67e-02 -1.73e-02 -3.14e-02
                                                            8.46e-02
                                                                      2.88e-02
## 654
         4.69e-03
                   7.35e-03 -1.28e-03 -4.32e-03 -3.63e-02
                                                            2.46e-02 -1.82e-02
## 655
        -3.57e-03 -6.10e-03
                             3.41e-03
                                       1.80e-03 -2.30e-03
                                                            4.84e-04 -3.36e-03
                   1.56e-02 -5.08e-03 -2.69e-02 -2.61e-04
## 656
        -2.26e-02
                                                            1.02e-03
                                                                      5.60e-03
## 657
         5.51e-02
                   8.07e-02 -3.72e-02 -8.21e-02 8.63e-03 -1.27e-02
                                                                      2.61e-03
## 658
                   4.27e-03 -9.54e-03 -4.84e-03
                                                 2.16e-03 -2.95e-04
         6.03e-03
                                                                      3.36e-03
## 659
        -5.63e-02
                   2.21e-02
                             2.22e-02 -1.23e-02 -1.56e-02 -4.57e-02 -5.73e-02
## 660
         7.65e-03
                   4.60e-03
                             1.24e-02 -4.84e-03 -6.51e-03
                                                            2.97e-03
                                                                      4.26e-03
         7.25e-02 -1.97e-02 -1.48e-01 -5.49e-02 3.22e-02 -1.70e-02 -5.75e-03
## 661
## 662
         5.46e-03 -1.70e-02
                             1.69e-02 -1.79e-02 -4.42e-03
                                                            5.72e-03 -7.26e-04
## 663
        -3.38e-02 -3.15e-02
                             1.53e-02 -6.65e-02 -1.39e-02
                                                            1.01e-02 -1.07e-02
                  6.39e-02 -6.30e-03 -6.40e-02 2.92e-02 -3.62e-02
## 664
        -5.07e-02
                                                                     8.44e-03
## 665
        -1.74e-02 -4.86e-03 -7.94e-03
                                       9.30e-03 -5.09e-03
                                                            6.39e-03
                                                                      3.90e-03
                             5.26e-02
                                                            1.90e-03 -1.75e-03
## 666
        -3.67e-02 -1.78e-02
                                       2.42e-02 -1.05e-02
         1.02e-01
                   6.41e-02
                             9.87e-04
                                                 3.51e-03 -2.01e-02 -1.36e-02
## 667
                                       9.85e-02
## 668
         7.80e-02 -3.68e-02
                             8.10e-03 -5.58e-02
                                                 2.82e-02
                                                            1.08e-01 -2.77e-02
## 669
         3.90e-03 -4.60e-03 -3.91e-03 -2.32e-03
                                                 2.65e-03
                                                            1.36e-03 -4.20e-03
## 670
         7.86e-02
                   8.43e-02
                             1.07e-02 -1.27e-01 -2.05e-02 -2.38e-03
                                                                      2.86e-02
## 671
                             9.95e-03 -5.92e-03 -6.42e-03
         1.13e-02 -2.16e-02
                                                            1.15e-04 -9.87e-04
## 672
                   3.97e-03
                             1.55e-02 -5.78e-03 -6.27e-03
                                                            7.91e-03 -7.68e-03
         9.57e-03
## 673
         9.87e-03 -6.41e-03
                             8.34e-03 -3.93e-03 6.07e-04 -7.55e-03
                                                                      1.02e-02
## 674
        -6.42e-02
                   4.39e-02
                             1.32e-03 -1.47e-02 -2.52e-03 -8.22e-04
                                                                      1.11e-02
                   8.51e-03 -1.24e-02 -8.92e-03 1.45e-03
                                                            2.40e-02
## 675
        -2.14e-02
                                                                      8.22e-03
## 676
         7.99e-03
                   1.88e-03 -3.02e-02 -2.46e-02 7.55e-03 -1.89e-02 -1.46e-02
        -1.92e-02 -3.46e-02 3.33e-03 3.14e-02 -7.59e-03 -2.04e-04
## 677
```

```
## 678
         2.79e-03 4.55e-03 -7.23e-03 4.69e-03 -1.84e-02
                                                            1.96e-03 1.17e-02
## 679
                                                  1.26e-03
                                                            2.20e-03 -4.22e-04
         3.92e-03 -1.47e-03 -4.79e-03
                                       3.71e-03
## 680
        -5.43e-04 -5.88e-04 -9.08e-05 -9.47e-04
                                                  9.30e-04
                                                            1.57e-03 -1.03e-03
## 681
         1.04e-02 -1.16e-02 -2.66e-04 -5.94e-03 -1.78e-02
                                                            2.97e-03
                                                                      8.90e-03
## 682
        -4.69e-03 -5.17e-03 -9.53e-03
                                       1.60e-03 -4.69e-03
                                                            1.17e-02 -2.72e-03
## 683
         3.41e-03 -8.24e-03 -8.25e-04 -2.72e-03 -3.92e-03
                                                            7.93e-03
                                                                      1.75e-03
## 684
                   2.93e-02 -1.42e-02
                                       1.76e-02
                                                  1.75e-02 -2.56e-02 -7.65e-05
         6.49e-02
## 685
         1.14e-02
                   1.54e-02
                             1.05e-02
                                       2.02e-02
                                                  7.46e-03
                                                            5.22e-03
                                                                       1.94e-05
## 686
                             4.27e-03 -2.67e-03
                                                  1.38e-02 -2.28e-02
                                                                       2.53e-02
         1.18e-02
                   1.94e-02
## 687
        -2.63e-02
                   9.93e-03 -2.26e-02 -5.95e-03
                                                  1.28e-02 -1.56e-02
                                                                       2.85e-02
## 688
         1.89e-03 -5.40e-03 -6.16e-03 -1.36e-03
                                                  1.62e-03 -1.49e-03
                                                                      7.33e-04
## 689
         5.35e-02 -2.03e-02
                             7.00e-03
                                       6.03e-02
                                                  8.75e-03 -1.82e-02
                                                                      8.17e-04
## 690
        -2.03e-02
                   5.26e-02
                             2.96e-04
                                       1.13e-02
                                                  1.61e-02 -1.57e-02
                                                                       3.76e-03
## 691
        -3.41e-02
                   2.62e-02 -2.96e-03
                                        5.85e-02
                                                  1.64e-02 -1.53e-02 -4.47e-02
## 692
        -3.60e-02
                   9.11e-03
                             3.38e-02 -1.22e-02 -9.37e-03
                                                            2.35e-03
                                                                      2.61e-03
## 693
         4.61e-03
                   7.10e-03
                             4.31e-03 -1.42e-02
                                                  9.81e-04 -8.92e-03 -1.14e-02
## 694
         1.04e-01 -6.89e-02 -1.34e-02
                                       2.05e-02
                                                  8.39e-02 -1.88e-02 -5.01e-02
## 695
                   5.44e-03
                             1.63e-02 -7.00e-03 -7.52e-03
                                                            2.54e-02 -1.75e-04
         9.50e-03
## 696
        -3.27e-02 -5.87e-02
                             4.20e-03 -1.33e-01 4.07e-02 -1.71e-01
                                                                      1.70e-01
## 697
        -3.45e-03 -7.78e-03 -8.78e-03 -8.94e-03 -1.19e-04
                                                            4.84e-03 -1.09e-02
## 698
         9.91e-03
                   1.91e-03
                             3.77e-03 -6.08e-03 -6.34e-03
                                                            9.81e-03
                                                                      2.94e-03
## 699
         5.33e-03 -1.79e-03
                             8.32e-03 -2.71e-03 -9.31e-03
                                                            2.61e-03
                                                                      1.71e-04
                             9.72e-03 -1.83e-02 -3.76e-02
## 700
        -1.16e-02 -1.60e-03
                                                            1.14e-02
                                                                      2.12e-02
##
  701
        -5.98e-02
                   1.81e-01 -1.07e-01
                                        2.92e-02
                                                 4.29e-02 -3.18e-02 -4.30e-03
        -3.71e-03 -2.46e-03 -4.95e-03
##
  702
                                       7.95e-03
                                                  1.76e-03
                                                            1.09e-02
                                                                      1.85e-02
##
  703
         6.89e-04
                   1.22e-03
                             3.39e-04 -2.17e-03
                                                  1.13e-03
                                                            1.35e-03 -2.52e-03
## 704
        -3.50e-02
                   1.38e-02
                             2.13e-02 -5.86e-03 -2.36e-03 -1.84e-03
                                                                      5.31e-03
## 705
        -1.17e-02 -8.81e-03 -9.02e-03
                                       2.77e-03 -9.47e-03
                                                            2.33e-02 -2.56e-02
                             1.75e-03 -2.54e-04 1.99e-04 -9.40e-04
## 706
         4.36e-04 -9.01e-04
                                                                      1.25e-03
##
  707
         9.40e-02
                  6.64e-03
                             9.35e-02 -5.73e-02 -5.95e-02 -2.17e-02 -8.25e-04
  708
        -1.12e-02 -8.58e-03 -4.26e-03 -1.48e-02 -1.75e-02 -3.73e-03
##
                                                                      1.13e-02
## 709
        -3.88e-03 -7.99e-03
                             5.40e-03
                                        3.81e-03 -8.96e-03 9.10e-03 -9.78e-03
## 710
         7.17e-02
                   7.25e-02 -4.99e-03
                                        1.17e-02
                                                 3.98e-03 -2.04e-03 -1.47e-03
                                        1.75e-04 -4.41e-03 -1.39e-02 -6.19e-03
## 711
         5.23e-03
                   9.35e-03
                             1.60e-02
  712
##
         5.90e-02
                   5.21e-02 -5.99e-03
                                        1.28e-02
                                                 1.03e-03 -1.28e-02
                                                                      5.19e-03
## 713
         1.03e-02 -1.11e-02
                             3.22e-03 -6.41e-03 -2.76e-03
                                                            8.08e-04
                                                                      4.55e-03
                                        3.82e-03 5.87e-03
        -7.37e-03 -2.42e-03 -3.81e-03
## 714
                                                            2.22e-04 -4.17e-03
## 715
        -1.66e-02
                   3.58e-02
                             5.15e-02 -2.03e-02 -3.32e-02
                                                            7.39e-03 -5.56e-03
                             1.86e-02 -4.86e-03 -9.99e-03 -1.80e-02 9.53e-03
## 716
        -3.56e-02
                   1.09e-02
                   5.98e-03 -1.83e-02
                                       1.77e-02 -4.18e-03
## 717
        -5.78e-03
                                                            3.89e-02 -3.52e-02
## 718
         9.11e-03
                   5.86e-03 -2.57e-03 -5.74e-03 3.95e-03
                                                            3.87e-03 -8.25e-03
## 719
        -2.08e-02
                   2.55e-03
                             1.24e-02 -3.00e-03
                                                 2.05e-03 -1.21e-02
                                                                      1.83e-02
## 720
        -2.24e-02 -9.20e-03
                             2.13e-02 -8.22e-03 -2.06e-02
                                                            3.62e-02
                                                                      1.08e-02
## 721
         7.20e-02 -5.42e-02
                             2.80e-02
                                       2.06e-02
                                                 3.26e-02 -6.88e-03 -2.09e-02
## 722
        -4.68e-03 -2.25e-03
                             9.34e-04 -6.30e-04 6.04e-04 -7.21e-03
                                                                      4.58e-03
## 723
         1.02e-02 -5.39e-03
                             1.41e-02
                                       1.30e-02 -4.04e-03
                                                            6.47e-03
                                                                      2.98e-03
## 724
        -1.01e-02 -7.86e-03 -1.83e-02
                                       3.14e-03 -8.73e-03
                                                            1.26e-02 -1.74e-02
                             1.15e-03 -3.42e-03 -5.51e-05
## 725
         8.22e-03 -2.30e-04
                                                            6.69e-03 -9.69e-03
##
  726
         6.66e-02
                  1.12e-01 -2.86e-02 -1.12e-01 2.27e-02 -3.14e-03 -2.01e-02
         8.02e-03 1.06e-02 1.34e-02 -2.31e-03 -1.99e-03 -7.13e-04 7.61e-03
## 727
```

```
## 728
         7.09e-03
                   1.77e-03 -7.40e-03 -3.91e-03 7.54e-04
                                                            5.00e-03 -2.77e-03
## 729
                             3.07e-03
                                        5.24e-03 -5.78e-03
                                                            3.98e-03 -1.65e-02
        -7.68e-03 -1.49e-02
## 730
        -4.11e-02
                   3.10e-02
                             3.89e-03
                                        3.54e-02 -3.87e-02 -4.80e-02 -5.96e-02
## 731
        -3.73e-02
                   1.69e-02
                             2.28e-02
                                        2.60e-02
                                                 1.42e-02 -2.08e-02
                                                                      1.81e-02
## 732
         5.47e-02
                   9.02e-04 -2.40e-03
                                        1.12e-02
                                                  1.17e-02 -1.62e-02
                                                                      2.64e-03
                                        1.17e-02
## 733
        -2.96e-02
                   2.64e-02 -6.25e-03
                                                  2.82e-03
                                                            8.75e-04
                                                                      1.33e-03
## 734
        -6.75e-03 -8.24e-03
                             2.07e-03
                                       1.95e-03
                                                  4.34e-03
                                                            1.13e-02 -6.65e-03
                                       4.03e-02 -6.11e-03 -1.55e-02
## 735
         1.78e-02
                   1.53e-03 -1.47e-02
                                                                      3.41e-03
## 736
                   1.34e-02 -3.91e-02 -7.56e-03
                                                  2.81e-02 -2.47e-03 -1.26e-02
         1.09e-02
## 737
         6.86e-04
                   4.13e-04 -1.73e-03 -3.12e-04
                                                  4.68e-04 -1.60e-03
## 738
         7.41e-03
                   2.86e-03
                             5.55e-03 -2.52e-03
                                                  3.34e-03 -7.91e-04 -5.71e-03
  739
        -3.61e-04
                   2.66e-04 -9.75e-05
                                       1.46e-04
                                                  9.47e-04 -1.09e-03
##
                                                                     1.07e-03
##
  740
         3.71e-03 -6.23e-03
                             3.57e-03 -2.78e-03
                                                  4.09e-04
                                                            3.40e-03 -4.84e-03
## 741
         4.94e-03 -8.64e-03
                             6.69e-03
                                       6.62e-03 -1.60e-03
                                                            1.01e-03 -1.05e-03
## 742
        -6.29e-03 -4.02e-03
                             3.84e-03
                                       1.41e-02 -1.13e-02 -4.99e-03 -1.23e-03
## 743
         4.32e-03 -4.23e-03
                             3.08e-03 -3.85e-03 -2.25e-03
                                                            3.76e-03 -2.63e-04
## 744
        -2.76e-02
                   1.09e-02 -3.31e-02 -6.97e-03
                                                 3.27e-02
                                                            1.22e-03 -1.70e-02
## 745
        -3.24e-02 -8.67e-03 8.70e-02 -1.25e-01 -2.99e-02 -1.78e-02 -4.72e-04
## 746
        -4.03e-02
                   1.13e-02 -1.80e-04 -1.02e-02
                                                 3.53e-02 -1.69e-02 -2.70e-02
## 747
        -3.79e-03
                   1.62e-02 -1.43e-02 -8.27e-04
                                                  1.57e-03
                                                            2.47e-02 -1.09e-02
## 748
        -4.28e-02
                   2.52e-02 -7.04e-02 -1.38e-02
                                                  2.32e-02
                                                            1.09e-02 -2.01e-03
## 749
        -1.95e-02
                   2.57e-02
                             2.00e-02
                                       8.77e-03 -3.55e-02
                                                            1.54e-03
                                                                     2.02e-02
                   4.51e-03 -2.16e-02
                                       1.50e-02
                                                 2.97e-01
                                                            4.89e-02 -1.36e-01
## 750
        -4.91e-02
## 751
        -2.06e-03 -8.78e-04 -6.74e-04 -5.40e-04
                                                  3.28e-03 -9.17e-04 -3.35e-03
## 752
        -1.10e-02 -1.94e-02
                             4.76e-03
                                       8.71e-03
                                                 2.73e-02 -2.54e-02 -5.05e-02
##
  753
        -3.23e-02
                   1.16e-02
                             1.14e-01
                                        2.87e-02 -1.08e-01
                                                            3.92e-02
                                                                      2.40e-01
## 754
                   1.50e-02 -4.93e-03 -1.41e-02 -1.02e-01
        -4.91e-02
                                                            4.69e-02
                             8.22e-03
## 755
         8.76e-03 -1.43e-02
                                        1.80e-02
                                                 4.81e-03 -3.16e-04 -9.75e-03
## 756
        -1.07e-02 -7.35e-03
                             1.58e-02
                                       2.29e-02
                                                  6.70e-03 -6.03e-03 -8.06e-03
## 757
         6.76e-03
                   1.25e-02 -8.34e-03 -4.54e-03
                                                  1.18e-02 -4.72e-03 -1.73e-02
## 758
        -4.00e-03 -5.67e-03
                             3.05e-03 -4.91e-03
                                                  1.15e-02 -1.65e-02 -8.29e-03
## 759
        -1.50e-02
                  4.19e-03
                             2.01e-02 2.33e-02
                                                  9.53e-04 -3.86e-03
                                                                      8.76e-03
## 760
         1.34e-02 -1.55e-03
                             2.50e-02 -1.01e-02 -1.77e-02
                                                            5.57e-03
                                                                      1.46e-02
                  4.38e-03 -1.35e-02 -1.87e-03 5.62e-03
                                                            5.21e-03 -1.88e-03
## 761
         3.23e-03
        -4.27e-02 -2.03e-02
                             1.41e-02 -6.64e-02 -9.65e-03 -2.59e-02
##
  762
                                                                      8.90e-03
                                       1.20e-02 -6.41e-03 -2.24e-03
## 763
         6.33e-02 -1.09e-02
                             2.95e-02
                                                                      1.16e-03
        -3.52e-02 -2.26e-02
                             2.44e-02 -1.05e-02 -1.08e-02
## 764
                                                            4.87e-03 -6.15e-04
## 765
         6.12e-03 -1.71e-02
                             3.79e-03 -3.12e-03 -6.01e-03
                                                            6.82e-03 -7.90e-04
         7.60e-03 -1.54e-03 -3.92e-03 -4.33e-03 4.71e-03
## 766
                                                            2.21e-03 -5.39e-03
  767
                  1.51e-02 -1.27e-02
                                       1.20e-02
##
        -2.24e-02
                                                 2.24e-02
                                                            2.99e-02 -2.62e-02
## 768
         1.03e-02 -1.19e-03
                             4.40e-03
                                        1.88e-02 -4.54e-03 -7.79e-03
                   7.54e-03
## 769
         1.16e-02
                             2.35e-02
                                        2.04e-02
                                                 1.58e-02 -1.75e-02 -2.79e-02
## 770
         1.26e-02
                   1.27e-02 -6.61e-03 -7.60e-03 -3.31e-03
                                                            1.41e-03
                                                                      2.16e-03
## 771
        -1.23e-02
                                       2.50e-03 -3.06e-02 -9.92e-04
                   9.90e-03
                             5.12e-03
                                                                      7.06e-03
## 772
         5.44e-03
                   8.15e-03
                             1.37e-02 -2.23e-03 -7.56e-03
                                                            4.85e-04 -1.20e-02
## 773
         5.77e-03 -6.98e-03 -1.05e-02 -4.87e-03 1.40e-03 -3.15e-03
                                                                     6.00e-03
## 774
         7.55e-03
                   1.16e-02
                             2.81e-03
                                       1.26e-02
                                                  1.80e-04 -1.41e-03 -1.04e-02
         3.64e-03
                   1.03e-03 -1.26e-02 -1.02e-02
                                                 7.61e-03 -8.33e-03 -5.89e-03
## 775
##
  776
         4.84e-03
                   3.64e-03 -6.13e-03 -2.20e-03
                                                  5.23e-03
                                                            2.45e-03
                                                                      3.26e-05
         6.62e-02 -1.34e-02 1.19e-02 1.34e-02 -9.99e-03 2.06e-03 -9.31e-03
## 777
```

```
-2.90e-02 -2.61e-02 -1.85e-03 -4.92e-02 1.42e-02 -2.22e-02
## 779
        -1.68e-02 -2.40e-02 -6.65e-03 -2.48e-03 -9.12e-03 -2.64e-02
                                                                      2.00e-02
## 780
         1.05e-01 -5.96e-02 7.72e-02
                                       1.42e-01 6.58e-02 -1.76e-01 -3.17e-03
## 781
        -2.32e-02 -6.51e-02 -4.10e-02 -7.33e-02 -2.47e-02
                                                            2.28e-02 -6.52e-02
## 782
         1.04e-02 -4.92e-03 -1.06e-02 -6.93e-03 -2.96e-03
                                                            1.68e-04
                                                                      5.64e-03
## 783
         1.12e-02
                   1.42e-03
                             1.43e-02
                                       1.63e-02 -1.51e-02
                                                            6.96e-03
                                                                      1.09e-02
## 784
        -2.37e-03 -3.00e-03 -5.47e-04
                                        2.04e-03 2.12e-03 -1.28e-04 -5.76e-03
##
  785
         1.41e-03 -1.77e-03 -1.12e-03
                                        2.50e-03 -3.59e-03 -1.74e-04
## 786
                             6.70e-03 -3.08e-03 9.75e-06 -1.92e-02 -3.02e-02
         6.35e-03 -1.24e-02
## 787
         7.16e-03 -1.33e-02
                             5.01e-03 -7.20e-03 -7.68e-04
                                                            3.87e-03 -1.99e-04
## 788
        -7.84e-04
                   7.42e-04
                             1.13e-03
                                        3.24e-04 -9.57e-04 -1.94e-04 -1.11e-04
                   3.28e-03 -3.38e-03 -9.34e-03 2.88e-03 -3.61e-03
##
  789
         2.77e-03
                                                                      3.63e-03
##
  790
        -4.31e-02 -1.39e-02
                             5.58e-02
                                        3.04e-02
                                                 2.06e-01 -8.52e-02 -7.48e-02
                                        2.35e-04 -5.63e-04 -3.53e-04
## 791
        -8.99e-04
                   1.10e-04 -3.92e-04
                                                                      1.65e-04
## 792
         9.83e-02
                   1.15e-01 -8.55e-02
                                       1.11e-02 -3.91e-02
                                                            3.33e-02
                                                                      2.56e-02
## 793
        -2.87e-02
                   8.61e-02
                             2.98e-02
                                        1.93e-02 2.56e-02 -4.60e-03 -2.09e-02
## 794
         1.11e-02 -3.34e-03
                             1.13e-03
                                        1.70e-02 -5.42e-03
                                                            5.83e-03 -9.40e-03
                                                                      1.56e-02
## 795
         1.38e-02 -1.04e-02
                             2.20e-02
                                        2.41e-02 -1.06e-02
                                                            1.14e-02
## 796
        -2.69e-02
                  4.67e-03
                             4.85e-03 -6.88e-03 4.76e-03
                                                            7.96e-03 -6.67e-04
## 797
         1.11e-01 -8.06e-03
                             4.60e-02
                                        1.25e-01 -5.95e-02
                                                            3.62e-02
                                                                      6.86e-02
  798
                   7.44e-02 -3.05e-02 -5.75e-02 2.26e-02 -8.04e-03
                                                                      6.54e-03
##
        -4.07e-02
## 799
         4.91e-02
                   3.32e-02 -4.87e-03
                                       1.49e-02 -9.70e-03 -1.83e-03
                                                                      1.83e-02
         4.87e-03 -5.22e-03
                             3.74e-03 -2.02e-03 -1.44e-02
## 800
                                                            1.39e-02 -1.74e-02
## 801
        -3.23e-02 -2.35e-03 -3.45e-02
                                        1.87e-02
                                                 2.05e-02 -2.40e-02
                                                                      1.83e-03
                                                 2.30e-03 -1.31e-02
## 802
         7.48e-02 -1.34e-02 -1.04e-01
                                       1.70e-02
                                                                      1.54e-03
## 803
         7.49e-03 -5.75e-03
                             1.04e-02 -2.26e-03 -3.00e-03
                                                            2.87e-03
                                                                      4.36e-03
## 804
         1.98e-03 -1.02e-03 -1.95e-03 -1.25e-03 7.90e-04
                                                            1.49e-03 -2.05e-06
                             7.61e-03 -4.86e-03 -4.58e-03
                                                            3.20e-03
## 805
        -2.38e-03
                   7.47e-03
                                                                      2.40e-04
        -2.14e-03 -4.93e-03 -1.23e-03
                                       2.29e-03 -1.19e-03
## 806
                                                            2.11e-03 -3.32e-03
## 807
         8.20e-03 -1.33e-02
                             4.96e-03 -3.05e-03 -5.83e-03 -1.54e-02 -7.05e-03
## 808
                             2.24e-02 -3.75e-03 1.04e-02 -1.07e-02
        -2.40e-02
                   4.07e-03
                                                                      4.87e-03
## 809
                   1.03e-03
                             8.15e-04
                                       3.11e-04 -2.77e-04 -1.33e-04 -1.95e-04
        -4.12e-04
## 810
        -3.41e-03
                   3.97e-03 -2.28e-03 -7.23e-03 -1.64e-03
                                                            3.38e-03 -4.13e-03
                                       1.23e-03 -6.32e-03
## 811
        -2.18e-03 -4.65e-03 -6.86e-05
                                                            4.39e-03 -1.29e-03
## 812
         7.86e-03 -4.85e-03
                             3.69e-03 -1.31e-03
                                                 2.17e-03
                                                            4.97e-03
                                                                      5.02e-04
## 813
                   1.74e-02 -4.56e-03 -2.83e-03 -4.43e-03 -2.37e-02
                                                                      1.78e-02
         1.11e-02
                                       1.52e-02 7.68e-02 -4.16e-02
## 814
        -4.35e-02 -6.02e-02
                             1.02e-02
                                                                      1.64e-01
## 815
         2.51e-03
                   9.12e-04
                             6.40e-03 -6.79e-03 -7.44e-03
                                                            4.85e-03
                                                                      3.26e-03
## 816
        -6.02e-02
                   3.91e-02 -6.08e-03 -6.24e-02 1.41e-02
                                                            5.34e-03 -2.35e-02
## 817
         5.41e-03
                   1.56e-03
                             5.08e-03
                                       1.20e-02
                                                  1.45e-04 -6.50e-03
                                                                      7.84e-03
## 818
         6.66e-04 -1.87e-03 -2.75e-03 -5.66e-04
                                                  1.34e-03 -2.22e-03
                                                                      2.94e-03
## 819
         7.91e-03
                   1.01e-02
                             3.55e-03 -4.27e-03
                                                  2.62e-03
                                                            2.01e-03 -5.76e-03
## 820
         1.07e-02 -8.10e-03 -3.48e-03
                                       4.96e-02 -3.34e-03
                                                            2.10e-03
                                                                      1.16e-02
## 821
                             3.19e-03 -9.14e-04 -2.13e-03
         2.40e-03
                   2.95e-03
                                                            1.28e-03
                                                                      1.33e-03
## 822
        -1.55e-03
                   1.24e-03
                             6.00e-04
                                        6.00e-05 -1.14e-03
                                                            3.68e-03 -1.48e-03
## 823
         1.22e-02
                   1.66e-02
                             1.41e-02
                                        1.99e-02 -1.26e-03 -5.25e-04
                                                                      5.34e-03
## 824
         1.37e-02
                   3.59e-03 -9.46e-03
                                        1.87e-02 -1.20e-02 -1.49e-02
                                                                      7.83e-03
         2.10e-02 -2.56e-02 -4.86e-02 -1.15e-02 1.79e-02
## 825
                                                            1.14e-02 -2.52e-04
## 826
        -4.24e-02
                   1.33e-03 -7.17e-03
                                       3.05e-02 -2.52e-02 -3.38e-02
                                                                      2.20e-02
         5.78e-04 5.14e-04 1.48e-04 -1.52e-03 -6.73e-04 -9.51e-04 -9.76e-04
## 827
```

```
## 828
                   1.00e-02 9.52e-03 -1.35e-02 -8.57e-03
                                                            1.80e-02
        -5.01e-02
                                                                       9.04e-03
## 829
                                       1.28e-02 -4.13e-03 -1.64e-02
        -3.10e-02 -5.69e-02
                             2.13e-02
                                                                       6.78e-03
## 830
         6.84e-02
                   1.96e-02 -4.68e-02
                                       1.44e-02 1.84e-02 -1.15e-02
                                                                      -2.11e-02
## 831
                             1.10e-02 -1.32e-02 -2.32e-03
        -3.97e-02
                   3.29e-02
                                                            9.46e-03
                                                                       1.77e-03
## 832
        -4.54e-02 -5.72e-02 -4.08e-02 -6.46e-02 -1.44e-02 -3.18e-03
                                                                       3.03e-02
## 833
         6.98e-03
                   5.45e-03
                             3.28e-03 -3.56e-03 -3.71e-03
                                                            6.02e-03
                                                                       1.66e-03
## 834
         8.50e-03
                   6.92e-03 -1.94e-03 -3.27e-03 -2.03e-03
                                                            4.55e-03 -4.21e-03
## 835
         3.22e-03 -6.95e-03
                             5.71e-03
                                       6.01e-03 -2.12e-03 -3.11e-03
                                                                       1.94e-03
## 836
         1.14e-02 -7.64e-03
                                       4.11e-02 1.69e-03 -8.55e-03
                                                                       4.27e-03
                             7.86e-03
## 837
        -4.08e-02 -3.82e-02 -2.64e-02 -1.82e-01 -5.11e-02
                                                            2.91e-02 -3.08e-02
## 838
         6.87e-03 -5.79e-03
                             2.56e-03
                                       1.15e-02 -8.04e-03
                                                            1.16e-02
                                                                       1.68e-02
## 839
         6.75e-02 -2.88e-02 -2.45e-02 -4.57e-02 -6.92e-03 -5.22e-02
                                                                       1.00e-01
## 840
                  8.36e-03
                            1.23e-02 -2.46e-02 -8.29e-05
                                                            4.75e-04
                                                                       5.47e-03
         6.61e-03
## 841
         2.41e-03
                   2.96e-03 -2.30e-03 -1.96e-03 -2.63e-03
                                                            8.95e-03
                                                                       1.13e-03
## 842
         1.59e-02 -3.96e-02 -1.46e-02 -6.34e-03 -3.26e-03 -2.61e-03
                                                                       1.46e-03
## 843
         8.33e-02 -6.75e-02 -3.38e-02 -5.19e-02 1.42e-02 -5.31e-03
                                                                       1.87e-03
## 844
        -2.42e-03
                   9.84e-03
                             3.35e-03
                                       2.57e-03 -6.40e-04
                                                            3.50e-03 -5.67e-03
## 845
         5.58e-03 -6.95e-03 -4.95e-05 -3.10e-03 -1.18e-02
                                                            8.40e-03
                                                                       5.66e-03
## 846
        -4.93e-02
                   2.68e-02 -6.70e-02 8.88e-02
                                                 3.29e-02 -4.94e-03
                                                                       4.11e-03
## 847
         1.89e-03 -2.76e-03 -1.25e-03 -5.15e-03
                                                  3.93e-03 -2.94e-03 -4.49e-03
## 848
         1.08e-02 -2.61e-02 -7.95e-03 -2.22e-03
                                                  2.47e-03 -1.28e-02
                                                                      4.29e-03
## 849
         7.55e-03
                   6.55e-03
                             8.77e-03 -1.74e-02
                                                  2.28e-03
                                                            2.37e-03 -4.74e-03
## 850
        -2.99e-02 -3.94e-02 -7.68e-02 -5.55e-02 -6.66e-03
                                                            1.13e-02 -4.22e-03
## 851
         3.80e-03
                   6.03e-03
                             5.70e-03 -2.16e-03 -3.45e-03
                                                            3.21e-03
                                                                       6.85e-05
## 852
        -5.30e-03 -2.75e-03
                             2.82e-03
                                       1.54e-03 -8.72e-03 -3.04e-03
                                                                      6.29e-03
## 853
        -1.82e-03 -2.63e-03
                             2.94e-03
                                       1.54e-03 -7.85e-05
                                                            2.56e-03 -4.67e-03
## 854
         1.55e-02 -7.31e-02 -2.65e-03 -5.91e-03 -9.05e-03
                                                            2.59e-03 -3.94e-04
## 855
        -4.02e-02 -2.15e-02
                             2.18e-02
                                        1.99e-02 -6.42e-03
                                                            1.86e-03
                                                                      7.49e-03
                             5.80e-04 -6.98e-03
## 856
        -4.25e-03 -4.01e-03
                                                  3.65e-05 -1.26e-03 -4.41e-03
## 857
         1.52e-02
                   2.85e-02 -3.42e-03
                                        3.48e-02
                                                  1.19e-02 -5.61e-03 -8.14e-03
## 858
         8.13e-02 -6.37e-02 -6.24e-02
                                        2.39e-02
                                                  4.95e-02
                                                            2.83e-02 -3.64e-02
## 859
                   1.63e-02
                             5.18e-04
                                        4.53e-03 -4.51e-02
                                                            1.30e-02
                                                                      8.96e-03
        -1.44e-02
## 860
        -5.62e-02 -2.15e-02 -1.07e-02
                                        3.45e-02
                                                  2.30e-03 -1.30e-02
                                                                       7.51e-03
                                        1.78e-02 -5.38e-03 -1.96e-02
## 861
         6.86e-02 -5.43e-02 -2.31e-04
                                                                       3.64e-03
## 862
        -4.28e-04
                   1.62e-03
                             2.73e-05
                                        1.58e-04
                                                  8.93e-04
                                                            7.04e-04
                                                                       1.81e-03
## 863
                   1.60e-02
                             5.88e-03 -5.98e-03
                                                  4.51e-03
                                                            3.09e-03
                                                                       1.55e-03
         1.39e-02
## 864
         3.32e-03
                   3.96e-03
                             2.07e-03 -2.00e-03
                                                  6.57e-04 -1.88e-03
                                                                       1.66e-03
## 865
        -3.22e-02
                   2.30e-02 -3.31e-02 -1.48e-01
                                                  1.74e-02 -1.36e-02 -9.95e-04
         7.79e-03 -1.19e-02 -1.29e-03 -4.29e-03 -2.66e-04
## 866
                                                            1.79e-03
                                                                      4.12e-03
## 867
                             1.67e-02 -4.98e-03
                                                 3.19e-04
         9.77e-03
                   1.36e-02
                                                            6.61e-03 -7.31e-04
## 868
         3.62e-04 -8.12e-04 -1.30e-03 -1.42e-04 9.73e-04
                                                            7.23e-05 -1.30e-04
## 869
         1.23e-02
                   1.67e-02 -3.08e-03 -5.65e-03 -1.22e-03 -8.02e-03 -6.54e-03
## 870
        -5.64e-03 -8.63e-03 4.49e-03 2.14e-03 -9.25e-03 -3.56e-03 -4.55e-03
## 871
        -3.16e-02
                   3.39e-03 -1.51e-02 -8.07e-03
                                                  2.17e-02 -1.62e-02
                                                                       1.36e-02
## 872
        -4.90e-02 -3.57e-02 -1.63e-02 -1.56e-01
                                                 2.55e-02 -2.76e-02
                                                                       2.20e-03
## 873
         1.39e-02
                   1.73e-02
                             1.24e-03
                                       2.14e-02 -2.74e-02 -2.62e-02
                                                                       2.37e-02
## 874
         3.68e-03
                   2.46e-03
                             1.80e-03 -1.96e-03
                                                  3.76e-03 -5.23e-03
                                                                       3.70e-03
                   1.82e-03 -9.64e-04 4.04e-03
## 875
         2.16e-03
                                                  3.86e-03
                                                            6.58e-04 -7.28e-03
## 876
         2.65e-03 -1.12e-02 -3.18e-03 -2.08e-03
                                                  3.67e-03
                                                            4.51e-03 -1.09e-02
         1.10e-02 -7.74e-03 -4.42e-03 -6.45e-03
## 877
                                                  1.49e-03 1.04e-02 -1.23e-02
```

```
-5.87e-03 -7.52e-03 -3.16e-03 -7.72e-03 -5.68e-04 -1.18e-03 -2.35e-03
## 879
        -5.12e-03
                   2.38e-03 -1.81e-03
                                       1.72e-02 -8.20e-04 -4.68e-05 -6.87e-03
## 880
         3.43e-03
                   1.58e-03 -4.21e-03
                                       1.16e-03
                                                  8.25e-04
                                                            2.50e-04 -2.12e-03
## 881
         1.69e-02 -3.22e-02 1.83e-02 -6.13e-03
                                                  6.27e-03
                                                            1.61e-03 -1.10e-02
                                                                     2.69e-02
## 882
        -3.59e-02
                  6.96e-03 -6.90e-04 -5.96e-03
                                                  9.09e-03 -1.88e-02
## 883
        -4.74e-02 -4.71e-02 -2.07e-02 -5.32e-03
                                                  6.16e-02 -1.85e-02 -4.71e-02
## 884
                   2.24e-03 -5.17e-03 -1.24e-03
                                                  9.40e-04 -2.65e-03
         1.38e-03
                                                                      9.23e-04
## 885
         7.24e-03
                   9.77e-03
                             1.47e-02 -2.15e-02 -5.11e-03
                                                            1.14e-02
                                                                      8.42e-04
                             3.13e-03 -3.38e-03 -3.96e-03 -2.27e-03 -7.34e-04
## 886
         7.93e-03
                   3.70e-03
## 887
        -2.37e-02 -2.31e-02 -1.64e-02 -5.69e-03
                                                  3.05e-03 -1.27e-02 -7.16e-03
## 888
        -6.53e-02 -1.53e-02 -5.77e-02 -1.84e-02
                                                  4.10e-02
                                                            1.37e-02
                                                                      8.98e-03
## 889
        -2.01e-02
                   1.41e-02 -1.34e-03
                                       9.62e-03
                                                  1.24e-04
                                                            3.38e-02 -1.45e-03
## 890
                   1.65e-02 -3.09e-02
                                       3.53e-02
                                                  3.03e-02 -9.65e-03 -4.46e-02
        -6.84e-02
## 891
        -4.68e-03
                   2.61e-03
                             1.87e-02 -1.22e-02 -9.50e-03
                                                            2.05e-03 -1.73e-03
## 892
        -6.58e-05 -8.83e-05 -3.06e-05
                                        8.00e-05
                                                  2.58e-05 -1.10e-04
                                                                      2.28e-04
## 893
         7.17e-02
                   9.62e-02
                             1.22e-02
                                        6.39e-02
                                                 5.58e-03 -2.12e-03
                                                                      3.50e-04
## 894
         3.40e-03
                   3.20e-04
                             2.74e-03 -2.71e-03 -6.01e-04
                                                            1.15e-03 -1.59e-03
## 895
        -1.93e-02 -1.14e-02
                             8.25e-02
                                       8.05e-03 -6.37e-02
                                                            3.48e-02 -4.55e-02
## 896
        -4.43e-02
                   2.43e-02
                             2.63e-02
                                       3.20e-02 -2.08e-02 -2.94e-02
                                                                      2.27e-02
## 897
         1.03e-02 -1.77e-02
                             6.82e-03 -4.31e-03 6.06e-03 -2.44e-02
                                                                      2.03e-02
## 898
         3.61e-03 -2.45e-03
                             5.81e-03 -2.31e-03 -2.15e-03
                                                            6.29e-03
                                                                      3.37e-03
## 899
        -5.68e-03 -3.62e-03
                             4.07e-03
                                       1.30e-03 -1.79e-02
                                                            8.61e-03 -1.29e-02
## 900
                   8.88e-04 -2.70e-04 -2.44e-03 1.78e-03
         7.52e-04
                                                            7.56e-04
                                                                      1.44e-04
## 901
         5.35e-03
                   7.68e-03 -5.40e-03
                                       9.88e-03 -8.03e-05
                                                           -1.61e-02
                                                                      1.44e-02
## 902
         7.05e-03
                   9.75e-03
                             6.15e-03
                                       8.99e-03 -3.67e-03
                                                            2.91e-03 -8.39e-05
## 903
         4.75e-03
                   1.01e-02 -1.46e-03 -3.90e-03 -3.38e-03
                                                            7.63e-04
                                                                      3.49e-03
## 904
        -2.78e-02
                   1.92e-02
                             1.22e-02 -9.26e-03 -2.92e-02
                                                            2.37e-02 -1.95e-03
## 905
        -1.72e-03 -1.80e-03
                             2.09e-03
                                       3.70e-03 -3.43e-03 -1.02e-03 -2.47e-04
## 906
        -6.18e-03 -2.04e-03 -1.73e-02 -1.28e-02 -1.18e-02
                                                            9.59e-03 -6.80e-03
## 907
         5.51e-03 -3.19e-03 6.22e-03
                                        6.79e-03 -4.72e-03
                                                            4.54e-03 -6.42e-04
## 908
        -4.04e-03 -7.74e-03 -4.39e-03
                                        2.04e-03 1.43e-02 -4.58e-03 -1.19e-02
## 909
         4.38e-04 -4.52e-05 -2.25e-04
                                        5.49e-05 -1.50e-04
                                                            2.63e-04 -3.35e-04
## 910
        -6.12e-02
                   3.49e-02 -5.64e-03 -1.70e-02 -1.27e-03
                                                            2.07e-02 -4.09e-03
## 911
         3.70e-03 -1.14e-02 -5.40e-04 -1.52e-03 -1.55e-03
                                                            4.73e-03 -2.79e-04
## 912
         3.57e-02 -9.94e-03 -5.98e-03
                                       8.97e-03
                                                 1.85e-03 -1.07e-02
                                                                      9.86e-03
## 913
        -4.74e-02 -4.20e-02 -2.47e-02
                                       3.37e-02 -2.47e-02 -1.95e-02
                                                                      2.66e-03
         1.01e-01
## 914
                   1.80e-02 -6.26e-02
                                       1.70e-02 1.27e-01 -1.28e-02 -1.44e-01
## 915
        -3.27e-02 -7.24e-03 -2.64e-02 -7.42e-03 -1.45e-01
                                                            2.72e-02 -5.79e-02
## 916
        -2.22e-02
                  4.55e-02
                             2.91e-03 -9.41e-02 -1.76e-02
                                                            8.73e-03
                                                                      1.89e-02
        -4.71e-03 -1.48e-03
                                       1.21e-03 -3.36e-03 -6.95e-03 -1.12e-02
## 917
                             2.37e-03
## 918
        -5.93e-02
                   2.47e-02
                             4.05e-02 -6.55e-03 -3.74e-03 -3.43e-03
## 919
        -2.25e-02 -4.67e-02
                             9.45e-03
                                       1.91e-02 -4.67e-02
                                                            2.05e-02 -1.47e-02
## 920
        -2.60e-04 -2.91e-04
                             2.31e-04 -2.97e-04 -2.22e-04
                                                            2.80e-04
                                                                      2.14e-04
## 921
         5.07e-03
                   4.62e-03 -9.49e-03 -1.41e-02 9.17e-03 -1.31e-03 -3.78e-03
## 922
                   3.99e-02 -7.67e-03 4.13e-02 -1.26e-02
        -5.36e-02
                                                            1.27e-03
                                                                      1.68e-02
## 923
        -3.14e-03
                   1.29e-04 -5.18e-03 -5.44e-03 5.68e-03 -9.82e-03
                                                                      1.36e-02
## 924
         5.05e-03
                   1.10e-02 -8.63e-03 -1.46e-02
                                                  6.38e-03 -1.09e-02
                                                                      1.07e-02
                   8.15e-03 1.39e-02 -1.02e-02 -4.20e-04
## 925
        -3.63e-02
                                                            5.67e-03 -1.08e-02
## 926
        -3.37e-02 -6.22e-03 -5.09e-02 -9.24e-03 1.07e-02
                                                            1.17e-02 -2.59e-03
## 927
         1.70e-03 5.80e-04 -1.69e-03 -5.96e-03 1.87e-03
                                                           9.40e-03 -1.08e-02
```

```
## 928
        -3.49e-02 2.21e-02 -2.21e-02 -3.81e-03
                                                  1.99e-02 -4.30e-02 7.74e-03
## 929
        -4.10e-02 -9.77e-02 -1.40e-01
                                       2.21e-02
                                                  5.64e-02
                                                            6.87e-02 -1.07e-01
## 930
        -4.57e-02
                   2.72e-02
                             1.34e-02 -8.63e-03
                                                  1.59e-02
                                                            1.05e-04 -1.32e-02
## 931
                   1.29e-02
                             4.29e-02
                                       2.53e-02 -2.70e-03
         2.24e-02
                                                            7.45e-02 -6.48e-02
## 932
        -3.48e-02 -1.39e-02 -8.04e-03 -7.14e-03
                                                  9.89e-04
                                                            1.13e-02
                                                                      1.08e-02
## 933
         9.55e-02 -3.66e-02
                             6.24e-02
                                       2.62e-02 -8.88e-02
                                                            3.20e-02
                                                                      1.05e-01
## 934
                   2.13e-02 -5.90e-03
                                       2.48e-02
                                                  1.71e-05 -4.25e-04 -2.05e-03
         1.37e-02
## 935
         1.42e-02 -1.86e-02
                             2.20e-03
                                       2.62e-02
                                                  1.10e-03 -3.62e-03 -1.22e-02
## 936
        -7.37e-03 -7.36e-04 -7.26e-04
                                       2.44e-02
                                                  1.74e-03
                                                            3.04e-03 -1.84e-02
## 937
         1.55e-02 -4.14e-02 -7.04e-03 -3.56e-03
                                                  3.30e-02
                                                            4.32e-03
                                                                     1.83e-03
## 938
        -4.87e-02
                   1.25e-02
                             1.77e-02 -7.08e-03 -4.20e-02 -1.42e-02 -1.24e-01
## 939
                             2.99e-02 -5.79e-03 -1.97e-03
         6.82e-03
                   1.05e-02
                                                            3.78e-04 -6.12e-03
## 940
        -5.88e-02
                   7.20e-02
                             5.98e-03
                                       2.25e-02 1.58e-01 -1.70e-02 -4.94e-02
                                       2.19e-02 3.79e-02 -1.84e-02 -3.21e-02
## 941
        -3.85e-02 -3.61e-02 -4.31e-02
## 942
                   1.25e-02 -3.98e-03 -7.39e-03 -3.97e-04
                                                            2.83e-02 -2.17e-02
         6.51e-03
## 943
        -4.00e-03 -5.69e-03 -4.75e-03
                                       7.85e-04 -6.48e-03
                                                            5.76e-03 -4.97e-03
## 944
         4.87e-03
                   7.42e-03
                             3.30e-03 -1.47e-02 5.94e-03 -1.66e-03 -7.76e-03
## 945
         1.94e-03
                   5.46e-03 -1.60e-03 -9.53e-04
                                                  3.24e-03 -3.80e-03 -5.76e-03
## 946
        -2.62e-02
                   2.36e-02 -1.84e-02 -8.32e-03
                                                  2.54e-02
                                                            3.36e-03
                                                                      2.79e-03
## 947
         6.22e-02 -3.64e-02 -5.97e-02 6.75e-03
                                                  1.43e-02
                                                            4.00e-02 -1.43e-02
## 948
                   5.50e-02 -1.31e-01 -5.78e-02 -4.73e-02
                                                            3.18e-02
         9.05e-02
                                                                      8.44e-02
## 949
        -4.56e-02 -5.75e-02
                             3.45e-02 -1.18e-02 -1.82e-02
                                                            5.65e-02
                                                                      2.45e-02
## 950
         7.23e-03
                   1.97e-02
                             1.12e-02 -4.87e-03 5.68e-03 -1.36e-02
                                                                      1.15e-02
## 951
        -1.72e-02 -1.15e-02
                             7.48e-03
                                       1.31e-02 9.18e-03 -7.58e-03 -2.22e-02
## 952
         1.54e-02
                   1.55e-02 -2.31e-02 -1.41e-02 -5.09e-02
                                                           9.59e-02 -6.43e-02
## 953
         6.77e-02 -4.75e-02 -2.27e-02
                                       7.69e-02
                                                 3.70e-03 -1.03e-02
                                                                      1.99e-02
## 954
        -3.11e-02 -6.39e-02
                             2.32e-02
                                       1.28e-01 -2.22e-03 -1.65e-02
                                                                      7.31e-03
## 955
        -4.27e-03
                   1.57e-03
                             2.22e-03
                                       2.82e-03 -4.09e-03
                                                            1.27e-03
                                                                      4.76e-03
        -3.07e-03 -1.02e-03 -9.67e-03
## 956
                                       7.65e-04 4.84e-04 -2.69e-03
                                                                      4.51e-03
## 957
                   2.41e-05 -2.83e-04 -3.30e-05
                                                 3.21e-04
                                                            1.16e-04 -2.11e-04
         8.11e-05
## 958
                             4.95e-04 -4.56e-04 -1.07e-03 -8.79e-05
         8.30e-04 -1.23e-04
                                                                      5.21e-04
                                                           8.03e-03 -7.64e-03
## 959
        -7.33e-03 -1.04e-02 -9.39e-03 -1.24e-02 -1.33e-03
## 960
         2.58e-03
                   2.73e-03
                             4.15e-03 -1.20e-03 5.82e-03 -3.22e-03 -9.60e-03
## 961
         4.44e-03 -4.57e-03
                             4.87e-03 -2.49e-03 -4.84e-03
                                                            8.31e-03
                                                                      4.04e-03
## 962
        -5.30e-02
                   3.52e-02
                             1.22e-02 -5.49e-03 -4.08e-02 -4.23e-02
                                                                      2.51e-02
                                                            4.84e-03
## 963
                   2.26e-03 -1.84e-03 -1.37e-03 -1.57e-02
                                                                      1.04e-02
        -4.19e-03
                             4.66e-04 -4.80e-04 1.26e-03 -1.42e-03
## 964
         8.12e-04
                   1.05e-04
                                                                      1.05e-03
## 965
         1.09e-02
                   1.75e-02
                             7.10e-03 -3.41e-02
                                                 1.26e-02 -1.43e-02 -4.58e-02
## 966
         6.09e-03
                   9.28e-03 -7.91e-03
                                       7.65e-03 1.90e-03
                                                            1.55e-03 -7.23e-04
## 967
                             1.54e-01 -6.59e-02 -1.46e-01
         1.02e-01 -2.64e-02
                                                            7.11e-02
                                                                      2.05e-02
## 968
         3.79e-03 -1.35e-02
                             1.37e-03 -2.70e-03 -2.52e-03
                                                            2.88e-03
                                                                      2.99e-03
## 969
         5.51e-03 -3.90e-03 -1.35e-02
                                       1.32e-02 3.66e-03
                                                            1.50e-02 -6.83e-03
## 970
        -6.16e-03 -1.12e-02 -1.86e-02
                                       1.55e-03 -1.98e-03
                                                            1.36e-02 -1.49e-02
## 971
         7.13e-04
                   3.45e-04 -6.73e-04 -4.90e-04 -2.76e-04
                                                            7.33e-04 -1.70e-04
## 972
         5.55e-03 -1.75e-03 -1.47e-02
                                       7.60e-03 7.10e-03
                                                            2.75e-03
                                                                     4.10e-03
## 973
         2.24e-03
                   2.75e-04 -1.52e-03 -7.21e-03 -3.42e-04
                                                            2.34e-03 -9.02e-04
## 974
        -7.65e-04 -8.47e-04 -7.38e-05
                                       1.34e-04 1.32e-03
                                                            1.63e-03 -1.21e-03
         2.00e-02 -3.47e-02 -5.80e-03 -3.85e-03 -2.77e-02
## 975
                                                            4.96e-03
                                                                     1.54e-02
## 976
         9.99e-02
                  3.74e-02 -5.11e-02 -6.10e-02 1.14e-01 -3.16e-02 -6.25e-02
## 977
        -1.73e-02 1.07e-02 -1.81e-02 -3.44e-03 1.85e-02 -2.65e-02 -3.57e-02
```

```
## 978
                             3.18e-03 -5.60e-03 -1.30e-02 -1.06e-02
         7.74e-03 -1.49e-02
## 979
        -3.23e-03
                   8.42e-03
                             1.91e-03
                                       2.17e-03 -7.52e-03 7.79e-03
                                                                       1.72e-02
                   8.91e-03
## 980
         6.76e-03
                             1.22e-04 -4.32e-03
                                                 1.51e-02 -5.20e-03 -2.07e-02
## 981
        -4.05e-02 -1.82e-02 -1.73e-02
                                       9.91e-02
                                                 1.36e-02 -2.65e-02
                                                                      6.94e-04
         6.94e-02
## 982
                   3.98e-02 -4.99e-02 -5.36e-02 5.49e-03 -1.96e-02
                                                                       3.42e-02
## 983
         1.00e-03
                   1.28e-03
                             1.04e-03 -4.46e-04 -5.41e-04
                                                            4.56e-04
                                                                      5.13e-04
## 984
        -1.66e-03 -3.99e-03
                             1.24e-03
                                       5.82e-03 -2.33e-03
                                                            4.11e-03 -1.26e-03
## 985
         1.22e-02
                   2.43e-02
                             1.23e-02 -5.76e-03 -2.78e-03
                                                            5.48e-03
                                                                      1.33e-02
## 986
                   2.54e-03 -2.42e-03 -5.05e-02 1.69e-02 -1.07e-01
         8.18e-02
## 987
        -4.23e-02
                   2.78e-02
                             2.14e-02 -4.91e-02
                                                  5.56e-03 -3.28e-04
                                                                      5.82e-03
                                                            3.27e-03 -6.83e-03
## 988
         7.87e-03
                   1.38e-02
                             1.14e-02 -3.39e-03
                                                 5.26e-03
                                       2.11e-02 -2.85e-03
## 989
        -2.97e-02
                   7.01e-03 -7.42e-04
                                                            1.81e-02 -1.43e-02
## 990
        -2.73e-02
                   2.01e-03 -3.72e-04 -8.62e-03 -8.16e-03 -1.43e-03
                                                                      5.13e-03
                             4.16e-03 -1.14e-02 -3.07e-04 -2.62e-03
## 991
         4.24e-03
                   4.61e-03
                                                                      2.22e-03
## 992
        -4.35e-02
                   1.34e-02
                             2.31e-02
                                        3.06e-02 -1.68e-04
                                                            2.90e-03 -1.19e-03
## 993
        -4.09e-03
                   9.83e-03 -3.03e-03
                                        2.83e-03 -1.89e-03 -1.58e-03 -6.38e-03
## 994
         6.43e-03
                   1.43e-02
                             5.06e-04
                                        1.17e-02
                                                 1.56e-03
                                                            2.56e-03 -2.25e-03
## 995
        -2.21e-02
                   1.94e-02 -1.49e-02
                                        1.87e-02
                                                 1.28e-02 -4.32e-03
## 996
        -5.82e-02
                   9.47e-03 -2.75e-02
                                       8.32e-02 -9.53e-02
                                                            1.91e-02
                                                                      6.45e-02
## 997
        -3.80e-02
                   2.55e-02
                             7.01e-03 -7.89e-03 3.28e-03
                                                            2.35e-02 -2.36e-02
## 998
                             3.34e-02
                                       2.12e-02 -1.29e-02 -7.57e-02
         6.81e-02 -2.30e-02
                                                                      8.70e-02
## 999
         1.37e-02
                   2.44e-02 -6.36e-03 -8.26e-03 -5.15e-03 -1.10e-02
                                                                      6.37e-04
## 1000 -2.49e-03 -9.45e-04 -3.94e-03
                                       1.31e-03 9.78e-03 -3.81e-03 -9.76e-03
## 1001
         7.16e-03
                   6.79e-03
                             6.19e-04
                                       2.47e-02
                                                 1.36e-03 -5.51e-03
                                                                      8.18e-03
## 1002
         1.01e-02 -1.14e-02 -2.04e-03 -9.30e-03 -2.57e-03
                                                            2.08e-03
                                                                      3.57e-03
## 1003
         1.43e-02
                   2.21e-02
                             7.51e-03 -3.50e-03
                                                  2.02e-02 -1.33e-03 -9.03e-03
## 1004
         5.84e-03
                   1.32e-02 -1.17e-02
                                       1.09e-02
                                                  1.86e-03
                                                            6.16e-04
                                                                      2.44e-03
         4.94e-03
## 1005
                   8.51e-03 -6.97e-03 -2.48e-03
                                                  5.57e-03 -1.06e-02
                                                                      1.00e-02
                             1.59e-02
## 1006
         9.66e-03
                   1.36e-02
                                        3.03e-02
                                                 1.53e-02 -3.22e-02
                                                                      3.48e-02
## 1007 -3.01e-02
                   5.29e-02
                             7.72e-02
                                        2.28e-02 -3.41e-02
                                                            2.31e-03 -4.22e-03
## 1008
         7.72e-02 -3.70e-02 -2.74e-02
                                       7.69e-03 -6.61e-02
                                                            2.68e-02
                                                                      7.68e-02
                                                            3.70e-04 -7.65e-04
## 1009
         2.70e-04 -3.81e-04 -6.38e-05
                                        3.27e-04 -3.55e-04
## 1010
         1.33e-03
                   1.39e-03
                             8.00e-04
                                        1.61e-04 -1.14e-03
                                                            1.18e-03 -9.37e-04
## 1011 -1.58e-02 -1.26e-02
                             5.01e-02
                                        3.80e-02 -1.48e-02
                                                            4.13e-02 -2.04e-02
## 1012 -5.64e-02 -5.78e-03 -2.98e-02 -1.32e-02
                                                 1.83e-03 -2.85e-02
                                                                      1.94e-02
                                                  1.39e-02 -1.36e-02 -2.01e-03
## 1013 -2.76e-02 -3.84e-02 -3.26e-02
                                       1.13e-02
                   7.71e-04 -1.19e-03 -1.20e-03
         3.38e-03
## 1014
                                                  4.75e-04
                                                           9.85e-04
                                                                      1.19e-03
## 1015
         9.16e-03
                   2.13e-02
                            3.24e-02 -3.01e-02
                                                  5.05e-03 -6.32e-03 -1.79e-04
## 1016
         8.19e-03
                   2.10e-03 -1.08e-02 -2.95e-03
                                                  3.68e-03 -9.56e-04
                                                                      1.13e-03
## 1017 -2.26e-02 -4.26e-02 -3.27e-02
                                       8.15e-02
                                                 2.06e-02 -1.93e-02
                                                                      1.25e-03
## 1018
         7.18e-03
                   4.60e-03 -6.73e-03 -2.87e-02 -1.02e-02
                                                            2.73e-02 -1.54e-03
## 1019
         8.89e-03 -3.57e-03
                             8.95e-03
                                        1.91e-02 -6.10e-03
                                                            1.28e-02
                                                                       1.41e-02
## 1020
         1.23e-02
                   1.12e-02 -9.00e-03
                                        2.19e-02
                                                 7.29e-03 -6.39e-04
                                                                      7.68e-03
## 1021
         2.90e-03
                   4.69e-03 -7.97e-03
                                       4.57e-03
                                                  8.62e-04 -4.67e-03
                                                                      1.81e-03
## 1022 -2.41e-02 -4.85e-02
                             3.29e-02
                                        1.73e-02 -1.74e-02 -6.16e-03
                                                                      2.19e-02
## 1023
         2.33e-03
                   1.82e-03
                             9.89e-04
                                       9.45e-03 -1.43e-03 -3.31e-03
                                                                      1.58e-03
## 1024
         4.47e-03 -1.59e-02
                             1.80e-02 -1.69e-02 -9.61e-03
                                                            5.92e-04 -1.05e-03
                   1.02e-02
                             1.04e-03
                                       1.45e-02 4.91e-03
## 1025 -4.63e-03
                                                            3.80e-02 -1.02e-02
## 1026 -2.44e-02
                  1.23e-02
                             2.44e-03 -4.58e-03 -2.76e-03 -2.57e-03
                                                                      8.67e-03
## 1027 -1.45e-03 -1.70e-03 -1.27e-03 -2.21e-03 -4.80e-04 3.38e-04 -1.09e-03
```

```
## 1028 6.86e-03 -5.11e-03 -1.15e-03 1.16e-02 -3.12e-03 -6.22e-03
## 1029 -2.84e-02 1.60e-02 5.86e-03
                                     1.49e-02 -6.05e-03
                                                          6.30e-03
                                                                    5.97e-03
## 1030 -6.67e-03 -1.77e-02 4.62e-04
                                      2.44e-02 -6.02e-03
                                                          1.05e-02 -1.63e-02
        2.21e-03 -3.82e-03
                            1.84e-03 -1.55e-03 2.35e-03
## 1031
                                                          2.60e-03 -9.15e-03
## 1032 -5.01e-02 -1.01e-01
                            2.65e-01
                                      1.48e-01 -1.42e-01
                                                          1.10e-01
                                                                   5.47e-02
## 1033
        7.59e-02 8.08e-02
                           4.79e-02
                                      7.63e-02 -3.75e-03 -1.66e-02 -2.80e-03
## 1034 -3.79e-02 -7.13e-02 -5.58e-02 9.20e-03 -2.27e-02
                                                          5.72e-02
## 1035 -4.11e-02 -1.63e-02 -4.24e-02 -9.90e-03 4.47e-02 -2.61e-02
                                                                    2.74e-02
         5.06e-03 -6.12e-03 -6.06e-03 -2.87e-03 -1.36e-03
                                                          1.76e-03
        7.06e-02 -2.95e-02 2.73e-02 -1.13e-01 -3.65e-02
## 1037
                                                          8.93e-03
                                                                    2.41e-02
## 1038 -2.80e-02 -1.10e-02 2.46e-02 -3.53e-02 2.26e-05
                                                          1.62e-02 -2.72e-03
        2.51e-03 4.00e-03 -2.19e-03 -1.51e-03 3.24e-03
## 1039
                                                          4.04e-04 -2.30e-03
## 1040 -3.40e-02 -1.22e-02 -6.20e-02
                                     3.04e-02 -4.75e-03 -1.35e-02
                                                                    4.06e-02
## 1041 -3.66e-03 -7.96e-03 -1.23e-03 9.44e-04 -9.87e-03
                                                         6.32e-03
                                                                    9.25e-05
        8.86e-03 -1.20e-02 1.09e-02 -2.41e-03 -8.82e-04 -5.59e-03
                                                                    3.97e-03
## 1042
## 1043
         5.28e-03 4.59e-03 6.22e-03 -3.75e-03 -5.68e-03
                                                          3.55e-03
                                                                    5.56e-03
## 1044 -2.63e-03 -3.14e-03
                            1.12e-02 -4.41e-03 -1.13e-02
                                                          3.25e-03
                                                                    6.35e-03
                 2.15e-03 -8.01e-03 4.12e-03 3.81e-03
                                                          6.41e-04 -5.68e-04
## 1045
        2.88e-03
## 1046 -5.98e-04 -2.40e-04
                           1.60e-04
                                     1.66e-03 1.43e-04 -6.76e-04
                                                                    2.29e-04
## 1047
        1.40e-02
                  1.18e-02
                            2.03e-02
                                      1.54e-02 -1.29e-02
                                                          8.32e-03
                                                                    2.63e-03
                  2.95e-03
                            1.08e-02 -1.83e-03 -1.29e-03 -6.40e-04
## 1048
        8.93e-03
                                                                    8.31e-03
## 1049
        6.13e-03 -9.67e-03 -7.99e-03 -3.16e-03 8.01e-03 -2.63e-03
                                                                    7.21e-03
## 1050
        4.74e-03
                 2.13e-04 5.23e-03 6.87e-03
                                                1.18e-03 4.44e-03 -4.40e-03
## 1051
        1.05e-02
                  1.38e-02 -2.12e-04 -7.48e-03
                                                2.53e-03 -1.84e-02 -5.83e-03
## 1052
        1.12e-02
                  1.55e-02 -3.13e-03
                                      1.94e-02 4.19e-03
                                                          5.06e-03
## 1053
         2.81e-03
                  2.86e-03
                            2.13e-03
                                      4.69e-03 -2.01e-03
                                                          2.12e-03 -2.50e-04
## 1054 -6.46e-03
                  2.94e-02 -1.79e-02 -1.34e-02 5.77e-03
                                                          1.25e-02 -1.06e-02
## 1055 -8.34e-03 -4.63e-03
                           3.38e-02
                                     5.08e-03 -1.86e-02 9.08e-03 -1.39e-02
## 1056
                  3.49e-03
                            1.78e-02
                                      1.75e-02 4.31e-03 -2.10e-03 -6.27e-03
        9.19e-03
## 1057 -3.32e-02 -7.60e-03
                            1.69e-02
                                      1.21e-01 4.98e-03 -2.38e-02
                                                                   9.81e-03
## 1058 -2.71e-02 -4.57e-02 -9.84e-03 -1.09e-01 2.61e-02 3.35e-02 -2.65e-02
        6.79e-02
                 7.66e-02
                           3.28e-02 7.04e-02 -1.39e-02 -7.93e-03
## 1059
                                                                   7.87e-02
## 1060
        3.86e-03
                  3.01e-03
                            5.64e-03 -1.83e-03 -2.96e-03
                                                          3.01e-03 -1.51e-05
## 1061
        3.85e-02 -2.67e-02 1.17e-02 -2.72e-02 -7.74e-03 -3.19e-05
## 1062
        4.32e-03
                  4.94e-03 -1.16e-05 -2.18e-03 -3.12e-03 4.50e-03
                                                                    3.18e-04
## 1063 -5.21e-02 -2.59e-02 -7.36e-03 3.58e-02 4.06e-02 -4.01e-03 -1.73e-02
        3.75e-03 1.91e-03 1.16e-03 -1.60e-03 -3.76e-03 -4.79e-03
## 1064
                                                                   6.41e-03
## 1065
        2.57e-04 -7.08e-04 -1.56e-04 -7.27e-04 -1.32e-04 1.16e-04
                                                                    2.50e-05
## 1066 -1.60e-02 -2.23e-03 3.01e-02 -4.58e-03 -5.40e-03 3.47e-03 -1.57e-04
                 2.19e-02 -6.01e-03 -6.68e-03 -4.45e-03 -9.85e-03
## 1067
        8.77e-03
                                                                    1.08e-02
## 1068 -2.96e-02 -9.20e-03 9.26e-03 2.04e-02 -1.75e-03 -1.06e-02
                            5.55e-02 -4.98e-02 -2.20e-02 -1.62e-03 -1.06e-03
## 1069 -2.94e-02 -4.56e-02
## 1070
        1.33e-02
                  6.78e-03
                            1.29e-02 5.07e-02 -8.30e-03 7.92e-03 -3.62e-03
## 1071
        1.72e-02
                  5.80e-03
                            1.53e-02 -4.51e-03 -1.82e-03
                                                          8.83e-03
                                                                    2.79e-03
                            7.68e-03 -2.69e-03 3.00e-04
        6.22e-03 -2.79e-02
## 1072
                                                          2.23e-03
                                                                    4.48e-04
## 1073
         8.94e-03 6.52e-03
                            6.29e-04 -2.82e-03 -1.54e-03
                                                          9.68e-04
                                                                    5.17e-03
## 1074
        1.25e-02
                  9.40e-03
                            7.29e-03 2.16e-02 7.37e-03 -6.58e-03
                                                                    1.48e-02
## 1075 -4.06e-02 -1.53e-02 -4.85e-02 -9.27e-03 2.37e-02 8.04e-03 -3.54e-03
        4.42e-03 -1.83e-02 3.83e-03 -1.08e-02 -5.18e-03
                                                          1.24e-03
                                                                    3.13e-03
## 1077 -9.79e-03 1.87e-02 -9.89e-04 5.80e-03 -1.33e-02 4.12e-03 -2.35e-02
```

```
## 1078 -2.20e-02 -3.07e-02 5.82e-02 -1.33e-01 -1.42e-02 5.91e-02 -6.28e-02
## 1079
        2.42e-03 2.21e-03
                           1.02e-03 -8.10e-03 3.14e-03 1.41e-02 -1.28e-02
## 1080
        9.33e-03 -1.40e-02
                           1.74e-02 -5.46e-03 4.42e-03
                                                         1.76e-02 -1.20e-02
                            6.17e-04
                                     5.56e-03
## 1081 -2.58e-03 -3.35e-03
                                               5.00e-04
                                                         1.24e-02 -3.05e-04
## 1082
        1.44e-02 -2.14e-02
                            2.02e-02 5.25e-02 -1.56e-02 -2.80e-02 5.33e-03
## 1083
        1.18e-02
                 7.35e-03 -4.90e-03 -6.28e-03 -8.16e-04 -4.50e-03 -2.77e-03
## 1084 -4.84e-02 -1.64e-02
                           1.07e-01 -1.52e-01 1.41e-02 6.20e-02 -1.26e-02
## 1085 -2.87e-02
                 3.82e-03
                           1.42e-02 -2.49e-03 1.44e-02 -1.81e-02 -2.99e-02
## 1086 -4.32e-02 -4.48e-02 -4.23e-04 -1.33e-01 -2.88e-02 -7.50e-02 1.05e-01
## 1087 -6.11e-02
                 1.65e-02 -2.55e-02 -2.52e-02 -1.97e-01 1.54e-01 -7.88e-02
## 1088 -3.01e-02 -4.47e-02 -1.61e-02 -7.91e-03 4.92e-03 -2.26e-02 -8.52e-03
                 4.90e-03
## 1089
        8.28e-03
                           1.45e-02 -5.17e-03 -5.33e-03 6.16e-03
## 1090
        1.19e-03 -1.01e-03
                           8.48e-04 -8.90e-04 3.11e-04 -1.95e-03
                                                                   3.87e-04
## 1091
        7.96e-03
                 1.08e-02 4.85e-03 -2.48e-03 1.37e-02 -1.59e-02
                                                                   1.92e-02
## 1092
        1.69e-02
                  1.39e-02 2.27e-02 -5.02e-03 -1.40e-02 -2.62e-03
                                                                   1.41e-02
## 1093 -1.72e-03
                  2.46e-03 -8.97e-04
                                     1.01e-03 8.48e-04
                                                         4.27e-04 -1.30e-03
## 1094 -3.38e-02
                  3.35e-03 -2.76e-02
                                     5.98e-02 -1.24e-02
                                                         2.35e-02 -6.48e-02
        9.40e-03
                  1.68e-02 1.54e-02 -3.45e-02 -1.69e-02
                                                         5.08e-03 -3.64e-02
## 1095
## 1096 -3.76e-02 2.25e-02 -1.76e-02 -5.75e-03 3.60e-03 -6.32e-02 4.72e-03
## 1097 -2.91e-02 -3.35e-02
                           1.56e-02 -7.16e-03 -4.50e-02
                                                        2.14e-02 -7.14e-03
        1.73e-02 7.46e-03 -6.02e-04 -6.92e-03 -2.22e-03
                                                         6.09e-04
## 1098
                                                                  4.80e-04
## 1099 -7.19e-03 -3.32e-03
                           1.08e-03 -1.82e-03 2.58e-03
                                                         1.13e-03 -2.86e-03
       1.77e-03 3.22e-03 7.70e-03 -9.12e-04 2.49e-03 -2.97e-03 -6.08e-03
## 1100
        1.28e-02 -3.79e-02 4.78e-03 -1.02e-02 -6.98e-03
                                                         7.03e-03 -2.15e-02
## 1101
## 1102
         5.49e-03 6.52e-03 -6.00e-03 -3.13e-03 -2.03e-03
                                                         1.39e-02 -8.00e-04
## 1103 -4.03e-02 -4.14e-02 -2.31e-03
                                     2.50e-02 -3.93e-04
                                                         2.77e-03 -4.68e-03
## 1104 -1.02e-03 -5.16e-04 1.26e-03
                                     6.04e-04 -2.35e-03
                                                         7.08e-04
                                                                  2.50e-03
## 1105
        4.58e-03 -5.43e-03 -3.32e-03
                                     6.89e-03 -1.71e-03
                                                          3.47e-03 -5.78e-04
## 1106
        1.19e-02 1.48e-02
                           3.68e-03
                                      5.48e-02 1.37e-02 -6.59e-04 -1.18e-02
## 1107 -2.93e-02 -7.72e-02 -2.53e-02
                                     1.48e-02 -4.56e-02
                                                          5.17e-02
                                                                   5.58e-02
                           2.21e-03 -3.23e-03 -5.29e-03
## 1108
        7.61e-03
                 1.18e-02
                                                         1.10e-03
                                                                   3.61e-03
                                                         2.33e-02 -4.27e-03
        1.46e-02 -2.45e-02
                           2.03e-02 -7.36e-03 -1.49e-02
## 1109
## 1110
        7.38e-03
                  1.04e-02 5.61e-03 -3.91e-03 2.00e-03
                                                         7.04e-03
                                                                   7.75e-04
## 1111
        7.58e-02 -3.44e-02 -5.00e-02
                                     1.68e-02 1.91e-02 -1.34e-02
## 1112 -7.45e-02
                 4.33e-02
                           1.61e-01
                                      5.14e-02 5.51e-01 -2.41e-01 -2.89e-01
                                     2.56e-02 1.76e-02 -5.82e-02 -9.91e-03
## 1113 -4.33e-02 -8.19e-02 -6.53e-02
                 1.93e-04 -1.77e-04
## 1114
        3.11e-04
                                     7.31e-04 -1.82e-04 -4.36e-04 2.71e-04
## 1115
        1.09e-02
                  1.46e-02 8.66e-03
                                      1.31e-02 -4.41e-03 2.65e-02 -3.05e-02
## 1116
        1.73e-02
                  1.81e-02 3.10e-02 6.52e-02 -1.14e-02 4.28e-03 -4.96e-04
## 1117 -8.04e-03
                  1.69e-02 -1.38e-03
                                      5.97e-03 5.68e-02 -3.90e-02 -2.97e-02
        2.91e-03 -2.14e-03 -1.23e-03 4.90e-03 2.14e-03 2.92e-04 -3.02e-03
## 1119
        6.01e-03 -1.92e-02
                           3.18e-03 -4.48e-03 -5.23e-03
                                                         6.98e-03 -1.60e-03
## 1120
        3.03e-03
                  6.40e-03
                           5.09e-03 -1.81e-03 4.60e-03 -3.73e-03 -6.97e-03
## 1121
        1.00e-02
                  1.62e-02 6.61e-03 -3.25e-02 2.40e-03
                                                         2.82e-03 -2.54e-03
## 1122
        8.90e-03
                  8.44e-03 -2.37e-02 -5.39e-03 7.70e-03
                                                         5.67e-03 -9.58e-04
## 1123 -5.58e-02 -2.32e-02 -1.63e-02 -1.06e-02 -1.13e-02 -5.71e-02
                                                                   3.13e-02
## 1124 -5.79e-02 -6.25e-03 2.74e-04 -1.52e-02 -1.87e-04
                                                         1.75e-02
                                                                   1.62e-02
## 1125 -5.41e-03 -9.58e-03 -7.13e-03 2.57e-03 -8.99e-03 5.39e-05
                                                                   1.59e-02
        3.82e-03 -6.91e-03 5.80e-03 -1.15e-02 -1.83e-03 -9.60e-04
                                                                   1.83e-03
## 1127 -1.68e-02 -3.06e-03 -1.34e-02 -3.05e-03 1.76e-02 4.24e-03 2.08e-03
```

```
## 1129 -5.46e-02 1.90e-02 3.88e-03 -1.33e-02 1.63e-03
                                                        4.01e-03
                                                                  1.06e-02
## 1130
        4.20e-04 -1.05e-03 -4.76e-04 -1.17e-04 8.64e-04
                                                         3.32e-04
                                                                  4.96e-05
        3.14e-03 -2.26e-03 6.96e-04 6.15e-03
                                              4.18e-03 -5.16e-03 -5.63e-03
## 1131
## 1132
        1.32e-02 4.28e-03
                           1.02e-02
                                    1.91e-02 5.33e-03
                                                        3.18e-02 -3.34e-02
        5.20e-03 -2.81e-04
                           1.17e-02 -1.22e-03 -3.71e-03 -3.80e-03
## 1133
                                                                 2.53e-03
## 1134 -1.96e-04 -2.05e-04 -1.55e-04
                                     1.05e-04 1.93e-04
                                                        8.46e-05 -1.55e-04
## 1135
        7.02e-03 -6.52e-03
                           1.18e-02
                                     9.34e-03 -3.65e-03
                                                        6.99e-03 -1.58e-04
        1.31e-03 -5.52e-04 6.67e-04
                                     3.70e-03 -7.54e-03
                                                        7.97e-03
## 1136
                                     1.73e-02 1.30e-02 -4.13e-03 -3.39e-03
## 1137
        7.09e-02 2.02e-02 -2.42e-02
## 1138 -6.19e-02 2.00e-02 -1.99e-02
                                    3.59e-02 3.19e-03
                                                        1.14e-02
                                                                  3.41e-03
## 1139 -3.82e-02 -2.82e-03 -2.52e-02 -1.62e-02 -7.26e-02
                                                        7.61e-02 -3.52e-02
       3.41e-04 -2.50e-04 -1.63e-04 -2.44e-04 -9.58e-05
                                                        1.30e-04
## 1140
                                                                  1.57e-04
## 1141 -4.31e-03 4.51e-04 4.26e-03 2.74e-03 -6.96e-03
                                                        3.64e-03
                                                                  5.95e-03
        1.38e-02
                 2.03e-02 -5.46e-03
                                     2.66e-02 -1.63e-02 -1.48e-02
## 1142
                                                                  8.29e-03
## 1143 -6.09e-02
                 1.32e-02 5.15e-02 -9.70e-03 -3.33e-02 -4.15e-02
## 1144
        7.18e-03
                  5.41e-03
                           1.67e-02 -5.32e-03 -7.22e-03 -1.25e-02 -1.88e-03
## 1145
        1.47e-02
                  9.50e-03 -8.96e-03 -3.93e-03 -4.55e-03 8.60e-03
                  1.89e-02 9.23e-03 -7.74e-03 -6.26e-04 1.27e-03 -2.24e-03
## 1146 -3.56e-02
## 1147
        4.70e-03
                  2.88e-03
                           1.12e-03 -1.22e-03 -1.42e-03 -5.94e-03 -9.96e-03
## 1148
        8.92e-03
                  5.47e-03
                           9.52e-03 1.20e-02 -1.17e-02 -8.52e-03
## 1149
        4.52e-03
                  6.71e-03
                           4.78e-03 -3.61e-03 1.27e-02 -4.46e-03 -1.75e-02
        5.81e-03
                  1.04e-02 -1.88e-03 -2.86e-03 4.58e-03 -7.48e-03 8.76e-03
## 1150
                                     4.96e-04 -1.32e-06 7.78e-03 -5.45e-03
## 1151 -1.18e-03 -3.33e-03
                           1.93e-03
        2.26e-02 -5.03e-02
                                     3.78e-02 -2.66e-02 -1.33e-02 1.75e-02
## 1152
                           1.25e-02
## 1153
        9.00e-03 -1.21e-02 -6.10e-03 -4.28e-03 6.50e-03
                                                        1.25e-03 -1.04e-02
        6.36e-02 -3.14e-02 8.25e-03
## 1154
                                     6.64e-02 -3.48e-03 -1.29e-02 7.44e-03
## 1155 -4.03e-03 -5.34e-03 4.57e-03
                                     1.36e-03 -2.80e-03 -8.60e-04 -1.07e-03
                 1.46e-04 -3.41e-04
                                     5.10e-04 2.58e-05 3.10e-03 -3.89e-03
## 1156 -1.69e-03
## 1157
        3.82e-03
                 7.18e-03
                           3.09e-03 -2.57e-03 1.48e-02 -1.70e-02 -2.86e-02
## 1158 -4.02e-03 -9.57e-03
                           1.02e-02
                                     1.55e-03 -5.46e-04 1.45e-02 -1.25e-02
        4.71e-03 -3.02e-03
                           1.45e-03
                                     7.28e-03 -3.72e-04 -1.42e-03 3.27e-03
## 1159
## 1160
        1.51e-02
                 1.47e-02
                           1.80e-02
                                     6.35e-02 -5.89e-03
                                                        3.98e-02 -5.99e-03
                 1.27e-02 -1.56e-02
                                     4.75e-03 -3.07e-03 -3.07e-04 -1.32e-03
## 1161 -8.41e-03
## 1162 -2.16e-02 -1.54e-02 9.08e-03 -2.10e-02 -4.34e-04 -5.08e-03
## 1163 -4.96e-02 3.90e-02 -7.49e-03 -4.49e-03 5.85e-02 2.13e-01
                                                                 2.92e-02
## 1164 1.02e-02 2.10e-02 6.43e-03 3.81e-02 5.86e-03
                                                        1.36e-02 -3.05e-02
## 1165 -4.18e-02 -6.54e-05 -3.48e-02 2.88e-02 3.05e-02 9.97e-03 -2.24e-02
## 1166 -3.78e-02 2.84e-02 -2.01e-03 -7.53e-03 -2.38e-02 -3.28e-02
                                                                 3.23e-02
        1.55e-03 -5.68e-03 -2.21e-03 -4.38e-04 3.85e-03
                                                        1.37e-04 -7.90e-04
## 1167
        6.95e-02 -1.84e-02 -2.01e-02 -4.28e-02 -3.65e-02
                                                        2.43e-03
                                                                  2.74e-02
## 1169 -7.07e-02
                 2.71e-02 -2.15e-02 -1.68e-02 -1.52e-02
                                                         1.73e-03
                                                                  1.16e-02
## 1170
        3.01e-03 -2.68e-03 -2.05e-03 -2.04e-03 -7.82e-04
                                                         9.76e-04
                                                                  1.36e-03
                 9.54e-03 -1.07e-02 2.14e-02 -2.47e-03
## 1171
        1.48e-02
                                                         1.95e-03
                                                                  2.30e-04
## 1172
        6.05e-02 -1.44e-02 1.29e-02 -8.39e-02 3.84e-03 -2.96e-03 -1.35e-02
## 1173
        1.23e-02 2.24e-02 -7.49e-04 -5.55e-03 2.57e-03
                                                        1.17e-02
                                                                  3.04e-03
## 1174
        5.06e-03 8.27e-03 7.46e-03 -2.11e-03 1.76e-03
                                                        1.56e-03
                                                                  3.90e-03
## 1175 -4.66e-03 4.59e-03 -5.67e-05 1.08e-03 -4.30e-03 6.01e-03 -7.00e-03
## 1176
        3.28e-03 -7.49e-03 4.08e-03 -8.50e-04 -3.63e-03 -2.91e-03
                                                                 1.18e-03
## 1177 5.17e-03 -1.01e-03 -1.43e-02 -3.14e-03 1.07e-02 1.42e-03 1.53e-03
```

```
## 1178 -4.70e-03 -8.75e-04 -6.26e-03 1.75e-03 -3.32e-03 9.06e-03 -1.20e-02
## 1180 -1.94e-03 -2.38e-03 -3.92e-04 9.57e-04 -2.31e-03 4.25e-04
                                                                4.30e-03
## 1181 1.14e-02 2.73e-02 -5.26e-02 -8.96e-03 1.56e-02 -5.09e-03
## 1182 -5.07e-03 -3.00e-03 -4.99e-03 -8.30e-04 4.21e-03 -2.96e-03
## 1183 -5.81e-04 -1.38e-04 -1.11e-03
                                   2.31e-04 1.03e-04 -3.13e-04 -5.87e-05
## 1184 -5.05e-03 1.08e-02 4.97e-03
                                   2.27e-03 -2.25e-03 1.03e-03 -4.28e-03
## 1185 -4.67e-03
                 1.83e-02
                          2.18e-02
                                    2.87e-03 -1.48e-02
                                                      5.90e-03
                                                                4.52e-04
                                    1.41e-03 -3.14e-03
## 1186 -2.95e-03
                 1.20e-02 -1.34e-02
                                                      2.24e-03
## 1187 8.79e-02
                 1.38e-01 2.70e-02
                                    9.69e-02 -2.58e-02 4.84e-02
                                                                4.87e-02
                                                      1.81e-02 -1.40e-02
## 1188 -8.28e-03 -6.96e-04 2.24e-02
                                   2.18e-02 -6.74e-03
## 1189 -5.53e-02 1.54e-02 -4.28e-03
                                   2.60e-02 -2.77e-02
                                                      8.85e-02
                                                                2.57e-02
## 1190 -5.10e-03 -9.60e-04 -5.66e-03
                                   2.07e-03 3.79e-03 -5.61e-03 -3.74e-03
## 1191 -8.72e-04 -5.59e-04 -5.06e-05 -1.40e-03 4.43e-04 -1.39e-04 -8.18e-04
## 1192 5.04e-03 9.35e-03 -7.61e-04 -4.47e-03 -2.09e-02 1.72e-02 6.44e-03
## 1193 -3.37e-02 -5.55e-03 -4.50e-02 2.23e-02 2.52e-02 -1.33e-03 -1.39e-02
## 1195 -5.75e-03 -2.34e-03 2.14e-02 3.38e-03 -1.41e-02 -1.44e-03
## 1196 3.09e-05 1.27e-05 -1.42e-05 -4.00e-06 -4.90e-06 -8.30e-05
                                                                5.13e-05
## 1197 -3.48e-02 -6.03e-03 -5.25e-02 -1.11e-02 2.23e-02 2.32e-02
                                                                3.51e-04
## 1198 1.41e-02 2.41e-02 -3.82e-03 -4.88e-03 2.07e-03 -1.12e-03
                                                                4.73e-03
## 1199 -1.73e-02 -2.78e-02 4.08e-03 -3.18e-03 -3.85e-03 -7.48e-03
                                                                4.05e-03
## 1200 8.98e-03 7.20e-03 -2.64e-03 1.36e-02 2.18e-03 2.40e-03
                                                                3.84e-03
## 1201 -2.07e-02 -1.06e-02 1.84e-03 -6.73e-03
                                             6.97e-03
                                                      1.22e-03 -8.68e-03
## 1202
       7.07e-02 -5.37e-02 1.33e-02
                                   1.59e-02
                                             8.02e-03
                                                      2.47e-02 -7.66e-03
## 1203
        1.75e-03 -2.24e-03 -4.20e-04
                                    2.14e-03
                                             8.12e-05
                                                      1.08e-03 -3.07e-04
## 1204 -3.54e-03 -8.78e-04 -8.35e-03
                                   2.40e-03
                                             8.08e-04 -4.12e-04 -2.34e-04
       8.94e-02 -7.25e-02 1.15e-01 2.89e-02 -7.71e-02 2.26e-02 8.94e-02
## 1205
## 1206 -4.44e-02 -5.03e-02 -5.71e-02
                                   2.09e-02 3.98e-02 -3.34e-02
                                                               6.77e-03
## 1207
        4.14e-04 -9.83e-04 -6.39e-04 -2.18e-04 8.75e-04 -5.11e-04 -7.90e-04
## 1208 1.12e-02 1.72e-02 2.41e-02 -1.02e-02 -8.33e-03 4.07e-03 -3.53e-04
## 1209 -2.14e-03 -2.23e-03 4.33e-03
                                   1.01e-02 -2.76e-03 -3.44e-05 -2.07e-03
## 1210 -2.96e-03
                 5.08e-03 -2.48e-04
                                    6.79e-03 -2.75e-03 -1.78e-03 -1.98e-04
                                    6.88e-04 -9.82e-04 1.53e-03 -2.06e-03
## 1211 -7.40e-04
                 1.16e-03
                          2.31e-03
## 1212
        1.22e-02
                 5.48e-03
                          2.44e-02
                                    1.55e-02 -5.53e-03
                                                      1.18e-03
                                                               5.99e-03
## 1213
        7.92e-03
                 1.48e-02 -7.14e-03 -5.47e-03 1.26e-02 -1.35e-02 -2.34e-02
                          1.60e-02 2.32e-02 6.05e-03 -1.07e-02 -8.02e-03
## 1214 9.67e-02
                 1.05e-01
## 1215 -3.71e-03 -2.43e-03 3.95e-03 -6.75e-04 1.78e-03 -7.49e-04 -2.82e-03
## 1216 -6.94e-02 1.75e-02 1.83e-02 -7.29e-02 1.28e-02 -1.87e-02 1.34e-02
## 1217 -9.64e-03 -2.71e-03
                          7.50e-03 -2.30e-03 5.96e-03 -4.79e-03 -1.02e-02
        9.19e-04 -3.30e-04 -5.10e-04 -5.62e-04 -3.19e-04 4.39e-04 8.56e-04
        3.17e-03 4.14e-03 8.61e-03 -9.15e-04 3.52e-03 -3.03e-03 -8.80e-03
## 1219
## 1220
        2.45e-03 -1.58e-03 -3.81e-03 -1.29e-03 -1.17e-03 5.75e-04
## 1221
        5.31e-03 -3.61e-04 -1.12e-02 9.31e-03 -1.29e-03 3.80e-05 -7.11e-03
## 1222
       2.71e-04 -9.27e-04 -4.16e-04 5.65e-04 -6.60e-04 -9.73e-04 -1.09e-03
## 1223 -4.27e-02 -6.75e-02 -3.49e-03 1.59e-02 1.19e-02 -2.95e-02 -2.42e-03
## 1224 -4.62e-02 -5.59e-02 -1.11e-02 -1.38e-01 9.47e-02 -1.69e-01
                                                                1.71e-01
        1.06e-02 1.77e-03 -6.29e-04 -2.65e-02 -1.75e-03 4.25e-03
## 1225
        1.68e-02 2.07e-02 2.60e-02 -7.14e-03 -5.17e-02 2.78e-02 -1.40e-02
## 1226
## 1227 1.46e-02 1.59e-02 -2.45e-02 2.24e-02 -1.73e-03 9.34e-03 4.15e-03
```

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2.61e-03 1.71e-03 -6.16e-04 -9.14e-03 -2.85e-03 3.19e-03
                                                                    2.36e-03
         4.64e-03 -7.95e-03 9.48e-04 -2.25e-03 3.14e-03
## 1229
                                                         1.36e-03
                                                                    1.17e-03
## 1230 -4.82e-02 -7.31e-03 -6.45e-02 -1.23e-02 2.09e-02
                                                          1.20e-02
                                                                    3.90e-04
                 1.25e-02 -1.00e-02 -3.91e-02 -1.86e-02
## 1231
        1.35e-02
                                                          1.29e-02
                                                                    2.14e-03
## 1232
         2.81e-03
                  1.89e-03 -5.05e-03 -1.76e-03 2.43e-03 -1.73e-03
                                                                    6.61e-03
                                      1.89e-03 -4.99e-03
## 1233 -3.28e-03
                  1.58e-04
                           7.52e-03
                                                          3.28e-03 -4.92e-03
## 1234
         5.83e-03
                  8.41e-03 -7.29e-03
                                      6.74e-03 -1.11e-02
                                                          2.47e-02
                                                                    7.97e-03
## 1235
        2.86e-03
                  5.77e-03
                            9.15e-03
                                      1.24e-02 -1.65e-03
                                                          1.16e-03
                                                                    8.05e-04
## 1236 -8.60e-03
                  4.66e-03
                            8.44e-03
                                      6.33e-03 -6.05e-03 -4.61e-03
## 1237
        7.78e-02 -2.99e-02
                            8.41e-02
                                      2.37e-02 -5.97e-02 -5.15e-03
                                                                    3.27e-02
## 1238 -2.45e-02 -6.09e-03
                            2.99e-02
                                      1.48e-02 -3.03e-02 -1.12e-02
                                                                    3.58e-03
## 1239
         1.77e-02
                  1.43e-02 -1.87e-03
                                      7.06e-02 1.10e-03 -4.69e-03 -1.38e-03
## 1240
        1.61e-02 -2.49e-02 -4.49e-03
                                      2.34e-02 8.30e-03 -6.29e-03
                                                                    6.72e-03
                            3.39e-04 -1.35e-04 4.09e-04 -3.12e-04 -2.58e-04
## 1241 -7.86e-04
                  7.52e-05
## 1242
        1.28e-02
                  9.88e-03
                            6.41e-03
                                      4.40e-02 7.14e-03 -6.81e-03
                                                                    1.02e-02
## 1243
        9.75e-03
                  1.47e-03
                            2.85e-02
                                      2.10e-02 -2.19e-02 1.44e-02 -3.81e-02
## 1244
        3.91e-03 -1.06e-02
                            1.14e-02 -1.09e-02 -3.93e-03
                                                          9.55e-03
                                                                    3.50e-03
## 1245
        1.34e-02 -3.76e-03 -9.43e-03 -5.04e-03 2.20e-04 -1.57e-02
## 1246
        1.25e-02 8.99e-03 -6.43e-03 -8.00e-03 4.18e-03
                                                         6.67e-04 -1.32e-02
## 1247 -5.19e-02 -7.05e-02 2.35e-02 -6.76e-02 4.29e-03 -9.22e-03 -1.14e-04
## 1248
        4.80e-03 -9.12e-03 8.26e-03 -3.57e-03 -6.67e-03 4.07e-03
                                                                    4.75e-03
                                      1.44e-02 -6.98e-03
## 1249
        1.02e-02 1.70e-02 -3.32e-03
                                                         1.04e-02
                                                                    2.13e-03
## 1250 -2.45e-02 -3.00e-02 -2.63e-02 1.20e-02 -1.62e-02
                                                          3.40e-03
                                                                    2.35e-02
## 1251 -3.80e-02
                 1.79e-02 -1.97e-02 -4.10e-02 9.29e-03
                                                          1.76e-03
                                                                    8.28e-03
        3.45e-03 6.91e-03 -1.01e-03 -1.05e-03 7.48e-03 -5.50e-03
## 1252
                                                                    3.79e-03
## 1253 -1.84e-02
                  2.21e-03 -2.63e-04 -5.59e-03 -1.15e-02
                                                          1.62e-02 -8.13e-04
## 1254
        3.13e-04
                 5.10e-05 -3.61e-04
                                     7.02e-04 -2.19e-04 -2.70e-04
## 1255 -1.05e-03 -1.26e-03 -2.22e-03 2.75e-03 9.61e-04 -1.81e-03 -5.93e-04
         5.80e-02 4.65e-02 6.11e-03 -3.92e-02 -2.44e-02 -3.63e-03
## 1256
                                                                    3.43e-03
## 1257
         1.32e-02
                  5.89e-03 -4.62e-03
                                     1.91e-02 -8.23e-03
                                                          2.28e-02
                                                                    1.31e-02
                                     2.36e-02 -1.86e-02 -4.13e-02
## 1258 -3.58e-02 -4.18e-02 1.01e-02
                                                                    4.98e-03
        1.10e-02 6.89e-03 9.95e-03 -4.00e-03 -6.22e-03 7.28e-03 -9.31e-04
## 1259
## 1260
        6.04e-04 -3.17e-04 -4.73e-04 -4.85e-04 -3.35e-04
                                                          2.44e-03
                                                                    1.96e-04
## 1261
        2.54e-03
                 3.70e-03 -1.05e-02 -2.21e-03 5.48e-03 -7.18e-03
## 1262 -5.20e-02 -2.46e-03 -5.47e-02 -1.71e-02 2.57e-02
                                                          1.95e-02 -1.35e-02
## 1263
        6.13e-02 3.68e-03 -2.04e-02 2.12e-02 1.05e-02 -2.16e-02 -5.33e-03
         5.41e-03 -1.47e-02 5.14e-03 7.61e-03 -3.02e-03 1.32e-03
## 1264
                                                                    4.28e-03
## 1265
        1.62e-03
                  1.92e-03 -6.23e-03 -5.06e-04 4.65e-03 7.83e-04
                                                                    5.69e-04
## 1266 -5.19e-03 -1.47e-04 5.46e-03 -1.26e-02 -4.06e-03
                                                          1.10e-02 -8.65e-03
         3.68e-03 -7.94e-03
                            5.80e-03 -2.13e-03 -2.81e-03
## 1267
                                                          1.15e-03
                                                                    3.05e-03
## 1268
         5.91e-03 -1.40e-03
                            3.15e-03 6.54e-04 1.67e-03
                                                          1.06e-02 -7.66e-03
## 1269 -2.61e-02 -1.71e-02 -2.82e-02
                                      1.57e-02
                                                2.19e-02 -8.51e-04
                                                                    7.36e-03
## 1270
        2.06e-03
                  2.64e-03
                           1.09e-03 -1.44e-03
                                                1.07e-03 -2.85e-03
                                                                    3.29e-03
## 1271
         1.25e-02
                  1.55e-02 1.09e-02 -3.55e-03
                                                1.24e-02 -6.16e-05 -8.64e-03
## 1272 -2.80e-02 -2.82e-02 -1.20e-04 1.39e-02 1.13e-02 -2.22e-02
                                                                    2.22e-02
## 1273
         2.11e-03
                 3.72e-03 2.50e-03 -1.12e-03 -5.03e-04 -5.23e-04
                                                                   2.18e-03
## 1274
         7.74e-02
                 2.57e-02 -6.22e-03 1.92e-02 2.30e-02 -3.06e-02
                                                                    4.03e-03
                  7.52e-03 -1.18e-02 -6.53e-03 -8.35e-05 -1.07e-03 -8.54e-03
## 1275
         8.89e-03
## 1276
         1.68e-03
                  3.82e-03 2.33e-03 -1.22e-03 3.19e-03 2.13e-05 -1.27e-03
        7.97e-03 4.86e-03 1.84e-02 -4.50e-03 -9.22e-03 8.00e-03 8.34e-03
## 1277
```

```
## 1278 -5.99e-03 -2.44e-03 -2.26e-03 -1.24e-03 7.46e-03 2.02e-03 -2.26e-03
## 1279 -2.66e-02 7.91e-03 1.07e-03 -4.56e-03 9.48e-04 -5.89e-03 -6.70e-03
## 1280
        7.54e-02 -3.96e-02 -5.00e-02 -5.37e-02 9.68e-03
                                                         5.79e-03
                                                         1.66e-02 -5.06e-03
        4.10e-03 2.40e-03 -1.17e-02 4.75e-03 -2.75e-03
## 1281
## 1282
        7.96e-02 3.66e-02 -1.93e-02 1.90e-02 -2.64e-02 1.28e-02 7.52e-02
        1.20e-03 -2.14e-03 -3.21e-03 -6.50e-04 8.71e-04 -1.23e-03 -2.84e-03
## 1283
## 1284 -1.36e-03 -2.68e-03 6.03e-04 4.25e-03 1.06e-03 -6.95e-04 -1.08e-03
## 1285
        5.80e-03 -1.32e-02
                           1.48e-02 -2.46e-03
                                               1.27e-03 -9.38e-04 -2.12e-03
        1.16e-02 7.29e-03
                           3.95e-02 -7.90e-03 8.71e-03 -1.60e-03 -8.54e-03
## 1286
## 1287
        6.20e-03 -5.02e-03
                           3.48e-03
                                     1.08e-02 -3.44e-03 -3.09e-03
## 1288
        6.25e-03 -7.72e-03
                           4.57e-04
                                     1.01e-02 2.10e-03 3.97e-03 -1.29e-03
## 1289 -6.22e-03 -6.57e-03
                            1.99e-02
                                     4.97e-03 -1.77e-02 1.20e-02 -8.27e-03
                                                         5.78e-03 -1.34e-03
## 1290 -1.32e-03 -2.98e-03
                            3.51e-03
                                     1.48e-03 -1.74e-03
## 1291 -4.65e-02 4.33e-02
                           1.91e-02 -7.51e-02 1.13e-02 -1.11e-01 -5.50e-02
## 1292 -4.33e-02
                 6.25e-03 -3.30e-02 -1.64e-01 5.26e-02 -7.16e-02 -7.43e-02
## 1293
        7.05e-03 -6.97e-03 5.05e-03 -3.36e-03 3.10e-03 5.63e-03 -6.08e-03
## 1294
        8.68e-03
                  1.48e-02
                           4.89e-03
                                     1.86e-02
                                               3.12e-04 -2.38e-03
## 1295
        1.07e-02
                 1.39e-02
                           1.99e-03 4.25e-02 6.09e-03 -3.54e-03 -9.44e-04
## 1296 -2.08e-02
                 5.41e-03 -9.98e-03 -2.22e-02 -1.61e-02 -2.35e-02 -3.23e-02
## 1297
        7.02e-03
                 5.12e-03
                           1.23e-02 -2.10e-03 -3.37e-03 -2.45e-02 1.38e-02
## 1298
        8.06e-02 -5.98e-02 3.07e-02 2.65e-02 1.81e-02 -6.64e-02 -1.88e-03
## 1299 -5.61e-02
                 1.48e-01 -5.52e-02
                                     1.46e-01 -2.90e-02 3.45e-02 -1.70e-02
## 1300 -5.88e-03 4.32e-03 1.35e-03 3.34e-03 3.44e-04 -1.38e-03 -3.96e-03
## 1301 -2.13e-03
                  7.25e-03 -1.74e-03
                                     1.52e-03 -1.76e-03
                                                         2.47e-03
                                                                   1.12e-03
                  1.84e-02 2.65e-02 -9.99e-03 -2.83e-02 -8.11e-03
## 1302 -4.61e-03
## 1303
        1.10e-02 -9.92e-04 3.04e-03 -3.36e-02 -2.56e-03 -6.77e-03
## 1304 -3.16e-02 1.41e-02 -2.90e-02 -8.83e-03 -5.09e-03 4.56e-03 -5.81e-02
       6.58e-03 9.92e-03 -1.13e-02 -5.33e-03 1.46e-02 9.76e-03 -2.40e-02
## 1305
## 1306 -6.41e-03 -4.81e-04 -5.40e-03 -7.44e-03 7.87e-04 -1.43e-02 -3.31e-03
## 1307
        1.12e-02 6.83e-03 1.23e-02 -5.38e-03 1.07e-02 5.40e-03 -8.82e-03
        5.81e-03 -2.79e-02 4.07e-03 -3.54e-03 -3.93e-03
## 1308
                                                         3.90e-03 -1.07e-03
## 1309 -4.22e-02 -3.29e-02 -7.11e-02 2.54e-02 2.48e-02 7.89e-03
## 1310 8.44e-03
                 7.16e-03 4.45e-03 -3.00e-03 -4.99e-03 -4.84e-04
## 1311 -3.62e-02
                 1.12e-02 5.47e-05 -1.10e-02 3.83e-02 -2.62e-04 -8.91e-03
## 1312
        1.37e-02 -1.20e-03 -4.82e-03
                                     6.20e-02 -2.76e-03
                                                         7.11e-03 -3.52e-03
## 1313 -4.95e-02 3.89e-02 -3.85e-02
                                     2.26e-02 3.85e-02 -3.99e-02 -3.71e-04
## 1314 5.89e-02 -1.90e-03 1.13e-03
                                     1.31e-02 -2.80e-03 1.04e-02
                                                                  2.30e-02
## 1315 -4.66e-03
                 2.08e-02 -8.56e-03 2.01e-02 -8.00e-03
                                                         4.17e-03
                                                                   8.95e-03
## 1316 -2.86e-02 -3.68e-02 -3.22e-02 -6.51e-03 9.37e-03 1.01e-02
## 1317
        3.06e-03 -7.65e-03 1.02e-02 -2.42e-03 6.72e-03 -2.81e-03 -1.11e-02
## 1318 -4.54e-02 1.04e-02 -1.34e-02 3.50e-02 -1.05e-02 -2.04e-02
                 1.28e-03 -1.82e-03 -3.17e-03 1.02e-03 -2.68e-04
## 1319
        1.23e-03
## 1320
        9.98e-03 7.28e-03 9.07e-03 -2.22e-02 8.99e-04 6.75e-03 -1.87e-03
## 1321
        1.74e-03 -4.83e-03 -1.15e-03 2.91e-03 -8.70e-04 8.90e-04 -1.09e-03
## 1322
        1.26e-02 1.80e-02 1.08e-02 -6.95e-03 -7.03e-04 -7.23e-03 -1.13e-02
## 1323 -9.85e-03 -2.98e-03 -1.91e-02 -1.69e-02 -1.09e-02 1.37e-02
                                                                  4.38e-03
## 1324 -9.99e-04 -1.57e-04 4.23e-05 5.24e-04 -1.55e-04 -3.93e-04
                                                                   8.50e-04
        1.11e-02 -7.18e-03 -7.57e-03 -6.77e-03 -3.40e-03 3.04e-02
## 1325
                                                                  2.30e-03
## 1326
        8.23e-03 6.71e-03 -3.51e-04 -4.54e-03 1.45e-03 3.42e-03 -1.20e-03
## 1327 6.34e-02 -3.45e-02 -2.79e-02 -4.64e-02 -3.52e-02 1.16e-02 1.78e-02
```

```
## 1328 -5.89e-03 -1.08e-02 2.55e-03 9.77e-04 4.13e-03 4.84e-02 -2.57e-02
## 1329 6.38e-03 -1.98e-02 -4.67e-03 -3.92e-03 1.23e-02 -7.05e-03 -9.65e-03
## 1330 1.07e-02 1.69e-02 9.66e-03 -3.97e-03 -5.42e-03
                                                         7.23e-03
                                                                  6.74e-04
## 1331 -1.76e-03 -3.60e-03 -7.92e-03 9.64e-04 -8.99e-03 4.75e-03 -2.88e-04
## 1332 -7.99e-04 -8.26e-04 -2.24e-04 2.87e-04 7.70e-04 -5.84e-04
                 7.77e-02 -2.36e-02 -3.47e-02 8.48e-03 -1.36e-02
## 1333
        4.37e-02
## 1334 -4.74e-02
                 1.38e-01 -6.10e-02 2.40e-02 -3.20e-02 5.34e-02 -1.02e-01
                                     3.29e-02 1.06e-02 -1.95e-02 -4.88e-02
## 1335
        2.25e-02 -2.82e-02 -1.50e-02
## 1336 -1.02e-03 -3.88e-04 -6.54e-04 4.66e-04 -6.15e-04 -3.29e-04
## 1337 -2.00e-03 3.85e-03 5.55e-03 6.58e-03 -6.75e-04 -2.52e-03 -1.60e-03
## 1338 7.49e-03 -1.42e-02 8.59e-03 -5.31e-03 -8.02e-03 8.70e-03 -1.08e-03
## 1339 -3.82e-02 -3.58e-02 -3.84e-02 -6.10e-02 2.78e-02 -2.28e-02
                                                                   8.90e-03
## 1340
       6.88e-02 9.99e-02 -4.35e-03
                                     1.24e-02 1.82e-02 -2.11e-02
                                                                   3.39e-03
## 1341 -3.35e-02 1.42e-02 1.00e-02 -6.79e-03 3.41e-03 -2.65e-02
                                                                   2.07e-02
## 1342
        4.23e-03
                  7.10e-03 -1.38e-03 -1.19e-03 -6.48e-03 -1.15e-02
                                                                   7.94e-03
## 1343 -2.16e-02
                 7.70e-03 1.24e-02 -4.48e-03 -7.61e-03 -2.31e-03
                                                                   1.65e-03
## 1344
        1.29e-02
                 4.88e-03 -3.62e-02 -5.58e-03 6.64e-03
                                                         2.39e-03 -2.07e-03
## 1345 -2.79e-02 -3.41e-02 -2.96e-02 -6.23e-03 6.62e-03
                                                         5.81e-03
                                                                   9.89e-03
## 1346 -4.45e-02 3.26e-02 3.41e-02 -7.51e-03 -1.77e-03
                                                         2.49e-03
                                                                   1.26e-02
## 1347
        4.18e-03 5.53e-03
                           7.96e-03
                                     7.21e-03 5.03e-03 -6.58e-03
                                                                   1.26e-03
## 1348
        1.14e-02 -3.10e-02
                           7.80e-03
                                     1.77e-02 -2.07e-02
                                                        4.09e-02
                                                                   1.70e-02
## 1349
        6.89e-04
                 1.87e-03
                           1.13e-03 -9.37e-04 1.30e-03
                                                         4.33e-03 -3.97e-03
## 1350 -6.06e-02 2.14e-02
                           1.59e-02
                                     3.89e-02 -3.90e-03 1.42e-02 -1.57e-02
## 1351
        3.67e-03
                  2.73e-03 -6.68e-04
                                     1.08e-02
                                               4.08e-03 -9.49e-03
                                                                   9.64e-03
                                                9.93e-03
## 1352 -8.88e-03 -1.10e-02 -7.15e-03 -7.47e-05
                                                         3.48e-02 -1.66e-02
## 1353
        3.77e-03 -4.51e-04 1.52e-03 -2.52e-03
                                               1.79e-03
                                                         7.14e-03 -4.93e-03
## 1354
        7.28e-02 9.18e-02 -1.14e-02
                                     1.64e-02
                                               4.38e-02 -1.58e-02
                                                                  2.69e-02
## 1355 -4.47e-02 6.33e-04 -1.40e-01
                                     3.66e-02
                                                7.77e-02 2.89e-03
                                                                   4.19e-03
## 1356
        1.38e-02 -3.37e-03 -1.31e-02 4.84e-02
                                                7.92e-03
                                                         5.15e-03
                                                                   2.81e-03
## 1357
        1.41e-03 -3.88e-03 -2.16e-03 -6.87e-04
                                                1.18e-03 -2.67e-04
                                                                   6.66e-04
## 1358 -7.08e-04 -7.33e-04 -4.28e-04
                                                3.87e-04 -2.50e-04
                                     2.23e-03
                                                                   3.47e-04
## 1359 -2.22e-02
                 1.57e-02 3.04e-03 -6.90e-03
                                               1.47e-03 1.06e-02
                                                                   8.74e-06
## 1360 -2.88e-02
                  1.72e-02
                           3.43e-03
                                     2.17e-02 -2.72e-03 -4.45e-04
                                                                   9.66e-03
## 1361
        5.76e-03
                  8.49e-03 2.44e-03
                                     9.93e-03
                                              4.01e-03 -6.27e-04 -6.58e-03
## 1362
        2.25e-03 -2.69e-03 -3.57e-03 -1.34e-03 4.70e-03 -1.35e-03 -6.62e-03
## 1363
                 1.44e-02
                           2.31e-03 -6.13e-03
                                                8.34e-04 4.76e-03
                                                                   7.36e-03
        1.04e-02
                                     1.46e-02 -4.00e-03 1.15e-02
## 1364
        7.20e-03
                  4.11e-03
                           3.25e-03
                                                                   1.62e-02
## 1365 -3.48e-02
                 2.00e-02 8.94e-03 -4.99e-03 1.74e-02 -2.09e-02
                                                                   2.51e-02
                 2.47e-02 -2.91e-02 1.57e-02 3.20e-02 -2.43e-02 -7.51e-05
## 1366 -3.54e-02
        7.82e-03 -1.14e-02 -9.54e-04 -7.21e-03 4.79e-03
## 1367
                                                         4.62e-03
                                                                   7.61e-04
        8.41e-03 1.70e-02 -6.96e-03 1.50e-02 -7.21e-03 3.92e-06
## 1368
                 3.72e-03 -2.16e-02 -1.01e-02 1.42e-02 -1.01e-02 -7.76e-03
## 1369 -3.99e-02
## 1370
       7.49e-02 -5.85e-02 -3.33e-02 2.34e-02 -1.64e-02 -4.87e-02
                 5.96e-03 6.66e-03
                                     1.99e-02 -6.37e-03 5.96e-03 -9.45e-03
## 1371 -5.02e-03
        5.58e-03 -1.25e-03
                           1.72e-02 -2.91e-03 -1.66e-03 3.55e-03
## 1372
                                                                   9.49e-06
## 1373
        6.56e-03 -4.57e-02 1.20e-02 -1.00e-02 -9.41e-03 5.60e-02 -3.17e-02
## 1374 -2.65e-02 -7.00e-03 -2.69e-02 -5.47e-03 -4.42e-02 -1.88e-02
                                                                   4.49e-02
## 1375 -1.20e-02 6.71e-03 -1.54e-02 8.90e-03 1.49e-02 2.72e-03
                                                                  2.10e-03
## 1376
        6.70e-02 -1.25e-02 2.84e-02
                                     1.80e-02 7.33e-03 -2.49e-02 -1.41e-02
## 1377 -1.55e-03 2.23e-03 9.33e-04 4.58e-03 9.82e-04 -1.59e-03 -8.74e-04
```

```
## 1378 -1.56e-03 -1.76e-04 2.68e-03 5.56e-04 -4.47e-03 4.53e-04 1.74e-03
## 1379 -2.93e-02 1.65e-02 -2.35e-02 -9.22e-03 1.66e-02 5.70e-03 -4.13e-03
## 1380 -2.86e-02 -4.72e-02 -2.81e-02
                                     2.00e-02 1.93e-02 -2.44e-02 -1.76e-03
        1.07e-02 -3.48e-03
                           1.92e-02 4.56e-02 -3.59e-03
## 1381
                                                        7.76e-04
                                                                   1.18e-02
## 1382
        7.79e-03 6.91e-03 -2.87e-03
                                     1.43e-02 -1.90e-03 2.44e-03
                                                                   2.92e-03
## 1383 -3.41e-02 1.24e-02
                           4.95e-03 -3.59e-02 -2.88e-03 1.13e-02 -7.08e-03
## 1384
        5.67e-04 -2.37e-03 6.60e-04 -6.09e-04 -1.18e-03 -5.24e-04
## 1385
        7.85e-03 -2.16e-02
                           5.40e-03
                                     1.63e-02 -2.79e-02 -1.77e-02
                 1.95e-03 -2.51e-03 -2.89e-03 1.77e-03 3.39e-03 -1.44e-03
## 1386 -1.84e-03
## 1387
         1.24e-02
                  1.24e-02 -2.01e-02
                                     3.05e-02 3.03e-02 -2.39e-02 -4.29e-02
## 1388
        8.30e-03
                  1.47e-02
                           7.65e-03
                                     2.36e-02 -7.47e-03 -5.55e-03
## 1389 -2.41e-03
                  2.43e-03
                            6.14e-04
                                     1.59e-03 2.01e-03 -3.72e-03 -1.22e-04
        1.28e-02 -3.42e-02
                            3.40e-04 -3.10e-03 1.55e-02 -9.53e-03 -3.50e-02
## 1390
## 1391 -5.56e-02 -6.55e-02
                           2.98e-02 -6.17e-02 1.98e-02 -6.18e-02 -1.75e-02
        1.88e-02
                  1.33e-02 -1.12e-01 2.88e-02 2.26e-02 9.70e-03 -2.24e-03
## 1392
## 1393 -1.01e-02
                  7.30e-03 2.03e-03 -2.39e-03 1.76e-03 -3.79e-03
## 1394
        3.70e-04
                  1.96e-04
                           5.90e-05 -1.23e-04
                                               3.49e-04 -5.29e-04
        8.28e-03 -2.48e-02 2.91e-03 -3.73e-03
                                               2.60e-04
                                                         5.92e-03
## 1395
## 1396
        8.74e-02 -6.85e-02 -2.45e-03 2.27e-02 -5.04e-03
                                                         2.37e-02 -7.21e-02
## 1397
        6.31e-02 -2.92e-02 -3.60e-02 -3.69e-02 -3.71e-02
                                                         6.41e-03
                                                                   1.89e-02
## 1398
        5.17e-03
                  1.13e-02 1.23e-02
                                     1.01e-02 1.85e-03 -1.26e-03 -2.60e-03
## 1399 -1.77e-03
                  3.26e-03 -1.16e-03
                                     7.09e-04 -7.67e-04 6.68e-04 -1.09e-03
                  1.23e-03 -5.12e-03 6.99e-04 -1.05e-03 3.46e-03 -4.68e-03
## 1400 -1.17e-03
## 1401 -3.72e-02
                  2.81e-02 9.03e-03 -1.16e-02 -2.63e-02
                                                         1.50e-02
                                                                   6.45e-03
## 1402 -6.55e-03 -3.16e-03 -8.85e-03 -9.29e-04 5.73e-03 -8.42e-03
## 1403 -3.63e-02
                 2.79e-02
                           1.81e-02 -1.07e-02 -8.28e-03
                                                         1.43e-02 -3.04e-03
## 1404
        1.03e-02
                 1.40e-02
                           7.47e-03 -4.93e-03 -1.62e-02 2.17e-02 -4.13e-02
                  7.73e-03 -9.50e-03 -2.35e-03 -1.90e-02 -1.35e-03
         5.55e-03
## 1405
                                                                   1.07e-02
                  1.12e-02 -7.64e-04 1.53e-02 -2.86e-03 -1.10e-03
## 1406 -3.76e-03
                                                                   1.54e-04
## 1407 -4.92e-02 -3.38e-02 5.17e-02 -1.12e-02 -9.81e-03 1.58e-02
                                                                   5.94e-03
                           1.08e-02 3.06e-02 -2.50e-04 -7.84e-03
## 1408
        1.34e-02
                 2.04e-02
                                                                   8.63e-04
## 1409
        6.28e-03
                  5.28e-03 -5.44e-03 -1.68e-02 -1.70e-03 7.52e-03
                           5.16e-03 -1.17e-02 2.60e-03 -9.44e-03 -1.50e-02
## 1410
         5.28e-03
                  8.36e-03
## 1411
        4.19e-04
                  3.19e-04 -5.01e-04 -3.26e-04 9.90e-04 -2.40e-04 -4.70e-04
## 1412
        6.97e-03
                  2.81e-03 -1.29e-02 -4.03e-03
                                                1.76e-03
                                                         1.19e-02 -4.07e-03
## 1413 -8.64e-05 -7.51e-05 1.39e-04 -1.48e-04 7.62e-05 9.90e-05 -1.58e-04
## 1414 -2.64e-02 -2.01e-02 -1.82e-02 1.84e-02
                                                8.20e-03 -1.87e-04 2.31e-03
         5.26e-03 -2.27e-02 -1.33e-02 -4.20e-03 1.59e-02 -1.81e-02 -2.74e-02
## 1415
        5.10e-03 9.03e-03 7.81e-03 9.47e-03 -2.46e-03 -2.04e-04 3.16e-04
## 1416
## 1417 -4.74e-03 -4.30e-05
                            5.63e-03
                                     1.47e-03
                                               1.83e-04
                                                         1.72e-02 -1.18e-03
## 1418
         5.18e-03 -1.02e-02
                           4.81e-03 -4.64e-03
                                               4.68e-04
                                                         1.94e-03 -2.55e-03
## 1419
        1.18e-02
                 2.72e-02
                            8.38e-03 -9.44e-03 1.37e-02
                                                         2.98e-02 -4.21e-02
## 1420 -3.51e-02 -1.39e-02
                            1.69e-02
                                     2.67e-02 -4.49e-04 -5.89e-03
## 1421 -3.11e-03
                 7.52e-03
                           4.24e-03
                                     1.44e-03 2.70e-03 6.86e-04 -4.56e-04
                 6.89e-03 -1.75e-02 -2.64e-02 -6.35e-03 -1.57e-03
## 1422 -4.66e-03
## 1423 -2.98e-02
                 2.46e-02 4.24e-03 -1.01e-02 5.81e-03 5.37e-03 -1.17e-02
## 1424
        7.36e-03
                  9.26e-03 -5.93e-03 -1.96e-02 4.08e-04
                                                         2.52e-03 -1.62e-03
        2.93e-03 -5.79e-03 2.64e-03 -2.13e-03 -1.59e-03 -2.04e-03 7.45e-03
## 1425
## 1426 -4.51e-02 1.61e-02 -4.10e-03 -8.43e-03 -4.89e-03 -3.00e-02 -5.84e-02
## 1427 2.68e-02 2.35e-02 2.67e-03 -1.31e-02 -2.91e-02 1.60e-02 -3.45e-02
```

```
5.72e-03 -9.50e-03 -3.85e-03 9.22e-03 -9.96e-04 4.06e-03 -6.80e-04
## 1429
        9.45e-03 6.24e-03 7.18e-03 -5.19e-03 6.34e-03 8.43e-04 -9.97e-03
## 1430 6.58e-03
                  9.85e-03 -2.50e-02 -4.58e-03 1.83e-02 -1.33e-02 7.82e-03
## 1431 -2.70e-04 -5.83e-04 6.90e-05
                                     3.22e-05 -2.72e-04 1.85e-03 -1.41e-03
## 1432 -4.32e-03 8.47e-03 -1.78e-03 1.29e-03 1.73e-03 7.90e-03
## 1433 -7.93e-03 -1.33e-02 3.00e-03 -1.28e-03 -1.54e-03 -5.63e-03 -6.44e-04
## 1434 -4.11e-02 -4.61e-02 4.70e-03 2.34e-02 -1.74e-03 6.04e-03
## 1435
       2.43e-03
                  1.37e-03 -2.73e-03
                                     3.25e-03 -3.40e-03 -7.63e-03
                                                                   4.29e-03
## 1436 -4.26e-02 2.53e-02 2.33e-02 -1.28e-02 -8.07e-03 -6.74e-03
## 1437 -7.04e-02 4.45e-02 -5.24e-03 -1.13e-02 1.14e-02 -3.79e-03 -8.53e-03
## 1438 -1.72e-03 -1.34e-03 2.92e-04 -3.27e-03 -1.12e-03 -3.26e-03 -8.23e-04
## 1439 -4.18e-02 6.15e-02 -4.35e-03 -6.50e-02 1.97e-02 -3.15e-02 1.71e-02
## 1440
        2.34e-03 -5.76e-03 4.94e-03 -8.98e-04 -5.98e-04 -4.88e-03 -1.80e-04
## 1441
        4.34e-03 2.34e-03 -1.28e-02 -1.53e-03 2.72e-03 1.17e-03 2.06e-03
## 1442 -1.14e-02 3.01e-02 -3.25e-02 -2.50e-02 1.43e-03 4.69e-02 -3.49e-02
## 1443 9.91e-02 -2.60e-02 -7.26e-03 1.10e-01 -2.25e-02 -1.36e-02
## 1444 -1.62e-03 -3.63e-03 -3.63e-03 -3.94e-03 5.00e-03 -8.71e-03 -3.84e-03
## 1445 -5.98e-02 -9.81e-02 -1.53e-02 -1.97e-01 -9.57e-02 8.68e-02
       4.33e-03 -1.79e-02 4.95e-03 -3.19e-03 -1.89e-02 9.55e-03
                                                                    2.01e-02
## 1446
## 1447
        2.17e-03 -4.71e-03 2.48e-03 -9.18e-04 1.11e-03 -2.03e-03
                                                                    2.59e-03
## 1448 -2.07e-04 8.23e-04 2.22e-04 -4.31e-04 -4.83e-04
                                                         3.91e-04
                                                                    7.81e-04
## 1449
        2.03e-03
                  3.44e-03 -8.75e-04 -1.02e-03 1.80e-03 -1.03e-03
                                                                    2.08e-03
## 1450
        1.16e-02 3.68e-03 7.59e-03 -4.41e-03 -9.34e-03
                                                         3.66e-03
                                                                    2.13e-04
## 1451 -4.11e-02 -6.36e-03 3.78e-02 -1.51e-02 -2.78e-02
                                                          6.91e-02
                                                                    1.02e-02
## 1452 -3.38e-04 -9.87e-04 -4.34e-04 2.91e-04 -2.34e-04
                                                          2.37e-04 -7.53e-04
## 1453 -5.71e-02 -6.18e-02 -5.95e-02
                                      2.69e-02 6.04e-02
                                                          1.69e-02 -5.05e-02
## 1454
        7.86e-03
                 7.39e-03
                           7.69e-03
                                     1.20e-02 -1.21e-02 -3.26e-03
                                                                   7.05e-03
## 1455
        8.72e-03 5.08e-04
                           1.26e-02 -2.91e-03 -8.81e-03 -3.07e-03
                                                                   6.63e-03
                  6.82e-03 -1.55e-03 -6.92e-03 7.52e-03 1.44e-03 -9.80e-03
## 1456
        1.10e-02
## 1457 -3.92e-02
                  7.49e-03 8.58e-03 -5.04e-02 -5.76e-02
                                                         3.11e-02
## 1458 -7.96e-04 -4.12e-04
                            3.86e-03 5.67e-04 -2.41e-04 -3.48e-05 -5.44e-04
       8.69e-03 1.20e-02
                            7.28e-03 -3.44e-03 -4.06e-03 -4.68e-03
## 1459
                                                                    1.78e-03
## 1460 -3.85e-02 1.49e-02 -2.05e-02 -8.81e-03 7.58e-03
                                                          2.82e-03
                                                                    1.15e-02
## 1461
        2.51e-02
                  1.32e-02
                            8.80e-03
                                      8.21e-02 7.41e-04 -1.84e-02
                                                                    2.42e-02
## 1462
        6.89e-02 -3.18e-02
                            3.94e-02
                                      1.90e-02 -3.91e-02
                                                         8.74e-03
                                                                    1.84e-02
## 1463
                            1.28e-03
                                      1.41e-02 -1.92e-02
                                                         9.48e-04 -1.45e-02
        8.47e-03
                 1.36e-02
## 1464
        4.76e-03 -1.23e-02 4.05e-03 -3.51e-03 -3.15e-03
                                                          6.25e-03
                                                                    1.06e-02
        1.39e-02 -1.43e-02 -5.70e-03 -5.52e-03 -1.64e-02
                                                          6.24e-04
                                                                    6.61e-03
## 1465
## 1466
         3.02e-03 -1.86e-03 -9.27e-03 -1.74e-03 3.57e-04
                                                          2.91e-03
                                                                    1.84e-03
        1.06e-03
## 1467
                 8.52e-05
                           3.06e-03 -1.89e-04 1.49e-03 -1.66e-03
                                                                    1.61e-03
## 1468 -3.80e-02 -3.20e-02 7.96e-03 -6.85e-03 -1.68e-02
                                                         1.38e-02
                                                                    1.24e-02
                  1.27e-03 -1.44e-03 3.88e-03 1.43e-03 -6.77e-04
## 1469
        2.59e-03
                                                                    4.83e-03
## 1470
        7.94e-05
                  1.31e-04 8.51e-05 -2.73e-04 -2.98e-05 3.27e-06 -1.24e-06
         dfb.YWCM
##
                     dffit cov.r
                                   cook.d
                                              hat inf
         3.64e-02
                  0.259585 0.964 3.06e-03 0.01497
## 1
## 2
        -4.66e-03 -0.041425 1.029 7.80e-05 0.01529
## 3
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        6.00e-02 -0.121278 1.017 6.69e-04 0.01569
## 4
## 5
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        -4.81e-03 -0.048187 1.024 1.06e-04 0.01177
```

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## 7
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## 8
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## 9
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        6.32e-03 -0.071836 1.033 2.35e-04 0.02103
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## 22
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## 23
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## 24
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## 25
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## 26
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## 27
        ## 28
        1.06e-02 -0.021303 1.022 2.06e-05 0.00744
## 29
        5.61e-03 0.009124 1.040 3.79e-06 0.02335
## 30
        5.10e-03 -0.072692 1.029 2.40e-04 0.01746
## 31
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       -5.33e-02 0.480004 0.878 1.04e-02 0.02060
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                 0.244891 0.969 2.72e-03 0.01465
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        ## 39
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       -3.57e-02 -0.167907 1.026 1.28e-03 0.02622
## 56
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## 58
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        -3.73e-02 -0.128437 1.030 7.50e-04 0.02423
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## 64
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         2.81e-03 -0.066472 1.026 2.01e-04 0.01511
## 80
         4.51e-03 -0.072399 1.020 2.38e-04 0.01151
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## 83
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        -6.47e-03 -0.062056 1.037 1.75e-04 0.02342
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## 86
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## 87
         6.61e-03 -0.053599 1.020 1.31e-04 0.00908
## 88
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## 89
        -1.12e-03 -0.020105 1.033 1.84e-05 0.01724
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## 105
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       3.38e-03 0.104857 1.036 5.00e-04 0.02573
## 106
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## 108
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## 110
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        2.05e-02 0.078828 1.028 2.83e-04 0.01760
## 156
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         5.99e-04
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         8.41e-03
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         1.11e-03
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## 206
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## 256
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        7.67e-04 0.003994 1.030 7.26e-07 0.01464
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         3.79e-03
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## 481
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## 483
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## 486
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## 498
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                  0.007123 1.037 2.31e-06 0.02139
## 499
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        -1.57e-02 -0.088451 1.015 3.56e-04 0.01044
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## 503
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        -2.01e-03 -0.014977 1.029 1.02e-05 0.01328
## 505
        -3.63e-02 0.272893 0.974 3.38e-03 0.01854
## 506
       -4.36e-04 -0.061668 1.013 1.73e-04 0.00667
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       -1.51e-02 -0.088203 1.031 3.54e-04 0.02063
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       -8.51e-05 -0.021171 1.022 2.04e-05 0.00734
## 556
```

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## 558
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        -2.15e-03
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## 563
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## 569
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## 606
        1.38e-02 -0.130560 1.010 7.75e-04 0.01357
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## 608
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## 644
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## 645
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         ## 651
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## 653
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## 654
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## 655
         2.04e-03 0.019089 1.025 1.66e-05 0.00968
       -2.68e-03 -0.058409 1.022 1.55e-04 0.01090
## 656
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-1.59e-03 0.190197 1.009 1.64e-03 0.02001
## 657
## 658
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## 659
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## 662
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## 663
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## 664
        -3.30e-02
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## 670
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## 671
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## 672
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## 673
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## 674
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## 679
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## 681
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## 682
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## 683
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## 684
        -1.53e-02 0.158417 0.987 1.14e-03 0.00986
## 685
         7.03e-03 -0.072801 1.019 2.41e-04 0.01094
## 686
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## 687
        -4.81e-02 -0.100198 1.041 4.57e-04 0.02935
## 688
        -3.38e-03 -0.013919 1.027 8.81e-06 0.01116
## 689
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                  0.158979 1.003 1.15e-03 0.01424
## 690
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## 691
         7.60e-03 -0.109893 1.019 5.49e-04 0.01540
## 692
         1.10e-02 -0.129104 1.015 7.58e-04 0.01577
## 693
         9.92e-03 -0.036133 1.024 5.94e-05 0.01077
## 694
        -8.96e-03
                  0.240990 0.934 2.63e-03 0.00938
## 695
        -1.56e-02 -0.059989 1.019 1.64e-04 0.00920
## 696
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         3.79e-02
## 697
         7.74e-03
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## 698
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## 699
         1.02e-02 -0.025751 1.022 3.02e-05 0.00783
## 700
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         1.99e-02
## 701
        -3.19e-02
                  0.405901 0.917 7.45e-03 0.02003
## 702
        -1.79e-02 0.034580 1.048 5.44e-05 0.03197
## 703
        -1.42e-03 -0.006303 1.032 1.81e-06 0.01593
## 704
         2.97e-04 -0.097268 1.021 4.30e-04 0.01517
## 705
         1.37e-02 0.083620 1.021 3.18e-04 0.01356
## 706
       -7.32e-04 -0.005313 1.030 1.28e-06 0.01464
```

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## 707
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## 708
         9.76e-03 -0.044431 1.037 8.98e-05 0.02256
## 709
         9.06e-03
                  0.048725 1.029 1.08e-04 0.01585
## 710
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## 711
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## 712
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## 714
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## 715
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## 717
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## 718
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## 719
        -1.07e-02 -0.069477 1.036 2.20e-04 0.02286
## 720
        -2.50e-02 -0.073656 1.028 2.47e-04 0.01727
## 721
        -3.84e-02
                  0.190845 0.986 1.65e-03 0.01293
## 722
         3.20e-03 -0.014903 1.031 1.01e-05 0.01533
## 723
        -2.61e-03 -0.049103 1.021 1.10e-04 0.00932
## 724
         1.44e-02 0.054896 1.021 1.37e-04 0.00987
## 725
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## 726
        -8.42e-03
                  0.237270 0.985 2.56e-03 0.01763
## 727
         5.96e-04 -0.059663 1.023 1.62e-04 0.01220
## 728
         8.91e-03 -0.076432 1.024 2.66e-04 0.01464
## 729
         1.32e-02 0.045036 1.023 9.22e-05 0.01068
## 730
         1.07e-01 -0.174987 1.020 1.39e-03 0.02340
## 731
        -1.66e-02 -0.101553 1.022 4.69e-04 0.01611
## 732
        -1.47e-02 0.149491 1.001 1.02e-03 0.01240
## 733
        -1.40e-02 0.178047 0.970 1.44e-03 0.00873
## 734
        -1.16e-02 0.043324 1.026 8.54e-05 0.01240
## 735
         2.97e-02 -0.149622 1.006 1.02e-03 0.01424
## 736
         9.94e-04 -0.095844 1.021 4.18e-04 0.01478
## 737
         2.29e-04 -0.004417 1.027 8.88e-07 0.01129
## 738
         4.81e-03 -0.032573 1.020 4.83e-05 0.00692
## 739
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                  0.002613 1.033 3.11e-07 0.01686
## 740
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## 741
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## 742
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## 743
         2.73e-03 -0.026230 1.024 3.13e-05 0.00992
## 744
        -3.29e-03 -0.088389 1.024 3.55e-04 0.01595
## 745
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## 746
        -2.24e-02 -0.123563 1.015 6.94e-04 0.01509
## 747
        -6.02e-03
                  0.060536 1.046 1.67e-04 0.03071
## 748
         1.06e-02 -0.121562 1.012 6.72e-04 0.01337
## 749
        -3.94e-03
                  0.246147 0.995 2.75e-03 0.02135
## 750
        -2.01e-01 0.528485 0.902 1.26e-02 0.02798
## 751
        -2.02e-03 -0.007687 1.040 2.69e-06 0.02364
## 752
         4.64e-02 0.134059 1.032 8.17e-04 0.02580
## 753
         9.73e-02 0.431103 0.949 8.42e-03 0.02847
## 754
         1.68e-02 -0.190406 1.010 1.65e-03 0.02052
## 755
         7.89e-05 -0.075696 1.023 2.61e-04 0.01341
## 756
       -1.52e-02 0.063913 1.029 1.86e-04 0.01692
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## 757
        -7.69e-03 -0.060142 1.034 1.65e-04 0.02072
## 758
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## 759
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## 760
        -3.88e-03 -0.087158 1.018 3.45e-04 0.01200
## 761
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## 762
        -3.74e-02
                  0.240504 0.931 2.62e-03 0.00909
## 763
        -8.70e-03
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## 764
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## 765
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## 770
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## 771
         5.14e-03
                  0.082048 1.029 3.06e-04 0.01865
## 772
         1.40e-02 -0.034206 1.030 5.32e-05 0.01534
## 773
         1.70e-03 -0.041779 1.030 7.94e-05 0.01624
## 774
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## 775
         1.02e-02 -0.040705 1.041 7.54e-05 0.02603
## 776
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## 777
         2.53e-03
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## 778
        -2.82e-02
                  0.187166 0.984 1.59e-03 0.01209
## 779
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         9.73e-02
                  0.374580 0.958 6.36e-03 0.02489
## 781
         8.04e-02
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## 782
         2.51e-03 -0.095782 1.013 4.17e-04 0.01060
## 783
         6.53e-03 -0.068742 1.023 2.15e-04 0.01320
## 784
         4.65e-03 0.017629 1.026 1.41e-05 0.01090
## 785
         4.43e-04 -0.009028 1.028 3.71e-06 0.01203
## 786
         2.98e-02 -0.059627 1.036 1.62e-04 0.02211
  787
        -1.42e-03 -0.091805 1.027 3.83e-04 0.01844
##
## 788
         1.76e-06
                  0.004180 1.028 7.95e-07 0.01282
## 789
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        -7.21e-05
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## 792
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                  0.274350 0.958 3.41e-03 0.01530
         1.74e-02
## 793
                  0.241155 0.978 2.64e-03 0.01620
## 794
         6.92e-03 -0.062789 1.017 1.79e-04 0.00852
## 795
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## 796
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## 797
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                  0.318116 0.929 4.58e-03 0.01467
## 798
        -4.28e-02
                  0.271523 0.948 3.34e-03 0.01339
## 799
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## 800
         7.22e-03 -0.039924 1.039 7.25e-05 0.02376
## 801
        -2.37e-02
                  0.226913 0.968 2.34e-03 0.01276
        -9.36e-03
## 802
                  0.252736 0.972 2.90e-03 0.01603
## 803
         1.94e-03 -0.042421 1.025 8.18e-05 0.01135
## 804
         8.31e-04 -0.014791 1.028 9.95e-06 0.01286
## 805
        -5.10e-03
                  0.028844 1.045 3.78e-05 0.02879
        9.92e-03 0.027012 1.030 3.32e-05 0.01457
## 806
```

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## 807
         2.92e-02 -0.052229 1.024 1.24e-04 0.01172
## 808
        -1.49e-02 -0.057696 1.021 1.51e-04 0.01053
## 809
         6.79e-04
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## 810
         2.82e-03
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## 811
         5.36e-03
                  0.020972 1.028 2.00e-05 0.01261
## 812
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## 813
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## 814
        -1.21e-01 0.404647 0.936 7.41e-03 0.02316
## 815
        -1.14e-03 -0.020615 1.034 1.93e-05 0.01817
## 816
        -4.57e-03 -0.152076 0.998 1.05e-03 0.01179
## 817
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## 819
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## 820
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## 821
         9.09e-04 -0.011536 1.027 6.05e-06 0.01184
## 822
        -2.78e-03 0.009235 1.027 3.88e-06 0.01157
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## 824
         2.61e-02 -0.068145 1.023 2.11e-04 0.01317
## 825
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## 826
         4.62e-02 -0.107431 1.011 5.25e-04 0.01136
## 827
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## 828
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        -3.16e-02 0.285714 0.945 3.70e-03 0.01416
## 830
         5.84e-03
                  0.156867 0.993 1.12e-03 0.01110
## 831
         5.37e-03 -0.112118 1.013 5.71e-04 0.01282
## 832
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## 833
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## 834
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## 835
         2.90e-03 -0.017583 1.022 1.41e-05 0.00695
## 836
       -3.32e-03 -0.068485 1.022 2.13e-04 0.01195
## 837
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## 838
## 839
         7.12e-02
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## 840
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## 841
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## 842
         1.12e-02 -0.091756 1.018 3.83e-04 0.01235
## 843
        -2.60e-02 0.210453 0.958 2.01e-03 0.00984
## 844
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## 845
         2.22e-03 -0.024717 1.019 2.78e-05 0.00566
## 846
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## 847
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## 848
        -1.03e-02 -0.085053 1.023 3.29e-04 0.01495
## 849
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## 850
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## 852
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## 853
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## 854
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## 855
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## 856
        1.14e-02 0.025577 1.025 2.98e-05 0.01033
```

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## 857
         3.10e-04 -0.118338 1.004 6.36e-04 0.00981
## 858
        -3.52e-02
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## 859
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## 860
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## 861
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## 862
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## 863
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## 864
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## 865
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## 867
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## 869
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## 870
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## 872
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## 873
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## 874
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## 875
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## 877
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## 878
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## 879
## 880
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## 881
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## 882
        -1.84e-02 -0.100193 1.017 4.56e-04 0.01304
## 883
        -2.98e-02 -0.151034 1.019 1.04e-03 0.02005
## 884
        -2.44e-03 -0.014056 1.029 8.99e-06 0.01364
## 885
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## 886
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## 887
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## 888
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## 889
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## 890
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## 891
         9.13e-04
                  0.030675 1.042 4.28e-05 0.02624
## 892
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## 893
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## 894
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## 895
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## 896
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## 897
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## 898
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## 899
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## 900
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## 901
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## 902
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## 903
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## 904
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## 905
        -2.64e-04 0.012522 1.035 7.13e-06 0.01953
## 906
        1.20e-02 0.051762 1.035 1.22e-04 0.02115
```

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3.94e-03 -0.027717 1.024 3.49e-05 0.00972
## 907
## 908
                  0.034494 1.027 5.41e-05 0.01304
        -1.60e-04
## 909
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                  0.001246 1.030 7.06e-08 0.01443
## 910
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## 912
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## 913
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## 914
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## 915
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## 916
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                  0.179415 1.003 1.46e-03 0.01670
## 917
         1.08e-02 0.035873 1.031 5.85e-05 0.01643
## 918
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## 919
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## 920
       -1.95e-04 0.001383 1.031 8.70e-08 0.01505
## 921
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## 922
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## 923
         3.62e-03 0.031028 1.041 4.38e-05 0.02499
## 924
        -6.13e-03 -0.040129 1.027 7.32e-05 0.01319
## 925
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## 926
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## 927
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## 928
        -1.69e-02 -0.092826 1.022 3.92e-04 0.01527
## 929
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## 930
        -8.81e-03 -0.140051 1.008 8.91e-04 0.01394
## 931
        -6.01e-02 -0.179438 1.016 1.46e-03 0.02206
## 932
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## 933
         5.26e-02 0.255333 0.959 2.96e-03 0.01376
## 934
         6.36e-03 -0.076058 1.015 2.63e-04 0.00909
## 935
         1.36e-02 -0.079722 1.015 2.89e-04 0.00981
## 936
         1.37e-02 0.054279 1.021 1.34e-04 0.01019
## 937
         5.93e-03 -0.131602 1.030 7.87e-04 0.02440
## 938
         1.08e-01 -0.225016 1.022 2.30e-03 0.03037
## 939
        -1.92e-03 -0.058920 1.038 1.58e-04 0.02354
## 940
        -1.54e-01
                  0.290998 0.891 3.83e-03 0.00909
## 941
         2.85e-03
                  0.231362 0.958 2.43e-03 0.01147
## 942
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## 943
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## 944
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## 945
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## 946
        -4.33e-03 -0.102718 1.029 4.80e-04 0.02059
## 947
        -6.15e-02 0.197760 0.990 1.78e-03 0.01458
## 948
        4.08e-02
                  0.270241 0.973 3.31e-03 0.01803
## 949
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## 950
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## 951
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## 952
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## 953
        -2.64e-03 0.191146 0.986 1.66e-03 0.01286
## 954
        -8.80e-03 0.278494 0.928 3.51e-03 0.01141
## 955
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## 956
        5.49e-03 0.024657 1.034 2.77e-05 0.01831
```

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## 957
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## 958
         1.39e-03 -0.005405 1.030 1.33e-06 0.01382
## 959
         ## 960
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## 961
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## 962
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## 963
         4.70e-03 -0.021108 1.054 2.03e-05 0.03667
## 964
        -1.48e-03 -0.006333 1.026 1.82e-06 0.01070
## 965
         5.20e-03 -0.087540 1.018 3.48e-04 0.01196
## 966
         6.79e-04 -0.029142 1.024 3.86e-05 0.01007
## 967
         7.60e-02 0.324373 0.948 4.77e-03 0.01815
## 968
        -1.02e-03 -0.025948 1.023 3.06e-05 0.00887
## 969
        -2.86e-02 -0.069202 1.030 2.18e-04 0.01817
        7.61e-03 0.045999 1.028 9.62e-05 0.01485
## 970
## 971
         5.33e-04 -0.003984 1.026 7.22e-07 0.01009
## 972
        -8.13e-04 -0.034137 1.031 5.30e-05 0.01628
## 973
         1.69e-03 -0.022540 1.034 2.31e-05 0.01881
## 974
        -2.53e-03 0.004283 1.028 8.35e-07 0.01204
## 975
        3.48e-02 -0.119675 1.018 6.51e-04 0.01609
## 976
        -2.32e-02 0.310532 0.954 4.37e-03 0.01787
## 977
        1.27e-02 -0.071000 1.040 2.29e-04 0.02648
## 978
        2.25e-02 -0.073138 1.031 2.43e-04 0.01891
## 979
        -3.81e-04 0.031516 1.033 4.52e-05 0.01768
## 980
        -8.71e-03 -0.051884 1.024 1.22e-04 0.01156
## 981
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        -1.34e-02
                  0.200021 0.974 1.82e-03 0.01136
## 983
        -2.21e-04 -0.005122 1.028 1.19e-06 0.01247
## 984
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## 985
        -7.48e-03 -0.082516 1.018 3.10e-04 0.01128
## 986
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        -1.44e-02 -0.119593 1.018 6.50e-04 0.01568
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## 989
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## 993
         4.92e-03 0.035007 1.030 5.57e-05 0.01572
## 994
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## 995
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## 999
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## 1000
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## 1001 -1.59e-03 -0.047363 1.029 1.02e-04 0.01520
## 1002
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## 1003 -9.23e-04 -0.082914 1.019 3.13e-04 0.01235
## 1004 1.55e-03 -0.041793 1.023 7.94e-05 0.00996
## 1005 -7.53e-03 -0.043945 1.026 8.78e-05 0.01308
## 1006 -2.24e-02 -0.107770 1.020 5.28e-04 0.01589
```

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## 1007 -3.36e-03 0.274226 0.991 3.41e-03 0.02341
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## 1008
## 1009 2.74e-04 -0.001727 1.036 1.36e-07 0.02002
## 1011 -4.82e-02 0.128707 1.028 7.53e-04 0.02261
## 1012 3.30e-02 -0.149103 1.005 1.01e-03 0.01367
## 1013 -1.75e-02 0.183561 0.988 1.53e-03 0.01258
## 1014
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## 1015
        1.67e-02 -0.108964 1.027 5.40e-04 0.02015
## 1016
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## 1018 -1.07e-02 -0.061914 1.023 1.74e-04 0.01205
## 1019 -2.43e-02 -0.074833 1.020 2.55e-04 0.01176
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## 1021
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## 1022 -5.21e-03 0.201418 0.969 1.84e-03 0.01055
## 1023
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## 1024
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## 1025 -2.64e-02 0.061629 1.039 1.73e-04 0.02523
## 1026
       2.71e-03 -0.062898 1.022 1.80e-04 0.01163
## 1027
        ## 1028
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## 1030 1.08e-02 0.070018 1.027 2.23e-04 0.01597
## 1031 -4.33e-03 -0.021679 1.031 2.14e-05 0.01542
## 1032 -7.60e-02 0.458680 0.887 9.50e-03 0.02013
## 1033 -1.85e-02  0.242951  1.003  2.68e-03  0.02382
## 1034 9.05e-03 0.374762 0.924 6.36e-03 0.01844
## 1035 -3.03e-02 -0.137950 1.022 8.65e-04 0.02054
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## 1037
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## 1039 -6.44e-05 -0.014565 1.026 9.65e-06 0.01096
## 1040 3.27e-03 0.203435 0.928 1.87e-03 0.00645
## 1041
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## 1042
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## 1044
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## 1045 4.56e-04 -0.019481 1.027 1.73e-05 0.01153
## 1046
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## 1047 -1.38e-03 -0.073746 1.023 2.47e-04 0.01318
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## 1051 -6.63e-03 -0.081342 1.022 3.01e-04 0.01346
## 1052
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## 1053
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## 1054
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        1.01e-02 0.059847 1.029 1.63e-04 0.01639
## 1055
## 1056 -1.12e-02 -0.073179 1.029 2.44e-04 0.01760
```

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## 1057 -5.59e-03 0.292330 0.937 3.87e-03 0.01363
## 1058 -6.97e-02 0.209172 0.997 1.99e-03 0.01799
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## 1063 -3.41e-03 -0.146266 1.004 9.72e-04 0.01303
## 1064
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## 1068
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## 1073
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## 1075
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## 1077
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## 1078
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## 1080 -3.86e-03 -0.069153 1.020 2.17e-04 0.01120
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## 1083
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## 1084 -1.11e-01 0.289510 0.956 3.80e-03 0.01640
## 1085
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## 1086
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## 1087
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## 1088
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## 1089
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## 1095
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## 1096
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## 1097
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## 1098
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## 1100 -1.04e-03 -0.019874 1.031 1.80e-05 0.01526
        9.75e-03 -0.088900 1.022 3.59e-04 0.01440
## 1101
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## 1103
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## 1104
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## 1105
        4.23e-03 -0.023492 1.023 2.51e-05 0.00852
## 1106 2.38e-03 -0.095112 1.017 4.11e-04 0.01256
```

```
## 1107 3.25e-02 0.274240 0.938 3.41e-03 0.01226
## 1108 6.66e-03 -0.032137 1.020 4.70e-05 0.00667
## 1109 -3.43e-03 -0.082751 1.015 3.11e-04 0.00979
## 1110 -2.49e-03 -0.049254 1.026 1.10e-04 0.01332
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## 1112 -1.72e-01 0.721659 0.883 2.35e-02 0.04153
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## 1114 6.93e-04 -0.002819 1.032 3.62e-07 0.01630
## 1115 -1.43e-02 -0.070886 1.023 2.28e-04 0.01350
## 1116 1.45e-02 -0.120507 1.014 6.60e-04 0.01395
## 1117 -1.02e-03 0.079078 1.063 2.84e-04 0.04713
## 1118 2.20e-03 -0.016183 1.023 1.19e-05 0.00804
## 1119
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## 1123
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## 1124 -1.86e-02 -0.111023 0.998 5.60e-04 0.00748
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## 1125
## 1126
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## 1127
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## 1132 -2.58e-02 -0.083255 1.023 3.15e-04 0.01463
## 1133 5.89e-03 -0.030943 1.025 4.35e-05 0.01045
## 1134 -1.63e-04 0.001116 1.033 5.66e-08 0.01722
## 1135 -1.41e-03 -0.034075 1.022 5.28e-05 0.00840
## 1136 -2.30e-03 -0.013615 1.066 8.43e-06 0.04787
## 1137 -2.66e-02 0.171109 0.979 1.33e-03 0.00958
## 1138 -7.99e-03 -0.185153 1.005 1.56e-03 0.01789
## 1139 -1.70e-03 -0.165913 1.033 1.25e-03 0.03049
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## 1141 -1.23e-03 -0.016168 1.039 1.19e-05 0.02272
## 1142 3.11e-02 -0.082402 1.013 3.09e-04 0.00900
## 1143 2.61e-02 -0.178868 0.999 1.45e-03 0.01530
## 1144
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## 1145 2.07e-03 -0.081170 1.016 3.00e-04 0.01015
## 1146
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## 1147
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## 1148 7.62e-03 -0.052300 1.025 1.24e-04 0.01290
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## 1150 -8.82e-03 -0.039852 1.029 7.22e-05 0.01524
## 1151 -8.69e-04 0.014183 1.035 9.15e-06 0.01918
## 1152 4.87e-02 -0.175276 1.014 1.40e-03 0.02049
## 1153 3.58e-04 -0.054745 1.020 1.36e-04 0.00915
## 1154 -1.24e-02 0.175240 0.997 1.39e-03 0.01418
## 1155 -4.78e-03 0.024703 1.035 2.78e-05 0.01917
## 1156 9.03e-04 0.012650 1.028 7.28e-06 0.01276
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## 1157 -5.49e-03 -0.050205 1.032 1.15e-04 0.01788
## 1158 8.47e-04 0.047797 1.030 1.04e-04 0.01636
## 1159 2.75e-03 -0.018610 1.020 1.58e-05 0.00534
## 1160 -4.21e-02 -0.126982 1.016 7.33e-04 0.01573
## 1161 1.96e-02 0.053077 1.025 1.28e-04 0.01301
## 1162 6.49e-03 -0.059258 1.025 1.60e-04 0.01343
## 1163 -2.70e-01 0.379299 0.932 6.51e-03 0.02014
## 1164 -1.87e-02 -0.077669 1.024 2.74e-04 0.01465
## 1165 -4.06e-03 -0.116344 1.011 6.15e-04 0.01232
## 1166 4.07e-02 -0.117524 1.020 6.28e-04 0.01688
## 1167 -5.85e-04 -0.011638 1.037 6.16e-06 0.02065
## 1168
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## 1169
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## 1170
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## 1171
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## 1174
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## 1175
## 1176
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## 1177
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## 1178
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## 1179
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## 1180
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## 1181
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## 1183 -8.66e-05 0.004766 1.030 1.03e-06 0.01414
## 1184 1.11e-03 0.030064 1.026 4.11e-05 0.01118
## 1185
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## 1186
        ## 1187
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## 1188
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## 1190
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       4.49e-04 0.004305 1.024 8.43e-07 0.00829
## 1191
## 1192
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## 1193 2.85e-04 -0.115987 1.018 6.12e-04 0.01536
## 1194 -5.00e-04 -0.119246 1.015 6.46e-04 0.01432
## 1195 -4.71e-04 0.043709 1.032 8.69e-05 0.01756
## 1196 9.80e-05 -0.000194 1.030 1.71e-09 0.01409
## 1197 -6.36e-03 -0.119861 1.020 6.53e-04 0.01726
## 1198  2.08e-03 -0.079756  1.013  2.89e-04  0.00876
## 1199
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## 1200 2.29e-03 -0.054435 1.020 1.35e-04 0.00937
## 1201 -2.70e-03 -0.056056 1.023 1.43e-04 0.01122
## 1202 -2.23e-02 0.196026 0.980 1.74e-03 0.01218
## 1203 6.08e-04 -0.008115 1.025 3.00e-06 0.00912
## 1205 4.04e-02 0.311229 0.954 4.39e-03 0.01797
## 1206 -3.41e-02 0.241174 0.934 2.63e-03 0.00944
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## 1207 -6.41e-04 -0.003915 1.031 6.97e-07 0.01530
## 1208 4.53e-04 -0.088044 1.031 3.53e-04 0.02053
## 1209 1.19e-02 0.025900 1.030 3.05e-05 0.01474
## 1210 -1.07e-04 0.021915 1.038 2.18e-05 0.02241
## 1211 3.28e-03 0.008707 1.033 3.45e-06 0.01693
## 1212 -2.63e-03 -0.079579 1.033 2.88e-04 0.02127
## 1213 -3.30e-03 -0.059594 1.024 1.62e-04 0.01300
## 1215 -1.77e-03 -0.010745 1.033 5.25e-06 0.01686
## 1216 -2.16e-02 -0.211162 0.997 2.02e-03 0.01814
## 1217 -5.61e-03 -0.026230 1.028 3.13e-05 0.01284
## 1218 -5.24e-04 -0.005354 1.024 1.30e-06 0.00850
## 1219 -1.77e-03 -0.020928 1.027 1.99e-05 0.01165
## 1220 1.90e-03 -0.010641 1.022 5.15e-06 0.00691
## 1221
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## 1222 1.78e-03 -0.003194 1.053 4.64e-07 0.03557
## 1223 -2.02e-02 0.253028 0.960 2.90e-03 0.01367
## 1224
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## 1225 -1.18e-03 -0.065236 1.022 1.94e-04 0.01198
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## 1228 -6.62e-04 -0.015869 1.022 1.15e-05 0.00695
## 1229 -1.56e-04 -0.040728 1.028 7.54e-05 0.01405
## 1230 1.40e-02 -0.123401 1.008 6.92e-04 0.01204
## 1231
       1.23e-02 -0.106060 1.023 5.11e-04 0.01715
## 1232 -6.27e-03 -0.018557 1.026 1.57e-05 0.01059
## 1233
       4.51e-03 0.019712 1.028 1.77e-05 0.01269
## 1234 -1.69e-02 -0.044262 1.030 8.91e-05 0.01638
## 1235
       2.62e-03 -0.026860 1.037 3.28e-05 0.02128
## 1236
       5.64e-03 -0.025142 1.027 2.88e-05 0.01236
## 1237 6.22e-03 0.223430 0.979 2.27e-03 0.01452
## 1239 8.45e-03 -0.112592 1.011 5.76e-04 0.01195
## 1240 -1.87e-03 -0.092784 1.023 3.91e-04 0.01570
## 1241 -4.95e-04 -0.002138 1.031 2.08e-07 0.01532
## 1242 3.98e-03 -0.081969 1.027 3.06e-04 0.01729
## 1244 -4.22e-03 -0.032359 1.032 4.76e-05 0.01724
## 1245 -1.41e-02 -0.099078 1.024 4.46e-04 0.01691
## 1246 1.07e-02 -0.080461 1.015 2.94e-04 0.00963
## 1247 -1.49e-02 0.250894 0.941 2.85e-03 0.01092
## 1248  2.64e-03 -0.031799  1.022  4.60e-05  0.00810
## 1249 -5.15e-03 -0.049268 1.018 1.10e-04 0.00771
## 1250 4.43e-03 0.165170 0.981 1.24e-03 0.00942
## 1251
       2.70e-03 -0.114763 1.017 5.99e-04 0.01475
## 1252 -5.68e-03 -0.030525 1.030 4.24e-05 0.01512
## 1253 8.92e-04 -0.055455 1.027 1.40e-04 0.01412
## 1254 -7.84e-05 -0.002729 1.030 3.39e-07 0.01454
## 1255
       1.17e-03 0.006867 1.031 2.15e-06 0.01518
## 1256 -1.60e-02 0.165965 1.007 1.25e-03 0.01650
```

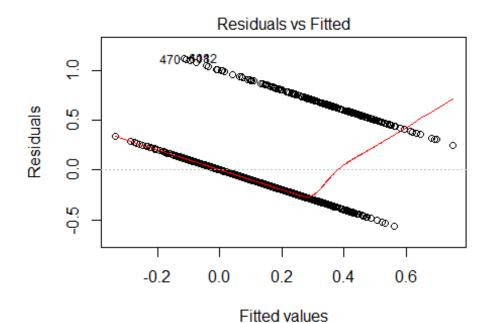
```
## 1257 -1.82e-02 -0.074466 1.018 2.52e-04 0.01066
## 1258 -3.40e-02 0.259437 0.928 3.05e-03 0.01007
## 1259 6.81e-03 -0.060340 1.021 1.66e-04 0.01055
## 1260 -1.77e-03 -0.004277 1.028 8.32e-07 0.01199
## 1261 -5.25e-03 -0.031922 1.029 4.63e-05 0.01437
## 1262 7.38e-03 -0.147337 1.003 9.86e-04 0.01294
## 1263 -1.17e-02 0.179926 0.986 1.47e-03 0.01172
## 1264 -2.60e-03 -0.030709 1.024 4.29e-05 0.00991
## 1265 5.74e-04 -0.013235 1.038 7.97e-06 0.02185
## 1266 2.30e-03 0.050419 1.031 1.16e-04 0.01765
## 1267 -1.94e-03 -0.022515 1.025 2.31e-05 0.01055
## 1268 -4.43e-03 0.021909 1.042 2.18e-05 0.02599
## 1269 1.76e-04 -0.086886 1.035 3.43e-04 0.02388
## 1270 -4.56e-03 -0.017064 1.028 1.32e-05 0.01274
## 1271 -4.14e-03 -0.073185 1.021 2.44e-04 0.01186
## 1272 -3.14e-02 0.183669 0.969 1.53e-03 0.00913
## 1273 -1.42e-03 -0.010983 1.025 5.49e-06 0.00942
## 1275 -3.04e-03 -0.075994 1.023 2.63e-04 0.01372
## 1276 -9.78e-04 -0.012381 1.027 6.97e-06 0.01178
## 1277 -1.01e-03 -0.049134 1.018 1.10e-04 0.00750
## 1278 -2.10e-03 -0.020333 1.033 1.88e-05 0.01772
## 1279 -8.61e-04 -0.065361 1.021 1.94e-04 0.01118
## 1281 -7.14e-03 -0.029225 1.032 3.88e-05 0.01702
## 1282
        2.46e-02 0.219429 0.974 2.18e-03 0.01309
## 1283
        7.16e-04 -0.008820 1.029 3.54e-06 0.01382
## 1285
        1.28e-03 -0.036352 1.027 6.01e-05 0.01252
## 1286 -4.27e-03 -0.115841 1.026 6.10e-04 0.01996
## 1287
       4.29e-03 -0.034769 1.022 5.50e-05 0.00868
## 1288
       4.96e-03 -0.039091 1.023 6.95e-05 0.01022
## 1289
        1.29e-02 0.068548 1.027 2.14e-04 0.01564
## 1290
        1.04e-03 0.020568 1.035 1.92e-05 0.01968
        1.08e-01 0.320267 0.934 4.64e-03 0.01543
## 1291
## 1292
        7.98e-02 0.303648 0.941 4.18e-03 0.01512
## 1293 -1.24e-03 -0.037280 1.026 6.32e-05 0.01236
## 1294
        4.72e-03 -0.084040 1.023 3.21e-04 0.01474
## 1295
        4.94e-03 -0.071058 1.021 2.30e-04 0.01220
## 1296
        4.18e-02 -0.080005 1.037 2.91e-04 0.02430
## 1297
        2.00e-02 -0.056662 1.021 1.46e-04 0.01051
        3.57e-02 0.198529 0.965 1.79e-03 0.00970
## 1298
## 1299
        6.82e-02 0.391480 0.884 6.92e-03 0.01493
        2.33e-04 0.026149 1.021 3.11e-05 0.00698
## 1300
## 1301
        3.38e-03 0.016444 1.024 1.23e-05 0.00870
        2.50e-02 0.074798 1.052 2.54e-04 0.03679
## 1302
## 1303
        1.68e-04 -0.087504 1.022 3.48e-04 0.01448
## 1304
       7.59e-03 -0.108570 1.027 5.36e-04 0.01995
## 1305 -1.36e-02 -0.051755 1.025 1.22e-04 0.01258
## 1306 1.57e-02 0.035717 1.027 5.80e-05 0.01273
```

```
## 1307 3.78e-03 -0.094500 1.016 4.06e-04 0.01206
       1.71e-03 -0.042945 1.025 8.39e-05 0.01187
## 1308
## 1309 -9.04e-03 -0.133338 1.018 8.08e-04 0.01759
## 1310 8.36e-03 -0.041901 1.018 7.98e-05 0.00678
## 1311 -8.98e-03 -0.118574 1.021 6.39e-04 0.01774
## 1312 1.53e-02 -0.135517 1.022 8.35e-04 0.02000
## 1313 -4.10e-02 0.283710 0.923 3.64e-03 0.01133
## 1314 -3.12e-02 0.152212 1.001 1.05e-03 0.01275
## 1315 8.83e-03 0.057396 1.028 1.50e-04 0.01582
## 1316 7.74e-03 -0.079046 1.020 2.84e-04 0.01210
## 1317 -6.07e-03 -0.032076 1.032 4.68e-05 0.01743
## 1318 2.18e-02 -0.135542 1.004 8.35e-04 0.01204
## 1319 -2.92e-03 -0.009046 1.034 3.72e-06 0.01805
## 1320 3.53e-03 -0.058227 1.025 1.54e-04 0.01362
## 1321 1.04e-03 -0.013549 1.031 8.35e-06 0.01542
## 1322 1.81e-02 -0.072570 1.017 2.39e-04 0.00958
## 1323
        7.67e-03 0.058737 1.024 1.57e-04 0.01225
## 1325 -2.22e-02 -0.074662 1.032 2.54e-04 0.01998
## 1326 2.23e-03 -0.036121 1.021 5.93e-05 0.00831
        1.21e-02 0.177861 0.994 1.44e-03 0.01346
## 1327
## 1328 -2.40e-02 0.081663 1.040 3.03e-04 0.02698
## 1329 -1.09e-02 -0.058434 1.025 1.55e-04 0.01295
## 1330 5.73e-03 -0.054845 1.019 1.37e-04 0.00858
## 1331 1.35e-02 0.027873 1.033 3.53e-05 0.01788
## 1332 -6.00e-04 0.005397 1.031 1.32e-06 0.01537
## 1333 -1.32e-02 0.167086 1.010 1.27e-03 0.01774
## 1334 6.53e-02 0.348501 0.866 5.48e-03 0.01071
## 1335
        2.36e-02 -0.144675 1.015 9.51e-04 0.01752
## 1336
        3.81e-05 0.004979 1.026 1.13e-06 0.01058
## 1337
        2.28e-03 0.017032 1.034 1.32e-05 0.01866
## 1338 6.67e-03 -0.042204 1.018 8.10e-05 0.00659
## 1339 -3.41e-02 0.202016 0.947 1.85e-03 0.00792
## 1340 -2.33e-02 0.184653 0.985 1.55e-03 0.01202
## 1341 -8.06e-03 -0.070495 1.016 2.26e-04 0.00896
## 1342
       1.35e-02 -0.030434 1.030 4.21e-05 0.01483
        1.72e-02 -0.053794 1.021 1.32e-04 0.01020
## 1343
## 1344 6.35e-03 -0.069468 1.016 2.19e-04 0.00879
## 1345 -4.92e-03 -0.075441 1.022 2.59e-04 0.01285
## 1346 -1.14e-03 -0.116814 1.008 6.20e-04 0.01114
## 1347 -7.55e-03 -0.029743 1.027 4.02e-05 0.01278
## 1348 -3.17e-02 -0.100493 1.028 4.59e-04 0.01992
## 1349 -6.48e-03 -0.011990 1.044 6.54e-06 0.02758
## 1350 1.28e-02 -0.141801 0.995 9.13e-04 0.01005
## 1351 -5.41e-03 -0.038182 1.026 6.63e-05 0.01217
## 1353 -9.01e-04 -0.029878 1.026 4.06e-05 0.01119
## 1354 -5.65e-02 0.260442 0.993 3.08e-03 0.02230
## 1355 -6.72e-02 0.354308 0.952 5.69e-03 0.02151
## 1356 -2.09e-03 -0.079953 1.019 2.91e-04 0.01185
```

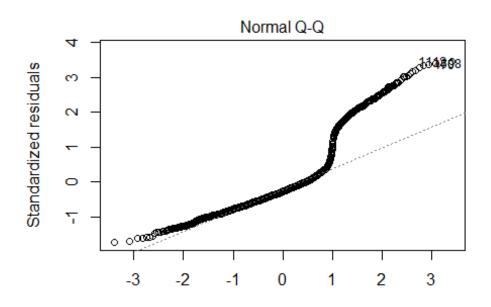
```
## 1357 -2.37e-04 -0.008042 1.023 2.94e-06 0.00761
## 1358 3.34e-04 0.005138 1.027 1.20e-06 0.01147
## 1359 -1.05e-02 -0.053061 1.020 1.28e-04 0.00917
## 1360 7.86e-03 -0.074706 1.016 2.54e-04 0.00956
## 1361 6.24e-04 -0.040953 1.025 7.63e-05 0.01184
## 1362 -2.76e-03 -0.016883 1.030 1.30e-05 0.01415
## 1363 -3.04e-03 -0.062696 1.021 1.79e-04 0.01075
## 1364 -2.32e-02 -0.051634 1.021 1.21e-04 0.00972
## 1365 -2.55e-02 -0.095771 1.019 4.17e-04 0.01378
## 1366 -3.72e-02 0.226128 0.979 2.32e-03 0.01484
## 1367 4.06e-05 -0.085822 1.028 3.35e-04 0.01856
## 1368 9.76e-03 -0.052795 1.020 1.27e-04 0.00904
## 1369 -3.28e-02 -0.115370 1.016 6.05e-04 0.01427
## 1370 3.13e-02 0.243026 0.975 2.68e-03 0.01572
## 1371 8.47e-03 0.050763 1.027 1.17e-04 0.01432
## 1372 8.35e-04 -0.037729 1.032 6.47e-05 0.01770
## 1373 -3.61e-02 -0.094481 1.032 4.06e-04 0.02238
## 1374
        3.01e-02 -0.119244 1.037 6.47e-04 0.02847
        1.61e-04 -0.052991 1.036 1.28e-04 0.02143
## 1375
## 1376
        8.09e-03 0.184128 0.994 1.54e-03 0.01423
## 1377
        5.66e-04 0.009845 1.028 4.41e-06 0.01256
## 1378 -1.17e-05 0.011557 1.033 6.08e-06 0.01713
## 1379 4.47e-03 -0.078528 1.019 2.80e-04 0.01131
## 1380 -1.85e-02 0.202405 0.985 1.86e-03 0.01380
## 1381 -4.34e-03 -0.070573 1.019 2.26e-04 0.01039
## 1382 -2.80e-03 -0.056682 1.023 1.46e-04 0.01165
## 1383 -4.64e-03 -0.099211 1.025 4.48e-04 0.01755
## 1384 1.21e-03 -0.007177 1.033 2.34e-06 0.01711
## 1385 4.05e-02 -0.069829 1.032 2.22e-04 0.01962
## 1386 -4.55e-03 0.010338 1.030 4.86e-06 0.01435
## 1387 -4.45e-03 -0.111416 1.017 5.64e-04 0.01429
## 1388 1.35e-02 -0.079133 1.019 2.85e-04 0.01181
## 1389 -9.09e-04 0.016395 1.029 1.22e-05 0.01399
## 1390 -6.34e-03 -0.110935 1.025 5.60e-04 0.01900
## 1391 2.84e-02 0.297481 0.926 4.01e-03 0.01261
## 1392 2.01e-02 -0.173811 1.014 1.37e-03 0.02053
## 1393 -8.62e-03 -0.023568 1.025 2.53e-05 0.01049
## 1394 -5.25e-04 -0.002291 1.025 2.39e-07 0.00944
## 1396
        5.44e-02 0.250073 0.972 2.84e-03 0.01566
## 1397
        4.81e-03 0.194425 0.999 1.72e-03 0.01685
## 1398
        4.72e-04 -0.046049 1.030 9.64e-05 0.01606
## 1399
        2.66e-03 0.010414 1.028 4.93e-06 0.01270
## 1400
        3.42e-03 0.014272 1.030 9.26e-06 0.01488
## 1401
        1.08e-02 -0.113558 1.014 5.86e-04 0.01338
## 1402
        4.37e-03 -0.025458 1.039 2.95e-05 0.02357
## 1403
        4.40e-03 -0.119631 1.017 6.51e-04 0.01534
## 1404 -1.80e-03 -0.098049 1.021 4.37e-04 0.01476
## 1405
        1.14e-02 -0.047565 1.038 1.03e-04 0.02334
## 1406 7.82e-03 0.042811 1.028 8.34e-05 0.01454
```

```
## 1407 -1.55e-02 -0.146224 1.011 9.72e-04 0.01579
## 1408 1.21e-02 -0.089622 1.011 3.65e-04 0.00899
## 1409 -4.96e-03 -0.036213 1.023 5.96e-05 0.00992
## 1410 8.29e-03 -0.033875 1.029 5.22e-05 0.01469
## 1411 -1.53e-03 -0.003440 1.023 5.38e-07 0.00782
## 1412 -2.26e-03 -0.040472 1.020 7.45e-05 0.00749
## 1413 -8.09e-08 0.000514 1.026 1.20e-08 0.01040
## 1414 -1.81e-03 -0.074066 1.020 2.49e-04 0.01146
## 1415 -1.41e-03 -0.065953 1.036 1.98e-04 0.02302
## 1416 5.32e-03 -0.041928 1.029 8.00e-05 0.01479
## 1417 -6.14e-03 0.035175 1.026 5.63e-05 0.01217
## 1418 -3.79e-04 -0.034307 1.020 5.35e-05 0.00697
## 1419 -3.08e-02 -0.101293 1.016 4.66e-04 0.01290
## 1420 1.00e-02 -0.105606 1.014 5.07e-04 0.01244
## 1422 2.39e-02 0.061321 1.037 1.71e-04 0.02330
## 1423 -3.70e-03 -0.074657 1.016 2.53e-04 0.00952
## 1424
       1.30e-03 -0.042932 1.022 8.38e-05 0.00916
## 1425 -5.21e-03 -0.021274 1.024 2.06e-05 0.00887
## 1426
       6.04e-02 -0.130213 1.013 7.71e-04 0.01492
## 1427
        3.82e-02 -0.152986 1.000 1.06e-03 0.01251
## 1428
       4.95e-03 -0.035756 1.023 5.81e-05 0.00941
## 1429 -7.05e-04 -0.058018 1.014 1.53e-04 0.00663
## 1430 -9.74e-03 -0.062687 1.028 1.79e-04 0.01590
## 1431 1.69e-04 0.003505 1.042 5.59e-07 0.02587
## 1433
       1.51e-03 -0.027682 1.037 3.49e-05 0.02164
## 1434 -8.18e-03 -0.112087 1.018 5.71e-04 0.01483
## 1435
        9.22e-03 -0.022758 1.049 2.36e-05 0.03199
## 1436 7.07e-03 -0.106489 1.011 5.15e-04 0.01098
## 1437
        2.22e-03 -0.155316 0.986 1.10e-03 0.00945
## 1438
       8.34e-04 0.015848 1.042 1.14e-05 0.02596
## 1439 -3.80e-02 0.251152 0.965 2.86e-03 0.01435
## 1440
       3.93e-03 -0.023436 1.028 2.50e-05 0.01287
       2.00e-03 -0.025038 1.030 2.85e-05 0.01474
## 1441
## 1442
       6.44e-03 0.124259 1.031 7.02e-04 0.02408
        1.58e-02 0.265350 0.960 3.19e-03 0.01490
## 1443
## 1444
        8.28e-03 0.020522 1.036 1.92e-05 0.02068
## 1445  4.64e-02  0.447592  0.903  9.06e-03  0.02136
## 1446 -4.13e-03 -0.046238 1.035 9.72e-05 0.02069
## 1447 -3.02e-03 -0.013920 1.028 8.81e-06 0.01287
## 1448 3.04e-04 0.002357 1.046 2.53e-07 0.02974
## 1449 -1.47e-03 -0.010925 1.025 5.43e-06 0.00951
## 1450 6.72e-03 -0.058474 1.015 1.55e-04 0.00718
## 1451 -4.58e-02 -0.140260 1.019 8.94e-04 0.01892
## 1452 1.18e-03 0.003323 1.027 5.02e-07 0.01143
## 1453 -7.71e-02 0.326853 0.909 4.83e-03 0.01290
       1.62e-02 -0.042100 1.022 8.06e-05 0.00960
## 1454
## 1455
        1.12e-02 -0.041664 1.023 7.89e-05 0.00984
## 1456 -1.91e-03 -0.054952 1.017 1.37e-04 0.00758
```

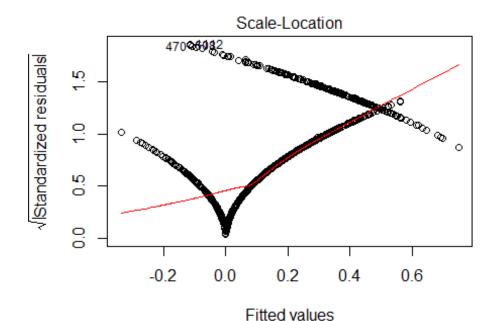
```
## 1457 2.65e-02 -0.121197 1.014 6.68e-04 0.01413
## 1458 -7.28e-04 0.005334 1.030 1.29e-06 0.01415
## 1459 8.03e-03 -0.052226 1.023 1.24e-04 0.01107
## 1460 -3.17e-03 -0.098817 1.013 4.44e-04 0.01100
## 1461 -5.97e-03 -0.160407 1.010 1.17e-03 0.01713
## 1462 -4.21e-02 0.265461 0.975 3.20e-03 0.01798
## 1463 2.15e-02 -0.060362 1.029 1.66e-04 0.01629
## 1464 -1.32e-02 -0.066928 1.031 2.04e-04 0.01879
## 1465 2.14e-02 -0.069947 1.018 2.22e-04 0.00977
## 1466 9.02e-04 -0.020905 1.035 1.99e-05 0.01920
## 1467 -2.04e-03 -0.007648 1.027 2.66e-06 0.01113
## 1468 3.50e-03 -0.094826 1.018 4.09e-04 0.01293
## 1469 -4.52e-03 -0.015602 1.029 1.11e-05 0.01336
## 1470 7.64e-05 -0.000586 1.025 1.56e-08 0.00930
#diagnostic plots
plot(x)
```



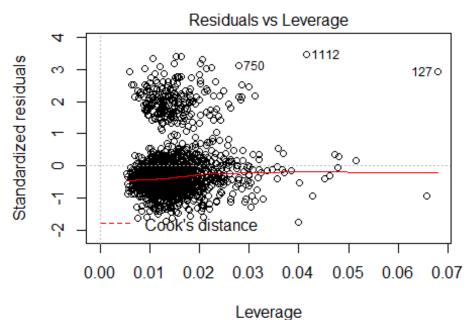
Attrition ~ ī..Age + BusinessTravel + DailyRate + DistanceFromHome



Theoretical Quantiles [Attrition ~ i...Age + BusinessTravel + DailyRate + DistanceFromHome



Attrition ~ ī..Age + BusinessTravel + DailyRate + DistanceFromHome



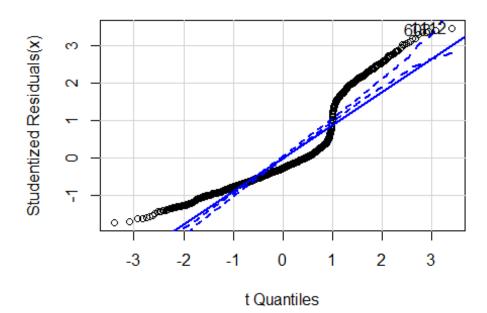
Attrition ~ ī..Age + BusinessTravel + DailyRate + DistanceFromHome

Assessing Outliers
outlierTest(x)

```
## No Studentized residuals with Bonferroni p < 0.05
## Largest |rstudent|:
## rstudent unadjusted p-value Bonferroni p
## 1112 3.466883     0.00054195     0.79666

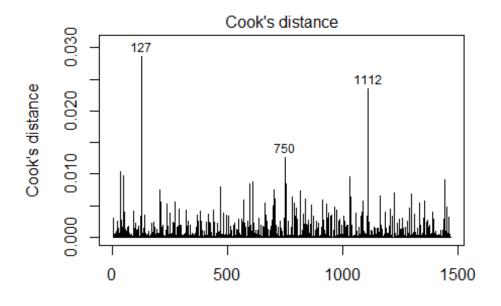
qqPlot(x, main="QQ Plot")
## Warning in rlm.default(x, y, weights, method = method, wt.method = wt.method,:
## 'rlm' failed to converge in 20 steps</pre>
```

QQ Plot



```
## [1] 608 1112

# Cook's D plot
# identify D values > 4/(n-k-1)
cutoff <- 4/((nrow(emp_churn)-length(x$coefficients)-2))
plot(x, which=4, cook.levels=cutoff)</pre>
```



Obs. number [Attrition ~ i..Age + BusinessTravel + DailyRate + DistanceFromHome

```
# Influence Plot
influencePlot(x, id.method="identify", main="Influence Plot", sub="Circle
size is proportial to Cook's Distance" )

## Warning in plot.window(...): "id.method" is not a graphical parameter

## Warning in plot.xy(xy, type, ...): "id.method" is not a graphical
parameter

## Warning in axis(side = side, at = at, labels = labels, ...): "id.method"
is not

## a graphical parameter

## Warning in axis(side = side, at = at, labels = labels, ...): "id.method"
is not

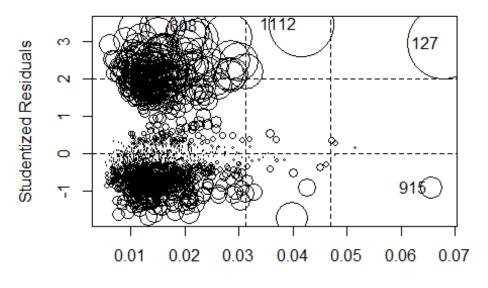
## a graphical parameter

## Warning in box(...): "id.method" is not a graphical parameter

## Warning in title(...): "id.method" is not a graphical parameter

## Warning in plot.xy(xy.coords(x, y), type = type, ...): "id.method" is not
a
## graphical parameter
```

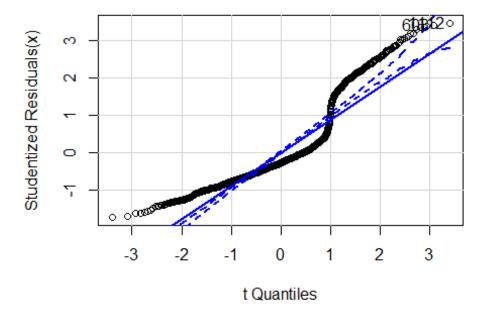
Influence Plot



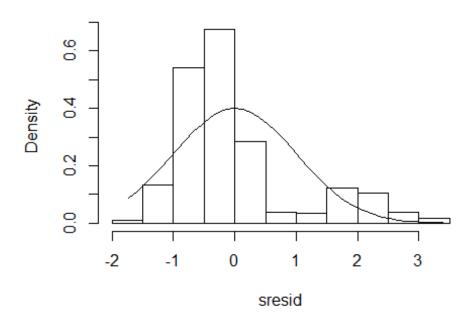
Hat-Values Circle size is proportial to Cook's Distance

```
##
           StudRes
                          Hat
                                    CookD
## 127
         2.9438840 0.06790998 0.028549672
## 608
         3.4219376 0.01638551 0.008801489
## 915
       -0.9268187 0.06569735 0.002745803
## 1112 3.4668834 0.04153019 0.023493555
# Normality of Residuals
# qq plot for studentized resid
qqPlot(x, main="QQ Plot")
## Warning in rlm.default(x, y, weights, method = method, wt.method =
wt.method, :
## 'rlm' failed to converge in 20 steps
```

QQ Plot



Distribution of Studentized Residuals



```
#Non-constant Error Variance
# Evaluate homoscedasticity
# non-constant error variance test
ncvTest(x)

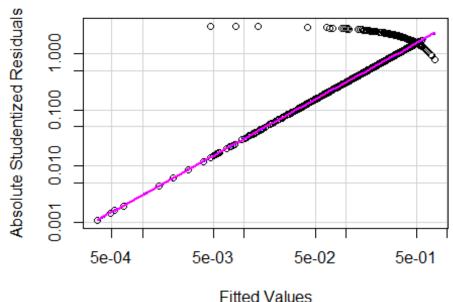
## Non-constant Variance Score Test
## Variance formula: ~ fitted.values
## Chisquare = 263.4021, Df = 1, p = < 2.22e-16

# plot studentized residuals vs. fitted values
spreadLevelPlot(x)

## Warning in spreadLevelPlot.lm(x):
## 245 negative fitted values removed</pre>
```

Spread-Level Plot for

Х



```
## Suggested power transformation:
                                    -0.0006310025
#Non-independence of Errors
# Test for Autocorrelated Errors
durbinWatsonTest(x)
    lag Autocorrelation D-W Statistic p-value
##
##
             0.03902977
                              1.91893
   Alternative hypothesis: rho != 0
summary(x)
##
## Call:
## lm(formula = Attrition ~ i..Age + BusinessTravel + DailyRate +
       DistanceFromHome + EnvironmentSatisfaction + MaritalStatus +
##
       HourlyRate + JobInvolvement + JobLevel + JobSatisfaction +
##
##
       MaritalStatus + MonthlyIncome + OverTime + PercentSalaryHike +
##
       StandardHours + TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
       YearsInCurrentRole + YearsSinceLastPromotion + YearsWithCurrManager,
##
##
       data = emp_churn)
##
## Residuals:
        Min
                       Median
                  1Q
                                    3Q
                                             Max
## -0.56216 -0.20840 -0.09171 0.05753
                                        1.11567
##
```

```
## Coefficients: (1 not defined because of singularities)
##
                                    Estimate Std. Error t value Pr(>|t|)
## (Intercept)
                                   8.341e-01 9.065e-02
                                                         9.201 < 2e-16 ***
## i..Age
                                  -3.162e-03 1.326e-03 -2.384 0.01726 *
## BusinessTravelTravel_Frequently 1.514e-01 3.360e-02 4.505 7.18e-06 ***
## BusinessTravelTravel Rarely
                                   6.512e-02 2.904e-02 2.243 0.02507 *
## DailyRate
                                  -2.791e-05 2.154e-05 -1.295
                                                                0.19538
## DistanceFromHome
                                   3.460e-03 1.068e-03 3.239 0.00123 **
                                  -4.029e-02 7.927e-03 -5.083 4.20e-07 ***
## EnvironmentSatisfaction
                                  -1.102e-01 2.014e-02 -5.474 5.17e-08 ***
## MaritalStatus1
## MaritalStatus2
                                  -1.349e-01 2.399e-02 -5.622 2.26e-08 ***
                                  -2.170e-04 4.271e-04 -0.508 0.61150
## HourlyRate
## JobInvolvement
                                  -6.229e-02 1.220e-02 -5.107 3.71e-07 ***
## JobLevel
                                  -2.387e-02 2.604e-02 -0.917 0.35937
## JobSatisfaction
                                  -4.033e-02 7.858e-03 -5.132 3.25e-07 ***
## MonthlyIncome
                                  -3.525e-07 6.016e-06 -0.059 0.95329
## OverTime1
                                   2.024e-01 1.924e-02 10.522 < 2e-16 ***
## PercentSalaryHike
                                  -1.674e-03 2.365e-03 -0.708 0.47918
## StandardHours
                                          NA
                                                     NA
                                                            NA
                                                                     NA
## TotalWorkingYears
                                  -1.479e-03 2.358e-03 -0.627
                                                                0.53049
## WorkLifeBalance
                                 -2.903e-02 1.227e-02 -2.365 0.01815 *
## YearsAtCompany
                                   2.603e-03 2.931e-03 0.888
                                                                0.37455
                                  -9.064e-03 3.914e-03 -2.316
## YearsInCurrentRole
                                                                0.02070 *
## YearsSinceLastPromotion
                                   1.187e-02 3.455e-03
                                                         3.435
                                                                0.00061 ***
## YearsWithCurrManager
                                  -1.092e-02 4.019e-03 -2.718 0.00666 **
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.33 on 1448 degrees of freedom
## Multiple R-squared: 0.207, Adjusted R-squared: 0.1955
                  18 on 21 and 1448 DF, p-value: < 2.2e-16
## F-statistic:
x1 <- x
x2 <-
lm(Attrition~i..Age+BusinessTravel+DailyRate+DistanceFromHome+EnvironmentSati
sfaction+MaritalStatus+HourlyRate+JobInvolvement+JobLevel+JobSatisfaction+Mar
italStatus+MonthlyIncome+OverTime+PercentSalaryHike+StandardHours+TotalWorkin
gYears+WorkLifeBalance+YearsAtCompany+YearsInCurrentRole+YearsSinceLastPromot
ion+YearsWithCurrManager, data=emp churn)
# compare models
anova(x1, x2)
## Analysis of Variance Table
## Model 1: Attrition ~ i..Age + BusinessTravel + DailyRate +
DistanceFromHome +
##
      EnvironmentSatisfaction + MaritalStatus + HourlyRate + JobInvolvement
##
      JobLevel + JobSatisfaction + MaritalStatus + MonthlyIncome +
      OverTime + PercentSalaryHike + StandardHours + TotalWorkingYears +
##
```

```
WorkLifeBalance + YearsAtCompany + YearsInCurrentRole +
YearsSinceLastPromotion +
       YearsWithCurrManager
## Model 2: Attrition ~ i..Age + BusinessTravel + DailyRate +
DistanceFromHome +
       EnvironmentSatisfaction + MaritalStatus + HourlyRate + JobInvolvement
+
##
       JobLevel + JobSatisfaction + MaritalStatus + MonthlyIncome +
       OverTime + PercentSalaryHike + StandardHours + TotalWorkingYears +
##
##
       WorkLifeBalance + YearsAtCompany + YearsInCurrentRole +
YearsSinceLastPromotion +
##
       YearsWithCurrManager
               RSS Df Sum of Sq F Pr(>F)
##
     Res.Df
## 1
       1448 157.64
## 2
       1448 157.64 0
                              0
step <- stepAIC(x, direction="both")</pre>
## Start: AIC=-3238.05
## Attrition ~ ".. Age + BusinessTravel + DailyRate + DistanceFromHome +
       EnvironmentSatisfaction + MaritalStatus + HourlyRate + JobInvolvement
+
##
       JobLevel + JobSatisfaction + MaritalStatus + MonthlyIncome +
       OverTime + PercentSalaryHike + StandardHours + TotalWorkingYears +
##
##
       WorkLifeBalance + YearsAtCompany + YearsInCurrentRole +
YearsSinceLastPromotion +
##
      YearsWithCurrManager
##
##
## Step: AIC=-3238.05
## Attrition ~ ï..Age + BusinessTravel + DailyRate + DistanceFromHome +
##
       EnvironmentSatisfaction + MaritalStatus + HourlyRate + JobInvolvement
##
       JobLevel + JobSatisfaction + MonthlyIncome + OverTime +
PercentSalaryHike +
       TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
YearsInCurrentRole +
       YearsSinceLastPromotion + YearsWithCurrManager
##
##
                             Df Sum of Sa
                                             RSS
                                                     AIC
## - MonthlyIncome
                              1
                                   0.0004 157.64 -3240.0
## - HourlyRate
                                   0.0281 157.67 -3239.8
                              1
## - TotalWorkingYears
                              1
                                   0.0429 157.69 -3239.7
## - PercentSalaryHike
                                   0.0545 157.70 -3239.5
                              1
## - YearsAtCompany
                              1
                                   0.0859 157.73 -3239.3
## - JobLevel
                              1
                                   0.0915 157.73 -3239.2
## - DailyRate
                                   0.1827 157.82 -3238.3
## <none>
                                          157.64 -3238.1
## - YearsInCurrentRole
                              1
                                   0.5840 158.23 -3234.6
## - WorkLifeBalance
                              1 0.6091 158.25 -3234.4
```

```
## - i..Age
                              1
                                   0.6187 158.26 -3234.3
## - YearsWithCurrManager
                              1
                                   0.8040 158.45 -3232.6
## - DistanceFromHome
                              1
                                   1.1421 158.78 -3229.4
## - YearsSinceLastPromotion 1
                                   1.2843 158.93 -3228.1
## - BusinessTravel
                              2
                                   2.5438 160.19 -3218.5
## - EnvironmentSatisfaction 1
                                   2.8130 160.46 -3214.1
## - JobInvolvement
                              1
                                  2.8392 160.48 -3213.8
## - JobSatisfaction
                              1
                                  2.8675 160.51 -3213.6
                              2
## - MaritalStatus
                                 4.4752 162.12 -3200.9
## - OverTime
                              1
                                  12.0529 169.69 -3131.7
##
## Step: AIC=-3240.05
## Attrition ~ ".. Age + BusinessTravel + DailyRate + DistanceFromHome +
##
       EnvironmentSatisfaction + MaritalStatus + HourlyRate + JobInvolvement
+
       JobLevel + JobSatisfaction + OverTime + PercentSalaryHike +
##
##
       TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
YearsInCurrentRole +
##
       YearsSinceLastPromotion + YearsWithCurrManager
##
                             Df Sum of Sq
##
                                             RSS
                                                     AIC
## - HourlyRate
                              1
                                   0.0283 157.67 -3241.8
## - TotalWorkingYears
                                   0.0452 157.69 -3241.6
                              1
## - PercentSalaryHike
                              1
                                   0.0548 157.70 -3241.5
## - YearsAtCompany
                              1
                                   0.0857 157.73 -3241.3
## - DailyRate
                              1
                                   0.1829 157.83 -3240.3
## <none>
                                          157.64 - 3240.0
                                   0.0004 157.64 -3238.1
## + MonthlyIncome
                              1
## - JobLevel
                              1
                                   0.4352 158.08 -3238.0
## - YearsInCurrentRole
                              1
                                   0.5836 158.23 -3236.6
## - WorkLifeBalance
                              1
                                   0.6089 158.25 -3236.4
## - i..Age
                              1
                                   0.6189 158.26 -3236.3
## - YearsWithCurrManager
                              1
                                   0.8061 158.45 -3234.6
## - DistanceFromHome
                              1
                                   1.1514 158.79 -3231.4
## - YearsSinceLastPromotion
                              1
                                   1.2843 158.93 -3230.1
                              2
## - BusinessTravel
                                   2.5460 160.19 -3220.5
## - EnvironmentSatisfaction 1 2.8130 160.46 -3216.0
## - JobInvolvement
                              1
                                   2.8389 160.48 -3215.8
## - JobSatisfaction
                              1
                                  2.8671 160.51 -3215.6
## - MaritalStatus
                              2
                                  4.4781 162.12 -3202.9
## - OverTime
                              1
                                  12.0536 169.70 -3133.7
##
## Step: AIC=-3241.78
## Attrition ~ ".. Age + BusinessTravel + DailyRate + DistanceFromHome +
       EnvironmentSatisfaction + MaritalStatus + JobInvolvement +
##
##
       JobLevel + JobSatisfaction + OverTime + PercentSalaryHike +
##
       TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
YearsInCurrentRole +
##
       YearsSinceLastPromotion + YearsWithCurrManager
##
```

```
##
                              Df Sum of Sa
                                              RSS
                                                       AIC
                               1
## - TotalWorkingYears
                                    0.0460 157.72 -3243.4
## - PercentSalaryHike
                               1
                                    0.0538 157.72 -3243.3
## - YearsAtCompany
                               1
                                    0.0846 157.76 -3243.0
## - DailyRate
                               1
                                    0.1863 157.86 -3242.0
## <none>
                                           157.67 -3241.8
## + HourlyRate
                                    0.0283 157.64 -3240.0
                               1
## - JobLevel
                               1
                                    0.4274 158.10 -3239.8
## + MonthlyIncome
                               1
                                    0.0006 157.67 -3239.8
## - YearsInCurrentRole
                               1
                                    0.5808 158.25 -3238.4
## - WorkLifeBalance
                               1
                                    0.6094 158.28 -3238.1
## - i..Age
                               1
                                    0.6268 158.30 -3238.0
                                    0.8037 158.47 -3236.3
## - YearsWithCurrManager
                               1
## - DistanceFromHome
                               1
                                    1.1413 158.81 -3233.2
## - YearsSinceLastPromotion
                               1
                                    1.2907 158.96 -3231.8
## - BusinessTravel
                               2
                                    2.5501 160.22 -3222.2
## - EnvironmentSatisfaction
                               1
                                    2.7920 160.46 -3218.0
## - JobSatisfaction
                               1
                                    2.8413 160.51 -3217.5
## - JobInvolvement
                               1
                                    2.8633 160.53 -3217.3
## - MaritalStatus
                               2
                                    4.4971 162.17 -3204.4
## - OverTime
                               1
                                   12.0607 169.73 -3135.4
##
## Step: AIC=-3243.36
## Attrition ~ ".. Age + BusinessTravel + DailyRate + DistanceFromHome +
##
       EnvironmentSatisfaction + MaritalStatus + JobInvolvement +
##
       JobLevel + JobSatisfaction + OverTime + PercentSalaryHike +
       WorkLifeBalance + YearsAtCompany + YearsInCurrentRole +
##
YearsSinceLastPromotion +
##
       YearsWithCurrManager
##
                              Df Sum of Sq
##
                                              RSS
                                                       AIC
## - PercentSalaryHike
                               1
                                    0.0547 157.77 -3244.8
## - YearsAtCompany
                               1
                                    0.0585 157.78 -3244.8
## - DailyRate
                               1
                                    0.1946 157.91 -3243.5
## <none>
                                           157.72 -3243.4
## + TotalWorkingYears
                               1
                                    0.0460 157.67 -3241.8
## + HourlyRate
                               1
                                    0.0291 157.69 -3241.6
## + MonthlyIncome
                               1
                                    0.0033 157.71 -3241.4
## - YearsInCurrentRole
                               1
                                    0.5794 158.30 -3240.0
## - WorkLifeBalance
                               1
                                    0.6024 158.32 -3239.8
## - YearsWithCurrManager
                               1
                                    0.8119 158.53 -3237.8
## - JobLevel
                               1
                                    0.9221 158.64 -3236.8
## - DistanceFromHome
                               1
                                    1.1406 158.86 -3234.8
## - ï..Age
                               1
                                    1.1866 158.90 -3234.3
## - YearsSinceLastPromotion
                               1
                                    1.2938 159.01 -3233.3
## - BusinessTravel
                               2
                                    2.5320 160.25 -3223.9
## - EnvironmentSatisfaction
                               1
                                    2.7810 160.50 -3219.7
## - JobSatisfaction
                               1
                                    2.8190 160.54 -3219.3
## - JobInvolvement
                               1
                                    2.8526 160.57 -3219.0
                               2
## - MaritalStatus
                                    4.4757 162.19 -3206.2
```

```
## - OverTime
                                   12.0455 169.76 -3137.2
##
## Step: AIC=-3244.85
## Attrition ~ ".. Age + BusinessTravel + DailyRate + DistanceFromHome +
       EnvironmentSatisfaction + MaritalStatus + JobInvolvement +
##
       JobLevel + JobSatisfaction + OverTime + WorkLifeBalance +
##
##
       YearsAtCompany + YearsInCurrentRole + YearsSinceLastPromotion +
##
       YearsWithCurrManager
##
##
                              Df Sum of Sa
                                              RSS
                                                      AIC
## - YearsAtCompany
                              1
                                    0.0633 157.84 -3246.3
                                    0.1990 157.97 -3245.0
## - DailyRate
                               1
## <none>
                                           157.77 -3244.8
## + PercentSalaryHike
                               1
                                    0.0547 157.72 -3243.4
## + TotalWorkingYears
                              1
                                    0.0468 157.72 -3243.3
## + HourlyRate
                              1
                                    0.0281 157.74 -3243.1
## + MonthlyIncome
                              1
                                    0.0039 157.77 -3242.9
## - YearsInCurrentRole
                              1
                                    0.5919 158.36 -3241.3
## - WorkLifeBalance
                               1
                                    0.6021 158.37 -3241.2
## - YearsWithCurrManager
                               1
                                    0.8179 158.59 -3239.2
                                    0.9108 158.68 -3238.4
## - JobLevel
                              1
## - DistanceFromHome
                              1
                                    1.1231 158.90 -3236.4
## - i..Age
                               1
                                    1.2024 158.97 -3235.7
## - YearsSinceLastPromotion
                              1
                                    1.2976 159.07 -3234.8
## - BusinessTravel
                               2
                                    2.5492 160.32 -3225.3
## - EnvironmentSatisfaction
                              1
                                    2.7590 160.53 -3221.4
## - JobSatisfaction
                              1
                                   2.8345 160.61 -3220.7
## - JobInvolvement
                              1
                                   2.8372 160.61 -3220.6
## - MaritalStatus
                              2
                                   4.4707 162.24 -3207.8
## - OverTime
                              1
                                   12.0495 169.82 -3138.7
##
## Step: AIC=-3246.26
## Attrition ~ ".. Age + BusinessTravel + DailyRate + DistanceFromHome +
       EnvironmentSatisfaction + MaritalStatus + JobInvolvement +
##
##
       JobLevel + JobSatisfaction + OverTime + WorkLifeBalance +
       YearsInCurrentRole + YearsSinceLastPromotion + YearsWithCurrManager
##
##
##
                              Df Sum of Sq
                                              RSS
                                                      AIC
                                    0.2091 158.04 -3246.3
## - DailyRate
                               1
## <none>
                                           157.84 -3246.3
## + YearsAtCompany
                               1
                                    0.0633 157.77 -3244.8
## + PercentSalaryHike
                               1
                                    0.0595 157.78 -3244.8
## + HourlyRate
                               1
                                    0.0269 157.81 -3244.5
## + TotalWorkingYears
                              1
                                    0.0197 157.81 -3244.4
                              1
## + MonthlyIncome
                                    0.0020 157.83 -3244.3
## - YearsInCurrentRole
                               1
                                    0.5304 158.37 -3243.3
## - WorkLifeBalance
                               1
                                    0.6129 158.45 -3242.6
## - YearsWithCurrManager
                              1
                                    0.7876 158.62 -3240.9
## - JobLevel
                              1
                                    0.8484 158.68 -3240.4
                              1
## - DistanceFromHome
                                    1.1179 158.95 -3237.9
```

```
## - i..Age
                                   1.1753 159.01 -3237.4
## - YearsSinceLastPromotion
                              1
                                   1.5859 159.42 -3233.6
## - BusinessTravel
                              2
                                   2.5637 160.40 -3226.6
## - EnvironmentSatisfaction 1
                                   2.7699 160.60 -3222.7
## - JobSatisfaction
                              1
                                  2.8179 160.65 -3222.2
                              1
## - JobInvolvement
                                   2.8918 160.73 -3221.6
## - MaritalStatus
                              2
                                  4.4694 162.30 -3209.2
## - OverTime
                              1
                                  12.1073 169.94 -3139.6
##
## Step: AIC=-3246.31
## Attrition ~ i..Age + BusinessTravel + DistanceFromHome +
EnvironmentSatisfaction +
       MaritalStatus + JobInvolvement + JobLevel + JobSatisfaction +
##
##
       OverTime + WorkLifeBalance + YearsInCurrentRole +
YearsSinceLastPromotion +
##
       YearsWithCurrManager
##
##
                             Df Sum of Sq
                                                     AIC
                                             RSS
## <none>
                                          158.04 - 3246.3
## + DailyRate
                              1
                                   0.2091 157.84 -3246.3
## + YearsAtCompany
                                   0.0734 157.97 -3245.0
                              1
## + PercentSalaryHike
                              1
                                   0.0645 157.98 -3244.9
## + HourlyRate
                              1
                                   0.0303 158.01 -3244.6
## + TotalWorkingYears
                              1
                                   0.0237 158.02 -3244.5
## + MonthlyIncome
                              1
                                   0.0027 158.04 -3244.3
## - YearsInCurrentRole
                              1
                                   0.5623 158.61 -3243.1
## - WorkLifeBalance
                              1
                                   0.5860 158.63 -3242.9
## - YearsWithCurrManager
                              1
                                   0.7565 158.80 -3241.3
## - JobLevel
                              1
                                   0.8547 158.90 -3240.4
## - DistanceFromHome
                              1
                                   1.1261 159.17 -3237.9
## - i..Age
                              1
                                   1.1773 159.22 -3237.4
## - YearsSinceLastPromotion
                             1
                                   1.6321 159.68 -3233.2
## - BusinessTravel
                              2
                                   2.5843 160.63 -3226.5
## - EnvironmentSatisfaction 1
                                2.8001 160.84 -3222.5
## - JobSatisfaction
                              1
                                   2.8672 160.91 -3221.9
## - JobInvolvement
                              1
                                  2.9659 161.01 -3221.0
## - MaritalStatus
                              2
                                  4.6344 162.68 -3207.8
## - OverTime
                                  12.0907 170.13 -3139.9
step$anova # display results
## Stepwise Model Path
## Analysis of Deviance Table
##
## Initial Model:
## Attrition ~ ï..Age + BusinessTravel + DailyRate + DistanceFromHome +
       EnvironmentSatisfaction + MaritalStatus + HourlyRate + JobInvolvement
##
##
       JobLevel + JobSatisfaction + MaritalStatus + MonthlyIncome +
       OverTime + PercentSalaryHike + StandardHours + TotalWorkingYears +
##
```

```
WorkLifeBalance + YearsAtCompany + YearsInCurrentRole +
YearsSinceLastPromotion +
##
       YearsWithCurrManager
##
## Final Model:
## Attrition ~ i..Age + BusinessTravel + DistanceFromHome +
EnvironmentSatisfaction +
       MaritalStatus + JobInvolvement + JobLevel + JobSatisfaction +
##
       OverTime + WorkLifeBalance + YearsInCurrentRole +
YearsSinceLastPromotion +
       YearsWithCurrManager
##
##
##
##
                    Step Df
                                Deviance Resid. Df Resid. Dev
                                                                    AIC
## 1
                                              1448
                                                     157.6424 - 3238.052
## 2
         - StandardHours 0 0.0000000000
                                              1448
                                                     157.6424 - 3238.052
## 3
         - MonthlyIncome 1 0.0003737197
                                              1449
                                                     157.6428 -3240.049
            - HourlyRate 1 0.0283097887
## 4
                                              1450
                                                     157.6711 -3241.785
## 5 - TotalWorkingYears 1 0.0459611747
                                              1451
                                                     157.7170 -3243.356
## 6 - PercentSalaryHike 1 0.0546769330
                                              1452
                                                     157.7717 -3244.847
## 7
        - YearsAtCompany 1 0.0632856468
                                              1453
                                                     157.8350 -3246.257
## 8
             - DailyRate 1 0.2090976293
                                              1454
                                                     158.0441 -3246.311
#install.packages("leaps",
lib="/Library/Frameworks/R.framework/Versions/3.5/Resources/Library")
library(leaps)
## Warning: package 'leaps' was built under R version 3.6.3
leaps<-
regsubsets(Attrition~i..Age+BusinessTravel+DailyRate+DistanceFromHome+Environ
mentSatisfaction+MaritalStatus+HourlyRate+JobInvolvement+JobLevel+JobSatisfac
tion+MaritalStatus+MonthlyIncome+OverTime+PercentSalaryHike+StandardHours+Tot
alWorkingYears+WorkLifeBalance+YearsAtCompany+YearsInCurrentRole+YearsSinceLa
stPromotion+YearsWithCurrManager, data=emp_churn,nbest=10)
## Warning in leaps.setup(x, y, wt = wt, nbest = nbest, nvmax = nvmax,
force.in =
## force.in, : 1 linear dependencies found
## Reordering variables and trying again:
# view results
summary(leaps)
## Subset selection object
## Call: regsubsets.formula(Attrition ~ I..Age + BusinessTravel + DailyRate +
       DistanceFromHome + EnvironmentSatisfaction + MaritalStatus +
##
##
       HourlyRate + JobInvolvement + JobLevel + JobSatisfaction +
##
       MaritalStatus + MonthlyIncome + OverTime + PercentSalaryHike +
##
       StandardHours + TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
```

```
##
       YearsInCurrentRole + YearsSinceLastPromotion + YearsWithCurrManager,
       data = emp_churn, nbest = 10)
##
## 22 Variables (and intercept)
                                     Forced in Forced out
##
## ï..Age
                                         FALSE
                                                    FALSE
## BusinessTravelTravel_Frequently
                                         FALSE
                                                    FALSE
## BusinessTravelTravel_Rarely
                                         FALSE
                                                    FALSE
## DailyRate
                                         FALSE
                                                    FALSE
## DistanceFromHome
                                         FALSE
                                                    FALSE
## EnvironmentSatisfaction
                                                    FALSE
                                         FALSE
## MaritalStatus1
                                         FALSE
                                                    FALSE
## MaritalStatus2
                                         FALSE
                                                    FALSE
                                         FALSE
## HourlyRate
                                                    FALSE
## JobInvolvement
                                         FALSE
                                                    FALSE
## JobLevel
                                         FALSE
                                                    FALSE
## JobSatisfaction
                                         FALSE
                                                    FALSE
## MonthlyIncome
                                         FALSE
                                                    FALSE
## OverTime1
                                         FALSE
                                                    FALSE
## PercentSalaryHike
                                         FALSE
                                                    FALSE
## TotalWorkingYears
                                        FALSE
                                                    FALSE
## WorkLifeBalance
                                         FALSE
                                                    FALSE
## YearsAtCompany
                                         FALSE
                                                    FALSE
## YearsInCurrentRole
                                         FALSE
                                                    FALSE
## YearsSinceLastPromotion
                                         FALSE
                                                    FALSE
## YearsWithCurrManager
                                         FALSE
                                                    FALSE
## StandardHours
                                         FALSE
                                                    FALSE
## 10 subsets of each size up to 9
## Selection Algorithm: exhaustive
             i..Age BusinessTravelTravel_Frequently
##
BusinessTravelTravel Rarely
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##
            DailyRate DistanceFromHome EnvironmentSatisfaction
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```

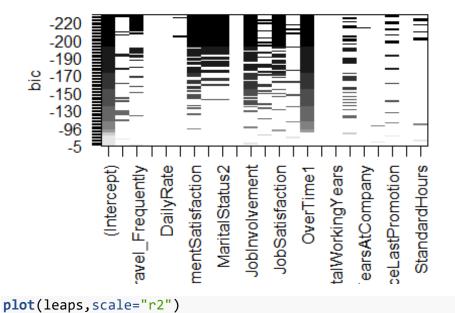
```
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                 TotalWorkingYears WorkLifeBalance YearsAtCompany
##
YearsInCurrentRole
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```

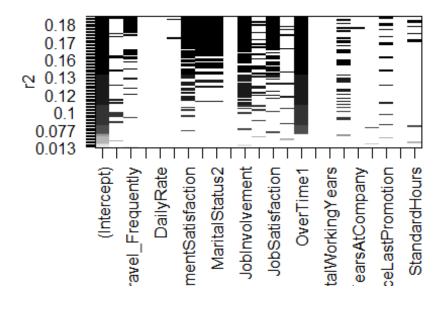
## 1	(4) ""	11 11	11 11	"*"
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## 1	(7) ""	" "	" "	" "
## 1	(8) ""	" "	"*"	" "
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## 2	(2) ""	п п	н н	11 11
## 2	(3) ""	11 11	н н	н н
## 2	(4) ""	11 11	11 11	11 11
## 2	(5) ""			"*"
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## 2			II II	II II
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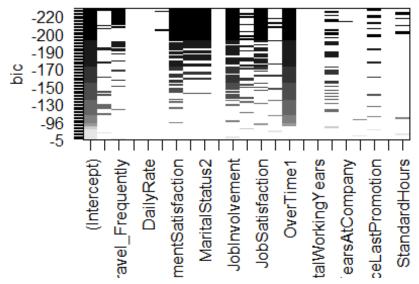
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# plot a table of models showing variables in each model.
# models are ordered by the selection statistic.
plot(leaps)
```







```
summary(leaps)
## Subset selection object
## Call: regsubsets.formula(Attrition ~ ï..Age + BusinessTravel + DailyRate +
##
       DistanceFromHome + EnvironmentSatisfaction + MaritalStatus +
##
       HourlyRate + JobInvolvement + JobLevel + JobSatisfaction +
##
       MaritalStatus + MonthlyIncome + OverTime + PercentSalaryHike +
##
       StandardHours + TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
##
       YearsInCurrentRole + YearsSinceLastPromotion + YearsWithCurrManager,
       data = emp_churn, nbest = 10)
## 22 Variables (and intercept)
##
                                    Forced in Forced out
## i..Age
                                        FALSE
                                                   FALSE
## BusinessTravelTravel Frequently
                                        FALSE
                                                   FALSE
## BusinessTravelTravel_Rarely
                                        FALSE
                                                   FALSE
## DailyRate
                                        FALSE
                                                   FALSE
## DistanceFromHome
                                        FALSE
                                                   FALSE
## EnvironmentSatisfaction
                                        FALSE
                                                   FALSE
## MaritalStatus1
                                        FALSE
                                                   FALSE
## MaritalStatus2
                                        FALSE
                                                   FALSE
## HourlyRate
                                        FALSE
                                                   FALSE
## JobInvolvement
                                        FALSE
                                                   FALSE
## JobLevel
                                                   FALSE
                                        FALSE
## JobSatisfaction
                                        FALSE
                                                   FALSE
```

```
## MonthlyIncome
                                          FALSE
                                                      FALSE
## OverTime1
                                                      FALSE
                                          FALSE
## PercentSalaryHike
                                          FALSE
                                                      FALSE
## TotalWorkingYears
                                          FALSE
                                                      FALSE
## WorkLifeBalance
                                          FALSE
                                                      FALSE
## YearsAtCompany
                                          FALSE
                                                      FALSE
## YearsInCurrentRole
                                          FALSE
                                                      FALSE
## YearsSinceLastPromotion
                                          FALSE
                                                      FALSE
## YearsWithCurrManager
                                          FALSE
                                                      FALSE
## StandardHours
                                          FALSE
                                                      FALSE
## 10 subsets of each size up to 9
## Selection Algorithm: exhaustive
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BusinessTravelTravel_Rarely
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regsubsets
## function (x, ...)
## {
##
       UseMethod("regsubsets", x)
## }
## <bytecode: 0x00000001eaf6d50>
## <environment: namespace:leaps>
summary(leaps)
## Subset selection object
## Call: regsubsets.formula(Attrition ~ I..Age + BusinessTravel + DailyRate +
##
       DistanceFromHome + EnvironmentSatisfaction + MaritalStatus +
       HourlyRate + JobInvolvement + JobLevel + JobSatisfaction +
##
       MaritalStatus + MonthlyIncome + OverTime + PercentSalaryHike +
##
##
       StandardHours + TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
##
       YearsInCurrentRole + YearsSinceLastPromotion + YearsWithCurrManager,
       data = emp churn, nbest = 10)
## 22 Variables (and intercept)
##
                                    Forced in Forced out
                                        FALSE
                                                    FALSE
## ï..Age
## BusinessTravelTravel Frequently
                                        FALSE
                                                    FALSE
## BusinessTravelTravel Rarely
                                        FALSE
                                                    FALSE
## DailyRate
                                        FALSE
                                                    FALSE
## DistanceFromHome
                                        FALSE
                                                    FALSE
## EnvironmentSatisfaction
                                        FALSE
                                                    FALSE
## MaritalStatus1
                                        FALSE
                                                    FALSE
## MaritalStatus2
                                        FALSE
                                                    FALSE
## HourlyRate
                                        FALSE
                                                    FALSE
## JobInvolvement
                                        FALSE
                                                    FALSE
## JobLevel
                                        FALSE
                                                    FALSE
## JobSatisfaction
                                        FALSE
                                                    FALSE
## MonthlyIncome
                                        FALSE
                                                    FALSE
## OverTime1
                                        FALSE
                                                    FALSE
## PercentSalaryHike
                                        FALSE
                                                    FALSE
## TotalWorkingYears
                                        FALSE
                                                    FALSE
## WorkLifeBalance
                                        FALSE
                                                    FALSE
```

```
## YearsAtCompany
                                           FALSE
                                                       FALSE
## YearsInCurrentRole
                                                       FALSE
                                           FALSE
## YearsSinceLastPromotion
                                           FALSE
                                                       FALSE
                                          FALSE
## YearsWithCurrManager
                                                       FALSE
                                           FALSE
                                                       FALSE
## StandardHours
## 10 subsets of each size up to 9
   Selection Algorithm: exhaustive
              i...Age BusinessTravelTravel_Frequently
##
BusinessTravelTravel_Rarely
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              DailyRate DistanceFromHome EnvironmentSatisfaction
##
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## 3 (4) ""	11 11	п п	11 11
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leaps
## Subset selection object
## Call: regsubsets.formula(Attrition ~ i..Age + BusinessTravel + DailyRate +
##
       DistanceFromHome + EnvironmentSatisfaction + MaritalStatus +
##
       HourlyRate + JobInvolvement + JobLevel + JobSatisfaction +
##
       MaritalStatus + MonthlyIncome + OverTime + PercentSalaryHike +
##
       StandardHours + TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
       YearsInCurrentRole + YearsSinceLastPromotion + YearsWithCurrManager,
##
##
       data = emp_churn, nbest = 10)
## 22 Variables (and intercept)
                                    Forced in Forced out
##
## i..Age
                                        FALSE
                                                    FALSE
## BusinessTravelTravel Frequently
                                        FALSE
                                                    FALSE
## BusinessTravelTravel_Rarely
                                        FALSE
                                                    FALSE
## DailyRate
                                        FALSE
                                                    FALSE
## DistanceFromHome
                                        FALSE
                                                    FALSE
## EnvironmentSatisfaction
                                                    FALSE
                                        FALSE
## MaritalStatus1
                                        FALSE
                                                    FALSE
## MaritalStatus2
                                        FALSE
                                                    FALSE
## HourlyRate
                                        FALSE
                                                    FALSE
## JobInvolvement
                                        FALSE
                                                    FALSE
## JobLevel
                                        FALSE
                                                    FALSE
## JobSatisfaction
                                        FALSE
                                                    FALSE
## MonthlyIncome
                                        FALSE
                                                    FALSE
## OverTime1
                                        FALSE
                                                    FALSE
## PercentSalaryHike
                                        FALSE
                                                    FALSE
## TotalWorkingYears
                                        FALSE
                                                    FALSE
## WorkLifeBalance
                                        FALSE
                                                    FALSE
## YearsAtCompany
                                        FALSE
                                                    FALSE
## YearsInCurrentRole
                                                    FALSE
                                        FALSE
## YearsSinceLastPromotion
                                        FALSE
                                                    FALSE
## YearsWithCurrManager
                                        FALSE
                                                    FALSE
## StandardHours
                                        FALSE
                                                    FALSE
## 10 subsets of each size up to 9
## Selection Algorithm: exhaustive
coef(leaps,1:10)
## [[1]]
## (Intercept)
                 OverTime1
     0.1043643
##
                 0.2009241
##
```

```
## [[2]]
##
       (Intercept) WorkLifeBalance
        0.25315437
                       -0.03329316
##
##
## [[3]]
## (Intercept)
                  JobLevel
## 0.27721332 -0.05619762
##
## [[4]]
##
               (Intercept) YearsSinceLastPromotion
               0.169470850
                                       -0.003769325
##
##
## [[5]]
##
     (Intercept) MonthlyIncome
##
    0.2424415341 -0.0000124893
##
## [[6]]
## (Intercept)
                      ï..Age
  0.397938009 -0.006410864
##
##
## [[7]]
     (Intercept) StandardHours
##
##
       0.1612245
                     0.0000000
##
## [[8]]
          (Intercept) YearsInCurrentRole
##
##
            0.2301630
                               -0.0163004
##
## [[9]]
      (Intercept) JobInvolvement
##
##
       0.34471872
                     -0.06721568
##
## [[10]]
##
                        (Intercept) BusinessTravelTravel Frequently
##
                         0.1408215
                                                           0.1082760
summary(x)
##
## Call:
## lm(formula = Attrition ~ i..Age + BusinessTravel + DailyRate +
       DistanceFromHome + EnvironmentSatisfaction + MaritalStatus +
##
##
       HourlyRate + JobInvolvement + JobLevel + JobSatisfaction +
##
       MaritalStatus + MonthlyIncome + OverTime + PercentSalaryHike +
       StandardHours + TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
##
       YearsInCurrentRole + YearsSinceLastPromotion + YearsWithCurrManager,
##
##
       data = emp_churn)
##
## Residuals:
        Min
##
                  1Q
                       Median
                                     3Q
                                             Max
```

```
## -0.56216 -0.20840 -0.09171 0.05753 1.11567
##
## Coefficients: (1 not defined because of singularities)
                                    Estimate Std. Error t value Pr(>|t|)
## (Intercept)
                                   8.341e-01 9.065e-02 9.201 < 2e-16 ***
                                  -3.162e-03 1.326e-03 -2.384 0.01726 *
## ï..Age
## BusinessTravelTravel Frequently 1.514e-01 3.360e-02 4.505 7.18e-06 ***
## BusinessTravelTravel Rarely
                                   6.512e-02 2.904e-02 2.243 0.02507 *
## DailyRate
                                  -2.791e-05 2.154e-05 -1.295 0.19538
## DistanceFromHome
                                   3.460e-03 1.068e-03 3.239 0.00123 **
## EnvironmentSatisfaction
                                  -4.029e-02 7.927e-03 -5.083 4.20e-07 ***
## MaritalStatus1
                                  -1.102e-01 2.014e-02 -5.474 5.17e-08 ***
## MaritalStatus2
                                 -1.349e-01 2.399e-02 -5.622 2.26e-08 ***
## HourlyRate
                                 -2.170e-04 4.271e-04 -0.508 0.61150
## JobInvolvement
                                 -6.229e-02 1.220e-02 -5.107 3.71e-07 ***
## JobLevel
                                 -2.387e-02 2.604e-02 -0.917 0.35937
## JobSatisfaction
                                 -4.033e-02 7.858e-03 -5.132 3.25e-07 ***
                                 -3.525e-07 6.016e-06 -0.059 0.95329
## MonthlyIncome
## OverTime1
                                 2.024e-01 1.924e-02 10.522 < 2e-16 ***
## PercentSalaryHike
                                 -1.674e-03 2.365e-03 -0.708 0.47918
                                                            NA
## StandardHours
                                         NA
                                                    NA
                                                                     NA
## TotalWorkingYears
                                -1.479e-03 2.358e-03 -0.627
                                                                0.53049
                                -2.903e-02 1.227e-02 -2.365 0.01815 *
## WorkLifeBalance
## YearsAtCompany
                                  2.603e-03 2.931e-03
                                                         0.888
                                                                0.37455
## YearsInCurrentRole
                                 -9.064e-03 3.914e-03 -2.316 0.02070 *
## YearsSinceLastPromotion
                                  1.187e-02 3.455e-03
                                                        3.435
                                                                0.00061 ***
                                 -1.092e-02 4.019e-03 -2.718 0.00666 **
## YearsWithCurrManager
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 0.33 on 1448 degrees of freedom
## Multiple R-squared: 0.207, Adjusted R-squared: 0.1955
## F-statistic:
                  18 on 21 and 1448 DF, p-value: < 2.2e-16
#Interpretation
#We have implemented a multiple linear regression model and have drawn
certain conclusions.
#By implementing the model, we can say that,
# 1.) We are 99.99% sure that age is a highly significant variable in
predicting attrition.
# 2.) We are 99.99% sure that frequent travel also contribute a lot in
predicitng attrition.
# 3.) Similarly Environment satisfaction, Marital status, Job Involvement,
Overtime and promotion also contribute to the prediction of attrition.
#Also, based on the estimate values, we can write the equation and prediction
```

the attrition value where 1 is yes and 0 is no.