```
les4- mo20w Fri Jun 01 16:28:50 2018 1
```

```
% this is ../../crops/18r/planning/current_pedigrees/primary_dominants/les4-_mo20w
% generated Friday, June 01, 2018 at 21:28:50 UTC (=1527888530.695405) by compute_pedigrees/1.
% Horizontal pedigrees, generations at same indentation. S: Mo20W; W: W23; M: M14.
% !!! => cross was not by Toni; references to image locations on right.
% Mo20W/Les4-
 06R0003:0000000 x 06R0003:0000000
      06R0003:0000308 x 06R0003:0000303
           06N201:S0004710 x 06N1015:0000502
                07R201:S0000101 x 07R2354:0040306
                                                    111
                07R201:S0029810 x 07R2354:0040307
                07R201:S0032705 x 07R2354:0040304
                     09R201:S0042901 x 09R1565:0016509
                          10R205:S0001703 x 10R2231:0018402
                                                                       10R2231:0018402: [10r/gimmel/9.8-[60]]
                               11N205:S0031803 x 11N3251:0010203
                               11N205:S0037802 x 11N3251:0010210
                               11N205:S0037805 x 11N3251:0010201
                          10R205:S0007307 x 10R2231:0018405
                                                                       10R2231:0018405: [10r/gimmel/9.8-[61]]
                               13R205:S0002202 x 13R4084:0005812
                                                                            13R4084:0005812: [13r/bet/11.7-[1032],13r/bet/
15.7-[1145],13r/bet/18.7-[1290],13r/bet/21.7-[1408],13r/bet/25.7-[1560]]
                              13R205:S0002204 x 13R4084:0005813
                                                                            13R4084:0005813: [13r/bet/1.8-[1729],13r/bet/1
1.7-[1030,1031],13r/bet/15.7-[1146],13r/bet/18.7-[1291],13r/bet/21.7-[1409],13r/bet/25.7-[1561]]
                                                                                 14R4229:0009701: [14r/bet/24.8-[2429]]
                                   14R205:S0000215 x 14R4229:0009701
                                         17R4441:0006701 x 17R4441:0006706
                                                                                      17R4441:0006706: [17r/gimmel/2.8-[30
5]]
                                         17R4441:0006702 x 17R4441:0006706
                                                                                      17R4441:0006706: [17r/gimmel/2.8-[30
5]]
                                         17R4441:0006703 x 17R4441:0006706
                                                                                      17R4441:0006706: [17r/gimmel/2.8-[30
511
                                         17R4441:0006704 x 17R4441:0006704
                                         17R4441:0006709 x 17R4441:0006706
                                                                                      17R4441:0006706: [17r/gimmel/2.8-[30
511
                                   14R205:S0000217 x 14R4229:0009708
                                                                                 14R4229:0009708: [14r/bet/18.8-[2192]]
                                   14R205:S0000218 x 14R4229:0009711
                                                                                14R4229:0009711: [14r/bet/18.8-[2201]]
                          10R205:S0007308 x 10R2231:0018409
                                                                      10R2231:0018409: [10r/gimmel/9.8-[62]]
                          10R205:S0007310 x 10R2231:0018411
                                                                       10R2231:0018411: [10r/gimmel/9.8-[63]]
                          11N205:S0031801 x 11N2231:0010007
                          11N205:S0031904 x 11N2231:0010013
                     09R201:S0043616 x 09R1565:0016508
                     09R201:S0043618 x 09R1565:0016510
                          11N205:S0036604 x 11N3414:0010104
                         11N205:S0037801 x 11N3414:0010112
                07R301:W0032611 x 07R2354:0040304
                07R401:M0032808 x 07R2354:0040304
           06N201:S0005602 x 06N1015:0000501
```

```
les4- mo20w
                  Fri Jun 01 16:28:50 2018
           06N201:S0005611 x 06N1015:0000505
           06N201:S0005908 x 06N1015:0000506
                07R201:S0027304 x 07R2351:0040502
                07R201:S0027306 x 07R2351:0040501
                07R301:W0030503 x 07R2351:0040502
                07R301:W0030510 x 07R2351:0040501
                07R401:M0030303 x 07R2351:0040501
                07R401:M0030304 x 07R2351:0040502
           06N301:W0004209 x 06N1015:0000502
           06N301:W0004513 x 06N1015:0000505
           06N301:W0004801 x 06N1015:0000511
                09R301:W0034704 x 09R2349:0017211
                09R301:W0035619 x 09R2349:0017203
                09R301:W0039514 x 09R2349:0017211
                09R301:W0041612 x 09R2349:0017201
                                                            09R2349:0017201: [09r/bet/2.9-[4]]
                    10R305:W0002405 x 10R2232:0018509
                                                                 10R2232:0018509: [10r/gimmel/9.8-[67]]
                    10R305:W0003603 x 10R2232:0018504
                                                                 10R2232:0018504: [10r/gimmel/9.8-[64]]
                         11R305:W0050402 x 11R3252:0017607
                                                                      11R3252:0017607: [11r/aleph/18.8-[1043]]
                         11R305:W0050403 x 11R3252:0017606
                                                                      11R3252:0017606: [11r/aleph/18.8-[1041]]
                              11N305:W0038308 x 11N3415:0010308
                              11N305:W0038309 x 11N3415:0010308
                                   12R305:W0000210 x 12R3586:0023008
                                                                               12R3586:0023008: [12r/bet/3.8-[41],12r/be
t/8.8-[156]]
                                        12N504:B0040701 x 12N3943:0016410
                                        12N504:B0040703 x 12N3943:0016411
                                        12N504:B0040705 x 12N3943:0016408
                                        13R3943:0006001 x 13R3943:0006010
                                                                                     13R3943:0006010: [13r/bet/1.8-[1715]
.13r/bet/11.7-[1039].13r/bet/15.7-[1152].13r/bet/18.7-[1297].13r/bet/21.7-[1415].13r/bet/25.7-[1567]]
                                        13R3943:0006006 x 13R3943:0006010
                                                                                     13R3943:0006010: [13r/bet/1.8-[1715]
,13r/bet/11.7-[1039],13r/bet/15.7-[1152],13r/bet/18.7-[1297],13r/bet/21.7-[1415],13r/bet/25.7-[1567]]
                                        13R3943:0006007 x 13R3943:0006010
                                                                                     13R3943:0006010: [13r/bet/1.8-[1715]
,13r/bet/11.7-[1039],13r/bet/15.7-[1152],13r/bet/18.7-[1297],13r/bet/21.7-[1415],13r/bet/25.7-[1567]]
                                        13R3943:0006009 x 13R3943:0006010
                                                                                    13R3943:0006010: [13r/bet/1.8-[1715]
,13r/bet/11.7-[1039],13r/bet/15.7-[1152],13r/bet/18.7-[1297],13r/bet/21.7-[1415],13r/bet/25.7-[1567]]
                                                                                     13R3943:0006010: [13r/bet/1.8-[1715]
                                        13R3943:0006010 x 13R3943:0006010
,13r/bet/11.7-[1039],13r/bet/15.7-[1152],13r/bet/18.7-[1297],13r/bet/21.7-[1415],13r/bet/25.7-[1567]] 13R3943:0006010: [13
r/bet/1.8-[1715],13r/bet/11.7-[1039],13r/bet/15.7-[1152],13r/bet/18.7-[1297],13r/bet/21.7-[1415],13r/bet/25.7-[1567]]
                                        14R3943:0009802 x 14R3943:0009801
                                                                                     14R3943:0009801: [14r/bet/18.8-[2189
]]
                                        14R3943:0009804 x 14R3943:0009801
                                                                                     14R3943:0009801: [14r/bet/18.8-[2189
]]
                                        14R3943:0009806 x 14R3943:0009801
                                                                                     14R3943:0009801: [14r/bet/18.8-[2189
]]
                                        14R3943:0009808 x 14R3943:0009801
                                                                                     14R3943:0009801: [14r/bet/18.8-[2189
]]
                                        14R3943:0009814 x 14R3943:0009801
                                                                                     14R3943:0009801: [14r/bet/18.8-[2189
]]
```

```
les4- mo20w
               Fri Jun 01 16:28:50 2018
                                      14R3943:0009815 x 14R3943:0009801 14R3943:0009801: [14r/bet/18.8-[2189
]]
                                      14R3943:0009816 x 14R3943:0009801
                                                                                 14R3943:0009801: [14r/bet/18.8-[2189
11
                                 12R305:W0000212 x 12R3586:0023002
                                                                            12R3586:0023002: [12r/bet/3.8-[40],12r/be
t/8.8-[154]]
                                 12R3586:0023002 x 12R3586:0023002
                                                                           12R3586:0023002: [12r/bet/3.8-[40],12r/be
t/8.8-[154]] 12R3586:0023002: [12r/bet/3.8-[40],12r/bet/8.8-[154]]
                                       12N3944:0016703 x 12N3944:0016704
                                                                                 12N3944:0016703: [12n/bet/13.1-[813]
        12N3944:0016704: [12n/bet/13.1-[814]]
                                  12R3586:0023008 x 12R3586:0023008
                                                                           12R3586:0023008: [12r/bet/3.8-[41],12r/be
t/8.8-[156]] 12R3586:0023008: [12r/bet/3.8-[41],12r/bet/8.8-[156]]
                                      12N3945:0016803 x 12N3945:0016809
                                                                               12N3945:0016803: [12n/bet/13.1-[820]
        12N3945:0016809: [12n/bet/13.1-[822]]
                             11N305:W0038310 x 11N3415:0010308
          06N401:M0005507 x 06N1015:0000502
          06N401:M0006104 x 06N1015:0000511
               09R401:M0042411 x 09R2350:0017312
                                                         09R2350:0017312: [09r/aleph/18.8-[245,247,252]]
               09R401:M0042703 x 09R2350:0017315
                                                         09R2350:0017315: [09r/aleph/21.8-[4]]
               09R401:M0042709 x 09R2350:0017314
                                                          09R2350:0017314: [09r/aleph/21.8-[2]]
                   10R405:M0005009 x 10R2233:0018603
                                                              10R2233:0018603: [10r/gimmel/9.8-[68]]
                   10R405:M0005010 x 10R2233:0018604
                                                              10R2233:0018604: [10r/gimmel/9.8-[69]]
                        11R405:M0050304 x 11R3253:0017702
                                                                   11R3253:0017702: [11r/aleph/18.8-[1040]]
                             11N405:M0037307 x 11N3416:0010410
                                  t/8.8-[161]]
                                      12N3946:0017004 x 12N3946:0017105
                                      12N3946:0017006 x 12N3946:0017103
                                                                                 12N3946:0017103: [12n/bet/13.1-[829]
                                      12N3946:0017102 x 12N3946:0017105
                                      12N3946:0017105 x 12N3946:0017109
                                                                                12N3946:0017109: [12n/bet/13.1-[832]
                                      12N3946:0017106 x 12N3946:0017107
                                                                               12N3946:0017107: [12n/bet/13.1-[831]
                                           13R4196:0013018 x 13R4115:0012910
                                                                                      13R4196:0013018: [13r/bet/6.8-[
1830]]
            13R4115:0012910: [13r/bet/17.7-[1234],13r/bet/21.7-[1438],13r/bet/25.7-[1589],13r/bet/6.8-[1846]]
                                       12N3946:0017112 x 12N3946:0017113
                                                                                12N3946:0017113: [12n/bet/13.1-[834]
                                      12N504:B0039905 x 12N3946:0017107
                                                                                 12N3946:0017107: [12n/bet/13.1-[831]
1
                                      12N504:B0039911 x 12N3946:0017110
                                                                                 12N3946:0017110: [12n/bet/13.1-[833]
                                      17R3946:0006905 x 17R3946:0006904
                                                                                 17R3946:0006904: [17r/gimmel/2.8-[31
5]]
                                      17R3946:0006906 x 17R3946:0006904
                                                                                 17R3946:0006904: [17r/gimmel/2.8-[31
511
                                      17R3946:0006908 x 17R3946:0006904
                                                                                 17R3946:0006904: [17r/gimmel/2.8-[31
```

```
les4- mo20w
               Fri Jun 01 16:28:50 2018
511
                                   12R405:M0001202 x 12R3587:0023104
                                                                                12R3587:0023104: [12r/bet/3.8-[42],12r/be
t/8.8-[159]]
                                   12R405:M0011408 x 12R3587:0023107
                                                                                12R3587:0023107: [12r/bet/3.8-[43]]
                                   12R503:B0012702 x 12R3587:0023110
                                                                                12R3587:0023110: [12r/bet/3.1-[44],12r/be
t/8.8-[161]]
                              11N405:M0037308 x 11N3416:0010410
                    10R405:M0005012 x 10R2233:0018608
                                                                  10R2233:0018608: [10r/gimmel/9.8-[70,71]]
           07R201:S0034005 x 07R1015:0098406
           07R201:S0034007 x 07R1015:0098406
           07R301:W0085005 x 07R1015:0098410
                                                111
      06R200:S00I6614 x 06R0003:0000304
           07R301:W0025104 x 07R1011:0042006
           07R301:W0025409 x 07R1011:0042006
           07R401:M0028002 x 07R1011:0042006
      06R300:W00I1707 x 06R0003:0000304
           07R301:W0085006 x 07R1555:0098507
                                                !!!
      06R300:W00I2006 x 06R0003:0000302
           09R201:S0035501 x 09R1278:0016404
           09R201:S0035502 x 09R1278:0016409
               10R205:S0001702 x 10R3000:0018907
                                                            10R3000:0018907: [10r/gimmel/9.8-[82]]
                10R205:S0001704 x 10R3000:0018902
                                                             10R3000:0018902: [10r/gimmel/9.8-[81]]
                    11N205:S0036709 x 11N3303:0009701
                    11N205:S0037807 \times 11N3303:0009705
                    11N205:S0039001 x 11N3303:0009708
                          12R205:S0003403 x 12R3582:0022607
                                                                      12R3582:0022607: [12r/aleph/8.8-[1949]]
                         12R205:S0003408 x 12R3582:0022607
                                                                      12R3582:0022607: [12r/aleph/8.8-[1949]]
                         12R205:S0010918 x 12R3582:0022610
                                                                      12R3582:0022610: [12r/aleph/8.8-[1951]]
                         12R205:S0010919 x 12R3582:0022608
                                                                      12R3582:0022608: [12r/aleph/8.8-[1957]]
                              12N205:S0035502 x 12N3939:0015202
                                                                           12N3939:0015202: [12n/bet/13.1-[790]]
                               12N205:S0035506 x 12N3939:0015204
                                                                            12N3939:0015204: [12n/bet/13.1-[791]]
                                   13R205:S0002205 x 13R4082:0005502
                                                                                 13R4082:0005502: [13r/bet/1.8-[1713],13r/
bet/11.7-[975,976,977],13r/bet/15.7-[1118],13r/bet/18.7-[1263],13r/bet/21.7-[1381],13r/bet/25.7-[1532]]
                                        14R4227:0009205 x 14R4227:0009211
                                                                                      14R4227:0009211: [14r/bet/18.8-[2193
,2200]]
                                        14R4227:0009207 x 14R4227:0009211
                                                                                     14R4227:0009211: [14r/bet/18.8-[2193
,220011
                                        14R4227:0009208 x 14R4227:0009211
                                                                                      14R4227:0009211: [14r/bet/18.8-[2193
,2200]]
                                        14R4227:0009209 x 14R4227:0009211
                                                                                      14R4227:0009211: [14r/bet/18.8-[2193
,2200]]
                                        14R4227:0009210 \times 14R4227:0009211
                                                                                      14R4227:0009211: [14r/bet/18.8-[2193
,2200]]
                                        14R4227:0009213 x 14R4227:0009211
                                                                                      14R4227:0009211: [14r/bet/18.8-[2193
,2200]]
                                        14R4227:0009214 x 14R4227:0009211
                                                                                      14R4227:0009211: [14r/bet/18.8-[2193
```

,2200]]

les4mo20w Fri Jun 01 16:28:50 20	18 5						
,2200]]	14R4227:0009216 x 14R4227:0009211	14R4227:0009211: [14r/bet/18.8-[2193					
	14R505:B0002013 x 14R4227:0009211	14R4227:0009211: [14r/bet/18.8-[2193					
,2200]]	16R505:B0002405 x 16R4227:0006601	16R4227:0006601: [16r/gimmel/26.7-[1					
22]]	16R505:B0002408 x 16R4227:0006601	16R4227:0006601: [16r/gimmel/26.7-[1					
22]]	17R4227:0006301 x 17R4227:0006317	17R4227:0006317: [17r/gimmel/2.8-[30					
9]]	17R4227:0006303 x 17R4227:0006310	17R4227:0006310: [17r/gimmel/2.8-[31					
2]]		_					
9]]	17R4227:0006304 x 17R4227:0006317	17R4227:0006317: [17r/gimmel/2.8-[30					
9]]	17R4227:0006305 x 17R4227:0006317	17R4227:0006317: [17r/gimmel/2.8-[30					
9]]	17R4227:0006315 x 17R4227:0006317	17R4227:0006317: [17r/gimmel/2.8-[30					
	17R4227:0006316 x 17R4227:0006317	17R4227:0006317: [17r/gimmel/2.8-[30					
13R205:S0002206 x 13R4082:0005510 13R4082:0005510: [13r/bet/11.7-[980,981], 13r/bet/15.7-[1121],13r/bet/18.7-[1266],13r/bet/21.7-[1384],13r/bet/25.7-[1535]]							
13R205:S0002207 x 13R4082:0005502 13R4082:0005502: [13r/bet/1.8-[1713],13r/bet/11.7-[975,976,977],13r/bet/15.7-[1118],13r/bet/18.7-[1263],13r/bet/21.7-[1381],13r/bet/25.7-[1532]]							
	10R305:W0002410 x 10R3001:0019009						
11R305:W0043508 x 11R3304:0017301							
-[146]]		0022707: [12r/bet/3.8-[36],12r/bet/8.8					
12R305:W00 -[148]]	00512 x 12R3583:0022709 12R3583:	0022709: [12r/bet/3.8-[37],12r/bet/8.8					
	5:W0038309 x 12N3940:0015409 12N 13R305:W0000702 x 13R4083:0005603	3940:0015409: [12n/bet/13.1-[794]] 13R4083:0005603: [13r/bet/11.7-[994,					
995],13r/bet/15.7-[1127],13r/bet/18.7-[12	72],13r/bet/21.7-[1390],13r/bet/25.7-[1541] 14R4228:0009419 x 14R4228:0009404] 14R4228:0009404: [14r/bet/18.8-					
[2196]]	14R505:B0002108 x 14R4228:0009404	14R4228:0009404: [14r/bet/18.8-					
[2196]]	16R4228:0006808 x 16R4228:0006811	16R4228:0006811: [16r/gimmel/30					

les4mo20w	Fri Jun 01 16:28:50 2018	6				
.7-[287]]						
8-[331]]		17R4228:000640	1 x 17R4228:0006	5404	17R4228:0006404:	[17r/gimmel/2.
			4 x 17R4228:0006	5404	17R4228:0006404:	[17r/gimmel/2.
8-[331]] 17R4228:0006404: [17r/gimmel/2 8-[331]]			8 x 17R4228:0006	5.4.0.4	17R4228:0006404:	[17r/gimmo]/2
		1784220.000040	6 X 1/R4226.0006	0404	1/R4220.0000404.	[1/1/g1000e1/2.
0 [000]		17R4228:000640	9 x 17R4228:0006	5415	17R4228:0006415:	[17r/gimmel/2.
8-[330]]		17R4228:000641	0 x 17R4228:0006	5415	17R4228:0006415:	[17r/gimmel/2.
8-[330]]						_
8-[330]]		17R4228:000641	1 x 17R4228:0006	5415	17R4228:0006415:	[17r/gimmel/2.
0 [330]]		17R4228:000641	5 x 17R4228:0006	5415	17R4228:0006415:	[17r/gimmel/2.
8-[330]]	17R4228:0006415: [17r/gimmel/2.8		C 177100000000000000000000000000000000	C 4 1 F	1754000.0006415.	[17/
8-[330]]		1/R4228:000641	6 x 17R4228:0006	0415	17R4228:0006415:	[1/r/gimme1/2.
		05:W0000707 x 1			083:0005603: [13r	:/bet/11.7-[994,
995],13r/bet/	/15.7-[1127],13r/bet/18.7-[1272],	13r/bet/21.7-[1: 038601 ▼ 12N394	390],13r/bet/25. 0:0015407	.7-[1541]] 12N3940:0	015407: [12n/bet/	12 1_[703]]
	12N305:W0	$038603 \times 12N394$	0:0015107	12N3940:0	015407: [12n/bet/	13.1-[793]]
12N305:W0038601 x 12N3940:0015407						
-[146]] 12R35	583:0022707: [12r/bet/3.8-[36],12	r/bet/8.8-[146] 9 x 12R3583:002		1202502:002270	9: [12r/bet/3.8-[271 12r/ho+/9 9
-[148]] 12R35	12R3563:0022709 583:0022709: [12r/bet/3.8-[37],12			12R3563.002270	9. [121/Det/3.6-[3/],121/Det/0.0
	11N305:W0039202 x 1					
	11R305:W0043513 x 11R330				eph/18.8-[1045]]	
0.0	10R305:W0006211 x 10R3001:0019	9002	10R3001:0019002	2: [10r/gimmel/	9.8-[86]]	
	PR401:M0034610 x 09R1278:0016409 PR401:M0034902 x 09R1278:0016410					
03	10R405:M0005011 x 10R3002:0019	9112	10R3002:0019112	2: [10r/gimme]/	9 8-[95]]	
	10R405:M0005301 x 10R3002:0019		10R3002:0019112			
	10R405:M0005311 x 10R3002:0019		10R3002:0019103			
06R400:	M00I2104 x 06R0003:0000302					
	5N201:S0004106 x 06N1603:0020008					
	10R205:S0000803 x 10R3003:001	9211	10R3003:0019211	l: [10r/gimmel/	9.8-[99]]	
	10R205:S0002005 x 10R3003:001	9208	10R3003:0019208	3: [10r/gimmel/	9.8-[98]]	
	10R205:S0002010 x 10R3003:0019	9203	10R3003:0019203	3: [10r/gimmel/	9.8-[97]]	
0.6	5N301:W0034504 x 06N1603:0020008					
	10R305:W0002411 x 10R2327:0019		10R2327:0019302			
	10R305:W0006203 x 10R2327:001		10R2327:0019304			
	10R305:W0006214 x 10R2327:0019	9311	10R2327:0019311	1: [10r/gimmel/	9.8-[102]]	
06	5N401:M0004302 x 06N1603:0020008					
	07R201:S0030716 x 07R2328:004					
	07R201:S0031001 x 07R2328:004					
	07R201:S0032713 x 07R2328:004					
	07R301:W0030514 x 07R2328:004	ATTT				

```
les4- mo20w
                  Fri Jun 01 16:28:50 2018
                     10R305:W0001807 x 10R1802:0019605
                                                                  10R1802:0019605: [10r/gimmel/9.8-[106]]
                                                                  10R1802:0019607: [10r/gimmel/9.8-[107]]
                     10R305:W0001808 x 10R1802:0019607
                                                                  10R1802:0019610: [10r/gimmel/9.8-[108]]
                     10R305:W0006217 x 10R1802:0019610
                07R301:W0032609 x 07R2328:0040101
                07R401:M0030610 x 07R2328:0040111
                07R401:M0032802 x 07R2328:0040106
                07R401:M0033910 x 07R2328:0040101
                     10R405:M0001316 x 10R2135:0019711
                                                                  10R2135:0019711: [10r/gimmel/9.8-[110]]
                     10R405:M0006909 x 10R2135:0019707
                                                                  10R2135:0019707: [10r/qimmel/9.8-[109]]
                          11R405:M0051304 x 11R3241:0017406
                                                                       11R3241:0017406: [11r/aleph/18.8-[1070]]
                               11N405:M0034004 x 11N3413:0009901
                                    12N3584:0015602 x 12N3584:0015604
                                                                                 12N3584:0015604: [12n/bet/13.1-[796]]
                                         13R4196:0013005 x 13R4114:0012804
                                                                                       13R4114:0012804: [13r/bet/17.7-[1227
],13r/bet/21.7-[1431],13r/bet/25.7-[1583]]
                                         13R4196:0013007 x 13R4114:0012804
                                                                                      13R4114:0012804: [13r/bet/17.7-[1227
],13r/bet/21.7-[1431],13r/bet/25.7-[1583]]
                                         13R4196:0013016 x 13R4114:0012808
                                                                                       13R4114:0012808: [13r/bet/17.7-[1230
],13r/bet/21.7-[1434],13r/bet/25.7-[1586]]
                                         13R4196:0013017 x 13R4114:0012805
                                                                                       13R4114:0012805: [13r/bet/17.7-[1228
],13r/bet/21.7-[1432],13r/bet/25.7-[1584],13r/bet/6.8-[1844,1845]]
                                    12N3584:0015603 x 12N3584:0015604
                                                                                 12N3584:0015604: [12n/bet/13.1-[796]]
                                                                                 12N3584:0015604: [12n/bet/13.1-[796]]
                                    12N3584:0015607 x 12N3584:0015604
                                    12N3584:0015701 x 12N3584:0015706
                                                                                 12N3584:0015706: [12n/bet/13.1-[803]]
                                    12N3584:0015710 x 12N3584:0015710
                                                                                 12N3584:0015710: [12n/bet/13.1-[806]]
    12N3584:0015710: [12n/bet/13.1-[806]]
                                    12N3584:0015804 x 12N3584:0015804
                                    12N3584:0015806 \times 12N3584:0015803
                                                                                 12N3584:0015803: [12n/bet/13.1-[808]]
                                    12N3584:0015809 x 12N3584:0015809
                                    12N3584:0015810 x 12N3584:0015810
                                    12N3584:0015812 x 12N3584:0015811
                                                                                 12N3584:0015811: [12n/bet/13.1-[810]]
                                    12R503:B0012603 x 12R3584:0022802
                                    12R503:B0012605 x 12R3584:0022806
                                    12R503:B0012607 x 12R3584:0022809
                                                                                 12R3584:0022809: [12r/bet/3.8-[39],12r/be
t/8.8-[152]]
                                    12R503:B0012709 x 12R3584:0022804
                                                                                 12R3584:0022804: [12r/bet/3.8-[38],12r/be
t/8.8-[150]]
                                    13R3584:0005701 x 13R3584:0005717
                                                                                 13R3584:0005717: [13r/bet/11.7-[1023,1024]
],13r/bet/15.7-[1142],13r/bet/18.7-[1287],13r/bet/21.7-[1405],13r/bet/25.7-[1557]]
                                    13R3584:0005703 x 13R3584:0005713
                                                                                 13R3584:0005713: [13r/bet/1.8-[1730],13r/
bet/11.7-[1021,1022],13r/bet/15.7-[1141],13r/bet/18.7-[1286],13r/bet/21.7-[1404],13r/bet/25.7-[1556]]
                                    13R3584:0005714 x 13R3584:0005713
                                                                                 13R3584:0005713: [13r/bet/1.8-[1730],13r/
bet/11.7-[1021,1022],13r/bet/15.7-[1141],13r/bet/18.7-[1286],13r/bet/21.7-[1404],13r/bet/25.7-[1556]]
                                    13R3584:0005715 x 13R3584:0005713
                                                                                 13R3584:0005713: [13r/bet/1.8-[1730],13r/
bet/11.7-[1021,1022],13r/bet/15.7-[1141],13r/bet/18.7-[1286],13r/bet/21.7-[1404],13r/bet/25.7-[1556]]
                                    13R3584:0005716 x 13R3584:0005717
                                                                                 13R3584:0005717: [13r/bet/11.7-[1023,1024
],13r/bet/15.7-[1142],13r/bet/18.7-[1287],13r/bet/21.7-[1405],13r/bet/25.7-[1557]]
                                    13R3584:0005718 x 13R3584:0005717
                                                                                 13R3584:0005717: [13r/bet/11.7-[1023,1024
```

 $06N401:M0004304 \times 06N1602:0019913$

```
],13r/bet/15.7-[1142],13r/bet/18.7-[1287],13r/bet/21.7-[1405],13r/bet/25.7-[1557]]
                                  bet/11.7-[1021,1022],13r/bet/15.7-[1141],13r/bet/18.7-[1286],13r/bet/21.7-[1404],13r/bet/25.7-[1556]]
                                  14R3584:0009502 x 14R3584:0009514
                                                                           14R3584:0009514: [14r/bet/24.8-[2431]]
                                  14R3584:0009505 x 14R3584:0009514
                                                                            14R3584:0009514: [14r/bet/24.8-[2431]]
                                  14R3584:0009507 x 14R3584:0009514
                                                                           14R3584:0009514: [14r/bet/24.8-[2431]]
                                  14R3584:0009511 x 14R3584:0009514
                                                                           14R3584:0009514: [14r/bet/24.8-[2431]]
                                  14R3584:0009513 x 14R3584:0009514
                                                                           14R3584:0009514: [14r/bet/24.8-[2431]]
                             11N405:M0034005 x 11N3413:0009901
                        11R405:M0051311 x 11R3241:0017404
                                                                   11R3241:0017404: [11r/aleph/18.8-[1042]]
                                                  10R2328:0019402: [10r/gimmel/9.8-[104]]
               10R405:M0005310 x 10R2328:0019402
               10R405:M0006908 x 10R2328:0019413
                                                         10R2328:0019413: [10r/gimmel/9.8-[105]]
     06R400:M00I6106 x 06R0003:0000303
          06N201:S0008301 x 06N1602:0019901
               07R201:S0027610 x 07R2346:0040606
               07R301:W0032608 x 07R2346:0040606
               07R401:M0025511 x 07R2346:0040606
               07R401:M0030305 \times 07R2346:0040604
          06N201:S0008305 x 06N1602:0019907
               07R201:S0025009 x 07R2340:0041013
               07R301:W0023308 x 07R2340:0041013
               07R301:W0027507 x 07R2340:0041011
               07R301:W0029309 x 07R2340:0041011
               07R301:W0030210 x 07R2340:0041013
               07R401:M0024906 x 07R2340:0041013
               07R401:M0028003 x 07R2340:0041011
          06N201:S0008309 \times 06N1602:0019911
          06N201:S0008906 x 06N1602:0019912
          06N201:S0009804 x 06N1602:0019913
               07R201:S0030704 x 07R2329:0041801
                                                  !!!
               07R301:W0030511 x 07R2329:0041801
               07R401:M0030601 x 07R2329:0041801
                                                   !!!
          06N201:S0031904 x 06N1602:0019905
               07R201:S0025017 x 07R2343:0040803
               07R201:S0029805 x 07R2343:0040803
               07R301:W0029311 x 07R2343:0040808
               07R401:M0028004 x 07R2343:0040803
               07R401:M0028005 x 07R2343:0040808
          06N301:W0006307 x 06N1602:0019901
          06N301:W0006605 x 06N1602:0019911
          06N301:W0011408 x 06N1602:0019912
          06N301:W0025101 x 06N1602:0019905
          06N301:W0025108 x 06N1602:0019909
          06N301:W0025401 x 06N1602:0019910
          06N301:W0025402 x 06N1602:0019913
          06N301:W0029904 x 06N1602:0019907
```

06N401:M0004902 x 06N1602:0019901 07R201:S0025615 x 07R2348:0040704 07R201:S0029201 x 07R2348:0040709 07R301:W0023908 x 07R2348:0040709 07R301:W0032001 x 07R2348:0040704 07R301:W0032002 x 07R2348:0040709 07R401:M0024308 x 07R2348:0040709 07R401:M0030306 x 07R2348:0040704 07R401:M0030310 x 07R2348:0040709 06N401:M0004909 x 06N1602:0019905 07R301:W0023906 x 07R2345:0040908 07R401:M0024305 x 07R2345:0040908 06N401:M0005201 x 06N1602:0019911 07R201:S0029808 x 07R2336:0041505 07R301:W0029608 x 07R2336:0041505 07R301:W0033204 x 07R2336:0041502 07R401:M0026101 x 07R2336:0041502 07R401:M0030005 x 07R2336:0041505 06N401:M0005202 x 06N1602:0019909 06N401:M0005509 x 06N1602:0019907 07R201:S0030403 x 07R2342:0041105 07R301:W0020601 x 07R2342:0041105 07R401:M0021008 x 07R2342:0041105 06N401:M0006101 x 06N1602:0019912 06N401:M0007001 x 06N1602:0019910