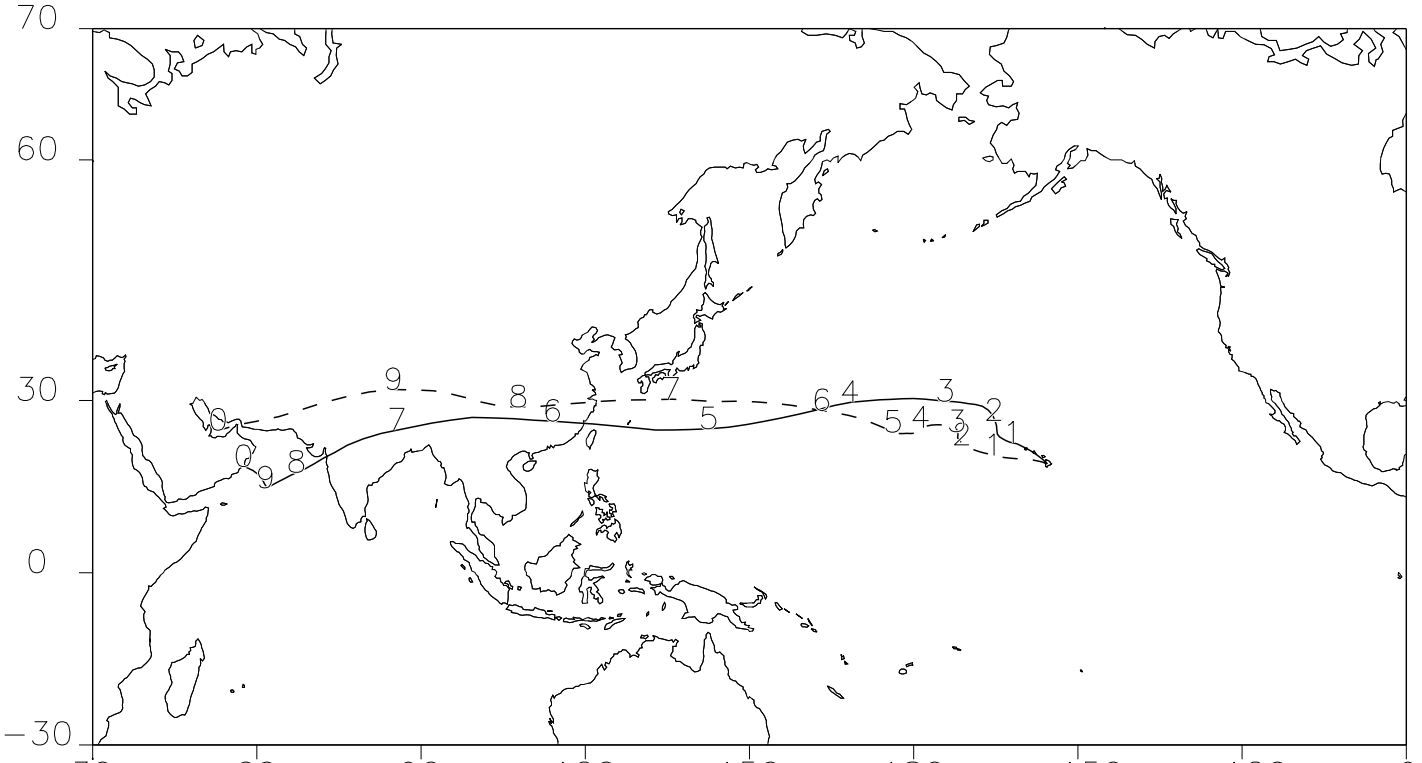
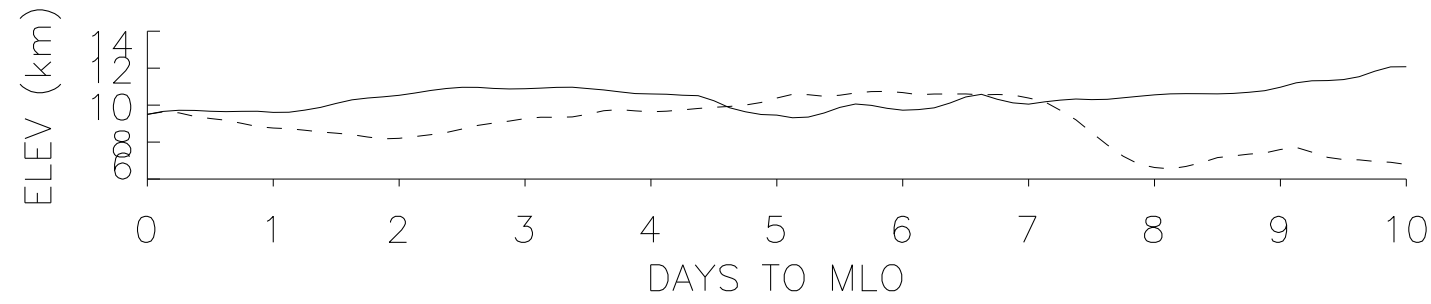
3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/1/2004 (Day of Year 92)
NCEP/NCAR Reanalysis 1 Data Set





00UT

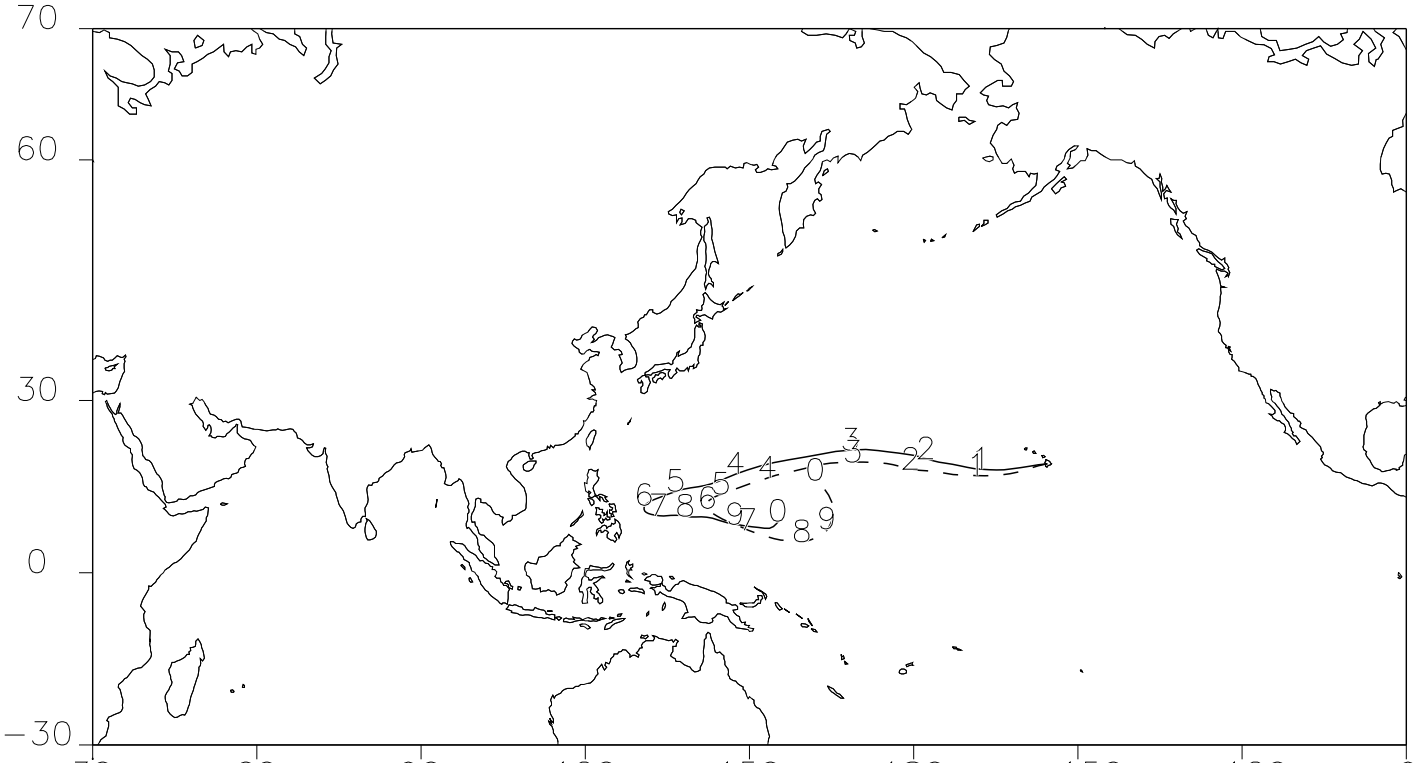
Day	km	hPa	C
0	9.5	305	−34
1	9.6	301	−35
2	10.5	263	−44
3	10.9	249	−47
4	10.6	257	−45
5	9.5	306	−34
6	9.7	293	−35
7	10.1	280	−36
8	10.6	264	−39
9	11.0	249	−41
10	12.1	211	−50

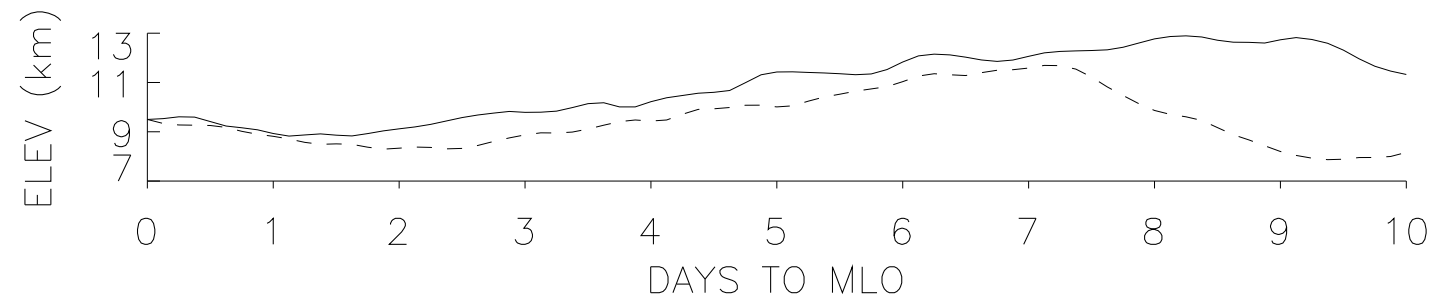
06UT

Day	km	hPa	C
0	9.5	305	−33
1	8.8	340	−27
2	8.2	368	−23
3	9.3	317	−35
4	9.6	299	−38
5	10.4	268	−44
6	10.7	255	−47
7	10.4	262	−45
8	6.6	445	−13
9	7.6	392	−23
10	6.8	442	−16

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





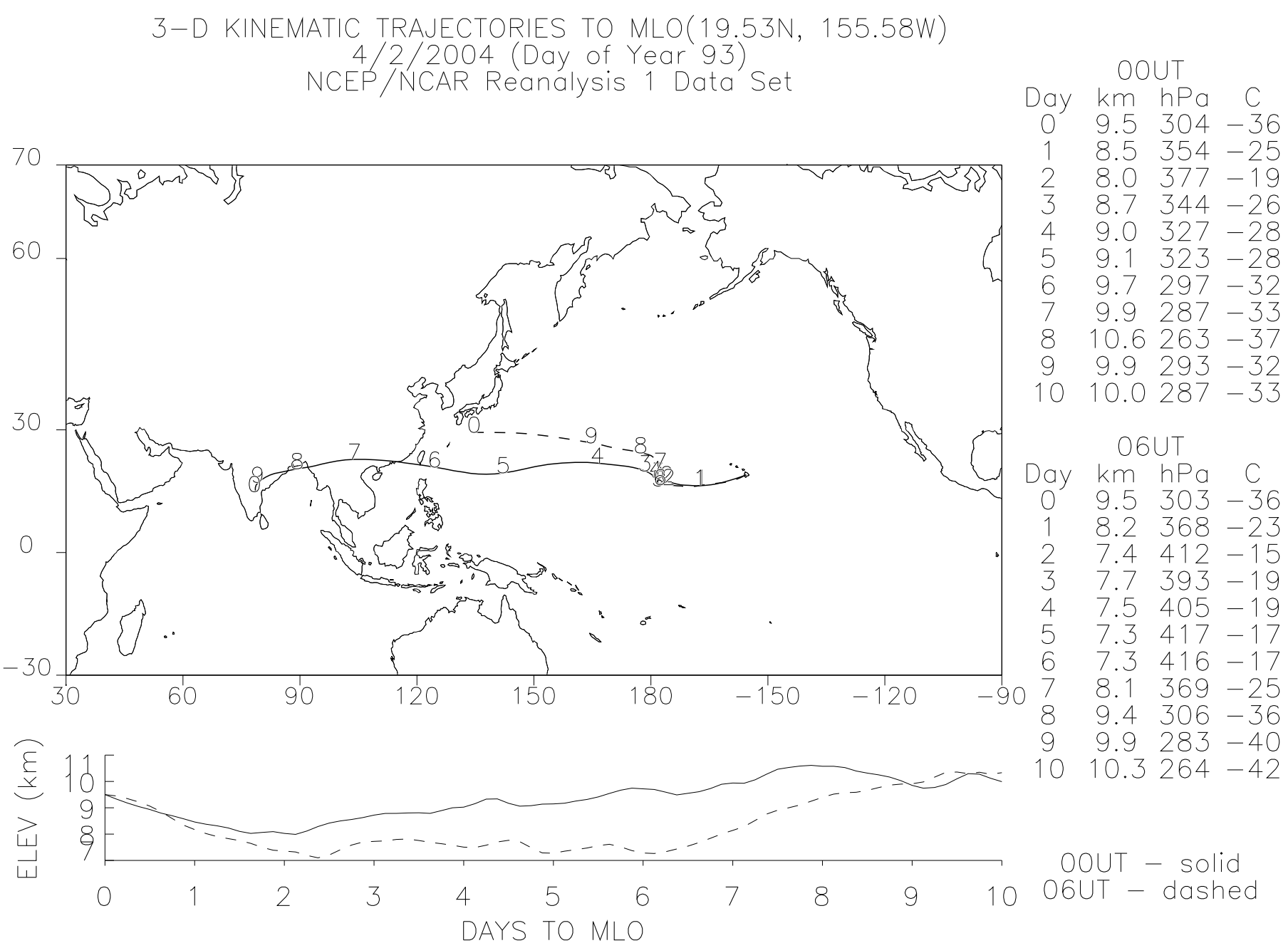
12UT

Day	km	hPa	C
0	9.5	304	−34
1	8.9	333	−27
2	9.1	325	−28
3	9.8	295	−33
4	10.2	279	−34
5	11.4	235	−45
6	11.8	221	−47
7	12.1	213	−49
8	12.8	191	−54
9	12.7	192	−53
10	11.3	239	−40

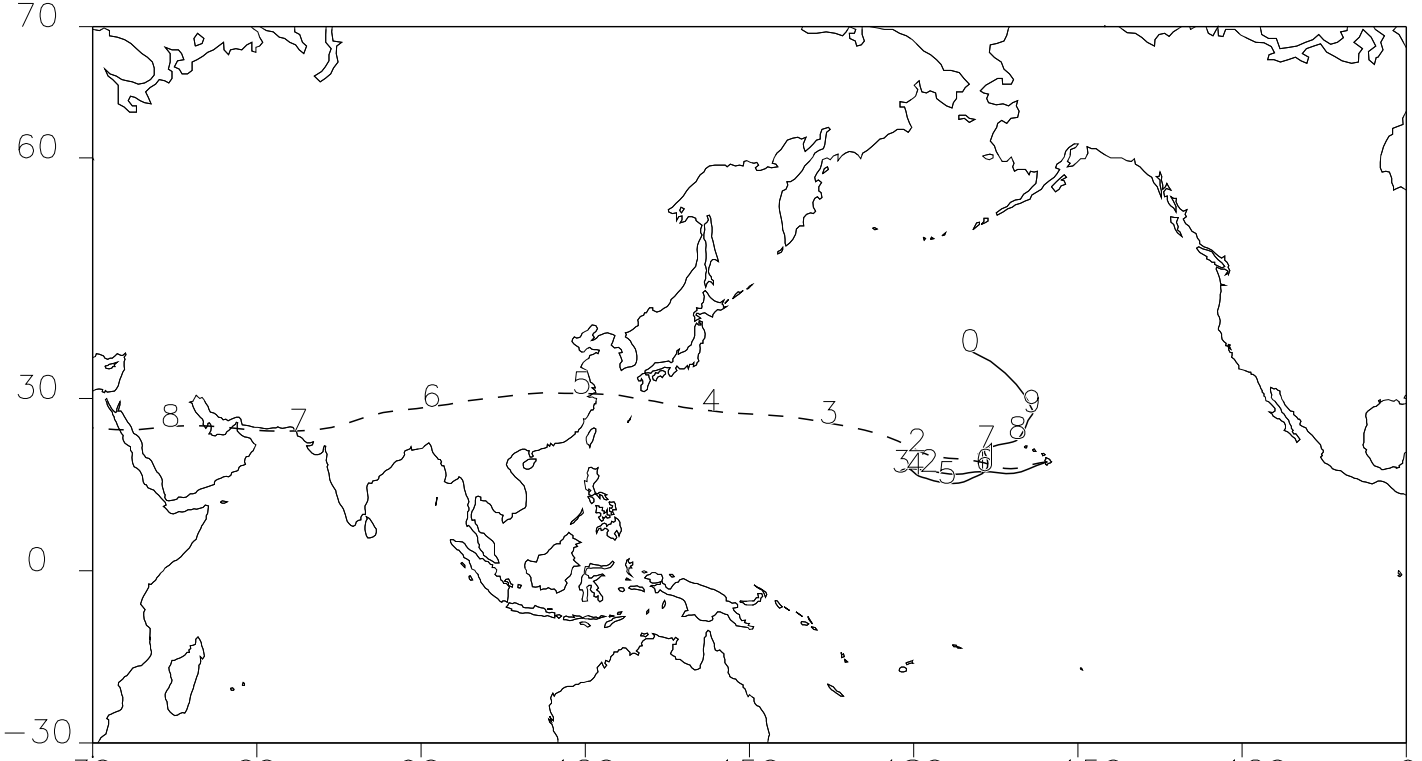
18UT

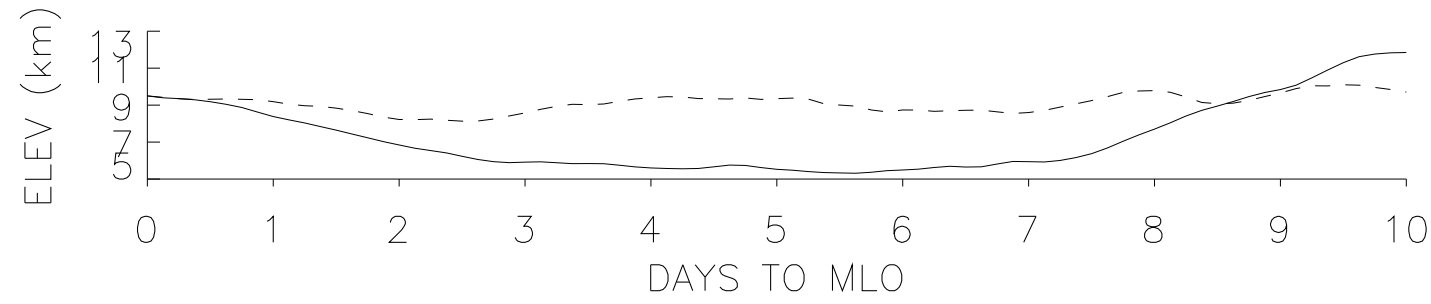
Day	km	hPa	C
0	9.5	305	−36
1	8.8	338	−27
2	8.3	363	−22
3	8.9	336	−27
4	9.4	310	−29
5	10.0	287	−34
6	11.0	248	−41
7	11.6	228	−45
8	9.9	292	−31
9	8.2	368	−19
10	8.2	369	−21

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
70
60
30
0
-30
30
60
90
120
150
180
-150
-120
-90
ELEV (km)
11
10
9
8
7
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
00UT
Day km hPa C
0 9.5 304 -36
1 8.5 354 -25
2 8.0 377 -19
3 8.7 344 -26
4 9.0 327 -28
5 9.1 323 -28
6 9.7 297 -32
7 9.9 287 -33
8 10.6 263 -37
9 9.9 293 -32
10 10.0 287 -33
06UT
Day km hPa C
0 9.5 303 -36
1 8.2 368 -23
2 7.4 412 -15
3 7.7 393 -19
4 7.5 405 -19
5 7.3 417 -17
6 7.3 416 -17
7 8.1 369 -25
8 9.4 306 -36
9 9.9 283 -40
10 10.3 264 -42
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





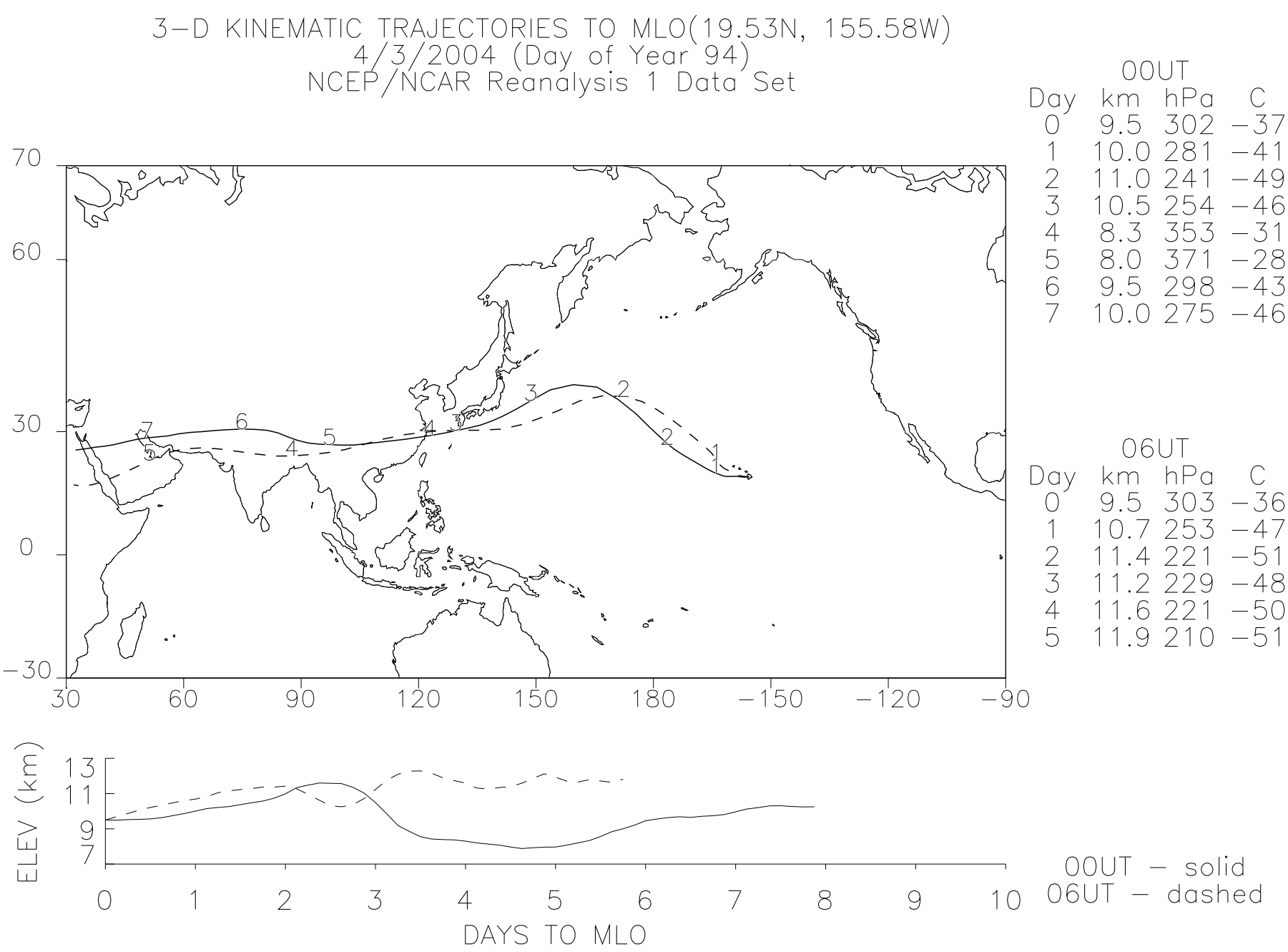
12UT

Day	km	hPa	C
0	9.5	303	-36
1	8.4	356	-27
2	6.8	442	-13
3	5.9	499	-5
4	5.6	519	-5
5	5.5	523	-4
6	5.5	525	-5
7	5.9	493	-11
8	7.7	389	-25
9	9.8	283	-46
10	11.8	203	-63

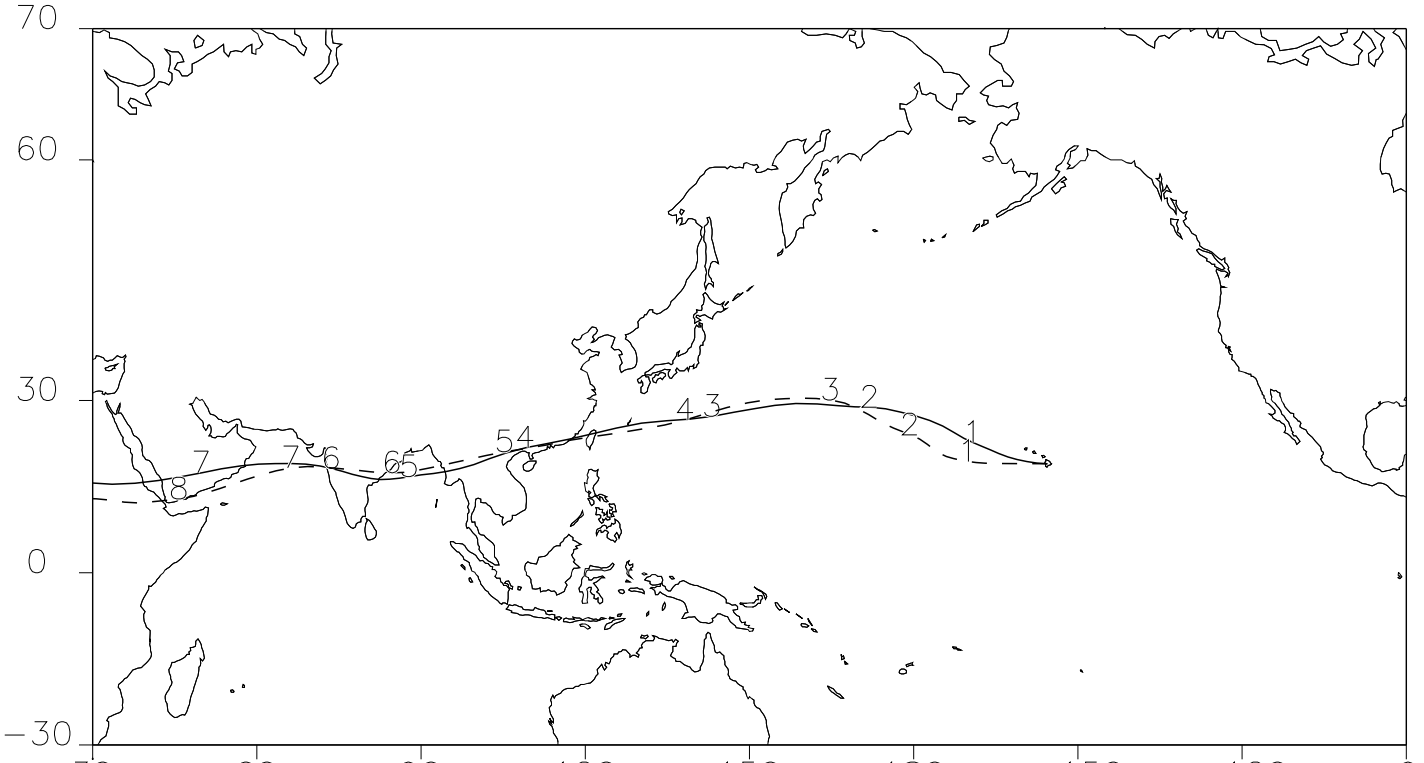
18UT

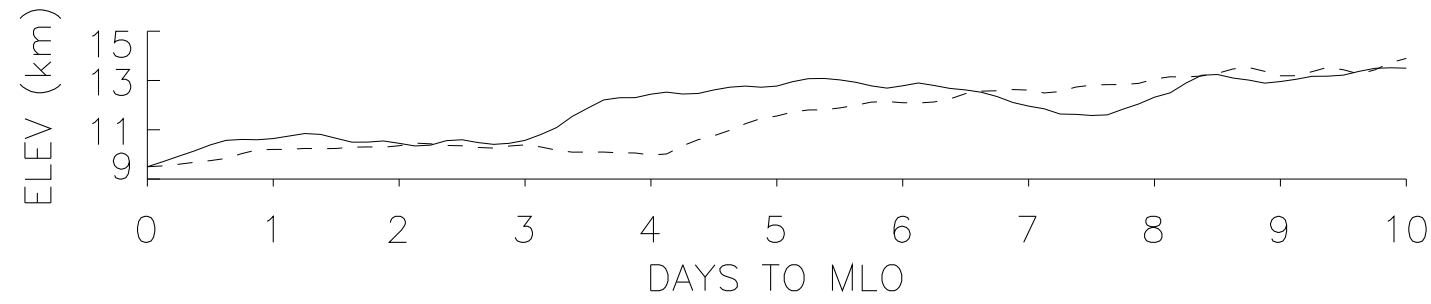
Day	km	hPa	C
0	9.5	303	-36
1	9.2	318	-35
2	8.2	364	-26
3	8.6	345	-30
4	9.4	305	-37
5	9.3	305	-38
6	8.7	335	-32
7	8.6	342	-30
8	9.8	287	-42
9	9.7	294	-40
10	9.7	292	-39

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 9.5 302 -37
1 10.0 281 -41
2 11.0 241 -49
3 10.5 254 -46
4 8.3 353 -31
5 8.0 371 -28
6 9.5 298 -43
7 10.0 275 -46
06UT
Day km hPa C
0 9.5 303 -36
1 10.7 253 -47
2 11.4 221 -51
3 11.2 229 -48
4 11.6 221 -50
5 11.9 210 -51
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)
4/3/2004 (Day of Year 94)
NCEP/NCAR Reanalysis 1 Data Set





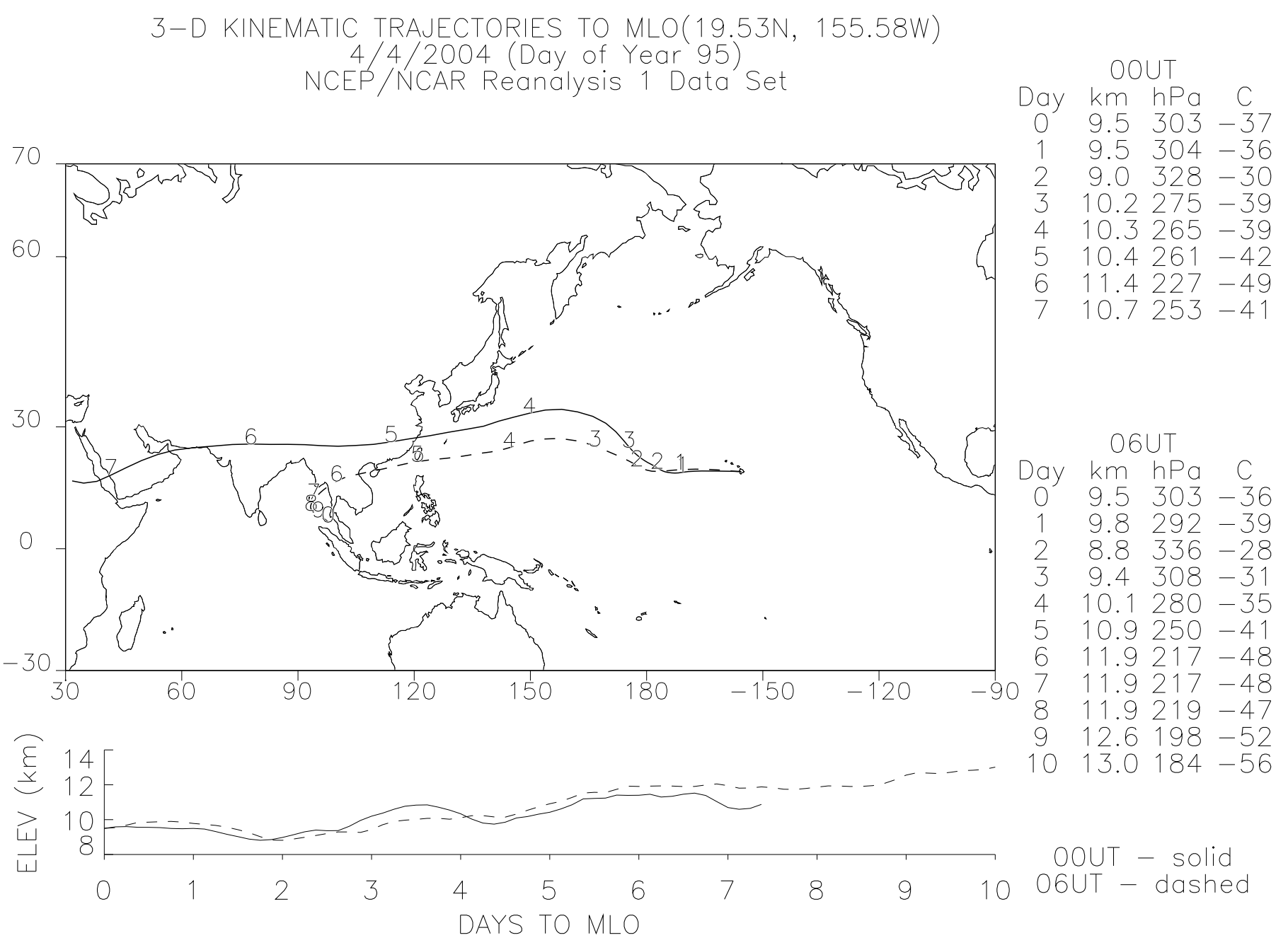
12UT

Day	km	hPa	C
0	9.5	303	−35
1	10.6	256	−44
2	10.5	265	−41
3	10.6	261	−38
4	12.4	197	−54
5	12.8	189	−55
6	12.8	189	−54
7	12.0	212	−48
8	12.3	199	−53
9	13.0	180	−57
10	13.5	168	−61

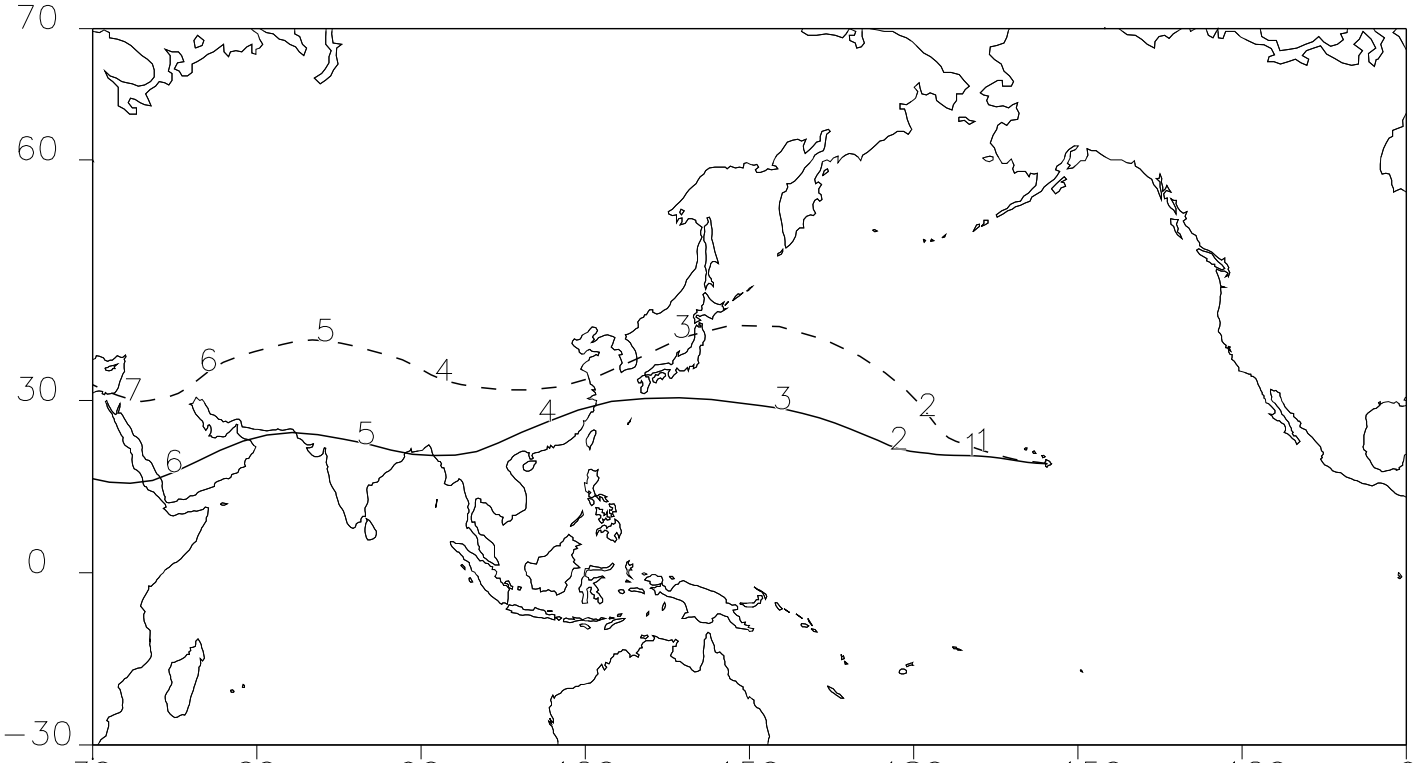
18UT

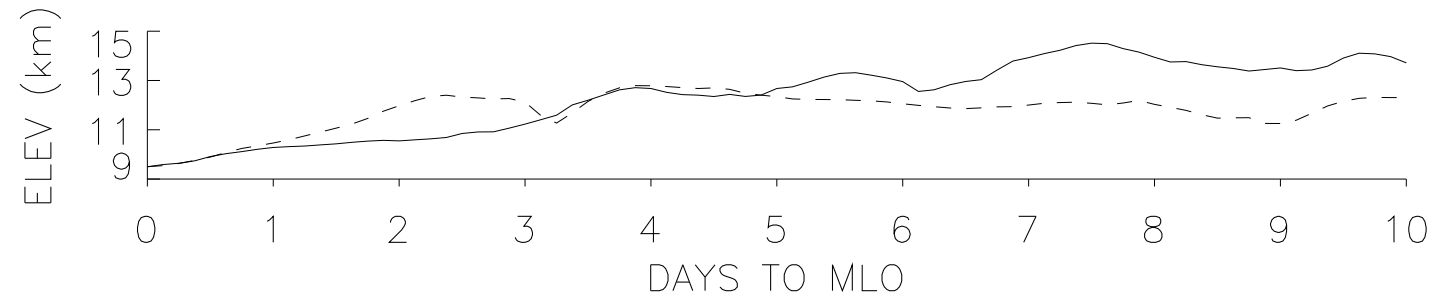
Day	km	hPa	C
0	9.5	304	−36
1	10.2	274	−39
2	10.4	269	−39
3	10.4	266	−39
4	10.0	283	−34
5	11.6	226	−47
6	12.1	211	−49
7	12.6	194	−54
8	13.1	181	−56
9	13.2	178	−58
10	13.9	158	−64

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 9.5 303 -37
1 9.5 304 -36
2 9.0 328 -30
3 10.2 275 -39
4 10.3 265 -39
5 10.4 261 -42
6 11.4 227 -49
7 10.7 253 -41
06UT
Day km hPa C
0 9.5 303 -36
1 9.8 292 -39
2 8.8 336 -28
3 9.4 308 -31
4 10.1 280 -35
5 10.9 250 -41
6 11.9 217 -48
7 11.9 217 -48
8 11.9 219 -47
9 12.6 198 -52
10 13.0 184 -56
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
00UT - solid
06UT - dashed

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





12UT

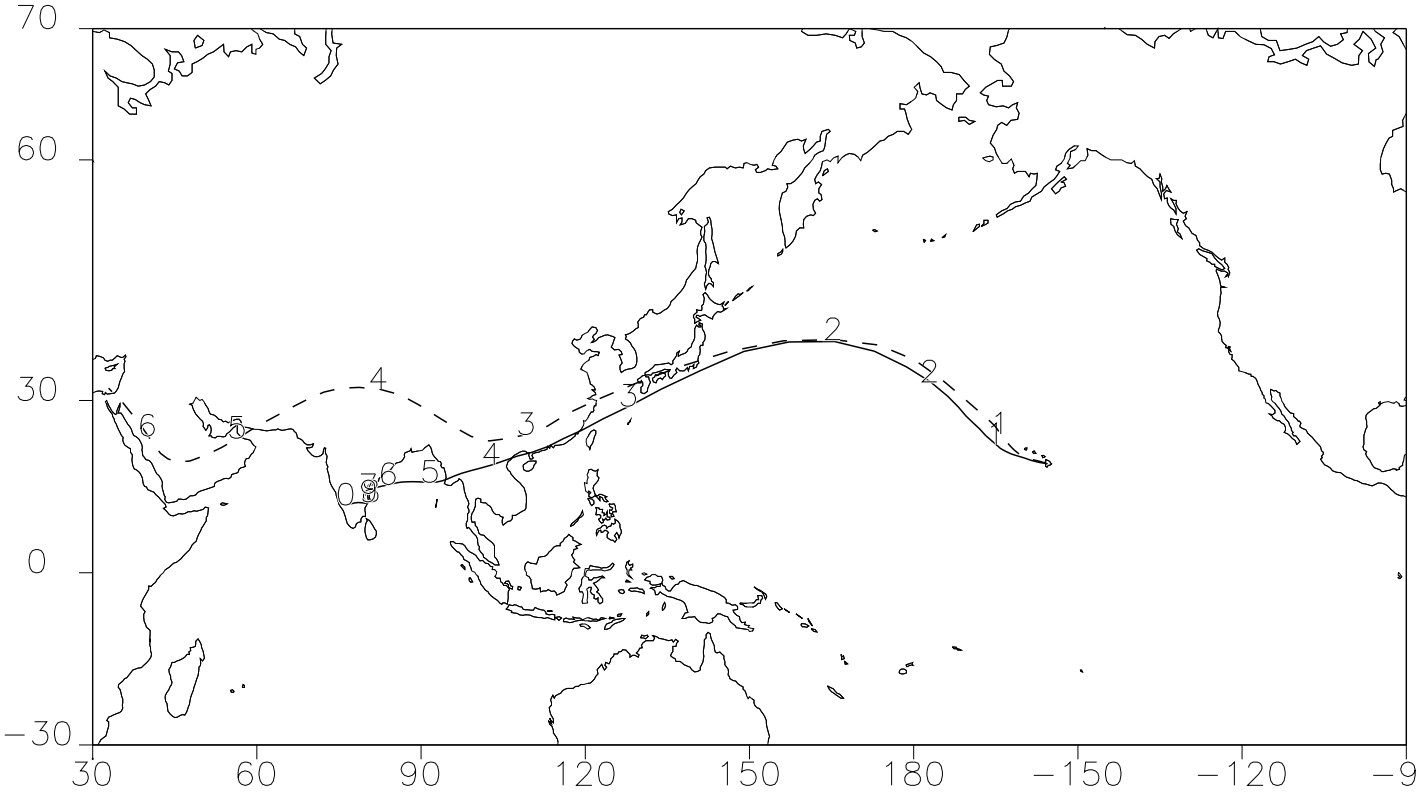
Day	km	hPa	C
0	9.5	304	−36
1	10.3	271	−42
2	10.5	262	−40
3	11.2	236	−45
4	12.7	186	−59
5	12.7	188	−54
6	13.0	180	−55
7	13.9	156	−63
8	13.9	153	−65
9	13.5	166	−59
10	13.7	161	−61

18UT

Day	km	hPa	C
0	9.5	304	−35
1	10.5	263	−45
2	12.0	207	−54
3	12.1	189	−58
4	12.8	176	−60
5	12.3	189	−58
6	12.1	199	−55
7	12.0	202	−53
8	12.0	197	−55
9	11.3	223	−48
10	12.3	192	−58

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

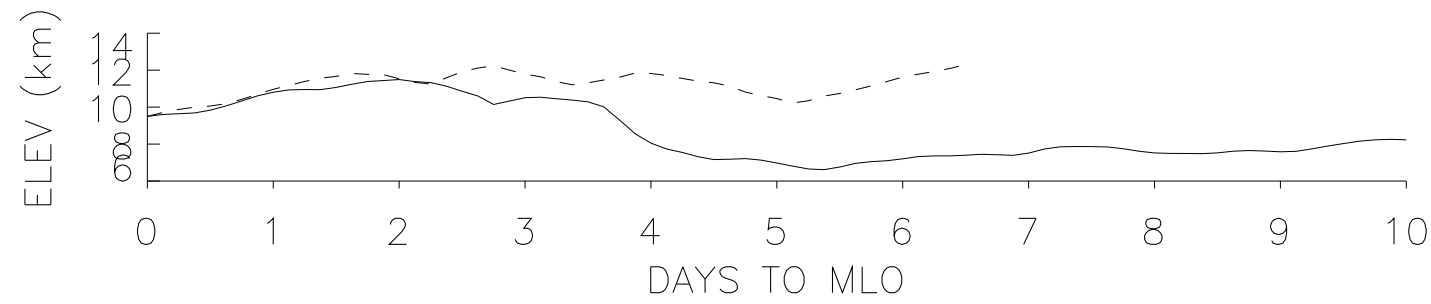


00UT

Day	km	hPa	C
0	9.5	303	-37
1	10.8	249	-48
2	11.5	221	-53
3	10.5	257	-45
4	8.1	373	-24
5	7.0	433	-14
6	7.2	420	-15
7	7.5	403	-15
8	7.5	403	-14
9	7.6	400	-15
10	8.2	366	-20

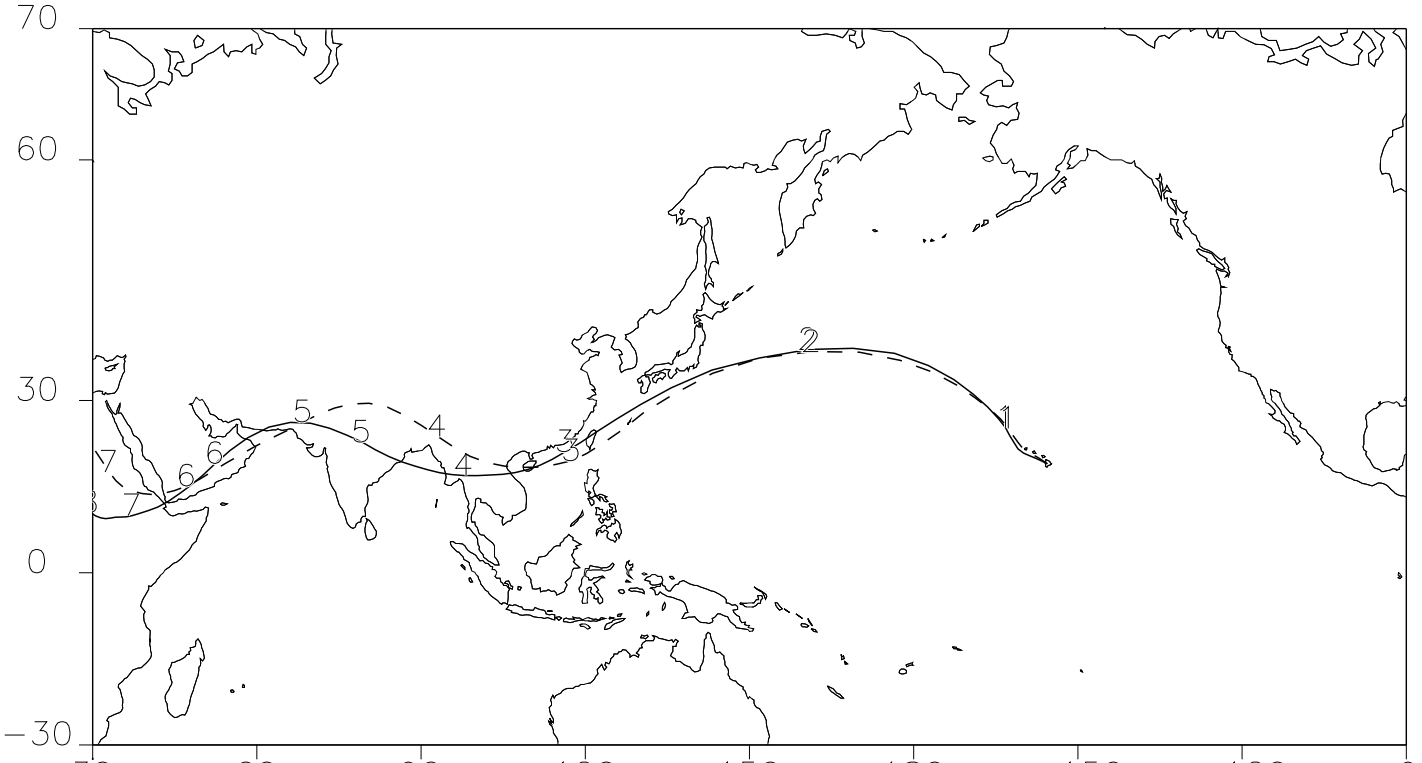
06UT

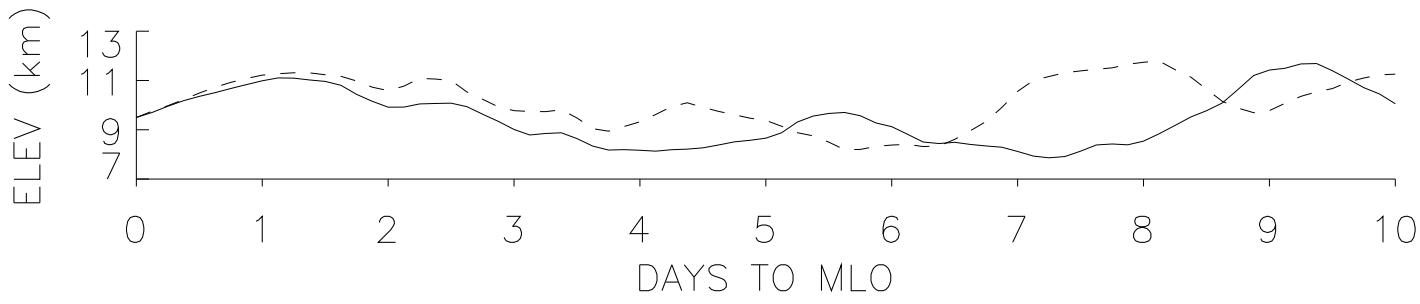
Day	km	hPa	C
0	9.5	304	-36
1	11.0	244	-49
2	11.5	213	-52
3	11.8	212	-52
4	11.8	211	-55
5	10.5	260	-45
6	11.6	217	-56



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





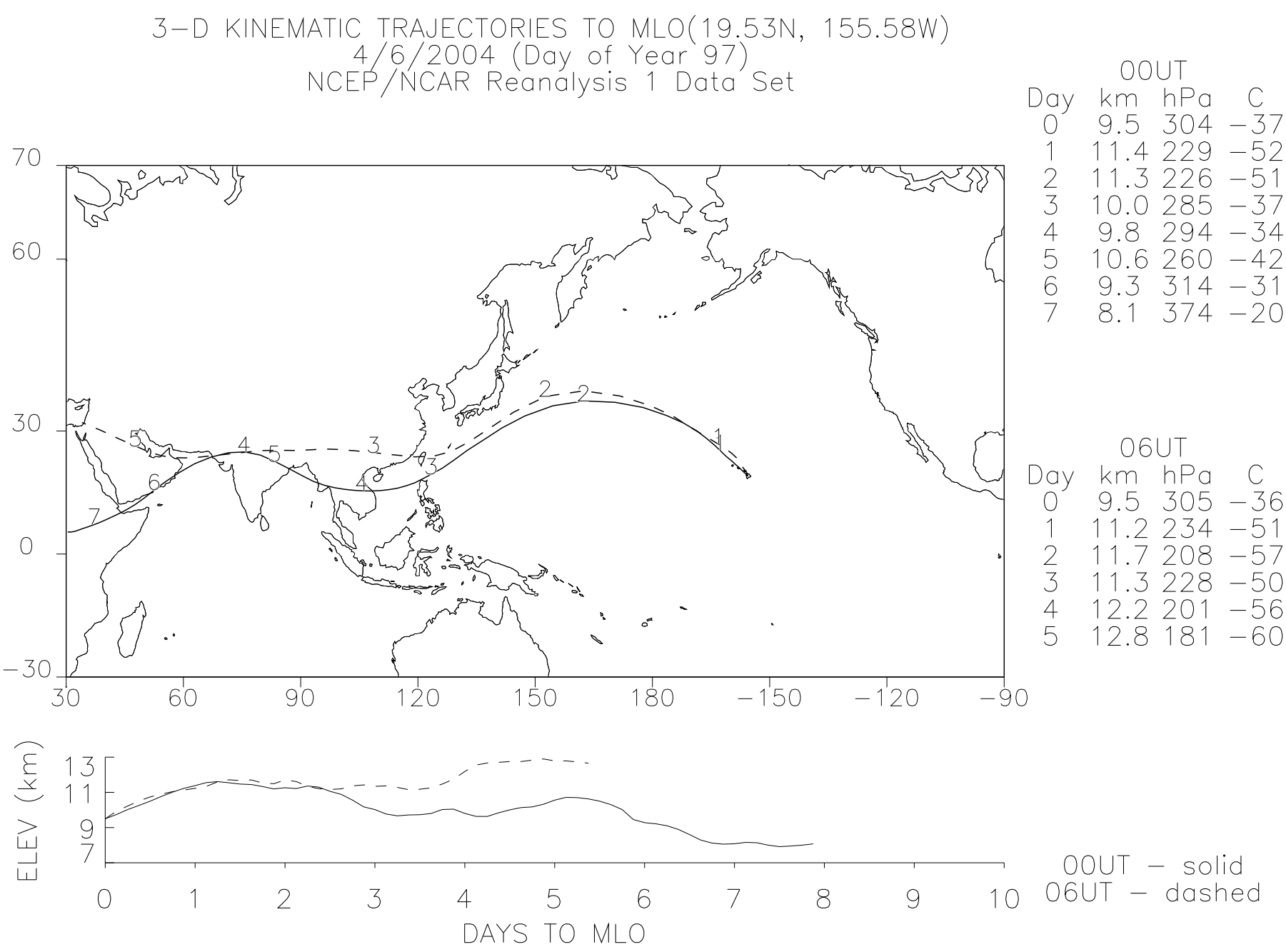
12UT

Day	km	hPa	C
0	9.5	304	-37
1	11.0	243	-49
2	9.9	276	-42
3	9.0	326	-31
4	8.2	369	-23
5	8.7	342	-28
6	9.1	320	-32
7	8.1	372	-22
8	8.5	351	-24
9	11.4	228	-52
10	10.1	276	-40

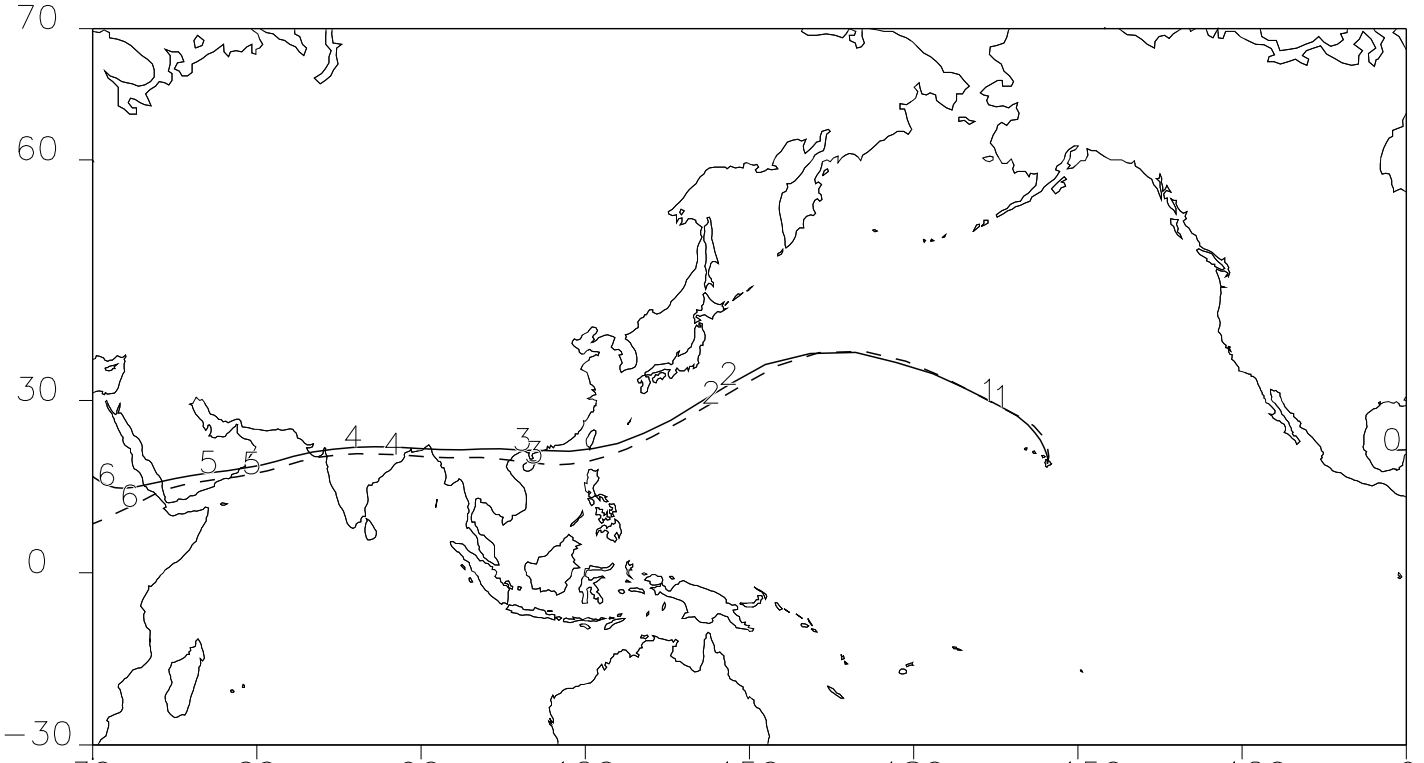
18UT

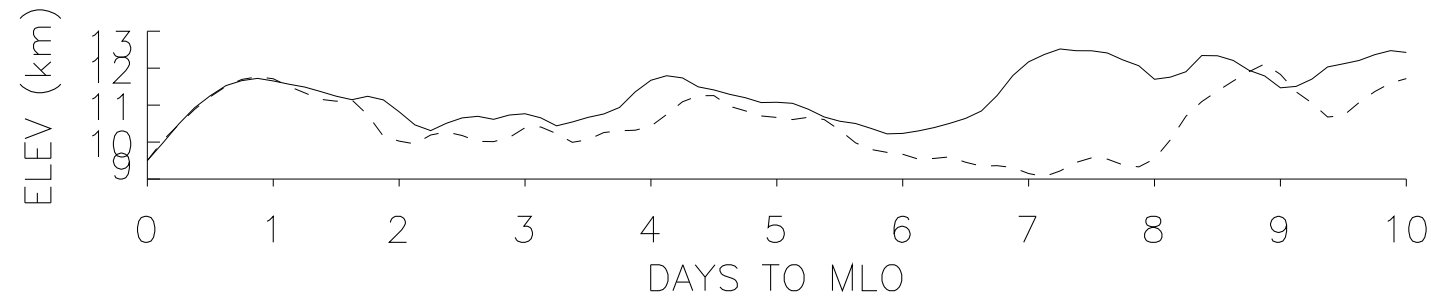
Day	km	hPa	C
0	9.5	305	-36
1	11.2	235	-51
2	10.6	248	-48
3	9.8	294	-37
4	9.3	310	-35
5	9.4	307	-37
6	8.4	356	-27
7	10.6	260	-47
8	11.7	214	-56
9	9.8	286	-38
10	11.3	230	-50

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 9.5 304 -37
1 11.4 229 -52
2 11.3 226 -51
3 10.0 285 -37
4 9.8 294 -34
5 10.6 260 -42
6 9.3 314 -31
7 8.1 374 -20
06UT
Day km hPa C
0 9.5 305 -36
1 11.2 234 -51
2 11.7 208 -57
3 11.3 228 -50
4 12.2 201 -56
5 12.8 181 -60
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)
4/6/2004 (Day of Year 97)
NCEP/NCAR Reanalysis 1 Data Set





12UT

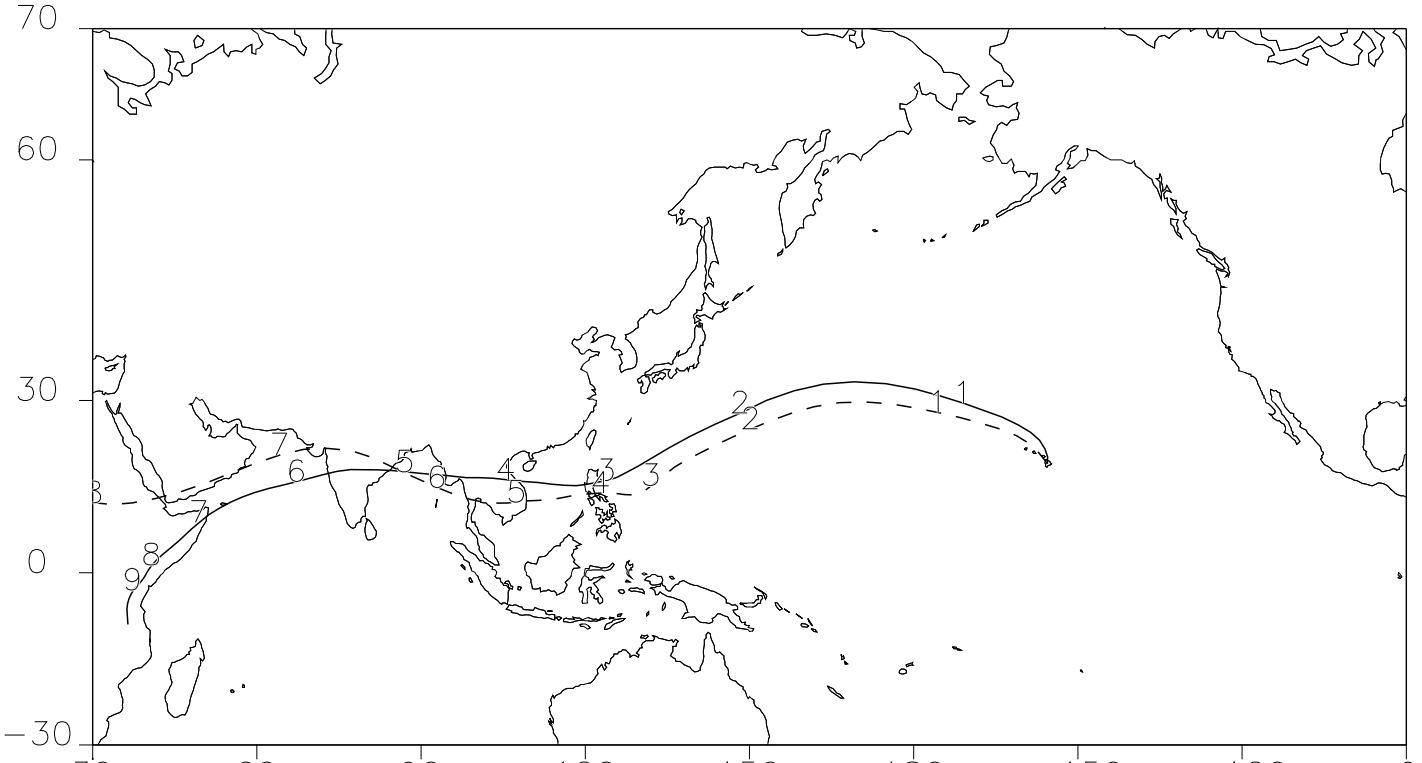
Day	km	hPa	C
0	9.5	305	−36
1	11.7	218	−55
2	10.8	244	−48
3	10.8	253	−43
4	11.7	221	−53
5	11.1	242	−48
6	10.2	276	−37
7	12.2	204	−54
8	11.7	215	−51
9	11.5	223	−48
10	12.4	196	−55

18UT

Day	km	hPa	C
0	9.5	306	−36
1	11.7	216	−57
2	10.0	275	−40
3	10.4	269	−39
4	10.4	267	−40
5	10.7	260	−43
6	9.7	300	−32
7	9.1	324	−25
8	9.5	306	−29
9	11.8	215	−52
10	11.7	218	−48

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

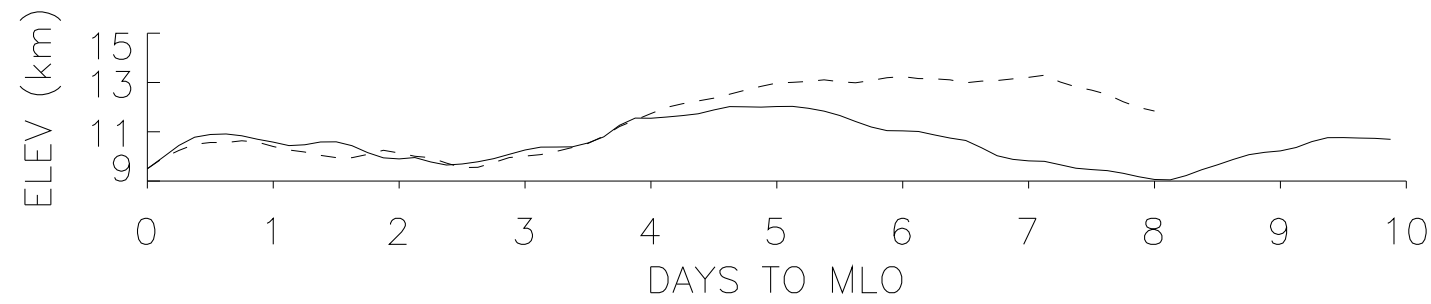


00UT

Day	km	hPa	C
0	9.5	306	−34
1	10.6	258	−43
2	9.9	286	−36
3	10.3	277	−37
4	11.5	228	−48
5	12.0	212	−51
6	11.0	246	−43
7	9.8	294	−32
8	9.1	327	−25
9	10.2	278	−35

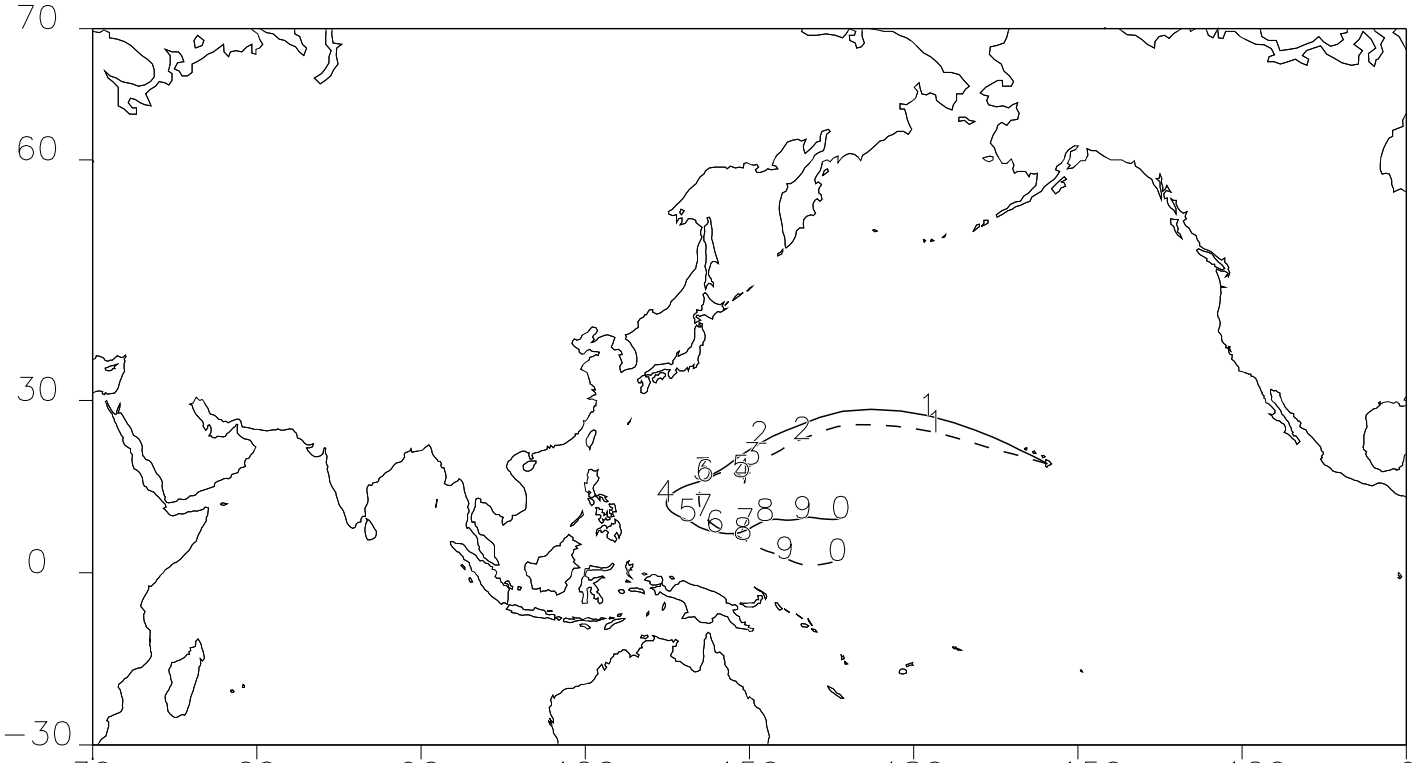
06UT

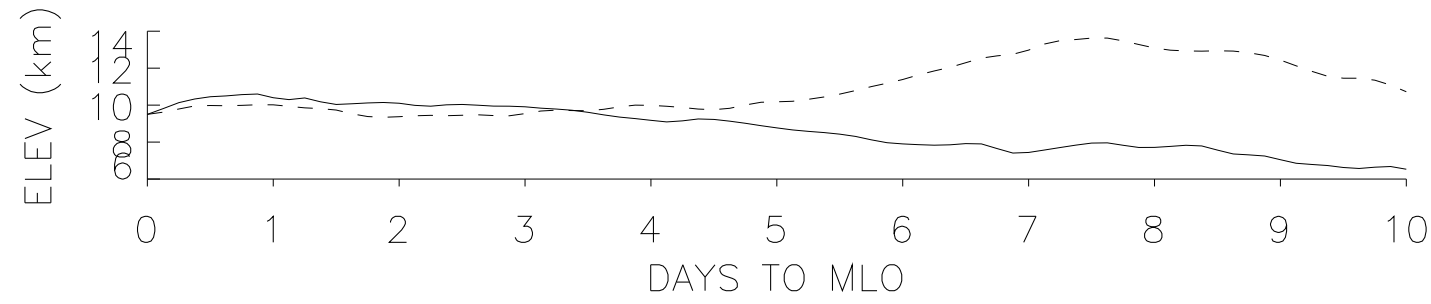
Day	km	hPa	C
0	9.5	307	−32
1	10.4	267	−40
2	10.1	279	−36
3	10.0	287	−34
4	11.7	223	−48
5	13.0	184	−57
6	13.2	176	−59
7	13.2	175	−59
8	11.8	219	−45



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

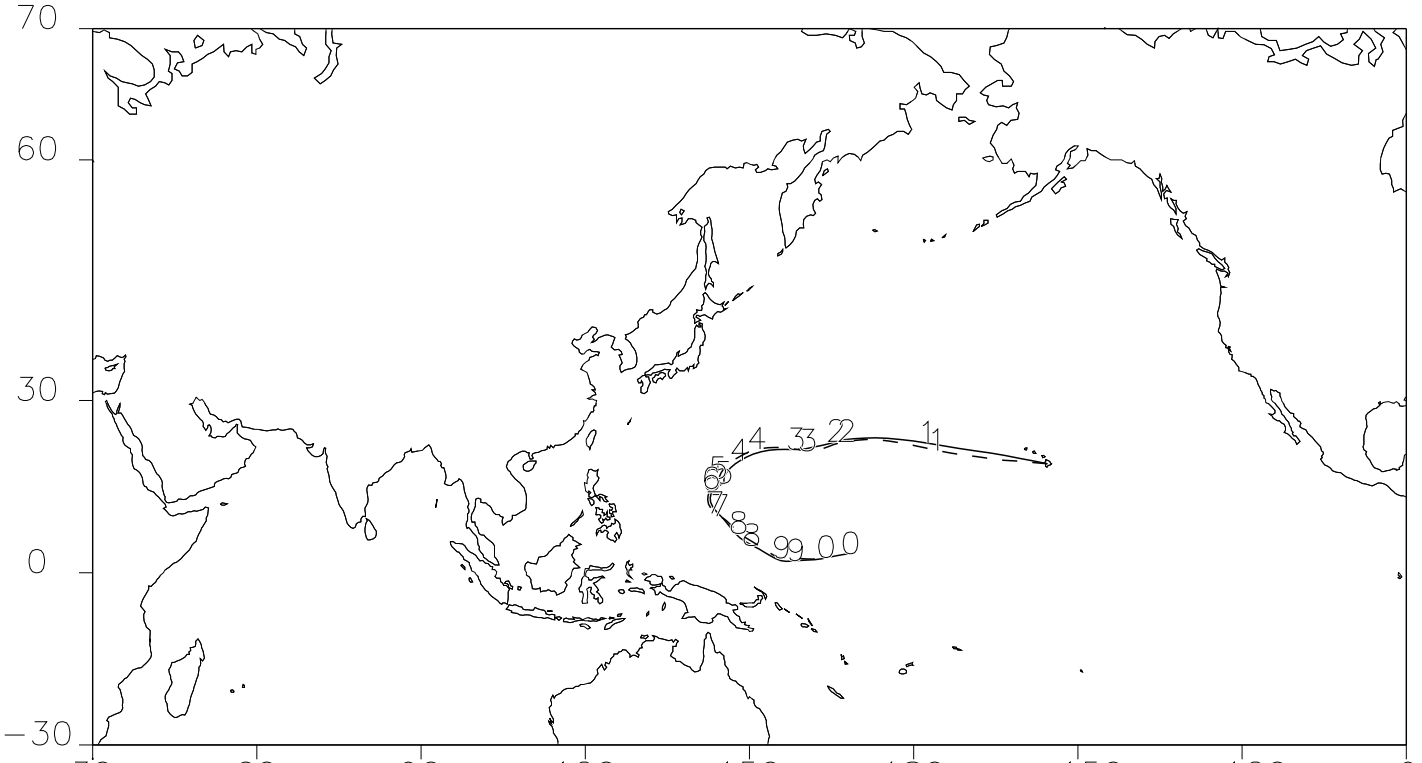
Day	km	hPa	C
0	9.5	306	−33
1	10.4	267	−39
2	10.1	284	−34
3	9.9	293	−32
4	9.2	325	−26
5	8.8	344	−22
6	7.9	386	−16
7	7.4	410	−13
8	7.7	395	−15
9	7.0	431	−11
10	6.5	461	−8

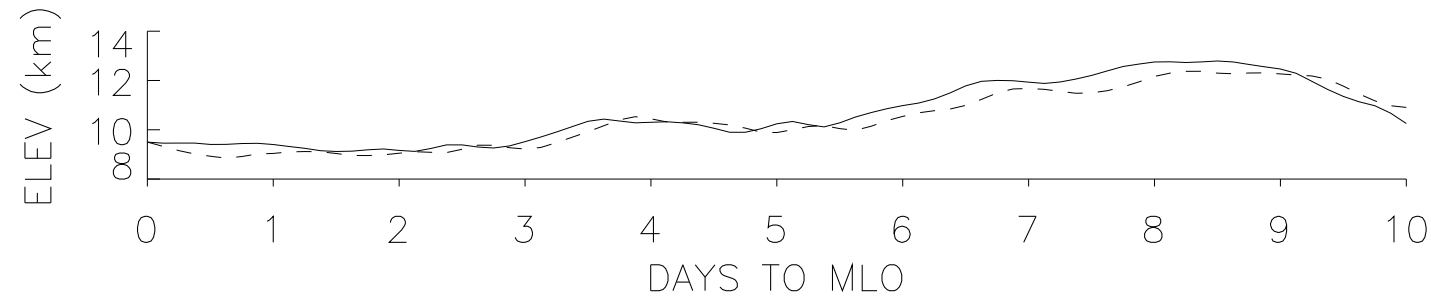
18UT

Day	km	hPa	C
0	9.5	307	−32
1	10.0	284	−35
2	9.4	313	−28
3	9.5	307	−29
4	10.0	289	−32
5	10.2	281	−34
6	11.4	236	−43
7	13.0	185	−56
8	13.1	181	−56
9	12.4	201	−50
10	10.7	259	−38

12UT − solid
18UT − dashed

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





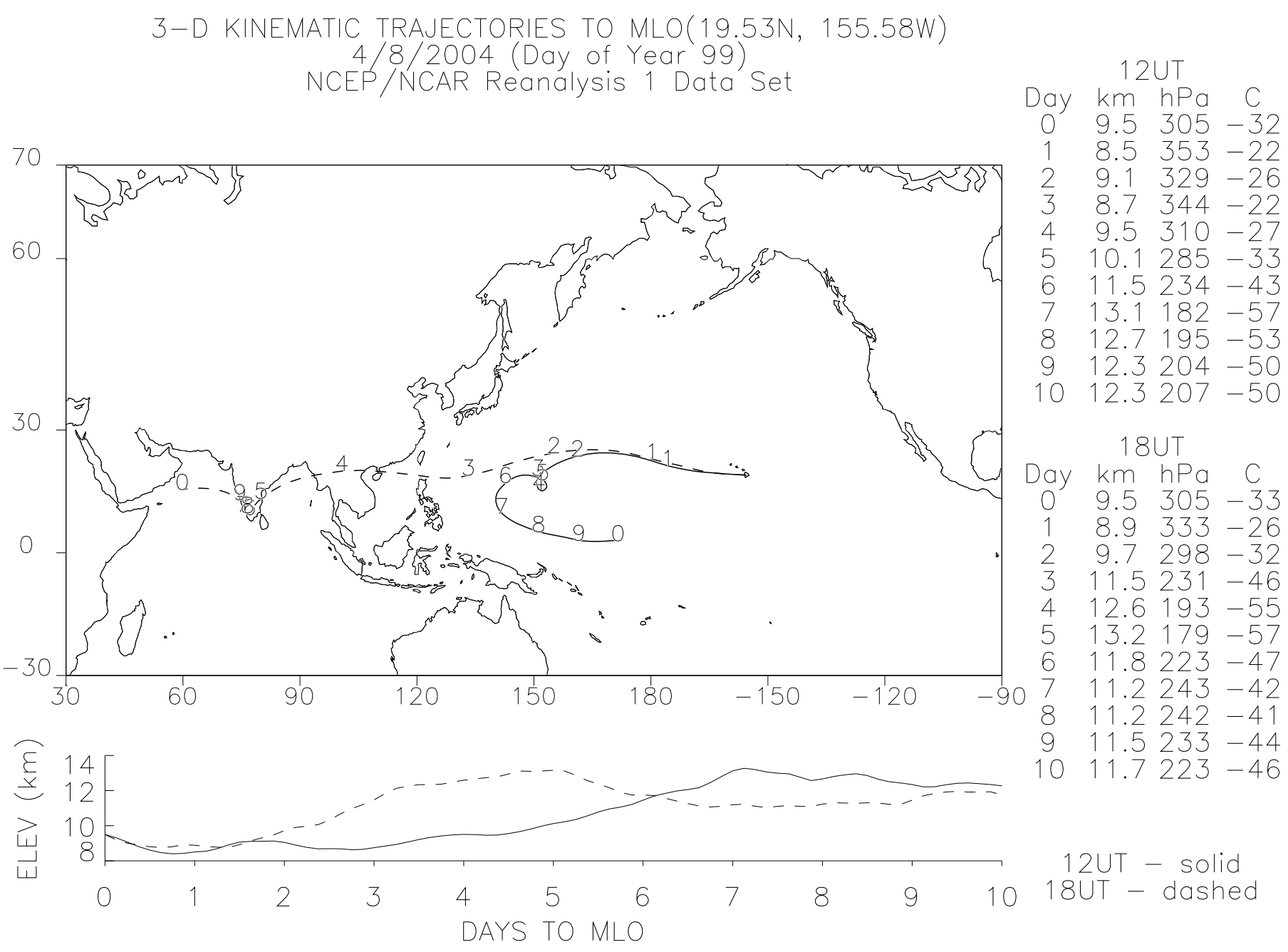
00UT

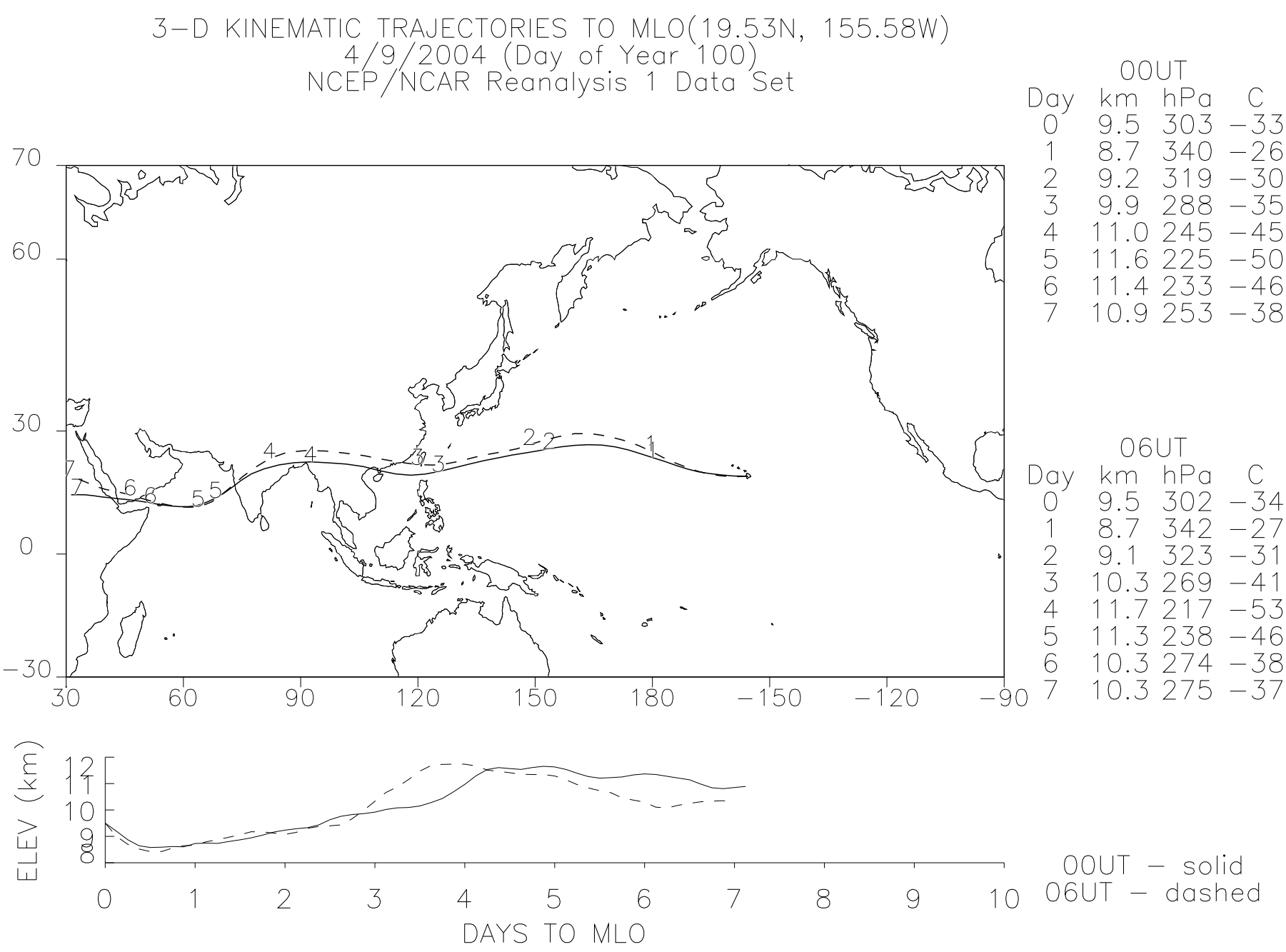
Day	km	hPa	C
0	9.5	306	−32
1	9.4	311	−29
2	9.2	325	−26
3	9.5	309	−28
4	10.3	276	−35
5	10.2	280	−34
6	11.0	251	−40
7	11.9	218	−47
8	12.8	192	−55
9	12.5	200	−52
10	10.3	279	−34

06UT

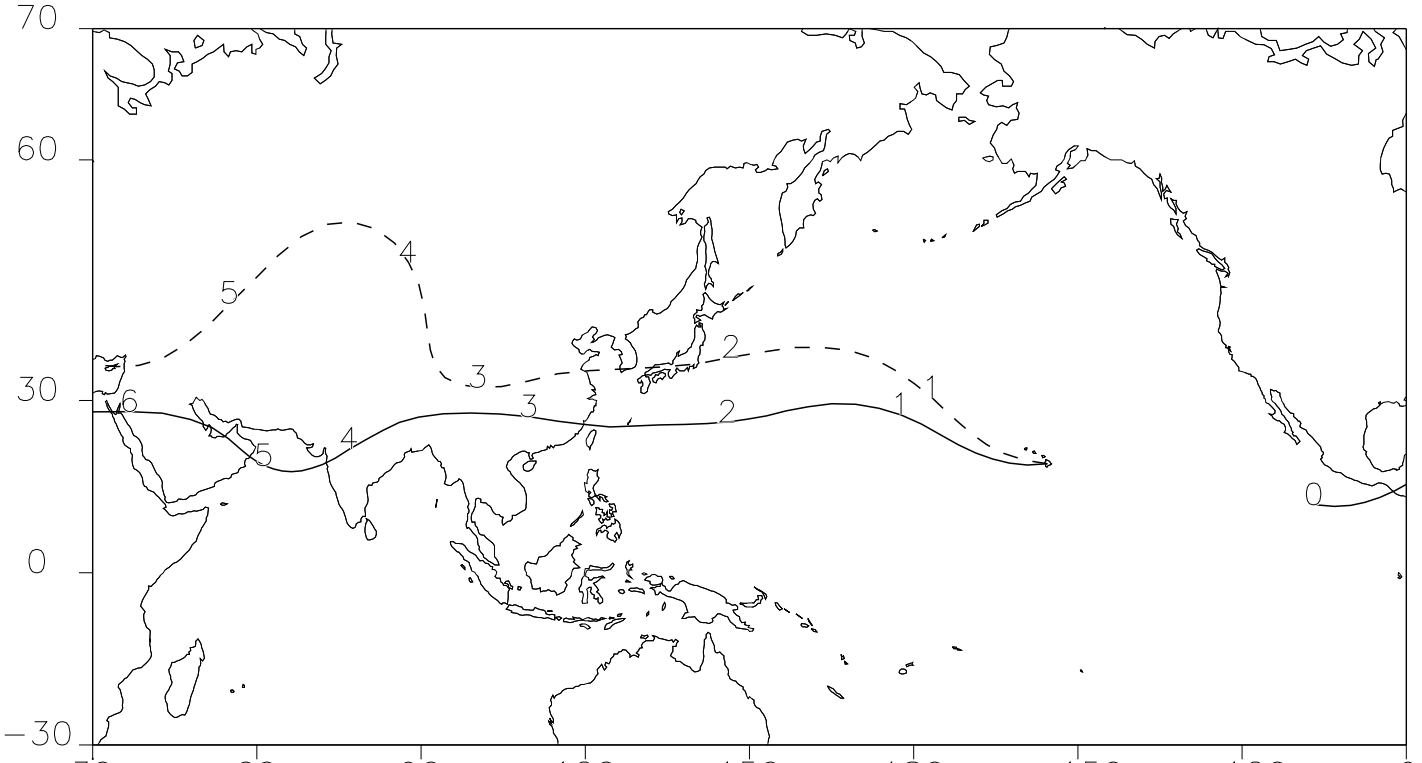
Day	km	hPa	C
0	9.5	306	−31
1	9.0	327	−26
2	9.0	329	−26
3	9.2	322	−26
4	10.4	270	−36
5	9.9	293	−31
6	10.5	267	−37
7	11.7	226	−45
8	12.2	210	−49
9	12.3	206	−50
10	10.9	252	−40

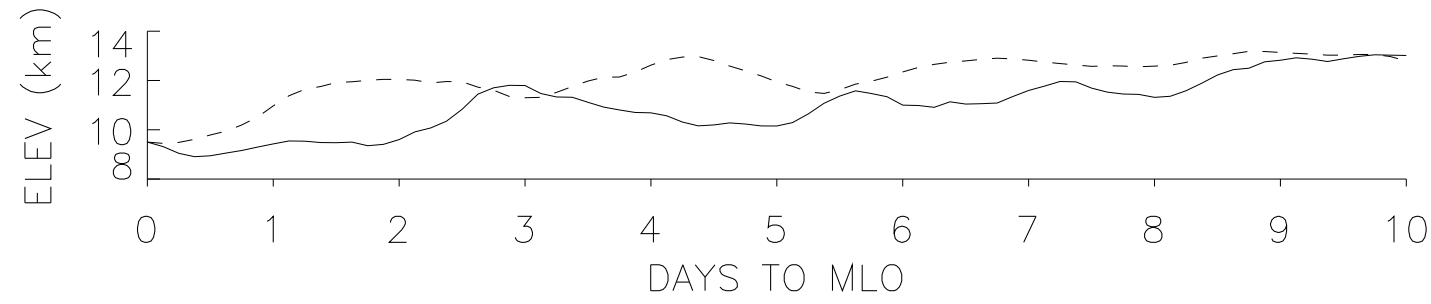
00UT − solid
06UT − dashed


3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/8/2004 (Day of Year 99)
NCEP/NCAR Reanalysis 1 Data Set
70
60
30
0
-30
30
60
90
120
150
180
-150
-120
-90
0
1
2
3
4
5
6
7
8
9
10
ELEV (km)
14
12
10
8
DAYS TO MLO
12UT
Day km hPa C
0 9.5 305 -32
1 8.5 353 -22
2 9.1 329 -26
3 8.7 344 -22
4 9.5 310 -27
5 10.1 285 -33
6 11.5 234 -43
7 13.1 182 -57
8 12.7 195 -53
9 12.3 204 -50
10 12.3 207 -50
18UT
Day km hPa C
0 9.5 305 -33
1 8.9 333 -26
2 9.7 298 -32
3 11.5 231 -46
4 12.6 193 -55
5 13.2 179 -57
6 11.8 223 -47
7 11.2 243 -42
8 11.2 242 -41
9 11.5 233 -44
10 11.7 223 -46
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 9.5 303 -33
1 8.7 340 -26
2 9.2 319 -30
3 9.9 288 -35
4 11.0 245 -45
5 11.6 225 -50
6 11.4 233 -46
7 10.9 253 -38
06UT
Day km hPa C
0 9.5 302 -34
1 8.7 342 -27
2 9.1 323 -31
3 10.3 269 -41
4 11.7 217 -53
5 11.3 238 -46
6 10.3 274 -38
7 10.3 275 -37
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
12
11
10
9
8
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)
4/9/2004 (Day of Year 100)
NCEP/NCAR Reanalysis 1 Data Set





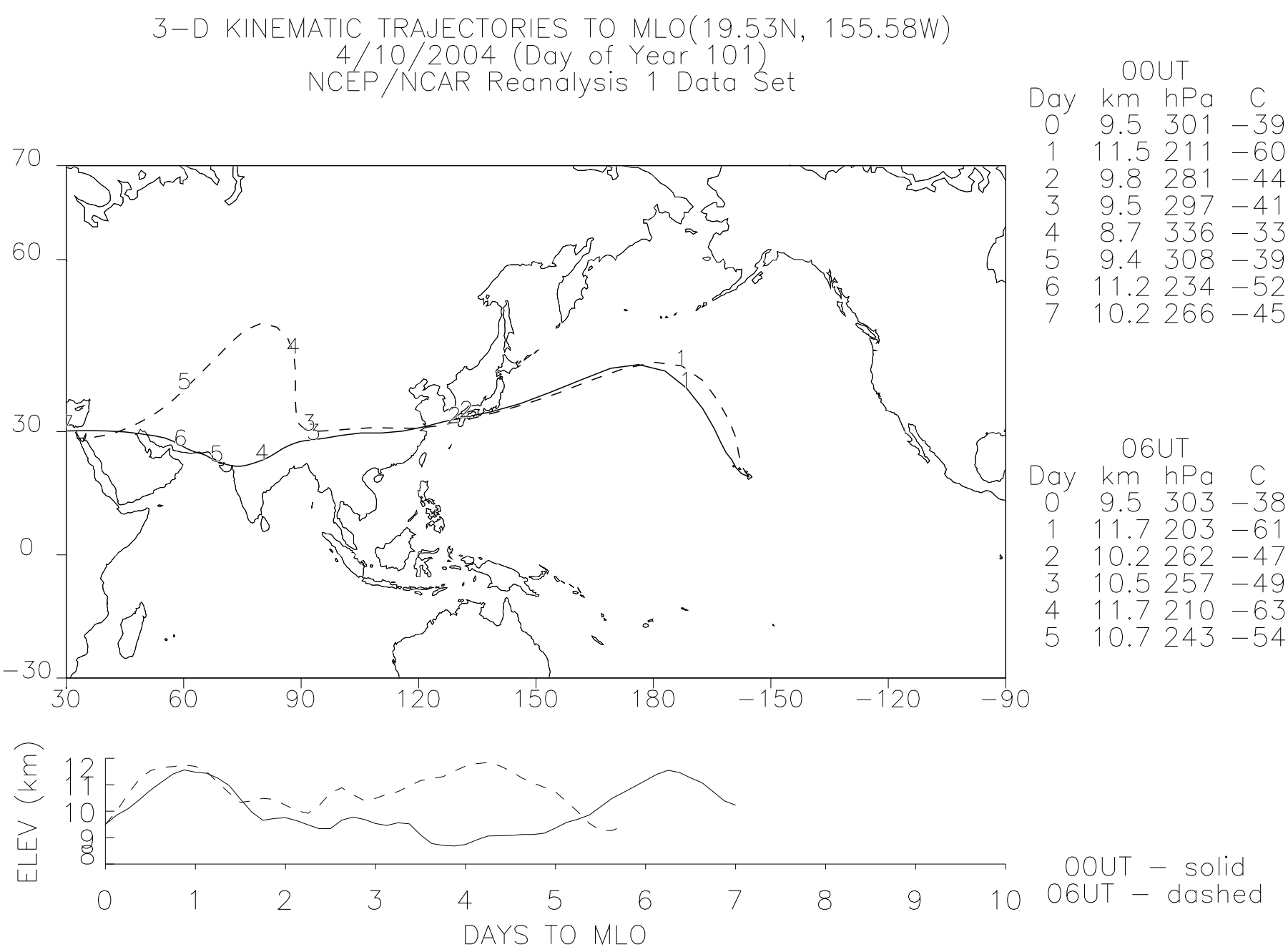
12UT

Day	km	hPa	C
0	9.5	301	−36
1	9.4	306	−36
2	9.6	300	−35
3	11.8	211	−58
4	10.7	253	−46
5	10.2	277	−40
6	11.0	238	−45
7	11.6	220	−51
8	11.3	232	−47
9	12.8	185	−57
10	13.0	179	−59

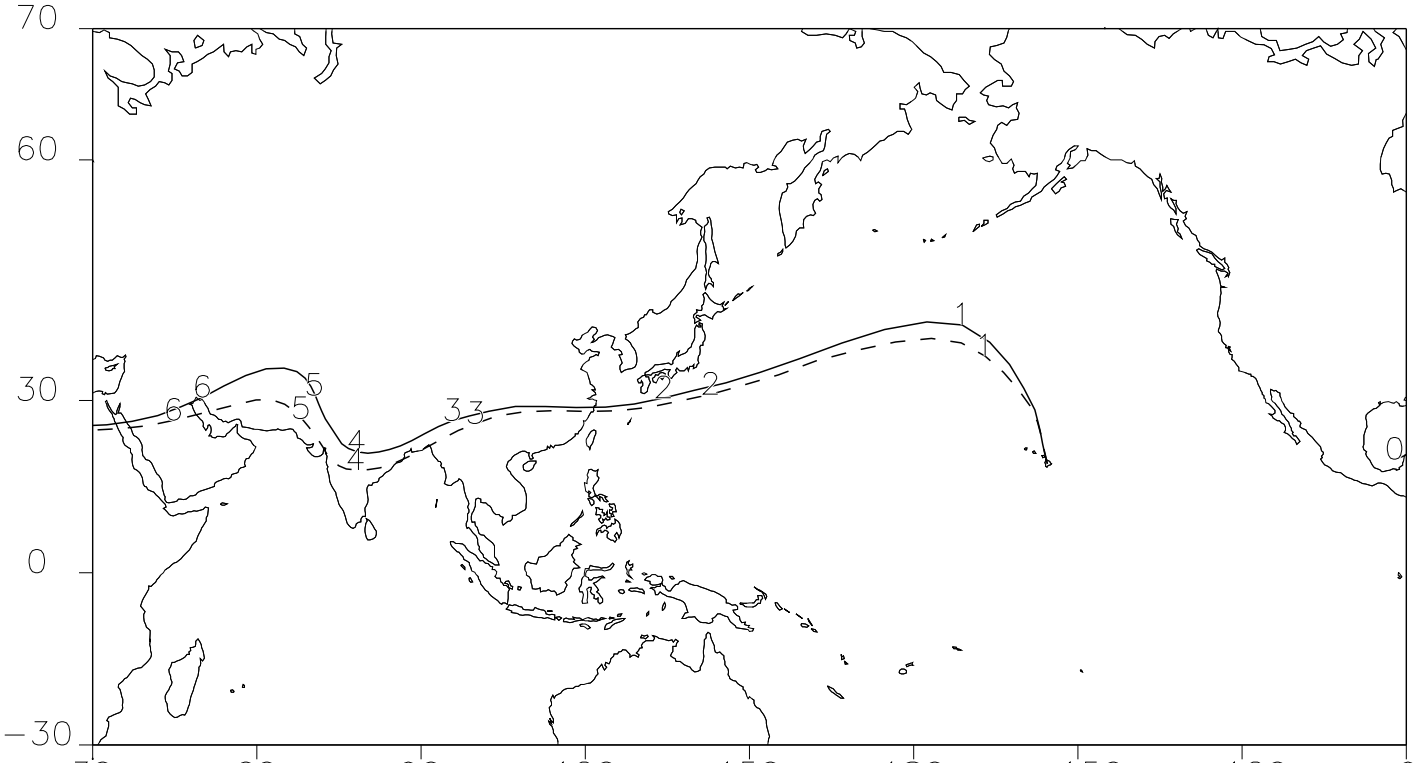
18UT

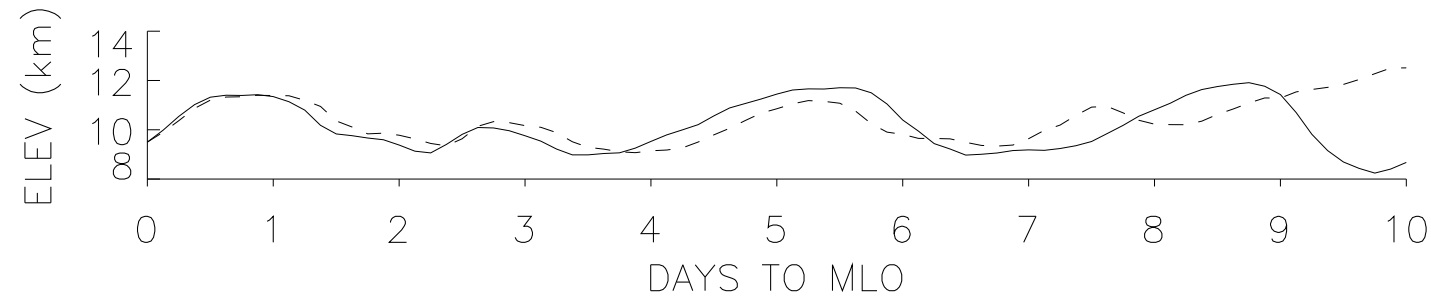
Day	km	hPa	C
0	9.5	300	−37
1	11.0	238	−51
2	12.0	195	−63
3	11.3	222	−56
4	12.6	177	−61
5	11.9	193	−53
6	12.3	183	−55
7	12.8	171	−59
8	12.6	179	−62
9	13.1	164	−64
10	12.8	173	−61

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 9.5 301 -39
1 11.5 211 -60
2 9.8 281 -44
3 9.5 297 -41
4 8.7 336 -33
5 9.4 308 -39
6 11.2 234 -52
7 10.2 266 -45
06UT
Day km hPa C
0 9.5 303 -38
1 11.7 203 -61
2 10.2 262 -47
3 10.5 257 -49
4 11.7 210 -63
5 10.7 243 -54
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
12
11
10
9
8
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

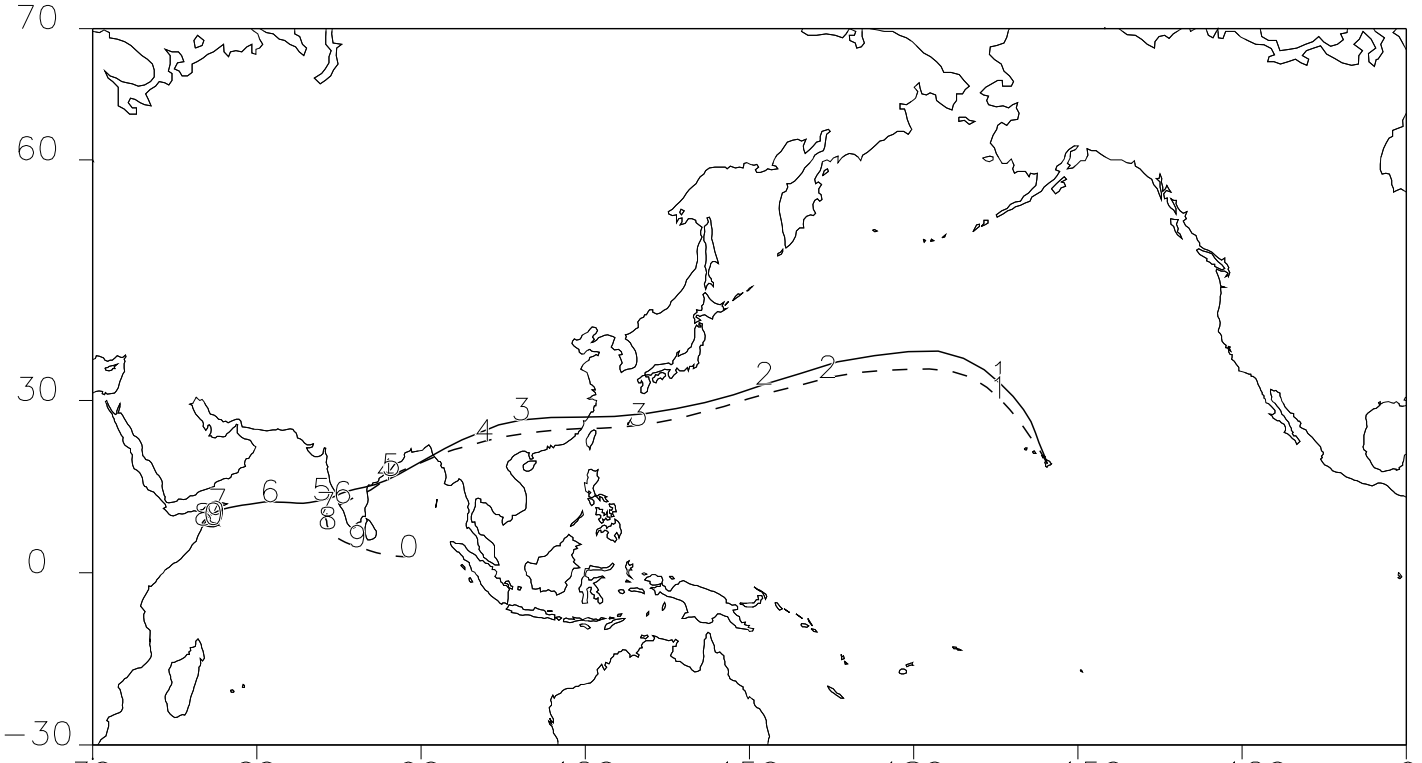
Day	km	hPa	C
0	9.5	302	-40
1	11.3	218	-58
2	9.4	301	-38
3	9.8	289	-39
4	9.5	300	-40
5	11.4	224	-54
6	10.4	261	-47
7	9.2	315	-34
8	10.8	246	-51
9	11.4	222	-58
10	8.7	333	-35

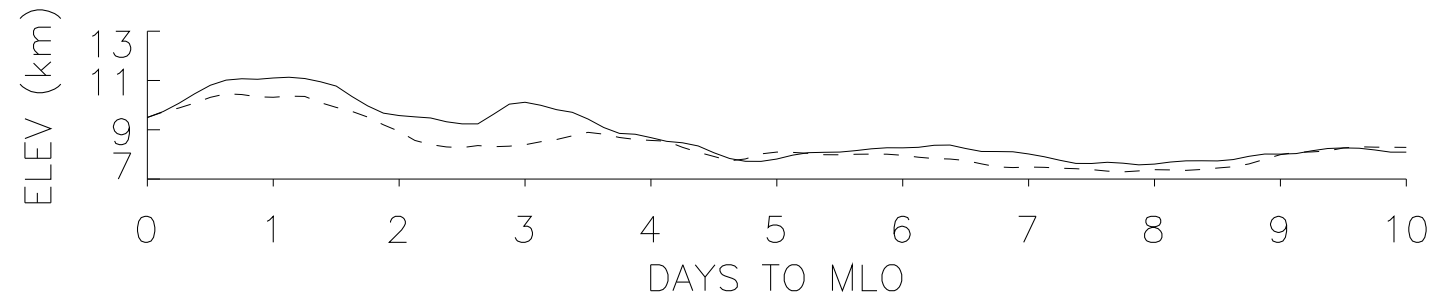
18UT

Day	km	hPa	C
0	9.5	303	-39
1	11.4	221	-57
2	9.8	284	-41
3	10.2	273	-41
4	9.1	321	-32
5	10.9	248	-48
6	9.8	286	-39
7	9.6	295	-37
8	10.2	272	-41
9	11.3	230	-49
10	12.5	192	-58

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

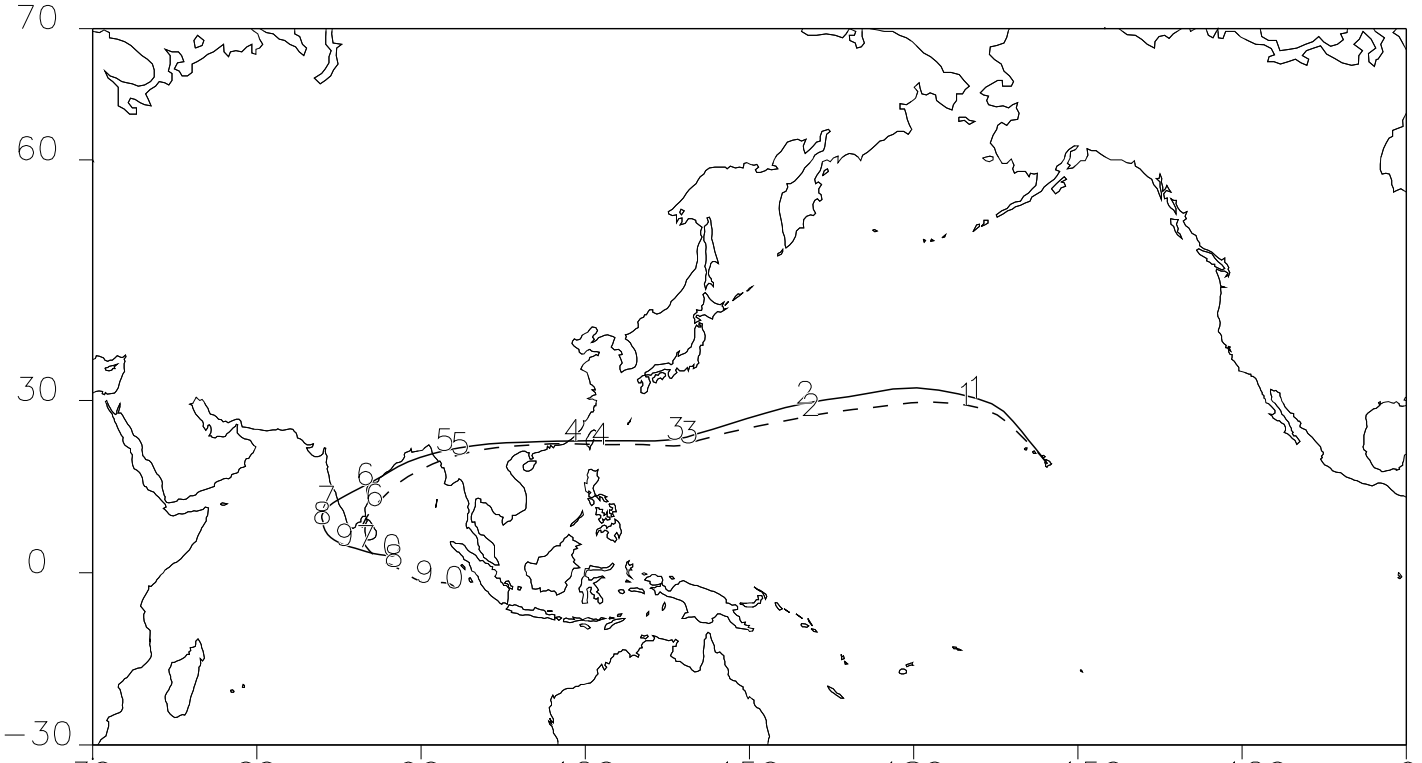
Day	km	hPa	C
0	9.5	303	-39
1	11.1	235	-53
2	9.6	293	-39
3	10.1	275	-41
4	8.7	342	-27
5	7.8	386	-20
6	8.3	364	-24
7	8.0	377	-21
8	7.6	398	-16
9	8.0	378	-20
10	8.1	374	-20

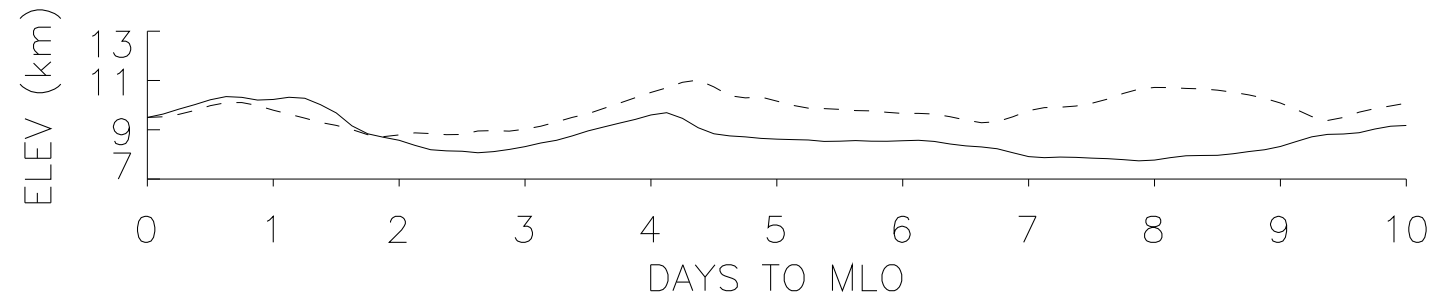
06UT

Day	km	hPa	C
0	9.5	304	-37
1	10.3	267	-44
2	8.9	322	-33
3	8.4	354	-25
4	8.6	347	-27
5	8.1	373	-22
6	8.0	381	-20
7	7.5	408	-16
8	7.4	412	-15
9	8.0	380	-18
10	8.3	366	-20

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

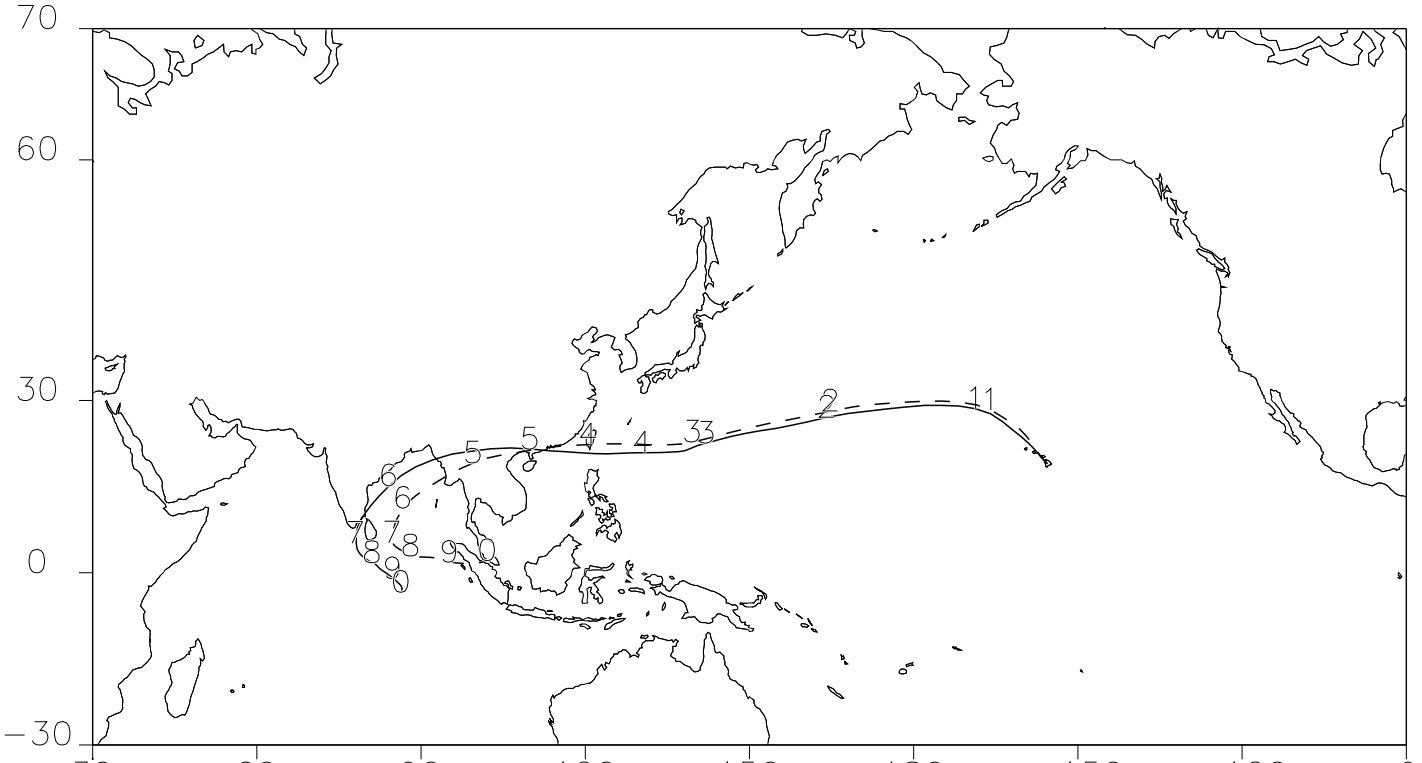
Day	km	hPa	C
0	9.5	304	−37
1	10.2	271	−42
2	8.6	345	−28
3	8.3	361	−22
4	9.6	301	−33
5	8.6	344	−27
6	8.6	349	−25
7	7.9	384	−20
8	7.8	391	−18
9	8.3	362	−21
10	9.2	322	−26

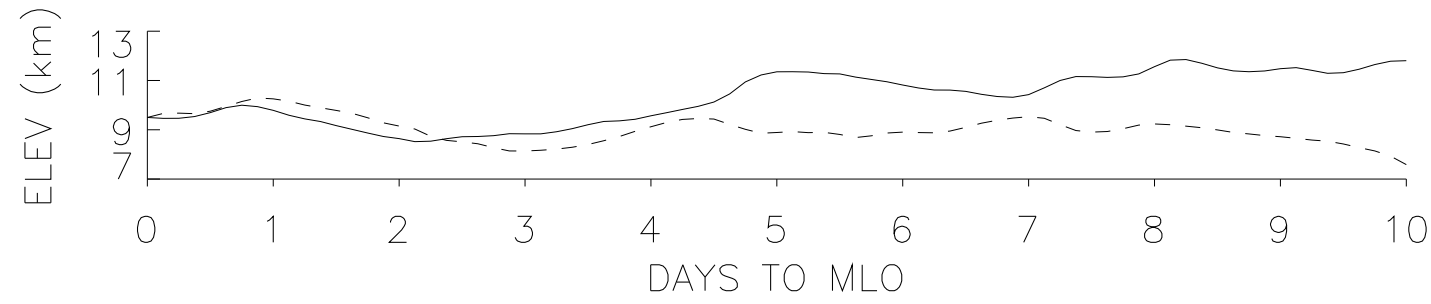
18UT

Day	km	hPa	C
0	9.5	304	−36
1	9.8	291	−39
2	8.8	336	−28
3	9.0	328	−27
4	10.5	264	−40
5	10.2	277	−38
6	9.7	301	−31
7	9.8	298	−31
8	10.7	260	−39
9	10.1	285	−33
10	10.1	285	−33

12UT − solid
18UT − dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/12/2004 (Day of Year 103)
NCEP/NCAR Reanalysis 1 Data Set





00UT

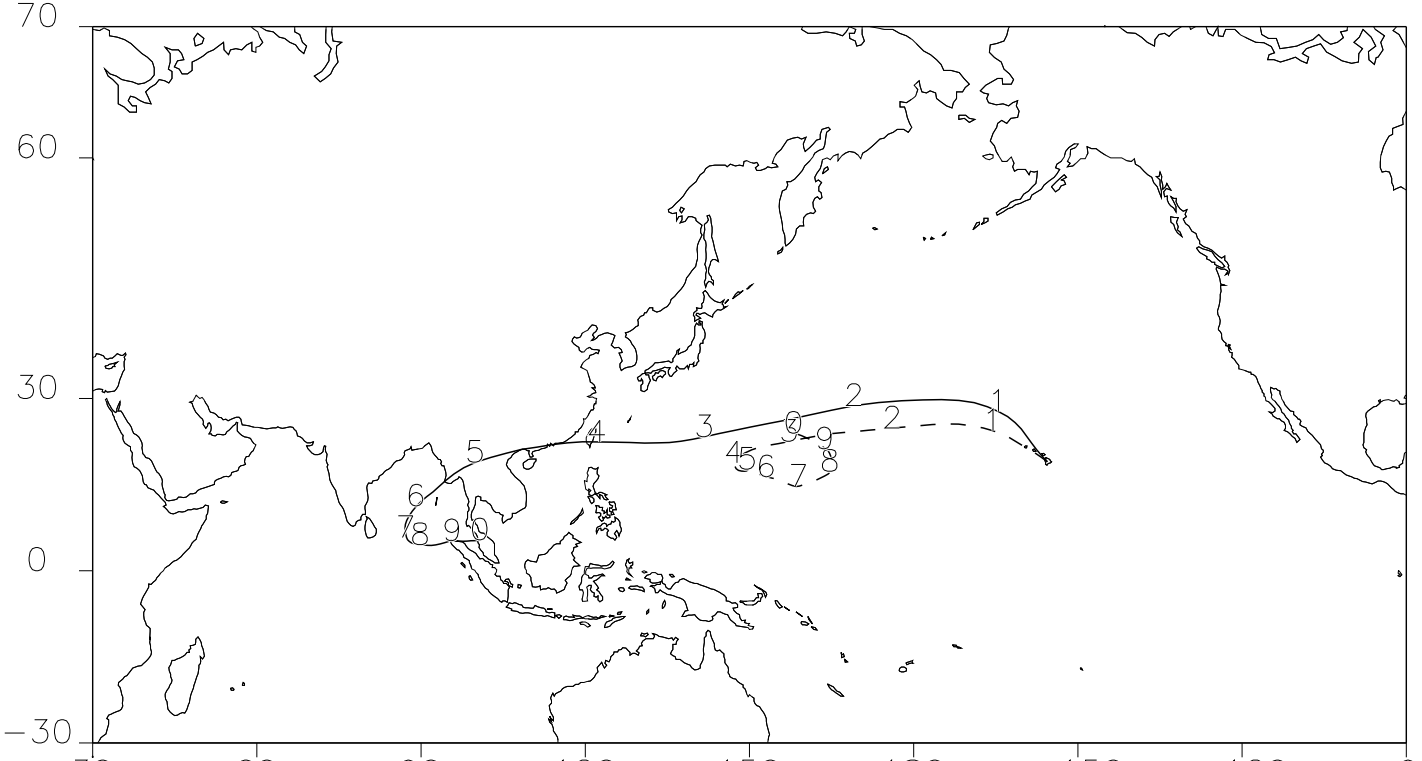
Day	km	hPa	C
0	9.5	303	-37
1	9.8	290	-39
2	8.6	344	-27
3	8.8	338	-25
4	9.6	304	-32
5	11.4	232	-48
6	10.8	253	-42
7	10.4	270	-37
8	11.6	229	-46
9	11.5	231	-45
10	11.8	221	-47

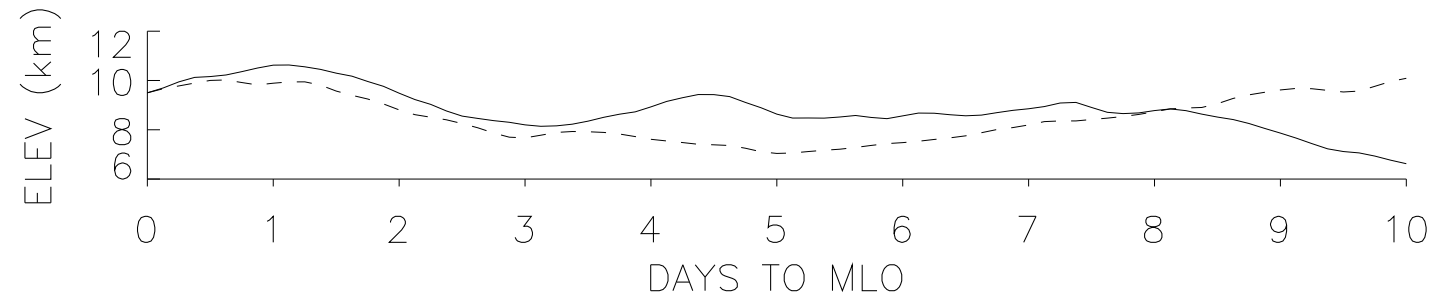
06UT

Day	km	hPa	C
0	9.5	304	-36
1	10.3	271	-43
2	9.2	317	-33
3	8.1	370	-21
4	9.1	323	-29
5	8.9	335	-27
6	8.9	335	-26
7	9.5	308	-30
8	9.2	321	-27
9	8.7	344	-24
10	7.6	401	-15

00UT - solid
06UT - dashed

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/12/2004 (Day of Year 103)
NCEP/NCAR Reanalysis 1 Data Set





12UT

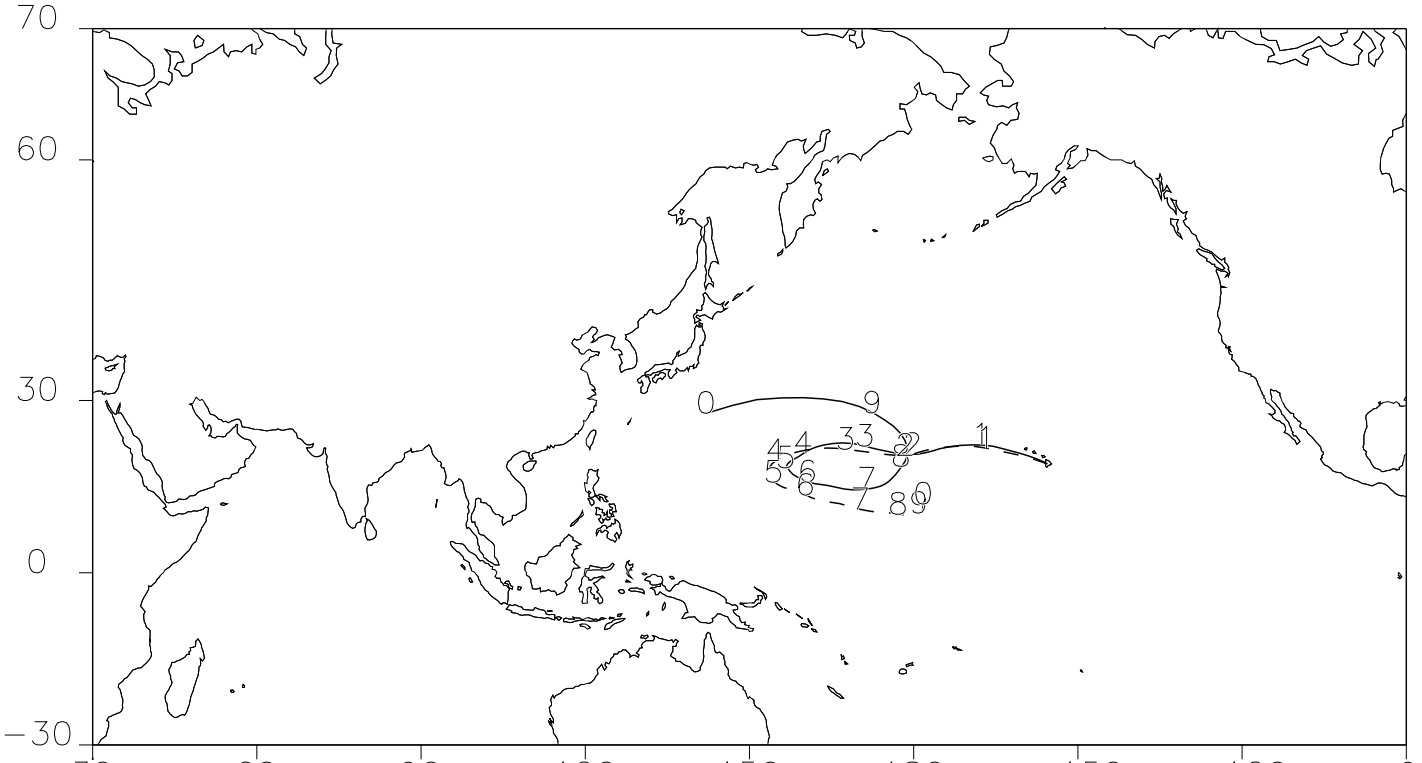
Day	km	hPa	C
0	9.5	304	-36
1	10.6	256	-46
2	9.5	302	-37
3	8.2	368	-21
4	8.9	332	-27
5	8.6	346	-25
6	8.6	350	-24
7	8.9	337	-25
8	8.8	341	-24
9	7.9	386	-17
10	6.6	454	-10

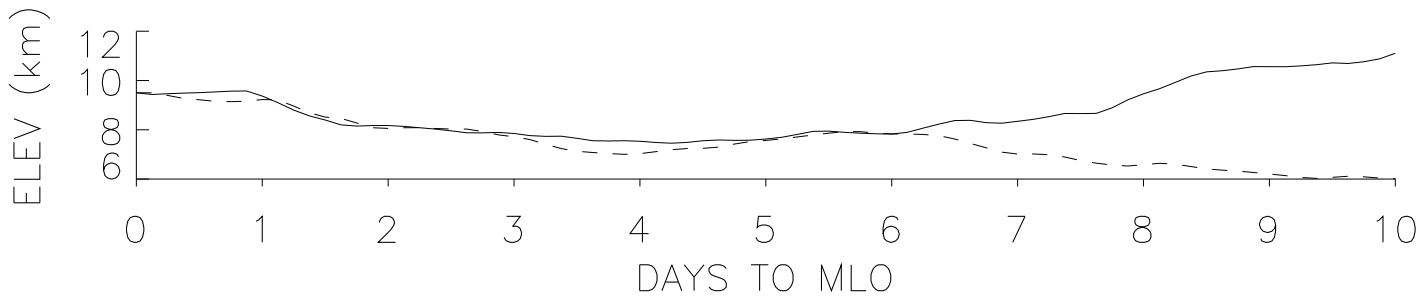
18UT

Day	km	hPa	C
0	9.5	304	-37
1	9.9	288	-39
2	8.8	336	-30
3	7.7	394	-18
4	7.6	398	-16
5	7.0	430	-11
6	7.5	406	-13
7	8.2	369	-18
8	8.7	344	-23
9	9.6	304	-32
10	10.1	283	-37

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

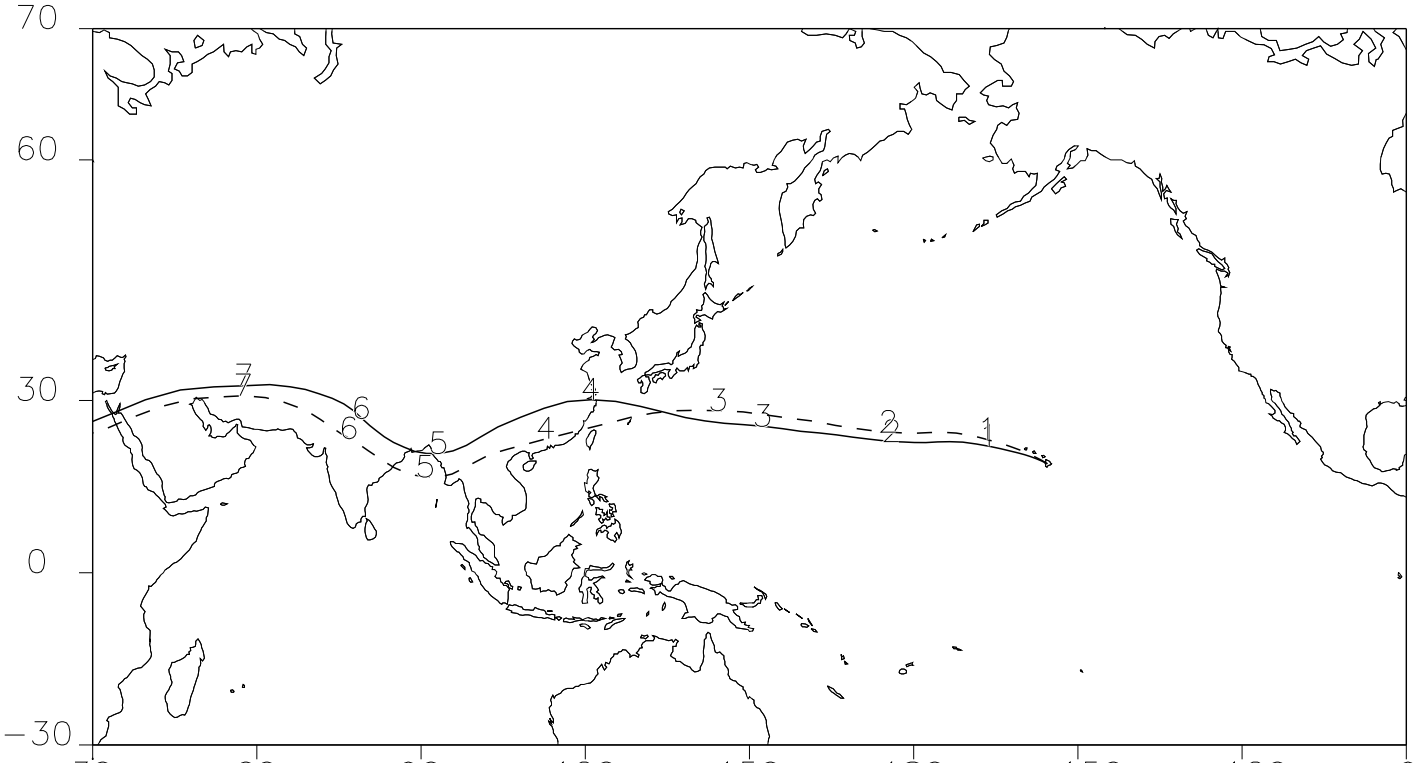
Day	km	hPa	C
0	9.5	304	−37
1	9.4	310	−34
2	8.2	370	−22
3	7.8	387	−19
4	7.5	404	−15
5	7.6	400	−15
6	7.8	389	−15
7	8.3	363	−19
8	9.5	310	−31
9	10.6	263	−41
10	11.1	241	−45

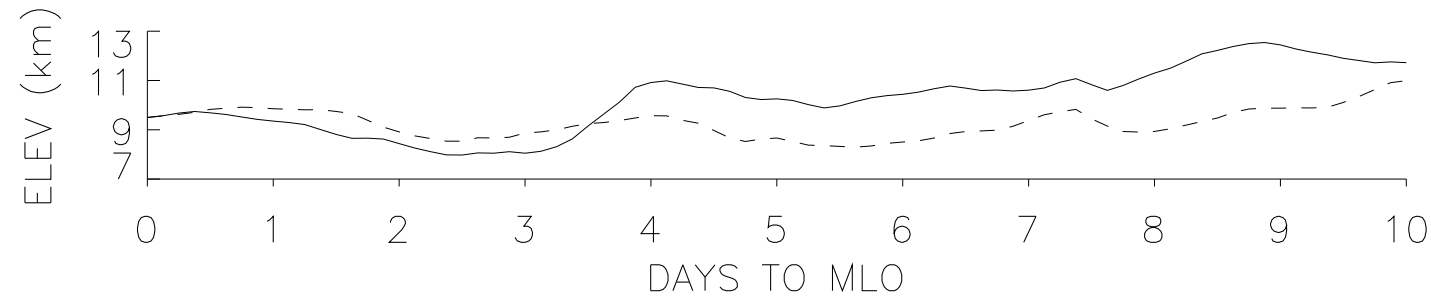
06UT

Day	km	hPa	C
0	9.5	304	−37
1	9.2	316	−34
2	8.1	375	−21
3	7.7	393	−18
4	7.0	431	−12
5	7.6	401	−14
6	7.8	388	−16
7	7.0	431	−10
8	6.6	455	−9
9	6.2	477	−8
10	6.0	488	−7

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





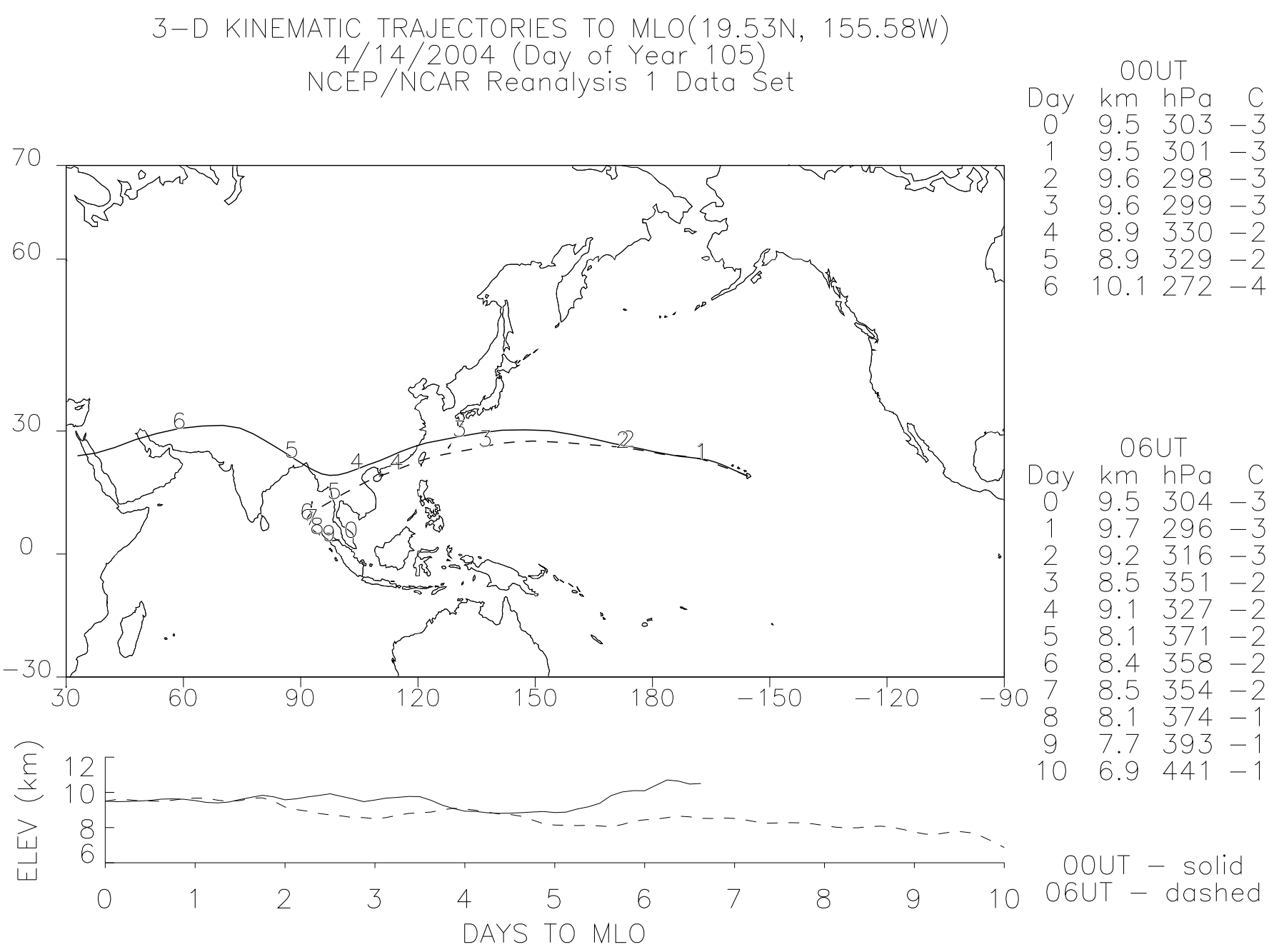
12UT

Day	km	hPa	C
0	9.5	303	−38
1	9.4	310	−36
2	8.4	355	−27
3	8.0	373	−22
4	10.9	243	−49
5	10.3	270	−40
6	10.4	262	−39
7	10.6	252	−44
8	11.3	230	−51
9	12.4	192	−59
10	11.7	212	−50

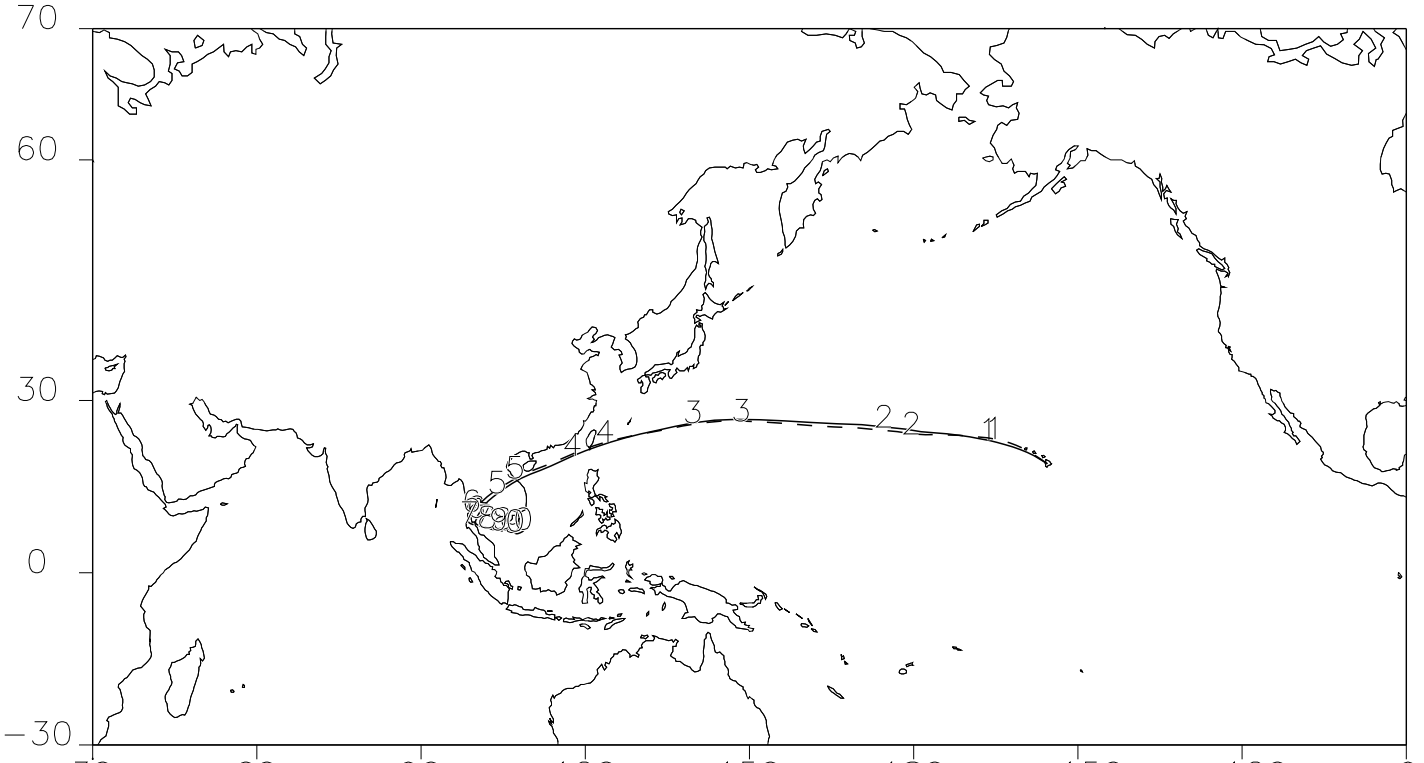
18UT

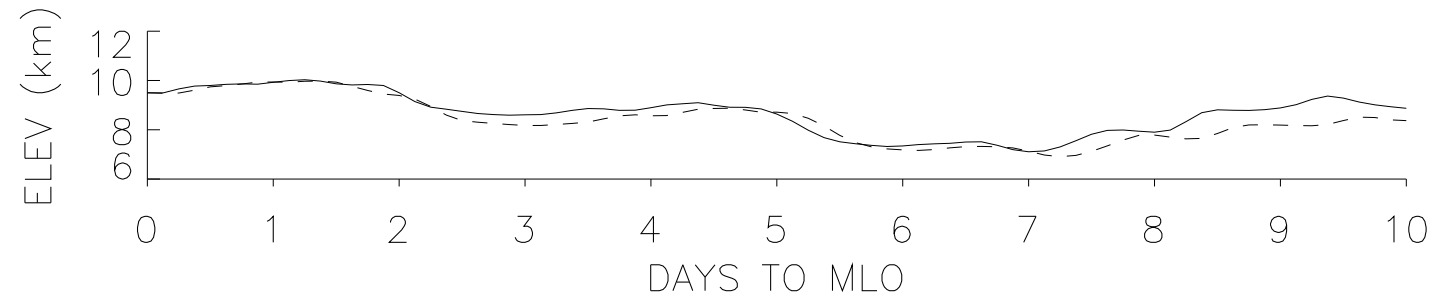
Day	km	hPa	C
0	9.5	304	−37
1	9.9	288	−40
2	8.9	329	−32
3	8.9	331	−30
4	9.6	301	−34
5	8.7	343	−25
6	8.5	349	−27
7	9.4	305	−37
8	8.9	326	−34
9	9.9	285	−45
10	11.0	236	−58

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 9.5 303 -38
1 9.5 301 -36
2 9.6 298 -38
3 9.6 299 -36
4 8.9 330 -29
5 8.9 329 -28
6 10.1 272 -41
06UT
Day km hPa C
0 9.5 304 -37
1 9.7 296 -37
2 9.2 316 -34
3 8.5 351 -25
4 9.1 327 -29
5 8.1 371 -20
6 8.4 358 -22
7 8.5 354 -22
8 8.1 374 -19
9 7.7 393 -17
10 6.9 441 -11
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
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

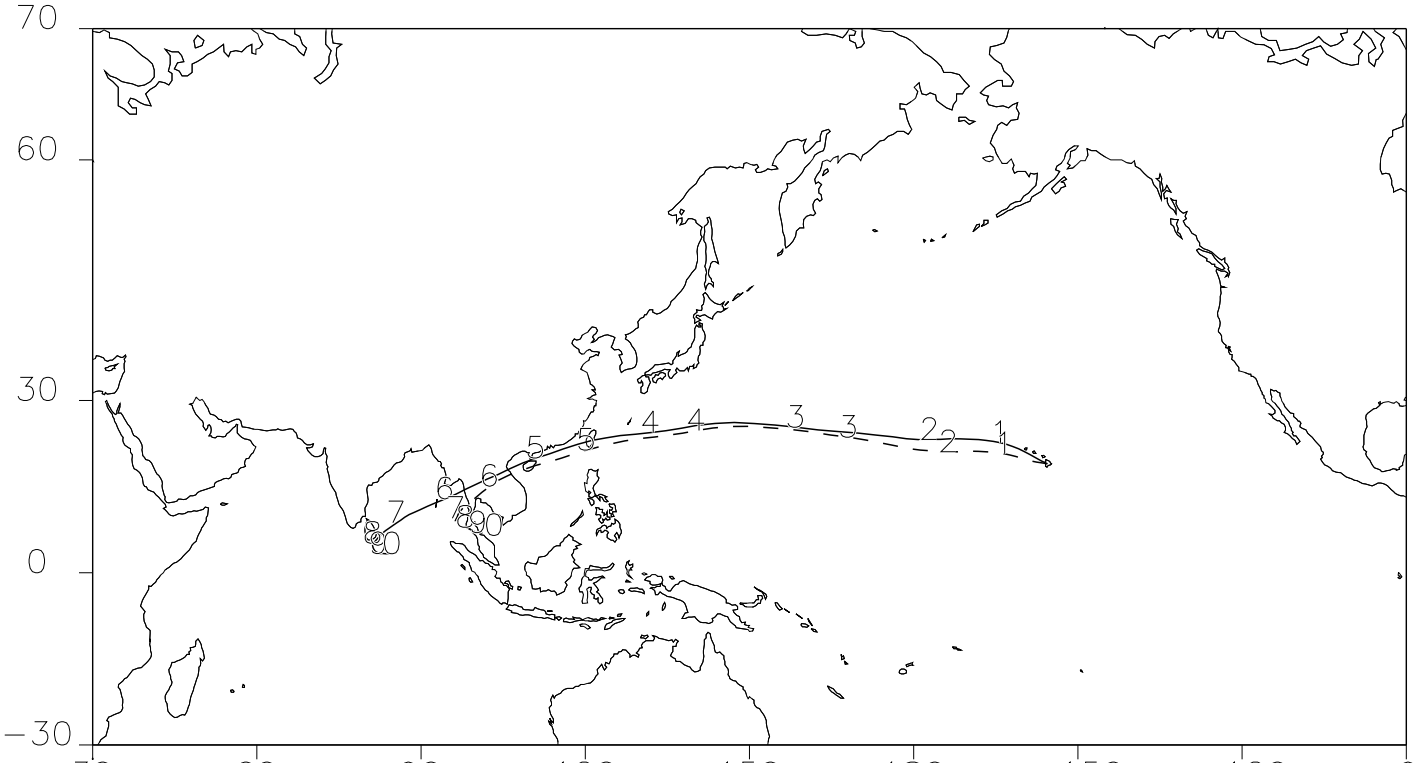
Day	km	hPa	C
0	9.5	303	-37
1	9.9	285	-40
2	9.5	301	-37
3	8.6	346	-26
4	8.9	335	-27
5	8.6	347	-24
6	7.3	413	-14
7	7.1	426	-12
8	7.9	384	-17
9	8.9	336	-24
10	8.9	337	-24

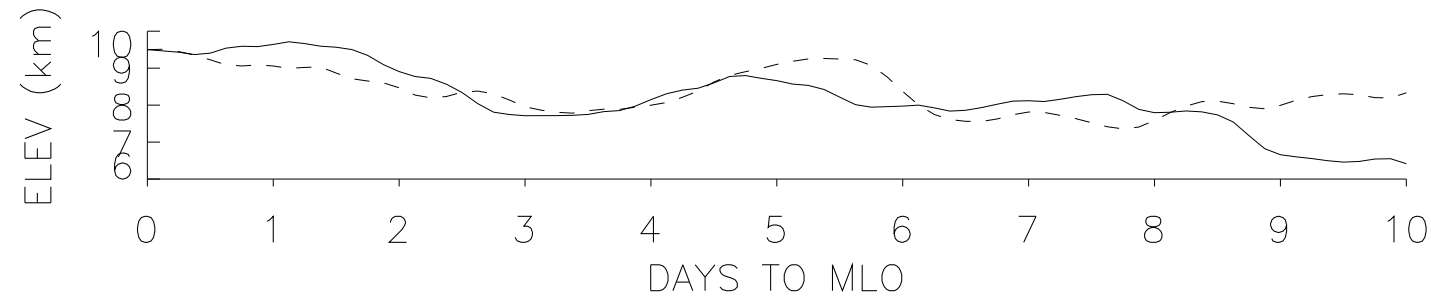
18UT

Day	km	hPa	C
0	9.5	304	-37
1	9.9	285	-41
2	9.4	307	-36
3	8.2	365	-24
4	8.6	349	-25
5	8.7	344	-24
6	7.2	422	-13
7	7.1	426	-13
8	7.8	391	-17
9	8.2	370	-19
10	8.4	360	-21

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

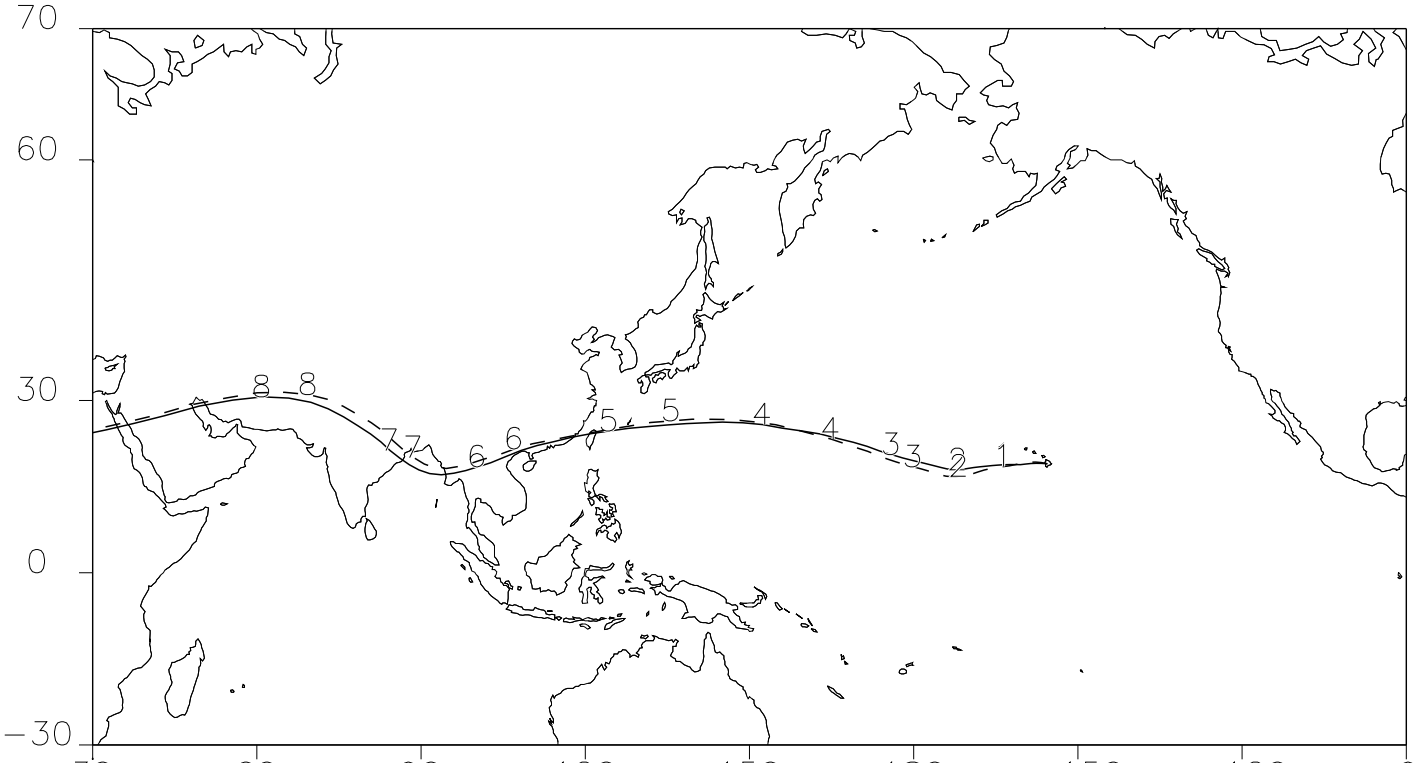
Day	km	hPa	C
0	9.5	303	−37
1	9.6	297	−38
2	8.9	330	−31
3	7.7	389	−20
4	8.1	371	−21
5	8.7	344	−26
6	8.0	378	−20
7	8.1	372	−20
8	7.8	389	−18
9	6.7	451	−10
10	6.4	466	−8

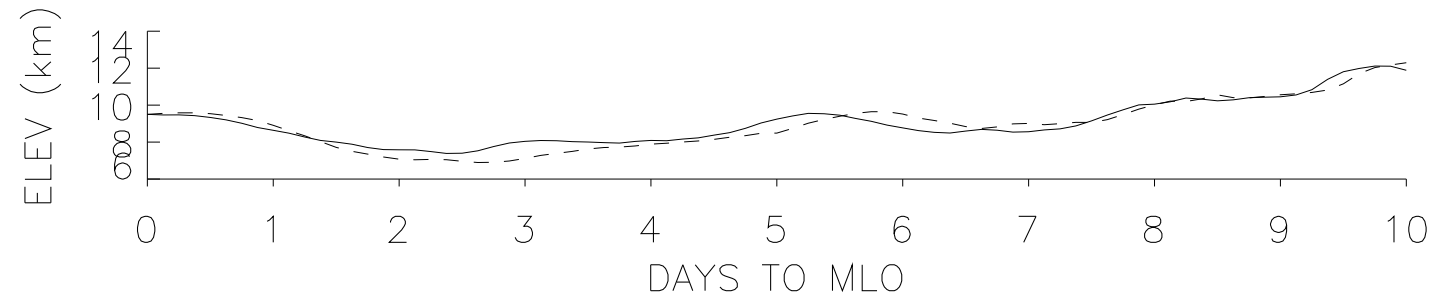
06UT

Day	km	hPa	C
0	9.5	303	−36
1	9.1	323	−33
2	8.5	352	−27
3	8.0	377	−23
4	8.0	378	−19
5	9.1	325	−29
6	8.4	360	−22
7	7.8	389	−17
8	7.6	401	−15
9	8.0	380	−18
10	8.3	363	−20

00UT − solid
06UT − dashed

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





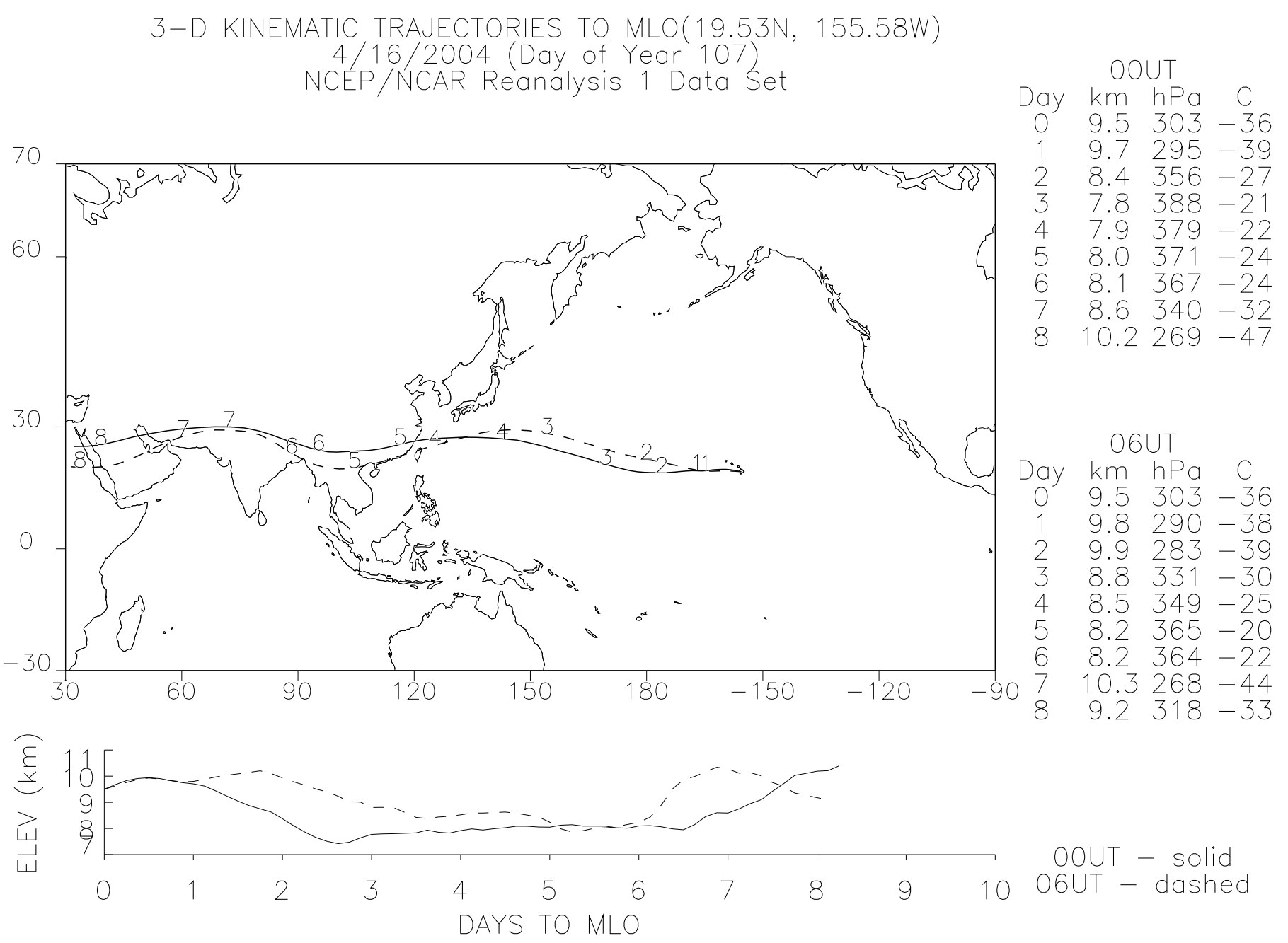
12UT

Day	km	hPa	C
0	9.5	303	-36
1	8.6	344	-29
2	7.6	398	-19
3	8.0	375	-22
4	8.1	371	-22
5	9.2	317	-31
6	8.8	338	-26
7	8.6	345	-26
8	10.1	276	-40
9	10.4	261	-44
10	11.9	211	-55

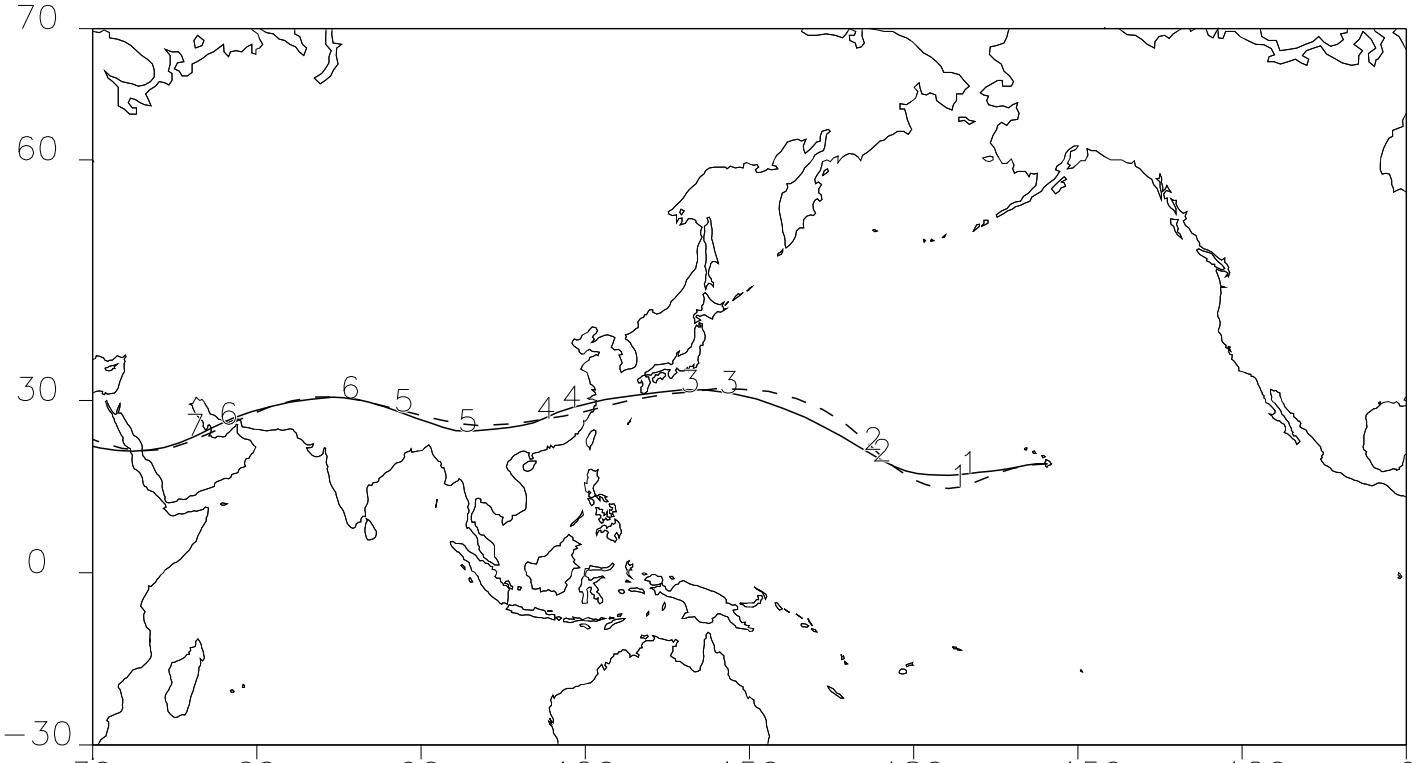
18UT

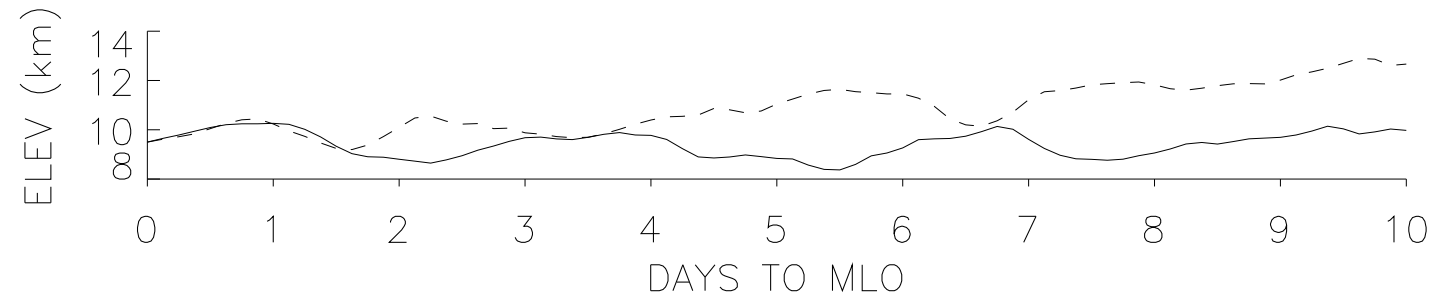
Day	km	hPa	C
0	9.5	304	-36
1	8.9	331	-32
2	7.1	425	-15
3	7.1	424	-15
4	7.9	381	-21
5	8.5	350	-25
6	9.5	304	-33
7	9.0	325	-27
8	10.0	278	-39
9	10.6	255	-46
10	12.3	196	-60

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 9.5 303 -36
1 9.7 295 -39
2 8.4 356 -27
3 7.8 388 -21
4 7.9 379 -22
5 8.0 371 -24
6 8.1 367 -24
7 8.6 340 -32
8 10.2 269 -47
06UT
Day km hPa C
0 9.5 303 -36
1 9.8 290 -38
2 9.9 283 -39
3 8.8 331 -30
4 8.5 349 -25
5 8.2 365 -20
6 8.2 364 -22
7 10.3 268 -44
8 9.2 318 -33
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
11
10
9
8
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)
4/16/2004 (Day of Year 107)
NCEP/NCAR Reanalysis 1 Data Set





12UT

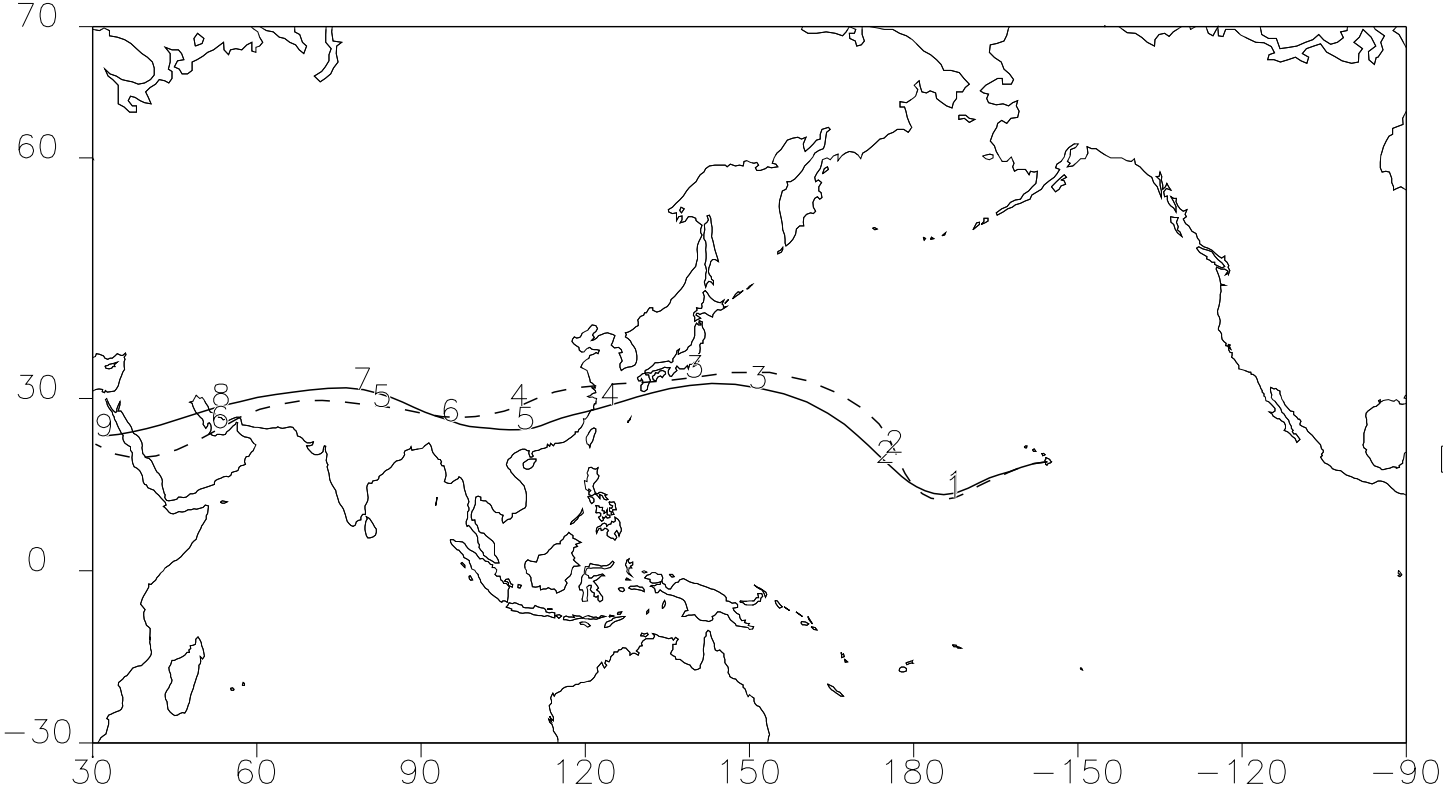
Day	km	hPa	C
0	9.5	303	−35
1	10.3	272	−42
2	8.8	335	−29
3	9.7	292	−38
4	9.8	290	−38
5	8.8	332	−29
6	9.3	311	−35
7	9.6	294	−40
8	9.1	321	−35
9	9.7	293	−37
10	10.0	283	−40

18UT

Day	km	hPa	C
0	9.5	304	−35
1	10.2	274	−40
2	10.1	278	−39
3	9.9	284	−39
4	10.4	265	−40
5	11.0	240	−47
6	11.5	225	−48
7	11.2	231	−49
8	11.8	213	−52
9	12.0	207	−53
10	12.7	183	−58

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

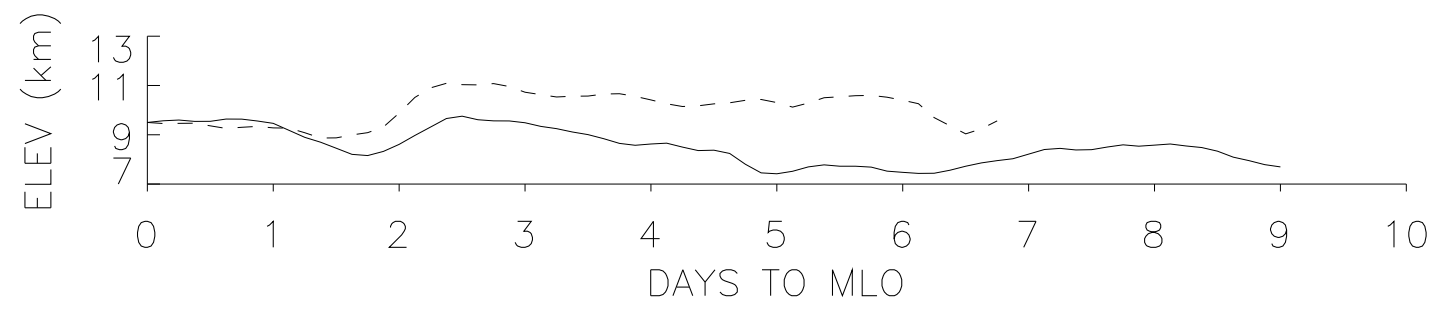


00UT

Day	km	hPa	C
0	9.5	304	-34
1	9.5	305	-35
2	8.6	345	-27
3	9.5	299	-37
4	8.6	341	-29
5	7.4	404	-20
6	7.5	400	-22
7	8.2	359	-29
8	8.6	340	-34
9	7.7	389	-26

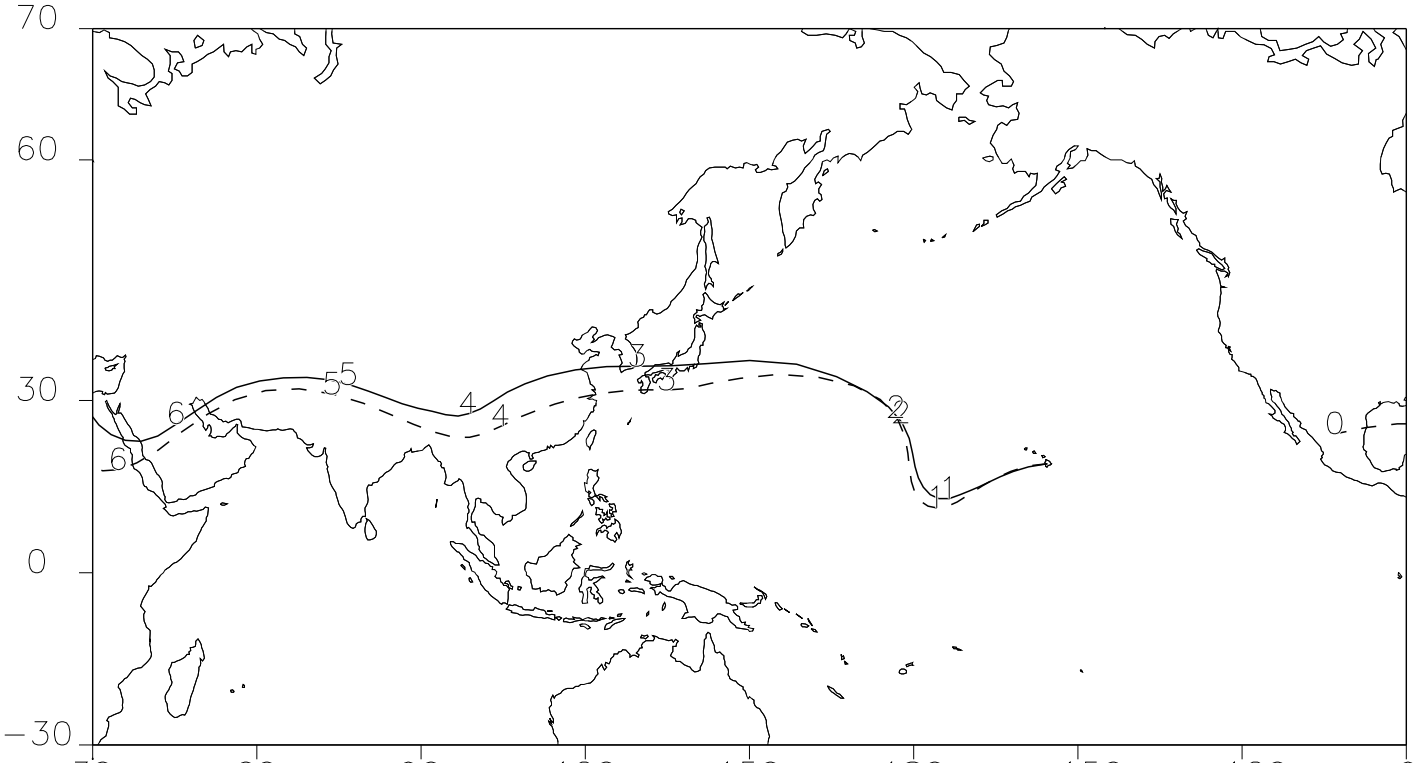
06UT

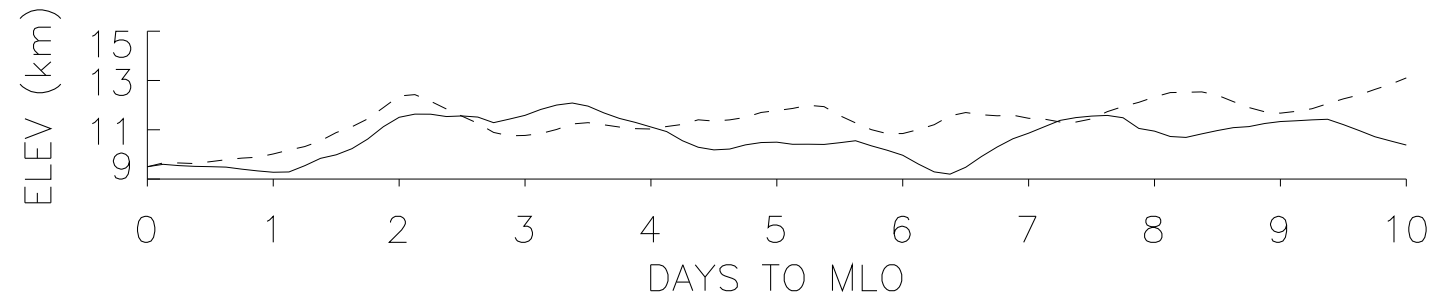
Day	km	hPa	C
0	9.5	305	-32
1	9.3	314	-33
2	9.9	287	-37
3	10.7	248	-47
4	10.4	262	-43
5	10.3	268	-42
6	10.4	263	-42



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

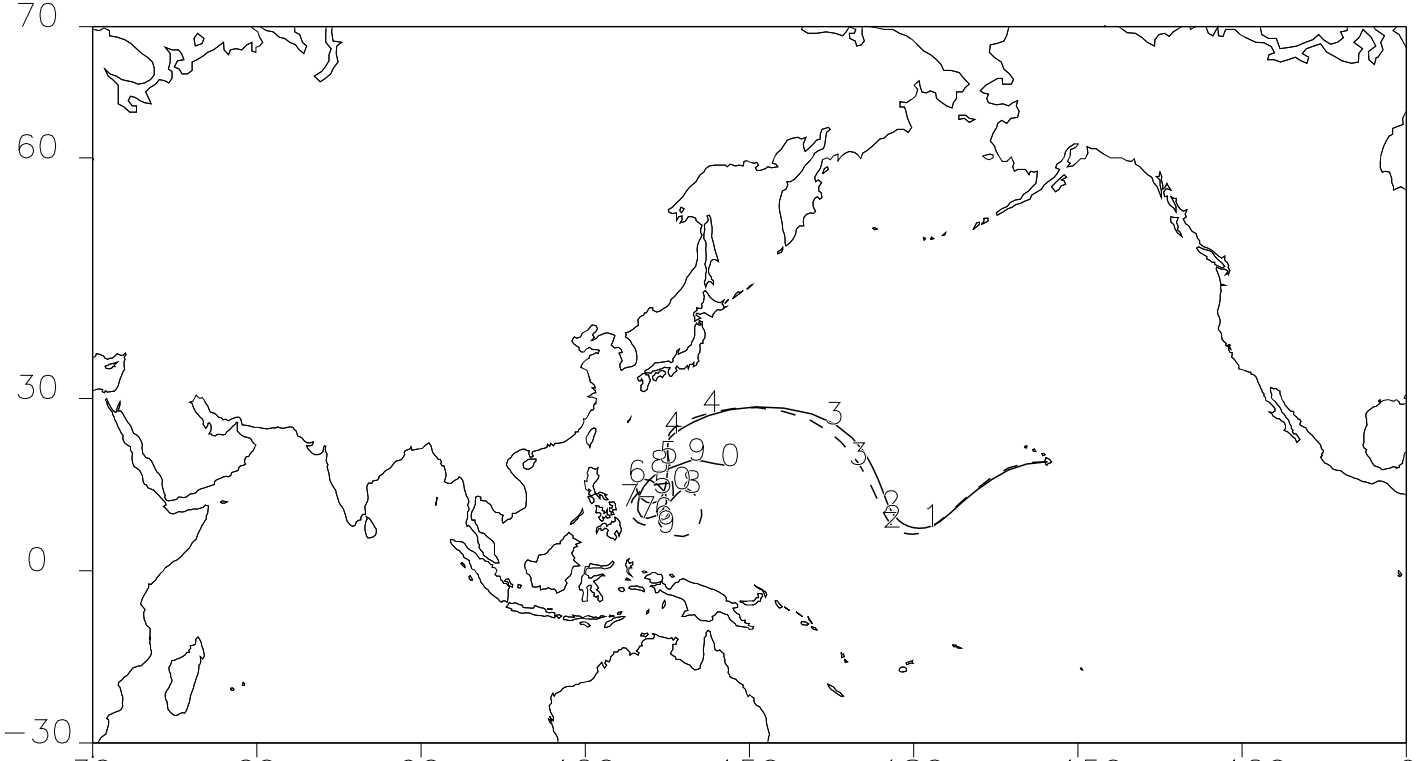
Day	km	hPa	C
0	9.5	304	-32
1	9.3	314	-32
2	11.5	224	-52
3	11.6	215	-55
4	11.1	236	-47
5	10.5	257	-48
6	10.0	276	-45
7	10.9	240	-55
8	10.9	233	-54
9	11.3	225	-56
10	10.4	258	-47

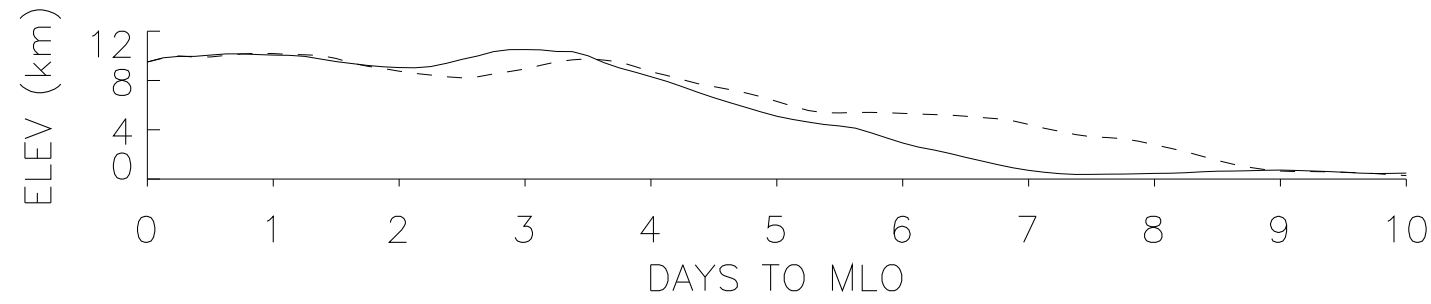
18UT

Day	km	hPa	C
0	9.5	305	-31
1	10.0	284	-36
2	12.4	196	-58
3	10.8	249	-45
4	11.0	241	-43
5	11.8	213	-53
6	10.8	249	-44
7	11.5	224	-49
8	12.3	198	-55
9	11.7	219	-48
10	13.1	173	-58

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

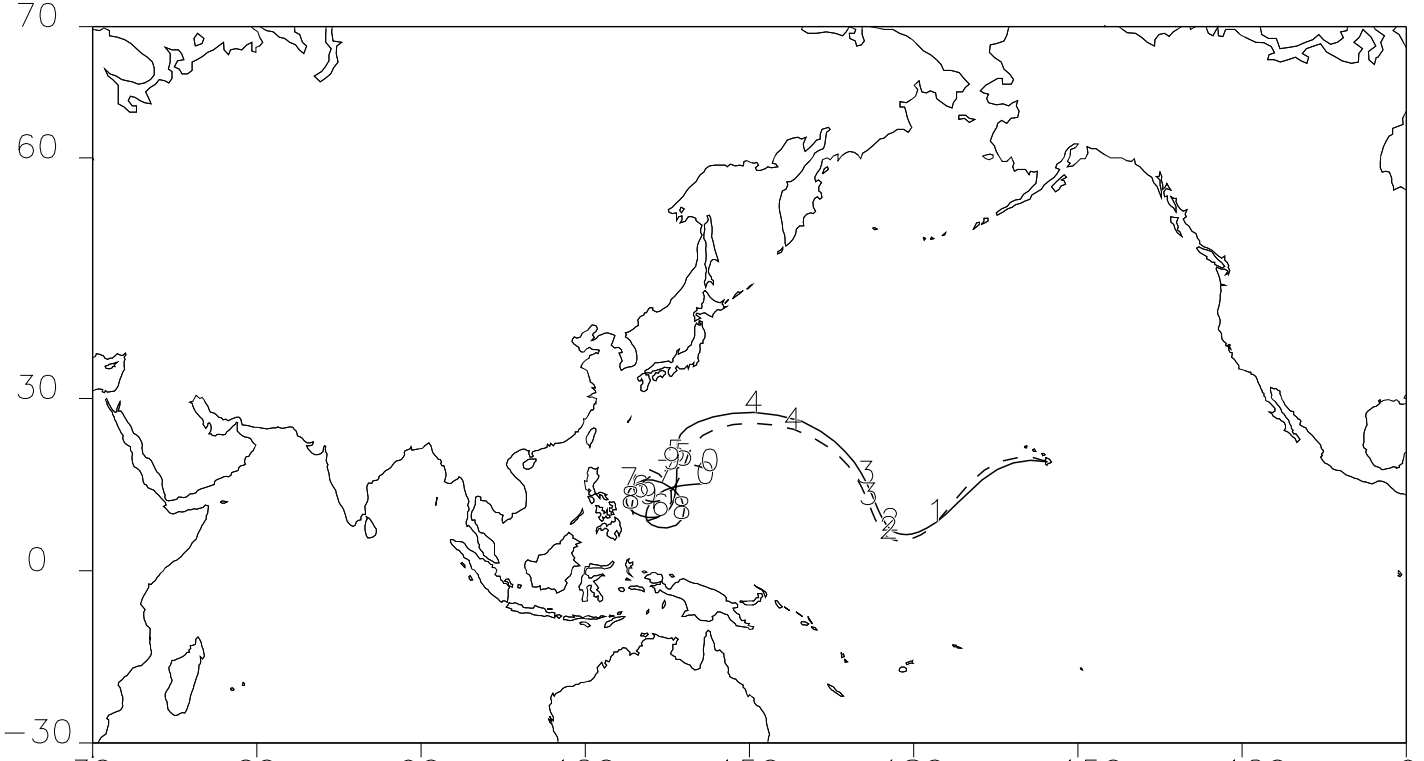
Day	km	hPa	C
0	9.5	305	−31
1	10.1	283	−34
2	9.1	328	−26
3	10.5	263	−40
4	8.3	361	−20
5	5.1	549	1
6	2.9	714	14
7	0.7	927	23
8	0.5	961	24
9	0.7	932	22
10	0.5	958	24

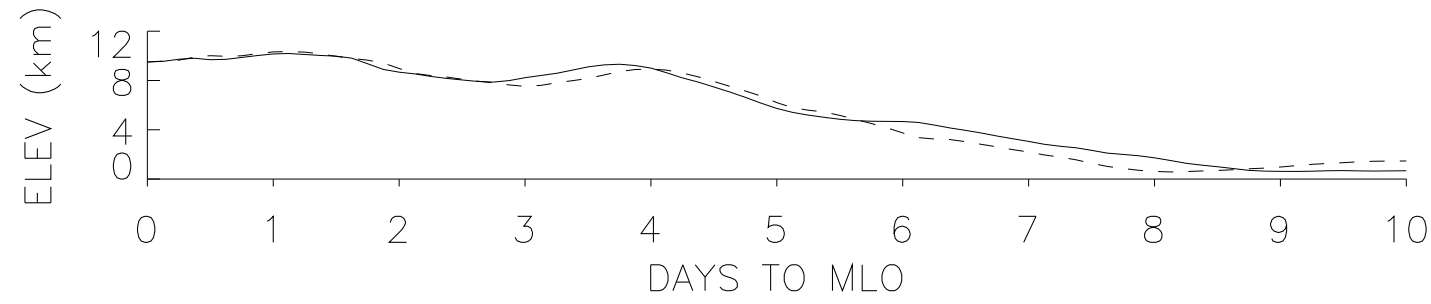
06UT

Day	km	hPa	C
0	9.5	306	−30
1	10.2	278	−35
2	8.8	341	−24
3	8.9	332	−26
4	8.7	339	−26
5	6.3	471	−7
6	5.3	535	−2
7	4.4	597	5
8	2.8	727	12
9	0.6	932	24
10	0.3	975	27

00UT − solid
06UT − dashed

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





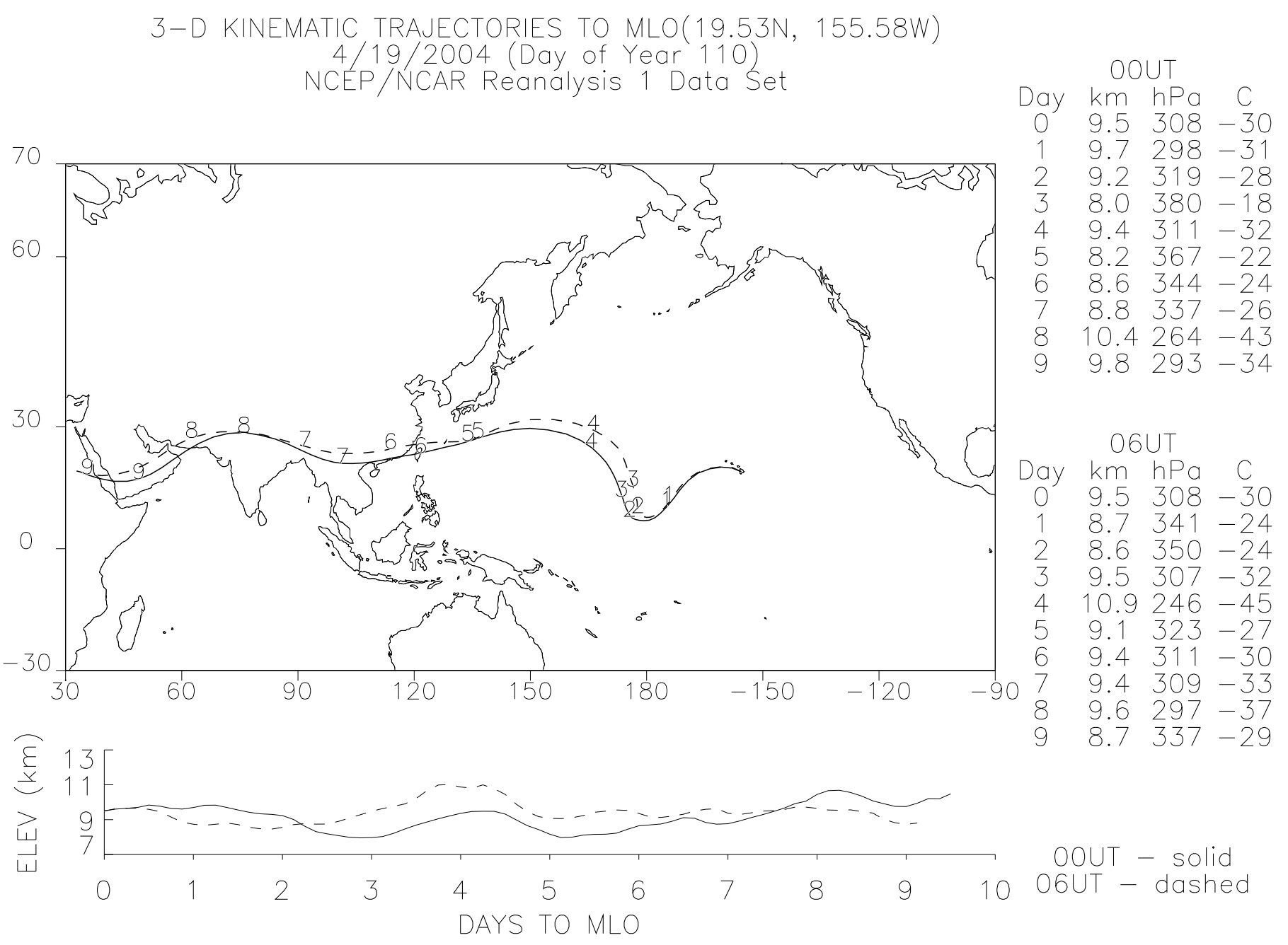
12UT

Day	km	hPa	C
0	9.5	306	−30
1	10.2	280	−35
2	8.7	346	−23
3	8.2	367	−20
4	9.0	325	−29
5	5.7	507	−5
6	4.7	581	3
7	3.1	705	14
8	1.7	826	18
9	0.6	938	25
10	0.7	935	24

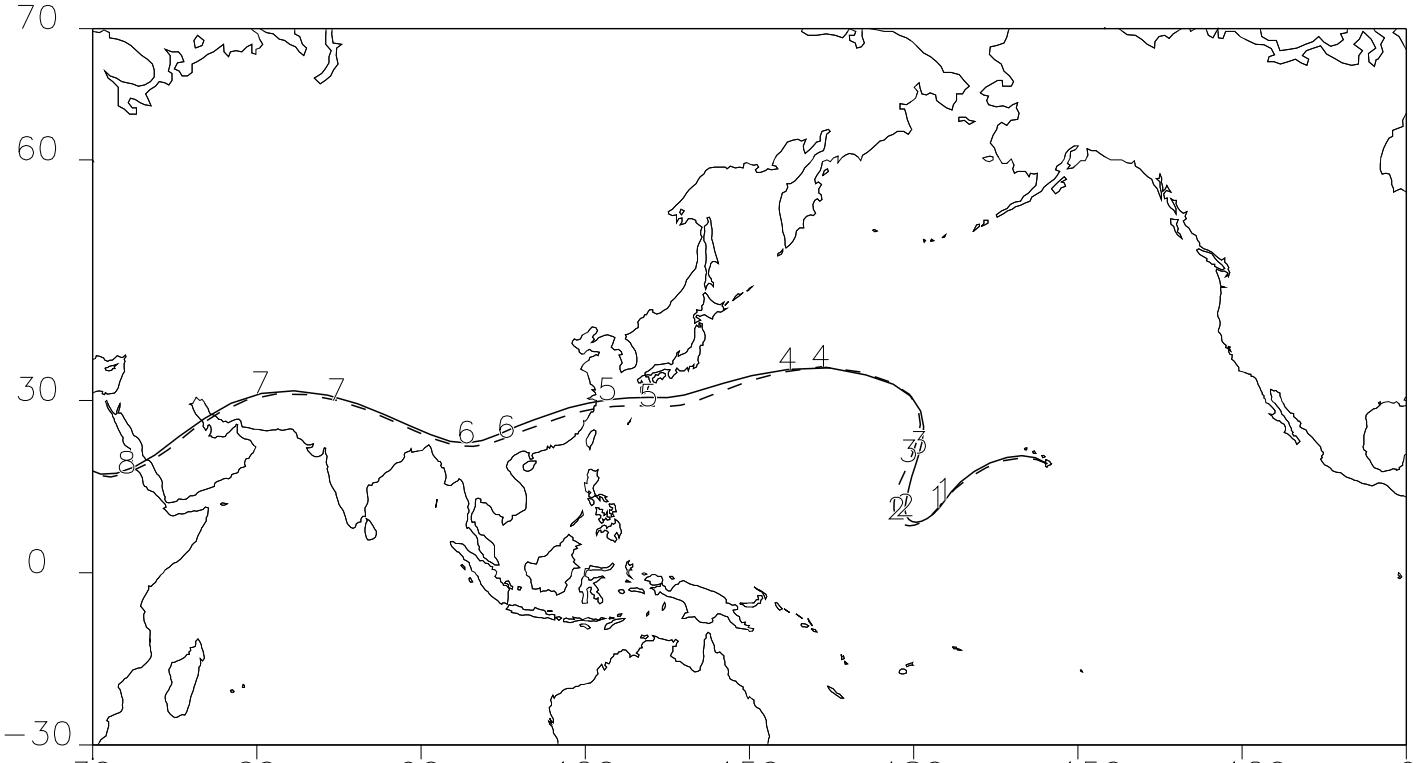
18UT

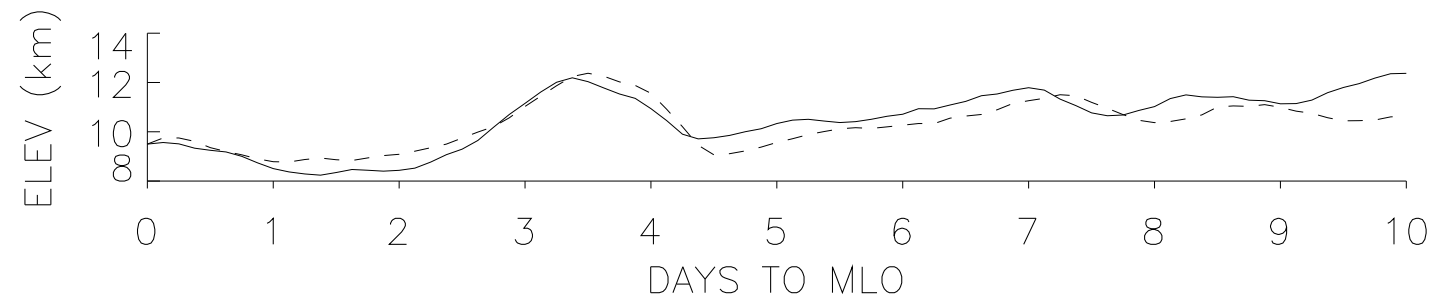
Day	km	hPa	C
0	9.5	307	−30
1	10.3	273	−36
2	9.0	331	−26
3	7.5	402	−15
4	8.9	330	−28
5	6.2	477	−7
6	3.7	647	9
7	2.2	779	16
8	0.6	937	23
9	1.0	904	20
10	1.5	854	18

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 9.5 308 -30
1 9.7 298 -31
2 9.2 319 -28
3 8.0 380 -18
4 9.4 311 -32
5 8.2 367 -22
6 8.6 344 -24
7 8.8 337 -26
8 10.4 264 -43
9 9.8 293 -34
06UT
Day km hPa C
0 9.5 308 -30
1 8.7 341 -24
2 8.6 350 -24
3 9.5 307 -32
4 10.9 246 -45
5 9.1 323 -27
6 9.4 311 -30
7 9.4 309 -33
8 9.6 297 -37
9 8.7 337 -29
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)
4/19/2004 (Day of Year 110)
NCEP/NCAR Reanalysis 1 Data Set





12UT

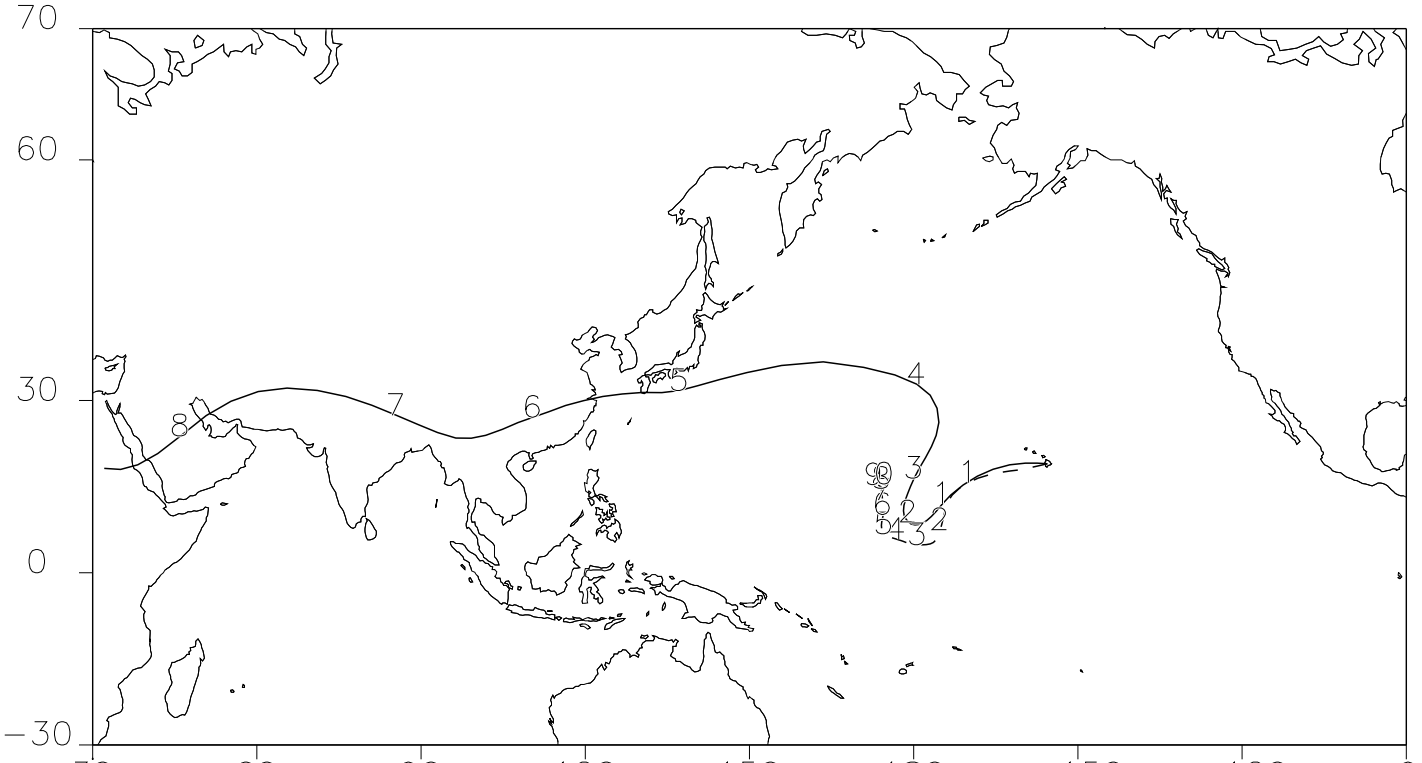
Day	km	hPa	C
0	9.5	307	−30
1	8.5	353	−23
2	8.4	356	−23
3	11.2	240	−48
4	10.9	238	−49
5	10.3	267	−41
6	10.7	254	−41
7	11.8	213	−53
8	11.0	244	−45
9	11.1	236	−48
10	12.4	197	−55

18UT

Day	km	hPa	C
0	9.5	308	−30
1	8.8	340	−24
2	9.1	325	−28
3	11.0	245	−46
4	11.6	216	−54
5	9.6	299	−34
6	10.3	271	−37
7	11.3	233	−50
8	10.4	268	−41
9	11.0	243	−46
10	10.6	257	−42

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

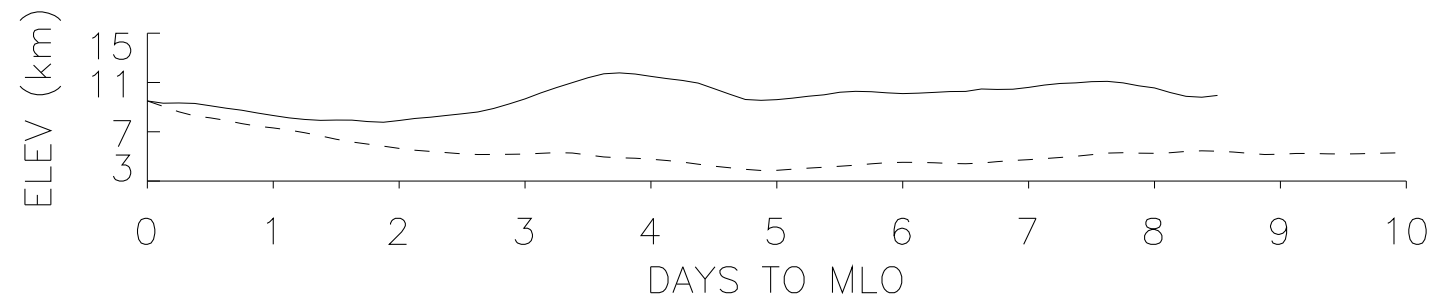


00UT

Day	km	hPa	C
0	9.5	306	−31
1	8.3	362	−21
2	7.9	382	−19
3	9.7	299	−36
4	11.5	224	−54
5	9.6	296	−35
6	10.1	276	−39
7	10.6	255	−44
8	10.6	255	−45

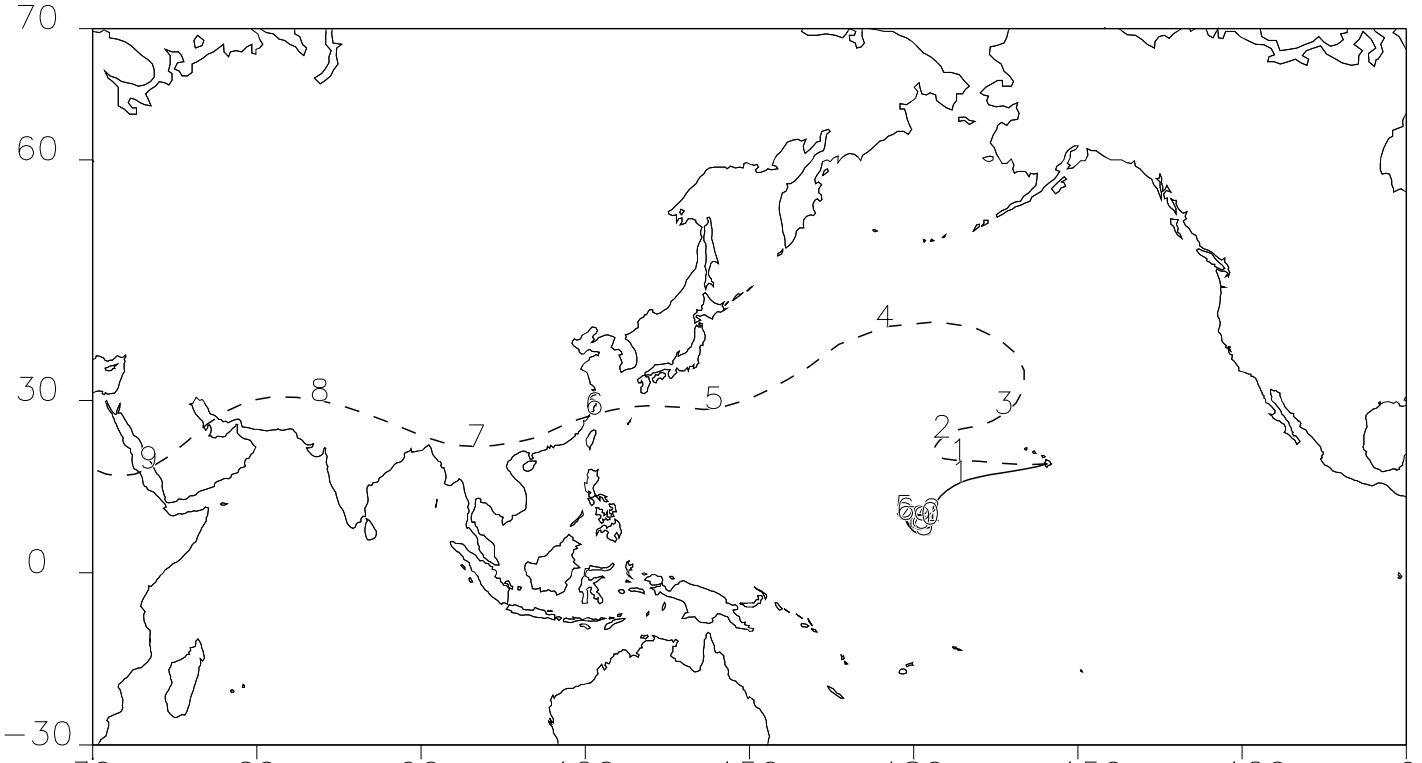
06UT

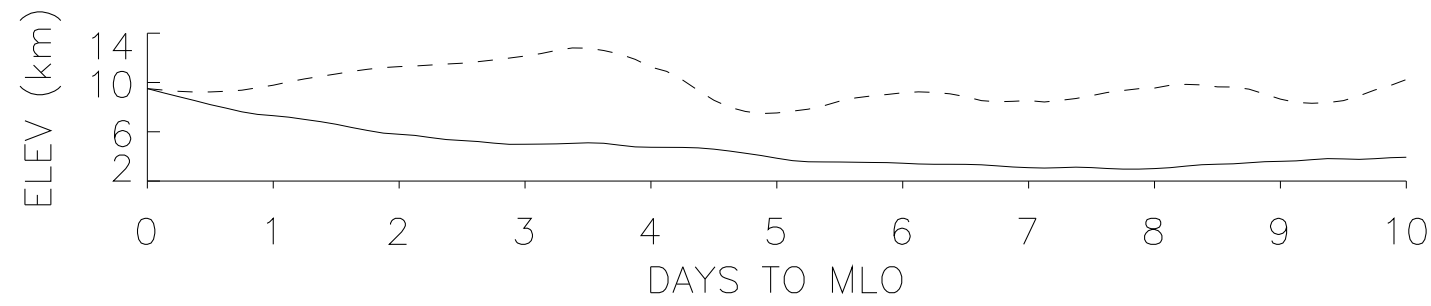
Day	km	hPa	C
0	9.5	306	−33
1	7.3	414	−16
2	5.7	512	−4
3	5.2	543	−2
4	4.8	573	1
5	3.9	640	7
6	4.5	592	2
7	4.7	577	2
8	5.3	540	−1
9	5.2	546	0
10	5.3	537	−1



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





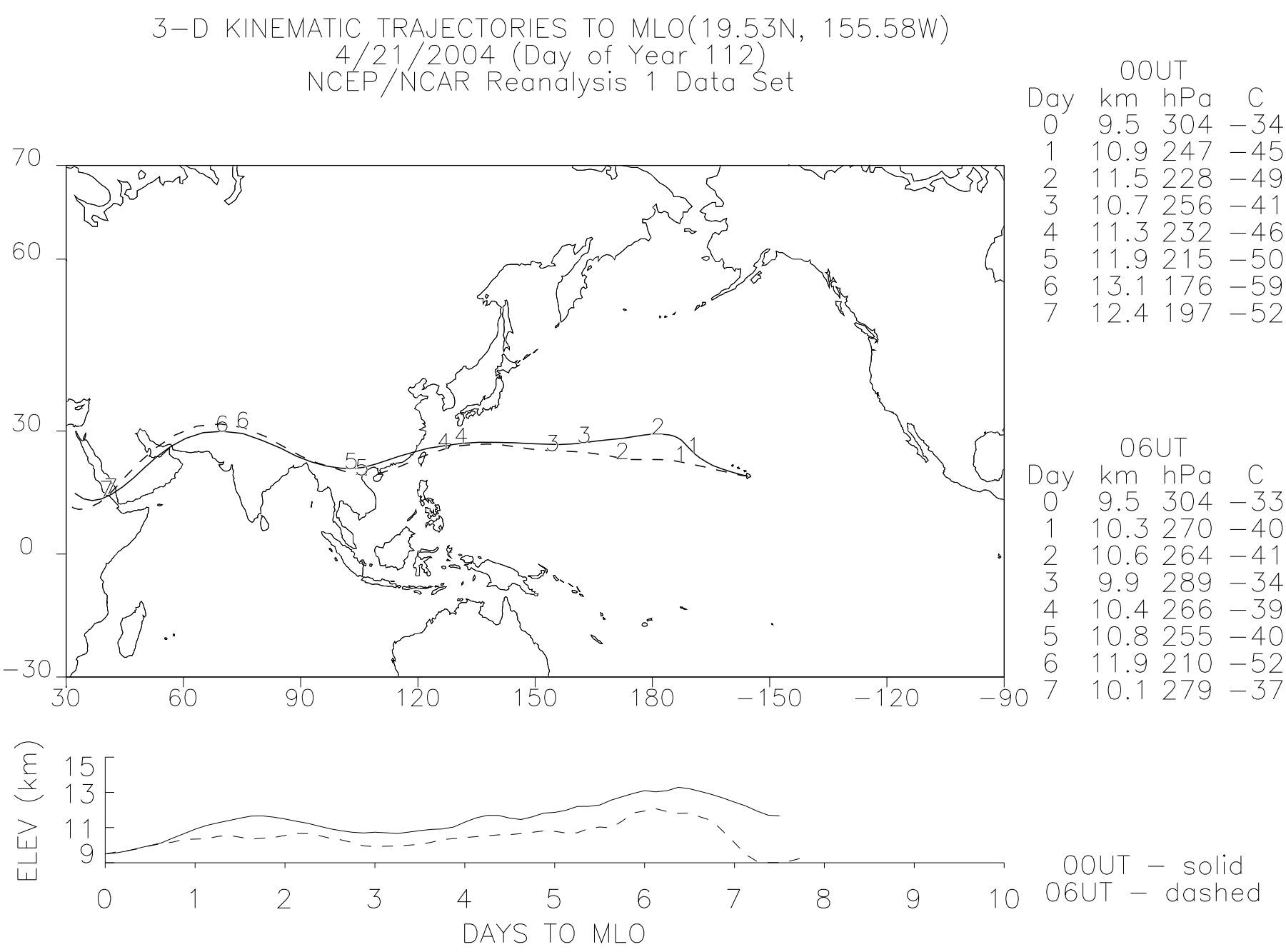
12UT

Day	km	hPa	C
0	9.5	304	−35
1	7.3	415	−16
2	5.8	504	−5
3	5.0	557	−1
4	4.7	576	1
5	3.9	643	6
6	3.4	675	7
7	3.1	706	10
8	3.0	711	11
9	3.6	663	7
10	3.9	636	6

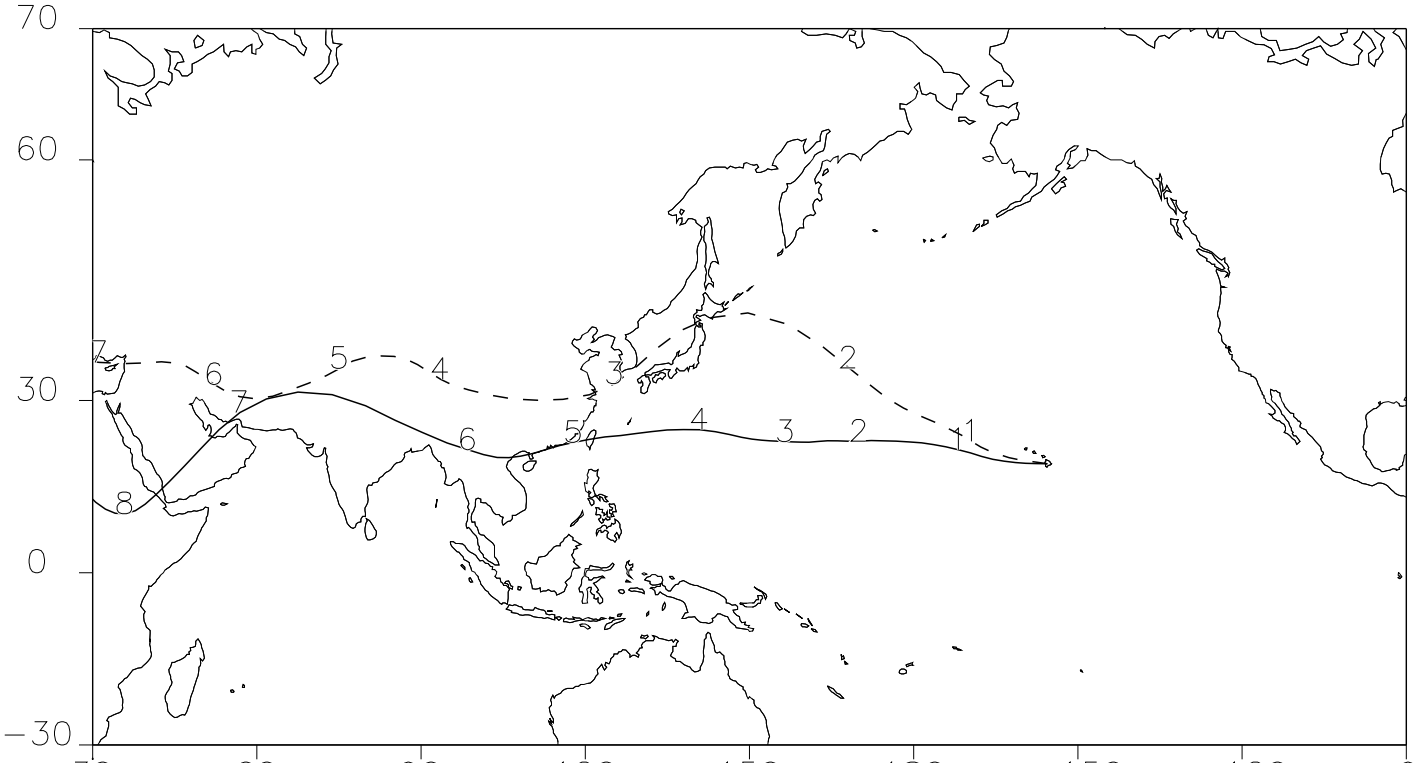
18UT

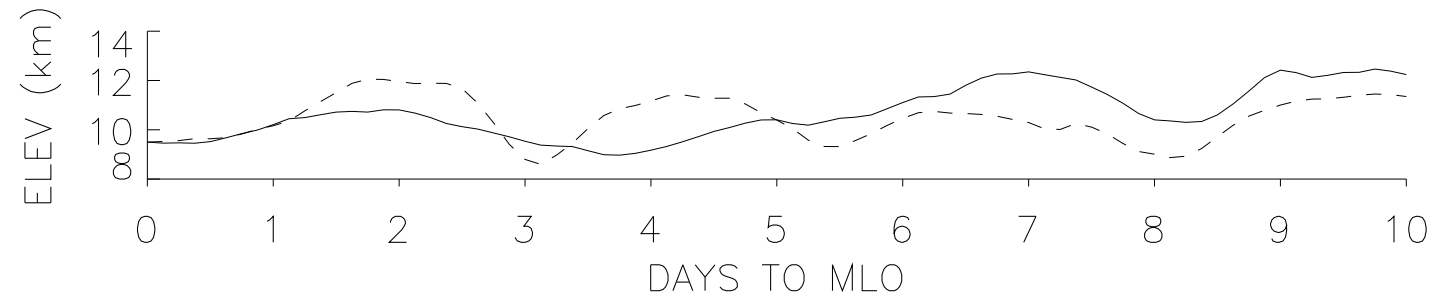
Day	km	hPa	C
0	9.5	304	−35
1	9.8	294	−34
2	11.3	235	−49
3	12.1	205	−55
4	11.3	222	−52
5	7.5	397	−17
6	9.2	317	−31
7	8.5	348	−26
8	9.5	301	−36
9	8.7	342	−28
10	10.2	272	−42

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 9.5 304 -34
1 10.9 247 -45
2 11.5 228 -49
3 10.7 256 -41
4 11.3 232 -46
5 11.9 215 -50
6 13.1 176 -59
7 12.4 197 -52
06UT
Day km hPa C
0 9.5 304 -33
1 10.3 270 -40
2 10.6 264 -41
3 9.9 289 -34
4 10.4 266 -39
5 10.8 255 -40
6 11.9 210 -52
7 10.1 279 -37
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

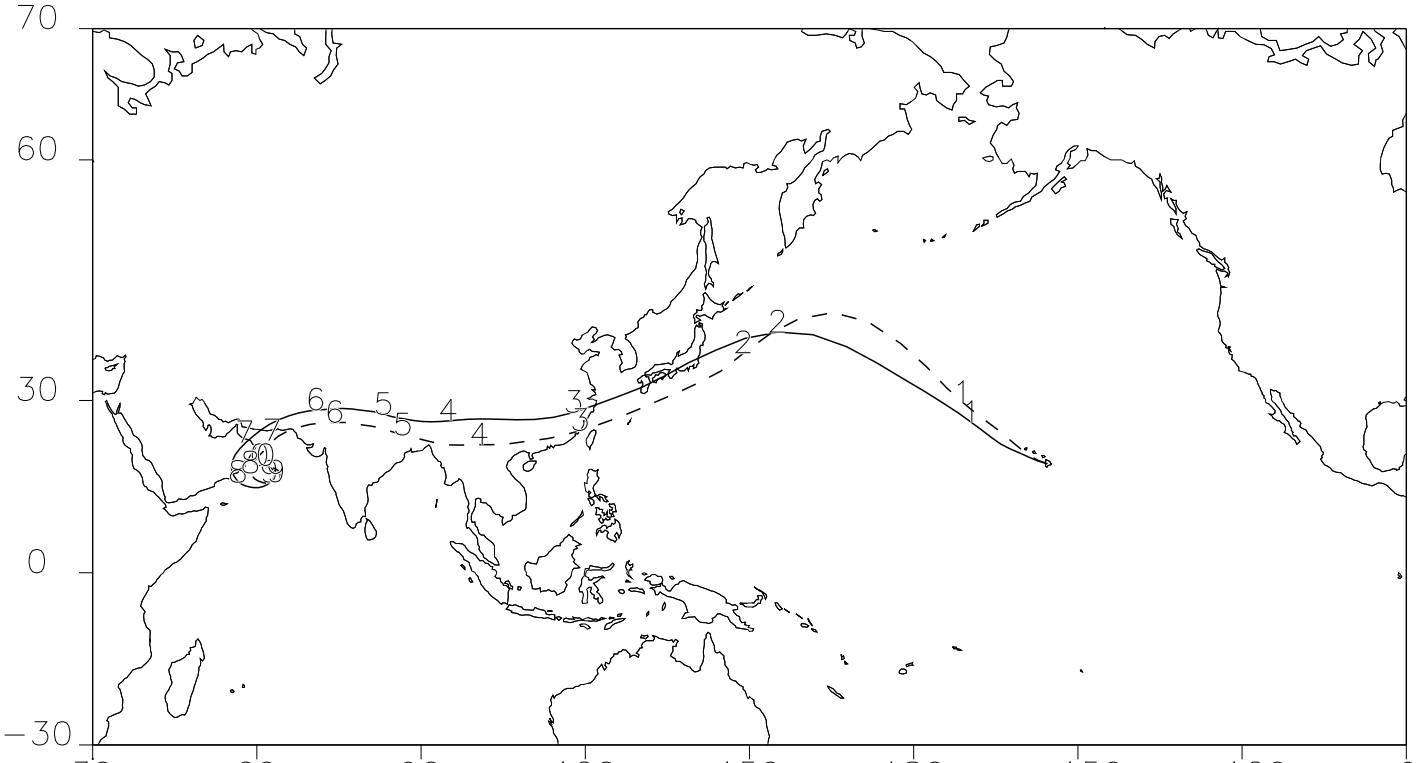
Day	km	hPa	C
0	9.5	303	−35
1	10.2	276	−39
2	10.8	255	−43
3	9.5	308	−30
4	9.2	321	−27
5	10.4	268	−38
6	11.1	241	−44
7	12.3	198	−55
8	10.4	269	−38
9	12.4	196	−56
10	12.2	203	−52

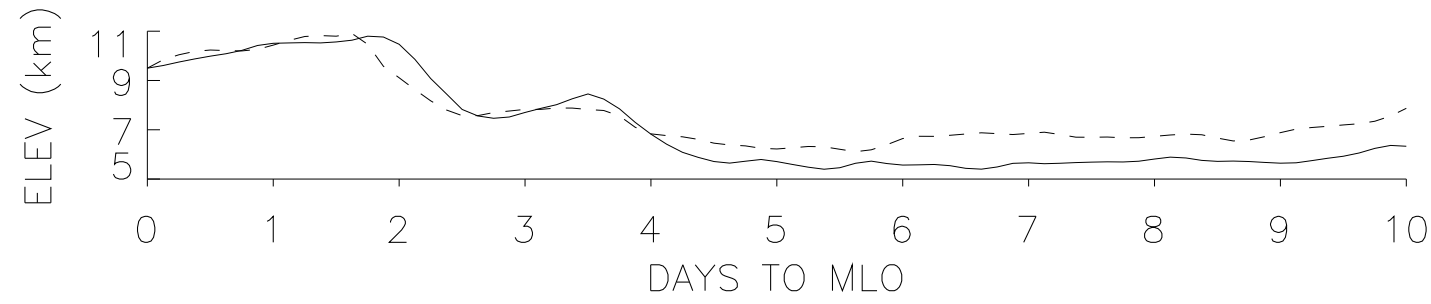
18UT

Day	km	hPa	C
0	9.5	304	−36
1	10.2	275	−41
2	12.0	204	−59
3	8.8	325	−33
4	11.2	230	−51
5	10.4	259	−46
6	10.5	256	−51
7	10.3	261	−49
8	9.0	314	−38
9	11.0	233	−58
10	11.3	218	−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

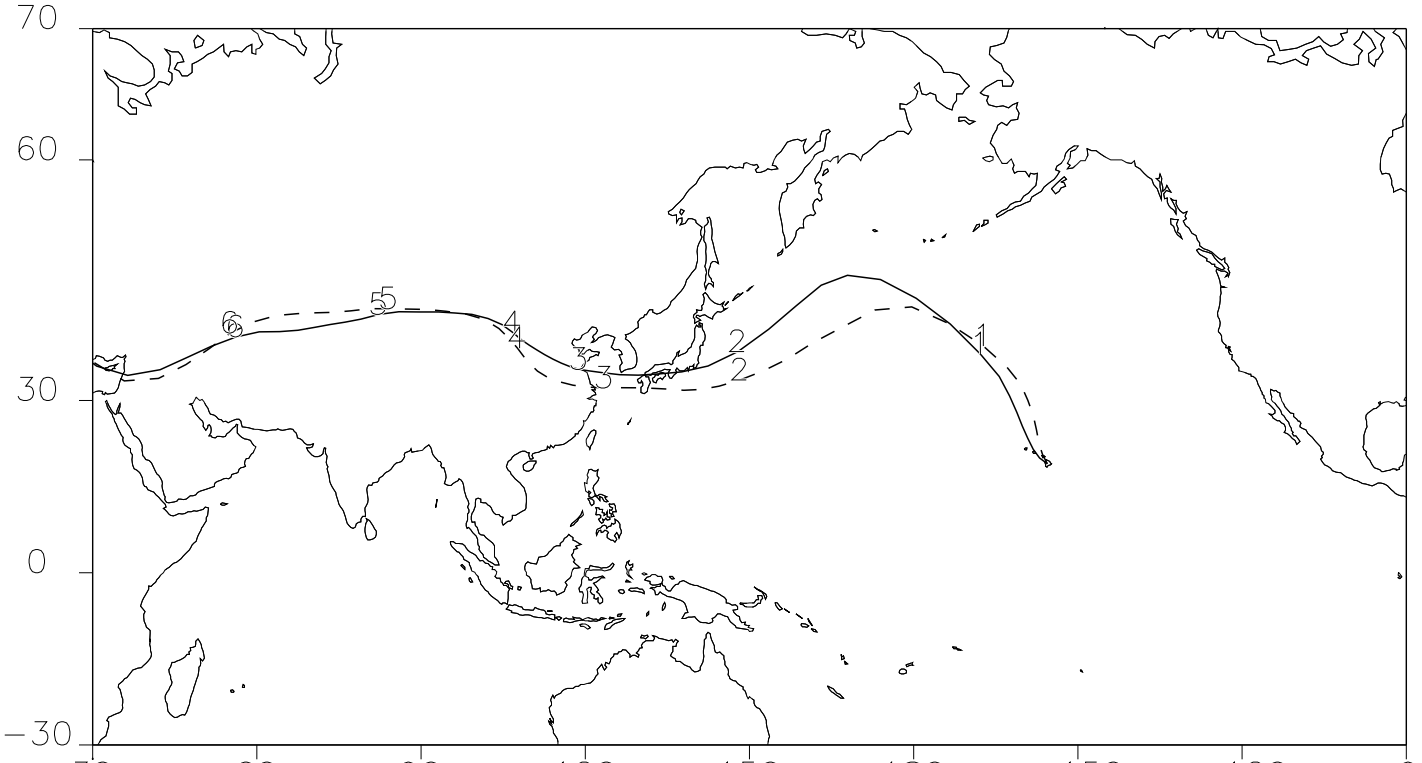
Day	km	hPa	C
0	9.5	304	−37
1	10.5	260	−45
2	10.5	256	−46
3	7.7	386	−22
4	6.8	435	−16
5	5.7	505	−8
6	5.6	516	−6
7	5.7	513	−6
8	5.8	504	−6
9	5.6	515	−3
10	6.3	472	−9

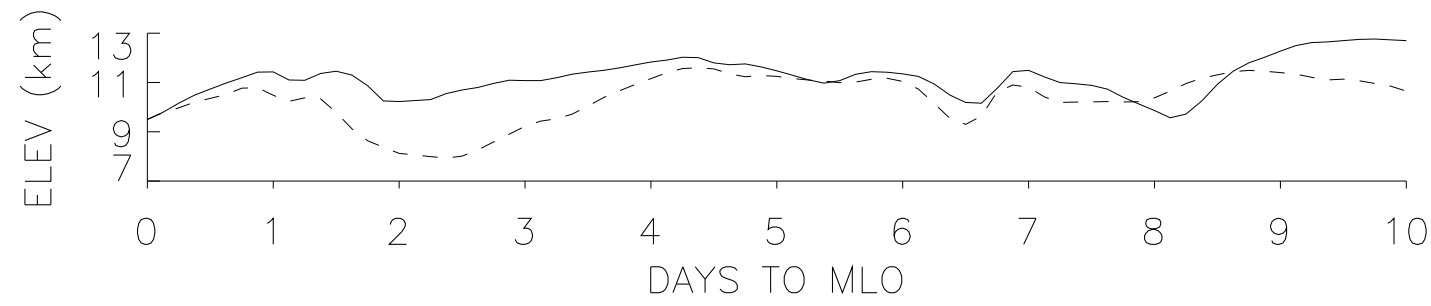
06UT

Day	km	hPa	C
0	9.5	303	−38
1	10.4	260	−45
2	9.1	312	−35
3	7.8	384	−20
4	6.8	439	−14
5	6.2	476	−9
6	6.6	452	−13
7	6.9	442	−13
8	6.7	449	−10
9	6.9	440	−11
10	7.9	387	−19

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





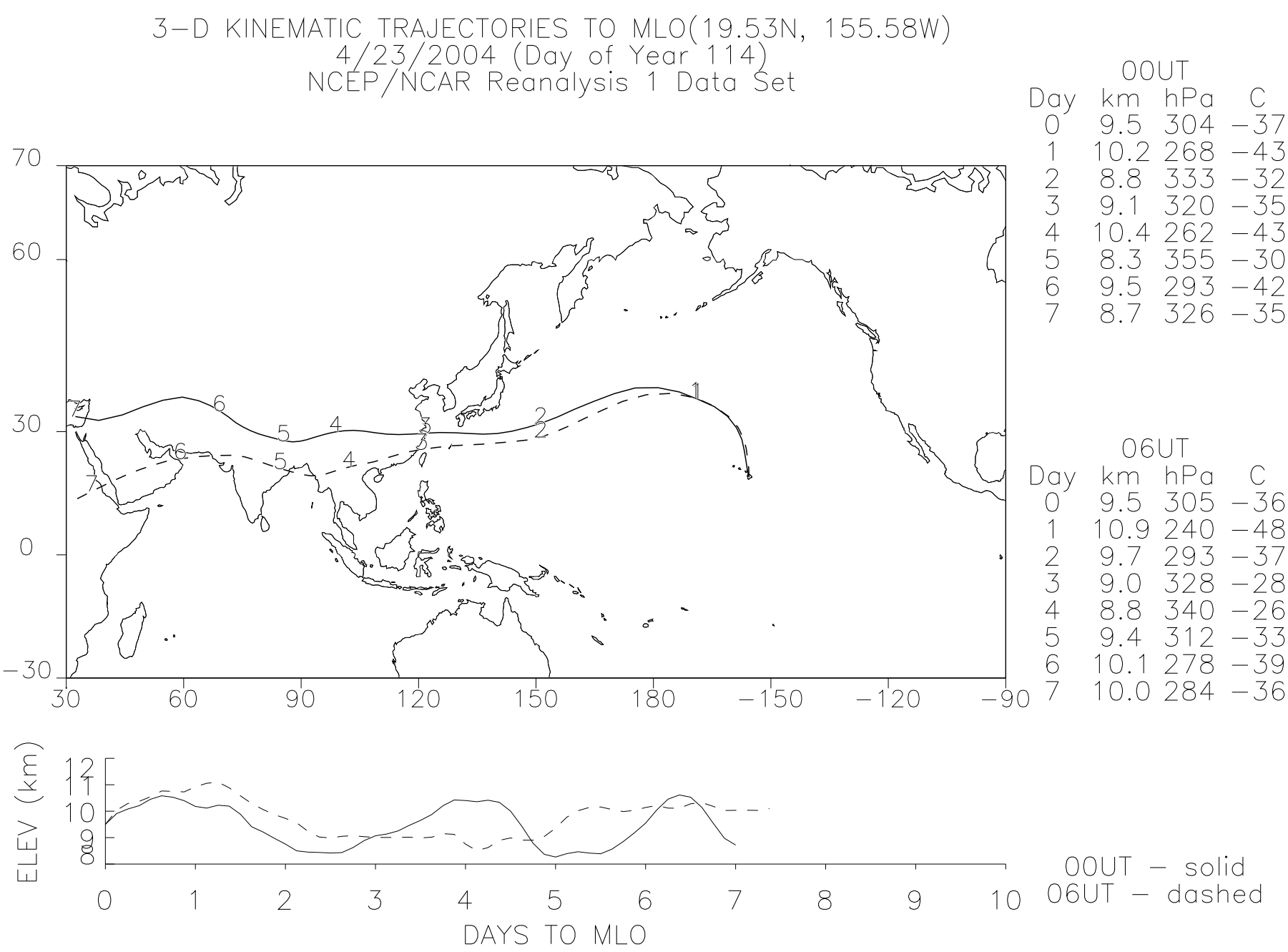
12UT

Day	km	hPa	C
0	9.5	303	−38
1	11.4	216	−56
2	10.2	260	−47
3	11.1	231	−53
4	11.8	203	−61
5	11.5	215	−58
6	11.3	217	−54
7	11.5	212	−56
8	9.9	271	−46
9	12.3	188	−61
10	12.7	175	−64

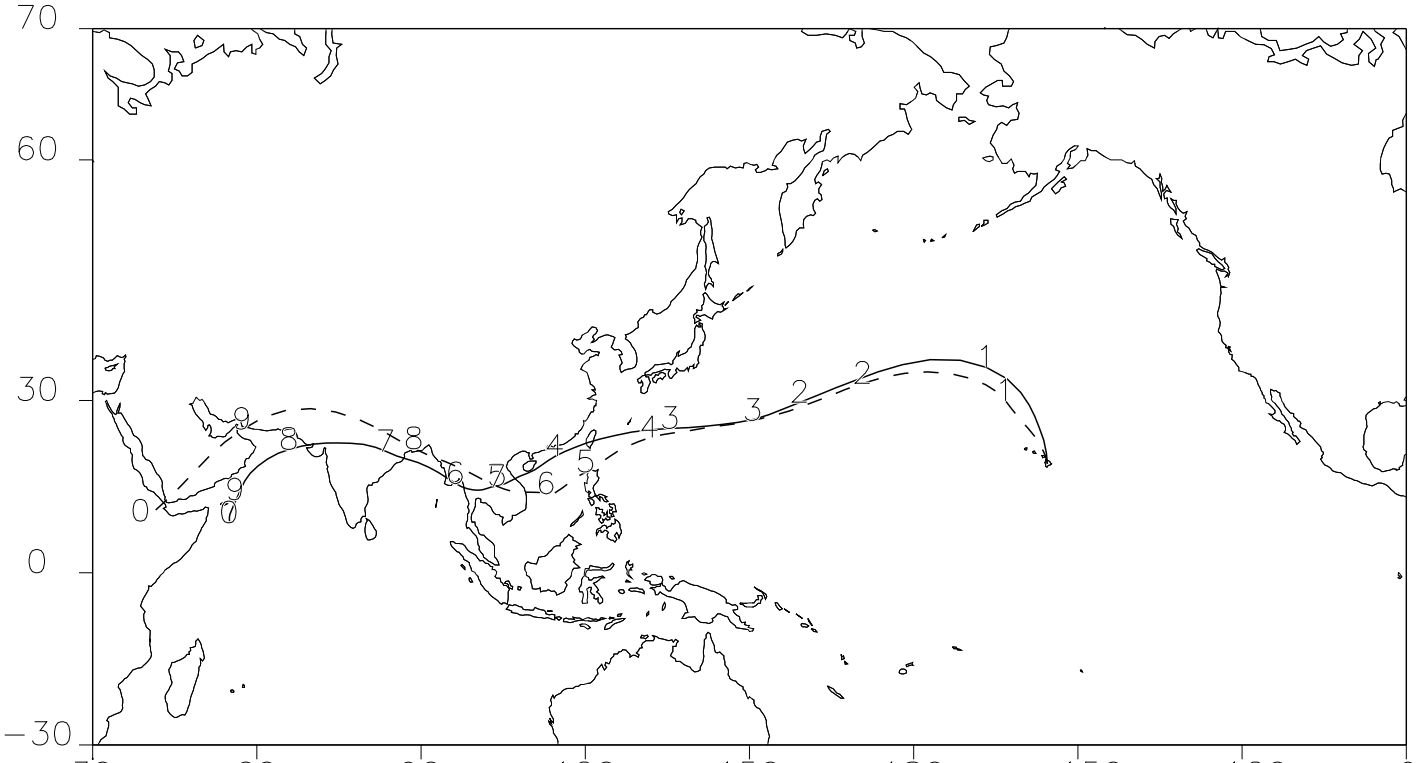
18UT

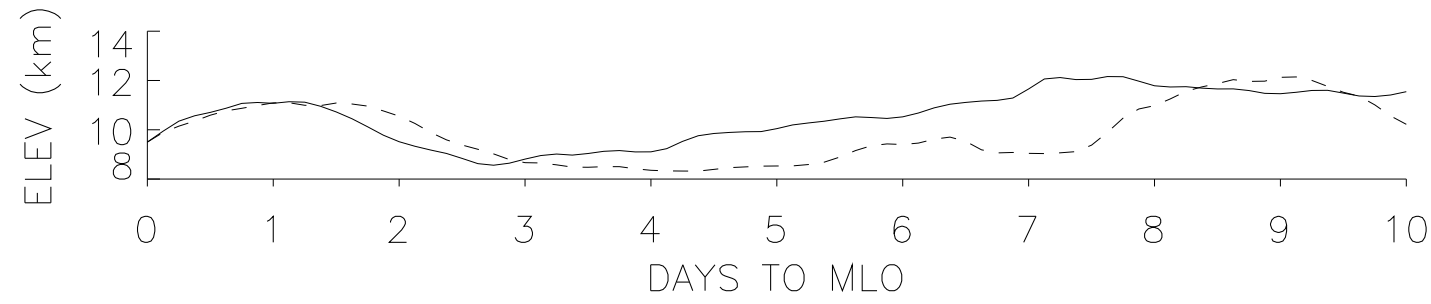
Day	km	hPa	C
0	9.5	304	−38
1	10.5	251	−50
2	8.1	361	−29
3	9.2	309	−39
4	11.2	227	−57
5	11.2	222	−57
6	11.0	227	−55
7	10.8	236	−56
8	10.4	249	−54
9	11.4	214	−61
10	10.7	237	−53

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 9.5 304 -37
1 10.2 268 -43
2 8.8 333 -32
3 9.1 320 -35
4 10.4 262 -43
5 8.3 355 -30
6 9.5 293 -42
7 8.7 326 -35
06UT
Day km hPa C
0 9.5 305 -36
1 10.9 240 -48
2 9.7 293 -37
3 9.0 328 -28
4 8.8 340 -26
5 9.4 312 -33
6 10.1 278 -39
7 10.0 284 -36
70
60
30
0
-30
30 60 90 120 150 180 -150 -120 -90
ELEV (km)
12
11
10
9
8
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

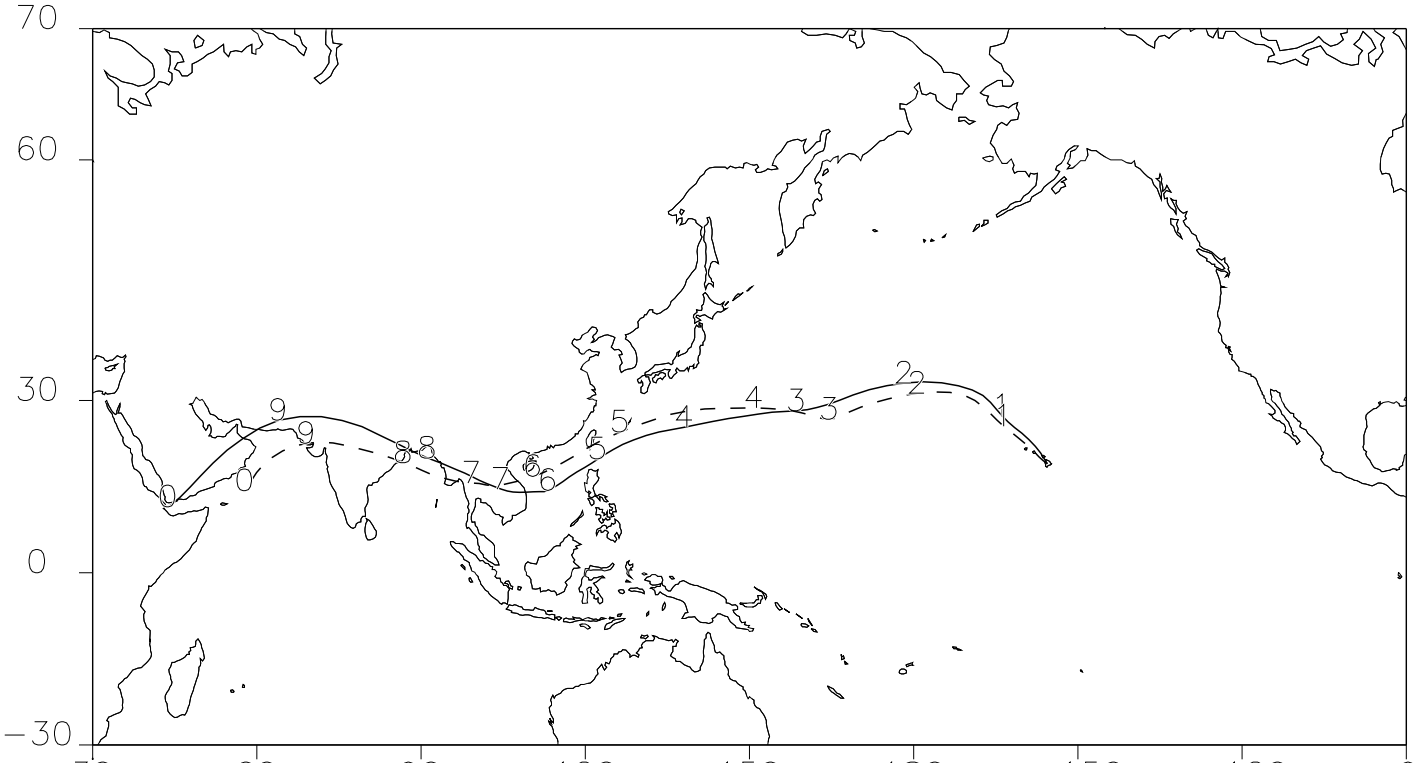
Day	km	hPa	C
0	9.5	305	−36
1	11.1	238	−49
2	9.5	303	−35
3	8.8	339	−25
4	9.1	326	−26
5	10.0	285	−33
6	10.5	266	−38
7	11.7	224	−48
8	11.8	220	−47
9	11.5	232	−45
10	11.5	229	−45

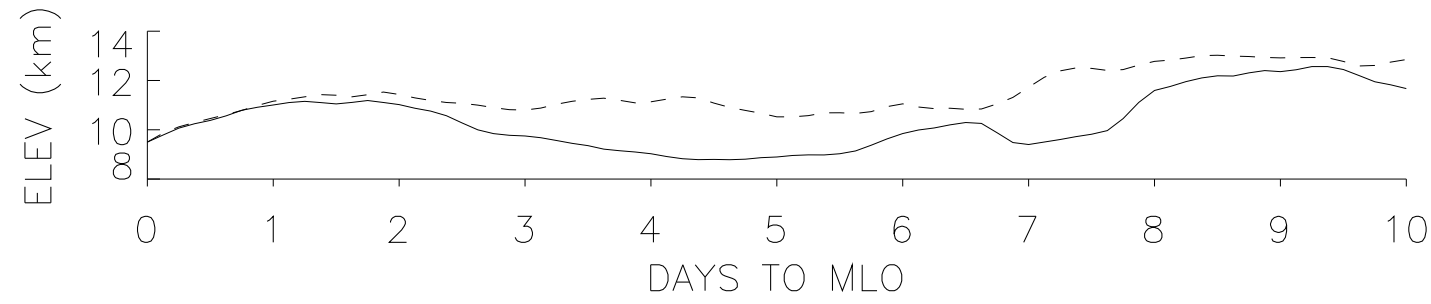
18UT

Day	km	hPa	C
0	9.5	307	−35
1	11.1	240	−48
2	10.6	258	−44
3	8.7	344	−26
4	8.4	361	−21
5	8.5	353	−21
6	9.4	312	−29
7	9.0	328	−27
8	11.0	248	−44
9	12.1	208	−52
10	10.2	278	−35

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

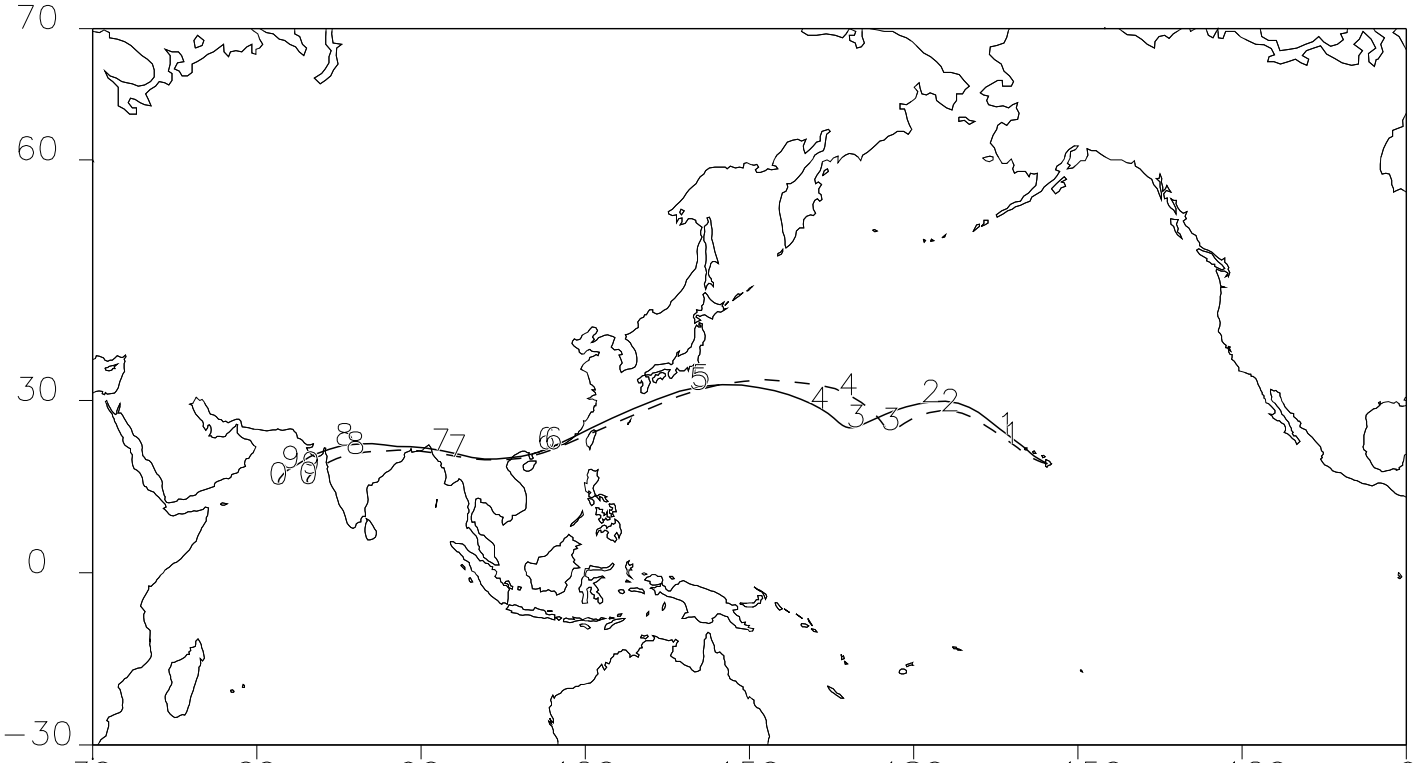
Day	km	hPa	C
0	9.5	306	-35
1	11.0	245	-47
2	11.0	242	-48
3	9.7	295	-36
4	9.0	330	-27
5	8.9	336	-25
6	9.8	294	-32
7	9.4	312	-30
8	11.6	226	-48
9	12.4	200	-54
10	11.7	223	-46

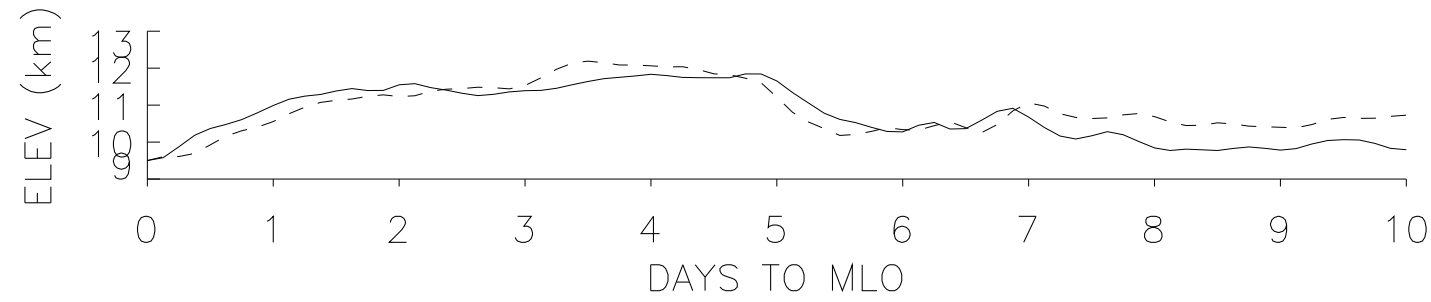
06UT

Day	km	hPa	C
0	9.5	306	-34
1	11.2	239	-49
2	11.4	228	-49
3	10.8	253	-43
4	11.1	242	-45
5	10.5	265	-38
6	11.1	246	-41
7	11.7	223	-48
8	12.8	190	-55
9	12.9	186	-56
10	12.8	189	-55

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

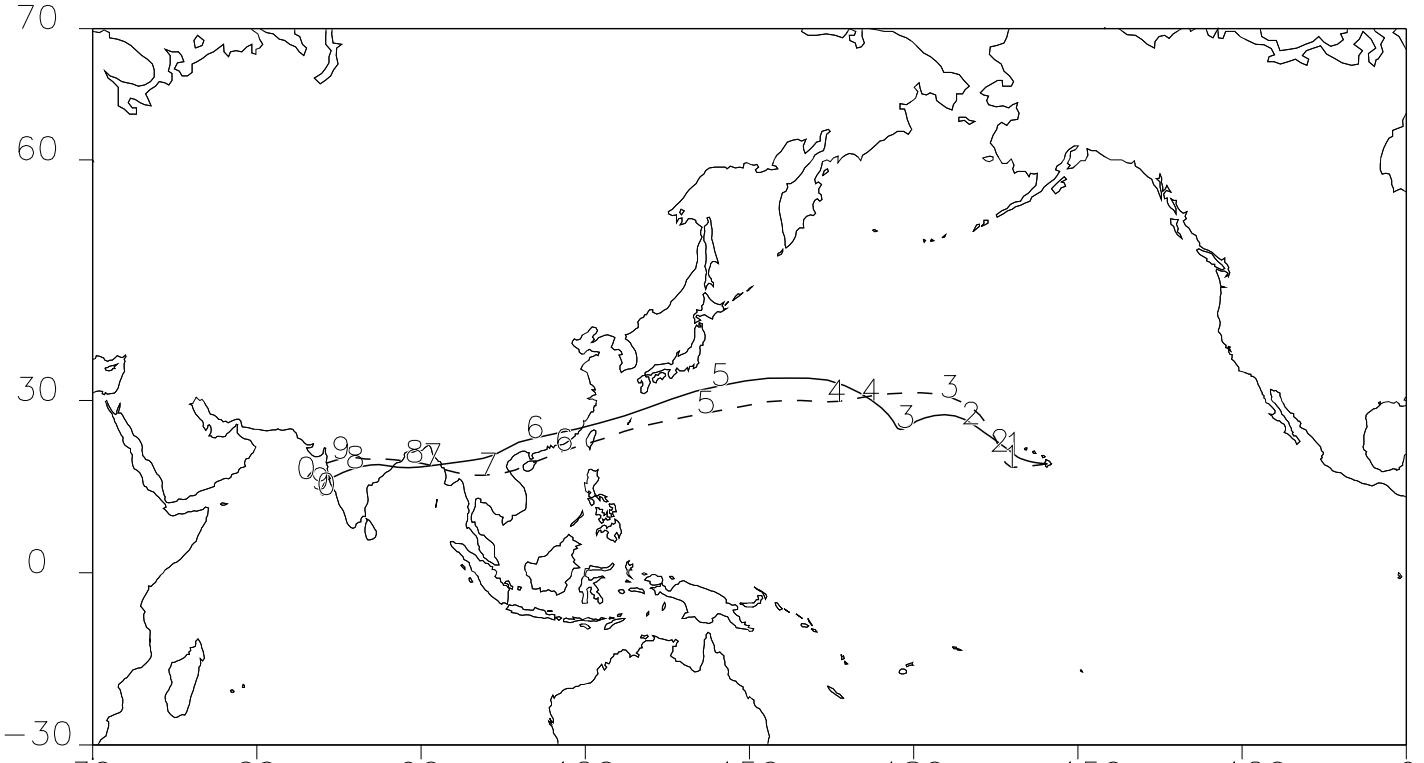
Day	km	hPa	C
0	9.5	305	−34
1	11.0	246	−47
2	11.6	225	−50
3	11.4	232	−48
4	11.8	217	−51
5	11.7	222	−51
6	10.3	274	−36
7	10.7	258	−40
8	9.8	293	−33
9	9.8	297	−32
10	9.8	296	−32

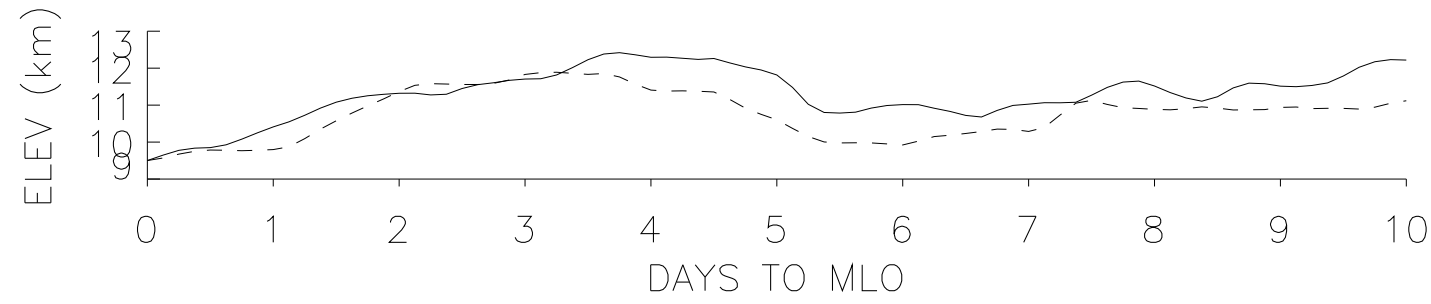
18UT

Day	km	hPa	C
0	9.5	306	−34
1	10.6	263	−44
2	11.2	236	−48
3	11.5	227	−50
4	12.1	207	−54
5	11.2	236	−48
6	10.3	272	−37
7	11.1	244	−44
8	10.7	260	−40
9	10.4	273	−36
10	10.7	261	−38

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

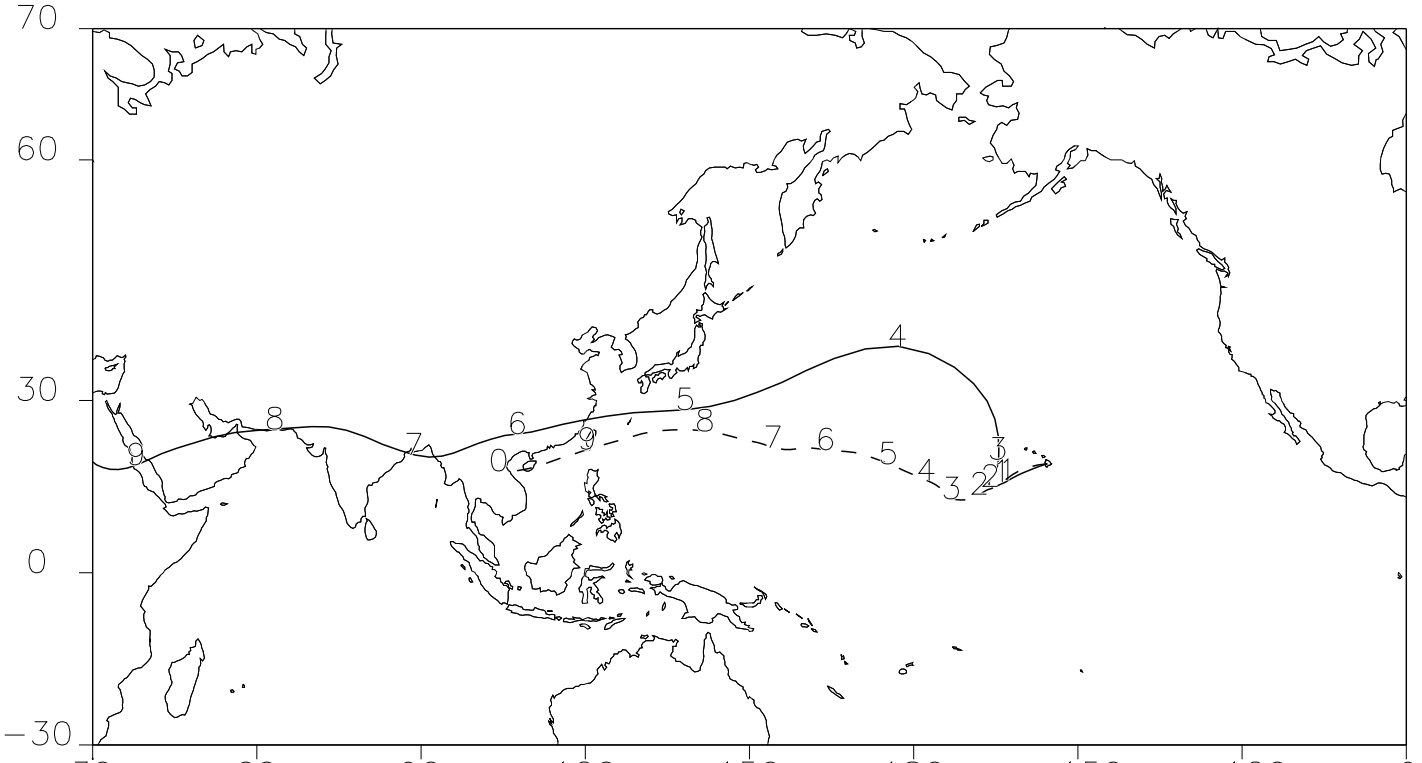
Day	km	hPa	C
0	9.5	305	−34
1	10.4	269	−41
2	11.3	235	−49
3	11.7	221	−51
4	12.3	200	−56
5	11.8	215	−51
6	11.0	245	−44
7	11.0	245	−44
8	11.5	229	−46
9	11.5	230	−45
10	12.2	207	−51

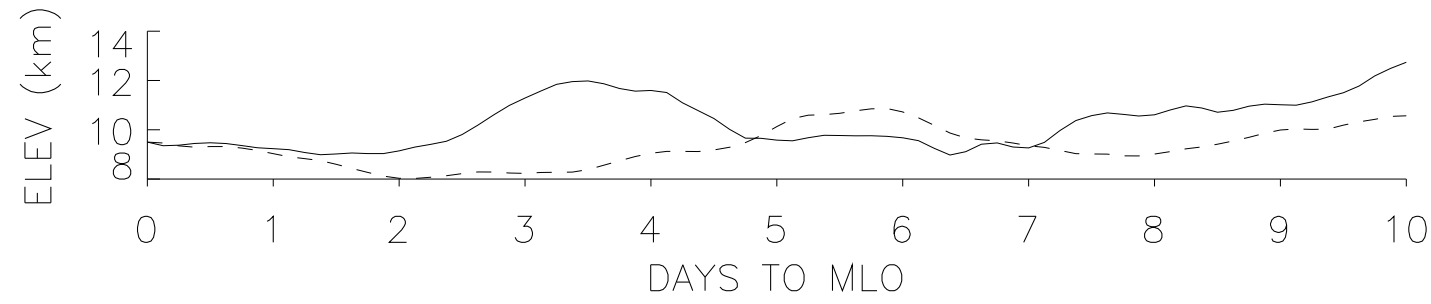
06UT

Day	km	hPa	C
0	9.5	305	−34
1	9.8	294	−36
2	11.4	233	−50
3	11.8	215	−52
4	11.4	230	−48
5	10.6	261	−40
6	9.9	290	−33
7	10.3	275	−37
8	10.9	253	−41
9	10.9	252	−42
10	11.1	246	−42

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

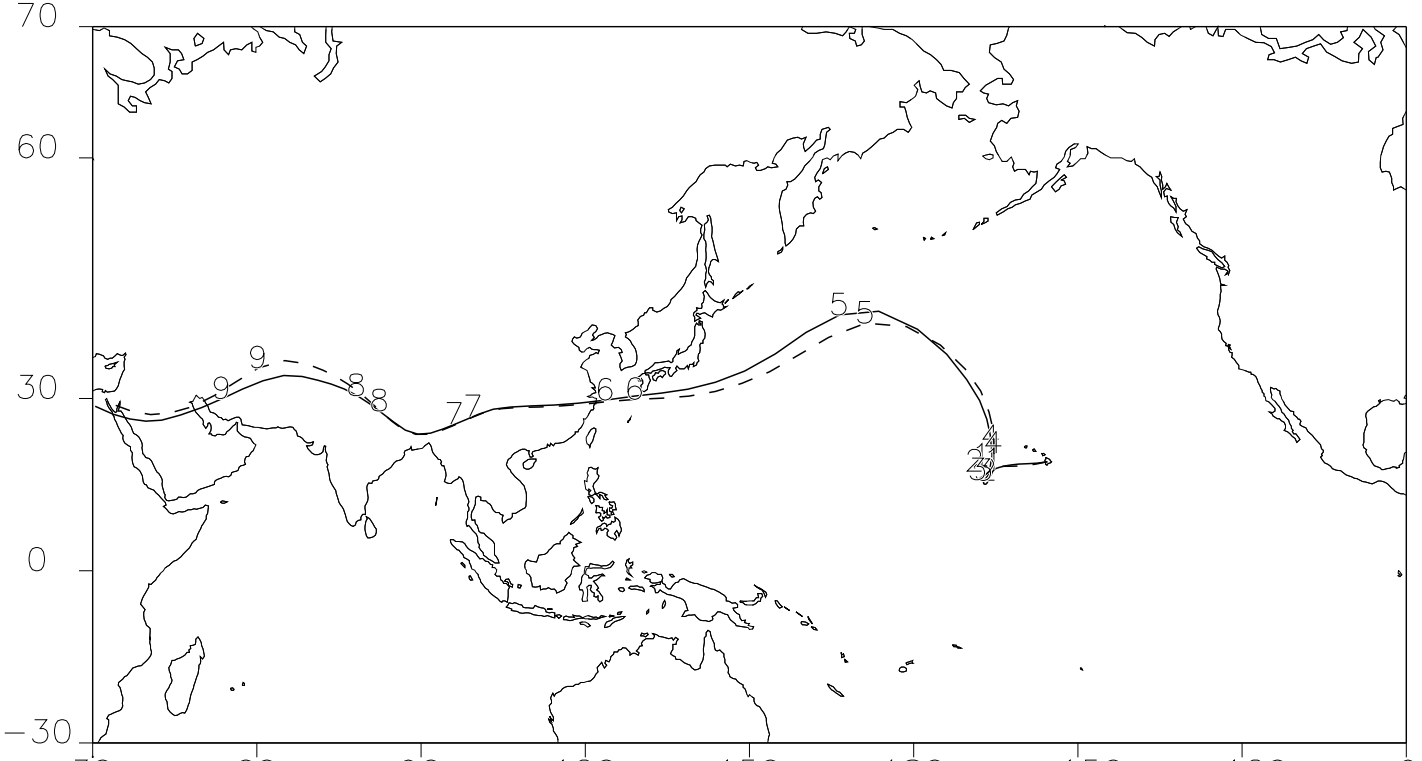
Day	km	hPa	C
0	9.5	304	-36
1	9.2	318	-31
2	9.1	323	-30
3	11.3	235	-50
4	11.6	216	-53
5	9.6	300	-34
6	9.7	298	-33
7	9.3	315	-32
8	10.6	258	-43
9	11.0	245	-46
10	12.7	187	-60

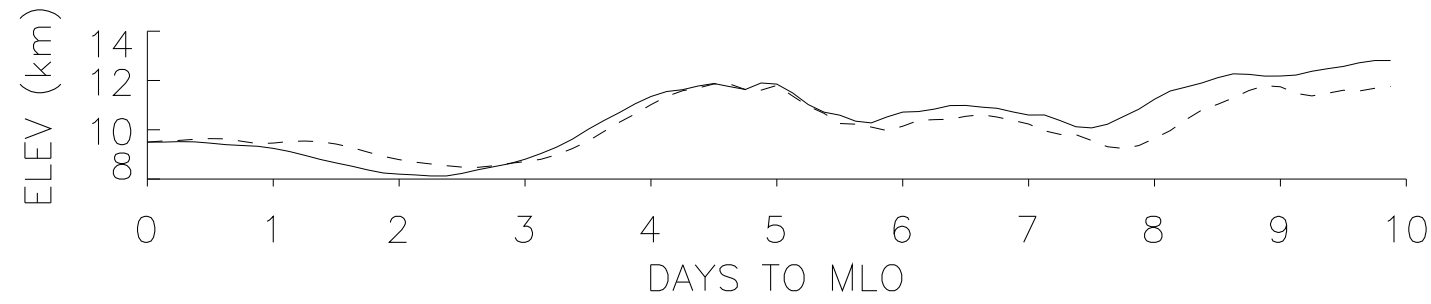
18UT

Day	km	hPa	C
0	9.5	303	-36
1	9.0	327	-29
2	8.0	377	-20
3	8.2	366	-22
4	9.0	326	-29
5	10.1	280	-38
6	10.7	258	-43
7	9.4	315	-29
8	9.0	327	-26
9	10.0	285	-34
10	10.6	264	-38

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

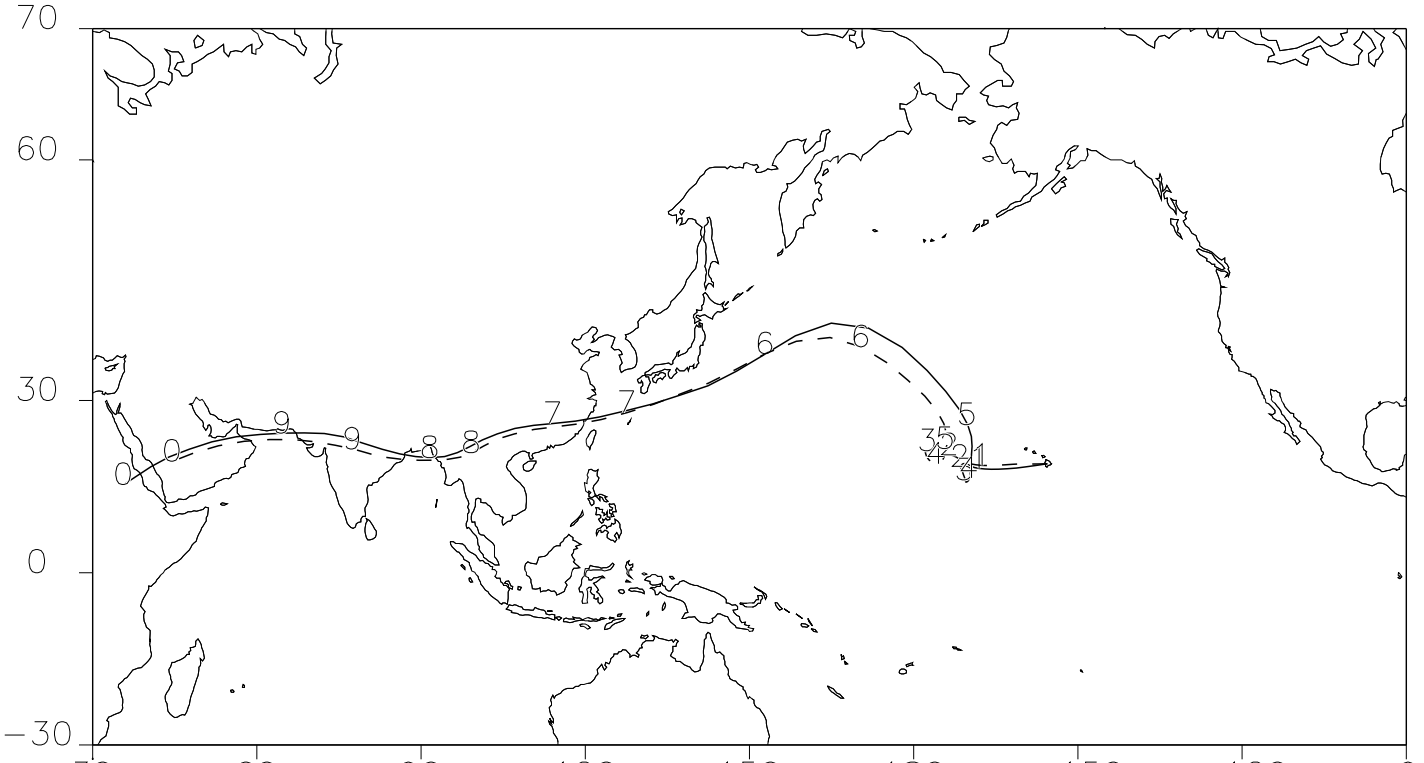
Day	km	hPa	C
0	9.5	303	-36
1	9.2	317	-33
2	8.2	368	-23
3	8.8	339	-27
4	11.3	232	-51
5	11.9	203	-57
6	10.7	251	-45
7	10.6	257	-43
8	11.2	231	-50
9	12.2	198	-60

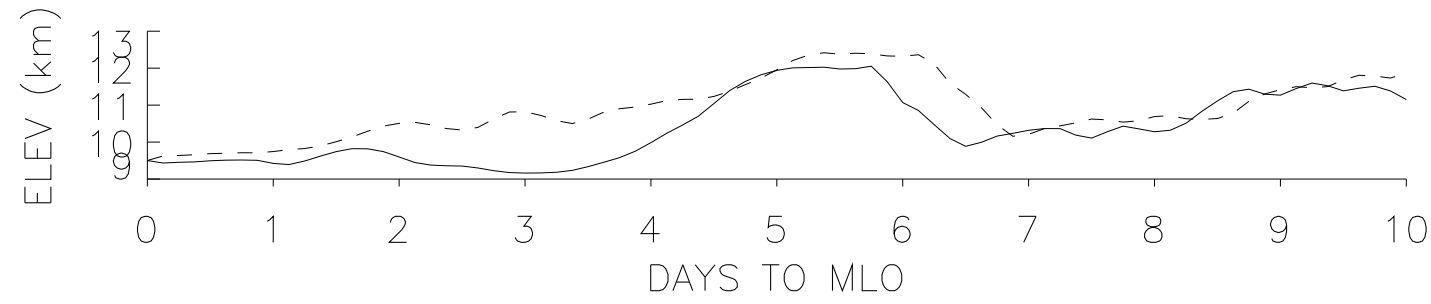
06UT

Day	km	hPa	C
0	9.5	303	-36
1	9.5	307	-34
2	8.8	339	-28
3	8.7	343	-26
4	11.0	244	-48
5	11.8	206	-55
6	10.1	274	-40
7	10.2	273	-39
8	9.7	294	-38
9	11.7	211	-58

00UT - solid
06UT - dashed

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





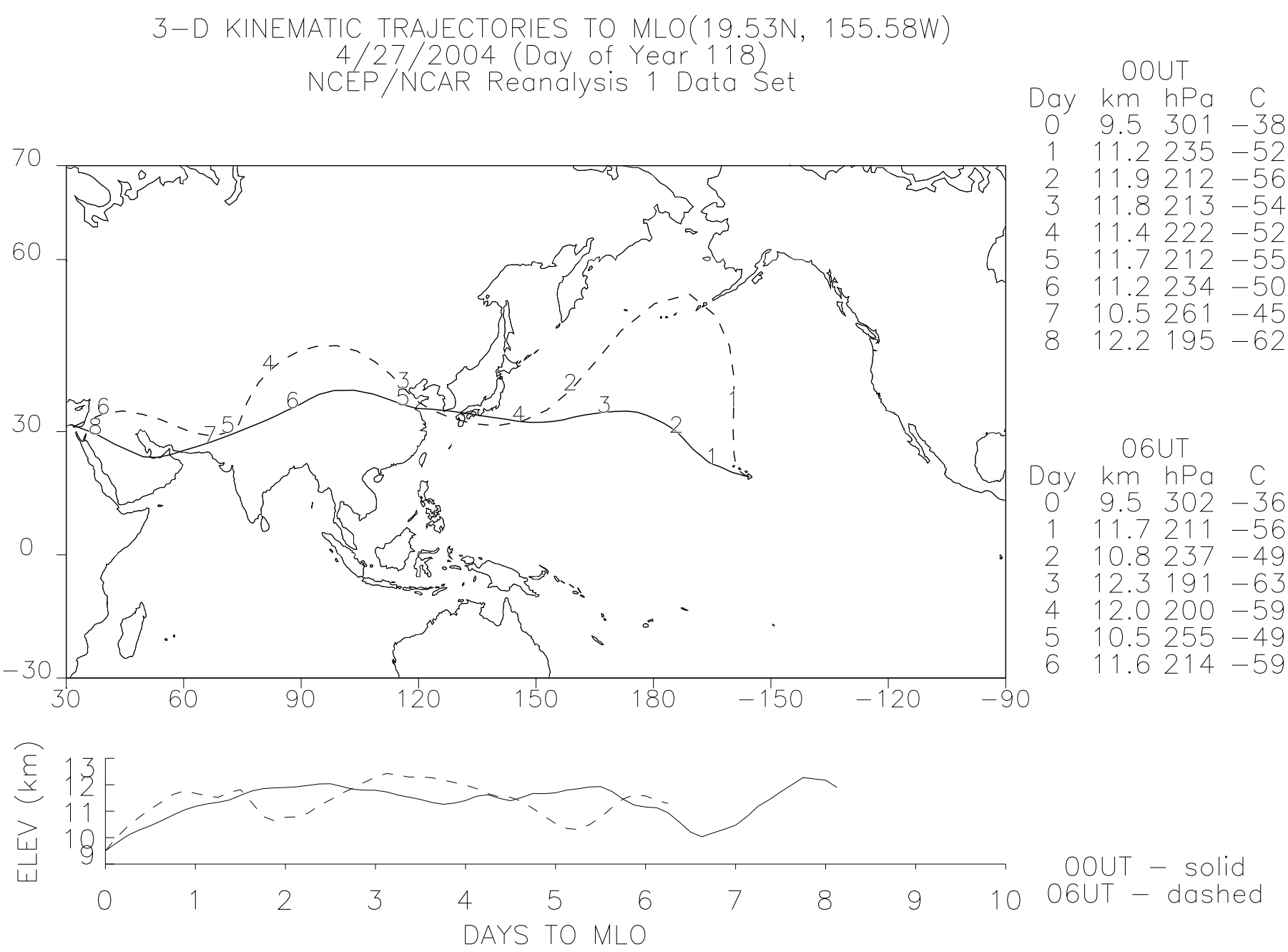
12UT

Day	km	hPa	C
0	9.5	302	−37
1	9.4	309	−35
2	9.6	302	−35
3	9.2	322	−31
4	10.0	286	−37
5	11.9	210	−55
6	11.1	234	−48
7	10.3	271	−38
8	10.3	272	−40
9	11.3	234	−46
10	11.2	241	−45

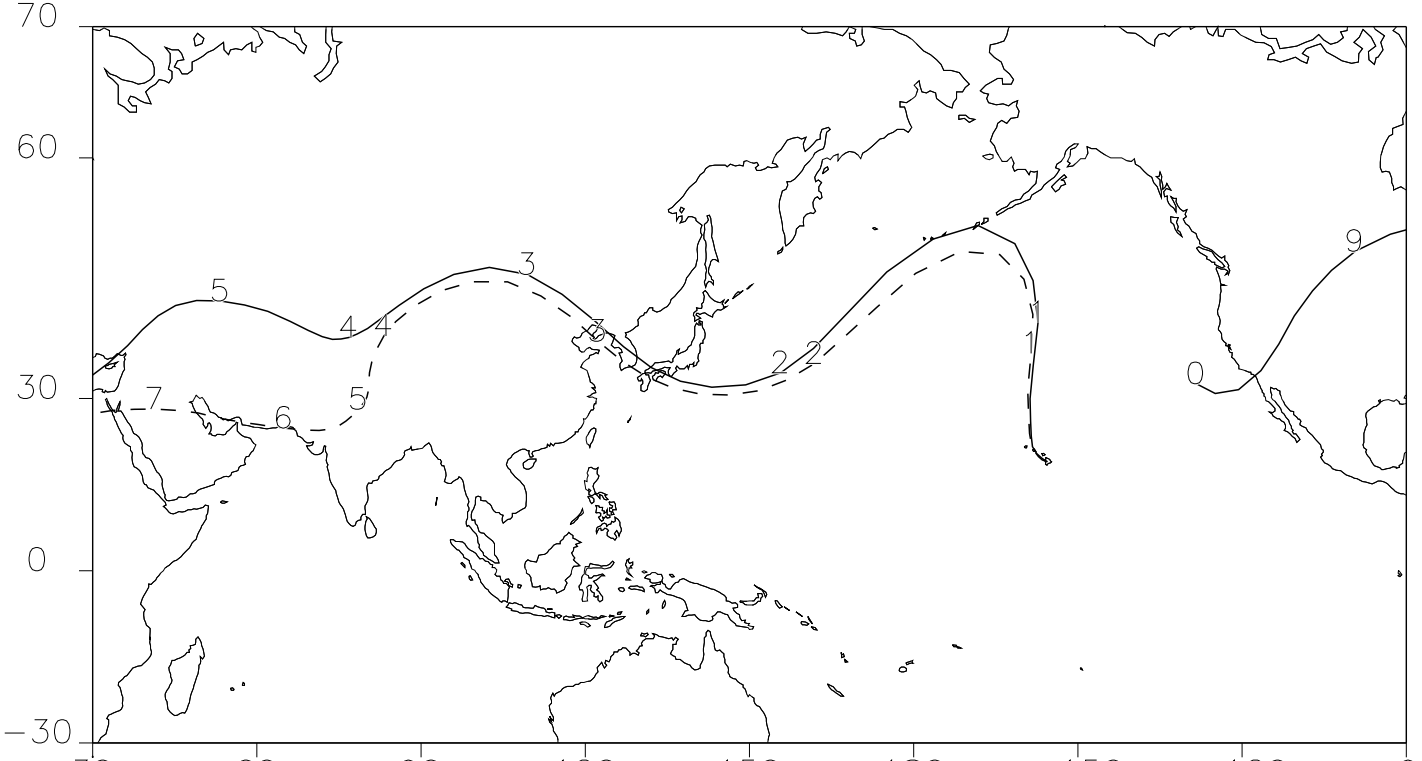
18UT

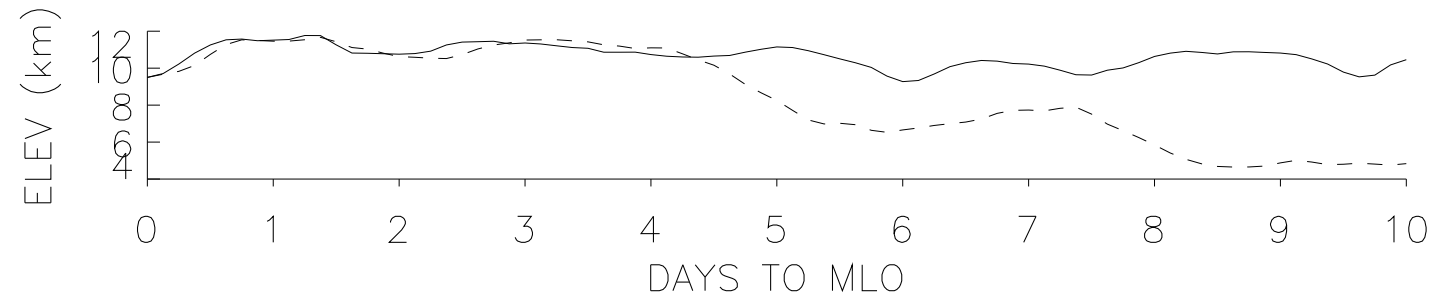
Day	km	hPa	C
0	9.5	302	−37
1	9.7	294	−38
2	10.5	264	−43
3	10.8	252	−44
4	11.0	245	−46
5	12.0	212	−53
6	12.3	193	−58
7	10.2	274	−37
8	10.7	257	−42
9	11.4	232	−48
10	11.9	216	−50

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 9.5 301 -38
1 11.2 235 -52
2 11.9 212 -56
3 11.8 213 -54
4 11.4 222 -52
5 11.7 212 -55
6 11.2 234 -50
7 10.5 261 -45
8 12.2 195 -62
06UT
Day km hPa C
0 9.5 302 -36
1 11.7 211 -56
2 10.8 237 -49
3 12.3 191 -63
4 12.0 200 -59
5 10.5 255 -49
6 11.6 214 -59
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)
4/27/2004 (Day of Year 118)
NCEP/NCAR Reanalysis 1 Data Set





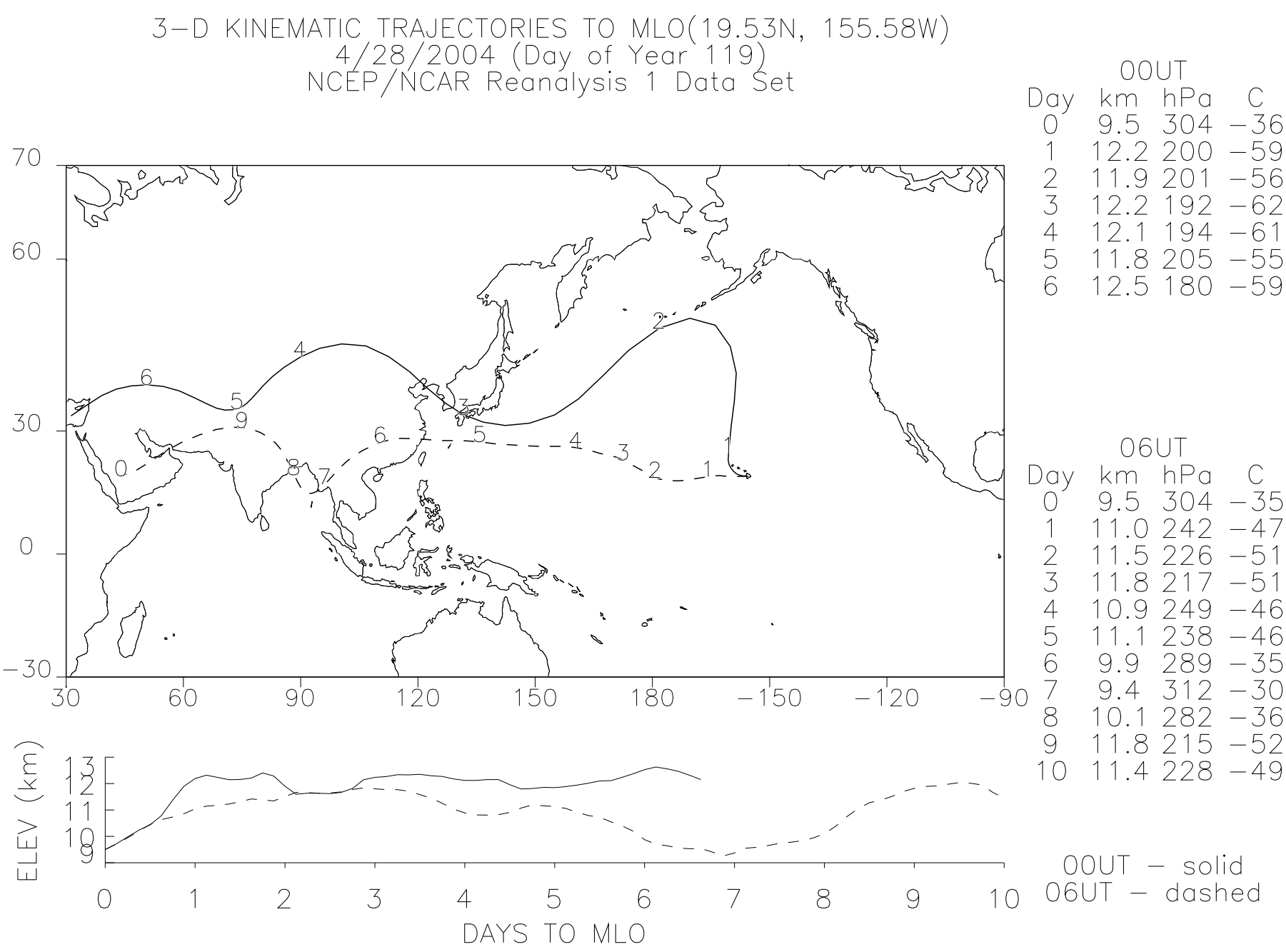
12UT

Day	km	hPa	C
0	9.5	302	-36
1	11.5	215	-56
2	10.8	244	-50
3	11.4	216	-58
4	10.7	244	-53
5	11.2	221	-57
6	9.3	296	-42
7	10.2	249	-53
8	10.6	245	-53
9	10.8	228	-56
10	10.5	246	-52

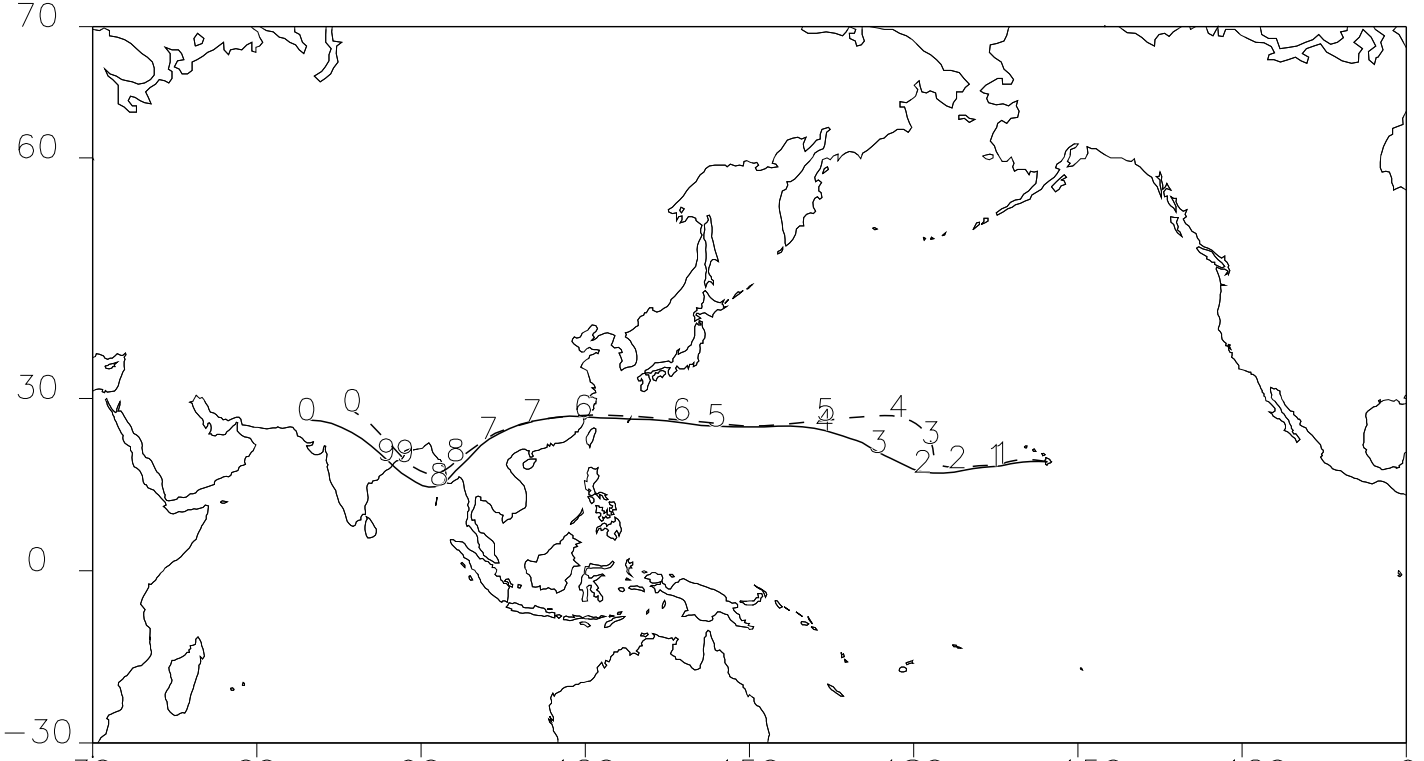
18UT

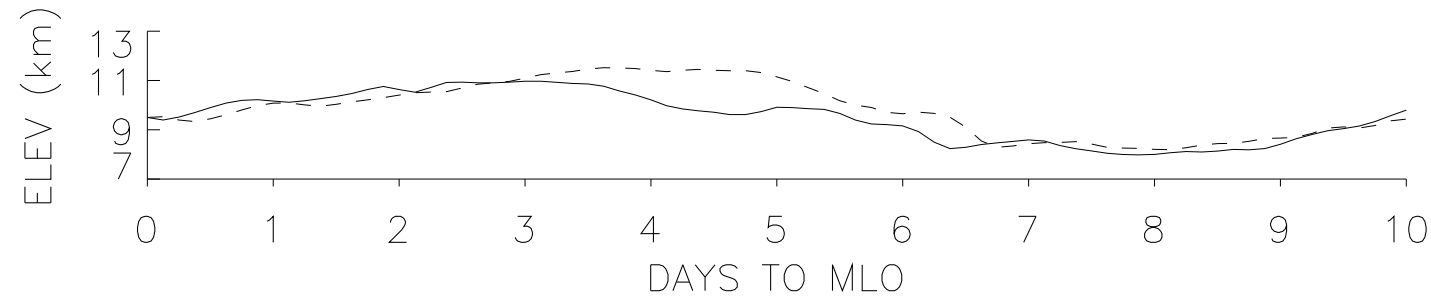
Day	km	hPa	C
0	9.5	304	-36
1	11.5	219	-55
2	10.6	250	-48
3	11.5	214	-60
4	11.1	232	-54
5	8.3	358	-31
6	6.7	449	-14
7	7.7	387	-24
8	5.8	499	-10
9	4.9	568	0
10	4.8	572	1

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 9.5 304 -36
1 12.2 200 -59
2 11.9 201 -56
3 12.2 192 -62
4 12.1 194 -61
5 11.8 205 -55
6 12.5 180 -59
06UT
Day km hPa C
0 9.5 304 -35
1 11.0 242 -47
2 11.5 226 -51
3 11.8 217 -51
4 10.9 249 -46
5 11.1 238 -46
6 9.9 289 -35
7 9.4 312 -30
8 10.1 282 -36
9 11.8 215 -52
10 11.4 228 -49
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)
4/28/2004 (Day of Year 119)
NCEP/NCAR Reanalysis 1 Data Set





12UT

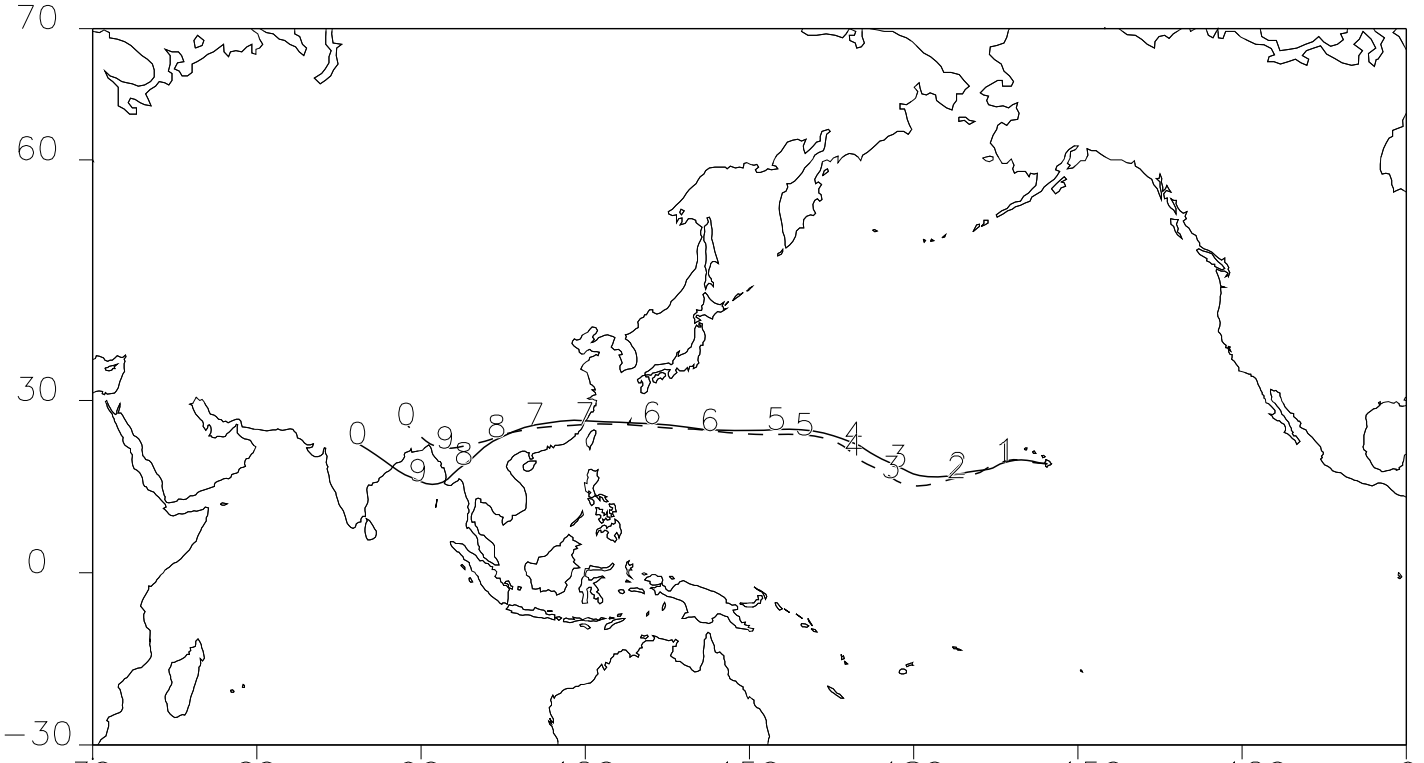
Day	km	hPa	C
0	9.5	304	−35
1	10.2	276	−40
2	10.6	259	−42
3	11.0	247	−46
4	10.2	277	−40
5	9.9	287	−36
6	9.2	320	−30
7	8.6	346	−27
8	8.0	378	−22
9	8.4	356	−24
10	9.8	291	−37

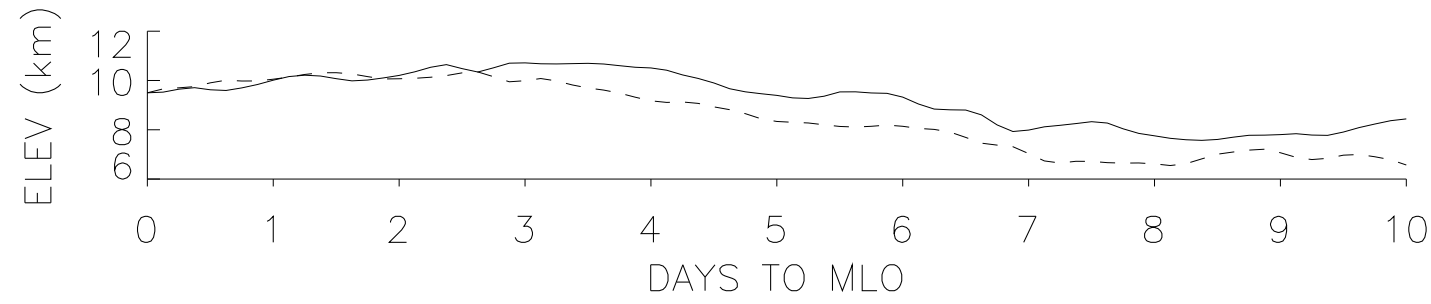
18UT

Day	km	hPa	C
0	9.5	305	−35
1	10.1	280	−39
2	10.4	266	−42
3	11.1	240	−49
4	11.4	230	−51
5	11.1	238	−48
6	9.7	295	−36
7	8.4	353	−25
8	8.2	367	−24
9	8.7	345	−27
10	9.4	307	−36

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

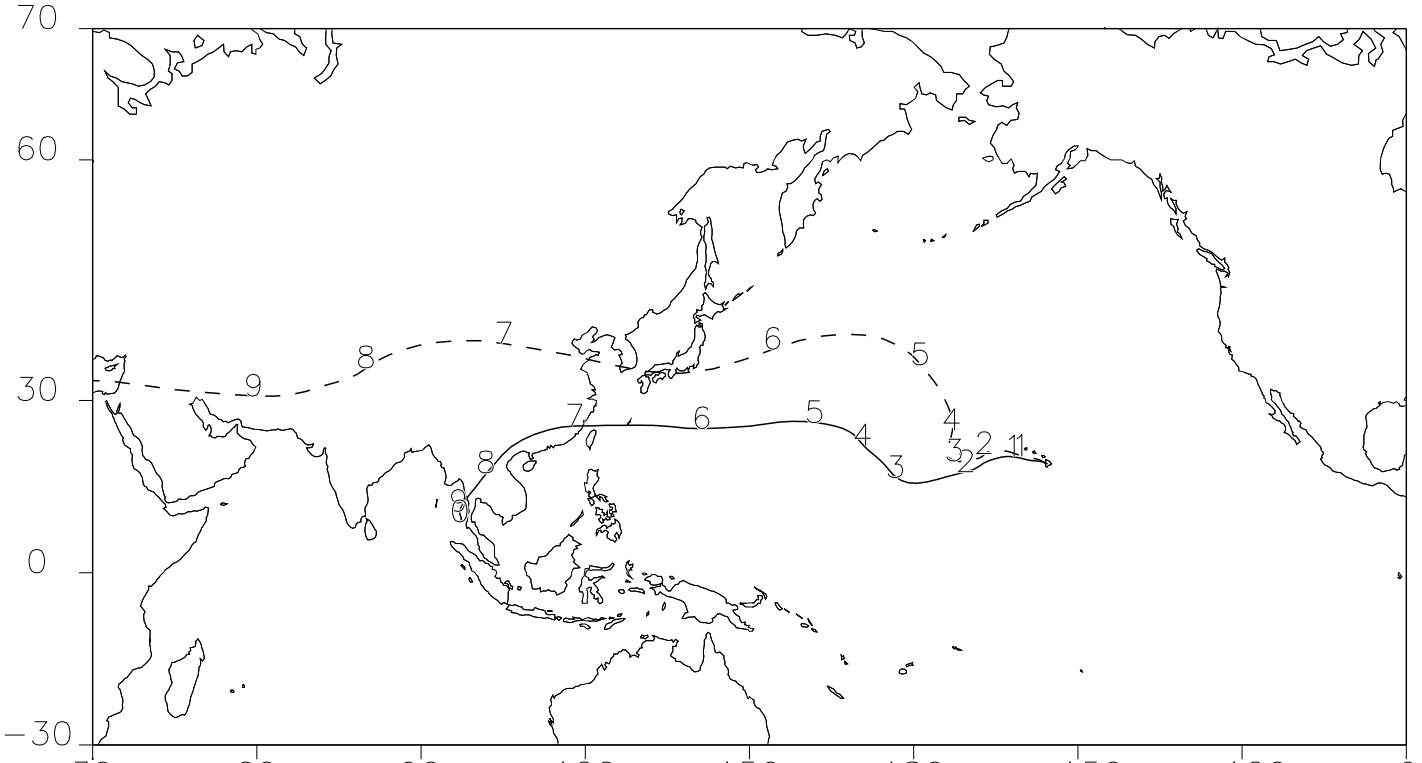
Day	km	hPa	C
0	9.5	304	−35
1	10.0	283	−39
2	10.2	274	−39
3	10.7	257	−44
4	10.5	265	−42
5	9.4	311	−34
6	9.3	311	−31
7	8.0	376	−22
8	7.8	389	−21
9	7.8	388	−21
10	8.4	353	−26

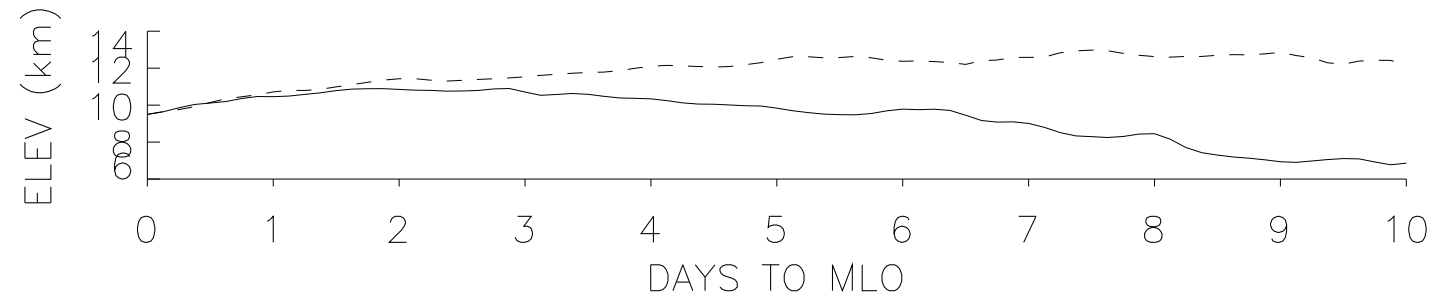
06UT

Day	km	hPa	C
0	9.5	305	−35
1	10.1	281	−39
2	10.1	279	−38
3	10.0	285	−38
4	9.2	321	−31
5	8.3	360	−26
6	8.1	367	−24
7	7.0	427	−14
8	6.6	453	−11
9	7.1	427	−17
10	6.6	453	−15

00UT − solid
06UT − dashed

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





12UT

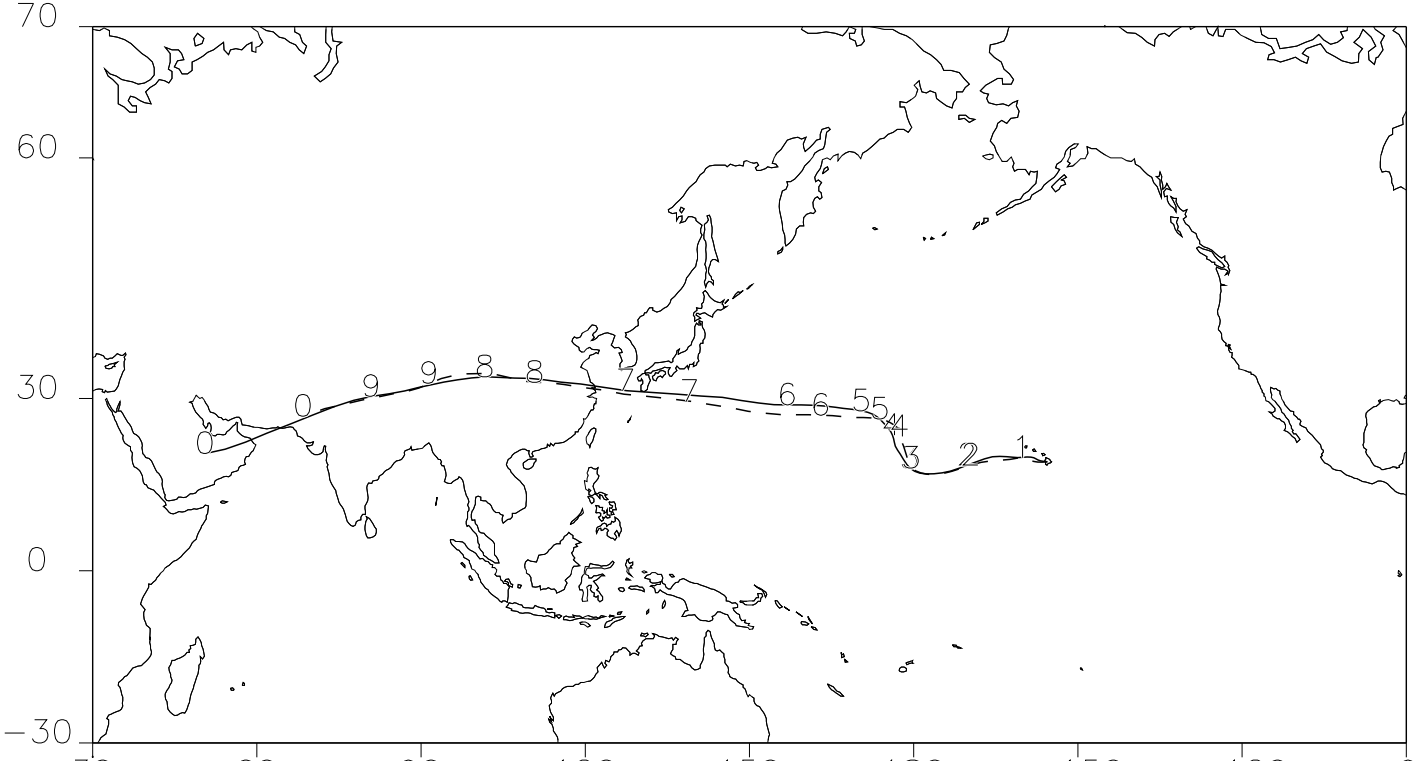
Day	km	hPa	C
0	9.5	304	-36
1	10.5	264	-43
2	10.8	249	-45
3	10.7	257	-42
4	10.3	272	-40
5	9.8	292	-37
6	9.8	292	-35
7	9.0	327	-28
8	8.5	355	-24
9	6.9	436	-11
10	6.9	440	-10

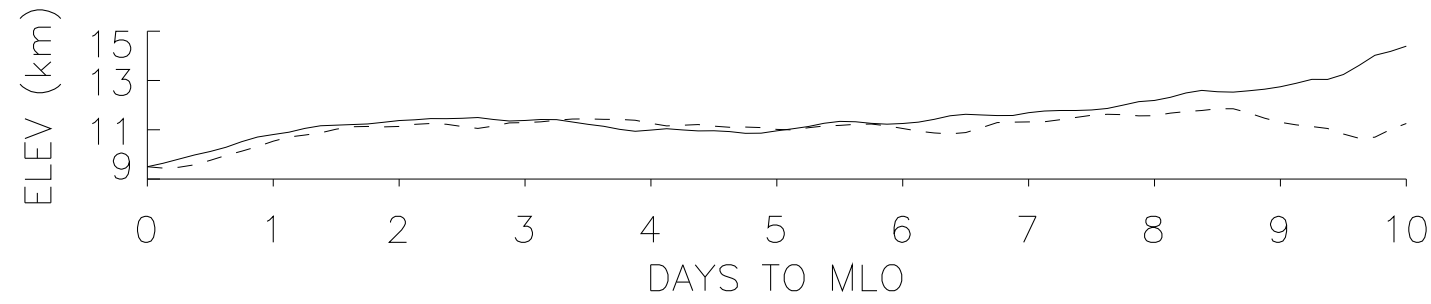
18UT

Day	km	hPa	C
0	9.5	305	-36
1	10.7	255	-45
2	11.4	228	-51
3	11.5	224	-51
4	12.1	205	-58
5	12.5	191	-60
6	12.4	188	-59
7	12.6	184	-57
8	12.6	184	-61
9	12.9	177	-60
10	12.2	193	-56

12UT - solid
18UT - dashed

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





00UT

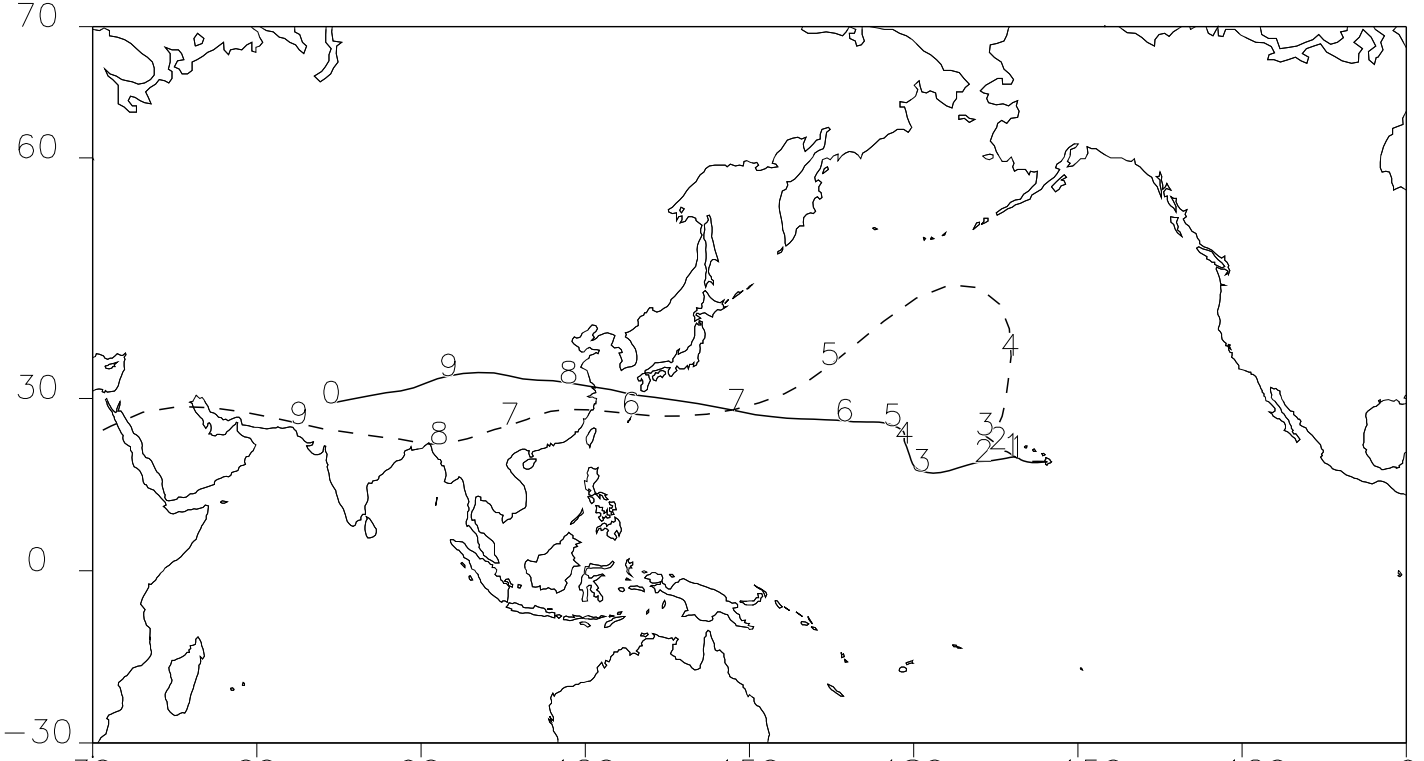
Day	km	hPa	C
0	9.5	305	−35
1	10.8	251	−46
2	11.4	231	−49
3	11.4	231	−49
4	11.0	246	−48
5	11.0	247	−47
6	11.3	234	−50
7	11.7	215	−55
8	12.2	200	−55
9	12.7	185	−55
10	14.4	142	−64

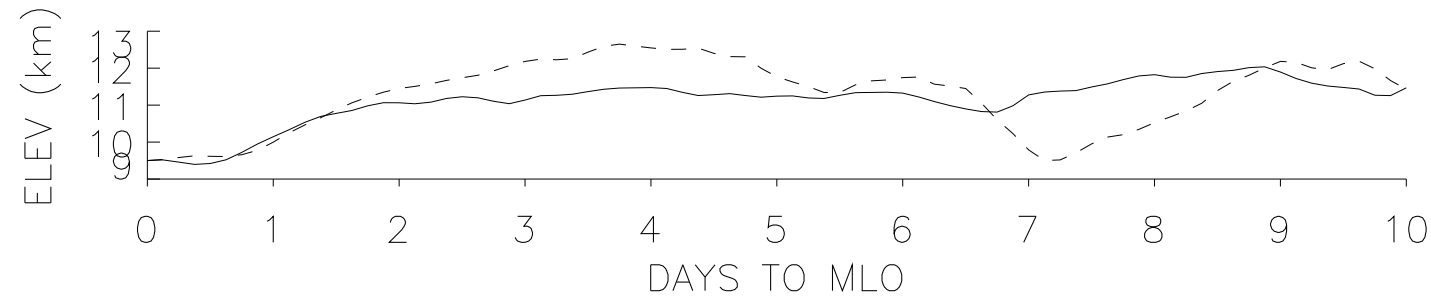
06UT

Day	km	hPa	C
0	9.5	305	−35
1	10.5	262	−43
2	11.1	239	−46
3	11.3	233	−48
4	11.3	235	−50
5	11.0	244	−47
6	11.1	242	−47
7	11.3	229	−49
8	11.6	222	−50
9	11.3	232	−49
10	11.3	234	−49

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





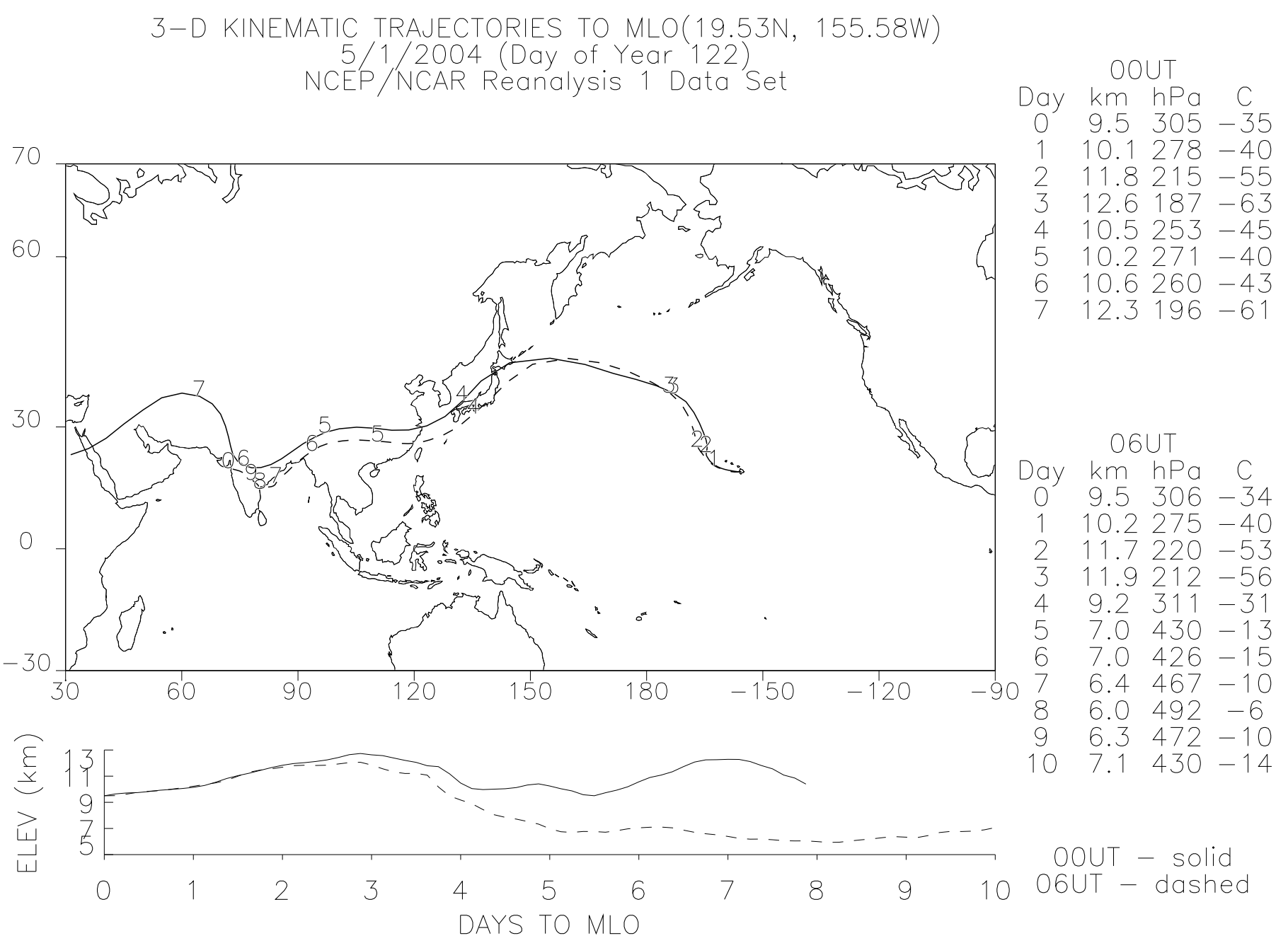
12UT

Day	km	hPa	C
0	9.5	305	-36
1	10.1	278	-41
2	11.1	242	-47
3	11.1	239	-47
4	11.5	228	-51
5	11.2	236	-50
6	11.3	234	-49
7	11.3	232	-49
8	11.8	212	-54
9	11.9	210	-54
10	11.5	226	-50

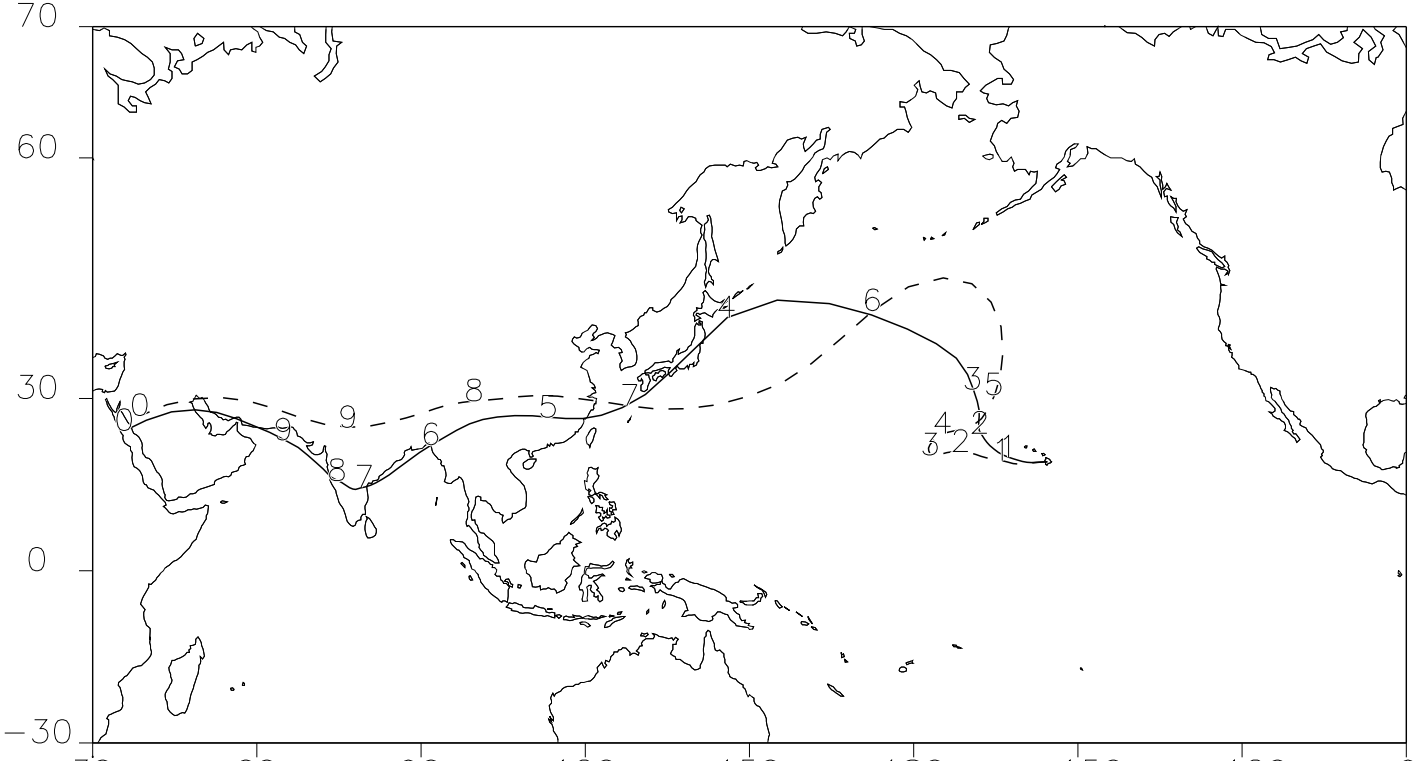
18UT

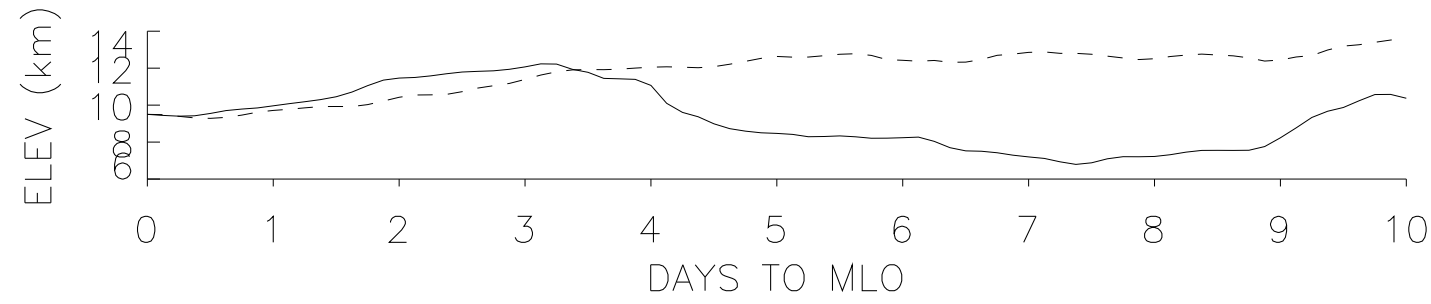
Day	km	hPa	C
0	9.5	306	-36
1	10.0	284	-39
2	11.4	228	-51
3	12.2	203	-56
4	12.5	188	-60
5	11.8	213	-54
6	11.7	217	-51
7	9.8	293	-34
8	10.5	263	-39
9	12.2	202	-56
10	11.4	230	-48

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 9.5 305 -35
1 10.1 278 -40
2 11.8 215 -55
3 12.6 187 -63
4 10.5 253 -45
5 10.2 271 -40
6 10.6 260 -43
7 12.3 196 -61
06UT
Day km hPa C
0 9.5 306 -34
1 10.2 275 -40
2 11.7 220 -53
3 11.9 212 -56
4 9.2 311 -31
5 7.0 430 -13
6 7.0 426 -15
7 6.4 467 -10
8 6.0 492 -6
9 6.3 472 -10
10 7.1 430 -14
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)
5/1/2004 (Day of Year 122)
NCEP/NCAR Reanalysis 1 Data Set





12UT

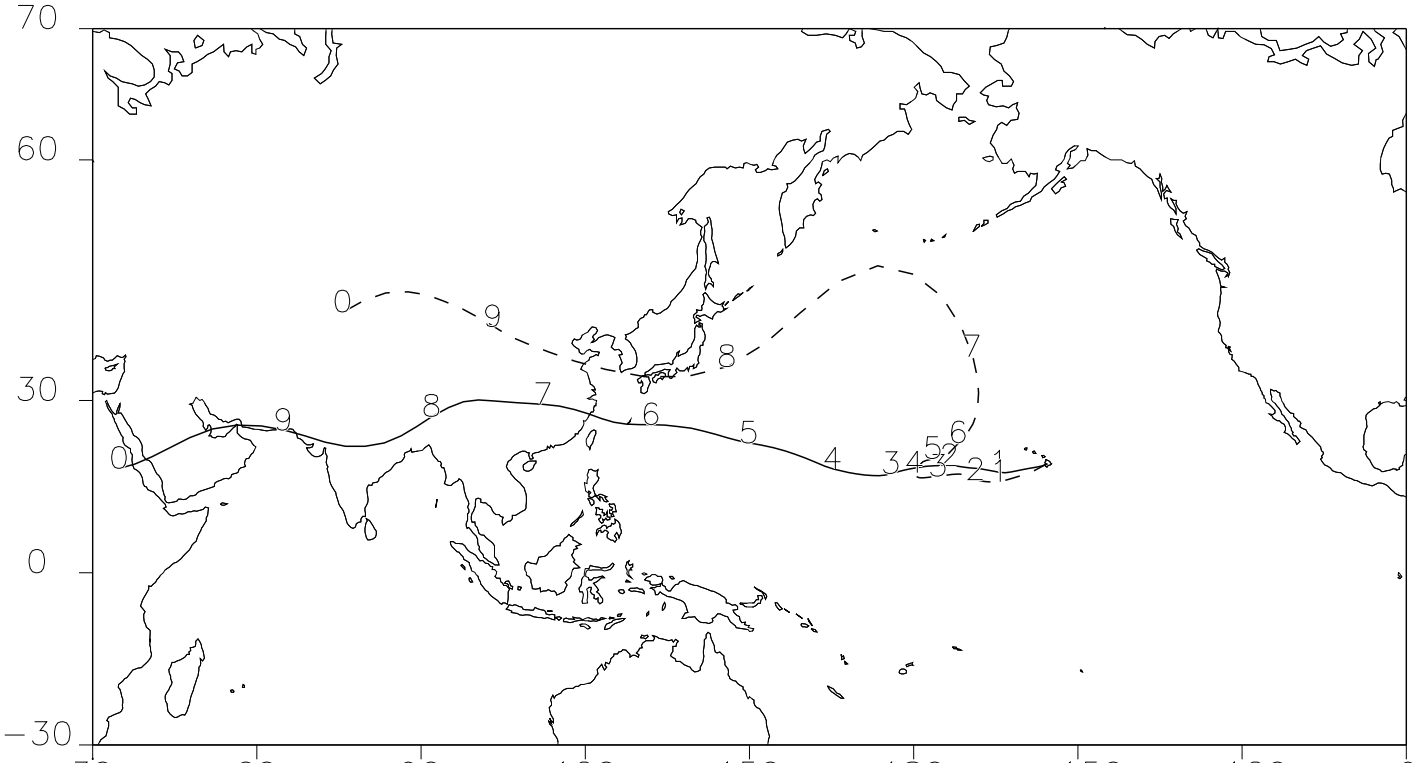
Day	km	hPa	C
0	9.5	305	−34
1	10.0	286	−38
2	11.5	229	−51
3	12.1	206	−57
4	11.1	231	−51
5	8.5	352	−25
6	8.2	363	−23
7	7.2	419	−14
8	7.2	418	−13
9	8.2	364	−24
10	10.4	267	−44

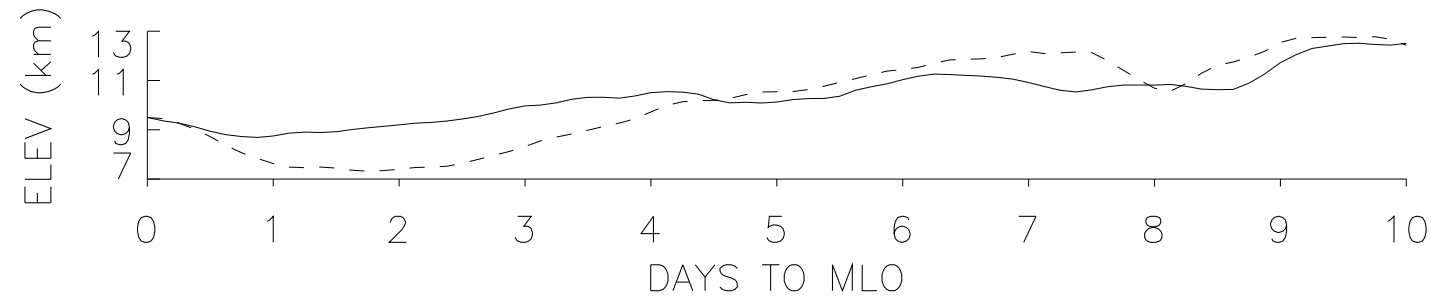
18UT

Day	km	hPa	C
0	9.5	305	−34
1	9.7	297	−36
2	10.4	267	−41
3	11.4	230	−48
4	12.1	207	−56
5	12.6	188	−60
6	12.4	188	−58
7	12.9	181	−60
8	12.5	193	−52
9	12.4	194	−52
10	13.6	159	−60

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

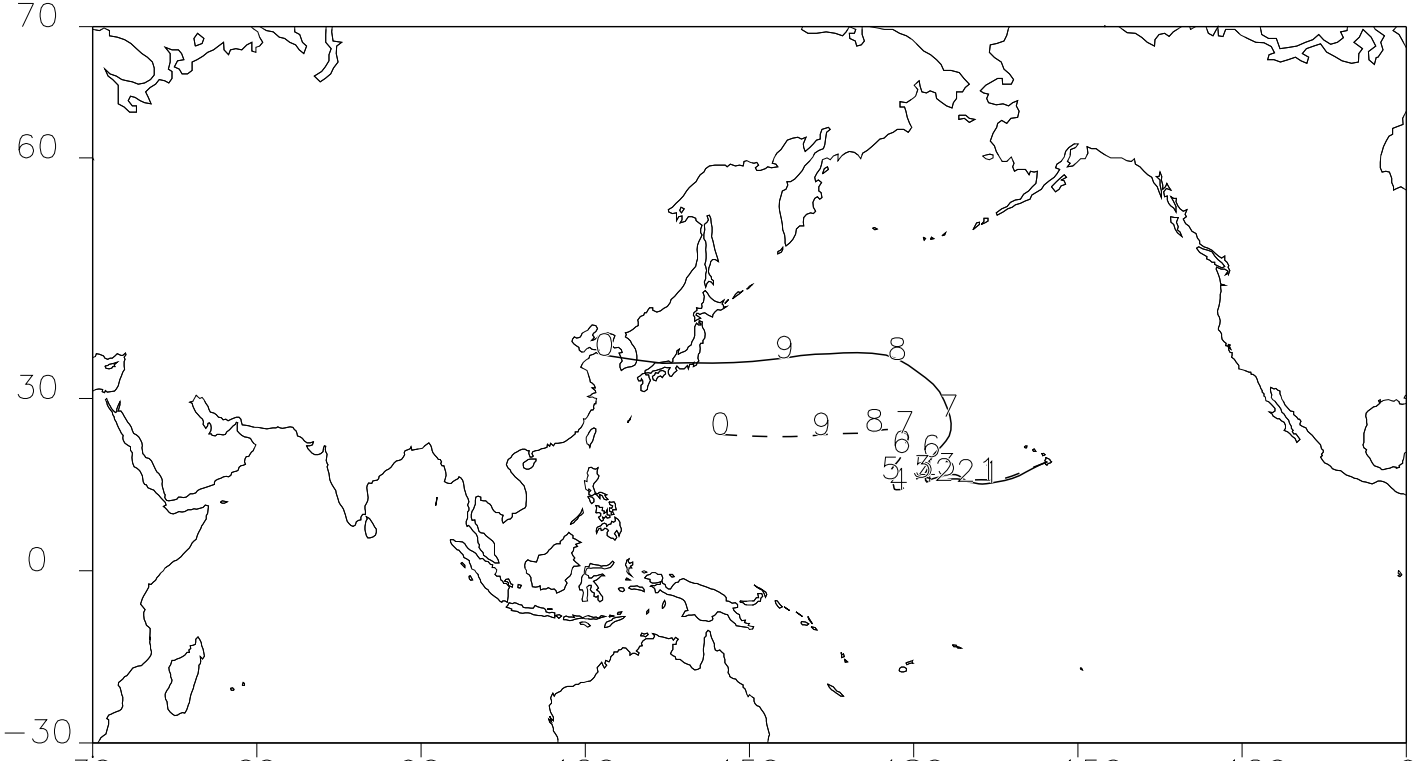
Day	km	hPa	C
0	9.5	305	−35
1	8.7	340	−27
2	9.2	320	−30
3	10.0	286	−36
4	10.5	265	−40
5	10.1	281	−37
6	11.0	244	−46
7	10.9	246	−46
8	10.8	249	−43
9	11.7	218	−50
10	12.5	195	−55

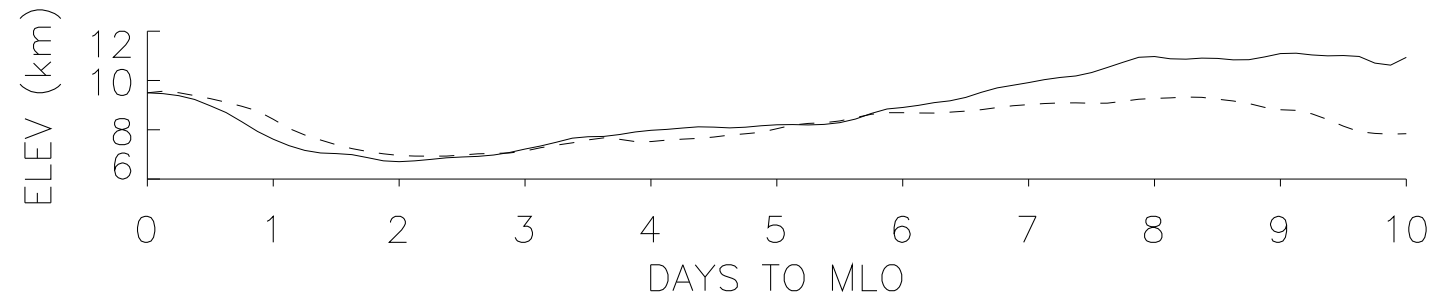
06UT

Day	km	hPa	C
0	9.5	305	−36
1	7.6	396	−18
2	7.4	409	−16
3	8.3	360	−24
4	9.7	295	−36
5	10.5	260	−46
6	11.4	227	−52
7	12.2	198	−59
8	10.7	239	−47
9	12.5	185	−60
10	12.4	185	−61

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

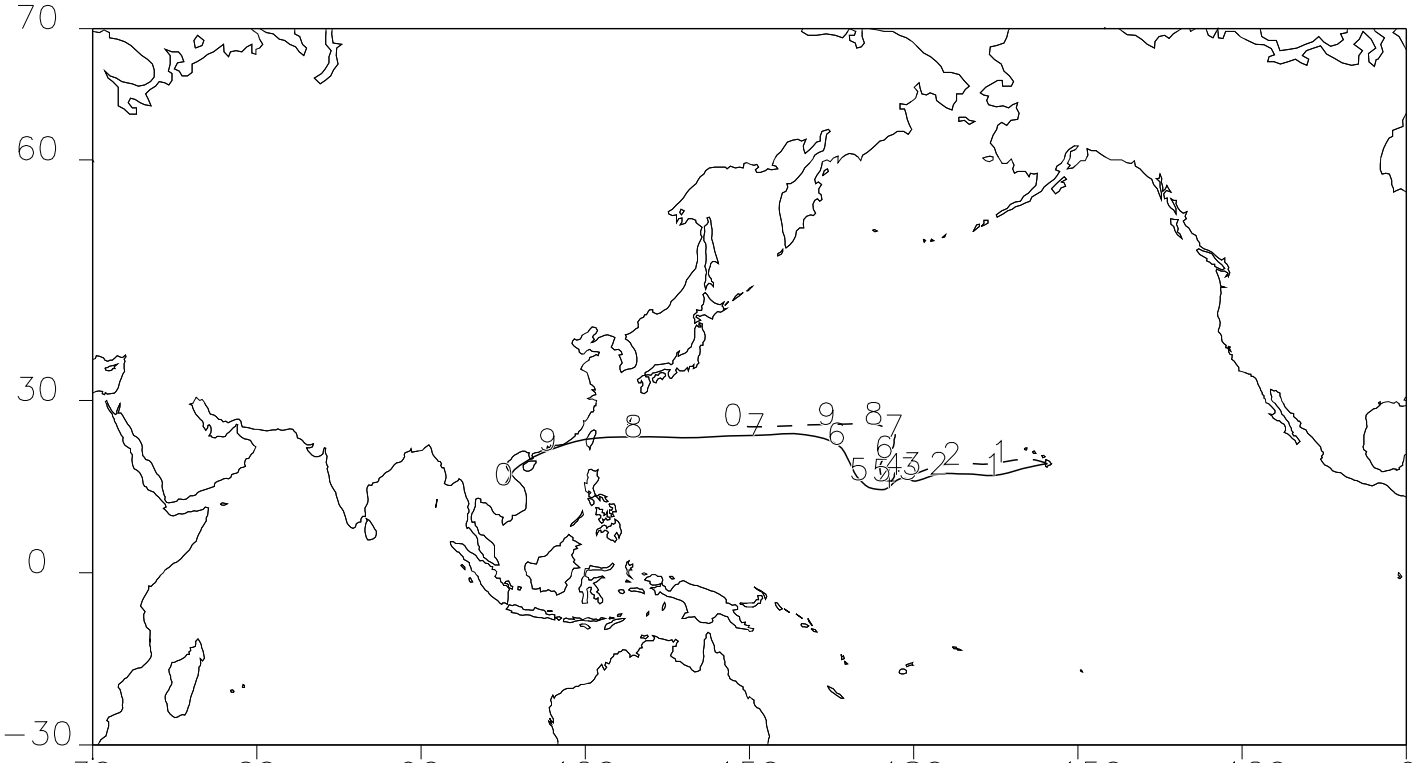
Day	km	hPa	C
0	9.5	305	−36
1	7.6	397	−18
2	6.7	448	−12
3	7.2	419	−17
4	8.0	377	−23
5	8.2	365	−25
6	8.9	331	−32
7	9.9	287	−40
8	11.0	243	−52
9	11.1	232	−52
10	10.9	235	−54

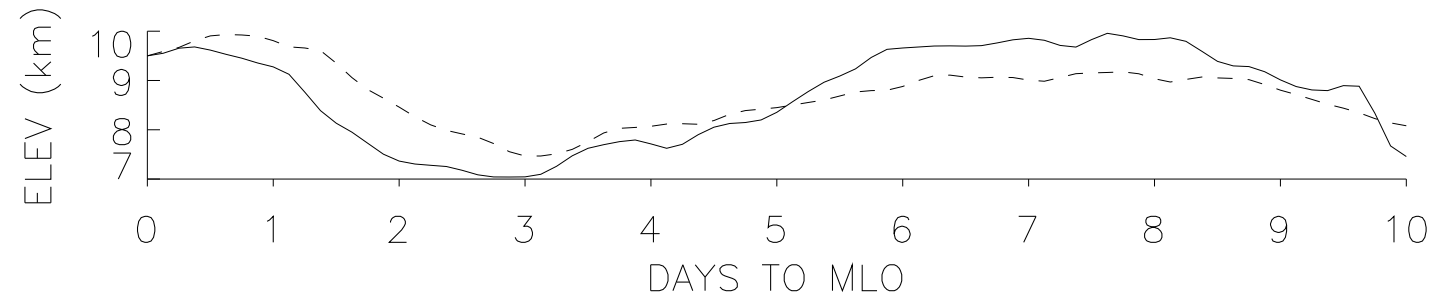
18UT

Day	km	hPa	C
0	9.5	305	−36
1	8.4	355	−25
2	7.0	434	−14
3	7.1	423	−15
4	7.5	401	−17
5	8.0	373	−23
6	8.7	342	−30
7	9.0	326	−33
8	9.3	316	−33
9	8.8	336	−30
10	7.8	383	−22

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





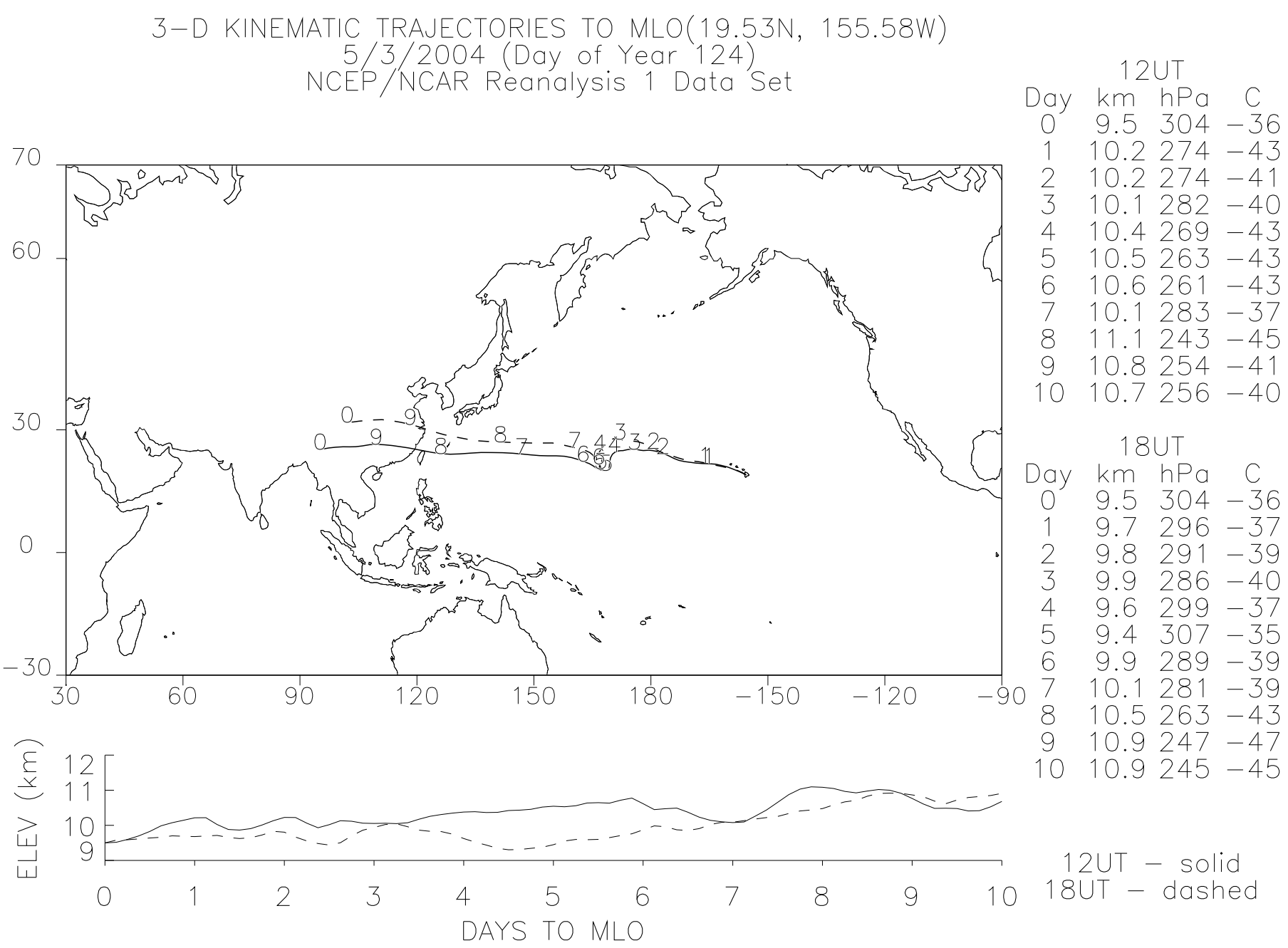
00UT

Day	km	hPa	C
0	9.5	304	-36
1	9.3	315	-33
2	7.4	411	-18
3	7.0	429	-15
4	7.7	392	-19
5	8.4	359	-23
6	9.7	300	-35
7	9.9	292	-36
8	9.8	292	-35
9	9.0	328	-28
10	7.5	406	-16

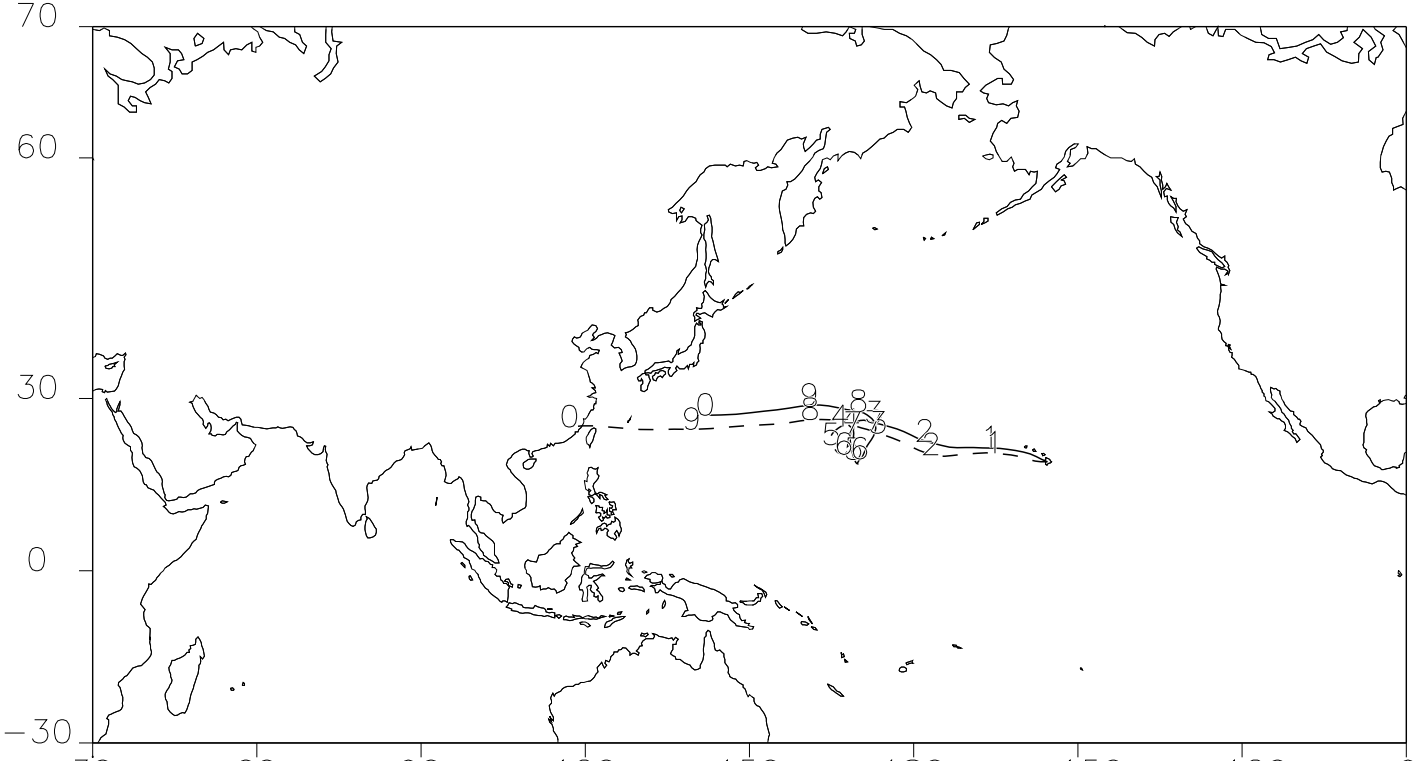
06UT

Day	km	hPa	C
0	9.5	305	-36
1	9.8	291	-37
2	8.5	353	-26
3	7.5	405	-17
4	8.1	373	-23
5	8.4	353	-25
6	8.9	333	-30
7	9.0	328	-32
8	9.0	326	-32
9	8.8	336	-30
10	8.1	369	-26

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
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
12UT
Day km hPa C
0 9.5 304 -36
1 10.2 274 -43
2 10.2 274 -41
3 10.1 282 -40
4 10.4 269 -43
5 10.5 263 -43
6 10.6 261 -43
7 10.1 283 -37
8 11.1 243 -45
9 10.8 254 -41
10 10.7 256 -40
18UT
Day km hPa C
0 9.5 304 -36
1 9.7 296 -37
2 9.8 291 -39
3 9.9 286 -40
4 9.6 299 -37
5 9.4 307 -35
6 9.9 289 -39
7 10.1 281 -39
8 10.5 263 -43
9 10.9 247 -47
10 10.9 245 -45
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

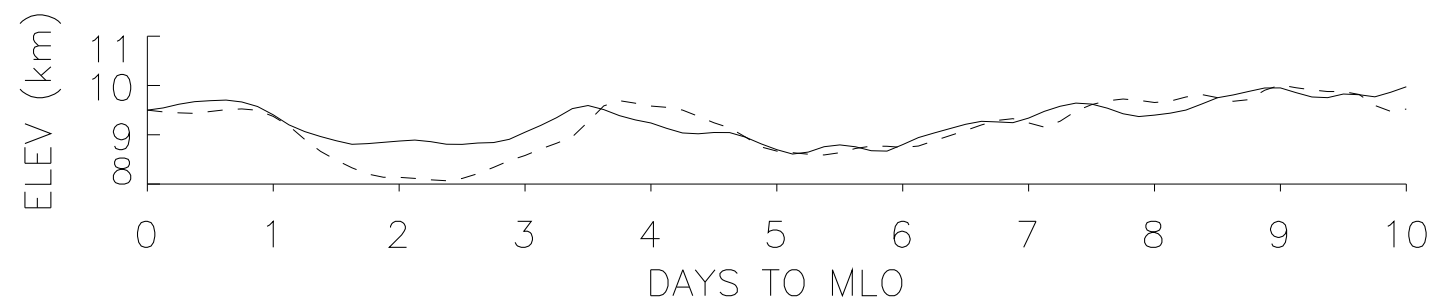


00UT

Day	km	hPa	C
0	9.5	305	−36
1	9.4	308	−34
2	8.9	333	−30
3	9.1	326	−32
4	9.2	318	−33
5	8.7	342	−28
6	8.8	338	−29
7	9.3	313	−34
8	9.4	311	−33
9	10.0	287	−36
10	10.0	283	−36

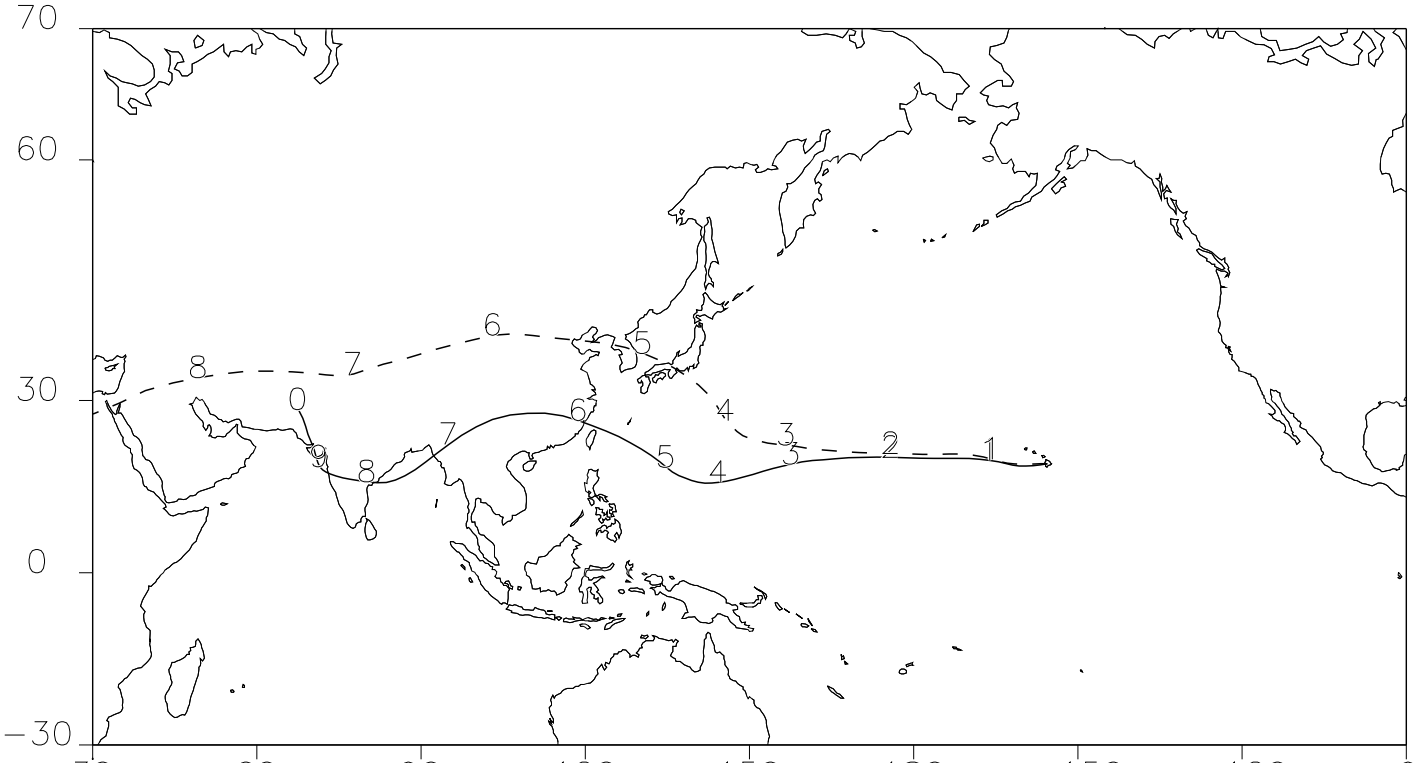
06UT

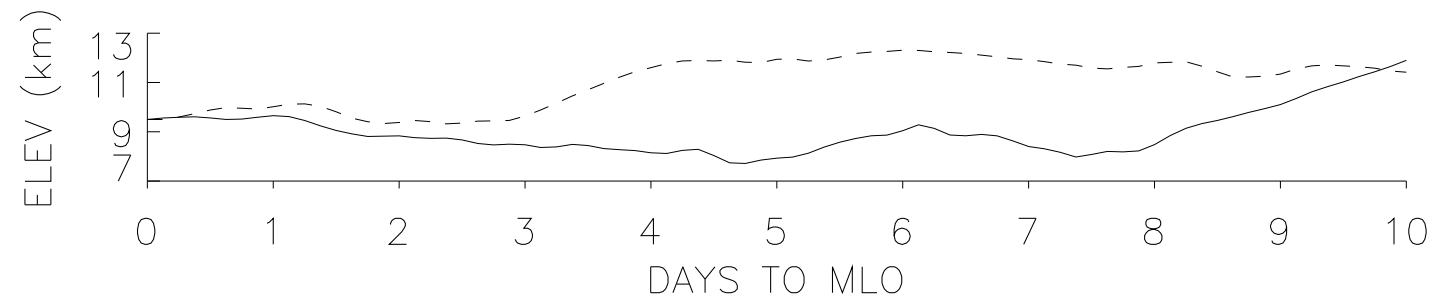
Day	km	hPa	C
0	9.5	305	−35
1	9.4	310	−34
2	8.1	369	−23
3	8.6	347	−28
4	9.6	301	−35
5	8.7	343	−30
6	8.7	340	−29
7	9.2	317	−34
8	9.7	299	−35
9	10.0	283	−38
10	9.5	305	−31



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

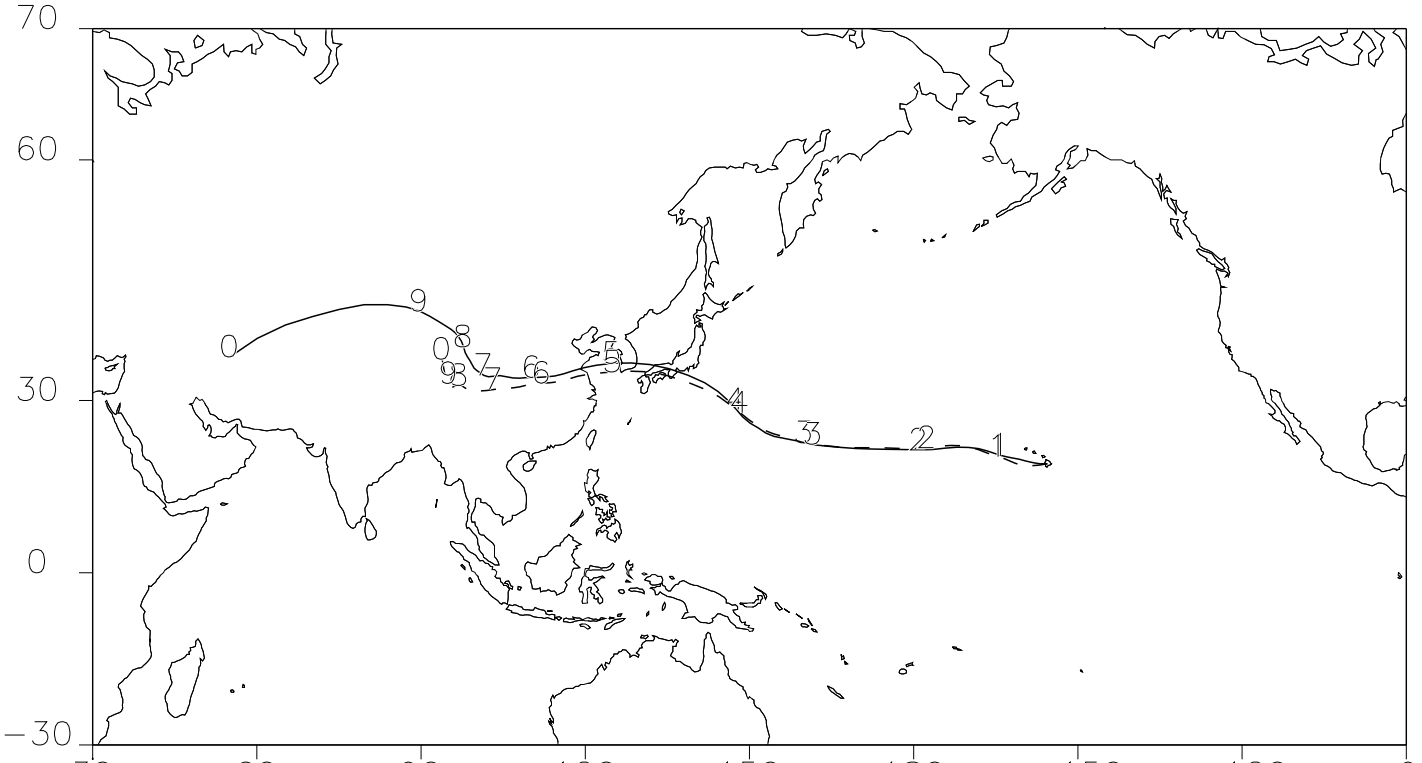
Day	km	hPa	C
0	9.5	304	−36
1	9.7	298	−35
2	8.8	335	−30
3	8.5	355	−24
4	8.1	371	−21
5	7.9	382	−20
6	9.0	326	−30
7	8.4	355	−23
8	8.5	353	−23
9	10.1	281	−38
10	11.9	213	−55

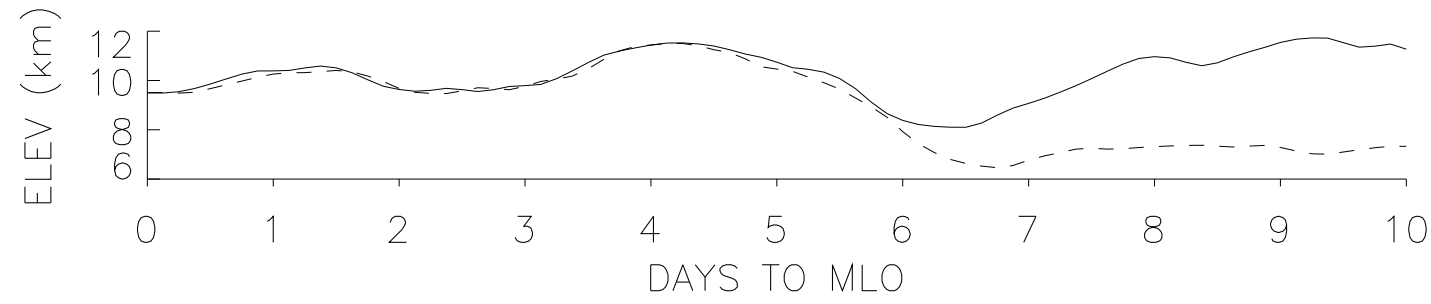
18UT

Day	km	hPa	C
0	9.5	305	−36
1	10.0	283	−39
2	9.4	308	−34
3	9.6	299	−36
4	11.6	220	−54
5	11.9	205	−57
6	12.3	193	−56
7	11.9	207	−53
8	11.8	210	−55
9	11.3	226	−52
10	11.4	225	−51

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

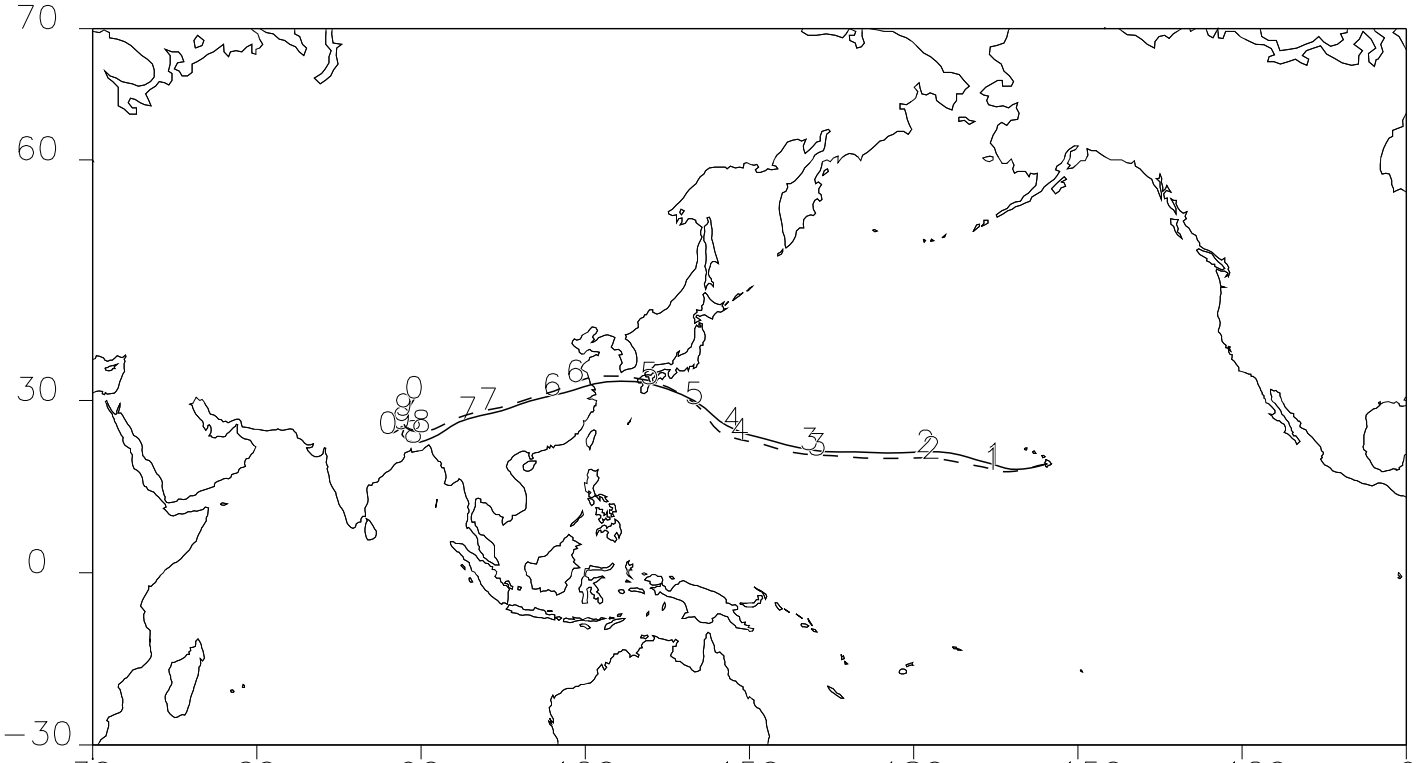
Day	km	hPa	C
0	9.5	304	−36
1	10.4	267	−43
2	9.6	297	−35
3	9.8	293	−37
4	11.4	227	−54
5	10.7	250	−47
6	8.4	351	−29
7	9.1	318	−36
8	11.0	239	−53
9	11.5	218	−58
10	11.3	226	−54

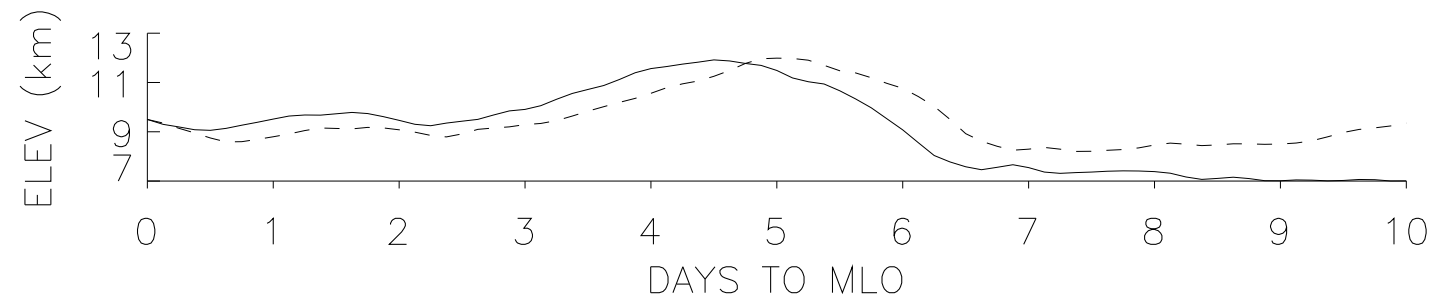
06UT

Day	km	hPa	C
0	9.5	304	−35
1	10.3	273	−41
2	9.7	295	−37
3	9.8	293	−37
4	11.4	227	−52
5	10.5	261	−44
6	7.9	375	−23
7	6.8	439	−16
8	7.3	408	−23
9	7.3	412	−23
10	7.3	407	−24

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

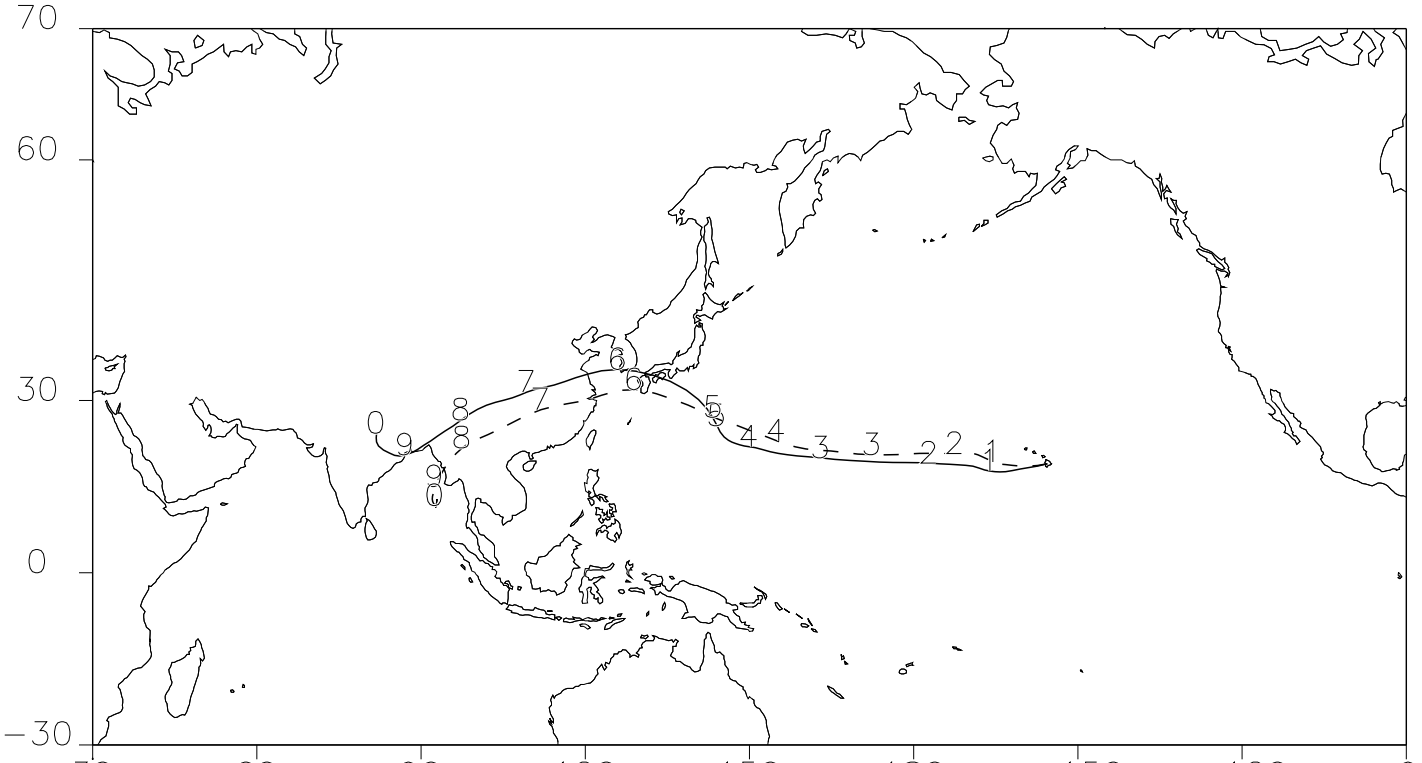
Day	km	hPa	C
0	9.5	303	−36
1	9.5	304	−35
2	9.5	305	−34
3	9.9	288	−37
4	11.6	225	−52
5	11.5	225	−52
6	9.1	321	−30
7	7.5	396	−20
8	7.4	405	−19
9	7.0	425	−19
10	7.0	424	−21

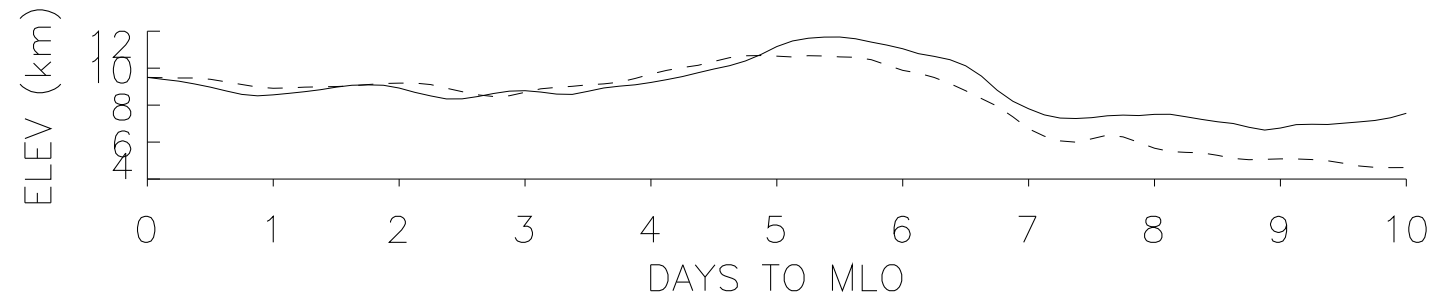
18UT

Day	km	hPa	C
0	9.5	303	−36
1	8.8	337	−30
2	9.1	323	−31
3	9.3	313	−32
4	10.6	262	−43
5	12.0	208	−55
6	10.8	250	−44
7	8.3	358	−25
8	8.5	350	−27
9	8.5	348	−30
10	9.4	308	−38

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

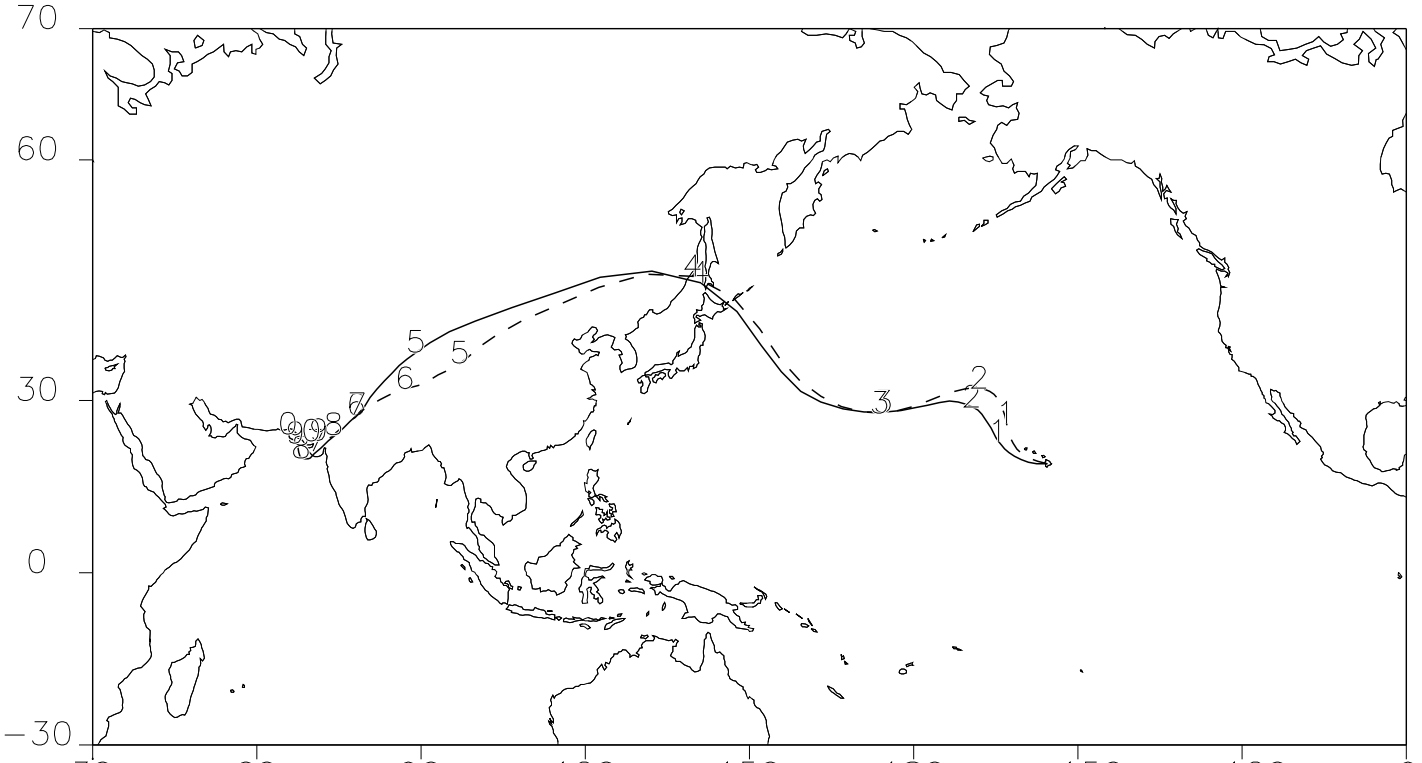
Day	km	hPa	C
0	9.5	302	-37
1	8.6	349	-28
2	8.9	331	-30
3	8.8	337	-28
4	9.2	319	-32
5	11.2	238	-50
6	11.1	239	-49
7	7.8	382	-23
8	7.5	399	-21
9	6.8	441	-16
10	7.6	395	-25

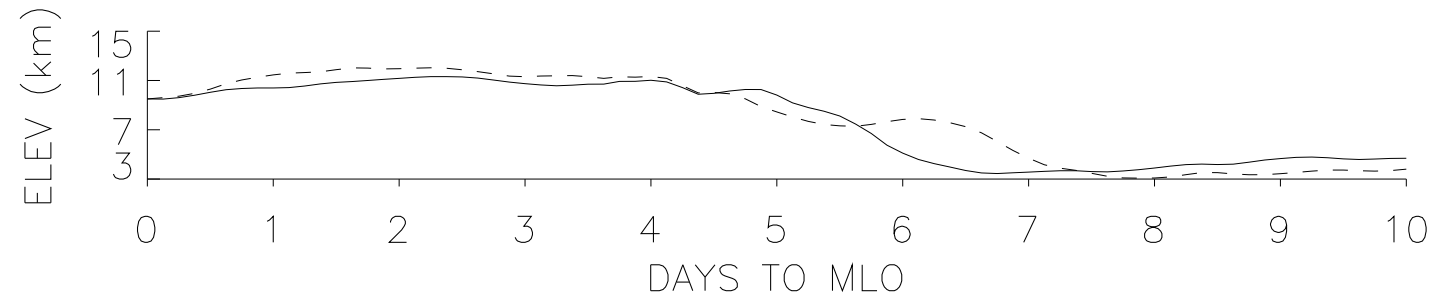
06UT

Day	km	hPa	C
0	9.5	301	-37
1	8.9	330	-32
2	9.2	318	-33
3	8.7	340	-29
4	9.7	297	-36
5	10.6	258	-45
6	9.9	286	-37
7	6.7	444	-13
8	5.7	511	-7
9	5.1	552	-2
10	4.6	586	1

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





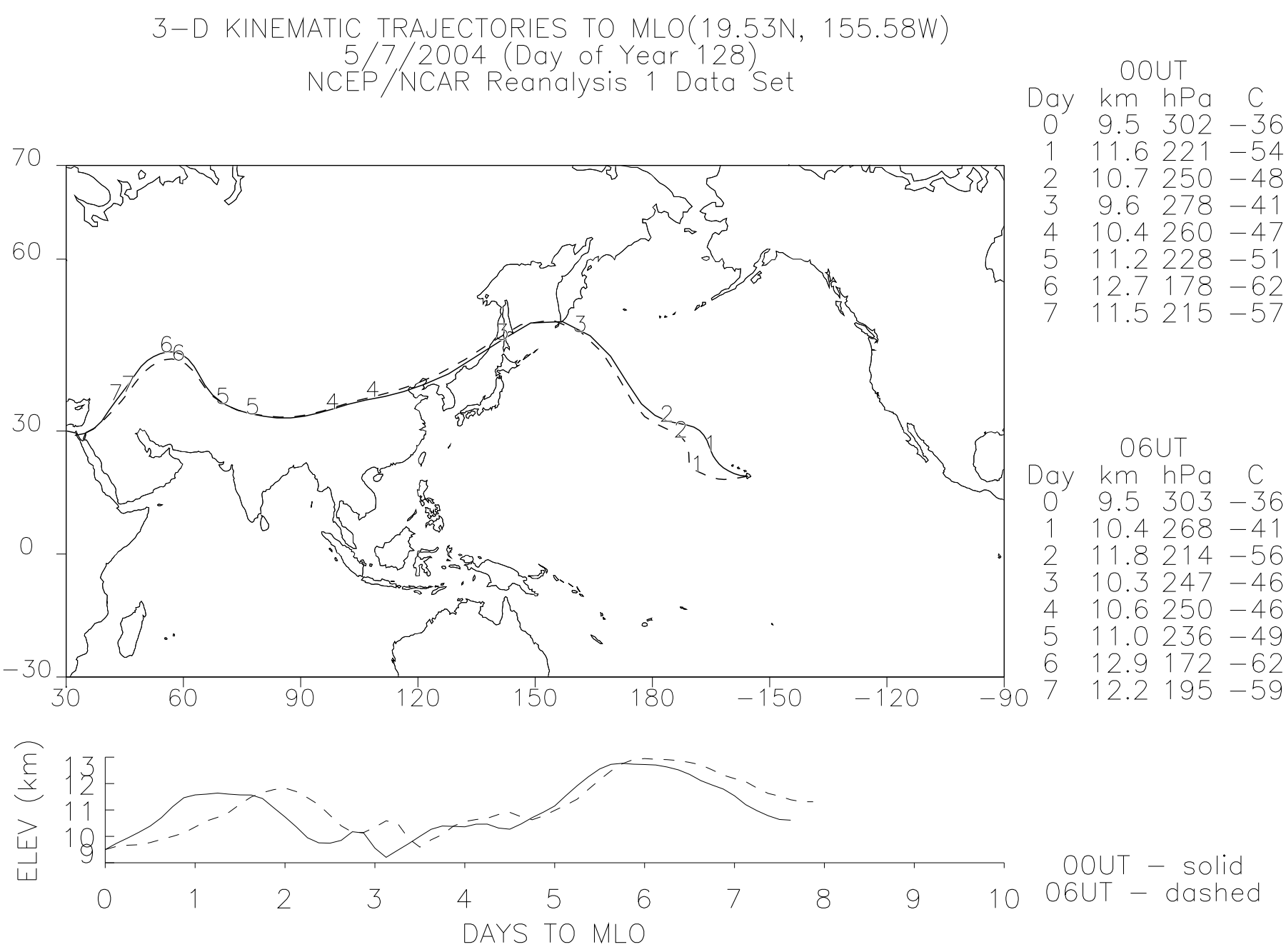
12UT

Day	km	hPa	C
0	9.5	301	−38
1	10.4	265	−45
2	11.2	236	−52
3	10.7	248	−51
4	11.0	228	−54
5	9.8	282	−42
6	5.1	545	−8
7	3.6	663	7
8	3.9	639	6
9	4.7	583	2
10	4.7	582	2

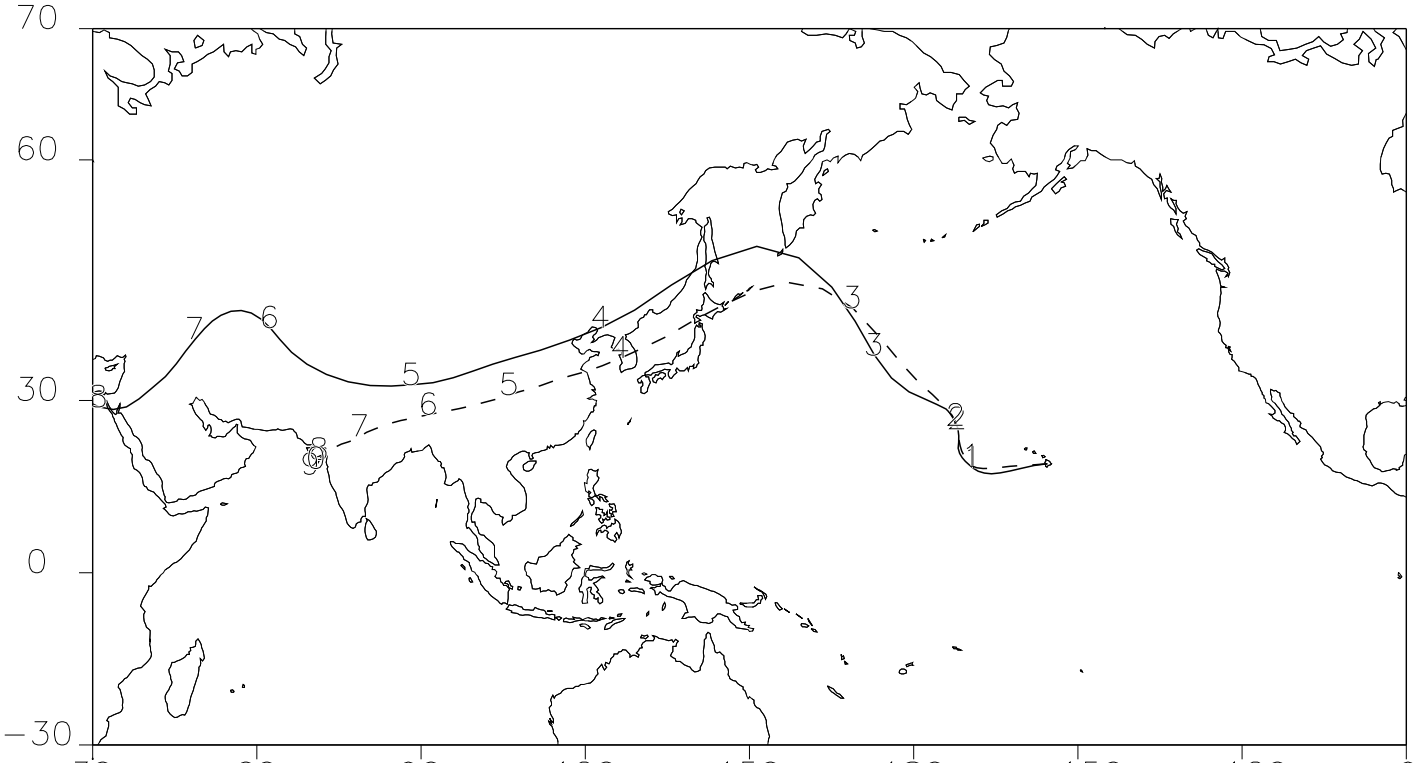
18UT

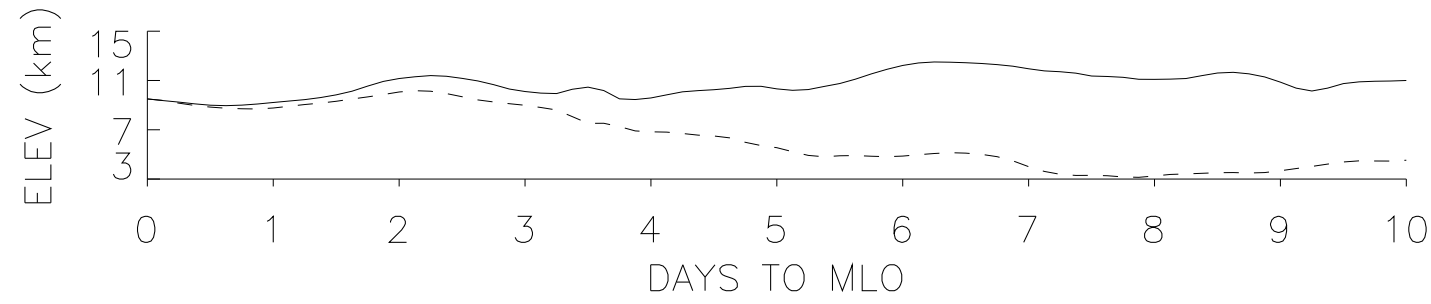
Day	km	hPa	C
0	9.5	302	−37
1	11.5	225	−54
2	12.0	208	−59
3	11.3	227	−55
4	11.3	218	−57
5	8.4	347	−29
6	7.8	379	−26
7	4.7	577	−4
8	3.1	704	12
9	3.4	678	11
10	3.8	649	7

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 9.5 302 -36
1 11.6 221 -54
2 10.7 250 -48
3 9.6 278 -41
4 10.4 260 -47
5 11.2 228 -51
6 12.7 178 -62
7 11.5 215 -57
06UT
Day km hPa C
0 9.5 303 -36
1 10.4 268 -41
2 11.8 214 -56
3 10.3 247 -46
4 10.6 250 -46
5 11.0 236 -49
6 12.9 172 -62
7 12.2 195 -59
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)
5/7/2004 (Day of Year 128)
NCEP/NCAR Reanalysis 1 Data Set





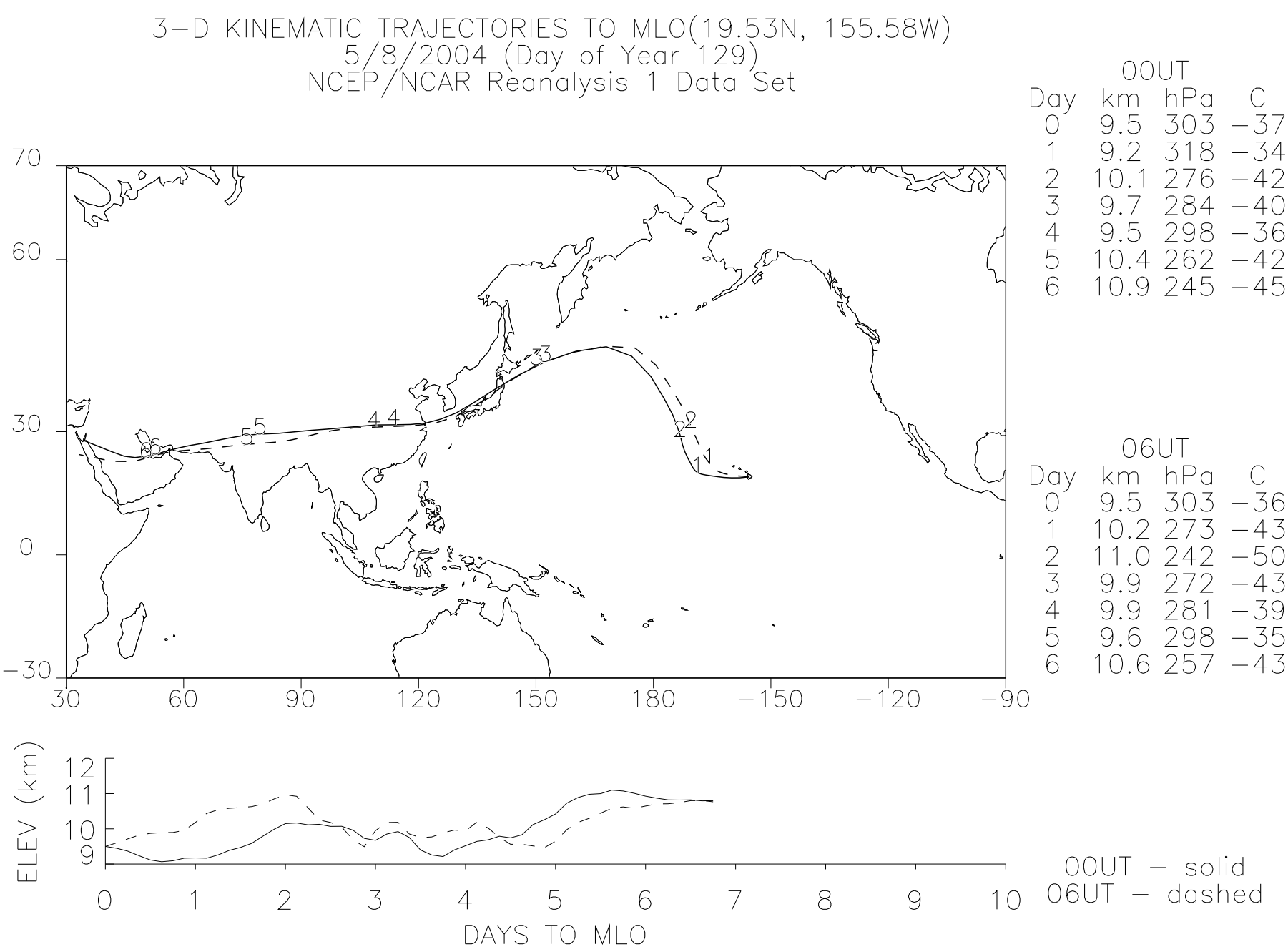
12UT

Day	km	hPa	C
0	9.5	302	−37
1	9.2	317	−32
2	11.2	238	−50
3	10.1	266	−42
4	9.6	285	−39
5	10.3	262	−44
6	12.2	195	−61
7	11.9	203	−59
8	11.1	232	−52
9	10.9	237	−50
10	11.0	237	−52

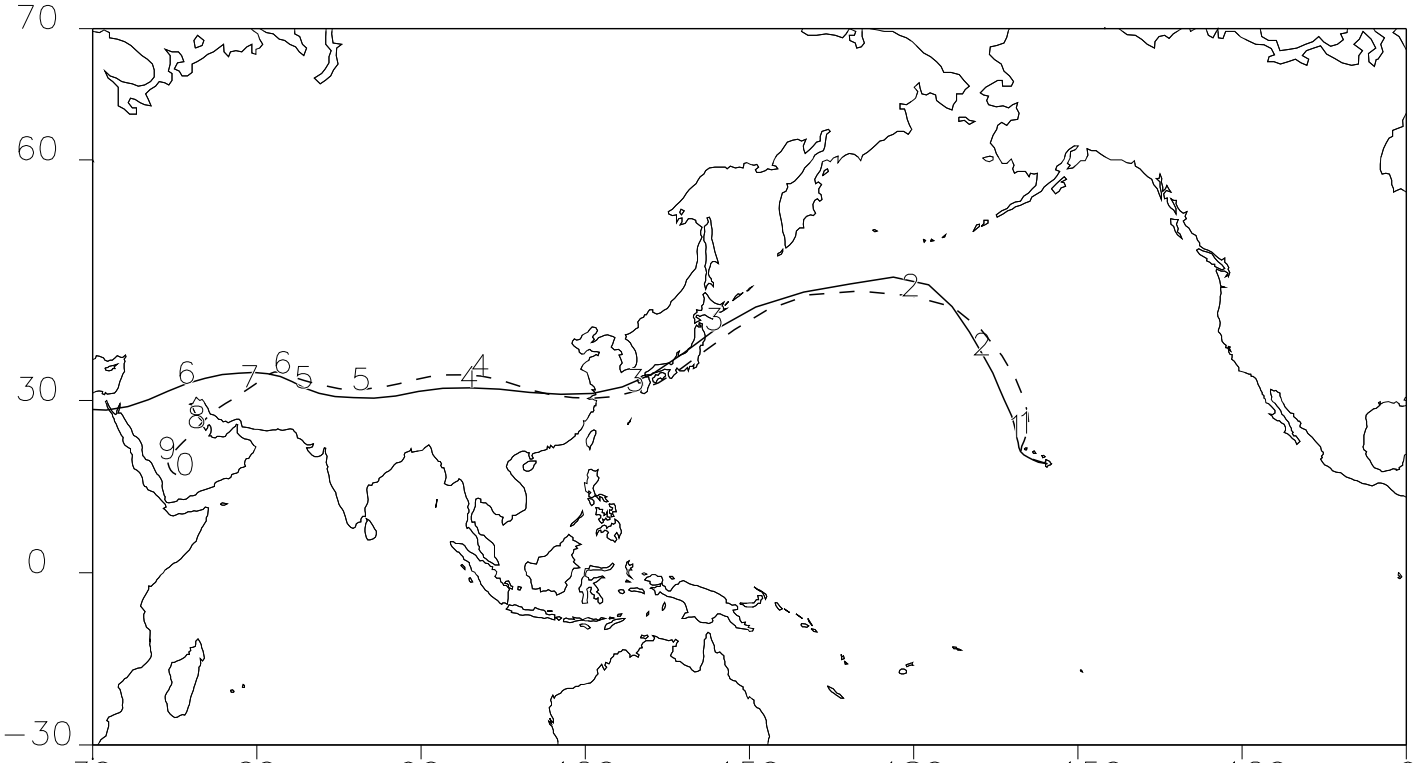
18UT

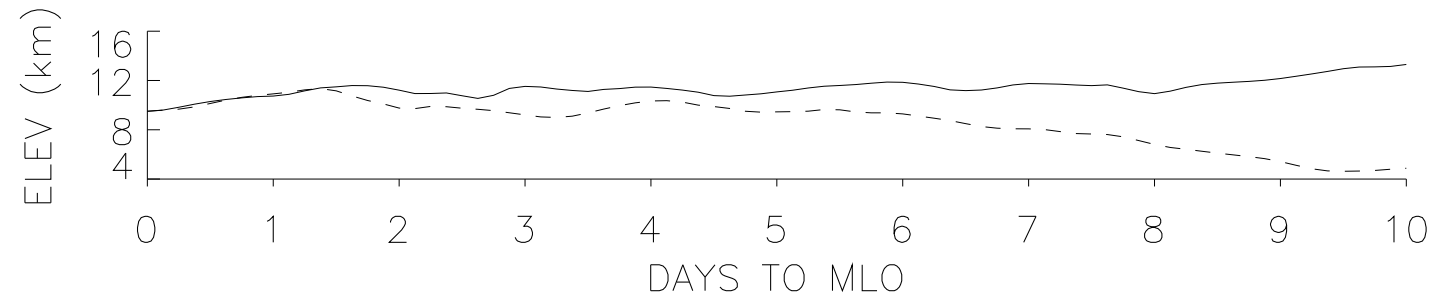
Day	km	hPa	C
0	9.5	302	−37
1	8.8	337	−29
2	10.1	280	−41
3	9.0	313	−36
4	6.8	429	−15
5	5.5	514	−8
6	4.9	562	−5
7	4.0	630	2
8	3.3	691	10
9	3.7	657	7
10	4.5	594	3

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 9.5 303 -37
1 9.2 318 -34
2 10.1 276 -42
3 9.7 284 -40
4 9.5 298 -36
5 10.4 262 -42
6 10.9 245 -45
06UT
Day km hPa C
0 9.5 303 -36
1 10.2 273 -43
2 11.0 242 -50
3 9.9 272 -43
4 9.9 281 -39
5 9.6 298 -35
6 10.6 257 -43
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)
5/8/2004 (Day of Year 129)
NCEP/NCAR Reanalysis 1 Data Set





12UT

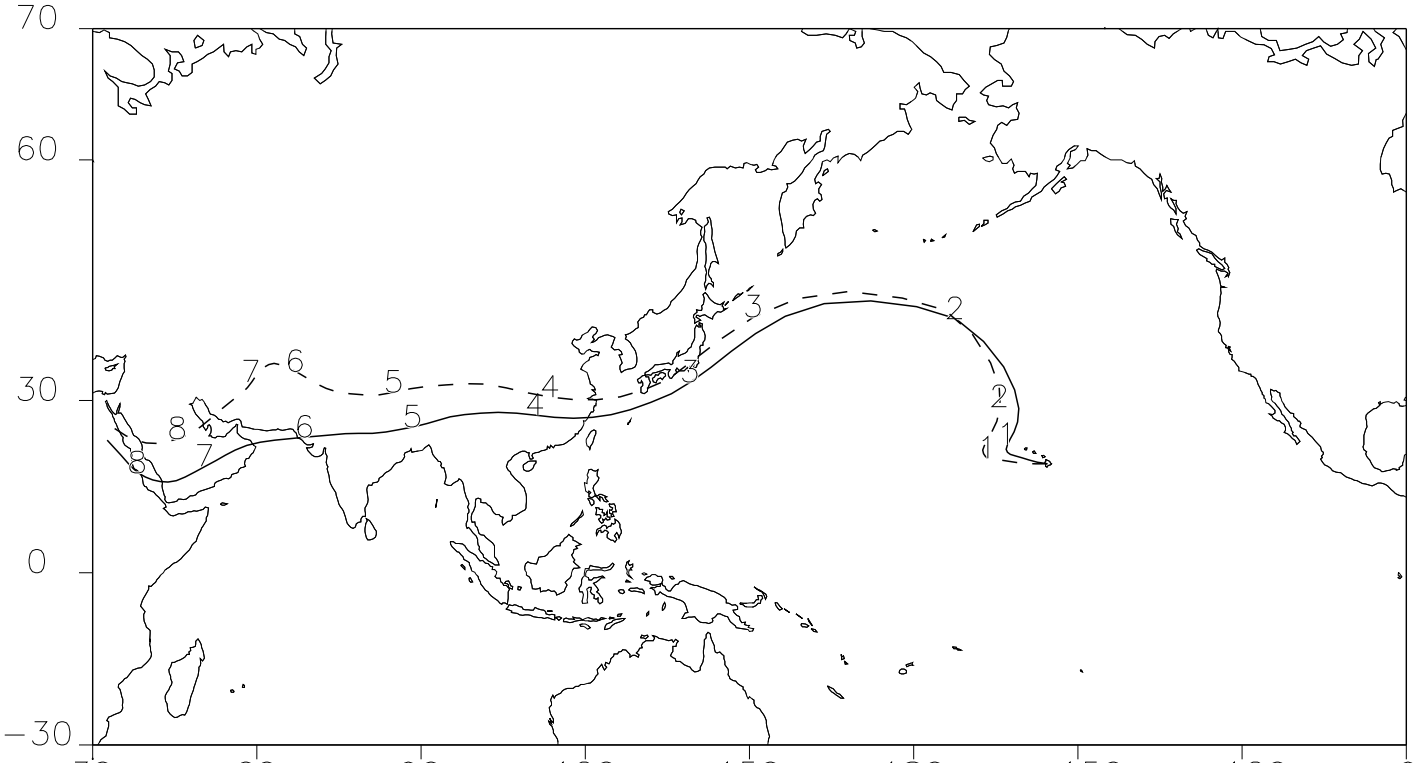
Day	km	hPa	C
0	9.5	302	−37
1	10.7	250	−48
2	11.2	228	−51
3	11.5	215	−52
4	11.5	222	−50
5	11.1	237	−45
6	11.9	208	−54
7	11.8	209	−54
8	10.9	239	−47
9	12.2	201	−56
10	13.3	169	−63

18UT

Day	km	hPa	C
0	9.5	303	−37
1	10.9	244	−49
2	9.8	279	−41
3	9.2	311	−37
4	10.3	262	−47
5	9.5	300	−39
6	9.3	309	−39
7	8.1	369	−27
8	6.8	441	−18
9	5.4	530	−6
10	4.9	568	−1

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

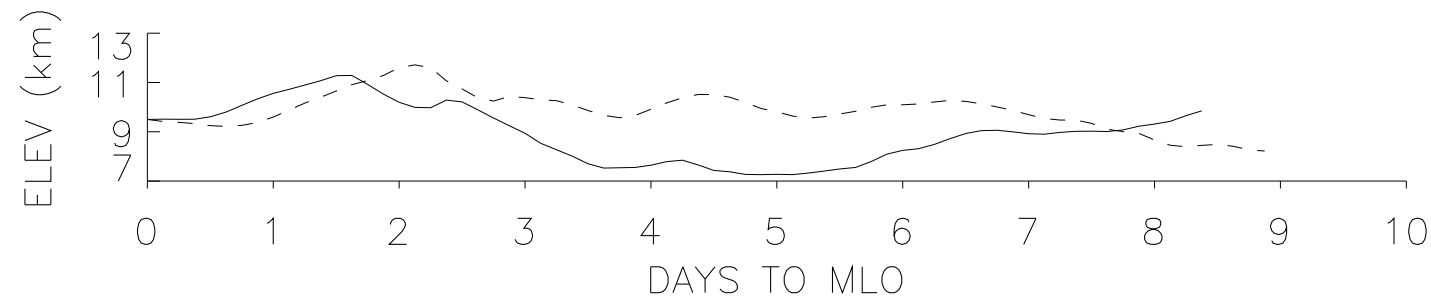


00UT

Day	km	hPa	C
0	9.5	304	−36
1	10.6	259	−45
2	10.2	267	−43
3	8.9	326	−32
4	7.6	391	−21
5	7.3	412	−17
6	8.2	364	−24
7	8.9	332	−28
8	9.3	313	−32

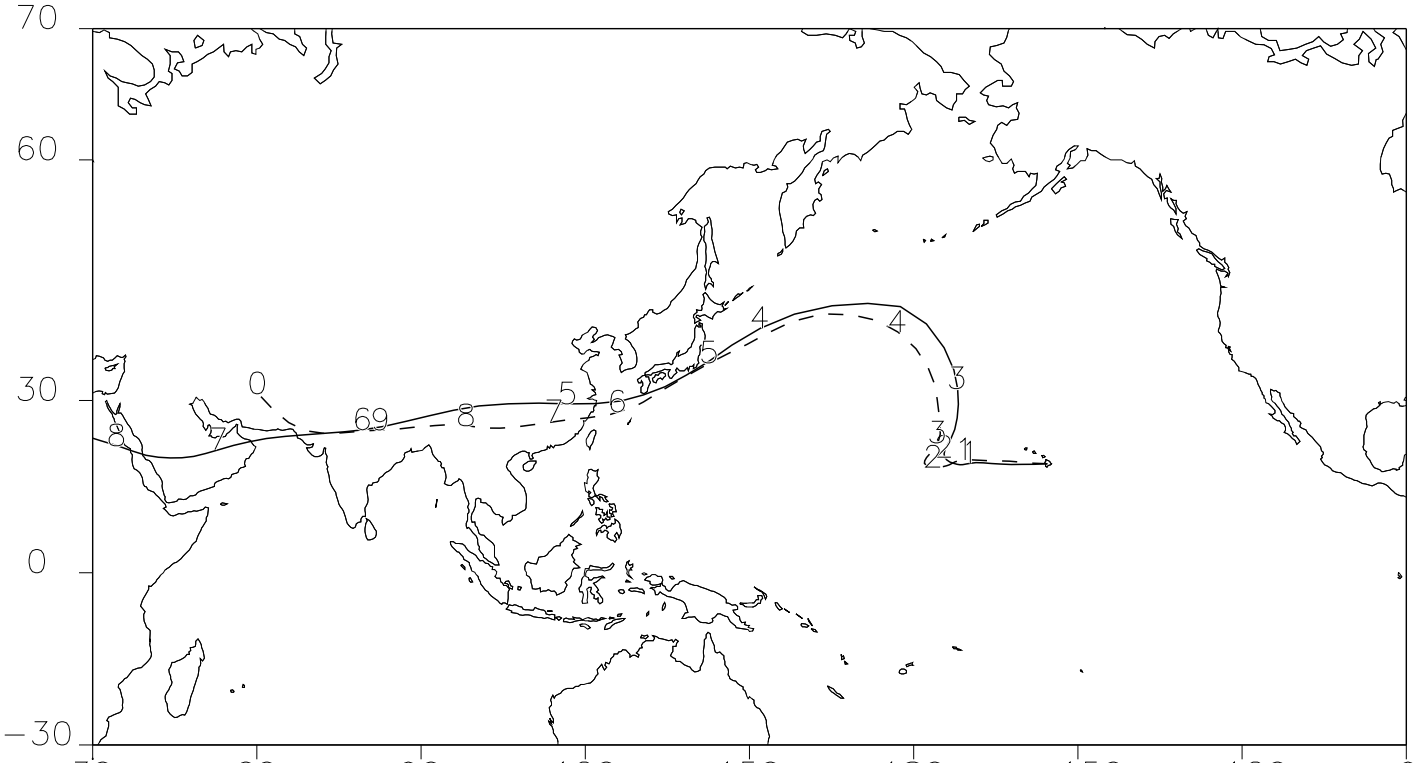
06UT

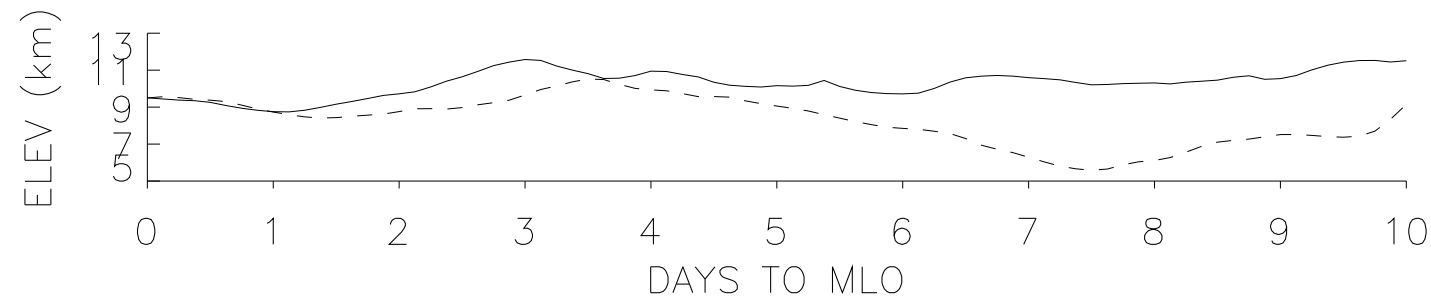
Day	km	hPa	C
0	9.5	304	−36
1	9.6	300	−37
2	11.6	219	−54
3	10.4	258	−45
4	9.9	280	−42
5	9.8	286	−39
6	10.1	274	−44
7	9.7	291	−42
8	8.7	340	−33



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

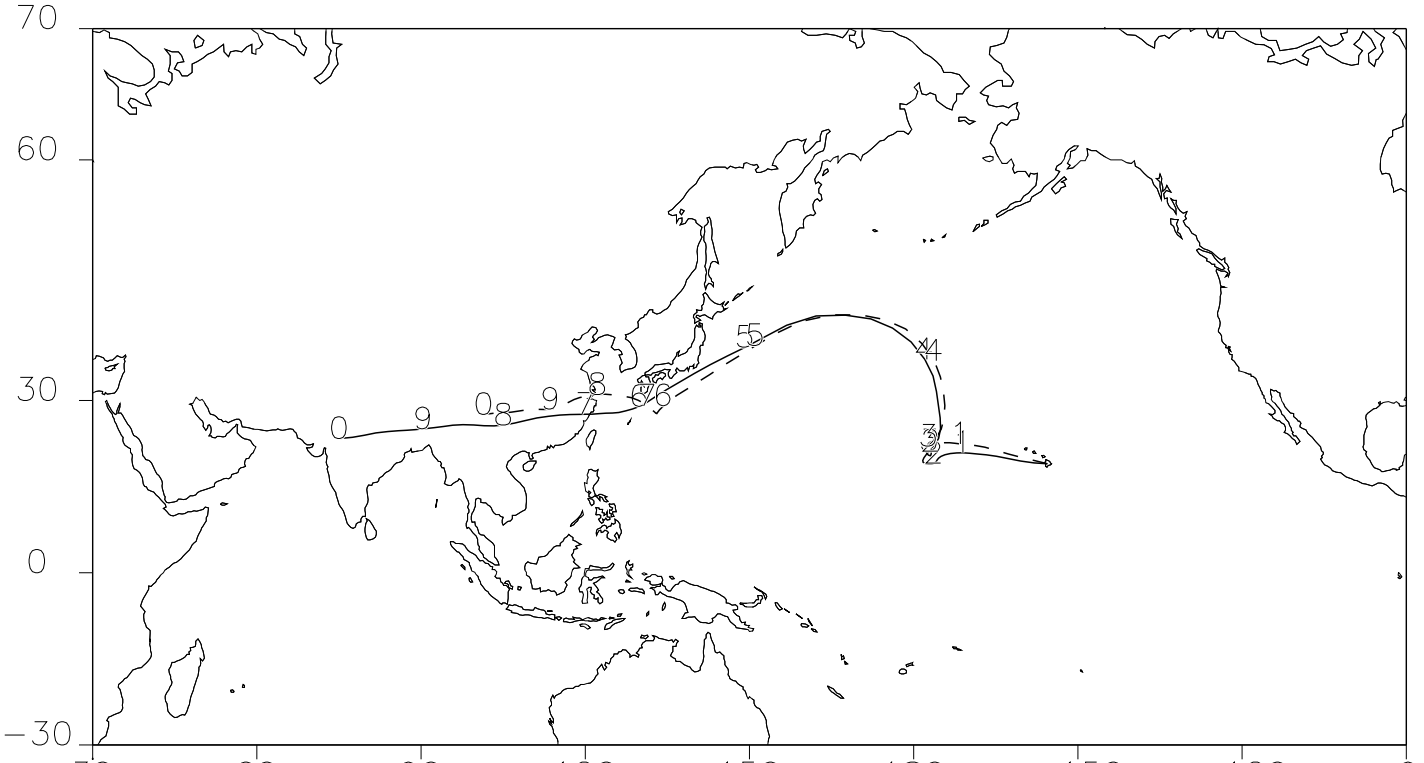
Day	km	hPa	C
0	9.5	303	−37
1	8.8	338	−29
2	9.7	296	−36
3	11.6	222	−54
4	10.9	241	−47
5	10.2	274	−39
6	9.7	296	−33
7	10.6	261	−40
8	10.3	271	−38
9	10.5	259	−43
10	11.5	225	−51

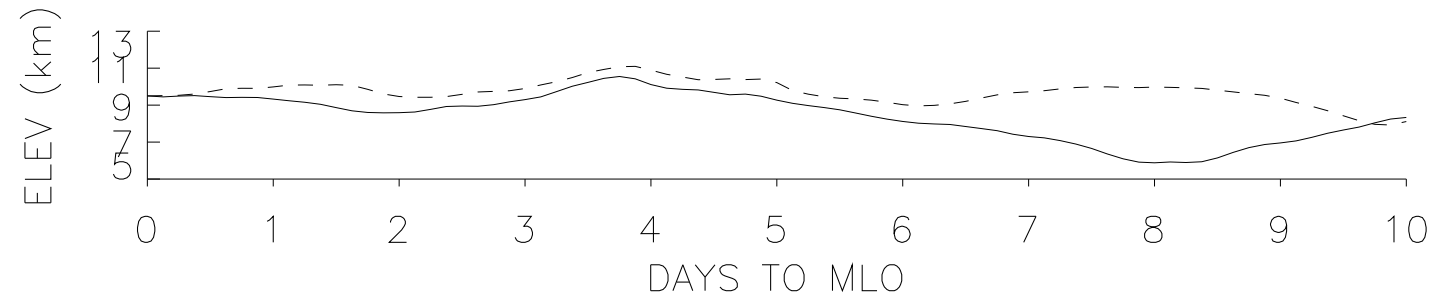
18UT

Day	km	hPa	C
0	9.5	303	−37
1	8.7	339	−29
2	8.8	338	−28
3	9.7	298	−36
4	9.9	283	−39
5	9.1	320	−31
6	7.8	384	−20
7	6.3	472	−10
8	6.1	480	−7
9	7.5	399	−23
10	9.1	314	−37

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





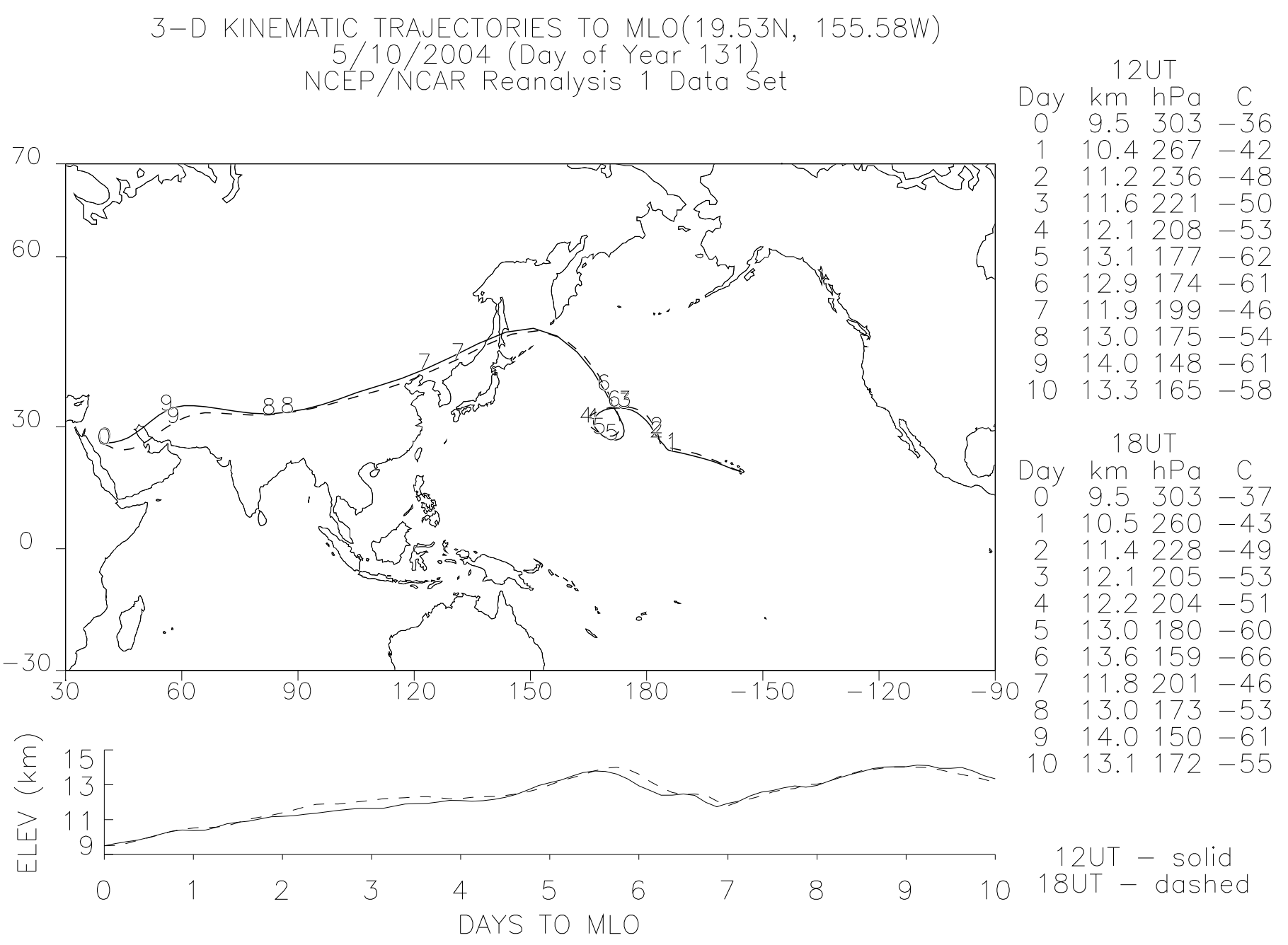
00UT

Day	km	hPa	C
0	9.5	303	−37
1	9.3	312	−34
2	8.6	347	−27
3	9.3	314	−32
4	10.1	277	−41
5	9.3	310	−32
6	8.1	369	−22
7	7.3	413	−17
8	5.9	495	−5
9	7.0	429	−16
10	8.3	355	−28

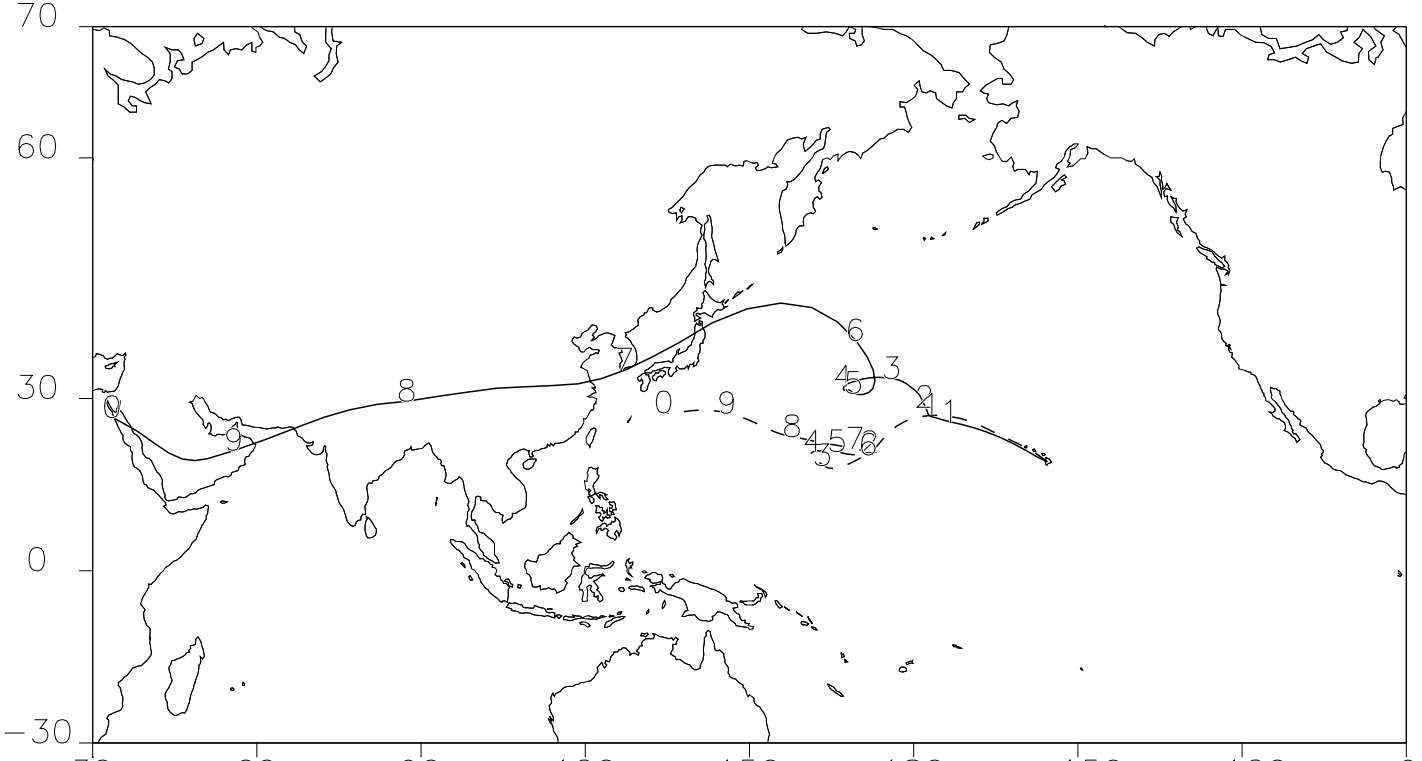
06UT

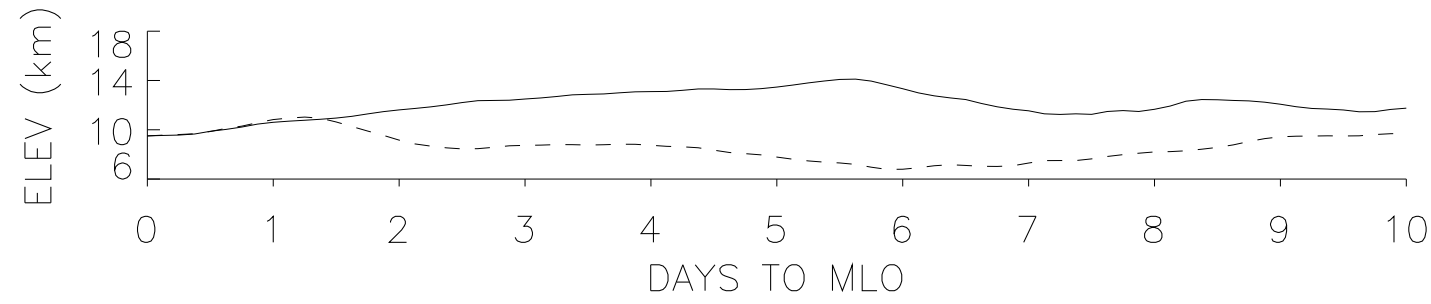
Day	km	hPa	C
0	9.5	303	−36
1	10.0	282	−40
2	9.5	305	−34
3	9.9	287	−38
4	10.9	247	−47
5	10.2	272	−41
6	9.0	326	−29
7	9.7	296	−35
8	10.0	285	−37
9	9.4	310	−32
10	8.1	369	−22

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
70
60
30
0
-30
30
60
90
120
150
180
-150
-120
-90
ELEV (km)
15
13
11
9
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
12UT
Day km hPa C
0 9.5 303 -36
1 10.4 267 -42
2 11.2 236 -48
3 11.6 221 -50
4 12.1 208 -53
5 13.1 177 -62
6 12.9 174 -61
7 11.9 199 -46
8 13.0 175 -54
9 14.0 148 -61
10 13.3 165 -58
18UT
Day km hPa C
0 9.5 303 -37
1 10.5 260 -43
2 11.4 228 -49
3 12.1 205 -53
4 12.2 204 -51
5 13.0 180 -60
6 13.6 159 -66
7 11.8 201 -46
8 13.0 173 -53
9 14.0 150 -61
10 13.1 172 -55
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

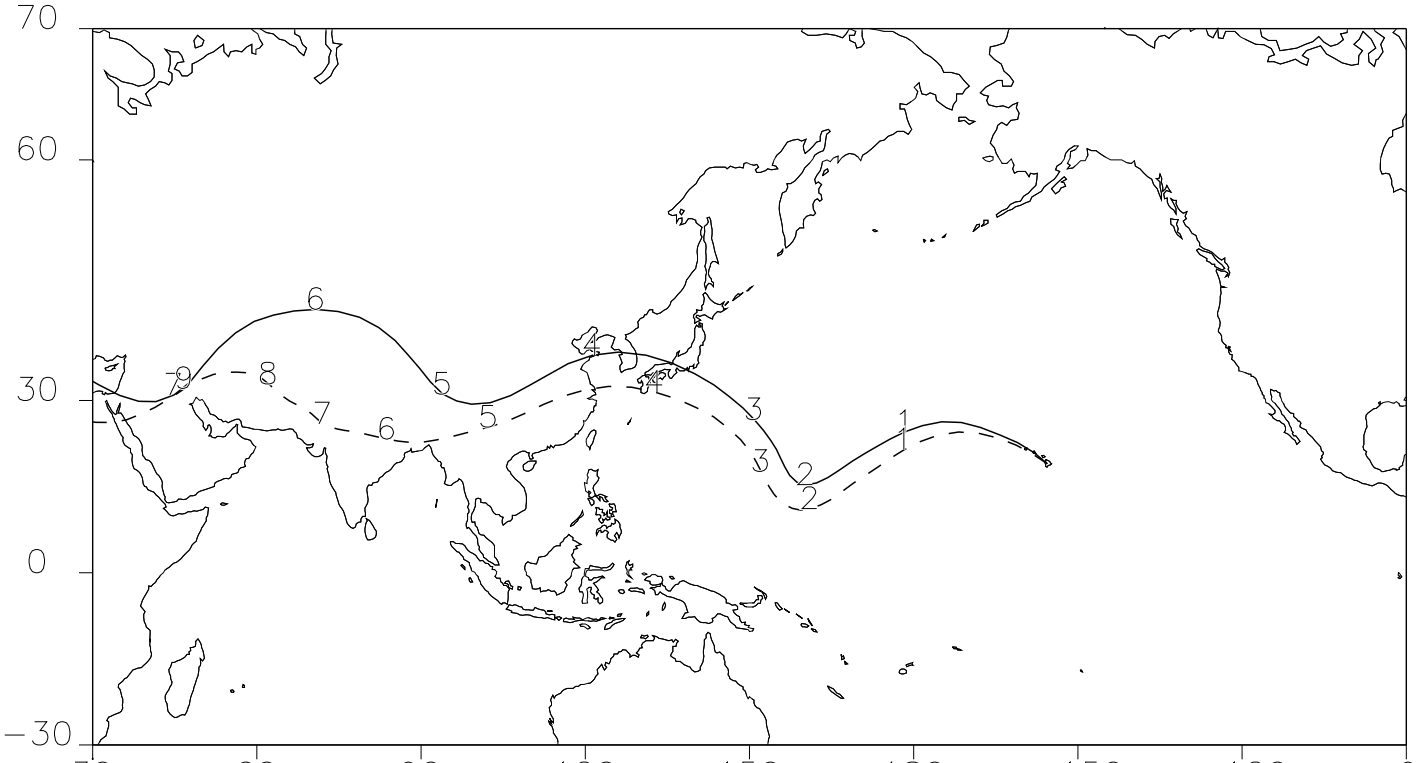
Day	km	hPa	C
0	9.5	303	-35
1	10.6	257	-43
2	11.6	222	-50
3	12.5	194	-54
4	13.1	178	-58
5	13.5	168	-62
6	13.3	167	-61
7	11.5	221	-46
8	11.7	218	-47
9	12.1	208	-51
10	11.8	214	-48

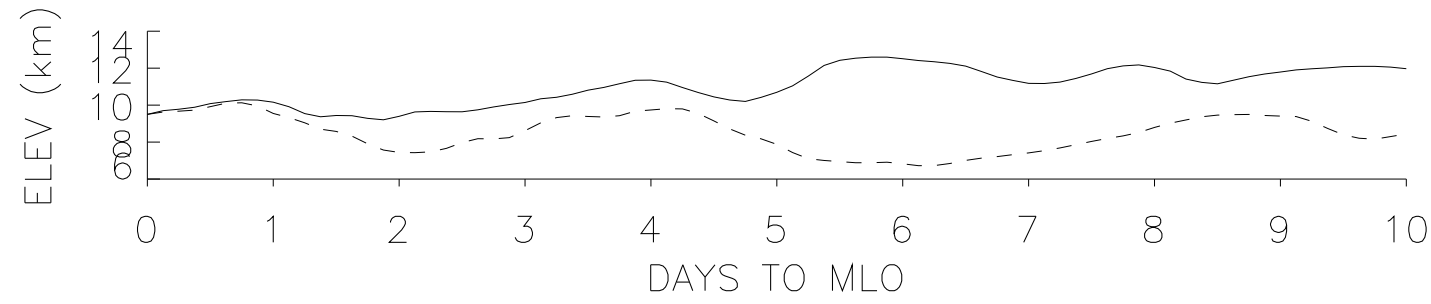
06UT

Day	km	hPa	C
0	9.5	304	-32
1	10.8	249	-45
2	9.2	318	-31
3	8.7	339	-27
4	8.7	338	-29
5	7.8	388	-21
6	6.8	443	-14
7	7.3	412	-18
8	8.2	363	-26
9	9.4	307	-36
10	9.7	296	-36

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





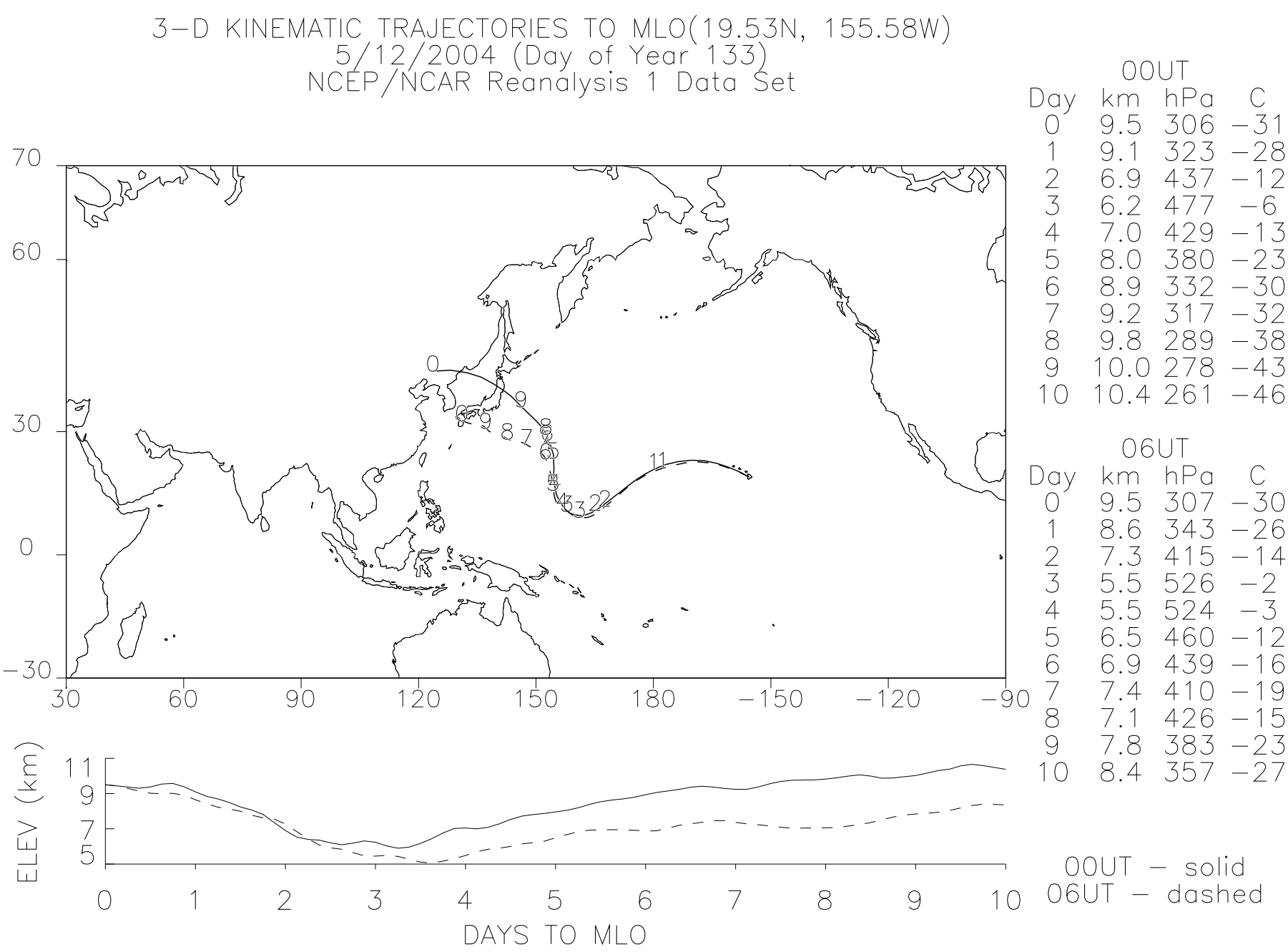
12UT

Day	km	hPa	C
0	9.5	304	−32
1	10.2	276	−38
2	9.4	310	−32
3	10.1	276	−41
4	11.4	224	−54
5	10.7	250	−46
6	12.5	185	−60
7	11.2	230	−46
8	12.0	199	−57
9	11.8	207	−55
10	12.0	198	−58

18UT

Day	km	hPa	C
0	9.5	306	−31
1	9.6	302	−32
2	7.4	405	−16
3	8.6	347	−26
4	9.7	292	−36
5	7.9	380	−23
6	6.8	440	−12
7	7.4	406	−20
8	8.8	334	−33
9	9.4	303	−42
10	8.4	347	−30

12UT – solid
18UT – dashed



00UT

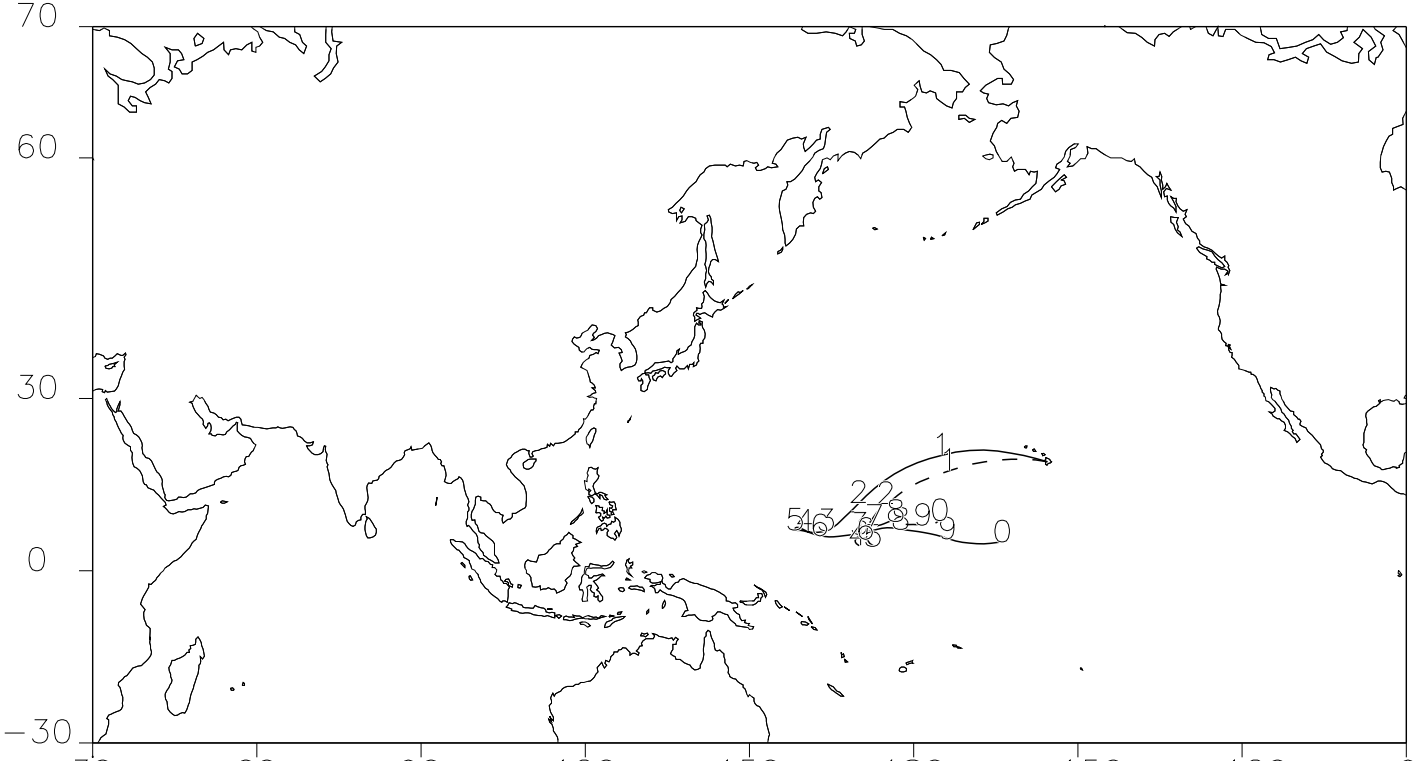
Day	km	hPa	C
0	9.5	306	−31
1	9.1	323	−28
2	6.9	437	−12
3	6.2	477	−6
4	7.0	429	−13
5	8.0	380	−23
6	8.9	332	−30
7	9.2	317	−32
8	9.8	289	−38
9	10.0	278	−43
10	10.4	261	−46

06UT

Day	km	hPa	C
0	9.5	307	−30
1	8.6	343	−26
2	7.3	415	−14
3	5.5	526	−2
4	5.5	524	−3
5	6.5	460	−12
6	6.9	439	−16
7	7.4	410	−19
8	7.1	426	−15
9	7.8	383	−23
10	8.4	357	−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

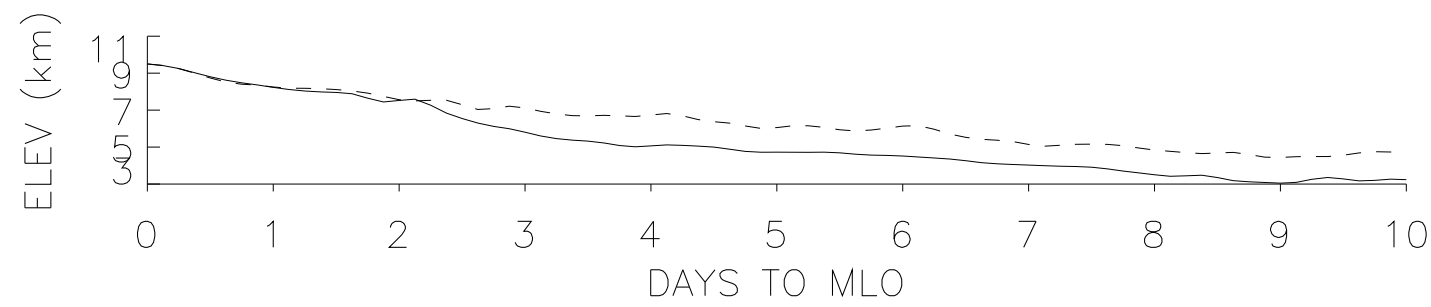


12UT

Day	km	hPa	C
0	9.5	306	−30
1	8.2	364	−23
2	7.5	403	−15
3	5.8	504	−3
4	5.1	554	0
5	4.7	578	2
6	4.5	593	3
7	4.0	630	6
8	3.5	672	9
9	3.0	707	13
10	3.2	692	11

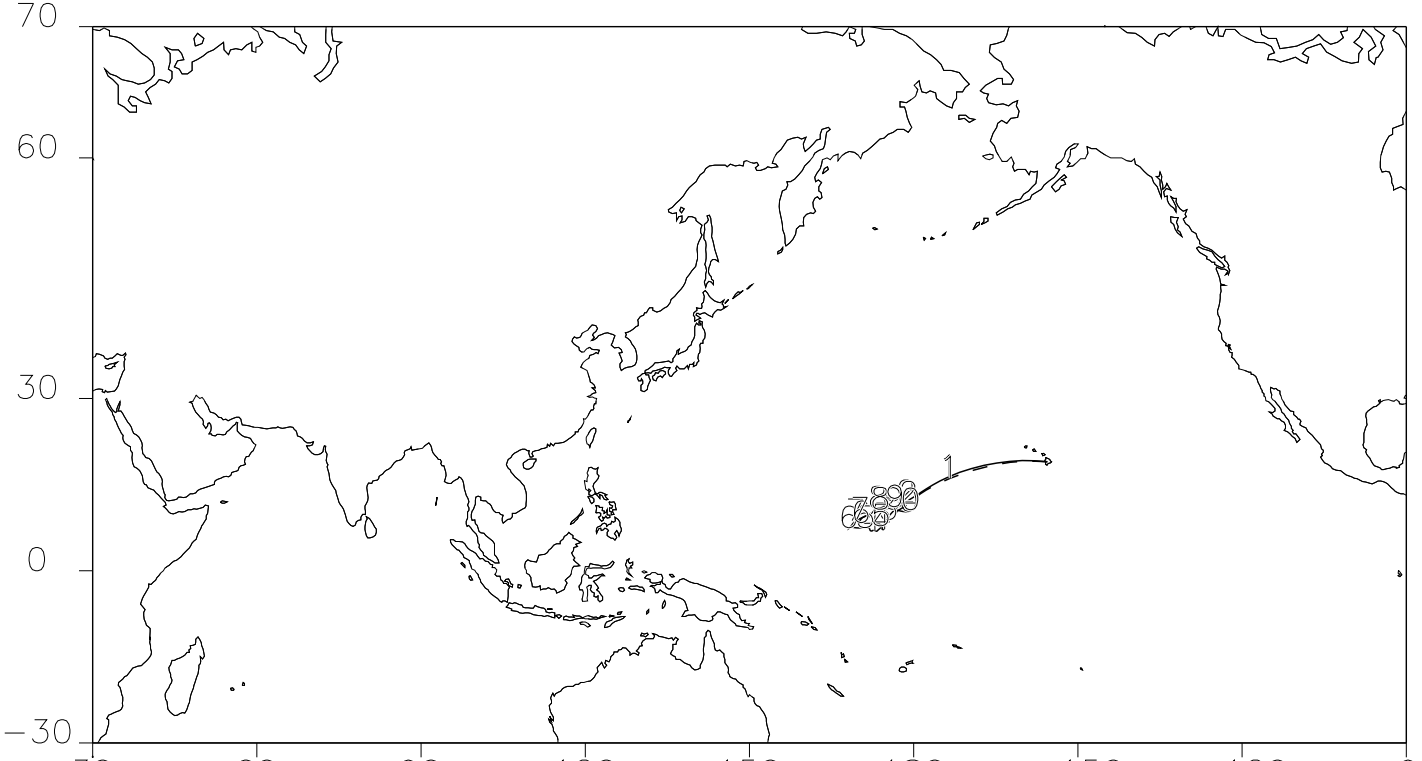
18UT

Day	km	hPa	C
0	9.5	307	−31
1	8.3	364	−21
2	7.6	400	−15
3	7.1	424	−12
4	6.7	446	−9
5	6.1	486	−5
6	6.1	482	−6
7	5.1	547	−1
8	4.8	569	1
9	4.4	597	3
10	4.7	581	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

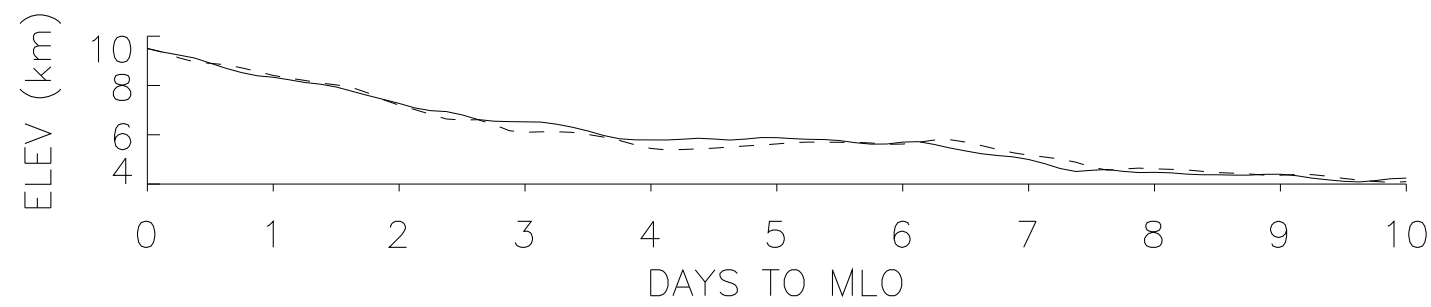


00UT

Day	km	hPa	C
0	9.5	308	−31
1	8.3	361	−21
2	7.3	417	−14
3	6.5	460	−8
4	5.8	505	−3
5	5.9	499	−3
6	5.7	511	−3
7	5.0	559	0
8	4.5	597	2
9	4.4	601	2
10	4.2	613	4

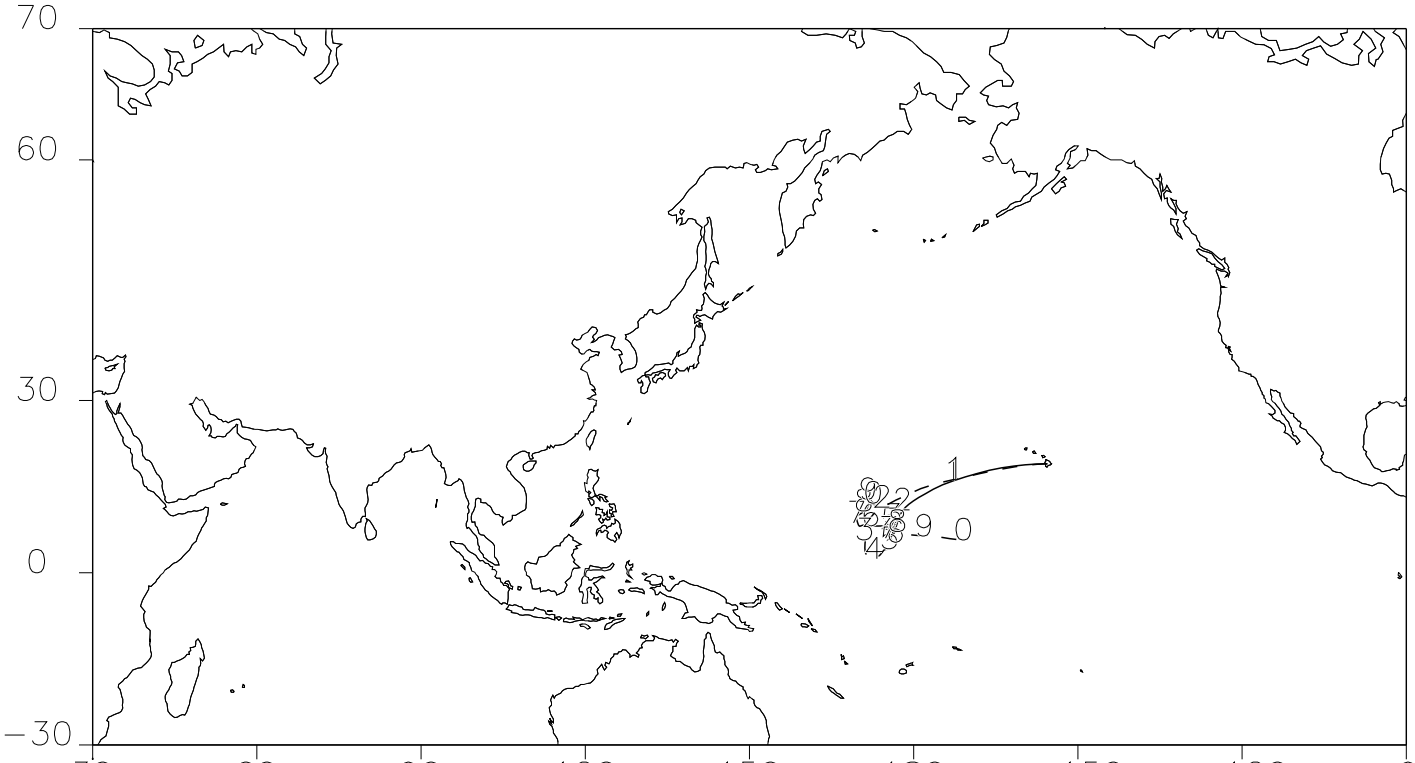
06UT

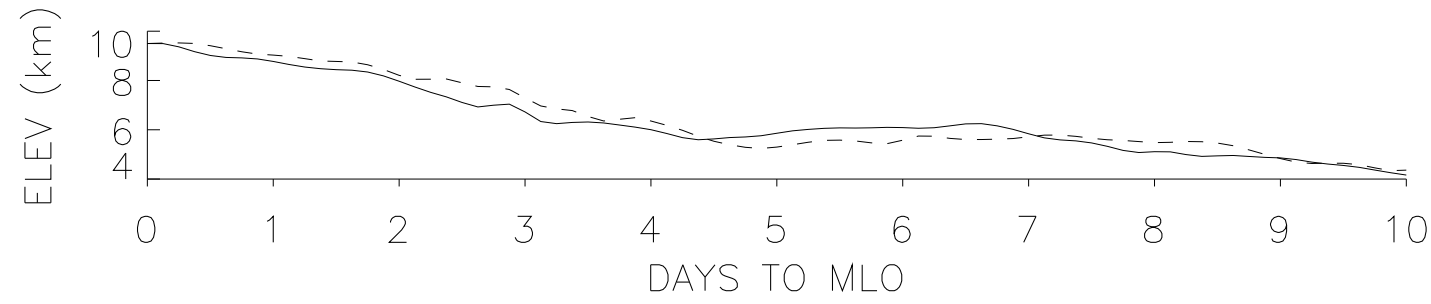
Day	km	hPa	C
0	9.5	308	−31
1	8.4	357	−22
2	7.2	420	−13
3	6.1	485	−5
4	5.4	526	−2
5	5.6	514	−3
6	5.6	514	−3
7	5.2	545	−1
8	4.6	585	1
9	4.4	603	3
10	4.1	622	5



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

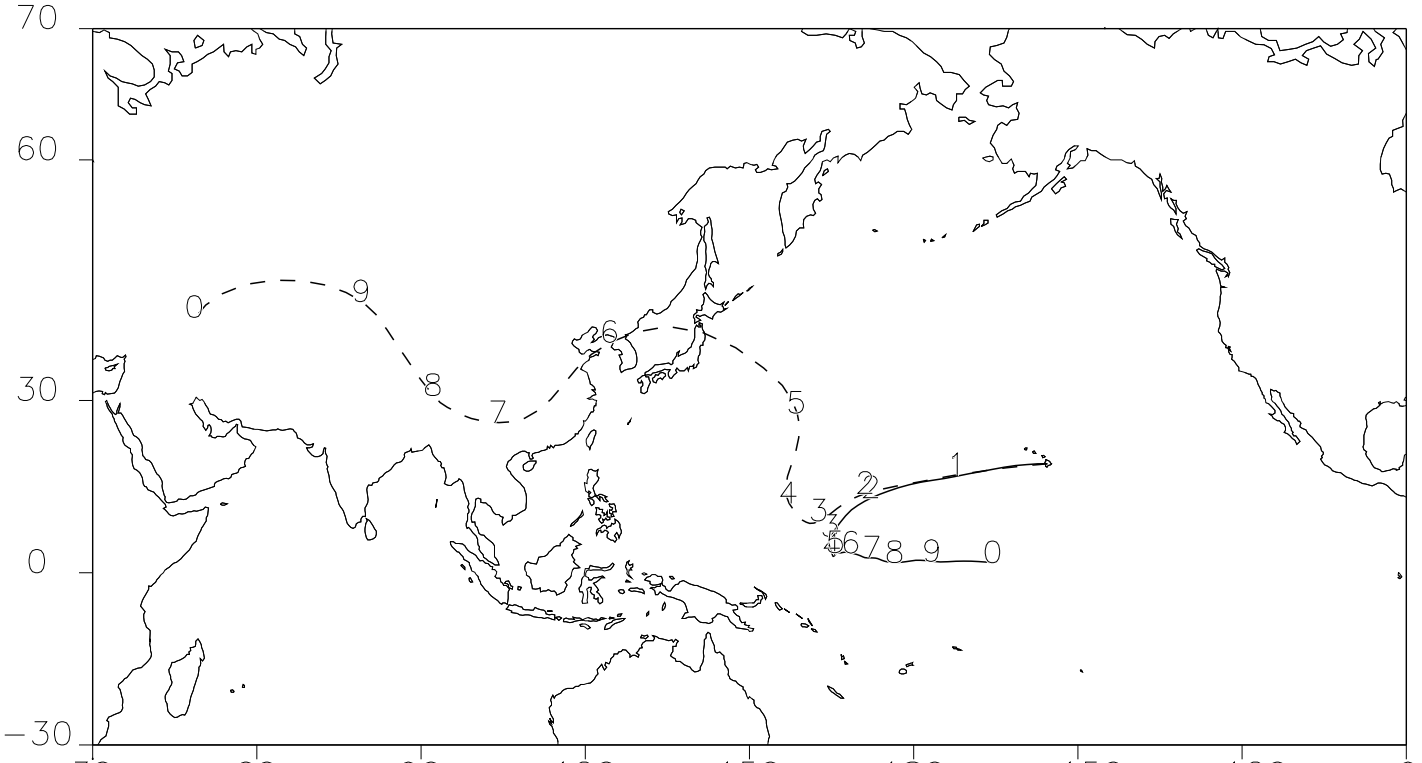
Day	km	hPa	C
0	9.5	307	−32
1	8.8	340	−25
2	8.0	380	−18
3	6.7	448	−10
4	6.0	492	−5
5	5.9	501	−4
6	6.1	486	−6
7	5.8	502	−4
8	5.1	552	−1
9	4.9	569	0
10	4.2	619	5

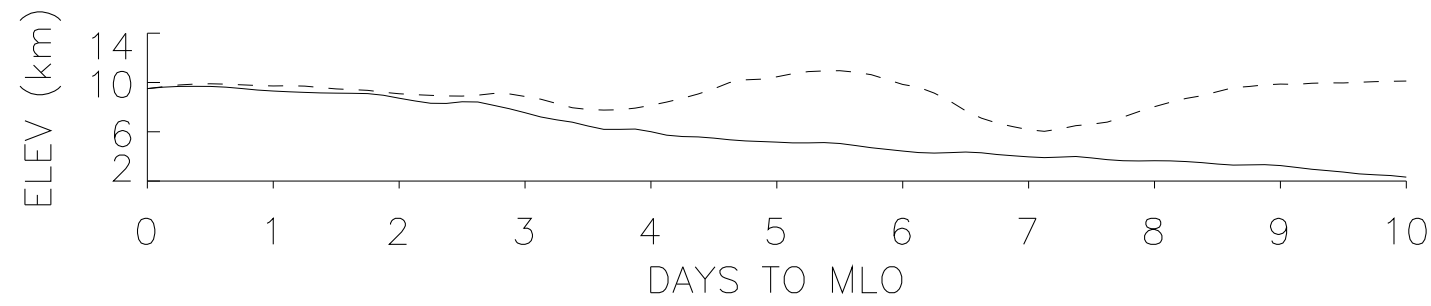
18UT

Day	km	hPa	C
0	9.5	308	−31
1	9.0	327	−27
2	8.2	367	−20
3	7.3	415	−13
4	6.4	469	−7
5	5.3	536	−1
6	5.6	517	−4
7	5.7	508	−4
8	5.5	525	−3
9	4.8	570	1
10	4.4	602	5

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





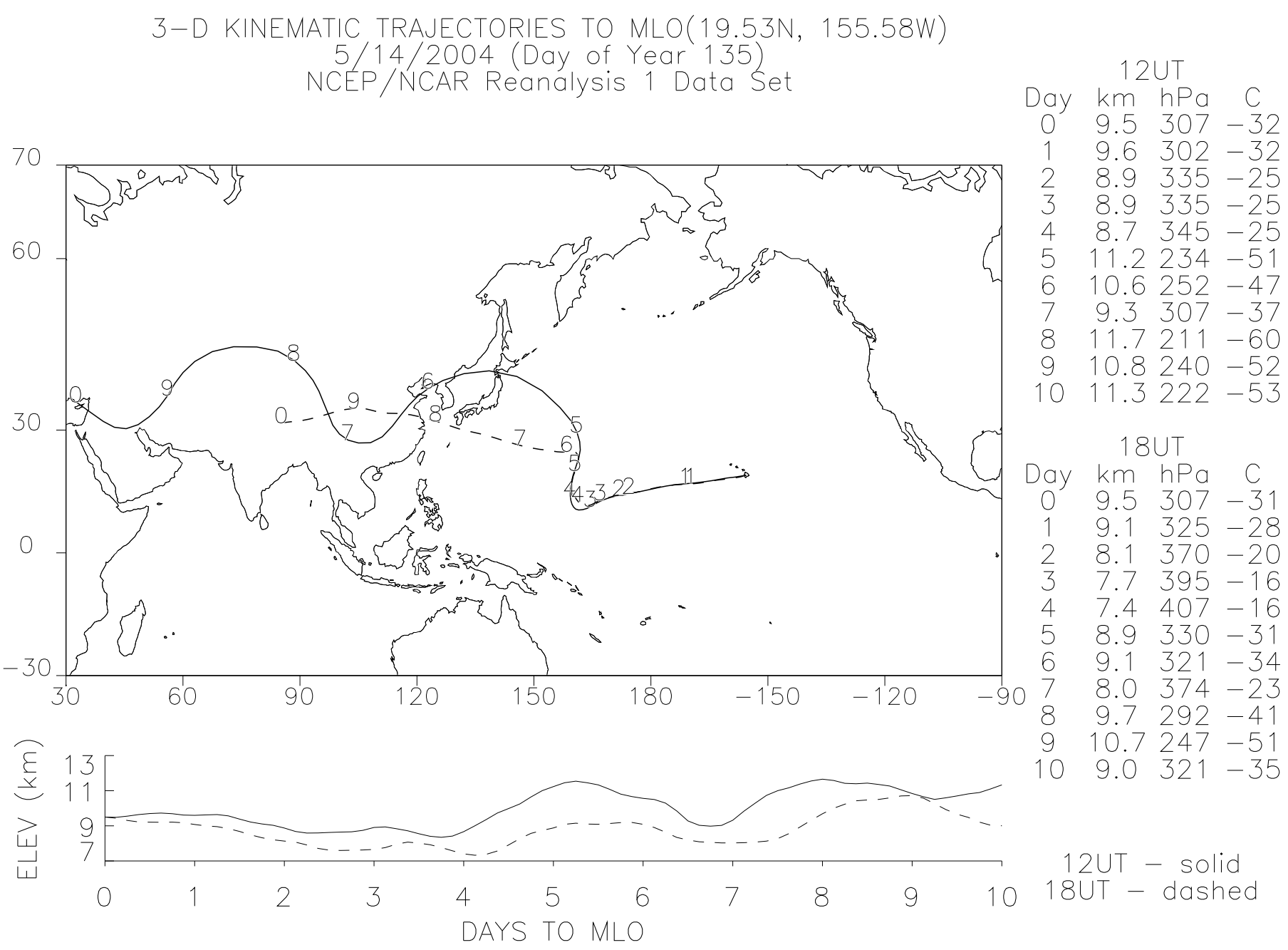
00UT

Day	km	hPa	C
0	9.5	308	−31
1	9.3	315	−30
2	8.7	343	−23
3	7.5	403	−14
4	6.0	492	−4
5	5.2	548	1
6	4.4	598	4
7	4.0	633	6
8	3.6	659	8
9	3.3	690	10
10	2.3	771	13

06UT

Day	km	hPa	C
0	9.5	308	−31
1	9.7	297	−33
2	9.1	326	−26
3	8.9	336	−24
4	8.1	369	−21
5	10.5	263	−45
6	9.8	280	−42
7	6.2	476	−13
8	8.0	369	−31
9	9.9	276	−48
10	10.1	266	−51

00UT – solid
06UT – dashed



12UT

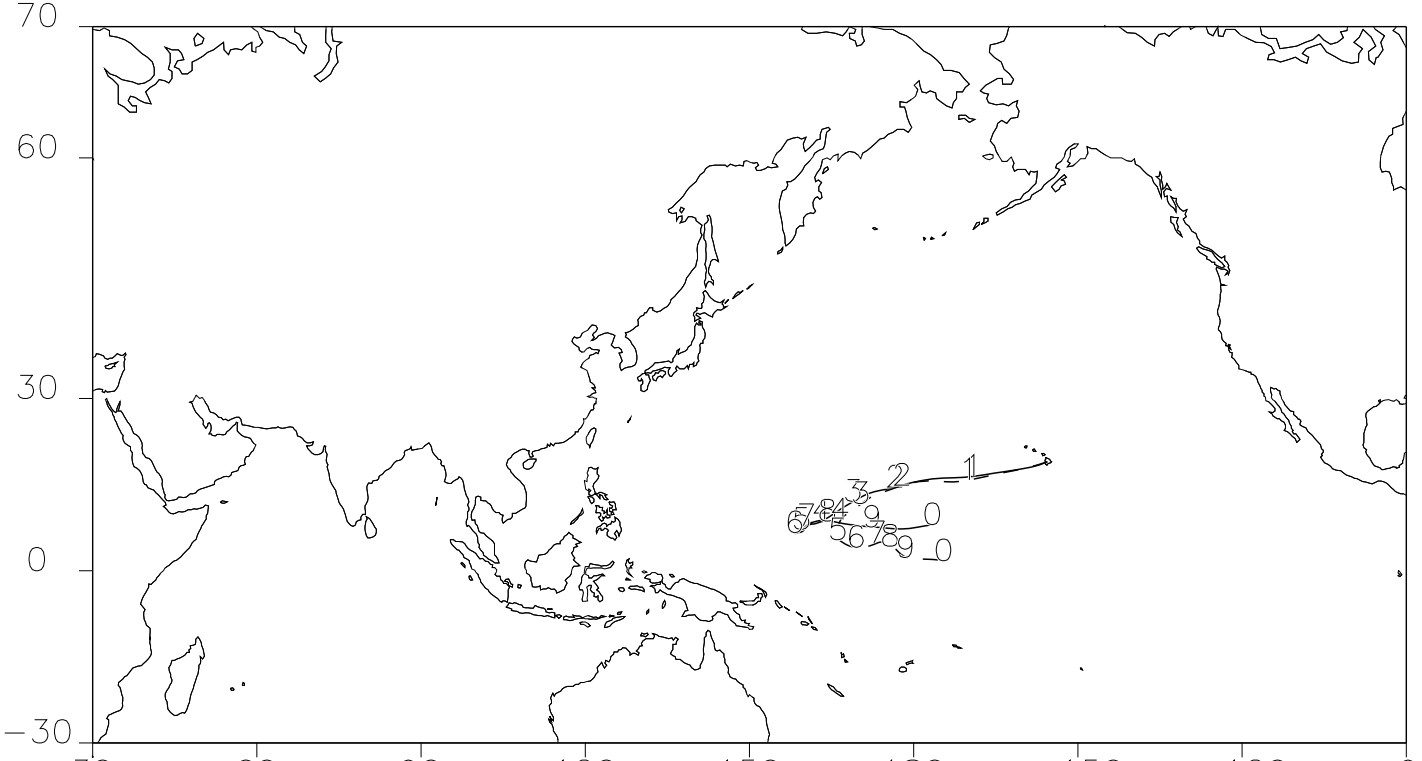
Day	km	hPa	C
0	9.5	307	−32
1	9.6	302	−32
2	8.9	335	−25
3	8.9	335	−25
4	8.7	345	−25
5	11.2	234	−51
6	10.6	252	−47
7	9.3	307	−37
8	11.7	211	−60
9	10.8	240	−52
10	11.3	222	−53

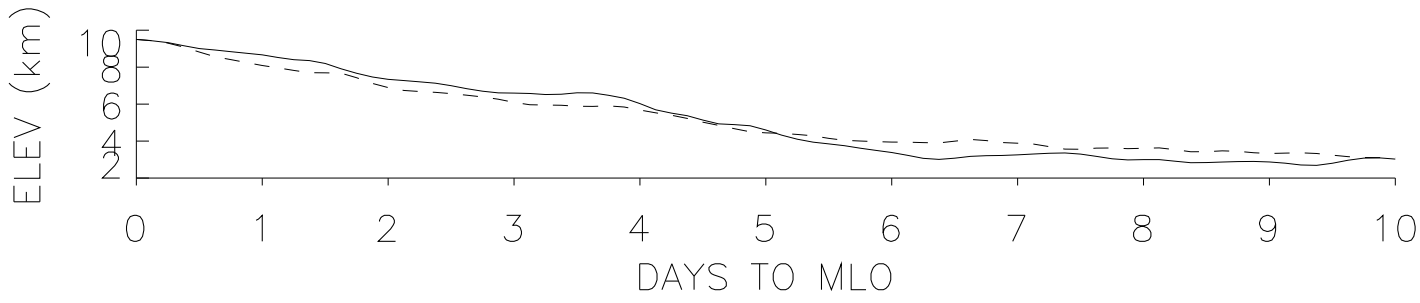
18UT

Day	km	hPa	C
0	9.5	307	−31
1	9.1	325	−28
2	8.1	370	−20
3	7.7	395	−16
4	7.4	407	−16
5	8.9	330	−31
6	9.1	321	−34
7	8.0	374	−23
8	9.7	292	−41
9	10.7	247	−51
10	9.0	321	−35

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

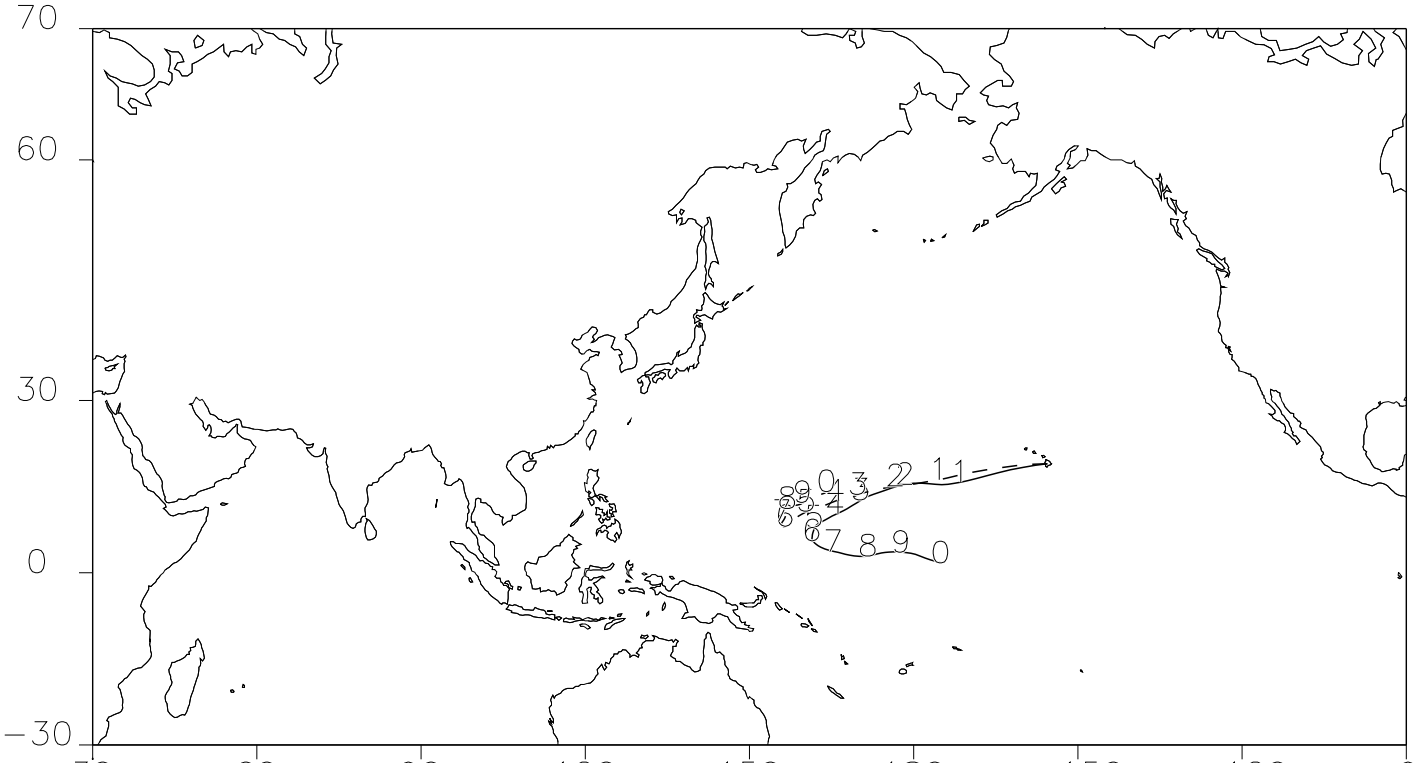
Day	km	hPa	C
0	9.5	308	−31
1	8.7	345	−25
2	7.3	412	−15
3	6.6	455	−10
4	6.0	490	−6
5	4.6	586	2
6	3.4	681	10
7	3.3	691	10
8	3.0	713	11
9	2.9	724	12
10	3.0	711	11

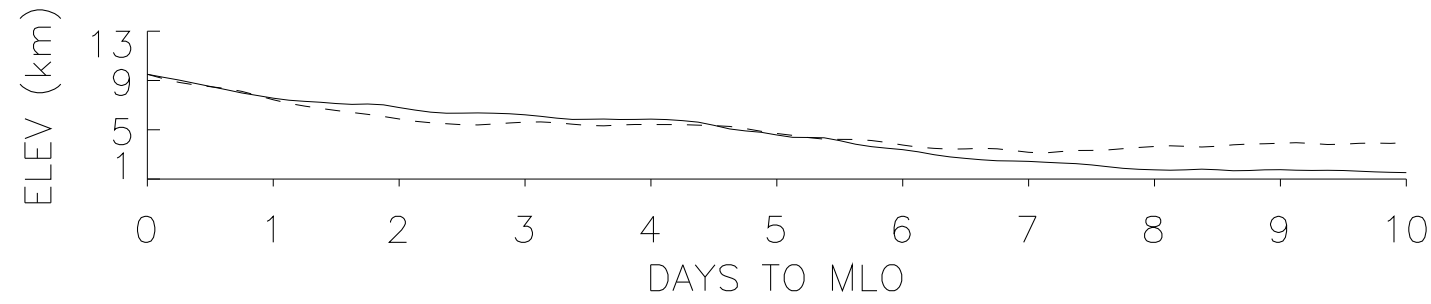
06UT

Day	km	hPa	C
0	9.5	307	−31
1	8.1	373	−20
2	6.9	436	−13
3	6.1	484	−6
4	5.7	510	−4
5	4.4	596	3
6	3.9	633	7
7	3.9	638	7
8	3.6	659	7
9	3.3	683	11
10	3.1	701	11

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

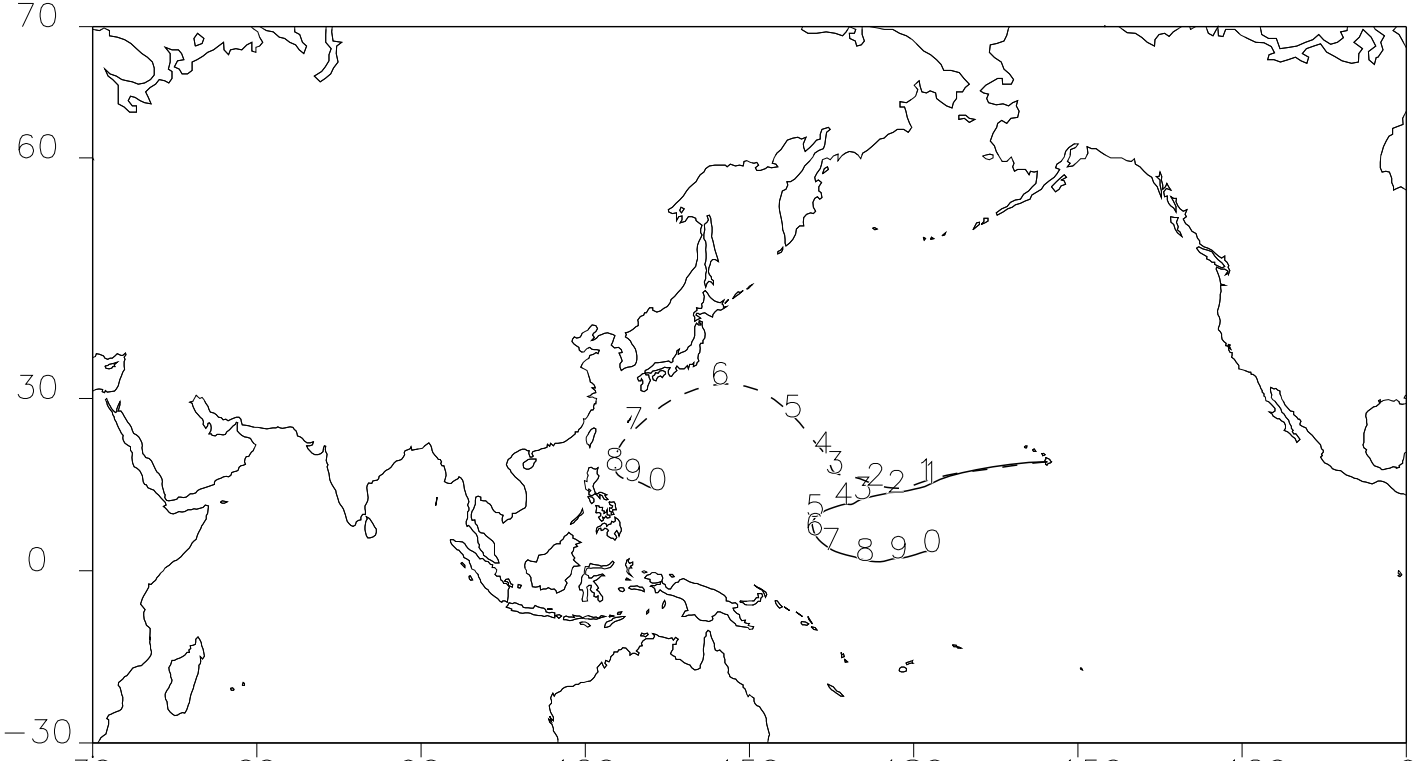
Day	km	hPa	C
0	9.5	307	−32
1	7.6	400	−17
2	6.8	442	−12
3	6.2	478	−8
4	5.9	500	−5
5	4.6	588	2
6	3.4	680	10
7	2.4	761	14
8	1.7	826	18
9	1.8	825	16
10	1.5	849	16

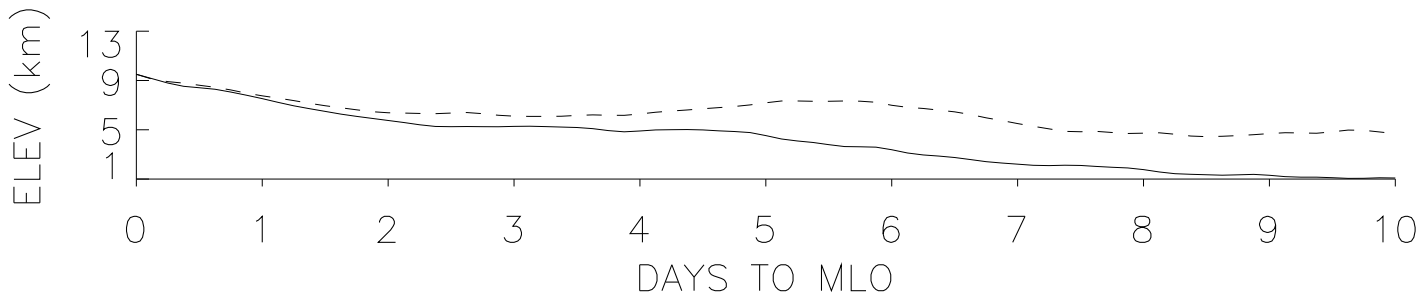
18UT

Day	km	hPa	C
0	9.5	307	−33
1	7.4	407	−16
2	5.9	498	−5
3	5.6	514	−5
4	5.4	527	−4
5	4.7	577	1
6	3.8	647	7
7	3.2	696	10
8	3.6	657	6
9	3.9	637	5
10	4.0	634	4

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

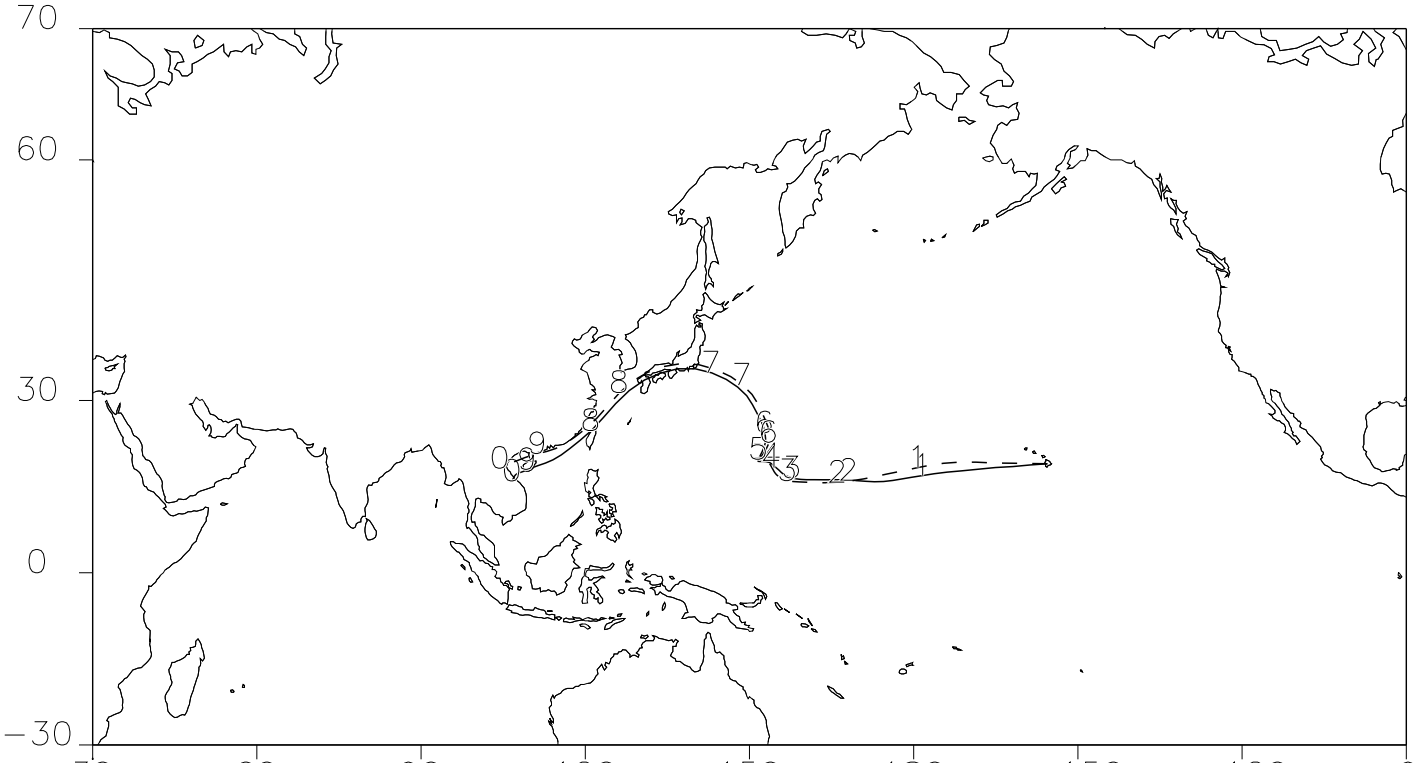
Day	km	hPa	C
0	9.5	308	−31
1	7.5	403	−17
2	5.8	507	−5
3	5.3	538	−2
4	4.9	564	−1
5	4.5	591	2
6	3.4	681	10
7	2.2	781	16
8	1.8	823	17
9	1.3	868	19
10	1.1	892	19

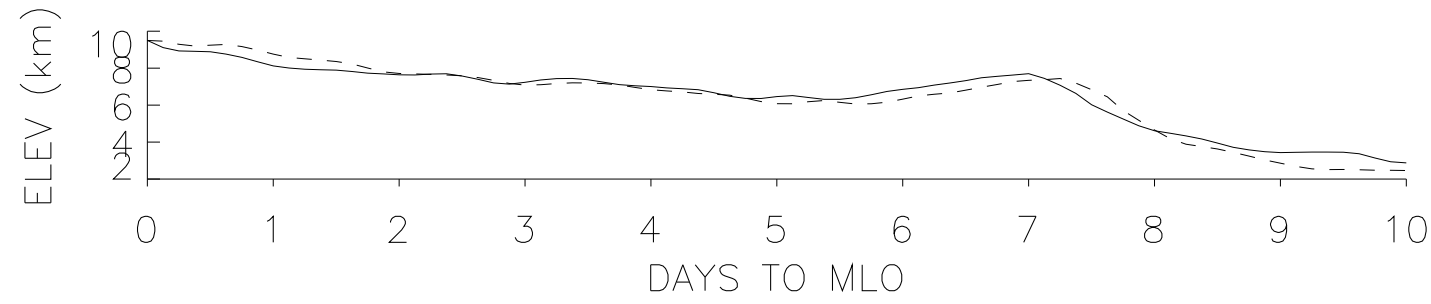
06UT

Day	km	hPa	C
0	9.5	308	−30
1	7.8	390	−18
2	6.4	467	−8
3	6.1	484	−7
4	6.3	472	−8
5	7.2	418	−16
6	7.0	430	−14
7	5.5	525	−3
8	4.7	579	2
9	4.7	582	2
10	4.7	582	3

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

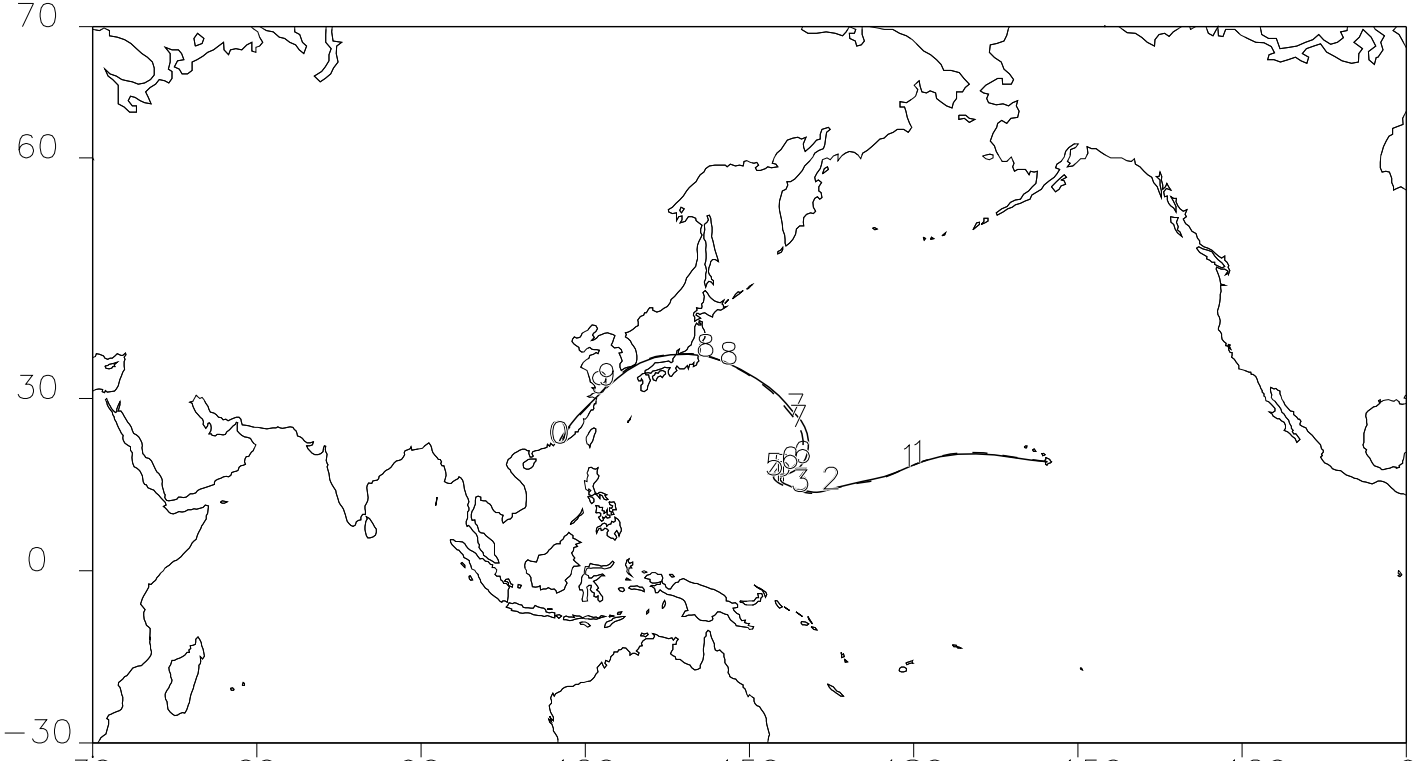
Day	km	hPa	C
0	9.5	307	−31
1	8.1	372	−21
2	7.6	397	−18
3	7.2	419	−14
4	7.0	432	−12
5	6.5	464	−7
6	6.9	441	−11
7	7.7	391	−19
8	4.6	581	1
9	3.4	675	9
10	2.9	723	12

18UT

Day	km	hPa	C
0	9.5	306	−32
1	8.8	339	−26
2	7.7	392	−19
3	7.1	427	−12
4	6.8	440	−11
5	6.1	486	−5
6	6.3	471	−8
7	7.3	409	−17
8	4.7	576	−1
9	2.9	722	11
10	2.5	760	13

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

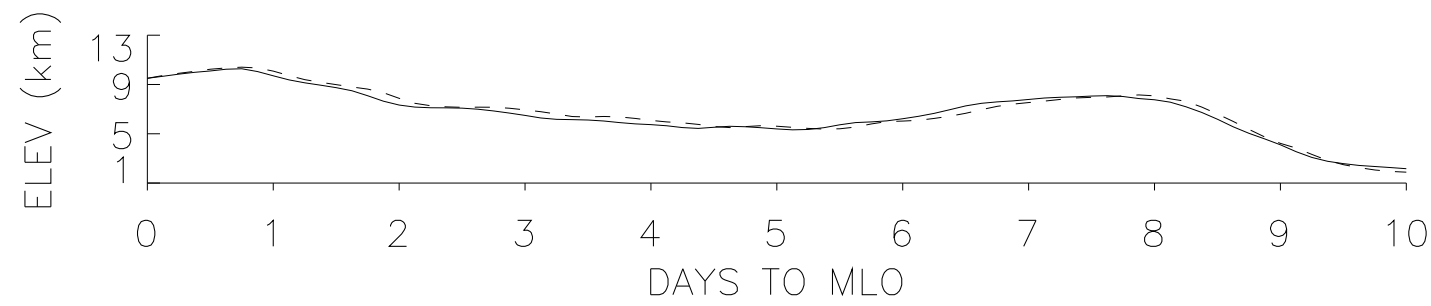


00UT

Day	km	hPa	C
0	9.5	306	−31
1	9.7	298	−32
2	7.3	414	−14
3	6.5	462	−8
4	5.7	508	−4
5	5.4	530	−1
6	6.2	476	−7
7	7.8	387	−21
8	7.8	384	−22
9	4.1	616	0
10	2.2	788	13

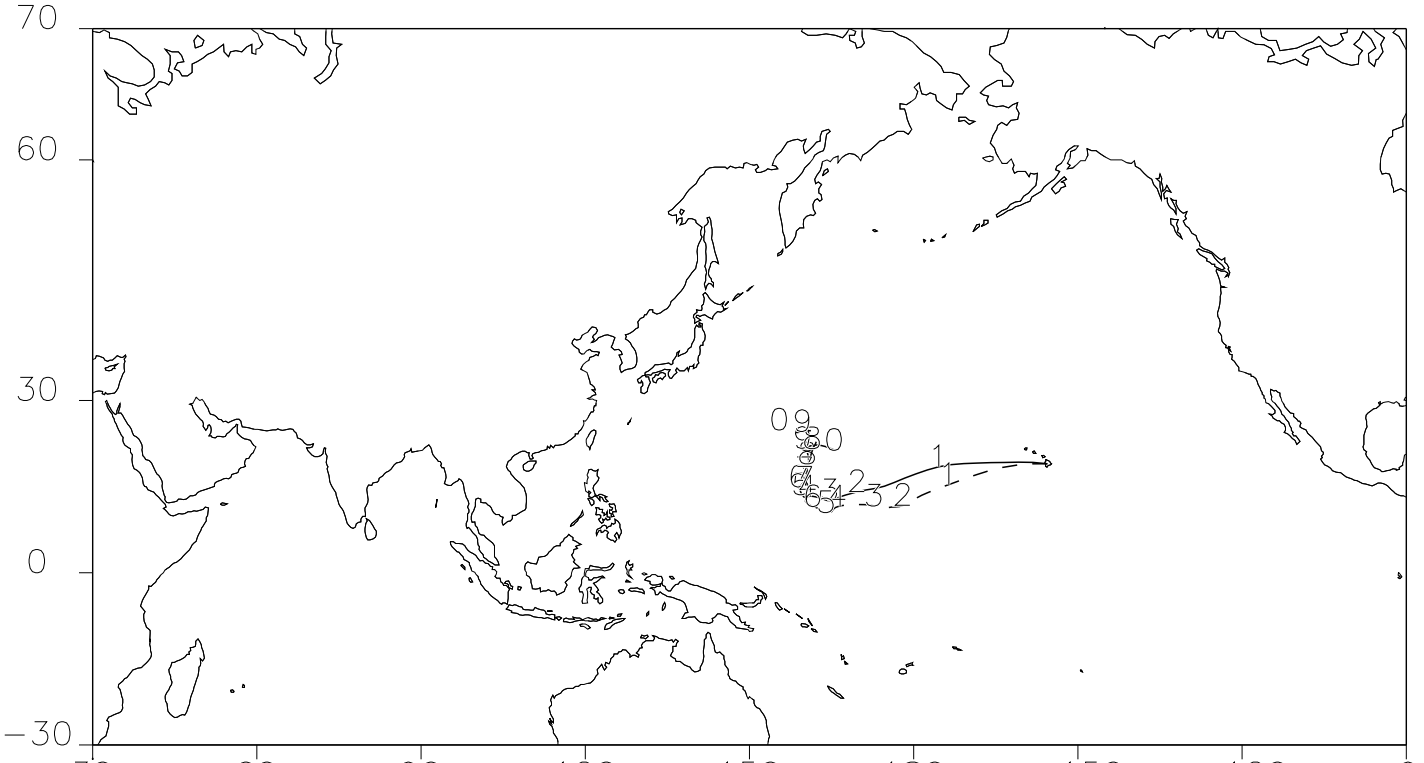
06UT

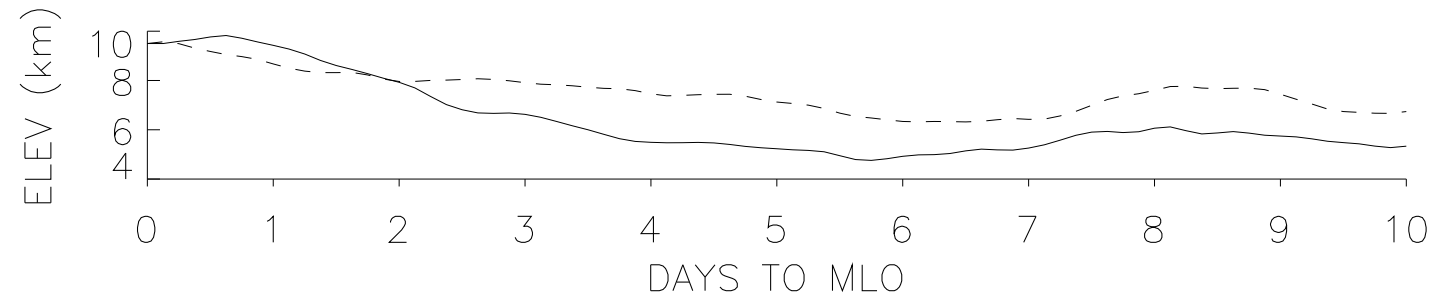
Day	km	hPa	C
0	9.5	307	−31
1	10.1	282	−36
2	7.9	385	−18
3	6.9	435	−10
4	6.1	486	−6
5	5.6	515	−2
6	6.0	488	−5
7	7.5	400	−18
8	8.1	368	−23
9	4.2	606	0
10	1.9	813	16



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

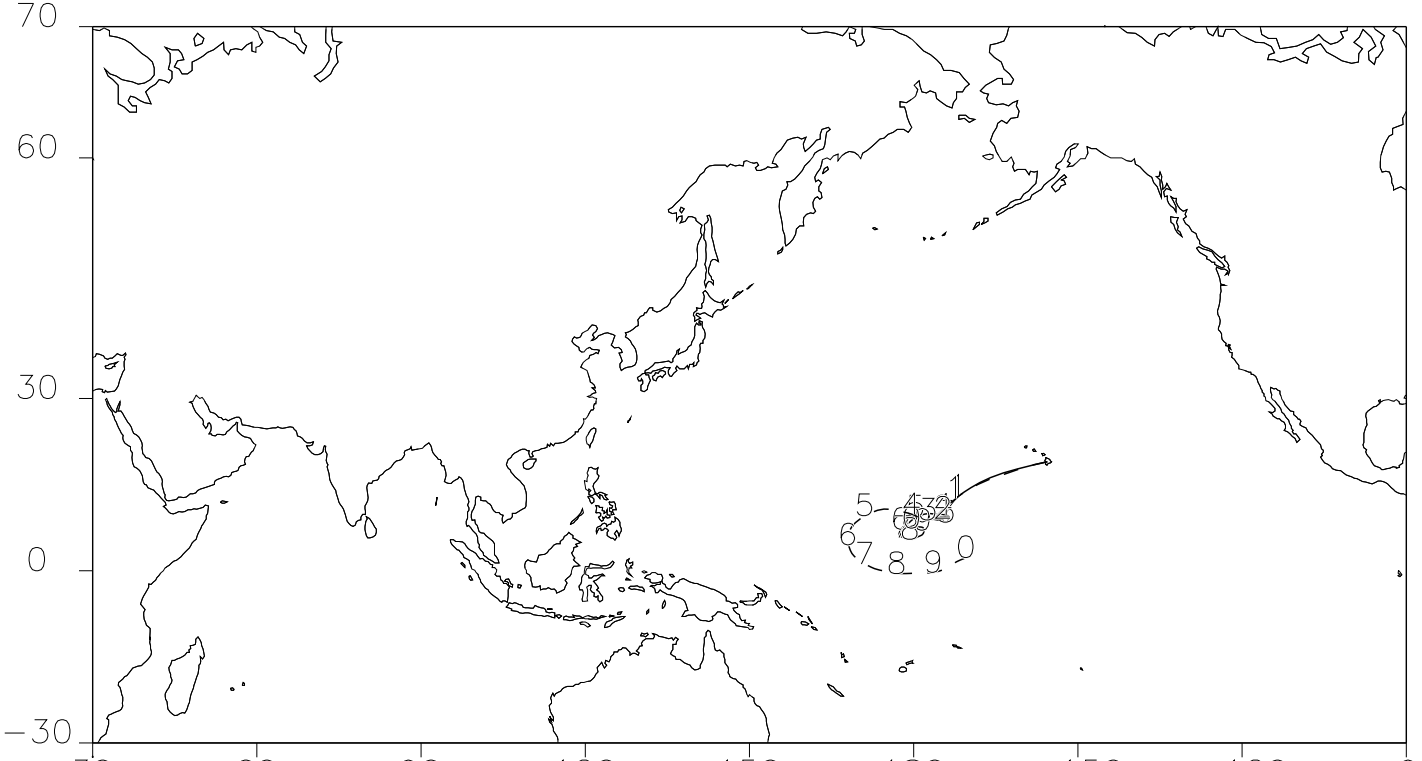
Day	km	hPa	C
0	9.5	307	−32
1	9.4	311	−31
2	7.9	383	−18
3	6.6	454	−9
4	5.5	525	−2
5	5.2	542	−1
6	4.9	563	0
7	5.3	539	−3
8	6.1	485	−11
9	5.7	507	−8
10	5.3	535	−4

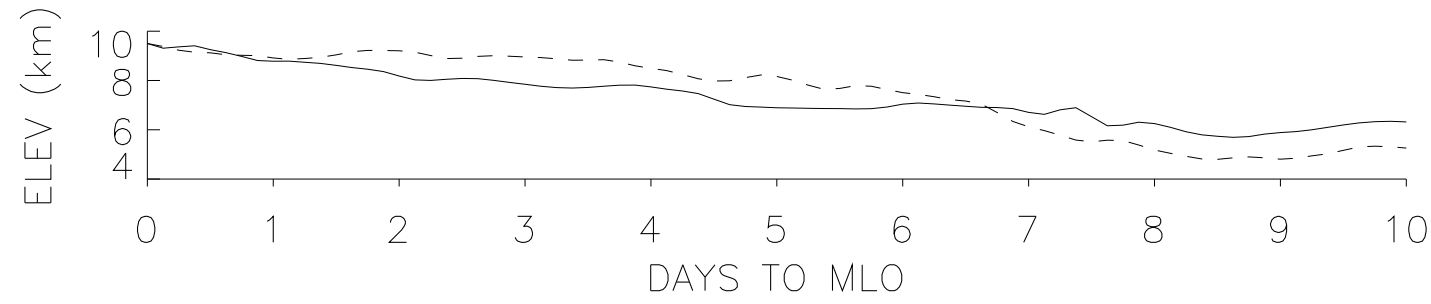
18UT

Day	km	hPa	C
0	9.5	307	−31
1	8.7	345	−25
2	8.0	381	−17
3	7.9	383	−18
4	7.5	406	−13
5	7.1	423	−12
6	6.3	469	−7
7	6.4	463	−10
8	7.6	394	−22
9	7.4	404	−21
10	6.7	445	−14

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

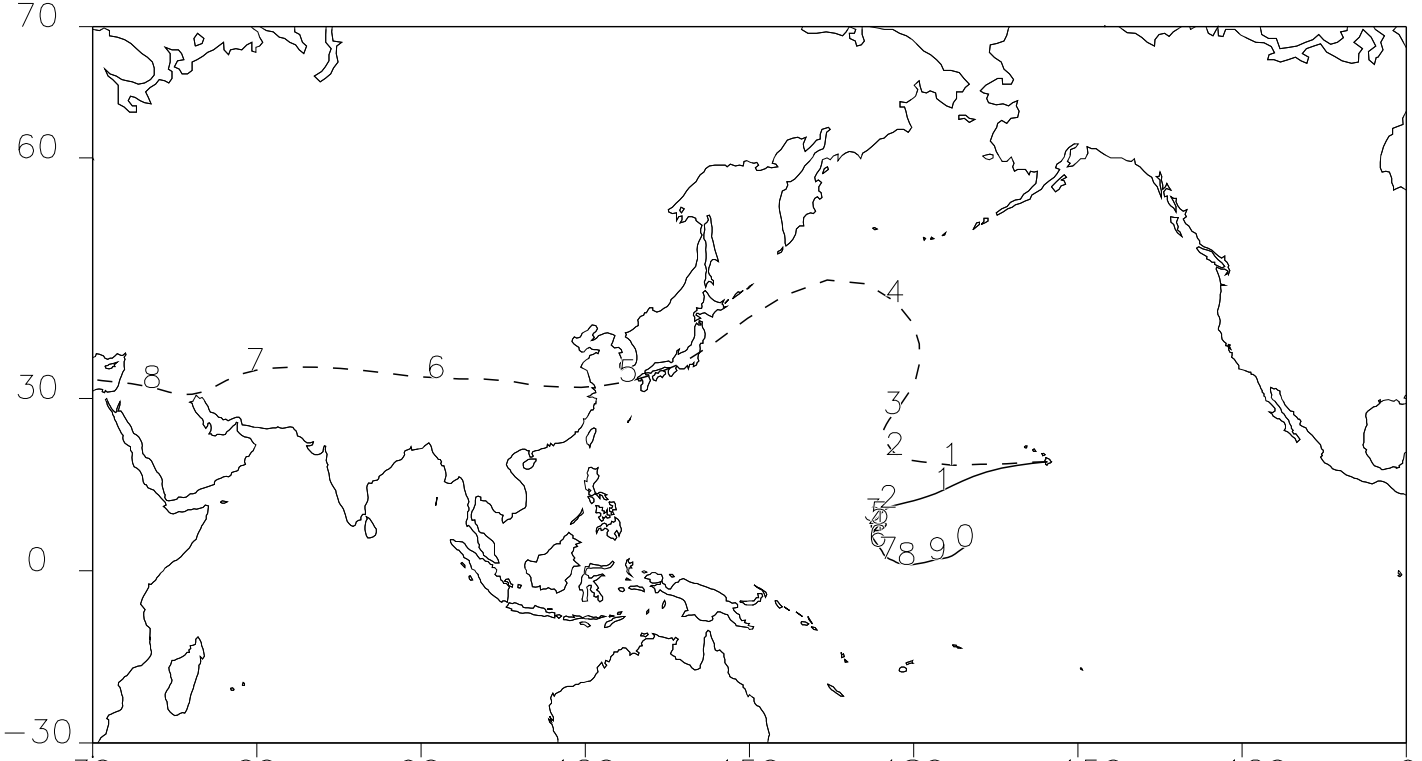
Day	km	hPa	C
0	9.5	306	−31
1	8.8	341	−25
2	8.2	371	−19
3	7.8	388	−17
4	7.7	393	−15
5	6.9	438	−10
6	7.0	430	−11
7	6.7	449	−9
8	6.3	476	−6
9	5.9	499	−4
10	6.3	472	−6

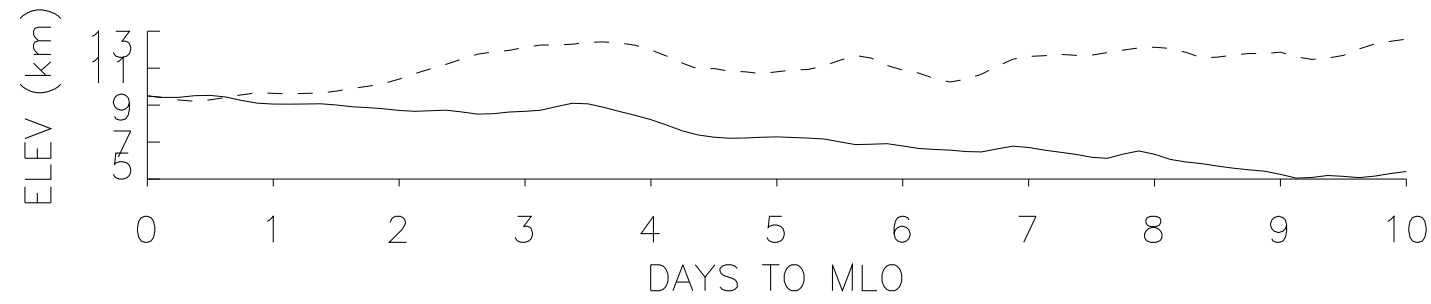
06UT

Day	km	hPa	C
0	9.5	307	−31
1	8.9	335	−25
2	9.2	322	−26
3	9.0	333	−24
4	8.5	355	−21
5	8.2	370	−18
6	7.5	403	−13
7	6.1	483	−5
8	5.2	545	1
9	4.8	570	3
10	5.3	540	0

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

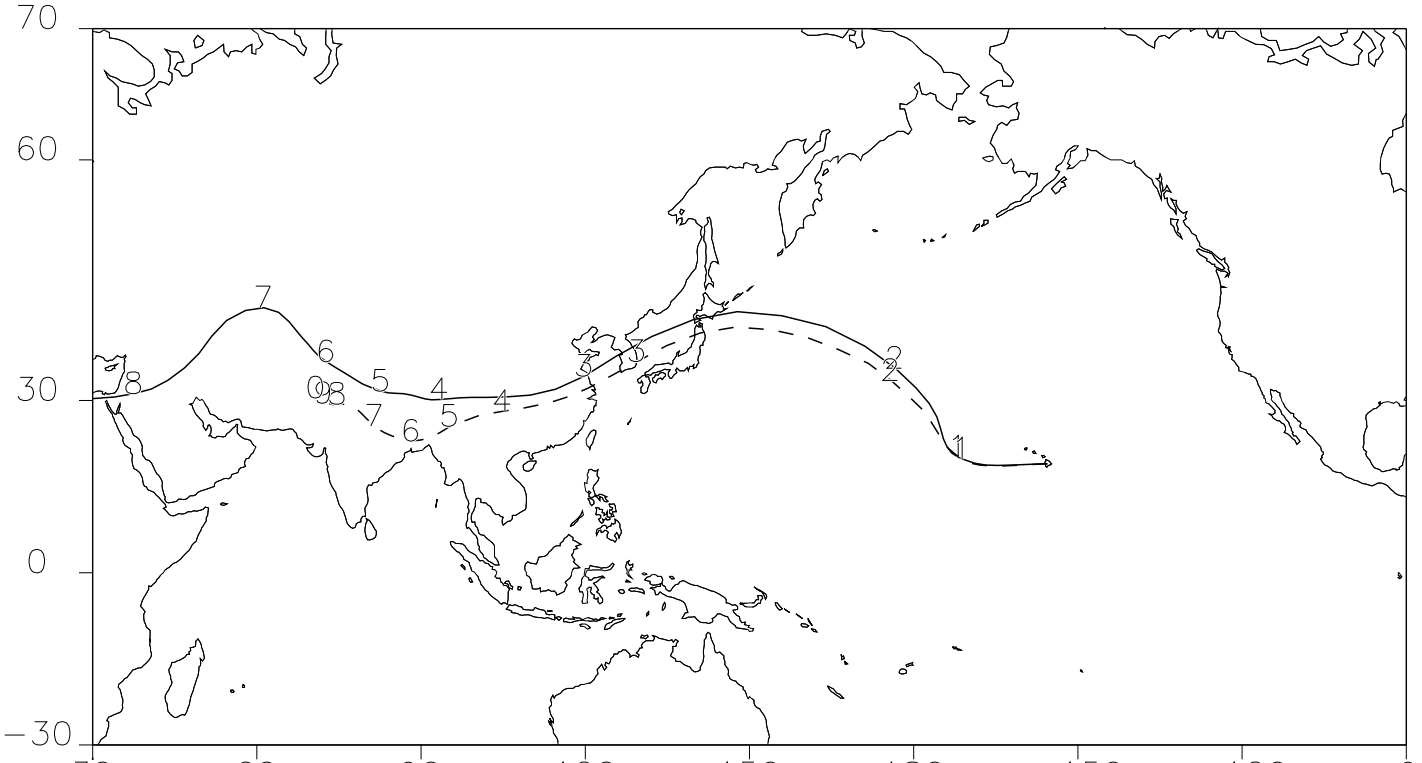
Day	km	hPa	C
0	9.5	306	−32
1	9.1	328	−27
2	8.7	345	−23
3	8.7	347	−22
4	8.2	369	−19
5	7.3	417	−12
6	6.8	444	−10
7	6.7	448	−9
8	6.3	470	−7
9	5.3	540	−1
10	5.4	530	−1

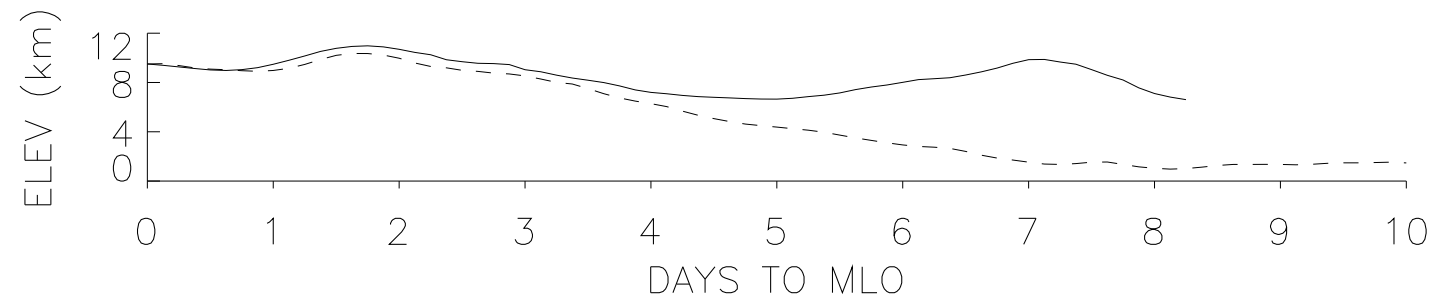
18UT

Day	km	hPa	C
0	9.5	307	−32
1	9.6	300	−33
2	10.4	268	−41
3	12.1	205	−55
4	12.0	204	−54
5	10.8	250	−45
6	10.9	244	−46
7	11.6	220	−51
8	12.1	203	−56
9	11.9	209	−54
10	12.6	191	−59

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

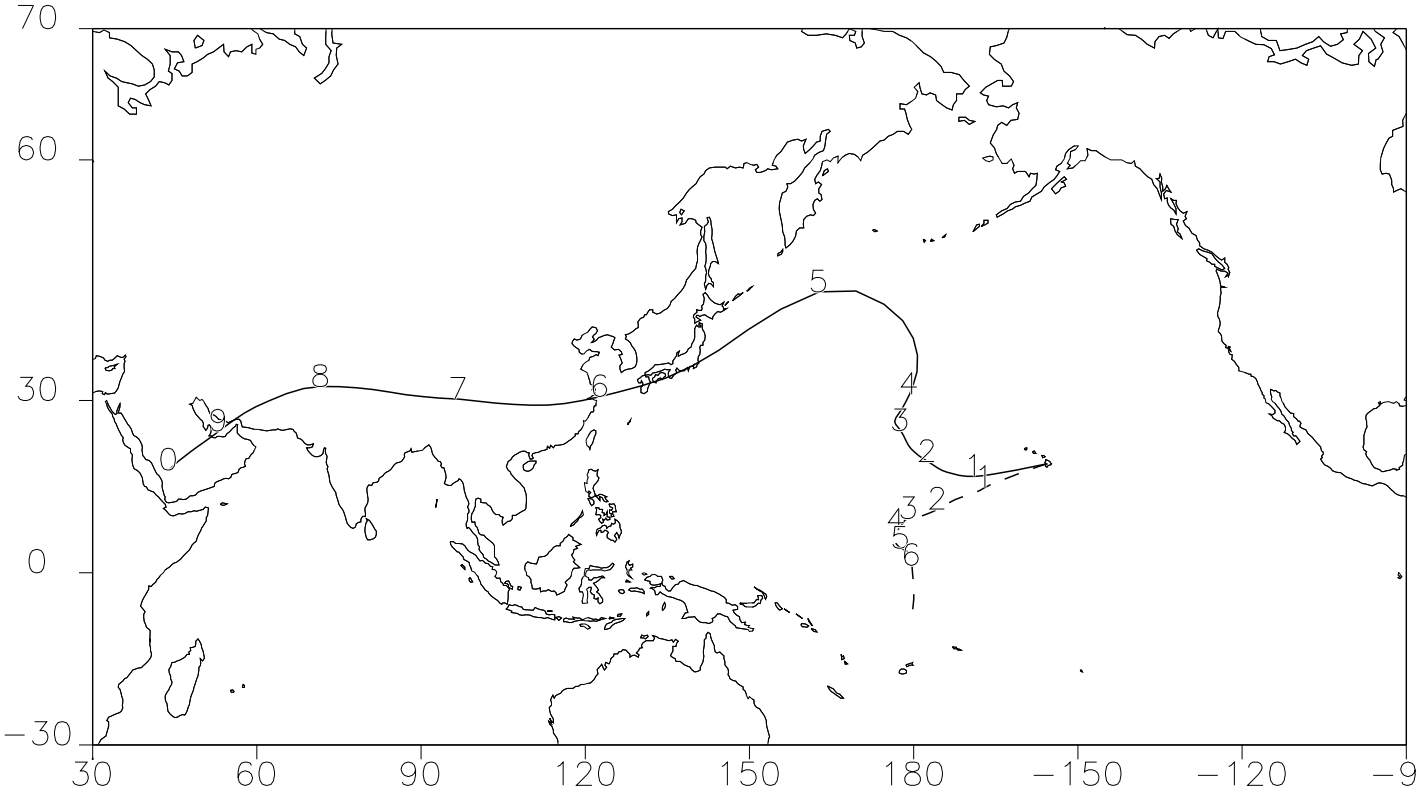
Day	km	hPa	C
0	9.5	307	−32
1	9.5	307	−31
2	10.7	252	−44
3	9.0	319	−32
4	7.2	416	−17
5	6.6	447	−14
6	8.0	370	−26
7	9.9	282	−46
8	7.1	422	−20

06UT

Day	km	hPa	C
0	9.5	307	−31
1	9.0	329	−26
2	10.0	282	−36
3	8.5	344	−25
4	6.3	471	−9
5	4.4	600	2
6	2.9	713	12
7	1.5	844	25
8	1.0	895	28
9	1.3	864	25
10	1.5	852	26

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

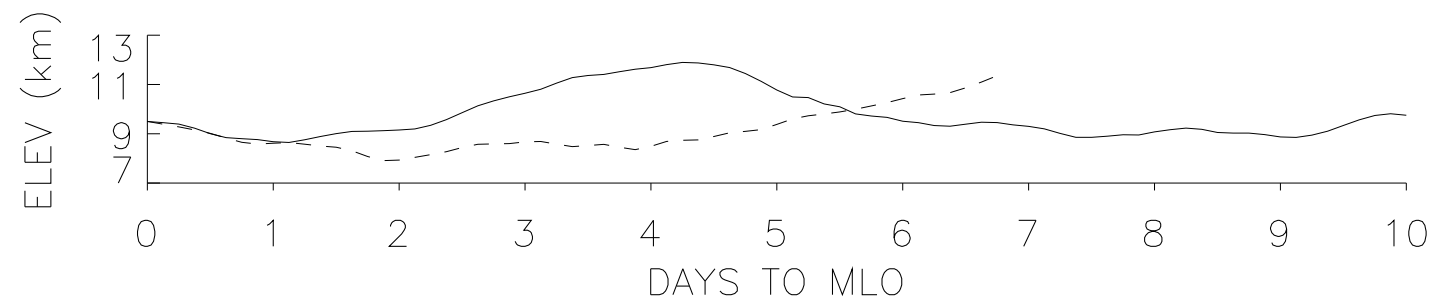


12UT

Day	km	hPa	C
0	9.5	307	−32
1	8.7	344	−24
2	9.2	321	−30
3	10.6	258	−45
4	11.7	219	−53
5	10.8	245	−46
6	9.5	304	−33
7	9.3	311	−31
8	9.1	322	−29
9	8.9	335	−27
10	9.8	297	−33

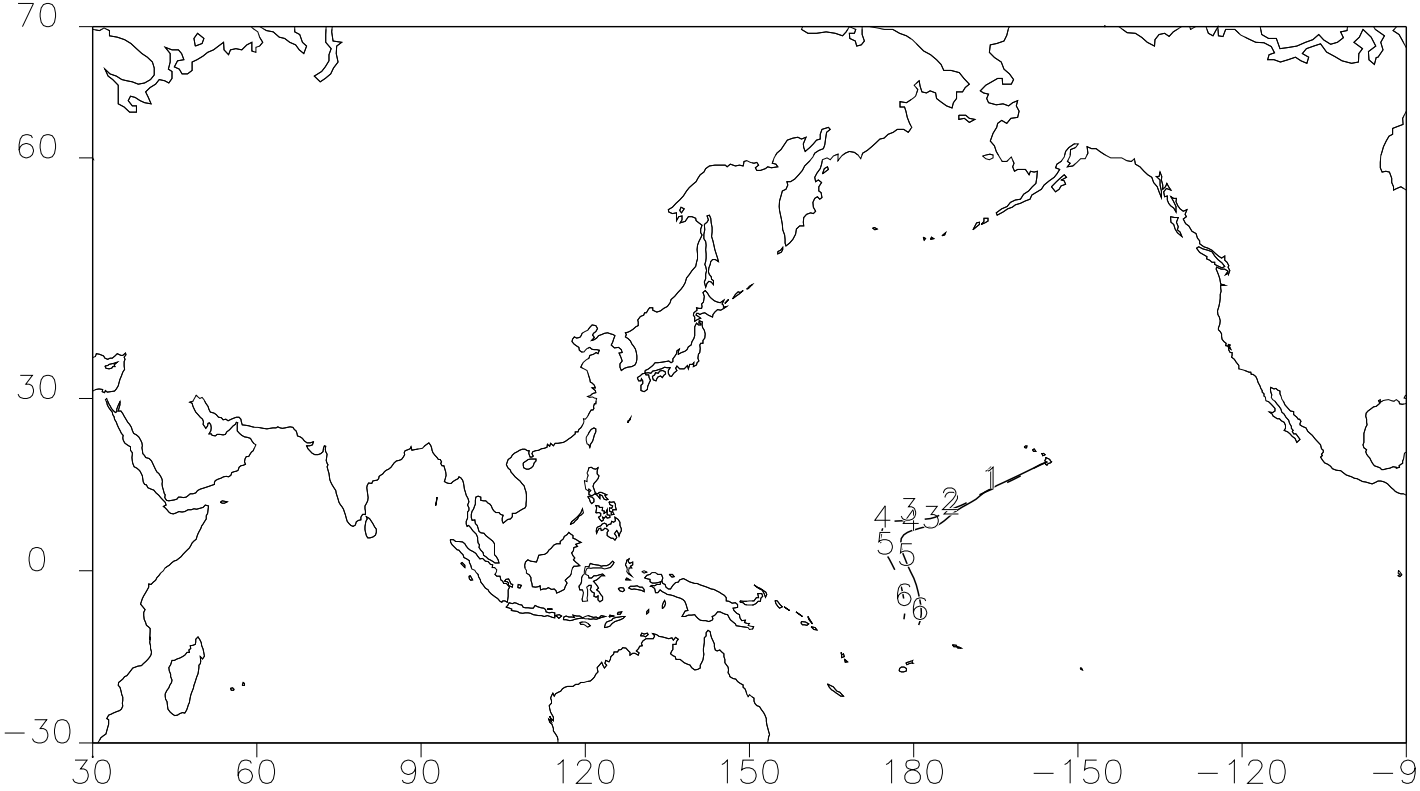
18UT

Day	km	hPa	C
0	9.5	307	−32
1	8.6	349	−24
2	7.9	383	−17
3	8.7	346	−23
4	8.5	355	−21
5	9.4	314	−27
6	10.4	271	−35



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

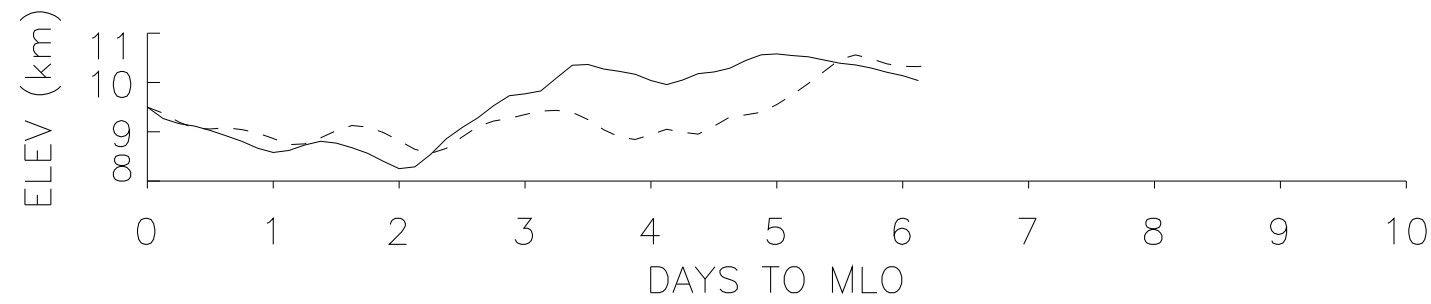


00UT

Day	km	hPa	C
0	9.5	307	-32
1	8.6	350	-24
2	8.3	367	-21
3	9.8	298	-30
4	10.0	287	-32
5	10.6	265	-37
6	10.1	283	-33

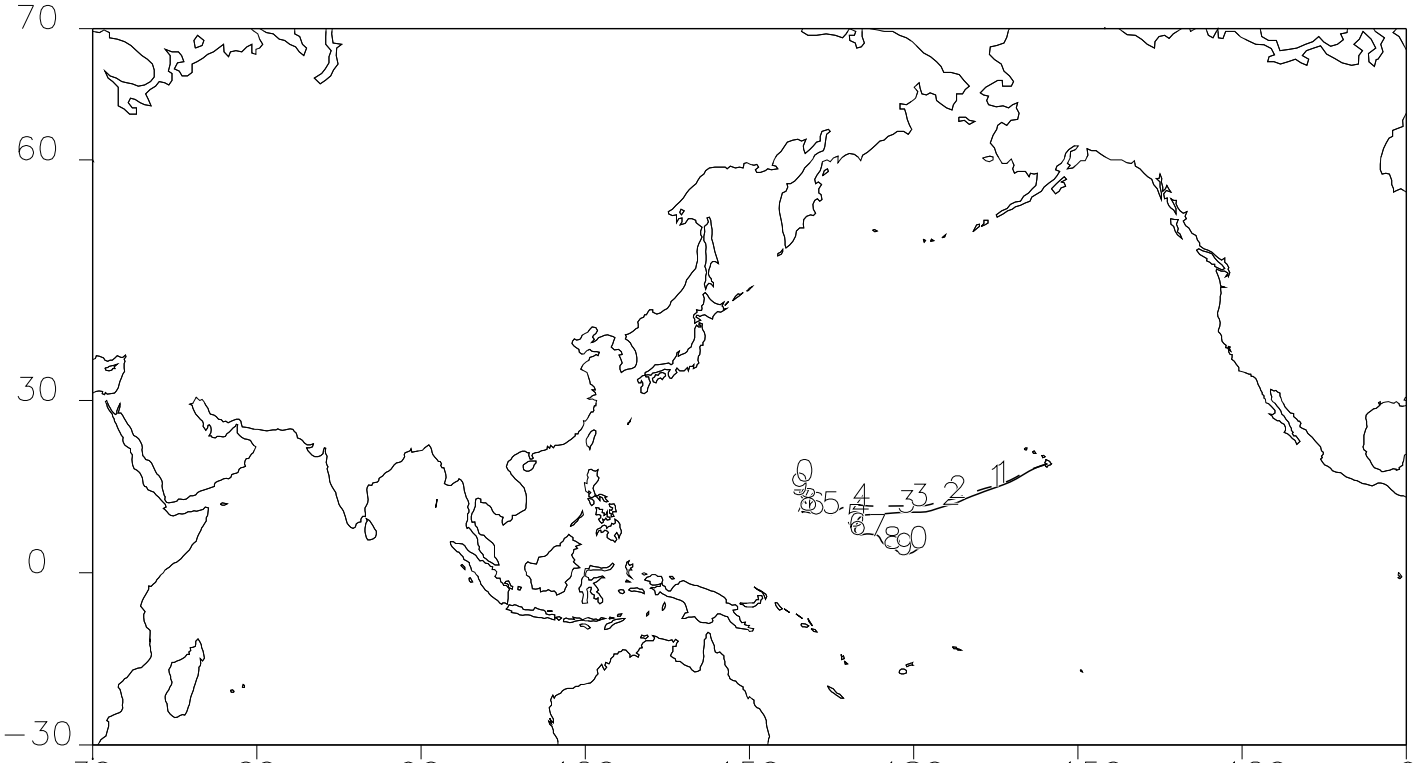
06UT

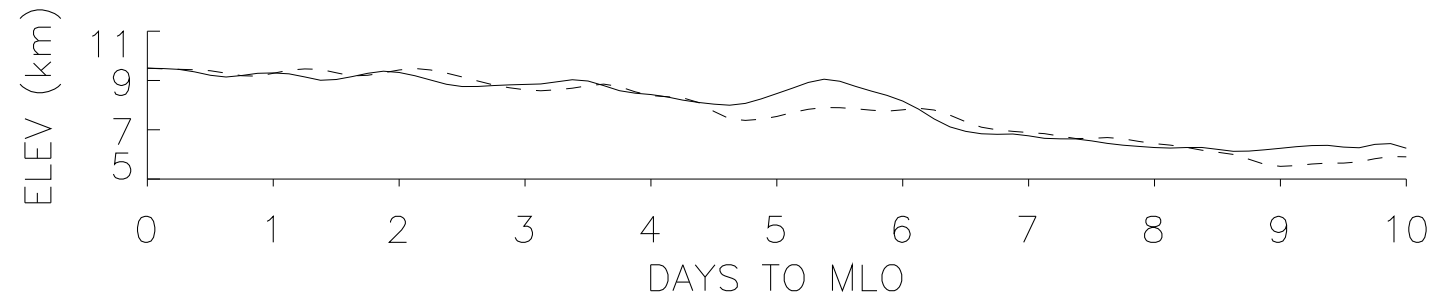
Day	km	hPa	C
0	9.5	307	-33
1	8.9	337	-26
2	8.8	339	-25
3	9.3	316	-27
4	8.9	334	-24
5	9.6	307	-28
6	10.3	275	-35



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

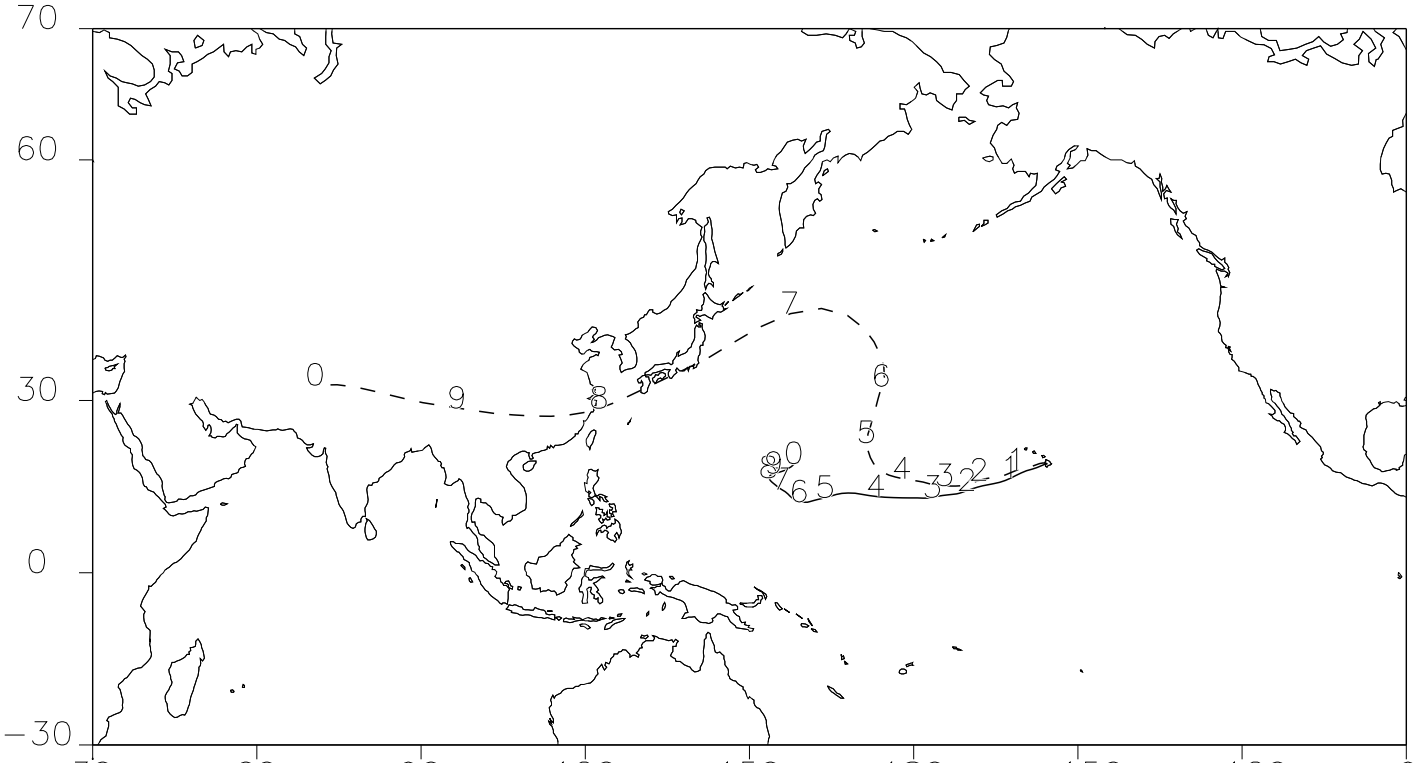
Day	km	hPa	C
0	9.5	307	−34
1	9.3	316	−30
2	9.3	316	−29
3	8.8	339	−25
4	8.4	359	−21
5	8.5	357	−21
6	8.2	372	−18
7	6.8	447	−9
8	6.3	474	−7
9	6.2	476	−6
10	6.3	476	−5

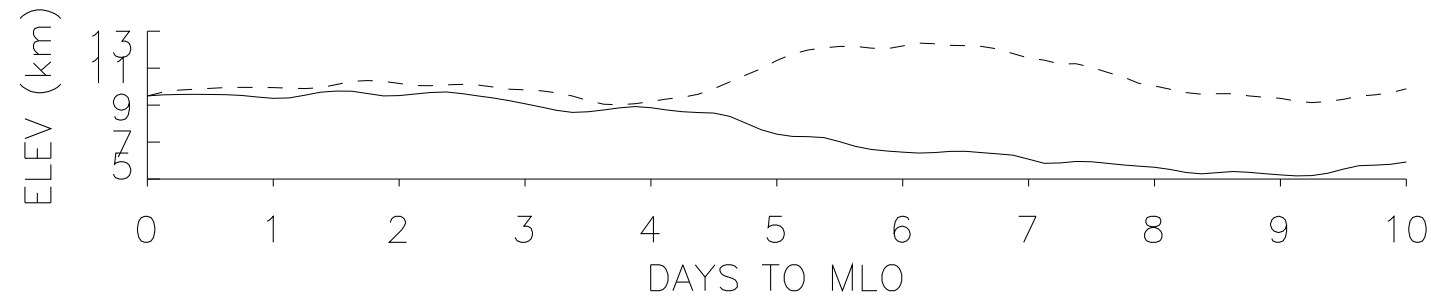
18UT

Day	km	hPa	C
0	9.5	307	−34
1	9.3	316	−31
2	9.4	311	−31
3	8.6	348	−23
4	8.4	360	−21
5	7.5	402	−14
6	7.8	389	−16
7	6.9	438	−10
8	6.4	463	−8
9	5.5	520	−2
10	5.9	495	−7

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

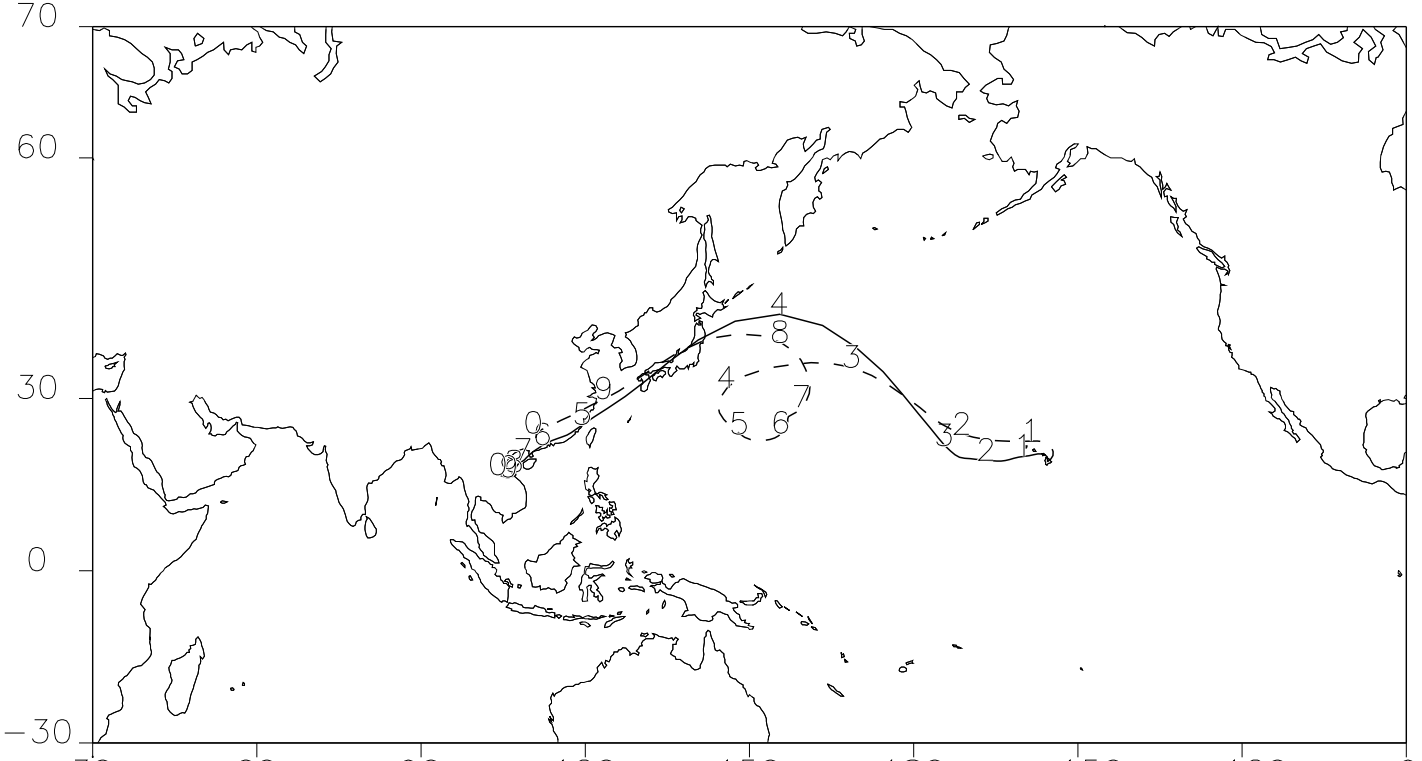
Day	km	hPa	C
0	9.5	308	−34
1	9.4	312	−31
2	9.5	307	−31
3	9.1	327	−28
4	8.9	338	−25
5	7.4	409	−15
6	6.5	465	−7
7	6.1	488	−5
8	5.6	516	−4
9	5.2	542	−1
10	5.9	495	−4

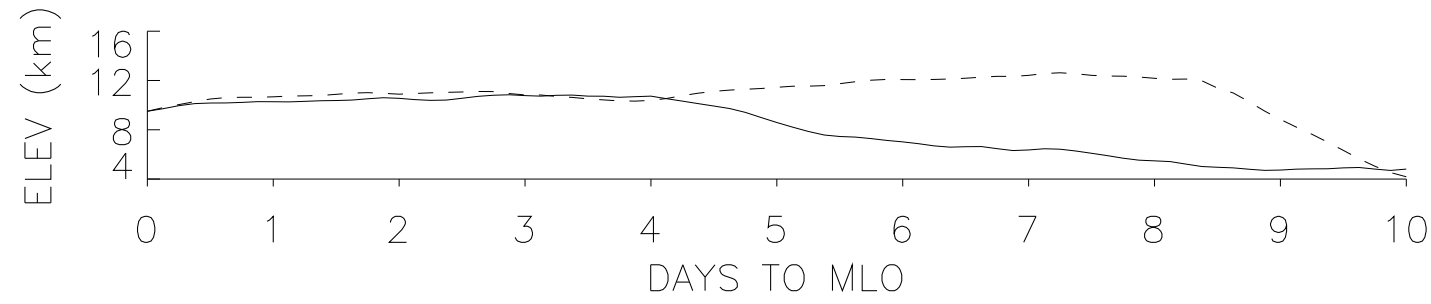
06UT

Day	km	hPa	C
0	9.5	308	−33
1	9.9	288	−36
2	10.2	279	−37
3	9.8	294	−33
4	9.2	321	−29
5	11.4	231	−49
6	12.2	203	−55
7	11.5	221	−50
8	10.0	283	−35
9	9.4	310	−30
10	9.9	288	−34

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

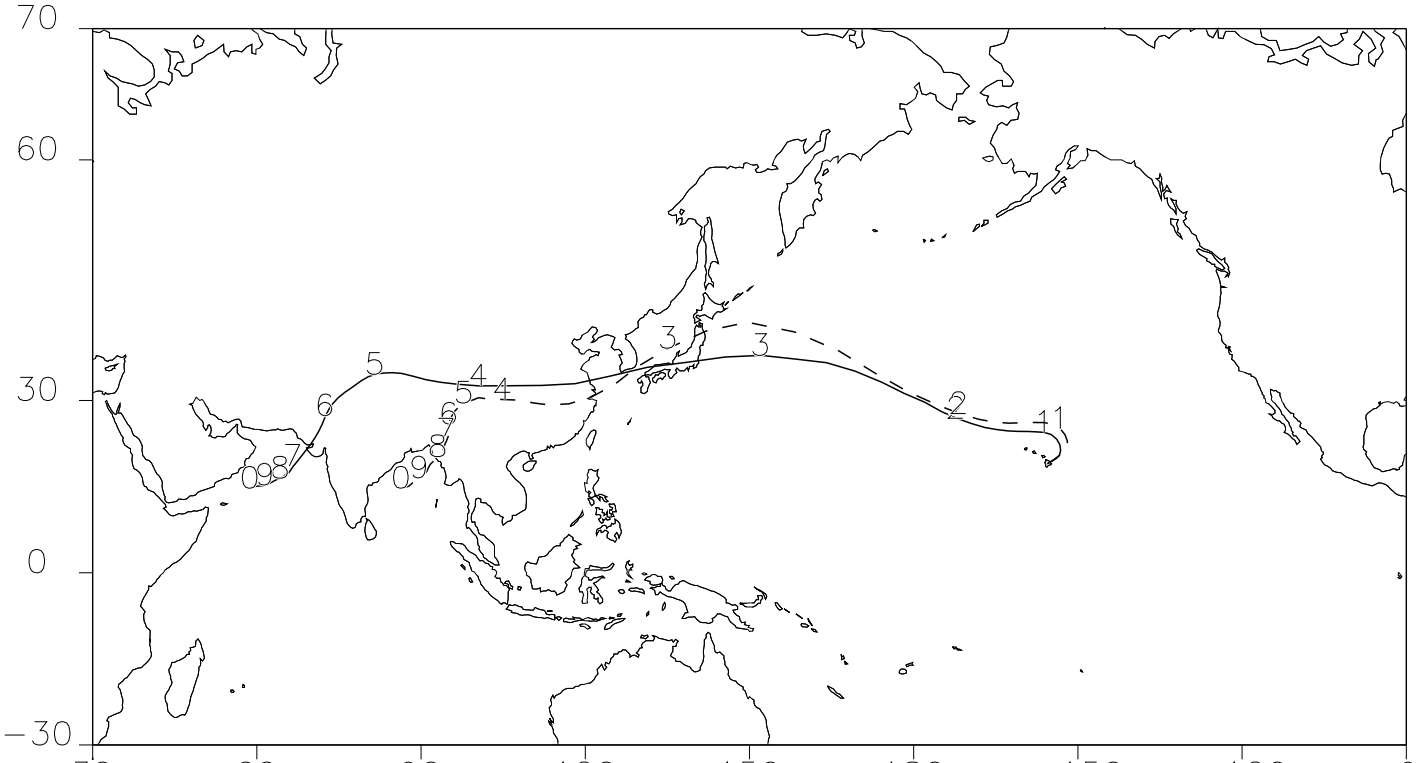
Day	km	hPa	C
0	9.5	308	−33
1	10.3	274	−39
2	10.6	263	−40
3	10.8	255	−42
4	10.7	250	−42
5	8.6	350	−21
6	7.0	432	−10
7	6.4	470	−7
8	5.5	524	−2
9	4.7	575	3
10	4.8	571	2

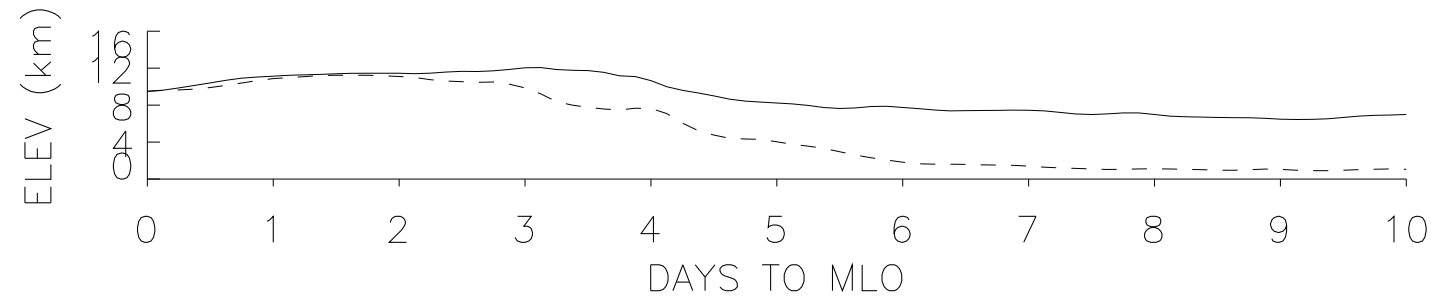
18UT

Day	km	hPa	C
0	9.5	308	−33
1	10.7	258	−43
2	10.9	248	−43
3	10.8	250	−43
4	10.4	271	−38
5	11.4	233	−46
6	12.1	211	−52
7	12.4	200	−55
8	12.2	204	−53
9	8.8	333	−26
10	4.2	614	4

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

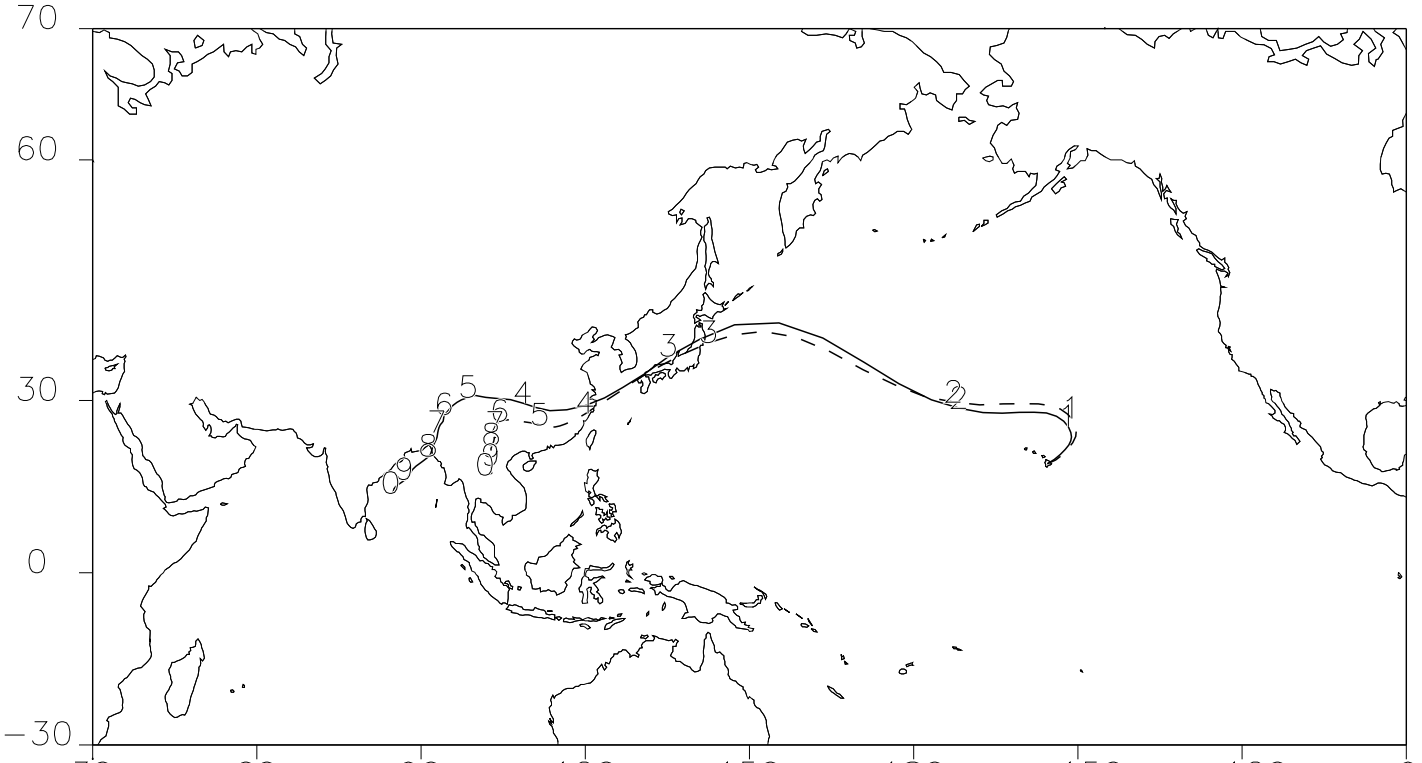
Day	km	hPa	C
0	9.5	308	−33
1	11.1	241	−46
2	11.5	228	−49
3	12.0	205	−55
4	10.6	255	−44
5	8.2	364	−22
6	7.7	389	−18
7	7.4	406	−15
8	7.0	432	−10
9	6.5	460	−7
10	7.0	432	−10

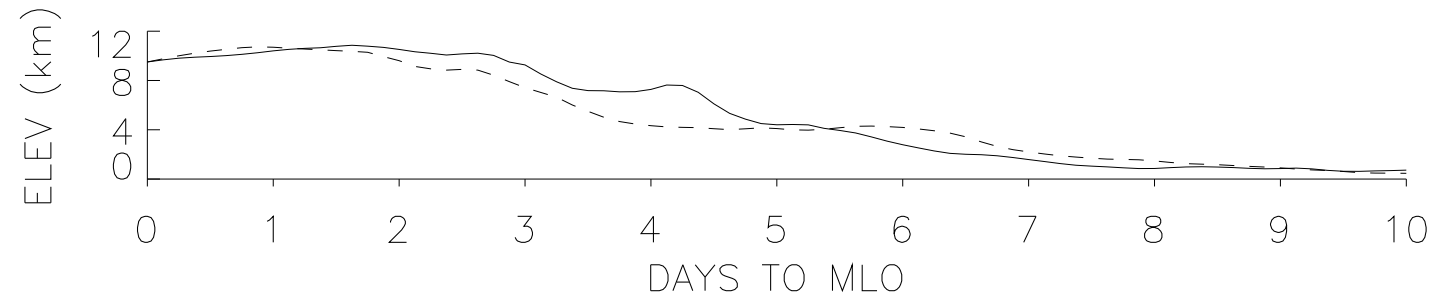
06UT

Day	km	hPa	C
0	9.5	309	−32
1	10.9	251	−44
2	11.1	239	−45
3	9.9	280	−37
4	7.6	392	−20
5	4.0	626	8
6	1.8	817	21
7	1.4	857	21
8	1.1	886	24
9	1.0	892	24
10	1.1	892	24

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

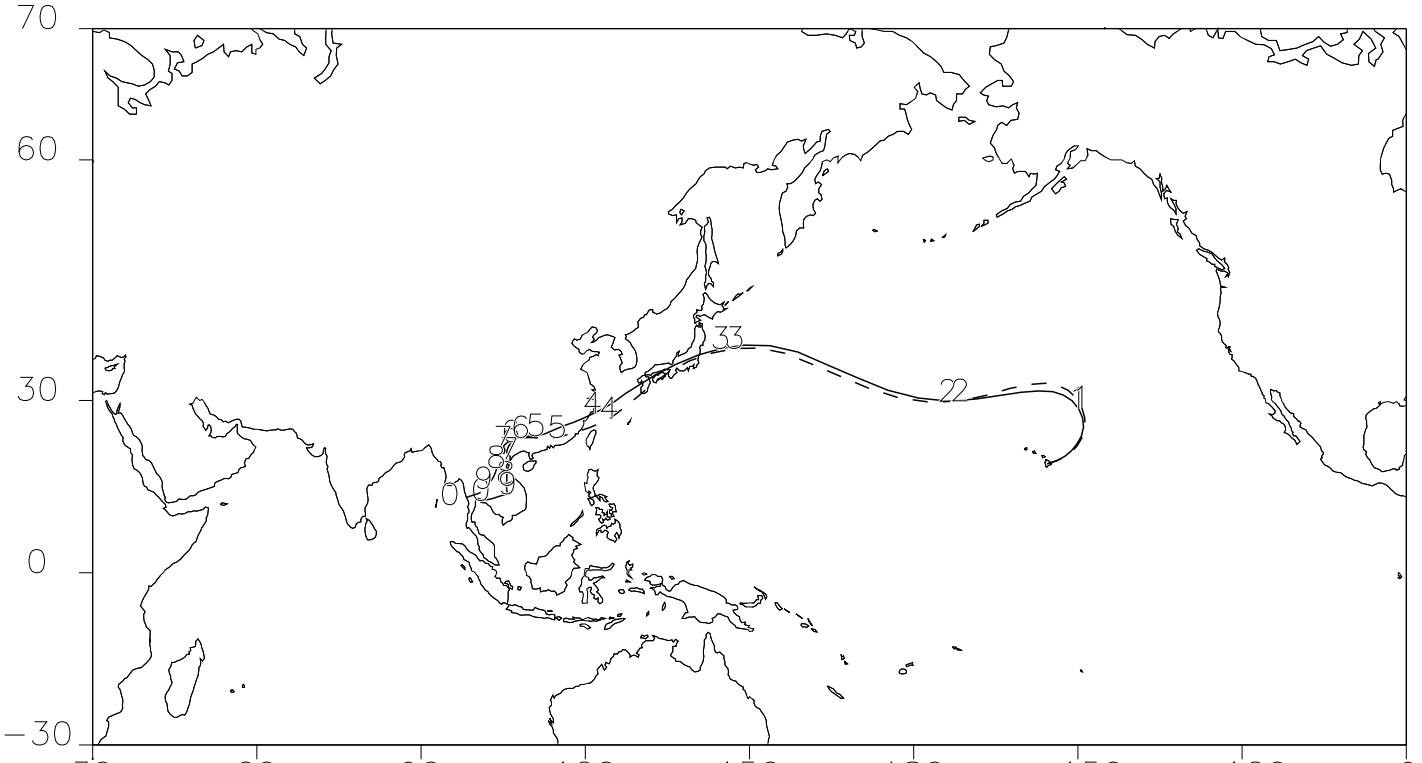
Day	km	hPa	C
0	9.5	308	−33
1	10.4	269	−41
2	10.5	259	−42
3	9.3	308	−32
4	7.3	409	−17
5	4.4	596	5
6	2.8	728	16
7	1.6	837	20
8	0.9	908	27
9	0.9	908	27
10	0.7	923	27

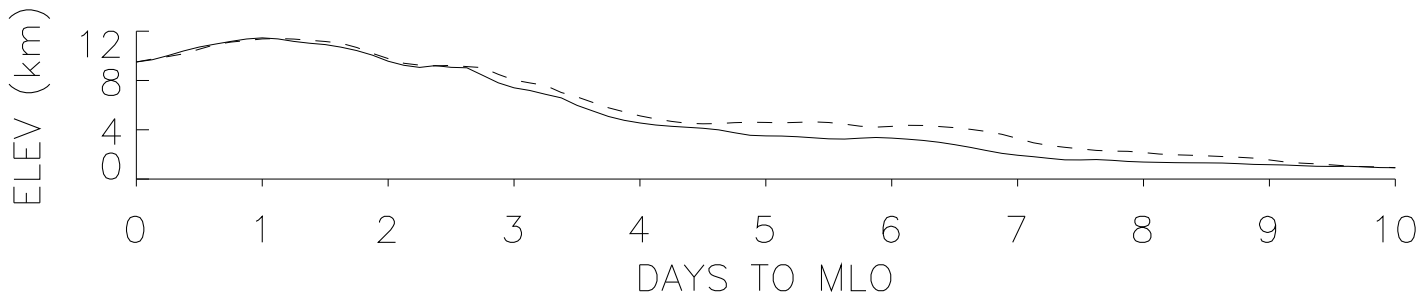
18UT

Day	km	hPa	C
0	9.5	309	−32
1	10.7	258	−43
2	9.6	294	−35
3	7.4	399	−20
4	4.3	600	−1
5	4.1	622	3
6	4.2	616	2
7	2.2	783	14
8	1.5	851	20
9	0.9	908	23
10	0.5	954	25

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

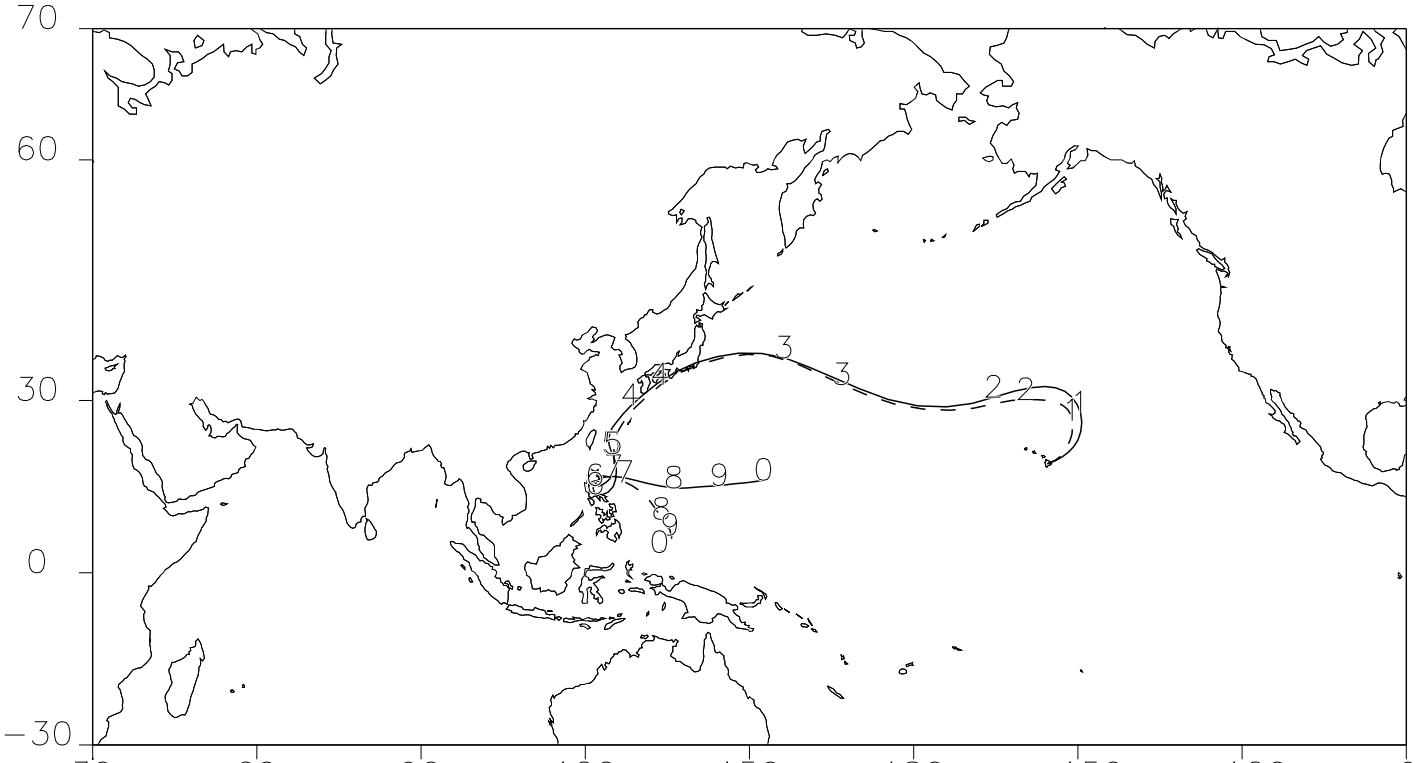
Day	km	hPa	C
0	9.5	309	−32
1	11.5	231	−48
2	9.6	297	−33
3	7.4	401	−17
4	4.5	584	1
5	3.5	669	7
6	3.3	685	8
7	1.9	808	17
8	1.4	861	21
9	1.2	882	22
10	0.9	905	23

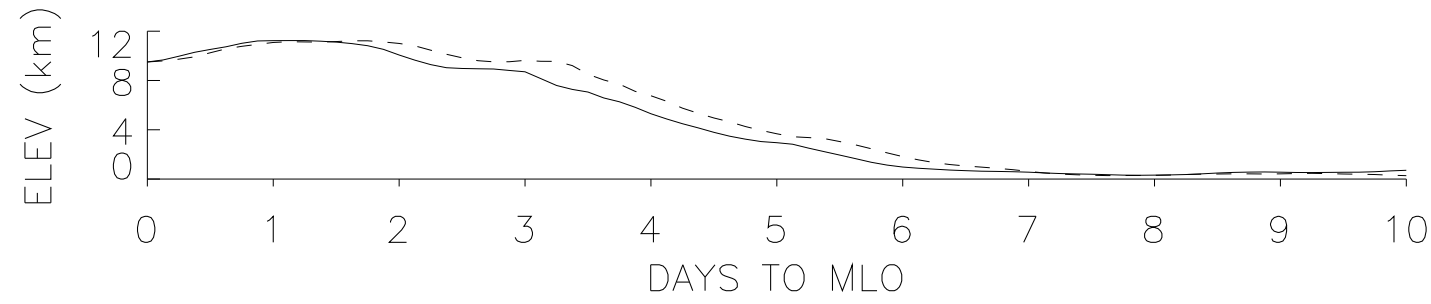
06UT

Day	km	hPa	C
0	9.5	309	−31
1	11.4	234	−47
2	9.8	288	−33
3	8.0	370	−21
4	5.1	544	−2
5	4.6	585	2
6	4.3	610	3
7	3.3	688	9
8	2.1	787	16
9	1.6	844	19
10	0.9	906	22

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

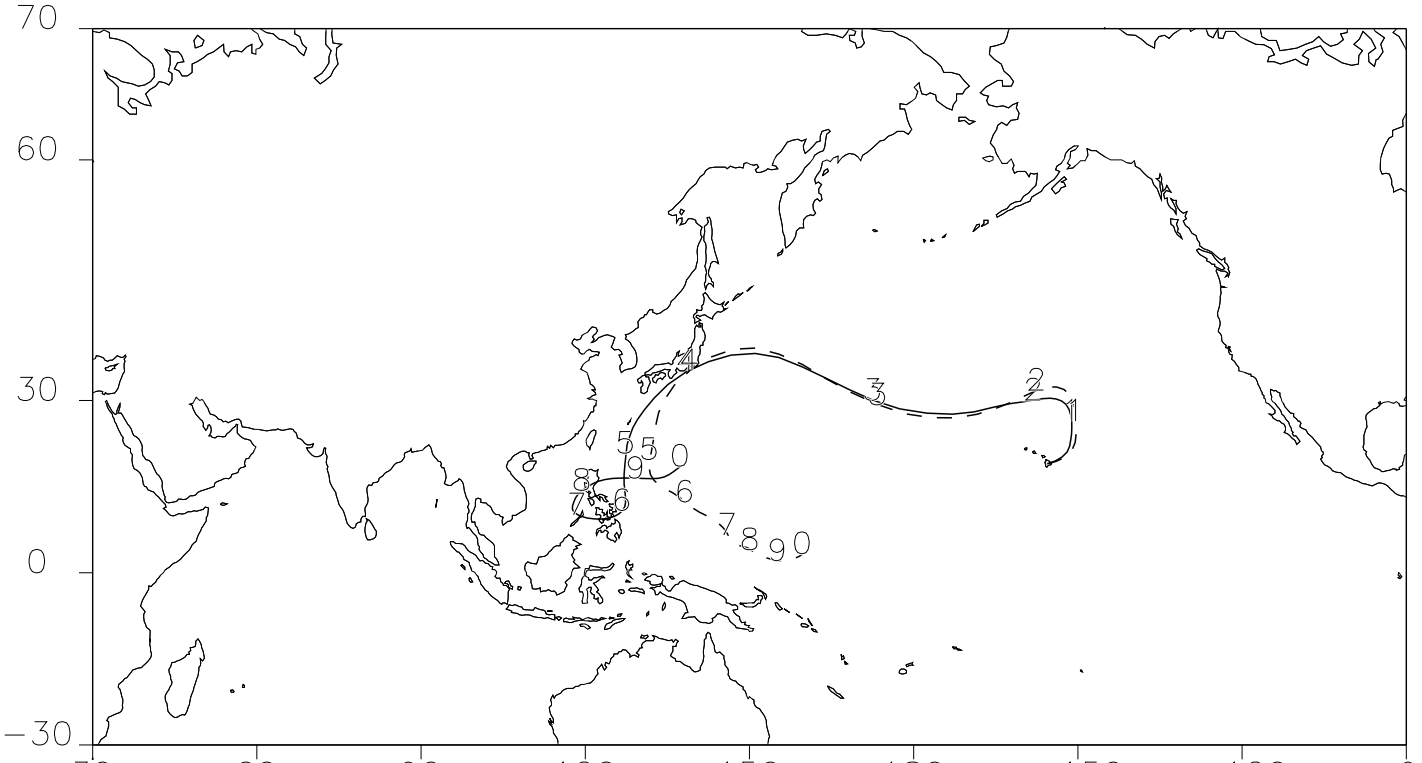
Day	km	hPa	C
0	9.5	308	−32
1	11.2	239	−46
2	10.1	279	−37
3	8.7	339	−25
4	5.3	531	−2
5	3.0	712	11
6	1.0	898	23
7	0.6	946	23
8	0.3	975	25
9	0.6	950	24
10	0.7	934	22

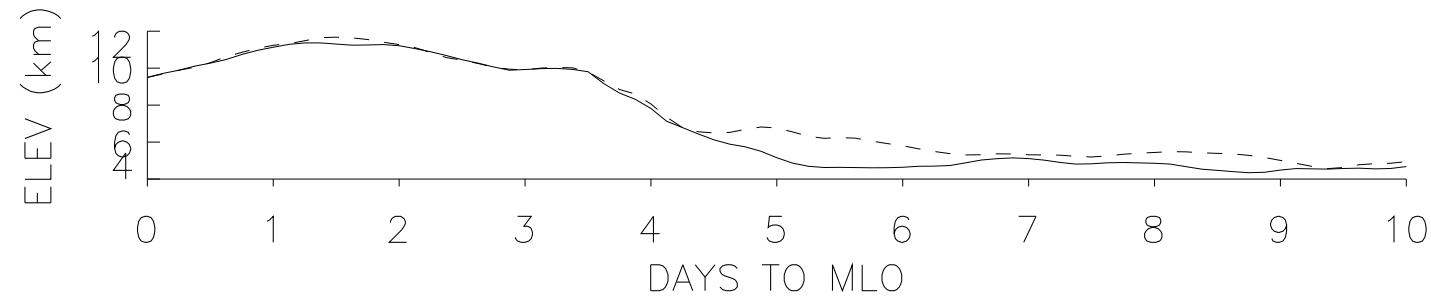
18UT

Day	km	hPa	C
0	9.5	308	−33
1	11.1	245	−45
2	11.0	245	−43
3	9.6	296	−32
4	6.8	440	−12
5	3.7	652	7
6	1.8	815	17
7	0.6	938	23
8	0.3	974	27
9	0.4	962	25
10	0.3	976	26

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

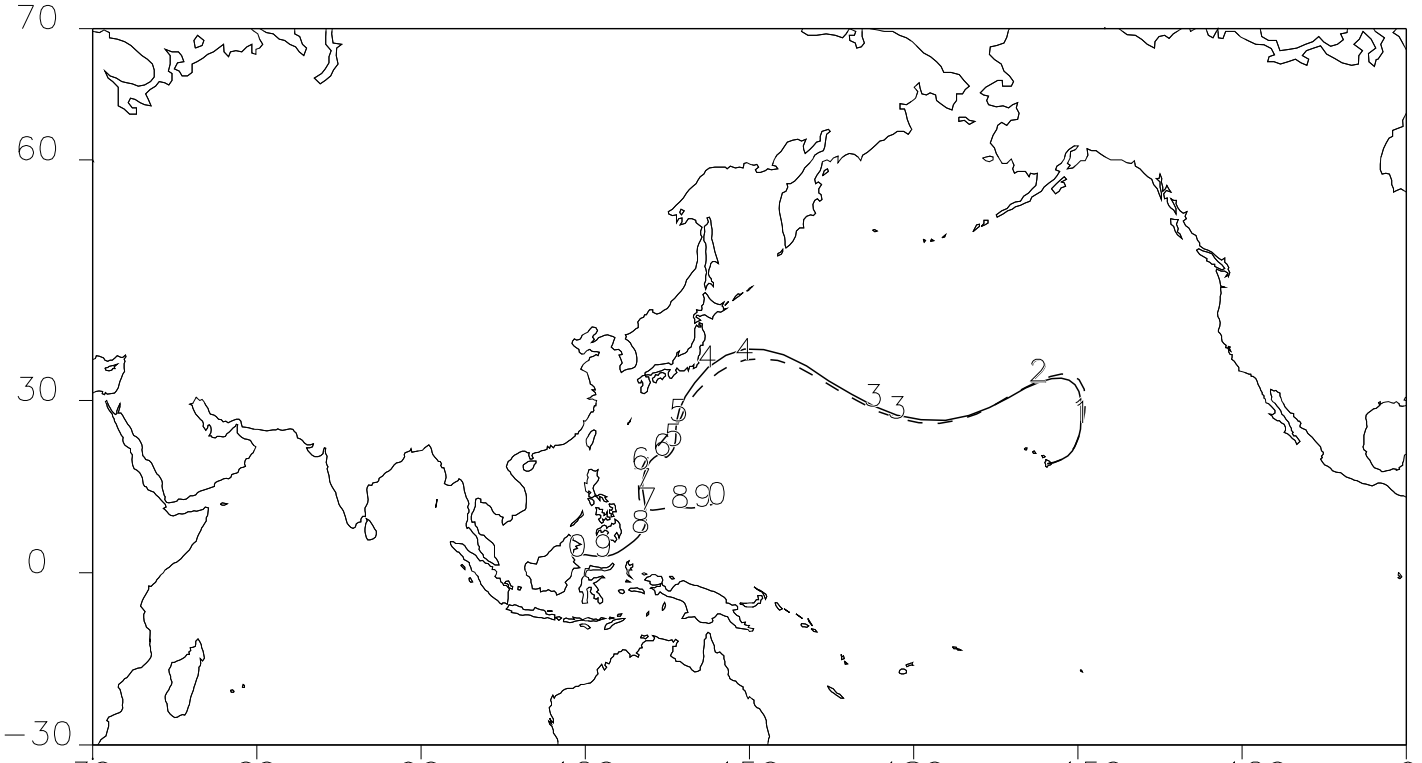
Day	km	hPa	C
0	9.5	308	−32
1	11.1	244	−44
2	11.2	240	−45
3	9.9	285	−33
4	7.8	382	−18
5	5.2	545	−1
6	4.6	584	2
7	5.1	550	−1
8	4.9	568	1
9	4.5	595	3
10	4.7	583	2

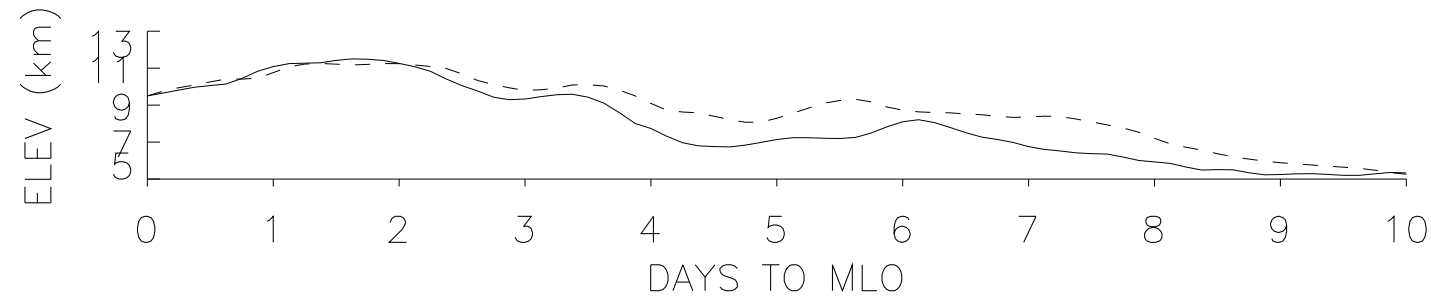
06UT

Day	km	hPa	C
0	9.5	308	−32
1	11.2	240	−45
2	11.3	237	−45
3	9.9	286	−33
4	8.1	369	−19
5	6.8	445	−10
6	5.8	504	−6
7	5.3	537	−2
8	5.4	528	−2
9	5.0	557	0
10	4.9	562	1

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

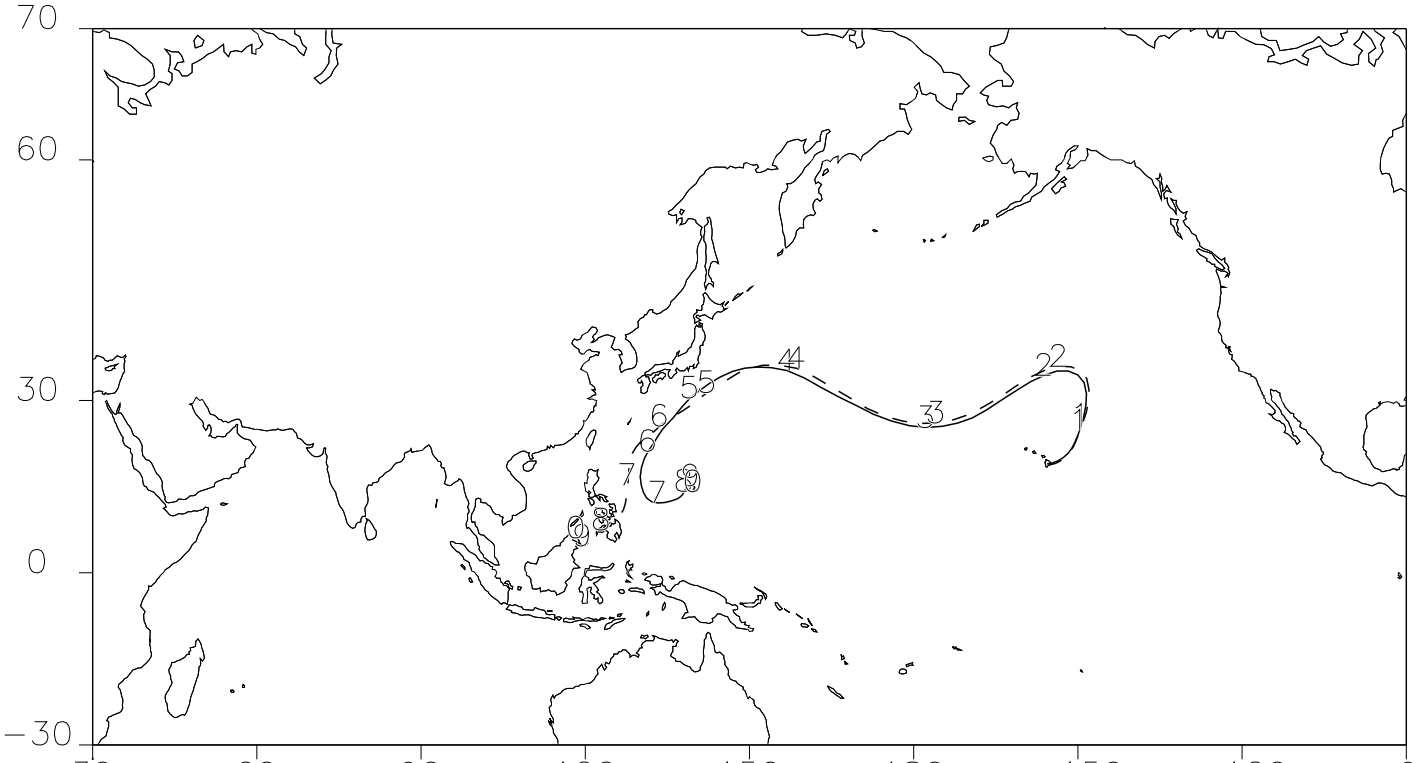
Day	km	hPa	C
0	9.5	308	−32
1	11.1	245	−44
2	11.3	237	−46
3	9.3	311	−28
4	7.7	388	−16
5	7.1	425	−12
6	8.1	374	−19
7	6.8	448	−9
8	5.9	497	−5
9	5.2	541	−1
10	5.3	535	−1

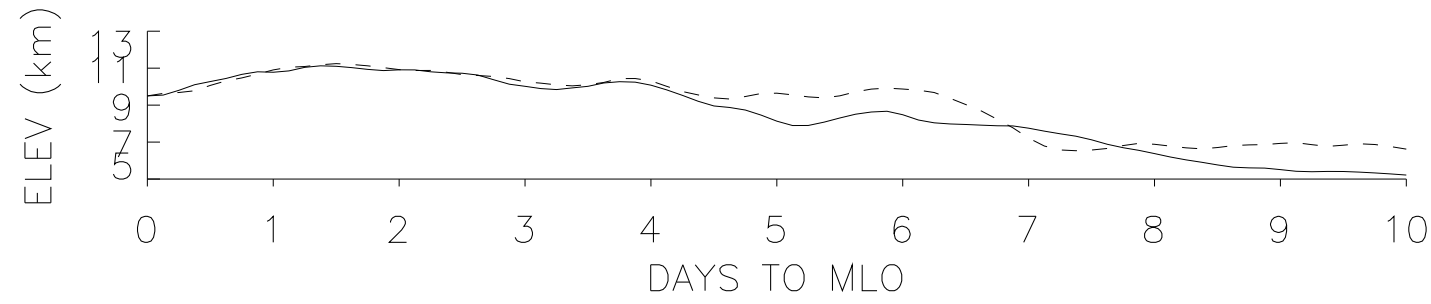
18UT

Day	km	hPa	C
0	9.5	309	−32
1	10.8	257	−42
2	11.2	238	−45
3	9.8	291	−32
4	9.1	322	−28
5	8.3	364	−20
6	8.7	343	−22
7	8.4	362	−20
8	7.2	421	−13
9	5.9	500	−6
10	5.3	540	−2

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

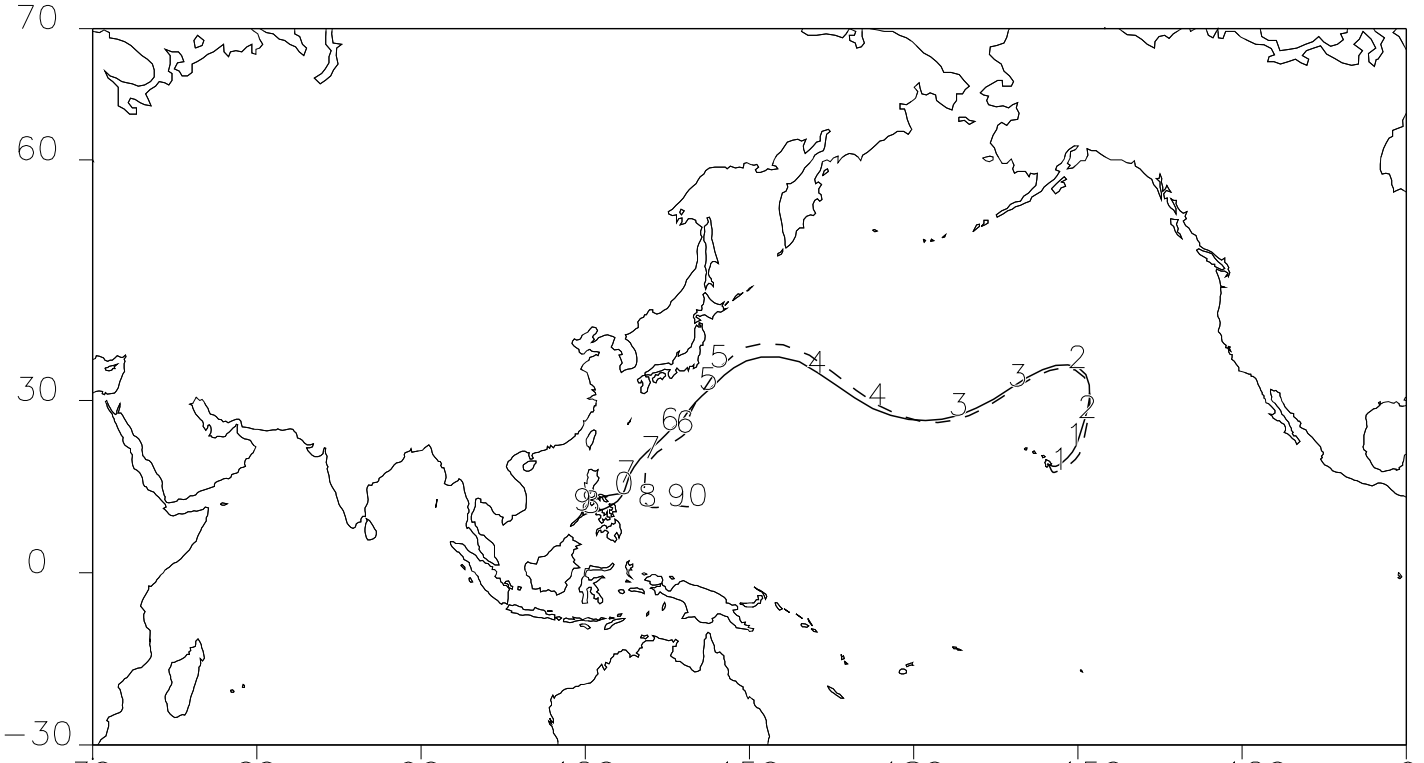
Day	km	hPa	C
0	9.5	309	−32
1	10.8	256	−42
2	10.9	251	−43
3	10.0	284	−34
4	10.1	282	−35
5	8.1	371	−19
6	8.5	355	−21
7	7.8	393	−16
8	6.4	470	−7
9	5.5	525	−3
10	5.2	544	−1

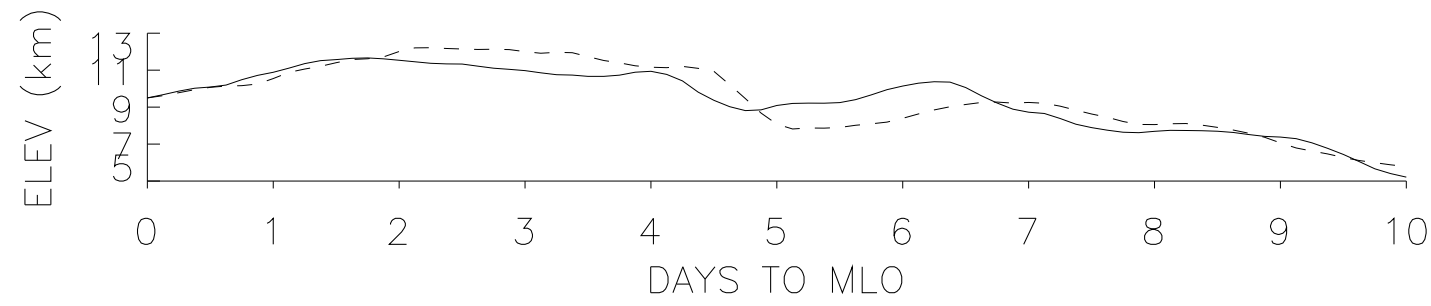
06UT

Day	km	hPa	C
0	9.5	308	−32
1	10.9	251	−43
2	10.9	250	−43
3	10.3	274	−36
4	10.3	271	−37
5	9.6	301	−30
6	9.9	292	−31
7	7.2	419	−13
8	6.9	439	−10
9	6.9	435	−12
10	6.6	453	−9

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

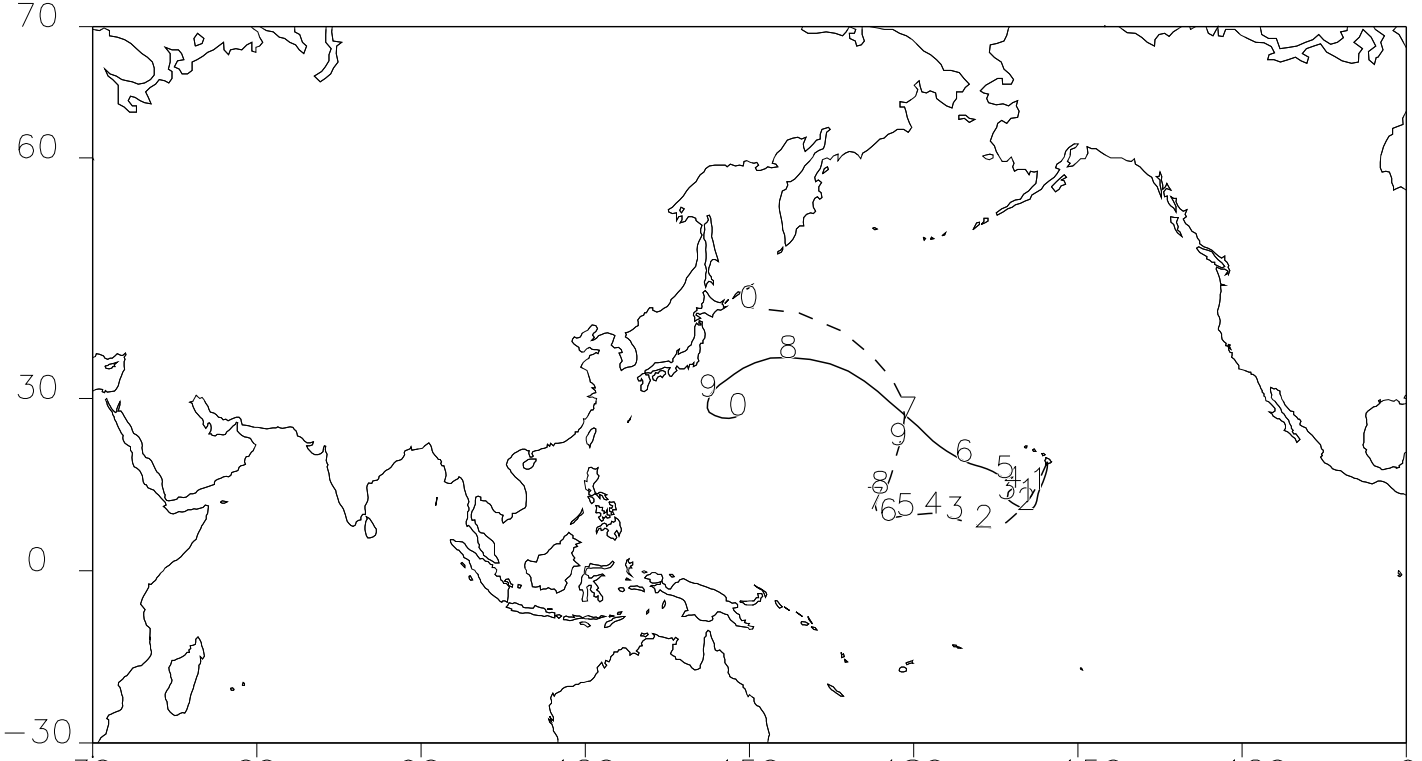
Day	km	hPa	C
0	9.5	308	-32
1	10.9	251	-44
2	11.5	228	-49
3	11.0	246	-43
4	10.9	247	-41
5	9.1	326	-26
6	10.1	282	-33
7	8.7	343	-22
8	7.7	396	-14
9	7.4	410	-11
10	5.2	542	-1

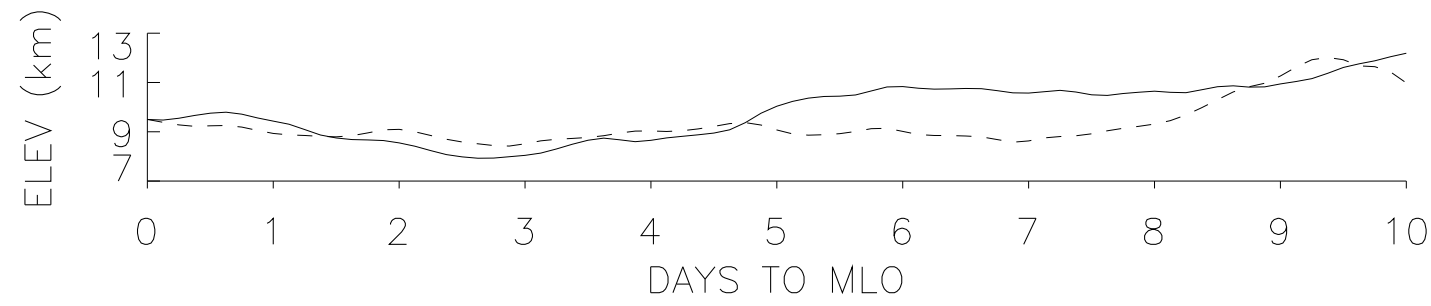
18UT

Day	km	hPa	C
0	9.5	308	-31
1	10.5	265	-40
2	12.0	212	-53
3	12.0	211	-51
4	11.2	238	-43
5	8.1	370	-19
6	8.4	360	-20
7	9.3	320	-27
8	8.1	377	-18
9	7.1	429	-12
10	5.8	506	-5

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





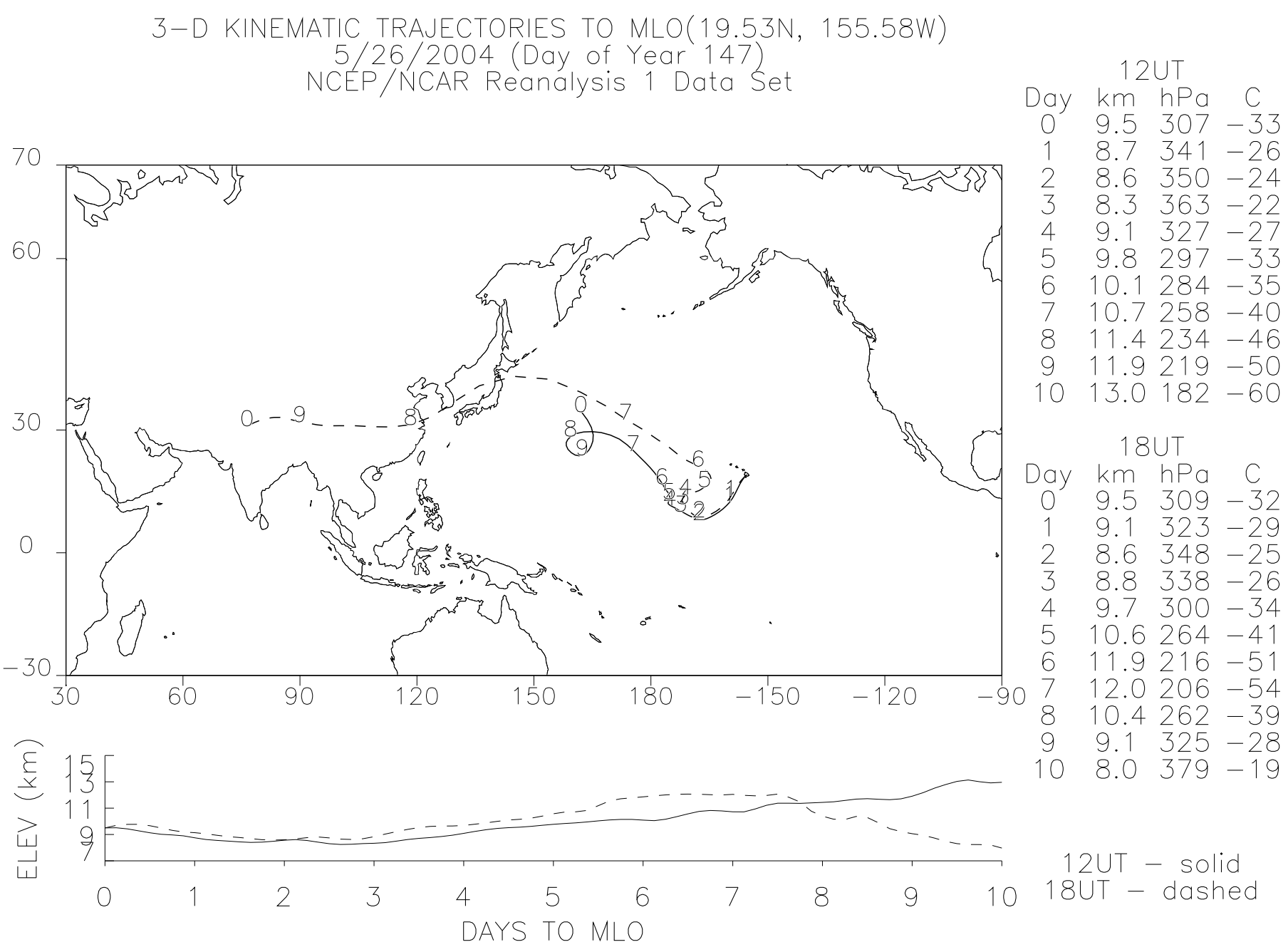
00UT

Day	km	hPa	C
0	9.5	308	-32
1	9.4	311	-30
2	8.5	351	-24
3	8.0	377	-20
4	8.7	347	-26
5	10.0	285	-37
6	10.8	253	-42
7	10.6	263	-40
8	10.6	259	-40
9	10.9	252	-41
10	12.2	209	-53

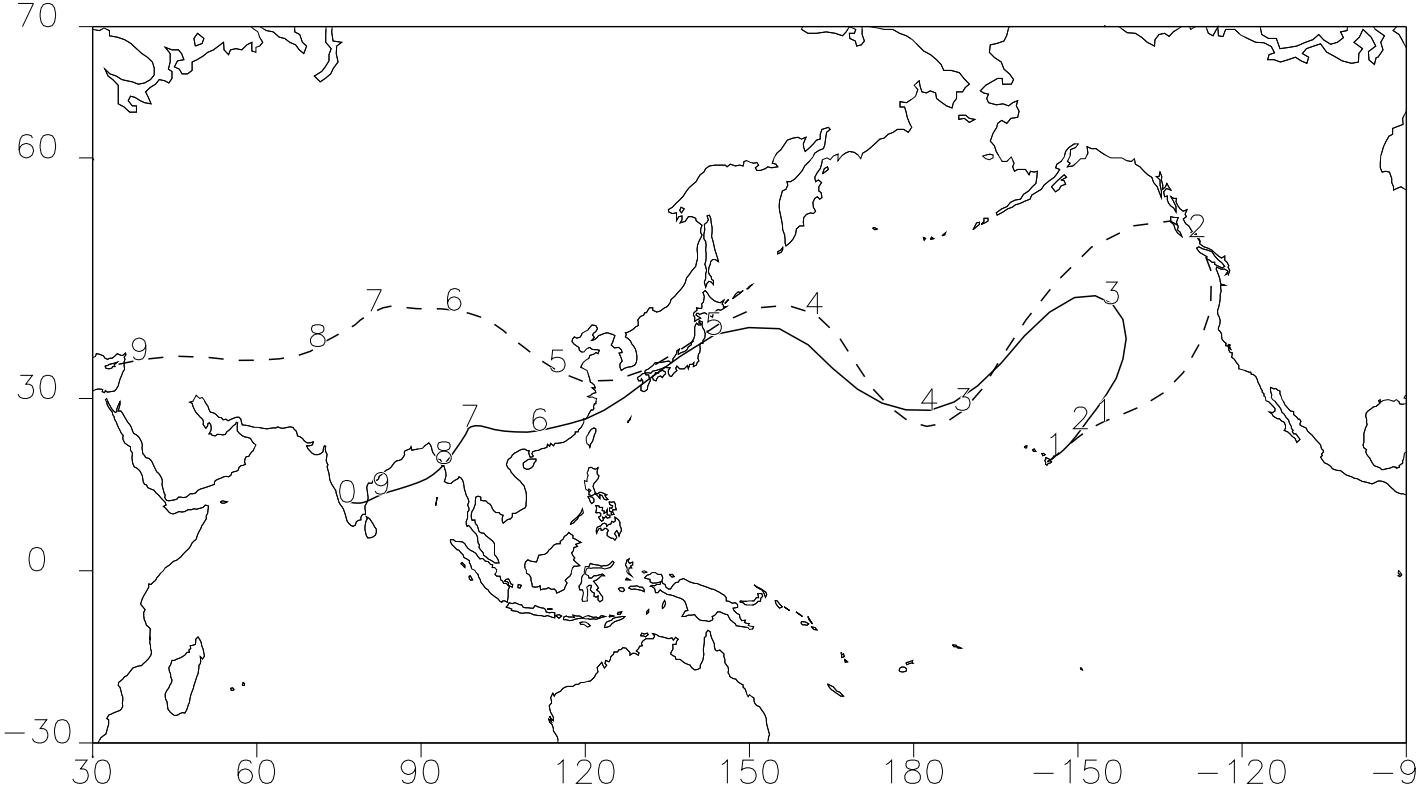
06UT

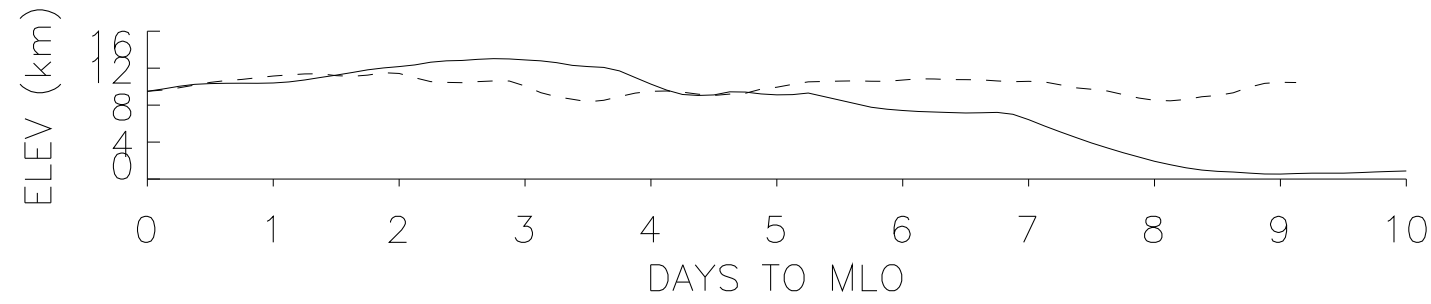
Day	km	hPa	C
0	9.5	308	-32
1	8.9	333	-27
2	9.1	326	-27
3	8.5	354	-22
4	9.0	330	-26
5	9.1	327	-26
6	9.0	330	-26
7	8.6	348	-23
8	9.3	317	-28
9	11.3	237	-47
10	11.0	237	-46

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
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 9.5 307 -33
1 8.7 341 -26
2 8.6 350 -24
3 8.3 363 -22
4 9.1 327 -27
5 9.8 297 -33
6 10.1 284 -35
7 10.7 258 -40
8 11.4 234 -46
9 11.9 219 -50
10 13.0 182 -60
18UT
Day km hPa C
0 9.5 309 -32
1 9.1 323 -29
2 8.6 348 -25
3 8.8 338 -26
4 9.7 300 -34
5 10.6 264 -41
6 11.9 216 -51
7 12.0 206 -54
8 10.4 262 -39
9 9.1 325 -28
10 8.0 379 -19
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

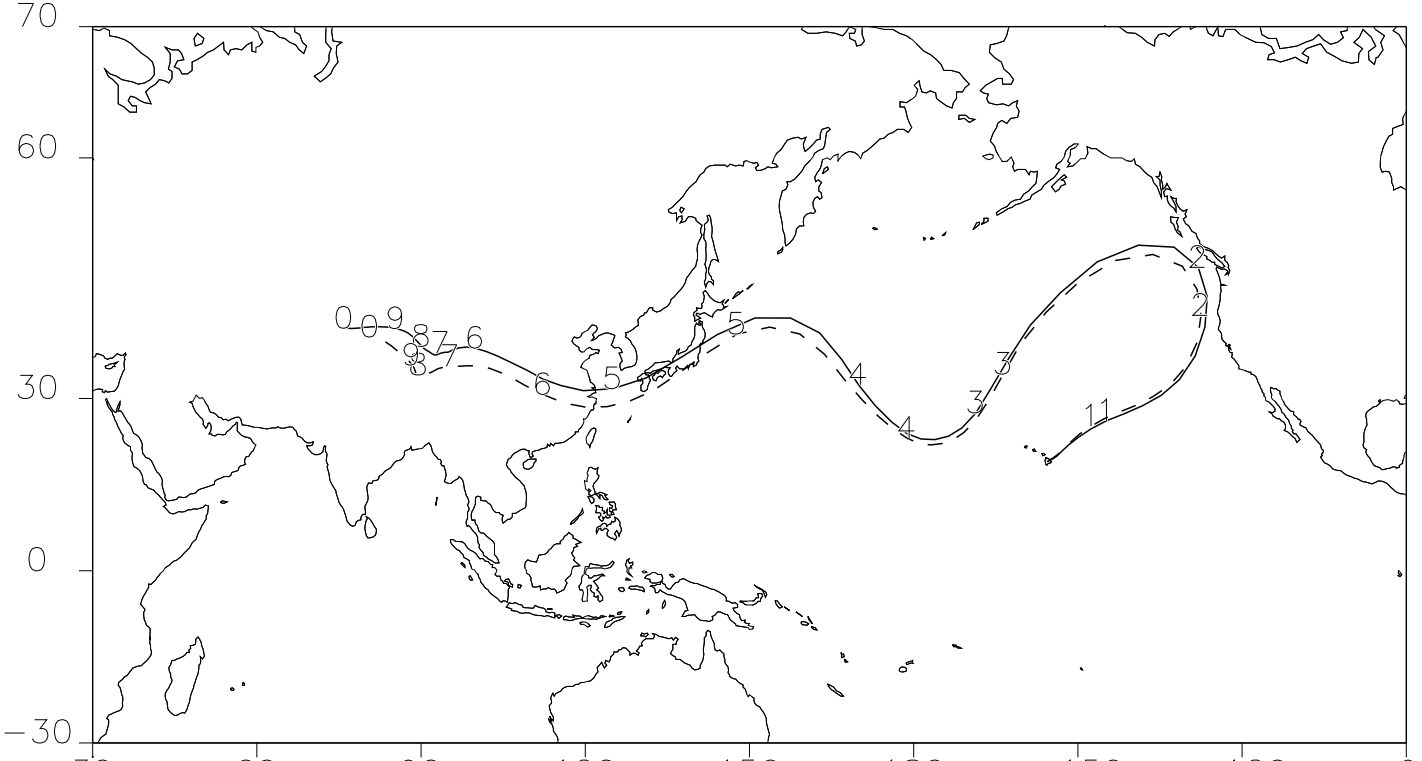
Day	km	hPa	C
0	9.5	308	-32
1	10.4	271	-39
2	12.2	207	-54
3	12.9	183	-60
4	10.3	271	-37
5	9.1	314	-29
6	7.4	403	-14
7	6.4	460	-8
8	1.9	801	17
9	0.5	944	27
10	0.9	911	21

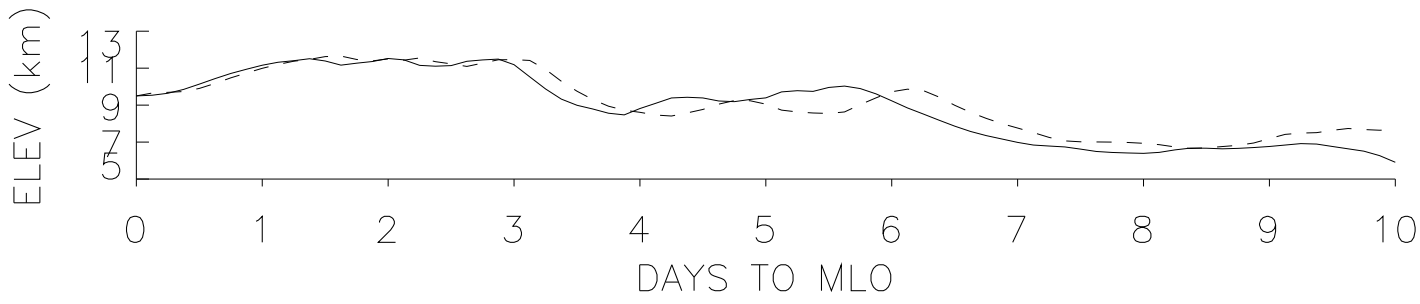
06UT

Day	km	hPa	C
0	9.5	309	-32
1	11.1	240	-48
2	11.4	224	-52
3	10.1	278	-38
4	9.5	298	-34
5	9.9	278	-42
6	10.7	248	-48
7	10.6	253	-46
8	8.5	345	-31
9	10.5	255	-49

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

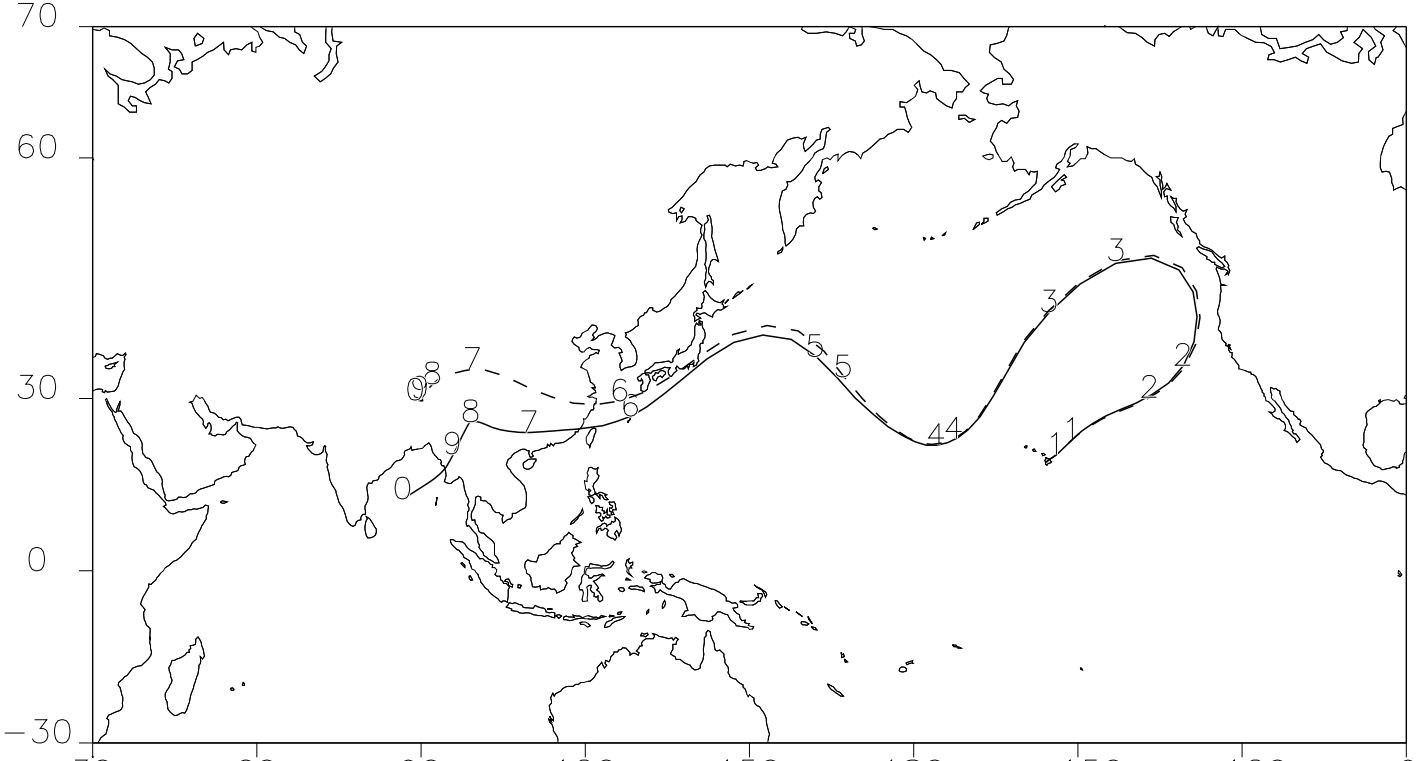
Day	km	hPa	C
0	9.5	307	−32
1	11.2	239	−49
2	11.5	222	−53
3	11.2	237	−47
4	8.8	333	−26
5	9.4	302	−33
6	9.2	311	−33
7	7.0	426	−15
8	6.4	462	−13
9	6.8	441	−18
10	5.9	494	−11

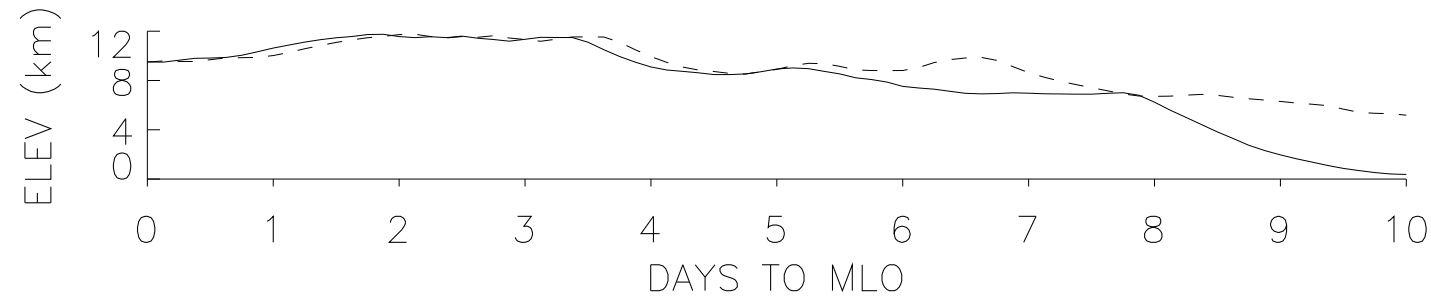
18UT

Day	km	hPa	C
0	9.5	308	−32
1	11.0	247	−46
2	11.5	224	−51
3	11.5	226	−50
4	8.6	347	−23
5	9.1	319	−29
6	9.7	291	−35
7	7.8	384	−20
8	6.9	430	−14
9	7.2	417	−19
10	7.7	391	−23

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

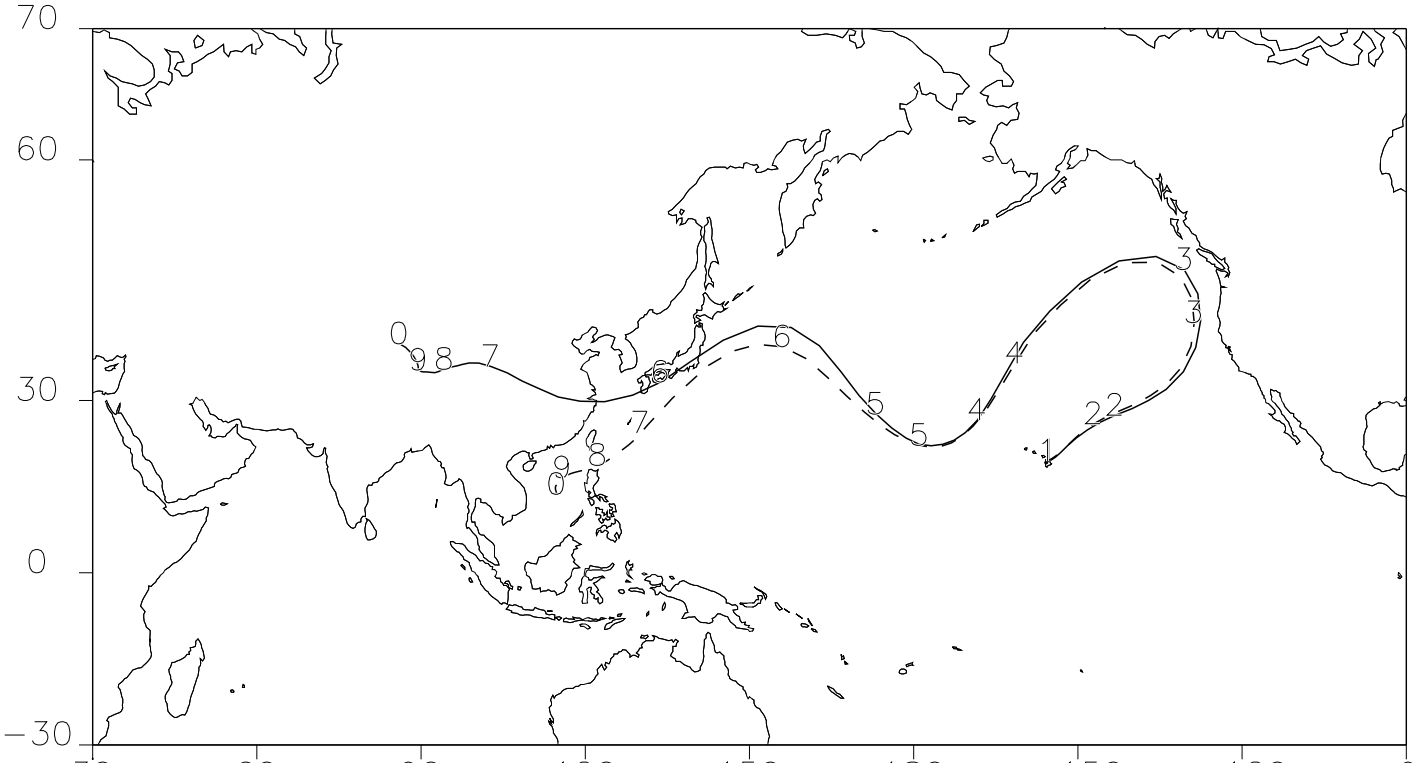
Day	km	hPa	C
0	9.5	307	−33
1	10.6	261	−42
2	11.6	223	−51
3	11.3	229	−50
4	9.1	326	−27
5	8.9	328	−26
6	7.5	400	−15
7	7.0	428	−12
8	6.2	471	−7
9	2.0	798	16
10	0.4	962	28

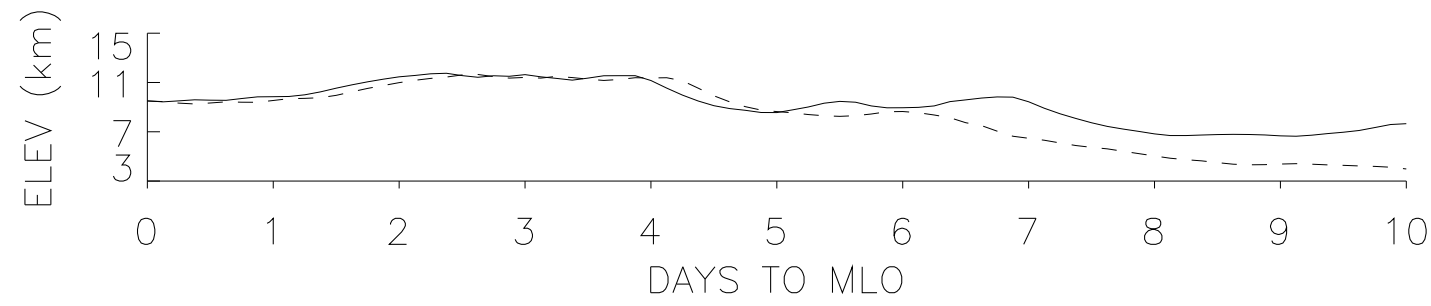
06UT

Day	km	hPa	C
0	9.5	307	−33
1	10.0	286	−37
2	11.7	220	−52
3	11.3	231	−50
4	9.9	288	−35
5	8.9	328	−26
6	8.8	331	−28
7	8.6	341	−27
8	6.7	444	−10
9	6.3	469	−7
10	5.2	542	2

00UT – solid
06UT – dashed

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





12UT

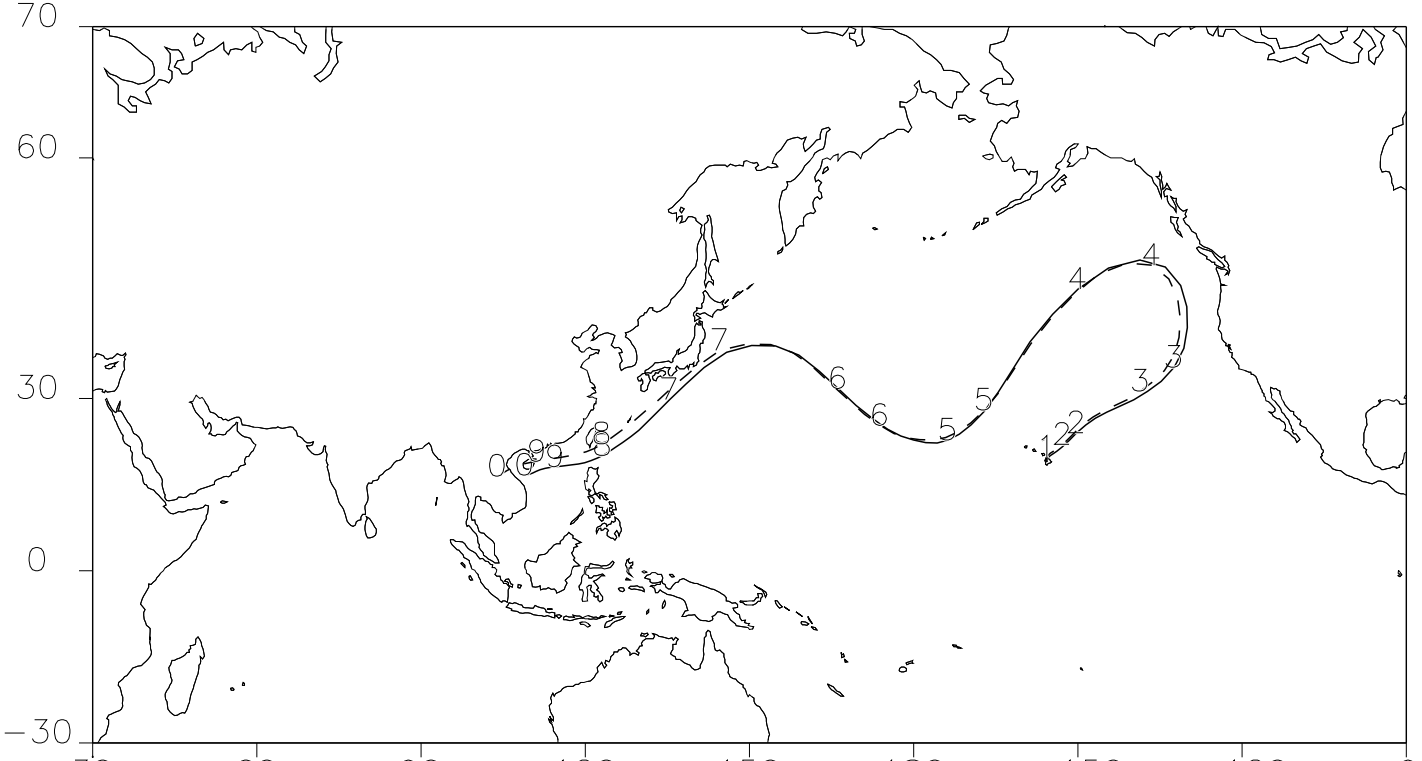
Day	km	hPa	C
0	9.5	306	−34
1	9.8	292	−35
2	11.5	229	−50
3	11.6	219	−53
4	11.2	239	−46
5	8.6	348	−21
6	8.9	324	−29
7	9.4	303	−32
8	6.8	435	−12
9	6.7	446	−12
10	7.7	391	−24

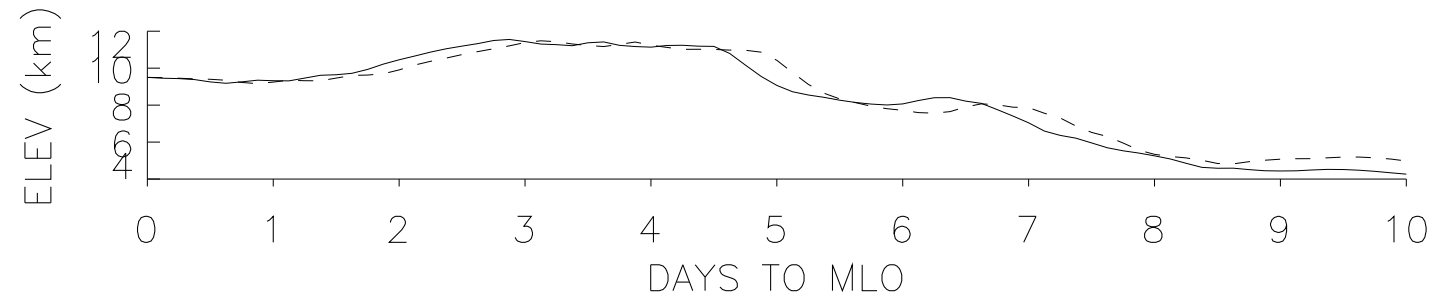
18UT

Day	km	hPa	C
0	9.5	305	−34
1	9.5	306	−33
2	11.0	248	−46
3	11.4	228	−50
4	11.4	229	−49
5	8.6	347	−23
6	8.6	341	−24
7	6.5	460	−8
8	5.0	554	1
9	4.4	601	5
10	4.0	631	7

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

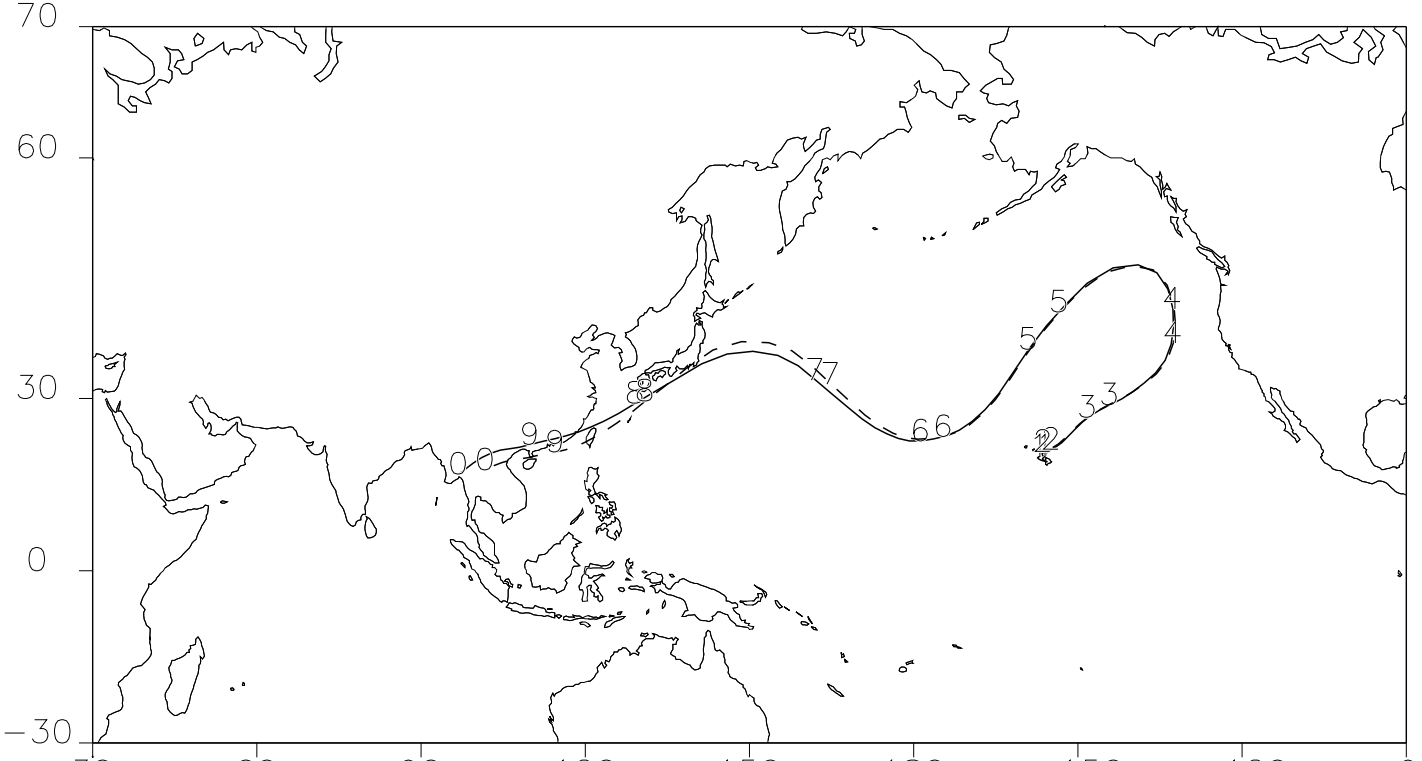
Day	km	hPa	C
0	9.5	305	−35
1	9.3	315	−31
2	10.5	268	−41
3	11.4	229	−50
4	11.1	238	−47
5	9.1	327	−28
6	8.1	371	−18
7	7.0	425	−12
8	5.3	539	0
9	4.4	597	4
10	4.3	609	5

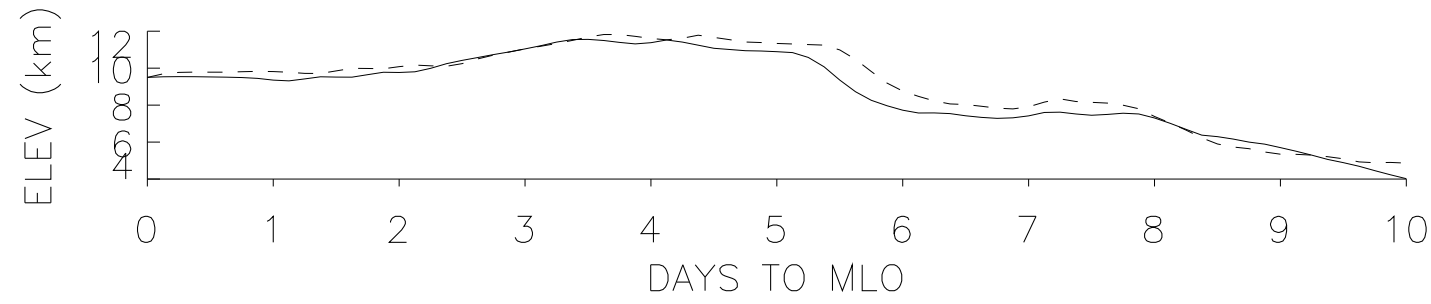
06UT

Day	km	hPa	C
0	9.5	305	−35
1	9.2	318	−32
2	9.9	291	−36
3	11.4	233	−49
4	11.2	236	−47
5	10.4	267	−39
6	7.7	391	−16
7	7.9	378	−19
8	5.3	531	−2
9	5.1	551	1
10	5.0	558	1

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

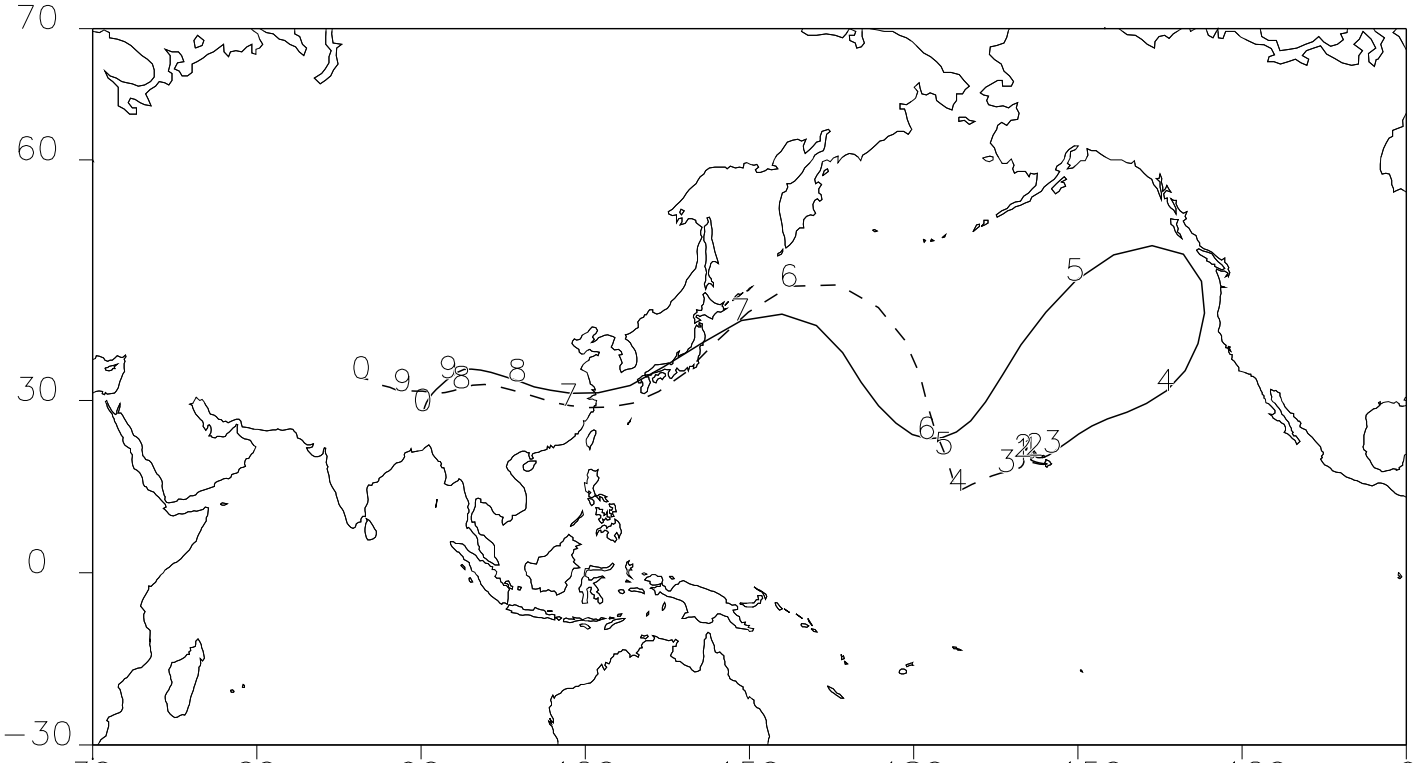
Day	km	hPa	C
0	9.5	305	−36
1	9.4	312	−33
2	9.8	296	−35
3	11.0	245	−46
4	11.4	230	−49
5	10.9	248	−44
6	7.7	393	−17
7	7.4	405	−13
8	7.3	408	−15
9	5.7	507	−3
10	4.0	625	6

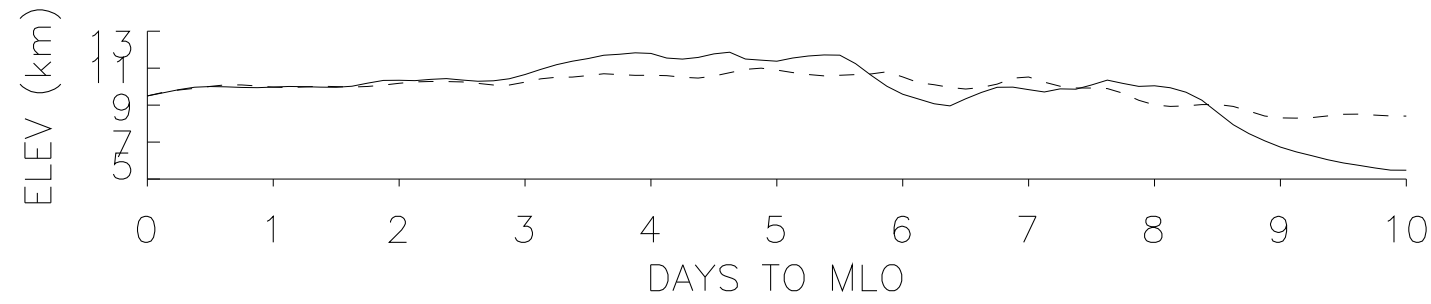
18UT

Day	km	hPa	C
0	9.5	305	−36
1	9.8	292	−37
2	10.1	283	−37
3	11.0	246	−45
4	11.6	223	−50
5	11.3	231	−48
6	8.8	340	−25
7	7.9	378	−17
8	7.4	404	−16
9	5.3	531	−2
10	4.9	565	2

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

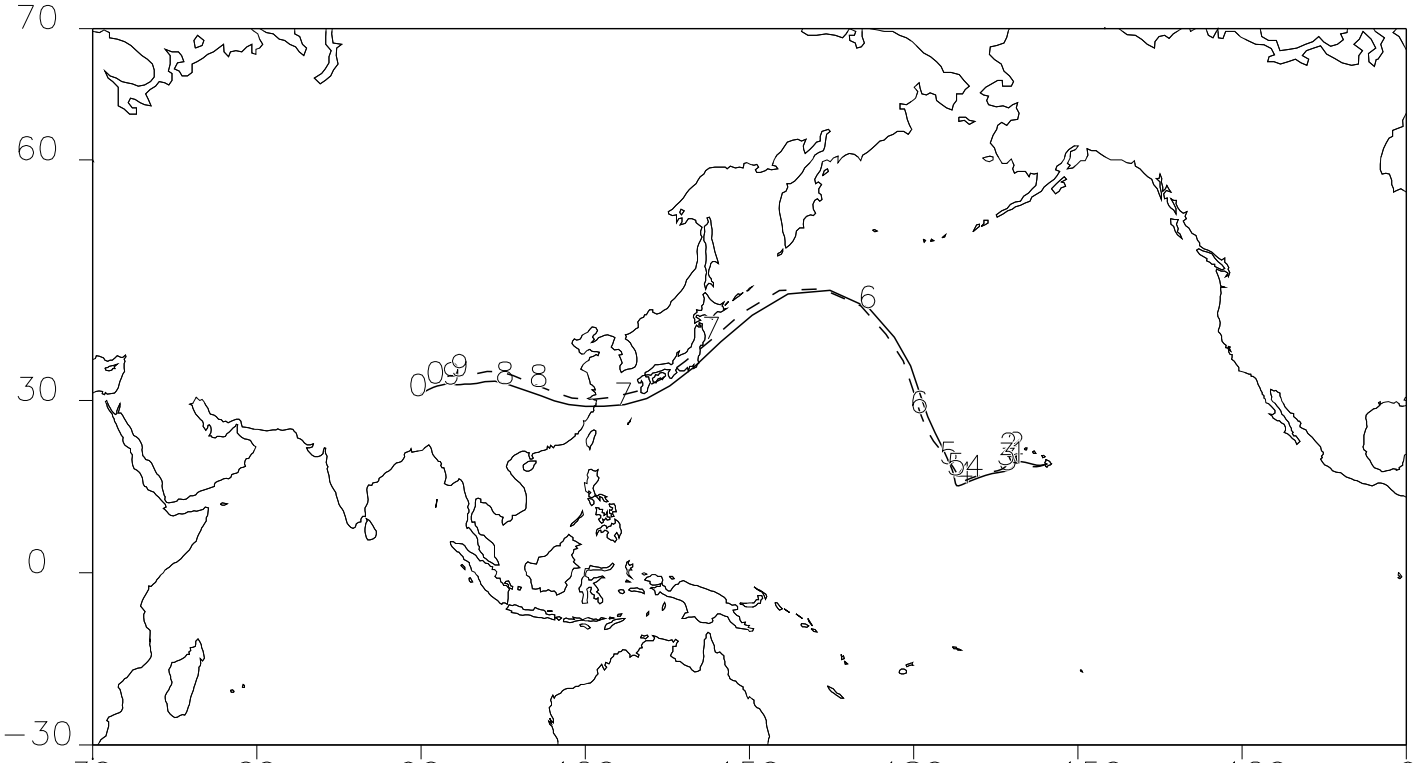
Day	km	hPa	C
0	9.5	306	−35
1	10.0	285	−39
2	10.3	272	−40
3	10.7	261	−42
4	11.8	216	−53
5	11.4	227	−50
6	9.6	303	−31
7	9.8	282	−36
8	10.0	278	−38
9	6.7	439	−12
10	5.5	519	−4

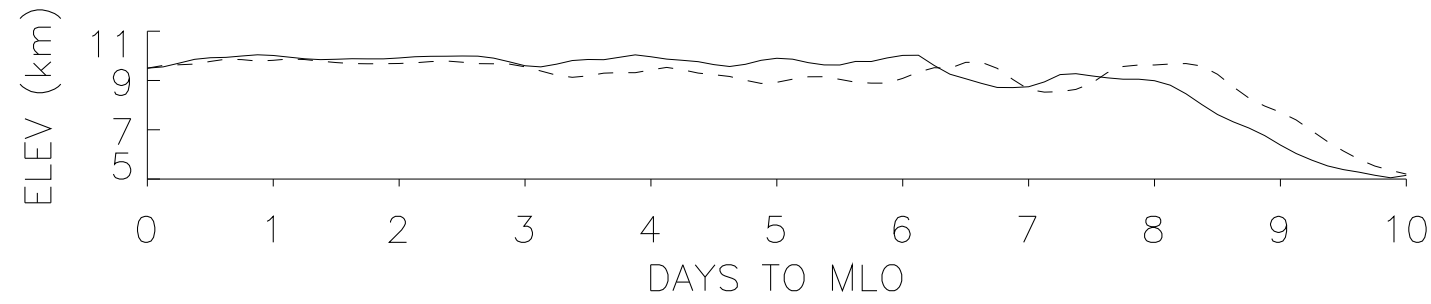
06UT

Day	km	hPa	C
0	9.5	306	−34
1	10.0	285	−38
2	10.2	278	−40
3	10.2	277	−38
4	10.6	261	−41
5	10.9	251	−43
6	10.5	253	−44
7	10.5	262	−41
8	9.0	324	−29
9	8.3	358	−24
10	8.4	353	−25

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

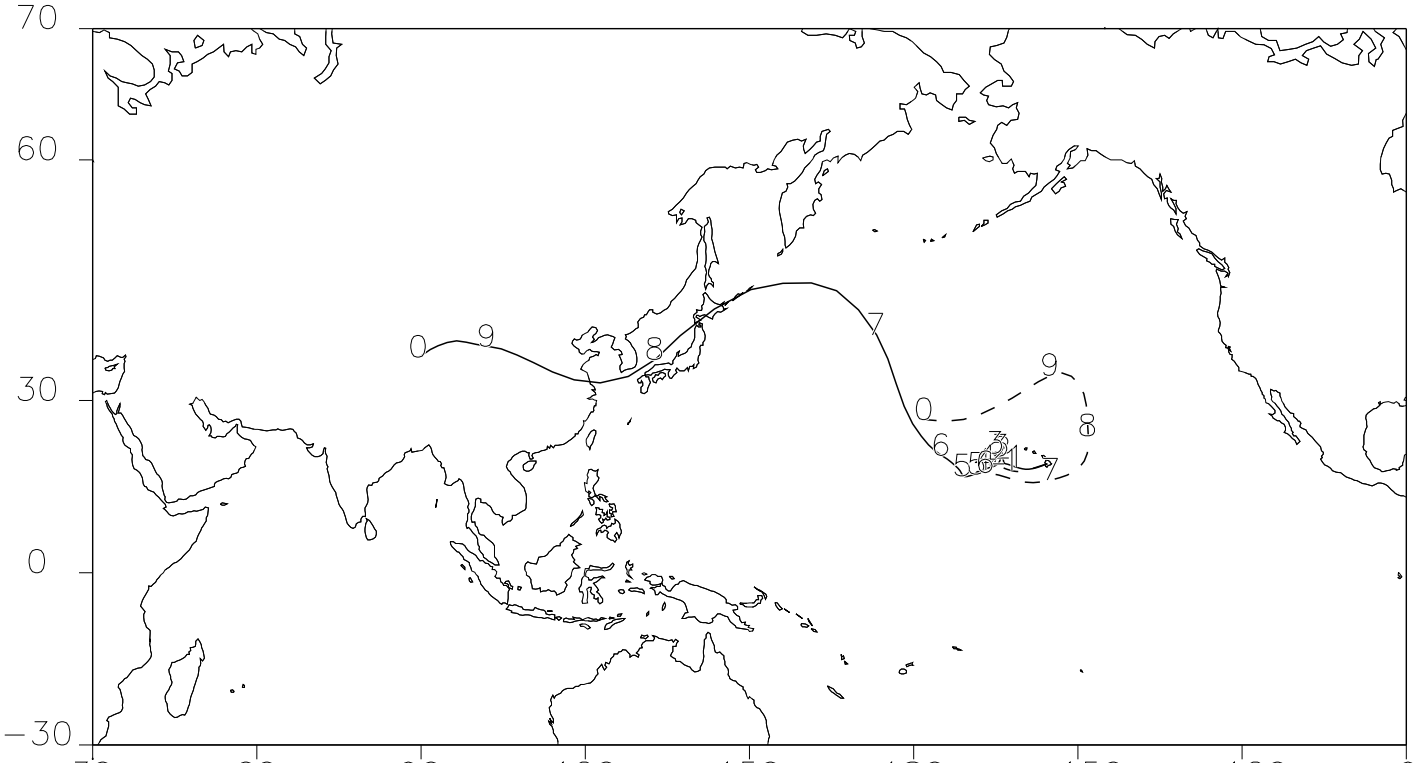
Day	km	hPa	C
0	9.5	306	−35
1	10.0	283	−39
2	9.9	288	−38
3	9.6	302	−33
4	10.0	287	−37
5	9.9	290	−36
6	10.0	273	−39
7	8.7	336	−27
8	9.0	324	−29
9	6.4	460	−9
10	5.1	538	2

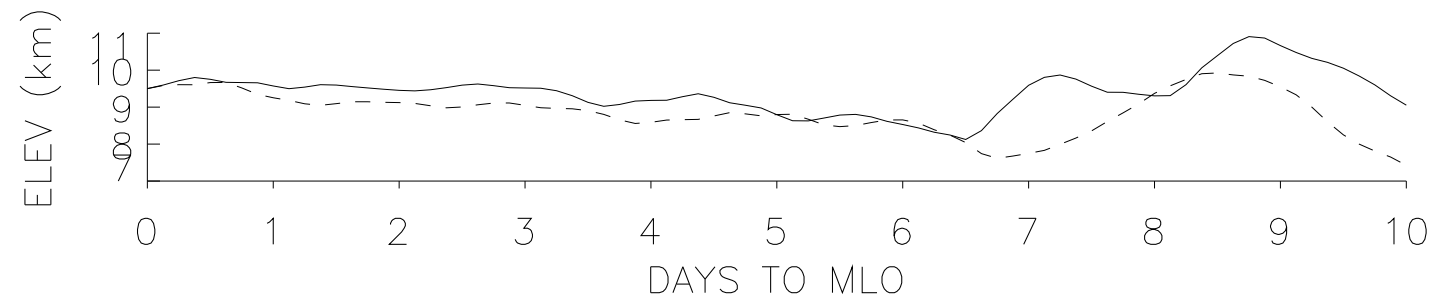
18UT

Day	km	hPa	C
0	9.5	306	−35
1	9.8	292	−37
2	9.7	297	−36
3	9.6	304	−33
4	9.4	310	−33
5	8.9	333	−28
6	9.1	320	−32
7	8.6	332	−30
8	9.6	295	−37
9	7.7	386	−20
10	5.2	535	−1

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

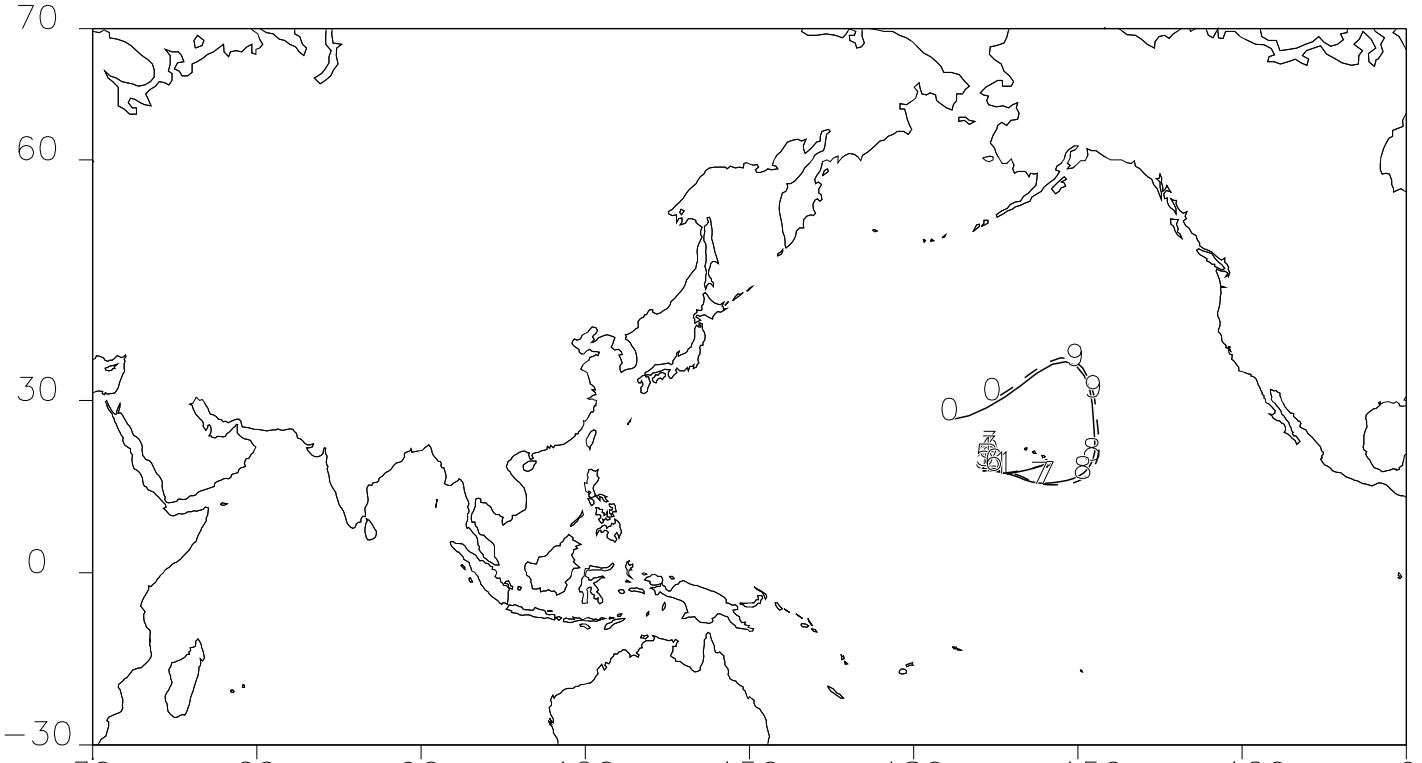
Day	km	hPa	C
0	9.5	306	−34
1	9.6	303	−34
2	9.5	308	−33
3	9.5	306	−34
4	9.2	321	−30
5	8.8	339	−28
6	8.5	352	−25
7	9.6	291	−38
8	9.3	299	−36
9	10.7	251	−45
10	9.1	319	−31

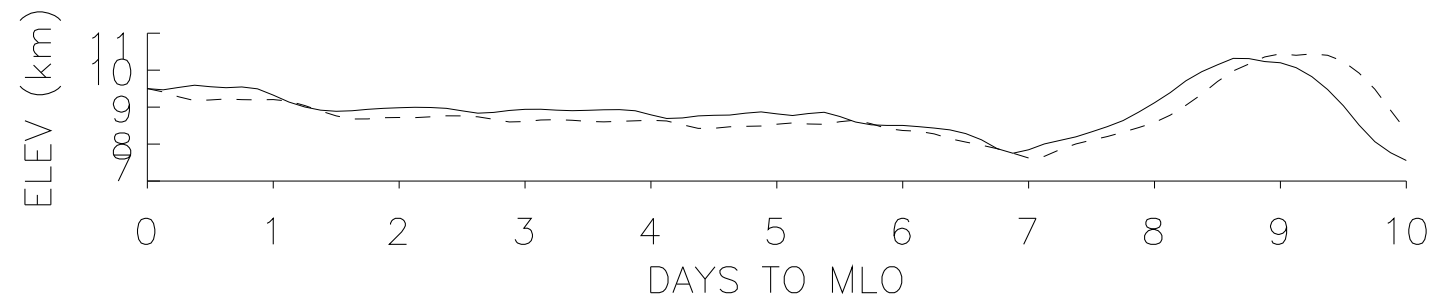
06UT

Day	km	hPa	C
0	9.5	307	−34
1	9.3	317	−31
2	9.1	322	−30
3	9.0	326	−31
4	8.6	349	−25
5	8.8	338	−28
6	8.7	346	−26
7	7.7	392	−19
8	9.4	313	−31
9	9.5	305	−33
10	7.4	402	−15

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	9.5	306	−34
1	9.3	314	−32
2	9.0	329	−29
3	8.9	331	−30
4	8.8	338	−28
5	8.8	337	−29
6	8.5	353	−26
7	7.8	386	−19
8	9.1	324	−29
9	10.2	277	−39
10	7.6	397	−17

18UT

Day	km	hPa	C
0	9.5	306	−34
1	9.2	320	−31
2	8.7	341	−27
3	8.6	347	−26
4	8.6	345	−27
5	8.5	351	−27
6	8.4	359	−25
7	7.6	398	−17
8	8.6	350	−25
9	10.4	268	−40
10	8.4	355	−23

12UT − solid
18UT − dashed