

LEONARD OBSERVATORY
Seismogram readings
July 1962

1	e(P) eL	Z' N	00 26 56 00 31 25	
1	iPKP ePP eSKS	Z' Z N	03 55 18 03 59 08 04 03 24	30.1N, 102.8E, h=25, H=03 37 36
1	eL	Z	22 23	40.0N, 75.4E, h=25, H=21 23 42 M=5.3(Tu1)
2	ePP iPS eL	Z' E Z	08 50 42 08 57 02 09 20	10.3S, 165.9E, h=50, H=08 32 38 M=5.8(Tu1)
3	eL	Z	07 08	17.5S, 173.2W, h=25, H=06 23 36
3	iP eL	Z' Z	21 27 51 21 48 30	4.3N, 31.6W, h=23, H=21 16 59 M=4.9(Tu1)
4	eP	Z'	07 12 45	14.3N, 93.2W, h=25, H=07 07 54
4	iP e eL	Z' Z' Z	08 05 52 08 06 33 08 19	54.5N, 36.7W, h=25, H=07 57 45 M=4.8(Tu1)
4	eP i(S) eL	Z' E Z	09 11 08 09 15 02 09 24 20	
4	eL	Z	10 09	
4	eL	Z	17 49	14.9S, 167.8E, h=62, H=17 00 53 M=4.4(Tu1)
5	eL	Z	05 59	
5	e(P) eL	Z' Z	06 44 02 07 24	
5	eL	Z	08 20	11.3S, 166.5E, h=33, H=07 32 33 M=4.3 (Tu1)
5	eL	Z	13 59	
5	eL	Z	15 17	
5	eL	Z	18 25	30.9N, 141.4E, h=23, H=17 40 55 M=5.4(Tu1)
5	eP iS eL	Z' N Z	20 53 09 20 56 47 20 58	23.5N, 107.8W, h=25, H=20 49 24 M=4.4(Tu1)
6	e(P)	Z'	02 15 17	

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6	ePKP eL	Z' Z	02 31 17 03 13	13.3N, 58.0E, h=30, H=02 12 20 M=5.7(Tul)
6	iP iS eL	Z' N Z	09 28 52 09 39 20 09 54	38.0N, 20.2E, h=30, H=09 16 15 M=5.6(Tul)
6	eP i e	Z' N Z	17 03 52 17 08 46 17 10	100 KT nuclear bomb, Nevada
6	iP isP iPP ipPP iSKS iSKKS iPKKP eL	Z' Z Z Z N N Z' Z	23 19 26 23 20 43 23 23 43 23 24 42 23 29 42 23 31 24 23 34 52 23 54	36.6N, 70.4E, h=203, H=23 05 43 M=7.1(Tul)
7	iP iS eL	Z' N Z	06 22 53 06 31 18 06 45	51.3N, 178.6E, h=60, H=06 12 49 M=6.1(Tul)
7	eP	Z'	07 24 40	51.3N, 178.8E, h=60, H=07 14 35
7	eL	Z	10 58	
7	ePKP iSKP eL	Z' Z' Z	12 06 29 12 09 52 12 49	7.3S, 128.3E, h=30, H=11 47 19 M=4.8(Tul)
7	iP	Z'	21 32 16	51.9N, 158.6E, h=33, H=21 20 58
8	iP	Z'	02 35 09	14.4S, 75.5W, h=88, H=02 25 56
8	iP eL	Z' Z	03 32 08 03 52	51.5N, 178.5E, h=60, H=03 22 04 M=5.3(Tul)
8	eP	Z'	05 37 06	2.6S, 78.0W, h=21, H=05 29 12
8	iP eL	Z' Z	07 40 51 07 58	8.1N, 38.0W, h=25, H=07 30 50 M=5.2(Tul)
8	eP e i(S)	Z' Z NZ	13 04 22 13 08 08 13 12 28	
8	eL	Z	23 45	28.1S, 176.5W, h=25, H=22 54 45
9	eL	Z	15 18	
10	iP	Z'	04 33 04	39.1S, 75.4W, h=25, H=04 21 12
10	eL	Z	17 04	

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11	eL	Z	01 56	31.8N, 66.9E, h=25, H=01 03 59 M=5.4(Tul)
11	iP	Z'	07 28 32	53.2N, 159.6E, h=69, H=07 17 27
	eL	Z	07 56	M=4.1(Tul)
11	eL	Z	13 31	11.9N, 122.1E, h=25, H=12 40 31 M=5.6(Tul)
11	eL	Z	16 08	
12	eP	Z'	22 58 37	3.9S, 104.1W, h=25, H=22 50 59
	iS	E	23 04 50	M=5.3(Tul)
	eL	Z	23 11	
13	iPKP	Z'	03 50 48	10.4S, 122.6E, h=66, H=03 32 00
	eL	Z	04 32	M=6.0(Tul)
13	eP	Z'	13 44 28	
13	eP	Z'	22 30 07	56.2N, 164.0E, h=59, H=22 19 23
	eL	Z	22 51	M=5.2(Tul)
13	e(P)	Z'	23 03 46	11.9S, 75.1W, h=91, H=22 55 48
	i	Z'	23 04 01	
	i	Z'	23 04 45	
14	iP	Z'	01 12 57	51.5N, 179.0E, h=25, H=01 02 52
	eL	Z	01 36	M=4.2(Tul)
14	iP	Z'	02 24 57	
	i(S)	N'	02 26 17	
14	eL	Z	17 00	30.4N, 79.5E, h=40, H=15 58 54
14	eP	Z'	19 48 56	40.3N, 124.4W, h=25, H=19 43 53
	iS	E	19 53 04	M=5.4(Tul)
	eL	Z	19 55 28	
	eLg	Z	19 56 12	
14	iP	Z'	20 27 37	16.9N, 99.1W, h=25, H=20 23 15
14	iP	Z'	20 49 29	50.2N, 155.8E, h=60, H=20 38 01
	eL	Z	21 14	M=5.1(Tul)
15	eP	Z'	07 00 04	39.8N, 140.9E, h=103, H=06 47 22
	ipP	Z'	07 00 30	M=5.0(Tul)
	iSKS	E	07 10 39	
	eL	Z	07 29	
15	eL	Z	10 22	14.7N, 146.3E, h=25, H=09 33 39 M=4.8(Tul)
15	eP	Z'	12 02 53	45.0N, 110.2W, h=25, H=11 59 22
	eL	Z	12 08	
15	eL	Z	22 53	13.4N, 53.1E, h=25, H=21 52 17 M=4.7(Tul)

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16	ePKP	Z'	02 24 16	52.1S, 138.9E, h=14, H=02 04 53
	eSS	N	02 45 28	M=5.7(Tul)
	eL	Z	03 08	
16	iP	Z'	04 58 03	11.2S, 79.8W, h=75, H=04 49 21
	eL	Z	05 13	M=5.1(Tul)
16	iP	Z'	07 16 26	
16	iP	Z'	07 44 30	
16	eL	Z	09 16	11.8S, 166.4E, h=57, H=08 28 11 M=4.8(Tul)
16	eL	Z	10 12	13.0S, 167.2E, h=180, H=09 25 55 M=5.3(Tul)
16	iP	Z'	13 02 42	62.3N, 153.1W, h=39, H=12 54 41
	iS	N	13 09 12	M=6.0(Tul)
	eL	Z	13 15	
	iLg	Z	13 17 48	
16	iP	Z'	16 27 59	34.8S, 108.6W, h=25, H=16 16 41
	eL	Z	16 52	M=4.6(Tul)
16	eL	Z	18 00	
16	eL	Z	22 06	
17	iP	Z'	04 18 14	11.6N, 87.1W, h=25, H=04 12 45
	iS	N	04 23 00	M=4.2(Tul)
	eL	Z	04 30	
17	iP	Z'	05 44 20	43.0S, 74.9W, h=26, H=05 32 09
	iS	N	05 54 28	M=5.5(Tul)
	eL	Z	06 07	
17	e(P)	Z'	07 17 44	
17	iP	Z'	07 55 45	
	eL	Z	08 06	
17	e(P)	Z'	08 04 31	
17	eP	Z'	09 45 38	14.8N, 92.9W, h=120, H=09 41 01
	i(S)	N'	09 49 42	M=4.3(Tul)
	eL	Z	09 54	
17	iP	Z'	17 32 51	43.1N, 144.5E, h=30, H=17 20 23
	i(pP)	Z'	17 33 05	M=5.6(Tul)
	e(S)	N	17 43 08	
	eL	Z	18 01	
18	eL	Z	02 12	4.3S, 152.9E, h=51, H=01 21 03 M=4.7(Tul)
18	i(P)	Z'	06 16 34	

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18	iP eS eL	Z' N Z	10 22 26 10 26 45 10 28 30	
18	eL	Z	10 58	15.3N, 148.1E, h=16, H=10 10 13
18	eP e(L)	Z' Z	20 44 16 20 53 40	
19	eL	Z	01 44	5.1S, 153.6E, h=49, H=00 52 14 M=5.2(Tul)
19	iP	Z'	12 12 34	20.6S, 68.7W, h=160, H=12 02 31
20	iP iLg eL	Z' N Z	09 06 19 09 11 44 09 12 40	39.5N, 118.3W, h=25, H=09 02 08 M=4.1(Tul)
20	eL	Z	17 11	21.0S, 174.8W, h=28, H=16 27 21 M=4.8(Tul)
20	iP	Z'	21 20 51	
22	eL	Z	00 48	3.2S, 137.5E, h=104, H=00 16 07 M=5.2(Tul)
22	eL	Z	01 14	5.9S, 151.7E, h=81, H=00 21 31 M=5.5(Tul)
22	e eL	Z' Z	13 53 31 14 26	8.4S, 158.8E, h=107, H=13 36 50 M=5.0(Tul)
22	eL	Z	17 09	
23	iP eS eL	Z' N Z	01 18 27 01 23 24 01 28	10.7N, 86.5W, h=44, H=01 12 53 M=4.7(Tul)
23	iP i(S)	Z' N'	06 06 31 06 07 29	
23	eP	Z'	06 20 17	
23	iP eL	Z' Z	22 18 18 22 27	19.0N, 61.5W, h=25, H=22 11 55 M=4.0(Tul)
23	eL	Z	23 58	14.1S, 166.8E, h=99, H=23 09 12 M=5.2(Tul)
24	iP e	Z' Z	04 04 54 04 10 46	10.4N, 85.8W, h=25, H=03 59 14
24	iP i iS eL iScS	Z' Z N Z E'	21 12 51 21 13 27 21 16 34 21 18 00 21 24 10	15.5N, 92.5W, h=129, H=21 08 23 M=5.6(Tul)
25	iP eL	Z' Z	00 21 09 00 39	14.4S, 76.1W, h=46, H=00 11 52 M=4.5(Tul)

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25	eP	Z'	04 42 27	18.9N, 81.1W, h=64, H=04 37 51
	i	Z'	04 42 36	M=6.0(Tul)
	iS	N	04 46 26	
	eL	Z	04 47 30	
	eW2	Z	07 17	
25	iP	Z'	06 14 26	14.3S, 75.5W, h=100, H=06 05 16
25	eP	Z'	11 16 59	
25	iP	Z'	15 36 52	
	i(S)	N'	15 37 23	
26	iP	Z'	02 41 14	4.9S, 81.3W, h=25, H=02 33 15
	eL	Z	03 03	M=4.0(Tul)
26	iP	Z'	08 20 55	7.5N, 82.7W, h=21, H=08 14 42
	i	Z'	08 20 58	M=7.1(Tul)
	iS	N	08 26 00	
	eL	Z	08 26 30	
	eW2	Z	09 59	
26	eL	Z	22 31	56.4S, 25.4W, h=25, H=21 32 18 M=4.8(Tul)
27	iP	Z'	04 24 00	
	eL	Z	04 30	
27	eL	Z	09 04	
27	iP	Z'	12 48 11	51.6N, 174.1W, h=60, H=12 38 35
	eL	Z	12 54	M=4.7(Tul)
28	iP	Z'	00 18 07	16.2S, 173.2W, h=40, H=00 05 11
	i(S)	E	00 28 56	M=6.0(Tul)
	eL	Z	00 42	
28	eL	N	02 26	
28	iP	Z'	02 40 10	4.1S, 79.7W, h=110, H=02 32 26
28	iP	Z'	06 13 24	31.0S, 67.8W, h=217, H=06 02 24
28	iP	Z'	14 03 25	14.8N, 93.0W, h=71, H=13 58 41
	i(S)	N	14 07 28	M=4.3(Tul)
	eL	Z	14 12	
28	iP	Z'	19 55 55	36.9N, 141.9E, h=39, H=19 43 00
	eL	Z	20 41	M=4.7(Tul)
29	eL	Z	00 36	
30	iP	Z'	10 24 24	
	eS	N	10 28 24	
	e(L)	Z	10 33	

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30	eP	Z	17 31 42	3.3S, 143.9E, h=25, H=17 16 44
	iPKP	Z'	17 35 29	M=7.5(Tul)
	iPP	Z	17 36 31	
	iSKS	E	17 42 26	
	iPKKP	Z'	17 45 53	
	iPS	E	17 46 23	
	iSS	E	17 53 03	
	iL	Z	18 10 35	
30	iP	Z'	19 04 43	6.6N, 73.0W, h=204, H=18 57 51
30	iP	Z'	20 25 41	5.0N, 76.3W, h=45, H=20 18 49
	i	Z'	20 25 46	M=6.7(Tul)
	iS	E	20 31 14	
	G1	E	20 33 41	
	eL	Z	20 34	
	G2	E	22 35	
	G4	E	01 07 30	
31	eL	Z	03 13	3.2S, 144.1E, h=20, H=02 19 05
				M=5.5(Tul)

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1	eL	Z	04 36 00	20.0S, 176.4W, h=33, H=03 49 12
1	iPKP	Z'	04 55 42	3.5S, 173.7E, h=30, H=04 36 58
	ePP	ZZ'	04 56 45	M=7.2 (Tul)
	eSKS	E	05 02 35	
	e	Z'	05 03 18	
	eSP	Z'	05 06 17	
	iPS	E	05 06 30	
	iSS	E	05 13 12	
	iL	Z	05 30 50	
1	eL	Z	08 31	
1	eL	Z	13 28	27.1S, 176.3W, h=33, H=12 47 47 M=5.2 (Tul)
2	iP	Z'	04 46 32	19.3N, 81.0W, h=47, H=04 41 47
	i	Z'	04 46 35	M=4.3 (Tul)
	eL	Z	04 52	
3	eL	Z	04 01	
3	iP	ZZ'	09 06 43	23.2S, 67.5W, h=71, H=08 56 12
	iPP	Z	09 09 06	M=6.6 (Tul)
	iS	EZ	09 15 12	
	i	E	09 16 07	
	eL	Z	09 28	
	iP'P'	ZZ'	09 35 28	
3	eL	Z	11 55	40.9N, 73.3E, h=25, H=11 04 04 M=5.3 (Tul)
3	i(P)	Z'	22 05 32	
	i	Z'	22 05 55	
3	eL	Z	24 00	
4	iP	Z'	02 54 37	14.1N, 93.0W, h=30, H=02 49 45
	i	Z'	02 54 39	M=4.3 (Tul)
	e(S)	E	02 58 26	
	i	NZ'	02 58 40	
4	iP	Z'	10 52 08	
5	iP	Z	09 19 50	74.2N, 52.5E, h=0, H=09 08 46
	eS	N	09 28 45	M=5.6 (Tul)
	eL	Z	09 40	

5	eL	Z	15 56	13.7S, 166.6E, h=60, H=15 08 34
6	iP	Z'	01 43 47	32.0N, 40.8W, h=48, H=01 35 30
	iS	N	01 50 28	M=6.0 (Tul)
	eL	Z	01 56	
6	eL	Z	21 38	26.9S, 177.1W, h=50, H=20 21 57
				M=6.3 (Tul)
7	eS	N	22 41 40	31.5N, 116.1W, h=22 32 35
	eL	Z	22 43.0	M=3.9 (Tul)
8	e(P)	Z'	11 04 15	52.1N, 170.5W, h=40, H=10 54 56
9	iP	Z'	00 31 22	22.4S, 70.0W, h=160, H=00 21 11
9	iP	Z'	04 28 38	6.7N, 73.1W, h=180, H=04 21 55
	iS	N	04 34 02	
9	iP	Z'	06 30 25	24.1S, 66.5W, h=128, H=06 19 51
	iS	E	06 38 56	M=5.1 (Tul)
	eL	Z	06 50	
9	iP	Z'	17 37 10	44.5S, 73.4W, h=33, H=17 24 48
10	iP	ZZ'	21 12 56	49.4N, 27.9W, h=33, H=21 03 59
	ePP	Z	21 14 44	M=5.6 (Tul)
	eS	E	21 20 00	
	eL	Z	21 26 20	
11	epP	Z'	02 02 15	20.0S, 178.8W, h=638, H=01 47 40
	esP	Z	02 03 21	
	esPP	Z	02 07 00	
	iS	N	02 10 34	
	isS	N	02 14 32	
	eG	N	02 27 00	
11	eSKS	N	07 10 56	15.7S, 172.9W, h=157, H=06 47 42
	eL	Z	07 28 50	M=5.8 (Tul)
11	eP	ZZ'	08 30 24	25.2N, 123.3E, h=140, H=08 15 44
	iPKP	Z'	08 33 58	M=6.5 (Tul)
	ePP	ZZ'	08 34 23	
	iSKS	NN'	08 40 22	
	i(SKKS)	NE'	08 41 12	
	iSP	Z	08 43 35	
	eL	Z	09 08	
12	eP	Z'	05 18 51	12.2N, 87.8W, h=33, H=05 13 33
	i	Z'	05 18 54	M=3.8 (Tul)
	eL	Z	05 26	
12	iP	Z'	20 46 53	36.0S, 72.4W, h=43, H=20 35 17
	i(pP)	Z'	20 47 19	

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13	iP	Z'	06 42 50	2.1N, 83.5W, h=33, H=06 35 56
	i	Z'	06 42 53	M=5.9 (Tul)
	ePP	Z	06 44 08	
	iS	N	06 48 17	
	e(Lg)	N	06 51 00	
	eL	Z	06 52 30	
13	iP	Z'	10 14 06	14.6N, 93.0W, h=118, H=10 09 25
	eS	E	10 18 06	M=4.2 (Tul)
	eL	Z	10 22 40	
13	eP	Z	10 27 38	
13	eL	Z	21 02	5.18N, 110.2E, h=33, H=20 11 36
				M=5.1 (Tul)
14	e(PKP)	Z'	01 30 00	49.9S, 136.0E, h=43, H=01 10 50
	ePP	Z	01 31 25	M=6.0 (Tul)
	ePS	NE	01 41 25	
	eSS	N	01 48 18	
	eG	NE	02 02.0	
	eL	Z	02 08	
14	eL	Z	08 26	28.0N, 55.6E, h=43, H=07 27 45
14	eP	Z'	11 51 47	
	eL	Z	12 04	
15	iP	Z'	08 30 34	54.6N, 161.6E, h=52, H=08 19 38
	eL	Z	08 54	M=5.1 (Tul)
15	iP	Z'	10 19 43	45.2N, 132.6E, h=37, H=10 06 54
15	iP	Z'	11 30 30	51.8N, 177.0W, h=53, H=11 20 44
	eL	Z	11 52	M = 4.3 (Tul)
15	eL	Z	14 17	
15	eL	Z	18 33 30	
17	i(P)	Z'	00 29 11	
17	eL	Z	01 14	15.8S, 172.9W, h=33, H=00 32 27
				M=5.2 (Tul)
17	eP	Z'	03 14 43	7.9N, 71.4W, h=17, H=03 07 47
	eL	N	03 29	
17	iP	Z'	03 34 55	31.6S, 67.7W, h=33, H=03 23 32
17	iPKP	Z'	05 23 25	10.9N, 121.6E, h=33, h=05 04 32
	ePP	Z	05 24 56	M=6.1 (Tul)
	eL	Z	05 57	

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17	iP i(sP)	Z' Z'	07 34 27 07 34 54	4.7S, 79.4W, h=96, H=07 26 33
17	eL	Z	23 43	15.4S, 172.7W, h=33, H=22 55 55 M=4.8 (Tul)
18	eL	Z	07 07	
18	eL	Z	08 04	
18	iP iS eL	Z' N Z	16 51 56 16 58 26 17 05	62.3N, 152.5W, h=32, H=16 43 54 M=5.9 (Tul)
18	iP iS	Z' N	17 54 27 18 00 46	62.3N, 152.5W, h=32, H=17 46 15 M=6.2 (Tul)
19	iP	Z'	00 32 59	19.9S, 66.9W, h=240, H=00 23 04
19	iP iSKS eL	Z' N Z	18 40 21 18 50 54 19 12 30	44.6N, 81.7E, h=33, H=18 26 36 M=6.4 (Tul)
19	iP i(sP) iSP eL	Z' Z' Z Z	23 23 38 23 23 58 23 32 24 23 47 30	26.6S, 69.8W, h=51, H=23 12 50 M=4.6 (Tul)
20	eL	Z	09 38	74.4N, 51.2E, h=0, H=09 02 14 M=5.3 (Tul)
20	eP eS eL e(Lg)	Z' N Z Z'	10 47 11 10 50 14 10 51 30 10 52 05	31.1N, 114.1W, h=14, H=10 43 23 M=5.0 (Tul)
20	e(S)	N	13 12 40	
20	iPKP	Z'	13 17 56	12.4S, 112.1E, h=84, H=12 58 24
20	iP eS eL	Z' E Z	13 19 54 13 23 50 13 28 30	13.9N, 92.9W, h=33, H=13 14 59 M=4.2 (Tul)
20	e(L)	Z	14 14	
20	eL	Z	24 09	14.7S, 166.6E, h=52, H=23 18 40 M=5.1 (Tul)
21	iP eL	Z' Z	02 18 05 02 25	41.3N, 127.1W, h=33, H=02 12 42 M=4.3 (Tul)
21	eL	Z	16 59	28.2S, 176.7W, h=57, H=16 10 09 M=5.2 (Tul)

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21	iP	Z'	17 38 16	62.4N, 152.6W, h=42, H=17 30 14
21	iP	Z'	18 21 16	41.5N, 15.4E, h=36, H=18 09 07
21	iP	ZZ'	18 31 42	41.4N, 15.5E, h=34, H=18 19 33
	ePP	Z'	18 34 41	M=6.3 (Tul)
	eS	N	18 41 47	
	eL	Z	18 50	
21	eP	Z'	19 08 21	
21	iP	Z'	21 20 40	26.9S, 111.9W, h=33, H=21 09 50
	iS	E	21 29 36	M=6.4 (Tul)
	eL	Z	21 39	
	eP'P'	Z'	21 49 15	
22	eL	Z	05 18	26.1N, 142.5E, h=29, H=04 32 29
				M=4.8 (Tul)
22	eL	Z	06 21	28.6S, 176.7W, h=55, H=05 29 27
				M=5.4 (Tul)
22	eL	Z	09 33	
22	eL	Z	12 57	28.6S, 176.7W, h=56, H=12 05 55
				M=5.0 (Tul)
23	eL	Z	13 13 15	62.2N, 152.8W, h=25, H=12 46 23
				M=4.7 (Tul)
23	eL	Z	16 34	22.9N, 120.8E, h=17, H=15 29 47
				M=4.8 (Tul)
23	iP	Z'	19 34 13	41.8N, 124.1W, h=33, H=19 29 16
	i	Z'	19 34 20	M=5.6 (Tul)
	eS	N	19 38 21	
	eL	Z	19 40 30	
	eLg	Z	19 40 48	
	iLg	Z	19 41 40	
24	eP	Z'	01 28 44	
	i	Z'	01 29 19	
	i(S)	N'	01 32 14	
24	iP	Z'	02 56 14	
	eL	Z	03 13	
24	eP	Z'	06 18 21	
24	eP	Z'	09 17 18	15.0S, 173.3W, h=33, H=09 04 23
	eSKS	N	09 27 50	M=6.4 (Tul)
	eL	Z	09 45	

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24	iP ipP	Z' Z'	13 25 25 13 25 41	17.5S, 70.4W, h=92, H=13 15 37
24	e(P)	Z'	19 20 20	
25	eL	Z	02 37	55.5N, 155.9W, h=33, H=02 11 12 M=4.1 (Tul)
25	eP epP iSKS iS i(PPS) eL	Z' ZZ' EN N N Z	08 44 17 08 46 23 08 54 02 08 54 54 08 58 36 09 10	20.5S, 178.5W, h=561, H=08 31 49 M=6.6 (Tul)
25	e(P)	Z'	09 28 50	
26	eP eL	Z' Z	07 02 10 07 33	34.0N, 139.2E, h=38, H=06 48 57 M=5.7 (Tul)
26	ePKP ePP eL	Z' Z Z	23 49 25 23 50 55 24 26	3.7S, 140.1E, h=50, H=23 30 38 M=5.8 (Tul)
27	iP	Z'	02 31 27	40.2N, 137.8E, h=274, H=02 18 59
27	eP eL	Z Z	09 11 48 09 32	74.7N, 50.3E, h=0, H=09 00 51 M=5.3 (Tul)
27	eP eL	Z' Z	16 32 54 17 02	38.3N, 142.4E, h=40, H=16 20 05 M=5.2 (Tul)
28	eL	Z	00 19	6.0S, 149.5E, h=48, H=23 28 45
28	iP	Z'	03 02 54	34.3N, 39.6E, h=33, H=02 49 40
28	iP iS eL	Z' E Z	08 24 56 08 28 41 08 12	18.6N, 105.8W, h=33, H=08 21 32 M=5.3 (Tul)
28	eL	Z	08 57	
28	iP ipP iSKS iS eSS eL	ZZ' Z EZN' EZN' E Z	11 12 33 11 13 01 11 22 48 11 23 06 11 28 52 11 41	38.0N, 23.1E, h=120, H=10 59 58 M=6.6 (Tul)
28	eL	Z	16 13	
28	iP eS eL	Z' E Z	17 01 08 17 04 56 17 07	

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28	eL	Z	24 03	2.2S, 67.8E, h=33, H=22 46 01
29	iP	Z'	08 42 53	
	eL	Z	08 48	
29	iP	Z'	08 54 54	18.0N, 103.3W, h=33, H=08 50 32
	eL	Z	09 00	M=4.6 (Tul)
29	eL	Z	10 30	7.3N, 80.5W, h=30, H=10 14 12
				M=4.0 (Tul)
29	eL	Z	21 06	34.0N, 139.3E, h=33, H=20 20 20
				M=4.7 (Tul)
29	eL	Z	23 21	34.1N, 139.1E, h=33, H=22 36 54
				M=5.6 (Tul)
30	iP	Z'	11 48 20	40.2S, 72.6W, h=37, H=11 36 11
	eL	Z	12 14	
30	iP	ZZ'	13 38 40	41.8N, 111.8W, h=33, H=13 35 29
	i(Pg)	Z	13 39 45	(M=6.0 (Tul))
	iS	N	13 41 12	
	e(L)	Z	13 41.5	
	iLg	N	13 42 40	
31	eP	Z'	17 12 45	51.3N, 179.7W, h=26, H=17 02 43
	i	Z'	17 12 47	M=6.2 (Tul)
	iS	E	17 20 52	
	eL	Z	17 34	
31	eP	Z'	18 06 09	51.2N, 179.9W, h=43, H=17 56 09
31	eP	Z'	22 03 51	

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1	iP	Z'	03 56 08	51.3N, 179.7W, h=25, H=03 46 05
	iS	E	04 04 16	M = 6.2 (Tul)
	eL	Z	04 15	
1	iP	Z'	04 08 24	51.1N, 180.0, h=33, H=03 58 22
1	iP	Z'	04 51 43	51.3N, 179.9W, h= 37, H=04 41 42
	eS	E'	04 59 51	M = 5.6 (Tul)
	eL	Z	05(15)	
1	eP	Z'	05 05 50	15.98, 168.2E, h=244, H=04 52 14
	i	Z'	05 09 36	
	iSKS	EE'	05 16 08	
	ePKKP	Z'	05 21 20	
1	e(P)	Z'	06 52 28	
1	eP	Z'	07 52 10	51.2N, 180.0, h=33, H=07 42 07
1	iP	Z'	08 01 09	51.3N, 179.9W, h=42, H=07 51 08
	iS	E	08 09 17	M = 6.0 (Tul)
	eL	Z	08 21	
1	eP	Z'	08 57 09	51.4N, 179.8W, h=29, H=08 47 07
1	eL	Z	10 32	
1	e(SPP)	NZ	15 30 25	25.8N, 56.3E, h=46, H=15 01 05
	eL	Z	15 58	M = 5.7 (Tul)
1	eP	ZZ'	19 34 33	35.6N, 50.0E, h=21, H=19 20 38
	iPP	Z	19 38 42	M = 7.5 (Tul)
	iSKS	N	19 45 17	
	eSP	Z	19 47 50	
	ePKKP	Z'	19 50 38	
	eL	Z	20 07	
2	iP	Z'	03 12 31	51.3N, 179.8W, h= 26, H=03 02 29
	eL	Z	03 35	M = 4.7 (Tul)
2	eL	Z	06 30	27.5N, 127.0E, h=58, H=05 33 05
				M = 5.1 (Tul)
2	eL	Z	08 43	
2	ePKP	Z'	15 41 14	10.2S, 120.3E, h=33, H=15 21 55
	eL	N	16 03	
4	eP	Z'	03 53 42	
4	eP	Z'	08 38 56	32.5S, 112.3W, h=33, H=08 27 49
4	iP	Z'	15 22 10	15.0N, 91.7W, h=217, H=15 17 42
	i(S)	N'	15 25 54	M = 4.1 (Tul)
	eL	Z	15 30	
4	eP	Z'	17 22 25	41.0N, 124.0W, h=48, H=17 17 28
	i	Z'	17 22 28	M = 5.0 (Tul)
	iS	N	17 25 50	
	eL	Z	17 28	
4	eP	Z'	21 54 07	24.0N, 46.4W, h=39, H=21 46 01
4	eL	Z	23 45	39.9N, 44.2E, h=33, H=22 59 19
				M = 5.5 (Tul)

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5	iP	Z'	08 47 02	52.7N, 159.1E, h=101, H=08 35 56
5	iP	Z'	16 07 43	40.7N, 112.0W, h=14, H=16 04 29
	i	Z'E'	16 08 42	(M = 4.3 (Tul))
	eLg	Z'	16 11 42	
	eL	Z	16 12 40	
6	iP	Z'	06 58 37	31.1S, 72.0W, h=33, H=06 47 25
6	eP	Z'	11 02 17	21.2S, 174.5W, h=10, H=10 49 01
	eL	E	11 32	
6	ePKP	Z'	11 30 06	4.0S, 126.4E, h=33, H=11 10 50
	eL	E	12 05	
6	eP	Z'	13 43 55	14.3N, 90.7W, h=160, H=11 39 11
7	iP	Z'	08 00 40	6.3S, 130.0E, h=180, H=07 41 51
7	eL	Z	12 55	34.0N, 139.3E, h=33, H=12 03 31
8	eL	Z	08 15	22.4N, 171.5E, h=76, H=07 27 07
				M = 5.3 (Tul)
8	eL	Z	10 51	73.7N, 53.8E, h=0, H=10 17 58
				M = 5.0 (Tul)
8	iP	Z'	13 10 38	16.9N, 60.9W, h=30, H=13 03 35
	eL	Z	13 22	M = 4.5 (Tul)
9	eL	Z	02 32	10.3N, 121.4E, h=58, H=01 34 38
9	iP	Z'	03 31 22	15.6S, 73.4W, h=98, H=03 21 56
9	eP	Z'	14 42 28	41.6N, 111.8W, h=37, H=14 38 13
	e(Lg)	Z'	14 45 32	
9	iP	Z'	14 50 40	14.0N, 89.5W, h=89, H= 14 45 44
	i	Z'	14 50 53	M = 3.8 (Tul)
	eL	Z	14 58	
9	iP	Z'	19 20 37	62.4N, 153.4W, h=57, H=19 12 37
	eL	Z	19 35	M = 4.8 (Tul)
10	iP	Z'	09 49 30	35.0N, 27.1E, h=33, H= 09 36 24
	eL	Z	10 10	M = 5.4 (Tul)
10	iP	Z	15 56 20	21.1S, 179.2W, h=640, H=15 43 59
	isP	Z	15 59 48	M = 6.8 (Tul)
	iSKS	E	16 06 06	
	iS	N	16 07 02	
	eSP	Z	16 08 20	
	eSS	N	16 13 48	
	e(L)	Z	16 20	
10	e(P)	Z'	20 17 06	13.6S, 111.6W, h=33, H=20 07 56.5
	eL	Z	20 34	
10	iP	Z'	21 57 34	12.3N, 86.7W, h=178, H=21 52 27
	ipP	Z'	21 58 12	
	iS	E	22 02 52	
11	eL	Z	01 30	(6.1S, 149.4E, h=62, H=00 33 12)
11	eL	Z	12 11	

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12	eP	Z'	05 03 18	7.0S, 12.4W, h=33, H=04 50 14
	eL	Z	05 32	M = 4.9 (Tul)
12	i(P)	Z'	14 30 41	
	eL	Z	14 58	
12	eL	Z	19 15	4.4S, 145.4E, h=32, H=18 18 43
				M = 5.4 (Tul)
12	eP	Z	21 11 12	36.5N, 69.2E, h=50, H=20 57 00
	e	Z'	21 14 40	M = 6.8 (Tul)
	iPP	Z	21 15 38	
	iSKS	N	21 21 48	
	iSP	Z	21 24 48	
	eL	Z	21 50	
13	eL	Z	00 40	7.3S, 13.3W, h=33, H=23 58 47
				M = 5.1 (Tul)
13	eL	Z	05 50	21.3S, 174.7W, h=33, H=05 02 23
				M = 4.9 (Tul)
13	eL	Z	14 08	25.6N, 109.6W, h=33, H=03 59 06
				M = 4.1 (Tul)
13	iP	Z'	14 42 27	11.6N, 61.3W, h=73, H=14 35 02
	eL	Z	14 57	M = 4.5 (Tul)
14	e(P)	Z'	14 01 40	
	eL	Z	14 18	
14	eL	Z	16 38	17.9S, 176.5E, h=33, H=15 52 41
				M = 4.9 (Tul)
15	eL	Z	08 34	74.4N, 51.5E, h=0, H=08 02 14
				M = 5.3 (Tul)
15	iP	Z'	23 02 20	48.5N, 156.8E, h=33, H=22 50 46
	e(PFP)	Z	23 06 52	M = 6.2 (Tul)
	iS	N	23 11 48	
	eL	Z	23 27	
16	iP	Z'	03 09 36	19.3N, 103.1W, h=100, H=03 05 33
	iS	NZ	03 12 58	M = 5.0 (Tul)
	eL	Z	03 14	
16	iP	Z'	05 40 29	35.8N, 118.1W, h=10, H=05 36 16
	iS	EZ	05 43 55	M = 5.0 (Tul)
	iLg	ZZ'	05 45 50	
	eL	Z	05 46	
16	eL	Z	11 31	74.2N, 51.6E, h=0, H=10 59 10
				M = 5.3 (Tul)
16	eL	Z	20 14	16.7N, 94.2E, h=33, H=19 06 29
				M = 5.8 (Tul)
17	eP	Z'	01 18 08	64.3N, 149.3W, h=63, H=01 10 19
	M	Z	01 36 40	M = 4.5 (Tul)
17	eP	Z'	18 08 13	21.0S, 179.1W, h=601, H=17 55 45
	epP	Z'	18 10 31	
	iS	N	18 18 50	
	eSP	Z	18 20 17	

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18	iP	ZZ'	00 35 18	7.5N, 82.3W, h=33, H=00 29 05
	iPa	Z	00 36 18	M = 7.0 (Tul)
	iS	N	00 40 18	
	eL	Z	00 44	
18	iP	Z'	05 19 51	7.3N, 82.4W, h=41, H=05 13 38
	eL	Z	05 28	M = 4.9 (Tul)
18	ePKP	Z'	06 29 26	2.3N, 126.9E, h=33, H=06 10 26
	eL	Z	07 12	M = 5.1 (Tul)
18	eL	Z	09 02	73.2N, 54.7E, h=0, H=08 29 03
				M = 5.0 (Tul)
18	eL	Z	21 02	21.0N, 169.9E, h=81, H=20 11 48
18	eL	Z	22 29	
19	iP	Z'	01 32 08	52.3N, 173.4W, h=33, H=01 22 36
	i	Z'	01 32 21	M = 4.9 (Tul)
	eL	Z	01 57	
19	iP	Z'	05 19 02	48.1N, 145.1E, h=466, H=05 07 39
19	eL	Z	08 32 32	11.5N, 141.0E, h=61, H=07 48 35
				M = 5.1 (Tul)
19	eP	Z	11 12 05	73.8N, 53.8E, h=0, H=11 00 56
	eL	Z	11 33	M = 5.6 (Tul)
19	eP	Z'	15 14 01	
	eL	Z	15 31	
20	iP	Z'	09 34 53	15.5S, 76.1W, h=33, H=09 25 27
	eL	Z	09 55	M = 4.2 (Tul)
20	eL	Z	11 16	
20	eL	Z 17 40		4.7S, 139.4E, h=33, H=16 38 25
				M = 4.9 (Tul)
21	eL	Z	08 34	
21	eL	Z	23 24	55.7S, 64.1W, h=51, H=22 38 52
				M = 5.2 (Tul)
22	eP	Z'	07 10 15	26.5N, 97.0E, h=33, H=06 51 32
	ePP	Z	07 11 22	M = 6.4 (Tul)
	eSKS	N	07 17 03	
	eSKKS	N	07 18 15	
	i(SP)	Z	07 21 04	
	eSS	E	07 27 18	
	eL	Z	07 45	
22	eL	Z	08 53	36.4N, 69.0E, h=33, H=08 06 28
				M = 5.4 (Tul)
22	eL	Z	15 58	
23	eP	Z'	12 11 27	14.7N, 45.1W, h=32, H=12 02 35
	eL	Z	12 25	M = 5.0 (Tul)
23	eL	Z	13 00	
23	iP	Z'	15 58 35	60.1N, 151.2W, h=86, H=15 50 46
	eL	Z	16 11	M = 4.5 (Tul)

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24	i(P)	Z'	04 54 29	
24	eL	Z	06 26	9.2N, 126.6E, h=33, H=05 28 26 M = 5.3 (Tul)
24	eP	Z'	10 16 40	
24	iP	Z'	14 50 50	42.8N, 145.3E, h=33, H=14 38 22
	eL	Z	15 18	M = 5.5 (Tul)
24	e(P)	Z'	18 42 41	
25	iP	Z'	00 34 31	55.6S, 124.3W, h=67, H=00 21 15
	eL	Z	01 00	M = 5.6 (Tul)
25	eL	Z	08 25	24.0S, 176.6W, h=33, H=07 30 09
				M = 4.6 (Tul)
25	eP	Z	13 13 38	73.7N, 55.0E, h=0, H=13 02 32
	eS	N	13 22 36	M = 5.6 (Tul)
	eL	Z	13 33	
26	eL	Z	08 42	
26	eL	Z	13 32	27.5S, 176.4W, h=33, H=12 44 49 M = 5.3 (Tul)
27	iP	Z'	07 00 02	31.2S, 67.9W, h=71, H=06 48 46
27	iP	Z'	08 00 32	17.9S, 64.9W, h=120, H=07 50 28
27	eP	Z	08 14 15	74.3N, 52.4E, h=0, H=08 03 16
	eS	N	08 23 20	M = 5.6 (Tul)
	eL	Z	08 28	
27	iPKP	Z'	13 15 36	4.6S, 104.4E, h=144, H=12 56 19
	i	Z'	13 19 03	
28	iP	Z'	39 02 55	5.2N, 76.2W, h=127, H=18 56 09
	ipP	ZZ'	19 03 19	M = 5.2 (Tul)
	eS	E	19 08 20	
	isS	EZ'	19 09 03	
	eL	Z	19 11	
28	iP	Z'	22 24 04	13.8S, 76.7W, h=61, H=22 14 53
29	iP	Z'	05 32 07	20.0S, 68.0W, h=63, H=05 21 50
29	iP	Z'	08 08 11	17.1S, 70.5W, h=33, H=07 58 21
29	iP	ZZ'	15 28 02	27.0S, 63.6W, h=575, H=15 17 48
	ipP	Z	15 29 58	M = 6.8 (Tul)
	isP	Z	15 30 56	
	iS	EZZ'	15 36 28	
	eL	Z	15 41	
29	i(P)	Z'	20 16 19	
30	eL	Z	11 40	5.2S, 152.7E, h=33, H=10 48 10 M = 5.6 (Tul)

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1	eL	Z	09 49 30	
1	iP	Z'	10 05 16.3	47.3N, 151.5E, h=127, H=09 53 32.9
1	eP	Z'	12 24 21	
1	ePKP	Z'	12 31 43	27.9N, 54.9E, h=16, H=12 13 57.4
	e(PS)	N	12 42 39	M=5.5(Tul)
	e	Z'	12 43 30	
	eL	Z	13 08	
1	eL	Z	16 09	5.5S, 151.9E, h=33, H=15 07 22.1 M=4.9(Tul)
1	iP	Z'	20 55 34.0	19.6S, 174.5W, h=143, H=20 42 36.5
	eL	Z	21 25 30	M=5.2(Tul)
2	iP	Z'	11 45 27.6	
2	e(L)	Z	23 32	Probably two earthquakes.
	eL	Z	23 50	
3	eP	Z'	01 25 51	40.6N, 29.7W, h=33, H=01 16 46.7
	eL	Z	01 40 30	M=5.4(Tul)
3	eP	Zf	01 28 22	40.7N, 29.7W, h=33, H=01 19 22.5
3	eL	Z'	14 29	
3	iPg	Z'	21 15 15.9	
	iSg	E'	21 15 38.0	
3	eL	Z	23 22	
4	eL	Z	00 21	
4	eP	Z'	04 51 07	40.4N, 29.5W, h=33, H=04 42 05.8
	eL	Z	05 06	M=4.9(Tul)
4	eL	Z	06 23	
4	eP	Z'	07 16 05	
4	eP	Z'	13 32 34	40.9N, 29.7W, h=33, H=13 23 34.0
	eL	Z	13 48	M=4.9(Tul)
4	eL	Z	17 51	
4	eL	Z	19 15	
4	eL	Z	20 33	38.3N, 22.7E, h=38, H=19 46 10.1 M=4.7(Tul)

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4	eL	Z	21 27	5.1S, 151.9E, h=33, H=20 34 38.7 M=4.9(Tul)
4	eL	Z	23 34	
5	eL	Z	04 39	40.2N, 29.5W, h=33, H=04 14 39.1 M=4.9(Tul)
5	eL	Z	09 03	40.7N, 29.8W, h=33, H=08 39 32.2 M=4.8(Tul)
5	e(P)	Z'	18 16 00	
6	iP	Z'	03 26 07.6	40.8N, 29.5W, h=33, H=03 17 07.2
	eS	NE	03 33 28	M=5.7(Tul)
	eL	Z	03 40 30	
6	eP	Z'	04 04 01	40.5N, 29.5W, h=33, H=03 54 58.3
	eS	E	04 11 20	M=5.4(Tul)
	eL	Z	04 18 30	
6	eP	Z	04 37 25	17.4S, 167.7E, h=33, H=04 23 24.1
	ePP	EZ	04 41 50	M=6.6(Tul)
	eSKS	E	04 48 07	
	ePS	E	04 51 04	
	ePSS	E	04 52 08	
	iSS	E	04 57 01	
	eL	Z	05 12	
6	e	Z'	05 55(47)	26.2N, 126.9E, h=122, H=05 38 40.3
	e(PPP)	Z'	06 00 00	
6	i(P)	Z'	07 14 44.0	
6	ePS	E	08 24 20	17.4S, 167.9E, h=33, H=07 56 20.4
	eSS	E	08 30 00	M=5.8(Tul)
6	eSKS	E	08 28 26	17.2S, 168.0E, h=33, H=08 03 31.7
	ePS	E	08 31 16	M=6.1(Tul)
	eSS	E	08 37 10	
	eL	Z	08 45	
6	i(P)	Z'	08 45 13.2	
6	e(Lg)	Z'	09 35 25	43.6N, 110.8W, h=33, H=09 28 17.4
6	eL	Z	11 50	13.3S, 167.3E, h=209, H=11 00 52.8
				M=5.3(Tul)
6	eL	Z	12 52	17.4S, 167.8E, h=17, H=11 59 42.3
				M=5.2(Tul)
6	eL	Z	18 53	17.6S, 168.0E, h=33, H=18 01 05.4
				M=5.0(Tul)
6	ePP	Z	23 49 53	17.5S, 167.6E, h=42, H=23 31 27.7
	eSKS	E	23 56 15	M=6.1(Tul)
	ePS	EZ	23 59 10	
	eSS	E	24 05 00	
	eL	Z	24 20	

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7	eL	Z	01 39	17.7S, 167.8E, h=33, H=00 46 55.4 M=5.6(Tu1)
7	e(P)	Z'	04 26 49	
7	eP	Z'	06 54 16	40.5N, 29.2W, h=33 H=06 45 13.8
	eL	Z	07 10	M=4.8(Tu1)
7	eP	Z'	09 58 30	40.2N, 29.2W, h=33, H=09 49 25.9
	eL	Z	10 13	M=5.0(Tu1)
8	iP	Z'	05 23 21.6	40.5N, 29.5W, h=33, H=05 14 20.4
	eL	Z	05 38	M=4.9(Tu1)
8	iP	Z'	13 10 43.8	
8	eP	Z	22 10 55	24.3N, 121.7E, h=29, H=21 56 22.2
	ePP	NZ	22 15 20	M=6.6(Tu1)
	eSKS	N	22 21 32	
	eSSP	NZ	22 24 55	
	eSS	E	22 31 20	
	eL	Z	22 50	
9	eL	Z	04 11	17.4S, 167.6E, h=33, H=03 13 44.8 M=4.6(Tu1)
9	e(PP)	Z	20 33 52	3.2S, 148.2E, h=33, H=20 14 38.3
	e(S)	N	20 41 45	M=6.5(Tu1)
	ePS	NZ	20 43 30	
	eSS	N	20 49 50	
	eSSS	N	20 53 44	
	eL	Z	21 06	
10	e(P)	Z'	03 18 21	
10	i(P)	Z'	08 08 01	
10	iPKP	Z'	13 52 43.0	8.9S, 110.3E, h=33, H=13 33 10.3
10	iP	Z'	21 04 58.0	34.9S, 70.1W, h=137, H=20 53 34.5
	eL	Z	21 30	M=4.6(Tu1)
10	eP	Z'	22 05 30	15.1S, 173.3W, h=33, H=21 52 36.8
	e(S)	N	22 16 24	M=5.2(Tu1)
	eL	Z	22 34	
11	iP	Z'	05 49 19.5	8.5S, 83.7W, h=33, H=05 40 59.9
11	eP	Z'	06 30 17	1.4S, 80.6W, h=33, H=06 22 45.9
12	iP	Z'	00 17 42.0	4.1S, 80.3W, h=195, H=00 10 04.8
12	eL	Z	02 42	33.1S, 178.2W, h=37, H=01 44 49.4 M=5.1(Tu1)
12	iP	Z'	08 06 11.4	20.4S, 68.9W, h=139, H=07 56 08.4

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13	i(P) i(pP)	Z' Z'	09 17 20.0 09 17 37.3	
13	eL	Z	11 18	35.5N, 49.8E, h=33, H=10 23 38.2 M=5.5(Tul)
13	iP	Z'	13 45 56.7	15.0N, 92.7W, h=170, H=13 41 21.7
13	ePS eSS eL	E E Z	19 15 28 19 21 06 19 35 30	12.6S, 166.6E, h=33, H=18 47 44.5 M=6.0(Tul)
14	eL	Z	01 19	33.4S, 179.3W, h=33, H=00 29 56.0 M=5.1(Tul)
14	eL	Z	10 28	38.7N, 124.0W, h=33, H=10 14 32.4
15	iP eL	Z' Z	03 21 25.6 03 27	
15	eL	Z	14 46	33.1S, 178.5W, h=89, H=13 59 54.9 M=4.9(Tul)
16	eL	Z	00 31 30	43.5S, 169.8E, h=33, H=23 36 35.0 M=5.6(Tul)
16	iPKP	Z'	07 36 10.2	28.3S, 62.5E, h=33, H=07 15 32.7
16	eP eS eL	Z' E Z	18 12 17 18 20 10 18 30	51.6N, 175.8W, h=27, H=18 02 32.9 M=5.3(Tul)
18	iPKP eSKP	Z' Z'	04 25 21.0 04 29 02	8.9S, 117.0E, h=33, H=04 06 00.4
18	iP e (sP)	Z' Z'	08 52 46.2 08 53 24	46.5N, 149.6E, h=140, H=08 40 55.5
18	iP	Z'	11 34 32.3	46.5N, 149.6E, h=128, H=11 22 40.2
18	eL	Z	16 33	
18	eP iS	Z' E'	19 54 19 19 57 45	16.2N, 93.5W, h=179, H=19 49 59.2
19	iP epP	Z' Z'	04 24 10.0 04 24 39	31.0S, 69.4W, h=120, H=04 13 03.6
19	eP iS eL	Z' N Z	21 26 13 21 30 30 21 31 30	19.8N, 108.2W, h=53, H=21 21 48.8 M=4.9(Tul)
20	iPKP	Z'	00 01 22.0	5.7S, 130.3E, h=177, H=23 43 34.9
20	iPKP i(SKP)	Z' Z'	05 49 32.0 05 52 38.8	6.7S, 130.1E, h=167, H=05 30 42.2 Possibly another earthquake.

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21	iP ePP eS eL	Z' Z N Z	02 13 06.8 02 15 00 02 19 20 02 27	61.1N, 149.7W, h=80, H=02 05 22.7 M=4.9(Tul)
22	eL	Z	05 27	3.4S, 145.3E, h=36, H=04 34 38.9 M=5.4(Tul)
22	eP eS eL	Z E Z	09 17 18 09 25 24 09 38	73.4N, 54.9E, h=0, H=09 06 10.1 M=5.5(Tul)
22	iP eS eSS eL	Z' N' NZ Z	15 35 07.3 15 44 32 15 49 35 16 00	49.8N, 155.8E, h=19, H=15 23 32.9 M=5.5(Tul)
23	iP eL	Z' Z	09 08 54.8 09 20	9.5N, 70.0W, h=30, H=09 02 02.2 M=4.0(Tul)
24	iP	Z'	01 56 16.7	19.4N, 67.0W, h=33, H=01 50 06.2
24	iP eL	Z' Z	06 28 45.8 06 35 30	19.4N, 108.2W, h=33, H=06 24 16.3 M=4.0(Tul)
24	e(P) i(S) eL	Z' N Z	17 57 24 18 01 07 18 02 30	
24	iPg i(Sg)	Z' Z'	20 23 54.0 20 24 29.0	
25	ePKP ePP e(SP) eSS eL	Z' Z' Z N Z	09 53 10 09 54 56 10 05 55 10 12 10 10 33	3.0N, 126.7E, h=33, H=09 34 14.6 M=5.7(Tul)
25	eP eS eL	Z' N Z	15 58 33 16 03 36 16 07	8.4N, 82.6W, h=51, H=15 52 29.2 M=5.3(Tul)
25	eSKP eSKKS eSS eSSS eL	Z N NE E Z	20 28 40 20 34 30 20 45 05 20 49 50 21 07	61.4S, 154.9E, h=33, H=20 06 10.0 M=6.1(Tul)
26	eSS eL	N Z	07 53 52 08 09	17.7S, 167.5E, h=33, H=07 20 25.8 M=5.4
26	eP	Z'	11 39 23	33.7N, 27.9E, h=33, H=11 26 12.4
26	eL	Z	16 56	55.5S, 26.5W, h=33, H=15 58 34.8 M=5.4(Tul)

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27	iP	Z'	08 15 14.0	14.0N, 90.4W, h=107, H=08 10 24.5
	i	Z'	08 15 38.0	M=4.7(Tul)
	iS	E'	08 19 22	
	eL	Z	08 21	
27	iP	Z'	13 58 15.0	11.5N, 86.4W, h=80, H=13 52 51.2
	eS	E	14 02 30	M=4.9(Tul)
	eL	Z	14 06	
28	i(P)	Z'	10 58 19.0	
28	iP	Z'	13 12 22.3	
	eL	Z	13 35	
28	PKP	Z'	15 19 20.8	0.1N, 123.6E, h=61, H=15 00 17.0
28	iP	Z'	22 57 26.2	16.0N, 93.6W, h=110, H=22 53 01.3
	iS	N'	23 01 02	M=4.7(Tul)
	eL	Z	23 02 30	
29	iP	Z'	00 25 57.8	7.1N, 82.6W, h=21, H=00 19 39.7
	eL	Z	00 37	M=3.9(Tul)
29	iP	Z'	02 46 58.4	34.3N, 117.0W, h=33, H=02 42 56.1
	eL	Z	02 51 30	M=4.8(Tul)
	e(Lg)	N'	02 52 07	
	i(Lg)	E	02 53 40	
29	eL	Z	08 23	
29	iP	Z'	09 42 17.0	33.9S, 70.7W, h=33, H=09 30 48.2
29	iP	Z'	10 58 41.2	13.0N, 88.4W, h=43, H=10 53 29.9
	i(pP)	Z'	10 58 55.0	M=3.9(Tul)
	eL	Z	11 07	
29	eP	Z'	16 17 03	
	eL	Z	16 37	
29	iP	Z'	21 11 38.6	23.3S, 111.5W, h=33, H=21 01 28.5
	eS	N	21 20 00	M=5.6(Tul)
	eSS	N	21 24 20	
	eL	Z	21 32	
30	ePKP	Z'	02 05 30	54.2S, 9.1E, h=33, H=01 46 32.7
	eSS	N	02 24 30	M=5.7(Tul)
	eL	Z	02 46	
30	i(P)	Z'	05 19 25.3	
30	iP	Z'	08 37 03.0	12.5N, 88.0W, h=80, H=08 31 51.8
	eS	NE	08 41 30	M=5.0(Tul)
	eL	Z	08 44	

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1	iP	Z'	00 29 06	
1	iP	Z'	04 12 19	41.8N, 144.8E, h=91, H=03 59 49.9
1	e(P)	Z'	09 16 42	
1	iP	Z'	11 39 14	1.5S, 77.8W, h=181, H=11 31 48.7
1	eL	Z	14 40	17.6S, 168.5E, h=21, H=13 51 37.0 M=4.6 (Tul)
1	ePKP	Z'	15 52 13	1.9N, 133.0E, h=56, H=15 33 22.6
	eSP	Z	16 05 10	M=6.1 (Tul)
	eSS	N	16 10 44	
	eL	Z	16 29	
1	e	E	18 22 28	1.9N, 132.8E, h=36, H=17 52 20.2
	eSS	N	18 29 25	M=6.1 (Tul)
	eL	Z	18 48	
1	eL	Z	19 45	
1	iP	Z'	23 33 13	43.9N, 145.2E, h=131, H=23 20 59.6
	epP	Z'	23 33 45	
2	iP	Z'	06 46 48	
2	ePKP	Z'	15 06 03	10.0S, 117.8E, h=33, H=14 46 39.2
	eL	Z	15 55	M=5.7 (Tul)
2	iP	Z'	15 13 21	36.7N, 141.1E, h=75, H=15 00 25.4
	i(pP)	Z'	15 13 34	
3	iP	Z'	01 43 11	6.7S, 104.7W, h=33, H=01 35 10.6
	eL	Z	01 51	M=4.8 (Tul)
3	iPKP	Z'	19 23 54	4.5S, 103.4E, h=33, H=19 04 20.8
4	i(P)	Z'	04 57 30	
4	e(P)	Z'	06 22 29	44.2N, 110.2W, h=33, H=06 18 31.3
	e(Lg)	Z'	06 25 56	
4	iP	Z'	23 05 47	43.2S, 75.8W, h=33, H=22 53 31.3
	i	Z	23 15 54	M=6.2 (Tul)
	i	N	23 16 40	
	eL	Z	23 21	
5	eL	Z	01 03	

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5	eL	Z	12 19	66.4N, 6.8E, h=33, H=11 46 12.1 M=4.8 (Tul)
5	i(P) i	Z' E'	23 19 51 23 23 17	
6	ePS eSS eL	N N Z	00 38 28 00 45 10 01 02	28.0N, 55.6E, h=33, H=00 09 47.2 M=5.6 (Tul)
6	iP eS eL iLg	Z N Z EE'	03 41 41 03 45 58 03 47 50 03 48 44	45.8N, 122.5W, h=44, H=03 36 46.9 M=5.6 (Tul)
6	iP	Z'	12 31 11	4.0S, 79.8W, h=101, H=12 23 24.6
6	i(P) i	Z' Z'	12 58 01 12 58 55	Seismic.
7	iP eS eL	Z' N Z	13 06 50 13 14 00 13 22	40.5N, 29.4W, h=33, H=12 57 45.7 M=5.3 (Tul)
7	ePKP iSKP	Z' Z'	16 22 00 16 25 26	7.8S, 119.8E, h=156, H=16 03 04.1
8	iP iS eL	Z' N Z	00 11 33 00 19 00 00 30	15.1S, 75.6W, h=33, H=00 02 08.6 M=4.7 (Tul)
8	eP iS e eL	Z' N N Z	00 40 56 00 47 15 00 50 25 00 53	4.4S, 105.5W, h=33, H=00 33 13.8 M=5.2 (Tul)
8	e(P)	Z'	02 38 45	
8	eL	Z	08 45	20.1S, 168.6W, h=33, H=07 48 44.7 M=4.7 (Tul)
8	eP eL	Z' Z	21 26 11 21 52	52.0N, 174.9E, h=33, H=21 15 56.0 M=4.7 (Tul)
9	eL	Z	02 06	33.4N, 47.2E, h=33, H=01 11 02.1 M=5.0 (Tul)
9	iP	Z'	02 27 02	45.8N, 126.7E, h=130, H=02 14 47.6
9	eL	Z	06 05	
9	iP	Z'	09 34 36	35.8N, 140.3E, h=33, H=09 21 30.8
9	iP eL	Z' Z	17 06 21 17 12	

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12	iP eS eL	Z' E Z	19 42 31 19 50 26 20 02	51.5N, 178.4W, h=57, H=19 32 38.0 M=4.8 (Tul)
13	iP ipP	Z Z'	09 07 16 09 07 37	42.0N, 141.9E, h=61, H=08 54 39.1
13	eL	Z	22 40	56.9S, 29.0W, h=33, H=21 47 50.7 M=4.7 (Tul)
14	eP e(S) eL	Z' N Z	01 43 56 01 46 52 01 49	
14	eL	Z	08 13	26.5S, 176.2E, h=33, H=07 23 50.3 M=4.5 (Tul)
14	iP eSKS eL	Z' N Z	08 01 07 08 11 55 08 31	35.7N, 104.8E, h=61, H=07 48 05.5 M=5.2 (Tul)
14	eL	Z	16 32	20.3N, 45.9W, h=33, H=16 11 08.4 M=4.7 (Tul)
14	ePKP eL	Z' Z	22 18 30 23 03	0.3S, 123.0E, h=92, H=21 59 16.1 M=5.6 (Tul)
15	iP ipP eS eL	Z' Z' NE Z	16 03 45.2 16 03 55 16 13 40 16 32	38.3S, 73.2W, h=33, H=15 51 57.6 M=5.0 (Tul)
15	iP ipP	Z' Z'	16 21 15.7 16 21 22	38.4S, 73.6W, h=33, H=16 09 26.9
15	iP eS eL	Z' NE Z	23 33 44.0 23 40 30 23 48	8.7S, 79.8W, h=45, H=23 25 15.7 M=5.9 (Tul)
16	e(P)	Z'	05 49 04	
16	eP	Z'	06 46 41	1.0S, 78.6W, h=33, H=06 39 08.2
16	iP iS eSS iG eL eP'P'	Z' E E E Z Z'	07 29 42.2 07 38 52 07 43 20 07 49 00 07 52 40 07 57 57	32.3S, 111.1W, h=43, H=07 18 37.3 M=6.4 (Tul)

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16	ePKP	Z'	21 29 12	13.5N, 93.2E, h=33, H=21 10 01.8
	ePP	Z	21 31 23	M=6.6 (Tul)
	iSKP	Z'	21 32 34.6	
	iPKS	E'	21 32 38.6	
	eSS	E	21 48 50	
	eL	Z	22 13	
17	eL	N	10 04 40	
17	iP	Z'	11 11 46.6	16.3N, 98.2W, h=12, H=11 07 15.4
	eS	N	11 15 30	M=4.9 (Tul)
	eL	Z	11 17	
	e(Lg)	E'	11 18 30	
17	iSKP	Z'	14 41 53	2.8N, 121.7E, h=609, H=14 21 30.6
17	iP	Z'	21 08 16.0	
	iS	Z'E'	21 08 38.2	
18	ePKP	Z'	07 02 22	0.2S, 125.1E, h=56, H=06 43 08.3
	eL	Z	07 47	M=5.4 (Tul)
18	iP	Z'	07 47 05.7	
19	eP	Z'	10 27 15	50.0S, 114.3W, h=33, H=10 14 29.4
	eL	E	10 37 50	M=5.1 (Tul)
	eL	Z	10 57	
19	iP	Z'	14 37 17.4	6.7N, 73.0W, h=135, H=14 30 29.1
20	iP	Z'	07 05 08.0	55.6N, 158.8E, h=33, H=06 54 04.1
	eL	E	07 31	
20	eP	Z'	07 43 43	56.2N, 159.3E, h=33, H=07 32 42.9
	eL	Z	08 13	M=5.0 (Tul)
20	i(P)	Z'	09 15 08.8	
20	eL	Z	11 05	6.1S, 154.5E, h=69, H=10 11 11.2
				M=4.8 (Tul)
22	eP	Z'	01 34 54	14.3N, 92.7W, h=33, H=01 30 02.5
	eS	E'	01 38 48	M=3.9 (Tul)
	eL	Z	01 44	
22	i(P)	Z'	03 35 53.2	
22	iP	Z'	07 01 07.2	1.6S, 77.1W, h=147, H=06 53 34.5
22	eL	Z	21 21	(30.2S, 178.6W, h=298, H=20 33 25.6)
				(M=5.6 (Tul))
23	iP	Z	00 39 30.0	15.1S, 75.3W, h=33, H=00 30 04.5
	iS	N	00 47 08	M=5.6 (Tul)
	eL	Z	00 57 30	

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23	iP Z	Z'	00 54 14.0	15.0S, 75.7W, h=40, H=00 44 51.2
23	iP	Z'	05 55 42.8	
23	e(P)	Z'	13 17 40	
24	iP	Z'	07 39 13	11.0N, 62.6W, h=19, H=07 31 46.5
24	eP	Z'	16 29 23	9.8N, 62.6W, h=33, H=16 19 44.9
	i(pP)	Z'	16 29 30	M=5.6 (Tul)
	eL	Z	16 41	
25	eL	Z	10 51	10.6N, 125.2E, h=47, H=09 51 22.8 M=5.1 (Tul)
26	ePP	Z'	05 47 51	39.8N, 177.2E, h=14, H=05 29 30.2
	eL	Z	06 18	M=5.5 (Tul)
26	eP	Z'	10 54 42	
	iS	E	10 56 31.6	
26	eP	Z'	16 12 15	23.8S, 175.8W, h=19, H=15 58 46.2
	eL	N	16 38	
27	ePKP	Z'	07 11 12	25.1N, 122.9E, h=148, H=06 52 57.8
	eL	E	07 43	
27	eL	N	13 11	14.9N, 119.9E, h=35, H=02 07 12.7
27	ePS	N	17 18 12	12.2N, 143.8E, h=33, H=16 50 27.7
	eSS	N	17 24 10	(M=5.5 (Tul))
	eL	N	17 35	
28	eSS	N	04 09 03	12.1N, 143.7E, h=33, H=02 35 48.8
	eL	N	03 21	(M=5.6 (Tul))
28	eL	N	05 52	22.4S, 10.5W, h=33, H=05 02 36.1
28	eSKP	Z'	15 48 31	9.9N, 93.4E, h=53, H=15 25 58.7
28	eL	N	19 22	
28	iP	Z'	20 08 08.6	
29	eP	Z'	09 17 12	22.3S, 175.9W, h=33, H=09 03 51.1
	eSKS	E	09 27 40	
	eS	N	09 28 25	
	eSS	N	09 34 45	
	eL	N	09 49	
29	eSKS	E	19 31 16	17.3S, 168.5E, h=33, H=19 06 37.6
	ePS	E	19 34 12	M=5.7 (Tul)
	eSS	NE	19 39 55	
	eL	N	19 50	

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30	iP	Z'	21 55 39.8	17.4N, 99.6W, h=51, H=21 51 22.9
	iS	N	21 59 16	M=5.5 (Tul)
	eL	Z	22 00	
30	eP	Z'	23 55 11	34.4N, 116.8W, h=33, H=23 51 05.7
	eL	N	24 00 20	(M=3.9 (Tul))

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1	eP	Z'	00 39 53	34.3N, 116.9W, h=33, H=00 35 50.1
	e(S)	Z'	00 44 54	
	eL	N	00 45 00	
1	iP	Z'	01 59 37.3	52.4N, 170.1W, h=38, H=01 50 20.4
	eS	E	02 07 09	M=4.9(Tul)
	eL	Z	02 16	
1	e(P)	Z'	02 13 19	
1	e(SKS)	Z'N	04 41 07	29.7S, 177.7W, h=52, H=04 16 59.6
	eL	Z	05 20	M=4.7(Tul)
1	e(P)	Z'	05 42 05	
1	e(L)	N	10 09	
1	iP	Z'	13 43 32.0	30.8S, 71.3W, h=68, H=13 32 24.8
1	iP	Z'	21 15 09.6	17.7S, 178.7W, h=620, H=21 05 51.8
2	eP	Z'	00 45 45	34.3N, 117.0W, h=33, H=00 41 39.7
	e(L)	N	00 51 12	
2	e(PS)	E	05 59 12	9.9S, 159.9E, h=34, H=05 30 53.8
	eL	E	06 21	M=5.3(Tul)
3	e(P)	Z'	22 13 03	
4	eP	Z'	03 35 18	10.1N, 103.6W, h=33, H=03 29 40.8
	eS	N	03 39 56	M=5.0(Tul)
	eL	N	03 41 30	
4	iP	Z'	06 28 31.0	39.6N, 141.0E, h=77, H=06 15 35.6
	ipP	Z'	06 28 43.3	
4	iP	Z'	07 33 08.3	21.8S, 65.6W, h=300, H=07 23 04.2
	iS	E'	07 41 19.5	M=5.3(Tul)
	epS	E	07 42 33	
	esS	E	07 43 19	
	eL	N	07 50	
	i(pP'P')	Z'	08 03 23.3	Possibly P of another shock
4	e(P)	Z'	08 17 21	
4	iP	Z'	08 42 52.2	
4	e	E	11 03 45	
	eL	N	11 23	

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4	eSKS	NE	17 03 36	16.5S, 172.8W, h=33, H=16 40 06.0
	eSS	E	17 09 54	M=5.3(Tul)
	eL	N	17 17	
4	iP	Z'	17 51 59.0	39.8N, 104.7W, h=33, H=17 49 59.4
	iPg	Z'	17 52 28.0	
	eS	E'	17 53 25	
	eSg	E'	17 54 15	
5	eL	E	01 21	
5	eSS	E	01 50 10	10.9S, 161.6E, h=33, H=01 16 06.3
	eL	E	02 03	M=5.1(Tul)
5	i(P)	Z	05 21 41	
5	iP	Z'	11 46 51.6	10.3S, 77.9W, h=50, H=11 38 10.6
	e	N	11 52 17	M=4.7(Tul)
	eL	N	12 02	
5	iP	Z'	13 49 59.0	39.9N, 104.6W, h=33, H=13 48 00.4
	iPg	Z'	13 50 28.8	M=4.0(Tul)
	eSg	NE'	13 52 15	
	eL	N	13 52 25	
6	iP	Z'	03 55 44.7	20.7S, 71.9W, h=60, H=03 45 37.4
6	eP	Z'	04 15 43	49.0N, 154.3E, h=85, H=04 04 09.8
6	e(P)	Z'	05 51 21	
6	iP	Z'	06 56 42.6	45.6S, 73.4W, h=33, H=06 44 17.0
	eL	Z	07 25	M=4.5(Tul)
6	iP	Z'	09 03 26.5	53.5N, 153.5E, h=480, H=08 52 46.8
7	eL	Z	10 33	38.0N, 106.3E, h=33, H=09 36 01.5
				M=4.7(Tul)
7	eP	Z'	14 16 26	29.2N, 139.2E, h=411, H=14 03 37.0
	epP	Z	14 17 56	M=6.9(Tul)
	esP	Z	14 18 50	
	ePP	Z'	14 20 24	
	eSKS	NZ	14 26 16	
	iS	N	14 27 10	
	ePS	NZ	14 28 36	
	e	N	14 29 22	
	eL	Z	14 44	
8	iP	Z'	01 51 42.4	62.6N, 151.6W, h=33, H=01 43 43.8
8	iP	Z'	18 11 07.2	23.6S, 69.4W, h=100, H=18 00 41.1
	epP	Z'	18 11 30	
	esP	Z'	18 11 40	

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8	iP	Z'	18 31 23.8	15.2S, 173.7W, h=33, H=18 18 29.1
	i(pP)	Z'	18 31 36.5	M=6.3(Tul)
	iSKS	NEZ	18 41 55	
	iS	E	18 42 11	
	eSS	E	18 48 12	
	eL	Z	18 59	
8	eL	Z	20 35	
8	iP	Z'	21 37 26.4	25.8S, 63.4W, h=620, H=21 27 22.2
	ipP	Z	21 39 27	M=7.4(Tul)
	iS	NE	21 45 42	
	isS	N	21 49 14	
	eL	Z	21 56	
	eP'P'	Z'	22 05 30	
	eSKPP'	Z'	22 07 56	
8	iP	Z'	23 04 51.0	50.5N, 176.8W, h=33, H=22 55 01.2
	eS	N	23 12 52	M=5.5(Tul)
	eP'P'	Z'	23 34 44	
9	iP	Z'	03 30 53.7	
9	e(P)	Z'	05 41 37	
9	eL	Z	21 37	17.7S, 173.6W, h=60, H=20 54 13.7
				M=5.2(Tul)
10	ePKP1	Z'	05 16 17	28.3S, 62.7E, h=33, H=04 56 19.7
	iPKP2	Z'	05 16 57.6	M=5.6(Tul)
	e	Z'	05 20 34	
	eSS	N	05 47 16	
	eL	Z	06 11 30	
10	eL	Z	07 01	8.4S, 157.4E, h=39, H=06 11 56.2
				M=5.2(Tul)
10	e(S)	N	17 21 08	27.2S, 176.8W, h=88, H=16 56 04.5
	eSS	N	17 27 50	M=5.4(Tul)
	eL	Z	17 42	
10	iPKP	Z'	23 23 59.0	9.0S, 108.6E, h=193, H=23 04 42.0
11	iPKP1	Z'	02 53 53.0	48.9S, 124.6E, h=33, H=02 34 09.6
	iPKP2	Z'	02 54 00.0	
12	ePP	Z'	10 27 58	4.8S, 153.8E, h=94, H=10 08 48.5
	ePP	Z	10 28 10	M=6.6(Tul)
	eSKS	E	10 33 44	
	ePS	EZ	10 37 00	
	iPKKP	Z'	10 38 17.0	
	i	Z'	10 38 47	
	eSS	E	10 43 12	
	eL	Z	10 59	

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12	eL	Z	14 55	60.3S, 25.9W, h=33, H=13 56 32.4 M=4.7(Tul)
12	ePKP	Z'	23 15 48	4.6N, 96.5E, h=138, H=22 56 45.8
	e	Z'	23 15 56	M=5.6(Tul)
	eSKP	Z'	23 19 24	
	eL	Z	24 07	
13	eL	Z	01 35	7.2N, 93.1E, h=33, H=00 25 02.5 M=4.8(Tul)
13	iP	Z'	04 29 13.2	63.3N, 149.7W, h=47, H=04 21 21.2
	i	Z'	04 29 19.0	M=5.4(Tul)
	eL	Z	04 44	
13	e(P)	Z'	07 06 38	
13	e(PKP)	Z'	08 31 21	4.7S, 153.8E, h=112, H=08 13 34.4
13	iP	Z'	15 05 04.3	61.4N, 147.2W, h=69, H=14 57 27.9
	eS	E	15 11 48	M=5.4(Tul)
	eL	Z	15 19	
	eLg	E'	15 19 20	
13	eL	Z	23 31	35.2N, 28.3E, h=39, H=22 45 28.4 M=4.6(Tul)
14	eL	Z	17 48	50.3N, 90.6N, h=33, H=16 52 49.8 M=4.6(Tul)
14	iP	Z'	19 50 10.4	
15	iP	Z'	06 39 04.0	40.7N, 117.5W, h=33, H=06 34 58.6
	e(L)	Z	06 45 52	M=4.0(Tul)
15	eL	Z	11 24	
16	iP	Z'	03 51 06.8	
16	iP	Z'	22 25 53.7	
	e(S)	E'	22 29 36	
17	ePKP	Z'	11 18 36	2.1N, 122.9E, h=393, H=11 00 16.0
	epPKP	Z'	11 20 23	M=6.0(Tul)
	ePP	Z'	11 20 42	
	ePPS	E	11 32 25	
	eL	Z	11 52	
17	eL	Z	18 19	30.8N, 106.1E, h=33, H=17 25 40.8 M=5.4(Tul)
17	eL	Z	20 08	
18	eL	Z	08 10	

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18	eL	Z	10 41	
18	eL	Z	11 25	28.3S, 178.2W, h=214, H=10 33 58.4 M=5.0(Tul)
19	eSKS	E	13 21 00	4.7S, 154.0E, h=98, H=12 56 19.7
	e(SKKS)	E	13 22 10	M=5.8(Tul)
	eSP	EZ	13 24 32	
	eL	Z	13 47	
20	eL	Z	09 19	20.0S, 174.1W, h=33, H=08 32 37.2 M=4.8(Tul)
20	eL	Z	19 21	61.8S, 161.1E, h=29, H=18 20 55.8 M=4.9(Tul)
21	iPKP	Z'	01 03 45.7	9.0S, 112.4E, h=64, H=00 44 19.7
	ePP	Z	01 06 52	M=6.4(Tul)
	eSKKS	N	01 13 45	
	eL	Z	01 53	
21	iP	Z'	06 37 00.0	52.5N, 168.7W, h=33, H=06 27 49.1
	eS	E	06 44 24	M=5.3(Tul)
	eL	Z	06 49	
21	iP	Z'	08 51 58.8	52.4N, 168.5W, h=33, H=08 42 48.3
	iS	N	08 59 24	M=6.7(Tul)
21	iP	Z'	08 59 22	52.8N, 168.2W, h=33, H=08 50 08.2
21	iP	Z'	09 09 52.0	52.4N, 168.5W, h=33, H=09 00 41.4
21	iP	Z'	09 19 11.6	52.5N, 168.5W, h=33, H=09 10 01.6
21	iP	Z'	09 45 53.8	42.4N, 142.3E, h=27, H=09 33 15.5
21	iP	Z'	09 53 03.8	22.8S, 66.5W, h=200, H=09 42 46.0
	eS	E'	10 01 28	
21	iP	Z'	21 35 18.6	0.9S, 80.9W, h=33, H=21 27 51.6
	iS	E	21 41 22	M=5.3(Tul)
22	e	Z'	01 09 45	22.0S, 170.1E, h=33, H=00 52 23.4
	e(PKP)	Z	01 10 00	M=6.8(Tul)
	eSKS	E	01 17 12	
	ePS	EZ	01 20 06	
	eSS	E	01 26 14	
	eSSS	E	01 30 00	
	eL	Z	01 42	
22	iPKP	Z'	02 19 17.0	9.2S, 112.4E, h=69, H=01 59 50.3
22	iP	Z'	15 29 41.0	52.5N, 168.8W, h=47, H=15 20 31.0
	iS	E	15 37 02	M=6.4(Tul)
	eL	Z	15 41	

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23	eL	Z	11 21	15.3N, 121.7E, h=52, H=10 21 55.3 M=4.8(Tul)
23	eL	Z	11 51	
24	eL	Z	01 25	59.1S, 26.0W, h=33, H=00 23 53.1 M=4.6(Tul)
24	eL	Z	11 17	
24	e eL	N Z	11 31 50 11 44	73.6N, 57.5E, h=0, H=11 11 42.0 M=5.5(Tul)
24	eL	Z	12 32	22.0S, 170.1E, h=33, H=11 40 46.7 M=5.0(Tul)
24	eL	N	13 24	
24	iP ipP	Z' Z'	17 51 30.0 17 51 51.0	8.4S, 78.7W, h=80, H=17 43 05.3
24	eL	Z	23 14	
25	iP eS	Z' E	12 21 06.8 12 30 20	36.2S, 100.2W, h=33, H=12 09 45.6 M=5.0(Tul)
25	eL	Z	14 10	
26	iP	Z'	01 23 38.7	16.6N, 99.2W, h=33, H=01 19 10.2
26	iP	Z'	05 37 46.8	52.5N, 168.4W, h=33, H=05 28 36.7
26	iP iS	Z' E'	06 19 52.0 06 25 26.6	12.8N, 60.9W, h=32, H=06 12 26.5
26	iP eL	Z' Z	09 08 25.8 09 30	39.3N, 10.6W, h=19, H=08 58 11.1 M=5.1(Tul)
26	iP iS e eL eP'P'	Z' EE' E' Z Z'	22 35 52.2 22 44 32 22 45 43 22 56 23 04 50	53.9N, 168.7E, h=33, H=22 25 15.5 M=6.5(Tul)
26	iP eS e eP'P'	Z' E' E' Z'	23 56 51.0 24 05 29 24 06 43 24 25 41	54.0N, 168.8E, h=33, H=23 46 14.7 M=5.6(Tul)
27	eL	Z	05 04	14.8S, 173.2W, h=54, H=04 13 54.7 M=4.6(Tul)
27	iP i(Pp)	Z' Z'	11 24 45.8 11 25 13.5	28.6S, 67.4W, h=33, H=11 13 38.2

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27	eL	Z	14 56	4.9S, 145.1E, h=35, H=14 02 02.1 M=5.3(Tul)
28	e(Lg)	Z'	10 10 55	48.4N, 113.9W, h=33, H=10 01 23.6
28	eP eL	Z' Z	14 55 56 15 17	53.7N, 163.7W, h=33, H=14 47 08.1 M=4.4(Tul)
29	ePKP eL	Z' Z	04 31 08 05 16	2.4N, 127.1E, h=33, H=04 12 09.0 M=4.9(Tul)
29	eL	Z	09 07	23.9N, 65.2E, h=33, H=08 04 25.7 M=5.4(Tul)
29	iP iS eL eP'P'	Z' N Z Z'	10 51 12.8 10 59 28 11 04 11 20 39	20.0S, 69.9W, h=46, H=10 41 04.1 M=6.2(Tul)
29	ePP eSKS e(S) eSP eSS eL	Z NE N Z E Z	15 05 28 15 12 12 15 13 18 15 14 50 15 20 16 15 38	31.2S, 177.9W, h=43, H=14 47 41.4 M=6.3(Tul)
29	eL	Z	19 08	31.6S, 177.8W, h=33, H=18 13 59.1 M=5.5(Tul)
29	eL	Z	20 32	
30	e(P) e(S) eL	Z' N Z	02 30 05 02 33 37 02 36	
30	eL	Z	04 23	
30	iP	Z'	07 15 24.0	
30	eSKS eSP eL	E EZ Z	18 41 10 18 44 30 19 07	4.7S, 153.7E, h=116, H=18 16 21.4 M=6.2(Tul)
31	eP	Z'	08 11 30	52.5N, 160.8E, h=51, H=08 00 23.8
31	eL	Z	12 28	0.1S, 99.3E, h=33, H=11 00 59.5 M=5.5(Tul)
31	eL	Z	20 30	22.7S, 171.4E, h=39, H=19 40 10.5 M=5.5(Tul)
31	iP e(S) eL	Z' E' Z	20 54 34.2 21 01 45 21 03	47.1N, 122.0W, h=33, H=20 49 35.3 M=4.3(Tul)