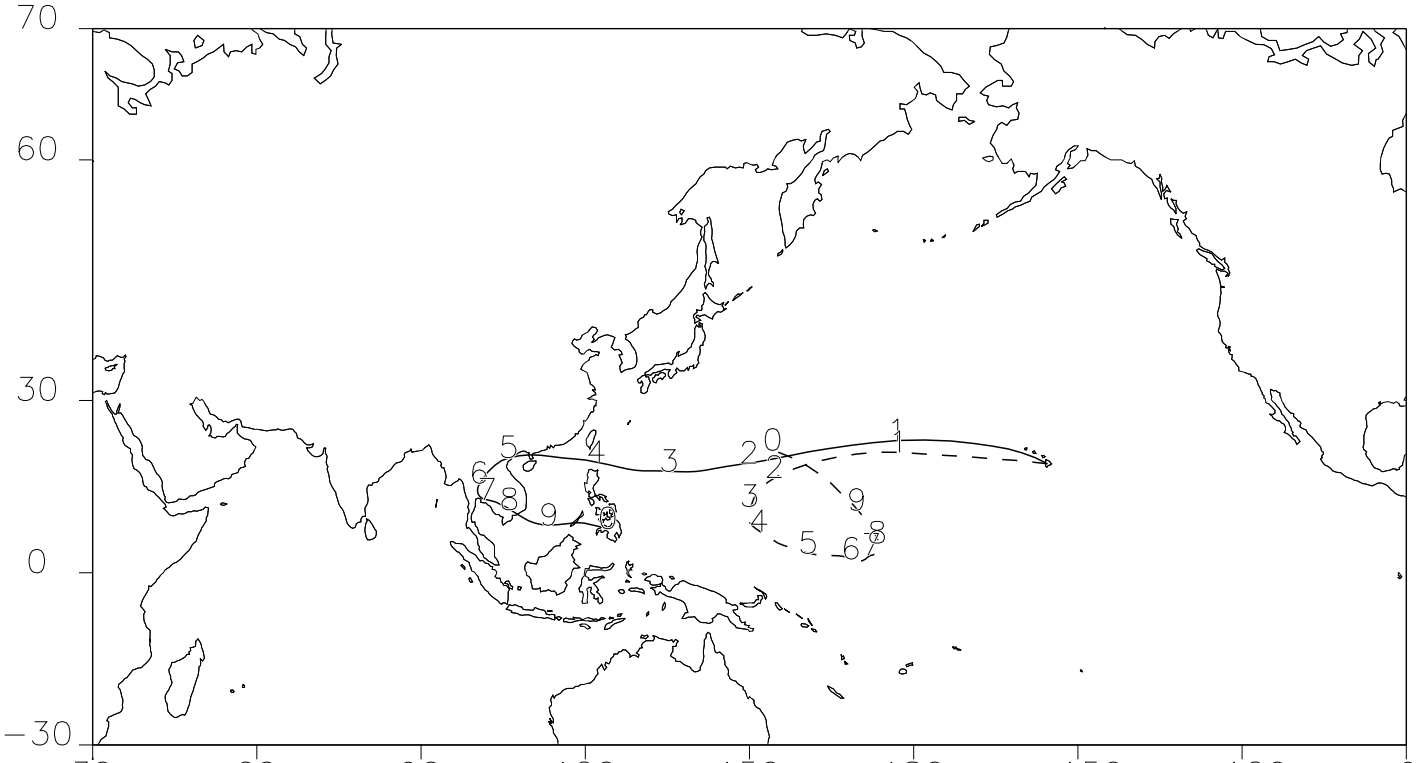
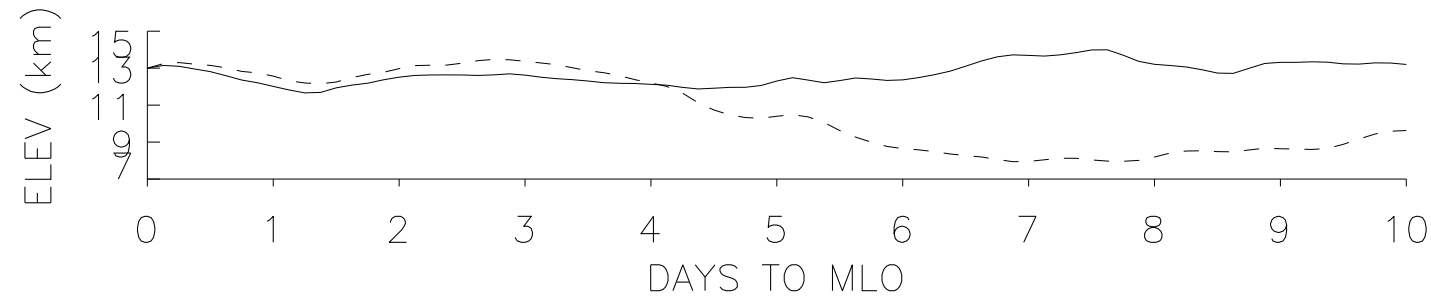
3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/1/2004 (Day of Year 92)
NCEP/NCAR Reanalysis 1 Data Set





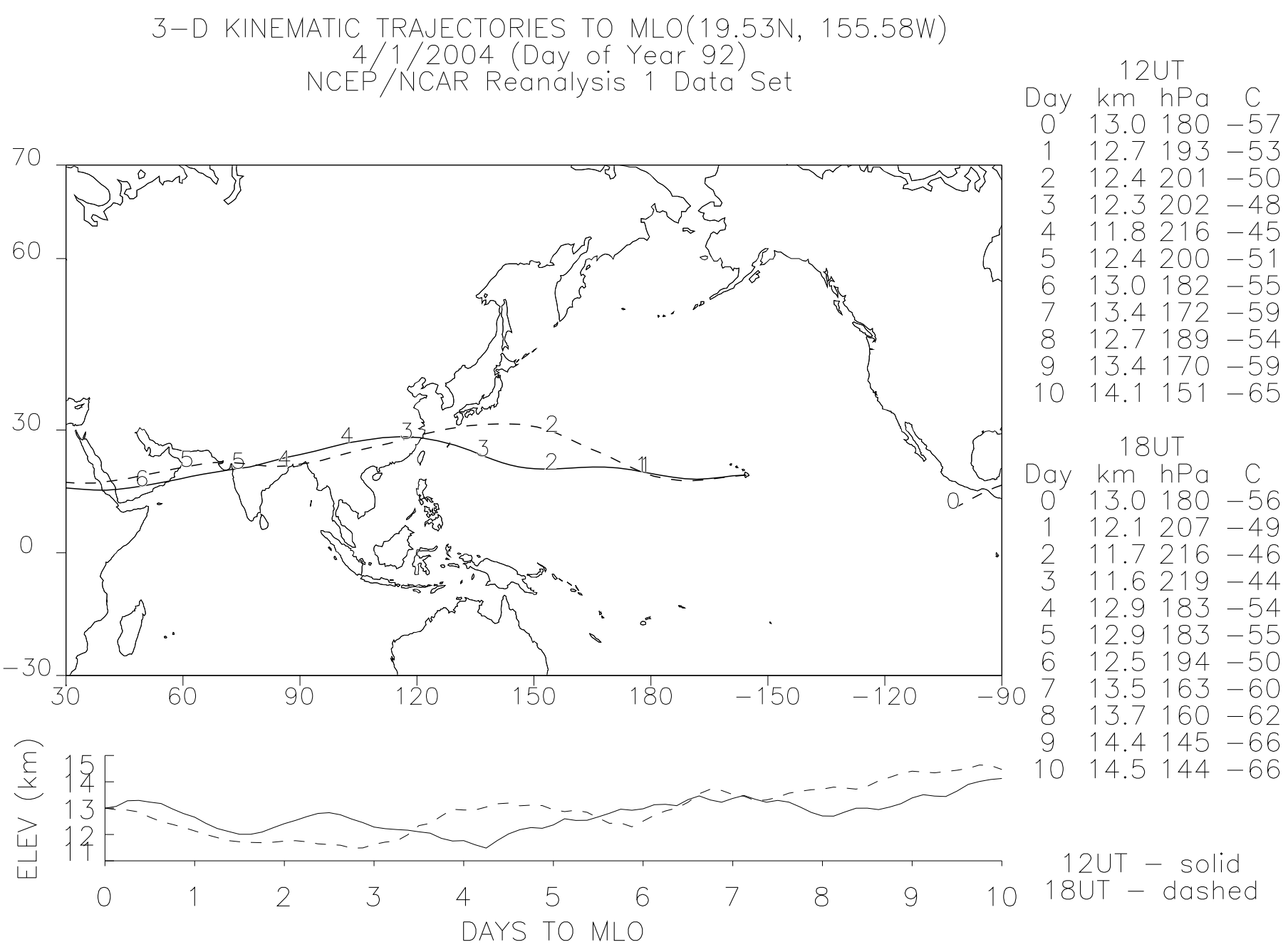
00UT

Day	km	hPa	C
0	13.0	180	-57
1	12.0	211	-48
2	12.5	198	-52
3	12.6	194	-53
4	12.1	209	-49
5	12.3	204	-50
6	12.4	202	-49
7	13.7	165	-61
8	13.2	179	-57
9	13.3	175	-57
10	13.2	179	-57

06UT

Day	km	hPa	C
0	13.0	181	-56
1	12.6	195	-51
2	13.0	185	-55
3	13.4	173	-59
4	12.2	208	-50
5	10.4	272	-37
6	8.6	347	-23
7	8.0	381	-17
8	8.2	368	-19
9	8.6	346	-23
10	9.6	300	-32

00UT – solid
06UT – dashed



12UT

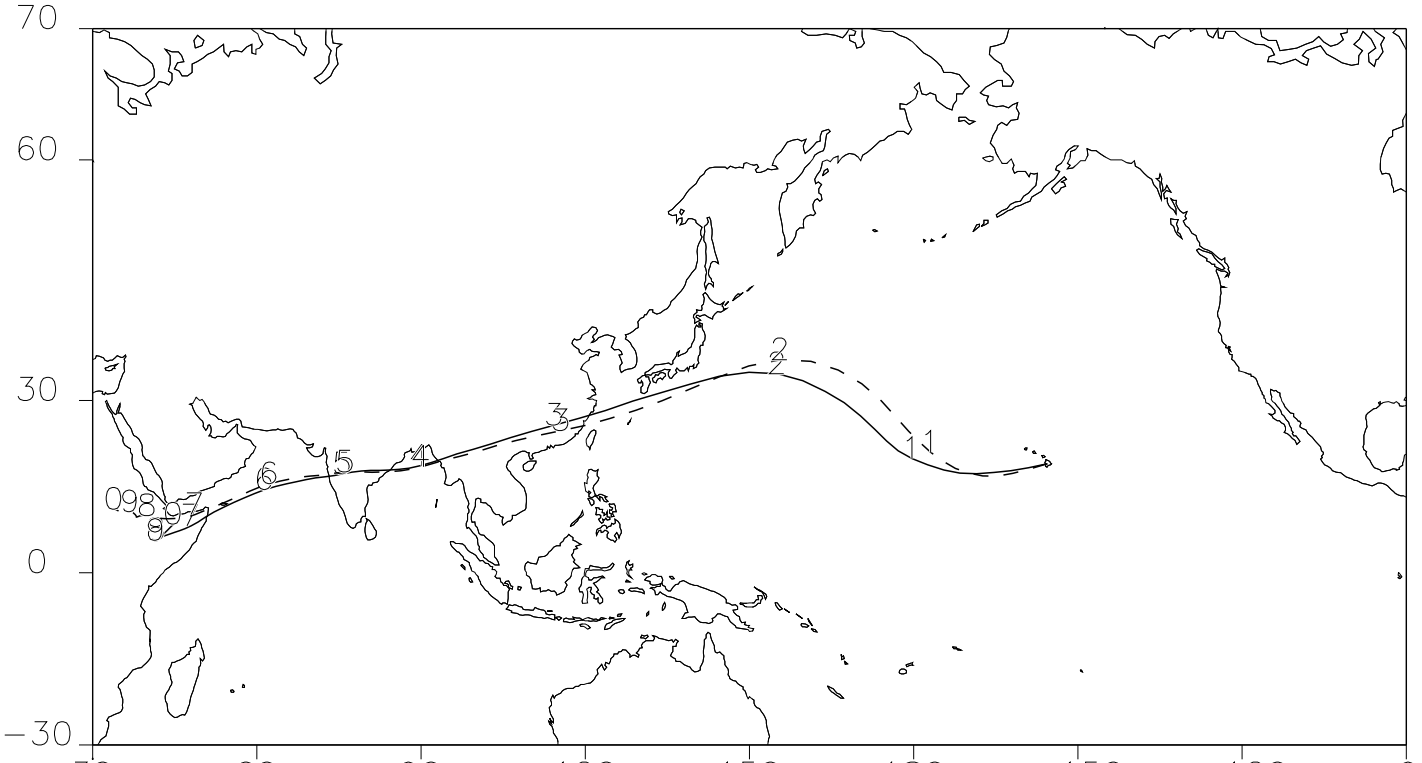
Day	km	hPa	C
0	13.0	180	−57
1	12.7	193	−53
2	12.4	201	−50
3	12.3	202	−48
4	11.8	216	−45
5	12.4	200	−51
6	13.0	182	−55
7	13.4	172	−59
8	12.7	189	−54
9	13.4	170	−59
10	14.1	151	−65

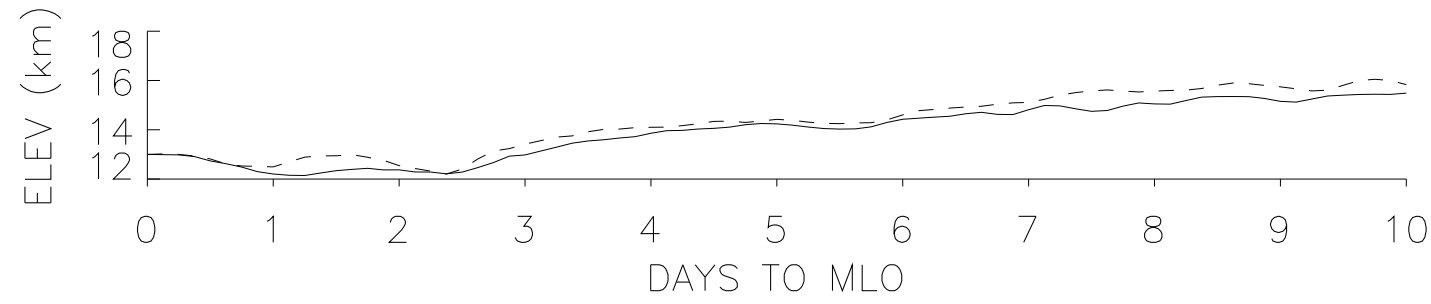
18UT

Day	km	hPa	C
0	13.0	180	−56
1	12.1	207	−49
2	11.7	216	−46
3	11.6	219	−44
4	12.9	183	−54
5	12.9	183	−55
6	12.5	194	−50
7	13.5	163	−60
8	13.7	160	−62
9	14.4	145	−66
10	14.5	144	−66

12UT − solid
18UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/2/2004 (Day of Year 93)
NCEP/NCAR Reanalysis 1 Data Set





00UT

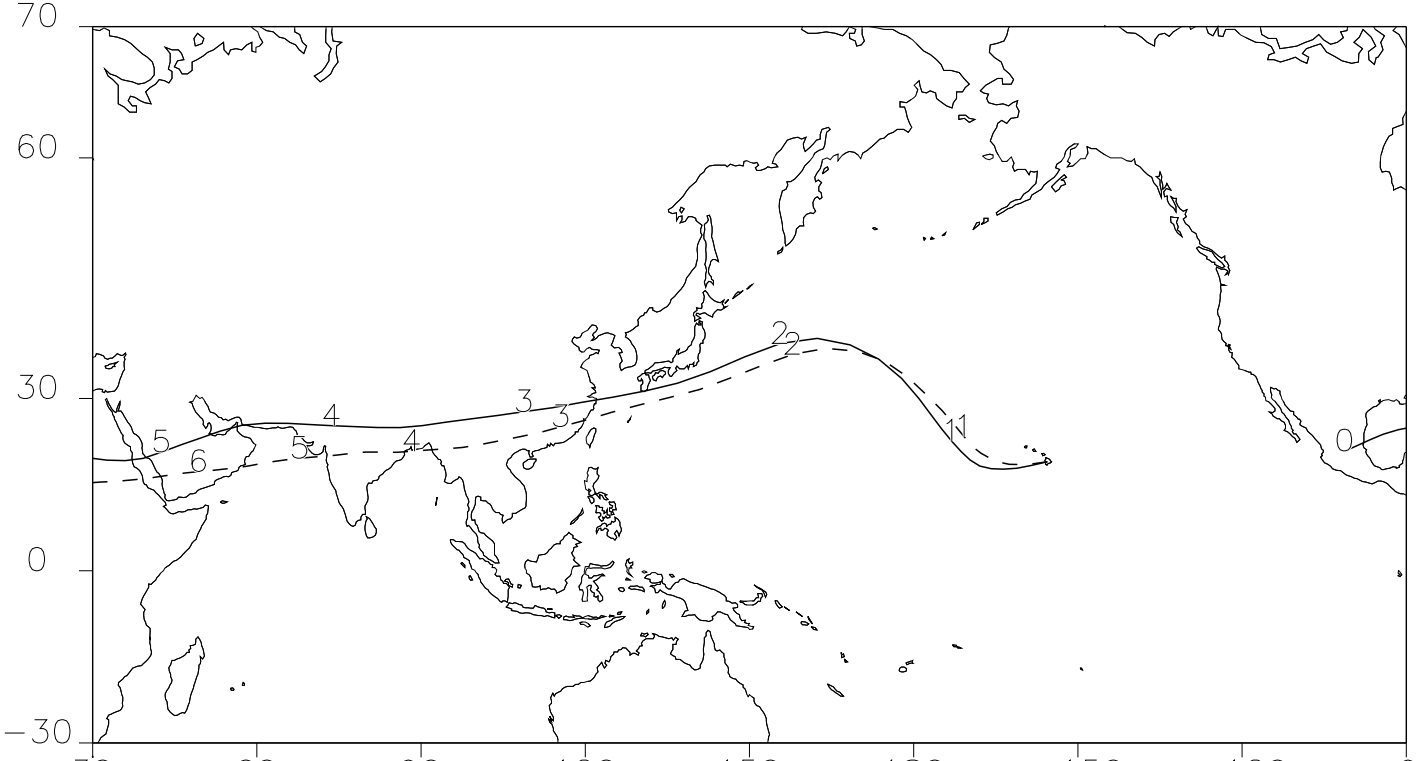
Day	km	hPa	C
0	13.0	179	−55
1	12.2	205	−49
2	12.4	194	−50
3	13.0	178	−54
4	13.9	158	−62
5	14.2	150	−64
6	14.4	145	−66
7	14.8	137	−69
8	15.0	132	−71
9	15.2	130	−72
10	15.5	122	−73

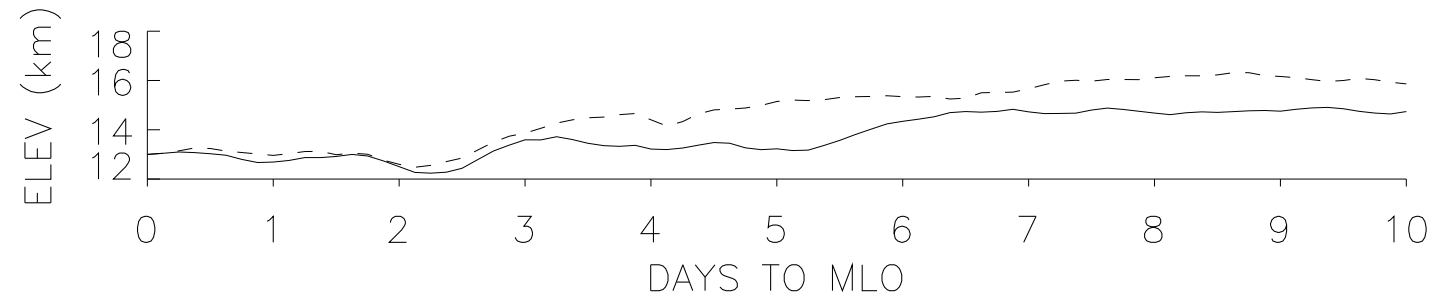
06UT

Day	km	hPa	C
0	13.0	179	−55
1	12.5	195	−51
2	12.5	187	−52
3	13.4	168	−57
4	14.1	153	−63
5	14.4	146	−66
6	14.6	142	−65
7	15.1	131	−70
8	15.6	121	−73
9	15.7	118	−74
10	15.8	116	−75

00UT − solid
06UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/2/2004 (Day of Year 93)
NCEP/NCAR Reanalysis 1 Data Set





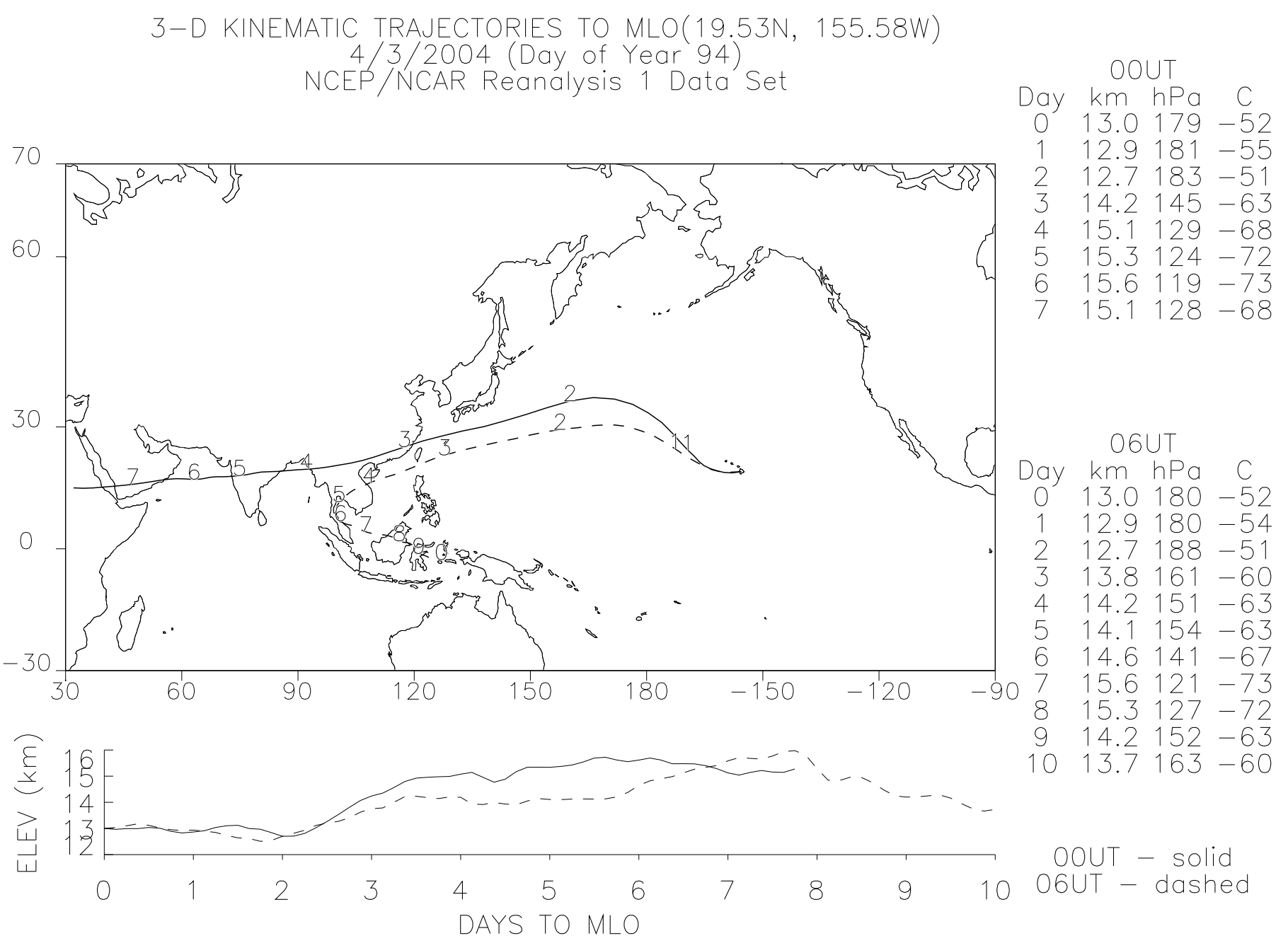
12UT

Day	km	hPa	C
0	13.0	179	−55
1	12.7	187	−54
2	12.5	186	−50
3	13.6	159	−58
4	13.2	172	−55
5	13.2	171	−55
6	14.3	143	−63
7	14.7	134	−64
8	14.7	135	−64
9	14.8	134	−65
10	14.7	134	−65

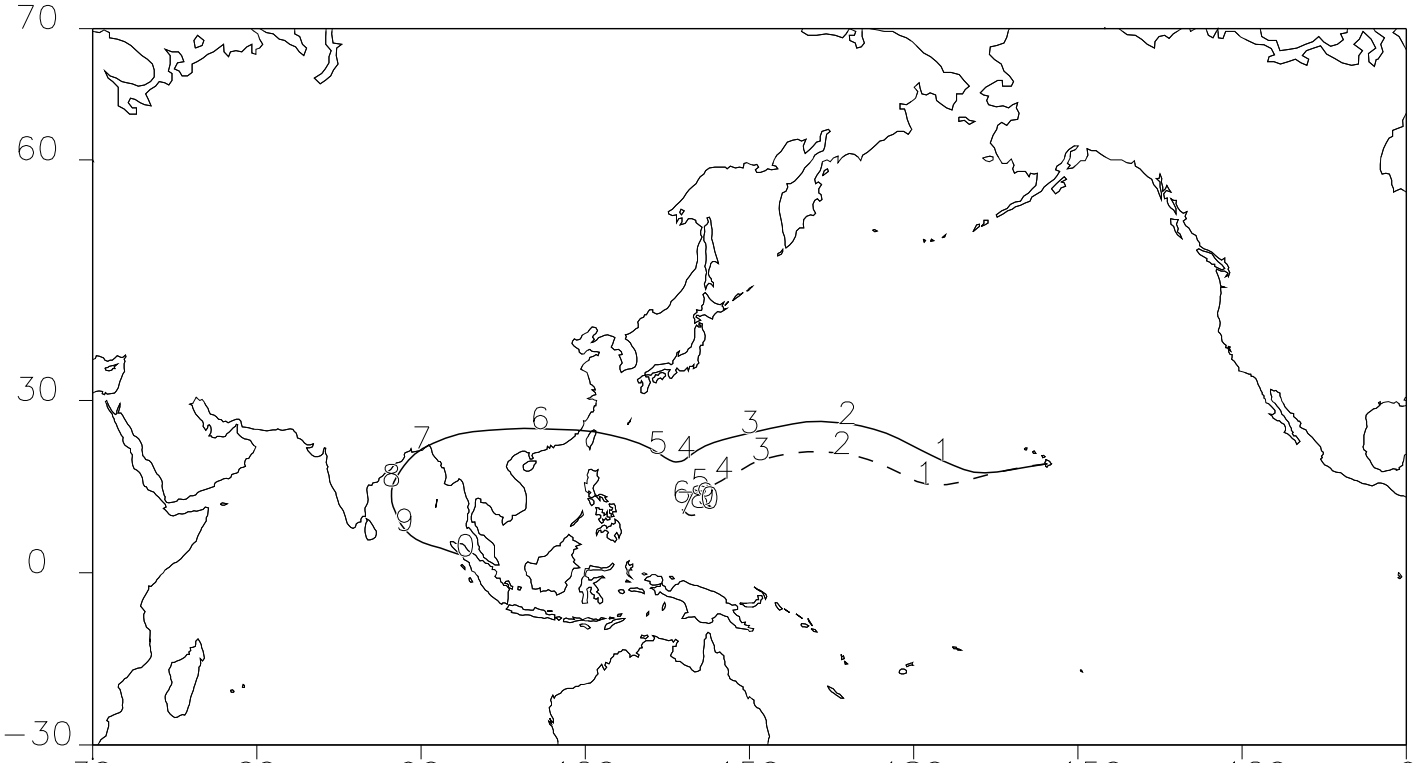
18UT

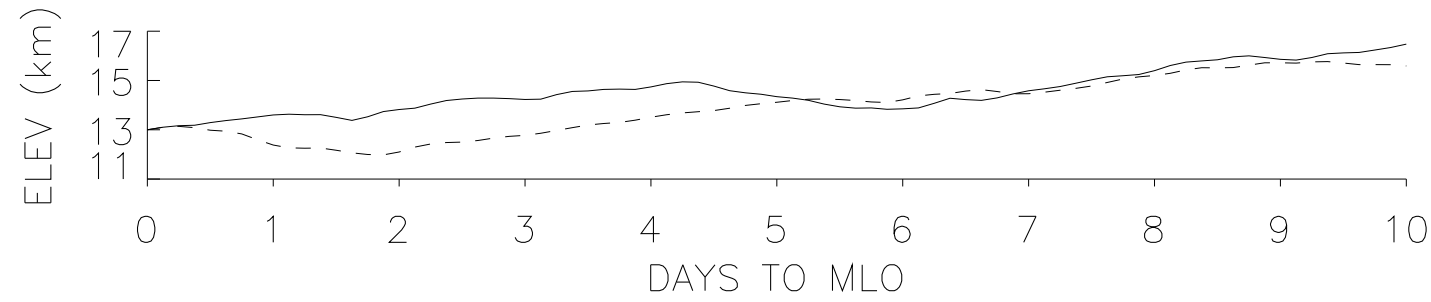
Day	km	hPa	C
0	13.0	179	−54
1	13.0	179	−55
2	12.6	185	−51
3	13.9	155	−60
4	14.4	145	−63
5	15.1	129	−69
6	15.3	124	−70
7	15.7	117	−70
8	16.1	109	−75
9	16.2	108	−74
10	15.9	113	−73

12UT − solid
18UT − dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/3/2004 (Day of Year 94)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 179 -52
1 12.9 181 -55
2 12.7 183 -51
3 14.2 145 -63
4 15.1 129 -68
5 15.3 124 -72
6 15.6 119 -73
7 15.1 128 -68
06UT
Day km hPa C
0 13.0 180 -52
1 12.9 180 -54
2 12.7 188 -51
3 13.8 161 -60
4 14.2 151 -63
5 14.1 154 -63
6 14.6 141 -67
7 15.6 121 -73
8 15.3 127 -72
9 14.2 152 -63
10 13.7 163 -60
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
16
15
14
13
12
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/3/2004 (Day of Year 94)
NCEP/NCAR Reanalysis 1 Data Set





12UT

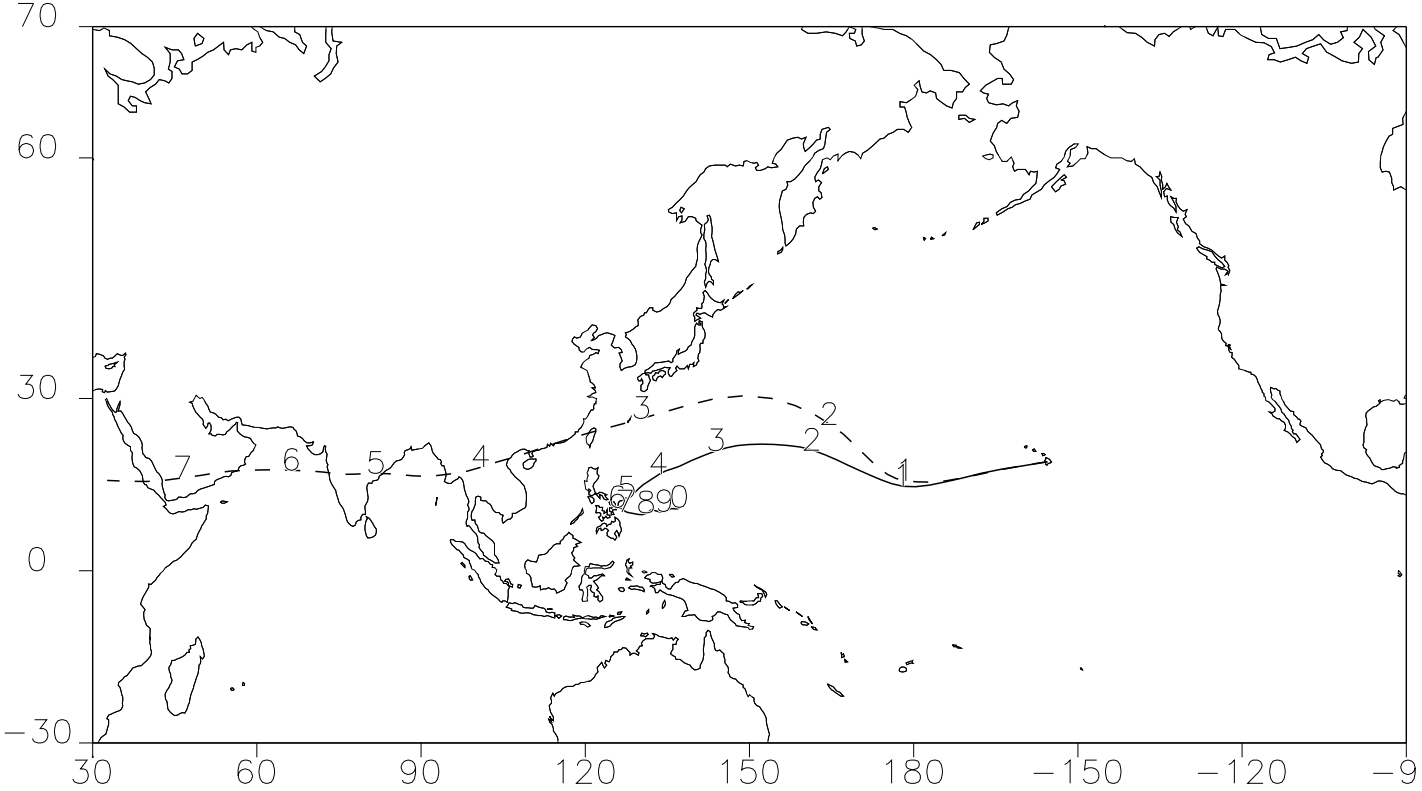
Day	km	hPa	C
0	13.0	181	−54
1	13.6	165	−59
2	13.8	160	−60
3	14.2	151	−63
4	14.7	139	−67
5	14.3	148	−64
6	13.9	158	−59
7	14.6	141	−65
8	15.4	124	−71
9	15.9	114	−75
10	16.5	103	−81

18UT

Day	km	hPa	C
0	13.0	180	−53
1	12.4	200	−50
2	12.1	210	−47
3	12.8	191	−52
4	13.5	170	−59
5	14.1	154	−64
6	14.2	151	−64
7	14.5	145	−66
8	15.2	128	−71
9	15.7	118	−74
10	15.6	120	−74

12UT − solid
18UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/4/2004 (Day of Year 95)
NCEP/NCAR Reanalysis 1 Data Set

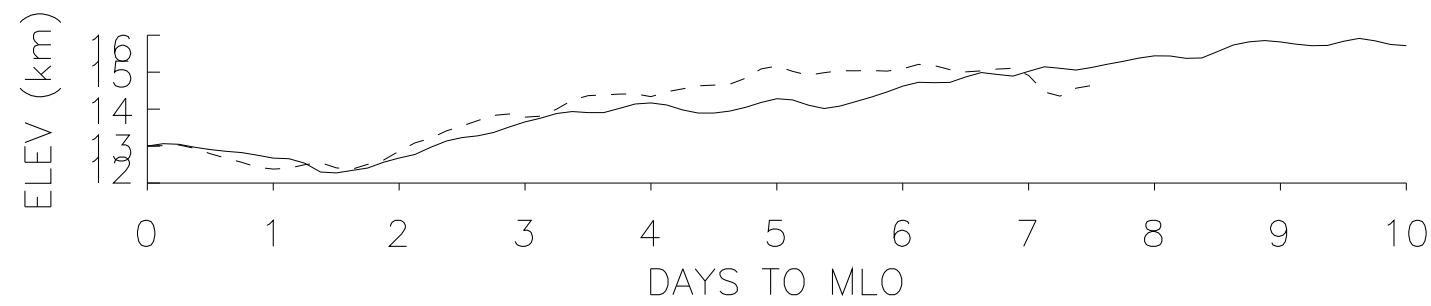


00UT

Day	km	hPa	C
0	13.0	179	−54
1	12.7	192	−51
2	12.7	194	−51
3	13.7	166	−59
4	14.2	153	−64
5	14.3	150	−65
6	14.6	141	−68
7	15.0	132	−70
8	15.4	124	−73
9	15.8	116	−77
10	15.7	118	−74

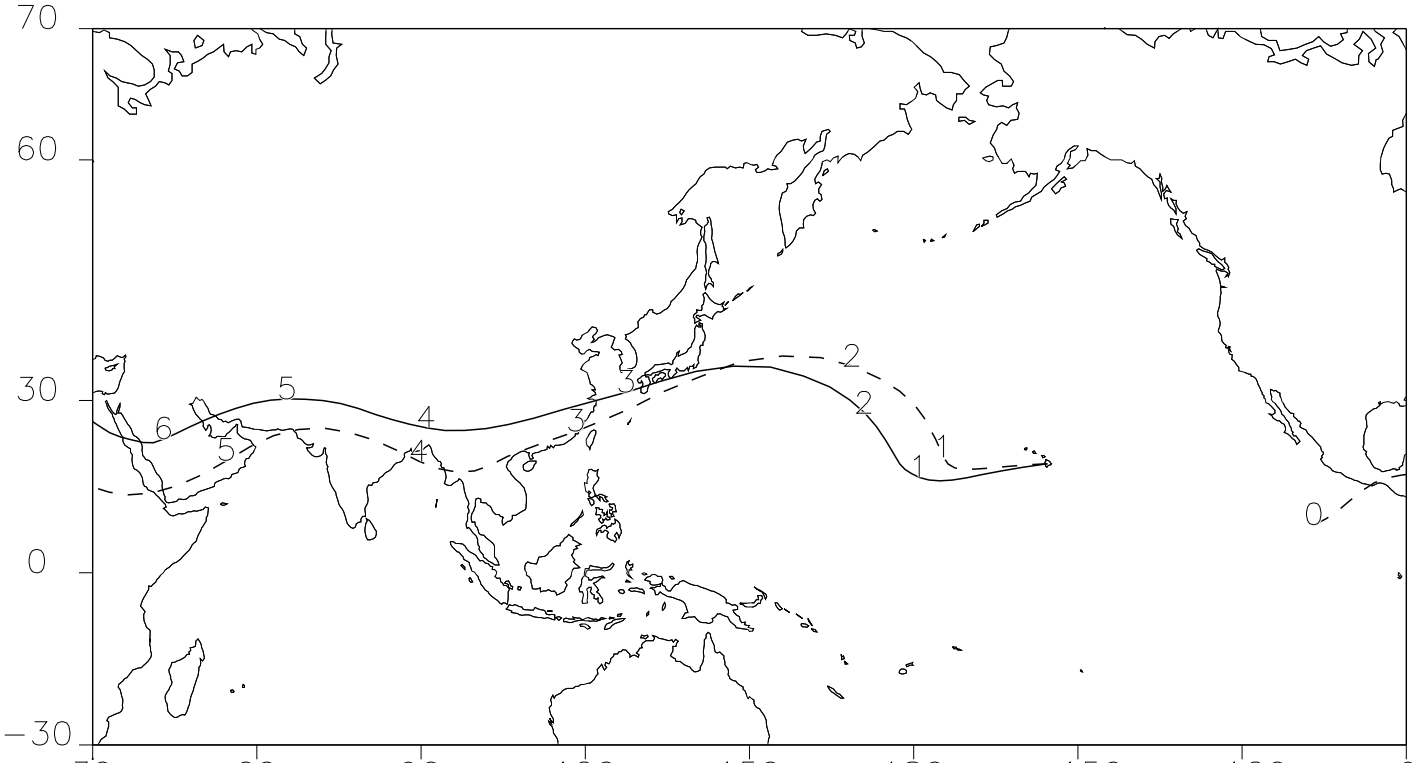
06UT

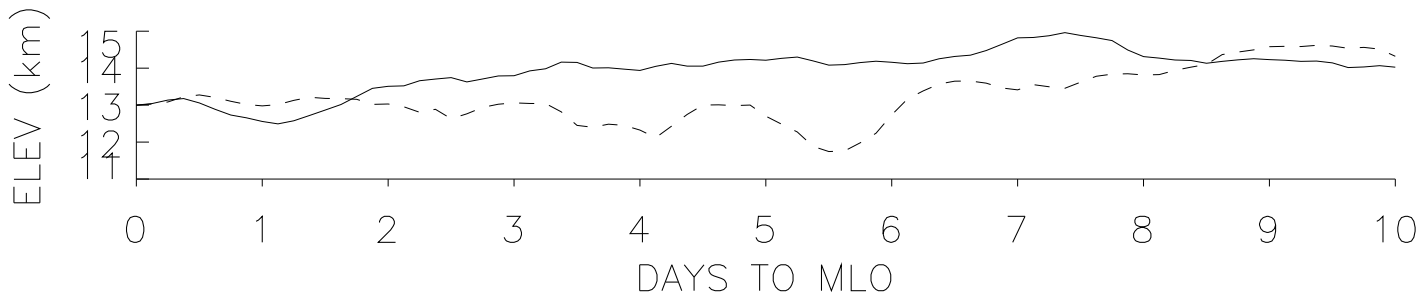
Day	km	hPa	C
0	13.0	179	−56
1	12.4	200	−49
2	12.9	185	−53
3	13.8	158	−61
4	14.3	147	−65
5	15.2	129	−70
6	15.1	130	−69
7	14.9	134	−67



00UT – solid
06UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/4/2004 (Day of Year 95)
NCEP/NCAR Reanalysis 1 Data Set





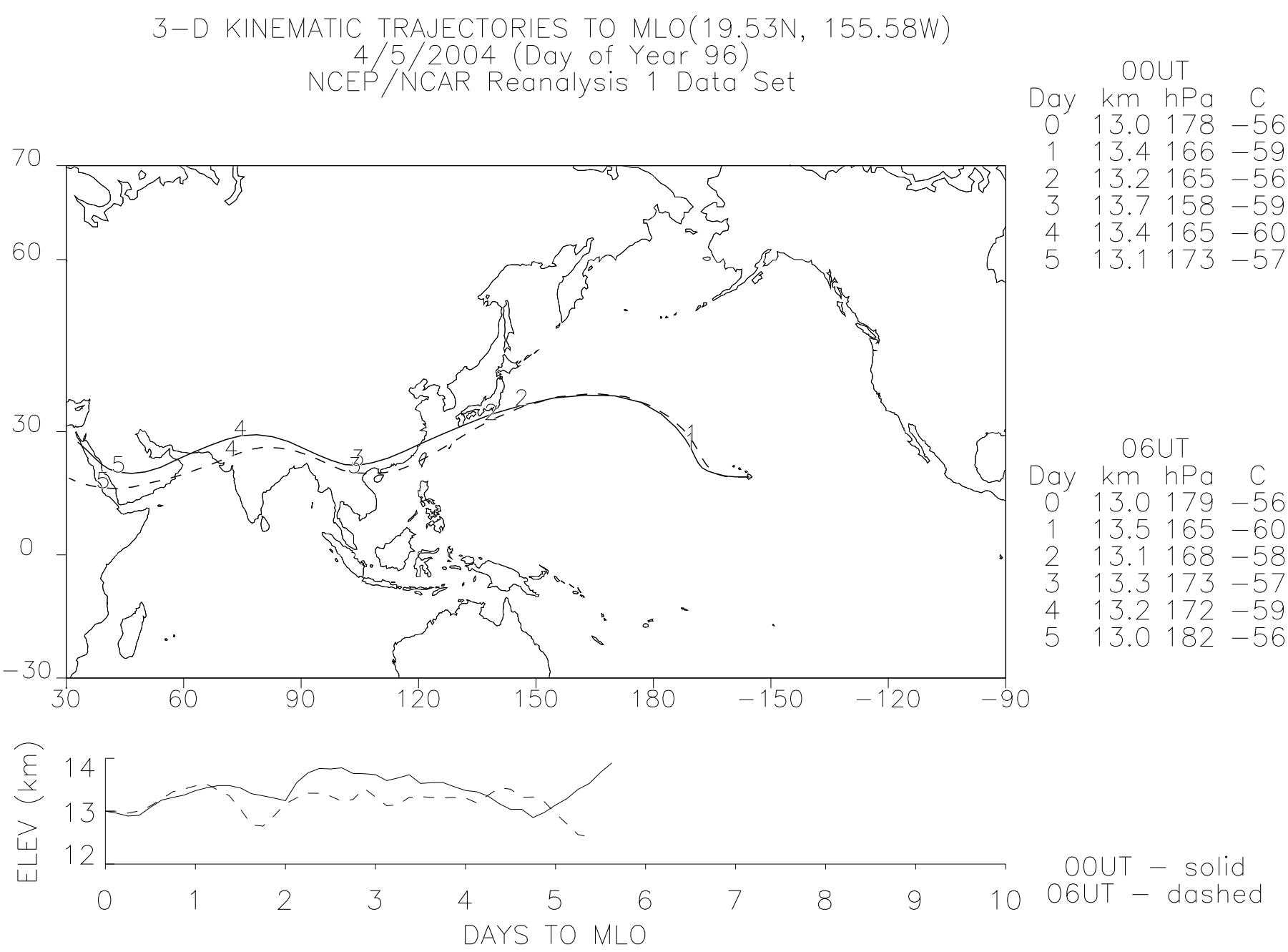
12UT

Day	km	hPa	C
0	13.0	179	−57
1	12.6	194	−51
2	13.5	165	−57
3	13.8	153	−61
4	13.9	151	−58
5	14.2	144	−59
6	14.2	146	−58
7	14.8	131	−63
8	14.3	139	−59
9	14.2	142	−59
10	14.0	147	−58

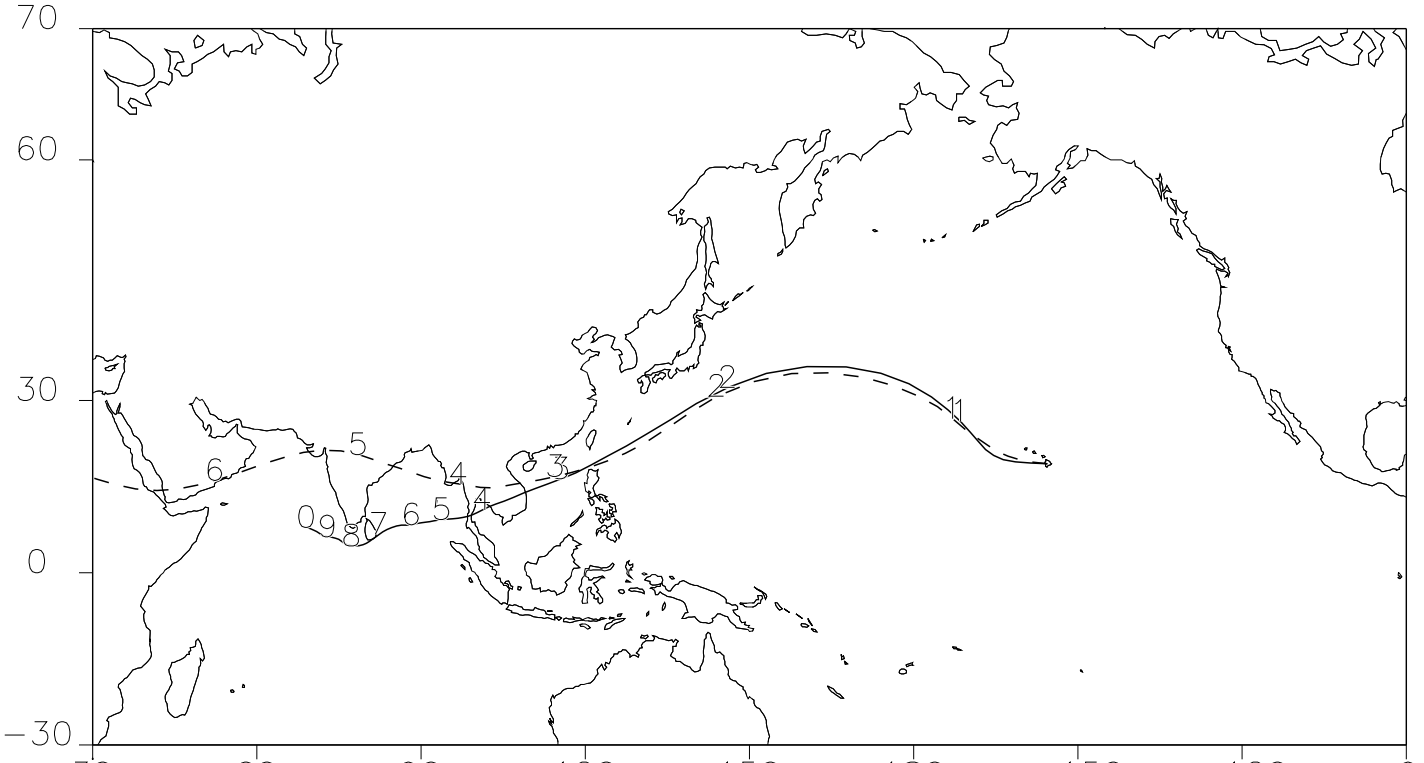
18UT

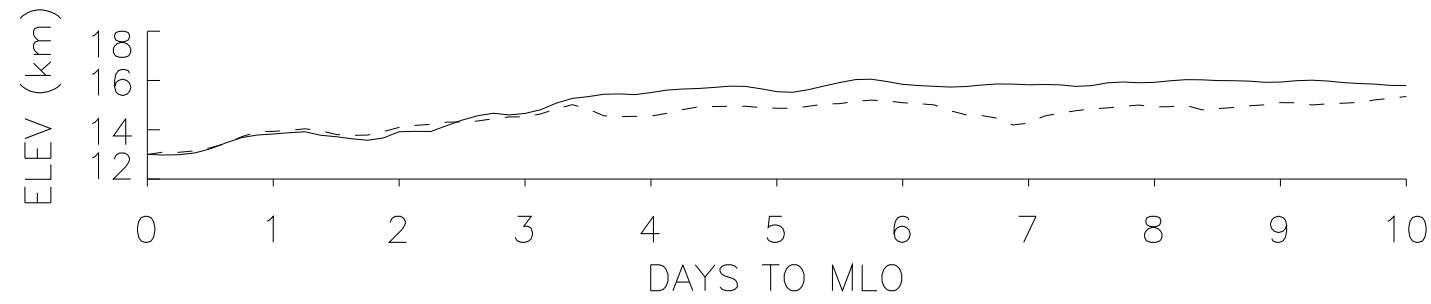
Day	km	hPa	C
0	13.0	179	−57
1	13.0	180	−56
2	13.0	174	−58
3	13.1	175	−59
4	12.3	201	−53
5	12.7	188	−56
6	12.7	188	−55
7	13.4	166	−59
8	13.8	155	−62
9	14.6	140	−66
10	14.3	148	−66

12UT − solid
18UT − dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/5/2004 (Day of Year 96)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 178 -56
1 13.4 166 -59
2 13.2 165 -56
3 13.7 158 -59
4 13.4 165 -60
5 13.1 173 -57
06UT
Day km hPa C
0 13.0 179 -56
1 13.5 165 -60
2 13.1 168 -58
3 13.3 173 -57
4 13.2 172 -59
5 13.0 182 -56
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
14
13
12
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/5/2004 (Day of Year 96)
NCEP/NCAR Reanalysis 1 Data Set





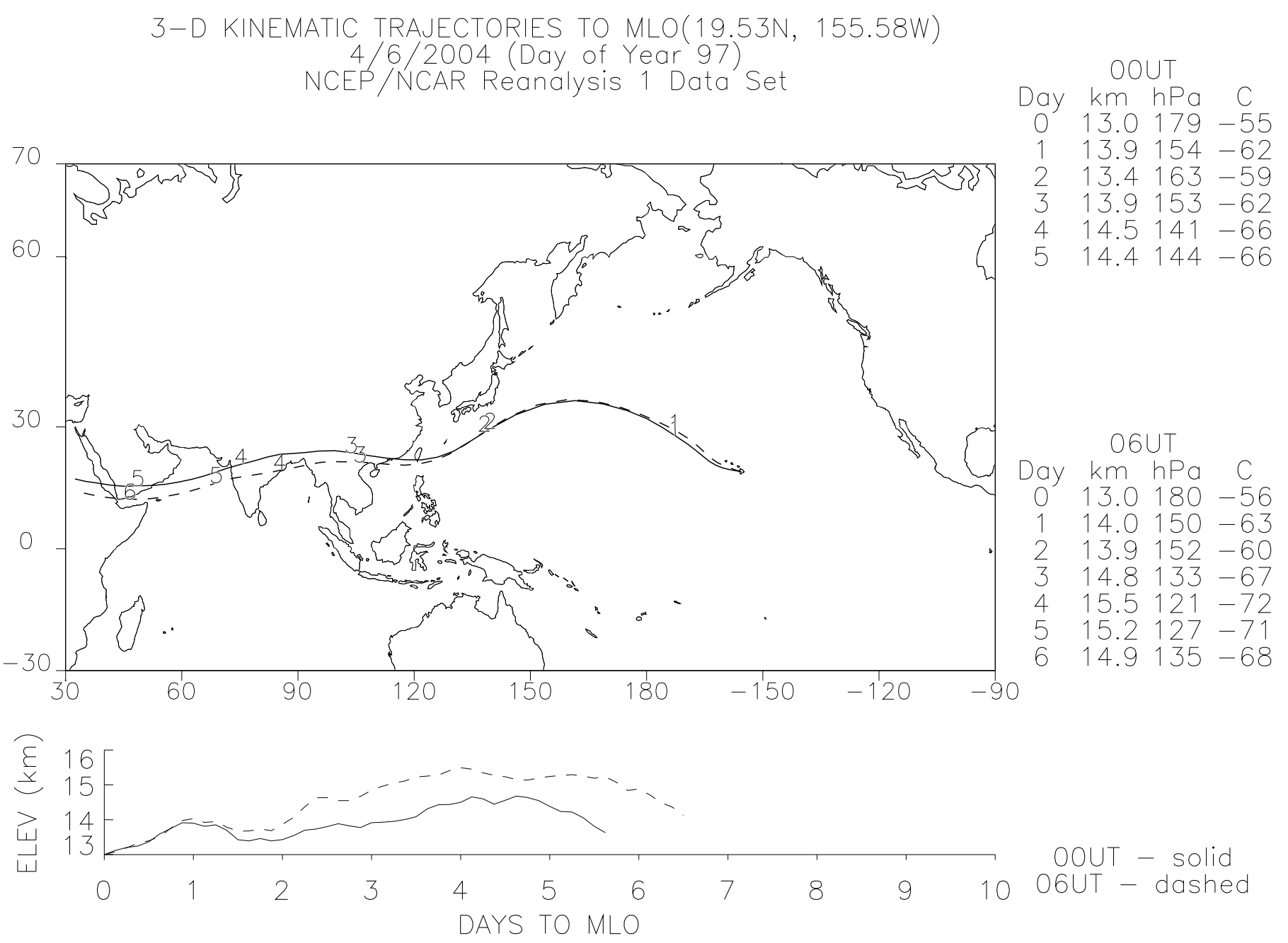
12UT

Day	km	hPa	C
0	13.0	179	−56
1	13.8	157	−62
2	13.9	152	−62
3	14.7	139	−67
4	15.5	121	−73
5	15.5	121	−72
6	15.8	115	−74
7	15.8	115	−74
8	15.9	114	−75
9	15.9	113	−75
10	15.8	116	−75

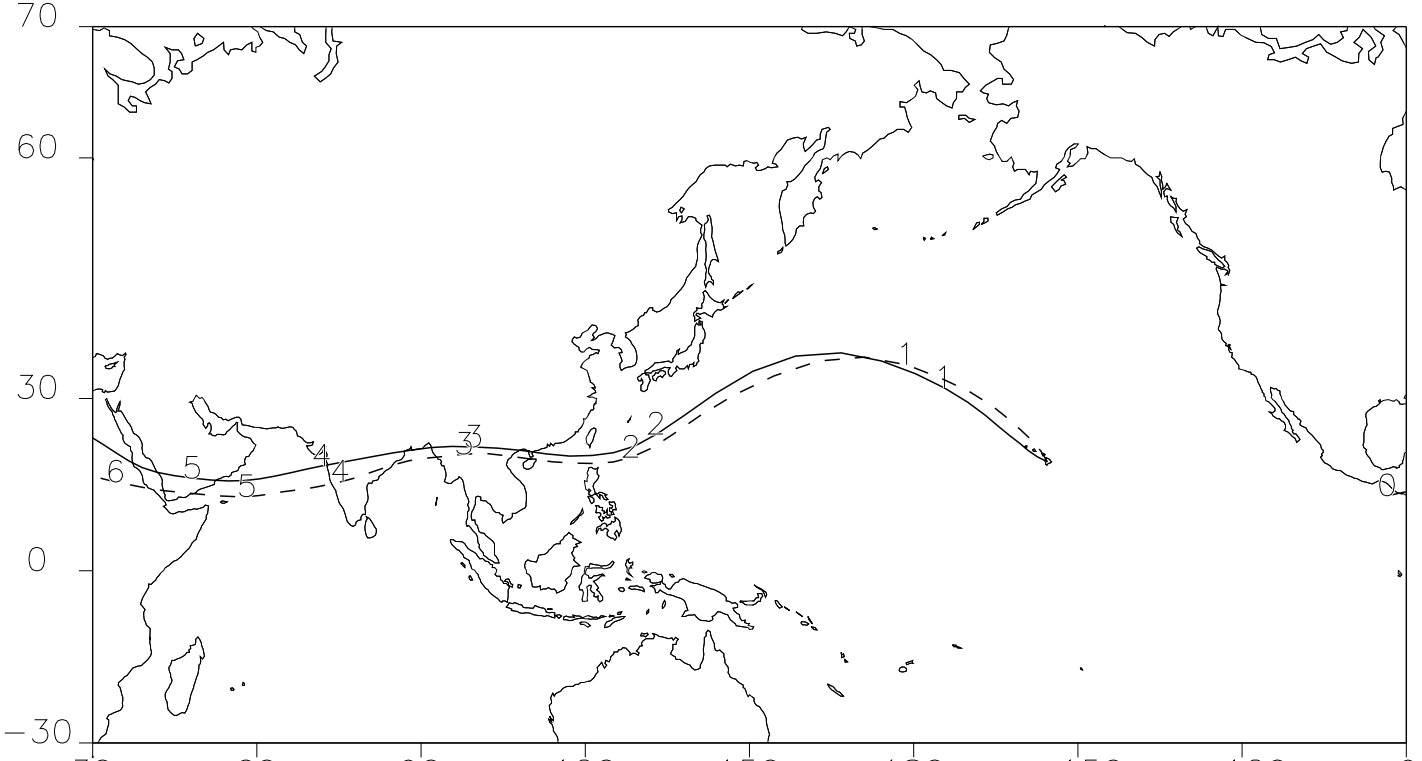
18UT

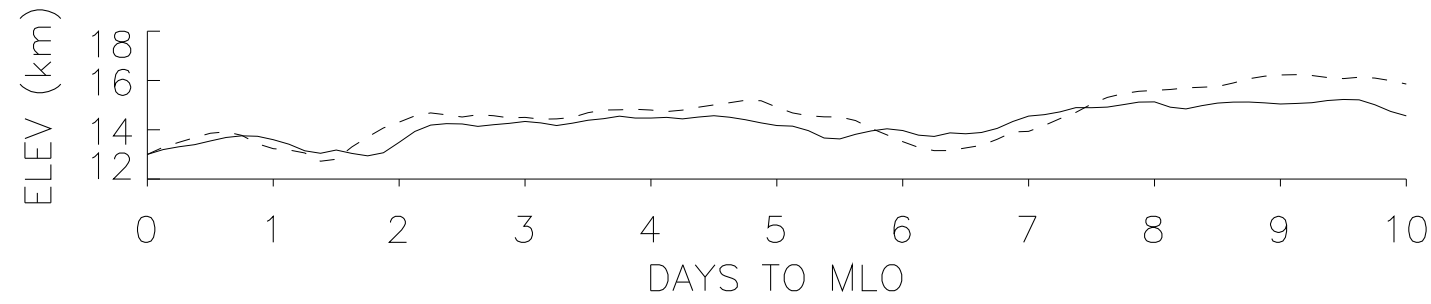
Day	km	hPa	C
0	13.0	179	−56
1	13.9	154	−62
2	14.1	148	−62
3	14.5	142	−66
4	14.6	142	−66
5	14.9	134	−67
6	15.1	129	−67
7	14.3	148	−60
8	14.9	131	−67
9	15.1	126	−68
10	15.3	122	−69

12UT − solid
18UT − dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/6/2004 (Day of Year 97)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 179 -55
1 13.9 154 -62
2 13.4 163 -59
3 13.9 153 -62
4 14.5 141 -66
5 14.4 144 -66
06UT
Day km hPa C
0 13.0 180 -56
1 14.0 150 -63
2 13.9 152 -60
3 14.8 133 -67
4 15.5 121 -72
5 15.2 127 -71
6 14.9 135 -68
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
16
15
14
13
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/6/2004 (Day of Year 97)
NCEP/NCAR Reanalysis 1 Data Set





12UT

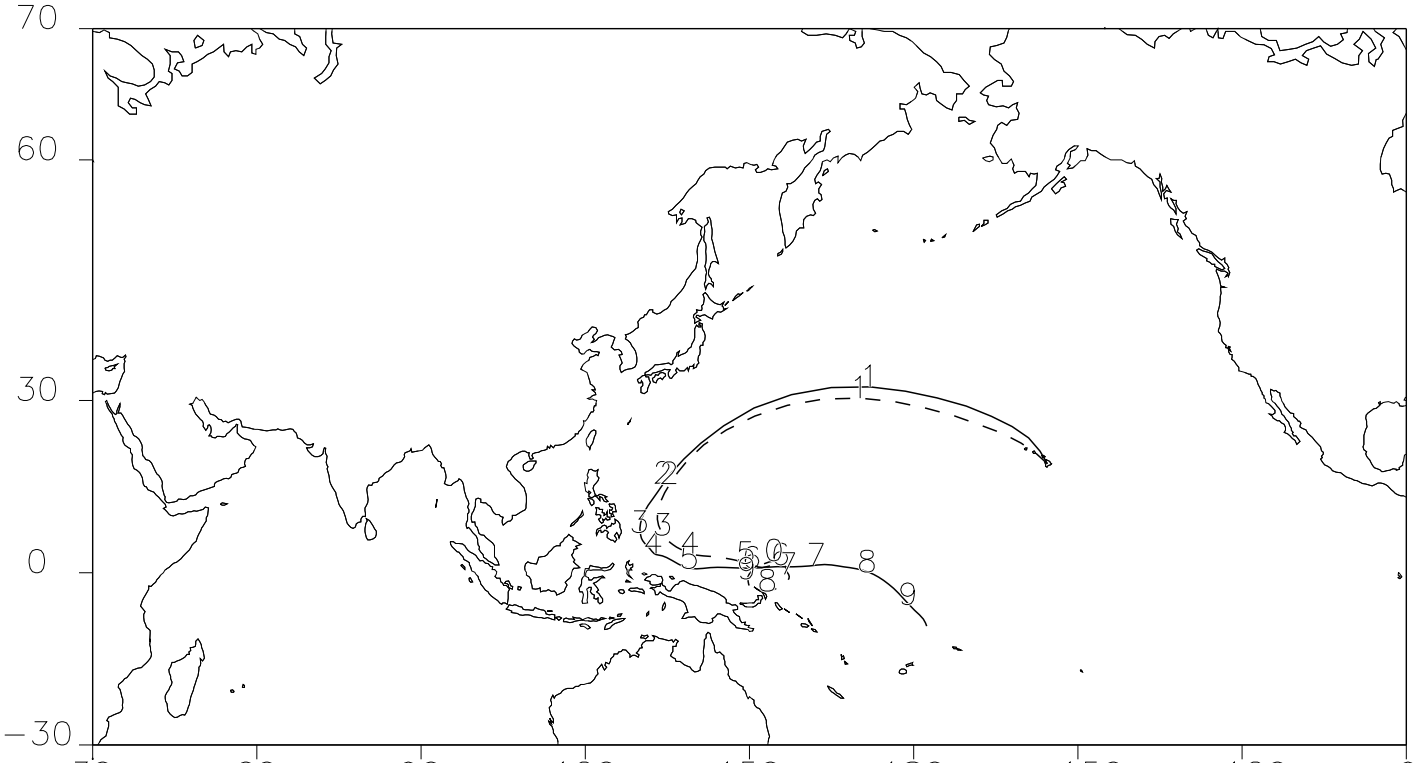
Day	km	hPa	C
0	13.0	179	-56
1	13.6	160	-62
2	13.5	165	-60
3	14.3	145	-67
4	14.5	142	-67
5	14.2	149	-63
6	14.0	153	-60
7	14.6	141	-67
8	15.1	127	-71
9	15.0	129	-72
10	14.6	141	-66

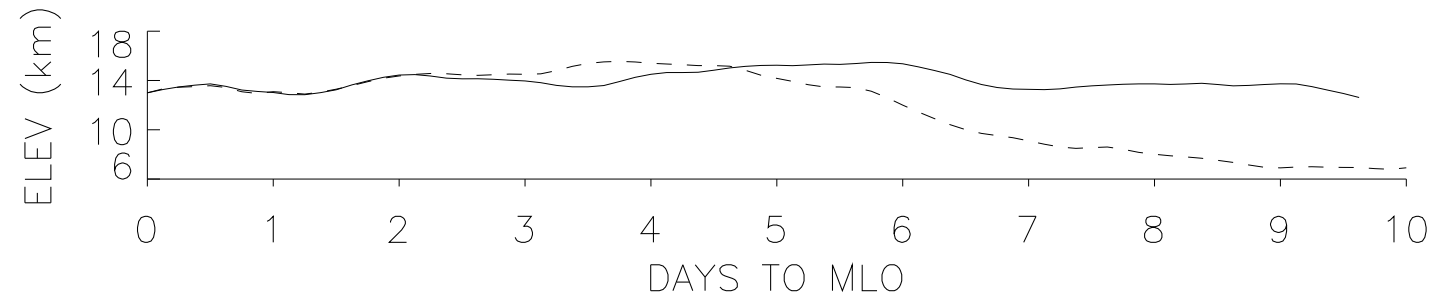
18UT

Day	km	hPa	C
0	13.0	181	-56
1	13.2	167	-58
2	14.3	146	-66
3	14.5	142	-67
4	14.8	137	-67
5	14.9	134	-68
6	13.5	168	-58
7	13.9	156	-62
8	15.6	120	-73
9	16.2	107	-77
10	15.9	114	-75

12UT – solid
18UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/7/2004 (Day of Year 98)
NCEP/NCAR Reanalysis 1 Data Set





00UT

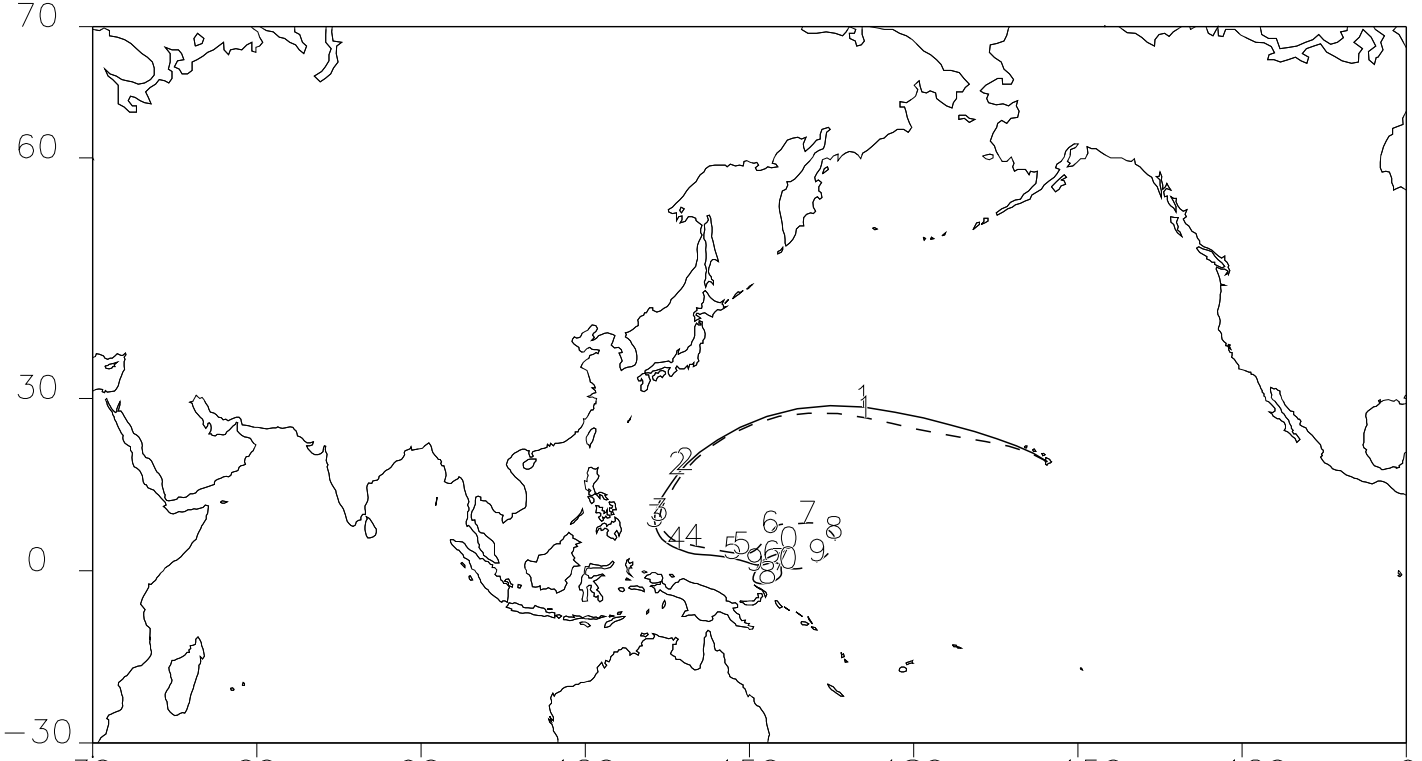
Day	km	hPa	C
0	13.0	181	−57
1	13.0	177	−57
2	14.4	146	−69
3	14.0	158	−64
4	14.5	145	−67
5	15.2	128	−72
6	15.4	126	−75
7	13.3	176	−59
8	13.7	164	−62
9	13.7	164	−62

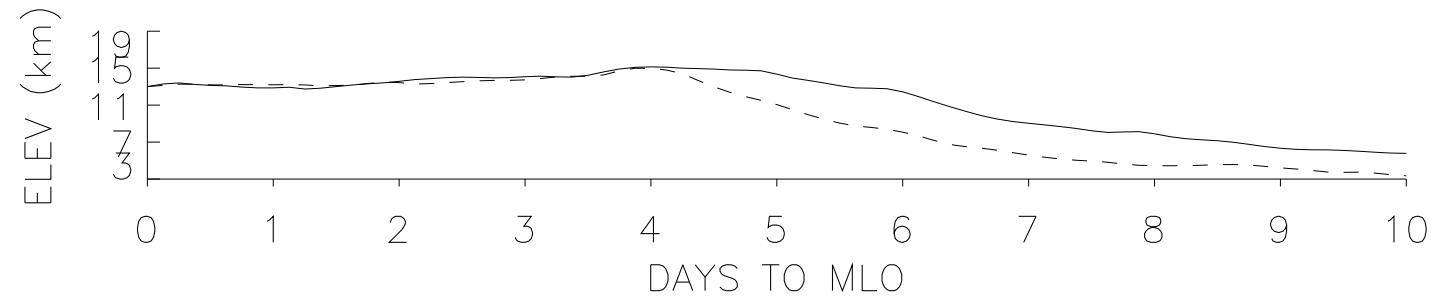
06UT

Day	km	hPa	C
0	13.0	182	−57
1	13.1	176	−57
2	14.4	147	−67
3	14.5	145	−66
4	15.4	125	−72
5	14.2	153	−64
6	12.0	215	−47
7	9.1	326	−25
8	8.0	378	−18
9	6.9	437	−11
10	6.9	436	−11

00UT − solid
06UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/7/2004 (Day of Year 98)
NCEP/NCAR Reanalysis 1 Data Set





12UT

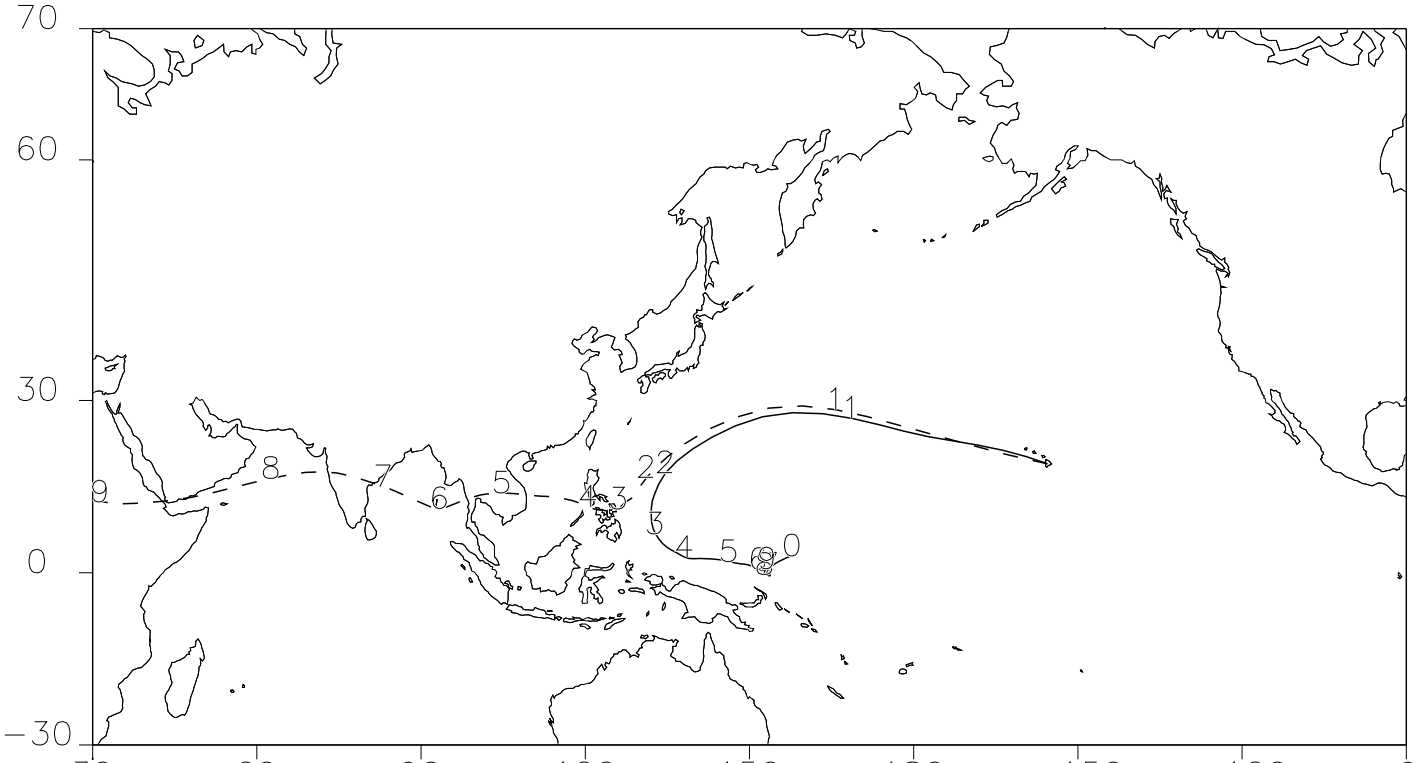
Day	km	hPa	C
0	13.0	181	−57
1	12.9	184	−55
2	13.6	168	−61
3	14.1	156	−65
4	15.1	131	−71
5	14.4	149	−66
6	12.4	202	−50
7	9.0	330	−24
8	7.9	385	−17
9	6.3	472	−8
10	5.8	507	−4

18UT

Day	km	hPa	C
0	13.0	182	−57
1	13.2	176	−57
2	13.4	171	−60
3	13.7	164	−62
4	15.0	134	−71
5	11.1	247	−40
6	8.1	375	−17
7	5.6	517	−4
8	4.4	597	4
9	4.2	614	3
10	3.3	681	9

12UT – solid
18UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/8/2004 (Day of Year 99)
NCEP/NCAR Reanalysis 1 Data Set

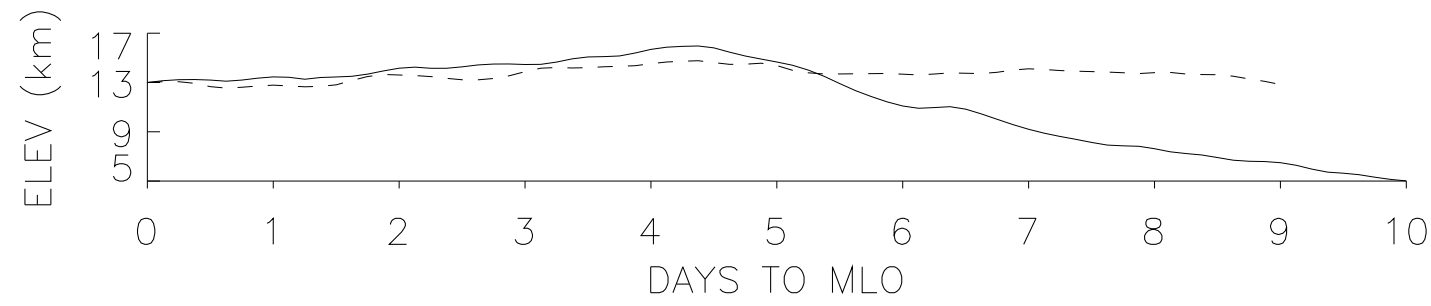


00UT

Day	km	hPa	C
0	13.0	182	−57
1	13.5	169	−60
2	14.2	152	−66
3	14.5	146	−68
4	15.7	119	−75
5	14.7	142	−68
6	11.1	247	−40
7	9.2	323	−26
8	7.6	399	−15
9	6.5	462	−9
10	5.0	558	0

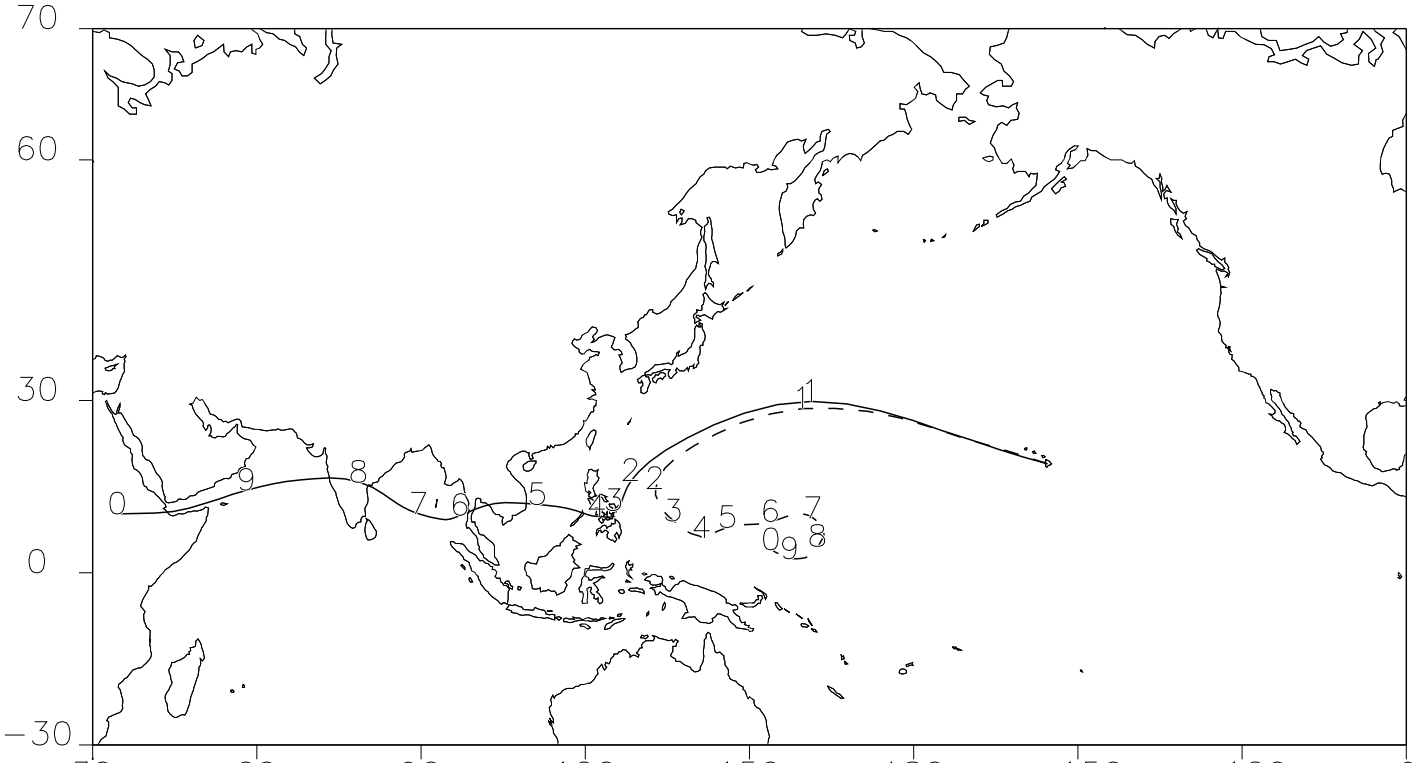
06UT

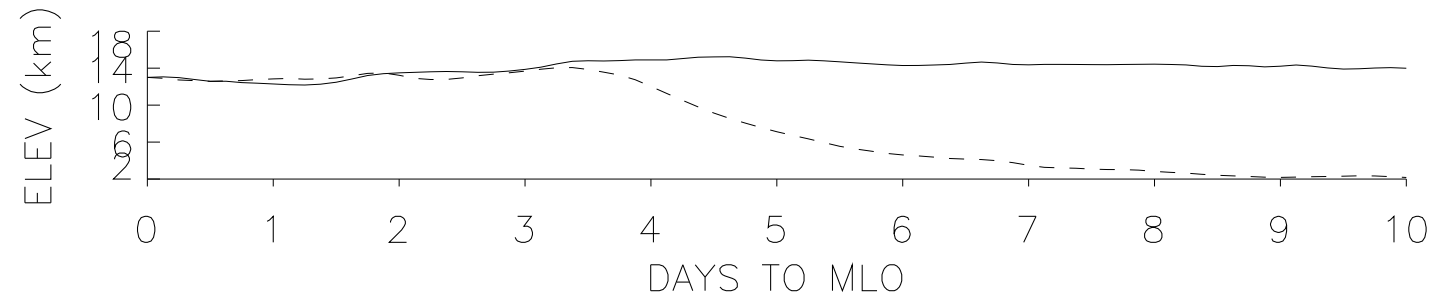
Day	km	hPa	C
0	13.0	182	−57
1	12.8	186	−55
2	13.6	167	−61
3	13.9	160	−64
4	14.5	143	−69
5	14.4	147	−66
6	13.7	165	−62
7	14.1	153	−66
8	13.8	161	−62
9	12.8	188	−53



00UT − solid
06UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/8/2004 (Day of Year 99)
NCEP/NCAR Reanalysis 1 Data Set





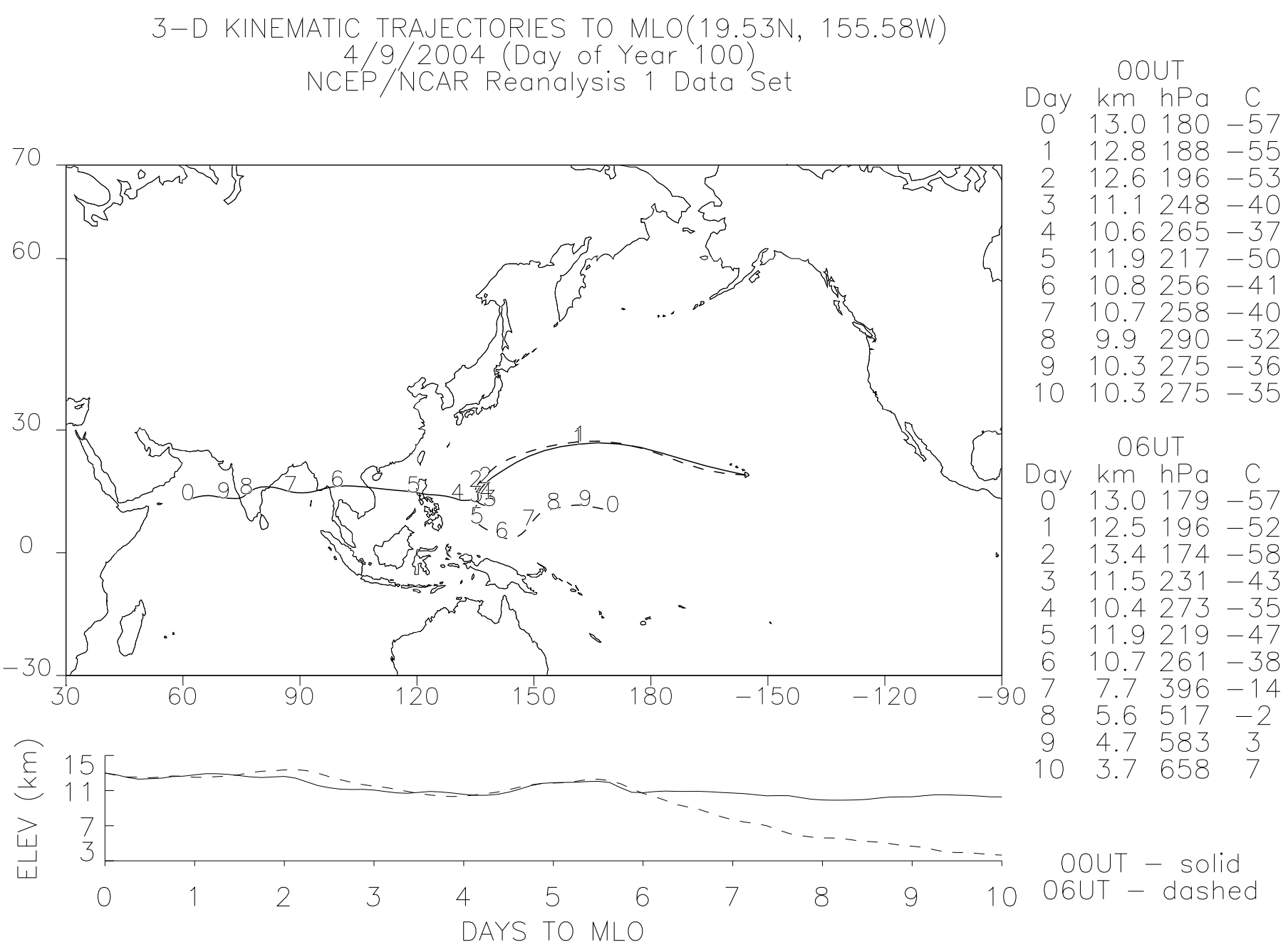
12UT

Day	km	hPa	C
0	13.0	180	−58
1	12.3	200	−51
2	13.5	170	−62
3	13.9	160	−64
4	14.9	135	−71
5	14.8	137	−69
6	14.3	149	−66
7	14.4	147	−66
8	14.4	145	−66
9	14.2	150	−66
10	14.0	156	−63

18UT

Day	km	hPa	C
0	13.0	181	−57
1	12.8	184	−55
2	13.2	177	−58
3	13.7	165	−62
4	12.0	214	−47
5	7.1	424	−11
6	4.6	584	2
7	3.5	671	9
8	2.8	726	12
9	2.2	784	15
10	2.2	785	15

12UT – solid
18UT – dashed



00UT

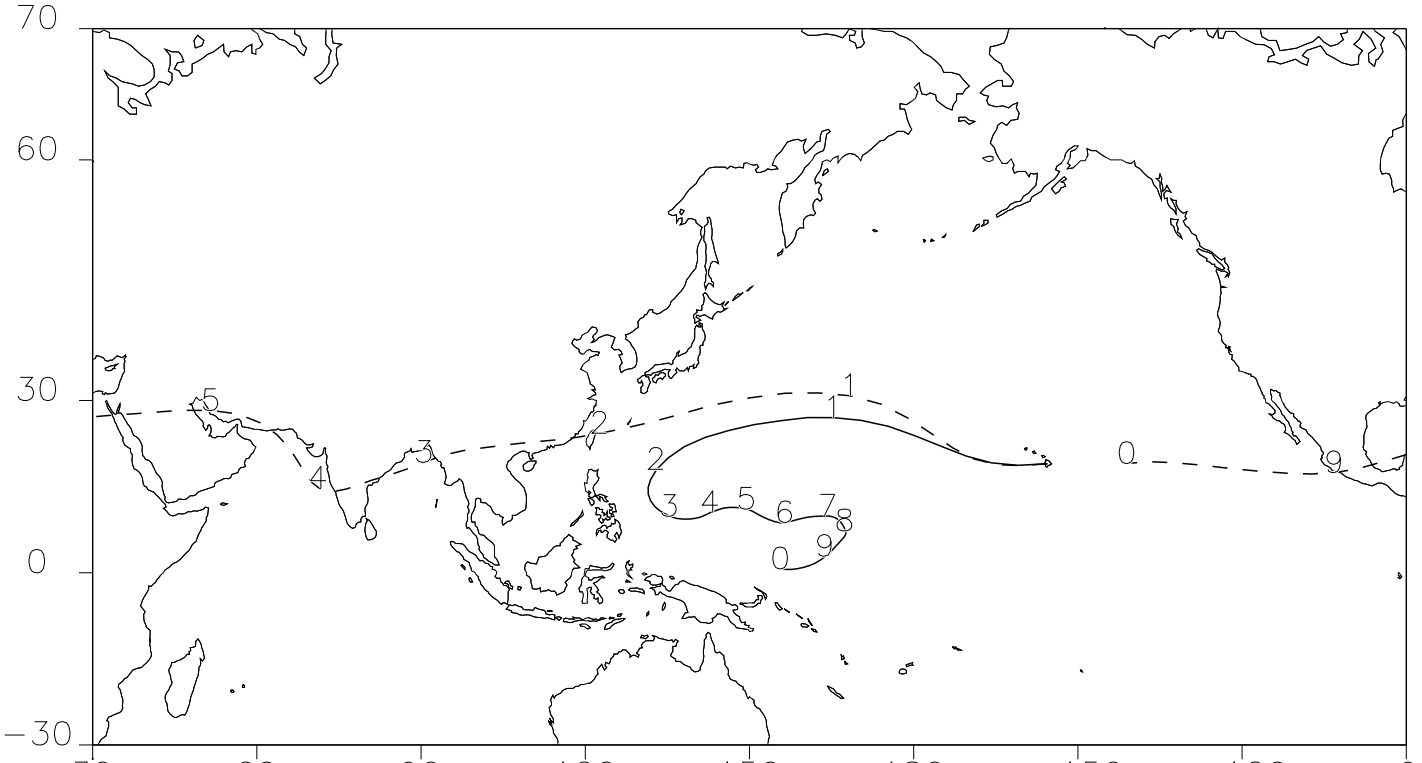
Day	km	hPa	C
0	13.0	180	−57
1	12.8	188	−55
2	12.6	196	−53
3	11.1	248	−40
4	10.6	265	−37
5	11.9	217	−50
6	10.8	256	−41
7	10.7	258	−40
8	9.9	290	−32
9	10.3	275	−36
10	10.3	275	−35

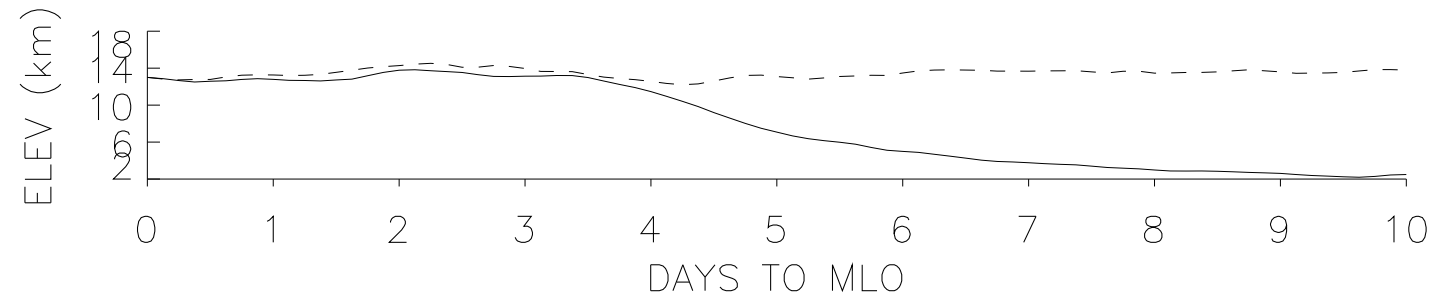
06UT

Day	km	hPa	C
0	13.0	179	−57
1	12.5	196	−52
2	13.4	174	−58
3	11.5	231	−43
4	10.4	273	−35
5	11.9	219	−47
6	10.7	261	−38
7	7.7	396	−14
8	5.6	517	−2
9	4.7	583	3
10	3.7	658	7

00UT − solid
06UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/9/2004 (Day of Year 100)
NCEP/NCAR Reanalysis 1 Data Set





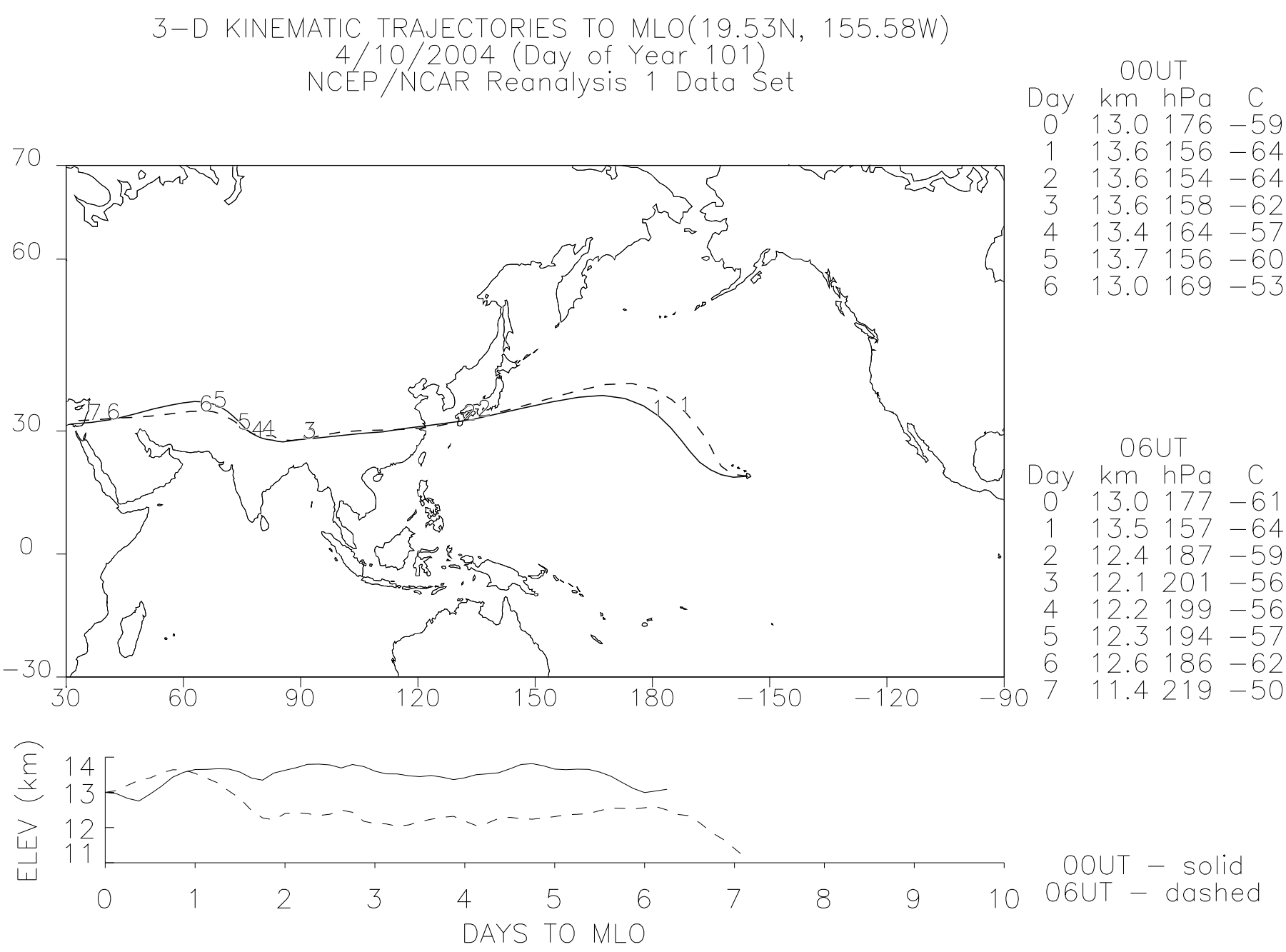
12UT

Day	km	hPa	C
0	13.0	178	-58
1	12.8	188	-54
2	13.8	163	-62
3	13.1	181	-56
4	11.5	234	-42
5	7.1	429	-10
6	5.0	559	1
7	3.8	651	7
8	3.0	715	12
9	2.6	747	13
10	2.5	758	14

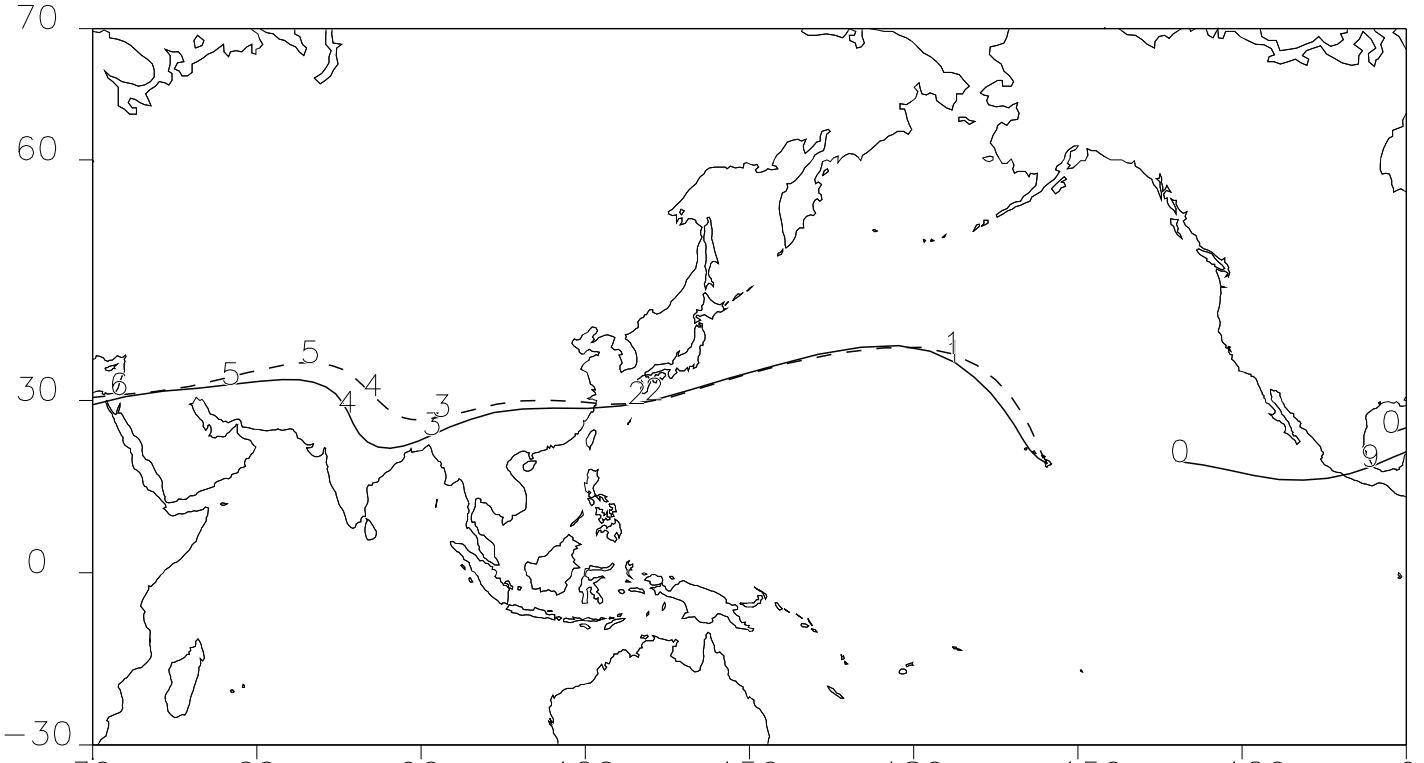
18UT

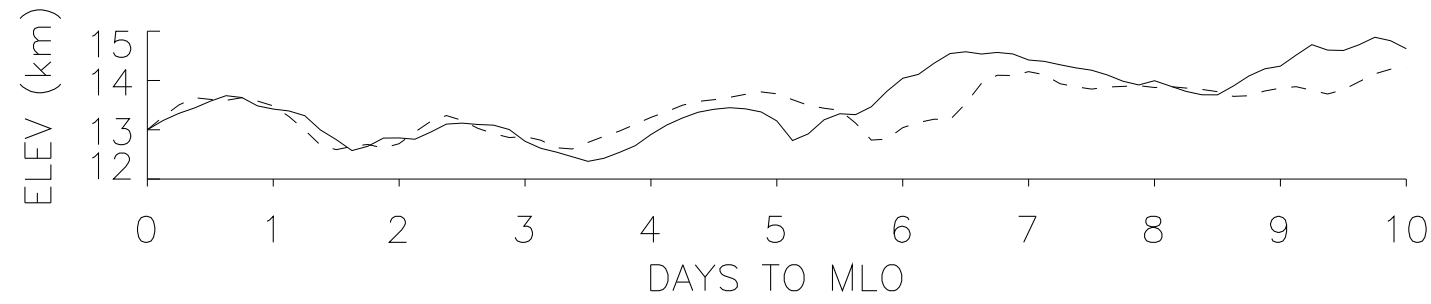
Day	km	hPa	C
0	13.0	177	-58
1	13.3	170	-59
2	14.3	145	-68
3	14.0	154	-64
4	12.6	195	-52
5	13.1	175	-56
6	13.5	165	-60
7	13.7	161	-60
8	13.5	164	-58
9	13.6	162	-61
10	13.8	157	-64

12UT - solid
18UT - dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/10/2004 (Day of Year 101)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 176 -59
1 13.6 156 -64
2 13.6 154 -64
3 13.6 158 -62
4 13.4 164 -57
5 13.7 156 -60
6 13.0 169 -53
06UT
Day km hPa C
0 13.0 177 -61
1 13.5 157 -64
2 12.4 187 -59
3 12.1 201 -56
4 12.2 199 -56
5 12.3 194 -57
6 12.6 186 -62
7 11.4 219 -50
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
7 6 5 4 4 3 2 2 1 1
ELEV (km)
14
13
12
11
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/10/2004 (Day of Year 101)
NCEP/NCAR Reanalysis 1 Data Set





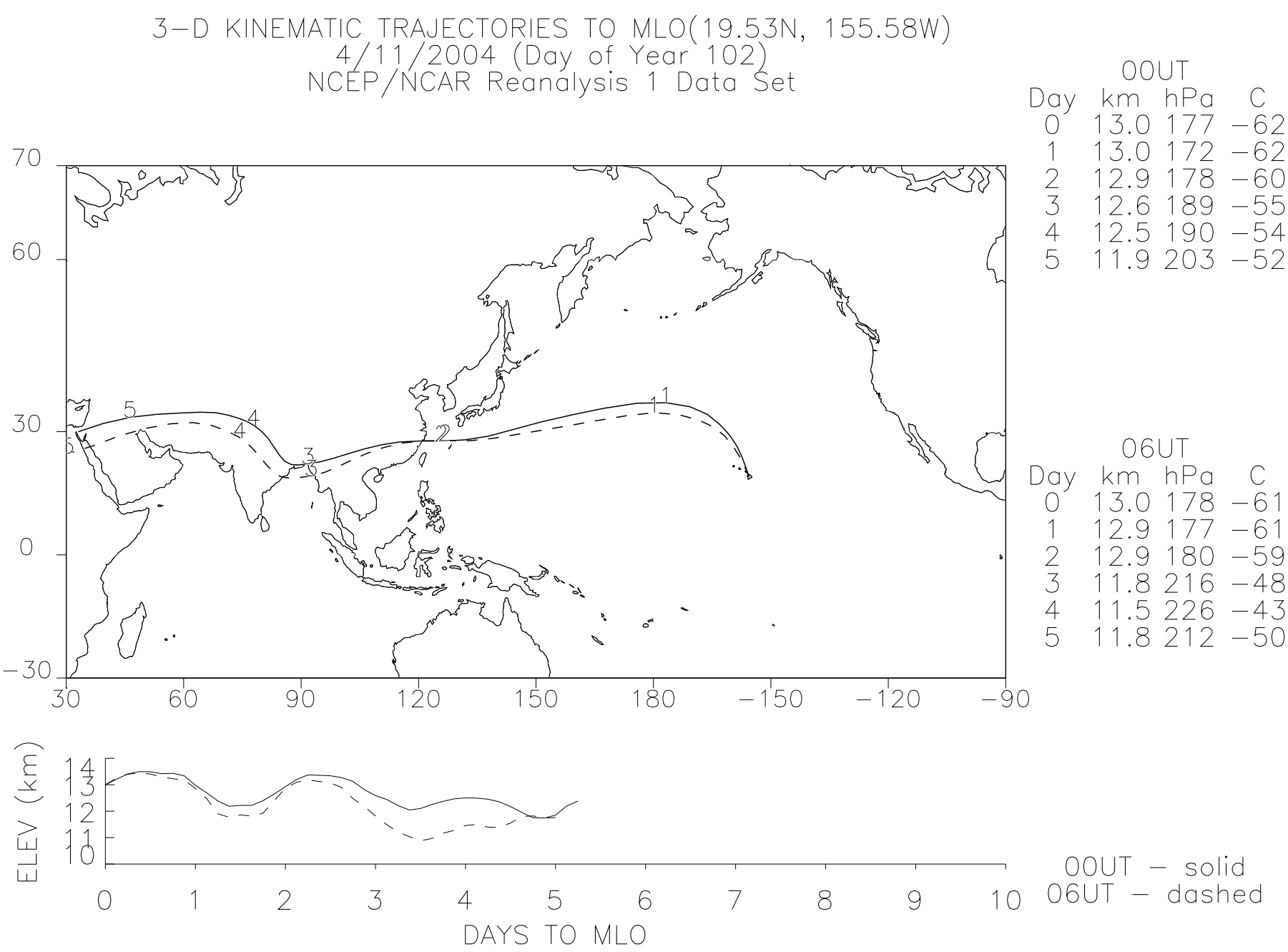
12UT

Day	km	hPa	C
0	13.0	175	−61
1	13.4	160	−64
2	12.8	178	−59
3	12.8	183	−57
4	12.9	179	−55
5	13.2	169	−56
6	14.0	149	−63
7	14.4	142	−62
8	14.0	150	−59
9	14.3	144	−63
10	14.6	136	−68

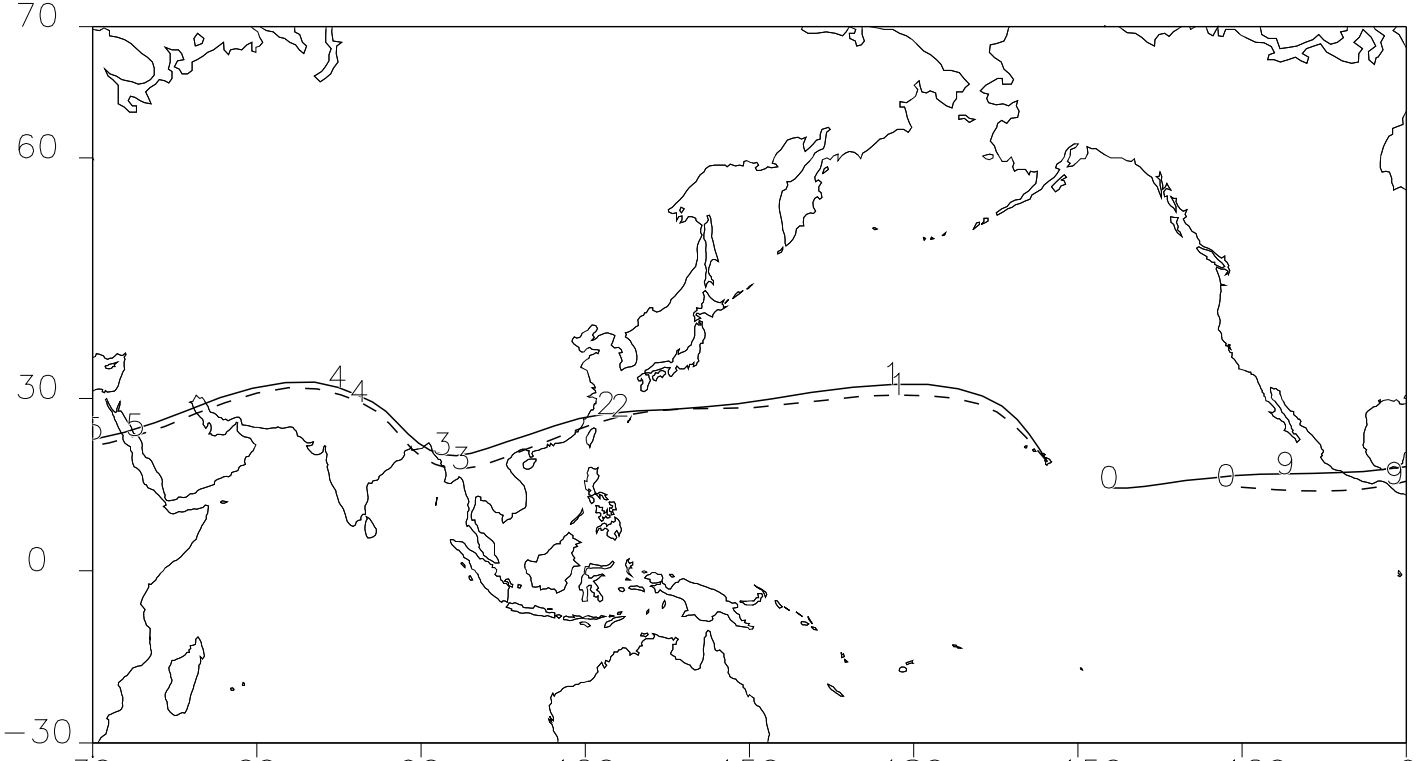
18UT

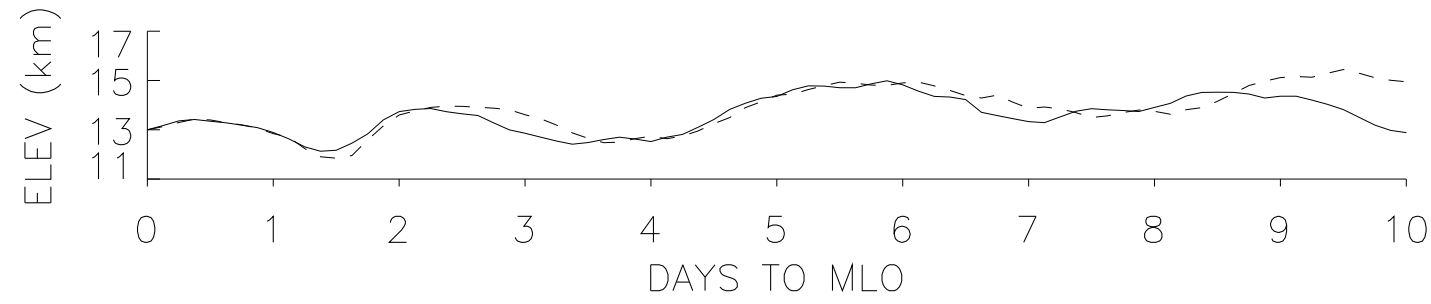
Day	km	hPa	C
0	13.0	177	−61
1	13.5	158	−65
2	12.7	180	−58
3	12.9	179	−57
4	13.3	169	−58
5	13.7	155	−61
6	13.0	170	−54
7	14.2	145	−63
8	13.9	152	−60
9	13.8	151	−58
10	14.3	143	−60

12UT − solid
18UT − dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/11/2004 (Day of Year 102)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 177 -62
1 13.0 172 -62
2 12.9 178 -60
3 12.6 189 -55
4 12.5 190 -54
5 11.9 203 -52
06UT
Day km hPa C
0 13.0 178 -61
1 12.9 177 -61
2 12.9 180 -59
3 11.8 216 -48
4 11.5 226 -43
5 11.8 212 -50
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
14
13
12
11
10
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/11/2004 (Day of Year 102)
NCEP/NCAR Reanalysis 1 Data Set





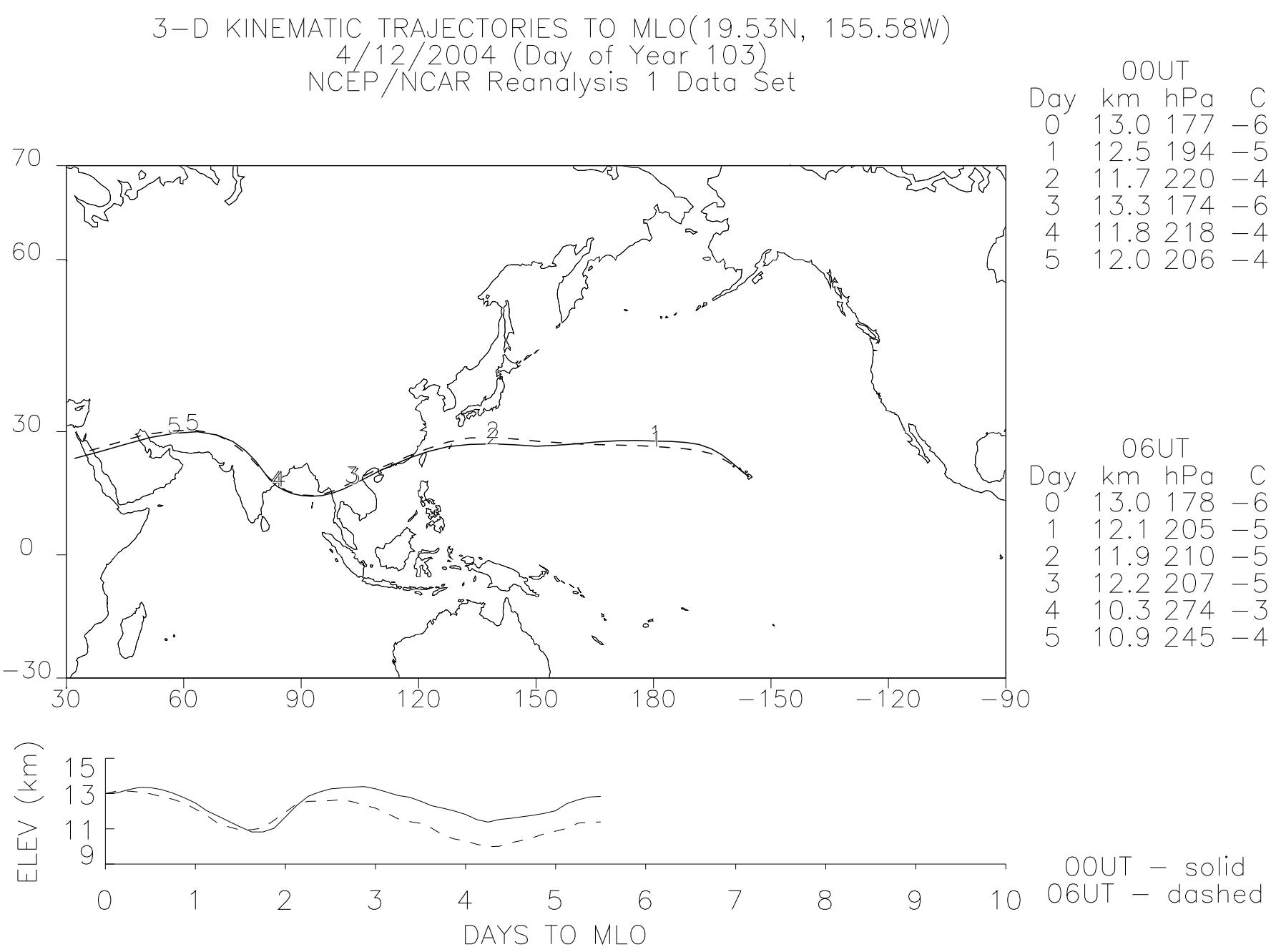
12UT

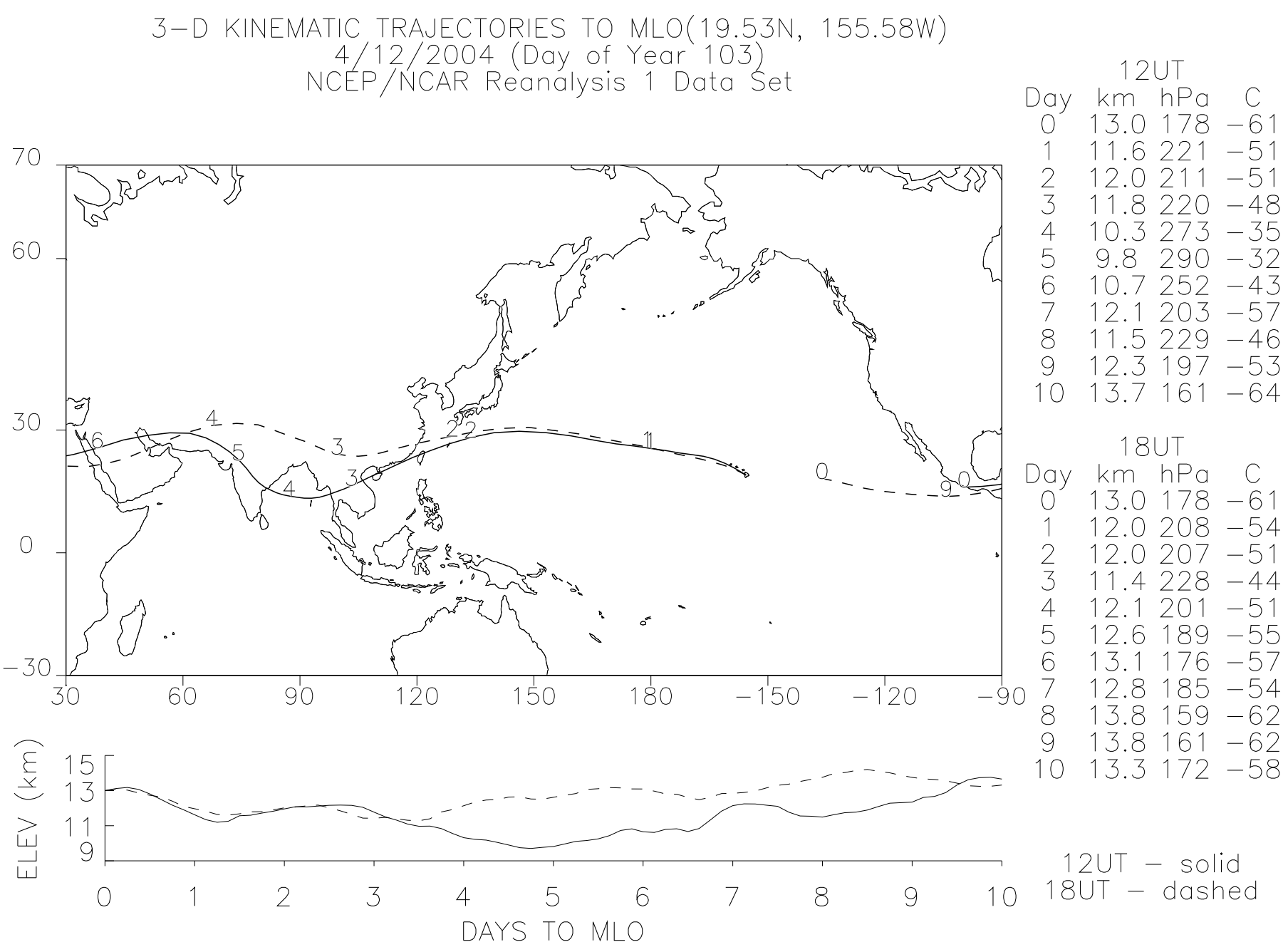
Day	km	hPa	C
0	13.0	177	−62
1	12.9	177	−59
2	13.7	158	−64
3	12.9	183	−54
4	12.5	190	−50
5	14.4	142	−65
6	14.8	134	−69
7	13.3	170	−56
8	13.9	153	−60
9	14.4	142	−69
10	12.9	183	−55

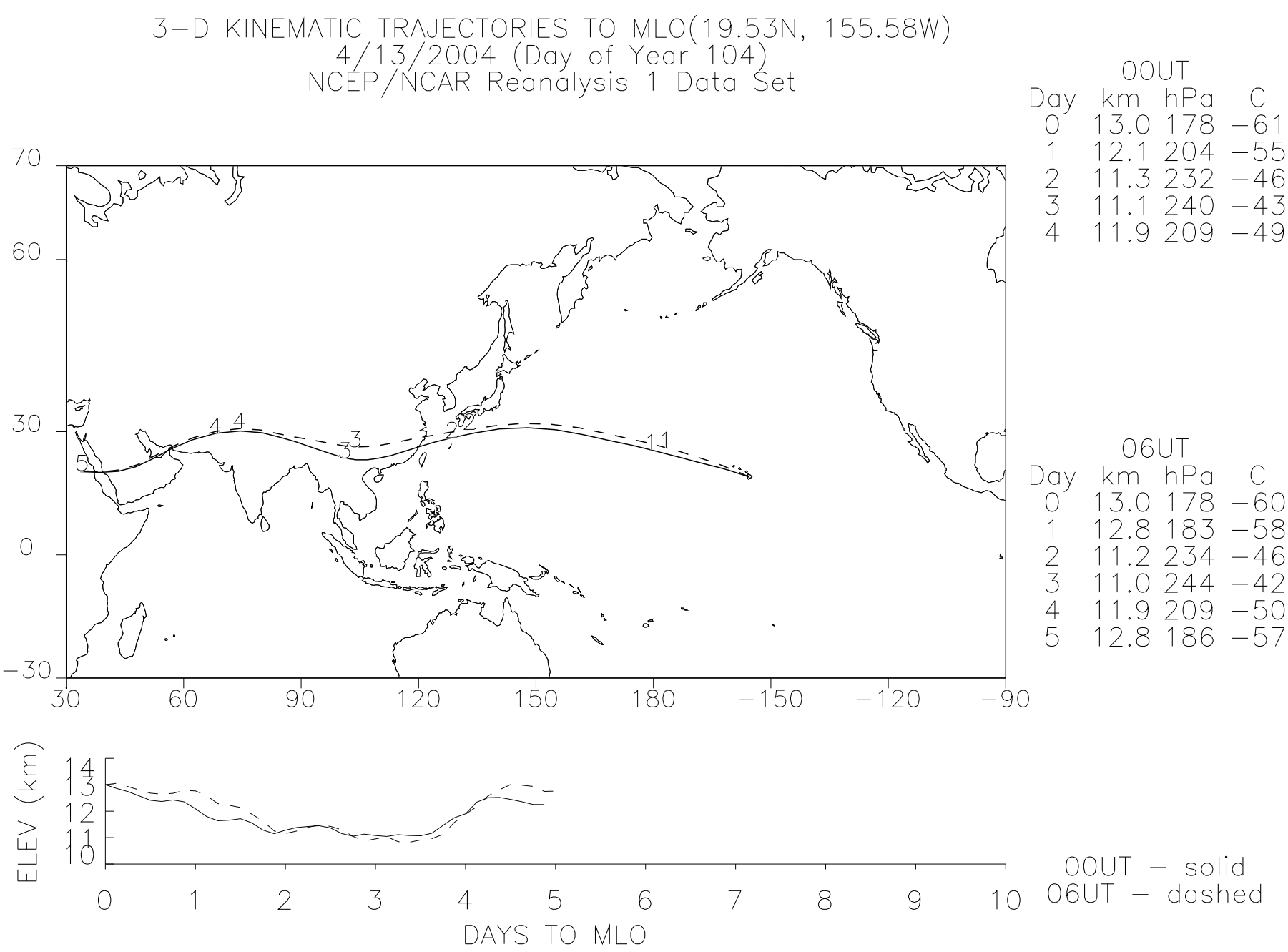
18UT

Day	km	hPa	C
0	13.0	178	−60
1	12.8	180	−58
2	13.6	163	−63
3	13.6	164	−59
4	12.7	186	−52
5	14.4	142	−66
6	14.9	132	−70
7	13.9	157	−59
8	13.7	158	−57
9	15.1	128	−69
10	14.9	132	−70

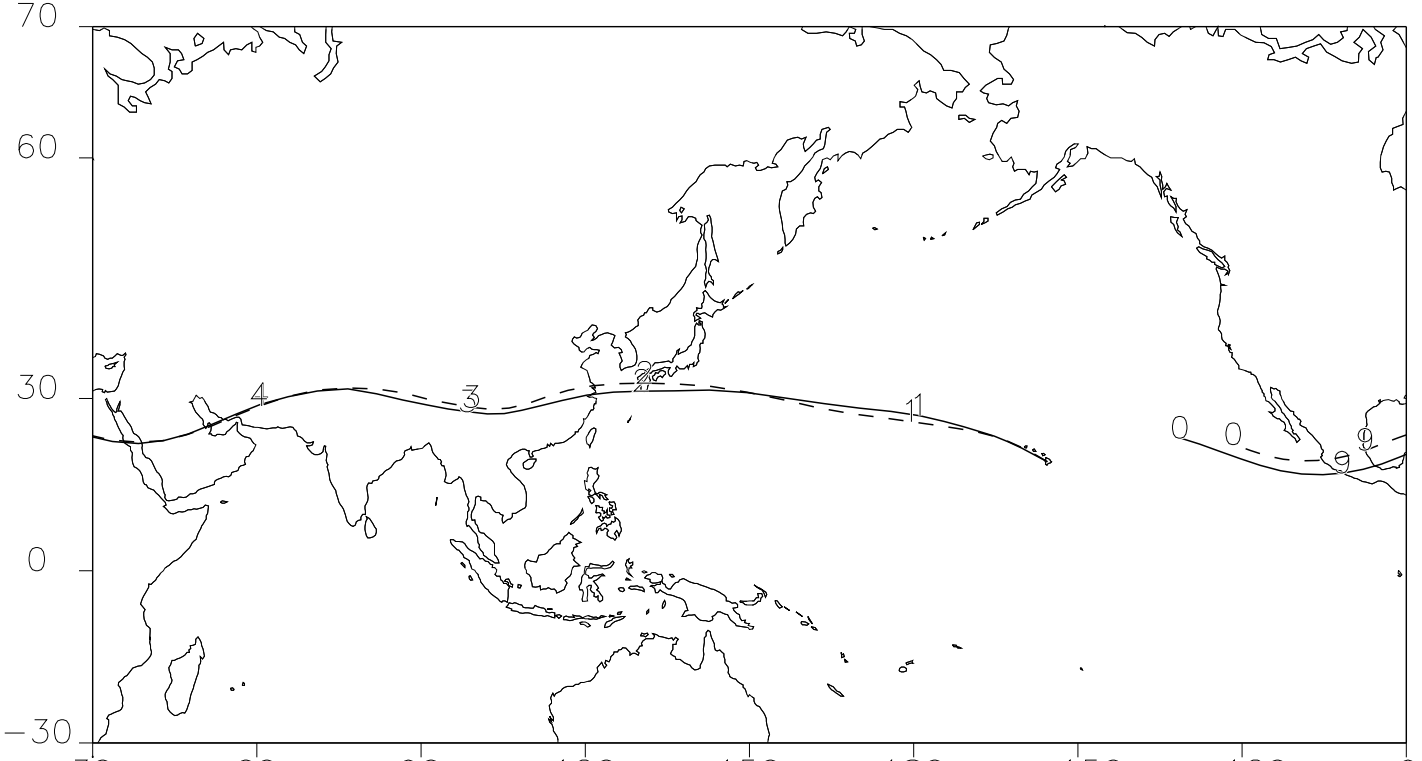
12UT − solid
18UT − dashed

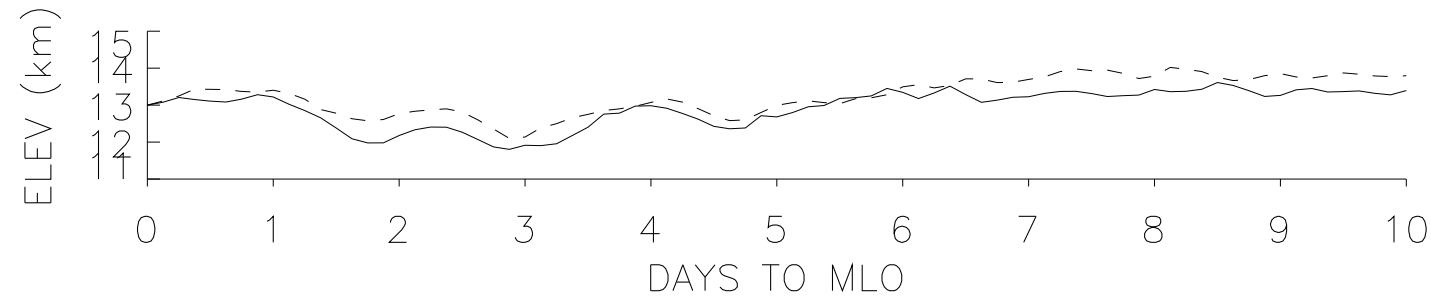

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/12/2004 (Day of Year 103)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 177 -61
1 12.5 194 -55
2 11.7 220 -48
3 13.3 174 -60
4 11.8 218 -47
5 12.0 206 -47
06UT
Day km hPa C
0 13.0 178 -60
1 12.1 205 -54
2 11.9 210 -51
3 12.2 207 -50
4 10.3 274 -34
5 10.9 245 -42
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
5.5
4
3
2
1
ELEV (km)
15
13
11
9
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/12/2004 (Day of Year 103)
NCEP/NCAR Reanalysis 1 Data Set
70
60
30
0
-30
30
60
90
120
150
180
-150
-120
-90
ELEV (km)
15
13
11
9
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
12UT
Day km hPa C
0 13.0 178 -61
1 11.6 221 -51
2 12.0 211 -51
3 11.8 220 -48
4 10.3 273 -35
5 9.8 290 -32
6 10.7 252 -43
7 12.1 203 -57
8 11.5 229 -46
9 12.3 197 -53
10 13.7 161 -64
18UT
Day km hPa C
0 13.0 178 -61
1 12.0 208 -54
2 12.0 207 -51
3 11.4 228 -44
4 12.1 201 -51
5 12.6 189 -55
6 13.1 176 -57
7 12.8 185 -54
8 13.8 159 -62
9 13.8 161 -62
10 13.3 172 -58
12UT - solid
18UT - dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/13/2004 (Day of Year 104)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 178 -61
1 12.1 204 -55
2 11.3 232 -46
3 11.1 240 -43
4 11.9 209 -49
06UT
Day km hPa C
0 13.0 178 -60
1 12.8 183 -58
2 11.2 234 -46
3 11.0 244 -42
4 11.9 209 -50
5 12.8 186 -57
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
14
13
12
11
10
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/13/2004 (Day of Year 104)
NCEP/NCAR Reanalysis 1 Data Set





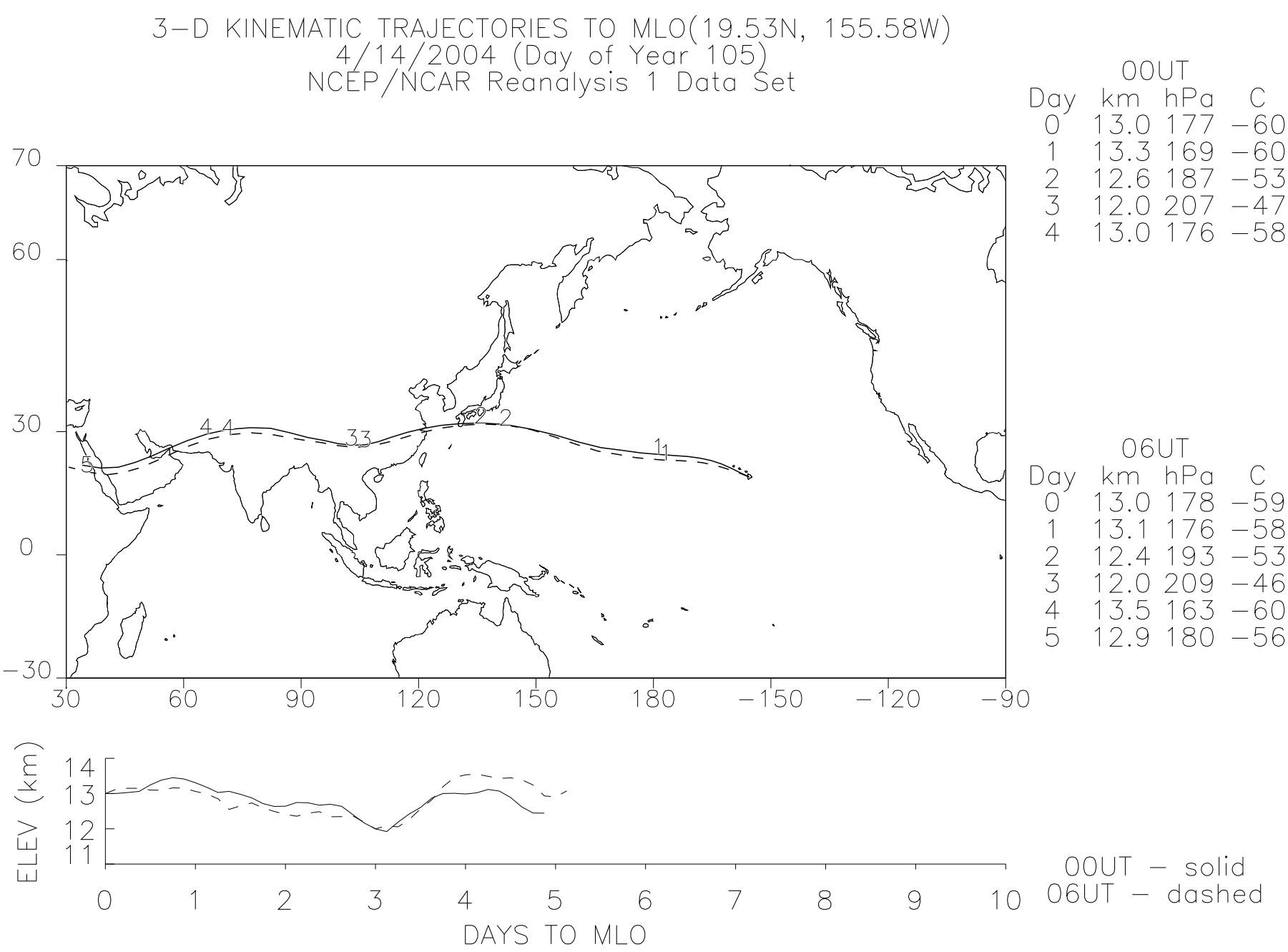
12UT

Day	km	hPa	C
0	13.0	177	−60
1	13.2	170	−61
2	12.2	201	−49
3	11.9	210	−48
4	13.0	175	−60
5	12.7	185	−56
6	13.3	169	−58
7	13.2	172	−57
8	13.4	164	−59
9	13.3	171	−57
10	13.4	167	−59

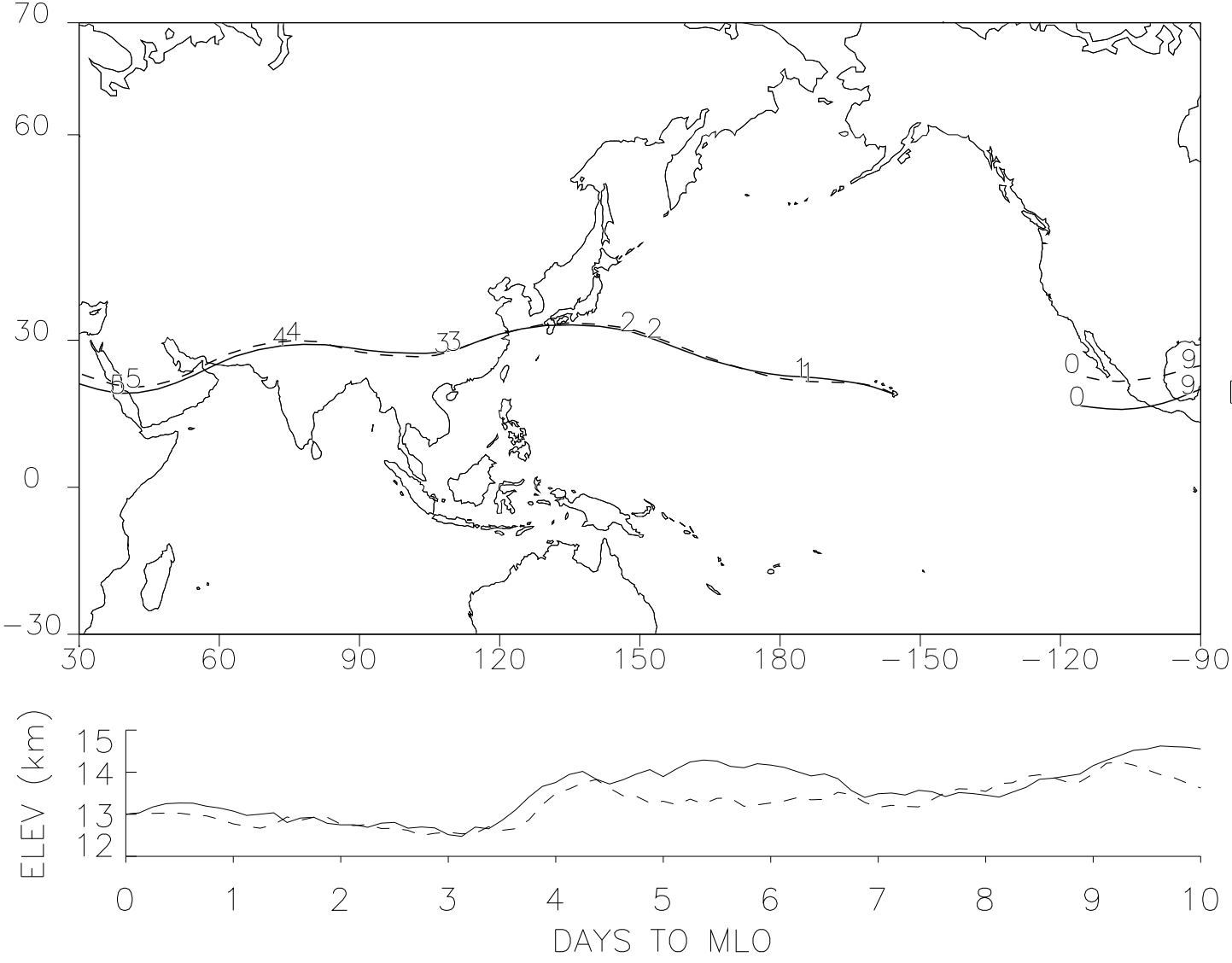
18UT

Day	km	hPa	C
0	13.0	178	−60
1	13.4	165	−60
2	12.8	182	−54
3	12.1	202	−48
4	13.1	174	−58
5	13.0	176	−58
6	13.5	163	−59
7	13.7	157	−59
8	13.8	153	−59
9	13.9	154	−59
10	13.8	156	−59

12UT − solid
18UT − dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/14/2004 (Day of Year 105)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 177 -60
1 13.3 169 -60
2 12.6 187 -53
3 12.0 207 -47
4 13.0 176 -58
06UT
Day km hPa C
0 13.0 178 -59
1 13.1 176 -58
2 12.4 193 -53
3 12.0 209 -46
4 13.5 163 -60
5 12.9 180 -56
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
14
13
12
11
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/14/2004 (Day of Year 105)
NCEP/NCAR Reanalysis 1 Data Set



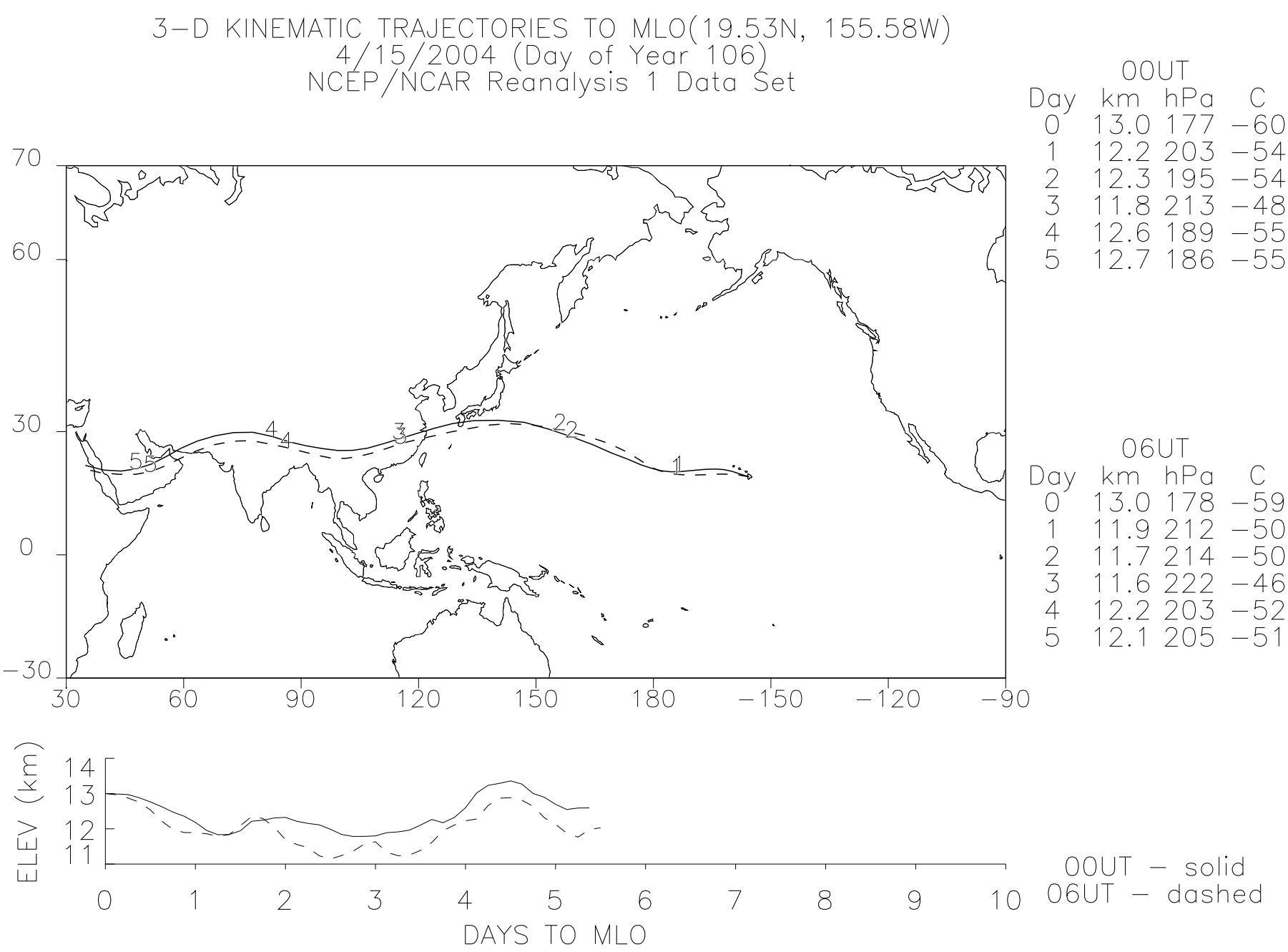
12UT

Day	km	hPa	C
0	13.0	177	−59
1	13.1	176	−59
2	12.7	182	−55
3	12.5	191	−50
4	13.8	157	−61
5	13.9	155	−61
6	14.2	148	−62
7	13.5	166	−58
8	13.5	165	−58
9	14.2	149	−63
10	14.6	139	−66

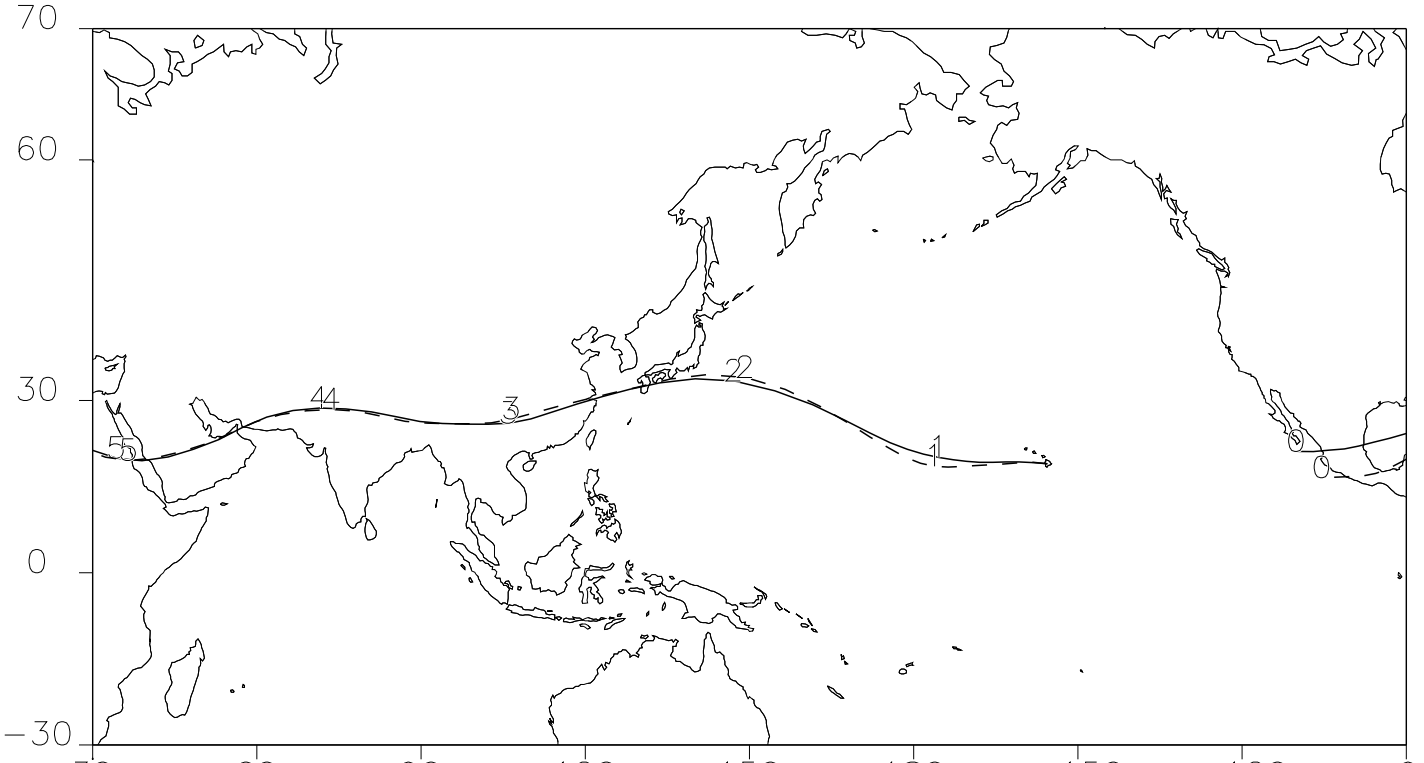
18UT

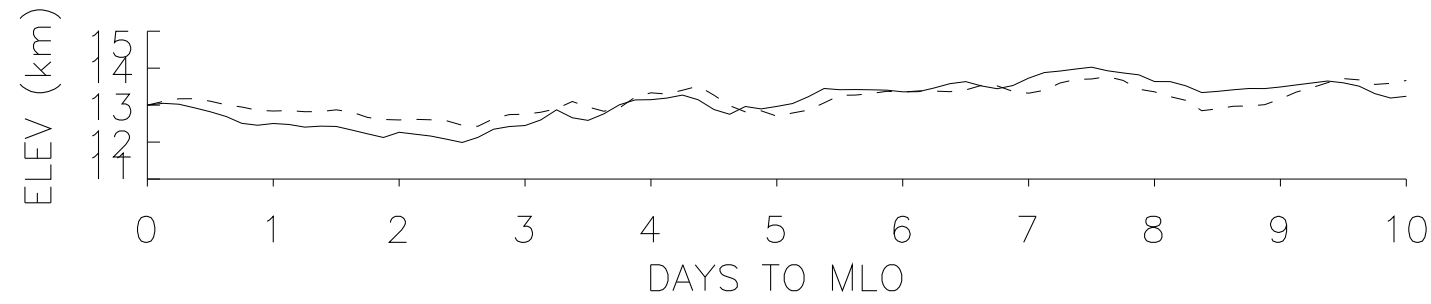
Day	km	hPa	C
0	13.0	178	−60
1	12.8	185	−57
2	12.8	181	−56
3	12.6	190	−50
4	13.5	164	−60
5	13.3	169	−57
6	13.3	169	−58
7	13.2	173	−57
8	13.5	161	−59
9	14.0	152	−60
10	13.6	159	−56

12UT − solid
18UT − dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/15/2004 (Day of Year 106)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 177 -60
1 12.2 203 -54
2 12.3 195 -54
3 11.8 213 -48
4 12.6 189 -55
5 12.7 186 -55
06UT
Day km hPa C
0 13.0 178 -59
1 11.9 212 -50
2 11.7 214 -50
3 11.6 222 -46
4 12.2 203 -52
5 12.1 205 -51
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
14
13
12
11
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/15/2004 (Day of Year 106)
NCEP/NCAR Reanalysis 1 Data Set





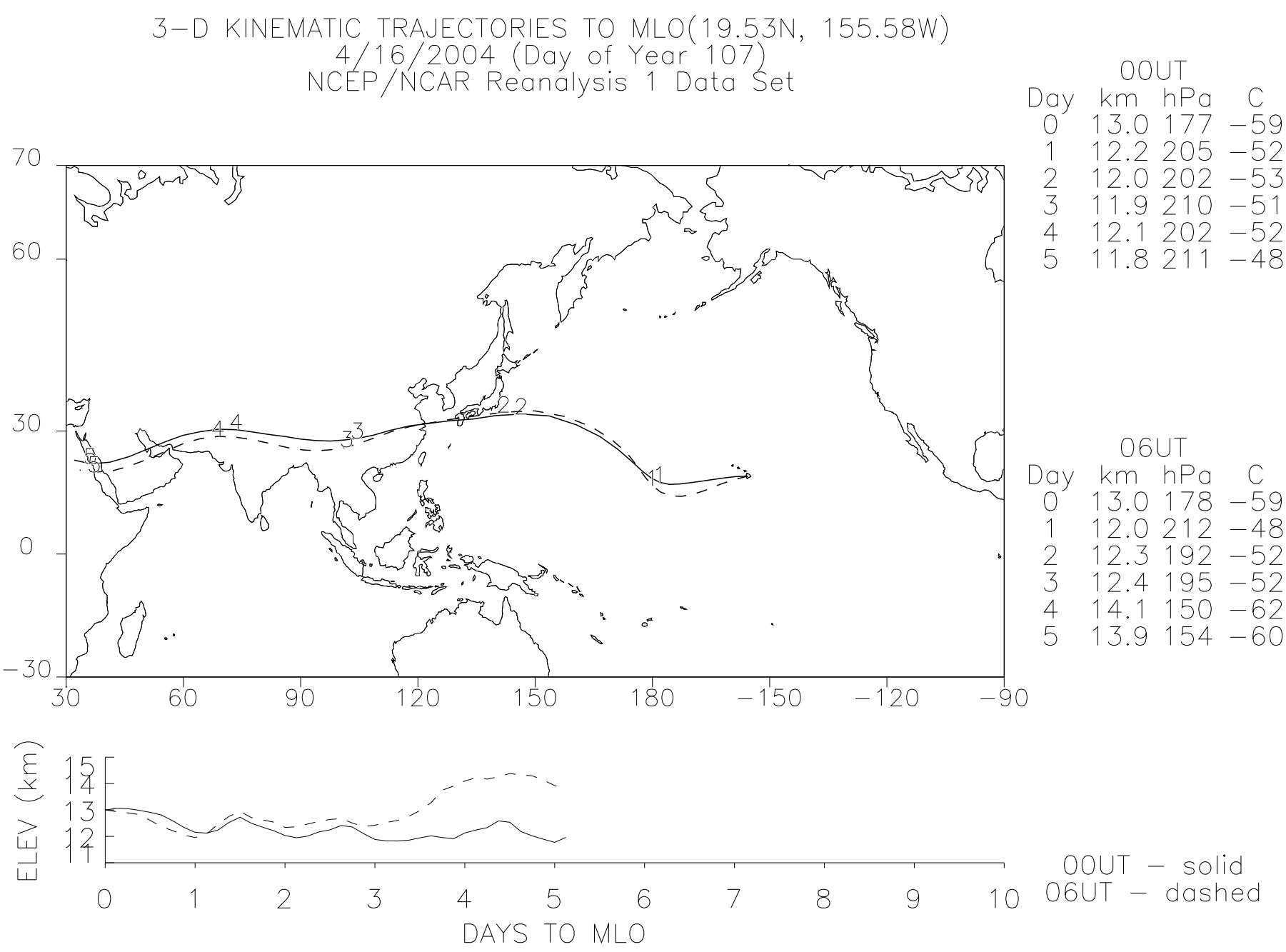
12UT

Day	km	hPa	C
0	13.0	178	-59
1	12.5	192	-54
2	12.3	195	-52
3	12.4	194	-51
4	13.1	174	-58
5	13.0	178	-55
6	13.4	168	-59
7	13.7	160	-60
8	13.6	160	-60
9	13.5	164	-58
10	13.2	169	-56

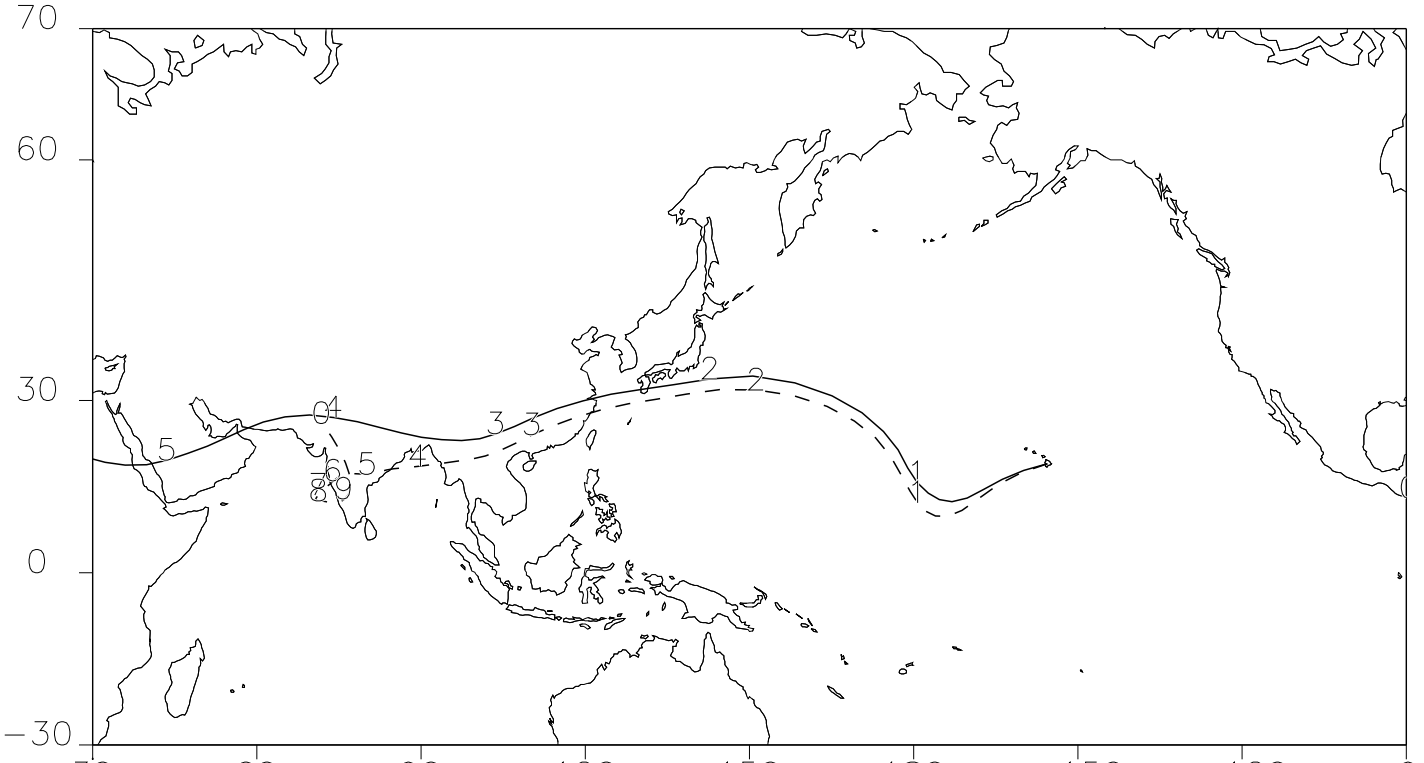
18UT

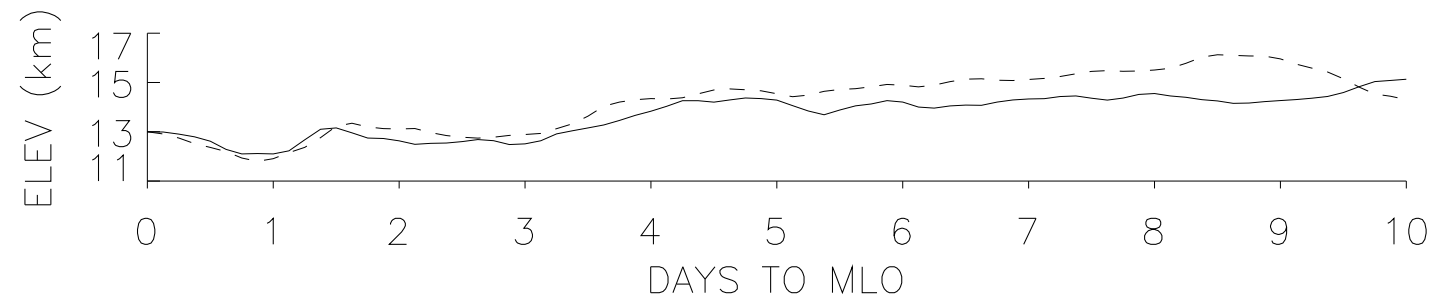
Day	km	hPa	C
0	13.0	177	-60
1	12.8	183	-56
2	12.6	184	-55
3	12.8	185	-52
4	13.3	170	-59
5	12.7	187	-52
6	13.4	168	-59
7	13.3	170	-58
8	13.4	168	-58
9	13.2	175	-56
10	13.7	163	-59

12UT - solid
18UT - dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/16/2004 (Day of Year 107)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 177 -59
1 12.2 205 -52
2 12.0 202 -53
3 11.9 210 -51
4 12.1 202 -52
5 11.8 211 -48
06UT
Day km hPa C
0 13.0 178 -59
1 12.0 212 -48
2 12.3 192 -52
3 12.4 195 -52
4 14.1 150 -62
5 13.9 154 -60
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
15
14
13
12
11
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/16/2004 (Day of Year 107)
NCEP/NCAR Reanalysis 1 Data Set





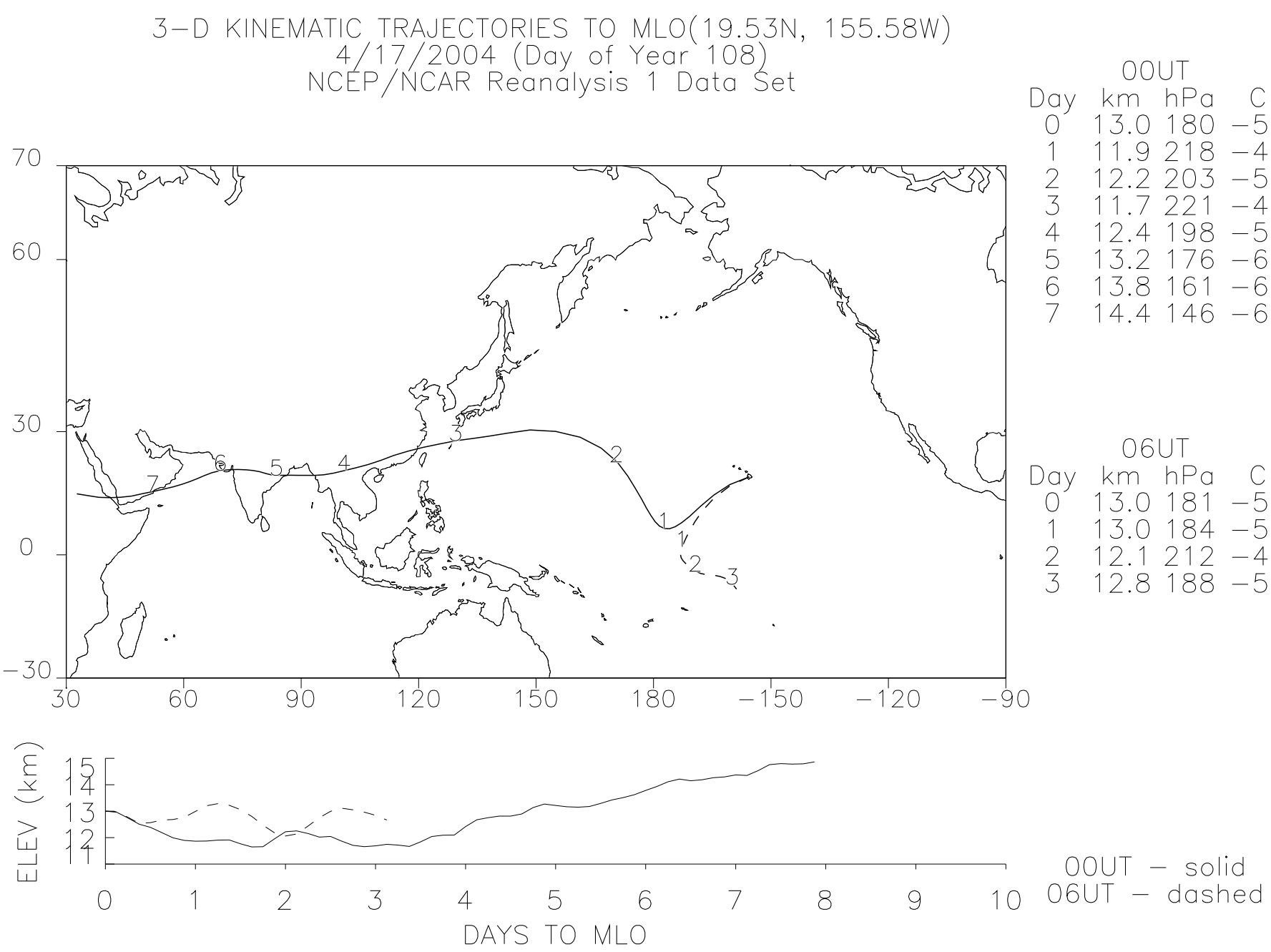
12UT

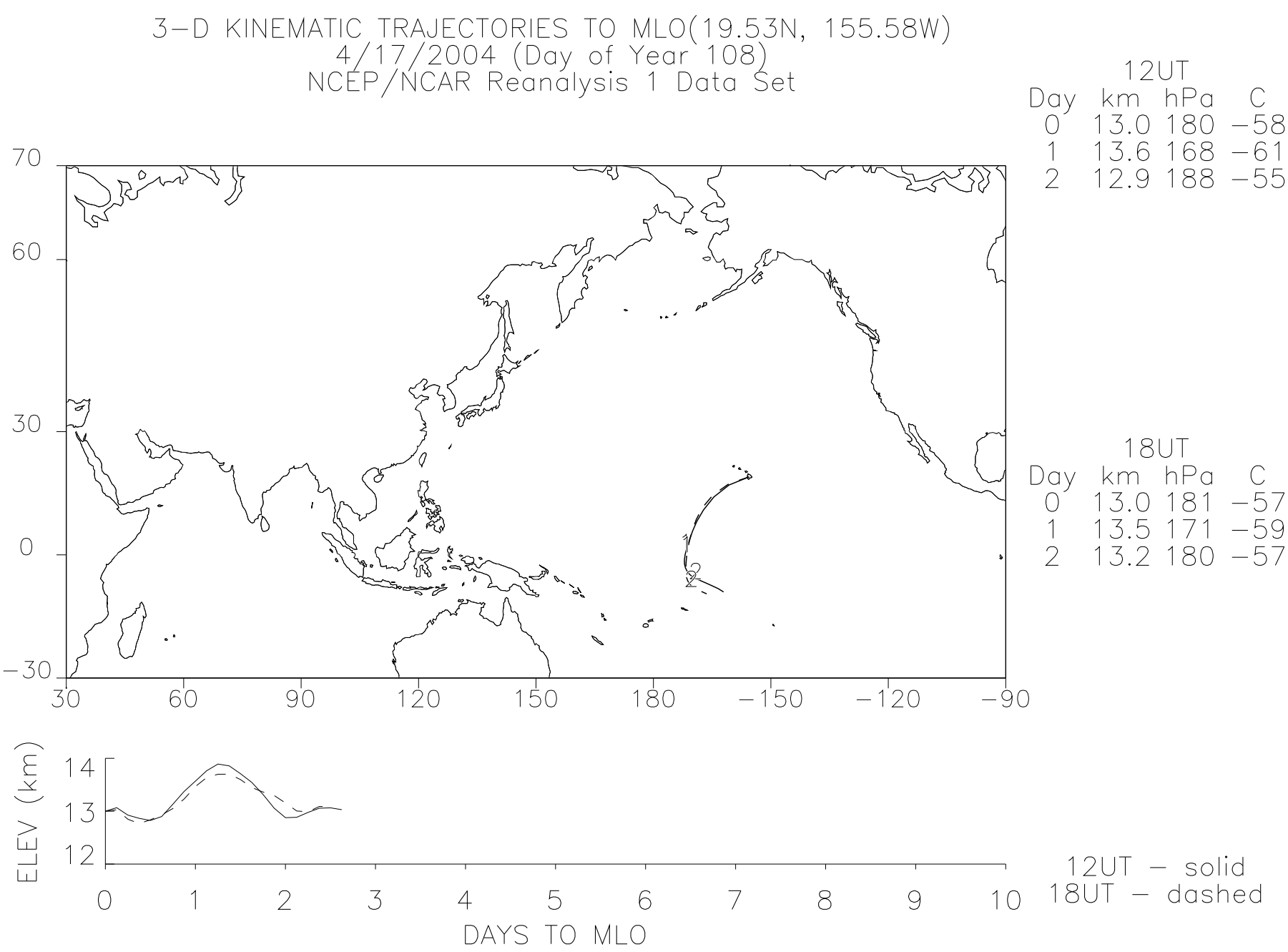
Day	km	hPa	C
0	13.0	178	−59
1	12.1	208	−49
2	12.6	185	−55
3	12.5	193	−51
4	13.8	157	−62
5	14.3	146	−65
6	14.2	147	−63
7	14.3	146	−64
8	14.6	141	−66
9	14.3	147	−64
10	15.1	129	−70

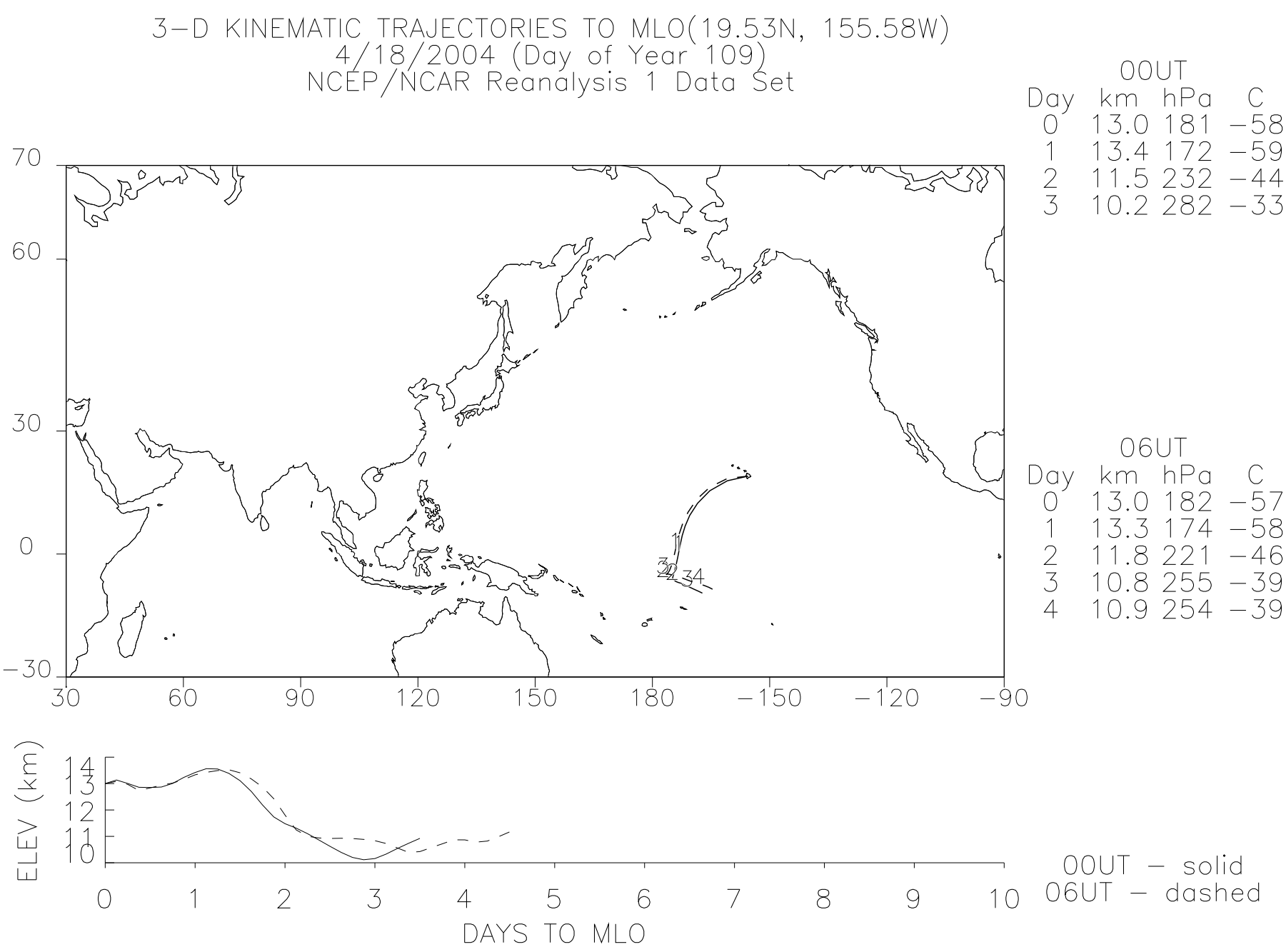
18UT

Day	km	hPa	C
0	13.0	180	−58
1	11.9	215	−48
2	13.1	173	−57
3	12.9	184	−53
4	14.3	148	−65
5	14.5	144	−66
6	14.9	136	−68
7	15.1	131	−69
8	15.5	122	−71
9	16.0	113	−74
10	14.3	146	−61

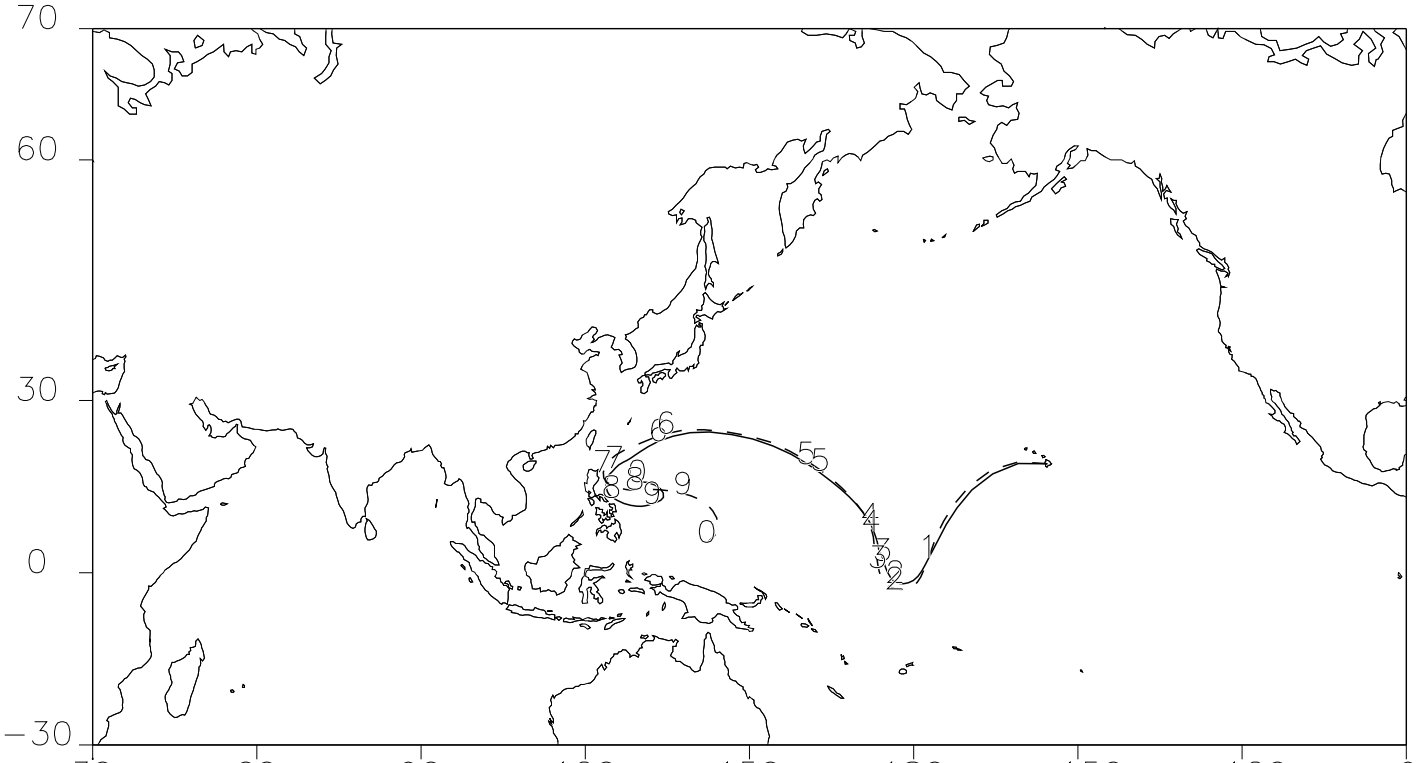
12UT − solid
18UT − dashed

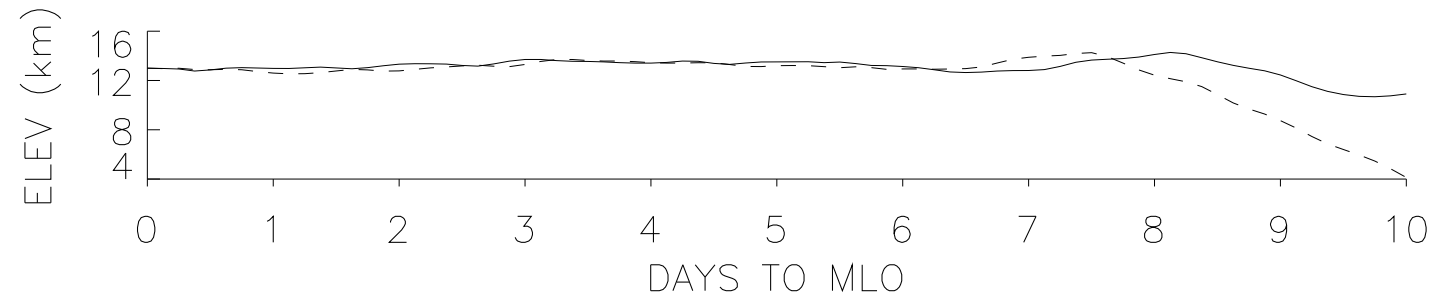

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/17/2004 (Day of Year 108)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 180 -59
1 11.9 218 -47
2 12.2 203 -51
3 11.7 221 -44
4 12.4 198 -52
5 13.2 176 -60
6 13.8 161 -63
7 14.4 146 -66
06UT
Day km hPa C
0 13.0 181 -57
1 13.0 184 -56
2 12.1 212 -48
3 12.8 188 -55
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
15
14
13
12
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/17/2004 (Day of Year 108)
NCEP/NCAR Reanalysis 1 Data Set
12UT
Day km hPa C
0 13.0 180 -58
1 13.6 168 -61
2 12.9 188 -55
18UT
Day km hPa C
0 13.0 181 -57
1 13.5 171 -59
2 13.2 180 -57
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
14
13
12
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
12UT - solid
18UT - dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/18/2004 (Day of Year 109)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 181 -58
1 13.4 172 -59
2 11.5 232 -44
3 10.2 282 -33
06UT
Day km hPa C
0 13.0 182 -57
1 13.3 174 -58
2 11.8 221 -46
3 10.8 255 -39
4 10.9 254 -39
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
14
13
12
11
10
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/18/2004 (Day of Year 109)
NCEP/NCAR Reanalysis 1 Data Set





12UT

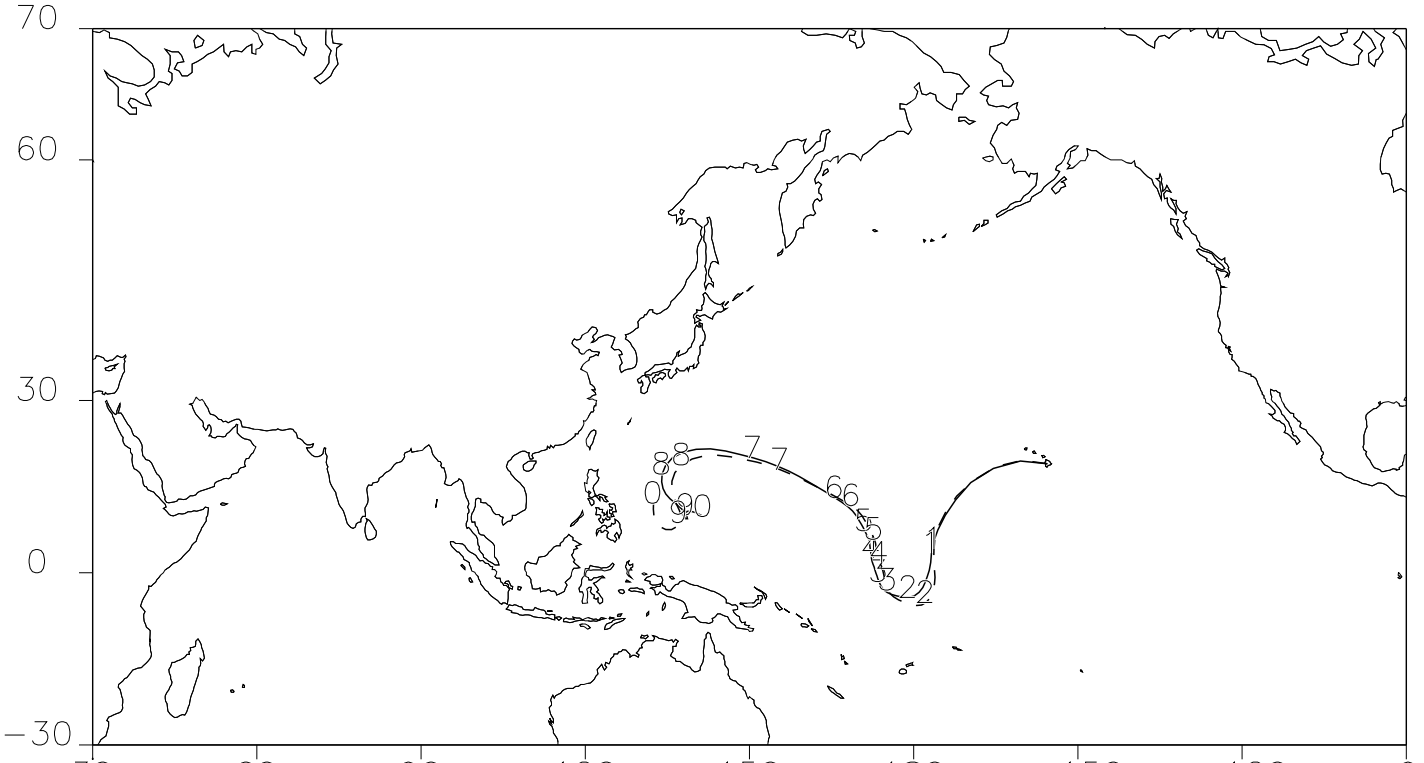
Day	km	hPa	C
0	13.0	182	-58
1	13.0	184	-56
2	13.3	175	-58
3	13.7	165	-62
4	13.4	173	-59
5	13.5	170	-60
6	13.1	180	-56
7	12.8	190	-53
8	14.1	155	-64
9	12.4	201	-51
10	10.9	253	-39

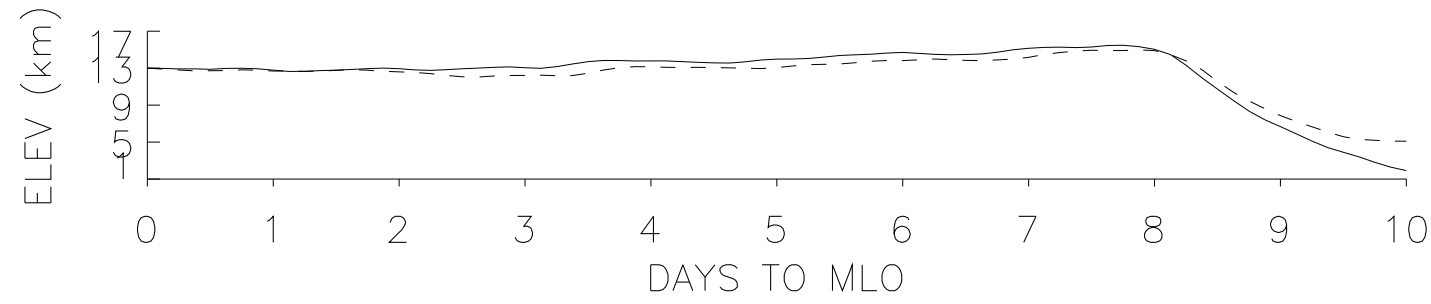
18UT

Day	km	hPa	C
0	13.0	183	-57
1	12.6	196	-53
2	12.8	190	-54
3	13.3	176	-58
4	13.4	172	-59
5	13.2	178	-57
6	12.9	185	-55
7	13.9	160	-61
8	12.4	202	-50
9	8.7	342	-21
10	4.1	615	4

12UT - solid
18UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/19/2004 (Day of Year 110)
NCEP/NCAR Reanalysis 1 Data Set





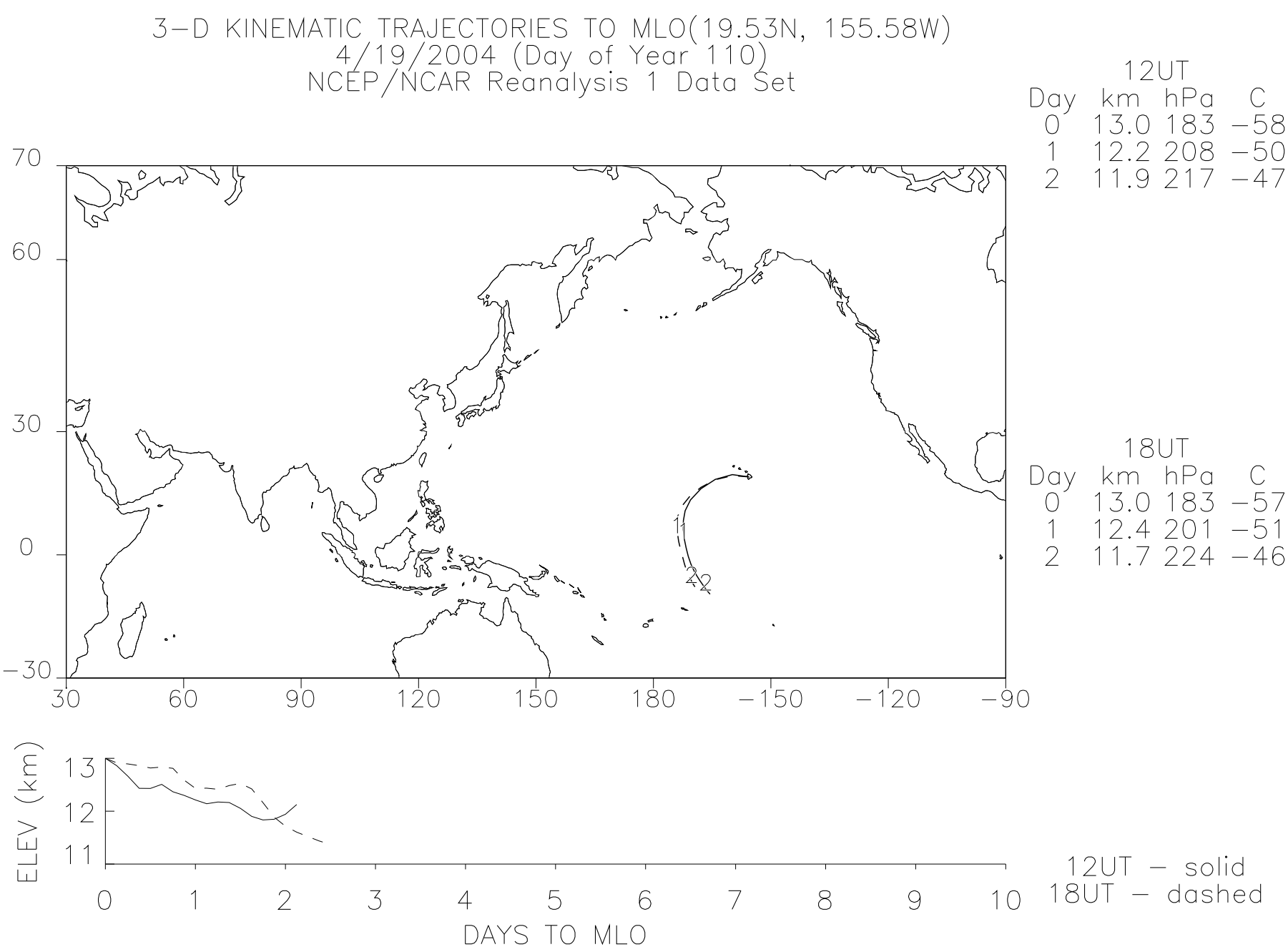
00UT

Day	km	hPa	C
0	13.0	183	−57
1	12.8	190	−54
2	12.9	186	−55
3	13.0	183	−56
4	13.8	163	−63
5	14.0	158	−63
6	14.7	141	−69
7	15.1	130	−71
8	15.0	133	−70
9	6.7	450	−8
10	1.9	804	16

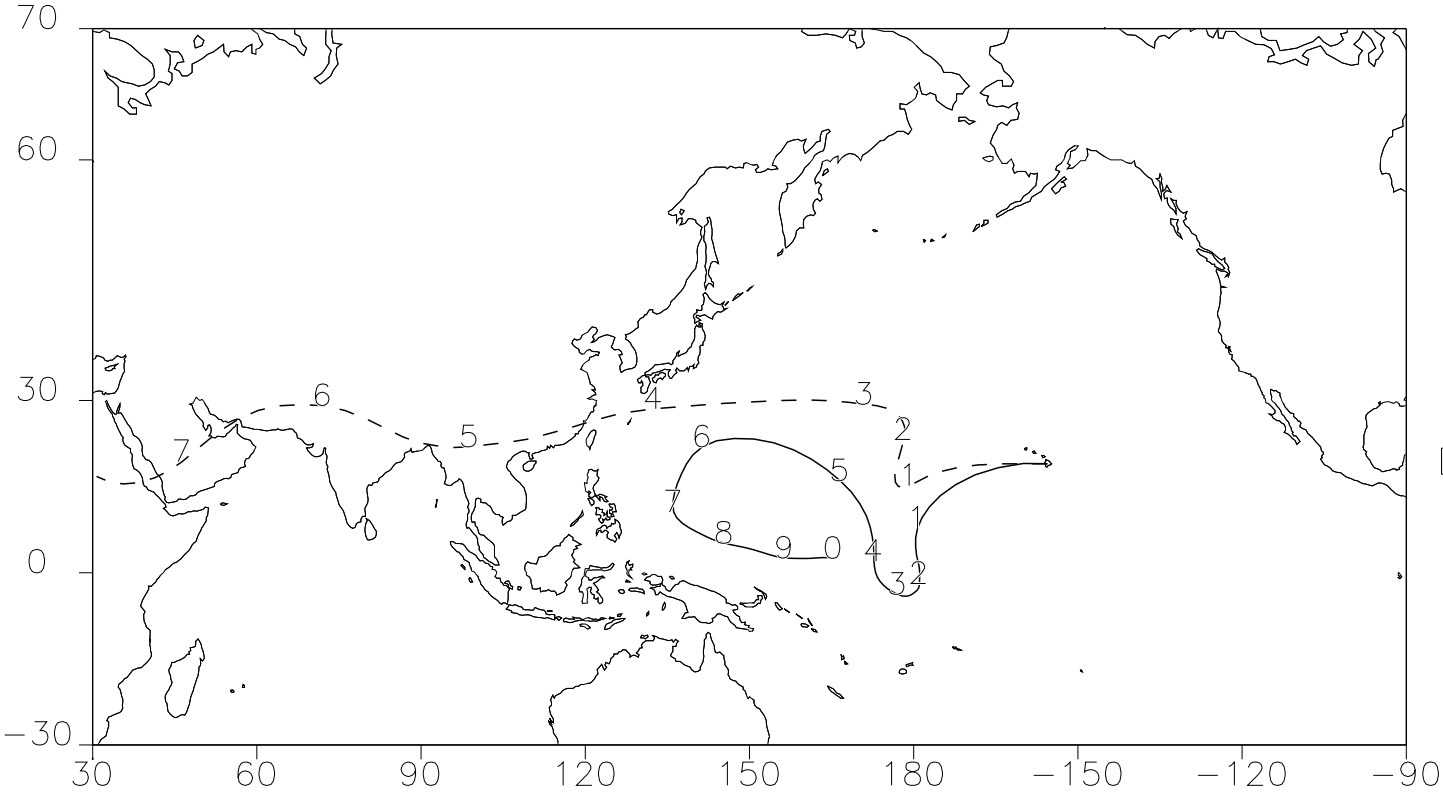
06UT

Day	km	hPa	C
0	13.0	183	−57
1	12.7	193	−53
2	12.6	196	−52
3	12.2	208	−49
4	13.1	180	−57
5	13.1	183	−56
6	13.8	162	−63
7	14.2	153	−65
8	14.9	136	−69
9	7.9	384	−15
10	5.1	550	0

00UT – solid
06UT – dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/19/2004 (Day of Year 110)
NCEP/NCAR Reanalysis 1 Data Set
12UT
Day km hPa C
0 13.0 183 -58
1 12.2 208 -50
2 11.9 217 -47
18UT
Day km hPa C
0 13.0 183 -57
1 12.4 201 -51
2 11.7 224 -46
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
13
12
11
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
12UT - solid
18UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/20/2004 (Day of Year 111)
NCEP/NCAR Reanalysis 1 Data Set

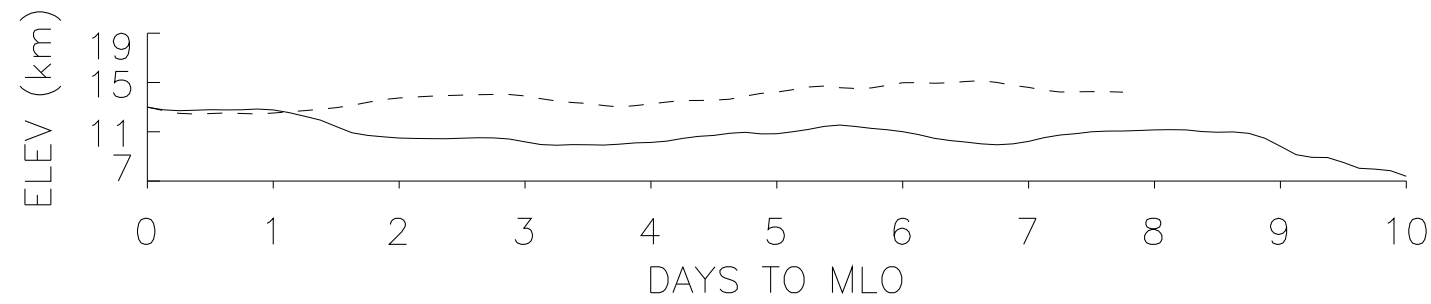


00UT

Day	km	hPa	C
0	13.0	182	−57
1	12.8	191	−54
2	10.5	269	−36
3	10.2	281	−33
4	10.1	283	−33
5	10.8	255	−38
6	11.0	249	−39
7	10.2	280	−34
8	11.2	245	−41
9	9.8	297	−29
10	7.4	412	−12

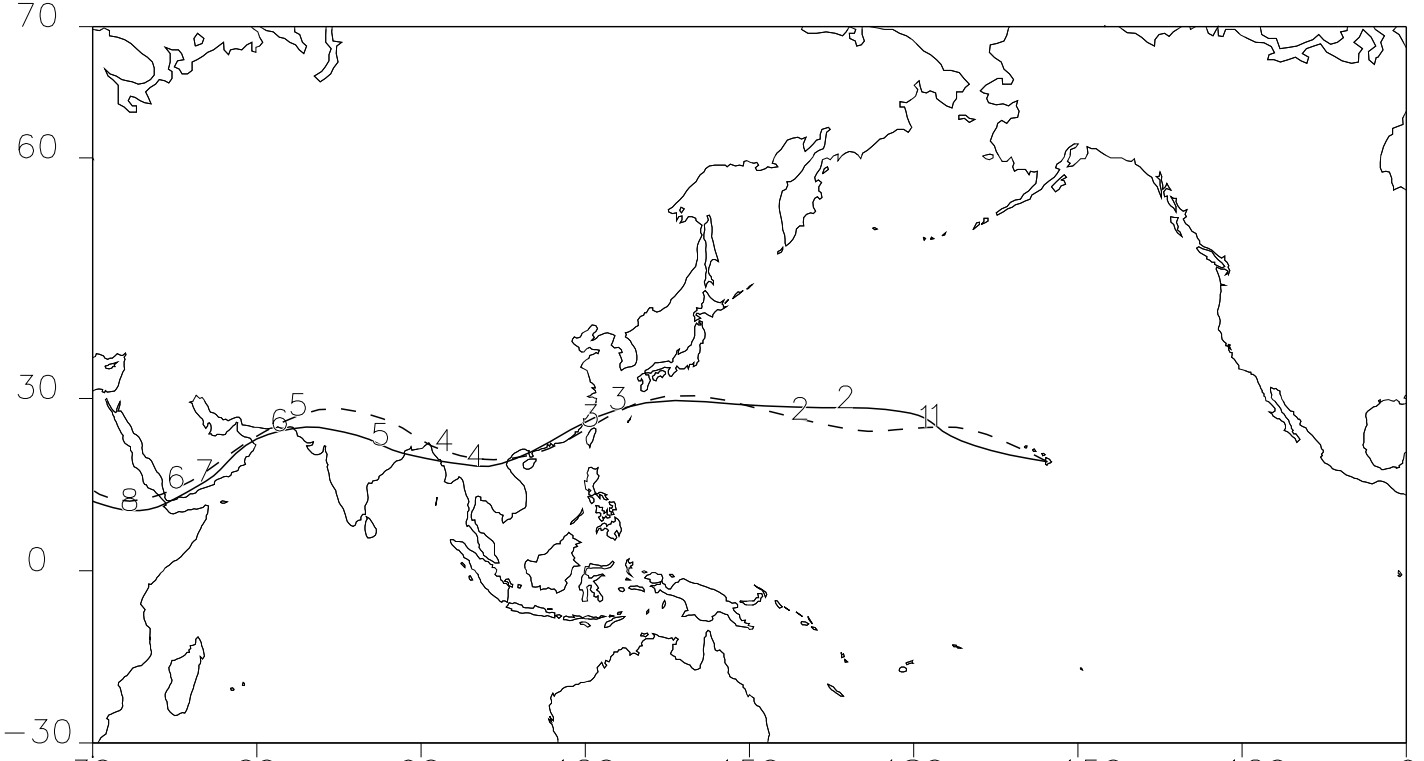
06UT

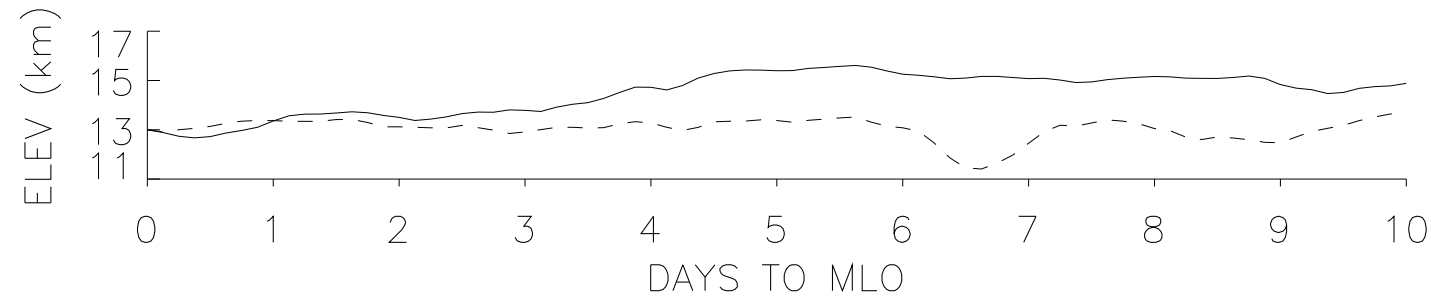
Day	km	hPa	C
0	13.0	181	−59
1	12.5	197	−52
2	13.7	161	−61
3	13.9	157	−61
4	13.3	170	−58
5	14.2	149	−65
6	15.0	130	−68
7	14.6	139	−64



00UT – solid
06UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/20/2004 (Day of Year 111)
NCEP/NCAR Reanalysis 1 Data Set





12UT

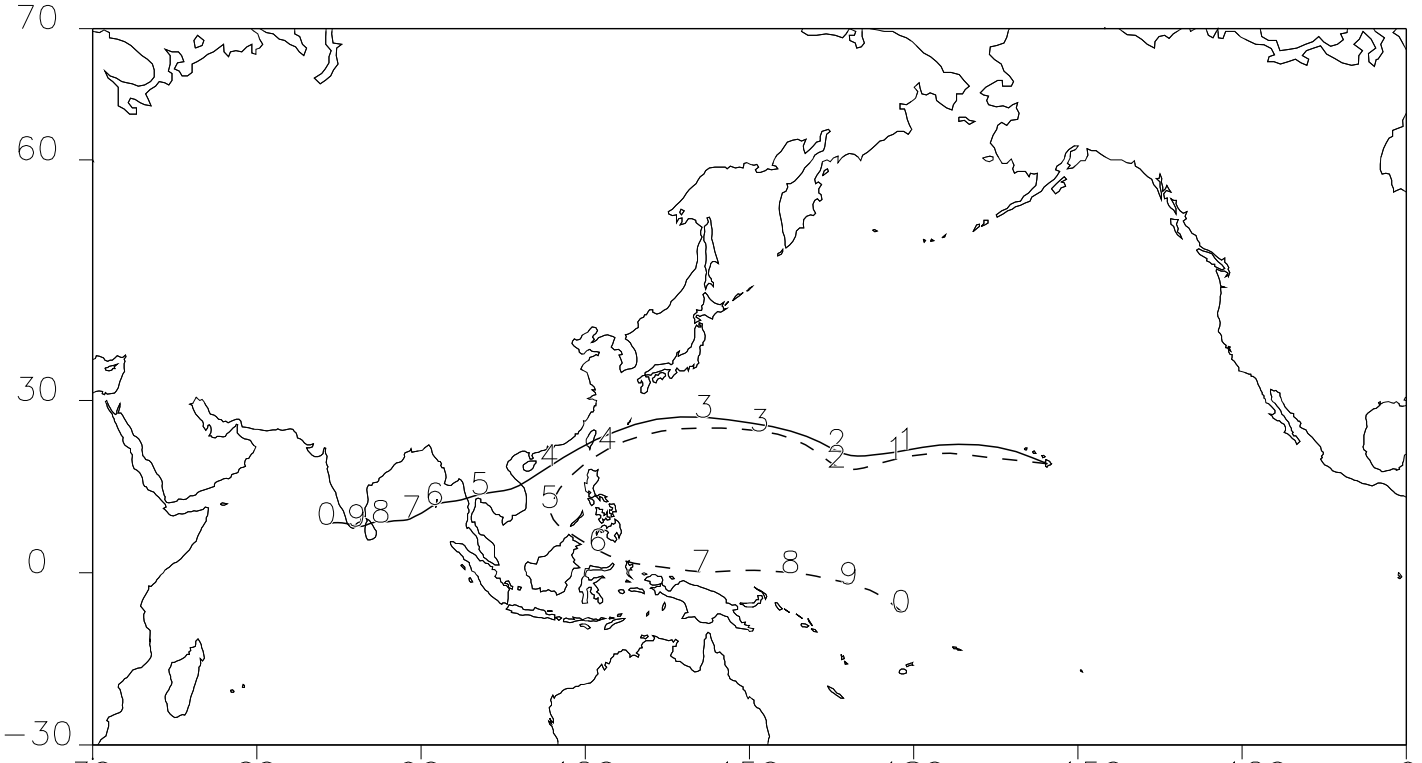
Day	km	hPa	C
0	13.0	179	−58
1	13.4	170	−60
2	13.5	167	−60
3	13.8	158	−61
4	14.7	138	−67
5	15.4	123	−70
6	15.3	126	−69
7	15.1	130	−69
8	15.2	128	−70
9	14.8	136	−69
10	14.9	134	−68

18UT

Day	km	hPa	C
0	13.0	180	−57
1	13.4	169	−61
2	13.1	177	−58
3	12.9	182	−56
4	13.3	174	−58
5	13.4	171	−59
6	13.1	180	−55
7	12.5	196	−53
8	13.0	179	−58
9	12.5	196	−53
10	13.7	162	−62

12UT – solid
18UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/21/2004 (Day of Year 112)
NCEP/NCAR Reanalysis 1 Data Set



00UT

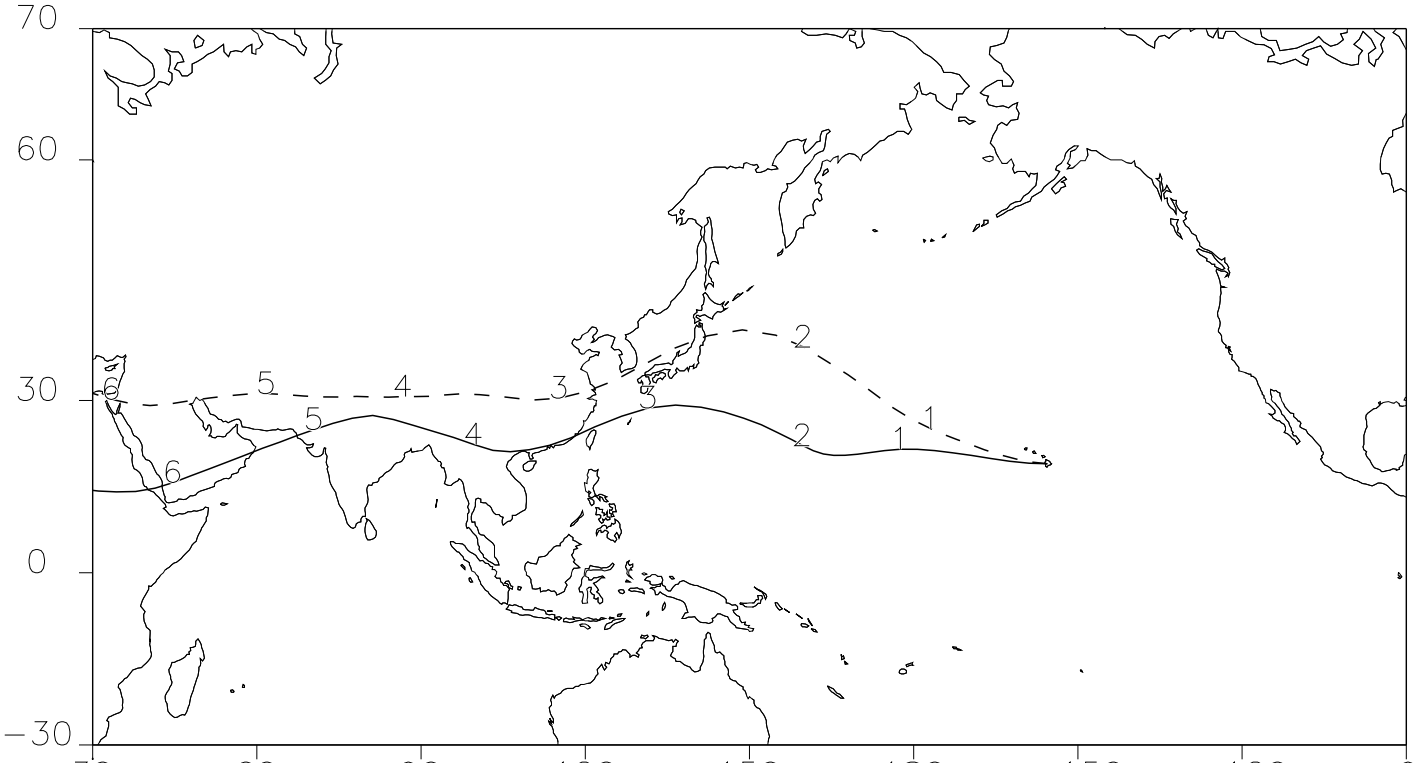
Day	km	hPa	C
0	13.0	180	-58
1	13.1	178	-59
2	12.7	193	-54
3	13.0	181	-56
4	13.2	176	-57
5	13.3	176	-58
6	13.5	170	-60
7	14.5	145	-68
8	14.5	144	-68
9	14.3	150	-66
10	14.3	149	-66

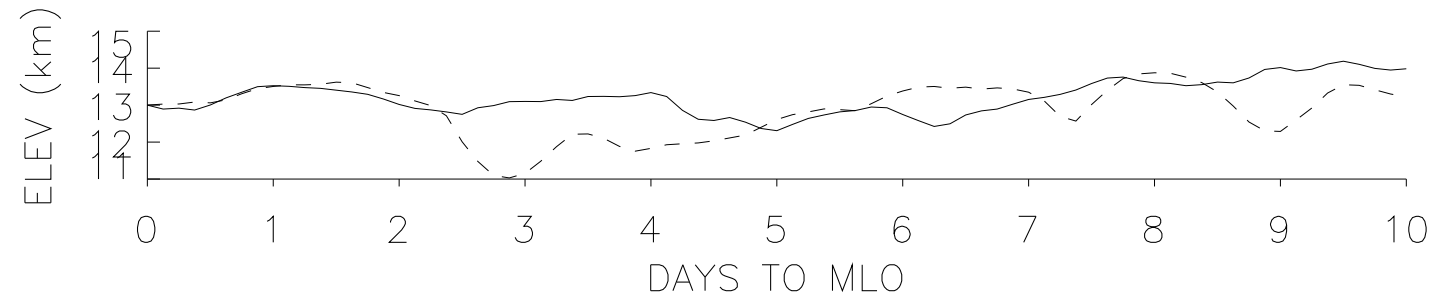
06UT

Day	km	hPa	C
0	13.0	179	-58
1	13.5	169	-60
2	12.8	189	-54
3	12.9	186	-55
4	13.2	178	-56
5	14.1	155	-64
6	14.3	149	-65
7	14.4	147	-66
8	13.4	172	-58
9	14.0	158	-63
10	13.9	161	-62

00UT – solid
06UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/21/2004 (Day of Year 112)
NCEP/NCAR Reanalysis 1 Data Set





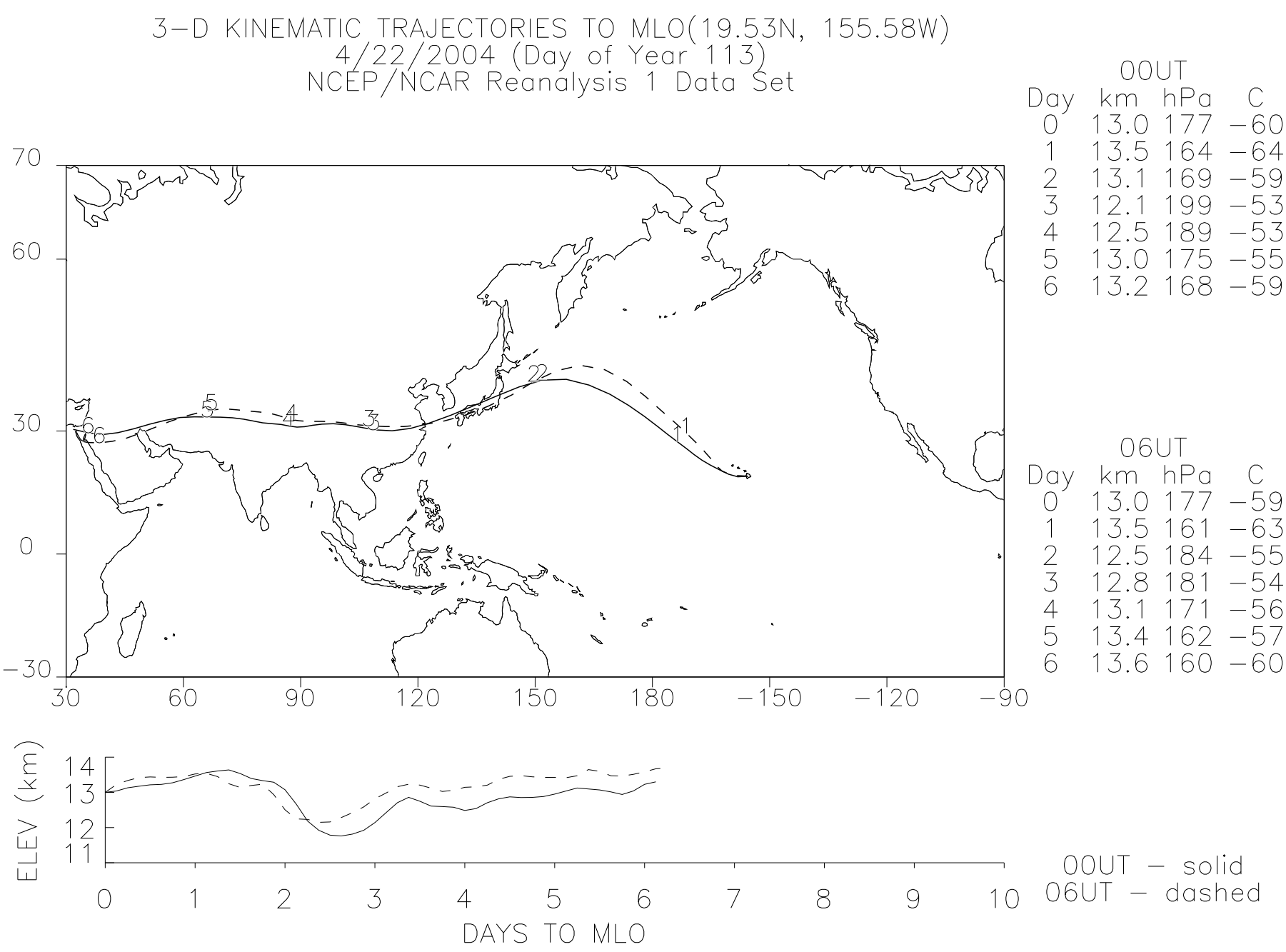
12UT

Day	km	hPa	C
0	13.0	178	−59
1	13.5	166	−62
2	13.0	182	−57
3	13.1	177	−58
4	13.3	170	−60
5	12.3	202	−53
6	12.7	189	−54
7	13.2	177	−57
8	13.6	167	−61
9	14.0	157	−65
10	14.0	157	−65

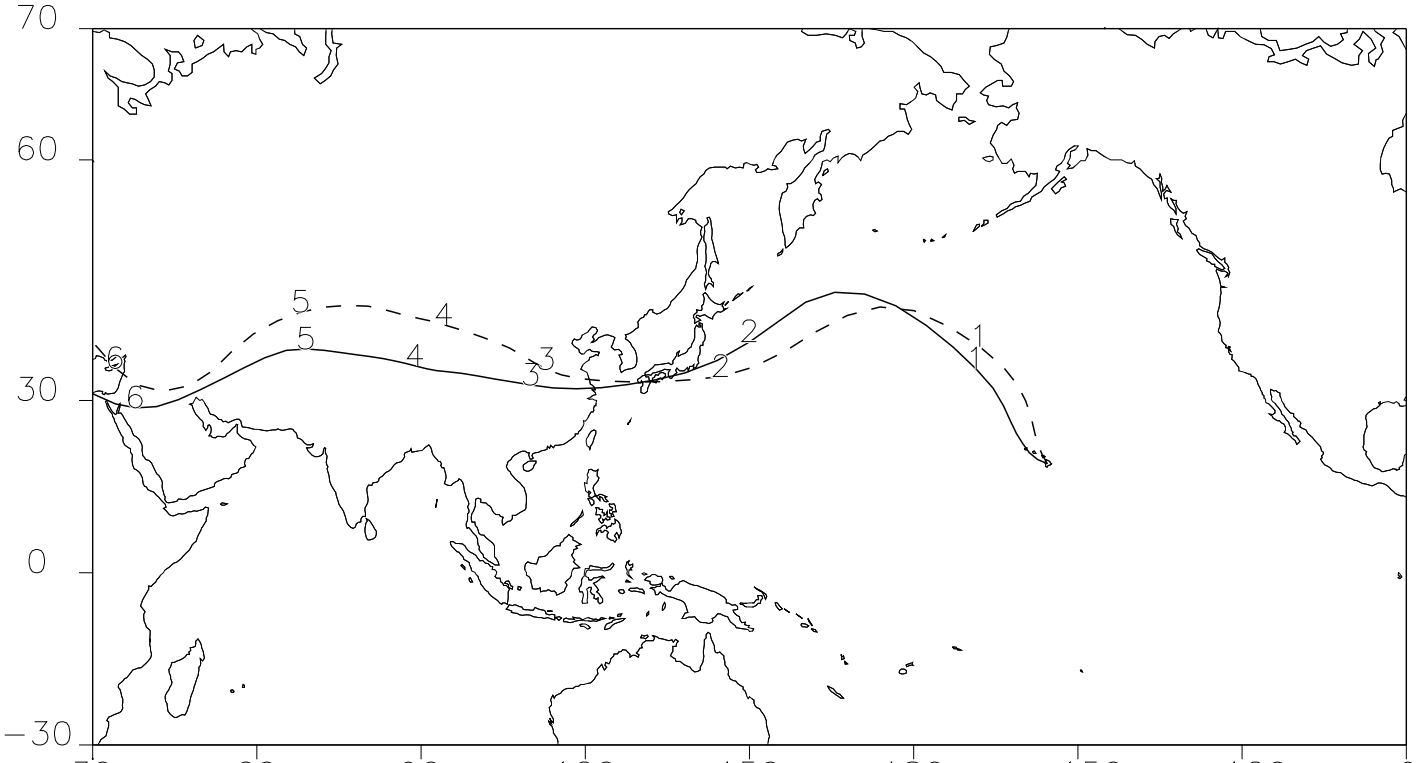
18UT

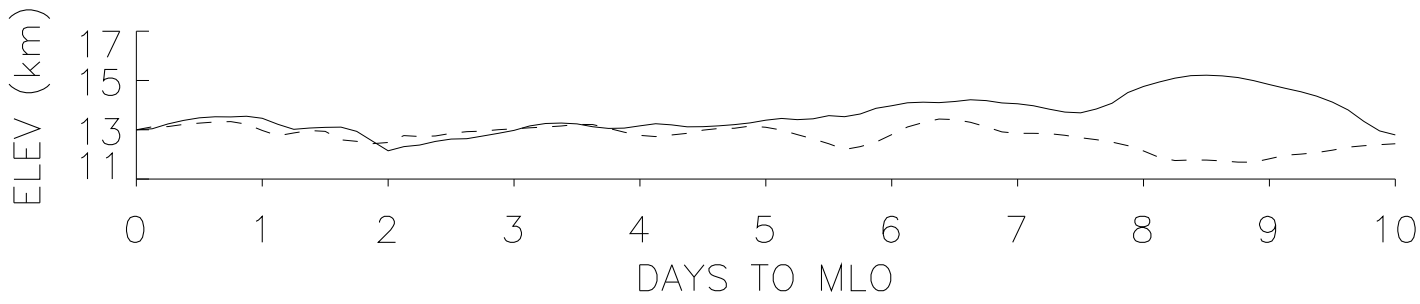
Day	km	hPa	C
0	13.0	178	−60
1	13.5	164	−63
2	13.3	166	−62
3	11.2	231	−48
4	11.8	210	−51
5	12.6	187	−54
6	13.4	164	−59
7	13.4	163	−60
8	13.9	153	−64
9	12.3	196	−52
10	13.2	162	−58

12UT − solid
18UT − dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/22/2004 (Day of Year 113)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 177 -60
1 13.5 164 -64
2 13.1 169 -59
3 12.1 199 -53
4 12.5 189 -53
5 13.0 175 -55
6 13.2 168 -59
06UT
Day km hPa C
0 13.0 177 -59
1 13.5 161 -63
2 12.5 184 -55
3 12.8 181 -54
4 13.1 171 -56
5 13.4 162 -57
6 13.6 160 -60
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
14
13
12
11
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/22/2004 (Day of Year 113)
NCEP/NCAR Reanalysis 1 Data Set





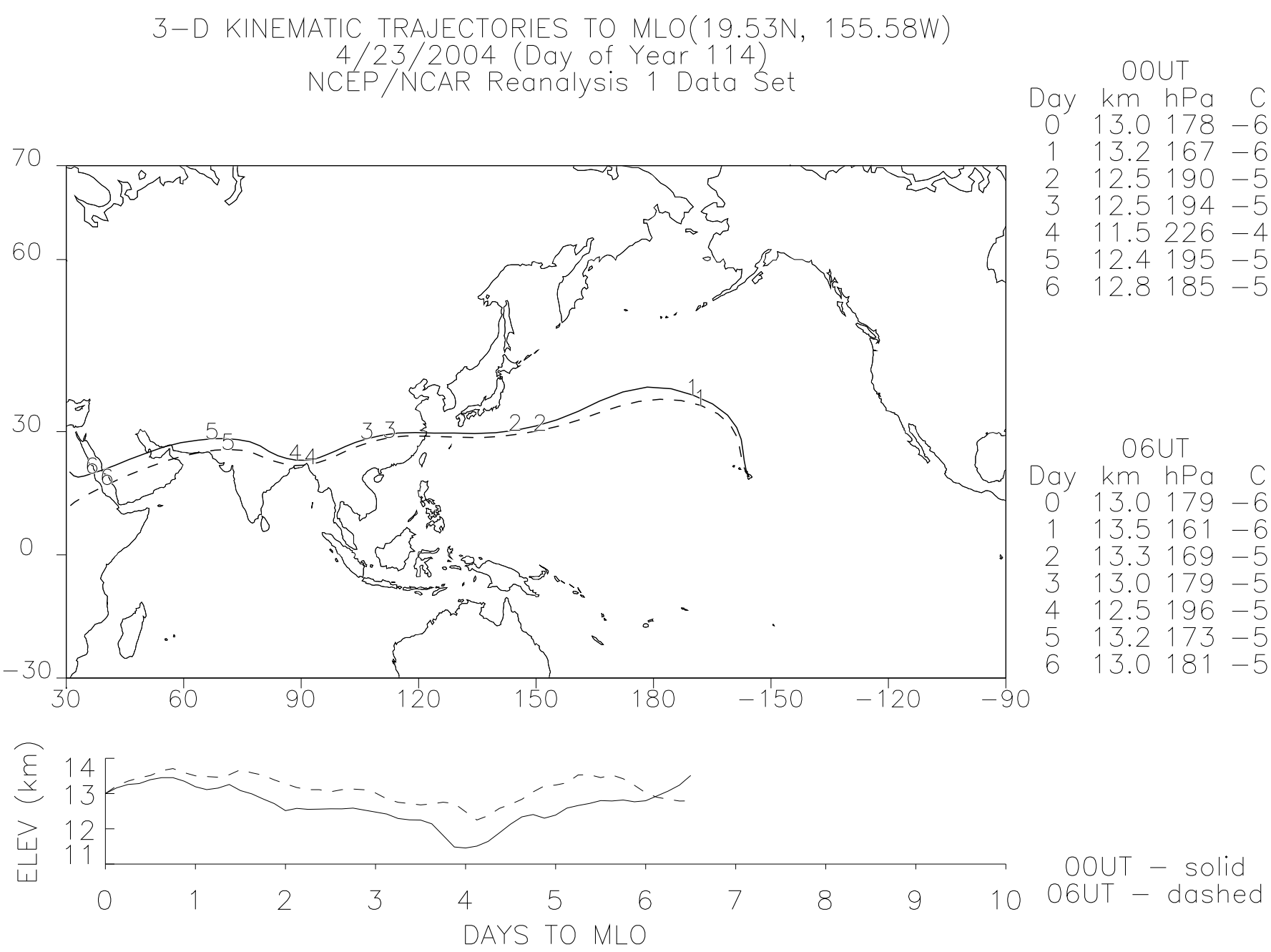
12UT

Day	km	hPa	C
0	13.0	177	−60
1	13.5	159	−62
2	12.1	193	−51
3	13.0	175	−55
4	13.2	169	−58
5	13.4	161	−58
6	14.0	149	−57
7	14.1	146	−61
8	14.8	130	−65
9	14.8	130	−66
10	12.8	179	−53

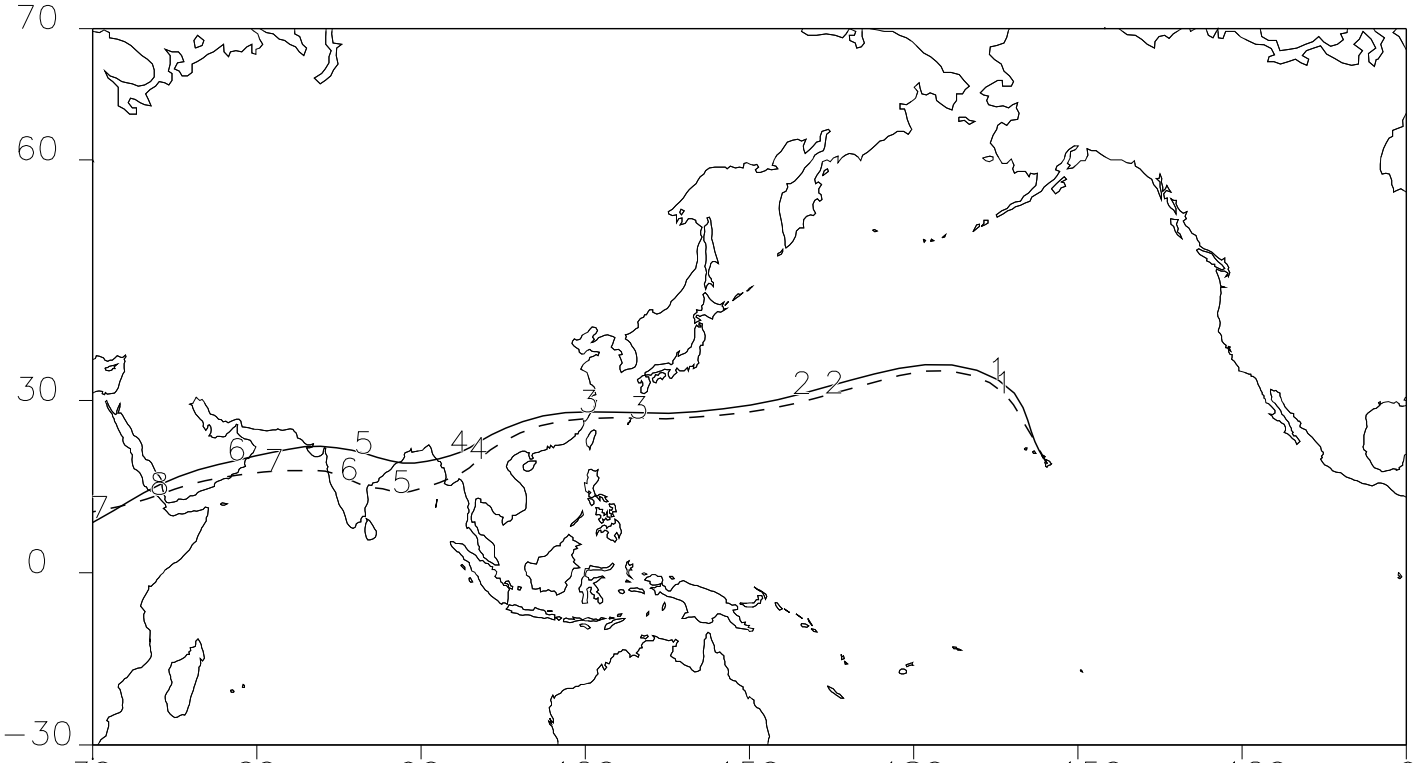
18UT

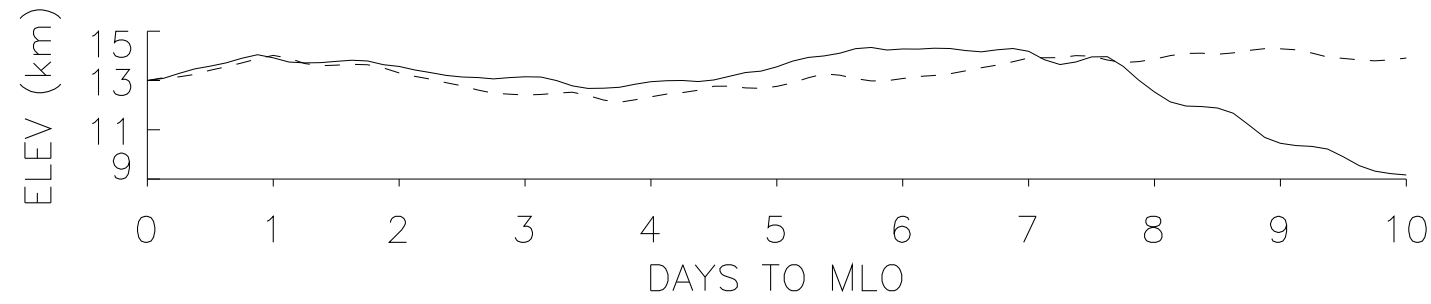
Day	km	hPa	C
0	13.0	178	−59
1	13.0	170	−60
2	12.5	186	−56
3	13.0	172	−56
4	12.8	176	−58
5	13.1	165	−57
6	12.8	173	−55
7	12.9	170	−55
8	12.1	190	−54
9	11.8	200	−51
10	12.4	181	−55

12UT − solid
18UT − dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/23/2004 (Day of Year 114)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 178 -60
1 13.2 167 -61
2 12.5 190 -56
3 12.5 194 -55
4 11.5 226 -47
5 12.4 195 -56
6 12.8 185 -57
06UT
Day km hPa C
0 13.0 179 -60
1 13.5 161 -63
2 13.3 169 -59
3 13.0 179 -56
4 12.5 196 -50
5 13.2 173 -58
6 13.0 181 -57
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
14
13
12
11
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/23/2004 (Day of Year 114)
NCEP/NCAR Reanalysis 1 Data Set





12UT

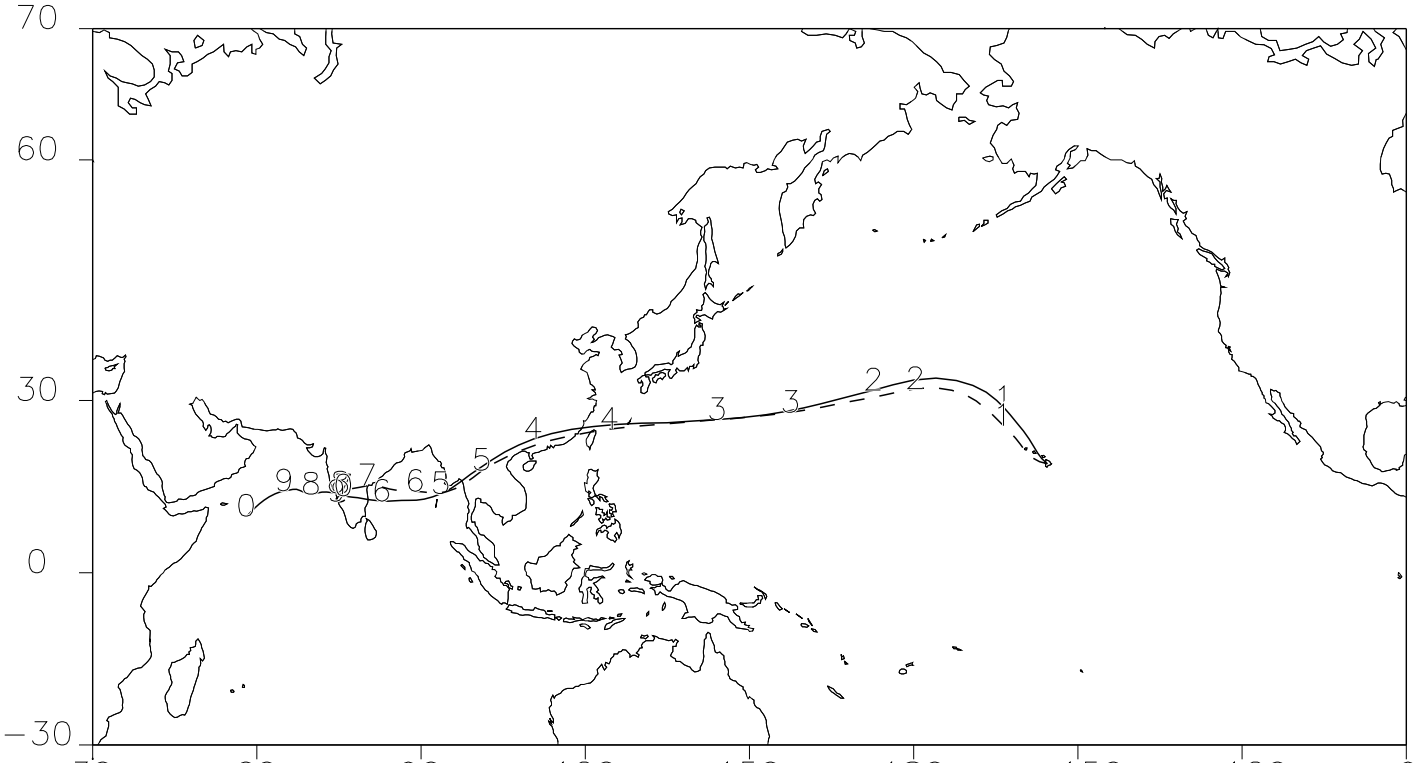
Day	km	hPa	C
0	13.0	179	−60
1	13.9	152	−67
2	13.6	162	−63
3	13.1	176	−58
4	12.9	182	−55
5	13.6	165	−59
6	14.3	148	−64
7	14.2	152	−64
8	12.5	199	−50
9	10.4	270	−35
10	9.2	323	−26

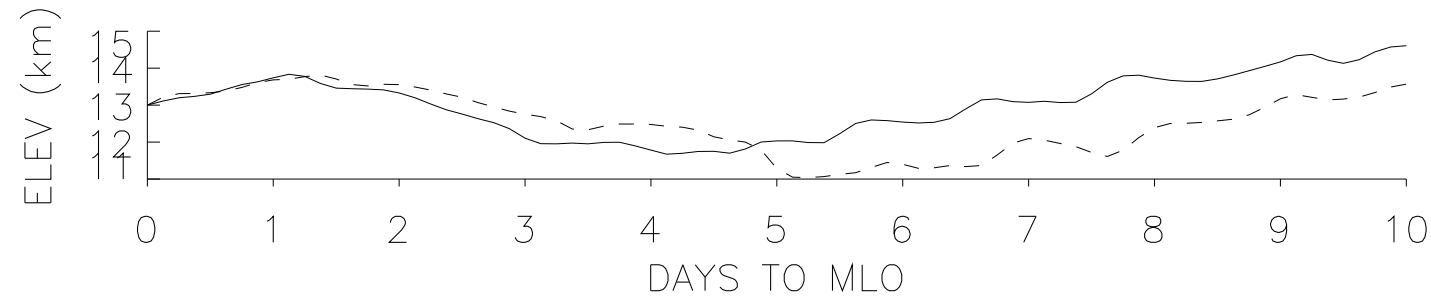
18UT

Day	km	hPa	C
0	13.0	180	−61
1	14.0	150	−68
2	13.3	168	−61
3	12.4	197	−54
4	12.3	202	−51
5	12.8	190	−54
6	13.1	182	−57
7	13.9	159	−62
8	13.9	160	−60
9	14.3	150	−65
10	13.9	159	−62

12UT − solid
18UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/24/2004 (Day of Year 115)
NCEP/NCAR Reanalysis 1 Data Set





00UT

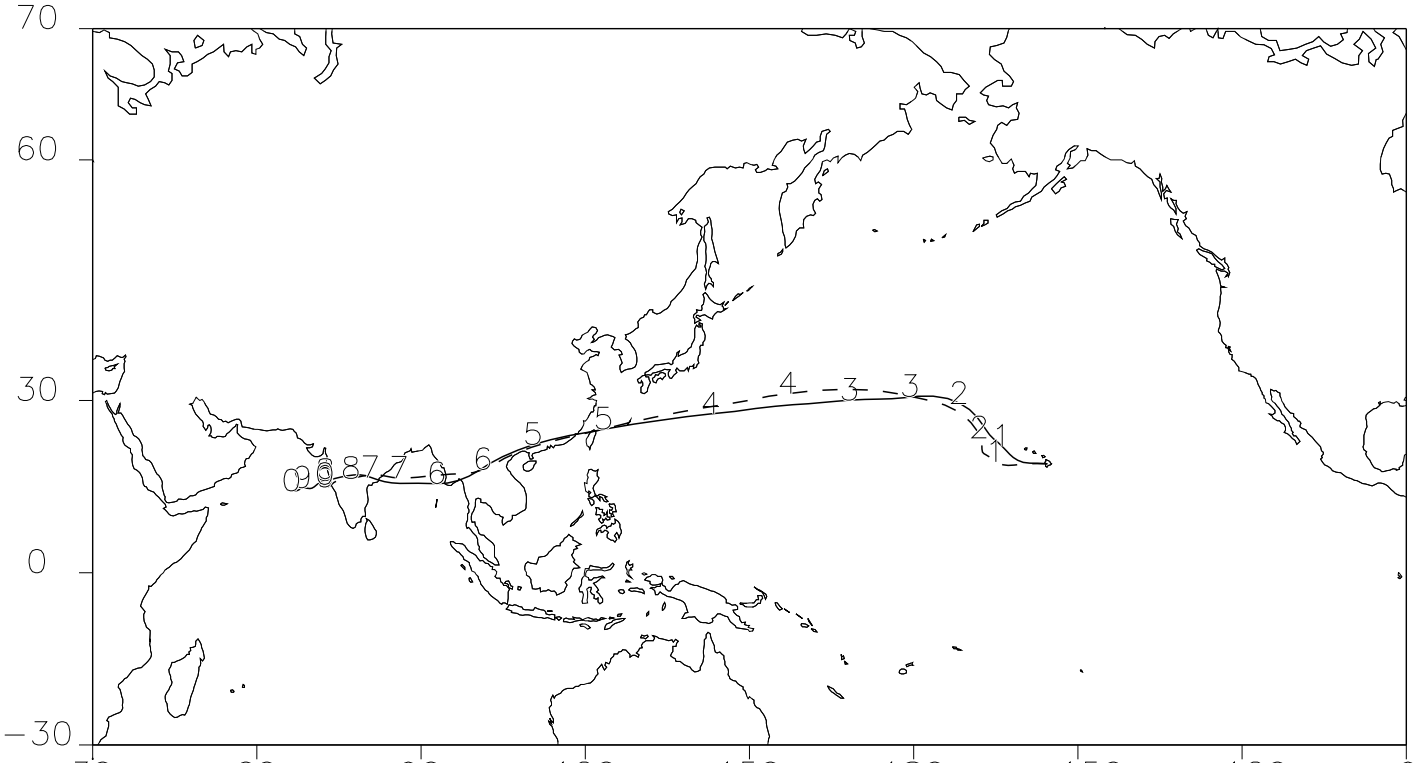
Day	km	hPa	C
0	13.0	180	-61
1	13.7	159	-65
2	13.3	169	-62
3	12.1	207	-52
4	11.8	220	-49
5	12.0	212	-50
6	12.5	197	-54
7	13.1	181	-57
8	13.7	163	-61
9	14.2	152	-64
10	14.6	142	-67

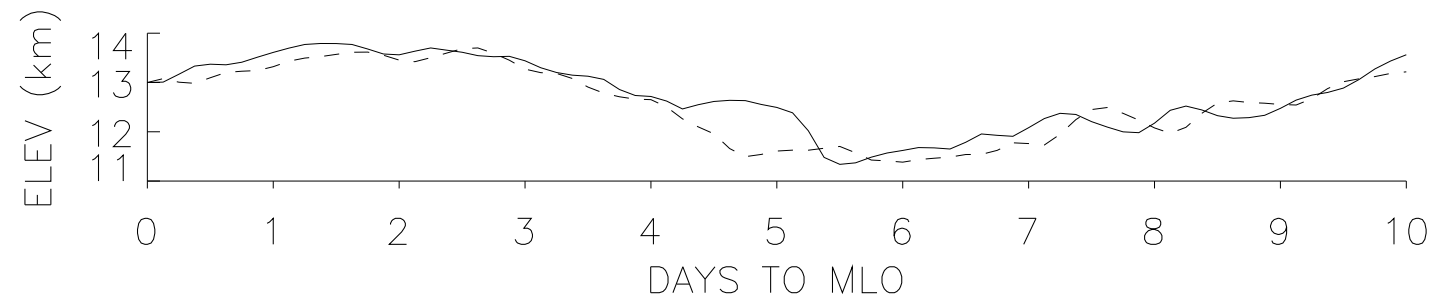
06UT

Day	km	hPa	C
0	13.0	181	-59
1	13.7	161	-65
2	13.6	163	-63
3	12.8	187	-56
4	12.5	198	-54
5	11.3	238	-43
6	11.4	235	-45
7	12.1	212	-50
8	12.4	203	-52
9	13.2	180	-57
10	13.6	169	-61

00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/24/2004 (Day of Year 115)
NCEP/NCAR Reanalysis 1 Data Set





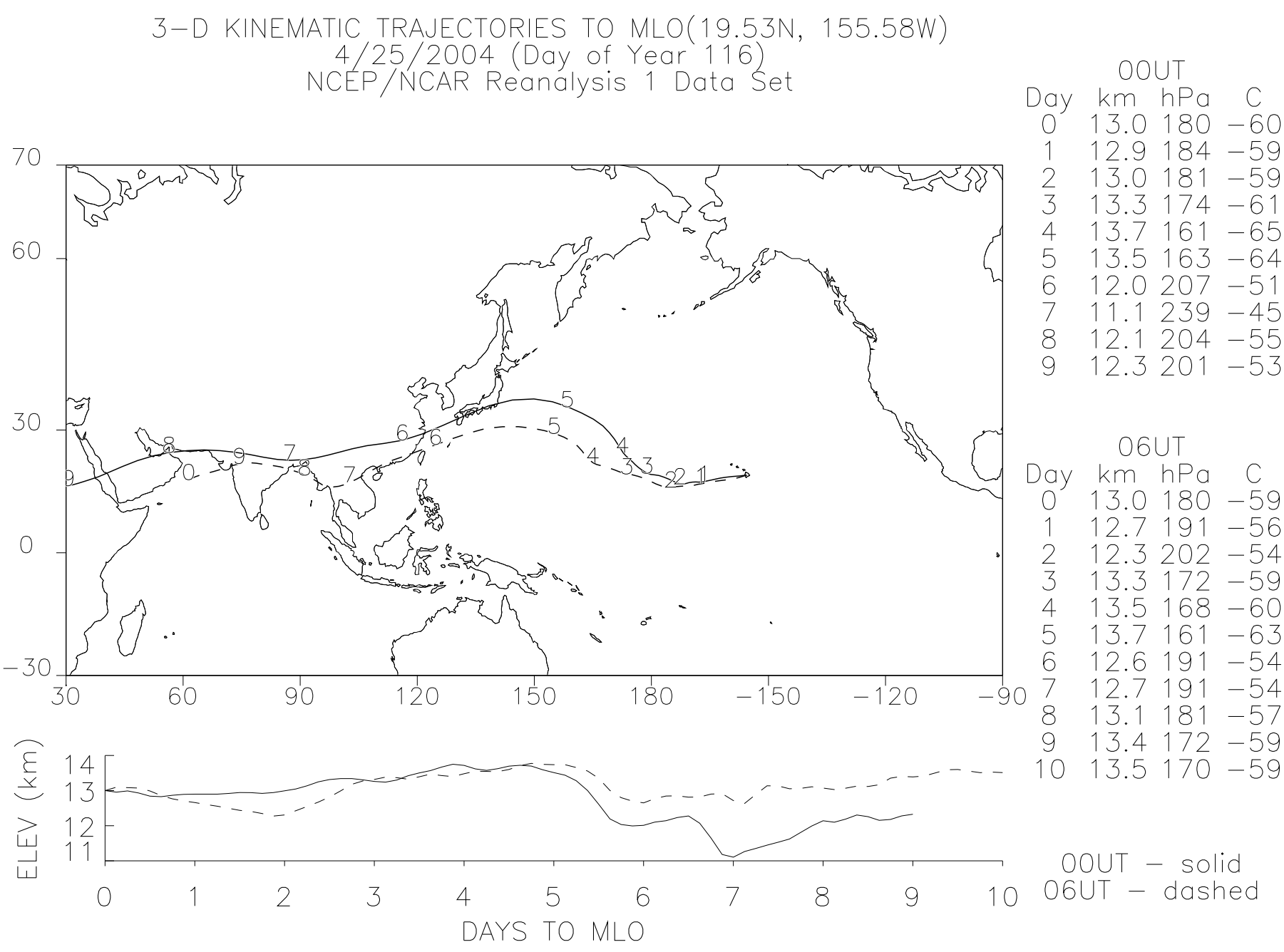
12UT

Day	km	hPa	C
0	13.0	180	−60
1	13.6	163	−64
2	13.6	164	−64
3	13.4	167	−62
4	12.7	189	−56
5	12.5	197	−54
6	11.6	225	−47
7	12.1	211	−51
8	12.2	208	−50
9	12.5	199	−51
10	13.6	168	−59

18UT

Day	km	hPa	C
0	13.0	180	−60
1	13.3	171	−62
2	13.5	167	−63
3	13.3	171	−62
4	12.7	189	−57
5	11.6	225	−47
6	11.4	233	−45
7	11.8	222	−48
8	12.1	213	−48
9	12.6	198	−52
10	13.2	179	−57

12UT − solid
18UT − dashed



00UT

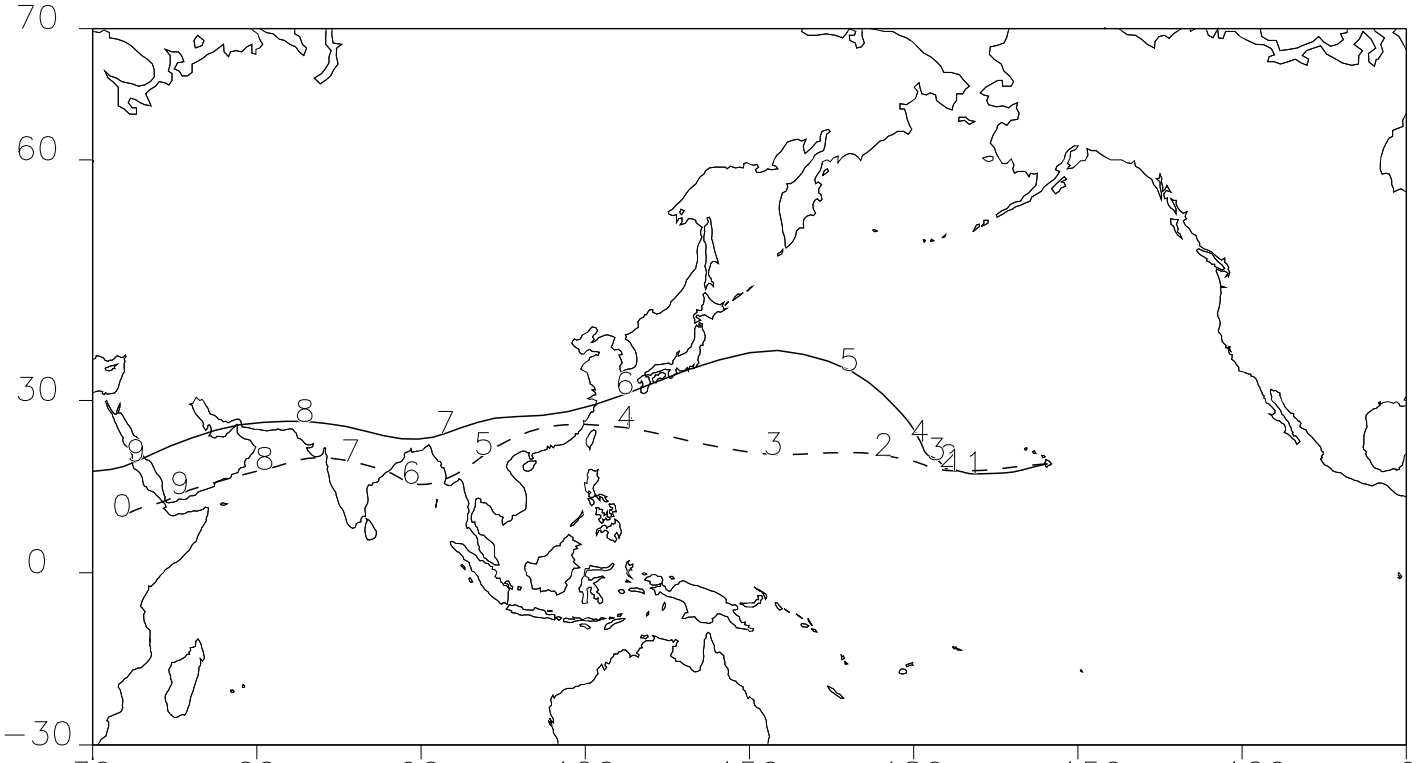
Day	km	hPa	C
0	13.0	180	−60
1	12.9	184	−59
2	13.0	181	−59
3	13.3	174	−61
4	13.7	161	−65
5	13.5	163	−64
6	12.0	207	−51
7	11.1	239	−45
8	12.1	204	−55
9	12.3	201	−53

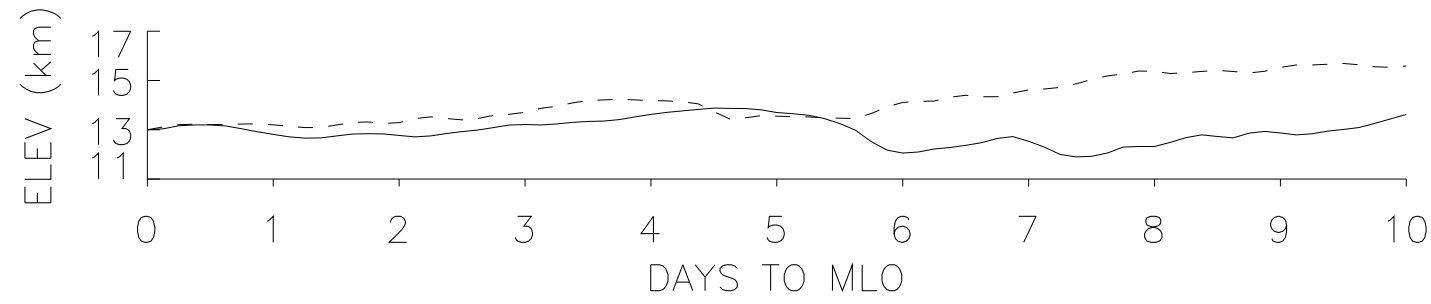
06UT

Day	km	hPa	C
0	13.0	180	−59
1	12.7	191	−56
2	12.3	202	−54
3	13.3	172	−59
4	13.5	168	−60
5	13.7	161	−63
6	12.6	191	−54
7	12.7	191	−54
8	13.1	181	−57
9	13.4	172	−59
10	13.5	170	−59

00UT – solid
06UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/25/2004 (Day of Year 116)
NCEP/NCAR Reanalysis 1 Data Set





12UT

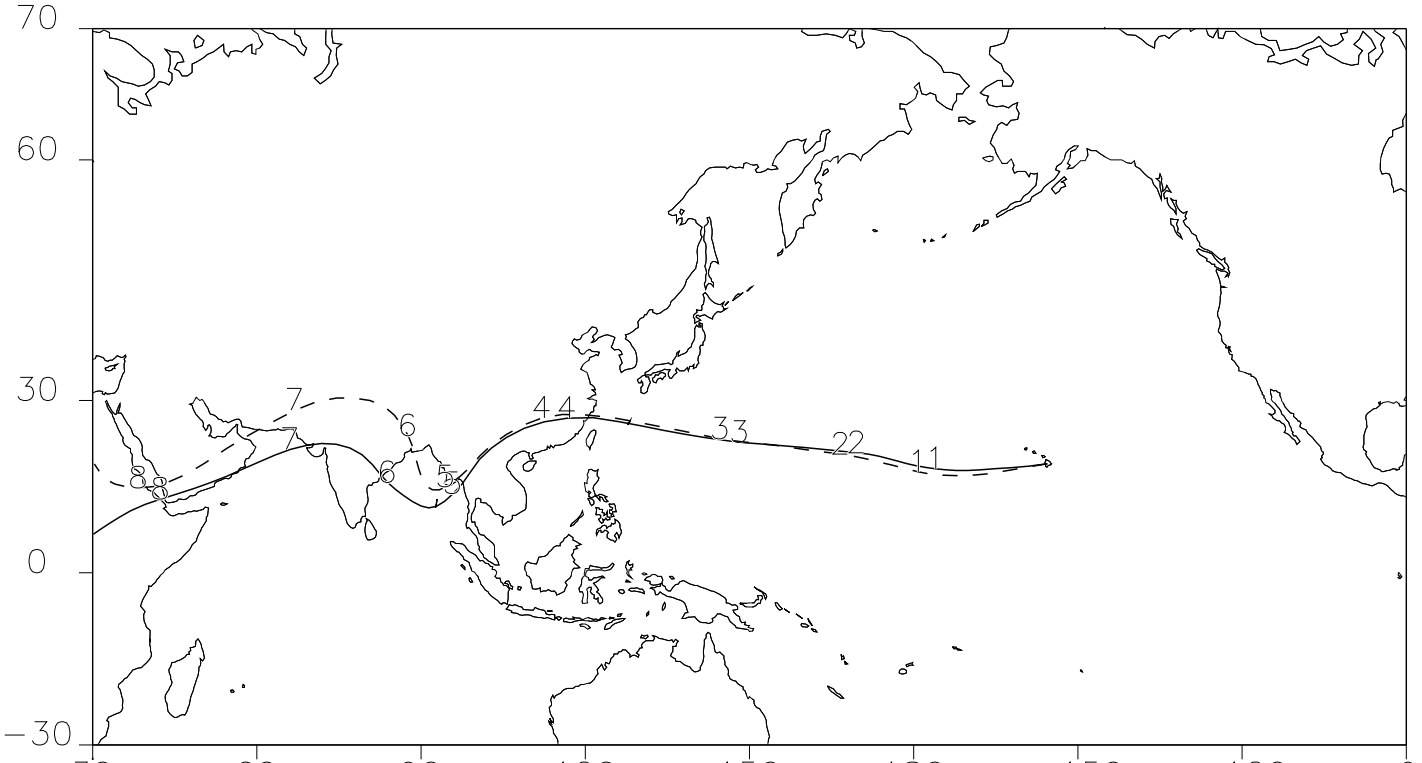
Day	km	hPa	C
0	13.0	179	−59
1	12.8	186	−57
2	12.8	188	−57
3	13.2	175	−61
4	13.6	163	−64
5	13.7	158	−65
6	12.1	205	−50
7	12.5	191	−53
8	12.3	198	−54
9	12.9	183	−57
10	13.6	164	−60

18UT

Day	km	hPa	C
0	13.0	178	−58
1	13.2	175	−59
2	13.3	173	−59
3	13.7	162	−61
4	14.2	149	−64
5	13.6	167	−57
6	14.1	154	−60
7	14.6	141	−65
8	15.4	124	−70
9	15.5	122	−71
10	15.6	121	−73

12UT − solid
18UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/26/2004 (Day of Year 117)
NCEP/NCAR Reanalysis 1 Data Set

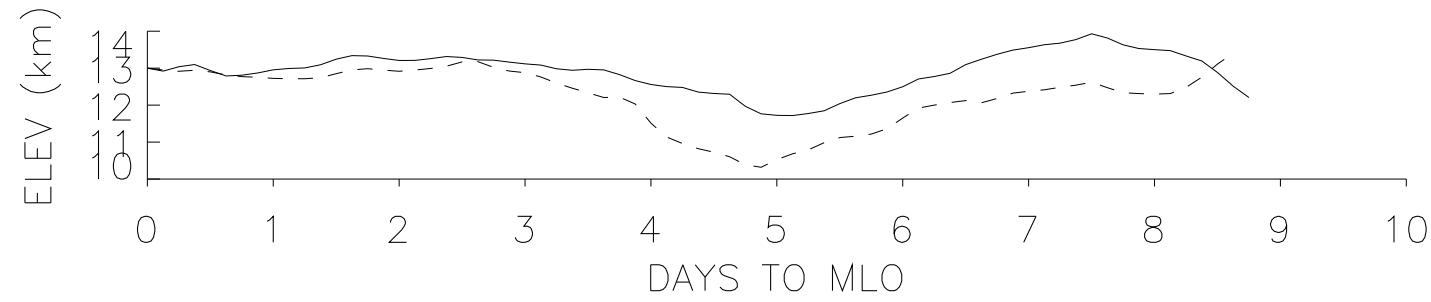


00UT

Day	km	hPa	C
0	13.0	178	−59
1	13.0	182	−58
2	13.2	176	−59
3	13.1	177	−59
4	12.6	192	−55
5	11.7	222	−46
6	12.5	198	−51
7	13.6	165	−62
8	13.5	168	−60

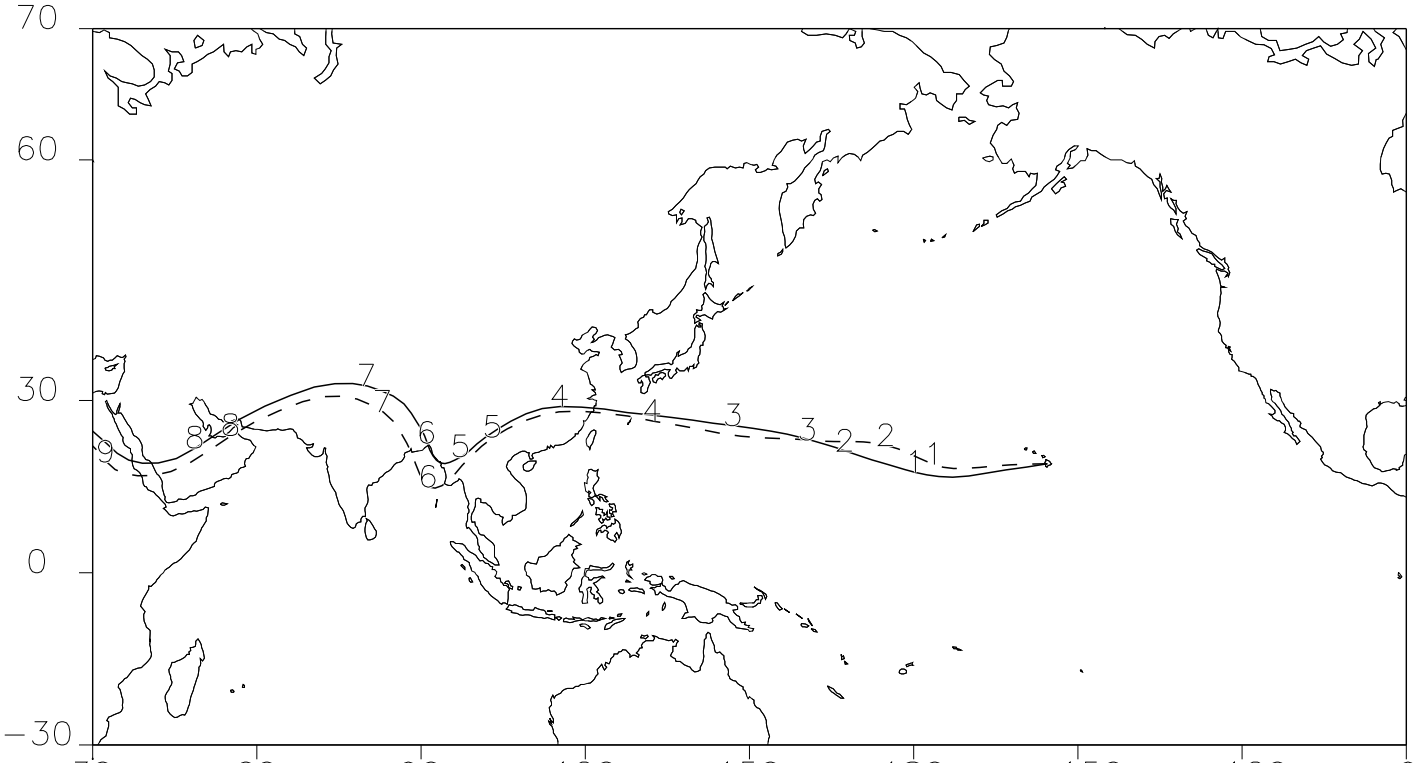
06UT

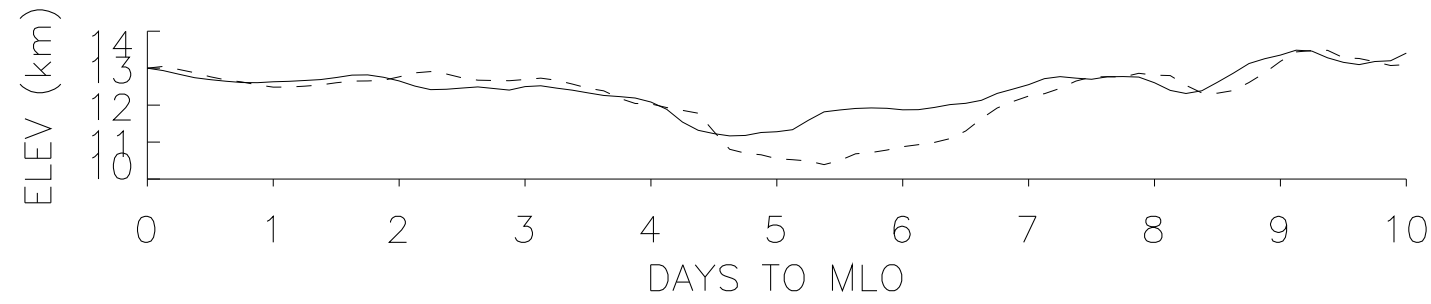
Day	km	hPa	C
0	13.0	178	−59
1	12.7	189	−56
2	12.9	184	−58
3	12.9	183	−58
4	11.5	227	−45
5	10.5	265	−37
6	11.6	223	−47
7	12.4	197	−56
8	12.3	203	−52



00UT – solid
06UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/26/2004 (Day of Year 117)
NCEP/NCAR Reanalysis 1 Data Set





12UT

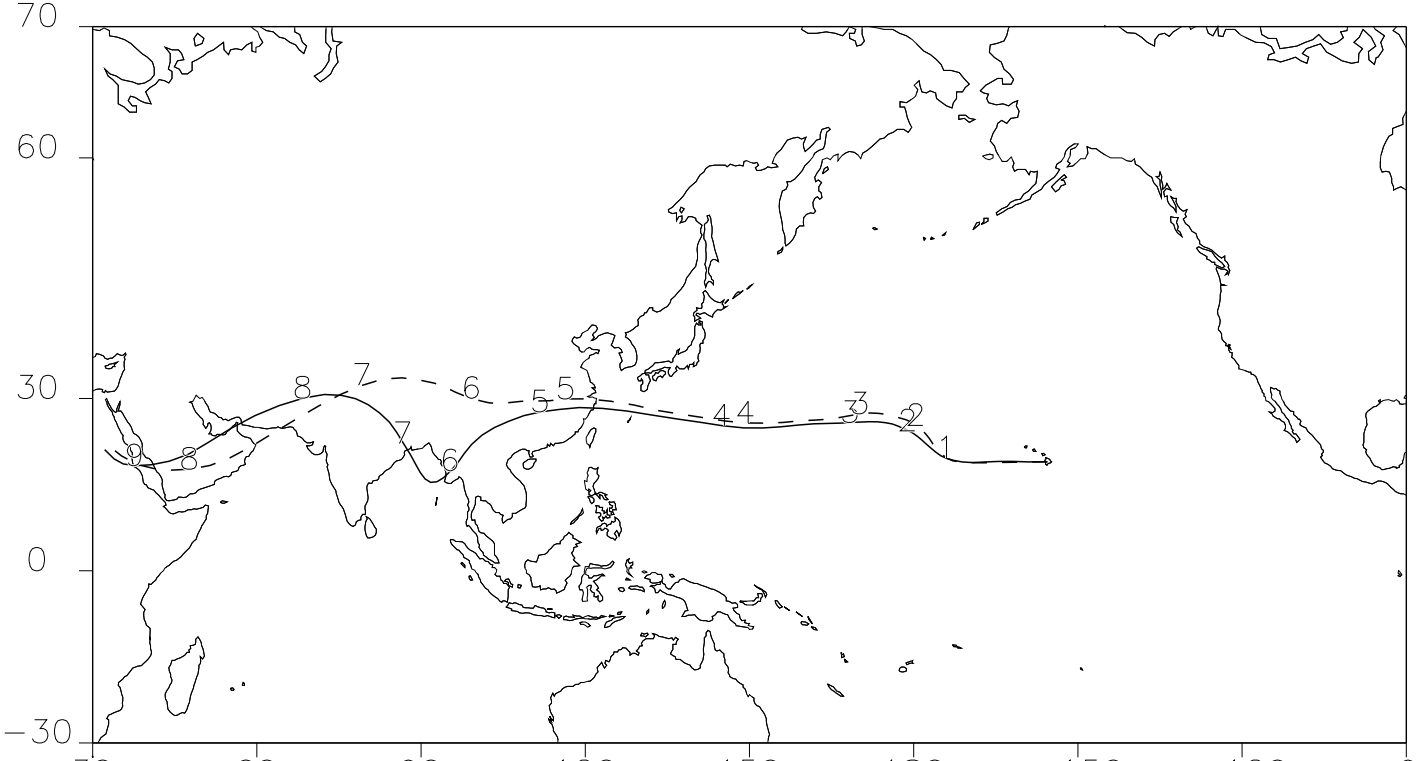
Day	km	hPa	C
0	13.0	177	−60
1	12.6	192	−57
2	12.7	192	−57
3	12.5	194	−56
4	12.1	206	−52
5	11.3	235	−43
6	11.9	215	−48
7	12.6	191	−56
8	12.6	188	−56
9	13.4	167	−61
10	13.4	165	−62

18UT

Day	km	hPa	C
0	13.0	177	−60
1	12.5	194	−57
2	12.8	187	−59
3	12.7	189	−57
4	12.0	208	−52
5	10.5	262	−40
6	10.9	252	−40
7	12.2	203	−52
8	12.8	183	−57
9	13.2	175	−58
10	13.1	172	−60

12UT – solid
18UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/27/2004 (Day of Year 118)
NCEP/NCAR Reanalysis 1 Data Set

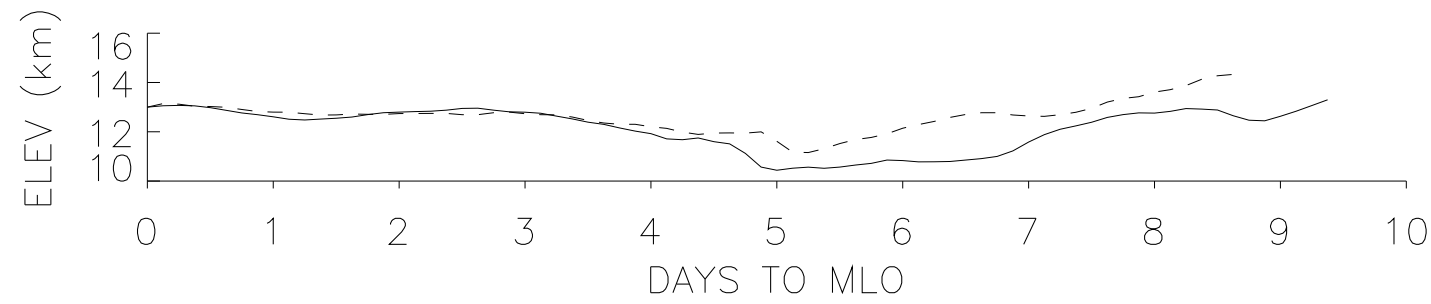


00UT

Day	km	hPa	C
0	13.0	177	−60
1	12.6	190	−57
2	12.8	186	−60
3	12.8	186	−57
4	11.9	212	−52
5	10.4	264	−41
6	10.8	252	−40
7	11.6	224	−47
8	12.8	183	−58
9	12.6	190	−55

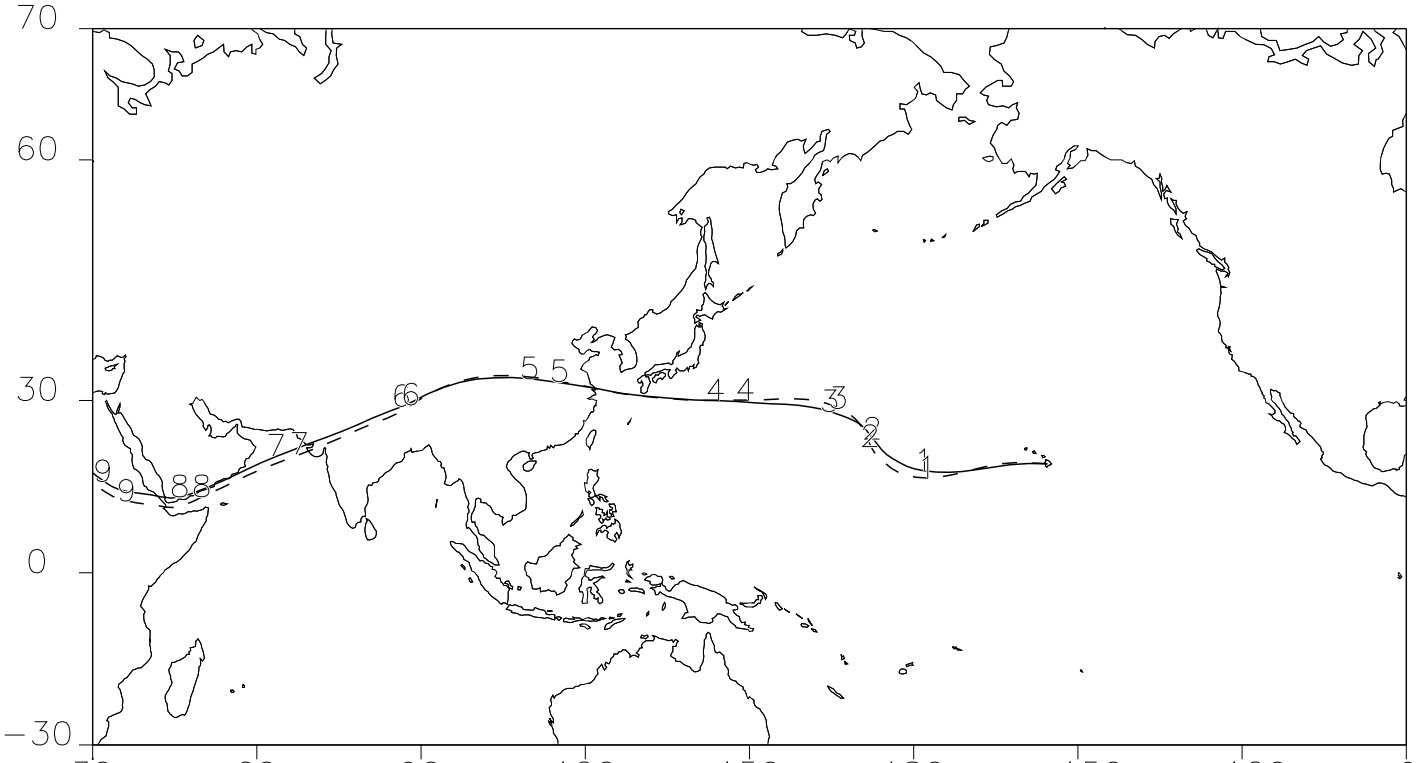
06UT

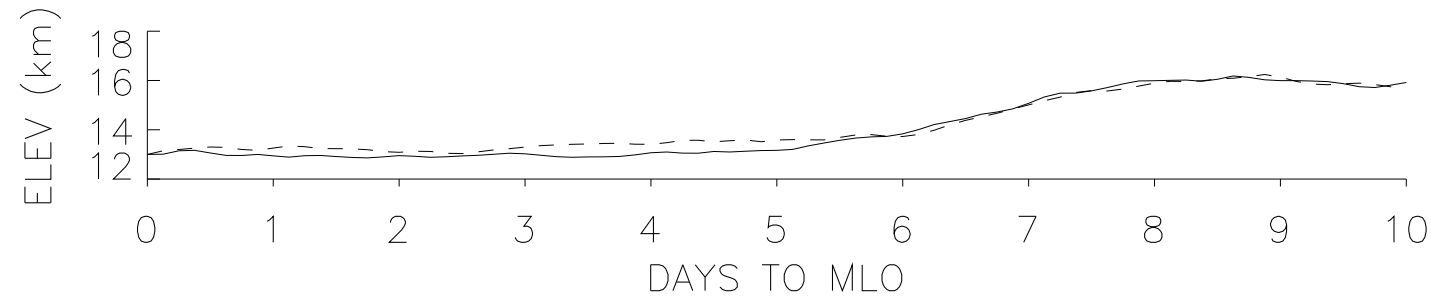
Day	km	hPa	C
0	13.0	177	−60
1	12.8	184	−58
2	12.7	187	−59
3	12.7	187	−58
4	12.2	202	−54
5	11.6	222	−47
6	12.1	205	−50
7	12.6	189	−54
8	13.6	163	−62



00UT – solid
06UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/27/2004 (Day of Year 118)
NCEP/NCAR Reanalysis 1 Data Set





12UT

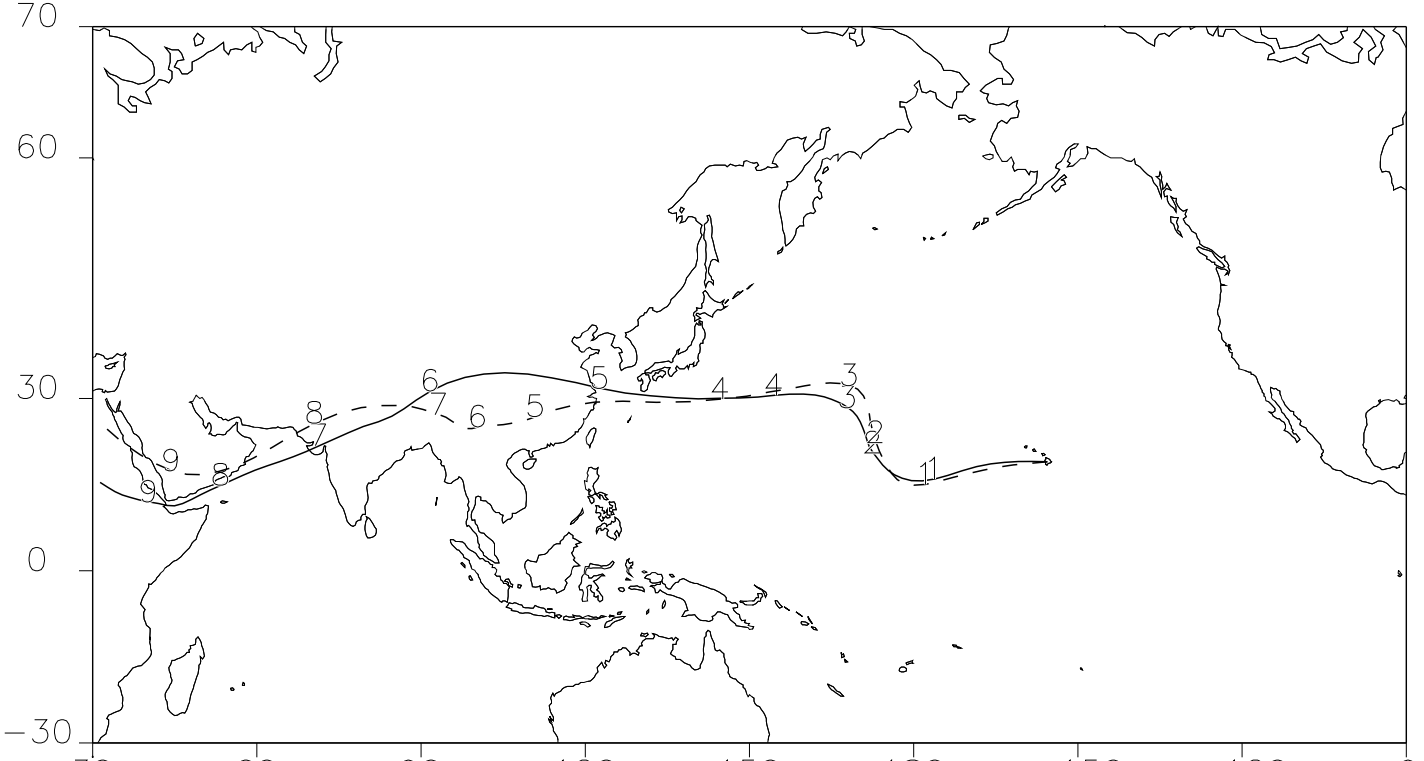
Day	km	hPa	C
0	13.0	177	-61
1	12.9	181	-58
2	12.9	182	-58
3	13.0	179	-58
4	13.1	174	-58
5	13.2	172	-56
6	13.8	156	-58
7	15.1	130	-67
8	16.0	111	-75
9	16.0	111	-73
10	15.9	112	-71

18UT

Day	km	hPa	C
0	13.0	178	-61
1	13.3	172	-60
2	13.1	177	-58
3	13.3	171	-58
4	13.4	165	-58
5	13.6	160	-57
6	13.7	159	-58
7	15.0	132	-66
8	15.9	114	-74
9	16.1	109	-76
10	15.7	117	-71

12UT - solid
18UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/28/2004 (Day of Year 119)
NCEP/NCAR Reanalysis 1 Data Set

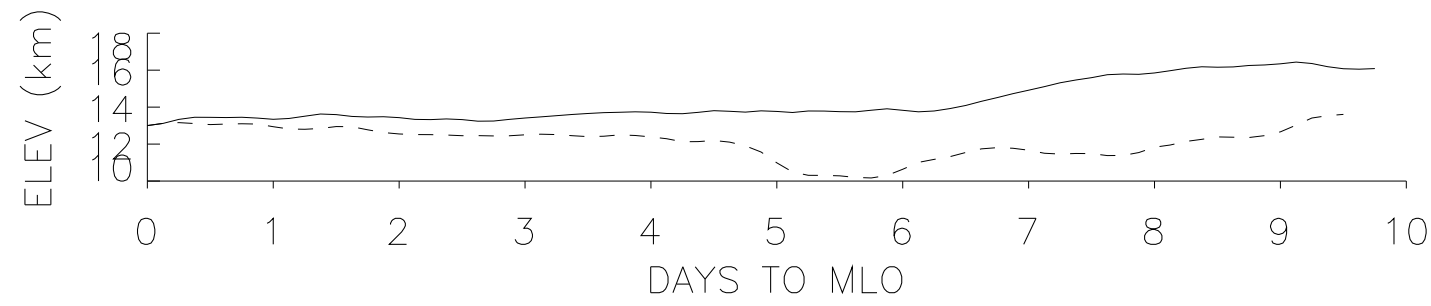


00UT

Day	km	hPa	C
0	13.0	178	-60
1	13.3	170	-60
2	13.4	169	-60
3	13.4	168	-59
4	13.7	158	-59
5	13.8	155	-59
6	13.8	155	-57
7	14.9	133	-66
8	15.9	114	-73
9	16.3	104	-77

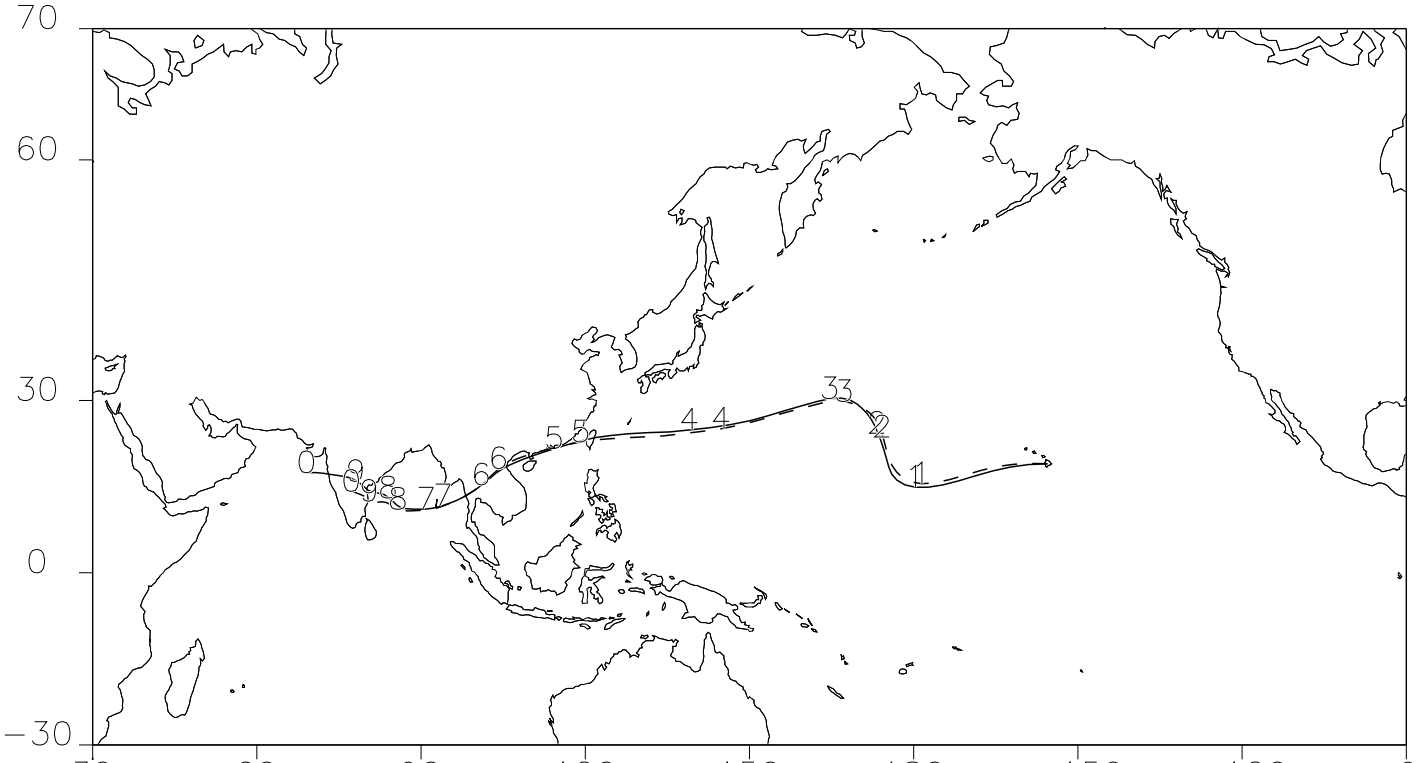
06UT

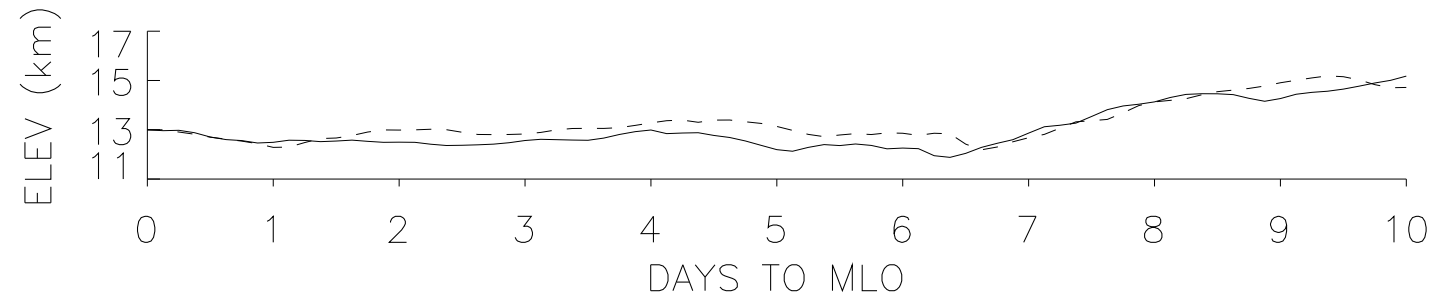
Day	km	hPa	C
0	13.0	179	-59
1	12.9	181	-57
2	12.5	193	-57
3	12.5	194	-55
4	12.4	194	-56
5	11.0	246	-41
6	10.6	258	-40
7	11.7	222	-47
8	11.8	216	-50
9	12.7	190	-57



00UT – solid
06UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/28/2004 (Day of Year 119)
NCEP/NCAR Reanalysis 1 Data Set





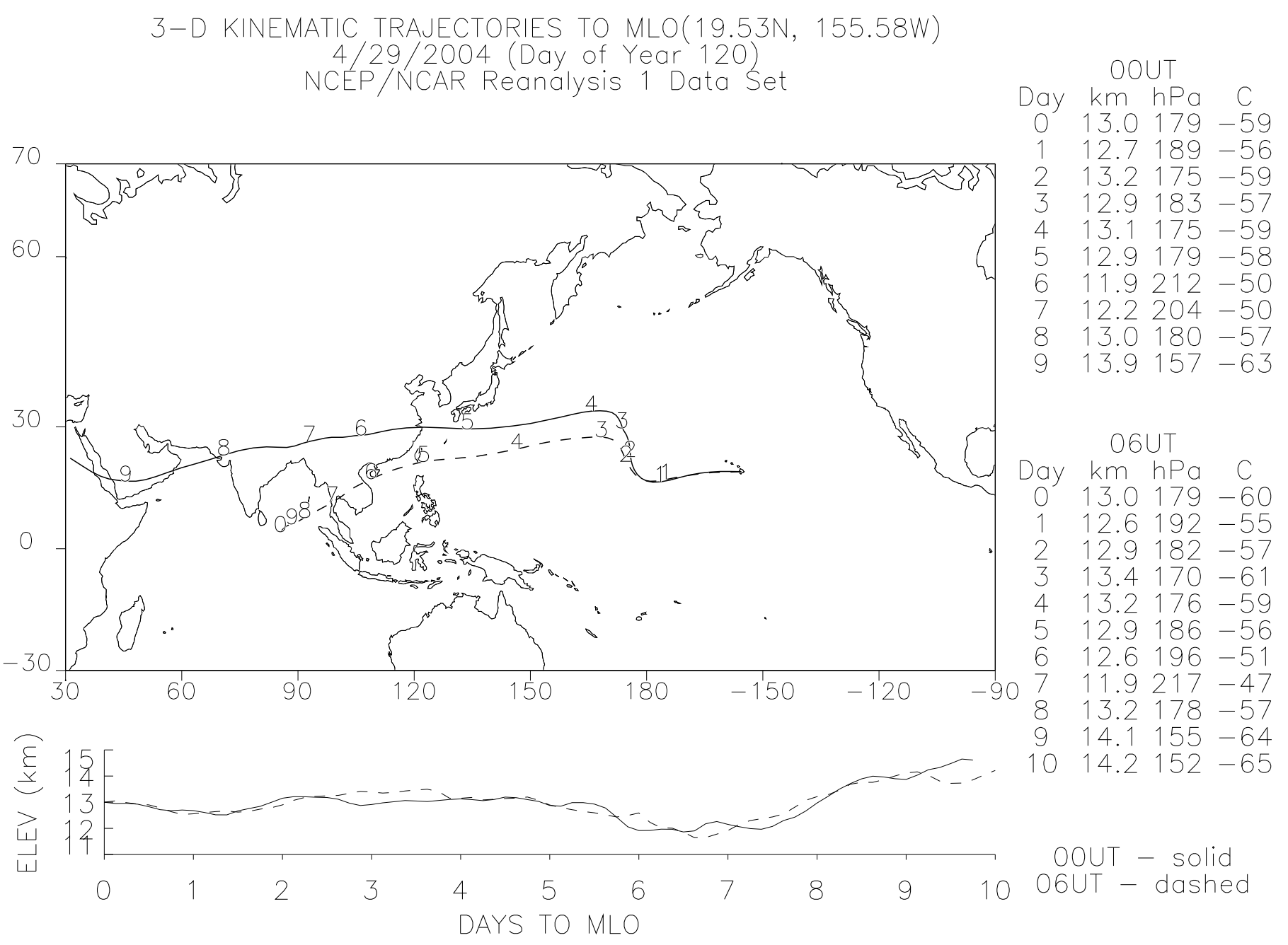
12UT

Day	km	hPa	C
0	13.0	178	−59
1	12.5	195	−54
2	12.5	196	−55
3	12.6	193	−56
4	13.0	180	−59
5	12.2	207	−50
6	12.3	205	−49
7	12.9	187	−55
8	14.1	153	−63
9	14.3	149	−64
10	15.2	128	−69

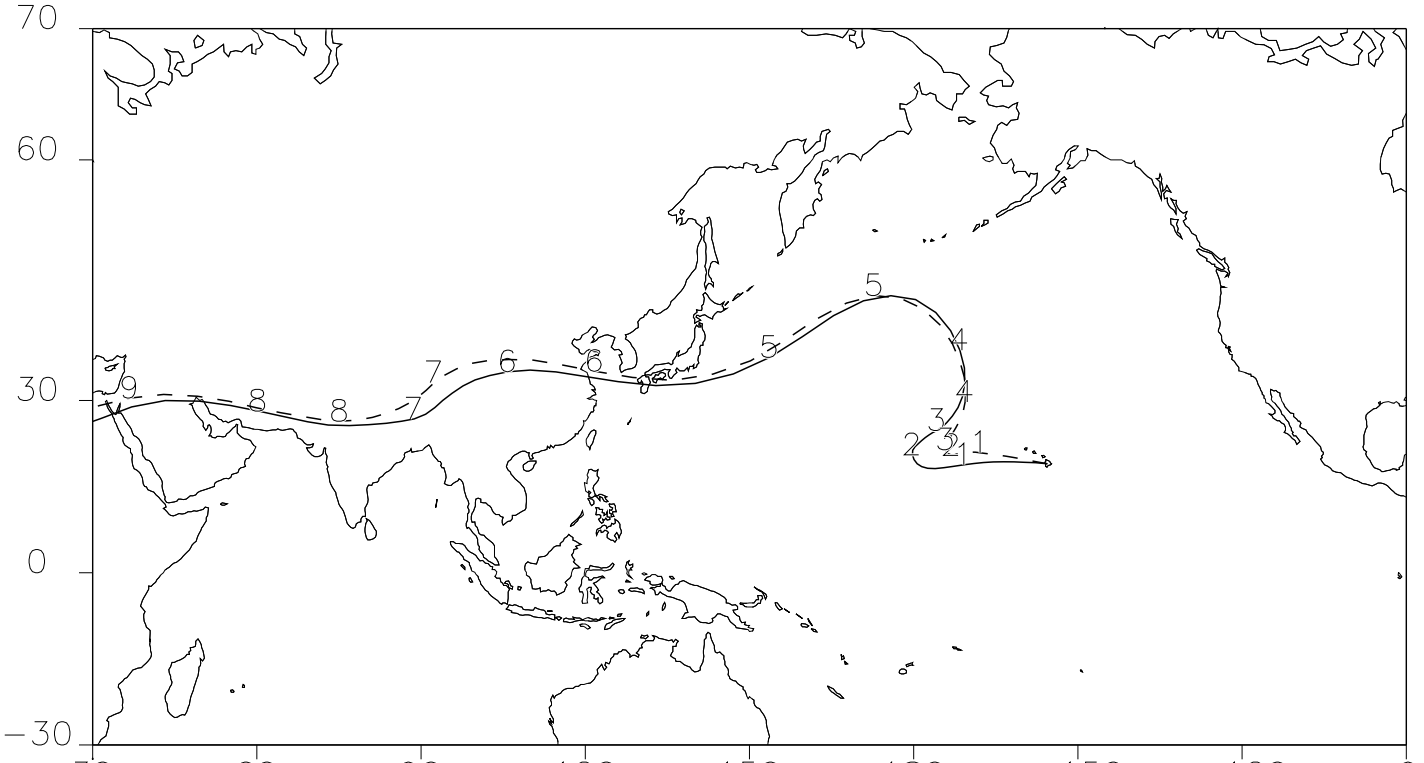
18UT

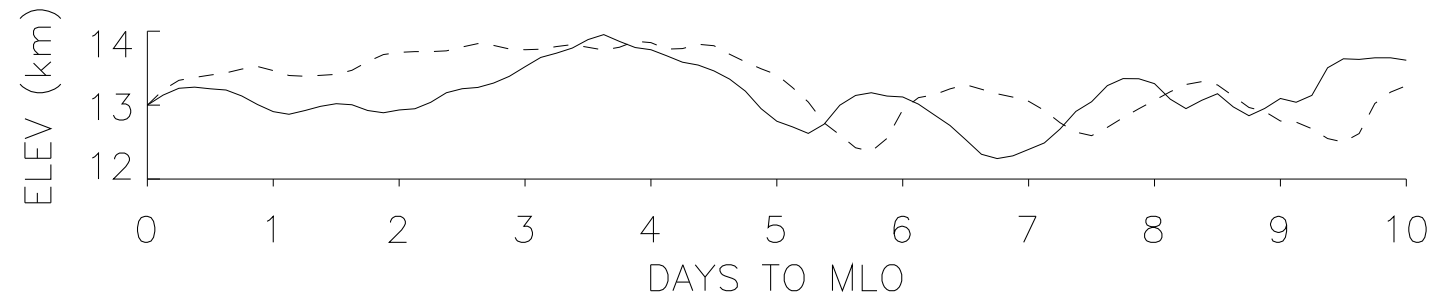
Day	km	hPa	C
0	13.0	179	−60
1	12.3	200	−53
2	13.0	180	−57
3	12.8	185	−57
4	13.3	172	−59
5	13.1	178	−57
6	12.9	187	−54
7	12.7	193	−52
8	14.1	154	−63
9	14.9	136	−68
10	14.7	140	−66

12UT − solid
18UT − dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/29/2004 (Day of Year 120)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 179 -59
1 12.7 189 -56
2 13.2 175 -59
3 12.9 183 -57
4 13.1 175 -59
5 12.9 179 -58
6 11.9 212 -50
7 12.2 204 -50
8 13.0 180 -57
9 13.9 157 -63
06UT
Day km hPa C
0 13.0 179 -60
1 12.6 192 -55
2 12.9 182 -57
3 13.4 170 -61
4 13.2 176 -59
5 12.9 186 -56
6 12.6 196 -51
7 11.9 217 -47
8 13.2 178 -57
9 14.1 155 -64
10 14.2 152 -65
70
60
30
0
-30
30
60
90
120
150
180
-150
-120
-90
ELEV (km)
15
14
13
12
11
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/29/2004 (Day of Year 120)
NCEP/NCAR Reanalysis 1 Data Set





12UT

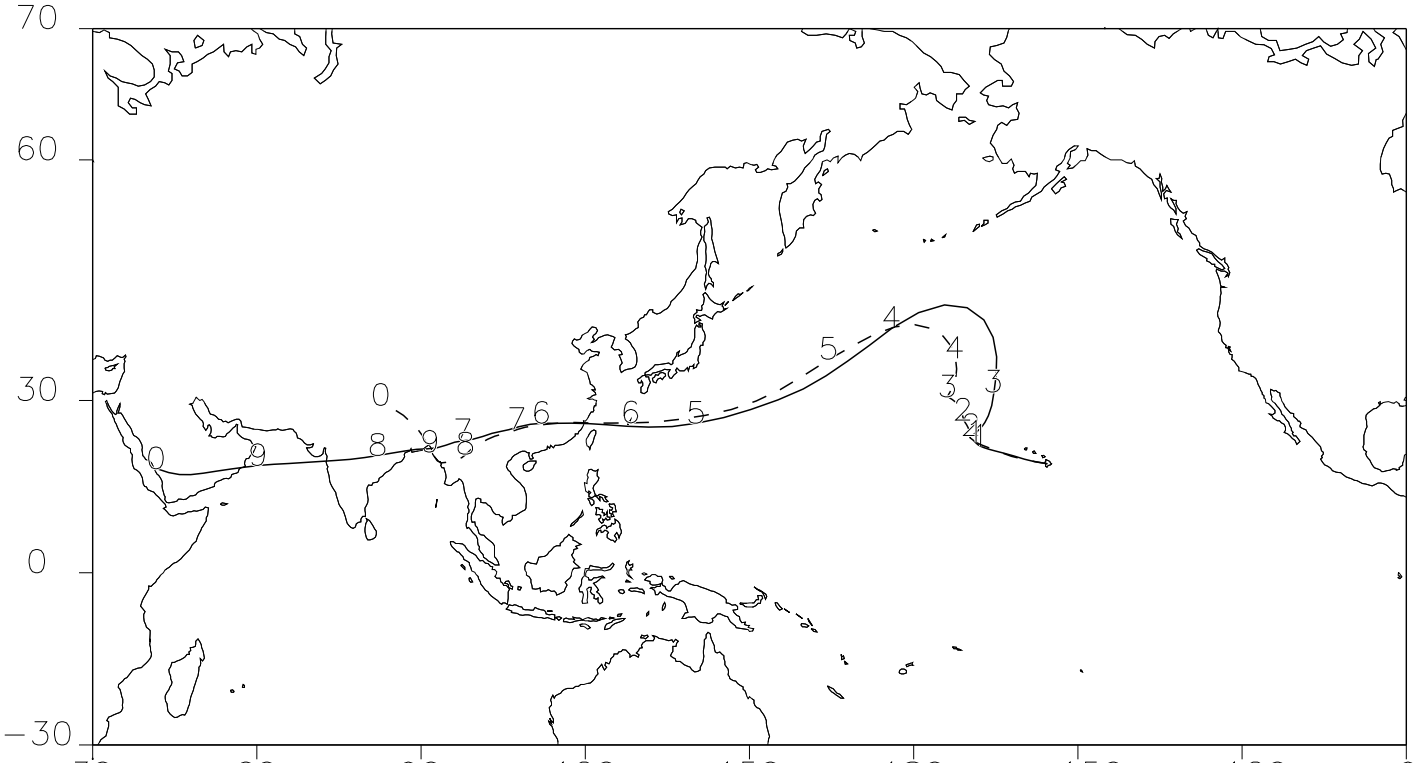
Day	km	hPa	C
0	13.0	179	-60
1	12.9	182	-58
2	12.9	180	-59
3	13.5	164	-62
4	13.7	156	-64
5	12.8	176	-56
6	13.1	173	-59
7	12.4	195	-53
8	13.3	168	-59
9	13.1	175	-59
10	13.6	161	-62

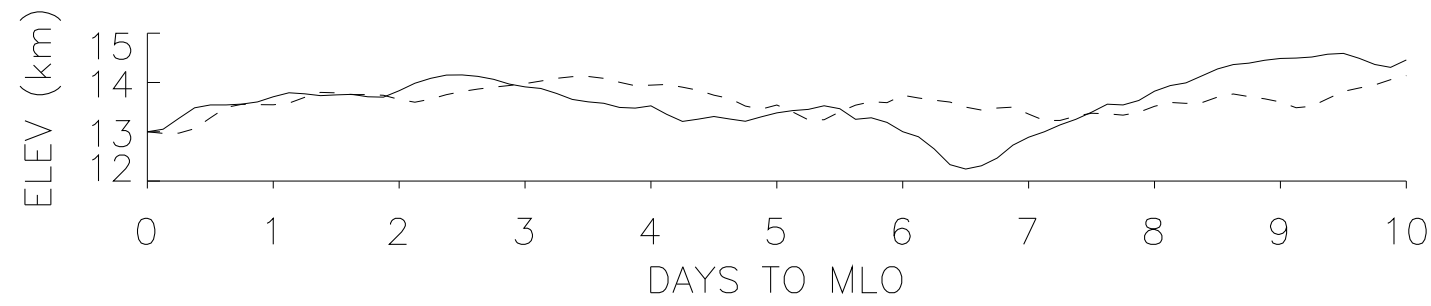
18UT

Day	km	hPa	C
0	13.0	179	-59
1	13.5	166	-61
2	13.7	158	-62
3	13.7	158	-62
4	13.8	154	-65
5	13.4	161	-62
6	12.9	173	-57
7	13.1	175	-57
8	13.1	175	-59
9	12.8	179	-59
10	13.3	168	-60

12UT - solid
18UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/30/2004 (Day of Year 121)
NCEP/NCAR Reanalysis 1 Data Set





00UT

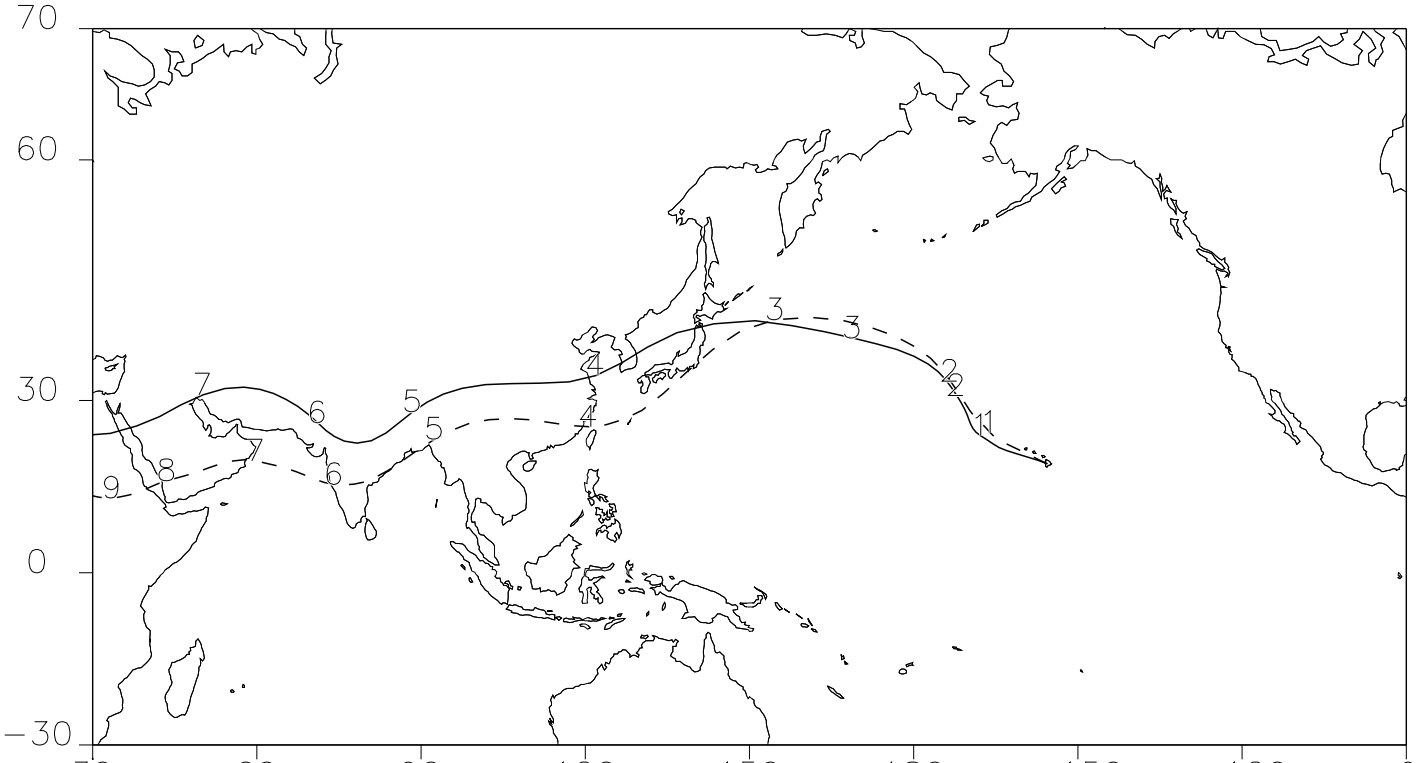
Day	km	hPa	C
0	13.0	179	−59
1	13.7	160	−62
2	13.8	156	−63
3	13.9	153	−64
4	13.5	161	−61
5	13.4	168	−61
6	13.0	180	−58
7	12.9	184	−55
8	13.8	158	−60
9	14.5	143	−66
10	14.5	143	−67

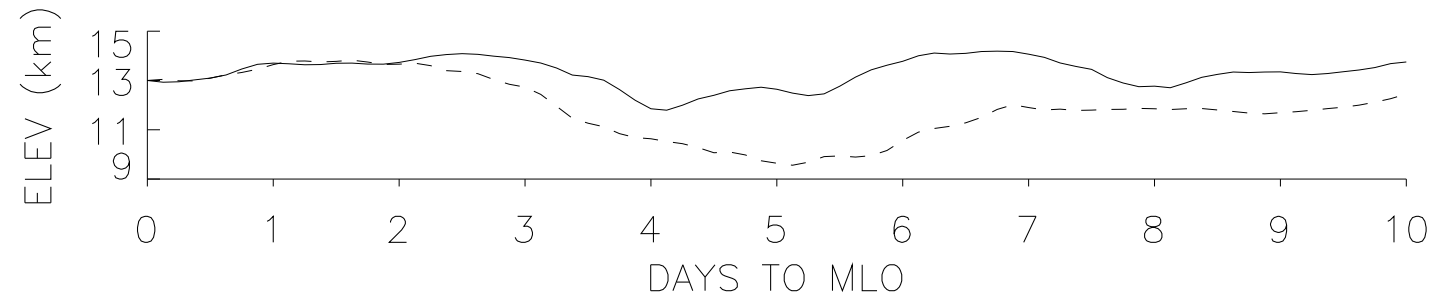
06UT

Day	km	hPa	C
0	13.0	180	−59
1	13.5	164	−62
2	13.7	161	−62
3	14.0	153	−63
4	13.9	153	−64
5	13.5	161	−61
6	13.7	159	−62
7	13.4	172	−57
8	13.5	168	−57
9	13.6	166	−57
10	14.1	151	−61

00UT − solid
06UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/30/2004 (Day of Year 121)
NCEP/NCAR Reanalysis 1 Data Set





12UT

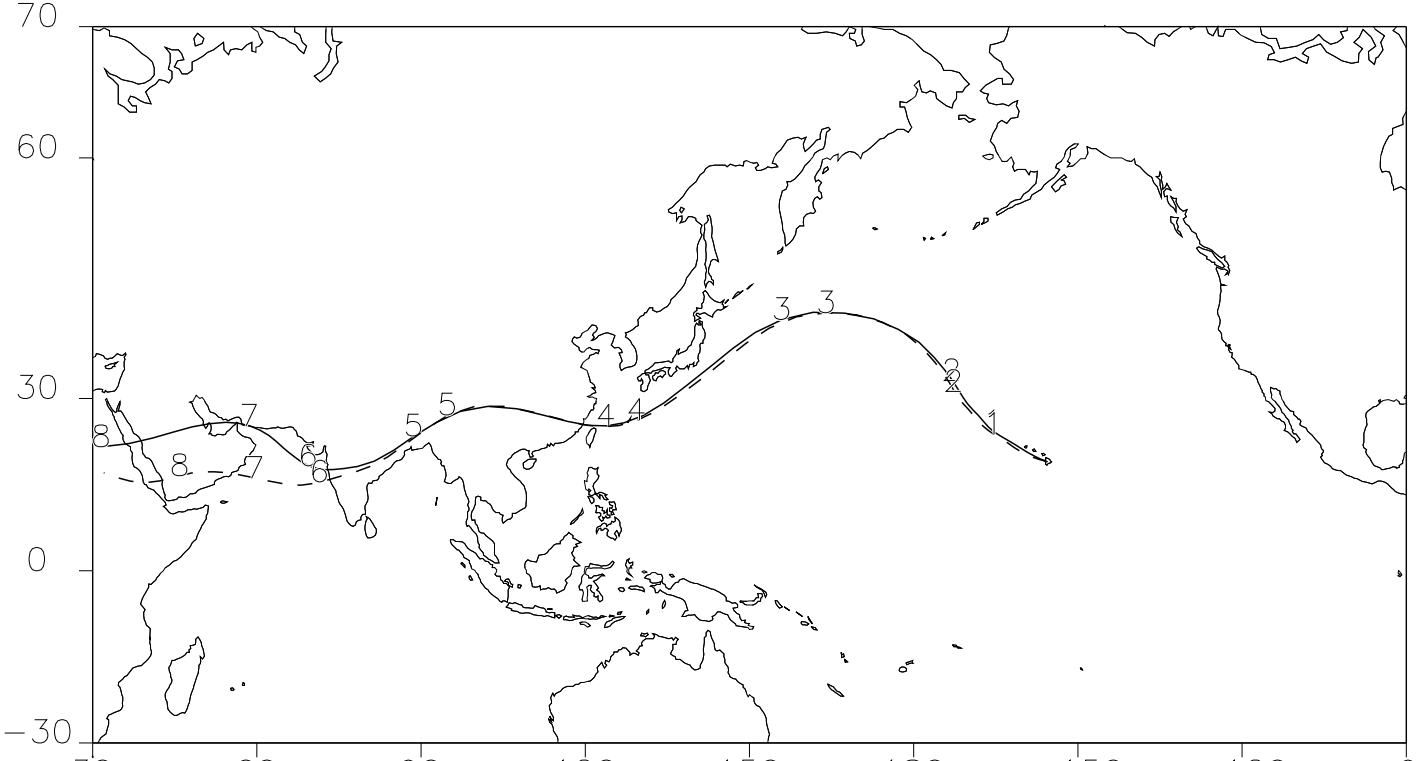
Day	km	hPa	C
0	13.0	179	-59
1	13.7	160	-64
2	13.7	158	-65
3	13.8	153	-69
4	11.9	206	-49
5	12.6	188	-52
6	13.8	158	-60
7	14.1	148	-64
8	12.8	181	-56
9	13.4	167	-61
10	13.8	157	-63

18UT

Day	km	hPa	C
0	13.0	180	-59
1	13.6	161	-64
2	13.7	160	-66
3	12.7	180	-59
4	10.6	259	-41
5	9.6	299	-31
6	10.6	264	-38
7	11.9	217	-50
8	11.9	218	-50
9	11.7	225	-47
10	12.4	200	-53

12UT - solid
18UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/1/2004 (Day of Year 122)
NCEP/NCAR Reanalysis 1 Data Set

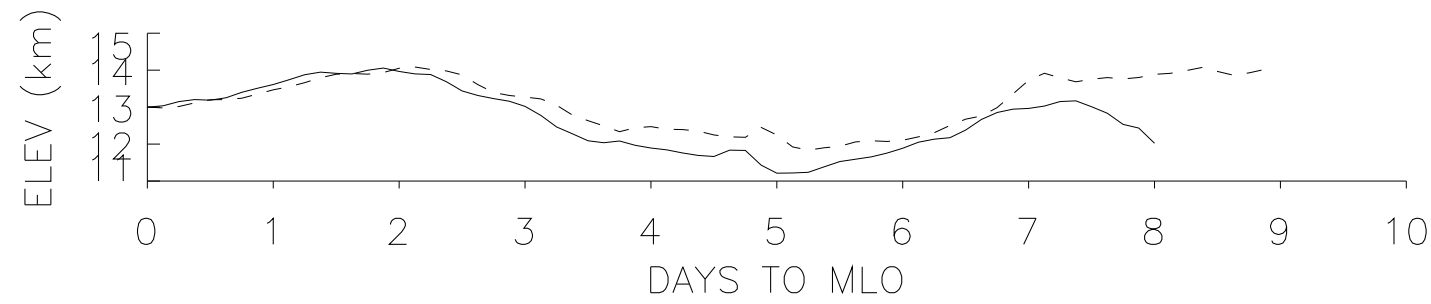


00UT

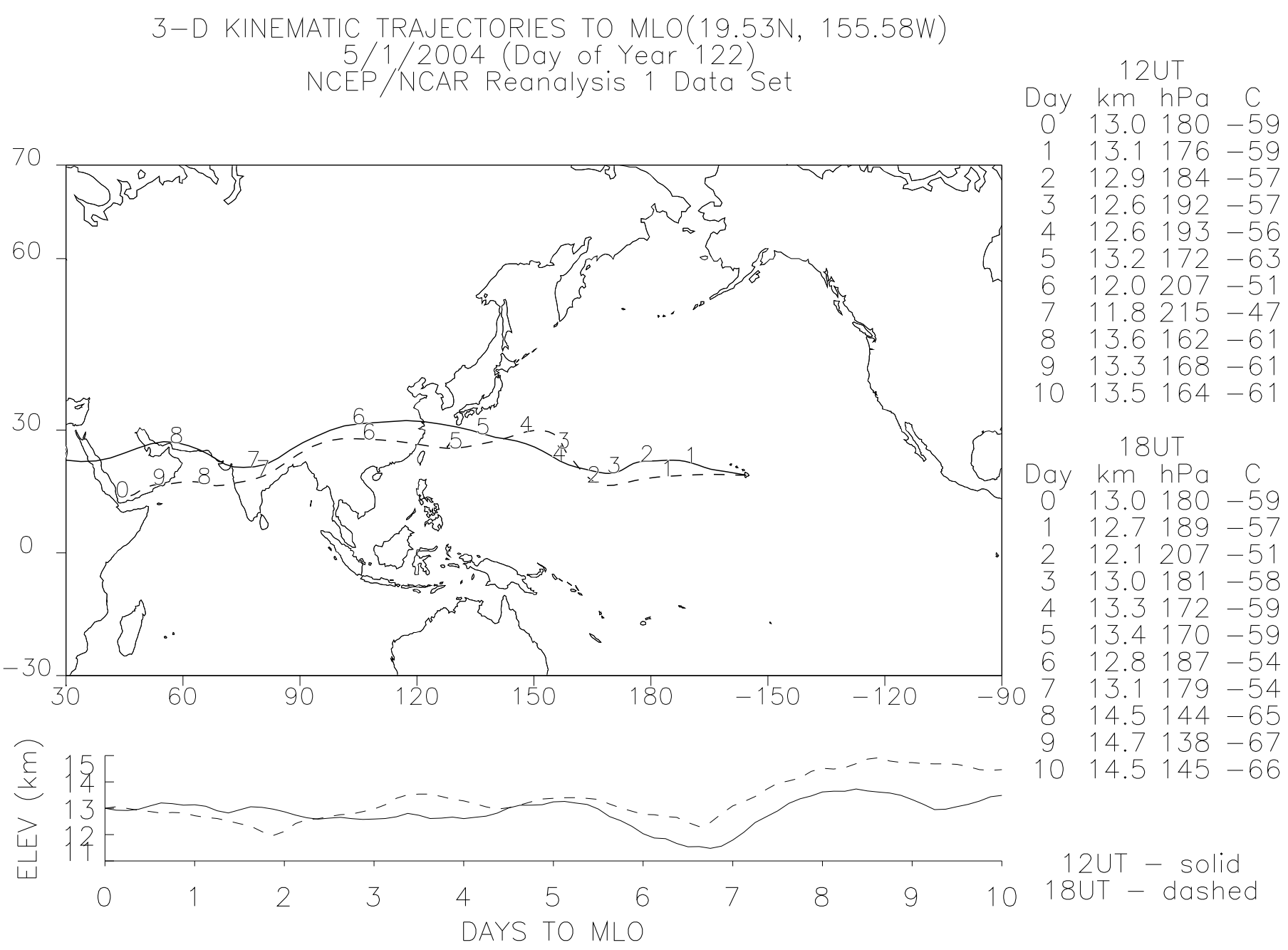
Day	km	hPa	C
0	13.0	180	−59
1	13.6	162	−63
2	14.0	152	−67
3	13.0	173	−60
4	11.9	214	−50
5	11.2	236	−43
6	11.9	215	−49
7	13.0	181	−59
8	12.0	207	−54

06UT

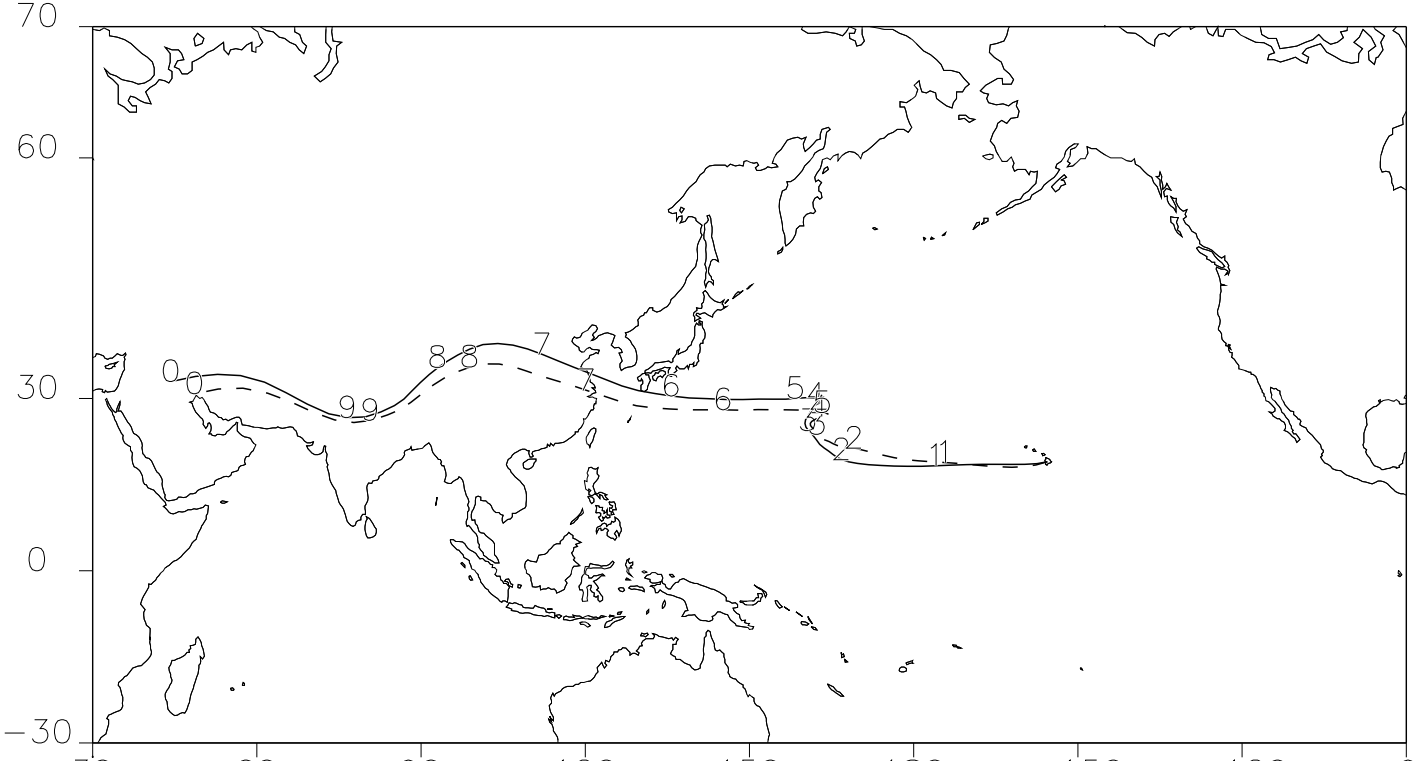
Day	km	hPa	C
0	13.0	180	−58
1	13.5	167	−61
2	14.1	151	−67
3	13.3	167	−59
4	12.5	195	−54
5	12.2	203	−50
6	12.1	211	−47
7	13.7	163	−62
8	13.9	158	−62

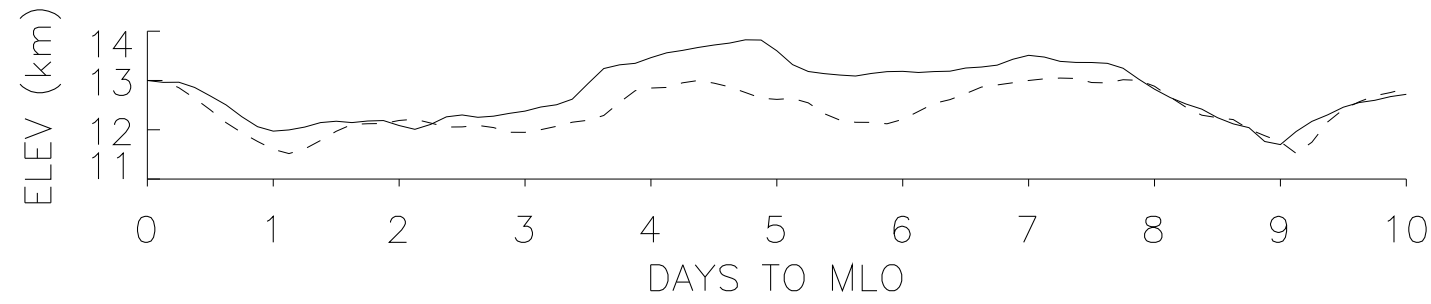


00UT – solid
06UT – dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/1/2004 (Day of Year 122)
NCEP/NCAR Reanalysis 1 Data Set
70
60
30
0
-30
30
60
90
120
150
180
-150
-120
-90
ELEV (km)
15
14
13
12
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
12UT
Day km hPa C
0 13.0 180 -59
1 13.1 176 -59
2 12.9 184 -57
3 12.6 192 -57
4 12.6 193 -56
5 13.2 172 -63
6 12.0 207 -51
7 11.8 215 -47
8 13.6 162 -61
9 13.3 168 -61
10 13.5 164 -61
18UT
Day km hPa C
0 13.0 180 -59
1 12.7 189 -57
2 12.1 207 -51
3 13.0 181 -58
4 13.3 172 -59
5 13.4 170 -59
6 12.8 187 -54
7 13.1 179 -54
8 14.5 144 -65
9 14.7 138 -67
10 14.5 145 -66
12UT - solid
18UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/2/2004 (Day of Year 123)
NCEP/NCAR Reanalysis 1 Data Set





00UT

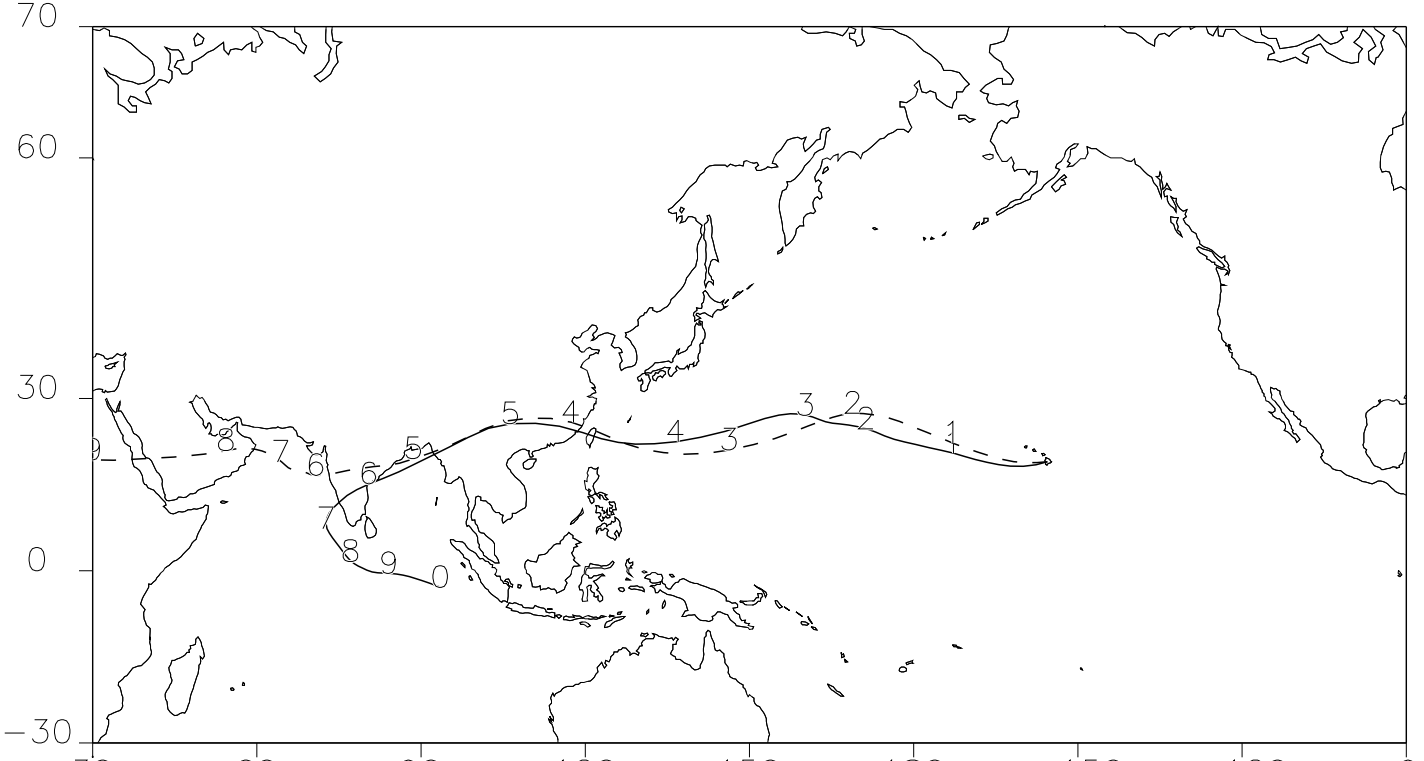
Day	km	hPa	C
0	13.0	179	−59
1	12.0	213	−50
2	12.1	209	−52
3	12.4	198	−54
4	13.5	167	−64
5	13.6	162	−65
6	13.2	171	−64
7	13.5	160	−65
8	12.8	180	−58
9	11.7	214	−49
10	12.7	180	−59

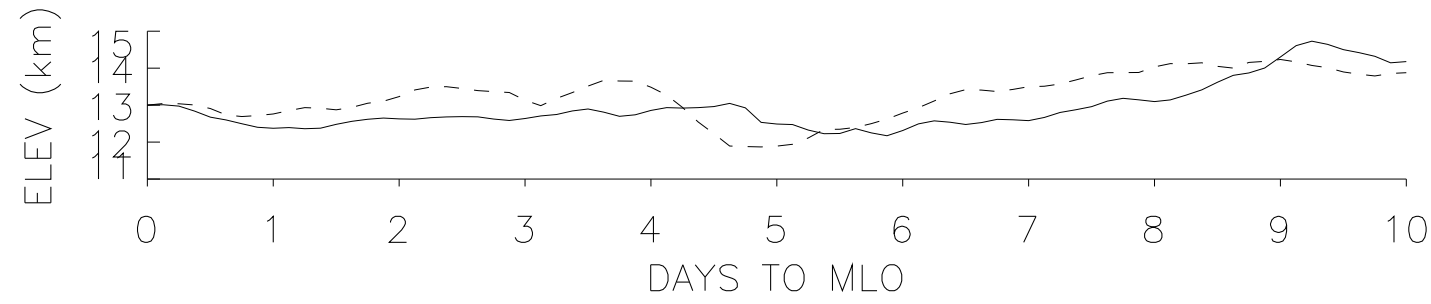
06UT

Day	km	hPa	C
0	13.0	179	−59
1	11.6	224	−47
2	12.2	205	−53
3	11.9	211	−52
4	12.8	184	−60
5	12.6	191	−59
6	12.2	202	−57
7	13.0	177	−60
8	12.9	180	−59
9	11.8	215	−48
10	12.8	179	−58

00UT − solid
06UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/2/2004 (Day of Year 123)
NCEP/NCAR Reanalysis 1 Data Set





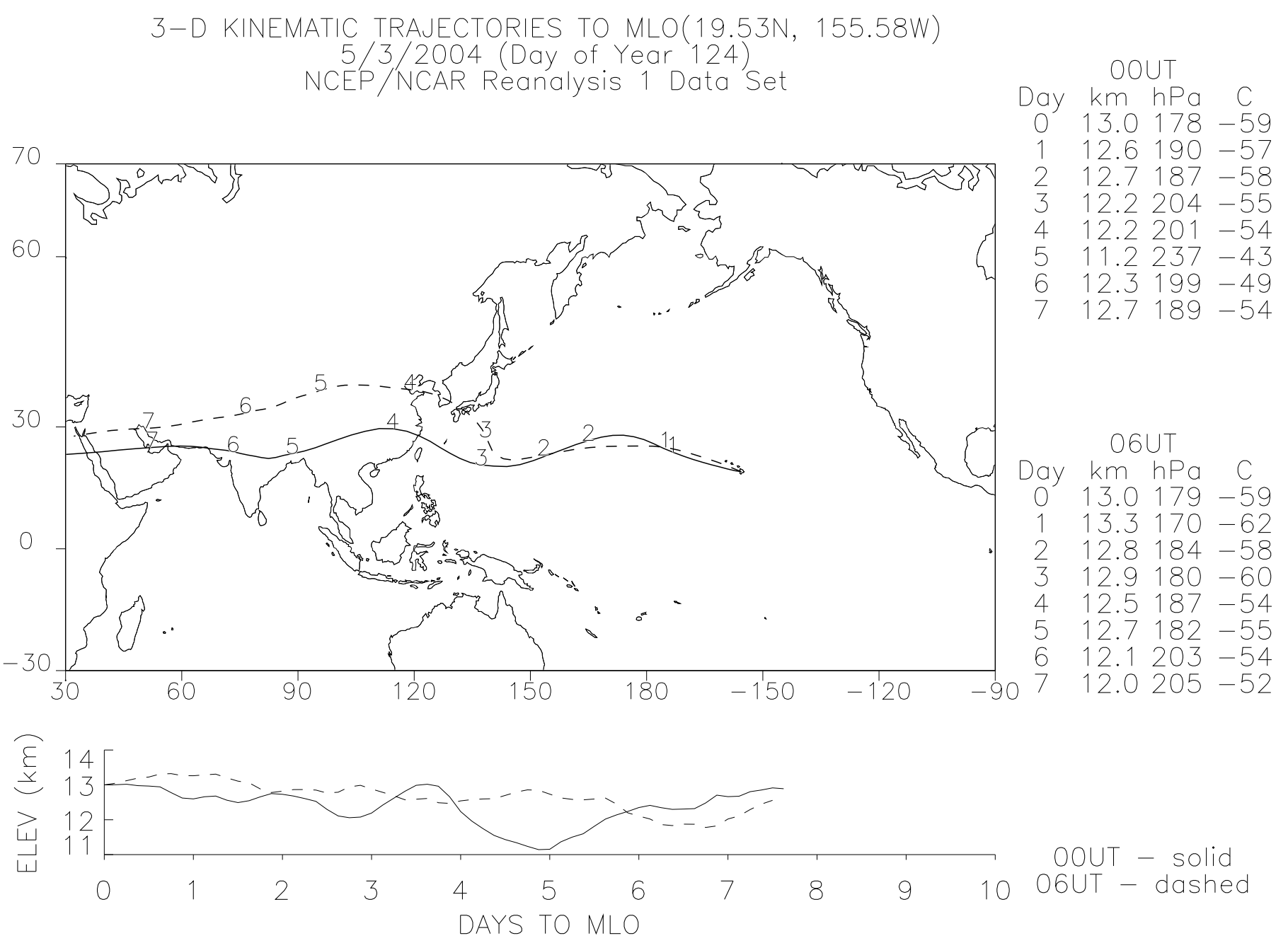
12UT

Day	km	hPa	C
0	13.0	179	-60
1	12.4	198	-55
2	12.6	191	-57
3	12.6	190	-56
4	12.9	185	-57
5	12.5	196	-54
6	12.3	204	-50
7	12.6	196	-52
8	13.1	181	-57
9	14.3	148	-66
10	14.2	152	-65

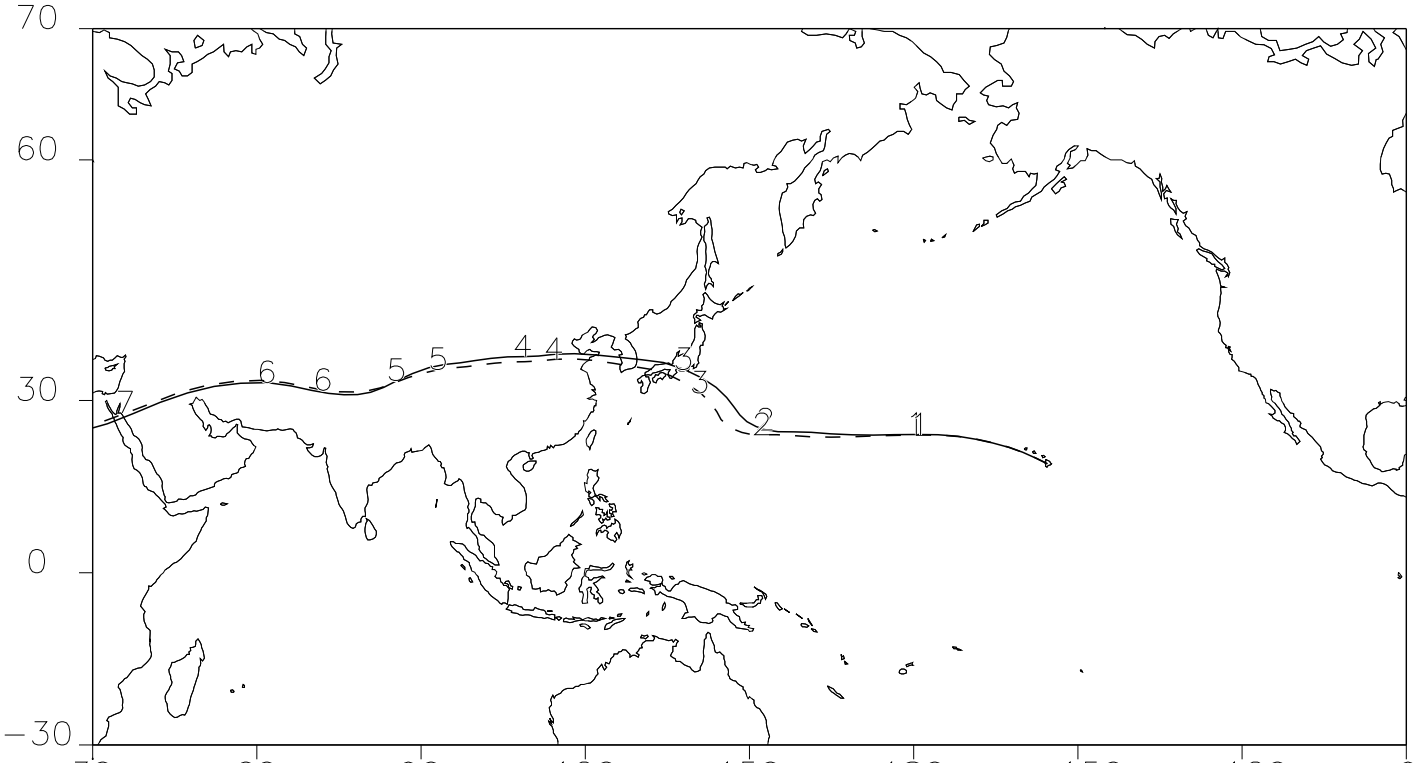
18UT

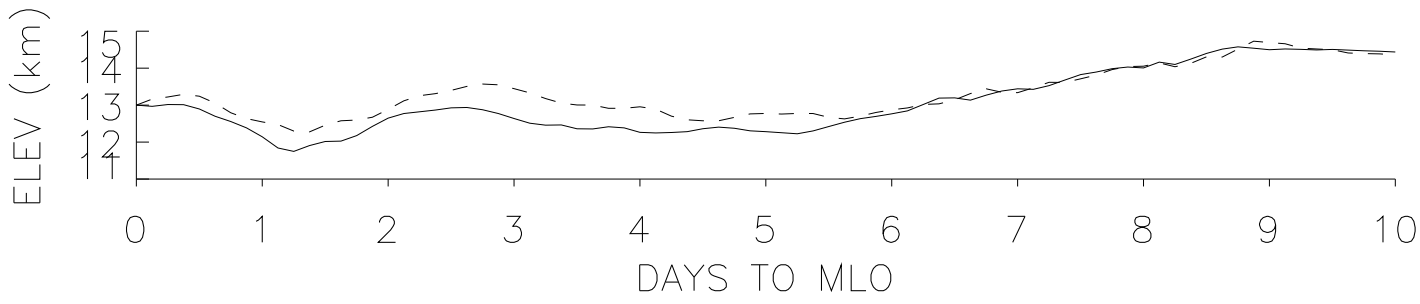
Day	km	hPa	C
0	13.0	179	-60
1	12.8	185	-58
2	13.2	172	-60
3	13.1	175	-59
4	13.5	167	-61
5	11.9	216	-46
6	12.8	190	-52
7	13.5	170	-58
8	14.0	155	-62
9	14.2	148	-65
10	13.9	156	-61

12UT – solid
18UT – dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/3/2004 (Day of Year 124)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 178 -59
1 12.6 190 -57
2 12.7 187 -58
3 12.2 204 -55
4 12.2 201 -54
5 11.2 237 -43
6 12.3 199 -49
7 12.7 189 -54
06UT
Day km hPa C
0 13.0 179 -59
1 13.3 170 -62
2 12.8 184 -58
3 12.9 180 -60
4 12.5 187 -54
5 12.7 182 -55
6 12.1 203 -54
7 12.0 205 -52
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
14
13
12
11
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/3/2004 (Day of Year 124)
NCEP/NCAR Reanalysis 1 Data Set





12UT

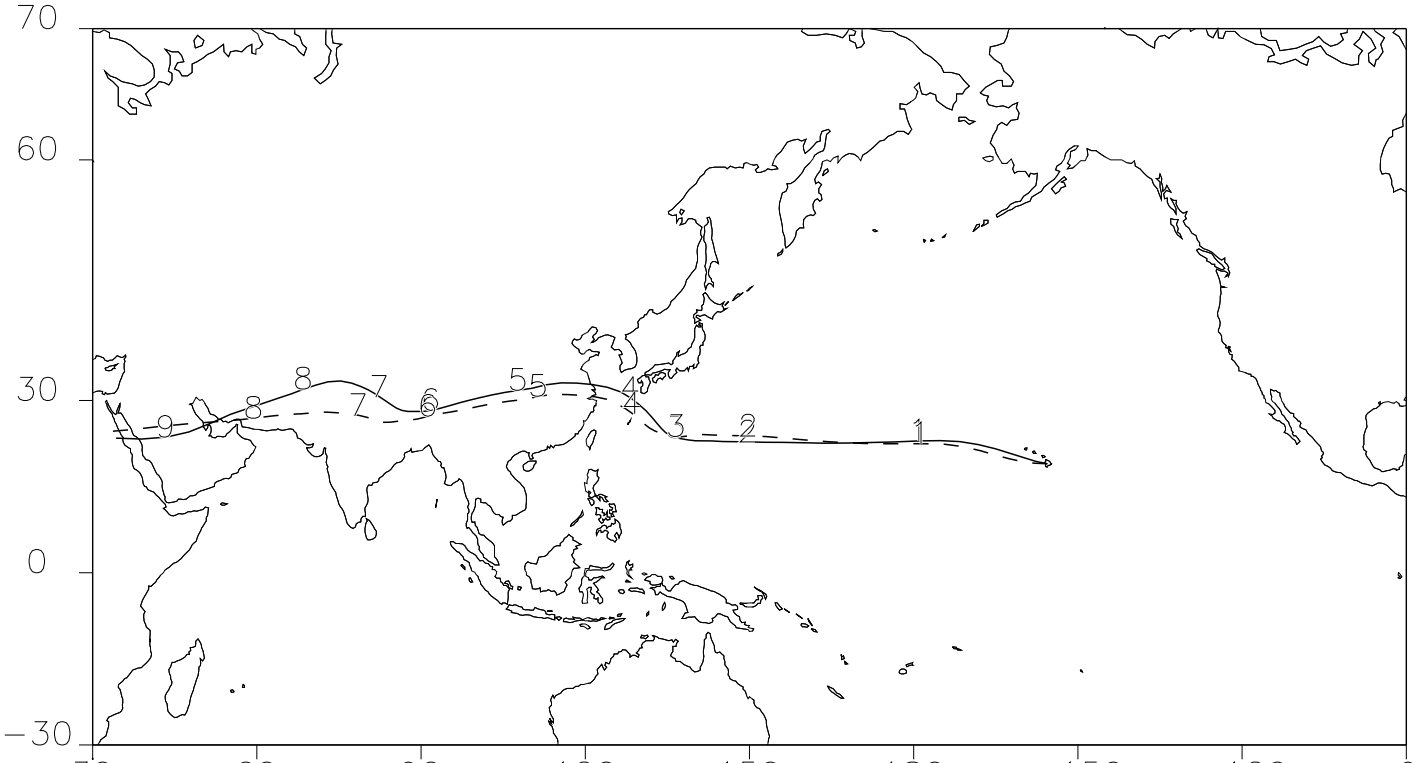
Day	km	hPa	C
0	13.0	178	−59
1	12.1	203	−55
2	12.6	189	−59
3	12.6	185	−58
4	12.3	197	−53
5	12.3	196	−53
6	12.8	182	−53
7	13.4	164	−57
8	14.0	151	−62
9	14.5	138	−65
10	14.4	140	−63

18UT

Day	km	hPa	C
0	13.0	179	−59
1	12.5	190	−57
2	12.9	183	−58
3	13.4	164	−59
4	13.0	177	−54
5	12.8	182	−53
6	12.9	180	−52
7	13.3	166	−55
8	14.1	149	−61
9	14.7	134	−66
10	14.4	143	−62

12UT − solid
18UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/4/2004 (Day of Year 125)
NCEP/NCAR Reanalysis 1 Data Set

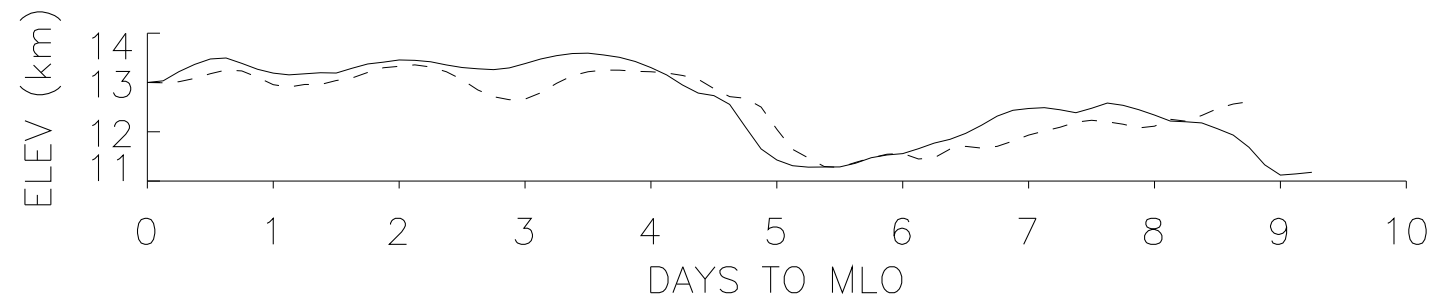


00UT

Day	km	hPa	C
0	13.0	179	-59
1	13.2	172	-59
2	13.5	168	-61
3	13.4	170	-60
4	13.3	170	-59
5	11.4	226	-47
6	11.6	221	-47
7	12.5	193	-55
8	12.3	198	-55
9	11.1	238	-47

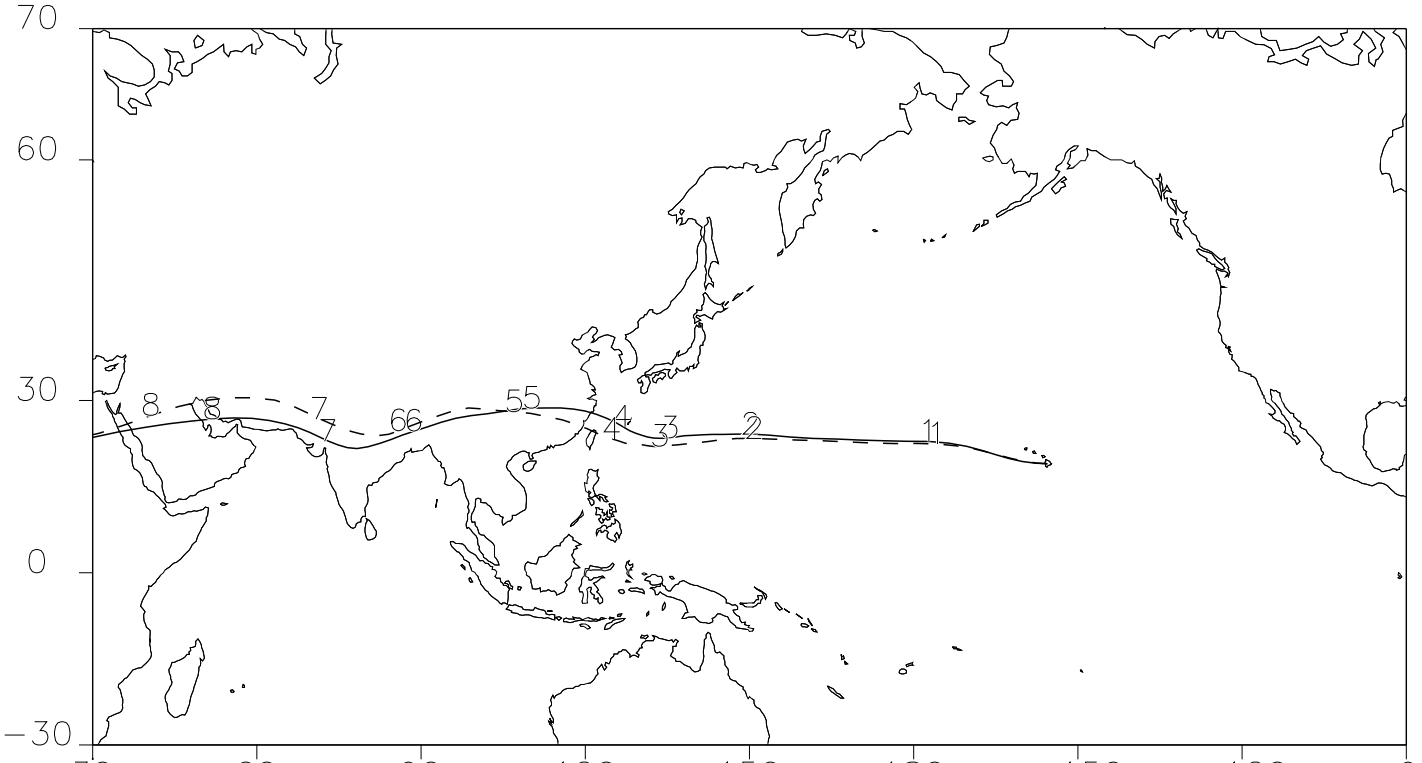
06UT

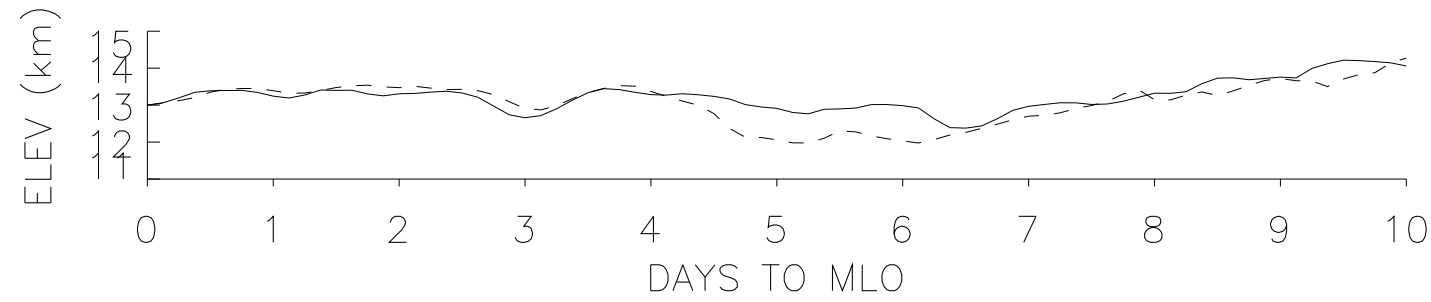
Day	km	hPa	C
0	13.0	179	-59
1	13.0	179	-58
2	13.3	170	-60
3	12.7	190	-56
4	13.2	173	-58
5	12.1	208	-48
6	11.6	223	-45
7	11.9	212	-50
8	12.1	207	-50



00UT – solid
06UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/4/2004 (Day of Year 125)
NCEP/NCAR Reanalysis 1 Data Set





12UT

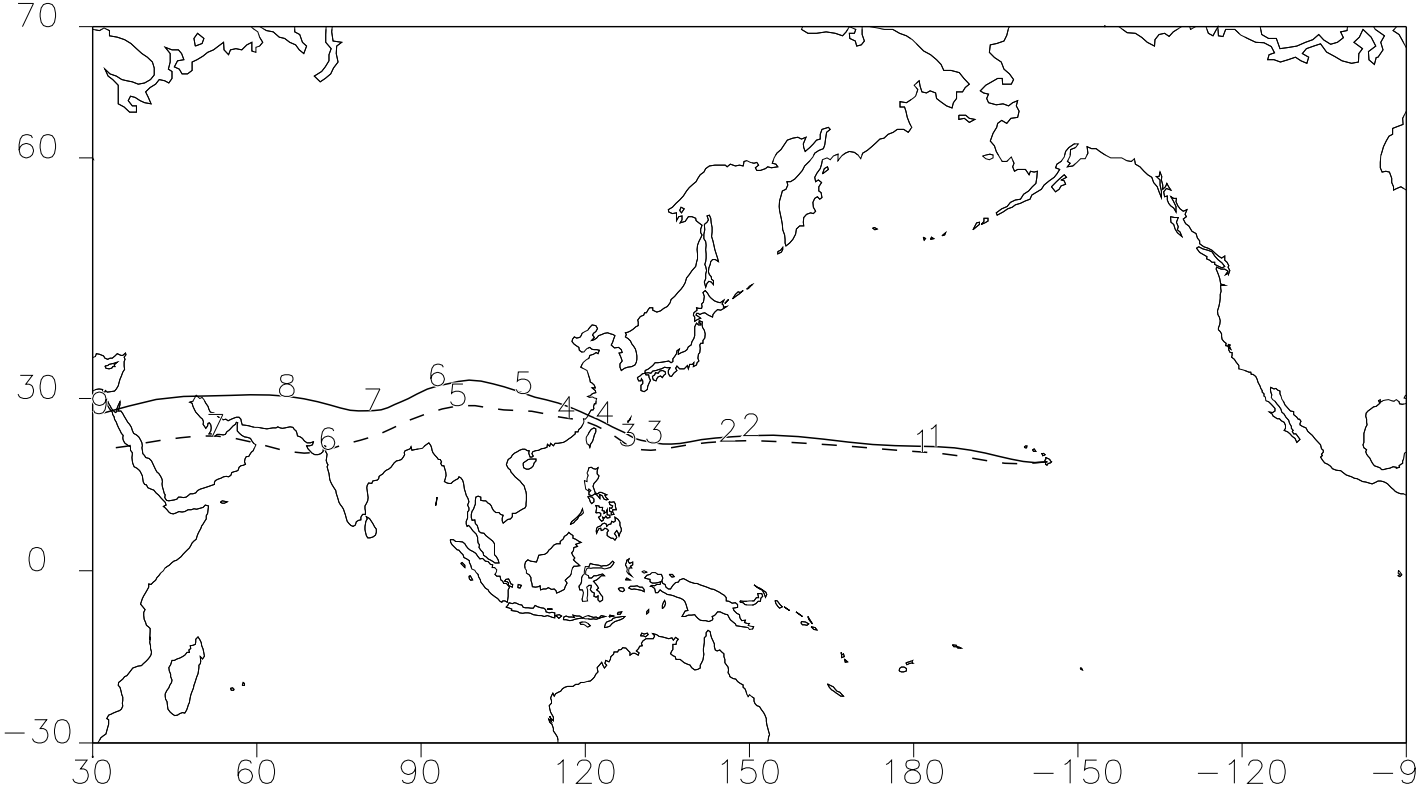
Day	km	hPa	C
0	13.0	178	−59
1	13.2	171	−60
2	13.3	171	−60
3	12.7	191	−56
4	13.3	172	−58
5	12.9	182	−53
6	13.0	180	−52
7	13.0	182	−52
8	13.3	170	−56
9	13.8	158	−59
10	14.1	150	−62

18UT

Day	km	hPa	C
0	13.0	179	−58
1	13.4	167	−60
2	13.5	166	−60
3	12.9	183	−56
4	13.4	170	−57
5	12.1	208	−47
6	12.0	208	−46
7	12.7	188	−49
8	13.1	173	−55
9	13.7	158	−60
10	14.3	145	−66

12UT − solid
18UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/5/2004 (Day of Year 126)
NCEP/NCAR Reanalysis 1 Data Set

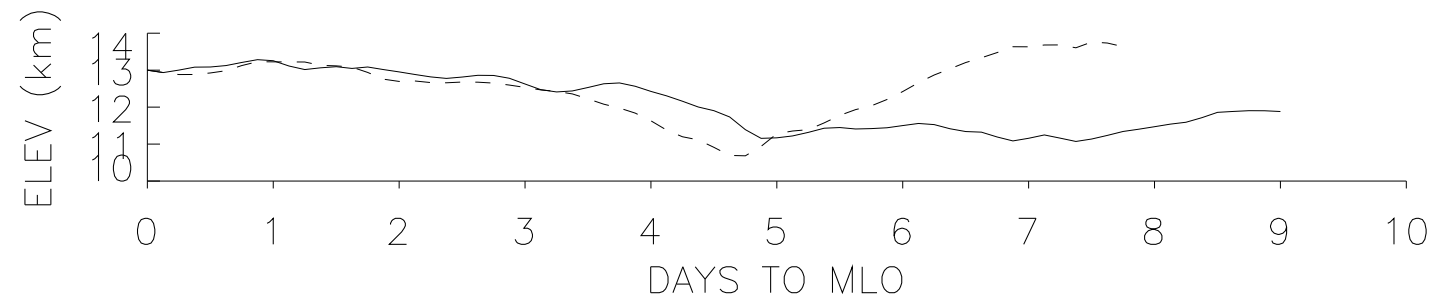


00UT

Day	km	hPa	C
0	13.0	179	-58
1	13.3	171	-60
2	13.0	180	-59
3	12.6	192	-56
4	12.4	197	-55
5	11.2	236	-47
6	11.5	223	-49
7	11.2	235	-45
8	11.5	225	-49
9	11.9	207	-55

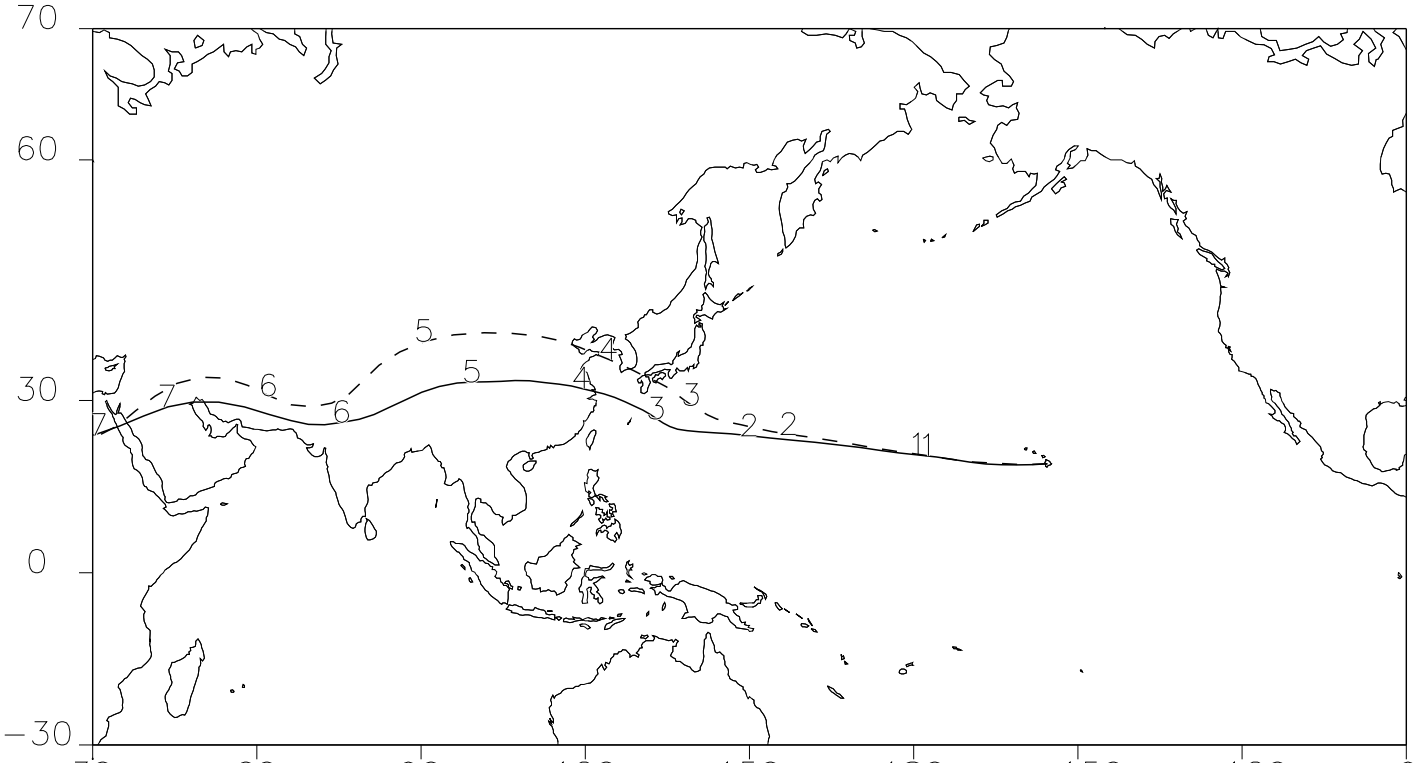
06UT

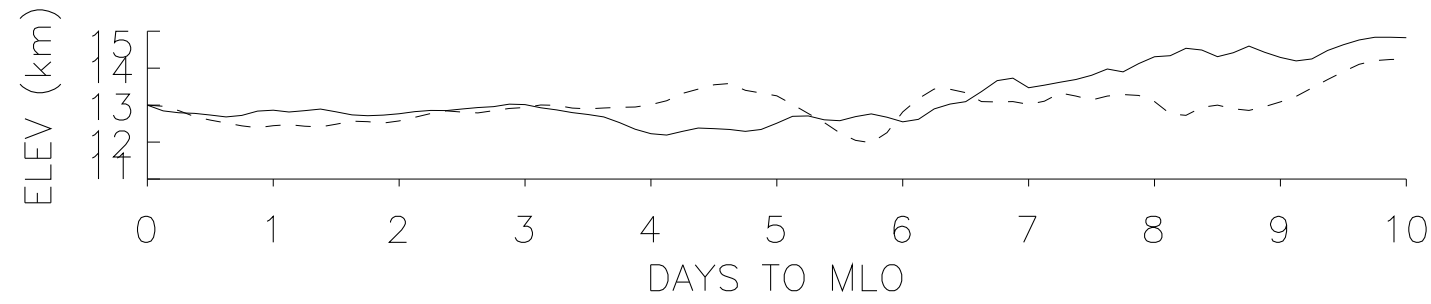
Day	km	hPa	C
0	13.0	179	-58
1	13.2	173	-60
2	12.7	188	-55
3	12.5	195	-53
4	11.6	224	-44
5	11.3	235	-42
6	12.4	198	-47
7	13.6	164	-58



00UT – solid
06UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/5/2004 (Day of Year 126)
NCEP/NCAR Reanalysis 1 Data Set





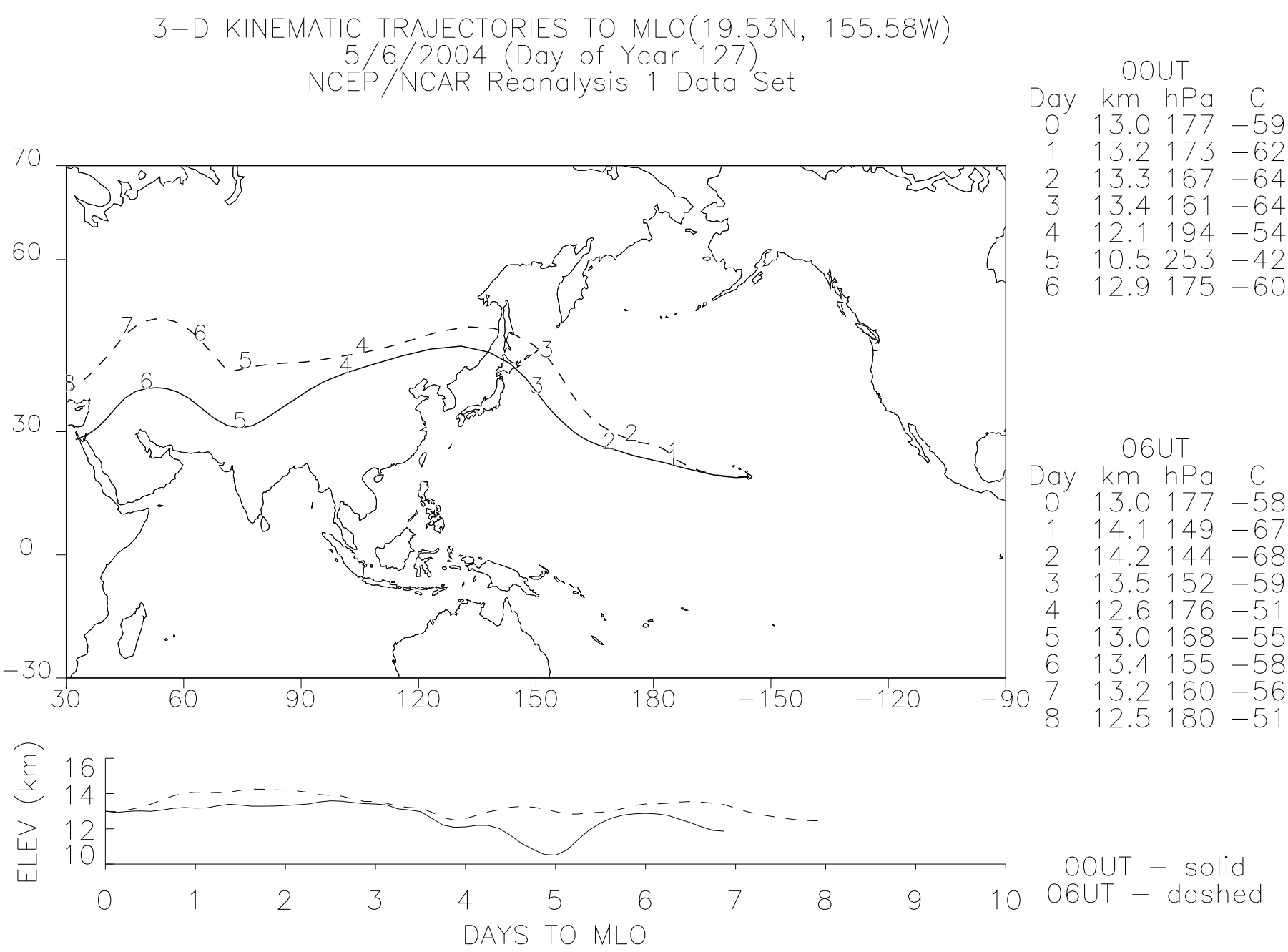
12UT

Day	km	hPa	C
0	13.0	178	-58
1	12.9	183	-60
2	12.8	186	-57
3	13.0	179	-57
4	12.2	202	-53
5	12.5	192	-50
6	12.5	190	-47
7	13.5	164	-57
8	14.3	143	-65
9	14.3	144	-65
10	14.8	133	-66

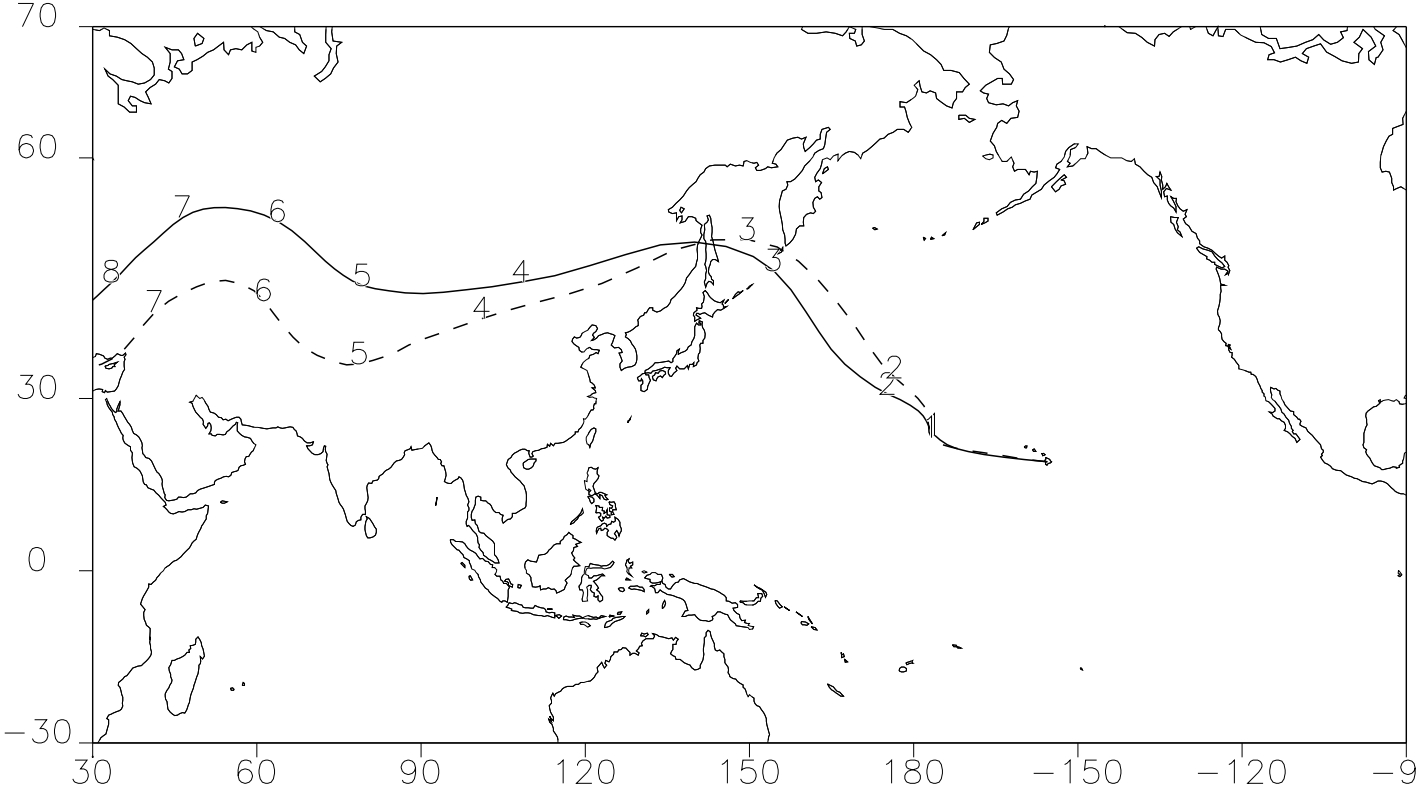
18UT

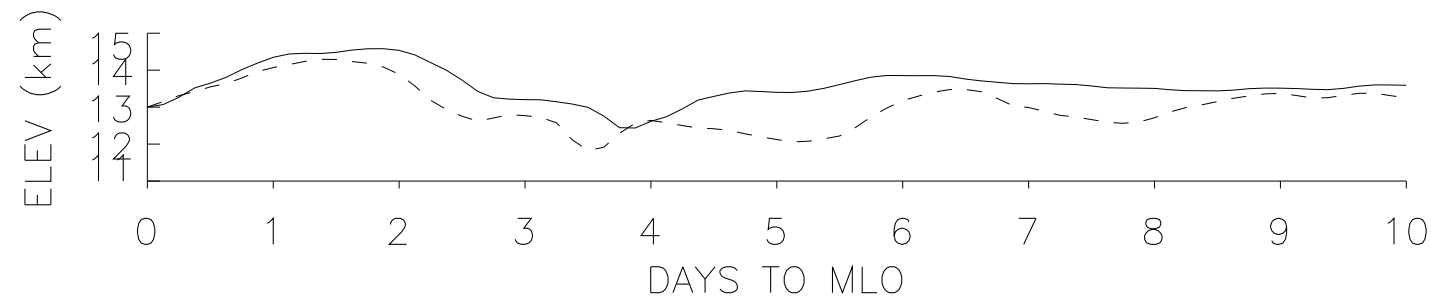
Day	km	hPa	C
0	13.0	177	-59
1	12.4	195	-59
2	12.6	190	-57
3	12.9	179	-58
4	13.0	176	-58
5	13.3	166	-57
6	12.8	180	-52
7	13.0	176	-55
8	13.1	170	-58
9	13.1	174	-59
10	14.2	143	-64

12UT - solid
18UT - dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/6/2004 (Day of Year 127)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 177 -59
1 13.2 173 -62
2 13.3 167 -64
3 13.4 161 -64
4 12.1 194 -54
5 10.5 253 -42
6 12.9 175 -60
06UT
Day km hPa C
0 13.0 177 -58
1 14.1 149 -67
2 14.2 144 -68
3 13.5 152 -59
4 12.6 176 -51
5 13.0 168 -55
6 13.4 155 -58
7 13.2 160 -56
8 12.5 180 -51
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
16
14
12
10
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/6/2004 (Day of Year 127)
NCEP/NCAR Reanalysis 1 Data Set





12UT

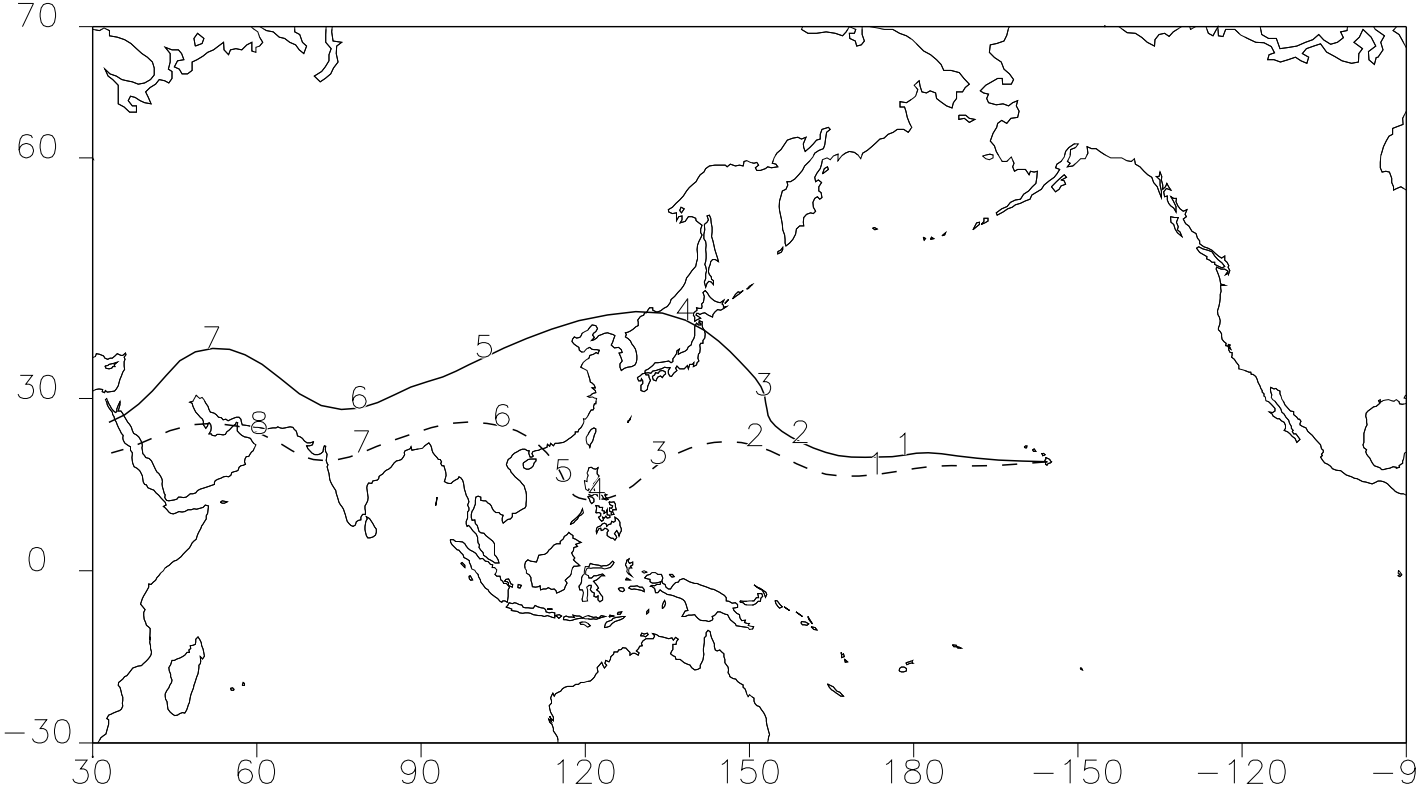
Day	km	hPa	C
0	13.0	177	−58
1	14.3	143	−67
2	14.5	136	−67
3	13.2	159	−56
4	12.6	174	−50
5	13.4	155	−56
6	13.9	143	−59
7	13.6	148	−58
8	13.5	151	−54
9	13.5	151	−53
10	13.6	150	−52

18UT

Day	km	hPa	C
0	13.0	177	−59
1	14.1	150	−67
2	13.9	150	−66
3	12.8	168	−53
4	12.6	178	−51
5	12.1	196	−51
6	13.2	165	−61
7	13.0	168	−58
8	12.7	175	−54
9	13.4	156	−56
10	13.3	160	−57

12UT – solid
18UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/7/2004 (Day of Year 128)
NCEP/NCAR Reanalysis 1 Data Set

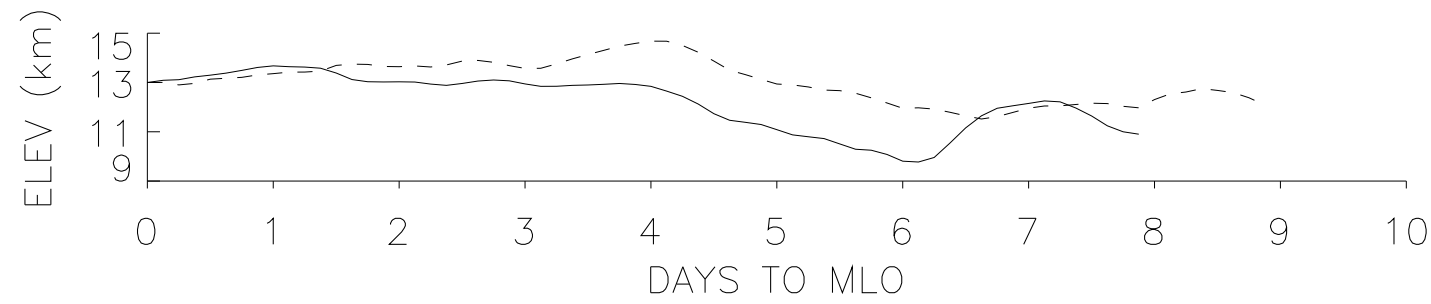


00UT

Day	km	hPa	C
0	13.0	178	-60
1	13.7	162	-63
2	13.0	180	-56
3	12.9	179	-59
4	12.8	178	-60
5	11.1	236	-46
6	9.8	285	-36
7	12.2	197	-60

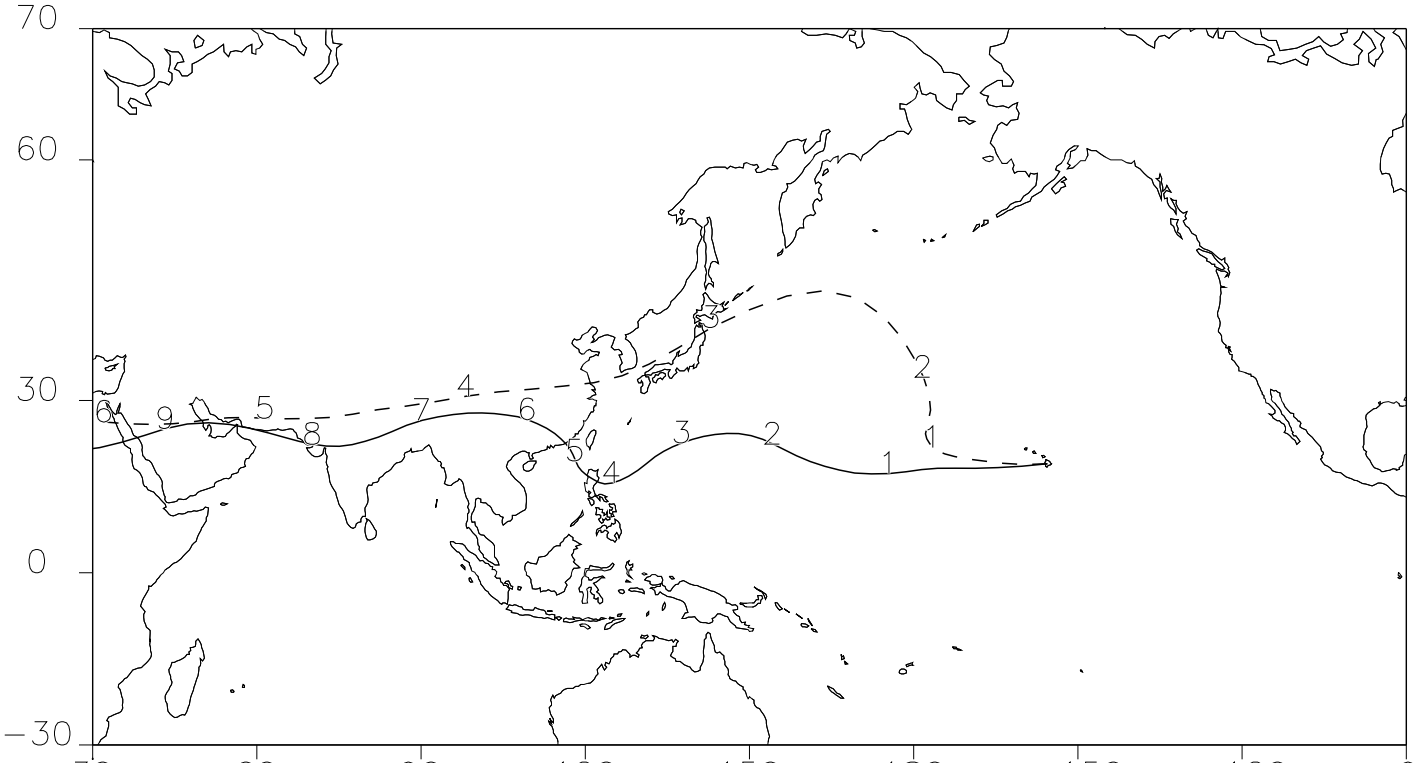
06UT

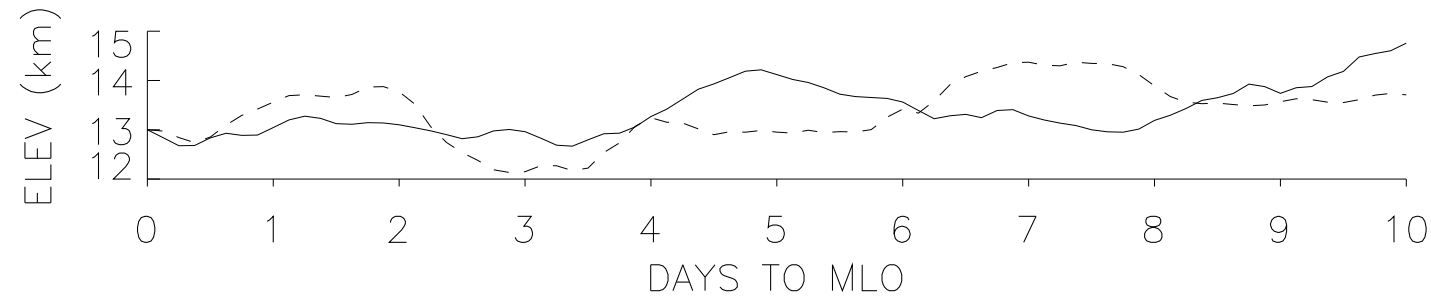
Day	km	hPa	C
0	13.0	178	-59
1	13.4	171	-58
2	13.6	165	-59
3	13.6	167	-57
4	14.7	141	-67
5	12.9	186	-54
6	12.0	215	-46
7	12.0	214	-44
8	12.3	201	-49



00UT – solid
06UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/7/2004 (Day of Year 128)
NCEP/NCAR Reanalysis 1 Data Set





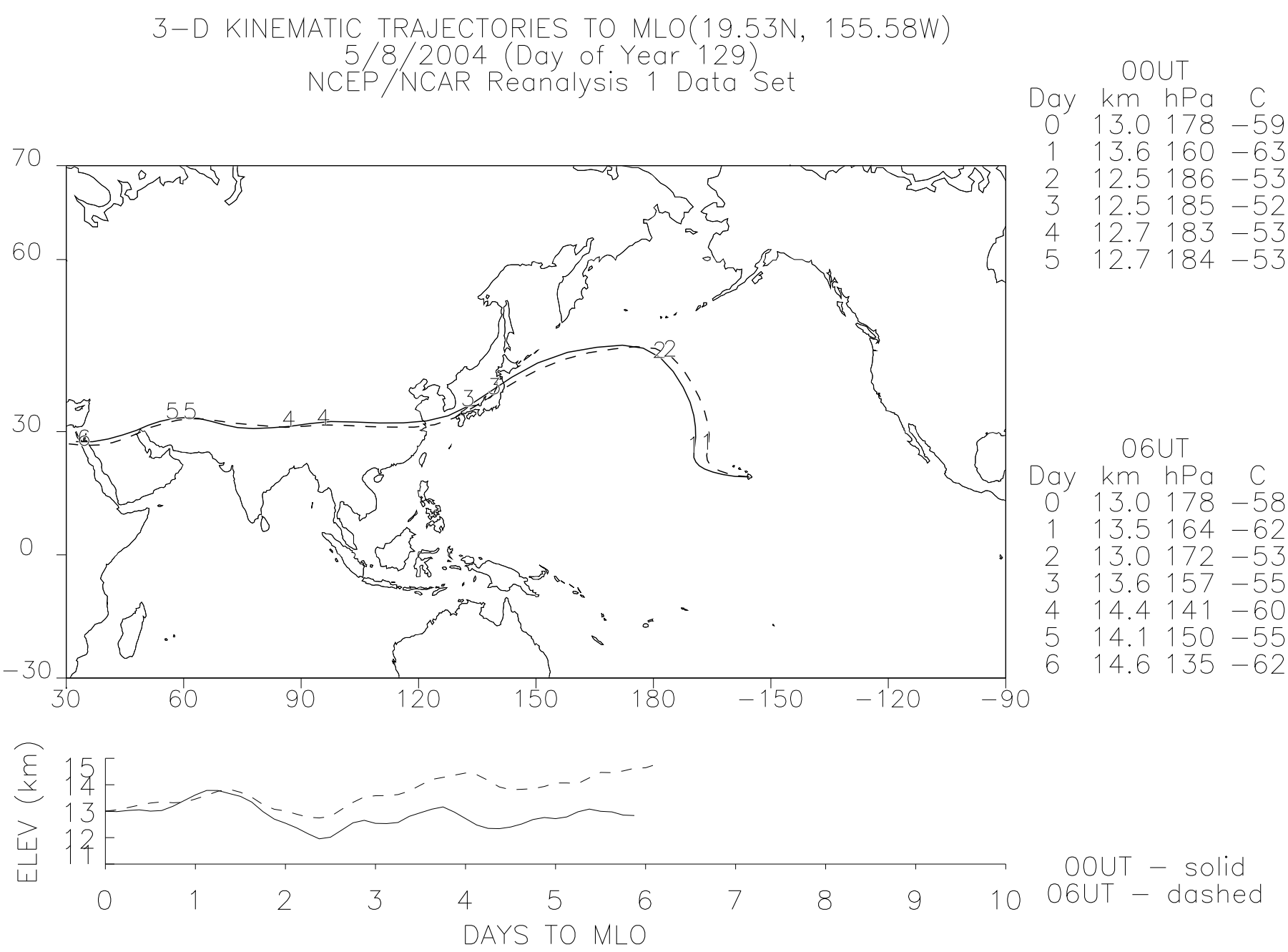
12UT

Day	km	hPa	C
0	13.0	177	-59
1	13.0	180	-57
2	13.1	180	-55
3	13.0	184	-53
4	13.3	176	-56
5	14.1	154	-61
6	13.6	167	-55
7	13.3	173	-54
8	13.2	175	-54
9	13.7	159	-59
10	14.8	135	-68

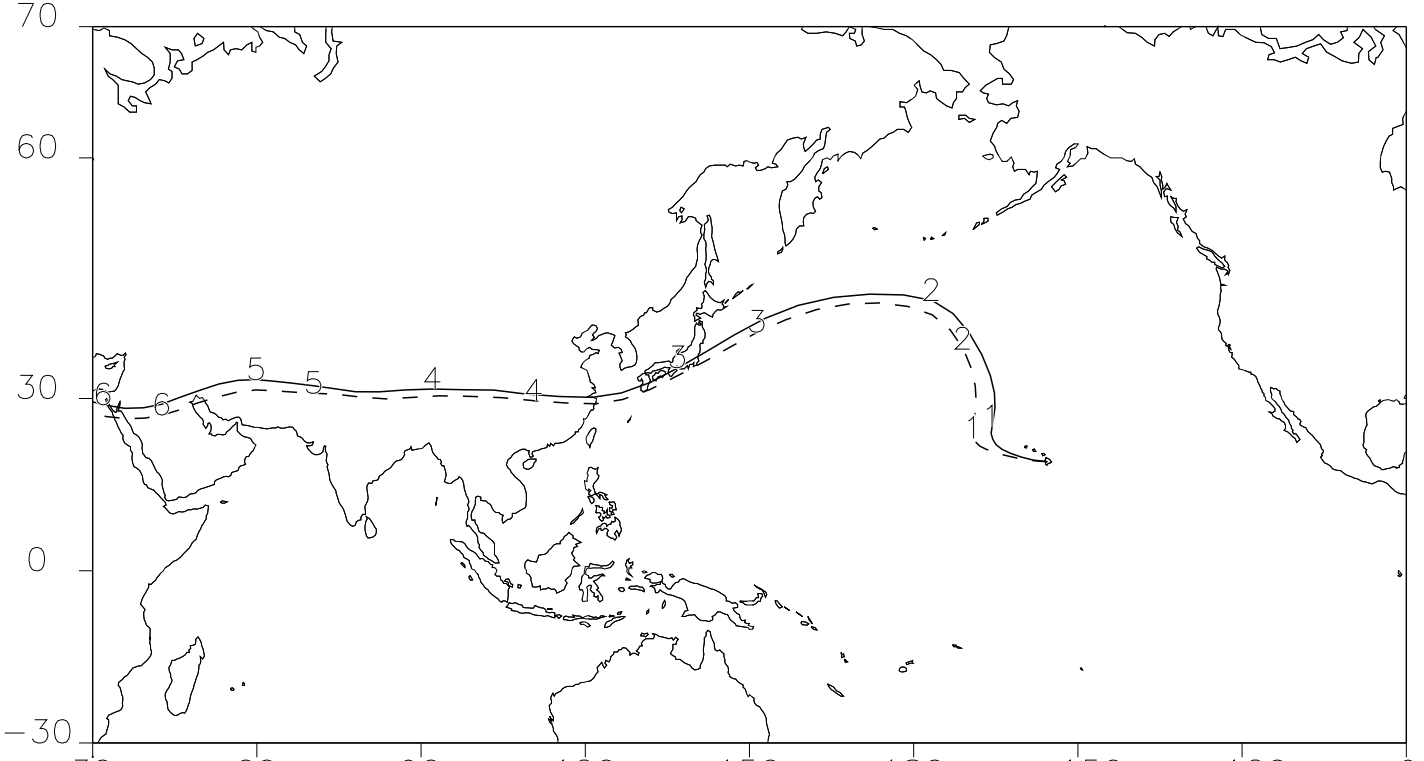
18UT

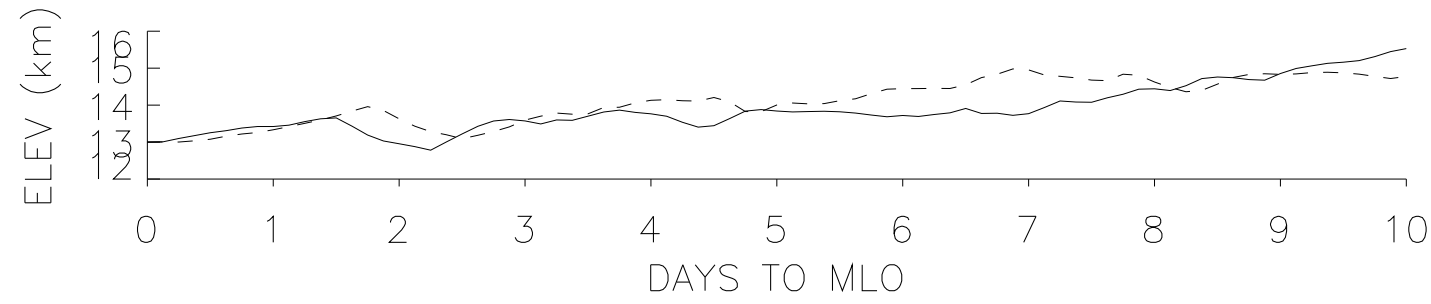
Day	km	hPa	C
0	13.0	177	-59
1	13.6	164	-63
2	13.8	157	-64
3	12.1	196	-51
4	13.2	171	-56
5	13.0	181	-52
6	13.4	166	-57
7	14.4	142	-67
8	13.9	156	-62
9	13.6	166	-59
10	13.7	161	-61

12UT - solid
18UT - dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/8/2004 (Day of Year 129)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 178 -59
1 13.6 160 -63
2 12.5 186 -53
3 12.5 185 -52
4 12.7 183 -53
5 12.7 184 -53
06UT
Day km hPa C
0 13.0 178 -58
1 13.5 164 -62
2 13.0 172 -53
3 13.6 157 -55
4 14.4 141 -60
5 14.1 150 -55
6 14.6 135 -62
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
15
14
13
12
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/8/2004 (Day of Year 129)
NCEP/NCAR Reanalysis 1 Data Set





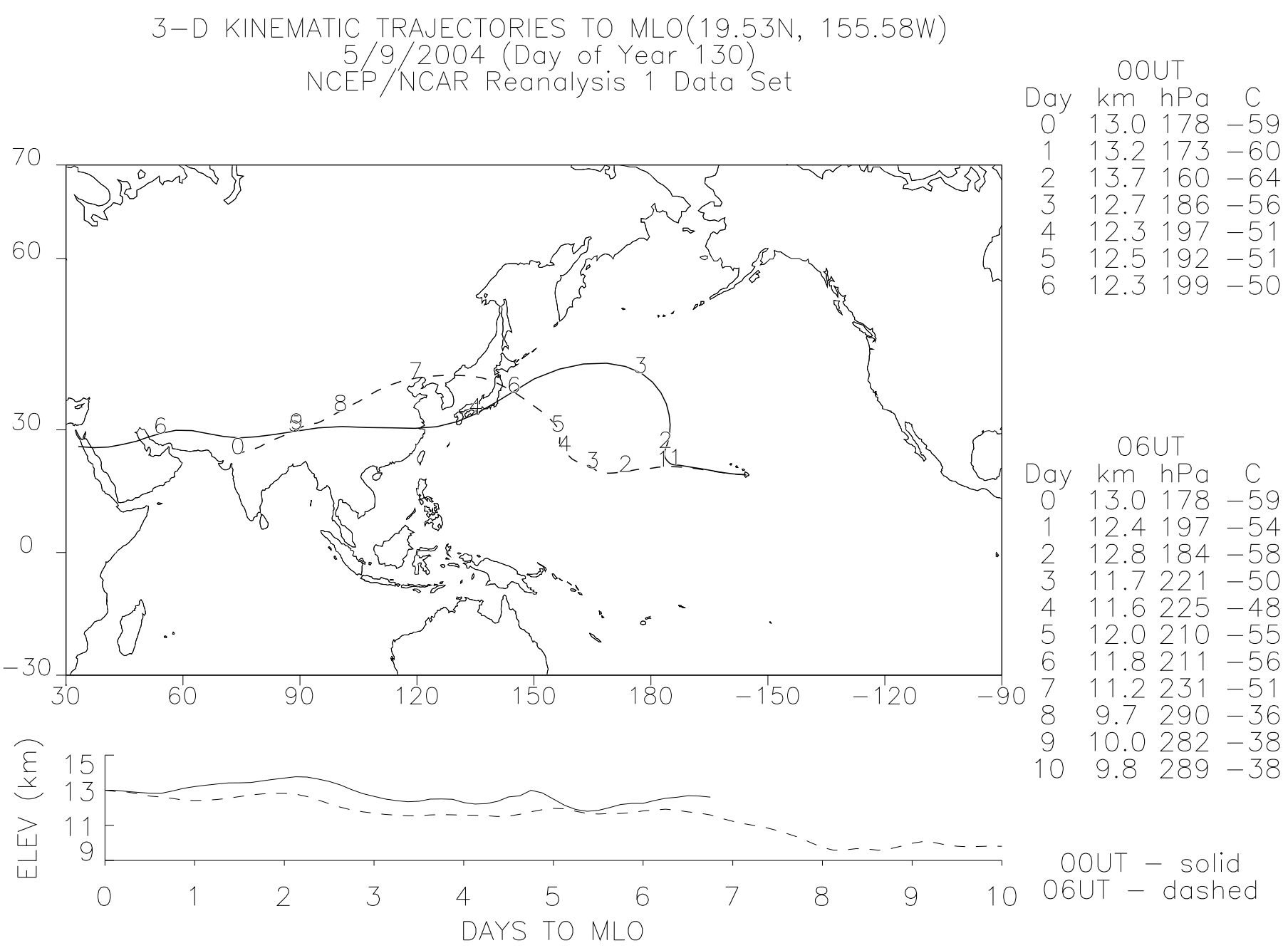
12UT

Day	km	hPa	C
0	13.0	177	−58
1	13.4	165	−62
2	13.0	174	−55
3	13.6	159	−56
4	13.8	156	−57
5	13.8	155	−58
6	13.7	156	−59
7	13.8	153	−60
8	14.4	140	−64
9	14.9	133	−67
10	15.5	119	−70

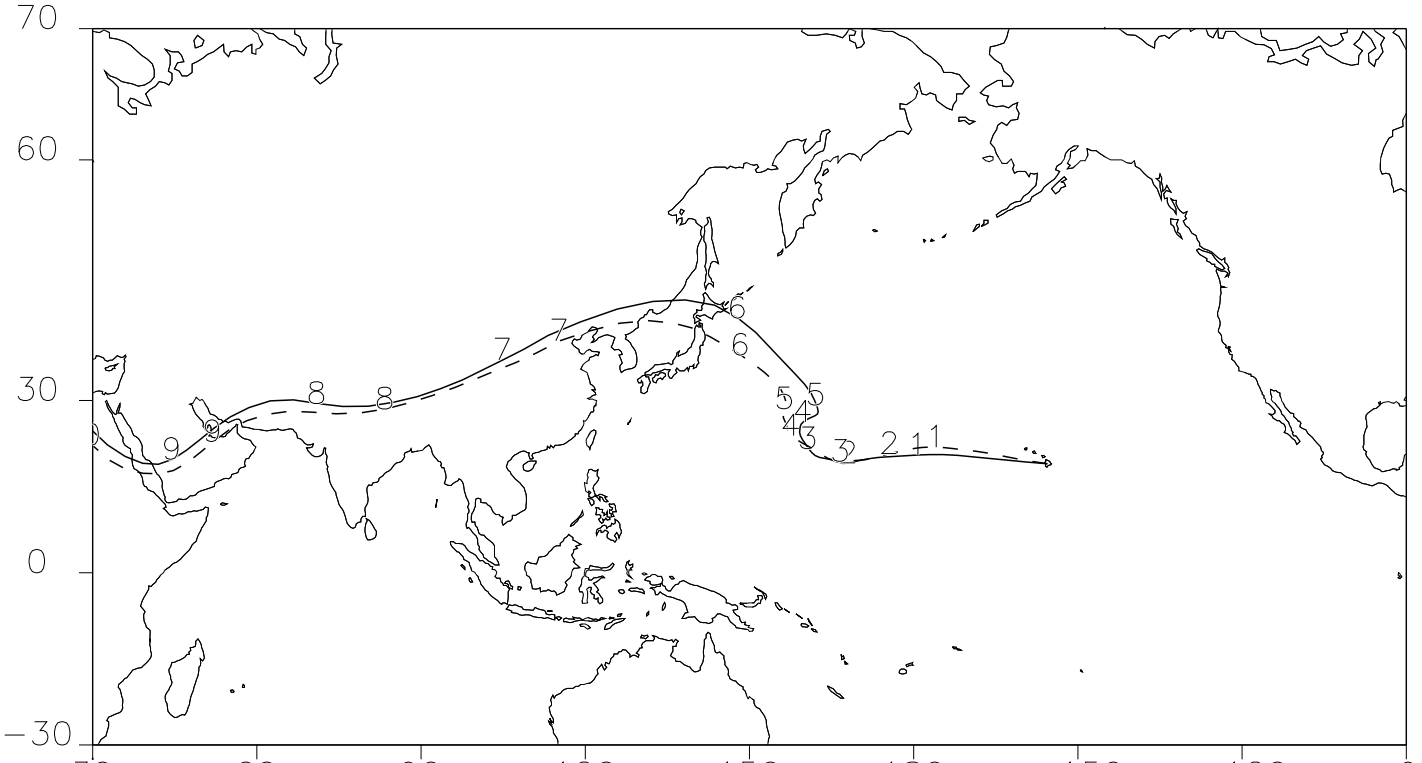
18UT

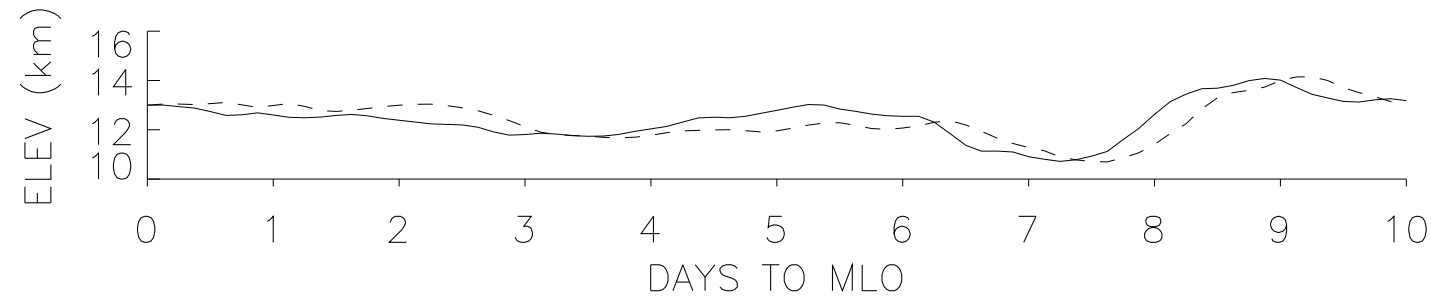
Day	km	hPa	C
0	13.0	178	−59
1	13.3	169	−60
2	13.6	158	−61
3	13.6	159	−57
4	14.1	148	−61
5	14.0	152	−56
6	14.4	141	−61
7	15.0	127	−64
8	14.6	133	−62
9	14.8	129	−64
10	14.8	133	−64

12UT – solid
18UT – dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/9/2004 (Day of Year 130)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 178 -59
1 13.2 173 -60
2 13.7 160 -64
3 12.7 186 -56
4 12.3 197 -51
5 12.5 192 -51
6 12.3 199 -50
06UT
Day km hPa C
0 13.0 178 -59
1 12.4 197 -54
2 12.8 184 -58
3 11.7 221 -50
4 11.6 225 -48
5 12.0 210 -55
6 11.8 211 -56
7 11.2 231 -51
8 9.7 290 -36
9 10.0 282 -38
10 9.8 289 -38
70
60
30
0
-30
30
60
90
120
150
180
-150
-120
-90
ELEV (km)
15
13
11
9
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/9/2004 (Day of Year 130)
NCEP/NCAR Reanalysis 1 Data Set





12UT

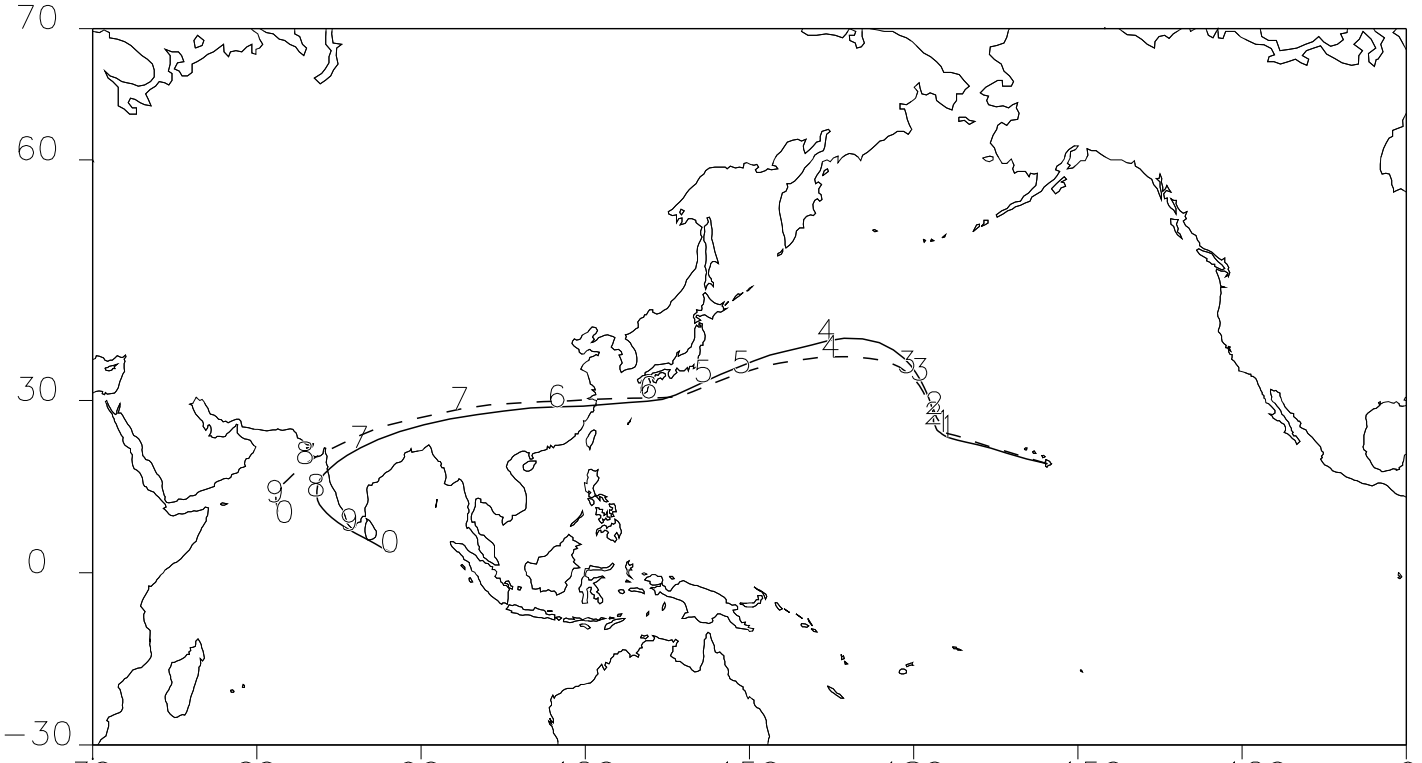
Day	km	hPa	C
0	13.0	178	−58
1	12.6	191	−55
2	12.4	198	−56
3	11.8	217	−50
4	12.0	210	−52
5	12.8	184	−59
6	12.5	184	−59
7	10.9	243	−42
8	12.6	188	−53
9	14.0	152	−63
10	13.2	168	−57

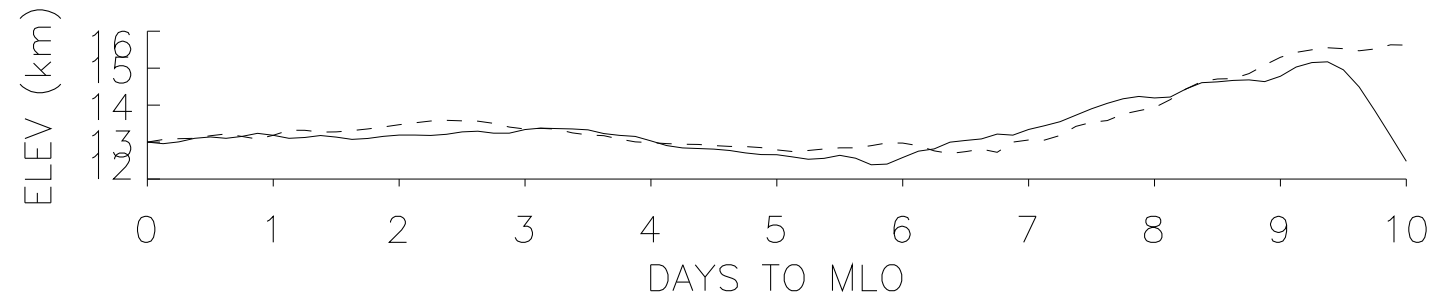
18UT

Day	km	hPa	C
0	13.0	178	−58
1	13.0	179	−58
2	13.0	180	−59
3	12.1	206	−53
4	11.8	218	−49
5	12.0	211	−51
6	12.1	203	−56
7	11.3	228	−45
8	11.4	227	−43
9	14.0	153	−63
10	13.1	176	−56

12UT − solid
18UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/10/2004 (Day of Year 131)
NCEP/NCAR Reanalysis 1 Data Set





00UT

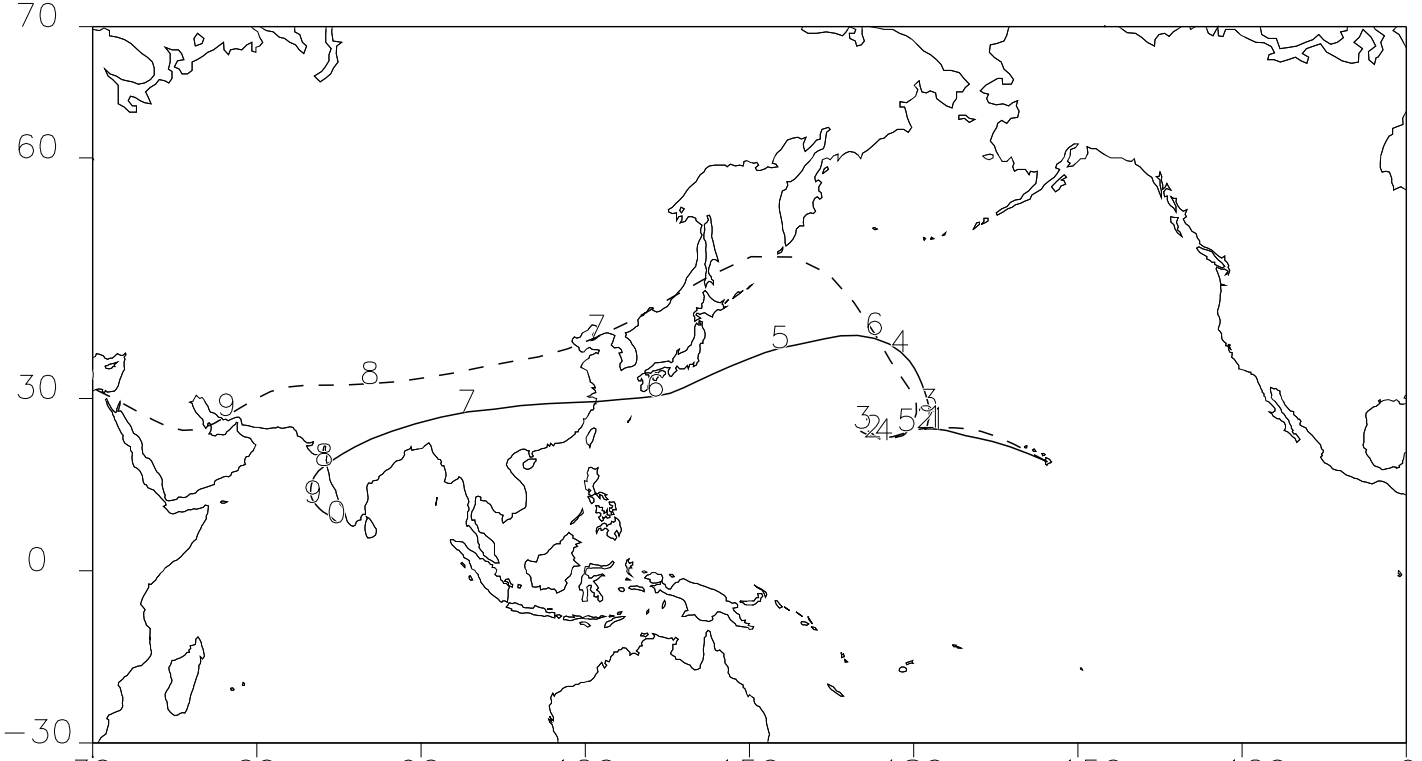
Day	km	hPa	C
0	13.0	178	−57
1	13.2	173	−58
2	13.2	174	−60
3	13.3	170	−61
4	13.0	178	−57
5	12.7	189	−52
6	12.6	192	−51
7	13.3	173	−57
8	14.2	152	−65
9	14.8	137	−70
10	12.5	199	−50

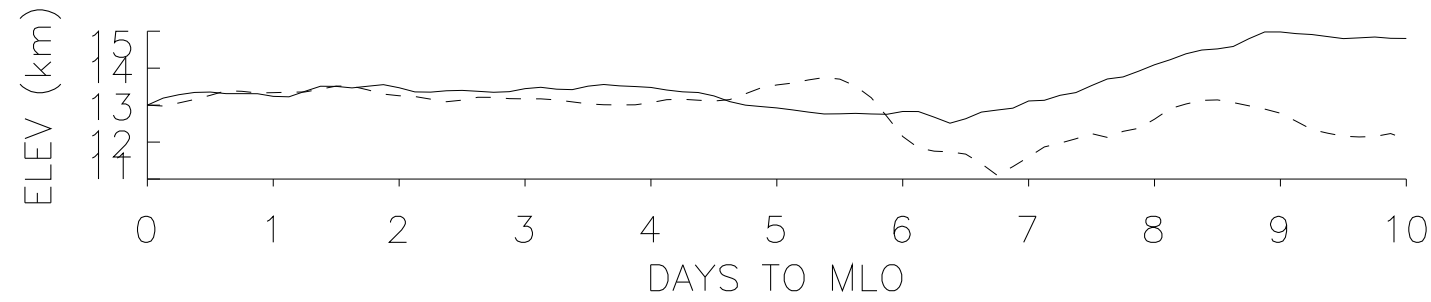
06UT

Day	km	hPa	C
0	13.0	179	−55
1	13.2	173	−58
2	13.5	166	−60
3	13.4	169	−59
4	13.0	180	−55
5	12.8	186	−55
6	13.0	181	−53
7	13.1	180	−54
8	13.9	158	−61
9	15.3	127	−72
10	15.6	120	−75

00UT – solid
06UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/10/2004 (Day of Year 131)
NCEP/NCAR Reanalysis 1 Data Set





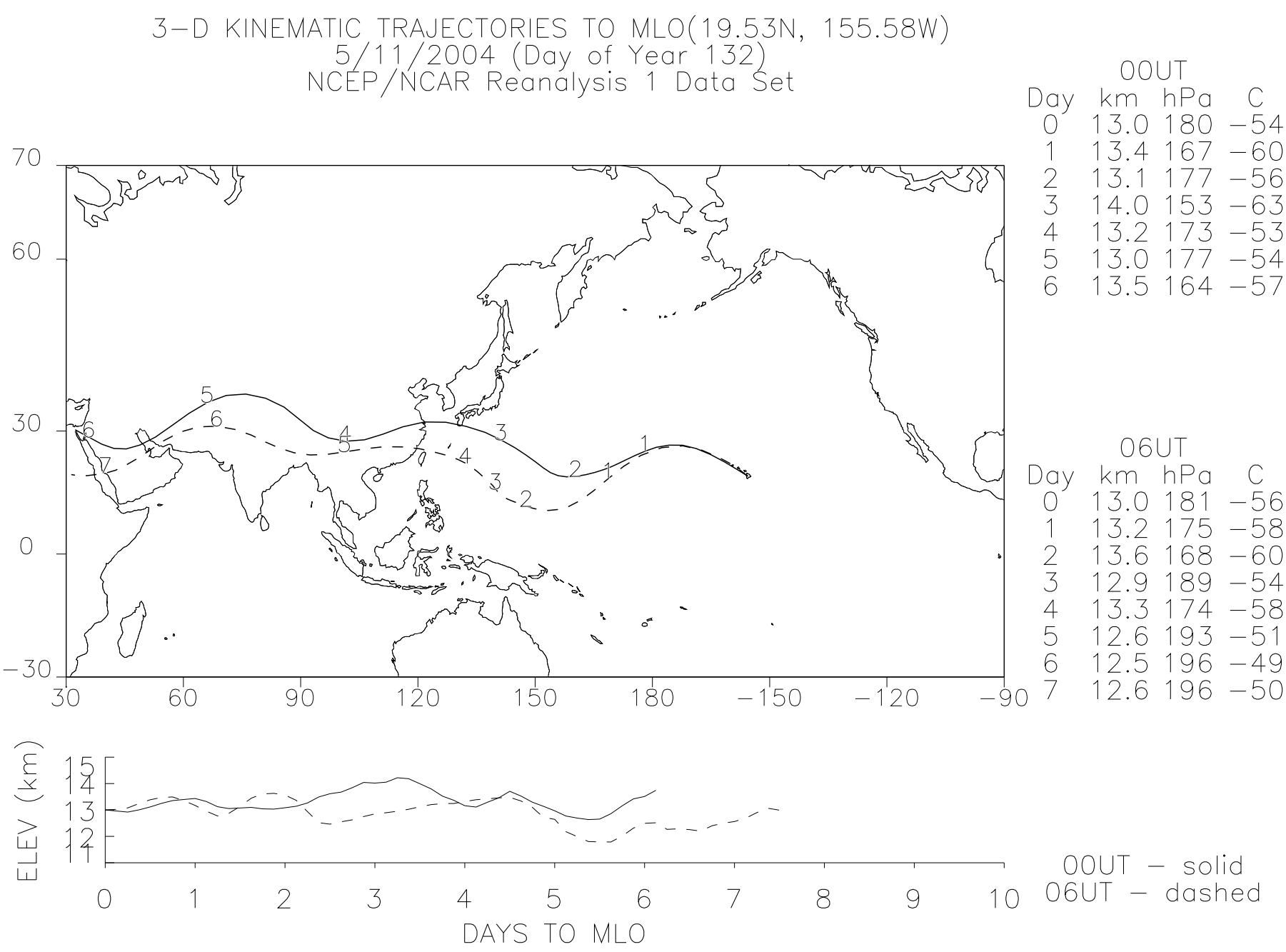
12UT

Day	km	hPa	C
0	13.0	178	−56
1	13.2	173	−57
2	13.5	166	−60
3	13.4	167	−61
4	13.5	166	−60
5	12.9	182	−54
6	12.8	185	−53
7	13.1	179	−54
8	14.1	154	−63
9	15.0	133	−70
10	14.8	137	−69

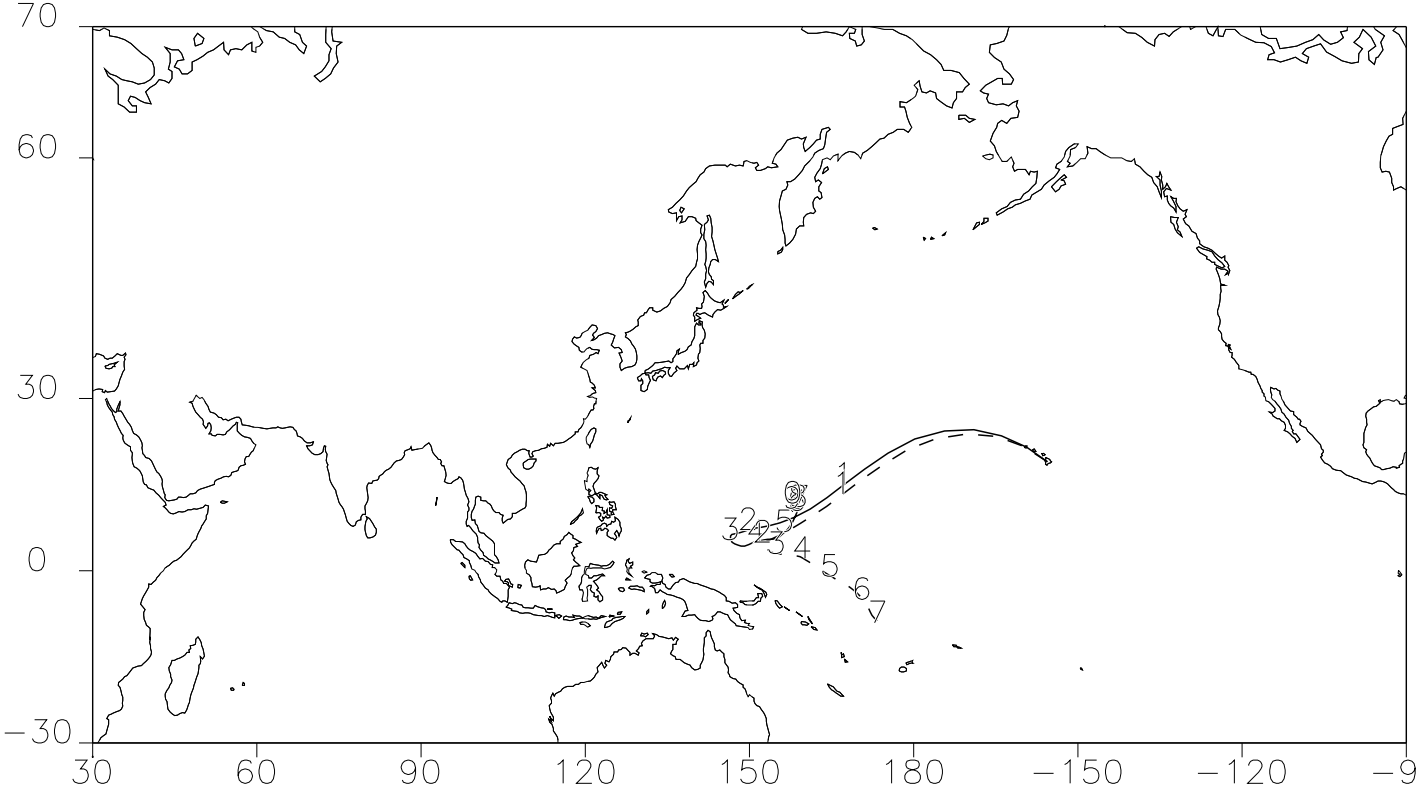
18UT

Day	km	hPa	C
0	13.0	179	−54
1	13.3	169	−58
2	13.3	172	−60
3	13.2	174	−61
4	13.1	177	−60
5	13.5	164	−65
6	12.2	194	−55
7	11.6	211	−48
8	12.6	186	−54
9	12.8	184	−57
10	12.1	200	−49

12UT − solid
18UT − dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/11/2004 (Day of Year 132)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 180 -54
1 13.4 167 -60
2 13.1 177 -56
3 14.0 153 -63
4 13.2 173 -53
5 13.0 177 -54
6 13.5 164 -57
06UT
Day km hPa C
0 13.0 181 -56
1 13.2 175 -58
2 13.6 168 -60
3 12.9 189 -54
4 13.3 174 -58
5 12.6 193 -51
6 12.5 196 -49
7 12.6 196 -50
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
15
14
13
12
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/11/2004 (Day of Year 132)
NCEP/NCAR Reanalysis 1 Data Set

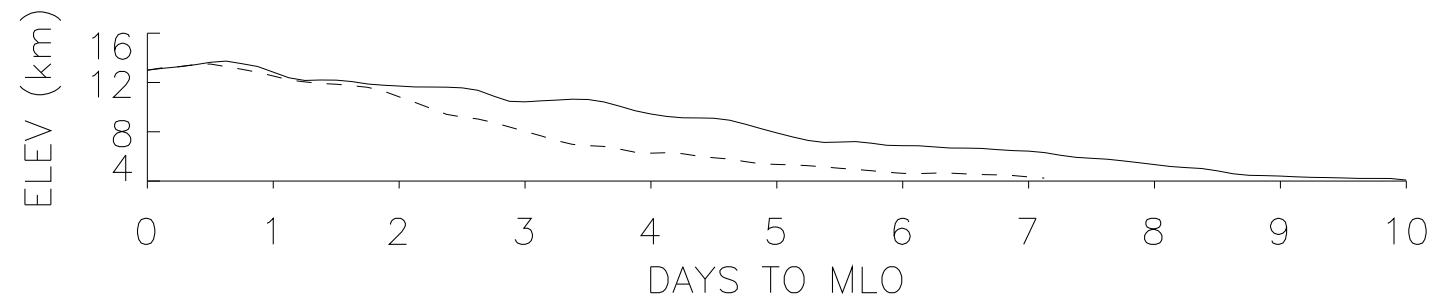


12UT

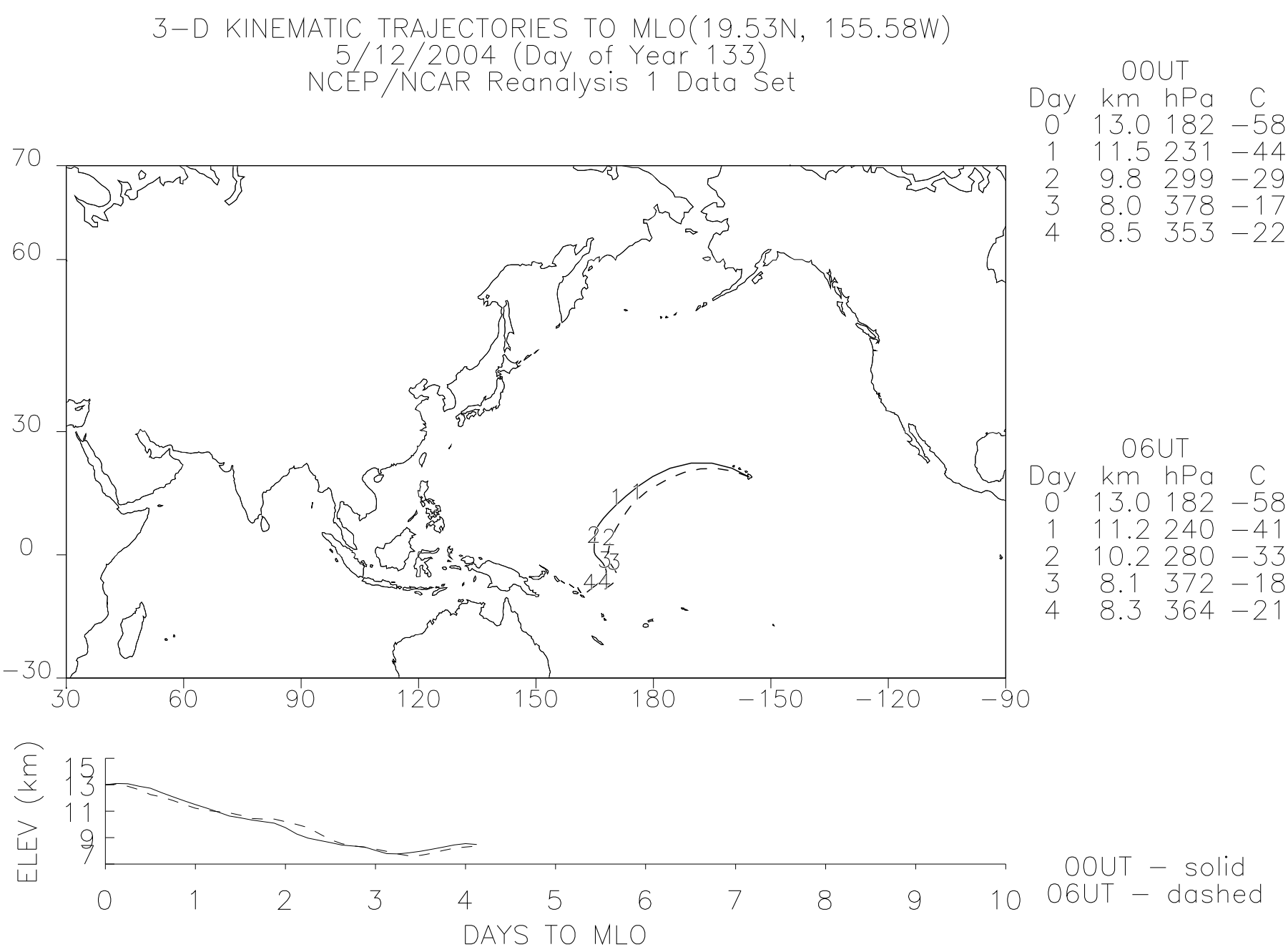
Day	km	hPa	C
0	13.0	180	−58
1	12.8	187	−56
2	11.7	226	−44
3	10.4	273	−33
4	9.4	313	−27
5	7.9	385	−15
6	6.9	441	−10
7	6.4	468	−6
8	5.3	536	−2
9	4.4	601	3
10	4.1	627	5

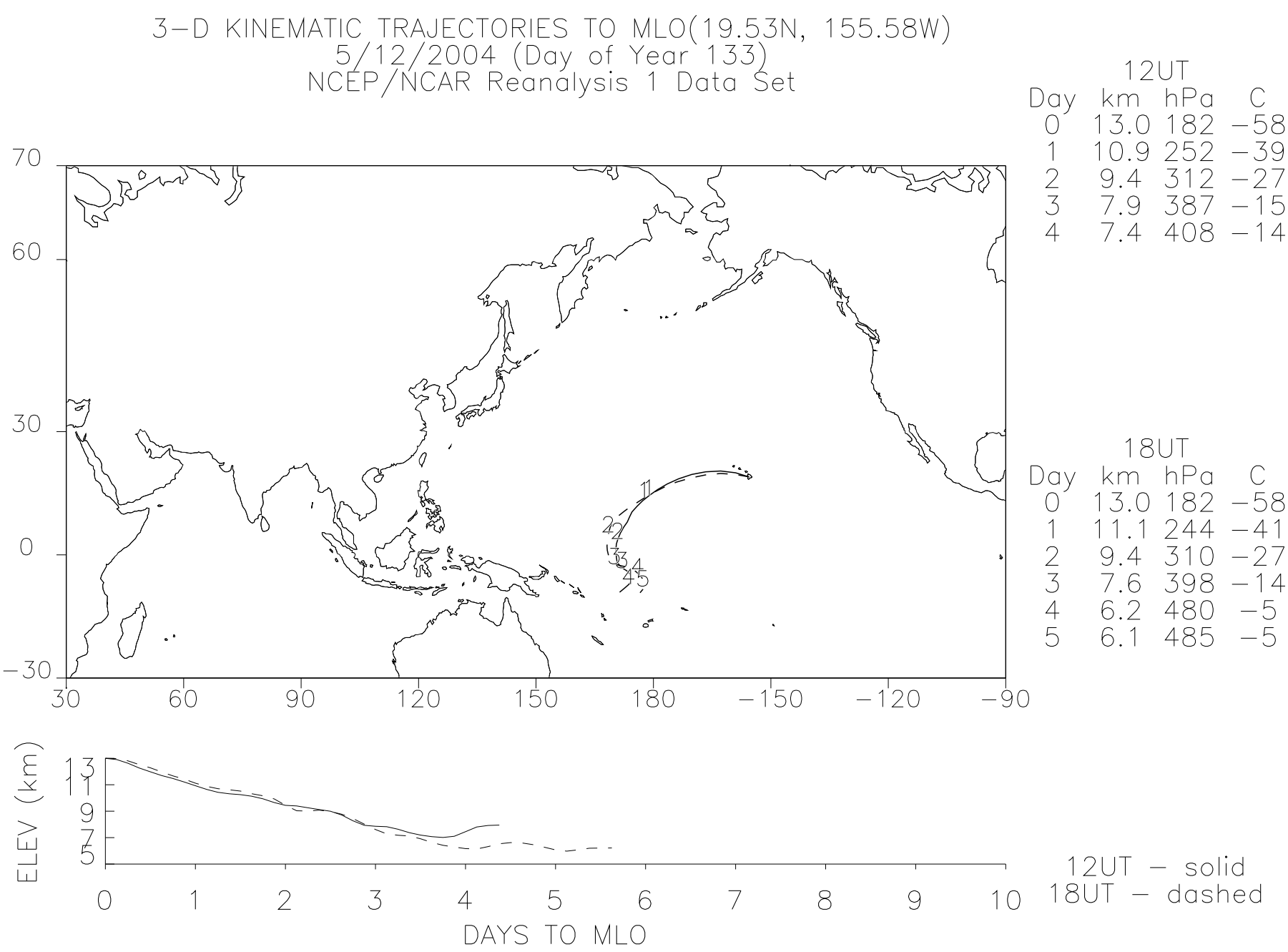
18UT

Day	km	hPa	C
0	13.0	181	−58
1	12.5	196	−53
2	10.8	255	−38
3	8.0	377	−17
4	6.3	474	−6
5	5.3	533	−1
6	4.6	584	2
7	4.3	606	4

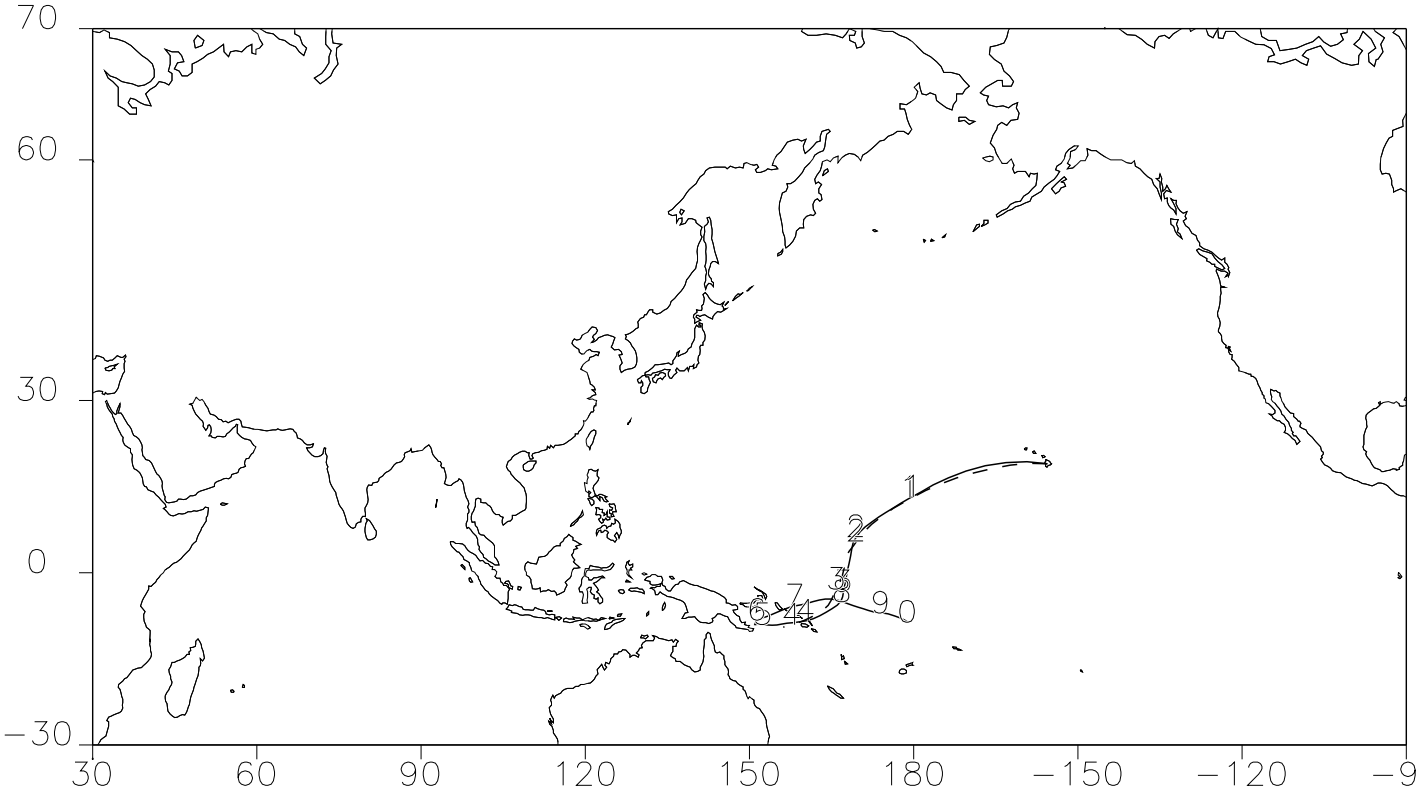


12UT – solid
18UT – dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/12/2004 (Day of Year 133)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 182 -58
1 11.5 231 -44
2 9.8 299 -29
3 8.0 378 -17
4 8.5 353 -22
06UT
Day km hPa C
0 13.0 182 -58
1 11.2 240 -41
2 10.2 280 -33
3 8.1 372 -18
4 8.3 364 -21
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
15
13
11
9
7
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/12/2004 (Day of Year 133)
NCEP/NCAR Reanalysis 1 Data Set
12UT
Day km hPa C
0 13.0 182 -58
1 10.9 252 -39
2 9.4 312 -27
3 7.9 387 -15
4 7.4 408 -14
18UT
Day km hPa C
0 13.0 182 -58
1 11.1 244 -41
2 9.4 310 -27
3 7.6 398 -14
4 6.2 480 -5
5 6.1 485 -5
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
13
11
9
7
5
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
12UT - solid
18UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/13/2004 (Day of Year 134)
NCEP/NCAR Reanalysis 1 Data Set

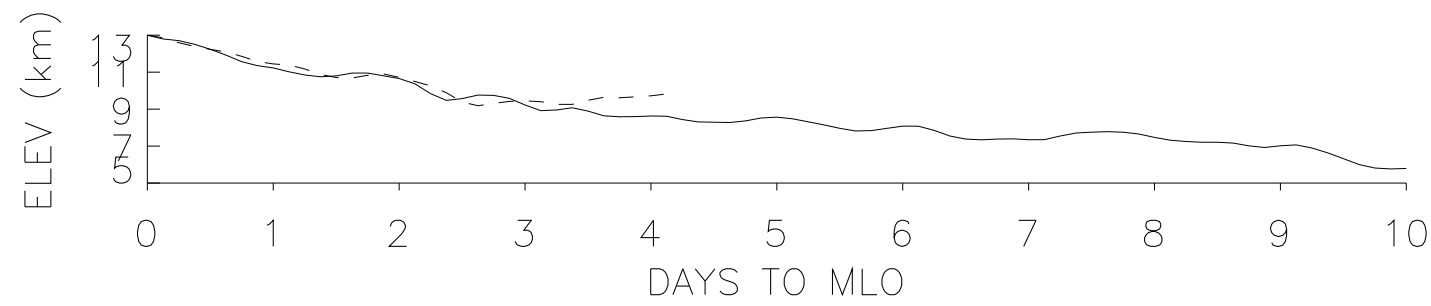


00UT

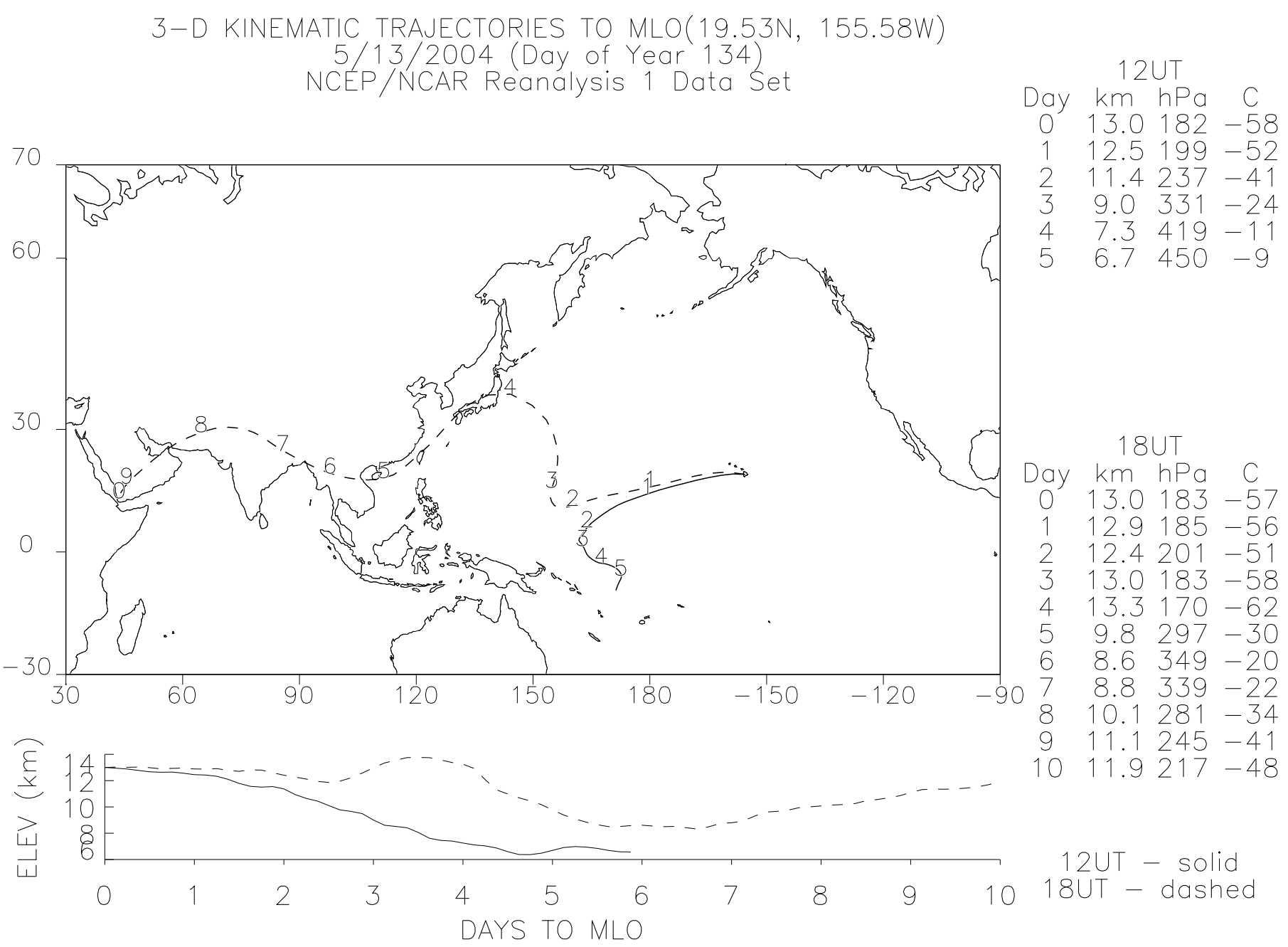
Day	km	hPa	C
0	13.0	182	-58
1	11.2	241	-41
2	10.7	263	-37
3	9.2	322	-25
4	8.6	349	-21
5	8.6	353	-20
6	8.1	377	-16
7	7.3	415	-12
8	7.5	408	-12
9	7.0	432	-11
10	5.8	505	-4

06UT

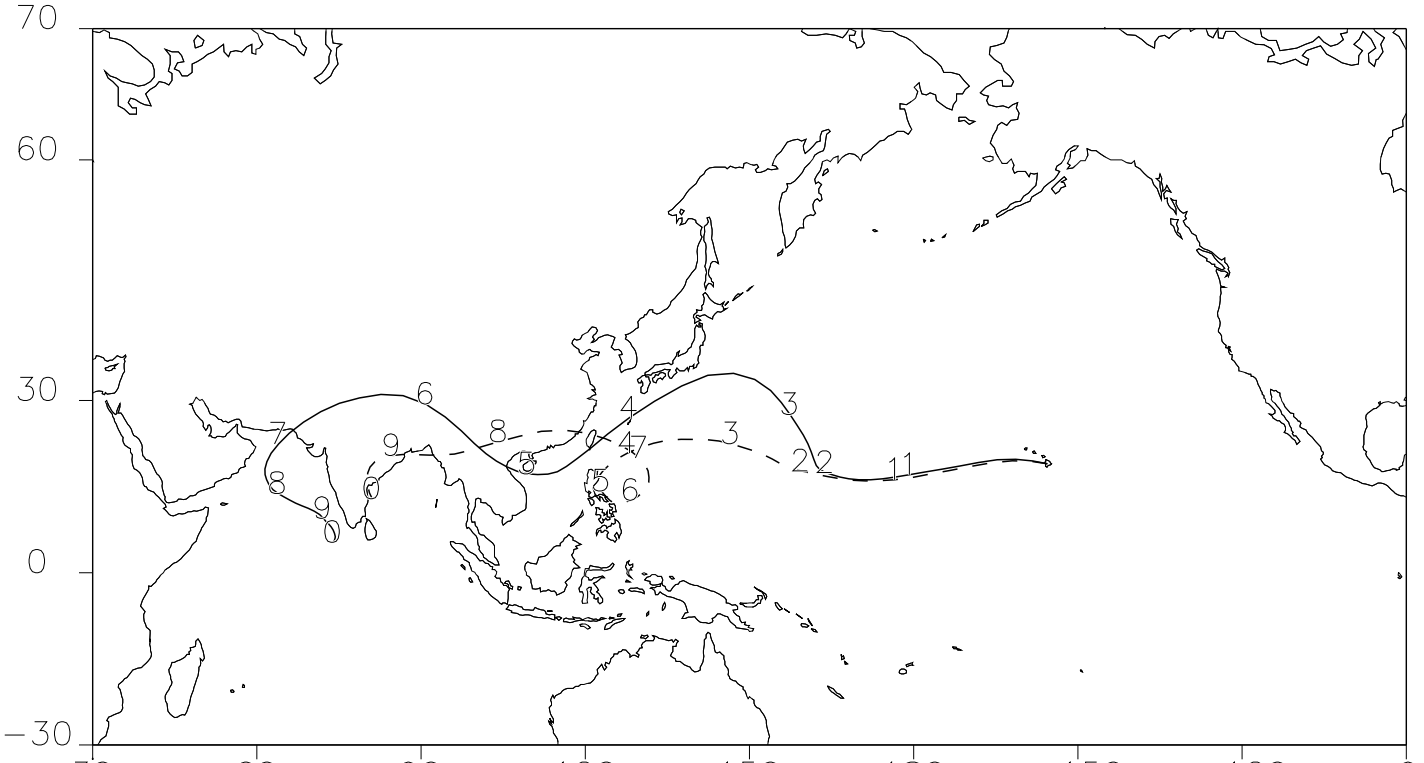
Day	km	hPa	C
0	13.0	183	-58
1	11.4	233	-42
2	10.7	260	-37
3	9.4	311	-27
4	9.7	299	-29

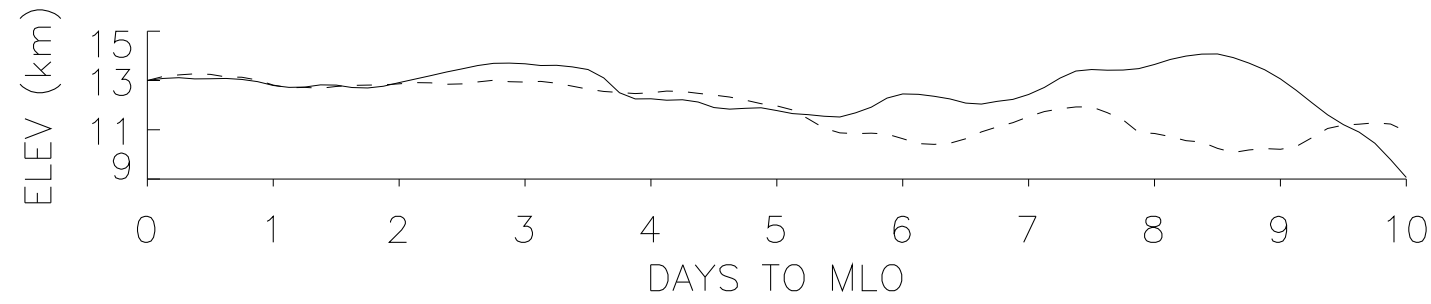


00UT – solid
06UT – dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/13/2004 (Day of Year 134)
NCEP/NCAR Reanalysis 1 Data Set
12UT
Day km hPa C
0 13.0 182 -58
1 12.5 199 -52
2 11.4 237 -41
3 9.0 331 -24
4 7.3 419 -11
5 6.7 450 -9
18UT
Day km hPa C
0 13.0 183 -57
1 12.9 185 -56
2 12.4 201 -51
3 13.0 183 -58
4 13.3 170 -62
5 9.8 297 -30
6 8.6 349 -20
7 8.8 339 -22
8 10.1 281 -34
9 11.1 245 -41
10 11.9 217 -48
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
14
12
10
8
6
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
12UT - solid
18UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/14/2004 (Day of Year 135)
NCEP/NCAR Reanalysis 1 Data Set





00UT

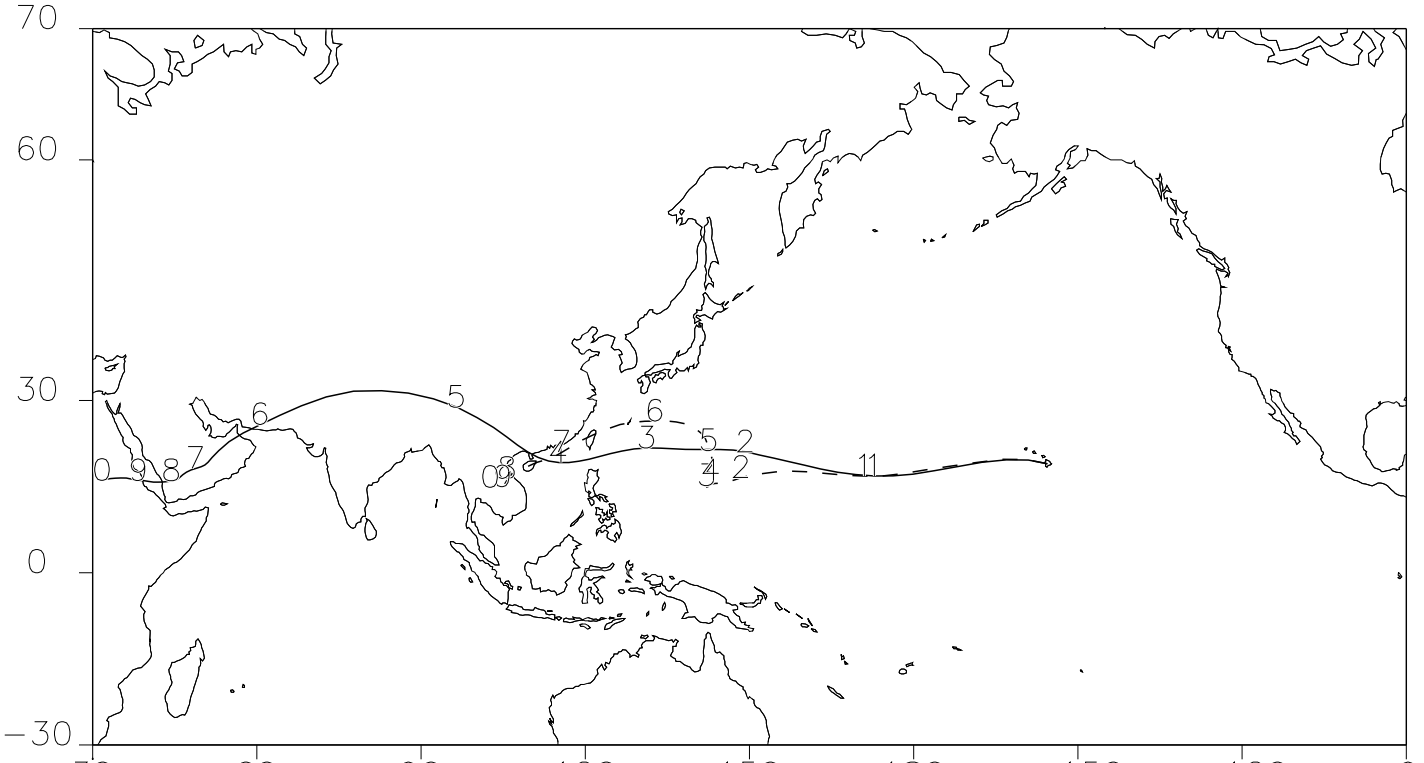
Day	km	hPa	C
0	13.0	183	-57
1	12.8	188	-56
2	12.9	185	-57
3	13.7	162	-64
4	12.3	203	-51
5	11.8	222	-46
6	12.5	198	-50
7	12.4	201	-49
8	13.7	166	-60
9	13.1	182	-55
10	9.1	326	-24

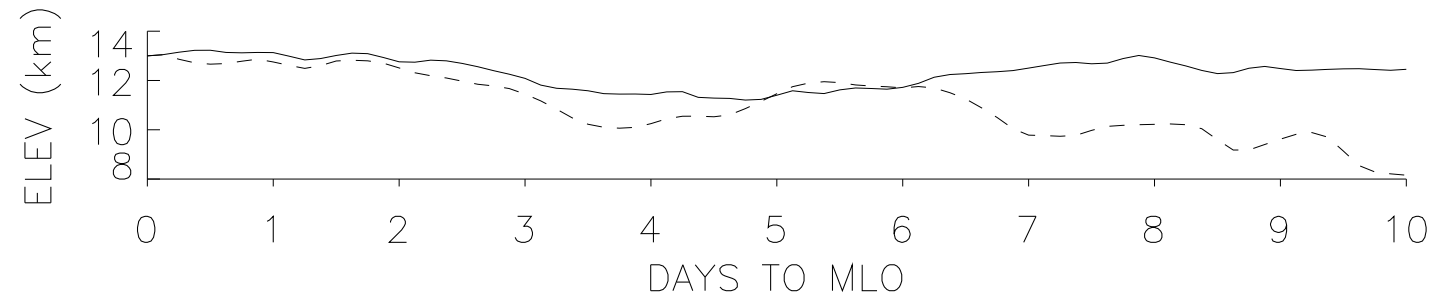
06UT

Day	km	hPa	C
0	13.0	183	-57
1	12.8	188	-55
2	12.9	187	-56
3	12.9	185	-56
4	12.5	199	-51
5	12.0	217	-46
6	10.6	263	-36
7	11.5	231	-45
8	10.9	254	-37
9	10.2	280	-31
10	10.9	253	-37

00UT – solid
06UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/14/2004 (Day of Year 135)
NCEP/NCAR Reanalysis 1 Data Set





12UT

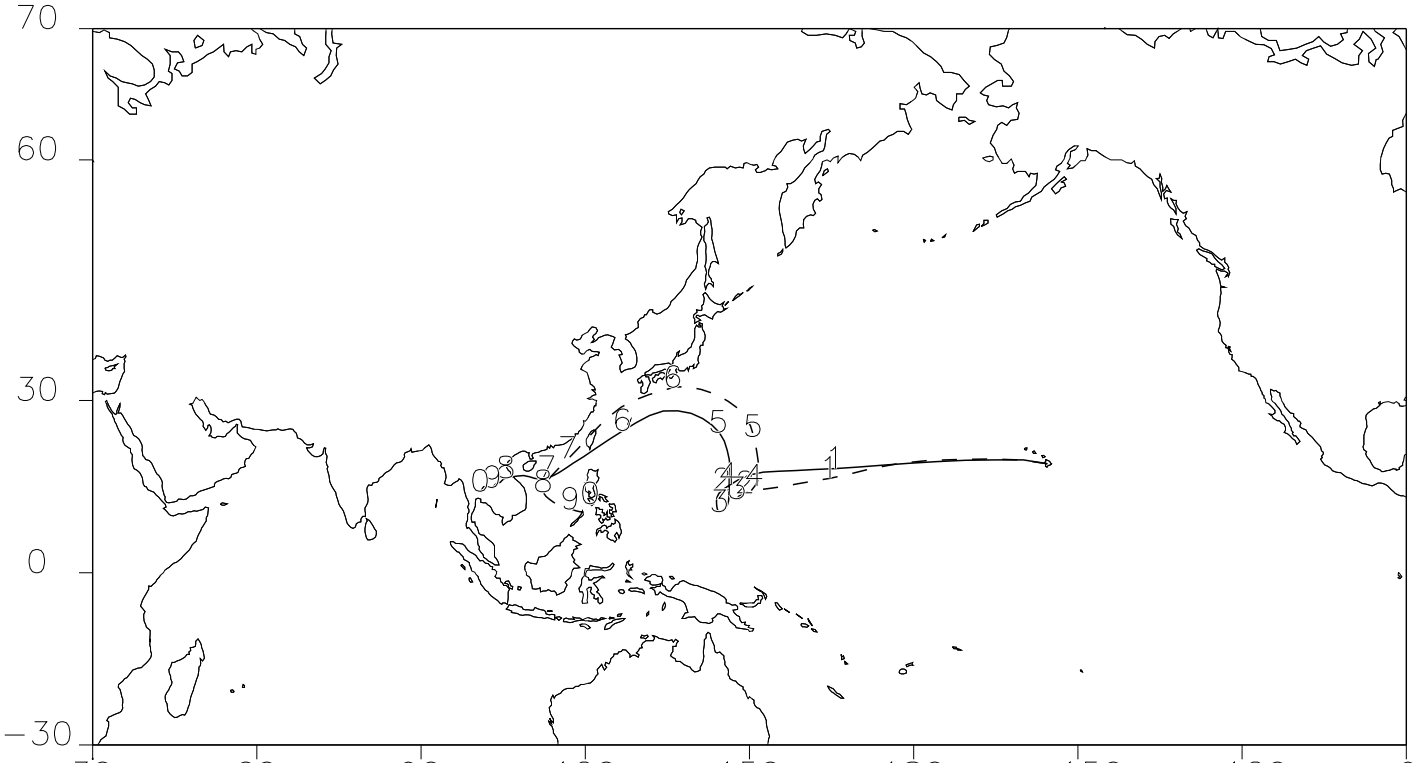
Day	km	hPa	C
0	13.0	182	-58
1	13.1	179	-58
2	12.8	190	-56
3	12.1	212	-48
4	11.4	234	-42
5	11.4	232	-43
6	11.7	222	-44
7	12.5	198	-50
8	12.9	186	-54
9	12.5	199	-51
10	12.5	200	-49

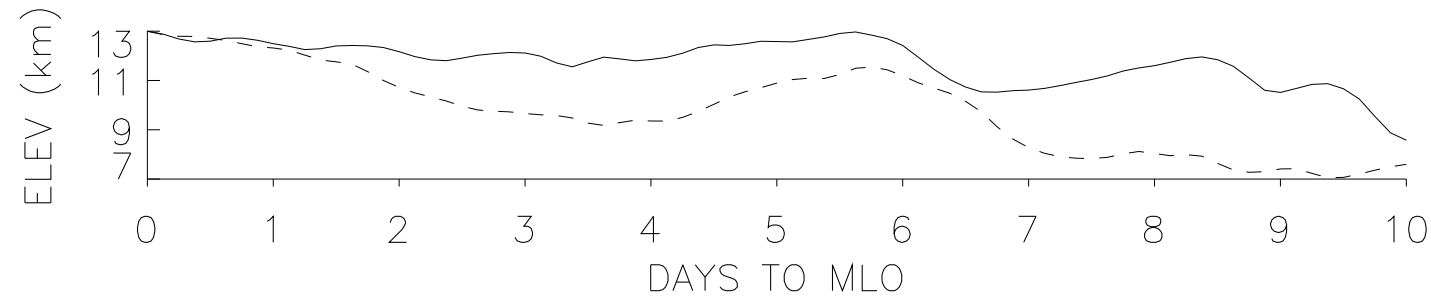
18UT

Day	km	hPa	C
0	13.0	182	-57
1	12.8	190	-55
2	12.5	198	-51
3	11.4	233	-44
4	10.2	278	-34
5	11.5	233	-45
6	11.7	223	-46
7	9.8	296	-30
8	10.2	280	-32
9	9.6	305	-27
10	8.2	372	-18

12UT – solid
18UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/15/2004 (Day of Year 136)
NCEP/NCAR Reanalysis 1 Data Set





00UT

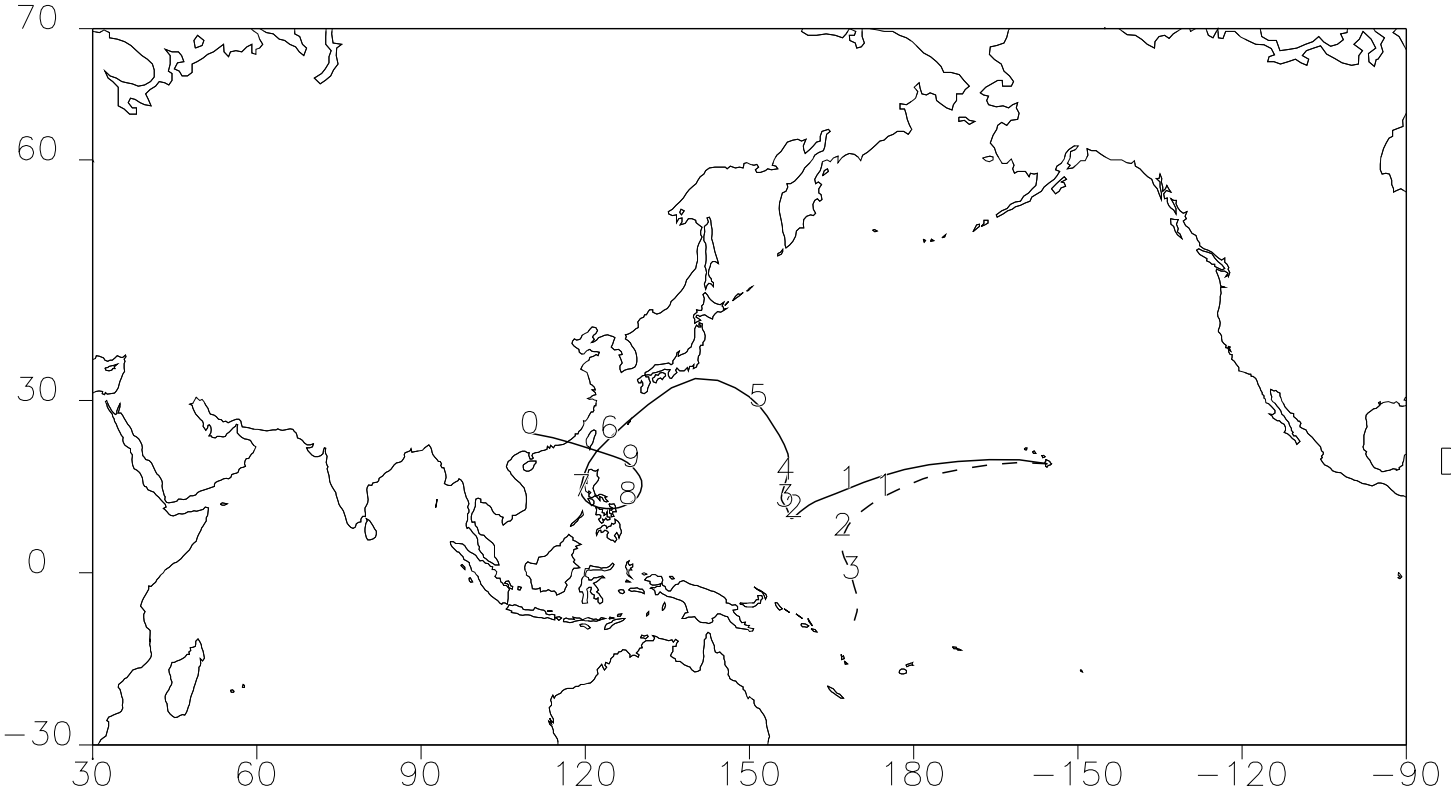
Day	km	hPa	C
0	13.0	183	−57
1	12.5	197	−53
2	12.2	210	−48
3	12.1	212	−48
4	11.9	221	−47
5	12.6	197	−53
6	12.4	201	−53
7	10.6	264	−36
8	11.6	229	−44
9	10.5	269	−34
10	8.6	351	−20

06UT

Day	km	hPa	C
0	13.0	182	−57
1	12.3	203	−51
2	10.7	260	−37
3	9.7	302	−31
4	9.4	315	−29
5	10.9	252	−42
6	11.2	240	−44
7	8.3	365	−19
8	8.0	379	−17
9	7.4	411	−13
10	7.6	400	−15

00UT − solid
06UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/15/2004 (Day of Year 136)
NCEP/NCAR Reanalysis 1 Data Set

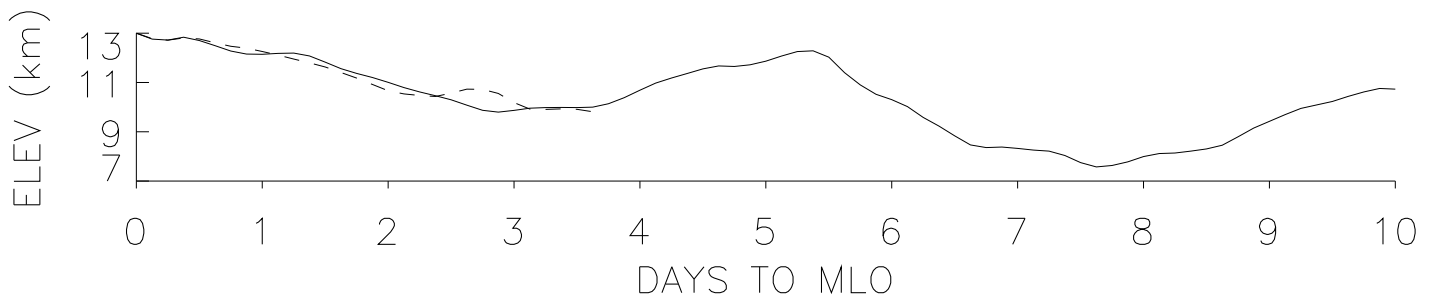


12UT

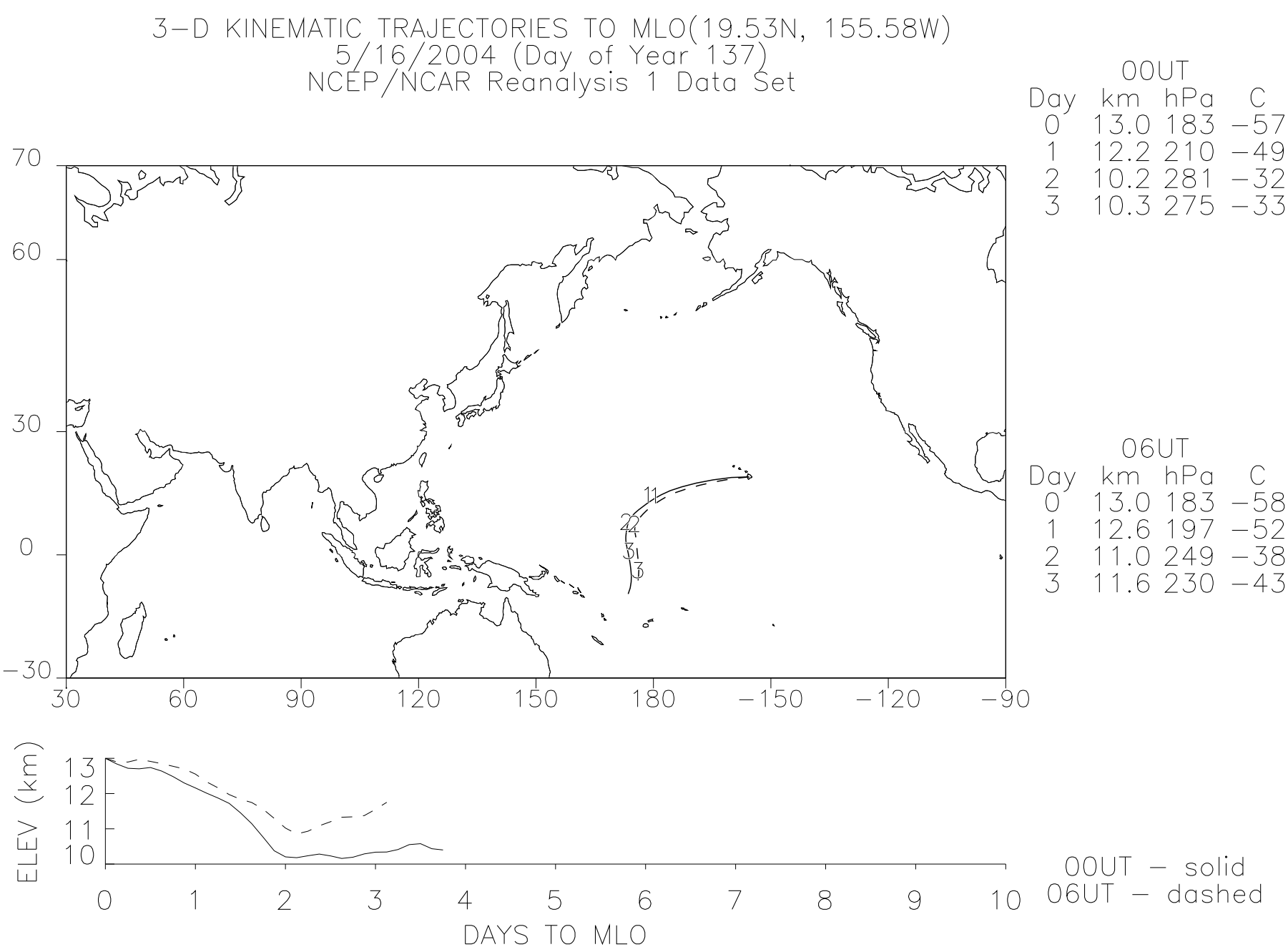
Day	km	hPa	C
0	13.0	182	−57
1	12.1	210	−49
2	11.0	250	−38
3	9.9	294	−31
4	10.7	261	−39
5	11.9	217	−49
6	10.3	275	−35
7	8.3	364	−18
8	8.0	381	−16
9	9.4	314	−28
10	10.7	257	−39

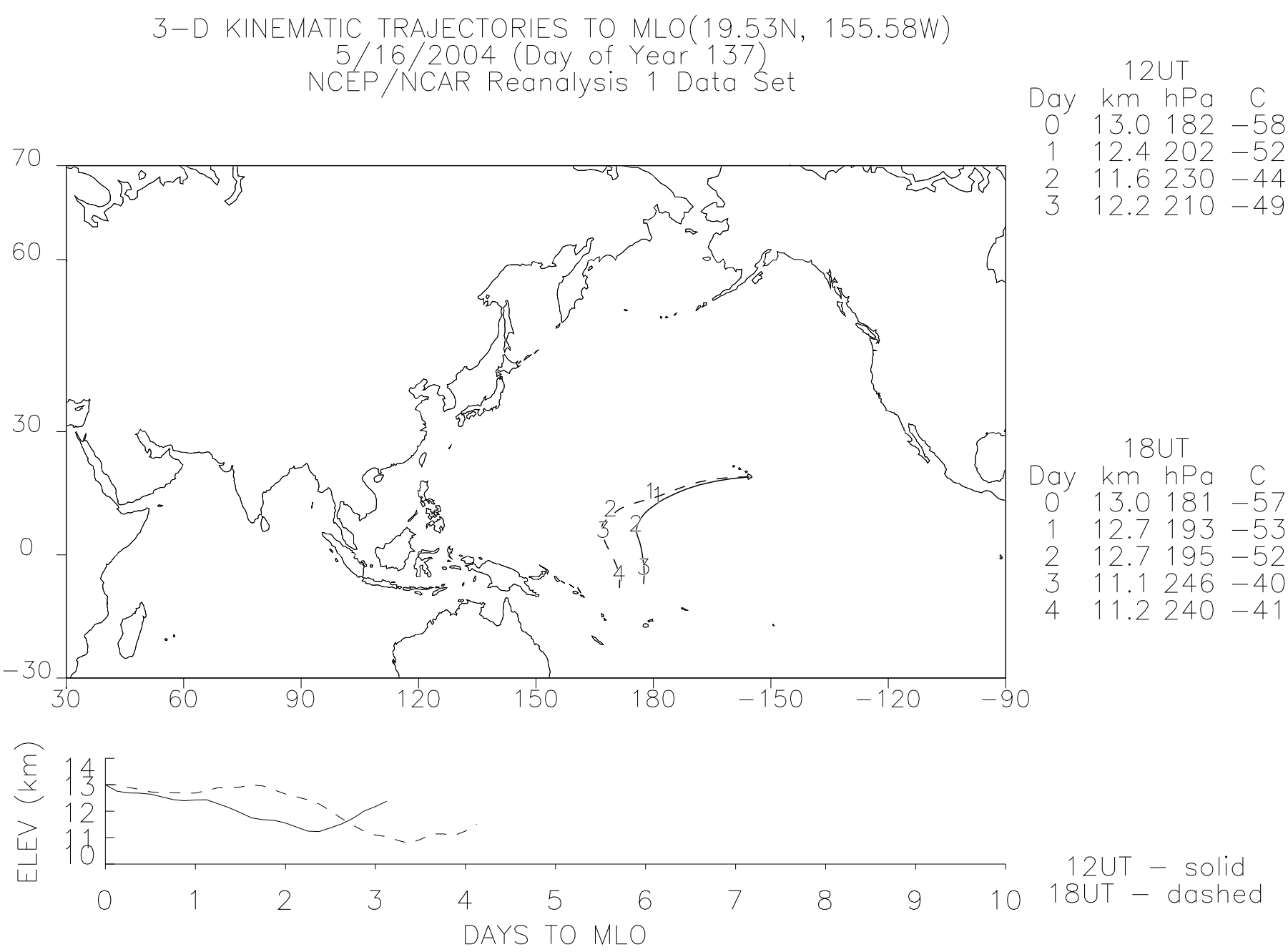
18UT

Day	km	hPa	C
0	13.0	182	−56
1	12.3	206	−49
2	10.7	262	−36
3	10.2	280	−32

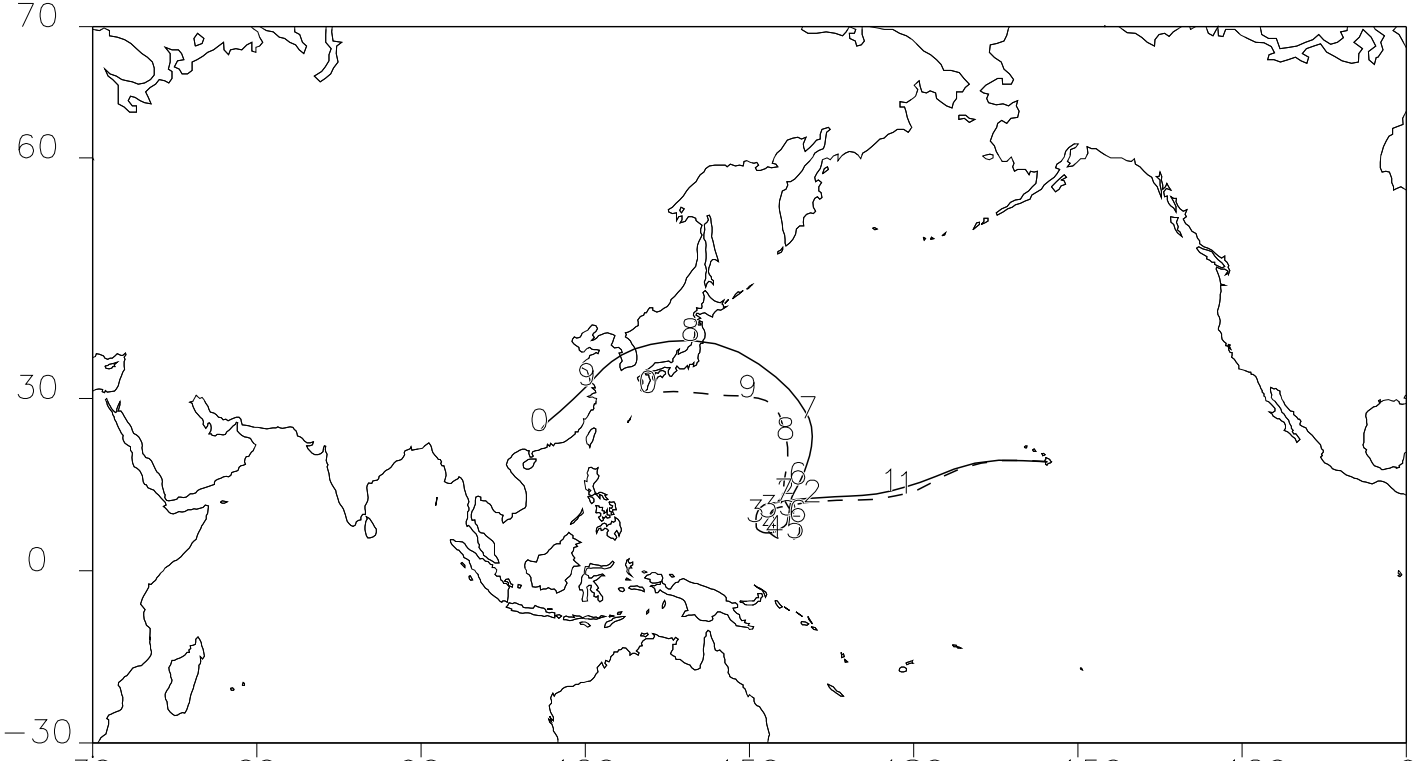


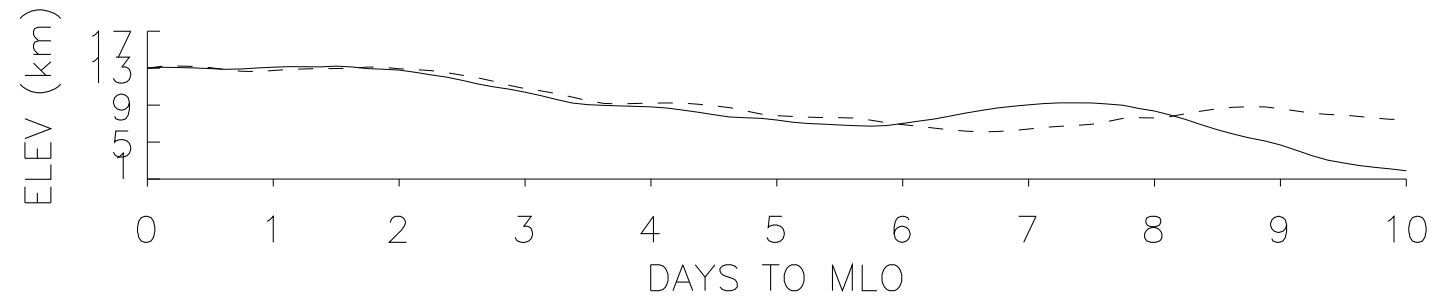
12UT – solid
18UT – dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/16/2004 (Day of Year 137)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 183 -57
1 12.2 210 -49
2 10.2 281 -32
3 10.3 275 -33
06UT
Day km hPa C
0 13.0 183 -58
1 12.6 197 -52
2 11.0 249 -38
3 11.6 230 -43
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
13
12
11
10
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/16/2004 (Day of Year 137)
NCEP/NCAR Reanalysis 1 Data Set
12UT
Day km hPa C
0 13.0 182 -58
1 12.4 202 -52
2 11.6 230 -44
3 12.2 210 -49
18UT
Day km hPa C
0 13.0 181 -57
1 12.7 193 -53
2 12.7 195 -52
3 11.1 246 -40
4 11.2 240 -41
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
14
13
12
11
10
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
12UT - solid
18UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/17/2004 (Day of Year 138)
NCEP/NCAR Reanalysis 1 Data Set





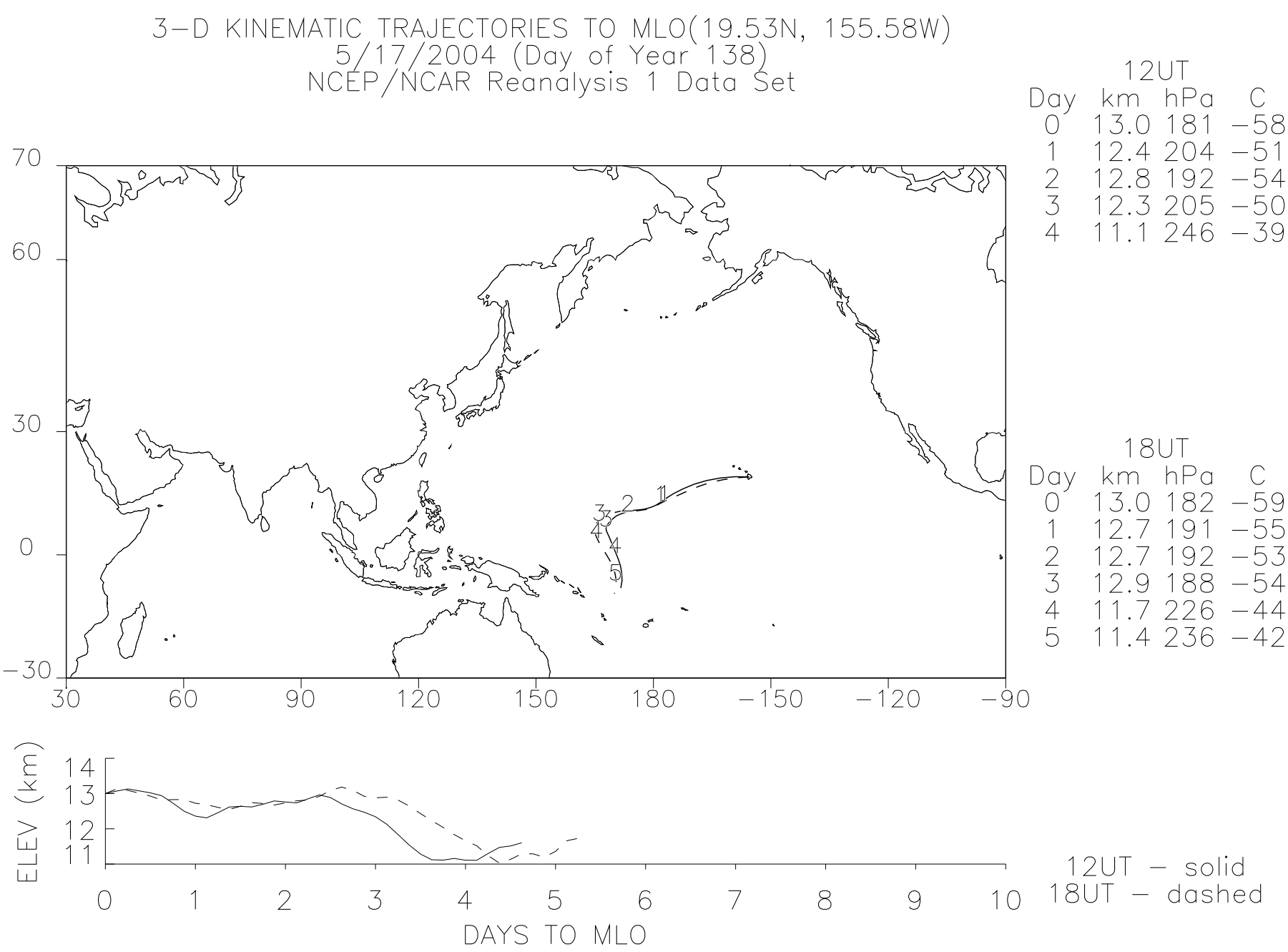
00UT

Day	km	hPa	C
0	13.0	182	-58
1	13.1	181	-58
2	12.8	191	-54
3	10.4	273	-35
4	8.8	341	-23
5	7.4	411	-12
6	7.0	430	-11
7	9.0	325	-31
8	8.4	350	-27
9	4.7	570	-3
10	1.9	811	13

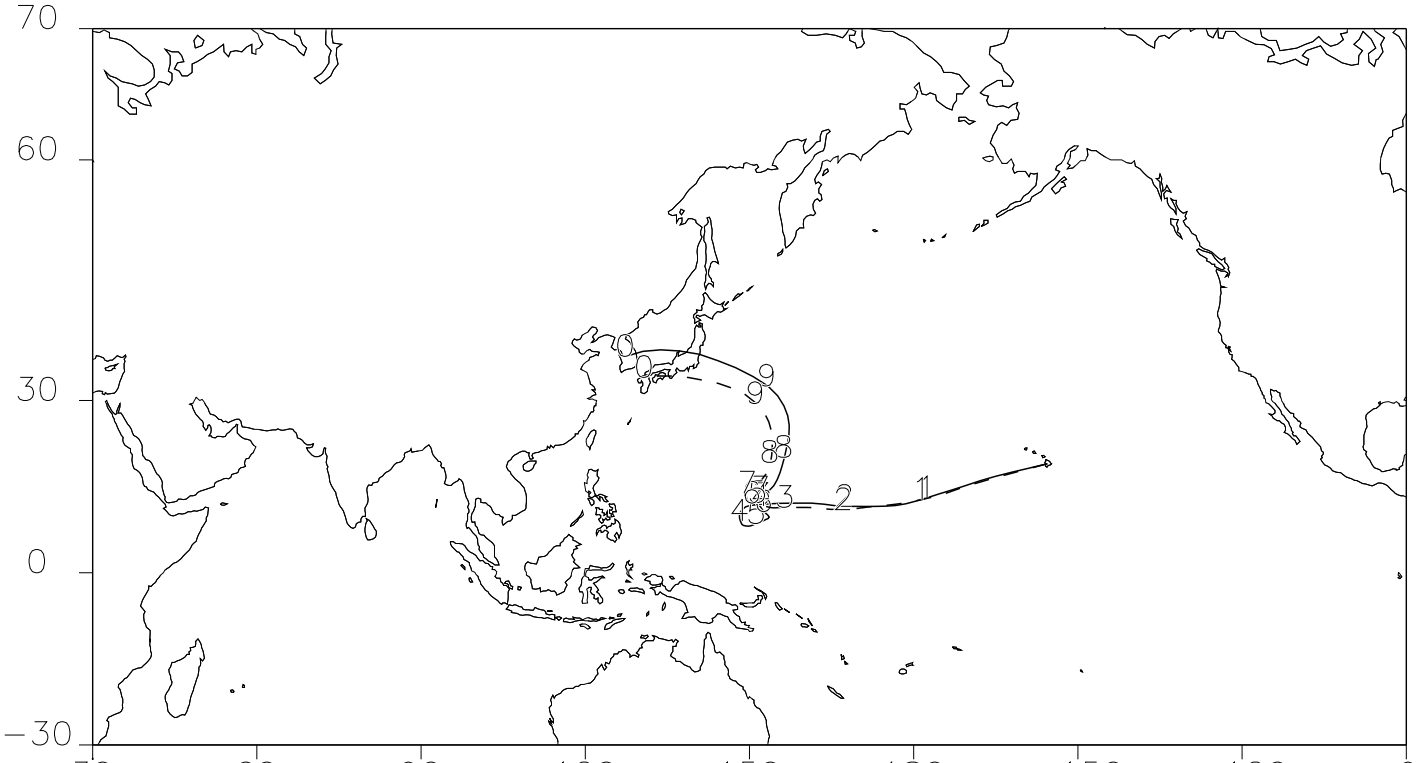
06UT

Day	km	hPa	C
0	13.0	182	-58
1	12.7	191	-54
2	12.9	186	-55
3	10.8	258	-37
4	9.2	322	-25
5	7.9	385	-16
6	6.9	437	-11
7	6.4	464	-9
8	7.6	395	-20
9	8.6	341	-32
10	7.5	401	-21

00UT - solid
06UT - dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/17/2004 (Day of Year 138)
NCEP/NCAR Reanalysis 1 Data Set
12UT
Day km hPa C
0 13.0 181 -58
1 12.4 204 -51
2 12.8 192 -54
3 12.3 205 -50
4 11.1 246 -39
18UT
Day km hPa C
0 13.0 182 -59
1 12.7 191 -55
2 12.7 192 -53
3 12.9 188 -54
4 11.7 226 -44
5 11.4 236 -42
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
14
13
12
11
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
12UT - solid
18UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/18/2004 (Day of Year 139)
NCEP/NCAR Reanalysis 1 Data Set

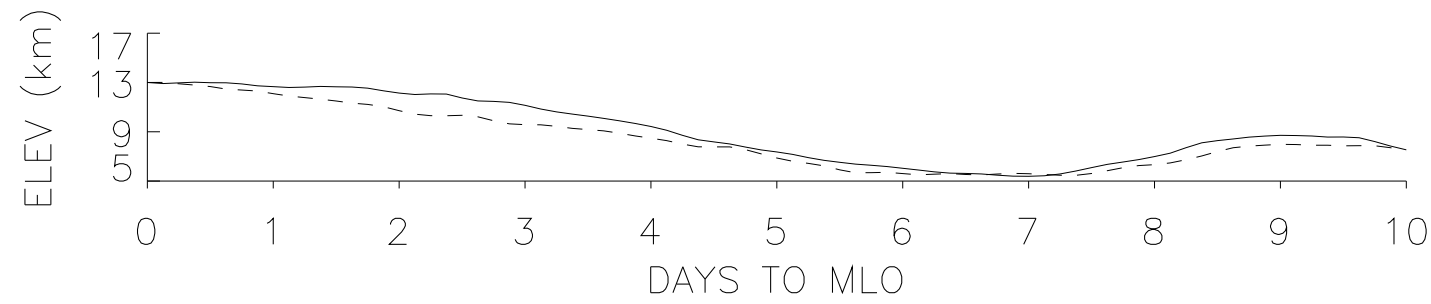


00UT

Day	km	hPa	C
0	13.0	181	−59
1	12.7	194	−54
2	12.1	211	−49
3	11.1	245	−40
4	9.4	313	−28
5	7.4	413	−13
6	6.0	490	−4
7	5.4	531	0
8	7.0	432	−13
9	8.7	338	−30
10	7.5	392	−24

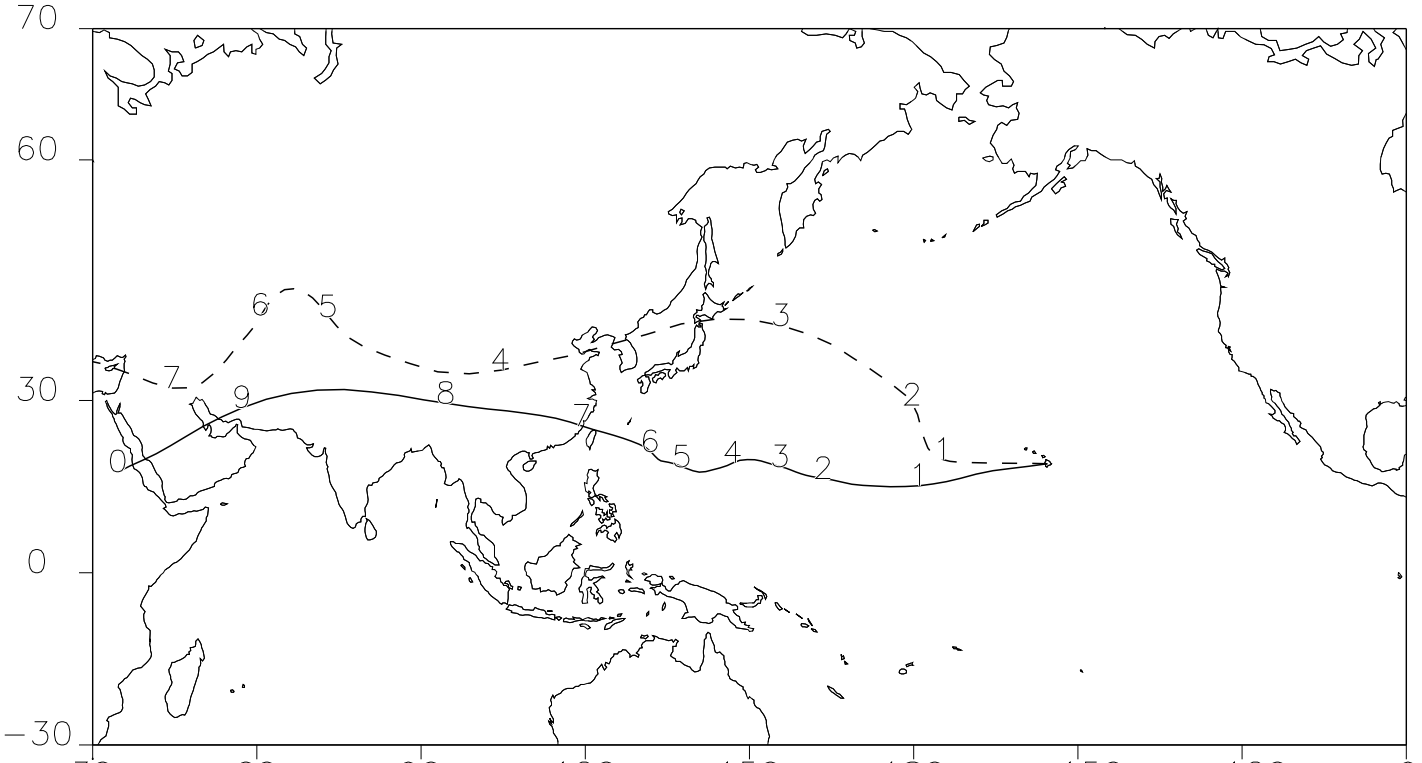
06UT

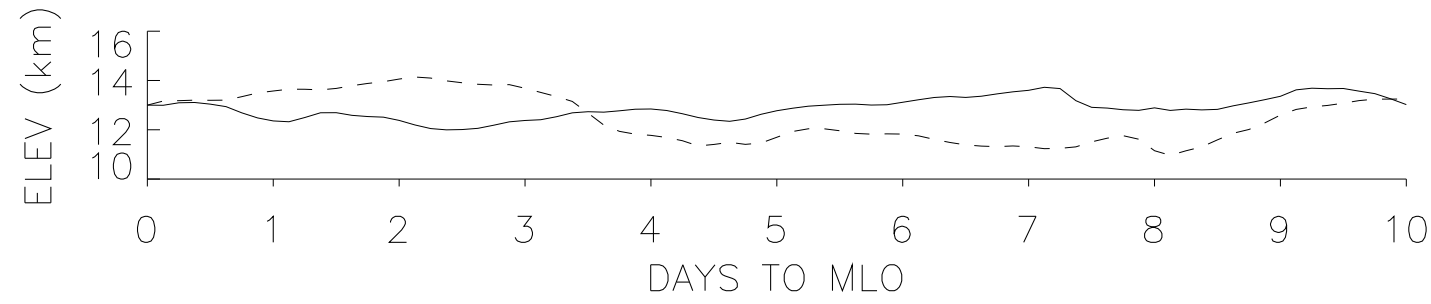
Day	km	hPa	C
0	13.0	181	−59
1	12.1	212	−50
2	10.7	260	−37
3	9.6	306	−28
4	8.5	356	−20
5	6.9	439	−11
6	5.6	516	−2
7	5.6	516	0
8	6.3	470	−7
9	8.0	376	−22
10	7.4	402	−19



00UT – solid
06UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/18/2004 (Day of Year 139)
NCEP/NCAR Reanalysis 1 Data Set





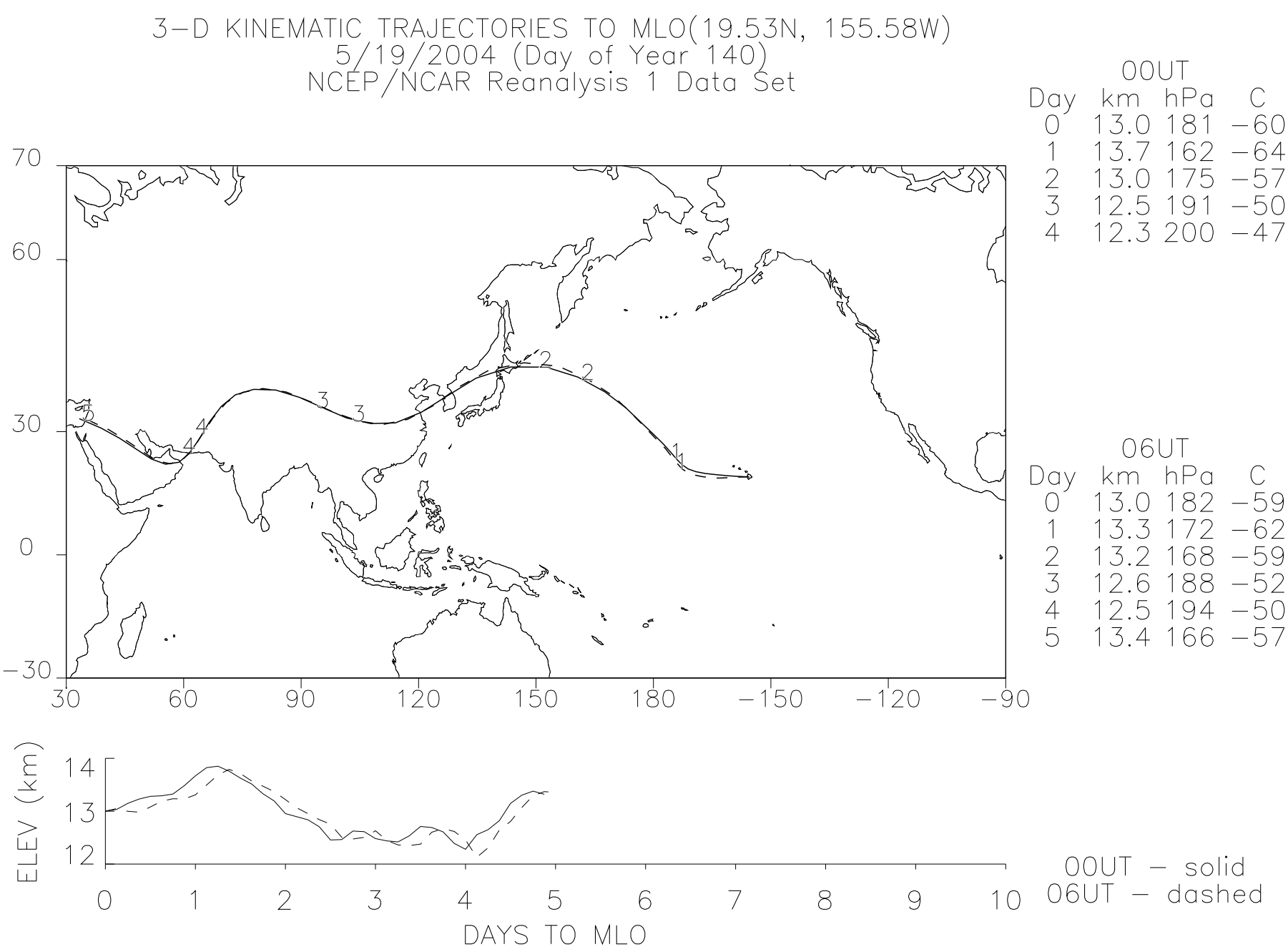
12UT

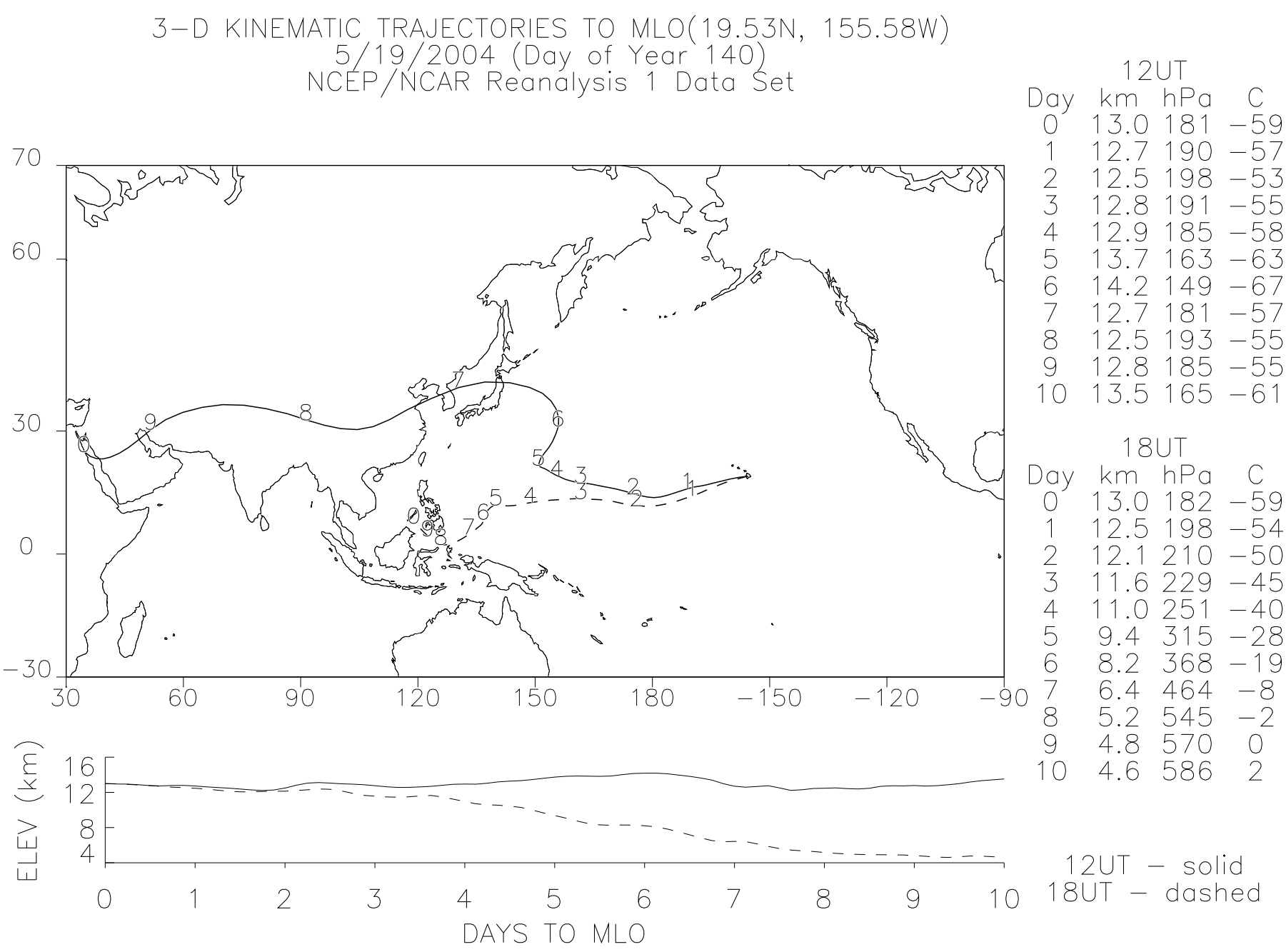
Day	km	hPa	C
0	13.0	180	−60
1	12.4	202	−53
2	12.4	203	−52
3	12.4	202	−53
4	12.8	188	−56
5	12.8	190	−53
6	13.1	180	−56
7	13.6	166	−59
8	12.9	184	−53
9	13.4	171	−57
10	13.0	182	−55

18UT

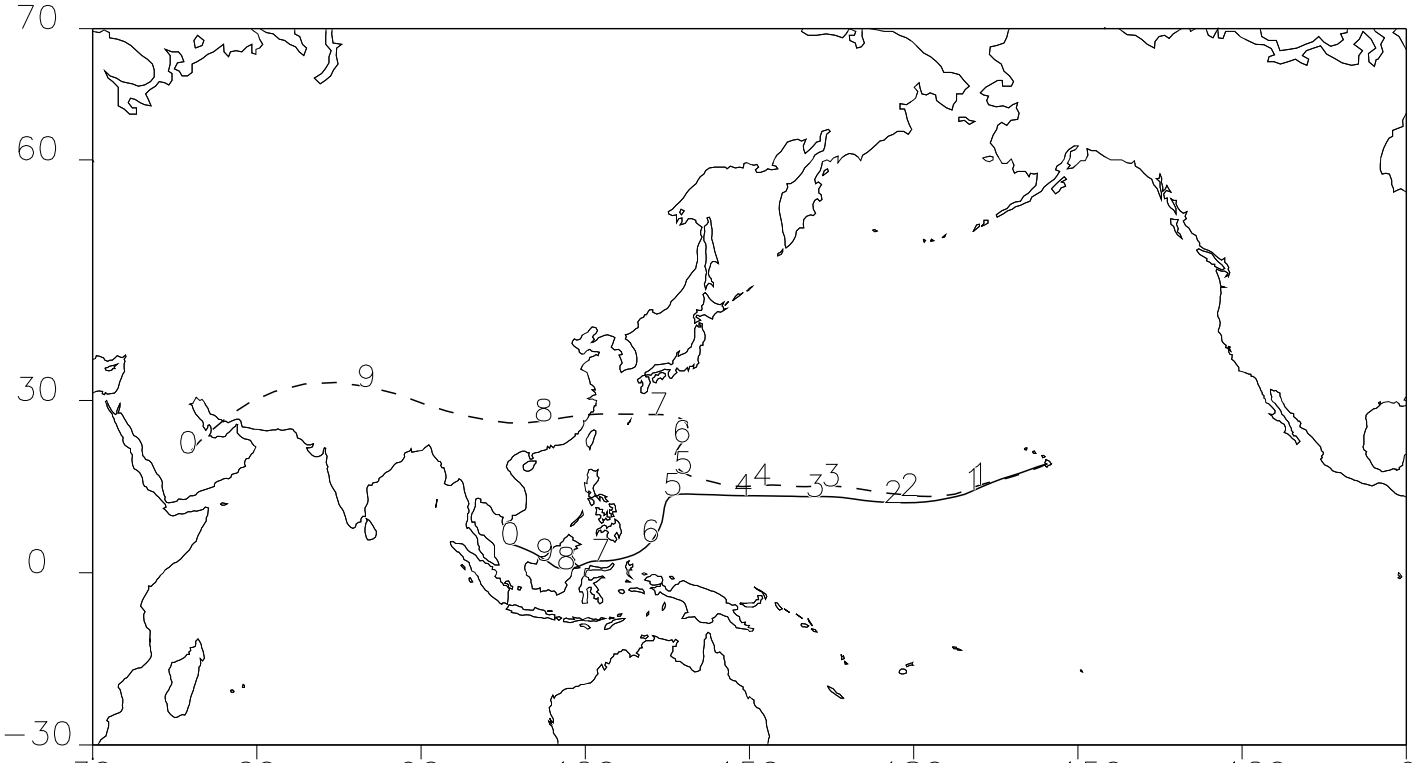
Day	km	hPa	C
0	13.0	181	−60
1	13.6	164	−63
2	14.1	149	−65
3	13.7	156	−64
4	11.8	210	−50
5	11.7	215	−55
6	11.8	209	−57
7	11.3	228	−51
8	11.2	230	−49
9	12.6	186	−58
10	13.2	167	−63

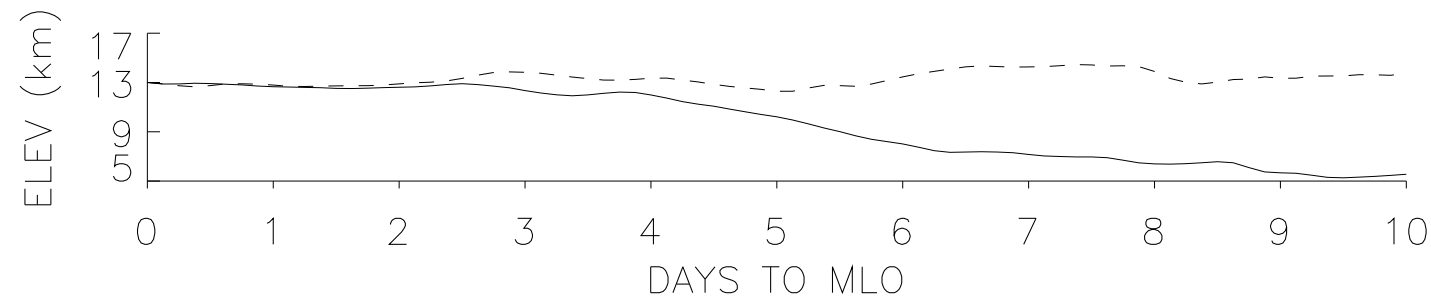
12UT – solid
18UT – dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/19/2004 (Day of Year 140)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 181 -60
1 13.7 162 -64
2 13.0 175 -57
3 12.5 191 -50
4 12.3 200 -47
06UT
Day km hPa C
0 13.0 182 -59
1 13.3 172 -62
2 13.2 168 -59
3 12.6 188 -52
4 12.5 194 -50
5 13.4 166 -57
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
14
13
12
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/19/2004 (Day of Year 140)
NCEP/NCAR Reanalysis 1 Data Set
70
60
30
0
-30
30
60
90
120
150
180
-150
-120
-90
ELEV (km)
16
12
8
4
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
12UT
Day km hPa C
0 13.0 181 -59
1 12.7 190 -57
2 12.5 198 -53
3 12.8 191 -55
4 12.9 185 -58
5 13.7 163 -63
6 14.2 149 -67
7 12.7 181 -57
8 12.5 193 -55
9 12.8 185 -55
10 13.5 165 -61
18UT
Day km hPa C
0 13.0 182 -59
1 12.5 198 -54
2 12.1 210 -50
3 11.6 229 -45
4 11.0 251 -40
5 9.4 315 -28
6 8.2 368 -19
7 6.4 464 -8
8 5.2 545 -2
9 4.8 570 0
10 4.6 586 2
12UT - solid
18UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/20/2004 (Day of Year 141)
NCEP/NCAR Reanalysis 1 Data Set





00UT

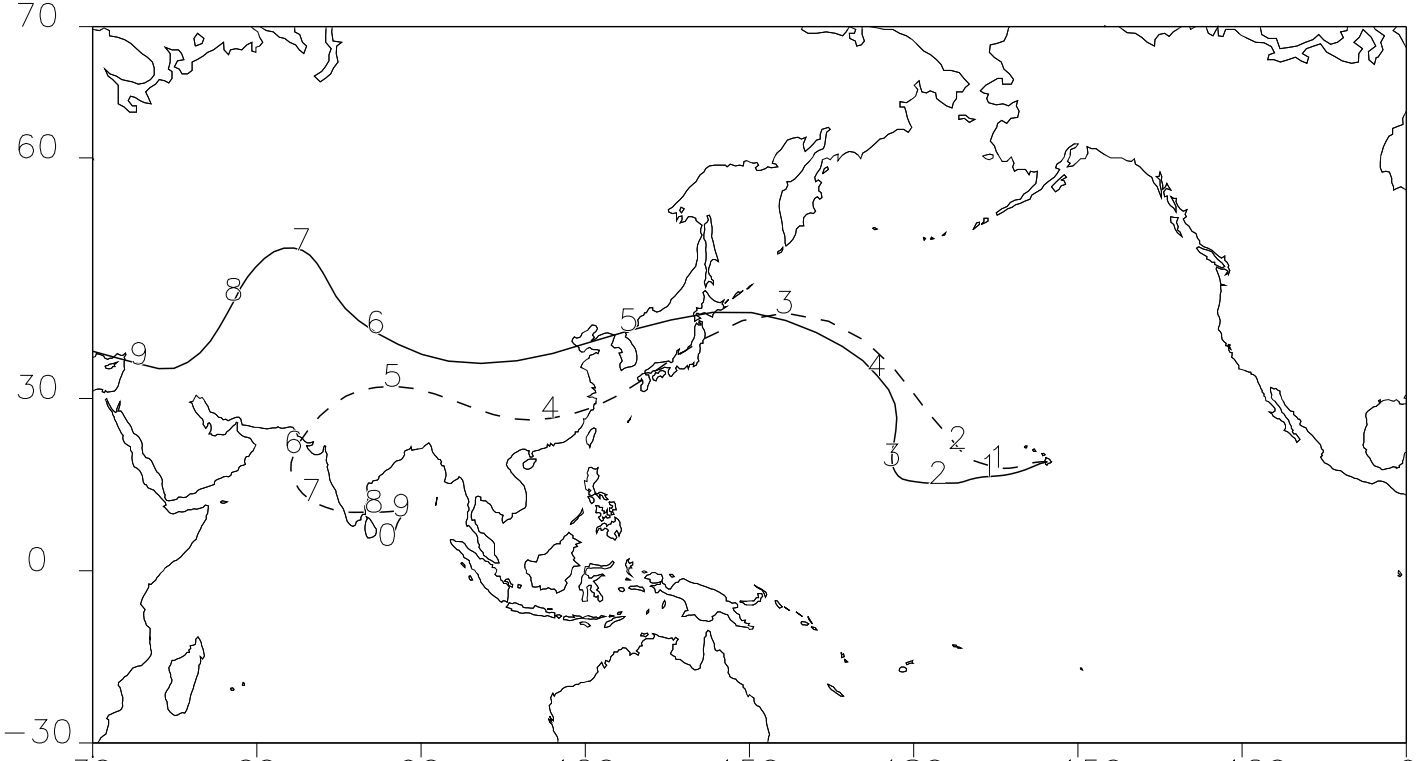
Day	km	hPa	C
0	13.0	181	−59
1	12.7	193	−55
2	12.6	195	−53
3	12.3	204	−51
4	12.0	216	−49
5	10.2	280	−33
6	8.0	378	−16
7	7.2	422	−12
8	6.4	467	−7
9	5.7	513	−4
10	5.5	521	−3

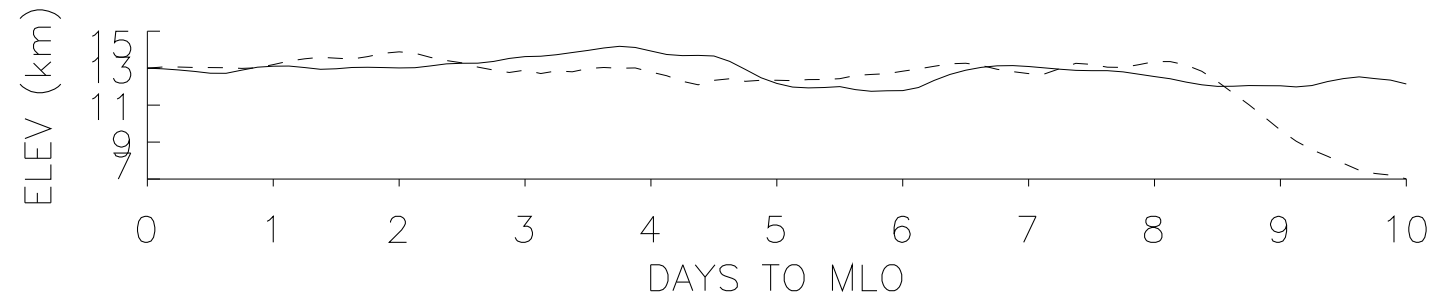
06UT

Day	km	hPa	C
0	13.0	182	−59
1	12.8	188	−56
2	12.9	186	−57
3	13.8	161	−63
4	13.4	173	−59
5	12.3	205	−49
6	13.5	171	−58
7	14.3	150	−66
8	13.9	158	−60
9	13.3	171	−56
10	13.8	163	−59

00UT − solid
06UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/20/2004 (Day of Year 141)
NCEP/NCAR Reanalysis 1 Data Set





12UT

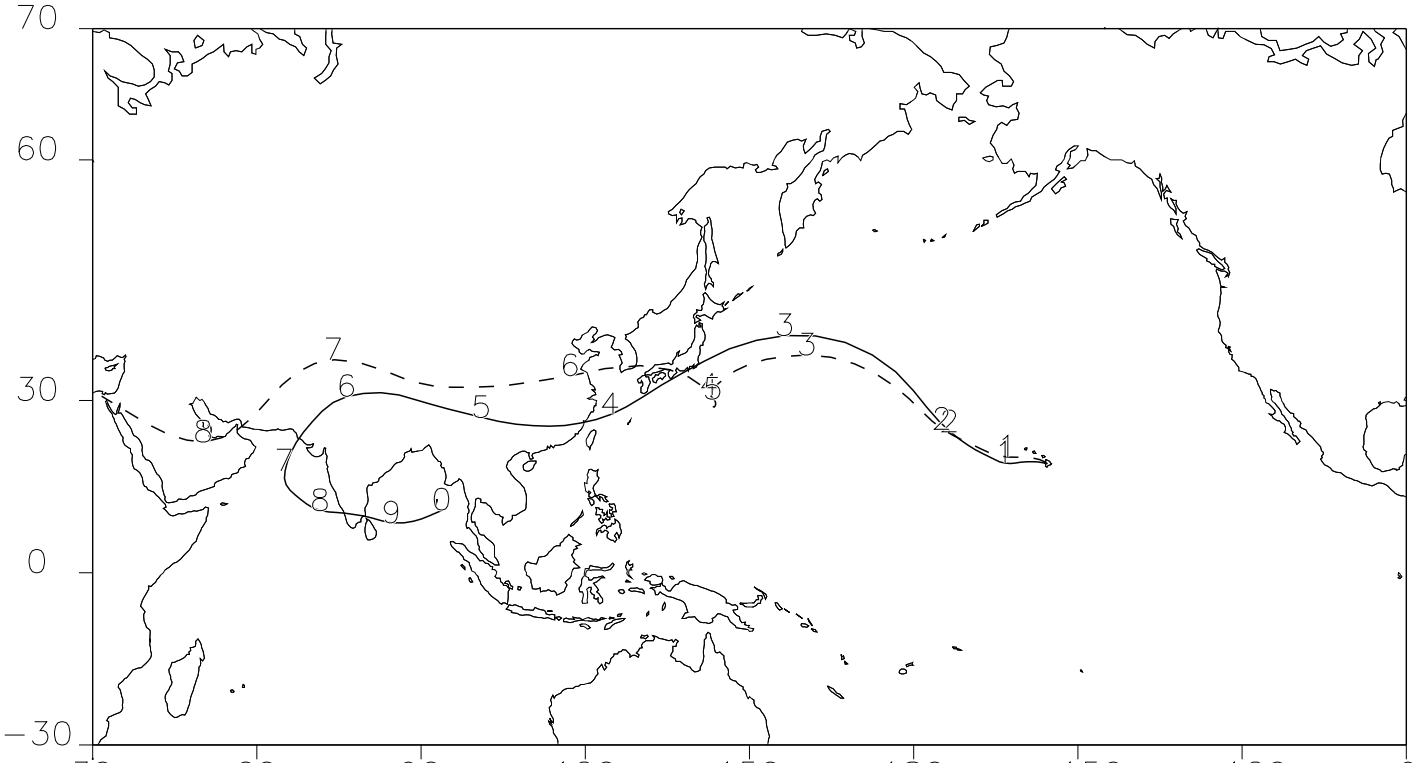
Day	km	hPa	C
0	13.0	181	-58
1	13.1	178	-60
2	13.0	182	-59
3	13.6	165	-63
4	13.9	153	-66
5	12.2	195	-52
6	11.8	210	-51
7	13.1	170	-60
8	12.5	184	-56
9	12.0	200	-53
10	12.1	196	-53

18UT

Day	km	hPa	C
0	13.0	181	-58
1	13.2	175	-59
2	13.9	157	-66
3	12.9	178	-57
4	12.8	189	-54
5	12.3	203	-48
6	12.8	189	-52
7	12.7	193	-52
8	13.4	175	-57
9	9.6	303	-29
10	7.0	432	-11

12UT – solid
18UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/21/2004 (Day of Year 142)
NCEP/NCAR Reanalysis 1 Data Set

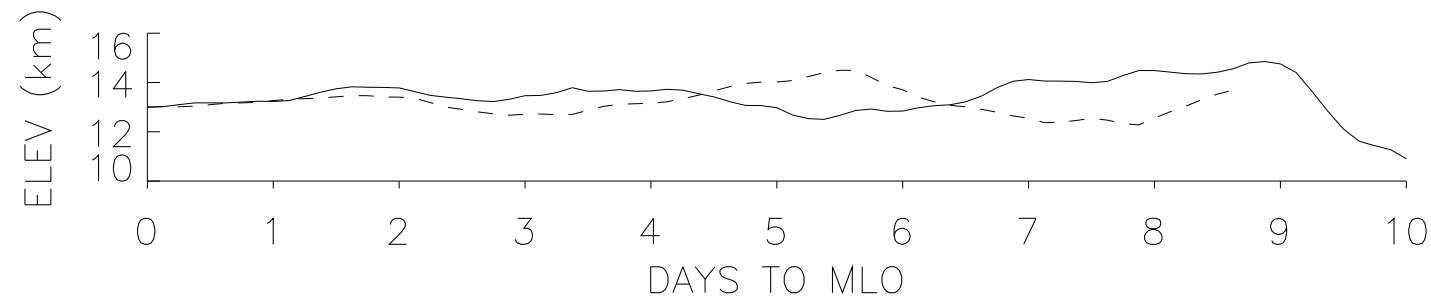


00UT

Day	km	hPa	C
0	13.0	181	−58
1	13.2	175	−60
2	13.8	159	−64
3	13.5	165	−60
4	13.7	165	−61
5	13.0	185	−54
6	12.8	187	−52
7	14.1	154	−64
8	14.5	145	−66
9	14.8	139	−68
10	10.9	254	−38

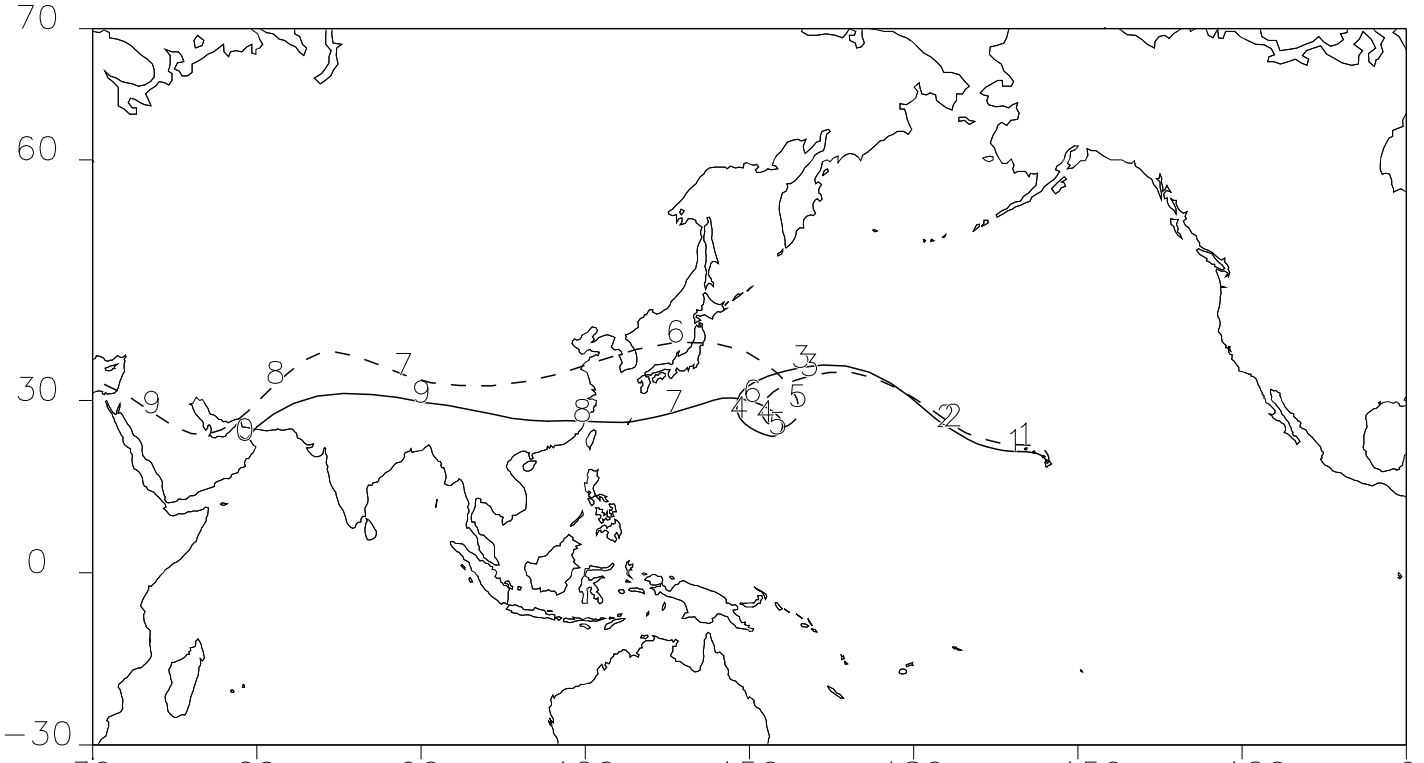
06UT

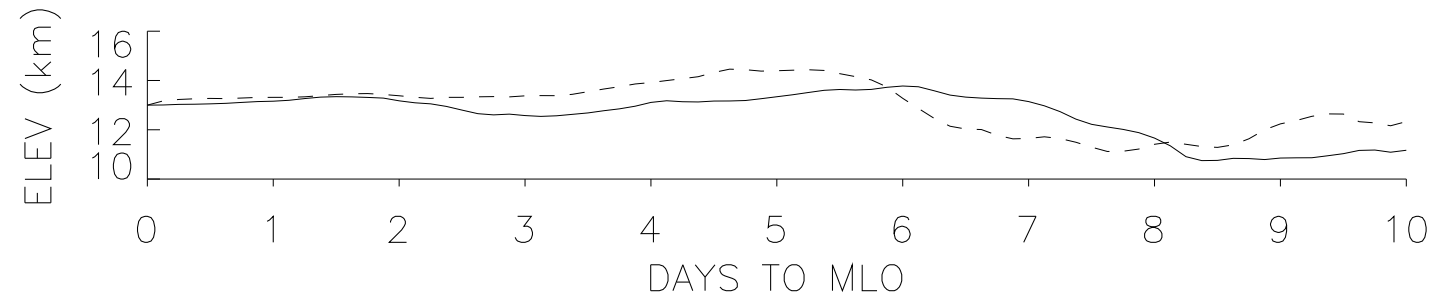
Day	km	hPa	C
0	13.0	182	−58
1	13.3	174	−60
2	13.4	169	−60
3	12.7	188	−56
4	13.2	179	−57
5	14.0	156	−64
6	13.7	159	−59
7	12.6	192	−50
8	12.6	193	−49



00UT – solid
06UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/21/2004 (Day of Year 142)
NCEP/NCAR Reanalysis 1 Data Set





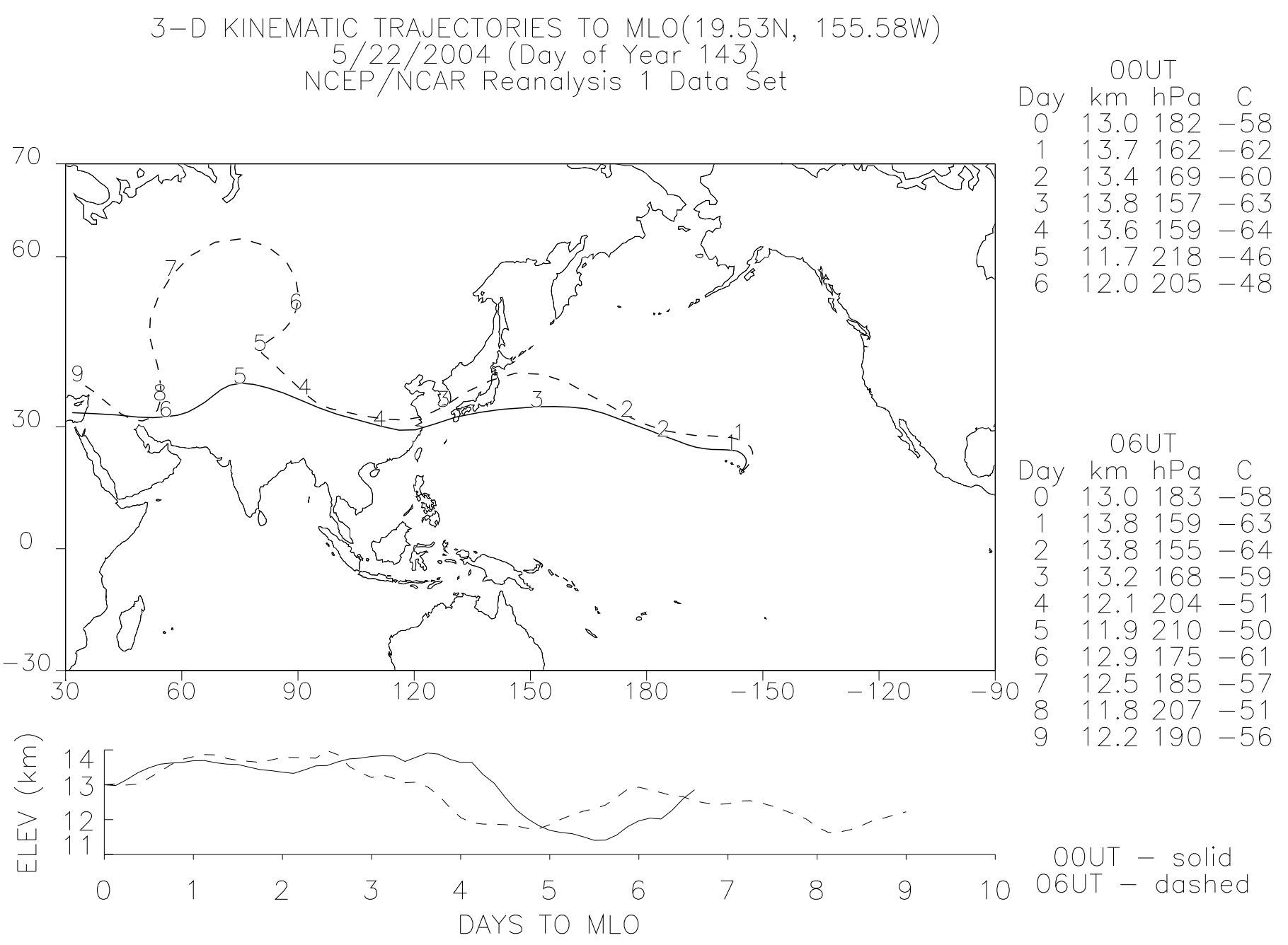
12UT

Day	km	hPa	C
0	13.0	182	−58
1	13.2	176	−59
2	13.2	175	−58
3	12.6	193	−54
4	13.1	181	−59
5	13.3	174	−61
6	13.8	161	−66
7	13.1	179	−60
8	11.7	225	−46
9	10.9	250	−39
10	11.2	242	−40

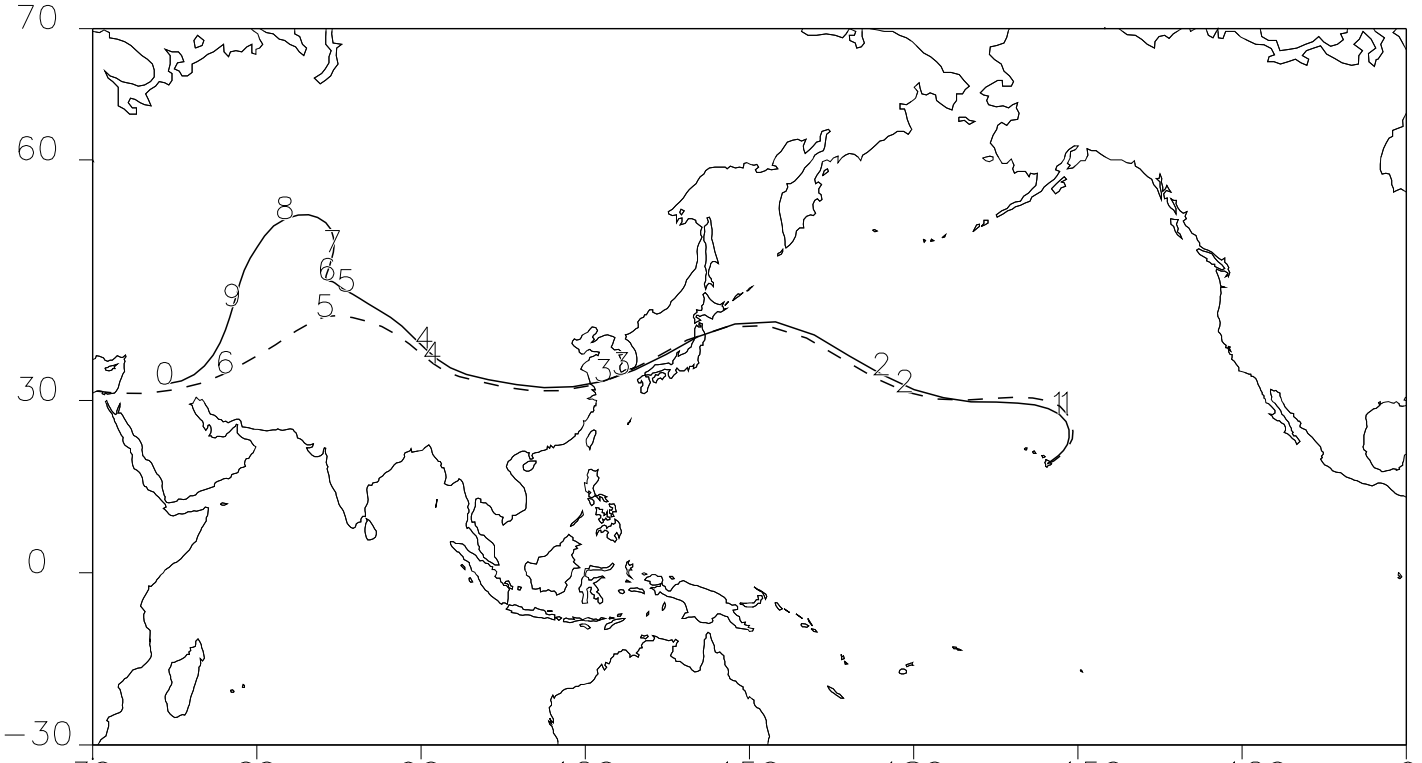
18UT

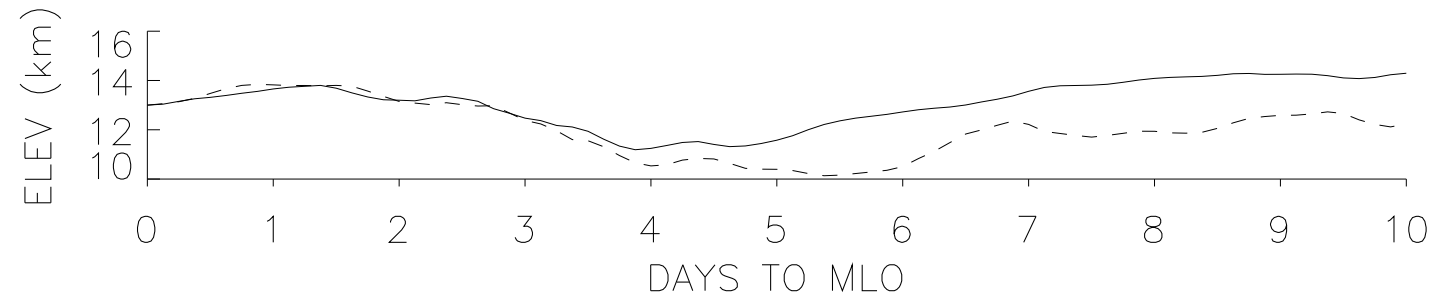
Day	km	hPa	C
0	13.0	182	−58
1	13.3	172	−60
2	13.4	169	−60
3	13.4	170	−59
4	13.9	158	−64
5	14.4	146	−69
6	13.3	169	−61
7	11.6	219	−47
8	11.4	227	−46
9	12.2	200	−54
10	12.3	196	−54

12UT − solid
18UT − dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/22/2004 (Day of Year 143)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 182 -58
1 13.7 162 -62
2 13.4 169 -60
3 13.8 157 -63
4 13.6 159 -64
5 11.7 218 -46
6 12.0 205 -48
06UT
Day km hPa C
0 13.0 183 -58
1 13.8 159 -63
2 13.8 155 -64
3 13.2 168 -59
4 12.1 204 -51
5 11.9 210 -50
6 12.9 175 -61
7 12.5 185 -57
8 11.8 207 -51
9 12.2 190 -56
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
14
13
12
11
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/22/2004 (Day of Year 143)
NCEP/NCAR Reanalysis 1 Data Set





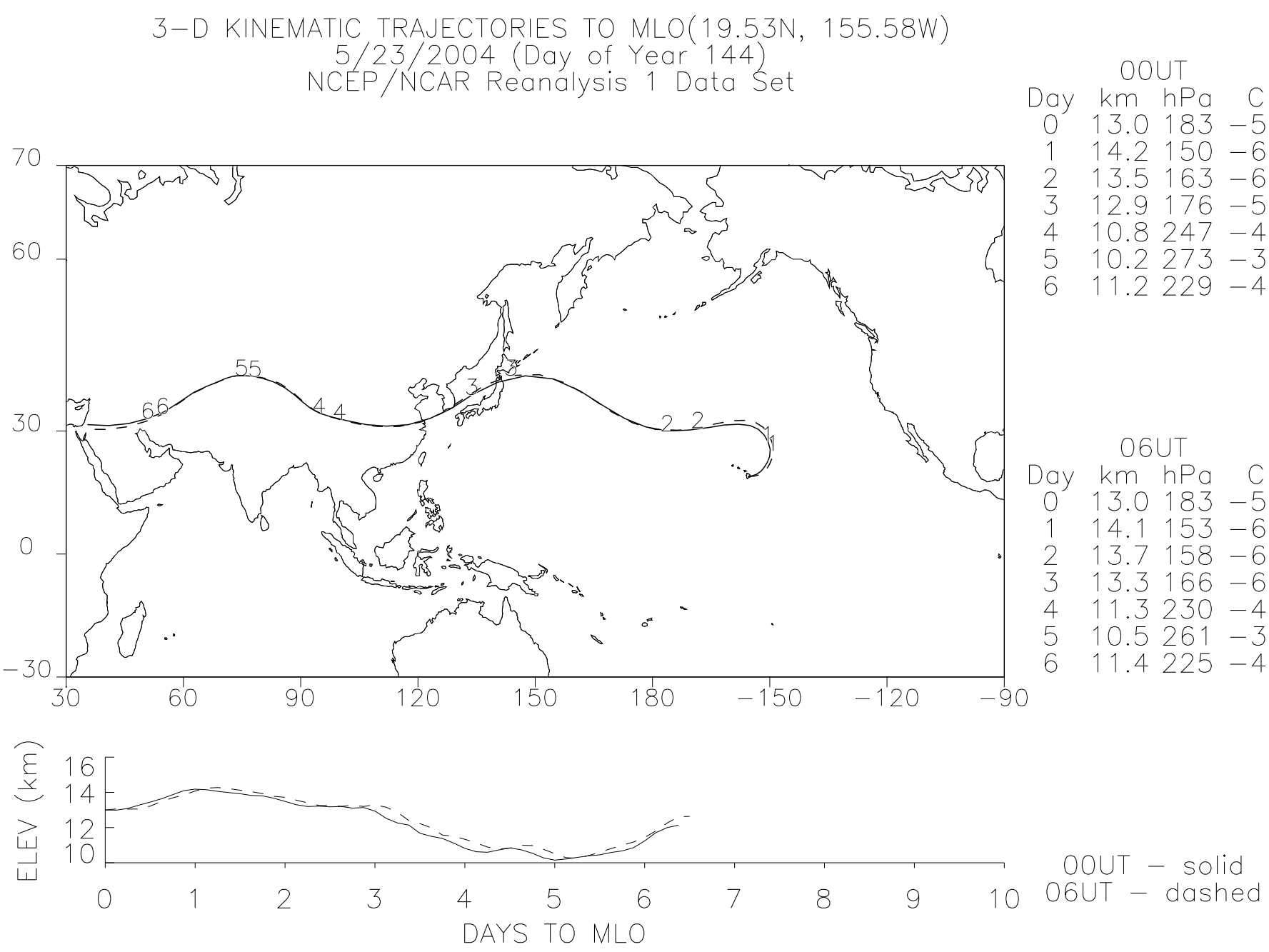
12UT

Day	km	hPa	C
0	13.0	182	−58
1	13.7	163	−63
2	13.2	168	−61
3	12.5	190	−56
4	11.2	232	−46
5	11.6	220	−46
6	12.7	184	−54
7	13.6	160	−56
8	14.1	146	−56
9	14.3	141	−55
10	14.3	141	−55

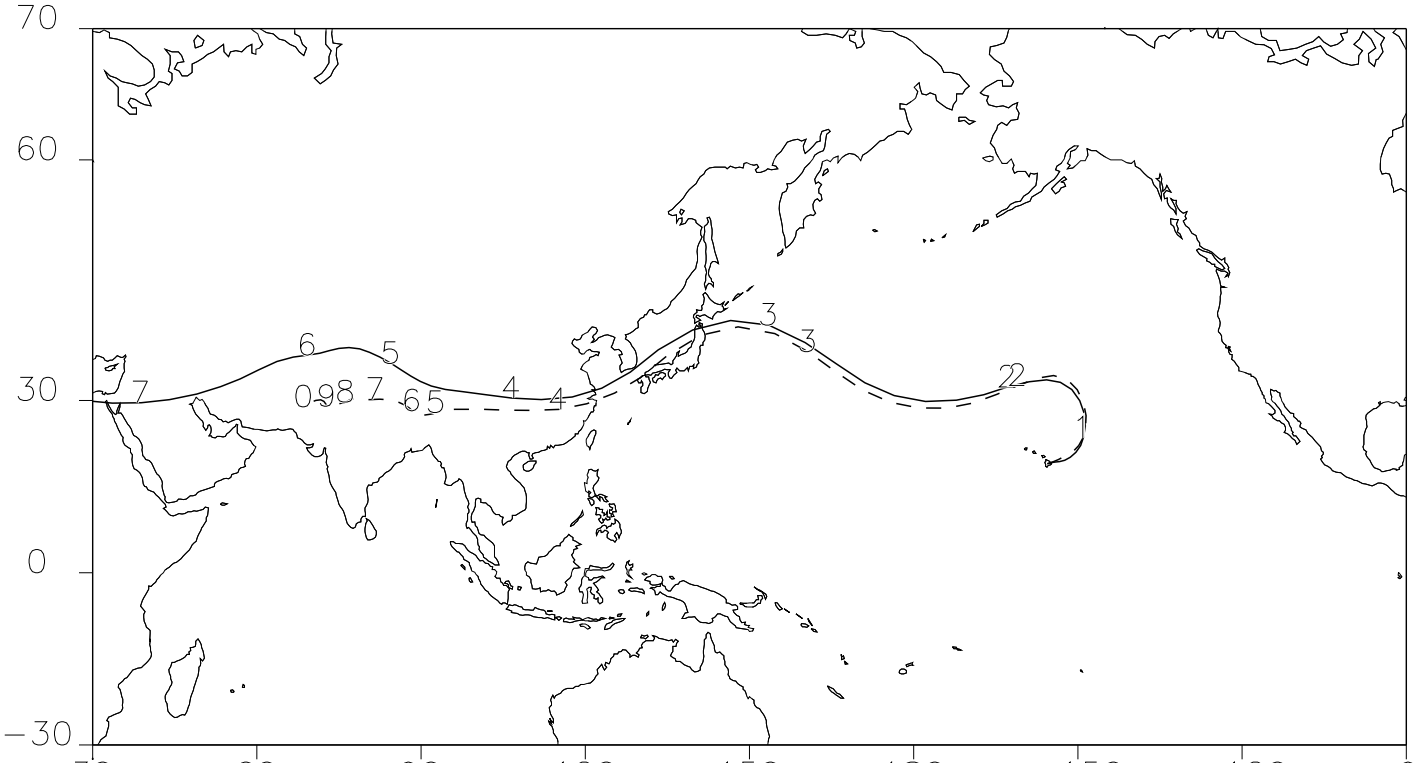
18UT

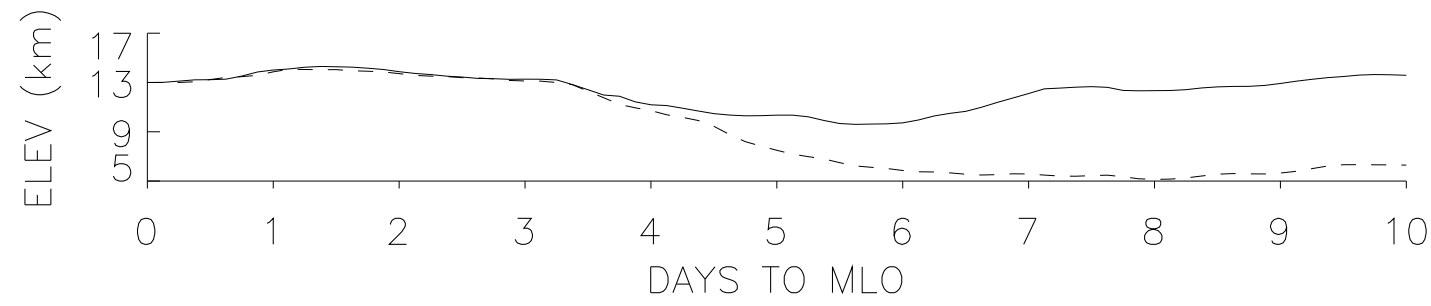
Day	km	hPa	C
0	13.0	183	−58
1	13.8	159	−63
2	13.1	170	−61
3	12.4	192	−55
4	10.5	259	−42
5	10.4	264	−38
6	10.5	256	−44
7	12.2	197	−58
8	11.9	208	−53
9	12.6	189	−57
10	12.2	201	−55

12UT – solid
18UT – dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/23/2004 (Day of Year 144)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 183 -58
1 14.2 150 -67
2 13.5 163 -64
3 12.9 176 -59
4 10.8 247 -43
5 10.2 273 -37
6 11.2 229 -48
06UT
Day km hPa C
0 13.0 183 -58
1 14.1 153 -66
2 13.7 158 -64
3 13.3 166 -60
4 11.3 230 -45
5 10.5 261 -38
6 11.4 225 -47
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
55
66
44
33
22
11
ELEV (km)
16
14
12
10
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/23/2004 (Day of Year 144)
NCEP/NCAR Reanalysis 1 Data Set





12UT

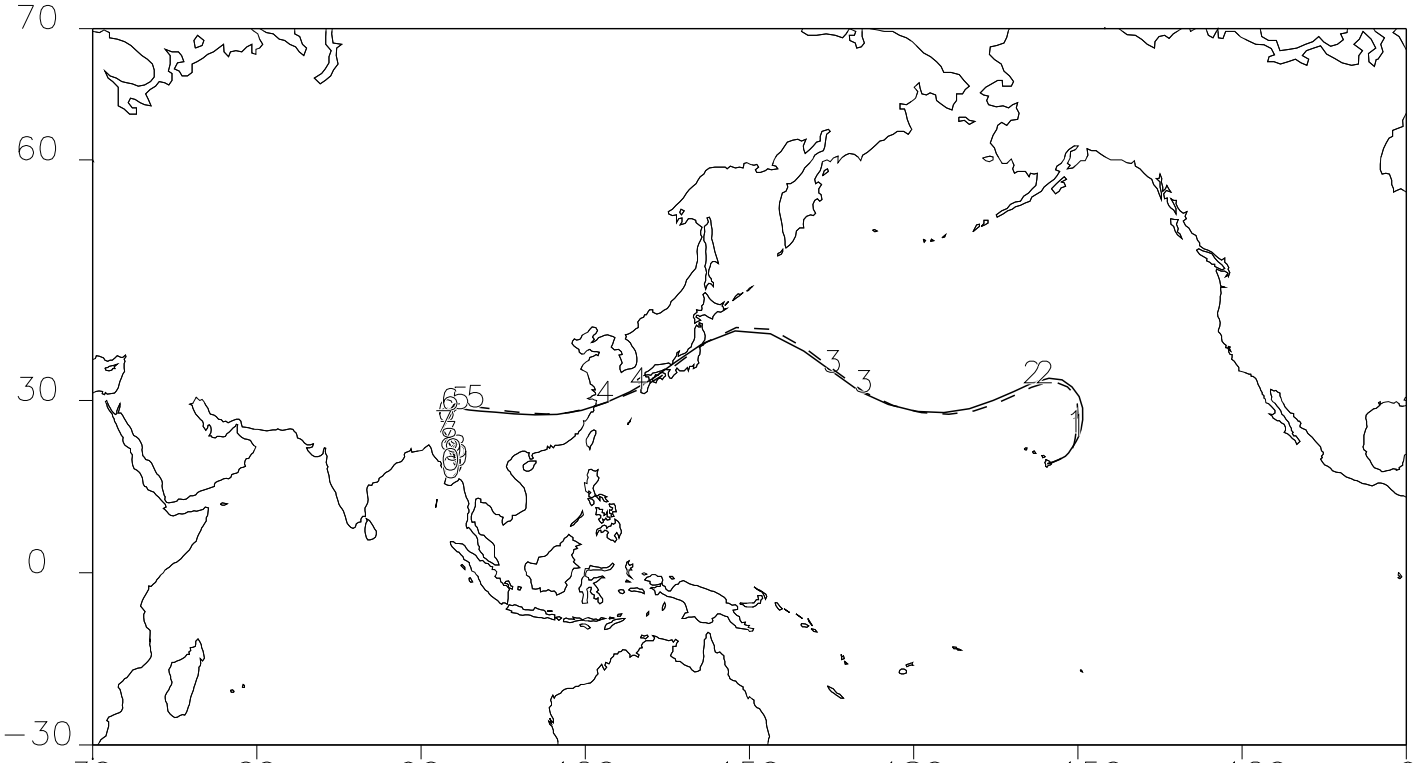
Day	km	hPa	C
0	13.0	182	−59
1	14.0	154	−65
2	13.9	154	−65
3	13.3	168	−61
4	11.2	235	−43
5	10.4	269	−36
6	9.7	294	−33
7	12.1	201	−56
8	12.3	194	−56
9	12.9	179	−59
10	13.6	162	−61

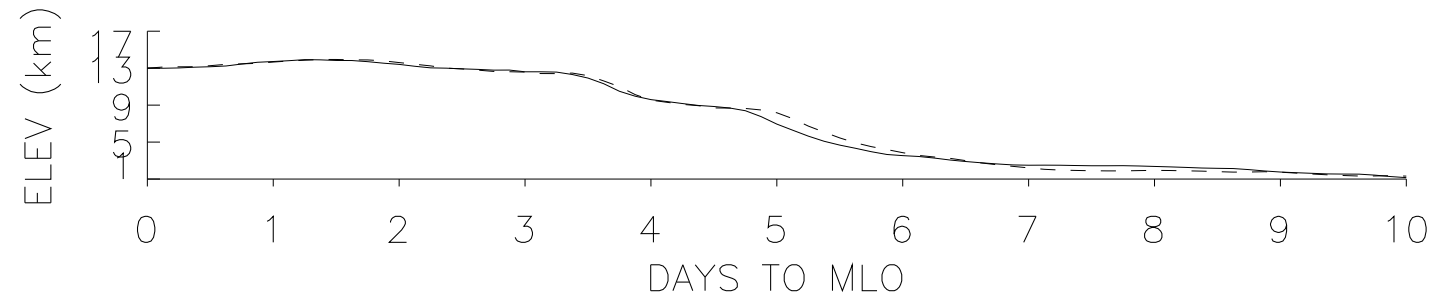
18UT

Day	km	hPa	C
0	13.0	182	−58
1	13.9	158	−64
2	13.7	159	−64
3	13.1	172	−60
4	10.7	253	−38
5	7.5	401	−15
6	5.9	499	−3
7	5.6	518	−3
8	5.1	547	0
9	5.7	513	−5
10	6.3	471	−11

12UT – solid
18UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/24/2004 (Day of Year 145)
NCEP/NCAR Reanalysis 1 Data Set





00UT

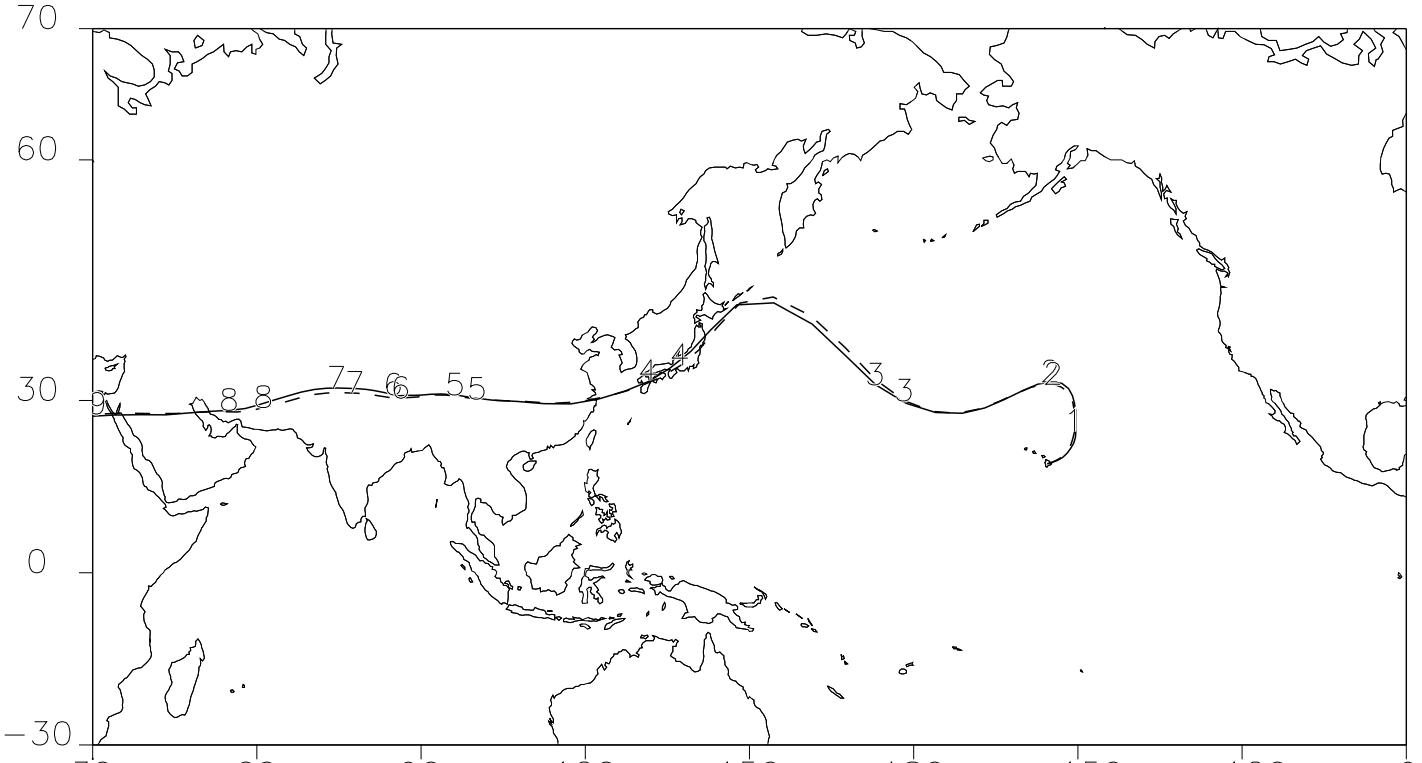
Day	km	hPa	C
0	13.0	183	−59
1	13.7	163	−63
2	13.4	169	−63
3	12.6	189	−57
4	9.6	297	−30
5	6.9	430	−13
6	3.5	663	9
7	2.5	753	14
8	2.4	766	15
9	1.8	821	19
10	1.2	880	21

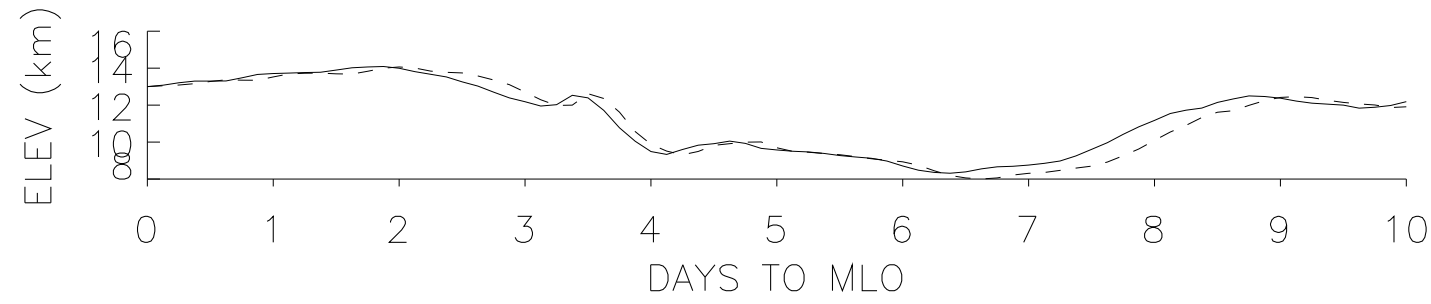
06UT

Day	km	hPa	C
0	13.0	182	−58
1	13.7	164	−63
2	13.6	165	−64
3	12.6	190	−56
4	9.5	299	−30
5	8.2	365	−22
6	3.9	638	8
7	2.2	779	17
8	1.9	806	18
9	1.7	824	19
10	1.3	866	21

00UT – solid
06UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/24/2004 (Day of Year 145)
NCEP/NCAR Reanalysis 1 Data Set





12UT

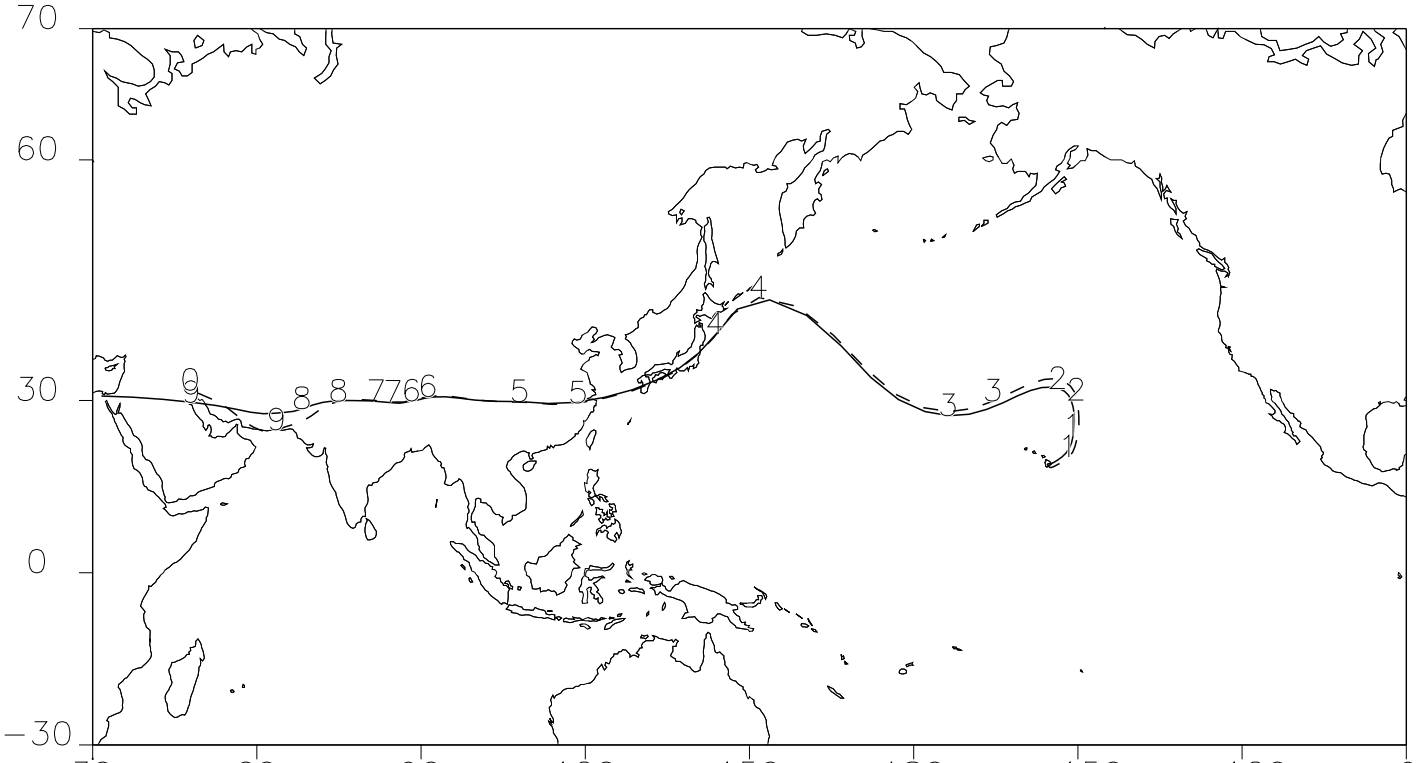
Day	km	hPa	C
0	13.0	182	−59
1	13.7	163	−64
2	14.0	154	−67
3	12.2	199	−54
4	9.5	300	−31
5	9.6	300	−31
6	8.7	341	−24
7	8.8	340	−22
8	11.2	237	−44
9	12.4	198	−56
10	12.2	201	−56

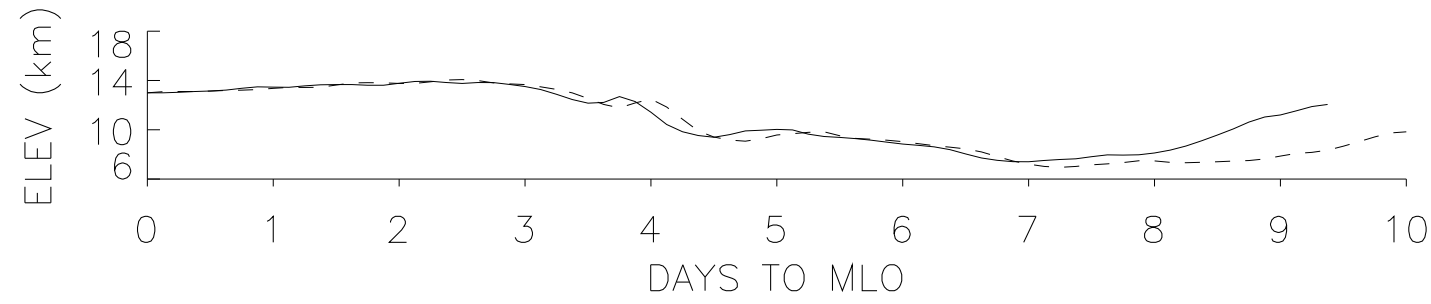
18UT

Day	km	hPa	C
0	13.0	182	−59
1	13.5	168	−62
2	14.1	153	−67
3	12.7	184	−57
4	9.9	283	−32
5	9.7	294	−33
6	8.9	330	−25
7	8.3	362	−19
8	10.1	280	−35
9	12.4	195	−56
10	11.9	210	−52

12UT − solid
18UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/25/2004 (Day of Year 146)
NCEP/NCAR Reanalysis 1 Data Set





00UT

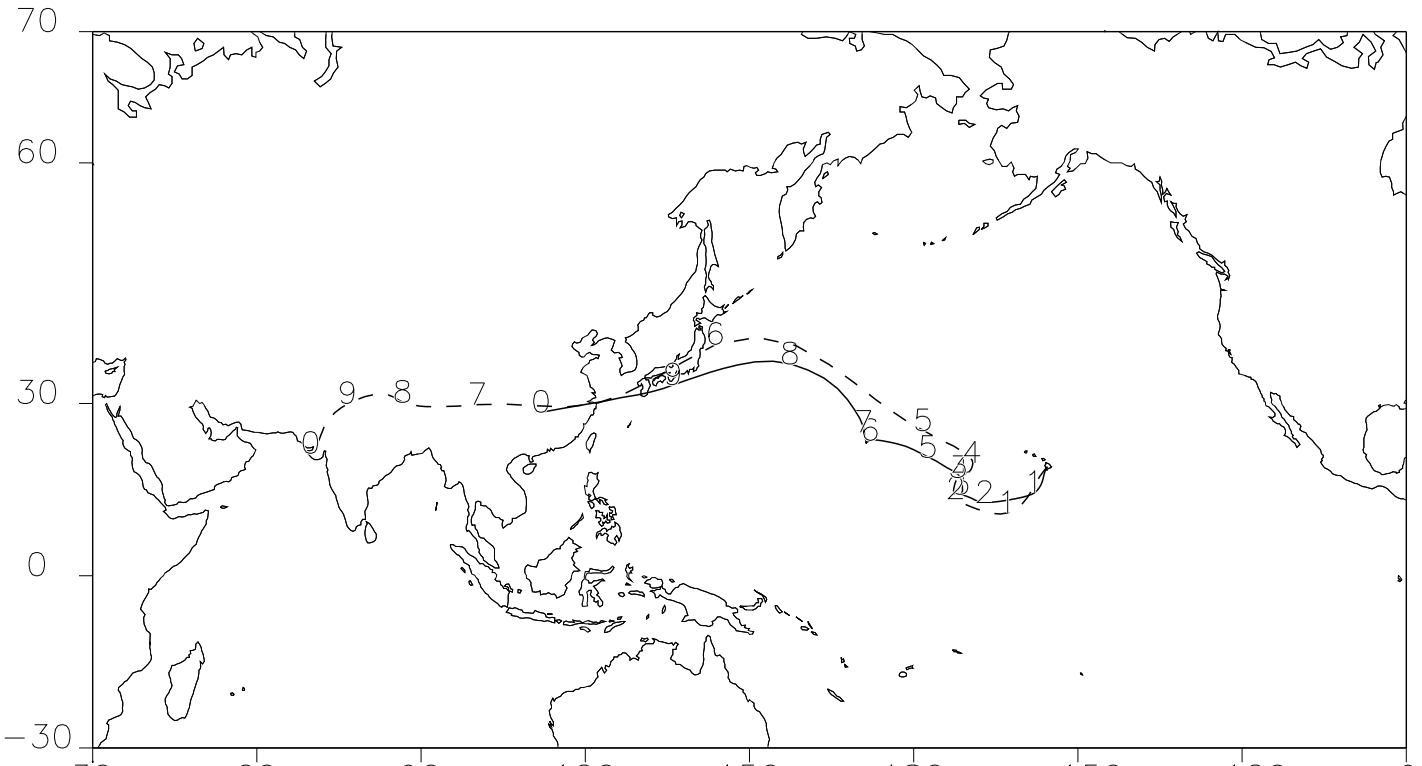
Day	km	hPa	C
0	13.0	182	−59
1	13.5	169	−62
2	13.8	161	−64
3	13.5	165	−63
4	11.4	227	−46
5	10.0	278	−36
6	8.8	333	−25
7	7.4	407	−15
8	8.1	369	−19
9	11.2	232	−48

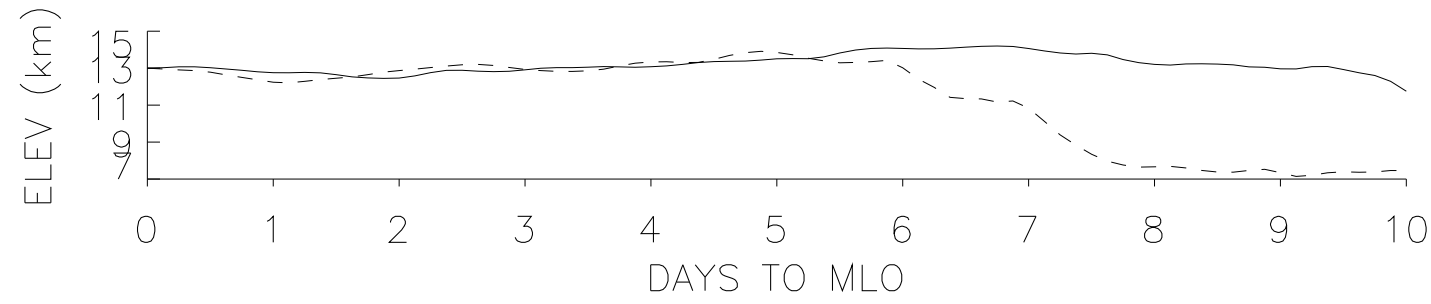
06UT

Day	km	hPa	C
0	13.0	182	−59
1	13.4	172	−60
2	13.8	161	−64
3	13.7	162	−64
4	12.5	191	−55
5	9.6	296	−33
6	9.0	325	−26
7	7.2	419	−14
8	7.5	405	−15
9	7.9	382	−20
10	9.8	282	−42

00UT − solid
06UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/25/2004 (Day of Year 146)
NCEP/NCAR Reanalysis 1 Data Set





12UT

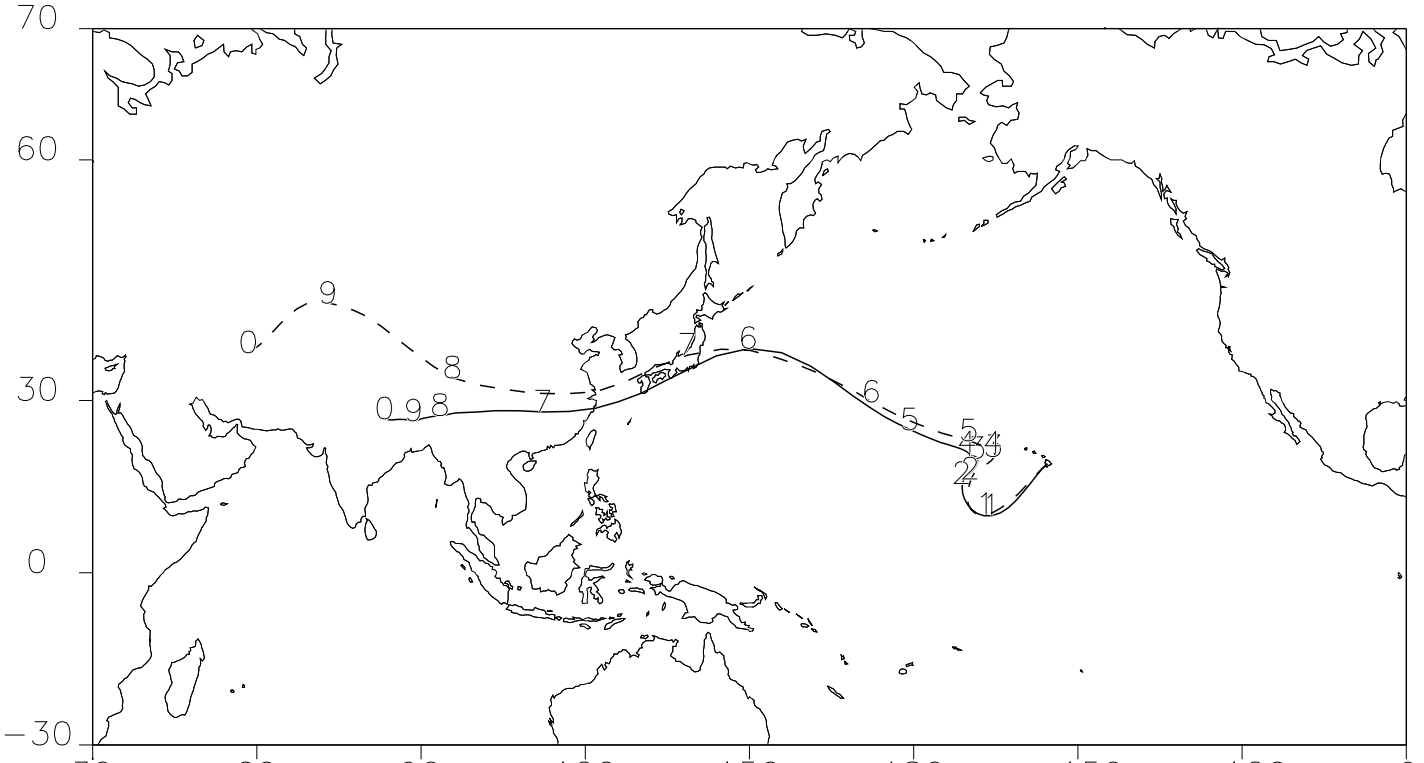
Day	km	hPa	C
0	13.0	182	-59
1	12.8	189	-56
2	12.5	198	-54
3	12.9	185	-57
4	13.1	180	-59
5	13.5	168	-62
6	14.1	154	-66
7	14.1	155	-66
8	13.2	176	-58
9	13.0	184	-56
10	11.8	222	-46

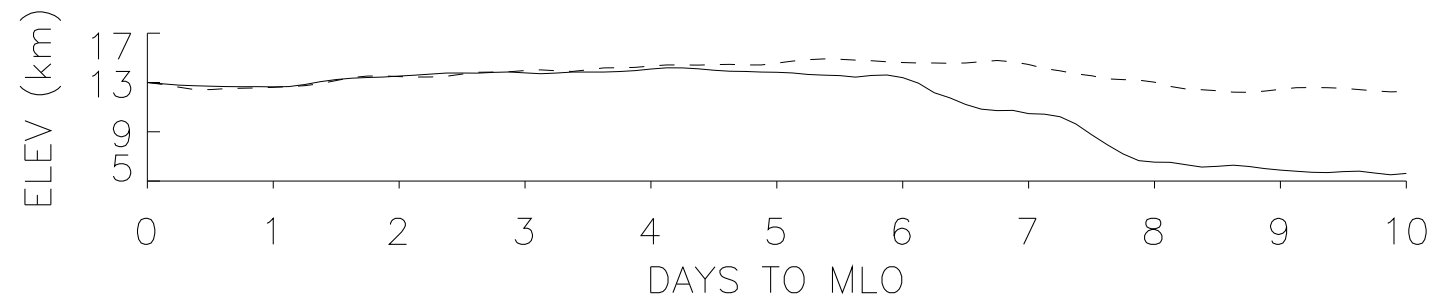
18UT

Day	km	hPa	C
0	13.0	183	-59
1	12.2	205	-52
2	12.9	187	-56
3	12.9	185	-58
4	13.3	173	-61
5	13.9	156	-66
6	13.0	176	-61
7	10.8	250	-42
8	7.7	394	-17
9	7.3	412	-15
10	7.5	407	-14

12UT – solid
18UT – dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/26/2004 (Day of Year 147)
NCEP/NCAR Reanalysis 1 Data Set





00UT

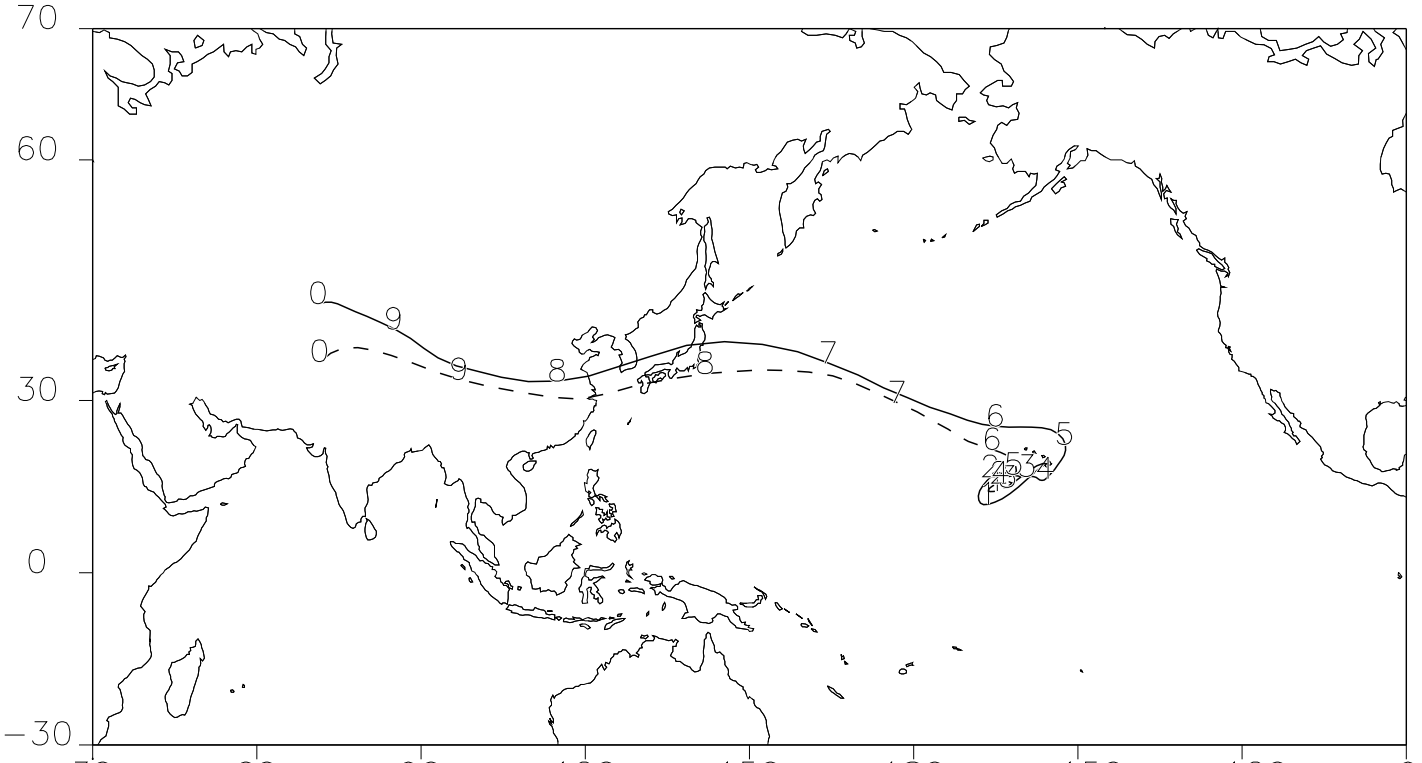
Day	km	hPa	C
0	13.0	182	−59
1	12.6	193	−54
2	13.5	168	−61
3	13.8	162	−64
4	14.1	153	−68
5	13.8	159	−67
6	13.4	168	−64
7	10.5	263	−38
8	6.5	456	−8
9	5.9	497	−3
10	5.6	514	−3

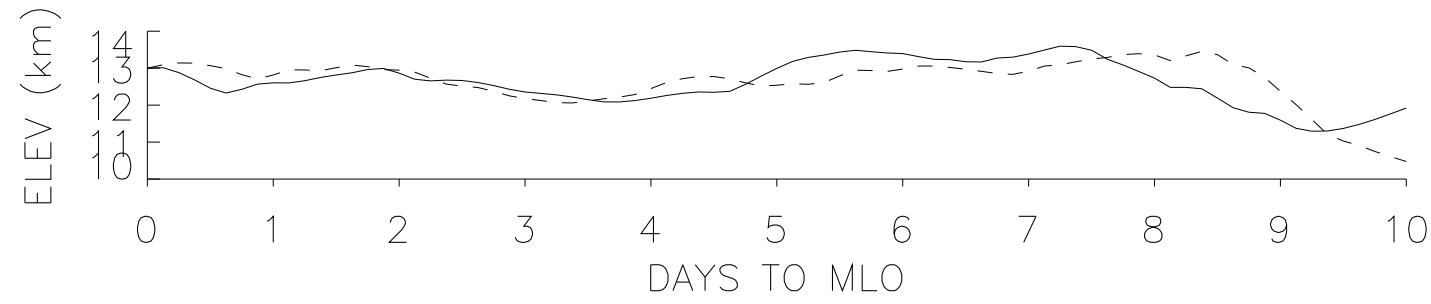
06UT

Day	km	hPa	C
0	13.0	182	−59
1	12.6	194	−54
2	13.5	169	−61
3	14.0	157	−65
4	14.3	147	−67
5	14.6	140	−67
6	14.6	138	−68
7	14.5	139	−68
8	13.0	177	−56
9	12.4	193	−48
10	12.3	194	−47

00UT − solid
06UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/26/2004 (Day of Year 147)
NCEP/NCAR Reanalysis 1 Data Set





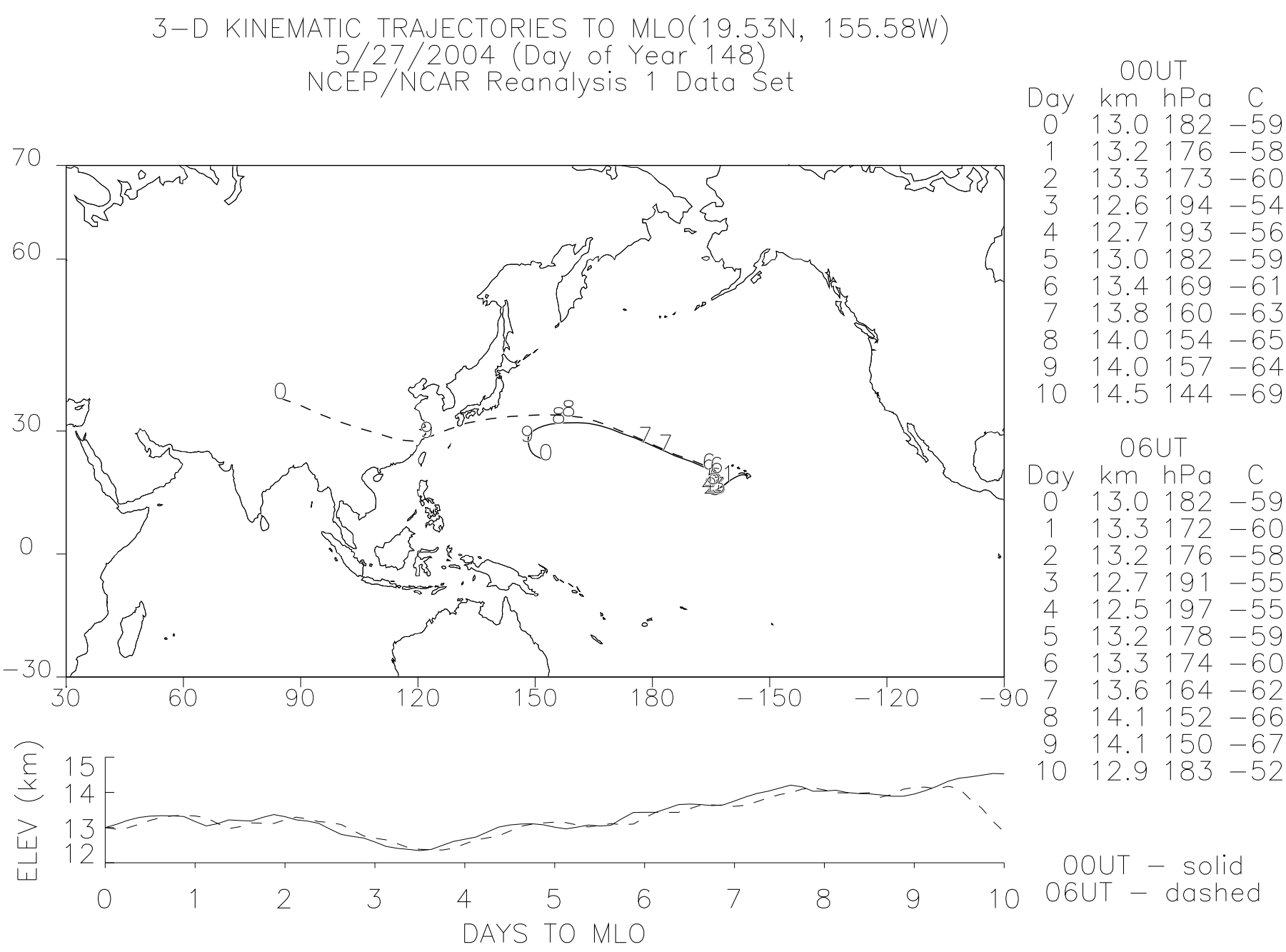
12UT

Day	km	hPa	C
0	13.0	181	−59
1	12.6	194	−55
2	12.9	186	−57
3	12.4	201	−54
4	12.2	206	−52
5	13.0	181	−58
6	13.4	168	−61
7	13.4	166	−62
8	12.7	181	−57
9	11.6	220	−48
10	11.9	209	−53

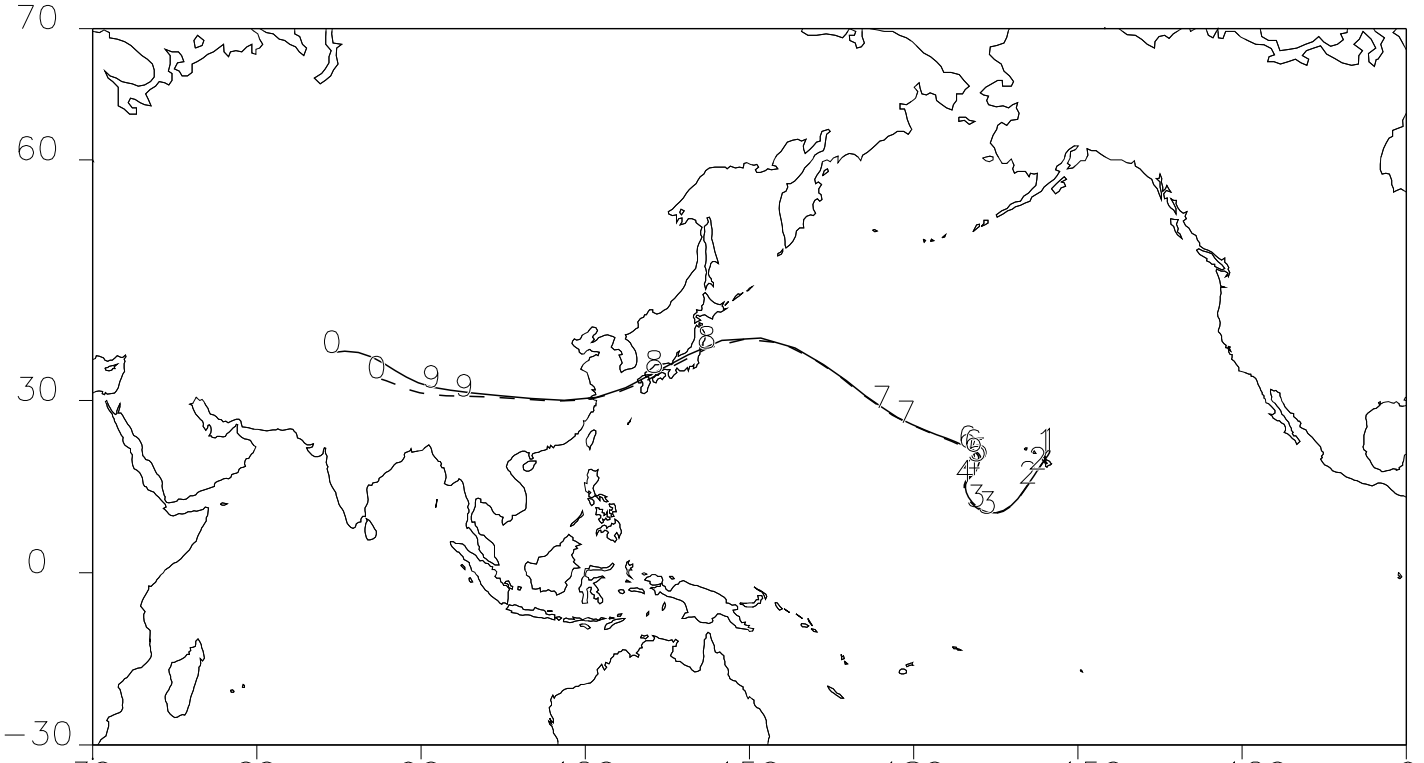
18UT

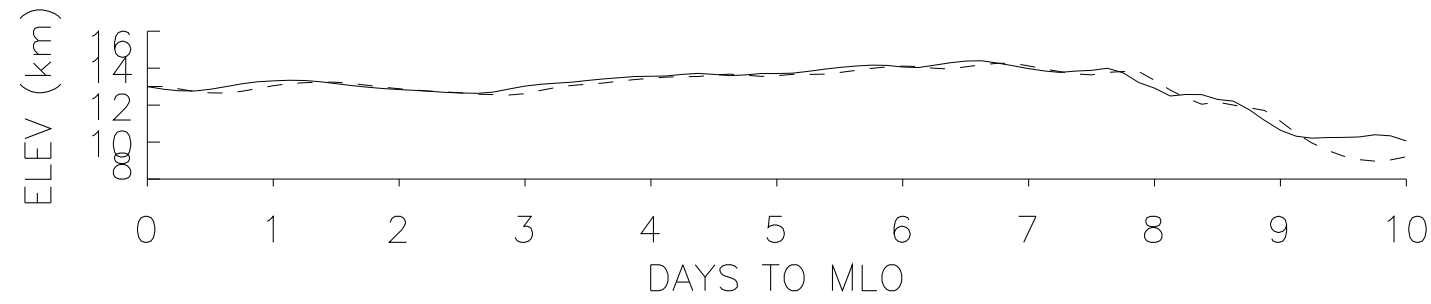
Day	km	hPa	C
0	13.0	182	−59
1	12.8	187	−55
2	12.9	183	−57
3	12.2	207	−52
4	12.4	199	−54
5	12.5	196	−55
6	13.0	181	−58
7	12.9	181	−58
8	13.4	168	−62
9	12.4	196	−54
10	10.5	262	−38

12UT – solid
18UT – dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/27/2004 (Day of Year 148)
NCEP/NCAR Reanalysis 1 Data Set
70
60
30
0
-30
30
60
90
120
150
180
-150
-120
-90
ELEV (km)
15
14
13
12
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
00UT
Day km hPa C
0 13.0 182 -59
1 13.2 176 -58
2 13.3 173 -60
3 12.6 194 -54
4 12.7 193 -56
5 13.0 182 -59
6 13.4 169 -61
7 13.8 160 -63
8 14.0 154 -65
9 14.0 157 -64
10 14.5 144 -69
06UT
Day km hPa C
0 13.0 182 -59
1 13.3 172 -60
2 13.2 176 -58
3 12.7 191 -55
4 12.5 197 -55
5 13.2 178 -59
6 13.3 174 -60
7 13.6 164 -62
8 14.1 152 -66
9 14.1 150 -67
10 12.9 183 -52
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/27/2004 (Day of Year 148)
NCEP/NCAR Reanalysis 1 Data Set





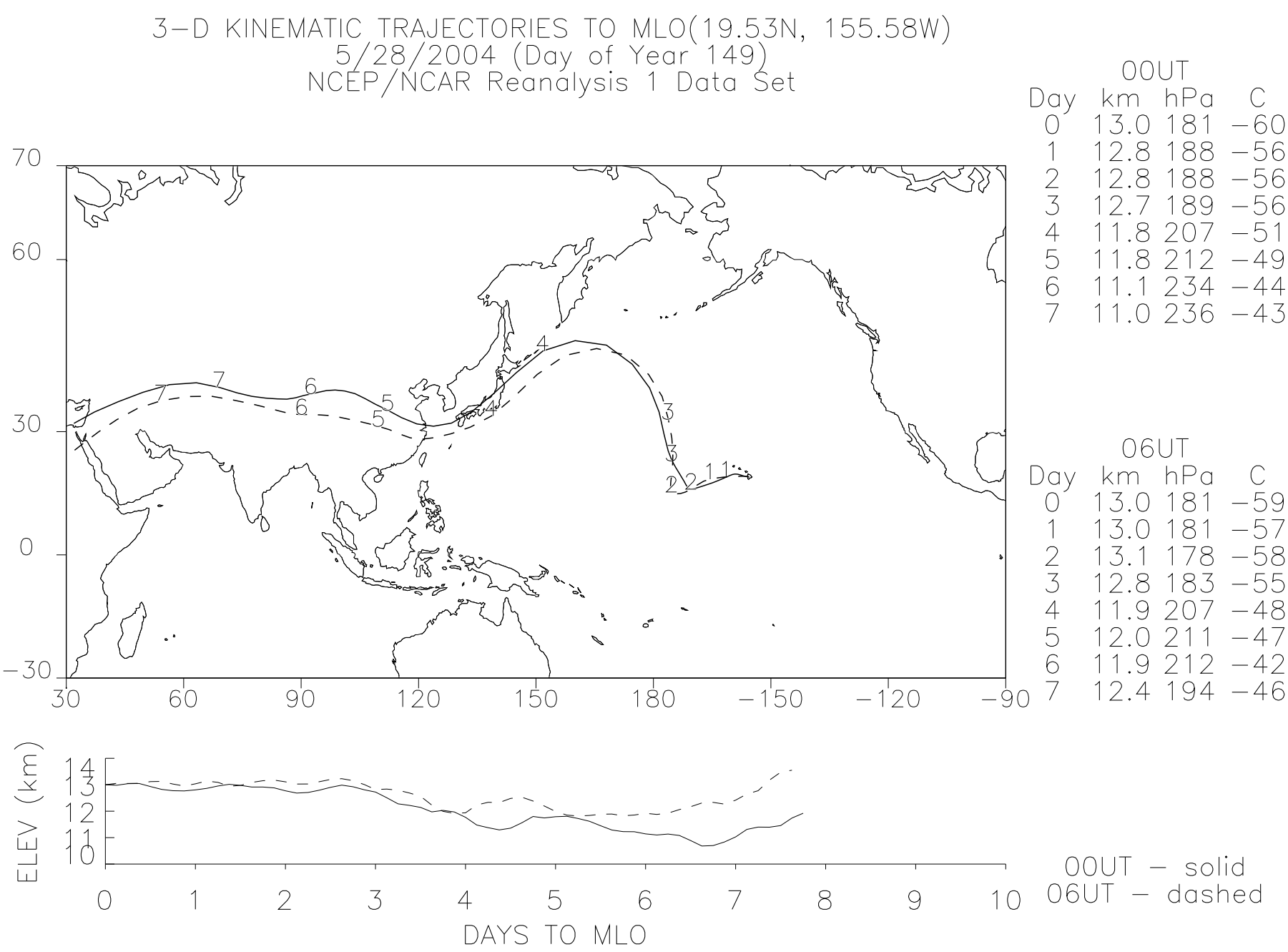
12UT

Day	km	hPa	C
0	13.0	181	-59
1	13.3	172	-61
2	12.8	186	-57
3	13.0	182	-57
4	13.6	167	-62
5	13.7	163	-64
6	14.1	153	-66
7	14.0	154	-68
8	12.9	180	-59
9	10.6	258	-39
10	10.1	281	-34

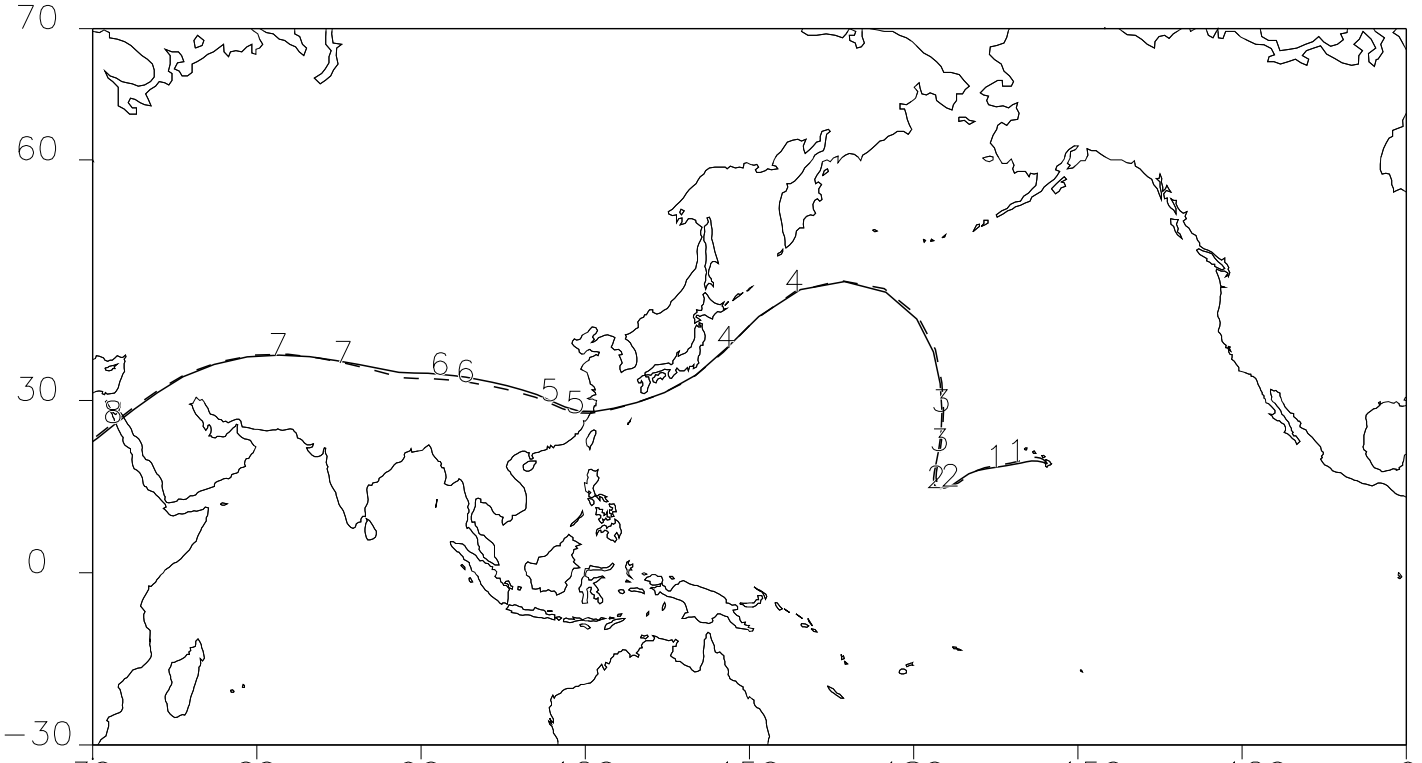
18UT

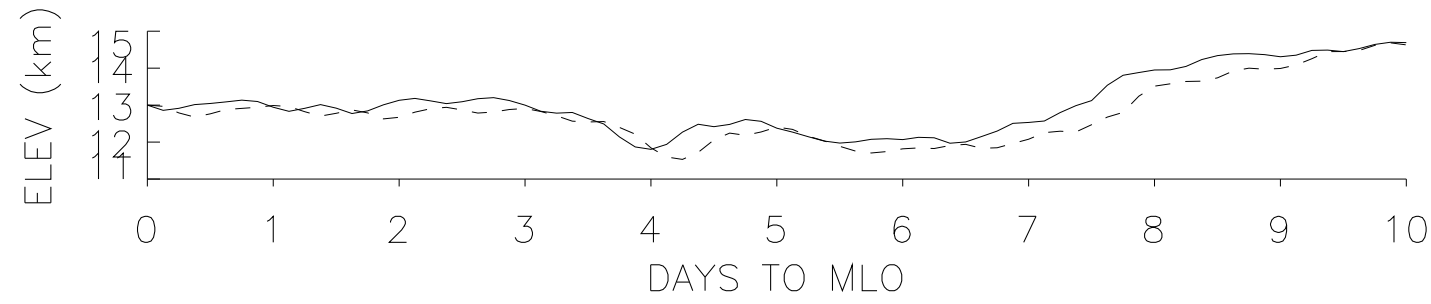
Day	km	hPa	C
0	13.0	182	-59
1	13.0	181	-60
2	12.9	186	-58
3	12.6	193	-54
4	13.5	170	-60
5	13.6	166	-62
6	14.1	152	-67
7	14.1	150	-69
8	13.3	168	-63
9	11.1	239	-44
10	9.2	319	-27

12UT – solid
18UT – dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/28/2004 (Day of Year 149)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 181 -60
1 12.8 188 -56
2 12.8 188 -56
3 12.7 189 -56
4 11.8 207 -51
5 11.8 212 -49
6 11.1 234 -44
7 11.0 236 -43
06UT
Day km hPa C
0 13.0 181 -59
1 13.0 181 -57
2 13.1 178 -58
3 12.8 183 -55
4 11.9 207 -48
5 12.0 211 -47
6 11.9 212 -42
7 12.4 194 -46
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
14
13
12
11
10
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/28/2004 (Day of Year 149)
NCEP/NCAR Reanalysis 1 Data Set





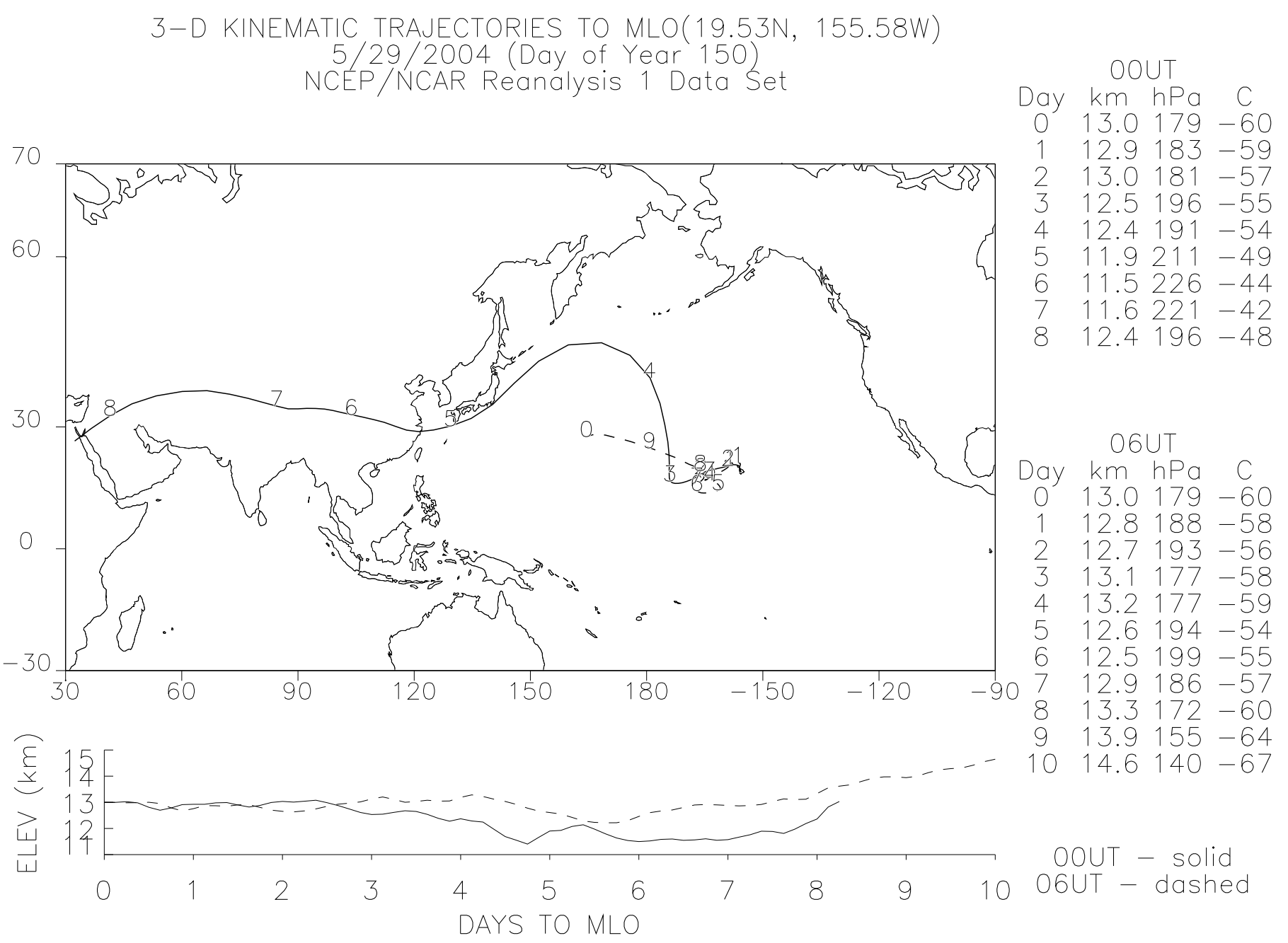
12UT

Day	km	hPa	C
0	13.0	180	−59
1	12.9	183	−57
2	13.1	178	−59
3	13.0	180	−57
4	11.8	210	−47
5	12.4	199	−50
6	12.1	207	−45
7	12.5	192	−46
8	14.0	156	−61
9	14.3	148	−65
10	14.7	138	−69

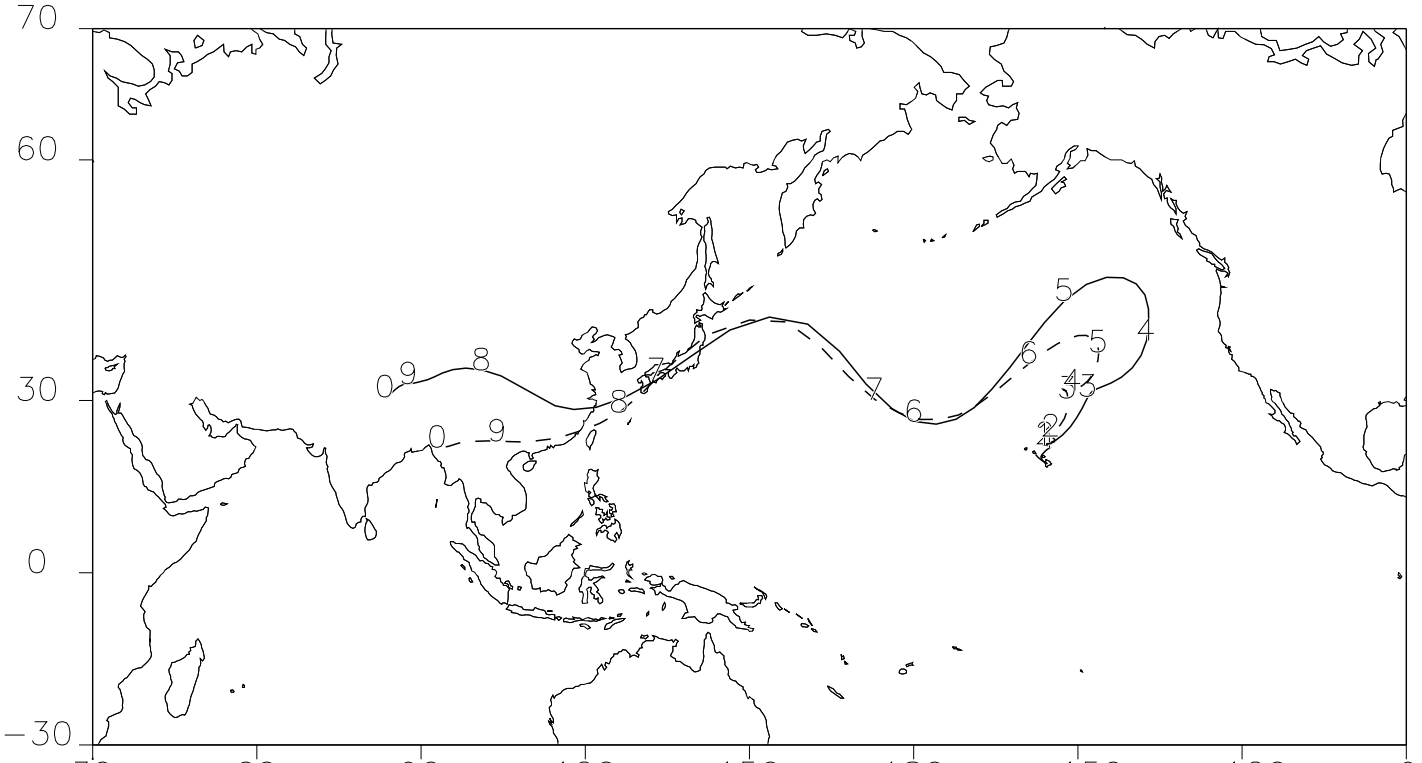
18UT

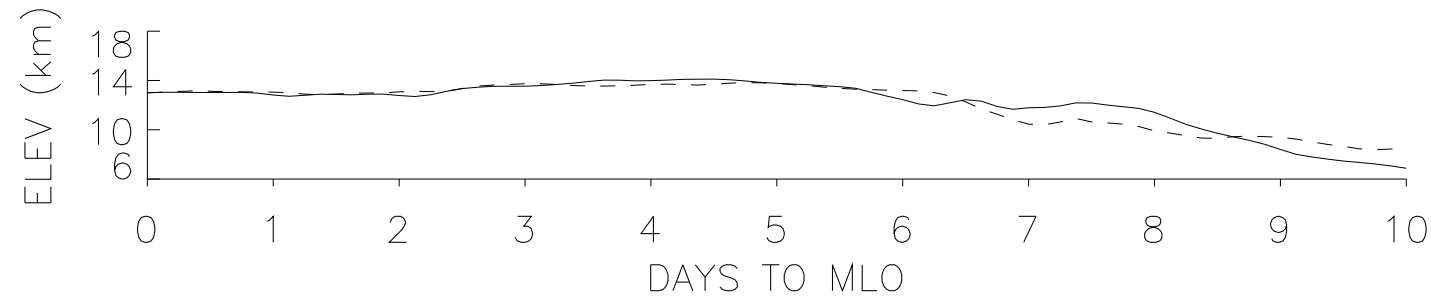
Day	km	hPa	C
0	13.0	180	−60
1	13.0	182	−58
2	12.7	191	−55
3	12.9	184	−58
4	11.8	206	−49
5	12.4	198	−49
6	11.8	216	−44
7	12.1	207	−43
8	13.5	166	−57
9	14.0	156	−63
10	14.6	140	−68

12UT – solid
18UT – dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/29/2004 (Day of Year 150)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 13.0 179 -60
1 12.9 183 -59
2 13.0 181 -57
3 12.5 196 -55
4 12.4 191 -54
5 11.9 211 -49
6 11.5 226 -44
7 11.6 221 -42
8 12.4 196 -48
06UT
Day km hPa C
0 13.0 179 -60
1 12.8 188 -58
2 12.7 193 -56
3 13.1 177 -58
4 13.2 177 -59
5 12.6 194 -54
6 12.5 199 -55
7 12.9 186 -57
8 13.3 172 -60
9 13.9 155 -64
10 14.6 140 -67
70
60
30
0
-30
30
60
90
120
150
180
-150
-120
-90
ELEV (km)
15
14
13
12
11
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/29/2004 (Day of Year 150)
NCEP/NCAR Reanalysis 1 Data Set





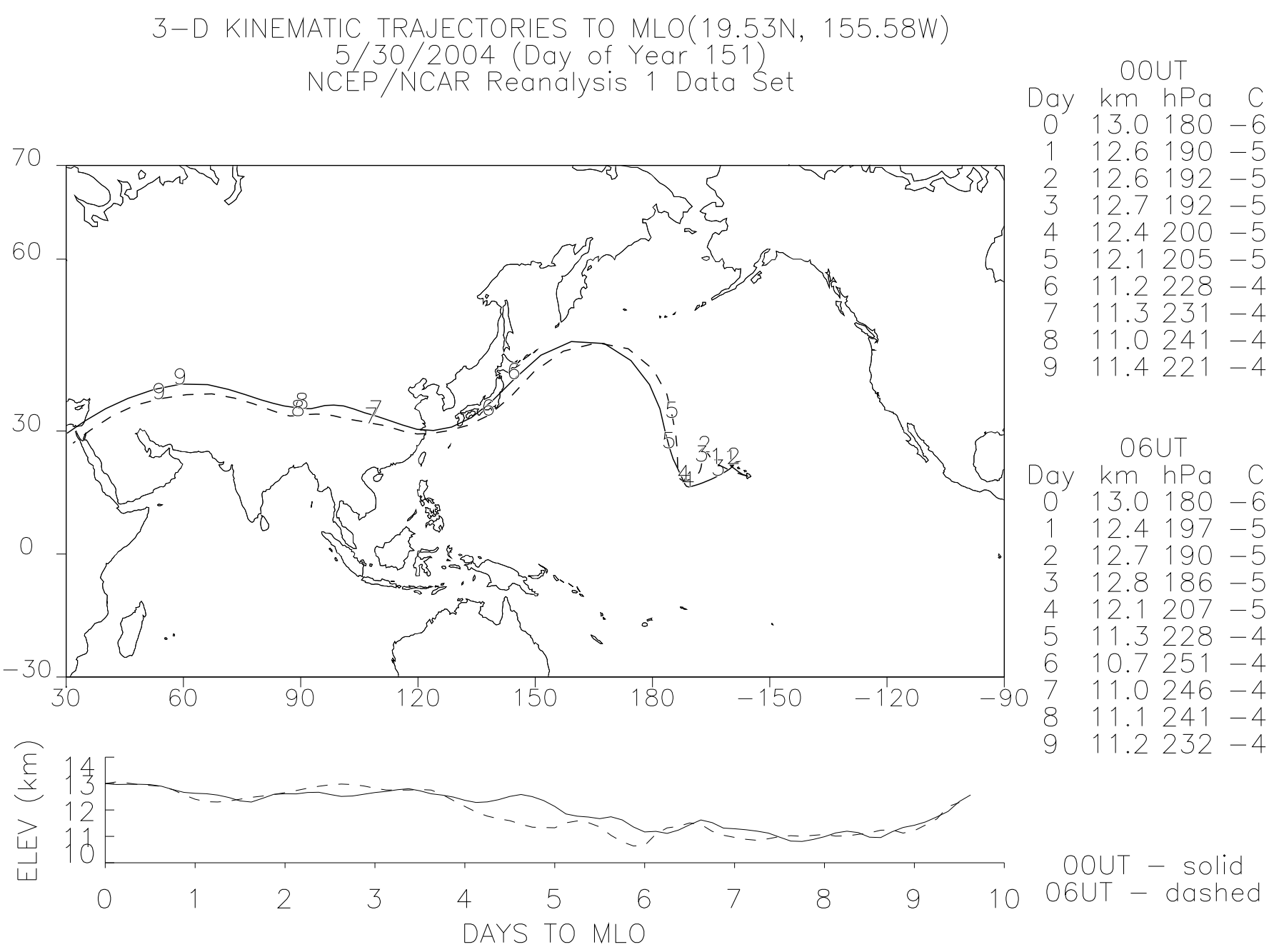
12UT

Day	km	hPa	C
0	13.0	179	-61
1	12.8	185	-59
2	12.8	188	-58
3	13.5	167	-64
4	14.0	154	-67
5	13.8	157	-64
6	12.4	196	-54
7	11.8	213	-47
8	11.4	228	-45
9	8.4	353	-22
10	6.9	434	-10

18UT

Day	km	hPa	C
0	13.0	179	-60
1	13.1	178	-60
2	13.1	179	-60
3	13.7	162	-66
4	13.7	164	-64
5	13.8	161	-64
6	13.2	174	-60
7	10.5	262	-38
8	9.9	285	-33
9	9.4	311	-26
10	8.4	358	-17

12UT – solid
18UT – dashed



00UT

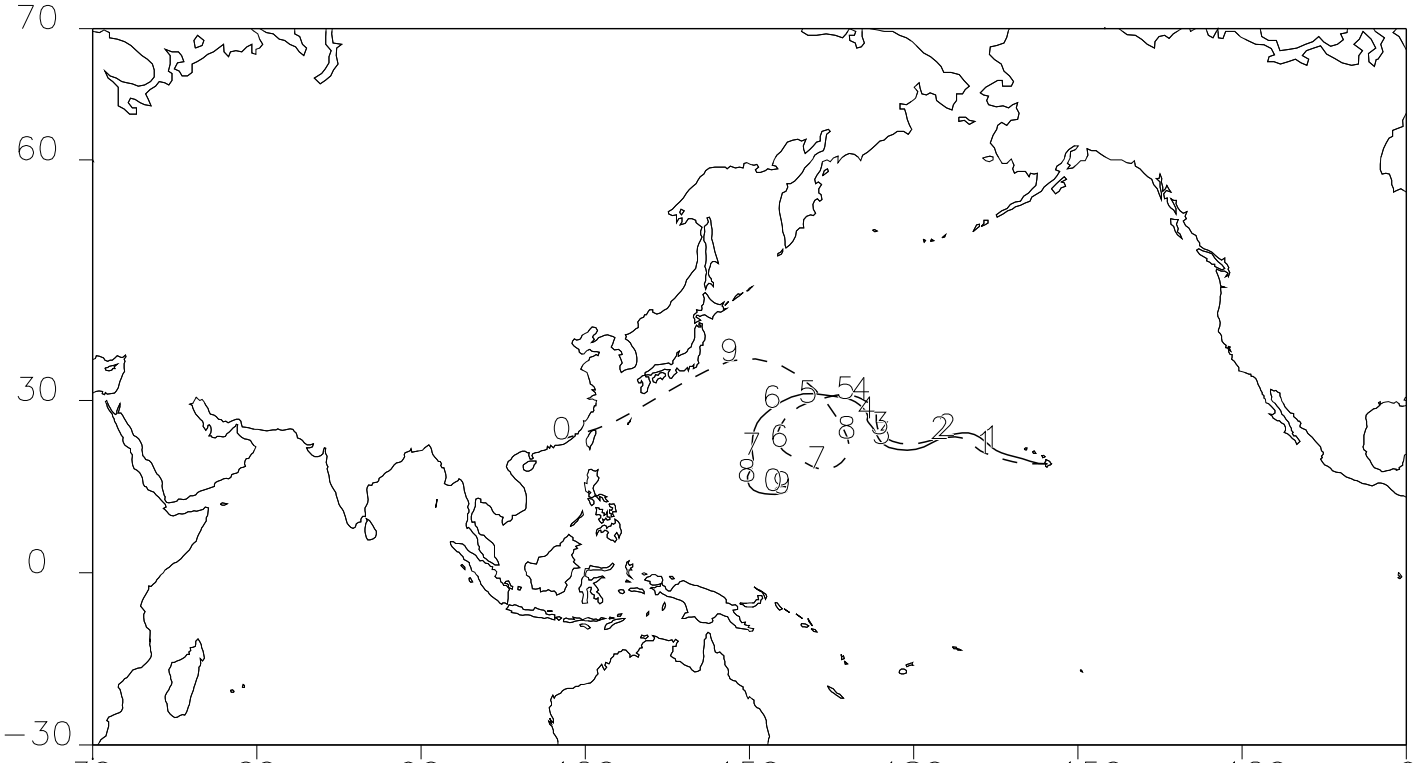
Day	km	hPa	C
0	13.0	180	−60
1	12.6	190	−58
2	12.6	192	−57
3	12.7	192	−55
4	12.4	200	−54
5	12.1	205	−52
6	11.2	228	−46
7	11.3	231	−46
8	11.0	241	−41
9	11.4	221	−44

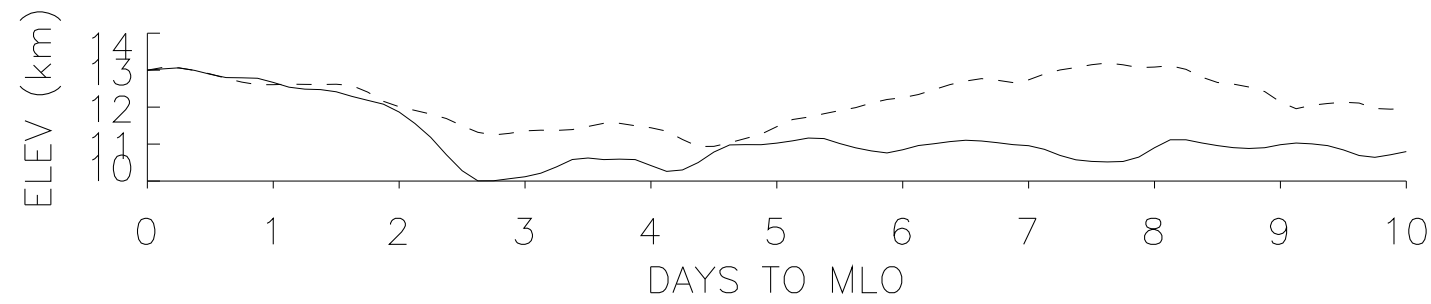
06UT

Day	km	hPa	C
0	13.0	180	−60
1	12.4	197	−56
2	12.7	190	−57
3	12.8	186	−57
4	12.1	207	−53
5	11.3	228	−48
6	10.7	251	−42
7	11.0	246	−41
8	11.1	241	−40
9	11.2	232	−41

00UT − solid
06UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/30/2004 (Day of Year 151)
NCEP/NCAR Reanalysis 1 Data Set





12UT

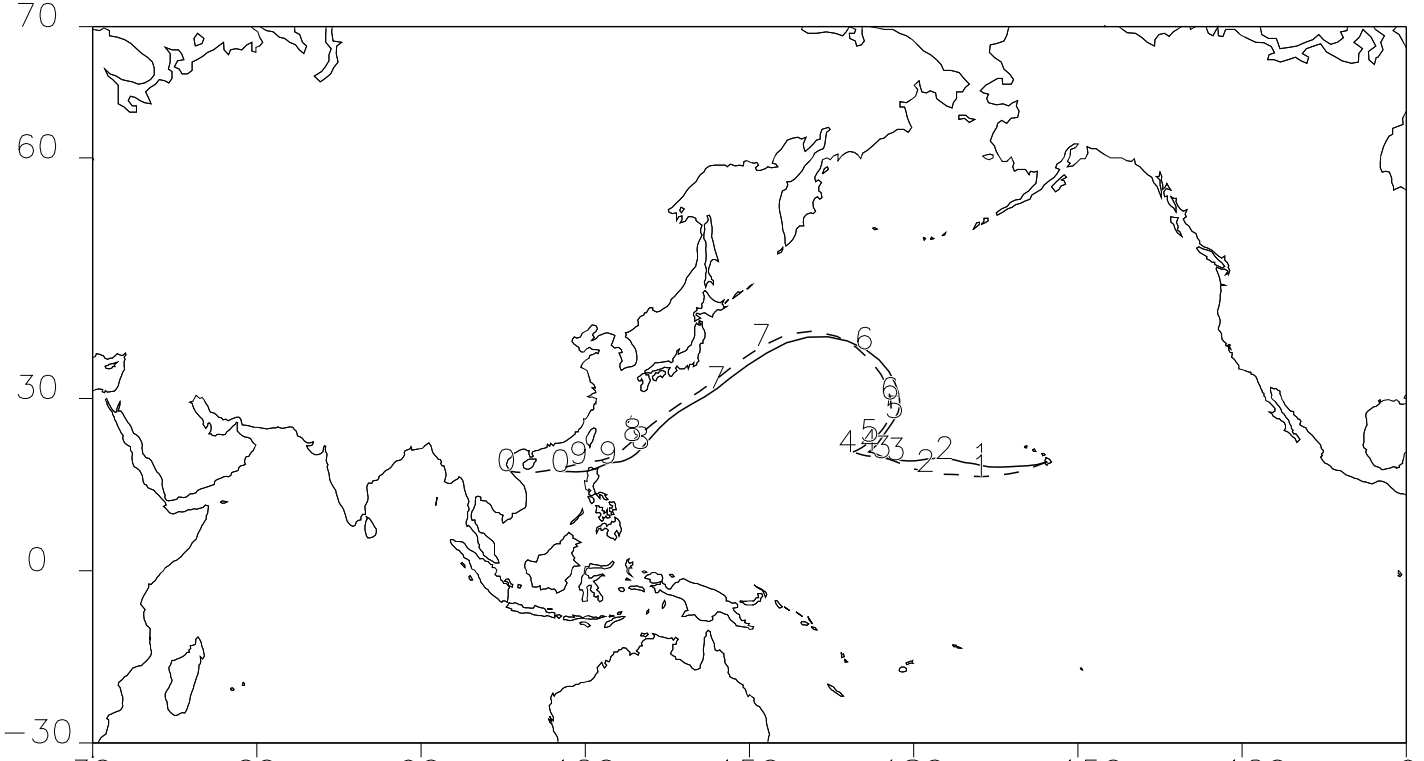
Day	km	hPa	C
0	13.0	180	−60
1	12.7	190	−57
2	11.9	215	−52
3	10.1	280	−36
4	10.4	272	−36
5	11.0	249	−41
6	10.8	256	−39
7	11.0	253	−41
8	10.9	255	−40
9	11.0	251	−41
10	10.8	257	−41

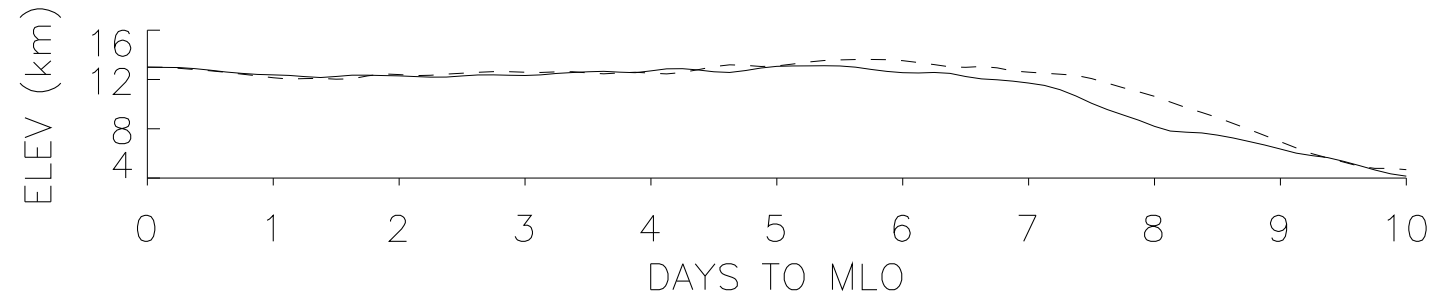
18UT

Day	km	hPa	C
0	13.0	180	−59
1	12.6	192	−57
2	12.0	210	−53
3	11.4	232	−45
4	11.4	233	−46
5	11.5	232	−45
6	12.3	207	−51
7	12.7	192	−55
8	13.1	181	−58
9	12.1	207	−50
10	12.0	215	−46

12UT − solid
18UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/31/2004 (Day of Year 152)
NCEP/NCAR Reanalysis 1 Data Set





00UT

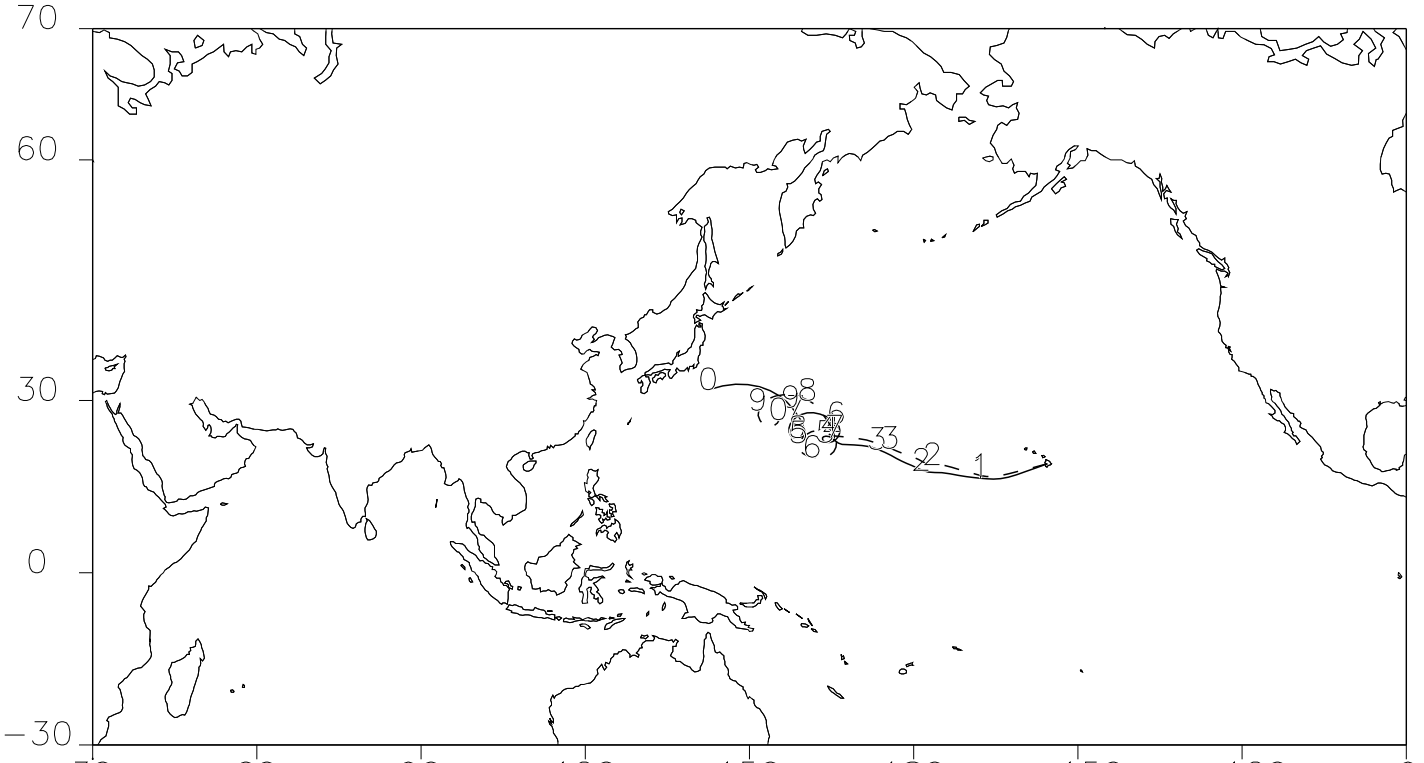
Day	km	hPa	C
0	13.0	180	−59
1	12.4	200	−54
2	12.3	202	−54
3	12.3	202	−52
4	12.7	192	−56
5	13.1	183	−57
6	12.6	194	−53
7	11.7	223	−47
8	8.2	369	−18
9	6.4	469	−8
10	4.2	617	4

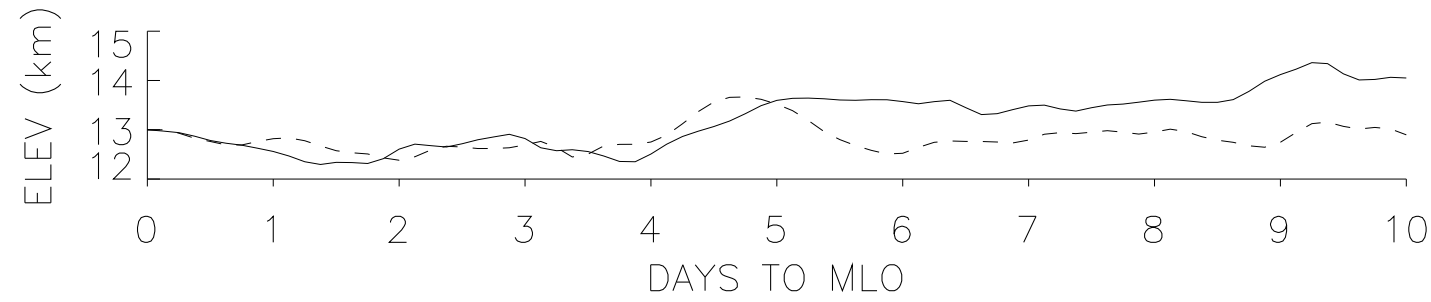
06UT

Day	km	hPa	C
0	13.0	181	−59
1	12.1	207	−53
2	12.4	199	−54
3	12.6	193	−55
4	12.5	197	−53
5	13.1	181	−57
6	13.5	169	−60
7	12.6	192	−54
8	10.6	262	−35
9	6.9	433	−12
10	4.7	579	2

00UT − solid
06UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/31/2004 (Day of Year 152)
NCEP/NCAR Reanalysis 1 Data Set





12UT

Day	km	hPa	C
0	13.0	180	−59
1	12.6	194	−57
2	12.6	193	−56
3	12.8	186	−57
4	12.5	197	−54
5	13.6	168	−62
6	13.6	170	−60
7	13.5	172	−59
8	13.6	169	−61
9	14.1	155	−65
10	14.1	155	−64

18UT

Day	km	hPa	C
0	13.0	180	−59
1	12.8	186	−58
2	12.4	199	−55
3	12.7	189	−57
4	12.8	188	−55
5	13.5	169	−61
6	12.5	199	−52
7	12.8	191	−54
8	13.0	186	−56
9	12.7	192	−53
10	12.9	187	−55

12UT − solid
18UT − dashed