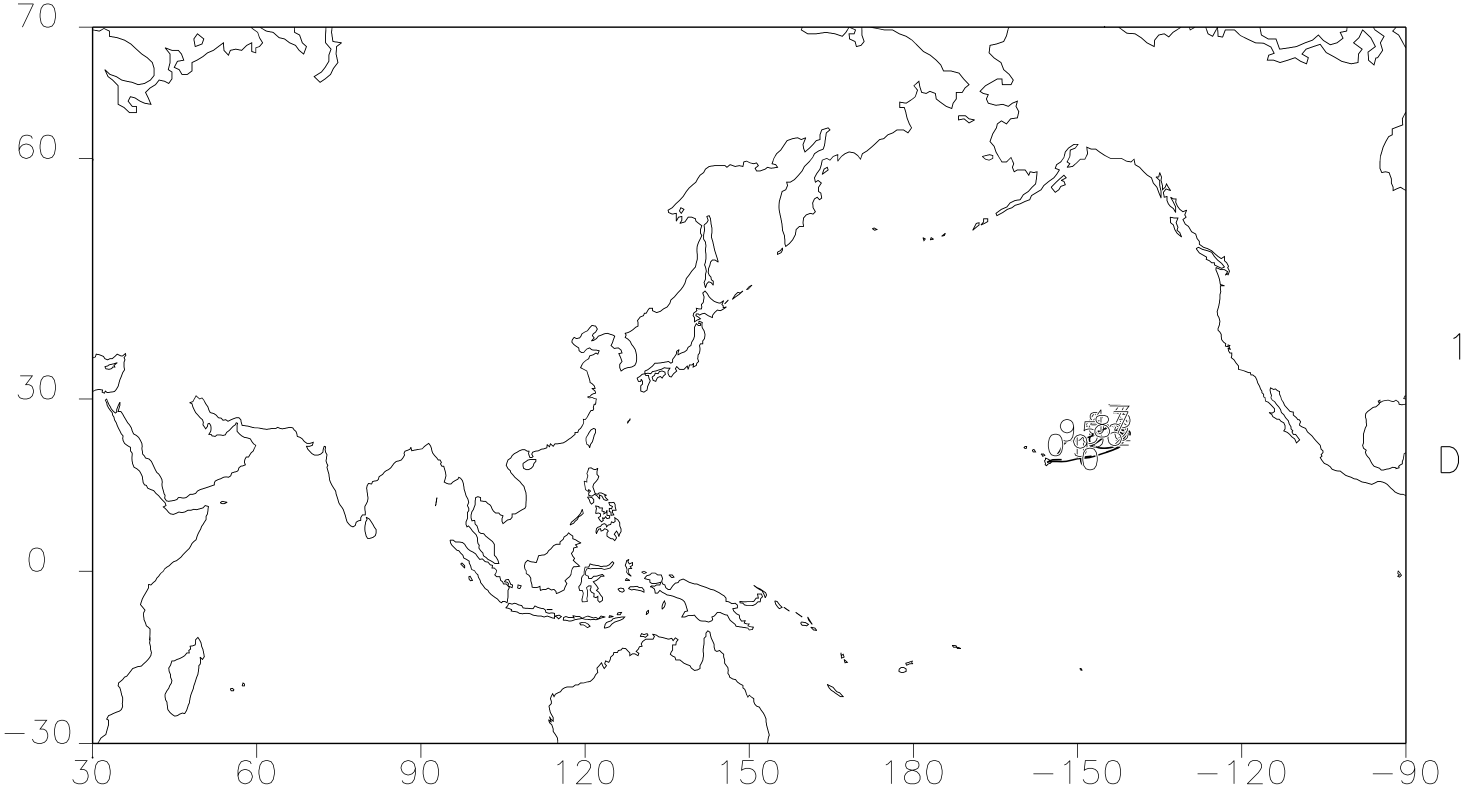
3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/1/2004 (Day of Year 92)
NCEP/NCAR Reanalysis 1 Data Set

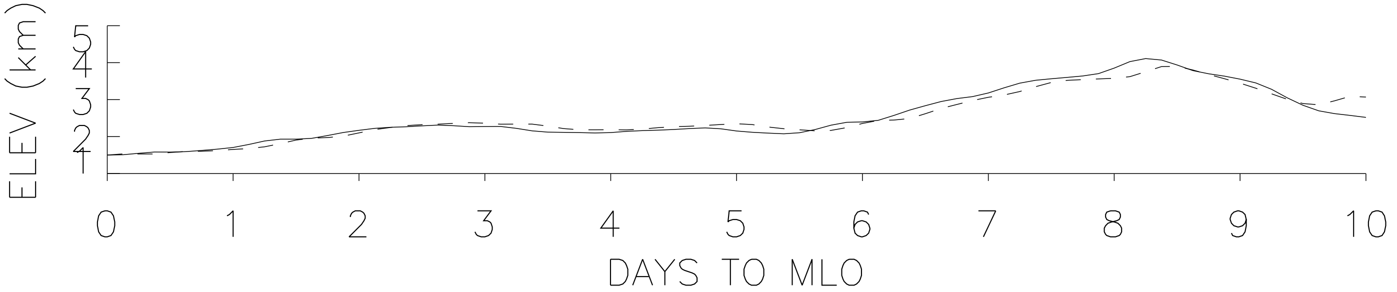


00UT

Day	km	hPa	C
0	1.5	854	15
1	1.7	833	12
2	2.2	788	9
3	2.3	780	10
4	2.1	796	9
5	2.2	792	10
6	2.4	770	9
7	3.2	698	4
8	3.9	641	0
9	3.6	666	1
10	2.5	755	8

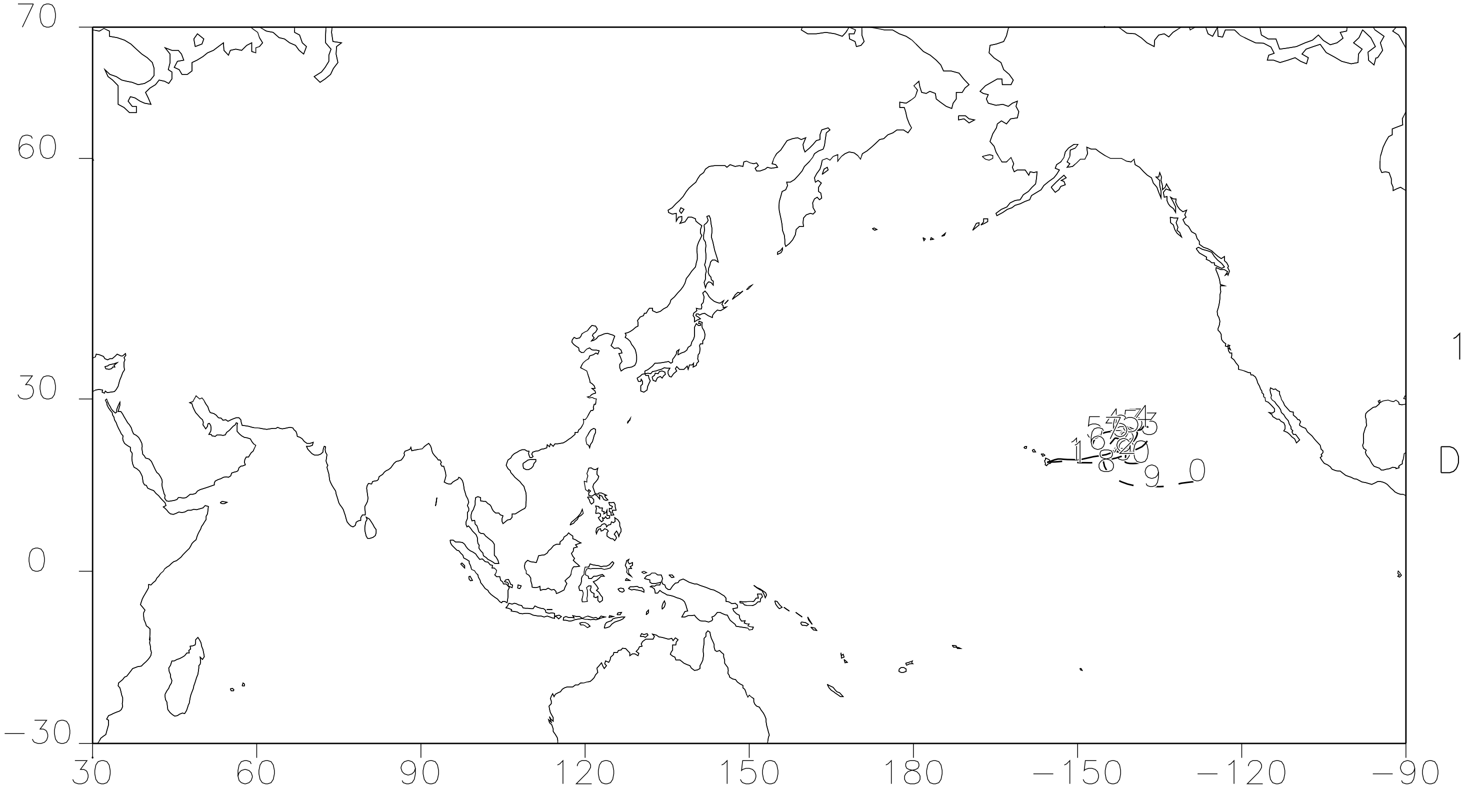
06UT

Day	km	hPa	C
0	1.5	855	15
1	1.7	839	12
2	2.1	796	10
3	2.4	772	9
4	2.2	790	9
5	2.3	776	10
6	2.4	775	9
7	3.1	711	5
8	3.6	666	2
9	3.4	676	4
10	3.1	709	8



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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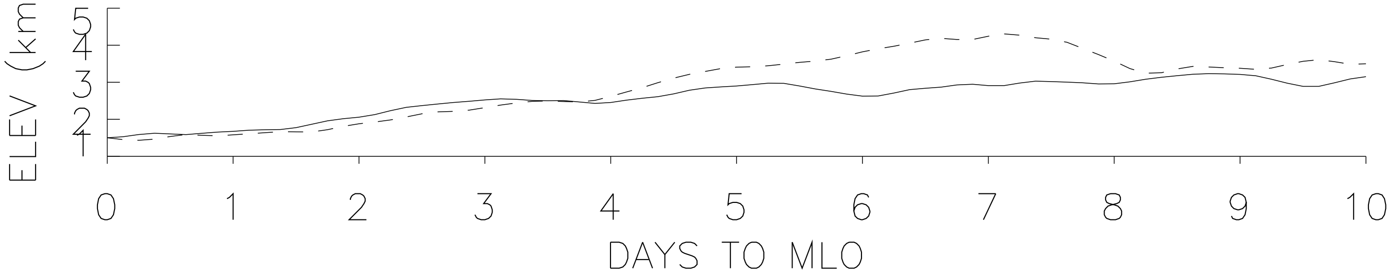


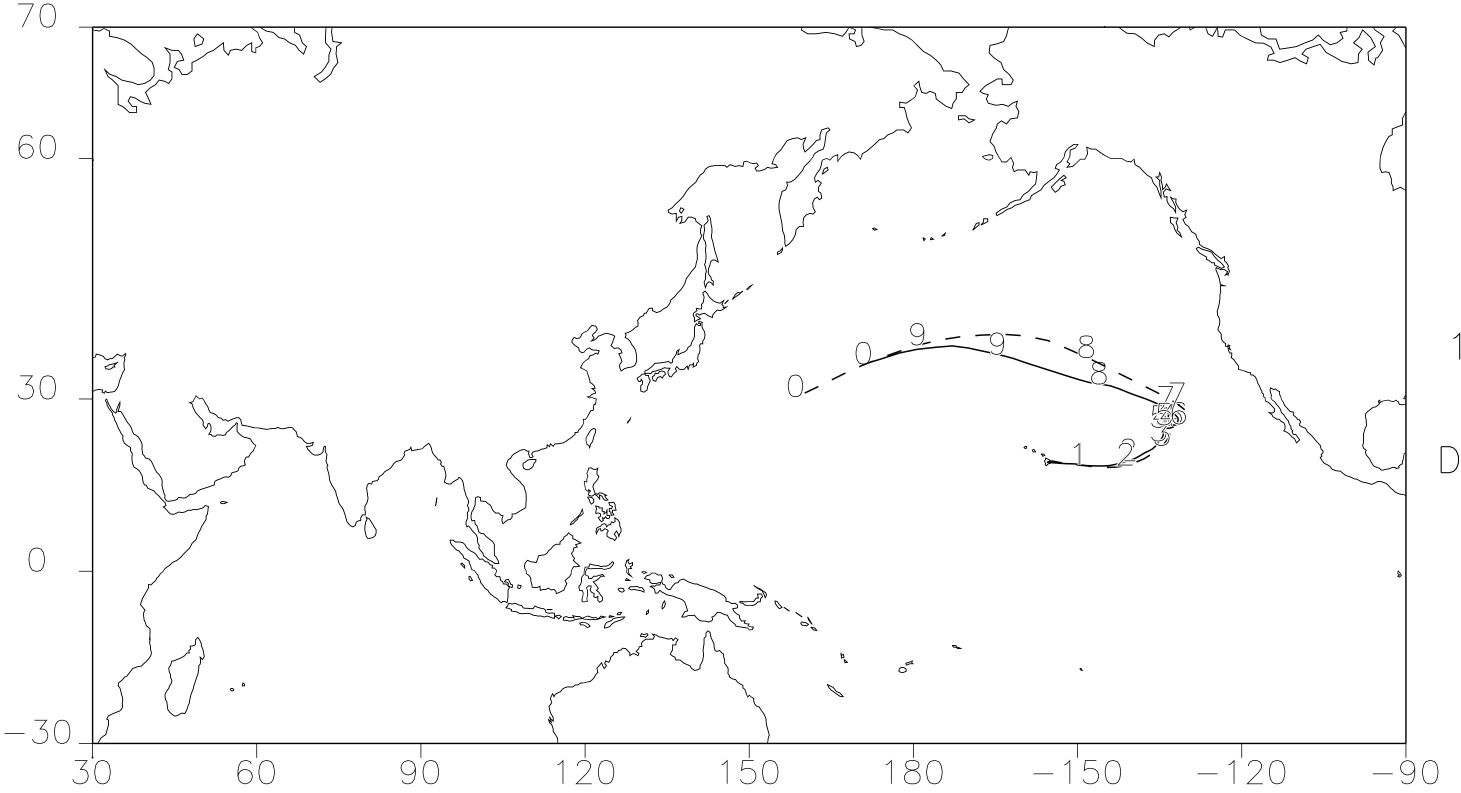
12UT

Day	km	hPa	C
0	1.5	853	14
1	1.7	836	11
2	2.1	799	10
3	2.5	756	8
4	2.5	763	7
5	2.9	724	6
6	2.6	748	8
7	2.9	723	7
8	3.0	718	8
9	3.2	696	6
10	3.2	701	8

18UT

Day	km	hPa	C
0	1.5	855	15
1	1.6	847	13
2	1.9	817	10
3	2.3	776	9
4	2.6	749	8
5	3.4	683	3
6	3.8	648	1
7	4.2	615	−2
8	3.6	668	6
9	3.4	682	9
10	3.5	672	8

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/2/2004 (Day of Year 93)
NCEP/NCAR Reanalysis 1 Data Set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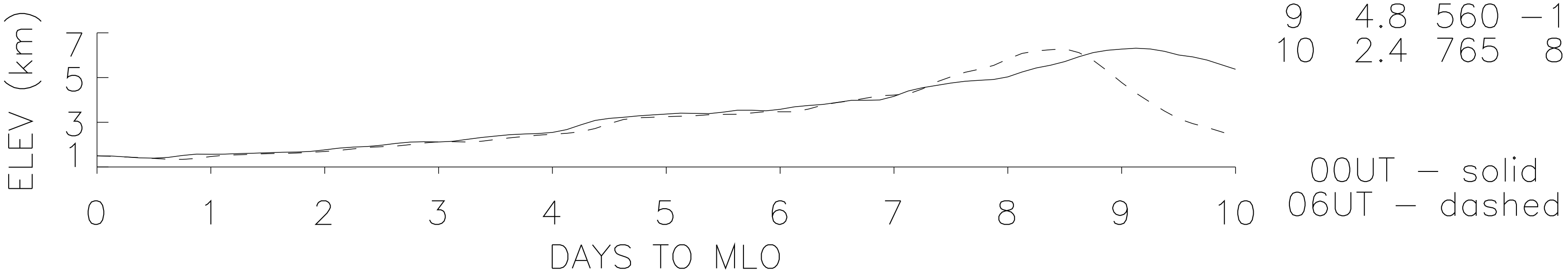
00UT

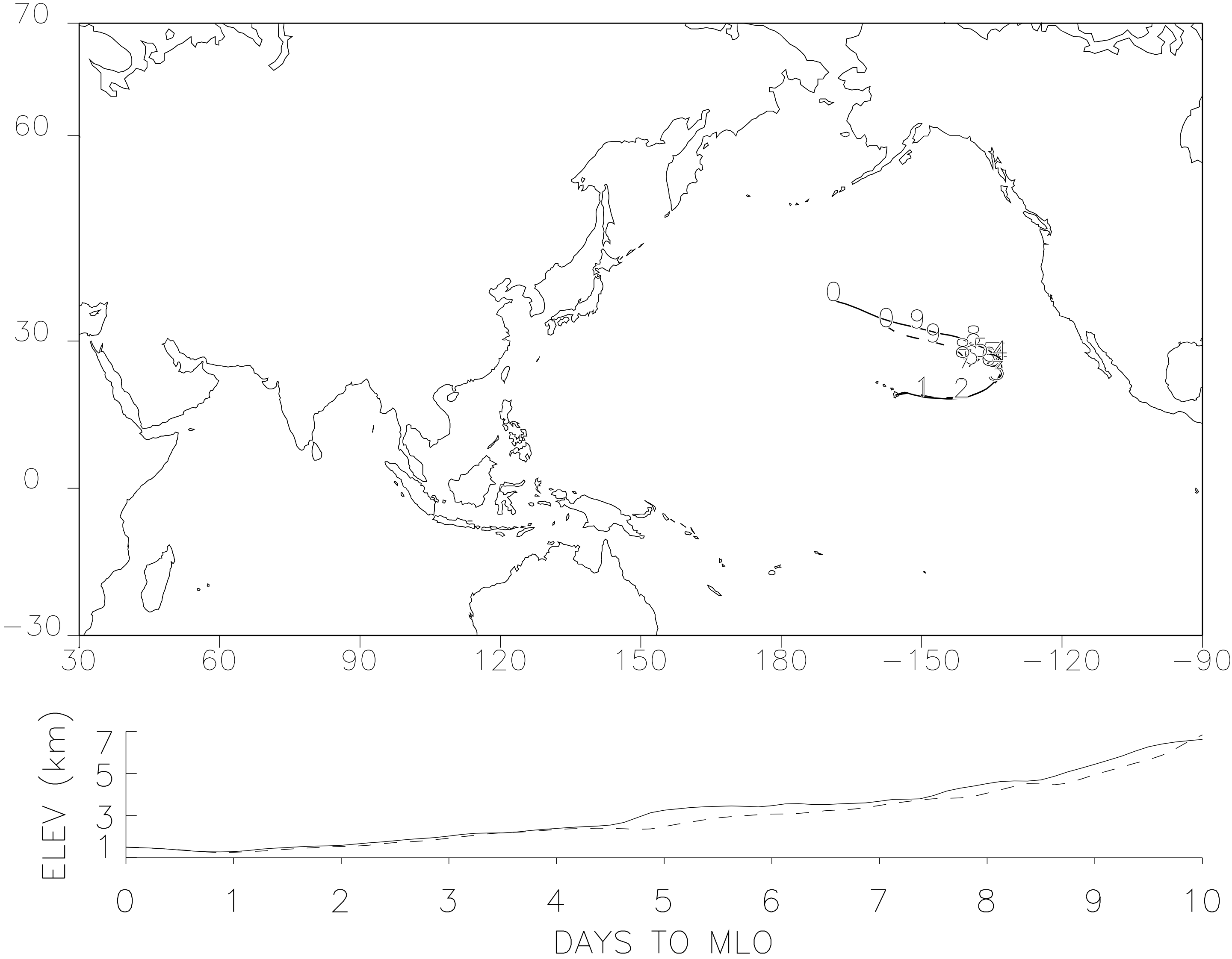
Day	km	hPa	C
0	1.5	853	14
1	1.6	846	12
2	1.8	826	11
3	2.1	793	10
4	2.5	754	9
5	3.4	684	5
6	3.6	667	6
7	4.2	619	0
8	5.0	550	−10
9	6.3	463	−21
10	5.4	522	−14

06UT

Day	km	hPa	C
0	1.5	854	15
1	1.5	858	13
2	1.7	834	12
3	2.1	793	10
4	2.5	762	10
5	3.3	696	5
6	3.5	677	6
7	4.2	615	1
8	5.8	493	−15
9	4.8	560	−11
10	2.4	765	8



3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/2/2004 (Day of Year 93)
NCEP/NCAR Reanalysis 1 Data Set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ELEV (km)
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DAYS TO MLO
12UT – solid
18UT – dashed

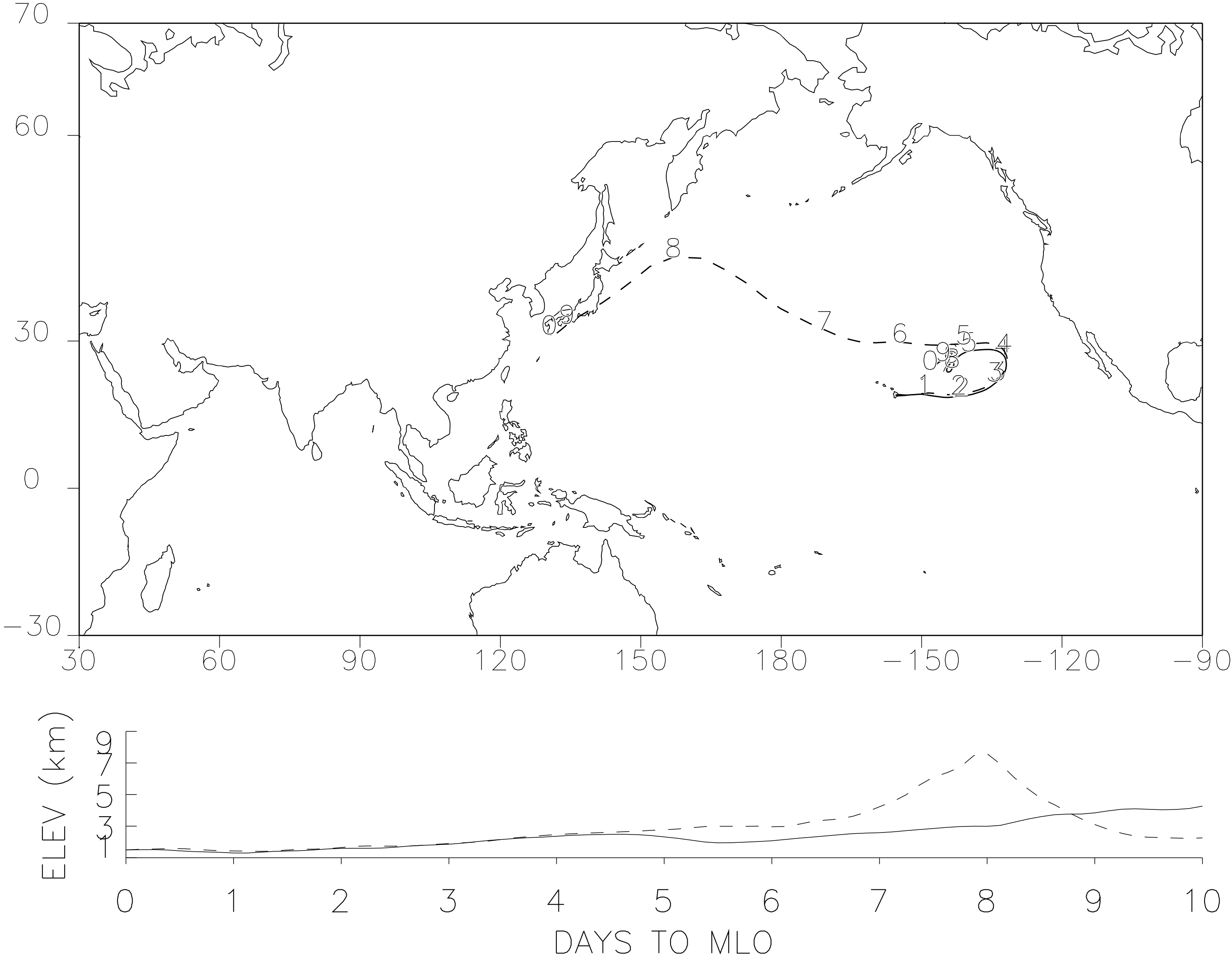
12UT

Day	km	hPa	C
0	1.5	853	14
1	1.3	874	14
2	1.6	844	10
3	2.0	801	10
4	2.4	767	9
5	3.3	692	3
6	3.5	676	5
7	3.7	657	3
8	4.5	591	–5
9	5.4	521	–14
10	6.6	443	–24

18UT

Day	km	hPa	C
0	1.5	854	13
1	1.3	879	15
2	1.5	851	11
3	1.9	812	11
4	2.3	773	9
5	2.5	762	8
6	3.1	710	5
7	3.5	676	4
8	4.1	629	–1
9	5.0	559	–8
10	6.8	432	–24

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/3/2004 (Day of Year 94)
NCEP/NCAR Reanalysis 1 Data Set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ELEV (km)
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DAYS TO MLO
00UT – solid
06UT – dashed

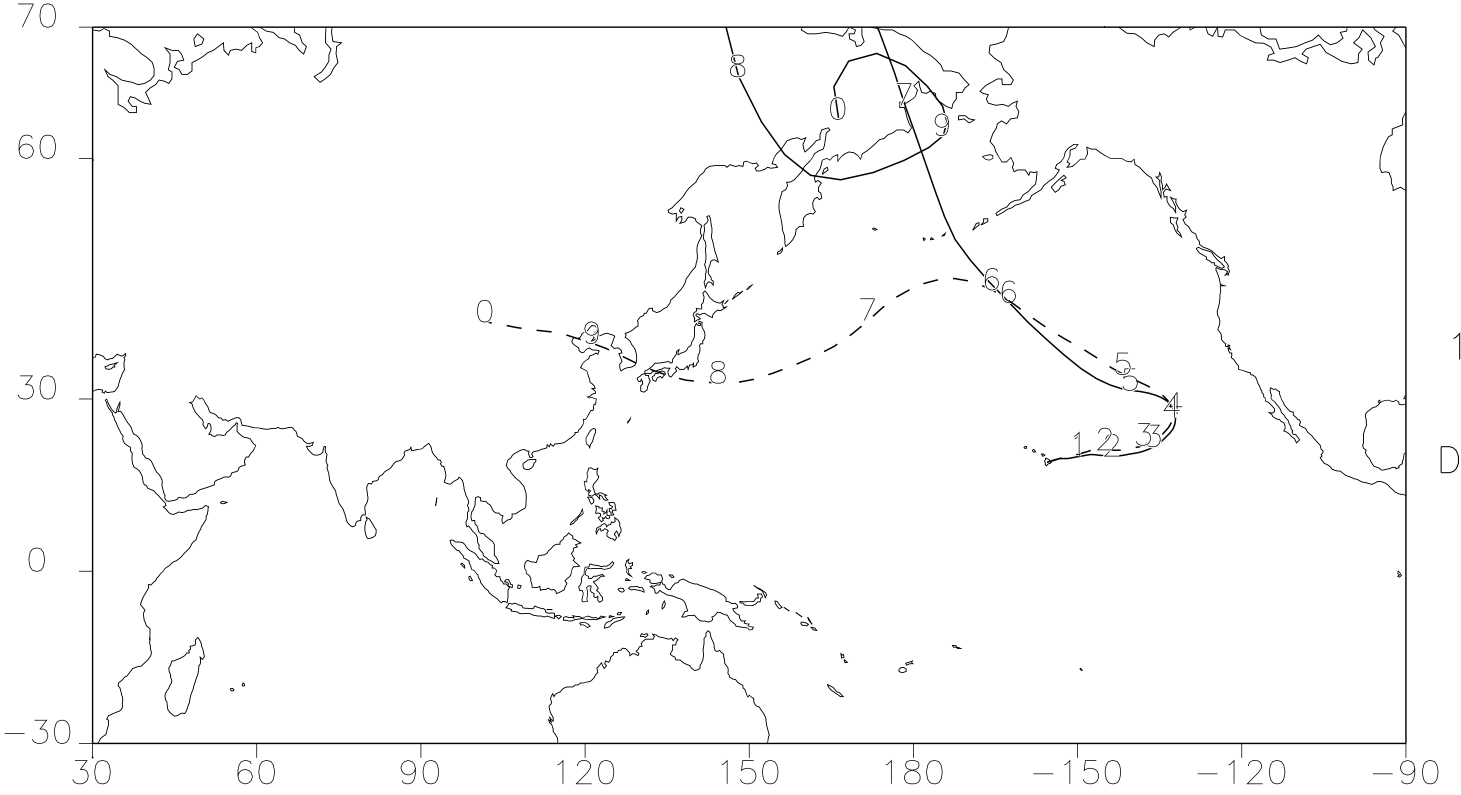
00UT

Day	km	hPa	C
0	1.5	853	14
1	1.3	874	15
2	1.6	845	11
3	1.9	817	10
4	2.4	769	8
5	2.3	774	9
6	2.1	799	9
7	2.6	751	7
8	3.0	717	6
9	3.8	643	–1
10	4.3	608	–3

06UT

Day	km	hPa	C
0	1.5	854	15
1	1.4	862	15
2	1.6	840	12
3	1.9	814	9
4	2.5	761	7
5	2.8	732	5
6	3.0	715	4
7	4.2	608	–7
8	7.6	373	–39
9	3.1	694	–3
10	2.3	773	4

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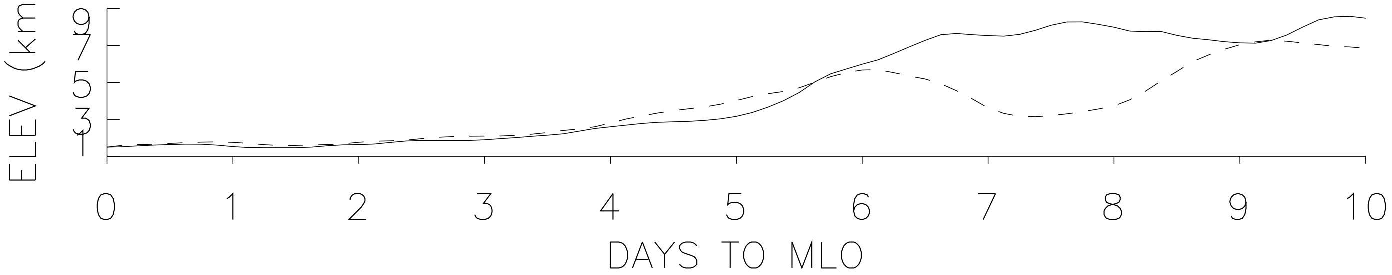


12UT – solid
18UT – dashed

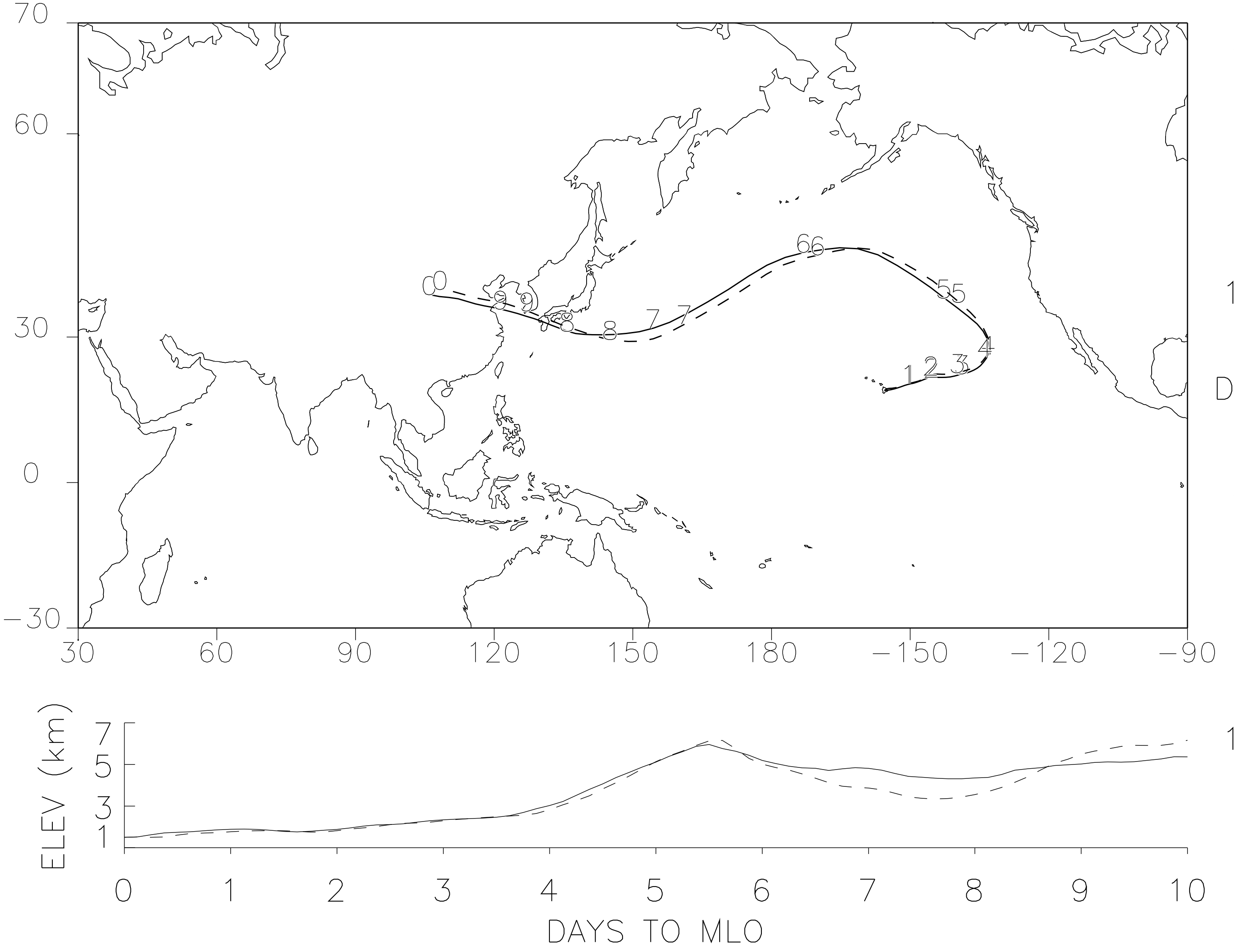
12UT

Day	km	hPa	C
0	1.5	854	14
1	1.5	852	14
2	1.6	840	12
3	1.9	814	8
4	2.6	747	6
5	3.2	694	0
6	6.0	462	–29
7	7.5	365	–45
8	8.0	340	–48
9	7.1	388	–39
10	8.5	320	–49

18UT

Day	km	hPa	C
0	1.5	854	14
1	1.8	830	12
2	1.8	830	12
3	2.1	797	10
4	2.8	731	7
5	4.0	623	–8
6	5.7	489	–23
7	3.6	644	–4
8	3.7	637	–6
9	7.0	405	–38
10	6.8	417	–36

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

00UT

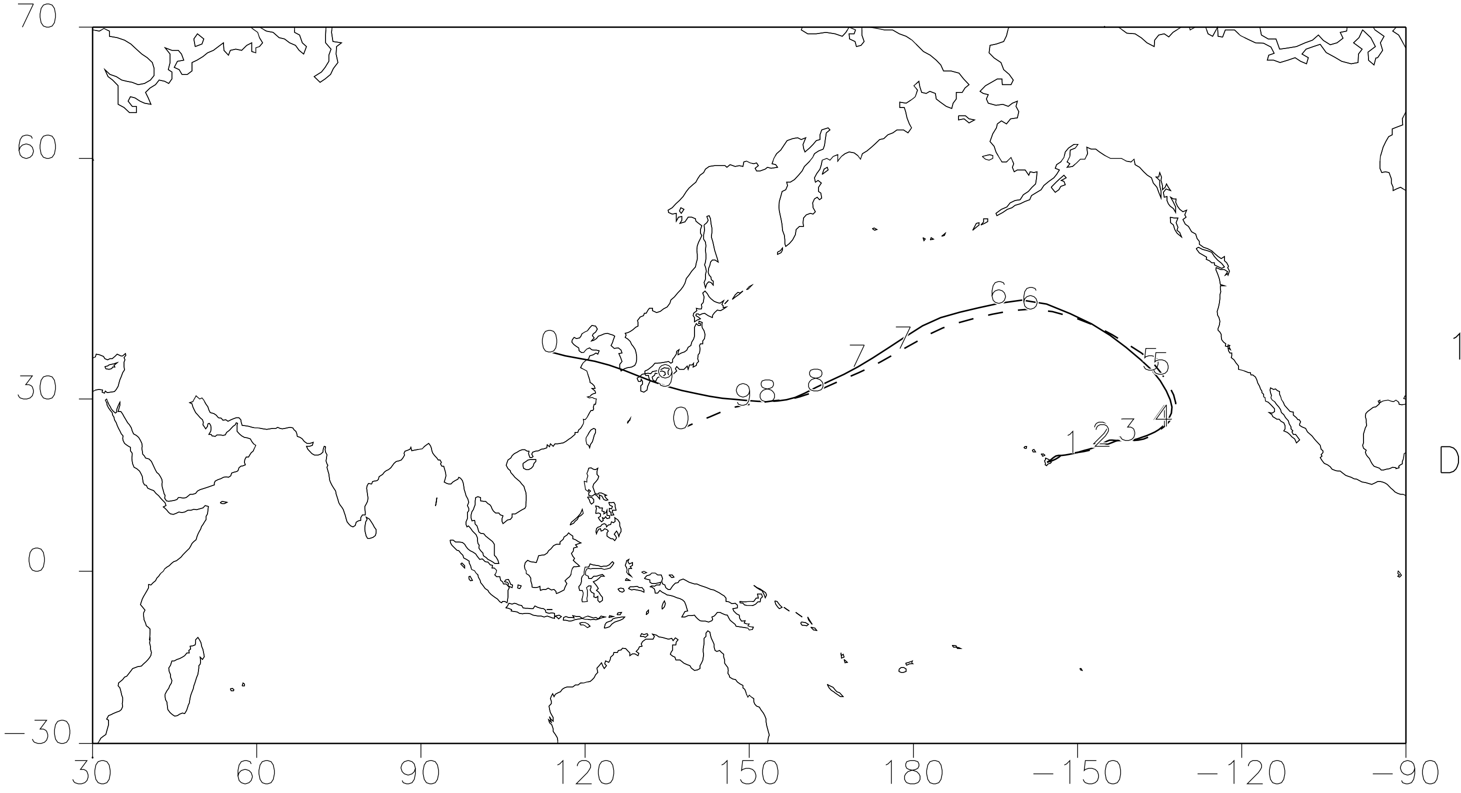
Day	km	hPa	C
0	1.5	853	14
1	1.9	815	12
2	1.9	817	12
3	2.3	773	9
4	3.0	710	7
5	5.1	537	−16
6	5.2	525	−15
7	4.8	559	−11
8	4.4	595	−9
9	5.0	541	−18
10	5.4	516	−20

06UT

Day	km	hPa	C
0	1.5	853	14
1	1.8	828	13
2	1.8	824	12
3	2.3	778	10
4	2.8	728	7
5	5.1	538	−15
6	5.0	537	−14
7	3.9	632	−5
8	3.6	661	−2
9	5.5	508	−22
10	6.2	462	−27

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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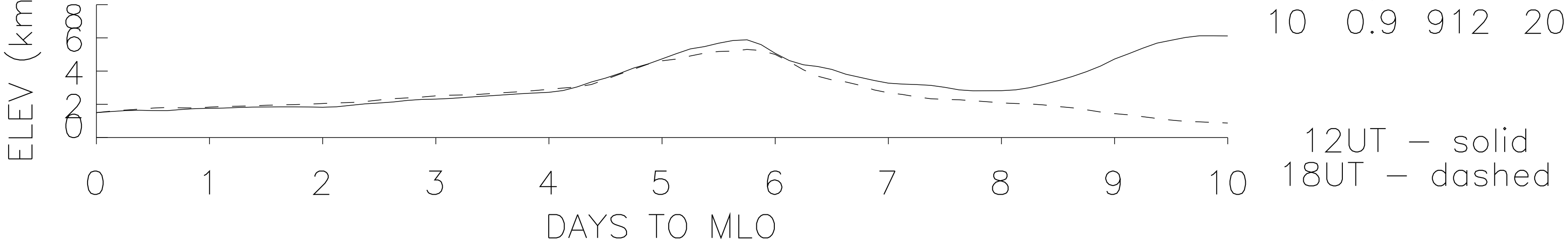
12UT

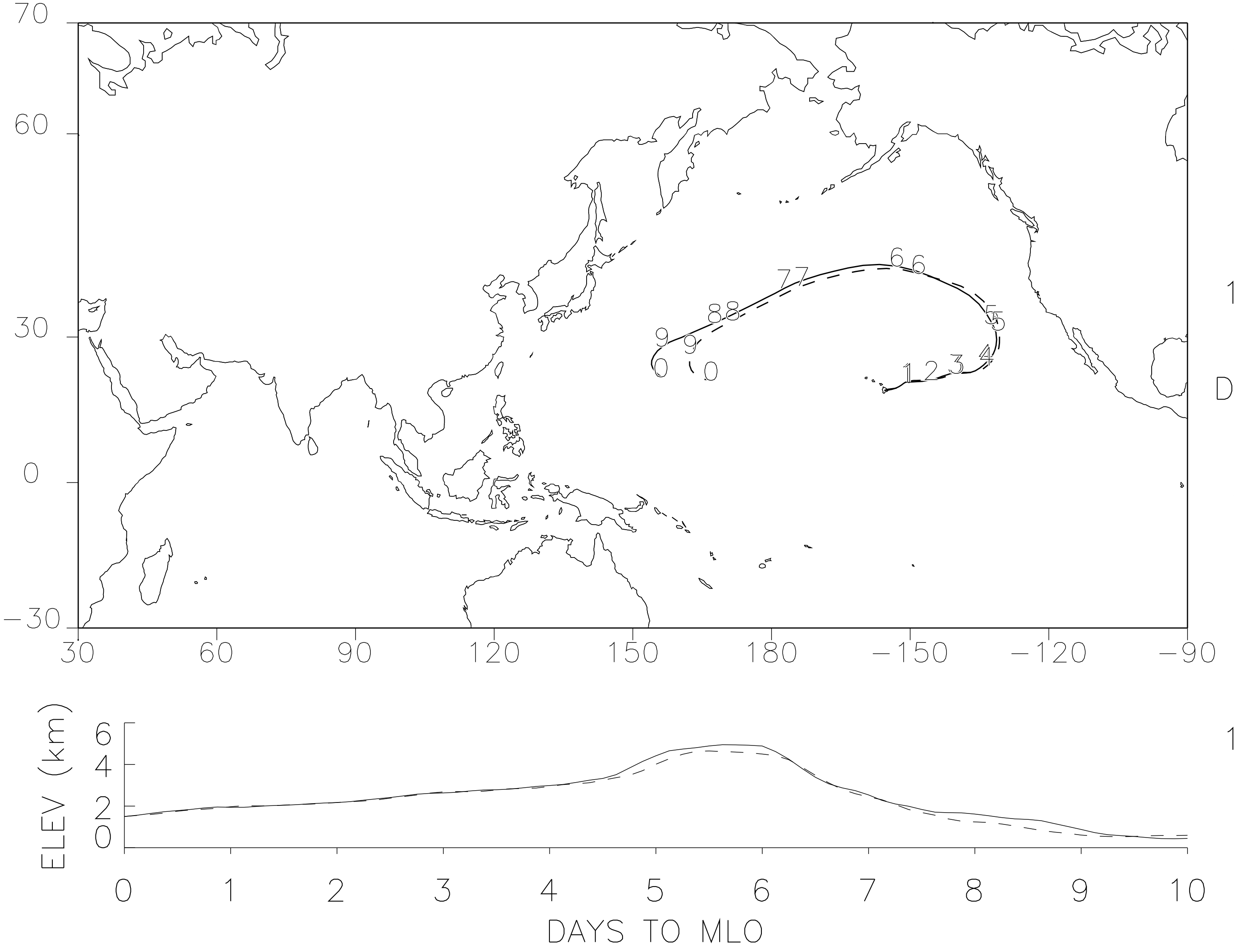
Day	km	hPa	C
0	1.5	853	14
1	1.8	828	13
2	1.8	822	12
3	2.3	775	10
4	2.7	736	7
5	4.7	570	–11
6	5.1	535	–13
7	3.3	681	–1
8	2.8	724	4
9	4.7	564	–11
10	6.1	465	–26

18UT

Day	km	hPa	C
0	1.5	854	14
1	1.8	822	13
2	2.0	801	11
3	2.5	758	10
4	2.9	722	7
5	4.6	581	–9
6	5.0	541	–13
7	2.7	732	3
8	2.1	791	8
9	1.4	853	13
10	0.9	912	20



3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/5/2004 (Day of Year 96)
NCEP/NCAR Reanalysis 1 Data Set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ELEV (km)
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10
DAYS TO MLO
00UT – solid
06UT – dashed

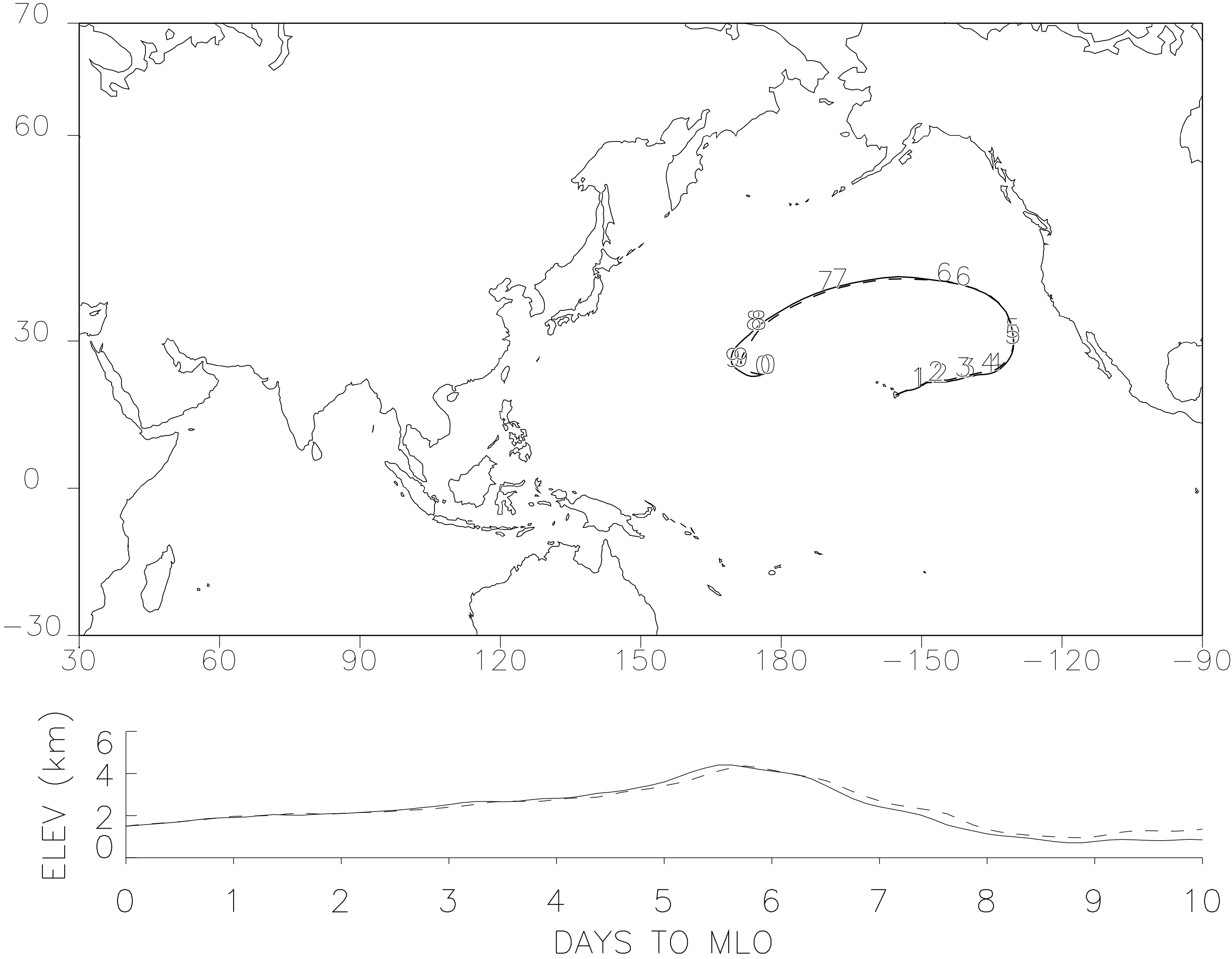
00UT

Day	km	hPa	C
0	1.5	853	14
1	1.9	809	12
2	2.2	788	10
3	2.6	746	9
4	3.0	714	6
5	4.4	596	–8
6	4.9	549	–13
7	2.5	746	4
8	1.6	838	10
9	0.9	916	19
10	0.4	965	22

06UT

Day	km	hPa	C
0	1.5	853	15
1	2.0	808	12
2	2.2	788	11
3	2.7	742	9
4	2.9	718	8
5	4.0	628	–3
6	4.5	581	–11
7	2.4	754	4
8	1.2	878	12
9	0.6	947	22
10	0.6	949	20

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



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ELEV (km)
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10
DAYS TO MLO
12UT − solid
18UT − dashed

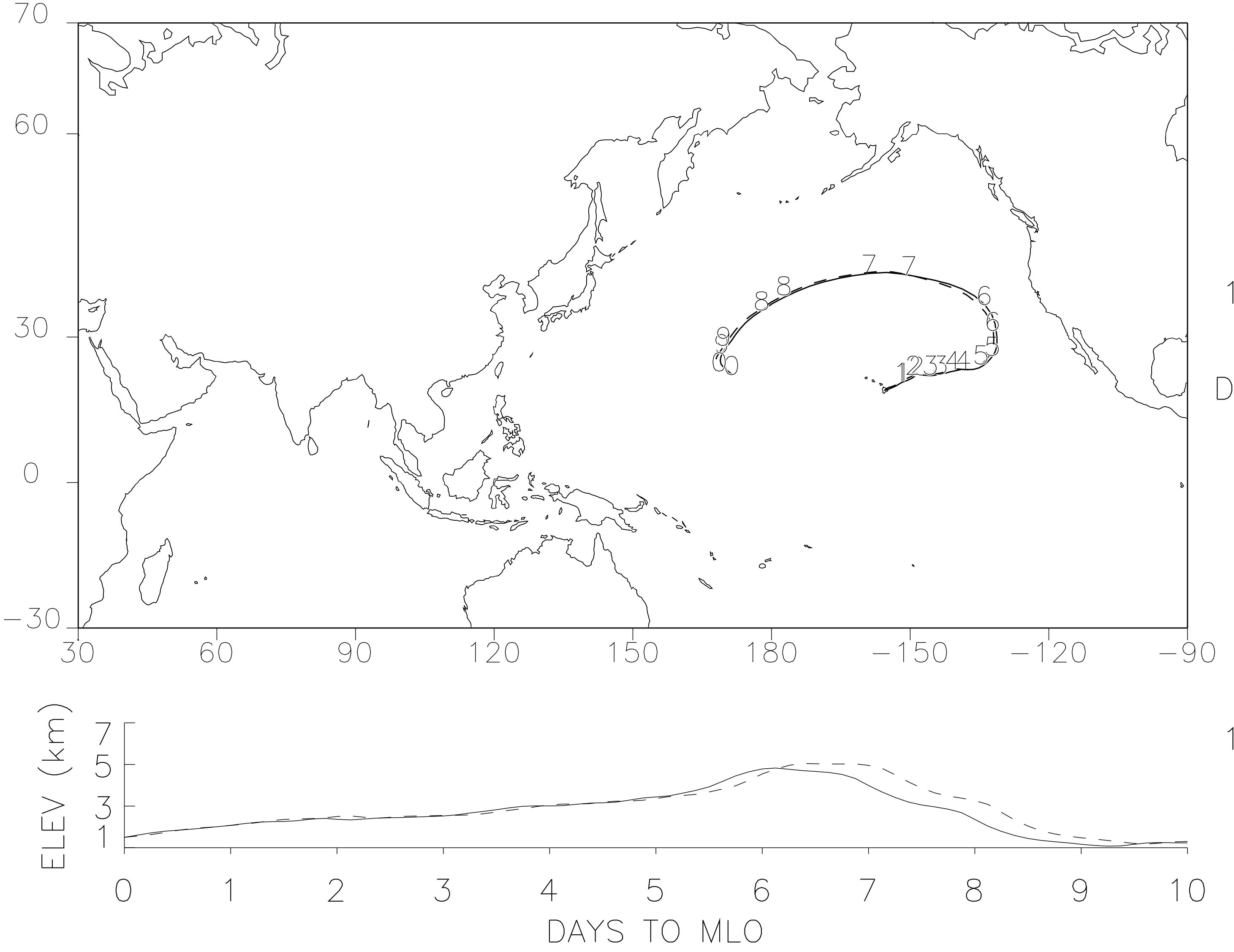
12UT

Day	km	hPa	C
0	1.5	853	14
1	1.9	813	13
2	2.1	794	11
3	2.5	755	9
4	2.8	728	8
5	3.6	661	1
6	4.1	613	−8
7	2.4	758	6
8	1.1	891	14
9	0.8	934	19
10	0.9	926	17

18UT

Day	km	hPa	C
0	1.5	854	15
1	2.0	808	12
2	2.1	795	11
3	2.4	768	10
4	2.8	736	9
5	3.4	678	2
6	4.2	611	−7
7	2.7	731	4
8	1.3	868	12
9	1.0	909	16
10	1.4	872	15

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/6/2004 (Day of Year 97)
NCEP/NCAR Reanalysis 1 Data Set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ELEV (km)
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10
DAYS TO MLO

00UT – solid
06UT – dashed

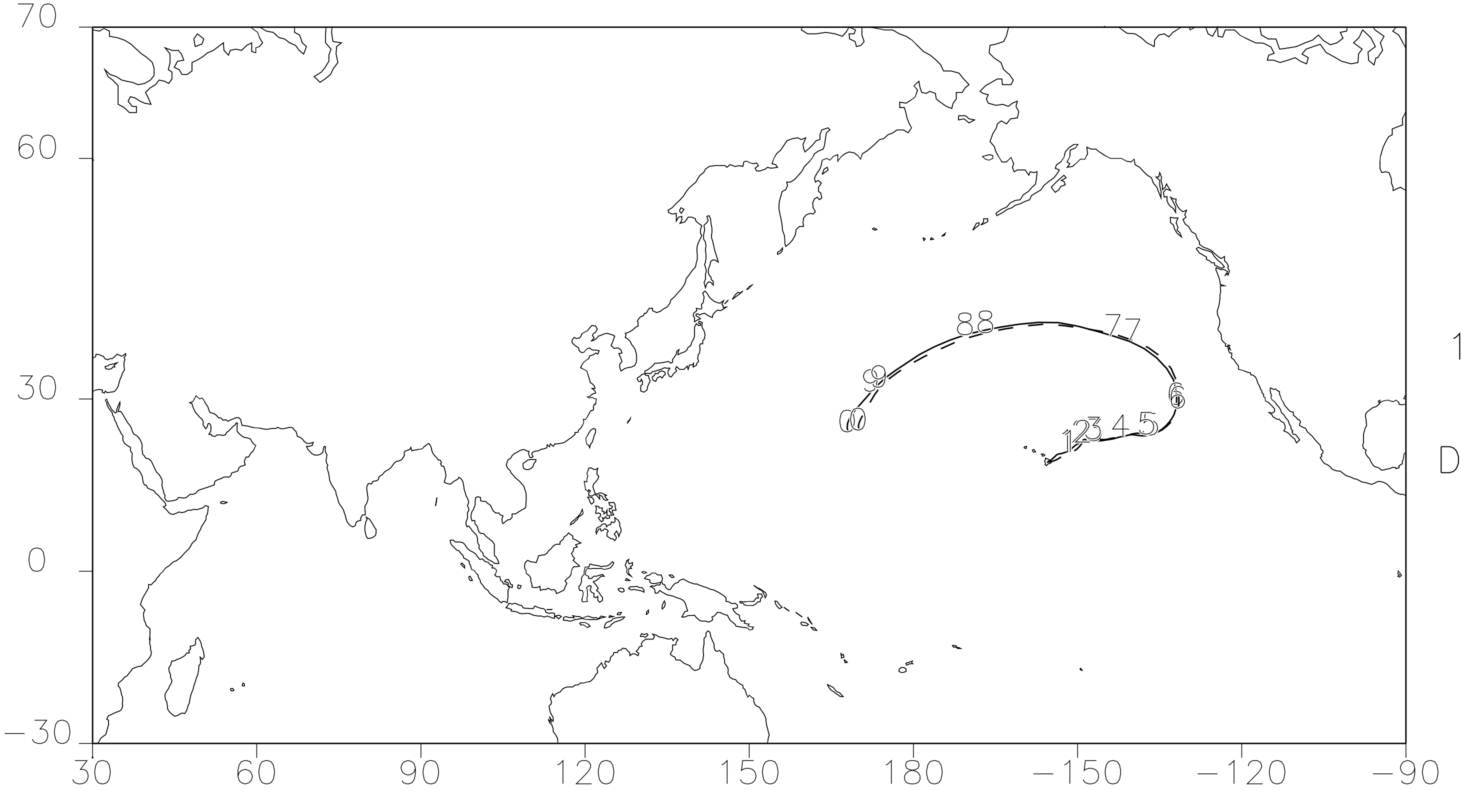
00UT

Day	km	hPa	C
0	1.5	852	15
1	2.1	796	11
2	2.4	770	9
3	2.5	755	9
4	3.0	713	9
5	3.4	676	4
6	4.8	567	−11
7	4.0	620	−6
8	2.4	765	6
9	1.2	890	17
10	1.2	885	16

06UT

Day	km	hPa	C
0	1.5	854	15
1	2.1	798	12
2	2.5	758	9
3	2.5	754	9
4	3.1	709	7
5	3.4	684	6
6	4.5	588	−4
7	5.0	549	−12
8	3.3	682	1
9	1.5	856	15
10	1.3	877	16

3−D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/6/2004 (Day of Year 97)
NCEP/NCAR Reanalysis 1 Data Set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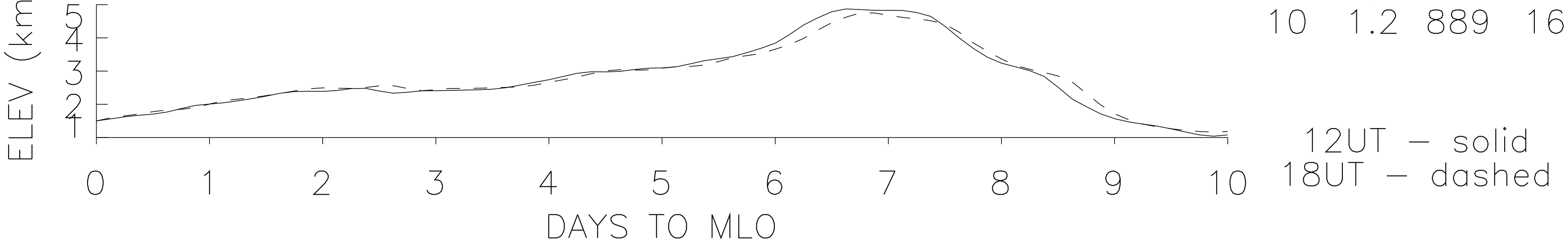
12UT

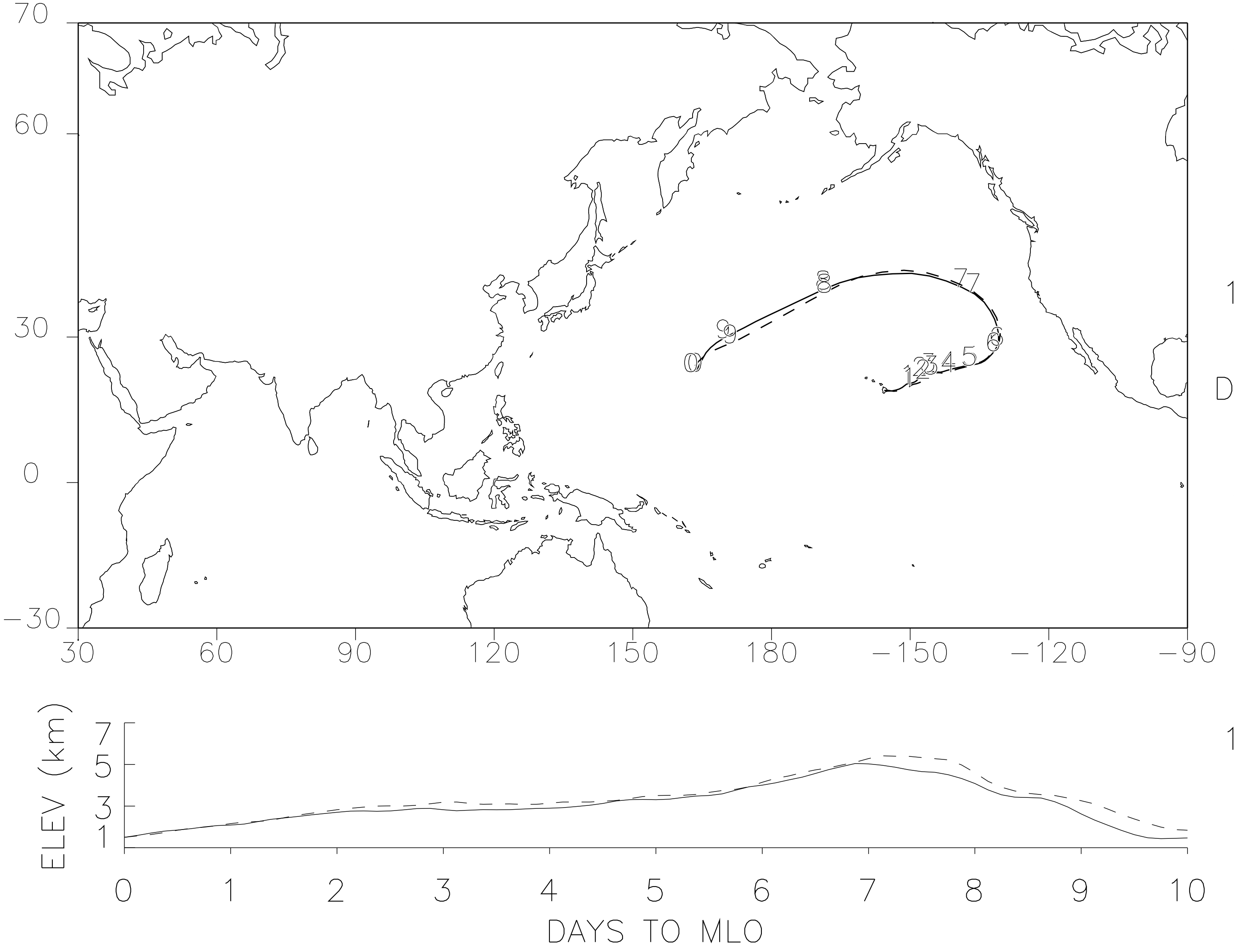
Day	km	hPa	C
0	1.5	853	13
1	2.0	803	12
2	2.4	767	9
3	2.4	765	9
4	2.7	736	8
5	3.1	704	7
6	3.8	642	1
7	4.8	560	−11
8	3.2	685	1
9	1.6	846	12
10	1.1	900	18

18UT

Day	km	hPa	C
0	1.5	854	14
1	2.0	804	12
2	2.5	759	9
3	2.4	764	10
4	2.7	744	9
5	3.1	708	8
6	3.7	658	2
7	4.7	573	−10
8	3.4	673	0
9	1.7	831	11
10	1.2	889	16



3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/7/2004 (Day of Year 98)
NCEP/NCAR Reanalysis 1 Data Set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ELEV (km)
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10
DAYS TO MLO
00UT – solid
06UT – dashed

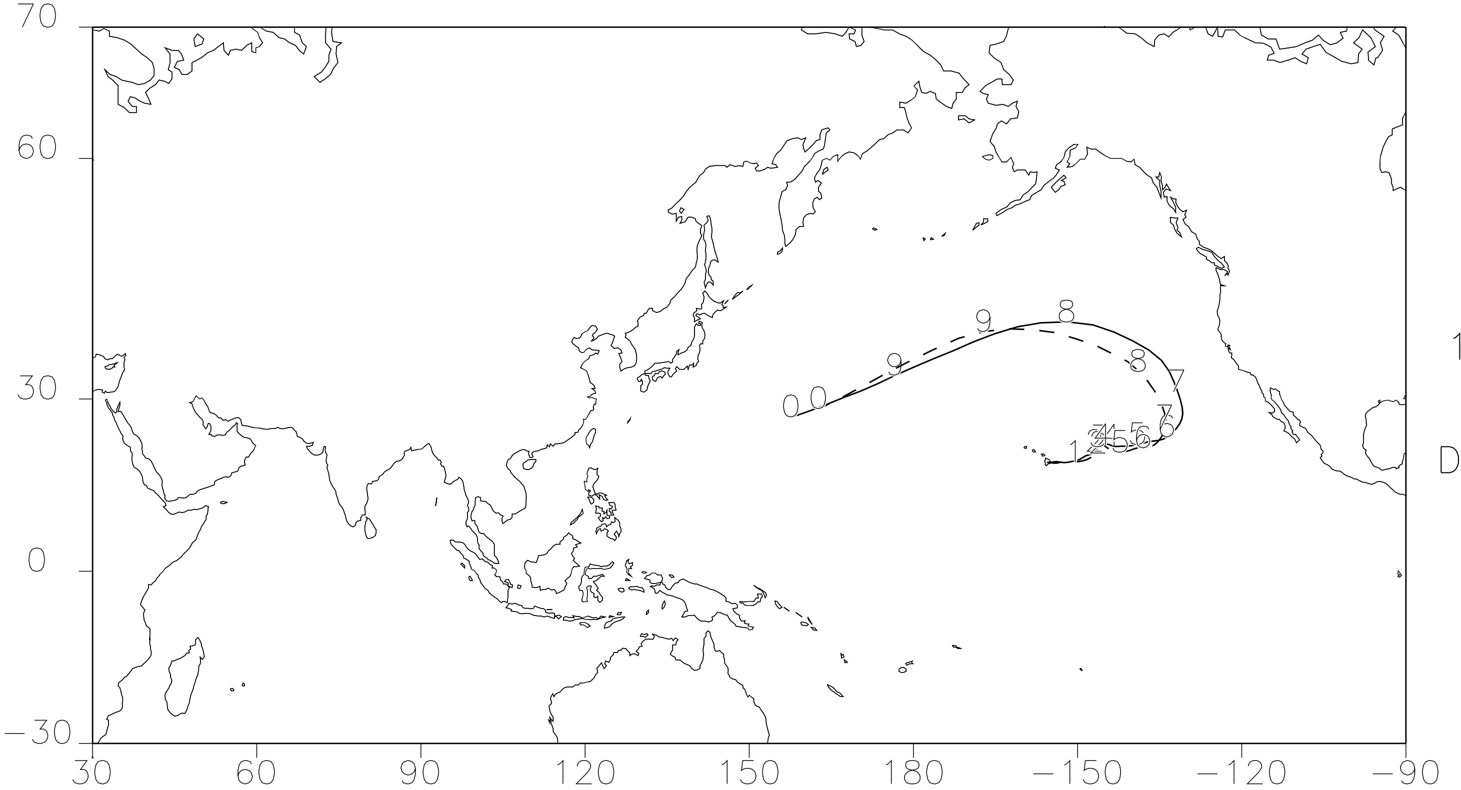
00UT

Day	km	hPa	C
0	1.5	852	14
1	2.1	795	12
2	2.7	738	7
3	2.8	728	7
4	2.9	721	8
5	3.3	688	8
6	4.0	630	1
7	5.0	548	–11
8	4.1	615	–5
9	2.6	744	7
10	1.5	859	16

06UT

Day	km	hPa	C
0	1.5	853	14
1	2.2	789	12
2	2.8	729	7
3	3.2	698	6
4	3.1	702	8
5	3.5	672	6
6	4.1	621	2
7	5.3	533	–10
8	4.6	576	–7
9	3.3	690	4
10	1.8	820	14

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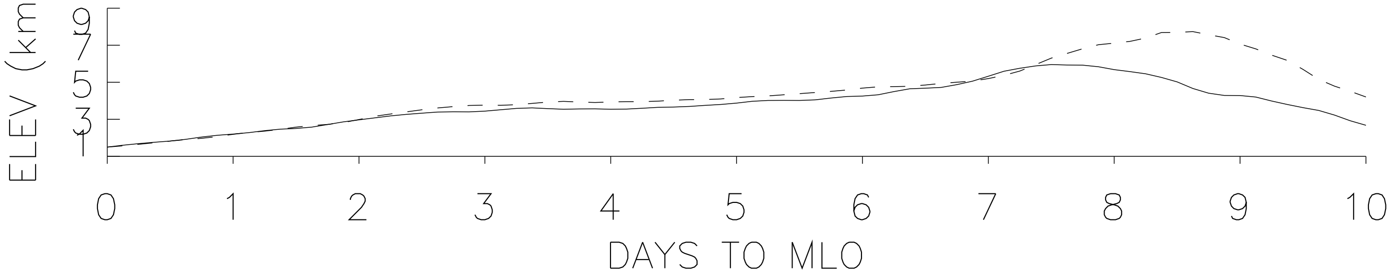


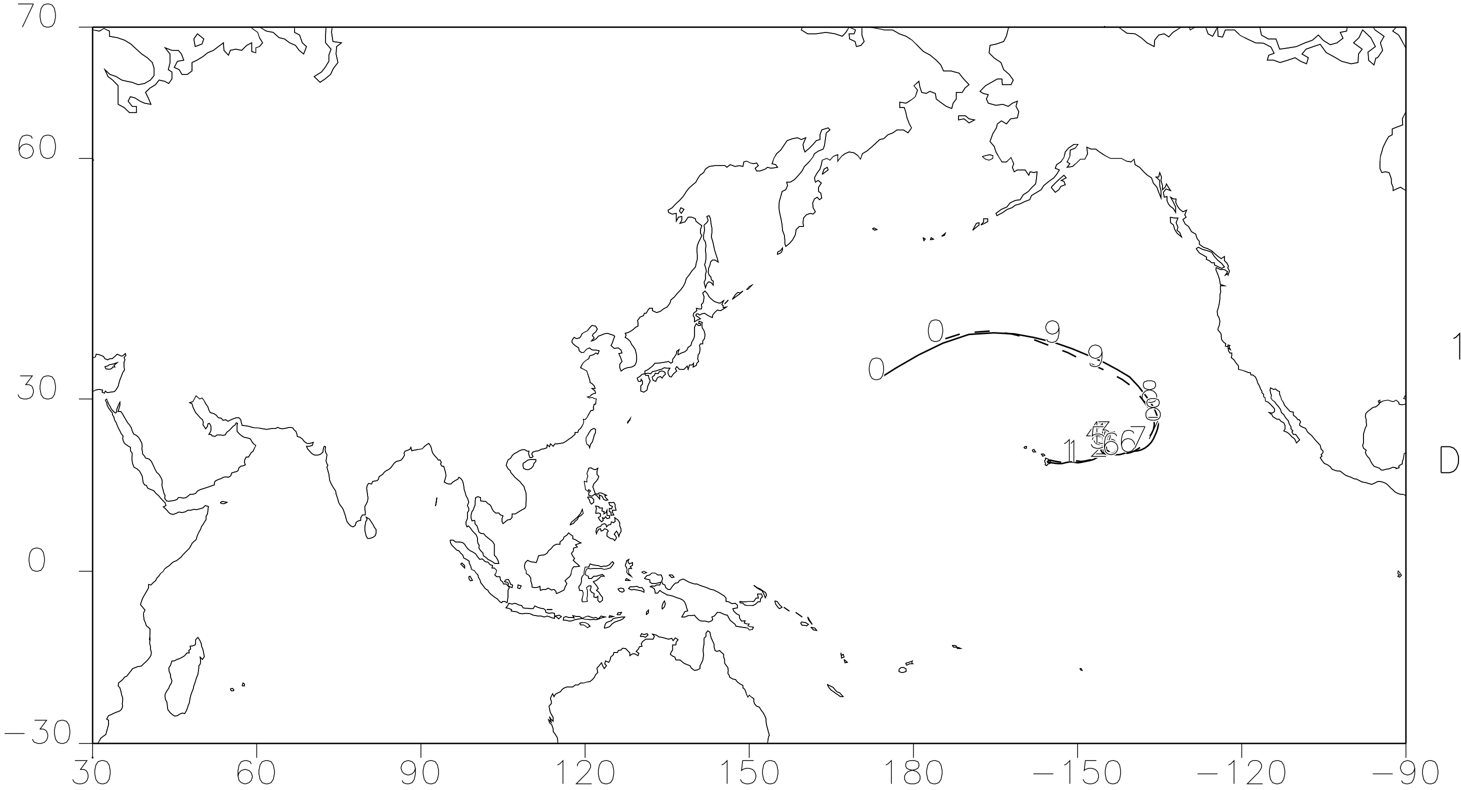
12UT

Day	km	hPa	C
0	1.5	852	13
1	2.2	784	10
2	3.0	714	7
3	3.4	675	3
4	3.5	667	4
5	3.9	641	3
6	4.3	611	2
7	5.3	532	−8
8	5.7	499	−13
9	4.3	603	−3
10	2.7	738	6

18UT

Day	km	hPa	C
0	1.5	853	13
1	2.2	787	11
2	3.0	714	7
3	3.8	650	1
4	3.9	637	1
5	4.2	619	1
6	4.7	581	−1
7	5.2	544	−4
8	7.1	420	−20
9	7.1	416	−21
10	4.2	610	−2

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

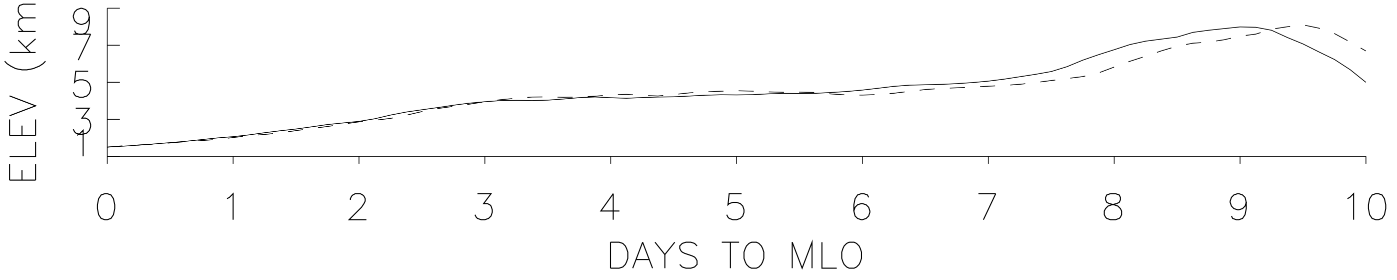

70
60
30
0
−30
30
60
90
120
150
180
−150
−120
−90
0
0
9
9
1
4
5
6
7
0
0

00UT

Day	km	hPa	C
0	1.5	852	13
1	2.1	796	12
2	2.9	721	7
3	3.9	633	−1
4	4.2	618	−3
5	4.3	606	0
6	4.6	588	−1
7	5.1	553	−3
8	6.8	443	−17
9	8.0	368	−28
10	5.0	552	−7

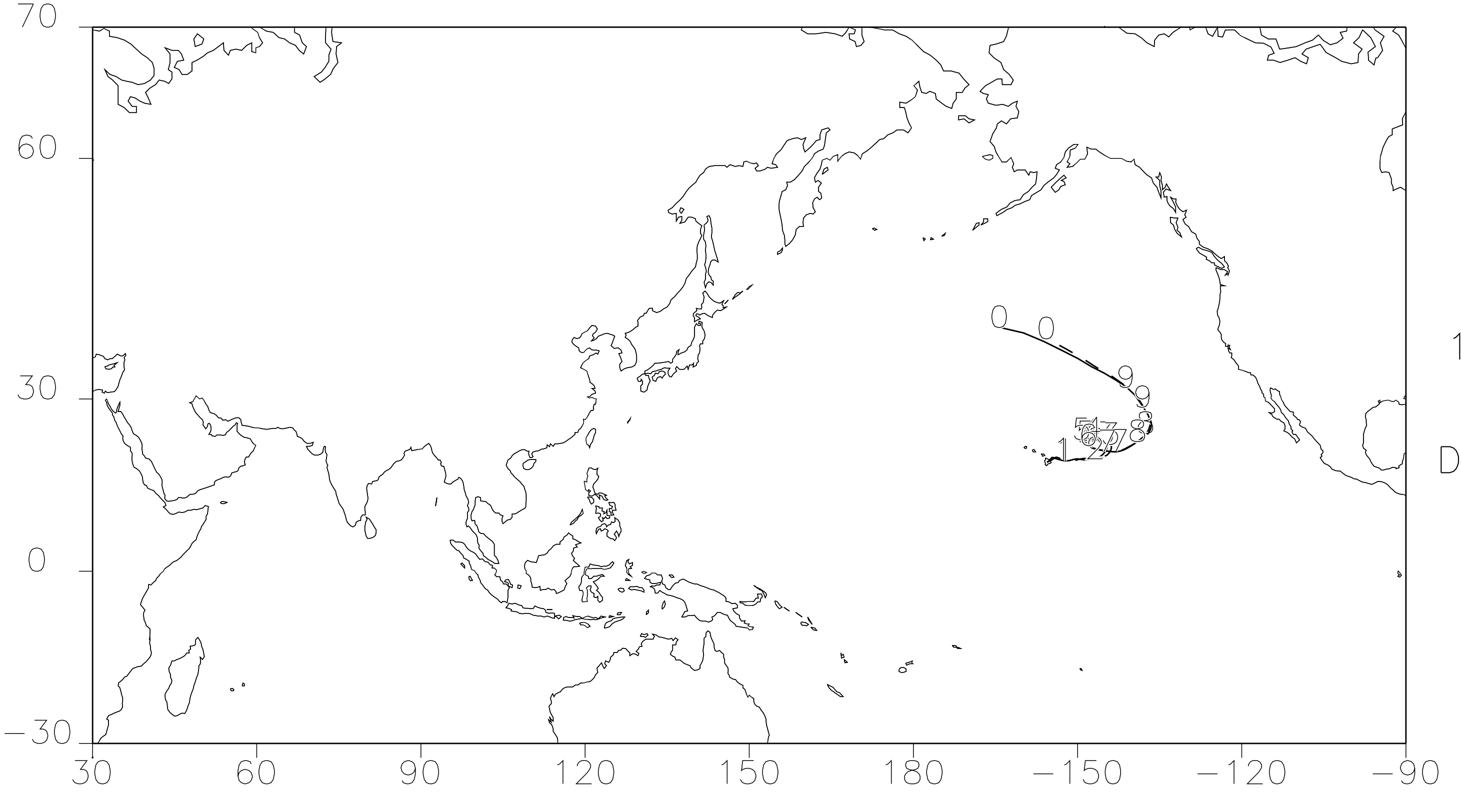
06UT

Day	km	hPa	C
0	1.5	852	12
1	2.0	803	12
2	2.9	725	8
3	3.9	635	0
4	4.3	606	−4
5	4.5	591	−3
6	4.3	609	1
7	4.8	574	−1
8	5.8	502	−9
9	7.5	398	−23
10	6.7	437	−19



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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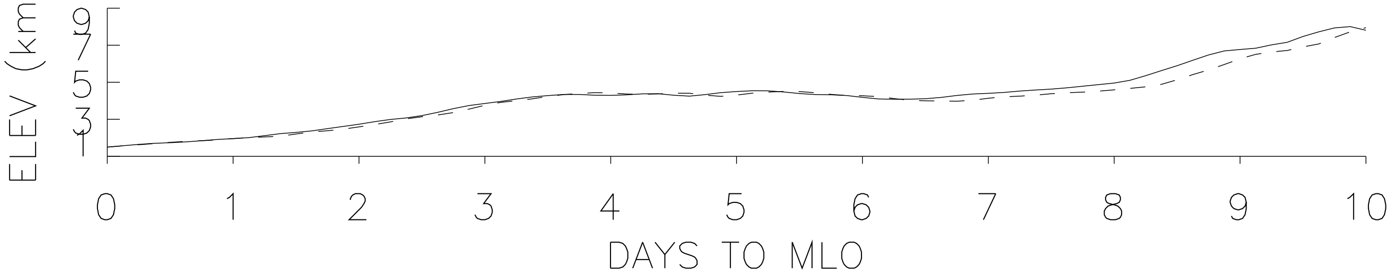
5
6
7
8



12UT

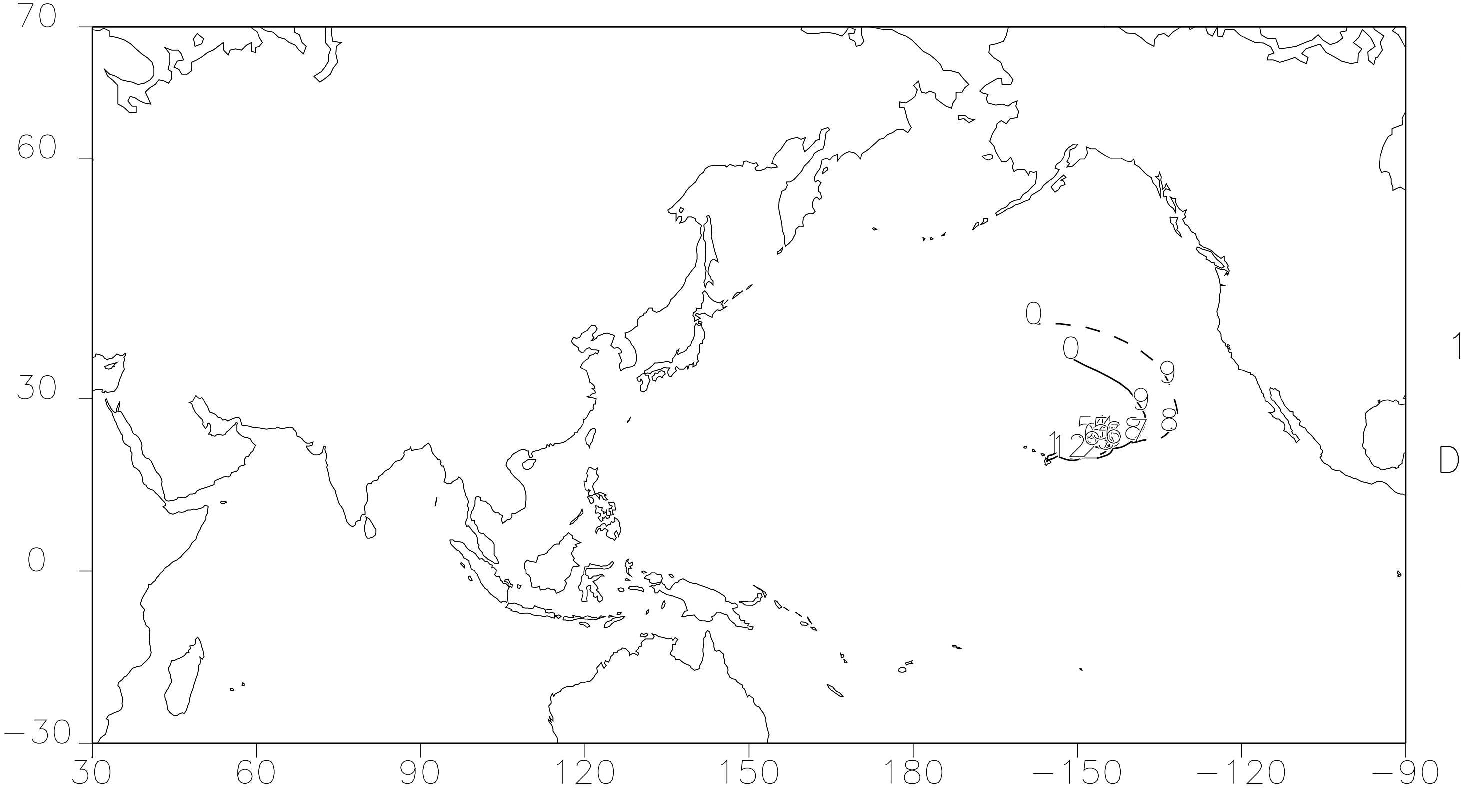
Day	km	hPa	C
0	1.5	851	12
1	2.0	807	11
2	2.7	735	8
3	3.9	641	0
4	4.3	607	−4
5	4.5	592	−5
6	4.2	617	0
7	4.4	601	0
8	5.0	560	−3
9	6.8	440	−18
10	7.8	376	−27

18UT

Day	km	hPa	C
0	1.5	852	13
1	2.0	808	12
2	2.6	750	10
3	3.8	651	2
4	4.4	598	−5
5	4.3	608	−3
6	4.3	611	−1
7	4.1	622	2
8	4.6	588	0
9	6.3	474	−14
10	7.9	369	−29

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)

4/9/2004 (Day of Year 100)
NCEP/NCAR Reanalysis 1 Data Set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60
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0
–30
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180
–150
–120
–90
0
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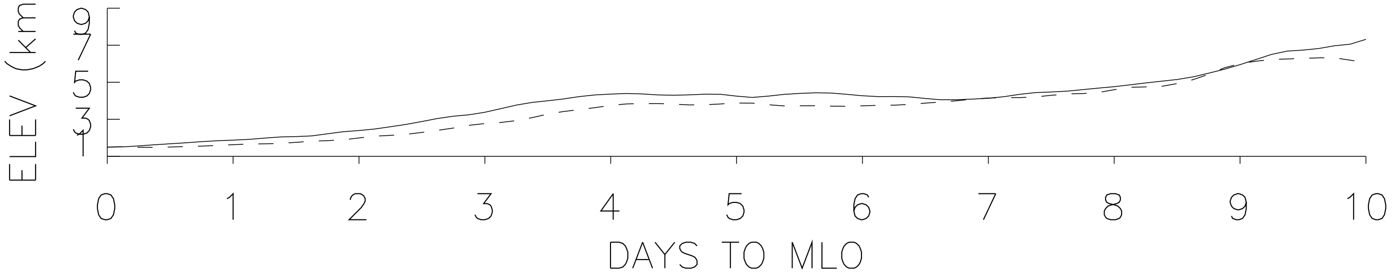
6
5
4
3
2
1



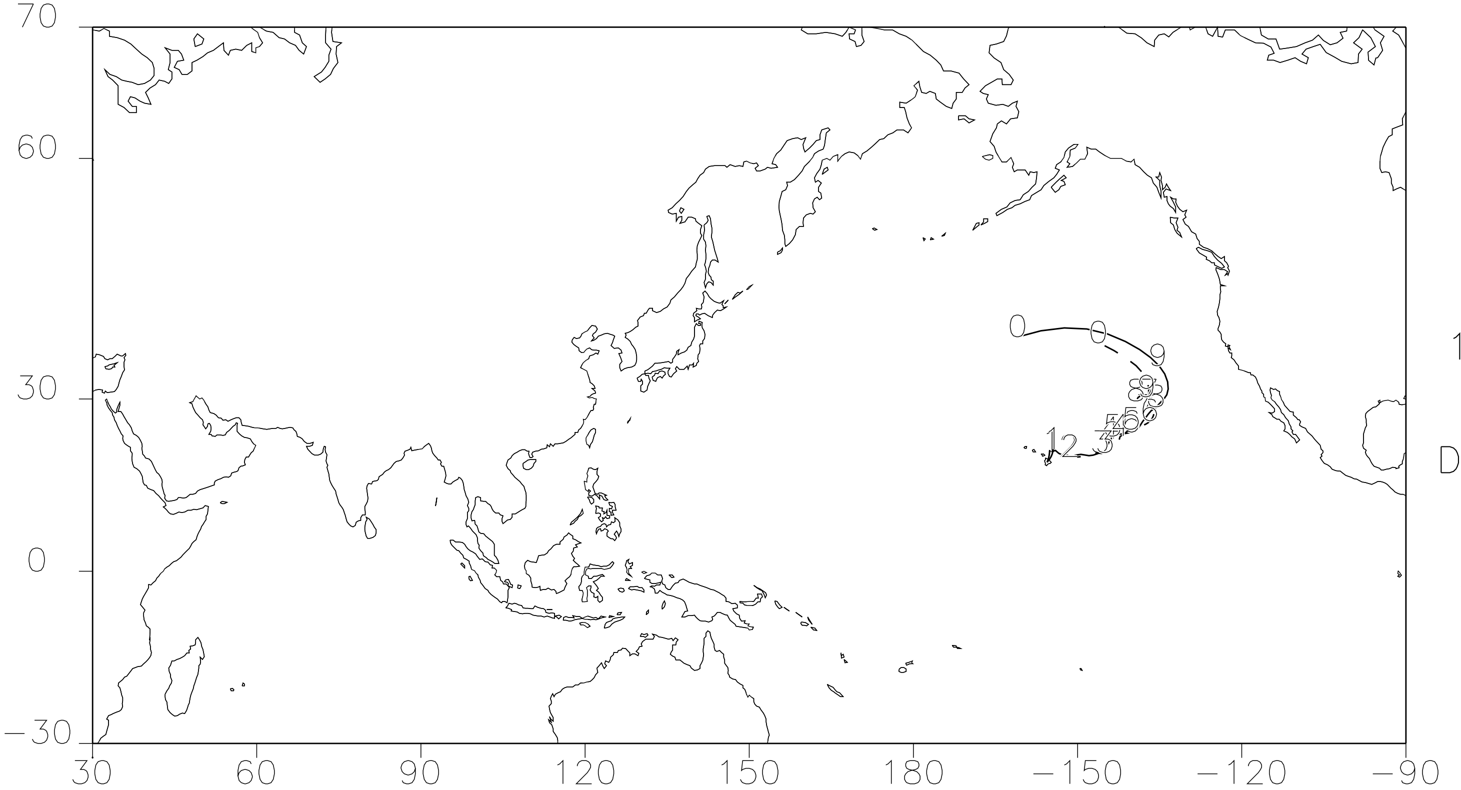
00UT

Day	km	hPa	C
0	1.5	851	13
1	1.9	815	12
2	2.4	766	10
3	3.4	680	4
4	4.4	601	–5
5	4.2	611	–4
6	4.3	610	–1
7	4.1	622	2
8	4.8	575	–2
9	6.0	494	–12
10	7.3	406	–23

06UT

Day	km	hPa	C
0	1.5	852	14
1	1.6	840	12
2	2.0	805	12
3	2.8	733	8
4	3.8	651	0
5	3.9	641	0
6	3.7	654	4
7	4.1	621	1
8	4.6	587	0
9	6.0	488	–12
10	6.1	475	–16

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/9/2004 (Day of Year 100)
NCEP/NCAR Reanalysis 1 Data Set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60
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–30
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90
120
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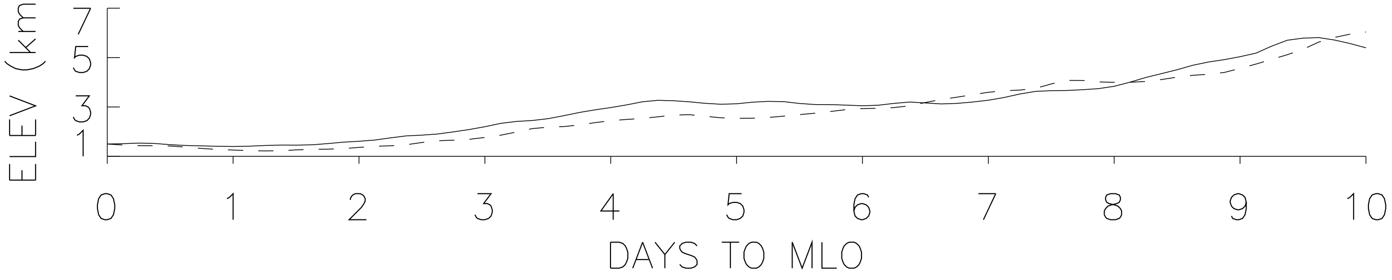
–150
–120
–90
0
0
9
1
2
3
4
5



12UT – solid
18UT – dashed

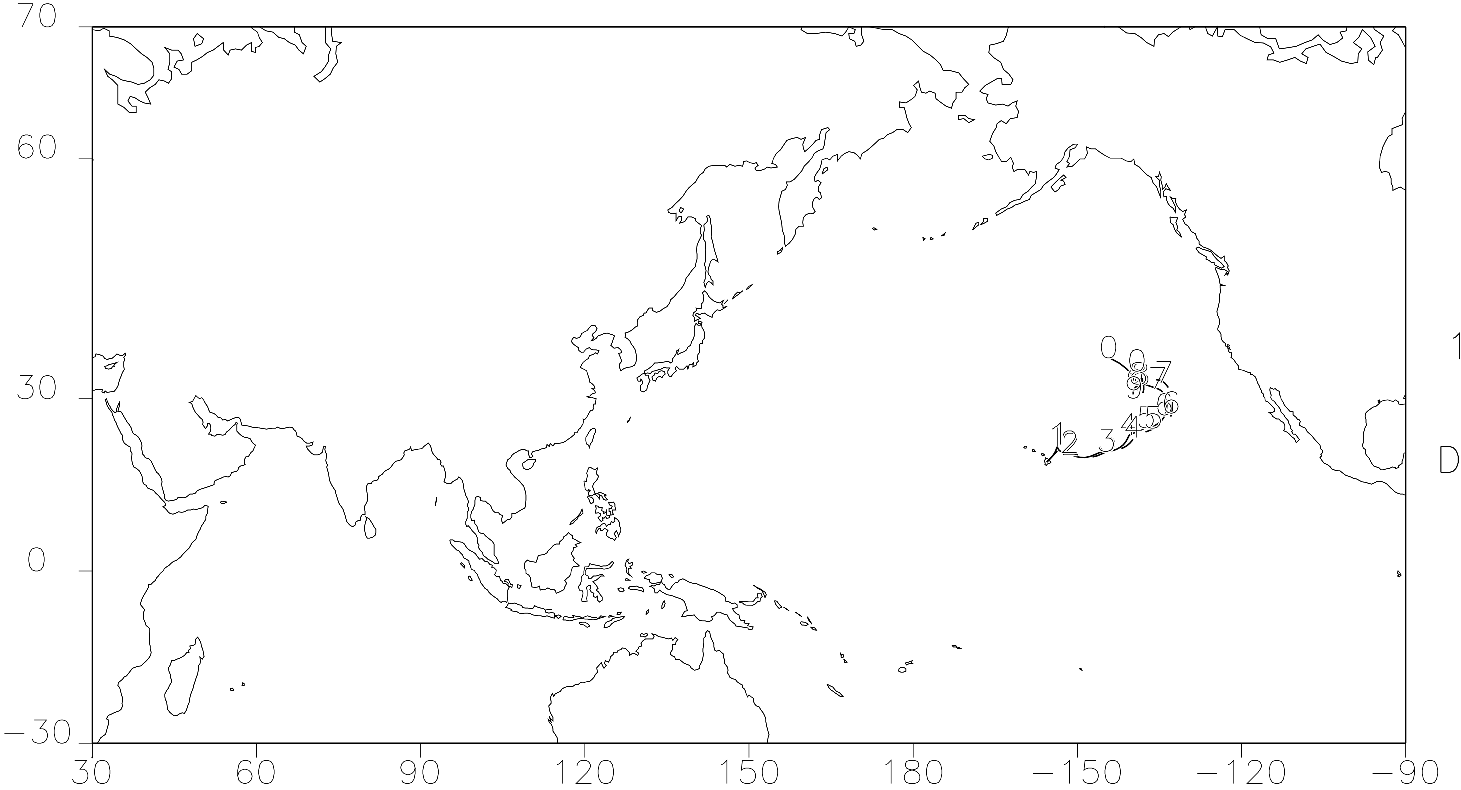
12UT

Day	km	hPa	C
0	1.5	851	13
1	1.4	862	12
2	1.6	841	12
3	2.2	784	10
4	3.0	714	6
5	3.1	701	6
6	3.0	708	8
7	3.3	691	6
8	3.8	645	2
9	5.0	552	–8
10	5.4	520	–11

18UT

Day	km	hPa	C
0	1.5	853	12
1	1.3	878	14
2	1.4	867	14
3	1.8	828	14
4	2.4	763	9
5	2.5	754	9
6	2.9	720	7
7	3.6	665	4
8	4.0	634	0
9	4.6	590	–4
10	6.0	483	–14

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/10/2004 (Day of Year 101)
NCEP/NCAR Reanalysis 1 Data Set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−150
−120
−90
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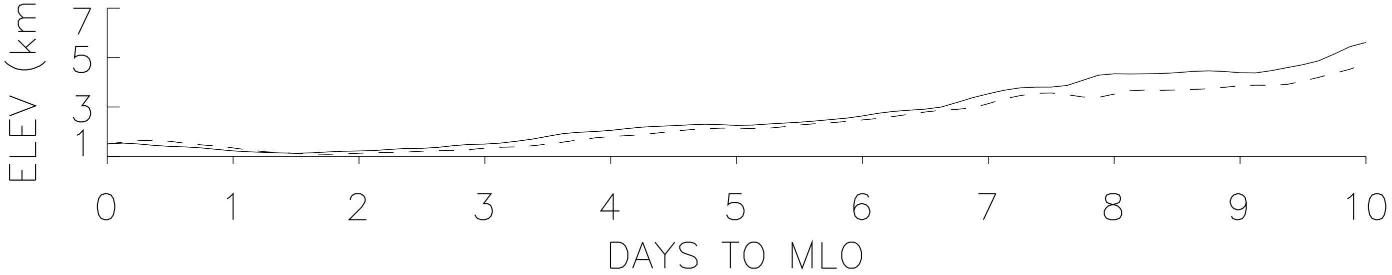
9



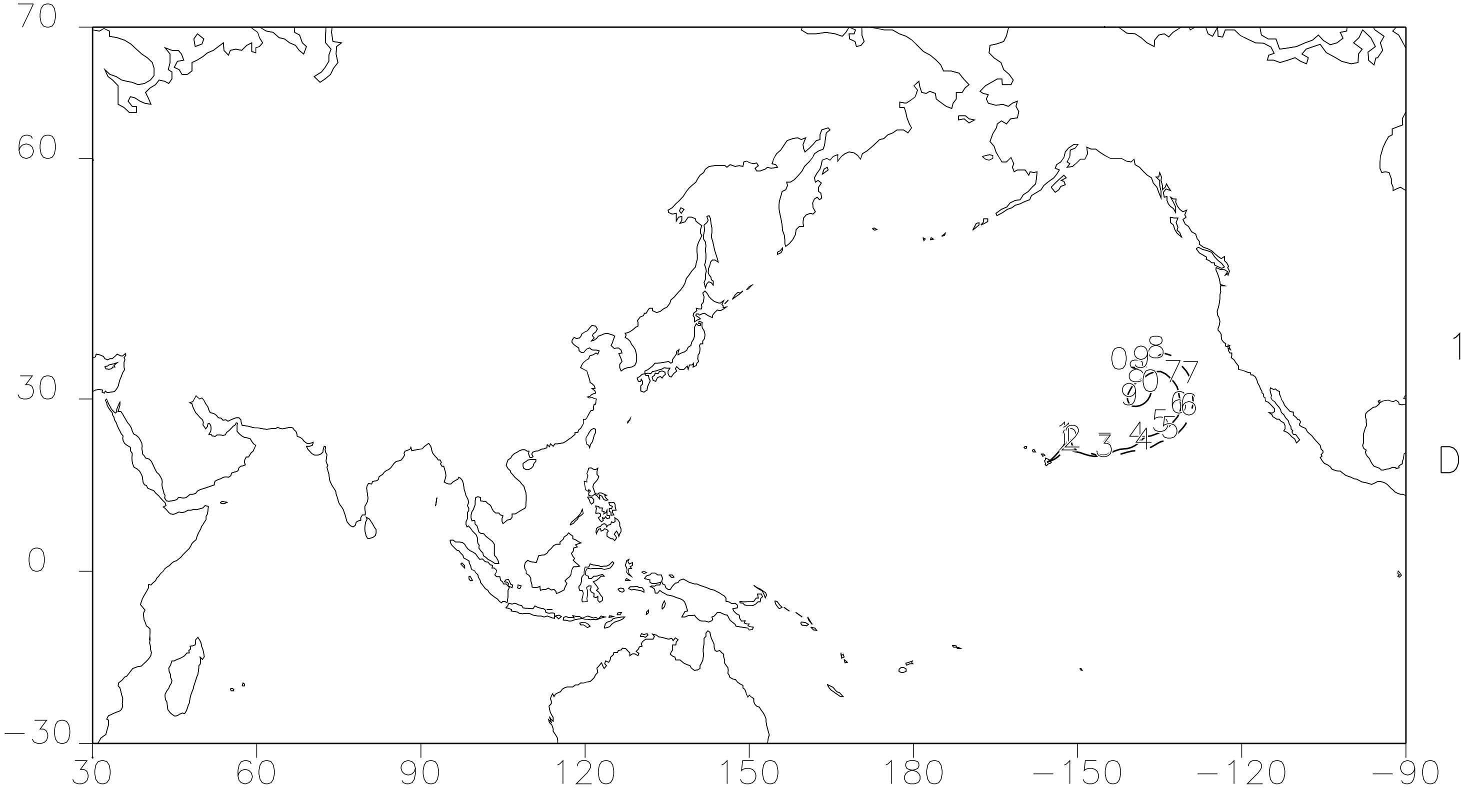
00UT

Day	km	hPa	C
0	1.5	853	13
1	1.2	880	15
2	1.2	882	14
3	1.5	853	13
4	2.1	798	10
5	2.3	779	9
6	2.6	744	8
7	3.5	667	3
8	4.3	606	−4
9	4.4	603	−2
10	5.6	513	−12

06UT

Day	km	hPa	C
0	1.5	854	14
1	1.3	868	14
2	1.1	892	15
3	1.3	872	14
4	1.8	824	12
5	2.1	791	10
6	2.5	760	9
7	3.1	700	5
8	3.5	672	3
9	3.9	646	1
10	4.8	574	−5

3−D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/10/2004 (Day of Year 101)
NCEP/NCAR Reanalysis 1 Data Set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−90
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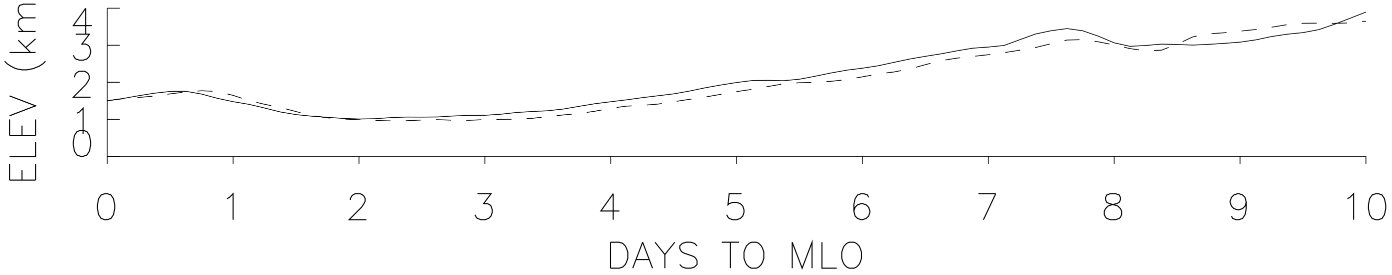


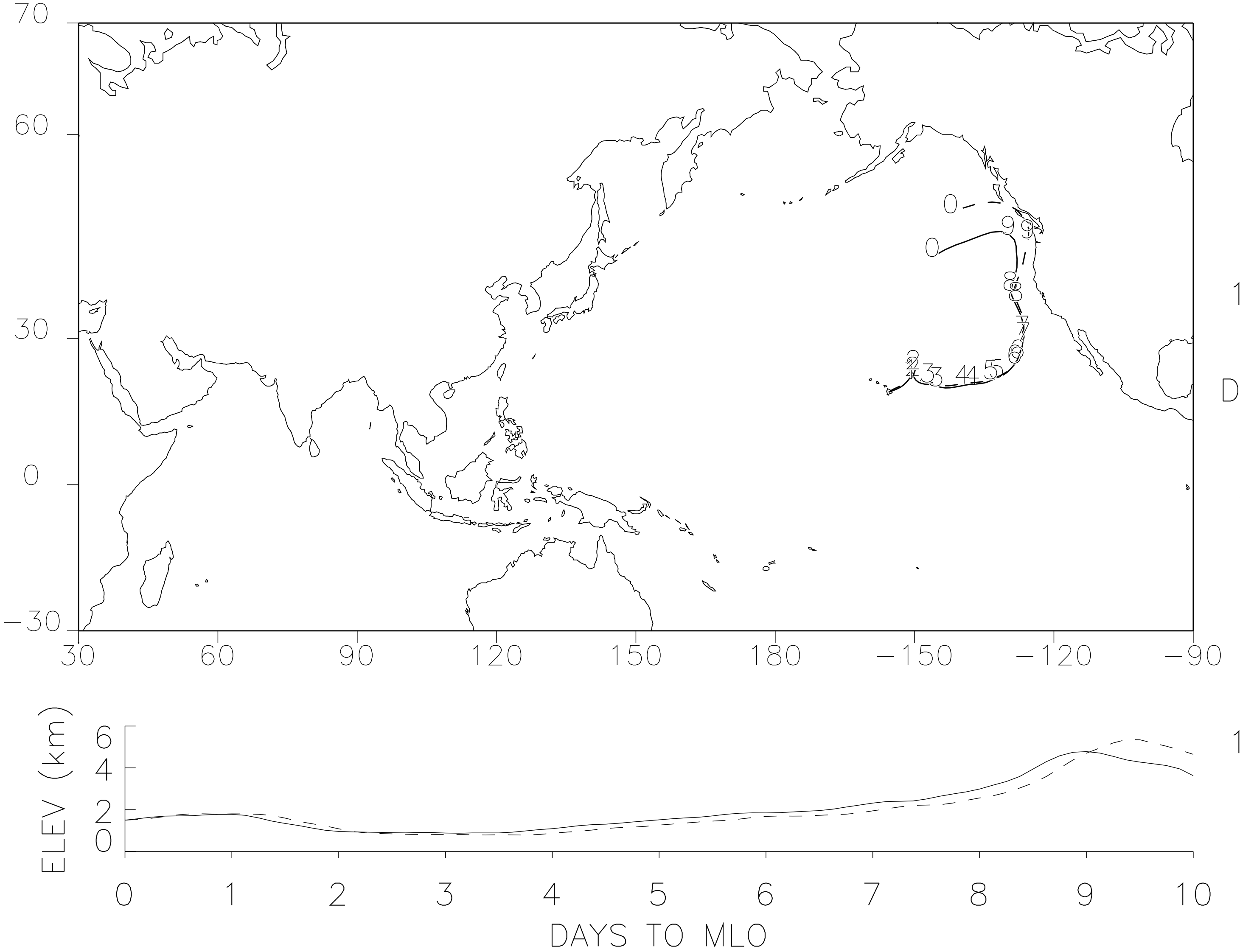
12UT

Day	km	hPa	C
0	1.5	854	13
1	1.5	854	12
2	1.0	903	15
3	1.1	893	14
4	1.5	855	12
5	2.0	804	10
6	2.4	766	8
7	3.0	715	6
8	3.1	707	5
9	3.1	707	5
10	3.9	640	0

18UT

Day	km	hPa	C
0	1.5	855	14
1	1.6	838	11
2	1.0	907	15
3	1.0	907	14
4	1.3	875	12
5	1.7	828	12
6	2.1	789	8
7	2.7	734	7
8	3.0	712	6
9	3.4	684	3
10	3.6	661	2

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/11/2004 (Day of Year 102)
NCEP/NCAR Reanalysis 1 Data Set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−30
30
60
90
120
150
180
−150
−120
−90
0
9
8
7
6
5
4
3
2
ELEV (km)
6
4
2
0
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO

00UT

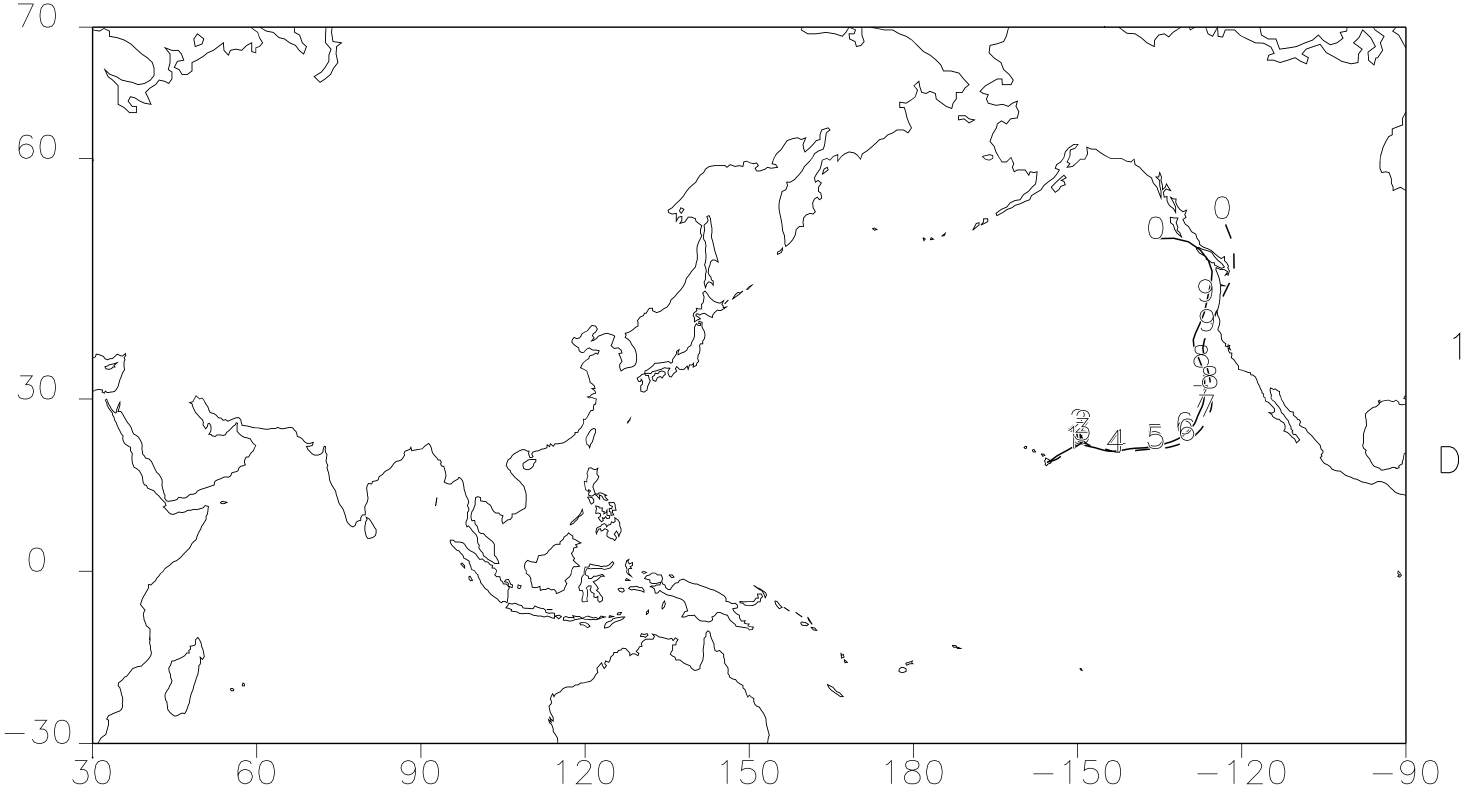
Day	km	hPa	C
0	1.5	854	14
1	1.8	826	11
2	1.0	909	16
3	0.9	917	15
4	1.1	894	13
5	1.5	849	11
6	1.8	816	9
7	2.3	771	9
8	3.0	707	5
9	4.8	567	−10
10	3.6	653	−4

06UT

Day	km	hPa	C
0	1.5	856	14
1	1.8	825	12
2	1.1	895	15
3	0.8	925	16
4	0.9	920	14
5	1.3	877	13
6	1.7	835	11
7	1.9	808	12
8	2.6	746	6
9	4.7	572	−10
10	4.6	566	−14

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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60
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0
−30
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90
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−150
−120
−90
0
0
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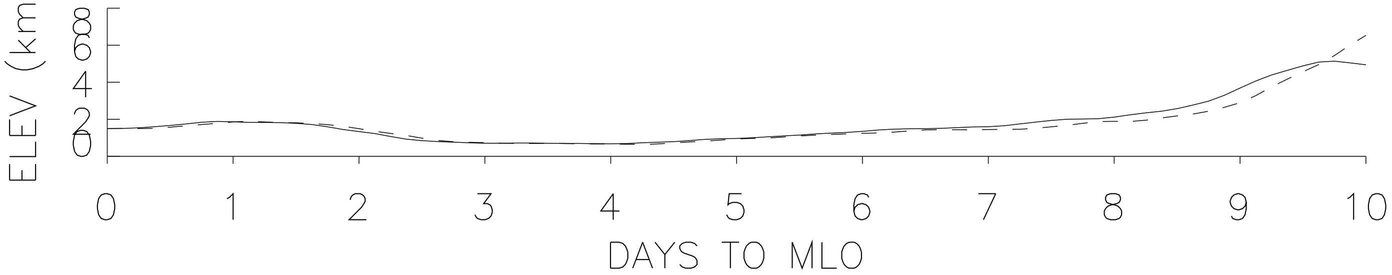
7
6
5
4
3
2
1



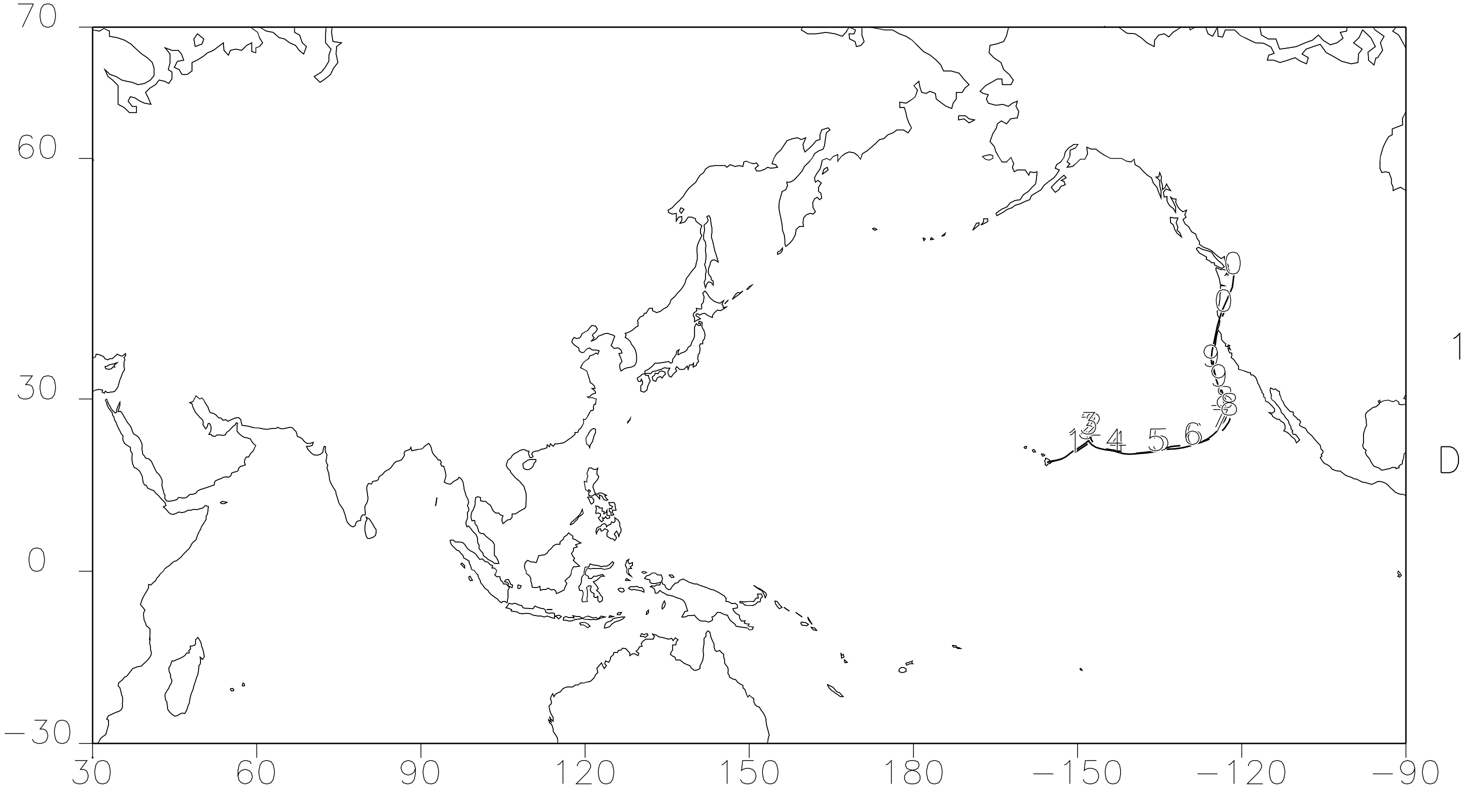
12UT

Day	km	hPa	C
0	1.5	855	13
1	1.9	818	11
2	1.3	869	13
3	0.7	936	17
4	0.7	940	15
5	1.0	908	11
6	1.4	867	11
7	1.6	840	11
8	2.1	787	10
9	3.7	652	−1
10	4.9	545	−17

18UT

Day	km	hPa	C
0	1.5	855	13
1	1.9	820	11
2	1.5	854	12
3	0.7	934	16
4	0.7	943	15
5	0.9	913	11
6	1.2	879	12
7	1.4	858	11
8	1.9	812	10
9	2.9	715	5
10	6.5	436	−32

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/12/2004 (Day of Year 103)
NCEP/NCAR Reanalysis 1 Data Set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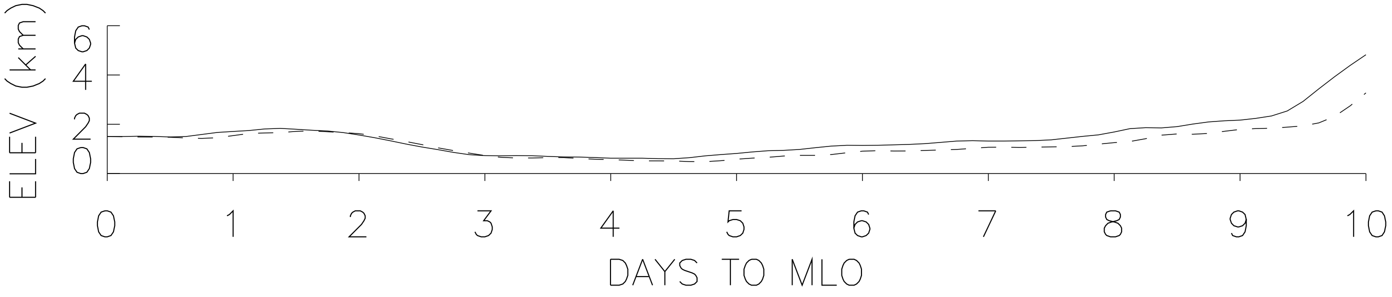
60
30
0
−30
30
60
90
120
150
180
−150
−120
−90
1
2
3
4
5
6
7
8
9
10

00UT

Day	km	hPa	C
0	1.5	854	13
1	1.7	833	12
2	1.6	847	12
3	0.7	934	17
4	0.6	945	16
5	0.8	925	11
6	1.1	887	10
7	1.3	868	9
8	1.7	829	10
9	2.2	779	6
10	4.8	557	−17

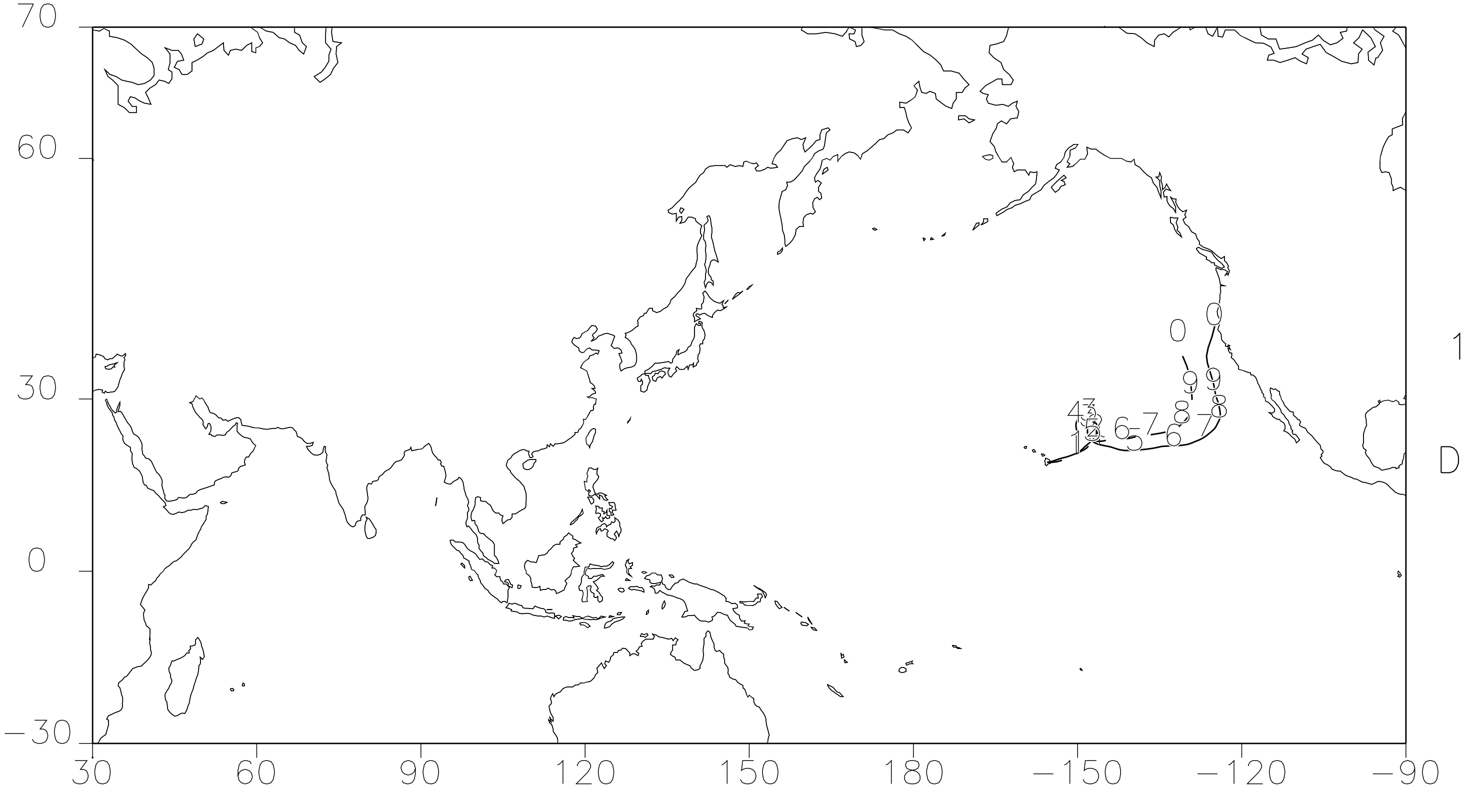
06UT

Day	km	hPa	C
0	1.5	854	12
1	1.5	852	13
2	1.6	843	13
3	0.7	934	17
4	0.6	954	17
5	0.6	953	14
6	0.9	916	10
7	1.1	898	8
8	1.3	876	10
9	1.8	819	10
10	3.3	683	−2



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

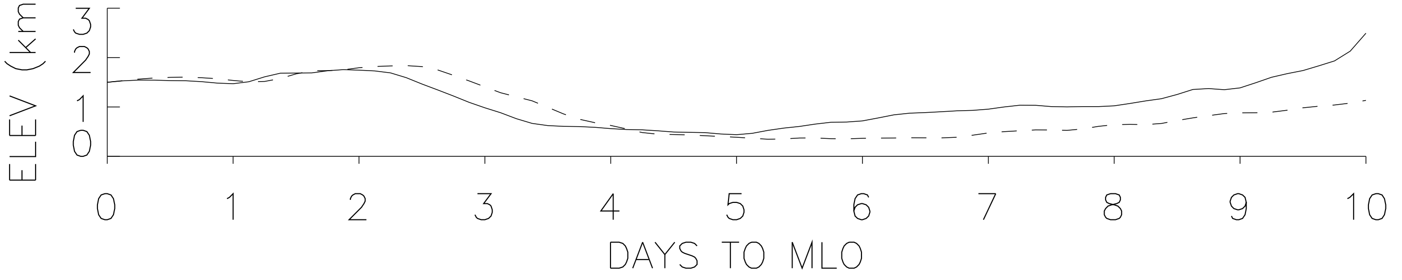


12UT

Day	km	hPa	C
0	1.5	854	12
1	1.5	857	12
2	1.7	830	11
3	1.0	906	15
4	0.6	952	17
5	0.4	967	16
6	0.7	935	11
7	1.0	908	8
8	1.0	900	8
9	1.4	859	11
10	2.5	751	3

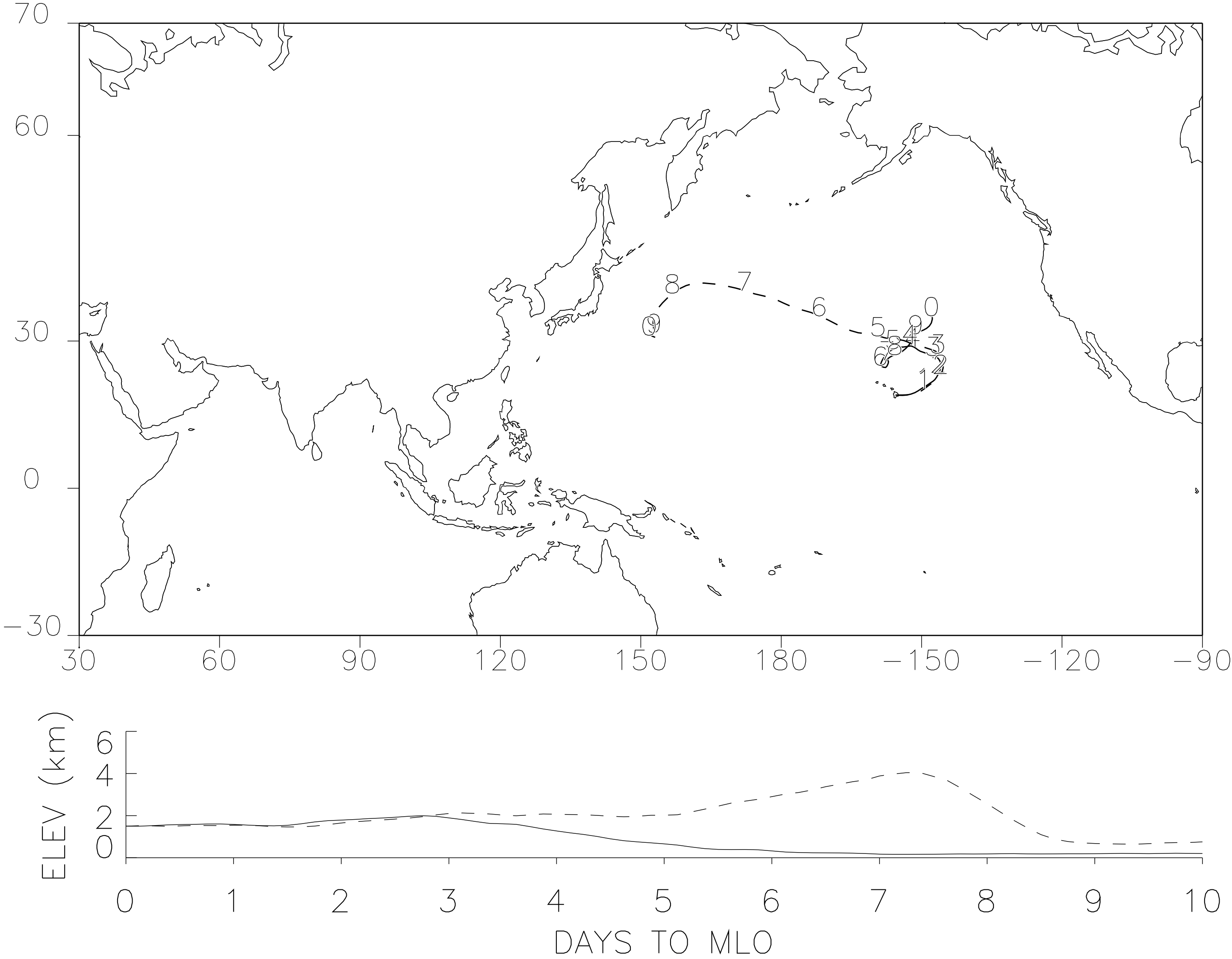
18UT

Day	km	hPa	C
0	1.5	855	12
1	1.5	851	12
2	1.8	826	11
3	1.4	863	12
4	0.6	947	17
5	0.4	974	18
6	0.4	978	18
7	0.5	965	16
8	0.6	947	11
9	0.9	919	8
10	1.1	892	8



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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60
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0
−30
30
60
90
120
150
180
−150
−120
−90
0
1
2
3
4
5
6
7
8
9
ELEV (km)
6
4
2
0
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
00UT − solid
06UT − dashed

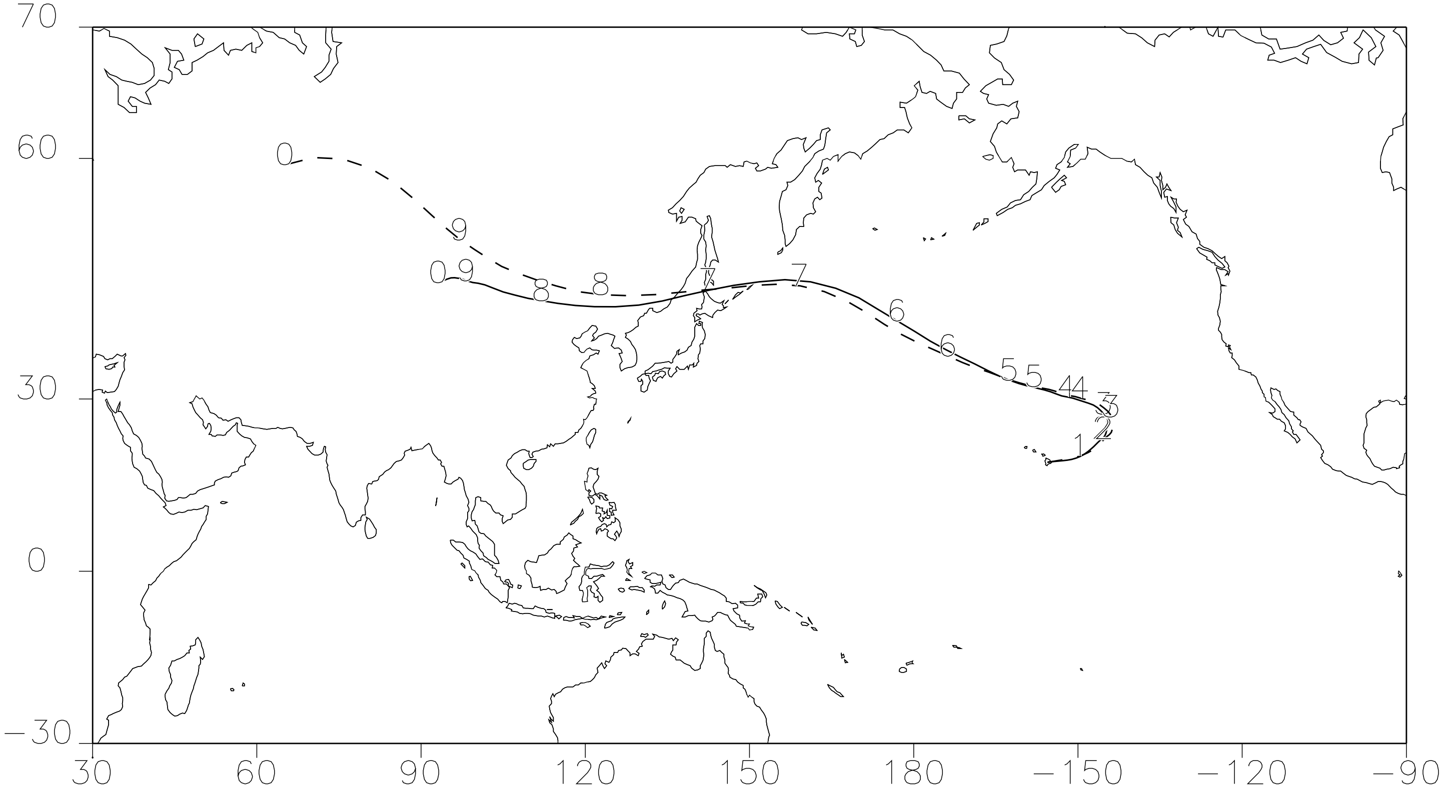
00UT

Day	km	hPa	C
0	1.5	854	14
1	1.6	846	12
2	1.8	826	11
3	1.9	814	8
4	1.3	876	12
5	0.7	941	16
6	0.3	979	19
7	0.2	999	20
8	0.2	999	18
9	0.2	1000	15
10	0.2	1000	12

06UT

Day	km	hPa	C
0	1.5	854	13
1	1.5	850	12
2	1.6	841	11
3	2.1	796	8
4	2.1	795	6
5	2.0	798	4
6	2.9	707	−5
7	3.9	621	−9
8	2.6	736	0
9	0.7	940	15
10	0.8	930	14

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/13/2004 (Day of Year 104)
NCEP/NCAR Reanalysis 1 Data Set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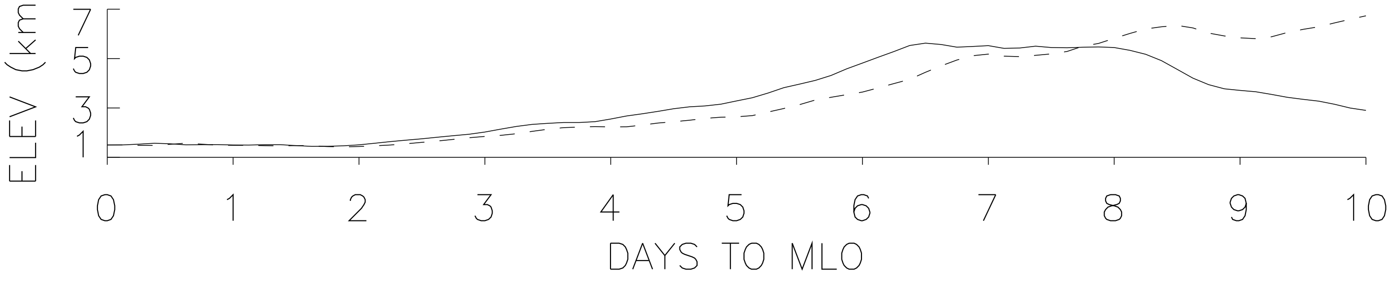
60
30
0
-30
30
60
90
120
150
180
-150
-120
-90
0
9
0
9
8
8
7
7
6
6
5
5
4
4
3
2
1
2

12UT

Day	km	hPa	C
0	1.5	854	13
1	1.5	854	12
2	1.5	854	11
3	2.0	803	8
4	2.6	748	1
5	3.3	679	−8
6	4.8	546	−23
7	5.5	492	−27
8	5.4	505	−24
9	3.7	642	−7
10	2.9	714	5

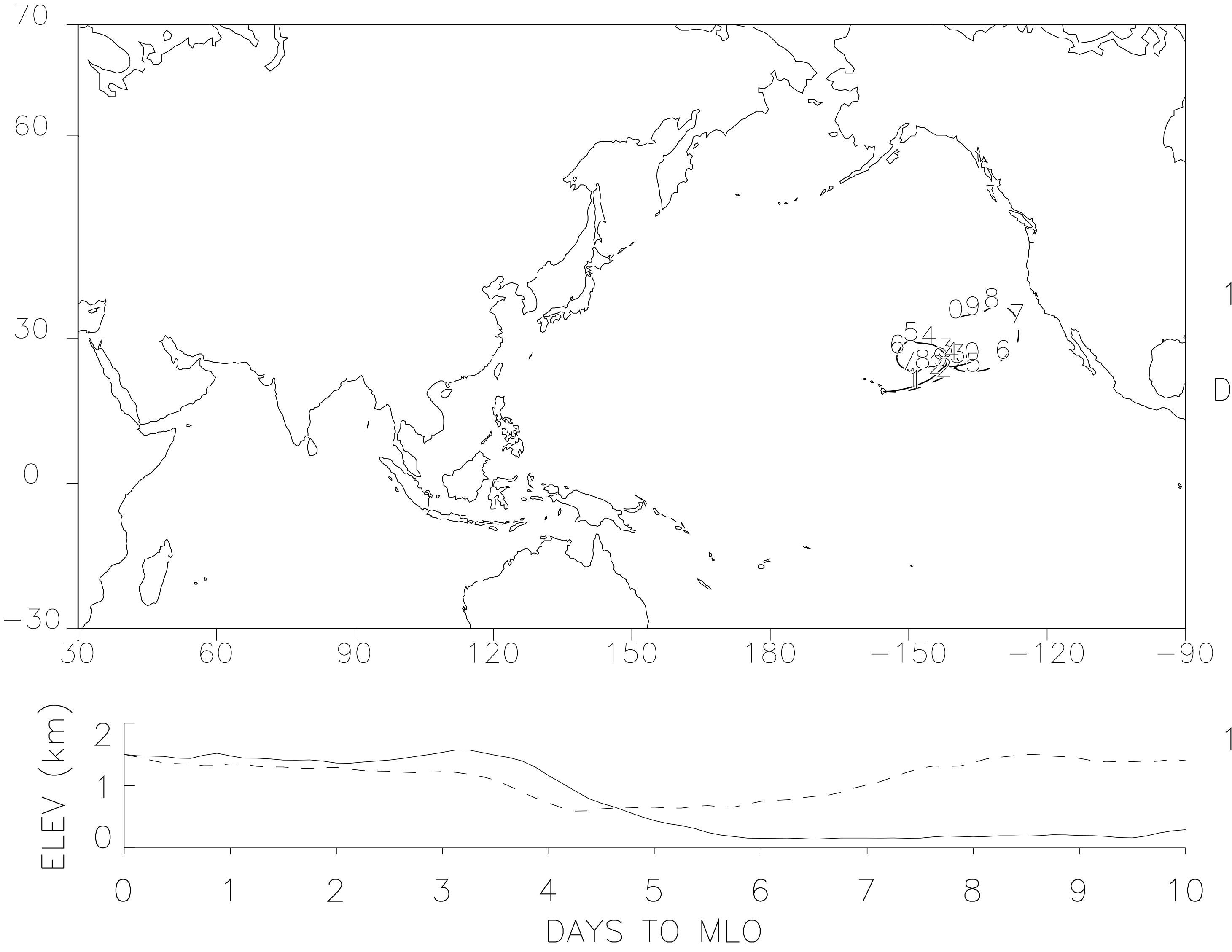
18UT

Day	km	hPa	C
0	1.5	854	13
1	1.5	856	11
2	1.4	861	11
3	1.8	821	10
4	2.2	779	4
5	2.6	739	−2
6	3.6	643	−13
7	5.2	516	−26
8	5.8	473	−30
9	5.8	477	−29
10	6.7	415	−39



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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60
30
0
−30
30
60
90
120
150
180
−150
−120
−90
0
9
8
7
6
5
4
3
2
1
ELEV (km)
2
1
0
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
00UT – solid
06UT – dashed

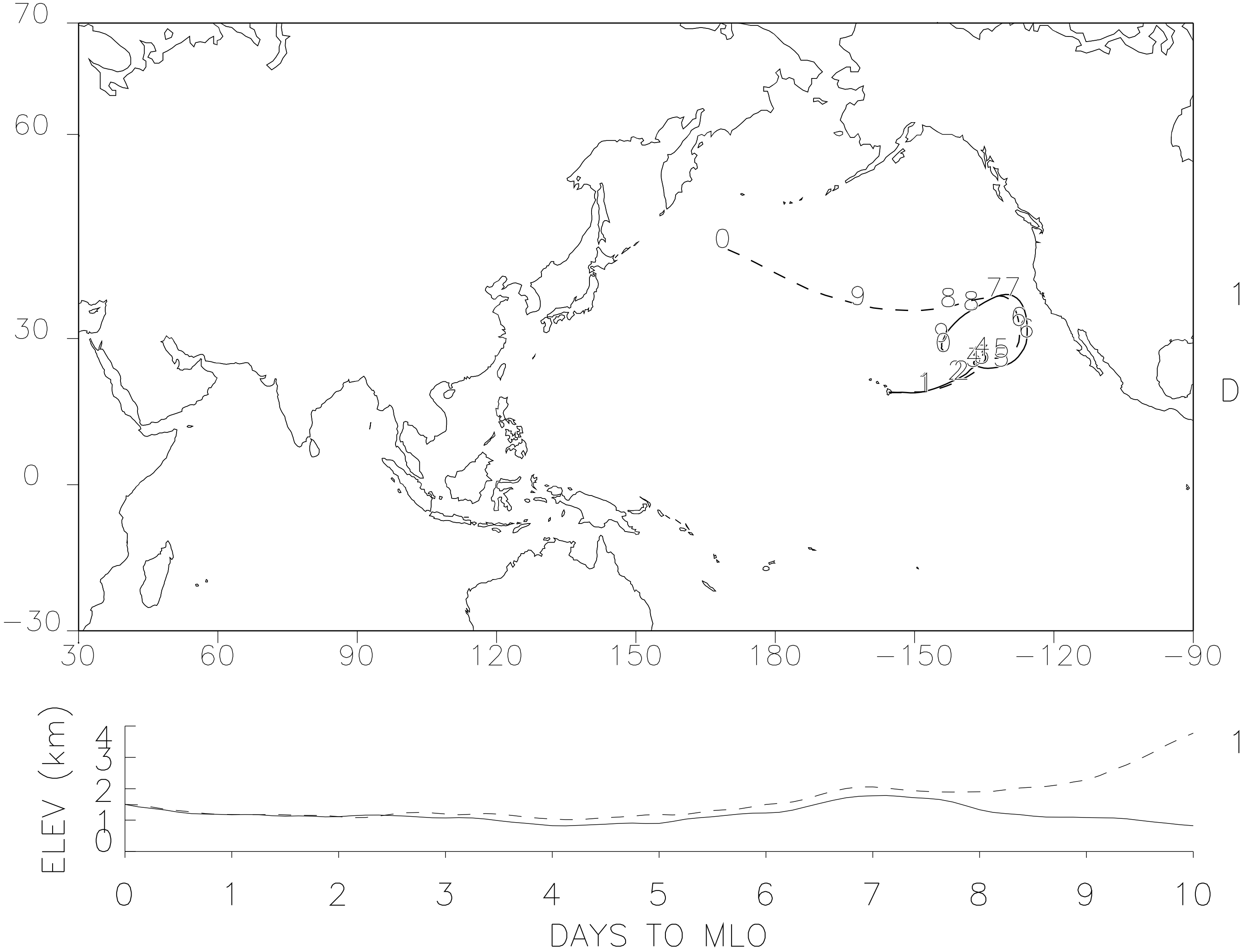
00UT

Day	km	hPa	C
0	1.5	854	14
1	1.5	856	12
2	1.4	868	11
3	1.5	851	11
4	1.2	888	13
5	0.4	966	18
6	0.2	1000	21
7	0.2	1000	21
8	0.2	997	20
9	0.2	995	19
10	0.3	985	16

06UT

Day	km	hPa	C
0	1.5	854	14
1	1.3	870	12
2	1.3	876	10
3	1.2	884	12
4	0.7	938	16
5	0.7	945	13
6	0.7	937	10
7	1.0	907	8
8	1.4	869	9
9	1.4	862	7
10	1.4	865	8

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/14/2004 (Day of Year 105)
NCEP/NCAR Reanalysis 1 Data Set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ELEV (km)
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DAYS TO MLO
12UT – solid
18UT – dashed

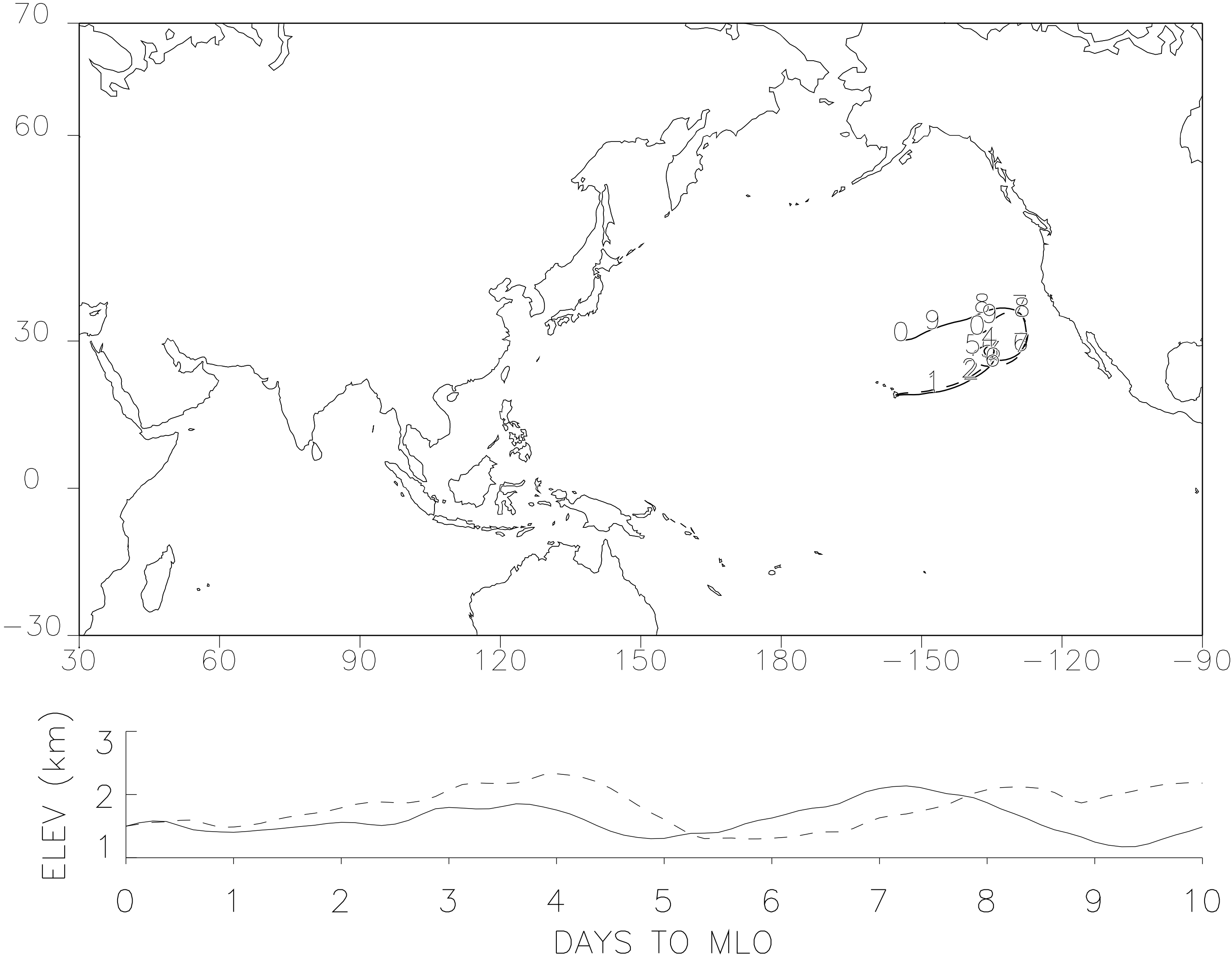
12UT

Day	km	hPa	C
0	1.5	854	13
1	1.2	887	13
2	1.1	894	12
3	1.1	899	12
4	0.8	926	13
5	0.9	916	11
6	1.2	881	10
7	1.8	826	5
8	1.3	868	8
9	1.1	897	13
10	0.8	925	14

18UT

Day	km	hPa	C
0	1.5	855	13
1	1.2	888	14
2	1.1	895	13
3	1.2	886	11
4	1.0	904	12
5	1.2	890	12
6	1.5	857	9
7	2.1	800	4
8	1.9	809	3
9	2.3	763	−4
10	3.8	616	−22

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



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ELEV (km)
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1
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO

00UT

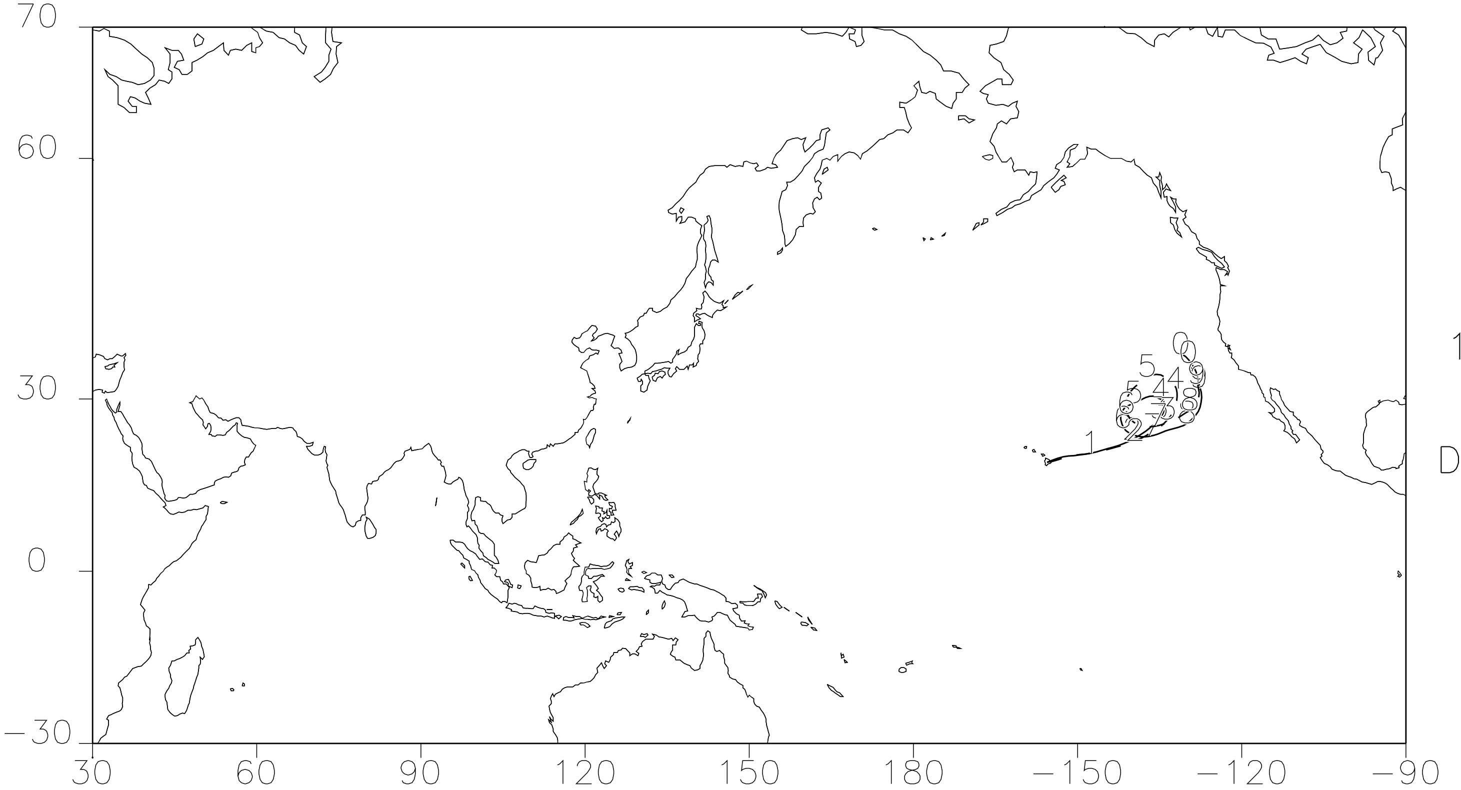
Day	km	hPa	C
0	1.5	854	14
1	1.4	864	12
2	1.6	848	10
3	1.8	824	8
4	1.8	828	9
5	1.3	875	12
6	1.6	841	10
7	2.1	796	6
8	1.9	816	5
9	1.2	875	11
10	1.5	855	11

06UT

Day	km	hPa	C
0	1.5	855	14
1	1.5	857	13
2	1.8	826	9
3	2.1	798	7
4	2.3	772	6
5	1.6	845	11
6	1.3	875	12
7	1.6	843	12
8	2.1	799	7
9	1.9	814	7
10	2.2	788	6

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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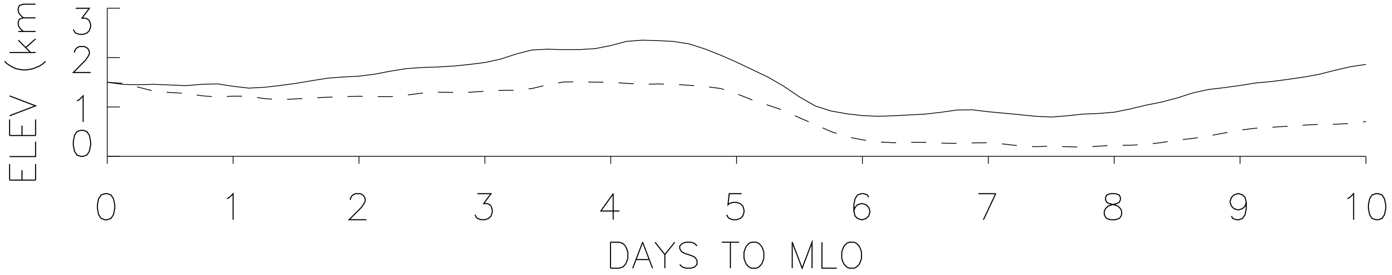
12UT

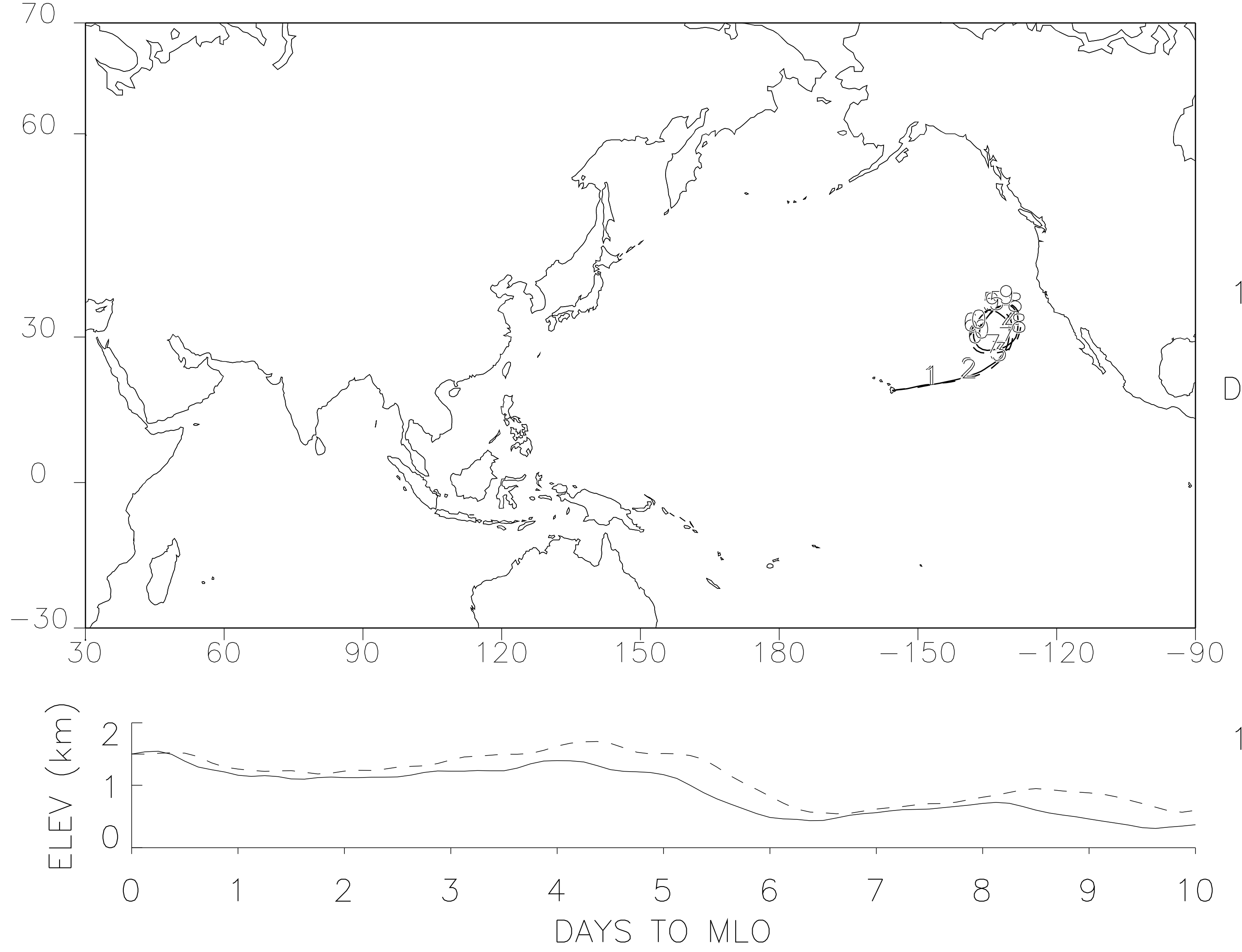
Day	km	hPa	C
0	1.5	854	12
1	1.4	863	12
2	1.6	842	10
3	1.9	813	7
4	2.2	779	4
5	1.9	813	7
6	0.8	925	13
7	0.9	917	10
8	0.9	918	10
9	1.4	860	8
10	1.9	815	3

18UT

Day	km	hPa	C
0	1.5	856	12
1	1.2	885	13
2	1.2	885	12
3	1.3	874	9
4	1.5	854	8
5	1.3	877	9
6	0.3	982	18
7	0.3	991	15
8	0.2	998	14
9	0.5	962	10
10	0.7	941	9



3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/16/2004 (Day of Year 107)
NCEP/NCAR Reanalysis 1 Data Set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ELEV (km)
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9
10
DAYS TO MLO
00UT – solid
06UT – dashed

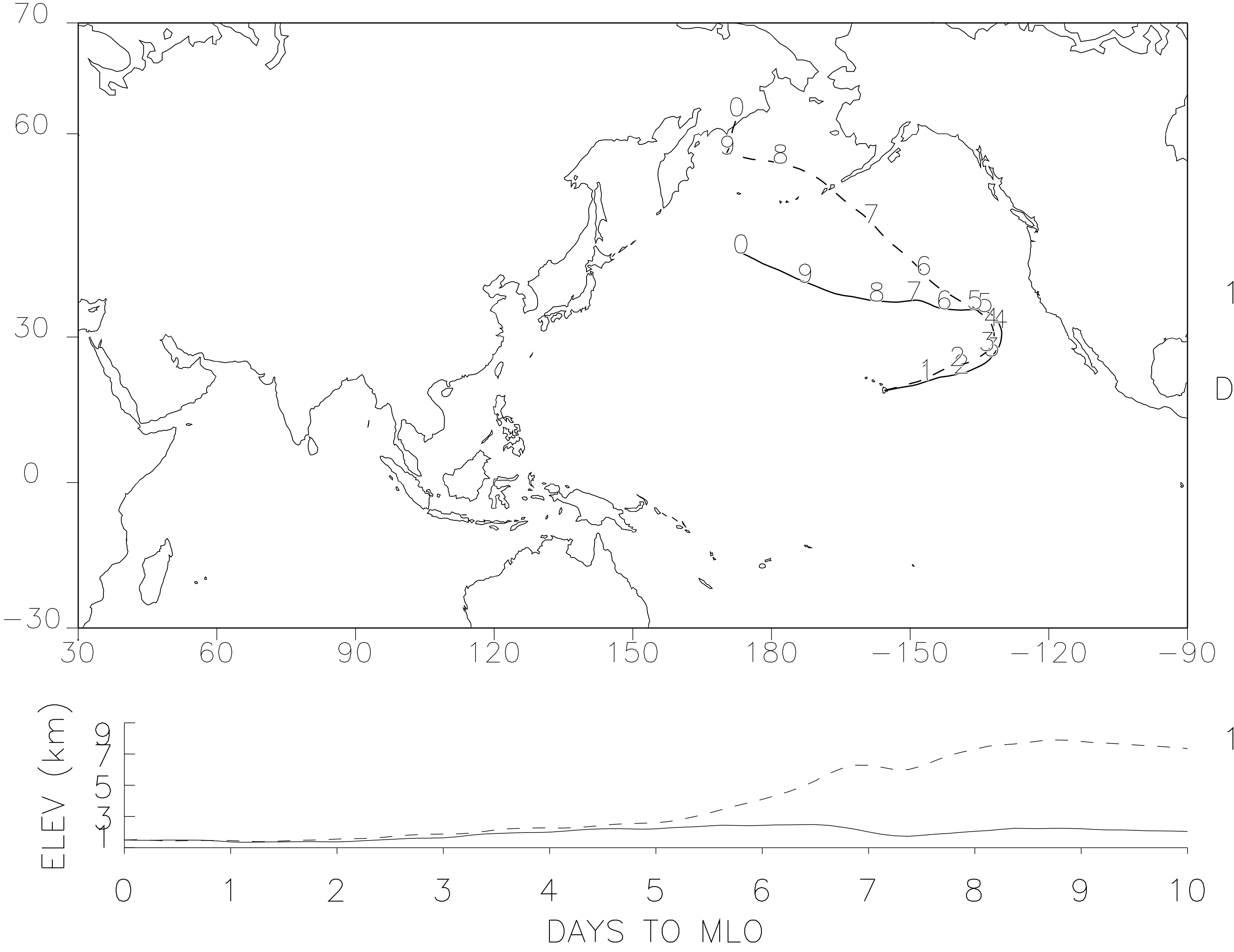
00UT

Day	km	hPa	C
0	1.5	854	12
1	1.2	890	14
2	1.1	894	12
3	1.2	882	9
4	1.4	864	11
5	1.2	887	10
6	0.5	964	16
7	0.6	956	13
8	0.7	941	12
9	0.5	968	14
10	0.4	977	14

06UT

Day	km	hPa	C
0	1.5	855	13
1	1.3	880	13
2	1.2	885	11
3	1.4	865	9
4	1.6	841	10
5	1.5	851	8
6	0.8	926	13
7	0.6	951	12
8	0.8	930	11
9	0.9	922	12
10	0.6	953	14

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/16/2004 (Day of Year 107)
NCEP/NCAR Reanalysis 1 Data Set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ELEV (km)
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10
DAYS TO MLO
12UT - solid
18UT - dashed

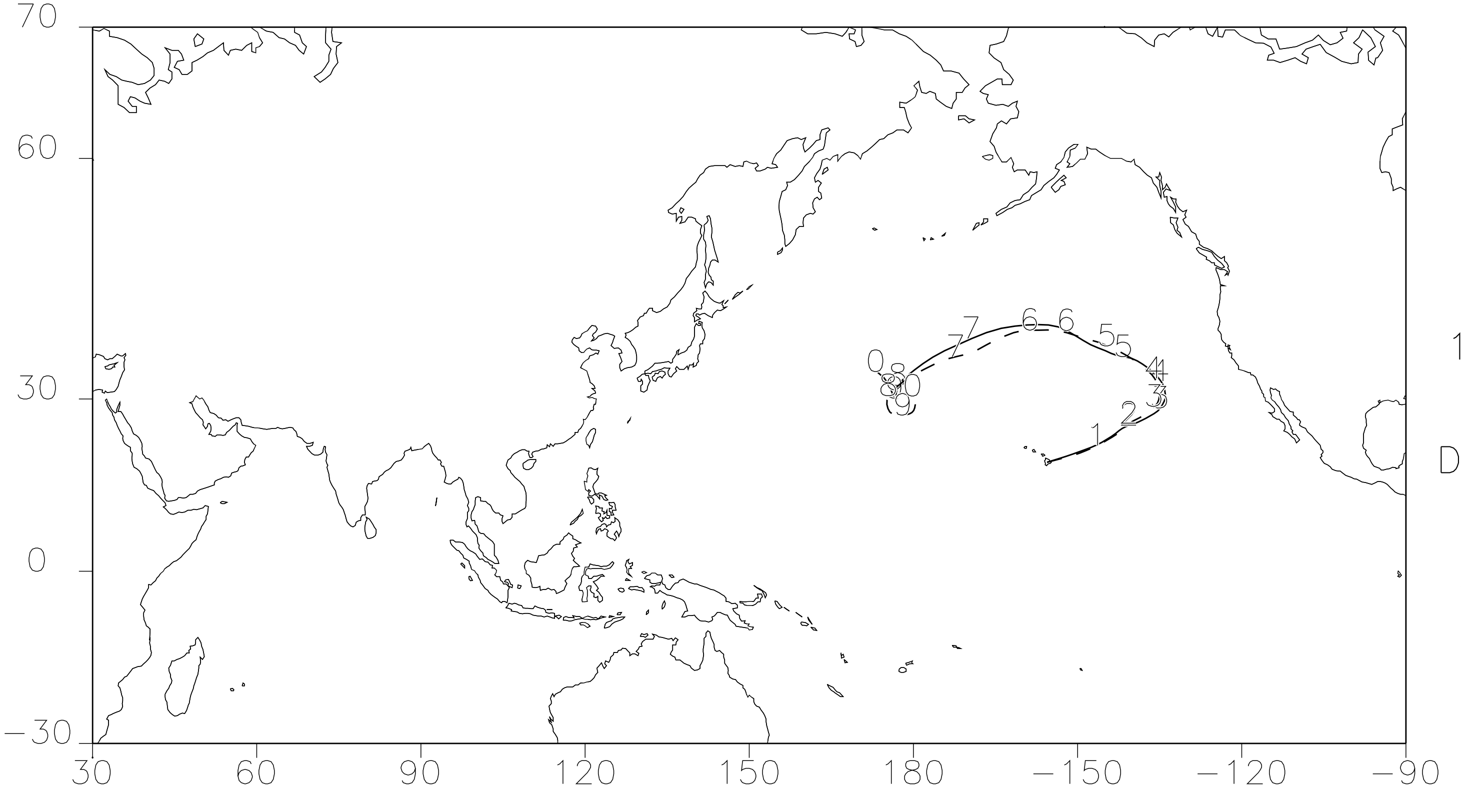
12UT

Day	km	hPa	C
0	1.5	854	13
1	1.4	867	12
2	1.4	867	11
3	1.6	840	8
4	2.0	803	6
5	2.2	781	3
6	2.4	757	−2
7	2.0	797	0
8	2.1	787	−4
9	2.2	766	−7
10	2.0	782	−10

18UT

Day	km	hPa	C
0	1.5	856	13
1	1.5	860	12
2	1.6	852	10
3	1.9	819	8
4	2.3	779	4
5	2.6	746	1
6	4.1	610	−17
7	6.3	442	−36
8	7.3	369	−45
9	7.8	340	−51
10	7.3	368	−46

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/17/2004 (Day of Year 108)
NCEP/NCAR Reanalysis 1 Data Set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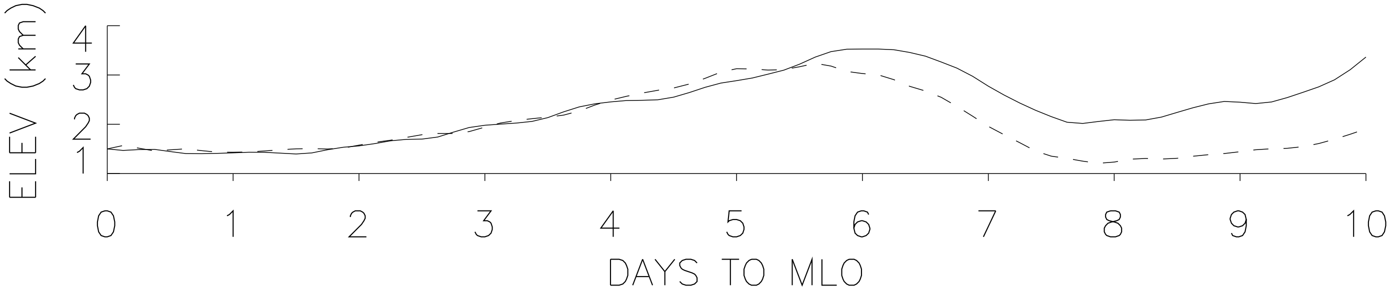
00UT

Day	km	hPa	C
0	1.5	854	12
1	1.4	864	12
2	1.6	850	11
3	2.0	809	8
4	2.5	761	3
5	2.9	720	−1
6	3.5	661	−9
7	2.8	725	−1
8	2.1	798	7
9	2.4	762	5
10	3.4	674	−3

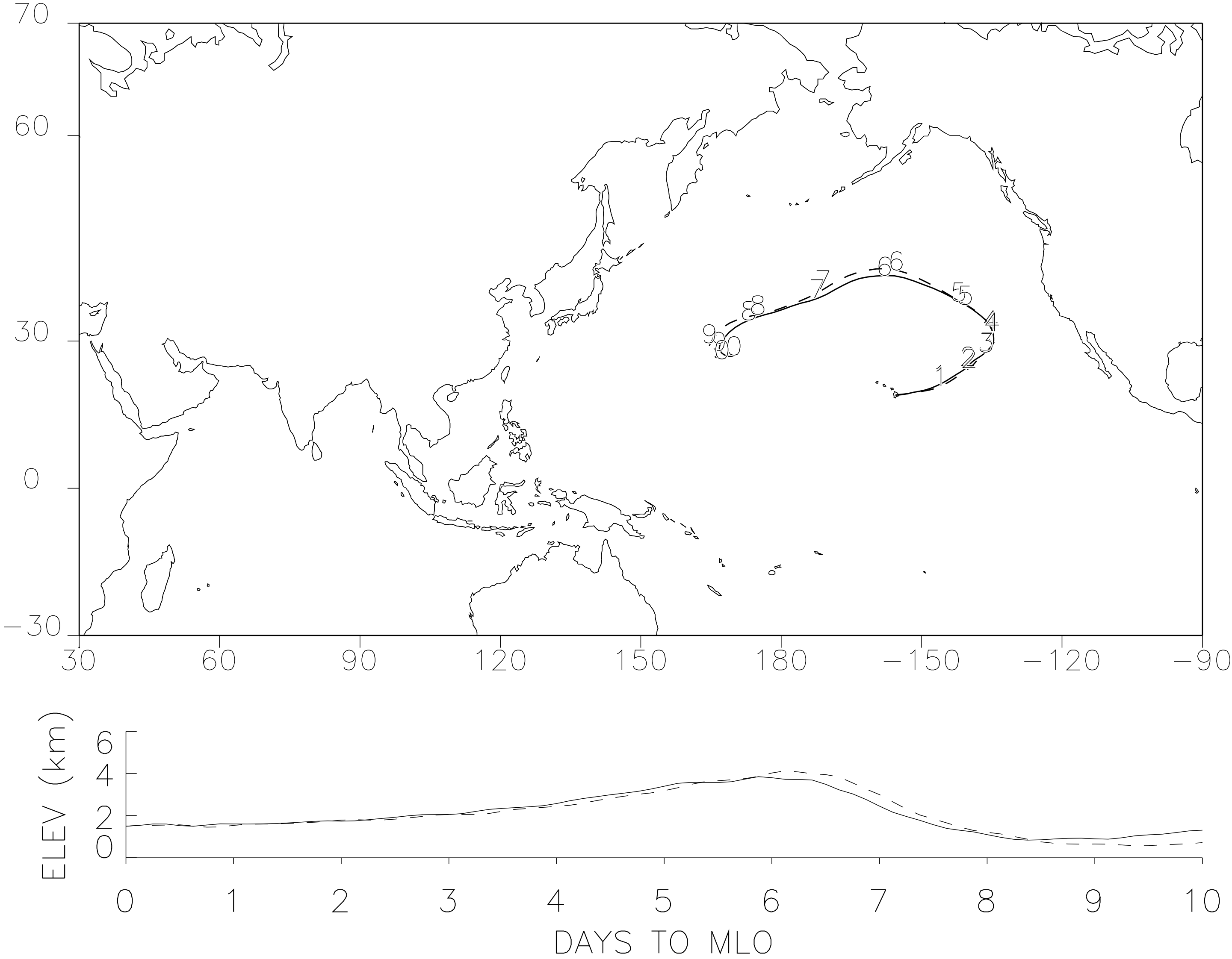
06UT

Day	km	hPa	C
0	1.5	856	12
1	1.4	863	12
2	1.6	850	10
3	1.9	814	9
4	2.5	759	3
5	3.1	698	−4
6	3.0	706	−4
7	2.0	805	6
8	1.2	882	10
9	1.4	861	11
10	1.9	808	6



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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ELEV (km)
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DAYS TO MLO
12UT – solid
18UT – dashed

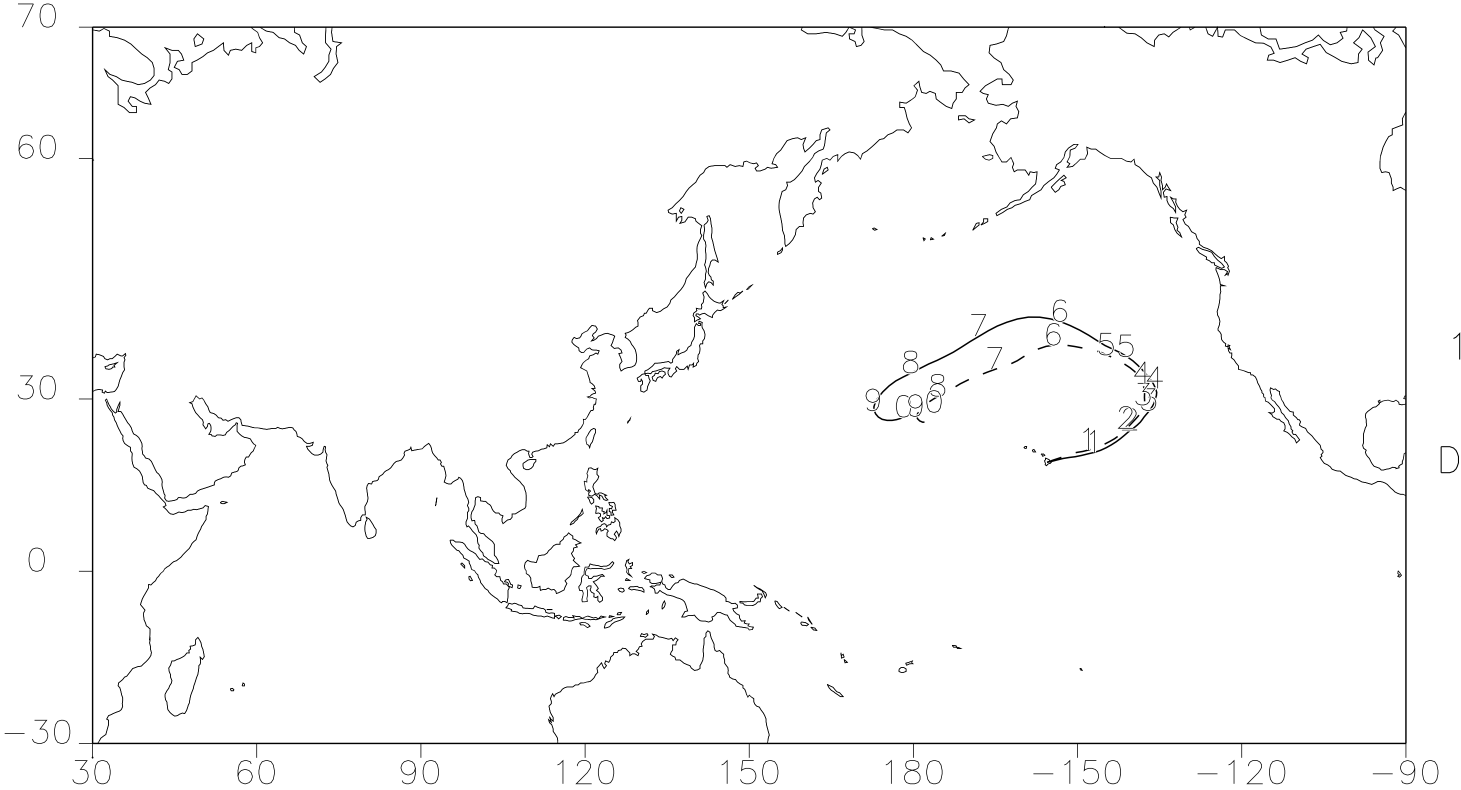
12UT

Day	km	hPa	C
0	1.5	855	11
1	1.6	844	9
2	1.7	830	9
3	2.1	802	9
4	2.6	751	4
5	3.4	675	–5
6	3.8	638	–8
7	2.5	756	2
8	1.1	892	12
9	0.9	919	14
10	1.3	875	11

18UT

Day	km	hPa	C
0	1.5	857	12
1	1.5	853	10
2	1.8	828	8
3	2.1	802	8
4	2.4	765	5
5	3.2	694	–3
6	4.0	619	–10
7	3.0	703	–2
8	1.2	878	10
9	0.7	944	15
10	0.7	937	14

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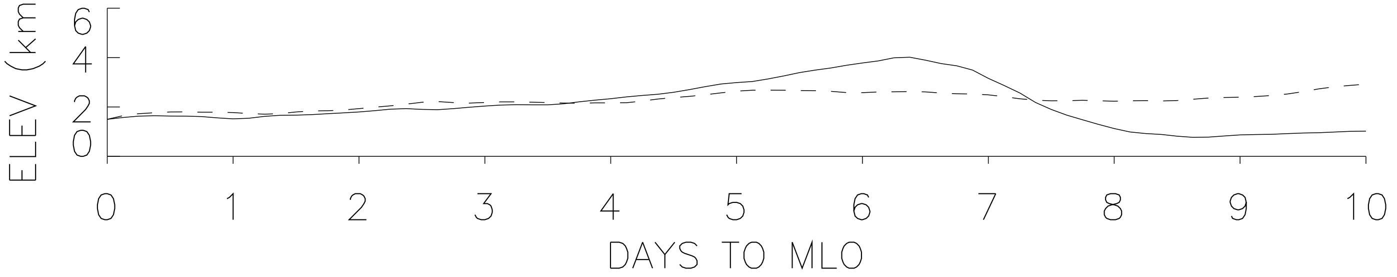


00UT

Day	km	hPa	C
0	1.5	856	12
1	1.5	852	11
2	1.8	826	9
3	2.0	803	7
4	2.3	775	5
5	3.0	712	0
6	3.8	640	–7
7	3.2	690	–3
8	1.1	890	11
9	0.9	923	14
10	1.0	906	12

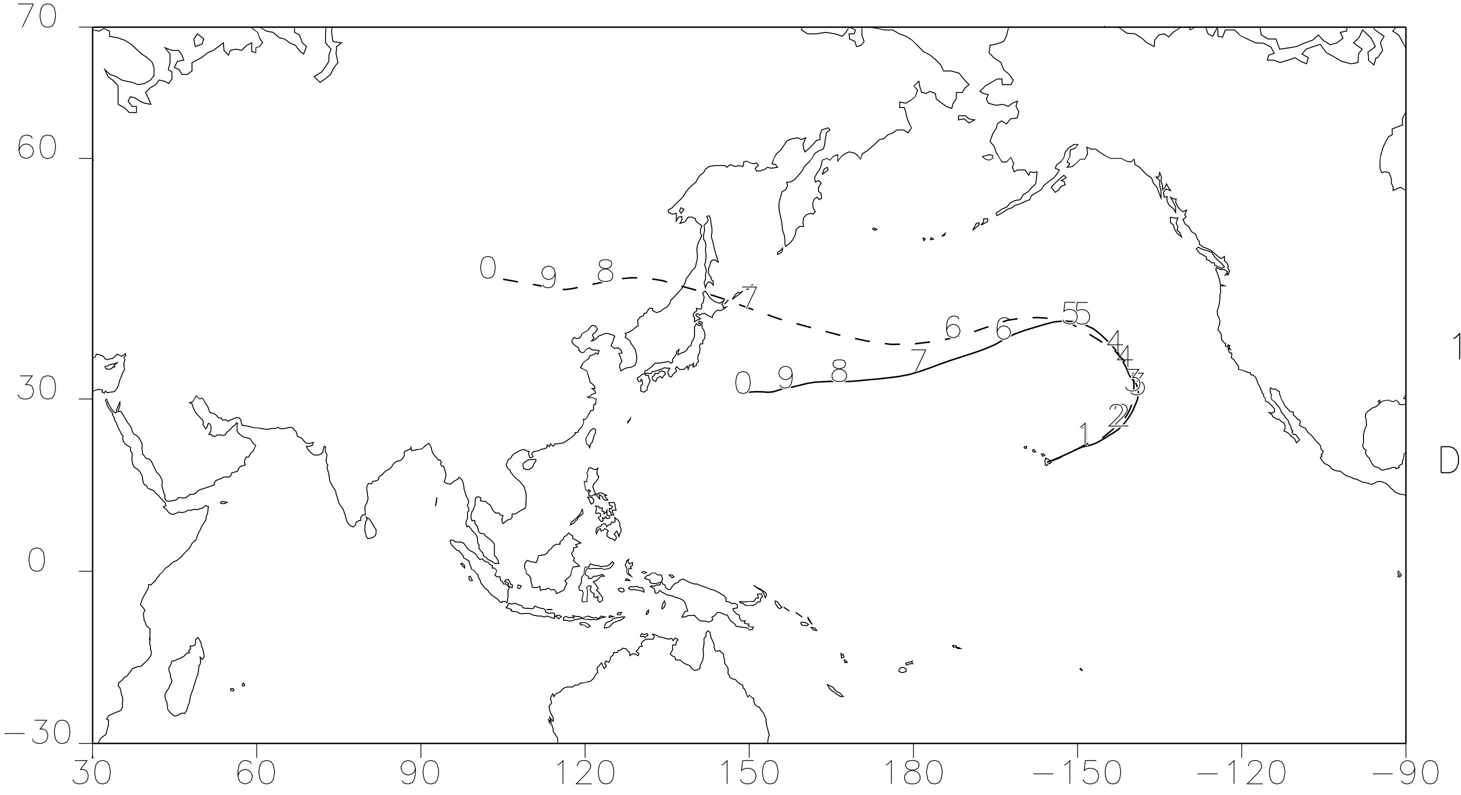
06UT

Day	km	hPa	C
0	1.5	856	13
1	1.8	829	9
2	1.9	813	8
3	2.2	790	6
4	2.2	793	7
5	2.6	746	1
6	2.6	749	1
7	2.5	758	5
8	2.2	784	9
9	2.4	769	9
10	2.9	719	4

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)

4/18/2004 (Day of Year 109)

NCEP/NCAR Reanalysis 1 Data Set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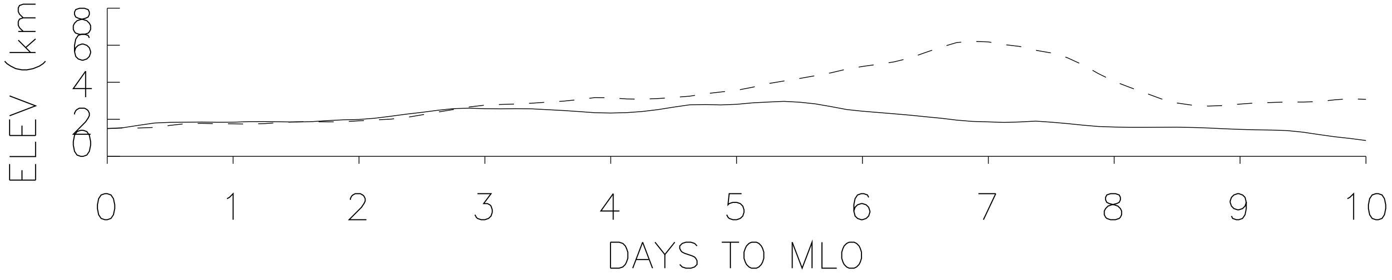


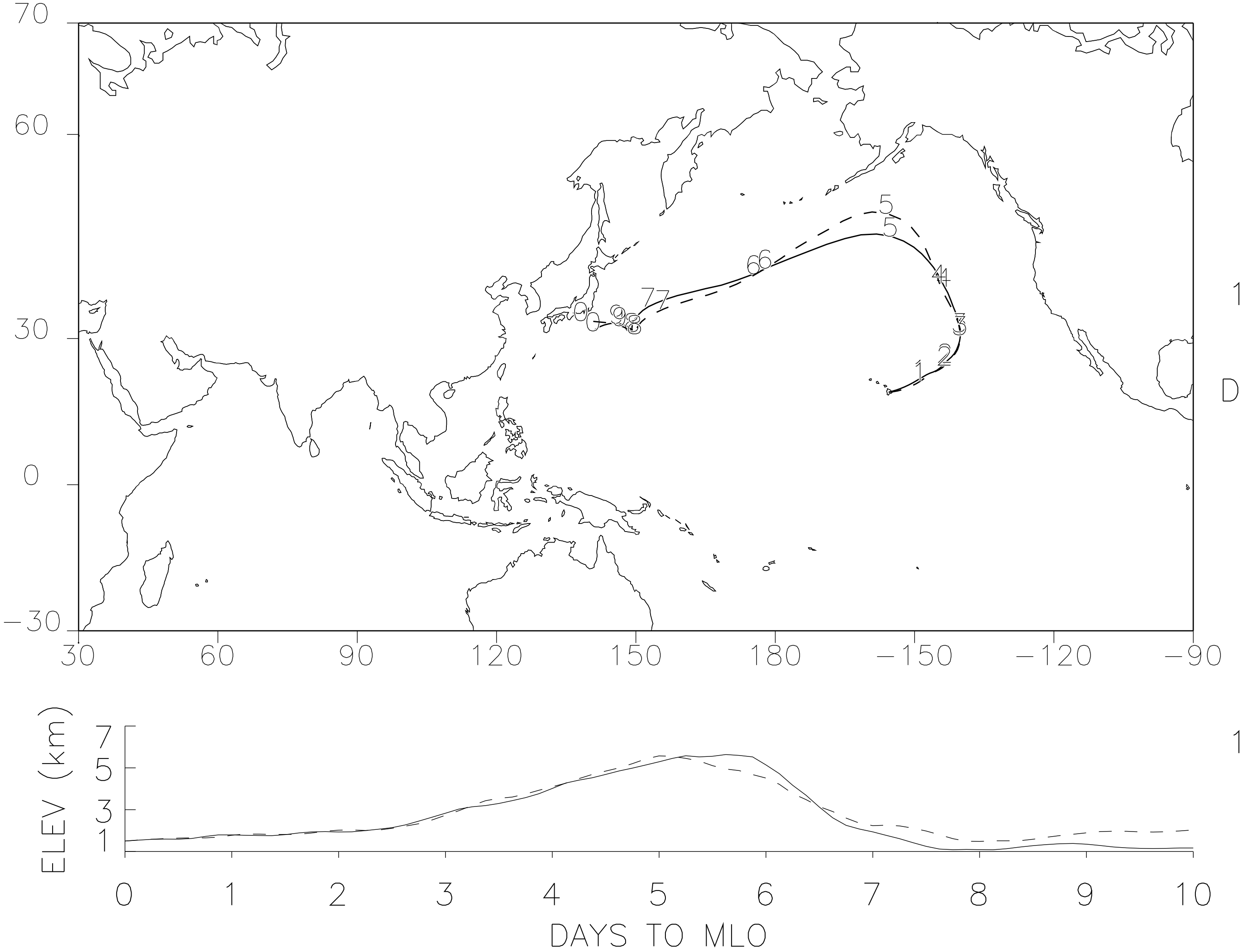
12UT

Day	km	hPa	C
0	1.5	857	12
1	1.8	821	9
2	2.0	806	7
3	2.6	751	3
4	2.3	775	4
5	2.8	727	0
6	2.4	758	2
7	1.9	812	6
8	1.6	840	7
9	1.5	854	8
10	0.9	916	16

18UT

Day	km	hPa	C
0	1.5	857	12
1	1.8	833	11
2	1.9	816	9
3	2.8	735	2
4	3.2	699	−2
5	3.6	664	−4
6	4.9	550	−16
7	6.2	449	−31
8	4.0	608	−13
9	2.8	715	0
10	3.1	695	−1

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/19/2004 (Day of Year 110)
NCEP/NCAR Reanalysis 1 Data Set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ELEV (km)
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9
10
DAYS TO MLO

00UT

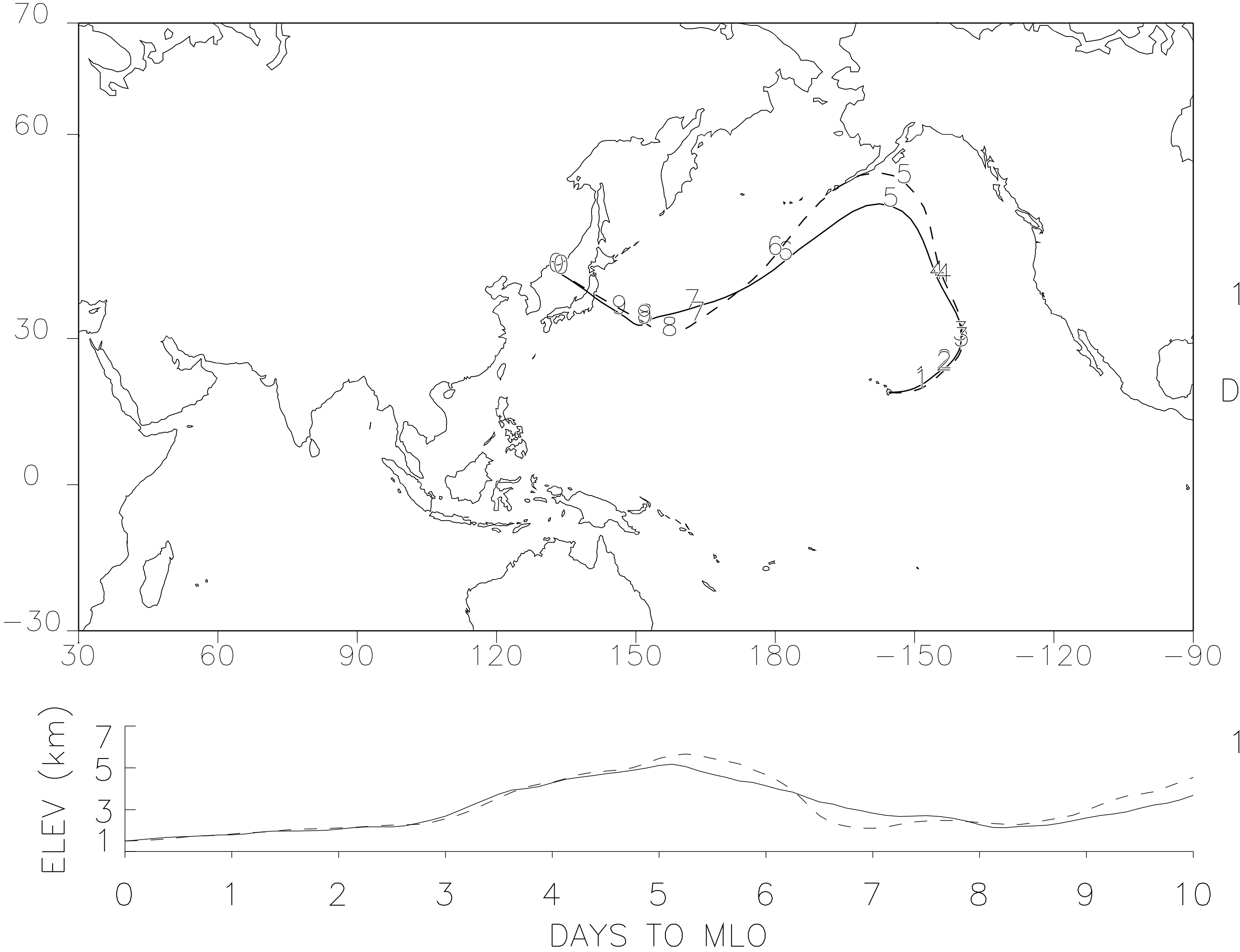
Day	km	hPa	C
0	1.5	855	12
1	1.8	827	10
2	1.9	813	9
3	2.8	728	2
4	4.0	626	−10
5	5.3	525	−19
6	5.1	523	−22
7	1.9	803	3
8	1.1	897	10
9	1.3	866	7
10	1.2	884	8

06UT

Day	km	hPa	C
0	1.5	856	11
1	1.8	829	10
2	2.0	806	9
3	2.7	738	3
4	4.1	621	−10
5	5.6	504	−24
6	4.5	569	−17
7	2.2	773	3
8	1.5	854	8
9	1.9	811	5
10	2.0	794	4

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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ELEV (km)
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10
DAYS TO MLO

12UT

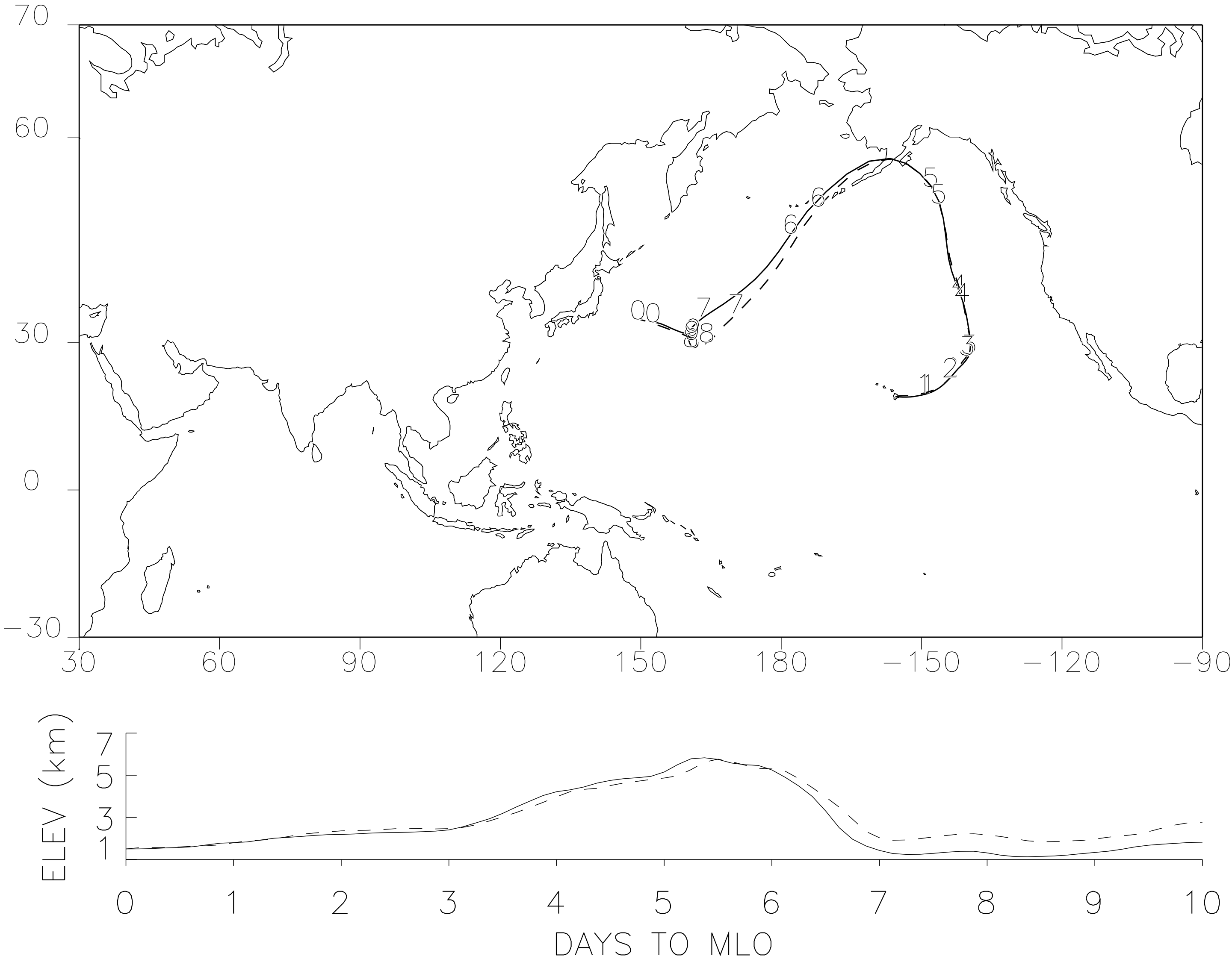
Day	km	hPa	C
0	1.5	855	10
1	1.8	826	9
2	2.1	799	8
3	2.7	740	3
4	4.3	605	−12
5	5.1	538	−20
6	4.1	601	−14
7	2.8	717	−2
8	2.3	774	3
9	2.6	743	1
10	3.7	640	−10

18UT

Day	km	hPa	C
0	1.5	855	10
1	1.8	823	10
2	2.1	796	9
3	2.6	754	5
4	4.3	602	−13
5	5.4	513	−22
6	4.7	554	−19
7	2.1	786	3
8	2.4	764	3
9	3.0	710	1
10	4.5	572	−14

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



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ELEV (km)
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7
8
9
10
DAYS TO MLO
00UT – solid
06UT – dashed

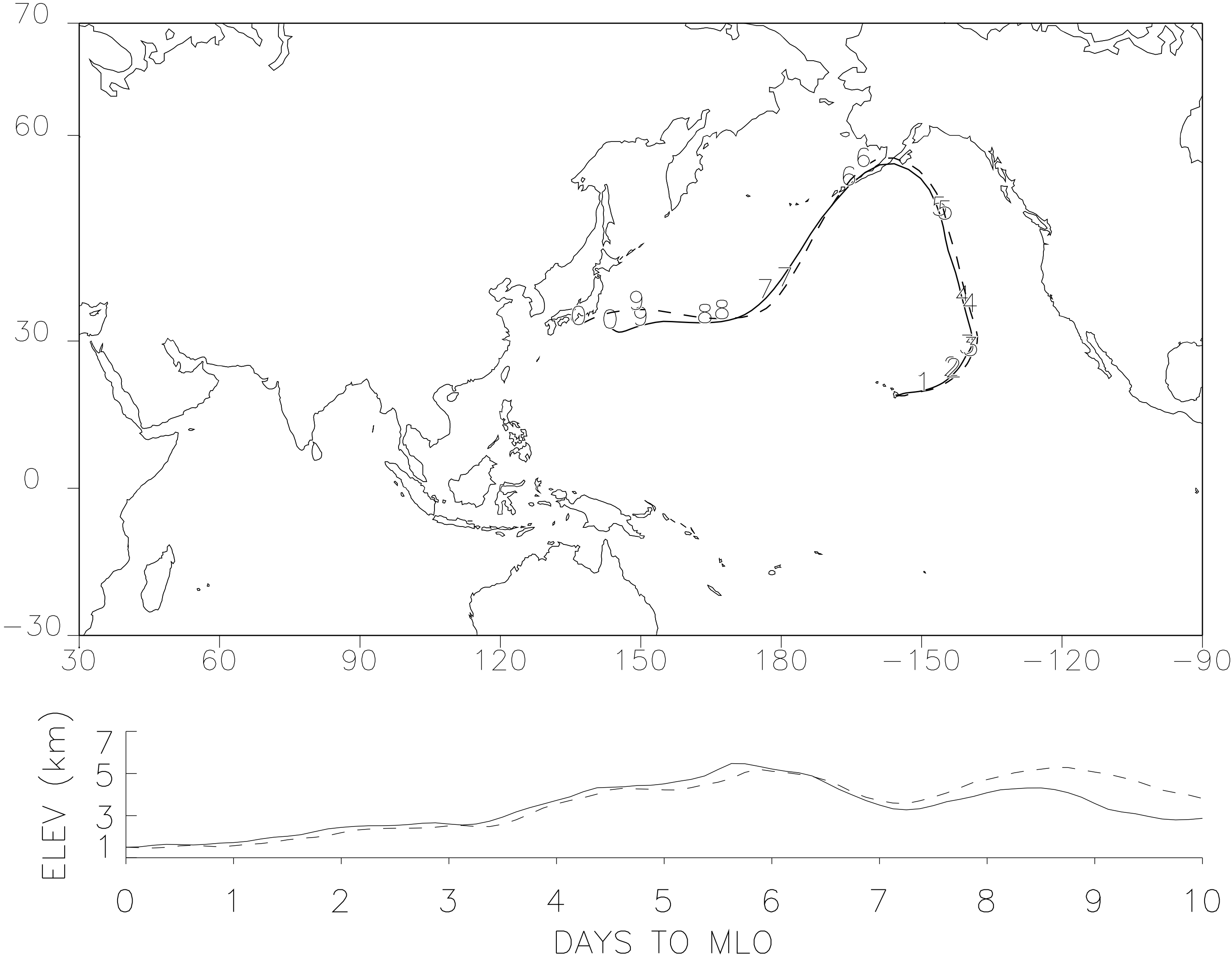
00UT

Day	km	hPa	C
0	1.5	855	12
1	1.8	825	10
2	2.2	788	8
3	2.4	767	6
4	4.2	608	–12
5	5.2	534	–20
6	5.3	509	–25
7	1.4	851	7
8	1.3	872	9
9	1.3	868	8
10	1.8	816	3

06UT

Day	km	hPa	C
0	1.5	856	13
1	1.8	827	9
2	2.4	772	7
3	2.5	763	7
4	4.0	630	–10
5	4.9	556	–17
6	5.3	510	–23
7	2.0	790	3
8	2.2	784	4
9	2.0	805	5
10	2.8	725	–1

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

12UT

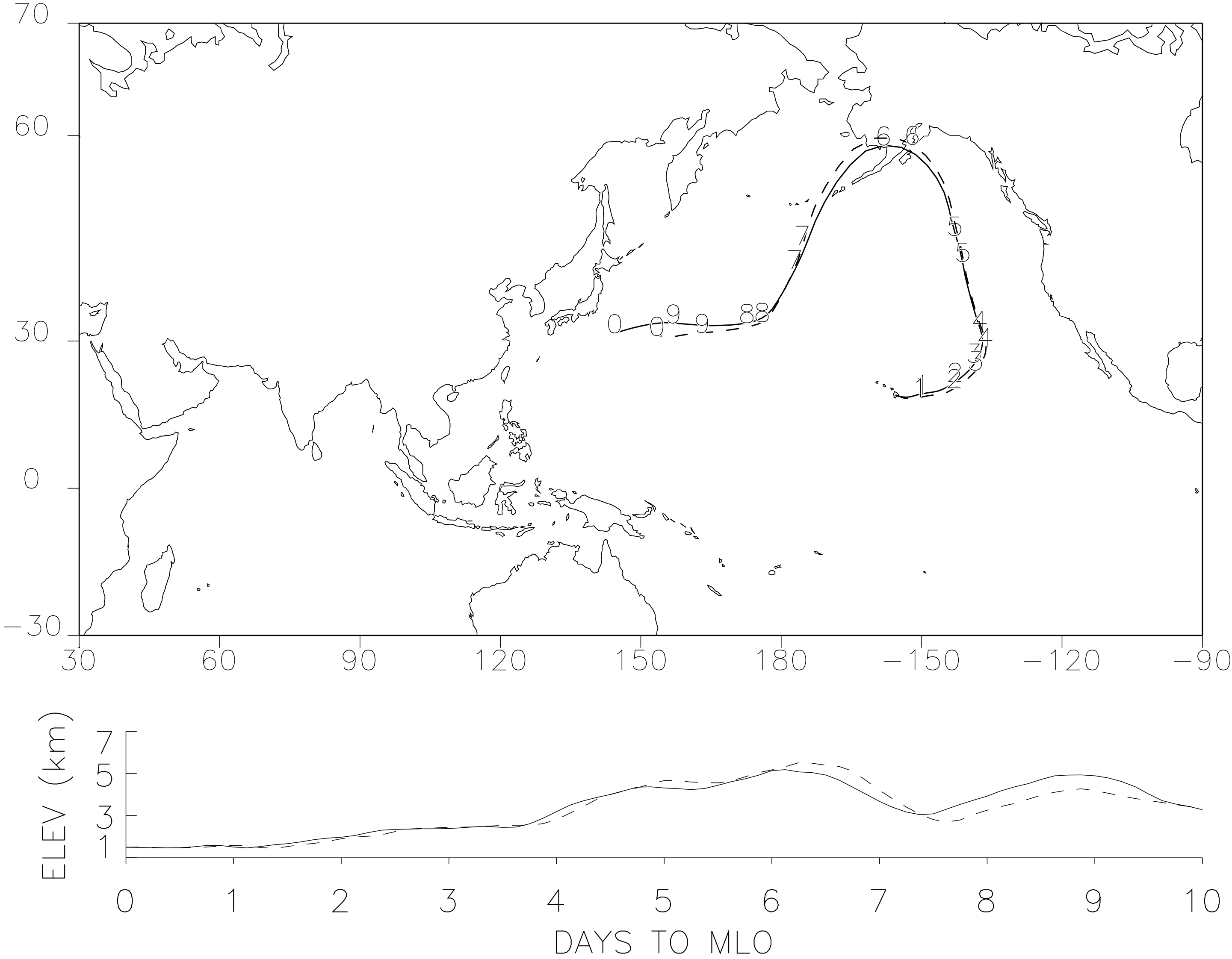
Day	km	hPa	C
0	1.5	854	13
1	1.7	832	10
2	2.4	763	6
3	2.6	749	5
4	3.7	649	−8
5	4.5	585	−15
6	5.2	523	−20
7	3.5	657	−7
8	4.1	614	−10
9	3.6	658	−3
10	2.9	721	5

18UT

Day	km	hPa	C
0	1.5	854	14
1	1.6	849	10
2	2.2	788	8
3	2.5	759	5
4	3.6	663	−7
5	4.2	606	−13
6	5.1	533	−19
7	3.7	638	−9
8	4.7	564	−15
9	5.1	539	−16
10	3.8	639	−2

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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ELEV (km)
7
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9
10
DAYS TO MLO

00UT – solid
06UT – dashed

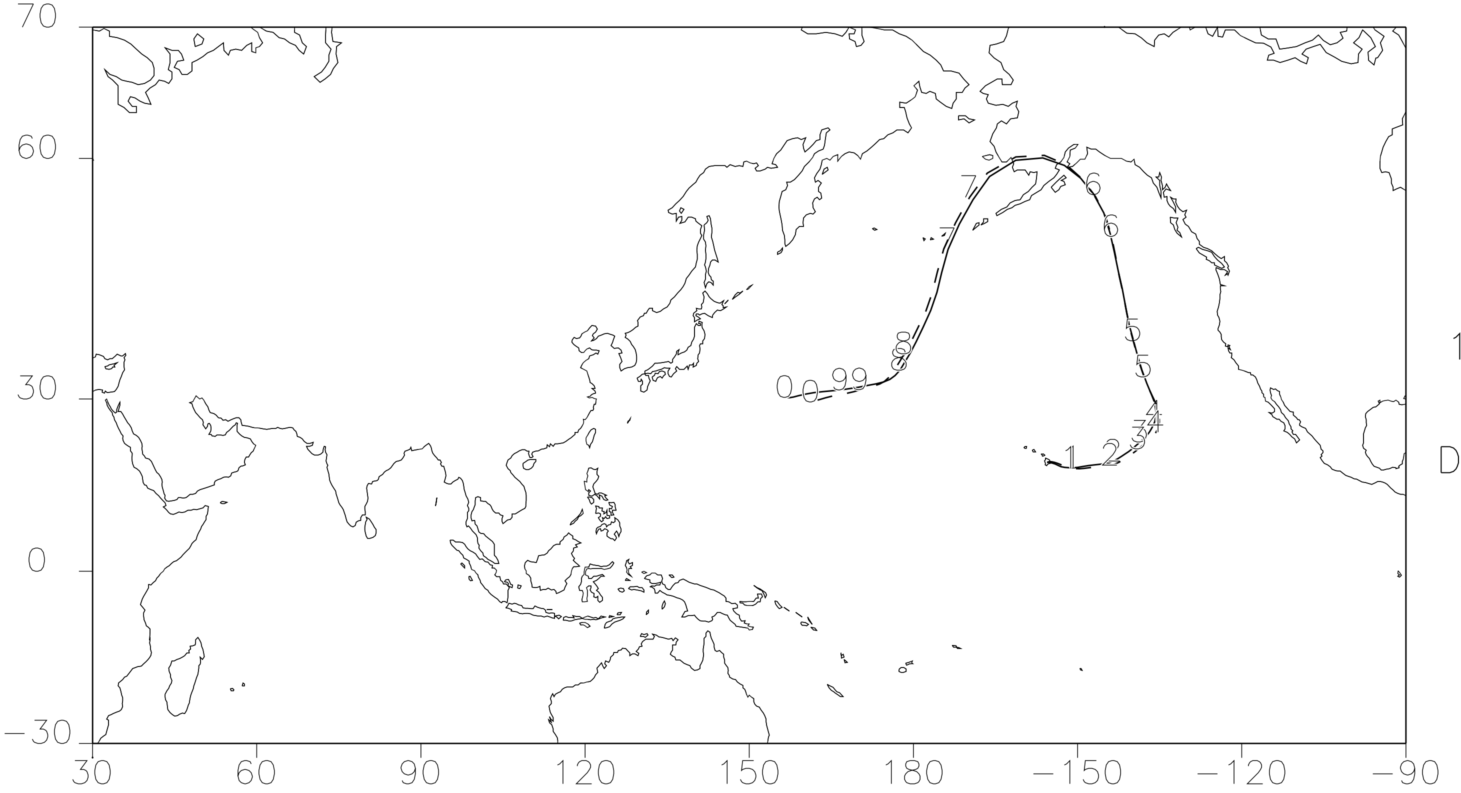
00UT

Day	km	hPa	C
0	1.5	853	14
1	1.5	853	11
2	2.0	808	9
3	2.4	769	6
4	3.2	693	–4
5	4.3	599	–14
6	5.1	532	–19
7	3.7	639	–9
8	3.9	627	–9
9	4.9	553	–15
10	3.3	685	2

06UT

Day	km	hPa	C
0	1.5	854	14
1	1.6	847	10
2	1.9	816	10
3	2.4	764	6
4	2.8	729	2
5	4.7	572	–16
6	5.2	531	–19
7	4.2	593	–13
8	3.3	682	–3
9	4.2	607	–9
10	3.5	669	0

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/21/2004 (Day of Year 112)
NCEP/NCAR Reanalysis 1 Data Set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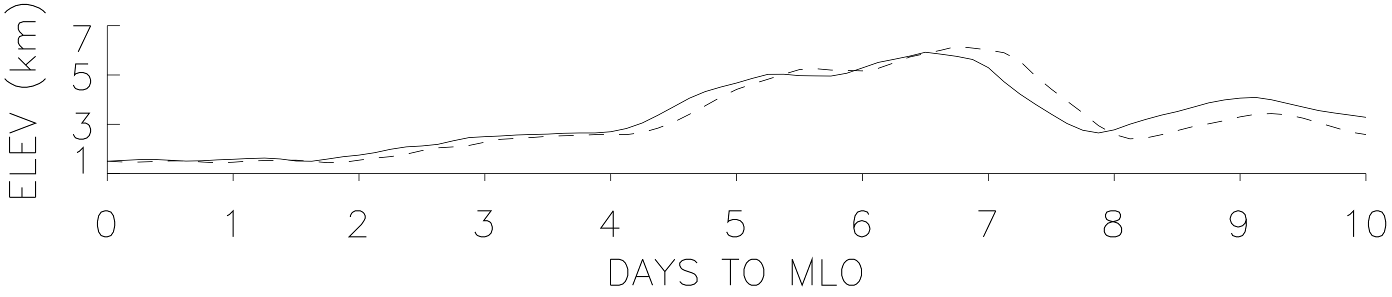
12UT

Day	km	hPa	C
0	1.5	853	13
1	1.6	846	11
2	1.7	828	9
3	2.5	757	6
4	2.7	738	4
5	4.7	571	−16
6	5.3	523	−20
7	5.3	511	−21
8	2.8	724	1
9	4.1	618	−9
10	3.3	686	1

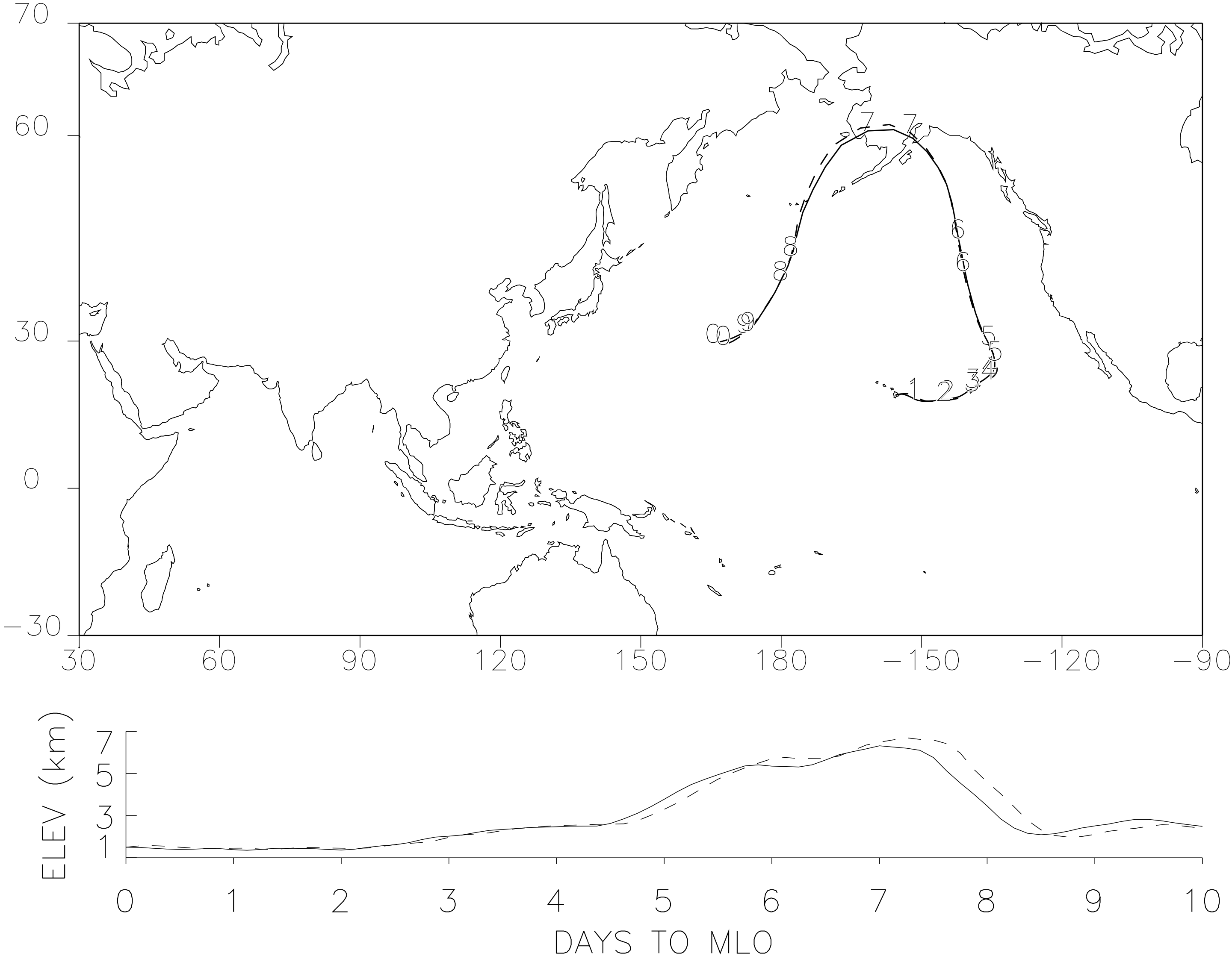
18UT

Day	km	hPa	C
0	1.5	854	13
1	1.5	858	13
2	1.5	851	10
3	2.3	779	8
4	2.6	751	5
5	4.4	592	−13
6	5.2	532	−19
7	6.0	464	−26
8	2.6	735	1
9	3.3	680	−3
10	2.6	746	3



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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0
ELEV (km)
7
5
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0
1
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5
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7
8
9
10
DAYS TO MLO

00UT

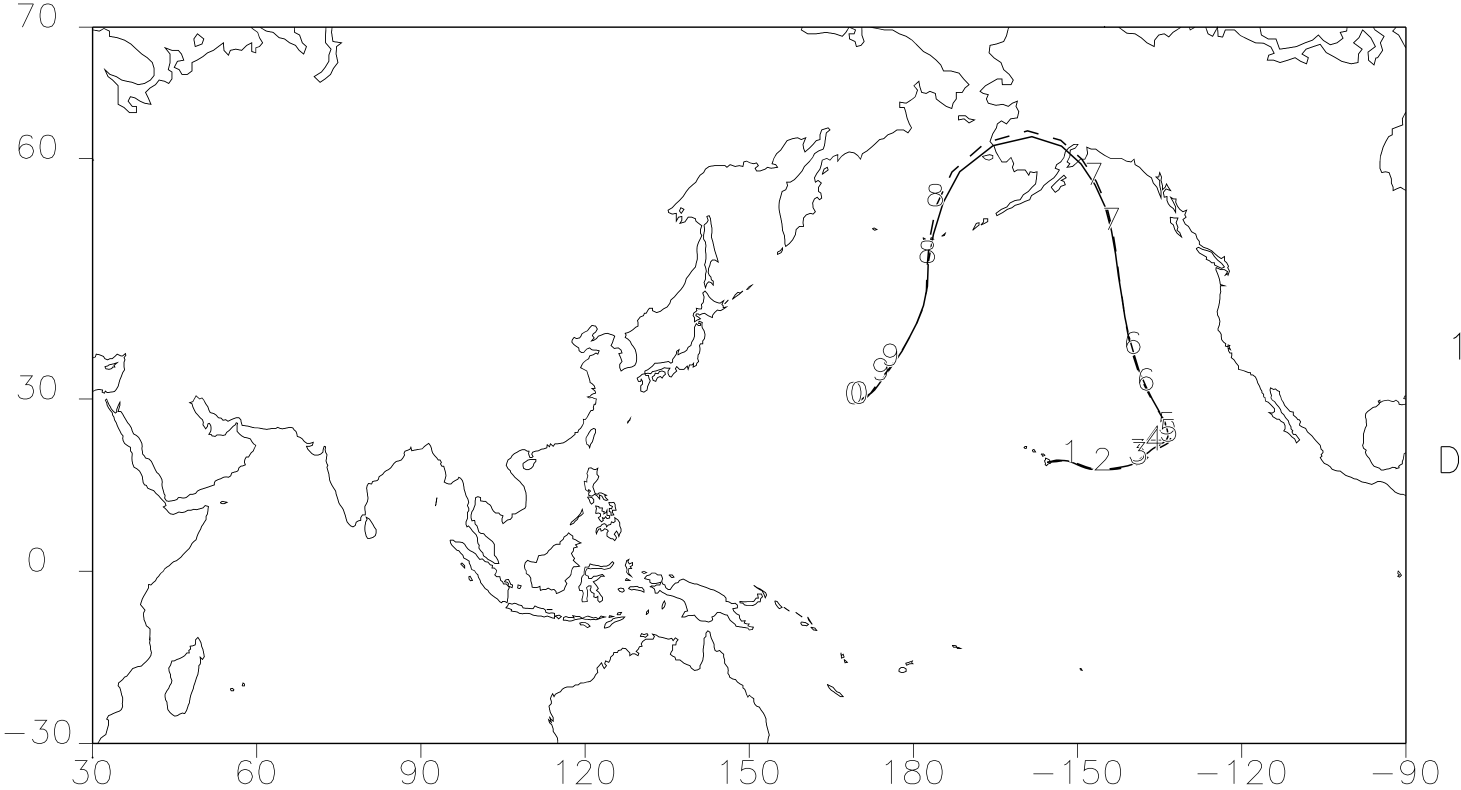
Day	km	hPa	C
0	1.5	853	13
1	1.4	865	13
2	1.4	867	11
3	2.0	802	8
4	2.5	760	6
5	3.8	643	−7
6	5.4	521	−20
7	6.3	449	−27
8	3.5	654	−6
9	2.5	751	2
10	2.5	755	3

06UT

Day	km	hPa	C
0	1.5	854	14
1	1.5	859	13
2	1.5	860	12
3	2.0	809	9
4	2.5	755	6
5	3.3	686	1
6	5.7	498	−22
7	6.5	442	−28
8	4.6	560	−15
9	2.1	786	4
10	2.4	763	4

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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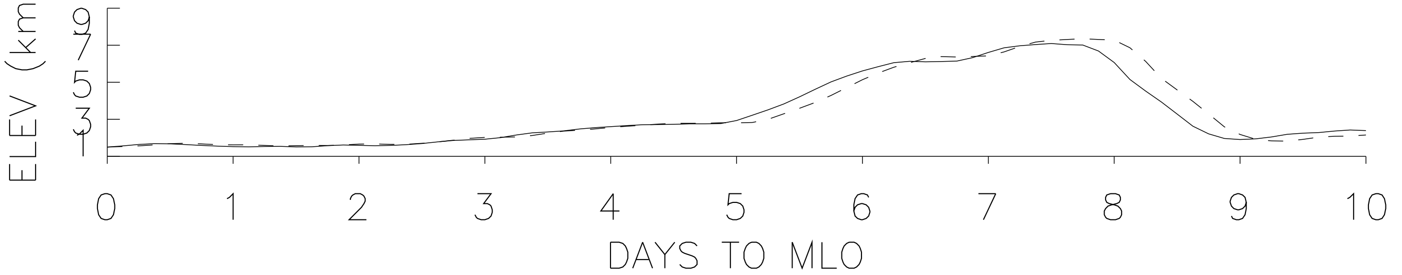
12UT

Day	km	hPa	C
0	1.5	853	13
1	1.5	851	12
2	1.6	844	10
3	1.9	810	9
4	2.6	746	6
5	2.9	716	4
6	5.6	504	−21
7	6.6	436	−29
8	6.1	456	−26
9	1.9	805	6
10	2.4	765	4

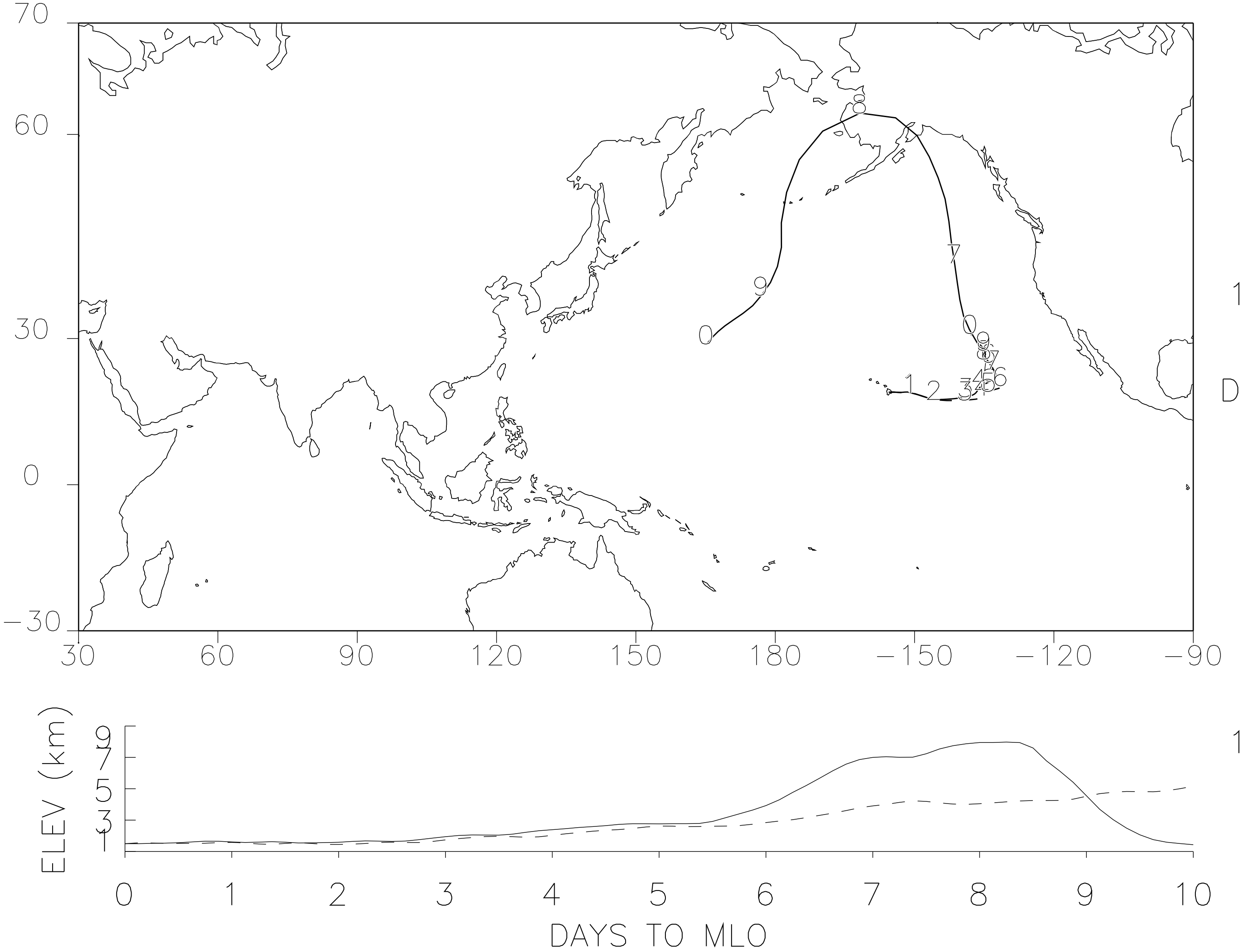
18UT

Day	km	hPa	C
0	1.5	855	14
1	1.6	842	12
2	1.7	838	12
3	2.0	803	9
4	2.6	752	7
5	2.8	731	6
6	5.1	540	−15
7	6.4	447	−28
8	7.3	383	−36
9	2.2	773	4
10	2.2	786	5



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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ELEV (km)
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7
8
9
10
DAYS TO MLO
00UT − solid
06UT − dashed

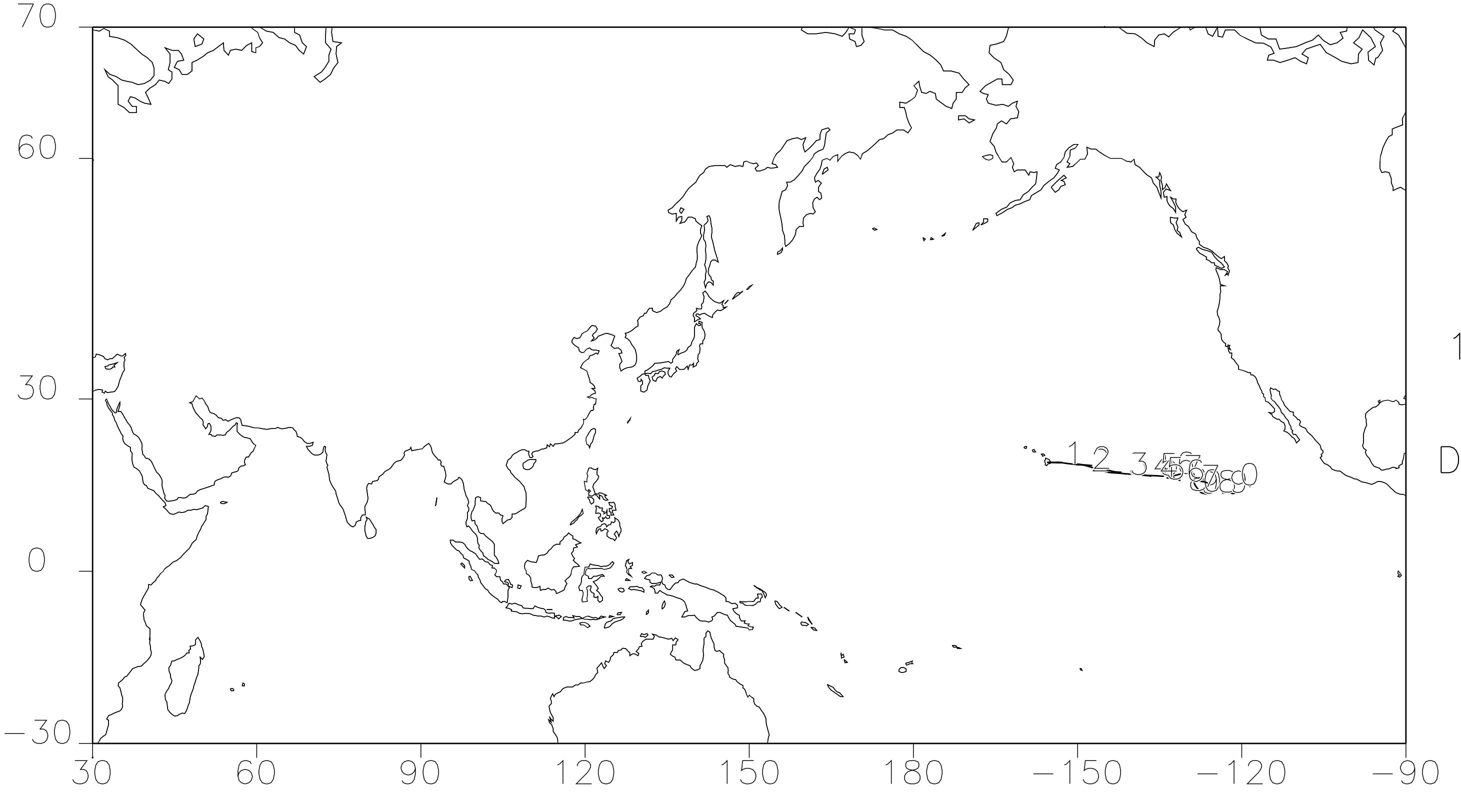
00UT

Day	km	hPa	C
0	1.5	854	14
1	1.6	842	12
2	1.6	844	12
3	1.9	809	9
4	2.4	767	7
5	2.8	732	6
6	3.9	633	−3
7	7.0	415	−32
8	7.9	353	−41
9	4.6	568	−13
10	1.4	856	11

06UT

Day	km	hPa	C
0	1.5	855	14
1	1.6	846	12
2	1.4	859	13
3	1.7	831	11
4	2.0	802	9
5	2.6	746	7
6	2.8	726	7
7	3.9	637	−1
8	4.0	626	−2
9	4.5	592	−4
10	5.2	543	−11

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/23/2004 (Day of Year 114)
NCEP/NCAR Reanalysis 1 Data Set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120
150
180
−150
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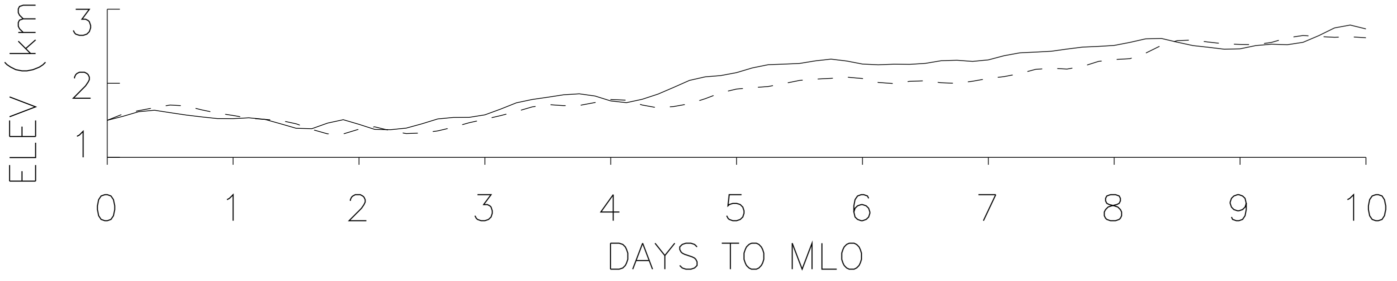
−90
1 2 3 4 5 6 7 8 9 0

12UT

Day	km	hPa	C
0	1.5	855	14
1	1.5	851	12
2	1.4	858	12
3	1.6	845	11
4	1.8	826	10
5	2.1	788	9
6	2.3	777	9
7	2.3	771	10
8	2.5	753	11
9	2.5	756	11
10	2.7	732	10

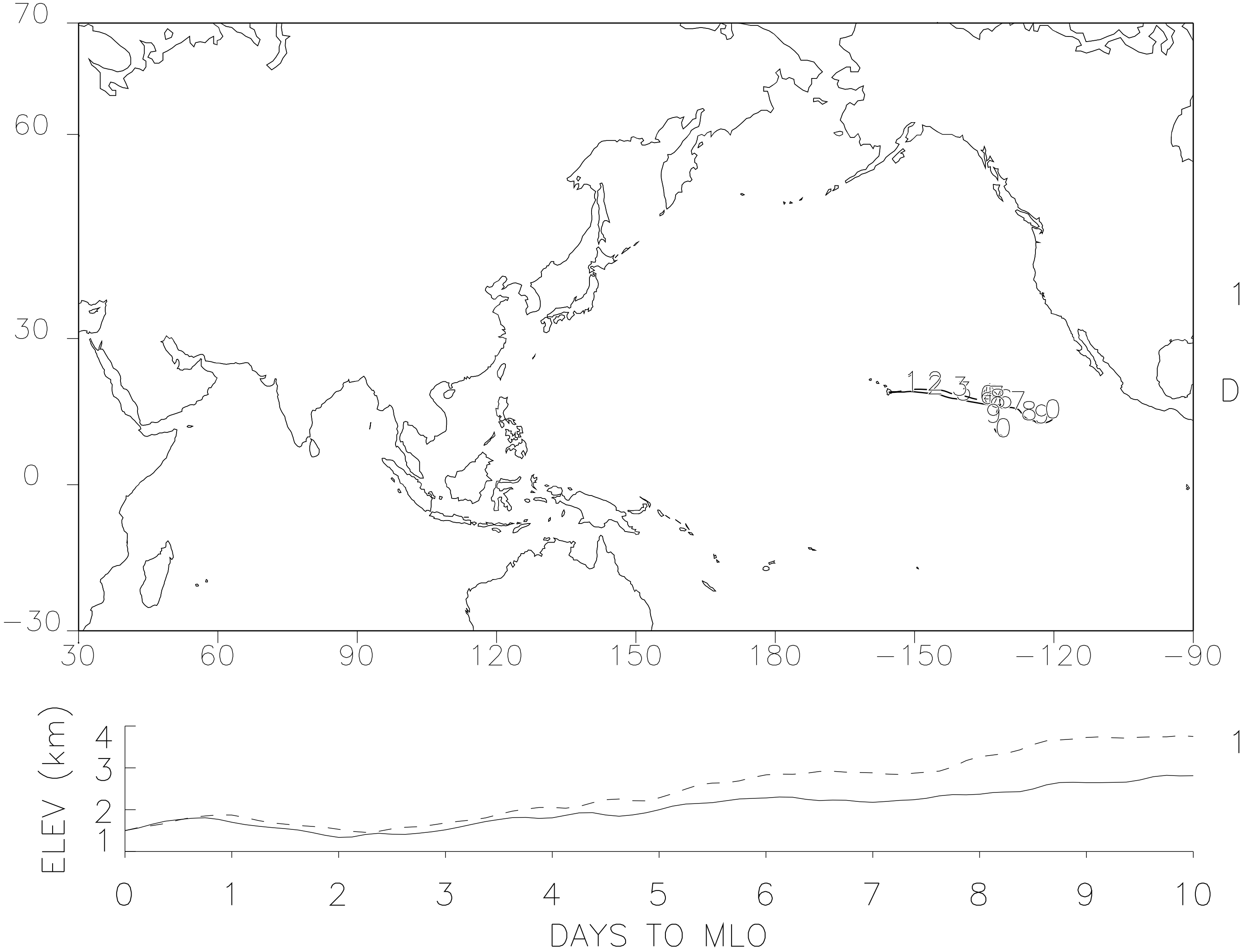
18UT

Day	km	hPa	C
0	1.5	856	14
1	1.6	849	13
2	1.4	867	13
3	1.5	853	12
4	1.8	827	11
5	1.9	812	11
6	2.1	798	11
7	2.1	798	13
8	2.3	773	13
9	2.5	754	12
10	2.6	745	14



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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1 2 3 4 5 6 7 8 9 0
ELEV (km)
1
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4
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1
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3
4
5
6
7
8
9
10
DAYS TO MLO
00UT − solid
06UT − dashed

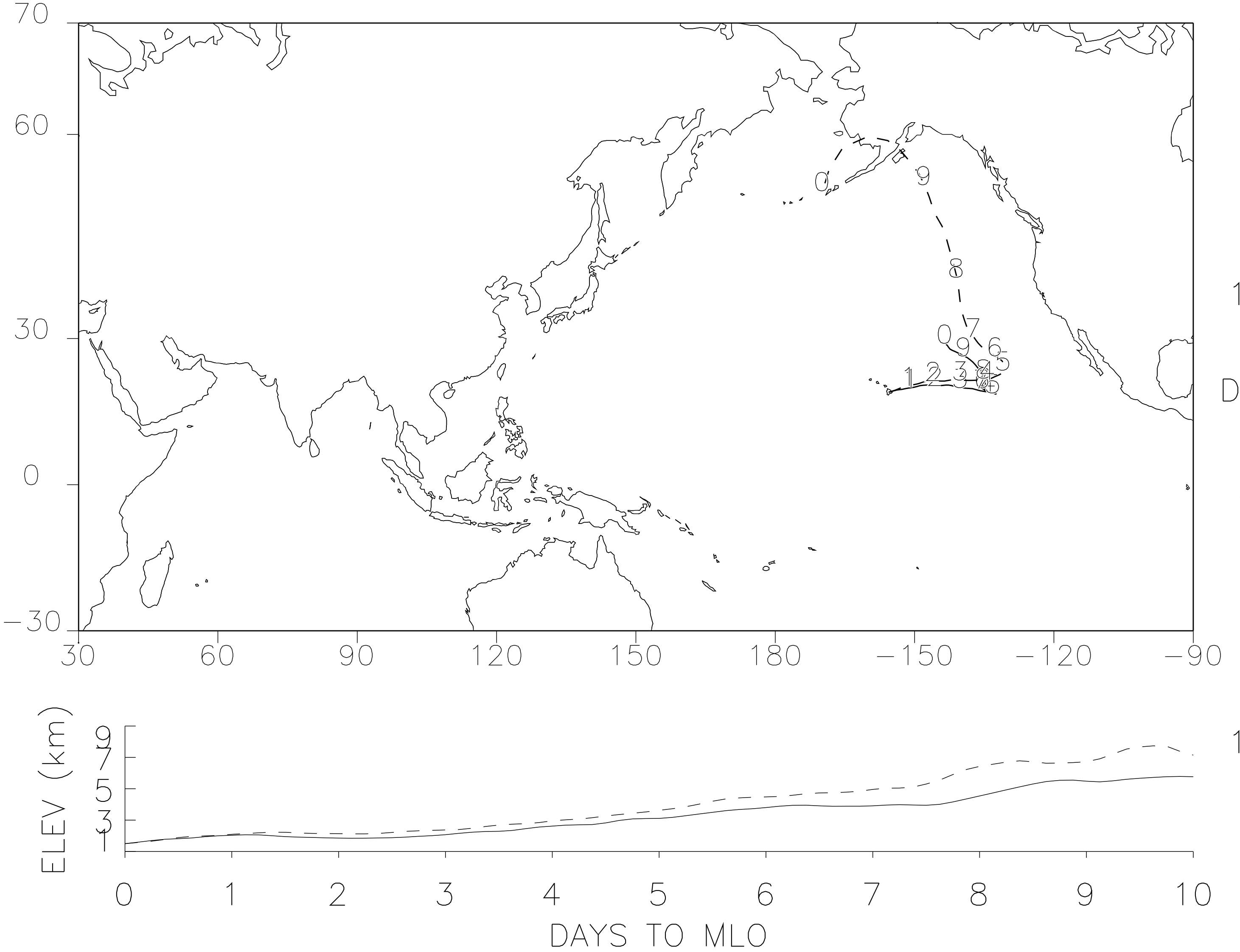
00UT

Day	km	hPa	C
0	1.5	855	14
1	1.7	834	13
2	1.3	870	13
3	1.5	850	12
4	1.8	823	11
5	2.0	803	11
6	2.3	775	9
7	2.2	784	11
8	2.4	766	13
9	2.6	741	11
10	2.8	726	10

06UT

Day	km	hPa	C
0	1.5	855	14
1	1.9	819	13
2	1.5	852	13
3	1.7	836	12
4	2.1	800	11
5	2.3	778	9
6	2.8	727	8
7	2.9	723	8
8	3.3	690	8
9	3.7	652	7
10	3.8	651	7

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/24/2004 (Day of Year 115)
NCEP/NCAR Reanalysis 1 Data Set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ELEV (km)
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9
DAYS TO MLO
0
1
2
3
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5
6
7
8
9
10
12UT – solid
18UT – dashed

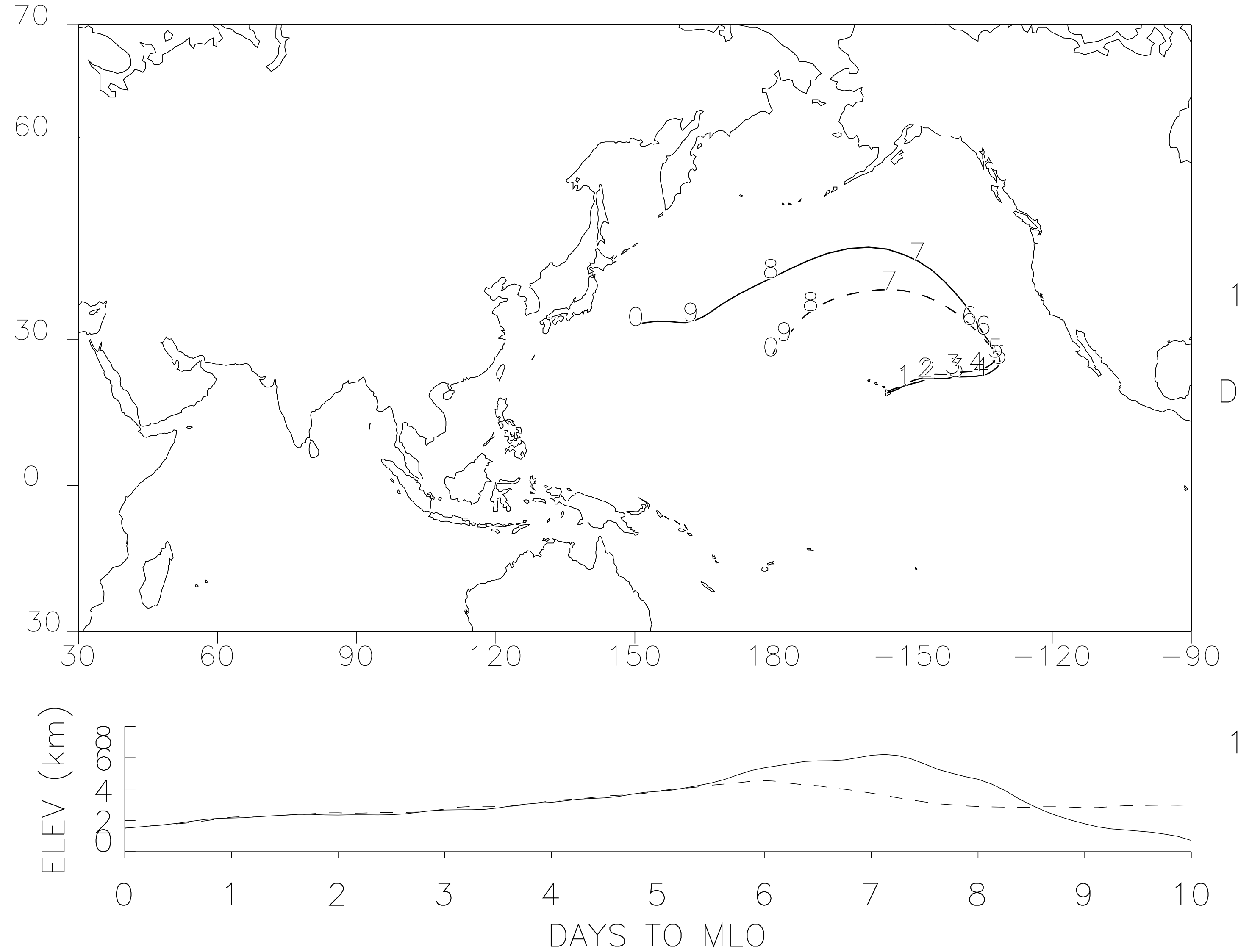
12UT

Day	km	hPa	C
0	1.5	854	13
1	2.0	802	12
2	1.9	818	12
3	2.1	798	10
4	2.6	745	8
5	3.1	701	6
6	3.8	644	2
7	3.9	635	1
8	4.5	587	−4
9	5.5	520	−12
10	5.8	503	−15

18UT

Day	km	hPa	C
0	1.5	854	14
1	2.1	798	12
2	2.1	793	11
3	2.4	772	10
4	3.0	719	7
5	3.6	662	3
6	4.5	592	−6
7	5.0	557	−11
8	6.4	453	−24
9	6.7	433	−26
10	7.1	399	−32

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/25/2004 (Day of Year 116)
NCEP/NCAR Reanalysis 1 Data Set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ELEV (km)
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5
6
7
8
9
10
DAYS TO MLO
00UT – solid
06UT – dashed

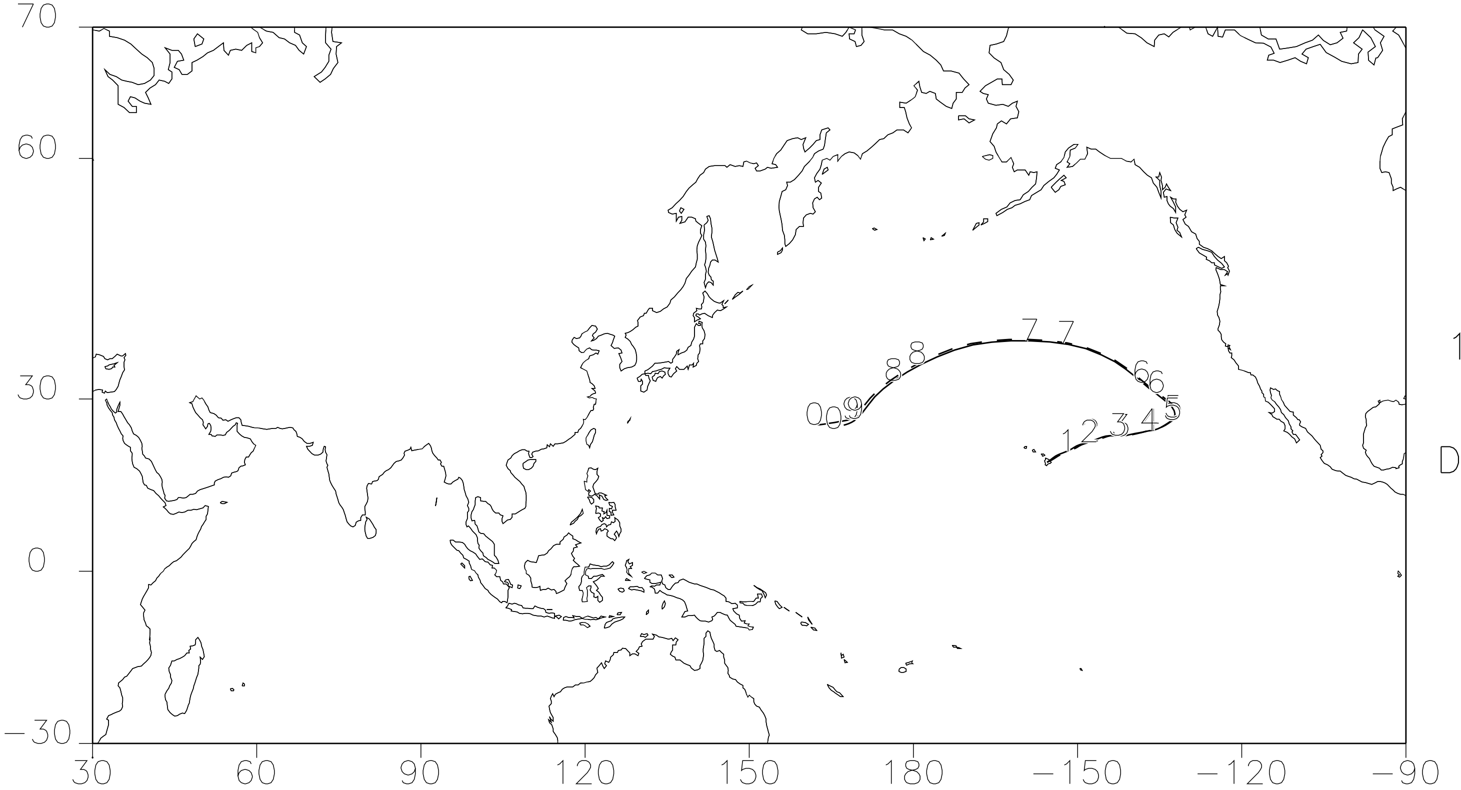
00UT

Day	km	hPa	C
0	1.5	853	13
1	2.1	792	11
2	2.3	773	9
3	2.7	743	8
4	3.2	700	6
5	3.9	643	2
6	5.4	526	–11
7	6.2	467	–20
8	4.6	571	–9
9	1.8	818	8
10	0.7	926	16

06UT

Day	km	hPa	C
0	1.5	853	13
1	2.2	787	10
2	2.5	762	8
3	2.7	739	8
4	3.2	694	6
5	3.9	643	2
6	4.5	587	–4
7	3.7	649	0
8	2.9	727	5
9	2.8	734	8
10	3.0	714	5

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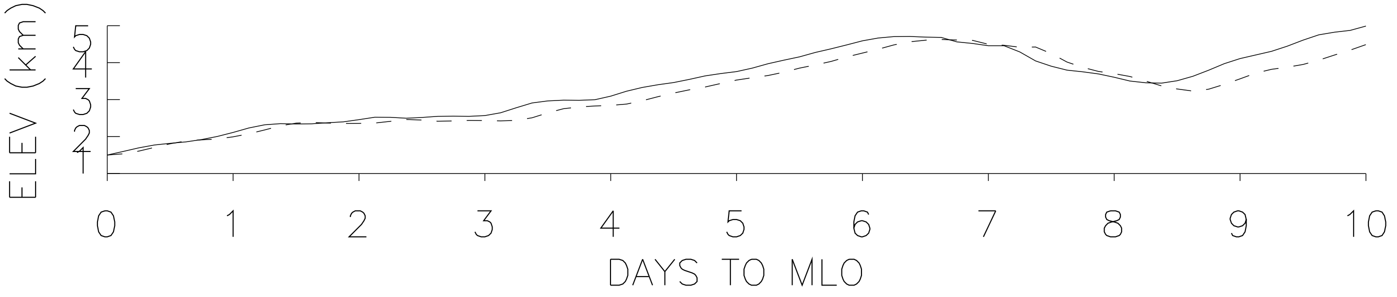


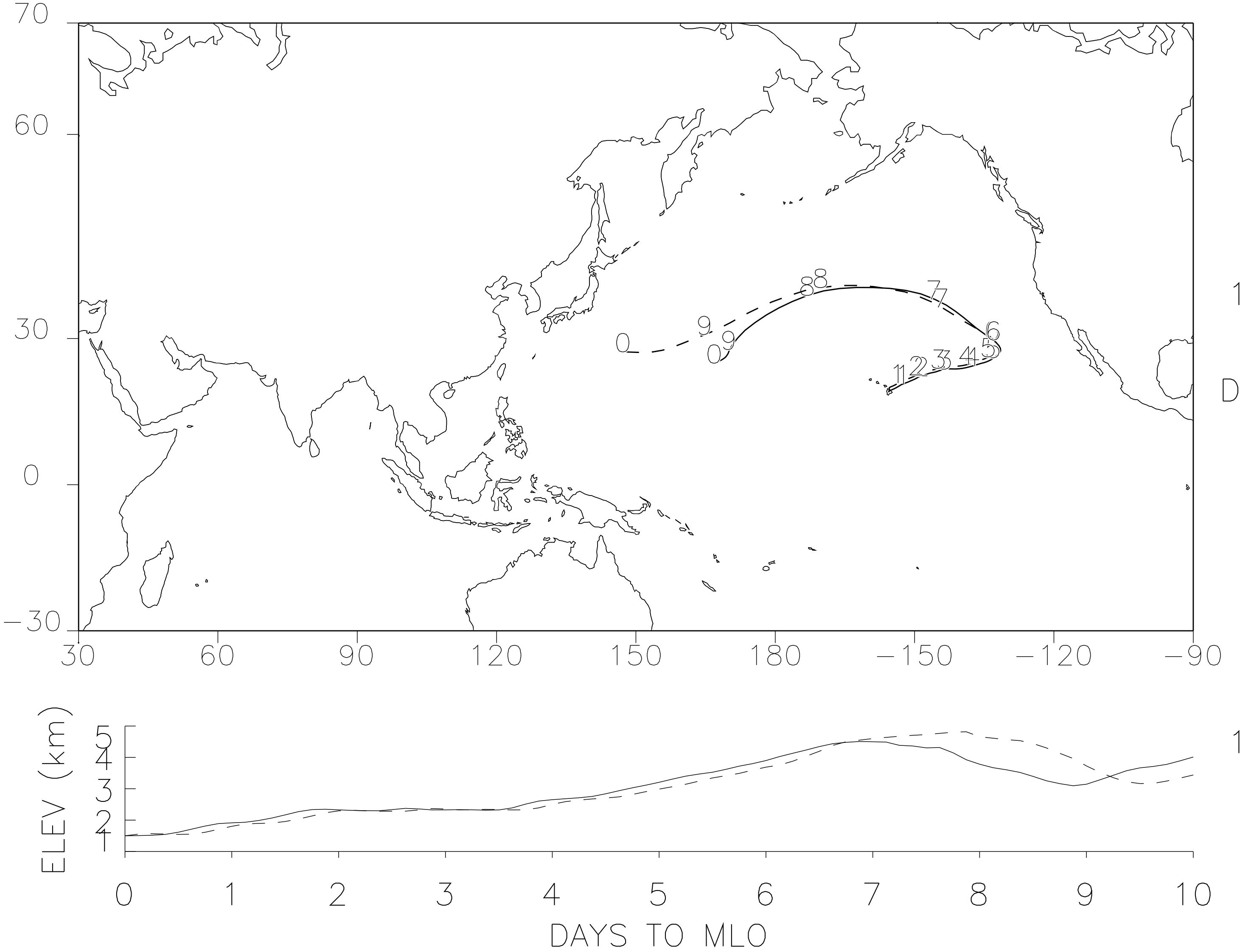
12UT

Day	km	hPa	C
0	1.5	851	13
1	2.1	794	10
2	2.5	763	9
3	2.6	752	8
4	3.1	706	6
5	3.8	651	3
6	4.6	583	–4
7	4.5	591	–3
8	3.6	663	4
9	4.1	624	3
10	5.0	558	–4

18UT

Day	km	hPa	C
0	1.5	851	13
1	2.0	806	12
2	2.4	773	10
3	2.4	766	9
4	2.8	729	8
5	3.5	672	4
6	4.3	609	–2
7	4.5	588	–4
8	3.7	651	3
9	3.6	667	6
10	4.5	593	0

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/26/2004 (Day of Year 117)
NCEP/NCAR Reanalysis 1 Data Set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ELEV (km)
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8
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10
DAYS TO MLO
00UT – solid
06UT – dashed

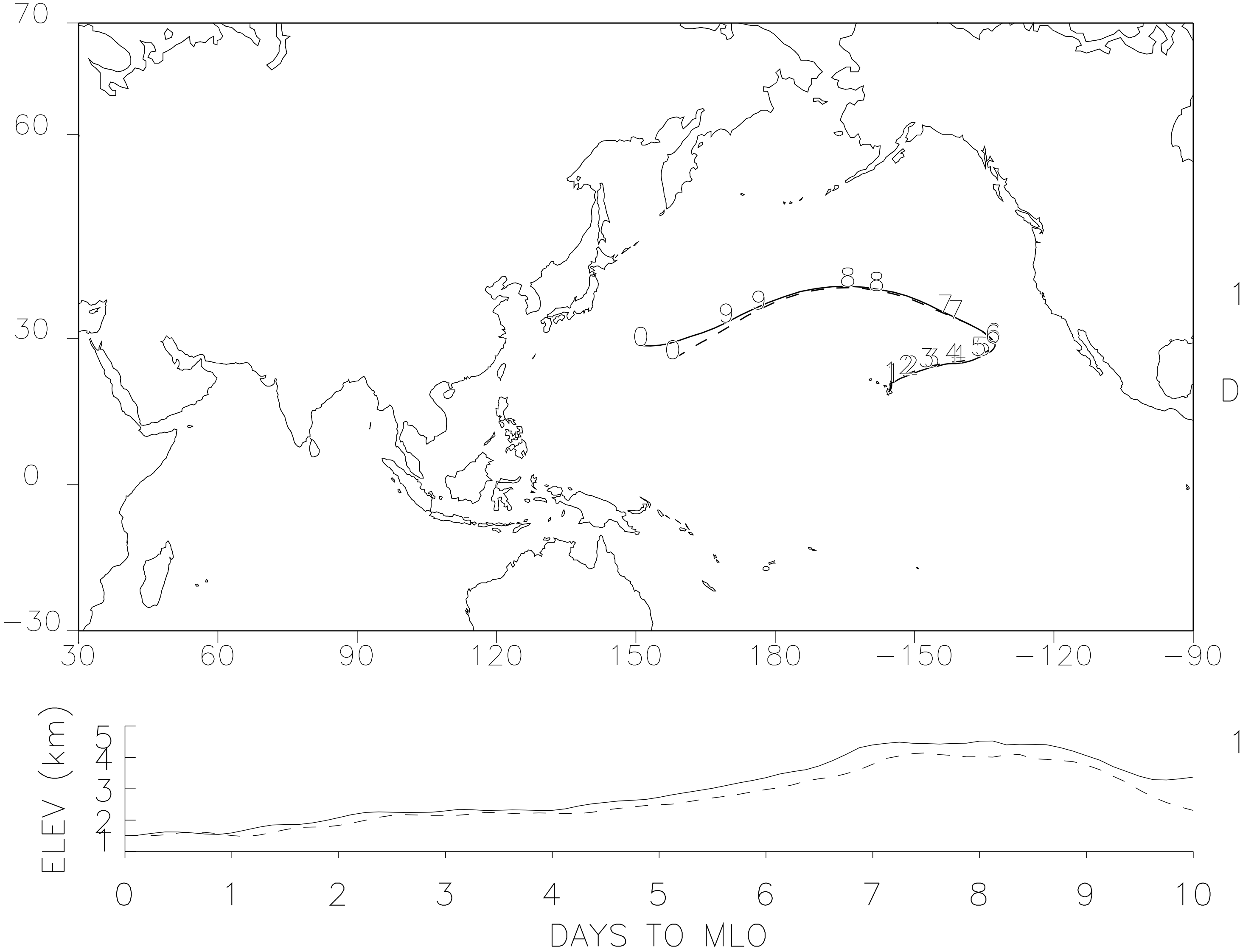
00UT

Day	km	hPa	C
0	1.5	851	14
1	1.9	812	12
2	2.3	775	10
3	2.3	775	9
4	2.7	745	8
5	3.2	697	6
6	3.9	638	0
7	4.5	587	−4
8	3.8	645	1
9	3.1	702	9
10	4.0	632	5

06UT

Day	km	hPa	C
0	1.5	851	13
1	1.8	823	12
2	2.3	778	9
3	2.4	774	9
4	2.5	759	9
5	3.0	717	7
6	3.7	657	2
7	4.6	582	−5
8	4.7	576	−5
9	3.7	647	5
10	3.4	666	7

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/26/2004 (Day of Year 117)
NCEP/NCAR Reanalysis 1 Data Set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ELEV (km)
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7
8
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10
DAYS TO MLO
12UT – solid
18UT – dashed

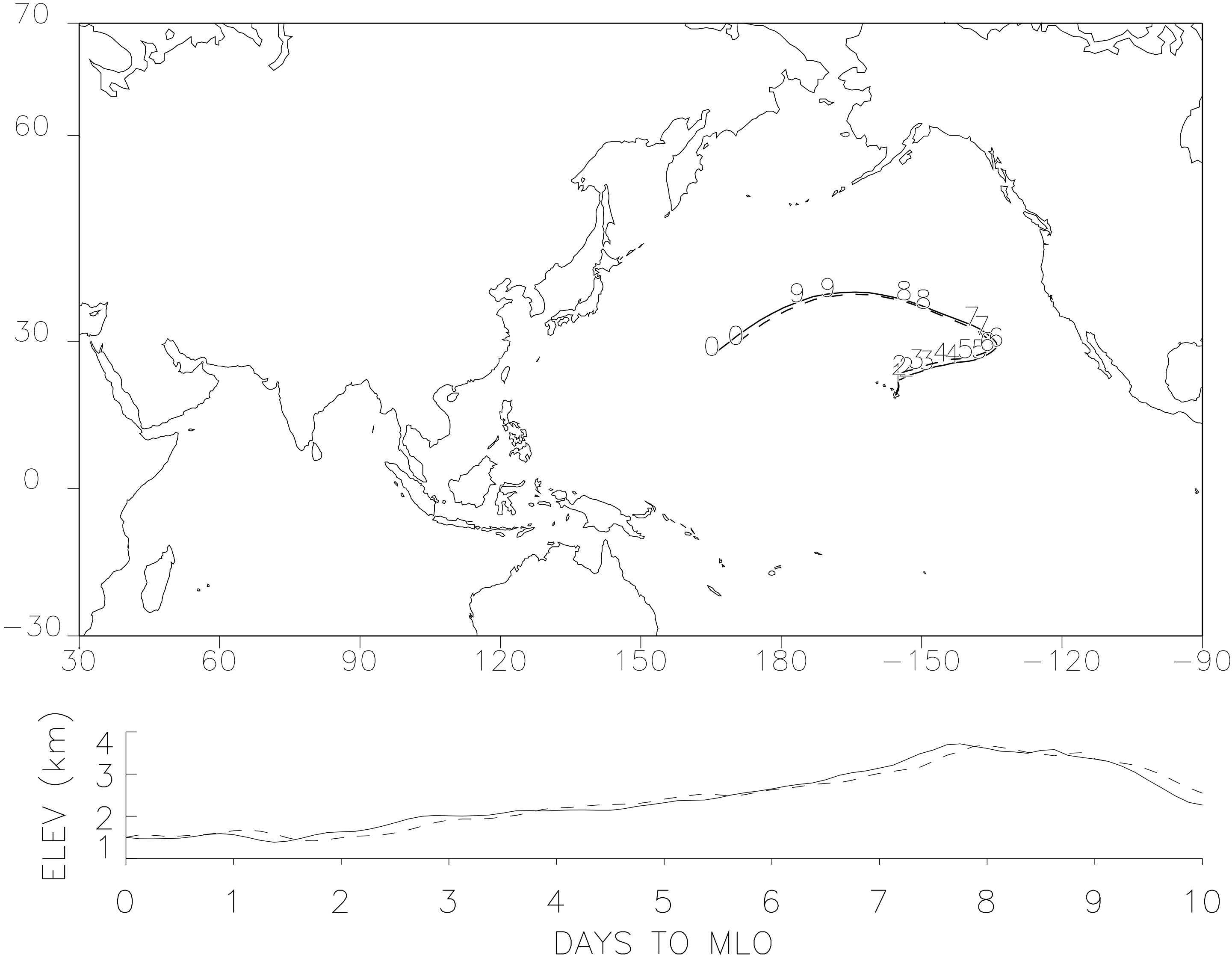
12UT

Day	km	hPa	C
0	1.5	850	13
1	1.6	843	13
2	2.1	797	10
3	2.3	778	9
4	2.3	776	9
5	2.7	739	8
6	3.4	685	5
7	4.4	597	−2
8	4.5	586	−5
9	4.1	621	1
10	3.4	673	8

18UT

Day	km	hPa	C
0	1.5	850	12
1	1.5	851	12
2	1.8	822	12
3	2.2	793	11
4	2.2	786	10
5	2.5	762	9
6	3.0	719	7
7	3.8	646	1
8	4.0	625	−1
9	3.8	645	2
10	2.3	769	14

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/27/2004 (Day of Year 118)
NCEP/NCAR Reanalysis 1 Data Set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6 6
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5 5
ELEV (km)
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4
5
6
7
8
9
10
DAYS TO MLO
00UT – solid
06UT – dashed

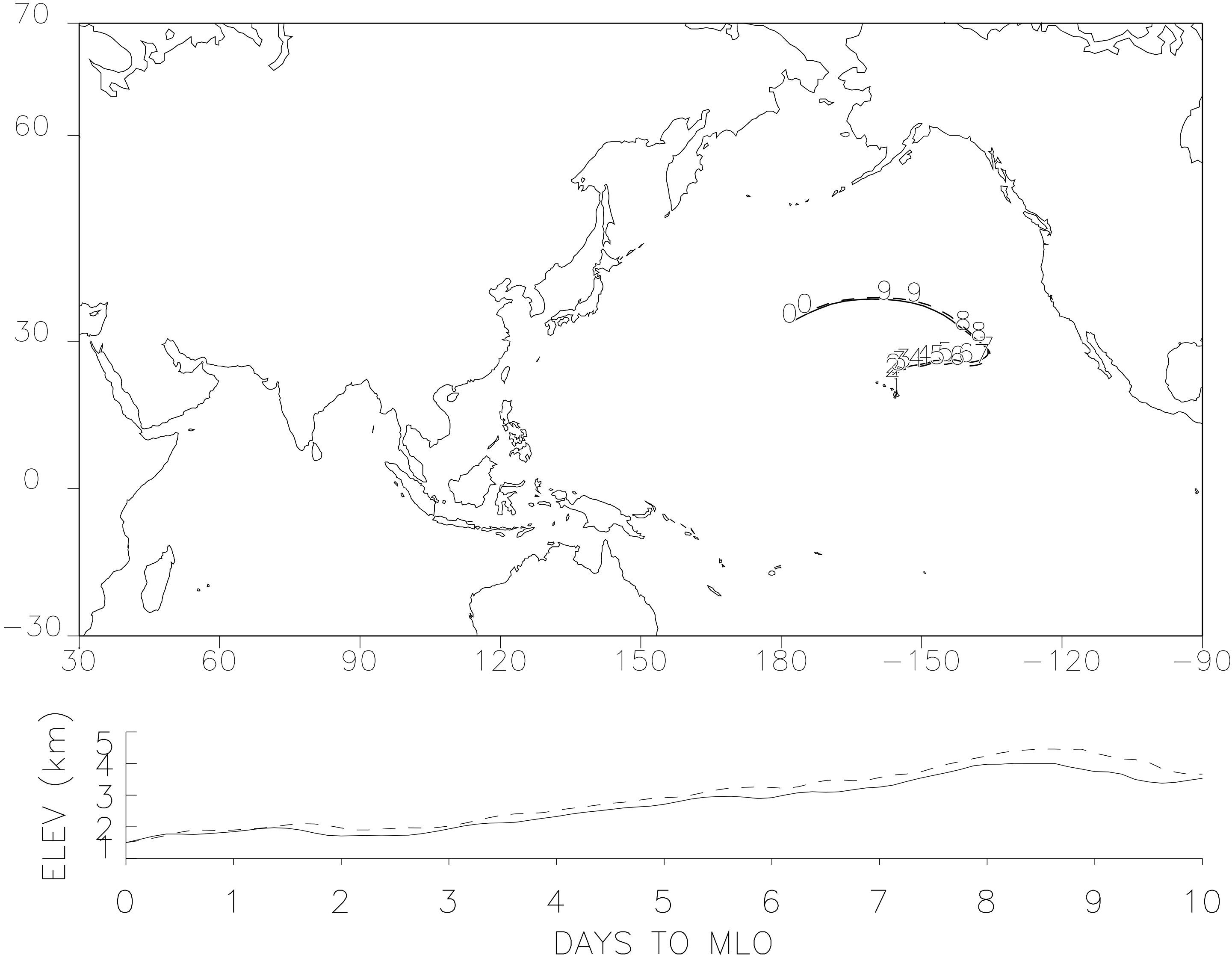
00UT

Day	km	hPa	C
0	1.5	850	13
1	1.6	845	13
2	1.6	841	13
3	2.0	806	11
4	2.1	794	10
5	2.3	776	9
6	2.6	747	8
7	3.1	700	4
8	3.6	659	2
9	3.4	679	4
10	2.3	778	14

06UT

Day	km	hPa	C
0	1.5	850	12
1	1.7	835	12
2	1.5	854	13
3	1.9	816	11
4	2.2	790	9
5	2.4	769	9
6	2.6	749	8
7	3.0	713	6
8	3.7	654	2
9	3.4	680	3
10	2.5	753	12

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
4/27/2004 (Day of Year 118)
NCEP/NCAR Reanalysis 1 Data Set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180
−150
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2
ELEV (km)
1
2
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7
8
9
10
DAYS TO MLO
12UT – solid
18UT – dashed

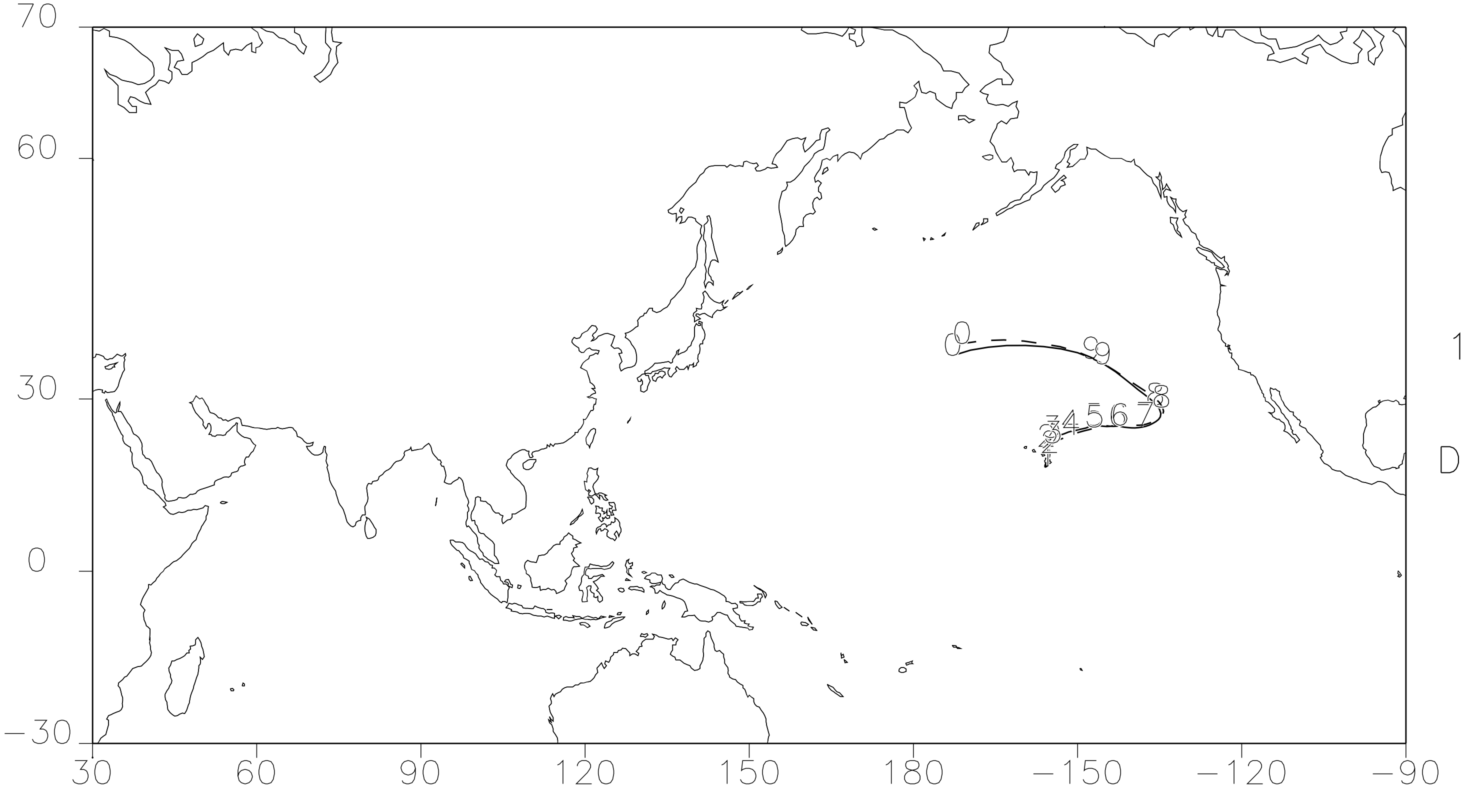
12UT

Day	km	hPa	C
0	1.5	850	12
1	1.8	816	10
2	1.7	832	12
3	1.9	813	10
4	2.3	777	9
5	2.7	740	7
6	2.9	722	7
7	3.3	694	6
8	4.0	631	0
9	3.7	649	2
10	3.5	671	4

18UT

Day	km	hPa	C
0	1.5	851	13
1	1.9	811	10
2	2.0	806	10
3	2.0	804	11
4	2.5	760	8
5	2.9	722	6
6	3.2	696	6
7	3.6	670	5
8	4.2	612	−1
9	4.3	603	−2
10	3.7	658	3

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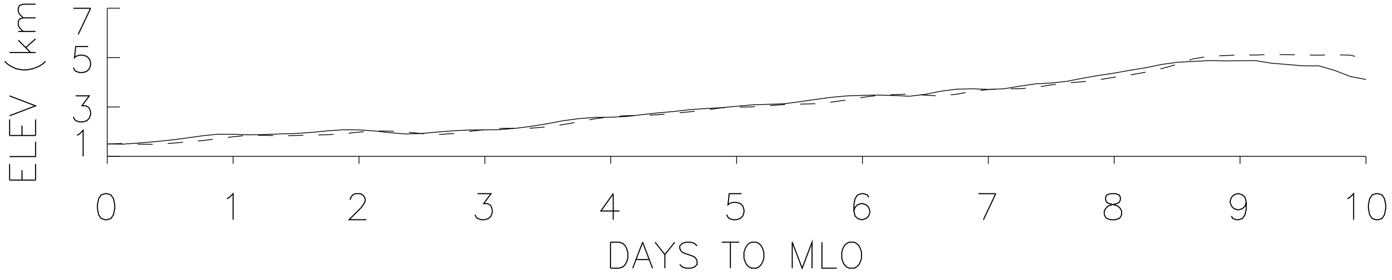


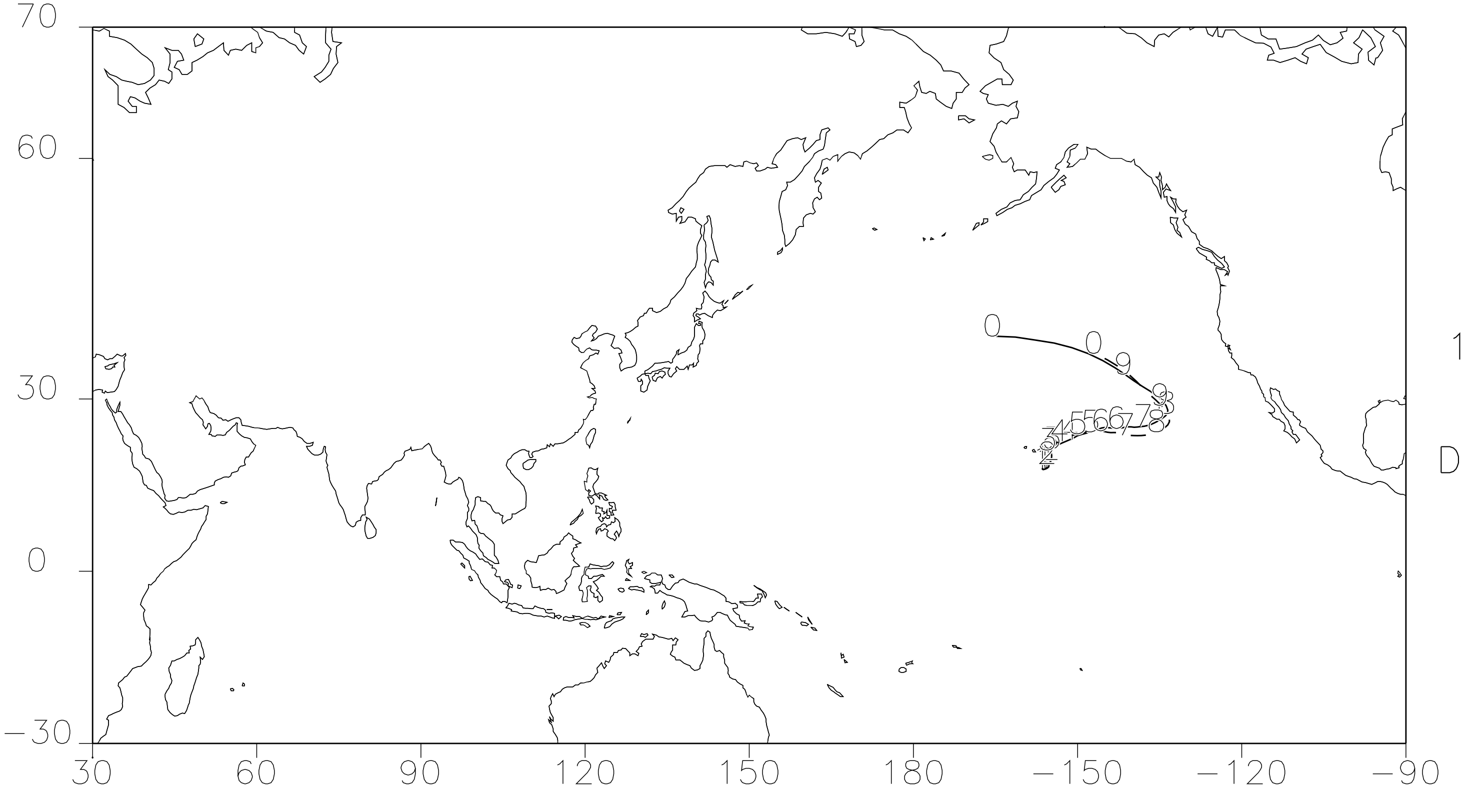
00UT

Day	km	hPa	C
0	1.5	851	13
1	1.9	811	11
2	2.1	795	10
3	2.1	798	11
4	2.6	752	7
5	3.0	713	6
6	3.5	675	4
7	3.7	655	4
8	4.4	603	–1
9	4.9	562	–6
10	4.1	621	0

06UT

Day	km	hPa	C
0	1.5	851	12
1	1.8	821	11
2	2.0	804	11
3	2.1	796	11
4	2.6	750	7
5	3.0	717	5
6	3.4	683	4
7	3.7	657	3
8	4.2	617	0
9	5.1	546	–8
10	4.9	556	–6

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

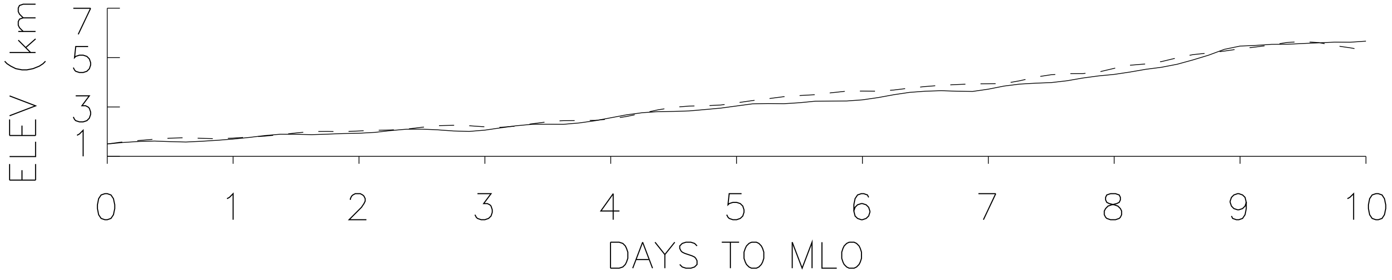


12UT

Day	km	hPa	C
0	1.5	851	12
1	1.7	830	12
2	1.9	807	11
3	2.1	797	11
4	2.6	752	8
5	3.0	711	5
6	3.3	690	5
7	3.7	655	3
8	4.3	608	0
9	5.5	521	−10
10	5.7	506	−12

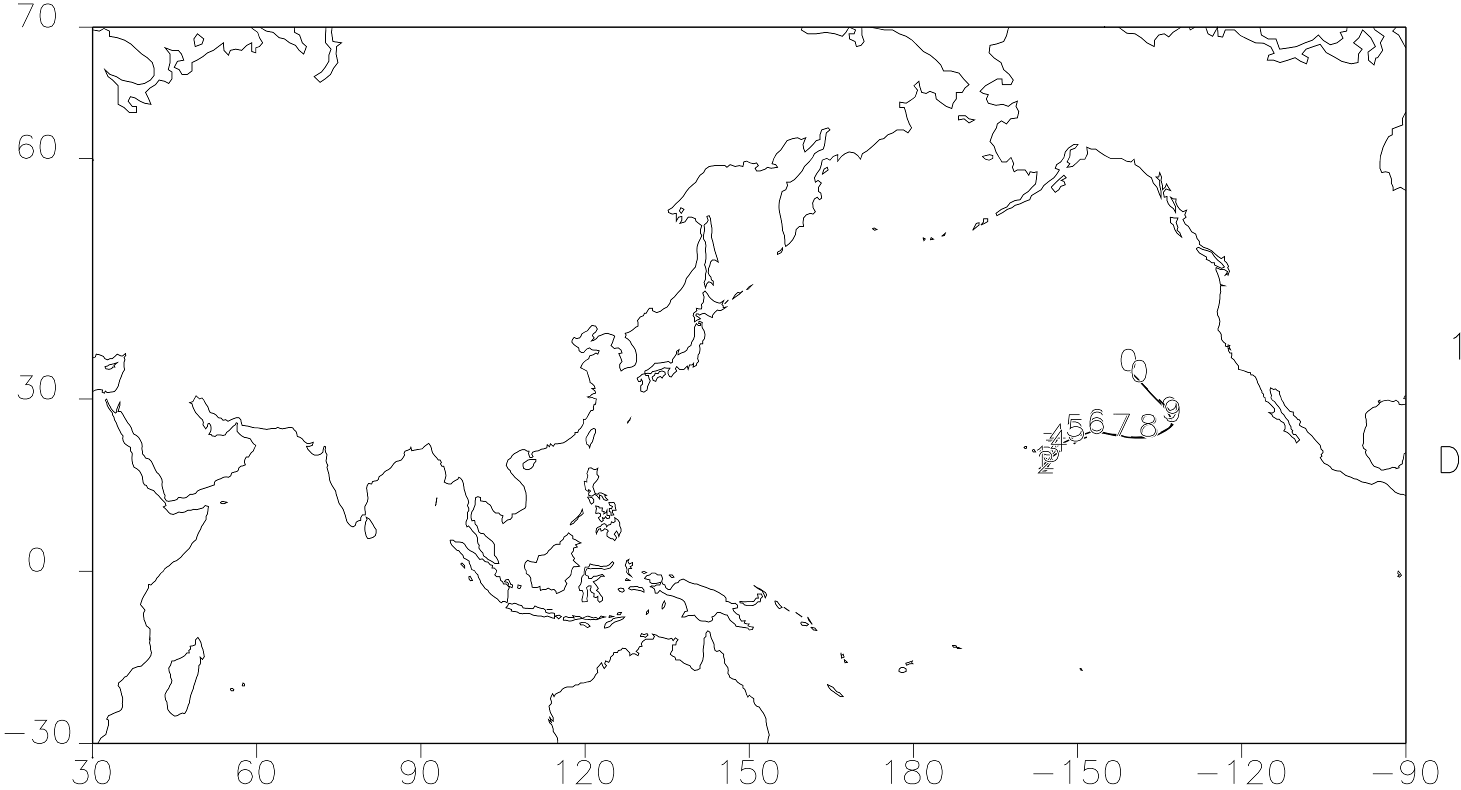
18UT

Day	km	hPa	C
0	1.5	853	13
1	1.7	828	13
2	2.0	799	10
3	2.2	784	10
4	2.5	757	9
5	3.2	701	4
6	3.6	662	3
7	3.9	638	2
8	4.6	591	−1
9	5.4	532	−8
10	5.3	533	−9



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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−30
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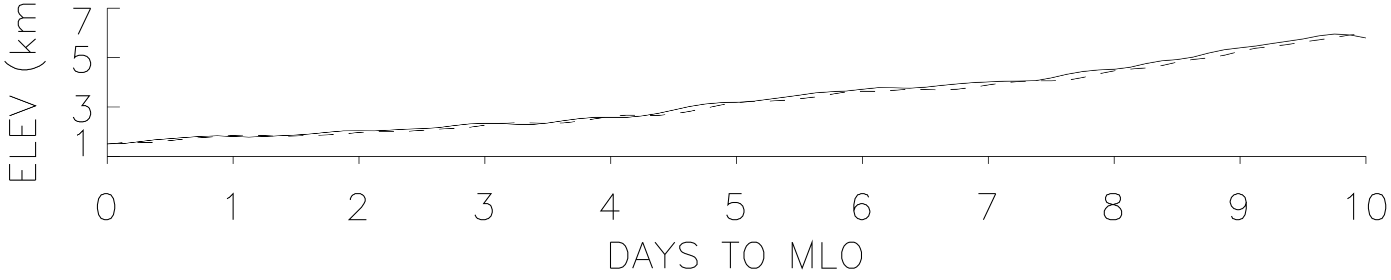
150
180
−150
−120
−90
0
1
2
3
4
5
6
7
8
9



00UT

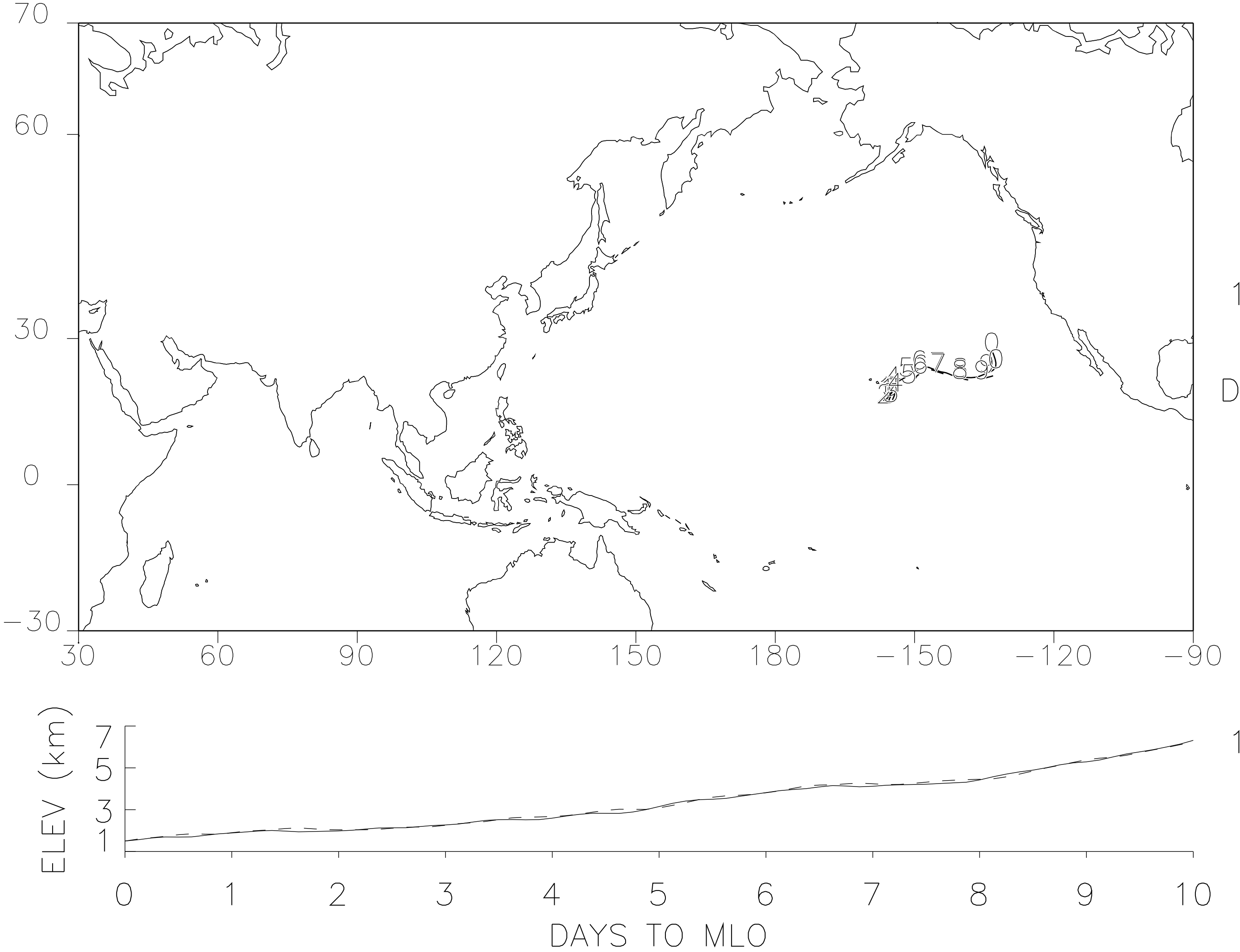
Day	km	hPa	C
0	1.5	852	12
1	1.8	821	12
2	2.0	797	11
3	2.3	770	10
4	2.6	750	9
5	3.2	698	4
6	3.7	655	1
7	4.0	630	1
8	4.5	592	−1
9	5.4	529	−8
10	5.8	498	−12

06UT

Day	km	hPa	C
0	1.5	853	13
1	1.8	817	12
2	2.0	804	11
3	2.3	777	10
4	2.6	746	9
5	3.2	700	4
6	3.6	663	2
7	3.9	641	2
8	4.5	598	−1
9	5.3	541	−6
10	6.0	490	−13

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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30
0
–30
30
60
90
120
150
180
–150
–120
–90
0
4
5
6
7
8
9
ELEV (km)
7
5
3
1
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
12UT – solid
18UT – dashed

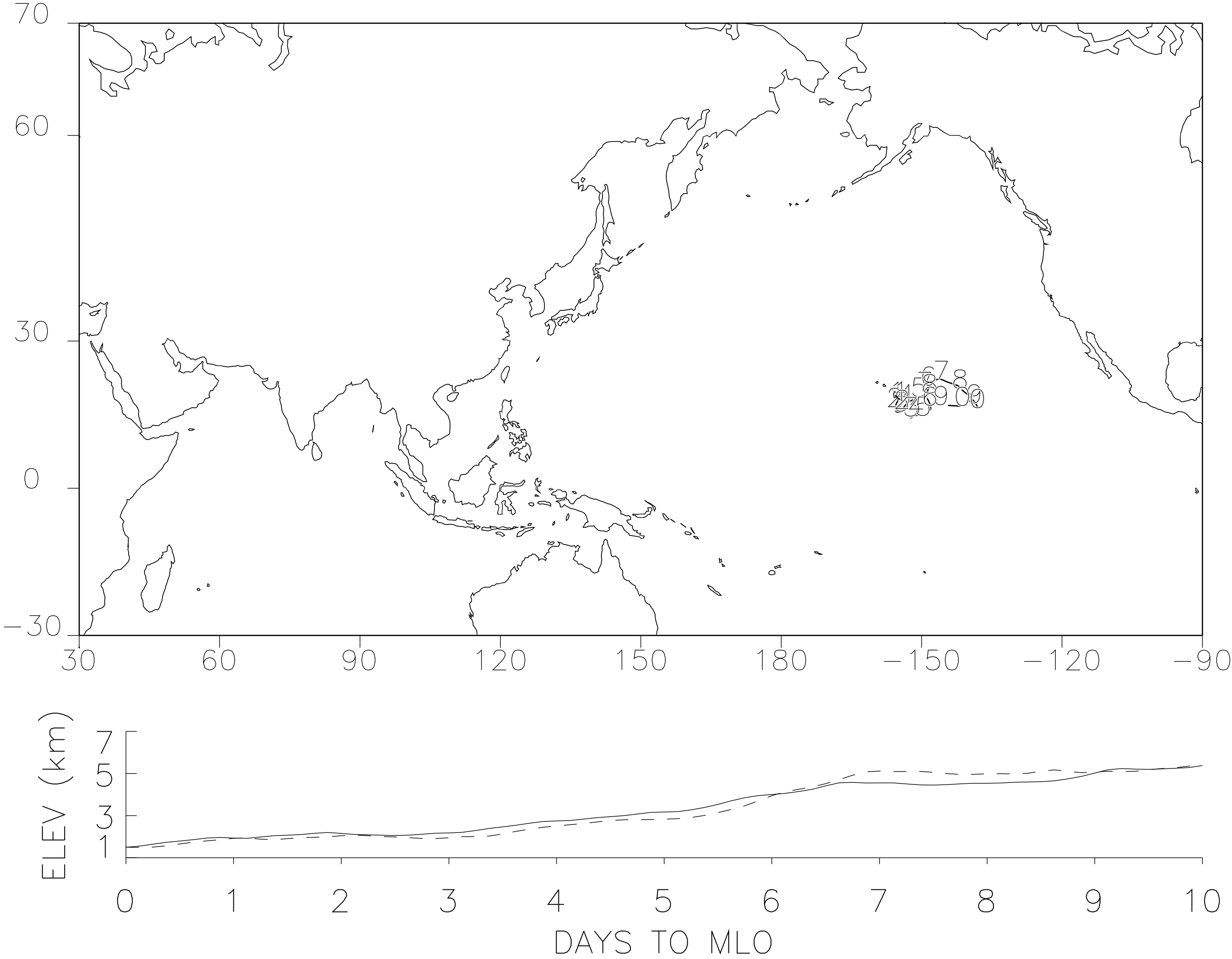
12UT

Day	km	hPa	C
0	1.5	852	13
1	1.9	813	11
2	2.0	802	11
3	2.3	775	10
4	2.6	747	9
5	3.2	700	5
6	3.8	647	1
7	4.1	622	–1
8	4.4	599	0
9	5.3	537	–7
10	6.3	467	–15

18UT

Day	km	hPa	C
0	1.5	853	13
1	1.9	814	12
2	2.0	799	12
3	2.3	777	10
4	2.7	740	9
5	3.1	706	6
6	3.8	648	1
7	4.2	614	–1
8	4.5	599	–1
9	5.4	532	–8
10	6.2	475	–13

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


70
60
30
0
–30
30
60
90
120
150
180
–150
–120
–90
ELEV (km)
7
5
3
1
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
00UT – solid
06UT – dashed

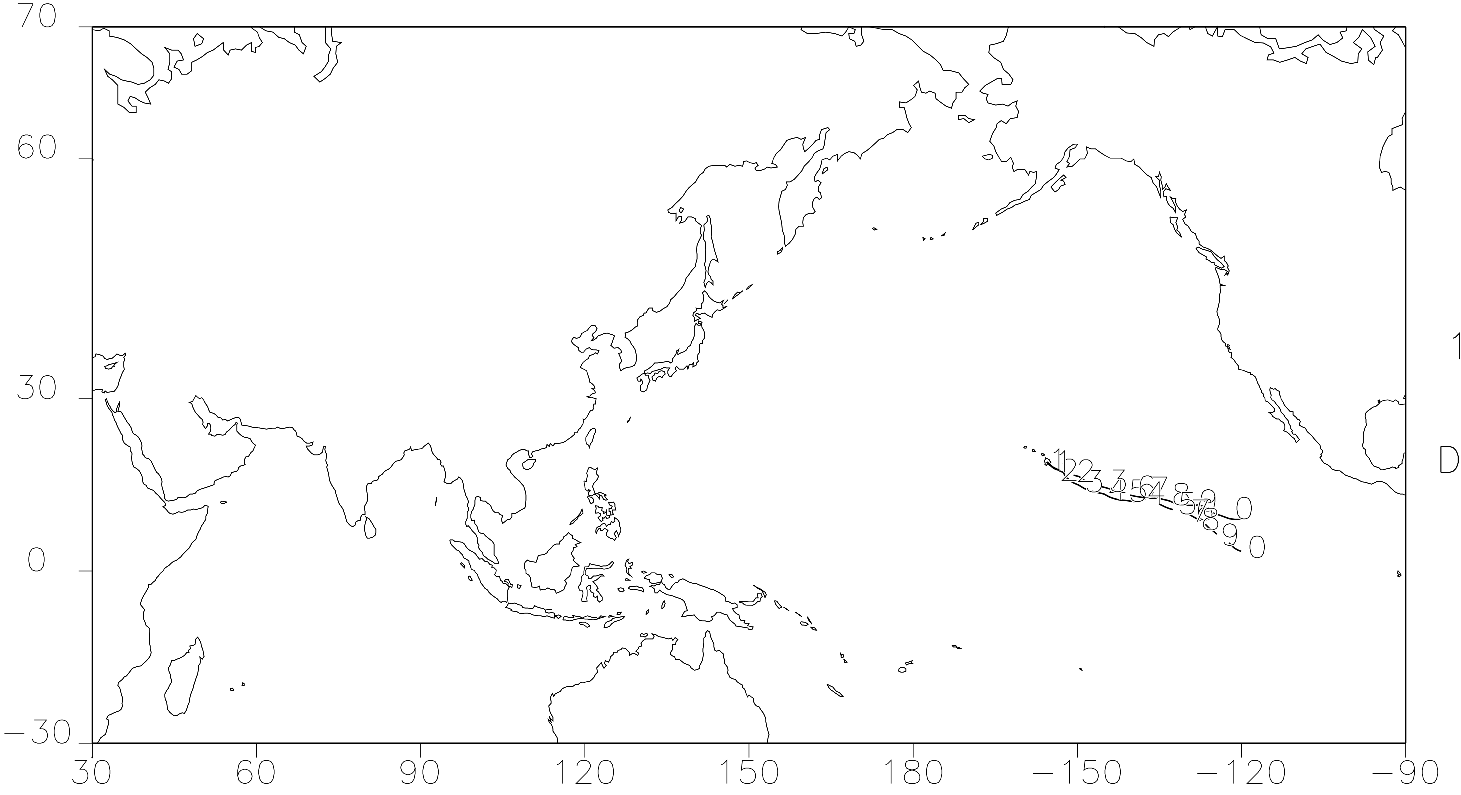
00UT

Day	km	hPa	C
0	1.5	852	14
1	1.9	809	12
2	2.2	787	12
3	2.2	783	11
4	2.7	732	9
5	3.2	697	7
6	4.0	631	1
7	4.6	589	–4
8	4.5	590	–1
9	5.0	554	–4
10	5.4	530	–7

06UT

Day	km	hPa	C
0	1.5	853	13
1	1.9	812	13
2	2.0	798	12
3	2.0	805	12
4	2.5	753	10
5	2.8	726	10
6	3.9	636	3
7	5.1	549	–7
8	5.0	558	–5
9	5.1	552	–3
10	5.4	527	–6

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

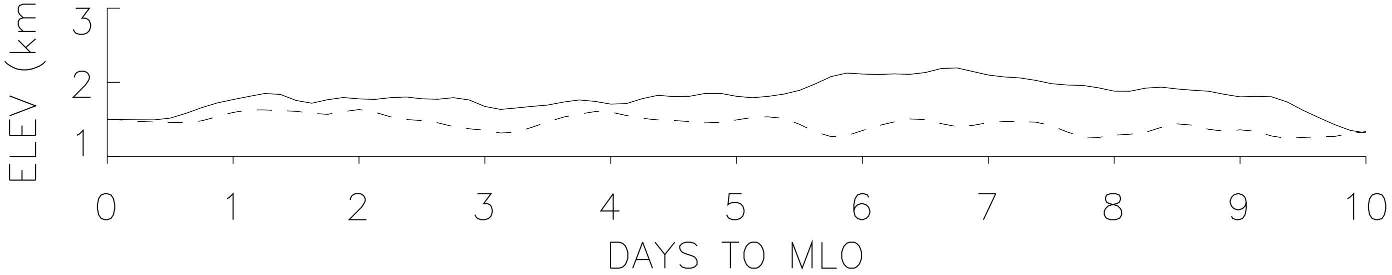

70
60
30
0
−30
30
60
90
120
150
180
−150
−120
−90

12UT

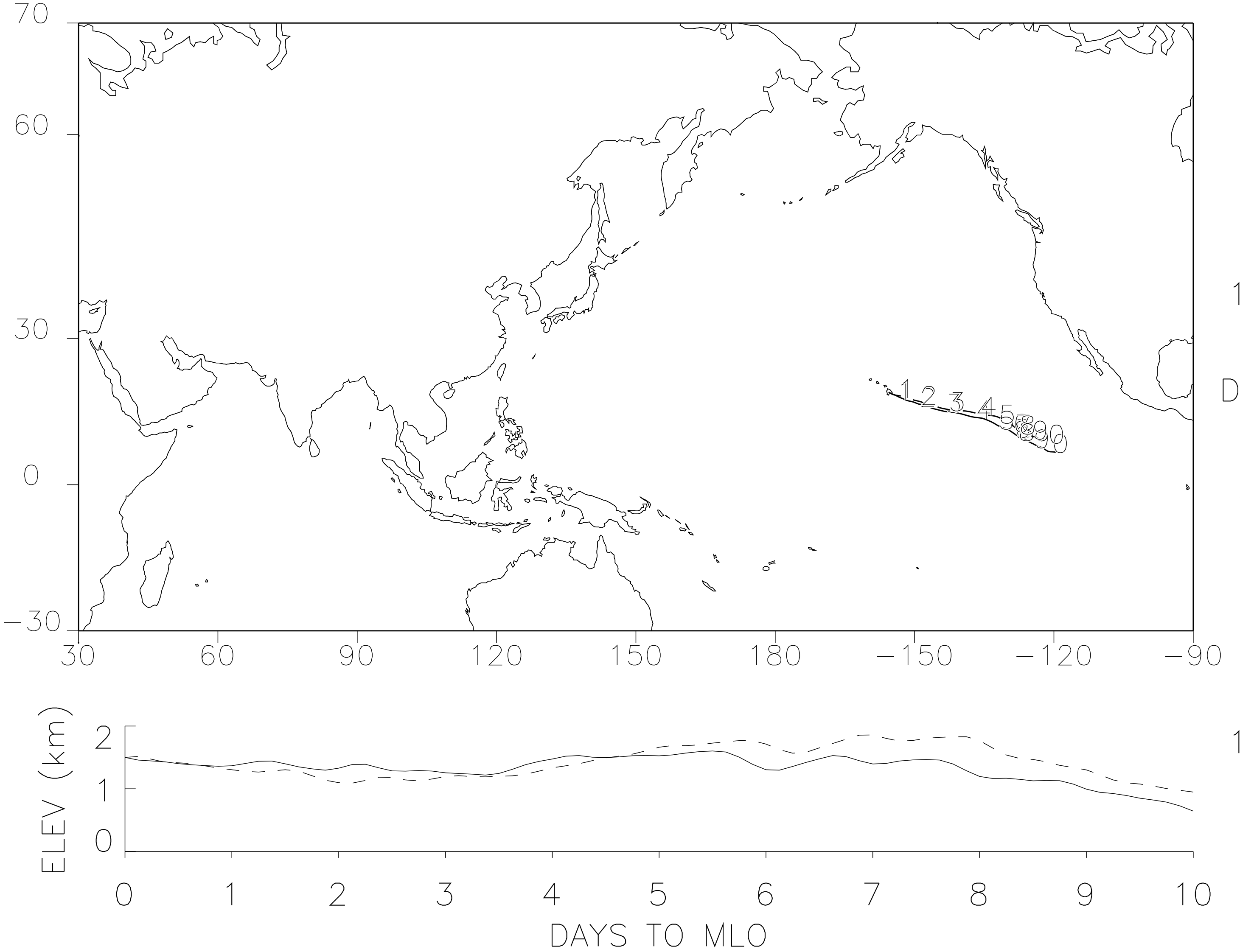
Day	km	hPa	C
0	1.5	852	14
1	1.8	826	13
2	1.8	824	13
3	1.7	832	15
4	1.7	828	14
5	1.8	819	14
6	2.1	791	12
7	2.1	793	12
8	1.9	813	14
9	1.8	821	14
10	1.3	869	18

18UT

Day	km	hPa	C
0	1.5	855	14
1	1.6	844	14
2	1.6	842	15
3	1.4	868	17
4	1.6	842	15
5	1.5	852	16
6	1.3	868	17
7	1.5	857	16
8	1.3	875	17
9	1.4	868	17
10	1.3	870	17



3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/1/2004 (Day of Year 122)
NCEP/NCAR Reanalysis 1 Data Set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30
60
90
120
150
180
–150
–120
–90
1
2
3
4
5
6
7
8
9
10
ELEV (km)
2
1
0
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO

00UT

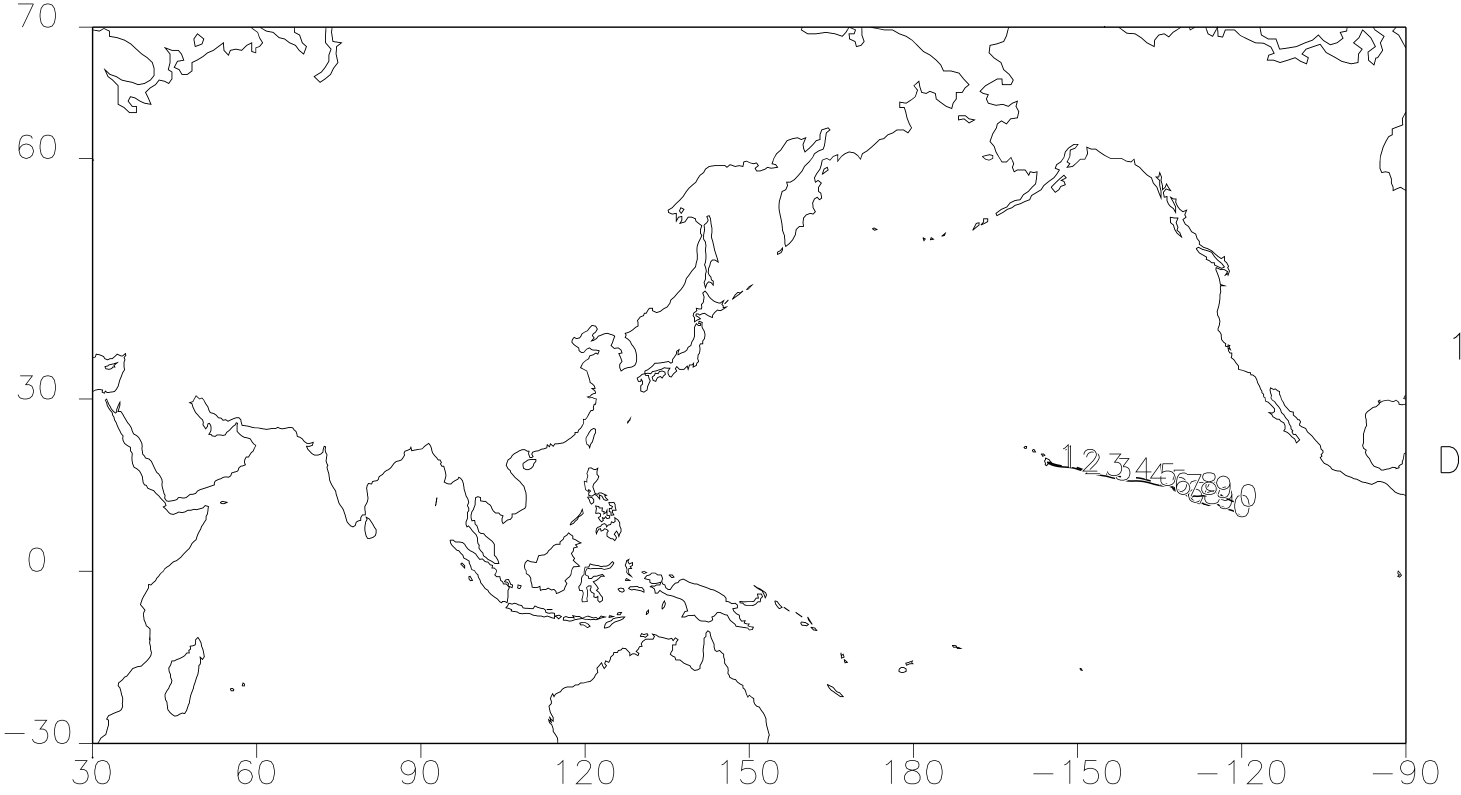
Day	km	hPa	C
0	1.5	854	14
1	1.4	866	16
2	1.3	870	17
3	1.3	876	18
4	1.5	852	16
5	1.5	845	15
6	1.3	869	18
7	1.4	860	16
8	1.2	881	17
9	1.0	903	20
10	0.6	937	23

06UT

Day	km	hPa	C
0	1.5	854	14
1	1.3	874	16
2	1.1	895	19
3	1.2	884	18
4	1.3	868	18
5	1.7	836	15
6	1.7	830	15
7	1.9	818	14
8	1.8	827	13
9	1.3	874	17
10	0.9	910	21

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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60
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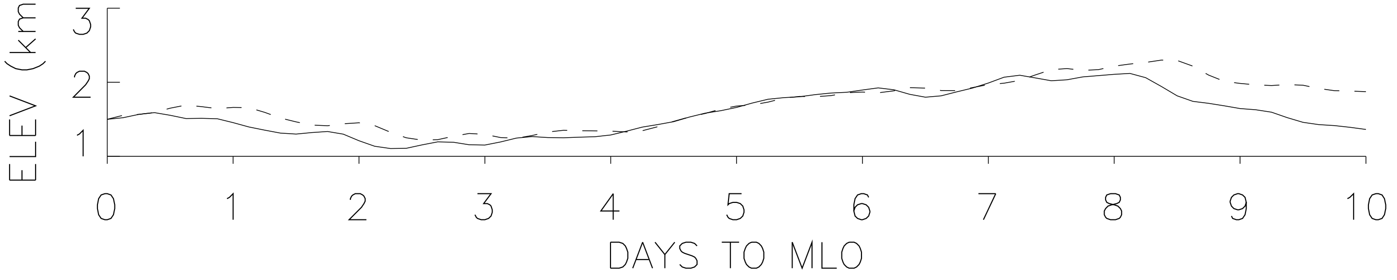
120
150
180
−150
−120
−90
1
2
3
4
5
6
7
8
9
10

12UT

Day	km	hPa	C
0	1.5	853	15
1	1.5	857	15
2	1.2	882	18
3	1.2	887	17
4	1.3	872	18
5	1.7	834	14
6	1.9	811	14
7	2.0	803	13
8	2.1	792	12
9	1.6	837	14
10	1.4	865	17

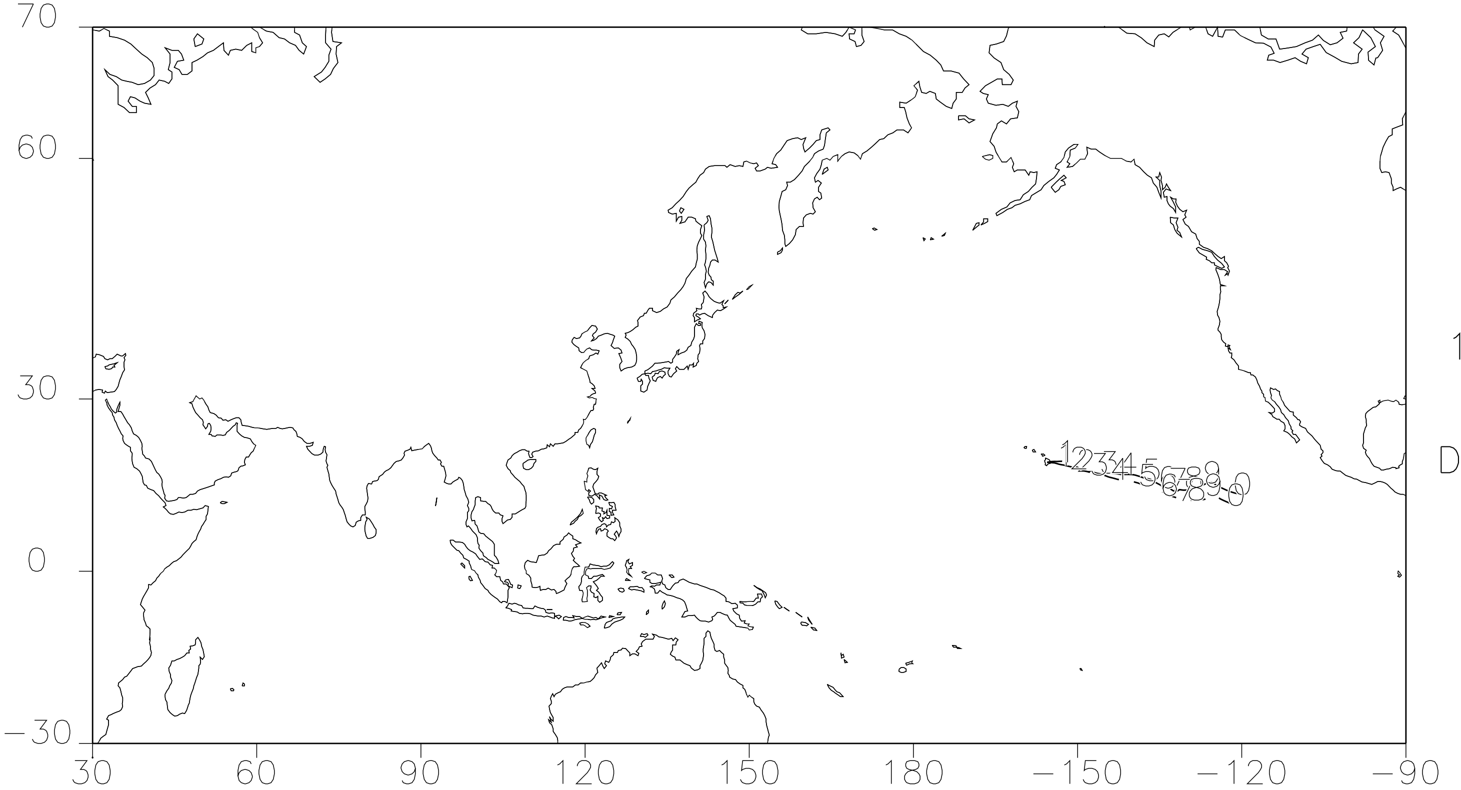
18UT

Day	km	hPa	C
0	1.5	855	15
1	1.7	839	15
2	1.5	858	15
3	1.3	876	17
4	1.3	870	17
5	1.7	835	15
6	1.9	815	14
7	2.0	807	14
8	2.2	784	13
9	2.0	807	14
10	1.9	818	15



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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180
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–120
–90
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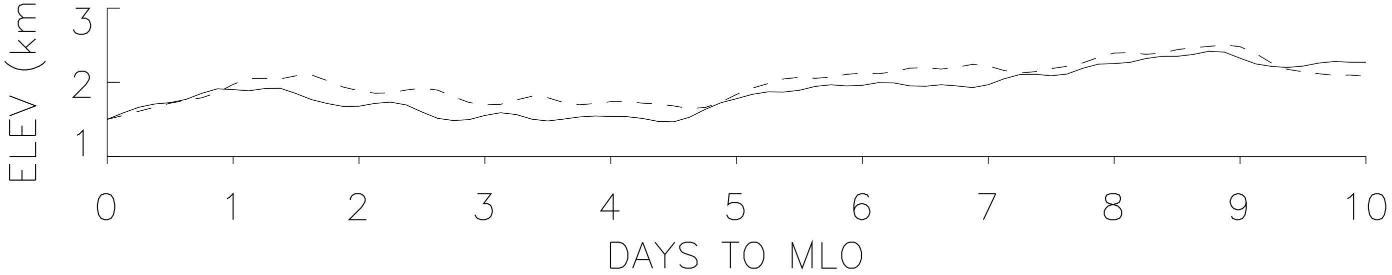


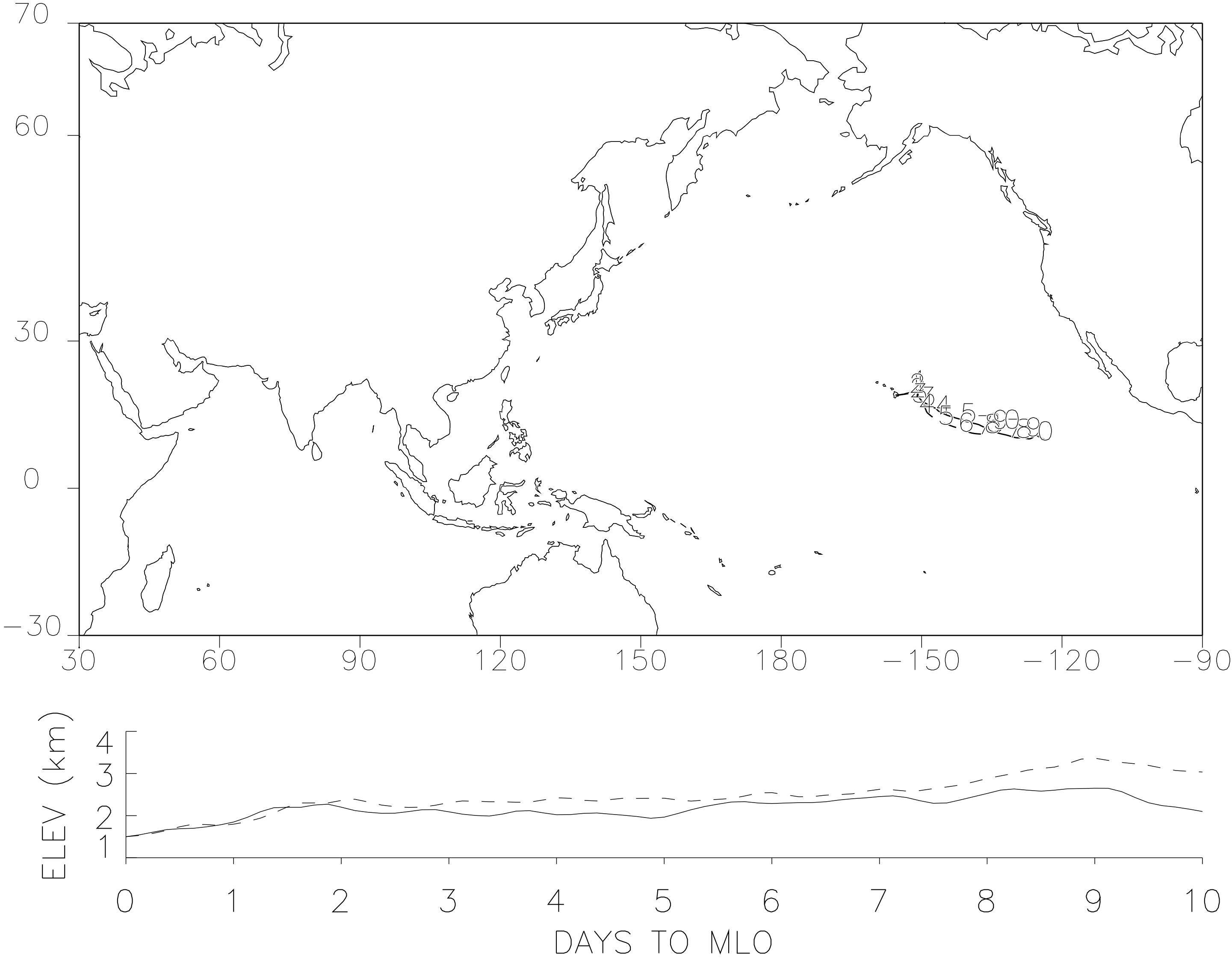
00UT

Day	km	hPa	C
0	1.5	854	17
1	1.9	814	14
2	1.7	835	15
3	1.6	849	16
4	1.5	848	16
5	1.8	822	14
6	2.0	804	12
7	2.0	804	14
8	2.3	778	12
9	2.3	772	12
10	2.3	778	13

06UT

Day	km	hPa	C
0	1.5	855	18
1	2.0	809	14
2	1.9	816	14
3	1.7	835	16
4	1.7	830	15
5	1.8	818	15
6	2.1	791	13
7	2.2	782	13
8	2.4	767	12
9	2.5	760	10
10	2.1	798	13

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/2/2004 (Day of Year 123)
NCEP/NCAR Reanalysis 1 Data Set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60
30
0
–30
30
60
90
120
150
180
–150
–120
–90
ELEV (km)
4
3
2
1
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
12UT – solid
18UT – dashed

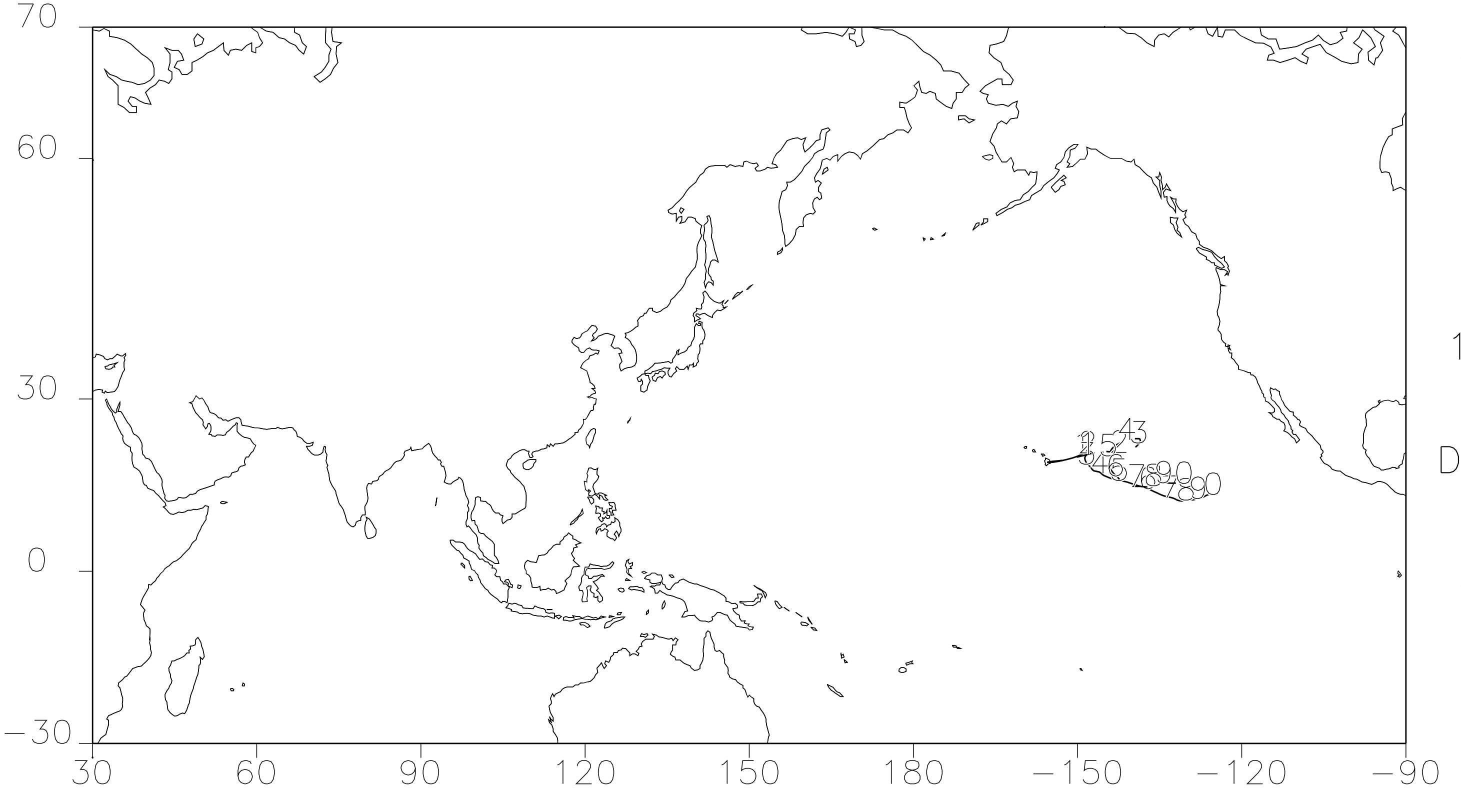
12UT

Day	km	hPa	C
0	1.5	854	18
1	1.8	820	14
2	2.2	785	13
3	2.1	795	13
4	2.0	800	13
5	2.0	805	14
6	2.3	773	12
7	2.5	758	12
8	2.5	753	11
9	2.7	742	10
10	2.1	793	12

18UT

Day	km	hPa	C
0	1.5	855	18
1	1.8	827	16
2	2.4	772	12
3	2.3	775	12
4	2.4	766	11
5	2.4	765	11
6	2.5	752	10
7	2.6	745	11
8	2.9	723	10
9	3.4	683	7
10	3.0	711	11

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/3/2004 (Day of Year 124)
NCEP/NCAR Reanalysis 1 Data Set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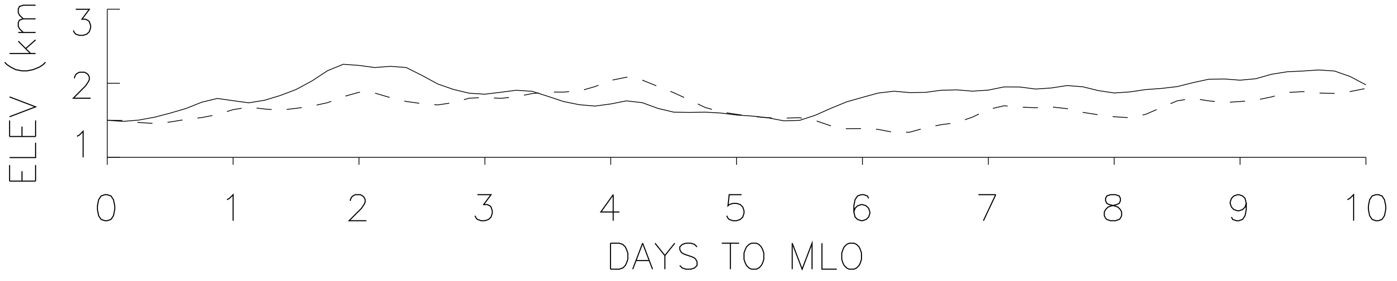
−30
30
60
90
120
150
180
−150
−120
−90
1
2
3
4
5
6
7
8
9
0

00UT

Day	km	hPa	C
0	1.5	855	18
1	1.8	830	17
2	2.2	783	12
3	1.9	818	14
4	1.7	832	15
5	1.6	845	16
6	1.8	819	14
7	1.9	808	13
8	1.9	813	14
9	2.0	798	13
10	2.0	804	13

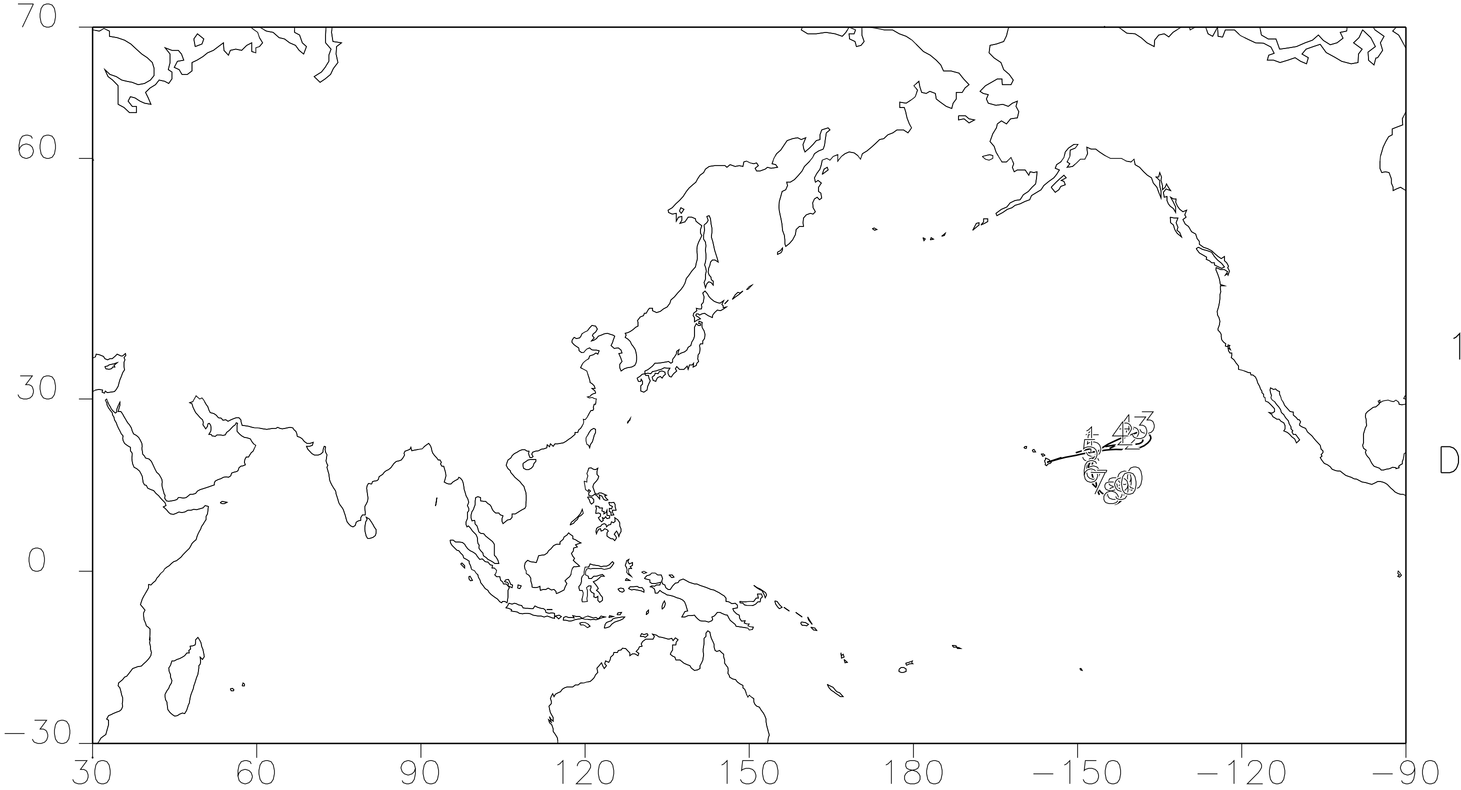
06UT

Day	km	hPa	C
0	1.5	857	19
1	1.6	842	18
2	1.9	819	15
3	1.8	825	15
4	2.0	802	13
5	1.6	845	16
6	1.4	862	16
7	1.6	837	14
8	1.5	846	14
9	1.8	829	15
10	1.9	812	13



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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-30
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-150
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-90
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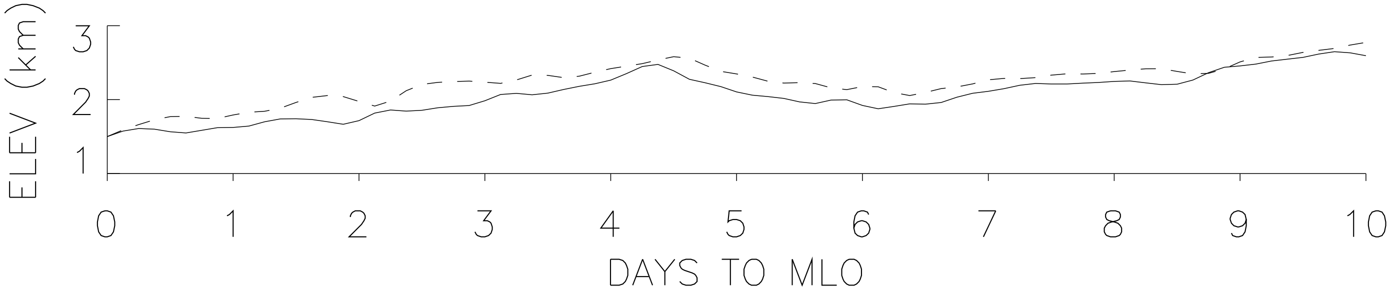
2
3
4
5
6
7
8
9
0



12UT

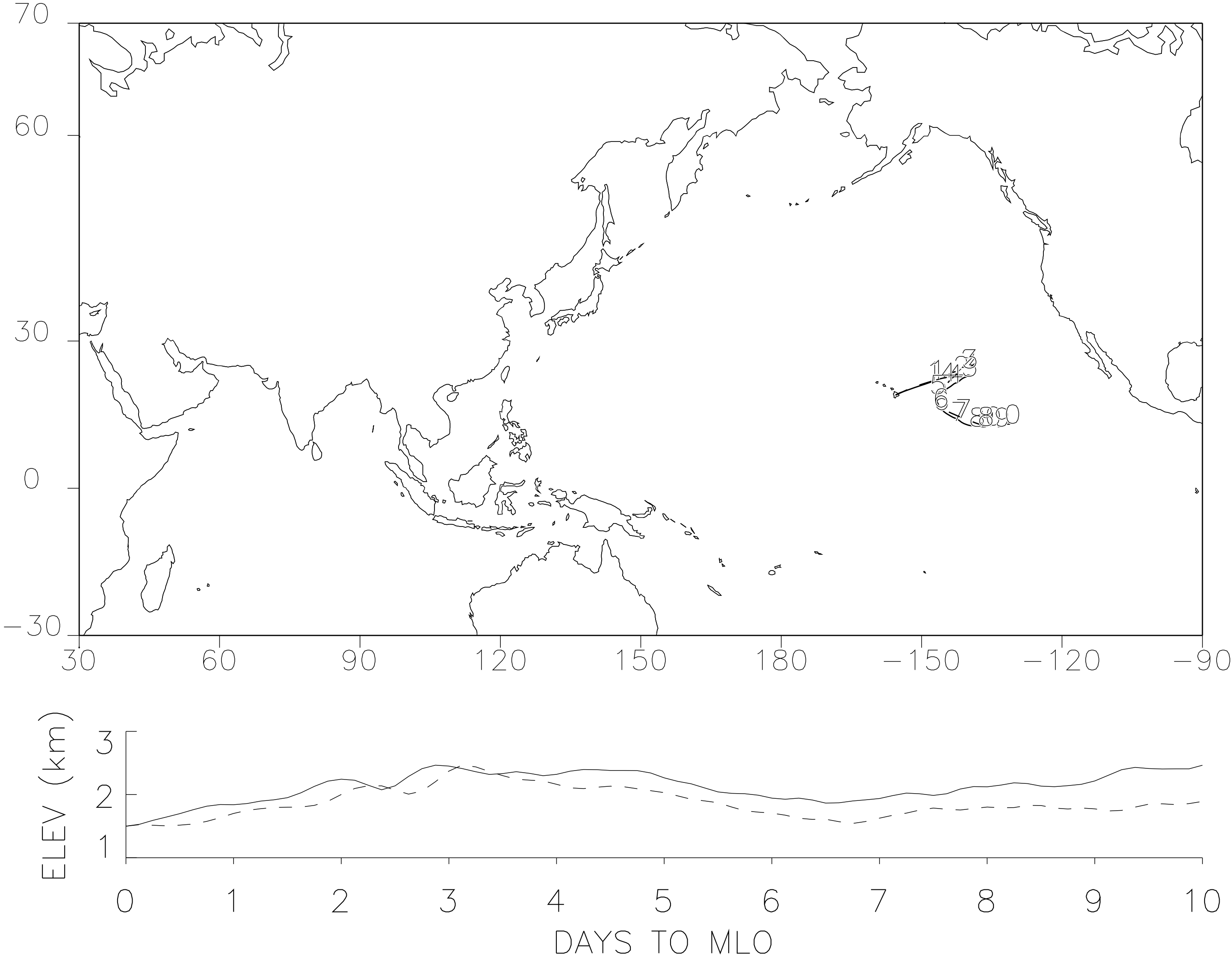
Day	km	hPa	C
0	1.5	856	17
1	1.6	843	17
2	1.7	833	16
3	2.0	808	13
4	2.3	778	10
5	2.1	792	11
6	1.9	808	13
7	2.1	789	12
8	2.2	778	12
9	2.5	759	10
10	2.6	747	11

18UT

Day	km	hPa	C
0	1.5	857	16
1	1.8	828	14
2	2.0	811	16
3	2.2	786	13
4	2.4	766	11
5	2.3	773	10
6	2.2	787	11
7	2.3	777	11
8	2.4	767	12
9	2.5	756	10
10	2.8	733	10

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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60
30
0
−30
30
60
90
120
150
180
−150
−120
−90
1
2
3
4
5
6
7
8
9
10
ELEV (km)
3
2
1
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO

00UT

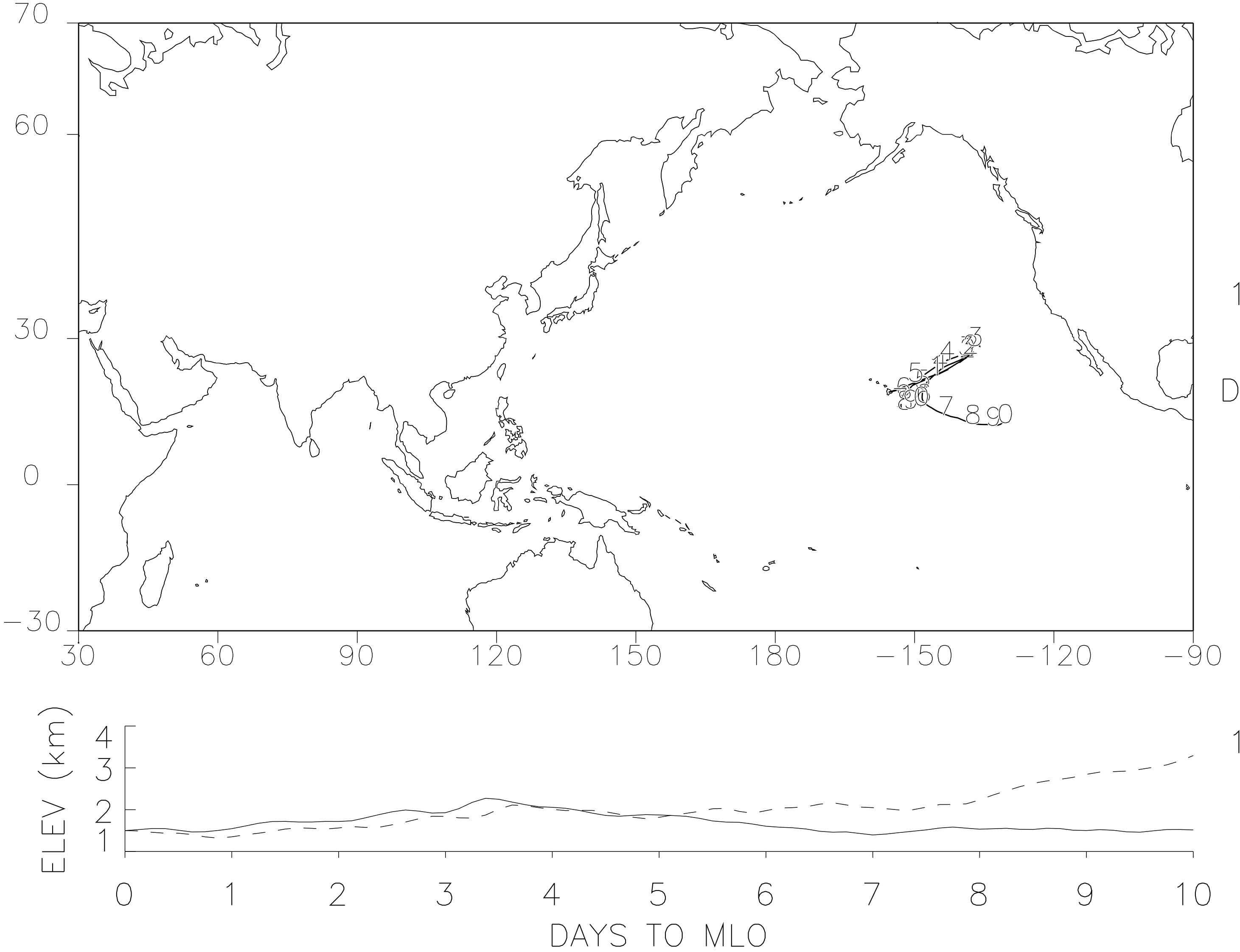
Day	km	hPa	C
0	1.5	856	16
1	1.8	823	13
2	2.2	785	12
3	2.5	764	11
4	2.3	775	12
5	2.3	779	11
6	1.9	808	13
7	1.9	806	13
8	2.1	788	12
9	2.2	781	13
10	2.5	759	11

06UT

Day	km	hPa	C
0	1.5	856	17
1	1.7	839	13
2	2.0	810	12
3	2.4	773	9
4	2.2	791	12
5	2.0	802	13
6	1.7	832	15
7	1.6	838	16
8	1.8	821	14
9	1.8	824	14
10	1.9	815	14

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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60
30
0
–30
30
60
90
120
150
180
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0
ELEV (km)
4
3
2
1
0
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3
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7
8
9
10
DAYS TO MLO

12UT

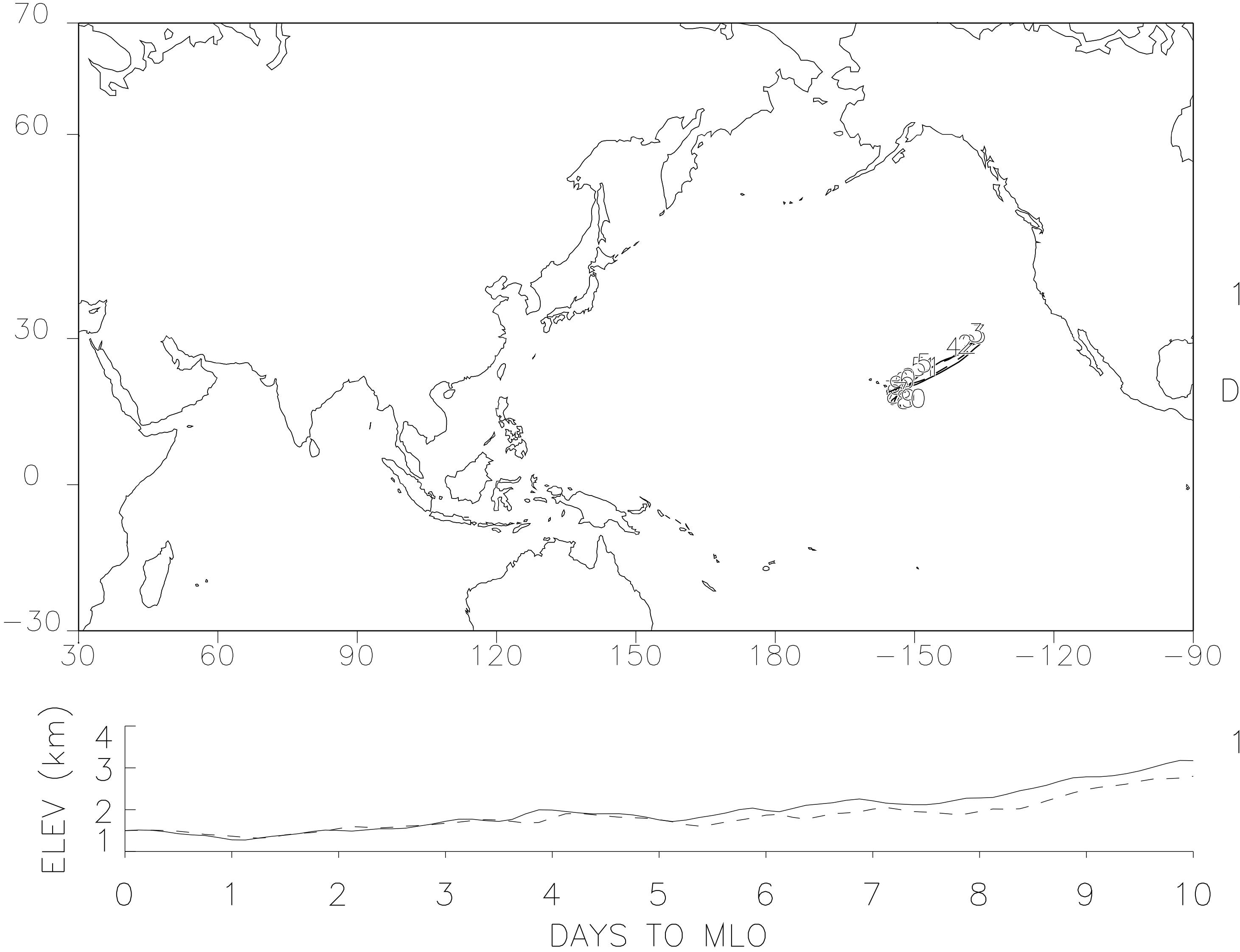
Day	km	hPa	C
0	1.5	854	14
1	1.5	852	13
2	1.7	836	12
3	1.9	813	11
4	2.1	799	11
5	1.9	815	12
6	1.6	841	14
7	1.4	859	16
8	1.5	846	14
9	1.5	849	15
10	1.5	850	16

18UT

Day	km	hPa	C
0	1.5	856	15
1	1.4	873	14
2	1.6	852	12
3	1.8	825	11
4	2.0	805	11
5	1.8	822	12
6	2.0	807	12
7	2.0	798	12
8	2.2	779	10
9	2.8	724	9
10	3.3	688	6

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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9
10
ELEV (km)
4
3
2
1
DAYS TO MLO

00UT

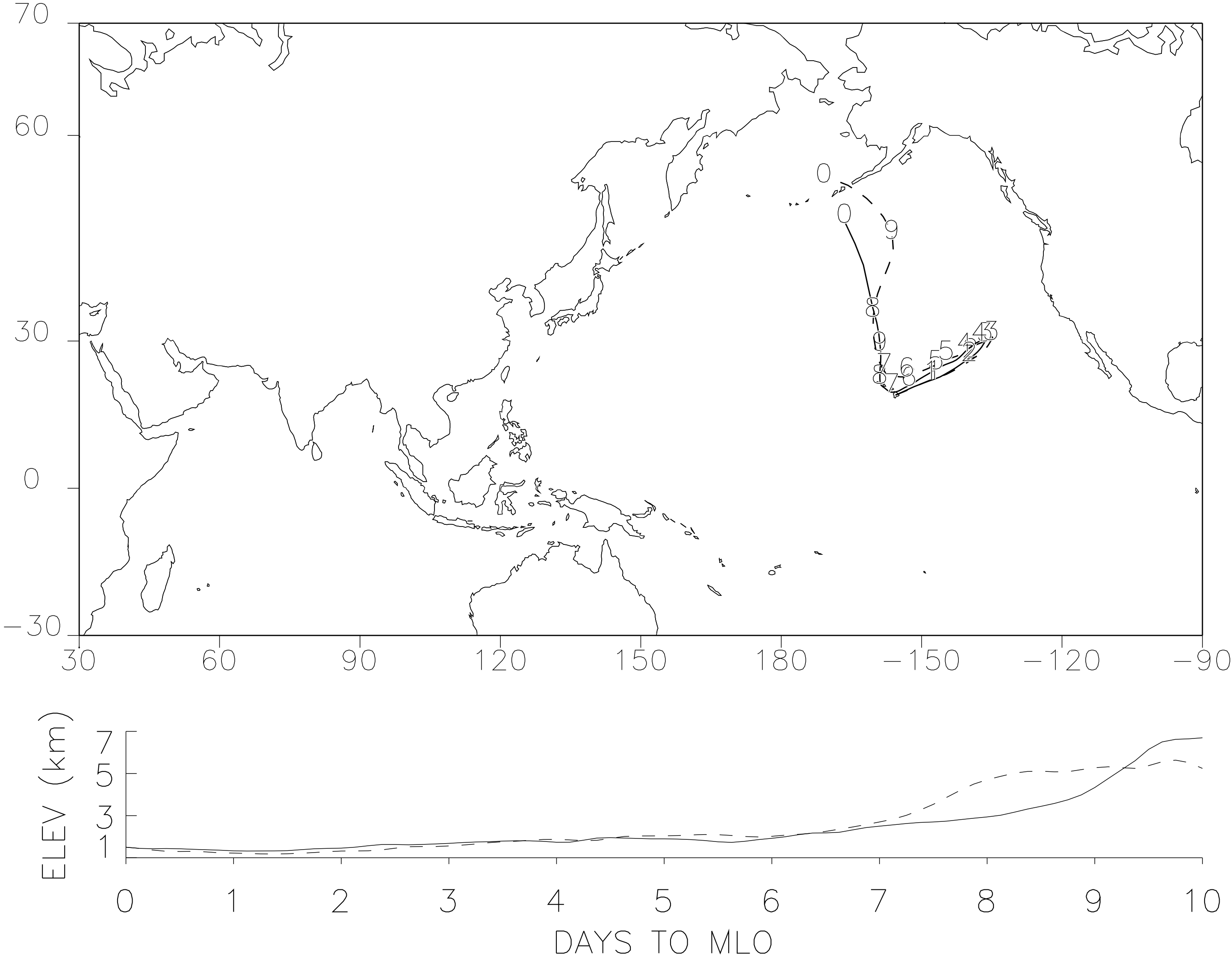
Day	km	hPa	C
0	1.5	855	14
1	1.3	879	15
2	1.5	859	12
3	1.7	837	12
4	2.0	807	10
5	1.8	827	12
6	2.0	805	12
7	2.2	781	11
8	2.3	774	10
9	2.8	729	8
10	3.2	697	6

06UT

Day	km	hPa	C
0	1.5	854	15
1	1.4	871	15
2	1.5	854	11
3	1.7	843	12
4	1.8	826	11
5	1.8	828	11
6	1.9	817	13
7	2.0	801	12
8	2.0	805	12
9	2.5	756	10
10	2.8	729	10

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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ELEV (km)
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9
10
DAYS TO MLO
12UT - solid
18UT - dashed

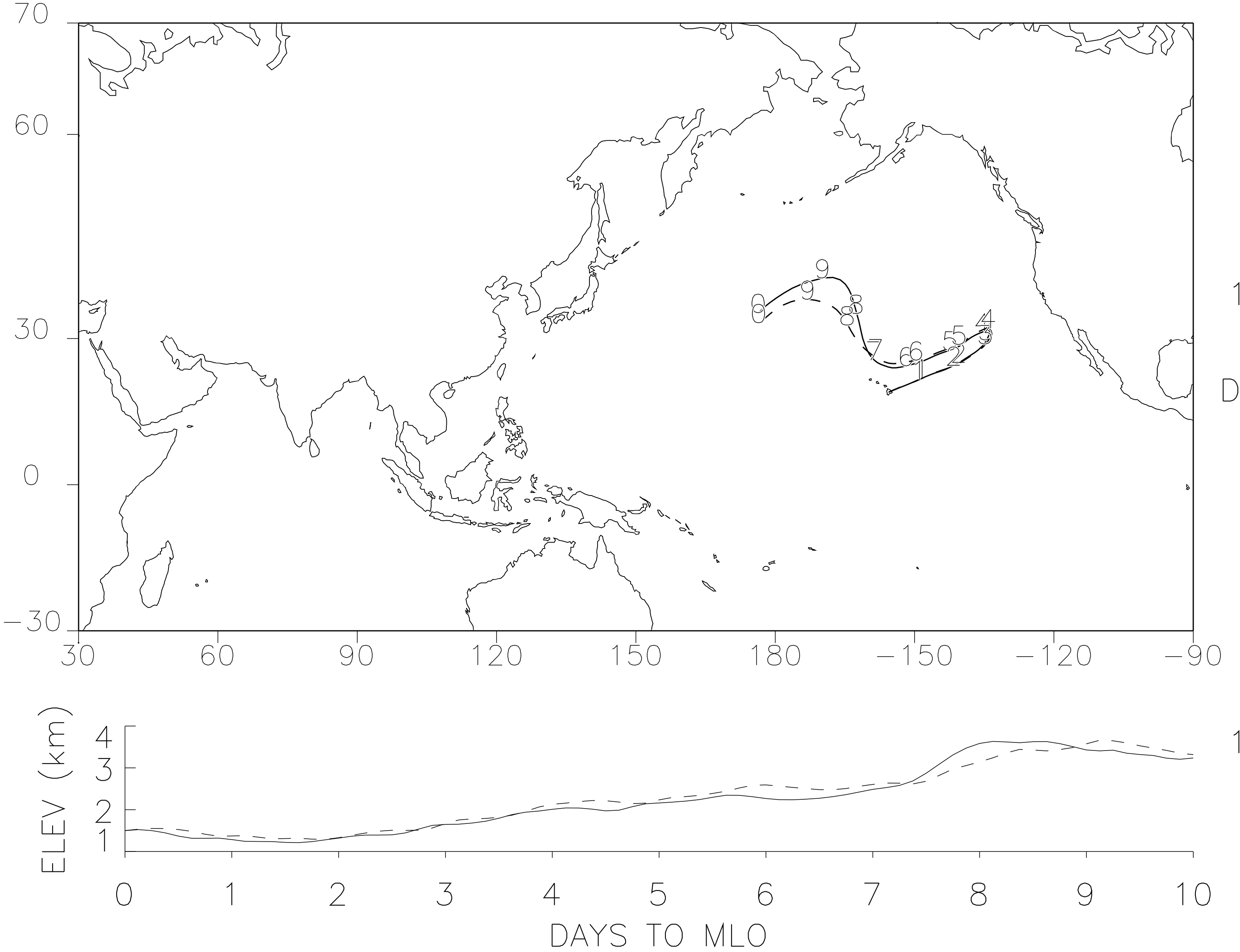
12UT

Day	km	hPa	C
0	1.5	853	13
1	1.3	872	14
2	1.5	862	12
3	1.7	841	11
4	1.7	832	11
5	1.9	813	10
6	1.9	810	11
7	2.5	754	9
8	2.9	714	7
9	4.3	601	-4
10	6.7	429	-27

18UT

Day	km	hPa	C
0	1.5	853	13
1	1.2	885	14
2	1.3	877	13
3	1.6	853	11
4	1.9	821	11
5	2.0	801	10
6	2.0	801	10
7	2.7	737	8
8	4.7	571	-9
9	5.3	528	-13
10	5.2	523	-15

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/6/2004 (Day of Year 127)
NCEP/NCAR Reanalysis 1 Data Set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1
ELEV (km)
4
3
2
1
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
00UT – solid
06UT – dashed

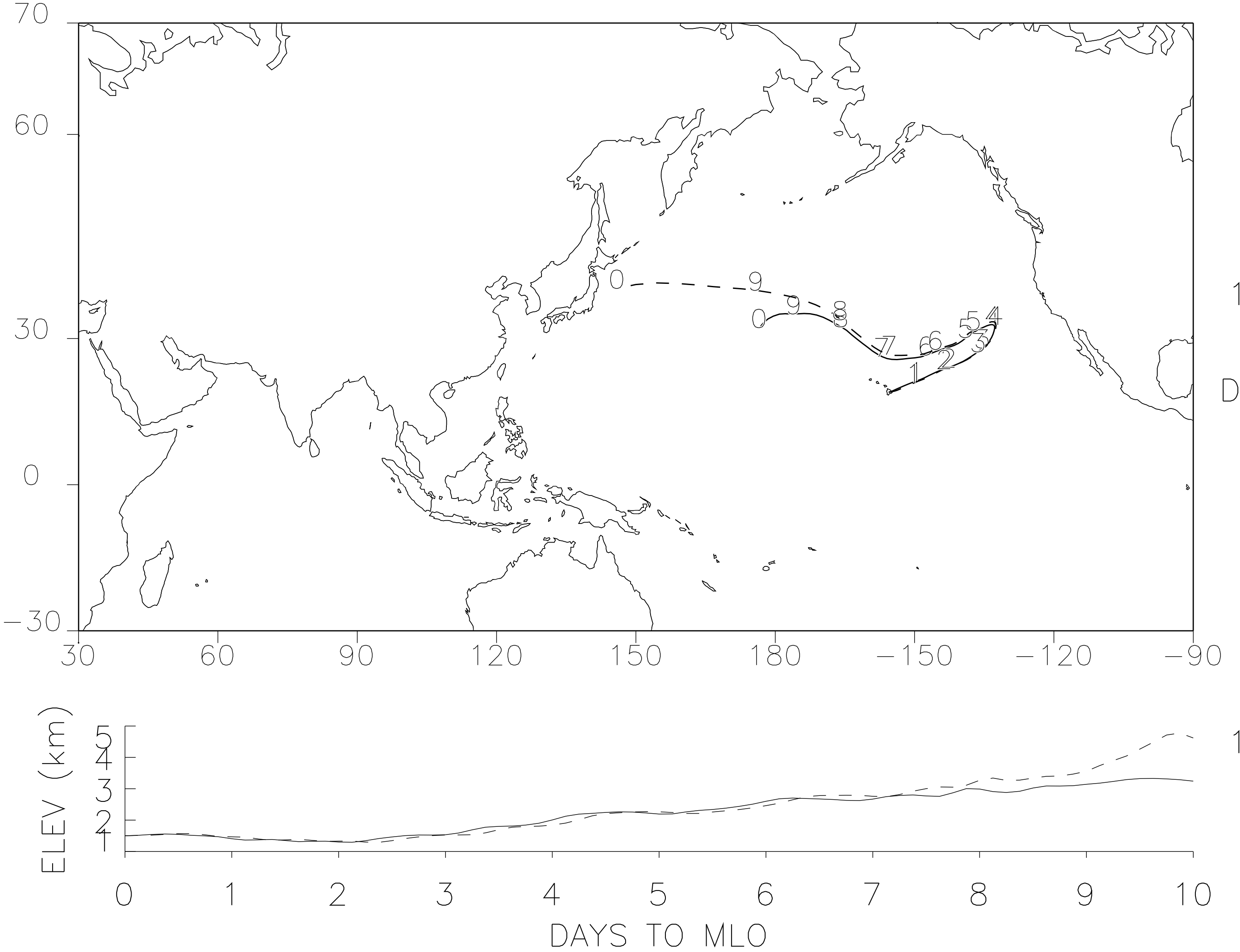
00UT

Day	km	hPa	C
0	1.5	851	12
1	1.3	877	14
2	1.3	875	14
3	1.6	844	10
4	2.0	808	11
5	2.2	790	9
6	2.3	776	9
7	2.5	756	9
8	3.6	660	0
9	3.4	677	3
10	3.2	698	4

06UT

Day	km	hPa	C
0	1.5	851	12
1	1.4	867	13
2	1.3	875	14
3	1.7	842	10
4	2.1	798	10
5	2.2	784	9
6	2.6	746	8
7	2.6	744	8
8	3.1	699	5
9	3.6	667	2
10	3.3	690	4

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/6/2004 (Day of Year 127)
NCEP/NCAR Reanalysis 1 Data Set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ELEV (km)
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10
DAYS TO MLO
12UT – solid
18UT – dashed

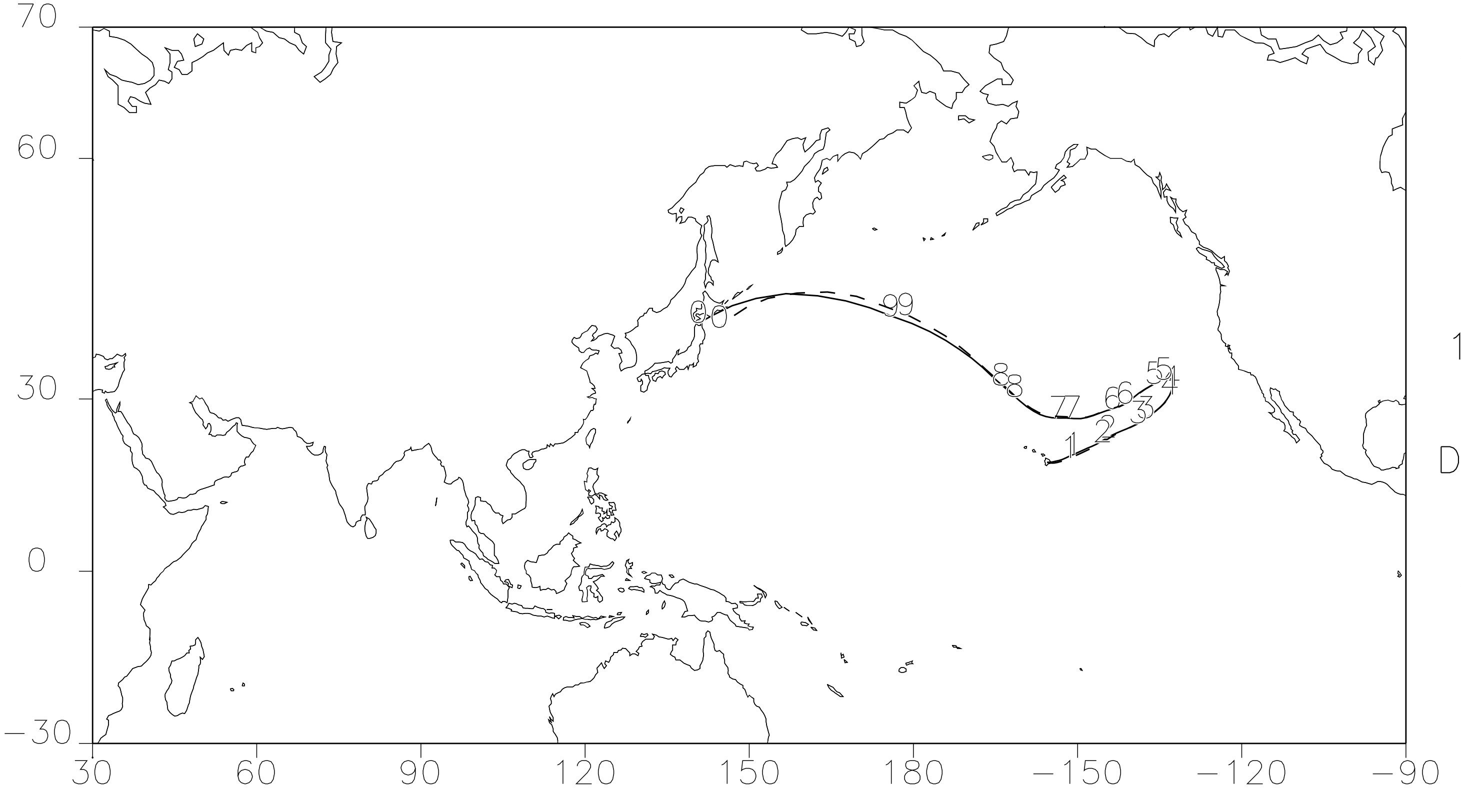
12UT

Day	km	hPa	C
0	1.5	850	12
1	1.4	861	13
2	1.3	875	13
3	1.5	854	12
4	2.0	809	10
5	2.2	786	9
6	2.6	745	6
7	2.7	738	8
8	3.0	711	4
9	3.1	704	5
10	3.2	698	4

18UT

Day	km	hPa	C
0	1.5	851	12
1	1.5	856	12
2	1.3	874	12
3	1.5	856	12
4	1.8	825	11
5	2.3	782	9
6	2.5	760	7
7	2.8	729	7
8	3.3	686	4
9	3.6	662	0
10	4.6	570	–12

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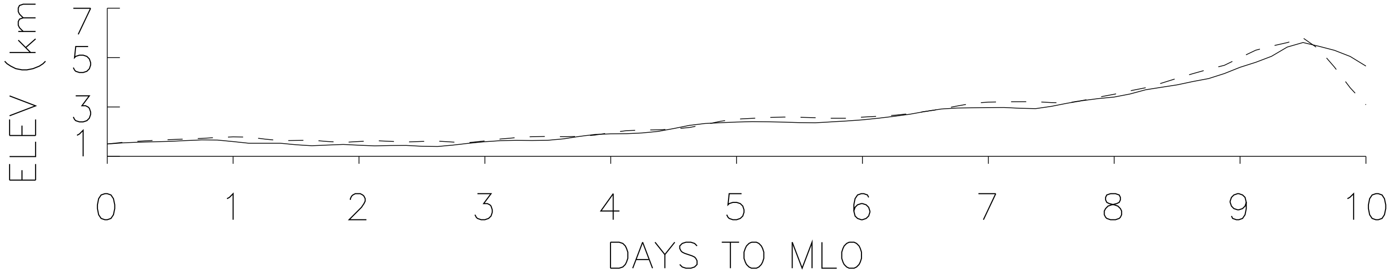


00UT

Day	km	hPa	C
0	1.5	851	12
1	1.6	841	11
2	1.5	860	11
3	1.6	848	12
4	1.9	818	10
5	2.4	771	9
6	2.5	759	7
7	3.0	711	6
8	3.4	674	3
9	4.6	573	−11
10	4.7	560	−13

06UT

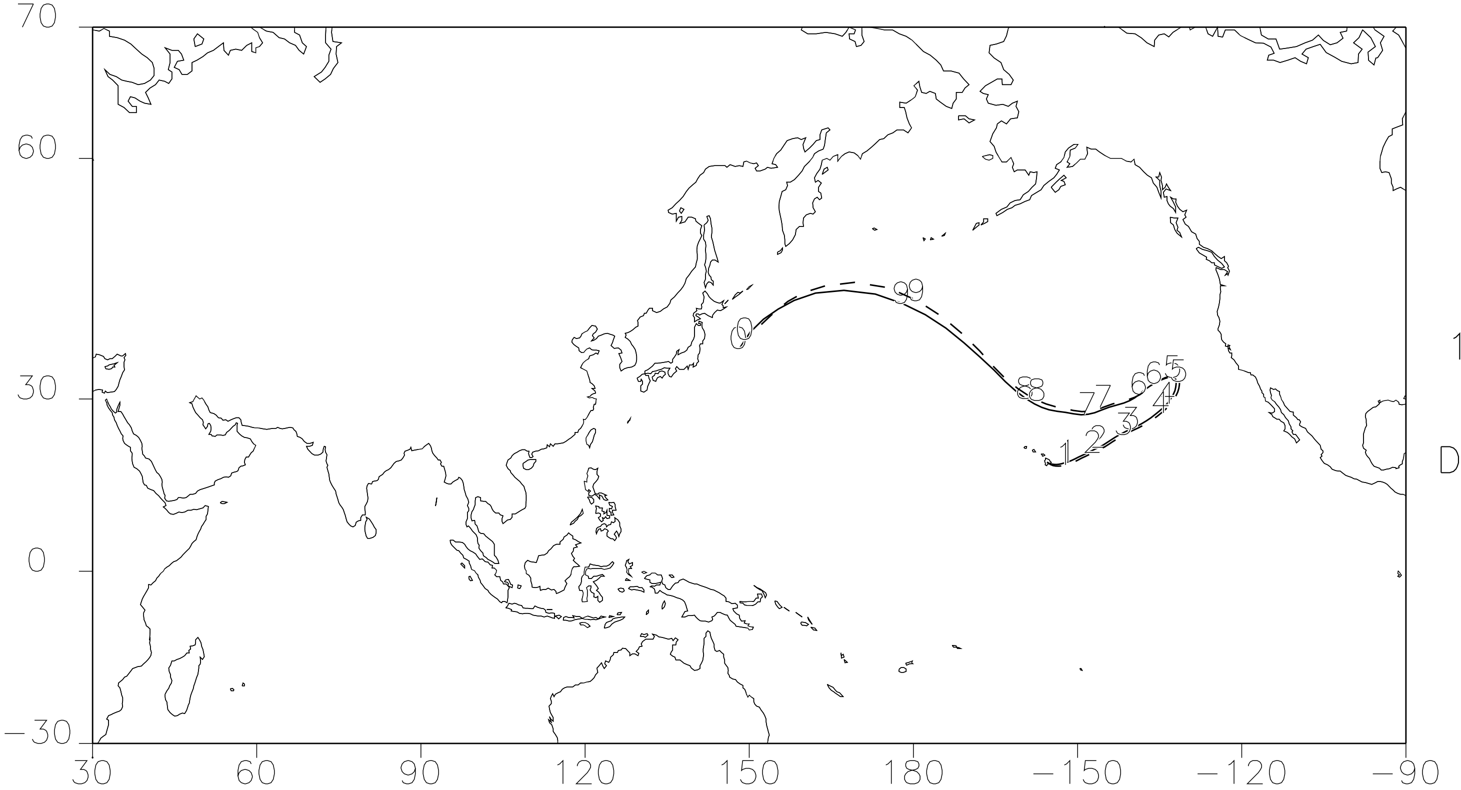
Day	km	hPa	C
0	1.5	851	13
1	1.8	822	10
2	1.6	844	11
3	1.6	845	13
4	2.0	813	10
5	2.5	762	8
6	2.6	750	7
7	3.2	692	6
8	3.5	664	4
9	5.0	546	−11
10	3.1	689	−2

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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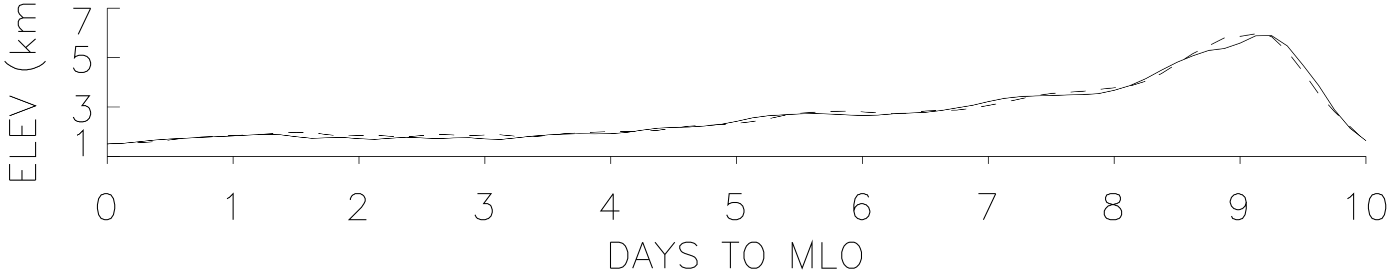


12UT - solid

18UT - dashed

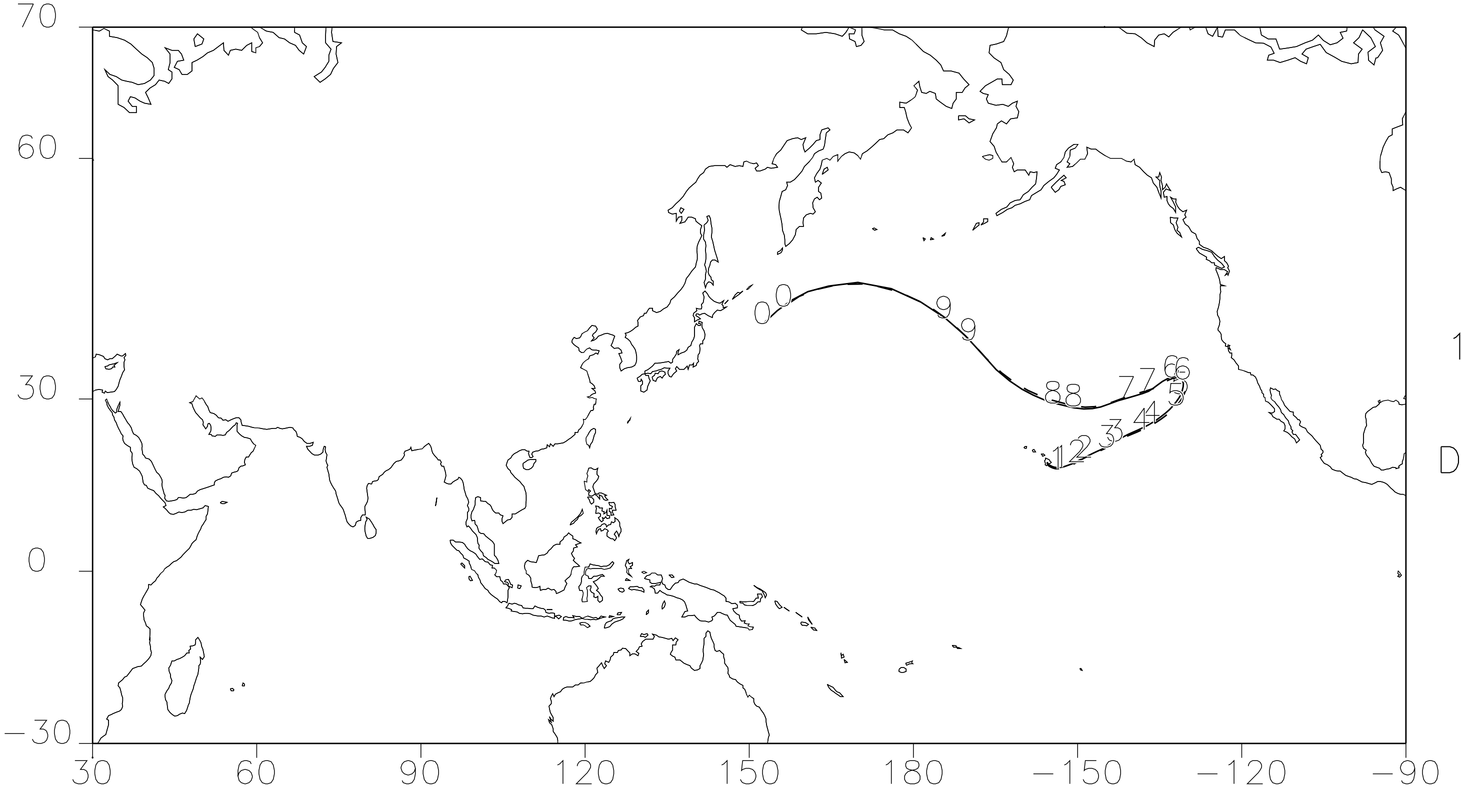
12UT

Day	km	hPa	C
0	1.5	850	12
1	1.8	817	10
2	1.7	830	11
3	1.7	834	11
4	1.9	816	11
5	2.4	770	9
6	2.7	743	7
7	3.2	691	3
8	3.7	651	3
9	5.6	504	-15
10	1.6	828	8

18UT

Day	km	hPa	C
0	1.5	851	12
1	1.8	817	10
2	1.8	818	10
3	1.9	819	11
4	2.0	808	11
5	2.3	778	10
6	2.8	733	7
7	3.1	705	4
8	3.8	643	3
9	5.9	485	-18
10	1.6	829	10

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/8/2004 (Day of Year 129)
NCEP/NCAR Reanalysis 1 Data Set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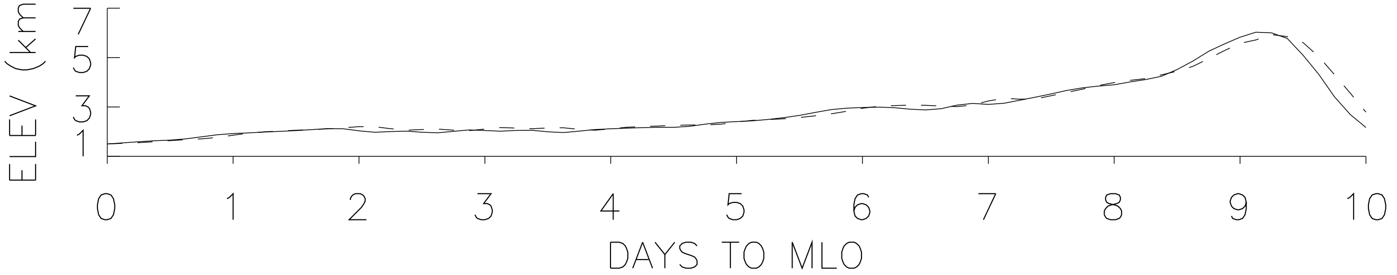
00UT

Day	km	hPa	C
0	1.5	851	14
1	1.9	809	11
2	2.0	797	10
3	2.0	800	10
4	2.1	795	11
5	2.4	769	10
6	3.0	718	6
7	3.1	703	4
8	3.9	633	1
9	5.8	490	−16
10	2.2	771	9

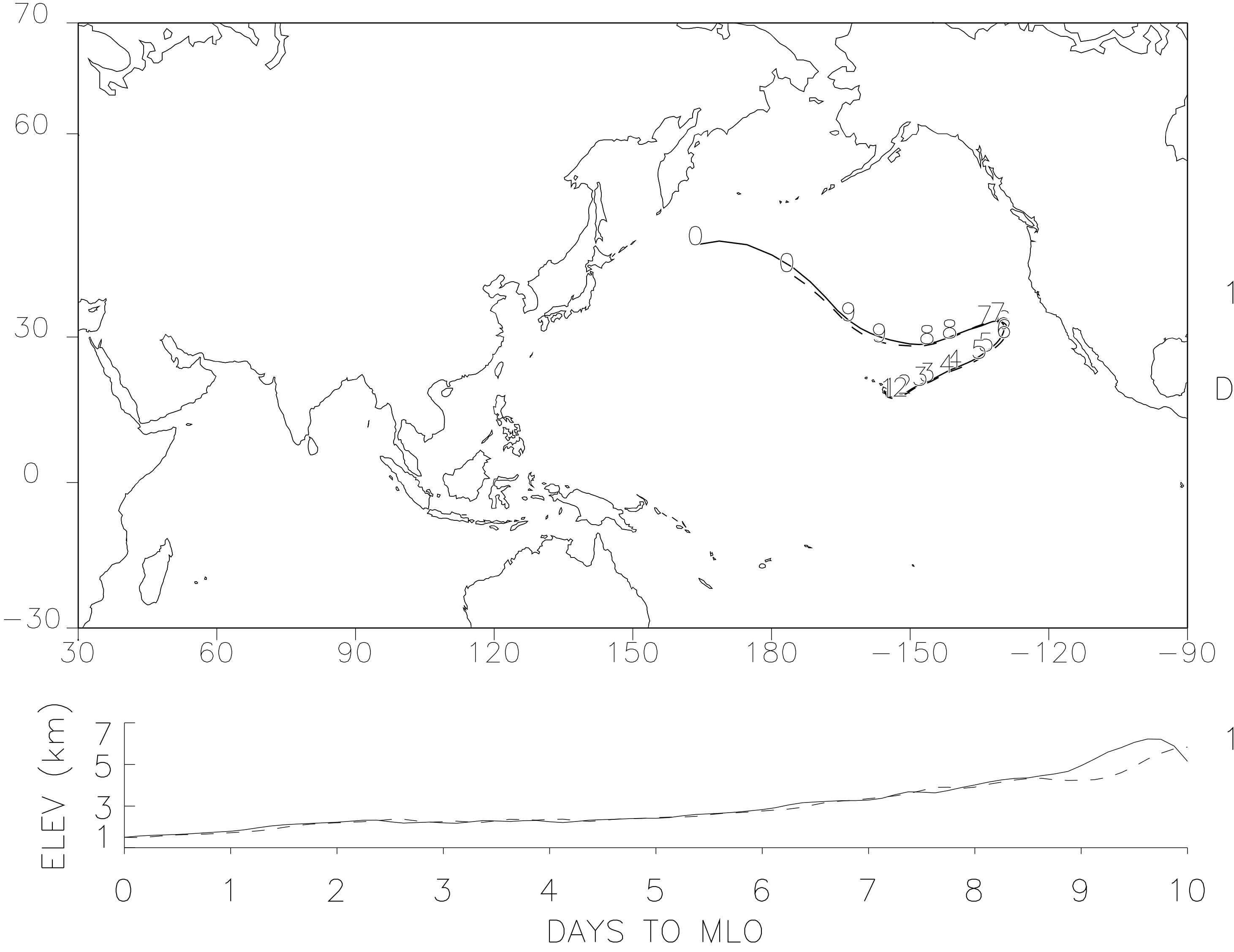
06UT

Day	km	hPa	C
0	1.5	852	13
1	1.9	816	11
2	2.2	781	10
3	2.1	794	11
4	2.1	796	11
5	2.4	771	10
6	2.9	723	8
7	3.2	693	3
8	4.0	626	1
9	5.6	506	−13
10	2.8	715	5



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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ELEV (km)
7
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7
8
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10
DAYS TO MLO
12UT – solid
18UT – dashed

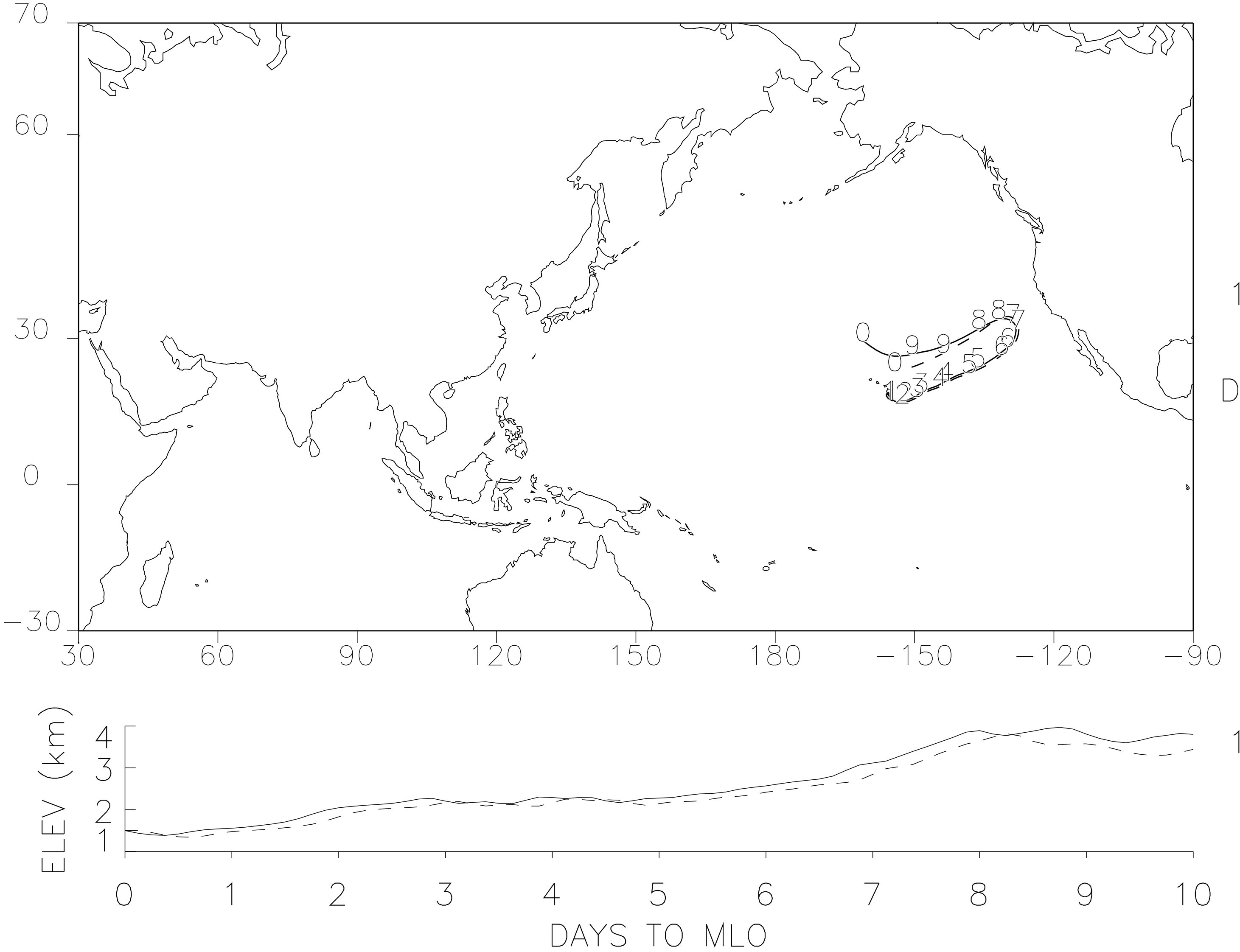
12UT

Day	km	hPa	C
0	1.5	851	13
1	1.8	821	11
2	2.2	779	9
3	2.2	783	10
4	2.2	781	10
5	2.4	767	10
6	2.8	731	9
7	3.3	689	5
8	4.0	624	−1
9	4.9	554	−6
10	5.2	533	−11

18UT

Day	km	hPa	C
0	1.5	851	13
1	1.7	830	12
2	2.2	782	9
3	2.3	778	10
4	2.4	771	10
5	2.4	765	9
6	2.8	737	11
7	3.4	686	5
8	3.9	636	0
9	4.2	607	2
10	5.8	491	−14

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/9/2004 (Day of Year 130)
NCEP/NCAR Reanalysis 1 Data Set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6
ELEV (km)
4
3
2
1
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO

00UT

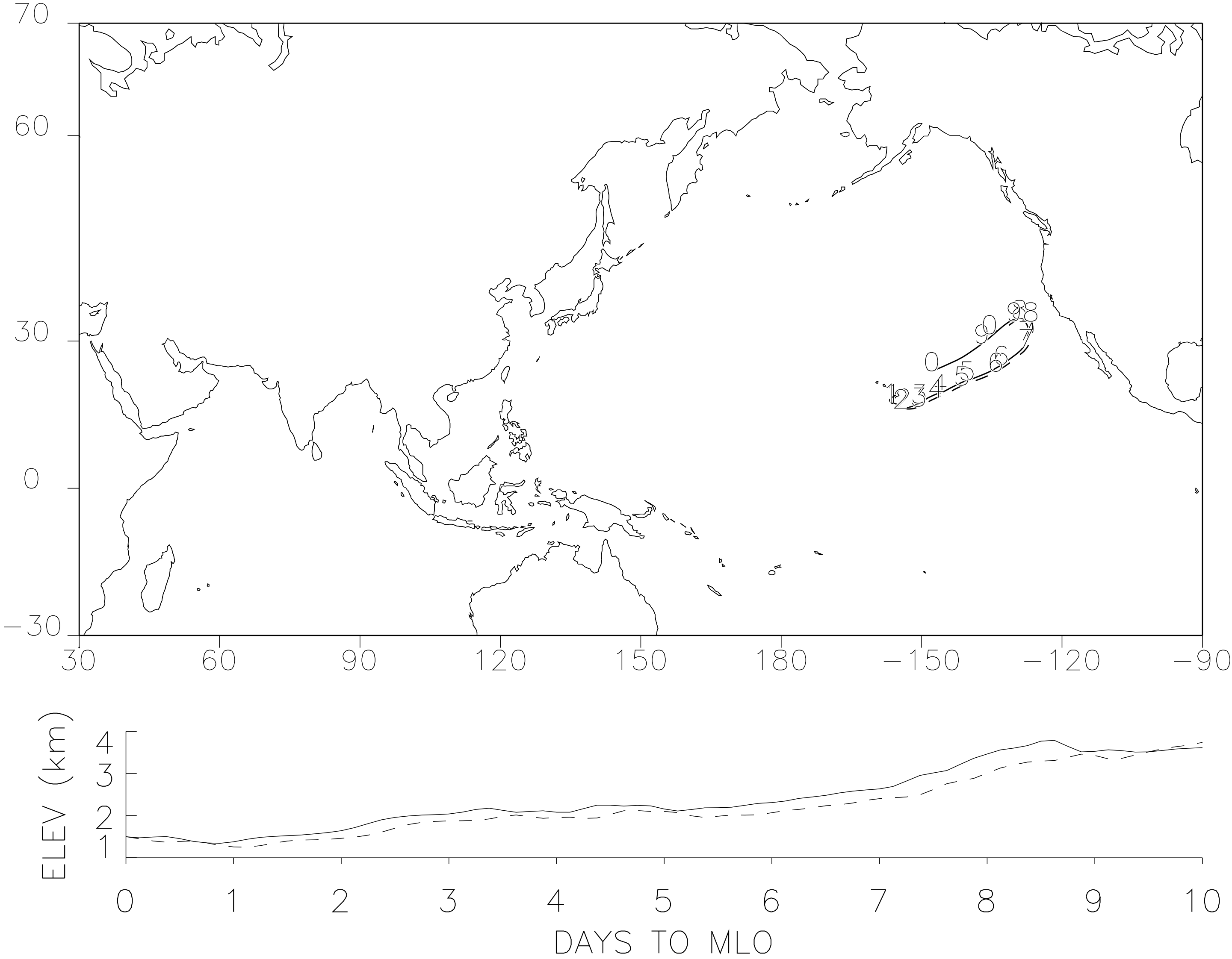
Day	km	hPa	C
0	1.5	850	14
1	1.6	845	13
2	2.0	797	11
3	2.2	780	10
4	2.3	776	9
5	2.3	779	10
6	2.6	753	11
7	3.1	706	7
8	3.9	638	0
9	3.8	641	3
10	3.8	643	2

06UT

Day	km	hPa	C
0	1.5	851	13
1	1.5	854	13
2	1.8	818	11
3	2.2	784	10
4	2.2	787	11
5	2.1	792	11
6	2.4	768	11
7	2.8	731	10
8	3.6	660	1
9	3.6	662	2
10	3.4	674	5

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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ELEV (km)
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10
DAYS TO MLO

12UT

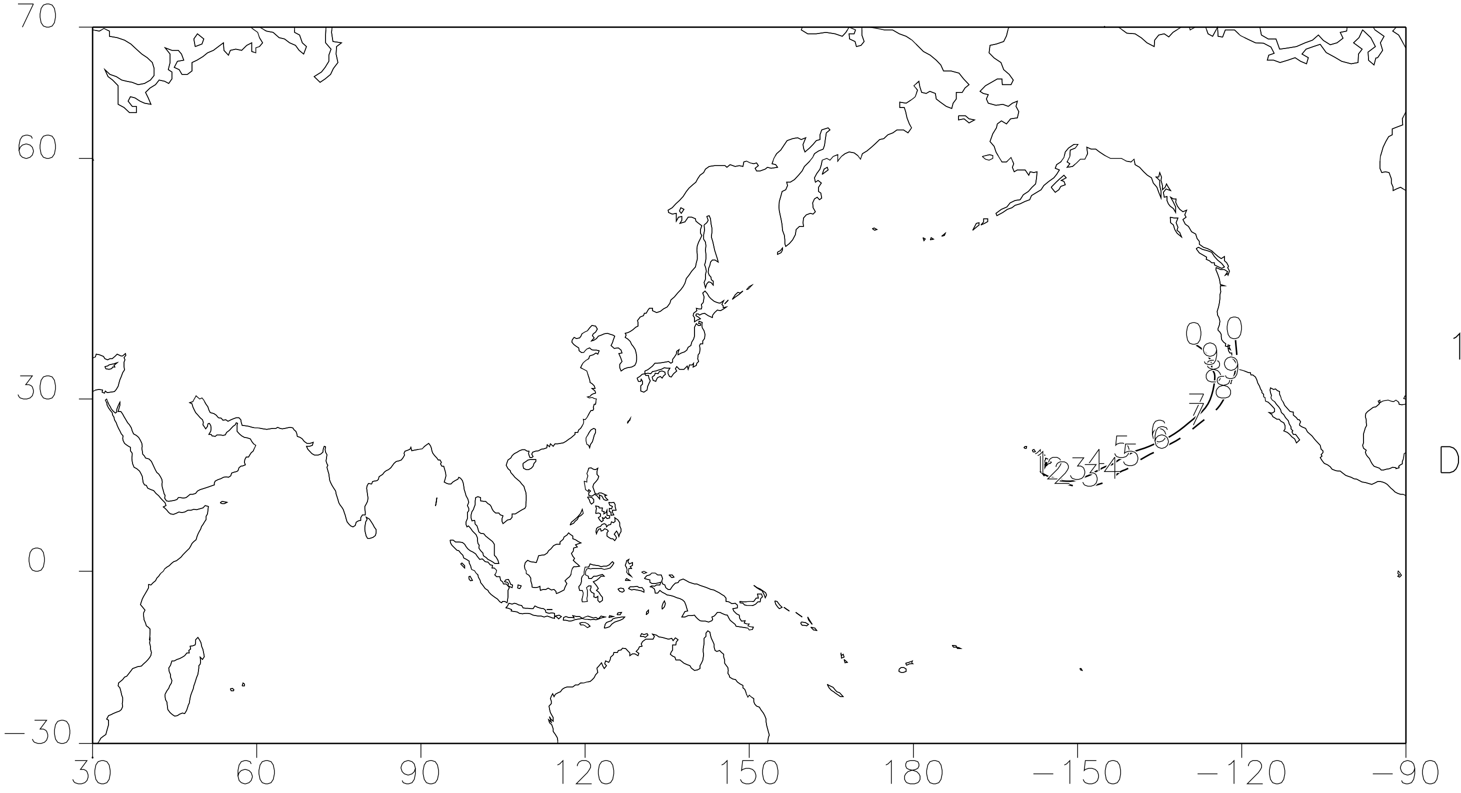
Day	km	hPa	C
0	1.5	850	14
1	1.4	863	14
2	1.6	836	12
3	2.0	796	10
4	2.1	793	10
5	2.2	788	10
6	2.3	776	10
7	2.6	748	11
8	3.5	675	4
9	3.5	667	3
10	3.6	659	5

18UT

Day	km	hPa	C
0	1.5	851	13
1	1.3	876	15
2	1.5	855	13
3	1.9	813	10
4	2.0	806	10
5	2.1	795	9
6	2.1	799	10
7	2.4	769	11
8	3.0	715	8
9	3.4	678	4
10	3.7	649	0

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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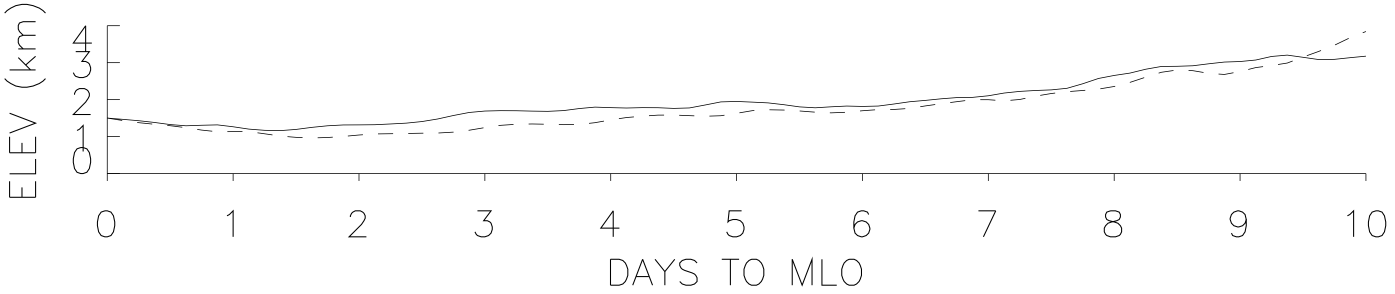
00UT

Day	km	hPa	C
0	1.5	850	14
1	1.3	874	16
2	1.3	869	15
3	1.7	831	12
4	1.8	821	11
5	1.9	807	10
6	1.8	822	11
7	2.1	795	13
8	2.7	746	10
9	3.0	711	7
10	3.2	695	6

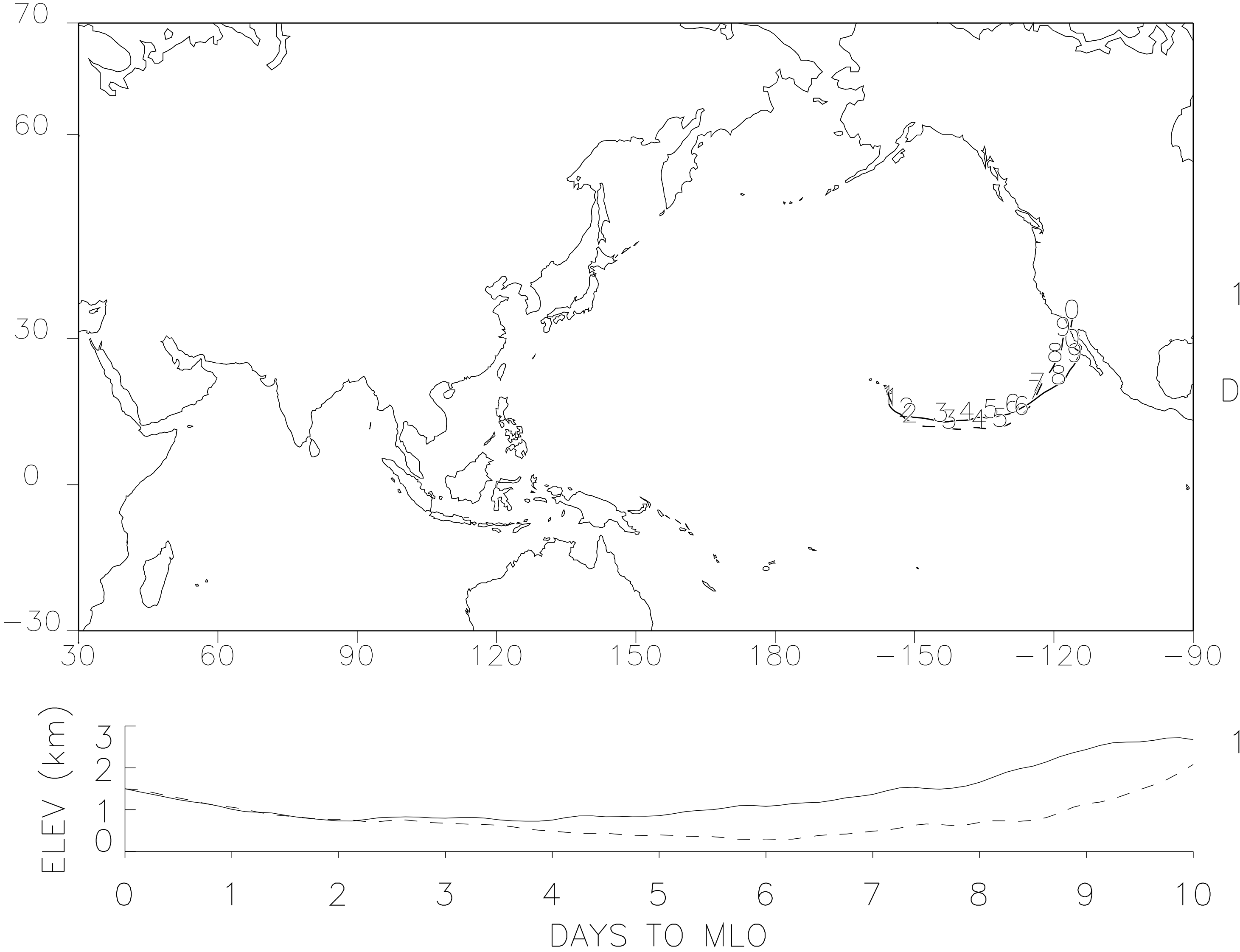
06UT

Day	km	hPa	C
0	1.5	851	14
1	1.1	888	17
2	1.0	898	17
3	1.2	877	14
4	1.5	855	12
5	1.6	839	12
6	1.7	834	13
7	2.0	806	14
8	2.4	774	13
9	2.8	735	10
10	3.8	638	−1



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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ELEV (km)
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10
DAYS TO MLO
12UT – solid
18UT – dashed

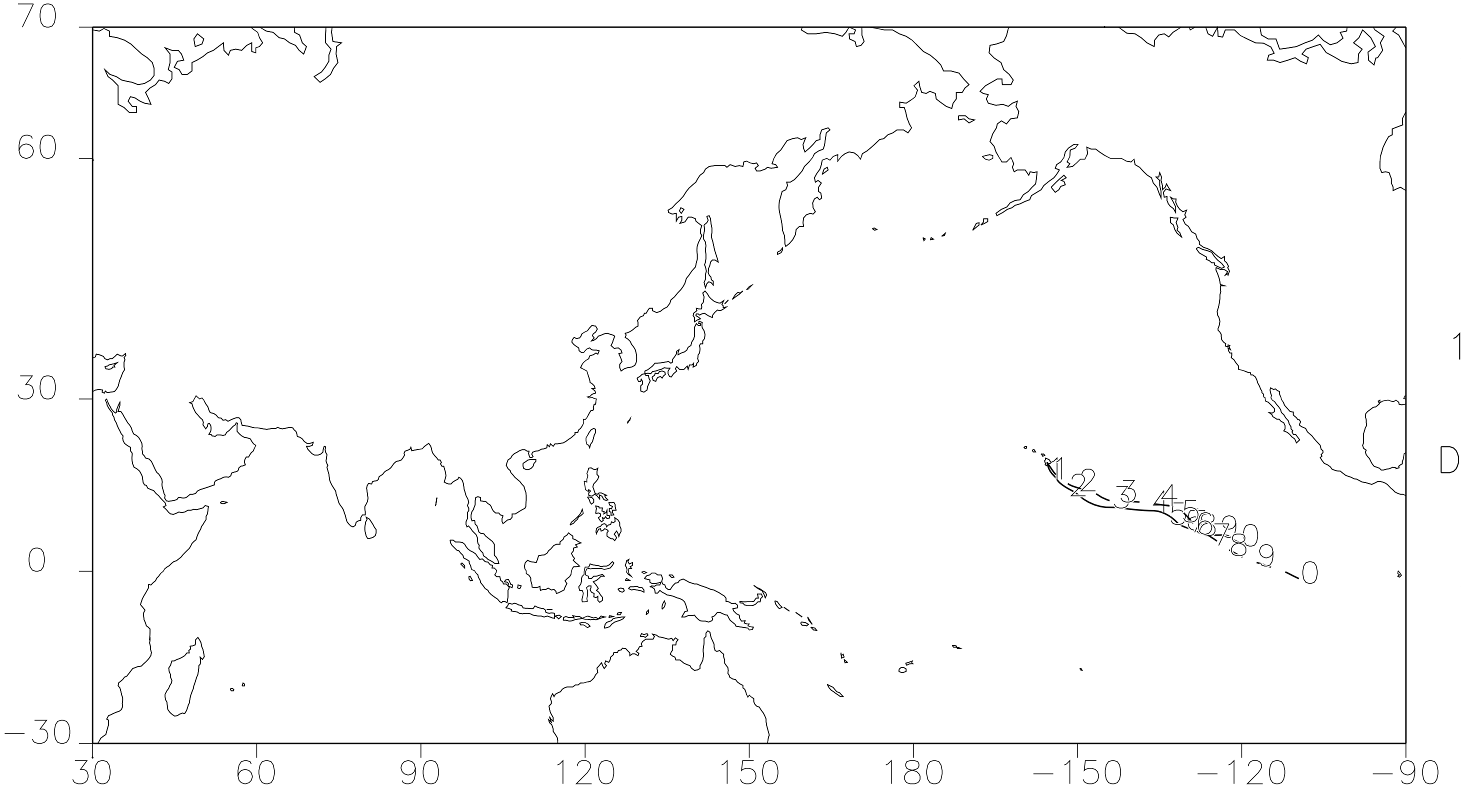
12UT

Day	km	hPa	C
0	1.5	850	15
1	1.0	901	18
2	0.7	929	20
3	0.8	924	19
4	0.8	925	18
5	0.9	916	15
6	1.1	891	13
7	1.4	863	16
8	1.7	835	18
9	2.4	761	12
10	2.7	737	10

18UT

Day	km	hPa	C
0	1.5	852	15
1	1.1	897	17
2	0.8	927	20
3	0.7	938	21
4	0.5	957	22
5	0.4	967	22
6	0.3	980	20
7	0.5	960	16
8	0.7	938	20
9	1.1	892	17
10	2.1	794	9

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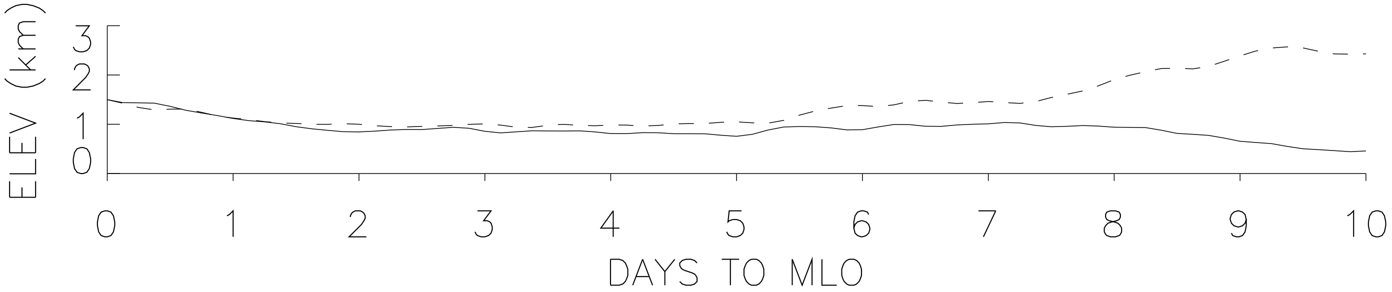


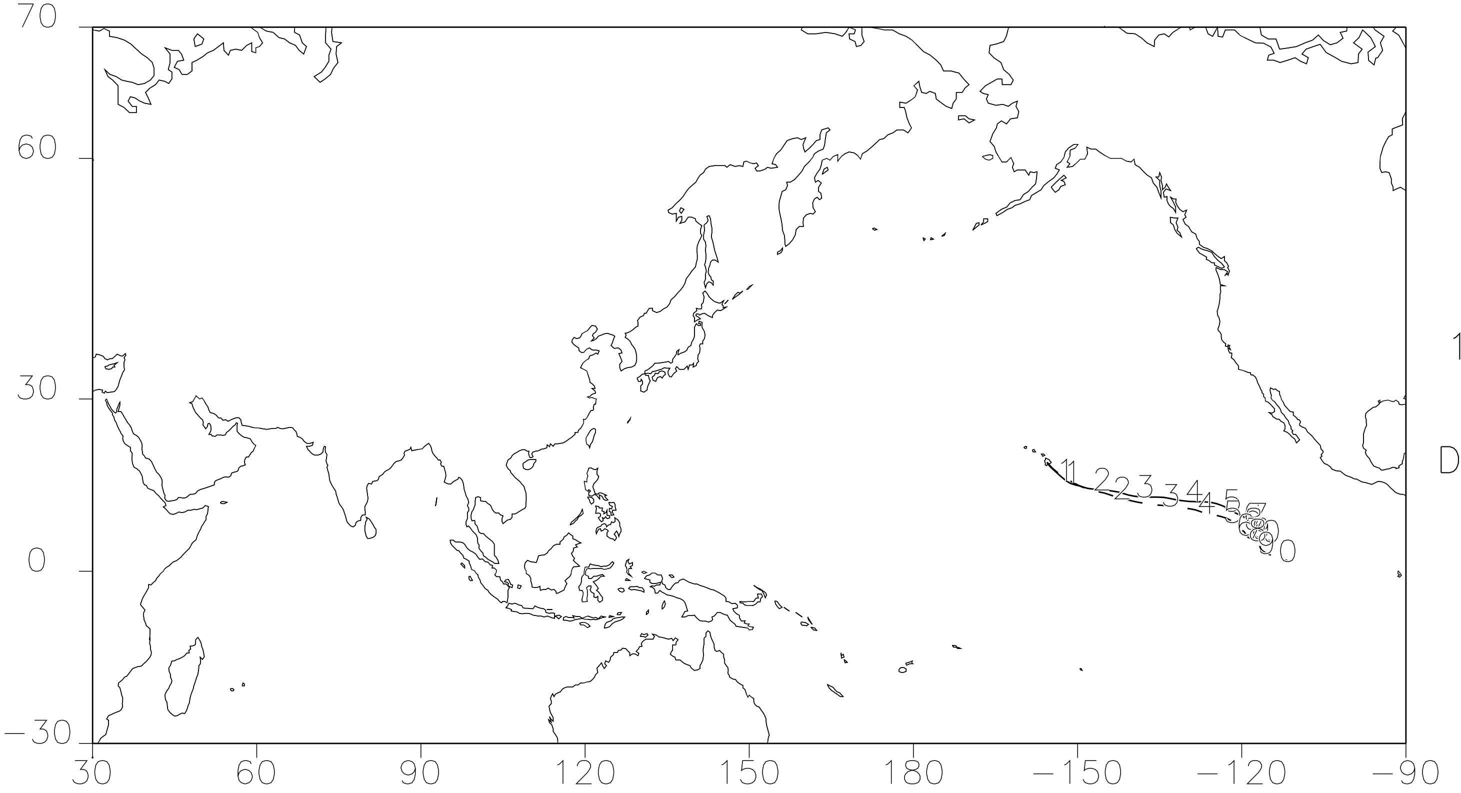
00UT

Day	km	hPa	C
0	1.5	851	15
1	1.1	889	18
2	0.8	918	21
3	0.9	917	21
4	0.8	920	21
5	0.8	924	20
6	0.9	911	19
7	1.0	898	18
8	0.9	906	20
9	0.7	935	24
10	0.5	957	25

06UT

Day	km	hPa	C
0	1.5	851	15
1	1.1	889	19
2	1.0	902	19
3	1.0	903	20
4	1.0	906	20
5	1.0	897	18
6	1.4	863	16
7	1.5	855	15
8	1.9	812	14
9	2.4	765	14
10	2.4	762	14

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/11/2004 (Day of Year 132)
NCEP/NCAR Reanalysis 1 Data Set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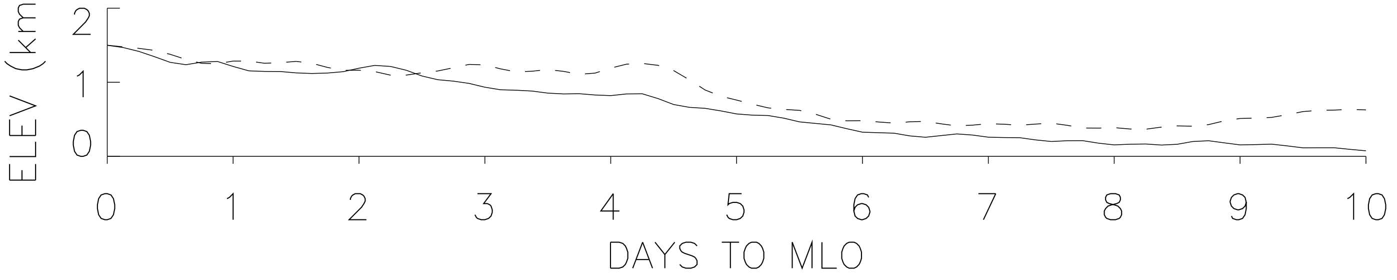
90
120
150
180
−150
−120
−90
1 2 3 4 5 6 7 8 9 10

12UT

Day	km	hPa	C
0	1.5	851	15
1	1.2	879	18
2	1.2	882	18
3	0.9	909	20
4	0.8	922	21
5	0.6	947	21
6	0.3	973	24
7	0.3	981	24
8	0.2	992	26
9	0.2	990	26
10	0.1	1000	27

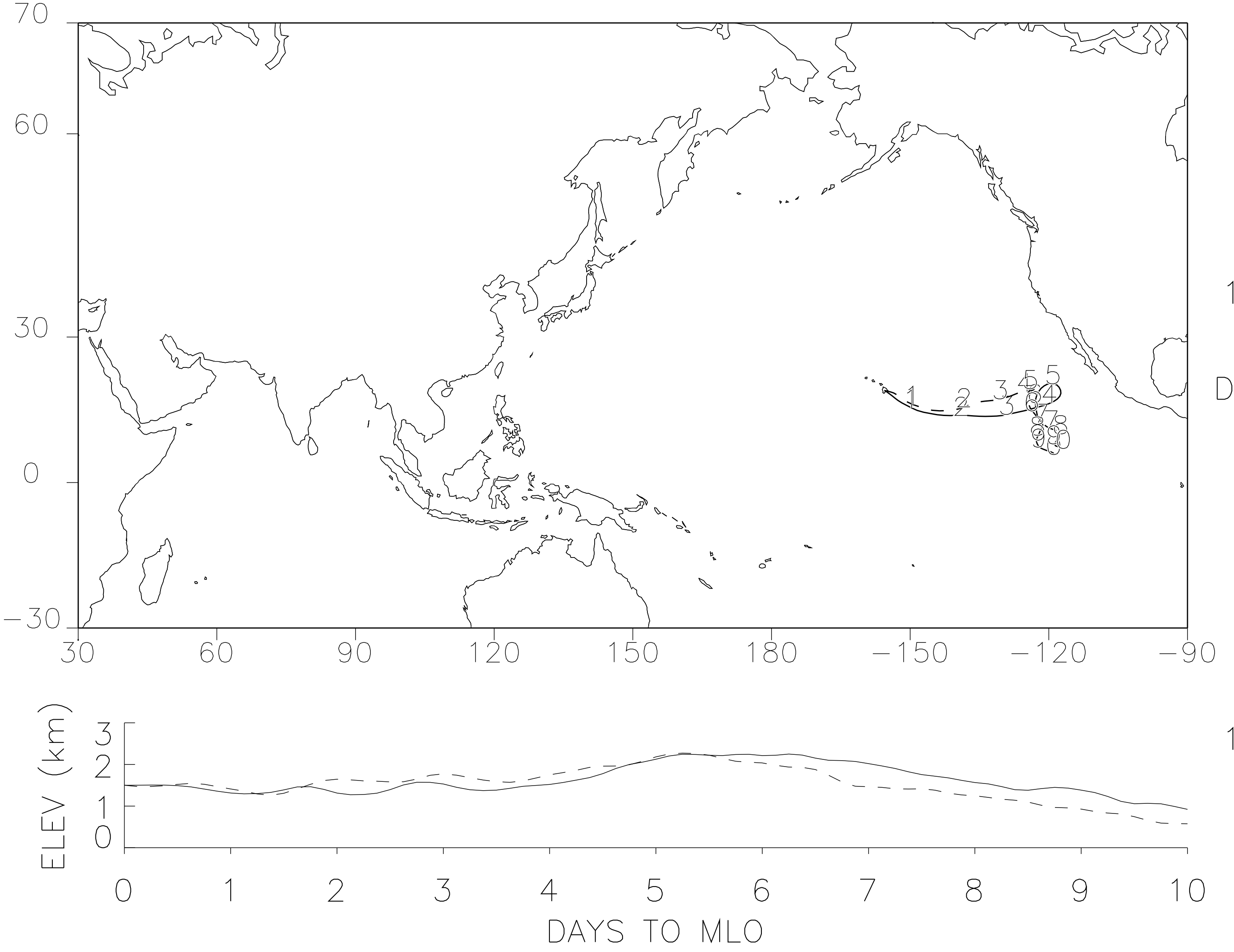
18UT

Day	km	hPa	C
0	1.5	853	15
1	1.3	874	18
2	1.2	886	19
3	1.2	880	18
4	1.2	885	19
5	0.8	929	21
6	0.5	959	23
7	0.4	964	23
8	0.4	970	24
9	0.5	953	23
10	0.6	942	22



12UT – solid
18UT – dashed

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/12/2004 (Day of Year 133)
NCEP/NCAR Reanalysis 1 Data Set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90
120
150
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1
2
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4
5
ELEV (km)
3
2
1
0
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
00UT – solid
06UT – dashed

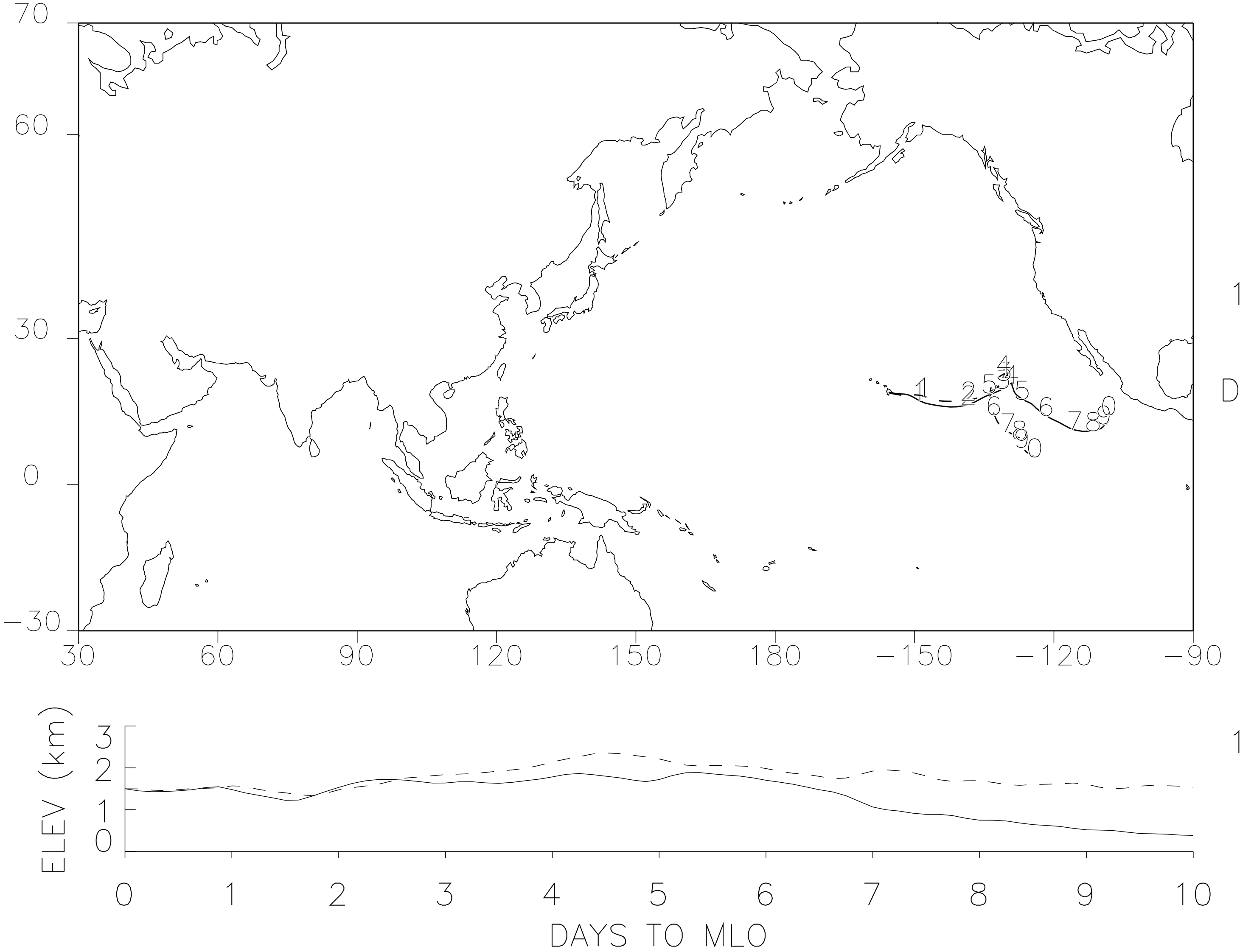
00UT

Day	km	hPa	C
0	1.5	853	16
1	1.3	870	18
2	1.3	870	18
3	1.5	850	17
4	1.5	851	18
5	2.1	792	12
6	2.2	780	12
7	2.0	799	14
8	1.6	842	15
9	1.4	860	17
10	0.9	907	22

06UT

Day	km	hPa	C
0	1.5	853	16
1	1.4	861	17
2	1.6	839	16
3	1.8	828	15
4	1.8	832	15
5	2.2	790	12
6	2.0	800	13
7	1.5	856	16
8	1.2	878	17
9	0.9	910	20
10	0.6	947	24

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/12/2004 (Day of Year 133)
NCEP/NCAR Reanalysis 1 Data Set



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9
0
ELEV (km)
3
2
1
0
0
1
2
3
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6
7
8
9
10
DAYS TO MLO
12UT – solid
18UT – dashed

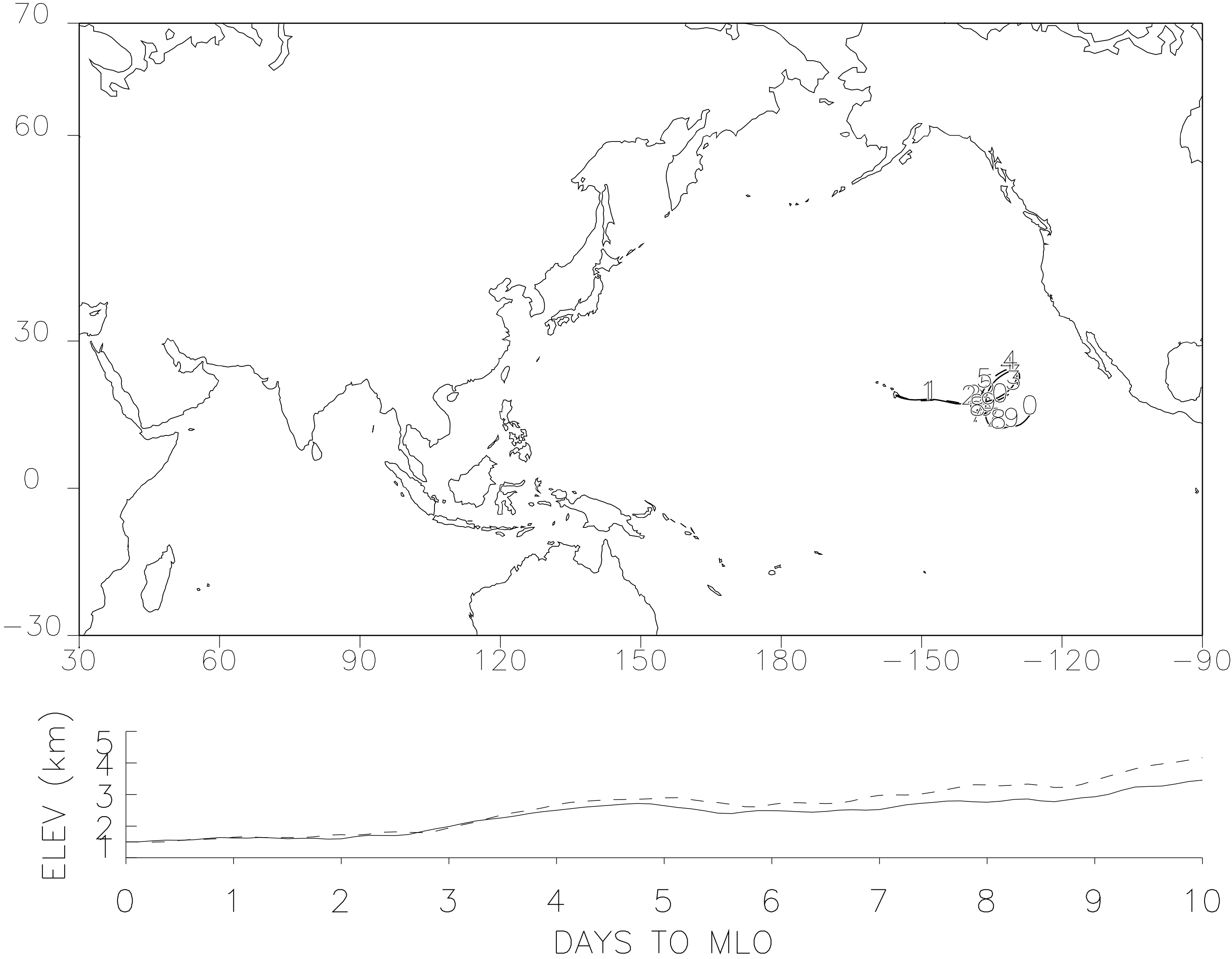
12UT

Day	km	hPa	C
0	1.5	852	16
1	1.5	853	16
2	1.5	849	17
3	1.6	840	15
4	1.8	826	14
5	1.7	832	15
6	1.7	831	14
7	1.1	893	18
8	0.7	927	20
9	0.5	951	23
10	0.4	966	25

18UT

Day	km	hPa	C
0	1.5	853	15
1	1.6	847	15
2	1.5	856	19
3	1.8	822	14
4	2.1	793	10
5	2.2	785	11
6	2.0	804	13
7	1.9	809	14
8	1.7	833	14
9	1.6	841	15
10	1.5	848	16

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/13/2004 (Day of Year 134)
NCEP/NCAR Reanalysis 1 Data Set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ELEV (km)
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0
1
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4
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6
7
8
9
10
DAYS TO MLO
00UT – solid
06UT – dashed

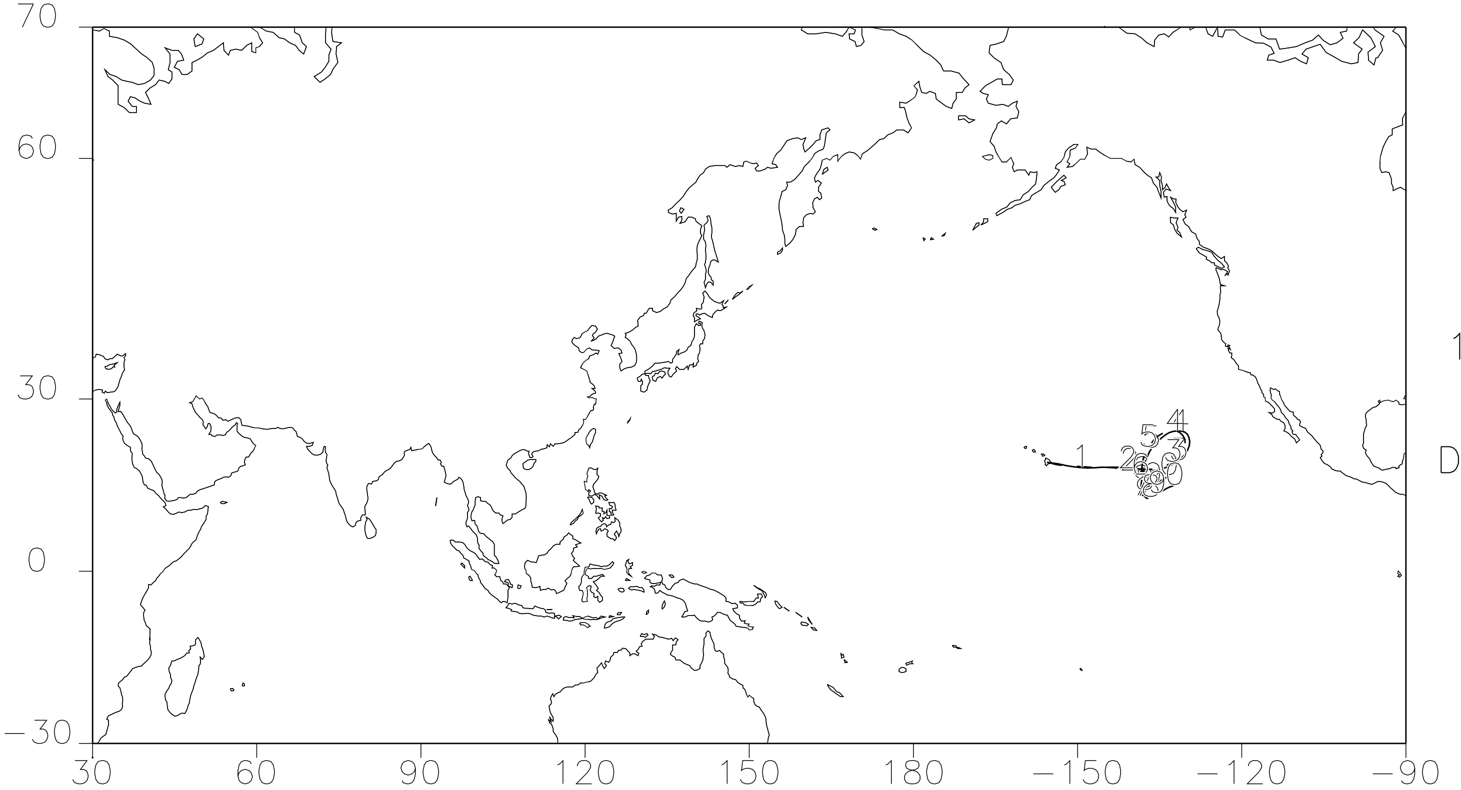
00UT

Day	km	hPa	C
0	1.5	853	16
1	1.6	840	16
2	1.6	842	19
3	2.0	806	13
4	2.5	758	8
5	2.6	744	8
6	2.5	756	13
7	2.5	750	14
8	2.8	731	12
9	2.9	715	11
10	3.5	673	9

06UT

Day	km	hPa	C
0	1.5	854	16
1	1.7	839	14
2	1.7	831	17
3	1.9	811	15
4	2.7	744	8
5	2.9	723	7
6	2.7	740	12
7	3.0	712	13
8	3.3	686	10
9	3.5	675	10
10	4.2	619	4

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/13/2004 (Day of Year 134)
NCEP/NCAR Reanalysis 1 Data Set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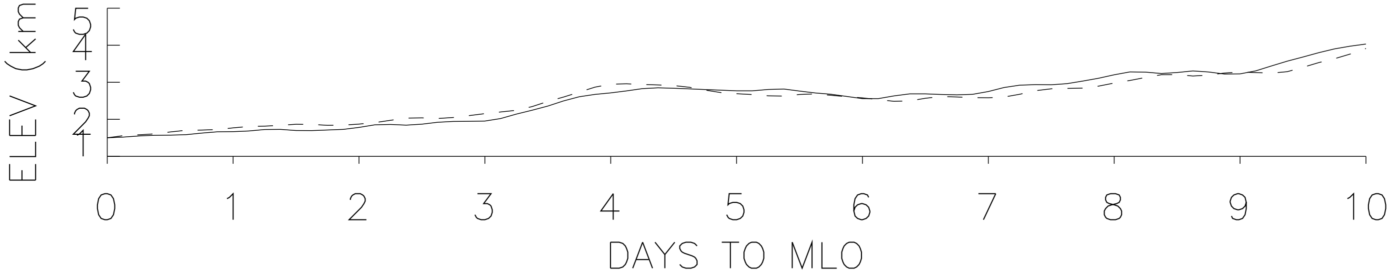
6

12UT

Day	km	hPa	C
0	1.5	852	15
1	1.7	836	14
2	1.8	824	16
3	2.0	808	15
4	2.7	739	7
5	2.8	733	6
6	2.6	750	12
7	2.8	730	12
8	3.2	693	12
9	3.2	691	11
10	4.0	628	5

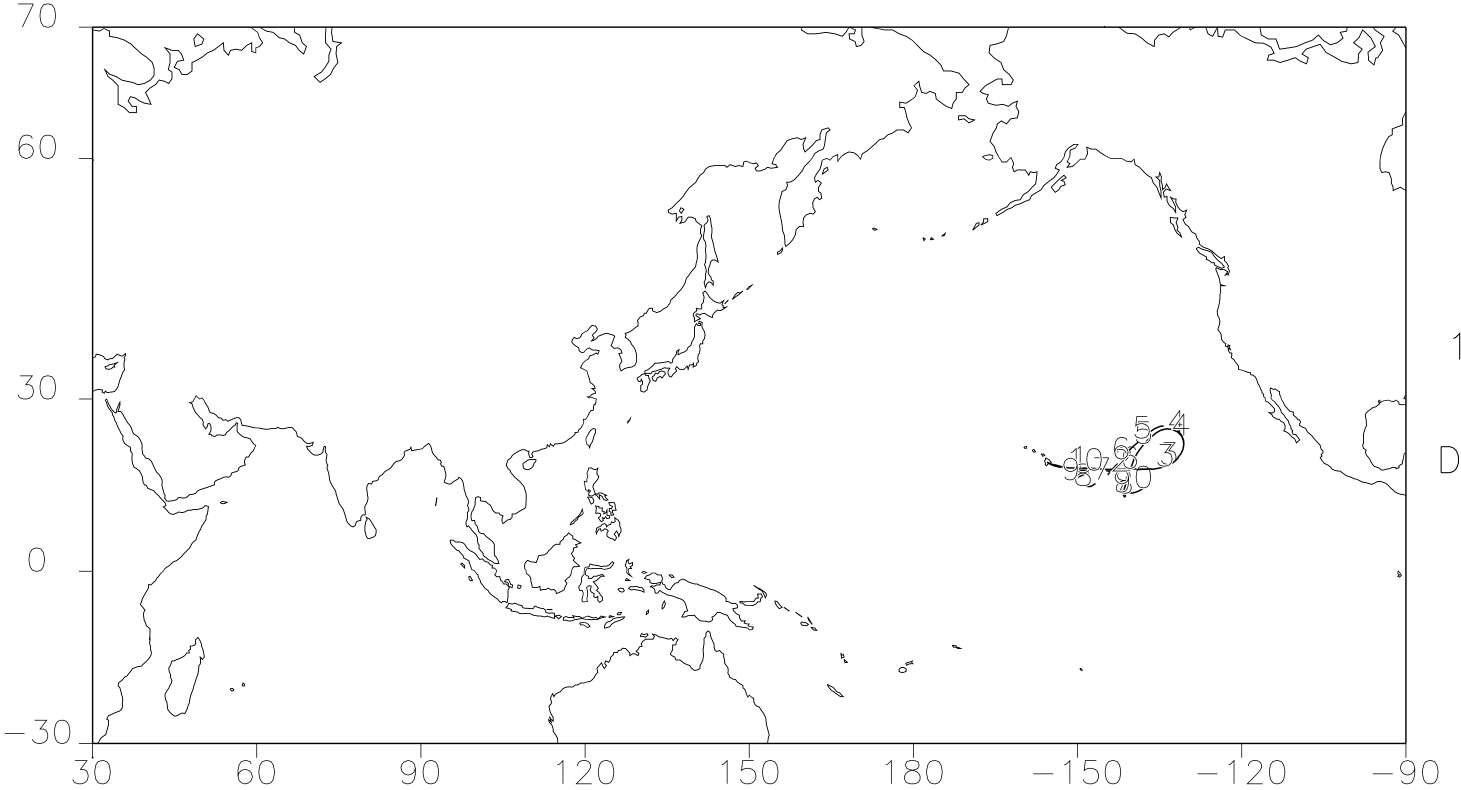
18UT

Day	km	hPa	C
0	1.5	852	15
1	1.8	827	14
2	1.9	817	16
3	2.2	792	14
4	2.9	719	6
5	2.7	741	8
6	2.6	750	11
7	2.6	748	13
8	3.0	712	12
9	3.3	689	11
10	3.9	638	7



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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−150
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−90
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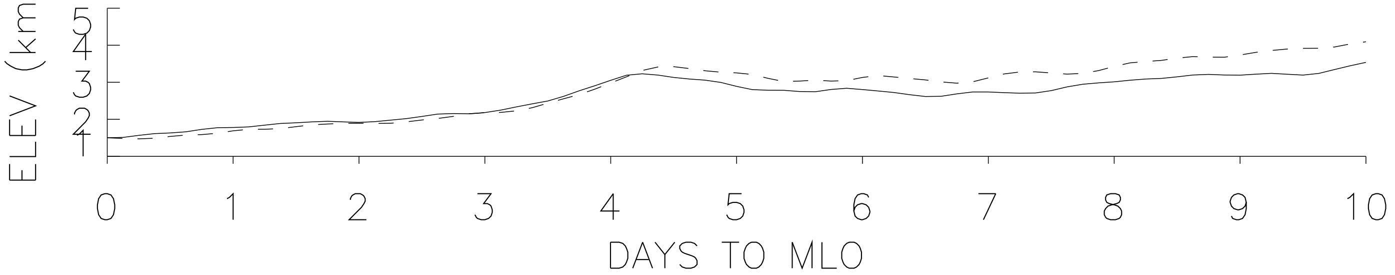
8
9
10

00UT

Day	km	hPa	C
0	1.5	852	16
1	1.8	825	14
2	1.9	811	14
3	2.2	786	15
4	3.1	709	6
5	2.9	722	7
6	2.8	729	10
7	2.7	733	12
8	3.0	707	12
9	3.2	695	11
10	3.5	666	9

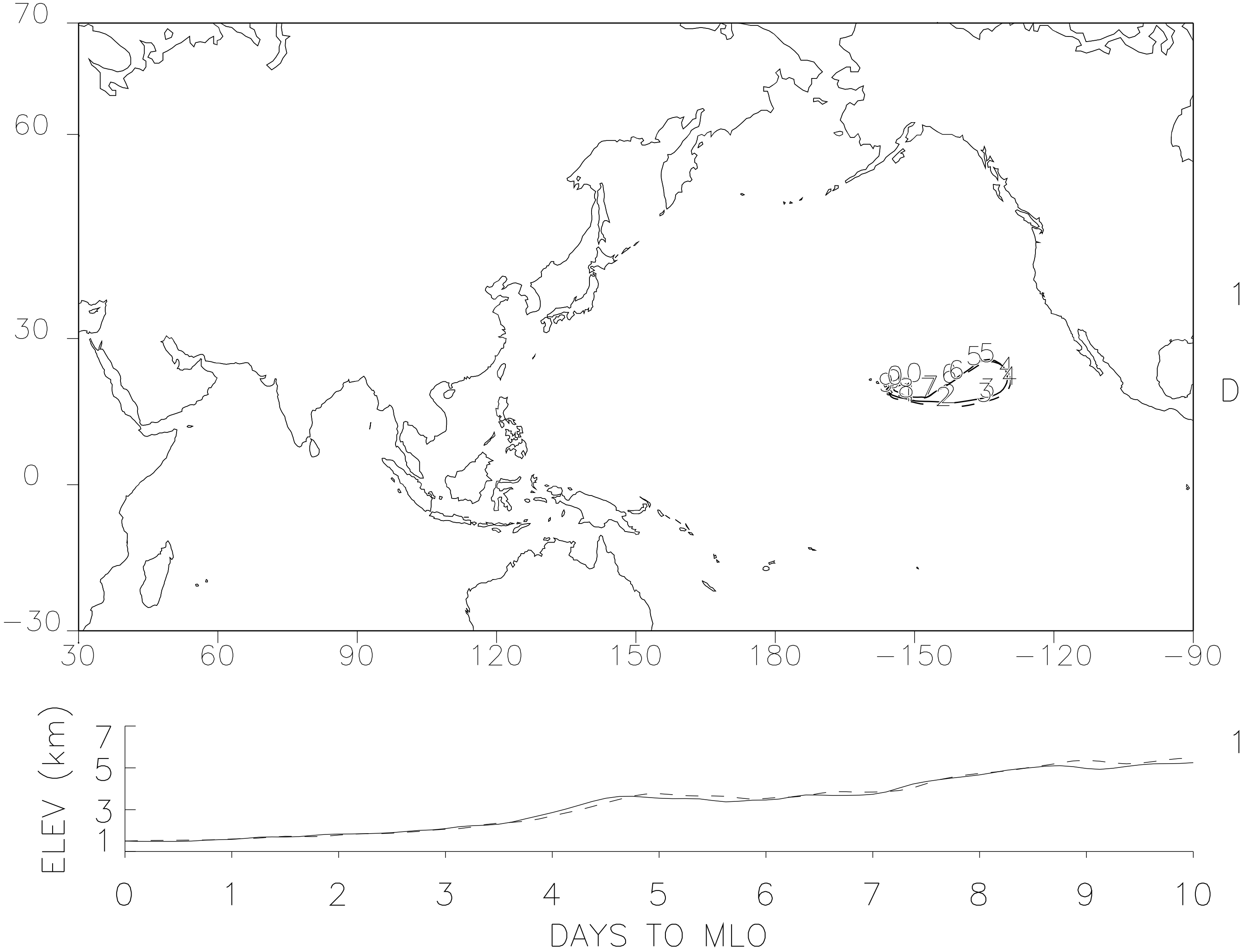
06UT

Day	km	hPa	C
0	1.5	852	15
1	1.7	835	14
2	1.9	815	14
3	2.2	788	14
4	3.0	717	6
5	3.3	693	5
6	3.1	702	7
7	3.1	701	11
8	3.4	674	9
9	3.7	652	7
10	4.1	625	3



00UT – solid
06UT – dashed

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



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ELEV (km)
7
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7
8
9
10
DAYS TO MLO

12UT – solid
18UT – dashed

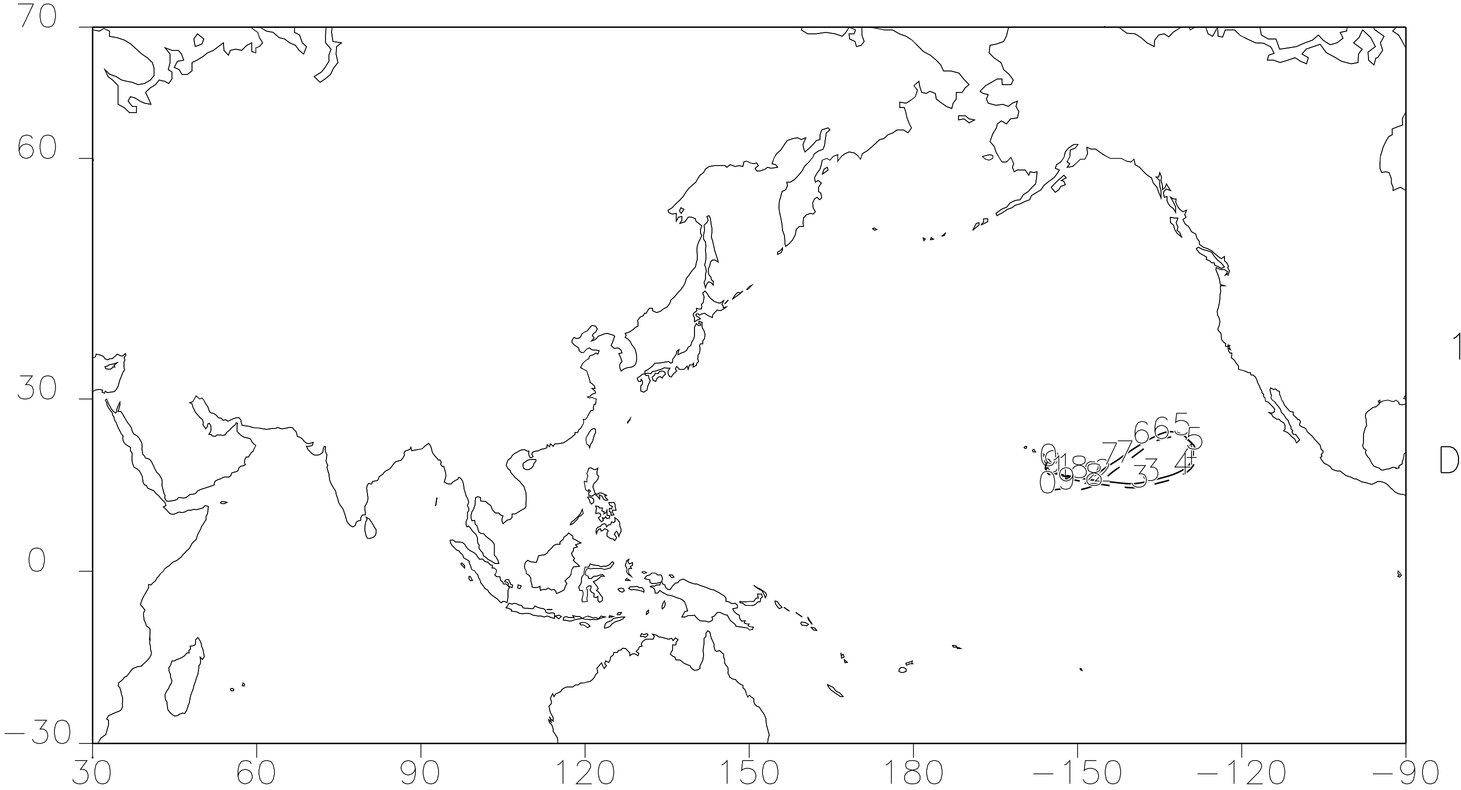
12UT

Day	km	hPa	C
0	1.5	852	15
1	1.6	844	13
2	1.8	819	14
3	2.1	793	15
4	2.9	725	8
5	3.5	666	2
6	3.5	672	5
7	3.7	649	5
8	4.7	577	–1
9	5.0	558	–5
10	5.2	540	–7

18UT

Day	km	hPa	C
0	1.5	852	15
1	1.6	843	14
2	1.8	824	14
3	2.1	797	15
4	2.7	741	10
5	3.8	650	1
6	3.5	667	5
7	3.8	642	4
8	4.7	574	–2
9	5.4	531	–7
10	5.5	528	–8

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

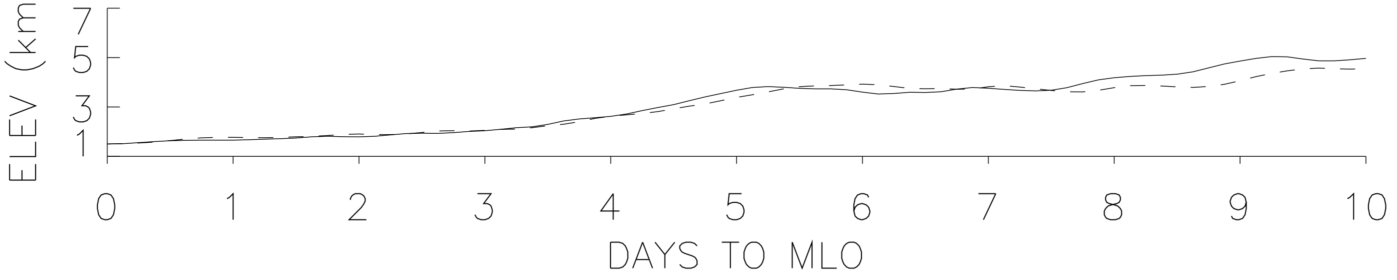


00UT

Day	km	hPa	C
0	1.5	852	16
1	1.7	836	15
2	1.8	823	14
3	2.0	797	14
4	2.6	746	11
5	3.7	657	3
6	3.6	662	4
7	3.8	648	5
8	4.2	614	4
9	4.9	565	−2
10	5.0	560	−3

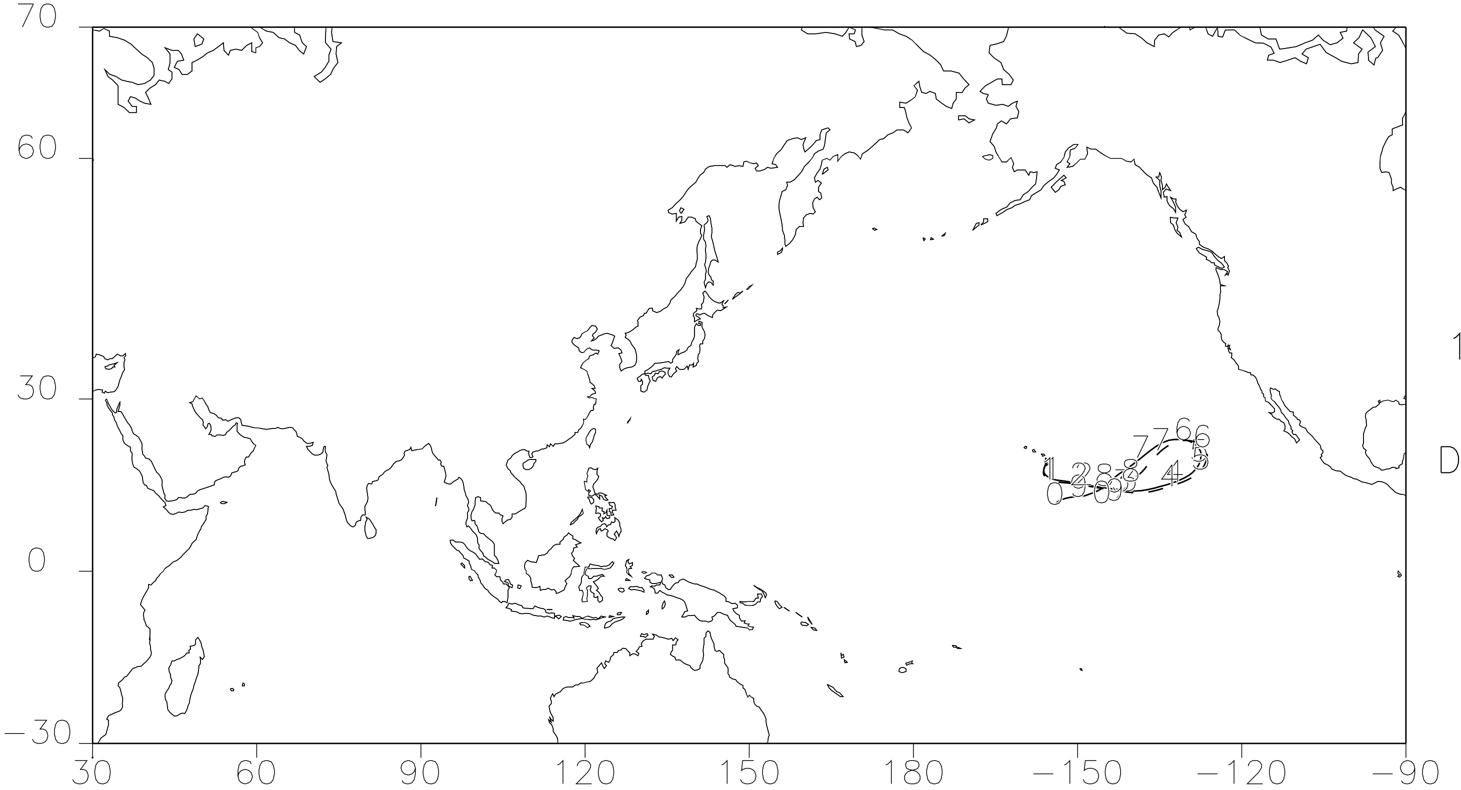
06UT

Day	km	hPa	C
0	1.5	853	16
1	1.8	825	15
2	1.9	812	14
3	2.1	798	14
4	2.6	746	12
5	3.4	683	7
6	3.9	639	2
7	3.8	645	4
8	3.8	647	8
9	4.1	624	5
10	4.6	589	2



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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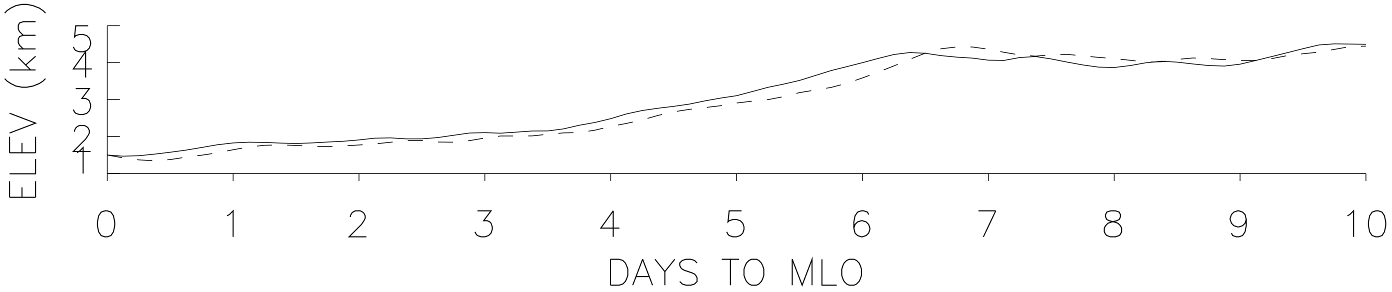


12UT – solid
18UT – dashed

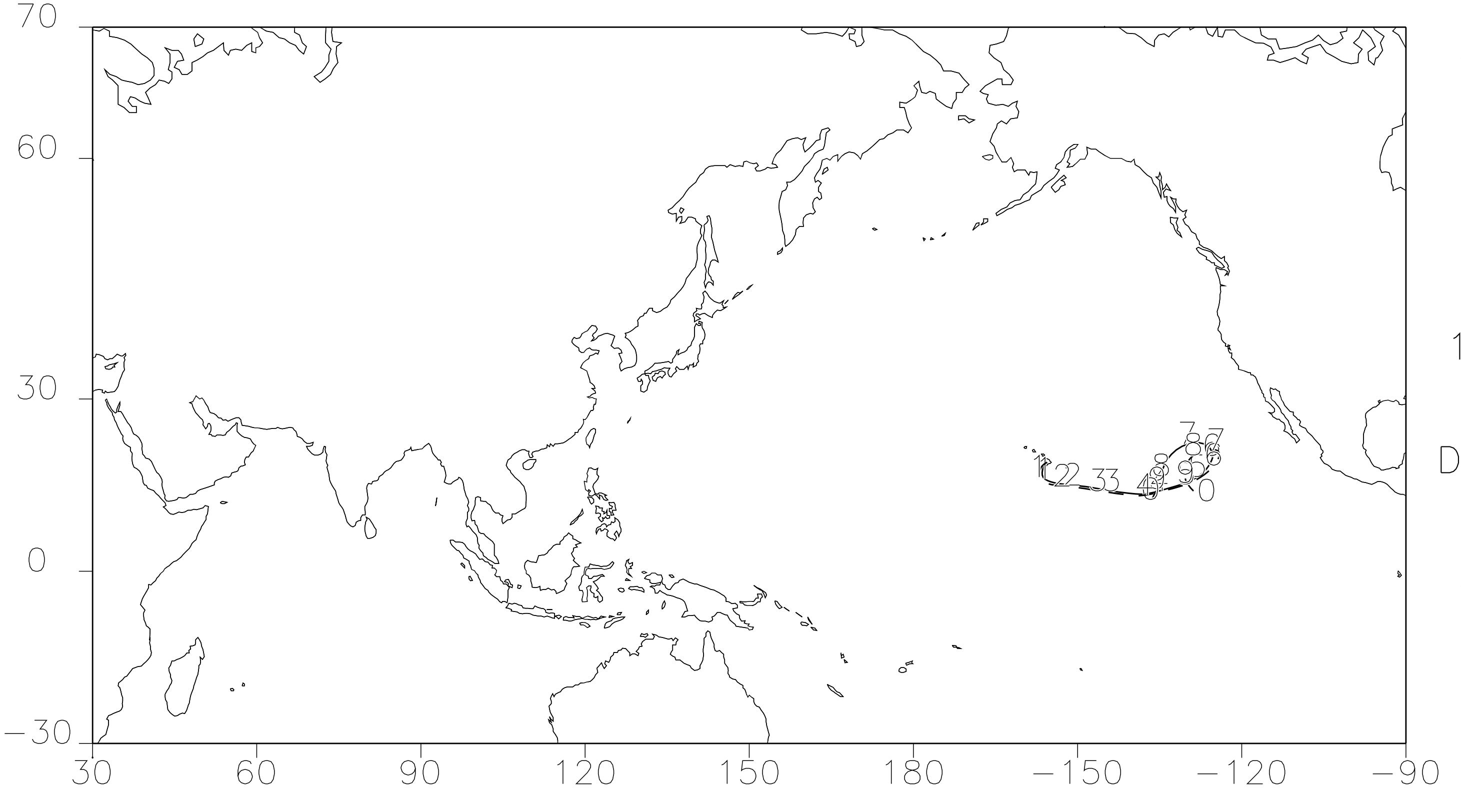
12UT

Day	km	hPa	C
0	1.5	853	17
1	1.8	820	14
2	1.9	811	13
3	2.1	791	13
4	2.5	756	13
5	3.1	703	9
6	4.0	631	2
7	4.1	625	3
8	3.9	640	7
9	4.0	632	6
10	4.5	593	3

18UT

Day	km	hPa	C
0	1.5	853	16
1	1.6	838	15
2	1.8	825	14
3	2.0	806	14
4	2.3	777	14
5	2.9	722	11
6	3.6	666	6
7	4.4	604	1
8	4.1	623	6
9	4.1	626	7
10	4.4	597	5

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/16/2004 (Day of Year 137)
NCEP/NCAR Reanalysis 1 Data Set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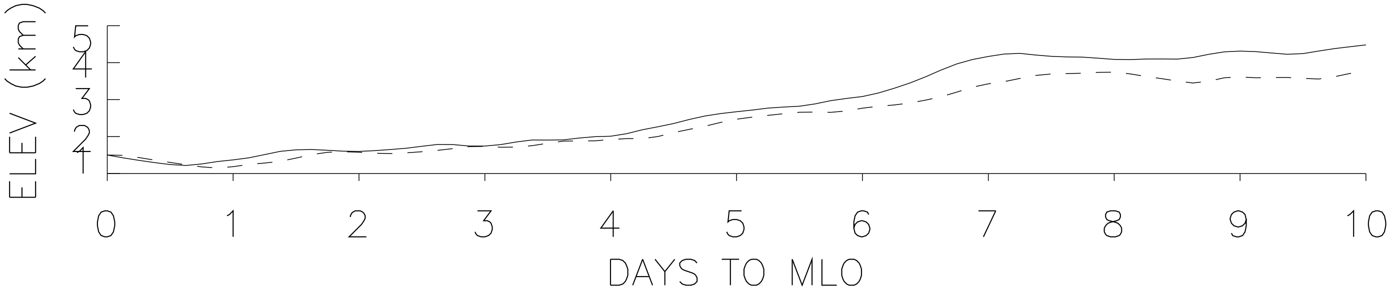


00UT – solid
06UT – dashed

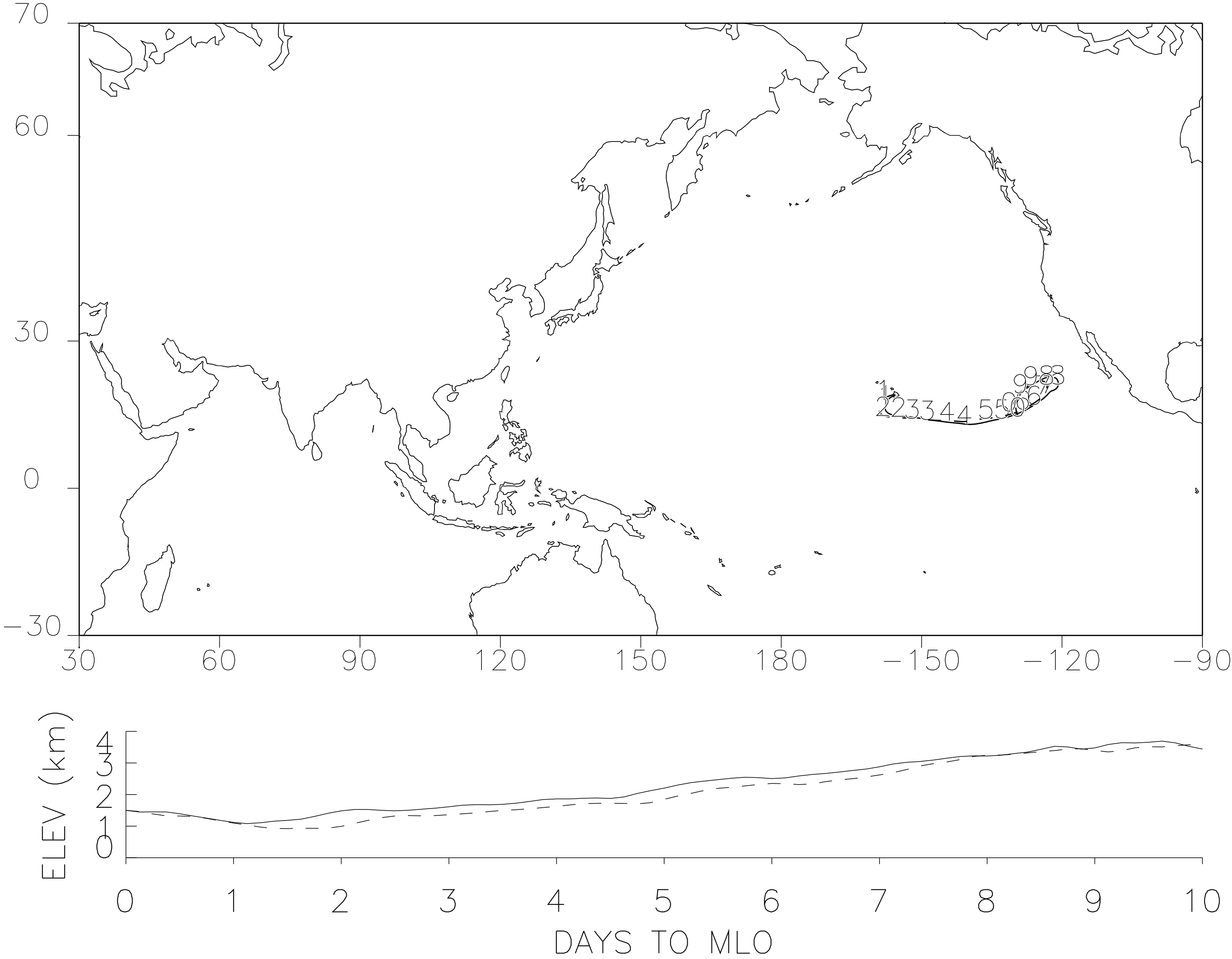
00UT

Day	km	hPa	C
0	1.5	852	17
1	1.4	865	17
2	1.6	841	15
3	1.7	826	14
4	2.0	799	14
5	2.7	741	12
6	3.1	706	10
7	4.2	619	3
8	4.1	624	5
9	4.3	607	6
10	4.5	593	5

06UT

Day	km	hPa	C
0	1.5	854	17
1	1.2	885	18
2	1.6	844	15
3	1.7	829	14
4	1.9	810	14
5	2.5	760	13
6	2.8	734	13
7	3.4	680	9
8	3.7	654	6
9	3.6	663	6
10	3.7	655	9

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/16/2004 (Day of Year 137)
NCEP/NCAR Reanalysis 1 Data Set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−30
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90
120
150
180
−150
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−90
1
2
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4
5
6
7
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9
ELEV (km)
4
3
2
1
0
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
12UT − solid
18UT − dashed

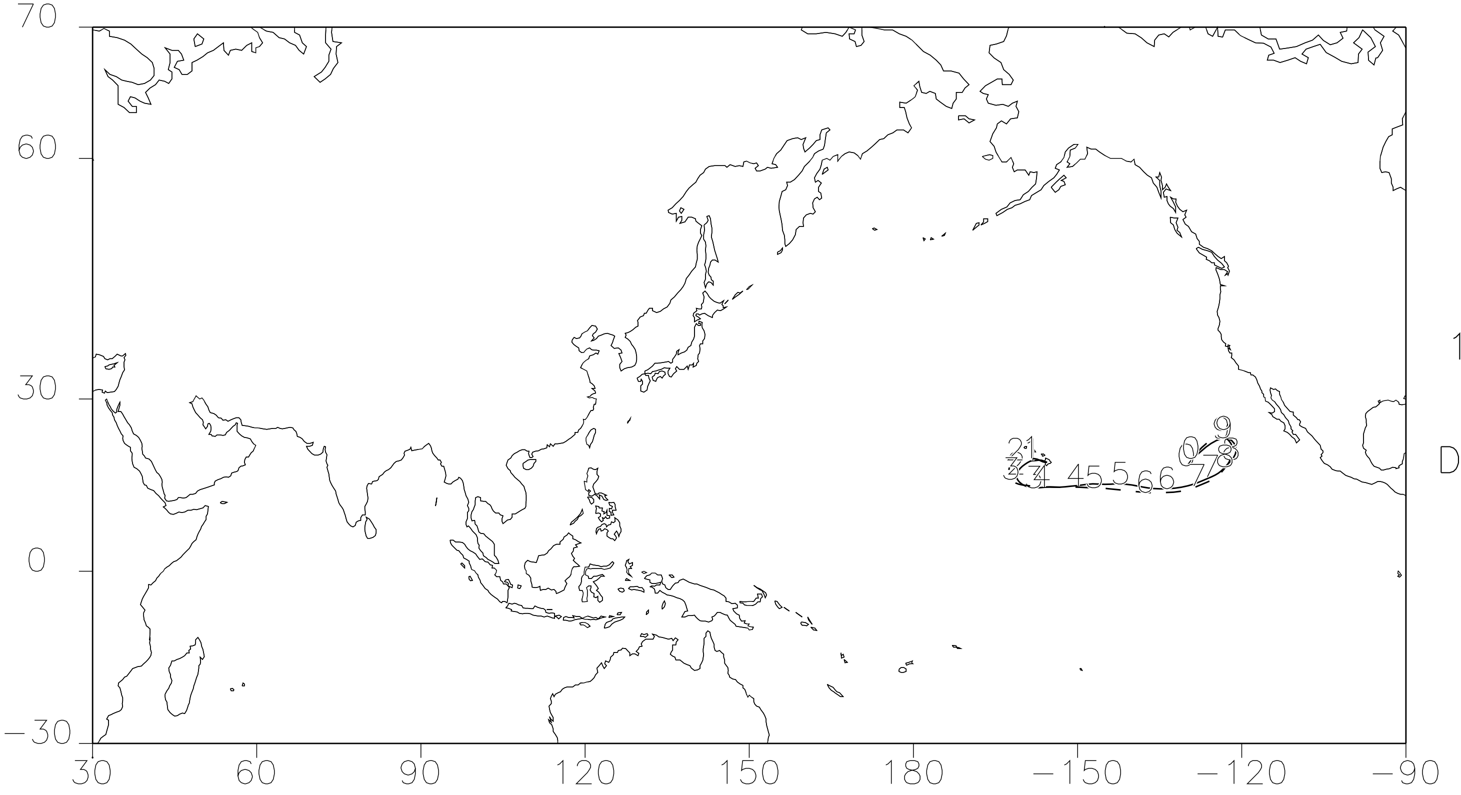
12UT

Day	km	hPa	C
0	1.5	853	17
1	1.1	892	19
2	1.5	853	15
3	1.6	839	13
4	1.9	814	14
5	2.2	781	14
6	2.5	755	14
7	2.9	723	12
8	3.2	696	10
9	3.5	673	7
10	3.4	673	9

18UT

Day	km	hPa	C
0	1.5	853	16
1	1.1	894	18
2	1.0	904	19
3	1.4	865	15
4	1.6	839	14
5	1.9	817	16
6	2.4	772	15
7	2.6	747	12
8	3.2	695	9
9	3.4	682	7
10	3.5	667	8

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/17/2004 (Day of Year 138)
NCEP/NCAR Reanalysis 1 Data Set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–90
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34
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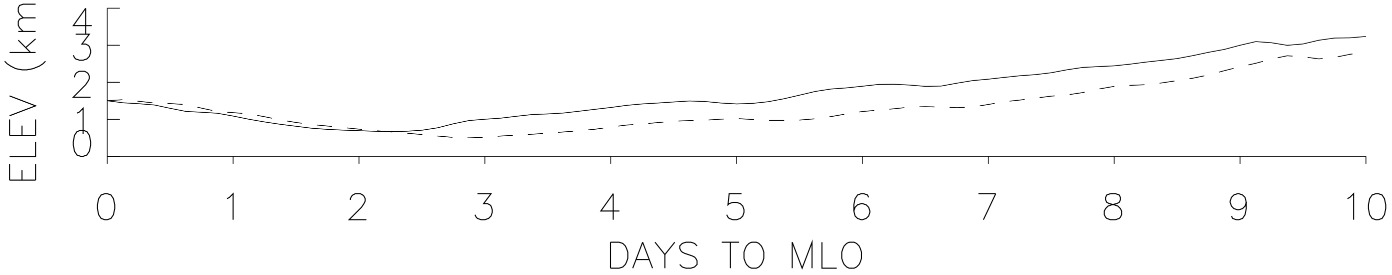


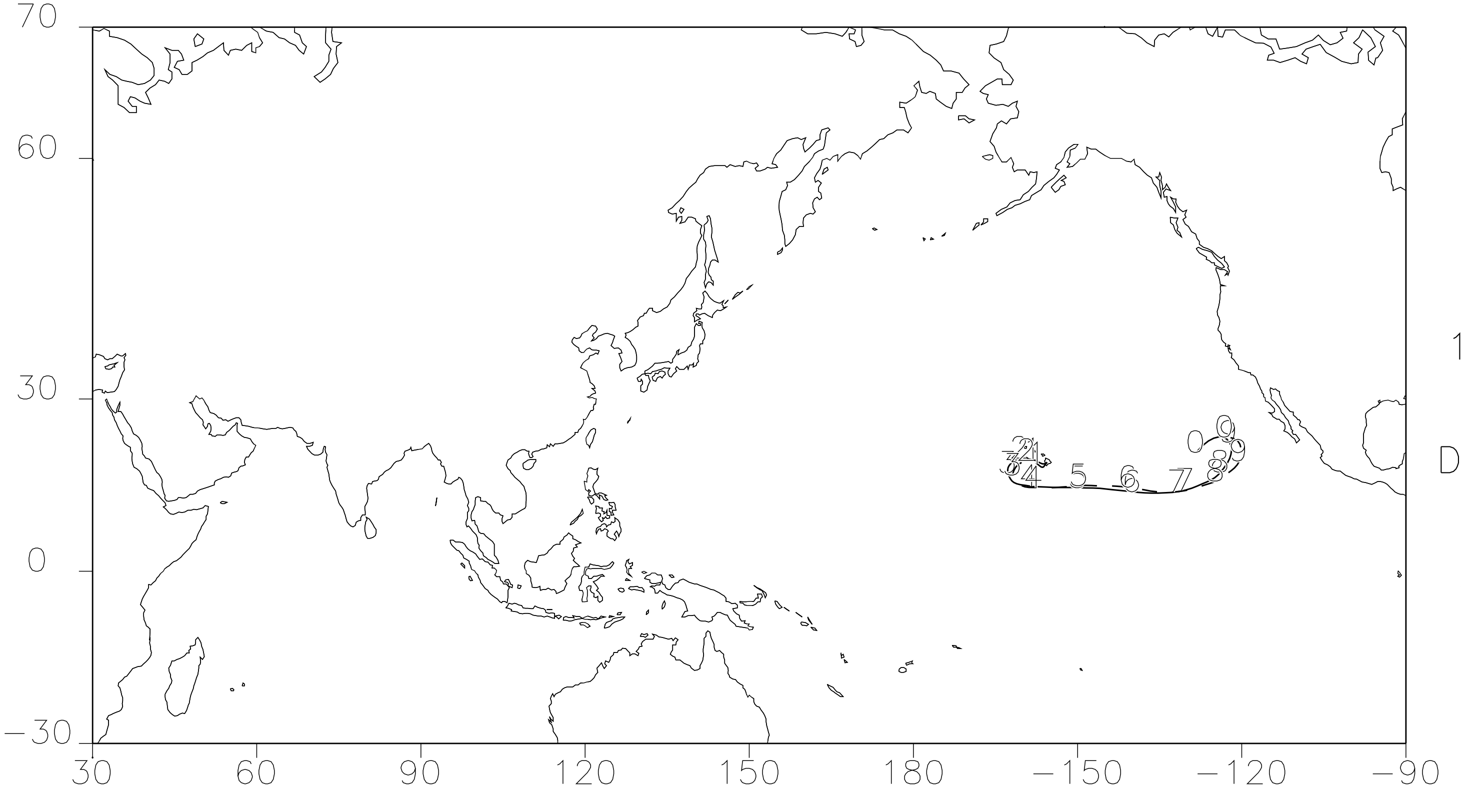
00UT

Day	km	hPa	C
0	1.5	852	15
1	1.1	894	18
2	0.7	935	22
3	1.0	902	19
4	1.3	869	17
5	1.4	859	16
6	1.9	812	16
7	2.1	795	16
8	2.4	763	14
9	3.0	714	9
10	3.2	692	8

06UT

Day	km	hPa	C
0	1.5	852	15
1	1.2	886	17
2	0.7	930	20
3	0.5	954	23
4	0.8	925	20
5	1.0	902	17
6	1.2	882	18
7	1.4	862	18
8	1.9	816	16
9	2.4	767	11
10	2.8	731	9

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



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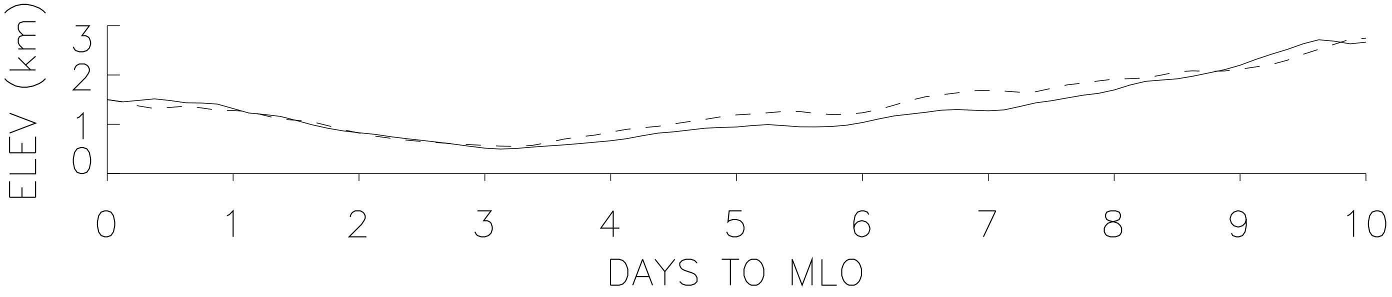


12UT – solid
18UT – dashed

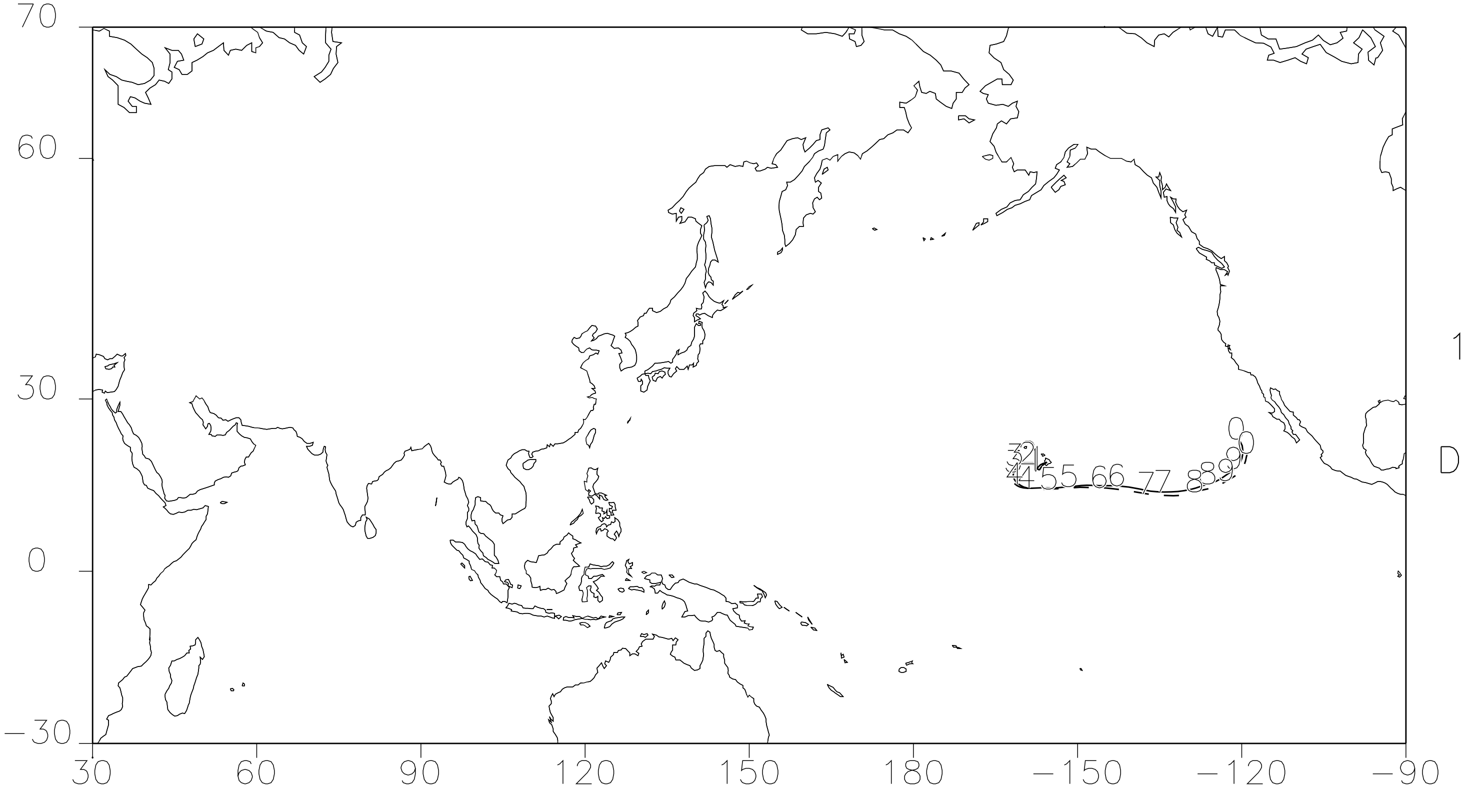
12UT

Day	km	hPa	C
0	1.5	851	14
1	1.3	871	16
2	0.8	921	19
3	0.5	954	23
4	0.7	938	21
5	0.9	908	18
6	1.0	898	18
7	1.3	872	18
8	1.7	832	17
9	2.2	786	12
10	2.7	742	10

18UT

Day	km	hPa	C
0	1.5	852	14
1	1.3	875	16
2	0.8	923	20
3	0.6	949	22
4	0.8	920	19
5	1.2	883	16
6	1.2	878	17
7	1.7	833	18
8	1.9	812	16
9	2.1	795	15
10	2.7	737	11

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/18/2004 (Day of Year 139)
NCEP/NCAR Reanalysis 1 Data Set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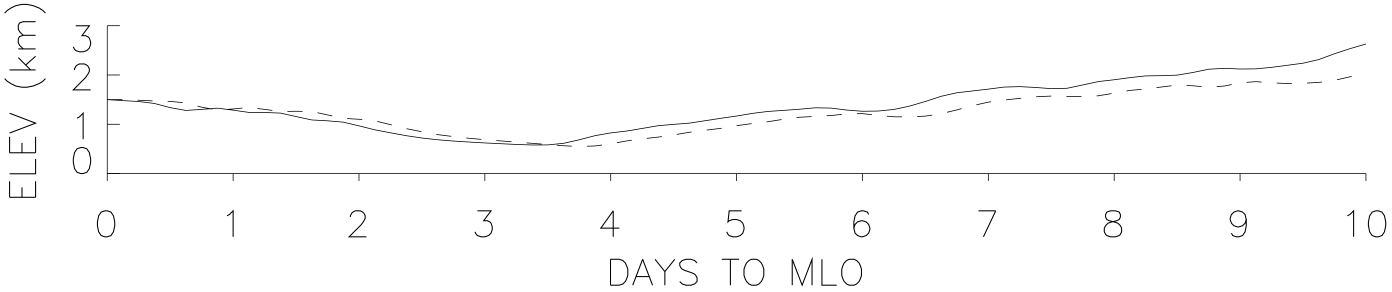
180
−150
−120
−90
0 1 2 3 4 5 6 7 8 9



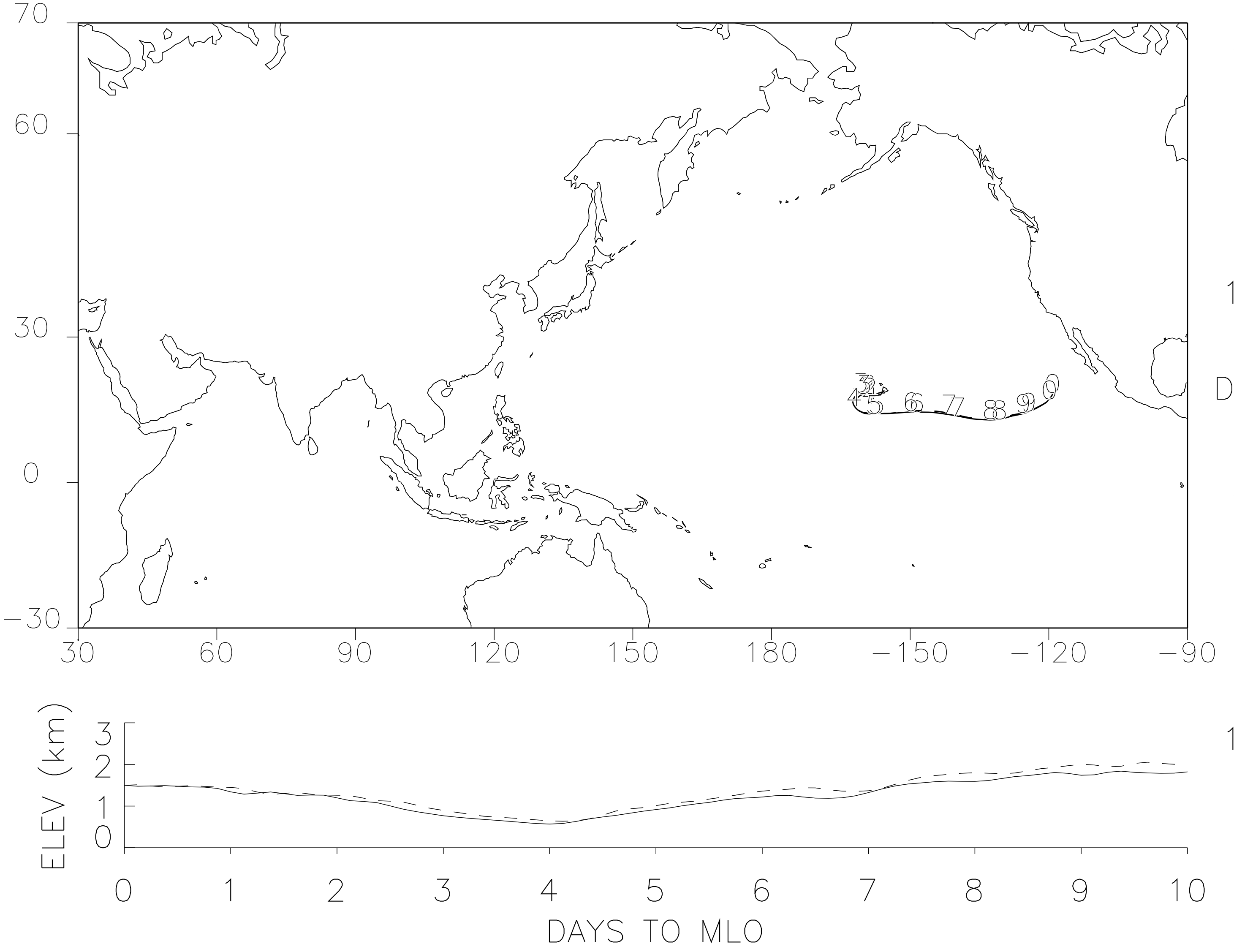
00UT

Day	km	hPa	C
0	1.5	851	14
1	1.3	874	16
2	1.0	907	19
3	0.6	943	22
4	0.8	920	21
5	1.2	885	17
6	1.3	874	16
7	1.7	829	17
8	1.9	812	17
9	2.1	792	15
10	2.6	746	12

06UT

Day	km	hPa	C
0	1.5	852	15
1	1.3	872	17
2	1.1	894	18
3	0.7	936	20
4	0.6	944	23
5	1.0	906	19
6	1.2	881	16
7	1.4	857	18
8	1.6	839	17
9	1.8	821	16
10	2.1	800	15

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/18/2004 (Day of Year 139)
NCEP/NCAR Reanalysis 1 Data Set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60
30
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−30
30
60
90
120
150
180
−150
−120
−90
0
1
2
3
4
5
6
7
8
9
0
1
2
3
4
5
6
7
8
9
10
ELEV (km)
0
1
2
3
DAYS TO MLO
12UT − solid
18UT − dashed

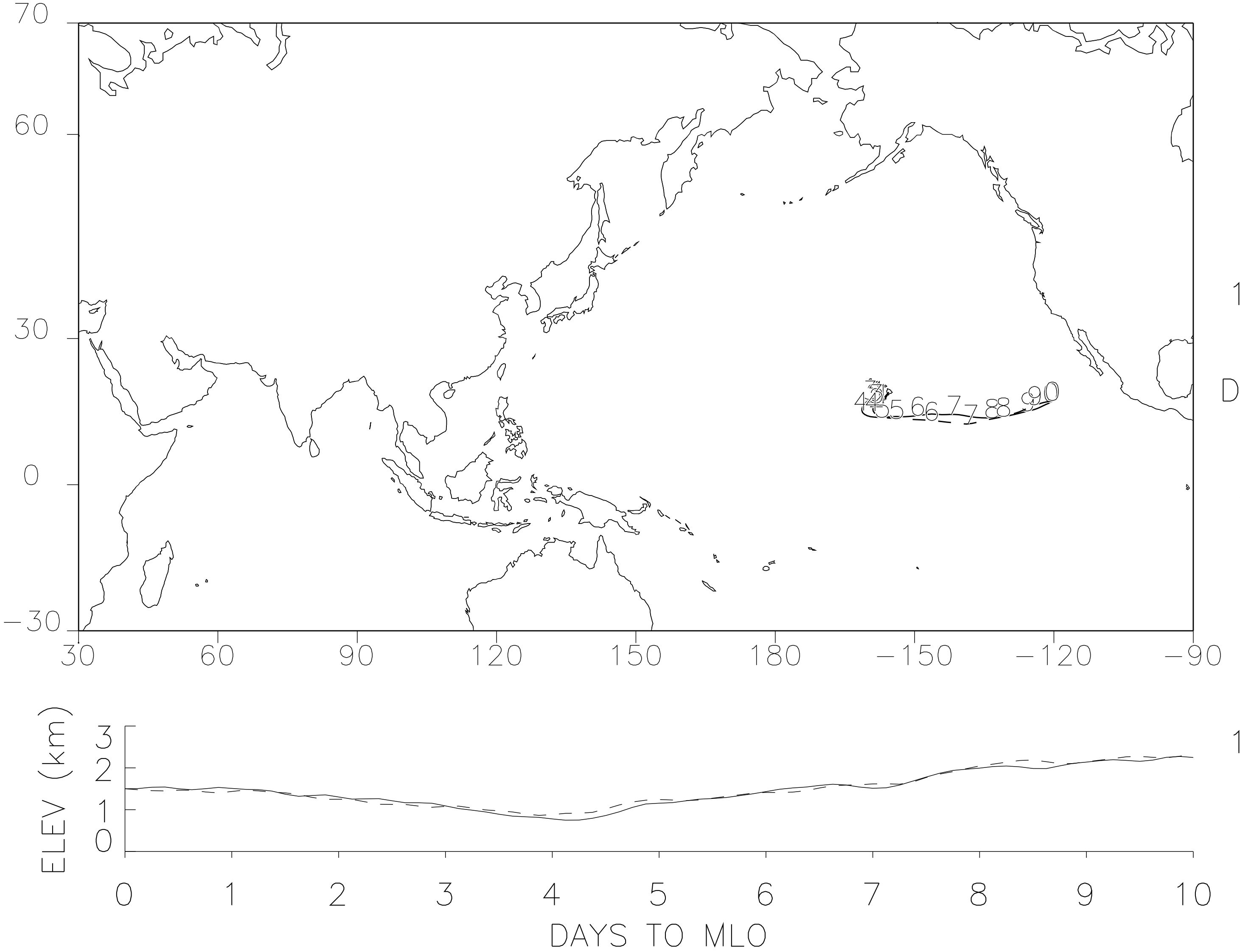
12UT

Day	km	hPa	C
0	1.5	851	14
1	1.3	868	16
2	1.2	884	17
3	0.8	927	20
4	0.6	948	23
5	0.9	911	18
6	1.2	880	16
7	1.3	867	17
8	1.6	840	17
9	1.7	827	16
10	1.8	822	16

18UT

Day	km	hPa	C
0	1.5	853	15
1	1.4	857	15
2	1.2	879	17
3	0.9	915	19
4	0.6	940	22
5	1.0	902	18
6	1.4	866	15
7	1.4	864	17
8	1.8	822	17
9	2.0	804	16
10	2.0	807	15

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/19/2004 (Day of Year 140)
NCEP/NCAR Reanalysis 1 Data Set


70
60
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0
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30
60
90
120
150
180
–150
–120
–90
ELEV (km)
3
2
1
0
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
00UT – solid
06UT – dashed

00UT

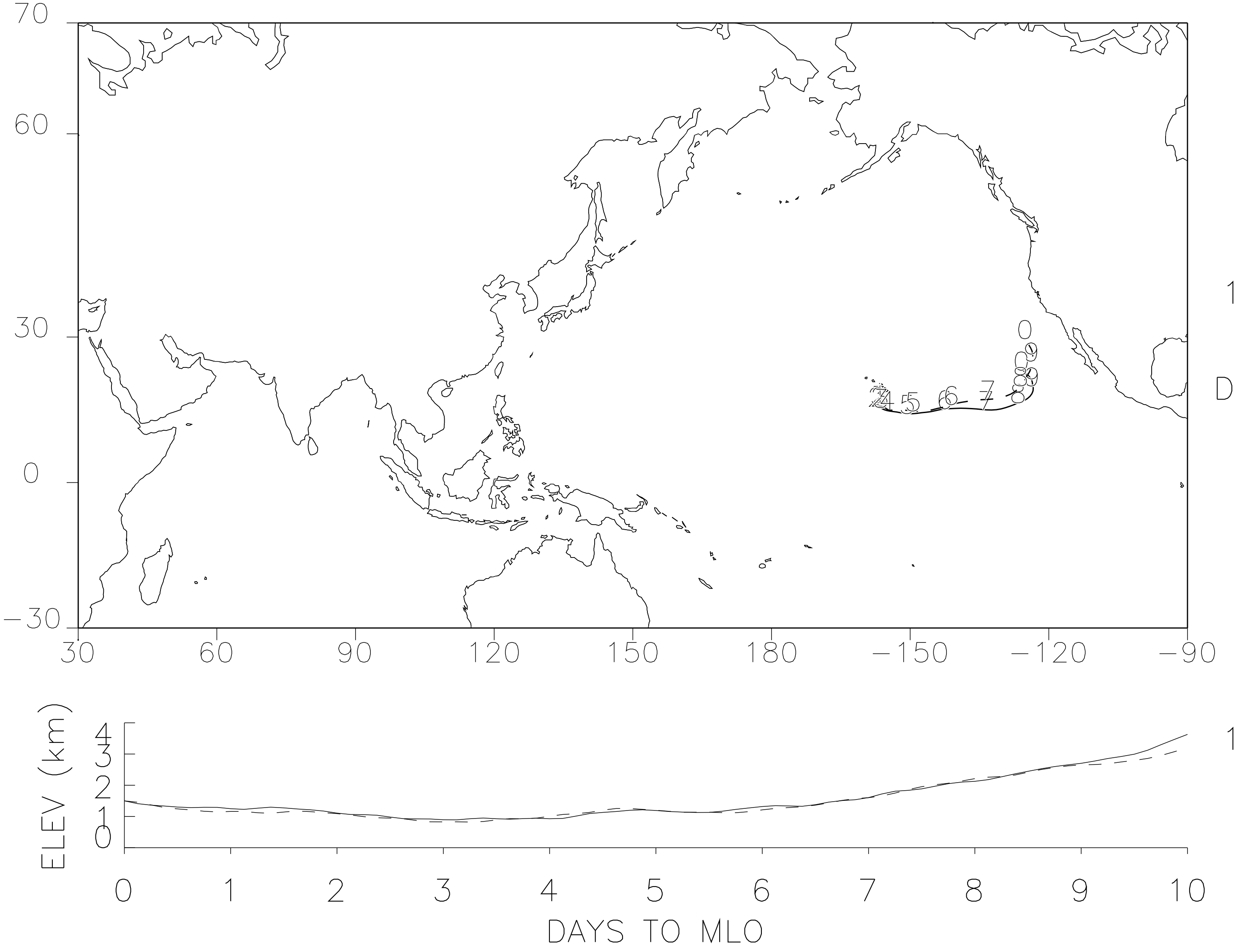
Day	km	hPa	C
0	1.5	853	15
1	1.5	850	15
2	1.3	873	17
3	1.1	894	19
4	0.8	926	22
5	1.2	885	18
6	1.4	857	16
7	1.5	849	16
8	2.0	802	15
9	2.1	789	16
10	2.2	780	14

06UT

Day	km	hPa	C
0	1.5	853	17
1	1.4	858	16
2	1.3	878	18
3	1.1	897	19
4	0.9	917	20
5	1.2	877	17
6	1.4	860	15
7	1.6	840	15
8	2.0	799	15
9	2.1	790	16
10	2.3	775	15

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)

5/19/2004 (Day of Year 140)
NCEP/NCAR Reanalysis 1 Data Set



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120
150
180
−150
−120
−90
0
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7
8
9
ELEV (km)
0
1
2
3
4
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
12UT – solid
18UT – dashed

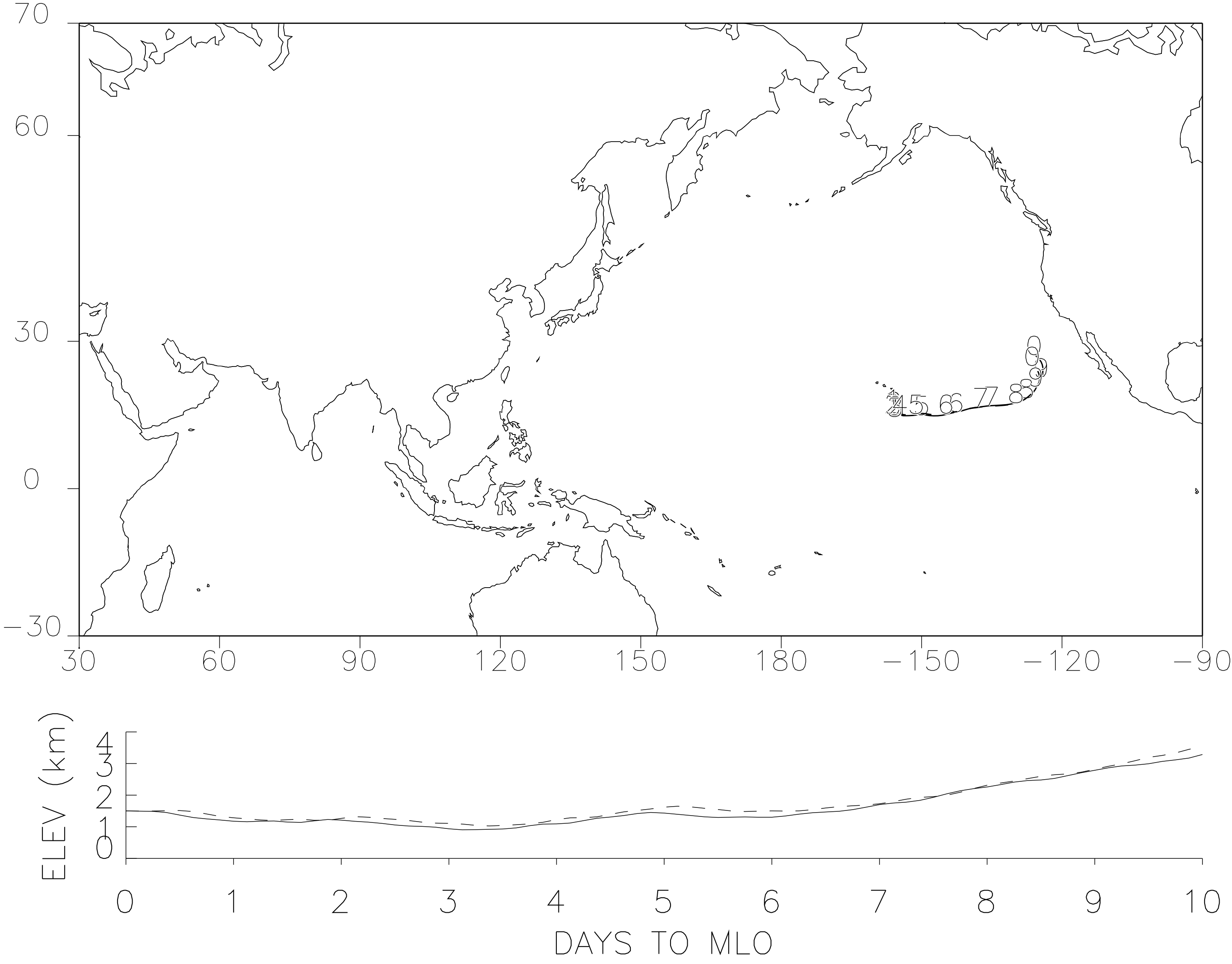
12UT

Day	km	hPa	C
0	1.5	853	16
1	1.2	877	17
2	1.1	892	19
3	0.9	916	20
4	0.9	912	20
5	1.2	882	16
6	1.3	869	14
7	1.6	840	14
8	2.1	788	14
9	2.7	737	12
10	3.6	661	6

18UT

Day	km	hPa	C
0	1.5	853	16
1	1.2	888	18
2	1.1	894	18
3	0.8	923	20
4	1.0	904	19
5	1.2	883	15
6	1.2	881	15
7	1.6	842	14
8	2.2	783	12
9	2.7	742	11
10	3.2	696	8

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/20/2004 (Day of Year 141)
NCEP/NCAR Reanalysis 1 Data Set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–30
30
60
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120
150
180
–150
–120
–90
0
1
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3
4
5
6
7
8
9
ELEV (km)
4
3
2
1
0
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
00UT – solid
06UT – dashed

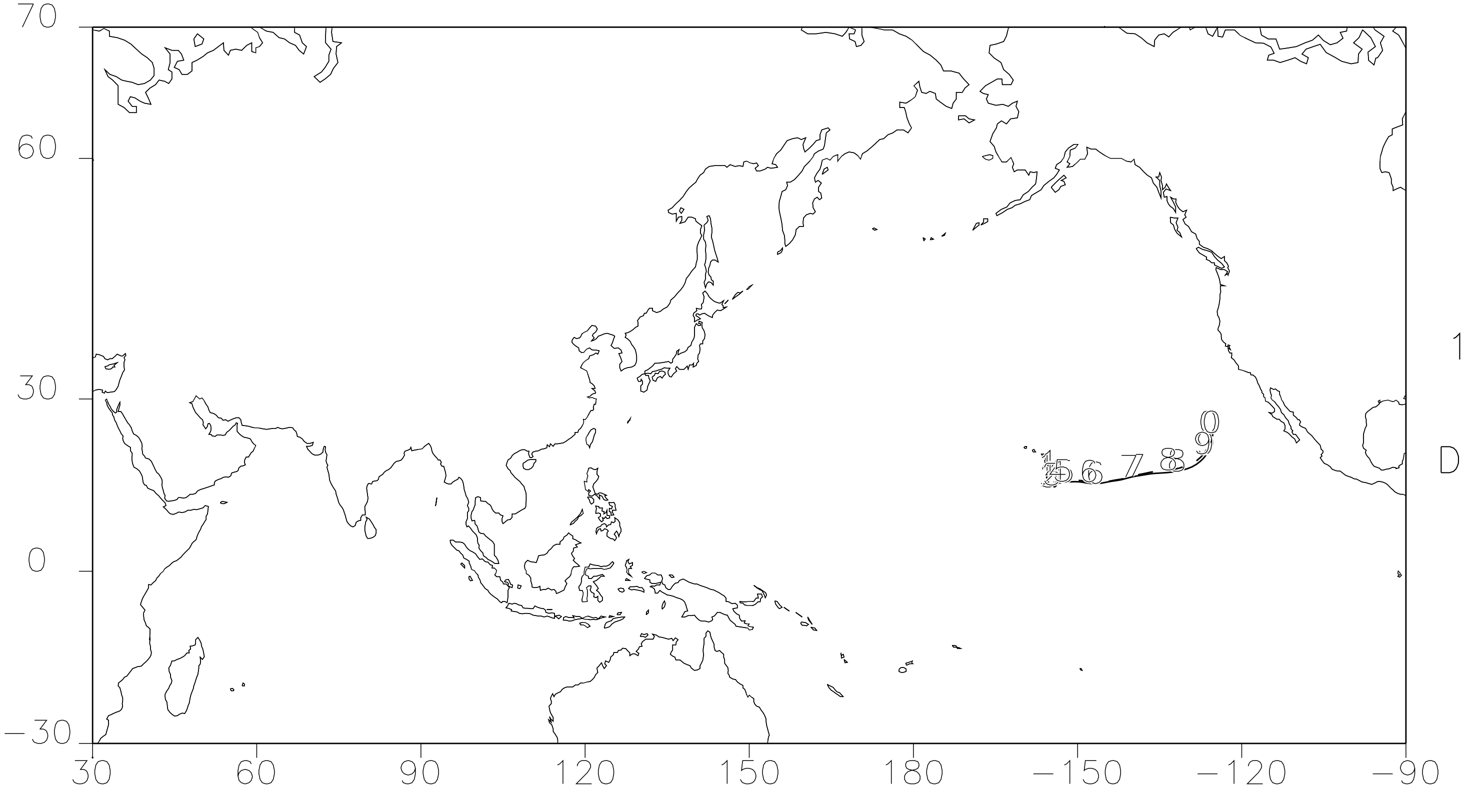
00UT

Day	km	hPa	C
0	1.5	853	16
1	1.2	886	18
2	1.2	881	17
3	0.9	911	20
4	1.1	894	19
5	1.4	859	15
6	1.3	869	16
7	1.7	832	14
8	2.3	776	12
9	2.8	730	10
10	3.3	688	8

06UT

Day	km	hPa	C
0	1.5	854	17
1	1.3	875	19
2	1.3	876	17
3	1.1	894	19
4	1.2	882	18
5	1.6	841	15
6	1.5	851	15
7	1.7	831	15
8	2.3	774	13
9	2.8	728	10
10	3.5	669	5

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/20/2004 (Day of Year 141)
NCEP/NCAR Reanalysis 1 Data Set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60
90
120
150
180
–150
–120
–90
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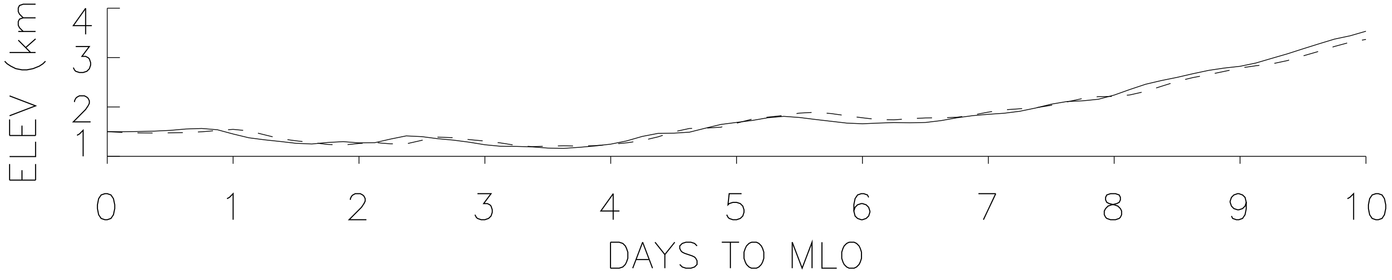
2
3
4
5
6
7
8
9
0

12UT

Day	km	hPa	C
0	1.5	854	16
1	1.5	857	17
2	1.3	874	17
3	1.2	879	18
4	1.2	879	18
5	1.7	834	15
6	1.7	835	15
7	1.9	817	13
8	2.2	779	12
9	2.8	725	10
10	3.5	667	5

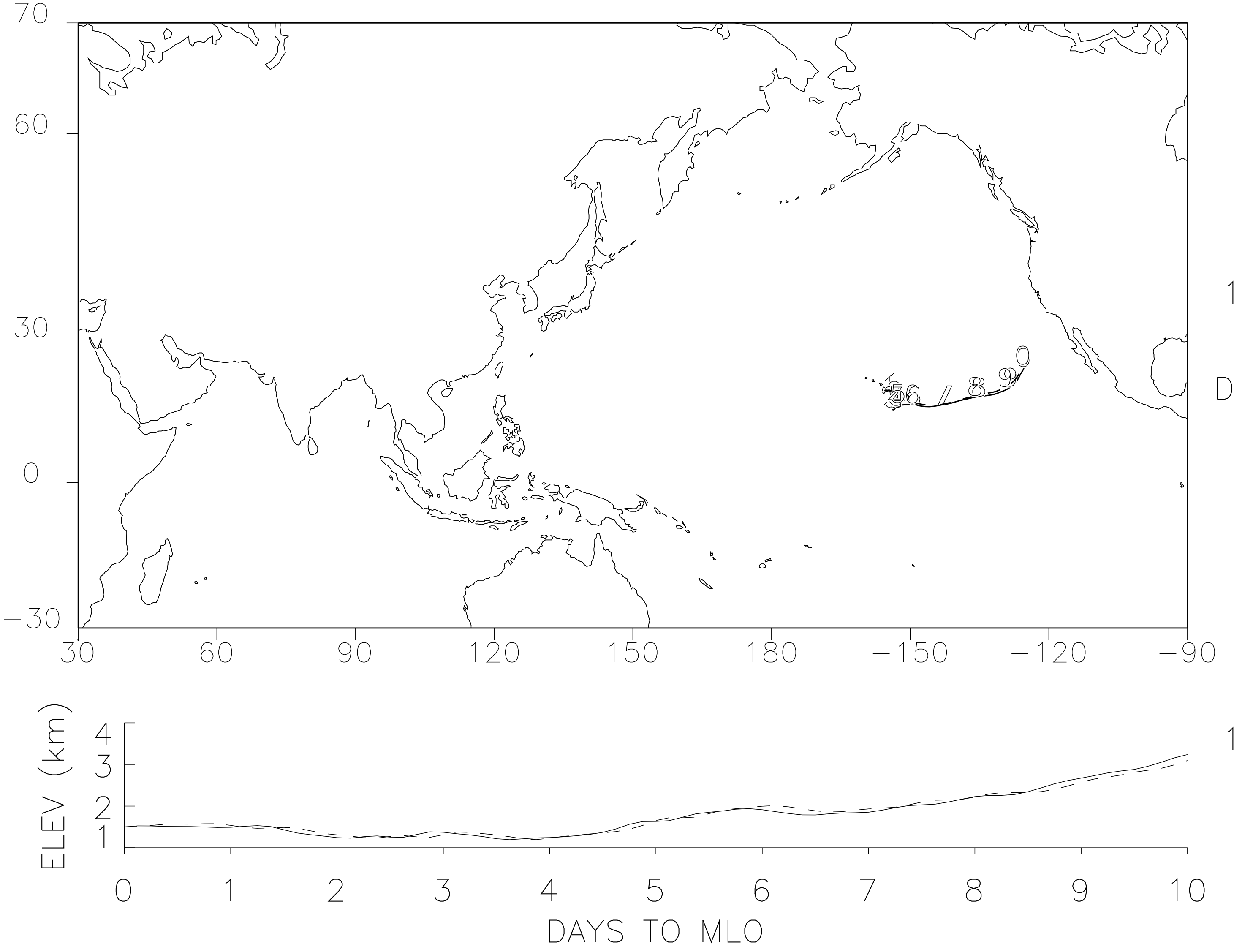
18UT

Day	km	hPa	C
0	1.5	854	16
1	1.5	849	16
2	1.3	878	17
3	1.3	872	16
4	1.2	880	17
5	1.7	837	16
6	1.8	824	14
7	1.9	813	13
8	2.2	783	14
9	2.8	731	10
10	3.4	683	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



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–150
–120
–90
0
9
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7
6
5
4
ELEV (km)
4
3
2
1
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
00UT – solid
06UT – dashed

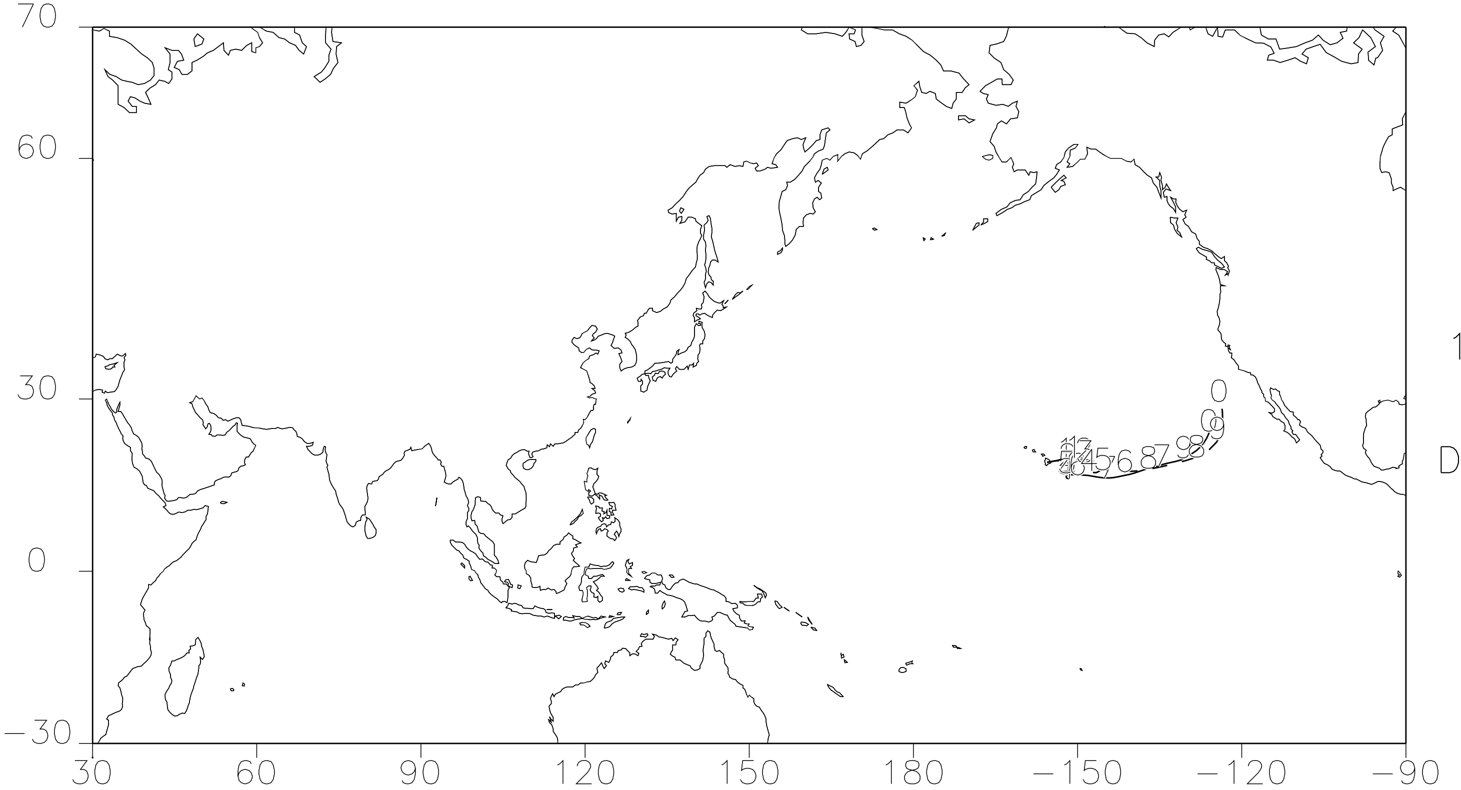
00UT

Day	km	hPa	C
0	1.5	855	17
1	1.5	854	17
2	1.2	879	18
3	1.4	864	16
4	1.2	878	18
5	1.6	839	16
6	1.9	812	13
7	1.9	815	14
8	2.2	782	13
9	2.7	739	10
10	3.2	693	7

06UT

Day	km	hPa	C
0	1.5	856	16
1	1.5	851	17
2	1.3	874	18
3	1.3	871	16
4	1.2	881	18
5	1.7	840	16
6	2.0	805	15
7	1.9	809	14
8	2.2	784	14
9	2.6	751	12
10	3.1	705	8

3-D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/21/2004 (Day of Year 142)
NCEP/NCAR Reanalysis 1 Data Set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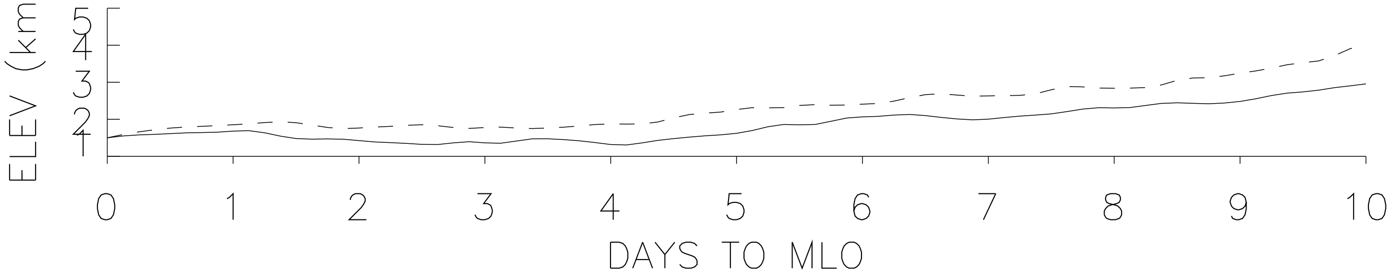
−30
30
60
90
120
150
180
−150
−120
−90
0
1
2
3
4
5
6
7
8
9
10

12UT

Day	km	hPa	C
0	1.5	855	16
1	1.7	836	15
2	1.4	861	16
3	1.4	865	15
4	1.3	870	17
5	1.6	841	16
6	2.1	798	14
7	2.0	802	14
8	2.3	774	13
9	2.5	758	12
10	3.0	715	9

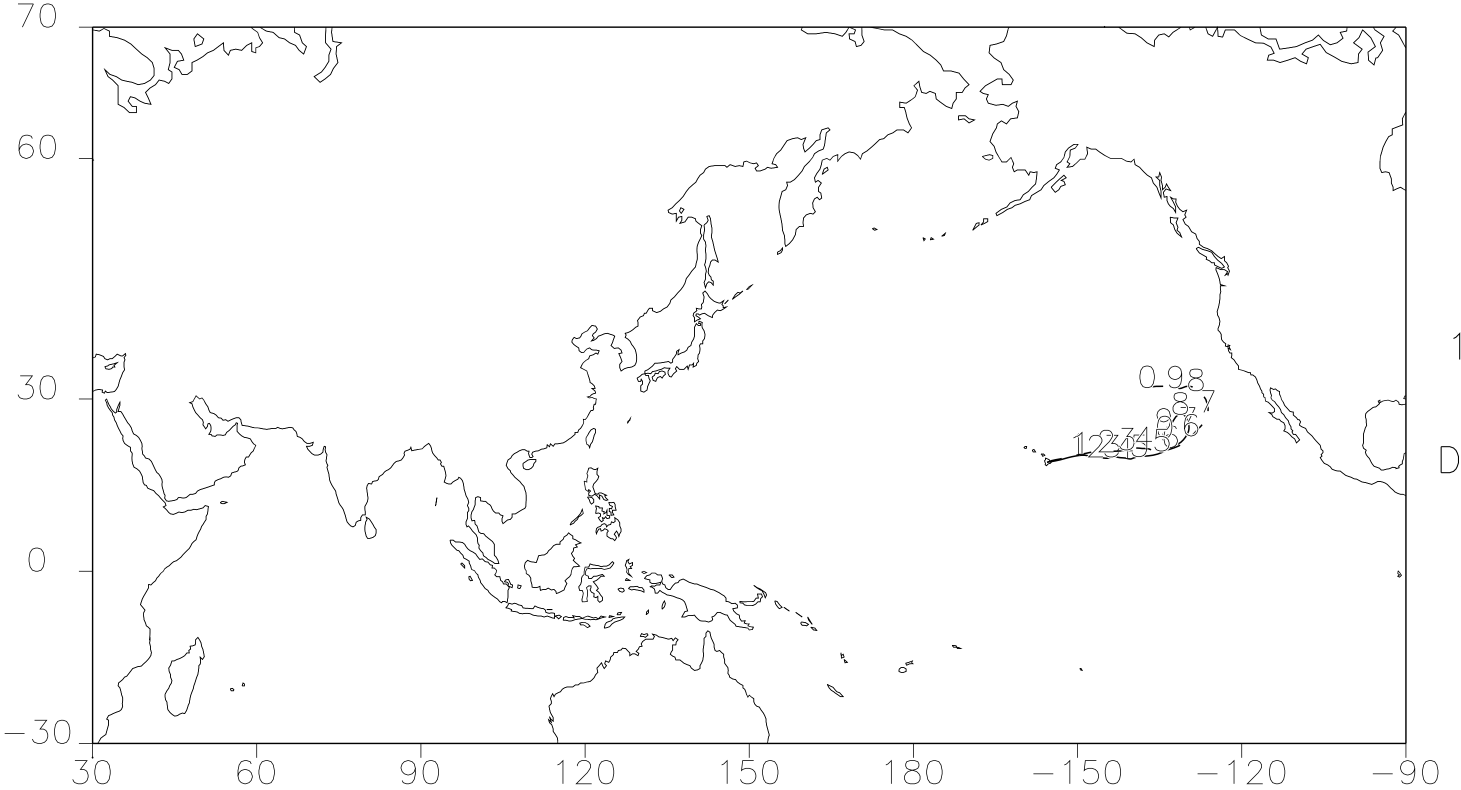
18UT

Day	km	hPa	C
0	1.5	856	16
1	1.9	820	15
2	1.8	829	15
3	1.8	827	15
4	1.9	816	13
5	2.3	780	13
6	2.4	767	14
7	2.6	745	13
8	2.8	727	12
9	3.2	693	11
10	4.0	631	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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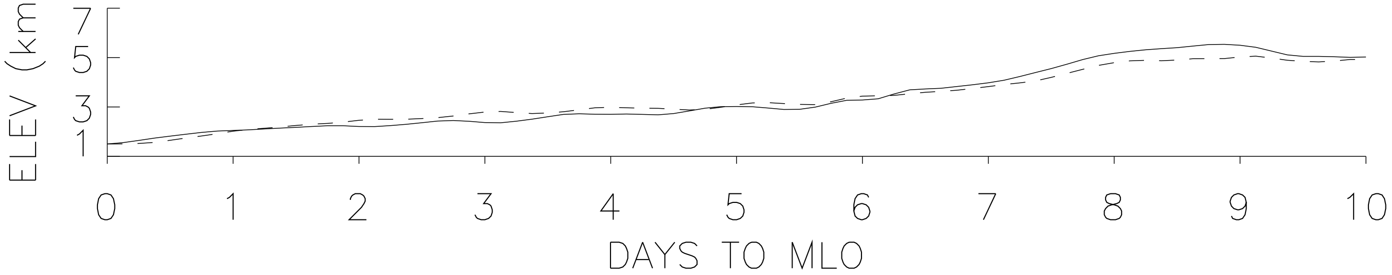
60
30
0
–30
30
60
90
120
150
180
–150
–120
–90
0 1 2 3 4 5 6 7 8 9 10

00UT

Day	km	hPa	C
0	1.5	856	17
1	2.0	801	14
2	2.2	785	13
3	2.4	770	12
4	2.7	738	11
5	3.0	711	10
6	3.3	690	8
7	4.0	634	3
8	5.2	545	–8
9	5.5	524	–8
10	5.0	557	–3

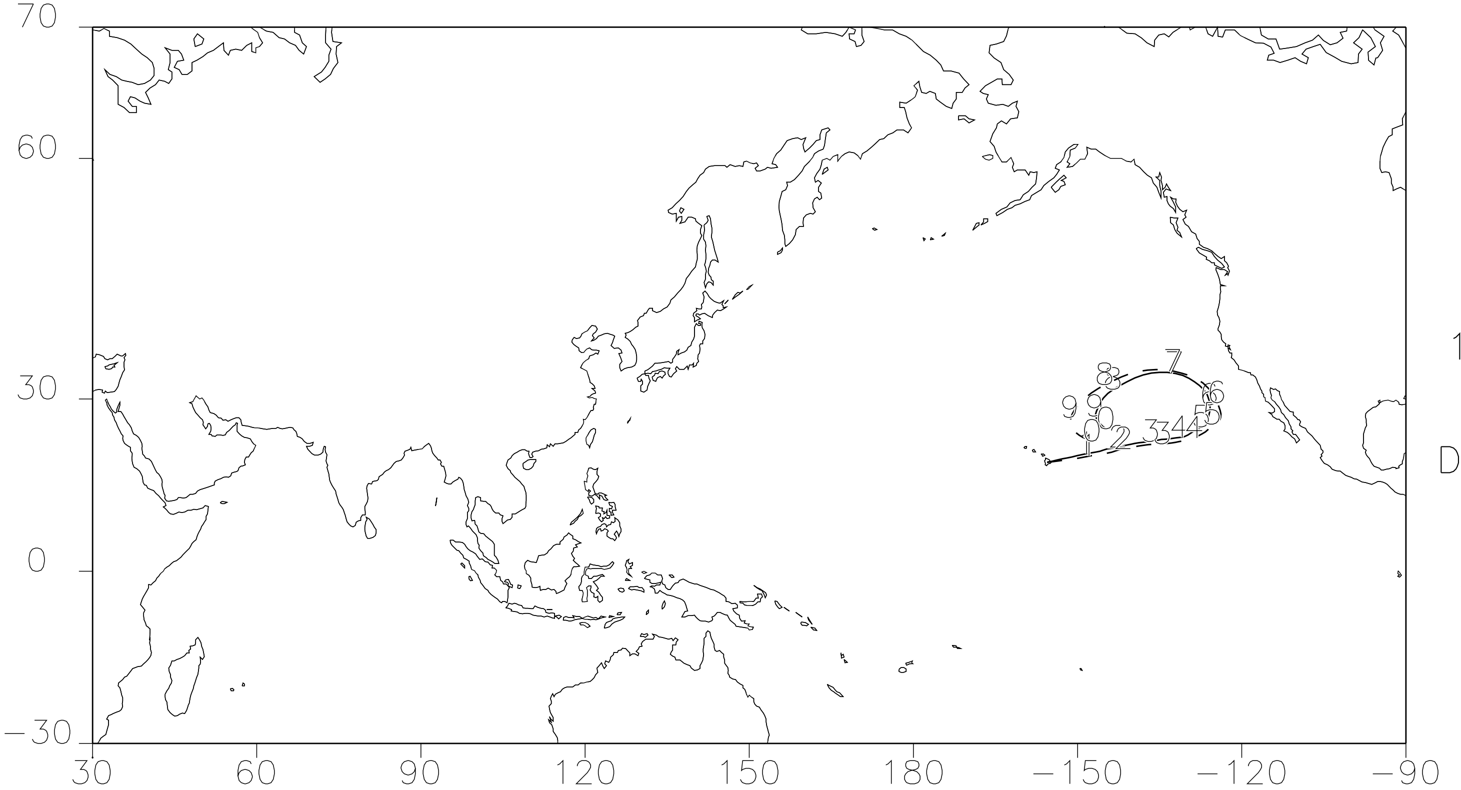
06UT

Day	km	hPa	C
0	1.5	856	16
1	2.0	806	14
2	2.5	763	11
3	2.8	733	10
4	3.0	715	9
5	3.1	706	10
6	3.4	679	8
7	3.8	647	3
8	4.8	572	–5
9	5.0	557	–5
10	4.9	564	–6



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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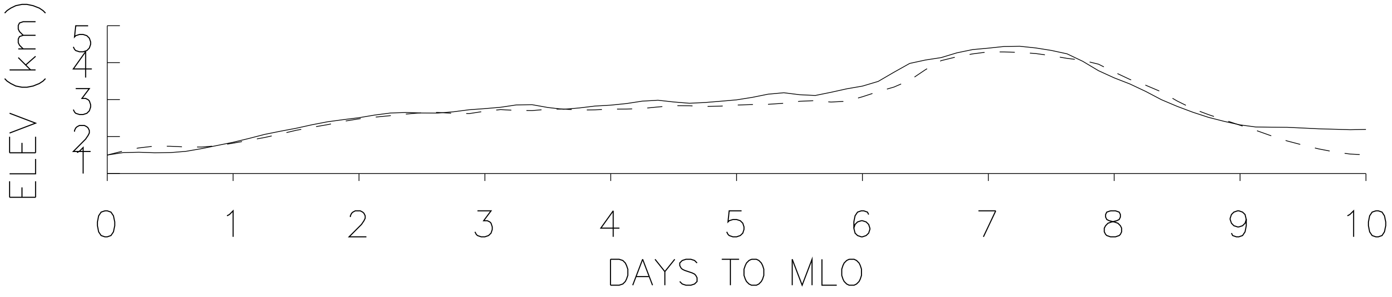
0
−30
30
60
90
120
150
180
−150
−120
−90
0
1
2
3
4
5
6
7
8
9

12UT

Day	km	hPa	C
0	1.5	856	15
1	1.8	822	14
2	2.5	757	10
3	2.8	735	10
4	2.9	727	9
5	3.0	712	10
6	3.4	683	8
7	4.4	601	−3
8	3.6	665	2
9	2.3	777	9
10	2.2	788	11

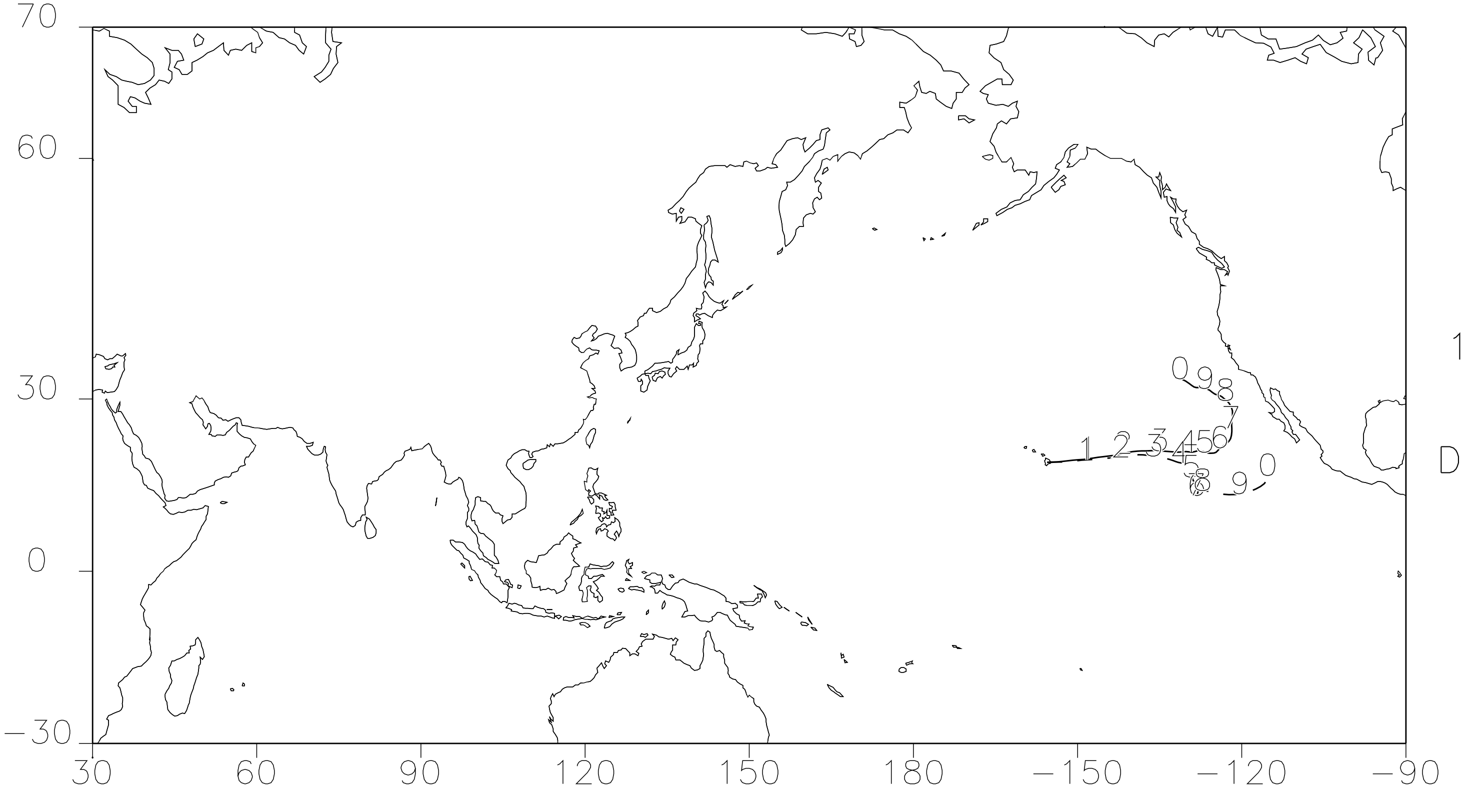
18UT

Day	km	hPa	C
0	1.5	856	15
1	1.8	825	14
2	2.5	761	11
3	2.7	742	10
4	2.7	738	11
5	2.9	727	11
6	3.1	708	11
7	4.3	610	−1
8	3.7	651	1
9	2.3	777	10
10	1.5	855	15



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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−90
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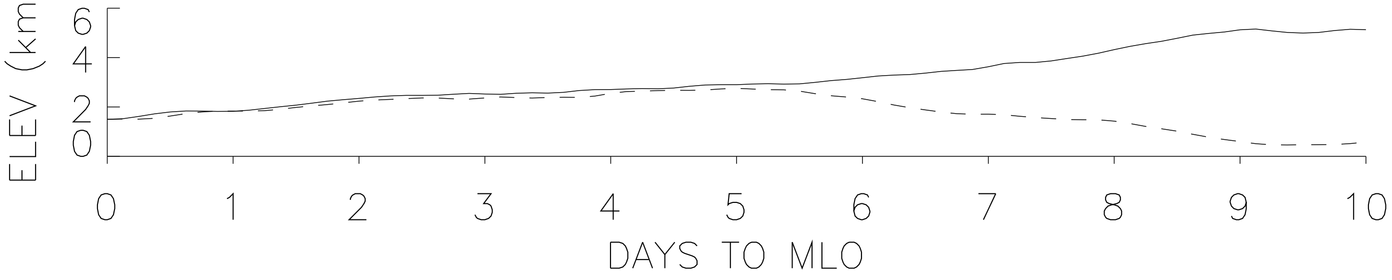
0 9 8 7 6 5 4 3 2 1



00UT

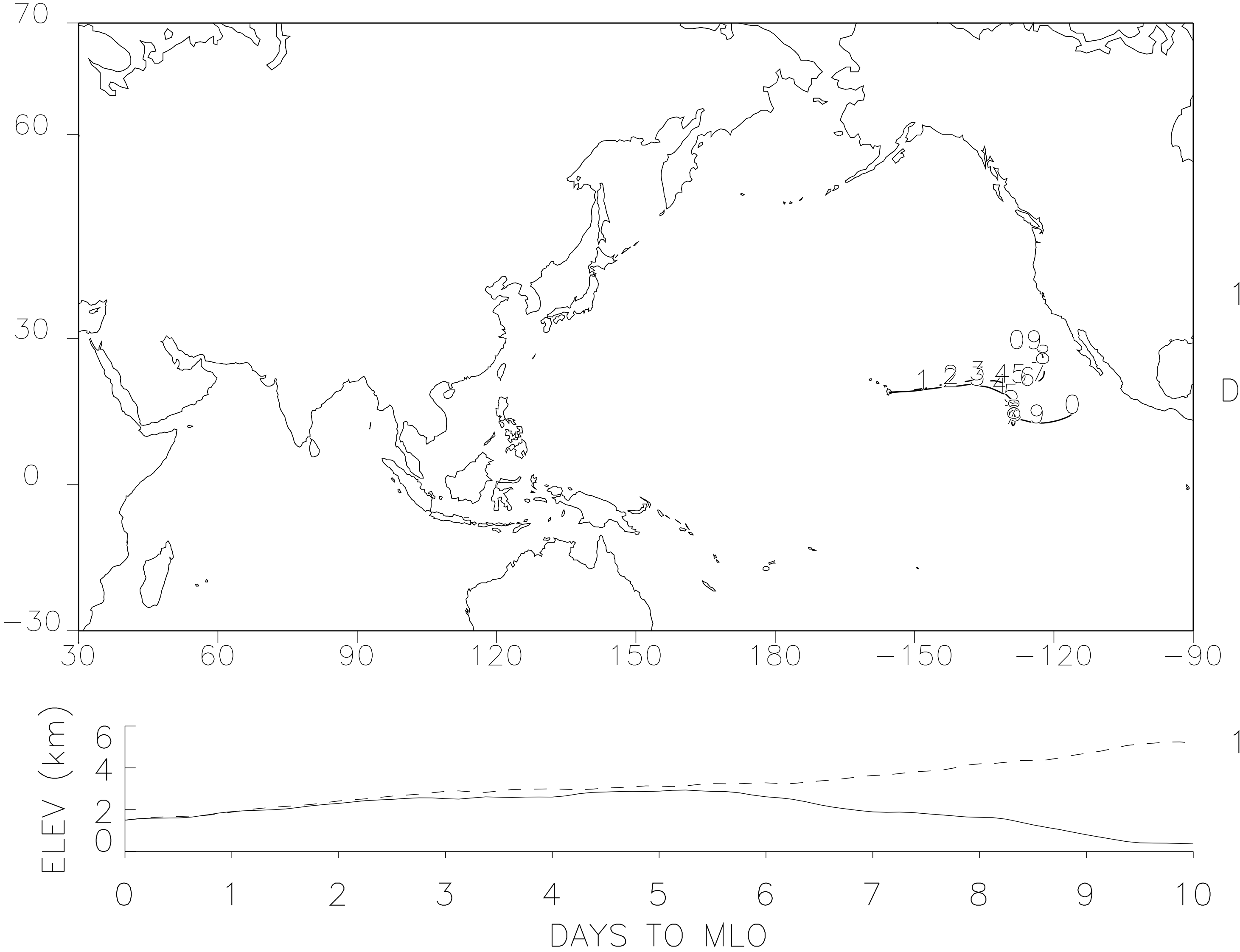
Day	km	hPa	C
0	1.5	854	15
1	1.8	824	14
2	2.3	773	12
3	2.5	756	11
4	2.7	739	11
5	2.9	720	11
6	3.2	696	11
7	3.6	660	7
8	4.3	607	0
9	5.1	548	−6
10	5.1	549	−6

06UT

Day	km	hPa	C
0	1.5	855	14
1	1.8	823	14
2	2.2	785	12
3	2.4	771	12
4	2.6	755	12
5	2.8	735	12
6	2.3	772	13
7	1.7	832	16
8	1.4	859	16
9	0.6	946	21
10	0.6	948	20

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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60
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–30
30
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90
120
150
180
–150
–120
–90
09
8
1 2 3 4 5 6 7
0
9
0
ELEV (km)
6
4
2
0
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
12UT – solid
18UT – dashed

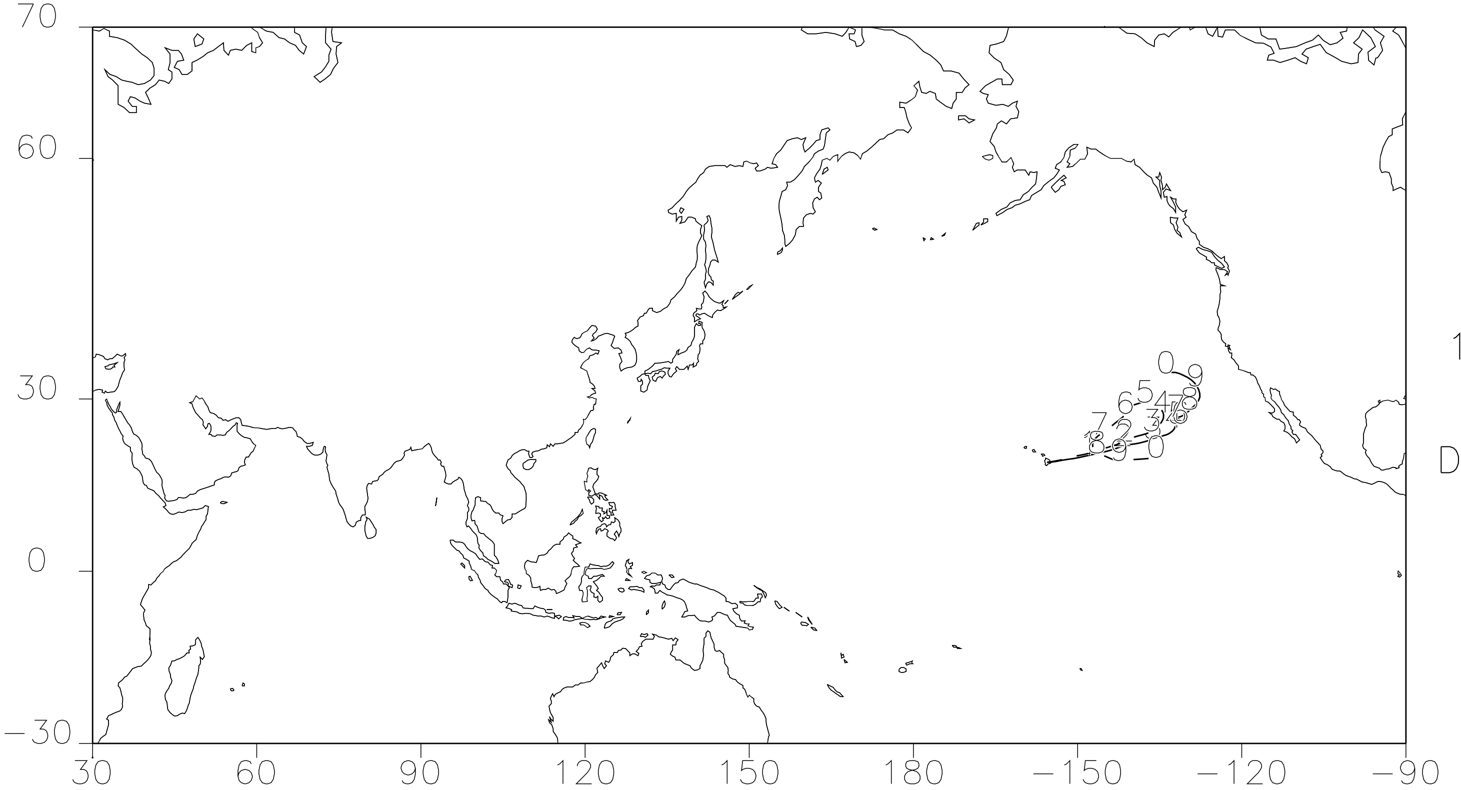
12UT

Day	km	hPa	C
0	1.5	854	14
1	1.9	816	13
2	2.3	777	12
3	2.5	755	10
4	2.6	747	11
5	2.9	722	10
6	2.6	744	11
7	1.9	811	14
8	1.6	837	14
9	0.8	921	20
10	0.4	969	23

18UT

Day	km	hPa	C
0	1.5	855	14
1	1.9	818	14
2	2.4	769	11
3	2.9	726	8
4	3.0	715	10
5	3.1	704	9
6	3.3	690	10
7	3.6	661	8
8	4.2	617	2
9	4.7	580	–3
10	5.2	546	–5

3−D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/24/2004 (Day of Year 145)
NCEP/NCAR Reanalysis 1 Data Set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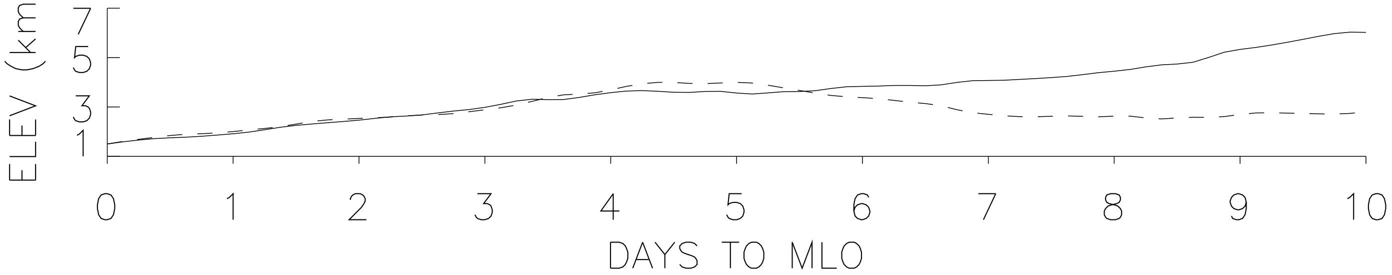
150
180
−150
−120
−90
0
9
6
5
4
7
8
3
2
7
1
8
9
0

00UT

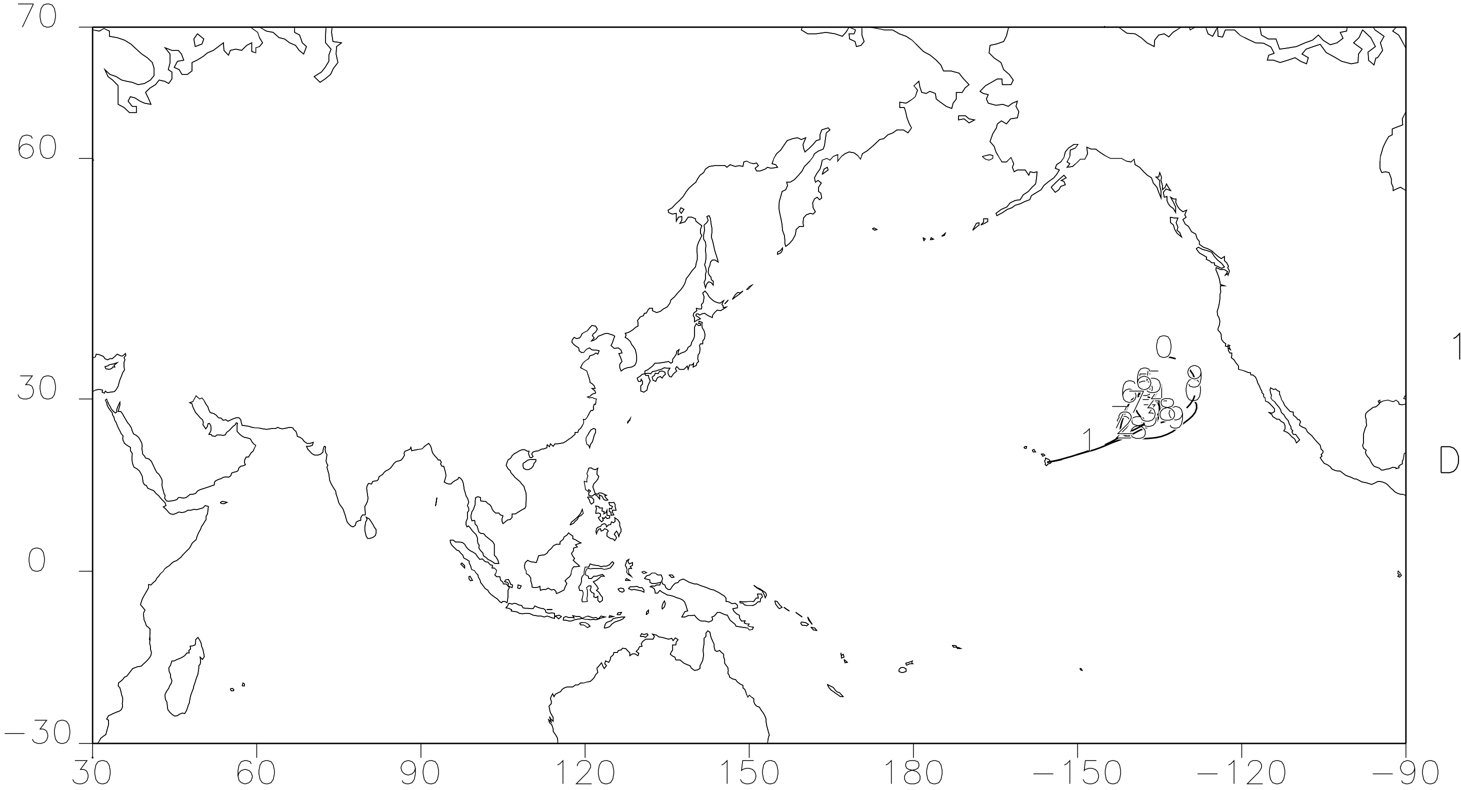
Day	km	hPa	C
0	1.5	854	15
1	1.9	815	14
2	2.5	763	11
3	3.0	717	8
4	3.6	666	5
5	3.6	668	4
6	3.8	645	3
7	4.1	626	2
8	4.4	599	0
9	5.3	535	−6
10	6.0	487	−14

06UT

Day	km	hPa	C
0	1.5	854	15
1	2.0	806	13
2	2.5	758	11
3	2.9	728	8
4	3.7	658	2
5	4.0	634	−1
6	3.4	682	4
7	2.7	739	10
8	2.6	748	12
9	2.7	741	12
10	2.8	730	12



3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/24/2004 (Day of Year 145)
NCEP/NCAR Reanalysis 1 Data Set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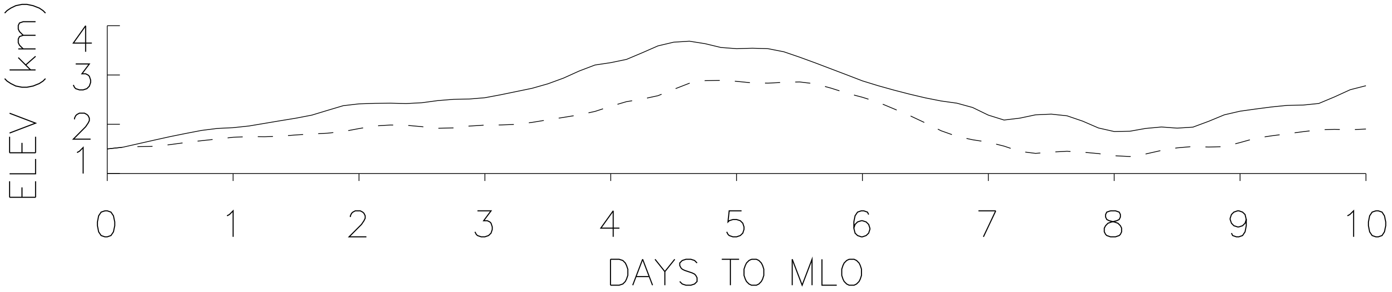
60
30
0
–30
30
60
90
120
150
180
–150
–120
–90
0
1

12UT

Day	km	hPa	C
0	1.5	854	14
1	1.9	812	13
2	2.4	769	10
3	2.5	757	9
4	3.3	694	2
5	3.5	670	1
6	2.9	724	6
7	2.2	785	10
8	1.9	820	14
9	2.3	781	12
10	2.8	733	8

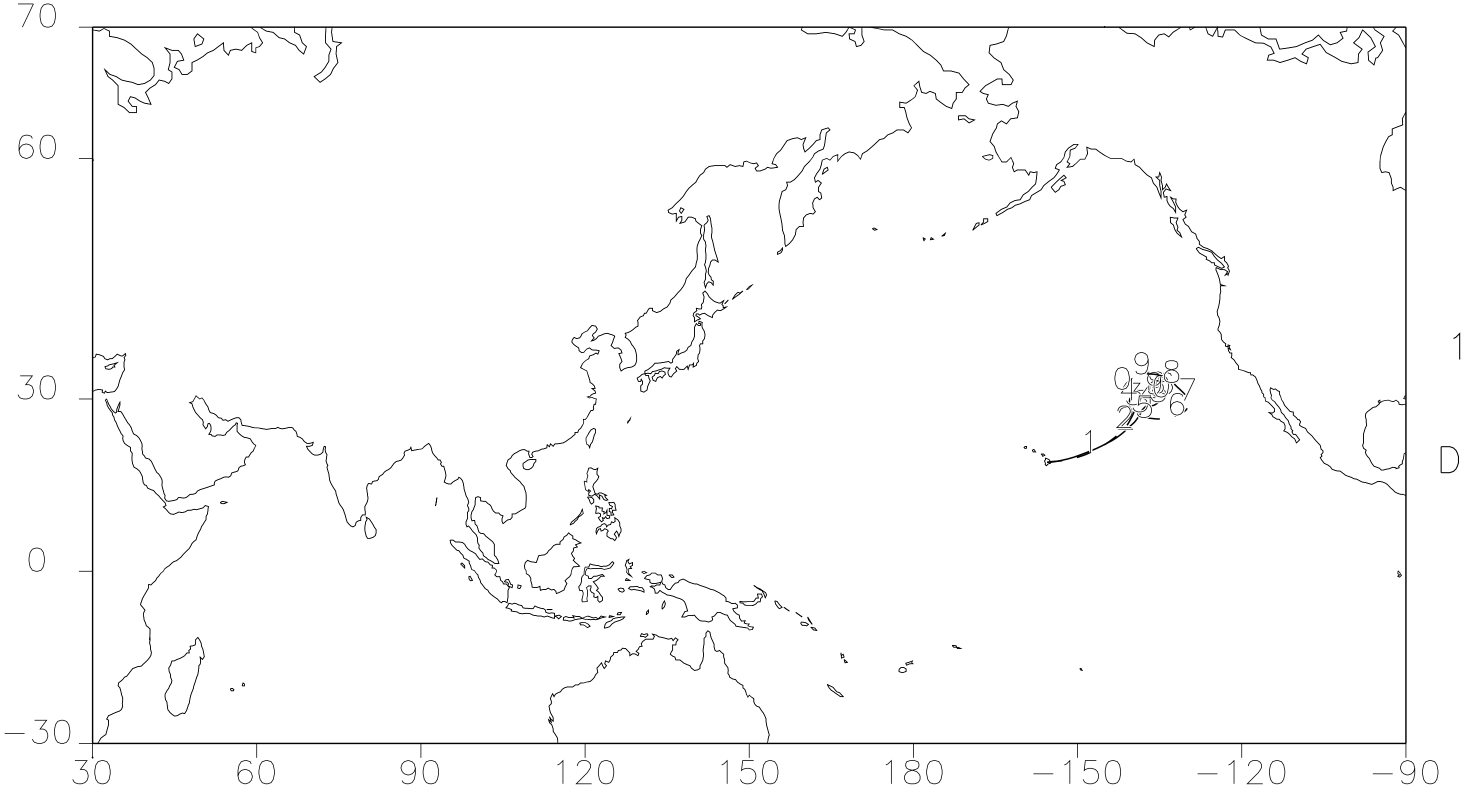
18UT

Day	km	hPa	C
0	1.5	855	14
1	1.7	833	13
2	1.9	817	13
3	2.0	811	12
4	2.4	774	8
5	2.9	727	4
6	2.5	756	6
7	1.6	843	11
8	1.4	870	14
9	1.6	843	12
10	1.9	816	7



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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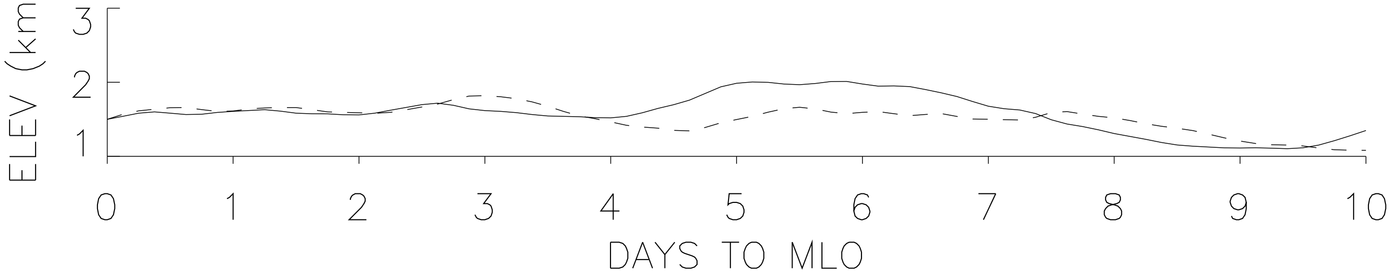


00UT

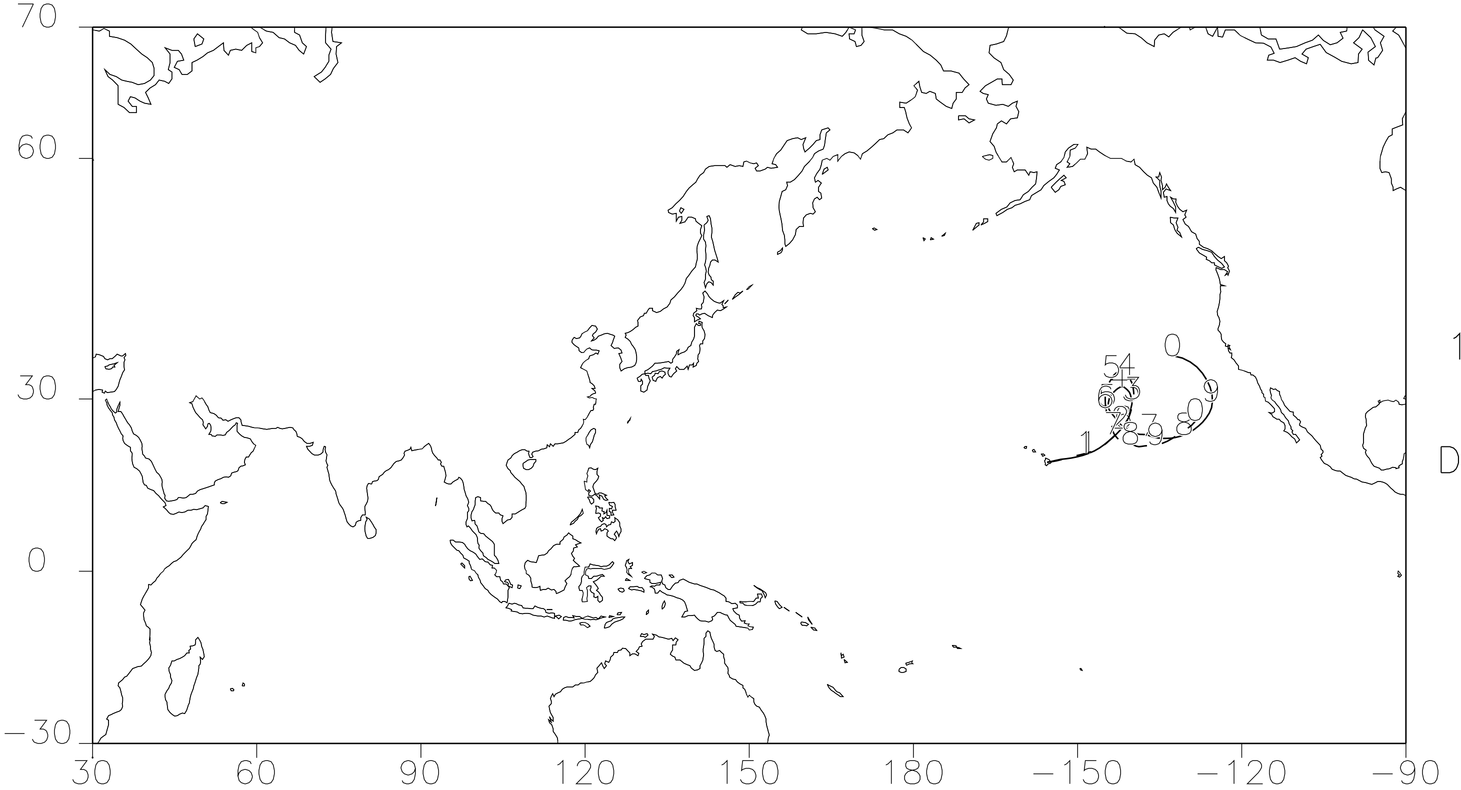
Day	km	hPa	C
0	1.5	854	14
1	1.6	844	13
2	1.6	851	13
3	1.6	847	13
4	1.5	857	13
5	2.0	809	9
6	2.0	810	9
7	1.7	838	10
8	1.3	875	13
9	1.1	898	16
10	1.3	873	13

06UT

Day	km	hPa	C
0	1.5	854	14
1	1.6	843	14
2	1.6	849	13
3	1.8	827	11
4	1.5	863	14
5	1.5	857	13
6	1.6	849	14
7	1.5	857	12
8	1.5	853	10
9	1.2	887	14
10	1.1	901	16

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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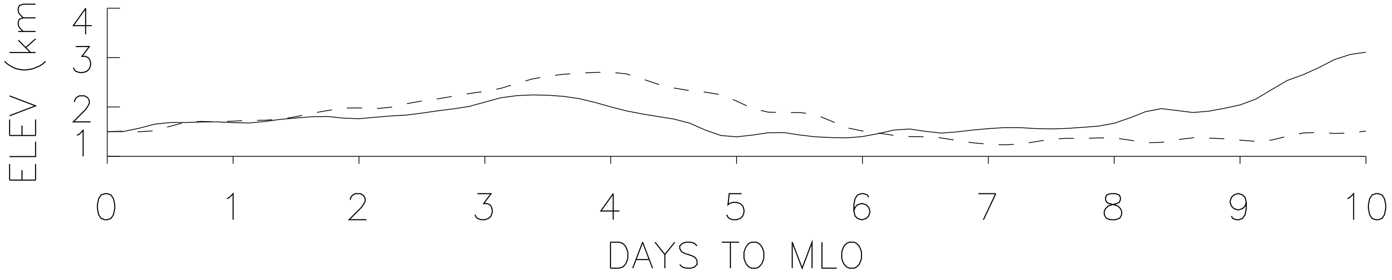


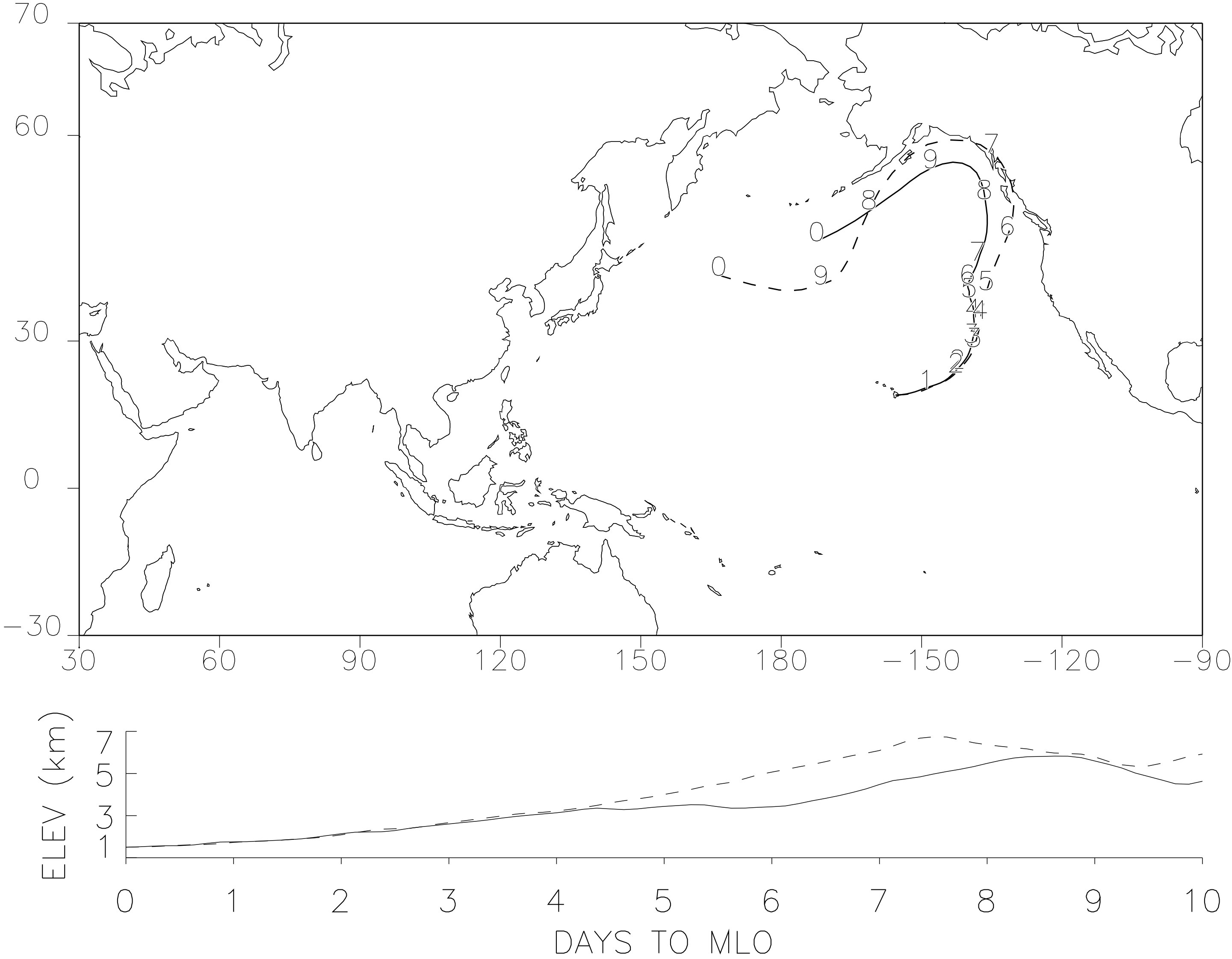
12UT

Day	km	hPa	C
0	1.5	854	14
1	1.7	836	13
2	1.8	829	11
3	2.1	800	9
4	2.0	809	9
5	1.4	866	14
6	1.4	866	14
7	1.6	849	12
8	1.7	835	14
9	2.0	800	12
10	3.1	703	3

18UT

Day	km	hPa	C
0	1.5	856	13
1	1.7	834	13
2	2.0	808	11
3	2.3	779	8
4	2.7	743	5
5	2.1	796	9
6	1.5	854	14
7	1.2	881	14
8	1.4	868	13
9	1.3	873	15
10	1.5	854	14

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/26/2004 (Day of Year 147)
NCEP/NCAR Reanalysis 1 Data Set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ELEV (km)
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5
6
7
8
9
10
DAYS TO MLO
00UT – solid
06UT – dashed

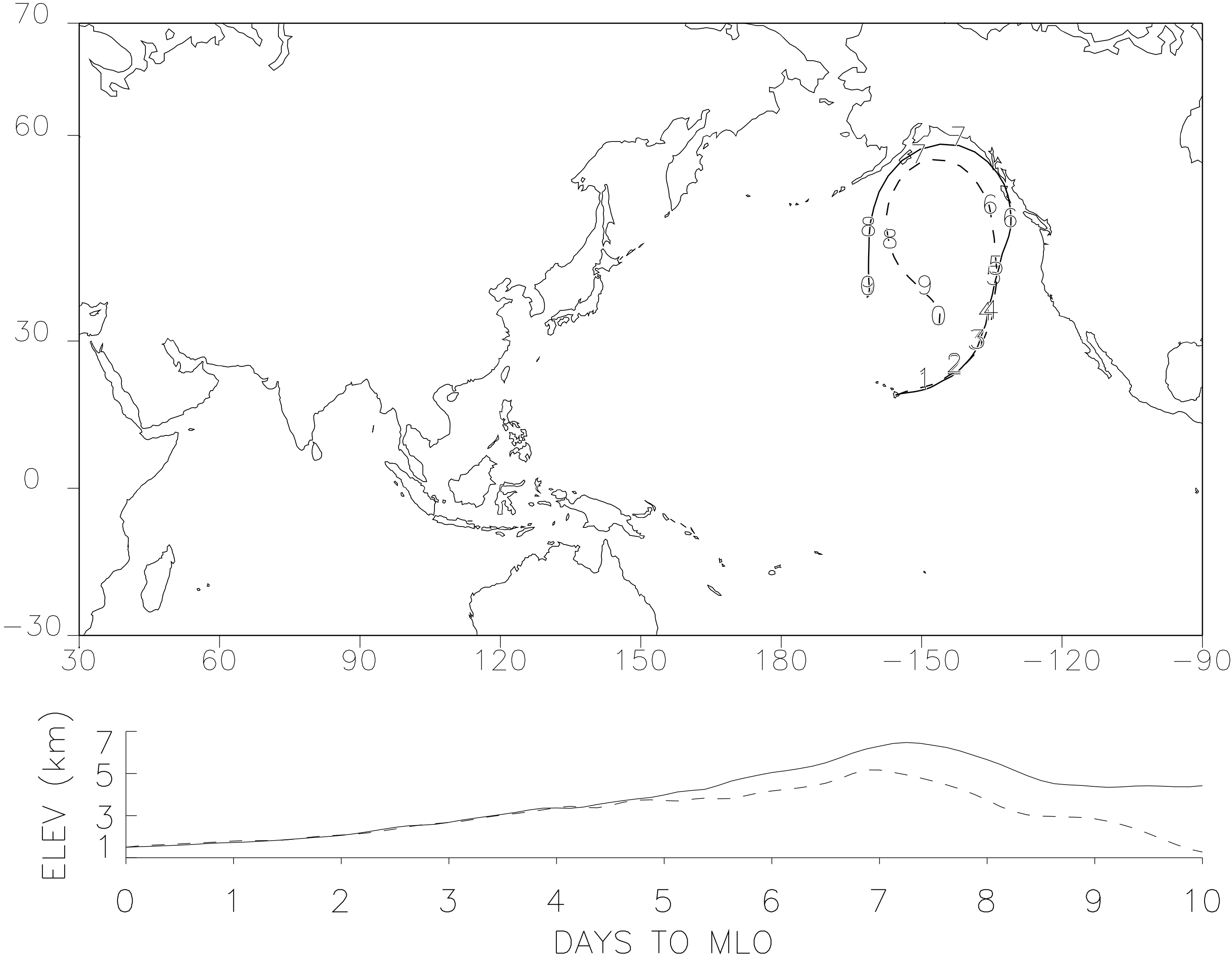
00UT

Day	km	hPa	C
0	1.5	855	14
1	1.8	829	13
2	2.1	791	10
3	2.6	751	7
4	3.1	704	2
5	3.4	677	0
6	3.4	680	1
7	4.5	593	–8
8	5.5	516	–16
9	5.6	502	–18
10	4.6	564	–10

06UT

Day	km	hPa	C
0	1.5	855	13
1	1.7	831	12
2	2.1	796	10
3	2.7	744	7
4	3.2	697	4
5	4.0	629	–2
6	5.1	547	–11
7	6.1	475	–21
8	6.4	452	–25
9	5.8	489	–21
10	5.9	482	–23

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/26/2004 (Day of Year 147)
NCEP/NCAR Reanalysis 1 Data Set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9
ELEV (km)
7
5
3
1
DAYS TO MLO
12UT – solid
18UT – dashed

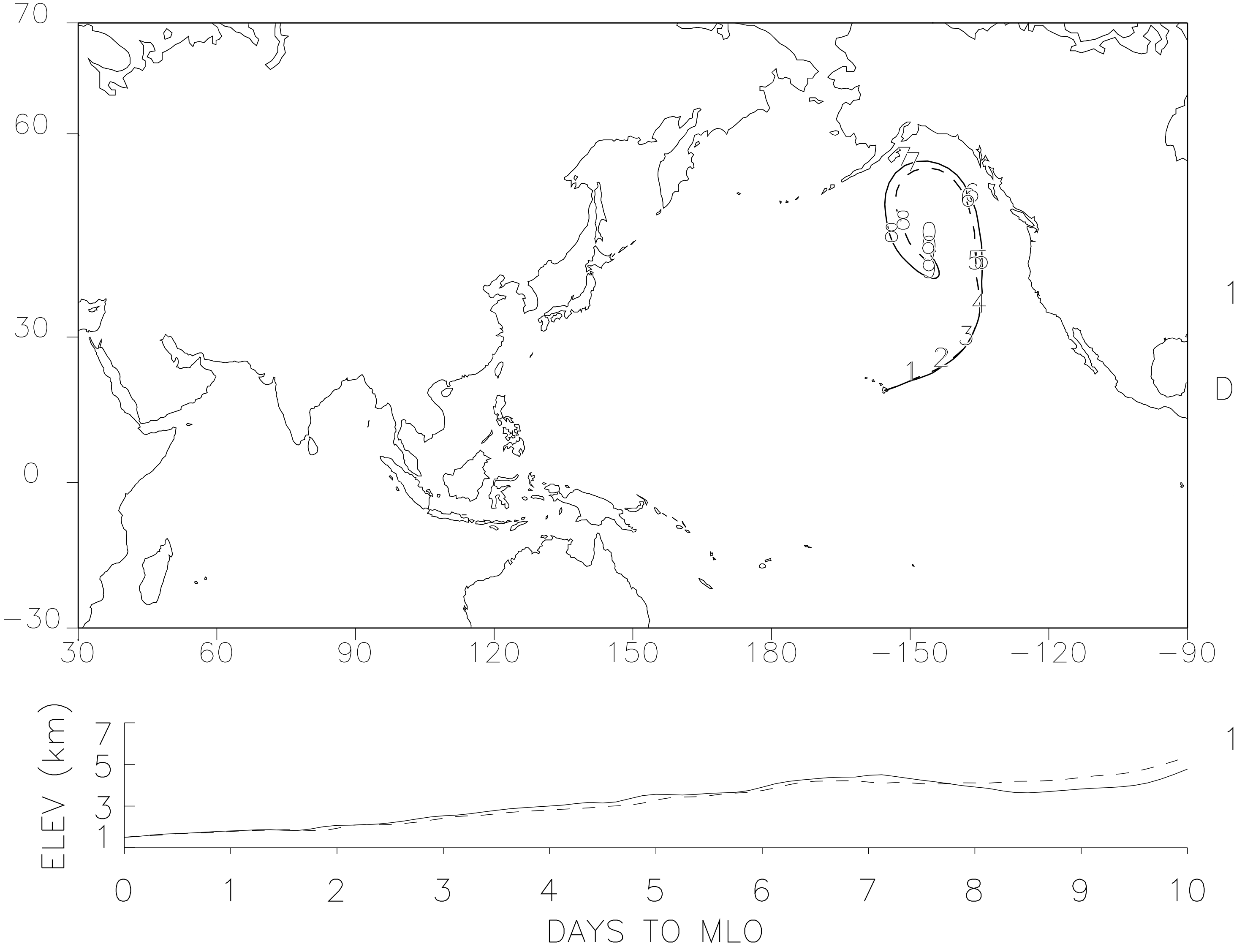
12UT

Day	km	hPa	C
0	1.5	855	13
1	1.7	832	11
2	2.1	799	10
3	2.7	741	7
4	3.4	684	3
5	4.0	631	−1
6	5.0	549	−10
7	6.3	463	−22
8	5.7	500	−17
9	4.4	595	−7
10	4.4	593	−7

18UT

Day	km	hPa	C
0	1.5	856	14
1	1.8	827	11
2	2.1	798	10
3	2.7	742	8
4	3.4	682	3
5	3.7	653	1
6	4.2	617	−2
7	5.2	542	−12
8	3.7	646	−3
9	2.8	723	4
10	1.3	876	13

3−D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/27/2004 (Day of Year 148)
NCEP/NCAR Reanalysis 1 Data Set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ELEV (km)
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5
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7
8
9
10
DAYS TO MLO
00UT − solid
06UT − dashed

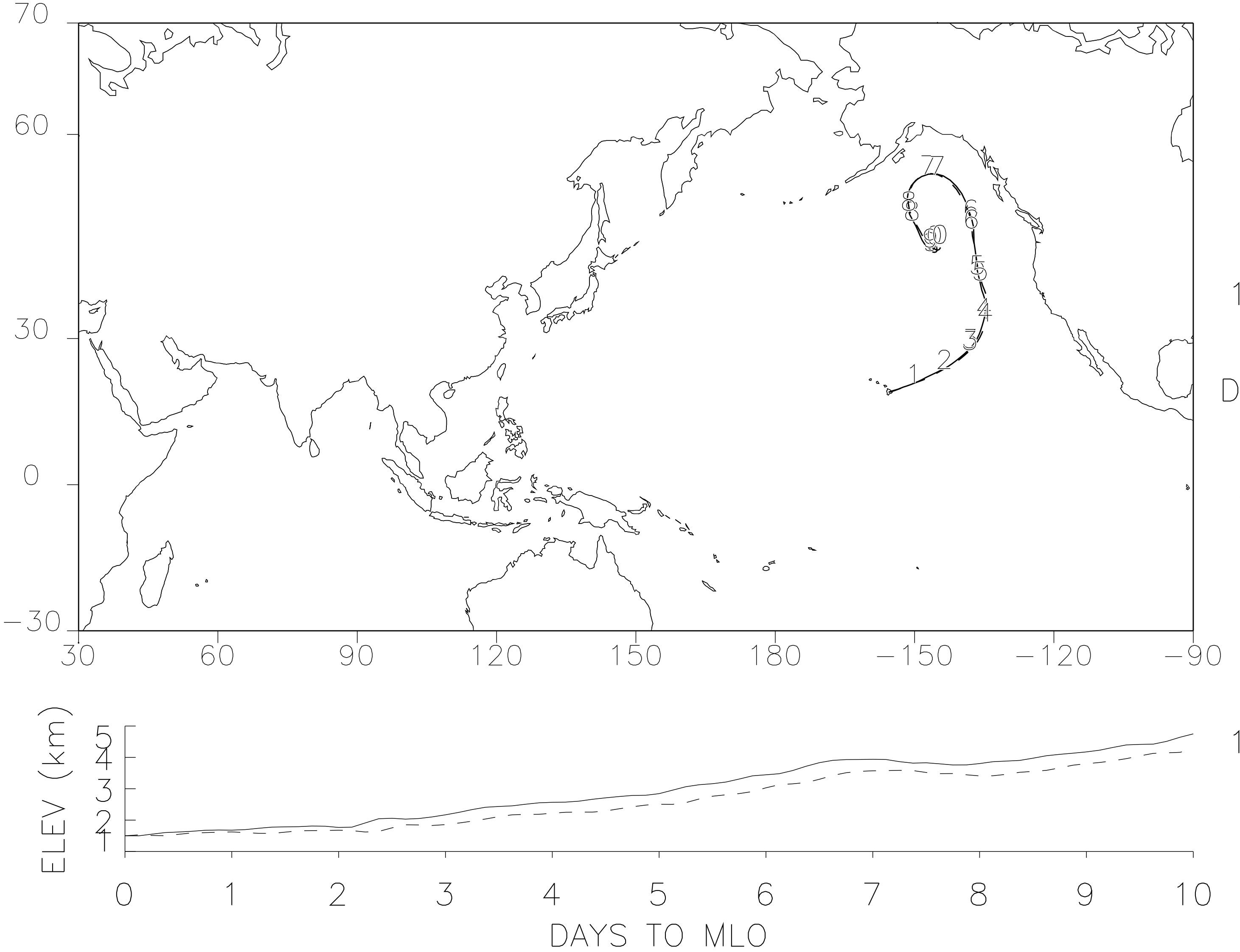
00UT

Day	km	hPa	C
0	1.5	855	13
1	1.8	825	12
2	2.1	798	10
3	2.5	754	7
4	3.0	714	5
5	3.6	666	4
6	3.9	637	−1
7	4.5	595	−7
8	3.9	635	−2
9	3.8	643	−1
10	4.8	565	−10

06UT

Day	km	hPa	C
0	1.5	855	14
1	1.8	828	12
2	1.9	812	10
3	2.4	765	8
4	2.8	730	6
5	3.3	690	6
6	3.7	651	0
7	4.2	620	−4
8	4.1	621	−3
9	4.4	601	−5
10	5.4	524	−14

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/27/2004 (Day of Year 148)
NCEP/NCAR Reanalysis 1 Data Set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ELEV (km)
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9
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DAYS TO MLO
12UT – solid
18UT – dashed

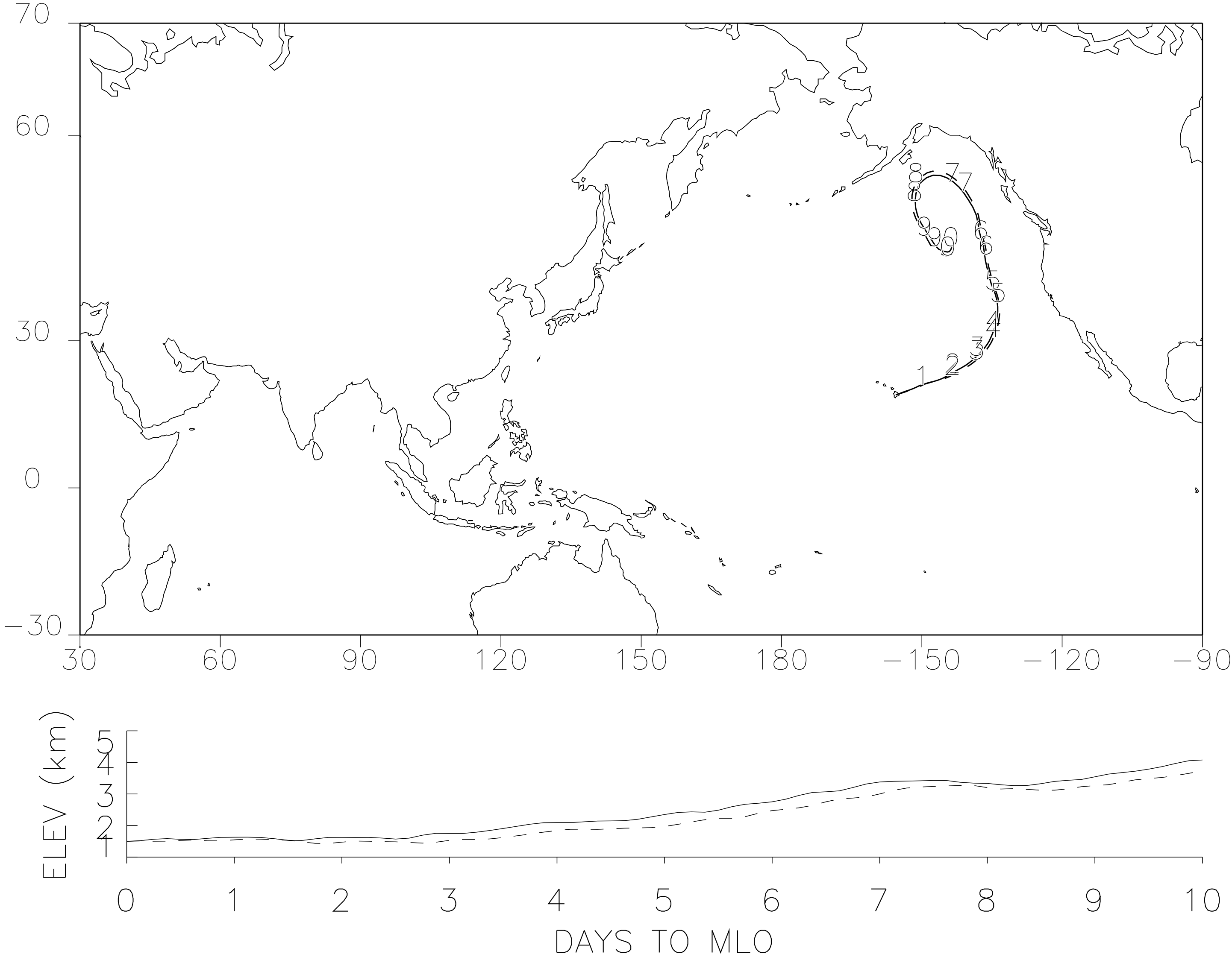
12UT

Day	km	hPa	C
0	1.5	853	14
1	1.7	837	13
2	1.8	828	10
3	2.2	788	8
4	2.6	751	6
5	2.8	728	8
6	3.4	676	4
7	3.9	637	−2
8	3.8	648	0
9	4.2	617	−4
10	4.8	570	−10

18UT

Day	km	hPa	C
0	1.5	853	13
1	1.6	844	12
2	1.7	838	11
3	1.9	819	10
4	2.2	784	8
5	2.5	759	9
6	3.0	712	7
7	3.6	667	0
8	3.4	681	2
9	3.8	647	−2
10	4.3	607	−7

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/28/2004 (Day of Year 149)
NCEP/NCAR Reanalysis 1 Data Set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ELEV (km)
5
4
3
2
1
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
00UT – solid
06UT – dashed

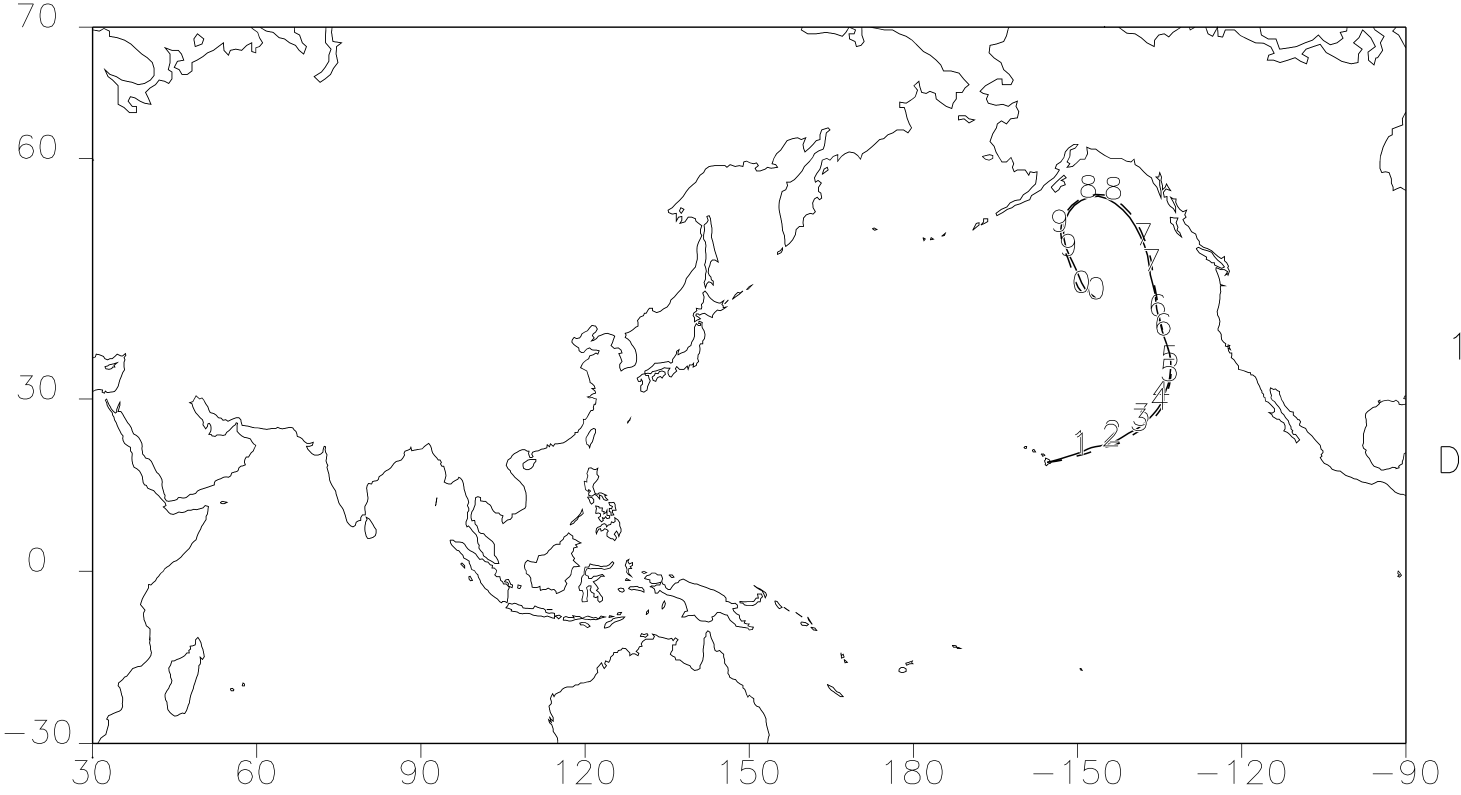
00UT

Day	km	hPa	C
0	1.5	853	13
1	1.6	842	12
2	1.6	843	10
3	1.8	829	9
4	2.1	794	8
5	2.3	772	9
6	2.8	738	9
7	3.4	683	3
8	3.3	688	3
9	3.5	670	1
10	4.1	624	–5

06UT

Day	km	hPa	C
0	1.5	853	13
1	1.5	850	12
2	1.5	858	12
3	1.5	852	11
4	1.8	819	8
5	2.0	807	9
6	2.5	762	9
7	3.0	714	4
8	3.2	699	2
9	3.3	692	3
10	3.7	651	–1

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/28/2004 (Day of Year 149)
NCEP/NCAR Reanalysis 1 Data Set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90
120
150
180
−150
−120
−90
1
2
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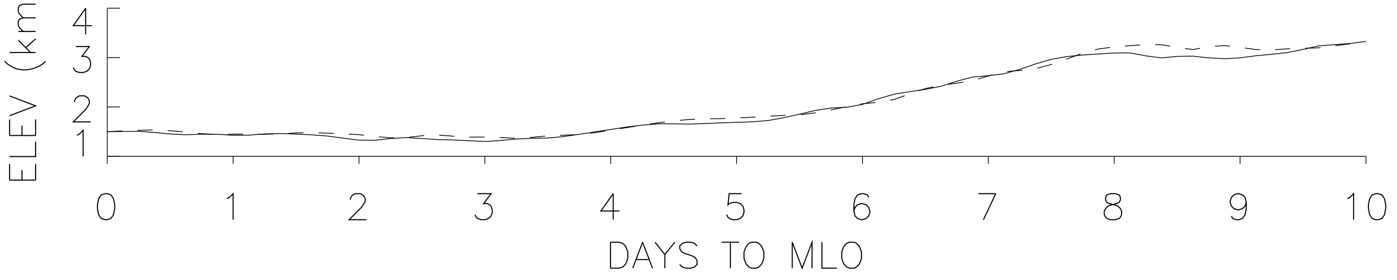
4
5
6
7
8
9
0

12UT

Day	km	hPa	C
0	1.5	852	13
1	1.4	861	12
2	1.3	872	13
3	1.3	875	11
4	1.5	849	9
5	1.7	835	8
6	2.1	800	10
7	2.6	746	6
8	3.1	707	2
9	3.0	715	4
10	3.3	686	2

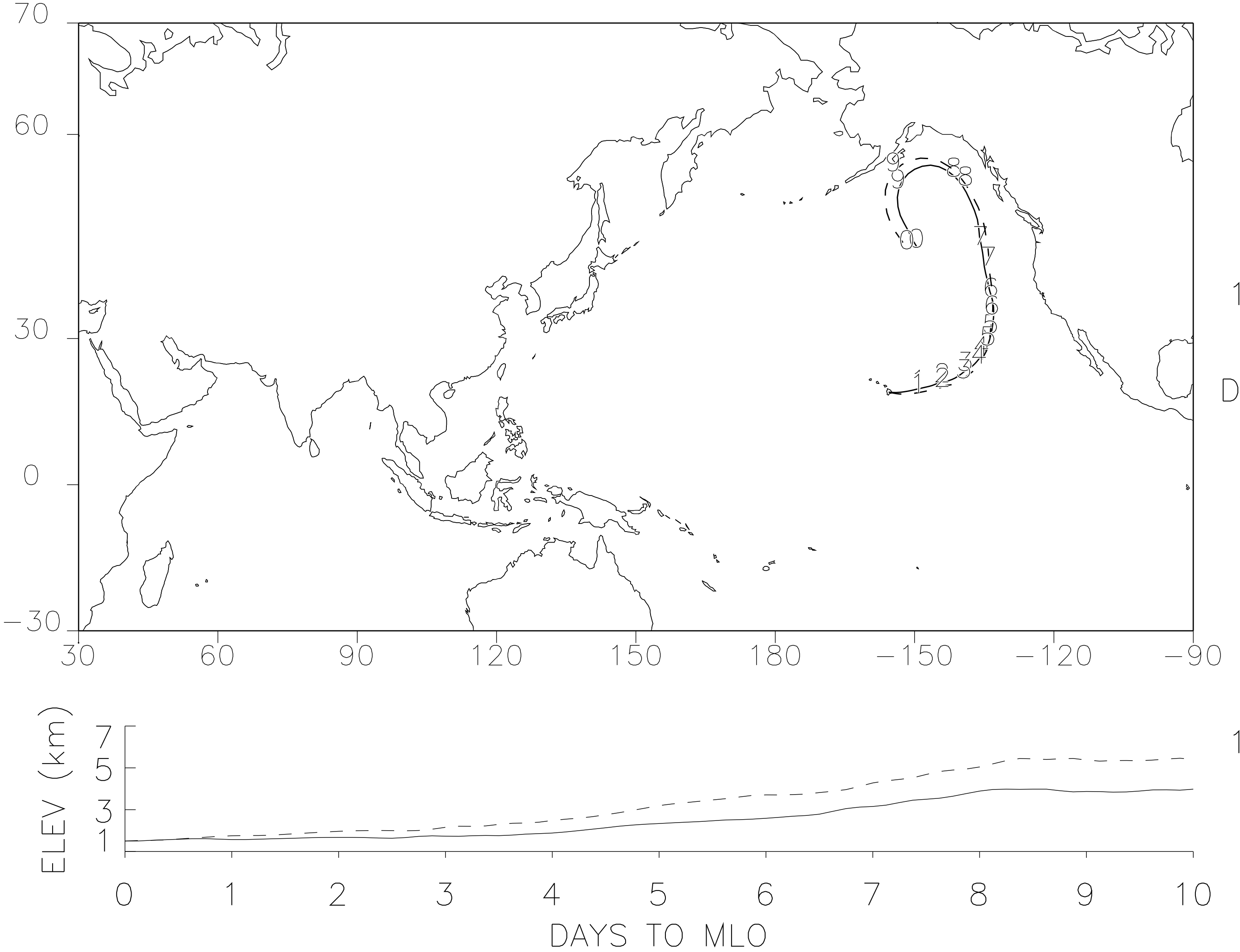
18UT

Day	km	hPa	C
0	1.5	853	12
1	1.4	859	11
2	1.4	862	12
3	1.4	866	11
4	1.5	851	10
5	1.8	826	9
6	2.1	799	10
7	2.6	747	7
8	3.2	696	1
9	3.2	697	2
10	3.3	690	2



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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30
60
90
120
150
180
−150
−120
−90
ELEV (km)
7
5
3
1
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
00UT – solid
06UT – dashed

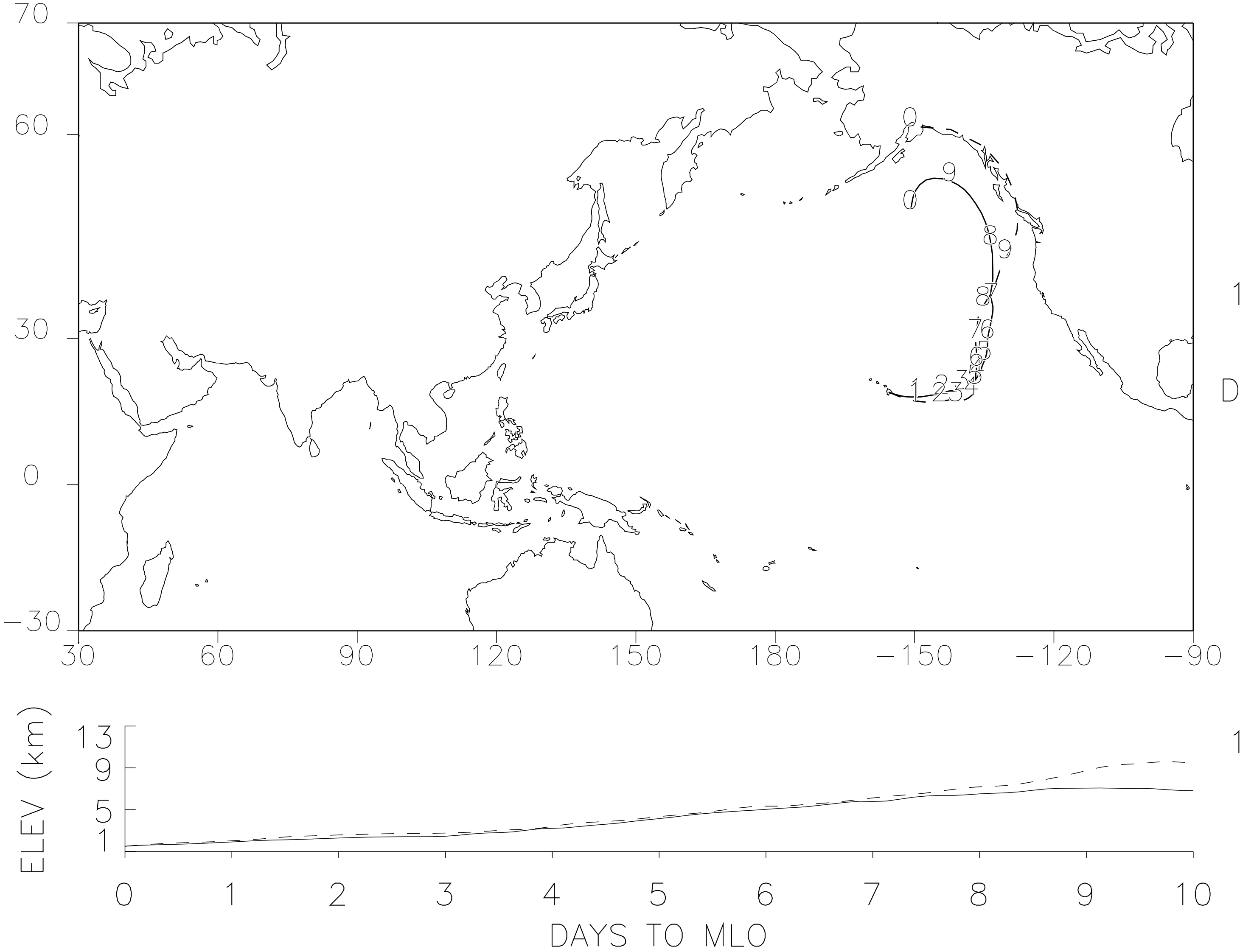
00UT

Day	km	hPa	C
0	1.5	852	13
1	1.6	846	12
2	1.7	837	10
3	1.7	831	10
4	1.9	815	8
5	2.3	770	7
6	2.6	750	8
7	3.2	701	8
8	3.9	640	−1
9	3.9	642	−1
10	4.0	633	−2

06UT

Day	km	hPa	C
0	1.5	852	12
1	1.8	828	12
2	2.0	808	11
3	2.2	790	10
4	2.5	759	8
5	3.2	695	4
6	3.7	654	0
7	4.3	609	−2
8	5.0	551	−9
9	5.4	528	−14
10	5.4	525	−13

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/29/2004 (Day of Year 150)
NCEP/NCAR Reanalysis 1 Data Set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−120
−90
0
9
0
8
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8
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7
6
6
5
5
3
4
1
2
3
4
ELEV (km)
13
9
5
1
0
1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
12UT – solid
18UT – dashed

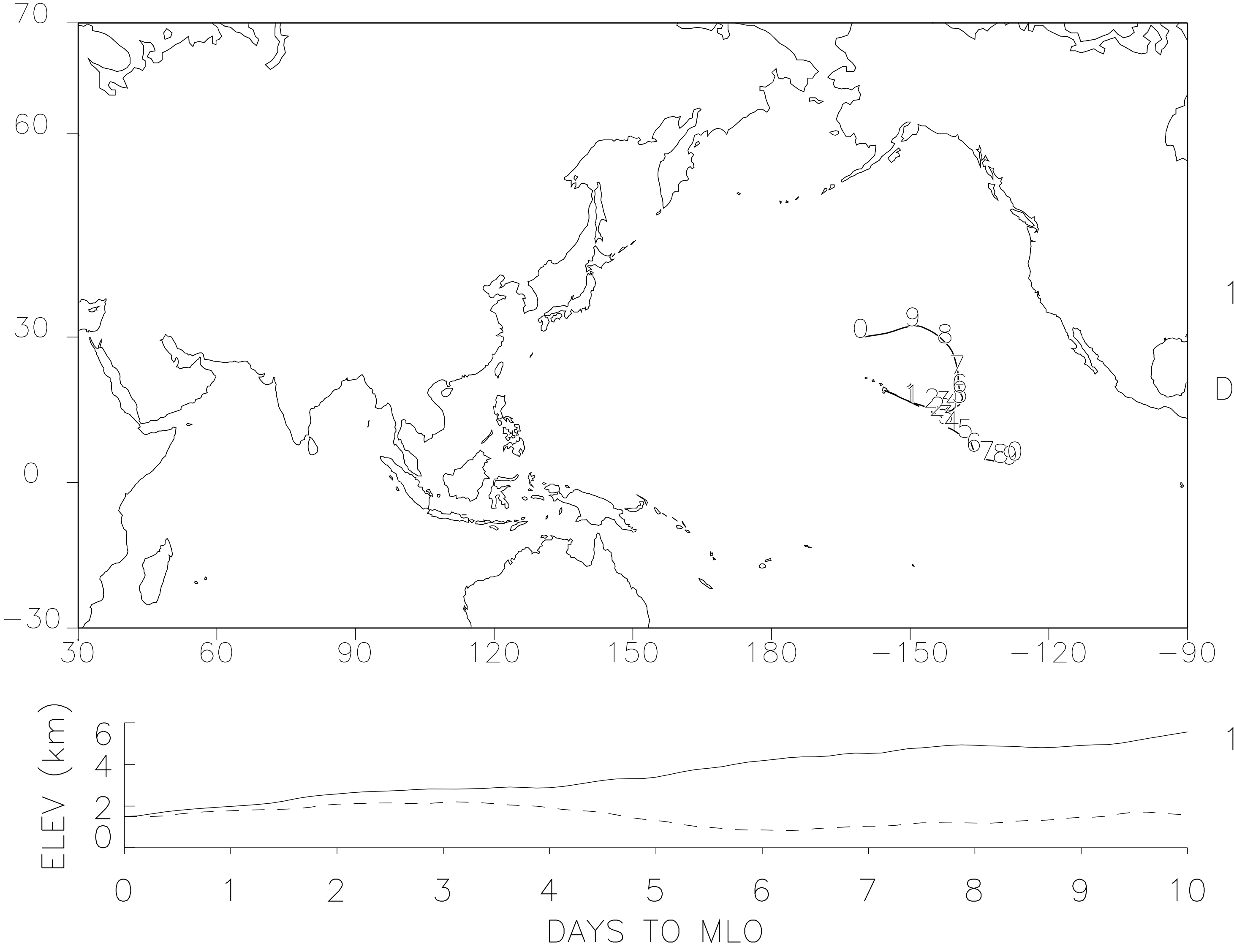
12UT

Day	km	hPa	C
0	1.5	853	13
1	1.9	811	11
2	2.3	776	10
3	2.5	760	9
4	3.2	694	5
5	4.1	617	−3
6	5.0	552	−10
7	5.8	501	−16
8	6.5	454	−20
9	7.1	423	−25
10	6.8	437	−23

18UT

Day	km	hPa	C
0	1.5	854	12
1	2.0	801	11
2	2.6	749	10
3	2.8	733	9
4	3.4	680	5
5	4.3	604	−4
6	5.3	531	−12
7	6.1	480	−17
8	7.2	415	−24
9	8.7	330	−38
10	9.5	292	−46

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/30/2004 (Day of Year 151)
NCEP/NCAR Reanalysis 1 Data Set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0
ELEV (km)
6
4
2
0
0
1
2
3
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5
6
7
8
9
10
DAYS TO MLO

00UT

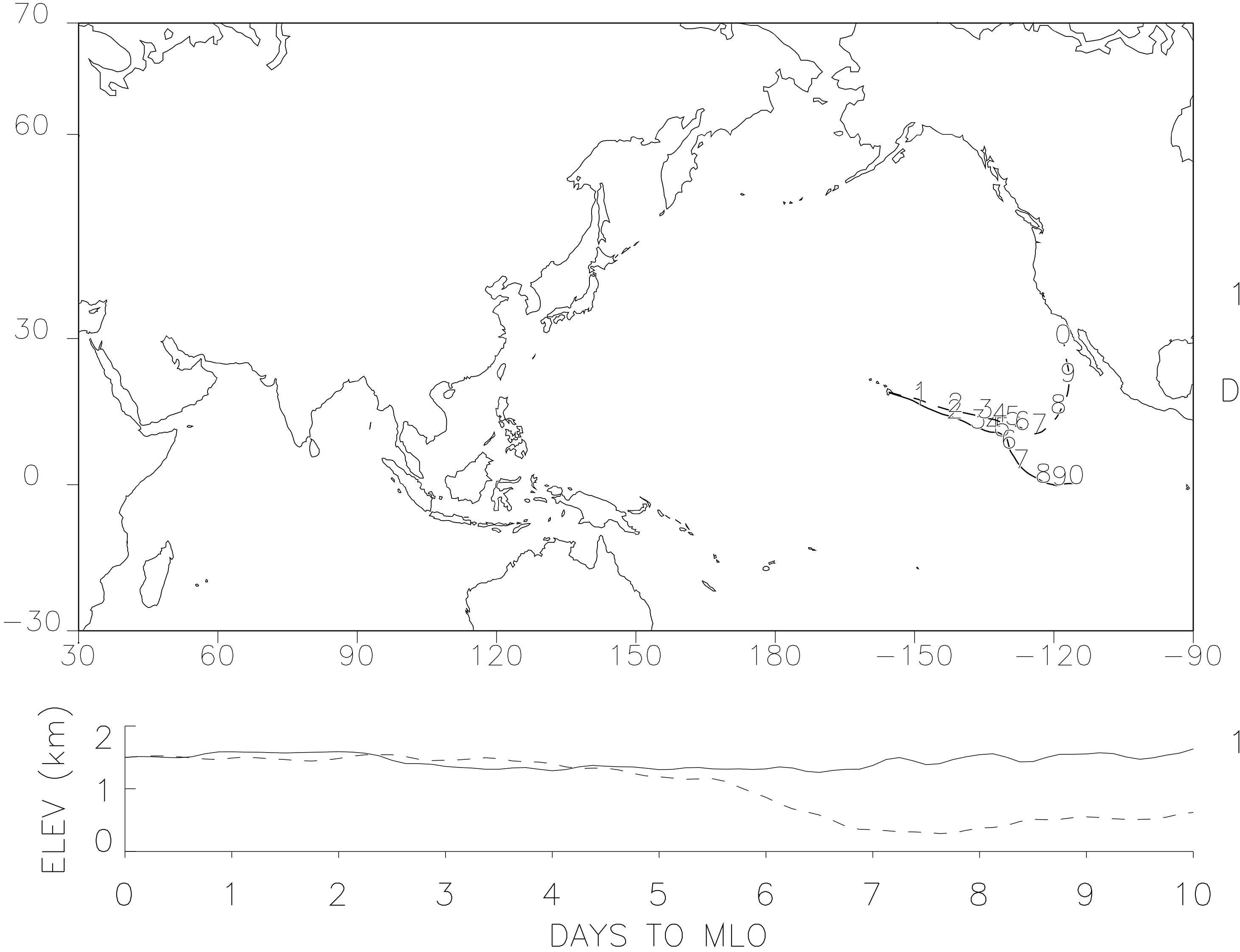
Day	km	hPa	C
0	1.5	854	14
1	2.0	804	11
2	2.6	748	10
3	2.8	728	9
4	2.9	722	8
5	3.4	679	6
6	4.2	615	−1
7	4.5	591	−3
8	4.9	564	−7
9	4.9	563	−6
10	5.6	511	−13

06UT

Day	km	hPa	C
0	1.5	854	14
1	1.8	825	12
2	2.1	794	12
3	2.2	787	13
4	1.9	811	13
5	1.3	871	17
6	0.9	918	20
7	1.0	899	19
8	1.2	884	18
9	1.5	857	16
10	1.6	846	16

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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9
0
ELEV (km)
2
1
0
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1
2
3
4
5
6
7
8
9
10
DAYS TO MLO
12UT – solid
18UT – dashed

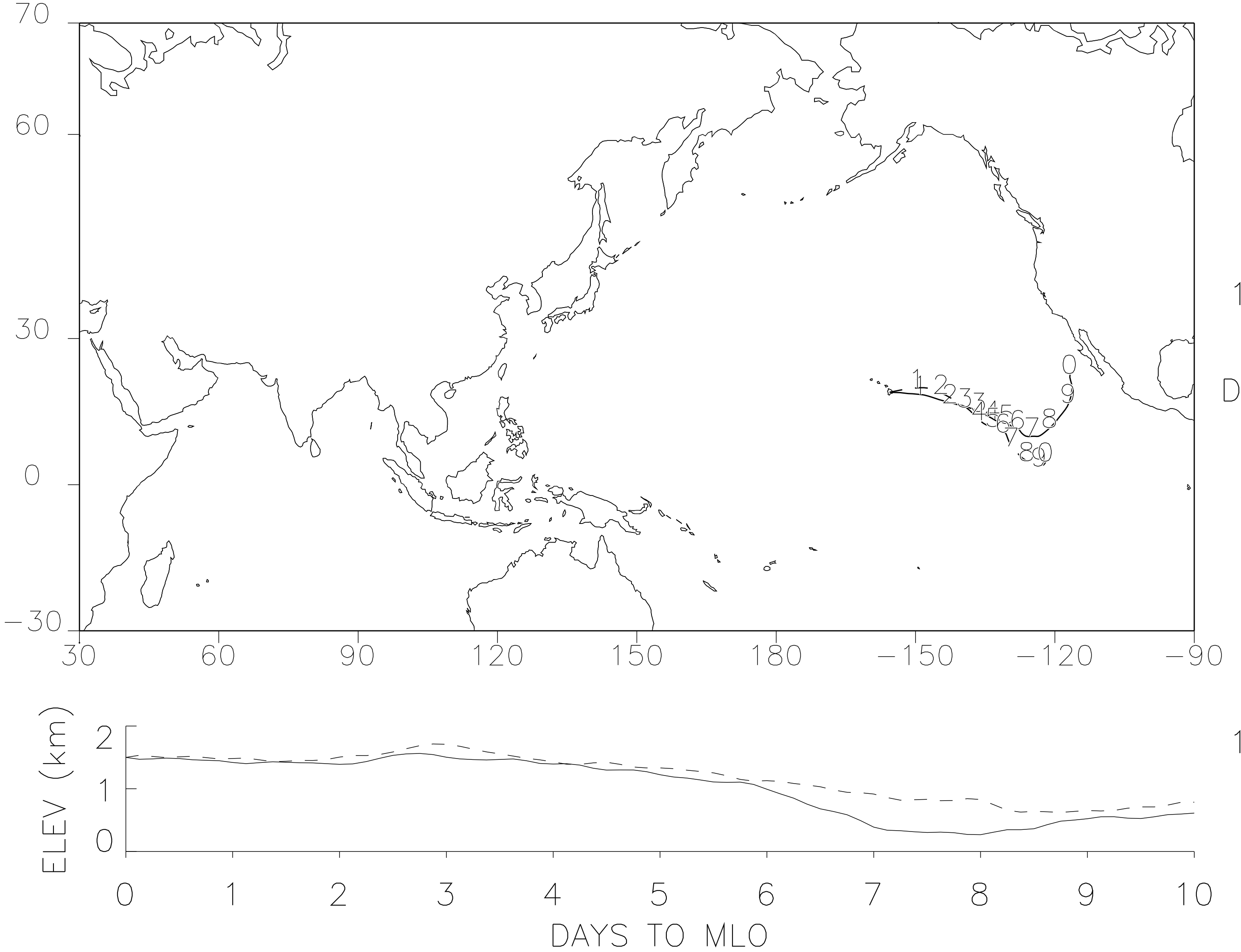
12UT

Day	km	hPa	C
0	1.5	855	15
1	1.6	844	13
2	1.6	842	14
3	1.4	866	17
4	1.3	873	17
5	1.3	871	17
6	1.3	868	16
7	1.4	862	15
8	1.5	846	15
9	1.6	846	16
10	1.6	838	15

18UT

Day	km	hPa	C
0	1.5	856	15
1	1.5	855	14
2	1.5	854	14
3	1.5	858	17
4	1.4	864	16
5	1.2	886	18
6	0.9	920	20
7	0.3	974	23
8	0.4	972	21
9	0.6	953	16
10	0.6	945	13

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/31/2004 (Day of Year 152)
NCEP/NCAR Reanalysis 1 Data Set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−90
1 2 3 4 5 6 7 8 9 0
1 2 3 4 5 6 7 8 9 0
ELEV (km)
2
1
0
0 1 2 3 4 5 6 7 8 9 10
DAYS TO MLO
00UT – solid
06UT – dashed

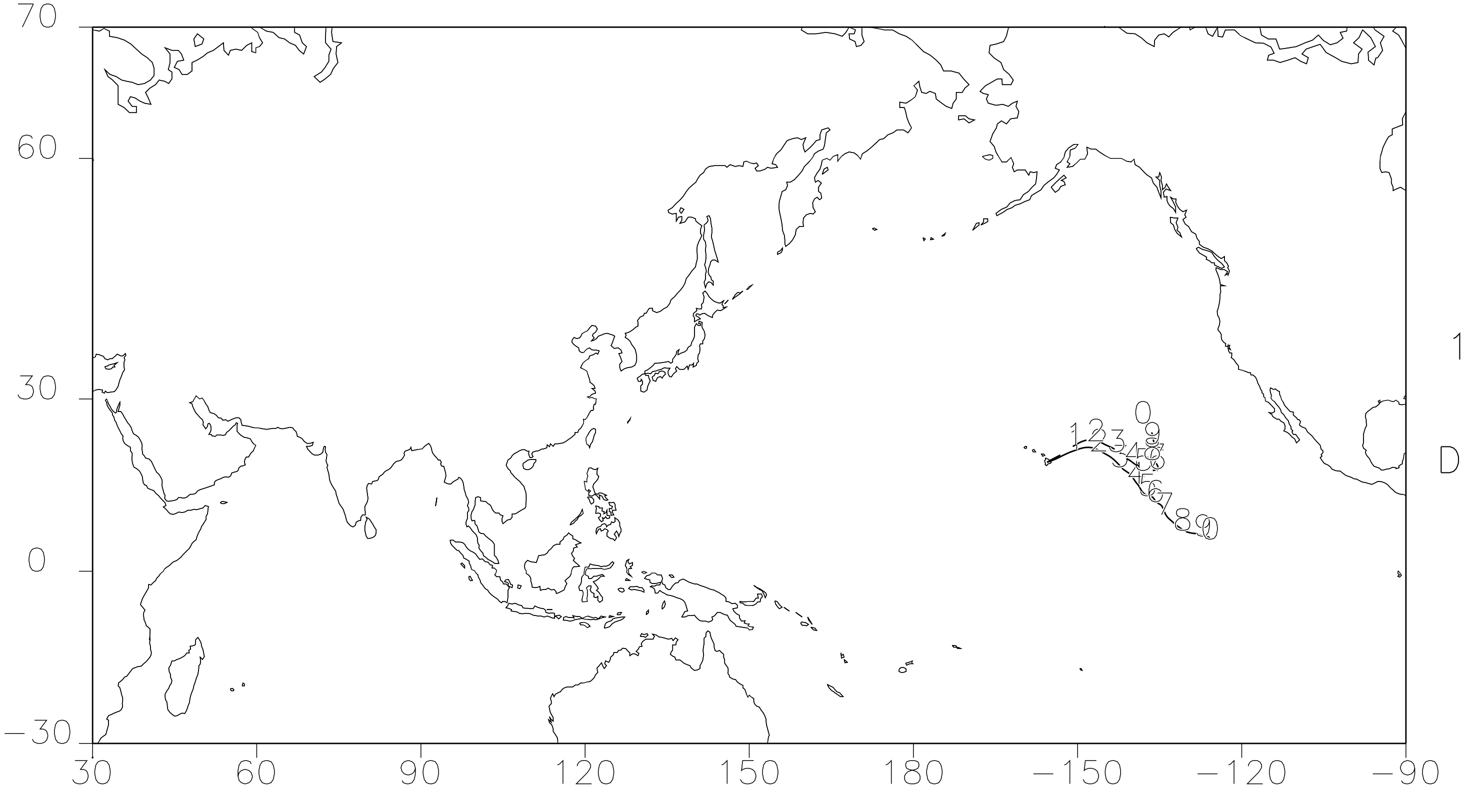
00UT

Day	km	hPa	C
0	1.5	856	16
1	1.4	863	15
2	1.4	864	15
3	1.5	852	15
4	1.4	863	16
5	1.2	880	18
6	1.0	903	19
7	0.4	966	23
8	0.3	980	23
9	0.5	954	19
10	0.6	944	15

06UT

Day	km	hPa	C
0	1.5	856	15
1	1.5	857	14
2	1.5	853	14
3	1.7	833	13
4	1.4	861	17
5	1.3	870	17
6	1.1	891	18
7	0.9	912	19
8	0.8	922	21
9	0.7	941	22
10	0.8	927	21

3–D KINEMATIC TRAJECTORIES TO MLO(19.53N, 155.58W)
5/31/2004 (Day of Year 152)
NCEP/NCAR Reanalysis 1 Data Set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–120
–90
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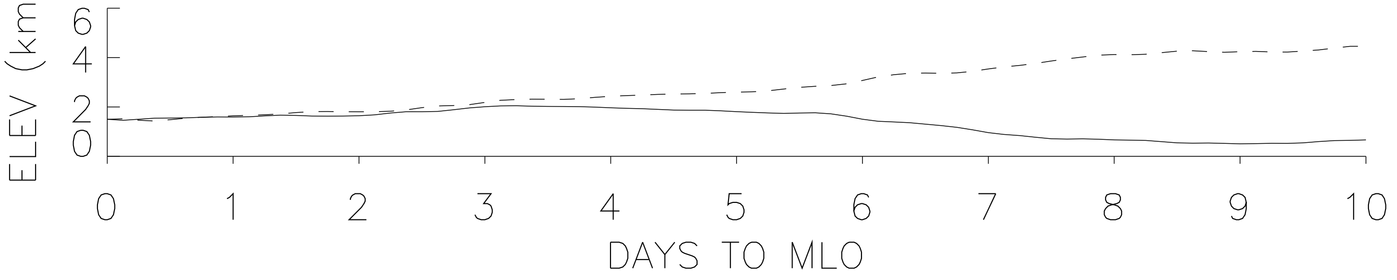
5
6
7
8
9
10

12UT

Day	km	hPa	C
0	1.5	855	14
1	1.6	847	13
2	1.6	840	13
3	2.0	803	11
4	2.0	806	12
5	1.8	821	13
6	1.5	851	15
7	1.0	905	19
8	0.7	935	20
9	0.5	954	22
10	0.7	937	21

18UT

Day	km	hPa	C
0	1.5	855	14
1	1.6	843	13
2	1.8	826	11
3	2.2	787	10
4	2.4	763	10
5	2.6	748	9
6	3.1	706	7
7	3.5	667	3
8	4.1	621	–1
9	4.2	614	–1
10	4.5	599	–4



12UT – solid
18UT – dashed