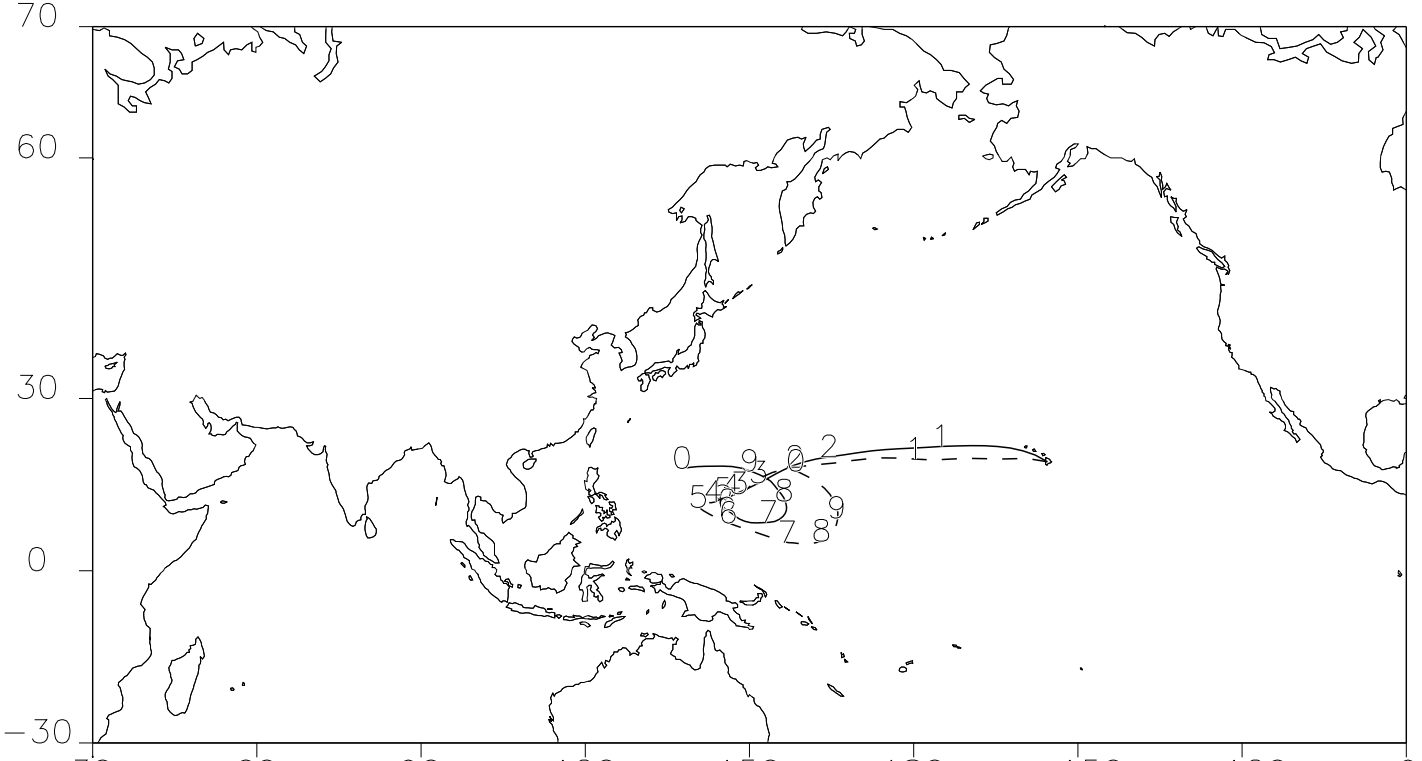
3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/1/2004 (Day of Year 92)
NCEP/NCAR Reanalysis 1 Data Set

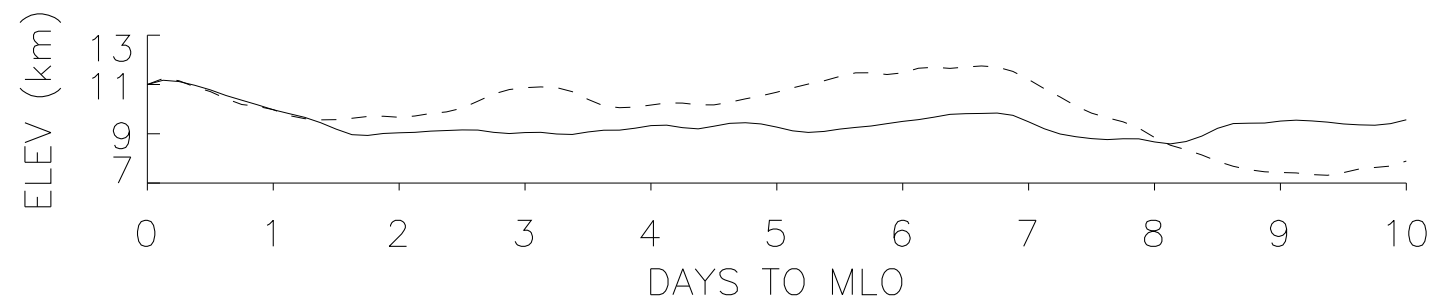


00UT

Day	km	hPa	C
0	11.0	245	−43
1	10.0	286	−35
2	9.0	328	−28
3	9.0	330	−26
4	9.3	317	−28
5	9.3	320	−28
6	9.5	309	−29
7	9.5	309	−29
8	8.7	347	−22
9	9.5	308	−29
10	9.6	306	−28

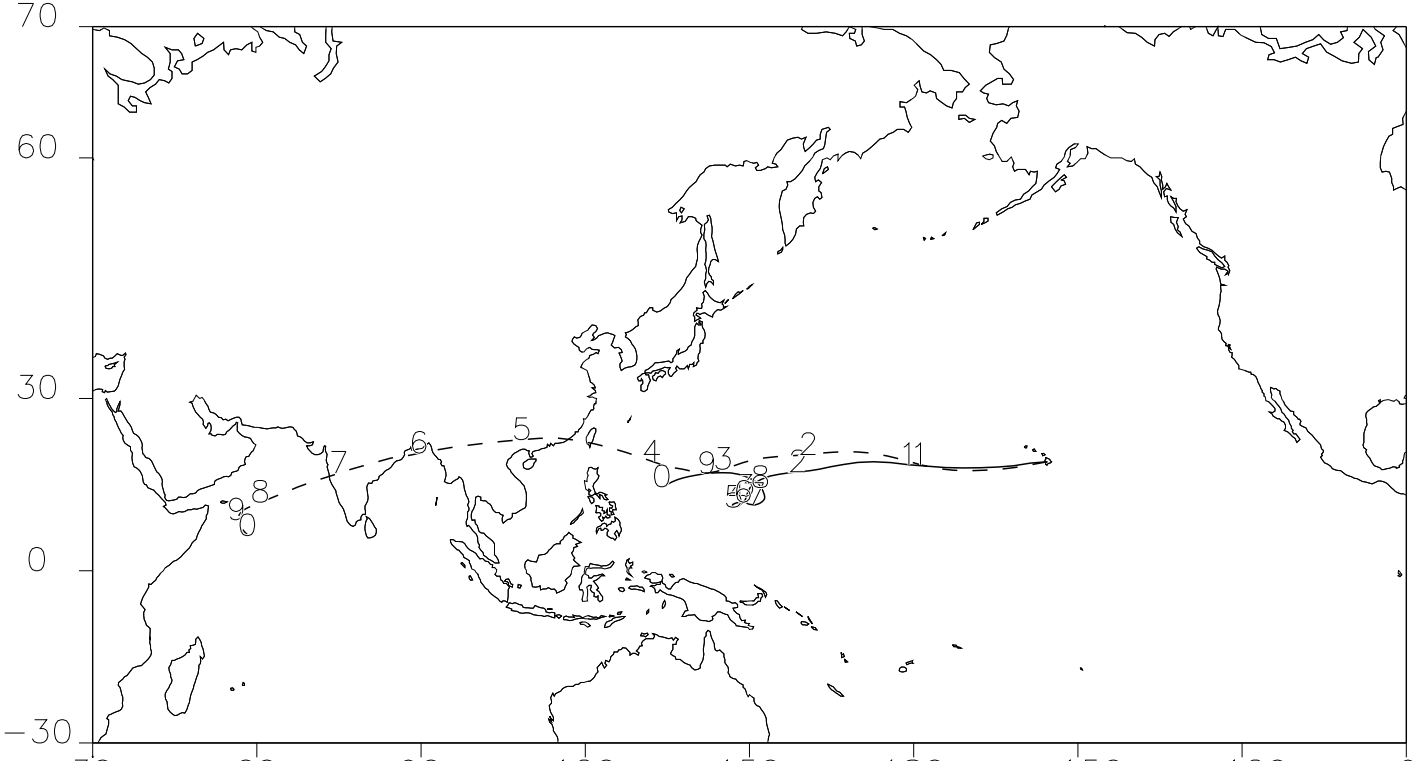
06UT

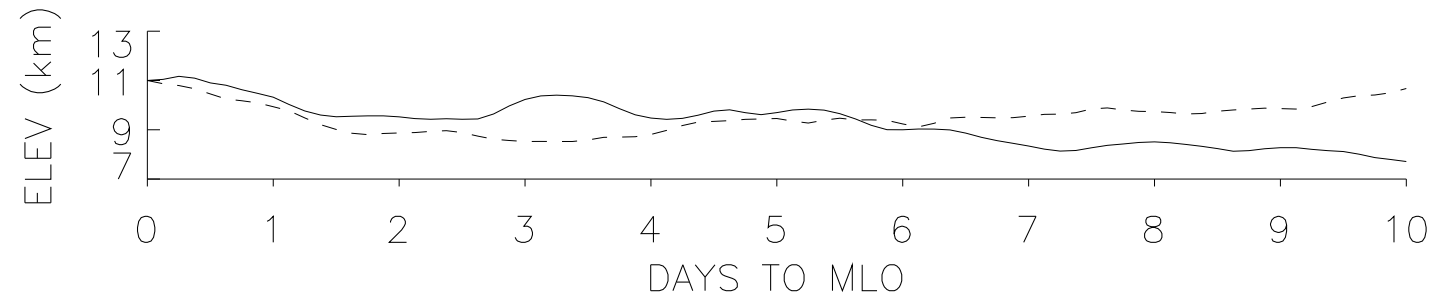
Day	km	hPa	C
0	11.0	245	−43
1	10.0	287	−33
2	9.7	301	−30
3	10.9	254	−40
4	10.2	281	−34
5	10.7	261	−39
6	11.5	232	−44
7	11.2	242	−42
8	8.8	337	−23
9	7.4	408	−15
10	7.9	383	−19



00UT − solid
06UT − dashed

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





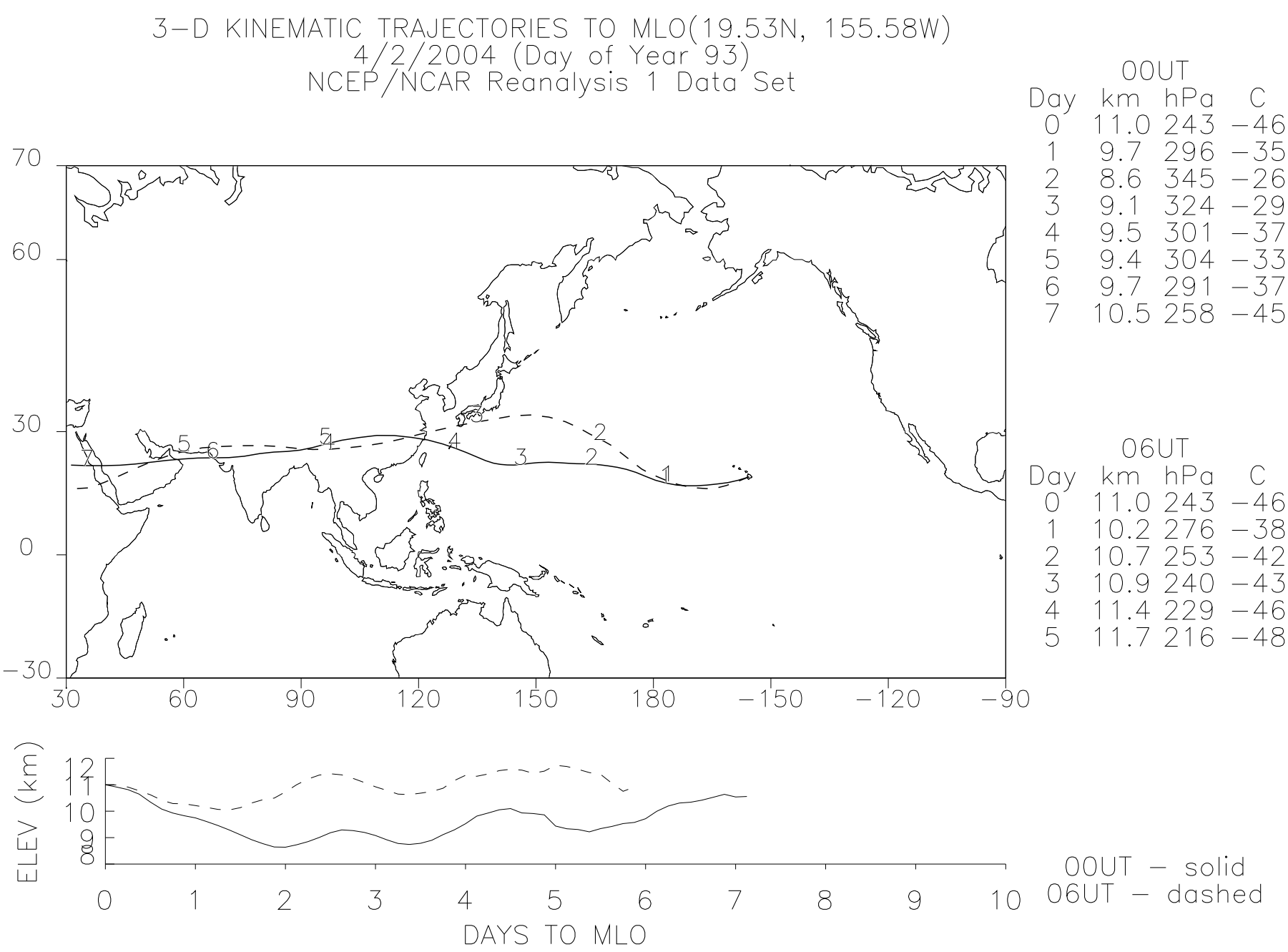
12UT

Day	km	hPa	C
0	11.0	244	−45
1	10.3	274	−36
2	9.5	308	−29
3	10.2	280	−35
4	9.5	310	−29
5	9.7	302	−31
6	9.0	333	−25
7	8.3	363	−21
8	8.5	354	−22
9	8.3	366	−20
10	7.7	395	−15

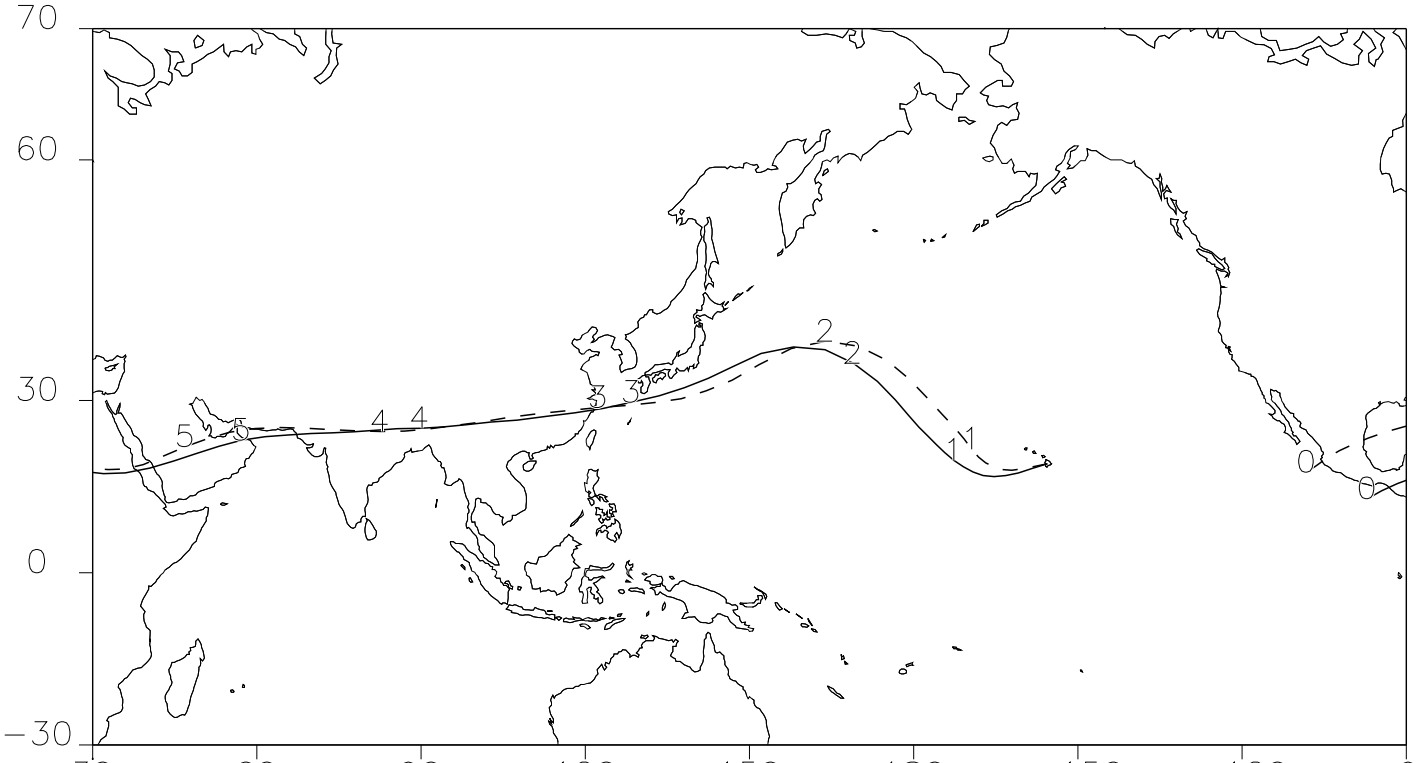
18UT

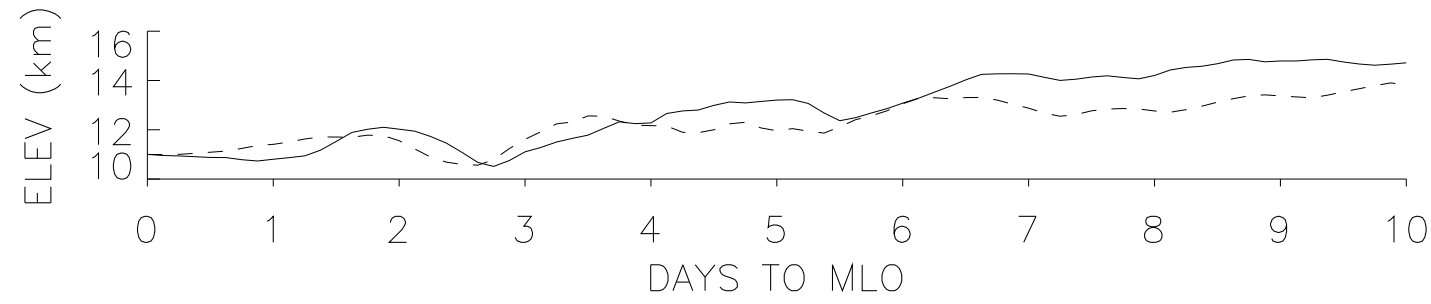
Day	km	hPa	C
0	11.0	244	−46
1	9.9	287	−36
2	8.9	335	−27
3	8.5	352	−23
4	8.8	337	−26
5	9.5	308	−32
6	9.2	319	−28
7	9.6	305	−30
8	9.7	299	−30
9	9.9	295	−31
10	10.7	262	−37

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 11.0 243 -46
1 9.7 296 -35
2 8.6 345 -26
3 9.1 324 -29
4 9.5 301 -37
5 9.4 304 -33
6 9.7 291 -37
7 10.5 258 -45
06UT
Day km hPa C
0 11.0 243 -46
1 10.2 276 -38
2 10.7 253 -42
3 10.9 240 -43
4 11.4 229 -46
5 11.7 216 -48
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
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)
4/2/2004 (Day of Year 93)
NCEP/NCAR Reanalysis 1 Data Set





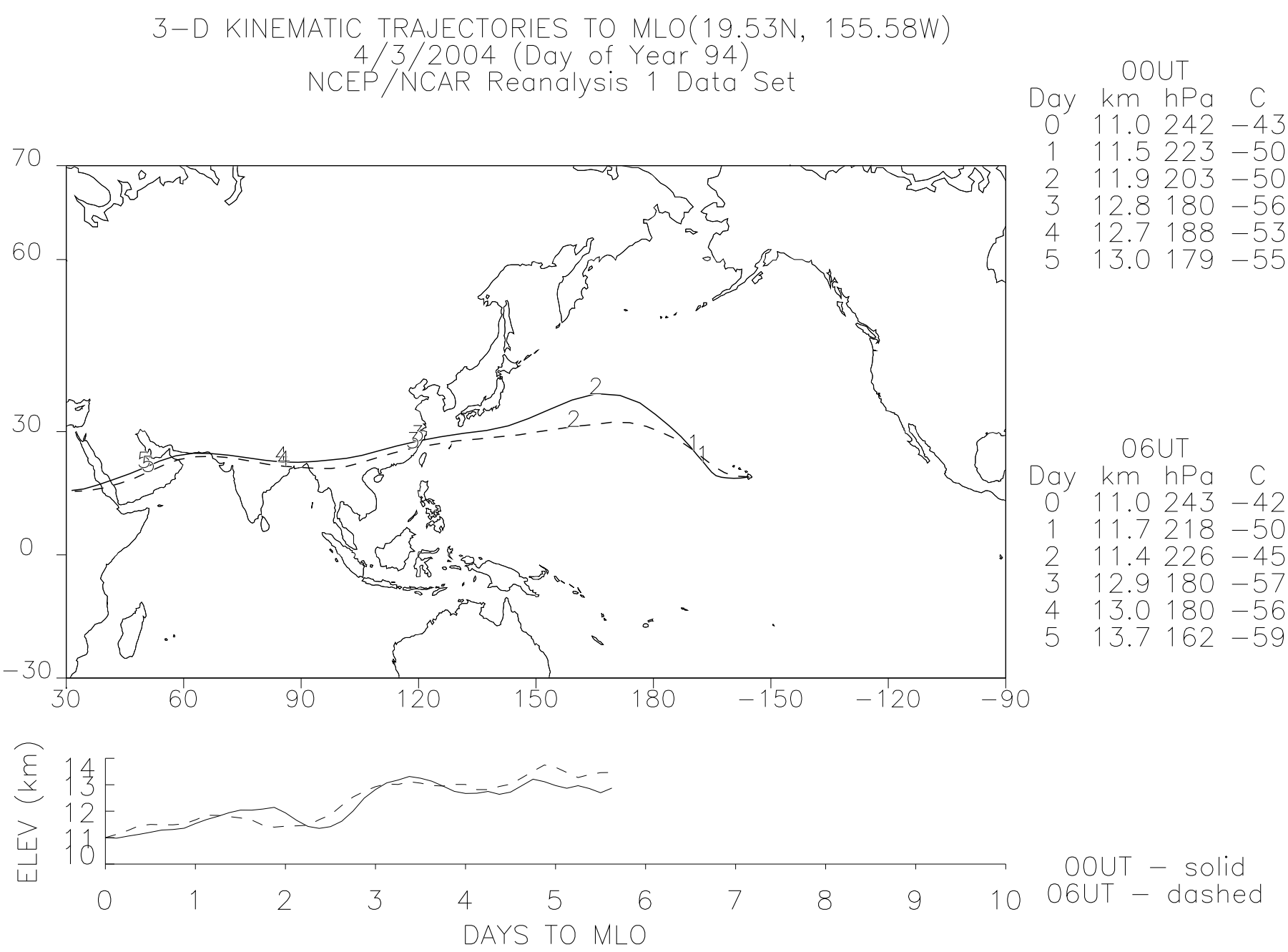
12UT

Day	km	hPa	C
0	11.0	243	−46
1	10.8	251	−46
2	12.0	203	−53
3	11.1	235	−42
4	12.3	199	−52
5	13.2	173	−56
6	13.1	177	−56
7	14.3	147	−66
8	14.2	148	−65
9	14.8	136	−69
10	14.7	137	−68

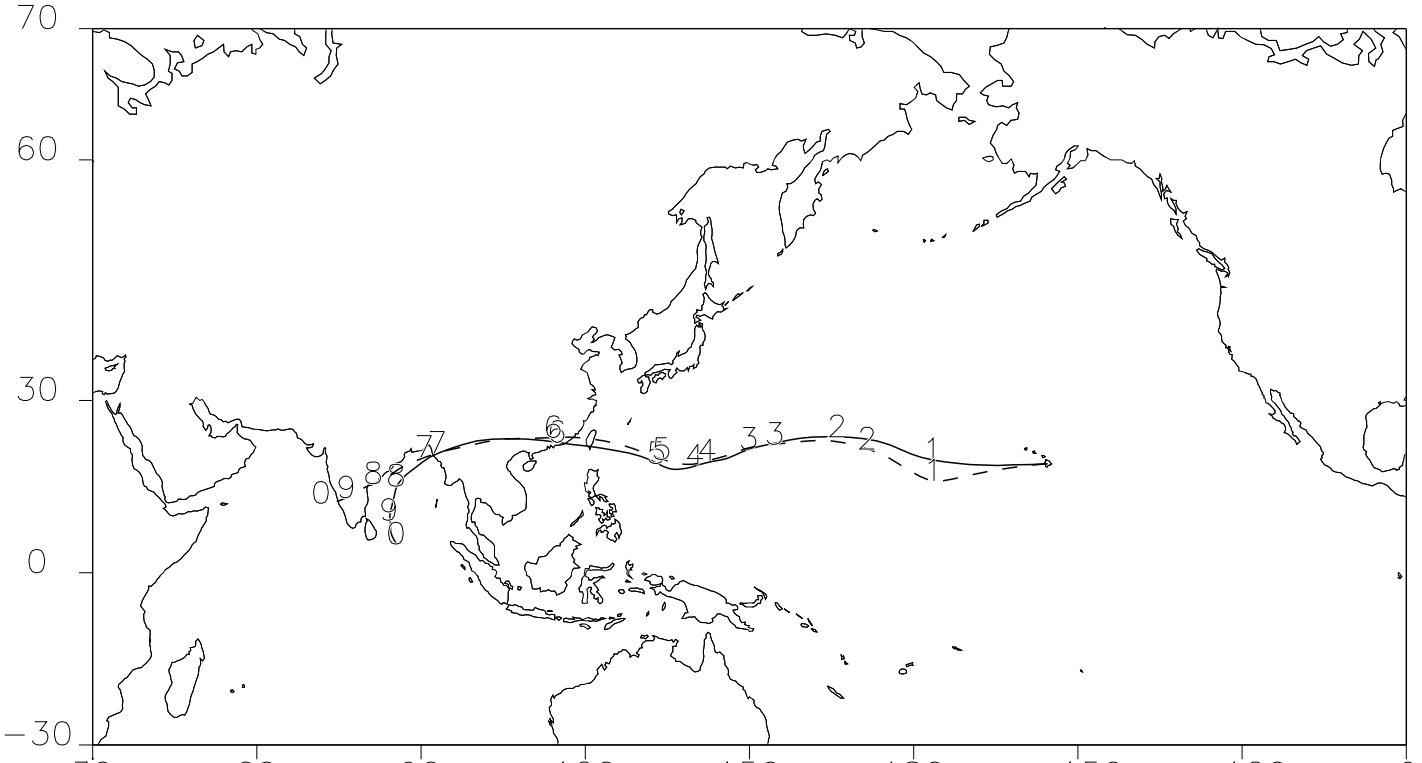
18UT

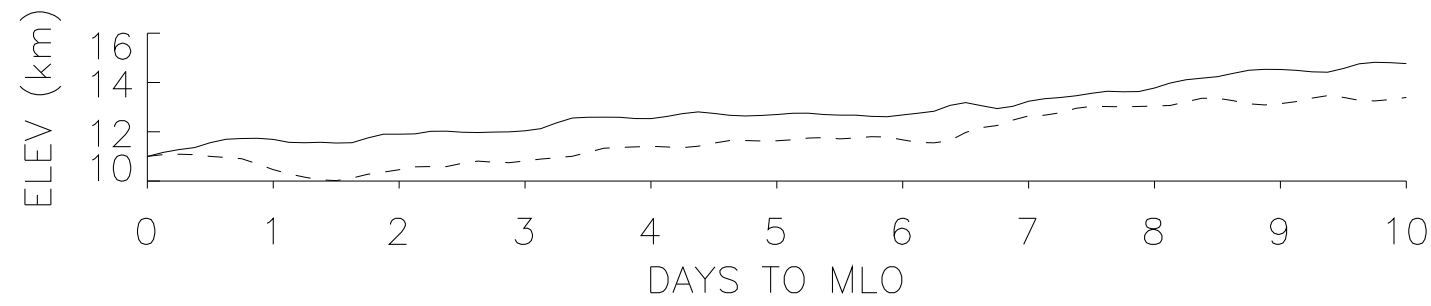
Day	km	hPa	C
0	11.0	243	−45
1	11.4	228	−50
2	11.6	215	−51
3	11.6	217	−50
4	12.2	202	−52
5	12.0	209	−50
6	13.1	176	−59
7	12.9	177	−57
8	12.8	182	−54
9	13.4	167	−57
10	13.8	157	−60

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 11.0 242 -43
1 11.5 223 -50
2 11.9 203 -50
3 12.8 180 -56
4 12.7 188 -53
5 13.0 179 -55
06UT
Day km hPa C
0 11.0 243 -42
1 11.7 218 -50
2 11.4 226 -45
3 12.9 180 -57
4 13.0 180 -56
5 13.7 162 -59
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)
4/3/2004 (Day of Year 94)
NCEP/NCAR Reanalysis 1 Data Set





12UT

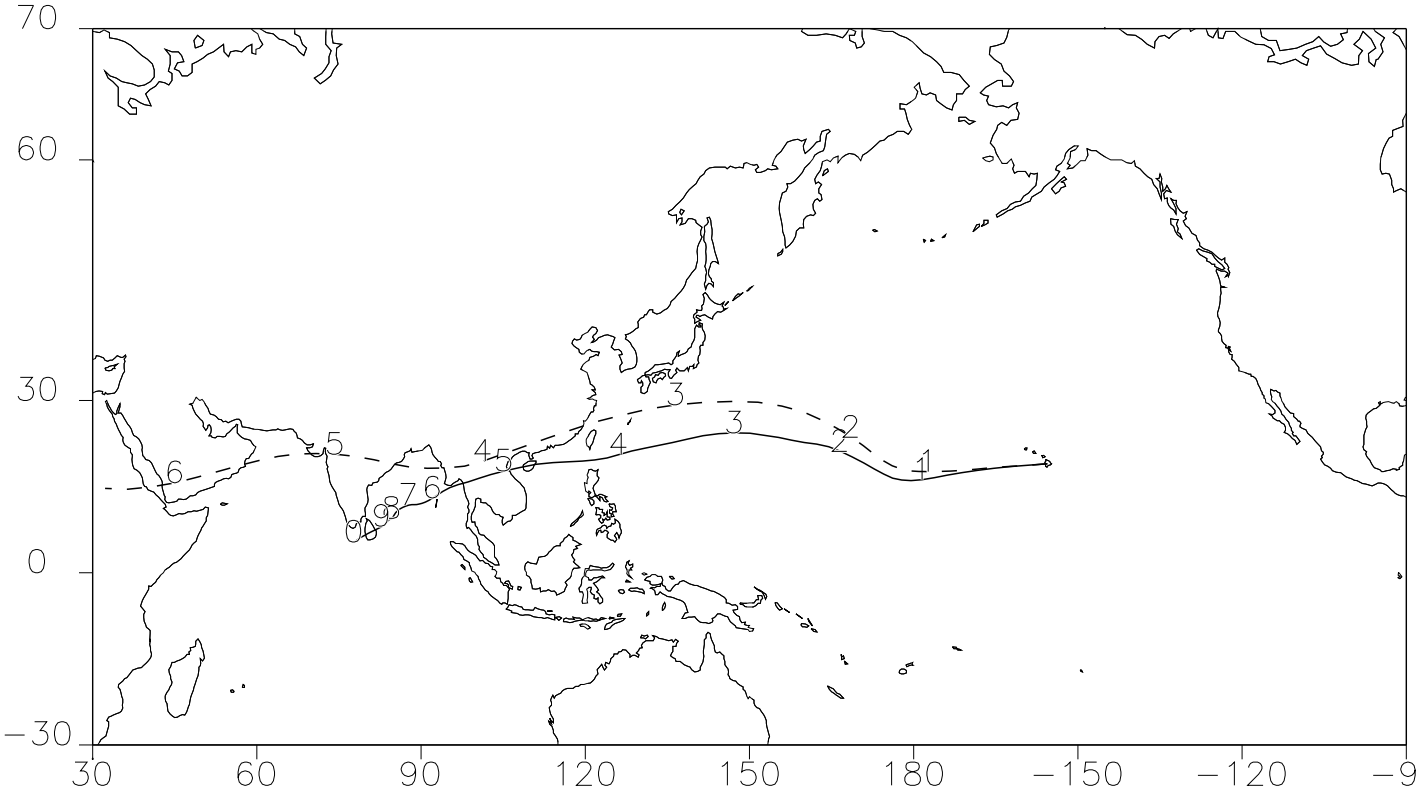
Day	km	hPa	C
0	11.0	244	−41
1	11.7	221	−45
2	11.9	217	−46
3	12.0	214	−46
4	12.5	198	−51
5	12.7	192	−52
6	12.7	191	−52
7	13.2	176	−57
8	13.8	162	−61
9	14.5	143	−67
10	14.8	138	−69

18UT

Day	km	hPa	C
0	11.0	244	−43
1	10.5	266	−38
2	10.5	267	−37
3	10.8	254	−38
4	11.4	234	−43
5	11.6	225	−45
6	11.7	222	−45
7	12.6	194	−52
8	13.0	183	−55
9	13.1	180	−55
10	13.4	173	−58

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

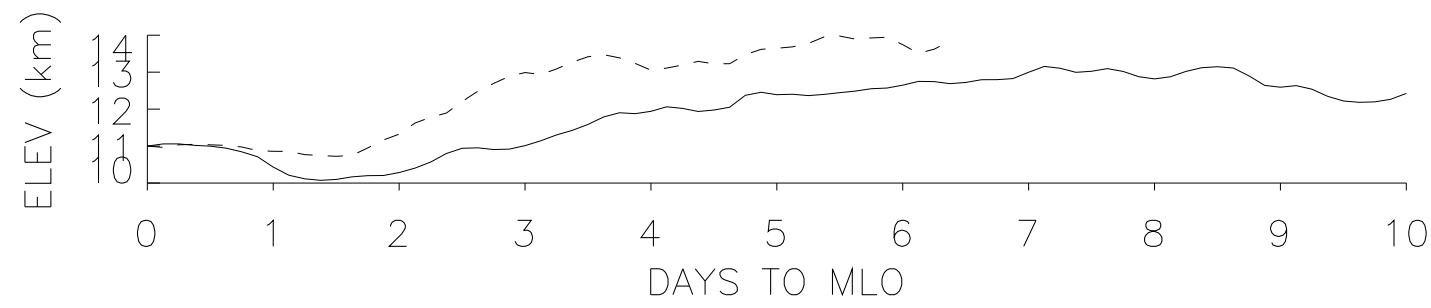


00UT

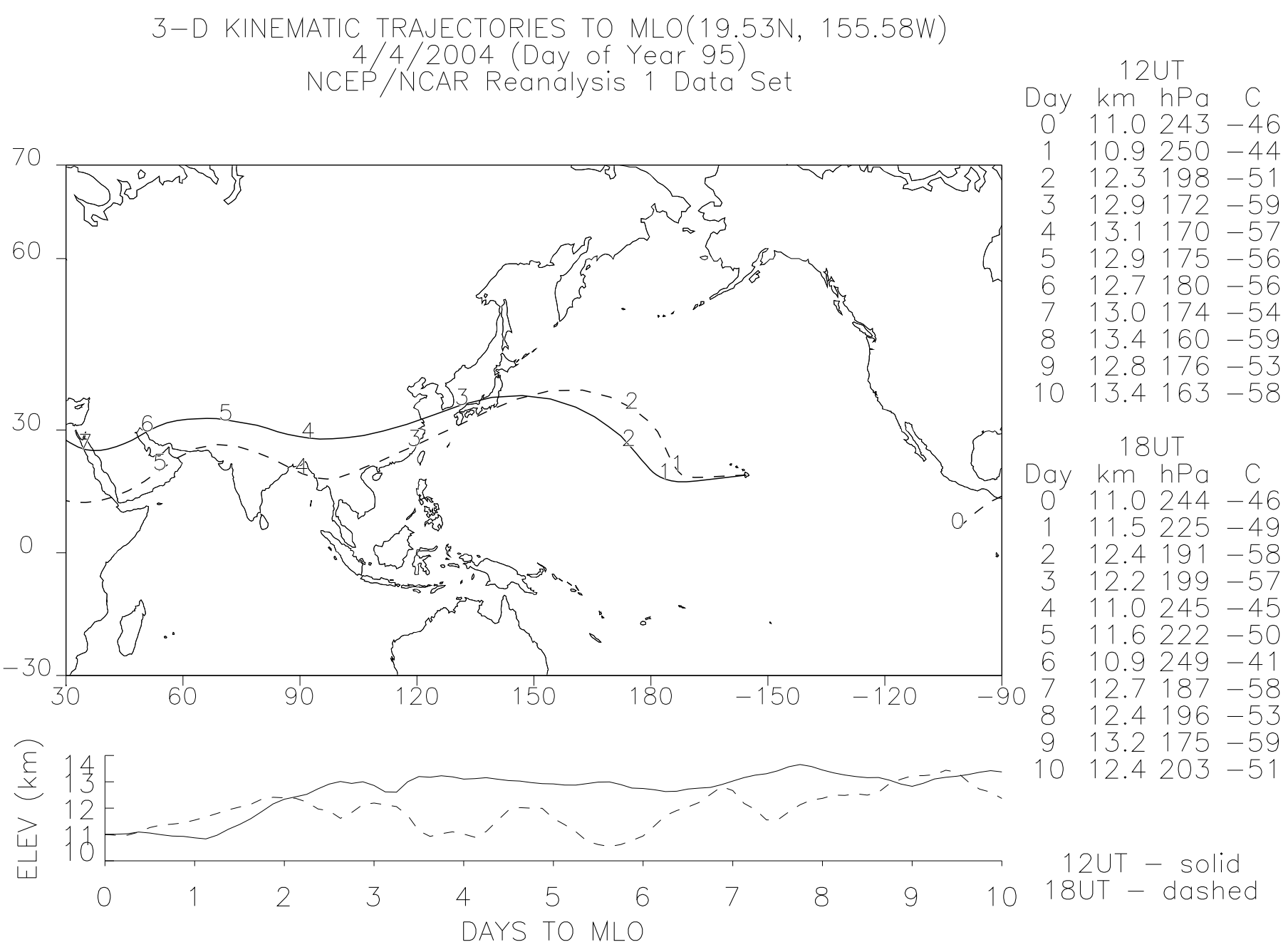
Day	km	hPa	C
0	11.0	243	−44
1	10.4	267	−39
2	10.3	275	−36
3	11.0	247	−42
4	11.9	214	−49
5	12.4	200	−53
6	12.6	194	−54
7	13.0	184	−56
8	12.8	189	−54
9	12.6	195	−52
10	12.4	200	−51

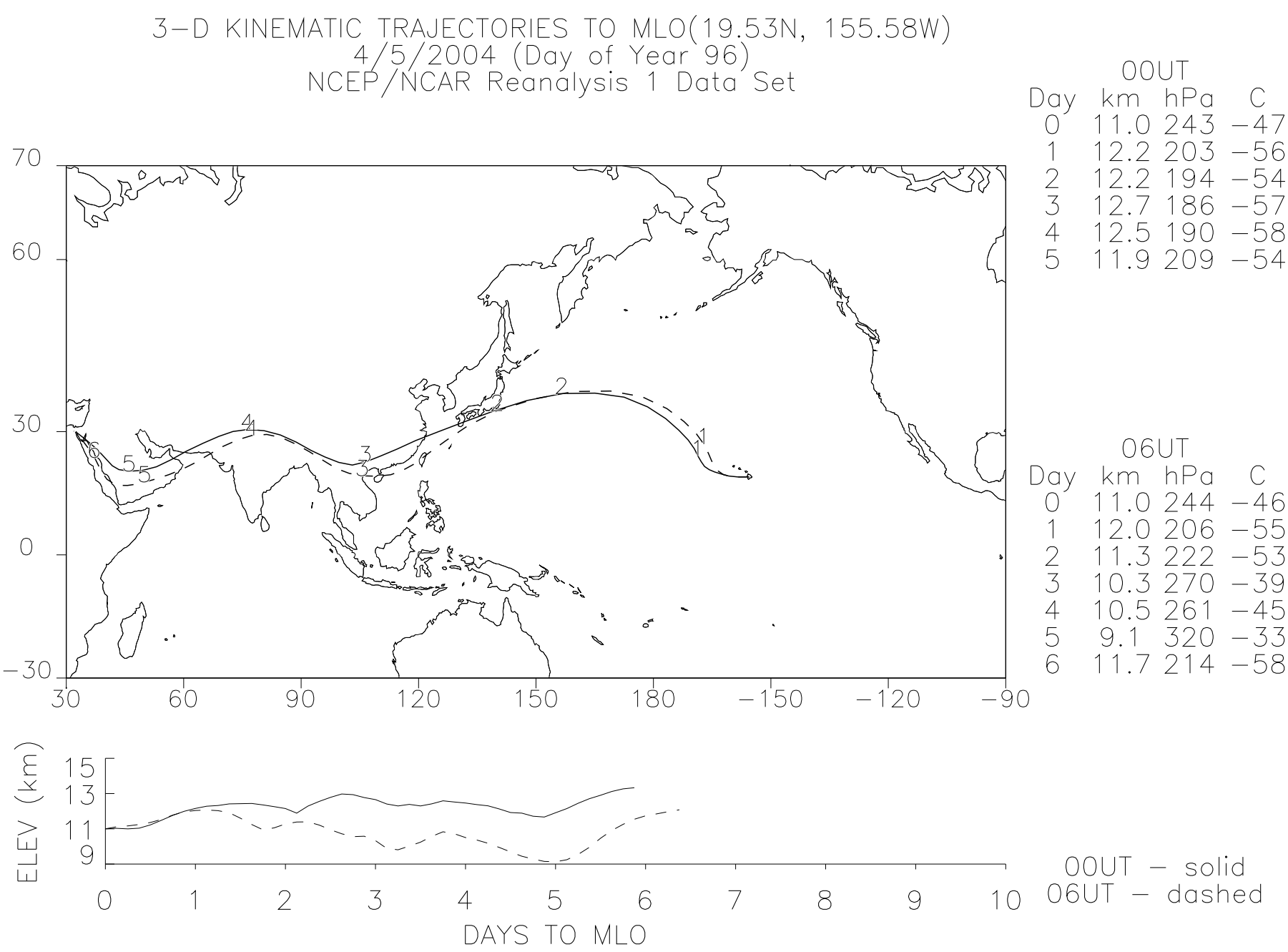
06UT

Day	km	hPa	C
0	11.0	243	−45
1	10.9	250	−43
2	11.3	234	−44
3	13.0	178	−58
4	13.1	179	−57
5	13.6	164	−60
6	13.7	161	−60

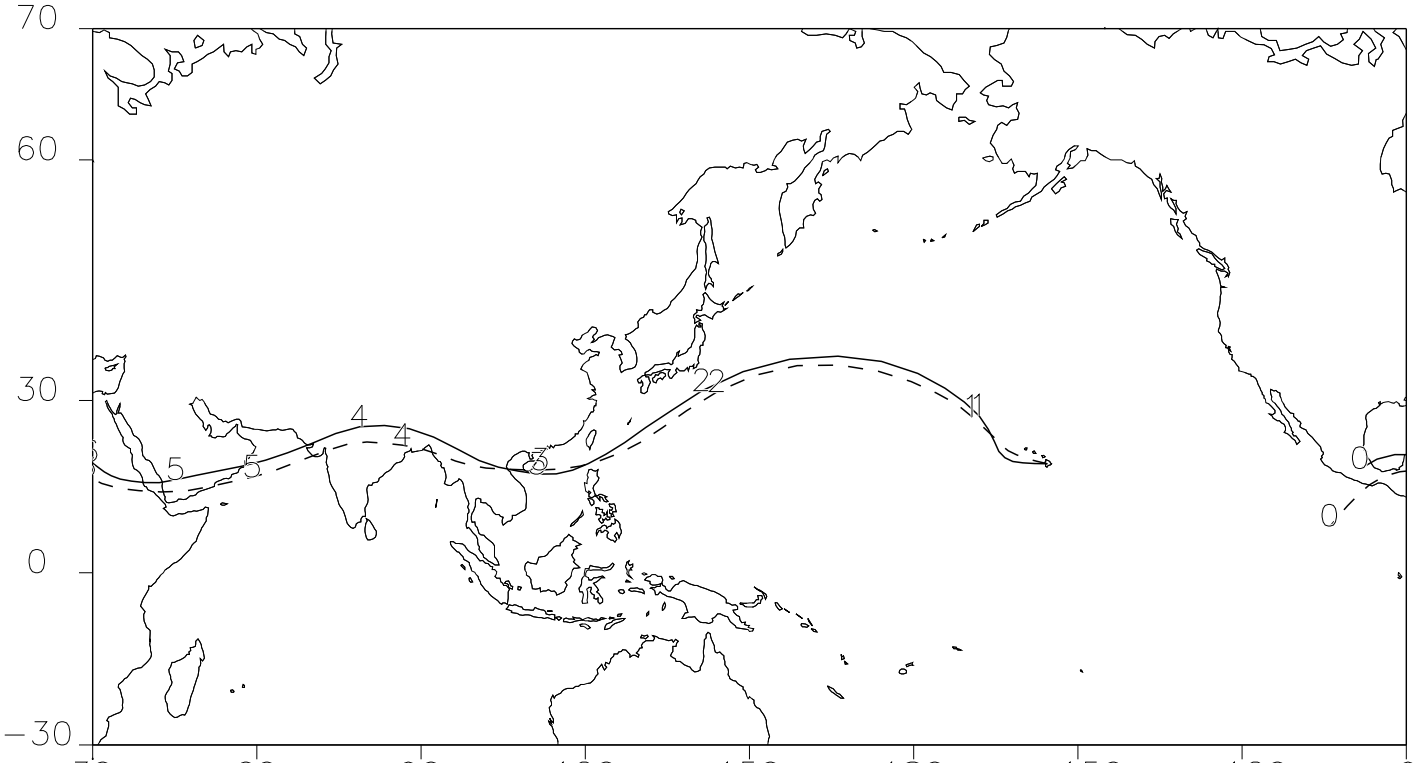


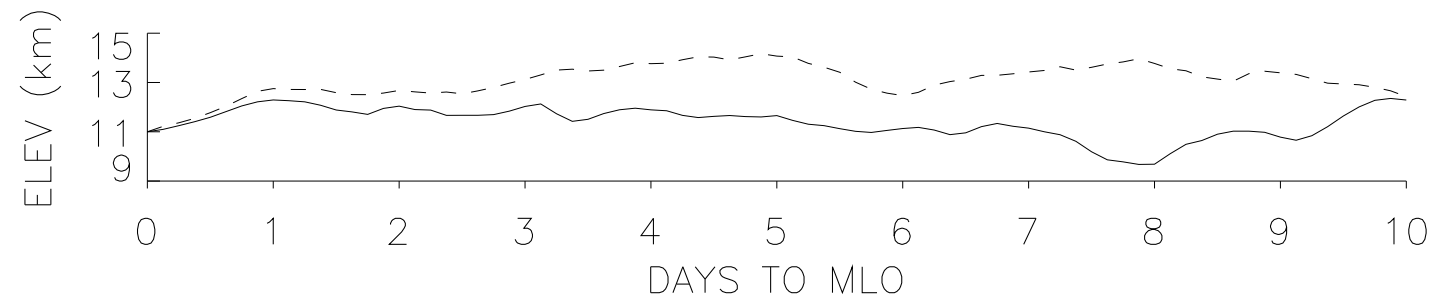
00UT – solid
06UT – dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/4/2004 (Day of Year 95)
NCEP/NCAR Reanalysis 1 Data Set
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
Day km hPa C
0 11.0 243 -46
1 10.9 250 -44
2 12.3 198 -51
3 12.9 172 -59
4 13.1 170 -57
5 12.9 175 -56
6 12.7 180 -56
7 13.0 174 -54
8 13.4 160 -59
9 12.8 176 -53
10 13.4 163 -58
18UT
Day km hPa C
0 11.0 244 -46
1 11.5 225 -49
2 12.4 191 -58
3 12.2 199 -57
4 11.0 245 -45
5 11.6 222 -50
6 10.9 249 -41
7 12.7 187 -58
8 12.4 196 -53
9 13.2 175 -59
10 12.4 203 -51
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 11.0 243 -47
1 12.2 203 -56
2 12.2 194 -54
3 12.7 186 -57
4 12.5 190 -58
5 11.9 209 -54
06UT
Day km hPa C
0 11.0 244 -46
1 12.0 206 -55
2 11.3 222 -53
3 10.3 270 -39
4 10.5 261 -45
5 9.1 320 -33
6 11.7 214 -58
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)
4/5/2004 (Day of Year 96)
NCEP/NCAR Reanalysis 1 Data Set





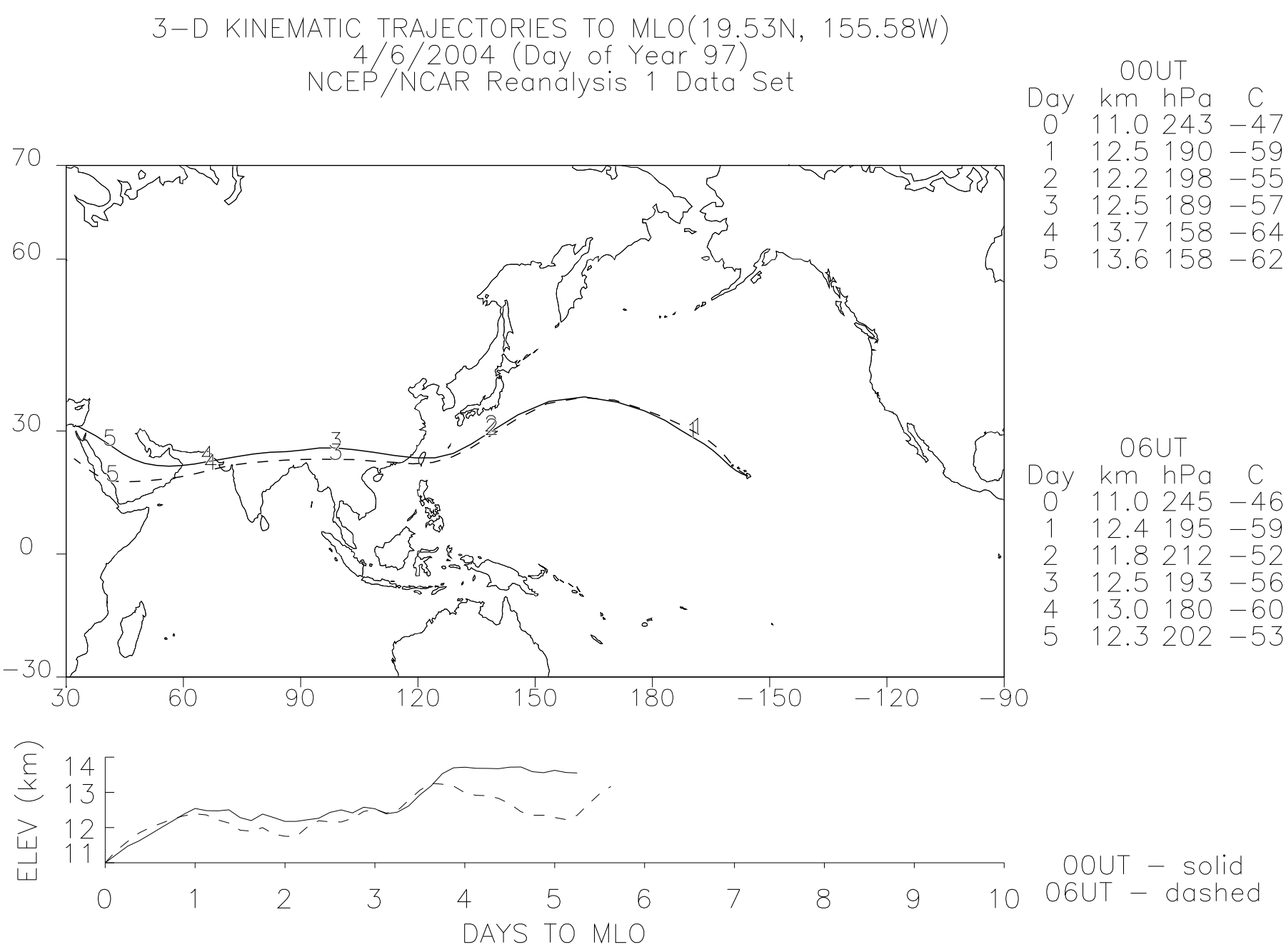
12UT

Day	km	hPa	C
0	11.0	243	−47
1	12.3	199	−56
2	12.0	203	−55
3	12.0	211	−51
4	11.9	213	−52
5	11.7	222	−50
6	11.1	239	−47
7	11.1	238	−51
8	9.7	293	−36
9	10.8	250	−44
10	12.3	202	−55

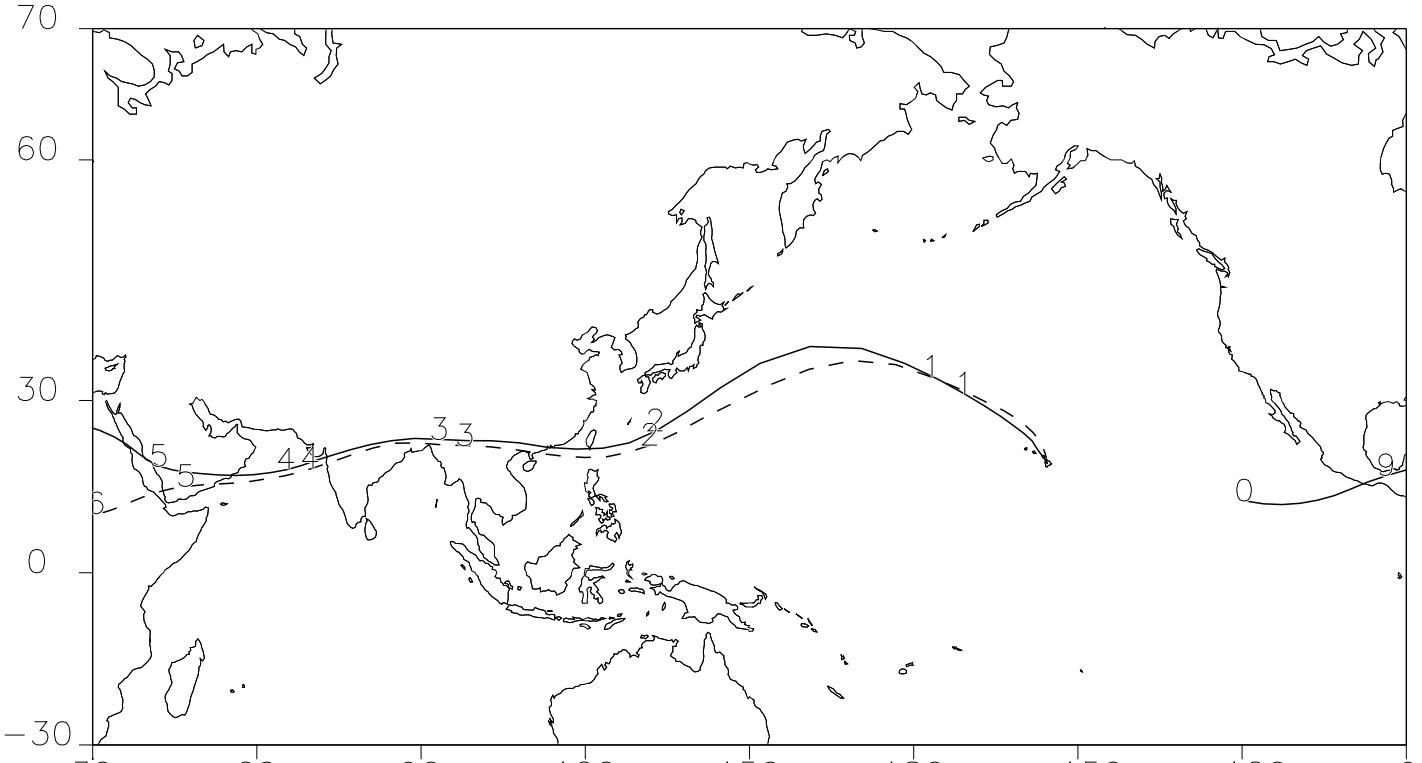
18UT

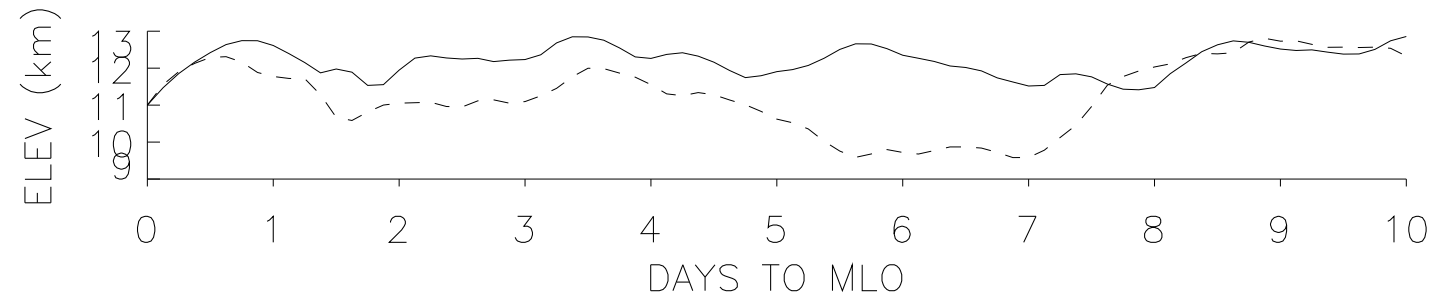
Day	km	hPa	C
0	11.0	244	−47
1	12.8	185	−58
2	12.7	184	−57
3	13.1	177	−57
4	13.8	160	−62
5	14.1	153	−64
6	12.5	197	−49
7	13.4	167	−59
8	13.8	156	−63
9	13.4	169	−60
10	12.4	200	−52

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 11.0 243 -47
1 12.5 190 -59
2 12.2 198 -55
3 12.5 189 -57
4 13.7 158 -64
5 13.6 158 -62
06UT
Day km hPa C
0 11.0 245 -46
1 12.4 195 -59
2 11.8 212 -52
3 12.5 193 -56
4 13.0 180 -60
5 12.3 202 -53
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)
4/6/2004 (Day of Year 97)
NCEP/NCAR Reanalysis 1 Data Set





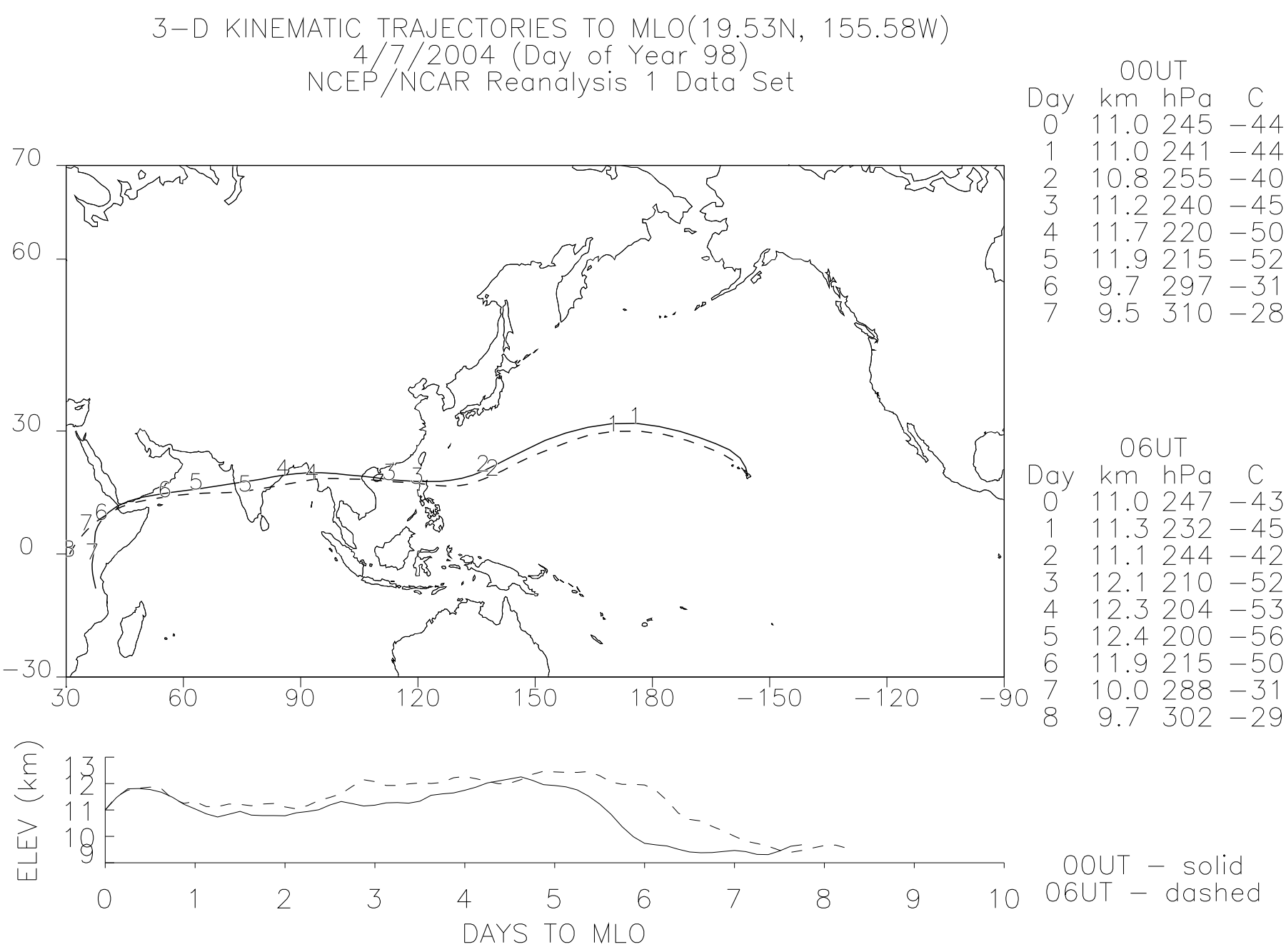
12UT

Day	km	hPa	C
0	11.0	244	−46
1	12.6	187	−60
2	11.9	209	−53
3	12.2	202	−54
4	12.3	202	−55
5	11.9	214	−51
6	12.4	198	−55
7	11.5	224	−50
8	11.5	225	−47
9	12.5	194	−53
10	12.9	184	−58

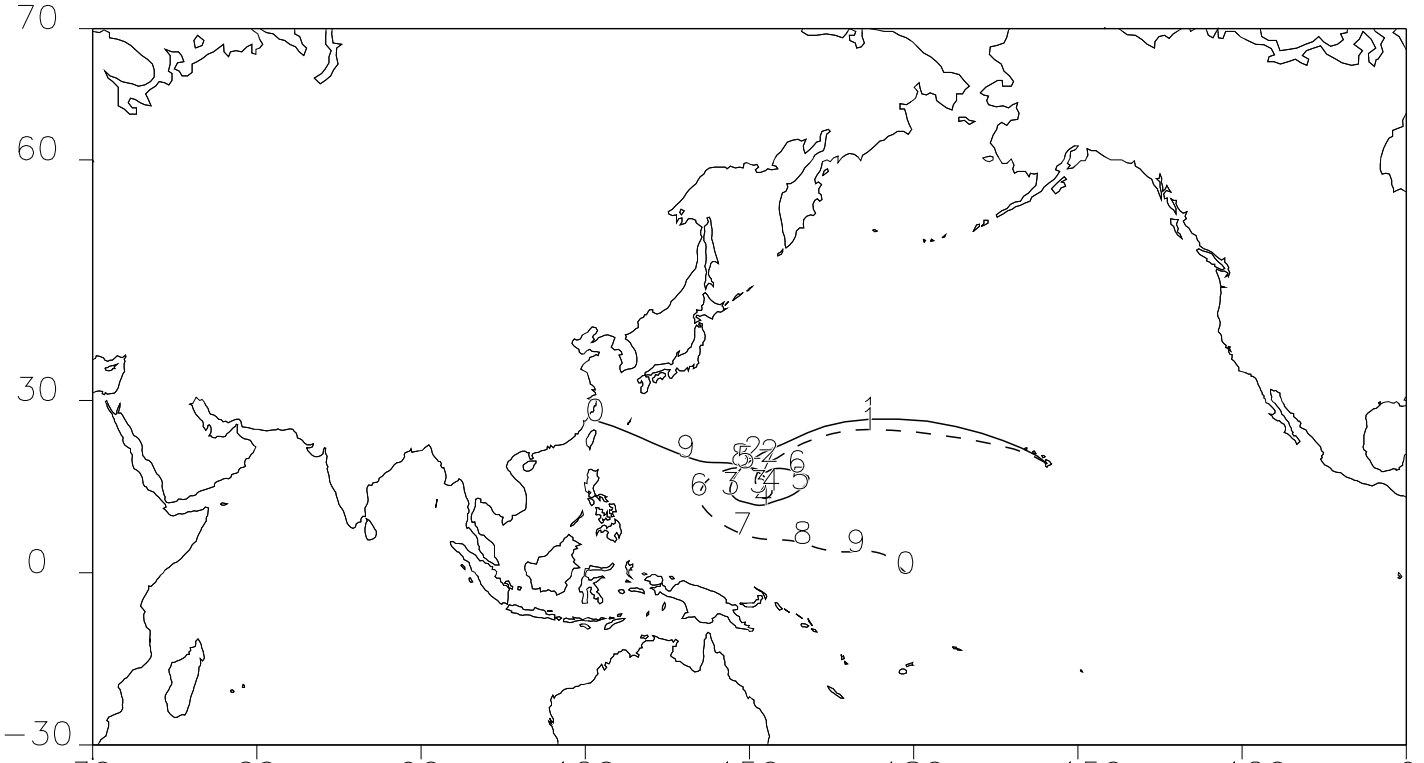
18UT

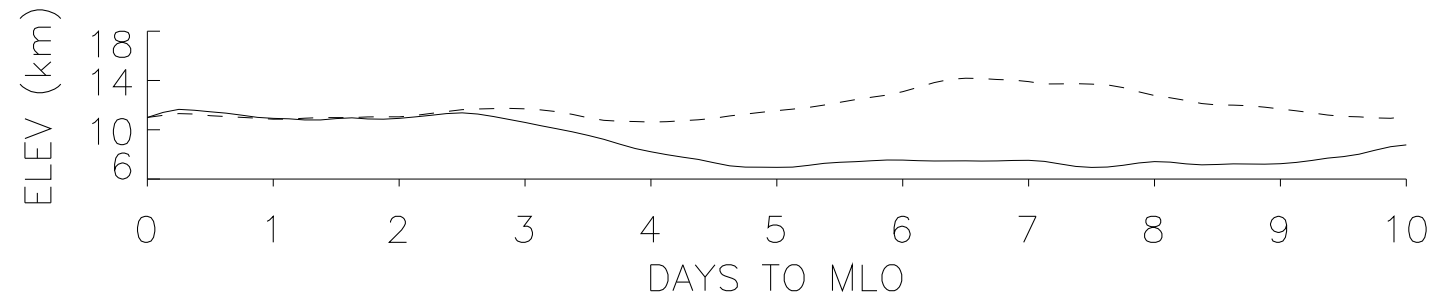
Day	km	hPa	C
0	11.0	245	−45
1	11.8	212	−53
2	11.1	241	−45
3	11.1	241	−45
4	11.6	227	−49
5	10.6	261	−40
6	9.7	299	−29
7	9.6	305	−29
8	12.0	212	−49
9	12.7	190	−55
10	12.3	202	−53

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 11.0 245 -44
1 11.0 241 -44
2 10.8 255 -40
3 11.2 240 -45
4 11.7 220 -50
5 11.9 215 -52
6 9.7 297 -31
7 9.5 310 -28
06UT
Day km hPa C
0 11.0 247 -43
1 11.3 232 -45
2 11.1 244 -42
3 12.1 210 -52
4 12.3 204 -53
5 12.4 200 -56
6 11.9 215 -50
7 10.0 288 -31
8 9.7 302 -29
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
13
12
11
10
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)
4/7/2004 (Day of Year 98)
NCEP/NCAR Reanalysis 1 Data Set





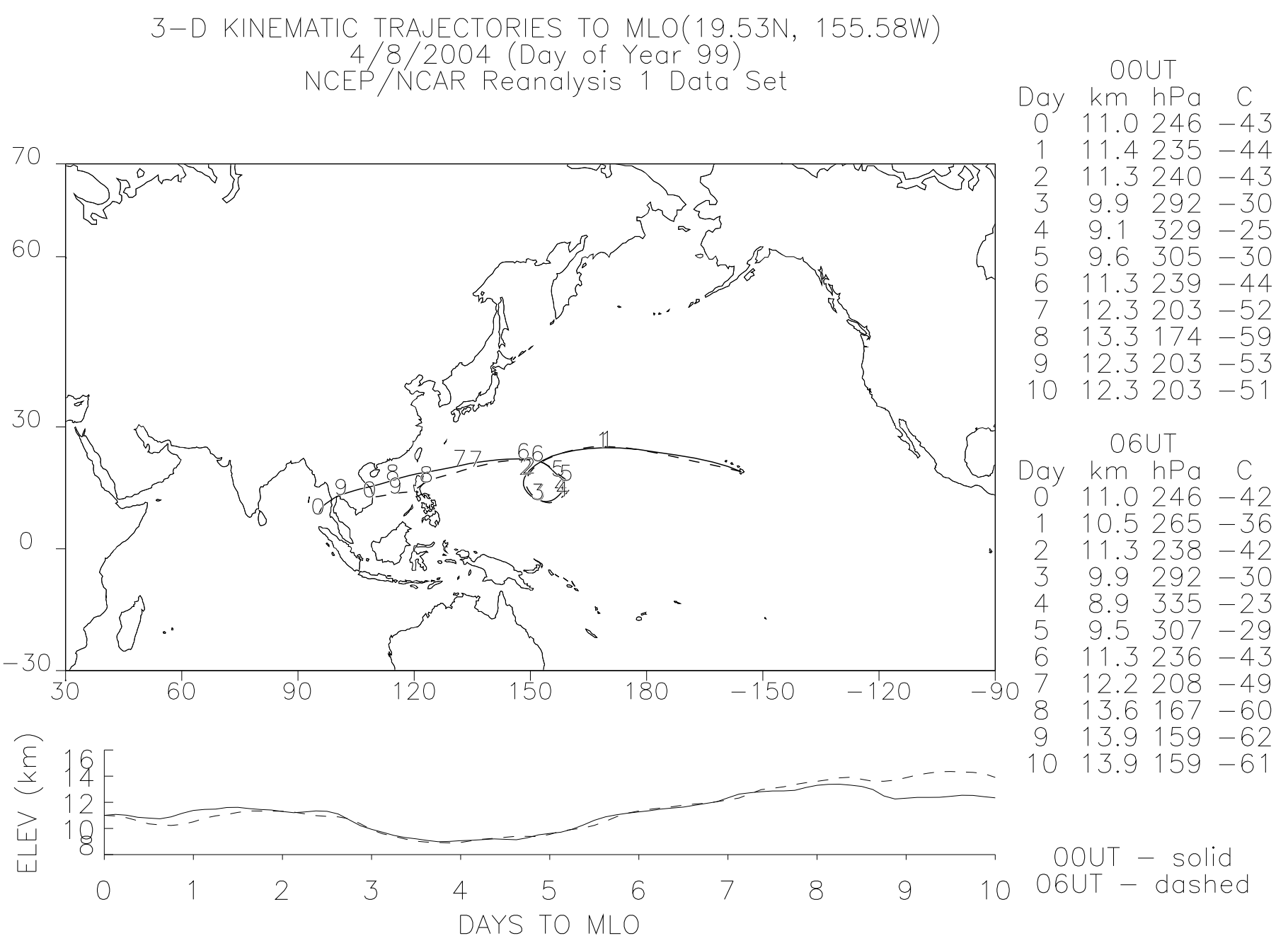
12UT

Day	km	hPa	C
0	11.0	246	-43
1	10.9	250	-41
2	10.9	253	-40
3	10.6	266	-36
4	8.2	371	-18
5	7.0	437	-11
6	7.5	405	-15
7	7.5	406	-15
8	7.4	409	-15
9	7.2	417	-15
10	8.8	335	-31

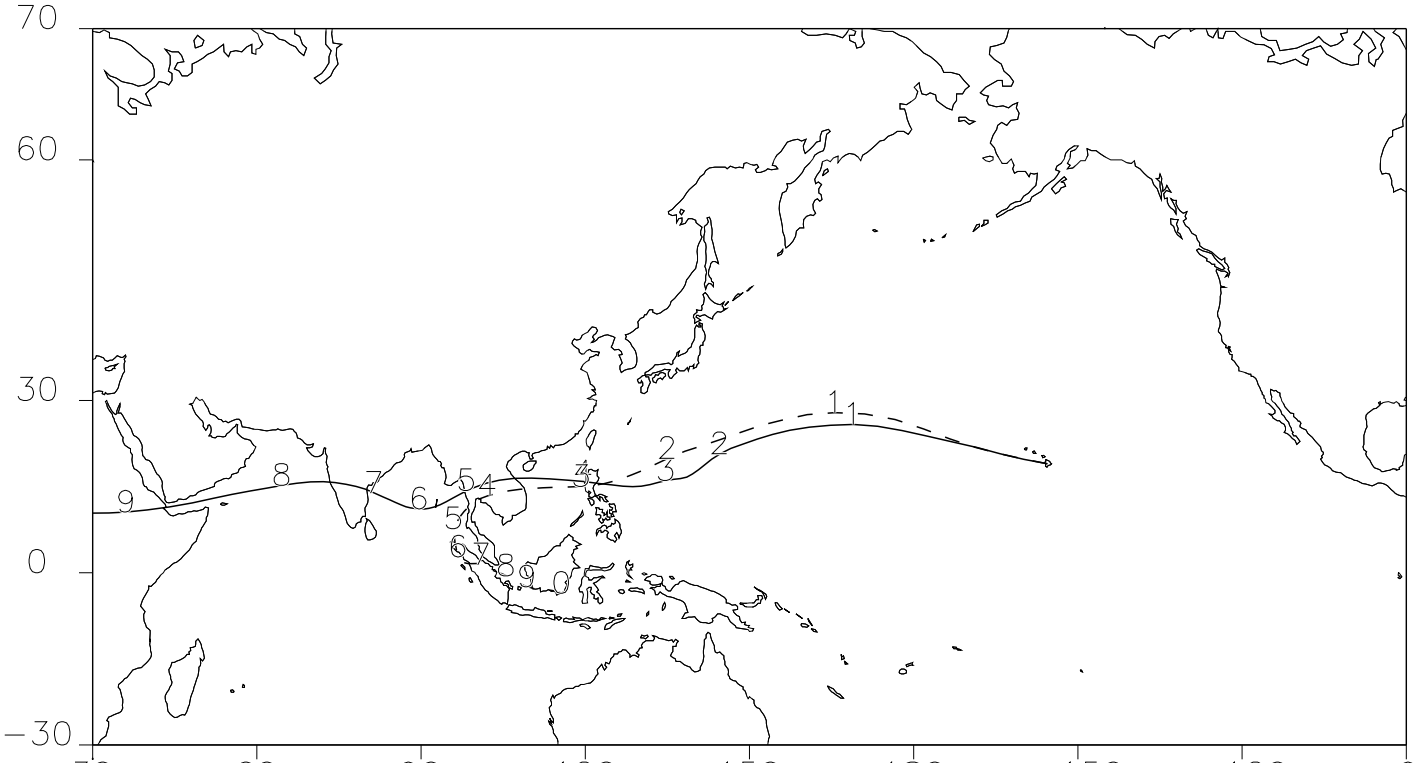
18UT

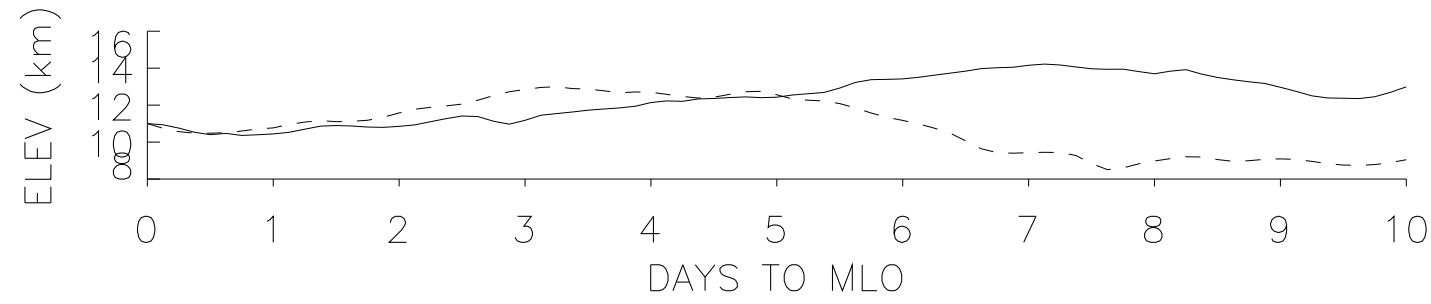
Day	km	hPa	C
0	11.0	247	-42
1	10.9	253	-40
2	11.0	248	-41
3	11.7	225	-45
4	10.6	264	-36
5	11.6	230	-45
6	13.1	182	-56
7	13.9	159	-63
8	12.8	191	-53
9	11.7	225	-45
10	11.1	246	-41

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
70
60
30
0
-30
30
60
90
120
150
180
-150
-120
-90
ELEV (km)
16
14
12
10
8
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
00UT
Day km hPa C
0 11.0 246 -43
1 11.4 235 -44
2 11.3 240 -43
3 9.9 292 -30
4 9.1 329 -25
5 9.6 305 -30
6 11.3 239 -44
7 12.3 203 -52
8 13.3 174 -59
9 12.3 203 -53
10 12.3 203 -51
06UT
Day km hPa C
0 11.0 246 -42
1 10.5 265 -36
2 11.3 238 -42
3 9.9 292 -30
4 8.9 335 -23
5 9.5 307 -29
6 11.3 236 -43
7 12.2 208 -49
8 13.6 167 -60
9 13.9 159 -62
10 13.9 159 -61
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

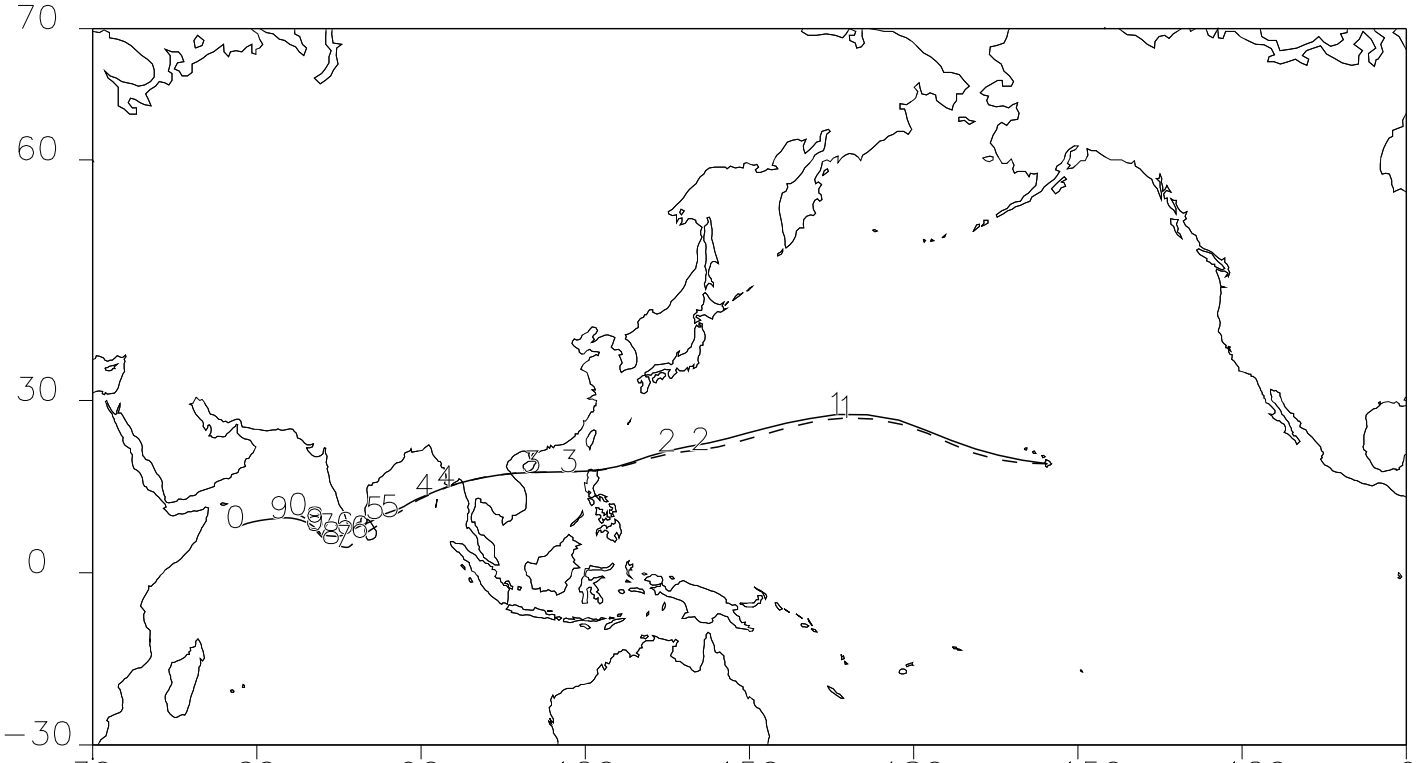
Day	km	hPa	C
0	11.0	245	−44
1	10.4	268	−36
2	10.8	255	−39
3	11.2	243	−42
4	12.1	209	−51
5	12.4	200	−53
6	13.4	171	−60
7	14.2	152	−66
8	13.7	163	−61
9	13.0	184	−55
10	13.0	185	−55

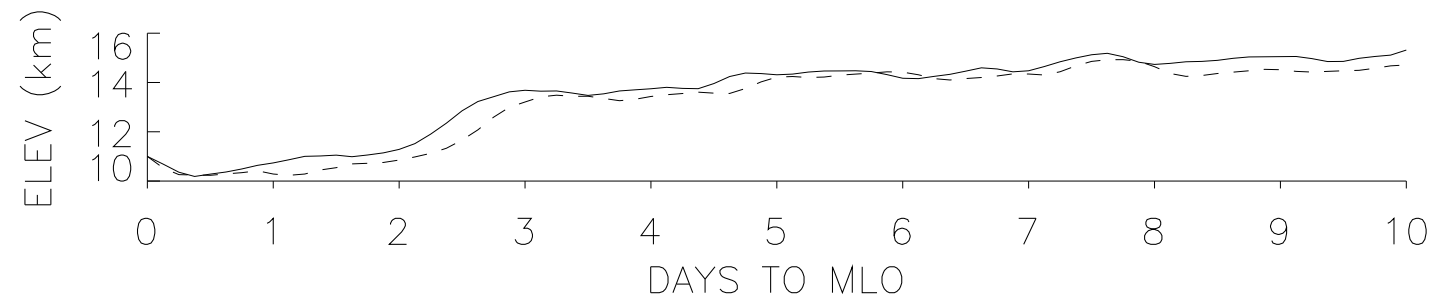
18UT

Day	km	hPa	C
0	11.0	245	−42
1	10.8	253	−40
2	11.6	227	−45
3	12.8	187	−57
4	12.7	192	−55
5	12.6	197	−53
6	11.2	243	−41
7	9.4	312	−29
8	9.0	332	−25
9	9.1	327	−27
10	9.0	329	−26

12UT − solid
18UT − dashed

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





00UT

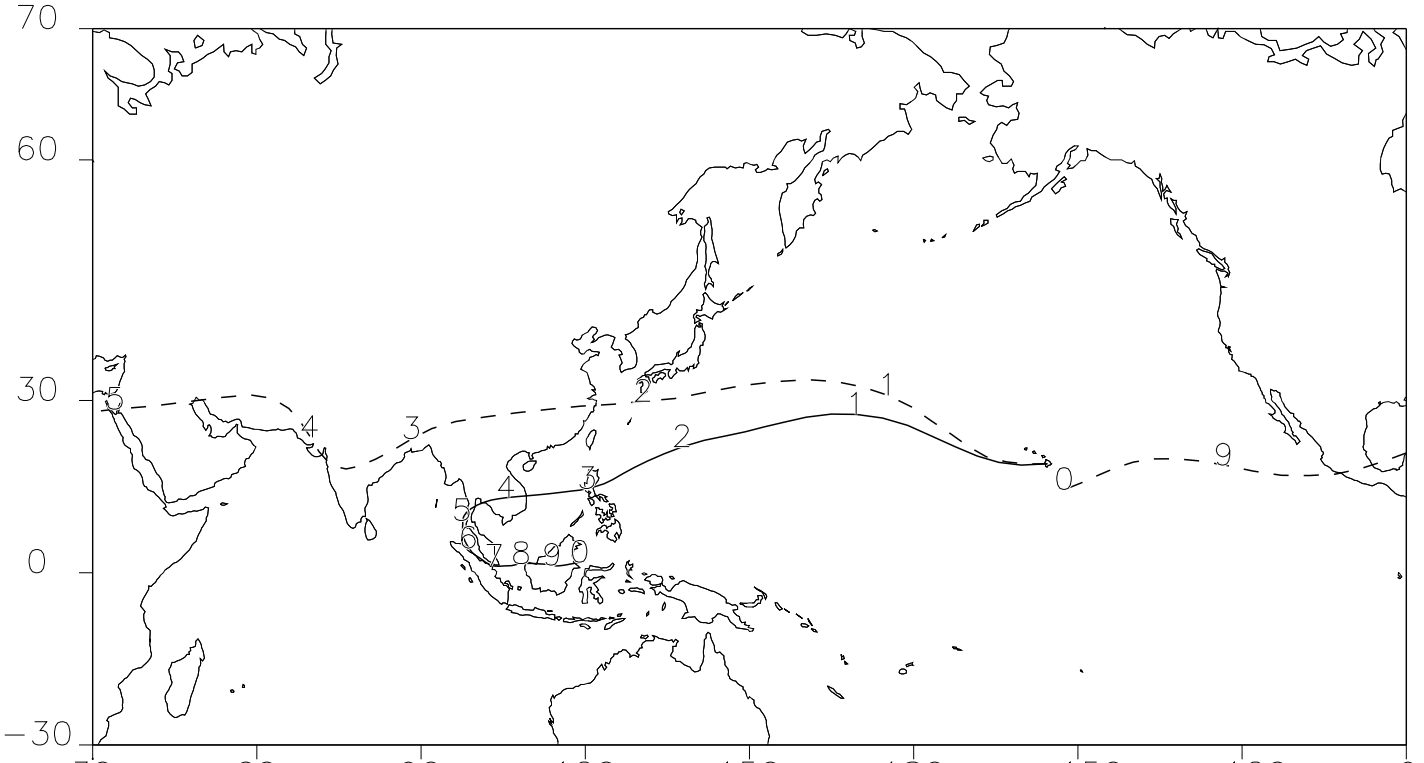
Day	km	hPa	C
0	11.0	244	−42
1	10.7	255	−39
2	11.3	237	−43
3	13.7	162	−65
4	13.7	162	−63
5	14.3	148	−66
6	14.2	151	−65
7	14.5	145	−67
8	14.7	139	−69
9	15.0	132	−70
10	15.3	126	−72

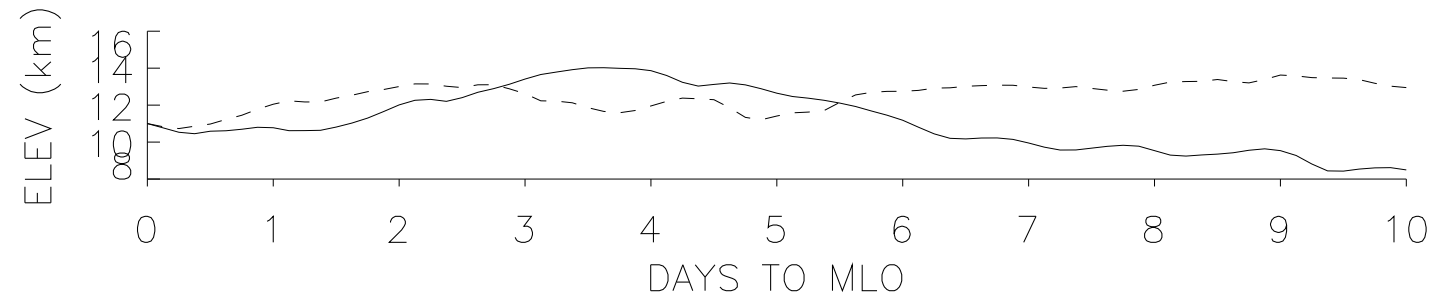
06UT

Day	km	hPa	C
0	11.0	243	−43
1	10.3	272	−36
2	10.9	253	−40
3	13.2	176	−60
4	13.4	171	−61
5	14.2	151	−65
6	14.4	146	−66
7	14.3	149	−66
8	14.6	142	−68
9	14.5	145	−65
10	14.7	140	−67

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





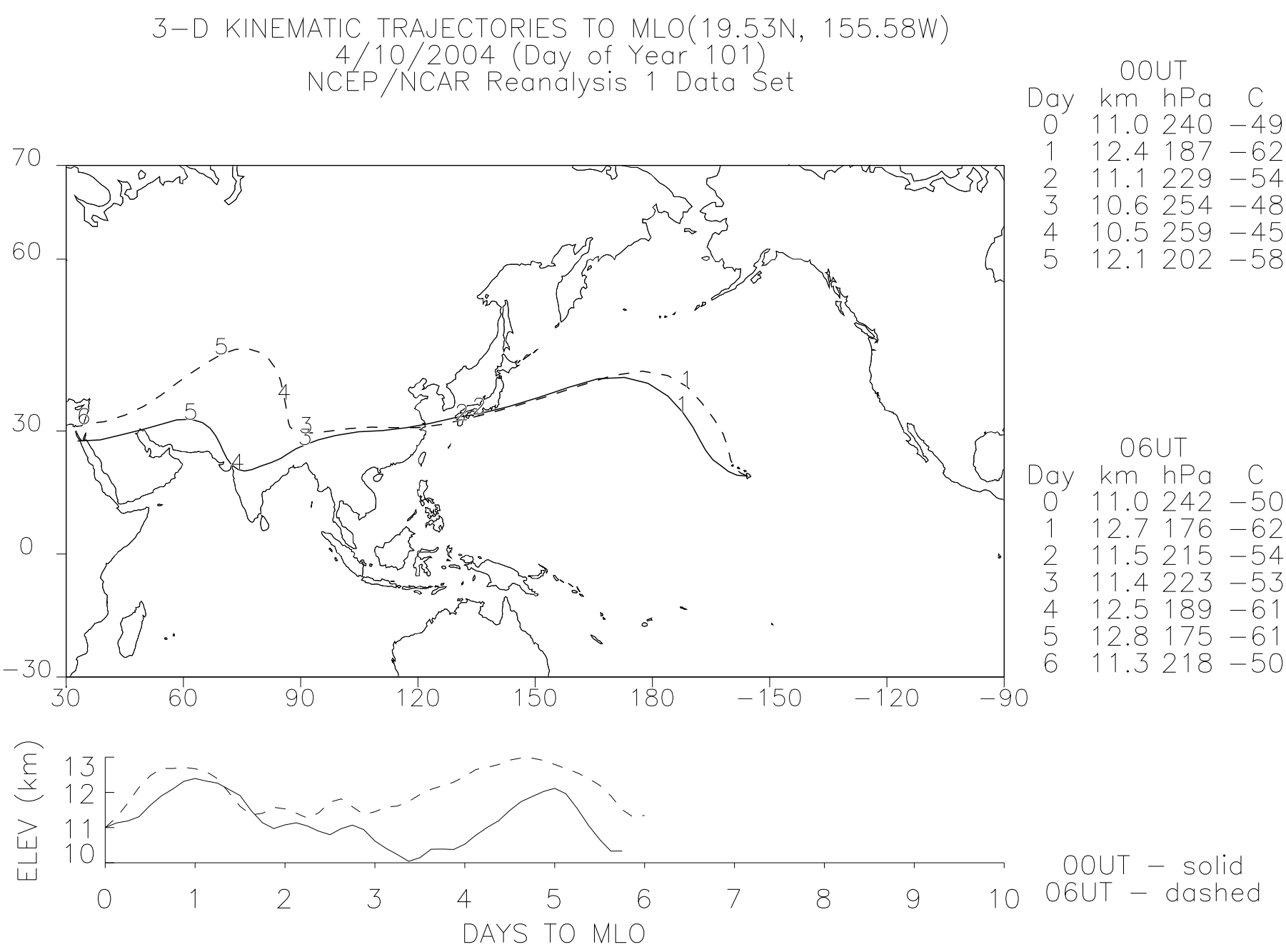
12UT

Day	km	hPa	C
0	11.0	242	-45
1	10.8	254	-40
2	12.0	213	-49
3	13.4	172	-61
4	13.9	159	-65
5	12.6	194	-54
6	11.2	243	-41
7	10.0	289	-32
8	9.5	307	-29
9	9.5	308	-28
10	8.5	355	-21

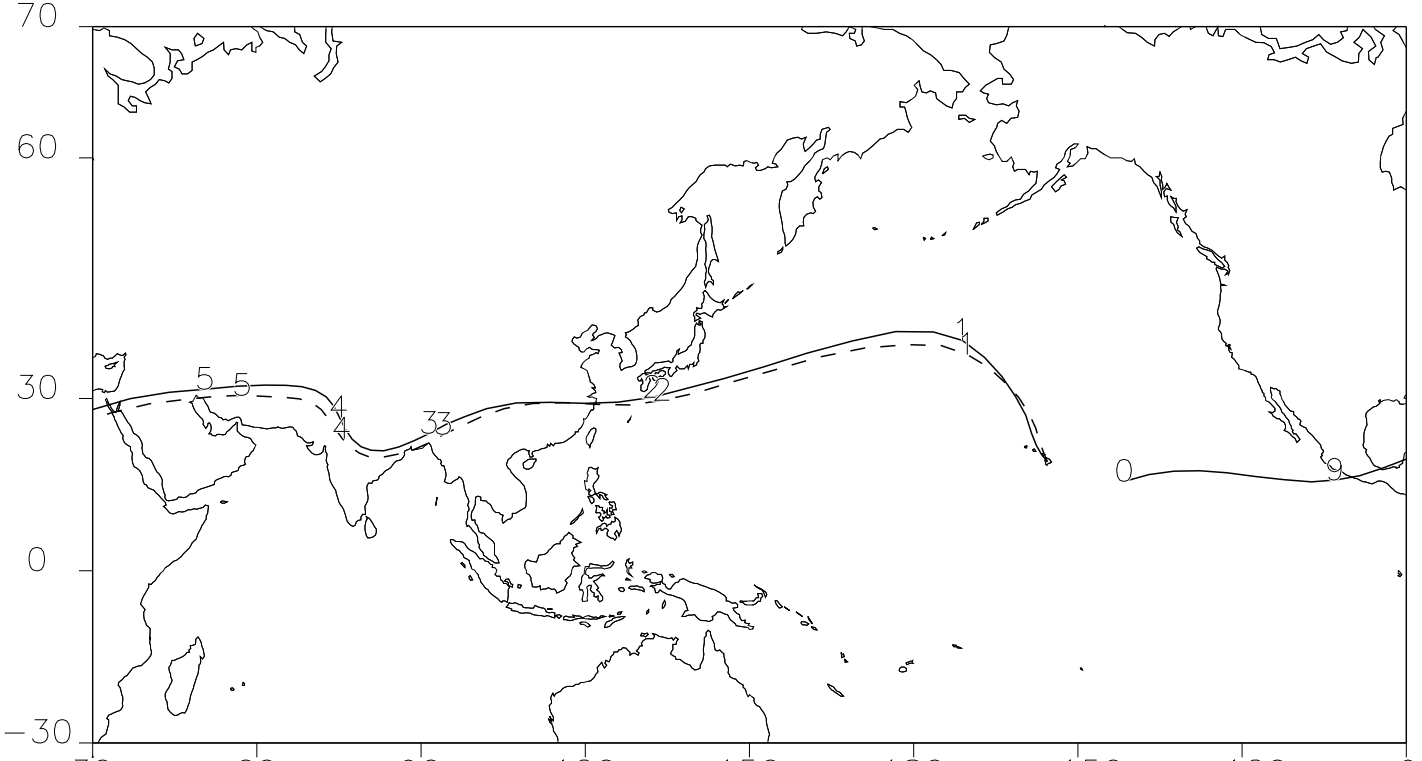
18UT

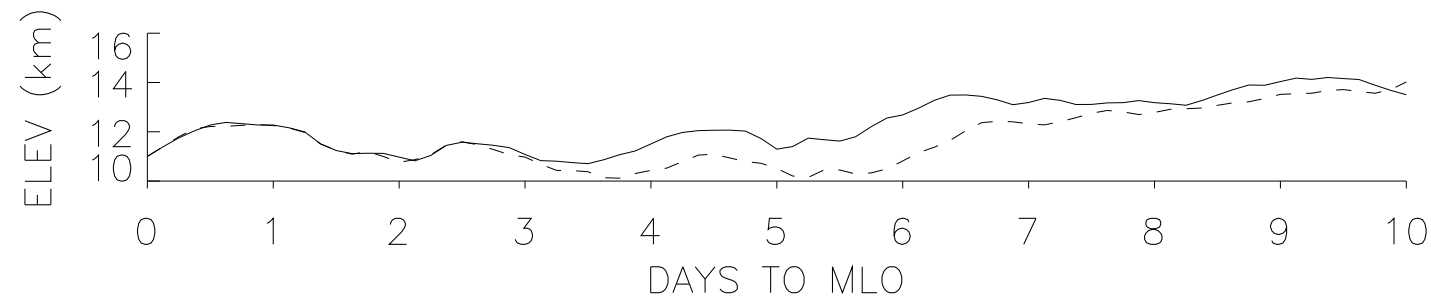
Day	km	hPa	C
0	11.0	241	-47
1	12.0	205	-55
2	13.0	174	-63
3	12.6	188	-56
4	12.0	210	-51
5	11.4	222	-46
6	12.7	185	-56
7	13.0	177	-58
8	13.1	175	-58
9	13.6	161	-64
10	12.9	182	-58

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 11.0 240 -49
1 12.4 187 -62
2 11.1 229 -54
3 10.6 254 -48
4 10.5 259 -45
5 12.1 202 -58
06UT
Day km hPa C
0 11.0 242 -50
1 12.7 176 -62
2 11.5 215 -54
3 11.4 223 -53
4 12.5 189 -61
5 12.8 175 -61
6 11.3 218 -50
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)
4/10/2004 (Day of Year 101)
NCEP/NCAR Reanalysis 1 Data Set





12UT

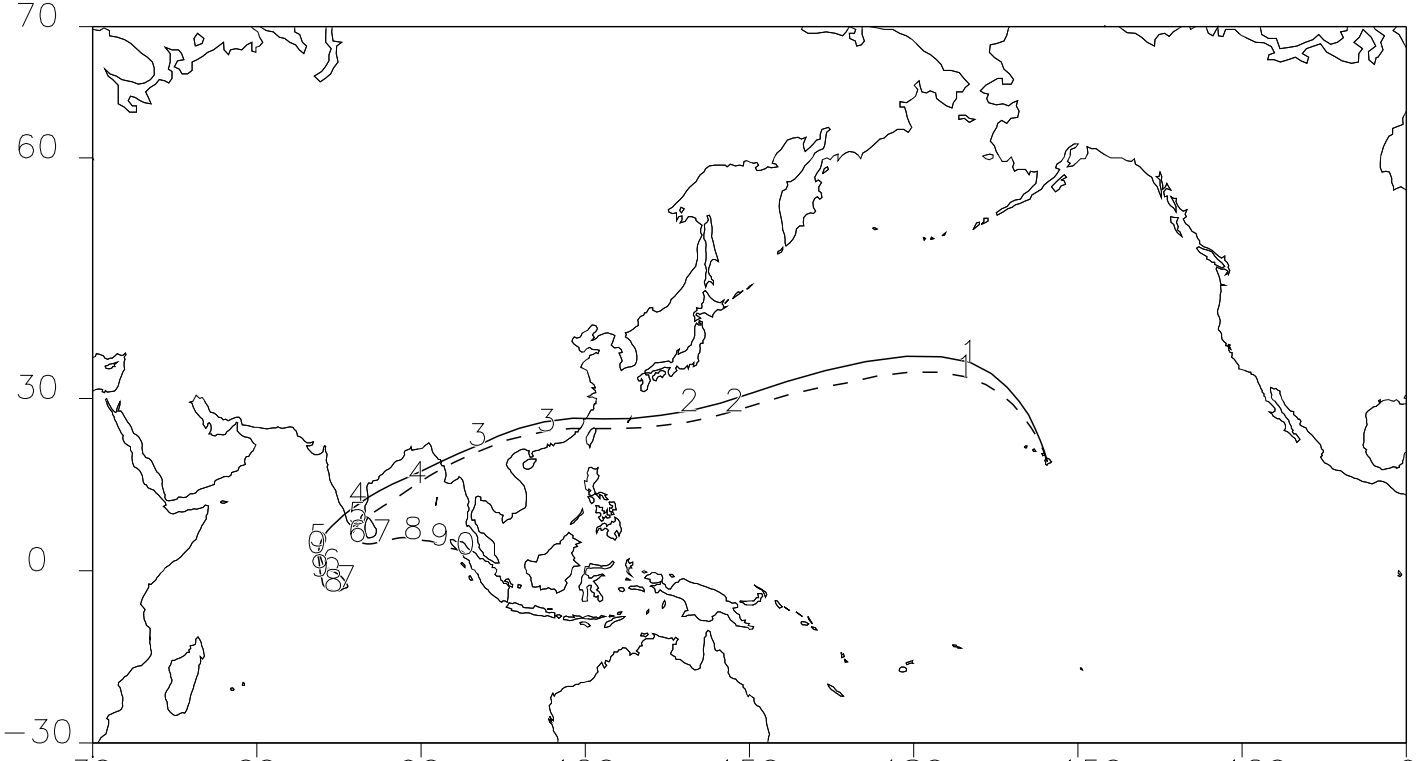
Day	km	hPa	C
0	11.0	241	−51
1	12.3	190	−62
2	11.0	237	−49
3	11.1	238	−48
4	11.5	222	−49
5	11.3	226	−47
6	12.7	187	−57
7	13.2	175	−58
8	13.2	171	−57
9	14.0	151	−65
10	13.5	166	−61

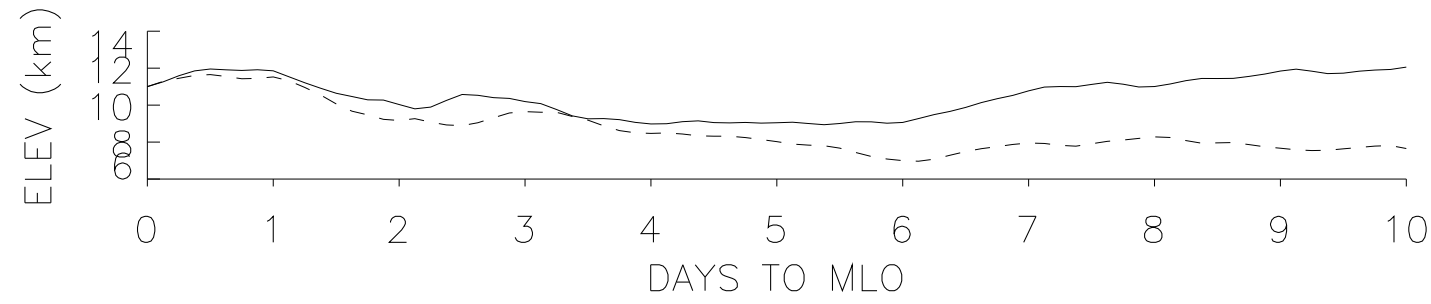
18UT

Day	km	hPa	C
0	11.0	242	−51
1	12.3	193	−62
2	10.8	245	−48
3	11.0	243	−47
4	10.4	264	−42
5	10.5	258	−42
6	10.8	248	−44
7	12.3	201	−53
8	12.8	188	−56
9	13.5	167	−60
10	14.0	155	−64

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

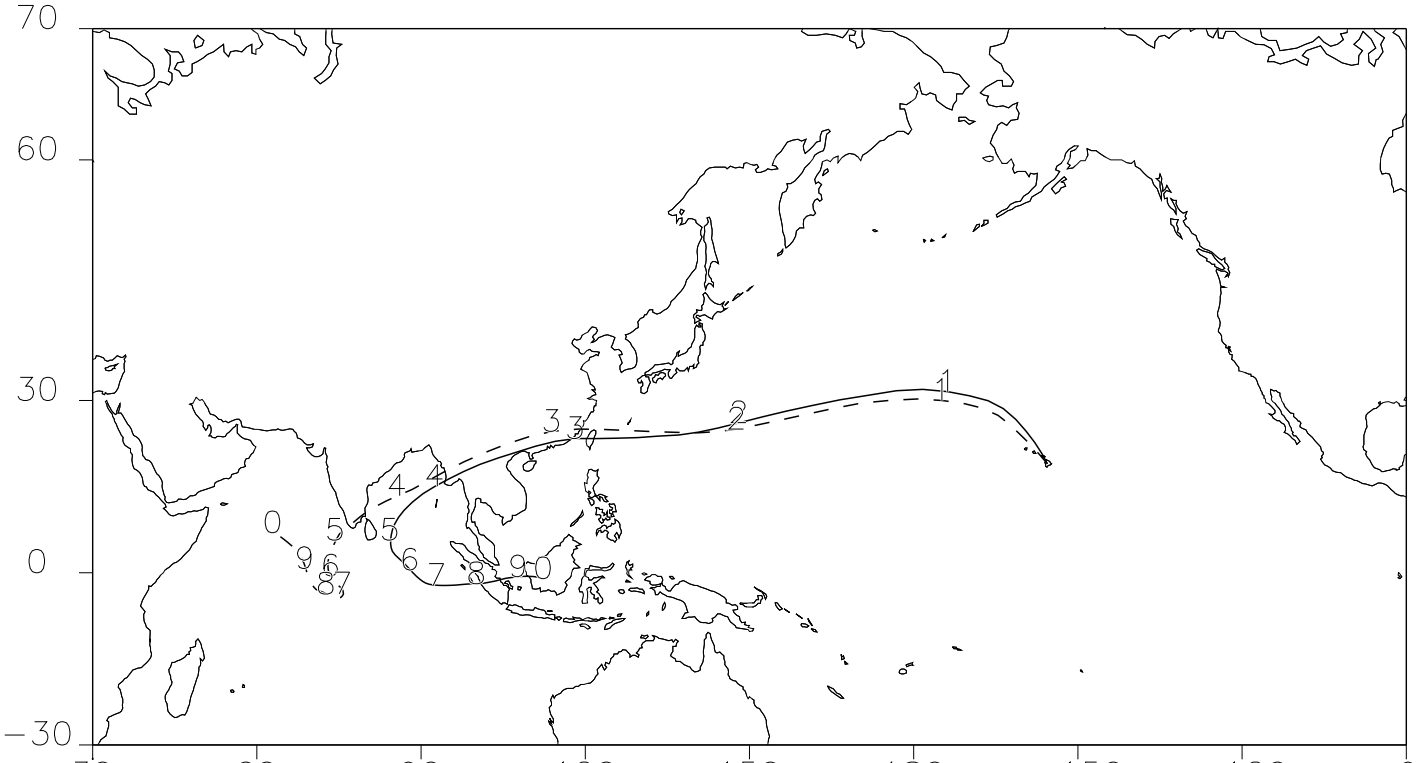
Day	km	hPa	C
0	11.0	242	-51
1	11.9	208	-59
2	10.0	279	-39
3	10.2	275	-39
4	9.0	330	-27
5	9.0	327	-27
6	9.1	327	-26
7	10.8	257	-40
8	11.0	248	-42
9	11.8	219	-47
10	12.1	212	-47

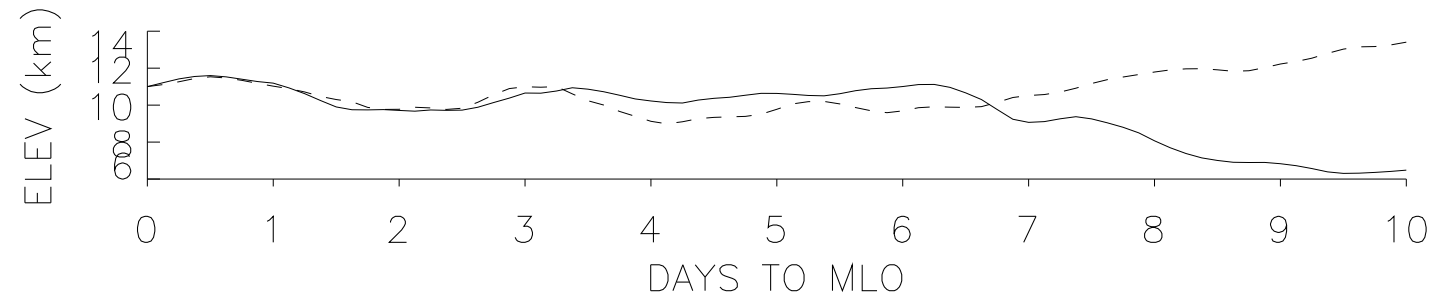
06UT

Day	km	hPa	C
0	11.0	244	-49
1	11.5	221	-53
2	9.2	316	-31
3	9.6	297	-34
4	8.5	354	-24
5	8.0	378	-20
6	7.0	433	-12
7	7.9	383	-18
8	8.3	365	-21
9	7.7	397	-15
10	7.7	398	-15

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





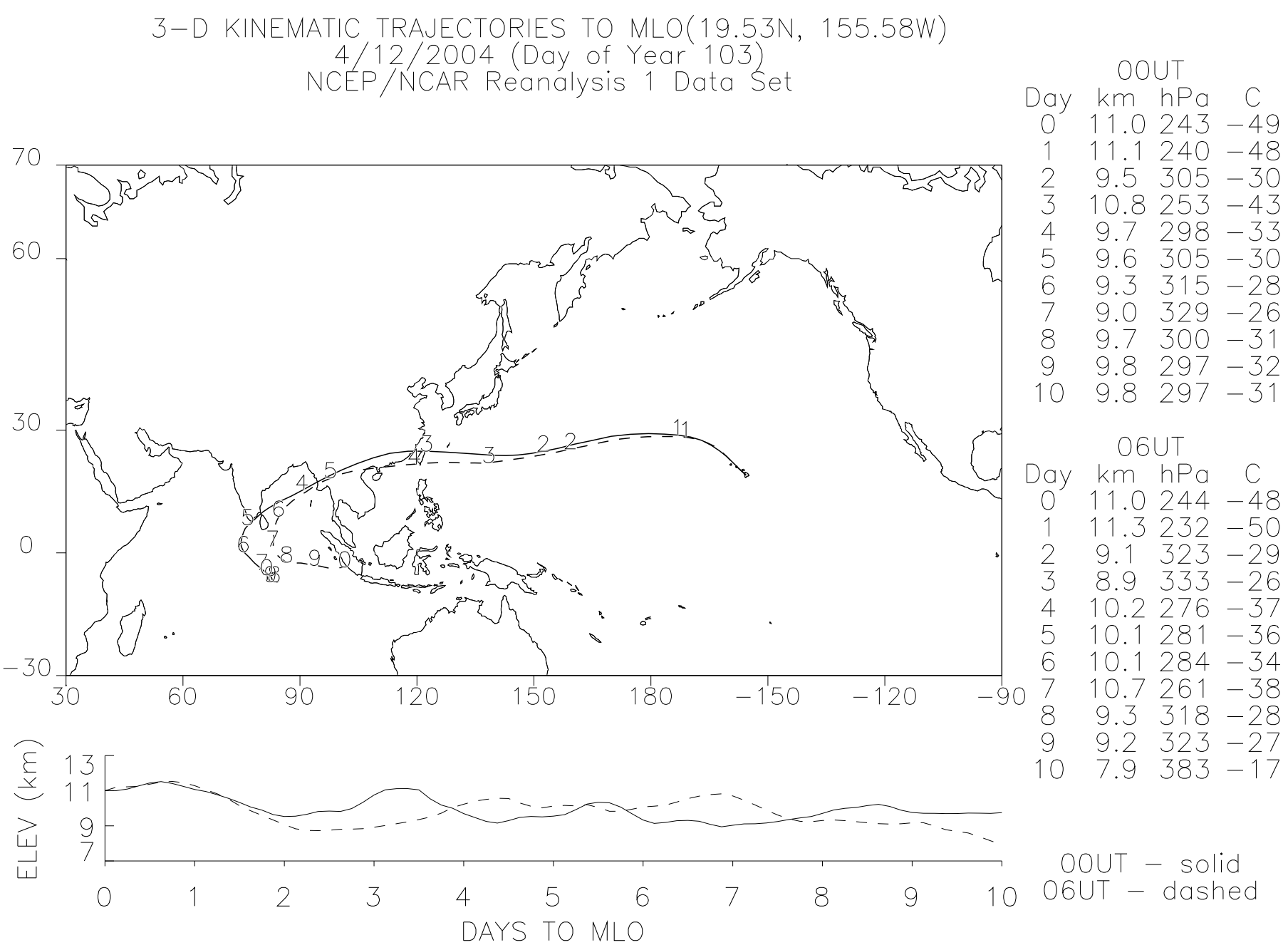
12UT

Day	km	hPa	C
0	11.0	243	-49
1	11.2	234	-50
2	9.7	296	-33
3	10.7	258	-41
4	10.2	277	-36
5	10.6	262	-38
6	11.0	248	-41
7	9.1	328	-26
8	8.1	376	-19
9	6.8	442	-11
10	6.5	463	-9

18UT

Day	km	hPa	C
0	11.0	244	-49
1	11.0	241	-50
2	9.8	293	-33
3	11.0	244	-46
4	9.1	324	-27
5	9.8	297	-31
6	9.7	301	-31
7	10.5	268	-37
8	11.8	222	-47
9	12.2	208	-50
10	13.4	173	-59

12UT – solid
18UT – dashed

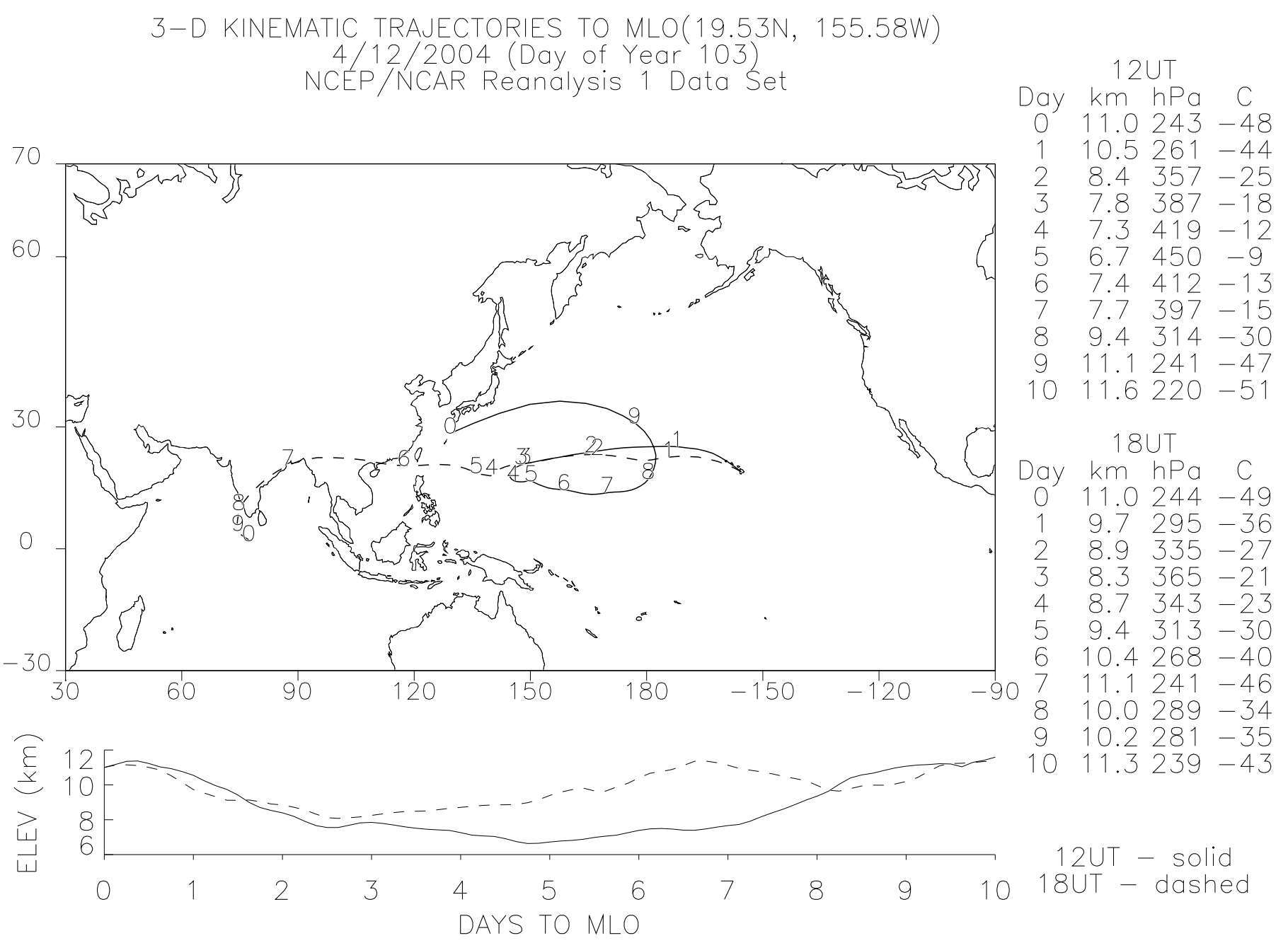


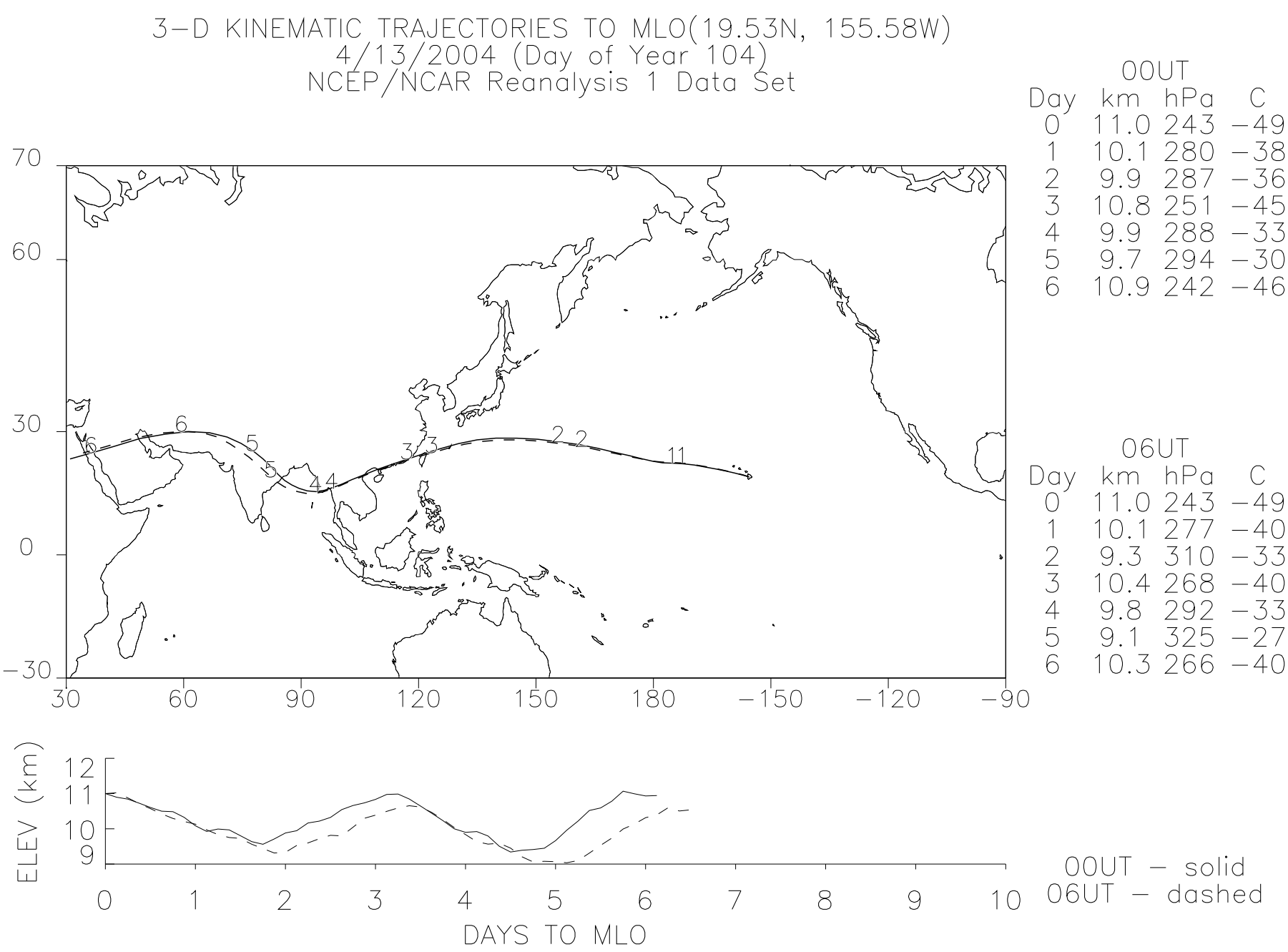
00UT

Day	km	hPa	C
0	11.0	243	-49
1	11.1	240	-48
2	9.5	305	-30
3	10.8	253	-43
4	9.7	298	-33
5	9.6	305	-30
6	9.3	315	-28
7	9.0	329	-26
8	9.7	300	-31
9	9.8	297	-32
10	9.8	297	-31

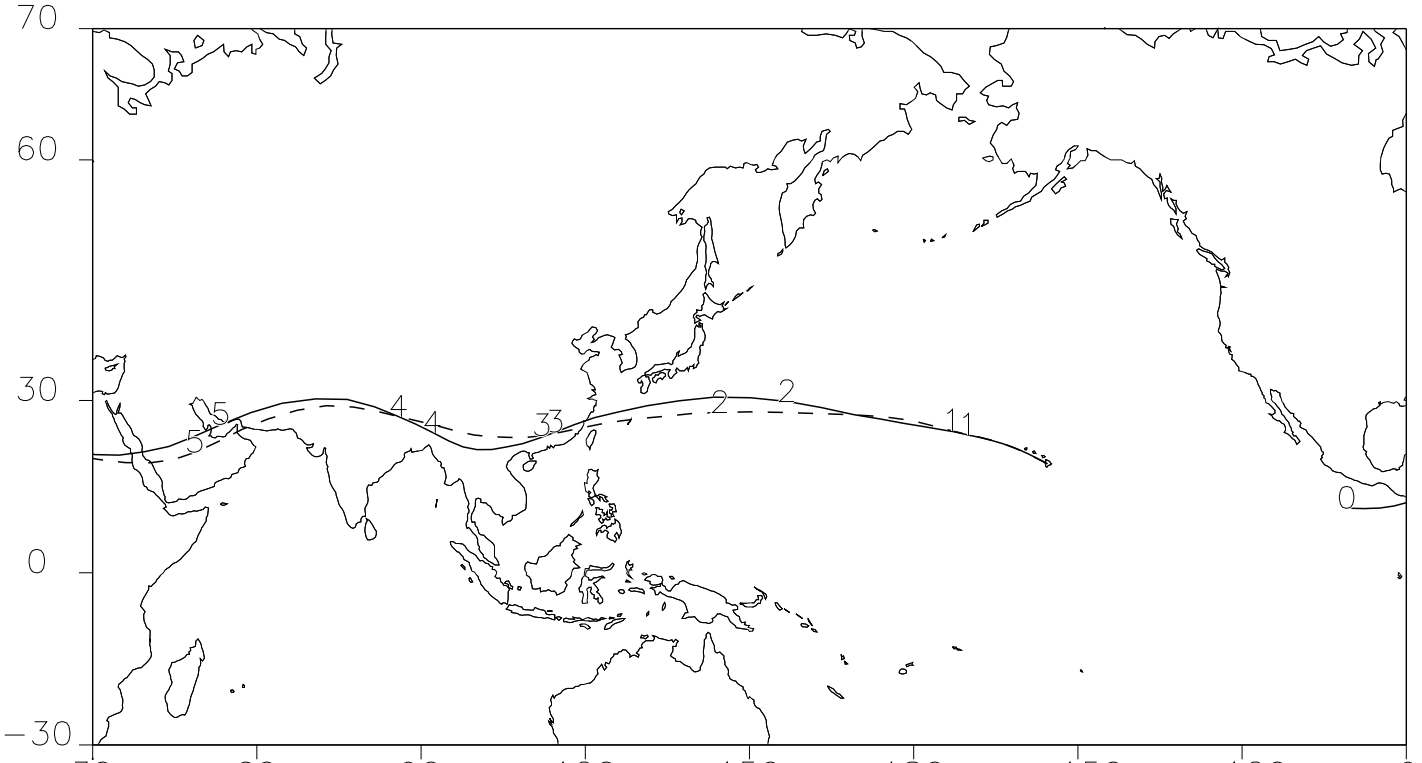
06UT

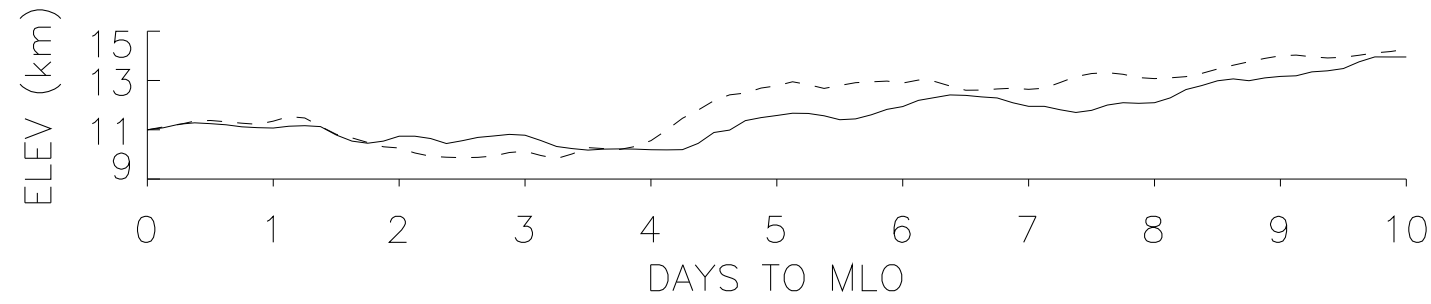
Day	km	hPa	C
0	11.0	244	-48
1	11.3	232	-50
2	9.1	323	-29
3	8.9	333	-26
4	10.2	276	-37
5	10.1	281	-36
6	10.1	284	-34
7	10.7	261	-38
8	9.3	318	-28
9	9.2	323	-27
10	7.9	383	-17


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)
12
10
8
6
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
12UT
Day km hPa C
0 11.0 243 -48
1 10.5 261 -44
2 8.4 357 -25
3 7.8 387 -18
4 7.3 419 -12
5 6.7 450 -9
6 7.4 412 -13
7 7.7 397 -15
8 9.4 314 -30
9 11.1 241 -47
10 11.6 220 -51
18UT
Day km hPa C
0 11.0 244 -49
1 9.7 295 -36
2 8.9 335 -27
3 8.3 365 -21
4 8.7 343 -23
5 9.4 313 -30
6 10.4 268 -40
7 11.1 241 -46
8 10.0 289 -34
9 10.2 281 -35
10 11.3 239 -43
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 11.0 243 -49
1 10.1 280 -38
2 9.9 287 -36
3 10.8 251 -45
4 9.9 288 -33
5 9.7 294 -30
6 10.9 242 -46
06UT
Day km hPa C
0 11.0 243 -49
1 10.1 277 -40
2 9.3 310 -33
3 10.4 268 -40
4 9.8 292 -33
5 9.1 325 -27
6 10.3 266 -40
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
12
11
10
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)
4/13/2004 (Day of Year 104)
NCEP/NCAR Reanalysis 1 Data Set





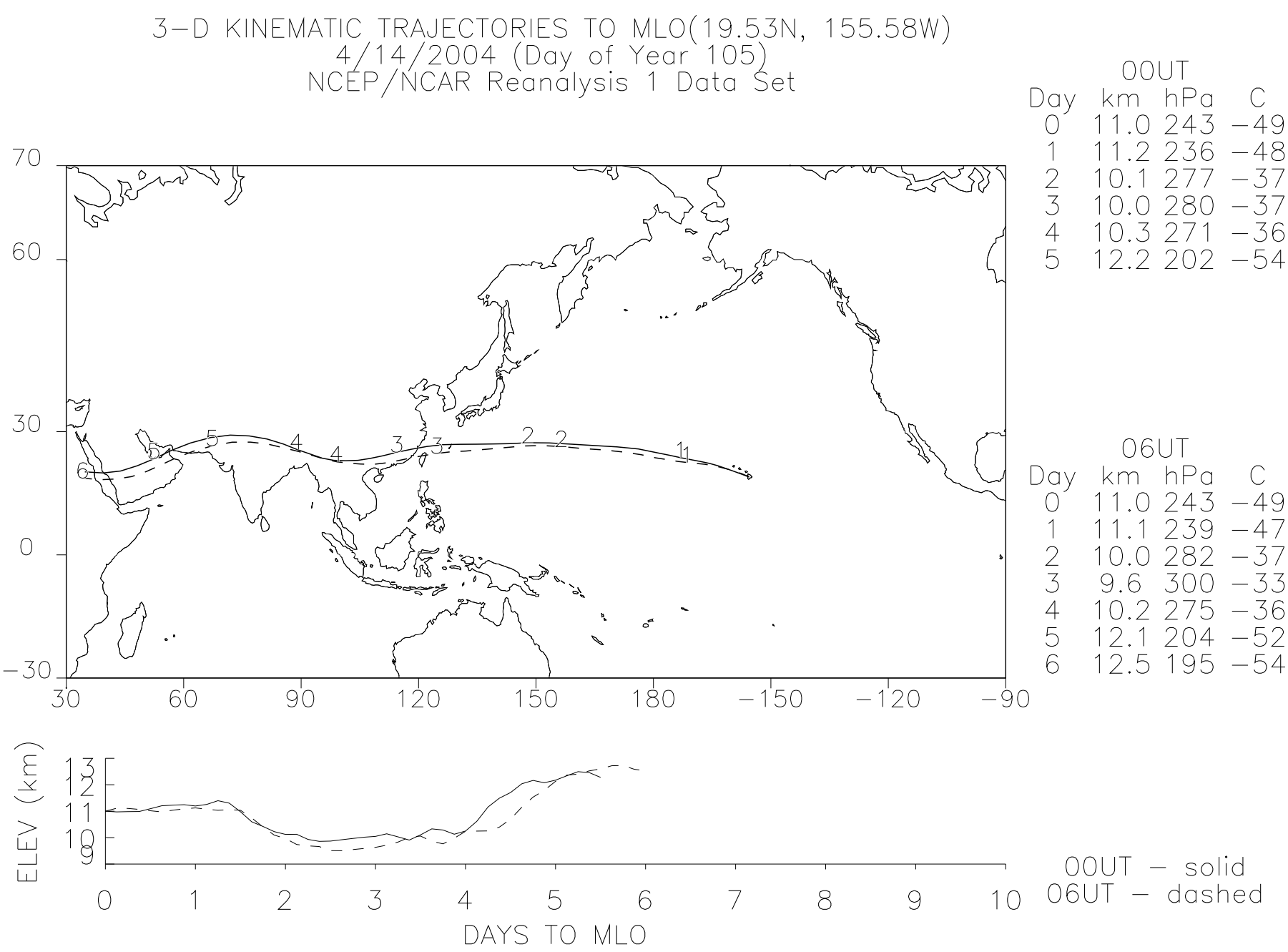
12UT

Day	km	hPa	C
0	11.0	243	−49
1	11.1	240	−48
2	10.7	249	−46
3	10.8	252	−43
4	10.2	273	−36
5	11.6	221	−49
6	11.9	210	−53
7	12.0	212	−51
8	12.1	208	−49
9	13.2	177	−59
10	14.0	156	−65

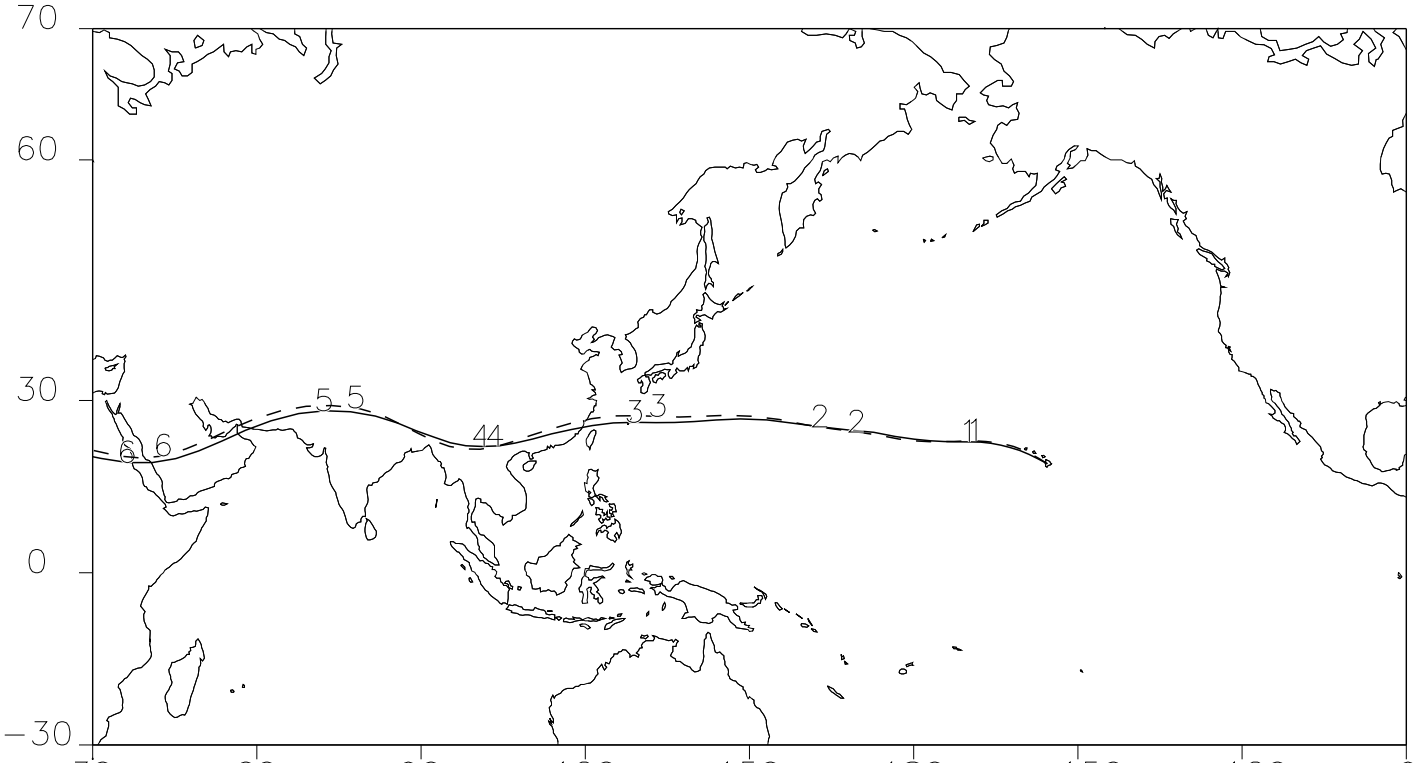
18UT

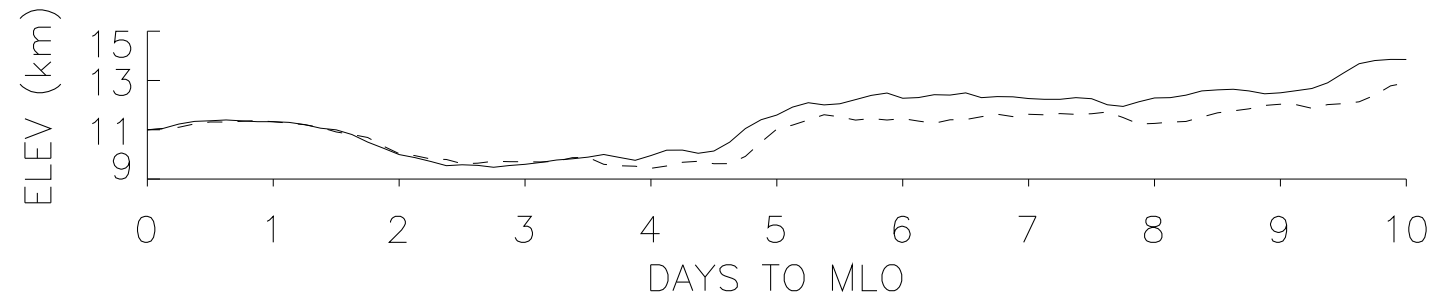
Day	km	hPa	C
0	11.0	243	−49
1	11.3	229	−50
2	10.3	270	−39
3	10.1	277	−37
4	10.6	259	−38
5	12.8	187	−56
6	12.9	183	−57
7	12.6	193	−54
8	13.1	181	−57
9	14.0	156	−62
10	14.3	149	−64

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 11.0 243 -49
1 11.2 236 -48
2 10.1 277 -37
3 10.0 280 -37
4 10.3 271 -36
5 12.2 202 -54
06UT
Day km hPa C
0 11.0 243 -49
1 11.1 239 -47
2 10.0 282 -37
3 9.6 300 -33
4 10.2 275 -36
5 12.1 204 -52
6 12.5 195 -54
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
13
12
11
10
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)
4/14/2004 (Day of Year 105)
NCEP/NCAR Reanalysis 1 Data Set





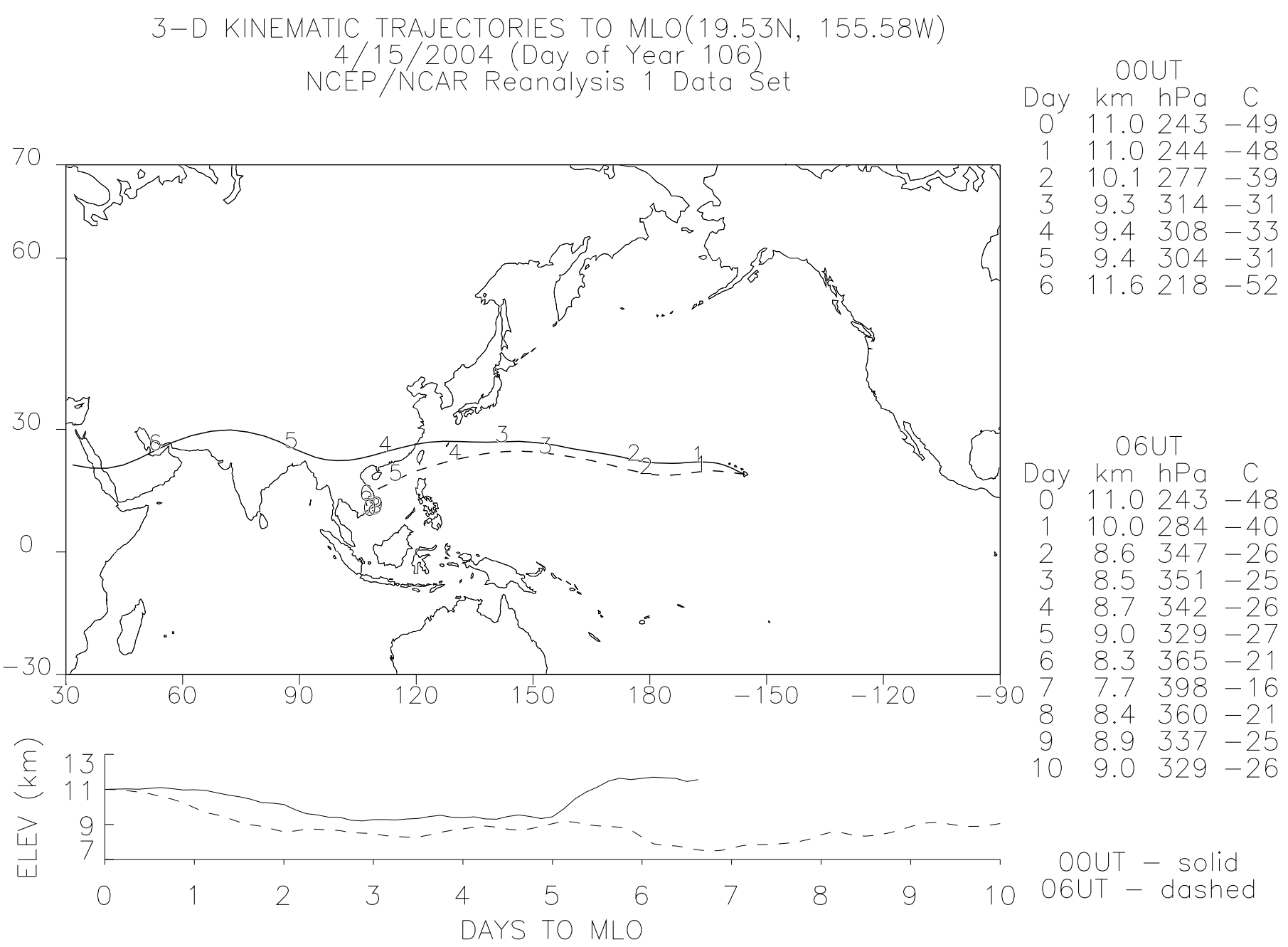
12UT

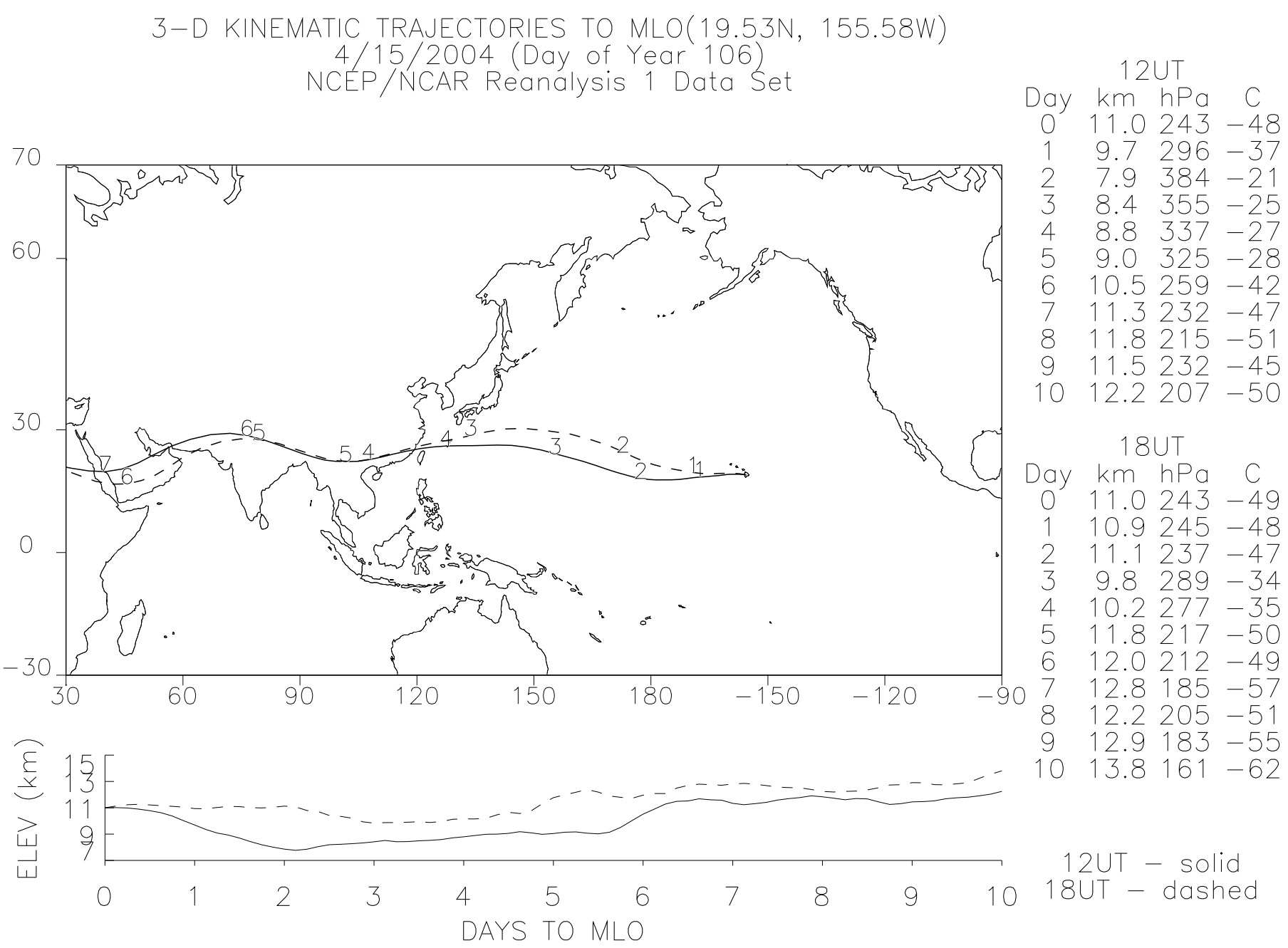
Day	km	hPa	C
0	11.0	243	−49
1	11.3	231	−49
2	10.0	281	−37
3	9.6	301	−32
4	10.0	286	−34
5	11.6	220	−49
6	12.3	201	−52
7	12.3	203	−53
8	12.3	205	−51
9	12.5	198	−52
10	13.9	160	−62

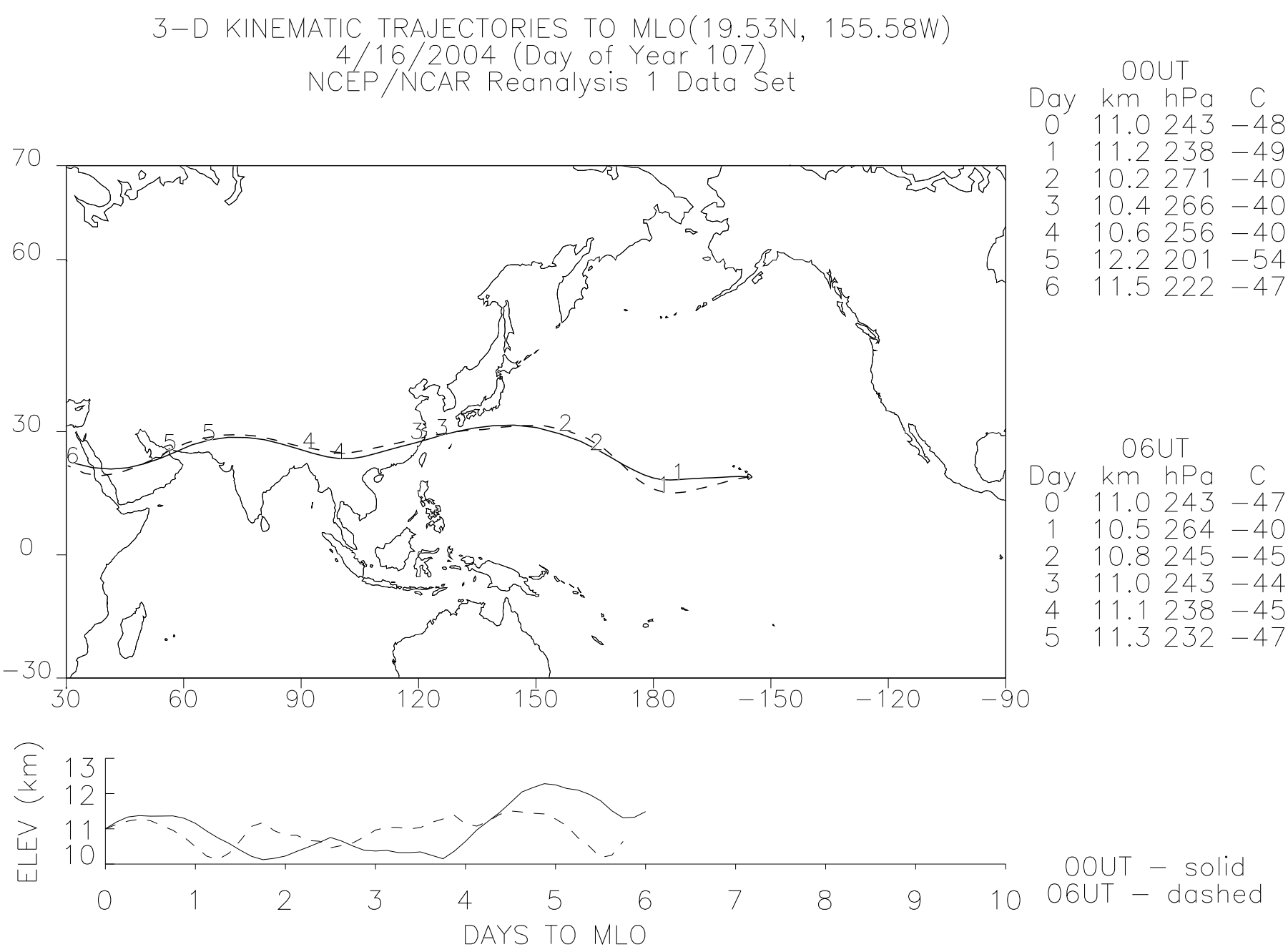
18UT

Day	km	hPa	C
0	11.0	243	−49
1	11.3	231	−51
2	10.0	279	−40
3	9.7	295	−34
4	9.4	308	−31
5	11.0	241	−46
6	11.5	228	−48
7	11.6	221	−50
8	11.3	236	−45
9	12.0	208	−52
10	12.9	184	−57

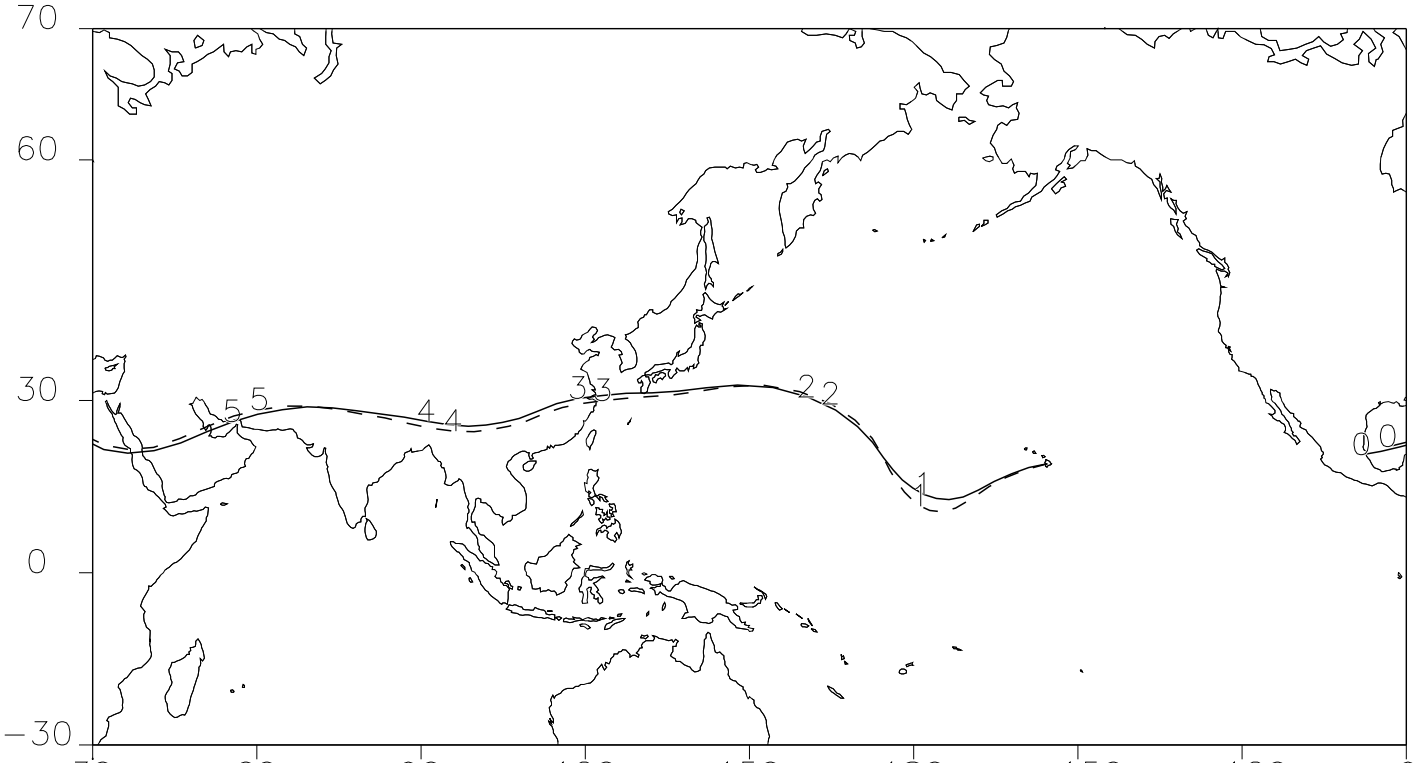
12UT − solid
18UT − dashed

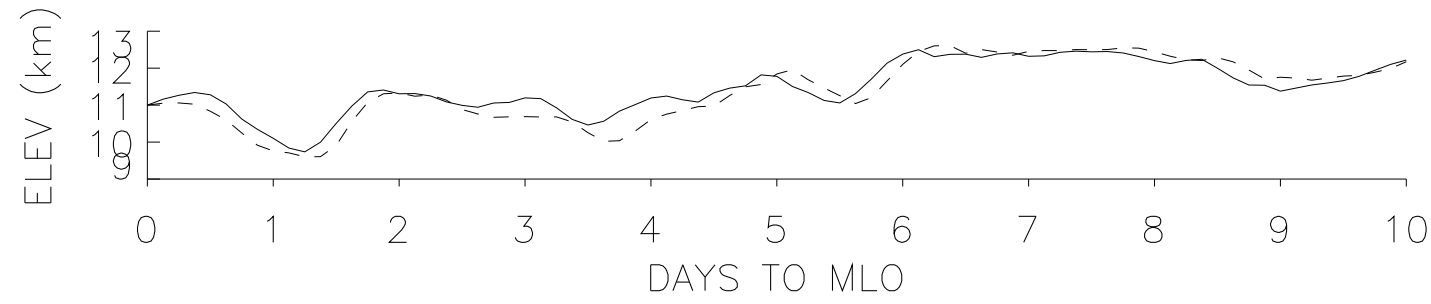

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/15/2004 (Day of Year 106)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 11.0 243 -49
1 11.0 244 -48
2 10.1 277 -39
3 9.3 314 -31
4 9.4 308 -33
5 9.4 304 -31
6 11.6 218 -52
06UT
Day km hPa C
0 11.0 243 -48
1 10.0 284 -40
2 8.6 347 -26
3 8.5 351 -25
4 8.7 342 -26
5 9.0 329 -27
6 8.3 365 -21
7 7.7 398 -16
8 8.4 360 -21
9 8.9 337 -25
10 9.0 329 -26
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
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)
4/15/2004 (Day of Year 106)
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
7
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
12UT
Day km hPa C
0 11.0 243 -48
1 9.7 296 -37
2 7.9 384 -21
3 8.4 355 -25
4 8.8 337 -27
5 9.0 325 -28
6 10.5 259 -42
7 11.3 232 -47
8 11.8 215 -51
9 11.5 232 -45
10 12.2 207 -50
18UT
Day km hPa C
0 11.0 243 -49
1 10.9 245 -48
2 11.1 237 -47
3 9.8 289 -34
4 10.2 277 -35
5 11.8 217 -50
6 12.0 212 -49
7 12.8 185 -57
8 12.2 205 -51
9 12.9 183 -55
10 13.8 161 -62
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 11.0 243 -48
1 11.2 238 -49
2 10.2 271 -40
3 10.4 266 -40
4 10.6 256 -40
5 12.2 201 -54
6 11.5 222 -47
06UT
Day km hPa C
0 11.0 243 -47
1 10.5 264 -40
2 10.8 245 -45
3 11.0 243 -44
4 11.1 238 -45
5 11.3 232 -47
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)
4/16/2004 (Day of Year 107)
NCEP/NCAR Reanalysis 1 Data Set





12UT

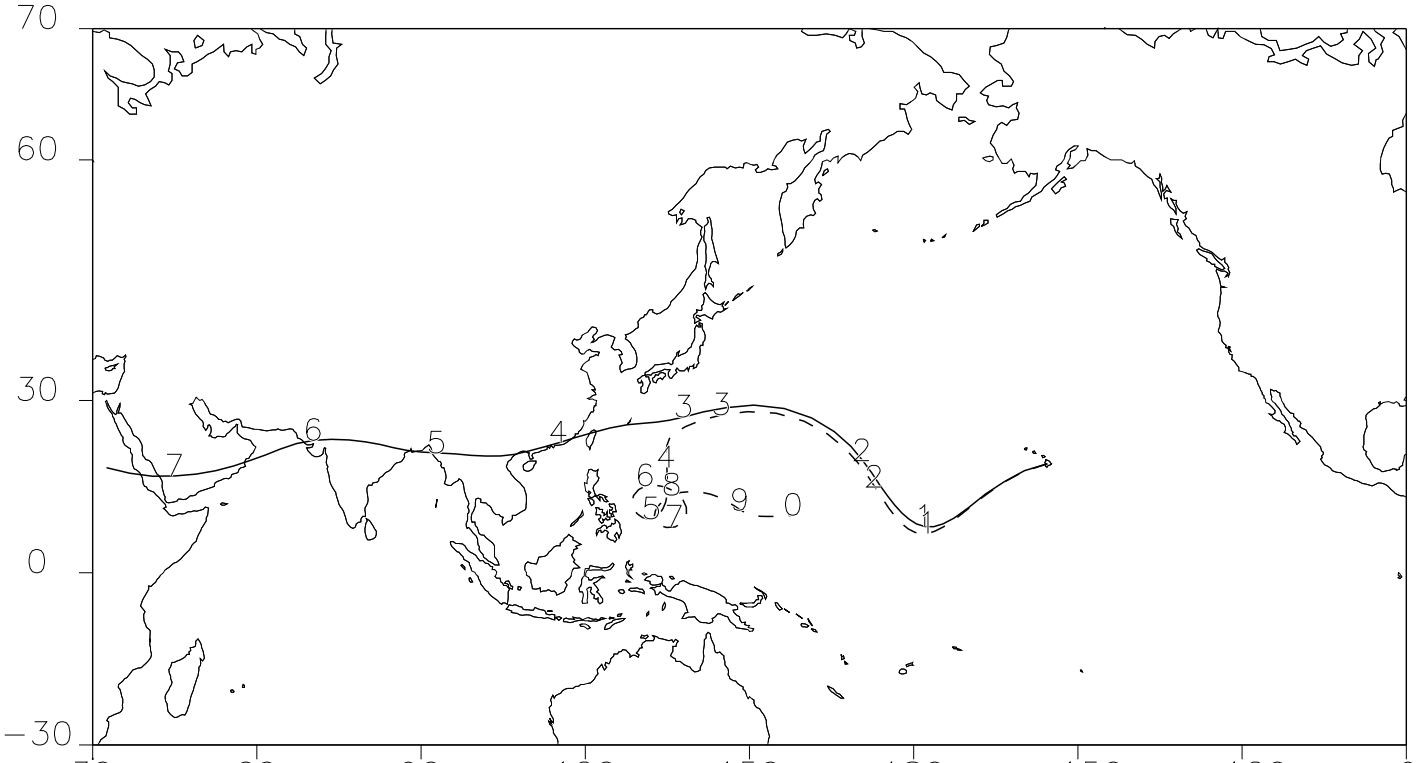
Day	km	hPa	C
0	11.0	243	−47
1	10.1	281	−37
2	11.3	228	−48
3	11.2	234	−47
4	11.2	234	−47
5	11.8	214	−51
6	12.4	193	−56
7	12.3	196	−54
8	12.2	201	−56
9	11.4	226	−48
10	12.2	201	−52

18UT

Day	km	hPa	C
0	11.0	244	−45
1	9.8	295	−32
2	11.3	227	−49
3	10.7	253	−43
4	10.6	257	−42
5	11.8	213	−52
6	12.1	202	−53
7	12.5	190	−58
8	12.4	193	−57
9	11.8	213	−50
10	12.2	203	−52

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

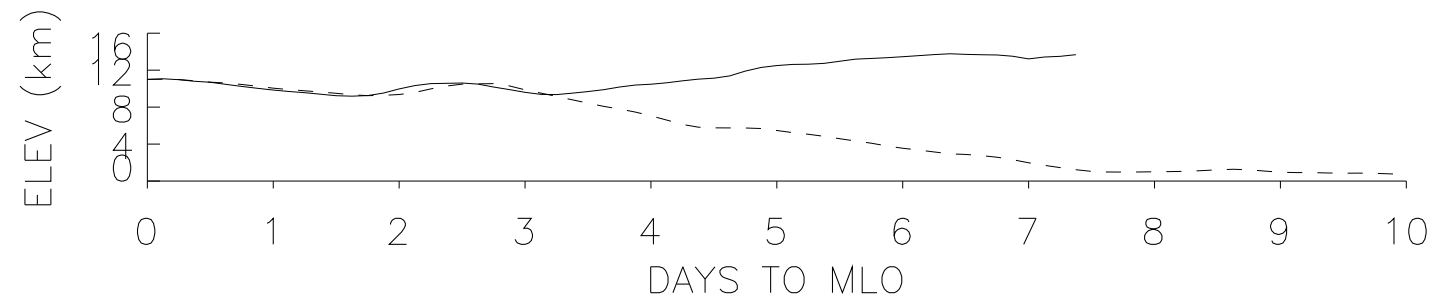


00UT

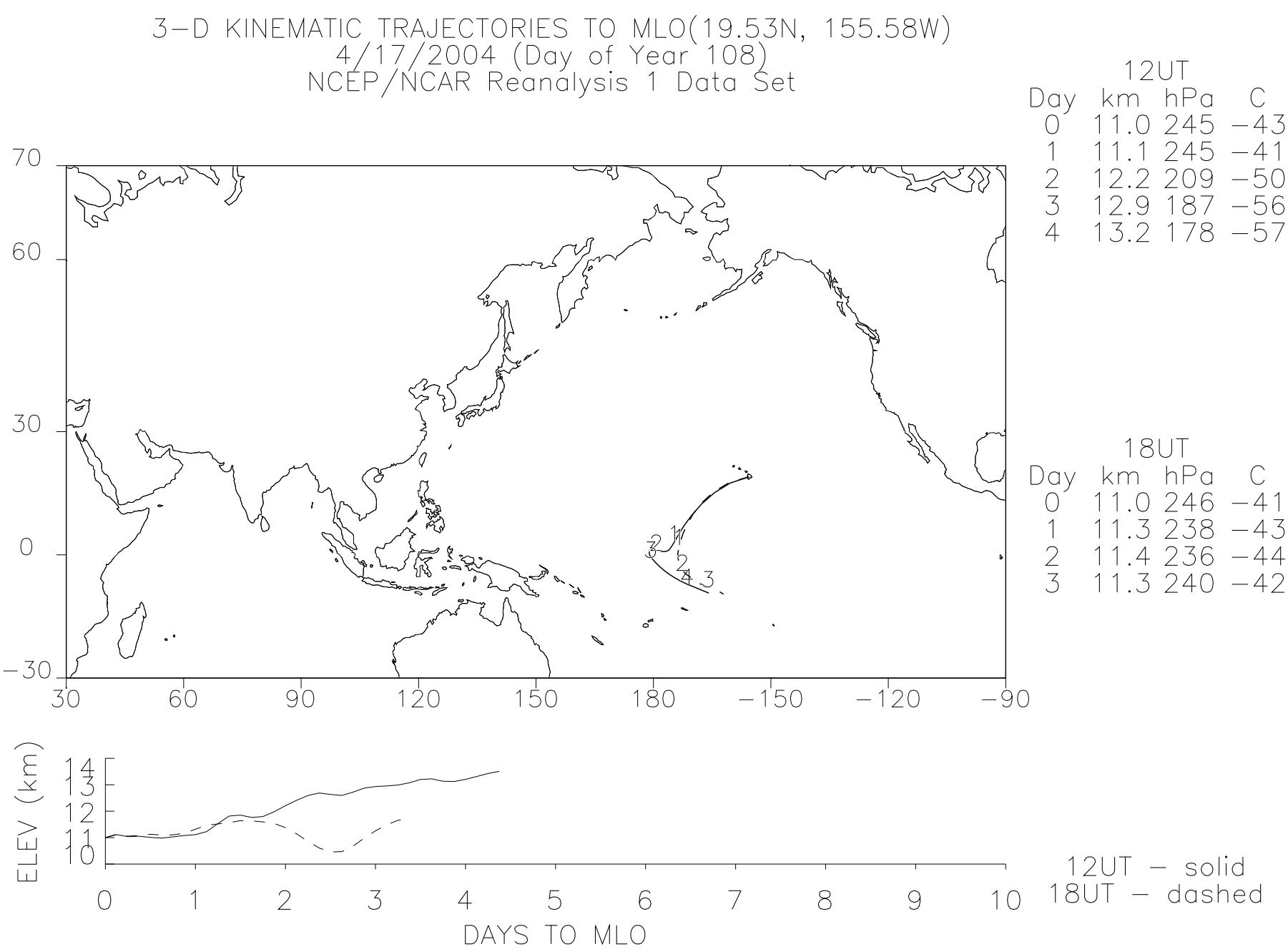
Day	km	hPa	C
0	11.0	244	-44
1	9.8	293	-33
2	10.0	286	-35
3	9.6	301	-31
4	10.5	265	-36
5	12.5	196	-53
6	13.5	169	-60
7	13.2	174	-57

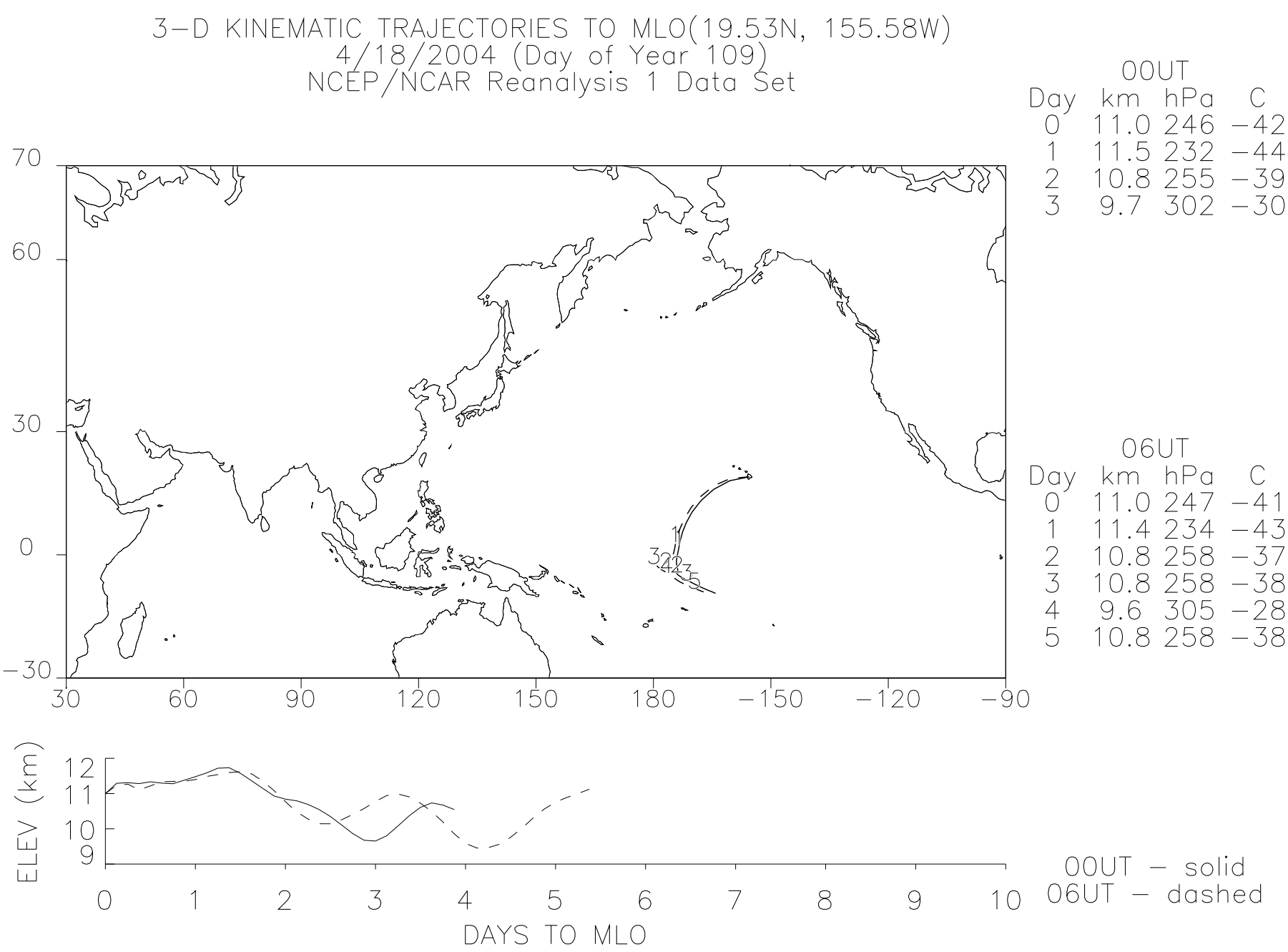
06UT

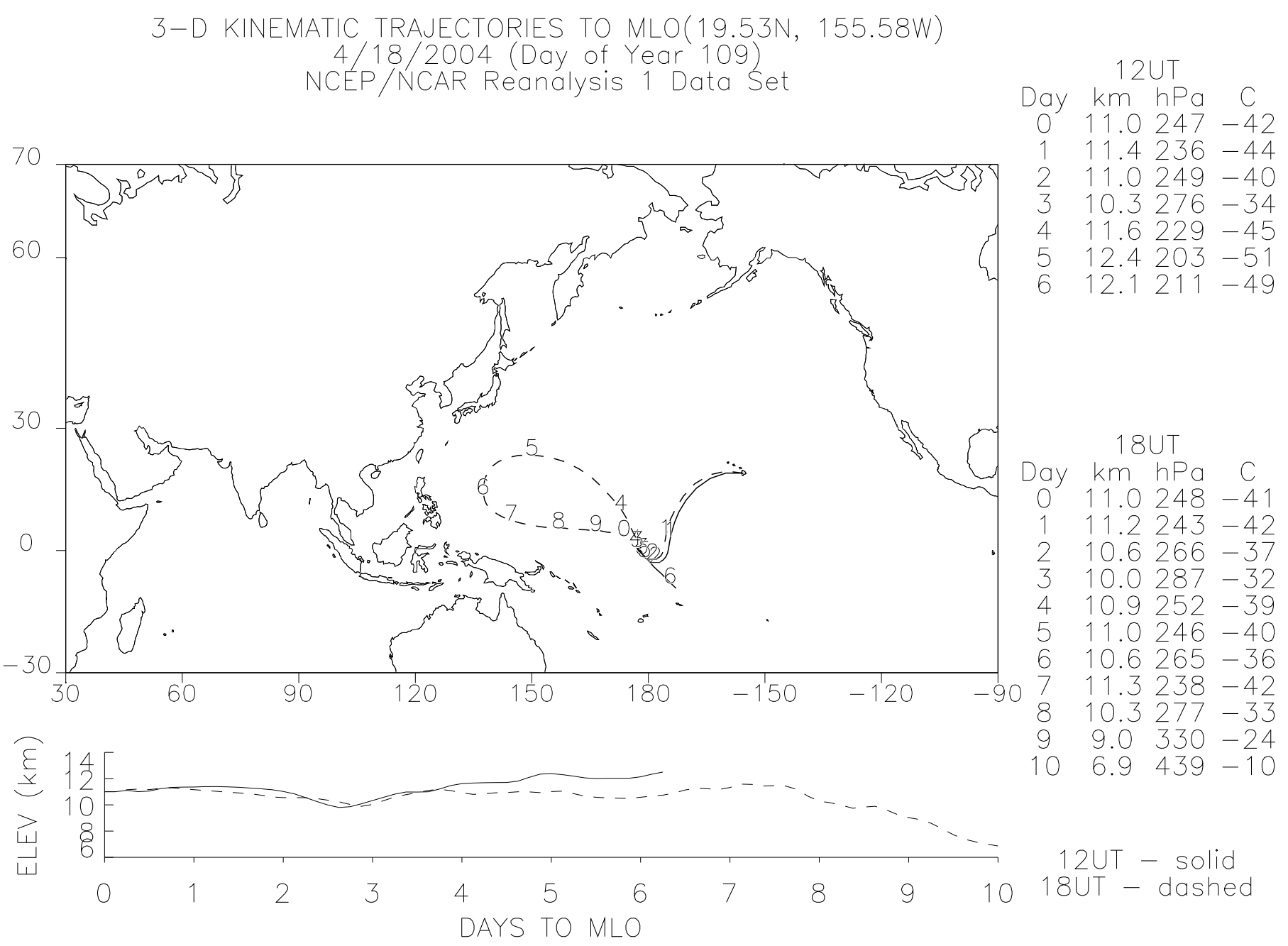
Day	km	hPa	C
0	11.0	245	-42
1	10.1	284	-34
2	9.4	313	-29
3	9.9	288	-33
4	7.1	426	-12
5	5.5	524	-3
6	3.5	664	11
7	2.0	799	16
8	1.0	897	22
9	1.0	902	22
10	0.7	927	23



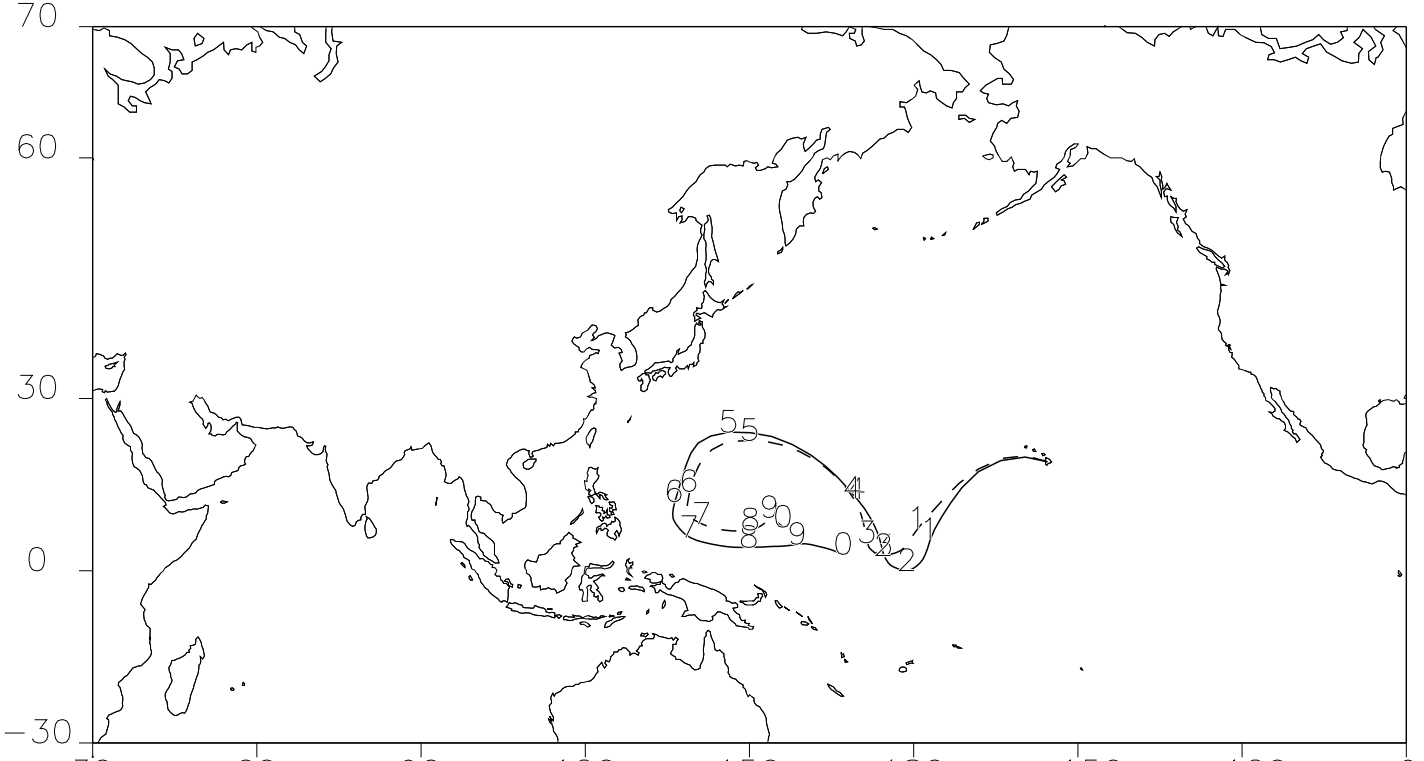
00UT - solid
06UT - dashed

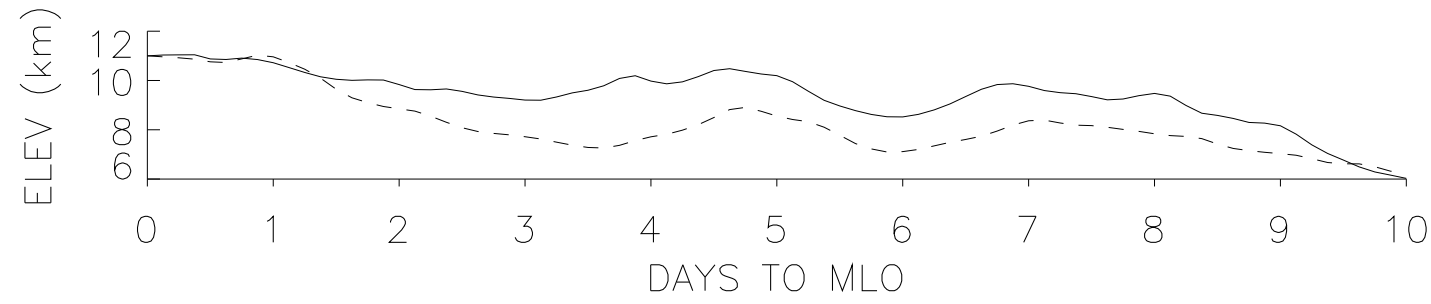

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/17/2004 (Day of Year 108)
NCEP/NCAR Reanalysis 1 Data Set
12UT
Day km hPa C
0 11.0 245 -43
1 11.1 245 -41
2 12.2 209 -50
3 12.9 187 -56
4 13.2 178 -57
18UT
Day km hPa C
0 11.0 246 -41
1 11.3 238 -43
2 11.4 236 -44
3 11.3 240 -42
70
60
30
0
-30
30 60 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)
4/18/2004 (Day of Year 109)
NCEP/NCAR Reanalysis 1 Data Set
00UT
Day km hPa C
0 11.0 246 -42
1 11.5 232 -44
2 10.8 255 -39
3 9.7 302 -30
06UT
Day km hPa C
0 11.0 247 -41
1 11.4 234 -43
2 10.8 258 -37
3 10.8 258 -38
4 9.6 305 -28
5 10.8 258 -38
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
12
11
10
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)
4/18/2004 (Day of Year 109)
NCEP/NCAR Reanalysis 1 Data Set
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
Day km hPa C
0 11.0 247 -42
1 11.4 236 -44
2 11.0 249 -40
3 10.3 276 -34
4 11.6 229 -45
5 12.4 203 -51
6 12.1 211 -49
18UT
Day km hPa C
0 11.0 248 -41
1 11.2 243 -42
2 10.6 266 -37
3 10.0 287 -32
4 10.9 252 -39
5 11.0 246 -40
6 10.6 265 -36
7 11.3 238 -42
8 10.3 277 -33
9 9.0 330 -24
10 6.9 439 -10
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

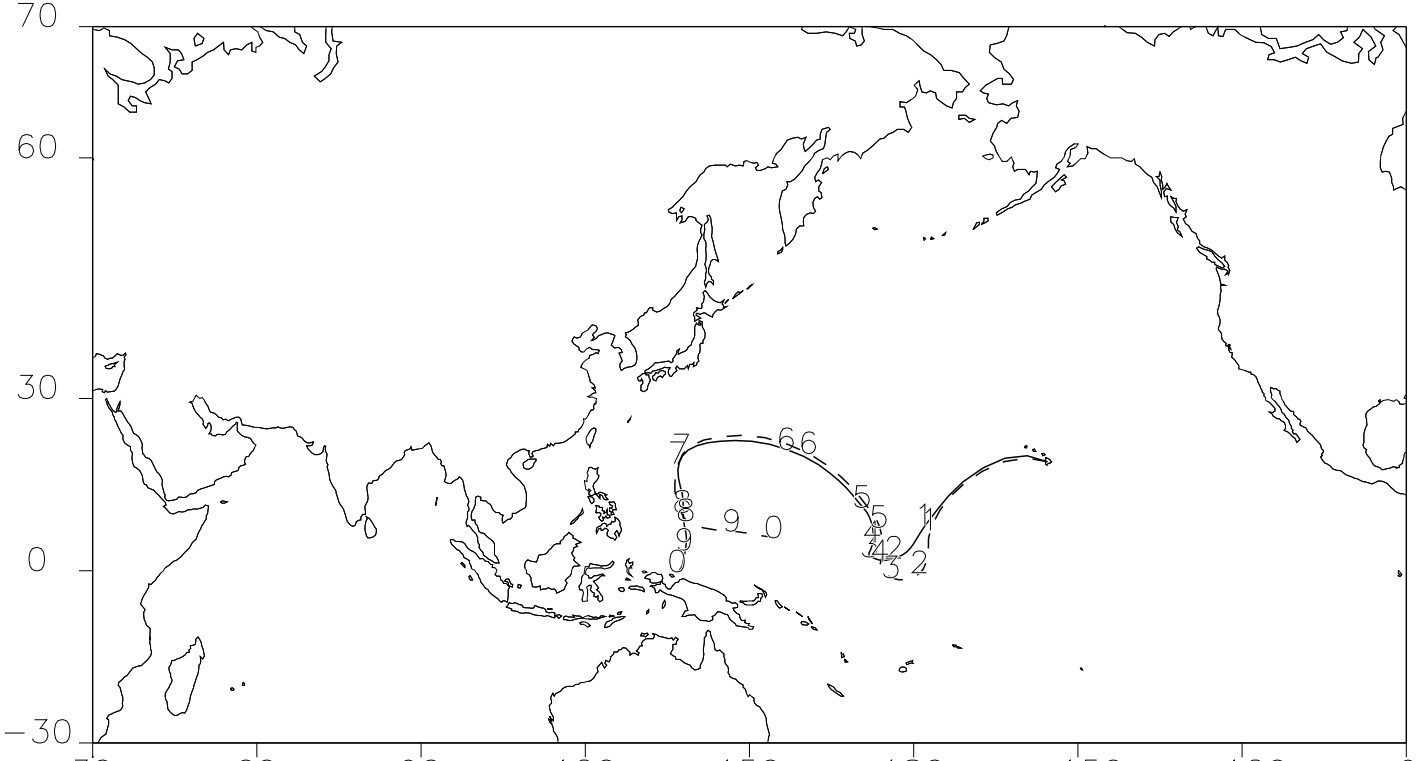
Day	km	hPa	C
0	11.0	248	−41
1	10.7	259	−38
2	9.8	294	−31
3	9.2	322	−26
4	10.0	290	−32
5	10.2	279	−34
6	8.5	354	−20
7	9.8	299	−30
8	9.5	311	−28
9	8.2	373	−18
10	6.0	490	−5

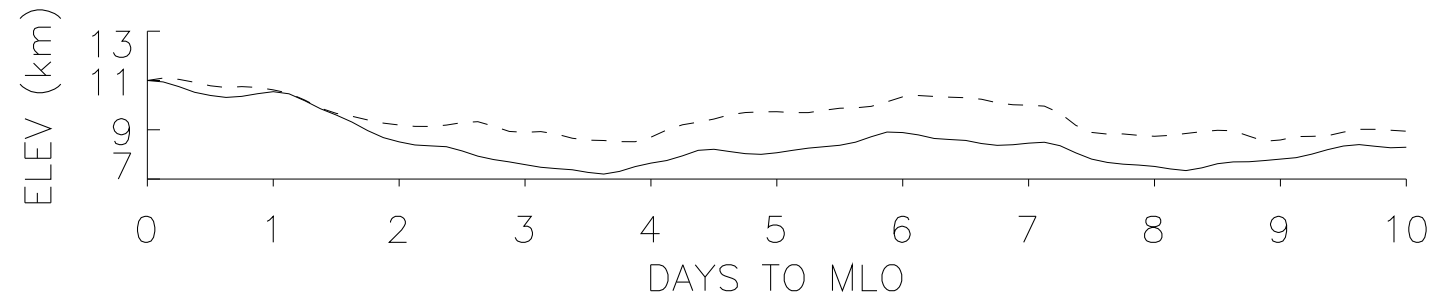
06UT

Day	km	hPa	C
0	11.0	249	−41
1	11.0	250	−39
2	8.8	337	−25
3	7.7	393	−16
4	7.7	394	−16
5	8.6	350	−24
6	7.1	425	−11
7	8.4	361	−20
8	7.8	388	−15
9	7.0	431	−11
10	6.3	476	−8

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

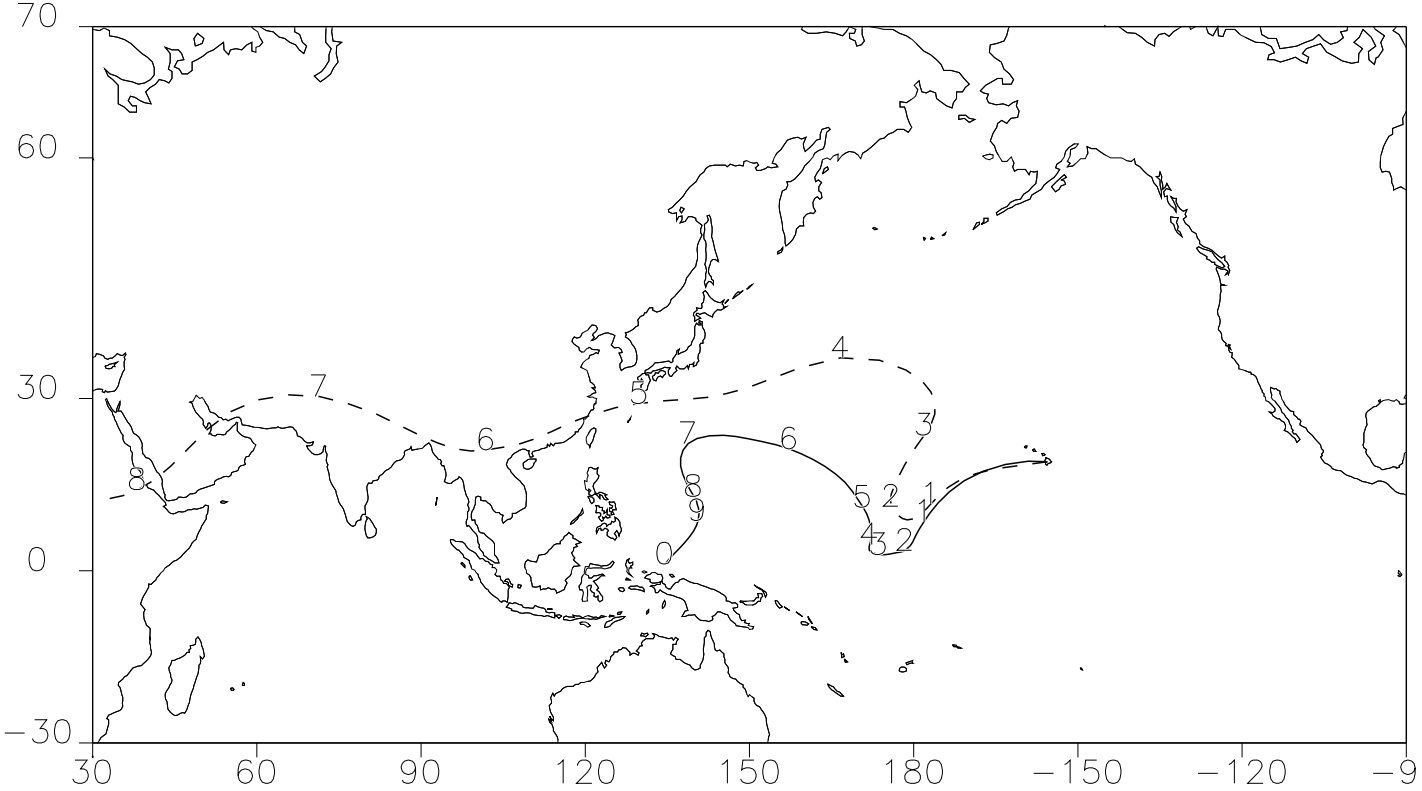
Day	km	hPa	C
0	11.0	248	-42
1	10.5	266	-37
2	8.5	354	-21
3	7.6	401	-15
4	7.6	399	-14
5	8.1	377	-18
6	8.9	335	-26
7	8.5	357	-22
8	7.5	406	-14
9	7.8	390	-15
10	8.3	365	-19

18UT

Day	km	hPa	C
0	11.0	248	-42
1	10.6	263	-38
2	9.2	322	-26
3	8.9	335	-24
4	8.7	345	-22
5	9.7	299	-30
6	10.3	272	-36
7	10.0	288	-31
8	8.7	343	-23
9	8.6	351	-22
10	8.9	334	-24

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

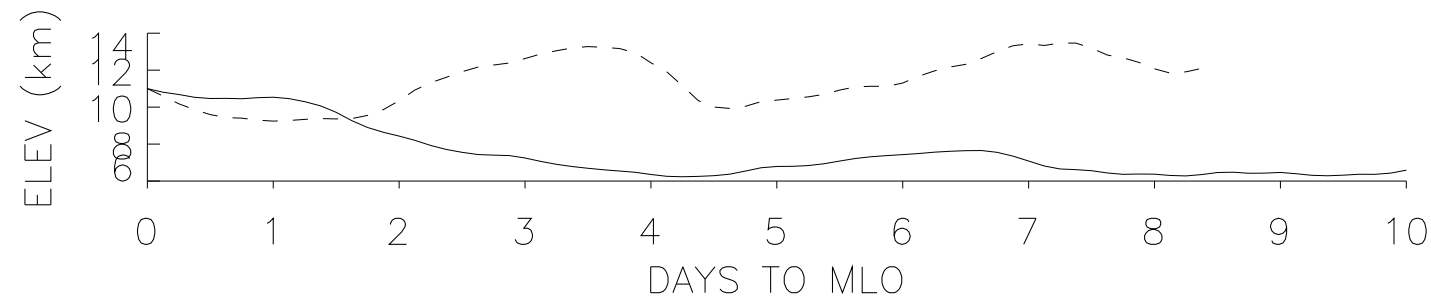


00UT

Day	km	hPa	C
0	11.0	247	-42
1	10.5	267	-36
2	8.4	357	-21
3	7.2	419	-13
4	6.4	471	-7
5	6.8	446	-9
6	7.4	408	-17
7	7.1	428	-13
8	6.4	471	-7
9	6.5	466	-7
10	6.6	457	-8

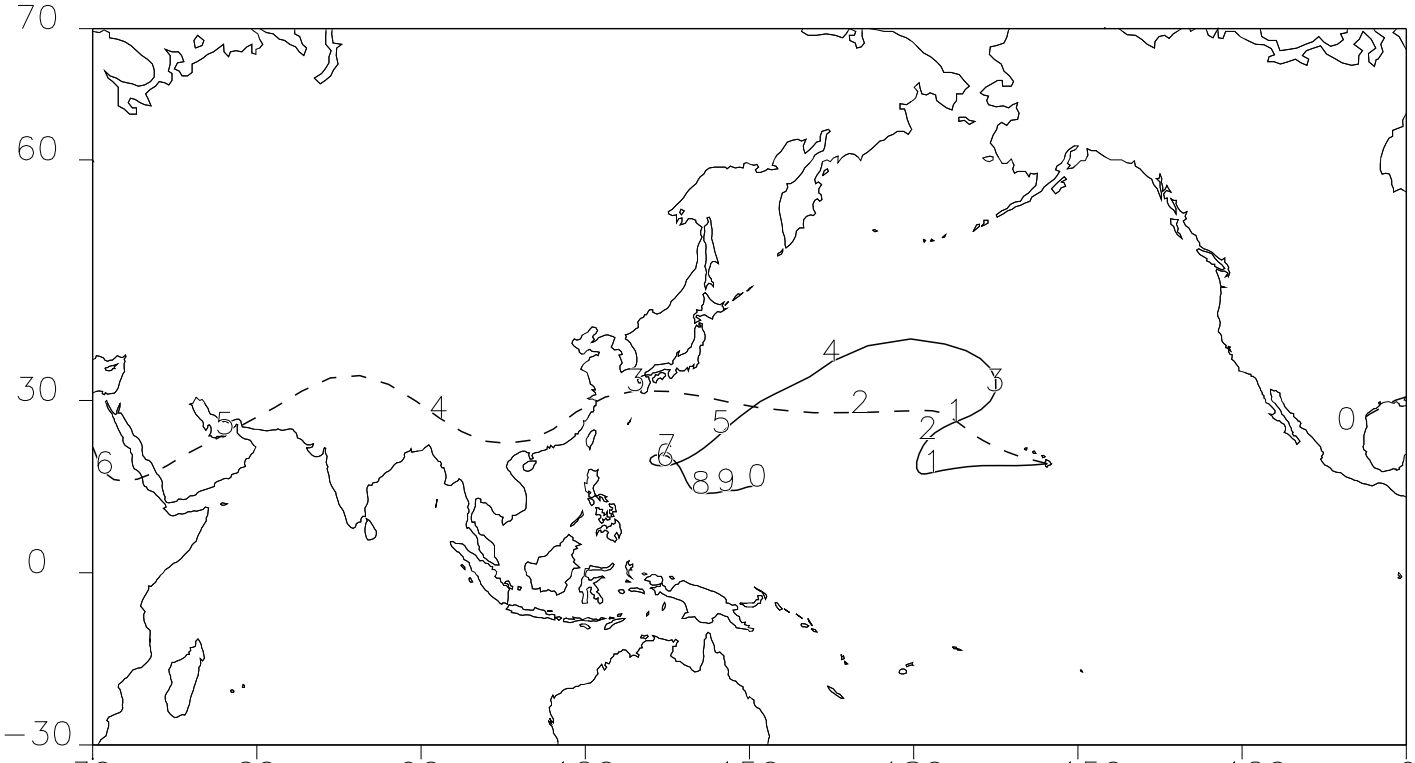
06UT

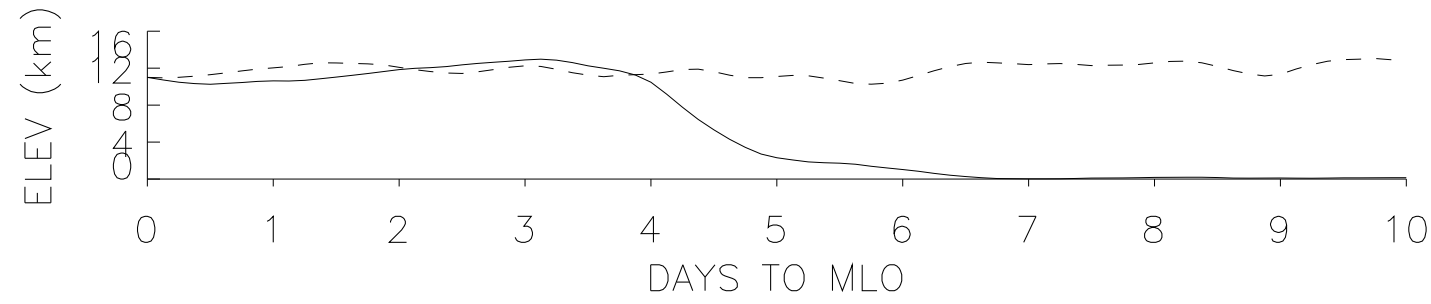
Day	km	hPa	C
0	11.0	246	-44
1	9.2	320	-26
2	10.3	272	-37
3	12.6	191	-56
4	12.4	190	-57
5	10.4	265	-39
6	11.3	235	-44
7	13.4	166	-60
8	12.1	209	-48



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





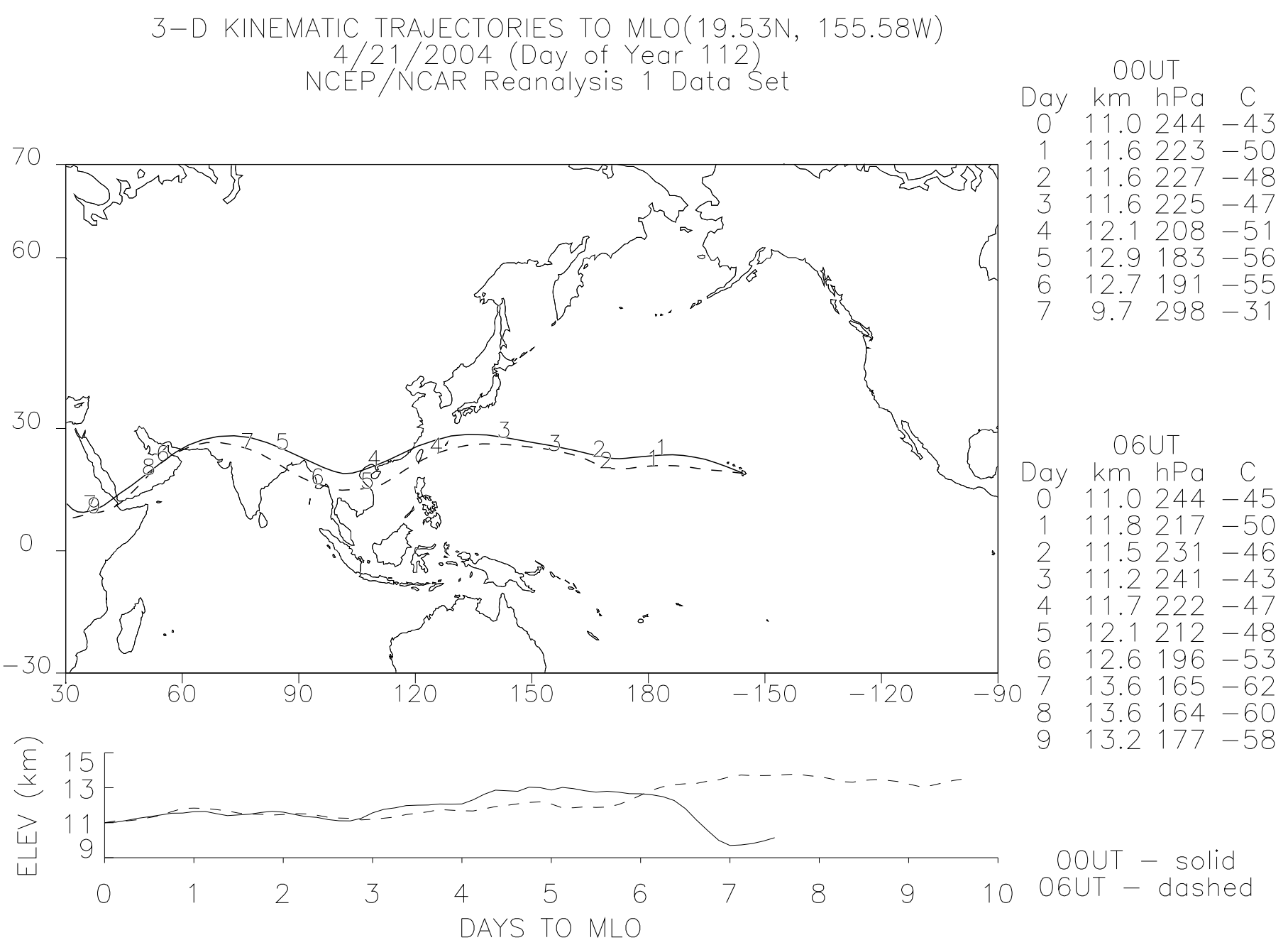
12UT

Day	km	hPa	C
0	11.0	244	-45
1	10.6	262	-39
2	11.8	217	-51
3	12.9	182	-60
4	10.5	256	-42
5	2.3	764	14
6	1.0	892	20
7	0.0	1000	28
8	0.2	991	27
9	0.1	1000	27
10	0.1	999	26

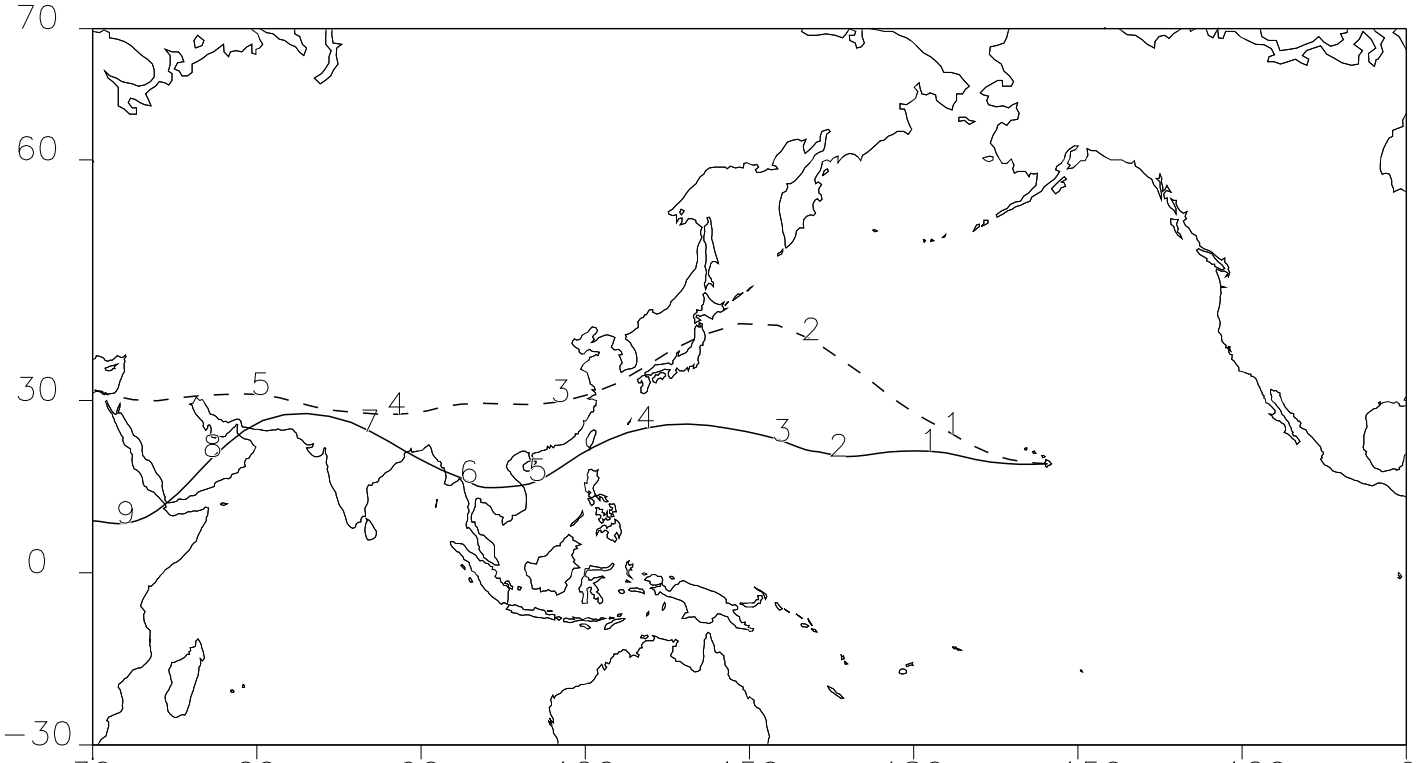
18UT

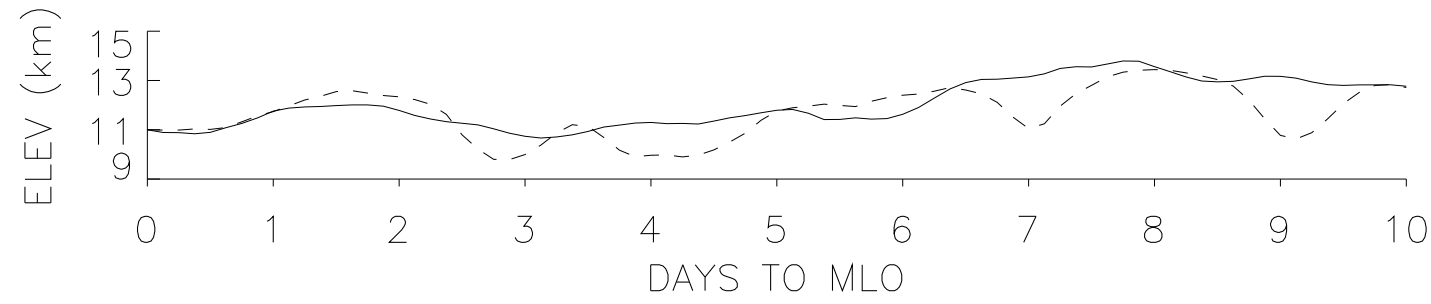
Day	km	hPa	C
0	11.0	244	-44
1	12.0	208	-53
2	12.1	207	-54
3	12.3	198	-55
4	11.4	228	-47
5	11.1	239	-45
6	10.7	255	-42
7	12.4	192	-56
8	12.6	189	-56
9	11.3	227	-48
10	12.9	177	-58

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 11.0 244 -43
1 11.6 223 -50
2 11.6 227 -48
3 11.6 225 -47
4 12.1 208 -51
5 12.9 183 -56
6 12.7 191 -55
7 9.7 298 -31
06UT
Day km hPa C
0 11.0 244 -45
1 11.8 217 -50
2 11.5 231 -46
3 11.2 241 -43
4 11.7 222 -47
5 12.1 212 -48
6 12.6 196 -53
7 13.6 165 -62
8 13.6 164 -60
9 13.2 177 -58
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)
4/21/2004 (Day of Year 112)
NCEP/NCAR Reanalysis 1 Data Set





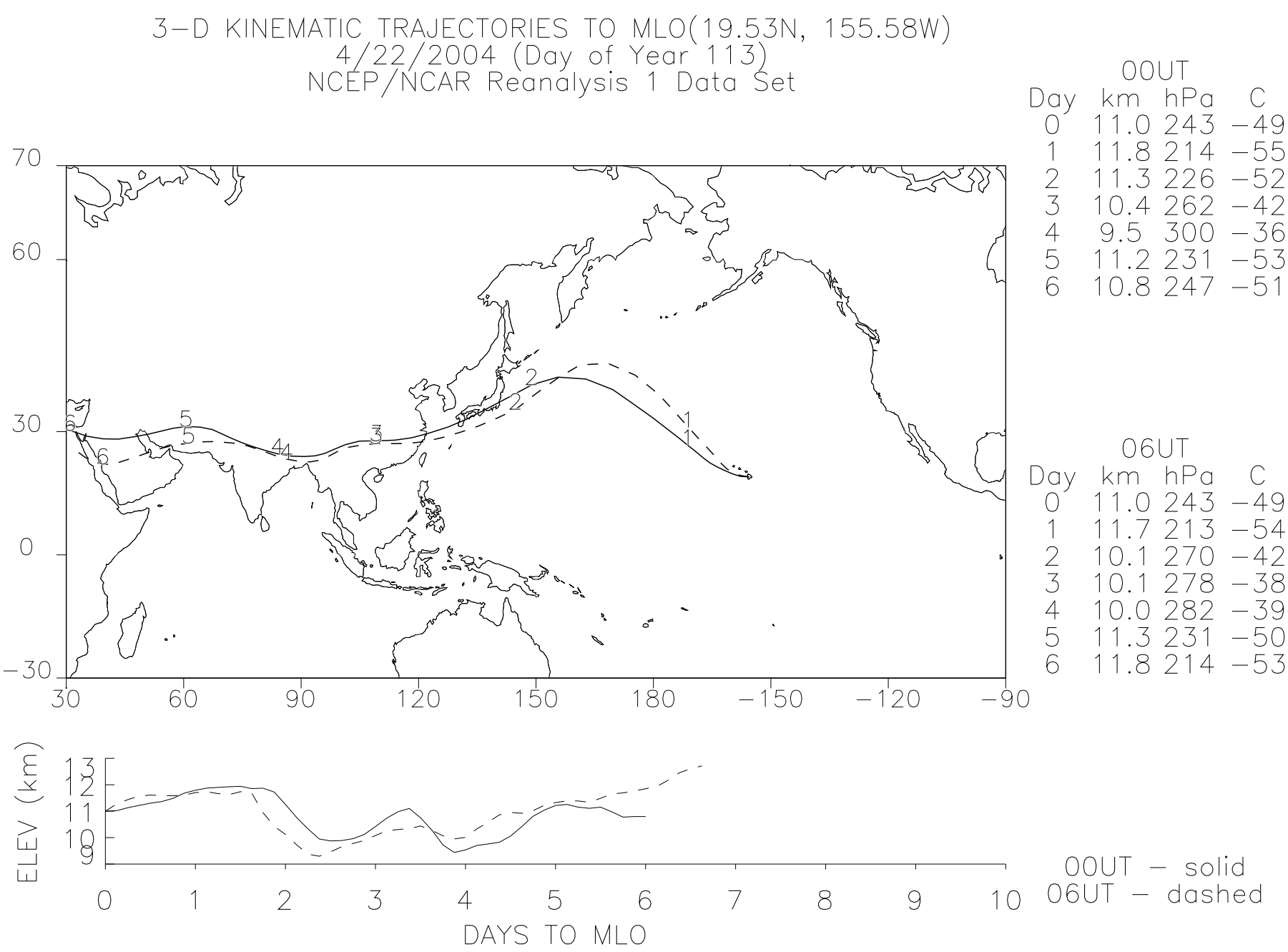
12UT

Day	km	hPa	C
0	11.0	243	−47
1	11.8	219	−51
2	11.8	221	−49
3	10.7	259	−39
4	11.3	236	−44
5	11.8	221	−46
6	11.6	226	−46
7	13.1	177	−58
8	13.6	165	−61
9	13.2	178	−58
10	12.8	191	−54

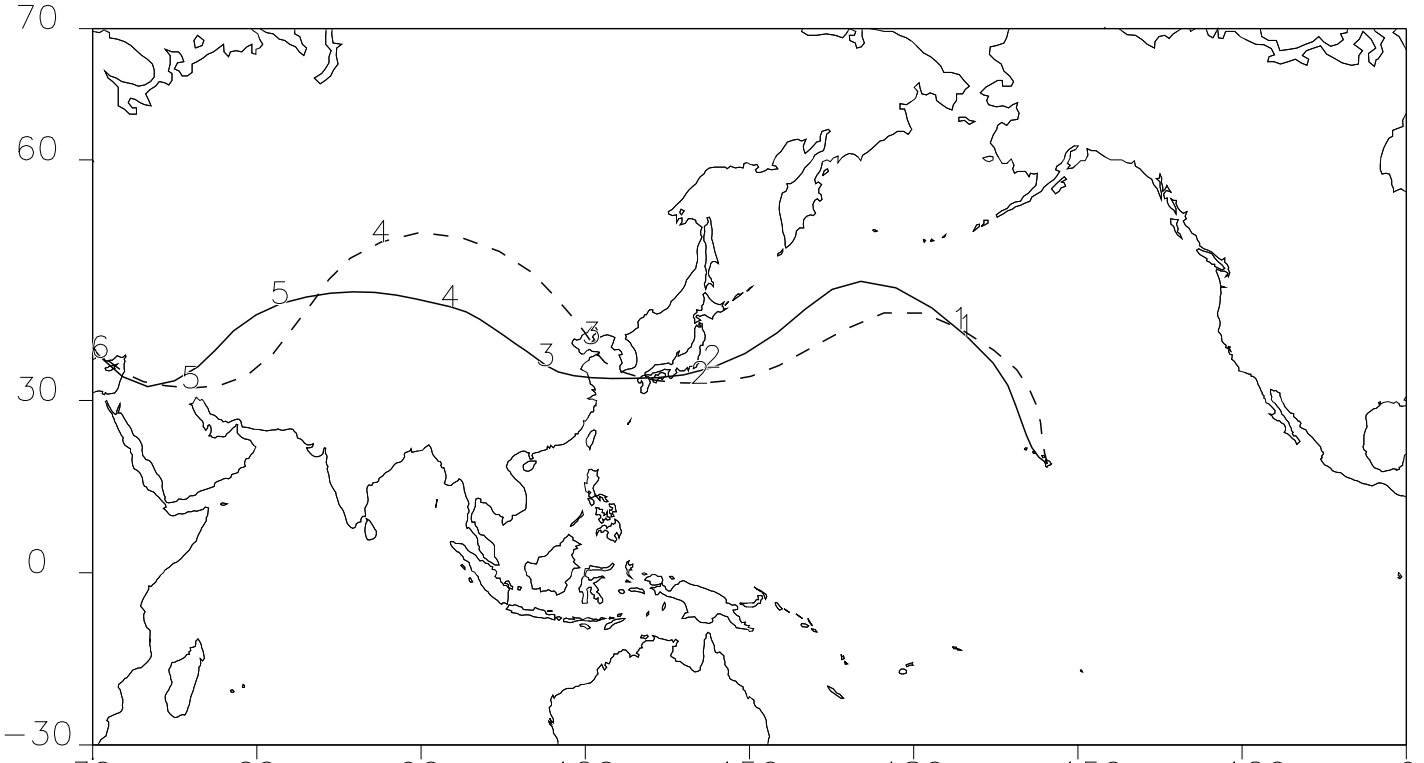
18UT

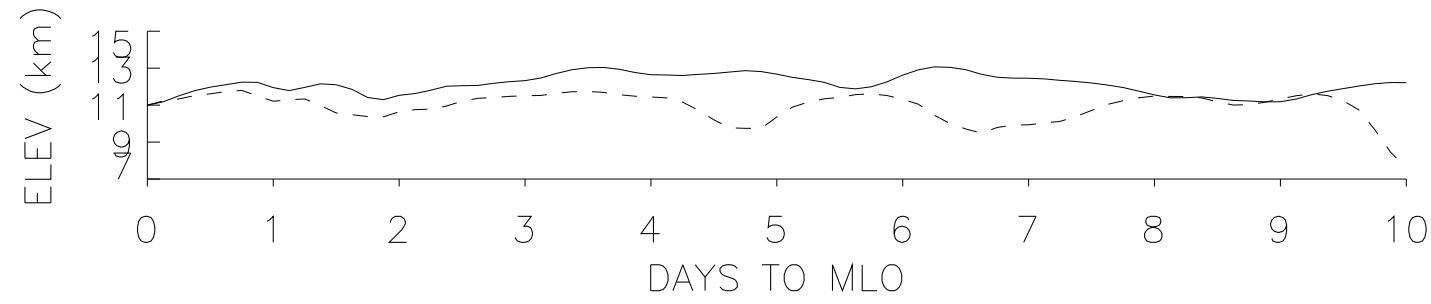
Day	km	hPa	C
0	11.0	243	−49
1	11.7	217	−54
2	12.3	190	−60
3	10.0	276	−41
4	10.0	280	−40
5	11.8	214	−53
6	12.4	191	−59
7	11.0	232	−46
8	13.4	164	−64
9	10.8	248	−45
10	12.7	176	−60

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 11.0 243 -49
1 11.8 214 -55
2 11.3 226 -52
3 10.4 262 -42
4 9.5 300 -36
5 11.2 231 -53
6 10.8 247 -51
06UT
Day km hPa C
0 11.0 243 -49
1 11.7 213 -54
2 10.1 270 -42
3 10.1 278 -38
4 10.0 282 -39
5 11.3 231 -50
6 11.8 214 -53
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
13
12
11
10
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)
4/22/2004 (Day of Year 113)
NCEP/NCAR Reanalysis 1 Data Set





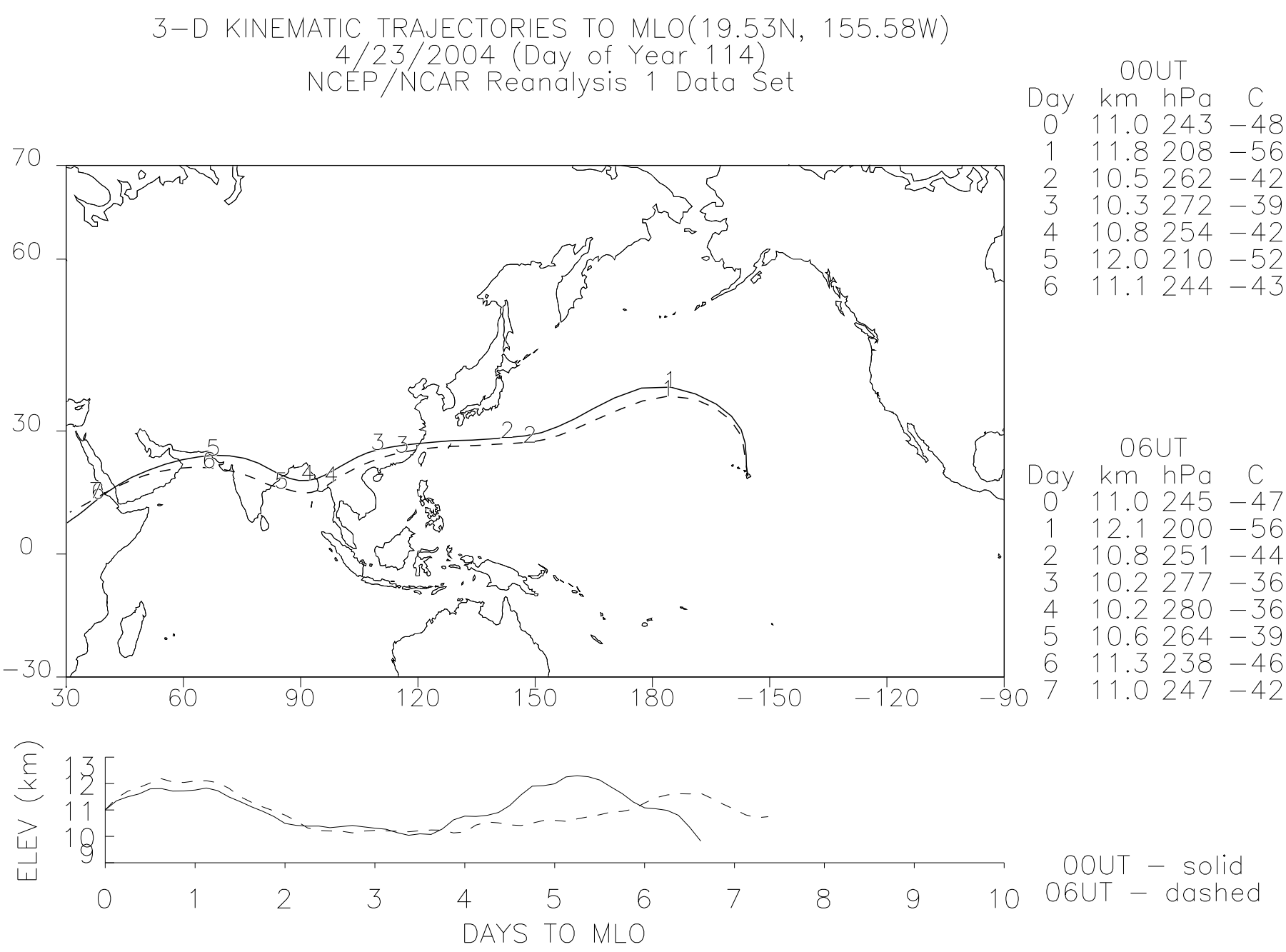
12UT

Day	km	hPa	C
0	11.0	242	−50
1	11.9	197	−57
2	11.5	215	−53
3	12.3	191	−56
4	12.6	178	−60
5	12.7	174	−57
6	12.6	178	−56
7	12.5	180	−55
8	11.6	208	−55
9	11.2	219	−49
10	12.2	188	−58

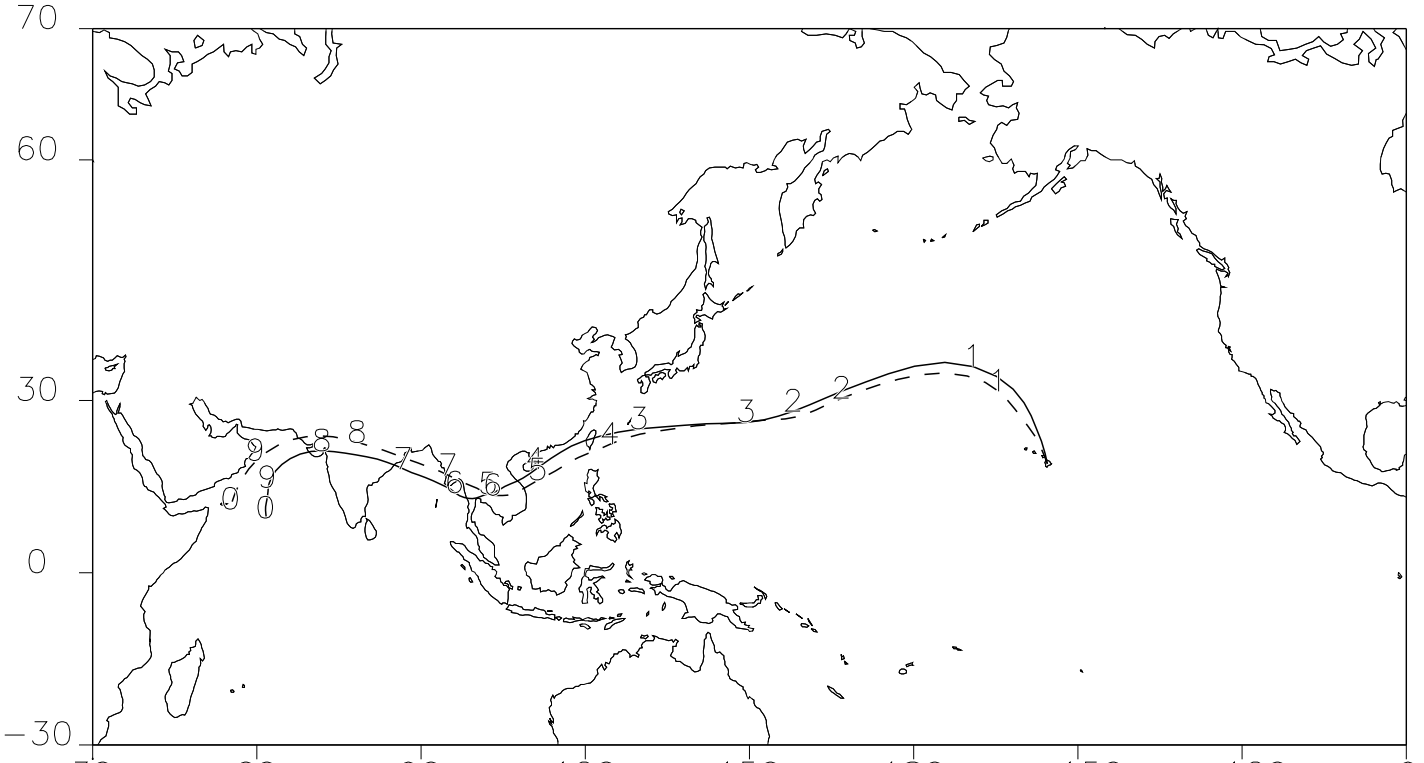
18UT

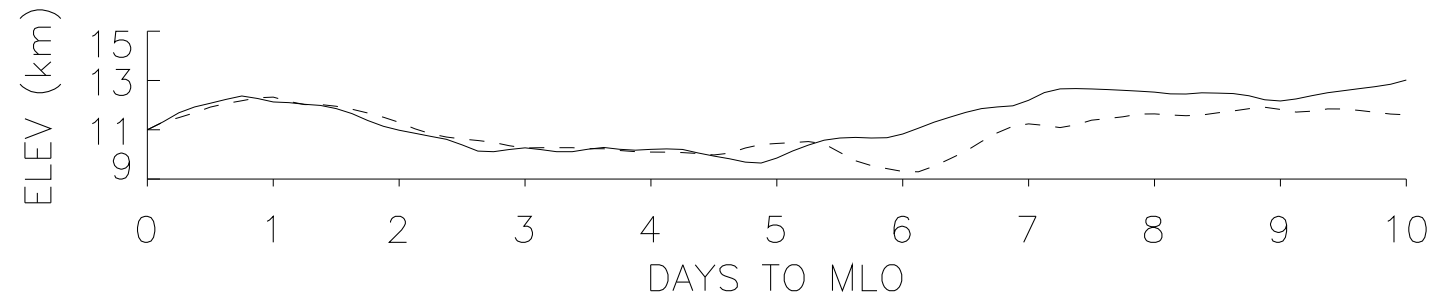
Day	km	hPa	C
0	11.0	243	−49
1	11.2	223	−54
2	10.6	249	−50
3	11.5	215	−60
4	11.4	209	−59
5	10.4	255	−48
6	11.3	223	−57
7	9.9	275	−45
8	11.5	223	−57
9	11.3	230	−55
10	7.6	392	−25

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 11.0 243 -48
1 11.8 208 -56
2 10.5 262 -42
3 10.3 272 -39
4 10.8 254 -42
5 12.0 210 -52
6 11.1 244 -43
06UT
Day km hPa C
0 11.0 245 -47
1 12.1 200 -56
2 10.8 251 -44
3 10.2 277 -36
4 10.2 280 -36
5 10.6 264 -39
6 11.3 238 -46
7 11.0 247 -42
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
13
12
11
10
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)
4/23/2004 (Day of Year 114)
NCEP/NCAR Reanalysis 1 Data Set





12UT

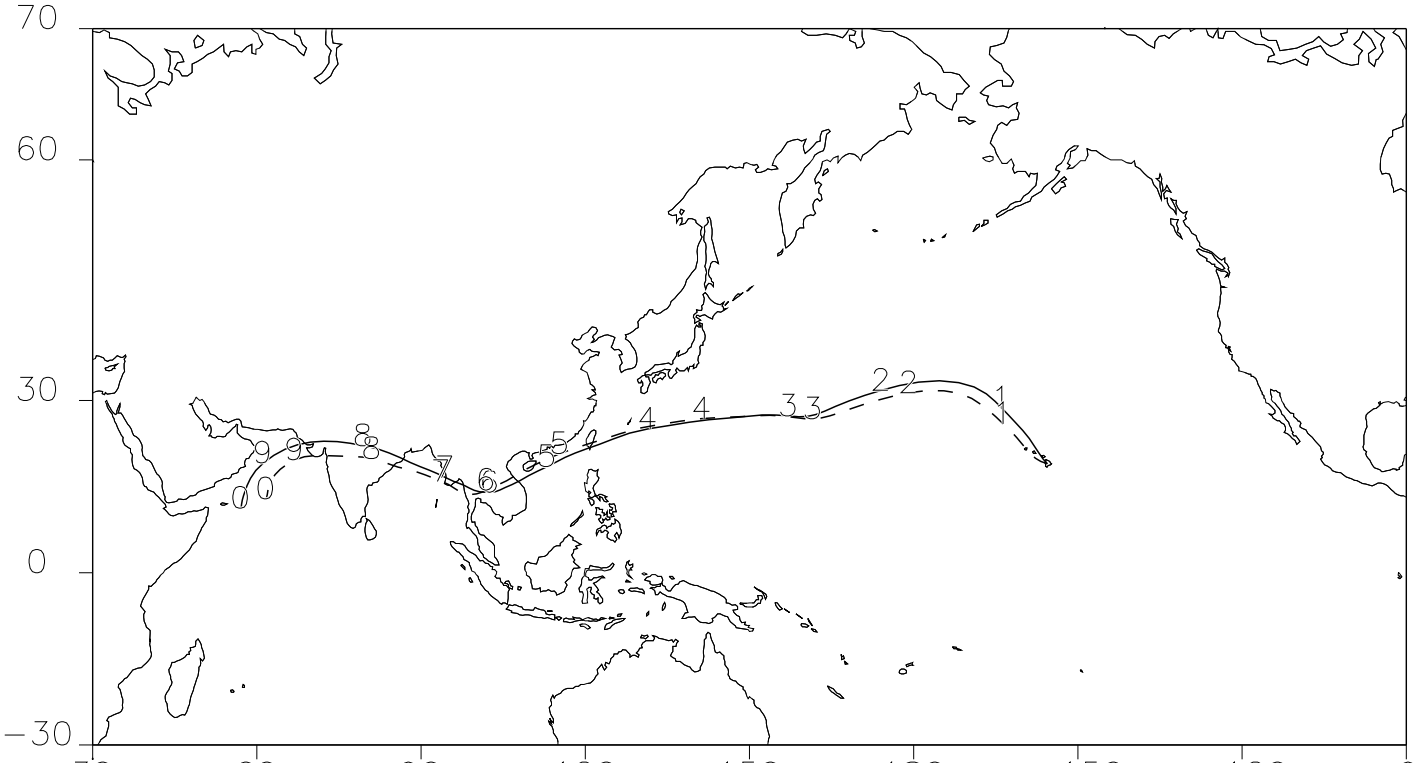
Day	km	hPa	C
0	11.0	245	−47
1	12.1	202	−56
2	11.0	245	−45
3	10.3	276	−37
4	10.2	280	−35
5	9.9	293	−32
6	10.8	255	−40
7	12.2	207	−51
8	12.5	197	−53
9	12.2	209	−50
10	13.0	183	−57

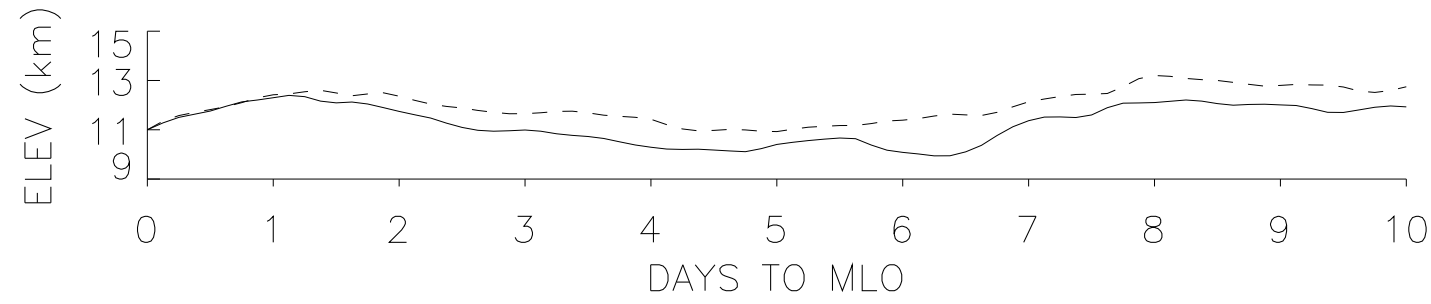
18UT

Day	km	hPa	C
0	11.0	246	−47
1	12.3	198	−58
2	11.3	232	−49
3	10.3	274	−38
4	10.1	284	−34
5	10.4	270	−36
6	9.3	316	−28
7	11.2	240	−45
8	11.6	226	−47
9	11.8	220	−47
10	11.6	228	−45

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

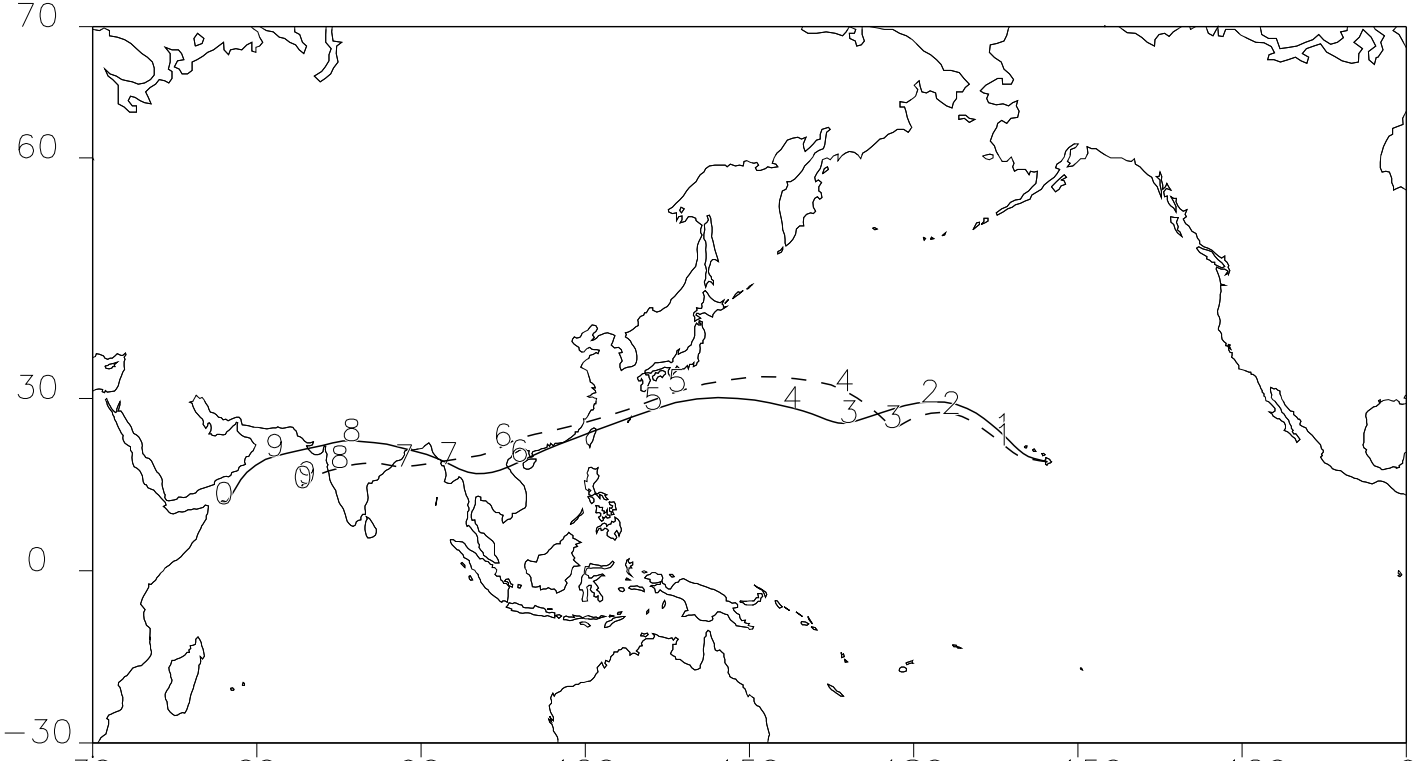
Day	km	hPa	C
0	11.0	246	−46
1	12.3	200	−57
2	11.7	217	−52
3	11.0	247	−45
4	10.3	276	−37
5	10.4	271	−37
6	10.1	283	−34
7	11.4	234	−46
8	12.1	209	−51
9	12.0	213	−50
10	11.9	216	−48

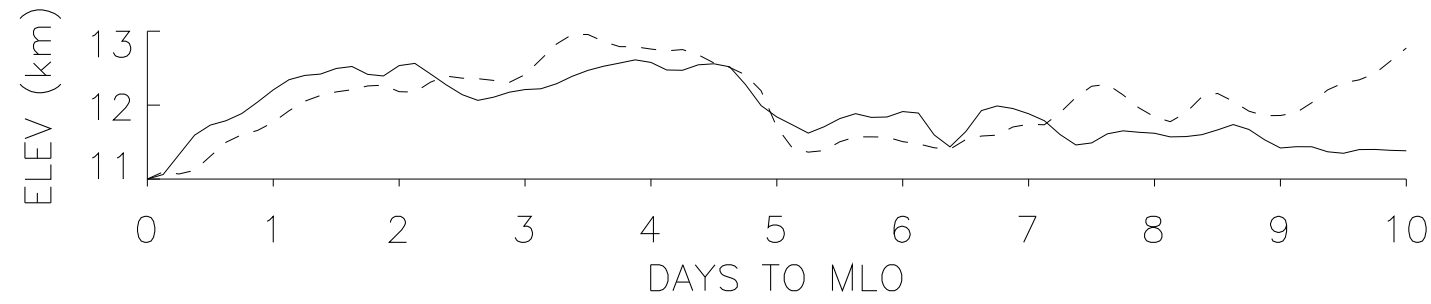
06UT

Day	km	hPa	C
0	11.0	246	−45
1	12.4	197	−57
2	12.4	197	−56
3	11.7	223	−49
4	11.4	232	−46
5	10.9	251	−41
6	11.4	235	−45
7	12.1	210	−51
8	13.2	178	−58
9	12.8	190	−54
10	12.7	192	−53

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

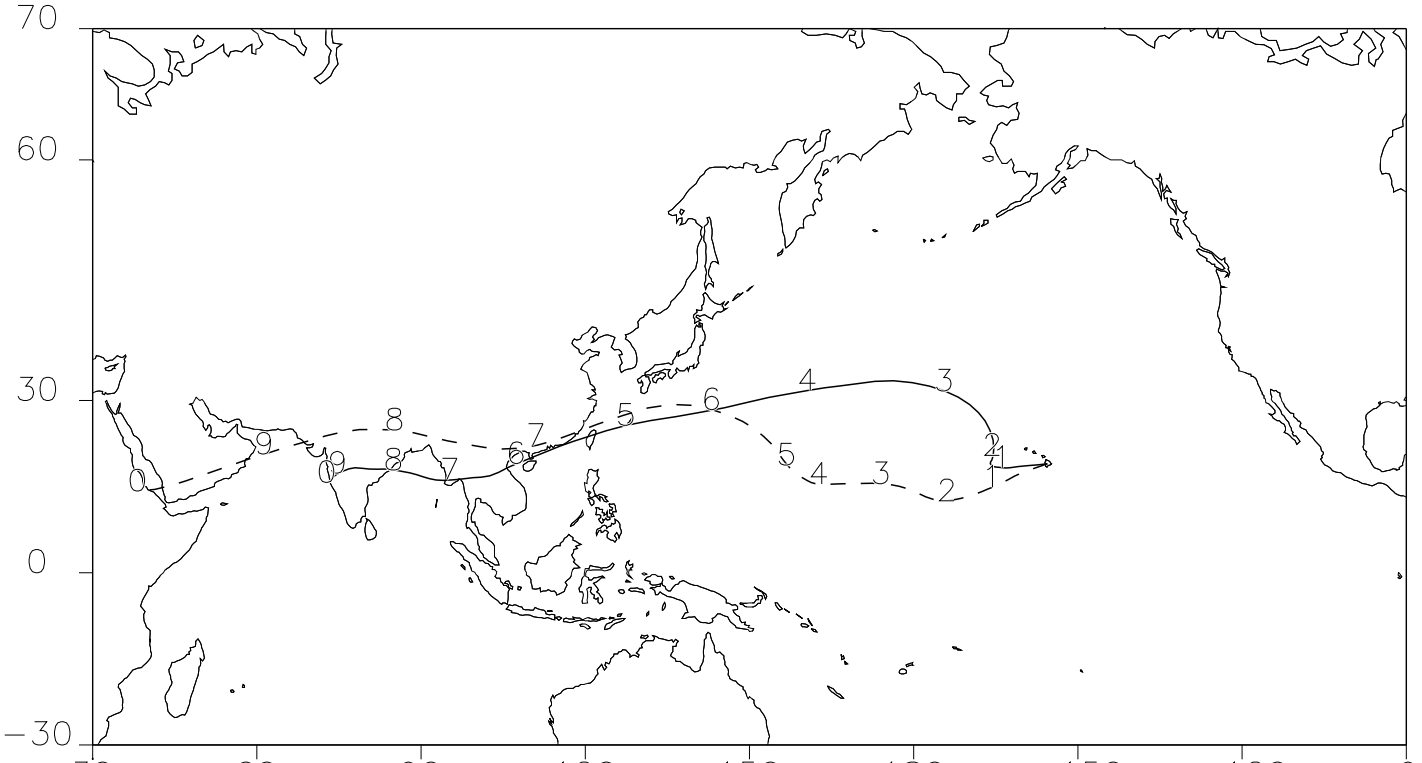
Day	km	hPa	C
0	11.0	245	-45
1	12.2	204	-56
2	12.5	194	-57
3	12.2	205	-53
4	12.6	194	-56
5	11.8	217	-50
6	11.9	215	-48
7	11.9	216	-49
8	11.6	225	-48
9	11.4	233	-44
10	11.4	235	-44

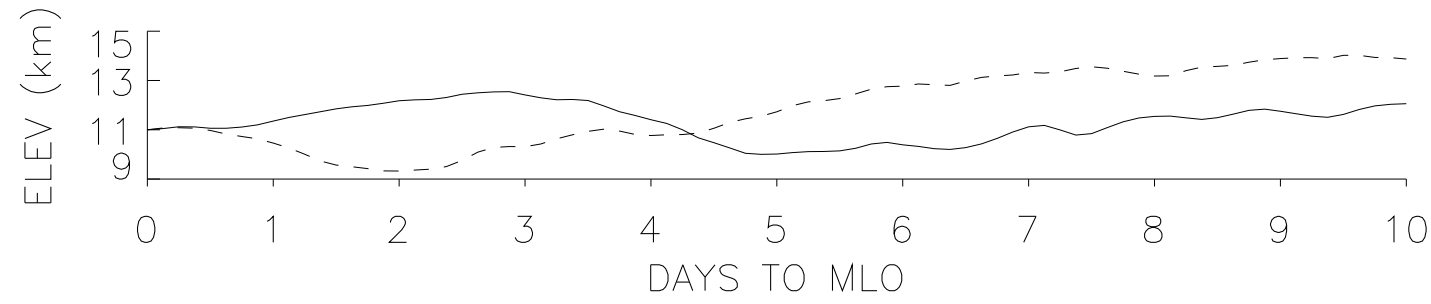
18UT

Day	km	hPa	C
0	11.0	246	-45
1	11.8	219	-53
2	12.2	204	-55
3	12.4	198	-56
4	12.8	186	-58
5	11.7	219	-51
6	11.5	228	-47
7	11.7	222	-48
8	11.8	220	-47
9	11.9	220	-47
10	12.8	192	-53

12UT - solid
18UT - dashed

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





00UT

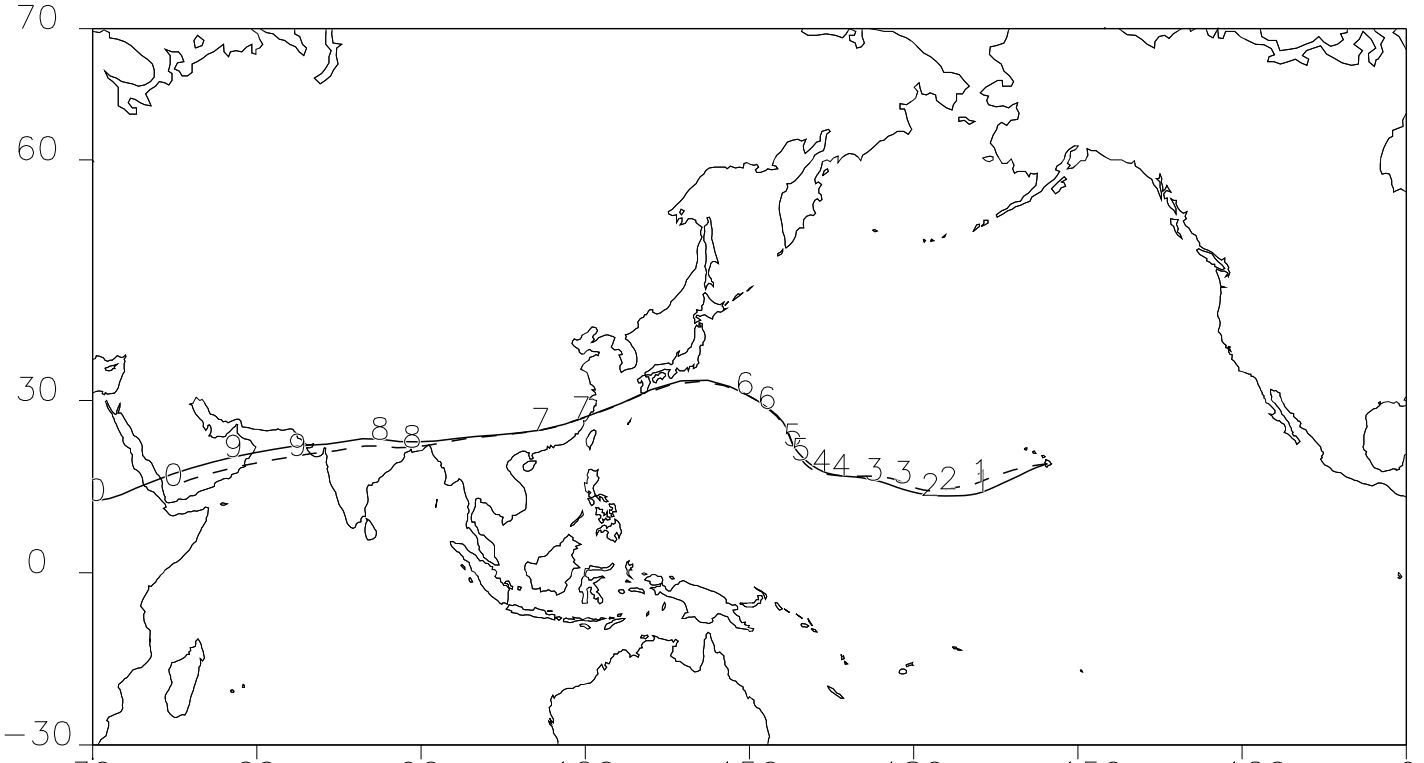
Day	km	hPa	C
0	11.0	245	-46
1	11.4	234	-48
2	12.2	206	-56
3	12.4	196	-58
4	11.4	229	-48
5	10.0	285	-35
6	10.4	270	-38
7	11.1	243	-44
8	11.5	229	-47
9	11.8	222	-47
10	12.1	212	-50

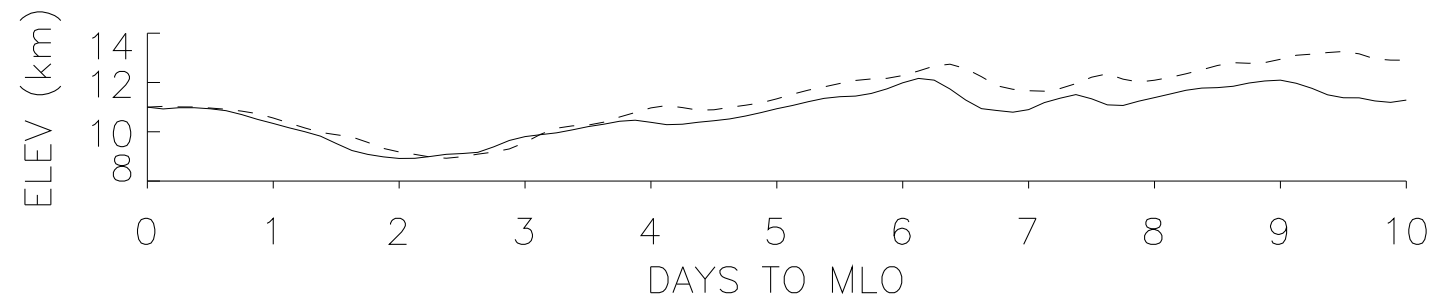
06UT

Day	km	hPa	C
0	11.0	245	-45
1	10.5	267	-40
2	9.3	315	-30
3	10.3	273	-37
4	10.8	256	-40
5	11.7	223	-48
6	12.8	189	-55
7	13.3	172	-58
8	13.2	176	-58
9	13.9	158	-63
10	13.9	159	-60

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

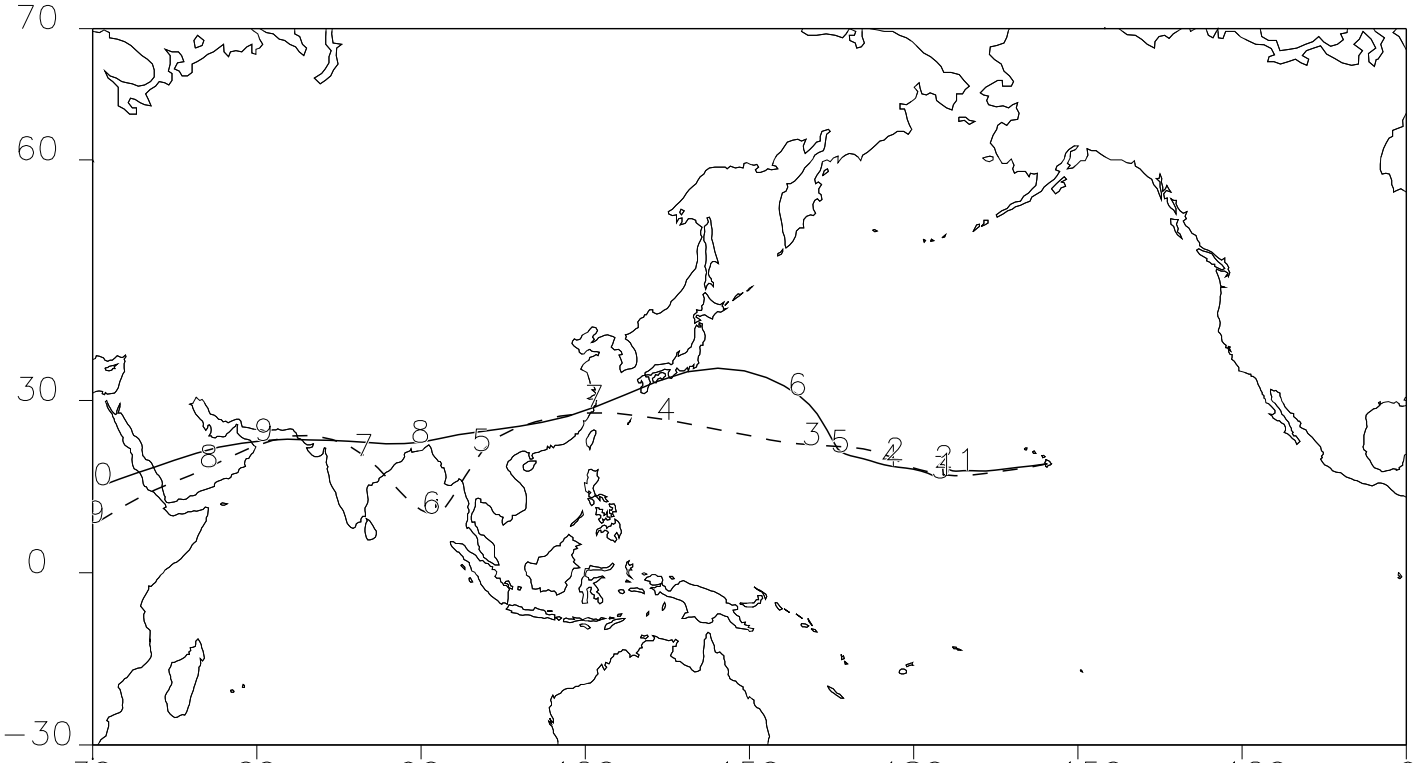
Day	km	hPa	C
0	11.0	244	−47
1	10.3	272	−38
2	8.9	334	−28
3	9.8	295	−33
4	10.4	272	−37
5	10.9	251	−43
6	12.0	212	−54
7	10.9	248	−43
8	11.4	231	−46
9	12.1	209	−52
10	11.3	237	−42

18UT

Day	km	hPa	C
0	11.0	243	−48
1	10.6	263	−41
2	9.2	321	−31
3	9.6	303	−33
4	11.0	248	−42
5	11.3	235	−46
6	12.3	203	−54
7	11.7	220	−50
8	12.1	208	−50
9	12.9	185	−56
10	12.9	186	−54

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

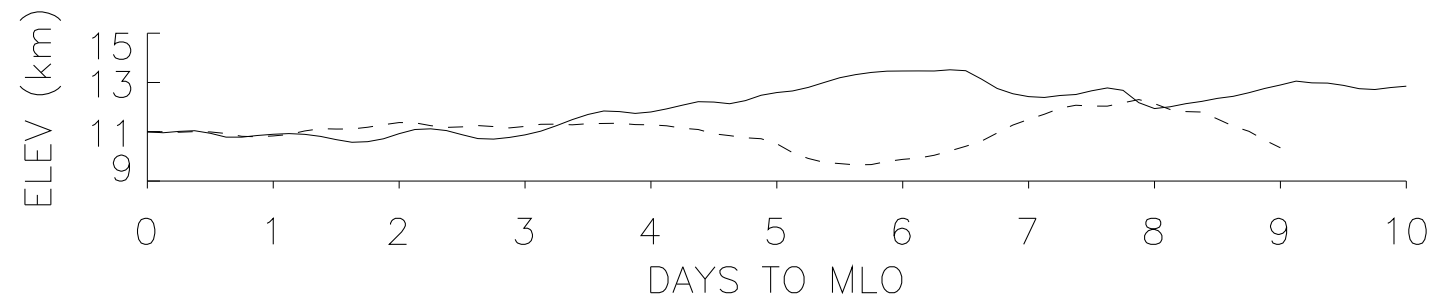


00UT

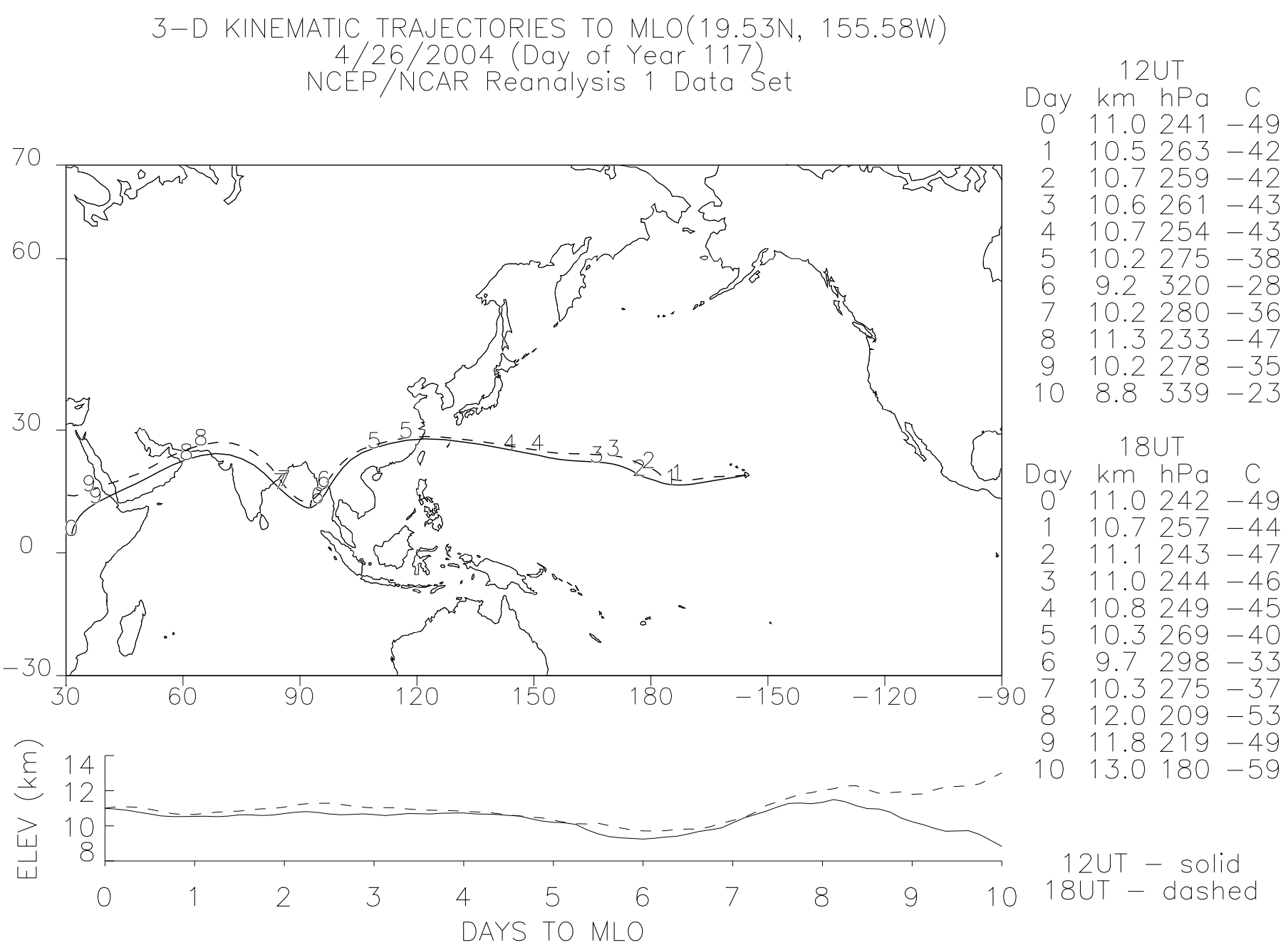
Day	km	hPa	C
0	11.0	243	-47
1	10.9	249	-45
2	10.9	250	-43
3	10.9	251	-44
4	11.8	219	-50
5	12.6	194	-55
6	13.5	167	-63
7	12.4	194	-54
8	11.9	211	-50
9	12.9	183	-57
10	12.9	186	-55

06UT

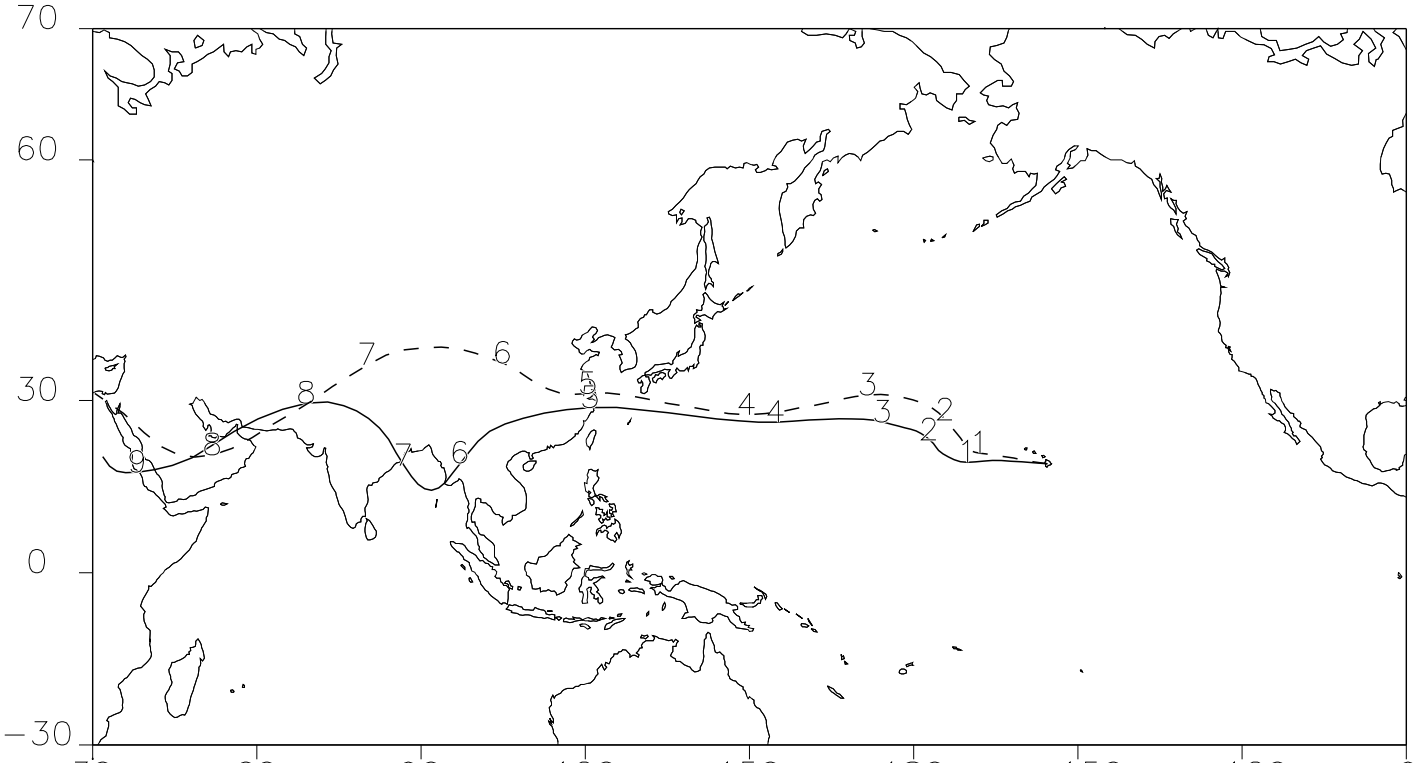
Day	km	hPa	C
0	11.0	243	-47
1	10.8	252	-44
2	11.4	233	-48
3	11.2	238	-47
4	11.3	233	-47
5	10.5	265	-38
6	9.9	294	-32
7	11.5	229	-47
8	12.1	207	-53
9	10.3	273	-36



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
70
60
30
0
-30
30
60
90
120
150
180
-150
-120
-90
ELEV (km)
14
12
10
8
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
12UT
Day km hPa C
0 11.0 241 -49
1 10.5 263 -42
2 10.7 259 -42
3 10.6 261 -43
4 10.7 254 -43
5 10.2 275 -38
6 9.2 320 -28
7 10.2 280 -36
8 11.3 233 -47
9 10.2 278 -35
10 8.8 339 -23
18UT
Day km hPa C
0 11.0 242 -49
1 10.7 257 -44
2 11.1 243 -47
3 11.0 244 -46
4 10.8 249 -45
5 10.3 269 -40
6 9.7 298 -33
7 10.3 275 -37
8 12.0 209 -53
9 11.8 219 -49
10 13.0 180 -59
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

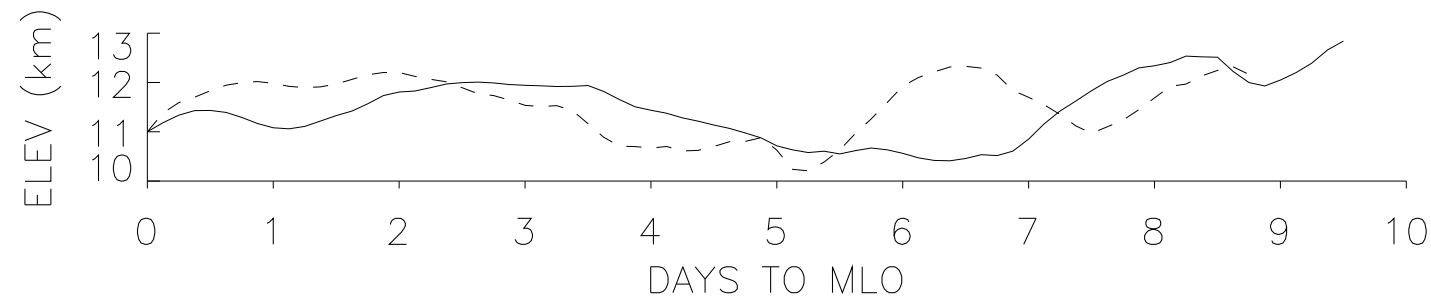


00UT

Day	km	hPa	C
0	11.0	241	−48
1	11.1	240	−48
2	11.8	217	−54
3	11.9	213	−53
4	11.4	228	−50
5	10.7	253	−44
6	10.6	262	−39
7	10.9	251	−42
8	12.3	196	−56
9	12.0	208	−52

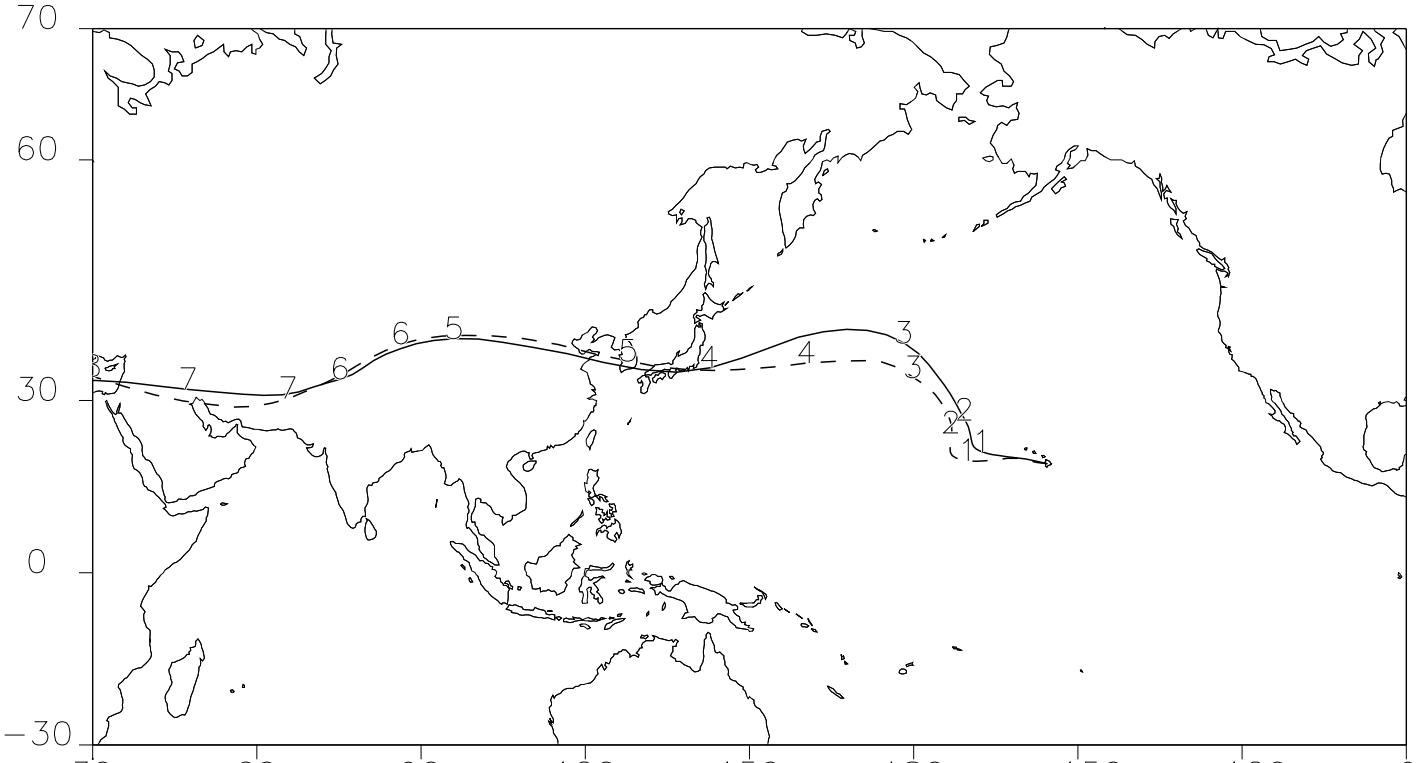
06UT

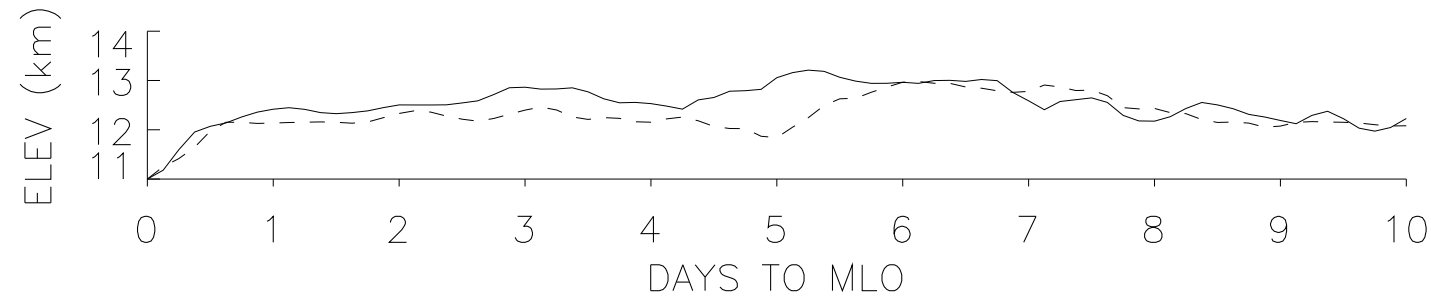
Day	km	hPa	C
0	11.0	242	−47
1	12.0	208	−55
2	12.2	203	−57
3	11.5	224	−52
4	10.7	253	−45
5	10.6	255	−43
6	11.9	208	−53
7	11.7	216	−52
8	11.7	218	−52



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





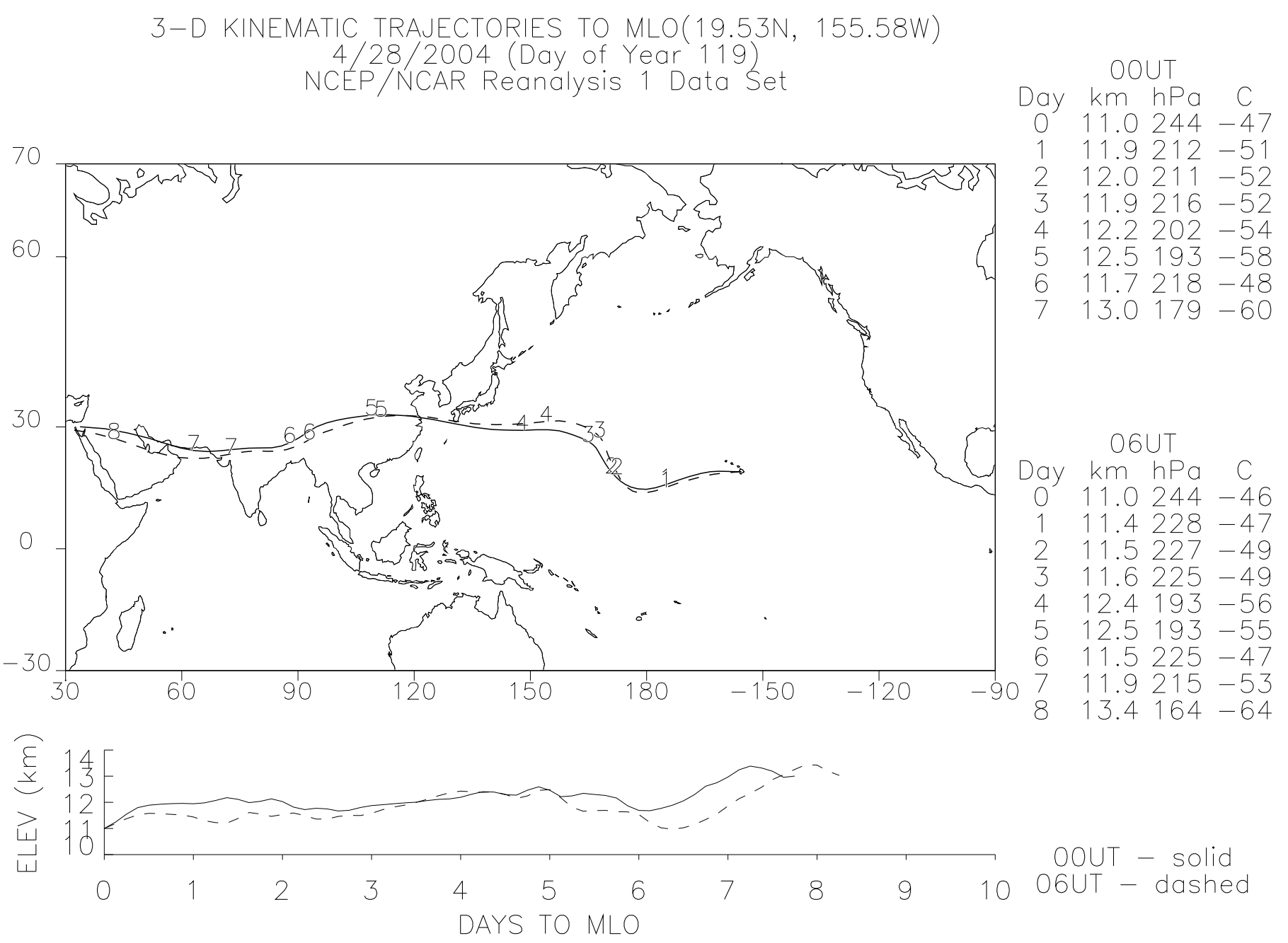
12UT

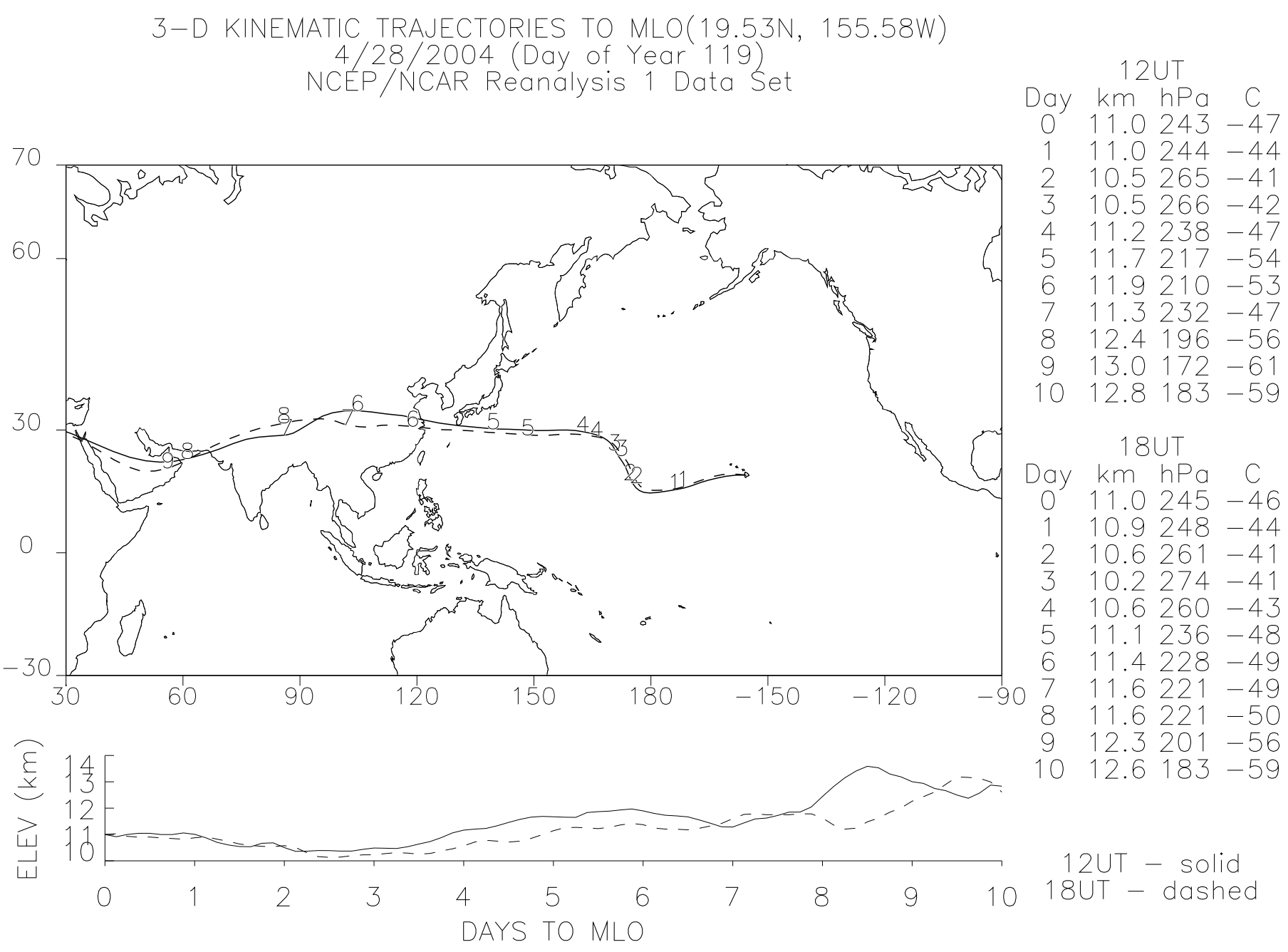
Day	km	hPa	C
0	11.0	242	-48
1	12.4	194	-58
2	12.5	192	-58
3	12.9	178	-60
4	12.5	183	-57
5	13.1	171	-60
6	13.0	175	-61
7	12.6	182	-57
8	12.2	195	-55
9	12.2	191	-58
10	12.2	195	-57

18UT

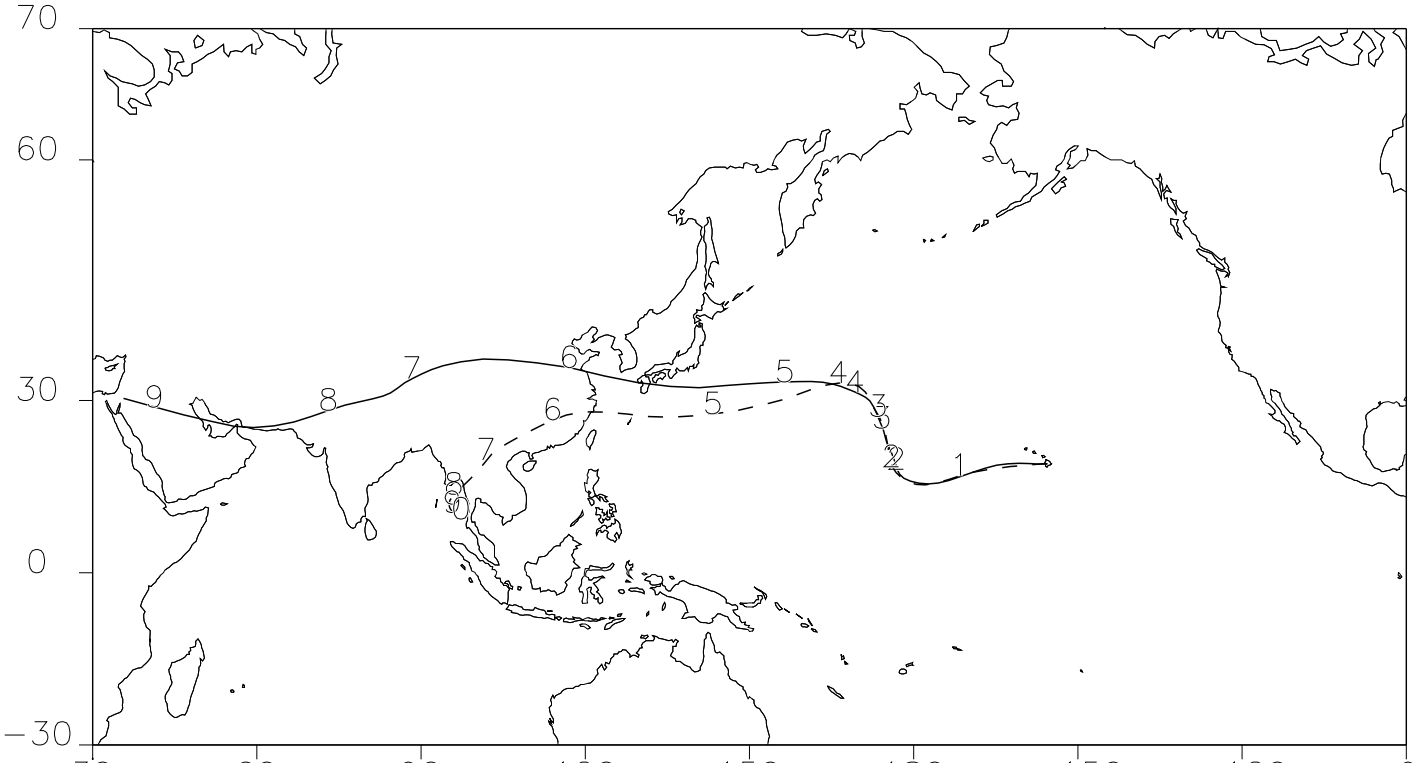
Day	km	hPa	C
0	11.0	243	-48
1	12.1	204	-55
2	12.3	198	-59
3	12.4	194	-59
4	12.2	198	-57
5	11.8	203	-57
6	13.0	173	-61
7	12.8	181	-59
8	12.4	184	-58
9	12.1	200	-54
10	12.1	197	-57

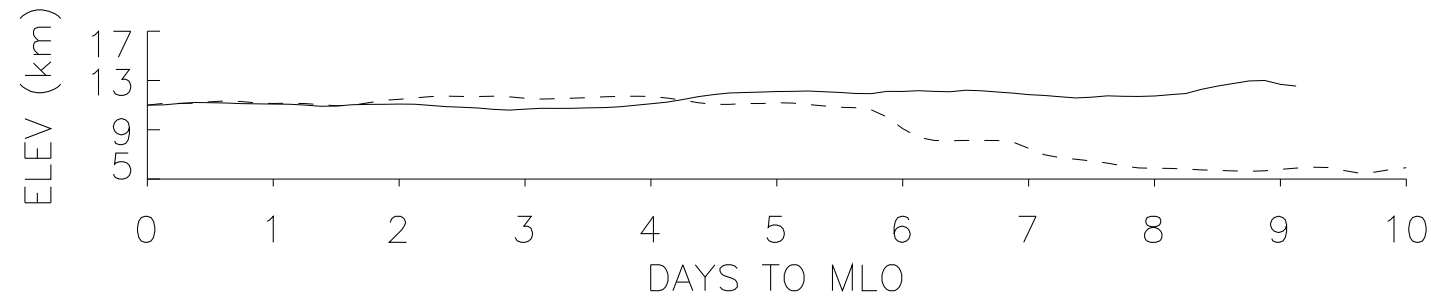
12UT - solid
18UT - dashed


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 11.0 244 -47
1 11.9 212 -51
2 12.0 211 -52
3 11.9 216 -52
4 12.2 202 -54
5 12.5 193 -58
6 11.7 218 -48
7 13.0 179 -60
06UT
Day km hPa C
0 11.0 244 -46
1 11.4 228 -47
2 11.5 227 -49
3 11.6 225 -49
4 12.4 193 -56
5 12.5 193 -55
6 11.5 225 -47
7 11.9 215 -53
8 13.4 164 -64
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)
4/28/2004 (Day of Year 119)
NCEP/NCAR Reanalysis 1 Data Set
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
Day km hPa C
0 11.0 243 -47
1 11.0 244 -44
2 10.5 265 -41
3 10.5 266 -42
4 11.2 238 -47
5 11.7 217 -54
6 11.9 210 -53
7 11.3 232 -47
8 12.4 196 -56
9 13.0 172 -61
10 12.8 183 -59
18UT
Day km hPa C
0 11.0 245 -46
1 10.9 248 -44
2 10.6 261 -41
3 10.2 274 -41
4 10.6 260 -43
5 11.1 236 -48
6 11.4 228 -49
7 11.6 221 -49
8 11.6 221 -50
9 12.3 201 -56
10 12.6 183 -59
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





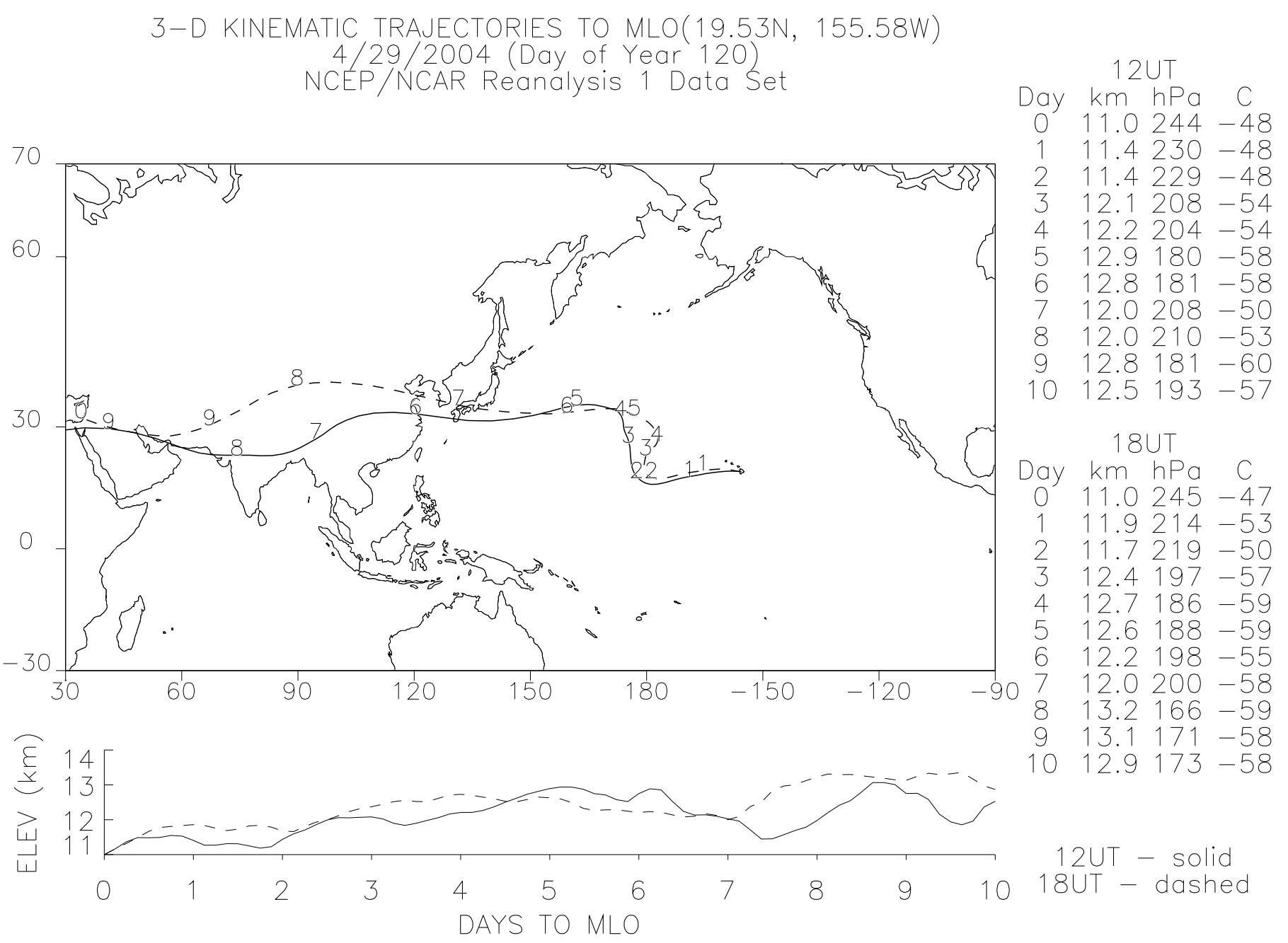
00UT

Day	km	hPa	C
0	11.0	244	-47
1	11.1	241	-45
2	11.1	241	-46
3	10.7	258	-45
4	11.1	240	-47
5	12.1	203	-56
6	12.1	198	-57
7	11.9	210	-55
8	11.7	215	-53
9	12.7	181	-60

06UT

Day	km	hPa	C
0	11.0	245	-47
1	11.1	239	-45
2	11.5	227	-48
3	11.6	225	-50
4	11.7	219	-50
5	11.2	235	-47
6	9.1	323	-28
7	7.5	403	-19
8	5.9	500	-6
9	5.8	508	-4
10	5.9	497	-6

00UT - solid
06UT - dashed



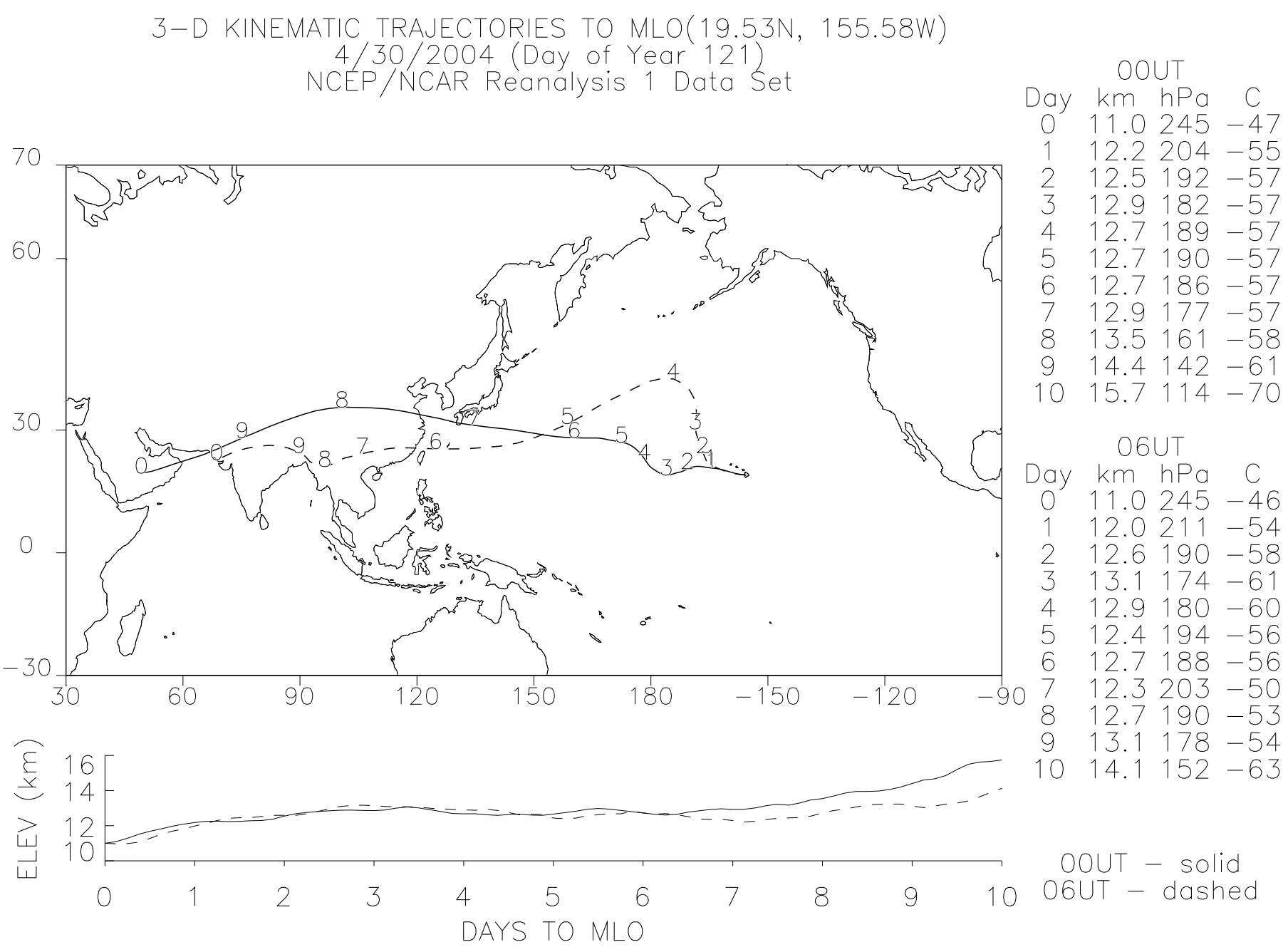
12UT

Day	km	hPa	C
0	11.0	244	−48
1	11.4	230	−48
2	11.4	229	−48
3	12.1	208	−54
4	12.2	204	−54
5	12.9	180	−58
6	12.8	181	−58
7	12.0	208	−50
8	12.0	210	−53
9	12.8	181	−60
10	12.5	193	−57

18UT

Day	km	hPa	C
0	11.0	245	−47
1	11.9	214	−53
2	11.7	219	−50
3	12.4	197	−57
4	12.7	186	−59
5	12.6	188	−59
6	12.2	198	−55
7	12.0	200	−58
8	13.2	166	−59
9	13.1	171	−58
10	12.9	173	−58

12UT − solid
18UT − dashed



00UT

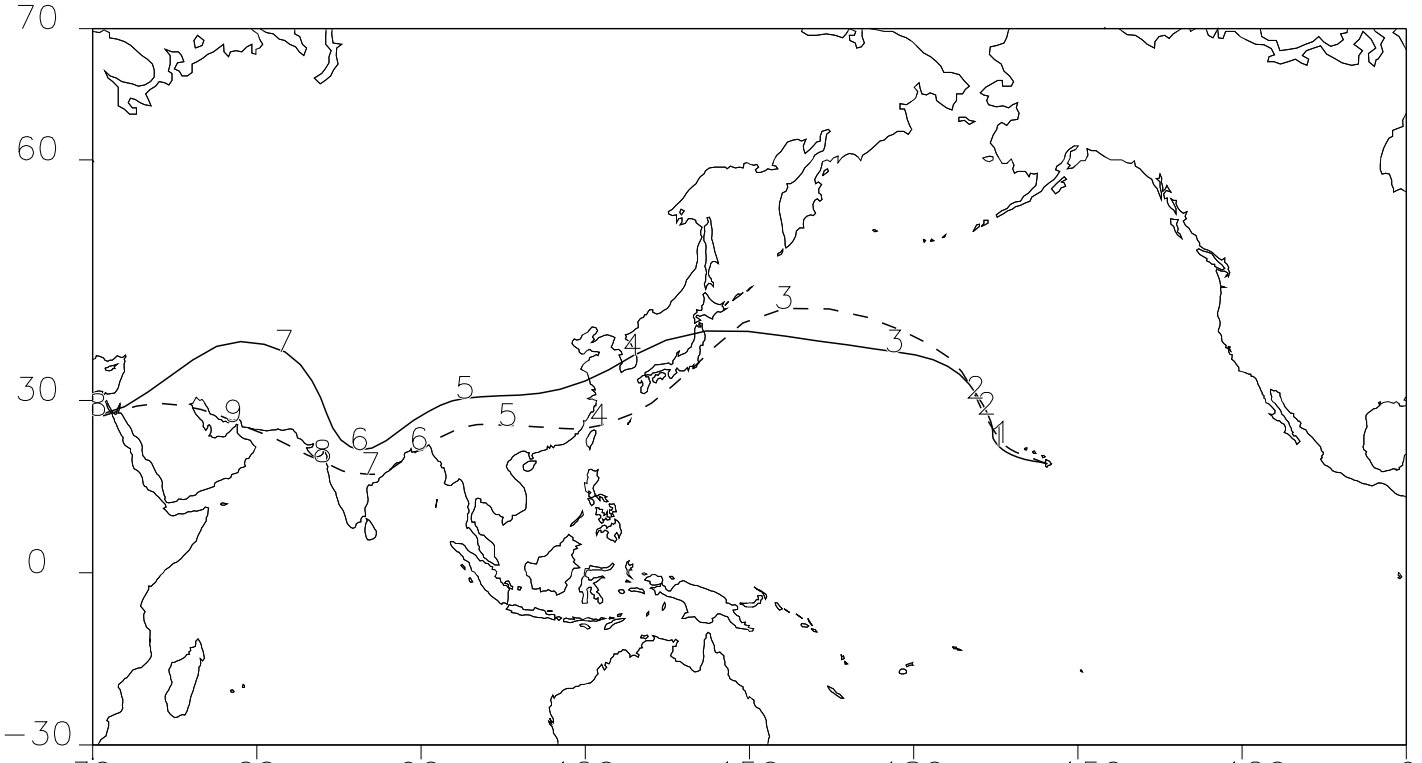
Day	km	hPa	C
0	11.0	245	−47
1	12.2	204	−55
2	12.5	192	−57
3	12.9	182	−57
4	12.7	189	−57
5	12.7	190	−57
6	12.7	186	−57
7	12.9	177	−57
8	13.5	161	−58
9	14.4	142	−61
10	15.7	114	−70

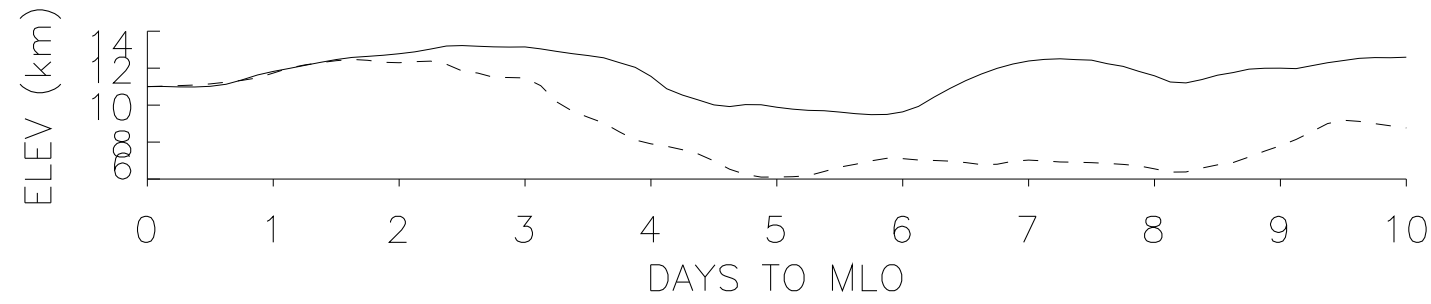
06UT

Day	km	hPa	C
0	11.0	245	−46
1	12.0	211	−54
2	12.6	190	−58
3	13.1	174	−61
4	12.9	180	−60
5	12.4	194	−56
6	12.7	188	−56
7	12.3	203	−50
8	12.7	190	−53
9	13.1	178	−54
10	14.1	152	−63

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

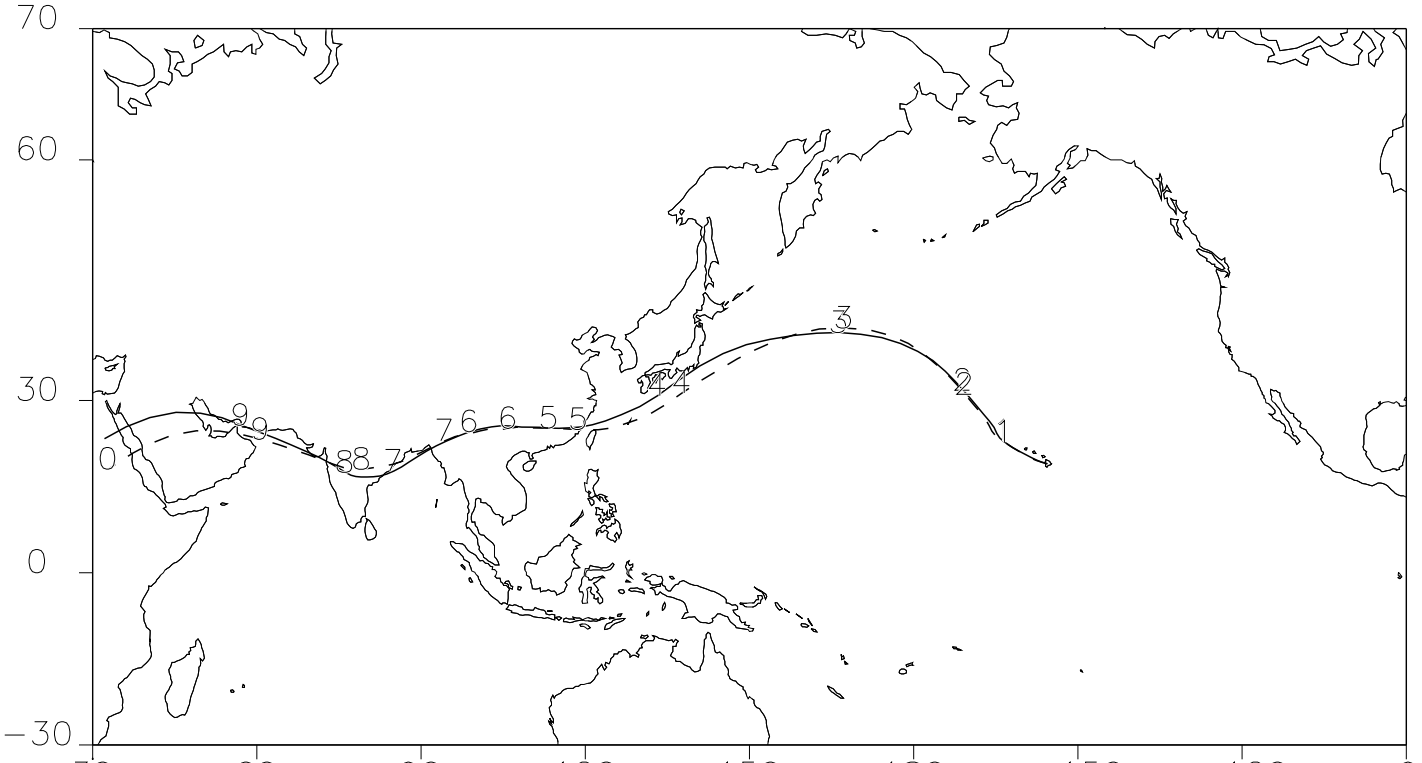
Day	km	hPa	C
0	11.0	244	-47
1	11.8	216	-54
2	12.8	184	-60
3	13.1	172	-65
4	11.6	216	-55
5	9.9	286	-38
6	9.6	296	-36
7	12.4	192	-62
8	11.6	214	-54
9	12.0	202	-57
10	12.6	186	-60

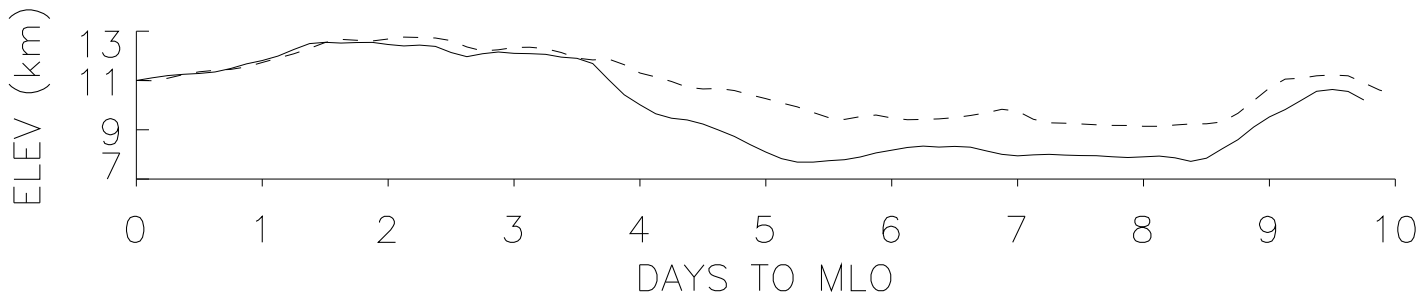
18UT

Day	km	hPa	C
0	11.0	245	-47
1	11.7	219	-53
2	12.3	200	-59
3	11.5	217	-54
4	7.9	379	-21
5	6.1	483	-7
6	7.1	424	-16
7	7.0	429	-14
8	6.6	458	-10
9	7.8	385	-23
10	8.8	333	-33

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

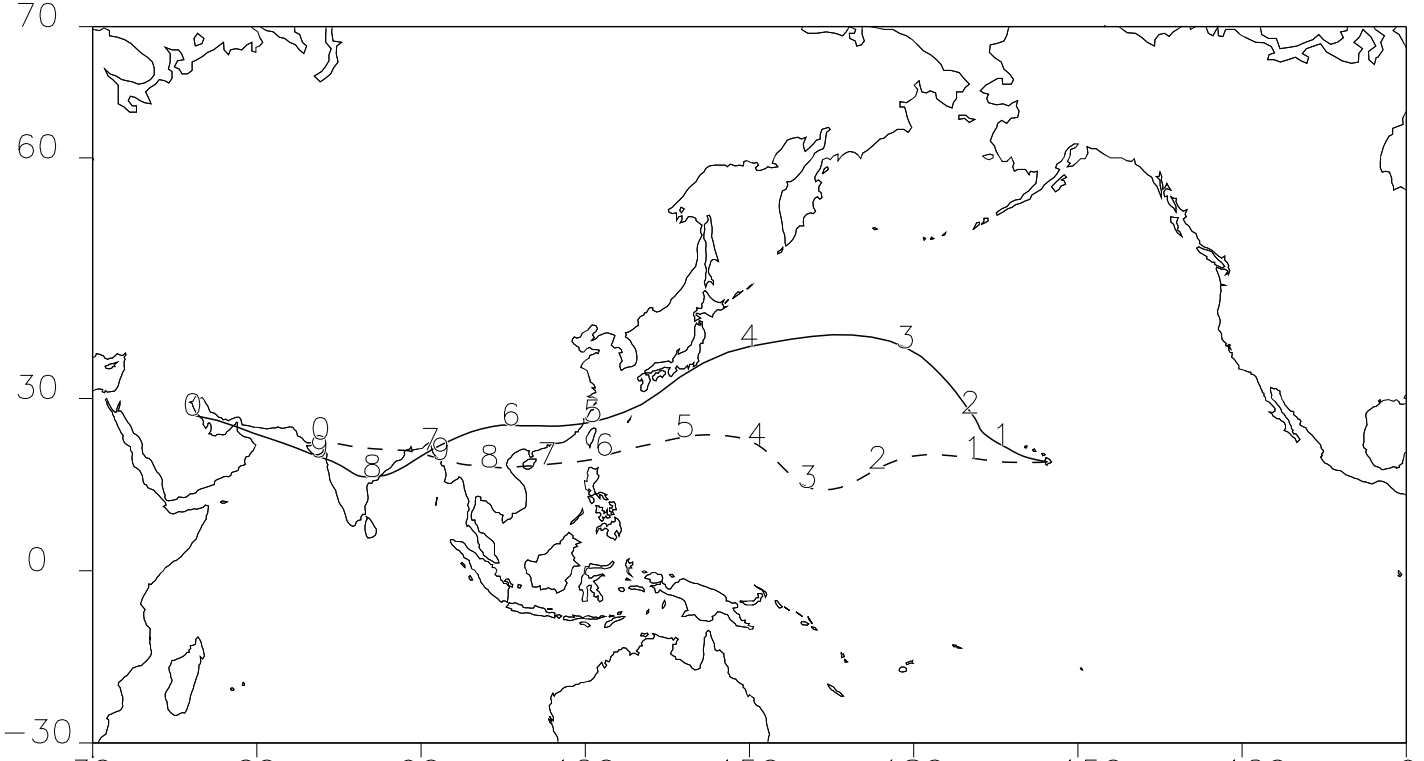
Day	km	hPa	C
0	11.0	245	−46
1	11.8	216	−52
2	12.5	195	−58
3	12.1	204	−56
4	10.0	280	−37
5	8.1	372	−21
6	8.2	367	−21
7	7.9	379	−20
8	7.9	381	−19
9	9.5	303	−36

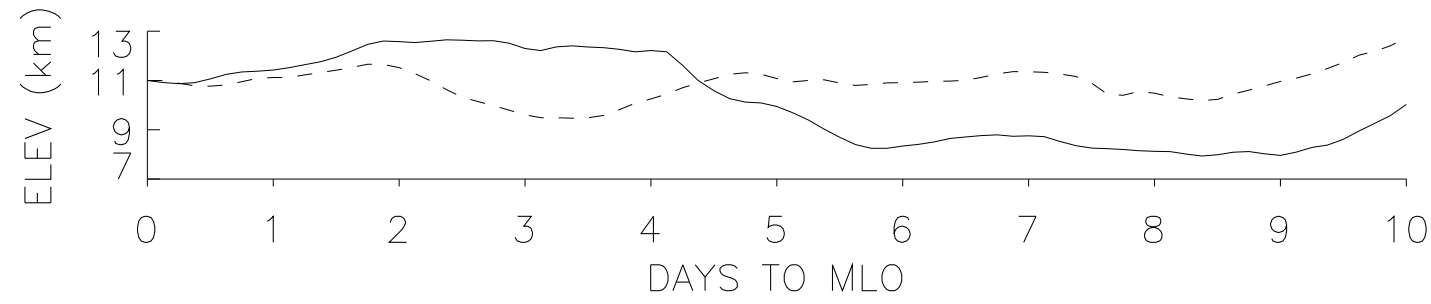
06UT

Day	km	hPa	C
0	11.0	245	−45
1	11.7	219	−51
2	12.7	188	−60
3	12.3	196	−56
4	11.3	231	−47
5	10.3	274	−37
6	9.5	308	−31
7	9.8	296	−32
8	9.1	323	−29
9	10.7	257	−43
10	10.4	269	−38

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





12UT

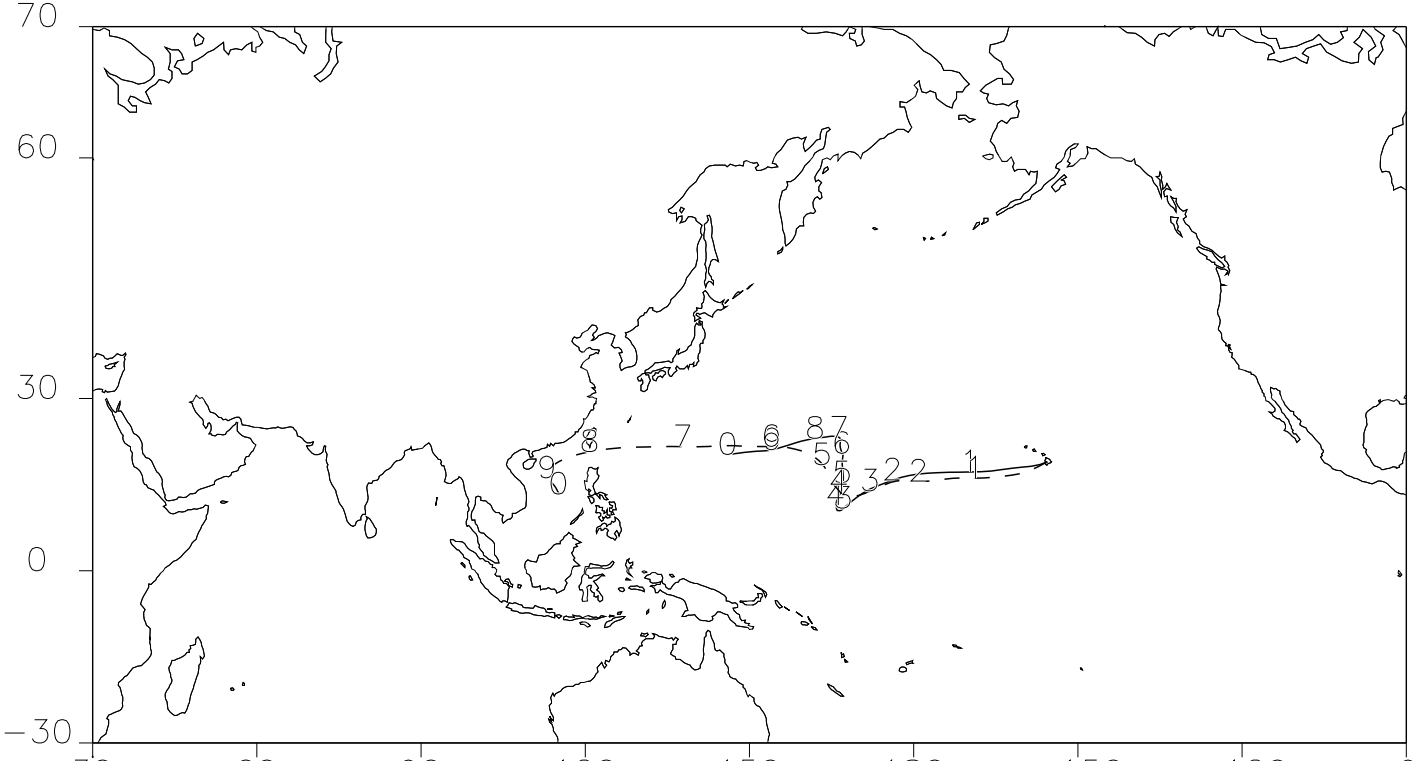
Day	km	hPa	C
0	11.0	245	-45
1	11.4	230	-49
2	12.6	192	-59
3	12.3	200	-57
4	12.2	199	-57
5	9.9	287	-35
6	8.3	360	-22
7	8.8	339	-27
8	8.1	371	-20
9	8.0	379	-20
10	10.0	280	-40

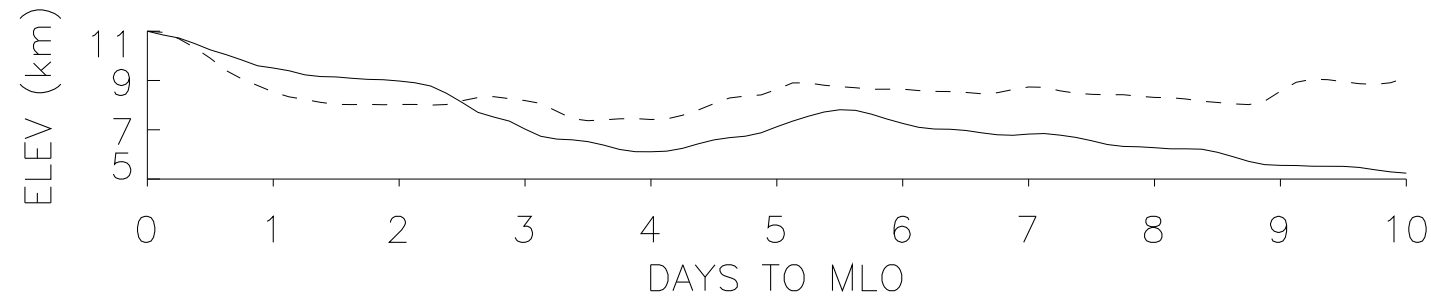
18UT

Day	km	hPa	C
0	11.0	245	-45
1	11.1	242	-45
2	11.5	228	-47
3	9.6	301	-31
4	10.3	276	-38
5	11.1	244	-45
6	10.9	251	-42
7	11.4	235	-45
8	10.5	267	-38
9	11.0	248	-41
10	12.7	188	-57

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

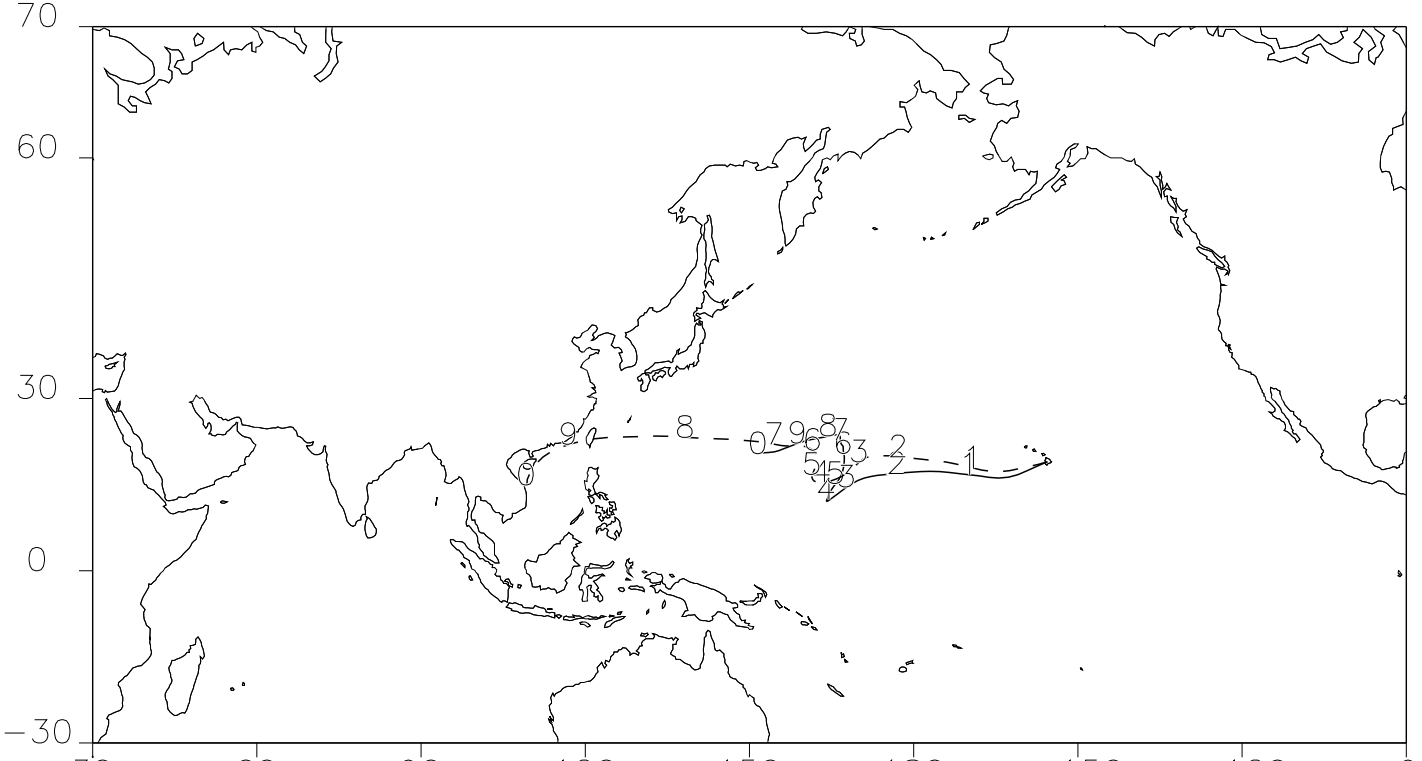
Day	km	hPa	C
0	11.0	244	-47
1	9.5	306	-32
2	9.0	330	-27
3	7.0	430	-12
4	6.1	485	-6
5	7.1	425	-13
6	7.3	419	-15
7	6.8	443	-15
8	6.3	476	-11
9	5.6	521	-6
10	5.2	542	-3

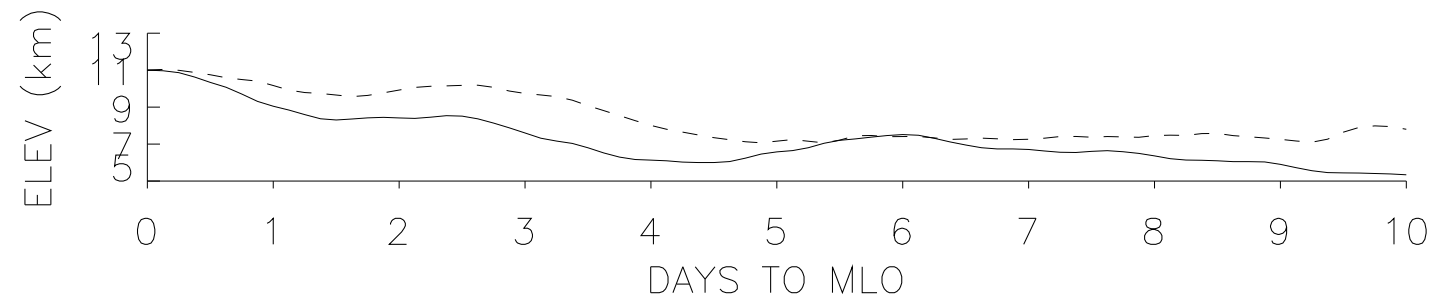
06UT

Day	km	hPa	C
0	11.0	244	-47
1	8.5	351	-25
2	8.0	376	-20
3	8.2	367	-22
4	7.4	407	-15
5	8.6	347	-25
6	8.6	346	-25
7	8.7	342	-26
8	8.3	363	-22
9	8.6	351	-23
10	9.1	326	-27

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

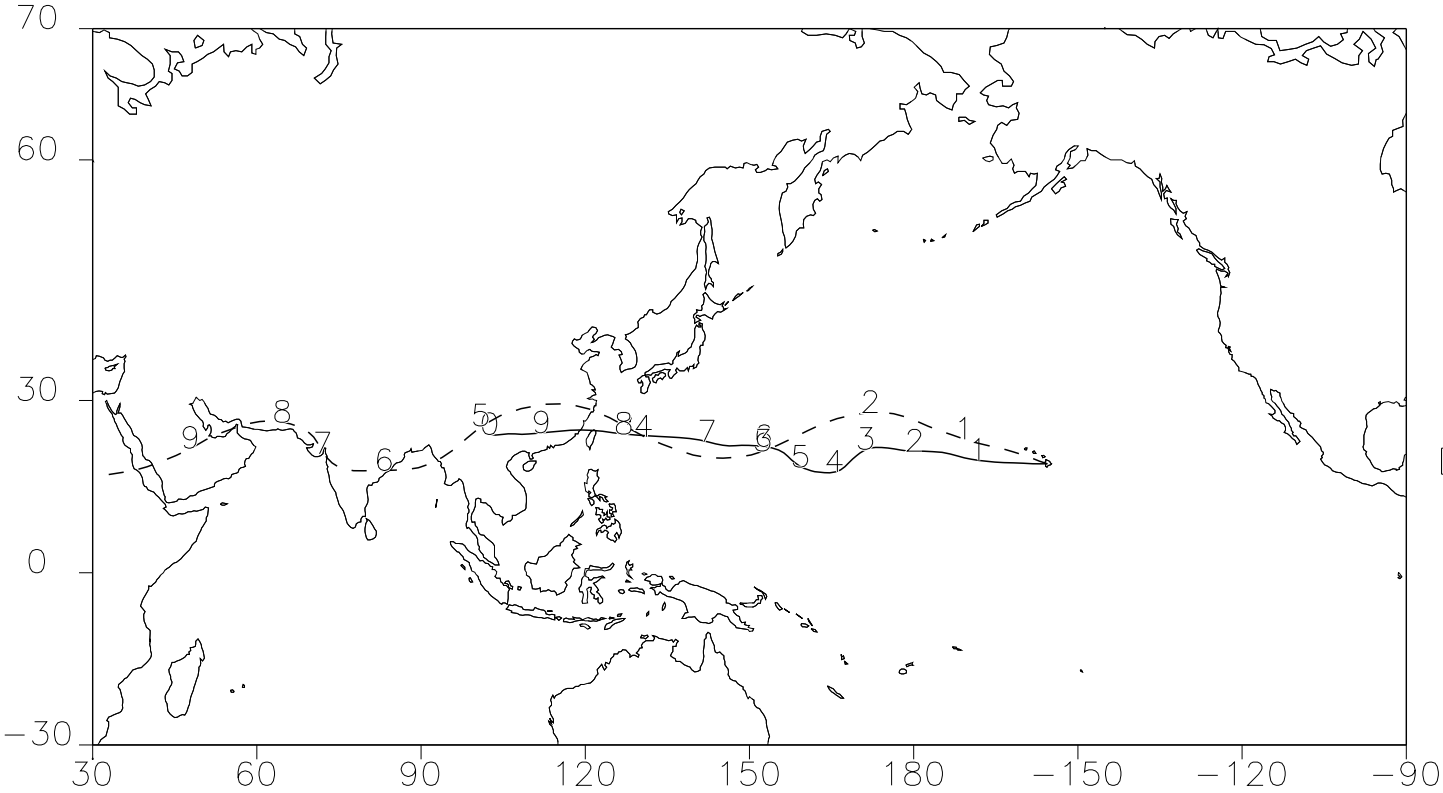
Day	km	hPa	C
0	11.0	244	-48
1	9.0	326	-30
2	8.4	357	-24
3	7.6	399	-19
4	6.1	483	-7
5	6.6	457	-10
6	7.5	405	-17
7	6.7	450	-13
8	6.4	471	-12
9	5.9	499	-8
10	5.3	536	-4

18UT

Day	km	hPa	C
0	11.0	244	-48
1	10.2	277	-39
2	9.9	288	-36
3	9.7	295	-34
4	8.0	375	-21
5	7.2	423	-15
6	7.4	410	-17
7	7.3	416	-16
8	7.5	404	-18
9	7.3	417	-15
10	7.8	389	-17

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

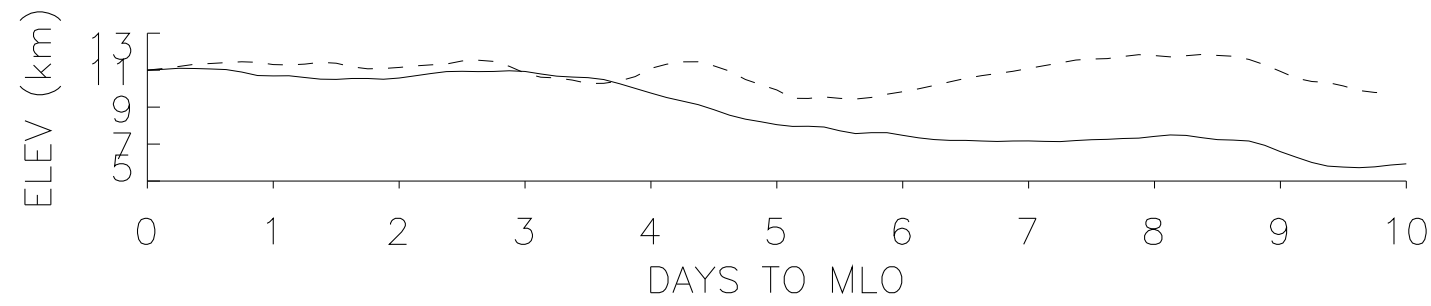


00UT

Day	km	hPa	C
0	11.0	244	-48
1	10.7	255	-44
2	10.6	261	-41
3	10.9	249	-44
4	9.8	294	-34
5	8.1	376	-22
6	7.5	407	-17
7	7.2	422	-15
8	7.4	407	-17
9	6.6	453	-12
10	5.9	492	-7

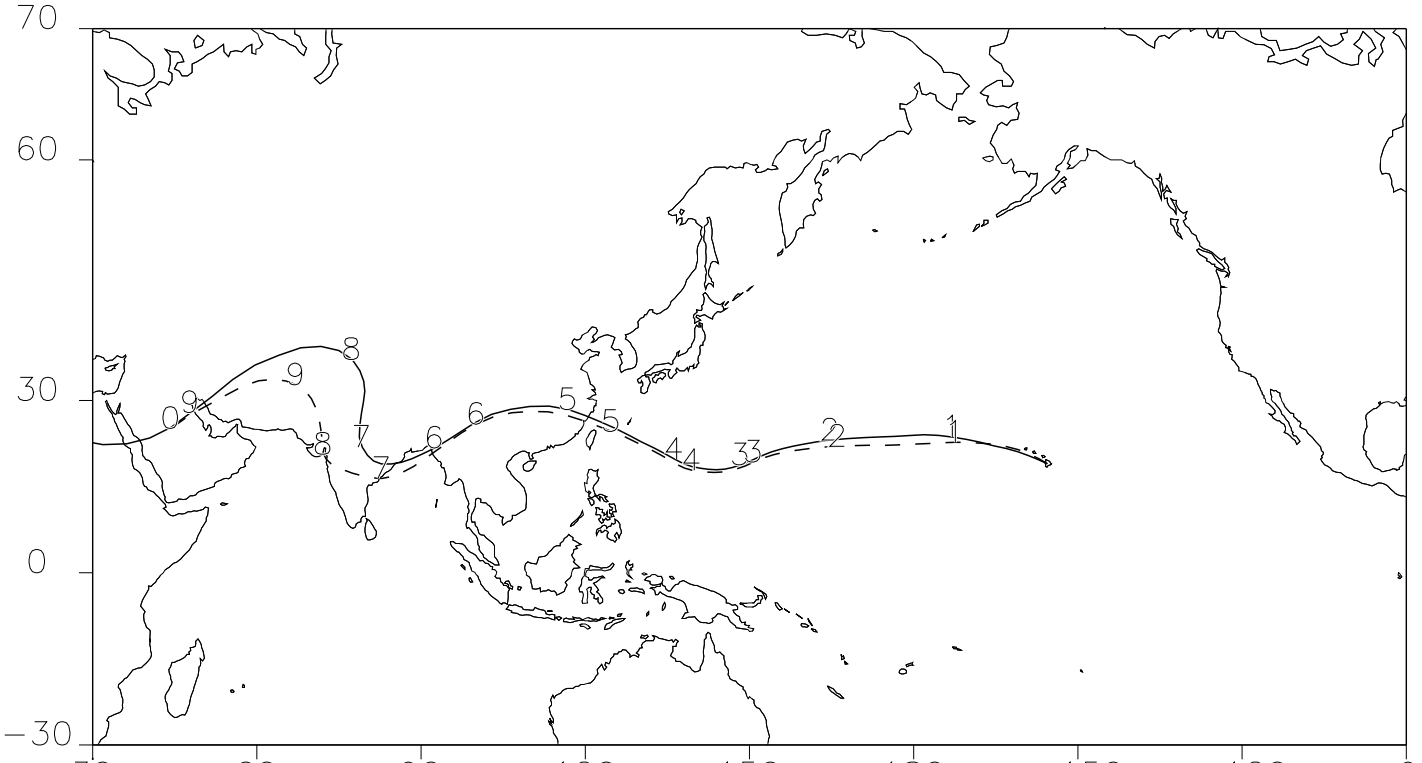
06UT

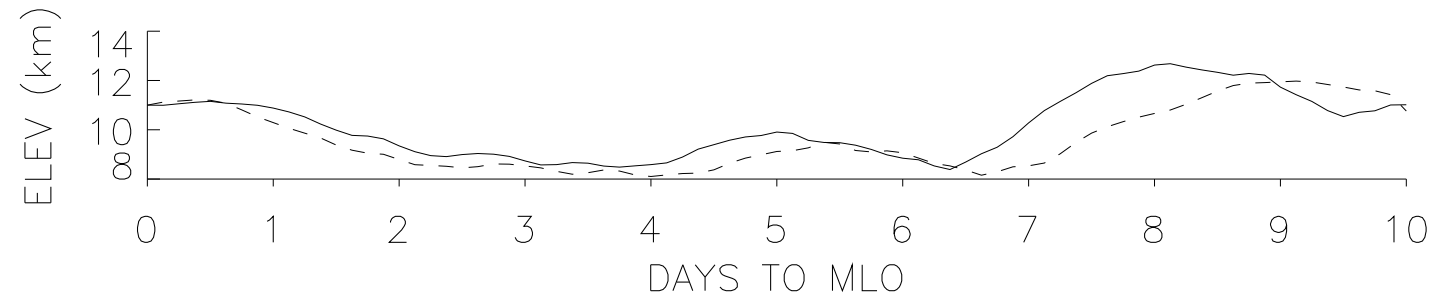
Day	km	hPa	C
0	11.0	244	-48
1	11.3	232	-50
2	11.1	238	-47
3	10.8	251	-44
4	11.1	241	-47
5	9.9	287	-34
6	9.8	293	-32
7	11.1	244	-44
8	11.8	219	-50
9	10.9	249	-45



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





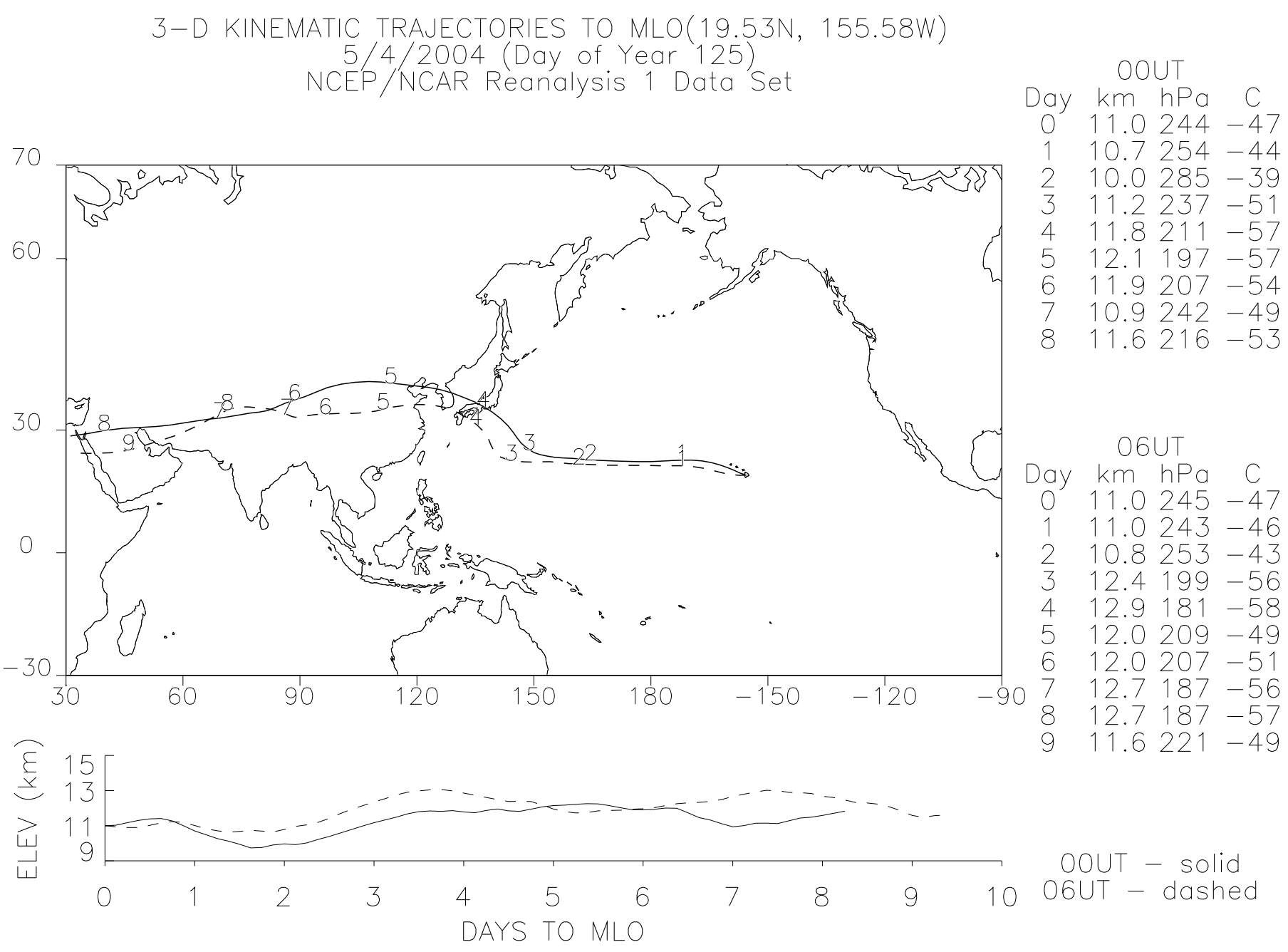
12UT

Day	km	hPa	C
0	11.0	244	-48
1	10.9	247	-47
2	9.3	312	-33
3	8.7	341	-28
4	8.6	348	-26
5	9.9	287	-37
6	8.8	333	-26
7	10.3	271	-40
8	12.6	188	-60
9	11.7	216	-54
10	11.0	238	-50

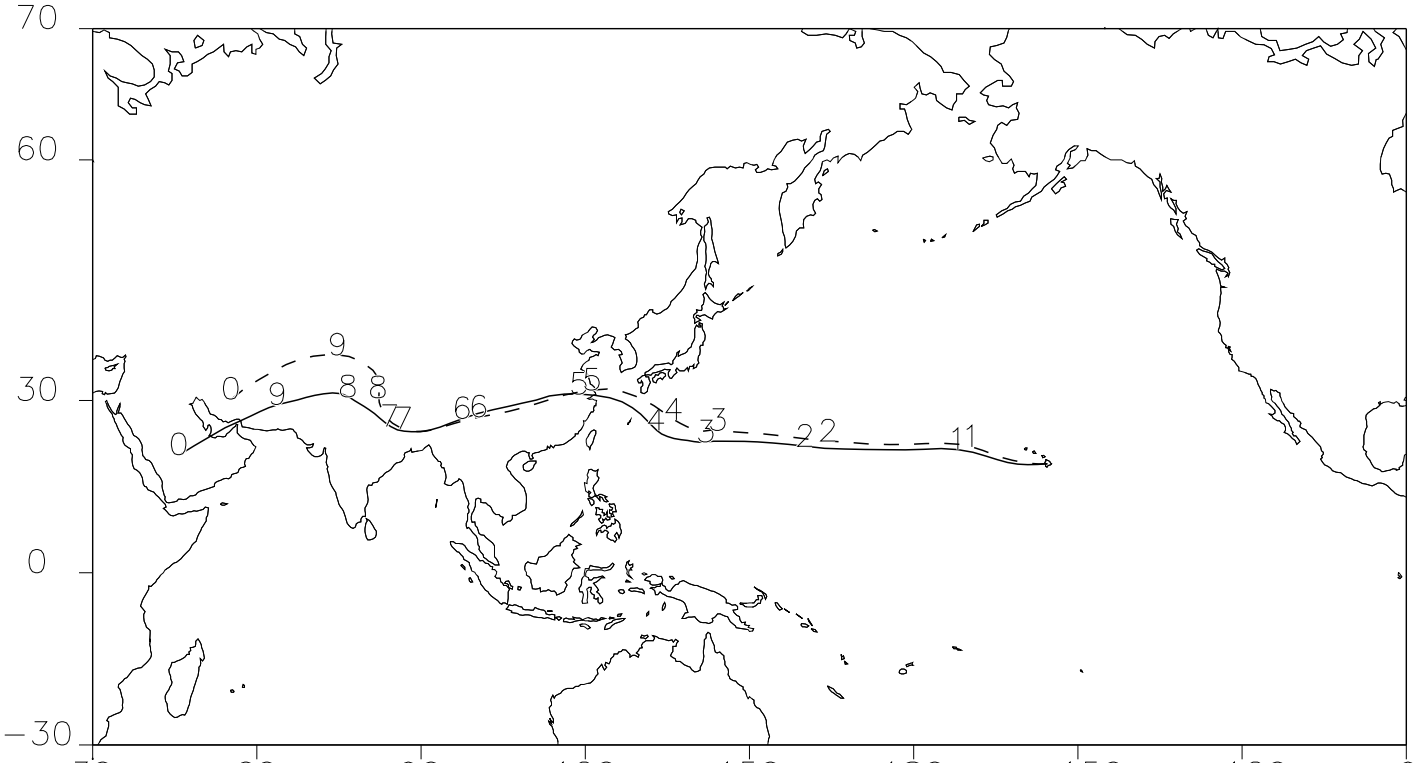
18UT

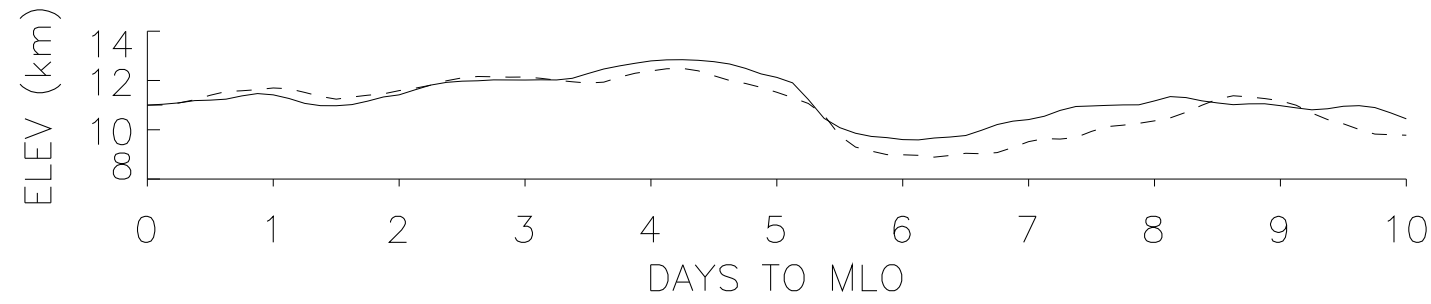
Day	km	hPa	C
0	11.0	244	-48
1	10.3	270	-42
2	8.8	337	-29
3	8.5	349	-27
4	8.1	372	-22
5	9.1	322	-31
6	9.1	323	-31
7	8.5	351	-24
8	10.7	260	-41
9	11.9	212	-55
10	10.8	252	-46

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 11.0 244 -47
1 10.7 254 -44
2 10.0 285 -39
3 11.2 237 -51
4 11.8 211 -57
5 12.1 197 -57
6 11.9 207 -54
7 10.9 242 -49
8 11.6 216 -53
06UT
Day km hPa C
0 11.0 245 -47
1 11.0 243 -46
2 10.8 253 -43
3 12.4 199 -56
4 12.9 181 -58
5 12.0 209 -49
6 12.0 207 -51
7 12.7 187 -56
8 12.7 187 -57
9 11.6 221 -49
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)
5/4/2004 (Day of Year 125)
NCEP/NCAR Reanalysis 1 Data Set





12UT

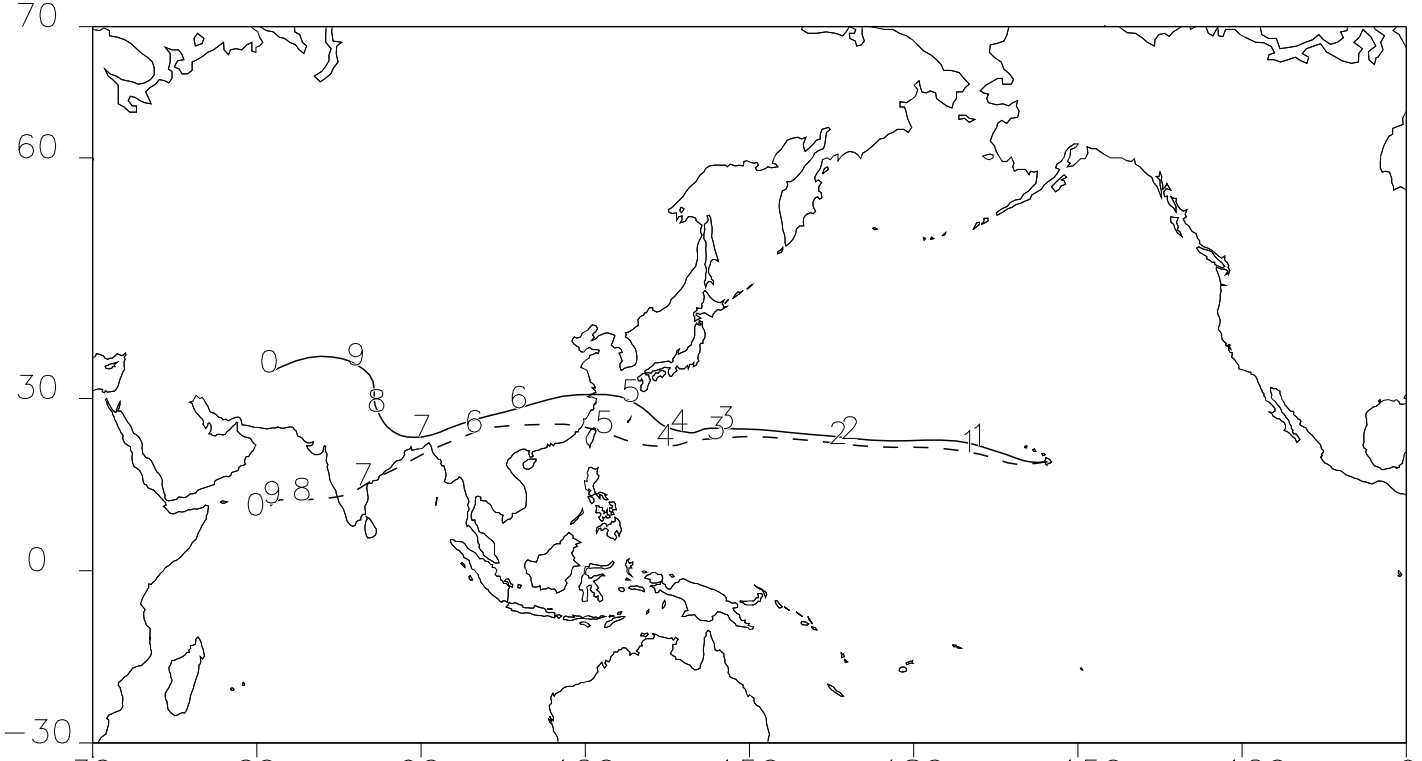
Day	km	hPa	C
0	11.0	244	−48
1	11.4	229	−49
2	11.4	230	−49
3	12.0	211	−54
4	12.8	186	−58
5	12.1	205	−53
6	9.6	298	−34
7	10.4	265	−41
8	11.2	238	−48
9	11.0	246	−47
10	10.4	267	−40

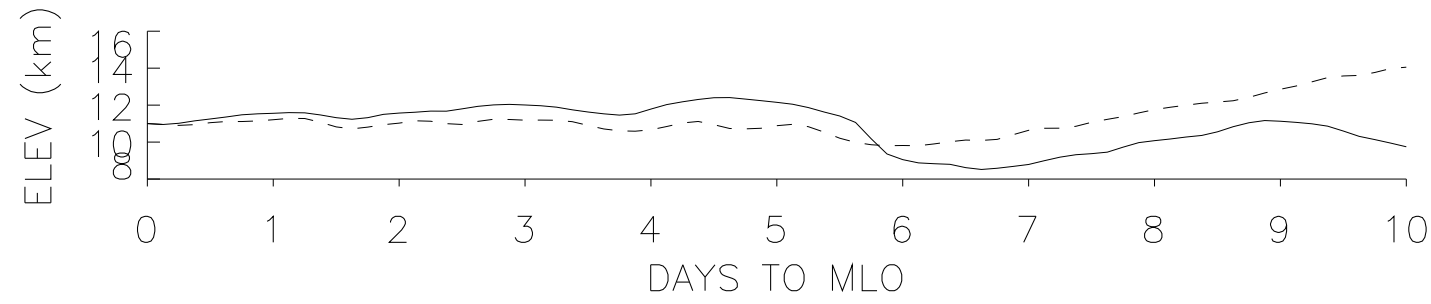
18UT

Day	km	hPa	C
0	11.0	244	−48
1	11.7	219	−53
2	11.6	221	−51
3	12.1	206	−55
4	12.4	197	−57
5	11.5	224	−49
6	9.0	326	−30
7	9.5	302	−35
8	10.4	268	−43
9	11.2	237	−50
10	9.8	292	−38

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

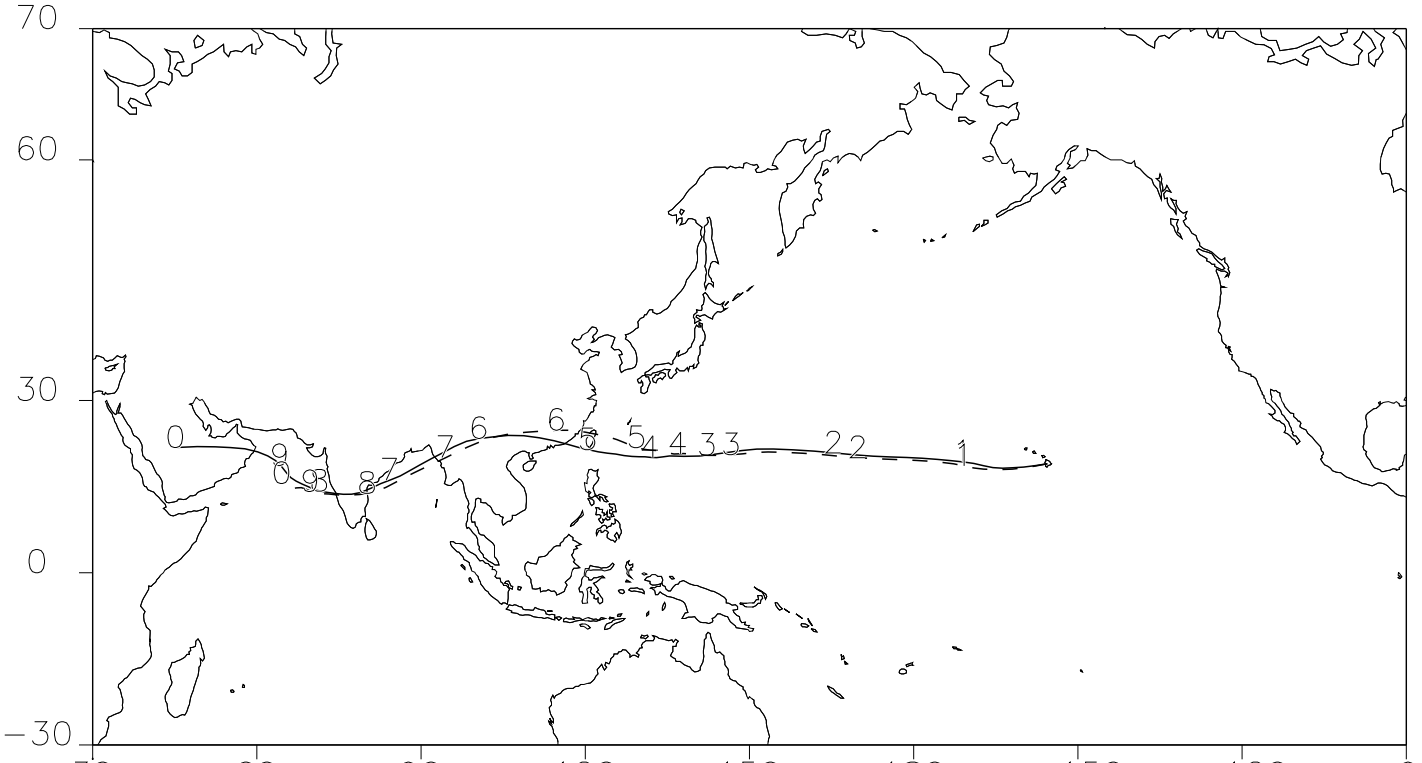
Day	km	hPa	C
0	11.0	244	-47
1	11.6	224	-52
2	11.6	222	-51
3	12.0	211	-54
4	11.8	218	-52
5	12.2	204	-56
6	9.0	323	-31
7	8.8	334	-28
8	10.1	278	-40
9	11.1	238	-50
10	9.7	292	-38

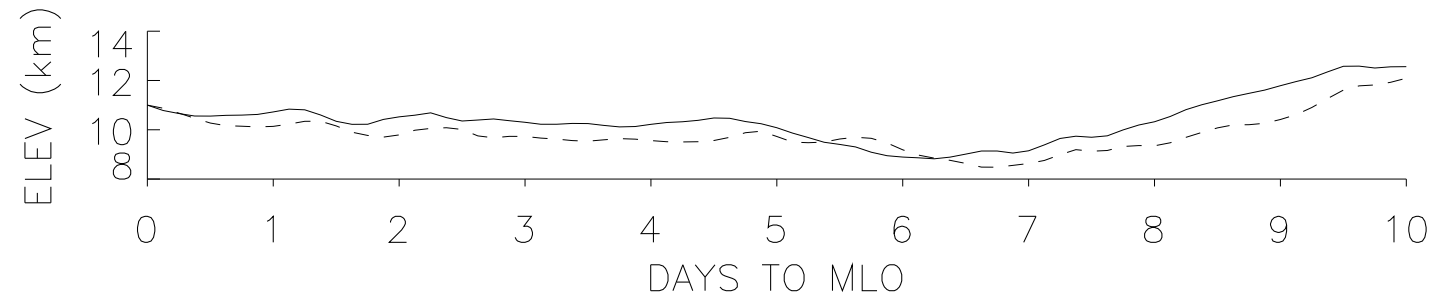
06UT

Day	km	hPa	C
0	11.0	244	-47
1	11.2	237	-48
2	11.0	241	-46
3	11.2	239	-46
4	10.7	259	-43
5	10.9	250	-43
6	9.8	293	-32
7	10.6	261	-37
8	11.8	223	-46
9	12.9	189	-54
10	14.1	156	-63

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

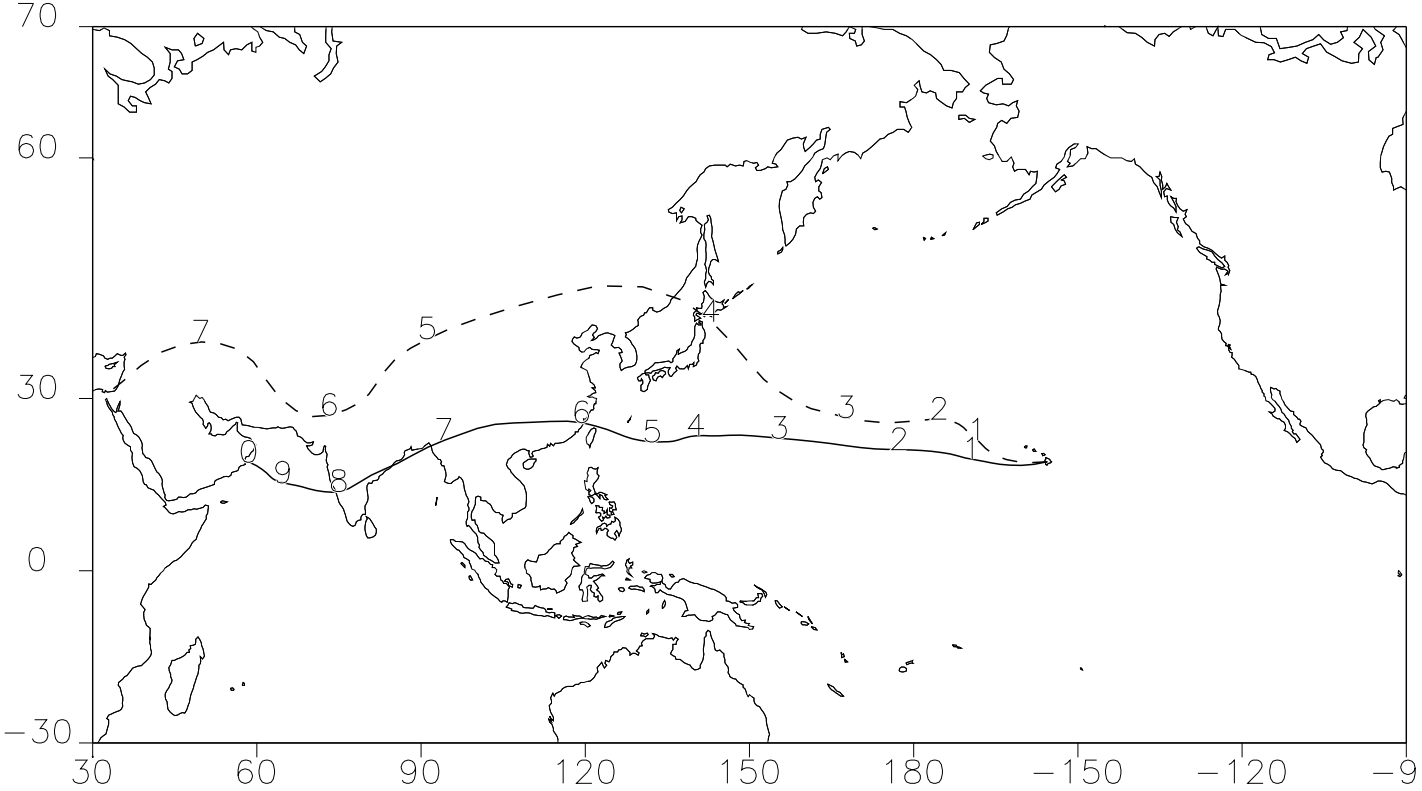
Day	km	hPa	C
0	11.0	243	-47
1	10.7	255	-44
2	10.5	262	-42
3	10.3	274	-39
4	10.2	277	-39
5	10.1	283	-36
6	8.9	333	-25
7	9.1	322	-27
8	10.3	273	-37
9	11.8	221	-47
10	12.6	193	-53

18UT

Day	km	hPa	C
0	11.0	243	-48
1	10.1	278	-39
2	9.8	291	-36
3	9.7	296	-35
4	9.6	304	-34
5	9.7	296	-35
6	9.2	320	-30
7	8.6	346	-23
8	9.3	315	-28
9	10.4	271	-35
10	12.1	212	-48

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

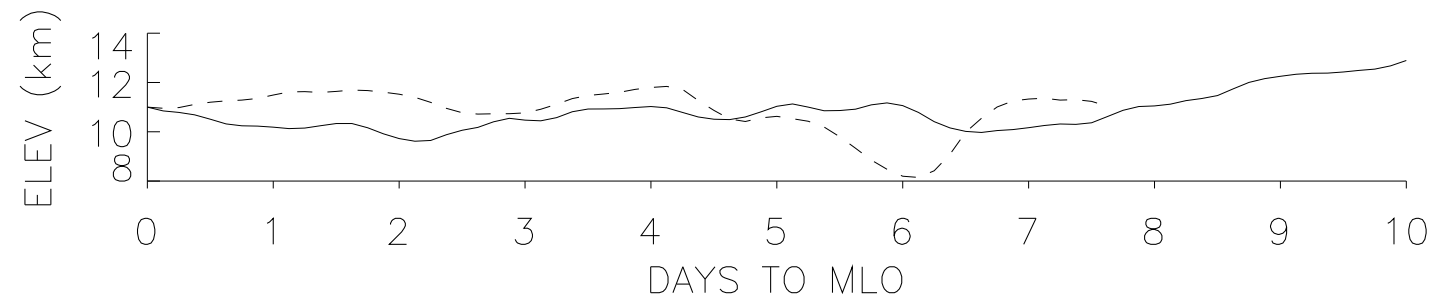


00UT

Day	km	hPa	C
0	11.0	242	-48
1	10.2	276	-41
2	9.7	295	-37
3	10.5	264	-43
4	11.0	245	-46
5	11.0	245	-46
6	11.1	243	-45
7	10.2	277	-35
8	11.1	245	-41
9	12.3	205	-50
10	12.9	186	-56

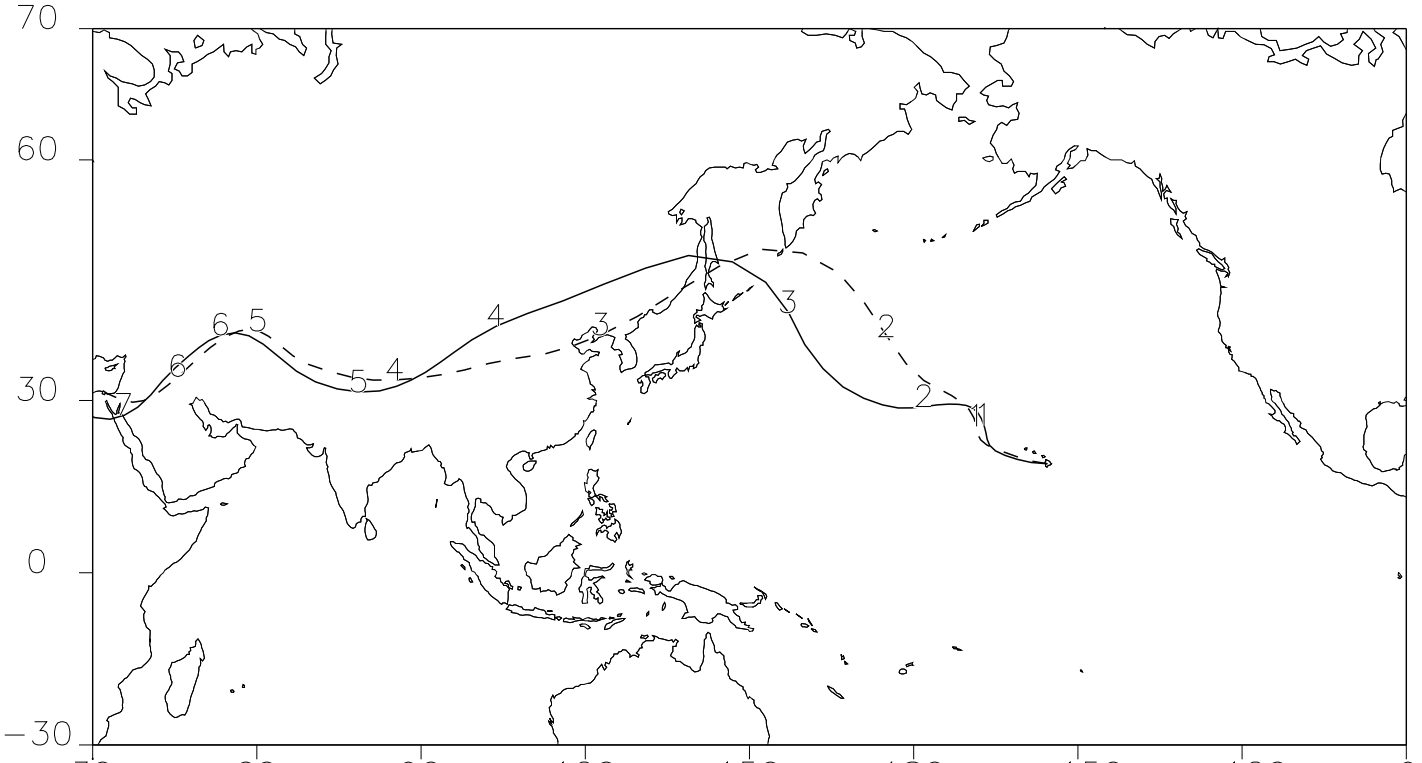
06UT

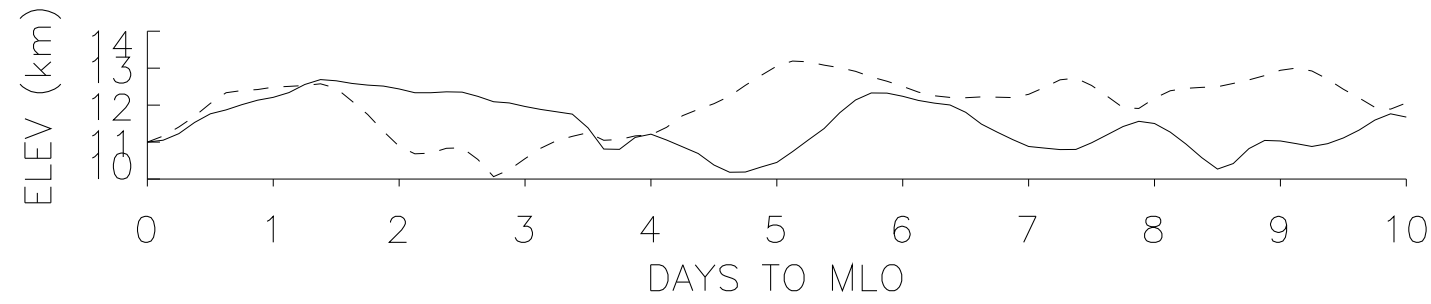
Day	km	hPa	C
0	11.0	241	-48
1	11.5	226	-53
2	11.5	224	-54
3	10.8	248	-50
4	11.8	207	-60
5	10.6	249	-48
6	8.2	359	-29
7	11.3	224	-57



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

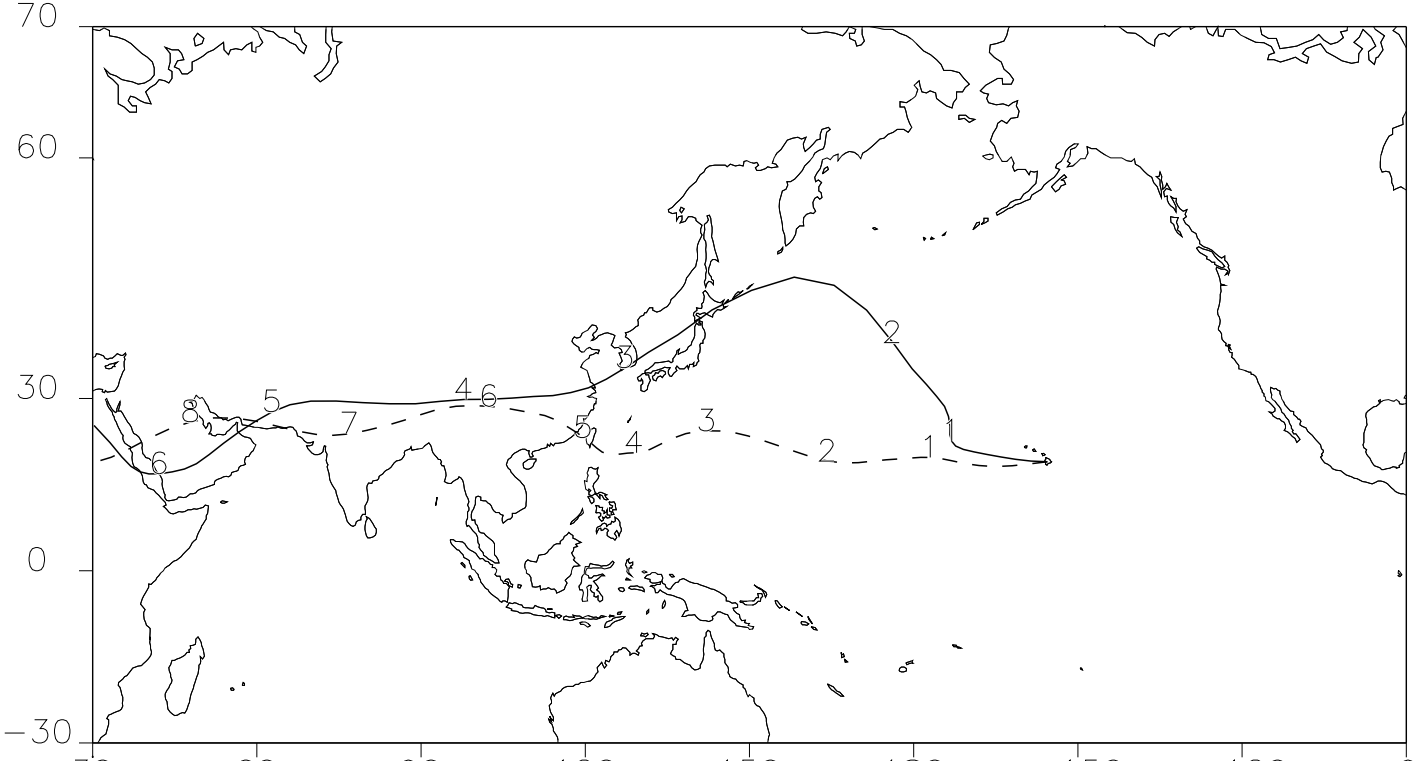
Day	km	hPa	C
0	11.0	241	−48
1	12.2	201	−58
2	12.4	193	−61
3	12.0	196	−59
4	11.2	225	−49
5	10.4	257	−42
6	12.2	194	−61
7	10.9	242	−51
8	11.5	216	−56
9	11.0	235	−51
10	11.7	212	−58

18UT

Day	km	hPa	C
0	11.0	242	−47
1	12.5	192	−60
2	10.9	233	−48
3	10.6	247	−46
4	11.2	230	−48
5	13.1	171	−62
6	12.5	186	−57
7	12.3	190	−54
8	12.2	191	−51
9	12.9	172	−59
10	12.1	190	−53

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

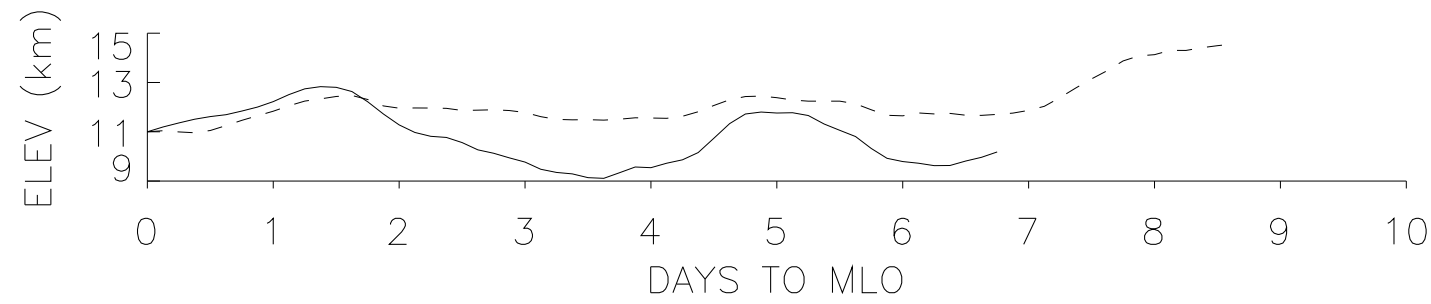


00UT

Day	km	hPa	C
0	11.0	242	−46
1	12.2	202	−56
2	11.3	226	−49
3	9.8	287	−38
4	9.5	299	−33
5	11.8	216	−53
6	9.8	293	−35

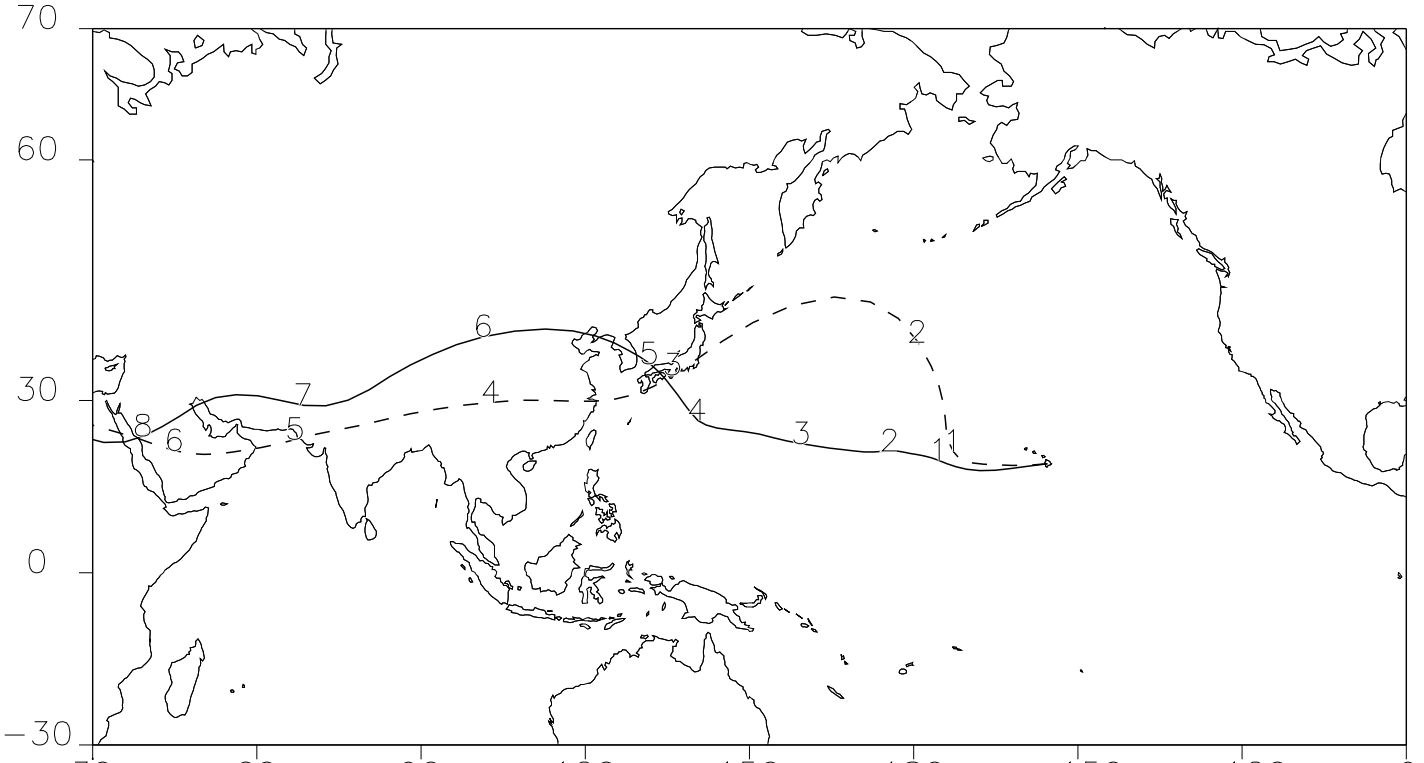
06UT

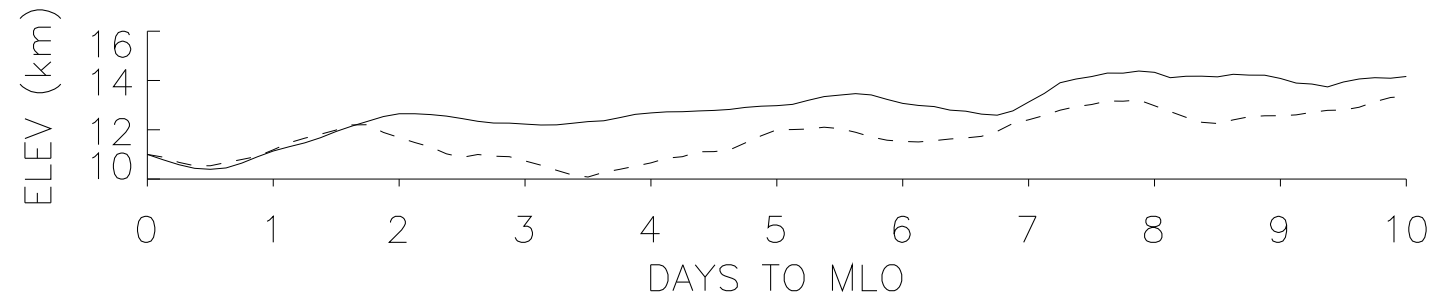
Day	km	hPa	C
0	11.0	243	−46
1	11.8	216	−50
2	12.0	213	−50
3	11.8	219	−47
4	11.6	226	−46
5	12.4	201	−49
6	11.6	223	−43
7	11.9	215	−43
8	14.1	150	−61



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





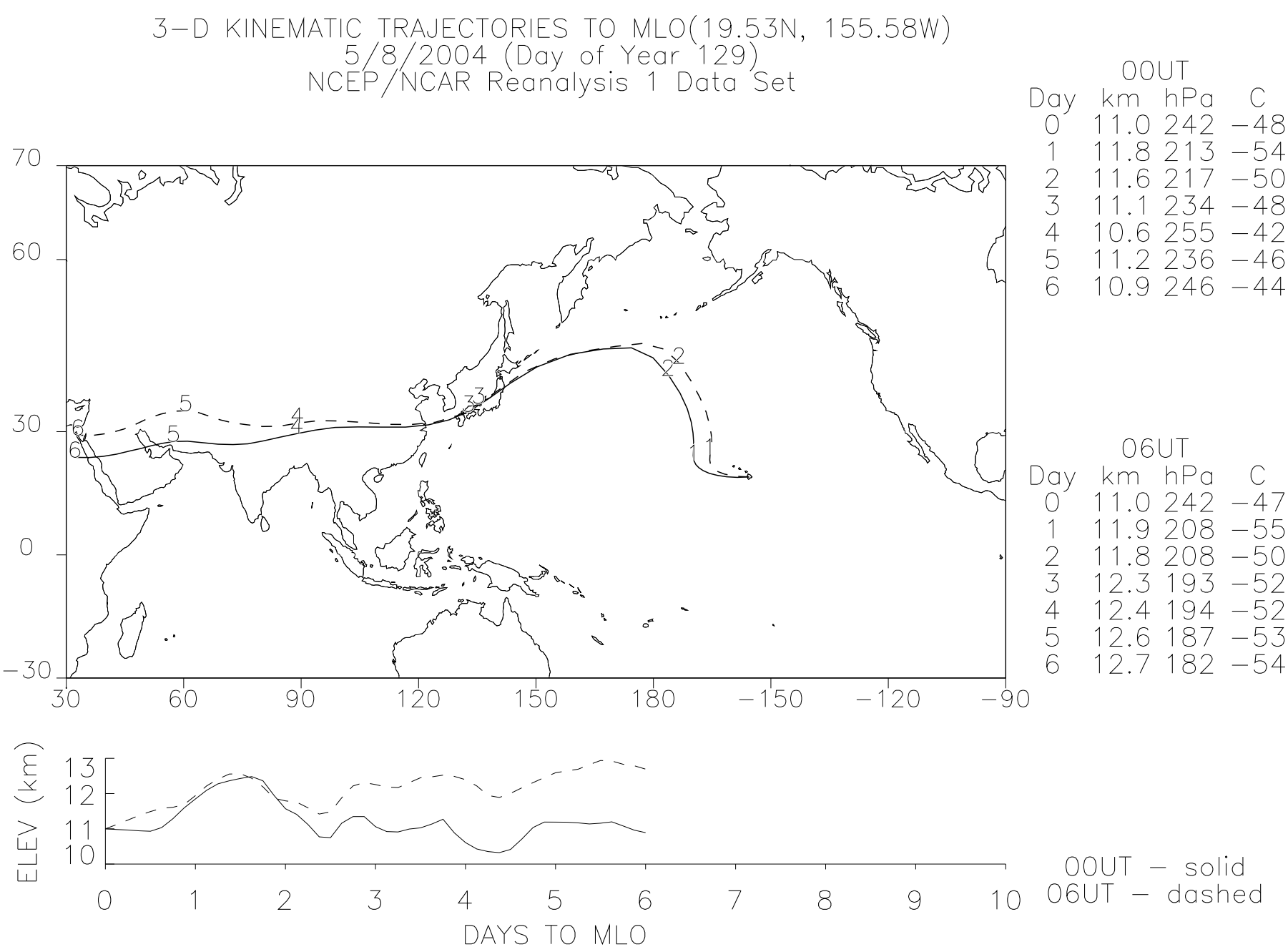
12UT

Day	km	hPa	C
0	11.0	242	−47
1	11.1	240	−47
2	12.6	191	−58
3	12.2	203	−54
4	12.7	188	−55
5	13.0	178	−57
6	13.1	172	−55
7	13.1	172	−51
8	14.3	143	−62
9	14.1	146	−63
10	14.2	146	−62

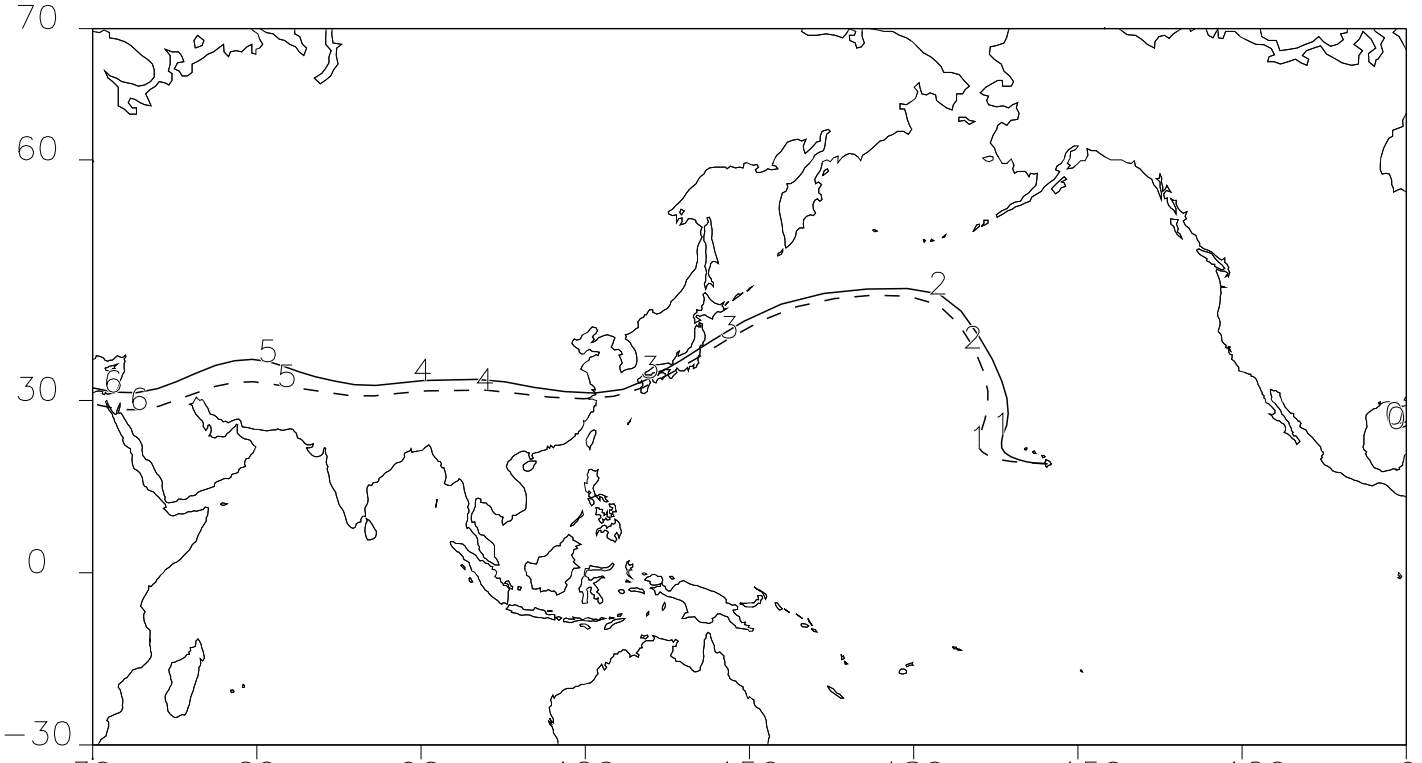
18UT

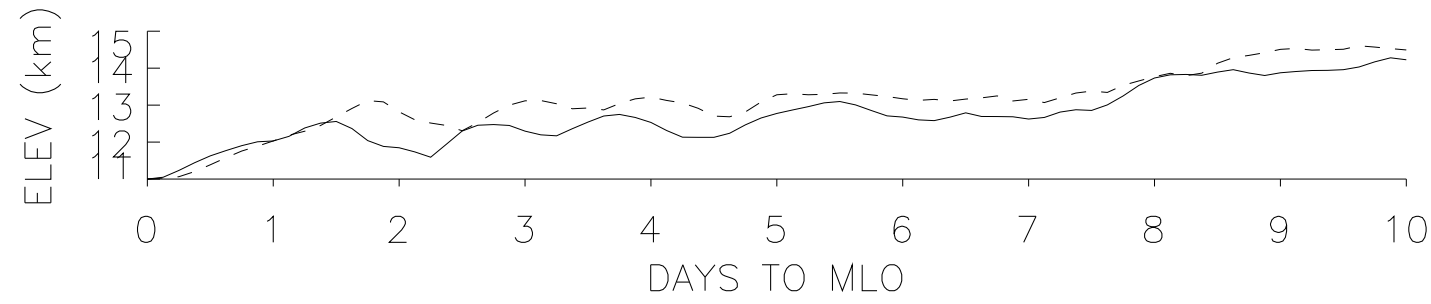
Day	km	hPa	C
0	11.0	242	−48
1	11.2	237	−49
2	11.7	216	−53
3	10.7	250	−45
4	10.7	256	−40
5	12.0	212	−49
6	11.5	226	−45
7	12.4	194	−55
8	13.0	180	−58
9	12.6	195	−54
10	13.4	171	−59

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 11.0 242 -48
1 11.8 213 -54
2 11.6 217 -50
3 11.1 234 -48
4 10.6 255 -42
5 11.2 236 -46
6 10.9 246 -44
06UT
Day km hPa C
0 11.0 242 -47
1 11.9 208 -55
2 11.8 208 -50
3 12.3 193 -52
4 12.4 194 -52
5 12.6 187 -53
6 12.7 182 -54
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)
5/8/2004 (Day of Year 129)
NCEP/NCAR Reanalysis 1 Data Set





12UT

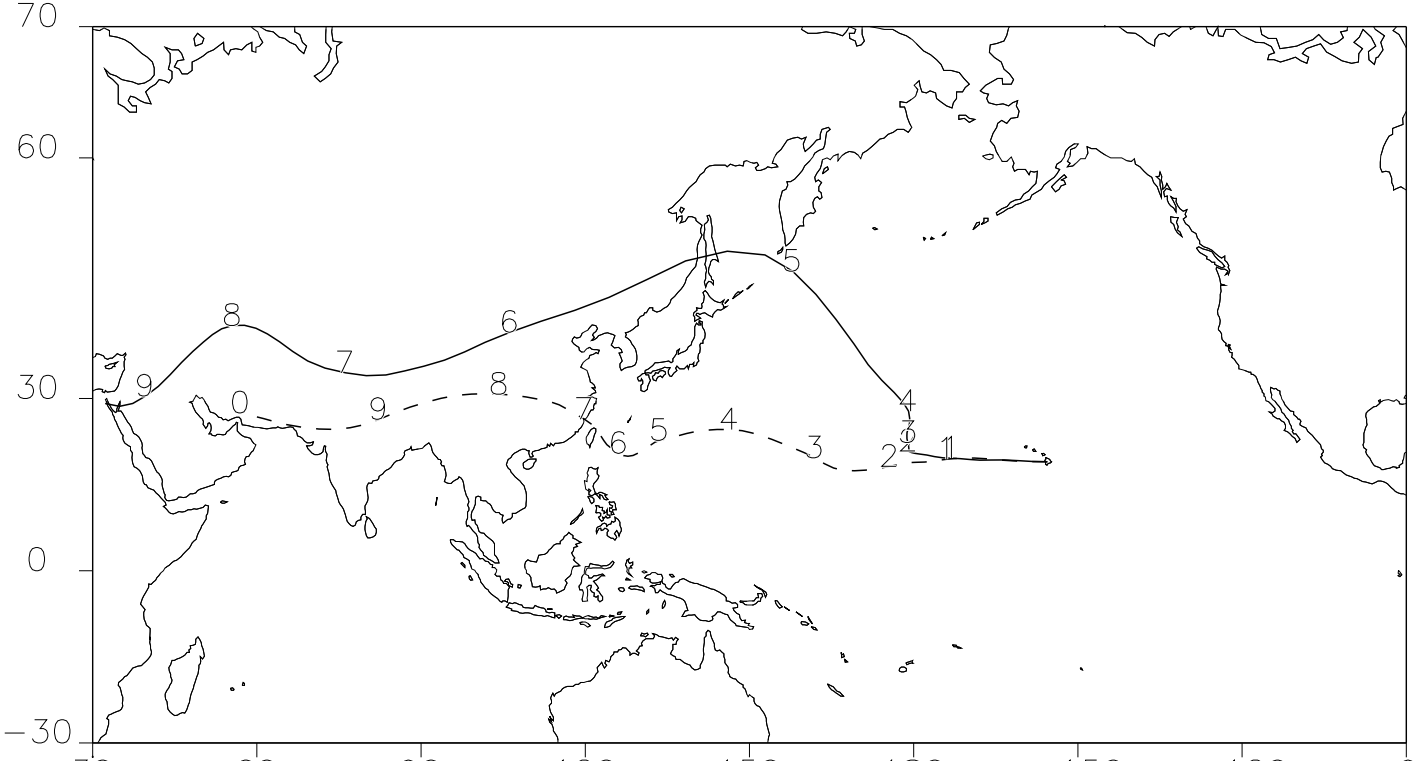
Day	km	hPa	C
0	11.0	242	−48
1	12.0	205	−56
2	11.8	206	−52
3	12.3	193	−53
4	12.5	188	−54
5	12.8	182	−55
6	12.7	181	−53
7	12.6	179	−54
8	13.7	154	−60
9	13.9	154	−62
10	14.2	145	−65

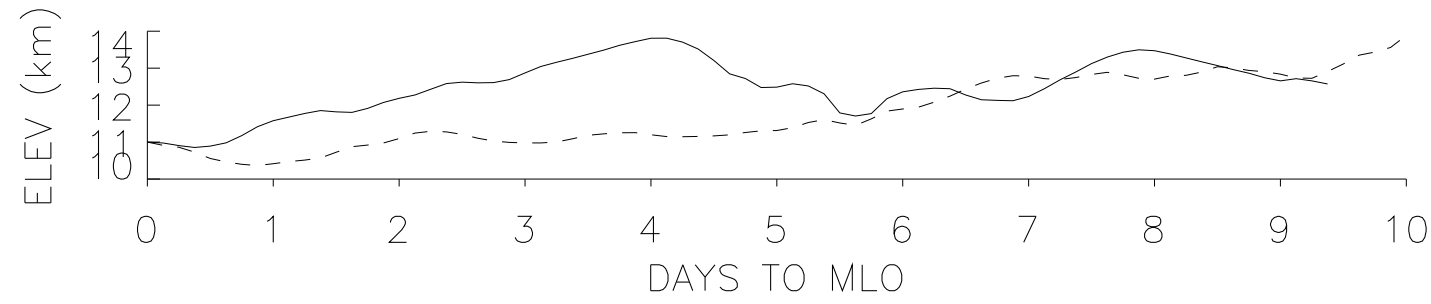
18UT

Day	km	hPa	C
0	11.0	243	−47
1	12.0	207	−54
2	12.8	179	−58
3	13.1	170	−56
4	13.2	170	−56
5	13.3	170	−54
6	13.2	171	−56
7	13.2	168	−57
8	13.8	156	−61
9	14.5	140	−65
10	14.5	140	−65

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

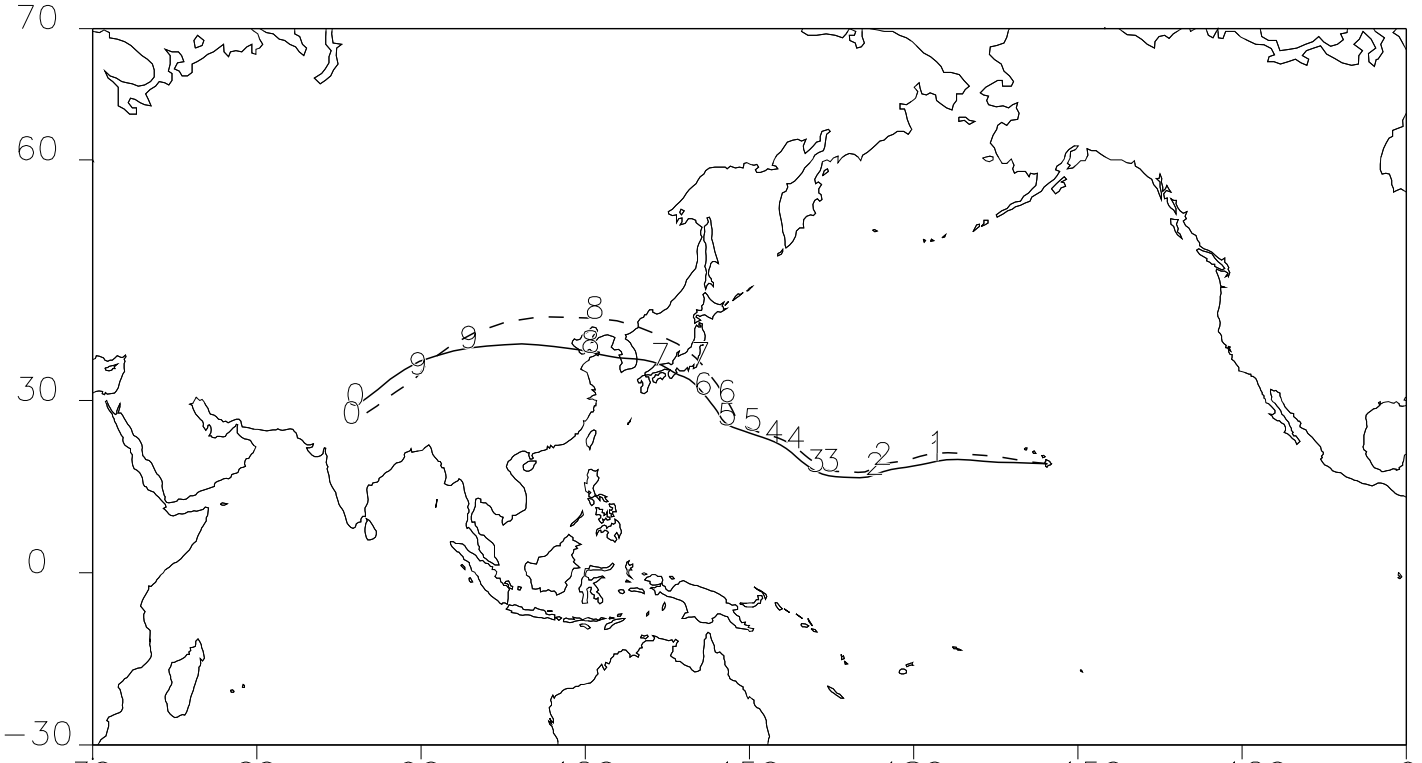
Day	km	hPa	C
0	11.0	243	-48
1	11.6	224	-50
2	12.2	205	-55
3	12.9	184	-59
4	13.8	156	-69
5	12.5	179	-55
6	12.4	187	-50
7	12.2	193	-51
8	13.5	159	-61
9	12.7	182	-56

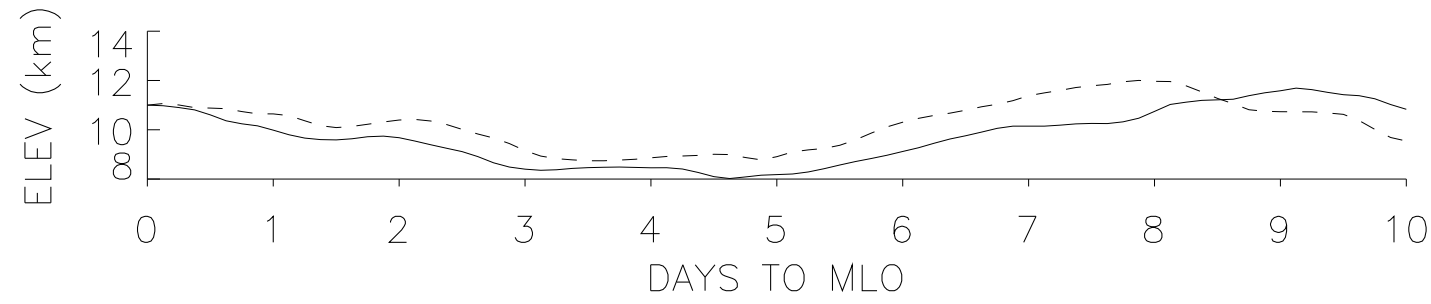
06UT

Day	km	hPa	C
0	11.0	243	-47
1	10.4	267	-40
2	11.1	241	-45
3	11.0	247	-44
4	11.2	239	-43
5	11.3	235	-43
6	11.9	215	-47
7	12.8	188	-51
8	12.7	189	-49
9	12.8	185	-49
10	13.9	155	-57

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

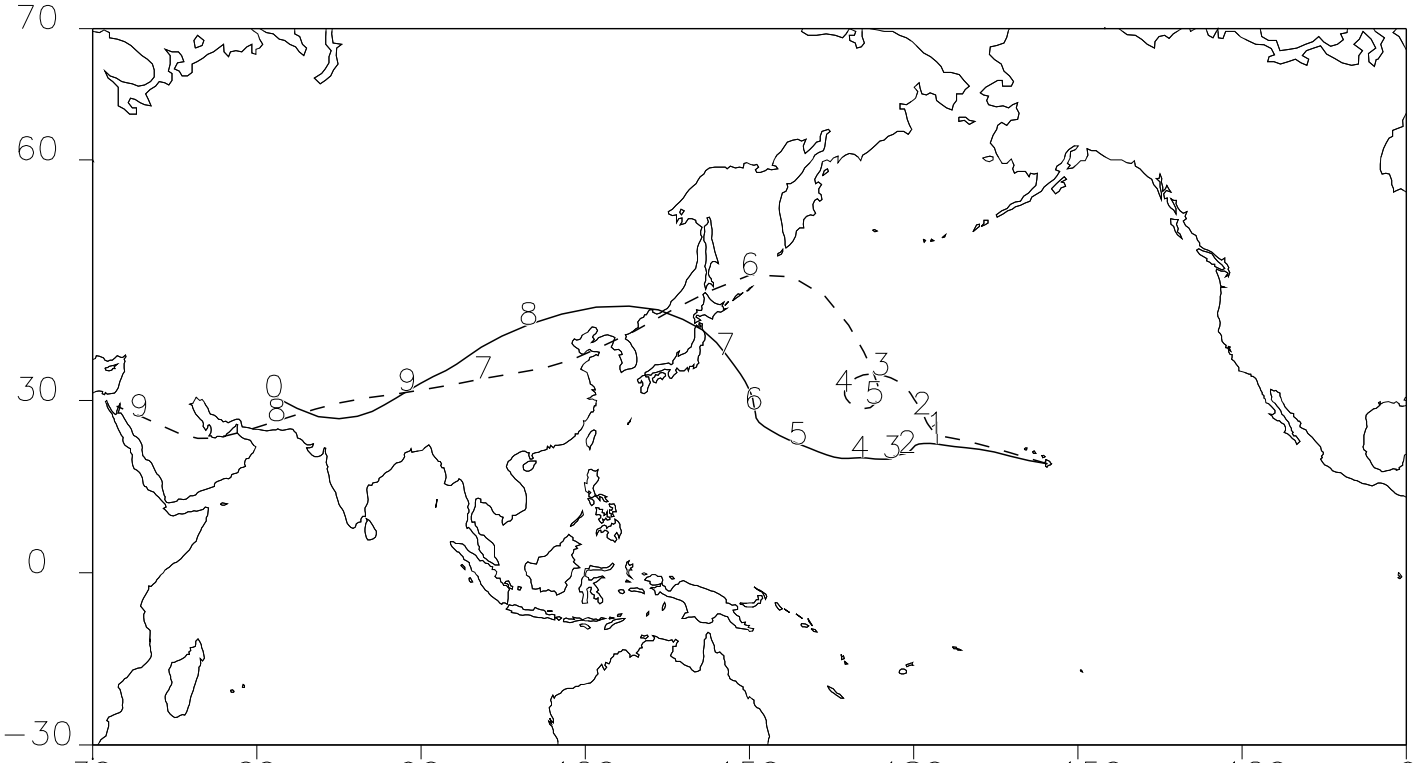
Day	km	hPa	C
0	11.0	243	−48
1	10.0	284	−37
2	9.7	298	−33
3	8.4	357	−24
4	8.5	355	−26
5	8.2	368	−24
6	9.1	320	−33
7	10.1	276	−42
8	10.7	250	−48
9	11.6	219	−54
10	10.8	245	−47

18UT

Day	km	hPa	C
0	11.0	242	−48
1	10.6	257	−44
2	10.4	268	−40
3	9.2	320	−31
4	8.9	334	−29
5	8.9	331	−30
6	10.3	269	−42
7	11.4	227	−54
8	12.0	204	−60
9	10.7	250	−45
10	9.5	299	−38

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

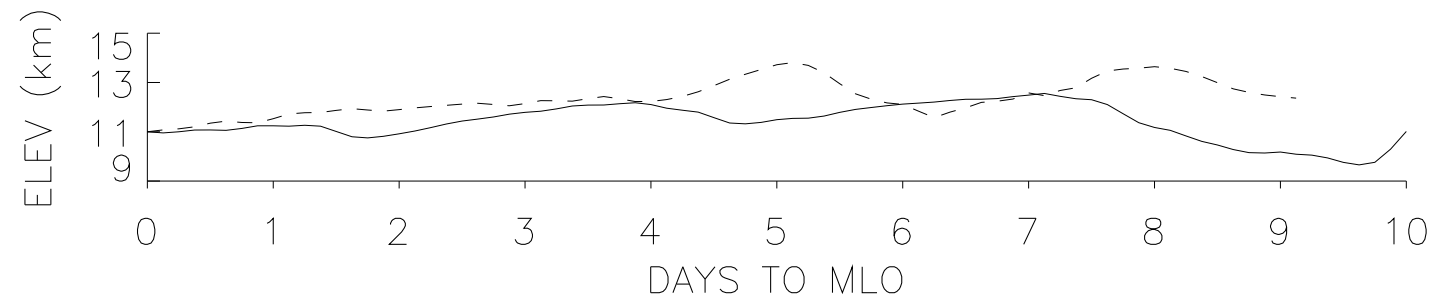


00UT

Day	km	hPa	C
0	11.0	243	−47
1	11.2	235	−48
2	10.9	248	−46
3	11.8	218	−52
4	12.1	208	−52
5	11.5	228	−47
6	12.1	205	−54
7	12.5	189	−61
8	11.2	229	−51
9	10.2	271	−40
10	11.0	237	−47

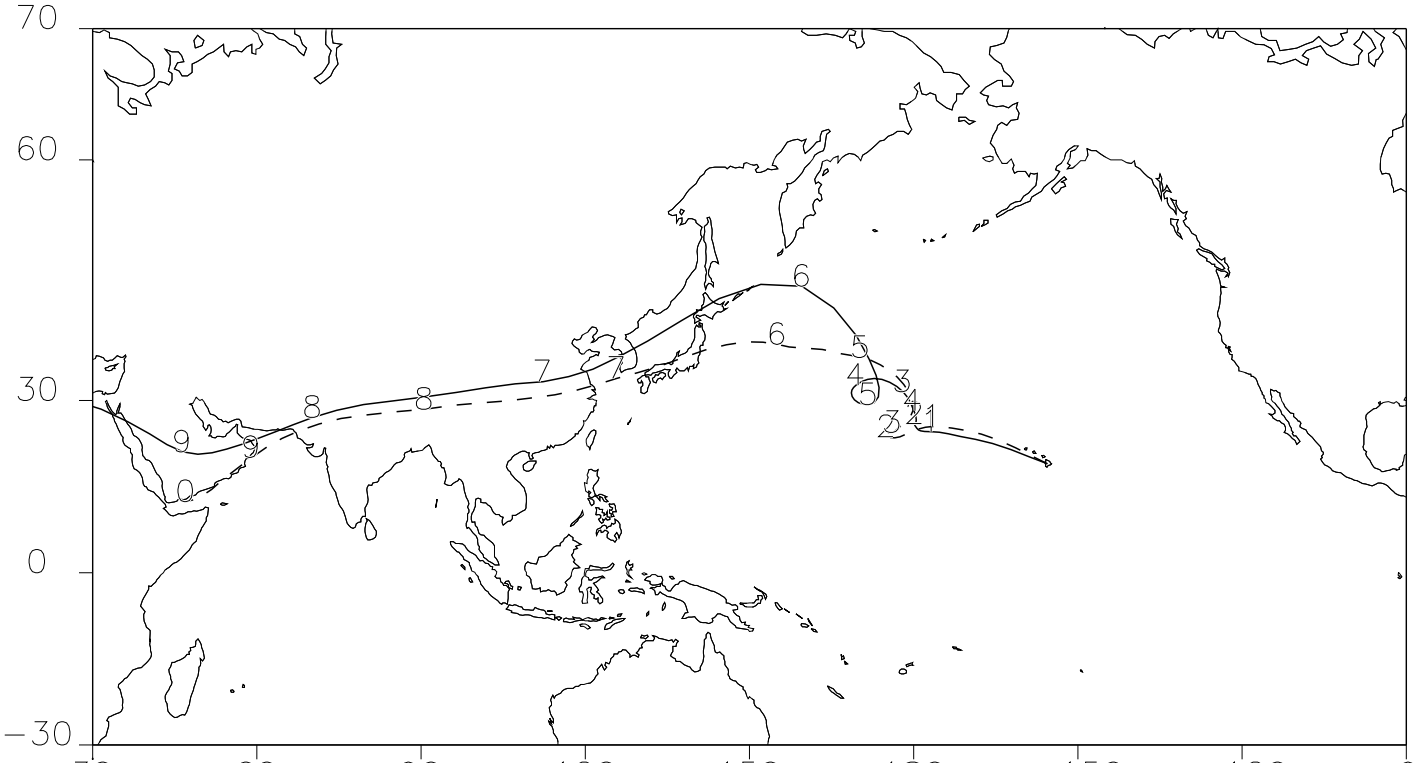
06UT

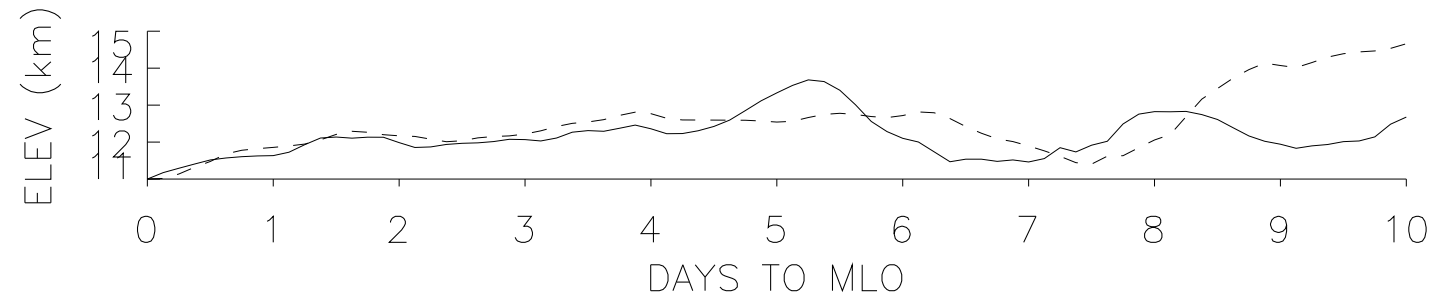
Day	km	hPa	C
0	11.0	243	−46
1	11.5	224	−49
2	11.9	212	−51
3	12.1	205	−52
4	12.2	204	−54
5	13.7	160	−66
6	12.1	193	−54
7	12.6	188	−50
8	13.6	162	−60
9	12.4	192	−51



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





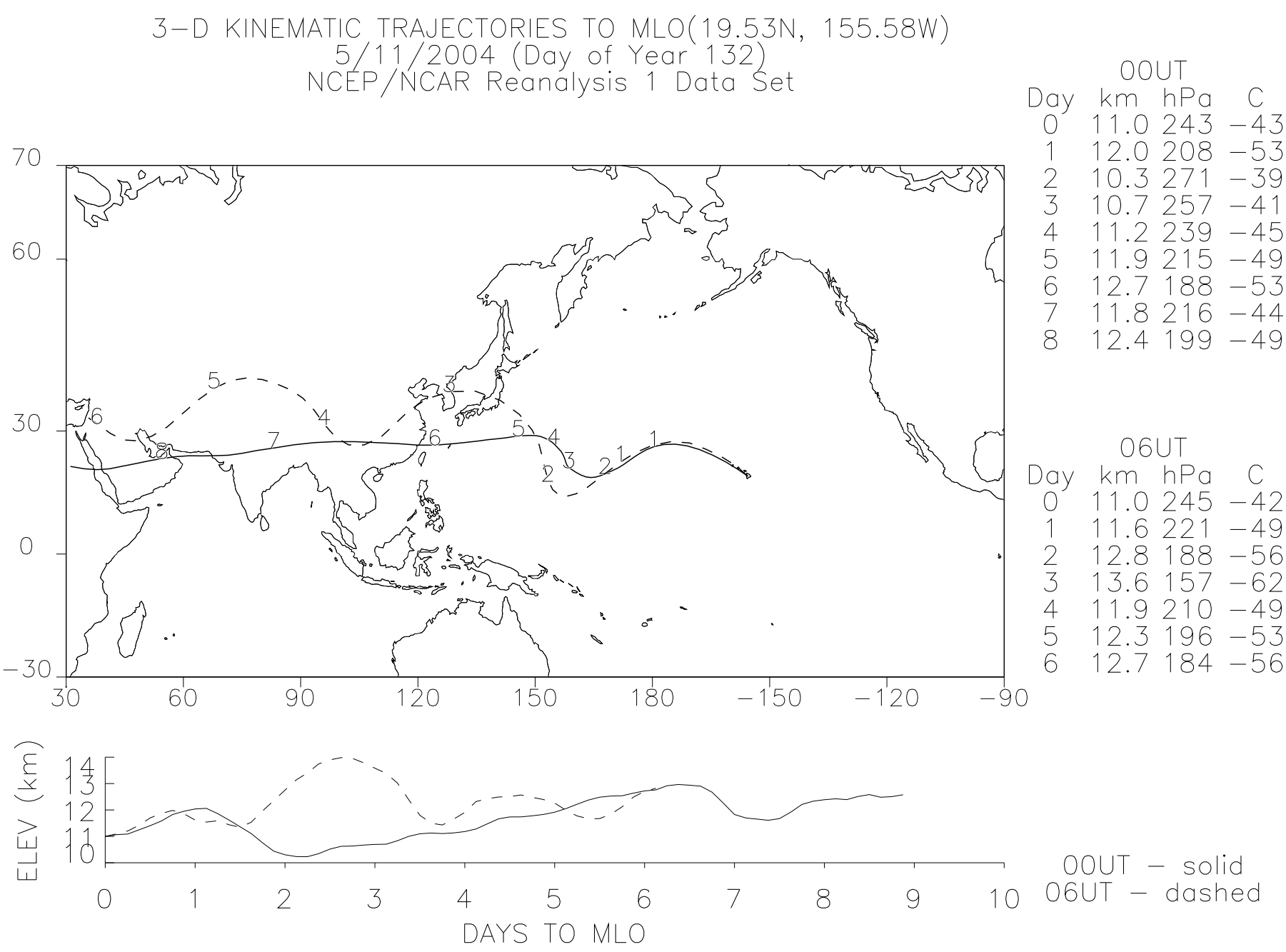
12UT

Day	km	hPa	C
0	11.0	243	−46
1	11.6	221	−48
2	12.0	209	−52
3	12.1	208	−53
4	12.4	200	−54
5	13.3	171	−63
6	12.1	197	−55
7	11.5	224	−44
8	12.8	184	−56
9	11.9	211	−49
10	12.7	183	−55

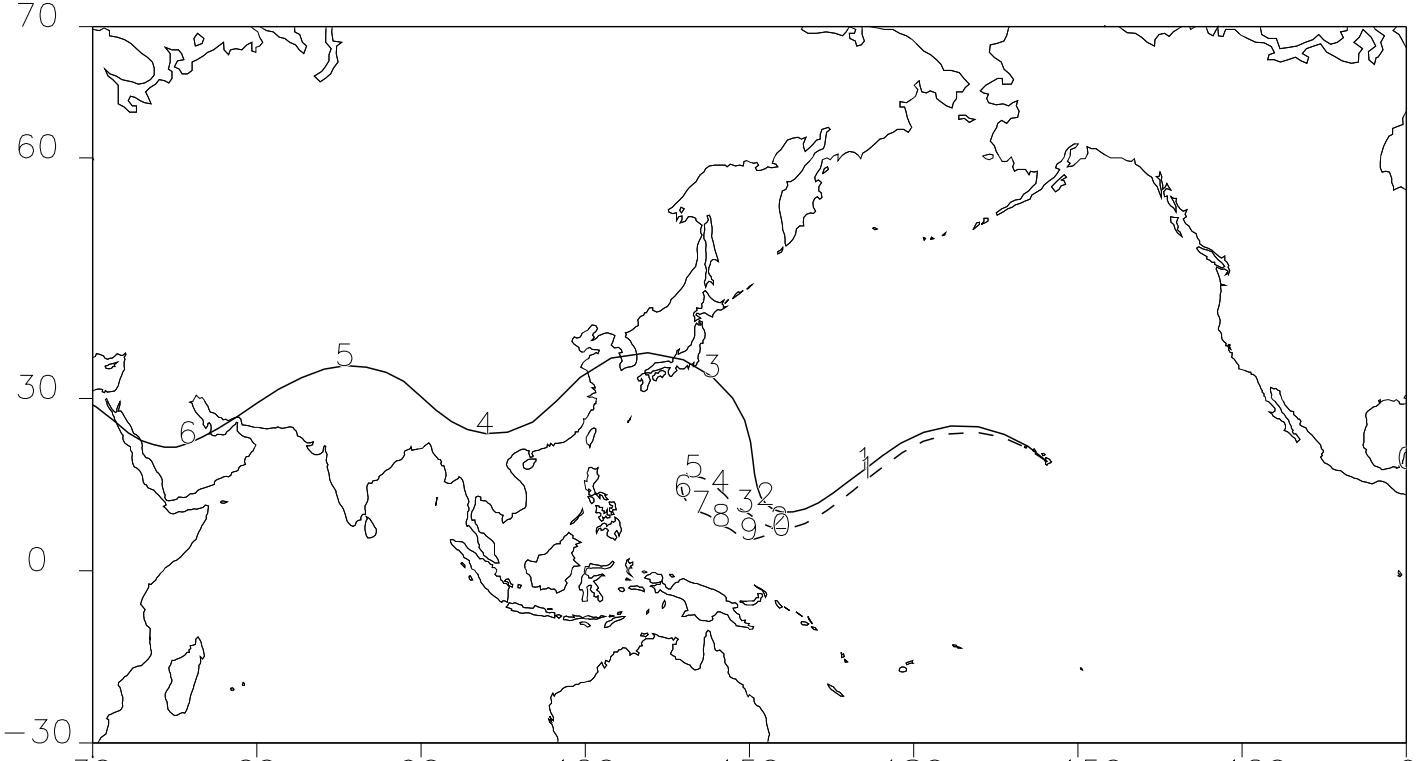
18UT

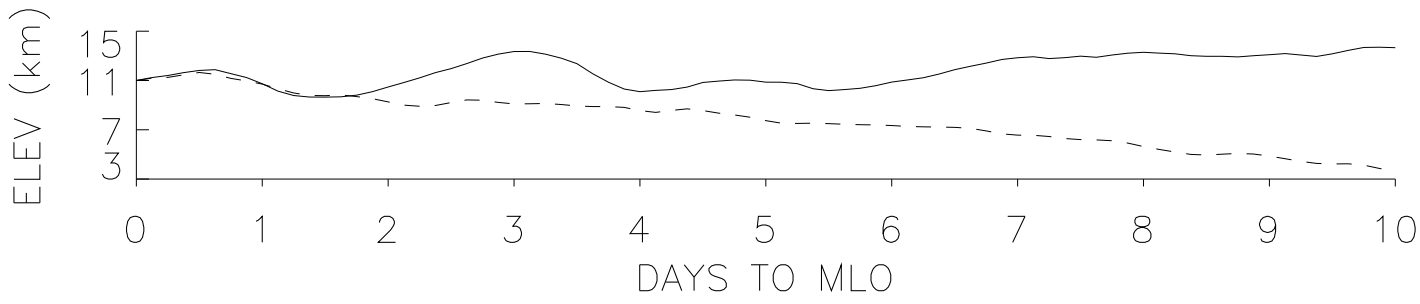
Day	km	hPa	C
0	11.0	243	−45
1	11.9	213	−50
2	12.2	203	−54
3	12.2	203	−55
4	12.8	186	−60
5	12.5	193	−56
6	12.7	186	−56
7	11.9	212	−47
8	12.1	208	−47
9	14.1	154	−63
10	14.7	140	−68

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 11.0 243 -43
1 12.0 208 -53
2 10.3 271 -39
3 10.7 257 -41
4 11.2 239 -45
5 11.9 215 -49
6 12.7 188 -53
7 11.8 216 -44
8 12.4 199 -49
06UT
Day km hPa C
0 11.0 245 -42
1 11.6 221 -49
2 12.8 188 -56
3 13.6 157 -62
4 11.9 210 -49
5 12.3 196 -53
6 12.7 184 -56
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)
5/11/2004 (Day of Year 132)
NCEP/NCAR Reanalysis 1 Data Set





12UT

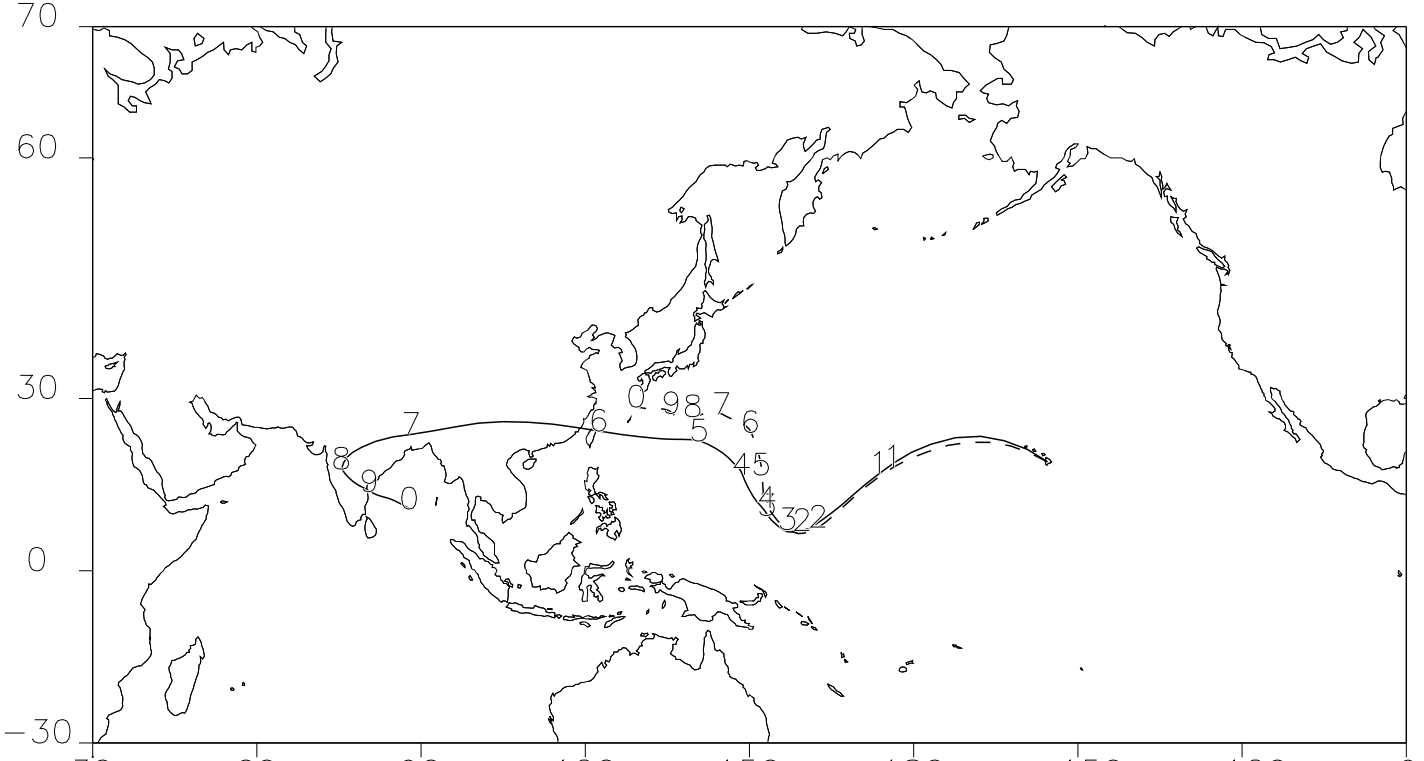
Day	km	hPa	C
0	11.0	245	-43
1	10.7	256	-39
2	10.5	270	-36
3	13.3	167	-63
4	10.1	279	-34
5	10.9	248	-41
6	10.9	251	-40
7	12.8	181	-58
8	13.3	169	-61
9	13.1	177	-59
10	13.7	163	-62

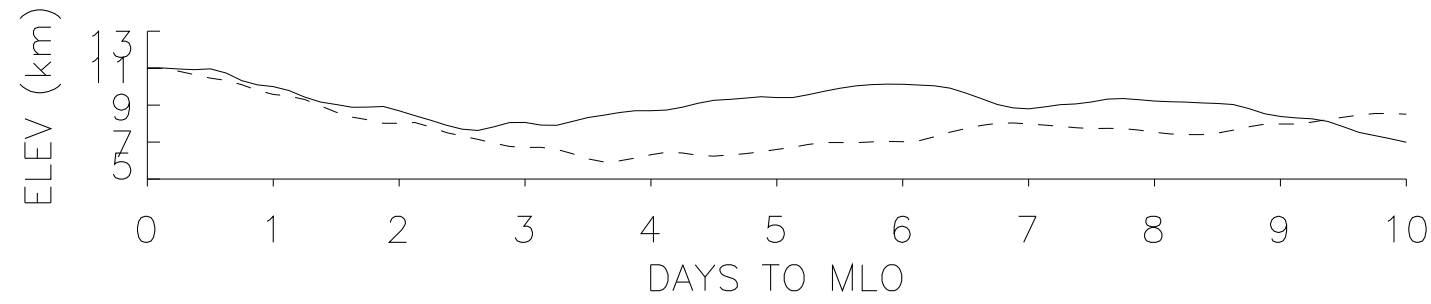
18UT

Day	km	hPa	C
0	11.0	246	-42
1	10.7	257	-39
2	9.3	318	-26
3	9.1	326	-25
4	8.6	351	-22
5	7.7	393	-16
6	7.3	414	-13
7	6.6	457	-9
8	5.6	513	-5
9	4.9	566	-1
10	3.6	659	8

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





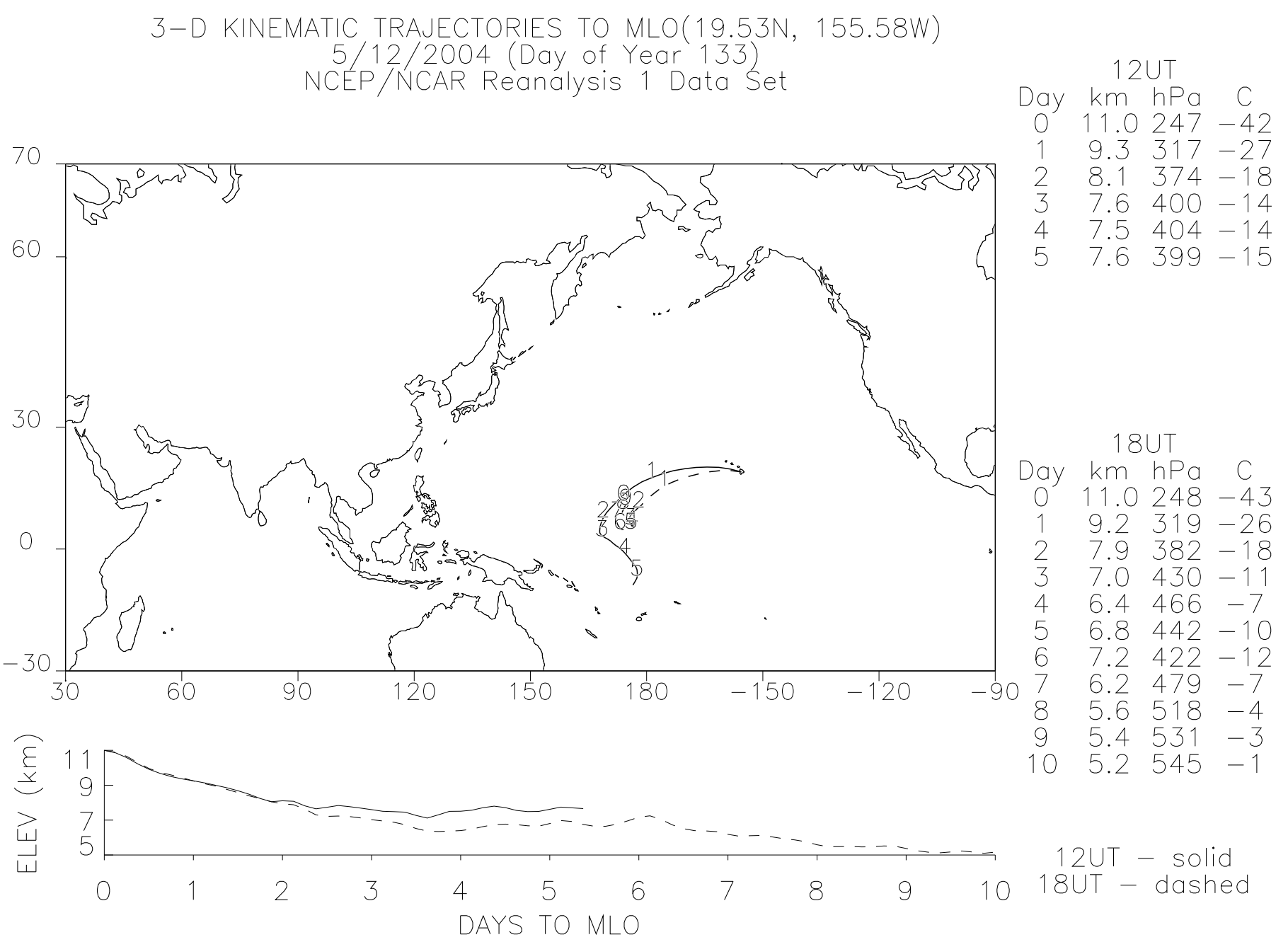
00UT

Day	km	hPa	C
0	11.0	247	-42
1	10.0	285	-34
2	8.7	346	-22
3	8.1	377	-18
4	8.7	345	-25
5	9.4	313	-31
6	10.1	280	-37
7	8.8	336	-23
8	9.2	320	-27
9	8.4	359	-19
10	7.0	432	-11

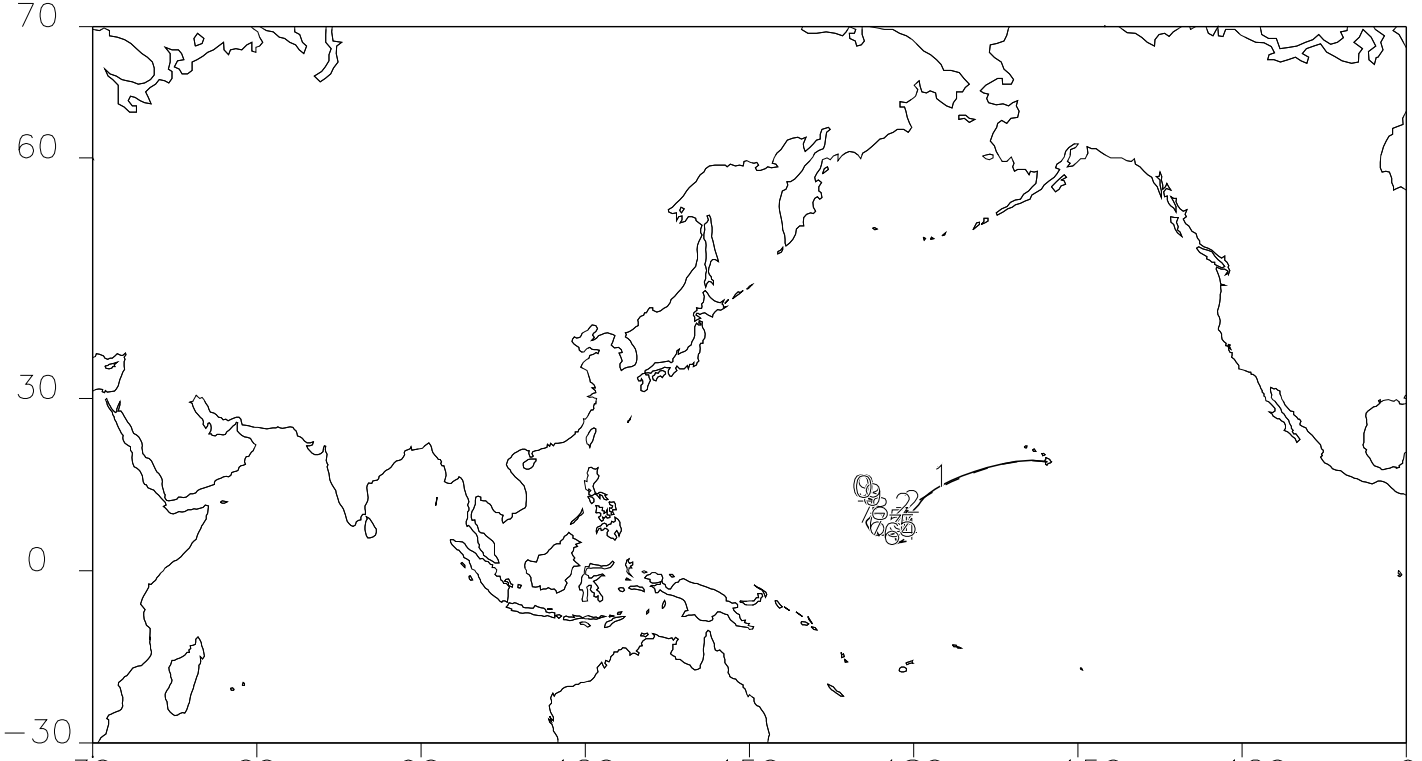
06UT

Day	km	hPa	C
0	11.0	247	-42
1	9.6	302	-31
2	8.0	378	-17
3	6.7	448	-8
4	6.3	471	-7
5	6.6	454	-12
6	7.0	431	-16
7	8.0	378	-23
8	7.5	401	-18
9	8.0	376	-23
10	8.5	351	-27

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
70
60
30
0
-30
30
60
90
120
150
180
-150
-120
-90
ELEV (km)
11
9
7
5
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
12UT
Day km hPa C
0 11.0 247 -42
1 9.3 317 -27
2 8.1 374 -18
3 7.6 400 -14
4 7.5 404 -14
5 7.6 399 -15
18UT
Day km hPa C
0 11.0 248 -43
1 9.2 319 -26
2 7.9 382 -18
3 7.0 430 -11
4 6.4 466 -7
5 6.8 442 -10
6 7.2 422 -12
7 6.2 479 -7
8 5.6 518 -4
9 5.4 531 -3
10 5.2 545 -1
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

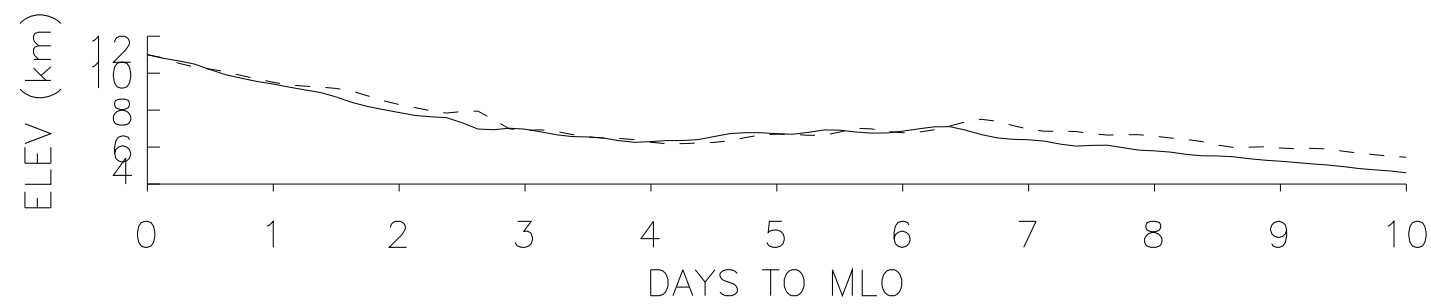


00UT

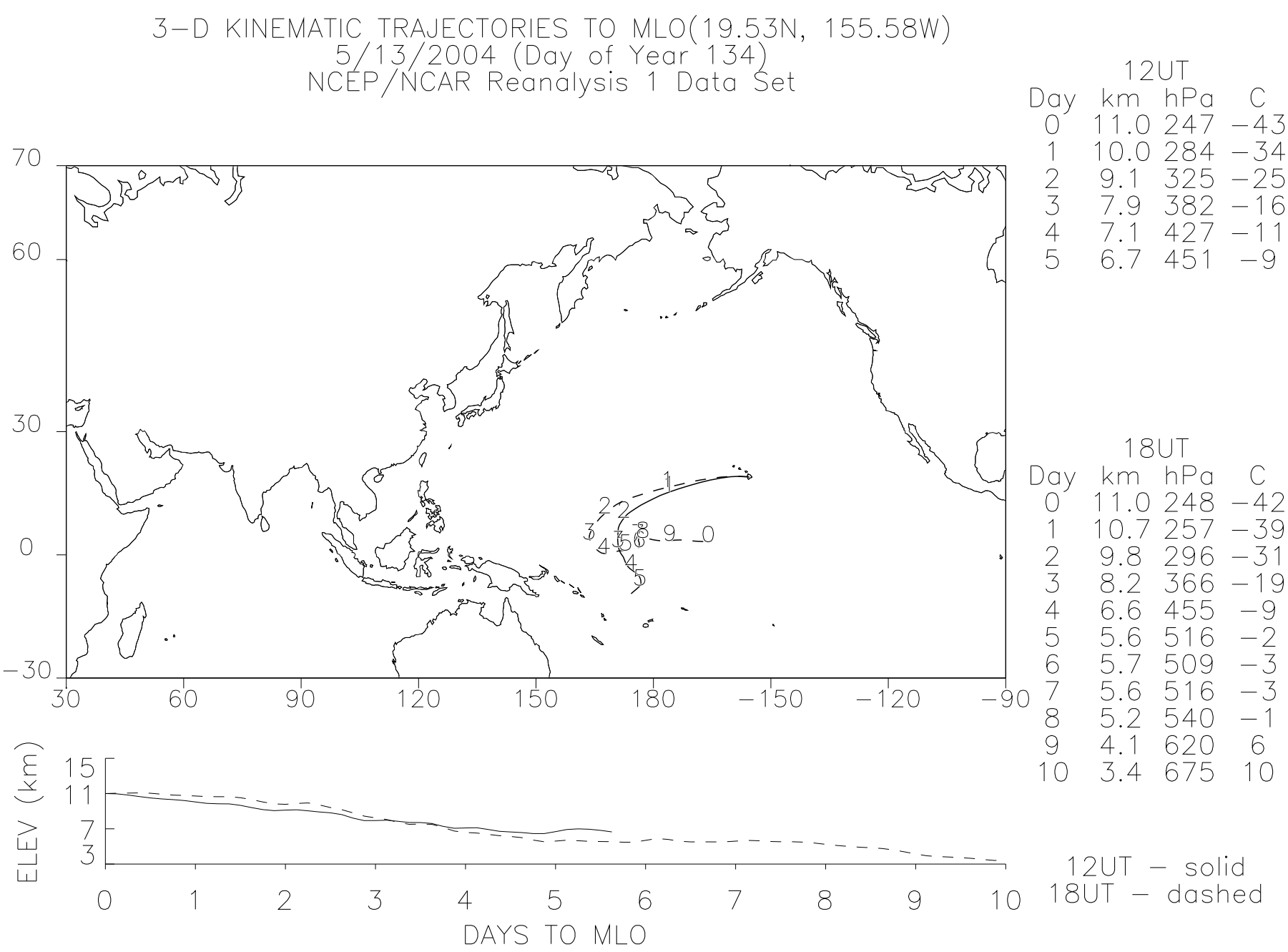
Day	km	hPa	C
0	11.0	248	-43
1	9.4	312	-28
2	7.9	386	-17
3	7.0	434	-10
4	6.3	474	-6
5	6.7	448	-9
6	6.9	440	-9
7	6.4	468	-7
8	5.8	506	-4
9	5.2	542	-2
10	4.6	585	3

06UT

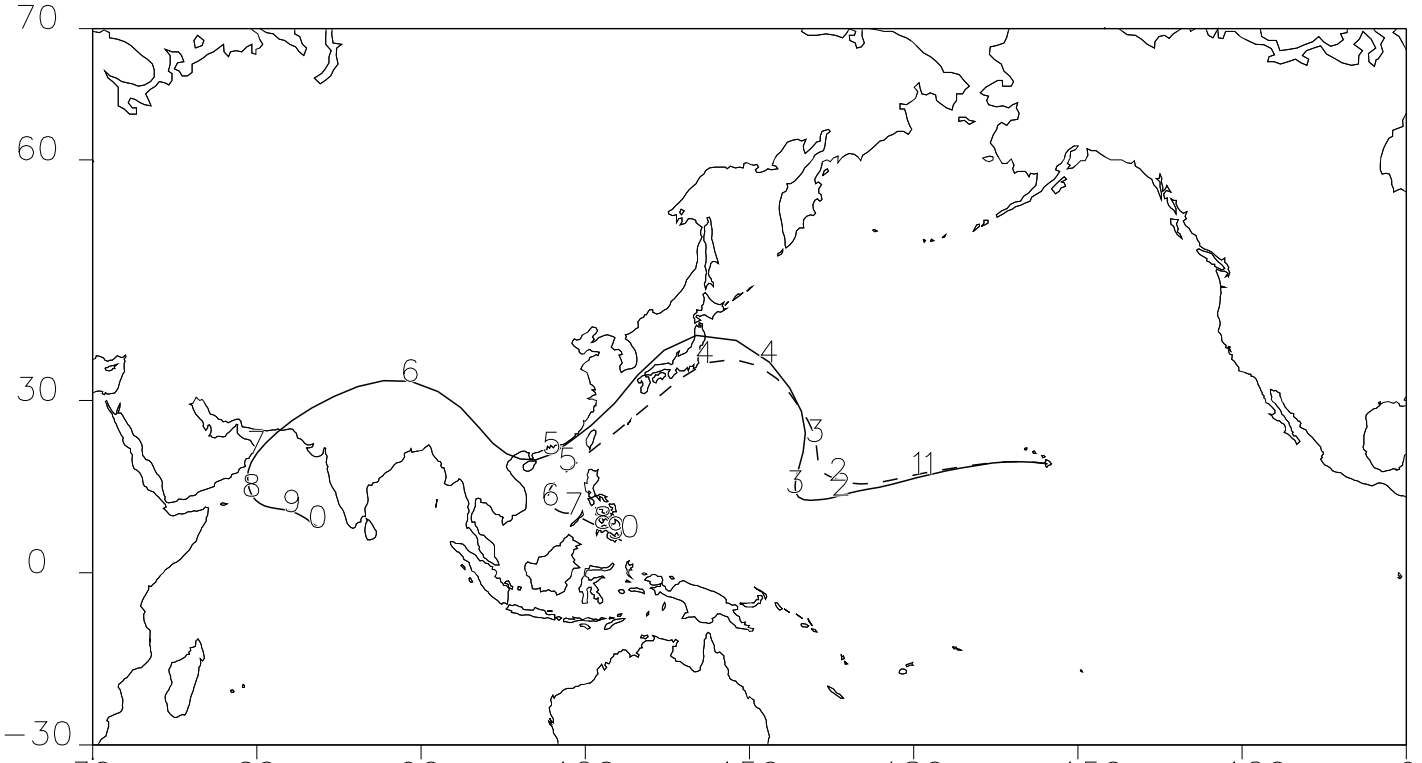
Day	km	hPa	C
0	11.0	248	-43
1	9.5	307	-29
2	8.3	363	-20
3	6.9	438	-9
4	6.3	474	-6
5	6.7	448	-9
6	6.8	443	-9
7	7.0	433	-10
8	6.6	456	-9
9	6.0	494	-4
10	5.5	526	-3

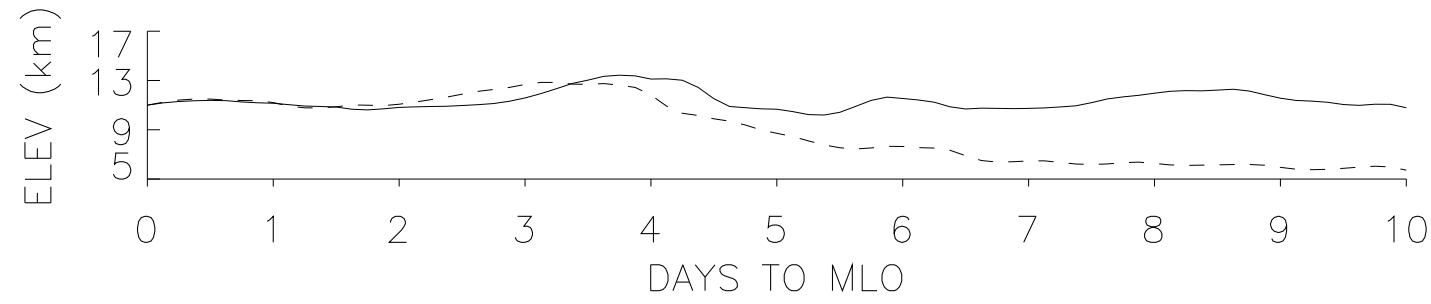


00UT - solid
06UT - dashed


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 11.0 247 -43
1 10.0 284 -34
2 9.1 325 -25
3 7.9 382 -16
4 7.1 427 -11
5 6.7 451 -9
18UT
Day km hPa C
0 11.0 248 -42
1 10.7 257 -39
2 9.8 296 -31
3 8.2 366 -19
4 6.6 455 -9
5 5.6 516 -2
6 5.7 509 -3
7 5.6 516 -3
8 5.2 540 -1
9 4.1 620 6
10 3.4 675 10
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
15
11
7
3
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

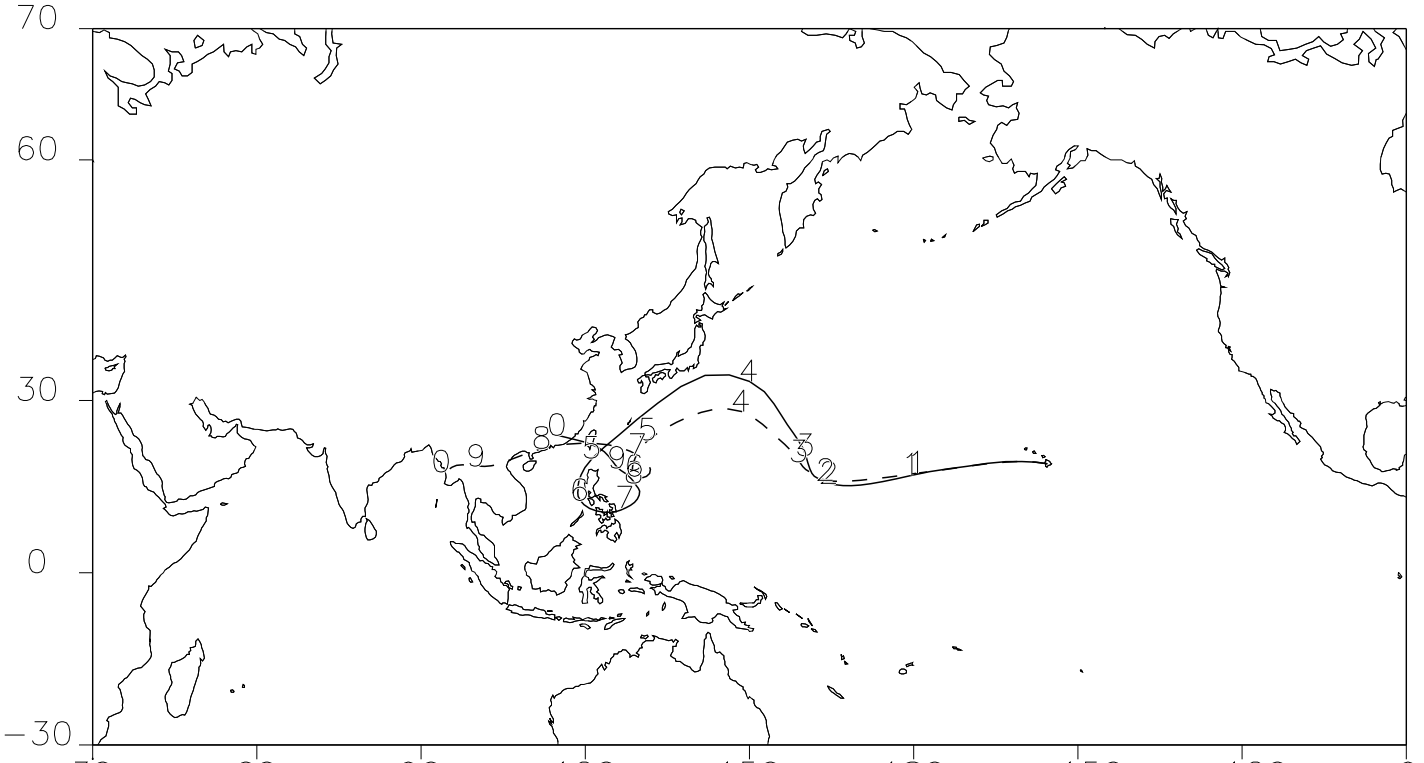
Day	km	hPa	C
0	11.0	248	−43
1	11.2	241	−43
2	10.8	255	−40
3	11.6	227	−47
4	13.1	173	−61
5	10.7	259	−38
6	11.5	226	−45
7	10.7	258	−36
8	12.0	215	−47
9	11.6	228	−44
10	10.8	256	−37

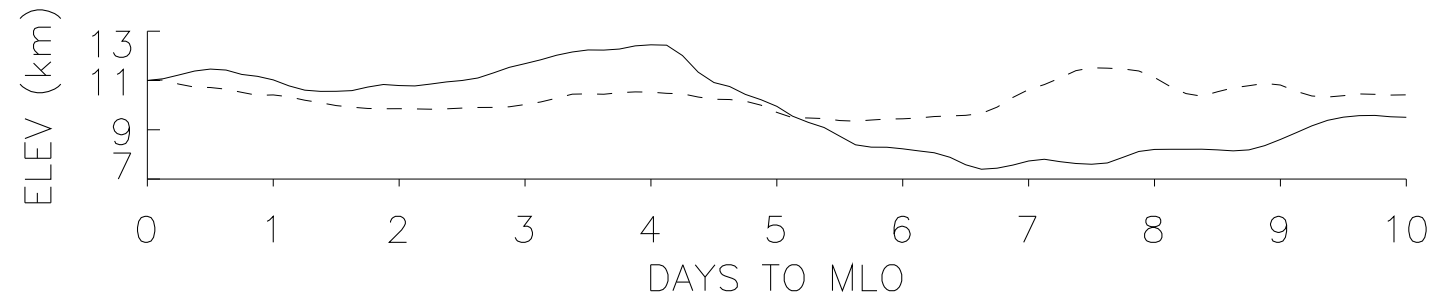
06UT

Day	km	hPa	C
0	11.0	248	−42
1	11.2	239	−43
2	11.1	245	−42
3	12.7	190	−57
4	11.8	215	−51
5	8.7	344	−23
6	7.6	398	−15
7	6.5	464	−8
8	6.3	476	−6
9	6.0	495	−4
10	5.7	508	−4

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

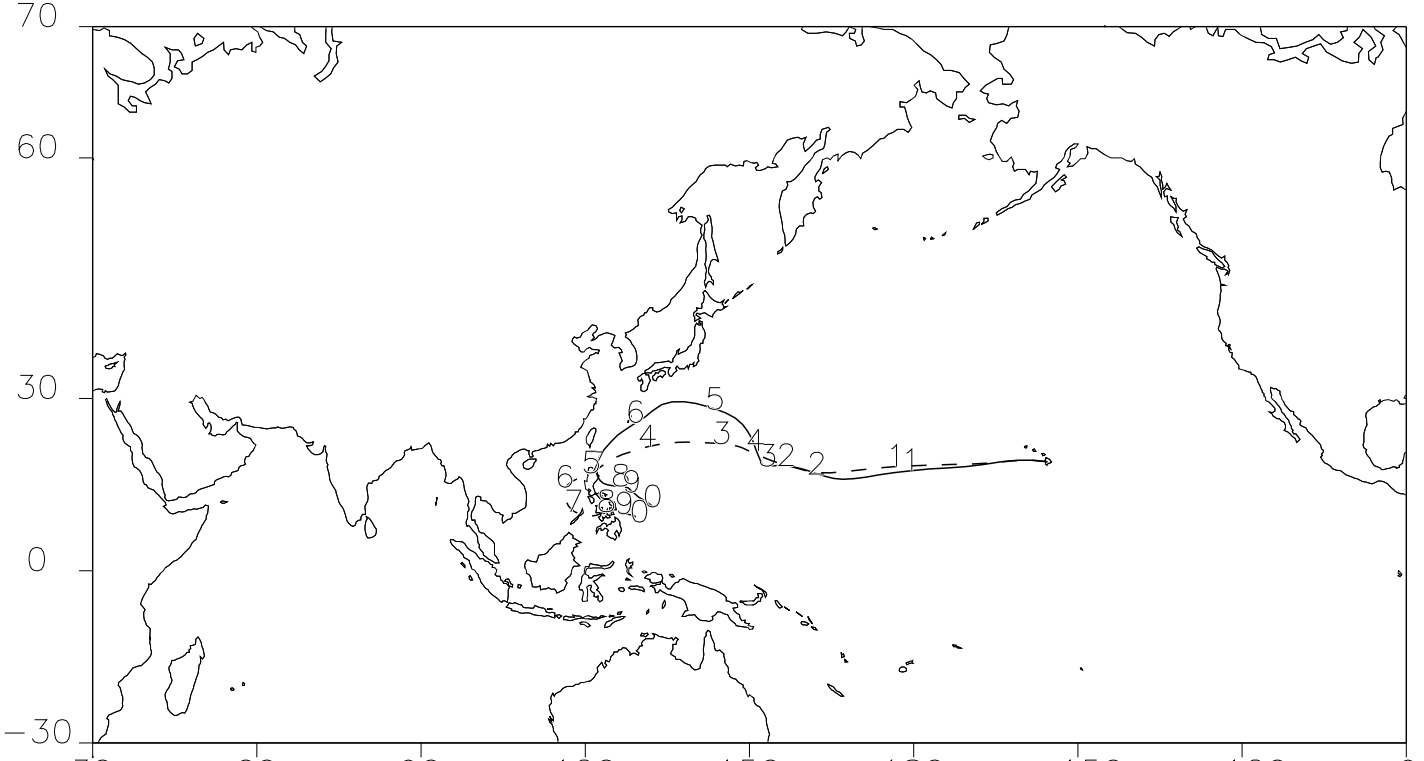
Day	km	hPa	C
0	11.0	247	-43
1	11.0	246	-42
2	10.8	256	-39
3	11.7	224	-48
4	12.4	197	-54
5	10.0	291	-31
6	8.2	369	-18
7	7.7	395	-14
8	8.2	371	-19
9	8.6	349	-23
10	9.5	307	-29

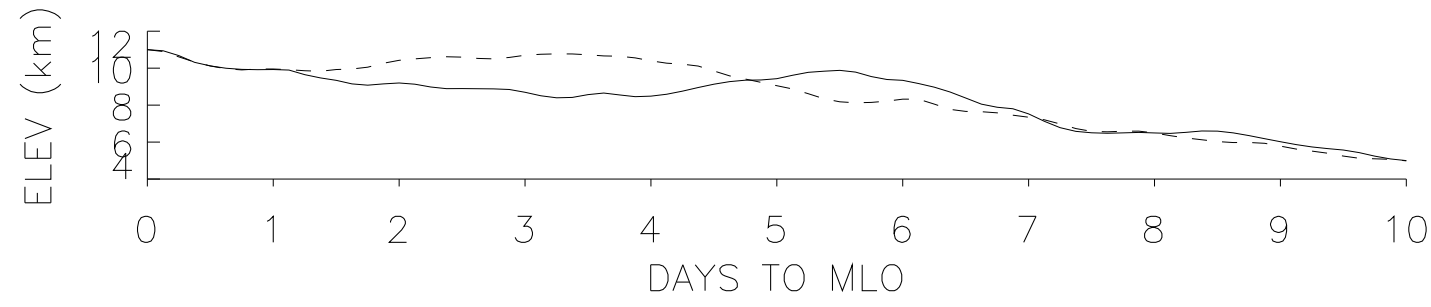
18UT

Day	km	hPa	C
0	11.0	248	-43
1	10.4	268	-38
2	9.9	292	-34
3	10.0	285	-35
4	10.5	265	-38
5	9.7	300	-31
6	9.4	312	-27
7	10.6	264	-38
8	11.1	245	-41
9	10.8	257	-37
10	10.4	273	-33

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

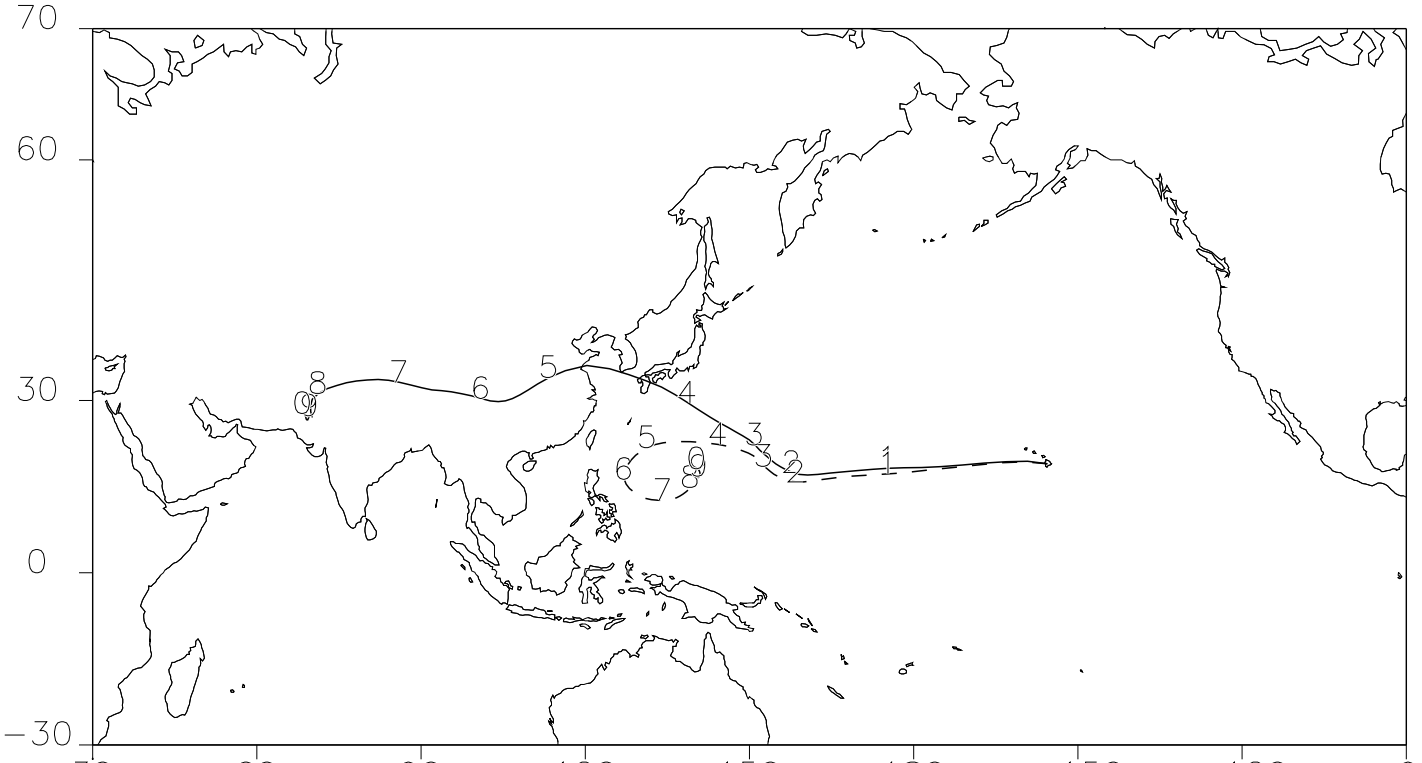
Day	km	hPa	C
0	11.0	248	-42
1	9.9	288	-35
2	9.2	321	-28
3	8.7	345	-24
4	8.5	355	-21
5	9.4	312	-30
6	9.3	316	-29
7	7.5	404	-14
8	6.5	464	-7
9	6.0	492	-5
10	5.0	559	0

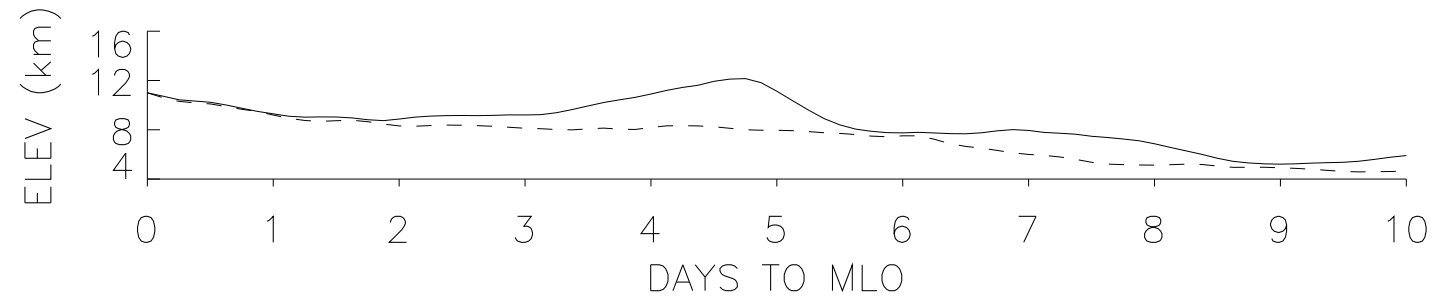
06UT

Day	km	hPa	C
0	11.0	248	-42
1	10.0	287	-35
2	10.4	269	-36
3	10.7	259	-40
4	10.4	271	-36
5	9.1	329	-25
6	8.3	364	-19
7	7.3	414	-13
8	6.5	462	-8
9	5.8	506	-3
10	5.0	559	0

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

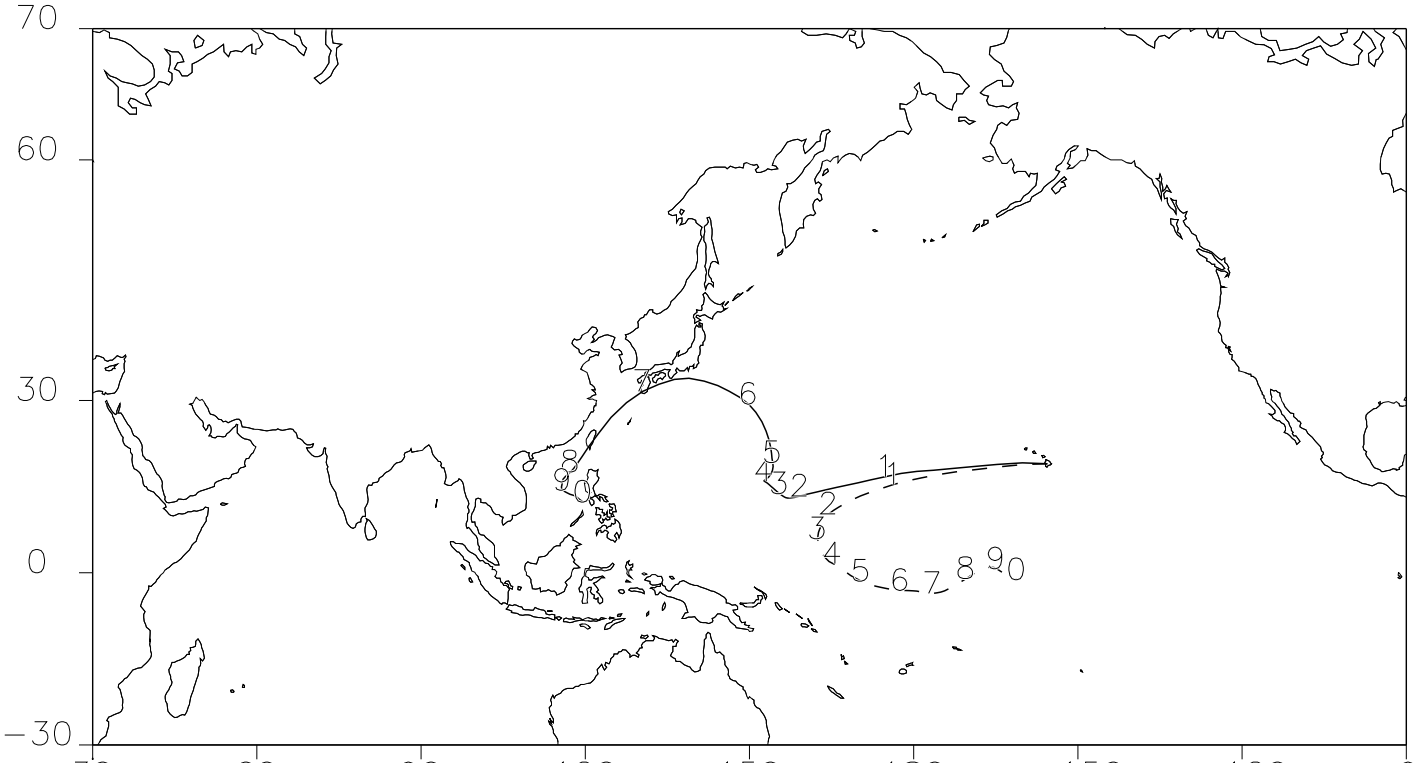
Day	km	hPa	C
0	11.0	247	-42
1	9.3	315	-30
2	8.9	336	-26
3	9.2	321	-29
4	10.9	249	-45
5	11.1	237	-48
6	7.7	386	-21
7	7.9	376	-24
8	6.9	435	-18
9	5.2	542	-4
10	5.9	497	-9

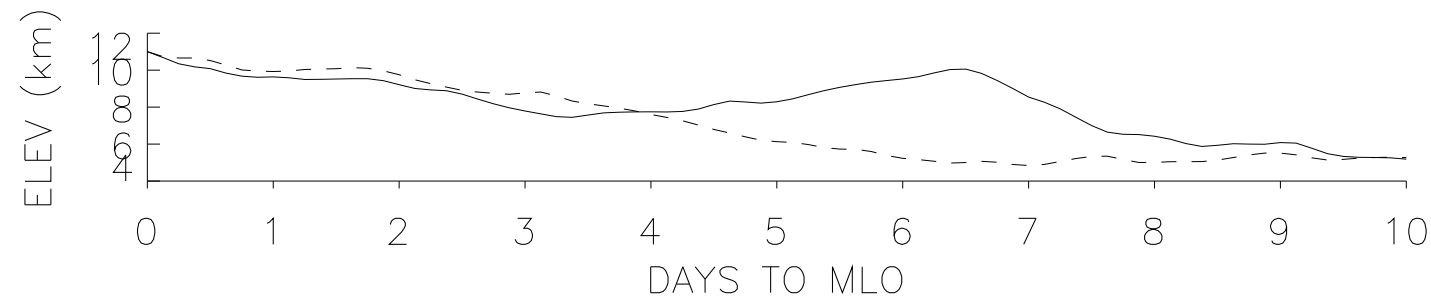
18UT

Day	km	hPa	C
0	11.0	247	-42
1	9.2	319	-28
2	8.3	363	-21
3	8.1	371	-20
4	8.2	368	-22
5	8.0	381	-19
6	7.5	406	-14
7	6.0	492	-6
8	5.1	550	-1
9	4.9	566	1
10	4.6	584	2

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

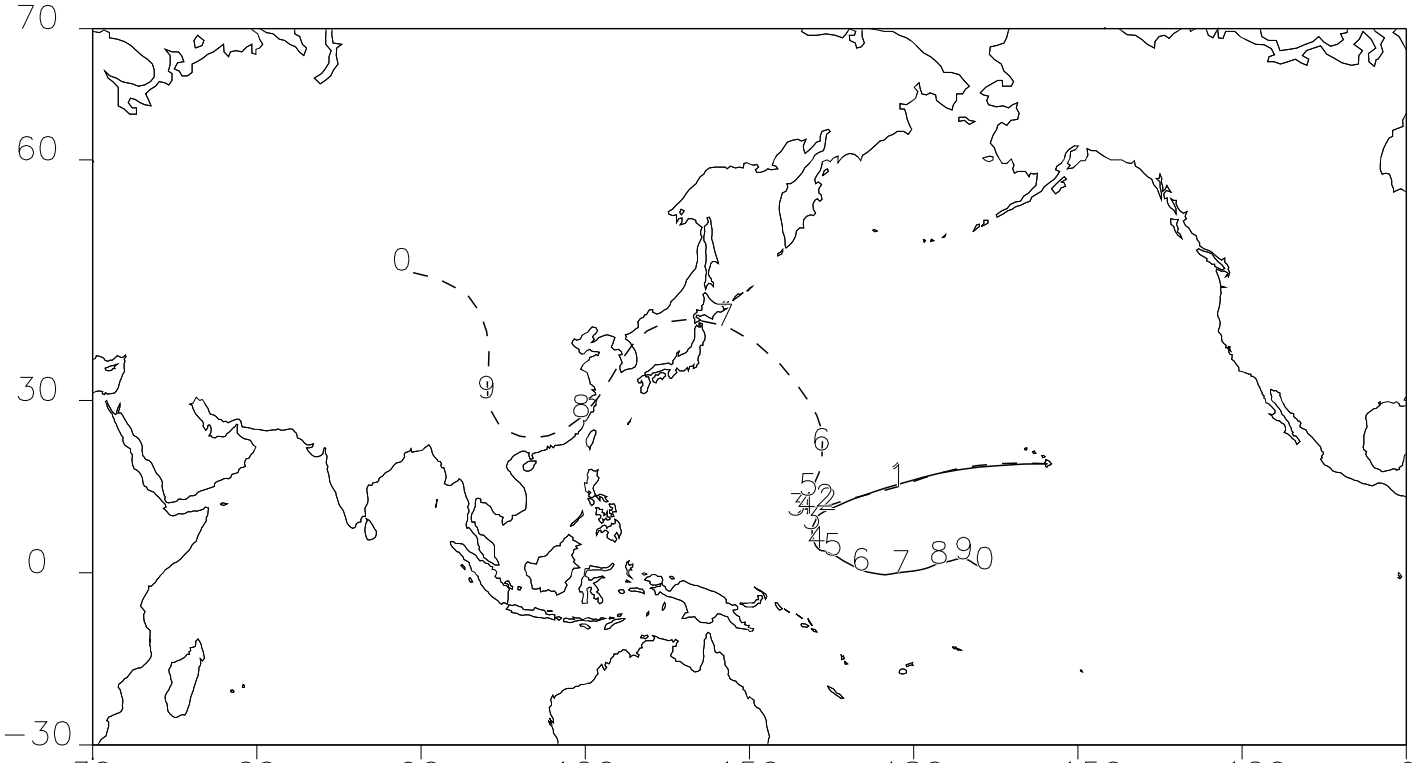
Day	km	hPa	C
0	11.0	248	-41
1	9.6	301	-29
2	9.2	322	-27
3	7.8	391	-16
4	7.7	393	-15
5	8.3	365	-19
6	9.5	306	-31
7	8.5	349	-24
8	6.4	466	-8
9	6.1	488	-6
10	5.2	546	0

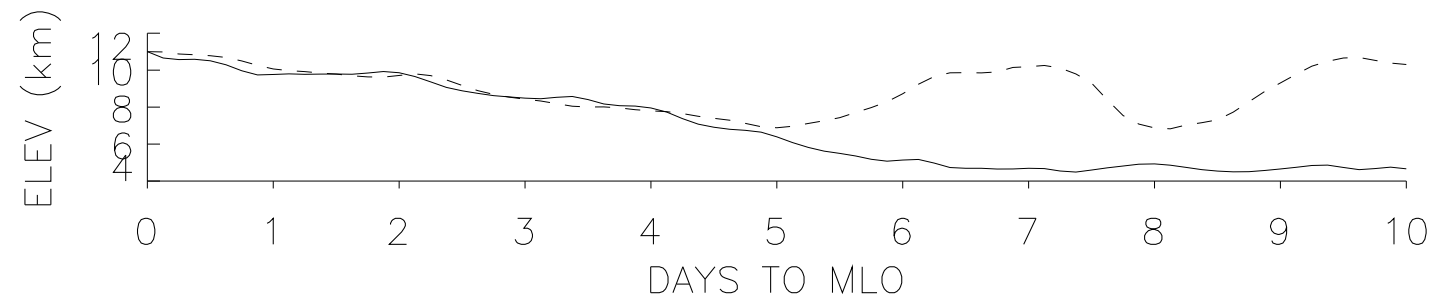
06UT

Day	km	hPa	C
0	11.0	248	-41
1	9.9	290	-31
2	9.8	298	-30
3	8.8	342	-21
4	7.6	399	-14
5	6.1	483	-5
6	5.2	541	1
7	4.8	568	2
8	5.0	556	1
9	5.5	522	-2
10	5.3	539	-1

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

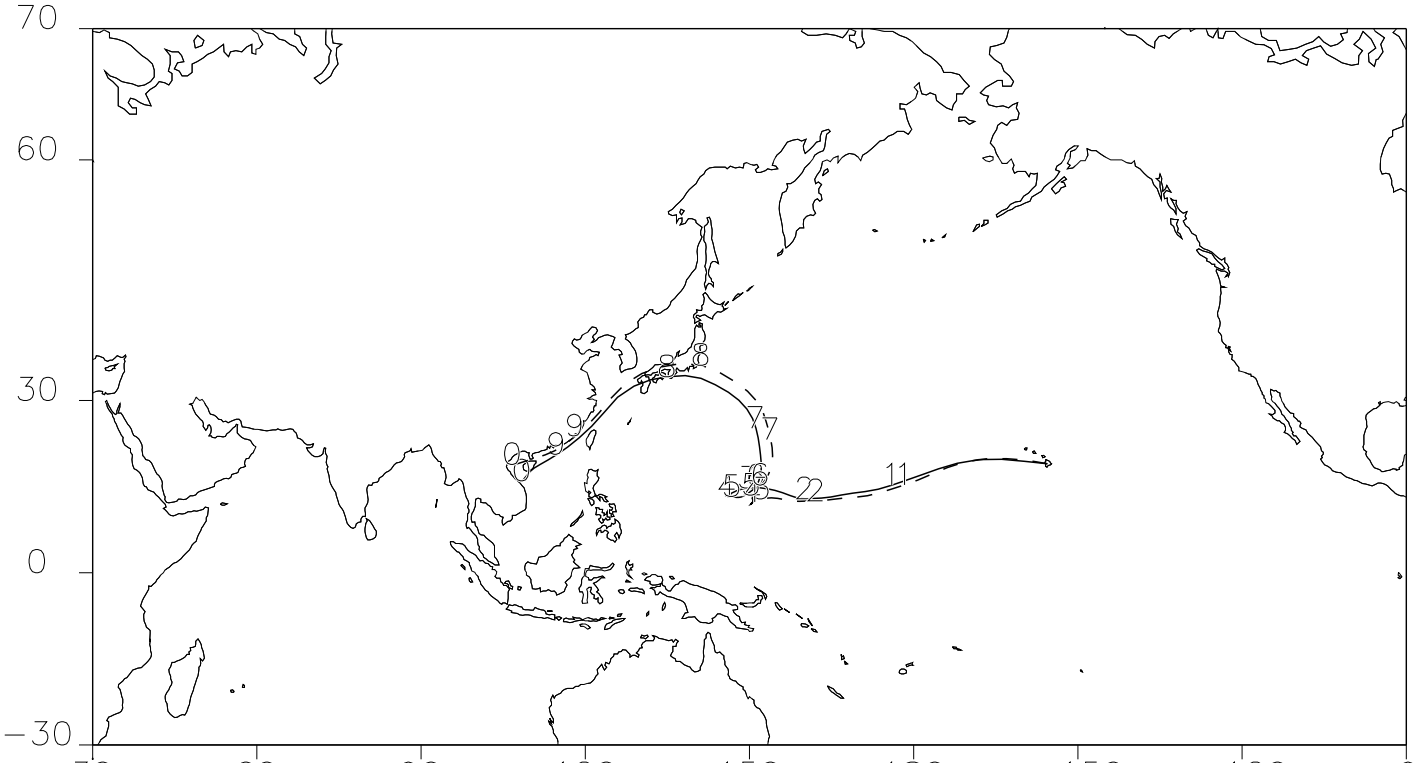
Day	km	hPa	C
0	11.0	247	-42
1	9.8	297	-30
2	9.9	294	-31
3	8.5	356	-20
4	8.0	382	-16
5	6.4	468	-7
6	5.1	547	1
7	4.7	579	3
8	4.9	562	1
9	4.7	582	3
10	4.7	581	3

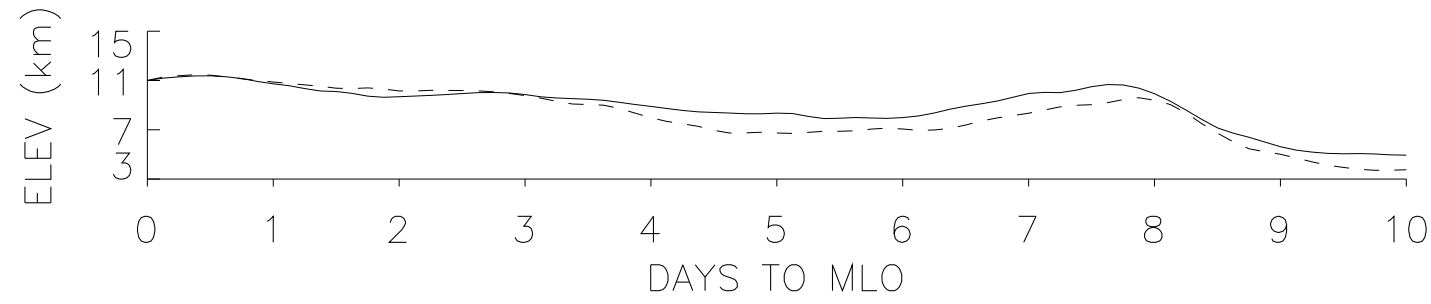
18UT

Day	km	hPa	C
0	11.0	246	-42
1	10.1	284	-33
2	9.7	299	-30
3	8.4	358	-20
4	7.8	388	-16
5	6.9	437	-10
6	8.7	339	-28
7	10.2	268	-43
8	6.9	428	-17
9	9.3	307	-41
10	10.3	254	-50

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

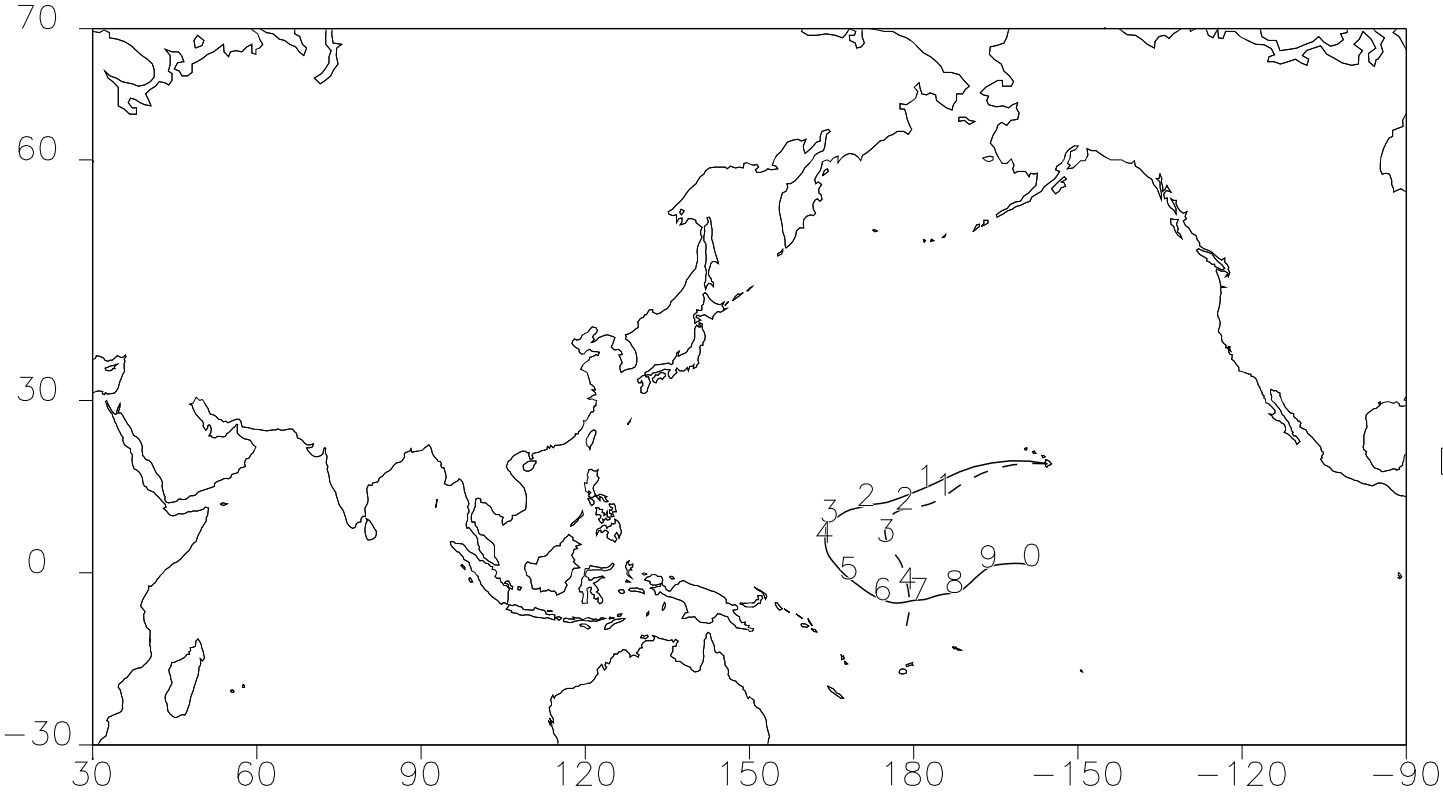
Day	km	hPa	C
0	11.0	247	-42
1	10.7	259	-38
2	9.7	302	-29
3	9.9	294	-32
4	8.9	337	-24
5	8.3	363	-20
6	8.0	380	-17
7	9.9	290	-34
8	9.9	287	-36
9	5.6	513	-4
10	4.9	563	1

06UT

Day	km	hPa	C
0	11.0	248	-42
1	10.9	253	-40
2	10.2	282	-33
3	9.8	298	-30
4	8.0	380	-17
5	6.7	447	-8
6	7.1	428	-10
7	8.3	361	-22
8	9.4	308	-31
9	5.0	553	-2
10	3.8	651	6

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

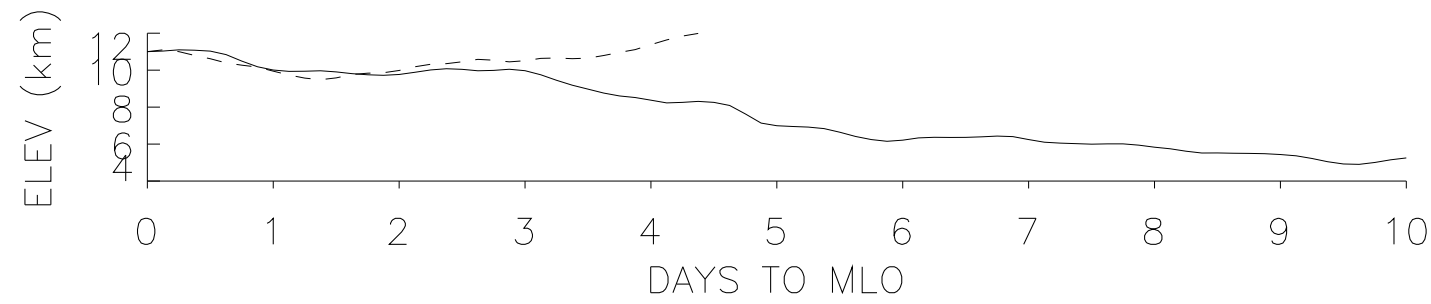


12UT

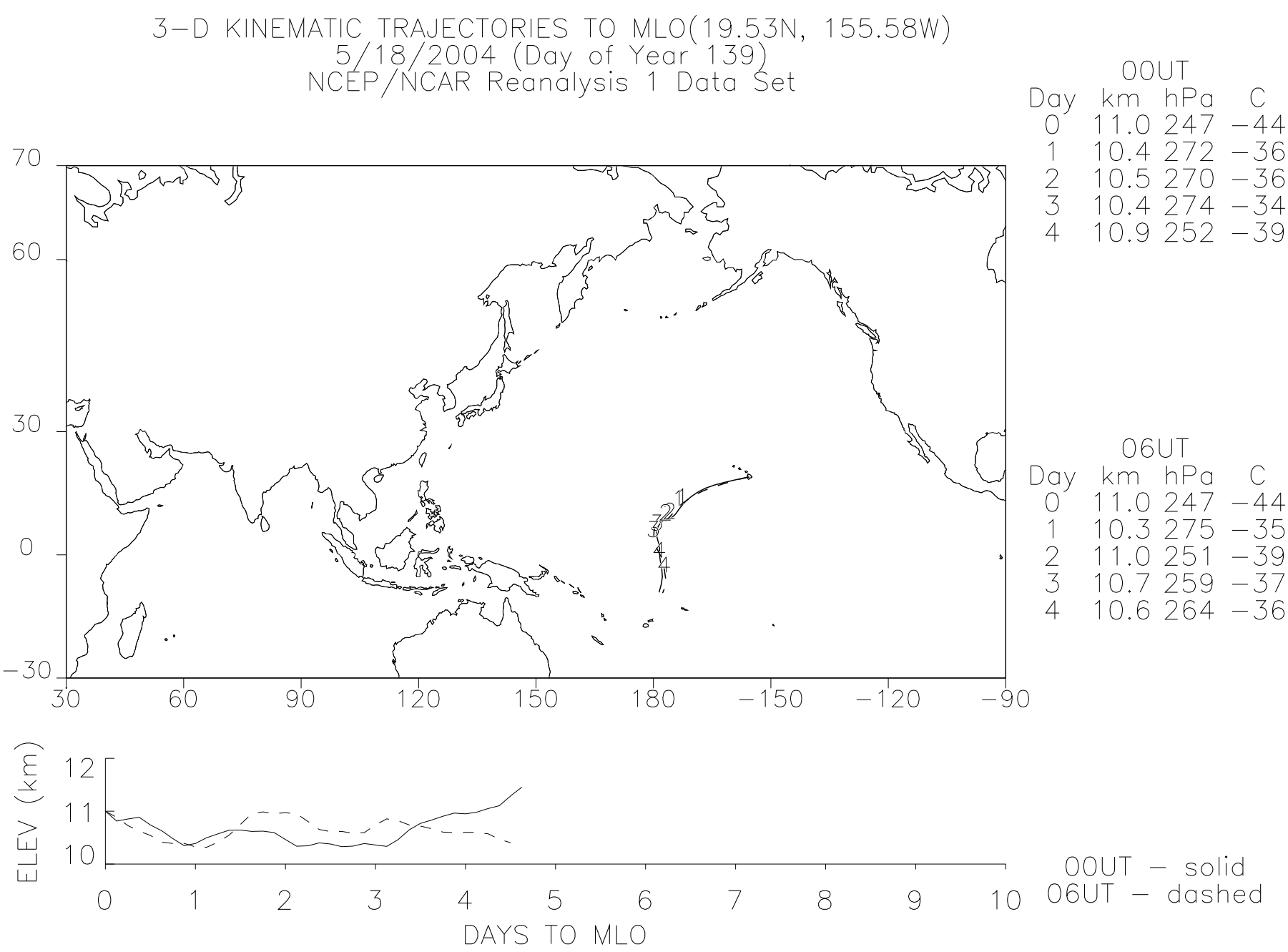
Day	km	hPa	C
0	11.0	247	−43
1	10.0	287	−33
2	9.8	298	−30
3	10.0	290	−32
4	8.4	361	−19
5	7.0	432	−11
6	6.2	478	−5
7	6.2	477	−6
8	5.8	502	−3
9	5.4	527	−1
10	5.2	540	−1

18UT

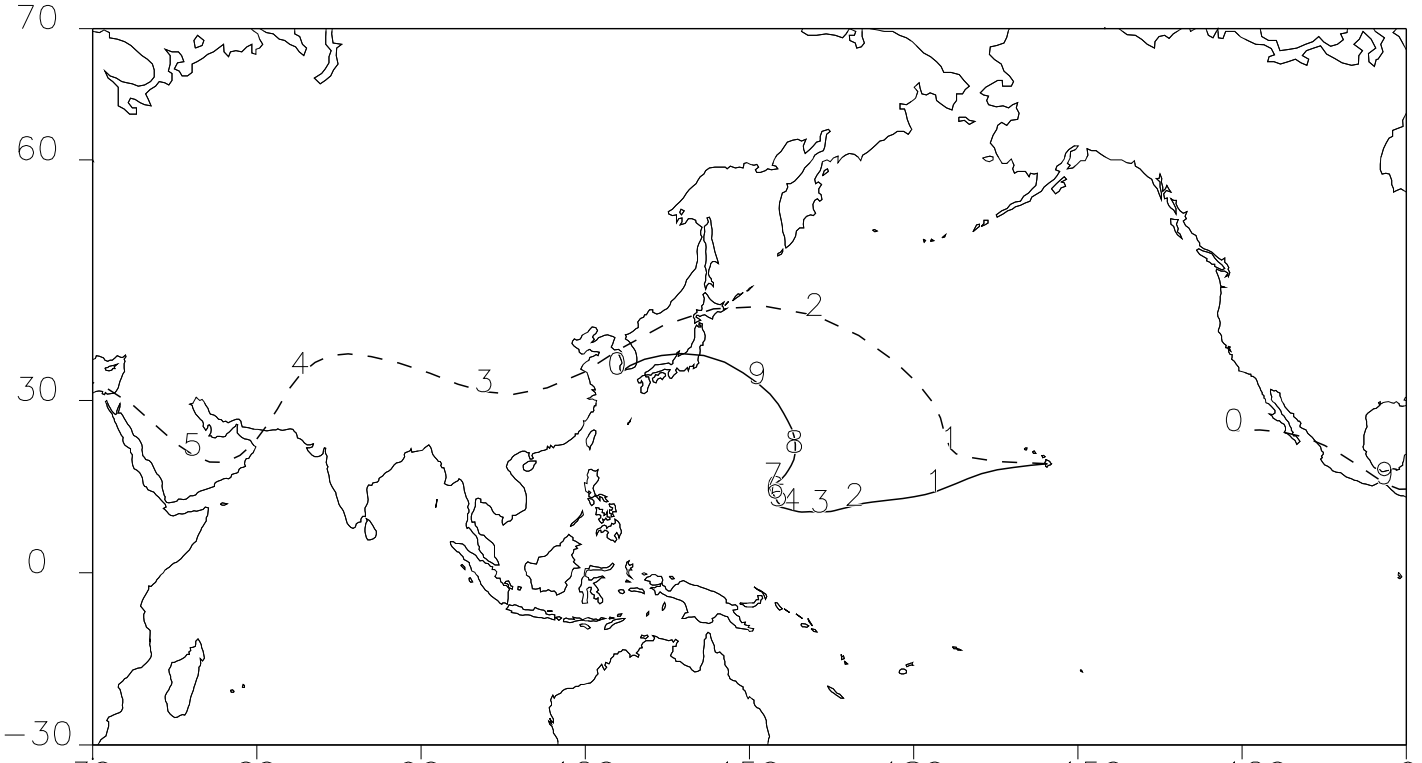
Day	km	hPa	C
0	11.0	247	−44
1	9.9	289	−33
2	10.0	289	−32
3	10.5	267	−36
4	11.4	235	−43

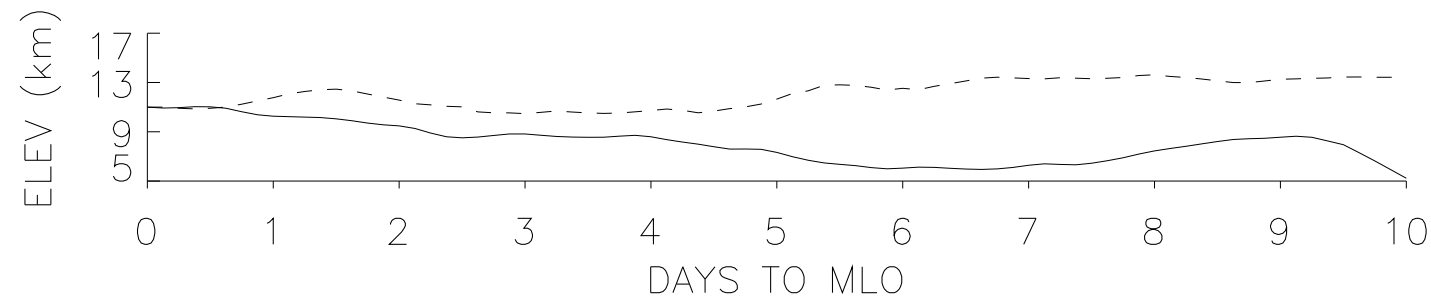


12UT – solid
18UT – dashed


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 11.0 247 -44
1 10.4 272 -36
2 10.5 270 -36
3 10.4 274 -34
4 10.9 252 -39
06UT
Day km hPa C
0 11.0 247 -44
1 10.3 275 -35
2 11.0 251 -39
3 10.7 259 -37
4 10.6 264 -36
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
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)
5/18/2004 (Day of Year 139)
NCEP/NCAR Reanalysis 1 Data Set





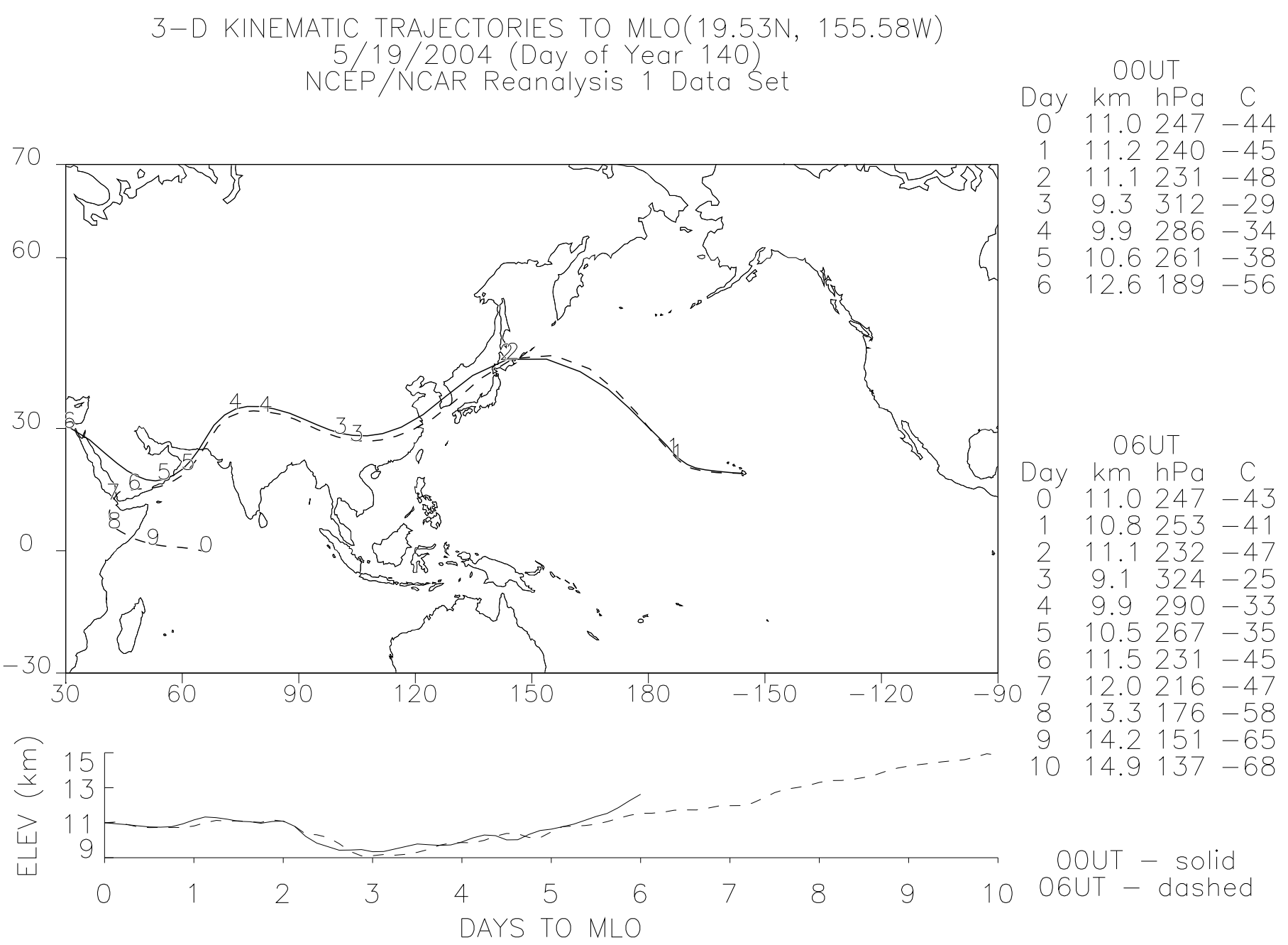
12UT

Day	km	hPa	C
0	11.0	246	−45
1	10.3	277	−37
2	9.5	311	−29
3	8.8	340	−23
4	8.6	351	−22
5	7.3	415	−13
6	6.1	489	−4
7	6.3	474	−5
8	7.4	406	−16
9	8.6	347	−26
10	5.2	534	−5

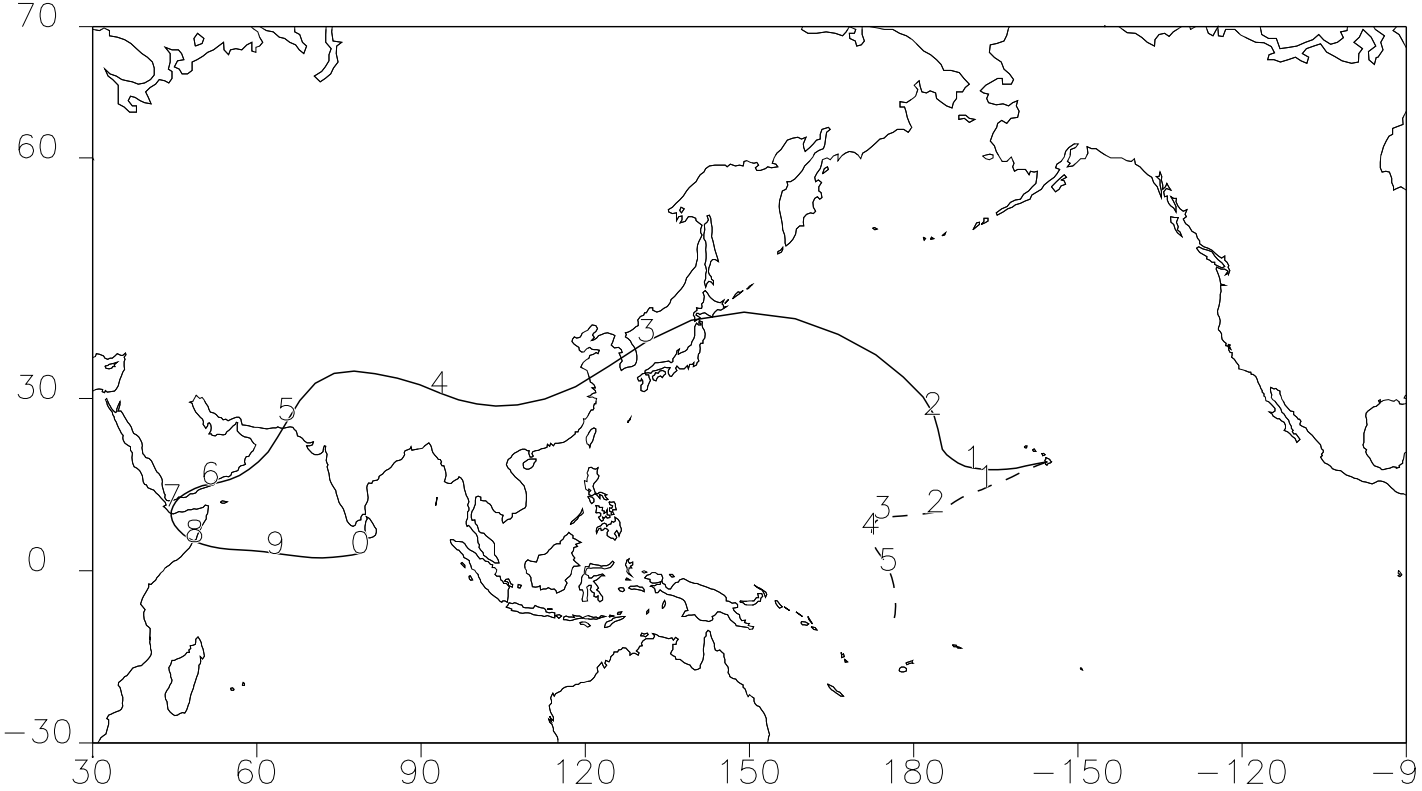
18UT

Day	km	hPa	C
0	11.0	247	−45
1	11.8	218	−52
2	11.6	214	−51
3	10.5	262	−40
4	10.7	253	−41
5	11.7	223	−46
6	12.5	190	−54
7	13.3	170	−59
8	13.6	164	−60
9	13.3	174	−59
10	13.5	167	−61

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 11.0 247 -44
1 11.2 240 -45
2 11.1 231 -48
3 9.3 312 -29
4 9.9 286 -34
5 10.6 261 -38
6 12.6 189 -56
06UT
Day km hPa C
0 11.0 247 -43
1 10.8 253 -41
2 11.1 232 -47
3 9.1 324 -25
4 9.9 290 -33
5 10.5 267 -35
6 11.5 231 -45
7 12.0 216 -47
8 13.3 176 -58
9 14.2 151 -65
10 14.9 137 -68
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)
5/19/2004 (Day of Year 140)
NCEP/NCAR Reanalysis 1 Data Set

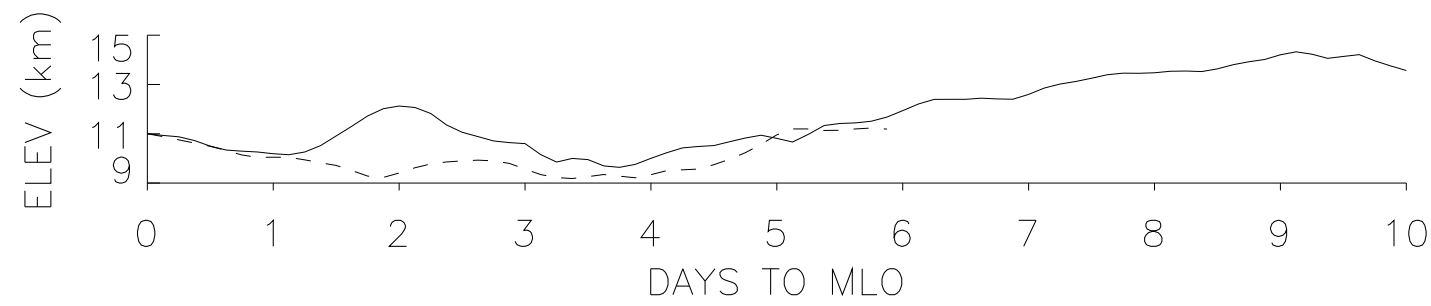


12UT

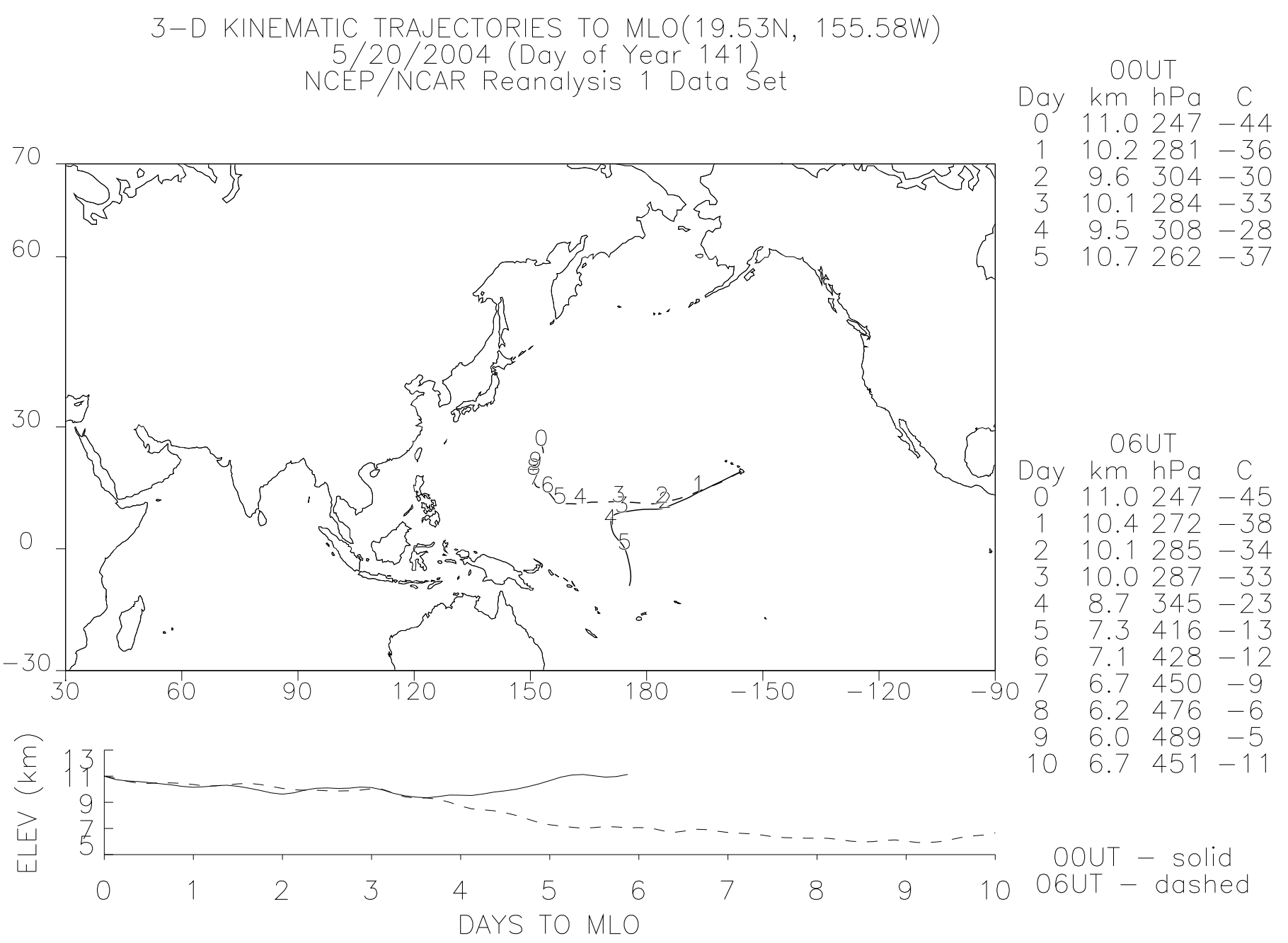
Day	km	hPa	C
0	11.0	247	-44
1	10.2	279	-36
2	12.1	206	-54
3	10.6	253	-42
4	10.0	284	-33
5	10.8	252	-39
6	11.9	216	-48
7	12.6	196	-52
8	13.5	171	-59
9	14.2	151	-65
10	13.6	168	-58

18UT

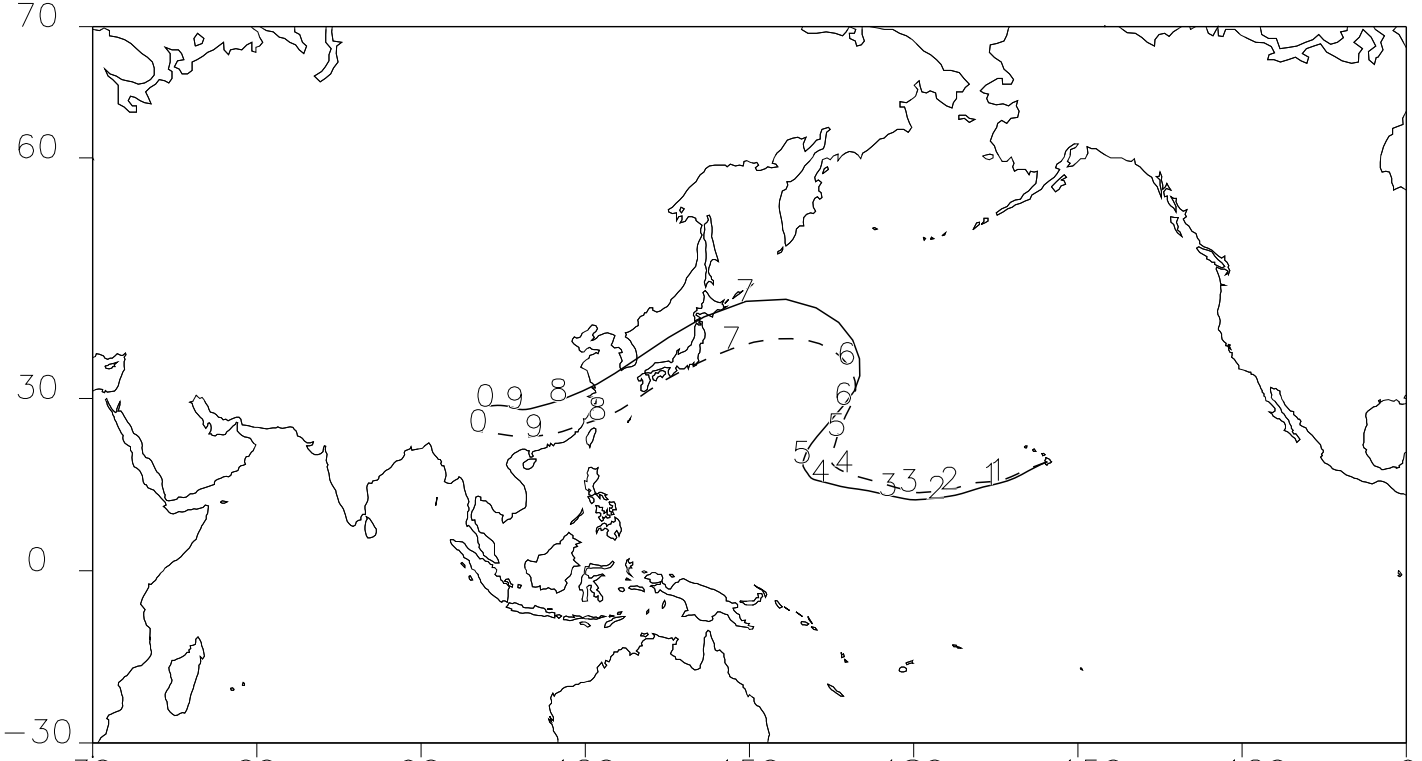
Day	km	hPa	C
0	11.0	247	-44
1	10.0	285	-36
2	9.4	313	-28
3	9.6	306	-29
4	9.3	316	-27
5	11.0	250	-40

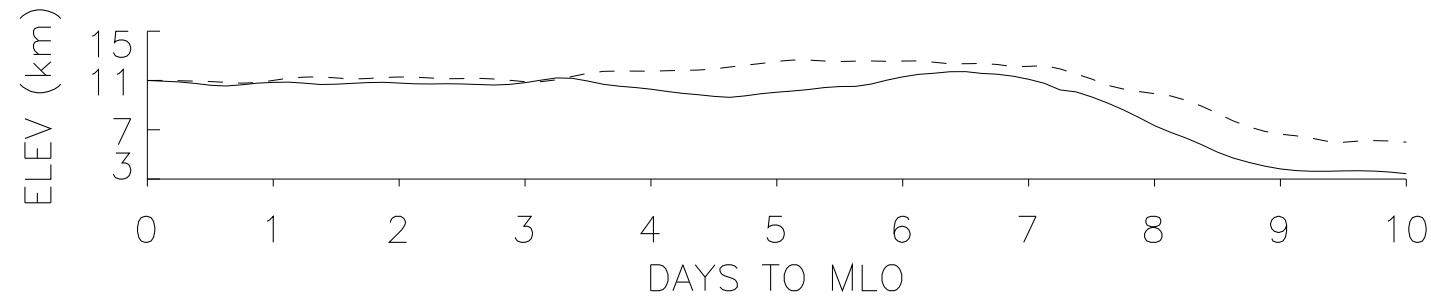


12UT – solid
18UT – dashed


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 11.0 247 -44
1 10.2 281 -36
2 9.6 304 -30
3 10.1 284 -33
4 9.5 308 -28
5 10.7 262 -37
06UT
Day km hPa C
0 11.0 247 -45
1 10.4 272 -38
2 10.1 285 -34
3 10.0 287 -33
4 8.7 345 -23
5 7.3 416 -13
6 7.1 428 -12
7 6.7 450 -9
8 6.2 476 -6
9 6.0 489 -5
10 6.7 451 -11
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
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

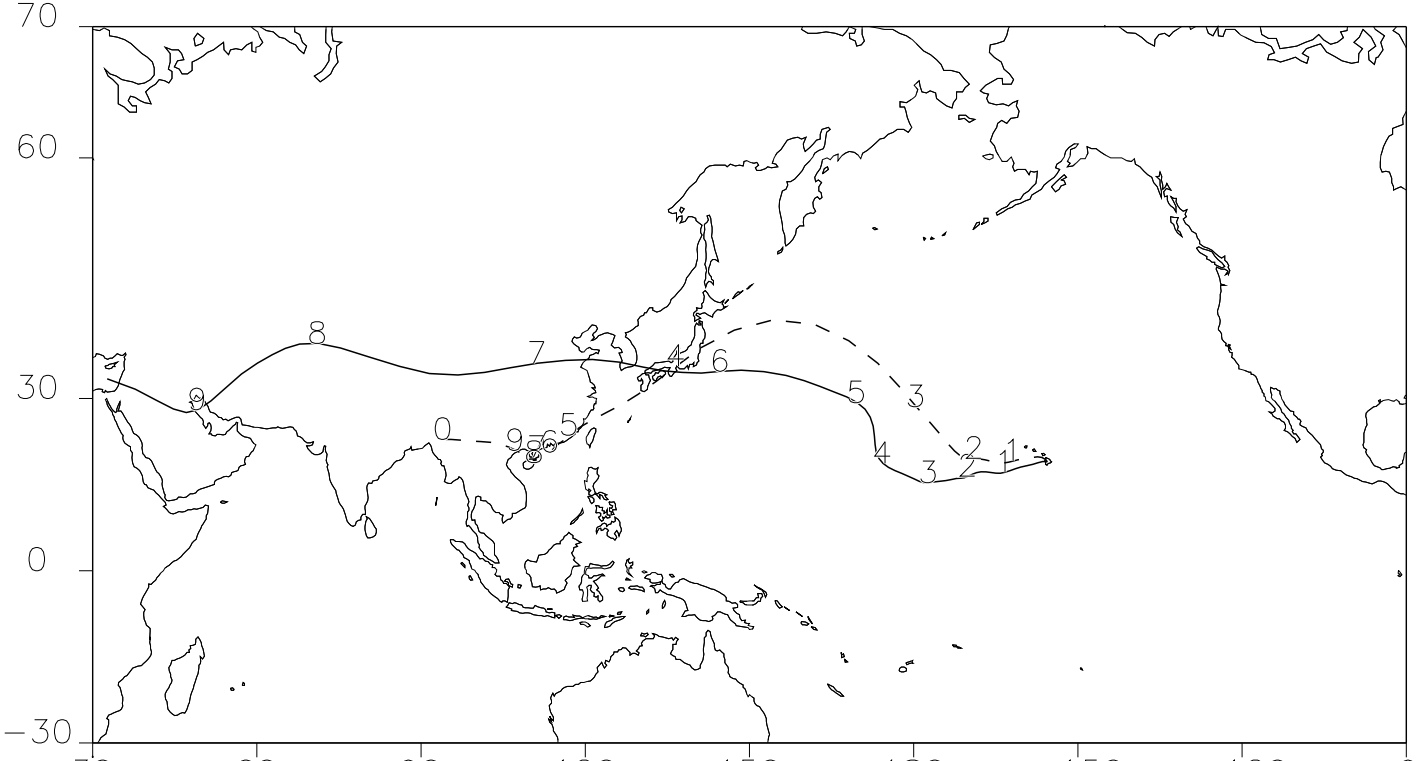
Day	km	hPa	C
0	11.0	246	−45
1	10.8	253	−43
2	10.8	256	−41
3	10.8	256	−41
4	10.3	277	−35
5	10.1	285	−35
6	11.3	234	−48
7	11.1	234	−50
8	7.3	407	−16
9	3.8	639	4
10	3.4	670	9

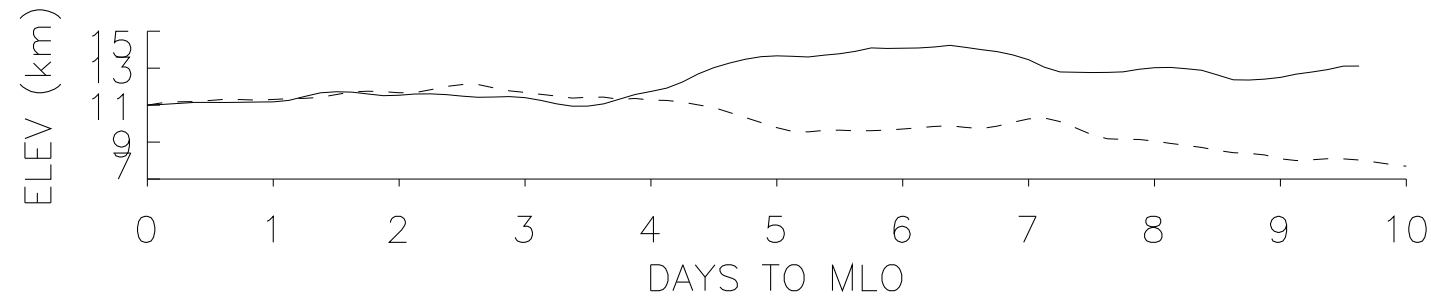
18UT

Day	km	hPa	C
0	11.0	247	−45
1	11.0	246	−44
2	11.3	238	−46
3	10.9	252	−42
4	11.8	222	−48
5	12.6	194	−56
6	12.6	193	−57
7	12.1	205	−53
8	9.9	288	−32
9	6.6	451	−10
10	6.0	490	−5

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

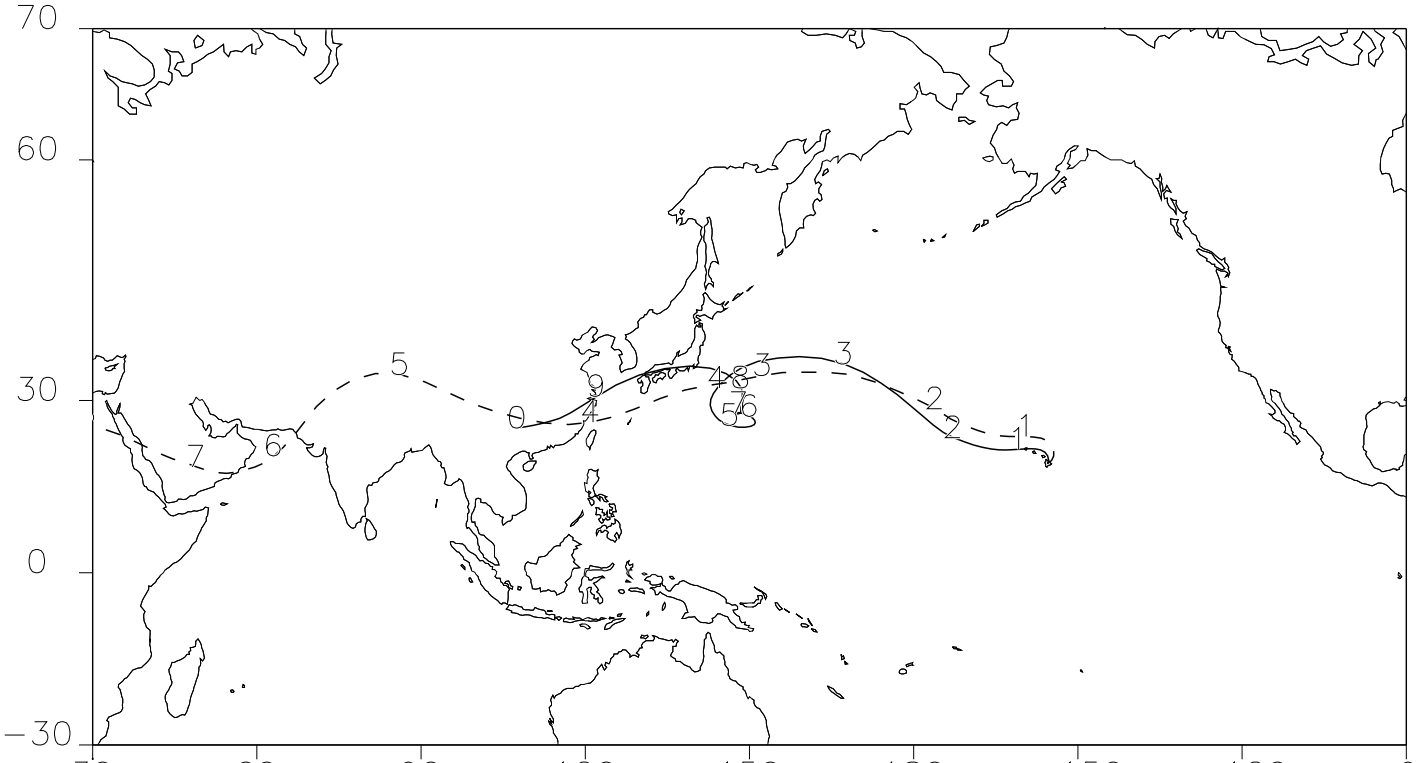
Day	km	hPa	C
0	11.0	247	-45
1	11.2	240	-45
2	11.5	229	-47
3	11.4	233	-46
4	11.7	221	-49
5	13.7	162	-64
6	14.1	151	-69
7	13.5	162	-61
8	13.0	175	-56
9	12.5	192	-52

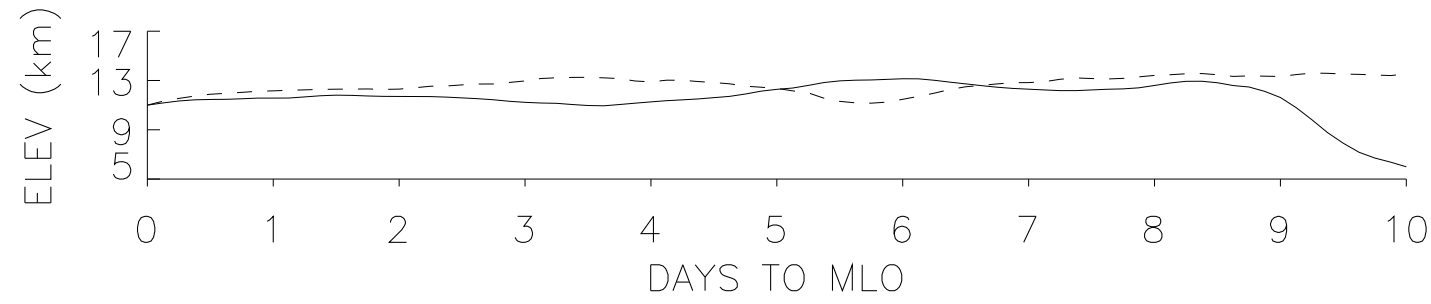
06UT

Day	km	hPa	C
0	11.0	248	-44
1	11.3	236	-47
2	11.7	223	-48
3	11.7	220	-49
4	11.3	235	-44
5	9.8	298	-28
6	9.7	302	-28
7	10.3	279	-31
8	9.1	329	-24
9	8.1	373	-18
10	7.7	394	-15

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





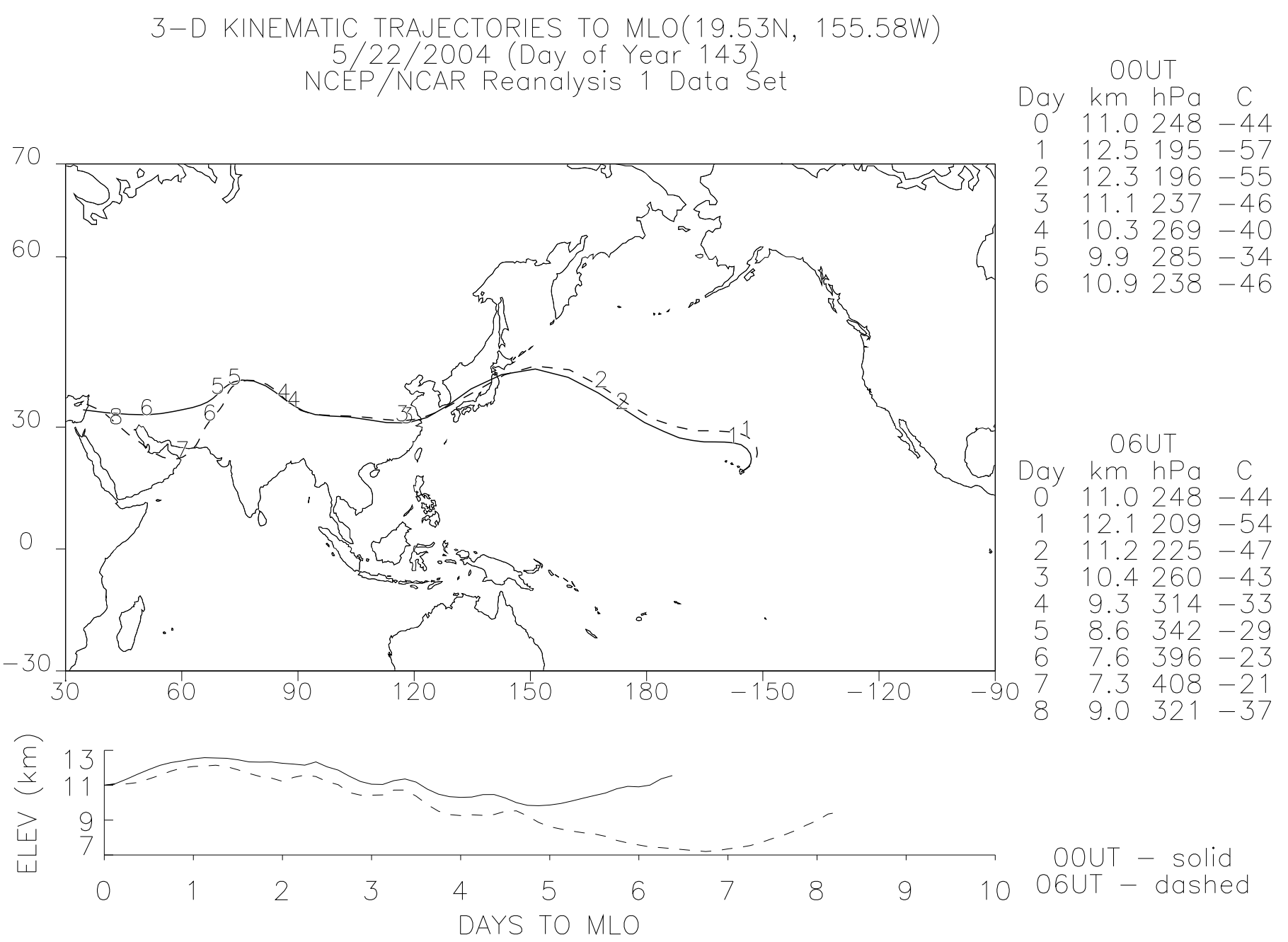
12UT

Day	km	hPa	C
0	11.0	247	-45
1	11.6	225	-49
2	11.7	221	-48
3	11.2	236	-45
4	11.3	239	-44
5	12.3	206	-53
6	13.1	179	-61
7	12.3	205	-52
8	12.6	195	-56
9	11.6	223	-47
10	6.0	489	-5

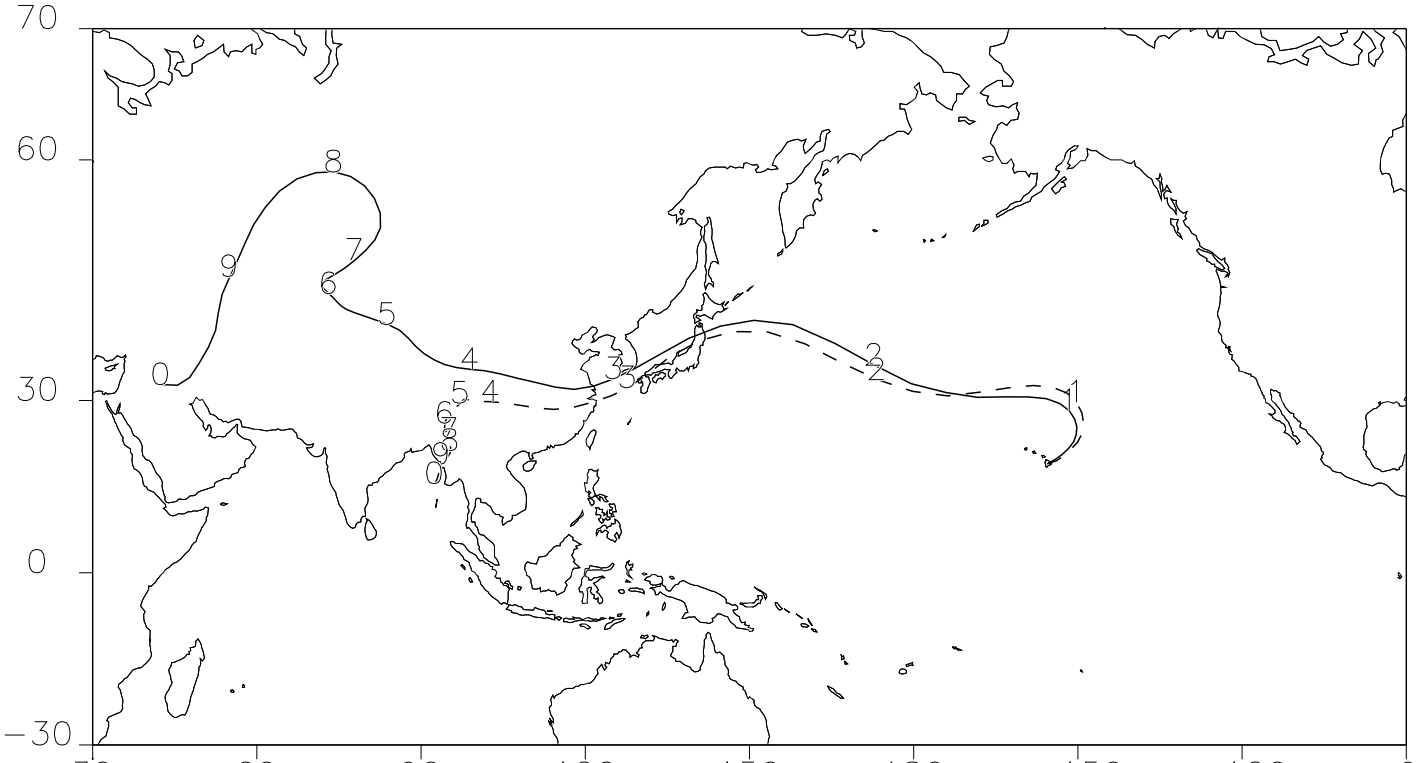
18UT

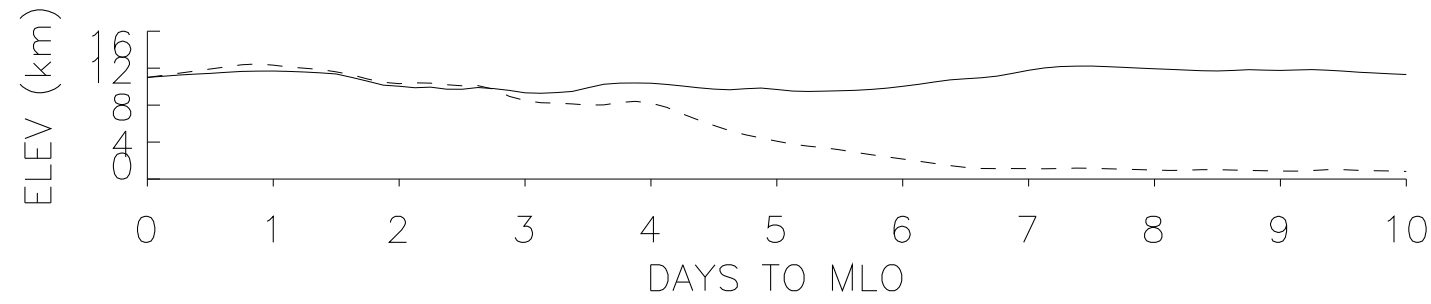
Day	km	hPa	C
0	11.0	248	-44
1	12.2	206	-54
2	12.3	199	-55
3	13.0	181	-58
4	12.9	185	-56
5	12.4	202	-49
6	11.5	232	-40
7	12.8	189	-53
8	13.4	170	-59
9	13.3	174	-58
10	13.5	169	-60

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 11.0 248 -44
1 12.5 195 -57
2 12.3 196 -55
3 11.1 237 -46
4 10.3 269 -40
5 9.9 285 -34
6 10.9 238 -46
06UT
Day km hPa C
0 11.0 248 -44
1 12.1 209 -54
2 11.2 225 -47
3 10.4 260 -43
4 9.3 314 -33
5 8.6 342 -29
6 7.6 396 -23
7 7.3 408 -21
8 9.0 321 -37
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
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)
5/22/2004 (Day of Year 143)
NCEP/NCAR Reanalysis 1 Data Set





12UT

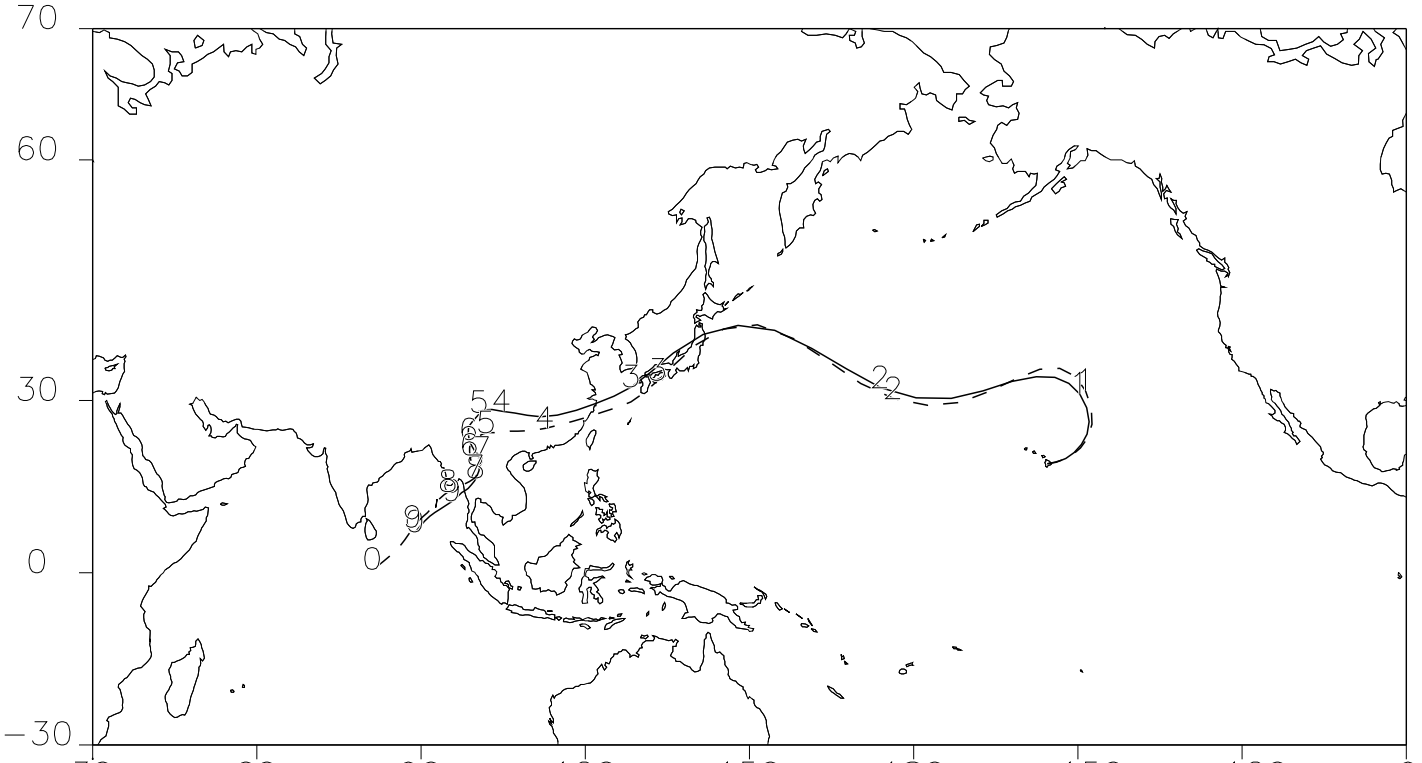
Day	km	hPa	C
0	11.0	248	-45
1	11.7	222	-51
2	10.0	269	-40
3	9.3	305	-35
4	10.4	263	-46
5	9.7	292	-40
6	10.0	278	-42
7	11.8	211	-55
8	11.9	203	-58
9	11.8	207	-54
10	11.3	224	-50

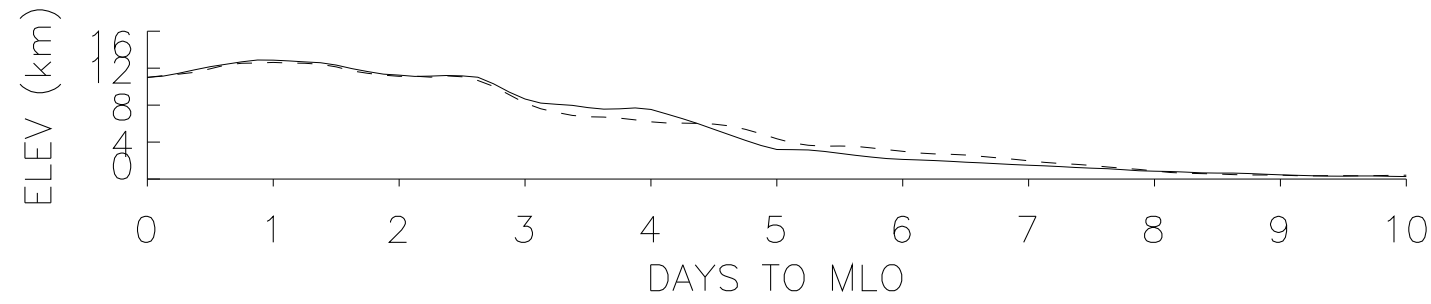
18UT

Day	km	hPa	C
0	11.0	248	-44
1	12.3	201	-56
2	10.3	262	-40
3	8.5	345	-26
4	8.2	362	-24
5	4.1	620	4
6	2.2	784	18
7	1.1	885	21
8	1.0	899	23
9	0.9	910	24
10	0.8	914	23

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

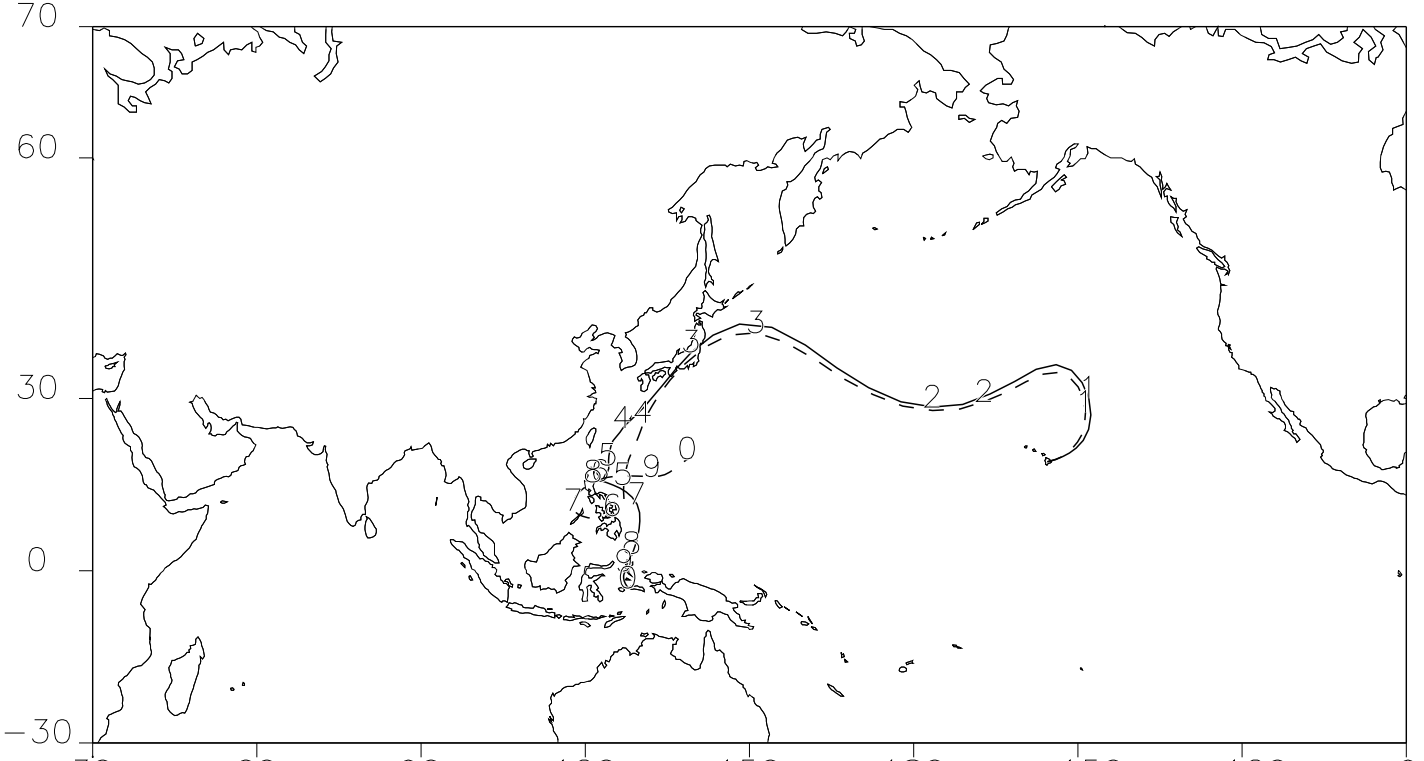
Day	km	hPa	C
0	11.0	249	−43
1	12.9	185	−60
2	11.2	230	−46
3	8.7	338	−25
4	7.5	397	−18
5	3.2	692	8
6	2.1	788	15
7	1.5	848	20
8	0.8	913	23
9	0.5	953	25
10	0.3	975	27

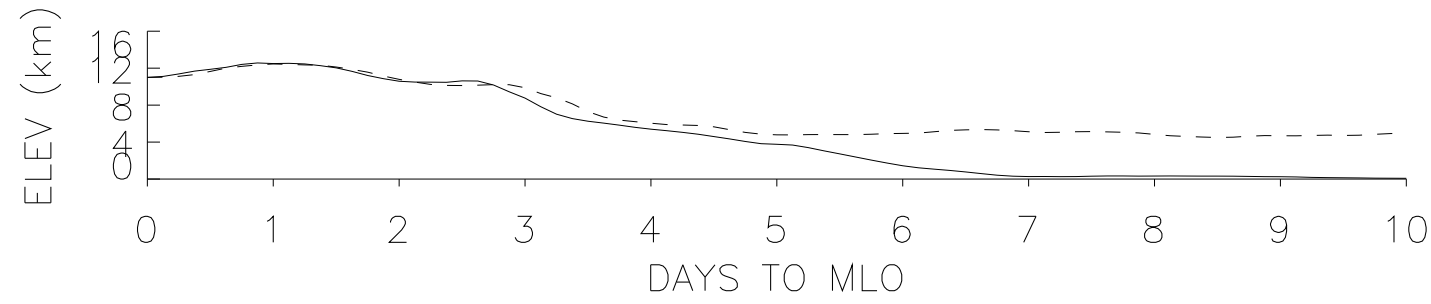
06UT

Day	km	hPa	C
0	11.0	249	−43
1	12.6	192	−58
2	11.1	236	−45
3	8.2	360	−21
4	6.2	475	−7
5	4.4	601	3
6	3.0	711	11
7	2.0	802	17
8	0.9	911	22
9	0.4	962	26
10	0.4	964	26

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

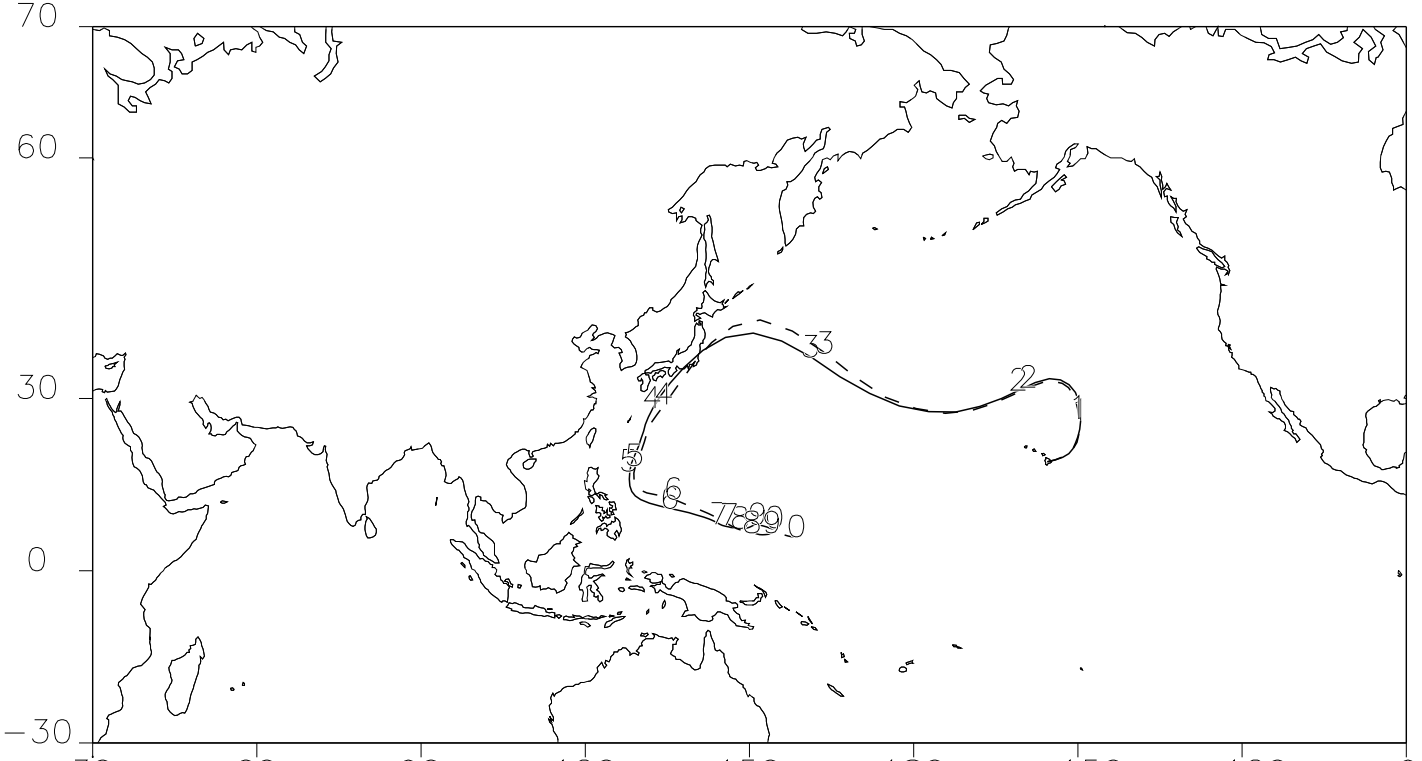
Day	km	hPa	C
0	11.0	248	-44
1	12.5	196	-57
2	10.6	257	-41
3	8.8	334	-25
4	5.4	527	-2
5	3.8	646	7
6	1.4	851	21
7	0.3	975	27
8	0.3	972	27
9	0.3	981	28
10	0.1	1000	27

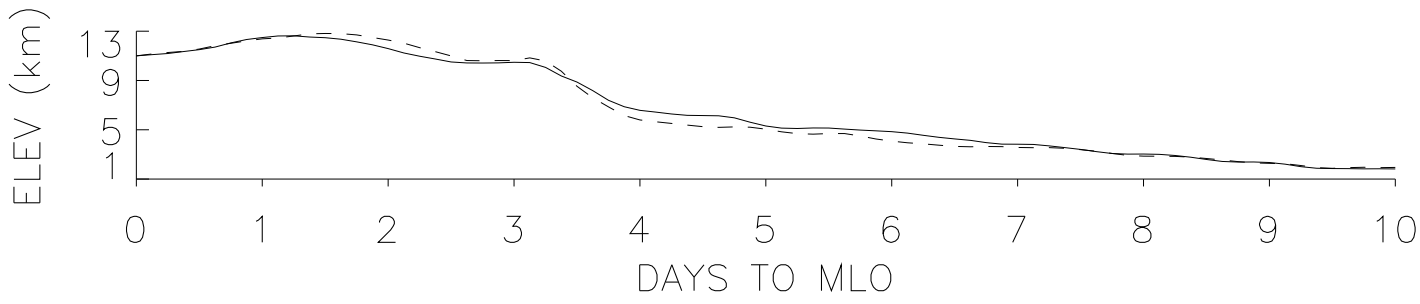
18UT

Day	km	hPa	C
0	11.0	248	-44
1	12.5	198	-57
2	10.8	251	-42
3	9.9	285	-33
4	6.0	485	-5
5	4.8	572	1
6	4.9	562	1
7	5.1	549	-1
8	4.8	569	1
9	4.7	580	2
10	5.0	562	0

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

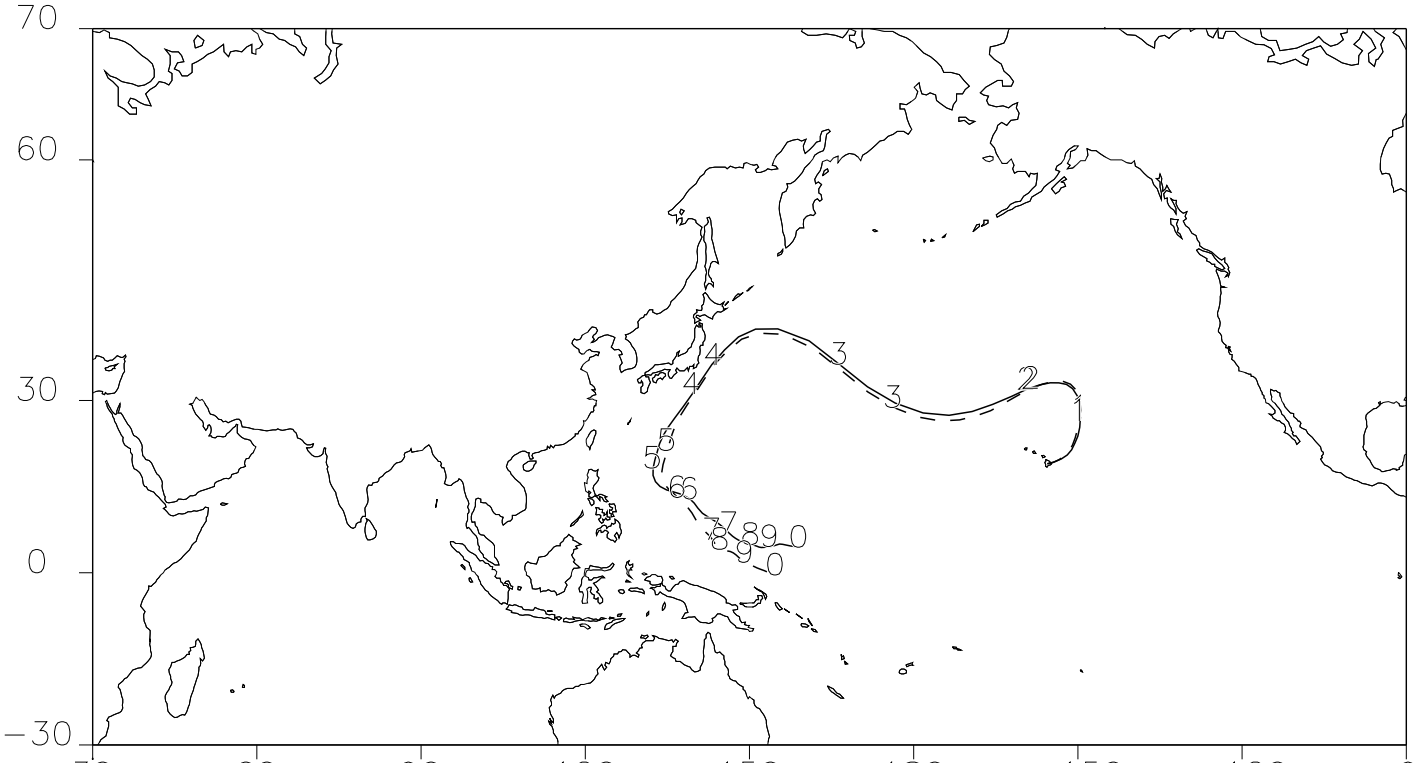
Day	km	hPa	C
0	11.0	248	-43
1	12.5	198	-56
2	11.6	225	-49
3	10.5	261	-39
4	6.6	452	-8
5	5.3	536	-2
6	4.8	570	1
7	3.8	647	6
8	3.0	711	11
9	2.3	772	14
10	1.8	820	16

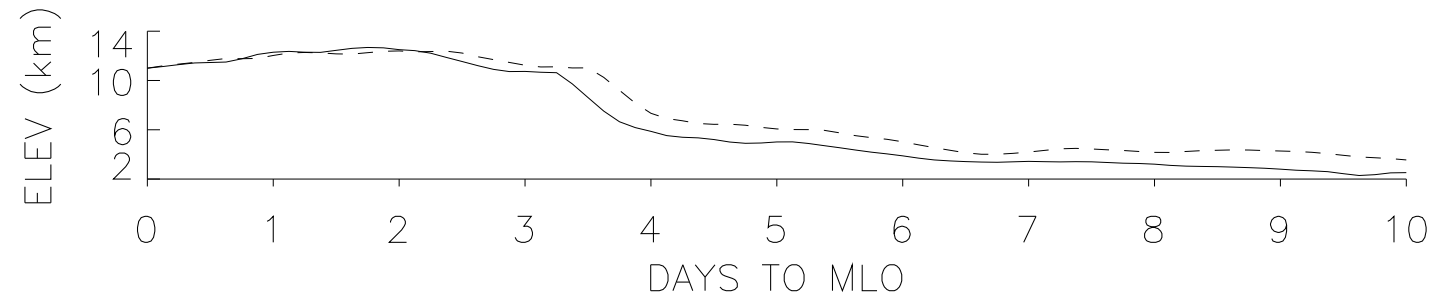
06UT

Day	km	hPa	C
0	11.0	248	-43
1	12.4	201	-54
2	12.3	203	-54
3	10.6	253	-40
4	5.8	499	-4
5	5.0	553	-2
6	4.1	625	5
7	3.6	666	8
8	2.9	724	13
9	2.3	776	15
10	1.9	806	16

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

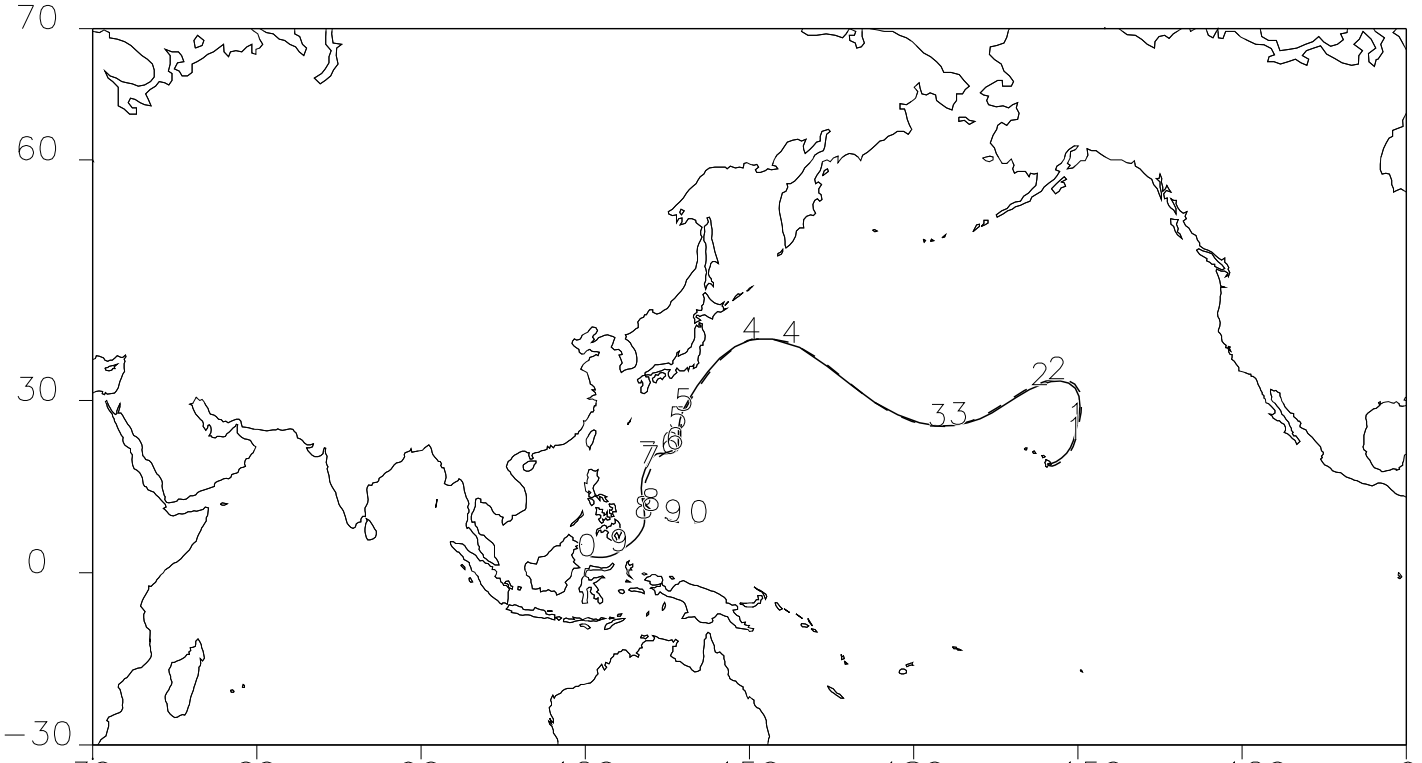
Day	km	hPa	C
0	11.0	248	−44
1	12.3	203	−54
2	12.5	196	−56
3	10.7	250	−40
4	5.9	495	−3
5	5.0	557	−1
6	3.9	642	7
7	3.4	679	9
8	3.2	697	11
9	2.8	730	13
10	2.5	756	13

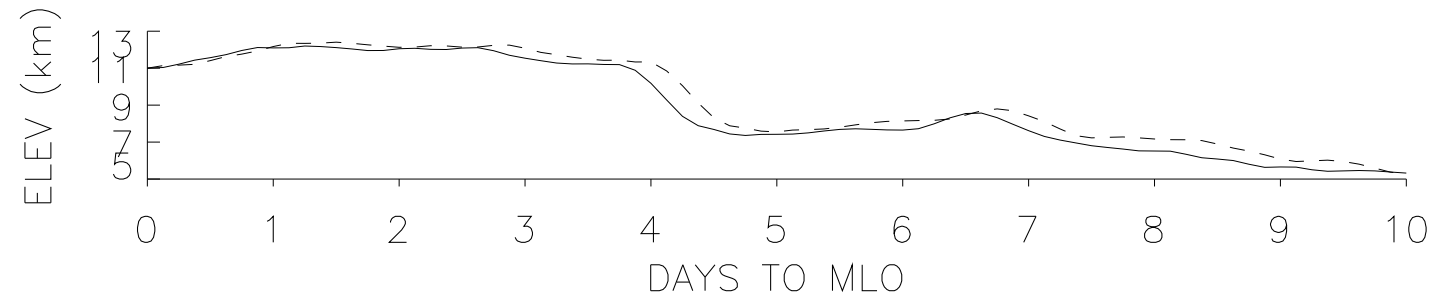
18UT

Day	km	hPa	C
0	11.0	248	−44
1	12.0	212	−52
2	12.4	200	−54
3	11.2	234	−44
4	7.3	407	−14
5	6.1	486	−7
6	5.0	556	0
7	4.2	616	5
8	4.2	619	5
9	4.3	610	4
10	3.5	666	9

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

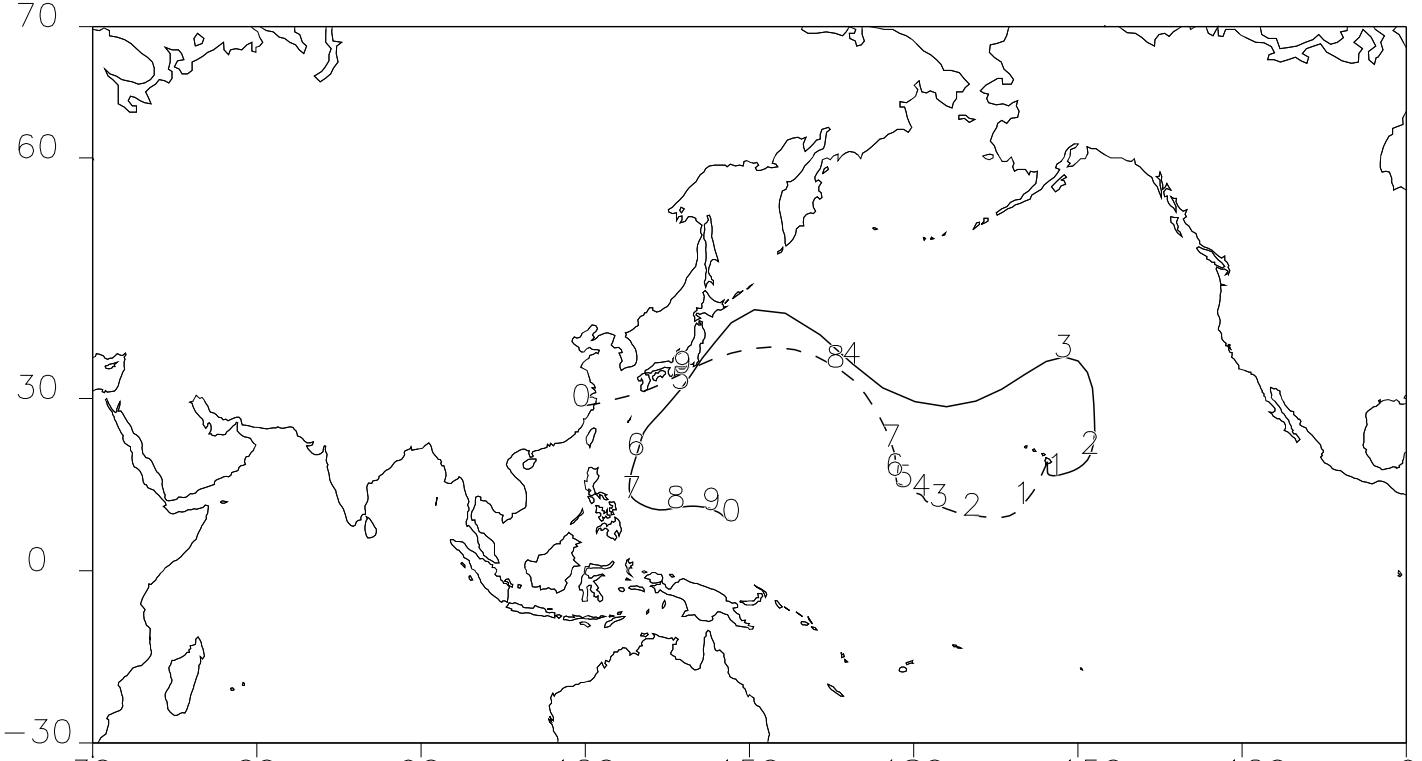
Day	km	hPa	C
0	11.0	248	−43
1	12.1	210	−52
2	12.1	211	−52
3	11.5	227	−47
4	10.2	275	−35
5	7.4	408	−13
6	7.7	398	−14
7	7.6	400	−15
8	6.5	462	−8
9	5.7	513	−3
10	5.3	535	−1

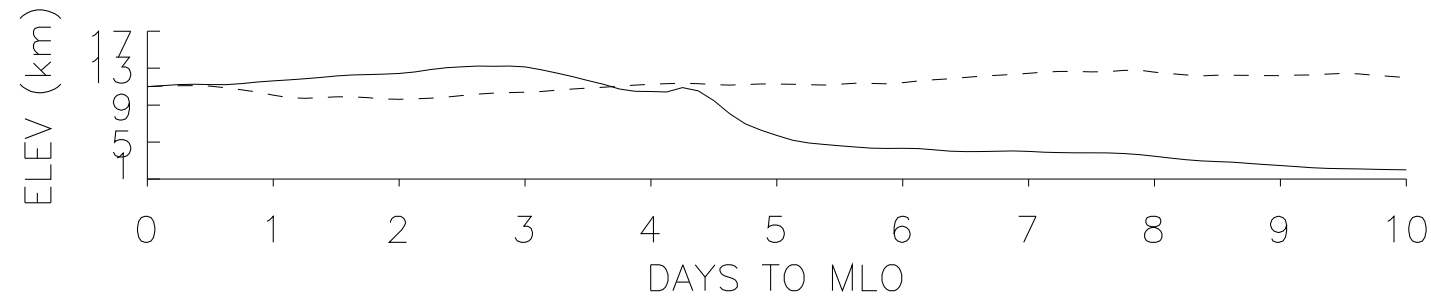
06UT

Day	km	hPa	C
0	11.0	248	−43
1	12.2	208	−53
2	12.1	209	−52
3	12.1	209	−51
4	11.3	230	−45
5	7.6	400	−13
6	8.1	372	−18
7	8.4	358	−21
8	7.2	424	−12
9	6.1	487	−6
10	5.3	539	−1

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

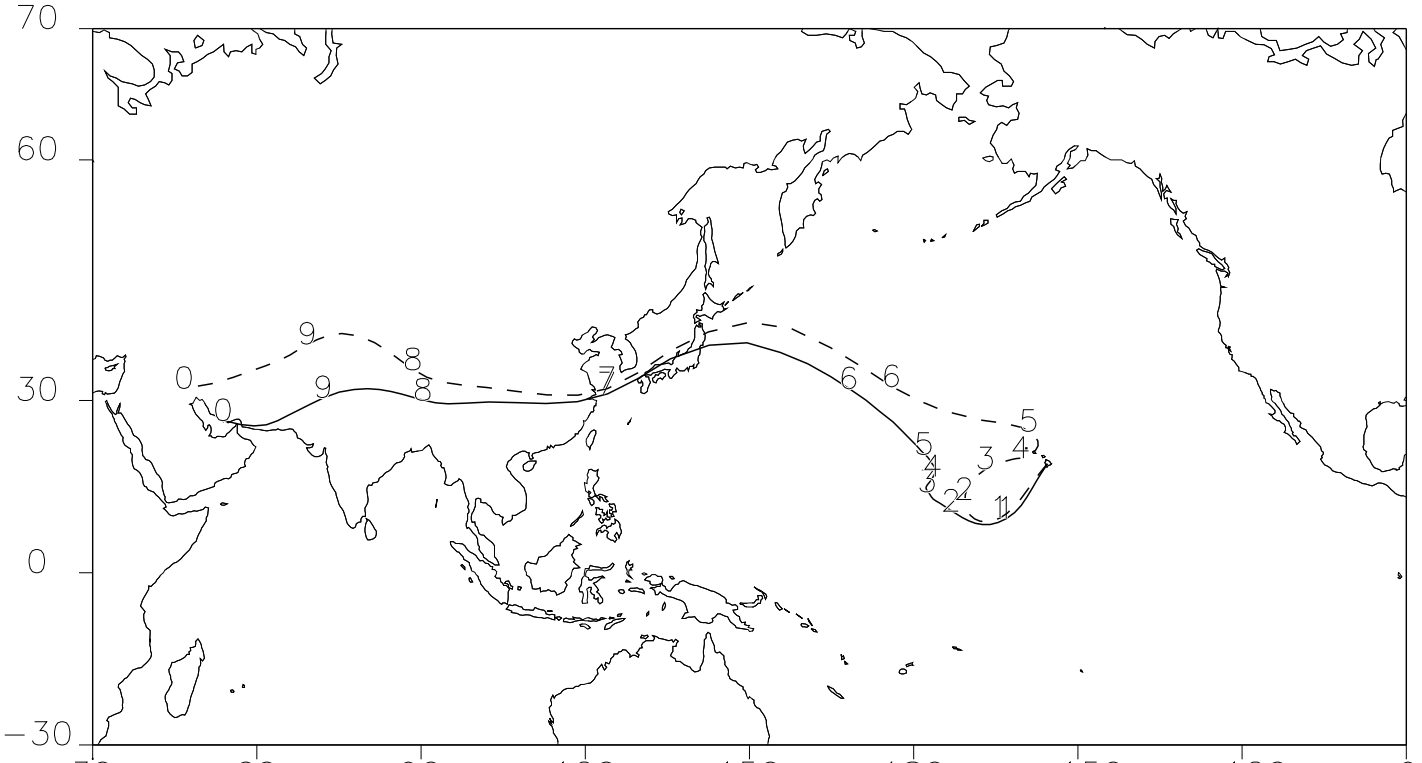
Day	km	hPa	C
0	11.0	248	-43
1	11.6	225	-49
2	12.4	199	-55
3	13.1	177	-61
4	10.5	257	-39
5	5.7	502	-3
6	4.3	604	3
7	4.0	633	5
8	3.5	676	9
9	2.5	760	14
10	2.0	803	17

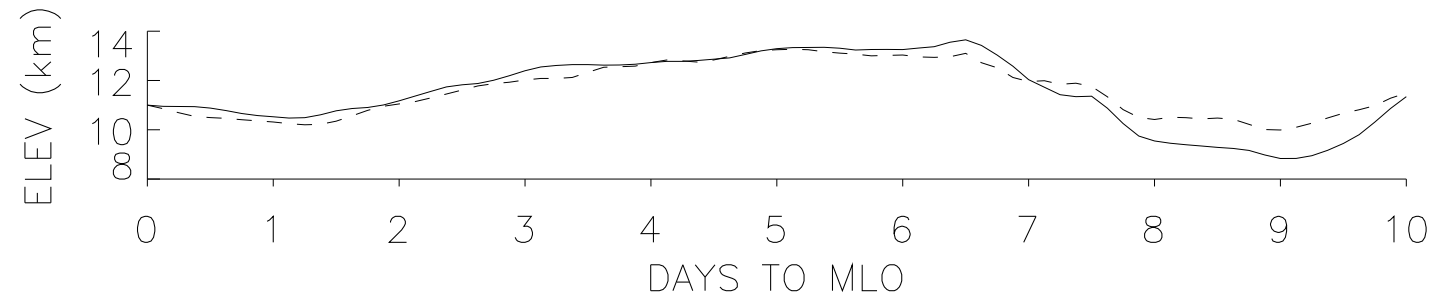
18UT

Day	km	hPa	C
0	11.0	248	-43
1	10.1	283	-35
2	9.6	302	-32
3	10.4	271	-39
4	11.3	239	-45
5	11.3	238	-44
6	11.4	233	-45
7	12.4	200	-54
8	12.6	193	-55
9	12.2	206	-51
10	12.0	215	-47

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

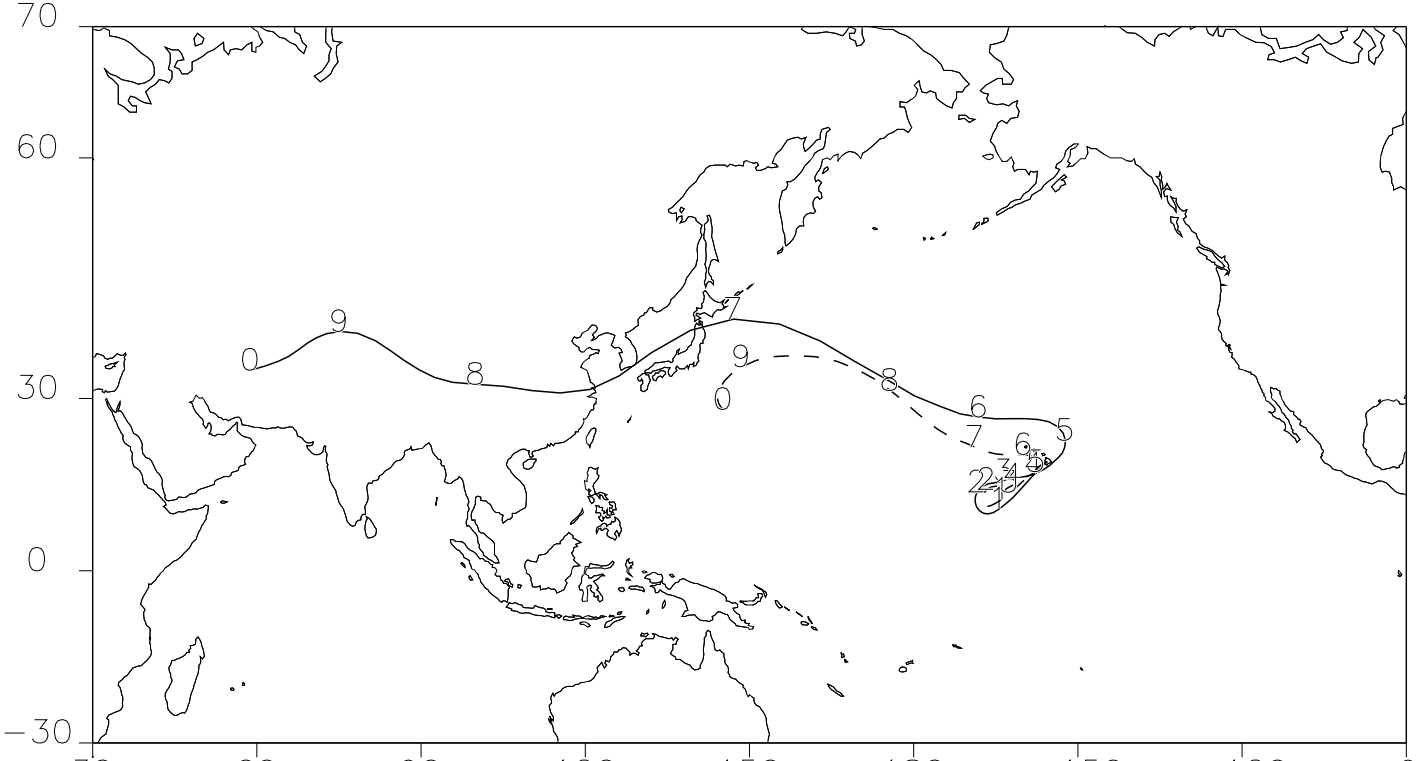
Day	km	hPa	C
0	11.0	248	-44
1	10.5	265	-38
2	11.2	243	-42
3	12.4	202	-54
4	12.7	191	-57
5	13.3	174	-62
6	13.3	173	-62
7	12.0	206	-52
8	9.5	304	-30
9	8.8	335	-22
10	11.3	230	-45

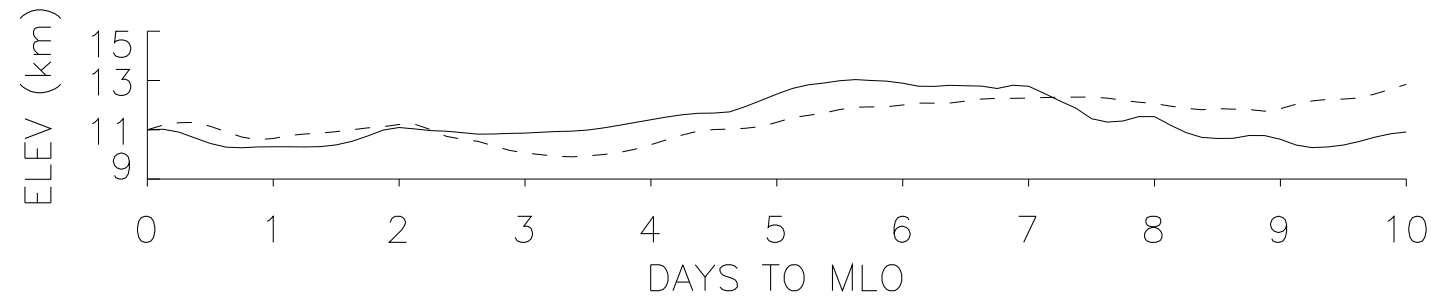
06UT

Day	km	hPa	C
0	11.0	248	-44
1	10.3	274	-36
2	11.0	246	-42
3	12.0	213	-52
4	12.7	191	-57
5	13.2	174	-60
6	13.0	175	-59
7	12.0	207	-52
8	10.4	266	-39
9	10.0	281	-35
10	11.5	219	-49

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

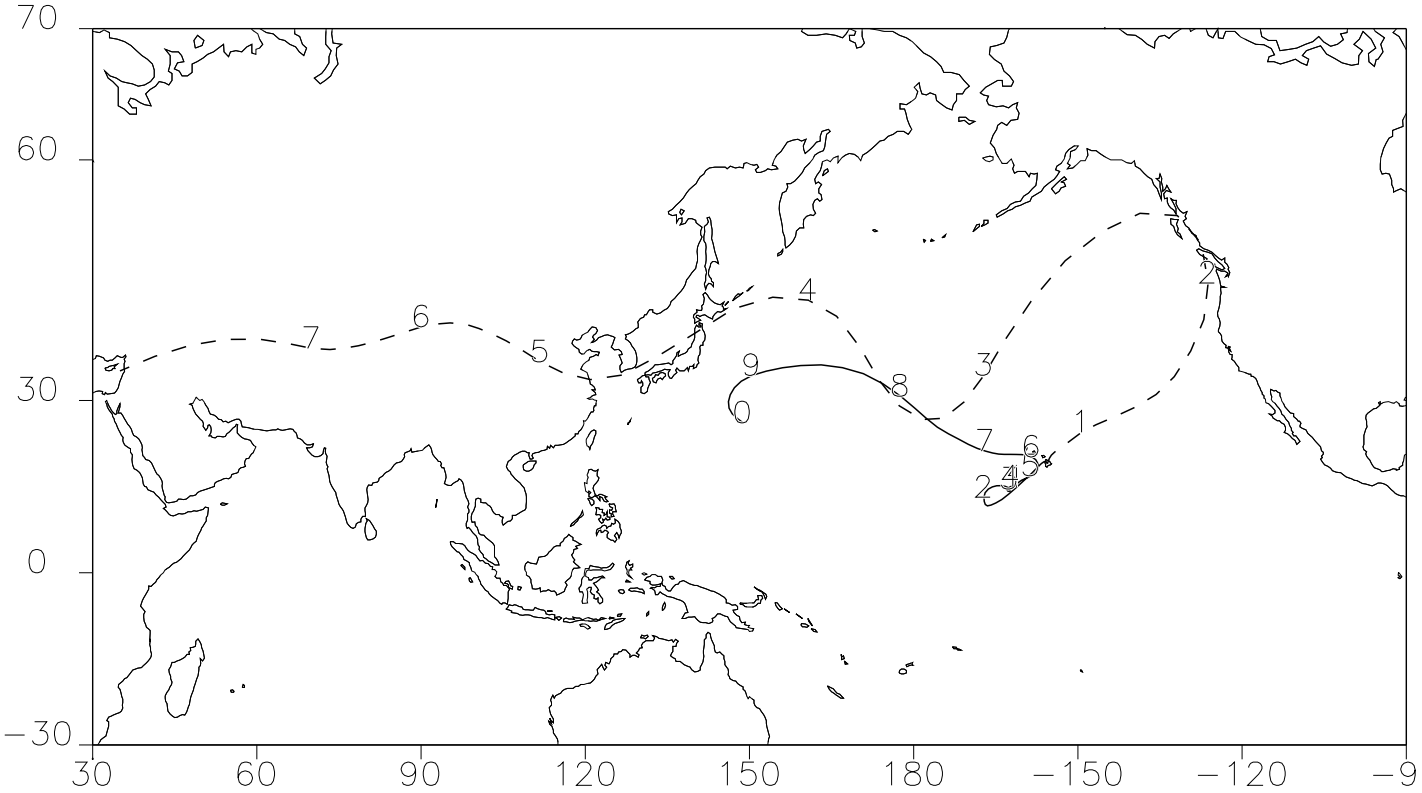
Day	km	hPa	C
0	11.0	247	-45
1	10.3	274	-37
2	11.1	244	-43
3	10.9	252	-43
4	11.4	232	-47
5	12.4	198	-56
6	12.9	182	-58
7	12.8	180	-60
8	11.5	223	-49
9	10.6	258	-40
10	10.9	242	-43

18UT

Day	km	hPa	C
0	11.0	248	-45
1	10.6	260	-40
2	11.2	239	-44
3	10.1	284	-36
4	10.4	271	-39
5	11.3	237	-46
6	12.0	211	-52
7	12.3	202	-53
8	12.1	208	-52
9	11.9	217	-48
10	12.8	188	-56

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

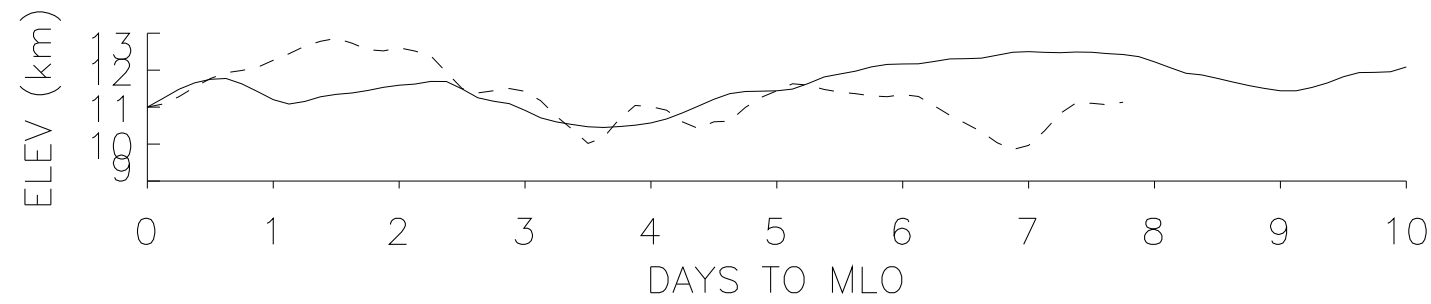


00UT

Day	km	hPa	C
0	11.0	248	-44
1	11.2	239	-45
2	11.6	226	-47
3	10.9	250	-41
4	10.6	264	-39
5	11.4	232	-47
6	12.2	207	-53
7	12.5	196	-55
8	12.2	203	-53
9	11.4	232	-46
10	12.1	213	-51

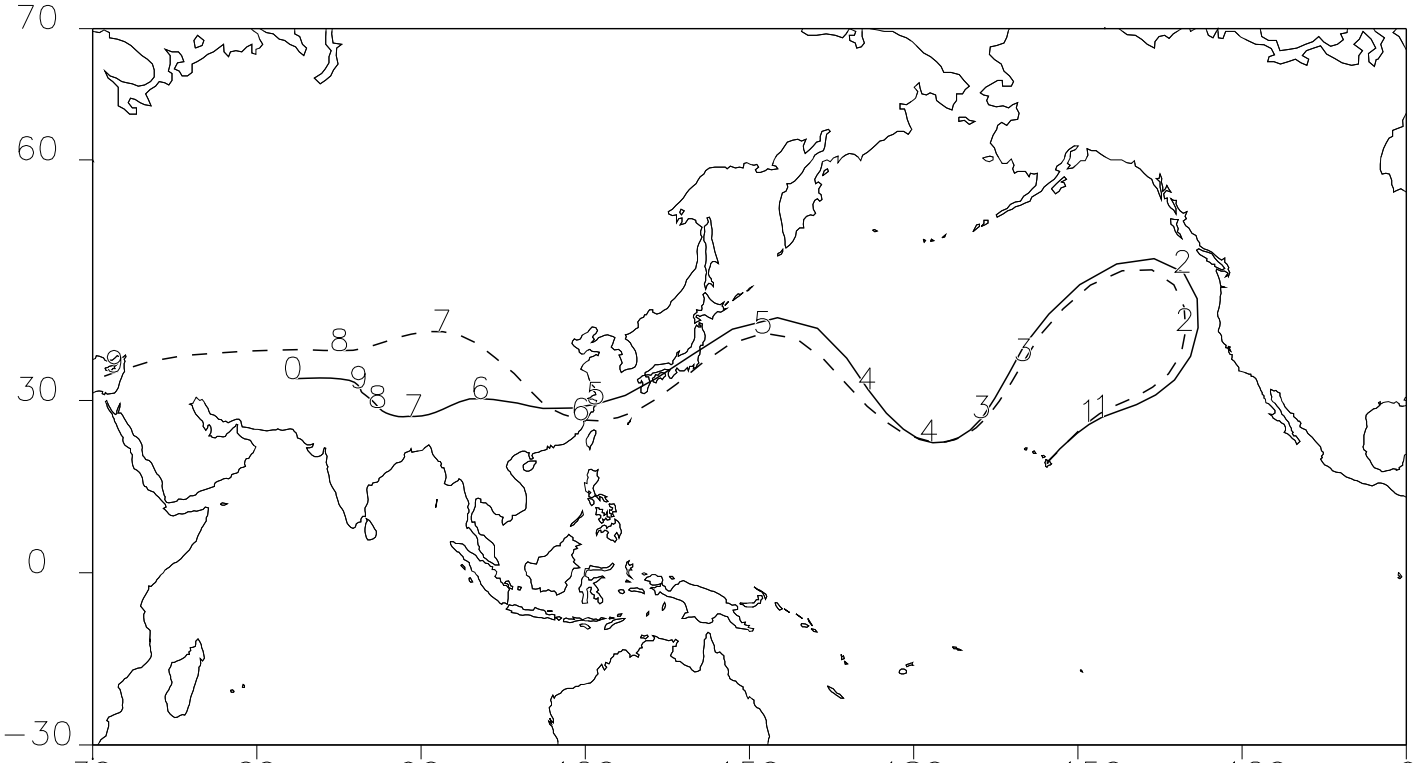
06UT

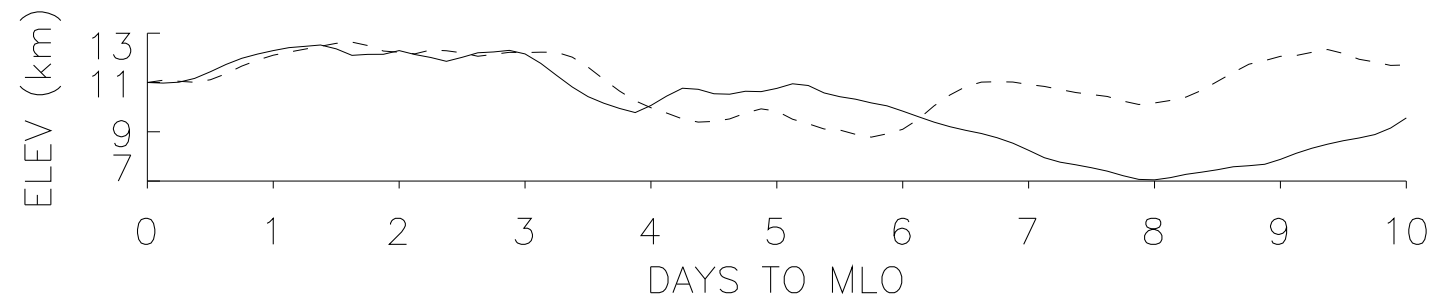
Day	km	hPa	C
0	11.0	248	-44
1	12.3	203	-56
2	12.6	185	-60
3	11.4	222	-49
4	11.0	237	-48
5	11.4	222	-49
6	11.3	227	-45
7	10.0	279	-38



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

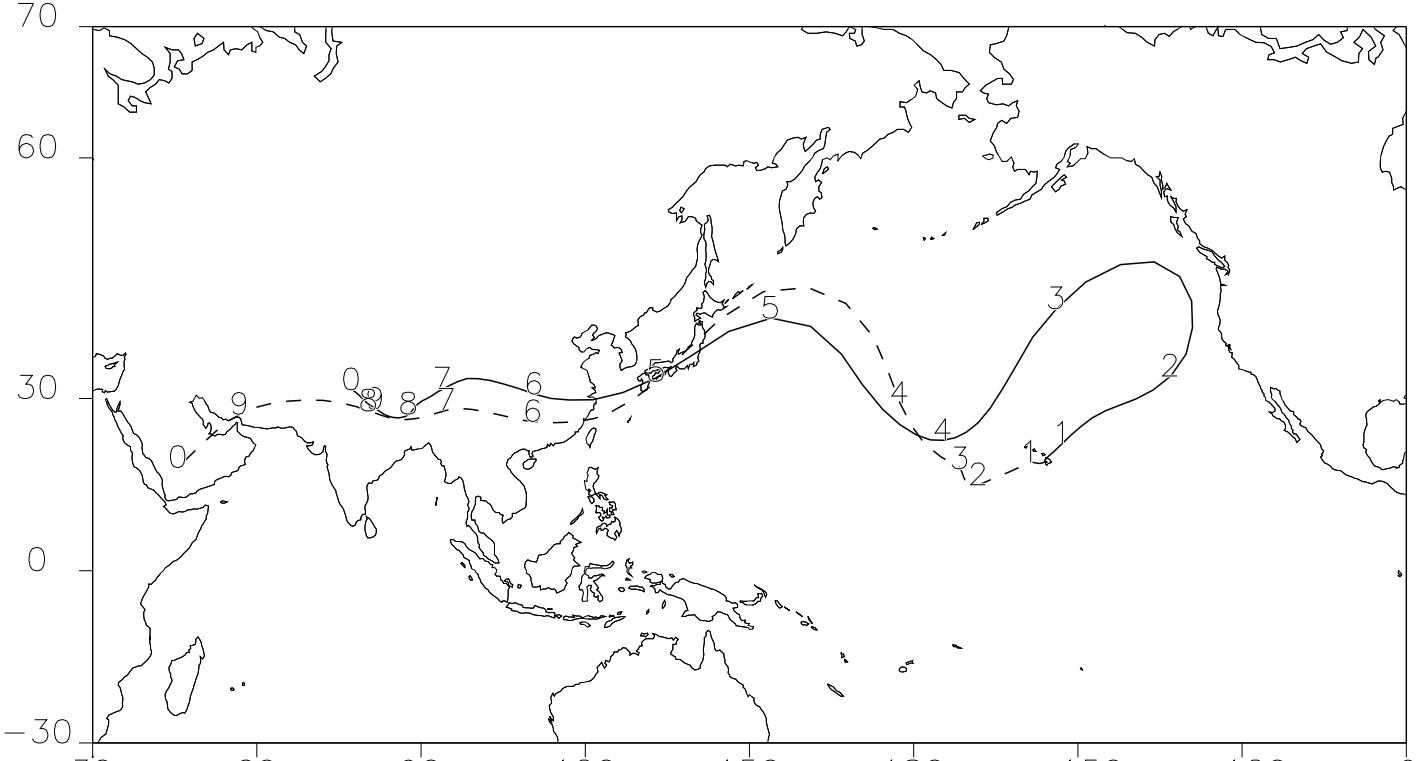
Day	km	hPa	C
0	11.0	247	-45
1	12.3	201	-57
2	12.3	198	-58
3	12.2	205	-54
4	10.1	277	-36
5	10.8	252	-42
6	9.8	289	-32
7	8.2	362	-18
8	7.0	425	-10
9	7.9	381	-18
10	9.6	303	-32

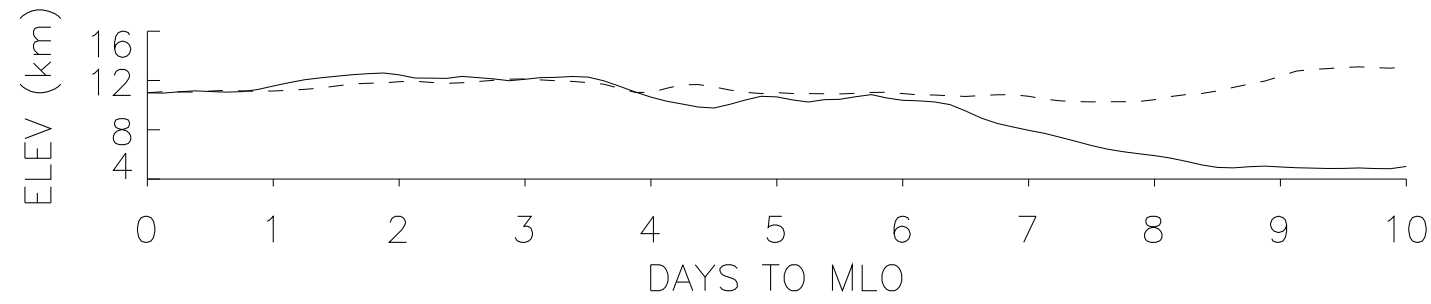
18UT

Day	km	hPa	C
0	11.0	248	-44
1	12.1	209	-55
2	12.2	202	-56
3	12.2	202	-55
4	10.0	287	-34
5	9.8	287	-33
6	9.1	320	-29
7	10.9	242	-46
8	10.2	272	-39
9	12.1	200	-57
10	11.7	212	-52

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





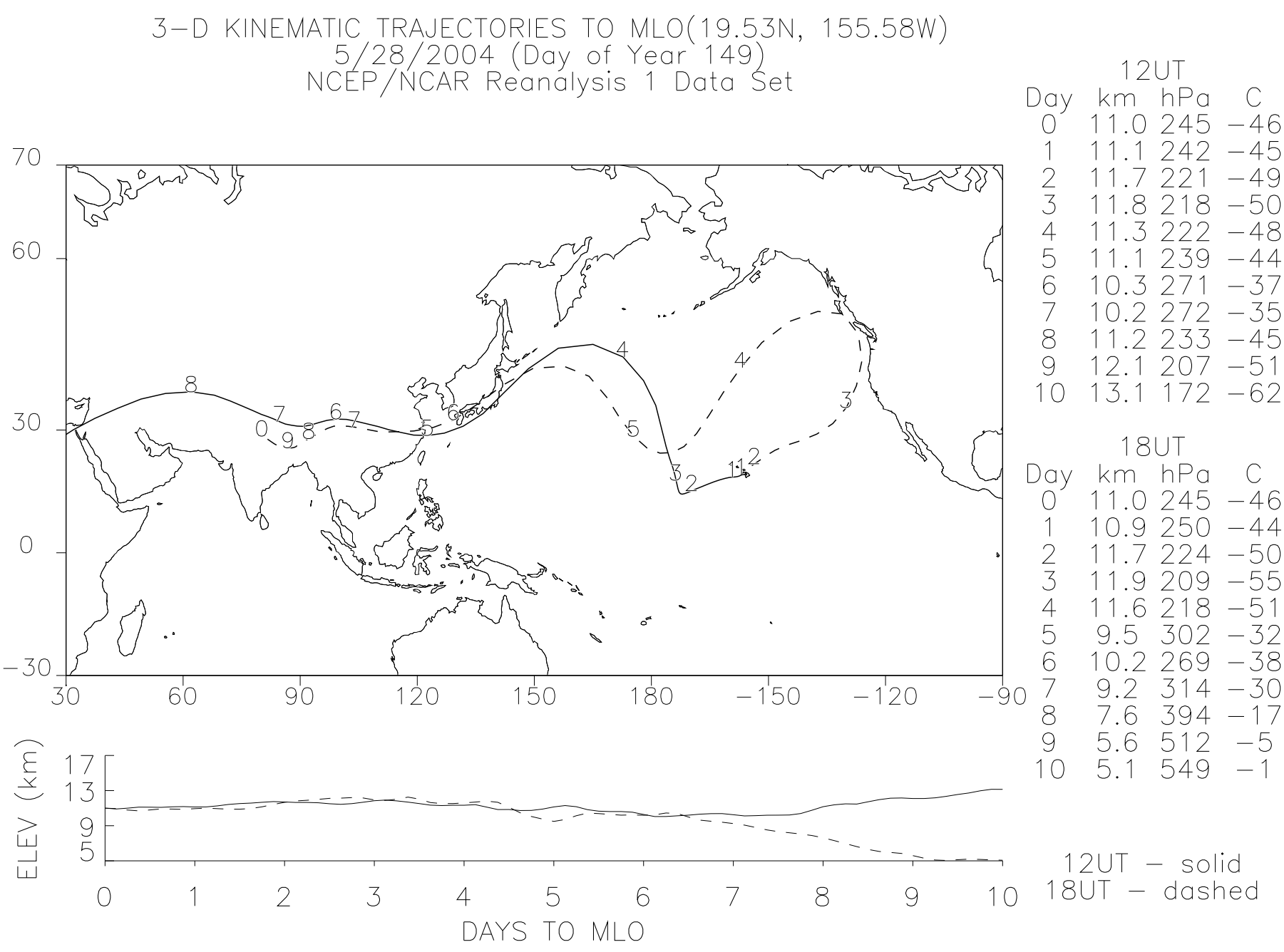
00UT

Day	km	hPa	C
0	11.0	247	−45
1	11.6	228	−49
2	12.5	195	−58
3	12.1	205	−55
4	10.6	261	−40
5	10.7	253	−41
6	10.4	265	−39
7	8.0	374	−19
8	5.9	491	−7
9	5.0	552	−1
10	5.0	552	−2

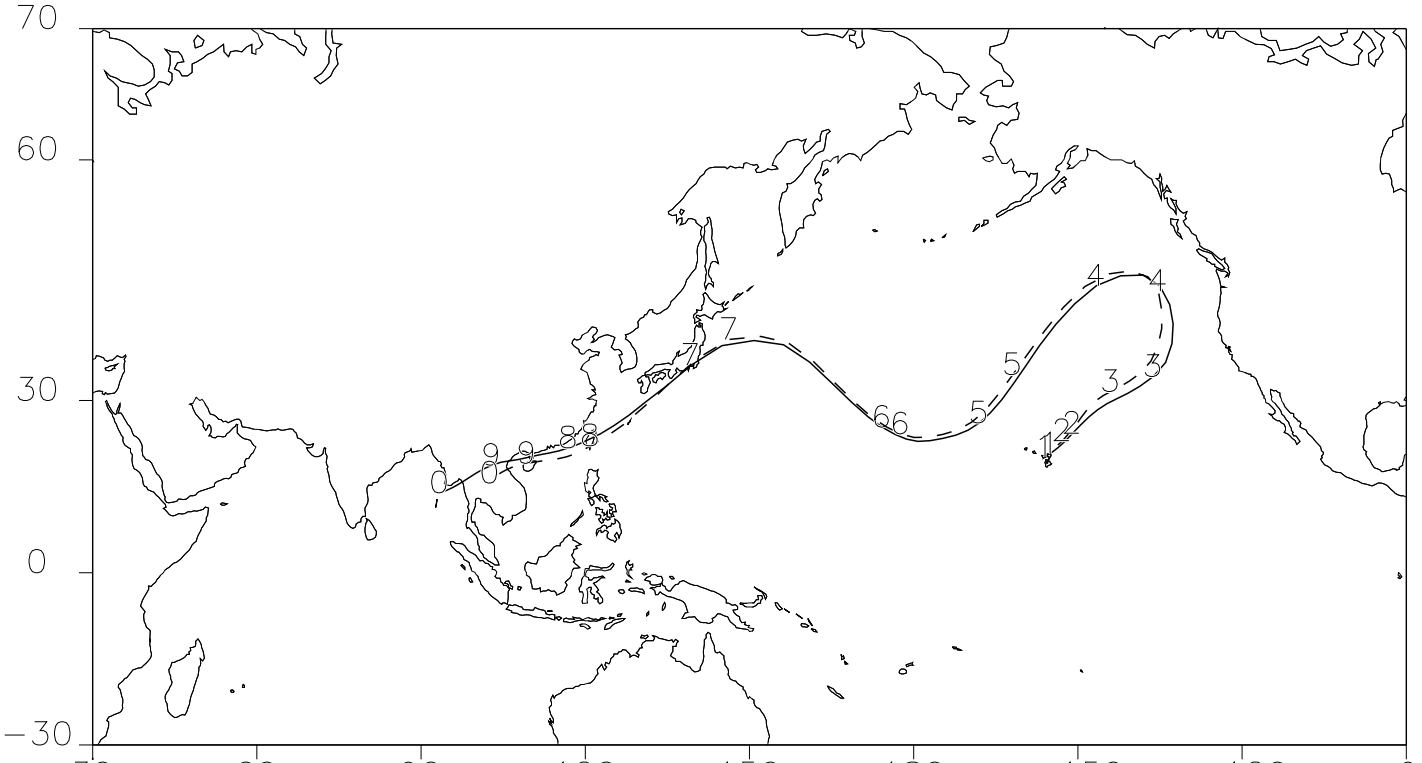
06UT

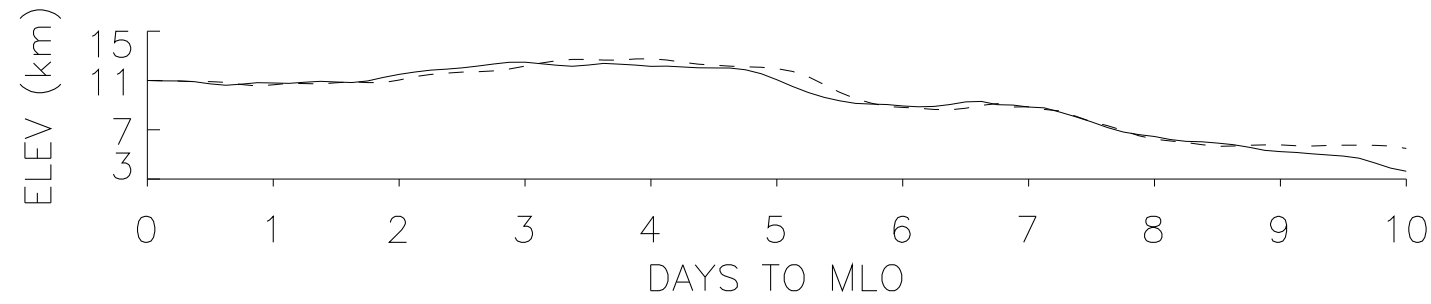
Day	km	hPa	C
0	11.0	246	−45
1	11.1	243	−45
2	11.9	215	−51
3	12.1	209	−52
4	11.0	241	−44
5	11.0	240	−43
6	10.9	249	−40
7	10.7	257	−34
8	10.4	269	−31
9	12.3	204	−47
10	13.1	182	−55

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
70
60
30
0
-30
30
60
90
120
150
180
-150
-120
-90
ELEV (km)
17
13
9
5
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
12UT
Day km hPa C
0 11.0 245 -46
1 11.1 242 -45
2 11.7 221 -49
3 11.8 218 -50
4 11.3 222 -48
5 11.1 239 -44
6 10.3 271 -37
7 10.2 272 -35
8 11.2 233 -45
9 12.1 207 -51
10 13.1 172 -62
18UT
Day km hPa C
0 11.0 245 -46
1 10.9 250 -44
2 11.7 224 -50
3 11.9 209 -55
4 11.6 218 -51
5 9.5 302 -32
6 10.2 269 -38
7 9.2 314 -30
8 7.6 394 -17
9 5.6 512 -5
10 5.1 549 -1
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

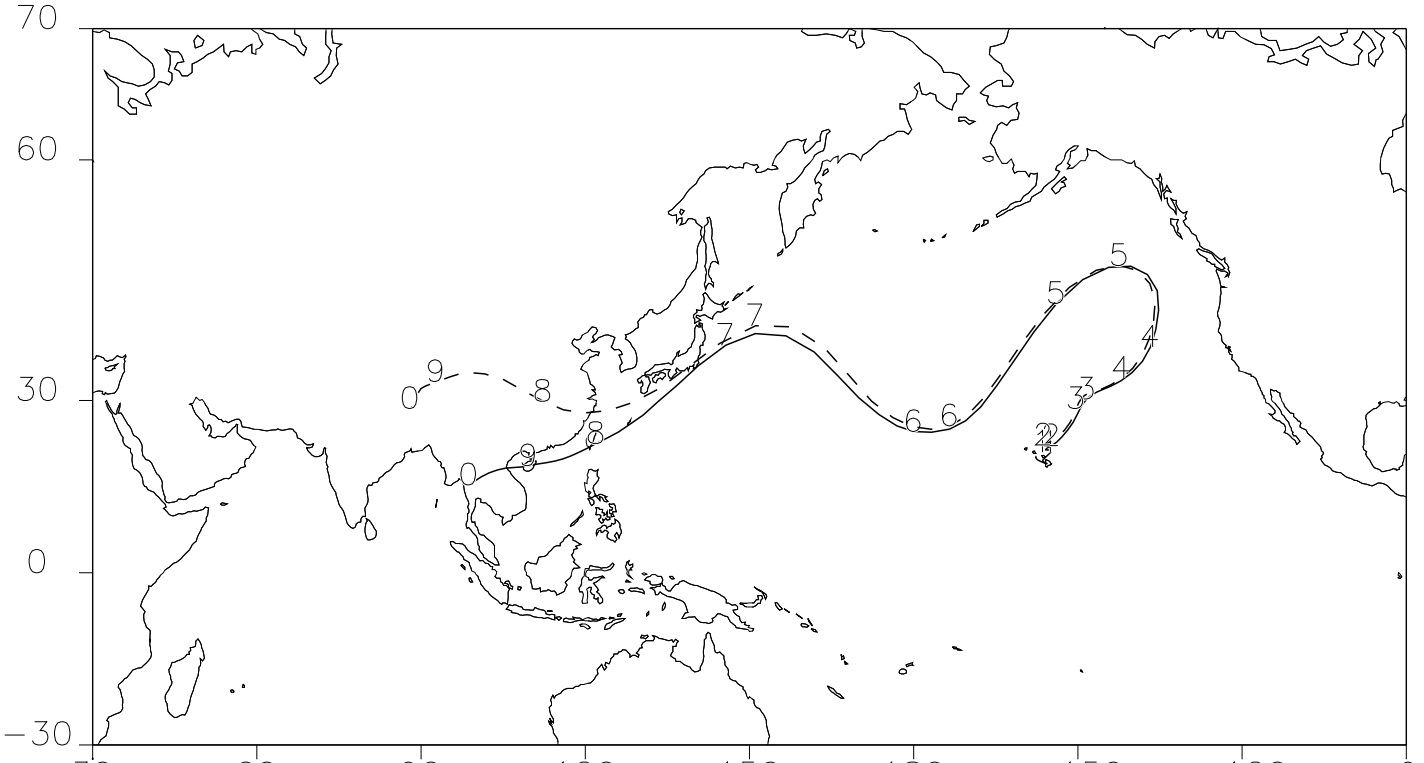
Day	km	hPa	C
0	11.0	245	-47
1	10.8	254	-43
2	11.5	230	-49
3	12.5	196	-58
4	12.1	205	-55
5	11.1	245	-44
6	8.9	332	-24
7	8.8	330	-25
8	6.5	460	-7
9	5.2	539	0
10	3.6	656	9

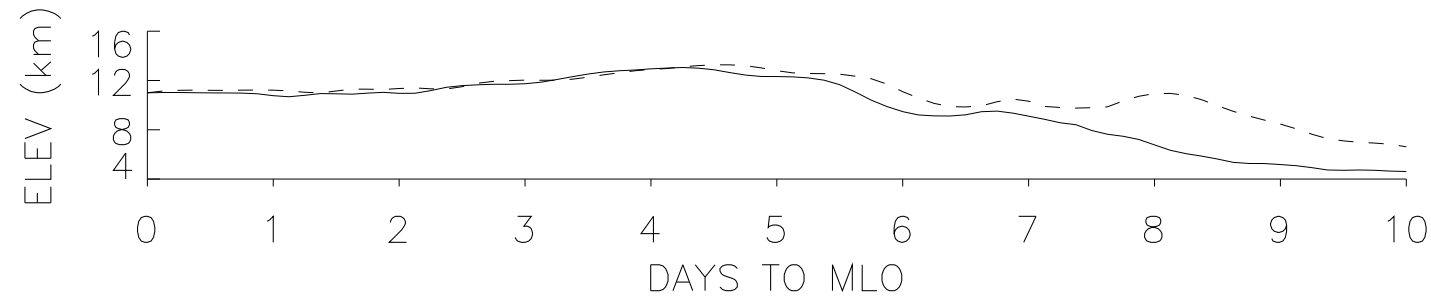
06UT

Day	km	hPa	C
0	11.0	244	-47
1	10.7	259	-42
2	11.0	246	-45
3	12.2	208	-55
4	12.8	187	-58
5	12.0	211	-53
6	8.8	337	-24
7	8.9	329	-26
8	6.2	474	-7
9	5.8	505	-3
10	5.5	524	-2

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

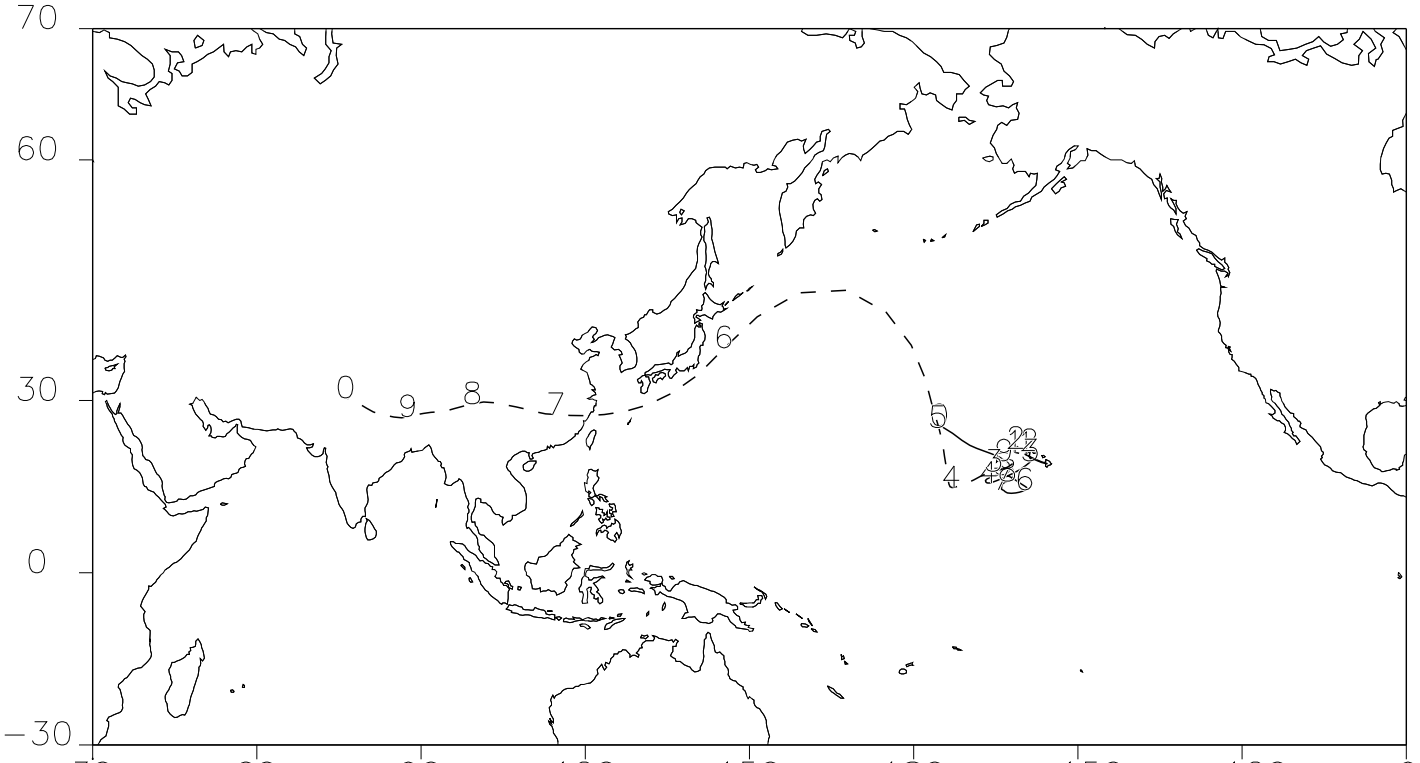
Day	km	hPa	C
0	11.0	244	−48
1	10.8	254	−44
2	11.0	249	−44
3	11.7	222	−50
4	12.9	182	−61
5	12.3	197	−57
6	9.5	308	−29
7	9.1	319	−28
8	6.8	442	−9
9	5.2	544	0
10	4.6	582	3

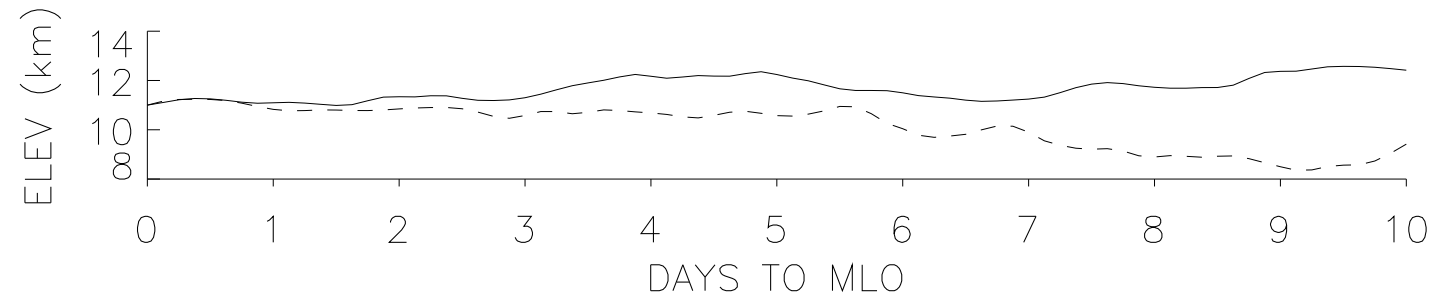
18UT

Day	km	hPa	C
0	11.0	245	−47
1	11.2	237	−48
2	11.4	235	−47
3	12.0	213	−54
4	12.9	185	−60
5	12.8	185	−60
6	11.1	242	−44
7	10.3	266	−38
8	10.9	245	−44
9	8.5	350	−23
10	6.6	449	−10

12UT − solid
18UT − dashed

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





00UT

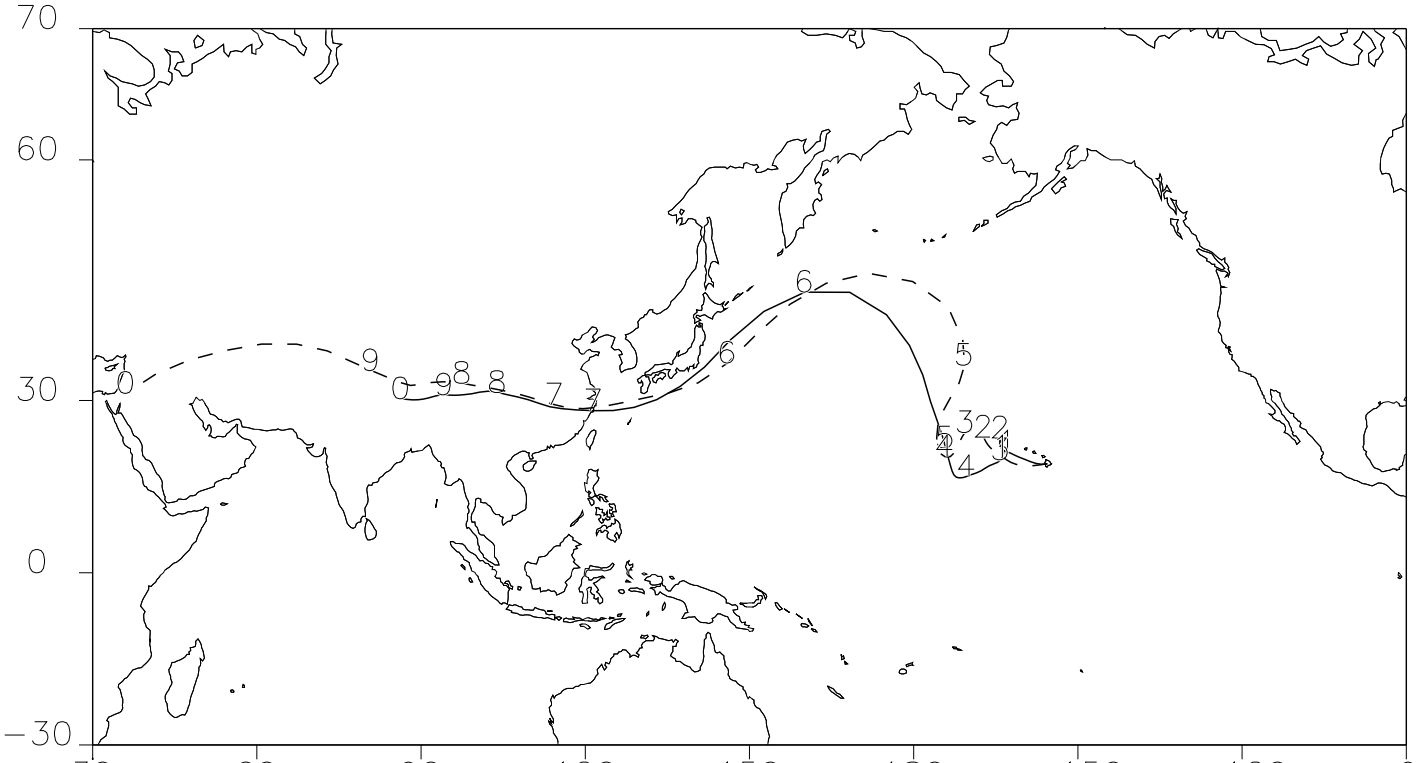
Day	km	hPa	C
0	11.0	245	−47
1	11.1	242	−47
2	11.3	234	−48
3	11.3	237	−47
4	12.2	206	−52
5	12.2	205	−53
6	11.5	230	−46
7	11.2	239	−44
8	11.7	223	−49
9	12.4	200	−55
10	12.4	197	−56

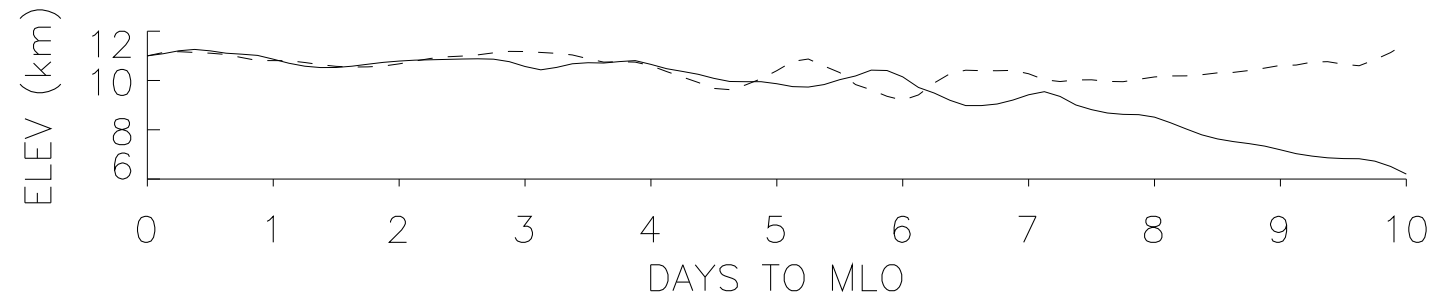
06UT

Day	km	hPa	C
0	11.0	245	−46
1	10.8	251	−44
2	10.8	252	−45
3	10.6	263	−40
4	10.7	259	−42
5	10.6	261	−41
6	10.0	274	−38
7	9.9	288	−34
8	8.9	331	−26
9	8.5	350	−21
10	9.4	309	−28

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

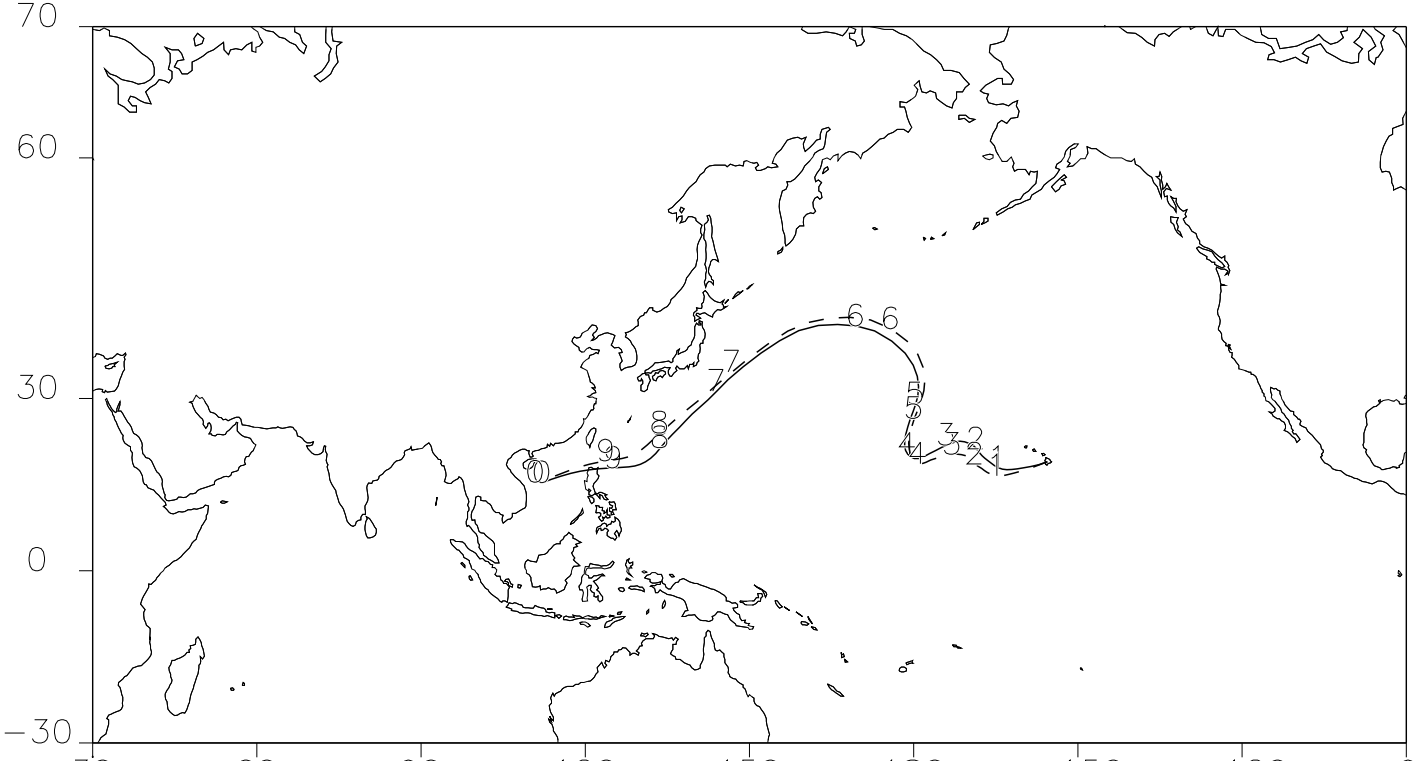
Day	km	hPa	C
0	11.0	245	−47
1	10.9	250	−45
2	10.8	253	−46
3	10.6	262	−41
4	10.7	259	−43
5	9.9	291	−36
6	10.1	269	−40
7	9.4	308	−32
8	8.5	348	−24
9	7.2	415	−14
10	6.2	472	−6

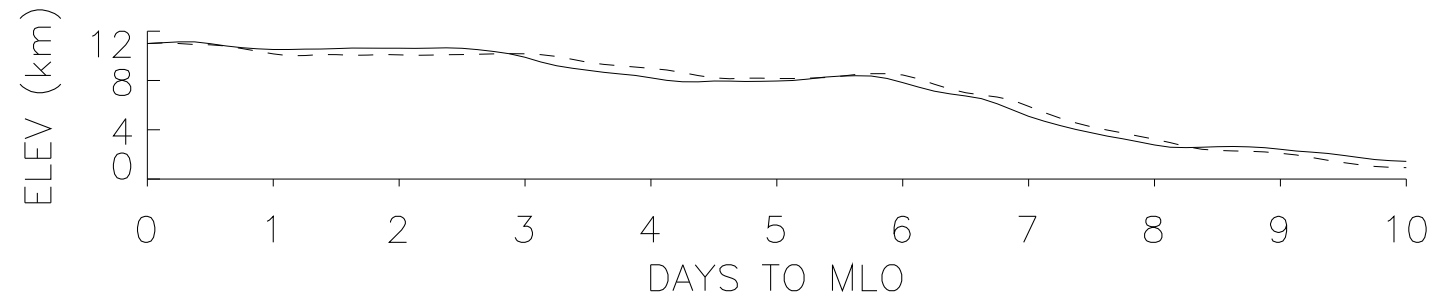
18UT

Day	km	hPa	C
0	11.0	246	−46
1	10.8	253	−44
2	10.7	258	−44
3	11.2	239	−47
4	10.6	260	−44
5	10.4	265	−42
6	9.2	308	−32
7	10.3	272	−39
8	10.1	276	−36
9	10.6	257	−38
10	11.5	222	−47

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

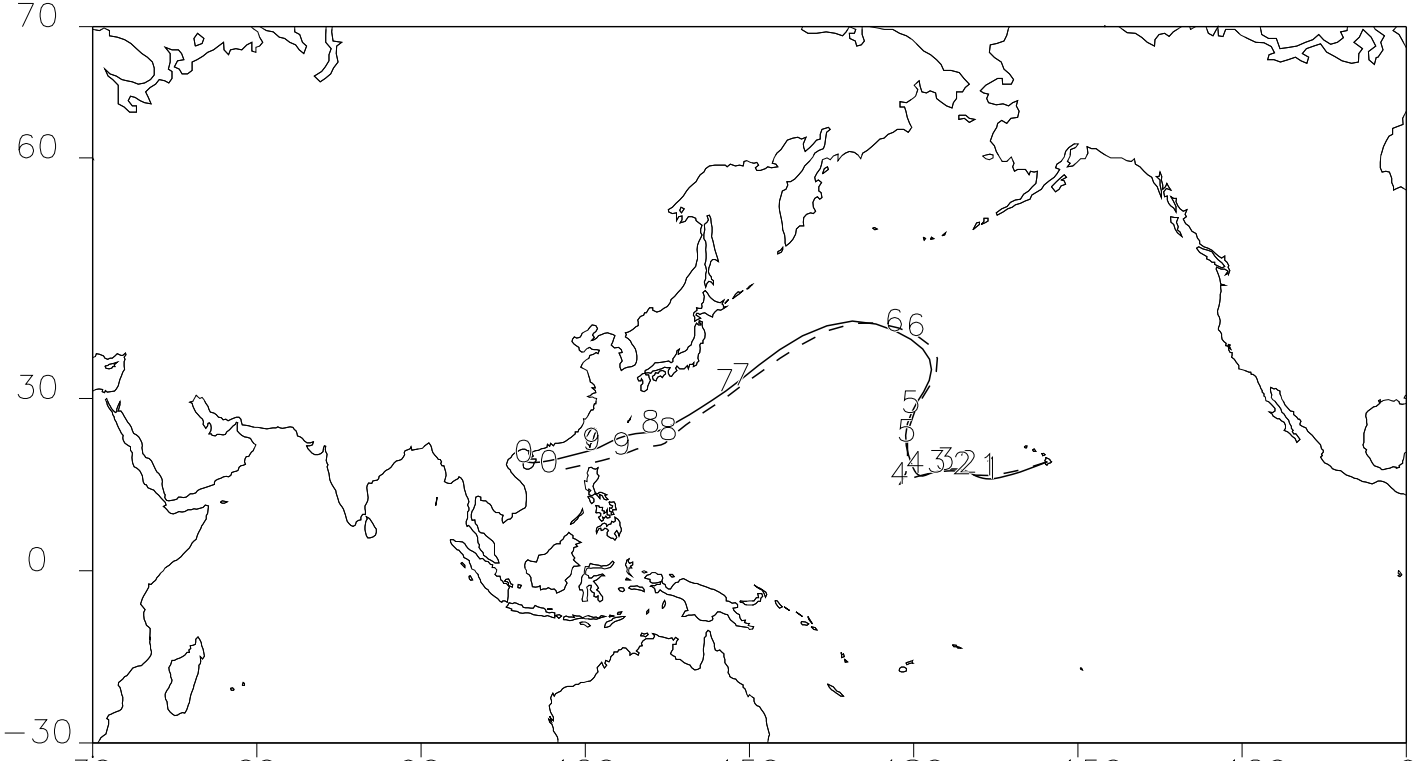
Day	km	hPa	C
0	11.0	246	-46
1	10.5	264	-41
2	10.6	260	-42
3	9.9	290	-35
4	8.2	367	-22
5	8.0	382	-19
6	7.8	380	-22
7	5.1	549	-2
8	2.8	732	12
9	2.4	762	15
10	1.4	854	21

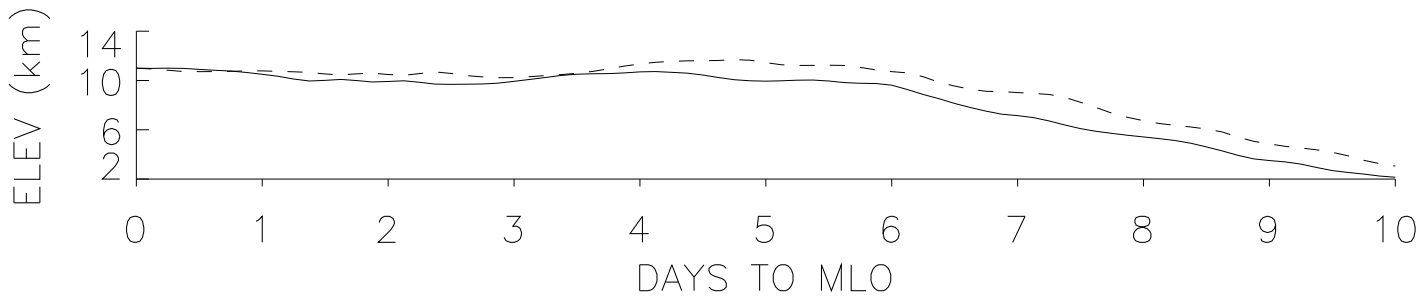
06UT

Day	km	hPa	C
0	11.0	246	-46
1	10.2	279	-37
2	10.1	281	-37
3	10.2	278	-37
4	9.0	329	-27
5	8.2	371	-20
6	8.4	348	-26
7	5.9	492	-9
8	3.2	692	9
9	2.1	790	16
10	0.9	904	25

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	11.0	246	−46
1	10.5	265	−41
2	9.9	288	−36
3	9.9	289	−35
4	10.7	258	−41
5	9.9	290	−33
6	9.6	298	−31
7	7.1	421	−12
8	5.4	528	−2
9	3.5	667	8
10	2.1	782	15

18UT

Day	km	hPa	C
0	11.0	246	−45
1	10.8	255	−43
2	10.5	266	−40
3	10.2	276	−37
4	11.3	234	−46
5	11.4	231	−47
6	10.7	255	−40
7	9.0	327	−26
8	6.7	447	−10
9	4.9	566	−1
10	3.1	704	11

12UT − solid
18UT − dashed