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```
% random weights of simu shots
```

```
clear; close all;
cd ./simu_functions/
addpath(genpath(pwd))
cd ..
cd ..
addpath(genpath(pwd))
cd ./seismic
```

original data

Number of time samples

```
nt = 1024;
% Number of sources
ns = 178;
% Number of receivers
nr = 178;

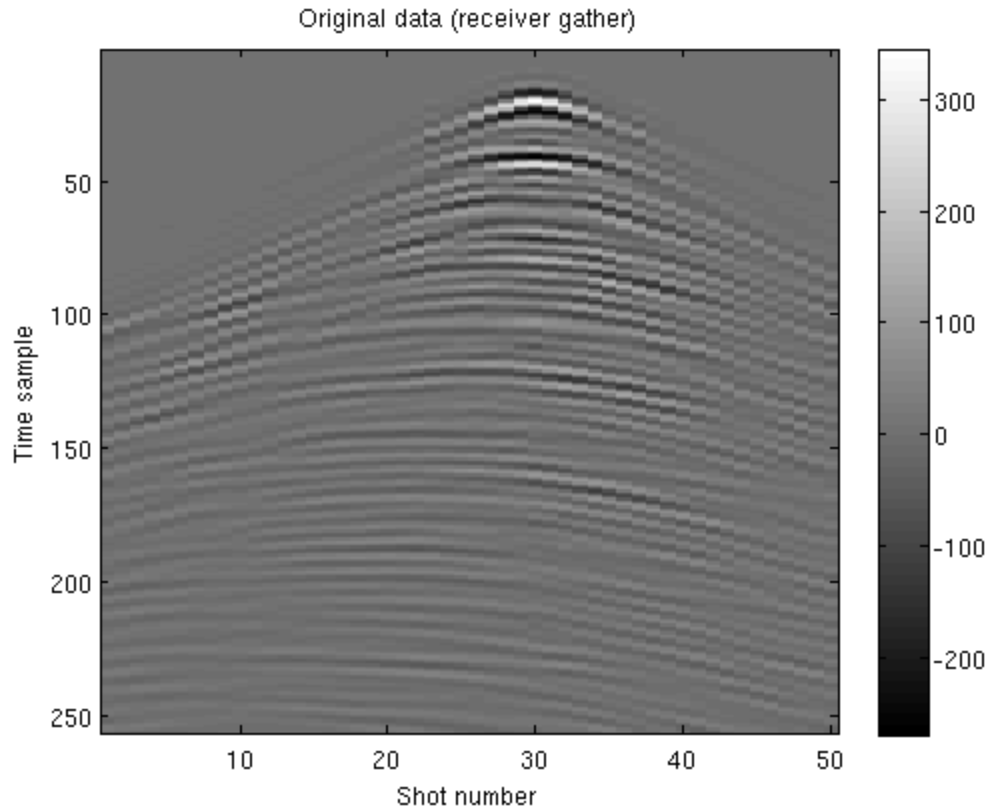
% Read data
D = ReadSuFast('GulfOfSuez178.su');
D = reshape(D,nt,nr,ns);

% Select small subset
D = D(1:256,30,1:50);

% Define new data sizes
[nt,nr,ns] = size(D);

% Vectorize D
D = D(:);

% Display
figure
imagesc(reshape(D,nt,ns)); colormap(gray); colorbar;
title('Original data (receiver gather)');
xlabel('Shot number'); ylabel('Time sample')
```



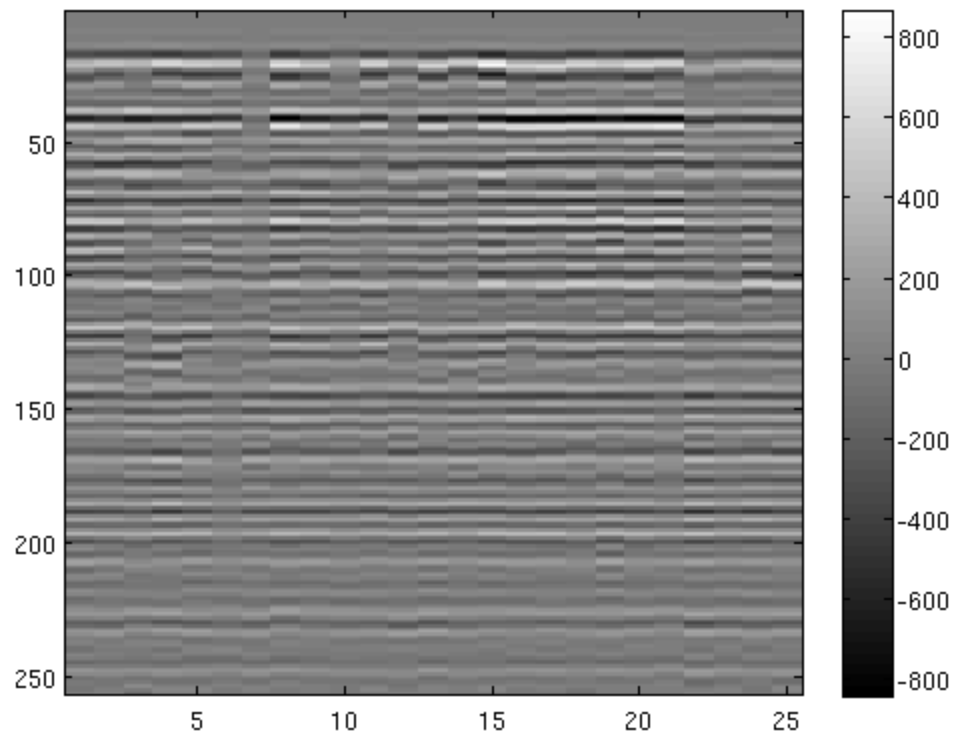
random weights of simu shots

```
p = .5;
nse = p*ns;
SS = rand(nse,ns);
Dt = opDirac(nt);
Dr = opDirac(nr);
RM = opKron(SS,Dr,Dt);

x_test = rand(size(RM,2),1);
y_test = rand(size(RM,1),1);
left = y_test'*(RM*x_test);
right = (RM'*y_test)'*x_test;
error = norm(left-right);
fprintf('In dottest error:%5.5e\n',error);

simD1 = RM*D;
figure;
imagesc(reshape(simD1,nt,nse)); colormap(gray); colorbar;

In dottest error:1.45519e-11
```

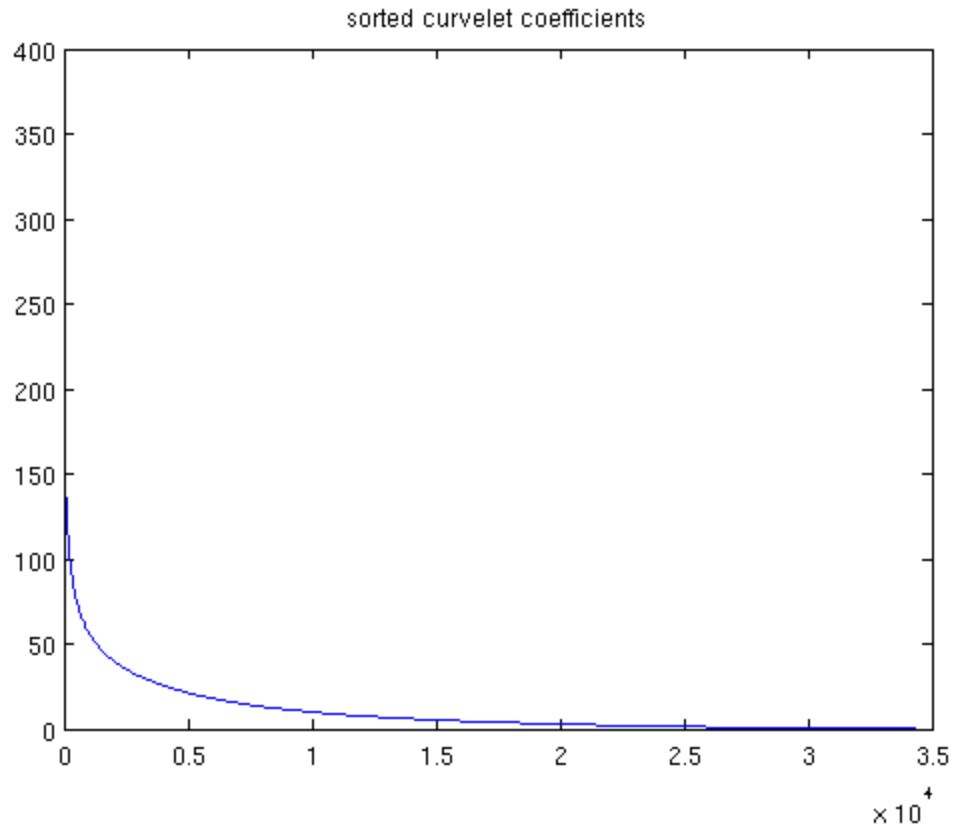


sparsifying transform

Use this to create a Curvelet SPOT operator:

```
C = opCurvelet(nt, ns);
```

```
% Transform the data into the Curvelet domain and plot the sorted coefficients  
C_D = C*D;  
sort_CD = sort(abs(C_D), 'descend');  
figure; plot(sort_CD); title('sorted curvelet coefficients')
```



reconstruct

```
A = RM*C';

options = spgSetParms('optTol', 1e-4, 'iterations', 1000);%, 'fid', fid);
xestspg = spgll(A,simD1,0,1e-3,[],options);
tau = norm(xestspg,1);
%tau = 2.5572179e+05;

options = spgSetParms('optTol', 1e-4, 'iterations', 200);%, 'fid', fid);
xinit = zeros(size(A,2),1);

which spgll
keyboard;
xestspg = spgll(A,simD1,tau,[],xinit,options);
%options.iterations = 100;
xestpqn = pqnll_2(A,simD1,tau,[],xinit,options);
fspg = C'*xestspg;
snrspg = SNR(D,fspg);
fpqn = C'*xestpqn;
snrpqn = SNR(D,fpqn);

figure;
subplot(1,2,1);imagesc(reshape(fspg,nt,ns)); colormap(gray);
```

```

title(strcat(['p = .5, SNR=' num2str(snrspg) 'dB']))
subplot(1,2,2);imagesc(reshape(fspg-D,nt,ns)); colormap(gray);
title('difference')

```

```

figure;
subplot(1,2,1);imagesc(reshape(fpqn,nt,ns)); colormap(gray);
title(strcat(['p = .5, SNR=' num2str(snrpqn) 'dB']))
subplot(1,2,2);imagesc(reshape(fpqn-D,nt,ns)); colormap(gray);
title('difference')

```

```

=====
SPGL1_SLIM v. 46 (Tue, 14 Jun 2011) based on v.1017
=====

```

No. rows	:	6400	No. columns	:	34341
Initial tau	:	0.00e+00	Two-norm of b	:	1.57e+04
Optimality tol	:	1.00e-04	Target objective	:	1.00e-03
Basis pursuit tol	:	1.00e-06	Maximum iterations	:	1000

Iter	Objective	Relative Gap	Rel Error	gNorm	stepG	nnzX
0	1.5700885e+04	0.0000000e+00	1.00e+00	9.837e+03	0.0	0
1	1.5571592e+04	2.6259688e+00	1.00e+00	1.256e+04	-0.3	1
2	1.5648387e+04	8.2877284e+00	1.00e+00	3.329e+04	-0.3	793
3	9.1046846e+03	6.0801062e+00	1.00e+00	1.157e+04	0.0	3038
4	8.1829697e+03	8.7038147e-01	1.00e+00	2.741e+03	0.0	2895
5	8.0740625e+03	8.5858293e-01	1.00e+00	2.748e+03	0.0	2763
6	7.9000614e+03	8.5152367e-01	1.00e+00	2.767e+03	0.0	2320
7	7.9454455e+03	1.2052007e+00	1.00e+00	3.101e+03	0.0	2055
8	7.8569157e+03	1.1907132e+00	1.00e+00	3.148e+03	0.0	2088
9	7.7830162e+03	7.4621512e-01	1.00e+00	2.618e+03	0.0	2164
10	7.7698296e+03	5.4416224e-01	1.00e+00	2.365e+03	0.0	1989
11	7.7474799e+03	5.6377481e-01	1.00e+00	2.394e+03	0.0	1856
12	7.6701373e+03	1.4752631e+00	1.00e+00	3.429e+03	0.0	1237
13	7.6893589e+03	4.5288802e-01	1.00e+00	2.267e+03	-0.3	1336
14	7.6190666e+03	7.3709057e-01	1.00e+00	2.581e+03	0.0	1594
15	7.6095212e+03	3.4272626e-01	1.00e+00	2.138e+03	0.0	1402
16	7.6041966e+03	3.6341574e-01	1.00e+00	2.162e+03	0.0	1315
17	7.5749761e+03	6.4104063e-01	1.00e+00	2.493e+03	0.0	1128
18	7.5675618e+03	4.0800011e-01	1.00e+00	2.204e+03	-0.3	1144
19	7.5632586e+03	9.0155275e-01	1.00e+00	2.783e+03	0.0	1115
20	7.5568867e+03	3.0933629e-01	1.00e+00	2.098e+03	0.0	1099
21	7.5539537e+03	3.0023064e-01	1.00e+00	2.091e+03	0.0	1093
22	7.5490937e+03	2.9794328e-01	1.00e+00	2.087e+03	0.0	1057
23	7.5166227e+03	1.4662076e+00	1.00e+00	3.417e+03	0.0	833
24	7.5164630e+03	3.0928824e-01	1.00e+00	2.087e+03	-0.3	853
25	5.2199141e+03	3.4766389e+00	1.00e+00	6.872e+02	0.0	13059
26	5.0277020e+03	2.4902088e+00	1.00e+00	6.699e+02	0.0	29287
27	4.9522114e+03	2.2414529e+00	1.00e+00	6.526e+02	0.0	19714
28	4.7705873e+03	1.9470226e+00	1.00e+00	7.019e+02	0.0	10287
29	4.9627510e+03	5.5320518e+00	1.00e+00	1.122e+03	0.0	4581
30	4.7828049e+03	2.4415899e+00	1.00e+00	8.190e+02	-0.3	14714
31	4.6124352e+03	2.0284538e+00	1.00e+00	5.452e+02	0.0	11242
32	4.5896530e+03	1.9286048e+00	1.00e+00	5.395e+02	0.0	9656

33	4.5116758e+03	1.5551033e+00	1.00e+00	5.586e+02	0.0	5816
34	4.5098796e+03	3.7291904e+00	1.00e+00	8.606e+02	-0.3	4185
35	4.5128292e+03	4.6850724e+00	1.00e+00	1.135e+03	0.0	5693
36	4.4496686e+03	2.1156118e+00	1.00e+00	6.033e+02	0.0	4710
37	4.4387893e+03	1.4495916e+00	1.00e+00	4.803e+02	0.0	4379
38	4.4307906e+03	1.4151500e+00	1.00e+00	4.772e+02	0.0	4013
39	4.3394822e+03	2.3268201e+00	1.00e+00	7.225e+02	0.0	2645
40	4.3352515e+03	2.0300433e+00	1.00e+00	6.381e+02	-0.3	2896
41	4.3119421e+03	2.3633470e+00	1.00e+00	6.787e+02	0.0	3351
42	4.3029757e+03	1.0390953e+00	1.00e+00	4.377e+02	0.0	3103
43	4.2989563e+03	1.0004874e+00	1.00e+00	4.249e+02	0.0	2916
44	4.2816107e+03	1.1001222e+00	1.00e+00	4.150e+02	0.0	2559
45	4.2997900e+03	7.3894980e+00	1.00e+00	1.542e+03	-0.3	2385
46	4.2929665e+03	5.7753949e+00	1.00e+00	1.248e+03	-0.3	2432
47	4.2546067e+03	9.9385054e-01	1.00e+00	4.048e+02	0.0	2669
48	4.2526496e+03	9.9485215e-01	1.00e+00	4.040e+02	0.0	2441
49	4.2416410e+03	9.9110027e-01	1.00e+00	3.993e+02	0.0	2292
50	4.2325823e+03	2.4663983e+00	1.00e+00	6.571e+02	-0.3	2293
51	4.2233295e+03	1.1338119e+00	1.00e+00	4.273e+02	-0.3	2428
52	4.2186158e+03	9.1694053e-01	1.00e+00	3.880e+02	0.0	2375
53	4.2160289e+03	9.1361048e-01	1.00e+00	3.870e+02	0.0	2289
54	4.2098053e+03	1.2551136e+00	1.00e+00	4.432e+02	0.0	2185
55	4.2068313e+03	1.4887183e+00	1.00e+00	4.833e+02	-0.3	2191
56	4.2041961e+03	1.6461078e+00	1.00e+00	5.086e+02	0.0	2160
57	4.2014990e+03	1.2904618e+00	1.00e+00	4.492e+02	0.0	2138
58	4.1992039e+03	8.8882540e-01	1.00e+00	3.805e+02	0.0	2118
59	4.1967285e+03	8.8097546e-01	1.00e+00	3.795e+02	0.0	2101
60	4.1929995e+03	1.8654519e+00	1.00e+00	5.442e+02	0.0	2039
61	4.1921151e+03	3.5820804e+00	1.00e+00	8.352e+02	-0.3	2018
62	4.1873930e+03	9.7821108e-01	1.00e+00	3.950e+02	0.0	2019
63	4.1856799e+03	8.5469362e-01	1.00e+00	3.747e+02	0.0	2006
64	4.1834669e+03	8.4960840e-01	1.00e+00	3.737e+02	0.0	1985
65	4.1521231e+03	5.6491145e+00	1.00e+00	1.163e+03	0.0	1662
66	4.1700064e+03	7.7624926e+00	1.00e+00	1.526e+03	-0.3	1710
67	4.1388967e+03	7.1547036e-01	1.00e+00	3.484e+02	0.0	2301
68	4.1373524e+03	7.1366341e-01	1.00e+00	3.480e+02	0.0	1938
69	4.1347267e+03	7.0606386e-01	1.00e+00	3.468e+02	0.0	1725
70	4.1259646e+03	7.0598330e-01	1.00e+00	3.476e+02	0.0	1609
71	4.1235643e+03	2.0779068e+00	1.00e+00	5.688e+02	-0.3	1616
72	4.1330645e+03	2.7355429e+00	1.00e+00	6.770e+02	0.0	1669
73	4.1189471e+03	1.1653243e+00	1.00e+00	4.204e+02	0.0	2016
74	4.1174531e+03	6.5622258e-01	1.00e+00	3.378e+02	0.0	1755
75	4.1165111e+03	6.5246417e-01	1.00e+00	3.374e+02	0.0	1652
76	4.0979818e+03	1.4453869e+00	1.00e+00	4.629e+02	0.0	1396
77	4.1006767e+03	1.7368004e+00	1.00e+00	5.162e+02	-0.3	1505
78	4.0897230e+03	1.4182105e+00	1.00e+00	4.584e+02	0.0	1808
79	4.0870361e+03	6.1543082e-01	1.00e+00	3.297e+02	0.0	1639
80	4.0863440e+03	6.0911389e-01	1.00e+00	3.289e+02	0.0	1521
81	4.0840711e+03	6.0620682e-01	1.00e+00	3.285e+02	0.0	1406
82	4.0821548e+03	1.5462963e+00	1.00e+00	4.793e+02	-0.3	1416
83	4.0802112e+03	5.4638325e-01	1.00e+00	3.188e+02	-0.3	1448
84	4.0794855e+03	5.4534041e-01	1.00e+00	3.186e+02	0.0	1407
85	4.0786420e+03	5.5111150e-01	1.00e+00	3.193e+02	0.0	1390
86	4.0769665e+03	2.1258546e+00	1.00e+00	5.704e+02	0.0	1354

87	4.0751209e+03	5.6035369e-01	1.00e+00	3.206e+02	-0.3	1369
88	4.0745360e+03	5.5436166e-01	1.00e+00	3.195e+02	0.0	1359
89	4.0736021e+03	5.4645316e-01	1.00e+00	3.180e+02	0.0	1349
90	4.0725741e+03	3.6580019e+00	1.00e+00	8.134e+02	0.0	1291
91	4.0678559e+03	4.9450401e-01	1.00e+00	3.112e+02	-0.3	1330
92	4.0657911e+03	5.0243788e-01	1.00e+00	3.110e+02	0.0	1346
93	4.0651357e+03	5.0303921e-01	1.00e+00	3.107e+02	0.0	1306
94	4.0633387e+03	4.9912280e-01	1.00e+00	3.098e+02	0.0	1279
95	4.0619832e+03	6.7274986e-01	1.00e+00	3.372e+02	-0.3	1285
96	4.0603540e+03	4.8602379e-01	1.00e+00	3.078e+02	-0.3	1300
97	4.0597196e+03	4.8702090e-01	1.00e+00	3.076e+02	0.0	1286
98	4.0591833e+03	4.8519434e-01	1.00e+00	3.074e+02	0.0	1281
99	4.0580383e+03	7.9238532e-01	1.00e+00	3.558e+02	0.0	1252
100	4.0594968e+03	2.9749447e+00	1.00e+00	7.009e+02	-0.3	1249
101	4.0571026e+03	1.4704421e+00	1.00e+00	4.624e+02	0.0	1257
102	4.0560354e+03	4.7570442e-01	1.00e+00	3.057e+02	0.0	1250
103	4.0557506e+03	4.7527270e-01	1.00e+00	3.055e+02	0.0	1245
104	4.0504829e+03	4.6001504e-01	1.00e+00	3.028e+02	0.0	1202
105	4.0538797e+03	3.9305554e+00	1.00e+00	8.484e+02	-0.3	1206
106	4.0465216e+03	4.7755259e-01	1.00e+00	3.068e+02	-0.3	1308
107	4.0445623e+03	4.4046212e-01	1.00e+00	2.996e+02	0.0	1376
108	4.0439045e+03	4.4070731e-01	1.00e+00	2.993e+02	0.0	1275
109	4.0429035e+03	4.6650569e-01	1.00e+00	3.029e+02	0.0	1214
110	4.0429660e+03	1.2793141e+00	1.00e+00	4.312e+02	-0.3	1183
111	3.9210369e+03	8.2806889e+00	1.00e+00	6.405e+02	-0.3	34249
112	3.7398745e+03	3.2619417e+00	1.00e+00	3.866e+02	0.0	34265
113	3.6080067e+03	3.1100218e+00	1.00e+00	2.667e+02	0.0	34275
114	3.4973297e+03	2.5627670e+00	1.00e+00	2.547e+02	0.0	34284
115	3.2190343e+03	5.6364919e+00	1.00e+00	3.428e+02	0.0	24373
116	3.1780216e+03	4.5128245e+00	1.00e+00	3.553e+02	-0.3	25413
117	3.1364656e+03	3.1574703e+00	1.00e+00	2.319e+02	0.0	22968
118	3.1015887e+03	2.4960096e+00	1.00e+00	2.229e+02	0.0	20728
119	3.0557508e+03	1.1657070e+01	1.00e+00	6.595e+02	0.0	16898
120	3.0458319e+03	2.0240188e+01	1.00e+00	1.145e+03	-0.3	15796
121	3.0071914e+03	1.2076699e+01	1.00e+00	6.781e+02	0.0	15012
122	2.9881127e+03	2.5381722e+00	1.00e+00	2.059e+02	0.0	14307
123	2.9751807e+03	2.5395370e+00	1.00e+00	2.045e+02	0.0	13563
124	2.8857938e+03	1.5565281e+01	1.00e+00	8.079e+02	0.0	9642
125	2.9214074e+03	3.6594640e+01	1.00e+00	1.811e+03	-0.3	9816
126	2.8605141e+03	6.9851105e+00	1.00e+00	3.992e+02	0.0	10115
127	2.8535030e+03	2.3585496e+00	1.00e+00	1.880e+02	0.0	9599
128	2.8450971e+03	2.3549364e+00	1.00e+00	1.870e+02	0.0	9186
129	2.7817848e+03	3.9661756e+01	1.00e+00	1.851e+03	0.0	4435
130	2.7122868e+03	1.8215035e+01	1.00e+00	8.654e+02	-0.3	5768
131	2.6779544e+03	5.1294895e+00	1.00e+00	3.071e+02	0.0	7209
132	2.6710546e+03	1.5863491e+00	1.00e+00	1.603e+02	0.0	6919
133	2.6627951e+03	2.3059967e+00	1.00e+00	1.800e+02	0.0	6355
134	2.6566247e+03	1.1850985e+01	1.00e+00	5.476e+02	0.0	5421
135	2.6502673e+03	2.0003267e+00	1.00e+00	1.621e+02	-0.3	5477
136	2.6483635e+03	1.6337790e+00	1.00e+00	1.479e+02	0.0	5347
137	2.6448602e+03	1.6171671e+00	1.00e+00	1.474e+02	0.0	5047
138	2.6377386e+03	2.3316929e+01	1.00e+00	9.726e+02	-0.3	4211
139	2.6261273e+03	6.0086208e+00	1.00e+00	3.083e+02	-0.3	4347
140	2.6204215e+03	1.7403931e+00	1.00e+00	1.442e+02	0.0	4615

141	2.6190112e+03	1.6944169e+00	1.00e+00	1.437e+02	0.0	4308
142	2.6120571e+03	5.3831737e+00	1.00e+00	2.918e+02	0.0	4003
143	2.6117731e+03	5.9100762e+00	1.00e+00	3.064e+02	-0.3	4086
144	2.6085202e+03	3.9575896e+00	1.00e+00	2.333e+02	0.0	4069
145	2.6074820e+03	1.5358504e+00	1.00e+00	1.410e+02	0.0	4006
146	2.6062717e+03	1.5401840e+00	1.00e+00	1.408e+02	0.0	3971
147	2.5943806e+03	2.0731506e+01	1.00e+00	8.510e+02	0.0	3501
148	2.5847446e+03	3.6941153e+00	1.00e+00	2.190e+02	-0.3	3574
149	2.5804903e+03	1.4690445e+00	1.00e+00	1.345e+02	0.0	3984
150	2.5791995e+03	1.4525526e+00	1.00e+00	1.344e+02	0.0	3626
151	2.5720945e+03	1.1110116e+01	1.00e+00	4.958e+02	0.0	3363
152	2.5695675e+03	3.8725517e+00	1.00e+00	2.259e+02	-0.3	3528
153	2.5670609e+03	1.4035142e+00	1.00e+00	1.358e+02	0.0	3649
154	2.5664838e+03	1.3249751e+00	1.00e+00	1.323e+02	0.0	3528
155	2.5636245e+03	1.3791036e+00	1.00e+00	1.316e+02	0.0	3383
156	2.5524934e+03	5.7424473e+00	1.00e+00	2.954e+02	0.0	3170
157	2.5587474e+03	1.8041610e+01	1.00e+00	7.365e+02	-0.3	3505
158	2.5500964e+03	8.8491408e+00	1.00e+00	4.013e+02	0.0	3711
159	2.5476896e+03	1.2908730e+00	1.00e+00	1.286e+02	0.0	3495
160	2.5472617e+03	1.2881291e+00	1.00e+00	1.285e+02	0.0	3381
161	2.5420810e+03	3.8488601e+00	1.00e+00	2.196e+02	0.0	3114
162	2.5449633e+03	1.2486509e+01	1.00e+00	5.303e+02	-0.3	3171
163	2.5438784e+03	1.4619508e+01	1.00e+00	6.075e+02	0.0	3277
164	2.5390494e+03	1.2728562e+00	1.00e+00	1.273e+02	0.0	3222
165	2.5386713e+03	1.2700791e+00	1.00e+00	1.272e+02	0.0	3174
166	2.5373368e+03	1.2671244e+00	1.00e+00	1.270e+02	0.0	3101
167	2.5305816e+03	2.0211848e+01	1.00e+00	8.026e+02	-0.3	2794
168	2.5378191e+03	2.5565516e+01	1.00e+00	9.997e+02	-0.3	2876
169	2.5177568e+03	1.1375056e+00	1.00e+00	1.228e+02	0.0	4261
170	2.5171294e+03	1.1403322e+00	1.00e+00	1.228e+02	0.0	3389
171	2.5145697e+03	2.0415629e+00	1.00e+00	1.526e+02	0.0	2858
172	2.5168301e+03	9.7158539e+00	1.00e+00	4.228e+02	-0.3	2805
173	2.5128800e+03	4.2281318e+00	1.00e+00	2.305e+02	-0.3	2985
174	2.5119128e+03	1.1544564e+00	1.00e+00	1.221e+02	0.0	2861
175	2.5115324e+03	1.1562918e+00	1.00e+00	1.221e+02	0.0	2808
176	2.5092551e+03	2.7355627e+00	1.00e+00	1.769e+02	0.0	2728
177	2.5113896e+03	8.6374445e+00	1.00e+00	3.833e+02	-0.3	2782
178	2.5095728e+03	8.8303237e+00	1.00e+00	3.909e+02	0.0	2856
179	2.5074694e+03	1.1404462e+00	1.00e+00	1.213e+02	0.0	2789
180	2.5072409e+03	1.1400948e+00	1.00e+00	1.212e+02	0.0	2760
181	2.5056199e+03	1.3635429e+00	1.00e+00	1.289e+02	0.0	2712
182	2.5067366e+03	9.1295996e+00	1.00e+00	3.996e+02	-0.3	2718
183	2.5037544e+03	1.1017304e+00	1.00e+00	1.203e+02	-0.3	2796
184	2.5030063e+03	1.1124287e+00	1.00e+00	1.203e+02	0.0	2766
185	2.5007834e+03	4.4456913e+00	1.00e+00	2.352e+02	0.0	2672
186	2.5015004e+03	5.1282686e+00	1.00e+00	2.587e+02	-0.3	2725
187	2.4997915e+03	3.2495030e+00	1.00e+00	1.940e+02	0.0	2784
188	2.4993854e+03	1.1105708e+00	1.00e+00	1.197e+02	0.0	2718
189	2.4991317e+03	1.1081084e+00	1.00e+00	1.196e+02	0.0	2689
190	2.4922400e+03	7.8370569e+00	1.00e+00	3.521e+02	0.0	2539
191	2.4946380e+03	1.1670890e+01	1.00e+00	4.866e+02	-0.3	2602
192	2.4898509e+03	1.2578275e+00	1.00e+00	1.245e+02	0.0	2843
193	2.4894811e+03	1.0507829e+00	1.00e+00	1.174e+02	0.0	2666
194	2.4888120e+03	1.0538711e+00	1.00e+00	1.173e+02	0.0	2582

195	2.4858962e+03	5.9869766e+00	1.00e+00	2.864e+02	0.0	2498
196	2.4878969e+03	9.0623399e+00	1.00e+00	3.916e+02	-0.3	2541
197	2.4848959e+03	2.9400235e+00	1.00e+00	1.818e+02	0.0	2709
198	2.4845707e+03	1.0336632e+00	1.00e+00	1.163e+02	0.0	2591
199	2.4843528e+03	1.0315962e+00	1.00e+00	1.163e+02	0.0	2541
200	2.4787218e+03	1.0525855e+01	1.00e+00	4.398e+02	0.0	2389
201	2.4805516e+03	1.2325853e+01	1.00e+00	5.049e+02	-0.3	2510
202	2.4749972e+03	9.6400375e-01	1.00e+00	1.137e+02	0.0	2939
203	2.4745337e+03	9.6060130e-01	1.00e+00	1.137e+02	0.0	2665
204	2.4736109e+03	9.6702006e-01	1.00e+00	1.137e+02	0.0	2480
205	2.4723613e+03	4.3085663e+00	1.00e+00	2.270e+02	0.0	2403
206	2.4720991e+03	1.5576107e+00	1.00e+00	1.336e+02	-0.3	2434
207	2.4715728e+03	2.0476625e+00	1.00e+00	1.503e+02	0.0	2449
208	2.4713735e+03	9.6186714e-01	1.00e+00	1.134e+02	0.0	2422
209	2.4711408e+03	9.6002460e-01	1.00e+00	1.133e+02	0.0	2404
210	2.4666125e+03	1.5665843e+01	1.00e+00	6.096e+02	0.0	2261
211	2.4681908e+03	1.4333803e+01	1.00e+00	5.687e+02	-0.3	2377
212	2.4602387e+03	8.6269674e-01	1.00e+00	1.100e+02	0.0	3228
213	2.4598012e+03	8.6370817e-01	1.00e+00	1.100e+02	0.0	2727
214	2.4581300e+03	3.2694599e+00	1.00e+00	1.898e+02	0.0	2360
215	2.4578403e+03	8.8983701e-01	1.00e+00	1.100e+02	-0.3	2404
216	2.4576166e+03	8.8812030e-01	1.00e+00	1.099e+02	0.0	2385
217	2.4573531e+03	8.8565010e-01	1.00e+00	1.099e+02	0.0	2339
218	2.4564733e+03	2.8606934e+00	1.00e+00	1.764e+02	0.0	2281
219	2.4566338e+03	1.6667397e+00	1.00e+00	1.363e+02	-0.3	2317
220	2.4559811e+03	2.2208474e+00	1.00e+00	1.549e+02	0.0	2330
221	2.4558259e+03	8.7095772e-01	1.00e+00	1.097e+02	0.0	2310
222	2.4556489e+03	8.7054427e-01	1.00e+00	1.096e+02	0.0	2293
223	2.4524601e+03	1.0388056e+01	1.00e+00	4.267e+02	-0.3	2198
224	2.4531753e+03	8.8491683e+00	1.00e+00	3.771e+02	-0.3	2265
225	2.4497466e+03	8.6159129e-01	1.00e+00	1.086e+02	0.0	2610
226	2.4494524e+03	8.5912059e-01	1.00e+00	1.086e+02	0.0	2396
227	2.4486292e+03	8.5721269e-01	1.00e+00	1.085e+02	0.0	2256
228	2.4486829e+03	9.3067863e+00	1.00e+00	3.904e+02	0.0	2193
229	2.4308236e+03	7.2601269e+01	1.00e+00	1.988e+03	-0.3	28177
230	2.2284155e+03	3.9515445e+01	1.00e+00	1.021e+03	-0.3	30127
231	2.1591837e+03	2.4618275e+00	1.00e+00	1.039e+02	0.0	26355
232	2.1487999e+03	2.0636788e+00	1.00e+00	9.647e+01	0.0	23793
233	2.0682012e+03	1.2672952e+01	1.00e+00	3.255e+02	0.0	8415
234	2.1217282e+03	4.2821241e+01	1.00e+00	9.494e+02	-0.3	9540
235	2.0612515e+03	1.4605124e+01	1.00e+00	3.519e+02	0.0	12425
236	2.0530146e+03	1.6779917e+00	1.00e+00	8.782e+01	0.0	10057
237	2.0510198e+03	1.6497087e+00	1.00e+00	8.751e+01	0.0	9289
238	2.0309765e+03	6.2946224e+00	1.00e+00	1.756e+02	0.0	6230
239	2.0463872e+03	2.6013773e+01	1.00e+00	5.724e+02	-0.3	6488
240	2.0426528e+03	2.7875463e+01	1.00e+00	6.062e+02	0.0	6807
241	2.0256691e+03	2.5797554e+00	1.00e+00	1.049e+02	0.0	6775
242	2.0247608e+03	1.4763504e+00	1.00e+00	8.345e+01	0.0	6423
243	2.0216565e+03	1.4617972e+00	1.00e+00	8.274e+01	0.0	5859
244	2.0204117e+03	1.4171170e+01	1.00e+00	3.283e+02	-0.3	4982
245	2.0156802e+03	2.0430641e+00	1.00e+00	9.517e+01	-0.3	5267
246	2.0136622e+03	1.5060788e+00	1.00e+00	8.388e+01	0.0	5233
247	2.0123916e+03	1.3663206e+00	1.00e+00	8.108e+01	0.0	4999
248	2.0099625e+03	2.5515135e+00	1.00e+00	1.036e+02	0.0	4664

249	2.0092570e+03	4.6407595e+00	1.00e+00	1.437e+02	-0.3	4706
250	2.0086687e+03	3.8016206e+00	1.00e+00	1.275e+02	0.0	4617
251	2.0080681e+03	3.8758492e+00	1.00e+00	1.290e+02	0.0	4586
252	2.0076225e+03	1.3276436e+00	1.00e+00	8.025e+01	0.0	4526
253	2.0071860e+03	1.3540608e+00	1.00e+00	8.078e+01	0.0	4488
254	2.0061200e+03	2.1843532e+00	1.00e+00	9.659e+01	0.0	4363
255	2.0067848e+03	1.8561183e+01	1.00e+00	4.097e+02	-0.3	4283
256	2.0046609e+03	2.4274814e+00	1.00e+00	1.013e+02	-0.3	4314
257	2.0043421e+03	1.2913844e+00	1.00e+00	7.965e+01	0.0	4277
258	2.0039848e+03	1.2889327e+00	1.00e+00	7.959e+01	0.0	4235
259	1.9937380e+03	4.8706642e+00	1.00e+00	1.516e+02	0.0	3550
260	1.9974454e+03	1.8572082e+01	1.00e+00	4.049e+02	-0.3	3726
261	1.9953618e+03	1.8081260e+01	1.00e+00	3.980e+02	0.0	3960
262	1.9922444e+03	1.2083429e+00	1.00e+00	7.826e+01	0.0	3835
263	1.9920169e+03	1.2010978e+00	1.00e+00	7.822e+01	0.0	3760
264	1.9916129e+03	1.1934230e+00	1.00e+00	7.817e+01	0.0	3639
265	1.9900312e+03	6.5534550e+00	1.00e+00	1.779e+02	0.0	3419
266	1.9915136e+03	1.4897830e+01	1.00e+00	3.368e+02	-0.3	3517
267	1.9886215e+03	2.6087462e+00	1.00e+00	1.041e+02	0.0	3537
268	1.9882238e+03	1.1897929e+00	1.00e+00	7.769e+01	0.0	3494
269	1.9880597e+03	1.1855765e+00	1.00e+00	7.766e+01	0.0	3439
270	1.9861482e+03	6.2913307e+00	1.00e+00	1.742e+02	0.0	3280
271	1.9878303e+03	1.1924948e+01	1.00e+00	2.788e+02	-0.3	3336
272	1.9856993e+03	5.9123402e+00	1.00e+00	1.665e+02	0.0	3440
273	1.9852502e+03	1.1432228e+00	1.00e+00	7.717e+01	0.0	3366
274	1.9851354e+03	1.1417901e+00	1.00e+00	7.715e+01	0.0	3322
275	1.9836699e+03	1.7162371e+00	1.00e+00	8.762e+01	0.0	3208
276	1.9841126e+03	9.7378867e+00	1.00e+00	2.376e+02	-0.3	3248
277	1.9837077e+03	5.1963778e+00	1.00e+00	1.525e+02	-0.3	3309
278	1.9826619e+03	2.4017788e+00	1.00e+00	1.006e+02	0.0	3354
279	1.9825410e+03	1.1284605e+00	1.00e+00	7.685e+01	0.0	3271
280	1.9823384e+03	1.1270988e+00	1.00e+00	7.681e+01	0.0	3226
281	1.9819603e+03	2.3471987e+01	1.00e+00	4.930e+02	0.0	3028
282	1.9822838e+03	1.9790543e+01	1.00e+00	4.256e+02	-0.3	3188
283	1.9777413e+03	1.5332972e+00	1.00e+00	8.432e+01	0.0	3559
284	1.9775230e+03	1.0906464e+00	1.00e+00	7.612e+01	0.0	3243
285	1.9769118e+03	1.4740911e+00	1.00e+00	8.316e+01	0.0	3090
286	1.9766309e+03	3.2749909e+00	1.00e+00	1.164e+02	-0.3	3034
287	1.9764699e+03	7.6188927e+00	1.00e+00	1.972e+02	-0.3	3058
288	1.9760062e+03	1.3010740e+00	1.00e+00	7.997e+01	0.0	3045
289	1.9758920e+03	1.0885470e+00	1.00e+00	7.606e+01	0.0	3033
290	1.9757687e+03	1.0877922e+00	1.00e+00	7.604e+01	0.0	3019
291	1.9685150e+03	4.0563968e+00	1.00e+00	1.309e+02	0.0	2812
292	1.9692837e+03	6.5013285e+00	1.00e+00	1.757e+02	-0.3	2936
293	1.9681706e+03	5.2874207e+00	1.00e+00	1.525e+02	0.0	3011
294	1.9674167e+03	1.0338861e+00	1.00e+00	7.475e+01	0.0	2998
295	1.9672175e+03	1.0356873e+00	1.00e+00	7.475e+01	0.0	2937
296	1.9672768e+03	8.4401878e+00	1.00e+00	2.114e+02	0.0	2855
297	1.8898196e+03	6.9193078e+01	1.00e+00	9.865e+02	0.0	34276
298	1.8654843e+03	7.2580203e+01	1.00e+00	1.105e+03	-0.3	34274
299	1.7091494e+03	1.1699420e+01	1.00e+00	1.667e+02	0.0	34283
300	1.6817458e+03	2.9365757e+00	1.00e+00	6.934e+01	0.0	33999
301	1.6434306e+03	2.7076488e+00	1.00e+00	6.532e+01	0.0	24862
302	1.7074768e+03	7.1081028e+01	1.00e+00	8.819e+02	0.0	7722

303	1.5863285e+03	3.3106370e+01	1.00e+00	3.849e+02	-0.3	10960
304	1.5558918e+03	6.6215432e+00	1.00e+00	1.023e+02	0.0	14200
305	1.5514904e+03	2.2601439e+00	1.00e+00	6.011e+01	0.0	12655
306	1.5433123e+03	4.3824441e+00	1.00e+00	7.815e+01	0.0	10365
307	1.5442983e+03	2.9906423e+01	1.00e+00	3.251e+02	0.0	8078
308	1.5343511e+03	4.0447481e+00	1.00e+00	7.403e+01	-0.3	8718
309	1.5327235e+03	1.8207447e+00	1.00e+00	5.296e+01	0.0	8466
310	1.5308172e+03	1.9539862e+00	1.00e+00	5.421e+01	0.0	7899
311	1.5268578e+03	7.6246447e+00	1.00e+00	1.066e+02	0.0	7034
312	1.5284336e+03	2.0135834e+01	1.00e+00	2.245e+02	-0.3	7146
313	1.5257836e+03	1.3543997e+01	1.00e+00	1.635e+02	0.0	7174
314	1.5241720e+03	2.1187865e+00	1.00e+00	5.520e+01	0.0	7027
315	1.5238274e+03	1.8027682e+00	1.00e+00	5.229e+01	0.0	6937
316	1.5204929e+03	3.1779471e+00	1.00e+00	6.493e+01	0.0	6409
317	1.5230163e+03	3.5099838e+01	1.00e+00	3.665e+02	-0.3	6413
318	1.5173777e+03	7.7098384e+00	1.00e+00	1.076e+02	-0.3	6875
319	1.5164292e+03	2.3202362e+00	1.00e+00	5.760e+01	0.0	6752
320	1.5158412e+03	1.9733423e+00	1.00e+00	5.412e+01	0.0	6540
321	1.5138835e+03	7.6258844e+00	1.00e+00	1.058e+02	0.0	6077
322	1.5133781e+03	6.1977606e+00	1.00e+00	9.246e+01	-0.3	6137
323	1.5129694e+03	7.7290379e+00	1.00e+00	1.070e+02	0.0	6045
324	1.5126023e+03	3.4513904e+00	1.00e+00	6.720e+01	0.0	5988
325	1.5122915e+03	3.3311205e+00	1.00e+00	6.624e+01	0.0	5943
326	1.5118151e+03	4.4106881e+00	1.00e+00	7.607e+01	0.0	5859
327	1.5117410e+03	1.8676043e+01	1.00e+00	2.084e+02	0.0	5708
328	1.4536475e+03	5.4255923e+01	1.00e+00	4.428e+02	0.0	34163
329	1.4238170e+03	9.0977402e+01	1.00e+00	7.275e+02	-0.3	34238
330	1.3803038e+03	8.0897888e+01	1.00e+00	5.845e+02	0.0	34258
331	1.3502938e+03	2.1484565e+01	1.00e+00	1.751e+02	0.0	31398
332	1.3430411e+03	5.0412542e+00	1.00e+00	5.983e+01	0.0	28830
333	1.3317569e+03	5.7453327e+00	1.00e+00	6.435e+01	0.0	23947
334	1.3225293e+03	1.3971402e+02	1.00e+00	9.321e+02	-0.3	11418
335	1.3091752e+03	1.0122865e+02	1.00e+00	6.723e+02	-0.3	12414
336	1.2921412e+03	4.5587199e+00	1.00e+00	5.468e+01	0.0	12286
337	1.2914004e+03	2.5168953e+00	1.00e+00	4.203e+01	0.0	11718
338	1.2845757e+03	7.0552818e+00	1.00e+00	6.931e+01	0.0	9389
339	1.2879280e+03	4.2001097e+01	1.00e+00	2.858e+02	-0.3	9523
340	1.2833782e+03	3.0251522e+01	1.00e+00	2.121e+02	-0.3	10233
341	1.2808286e+03	5.4530173e+00	1.00e+00	5.993e+01	0.0	9754
342	1.2802878e+03	2.3262307e+00	1.00e+00	4.091e+01	0.0	9417
343	1.2785995e+03	2.3549604e+00	1.00e+00	4.077e+01	0.0	8713
344	1.2762294e+03	3.3706333e+01	1.00e+00	2.323e+02	0.0	6950
345	1.2738380e+03	2.5191025e+01	1.00e+00	1.792e+02	-0.3	7692
346	1.2703147e+03	7.4543135e+00	1.00e+00	7.212e+01	0.0	7905
347	1.2698774e+03	3.1379145e+00	1.00e+00	4.614e+01	0.0	7495
348	1.2691933e+03	2.5086232e+00	1.00e+00	4.208e+01	0.0	7166
349	1.2669926e+03	2.2737279e+01	1.00e+00	1.617e+02	0.0	6507
350	1.2669338e+03	2.7040654e+01	1.00e+00	1.876e+02	-0.3	6631
351	1.2452466e+03	6.9359780e+00	1.00e+00	5.939e+01	0.0	33813
352	1.1588386e+03	4.4138850e+01	1.00e+00	2.305e+02	0.0	34238
353	1.1775423e+03	1.8012797e+02	1.00e+00	8.913e+02	-0.3	34208
354	1.1433802e+03	5.1450758e+01	1.00e+00	2.554e+02	0.0	31231
355	1.1371182e+03	5.2074311e+00	1.00e+00	4.391e+01	0.0	28519
356	1.1318059e+03	4.8658153e+00	1.00e+00	4.211e+01	0.0	24866

357	1.1296200e+03	1.1450538e+02	1.00e+00	5.427e+02	0.0	9186
358	1.1052102e+03	3.4528935e+01	1.00e+00	1.704e+02	-0.3	11115
359	1.1013238e+03	8.9417429e+00	1.00e+00	6.067e+01	0.0	12174
360	1.1002292e+03	3.1540158e+00	1.00e+00	3.568e+01	0.0	11271
361	1.0981558e+03	1.2727794e+01	1.00e+00	7.488e+01	0.0	9973
362	1.0985853e+03	4.4363150e+01	1.00e+00	2.083e+02	-0.3	9108
363	1.0994869e+03	7.0257402e+01	1.00e+00	3.186e+02	0.0	9127
364	1.0956920e+03	5.9488566e+00	1.00e+00	4.626e+01	0.0	8956
365	1.0954359e+03	2.5684717e+00	1.00e+00	3.214e+01	0.0	8835
366	1.0945265e+03	2.5821624e+00	1.00e+00	3.207e+01	0.0	8547
367	1.0919574e+03	6.9639604e+01	1.00e+00	3.149e+02	0.0	6254
368	1.0810352e+03	1.2287968e+01	1.00e+00	7.371e+01	-0.3	7708
369	1.0786840e+03	6.7282158e+00	1.00e+00	5.037e+01	0.0	8555
370	1.0774898e+03	3.6984416e+00	1.00e+00	3.758e+01	0.0	7831
371	1.0761075e+03	1.4788340e+01	1.00e+00	8.187e+01	0.0	7090
372	1.0764157e+03	3.2316962e+01	1.00e+00	1.526e+02	-0.3	6804
373	1.0755258e+03	2.3407563e+01	1.00e+00	1.169e+02	0.0	6789
374	1.0750332e+03	2.2680237e+00	1.00e+00	3.128e+01	0.0	6704
375	1.0749092e+03	2.2672380e+00	1.00e+00	3.127e+01	0.0	6644
376	1.0735697e+03	3.2216957e+00	1.00e+00	3.466e+01	0.0	6344
377	1.0737141e+03	2.3036780e+01	1.00e+00	1.152e+02	-0.3	6401
378	1.0726933e+03	3.5270971e+00	1.00e+00	3.615e+01	-0.3	6591
379	1.0724205e+03	2.8851300e+00	1.00e+00	3.365e+01	0.0	6493
380	1.0721358e+03	2.2621375e+00	1.00e+00	3.105e+01	0.0	6380
381	1.0715089e+03	1.0494071e+01	1.00e+00	6.407e+01	0.0	6231
382	1.0714179e+03	1.3354960e+01	1.00e+00	7.517e+01	-0.3	6272
383	1.0711430e+03	9.6776993e+00	1.00e+00	6.076e+01	0.0	6249
384	1.0709914e+03	2.2778500e+00	1.00e+00	3.099e+01	0.0	6227
385	1.0708625e+03	2.2690474e+00	1.00e+00	3.098e+01	0.0	6204
386	1.0695461e+03	1.8843784e+01	1.00e+00	9.686e+01	0.0	6036
387	1.0698753e+03	3.0754593e+01	1.00e+00	1.451e+02	-0.3	6074
388	1.0690806e+03	1.1686824e+01	1.00e+00	6.834e+01	0.0	6077
389	1.0689108e+03	2.2648735e+00	1.00e+00	3.087e+01	0.0	6053
390	1.0688107e+03	2.2647339e+00	1.00e+00	3.087e+01	0.0	6033
391	1.0658863e+03	9.1122670e+01	1.00e+00	3.845e+02	-0.3	5546
392	1.0642307e+03	7.2014214e+01	1.00e+00	3.064e+02	-0.3	5843
393	1.0594328e+03	6.4604520e+00	1.00e+00	4.748e+01	0.0	6432
394	1.0592946e+03	3.2354174e+00	1.00e+00	3.479e+01	0.0	5984
395	1.0588513e+03	3.7454326e+00	1.00e+00	3.654e+01	0.0	5707
396	1.0588006e+03	1.6884141e+01	1.00e+00	8.777e+01	-0.3	5615
397	1.0133000e+03	6.0880003e+01	1.00e+00	2.112e+02	0.0	34125
398	1.0331541e+03	1.5483338e+02	1.00e+00	5.621e+02	-0.3	34227
399	9.7258913e+02	1.1894904e+02	1.00e+00	3.654e+02	0.0	34259
400	9.3200395e+02	1.1796050e+01	1.00e+00	4.920e+01	0.0	34238
401	9.2017556e+02	5.2140107e+00	1.00e+00	2.941e+01	0.0	34271
402	8.6577823e+02	4.2440815e+01	1.00e+00	1.201e+02	0.0	18940
403	8.9019237e+02	1.3054061e+02	1.00e+00	3.392e+02	-0.3	20483
404	8.5900116e+02	2.9020091e+01	1.00e+00	8.445e+01	0.0	22803
405	8.5614629e+02	3.9729300e+00	1.00e+00	2.377e+01	0.0	20032
406	8.5473564e+02	3.9840625e+00	1.00e+00	2.376e+01	0.0	18926
407	8.3646956e+02	4.3195244e+01	1.00e+00	1.107e+02	0.0	11232
408	8.5129310e+02	1.2537633e+02	1.00e+00	3.065e+02	-0.3	12934
409	8.3507099e+02	5.6722916e+01	1.00e+00	1.407e+02	0.0	14178
410	8.3179331e+02	3.7860985e+00	1.00e+00	2.271e+01	0.0	12960

411	8.3136964e+02	3.4865132e+00	1.00e+00	2.206e+01	0.0	12192
412	8.2783513e+02	5.2414610e+01	1.00e+00	1.294e+02	0.0	9854
413	8.2856811e+02	7.8463573e+01	1.00e+00	1.864e+02	-0.3	10953
414	8.2549733e+02	3.0748843e+01	1.00e+00	8.161e+01	0.0	10866
415	8.2500396e+02	3.4433657e+00	1.00e+00	2.180e+01	0.0	10346
416	8.2477383e+02	3.4379314e+00	1.00e+00	2.180e+01	0.0	10061
417	8.2092334e+02	3.6131017e+01	1.00e+00	9.282e+01	0.0	8674
418	8.2478508e+02	1.1111453e+02	1.00e+00	2.569e+02	-0.3	9200
419	8.1981320e+02	2.9864955e+01	1.00e+00	7.861e+01	0.0	9301
420	8.1925724e+02	3.3706175e+00	1.00e+00	2.167e+01	0.0	9010
421	8.1911145e+02	3.3637286e+00	1.00e+00	2.166e+01	0.0	8872
422	8.1748977e+02	7.6763406e+01	1.00e+00	1.796e+02	0.0	7916
423	8.1553220e+02	1.7039754e+01	1.00e+00	5.081e+01	-0.3	8552
424	8.1508579e+02	6.0623731e+00	1.00e+00	2.749e+01	0.0	8475
425	8.1488633e+02	3.2179123e+00	1.00e+00	2.139e+01	0.0	8274
426	8.1428616e+02	1.2779870e+01	1.00e+00	4.167e+01	0.0	7985
427	8.1410308e+02	1.1572497e+01	1.00e+00	3.913e+01	-0.3	8018
428	8.1394917e+02	2.3679337e+01	1.00e+00	6.487e+01	0.0	7907
429	8.1377618e+02	9.6543373e+00	1.00e+00	3.503e+01	0.0	7869
430	8.1363384e+02	7.1986118e+00	1.00e+00	2.984e+01	0.0	7830
431	8.1350630e+02	3.2437971e+00	1.00e+00	2.143e+01	0.0	7789
432	8.1304803e+02	1.4521115e+01	1.00e+00	4.534e+01	0.0	7684
433	8.1300365e+02	3.0699311e+01	1.00e+00	7.957e+01	-0.3	7691
434	8.1302556e+02	4.7686145e+01	1.00e+00	1.157e+02	0.0	7697
435	8.0178254e+02	1.2803493e+01	1.00e+00	3.800e+01	0.0	33493
436	7.5209918e+02	7.2454573e+01	1.00e+00	1.398e+02	0.0	34174
437	7.6561175e+02	3.4508258e+02	1.00e+00	6.352e+02	-0.3	34135
438	7.4160658e+02	9.8444529e+01	1.00e+00	1.793e+02	0.0	33015
439	7.3795084e+02	1.0472500e+01	1.00e+00	2.901e+01	0.0	30349
440	7.3517155e+02	7.0708297e+00	1.00e+00	2.323e+01	0.0	27032
441	7.2677665e+02	1.5345348e+02	1.00e+00	2.645e+02	0.0	12015
442	7.2293523e+02	1.1260328e+02	1.00e+00	1.935e+02	-0.3	13531
443	7.1998342e+02	1.3151763e+01	1.00e+00	3.296e+01	0.0	13523
444	7.1963383e+02	3.8402529e+00	1.00e+00	1.798e+01	0.0	12875
445	7.1860100e+02	5.8725306e+00	1.00e+00	2.080e+01	0.0	11743
446	7.1773532e+02	6.1720593e+01	1.00e+00	1.108e+02	-0.3	10287
447	7.1657755e+02	1.6026843e+01	1.00e+00	3.737e+01	-0.3	10792
448	7.1620661e+02	6.7058942e+00	1.00e+00	2.250e+01	0.0	10577
449	7.1595291e+02	3.7909097e+00	1.00e+00	1.774e+01	0.0	10295
450	7.1476493e+02	2.2898365e+01	1.00e+00	4.763e+01	0.0	9540
451	7.1474954e+02	4.6139224e+01	1.00e+00	8.458e+01	-0.3	9570
452	6.9999565e+02	6.5415724e+01	1.00e+00	1.051e+02	0.0	33786
453	6.8323679e+02	4.2108627e+02	1.00e+00	5.996e+02	0.0	34215
454	7.0346145e+02	5.9683329e+02	1.00e+00	8.828e+02	-0.3	31613
455	6.4375495e+02	2.4770427e+01	1.00e+00	3.999e+01	0.0	31710
456	6.4219589e+02	5.8726929e+00	1.00e+00	1.635e+01	0.0	29907
457	6.3458231e+02	6.0833731e+00	1.00e+00	1.649e+01	0.0	21999
458	6.3314800e+02	2.5345688e+01	1.00e+00	3.969e+01	-0.3	21997
459	6.4021100e+02	8.3093067e+01	1.00e+00	1.101e+02	-0.3	19911
460	6.3043424e+02	3.6426940e+01	1.00e+00	5.221e+01	0.0	21331
461	6.2822072e+02	5.6789897e+00	1.00e+00	1.569e+01	0.0	19947
462	6.2760256e+02	5.6595922e+00	1.00e+00	1.565e+01	0.0	18757
463	6.2241315e+02	5.1621904e+01	1.00e+00	7.190e+01	0.0	11007
464	6.2080868e+02	5.7947356e+01	1.00e+00	7.466e+01	-0.3	13308

465	6.1804354e+02	2.5484874e+01	1.00e+00	3.905e+01	0.0	13560
466	6.1752574e+02	5.7512421e+00	1.00e+00	1.612e+01	0.0	12335
467	6.1727645e+02	5.1126149e+00	1.00e+00	1.534e+01	0.0	11859
468	6.1602919e+02	4.5660167e+01	1.00e+00	5.922e+01	0.0	10227
469	6.1741847e+02	8.3712199e+01	1.00e+00	1.055e+02	-0.3	11251
470	6.1449172e+02	2.1278570e+01	1.00e+00	3.292e+01	0.0	10874
471	6.1421886e+02	4.8909292e+00	1.00e+00	1.468e+01	0.0	10547
472	6.1405240e+02	4.9109490e+00	1.00e+00	1.474e+01	0.0	10341
473	6.1318512e+02	1.0470180e+02	1.00e+00	1.292e+02	0.0	9153
474	6.1015945e+02	3.5209641e+01	1.00e+00	4.896e+01	-0.3	10274
475	6.0934903e+02	9.9878669e+00	1.00e+00	2.110e+01	0.0	10324
476	6.0915693e+02	7.4412310e+00	1.00e+00	1.816e+01	0.0	9988
477	6.0841485e+02	1.0079532e+01	1.00e+00	2.025e+01	0.0	9432
478	6.0832469e+02	3.2630955e+01	1.00e+00	4.613e+01	-0.3	9222
479	6.0790166e+02	2.2570149e+01	1.00e+00	3.458e+01	-0.3	9539
480	6.0761717e+02	7.1342540e+00	1.00e+00	1.754e+01	0.0	9304
481	6.0750821e+02	4.6918829e+00	1.00e+00	1.481e+01	0.0	9196
482	6.0719305e+02	4.2228523e+00	1.00e+00	1.414e+01	0.0	9042
483	6.0456572e+02	8.8415388e+01	1.00e+00	1.068e+02	0.0	8465
484	6.0666923e+02	1.3488593e+02	1.00e+00	1.571e+02	-0.3	8879
485	6.0273539e+02	1.6199971e+01	1.00e+00	2.731e+01	0.0	9692
486	6.0261026e+02	5.8279121e+00	1.00e+00	1.603e+01	0.0	8926
487	6.0246133e+02	5.1747000e+00	1.00e+00	1.528e+01	0.0	8669
488	6.0206453e+02	9.4580630e+01	1.00e+00	1.110e+02	0.0	8250
489	6.0251243e+02	1.0068598e+02	1.00e+00	1.188e+02	-0.3	8822
490	5.9987881e+02	1.1311509e+01	1.00e+00	2.164e+01	0.0	8906
491	5.9978157e+02	5.1350951e+00	1.00e+00	1.506e+01	0.0	8636
492	5.9953179e+02	5.0404898e+00	1.00e+00	1.506e+01	0.0	8414
493	5.9887259e+02	4.7965493e+01	1.00e+00	6.105e+01	0.0	8159
494	5.9848597e+02	2.6344614e+01	1.00e+00	3.785e+01	-0.3	8391
495	5.9813765e+02	7.6100574e+00	1.00e+00	1.784e+01	0.0	8319
496	5.9806727e+02	4.2474985e+00	1.00e+00	1.424e+01	0.0	8250
497	5.9773627e+02	7.4887139e+00	1.00e+00	1.766e+01	0.0	8145
498	5.9755176e+02	2.9568132e+01	1.00e+00	4.116e+01	-0.3	8162
499	5.9771227e+02	5.9171332e+01	1.00e+00	7.278e+01	-0.3	8180
500	5.9727214e+02	1.9631090e+01	1.00e+00	3.055e+01	0.0	8180
501	5.9717460e+02	4.3049758e+00	1.00e+00	1.428e+01	0.0	8135
502	5.9710982e+02	4.3059469e+00	1.00e+00	1.428e+01	0.0	8103
503	5.9381110e+02	4.8977727e+01	1.00e+00	6.132e+01	0.0	7805
504	5.9422282e+02	9.3057546e+01	1.00e+00	1.077e+02	-0.3	7942
505	5.9349004e+02	3.2857566e+01	1.00e+00	4.430e+01	0.0	7972
506	5.9337888e+02	4.3232498e+00	1.00e+00	1.432e+01	0.0	7905
507	5.9332328e+02	4.3317273e+00	1.00e+00	1.432e+01	0.0	7863
508	5.9235842e+02	8.8864992e+01	1.00e+00	1.026e+02	-0.3	7682
509	5.9155615e+02	2.2754126e+01	1.00e+00	3.345e+01	-0.3	7865
510	5.9136460e+02	7.2362860e+00	1.00e+00	1.726e+01	0.0	7854
511	5.9128662e+02	5.4306053e+00	1.00e+00	1.540e+01	0.0	7817
512	5.9091428e+02	5.0771871e+01	1.00e+00	6.278e+01	0.0	7679
513	5.9098255e+02	5.8121157e+01	1.00e+00	7.036e+01	-0.3	7897
514	5.9044839e+02	1.1821045e+01	1.00e+00	2.213e+01	0.0	7853
515	5.9038976e+02	4.3275238e+00	1.00e+00	1.433e+01	0.0	7790
516	5.9028619e+02	4.3654095e+00	1.00e+00	1.435e+01	0.0	7726
517	5.8904715e+02	5.6549553e+01	1.00e+00	6.810e+01	0.0	7564
518	5.8917799e+02	7.0761367e+01	1.00e+00	8.298e+01	-0.3	7841

519	5.8850367e+02	1.5245154e+01	1.00e+00	2.546e+01	0.0	7836
520	5.8843216e+02	4.5108902e+00	1.00e+00	1.441e+01	0.0	7734
521	5.8833687e+02	4.4679666e+00	1.00e+00	1.439e+01	0.0	7646
522	5.8749368e+02	2.5141422e+01	1.00e+00	3.581e+01	0.0	7534
523	5.8780503e+02	6.5676642e+01	1.00e+00	7.747e+01	-0.3	7762
524	5.8742520e+02	3.9007892e+01	1.00e+00	4.993e+01	0.0	7759
525	5.8713554e+02	4.4397343e+00	1.00e+00	1.438e+01	0.0	7707
526	5.8709399e+02	4.4433551e+00	1.00e+00	1.438e+01	0.0	7649
527	5.8675685e+02	7.1980973e+00	1.00e+00	1.720e+01	0.0	7529
528	5.8667238e+02	6.9871290e+01	1.00e+00	8.152e+01	-0.3	7538
529	5.8620894e+02	1.2873938e+01	1.00e+00	2.304e+01	-0.3	7722
530	5.8609600e+02	6.4418903e+00	1.00e+00	1.644e+01	0.0	7652
531	5.8602730e+02	4.4349092e+00	1.00e+00	1.437e+01	0.0	7587
532	5.8562839e+02	1.0487366e+01	1.00e+00	2.050e+01	0.0	7481
533	5.8563998e+02	5.7817935e+01	1.00e+00	6.906e+01	-0.3	7505
534	5.6667249e+02	3.5779923e+02	1.00e+00	3.362e+02	0.0	34110
535	5.4533256e+02	6.1673018e+01	1.00e+00	6.159e+01	-0.3	34089
536	5.3984435e+02	7.9119280e+00	1.00e+00	1.451e+01	0.0	34129
537	5.2442296e+02	2.1398842e+01	1.00e+00	2.496e+01	0.0	27704
538	5.2361441e+02	6.2026593e+01	1.00e+00	5.650e+01	-0.3	27726
539	5.2261454e+02	1.2015162e+02	1.00e+00	1.030e+02	0.0	24485
540	5.2045475e+02	7.6888581e+01	1.00e+00	6.745e+01	0.0	23191
541	5.1901583e+02	1.3324331e+01	1.00e+00	1.793e+01	0.0	22206
542	5.1832206e+02	8.3265721e+00	1.00e+00	1.394e+01	0.0	21354
543	5.1479349e+02	4.9321324e+01	1.00e+00	4.557e+01	0.0	16691
544	5.1660887e+02	1.5201394e+02	1.00e+00	1.244e+02	-0.3	16747
545	5.1397400e+02	5.3228036e+01	1.00e+00	4.834e+01	0.0	16461
546	5.1346637e+02	5.7403467e+00	1.00e+00	1.183e+01	0.0	16137
547	5.1317303e+02	5.7276059e+00	1.00e+00	1.182e+01	0.0	15729
548	5.1100017e+02	9.2719006e+01	1.00e+00	8.069e+01	0.0	9523
549	5.1020454e+02	1.4032148e+02	1.00e+00	1.121e+02	-0.3	11697
550	5.0685118e+02	5.4094344e+01	1.00e+00	4.860e+01	0.0	13743
551	5.0637482e+02	6.3719617e+00	1.00e+00	1.275e+01	0.0	11624
552	5.0622381e+02	7.3999191e+00	1.00e+00	1.347e+01	0.0	10961
553	5.0625302e+02	7.0355616e+01	1.00e+00	5.826e+01	0.0	9412
554	5.0530941e+02	3.1069781e+01	1.00e+00	3.029e+01	-0.3	10770
555	5.0498439e+02	1.2429900e+01	1.00e+00	1.645e+01	0.0	10226
556	5.0481160e+02	5.3933248e+00	1.00e+00	1.147e+01	0.0	9869
557	5.0453936e+02	2.0375043e+01	1.00e+00	2.276e+01	0.0	9350
558	5.0459984e+02	8.5197951e+01	1.00e+00	7.051e+01	-0.3	9112
559	5.0426899e+02	3.1913857e+01	1.00e+00	3.113e+01	-0.3	9150
560	5.0416667e+02	6.5162801e+00	1.00e+00	1.250e+01	0.0	9084
561	5.0410869e+02	5.1174332e+00	1.00e+00	1.147e+01	0.0	9041
562	5.0306767e+02	2.2687015e+01	1.00e+00	2.445e+01	0.0	8657
563	5.0319028e+02	7.2617717e+01	1.00e+00	6.113e+01	-0.3	8735
564	5.0310988e+02	6.7274733e+01	1.00e+00	5.688e+01	0.0	8804
565	5.0273505e+02	7.7281711e+00	1.00e+00	1.342e+01	0.0	8776
566	5.0268852e+02	5.1668486e+00	1.00e+00	1.153e+01	0.0	8694
567	5.0249663e+02	5.1690831e+00	1.00e+00	1.154e+01	0.0	8586
568	5.0175874e+02	8.3542005e+01	1.00e+00	6.891e+01	-0.3	8588
569	5.0145994e+02	6.5473125e+01	1.00e+00	5.548e+01	-0.3	8865
570	5.0101455e+02	1.2124351e+01	1.00e+00	1.668e+01	0.0	8777
571	5.0096466e+02	5.1359126e+00	1.00e+00	1.159e+01	0.0	8698
572	5.0078065e+02	6.2367638e+00	1.00e+00	1.231e+01	0.0	8546

573	5.0074490e+02	6.8568391e+01	1.00e+00	5.788e+01	-0.3	8367
574	5.0024693e+02	1.0233099e+01	1.00e+00	1.522e+01	-0.3	8520
575	5.0016631e+02	7.0855402e+00	1.00e+00	1.299e+01	0.0	8460
576	5.0009626e+02	5.1951510e+00	1.00e+00	1.160e+01	0.0	8415
577	4.9948475e+02	5.0619404e+01	1.00e+00	4.421e+01	0.0	8119
578	5.0007532e+02	1.0526797e+02	1.00e+00	8.431e+01	-0.3	8272
579	4.9917026e+02	1.8702694e+01	1.00e+00	2.127e+01	0.0	8292
580	4.9910882e+02	5.2616034e+00	1.00e+00	1.162e+01	0.0	8232
581	4.9905515e+02	5.2499891e+00	1.00e+00	1.162e+01	0.0	8163
582	4.9883587e+02	2.1834839e+02	1.00e+00	1.655e+02	0.0	7771
583	4.9651682e+02	9.4595330e+00	1.00e+00	1.490e+01	-0.3	8089
584	4.9637440e+02	9.3830738e+00	1.00e+00	1.477e+01	0.0	8055
585	4.9621821e+02	6.4127081e+00	1.00e+00	1.253e+01	0.0	7942
586	4.9601291e+02	2.5496973e+01	1.00e+00	2.606e+01	0.0	7817
587	4.9590090e+02	1.2253569e+01	1.00e+00	1.662e+01	-0.3	7899
588	4.9583939e+02	1.0853432e+01	1.00e+00	1.563e+01	0.0	7846
589	4.9577871e+02	6.7972093e+00	1.00e+00	1.275e+01	0.0	7808
590	4.9566432e+02	2.4029979e+01	1.00e+00	2.501e+01	0.0	7767
591	4.9580116e+02	5.4247699e+01	1.00e+00	4.651e+01	-0.3	7776
592	4.9557602e+02	3.3256636e+01	1.00e+00	3.157e+01	0.0	7807
593	4.9546683e+02	5.3102705e+00	1.00e+00	1.169e+01	0.0	7778
594	4.9543790e+02	5.3103334e+00	1.00e+00	1.169e+01	0.0	7764
595	4.9474740e+02	2.2172162e+01	1.00e+00	2.361e+01	0.0	7679
596	4.9496974e+02	8.1003952e+01	1.00e+00	6.552e+01	-0.3	7722
597	4.9516617e+02	8.9022034e+01	1.00e+00	7.091e+01	0.0	7785
598	4.9449232e+02	6.4728983e+00	1.00e+00	1.253e+01	0.0	7851
599	4.9446272e+02	5.3294246e+00	1.00e+00	1.170e+01	0.0	7766
600	4.9432057e+02	5.9477318e+00	1.00e+00	1.214e+01	0.0	7695
601	4.9401102e+02	5.0157688e+01	1.00e+00	4.335e+01	-0.3	7694
602	4.9383806e+02	2.9092913e+01	1.00e+00	2.849e+01	-0.3	7824
603	4.9367590e+02	9.2514523e+00	1.00e+00	1.446e+01	0.0	7761
604	4.9363988e+02	5.3478120e+00	1.00e+00	1.171e+01	0.0	7727
605	4.9352368e+02	5.3533991e+00	1.00e+00	1.172e+01	0.0	7675
606	4.9301997e+02	9.5252715e+01	1.00e+00	7.478e+01	0.0	7545
607	4.9224582e+02	1.6753109e+01	1.00e+00	1.976e+01	-0.3	7742
608	4.9211056e+02	6.9851567e+00	1.00e+00	1.285e+01	0.0	7692
609	4.9205362e+02	5.3865808e+00	1.00e+00	1.173e+01	0.0	7653
610	4.9196371e+02	6.8085146e+01	1.00e+00	5.575e+01	0.0	7548
611	4.9170942e+02	4.7440590e+01	1.00e+00	4.104e+01	-0.3	7764
612	4.9147657e+02	9.2210497e+00	1.00e+00	1.439e+01	0.0	7732
613	4.9144258e+02	5.4697148e+00	1.00e+00	1.176e+01	0.0	7692
614	4.9127677e+02	8.8236826e+00	1.00e+00	1.413e+01	0.0	7583
615	4.9144314e+02	7.1867879e+01	1.00e+00	5.822e+01	-0.3	7531
616	4.9104764e+02	5.6362474e+00	1.00e+00	1.188e+01	-0.3	7723
617	4.9099055e+02	7.3052736e+00	1.00e+00	1.305e+01	0.0	7682
618	4.9086773e+02	5.4520615e+00	1.00e+00	1.175e+01	0.0	7584
619	4.9063728e+02	3.5290686e+01	1.00e+00	3.261e+01	0.0	7477
620	4.9064618e+02	5.2190216e+01	1.00e+00	4.428e+01	-0.3	7688
621	4.8410198e+02	2.8255973e+01	1.00e+00	2.548e+01	0.0	33007
622	4.5046284e+02	2.0705285e+02	1.00e+00	1.255e+02	0.0	34147
623	4.5643909e+02	5.1631062e+02	1.00e+00	3.065e+02	-0.3	34124
624	4.4189504e+02	6.3026645e+01	1.00e+00	4.081e+01	0.0	34135
625	4.3763437e+02	1.6641649e+01	1.00e+00	1.490e+01	0.0	34163
626	4.2481550e+02	1.1195205e+02	1.00e+00	6.276e+01	0.0	25964

627	4.2775297e+02	3.7936251e+02	1.00e+00	1.998e+02	-0.3	26186
628	4.2302898e+02	1.2086791e+02	1.00e+00	6.660e+01	0.0	25390
629	4.2208451e+02	1.3015209e+01	1.00e+00	1.217e+01	0.0	24425
630	4.2134312e+02	7.2377903e+00	1.00e+00	9.271e+00	0.0	23360
631	4.1788271e+02	1.3427458e+02	1.00e+00	7.378e+01	0.0	11884
632	4.1527010e+02	1.9549996e+02	1.00e+00	9.927e+01	-0.3	14716
633	4.1195130e+02	5.3957352e+01	1.00e+00	3.187e+01	0.0	16345
634	4.1154383e+02	8.0025735e+00	1.00e+00	9.722e+00	0.0	14259
635	4.1133927e+02	8.3865974e+00	1.00e+00	9.884e+00	0.0	13548
636	4.1147444e+02	1.1213593e+02	1.00e+00	5.773e+01	0.0	11208
637	4.1004992e+02	3.9929914e+01	1.00e+00	2.454e+01	-0.3	13159
638	4.0963228e+02	1.2615983e+01	1.00e+00	1.143e+01	0.0	12423
639	4.0941832e+02	6.8125600e+00	1.00e+00	8.831e+00	0.0	11851
640	4.0906995e+02	3.1529139e+01	1.00e+00	2.066e+01	0.0	11056
641	4.0940013e+02	1.2011390e+02	1.00e+00	6.215e+01	-0.3	10809
642	4.0917906e+02	1.2474086e+02	1.00e+00	6.431e+01	0.0	10827
643	4.0864505e+02	8.5541969e+00	1.00e+00	9.770e+00	0.0	10751
644	4.0859817e+02	6.5083170e+00	1.00e+00	8.817e+00	0.0	10681
645	4.0821149e+02	7.8455777e+00	1.00e+00	9.494e+00	0.0	10406
646	4.0833604e+02	1.0998215e+02	1.00e+00	5.730e+01	-0.3	10409
647	4.0756298e+02	1.6161999e+01	1.00e+00	1.328e+01	-0.3	10654
648	4.0742206e+02	9.0831279e+00	1.00e+00	1.002e+01	0.0	10513
649	4.0733548e+02	6.4528234e+00	1.00e+00	8.819e+00	0.0	10406
650	4.0684552e+02	2.3607768e+01	1.00e+00	1.686e+01	0.0	9970
651	4.0682235e+02	6.8387308e+01	1.00e+00	3.758e+01	-0.3	10066
652	4.0684202e+02	8.3481392e+01	1.00e+00	4.459e+01	0.0	9992
653	4.0255962e+02	1.9580645e+01	1.00e+00	1.402e+01	0.0	32476
654	3.8319355e+02	1.1834910e+02	1.00e+00	5.297e+01	0.0	34032
655	3.8767192e+02	5.8969368e+02	1.00e+00	2.481e+02	-0.3	33992
656	3.7695267e+02	2.0235046e+02	1.00e+00	8.388e+01	0.0	34047
657	3.7287144e+02	3.5451395e+01	1.00e+00	1.820e+01	0.0	34071
658	3.6760438e+02	4.7926734e+01	1.00e+00	2.237e+01	0.0	33401
659	3.6803218e+02	5.6704264e+02	1.00e+00	2.156e+02	-0.3	21378
660	3.6192639e+02	3.5398364e+01	1.00e+00	1.715e+01	-0.3	21811
661	3.6147761e+02	9.0668997e+00	1.00e+00	7.698e+00	0.0	21127
662	3.6049837e+02	9.5347032e+00	1.00e+00	7.925e+00	0.0	18859
663	3.6074598e+02	2.8299008e+02	1.00e+00	1.059e+02	-0.3	12153
664	3.5769867e+02	2.0593416e+02	1.00e+00	7.709e+01	-0.3	15445
665	3.5586406e+02	5.1327250e+01	1.00e+00	2.245e+01	0.0	15493
666	3.5565473e+02	9.6179632e+00	1.00e+00	7.951e+00	0.0	14428
667	3.5538265e+02	1.4077901e+01	1.00e+00	9.504e+00	0.0	13528
668	3.5485238e+02	9.4546106e+01	1.00e+00	3.737e+01	-0.3	11961
669	3.5448999e+02	4.3737117e+01	1.00e+00	1.974e+01	-0.3	12311
670	3.5433619e+02	1.0838892e+01	1.00e+00	8.383e+00	0.0	12052
671	3.5423840e+02	1.0451833e+01	1.00e+00	8.243e+00	0.0	11842
672	3.5388939e+02	4.7898087e+01	1.00e+00	2.115e+01	0.0	11420
673	3.5398224e+02	1.2828807e+02	1.00e+00	4.881e+01	-0.3	11444
674	3.5372585e+02	8.1375557e+01	1.00e+00	3.267e+01	0.0	11395
675	3.5358296e+02	7.9471948e+00	1.00e+00	7.382e+00	0.0	11326
676	3.5353372e+02	7.9295230e+00	1.00e+00	7.379e+00	0.0	11276
677	3.5271490e+02	4.6413615e+01	1.00e+00	2.059e+01	0.0	10689
678	3.5298034e+02	1.6420468e+02	1.00e+00	6.094e+01	-0.3	10706
679	3.5282337e+02	1.6141267e+02	1.00e+00	5.992e+01	0.0	10747
680	3.5239286e+02	9.2763457e+00	1.00e+00	7.865e+00	0.0	10689

681	3.5235612e+02	7.6120552e+00	1.00e+00	7.295e+00	0.0	10647
682	3.5168085e+02	9.5409818e+00	1.00e+00	7.967e+00	0.0	10353
683	3.5189945e+02	1.9362715e+02	1.00e+00	7.081e+01	-0.3	10356
684	3.5127518e+02	1.2162717e+02	1.00e+00	4.598e+01	-0.3	11061
685	3.5072886e+02	1.8487025e+01	1.00e+00	1.104e+01	0.0	10849
686	3.5067873e+02	7.9914226e+00	1.00e+00	7.477e+00	0.0	10628
687	3.5048031e+02	9.4737890e+00	1.00e+00	7.958e+00	0.0	10342
688	3.5050628e+02	9.7350960e+01	1.00e+00	3.764e+01	-0.3	10069
689	3.4997269e+02	2.1172329e+01	1.00e+00	1.191e+01	-0.3	10524
690	3.4987208e+02	8.4157376e+00	1.00e+00	7.615e+00	0.0	10335
691	3.4979710e+02	7.2965057e+00	1.00e+00	7.239e+00	0.0	10170
692	3.4940368e+02	3.1185136e+01	1.00e+00	1.523e+01	0.0	9892
693	3.4939078e+02	6.3992077e+01	1.00e+00	2.625e+01	-0.3	10003
694	3.4401154e+02	7.0921966e+01	1.00e+00	2.661e+01	0.0	33032
695	3.3374303e+02	5.6015414e+02	1.00e+00	1.726e+02	0.0	34064
696	3.2169475e+02	1.2362273e+02	1.00e+00	3.778e+01	-0.3	34071
697	3.1898258e+02	1.7833818e+01	1.00e+00	8.628e+00	0.0	34091
698	3.1244908e+02	2.5722229e+01	1.00e+00	1.026e+01	0.0	34147
699	3.1257610e+02	7.1301014e+02	1.00e+00	1.918e+02	-0.3	19998
700	2.9724620e+02	1.7468832e+02	1.00e+00	4.458e+01	-0.3	22626
701	2.9590444e+02	1.5971476e+01	1.00e+00	7.068e+00	0.0	22596
702	2.9562003e+02	1.3829060e+01	1.00e+00	6.572e+00	0.0	21559
703	2.9354275e+02	7.8269418e+01	1.00e+00	2.133e+01	0.0	16265
704	2.9493644e+02	1.4337309e+02	1.00e+00	3.701e+01	-0.3	18805
705	2.9226440e+02	4.9160452e+01	1.00e+00	1.456e+01	0.0	18716
706	2.9190749e+02	1.3404184e+01	1.00e+00	6.404e+00	0.0	17606
707	2.9173805e+02	1.2659808e+01	1.00e+00	6.230e+00	0.0	16611
708	2.8997143e+02	8.3364331e+01	1.00e+00	2.235e+01	0.0	13781
709	2.9033008e+02	1.2177254e+02	1.00e+00	3.086e+01	-0.3	15393
710	2.8928087e+02	5.1819350e+01	1.00e+00	1.505e+01	0.0	15480
711	2.8908834e+02	1.1988686e+01	1.00e+00	6.107e+00	0.0	14599
712	2.8898775e+02	1.1995866e+01	1.00e+00	6.106e+00	0.0	14140
713	2.8783741e+02	1.2630849e+02	1.00e+00	3.144e+01	0.0	12628
714	2.8771500e+02	1.3613727e+02	1.00e+00	3.373e+01	-0.3	13524
715	2.8723758e+02	3.4655529e+01	1.00e+00	1.111e+01	0.0	13176
716	2.8715480e+02	1.0909311e+01	1.00e+00	5.862e+00	0.0	12927
717	2.8702808e+02	1.1020427e+01	1.00e+00	5.885e+00	0.0	12722
718	2.8625503e+02	2.5499291e+02	1.00e+00	5.976e+01	0.0	11551
719	2.8545417e+02	1.1501475e+02	1.00e+00	2.870e+01	-0.3	12587
720	2.8507504e+02	1.8556094e+01	1.00e+00	7.601e+00	0.0	12368
721	2.8501650e+02	1.0390329e+01	1.00e+00	5.812e+00	0.0	12159
722	2.8465783e+02	2.1301357e+01	1.00e+00	8.117e+00	0.0	11671
723	2.8453026e+02	6.3857949e+01	1.00e+00	1.741e+01	-0.3	11773
724	2.8471664e+02	1.8914227e+02	1.00e+00	4.470e+01	0.0	11621
725	2.8440255e+02	1.0573875e+02	1.00e+00	2.642e+01	0.0	11645
726	2.8423577e+02	1.0155199e+01	1.00e+00	5.738e+00	0.0	11566
727	2.8419667e+02	1.0148302e+01	1.00e+00	5.736e+00	0.0	11501
728	2.8338794e+02	3.8373454e+01	1.00e+00	1.183e+01	0.0	11031
729	2.8351246e+02	1.3224669e+02	1.00e+00	3.207e+01	-0.3	11133
730	2.8354080e+02	1.5562812e+02	1.00e+00	3.708e+01	0.0	11262
731	2.8310663e+02	1.5414614e+01	1.00e+00	6.871e+00	0.0	11192
732	2.8306938e+02	1.0014282e+01	1.00e+00	5.714e+00	0.0	11094
733	2.8291716e+02	9.9412574e+00	1.00e+00	5.708e+00	0.0	10955
734	2.8268091e+02	3.6820427e+02	1.00e+00	8.243e+01	-0.3	10226

735	2.8060991e+02	1.6003348e+02	1.00e+00	3.754e+01	-0.3	11037
736	2.7983414e+02	2.0173473e+01	1.00e+00	7.908e+00	0.0	11127
737	2.7977861e+02	1.3442739e+01	1.00e+00	6.493e+00	0.0	10825
738	2.7948560e+02	4.9042720e+01	1.00e+00	1.393e+01	0.0	10348
739	2.7937818e+02	2.5299048e+01	1.00e+00	8.901e+00	-0.3	10626
740	2.7931678e+02	1.7289300e+01	1.00e+00	7.274e+00	0.0	10452
741	2.7926606e+02	9.5753605e+00	1.00e+00	5.649e+00	0.0	10361
742	2.7915345e+02	3.2266020e+01	1.00e+00	1.043e+01	0.0	10247
743	2.7910268e+02	4.7714112e+01	1.00e+00	1.361e+01	-0.3	10278
744	2.7905743e+02	6.3430891e+01	1.00e+00	1.694e+01	0.0	10221
745	2.7900400e+02	4.3147430e+01	1.00e+00	1.265e+01	0.0	10204
746	2.7896114e+02	1.8543924e+01	1.00e+00	7.543e+00	0.0	10187
747	2.7892272e+02	1.0846275e+01	1.00e+00	5.925e+00	0.0	10174
748	2.7881698e+02	4.8947756e+01	1.00e+00	1.389e+01	0.0	10133
749	2.7877385e+02	4.1472942e+01	1.00e+00	1.229e+01	-0.3	10147
750	2.7872983e+02	3.2522185e+01	1.00e+00	1.045e+01	0.0	10131
751	2.7868921e+02	2.2698132e+01	1.00e+00	8.387e+00	0.0	10114
752	2.7863910e+02	3.4988439e+01	1.00e+00	1.096e+01	0.0	10102
753	2.7860970e+02	9.4629658e+01	1.00e+00	2.333e+01	0.0	10085
754	2.7862706e+02	1.3980387e+02	1.00e+00	3.281e+01	0.0	10096
755	2.7847794e+02	2.5757358e+01	1.00e+00	9.016e+00	0.0	10093
756	2.7844999e+02	9.3839521e+00	1.00e+00	5.623e+00	0.0	10075
757	2.7839681e+02	9.3851029e+00	1.00e+00	5.621e+00	0.0	10061
758	2.7662592e+02	6.1675997e+02	1.00e+00	1.306e+02	0.0	9541
759	2.7483990e+02	2.7283377e+02	1.00e+00	5.901e+01	-0.3	10124
760	2.7415128e+02	1.6454847e+01	1.00e+00	7.124e+00	0.0	10119
761	2.7411888e+02	1.1448957e+01	1.00e+00	6.100e+00	0.0	9943
762	2.7394460e+02	2.6934575e+01	1.00e+00	9.070e+00	0.0	9680
763	2.7388343e+02	2.4603344e+01	1.00e+00	8.674e+00	-0.3	9865
764	2.7383512e+02	2.5259425e+01	1.00e+00	8.819e+00	0.0	9690
765	2.7379516e+02	2.0617467e+01	1.00e+00	7.884e+00	0.0	9658
766	2.7375714e+02	1.9498854e+01	1.00e+00	7.664e+00	0.0	9616
767	2.7371896e+02	2.1295466e+01	1.00e+00	8.021e+00	0.0	9593
768	2.7368055e+02	3.6316845e+01	1.00e+00	1.103e+01	0.0	9575
769	2.7365553e+02	5.3985621e+01	1.00e+00	1.459e+01	0.0	9569
770	2.7361128e+02	4.2308804e+01	1.00e+00	1.223e+01	0.0	9563
771	2.7357634e+02	1.2374610e+01	1.00e+00	6.227e+00	0.0	9563
772	2.7355155e+02	1.0070675e+01	1.00e+00	5.761e+00	0.0	9546
773	2.7344213e+02	3.6103335e+01	1.00e+00	1.099e+01	0.0	9526
774	2.7345687e+02	1.1915752e+02	1.00e+00	2.760e+01	-0.3	9532
775	2.7348206e+02	1.5994255e+02	1.00e+00	3.585e+01	0.0	9547
776	2.7330956e+02	1.4364817e+01	1.00e+00	6.614e+00	0.0	9530
777	2.7329208e+02	1.0111509e+01	1.00e+00	5.767e+00	0.0	9523
778	2.7320061e+02	1.0125326e+01	1.00e+00	5.768e+00	0.0	9500
779	2.7155022e+02	3.7556308e+02	1.00e+00	7.821e+01	-0.3	9500
780	2.7090879e+02	2.8232927e+02	1.00e+00	5.948e+01	-0.3	10191
781	2.7002349e+02	2.4156440e+01	1.00e+00	8.573e+00	0.0	10172
782	2.6998692e+02	1.2002647e+01	1.00e+00	6.186e+00	0.0	9978
783	2.6987466e+02	1.1259448e+01	1.00e+00	5.965e+00	0.0	9682
784	2.6975404e+02	6.3599340e+01	1.00e+00	1.622e+01	0.0	9471
785	2.6961871e+02	3.3019486e+01	1.00e+00	1.026e+01	-0.3	9866
786	2.6956748e+02	1.9141972e+01	1.00e+00	7.516e+00	0.0	9657
787	2.6953563e+02	1.0945967e+01	1.00e+00	5.916e+00	0.0	9579
788	2.6946865e+02	1.7451118e+01	1.00e+00	7.159e+00	0.0	9476

789	2.6941744e+02	8.8173394e+01	1.00e+00	2.095e+01	-0.3	9475
790	2.6946774e+02	1.4169588e+02	1.00e+00	3.130e+01	-0.3	9480
791	2.6933030e+02	3.6039067e+01	1.00e+00	1.079e+01	0.0	9485
792	2.6930579e+02	1.0988417e+01	1.00e+00	5.904e+00	0.0	9456
793	2.6927986e+02	1.0982810e+01	1.00e+00	5.902e+00	0.0	9430
794	2.6741743e+02	1.6757468e+02	1.00e+00	3.590e+01	0.0	9072
795	2.6855162e+02	4.1430930e+02	1.00e+00	8.394e+01	-0.3	9500
796	2.6710346e+02	6.6845876e+01	1.00e+00	1.652e+01	0.0	9708
797	2.6704130e+02	1.0856588e+01	1.00e+00	5.825e+00	0.0	9432
798	2.6701946e+02	1.0844137e+01	1.00e+00	5.823e+00	0.0	9310
799	2.6674462e+02	5.8332423e+01	1.00e+00	1.491e+01	0.0	9063
800	2.6686505e+02	1.3621805e+02	1.00e+00	2.967e+01	-0.3	9266
801	2.6666196e+02	6.6301233e+01	1.00e+00	1.641e+01	0.0	9329
802	2.6660838e+02	1.1041654e+01	1.00e+00	5.853e+00	0.0	9218
803	2.6659155e+02	1.1017678e+01	1.00e+00	5.851e+00	0.0	9157
804	2.6630100e+02	2.7479470e+01	1.00e+00	8.989e+00	0.0	9035
805	2.6650548e+02	1.5551779e+02	1.00e+00	3.334e+01	-0.3	9134
806	2.6642876e+02	1.1791622e+02	1.00e+00	2.620e+01	0.0	9375
807	2.6616852e+02	1.1466292e+01	1.00e+00	5.922e+00	0.0	9259
808	2.6615133e+02	1.1191498e+01	1.00e+00	5.874e+00	0.0	9174
809	2.6607815e+02	1.1059819e+01	1.00e+00	5.857e+00	0.0	9053
810	2.6613470e+02	2.0235888e+02	1.00e+00	4.206e+01	-0.3	8956
811	2.6571548e+02	1.0214870e+02	1.00e+00	2.312e+01	-0.3	9341
812	2.6554793e+02	1.3658829e+01	1.00e+00	6.321e+00	0.0	9213
813	2.6552737e+02	1.1360709e+01	1.00e+00	5.892e+00	0.0	9141
814	2.6540172e+02	2.7868965e+01	1.00e+00	9.038e+00	0.0	8984
815	2.6536467e+02	3.5597288e+01	1.00e+00	1.047e+01	-0.3	9043
816	2.6533399e+02	3.4095476e+01	1.00e+00	1.019e+01	0.0	8990
817	2.6530594e+02	2.5835931e+01	1.00e+00	8.626e+00	0.0	8988
818	2.6528106e+02	1.6343337e+01	1.00e+00	6.838e+00	0.0	8966
819	2.6525260e+02	1.5890971e+01	1.00e+00	6.751e+00	0.0	8949
820	2.6520366e+02	4.4094772e+01	1.00e+00	1.207e+01	0.0	8934
821	2.6523963e+02	9.9767587e+01	1.00e+00	2.257e+01	-0.3	8949
822	2.6514942e+02	4.6069586e+01	1.00e+00	1.244e+01	0.0	8968
823	2.6511851e+02	1.1188326e+01	1.00e+00	5.863e+00	0.0	8950
824	2.6510359e+02	1.1189273e+01	1.00e+00	5.862e+00	0.0	8938
825	2.6470310e+02	5.8010123e+01	1.00e+00	1.465e+01	0.0	8873
826	2.6479195e+02	1.2526107e+02	1.00e+00	2.729e+01	-0.3	8911
827	2.6465315e+02	6.3832001e+01	1.00e+00	1.574e+01	0.0	8918
828	2.6460757e+02	1.1223283e+01	1.00e+00	5.861e+00	0.0	8901
829	2.6459470e+02	1.1221701e+01	1.00e+00	5.861e+00	0.0	8892
830	2.6187272e+02	7.2209875e+02	1.00e+00	1.196e+02	-0.3	34249
831	2.3214236e+02	6.2456632e+02	1.00e+00	9.108e+01	-0.3	34237
832	1.9962168e+02	3.7464657e+01	1.00e+00	5.312e+00	0.0	34248
833	1.9869801e+02	3.7739406e+01	1.00e+00	5.333e+00	0.0	34253
834	1.5480653e+02	3.0634779e+02	1.00e+00	1.997e+01	0.0	28637
835	1.6192928e+02	8.0361419e+02	1.00e+00	5.345e+01	-0.3	29740
836	1.5267267e+02	1.4751823e+02	1.00e+00	9.911e+00	0.0	32700
837	1.5204068e+02	4.9289490e+01	1.00e+00	3.985e+00	0.0	31266
838	1.5172227e+02	4.9106357e+01	1.00e+00	3.972e+00	0.0	30156
839	1.4283271e+02	2.5815771e+02	1.00e+00	1.420e+01	0.0	24258
840	1.4567736e+02	6.0447226e+02	1.00e+00	3.393e+01	-0.3	26249
841	1.4150330e+02	1.1111093e+02	1.00e+00	6.649e+00	0.0	27166
842	1.4125393e+02	4.4238863e+01	1.00e+00	3.353e+00	0.0	25869

843	1.4105262e+02	4.3858690e+01	1.00e+00	3.328e+00	0.0	25067
844	1.3927489e+02	8.5750815e+02	1.00e+00	4.350e+01	0.0	20050
845	1.3731968e+02	8.6014782e+02	1.00e+00	4.198e+01	-0.3	22643
846	1.3348142e+02	1.0754137e+02	1.00e+00	6.132e+00	0.0	27371
847	1.3325327e+02	7.3133217e+01	1.00e+00	4.572e+00	0.0	23777
848	1.3291103e+02	7.1243940e+01	1.00e+00	4.456e+00	0.0	21933
849	1.3205702e+02	4.0344828e+02	1.00e+00	1.894e+01	-0.3	20206
850	1.3231840e+02	5.2953706e+02	1.00e+00	2.467e+01	-0.3	21405
851	1.3109504e+02	4.0368094e+01	1.00e+00	2.970e+00	0.0	21332
852	1.3101130e+02	4.1623424e+01	1.00e+00	3.037e+00	0.0	20619
853	1.3075163e+02	3.8621687e+01	1.00e+00	2.905e+00	0.0	20026
854	1.2974422e+02	4.4606650e+02	1.00e+00	1.986e+01	-0.3	18367
855	1.3097240e+02	6.3147742e+02	1.00e+00	2.882e+01	-0.3	21590
856	1.2818697e+02	8.5345799e+01	1.00e+00	4.680e+00	0.0	22350
857	1.2806786e+02	3.6201206e+01	1.00e+00	2.685e+00	0.0	20550
858	1.2794246e+02	3.5647773e+01	1.00e+00	2.659e+00	0.0	19325
859	1.2756617e+02	3.1613281e+02	1.00e+00	1.447e+01	-0.3	17591
860	1.2635404e+02	6.4991829e+01	1.00e+00	3.820e+00	-0.3	19424
861	1.2622579e+02	3.7398253e+01	1.00e+00	2.730e+00	0.0	18943
862	1.2611214e+02	3.3045594e+01	1.00e+00	2.545e+00	0.0	18424
863	1.2554662e+02	2.3131014e+02	1.00e+00	1.025e+01	0.0	17042
864	1.2490197e+02	8.1505305e+01	1.00e+00	4.448e+00	-0.3	18638
865	1.2476133e+02	3.4413255e+01	1.00e+00	2.544e+00	0.0	18221
866	1.2468142e+02	3.2744752e+01	1.00e+00	2.487e+00	0.0	17892
867	1.2418465e+02	1.7639524e+02	1.00e+00	8.161e+00	0.0	16645
868	1.2422393e+02	1.7360685e+02	1.00e+00	7.889e+00	-0.3	18336
869	1.2363909e+02	6.3131526e+01	1.00e+00	3.654e+00	0.0	18142
870	1.2358023e+02	3.1966599e+01	1.00e+00	2.448e+00	0.0	17574
871	1.2345673e+02	3.2693756e+01	1.00e+00	2.472e+00	0.0	17012
872	1.2323632e+02	5.0329594e+02	1.00e+00	2.032e+01	0.0	15681
873	1.2138635e+02	1.1942718e+02	1.00e+00	5.704e+00	-0.3	17903
874	1.2116176e+02	3.9687529e+01	1.00e+00	2.673e+00	0.0	17529
875	1.2109284e+02	3.3097036e+01	1.00e+00	2.437e+00	0.0	17088
876	1.2099358e+02	2.3606124e+02	1.00e+00	9.976e+00	0.0	15751
877	1.2068461e+02	1.8467679e+02	1.00e+00	7.990e+00	-0.3	17736
878	1.2033268e+02	3.8884934e+01	1.00e+00	2.634e+00	0.0	17141
879	1.2028355e+02	3.0641960e+01	1.00e+00	2.337e+00	0.0	16664
880	1.2012712e+02	2.9708615e+01	1.00e+00	2.302e+00	0.0	15992
881	1.1996266e+02	4.9158659e+02	1.00e+00	1.904e+01	-0.3	15332
882	1.2008972e+02	6.2438592e+02	1.00e+00	2.390e+01	-0.3	16891
883	1.1946794e+02	1.0297820e+02	1.00e+00	4.922e+00	0.0	16462
884	1.1942355e+02	3.0093747e+01	1.00e+00	2.300e+00	0.0	15926
885	1.1935019e+02	2.8737184e+01	1.00e+00	2.250e+00	0.0	15537
886	1.1870090e+02	5.6920183e+02	1.00e+00	2.145e+01	0.0	14824
887	1.1925861e+02	8.0393280e+02	1.00e+00	3.003e+01	-0.3	15968
888	1.1809989e+02	8.5177982e+01	1.00e+00	4.213e+00	0.0	15979
889	1.1806081e+02	3.1647302e+01	1.00e+00	2.334e+00	0.0	15453
890	1.1799575e+02	2.9025090e+01	1.00e+00	2.245e+00	0.0	15079
891	1.1772737e+02	6.1039715e+02	1.00e+00	2.246e+01	0.0	14472
892	1.1699591e+02	2.3857599e+02	1.00e+00	9.479e+00	-0.3	16000
893	1.1681838e+02	3.8292213e+01	1.00e+00	2.531e+00	0.0	15443
894	1.1678253e+02	2.9193626e+01	1.00e+00	2.224e+00	0.0	15122
895	1.1654791e+02	1.1041847e+02	1.00e+00	4.997e+00	0.0	14529
896	1.1654942e+02	1.8337573e+02	1.00e+00	7.522e+00	-0.3	15120

897	1.1544410e+02	1.1371172e+02	1.00e+00	4.899e+00	0.0	29440
898	1.1325973e+02	4.0143802e+02	1.00e+00	1.407e+01	0.0	32904
899	1.1433234e+02	1.2073442e+03	1.00e+00	4.008e+01	-0.3	33447
900	1.1127624e+02	7.9512755e+02	1.00e+00	2.583e+01	0.0	33560
901	1.0913801e+02	5.6860433e+01	1.00e+00	2.683e+00	0.0	33622
902	1.0852340e+02	3.9490500e+01	1.00e+00	2.158e+00	0.0	33673
903	1.0098986e+02	3.3608470e+02	1.00e+00	9.411e+00	0.0	27369
904	1.0337977e+02	1.3999476e+03	1.00e+00	3.821e+01	-0.3	27854
905	1.0067174e+02	3.0962467e+02	1.00e+00	8.668e+00	0.0	28680
906	1.0045144e+02	4.9730047e+01	1.00e+00	2.095e+00	0.0	27453
907	1.0034515e+02	4.9128928e+01	1.00e+00	2.076e+00	0.0	26728
908	9.8248005e+01	4.6282739e+02	1.00e+00	1.239e+01	0.0	16268
909	9.8662732e+01	6.7876452e+02	1.00e+00	1.713e+01	-0.3	19559
910	9.7100394e+01	1.6766838e+02	1.00e+00	4.939e+00	0.0	21381
911	9.6966642e+01	3.8506401e+01	1.00e+00	1.840e+00	0.0	19176
912	9.6909703e+01	3.9049831e+01	1.00e+00	1.853e+00	0.0	18082
913	9.6815285e+01	4.4531351e+02	1.00e+00	1.107e+01	0.0	15294
914	9.6590810e+01	3.8312251e+02	1.00e+00	1.006e+01	-0.3	18021
915	9.5878759e+01	5.9078254e+01	1.00e+00	2.236e+00	0.0	17567
916	9.5829876e+01	4.0859921e+01	1.00e+00	1.842e+00	0.0	16839
917	9.5721706e+01	3.7723329e+01	1.00e+00	1.782e+00	0.0	15905
918	9.5737744e+01	5.6287773e+02	1.00e+00	1.394e+01	0.0	14716
919	9.5190252e+01	3.5996266e+02	1.00e+00	9.061e+00	-0.3	16924
920	9.4902339e+01	7.2643485e+01	1.00e+00	2.579e+00	0.0	16265
921	9.4866345e+01	4.1775830e+01	1.00e+00	1.884e+00	0.0	15867
922	9.4737971e+01	3.8696540e+01	1.00e+00	1.804e+00	0.0	15179
923	9.4733556e+01	2.8280181e+02	1.00e+00	7.289e+00	-0.3	14699
924	9.3776798e+01	2.8120281e+02	1.00e+00	6.981e+00	-0.3	29637
925	9.2849658e+01	2.6412342e+02	1.00e+00	6.550e+00	0.0	31541
926	9.1954546e+01	2.4773241e+02	1.00e+00	6.008e+00	0.0	32464
927	9.1076452e+01	2.7223320e+02	1.00e+00	6.462e+00	0.0	32942
928	9.0238545e+01	3.3502842e+02	1.00e+00	7.527e+00	0.0	33270
929	8.9421364e+01	3.4300038e+02	1.00e+00	7.632e+00	0.0	33449
930	8.8578837e+01	2.3672529e+02	1.00e+00	5.348e+00	0.0	33517
931	8.7858829e+01	1.6123504e+02	1.00e+00	3.860e+00	0.0	33581
932	8.6997290e+01	2.1431600e+02	1.00e+00	4.734e+00	0.0	33681
933	8.6494839e+01	7.0754432e+02	1.00e+00	1.392e+01	0.0	33818
934	8.5074630e+01	2.7815456e+02	1.00e+00	5.659e+00	-0.3	33483
935	8.4795862e+01	5.5486078e+01	1.00e+00	1.688e+00	0.0	32762
936	8.4673952e+01	5.7540123e+01	1.00e+00	1.717e+00	0.0	31967
937	8.2879852e+01	2.0785828e+02	1.00e+00	4.381e+00	0.0	20247
938	8.3102573e+01	4.3796628e+02	1.00e+00	8.033e+00	-0.3	21702
939	8.2642754e+01	1.5489937e+02	1.00e+00	3.390e+00	0.0	21575
940	8.2565422e+01	5.7088193e+01	1.00e+00	1.675e+00	0.0	20732
941	8.2518144e+01	5.4102440e+01	1.00e+00	1.625e+00	0.0	20231
942	8.1399526e+01	4.6774591e+02	1.00e+00	8.363e+00	0.0	16039
943	8.2445868e+01	1.2894117e+03	1.00e+00	2.269e+01	-0.3	17755
944	8.1125689e+01	2.6033884e+02	1.00e+00	4.953e+00	0.0	18423
945	8.1049695e+01	4.9980211e+01	1.00e+00	1.550e+00	0.0	17398
946	8.1015649e+01	4.7662315e+01	1.00e+00	1.513e+00	0.0	16727
947	8.0969180e+01	1.0102861e+03	1.00e+00	1.743e+01	0.0	14964
948	8.0112237e+01	2.0747925e+02	1.00e+00	4.062e+00	-0.3	17220
949	8.0026834e+01	5.8317611e+01	1.00e+00	1.708e+00	0.0	16589
950	7.9986348e+01	4.6670290e+01	1.00e+00	1.514e+00	0.0	16083

951	7.9814626e+01	2.2017525e+02	1.00e+00	4.218e+00	0.0	15185
952	7.9830023e+01	3.7643607e+02	1.00e+00	6.750e+00	-0.3	15783
953	7.9724374e+01	2.6281478e+02	1.00e+00	4.904e+00	0.0	15462
954	7.9687099e+01	4.3478412e+01	1.00e+00	1.452e+00	0.0	15229
955	7.9666597e+01	4.3458851e+01	1.00e+00	1.451e+00	0.0	15131
956	7.9412881e+01	3.0618483e+02	1.00e+00	5.564e+00	0.0	14774
957	7.9443494e+01	5.8717724e+02	1.00e+00	9.955e+00	-0.3	14851
958	7.9335900e+01	1.6755144e+02	1.00e+00	3.390e+00	0.0	14821
959	7.9313492e+01	4.3274769e+01	1.00e+00	1.445e+00	0.0	14781
960	7.9290816e+01	4.3267131e+01	1.00e+00	1.444e+00	0.0	14748
961	7.8305416e+01	2.2994617e+03	1.00e+00	3.578e+01	0.0	14111
962	7.9297395e+01	3.3078836e+03	1.00e+00	5.242e+01	-0.3	15027
963	7.7398228e+01	1.1418852e+02	1.00e+00	2.484e+00	0.0	14975
964	7.7377737e+01	4.2071154e+01	1.00e+00	1.416e+00	0.0	14622
965	7.7318503e+01	4.4192653e+01	1.00e+00	1.452e+00	0.0	14273
966	7.7270701e+01	7.4123145e+02	1.00e+00	1.172e+01	-0.3	14077
967	7.7327121e+01	9.3167714e+02	1.00e+00	1.465e+01	-0.3	15140
968	7.6977845e+01	9.5312631e+01	1.00e+00	2.183e+00	0.0	14667
969	7.6959148e+01	4.2406371e+01	1.00e+00	1.409e+00	0.0	14410
970	7.6925501e+01	4.2104868e+01	1.00e+00	1.408e+00	0.0	14180
971	7.6386962e+01	4.7169321e+02	1.00e+00	7.617e+00	0.0	13863
972	7.6322289e+01	5.1310173e+02	1.00e+00	8.233e+00	-0.3	14792
973	7.6184708e+01	1.0351692e+02	1.00e+00	2.275e+00	0.0	14286
974	7.6168029e+01	4.1921439e+01	1.00e+00	1.393e+00	0.0	14151
975	7.6136517e+01	4.1983984e+01	1.00e+00	1.393e+00	0.0	13997
976	7.5936259e+01	2.1462450e+03	1.00e+00	3.151e+01	0.0	13658
977	7.5969479e+01	2.1565328e+03	1.00e+00	3.164e+01	-0.3	14683
978	7.5251640e+01	1.5510620e+02	1.00e+00	2.967e+00	0.0	14430
979	7.5233692e+01	4.3944165e+01	1.00e+00	1.403e+00	0.0	14118
980	7.5174035e+01	4.4830615e+01	1.00e+00	1.420e+00	0.0	13852
981	7.5142837e+01	6.3609859e+02	1.00e+00	9.673e+00	-0.3	13647
982	7.5037870e+01	4.4583100e+02	1.00e+00	7.027e+00	-0.3	14261
983	7.4930881e+01	8.7615861e+01	1.00e+00	2.003e+00	0.0	13937
984	7.4917283e+01	4.2544496e+01	1.00e+00	1.377e+00	0.0	13848
985	7.4863065e+01	5.8382968e+01	1.00e+00	1.603e+00	0.0	13688
986	7.4816688e+01	3.0847640e+02	1.00e+00	5.058e+00	-0.3	13700
987	7.4774924e+01	1.0667261e+02	1.00e+00	2.268e+00	-0.3	13807
988	7.4756347e+01	4.2520539e+01	1.00e+00	1.374e+00	0.0	13705
989	7.4730928e+01	4.3284235e+01	1.00e+00	1.388e+00	0.0	13643
990	7.4647037e+01	4.6463695e+02	1.00e+00	7.203e+00	0.0	13568
991	7.4676810e+01	6.3316818e+02	1.00e+00	9.557e+00	-0.3	13738
992	7.4541924e+01	8.2791016e+01	1.00e+00	1.927e+00	0.0	13640
993	7.4530734e+01	4.2381900e+01	1.00e+00	1.371e+00	0.0	13603
994	7.4490295e+01	4.2288075e+01	1.00e+00	1.369e+00	0.0	13557
995	7.4419920e+01	1.0156749e+03	1.00e+00	1.473e+01	-0.3	13440
996	7.4048158e+01	6.9304324e+01	1.00e+00	1.732e+00	-0.3	13702
997	7.4025033e+01	4.2277483e+01	1.00e+00	1.361e+00	0.0	13640
998	7.3992858e+01	4.2338060e+01	1.00e+00	1.361e+00	0.0	13569
999	7.3873001e+01	7.4318464e+02	1.00e+00	1.085e+01	0.0	13356
1000	7.3584496e+01	1.1245417e+02	1.00e+00	2.303e+00	-0.3	13753

ERROR EXIT -- Too many iterations

Products with A : 1452 Total time (secs) : 380.8

Products with A'	:	1002	Project time (secs)	:	3.8
Newton iterations	:	17	Mat-vec time (secs)	:	373.8
Line search its	:	896	Subspace iterations	:	0

/users/installs/slic/mat_toolbox/spgl1-slim/spgl1.m

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SPGL1_SLIM v. 46 (Tue, 14 Jun 2011) based on v.1017

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No. rows	:	6400	No. columns	:	34341
Initial tau	:	2.02e+05	Two-norm of b	:	1.57e+04
Optimality tol	:	1.00e-04	Target one-norm of x	:	2.02e+05
Basis pursuit tol	:	1.00e-06	Maximum iterations	:	200

Iter	Objective	Relative Gap	gNorm	stepG	nnzX	nnzG
0	1.5700885e+04	1.6080759e+01	9.84e+03	0.0	0	0
1	1.4122377e+04	1.7339956e+01	8.69e+03	0.0	33736	0
2	5.5553236e+03	1.2142639e+01	9.31e+02	0.0	34266	0
3	5.4436189e+03	1.2585776e+01	9.32e+02	0.0	34270	0
4	2.5578165e+03	3.2384037e+01	6.13e+02	0.0	28095	0
5	3.5857470e+03	5.4122184e+01	1.53e+03	-0.3	28498	0
6	2.4437870e+03	3.1409922e+01	5.39e+02	0.0	34292	0
7	2.2836691e+03	1.9493750e+01	2.74e+02	0.0	34290	0
8	2.2560909e+03	1.9853953e+01	2.73e+02	0.0	34285	0
9	2.0365885e+03	4.7525353e+01	5.78e+02	-0.3	25534	0
10	2.2101019e+03	6.6812562e+01	7.39e+02	-0.3	26139	0
11	1.8040299e+03	3.5991186e+01	3.34e+02	0.0	34164	0
12	1.7621175e+03	2.3276302e+01	2.03e+02	0.0	34206	0
13	1.7389059e+03	2.4121315e+01	2.05e+02	0.0	33408	0
14	1.6951045e+03	4.9196706e+01	4.18e+02	-0.3	23043	0
15	1.7112916e+03	5.9572124e+01	4.05e+02	-0.3	23880	0
16	1.5513310e+03	3.2179750e+01	2.24e+02	0.0	34068	0
17	1.5313760e+03	2.3799504e+01	1.60e+02	0.0	31317	0
18	1.5193568e+03	2.6557179e+01	1.78e+02	0.0	25570	0
19	1.4733274e+03	1.7866029e+01	1.09e+02	0.0	22208	0
20	1.4873125e+03	4.3554684e+01	2.83e+02	-0.3	23346	0
21	1.4460516e+03	2.0029362e+01	1.21e+02	0.0	22117	0
22	1.4385814e+03	2.6217537e+01	1.58e+02	0.0	22372	0
23	1.4291097e+03	2.5434257e+01	1.52e+02	0.0	21742	0
24	1.2168173e+03	1.2473513e+02	5.00e+02	0.0	15115	0
25	1.4311515e+03	1.9276522e+02	9.51e+02	-0.3	16371	0
26	1.0580321e+03	8.3957056e+01	2.57e+02	0.0	33980	0
27	1.0160905e+03	1.7056760e+01	5.76e+01	0.0	33533	0
28	1.0106571e+03	1.7268370e+01	5.90e+01	0.0	28545	0
29	9.9057940e+02	1.9553817e+01	6.52e+01	0.0	18913	0
30	9.9355851e+02	4.7011798e+01	1.23e+02	-0.3	19189	0
31	9.9534163e+02	6.5603137e+01	1.84e+02	0.0	20853	0
32	9.7512615e+02	1.8541575e+01	5.82e+01	0.0	19096	0
33	9.7315745e+02	1.7832465e+01	5.70e+01	0.0	18541	0
34	9.6240555e+02	1.8446934e+01	5.75e+01	0.0	17245	0
35	9.7020292e+02	2.1911826e+02	5.16e+02	-0.3	14712	0
36	8.6605851e+02	7.5043748e+01	1.57e+02	-0.3	17919	0
37	8.5416866e+02	2.5447563e+01	5.92e+01	0.0	22703	0
38	8.5190331e+02	2.7071685e+01	6.26e+01	0.0	19362	0

39	8.3847636e+02	3.0274555e+01	6.65e+01	0.0	15978	0
40	8.4246973e+02	6.3402483e+01	1.26e+02	-0.3	17284	0
41	8.4072873e+02	7.9928593e+01	1.53e+02	0.0	18180	0
42	8.2909208e+02	2.3818083e+01	5.40e+01	0.0	18464	0
43	8.2769207e+02	2.6252617e+01	5.80e+01	0.0	17165	0
44	8.2287379e+02	2.7148582e+01	5.92e+01	0.0	15678	0
45	7.9717176e+02	1.3022712e+02	2.10e+02	-0.3	13850	0
46	7.8214737e+02	1.0097427e+02	1.71e+02	-0.3	17679	0
47	7.6086064e+02	1.9581054e+01	3.94e+01	0.0	20593	0
48	7.5942563e+02	2.3595123e+01	4.58e+01	0.0	18035	0
49	7.5492601e+02	2.4411337e+01	4.68e+01	0.0	15490	0
50	7.5164127e+02	1.3781832e+02	2.04e+02	-0.3	13853	0
51	7.3479158e+02	3.6563652e+01	6.15e+01	-0.3	16709	0
52	7.3234419e+02	2.4066028e+01	4.37e+01	0.0	16394	0
53	7.3090003e+02	2.4398676e+01	4.42e+01	0.0	15416	0
54	7.1873604e+02	5.2193171e+01	7.99e+01	0.0	13652	0
55	7.2633963e+02	8.5886602e+01	1.23e+02	-0.3	15931	0
56	7.1060877e+02	2.5645032e+01	4.36e+01	0.0	19214	0
57	7.0876509e+02	2.5157177e+01	4.29e+01	0.0	16805	0
58	7.0762567e+02	2.5565939e+01	4.33e+01	0.0	15289	0
59	6.9298883e+02	1.4058358e+02	1.80e+02	0.0	13080	0
60	6.7678924e+02	1.0373058e+02	1.29e+02	-0.3	15544	0
61	6.6584763e+02	2.3477081e+01	3.64e+01	0.0	19035	0
62	6.6480513e+02	2.4439986e+01	3.76e+01	0.0	16341	0
63	6.6197216e+02	2.5124535e+01	3.82e+01	0.0	14410	0
64	6.5867528e+02	5.7840222e+01	7.24e+01	-0.3	14419	0
65	6.5593524e+02	2.6487838e+01	3.92e+01	-0.3	14846	0
66	6.5453806e+02	2.4793908e+01	3.69e+01	0.0	14439	0
67	6.5309184e+02	2.5572419e+01	3.78e+01	0.0	13892	0
68	6.5021240e+02	2.2177991e+02	2.41e+02	0.0	13002	0
69	6.3934921e+02	1.0005478e+02	1.13e+02	-0.3	14415	0
70	6.3641022e+02	2.5368193e+01	3.57e+01	0.0	14328	0
71	6.3579615e+02	2.5701611e+01	3.60e+01	0.0	13858	0
72	6.2637950e+02	9.0481693e+01	1.00e+02	0.0	12820	0
73	6.2106558e+02	4.3108306e+01	5.10e+01	-0.3	14358	0
74	6.1888589e+02	2.4784513e+01	3.37e+01	0.0	14822	0
75	6.1818871e+02	2.4895346e+01	3.37e+01	0.0	13977	0
76	6.1369995e+02	2.7677646e+01	3.57e+01	0.0	13061	0
77	6.1356962e+02	7.9065646e+01	8.40e+01	-0.3	13323	0
78	6.1365866e+02	1.0615547e+02	1.09e+02	-0.3	14047	0
79	6.0894994e+02	2.5419453e+01	3.32e+01	0.0	14207	0
80	6.0840287e+02	2.5393517e+01	3.32e+01	0.0	13590	0
81	6.0671085e+02	2.5937306e+01	3.36e+01	0.0	13045	0
82	6.0250458e+02	3.9526421e+02	3.58e+02	0.0	11926	0
83	5.5851731e+02	1.8164807e+02	1.51e+02	-0.3	14659	0
84	5.4742808e+02	2.4623930e+01	2.65e+01	0.0	20900	0
85	5.4652332e+02	2.4732078e+01	2.68e+01	0.0	17211	0
86	5.4308310e+02	2.7788501e+01	2.93e+01	0.0	13727	0
87	5.4213488e+02	5.0559070e+01	4.52e+01	-0.3	14028	0
88	5.4266042e+02	1.4464667e+02	1.14e+02	0.0	13538	0
89	5.4038431e+02	6.9204720e+01	5.87e+01	0.0	13534	0
90	5.3942818e+02	2.5621897e+01	2.70e+01	0.0	13291	0
91	5.3899409e+02	2.5467251e+01	2.69e+01	0.0	13070	0
92	5.3287098e+02	4.1919077e+01	3.88e+01	0.0	12276	0

93	5.3488136e+02	1.3334163e+02	1.02e+02	-0.3	12807	0
94	5.3221870e+02	1.0801587e+02	8.50e+01	0.0	13749	0
95	5.3042515e+02	2.5187550e+01	2.60e+01	0.0	13063	0
96	5.3009379e+02	2.5366291e+01	2.61e+01	0.0	12701	0
97	5.2513302e+02	3.5211298e+01	3.30e+01	0.0	12113	0
98	5.2855267e+02	1.5466226e+02	1.13e+02	-0.3	12374	0
99	5.2360057e+02	7.4555845e+01	5.96e+01	-0.3	13813	0
100	5.2221429e+02	2.3542453e+01	2.41e+01	0.0	13252	0
101	5.2184348e+02	2.4468826e+01	2.48e+01	0.0	12864	0
102	5.1686026e+02	5.2395826e+01	4.47e+01	0.0	11997	0
103	5.1863232e+02	8.8280280e+01	6.51e+01	-0.3	13175	0
104	5.1429025e+02	3.5617853e+01	3.21e+01	0.0	14780	0
105	5.1362731e+02	2.6551252e+01	2.56e+01	0.0	13369	0
106	5.1317386e+02	2.6918035e+01	2.58e+01	0.0	12631	0
107	5.0363546e+02	3.3699404e+02	2.18e+02	0.0	11575	0
108	4.9104845e+02	9.6390647e+01	6.62e+01	-0.3	13484	0
109	4.8909233e+02	2.3078632e+01	2.13e+01	0.0	14090	0
110	4.8863570e+02	2.3059177e+01	2.14e+01	0.0	13213	0
111	4.8593029e+02	6.1746135e+01	4.41e+01	0.0	11959	0
112	4.8598771e+02	7.6051235e+01	5.22e+01	-0.3	13536	0
113	4.8347184e+02	4.0396731e+01	3.11e+01	0.0	13807	0
114	4.8304873e+02	2.7950524e+01	2.39e+01	0.0	12903	0
115	4.8255428e+02	2.7404967e+01	2.35e+01	0.0	12368	0
116	4.7623198e+02	2.3171277e+02	1.38e+02	0.0	11479	0
117	4.7435066e+02	2.0384174e+02	1.21e+02	-0.3	12936	0
118	4.6814260e+02	2.6570033e+01	2.19e+01	0.0	14831	0
119	4.6778772e+02	2.3991641e+01	2.05e+01	0.0	13236	0
120	4.6646493e+02	3.0763752e+01	2.40e+01	0.0	12029	0
121	4.6507088e+02	1.7382324e+02	1.00e+02	-0.3	11530	0
122	4.6708965e+02	2.5200037e+02	1.44e+02	-0.3	12699	0
123	4.6097938e+02	2.3884801e+01	1.99e+01	0.0	13376	0
124	4.6068815e+02	2.1933437e+01	1.89e+01	0.0	12425	0
125	4.6003491e+02	2.6425285e+01	2.12e+01	0.0	11847	0
126	4.5380857e+02	2.1334406e+02	1.16e+02	0.0	11286	0
127	4.5463008e+02	2.3208240e+02	1.26e+02	-0.3	12545	0
128	4.4719047e+02	2.6668237e+01	2.02e+01	0.0	14801	0
129	4.4687947e+02	2.6471266e+01	2.02e+01	0.0	13011	0
130	4.4606851e+02	2.7122548e+01	2.04e+01	0.0	11866	0
131	4.4630020e+02	2.2777434e+02	1.20e+02	-0.3	11285	0
132	4.4099228e+02	1.4098270e+02	7.51e+01	-0.3	12394	0
133	4.3829880e+02	2.4573930e+01	1.87e+01	0.0	13070	0
134	4.3805909e+02	2.5444562e+01	1.91e+01	0.0	12200	0
135	4.3607228e+02	3.5645872e+01	2.36e+01	0.0	11400	0
136	4.3742390e+02	1.5504894e+02	8.06e+01	-0.3	11917	0
137	4.3644655e+02	1.2917435e+02	6.79e+01	0.0	12496	0
138	4.3455725e+02	2.6786013e+01	1.94e+01	0.0	12230	0
139	4.3435133e+02	2.3857759e+01	1.80e+01	0.0	11863	0
140	4.3323009e+02	3.1972123e+01	2.17e+01	0.0	11384	0
141	4.3145814e+02	1.1982842e+02	6.19e+01	-0.3	11397	0
142	4.2987281e+02	6.9973913e+01	3.90e+01	-0.3	12189	0
143	4.2902214e+02	2.8460851e+01	1.98e+01	0.0	11948	0
144	4.2880776e+02	2.2625006e+01	1.71e+01	0.0	11706	0
145	4.2724883e+02	3.1642738e+01	2.11e+01	0.0	11331	0
146	4.2746826e+02	8.3458637e+01	4.43e+01	-0.3	11507	0

147	4.2710712e+02	7.3667810e+01	4.03e+01	-0.3	12221	0
148	4.2550375e+02	2.8422525e+01	1.95e+01	0.0	12080	0
149	4.2529397e+02	2.4000189e+01	1.75e+01	0.0	11732	0
150	4.2462640e+02	2.8111846e+01	1.93e+01	0.0	11378	0
151	4.2539073e+02	4.5666594e+02	2.11e+02	0.0	10900	0
152	4.0727016e+02	4.0824295e+01	2.34e+01	-0.3	12399	0
153	4.0643777e+02	2.6097432e+01	1.71e+01	0.0	13062	0
154	4.0568633e+02	2.5298617e+01	1.67e+01	0.0	12160	0
155	4.0458459e+02	7.4684931e+01	3.66e+01	0.0	11206	0
156	4.0358044e+02	5.5337516e+01	2.90e+01	-0.3	12273	0
157	4.0236740e+02	2.5426777e+01	1.65e+01	0.0	12141	0
158	4.0216420e+02	2.4178612e+01	1.60e+01	0.0	11778	0
159	4.0151071e+02	2.5546813e+01	1.65e+01	0.0	11315	0
160	3.9923239e+02	1.1622908e+02	5.26e+01	-0.3	10951	0
161	3.9722998e+02	3.8252727e+01	2.12e+01	-0.3	11922	0
162	3.9664957e+02	2.7130718e+01	1.69e+01	0.0	11872	0
163	3.9639493e+02	2.6597027e+01	1.66e+01	0.0	11574	0
164	3.9494399e+02	4.7227395e+01	2.43e+01	0.0	10997	0
165	3.9514388e+02	7.2701902e+01	3.46e+01	-0.3	11630	0
166	3.9407863e+02	2.8366651e+01	1.70e+01	0.0	11631	0
167	3.9384882e+02	2.6290073e+01	1.63e+01	0.0	11375	0
168	3.9359241e+02	2.6314293e+01	1.63e+01	0.0	11134	0
169	3.8620145e+02	1.9869209e+02	7.97e+01	0.0	10764	0
170	3.8802661e+02	2.6315674e+02	1.04e+02	-0.3	11441	0
171	3.8344457e+02	2.6616020e+01	1.57e+01	0.0	12748	0
172	3.8325856e+02	2.6775848e+01	1.58e+01	0.0	11722	0
173	3.8280008e+02	2.6922865e+01	1.58e+01	0.0	11102	0
174	3.8154520e+02	2.3377011e+02	9.07e+01	-0.3	10770	0
175	3.8013338e+02	1.2878180e+02	5.21e+01	-0.3	11605	0
176	3.7873864e+02	2.6260833e+01	1.53e+01	0.0	11757	0
177	3.7859742e+02	2.6535657e+01	1.54e+01	0.0	11276	0
178	3.7769453e+02	2.7564703e+01	1.56e+01	0.0	10876	0
179	3.7758871e+02	1.2176949e+02	4.90e+01	-0.3	10951	0
180	3.7737480e+02	1.0675039e+02	4.36e+01	-0.3	11130	0
181	3.7662097e+02	2.6534284e+01	1.52e+01	0.0	11050	0
182	3.7649176e+02	2.6776309e+01	1.53e+01	0.0	10948	0
183	3.7591600e+02	2.6916126e+01	1.53e+01	0.0	10810	0
184	3.7643532e+02	3.8692164e+02	1.42e+02	-0.3	10595	0
185	3.7648343e+02	3.9021756e+02	1.43e+02	-0.3	11787	0
186	3.6653789e+02	3.4693133e+01	1.72e+01	0.0	14833	0
187	3.6632392e+02	2.7236559e+01	1.48e+01	0.0	12722	0
188	3.6555060e+02	2.5095119e+01	1.40e+01	0.0	11163	0
189	3.6508882e+02	6.8585225e+01	2.83e+01	-0.3	11190	0
190	3.6465088e+02	2.7639567e+01	1.48e+01	-0.3	11338	0
191	3.6443523e+02	2.7505720e+01	1.47e+01	0.0	11138	0
192	3.6410698e+02	2.7046795e+01	1.46e+01	0.0	10963	0
193	3.6361963e+02	1.1607980e+02	4.36e+01	-0.3	10765	0
194	3.6295972e+02	3.8261155e+01	1.82e+01	-0.3	10957	0
195	3.6276203e+02	2.7581426e+01	1.46e+01	0.0	10856	0
196	3.6253164e+02	2.7421426e+01	1.46e+01	0.0	10755	0
197	3.6004982e+02	1.5665764e+02	5.59e+01	0.0	10615	0
198	3.6243569e+02	4.4831789e+02	1.52e+02	-0.3	10952	0
199	3.5916437e+02	6.1645158e+01	2.52e+01	0.0	11063	0
200	3.5898354e+02	2.7760853e+01	1.44e+01	0.0	10835	0

ERROR EXIT -- Too many iterations

<i>Products with A</i>	<i>:</i>	<i>304</i>	<i>Total time (secs)</i>	<i>:</i>	<i>78.7</i>
<i>Products with A'</i>	<i>:</i>	<i>201</i>	<i>Project time (secs)</i>	<i>:</i>	<i>0.8</i>
<i>Newton iterations</i>	<i>:</i>	<i>0</i>	<i>Mat-vec time (secs)</i>	<i>:</i>	<i>77.2</i>
<i>Line search its</i>	<i>:</i>	<i>219</i>	<i>Subspace iterations</i>	<i>:</i>	<i>0</i>

=====

PQNL1_SLIM v. 46 (Tue, 14 Jun 2011) based on v.1017

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<i>No. rows</i>	<i>:</i>	<i>6400</i>	<i>No. columns</i>	<i>:</i>	<i>34341</i>
<i>Initial tau</i>	<i>:</i>	<i>2.02e+05</i>	<i>Two-norm of b</i>	<i>:</i>	<i>1.57e+04</i>
<i>Optimality tol</i>	<i>:</i>	<i>1.00e-04</i>	<i>Target one-norm of x</i>	<i>:</i>	<i>2.02e+05</i>
<i>Basis pursuit tol</i>	<i>:</i>	<i>1.00e-06</i>	<i>Maximum iterations</i>	<i>:</i>	<i>200</i>

<i>Iter</i>	<i>Objective</i>	<i>Relative Gap</i>	<i>gNorm</i>	<i>stepG</i>	<i>nnzX</i>	<i>nnzG</i>
-------------	------------------	---------------------	--------------	--------------	-------------	-------------

Undefined function 'undist' for input arguments of type 'double'.

Error in pqnl1_2 (line 405)

gNorm = undist(options.dual_norm(g,weights)); % originally options.d

Error in rand_weights_of_simu_shots (line 86)

xestpqnl = pqnl1_2(A,simD1,tau,[],xinit,options);

if given known strict sparse vector

```
[m n] = size(A); k = .2*round(n/log(m));
p = randperm(n); x0 = zeros(n,1); x0(p(1:k)) = sign(randn(k,1));
figure;plot(x0)
b0 = A*x0;

tau = norm(x0,1);

options = spgSetParms('optTol', 1e-4, 'iterations', 200);%, 'fid', fid);
xinit = zeros(size(A,2),1);

xestspg = spg11(A,b0,tau,[],xinit,options);
xestpqnl = pqnl1_2(A,b0,tau,[],xinit,options);
snrspg = SNR(x0,xestspg);
snrpqnl = SNR(x0,xestpqnl);

figure('Name','strcit sparse vector SPG');
subplot(2,1,1);plot(xestspg);
title(strcat(['p = .5, SNR=' num2str(snrspg) 'dB']))
subplot(2,1,2);plot(xestspg - x0);
title('difference')

figure('Name','strcit sparse vector PQN');
subplot(2,1,1);plot(xestpqnl);
title(strcat(['p = .5, SNR=' num2str(snrpqnl) 'dB']))
```

```
subplot(2,1,2);plot(xestpqn - x0);  
title('difference')
```

if given known compressible vector

```
nn = linspace(0,1,n);  
x0_compress = exp(-nn.^1);  
x0_compress = x0_compress - min(x0_compress);  
figure;plot(x0_compress)  
x0_compress = x0_compress(:);  
b_compress = A*x0_compress + 0.005 * randn(m,1);  
  
tau = norm(x0_compress,1);  
  
options = spgSetParms('optTol', 1e-4, 'iterations', 200);%, 'fid', fid);  
xinit = zeros(size(A,2),1);  
  
xestspg = spg11(A,b_compress,tau,[],xinit,options);  
xestpqn = pqn11_2(A,b_compress,tau,[],xinit,options);  
snrspg = SNR(x0_compress,xestspg);  
snrpqn = SNR(x0_compress,xestpqn);  
  
figure('Name','compressible vector SPG');  
subplot(2,1,1);plot(xestspg);  
title(strcat(['p = .5, SNR=' num2str(snrspg) 'dB']))  
subplot(2,1,2);plot(xestspg - x0_compress);  
title('difference')  
  
figure('Name','compressible vector PQN');  
subplot(2,1,1);plot(xestpqn);  
title(strcat(['p = .5, SNR=' num2str(snrpqn) 'dB']))  
subplot(2,1,2);plot(xestpqn - x0_compress);  
title('difference')
```

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