

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

PRELIMINARY DETERMINATION OF EPICENTERS  
MONTHLY LISTING

JANUARY - MARCH 1990

NATIONAL EARTHQUAKE INFORMATION CENTER

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1990



# PRELIMINARY DETERMINATION OF EPICENTERS

## MONTHLY LISTING

### U.S. DEPARTMENT OF THE INTERIOR / GEOLOGICAL SURVEY National Earthquake Information Center

JANUARY 1990

K E Y	DAY	ORIGIN TIME UTC HR MN SEC	GEOGRAPHIC COORDINATES LAT LONG	DEPTH	MAGNITUDES GS MB Msz	SD	NO. STA USED	REGION, CONTRIBUTED MAGNITUDES AND COMMENTS
	01	00 22 33.5	61.719 N 149.671 W	39			33	SOUTHERN ALASKA. <AGS-P>. ML 2.9 (PMR).
	01	02 47 41.2	36.323 N 26.969 E	145 ?		1.1	6	DODECANESE ISLANDS. MD 3.3 (ATH).
	01	03 25 58.2	44.38 N 7.31 E	10 G		0.0	4	NORTHERN ITALY. ML 1.6 (GEN).
	01	06 34 04.0	41.714 N 19.431 E	10 G		1.2	18	ALBANIA. ML 3.3 (SKO).
o	01	07 49 35.5	21.772 S 179.361 W	600 D	5.2	1.1	143	FIJI ISLANDS REGION
	01	09 03 12.8	36.417 N 140.568 E	68	4.8	1.2	35	NEAR EAST COAST OF HONSHU, JAPAN
	01	09 30 26.7	40.40 N 28.65 E	10 G		1.1	4	TURKEY
	01	09 38 15.3	23.616 S 179.922 W	541 ?	4.8	1.0	18	SOUTH OF FIJI ISLANDS
	01	10 33 44.0	16.302 N 63.417 W	33 N		0.9	7	LEEWARD ISLANDS. ML 3.6 (FDF).
	01	13 22 47.8	36.978 N 121.810 W	15			14	CENTRAL CALIFORNIA. <BRK>. ML 2.6 (BRK).
	01	14 10 03.0	9.412 S 107.260 E	32 D	4.7	1.1	24	SOUTH OF JAVA
o	01	14 49 00.6	10.507 S 161.387 E	37 D	5.2 4.8	0.9	90	SOLOMON ISLANDS
o	01	16 07 27.3	7.183 S 125.242 E	527	5.2	1.1	97	BANDA SEA
	01	16 20 34.3	42.577 N 12.599 E	10 G		1.0	8	CENTRAL ITALY
	01	16 38 24.4	46.801 N 9.738 E	5 G		1.3	48	SWITZERLAND. ML 3.1 (FUR), 3.1 (GRF), 3.0 (LDG).
	01	17 13 46.7	50.37 N 173.77 E	33 N	4.6	0.8	11	ALEUTIAN ISLANDS REGION
o	01	17 21 38.8	19.151 S 167.313 E	10 G	5.2 4.7	1.1	146	VANUATU ISLANDS REGION
	01	18 03 19.2	6.830 N 72.995 W	158	5.3	1.1	123	NORTHERN COLOMBIA. Felt in Tachira, Venezuela.
	01	18 19 32.1	45.037 N 7.302 E	10 G		0.7	5	NORTHERN ITALY. ML 2.3 (GEN).
	01	18 25 42.6	43.90 N 8.86 E	10 G		0.5	7	CORSICA
	01	18 36 21.9	35.12 N 50.72 E	10 G		1.2	5	IRAN
	01	18 46 01.2	44.42 N 8.11 E	10 G		0.5	4	NORTHERN ITALY. ML 1.7 (GEN).
	01	19 04 20.3	39.927 N 29.155 E	5 G		1.0	6	TURKEY
	01	19 31 07.3	33.22 S 72.16 W	10 G		0.5	7	OFF COAST OF CENTRAL CHILE
	01	19 50 17.1	44.32 N 7.45 E	10 G		0.2	4	NORTHERN ITALY. ML 1.7 (GEN).
	01	22 59 43.3	32.560 N 115.800 W	4			6	CALIFORNIA-MEXICO BORDER REGION. <PAS-P>. ML 3.2 (PAS).
	01	23 17 18.1	38.313 N 118.670 W	11			21	CALIFORNIA-NEVADA BORDER REGION. <BRK>. ML 3.1 (BRK).
	01	23 29 53.7	51.57 N 178.30 W	33 N	4.4	1.4	12	ANDREANOF ISLANDS, ALEUTIAN IS.
o	02	00 15 03.1	44.37 N 7.17 E	10 G		0.0	4	NORTHERN ITALY. ML 1.6 (GEN).
	02	01 25 06.5	8.344 N 127.441 E	41 D	5.4 4.9	1.1	98	PHILIPPINE ISLANDS REGION
	02	01 36 33.2	38.808 S 175.218 E	249 *		0.3	20	NORTH ISLAND, NEW ZEALAND
	02	02 19 21.4	21.771 S 13.126 W	10 G	4.7	1.0	27	SOUTH ATLANTIC RIDGE
	02	02 27 11.2	11.70 S 122.50 E	33 N	4.1	1.3	8	SOUTH OF TIMOR
	02	04 10 22.6	44.66 N 7.03 E	10 G		0.5	4	NORTHERN ITALY. ML 1.6 (GEN).
	02	04 33 54.6	3.446 S 146.320 E	33 N	4.6 4.3	1.3	9	BISMARCK SEA
	02	06 26 52.3	23.059 N 121.372 E	10 G		0.5	6	TAIWAN
	02	06 44 17.5	25.08 S 70.00 W	33 N		1.4	5	NEAR COAST OF NORTHERN CHILE
	02	07 02 47.4	19.109 S 169.323 E	243	4.7	1.0	61	VANUATU ISLANDS
	02	07 06 30.8	43.067 N 0.674 W	10 G		0.2	8	PYRENEES MD 1.0 (STR).
	02	07 36 15.8	10.718 S 166.073 E	140 D	4.7	0.9	42	SANTA CRUZ ISLANDS
	02	08 01 11.7	37.048 N 121.793 W	10			13	CENTRAL CALIFORNIA. <BRK>. ML 2.5 (BRK).
	02	08 22 56.5	3.433 S 145.947 E	33 N	5.1	0.7	14	NEAR N COAST OF PAPUA NEW GUINEA
	02	08 23 09.3	40.233 N 27.024 E	10 G		0.6	5	TURKEY
	02	09 50 53.1	33.650 N 116.770 W	13			20	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.4 (PAS). Felt (IV) at Anzo and Winchester. Felt (III) at Hemet, Indio and North Palm Springs.
	02	11 41 48.5	63.087 N 150.464 W	109			36	CENTRAL ALASKA. <AGS-P>.
	02	12 13 47.2	61.496 N 146.331 W	32			27	SOUTHERN ALASKA. <AGS-P>.
	02	12 14 10.9	31.23 S 68.76 W	10 G		0.4	4	SAN JUAN PROVINCE, ARGENTINA
	02	12 54 32.2	61.816 N 150.867 W	55			32	SOUTHERN ALASKA. <AGS-P>.
	02	13 23 41.9	35.91 N 146.46 E	33 N		0.7	8	OFF EAST COAST OF HONSHU, JAPAN
	02	13 50 43.7	42.888 N 0.771 W	10 G		0.1	9	PYRENEES. MD 1.2 (STR).
	02	15 20 30.2	7.991 N 127.305 E	69 ?	4.4	0.9	28	PHILIPPINE ISLANDS REGION
	02	15 34 16.9	2.849 S 128.687 E	33 N	4.7	1.2	20	CERAM SEA
	02	16 26 37.7	43.420 N 146.063 E	73 *	4.6	0.8	23	KURIL ISLANDS
	02	16 44 32.6	44.288 N 6.989 E	10 G		0.4	7	FRANCE ML 1.9 (GEN).
	02	17 45 25.1	36.965 N 114.921 W	5 G		0.7	6	SOUTHERN NEVADA. ML 3.1 (NEIS).
	02	17 50 29.1	38.945 N 27.857 E	10 G		1.4	8	TURKEY

	02	18 50 19.07	48.01 N	16.95 E	10 G	1.7	4	AUSTRIA ML 2.1 (VKA). Felt (IV) at Nickelsdorf.
a	02	20 21 32.6	13.408 N	144.439 E	136 G 5.7	1.0	284	MARIANA ISLANDS. Felt (IV) in the Agana-Santo Rito-Mimitz Hill-Apra Harbor area and (III) throughout much of the other parts of the island. Depth from broadband displacement seismograms.
	02	20 35 41.7	38.607 N	24.194 E	10 G 4.6	1.2	105	AEGEAN SEA. ML 4.5 (ATH).
	02	20 43 12.97	44.35 N	7.14 E	10 G	0.0	4	NORTHERN ITALY. ML 1.7 (GEN).
	02	20 51 07.9*	33.407 S	72.522 W	10 G 4.7	1.3	21	OFF COAST OF CENTRAL CHILE. Felt (IV) in the Valparaiso area.
	02	21 03 49.9%	38.565 N	23.932 E	10 G	1.1	5	GREECE
o	02	21 38 18.6	2.550 S	127.713 E	34 D 5.4 4.7	1.2	104	CERAM SEA
	02	21 38 24.6	40.606 N	79.002 E	10 G 4.9	1.4	23	SOUTHERN XINJIANG, CHINA
	02	21 46 47.2	36.118 N	27.210 E	5 G	1.0	7	DODECANESE ISLANDS. MD 3.6 (ATH).
	02	22 09 18.4&	46.227 N	111.397 W	1	19	MONTANA. <BUT>. ML 3.7 (BUT).	
	02	22 36 11.0	44.349 N	7.146 E	10 G	0.3	5	NORTHERN ITALY. ML 1.7 (GEN).
	02	22 54 34.7	43.055 N	27.605 E	13	1.3	20	BULGARIA
	02	22 57 52.5%	44.367 N	7.187 E	10 G	0.4	5	NORTHERN ITALY ML 1.7 (GEN).
	02	23 24 34.0	36.596 N	25.651 E	26 4.4	1.1	31	DODECANESE ISLANDS. ML 4.0 (ATH).
	03	00 27 35.6%	44.316 N	7.067 E	10 G	0.2	6	NORTHERN ITALY. ML 1.8 (GEN).
	03	00 43 47.9	6.700 N	126.477 E	107 * 4.7	1.5	35	MINDANAO, PHILIPPINE ISLANDS
	03	01 32 22.27	33.58 N	25.91 E	33 N	1.2	7	EASTERN MEDITERRANEAN SEA. MD 3.9 (ATH).
	03	01 43 40.9	51.380 N	20.825 E	10 G	0.9	7	POLAND. ML 2.8 (KRA), 2.9 (VKA).
	03	01 47 28.3	43.527 N	0.491 W	16	1.1	27	PYRENEES ML 3.4 (LDG). mbLg 3.3 (MDD). Felt (IV) at Artix and (III) in parts of the Lacq oilfield, France.
	03	08 25 06.4	42.243 N	48.303 E	10 D 4.9 4.3	1.4	122	CASPIAN SEA
	03	08 53 38.9*	35.457 N	141.272 E	10 G 4.3	1.1	9	NEAR EAST COAST OF HONSHU, JAPAN
	03	09 40 10.5	38.759 N	22.531 E	10 G	1.3	10	GREECE. ML 3.2 (ATH).
	03	10 58 31.1%	43.884 N	7.120 E	10 G	0.8	8	NEAR SOUTH COAST OF FRANCE
	03	11 07 11.1&	58.820 N	154.831 W	130	33	ALASKA PENINSULA. <AGS-P>.	
	03	11 54 27.4&	33.250 N	116.370 W	9	14	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.4 (PAS). Felt (III) at Indio and Lakeside. Also felt at Ramona, Warner Springs and in the Palm Springs area.	
	03	15 09 09.3%	40.075 N	27.815 E	10 G	0.9	5	TURKEY
	03	15 12 12.27	36.05 N	53.16 E	10 G	1.2	7	IRAN
	03	15 46 21.4*	37.940 S	176.318 E	239 ?	0.3	21	NORTH ISLAND, NEW ZEALAND
	03	16 01 26.3?	6.54 S	152.92 E	33 N 4.1	1.5	7	NEW BRITAIN REGION
	03	18 16 35.6%	41.998 N	14.033 E	10 G	0.5	9	SOUTHERN ITALY
	03	18 58 04.5*	31.813 S	69.734 W	10 G	1.2	10	SAN JUAN PROVINCE, ARGENTINA
	03	19 42 27.07	5.11 S	148.41 E	219 ? 3.8	0.1	5	NEW BRITAIN REGION
	03	21 12 45.87	41.69 N	12.75 E	10 G	0.3	5	SOUTHERN ITALY
	03	21 31 54.17	41.53 N	12.57 E	10 G	0.1	5	SOUTHERN ITALY
	03	21 36 43.07	12.56 S	115.56 E	33 N 4.5	1.3	11	NORTHWEST OF AUSTRALIA
	03	21 52 38.5*	37.837 S	176.195 E	308 * 3.1	0.6	20	NORTH ISLAND, NEW ZEALAND
	03	21 52 46.57	32.63 N	121.38 E	10 G	1.6	5	EASTERN CHINA
	04	01 13 40.4	44.316 N	7.044 E	10 G	0.5	8	NORTHERN ITALY. ML 1.9 (GEN).
	04	02 30 50.1	45.949 N	7.180 E	10 G	1.5	28	NORTHERN ITALY. ML 2.6 (LDG).
	04	03 06 23.5?	3.63 S	142.32 E	226 ? 4.0	1.2	6	NEAR N COAST OF PAPUA NEW GUINEA
	04	04 09 09.7	36.479 N	82.567 E	10 G 4.5	1.0	20	SOUTHERN XINJIANG, CHINA
	04	05 04 31.4%	39.688 N	16.404 E	10 G	0.5	6	SOUTHERN ITALY
	04	05 10 58.6&	61.188 N	150.880 W	51	28	SOUTHERN ALASKA. <AGS-P>.	
	04	05 26 22.8%	41.669 N	12.766 E	10 G	0.5	5	SOUTHERN ITALY
f	04	05 32 21.0	15.397 S	172.850 W	54 G 6.4 6.4	1.2	411	SAMOA ISLANDS REGION. Ms 6.4 (BRK), 6.3 (PAS). Mo=1.0*10**19 Nm (PPT). Felt at Pago Pago, American Samoa. Depth from broadband displacement seismograms.
	04	06 18 35.4	47.463 N	115.941 W	0 G	0.6	6	MONTANA. CL 2.7 (BUT). Probable rockburst. Felt at Silverton and Wallace, Idaho
	04	07 14 04.0*	34.829 N	26.647 E	10 G	1.5	7	CRETE
	04	09 13 32.6*	31.428 S	68.444 W	105 ?	0.8	8	SAN JUAN PROVINCE, ARGENTINA
	04	11 14 59.4*	6.556 S	153.317 E	33 N 4.3	0.7	6	NEW BRITAIN REGION
	04	12 16 38.3*	36.342 N	141.408 E	55 * 4.4	1.1	23	NEAR EAST COAST OF HONSHU, JAPAN
	04	12 58 13.1*	3.906 S	131.545 E	33 N 4.3	1.5	13	WEST IRIAN REGION
	04	13 05 01.3	24.196 N	121.909 E	30 4.2	1.5	30	TAIWAN
	04	13 20 44.0&	57.790 N	150.543 W	10 G 4.3	47	GULF OF ALASKA. <AGS-P>. ML 4.1 (PMR).	
	04	14 38 40.0	43.950 N	18.042 E	10 G	0.9	15	YUGOSLAVIA. ML 2.9 (KBA), 2.4 (LJU).
	04	18 01 04.4	44.765 N	117.627 W	5 G	0.6	8	OREGON. ML 3.0 (BUT).
	04	18 08 57.0	23.429 N	121.923 E	10 G 4.0	1.1	10	TAIWAN
a	04	18 54 31.5*	41.600 S	85.278 E	10 G 5.0 5.1	0.9	14	SOUTHEAST INDIAN RISE
	04	18 58 14.2*	45.367 N	6.589 E	10 G	0.5	5	FRANCE. ML 2.0 (GEN).
	04	19 41 41.1*	24.605 S	71.273 W	33 N	0.8	7	OFF COAST OF NORTHERN CHILE
	04	20 37 24.97	47.59 N	9.45 E	10 G	0.7	5	GERMANY
	04	20 41 39.7*	47.465 N	9.147 E	10 G	0.9	6	GERMANY
	04	20 44 51.7	47.387 N	9.027 E	5 G	1.3	25	GERMANY. ML 2.9 (LDG), 2.6 (KBA), 2.6 (FUR). MD 2 8 (STR).
	04	20 49 42.6	47.413 N	9.101 E	10 G	1.1	15	GERMANY. ML 3.0 (LDG), 2.9 (FUR), 2.7 (KBA). MD 2 2 (STR).
	04	22 16 52.1	36.140 N	120.112 W	5 G	1.4	10	CENTRAL CALIFORNIA. ML 2.7 (BRK).
o	04	22 24 01.1	3.156 S	148.464 E	33 N 5.1 4.4	1.2	25	BISMARCK SEA
	04	23 20 26.1	47.392 N	9.135 E	10 G	1.3	15	GERMANY. ML 2.7 (LDG). MD 2.1 (STR).
	04	23 23 28.57	51.46 N	173.87 W	33 N 4.5	1.1	19	ANDREANOF ISLANDS, ALEUTIAN IS.
a	04	23 25 57.1	32.381 N	138.821 E	248 5.1	0.9	138	SOUTH OF HONSHU, JAPAN
	05	00 02 18.6	45.803 N	15.509 E	10 G	1.4	13	YUGOSLAVIA. ML 3.0 (KBA).
	05	00 29 50.6	38.413 N	22.144 E	5 G 3.9	1.4	50	GREECE. ML 3.6 (THE), 3.4 (ATH).
	05	00 49 34.8%	36.948 N	5.338 W	10 G	1.1	6	STRAIT OF GIBRALTAR. mbLg 2.5 (MDD).
	05	00 55 17.4	43.416 N	5.415 E	10	0.9	15	NEAR SOUTH COAST OF FRANCE. MD 2.6 (STR).
	05	01 51 01.4	29.411 N	52.120 E	10 G 4.3	1.1	25	SOUTHERN IRAN
	05	01 56 25.87	46.00 N	15.44 E	5 G	0.8	4	YUGOSLAVIA. MD 2.7 (LJU).
	05	02 19 39.17	47.51 N	8.53 E	10 G	1.5	5	SWITZERLAND. ML 2.5 (LDG).
	05	03 37 40.1&	59.250 N	154.884 W	101	6	SOUTHERN ALASKA. <AGS-P>.	
	05	04 02 41.6	39.334 N	20.529 E	6	1.0	31	GREECE-ALBANIA BORDER REGION. ML 3.3 (THE). MD 3.6 (ATH).
	05	04 21 09.5	47.429 N	9.072 E	9	1.3	33	GERMANY. ML 3.3 (FUR), 3.2 (LDG). MD 2.9 (STR).
	05	05 25 13.0	38.663 N	26.155 E	10 G	0.8	7	AEGEAN SEA. MD 3.2 (ATH).
	05	06 39 40.4	7.828 N	127.198 E	33 N 4.0 3.4	0.5	24	PHILIPPINE ISLANDS REGION

05	06	42	10.5*	41.736	N	126.807	W	10	G	4.4	0.4	21	OFF COAST OF NORTHERN CALIFORNIA	
05	06	51	16.8	41.746	N	127.036	W	10	G	4.1 4.6	0.8	54	OFF COAST OF NORTHERN CALIFORNIA	
05	07	07	27.6*	41.842	N	126.885	W	10	G		1.0	10	OFF COAST OF NORTHERN CALIFORNIA	
a	05	07	16	51.7	41.836	N	126.796	W	10	G	4.7 5.1	1.0	90	OFF COAST OF NORTHERN CALIFORNIA. ML 4.4 (BRK).
05	07	22	40.4*	41.771	N	126.694	W	10	G		0.5	32	OFF COAST OF NORTHERN CALIFORNIA	
05	09	36	54.3?	21.24	S	178.35	W	550	?	4.4	0.7	13	FIJI ISLANDS REGION	
05	10	08	16.5	44.570	N	9.182	E	10	G		0.9	17	NORTHERN ITALY. ML 2.5 (GEN).	
a	05	10	10	21.8	8.800	S	106.442	E	29	D	5.3 5.8	1.3	101	SOUTH OF JAVA
05	10	44	51.5*	8.184	N	126.712	E	33	N	4.9	1.1	24	MINDANAO, PHILIPPINE ISLANDS	
05	11	35	39.6	36.006	N	71.203	E	80	*	4.6	1.5	38	AFGHANISTAN-USSR BORDER REGION	
05	11	59	54.9*	12.486	N	57.841	E	10	G	4.4	0.3	12	ARABIAN SEA	
05	12	01	43.7*	59.822	N	73.353	W	10	G	4.0	1.3	10	NORTHERN QUEBEC	
05	12	22	36.1&	61.357	N	151.489	W	75				55	SOUTHERN ALASKA. <AGS-P>.	
05	12	44	31.9	38.653	S	175.679	E	166	*		0.3	23	NORTH ISLAND, NEW ZEALAND	
a	05	13	03	44.3	19.258	S	69.529	W	109		5.0	1.2	77	NORTHERN CHILE. Felt (IV) at Arica, (III) at Iquique and (II) at Toconao.
05	14	01	22.7&	66.824	N	150.345	W	74				6	ALASKA. <AGS-P>.	
05	14	45	27.7*	50.419	N	18.976	E	10	G		0.4	5	POLAND. ML 2.9 (KRA).	
05	15	18	46.2	4.056	S	80.877	W	52	*	5.0 4.3	0.7	27	PERU-ECUADOR BORDER REGION. Felt (V) at Tumbes, Peru.	
05	16	04	48.5	41.554	N	20.017	E	10	G		1.5	8	ALBANIA. ML 2.6 (SKO).	
05	16	35	01.2	47.403	N	9.074	E	10	G		1.5	21	GERMANY. ML 3.0 (LDG), 2.9 (FUR), 2.6 (KBA). MD 2.3 (STR).	
05	16	58	14.3	39.746	N	20.617	E	10	G		0.7	6	GREECE-ALBANIA BORDER REGION	
a	05	18	27	00.1	18.863	N	106.795	W	33	N	5 4 5.9	1.3	155	OFF COAST OF JALISCO, MEXICO. Ms 6.0 (BRK). Mo=3.0*10**18 Nm (PPT).
05	19	58	38.2?	15.72	N	97.26	W	33	N		0.7	6	NEAR COAST OF OAXACA, MEXICO	
05	20	18	39.8&	63.106	N	149.746	W	98				50	CENTRAL ALASKA. <AGS-P>.	
05	20	31	07.1?	36.12	N	144.05	E	33	N	4.3	1.1	7	OFF EAST COAST OF HONSHU, JAPAN	
05	20	37	59.8	39.849	N	23.411	E	10	G		0.6	14	AEGEAN SEA. ML 3.4 (THE). MD 3.4 (ATH).	
05	21	05	40.3?	47.55	N	8.78	E	10	G		1.1	6	SWITZERLAND. ML 2.7 (LDG).	
05	23	56	36.0	21.441	N	145.914	E	79	*	4.9	1.0	36	MARIANA ISLANDS REGION	
06	01	29	24.8&	60.718	N	151.118	W	48				65	KENAI PENINSULA, ALASKA. <AGS-P>. ML 3.9 (PMR).	
06	03	36	15.2&	62.901	N	152.173	W	165				30	CENTRAL ALASKA. <AGS-P>.	
06	03	43	00.5*	8.337	N	126.660	E	33	N	5.1	1.1	16	MINDANAO, PHILIPPINE ISLANDS	
06	04	04	08.8*	14.658	S	72.061	W	10	G		0.6	6	PERU	
06	04	20	17.4	45.345	N	26.986	E	10	G		1.0	13	ROMANIA	
06	04	25	04.0	45.413	N	26.901	E	33	N		1.4	13	ROMANIA	
06	04	47	14.7?	50.99	N	6.84	E	32	?		1.3	5	GERMANY. MD 2.8 (UCC).	
06	05	11	14.6%	15.369	N	92.801	W	33	N		0.9	8	MEXICO-GUATEMALA BORDER REGION	
06	05	35	44.2&	40.520	N	125.762	W	5		4.1 3.8		68	OFF COAST OF NORTHERN CALIFORNIA. <BRK>. ML 4.2 (BRK).	
06	06	01	35.6?	27.96	N	51.95	E	58	?	4.5	0.7	17	PERSIAN GULF	
06	06	36	41.6*	3.121	S	141.124	E	33	N	4.8	1.2	17	PAPUA NEW GUINEA	
06	07	16	53.3?	6.73	S	133.84	E	33	N	4.3	1.4	7	AROE ISLANDS REGION	
06	09	37	17.4&	62.454	N	151.263	W	96				38	CENTRAL ALASKA. <AGS-P>.	
06	12	47	54.2	33.937	S	70.076	W	21			1.2	17	CHILE-ARGENTINA BORDER REGION	
06	12	58	52.9%	30.905	S	117.129	E	10	G		1.4	5	WESTERN AUSTRALIA	
06	13	44	56.5?	35.39	N	22.27	E	50	?	3.8	1.0	10	MEDITERRANEAN SEA	
06	15	34	11.2	44.548	N	7.257	E	10	G		0.3	6	NORTHERN ITALY. ML 2.0 (GEN).	
06	16	30	47.4*	16.865	N	61.929	W	10	G		0.3	7	LEEWARD ISLANDS. ML 2.8 (FDF).	
06	16	36	05.6	45.841	N	11.904	E	10	G		0.9	10	NORTHERN ITALY. ML 3.2 (KBA).	
06	18	25	04.8%	33.574	S	71.132	W	33	N		0.8	7	NEAR COAST OF CENTRAL CHILE	
06	18	25	59.0	53.015	N	152.684	E	555	*	4.3	0.6	45	SEA OF OKHOTSK	
06	19	10	49.8	45.035	N	7.567	E	10	G		0.7	16	NORTHERN ITALY. ML 2.6 (GEN).	
06	20	44	35.9	50.411	N	19.058	E	10	G		1.2	16	POLAND. ML 4.0 (GRF), 3.6 (KBA), 3.6 (KRA), 3.4 (VKA).	
06	20	48	23.1?	42.24	N	8.99	E	10	G		0.6	12	CORSICA. ML 2.8 (LDG).	
06	21	12	20.7%	39.634	N	22.894	E	10	G		0.2	6	GREECE	
06	21	40	51.3?	46.31	N	2.56	E	10	G		0.4	4	FRANCE. ML 1.7 (LDG).	
06	21	42	03.1*	34.546	N	26.184	E	17	*	4.2	1.1	23	CRETE. MD 4.1 (ATH).	
f	06	21	44	56.2	10.681	S	92.987	E	15	G	5.7 5.5	1.1	237	SOUTH INDIAN OCEAN. Two events about 1.5 seconds apart. Depth from broadband displacement seismograms, based on first event.
06	23	15	13	9	55.925	N	4.383	W	10	G		0.8	12	UNITED KINGDOM. ML 2.2 (BGS). Felt (IV) at Strathblane, Milngavie and Bearsden near Glasgow.
06	23	22	31.9*	31.523	S	68.517	W	109	*		1.3	9	SAN JUAN PROVINCE, ARGENTINA	
07	01	31	36.3%	61.341	N	3.422	E	10	G		0.4	7	NORWEGIAN SEA. MD 2.3 (BER).	
07	01	53	20.3%	41.861	N	12.783	E	10	G		0.6	5	SOUTHERN ITALY	
07	02	03	25.4	40.293	N	19.945	E	6			1.0	35	ALBANIA. ML 3.3 (THE). MD 3.6 (ATH).	
07	03	20	05.7*	46.455	N	0.867	W	10	G		1.4	5	FRANCE. ML 2.6 (LDG).	
07	04	57	22.2%	27.382	S	117.643	E	10	G		1.3	5	WESTERN AUSTRALIA	
07	05	31	52.9*	1.406	N	126.473	E	89	?	4.7	1.0	19	MOLUCCA PASSAGE	
07	06	50	23.1	41.321	N	49.452	E	33	N	4.6	0.8	11	CASPIAN SEA	
07	07	26	13.0	39.940	N	77.558	E	10	G	4.1	0.9	15	SOUTHERN XINJIANG, CHINA	
07	07	45	44.7	8.170	N	126.801	E	28	D	5.0 4.3	1.2	64	MINDANAO, PHILIPPINE ISLANDS	
07	08	19	04.4*	17.885	S	70.625	W	67	*	4.7	1.5	16	NEAR COAST OF PERU. Felt (III) at Arequipa.	
a	07	09	06	43.4	15.947	S	74.245	W	48	D	5 9 5.3	1.0	303	NEAR COAST OF PERU. Felt (II) at Arequipa.
07	11	01	49.7	64.904	N	148.973	W	20	G		0.7	15	CENTRAL ALASKA. Foreshock.	
07	11	02	05.6	64.778	N	148.868	W	20	G	4.9 4.6	1.3	77	CENTRAL ALASKA. ML 5.5 (PMR). Felt (V) at Ester, Fairbanks and Monley Hot Springs; (IV) at Anderson, Eielson Air Force Base, Nenana and North Pole; (III) at Clear, Delta Junction, Minto and Tanana.	
07	11	23	31.5?	64.85	N	148.91	W	10	G		0.8	4	CENTRAL ALASKA	
07	11	45	42.4*	64.891	N	148.916	W	10	G		1.0	6	CENTRAL ALASKA. ML 3.8 (PMR).	
a	07	13	28	47.4	41.518	N	142.053	E	70	D	5.2	1.1	165	HOKKAIDO, JAPAN REGION. Felt (IV) at Misawa, Honshu.
07	14	05	21.9	11.848	S	166.564	E	164	*	5.1	0.9	76	SANTA CRUZ ISLANDS	
07	16	13	16.7&	32.968	N	80.218	W	5				12	SOUTH CAROLINA. <GLD>. MD 2.1 (GLD).	
07	16	21	23.8*	35.817	N	1.227	E	10	G		1.1	11	ALGERIA. mbLg 3.7 (MDD).	
07	16	43	19.4*	21.744	N	121.245	E	10		4.4 4.1	1.1	29	TAIWAN REGION	
07	17	18	03.9&	61.153	N	149.737	W	34				27	SOUTHERN ALASKA. <AGS-P>.	
07	17	41	13.6&	65.112	N	149.202	W	9				8	ALASKA. <AGS-P>.	
07	19	50	34.2	44.161	N	140.828	E	25	*	4.8 4.8	1.0	50	EASTERN SEA OF JAPAN	
a	07	20	53	29.2	32.159	S	57.447	E	10	G	5.3 4.8	1.3	111	ATLANTIC-INDIAN RISE
07	21	59	33.2	15.428	S	71.442	W	10	G		1.0	8	SOUTHERN PERU	
07	22	20	26.5%	36.867	N	5.260	W	10	G		0.5	5	STRAIT OF GIBRALTAR. mbLg 2.3 (MDD).	

07	23 35 09.1	20.142 N	98.752 E	50 *	4 3	0.7	12	BURMA
08	00 11 30.0	63.080 N	150.661 W	137 *	4 2	0.9	11	CENTRAL ALASKA
08	00 12 32.4*	35.934 N	118.578 W	5 G		1.2	6	CENTRAL CALIFORNIA. ML 2.9 (NEIS).
08	00 41 02.5	31.750 S	68.083 W	10 G		1.2	8	SAN JUAN PROVINCE, ARGENTINA
08	00 48 01.8	37.860 N	72.353 E	33 N	4 8	1.1	65	TAJIK SSR. Felt (III) at Khorog and Dushanbe.
08	02 42 30.4*	34.569 N	26.262 E	69 ?		1.2	15	CRETE. MD 3.7 (ATH).
08	02 42 52.5*	53.621 N	170.326 E	33 N	4.4	0.7	12	NEAR ISLANDS, ALEUTIAN ISLANDS. ML 4.0 (PMR).
08	02 57 32.9?	48.04 N	7.71 E	10 G		0.1	4	FRANCE. ML 1.3 (LDG).
08	04 17 37.1?	18.05 S	172.71 W	33 N	5.0 4.9	1.5	25	TONGA ISLANDS REGION
08	04 47 36.7?	52.60 N	4.16 W	10 G		1.4	5	UNITED KINGDOM
08	08 10 45.5	9.161 N	127.003 E	43 D	5.2 4.2	1.2	51	PHILIPPINE ISLANDS REGION
08	09 25 58.8	36.078 N	27.111 E	10 G		0.9	8	DODECANESE ISLANDS. MD 3.7 (ATH).
08	09 30 44.4&	36.840 N	121.613 W	4		1.7	17	CENTRAL CALIFORNIA. <BRK>. ML 2.7 (BRK). Felt in Monterey County.
08	10 28 44.0	36.045 N	27.220 E	31	4.1	1.4	26	DODECANESE ISLANDS. ML 4.1 (ATH).
08	11 05 47.1	24.368 S	179.105 E	518	5.0	0.9	114	SOUTH OF FIJI ISLANDS
08	12 26 49.9	24.060 S	179.372 E	573 *	5.0	0.8	32	SOUTH OF FIJI ISLANDS
08	12 58 33.3	7.888 N	126.498 E	88 *	5.1	0.9	62	MINDANAO, PHILIPPINE ISLANDS
08	13 23 41.4*	42.565 N	24.047 E	10 G		0.3	6	BULGARIA
08	13 43 42.6	47.428 N	9.114 E	10 G		0.4	7	GERMANY
08	13 49 07.4?	12.46 S	119.46 E	33 N		1.1	6	SOUTH OF SUMBA ISLAND
08	14 30 12.7	36.072 N	27.198 E	10 G		1.0	8	DODECANESE ISLANDS
08	16 17 09.2*	43.910 N	7.795 E	10 G		0.2	6	NEAR SOUTH COAST OF FRANCE. ML 1.8 (GEN).
08	17 33 25.9?	37.56 N	20.72 E	10 G		0.9	9	IONIAN SEA. MD 3.2 (ATH).
08	17 33 36.0?	12.30 S	74.69 W	33 N		0.1	5	PERU
08	17 51 17.5*	36.074 N	27.149 E	10 G		0.7	5	DODECANESE ISLANDS
08	17 56 47.1*	23.295 N	142.494 E	33 N	4.6 3.6	1.2	14	VOLCANO ISLANDS REGION
08	18 04 00.9?	37.74 N	23.13 E	33 N		0.5	4	SOUTHERN GREECE. ML 2.9 (ATH).
o 08	19 06 44.4	13.254 N	143.877 E	141	5.1	1.0	70	SOUTH OF MARIANA ISLANDS. Felt (II) on Guam.
o 08	19 43 06.0?	32.31 S	69.53 W	119 ?		1.0	9	MENDOZA PROVINCE, ARGENTINA
o 08	19 44 34.6	52.038 N	169.446 W	33 N	5.6 5.7	1.2	307	FOX ISLANDS, ALEUTIAN ISLANDS. ML 5.6 (PMR). Ms 5.8 (BRK). 5.3 (PAS). Mo=1.6*10**18 Nm (PPT).
08	20 11 45.2	52.044 N	169.351 W	33 N	5.0	1.2	102	FOX ISLANDS, ALEUTIAN ISLANDS. ML 4.5 (PMR).
08	20 32 00.2	36.119 N	27.213 E	5 G		0.9	9	DODECANESE ISLANDS. MD 3.7 (ATH).
08	21 04 53.0	37.365 N	118.309 W	5 G		0.8	18	CALIFORNIA-NEVADA BORDER REGION. ML 3.3 (NEIS).
08	21 23 08.2?	28.31 N	16.92 W	10 G		1.2	4	CANARY ISLANDS REGION. mbLg 3.2 (MDD). Felt (III) at Punta Teno.
08	21 25 14.2*	32.085 S	69.979 W	33 N		1.1	9	MENDOZA PROVINCE, ARGENTINA
08	21 39 45.4	52.127 N	169.442 W	33 N	4.9	1.1	73	FOX ISLANDS, ALEUTIAN ISLANDS. ML 4.4 (PMR).
08	21 40 02.8	46.408 N	152.369 E	55 D	5.0	0.6	20	KURIL ISLANDS
08	22 54 39.4*	29.863 N	50.377 E	33 N	4.2	1.3	10	SOUTHERN IRAN
09	00 21 35.6?	16.56 N	61.79 W	115 ?		0.3	8	LEEWARD ISLANDS
09	00 33 04.0&	60.605 N	151.832 W	66		2.9		KENAI PENINSULA, ALASKA. <AGS-P>.
09	02 29 26.6	28.225 N	88.163 E	79 D	5.5	1.0	265	TIBET. Felt strongly at Gangtok, India. Also felt at Ponchogorh, Bangladesh.
09	02 38 51.5?	45.73 N	13.21 E	10 G		1.4	5	NORTHERN ITALY
09	03 36 15.2*	21.987 S	68.614 W	33 N		1.4	6	CHILE-BOLIVIA BORDER REGION
09	04 18 55.1	11.108 N	139.838 E	45 *	4.9 4.4	1.4	36	WEST CAROLINE ISLANDS
09	04 41 21.4	36.132 N	27.175 E	10 G		1.1	7	DODECANESE ISLANDS. MD 3.5 (ATH).
a 09	04 58 39.1	51.963 N	169.383 W	33 N	5.4 5.3	1.1	257	FOX ISLANDS, ALEUTIAN ISLANDS. ML 5.2 (PMR). Ms 5.4 (BRK). Mo=8.0*10**17 Nm (PPT).
09	05 29 51.1*	39.898 N	113.894 E	10 G		1.3	5	NORTHEASTERN CHINA
09	05 29 51.2?	53.32 N	170.32 W	33 N	4.6	0.7	9	FOX ISLANDS, ALEUTIAN ISLANDS
09	05 47 12.6*	41.161 N	20.047 E	10 G		0.4	5	ALBANIA. ML 2.3 (SKO).
09	06 01 25.5	39.281 N	0.843 W	10 G		0.7	9	SPAIN. mbLg 3.1 (MDD). Felt (V) at Millares.
09	06 35 04.1	30.804 N	103.252 E	33 N	4.3	0.8	9	SICHUAN PROVINCE, CHINA
09	08 30 29.5*	53.102 S	160.038 E	10 G	4.7 4.6	1.5	10	MACQUARIE ISLANDS REGION
09	09 39 00.0?	32.54 S	71.36 W	33 N		1.2	8	NEAR COAST OF CENTRAL CHILE
09	10 20 51.9	33.810 S	69.966 W	10 G		0.2	7	CHILE-ARGENTINA BORDER REGION
09	10 28 21.0	43.164 N	0.399 W	10 G		0.9	16	PYRENEES. ML 3.3 (LDG). mbLg 3.3 (MDD). Felt (IV) at Arudy, France. Also felt in the Ossau Valley, France.
09	10 49 00.9*	43.086 N	0.605 W	10 G		0.5	5	PYRENEES. MD 1.8 (STR).
09	12 09 57.5*	40.278 N	23.136 E	10 G		0.5	5	GREECE
09	12 23 28.9	40.517 N	21.877 E	10 G		1.1	8	GREECE. ML 2.9 (THE).
09	12 28 28.5	36.723 N	21.524 E	21		1.0	22	SOUTHERN GREECE. MD 3.6 (ATH).
09	12 53 14.1?	0.73 S	133.32 E	33 N	4.2	1.3	8	WEST IRIAN REGION
09	13 57 55.6*	50.134 N	5.364 E	10 G		1.0	11	BELGIUM. ML 2.7 (LDG).
09	14 09 24.7*	22.451 S	173.642 E	33 N	4.8	0.5	7	LOYALTY ISLANDS REGION
a 09	14 42 58.2	21.738 S	179.396 W	604	5.4	0.9	121	FIJI ISLANDS REGION
o 09	15 35 49.0	11.591 N	95.017 E	33 N	5.2 5.3	1.1	163	ANDAMAN ISLANDS REGION. Felt in the Ronong area, Thailand.
09	16 17 26.0*	31.346 S	68.828 W	33 N		1.4	5	SAN JUAN PROVINCE, ARGENTINA
09	18 31 43.2?	10.04 S	123.93 E	33 N	3.9	1.5	6	TIMOR
09	18 43 54.4	19.876 S	168.033 E	34 D	4.5 5.0	0.8	32	VANUATU ISLANDS
f 09	18 51 29.2	24.753 N	95.241 E	119 G	6.1	1.1	442	BURMA. Felt strongly at Kohima, Gauhati and Silchor, India. Also felt at Bolurghat, India. Felt strongly at Dacca, Bangladesh. Also felt at Chittogong and Rangpur, Bangladesh. Two events about 2.8 seconds apart. Depth from broadband displacement seismograms, based on first event. Depth of second event was 120.0 kilometers.
09	19 09 45.9*	18.070 N	64.754 W	33 N	5.0	1.4	10	VIRGIN ISLANDS. Felt on St. Thomas.
09	19 20 58.5	56.645 N	4.341 W	10 G		0.5	11	UNITED KINGDOM. ML 2.5 (BGS). Felt (IV) in the Glen Lyon-Loch Rannoch area.
09	20 43 14.7?	17.41 N	100.91 W	33 N		0.6	5	GUERRERO, MEXICO
09	22 01 57.1&	59.927 N	151.264 W	44		2.3		KENAI PENINSULA, ALASKA. <AGS-P>.
09	23 29 23.6*	42.791 N	12.654 E	10 G		0.9	6	CENTRAL ITALY
09	23 45 19.2*	26.453 S	27.383 E	5 G		0.9	7	REPUBLIC OF SOUTH AFRICA
10	01 26 50.4?	17.79 S	178.69 W	590 ?	4.6	1.0	21	FIJI ISLANDS REGION
10	02 03 22.8&	61.492 N	151.170 W	63		2.4		SOUTHERN ALASKA. <AGS-P>.
10	02 17 38.0*	41.950 N	14.045 E	10 G		0.6	7	SOUTHERN ITALY
10	02 45 40.3*	11.218 N	94.903 E	33 N		0.8	8	ANDAMAN ISLANDS REGION
10	02 57 50.5	5.650 N	75.784 W	62	5.0	1.2	94	COLOMBIA. Felt at Manizales.
a 10	03 09 18.8	39.646 N	143.288 E	34 D	5.3	1.1	176	OFF EAST COAST OF HONSHU, JAPAN. Felt (II JMA) at

										Morioka; (I JMA) at Aomori, Hachinohe, Miyako, Akita, Sokoto, and Utsunomiya.
o 10	03 11 17.6	39.706 N	143.306 E	37	5.7 5.5	1.1	175	OFF EAST COAST OF HONSHU, JAPAN. Felt (II JMA) at Morioka and Akita; (I JMA) at Sendai, Aomori and Miyako.		
10	03 40 47.5	61.841 N	151.038 W	71 ?		0.4	9	SOUTHERN ALASKA. Felt (II) at Palmer.		
10	03 45 45.77	17.11 S	72.33 W	33 N		0.7	5	NEAR COAST OF PERU		
10	03 51 36.67	15.31 N	103.28 W	33 N		1.2	7	OFF COAST OF GUERRERO, MEXICO		
10	04 36 12.27	17.05 N	101.60 W	33 N		1.4	5	NEAR COAST OF GUERRERO, MEXICO		
10	05 18 31.27	32.14 S	14.10 W	10 G	4.4	0.6	9	SOUTH ATLANTIC RIDGE		
10	05 38 25.6	36.078 N	27.130 E	40	4.5	1.4	104	DODECANESE ISLANDS. MD 4.5 (ATH).		
10	06 11 06.1	22.466 N	94.552 E	123 *	4.8	0.9	18	BURMA		
10	06 37 25.2	36.189 N	27.293 E	10 G		1.3	8	DODECANESE ISLANDS. MD 3.8 (ATH).		
10	06 37 54.8	24.516 N	94.682 E	87 D	5.2	1.0	171	BURMA-INDIA BORDER REGION		
10	07 41 08.1*	13.139 S	172.612 W	33 N	4.8	0.8	17	SAMOA ISLANDS		
10	07 50 43.8	39.279 N	28.297 E	10 G		1.1	15	TURKEY. MD 3.7 (ATH).		
10	08 02 11.9	30.996 S	69.118 W	29		1.1	14	CHILE-ARGENTINA BORDER REGION		
10	09 46 18.7*	36.092 N	27.235 E	10 G		1.3	6	DODECANESE ISLANDS. MD 3.4 (ATH).		
10	10 04 15.1	39.280 N	28.218 E	10 G		0.9	29	TURKEY. MD 3.7 (ATH).		
o 10	10 06 01.5*	52.192 S	13.514 E	10 G	5.5 5.0	1.2	38	SOUTHWEST OF AFRICA		
10	10 09 35.3	39.307 N	28.158 E	10 G		0.8	8	TURKEY		
10	10 14 52.6%	43.528 N	12.458 E	10 G		0.7	6	CENTRAL ITALY		
10	10 21 21.1*	24.616 S	175.337 W	77 D	5.0	0.8	46	SOUTH OF TONGA ISLANDS		
10	11 15 57.2*	33.127 N	47.153 E	33 N	4.4	0.7	6	WESTERN IRAN		
o 10	11 53 21.6	11.654 N	95.143 E	33 N	5.3 5.4	1.1	141	ANDAMAN ISLANDS REGION		
10	12 32 54.97	44.15 N	7.47 E	10 G		0.5	7	NORTHERN ITALY. ML 2.4 (LDG).		
10	12 44 19.1%	55.619 N	160.898 W	114			28	ALASKA PENINSULA. <PAL>.		
10	12 52 06.7*	36.014 N	27.203 E	33 N		1.5	5	DODECANESE ISLANDS		
10	13 04 00.3*	36.039 N	27.378 E	33 N		1.4	9	DODECANESE ISLANDS. MD 3.8 (ATH).		
o 10	13 10 12.3	52.117 N	169.236 W	33 N	5.6 5.3	1.2	236	FOX ISLANDS, ALEUTIAN ISLANDS		
10	13 33 48.87	16.84 S	74.83 W	33 N	4.8	1.5	8	NEAR COAST OF PERU		
10	13 38 11.3	40.096 N	20.027 E	5 G		1.2	6	GREECE-ALBANIA BORDER REGION		
10	14 13 20.4	44.532 N	7.282 E	16		0.8	22	NORTHERN ITALY. ML 2.7 (GEN), 3.0 (LDG).		
10	14 49 06.17	31.37 S	69.31 W	33 N		1.0	5	SAN JUAN PROVINCE, ARGENTINA		
10	15 33 50.4*	36.066 N	27.439 E	10 G		1.7	6	DODECANESE ISLANDS		
10	16 07 06.4%	37.012 N	121.780 W	8 G			8	CENTRAL CALIFORNIA. <BRK>. ML 2.1 (BRK). Felt in the Uvas Canyon County Park area.		
o 10	16 11 46.7	10.073 S	123.819 E	33 D	5.6 4.9	1.2	192	TIMOR		
10	17 37 34.8%	43.605 N	12.452 E	10 G		1.1	7	CENTRAL ITALY		
10	17 40 17.4*	51.116 N	16.002 E	10 G		0.8	7	POLAND. ML 3.7 (VKA), 3.4 (KBA), 2.8 (KRA).		
10	18 25 08.9	31.329 S	68.698 W	117 *		1.0	16	SAN JUAN PROVINCE, ARGENTINA		
10	18 28 51.6	10.439 S	124.203 E	77 ?	5.0	1.5	27	TIMOR		
10	21 14 46.5	44.489 N	114.159 W	5 G		0.7	9	WESTERN IDAHO. ML 3.7 (BUT).		
10	21 20 48.0	44.481 N	10.045 E	10 G		0.6	6	NORTHERN ITALY		
10	21 59 09.07	20.86 S	70.97 W	10 G		1.0	5	NEAR COAST OF NORTHERN CHILE. Felt (III) in the Antofagasta area.		
10	22 35 24.2%	60.969 N	150.315 W	56	3.5		34	KENAI PENINSULA, ALASKA. <AGS-P>. Felt (II) at Anchorage and Palmer.		
10	23 01 21.9	26.559 N	86.663 E	69 *	4.7	1.4	24	NEPAL-INDIA BORDER REGION		
10	23 51 24.5*	36.132 N	27.225 E	10 G		1.5	6	DODECANESE ISLANDS. MD 3.2 (ATH).		
10	23 59 49.9%	60.386 N	146.811 W	22			21	SOUTHERN ALASKA. <AGS-P>.		
11	01 22 10.3%	35.220 N	118.220 W	4			24	CENTRAL CALIFORNIA. <PAS-P>. ML 3.5 (PAS), 4.1 (BRK). Felt (II) at Frazier Park.		
11	01 56 50.9*	36.138 N	27.183 E	10 G		1.5	6	DODECANESE ISLANDS. MD 3.5 (ATH).		
11	02 09 51.0*	25.766 N	125.263 E	150 *	4.4	1.0	35	SOUTHWESTERN RYUKYU ISLANDS		
11	02 59 04.2	36.121 N	27.214 E	5 G		1.4	7	DODECANESE ISLANDS. MD 3.5 (ATH).		
11	03 17 16.8%	39.971 N	31.372 E	10 G		1.1	5	TURKEY		
11	03 53 51.8*	38.155 N	27.454 E	10 G		1.6	9	TURKEY		
11	04 13 49.57	17.43 S	178.95 W	553 *	5.0	0.7	18	FIJI ISLANDS REGION		
11	05 31 41.77	45.19 N	14.85 E	10 G		1.6	7	YUGOSLAVIA. MD 3.0 (LJU), 2.6 (TRI). Felt (IV) at Senj.		
11	05 31 48.7*	33.326 S	72.292 W	10 G		1.4	13	OFF COAST OF CENTRAL CHILE		
11	05 32 30.0*	36.407 N	27.576 E	10 G		1.4	6	DODECANESE ISLANDS. MD 3.2 (ATH).		
11	06 49 37.97	25.90 S	174.08 W	33 N	5.0	1.5	8	SOUTH OF TONGA ISLANDS		
11	07 00 36.5	44.989 N	7.619 E	10 G		0.9	34	NORTHERN ITALY		
11	07 35 47.57	52.80 N	169.83 W	33 N	4.4	0.6	7	FOX ISLANDS, ALEUTIAN ISLANDS		
11	08 35 46.1%	39.400 N	123.277 W	7			15	NEAR COAST OF NORTHERN CALIF. <BRK>. ML 3.0 (BRK). Felt (IV) at Redwood Valley and Willits; (III) at Fort Bragg and Potter Valley.		
11	08 50 35.77	39.13 N	27.59 E	10 G		0.9	4	TURKEY		
11	09 29 47.6%	61.718 N	150.446 W	46			23	SOUTHERN ALASKA. <AGS-P>.		
11	09 51 55.57	39.10 N	27.74 E	10 G		0.2	4	TURKEY		
11	09 58 13.57	39.25 N	27.86 E	10 G		1.0	4	TURKEY		
11	11 10 51.2	35.066 N	135.951 E	26	4.8 3.7	1.1	47	SOUTHERN HONSHU, JAPAN. Felt (IV JMA) at Naro, (III JMA) at Kyoto and Mie and (II JMA) at Gifu, Kobe, Nagoya and Osaka.		
11	11 14 43.2	25.047 N	95.364 E	142 *	4.7	1.3	34	BURMA-INDIA BORDER REGION		
11	11 22 08.67	32.72 S	71.53 W	33 N		0.7	5	NEAR COAST OF CENTRAL CHILE		
11	13 31 31.2	16.759 N	85.833 W	10 G	4.6	1.2	49	CARIBBEAN SEA		
11	13 40 22.0	43.855 N	12.085 E	14		1.0	14	CENTRAL ITALY. MD 3.2 (FIR).		
11	14 19 29.1%	60.141 N	152.501 W	95			35	SOUTHERN ALASKA. <AGS-P>.		
11	16 04 07.7	23.563 S	69.131 W	88 *	4.7	1.3	44	NORTHERN CHILE		
11	16 42 11.7*	39.970 N	24.420 E	10 G		1.4	11	AEGEAN SEA. ML 2.7 (THE).		
11	17 05 28.0*	37.606 N	20.697 E	10 G		1.1	12	IONIAN SEA. ML 3.0 (THE). MD 3.4 (ATH).		
11	18 05 55.4*	56.484 N	152.719 W	33 N	4.6	1.3	22	KODIAK ISLAND REGION. ML 4.1 (PMR).		
11	18 23 10.9*	37.132 N	29.488 E	10 G		1.4	6	TURKEY		
11	18 57 03.5*	51.674 N	16.343 E	10 G		1.2	11	POLAND. ML 3.8 (VKA), 3.7 (KBA).		
11	19 22 48.27	40.79 S	78.24 E	10 G	4.8 5.2	1.5	11	MID-INDIAN RISE		
11	19 39 00.7	36.523 N	26.469 E	159 *	4.0	1.1	26	DODECANESE ISLANDS		
11	20 08 18.37	51.80 N	16.78 E	33 N	3.6	0.7	7	POLAND. ML 3.3 (VKA).		
11	20 23 51.3	5.166 S	150.982 E	188 D	5.1	0.7	95	NEW BRITAIN REGION		
11	20 37 21.9	36.138 N	27.169 E	10 G	4.0	1.1	13	DODECANESE ISLANDS		
11	21 14 57.8	35.786 N	80.757 E	10 G	5.3 4.9	1.4	110	KASHMIR-TIBET BORDER REGION		
11	21 23 35.6*	5.006 S	102.429 E	33 N	4.8	1.6	11	SOUTHERN SUMATRA		

11	21	25	30.7?	32.63	S	71.40	W	29 *	0.7	7	NEAR COAST OF CENTRAL CHILE
11	22	20	42.5*	57.328	N	36.544	W	10 G 4.5	0.9	17	NORTH ATLANTIC OCEAN
11	23	08	57.9&	35.230	N	118.220	W	3		24	CENTRAL CALIFORNIA. <PAS-P>. ML 3.4 (PAS).
11	23	26	41.4&	59.613	N	153.609	W	118		14	SOUTHERN ALASKA. <AGS-P>.
12	00	54	57.8	36.095	N	27.156	E	10 G	1.4	13	DODECANESE ISLANDS
12	02	19	52.2*	37.174	N	4.035	W	33 N	1.1	5	SPAIN
12	02	33	38.6	36.063	N	27.194	E	10 G	1.3	7	DODECANESE ISLANDS
a 12	03	24	59.0	12.672	N	87.489	W	86 D 5.3	1.2	92	NEAR COAST OF NICARAGUA. Felt strongly in the Monogua area. Also felt (III) at San Salvador, El Salvador.
12	03	25	26.2	38.828	N	26.304	E	10 G	0.9	23	AEGEAN SEA
12	04	29	36.4%	42.972	N	13.265	E	10 G	0.2	5	CENTRAL ITALY
12	04	54	48.2%	43.065	N	0.667	W	10 G	0.1	9	PYRENEES. MD 1.0 (STR).
12	05	00	38.6	37.067	N	3.891	W	10 G	1.3	11	SPAIN. mbLg 3.2 (MDD). Felt (IV) at Chimeneas.
12	06	14	41.9?	44.39	N	15.42	E	10 G	0.5	4	YUGOSLAVIA. MD 2.6 (TRI).
12	06	56	38.4	79.068	N	2.241	E	10 G 4.7	1.0	42	GREENLAND SEA
12	07	07	59.5*	35.267	N	26.228	E	10 G	1.2	7	CRETE. MD 3.8 (ATH).
12	07	18	21.3?	33.08	S	72.18	W	10 G	0.4	8	OFF COAST OF CENTRAL CHILE
12	08	27	00.5	36.132	N	27.229	E	10 G	1.0	11	DODECANESE ISLANDS. MD 3.8 (ATH).
12	08	55	42.8	36.164	N	27.063	E	10 G	1.5	9	DODECANESE ISLANDS. MD 3.8 (ATH).
12	09	07	26.1?	8.39	N	126.62	E	33 N 4.6	1.3	6	MINDANAO, PHILIPPINE ISLANDS
12	09	10	23.1&	36.405	N	120.788	W	14 3.9		29	CENTRAL CALIFORNIA. <BRK>. ML 4.2 (BRK). Mo=4.5+10**15 Nm (BRK). Felt (III) at Aromas, Carmel Valley and Dos Palos.
12	09	50	57.4?	23.08	S	131.12	E	10 G	0.4	4	NORTHERN TERRITORY, AUSTRALIA
12	10	22	17.6	50.465	N	6.011	E	10 G	0.2	6	GERMANY. ML 2.1 (UCC).
12	10	32	10.8	39.630	N	22.939	E	10 G	1.0	10	GREECE. ML 2.6 (THE).
12	10	42	05.0?	36.04	N	27.24	E	10 G	0.5	4	DODECANESE ISLANDS. MD 3.6 (ATH).
12	11	17	45.9*	52.952	N	169.760	W	33 N 4.8	1.2	45	FOX ISLANDS, ALEUTIAN ISLANDS
12	13	21	30.2	8.486	N	72.637	W	198 ? 4.4	1.1	26	VENEZUELA
o 12	15	28	14.7	4.979	N	126.508	E	62 * 5.4	1.1	97	TALAUD ISLANDS
12	16	02	02.6*	36.069	N	27.307	E	33 N	0.1	5	DODECANESE ISLANDS. MD 3.6 (ATH).
12	16	25	30.1?	43.84	N	8.71	E	10 G	0.1	7	CORSICA. ML 2.0 (GEN).
12	18	21	34.6	22.228	S	69.916	W	42 D 5.0	0.9	30	NORTHERN CHILE. Felt (V) in the Tacopilla area.
12	18	51	12.2*	32.386	S	179.707	W	83 * 5.0	1.3	10	SOUTH OF KERMADEC ISLANDS
12	19	50	56.5&	36.340	N	120.370	W	6		19	CENTRAL CALIFORNIA. <BRK>. ML 3.0 (BRK), 3.2 (PAS).
12	20	10	01.9*	42.299	N	15.535	E	10 G	1.2	5	ADRIATIC SEA
12	22	17	05.9	53.896	N	131.424	W	10 G 5.3 4.2	1.1	161	QUEEN CHARLOTTE ISLANDS REGION. Felt (IV) at Mosset, Port Clements, Juskatla, Tlell, Prince Rupert and an Banilla Island, British Columbia. Also felt (IV) at Ketchikan and Metlakatla, Alaska. Also felt at Kitimat, Lownhill, Sandspit, Skidegate, Smithers and Terrace, British Columbia.
12	22	48	15.5	53.831	N	131.400	W	10 G 4.2	1.4	22	QUEEN CHARLOTTE ISLANDS REGION. Felt at Prince Rupert, British Columbia. Also felt in the northern part of Graham Island.
12	23	12	44.6	31.510	S	69.547	W	146 *	0.6	15	SAN JUAN PROVINCE, ARGENTINA
12	23	33	05.3*	64.989	N	149.243	W	10 G	0.9	5	CENTRAL ALASKA
12	23	33	15.3?	52.33	N	169.28	W	33 N 4.5	0.9	9	FOX ISLANDS, ALEUTIAN ISLANDS
13	00	23	15.2	44.268	N	15.271	E	10 G	1.0	16	YUGOSLAVIA. ML 2.9 (KBA), 2.8 (ZAG), 2.6 (LJU). MD 3.0 (TRI).
13	01	18	29.7?	17.39	S	176.88	W	404 * 4.4	1.2	18	FIJI ISLANDS REGION
13	01	25	36.0	43.642	N	10.244	E	10 G	0.7	11	CENTRAL ITALY. ML 2.5 (LDG).
a 13	02	07	26.8	16.826	N	99.509	W	28 D 5.3 5.0	1.1	116	NEAR COAST OF GUERRERO, MEXICO. Felt in the Acapulco area.
o 13	03	32	15.2	12.661	N	125.038	E	36 D 5.3 4.6	1.1	113	SAMAR, PHILIPPINE ISLANDS
13	03	33	35.6	38.854	N	26.494	E	10 G	0.5	6	AEGEAN SEA. MD 3.1 (ATH).
13	03	56	16.5	64.768	N	5.909	E	33 N	0.9	16	NORWEGIAN SEA. MD 3.2 (BER).
13	04	02	22.5?	44.54	N	7.28	E	10 G	0.0	4	NORTHERN ITALY. ML 1.7 (GEN).
13	04	39	43.6*	40.018	N	122.514	W	10 G	1.5	8	NORTHERN CALIFORNIA. ML 2.7 (BRK).
13	05	05	59.4	36.107	N	27.188	E	43 4.6 3.9	1.3	132	DODECANESE ISLANDS. MD 4.7 (ATH).
13	05	11	09.1	35.981	N	27.188	E	10 G	0.9	10	DODECANESE ISLANDS. MD 3.9 (ATH).
13	05	19	00.3%	36.051	N	27.161	E	10 G	1.0	8	DODECANESE ISLANDS
13	05	47	33.5*	30.222	N	114.440	W	10 G 4.6	1.3	18	GULF OF CALIFORNIA
13	05	52	48.5&	62.328	N	151.188	W	85		25	CENTRAL ALASKA. <AGS-P>.
13	06	27	42.4%	36.912	N	4.854	W	10 G	0.7	7	STRAIT OF GIBRALTAR. mbLg 2.7 (MDD).
13	06	55	07.2	45.667	N	26.428	E	161 4.0	1.4	26	ROMANIA
13	07	04	14.2	36.115	N	27.174	E	10 G	0.5	7	DODECANESE ISLANDS. MD 3.8 (ATH).
13	07	11	43.3%	40.500	N	28.144	E	10 G	0.5	5	TURKEY
13	07	43	47.2	36.131	N	27.170	E	10 G	1.2	13	DODECANESE ISLANDS. ML 4.0 (ATH).
13	08	16	26.9	36.105	N	27.239	E	10 G	0.9	7	DODECANESE ISLANDS. MD 3.2 (ATH).
13	08	33	08.0%	39.061	N	27.621	E	10 G	0.8	5	TURKEY
13	08	46	34.9	36.039	N	27.157	E	10 G	0.8	7	DODECANESE ISLANDS. MD 3.3 (ATH).
13	09	59	05.5%	39.145	N	27.617	E	10 G	0.6	5	TURKEY
13	09	59	36.7	44.934	N	8.972	E	10 G	1.2	16	NORTHERN ITALY. ML 2.4 (GEN).
13	10	22	13.4	36.149	N	27.187	E	10 G	1.2	12	DODECANESE ISLANDS. ML 4.0 (ATH).
13	10	26	29.9	36.081	N	27.165	E	30 4.5	1.3	34	DODECANESE ISLANDS. ML 4.2 (CSS). MD 4.3 (ATH).
13	10	33	32.3	36.064	N	27.244	E	10 G	1.1	11	DODECANESE ISLANDS. MD 3.8 (ATH).
13	11	10	09.3%	43.696	N	12.037	E	10 G	0.8	5	CENTRAL ITALY
13	11	15	44.5	15.781	N	147.215	E	40 * 5.0	1.0	72	MARIANA ISLANDS REGION
13	11	16	54.8*	39.346	N	119.753	W	5 G	1.4	8	NEVADA. ML 2.8 (BRK).
13	11	37	39.1	36.072	N	27.200	E	10 G	0.5	7	DODECANESE ISLANDS. MD 3.5 (ATH).
13	11	49	30.4	36.104	N	27.193	E	10 G	0.9	8	DODECANESE ISLANDS. MD 3.4 (ATH).
13	11	56	13.2	36.080	N	27.145	E	10 G	1.2	12	DODECANESE ISLANDS. MD 3.8 (ATH).
13	12	58	12.4	36.165	N	27.123	E	10 G	1.3	11	DODECANESE ISLANDS. MD 4.0 (ATH).
13	13	40	22.7?	37.04	N	27.77	E	10 G	1.6	6	TURKEY
13	13	44	01.0?	45.14	N	18.20	E	10 G	1.4	6	YUGOSLAVIA. ML 2.7 (ZAG), 2.4 (KBA).
13	13	46	09.7	36.168	N	27.208	E	10 G	0.7	8	DODECANESE ISLANDS
13	14	03	15.3	36.095	N	27.121	E	10 G	1.3	13	DODECANESE ISLANDS. ML 4.0 (ATH).
13	14	13	42.6*	22.082	S	170.399	E	28 D 4.9 4.4	1.2	38	LOYALTY ISLANDS REGION
13	14	30	04.1?	30.83	S	117.75	E	10 G	0.2	4	WESTERN AUSTRALIA
13	15	06	19.4*	4.646	N	125.128	E	216 ? 5.0	1.2	21	TALAUD ISLANDS
13	17	02	06.0*	18.262	S	175.963	W	272 D 5.2	1.3	46	TONGA ISLANDS
13	17	17	38.4*	21.967	S	170.169	E	33 N 4.7 4.2	1.5	53	LOYALTY ISLANDS REGION

13	18	31	06.0*	18.033 N	100.306 W	10 G	1.0	8	GUERRERO, MEXICO
13	18	31	16.6	15.789 N	147.213 E	48 *	5.1 4.1	1.2	64 MARIANA ISLANDS REGION
13	18	55	46.6%	16.053 N	61.049 W	10 G	0.5	5	LEEWARD ISLANDS. ML 2.4 (FDF).
13	19	11	47.27	7.50 N	94.17 E	33 N	4.1	1.1	7 NICOBAR ISLANDS REGION
13	19	20	07.0*	17.617 S	167.700 E	22 D	4.9 4.1	1.5	63 VANUATU ISLANDS
a 13	20	03	41.9	10.171 S	117.826 E	36 D	5.2 4.8	1.4	102 SOUTH OF SUMBAWA ISLAND
13	20	05	10.3	27.602 N	115.091 W	10 G	5.1	1.2	79 OFF W. COAST OF BAJA CALIFORNIA
13	20	15	58.7	44.197 N	7.495 E	10 G		0.3	10 NORTHERN ITALY. ML 1.7 (GEN).
a 13	20	18	17.7	10.812 S	166.008 E	47 D	4.9	1.2	38 SANTA CRUZ ISLANDS
13	20	47	55.3*	39.425 N	76.881 W	5 G		0.9	9 CHESAPEAKE BAY REGION. mbLg 2.5 (NEIS). MD 2.6 (NED). Felt (V) at Randallstown; (IV) at Eldersburg, Ellicott City, Granite and Woodstock; (III) at Owings Mills, Maryland.
13	20	56	57.2	36.082 N	27.158 E	10 G	4.1	1.5	30 DODECANESE ISLANDS. ML 4.3 (CSS), 4.0 (ATH).
13	21	12	48.9%	39.018 N	27.759 E	10 G		0.7	6 TURKEY
13	21	53	31.6*	0.272 N	122.017 E	193 ?	5.3	1.1	17 MINAHASSA PENINSULA
13	22	13	54.0%	43.080 N	0.458 W	10 G		0.1	5 PYRENEES. MD 1.0 (STR).
13	22	18	02.0	32.835 S	70.117 W	123 ?		0.7	15 CHILE-ARGENTINA BORDER REGION
13	22	40	21.8*	6.960 S	147.386 E	33 N	4.2	0.6	6 EAST PAPUA NEW GUINEA REGION. ML 4.6 (PMG).
13	22	48	06.9	36.073 N	27.303 E	10 G	4.7	1.6	19 DODECANESE ISLANDS. ML 4.0 (CSS), 4.0 (ATH).
13	23	08	27.2	35.992 N	27.178 E	10 G	4.5	1.2	14 DODECANESE ISLANDS. ML 4.1 (ATH).
13	23	49	14.3*	10.488 S	124.052 E	33 N	4.2	1.5	9 TIMOR
13	23	51	06.2	36.065 N	27.058 E	10 G		0.8	9 DODECANESE ISLANDS. MD 3.7 (ATH).
14	00	09	06.8	36.039 N	27.187 E	10 G		1.5	9 DODECANESE ISLANDS. MD 3.7 (ATH).
14	00	25	32.0*	6.316 N	74.248 W	238 *	4.5	1.1	9 NORTHERN COLOMBIA
14	00	28	26.8	36.076 N	27.134 E	10 G		1.0	10 DODECANESE ISLANDS. MD 3.6 (ATH).
14	01	19	14.17	21.29 S	169.93 E	80 ?	4.9	1.4	27 LOYALTY ISLANDS REGION
14	01	38	49.9	36.056 N	27.152 E	24	4.5	1.3	33 DODECANESE ISLANDS. ML 4.4 (CSS), 4.0 (ATH).
14	01	40	27.4%	43.567 N	12.306 E	10 G		0.8	5 CENTRAL ITALY
14	01	43	49.47	29.06 N	130.82 E	33 N	4.7	1.6	6 RYUKYU ISLANDS
14	02	00	20.3*	4.857 S	152.450 E	83 *	4.9	1.2	19 NEW BRITAIN REGION
14	02	29	23.9	36.127 N	27.102 E	28	4.2	1.3	65 DODECANESE ISLANDS. ML 4.4 (CSS), 4.1 (ATH).
14	02	32	12.9	36.112 N	27.103 E	10 G	4.1	1.4	16 DODECANESE ISLANDS. ML 4.0 (ATH).
f 14	03	03	19.2	37.819 N	91.971 E	12 G	6.1 6.1	1.1	437 QINGHAI PROVINCE, CHINA. Ms 6.1 (PAS), 6.0 (BRK). Slight damage in the Mangyai-Lenghu area. Depth from broadband displacement seismograms.
14	03	07	05.27	42.59 N	129.59 W	10 G		0.2	33 OFF COAST OF OREGON
14	03	09	41.4	36.151 N	27.171 E	10 G		1.3	17 DODECANESE ISLANDS. ML 4.0 (ATH).
14	03	33	12.9	45.352 N	150.930 E	33 N	5.5	1.0	228 KURIL ISLANDS
14	03	34	59.7	44.811 N	6.730 E	10 G		0.6	19 FRANCE. ML 2.7 (LDG), 2.6 (GEN).
14	03	38	04.6	45.345 N	150.913 E	48 D	5.7 5.7	1.0	301 KURIL ISLANDS
14	03	47	02.1	35.927 N	27.223 E	10 G		1.4	7 DODECANESE ISLANDS
14	03	52	46.7	45.310 N	151.021 E	33 N	5.0	0.9	72 KURIL ISLANDS
14	04	04	49.2*	45.356 N	150.920 E	33 N	4.2	1.2	8 KURIL ISLANDS
14	04	23	16.3	36.014 N	27.170 E	10 G		1.0	7 DODECANESE ISLANDS. MD 3.6 (ATH).
14	04	27	10.67	1.63 N	127.00 E	115 ?	4.8	1.2	15 MOLUCCA PASSAGE
14	04	28	24.07	45.63 N	150.45 E	33 N	4.5	1.3	7 KURIL ISLANDS
14	04	42	02.6*	19.059 S	69.790 W	33 N		0.8	5 NORTHERN CHILE
14	04	57	00.5*	45.236 N	151.081 E	33 N	4.6	1.3	18 KURIL ISLANDS
14	05	11	01.3*	36.057 N	27.092 E	10 G		1.6	6 DODECANESE ISLANDS
14	05	12	55.1	36.154 N	27.212 E	10 G		0.6	13 DODECANESE ISLANDS. MD 3.8 (ATH).
14	05	37	28.9	37.452 N	26.943 E	10 G		1.2	23 DODECANESE ISLANDS. MD 3.8 (ATH).
14	05	40	37.57	5.35 N	126.46 E	33 N	5.0	0.9	11 MINDANAO, PHILIPPINE ISLANDS
14	06	12	32.1	36.174 N	27.126 E	10 G		1.0	16 DODECANESE ISLANDS. ML 4.1 (CSS), MD 3.9 (ATH).
14	07	08	53.8*	8.208 S	108.818 E	89 ?	5.0	1.1	19 JAVA
14	07	20	11.3*	45.312 N	151.033 E	33 N	4.9	0.9	51 KURIL ISLANDS
14	07	27	58.3	36.087 N	27.111 E	10 G		1.3	11 DODECANESE ISLANDS. MD 3.9 (ATH).
14	07	43	38.0	39.545 N	22.183 E	10 G		0.7	12 GREECE. ML 2.8 (THE), MD 3.0 (ATH).
14	08	22	03.4	36.075 N	27.225 E	10 G		1.4	12 DODECANESE ISLANDS. MD 3.8 (ATH).
14	08	24	14.9*	36.143 N	27.223 E	10 G		1.7	6 DODECANESE ISLANDS
14	08	44	51.5	36.118 N	27.149 E	10 G		1.2	10 DODECANESE ISLANDS. MD 3.7 (ATH).
14	09	12	31.9	43.954 N	8.513 E	10 G		0.9	25 CORSICA. ML 2.8 (GEN), 2.5 (LDG).
14	09	31	29.8*	29.906 S	177.205 W	33 N	4.9 4.3	1.6	22 KERMADec ISLANDS. Felt on Raoul Island.
14	09	41	49.0%	65.059 N	149.088 W	19		1.8	ALASKA. <AGS-P>.
14	10	16	33.3%	39.097 N	27.548 E	10 G		1.1	5 TURKEY
14	10	32	18.9*	45.278 N	151.050 E	33 N	4.8	0.9	42 KURIL ISLANDS
14	12	28	02.07	43.80 N	8.83 E	10 G		0.6	7 CORSICA. ML 2.3 (GEN).
14	12	46	00.7	45.392 N	150.915 E	33 N	4.9 3.8	0.9	60 KURIL ISLANDS
14	13	04	50.9*	20.065 S	69.545 W	106 *		0.7	7 NORTHERN CHILE
14	13	47	26.47	29.51 S	176.38 W	33 N	4.8	1.5	11 KERMADec ISLANDS REGION
14	14	38	37.6*	35.407 N	26.082 E	10 G		1.4	9 CRETE. MD 3.7 (ATH).
14	15	10	11.2%	37.012 N	4.806 W	10 G		1.0	8 SPAIN. mbLg 2.7 (MDD).
14	15	24	56.1	36.065 N	27.206 E	10 G		0.5	7 DODECANESE ISLANDS. MD 3.4 (ATH).
14	15	53	15.5	45.734 N	10.580 E	10 G		0.4	8 NORTHERN ITALY
14	16	53	35.3%	43.755 N	12.315 E	10 G		0.3	5 CENTRAL ITALY
14	17	08	38.8	35.248 N	26.068 E	22	4.5	1.4	141 CRETE. ML 4.5 (THE), MD 4.5 (ATH). Felt at Ayios Nikolaos and Sitia.
14	17	27	42.7	37.769 N	14.960 E	10 G		1.2	7 SICILY
14	17	41	45.2	36.086 N	27.132 E	10 G		1.3	14 DODECANESE ISLANDS. MD 3.8 (ATH).
14	17	52	11.6	62.561 N	151.223 W	105 ?		0.5	12 CENTRAL ALASKA
14	18	00	52.8*	55.758 N	156.509 W	33 N	4.7	1.0	24 SOUTH OF ALASKA. ML 4.4 (PMR).
14	19	20	11.4	36.100 N	27.189 E	10 G		1.2	8 DODECANESE ISLANDS
a 14	21	04	03.2	29.709 S	177.467 W	58 *	5.5 6.0	1.3	208 KERMADec ISLANDS. Ms 5.9 (BRK). Mo=2.0*10**18 Nm (PPT). Felt lightly on Raoul Island.
14	21	10	30.2*	29.080 S	177.628 W	33 N	5.5 5.7	1.2	27 KERMADec ISLANDS
14	21	13	01.97	45.68 N	1.16 E	10 G		0.9	5 FRANCE. ML 1.6 (LDG).
14	21	13	24.3%	45.692 N	1.157 E	10 G		0.4	6 FRANCE. ML 2.1 (LDG).
14	21	21	15.4*	66.933 N	156.514 W	5 G		1.1	9 ALASKA. ML 3.7 (PMR).
14	21	25	50.4	36.089 N	27.156 E	10 G	4.4	1.5	23 DODECANESE ISLANDS. ML 4.2 (CSS), 4.1 (ATH).
14	21	28	14.5	5.571 S	128.605 E	339	4.8	1.0	28 BANDA SEA
14	21	31	25.1	36.029 N	27.162 E	10 G		1.2	14 DODECANESE ISLANDS. MD 3.9 (ATH).
14	21	40	12.2*	21.348 N	146.098 E	33 N	4 6 5 1	1 2	21 MARIANA ISLANDS REGION
14	22	19	50.3	43.223 N	29.870 E	10 G		1.3	11 BLACK SEA



14	22	29	54.4	36.116	N	27.148	E	10	G	1.2	15	DODECANESE ISLANDS. ML 3.8 (ATH).			
14	22	32	40.7?	18.83	N	120.42	E	33	N	4.4	1.2	6	LUZON, PHILIPPINE ISLANDS		
15	00	29	02.1?	48.84	N	0.78	W	10	G	0.1	4	FRANCE. ML 2.6 (LDG).			
15	01	21	51.5	44.025	N	128.352	W	10	G	4.5	4.0	0.6	49	OFF COAST OF OREGON	
15	01	26	45.0	36.152	N	27.240	E	10	G	1.5	9	DODECANESE ISLANDS. MD 3.7 (ATH).			
15	03	19	44.7	30.688	N	103.317	E	22	*	4.8	1.1	48	SICHUAN PROVINCE, CHINA. ML 4.8 (BJI).		
15	04	13	31.8	36.065	N	27.133	E	10	G	1.1	8	DODECANESE ISLANDS. MD 3.6 (ATH).			
15	04	17	13.8*	31.691	S	69.298	W	140	?	0.8	11	SAN JUAN PROVINCE, ARGENTINA			
15	04	48	20.1	36.109	N	27.151	E	10	G	1.3	13	DODECANESE ISLANDS. MD 3.7 (ATH).			
15	04	56	51.7*	9.602	S	110.365	E	33	N	4.6	3.4	1.3	9	SOUTH OF JAVA	
15	05	29	03.4	37.988	N	118.210	W	5	G	4.4	1.1	60	CALIFORNIA-NEVADA BORDER REGION. ML 5.0 (BRK), 4.7 (PAS). Felt (IV) at Lee Vining and Mono City, California. Felt (III) at Benton, California.		
15	05	57	18.4	68.460	N	147.815	W	10	G	0.8	16	ALASKA. ML 3.3 (PMR).			
15	06	18	00.1*	48.784	S	122.324	E	10	G	4.6	4.0	1.1	14	SOUTH OF AUSTRALIA	
15	06	40	56.5?	79.73	N	3.20	E	33	N	3.6	1.5	6	GREENLAND SEA. MD 2.8 (BER).		
15	07	15	48.0	36.091	N	27.158	E	10	G	1.4	8	DODECANESE ISLANDS			
15	08	08	26.6	45.824	N	14.654	E	10	G	1.0	10	YUGOSLAVIA. ML 3.2 (LJU), 2.8 (KBA). Felt (V) in the Velike Lasce area.			
15	09	50	19.5?	4.24	S	127.05	E	10	G	4.5	1.5	8	BANDA SEA		
15	10	02	36.9&	58.912	N	152.698	W	66			19	KODIAK ISLAND REGION. <AGS-P>.			
15	10	12	20.3?	45.87	N	14.65	E	10	G	0.8	4	YUGOSLAVIA			
15	10	16	51.4	53.865	N	131.345	W	10	G	3.7	1.1	18	QUEEN CHARLOTTE ISLANDS REGION. Felt at Prince Rupert, British Columbia. Also felt in the northern part of Graham Island.		
15	10	41	48.4*	37.864	N	20.158	E	10	G	0.9	6	IONIAN SEA. MD 3.3 (ATH).			
15	10	45	00.8?	39.03	N	27.92	E	5	G	0.5	4	TURKEY			
15	11	08	04.8	10.092	N	126.385	E	45	D	5.1	1.4	46	PHILIPPINE ISLANDS REGION		
15	11	11	05.2	47.271	N	153.537	E	52	D	4.9	0.8	104	KURIL ISLANDS		
15	12	42	25.9	24.403	N	122.147	E	25	D	5.1	1.4	123	TAIWAN REGION. Felt (III JMA) at Ilan, Suao and Taipei; (II JMA) at Hsinchu and Hualien; (I JMA) at Keelung and Taichung.		
15	13	21	27.1*	11.311	S	118.587	E	33	N	4.1	1.4	14	SOUTH OF SUMBAWA ISLAND		
15	13	23	27.6?	42.58	N	126.12	W	10	G	4.3	1.3	11	OFF COAST OF OREGON		
15	16	00	10.6	44.854	N	114.047	W	5	G		0.6	10	WESTERN IDAHO. ML 3.0 (BUT).		
15	16	15	14.7&	59.891	N	140.417	W	16				11	SOUTHEASTERN ALASKA. <AGS-P>.		
15	16	31	55.4&	59.143	N	144.616	W	10	G	4.4		53	GULF OF ALASKA. <AGS-P>. ML 4.0 (PMR).		
15	17	20	39.9	37.635	N	22.900	E	10	G	4.0	0.9	44	SOUTHERN GREECE. ML 3.7 (ATH), 3.5 (THE).		
15	17	33	54.9&	65.935	N	150.437	W	88				11	ALASKA. <AGS-P>.		
15	18	41	56.1*	45.045	N	7.329	E	10	G		0.7	6	NORTHERN ITALY. ML 2.2 (GEN).		
15	19	02	48.2?	31.83	S	69.89	W	33	N		1.2	4	SAN JUAN PROVINCE, ARGENTINA		
15	19	07	00.0*	45.054	N	7.517	E	10	G		1.4	6	NORTHERN ITALY. ML 2.1 (GEN).		
15	19	18	06.2	14.972	S	166.804	E	33	N	4.9	4.4	1.2	95	VANUATU ISLANDS	
15	20	19	48.2	38.769	N	24.831	E	7			0.8	33	AEGEAN SEA. ML 3.3 (ATH), 3.2 (THE).		
15	20	49	33.3?	44.38	N	7.20	E	10	G		0.1	4	NORTHERN ITALY. ML 1.7 (GEN).		
15	21	24	19.6	36.093	N	27.261	E	10	G		1.5	7	DODECANESE ISLANDS. MD 3.3 (ATH).		
15	23	47	04.6?	35.03	S	70.84	W	111	?	4.0	1.2	10	CHILE-ARGENTINA BORDER REGION		
15	23	57	33.7	8.414	S	74.199	W	163	D	4.6	0.9	67	PERU-BRAZIL BORDER REGION		
16	00	51	01.1?	34.39	S	71.93	W	10	G		1.2	9	NEAR COAST OF CENTRAL CHILE		
16	01	41	10.1&	59.620	N	145.726	W	10	G	3.7		44	GULF OF ALASKA. <AGS-P>. ML 3.6 (PMR).		
16	02	43	50.8&	44.422	N	7.406	E	10	G		0.6	10	NORTHERN ITALY. ML 3.1 (GEN).		
16	02	51	57.2?	31.25	S	117.45	E	5	G		1.5	4	WESTERN AUSTRALIA		
16	03	32	19.8&	41.723	N	12.744	E	10	G		0.2	7	SOUTHERN ITALY		
16	04	01	46.0*	8.765	N	126.924	E	68	?	4.6	1.7	17	MINDANAO, PHILIPPINE ISLANDS		
16	04	30	03.0&	37.362	N	121.717	W	7				13	CENTRAL CALIFORNIA. <BRK>. ML 2.6 (BRK).		
16	05	58	27.2*	44.221	N	129.349	W	10	G	4.2	0.4	35	OFF COAST OF OREGON		
16	06	44	16.4&	60.996	N	151.228	W	62				24	KENAI PENINSULA, ALASKA. <AGS-P>.		
16	07	14	44.1	37.234	N	20.940	E	10	G	4.1	1.2	43	IONIAN SEA. ML 4.1 (THE), 3.9 (ATH).		
16	07	24	59.2?	46.51	N	14.78	E	10	G		1.0	4	YUGOSLAVIA. ML 2.1 (KBA). MD 2.3 (LJU).		
16	07	28	00.5?	44.41	N	6.45	E	33	N		0.8	7	FRANCE		
a	16	07	36	31.6	31.664	S	178.085	W	23	D	5.4	5.5	1.2	109	KERMADEC ISLANDS REGION. Ms 5.8 (BRK).
a	16	07	56	33.4	31.725	S	177.996	W	33	N	5.4	5.5	1.1	81	KERMADEC ISLANDS REGION
16	08	12	43.7*	51.303	N	15.587	E	10	G		0.9	9	POLAND. ML 4.1 (VKA), 3.9 (KBA).		
16	08	41	54.8	5.253	S	132.381	E	44	D	5.0	4.9	1.3	33	AROE ISLANDS REGION	
16	09	31	01.9?	43.69	N	10.35	E	10	G		0.3	4	CENTRAL ITALY		
16	10	15	13.5*	17.038	N	102.031	W	33	N	4.0	0.8	8	NEAR COAST OF MICHOCAN, MEXICO		
16	10	22	36.5*	35.458	N	26.865	E	33	N		1.6	7	CRETE		
16	10	34	24.4?	39.06	N	27.67	E	10	G		0.5	4	TURKEY		
a	16	10	52	08.2	31.587	S	178.046	W	33	N	5.5	5.4	1.1	103	KERMADEC ISLANDS REGION
16	11	41	45.7&	62.958	N	149.217	W	75				45	CENTRAL ALASKA. <AGS-P>.		
16	12	01	02.5&	37.070	N	121.943	W	43				11	CENTRAL CALIFORNIA. <BRK>. ML 2.6 (BRK).		
16	12	03	45.4*	6.427	S	150.563	E	33	N	4.9	1.1	10	NEW BRITAIN REGION. ML 5.1 (PMG).		
16	12	25	58.1*	5.137	S	137.783	E	93	*	4.0	1.1	9	NEAR S. COAST OF WEST IRIAN		
16	12	41	01.3&	62.123	N	149.647	W	65				20	CENTRAL ALASKA. <AGS-P>.		
a	16	12	57	20.7	43.560	N	127.402	W	10	G	4.8	4.9	1.1	104	OFF COAST OF OREGON. ML 5.1 (BRK).
16	13	44	06.5?	51.49	N	16.40	E	10	G		0.9	5	POLAND		
16	14	11	20.3*	42.194	N	24.251	E	10	G		1.0	6	BULGARIA. ML 2.9 (THE).		
16	14	18	09.5	33.218	N	46.776	E	12	D	4.7	1.2	48	IRAN-IRAQ BORDER REGION. Felt in the Ilom area, Iran.		
16	15	11	33.5%	0.179	S	78.312	W	10	G		0.5	5	ECUADOR		
16	15	11	37.9?	34.56	N	31.17	E	33	N		1.6	7	CYPRUS. ML 3.1 (CSS).		
16	15	38	19.2%	39.225	N	29.153	E	10	G		1.1	7	TURKEY		
16	15	46	56.2%	39.209	N	29.122	E	10	G		1.0	8	TURKEY		
16	16	45	09.9?	5.20	S	154.11	E	408	?	4.6	1.0	8	SOLOMON ISLANDS		
16	18	01	51.9*	29.355	N	129.956	E	33	N	4.3	1.2	12	RYUKYU ISLANDS		
16	19	55	12.8?	5.20	S	147.25	E	220	?	4.9	1.5	6	EAST PAPUA NEW GUINEA REGION		
a	16	20	08.22.0&	40.232	N	124.138	W	2		5.1	5.5	196	NEAR COAST OF NORTHERN CALIF. <BRK>. ML 5.3 (BRK). Damage (VII) at Honey Dew. Also slight damage (VI) at Redway, Weott and Whitethorn. Felt (V) at Eureka, Garberville, Leggett, Miranda, Myers Flat, Piercy, Redcrest, Rio Dell, Westport and Willits. Felt in Humboldt, Lake, Mendocino and Trinity Counties.		
16	21	07	56.4&	40.225	N	124.407	W	9				12	NEAR COAST OF NORTHERN CALIF. <BRK>. ML 3.4 (BRK).		
17	01	20	26.0?	29.22	S	72.01	W	33	N		1.2	15	OFF COAST OF CENTRAL CHILE		

17	01 41 18.5%	38.995 N	16.399 E	10 G	0.4	7	SOUTHERN ITALY
17	02 04 41.9?	32.34 S	178.01 W	33 N 4.7	1.4	8	SOUTH OF KERMADEC ISLANDS
17	02 28 59.3*	34.028 N	26.242 E	33 N	1.4	8	CRETE
17	02 37 08.8?	16.34 N	61.33 W	10 G	0.2	4	LEEWARD ISLANDS. ML 2.1 (FDF).
17	02 43 51.3	44.417 N	7.516 E	10 G	1.0	25	NORTHERN ITALY. ML 2.8 (LDG).
17	03 33 39.8?	32.65 S	178.68 W	33 N 4.8 4.1	1.4	7	SOUTH OF KERMADEC ISLANDS
17	04 14 32.7?	51.47 N	16.08 E	10 G	0.7	9	POLAND. ML 3.4 (VKA).
17	05 25 33.6%	43.134 N	1.001 W	10 G	0.1	5	PYRENEES. MD 1.0 (STR).
17	05 29 16.2*	38.301 N	21.642 E	10 G	0.9	5	GREECE. MD 3.0 (ATH).
17	06 38 05.7	31.673 S	116.995 E	7 D 5.2	1.2	45	WESTERN AUSTRALIA. ML 5.5 (MUN). Felt (VI) at Meckering. Also felt in the Perth area.
17	07 23 01.9	64.349 N	148.396 W	33 N	1.4	10	CENTRAL ALASKA. ML 4.0 (PMR). Felt (III) at Healy.
17	07 28 01.4%	44.405 N	6.354 E	10 G	0.6	5	FRANCE. ML 2.3 (LDG).
17	07 41 15.0%	31.741 S	116.996 E	10 G	0.6	5	WESTERN AUSTRALIA
17	07 52 51.4	36.052 N	27.091 E	36 * 4.3	1.4	43	DODECANESE ISLANDS. ML 4.4 (CSS), 4.3 (ATH).
17	09 05 58.6*	9.928 N	126.576 E	33 N 4.9	1.3	15	MINDANAO, PHILIPPINE ISLANDS
17	10 39 29.6%	1.081 S	78.303 W	10 G	0.3	6	ECUADOR
17	10 42 14.1?	39.07 N	27.52 E	10 G	0.5	4	TURKEY
17	11 10 16.5*	9.764 N	126.242 E	33 N 4.6	1.0	16	MINDANAO, PHILIPPINE ISLANDS
17	11 23 31.2	37.560 N	21.117 E	10 G 4.3	1.0	57	SOUTHERN GREECE. ML 4.0 (THE), 4.0 (ATH).
17	11 51 26.8?	39.86 N	28.80 E	10 G	0.4	4	TURKEY
17	11 54 14.7?	38.66 N	23.66 E	10 G	0.1	4	GREECE. ML 2.6 (THE).
o 17	12 05 29.8	43.589 N	127.443 W	10 G 5.4 5.2	1.2	168	OFF COAST OF OREGON
17	13 23 21.7%	55.874 N	160.886 W	164	5	5	ALASKA PENINSULA. <PAL>.
17	13 26 24.1%	41.137 N	28.460 E	10 G	0.5	5	TURKEY
17	13 35 42.9*	36.895 N	29.379 E	10 G	0.5	5	TURKEY
17	14 27 45.8	40.213 N	23.904 E	10 G	0.7	10	GREECE. ML 2.5 (THE).
17	15 39 28.8%	31.724 S	117.006 E	10 G	0.3	5	WESTERN AUSTRALIA
17	16 11 14.4%	36.878 N	121.630 W	5	15	15	CENTRAL CALIFORNIA. <BRK>. ML 3.0 (BRK). Felt at Prunedale and San Juan Bautista.
17	16 21 51.9	37.297 N	20.848 E	57 4.3	1.1	51	IONIAN SEA
17	16 58 48.9	2.495 S	138.738 E	33 N 4.8 4.9	1.3	31	WEST IRIAN
17	16 59 31.2*	20.887 S	67.679 W	33 N	1.7	7	SOUTHERN BOLIVIA
17	17 17 19.9?	43.32 N	128.21 W	10 G	0.3	28	OFF COAST OF OREGON
17	17 28 26.8?	32.04 S	177.67 W	33 N 4.9	1.5	9	SOUTH OF KERMADEC ISLANDS
17	17 47 58.4%	62.344 N	147.695 W	68	21	21	CENTRAL ALASKA. <AGS-P>.
17	18 18 34.3*	41.102 N	20.179 E	10 G	1.7	5	ALBANIA. ML 2.5 (SKO).
17	19 19 08.4*	41.119 N	20.222 E	10 G	0.8	6	ALBANIA. ML 2.2 (SKO).
17	21 08 40.9*	36.116 N	27.296 E	10 G	1.6	8	DODECANESE ISLANDS
17	21 28 16.3	39.709 N	16.866 E	10 G	1.3	16	SOUTHERN ITALY
17	22 12 04.5%	59.885 N	153.827 W	142	18	18	SOUTHERN ALASKA. <AGS-P>.
17	23 27 18.0%	33.870 N	118.260 W	14	16	16	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.3 (PAS). Felt (V) at Compton; (IV) at Bellflower, Carson, Harbor City, Paramount and Wilmington; (III) at Artesia, Buena Park, Gardena, Hawthorne, Lakewood, Long Beach, Las Alamos, Los Angeles, Seal Beach and Tarrance.
18	01 04 31.0	10.797 S	113.653 E	46 D 5.1	1.2	35	SOUTH OF JAVA
18	01 15 32.6?	40.33 N	127.29 W	10 G	0.4	8	OFF COAST OF NORTHERN CALIFORNIA. ML 3.7 (BRK).
18	02 10 07.2*	34.443 N	23.949 E	10 G	1.4	13	CRETE. MD 3.9 (ATH).
18	02 48 22.1?	15.41 S	72.32 W	170 ?	1.0	8	SOUTHERN PERU
18	03 09 23.7	18.250 N	66.777 W	10 G	0.5	5	PUERTO RICO REGION. Felt at Hormigueros.
18	03 27 07.7	46.108 N	6.314 E	5 G	1.4	25	SWITZERLAND. ML 2.7 (LDG).
18	03 38 17.7*	39.935 N	23.751 E	10 G	1.2	6	AEGEAN SEA. ML 2.5 (THE).
18	04 14 39.0%	60.033 N	152.381 W	71	26	26	SOUTHERN ALASKA. <AGS-P>.
18	04 43 45.5?	46.53 N	4.47 E	33 N	0.5	8	FRANCE. ML 2.3 (LDG).
18	05 38 51.1?	3.43 N	123.22 E	513 ? 4.4	1.2	17	CELEBES SEA
o 18	05 42 35.9	30.108 S	177.665 W	25 D 5.5 5.3	1.1	135	KERMADEC ISLANDS. Felt on Raoul Island.
18	06 17 31.3?	37.70 N	3.96 W	33 N	0.2	4	SPAIN. mblg 2.7 (MDD).
18	07 28 08.4*	28.611 N	129.529 E	33 N 4.4	1.0	10	RYUKYU ISLANDS
18	08 00 04.1%	40.265 N	124.337 W	6	4	6	NEAR COAST OF NORTHERN CALIF. <BRK>. ML 3.0 (BRK).
18	08 32 40.1%	40.158 N	124.408 W	5	6	6	NEAR COAST OF NORTHERN CALIF. <BRK>. ML 3.0 (BRK).
18	08 49 39.7*	24.344 N	122.413 E	10 G	1.0	6	TAIWAN REGION
18	09 22 33.2*	4.385 S	135.261 E	33 N 4.8	1.5	16	WEST IRIAN REGION
18	09 31 40.8*	23.835 S	67.595 W	33 N	1.5	5	CHILE-ARGENTINA BORDER REGION
18	10 03 30.7?	39.08 N	27.58 E	10 G	0.6	4	TURKEY
18	10 43 24.0*	35.251 N	22.694 E	82 * 3.7	1.1	24	MEDITERRANEAN SEA
18	11 45 26.5%	41.173 N	123.777 W	33 N 4.9 4.7	204	204	NORTHERN CALIFORNIA. <BRK>. ML 4.6 (BRK). Felt (V) at Hoopa, Klamath, Orick, Salyer, Westhaven and Willow Creek. Felt (IV) at Arcata, Bayside, Blue Lake, Carlotta, Eureka, Fields Landing, Fortuna, Kneeland, Korbel, Loleta, Mirando, Orleans, Redcrest and Trinidad. Felt in Del Norte, Humboldt, Mendocino, Siskiyou and Trinity Counties.
18	12 21 03.6*	31.869 S	72.691 W	28	1.1	19	OFF COAST OF CENTRAL CHILE
f 18	12 45 23.6	30.141 S	177.688 W	13 D 6 0 5.8	1.1	262	KERMADEC ISLANDS. Ms 5.8 (BRK). Mo=1.3*10**18 Nm (PPT). Felt on Raoul Island.
18	12 48 26.6	36.220 N	27.133 E	10 G	0.7	10	DODECANESE ISLANDS. MD 3.8 (ATH).
18	13 15 01.0?	42.30 N	24.01 E	10 G	1.6	7	BULGARIA. ML 2.7 (THE).
18	14 01 51.4	44.743 N	114.187 W	5 G	0.5	14	WESTERN IDAHO. ML 3.2 (BUT).
18	14 22 15.2%	39.281 N	29.168 E	10 G	1.9	5	TURKEY
18	15 01 48.9?	31.08 N	141.05 E	33 N 4.7	1.1	6	SOUTH OF HONSHU, JAPAN
18	15 34 19.4?	50.47 N	6.02 E	10 G	0.2	4	GERMANY. ML 1.2 (UCC).
18	15 49 13.5%	58.319 N	154.793 W	99 4.4	85	85	ALASKA PENINSULA. <AGS-P>.
18	16 18 07.8%	44.537 N	7.176 E	10 G	0.4	8	NORTHERN ITALY. ML 1.7 (GEN).
18	16 48 10.8	36.031 N	27.078 E	10 G	1.6	9	DODECANESE ISLANDS. MD 3.7 (ATH).
18	17 08 58.8	44.123 N	7.377 E	10 G	0.1	10	NORTHERN ITALY. ML 1.6 (GEN).
18	17 55 28.8	36.097 N	27.198 E	10 G	1.4	8	DODECANESE ISLANDS. MD 3.5 (ATH).
18	18 16 07.3%	37.157 N	122.025 W	10	14	14	CENTRAL CALIFORNIA. <BRK> ML 3.0 (BRK).
18	18 30 00.6	0.032 S	124.603 E	81 * 4.9	1.3	37	MOLUCCA SEA
18	18 38 09.2*	56.040 S	27.402 W	33 N 5.3	1.3	16	SOUTH SANDWICH ISLANDS REGION
o 18	19 59 22.0	5.286 S	150.609 E	136 D 5.6	1.0	199	NEW BRITAIN REGION
o 18	20 57 49.2	20.760 S	178.487 W	586 D 5.7	1.0	201	FIJI ISLANDS REGION
18	21 03 22.8	44.271 N	7.385 E	10 G	0.5	28	NORTHERN ITALY. ML 2.6 (LDG), 2.5 (GEN).

18	22	12	16.47	35.99	N	27.25	E	33	N	0.2	4	DODECANESE ISLANDS. MD 3.2 (ATH).
18	22	51	08.57	41.90	N	23.18	E	10	G	0.3	5	GREECE-BULGARIA BORDER REGION. ML 2.4 (THE).
18	23	53	20.2	33.730	S	69.951	W	10	G	0.9	11	CHILE-ARGENTINA BORDER REGION
19	01	08	00.4	34.162	N	26.567	E	84	?	1.3	21	CRETE
19	02	23	00.17	31.68	S	116.97	E	10	G	0.6	4	WESTERN AUSTRALIA
19	02	52	31.3&	61.715	N	150.352	W	46		36		SOUTHERN ALASKA. <AGS-P>. ML 3.1 (PMR).
19	03	09	26.07	33.96	S	70.58	W	99	?	0.1	8	CHILE-ARGENTINA BORDER REGION
19	03	32	08.7	46.188	N	151.970	E	33	N	0.7	45	KURIL ISLANDS
19	05	17	47.7&	36.535	N	121.158	W	8		15		CENTRAL CALIFORNIA. <BRK>. ML 2.5 (BRK).
19	07	01	29.27	33.91	S	70.55	W	95	?	0.1	9	CHILE-ARGENTINA BORDER REGION
19	08	46	43.2&	63.196	N	150.566	W	131		4.4	41	CENTRAL ALASKA. <AGS-P>. Felt (III) at McKinley Park.
19	09	32	00.97	39.586	N	23.951	E	10	G	0.8	5	AEGEAN SEA
19	12	13	04.9&	37.637	N	119.053	W	2		33		CENTRAL CALIFORNIA. <BRK>. ML 3.6 (BRK).
19	12	39	17.9&	35.230	N	118.220	W	4		32		CENTRAL CALIFORNIA. <PAS-P>. ML 3.6 (PAS), 4.0 (BRK). Felt (III) at Mojave.
19	12	46	16.9	44.470	N	12.045	E	10	G	1.2	11	NORTHERN ITALY
19	13	09	52.6%	31.818	S	67.837	W	10	G	1.5	6	SAN JUAN PROVINCE, ARGENTINA
19	14	54	03.67	2.16	N	127.14	E	33	N	1.3	8	MOLUCCA PASSAGE
19	16	36	47.8	36.061	N	27.214	E	10	G	0.8	6	DODECANESE ISLANDS. MD 3.2 (ATH).
19	16	53	12.0%	35.899	N	27.444	E	10	G	0.9	5	DODECANESE ISLANDS. MD 3.2 (ATH).
19	17	09	21.2*	15.236	N	60.545	W	33	N	0.3	8	LEEWARD ISLANDS. ML 2.4 (FDF).
19	17	29	35.3*	7.430	S	126.679	E	325	?	0.8	9	BANDA SEA
19	18	44	27.67	21.76	S	170.14	E	33	N	1.5	17	LOYALTY ISLANDS REGION
19	18	52	48.77	16.93	N	100.12	W	10	G	1.2	4	NEAR COAST OF GUERRERO, MEXICO
19	19	07	46.1*	35.339	N	141.227	E	22	*	0.9	22	NEAR EAST COAST OF HONSHU, JAPAN
19	20	12	43.2&	59.798	N	152.179	W	66		11		SOUTHERN ALASKA. <AGS-P>.
19	20	30	54.6*	21.333	S	68.817	W	125	*	1.5	14	CHILE-BOLIVIA BORDER REGION
19	20	50	58.4*	46.221	N	12.592	E	10	G	0.6	5	NORTHERN ITALY. ML 1.7 (KBA).
19	21	22	58.8*	31.475	S	69.194	W	113		1.2	13	SAN JUAN PROVINCE, ARGENTINA
19	21	34	11.67	40.65	N	22.49	E	10	G	0.1	5	GREECE. ML 1.9 (THE).
19	22	05	13.7*	19.906	S	47.173	W	10	G	1.5	5	BRAZIL. Felt (VI) at Franca, Pedregulho, Rifaina and Sacramento.
19	22	33	53.3	36.065	N	27.225	E	10	G	1.3	9	DODECANESE ISLANDS. MD 3.3 (ATH).
19	23	41	43.8*	61.857	N	4.715	E	10	G	1.1	11	SOUTHERN NORWAY. ML 3.4 (NAO). MD 3.4 (BER). Felt.
20	00	24	48.1	36.957	N	29.329	E	10	G	1.0	6	TURKEY
20	00	31	54.07	50.97	N	19.75	E	33	N	0.4	4	POLAND. ML 2.8 (KRA).
a 20	01	27	09.8	35.832	N	52.954	E	25	D	5.5 5.9	1.0 348	IRAN. Slight damage in the Firuzkuh area. Felt at Tehran.
20	01	35	17.2&	62.022	N	150.886	W	53		36		CENTRAL ALASKA. <AGS-P>.
20	01	50	33.67	38.37	N	73.30	E	160	?	1.5	7	TAJIK-XINJIANG BORDER REGION
20	02	11	29.4*	24.641	N	122.641	E	10	G	1.3	9	TAIWAN REGION
20	02	15	06.4*	36.053	N	53.309	E	39	D	4.5	1.0 16	IRAN. Felt in the Firuzkuh area.
20	02	35	26.8	48.101	N	9.277	E	10	G	1.4	11	GERMANY. ML 2.8 (LDG), 2.2 (FUR), 2.1 (KBA).
20	02	55	54.8	40.097	N	142.314	E	48	D	5.2 5.7	0.9 138	NEAR EAST COAST OF HONSHU, JAPAN
20	03	41	43.3&	59.435	N	152.972	W	80		19		SOUTHERN ALASKA. <AGS-P>.
20	04	16	06.4%	39.403	N	28.392	E	10	G	1.3	5	TURKEY
20	06	46	03.8&	58.045	N	155.608	W	61		22		ALASKA PENINSULA. <AGS-P>.
20	06	52	56.9*	16.003	N	96.440	W	60	*	4.2	1.3 16	OAXACA, MEXICO
20	07	02	39.0%	22.798	N	121.091	E	5	G	0.7	5	TAIWAN REGION
a 20	07	20	21.8	15.262	S	173.376	W	34	D	5.5 5.5	1.4 121	TONGA ISLANDS. Ms 5.9 (BRK).
20	08	07	16.3	39.428	N	28.292	E	10	G	1.3	12	TURKEY
a 20	09	13	13.9	6.649	S	105.911	E	64		5.3	1.0 132	SUNDA STRAIT. Felt (IV) at Jakarta, Java.
20	11	06	13.3&	38.795	N	122.775	W	4		13		NORTHERN CALIFORNIA. <BRK>. ML 3.4 (BRK). Mo=1.9*10**14 Nm (BRK).
20	11	35	54.0*	7.656	S	87.617	E	10	G	5.0 4.3	1.1 19	SOUTH INDIAN OCEAN
20	11	51	27.0*	50.279	N	18.936	E	10	G	1.5	7	POLAND. ML 3.1 (KBA).
20	11	55	47.7	36.097	N	27.216	E	10	G	1.1	6	DODECANESE ISLANDS. MD 3.8 (ATH).
20	12	38	56.9*	35.985	N	29.000	E	10	G	0.6	5	EASTERN MEDITERRANEAN SEA
20	14	03	50.57	44.22	N	8.24	E	10	G	0.5	4	NORTHERN ITALY. ML 1.5 (GEN).
20	15	02	50.4	37.779	N	15.020	E	10	G	1.1	11	SICILY. MD 2.8 (ROM).
20	15	22	57.0	32.618	S	71.586	W	32		0.6	14	NEAR COAST OF CENTRAL CHILE
20	16	58	17.5	39.909	N	29.127	E	10	G	1.3	9	TURKEY
a 20	16	59	00.8	6.082	S	81.224	W	26	D	5.1 5.2	1.3 41	NEAR COAST OF NORTHERN PERU. Felt (IV) in the Piura area.
20	18	20	47.2*	29.790	S	72.359	W	20	*	5.3	1.4 20	OFF COAST OF CENTRAL CHILE
20	18	43	17.37	34.30	S	97.82	W	10	G	4.9	1.4 26	WEST CHILE RISE
20	19	16	14.1	34.727	N	26.167	E	10	G	1.4	22	CRETE. MD 3.7 (ATH).
20	19	17	00.5%	44.223	N	8.253	E	10	G	0.4	6	NORTHERN ITALY. ML 1.8 (GEN).
20	19	25	20.1	45.153	N	7.175	E	10	G	1.1	80	NORTHERN ITALY. ML 3.8 (GEN), 3.3 (LDG). MD 3.3 (STR).
20	19	56	46.0	19.978	S	133.706	E	10	G	4.4	1.3 12	NORTHERN TERRITORY, AUSTRALIA
20	20	19	13.4	62.211	N	150.953	W	87	?	1.1	10	CENTRAL ALASKA
20	20	29	25.6&	37.175	N	122.043	W	10		12		CENTRAL CALIFORNIA. <BRK>. ML 2.5 (BRK).
20	20	29	38.2%	44.088	N	8.283	E	10	G	0.8	6	NORTHERN ITALY. ML 1.5 (GEN).
20	20	32	45.8%	44.229	N	8.244	E	10	G	0.3	7	NORTHERN ITALY. ML 1.5 (GEN).
20	20	35	48.0	44.266	N	8.235	E	10	G	0.7	12	NORTHERN ITALY. ML 2.4 (LDG), 2.2 (GEN).
20	20	38	43.6%	44.220	N	8.274	E	10	G	0.6	7	NORTHERN ITALY. ML 1.7 (GEN).
20	20	41	32.1%	44.218	N	8.274	E	10	G	0.7	7	NORTHERN ITALY. ML 1.7 (GEN).
20	21	15	30.5%	44.248	N	8.258	E	10	G	0.6	6	NORTHERN ITALY. ML 1.7 (GEN).
20	21	21	14.37	35.59	N	51.44	E	10	G	1.2	5	IRAN. Felt in the Firuzkuh area.
20	21	23	43.8*	34.954	N	26.114	E	5	G	1.5	7	CRETE. MD 3.4 (ATH).
20	21	45	46.5%	44.249	N	8.209	E	10	G	0.1	7	NORTHERN ITALY. ML 1.8 (GEN).
20	21	54	22.5	39.525	N	24.844	E	10	G	1.3	27	AEGEAN SEA. ML 3.1 (ATH), 2.8 (THE).
20	21	59	53.7%	36.180	N	53.110	E	10	G	0.6	6	IRAN. Felt in the Firuzkuh area.
20	22	35	20.0	47.345	N	11.777	E	10	G	0.8	7	AUSTRIA. ML 2.6 (FUR), 2.3 (KBA).
20	23	07	29.4%	44.206	N	8.294	E	10	G	0.7	7	NORTHERN ITALY. ML 1.7 (GEN).
20	23	10	07.4%	44.200	N	8.292	E	10	G	0.8	7	NORTHERN ITALY. ML 1.7 (GEN).
20	23	43	30.9	44.222	N	8.257	E	10	G	0.7	7	NORTHERN ITALY. ML 1.6 (GEN).
20	23	45	23.4%	44.238	N	8.239	E	10	G	0.3	7	NORTHERN ITALY. ML 1.7 (GEN).
21	00	32	04.2%	44.264	N	8.185	E	10	G	0.6	7	NORTHERN ITALY. ML 2.2 (GEN).
21	00	34	47.47	16.87	N	99.35	W	33	N	1.6	5	NEAR COAST OF GUERRERO, MEXICO
21	01	02	09.0%	44.232	N	8.234	E	10	G	0.2	5	NORTHERN ITALY. ML 1.5 (GEN).
21	01	08	16.27	9.03	S	128.55	E	161	?	4.2	0.7 6	TIMOR SEA
21	01	08	48.9*	31.571	S	179.457	W	197	*	4.9	1.0 28	KERMADEC ISLANDS REGION

a	21	01	37	42.37	41.49	N	23.61	E	10	G	0.9	6	GREECE-BULGARIA BORDER REGION		
	21	01	59	40.0	51.979	N	170.007	W	33	N	5.2 4.6	1.0	164	FOX ISLANDS, ALEUTIAN ISLANDS	
	21	01	59	55.9	39.444	N	28.360	E	10	G		1.0	5	TURKEY	
	21	03	37	41.77	38.688	N	15.539	E	10	G		1.2	5	SICILY	
	21	03	52	42.27	8.76	N	82.82	W	74	*	4.6	0.9	10	PANAMA-COSTA RICA BORDER REGION. MD 4.6 (UPA).	
	21	04	27	04.7	19.282	S	169.127	E	155	*	4.6	1.0	20	VANUATU ISLANDS	
	21	04	52	03.27	37.985	N	14.601	E	10	G		0.9	6	SICILY	
	21	05	15	07.08	59.161	N	152.054	W	66			9		SOUTHERN ALASKA. <AGS-P>.	
	21	05	26	52.3	1.777	N	127.282	E	140	*	5.1	1.2	40	HALMAHERA	
	21	05	59	25.2	51.649	N	16.418	E	10	G		0.9	10	POLAND. ML 3.3 (VKA), 3.2 (KBA).	
	21	06	16	22.3	47.981	N	9.384	E	10	G		1.3	6	GERMANY. ML 2.5 (LDG).	
	21	07	31	02.1	29.973	S	71.947	W	33	*	4.9 4.5	1.2	50	NEAR COAST OF CENTRAL CHILE	
	21	07	49	41.9	24.090	S	66.830	W	210		4.5	1.2	16	SALTA PROVINCE, ARGENTINA	
	21	07	53	31.9	41.534	N	88.728	E	33	N	4.6	1.0	50	SOUTHERN XINJIANG, CHINA	
	21	08	10	10.67	44.22	N	8.29	E	10	G		0.3	4	NORTHERN ITALY. ML 1.4 (GEN).	
	21	08	12	03.67	22.37	N	121.44	E	10	G		0.1	5	TAIWAN REGION	
	21	08	27	18.0	43.391	N	5.426	E	10	G		1.0	19	NEAR SOUTH COAST OF FRANCE. MD 2.5 (STR).	
	21	09	41	16.57	44.32	N	7.22	E	10	G		0.1	4	NORTHERN ITALY. ML 1.6 (GEN).	
	21	09	49	19.5	23.605	N	121.698	E	28		3.9	0.5	9	TAIWAN	
	21	10	12	15.2	8.565	N	127.825	E	33	N	3.6	0.8	13	PHILIPPINE ISLANDS REGION	
	21	10	42	58.3	15.561	N	91.579	W	213		4.5	0.9	97	MEXICO-GUATEMALA BORDER REGION	
	21	10	55	49.28	60.391	N	152.728	W	127				15	SOUTHERN ALASKA. <AGS-P>.	
	21	11	42	31.9	26.028	S	69.763	W	97	?		1.3	7	NORTHERN CHILE	
	21	12	32	42.58	36.140	N	120.020	W	6	G			20	CENTRAL CALIFORNIA. <PAS-P>. ML 3.3 (PAS). Felt (III) at Avenal.	
	21	13	10	07.9	2.623	N	79.825	W	15		4.9	1.1	51	SOUTH OF PANAMA	
	21	13	20	33.58	59.779	N	152.960	W	96				57	SOUTHERN ALASKA. <AGS-P>.	
	21	13	39	40.77	35.92	N	51.38	E	10	G		0.3	5	IRAN. Felt in the Firuzkuh area.	
	21	13	54	45.7	34.830	N	28.015	E	33	N		1.5	10	EASTERN MEDITERRANEAN SEA. MD 4.0 (HLW).	
	21	14	38	05.4	42.804	N	13.113	E	7			0.9	10	CENTRAL ITALY	
	21	15	20	36.17	35.43	N	141.03	E	33	N	4.1	0.5	6	NEAR EAST COAST OF HONSHU, JAPAN	
	21	15	23	13.1	7.205	S	151.634	E	33	N	4.0	0.7	5	NEW BRITAIN REGION	
a	21	16	43	44.6	21.098	S	173.780	W	33	N	5.1 5.0	1.2	69	TONGA ISLANDS	
	21	16	52	54.0	34.419	N	70.560	E	33	N	4.5	1.4	12	AFGHANISTAN	
	21	18	12	18.88	61.471	N	150.646	W	59				25	SOUTHERN ALASKA. <AGS-P>.	
	21	18	31	11.87	41.654	N	12.799	E	5	G		0.5	5	SOUTHERN ITALY	
	21	18	44	38.3	4.858	S	152.297	E	92	*	4.0	0.3	8	NEW BRITAIN REGION	
	21	19	07	39.67	32.81	S	71.94	W	33	N		0.3	8	NEAR COAST OF CENTRAL CHILE	
	21	19	09	18.6	7.859	N	127.012	E	63	*	4.4 3.8	1.0	16	PHILIPPINE ISLANDS REGION	
	21	19	10	27.57	39.504	N	23.563	E	10	G		0.3	5	AEGEAN SEA	
	21	19	36	37.07	41.708	N	12.740	E	10	G		0.2	5	SOUTHERN ITALY	
	21	20	26	12.6	7.198	S	128.077	E	82	?	3.8	1.1	12	BANDA SEA	
	21	20	53	41.37	44.36	N	148.66	E	33	N	4.8	0.5	9	KURIL ISLANDS	
	21	21	14	29.37	41.70	N	12.71	E	10	G		0.2	4	SOUTHERN ITALY	
	21	21	26	56.47	34.75	N	57.29	E	33	N	4.5	1.3	9	IRAN	
	21	21	28	01.97	35.33	N	51.83	E	10	G		0.1	5	IRAN. Felt in the Firuzkuh area.	
	21	21	41	51.5	39.976	N	20.493	E	5	G		1.3	11	GREECE-ALBANIA BORDER REGION. MD 3.1 (ATH). ML 3.0 (THE).	
	21	21	49	59.6	32.210	S	70.103	W	113	?		0.8	11	CHILE-ARGENTINA BORDER REGION	
	21	21	50	15.37	27.50	N	140.75	E	483	?	3.8	1.0	10	BONIN ISLANDS REGION	
	21	22	10	04.0	34.020	N	70.065	E	33	N	4.7	1.1	32	AFGHANISTAN	
	21	22	55	35.77	39.236	N	28.960	E	10	G		0.9	6	TURKEY	
	22	02	31	45.17	0.64	S	80.80	W	33	N		4.2	0.6	8	NEAR COAST OF ECUADOR
a	22	02	32	04.4	20.929	S	173.870	W	37	D	5.4 5.1	1.2	112	TONGA ISLANDS	
	22	02	40	49.97	40.867	N	22.919	E	10	G		0.9	5	GREECE. ML 1.9 (THE).	
	22	03	20	34.67	29.471	S	68.043	W	33	N		0.8	5	SAN JUAN PROVINCE, ARGENTINA	
	22	03	36	10.1	41.709	N	12.688	E	10	G		0.7	14	SOUTHERN ITALY	
	22	03	45	21.87	43.33	N	128.34	W	10	G		0.3	22	OFF COAST OF OREGON	
	22	04	23	27.77	60.79	N	2.74	E	10	G		0.4	4	NORTH SEA. MD 1.9 (BER).	
a	22	05	08	54.1	22.127	S	169.993	E	33	N	5.0 4.4	1.4	54	LOYALTY ISLANDS REGION	
	22	05	16	12.3	20.902	S	174.016	W	33	N	4.8 5.2	1.3	29	TONGA ISLANDS	
	22	05	59	37.28	60.074	N	152.519	W	94				24	SOUTHERN ALASKA. <AGS-P>.	
	22	06	01	10.98	37.318	N	122.125	W	7				17	CENTRAL CALIFORNIA. <BRK>. ML 3.2 (BRK). Mo=1.5*10**14 Nm (BRK).	
	22	06	12	08.6	43.413	N	149.613	E	33	N	4.4	1.1	14	KURIL ISLANDS REGION	
	22	06	38	14.68	63.355	N	149.507	W	101				42	CENTRAL ALASKA. <AGS-P>.	
	22	06	44	42.77	7.72	S	130.19	E	33	N	3.9	0.1	5	TANIMBAR ISLANDS REGION	
o	22	08	25	34.0	31.612	S	178.083	W	33	N	5.2	1.4	35	KERMADEC ISLANDS REGION	
	22	09	17	43.47	36.02	N	27.26	E	10	G		0.9	4	DODECANESE ISLANDS	
	22	09	24	14.87	44.12	N	8.23	E	10	G		0.9	4	NORTHERN ITALY. ML 1.4 (GEN).	
	22	09	26	15.77	44.230	N	8.258	E	10	G		0.2	5	NORTHERN ITALY. ML 1.8 (GEN).	
	22	09	28	19.37	44.24	N	8.27	E	10	G		1.1	4	NORTHERN ITALY. ML 1.6 (GEN).	
	22	09	29	56.37	44.24	N	8.25	E	10	G		0.5	4	NORTHERN ITALY. ML 1.6 (GEN).	
	22	09	32	13.87	44.247	N	8.232	E	10	G		0.2	6	NORTHERN ITALY. ML 1.8 (GEN).	
	22	10	25	43.8	41.558	N	14.262	E	9			1.1	17	SOUTHERN ITALY. ML 1.6 (KBA).	
	22	10	30	02.77	38.10	N	4.86	W	10	G		0.3	4	SPAIN. mbLg 2.6 (MDD).	
	22	10	59	10.4	40.695	N	29.149	E	10	G		1.1	7	TURKEY	
	22	11	04	14.48	40.308	N	124.413	W	8				7	NEAR COAST OF NORTHERN CALIF. <BRK>. ML 3.0 (BRK).	
	22	11	20	08.87	44.337	N	8.186	E	10	G		1.2	5	NORTHERN ITALY. ML 1.7 (GEN).	
	22	13	18	24.2	36.593	N	71.258	E	89	?	4.5	1.0	11	AFGHANISTAN-USSR BORDER REGION	
	22	16	10	27.87	30.08	S	71.88	W	173	?		0.3	12	NEAR COAST OF CENTRAL CHILE	
	22	16	17	51.97	46.206	N	1.851	E	10	G		0.6	6	FRANCE. ML 1.7 (LDG).	
	22	16	41	06.2	30.438	S	70.993	W	31			1.6	15	CHILE-ARGENTINA BORDER REGION	
	22	17	13	56.1	5.175	S	153.250	E	10	G	4.1	0.9	6	NEW IRELAND REGION	
f	22	17	26	11.4	3.885	N	96.100	E	46	G	6.0 5.8	1.0	494	NORTHERN SUMATERA. Two events about 5.3 seconds apart. Depth from broadband displacement seismograms, based on first event.	
	22	18	41	37.4	1.519	S	150.980	E	45	?		1.3	24	NEW IRELAND REGION	
	22	18	49	35.07	11.54	N	92.34	E	33	N	4.8	0.8	5	ANDAMAN ISLANDS REGION	
	22	19	33	49.37	13.43	N	88.97	W	33	N		0.9	6	EL SALVADOR. Felt (II) at San Salvador.	
	22	19	52	30.67	38.002	N	6.527	W	10	G		1.4	7	SPAIN. mbLg 3.3 (MDD).	
	22	20	37	07.88	58.973	N	154.370	W	124				34	ALASKA PENINSULA. <AGS-P>.	
	22	21	02	10.88	61.278	N	149.923	W	38				40	SOUTHERN ALASKA. <AGS-P>. ML 3.6 (PMR). Felt (III) at	

22	21	32	49.2?	37.69	N	3.93	W	33	N		0.1	4	Eagle River and Peters Creek; (II) at Anchorage, Butte and Palmer.
22	23	13	57.4%	35.966	N	52.390	E	33	N		1.3	6	SPAIN. mbLg 2.6 (MDD).
22	23	26	59.9*	39.967	N	30.477	E	10	G		1.4	8	IRAN.
22	23	45	41.3%	62.569	N	151.308	W	94				19	TURKEY
23	00	41	05.7	42.523	N	71.544	W	5	G		0.3	6	CENTRAL ALASKA. <AGS-P>.
													SOUTHERN NEW ENGLAND. MD 2.5 (WES). mbLg 2.3 (NEIS). Felt (V) at Littleton; (IV) at Ayer, Concord, Nabbasset, Stow and Westford; (III) at Fitchburg, North Billerica, Marlborough, Maynard and West Groton, Massachusetts. Felt in Middlesex and Worcester Counties, Massachusetts.
23	01	00	04.0%	61.578	N	146.307	W	33				21	SOUTHERN ALASKA. <AGS-P>.
23	01	15	06.8*	30.018	S	72.025	W	38	?	4.6	1.5	19	OFF COAST OF CENTRAL CHILE
23	01	23	48.1%	61.188	N	140.376	W	0				36	SOUTHERN YUKON TERRITORY, CANADA. <AGS-P>. ML 3.5 (PMR).
23	02	25	06.6%	36.932	N	121.702	W	10				14	CENTRAL CALIFORNIA. <BRK>. ML 2.5 (BRK).
23	02	48	43.9%	59.983	N	153.526	W	146				50	SOUTHERN ALASKA. <AGS-P>.
23	03	11	19.9%	36.912	N	121.697	W	10				19	CENTRAL CALIFORNIA. <BRK>. ML 3.0 (BRK). Felt at Watsonville.
23	03	15	40.0	24.703	N	122.565	E	117	4.8	0.8	36	TAIWAN REGION	
23	04	05	10.5?	50.95	N	174.42	E	33	N	4.4	1.2	7	ALEUTIAN ISLANDS REGION
23	05	02	55.4	31.809	S	69.471	W	140	*		0.7	16	SAN JUAN PROVINCE, ARGENTINA
23	07	39	32.6?	23.67	N	120.89	E	10	G		0.0	4	TAIWAN
a 23	07	47	09.5	12.451	S	75.069	W	104	D	5.5	1.1	231	PERU. Felt (V) at Pisco, (IV) at Ica and Lima and (III) at Huancayo. Also felt at Callao.
23	09	08	37.8*	14.756	S	70.346	W	33	N		0.8	6	PERU
23	09	29	19.6*	36.056	N	27.275	E	10	G		0.5	5	DODECANESE ISLANDS
23	09	30	10.7?	16.68	N	99.73	W	33	N		0.8	5	NEAR COAST OF GUERRERO, MEXICO
23	09	43	49.8%	61.998	N	150.350	W	43				28	SOUTHERN ALASKA. <AGS-P>.
23	10	00	19.6?	14.62	N	60.89	W	10	G		0.0	4	WINDWARD ISLANDS. ML 1.9 (FDF).
23	10	33	35.6?	34.52	N	27.75	E	10	G		1.1	5	EASTERN MEDITERRANEAN SEA
23	10	34	38.6%	40.393	N	23.260	E	10	G		0.2	5	GREECE
23	11	10	57.1%	40.273	N	124.542	W	6				13	NEAR COAST OF NORTHERN CALIF. <BRK>. ML 3.4 (BRK).
23	11	27	43.3%	60.141	N	153.230	W	146	4.4			56	SOUTHERN ALASKA. <AGS-P>.
23	11	57	04.3	38.810	N	23.476	E	33	N		1.3	17	GREECE. ML 3.3 (ATH), 3.3 (THE).
23	12	32	20.1?	39.06	N	27.56	E	10	G		0.1	4	TURKEY
23	13	07	59.1?	40.39	N	25.86	E	10	G		0.4	6	AEGEAN SEA
23	13	29	21.2*	37.309	N	141.680	E	55	?	4.9	0.9	26	NEAR EAST COAST OF HONSHU, JAPAN
23	14	04	36.6?	43.82	N	7.03	E	10	G		0.2	6	NEAR SOUTH COAST OF FRANCE
23	15	33	03.4	38.187	N	21.999	E	10	G		0.7	9	GREECE. ML 2.9 (ATH).
23	15	40	53.3	25.185	N	96.424	E	33	N	4.7 4.4	1.1	53	BURMA
23	16	30	09.9?	45.00	N	4.46	E	10	G		0.8	5	FRANCE. MD 1.0 (STR).
23	16	54	53.0%	59.946	N	151.701	W	56				49	KENAI PENINSULA, ALASKA. <AGS-P>. Felt (II) at Homer.
23	17	02	53.3	18.112	S	69.719	W	147	4.7		0.8	10	NORTHERN CHILE
23	17	28	59.8*	22.661	N	120.882	E	5	G		0.6	5	TAIWAN
23	17	30	58.4	51.568	N	16.165	E	5	G		0.5	13	POLAND. ML 4.1 (VKA), 3.8 (KBA).
23	17	41	12.6%	61.628	N	146.414	W	30				37	SOUTHERN ALASKA. <AGS-P>.
23	19	13	13.1%	37.028	N	5.458	W	10	G		0.7	7	SPAIN. mbLg 2.8 (MDD).
23	19	14	34.6?	39.15	N	27.75	E	10	G		0.5	4	TURKEY
23	19	42	37.9%	35.298	N	50.744	E	5	G		1.8	5	IRAN. Felt in the Firuzkuh area.
23	20	06	53.5*	28.507	N	130.423	E	33	N	4.5	1.3	17	RYUKYU ISLANDS
a 23	20	44	46.4	19.129	N	121.236	E	25	D	5.1 4.6	1.2	77	PHILIPPINE ISLANDS REGION
23	21	24	59.8%	37.037	N	5.470	W	10	G		0.9	8	SPAIN. mbLg 3.0 (MDD).
23	21	37	30.0%	37.026	N	5.479	W	10	G		0.8	9	SPAIN. mbLg 3.4 (MDD). Felt (III) in the Coripe area.
23	23	07	06.1	36.026	N	137.531	E	10	G		1.1	11	HONSHU, JAPAN
23	23	13	28.8*	21.569	N	143.252	E	277	?	4.4	1.0	27	MARIANA ISLANDS REGION
23	23	16	41.7?	14.93	S	72.23	W	33	N		0.7	5	PERU
24	00	42	11.3	48.077	N	9.403	E	10	G		1.2	23	GERMANY. ML 3.0 (FUR), 3.1 (LDG), 3.1 (KBA), 3.4 (VKA).
24	01	06	39.5?	51.12	N	16.03	E	10	G		1.2	5	POLAND. ML 2.0 (KBA).
24	02	22	50.0%	37.055	N	5.463	W	10	G		0.9	8	SPAIN. mbLg 2.8 (MDD).
24	03	07	16.9	27.630	N	34.254	E	10	G		0.4	10	RED SEA
24	03	50	47.6%	37.043	N	5.452	W	10	G		0.9	7	SPAIN. mbLg 2.5 (MDD).
24	03	51	08.8%	39.124	N	16.750	E	10	G		0.8	11	SOUTHERN ITALY
24	03	52	01.4%	37.034	N	5.511	W	10	G		0.8	8	SPAIN. mbLg 3.3 (MDD).
24	03	56	31.4	51.715	N	16.158	E	10	G		0.7	24	POLAND. ML 4.3 (GRF), 4.0 (FUR), 4.3 (VKA), 4.0 (KBA).
24	03	57	51.5	27.599	N	34.231	E	10	G		0.6	12	RED SEA. MD 4.1 (HLW).
24	04	05	38.2?	27.62	N	34.14	E	10	G		0.3	4	RED SEA
24	04	45	05.1	39.171	N	16.925	E	48	4.5		1.2	77	SOUTHERN ITALY
24	04	46	27.8	48.062	N	9.297	E	10	G		0.9	10	GERMANY. ML 2.9 (LDG), 2.3 (FUR).
24	04	47	12.7?	39.20	N	17.68	E	10	G		1.4	6	SOUTHERN ITALY
24	05	04	38.7	40.208	N	29.988	E	10	G		0.6	9	TURKEY
24	05	07	25.5*	23.947	S	66.667	W	230	*		0.6	9	JUJUY PROVINCE, ARGENTINA
24	05	17	29.0%	39.146	N	16.687	E	10	G		1.4	8	SOUTHERN ITALY
24	05	35	26.0%	39.164	N	17.068	E	10	G		0.8	10	SOUTHERN ITALY
24	07	50	57.0%	63.071	N	149.346	W	77				24	CENTRAL ALASKA. <AGS-P>.
24	07	53	54.5	23.953	S	70.026	W	10	G	4.7	1.3	14	NEAR COAST OF NORTHERN CHILE. Felt (IV) in the Antofagasta area.
24	08	01	21.8*	24.009	S	70.156	W	10	G		1.3	5	NEAR COAST OF NORTHERN CHILE. Felt (II) in the Antofagasta area.
24	08	35	07.1%	40.454	N	23.086	E	10	G		0.7	7	GREECE
24	09	03	30.9%	41.763	N	112.628	W	10				13	UTAH. <SLC-P>. ML 3.6 (SLC).
24	09	08	15.0%	64.034	N	148.374	W	116				20	CENTRAL ALASKA. <AGS-P>.
24	10	06	13.3	49.059	N	155.553	E	44	D	5.3	0.8	129	KURIL ISLANDS
24	10	45	14.1?	51.00	N	19.98	E	10	G		1.6	4	POLAND. ML 2.7 (KRA).
24	11	03	45.8?	15.40	N	61.14	W	171			0.6	11	LEEWARD ISLANDS
24	11	23	39.5?	5.03	S	102.68	E	122	?	4.1	1.1	10	SOUTHERN SUMATERA
24	11	25	26.3%	40.141	N	16.177	E	10	G		0.8	7	SOUTHERN ITALY
24	12	14	02.4*	20.637	S	69.052	W	33	N		1.2	6	NORTHERN CHILE
24	13	17	47.4	35.690	N	26.148	E	124	4.2		1.1	68	CRETE. Felt.
24	13	54	26.0*	40.203	N	124.280	W	10	G		0.1	6	NEAR COAST OF NORTHERN CALIF. ML 2.9 (BRK).
24	14	17	03.7%	40.831	N	28.107	E	10	G		0.4	6	TURKEY
24	14	23	48.8*	31.527	S	68.610	W	109	*		0.6	7	SAN JUAN PROVINCE, ARGENTINA

24	16 18 59.2	39.187 N	16.949 E	52 *	4.1	1.1	36	SOUTHERN ITALY. MD 3.9 (ATH).
24	16 19 22.5*	12.752 S	169.703 E	681 *	4.6	1.0	69	SANTA CRUZ ISLANDS REGION
24	16 21 49.1*	71.922 N	0.351 E	10 G	4.4	0.6	7	NORWEGIAN SEA
24	16 24 19.0	11.911 N	43.215 E	10 G		1.1	14	ETHIOPIA. ML 4.5 (ARO).
24	16 35 17.4%	11.883 N	43.268 E	10 G		0.6	7	ETHIOPIA. ML 4.2 (ARO).
24	16 40 24.0*	39.565 N	16.657 E	10 G		1.5	6	SOUTHERN ITALY
24	17 14 22.1	36.031 N	137.566 E	5 G		0.7	14	HONSHU, JAPAN
24	17 55 12.8	20.620 N	99.815 E	41 *		1.1	24	BURMA
24	18 20 24.4	38.133 N	86.434 W	5 G	4.1	0.7	19	SOUTHERN INDIANA. mblg 3.8 (NEIS), 4.0 (BLA). Felt (V) at Leavenworth, Indiana and Rhadelia, Kentucky. Felt (IV) at Mauckport, Magnet, Rame and Saint Croix, Indiana. Also felt (IV) at Battletown, Bradenburg, Ekran, Guston, Hawesville, Lewisport, Payneville, Sample, Stephensport, Union Star, Webster and West Point, Kentucky.
24	18 50 33.9	42.292 N	126.433 W	10 G	4.8 4.7	1.1	61	OFF COAST OF OREGON. ML 4.2 (BRK).
24	18 59 11.8?	36.35 N	24.39 E	10 G		0.1	4	SOUTHERN GREECE
o 24	19 33 31.1	14.603 N	119.437 E	23 D	5.6 5.8	1.0	137	LUZON, PHILIPPINE ISLANDS
24	19 51 22.4*	39.103 N	17.031 E	10 G		1.2	7	SOUTHERN ITALY
24	19 51 57.1?	7.24 S	145.96 E	183 ?		0.9	7	NEAR S COAST OF PAPUA NEW GUINEA
24	20 11 33.2	39.116 N	16.966 E	10 G		0.9	12	SOUTHERN ITALY
24	20 47 08.8	42.350 N	126.301 W	10 G	4.9 5.0	0.9	67	OFF COAST OF OREGON. ML 4.4 (BRK).
24	20 55 33.5	43.599 N	127.440 W	10 G	4.5	0.8	58	OFF COAST OF OREGON. ML 4.5 (BRK).
24	21 09 40.7*	40.087 N	123.080 W	5 G		1.1	6	NORTHERN CALIFORNIA. ML 2.7 (BRK).
24	22 23 38.6%	42.503 N	13.254 E	10 G		0.2	8	CENTRAL ITALY
24	22 24 22.0%	11.933 N	43.430 E	27		0.2	10	ETHIOPIA. ML 3.9 (ARO).
24	23 22 32.8*	12.239 N	141.126 E	154 *	4.7	0.8	13	SOUTH OF MARIANA ISLANDS
24	23 24 49.3?	30.05 S	174.25 W	30 D	4.3	1.4	8	KERMADEC ISLANDS REGION
24	23 25 15.2*	36.732 N	26.692 E	10 G		1.5	8	DODECANESE ISLANDS
25	00 10 06.7?	36.50 N	26.99 E	154 ?		0.2	5	DODECANESE ISLANDS. MD 3.0 (ATH).
25	02 25 57.8?	30.77 S	179.31 W	330 G	4.4	1.1	11	KERMADEC ISLANDS REGION
25	02 34 00.9%	58.809 N	149.576 W	56	3.7		41	GULF OF ALASKA. <AGS-P>.
25	02 37 56.6%	58.959 N	149.602 W	50			19	GULF OF ALASKA. <AGS-P>.
25	02 56 58.2%	39.238 N	28.302 E	10 G		0.8	6	TURKEY
25	03 28 45.1*	35.912 N	31.872 E	10 G		1.5	6	CYPRUS
25	04 01 05.6	44.535 N	7.294 E	10 G		0.4	16	NORTHERN ITALY. ML 2.3 (LDG), 2.2 (GEN).
25	04 13 30.1*	32.430 S	177.816 W	244 ?	4.2	1.0	14	SOUTH OF KERMADEC ISLANDS
25	04 14 34.4*	23.165 S	67.263 W	187 *	4.4	1.3	8	CHILE-ARGENTINA BORDER REGION
25	04 54 44.3	42.306 N	126.418 W	10 G	4.0	1.0	39	OFF COAST OF OREGON
25	05 25 09.7	36.167 N	27.164 E	10 G		1.1	8	DODECANESE ISLANDS. MD 3.5 (ATH).
o 25	05 48 30.5?	31.03 S	179.08 W	259 ?	4.4	1.3	11	KERMADEC ISLANDS REGION
o 25	06 29 21.3*	31.554 S	177.580 W	33 N	5.2 5.1	1.4	36	KERMADEC ISLANDS REGION
25	06 42 16.4?	43.84 N	7.94 E	10 G		0.5	6	NEAR SOUTH COAST OF FRANCE. ML 1.7 (GEN).
25	07 34 25.9?	33.92 S	70.54 W	33 N		0.8	5	CHILE-ARGENTINA BORDER REGION
25	08 28 08.7?	29.06 N	57.06 E	33 N	3.9	1.2	7	SOUTHERN IRAN
25	09 25 48.5*	41.937 N	126.433 W	10 G	4.2	0.8	35	OFF COAST OF NORTHERN CALIFORNIA
25	09 37 53.7%	13.099 S	75.347 W	33 N		0.2	5	PERU
25	09 55 50.8?	39.07 N	27.59 E	10 G		1.1	4	TURKEY
25	10 44 59.4?	44.10 N	8.15 E	10 G		0.1	4	NORTHERN ITALY. ML 1.6 (GEN).
25	11 18 54.5?	44.54 N	7.26 E	10 G		0.3	4	NORTHERN ITALY. ML 1.7 (GEN).
25	11 39 26.0?	35.54 N	51.72 E	10 G		0.8	5	IRAN
25	12 44 33.0	15.236 N	60.811 W	128 *		0.2	18	LEEWARD ISLANDS
25	13 07 08.0	36.105 N	27.197 E	10 G		1.3	12	DODECANESE ISLANDS. ML 4.2 (ATH).
25	13 51 25.1%	36.673 N	121.345 W	4			14	CENTRAL CALIFORNIA. <BRK>. ML 2.7 (BRK).
25	14 04 31.8%	36.672 N	121.347 W	5			21	CENTRAL CALIFORNIA. <BRK>. ML 3.9 (BRK). Felt (III) at Chuatar and Hollister.
25	18 39 45.2%	39.173 N	16.770 E	10 G		1.3	7	SOUTHERN ITALY
25	20 29 48.1	36.085 N	27.287 E	37 *	4.0	1.3	16	DODECANESE ISLANDS. ML 4.1 (ATH).
25	20 47 29.8?	18.55 N	66.23 W	33 N		0.8	5	PUERTO RICO REGION
25	21 34 33.5	20.116 N	121.493 E	34	4.8 4.3	0.9	55	PHILIPPINE ISLANDS REGION
26	00 27 11.2%	60.194 N	151.814 W	65			34	KENAI PENINSULA, ALASKA. <AGS-P>.
26	01 10 23.2%	63.094 N	150.828 W	131			20	CENTRAL ALASKA. <AGS-P>.
26	01 23 34.3	39.364 N	28.235 E	10 G		1.4	8	TURKEY
26	01 42 28.3*	31.216 S	68.196 W	10 G		1.3	7	SAN JUAN PROVINCE, ARGENTINA
26	01 43 17.6*	35.275 N	27.133 E	10 G		1.2	20	DODECANESE ISLANDS. ML 4.1 (ATH).
26	02 13 12.2	20.236 N	145.461 E	110 *	4.7	1.1	40	MARIANA ISLANDS
26	02 20 17.4	26.083 N	110.123 W	10 G	4.8	1.3	45	GULF OF CALIFORNIA
26	02 38 14.5*	36.455 N	70.962 E	148 ?	4.1	1.1	11	HINDU KUSH REGION
26	02 47 46.8%	36.682 N	121.357 W	4			16	CENTRAL CALIFORNIA. <BRK>. ML 2.9 (BRK).
26	03 10 39.4?	33.75 N	15.10 E	10 G		1.3	11	MEDITERRANEAN SEA
26	03 26 25.6*	26.662 S	176.337 W	33 N	5.0	1.0	13	SOUTH OF FIJI ISLANDS
26	03 59 03.9?	0.92 S	79.48 W	33 N		1.0	6	ECUADOR
26	05 02 30.9*	9.490 S	117.697 E	102 *	4.3	1.2	15	SUMBAWA ISLAND REGION
26	05 54 30.0%	61.245 N	140.279 W	0			25	SOUTHERN YUKON TERRITORY, CANADA. <AGS-P>.
26	06 40 51.7?	52.47 S	160.02 E	10 G	4.4	0.2	6	MACQUARIE ISLANDS REGION
26	08 54 26.4*	41.364 N	29.248 E	10 G		0.6	8	TURKEY
26	09 40 14.2	36.071 N	27.044 E	10 G		1.2	11	DODECANESE ISLANDS. ML 4.1 (ATH).
26	10 06 14.8*	14.576 S	75.815 W	33 N	4.6	0.8	13	NEAR COAST OF PERU
26	11 08 30.0*	14.839 S	76.112 W	33 N	4.3	1.0	12	NEAR COAST OF PERU
26	11 42 55.6	36.047 N	27.148 E	10 G		1.3	7	DODECANESE ISLANDS
26	11 47 21.2%	45.383 N	25.406 E	5 G		1.4	7	ROMANIA
26	13 42 31.5?	56.09 N	6.28 W	10 G		0.5	10	UNITED KINGDOM. ML 3.0 (BGS). Felt (IV) on Colonsay and (II) on Iona.
26	14 51 42.4?	41.21 N	28.51 E	10 G		1.5	9	TURKEY
26	16 12 39.4	59.016 N	26.955 E	10 G		1.1	13	TURKEY. MD 3.4 (ATH).
26	20 13 36.5	53.879 N	132.186 W	10 G	4.0	0.8	16	QUEEN CHARLOTTE ISLANDS REGION. Felt (IV) at Masset and Port Clements, British Columbia. Also felt at Skidegate, British Columbia.
26	20 49 53.8	40.289 N	27.344 E	10 G		0.6	11	TURKEY. MD 3.2 (ATH).
26	22 46 19.8	23.347 N	100.242 E	33 N	4.6	1.3	31	YUNNAN PROVINCE, CHINA
26	23 27 40.3	23.338 N	100.191 E	33 N	4.5	1.2	29	YUNNAN PROVINCE, CHINA
27	00 30 41.4	39.923 N	23.817 E	10 G		1.0	14	AEGEAN SEA. MD 3.0 (ATH) ML 2.7 (THE).
o 27	00 34 55.0	6.913 S	130.257 E	109 *	5.1	1.2	41	BANDA SEA

27	01	19	00.3*	37.624	N	21.388	E	10				1.5	13	SOUTHERN GREECE. ML 3.4 (ATH), 3.3 (THE).
27	01	37	17.0?	37.05	S	177.90	E	191	?	4.0		1.0	7	OFF E. COAST OF N. ISLAND, N.Z.
27	01	38	59.1	43.790	N	16.478	E	10	G			1.1	30	YUGOSLAVIA. ML 3.4 (ZAG), 3.2 (KBA). Felt (V) at Potravlje and Otavice.
27	02	08	18.8	42.198	N	15.579	E	13				1.3	33	ADRIATIC SEA. MD 3.9 (TRI). ML 3.3 (KBA).
27	02	45	09.2&	61.590	N	147.769	W	10					34	SOUTHERN ALASKA. <AGS-P>.
27	03	36	03.6&	36.668	N	121.343	W	6					13	CENTRAL CALIFORNIA. <BRK>. ML 2.3 (BRK).
27	03	39	24.4	6.431	S	154.993	E	102	*	4.6		1.3	30	SOLOMON ISLANDS
27	04	48	57.0&	61.731	N	149.974	W	38					44	SOUTHERN ALASKA. <AGS-P>. ML 3.7 (PMR).
27	05	07	22.3&	36.842	N	121.587	W	3					14	CENTRAL CALIFORNIA. <BRK>. ML 2.9 (BRK).
27	05	48	01.7?	15.68	S	167.48	E	136	?	4.6		0.7	9	VANUATU ISLANDS
27	06	28	52.0?	30.12	N	113.73	W	10	G	4.2		1.1	11	GULF OF CALIFORNIA
27	06	37	01.4*	31.230	S	68.618	W	116	*			0.8	9	SAN JUAN PROVINCE, ARGENTINA
27	07	31	48.3*	52.098	N	169.579	W	33	N	4.7		0.8	18	FOX ISLANDS, ALEUTIAN ISLANDS
27	07	51	31.9&	60.218	N	152.144	W	82					24	SOUTHERN ALASKA. <AGS-P>.
27	08	27	01.0%	39.190	N	27.790	E	10	G			0.4	5	TURKEY
27	08	49	20.7	33.425	N	14.804	E	33	N	4.1		1.2	26	MEDITERRANEAN SEA. MD 3.8 (ATH).
27	09	10	52.9	16.521	S	69.915	W	192		4.8		1.3	32	PERU-BOLIVIA BORDER REGION
27	09	16	06.5?	39.07	N	27.64	E	10	G			0.2	4	TURKEY
27	09	29	11.1	39.149	N	24.341	E	10	G			0.7	14	AEGEAN SEA. ML 3.2 (ATH), 3.0 (THE).
27	10	52	45.1?	40.27	N	27.24	E	10	G			1.4	5	TURKEY
27	11	30	51.7	43.618	N	12.440	E	11				0.9	62	CENTRAL ITALY. MD 3.7 (TRI). ML 3.4 (LDG), 3.8 (KBA).
27	11	45	32.6	49.155	N	6.878	E	10	G			0.8	10	GERMANY. MD 2.6 (UCC), 2.3 (STR).
27	12	36	00.1?	16.71	N	99.86	W	33	N			0.4	5	NEAR COAST OF GUERRERO, MEXICO
27	12	39	24.0?	13.12	N	89.18	W	33	N			0.2	7	EL SALVADOR. Felt (II) at San Salvador.
27	12	57	41.7*	32.081	S	69.646	W	130	?			0.3	6	MENDOZA PROVINCE, ARGENTINA
27	14	05	50.3	38.119	N	86.438	W	5	G	3.8		0.8	15	SOUTHERN INDIANA. mblg 3.5 (NEIS). Felt (IV) at Derby, Grantsburg, Magnet, Rame and Saint Craix, Indiana. Also felt (IV) at Battletown and West Point, Kentucky. Felt in Crawford, Harrison and Perry Counties, Indiana and in Breckinridge and Meade Counties, Kentucky.
27	14	53	26.6?	3.72	S	149.86	E	33	N	4.3		1.2	8	BISMARCK SEA
27	15	11	22.2*	12.873	S	73.891	W	33	N			1.3	8	PERU
27	16	24	41.9	37.506	N	76.686	E	33	N	4.3		1.3	16	SOUTHERN XINJIANG, CHINA
27	16	48	26.4?	70.97	N	11.08	W	10	G	3.9		0.7	6	JAN MAYEN ISLAND REGION. MD 2.4 (BER).
27	16	55	10.7	31.538	S	67.762	W	10	G			0.7	6	SAN JUAN PROVINCE, ARGENTINA
27	18	36	06.9	48.010	N	9.343	E	10	G			1.2	9	GERMANY. ML 2.6 (FUR), 2.8 (LDG).
27	18	38	14.6*	19.006	N	144.954	E	613	?	4.3		0.2	13	MARIANA ISLANDS
27	19	52	40.2	38.532	N	23.550	E	21		4.4		1.1	70	GREECE. ML 4.2 (ATH), 3.9 (THE).
27	19	59	02.9?	7.20	N	126.44	E	99	?	4.3		0.6	7	MINDANAO, PHILIPPINE ISLANDS
27	21	21	53.7&	36.678	N	121.350	W	5					18	CENTRAL CALIFORNIA. <BRK>. ML 3.4 (BRK).
27	21	42	55.7&	36.673	N	121.367	W	2					17	CENTRAL CALIFORNIA. <BRK>. ML 3.0 (BRK).
27	22	06	08.9&	38.788	N	122.742	W	7					15	NORTHERN CALIFORNIA. <BRK>. ML 4.4 (BRK). Ma=1.2*10**15 Nm (BRK). Felt (IV) at Cobb. Felt (III) at Lach Lamond and Middletown.
27	22	50	12.8	41.632	N	22.764	E	10	G			0.9	8	YUGOSLAVIA. ML 2.1 (SKO).
27	23	14	46.4*	12.963	N	143.034	E	140	?	4.6		0.7	11	SOUTH OF MARIANA ISLANDS
27	23	18	18.2*	38.321	S	74.425	W	33	N	5.0	4.1	1.4	17	OFF COAST OF CENTRAL CHILE
27	23	29	37.9%	39.486	N	28.980	E	10	G			0.6	6	TURKEY
27	23	53	02.4	18.545	N	68.930	W	154	D	4.5		1.0	57	MONA PASSAGE. Felt in the Dominican Republic. Also felt slightly at Aguas Buenas, Puerto Rico.
28	01	10	53.5?	39.86	N	23.85	E	10	G			0.8	8	AEGEAN SEA
28	01	23	56.5?	4.17	S	152.96	E	116	?	4.3		1.5	7	NEW BRITAIN REGION
28	01	25	28.9?	17.52	S	178.97	E	622	*	4.4		1.2	12	FIJI ISLANDS
28	02	52	44.2*	40.115	N	21.561	E	10	G			1.4	6	GREECE
28	03	58	49.2*	5.883	S	105.670	E	105	*	5.3		1.3	71	SUNDA STRAIT
28	04	20	51.2*	36.451	N	2.589	E	10	G			1.0	16	ALGERIA. mblg 3.6 (MDD). Felt at Algiers.
28	04	41	42.9	38.186	N	23.028	E	125	*			0.9	26	GREECE
28	04	59	59.1	43.313	N	102.504	W	5	G			0.9	16	SOUTH DAKOTA. mblg 3.9 (NEIS), 4.0 (TUL). Felt (V) at Oglala; (IV) at Manderson; (III) at Edgemont, Hot Springs, Pine Ridge and Rapid City. Felt (III) at Gordon and (II) at Chadron, Nebraska.
28	06	07	04.7&	55.809	N	155.014	W	98					15	SOUTH OF ALASKA. <AGS-P>.
28	06	08	19.1?	51.51	N	16.22	E	10	G			1.1	4	POLAND. ML 3.2 (VKA).
28	07	28	41.0?	31.08	S	179.10	W	261	?	4.3		1.2	9	KERMADEC ISLANDS REGION
28	07	36	08.6	49.165	N	6.810	E	10	G			1.1	17	GERMANY. MD 2.8 (STR), 2.9 (UCC). ML 3.0 (KBA).
28	09	14	47.0%	41.132	N	28.649	E	10	G			0.8	6	TURKEY
28	09	34	14.1?	39.11	N	27.61	E	10	G			0.1	4	TURKEY
28	10	01	33.1?	5.23	S	152.94	E	113	?	3.5		0.6	5	NEW BRITAIN REGION
28	10	06	32.6%	37.741	N	15.022	E	10	G			0.3	5	SICILY
28	10	07	12.3?	37.86	N	15.03	E	10	G			0.0	4	SICILY
28	10	09	25.5%	37.796	N	14.977	E	10	G			1.1	9	SICILY
28	10	14	51.2%	37.787	N	14.970	E	10	G			0.9	8	SICILY
28	10	21	31.6	42.615	N	26.242	E	10	G			1.1	21	BULGARIA
28	10	22	44.5*	42.678	N	26.299	E	10	G			0.7	7	BULGARIA
28	10	24	32.0?	37.76	N	15.07	E	10	G			1.5	4	SICILY
28	10	25	14.3%	41.698	N	12.808	E	10	G			0.5	5	SOUTHERN ITALY
28	11	00	33.1%	37.782	N	15.030	E	10	G			0.8	11	SICILY
28	11	15	30.3*	16.733	S	167.656	E	27	D	5.1		1.3	34	VANUATU ISLANDS
28	11	40	11.3%	39.356	N	28.336	E	10	G			0.4	6	TURKEY
28	12	26	03.4?	37.99	N	14.97	E	10	G			0.9	4	SICILY
28	12	49	12.5*	40.607	N	21.376	E	10	G			1.0	6	GREECE ML 2.7 (SKO), 2.4 (THE).
28	13	54	28.0?	35.54	N	51.72	E	10	G			0.8	5	IRAN
28	17	10	52.3&	63.603	N	149.877	W	146					19	CENTRAL ALASKA. <AGS-P>.
28	17	34	11.9*	7.024	S	150.027	E	33	N	4.2		1.4	5	NEW BRITAIN REGION
28	17	51	30.6	36.120	N	27.119	E	10	G			0.8	16	DODECANESE ISLANDS. ML 4.0 (ATH).
28	18	36	24.2	36.060	N	27.190	E	10	G			1.5	24	DODECANESE ISLANDS ML 3.9 (ATH), 4.2 (CSS).
28	19	36	09.6	36.156	N	27.166	E	10	G			1.0	10	DODECANESE ISLANDS ML 3.9 (ATH).
28	20	24	55.7%	13.120	S	75.892	W	33	N			0.1	5	PERU
28	20	40	42.3*	16.084	S	72.233	W	10	G			1.2	8	NEAR COAST OF PERU
28	21	41	38.9*	30.733	N	41.663	W	10	G	4.6	3.9	0.9	14	NORTH ATLANTIC RIDGE
28	22	43	16.9	30.902	N	41.537	W	18	D	4.8	4.1	0.9	54	NORTH ATLANTIC RIDGE
29	00	11	43.5	41.759	N	24.361	E	10	G			0.8	14	GREECE-BULGARIA BORDER REGION

29	00 16 43.9	51.676 N	175.303 W	56	5.0 4.5	0.9	117	ANDREANOF ISLANDS, ALEUTIAN IS.
29	01 07 50.07	41.71 N	24.29 E	10 G		0.5	5	GREECE-BULGARIA BORDER REGION. ML 2.3 (THE).
29	02 09 08.8	50.411 N	5.957 E	10 G		1.0	15	BELGIUM. MD 2.3 (UCC). ML 2.6 (LDG).
29	02 21 07.5	39.173 N	28.337 E	10 G		0.3	5	TURKEY
29	02 29 50.87	9.91 S	123.39 E	33 N	3.9	0.7	5	TIMOR
29	02 41 23.9	18.271 N	102.547 W	39 D	5.4 4.4	1.1	108	MICHOACAN, MEXICO
29	02 50 22.58	59.051 N	145.122 W	10 G			10	GULF OF ALASKA. <AGS-P>.
29	03 51 41.2	43.970 N	7.435 E	10 G		0.3	6	NEAR SOUTH COAST OF FRANCE. MD 1.0 (STR).
29	03 51 56.6	40.844 N	23.221 E	10 G		1.2	23	GREECE. ML 3.7 (THE). 3.5 (ATH). 3.7 (SKO).
29	04 47 01.0	31.336 S	67.935 W	10 G		0.5	5	SAN JUAN PROVINCE, ARGENTINA
29	05 28 13.2	23.568 N	120.940 E	10 G		0.2	5	TAIWAN
29	06 08 43.0	40.732 N	23.311 E	10 G		0.4	8	GREECE. ML 2.3 (THE). 2.1 (SKO).
29	06 11 33.9	23.571 N	120.954 E	10 G		0.4	7	TAIWAN
29	06 23 32.6	44.624 N	8.235 E	10 G		0.9	5	NORTHERN ITALY. ML 1.6 (GEN).
29	06 48 37.7	31.23 N	39.57 W	20 D	4.4	1.0	11	NORTH ATLANTIC RIDGE
29	08 16 00.6	39.20 N	27.80 E	10 G		0.6	4	TURKEY
29	09 56 36.2	39.06 N	27.53 E	10 G		0.1	4	TURKEY
29	10 29 45.1	44.766 N	7.167 E	13		0.6	12	NORTHERN ITALY. ML 2.3 (GEN).
29	10 37 10.3	40.190 N	142.324 E	48 D	4.8 4.0	1.2	30	NEAR EAST COAST OF HONSHU, JAPAN
29	11 09 07.9	1.061 S	78.183 W	10 G		0.9	5	ECUADOR
29	12 19 16.4	43.54 N	7.57 E	10 G		0.2	6	NEAR SOUTH COAST OF FRANCE. ML 2.5 (GEN).
29	12 54 43.9	44.592 N	8.245 E	10 G		0.4	6	NORTHERN ITALY. ML 2.1 (GEN).
29	13 01 45.1	39.964 N	23.936 E	10 G	4.3	0.9	64	AEGEAN SEA. ML 4.0 (THE). 4.1 (ATH).
29	13 08 36.7	39.953 N	23.820 E	10 G		0.9	10	AEGEAN SEA. ML 2.7 (THE).
29	13 11 36.6	44.543 N	8.275 E	10 G		0.2	6	NORTHERN ITALY. ML 2.1 (GEN).
29	13 13 21.8	44.551 N	8.281 E	10 G		0.4	6	NORTHERN ITALY. ML 2.1 (GEN).
29	13 15 42.6	44.560 N	8.273 E	10 G		0.1	6	NORTHERN ITALY. ML 2.0 (GEN).
29	13 16 10.6	34.463 N	106.879 W	12	4.5		46	NEW MEXICO. <SNM>. mbLg 4.8 (TUL). Slight damage (VI) at Jarales. Felt (V) at Albuquerque and Bosque; (IV) at Belen, Los Lunas, Magdalena and Tame; (III) at Mountainair; (II) at Isleta, Peralta and Socorro.
29	14 30 14.7	31.81 S	179.72 W	501 ?	3.9	1.2	16	KERMADEC ISLANDS REGION
29	14 54 07.1	38.342 N	21.883 E	10 G		1.2	13	GREECE. ML 3.0 (THE). MD 3.2 (ATH).
29	15 05 50.0	2.44 S	27.80 W	10 G	4.5 4.1	0.5	7	SOUTH ATLANTIC OCEAN
29	15 35 31.8	39.991 N	23.770 E	10 G		1.3	8	AEGEAN SEA
29	15 48 18.6	41.948 N	141.650 E	33 N	4.4	0.5	6	HOKKAIDO, JAPAN REGION
29	16 05 38.4	39.980 N	23.694 E	10 G		1.1	14	AEGEAN SEA. MD 3.2 (ATH).
29	16 56 43.4	44.343 N	8.260 E	10 G		0.3	5	NORTHERN ITALY. ML 1.8 (GEN).
29	18 34 41.1	39.955 N	23.771 E	10 G		1.2	9	AEGEAN SEA
29	19 41 47.4	38.117 N	86.424 W	5 G		0.8	12	SOUTHERN INDIANA. mbLg 2.9 (NEIS). Felt (III) at Magnet and (II) at Leavenworth. Also felt in Meade County, Kentucky.
29	19 50 57.5	27.188 N	129.417 E	29 D	5.1	1.2	40	RYUKYU ISLANDS
29	20 01 38.6	13.91 N	95.57 E	33 N		1.6	5	ANDAMAN ISLANDS REGION
29	20 18 29.9	40.831 N	28.066 E	10 G		0.3	5	TURKEY
29	20 34 20.2	6.104 N	94.683 E	98 D	5.0	0.9	118	NICOBAR ISLANDS REGION
29	20 57 25.3	51.942 N	169.500 W	33 N	5.0	1.2	89	FOX ISLANDS, ALEUTIAN ISLANDS. ML 4.6 (PMR).
29	21 13 08.4	36.782 N	26.581 E	10 G		0.7	6	DODECANESE ISLANDS. MD 3.1 (ATH).
29	21 41 43.5	8.669 N	127.426 E	33 ?	4.7 4.4	1.3	23	PHILIPPINE ISLANDS REGION
29	23 24 04.8	36.574 N	23.011 E	10 G		0.3	5	SOUTHERN GREECE. ML 3.0 (ATH).
30	02 38 08.5	36.070 N	26.910 E	10 G		0.9	9	DODECANESE ISLANDS. MD 3.7 (ATH).
30	02 54 12.6	60.245 N	152.582 W	101			21	SOUTHERN ALASKA. <AGS-P>.
30	03 15 02.2	43.008 N	145.460 E	41 D	5.5 4.3	0.8	284	HOKKAIDO, JAPAN REGION
30	03 42 16.9	60.778 N	4.690 E	10 G		0.7	5	SOUTHERN NORWAY. MD 2.1 (BER).
30	04 10 31.3	61.376 N	149.991 W	34			50	SOUTHERN ALASKA. <AGS-P>. ML 3.4 (PMR). Felt (IV) at Fort Richardson, (III) at Anchorage and (II) at Palmer.
30	04 46 47.2	20.634 S	178.657 W	613 *	4.7	1.0	13	FIJI ISLANDS REGION
30	05 03 34.7	39.154 N	16.771 E	10 G		1.5	5	SOUTHERN ITALY
30	05 07 18.6	36.543 N	121.177 W	4			16	CENTRAL CALIFORNIA. <BRK>. ML 2.8 (BRK).
30	05 47 56.2	18.99 S	168.26 E	149	4.7	0.5	9	VANUATU ISLANDS
30	07 12 37.8	61.410 N	150.024 W	35			48	SOUTHERN ALASKA. <AGS-P>. ML 3.3 (PMR). Felt (II) at Anchorage and Palmer.
30	08 12 12.9	43.393 N	5.427 E	10 G		0.7	15	NEAR SOUTH COAST OF FRANCE. MD 2.8 (STR).
30	08 34 05.9	38.203 N	28.844 E	10 G		0.7	13	TURKEY
30	09 16 07.3	39.11 N	27.54 E	10 G		0.5	4	TURKEY
30	10 16 48.1	38.277 N	29.242 E	10 G		0.3	5	TURKEY
30	11 10 46.7	35.763 N	52.276 E	10 G		0.6	6	IRAN. Felt at Firuzkuh.
30	11 16 24.5	60.117 N	152.968 W	117			35	SOUTHERN ALASKA. <AGS-P>.
30	12 43 58.2	62.138 N	147.906 W	9			50	CENTRAL ALASKA. <AGS-P> ML 2.7 (PMR).
30	14 01 37.8	40.442 N	23.485 E	10 G		0.2	5	GREECE
30	14 19 31.5	44.319 N	8.371 E	10 G		1.0	6	NORTHERN ITALY. ML 1.9 (GEN).
30	15 06 26.0	28.599 N	85.714 E	52 ?	4.5	1.5	22	NEPAL
30	16 33 26.2	45.82 N	16.13 E	10 G		1.3	5	YUGOSLAVIA. ML 2.0 (ZAG). 2.0 (KBA).
30	17 21 58.3	18.314 N	66.461 W	33 N		0.6	5	PUERTO RICO REGION
30	17 41 44.5	33.12 S	72.42 W	33 N		1.4	8	OFF COAST OF CENTRAL CHILE
30	18 14 12.8	23.398 S	179.094 E	548	5.3	1.0	110	SOUTH OF FIJI ISLANDS
30	18 37 45.1	5.03 S	139.58 E	33 N	4.4	0.5	4	WEST IRIAN
30	19 58 45.7	34.396 N	136.306 E	370	4.9	0.8	86	SOUTHERN HONSHU, JAPAN
30	21 03 54.7	44.77 N	15.06 E	10 G		0.3	6	YUGOSLAVIA. MD 2.8 (LJU). 2.5 (TRI).
30	21 30 42.5	37.898 N	16.070 E	10 G		0.3	5	IONIAN SEA
30	21 46 15.2	39.760 N	29.459 E	10 G		0.8	6	TURKEY
30	22 59 33.6	71.134 N	6.012 W	10 G		0.1	6	JAN MAYEN ISLAND REGION. MD 2.0 (BER).
31	00 35 49.2	61.536 N	146.523 W	30			38	SOUTHERN ALASKA. <AGS-P>.
31	00 37 44.2	48.064 N	9.291 E	5 G		0.6	11	GERMANY. ML 2.5 (FUR). 2.8 (LDG). 2.2 (KBA).
31	00 46 13.0	32.40 S	70.99 W	119 *	4.2	1.3	17	CHILE-ARGENTINA BORDER REGION
31	00 58 33.4	44.89 N	11.32 E	10 G		1.4	4	NORTHERN ITALY. ML 2.0 (KBA).
31	01 08 19.2	34.445 N	106.860 W	10 G		0.7	15	NEW MEXICO. mbLg 4.0 (TUL). Felt (V) at Belen and Bosque, (IV) at Jarales and (II) at Socorro. Also felt at Bernardo and Los Lunas.
31	02 04 06.6	39.158 N	16.736 E	10 G		0.8	8	SOUTHERN ITALY
31	02 18 19.6	26.39 N	129.29 E	33 N	4.6	1.2	7	RYUKYU ISLANDS
31	02 46 08.3	38.377 N	20.291 E	50	4.1	1.1	71	GREECE
31	02 51 26.1	44.46 N	6.53 E	10 G		0.1	5	FRANCE ML 1.9 (GEN).





Dep 55.4 6.7 Half-duration 1.9  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 1.76 Plg= 4 Azm=333  
N -0.60 49 68  
P -1.16 41 240  
Best Double Couple:Mo=1.5\*10\*\*17  
NP1:Strike= 25 Dip=59 Slip=-151  
NP2: 279 66 -34

04 05 32 21.04 15.397S 172.850W 54km  
6.4mb ( 45 obs.) 6.4Msz ( 33 obs.)  
SAMOA ISLANDS REGION  
FAULT PLANE SOLUTION: P-Waves  
NP1:Strike=140 Dip=60 Slip= -90  
NP2: 320 30 -90  
Principal Axes:  
T Plg=15 Azm=230  
P 75 50  
Comment: The focal mechanism is  
poorly controlled and  
corresponds to normal  
faulting. The preferred fault  
plane is NP1.  
RADIATED ENERGY  
No. of sta: 14 Focal mech. F  
Energy 1.0\*10\*\*14 Nm  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 15S, 39C M.W.: 11S, 22C  
Centroid Location:  
Origin Time 05:32:30.5 0.2  
Lat 15.45S 0.02 Lon 173.17W 0.02  
Dep 59.8 1.0 Half-duration 7.1  
Principal Axes:  
Scale 10\*\*18 Nm  
T Val= 6.24 Plg=14 Azm=214  
N 0.82 25 311  
P -7.06 61 98  
Best Double Couple:Mo=6.7\*10\*\*18  
NP1:Strike=274 Dip=38 Slip=-133  
NP2: 144 63 -62

04 18 54 31.52 41.600S 85.278E 10km  
5.0mb ( 8 obs.) 5.1Msz ( 1 obs.)  
SOUTHEAST INDIAN RISE  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 8S, 16C  
Centroid Location:  
Origin Time 18:54:39.2 1.5  
Lat 41.54S 0.12 Lon 84.96E 0.13  
Dep 15.0 FIX Half-duration 1.7  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 4.95 Plg= 0 Azm=174  
N 0.60 90 180  
P -5.55 0 84  
Best Double Couple:Mo=5.2\*10\*\*16  
NP1:Strike=219 Dip=90 Slip=-180  
NP2: 309 90 0

04 22 24 01.17 3.156S 148.464E 33km  
5.1mb ( 9 obs.) 4.4Msz ( 1 obs.)  
BISMARCK SEA  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 9S, 16C  
Centroid Location:  
Origin Time 22:24: 3.7 1.5  
Lat 3.08S 0.11 Lon 148.29E 0.14  
Dep 15.0 FIX Half-duration 1.5  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 4.75 Plg= 4 Azm=321  
N 1.27 68 60  
P -6.01 21 230  
Best Double Couple:Mo=5.4\*10\*\*16  
NP1:Strike= 8 Dip=72 Slip=-167  
NP2: 274 78 -18

04 23 25 57.19 32.381N 138.821E 248km  
5.1mb ( 54 obs.)  
SOUTH OF HONSHU, JAPAN  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 12S, 14C  
Centroid Location:  
Origin Time 23:25:59.4 1.4  
Lat 32.16N 0.12 Lon 138.79E 0.21  
Dep 270.3 6.8 Half-duration 1.5  
Principal Axes:  
Scale 10\*\*16 Nm

T Val= 5.30 Plg=26 Azm= 62  
N 1.82 62 216  
P -7.12 11 327  
Best Double Couple:Mo=6.2\*10\*\*16  
NP1:Strike=102 Dip=64 Slip= 169  
NP2: 197 80 26

05 07 16 51.78 41.836N 126.796W 10km  
4.7mb ( 19 obs.) 5.1Msz ( 2 obs.)  
OFF COAST OF NORTHERN CALIFORNIA  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 15S, 26C  
Centroid Location:  
Origin Time 07:17: 1.0 0.6  
Lat 42.28N 0.07 Lon 127.60W 0.07  
Dep 15.0 FIX Half-duration 1.9  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 1.43 Plg= 0 Azm= 94  
N -0.04 0 4  
P -1.38 90 180  
Best Double Couple:Mo=1.4\*10\*\*17  
NP1:Strike=184 Dip=45 Slip= -90  
NP2: 4 45 -90

05 10 10 21.81 8.800S 106.442E 29km  
5.3mb ( 21 obs.) 5.8Msz ( 8 obs.)  
SOUTH OF JAVA  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 18S, 39C  
Centroid Location:  
Origin Time 10:10:38.5 0.7  
Lat 8.75S FIX;Lon 106.53E FIX  
Dep 15.0 FIX Half-duration 2.8  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 6.09 Plg=51 Azm=245  
N -0.61 23 124  
P -5.47 29 20  
Best Double Couple:Mo=5.8\*10\*\*17  
NP1:Strike= 64 Dip=26 Slip= 27  
NP2: 309 78 113

05 13 03 44.30 19.258S 69.529W 109km  
5.0mb ( 9 obs.)  
NORTHERN CHILE  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 11S, 17C  
Centroid Location:  
Origin Time 13:03:50.6 0.5  
Lat 19.47S 0.05 Lon 69.24W 0.06  
Dep 132.0 2.3 Half-duration 1.8  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 1.79 Plg=43 Azm= 76  
N -0.26 7 172  
P -1.53 46 270  
Best Double Couple:Mo=1.7\*10\*\*17  
NP1:Strike= 97 Dip= 7 Slip=-165  
NP2: 353 88 -83

05 18 27 00.12 18.863N 106.795W 33km  
5.4mb ( 52 obs.) 5.9Msz ( 12 obs.)  
OFF COAST OF JALISCO, MEXICO  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 15S, 38C  
Centroid Location:  
Origin Time 18:27: 0.2 0.4  
Lat 18.54N 0.03 Lon 106.83W 0.03  
Dep 15.0 FIX Half-duration 3.8  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 10.19 Plg= 0 Azm=239  
N -0.23 90 180  
P -9.96 0 149  
Best Double Couple:Mo=1.0\*10\*\*18  
NP1:Strike=284 Dip=90 Slip=-180  
NP2: 14 90 0

06 21 44 56.26 10.681S 92.987E 15km  
5.7mb ( 46 obs.) 5.5Msz ( 24 obs.)  
SOUTH INDIAN OCEAN  
FAULT PLANE SOLUTION: P-Waves  
NP1:Strike= 60 Dip=73 Slip= 90  
NP2: 240 17 90  
Principal Axes:  
T Plg=62 Azm=330  
P 28 150  
Comment: The focal mechanism is

poorly controlled and  
corresponds to reverse  
faulting. The preferred fault  
plane is NP2.  
RADIATED ENERGY  
No. of sta: 7 Focal mech. C  
Energy 7.7\*10\*\*12 Nm  
MOMENT TENSOR SOLUTION  
Dep 20 No. of sta: 14  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 6.93 Plg=43 Azm= 5  
N 0.85 32 239  
P -7.78 30 128  
Best Double Couple:Mo=7.4\*10\*\*17  
NP1:Strike=166 Dip=33 Slip= 14  
NP2: 64 82 122  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 14S, 29C  
Centroid Location:  
Origin Time 21:45: 1.9 0.4  
Lat 11.24S 0.05 Lon 92.57E 0.05  
Dep 15.0 BDY Half-duration 3.4  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 10.31 Plg=61 Azm=163  
N 2.87 15 43  
P -13.18 24 306  
Best Double Couple:Mo=1.2\*10\*\*18  
NP1:Strike= 8 Dip=25 Slip= 52  
NP2: 229 70 106

07 09 06 43.44 15.947S 74.245W 48km  
5.9mb ( 64 obs.) 5.3Msz ( 7 obs.)  
NEAR COAST OF PERU  
RADIATED ENERGY  
No. of sta: 4 Focal mech. C  
Energy 1.4\*10\*\*13 Nm  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 12S, 28C  
Centroid Location:  
Origin Time 09:06:51.1 0.4  
Lat 16.31S 0.06 Lon 74.82W 0.11  
Dep 30.2 5.1 Half-duration 2.1  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 1.88 Plg=53 Azm=133  
N -0.05 37 305  
P -1.83 4 38  
Best Double Couple:Mo=1.9\*10\*\*17  
NP1:Strike=161 Dip=52 Slip= 140  
NP2: 278 59 45

07 13 28 47.47 41.518N 142.053E 70km  
5.2mb ( 54 obs.)  
HOKKAIDO, JAPAN REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 11S, 28C  
Centroid Location:  
Origin Time 13:28:52.2 0.4  
Lat 41.19N 0.05 Lon 141.66E 0.05  
Dep 52.0 4.6 Half-duration 2.0  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 1.32 Plg=72 Azm=270  
N 0.36 7 23  
P -1.68 16 116  
Best Double Couple:Mo=1.5\*10\*\*17  
NP1:Strike=217 Dip=29 Slip= 105  
NP2: 19 62 82

07 20 53 29.23 32.159S 57.447E 10km  
5.3mb ( 35 obs.) 4.8Msz ( 3 obs.)  
ATLANTIC-INDIAN RISE  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 10S, 24C  
Centroid Location:  
Origin Time 20:53:36.7 1.0  
Lat 31.94S 0.08 Lon 57.54E 0.10  
Dep 15.0 FIX Half-duration 1.7  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 1.08 Plg= 0 Azm=183  
N -0.29 90 180  
P -0.79 0 93  
Best Double Couple:Mo=0.9\*10\*\*17  
NP1:Strike=228 Dip=90 Slip=-180  
NP2: 318 90 0

08 19 06 44.41 13.254N 143.877E 141km  
5.1mb ( 19 obs.)  
SOUTH OF MARIANA ISLANDS  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 9S, 21C  
Centroid Location:  
Origin Time 19:06:43.4 1.1  
Lat 12.82N 0.09 Lon 143.94E 0.17  
Dep 135.0 3.0 Half-duration 1.5  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 5.61 Plg=72 Azm= 34  
N -0.13 15 246  
P -5.47 9 153  
Best Double Couple:Mo=5.5\*10\*\*16  
NP1:Strike=226 Dip=38 Slip= 65  
NP2: 77 56 109

08 19 44 34.67 52.038N 169.446W 33km  
5.6mb ( 68 obs.) 5.7MsZ ( 21 obs.)  
FOX ISLANDS, ALEUTIAN ISLANDS  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 16S, 39C  
Centroid Location:  
Origin Time 19:44:38.3 0.2  
Lat 52.34N 0.03 Lon 169.51W 0.05  
Dep 15.0 FIX Half-duration 3.9  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 12.22 Plg=63 Azm=347  
N 1.14 8 240  
P -13.36 26 146  
Best Double Couple:Mo=1.3\*10\*\*18  
NP1:Strike=218 Dip=21 Slip= 66  
NP2: 63 71 99

09 04 58 39.17 51.963N 169.383W 33km  
5.4mb ( 62 obs.) 5.3MsZ ( 13 obs.)  
FOX ISLANDS, ALEUTIAN ISLANDS  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 15S, 37C  
Centroid Location:  
Origin Time 04:58:47.2 0.3  
Lat 52.31N 0.03 Lon 169.24W 0.05  
Dep 15.0 FIX Half-duration 3.0  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 5.61 Plg=63 Azm=353  
N 0.84 11 239  
P -6.44 24 144  
Best Double Couple:Mo=6.0\*10\*\*17  
NP1:Strike=211 Dip=24 Slip= 60  
NP2: 63 70 102

09 14 42 58.25 21.738S 179.396W 604km  
5.4mb ( 43 obs.)  
FIJI ISLANDS REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 6S, 10C  
Centroid Location:  
Origin Time 14:43: 6.2 2.2  
Lat 21.50S 0.17 Lon 179.76W 0.17  
Dep 623.210.8 Half-duration 1.5  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 11.14 Plg=39 Azm= 88  
N -0.40 29 205  
P -10.74 37 320  
Best Double Couple:Mo=1.1\*10\*\*17  
NP1:Strike=112 Dip=29 Slip= 177  
NP2 205 89 61

09 15 35 49.07 11.591N 95.017E 33km  
5.2mb ( 59 obs.) 5.3MsZ ( 7 obs.)  
ANDAMAN ISLANDS REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 10S, 21C  
Centroid Location:  
Origin Time 15:35:49.2 0.6  
Lat 11.50N 0.03 Lon 95.01E 0.06  
Dep 59.4 4.0 Half-duration 2.8  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 4.60 Plg= 2 Azm=124  
N -0.12 80 21  
P -4.48 10 214  
Best Double Couple:Mo=4.5\*10\*\*17  
NP1:Strike=258 Dip=81 Slip= -6

NP2: 349 84 -171

09 18 51 29.21 24.753N 95.241E 119km  
6.1mb ( 83 obs.)  
BURMA  
FAULT PLANE SOLUTION: P-Waves  
NP1:Strike=250 Dip=62 Slip= 37  
NP2: 141 58 146  
Principal Axes:  
T Plg=45 Azm=107  
P 3 14  
Comment: The focal mechanism is moderately well controlled and corresponds to strike-slip faulting with a large reverse component. The preferred fault plane is not determined.  
RADIATED ENERGY  
No. of sta: 4 Focal mech. C  
Energy 1.1\*10.5\*10\*\*14 Nm  
MOMENT TENSOR SOLUTION  
Dep 119 No. of sta: 9  
Principal Axes:  
Scale 10\*\*18 Nm  
T Val= 3.85 Plg=57 Azm=167  
N -0.02 3 262  
P -3.83 33 354  
Best Double Couple:Mo=3.8\*10\*\*18  
NP1:Strike= 98 Dip=13 Slip= 106  
NP2: 261 78 86  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 11S, 28C M.W.: 12S, 23C  
Centroid Location:  
Origin Time 18:51:36.2 0.2  
Lat 24.42N 0.02 Lon 94.95E 0.02  
Dep 129.6 1.0 Half-duration 5.0  
Principal Axes:  
Scale 10\*\*18 Nm  
T Val= 3.44 Plg=58 Azm=142  
N -0.78 24 276  
P -2.67 20 16  
Best Double Couple:Mo=3.0\*10\*\*18  
NP1:Strike=140 Dip=32 Slip= 139  
NP2: 267 69 64

10 03 09 18.85 39.646N 143.288E 34km  
5.3mb ( 41 obs.)  
OFF EAST COAST OF HONSHU, JAPAN  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 9S, 21C  
Centroid Location:  
Origin Time 03:09:24.7 0.7  
Lat 38.92N 0.12 Lon 142.78E 0.10  
Dep 15.0 FIX Half-duration 2.6  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 3.65 Plg=58 Azm=282  
N 0.29 3 16  
P -3.94 32 108  
Best Double Couple:Mo=3.8\*10\*\*17  
NP1:Strike=207 Dip=13 Slip= 101  
NP2: 15 77 87

10 03 11 17.63 39.706N 143.306E 37km  
5.7mb ( 48 obs.) 5.5MsZ ( 5 obs.)  
OFF EAST COAST OF HONSHU, JAPAN  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 10S, 26C  
Centroid Location:  
Origin Time 03:11:21.1 0.6  
Lat 40.01N FIX:Lon 142.97E FIX  
Dep 15.0 FIX Half-duration 3.3  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 5.69 Plg=49 Azm=314  
N 0.16 21 197  
P -5.85 33 93  
Best Double Couple:Mo=5.8\*10\*\*17  
NP1:Strike=132 Dip=23 Slip= 23  
NP2: 20 81 111

10 10 06 01.59 52.192S 13.514E 10km  
5.5mb ( 12 obs.) 5.0MsZ ( 3 obs.)  
SOUTHWEST OF AFRICA  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 10S, 19C  
Centroid Location:  
Origin Time 10:06 9.7 0.4  
Lat 52.04S 0.03 Lon 14 15E 0.12

Dep 15.0 FIX Half-duration 2.0  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 1.48 Plg= 0 Azm=203  
N -0.09 0 113  
P -1.38 90 180  
Best Double Couple:Mo=1.4\*10\*\*17  
NP1:Strike=293 Dip=45 Slip= -90  
NP2: 113 45 -90

10 11 53 21.65 11.654N 95.143E 33km  
5.3mb ( 46 obs.) 5.4MsZ ( 7 obs.)  
ANDAMAN ISLANDS REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 10S, 22C  
Centroid Location:  
Origin Time 11:53:22.8 0.5  
Lat 11.71N 0.03 Lon 95.03E 0.05  
Dep 61.0 3.2 Half-duration 2.5  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 7.51 Plg= 7 Azm=125  
N -0.31 81 347  
P -7.20 6 216  
Best Double Couple:Mo=7.3\*10\*\*17  
NP1:Strike=260 Dip=81 Slip= 0  
NP2: 170 90 171

10 13 10 12.33 52.117N 169.236W 33km  
5.6mb ( 61 obs.) 5.3MsZ ( 7 obs.)  
FOX ISLANDS, ALEUTIAN ISLANDS  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 10S, 22C  
Centroid Location:  
Origin Time 13:10:17.6 0.5  
Lat 52.23N 0.09 Lon 169.94W 0.15  
Dep 15.0 FIX Half-duration 2.0  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 2.07 Plg=60 Azm=316  
N -0.56 1 47  
P -1.50 30 138  
Best Double Couple:Mo=1.8\*10\*\*17  
NP1:Strike=231 Dip=15 Slip= 94  
NP2: 47 75 89

10 16 11 46.73 10.073S 123.819E 33km  
5.6mb ( 43 obs.) 4.9MsZ ( 12 obs.)  
TIMOR  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 11S, 22C  
Centroid Location:  
Origin Time 16:11:46.8 0.9  
Lat 10.32S 0.07 Lon 124.35E 0.08  
Dep 58.7 4.1 Half-duration 2.0  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 1.45 Plg=57 Azm= 60  
N 0.61 33 252  
P -2.07 5 158  
Best Double Couple:Mo=1.8\*10\*\*17  
NP1:Strike=218 Dip=49 Slip= 44  
NP2: 95 58 129

12 03 24 59.08 12.672N 87.489W 86km  
5.3mb ( 19 obs.)  
NEAR COAST OF NICARAGUA  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 11S, 22C  
Centroid Location:  
Origin Time 03:25: 3.5 1.1  
Lat 12.18N 0.11 Lon 87.65W 0.08  
Dep 15.0 FIX Half-duration 2.0  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 2.53 Plg=63 Azm= 75  
N 0.34 12 321  
P -2.88 24 226  
Best Double Couple:Mo=2.7\*10\*\*17  
NP1:Strike=293 Dip=24 Slip= 60  
NP2: 145 70 102

12 15 28 14.79 4.979N 126.508E 62km  
5.4mb ( 37 obs.)  
TALAUD ISLANDS  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 14S, 28C  
Centroid Location:

Origin Time 15:28:15.1 0.3  
 Lat 4.77N 0.05 Lon 126.42E 0.05  
 Dep 48.4 3.1 Half-duration 2.8  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 3.88 Plg=72 Azm=240  
 N 1.55 11 9  
 P -5.43 13 102  
 Best Double Couple:Mo=4.7\*10\*\*17  
 NP1:Strike=207 Dip=33 Slip= 111  
 NP2: 2 59 77

13 02 07 26.84 16.826N 99.509W 28km  
 5.3mb ( 42 obs.) 5.0Msz ( 4 obs.)  
 NEAR COAST OF GUERRERO, MEXICO  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 11S, 28C  
 Centroid Location:  
 Origin Time 02:07:31.5 1.1  
 Lat 16.33N 0.09 Lon 99.67W 0.08  
 Dep 34.2 4.9 Half-duration 1.8  
 Principal Axes:  
 Scale 10\*\*16 Nm  
 T Val= 10.00 Plg=65 Azm= 62  
 N 0.04 19 284  
 P -10.03 16 189  
 Best Double Couple:Mo=1.0\*10\*\*17  
 NP1:Strike=253 Dip=34 Slip= 54  
 NP2: 114 63 112

13 03 32 15.27 12.661N 125.038E 36km  
 5.3mb ( 30 obs.) 4.6Msz ( 4 obs.)  
 SAMAR, PHILIPPINE ISLANDS  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 8S, 14C  
 Centroid Location:  
 Origin Time 03:32:16.4 0.8  
 Lat 12.71N 0.07 Lon 125.28E 0.11  
 Dep 22.8 7.9 Half-duration 1.5  
 Principal Axes:  
 Scale 10\*\*16 Nm  
 T Val= 6.85 Plg=67 Azm=217  
 N -0.05 8 327  
 P -6.80 21 61  
 Best Double Couple:Mo=6.8\*10\*\*16  
 NP1:Strike=166 Dip=25 Slip= 110  
 NP2: 324 67 81

13 20 03 41.92 10.171S 117.826E 36km  
 5.2mb ( 24 obs.) 4.8Msz ( 11 obs.)  
 SOUTH OF SUMBAWA ISLAND  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 11S, 23C  
 Centroid Location:  
 Origin Time 20:03:49.7 1.2  
 Lat 10.05S 0.12 Lon 118.09E 0.11  
 Dep 56.7 5.8 Half-duration 1.5  
 Principal Axes:  
 Scale 10\*\*16 Nm  
 T Val= 11.80 Plg=59 Azm=196  
 N -3.87 29 353  
 P -7.94 10 88  
 Best Double Couple:Mo=9.9\*10\*\*16  
 NP1:Strike=209 Dip=43 Slip= 135  
 NP2: 335 61 57

13 20 18 17.75 10.812S 166.008E 47km  
 4.9mb ( 7 obs.)  
 SANTA CRUZ ISLANDS  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 13S, 26C  
 Centroid Location:  
 Origin Time 20:18:26.2 0.4  
 Lat 11.14S 0.06 Lon 165.34E 0.05  
 Dep 53.4 3.6 Half-duration 2.0  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 1.55 Plg=80 Azm=147  
 N 0.19 9 353  
 P -1.74 4 262  
 Best Double Couple:Mo=1.6\*10\*\*17  
 NP1:Strike=342 Dip=41 Slip= 76  
 NP2: 181 50 102

14 03 03 19.23 37.819N 91.971E 12km  
 6.1mb ( 88 obs.) 6.1Msz ( 16 obs.)  
 QINGHAI PROVINCE, CHINA  
 FAULT PLANE SOLUTION: P-Waves  
 NP1:Strike=260 Dip=72 Slip= 90

NP2: 80 18 90  
 Principal Axes:  
 T Plg=63 Azm=170  
 P 27 350  
 Comment: The focal mechanism is  
 poorly controlled and  
 corresponds to reverse  
 faulting. The preferred fault  
 plane is NP2.  
 RADIATED ENERGY  
 No. of sta: 5 Facal mech. M  
 Energy 2.4±0.7\*10\*\*13 Nm  
 MOMENT TENSOR SOLUTION  
 Dep 14 No. of sta: 11  
 Principal Axes:  
 Scale 10\*\*18 Nm  
 T Val= 1.12 Plg=72 Azm= 96  
 N -0.06 17 254  
 P -1.06 7 346  
 Best Double Couple:Mo=1.1\*10\*\*18  
 NP1:Strike= 94 Dip=41 Slip= 116  
 NP2: 241 54 69  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 10S, 26C  
 Centroid Location:  
 Origin Time 03:03:30.9 0.6  
 Lat 37.60N 0.05 Lon 92.10E 0.10  
 Dep 15.0 BDY Half-duration 3.8  
 Principal Axes:  
 Scale 10\*\*18 Nm  
 T Val= 0.79 Plg=56 Azm=269  
 N 0.64 32 111  
 P -1.43 10 15  
 Best Double Couple:Mo=1.1\*10\*\*18  
 NP1:Strike= 72 Dip=45 Slip= 41  
 NP2: 310 63 127

14 21 04 03.26 29.709S 177.467W 58km  
 5.5mb ( 20 obs.) 6.0Msz ( 15 obs.)  
 KERMADEC ISLANDS  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 14S, 37C  
 Centroid Location:  
 Origin Time 21:04:12.7 0.4  
 Lat 29.52S 0.03 Lon 177.79W 0.04  
 Dep 30.1 1.9 Half-duration 4.1  
 Principal Axes:  
 Scale 10\*\*18 Nm  
 T Val= 1.31 Plg=73 Azm=268  
 N 0.43 6 17  
 P -1.74 16 109  
 Best Double Couple:Mo=1.5\*10\*\*18  
 NP1:Strike=207 Dip=30 Slip= 102  
 NP2: 14 61 83

16 07 36 31.66 31.664S 178.085W 23km  
 5.4mb ( 14 obs.) 5.5Msz ( 14 obs.)  
 KERMADEC ISLANDS REGION  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 15S, 37C  
 Centroid Location:  
 Origin Time 07:36:44.8 0.6  
 Lat 31.53S 0.05 Lon 178.30W 0.05  
 Dep 15.0 BDY Half-duration 2.6  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 3.62 Plg=65 Azm=253  
 N 0.76 12 12  
 P -4.38 21 106  
 Best Double Couple:Mo=4.0\*10\*\*17  
 NP1:Strike=218 Dip=26 Slip= 119  
 NP2: 6 67 76

16 07 56 33.47 31.725S 177.996W 33km  
 5.4mb ( 11 obs.) 5.5Msz ( 3 obs.)  
 KERMADEC ISLANDS REGION  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 11S, 26C  
 Centroid Location:  
 Origin Time 07:56:46.4 1.0  
 Lat 31.27S 0.07 Lon 178.26W 0.10  
 Dep 15.0 FIX Half-duration 2.4  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 2.39 Plg=77 Azm= 4  
 N 1.12 12 197  
 P -3.50 3 106  
 Best Double Couple:Mo=3.0\*10\*\*17  
 NP1:Strike=183 Dip=44 Slip= 72

NP2: 28 49 107  
 Principal Axes:  
 T Plg=63 Azm=170  
 P 27 350  
 Comment: The focal mechanism is  
 poorly controlled and  
 corresponds to reverse  
 faulting. The preferred fault  
 plane is NP2.  
 RADIATED ENERGY  
 No. of sta: 5 Facal mech. M  
 Energy 2.4±0.7\*10\*\*13 Nm  
 MOMENT TENSOR SOLUTION  
 Dep 14 No. of sta: 11  
 Principal Axes:  
 Scale 10\*\*18 Nm  
 T Val= 1.12 Plg=72 Azm= 96  
 N -0.06 17 254  
 P -1.06 7 346  
 Best Double Couple:Mo=1.1\*10\*\*18  
 NP1:Strike= 94 Dip=41 Slip= 116  
 NP2: 241 54 69  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 10S, 26C  
 Centroid Location:  
 Origin Time 03:03:30.9 0.6  
 Lat 37.60N 0.05 Lon 92.10E 0.10  
 Dep 15.0 BDY Half-duration 3.8  
 Principal Axes:  
 Scale 10\*\*18 Nm  
 T Val= 0.79 Plg=56 Azm=269  
 N 0.64 32 111  
 P -1.43 10 15  
 Best Double Couple:Mo=1.1\*10\*\*18  
 NP1:Strike= 72 Dip=45 Slip= 41  
 NP2: 310 63 127

16 10 52 08.28 31.587S 178.046W 33km  
 5.5mb ( 12 obs.) 5.4Msz ( 12 obs.)  
 KERMADEC ISLANDS REGION  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 12S, 28C  
 Centroid Location:  
 Origin Time 10:52:15.7 0.5  
 Lat 31.53S 0.04 Lon 177.86W 0.05  
 Dep 15.0 FIX Half-duration 2.3  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 2.59 Plg=68 Azm=211  
 N 0.20 21 12  
 P -2.79 7 104  
 Best Double Couple:Mo=2.7\*10\*\*17  
 NP1:Strike=217 Dip=43 Slip= 122  
 NP2: 356 55 64

16 12 57 20.70 43.560N 127.402W 10km  
 4.8mb ( 19 obs.) 4.9Msz ( 3 obs.)  
 OFF COAST OF OREGON  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 13S, 28C  
 Centroid Location:  
 Origin Time 12:57:29.1 0.5  
 Lat 43.46N 0.06 Lon 128.28W 0.06  
 Dep 15.0 FIX Half-duration 2.3  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 2.74 Plg= 4 Azm= 72  
 N 0.03 81 187  
 P -2.77 8 342  
 Best Double Couple:Mo=2.8\*10\*\*17  
 NP1:Strike=117 Dip=82 Slip=-177  
 NP2: 27 87 -8

16 20 08 22.00 40.232N 124.138W 2km  
 5.1mb ( 52 obs.) 5.5Msz ( 9 obs.)  
 NEAR COAST OF NORTHERN CALIF.  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 11S, 23C  
 Centroid Location:  
 Origin Time 20:08:30.6 0.6  
 Lat 40.06N 0.05 Lon 124.94W 0.06  
 Dep 15.0 FIX Half-duration 2.2  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 1.73 Plg= 0 Azm=262  
 N 0.46 90 180  
 P -2.19 0 172  
 Best Double Couple:Mo=2.0\*10\*\*17  
 NP1:Strike=307 Dip=90 Slip=-180  
 NP2: 37 90 0

17 12 05 29.84 43.589N 127.443W 10km  
 5.4mb ( 55 obs.) 5.2Msz ( 7 obs.)  
 OFF COAST OF OREGON  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 13S, 27C  
 Centroid Location:  
 Origin Time 12:05:36.7 0.5  
 Lat 43.52N 0.05 Lon 128.50W 0.05  
 Dep 15.0 FIX Half-duration 2.6  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 3.70 Plg=16 Azm= 73  
 N -0.07 73 273  
 P -3.62 5 165  
 Best Double Couple:Mo=3.7\*10\*\*17  
 NP1:Strike=210 Dip=75 Slip= 8  
 NP2: 118 83 165

18 05 42 35.91 30.108S 177.665W 25km  
 5.5mb ( 24 obs.) 5.3Msz ( 2 obs.)  
 KERMADEC ISLANDS  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 12S, 24C  
 Centroid Location:  
 Origin Time 05:42:48.8 1.0  
 Lat 29.67S 0.06 Lon 177.93W 0.09  
 Dep 31.8 4.4 Half-duration 2.0  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 1.29 Plg=76 Azm=355  
 N 0.68 13 196  
 P -1.97 5 105

Best Double Couple: Mo=1.6\*10\*\*17  
 NP1: Strike=181 Dip=42 Slip= 70  
 NP2: 27 51 107

18 12 45 23.60 30.141S 177.688W 13km  
 6.0mb ( 29 obs.) 5.8Msz ( 23 obs.)  
 KERMADEC ISLANDS  
 FAULT PLANE SOLUTION: P-Waves  
 NP1: Strike=350 Dip=65 Slip= 90  
 NP2: 170 25 90  
 Principal Axes:  
 T P1g=70 Azm=260  
 P 20 80  
 Comment: The focal mechanism is poorly controlled and corresponds to reverse faulting. The preferred fault plane is NP2.  
 RADIATED ENERGY  
 No. of sta: 4 Focal mech. M  
 Energy 2.9±1.3\*10\*\*12 Nm  
 MOMENT TENSOR SOLUTION  
 Dep 25 No. of sta: 16  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Vol= 8.40 P1g=62 Azm=294  
 N 0.43 17 170  
 P -8.84 22 73  
 Best Double Couple: Mo=8.6\*10\*\*17  
 NP1: Strike=134 Dip=27 Slip= 51  
 NP2: 357 69 108  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 14S, 34C  
 Centroid Location:  
 Origin Time 12:45:39.7 0.5  
 Lat 29.74S 0.03 Lon 178.07W 0.04  
 Dep 32.5 2.1 Half-duration 3.8  
 Principal Axes:  
 Scale 10\*\*18 Nm  
 T Vol= 1.01 P1g=74 Azm=263  
 N 0.40 6 15  
 P -1.41 15 107  
 Best Double Couple: Mo=1.2\*10\*\*18  
 NP1: Strike=206 Dip=30 Slip= 103  
 NP2: 12 60 83

18 19 59 22.09 5.286S 150.609E 136km  
 5.6mb ( 29 obs.)  
 NEW BRITAIN REGION  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 13S, 22C  
 Centroid Location:  
 Origin Time 19:59:25.3 0.6  
 Lat 5.50S 0.06 Lon 150.74E 0.06  
 Dep 148.4 1.5 Half-duration 2.3  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Vol= 2.39 P1g=9 Azm=148  
 N -0.34 16 241  
 P -2.04 71 30  
 Best Double Couple: Mo=2.2\*10\*\*17  
 NP1: Strike=220 Dip=39 Slip=-117  
 NP2: 72 56 -70

18 20 57 49.29 20.760S 178.487W 586km  
 5.7mb ( 40 obs.)  
 FIJI ISLANDS REGION  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 12S, 24C  
 Centroid Location:  
 Origin Time 20:57:56.8 0.8  
 Lat 20.53S 0.07 Lon 178.87W 0.07  
 Dep 593.2 4.2 Half-duration 2.9  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Vol= 3.55 P1g=42 Azm=143  
 N 1.53 15 40  
 P -5.08 44 295  
 Best Double Couple: Mo=4.3\*10\*\*17  
 NP1: Strike=305 Dip=15 Slip= -4  
 NP2: 39 89 -105

20 01 27 09.80 35.832N 52.954E 25km  
 5.5mb ( 73 obs.) 5.9Msz ( 22 obs.)  
 IRAN  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 14S, 34C  
 Centroid Location:  
 Origin Time 01:27:13.2 0.2

Lat 35.58N 0.03 Lon 53.29E 0.03  
 Dep 33.0 FIX Half-duration 3.7  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Vol= 9.24 P1g=22 Azm=316  
 N 1.89 65 105  
 P -11.13 12 222  
 Best Double Couple: Mo=1.0\*10\*\*18  
 NP1: Strike=357 Dip=66 Slip= 172  
 NP2: 91 83 24

20 07 20 21.83 15.262S 173.376W 34km  
 5.5mb ( 25 obs.) 5.5Msz ( 10 obs.)  
 TONGA ISLANDS  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 12S, 28C  
 Centroid Location:  
 Origin Time 07:20:28.5 0.3  
 Lat 15.91S 0.05 Lon 173.13W 0.05  
 Dep 15.0 FIX Half-duration 3.0  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Vol= 6.14 P1g=47 Azm=324  
 N 0.16 29 196  
 P -6.30 28 89  
 Best Double Couple: Mo=6.2\*10\*\*17  
 NP1: Strike=130 Dip=32 Slip= 20  
 NP2: 22 79 120

20 09 13 13.96 6.649S 105.911E 64km  
 5.3mb ( 22 obs.)  
 SUNDIA STRAIT  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 13S, 24C  
 Centroid Location:  
 Origin Time 09:13:19.5 0.7  
 Lat 7.06S 0.07 Lon 106.14E 0.09  
 Dep 58.8 4.4 Half-duration 1.8  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Vol= 1.44 P1g=6 Azm=139  
 N -0.10 52 41  
 P -1.34 37 234  
 Best Double Couple: Mo=1.4\*10\*\*17  
 NP1: Strike=269 Dip=59 Slip= -24  
 NP2: 12 69 -147

20 16 59 00.89 6.082S 81.224W 26km  
 5.1mb ( 8 obs.) 5.2Msz ( 2 obs.)  
 NEAR COAST OF NORTHERN PERU  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 13S, 26C  
 Centroid Location:  
 Origin Time 16:59:7.3 0.5  
 Lat 6.53S 0.08 Lon 81.25W 0.08  
 Dep 15.0 FIX Half-duration 1.8  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Vol= 1.64 P1g=63 Azm=86  
 N 0.10 5 347  
 P -1.74 26 255  
 Best Double Couple: Mo=1.7\*10\*\*17  
 NP1: Strike=334 Dip=19 Slip= 76  
 NP2: 169 71 95

21 01 59 40.09 51.979N 170.007W 33km  
 5.2mb ( 51 obs.) 4.6Msz ( 6 obs.)  
 FOX ISLANDS, ALEUTIAN ISLANDS  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 11S, 20C  
 Centroid Location:  
 Origin Time 01:59:44.6 1.8  
 Lat 52.25N 0.26 Lon 170.57W 0.31  
 Dep 15.0 FIX Half-duration 1.5  
 Principal Axes:  
 Scale 10\*\*16 Nm  
 T Vol= 7.08 P1g=52 Azm=319  
 N -0.35 3 226  
 P -6.74 38 134  
 Best Double Couple: Mo=6.9\*10\*\*16  
 NP1: Strike=205 Dip=8 Slip= 69  
 NP2: 46 83 93

21 16 43 44.67 21.098S 173.780W 33km  
 5.1mb ( 13 obs.) 5.0Msz ( 3 obs.)  
 TONGA ISLANDS  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 13S, 29C

Centroid Location:  
 Origin Time 16:43:53.4 0.8  
 Lat 20.95S 0.06 Lon 174.09W 0.08  
 Dep 15.0 FIX Half-duration 2.0  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Vol= 1.29 P1g=67 Azm=288  
 N 0.37 3 191  
 P -1.66 23 100  
 Best Double Couple: Mo=1.5\*10\*\*17  
 NP1: Strike=184 Dip=23 Slip= 82  
 NP2: 13 68 93

22 02 32 04.47 20.929S 173.870W 37km  
 5.4mb ( 27 obs.) 5.1Msz ( 11 obs.)  
 TONGA ISLANDS  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 10S, 22C  
 Centroid Location:  
 Origin Time 02:32:12.3 1.6  
 Lat 20.96S 0.08 Lon 173.78W 0.11  
 Dep 15.0 FIX Half-duration 1.9  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Vol= 1.22 P1g=70 Azm=25  
 N 0.35 20 198  
 P -1.57 2 289  
 Best Double Couple: Mo=1.4\*10\*\*17  
 NP1: Strike=38 Dip=46 Slip= 118  
 NP2: 181 51 64

22 05 08 54.12 22.127S 169.993E 33km  
 5.0mb ( 6 obs.) 4.4Msz ( 1 obs.)  
 LOYALTY ISLANDS REGION  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 11S, 21C  
 Centroid Location:  
 Origin Time 05:08:59.0 0.7  
 Lat 22.32S 0.16 Lon 169.67E 0.11  
 Dep 37.0 6.6 Half-duration 1.7  
 Principal Axes:  
 Scale 10\*\*16 Nm  
 T Vol= 8.29 P1g=60 Azm=348  
 N -1.04 27 142  
 P -7.25 11 238  
 Best Double Couple: Mo=7.8\*10\*\*16  
 NP1: Strike=358 Dip=42 Slip= 134  
 NP2: 126 62 58

22 08 25 34.07 31.612S 178.083W 33km  
 5.2mb ( 4 obs.)  
 KERMADEC ISLANDS REGION  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 13S, 27C  
 Centroid Location:  
 Origin Time 08:25:41.7 0.5  
 Lat 31.55S FIX; Lon 178.12W FIX  
 Dep 15.0 FIX Half-duration 2.0  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Vol= 1.49 P1g=74 Azm=156  
 N 0.42 9 31  
 P -1.91 13 299  
 Best Double Couple: Mo=1.7\*10\*\*17  
 NP1: Strike=16 Dip=33 Slip= 73  
 NP2: 216 58 101

22 17 26 11.46 3.885N 96.100E 46km  
 6.0mb ( 88 obs.) 5.8Msz ( 29 obs.)  
 NORTHERN SUMATERA  
 FAULT PLANE SOLUTION: P-Waves  
 NP1: Strike=128 Dip=73 Slip= 90  
 NP2: 308 17 90  
 Principal Axes:  
 T P1g=62 Azm=38  
 P 28 218  
 Comment: The focal mechanism is poorly controlled and corresponds to reverse faulting. The preferred fault plane is NP2.  
 RADIATED ENERGY  
 No. of sta: 6 Focal mech. C  
 Energy 1.5±0.4\*10\*\*13 Nm  
 MOMENT TENSOR SOLUTION  
 Dep 49 No. of sta: 13  
 Principal Axes:  
 Scale 10\*\*18 Nm  
 T Vol= 2.26 P1g=66 Azm=25  
 N 0.02 1 116

P -2.28 24 207  
 Best Double Couple:Mo=2.3\*10\*\*18  
 NP1:Strike=298 Dip=21 Slip= 92  
 NP2: 116 69 89  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 16S, 41C  
 Centroid Location:  
 Origin Time 17:26:19.2 0.2  
 Lat 3.55N 0.03 Lon 95.93E 0.03  
 Dep 50.1 1.9 Half-duration 5.0  
 Principal Axes:  
 Scale 10\*\*18 Nm  
 T Val= 2.33 Plg=72 Azm= 44  
 N 0.41 0 313  
 P -2.74 18 223  
 Best Double Couple:Mo=2.5\*10\*\*18  
 NP1:Strike=313 Dip=27 Slip= 89  
 NP2: 133 63 90

23 07 47 09.58 12.451S 75.069W 104km  
 5.5mb ( 72 obs.)  
 PERU  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 14S, 29C  
 Centroid Location:  
 Origin Time 07:47:16.2 0.4  
 Lat 12.50S 0.04 Lon 74.95W 0.05  
 Dep 113.4 2.2 Half-duration 2.5  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 3.47 Plg= 9 Azm=236  
 N -0.25 4 145  
 P -3.22 80 30  
 Best Double Couple:Mo=3.3\*10\*\*17  
 NP1:Strike=330 Dip=37 Slip= -83  
 NP2: 142 54 -95

23 20 44 46.46 19.129N 121.236E 25km  
 5.1mb ( 18 obs.) 4.6MsZ ( 2 obs.)  
 PHILIPPINE ISLANDS REGION  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 9S, 21C

Centroid Location:  
 Origin Time 20:44:48.3 0.4  
 Lat 19.69N 0.06 Lon 121.68E 0.08  
 Dep 49.0 4.9 Half-duration 1.7  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 1.06 Plg=30 Azm= 49  
 N 0.39 60 222  
 P -1.45 3 317  
 Best Double Couple:Mo=1.2\*10\*\*17  
 NP1:Strike= 89 Dip=67 Slip= 160  
 NP2: 187 71 24

24 19 33 31.11 14.603N 119.437E 23km  
 5.6mb ( 27 obs.) 5.8MsZ ( 15 obs.)  
 LUZON, PHILIPPINE ISLANDS  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 11S, 22C  
 Centroid Location:  
 Origin Time 19:33:33.5 0.4  
 Lat 14.61N 0.04 Lon 118.69E 0.05  
 Dep 15.0 FIX Half-duration 2.8  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 8.70 Plg=57 Azm= 68  
 N -0.40 13 179  
 P -8.29 29 277  
 Best Double Couple:Mo=8.5\*10\*\*17  
 NP1:Strike= 41 Dip=20 Slip= 133  
 NP2: 176 76 76

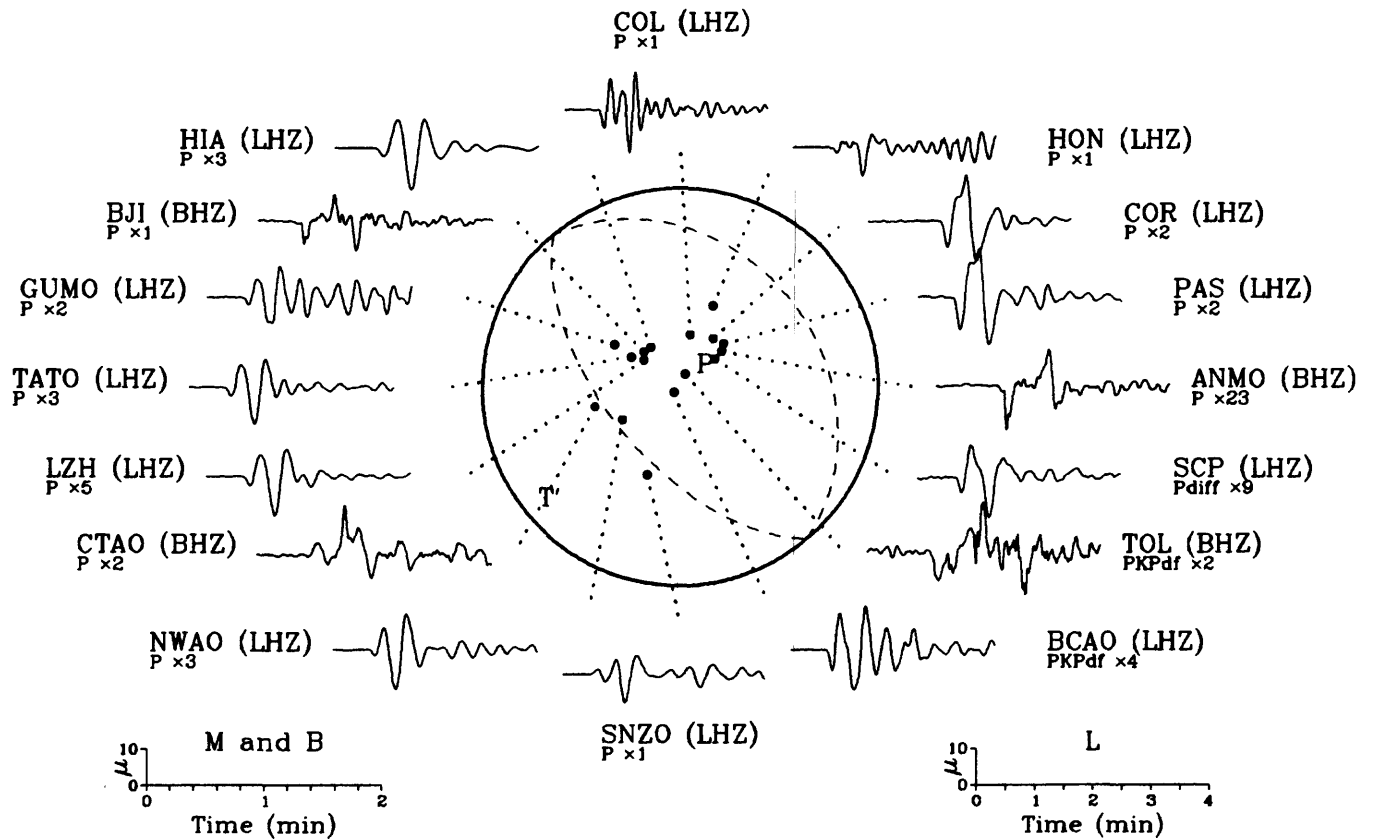
25 06 29 21.36 31.554S 177.580W 33km  
 5.2mb ( 9 obs.) 5.1MsZ ( 2 obs.)  
 KERMADEC ISLANDS REGION  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 10S, 17C  
 Centroid Location:  
 Origin Time 06:29:41.1 0.7  
 Lat 31.28S FIX;Lon 178.00W FIX  
 Dep 143.0 2.8 Half-duration 1.7  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 1.48 Plg=39 Azm=281

N 0.09 4 14  
 P -1.56 50 110  
 Best Double Couple:Mo=1.5\*10\*\*17  
 NP1:Strike=336 Dip= 7 Slip=-128  
 NP2: 195 84 -86

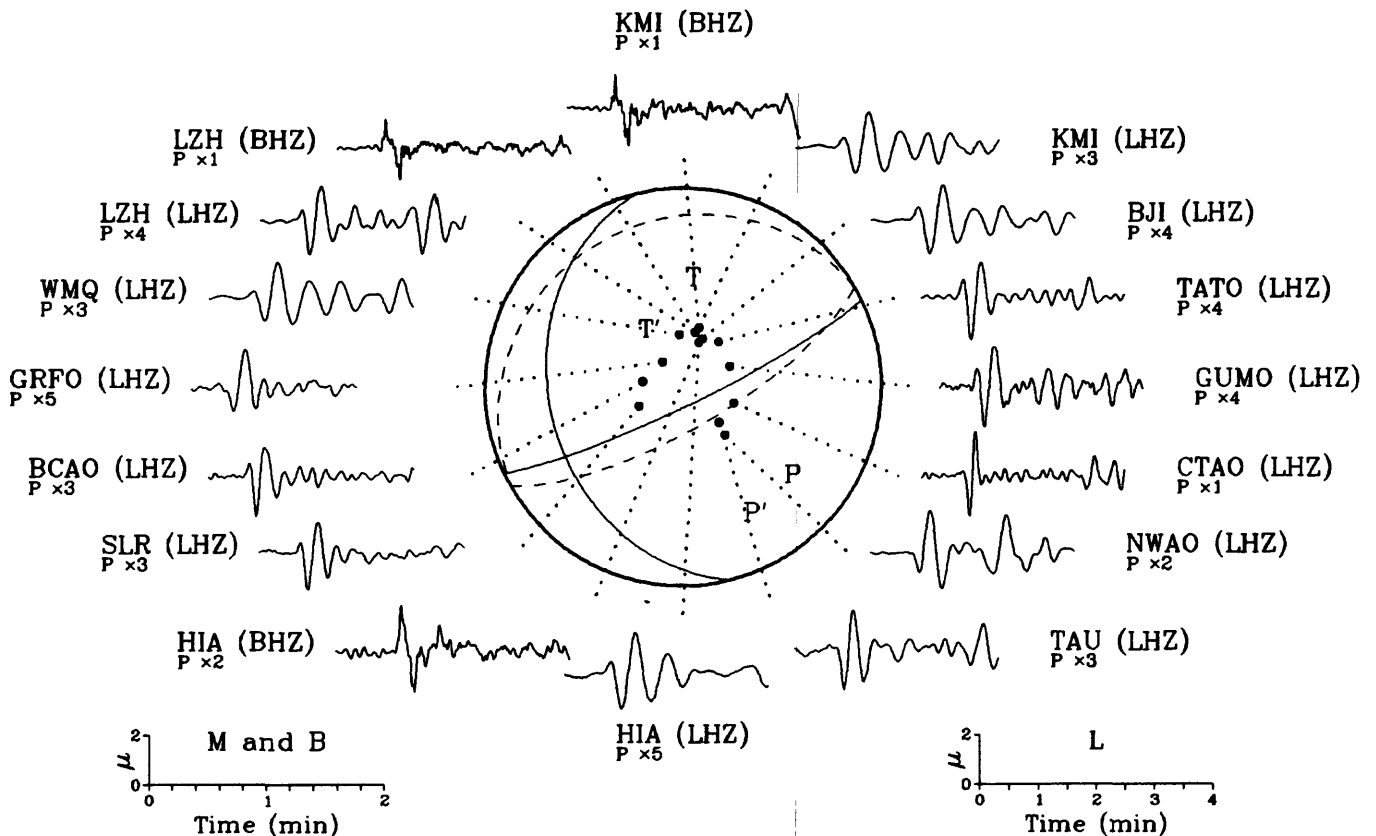
27 00 34 55.04 6.913S 130.257E 109km  
 5.1mb ( 15 obs.)  
 BANDA SEA  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 9S, 14C  
 Centroid Location:  
 Origin Time 00:35: 2.0 1.4  
 Lat 6.04S 0.12 Lon 129.83E 0.15  
 Dep 75.0 9.4 Half-duration 1.5  
 Principal Axes:  
 Scale 10\*\*16 Nm  
 T Val= 5.35 Plg=29 Azm=299  
 N 1.63 56 155  
 P -6.98 17 38  
 Best Double Couple:Mo=6.2\*10\*\*16  
 NP1:Strike= 82 Dip=57 Slip= 9  
 NP2: 347 82 147

30 18 14 12.85 23.398S 179.094E 548km  
 5.3mb ( 22 obs.)  
 SOUTH OF FIJI ISLANDS  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 13S, 22C  
 Centroid Location:  
 Origin Time 18:14:22.9 0.6  
 Lat 23.49S 0.09 Lon 178.67E 0.06  
 Dep 558.6 3.2 Half-duration 2.5  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 3.23 Plg= 5 Azm= 62  
 N -0.03 35 329  
 P -3.20 55 159  
 Best Double Couple:Mo=3.2\*10\*\*17  
 NP1:Strike=184 Dip=51 Slip= -42  
 NP2: 304 59 -132

04 January 1990 05:32:21.04  
Samoa Islands Region

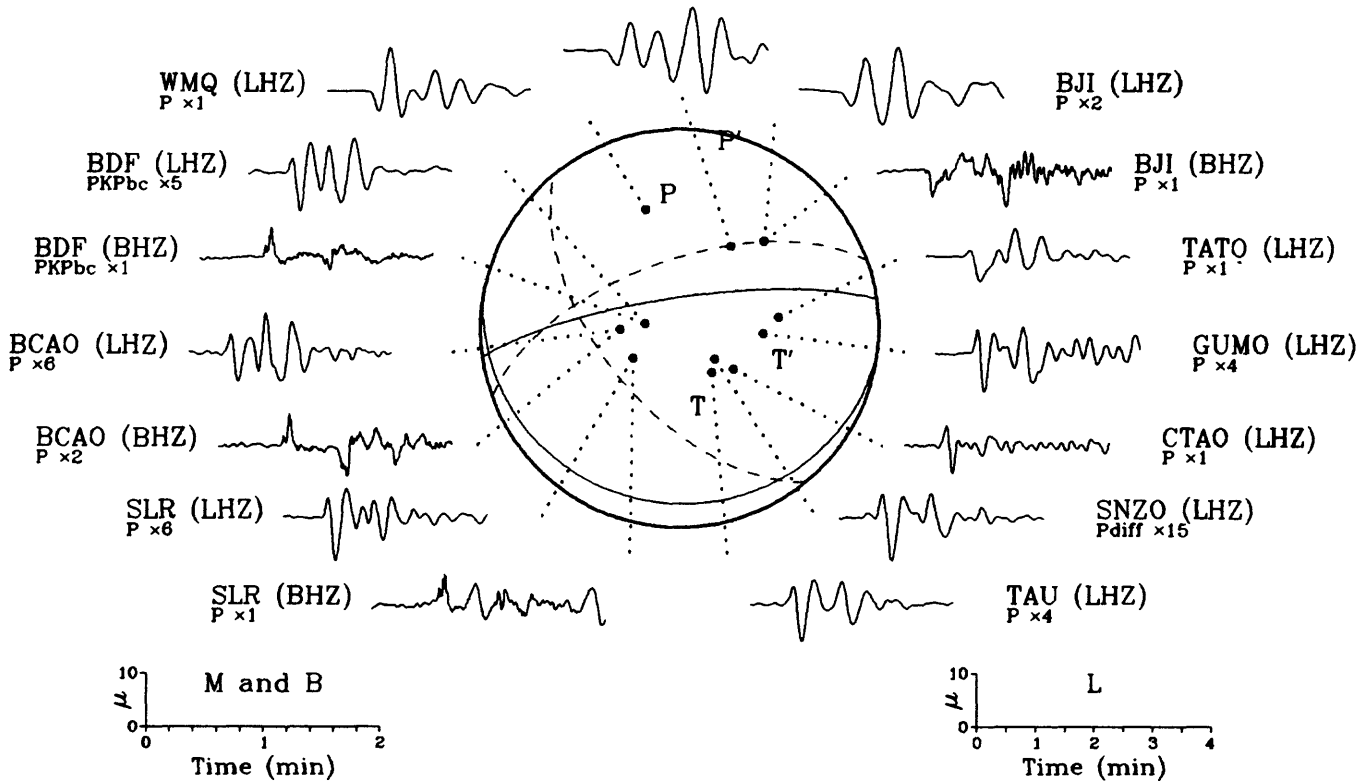


06 January 1990 21:44:56.26  
South Indian Ocean



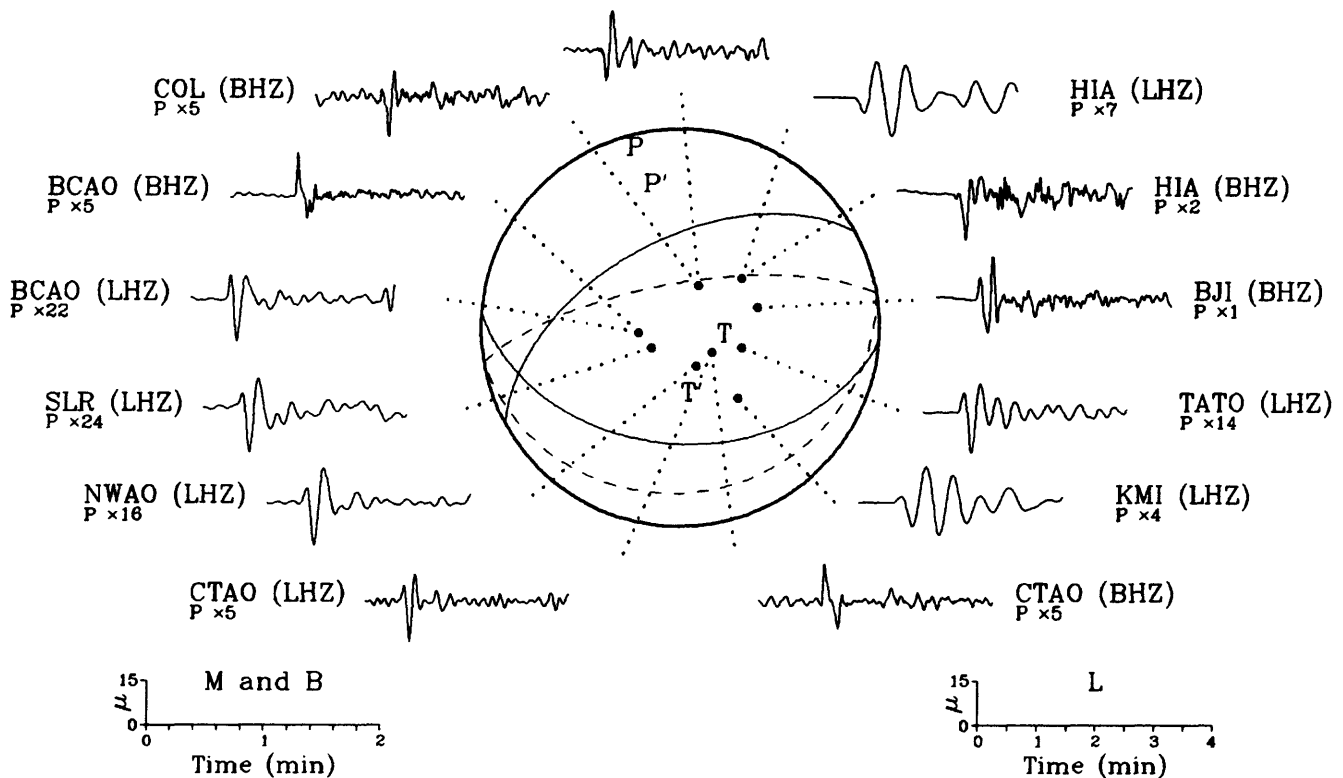
09 January 1990 18:51:29.21

Burma

HIA (LHZ)  
P x4

14 January 1990 03:03:19.23

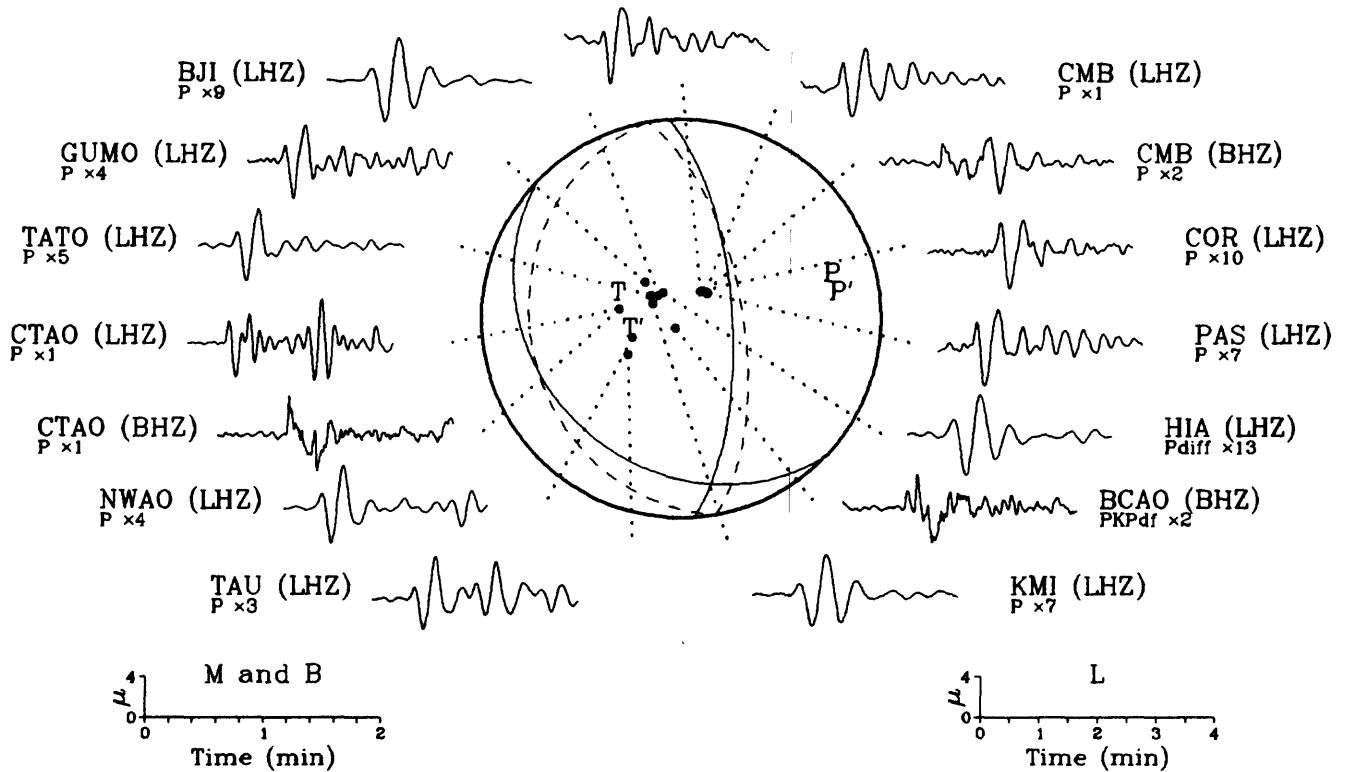
Qinghai Province, China

COL (LHZ)  
P x7



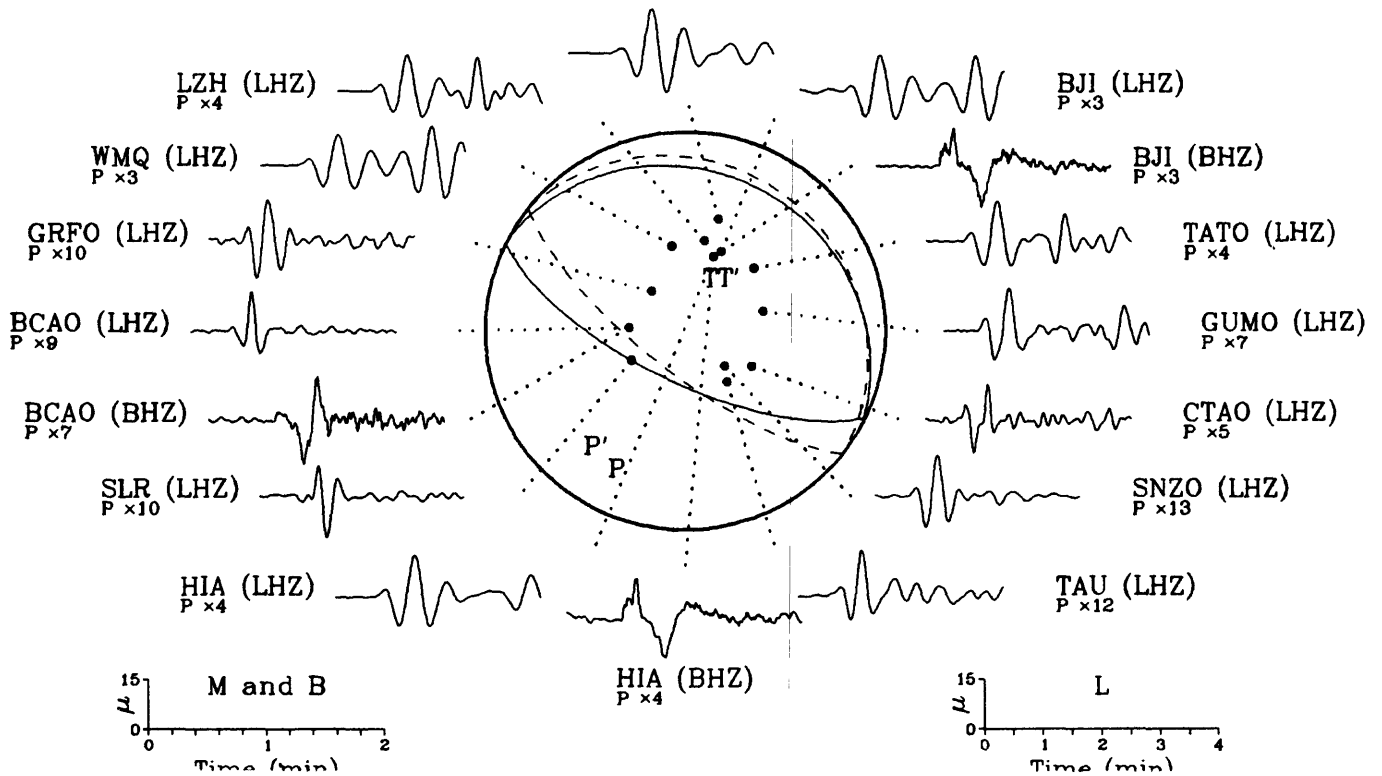
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Kermadec Islands

LON (LHZ)  
P x13

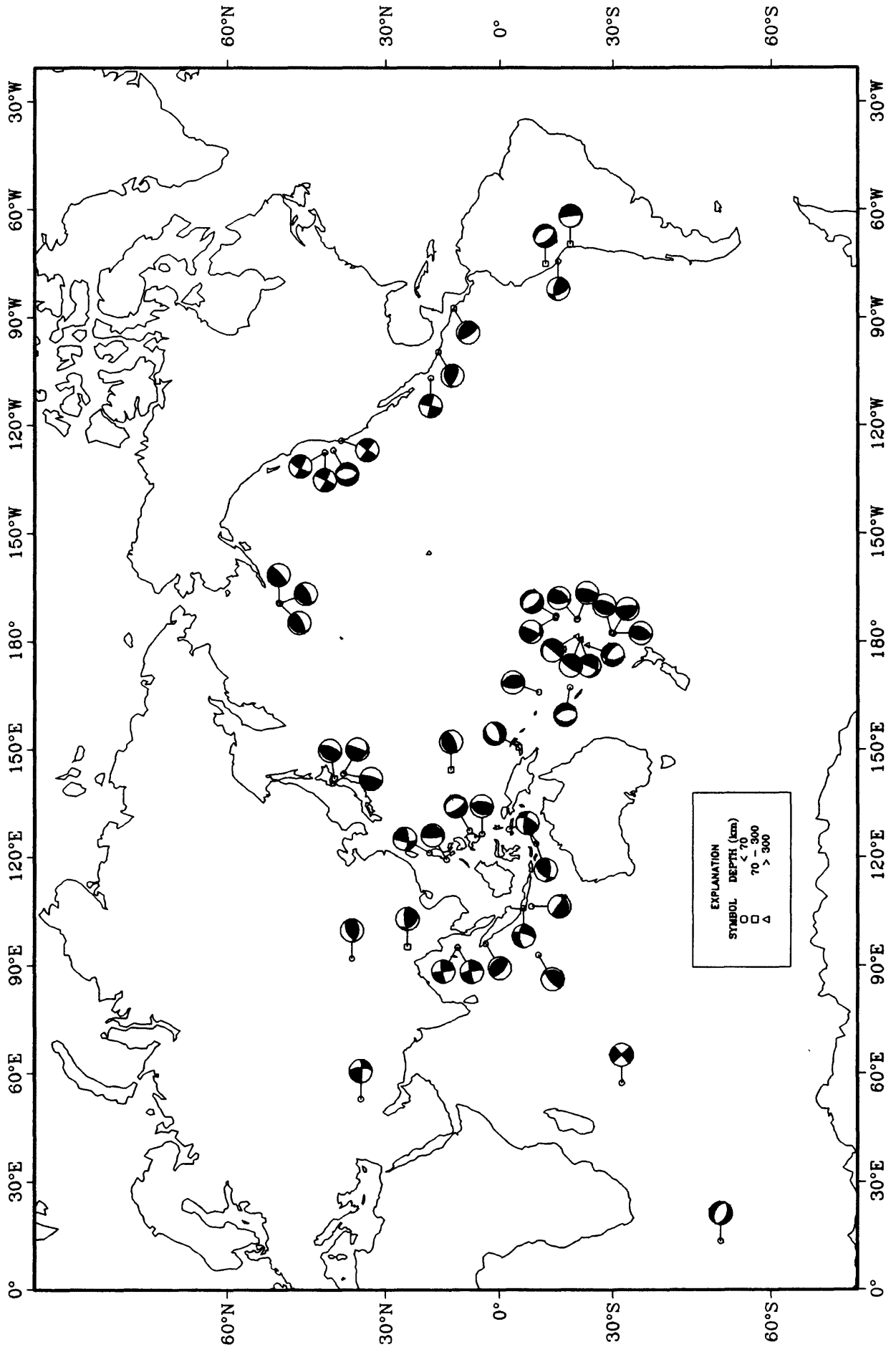


22 January 1990 17:26:11.46  
Northern Sumatera

KMI (LHZ)  
P x1



## Earthquake Focal Mechanisms for January 1990



## SIGNIFICANT EARTHQUAKES OF THE WORLD, 1989

Earthquakes of magnitude 6.5 or greater or ones that caused fatalities, injuries or substantial damage.  
BRK--Berkeley. PAS--Pasadena.

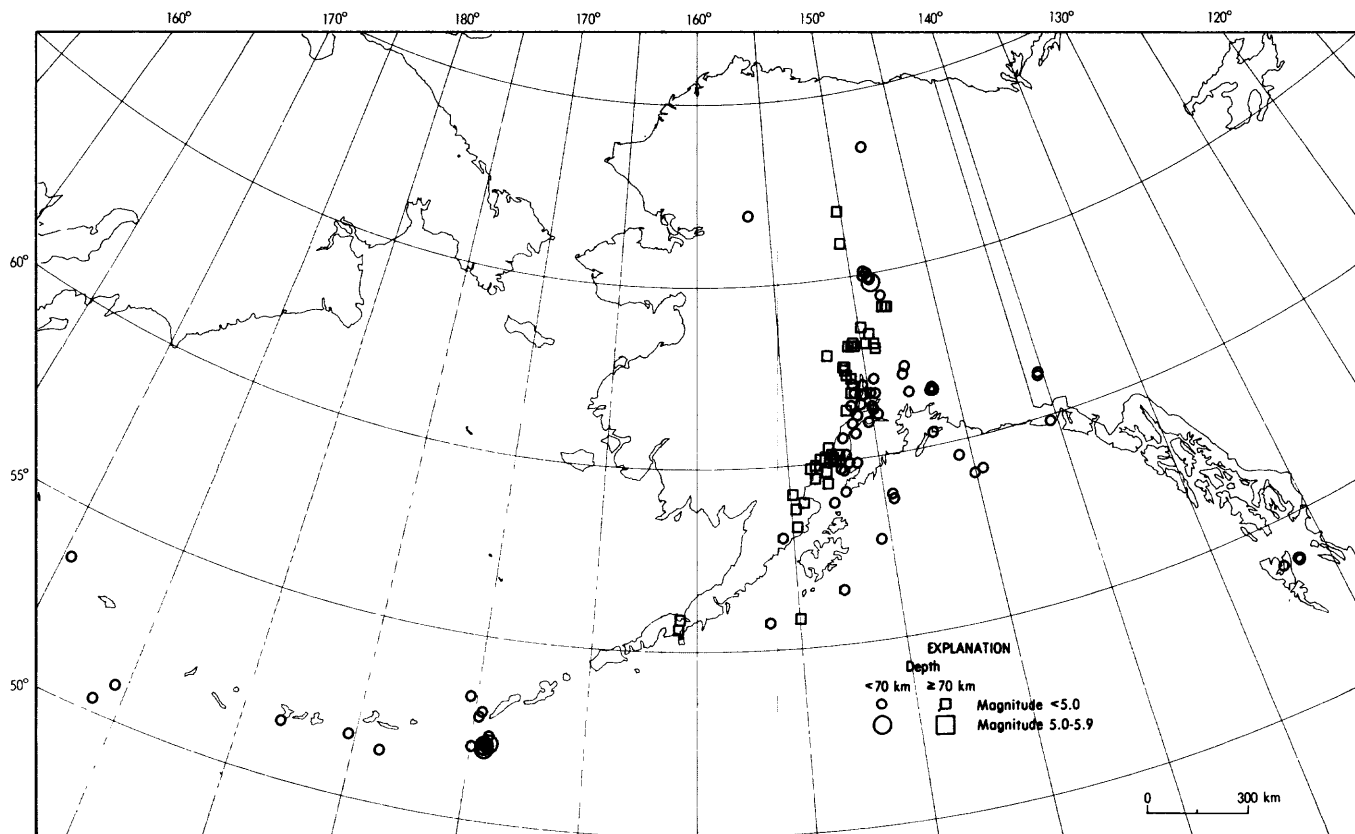
DATE	ORIGIN TIME			GEOGRAPHIC COORDINATES		DEPTH	MAGNITUDES			SD	NO STA USED	REGION, CONTRIBUTED MAGNITUDES AND COMMENTS
	HR	MM	SEC	LAT	LONG		GS	MB	MsZ			
JAN 10	05	55	01.4	3.162 S	130.556 E	47	5.9	6.5	1 2	206		CERAM. Ms 6.7 (BRK), 6.6 (PAS).
JAN 19	06	53	28.8	33.920 N	118.630 W	12	5.2	4 8		174		SOUTHERN CALIFORNIA. <PAS-P>. ML 5.0 (PAS), 5.2 (BRK). Several people injured, some broken windows and many items knocked from store shelves in the Malibu-Santa Monica-Redonda Beach area. Slight damage (VI) at Hollywood, Lancaster, Los Angeles, Malibu and Monterey Park. Felt in Kern, Orange, Los Angeles, San Bernardino, San Diego, Santa Barbara, Riverside and Ventura Counties.
JAN 22	23	02	07.1	38.465 N	68.694 E	33 N	5.3		0.9	205		TAJIK SSR. Two hundred seventy-four people killed, many injured, extensive damage (VII) and mudslides in the Gissar area. Nearly all the casualties were caused by mudslides which buried Sharara and two nearby villages. Felt (VI) at Gulkhani and Sarkishti; (V) at Dushanbe and Tursunzade; (IV) at Denau and Nurek.
FEB 10	11	15	24.6	2.305 N	126.760 E	44 G	6.2	6.8	1.3	376		MOLUCCA PASSAGE. Ms 6.6 (BRK), 6.4 (PAS). Felt at Manado and Bitung, Sulawesi.
FEB 19	12	27	09.9	35.964 N	139.788 E	60	5.5		1.1	287		NEAR S. COAST OF HONSHU, JAPAN. One person killed and one injured. Felt (IV JMA) at Tokyo, Utsunomiya and Mito; (III JMA) at Kumagaya, Chashi, Yokahama and Taleyama; (II JMA) at Shirakawa, Maebashi and Kawaguchi-ko; (I JMA) at Ofunata.
FEB 25	11	26	35.4	29.915 S	177.885 W	31 G	6.1	6.7	1.1	353		KERMADEC ISLANDS Ms 6.6 (BRK), 6.3 (PAS). Felt (V) on Raoul Island.
FEB 27	23	39	10.8	2.301 N	128.009 E	54	5.8	6.0	1.2	183		HALMAHERA. Ms 6.2 (BRK). At least six schools and a number of houses damaged in the Galela area. Two events about 2.5 seconds apart.
MAR 08	11	44	32.3	1.031 N	126.189 E	32 G	5.9	5.6	1.0	307		MOLUCCA PASSAGE. Two hundred thirty-three houses and public buildings damaged and 5,500 people left homeless on Marotai, Indonesia. Sixteen houses damaged and some homeless at Tanawangu, Halmahera.
MAR 10	08	00	48.7	40.027 N	41.816 E	10 G	4.4	4.4	1.3	28		TURKEY. Ten houses collapsed and 120 damaged in the Erzurum-Kars area.
MAR 10	14	14	10.2	4.346 S	152.797 E	53	5.6	5.4	0.9	259		NEW BRITAIN REGION. One person killed by a landslide in the Robaul area. Felt (V) at Robaul.
MAR 10	21	49	45.8	13.702 S	34.420 E	30 G	6.2	6.1	0.9	448		MALAWI. Ms 6.6 (BRK). At least two people killed, 100 injured and damage in the Salima area, six people killed and damage in the Dedza area and one person killed and damage in the Mohinji area. About 50,000 left homeless in Malawi. Felt strongly in much of central Malawi. Felt in Niassa and Tete Provinces, Mozambique. Also felt in Zambia.
MAR 11	05	05	00.6	17.766 S	174.761 W	230 G	6.4		1.3	515		TONGA ISLANDS. mb 6.7 (BRK).
MAR 13	13	02	14.7	50.711 N	9.896 E	1 G	5.4	4.7	1.3	324		GERMANY. ML 5.8 (ZUR), 5.7 (GRF), 5.6 (BNS), 5.5 (LDG). Rockburst triggered by blasting at the Ernst Thaelmann Mine near Merkers. Three people injured and 80 percent of buildings damaged in the Vaelkershausen area. Felt in large parts of Germany, as far west as Kain and Dusseldorf. Also felt in France, Czechoslovakia, Switzerland and Austria.
APR 11	03	56	36.9	49.488 N	159.185 E	16 G	6.3	6.6	1.0	545		KURIL ISLANDS REGION. Ms 6.1 (BRK), 6.0 (PAS). Felt (V) at Severa-Kurilsk, Mys Vasilyevo and an Shumshu; (IV) at Petropavlovsk-Kamchatskiy.
APR 15	20	34	08.9	29.987 N	99.195 E	13 G	6.2	6.2	1.2	406		SICHUAN PROVINCE, CHINA. Four people killed, 5 injured and considerable damage in the Batang area. Seven people killed, at least 37 injured and additional damage in the area due to a number of aftershocks.
APR 20	22	59	54.0	57.166 N	121.976 E	26 G	6.1	6.5	0.9	545		EASTERN USSR Ms 6.3 (BRK), 5.9 (PAS). Felt (VI) at Khami, Oleksa and Yuktali; (V) at Ikabya, Kuykta, Khotymi, Neryungri and Berkakit; (IV) at Yakutsk, Chita and Blagoveshchensk. Also felt strongly at Ust-Nyukzha.
APR 25	14	29	00.5	16.773 N	99.328 W	19 G	6.2	6.8	1.2	380		NEAR COAST OF GUERRERO, MEXICO. Ms 7.1 (BRK), 6.5 (PAS). Three people killed, a few injured and some damage at Mexico City. Minor damage reported in the Acapulco area. Felt strongly in much of southern Mexico and as far away as Guadalajara.

DATE	ORIGIN TIME			GEOGRAPHIC		DEPTH	MAGNITUDES			SD	NO. STA USED	REGION, CONTRIBUTED MAGNITUDES AND COMMENTS
	UTC	HR	MN	SEC	LAT		LONG	GS	MB			
APR 27	02 20 04.7	30.601 N	140.589 E	85 G	6.1				1.0	454	SOUTH OF HONSHU, JAPAN. mb 6.6 (BRK). Felt (II JMA) at Tokyo, Tateyama and on Chichi-shima; (I JMA) at Choshi, Hiroo, Onahama and on Hachijo-jima.	
MAY 03	09 13 24.2	29.947 N	51.674 E	33 N	5.1	6.2			1.0	46	SOUTHERN IRAN. Four people injured and seven villages severely damaged in the Mamasani area.	
MAY 03	05 53 01.1	30.091 N	99.475 E	14 G	6.1	6.1			1.0	422	SICHUAN PROVINCE, CHINA. Two people injured by a landslide which blocked the highway between Chengdu and Batang.	
MAY 04	00 22 06.7	11.038 N	68 270 W	16	5.4	5.2			1.0	227	NEAR COAST OF VENEZUELA. More than 2,000 people made homeless in the Tucacas area. Felt strongly in the states of Falcon and Carabobo. Also felt at Caracas and in parts of Aragua and Miranda.	
MAY 05	18 28 39.4	8.281 S	71.381 W	593 G	6.4				1.0	589	WESTERN BRAZIL. mb 6.7 (BRK), 6.5 (PAS). Felt at Feija, Brazil and Puya, Ecuador.	
MAY 07	00 38 18.5	23 553 N	99.526 E	33 N	5.3	5.6			1.1	266	BURMA-CHINA BORDER REGION. At least one person killed, 91 injured and 5,300 houses destroyed in the Gengma area, China. Felt strongly in Lancang and Menglian Counties. Direct economic losses of more than 54 million dollars were sustained.	
MAY 14	00 59 50.4	30.523 S	178.414 W	44 G	5.9	6.6			1.1	396	KERMADEC ISLANDS. Ms 6.4 (BRK), 6.3 (PAS). Felt (IV) on Raoul. Two events about 5 seconds apart.	
MAY 23	10 54 46.3	52.341 S	160.568 E	10 G	6.4	8.2			1.3	399	MACQUARIE ISLANDS REGION. Ms 8.0 (BRK), 7.8 (PAS). Felt (V) on Campbell Island. Also felt on Macquarie Island. Small tsunami reported along the southeastern coast of Tasmania and in Jervis Bay and Sydney Harbour, Australia. Complex event.	
MAY 27	20 08 37.3	30.167 N	50.921 E	31	5.6	5.8			1.0	405	IRAN. Ms 5.4 (BRK). Seventeen people injured, several houses damaged and about 100 cattle killed in the Da Gabadan area. Felt in the Bushehr-Shiroz area and at Mamasani. Also felt in Kuwait.	
MAY 31	05 54 20.5	45.383 S	167.086 E	23 G	5.8	6.3			1.2	278	SOUTH ISLAND, NEW ZEALAND. Ms 6.5 (BRK). Felt strongly in the southwestern part of South Island. Also felt at Wellington.	
JUN 08	06 24 09.6	6.837 N	37.878 E	19	5.0	4.8			0.9	91	ETHIOPIA. Minor injuries to a few people and damage at Sada.	
JUN 12	00 04 09.7	21.861 N	89.763 E	6 G	6.1	5.1			0.9	412	BANGLADESH. One person killed, at least 100 injured and minor damage in the Banaripara area. Felt throughout eastern Bangladesh from Chittagang to Rangpur. Also felt in Meghalaya, India.	
JUN 25	20 37 32.4	1.134 N	79.616 W	15 G	5.9	6.1			1.0	364	NEAR COAST OF ECUADOR. Ms 6.0 (BRK), 6.0 (PAS). Thirty people injured and 12 homes damaged (VII) in the Esmeraldas area. Felt (III) at Guayaquil and (II) at Quito. Felt throughout Ecuador and southwestern Colombia.	
JUN 26	03 27 03.9&	19.362 N	155.083 W	9	5.8	6.1				302	HAWAII. <HVO-P>. MD 6.2 (HVO). Ms 6.2 (BRK), 6.2 (PAS). Five people injured slightly, 5 homes destroyed and about 100 homes damaged in the Puna District. Landslides occurred in several places and blocked a road at Hanamu. Slight damage (VI) at Hawaii National Park, Hilo, Honoumua and Keolu. Felt (V) at Hanakaa, Kapaau, Kurtistown, Ninale, Oakala, Paauhau and Volcano; (IV) at Hakalau, Hawi, Halualoa, Honaunau, Loupahoehoe and Pahala. Felt throughout the island of Hawaii. Also felt on Maui and Oahu. A small tsunami was generated with maximum wave heights (peak-to-trough) of 57 cm. at Hanuapa, 21 cm. at Kapaha and 14 cm. at Hilo. Two events about 5 seconds apart.	
JUN 26	10 38 39.4	39 112 N	28.242 W	11 G	5.7	5.7			1.1	390	AZORES ISLANDS. Ms 5.4 (BRK). Several people injured slightly and minor damage (VI) on Graciosa. Felt (V) on Terceira and (IV) on Faial, Pico and Sao Jorge.	
JUL 09	02 09 09.1	34.942 N	139.193 E	5 G	5.1	5.0			1 2	138	NEAR S. COAST OF HONSHU, JAPAN. At least 18 people injured (IV JMA), landslides at 16 places and roads cracked at 10 places in the Ito area. Felt (IV JMA) at Ajiro; (III JMA) at Tokyo, Yokohama, Mishima, Tateyama and on Oshima.	

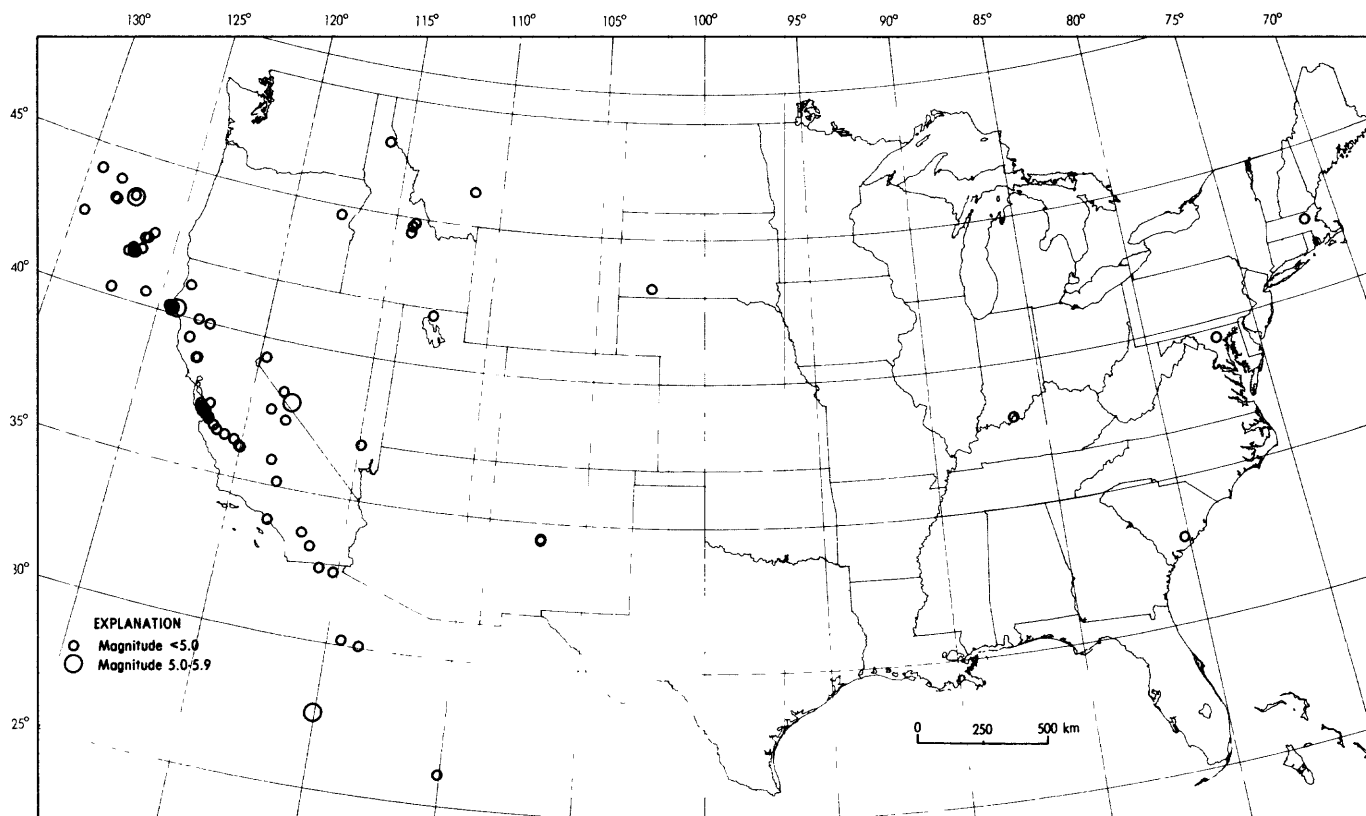
DATE	ORIGIN TIME UTC HR MN SEC	GEOGRAPHIC COORDINATES LAT LONG	DEPTH	MAGNITUDES GS MB Msz	SD	NO. STA USED	REGION. CONTRIBUTED MAGNITUDES AND COMMENTS
JUL 14	20 42 40.0	8.081 S 125.129 E	10 G	6.4 6.2	1.2	394	TIMOR. Seven people injured seriously and 38 buildings damaged on Alor
AUG 01	00 18 04.8	4.511 S 139.022 E	14 G	6.0 5.8	1.3	235	WEST IRIAN. Ms 5.7 (BRK). About 120 people killed and 125 injured by landslides which buried two villages in the Kurimo district. Landslides also blocked the Bolim River. Felt at Womeno.
AUG 03	07 42 40.8	43.522 N 45.362 E	18 D	5.0 5.0	1.2	190	EASTERN CAUCASUS. One person killed and damage (VI) in the Groznyy area. Felt (IV) at Buynaksk and (III) at Makhachkala.
AUG 08	08 13 27.5	37.130 N 121.952 W	15	4.9 4.5		60	CENTRAL CALIFORNIA. <BRK>. ML 5.4 (BRK). One person killed, some minor injuries and damage (VI) in the Los Gatos, Campbell and Saratoga areas. Also slight damage (VI) at Ben Lomond, Brookdale, Cupertino, Holy City, Redwood Estates and Santa Cruz. Felt (V) throughout much of the San Francisco Bay area. Felt from San Luis Obispo to Sonoma and east as far as Tracy.
AUG 20	11 16 56.5	11.766 N 41.942 E	12 G	5.8 6.3	1.0	449	ETHIOPIA. Ms 6.1 (BRK), 5.5 (PAS). ML 5.8 (ARO). Two people killed, 2 injured and damage and rockslides caused in the Galafi-Yobaki area, Djibouti. Ground cracks were observed at Galafi and 4 springs were destroyed in the area. Felt strongly throughout Djibouti. Damage and landslides occurred in northeastern Ethiopia, particularly along the Aseb-Adis Abeba highway. Felt at Aseb.
AUG 29	04 16 23.0	18.039 N 105.667 W	21 G	5.7 6.6	1.2	214	OFF COAST OF JALISCO, MEXICO. Ms 6.7 (BRK), 6.4 (PAS). Felt along the coast of Jalisco. Also felt at Guadalajara and in the southern part of the Mexico City area.
SEP 04	13 14 58.2	55.543 N 156.835 W	11 G	6.5 6.9	1.2	507	SOUTH OF ALASKA. ML 6.9 (PMR). Ms 6.7 (BRK), 6.4 (PAS). Felt (V) at Chignik, Chignik Lagoon and Port Heiden; (IV) at Perryville, Sand Point and Tagiak; (III) at Egegik, Homer, King Cove, Pilot Point and Unalaska; (II) at King Salmon. Also felt at Cold Bay and Kenai. Two events about 2.5 seconds apart.
SEP 16	02 05 08.9	40.337 N 51.534 E	55 D	6.4 6.5	1.0	563	CASPIAN SEA. Ms 6.6 (BRK), 6.5 (PAS). Felt (VI) at Baku and Neftchanyye Kamni. (V) at Sumgait and (IV) at Lenkoran, Divichi and Siazan, USSR. Some minor damage reported in the area. Felt in northwestern Iran.
SEP 16	23 20 53.2	16.497 N 93.671 W	108 G	6.0	1.3	415	CHIAPAS, MEXICO. mb 6.6 (BRK), 6.3 (PAS). Felt in the central and southern regions of the country including Mexico City, Oaxaca, Tuxtla Gutierrez and Villahermosa.
SEP 22	02 25 50.8	31.583 N 102.433 E	15 G	6.1 6.1	1.1	441	SICHUAN PROVINCE, CHINA. At least 54 people injured, about 4,270 houses destroyed, more than 300 animals killed and damage caused to bridges, highways and to a phosphorus mine in Xiaojin County.
OCT 01	02 59 06.3	30.960 N 51.421 E	42	5.2 4.7	1.0	246	IRAN. At least 300 homes damaged and four landslides blocked roads in the Deh Barzarg-e Sisakht area. Felt in the Yasuj area.
OCT 07	15 48 29.0	51.314 N 179.028 W	20 G	6.1 6.7	1.0	533	ANDREANOF ISLANDS, ALEUTIAN IS. Ms 6.2 (BRK), 6.1 (PAS). Felt (IV) on Adak and Amchitka. Two events about 2.5 seconds apart.
OCT 13	21 19 57.9	34.726 N 139.531 E	26 D	5.3 4.8	1.2	196	NEAR S. COAST OF HONSHU, JAPAN. Two people injured. Felt (IV JMA) at Yokohama and on Oshima; (III JMA) at Toteyama, Ajiro, Kofu, Mishima and Tokyo; (II JMA) at Kowaguchi-ko and Nagatsura; (I JMA) at Shizuoka. Also felt (IV) at Yakosuko.
OCT 18	00 04 15.2	37.036 N 121.883 W	19	6.5 7.1		600	CENTRAL CALIFORNIA. <GS>. ML 7.0 (BRK). Sixty-two people killed, 3,757 injured and damage estimated at 5.6 billion dollars. Maximum intensity IX in parts of Oakland and San Francisco. Numerous landslides occurred in the epicentral area and liquefaction occurred in some areas of Oakland and San Francisco. Felt from Eureka to Los Angeles and east as far as Fallon, Nevada. Also felt in high-rise buildings in San Diego. A small tsunami with maximum wave height (peak-to-trough) of 40 cm. was recorded at Monterey. Three events about 1.5 and 3.0 seconds apart, respectively
OCT 18	14 57 22.4	39.893 N 113.884 E	10 D	5.1 5.3	1.3	125	NORTHEASTERN CHINA. At least 29 people killed, 150 injured and about 27,500 houses damaged in the Dolong-Yongyuon area. Felt at Beijing

DATE	ORIGIN TIME UTC	GEOGRAPHIC COORDINATES	DEPTH	MAGNITUDES GS	SD	NO STA USED	REGION. CONTRIBUTED MAGNITUDES AND COMMENTS
HR MN SEC	LAT	LONG		MB Msz			
OCT 27	21 04 51.8	11.022 S 162.350 E	25 G	6.1 7 0	1 1	354	SOLOMON ISLANDS. Ms 7.1 (BRK), 6.8 (PAS). Felt on San Cristobal and (IV) on Guadalcanal. Minor landslide and ground fissure at Mwaniwaro Village, Santa Catalina. Two events about 3 seconds apart.
OCT 29	05 25 38.2	39.571 N 143.333 E	10 G	6.0 6.6	1.0	409	OFF EAST COAST OF HONSHU, JAPAN. Ms 6.4 (PAS), 6.1 (BRK). Felt (III JMA) at Hachinohe, Miyako, Mariako, Ofunato and Sakata; (II JMA) at Akita, Aomori, Sendai, Ishinomaki and Mutsu. Felt from central Honshu to Hokkaido. Small tsunami recorded with maximum wave heights 11 cm. at Ofunato, 10 cm. at Ayukawa, 6 cm. at Miyako and 3 cm. at Hachinohe.
OCT 29	19 09 12.9	36.788 N 2.448 E	6 G	5.7 5.7	1.2	461	ALGERIA. Ms 5.9 (PAS). At least 30 people killed, 245 injured and damage (VIII) in the Cherchell-Tifaza area. Felt (IV) in the Balearic Islands, Spain.
OCT 29	19 21 52.4	36.745 N 2.443 E	10 G	5.4 5.6	1.1	367	ALGERIA. Additional casualties and damage in the Cherchell-Tifaza area.
NOV 01	18 25 34.9	39.837 N 142.760 E	29 G	6.4 7.4	1.1	550	NEAR EAST COAST OF HONSHU, JAPAN. Ms 7.4 (BRK), 7.1 (PAS). Felt (IV JMA) at Aomori and Mariako; (III JMA) at Misawa; (I JMA) at Yamagata. Also felt (I JMA) in parts of Hokkaido. Tsunami generated with wave heights 56 cm. at Miyako, 34 cm. at Ayukawa, 24 cm. at Hachinohe and 20 cm. at Ofunato.
NOV 20	03 21 07.8	29.882 N 106.804 E	33 N	5.2 4.7	3.9	177	SICHUAN PROVINCE, CHINA. Four people killed, 161 injured and at least 1,000 homes destroyed in Jiangbei County.
NOV 20	04 19 04.6	29.892 N 57.718 E	18 D	5.6 5.7	1.1	312	SOUTHERN IRAN. Ms 5.5 (BRK). At least three people were killed, 45 injured and damage in the Shahdad area.
NOV 29	01 00 14.8	15.808 S 73.242 W	71 G	6.1	1.1	366	SOUTHERN PERU. mb 6.5 (PAS), 6.1 (BRK). Felt (IV) at Arequipa.
DEC 09	20 38 08.5	0.141 N 123.340 E	151 G	6.2	1.1	427	MINAHASSA PENINSULA. mb 6.8 (PAS).
DEC 15	18 43 45.0	8.337 N 126.729 E	24 G	6.2 7.3	1.4	204	MINDANAO, PHILIPPINE ISLANDS. Ms 7.4 (BRK), 6.9 (PAS). At least one person killed and many injured on Mindanao. Damage (VII RF) at Bislig. Felt (VI RF) at Cotabato and Davao and (I RF) at Dipolog. Also felt (IV RF) on Camiguin, (III RF) on Cebu and (I RF) in southeastern Luzon. Two events about 10.5 seconds apart.
DEC 27	23 26 57.0	32.967 S 151.619 E	10 G	5.4	1.0	132	NEAR S.E. COAST OF AUSTRALIA. MD 5.5 (CNB). Twelve people killed, more than 100 injured and estimated 1.1 billion U.S. dollars damage (VIII) caused in the Newcastle area. Damage occurred as far away as Liverpool, Scone and Gladstone. Felt in a 200,000 sq. km. area of New South Wales and the Australian Capital Territory from Albury and Cooma to Coffs Harbour and Inverell and as far west as Narramine. Also felt by people in high-rise buildings in Gold Coast and Melbourne. Believed to be the first earthquake in Australian history that has caused deaths.
DEC 30	23 18 51.6	3.406 S 145.966 E	38 D	5.6 6.6	1.3	144	NEAR N COAST OF PAPUA NEW GUINEA. Ms 7.0 (BRK), 6.4 (PAS). Felt (III) on Karkar and Monom.

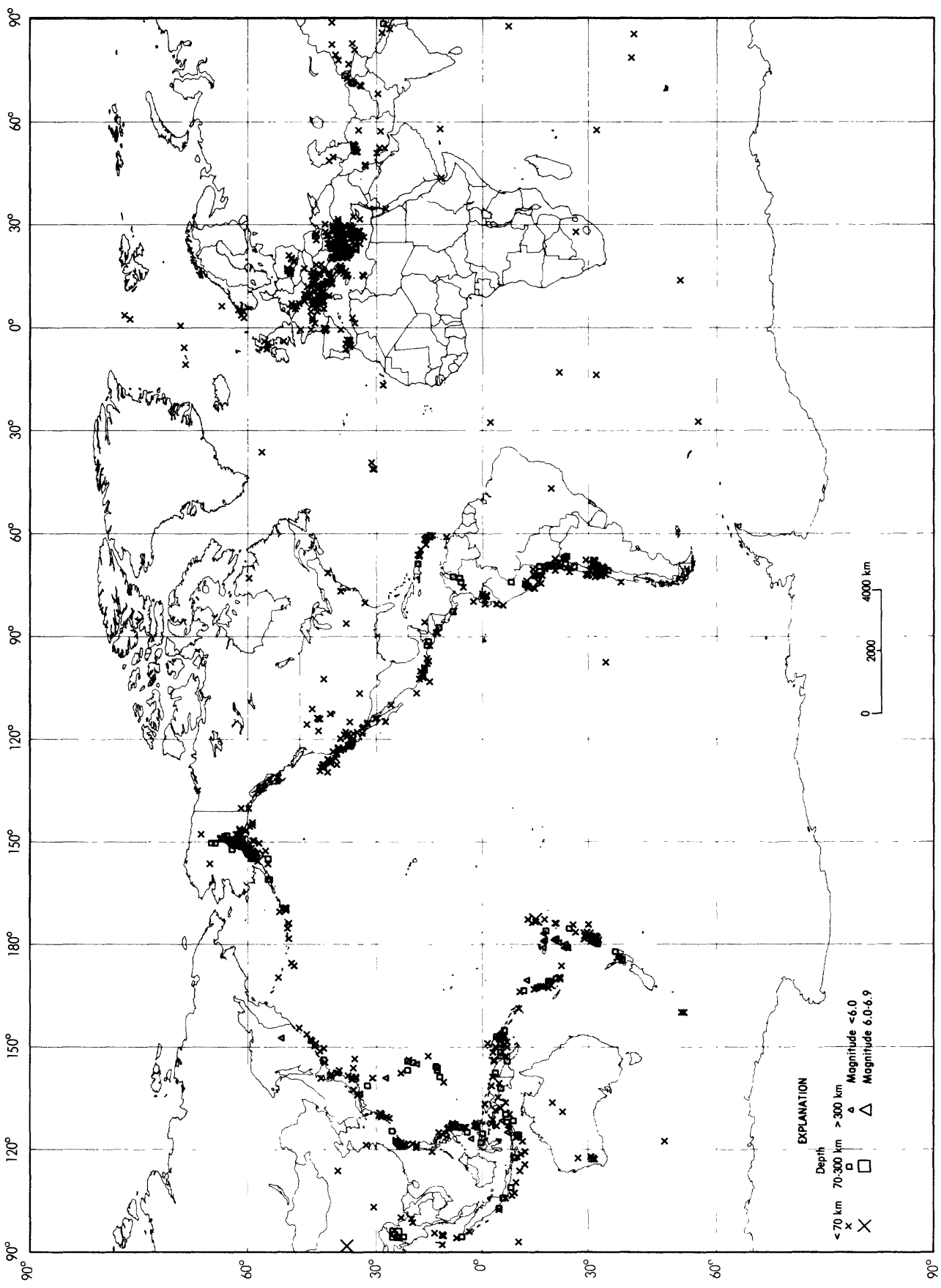
Compiled by Waverly J. Person



Earthquake epicenters in Alaska and adjacent regions for January, 1990 (C. Stover).



Earthquake epicenters in the conterminous United States and adjacent regions for January, 1990 (C. Stover).



Earthquakes located in January, 1990 (C. Stover).



## EXPLANATION OF ABBREVIATIONS AND SYMBOLS APPEARING IN THIS PUBLICATION

## Abbreviations in Heading

- MB - Body wave magnitudes.  
 Msz - Vertical surface wave magnitudes.  
 UTC - Coordinated Universal Time. HR MN SEC - Hour, minute, second.  
 SD - Standard Deviation from the arithmetic mean of residuals.  
 Na. Sta. - Number of stations reporting P or PKP phases used in computation.  
 KEY - (Printed vertically). A symbol in this column indicates additional source parameters and/or a focal sphere are published for this event in separate sections which follow the list of hypocenters. The symbols are:  
 a - Additional source parameters  
 f - Additional source parameters plus focal sphere

## Symbols and Abbreviations Used in Comments

- AGS Alaska Seismic Project, U.S. Geological Survey, Menlo Park, California.  
 APT University of Connecticut.  
 BGS British Geological Survey, Edinburgh, United Kingdom.  
 BLA Virginia Polytechnic Institute and State University, Blacksburg.  
 BOU University of Colorado, Boulder.  
 BRK University of California, Berkeley.  
 BUT Montana Bureau of Mines and Geology, Butte.  
 CL Coda length magnitude.  
 DOE U.S. Department of Energy (formerly AEC and ERDA).  
 EXPLD Same or all parameters of explosion (controlled or accidental) supplied by any group or individual other than DOE or its predecessor organizations.  
 GLD U.S. Geological Survey, Golden, Colorado (other than NEIS).  
 GS U.S. Geological Survey, Menlo Park, California.  
 HDC Observatorio Vulcanologica y Sismologica de Costa Rica, Universidad Nacional, Heredia, Costa Rica.  
 HRV Harvard University, Cambridge, Massachusetts.  
 HVO Hawaiian Volcano Observatory.  
 JMA Japan Meteorological Agency, Tokyo (also used to indicate 7-point Japanese Intensity Scale).  
 LAK Kansas Geological Survey, University of Kansas, Lawrence.  
 LDG Laboratoire de Detection et de Geophysique, Bruyeres-le-Chatel, France.  
 MACRO Hypocenter based upon macroseismic information.  
 MD Duration magnitude (shown as DUR prior to 1986).  
 MDD Instituto Geografico Nacional, Madrid, Spain.  
 MG Contributed local or regional magnitude of unspecified type (see "Contributed Magnitudes" below).  
 MW Moment Magnitude.  
 NEIS U.S. Geological Survey, National Earthquake Information Service, Golden, Colorado.  
 OTT Earth Physics Branch, Ottawa, Canada.  
 PAL Columbia University, Lamont-Doherty Geological Observatory, Palisades, New York.  
 PAR Institute de Physique du Globe, Universite Pierre et Marie Curie, Paris, France.  
 PAS California Institute of Technology, Pasadena.  
 PGC Pacific Geoscience Centre, Sidney, British Columbia, Canada.  
 PMR Alaska Tsunami Warning Center, Palmer, Alaska.  
 PPT Laboratoire de Geophysique, Papeete, French Polynesia.  
 QDM Queensland Department of Mines, Brisbane, Australia.  
 REN University of Nevada, Reno.  
 RF Rossi-Forel Intensity Scale.  
 SEA University of Washington, Seattle.  
 SLC University of Utah, Salt Lake City.  
 SLM St. Louis University, Missouri.  
 SPEC An NEIS solution based on use of dense local networks, a local crustal model, or other methods not routinely applied in calculating the hypocenter parameters.  
 TEIC Center for Earthquake Research and Information, Memphis, Tennessee.  
 TUL Oklahoma Geological Survey, Leonard.  
 UVC Universidad del Valle, Cali, Colombia.  
 WES Weston Observatory, Massachusetts.
- Roman Numerals Used to indicate intensity (when not followed by RF or JMA they refer to the Modified Mercalli Scale or any 12-point intensity scale closely related to it).
- " " Geographic degrees, minutes, seconds.
- P Supplied hypocenter is a preliminary computation.
- Any additional 3 to 5 letter codes enclosed in parentheses or angle brackets refer to individual station codes. These codes may be found in Geological Survey Open File Report 85-714, Seismograph Station Codes and Coordinates (1985). Addenda to OF 85-714 are printed at the end of the Earthquake Data Report for this month.

## Symbols Following Depth

- N Indicates the depth was restrained at 33 km for earthquakes whose character on seismograms indicates a shallow focus but whose depth is not satisfactorily determined by the data.
- D Indicates the depth was restrained by the computer program based on 2 or more compatible pP phases and/or unidentified secondary arrivals used as pP.
- G Indicates the depth was restrained by a geophysicist.
- \* Indicates a less well-constrained free depth. The 90% marginal confidence interval on depth is greater than 8.5 km and less than or equal to 16.0 km.
- ? Indicates a poorly-constrained free depth. The 90% marginal confidence interval on depth is greater than 16.0 km.
- The lack of any symbol indicates that the 90% marginal confidence interval on depth is less than or equal to 8.5 km, or that a contributed hypocenter was computed with a free depth, regardless of the size of the confidence interval.

## Symbols Following Origin Time

- & Indicates that parameters of the hypocenter were supplied or determined by a computational procedure not normally used by the National Earthquake Information Service (NEIS). The source or nature of the determination is indicated by a 2 to 5 letter code enclosed by angle brackets and appearing in the first line of comments. A "-P" appended to the code indicates that the computation is preliminary. These codes are included with the list of abbreviations above.
  - % Indicates a single network solution. A non-furnished hypocenter has been computed using data reported by a single network of stations for which the date and/or origin time cannot be confirmed from seismograms available to a NEIS analyst. The geometric mean of the semi-major and semi-minor axes of the horizontal 90% confidence ellipse is less than or equal to 16.0 km.
  - \* Indicates a less reliable solution. In general, the geometric mean of the semi-major and semi-minor axes of the horizontal 90% confidence ellipse is greater than 8.5 km and less than or equal to 16.0 km.
  - ? Indicates a poor solution, published for completeness of the catalog. In general, the geometric mean of the semi-major and semi-minor axes of the horizontal 90% confidence ellipse is greater than 16.0 km. This includes a poor solution computed using data reported by a single network.
- The lack of any symbol indicates that the geometric mean of the semi-major and semi-minor axes of the horizontal 90% confidence ellipse is less than or equal to 8.5 km.

APPROXIMATE CORRELATION OF GRADES FOR INTENSITY SCALES  
REPORTED IN PRELIMINARY DETERMINATION OF EPICENTERS

U.S.A. Modified Mercalli (M.M.), 1931	Japanese, 1950 (JMA)	Rossi-Forel, 1873 (RF)	European (Mercalli - Cancani-Sieberg), 1917
I	0	I	I
II	I	I-II	II
III	II	III	III
IV	II-III	IV-V	IV
V	III	V-VI	V
VI	IV	VI-VII	VI
VII	IV-V	VIII-	VII
VIII	V	VIII+-IX	VIII
IX	V-VI	IX+	IX
X	VI	X	X
XI	VII	X	XI
XII	VII	X	XII

## TRAVEL-TIME TABLES

In general, all hypocenters have been computed based on the 1940 Jeffreys-Bullen P and 1968 Balt PKP travel-time tables. Some other earth model or computational procedure may have been used for those hypocenters which have been indicated by an ampersand (&) following the origin time.

## MACROSEISMIC INFORMATION

Macroseismic information is compiled from various sources, including newspaper articles, Foreign Broadcast Information Service messages, U.S. Geological Survey Earthquake Reports and seismological station reports. Macroseismic information for southwestern France is contributed by Dr. Pierre Stahl, Pau. Sources of information for particular events can be supplied on request from: U.S. Geological Survey, National Earthquake Information Center, Stop 967, Box 25046, Denver Federal Center, Denver, CO 80225, U.S.A.

## GEOGRAPHIC REGIONS

The regions shown in the comments column are from the seismic and geographical regionalization of Flinn, Engdahl and Hill (1974), with occasional name changes which have been given in various issues of the Monthly Listing. The boundaries of these regions are defined at one degree intervals and differ slightly from irregular political boundaries.

## DEPTHS FROM BROADBAND DISPLACEMENT SEISMOGRAMS

The NEIS routinely interprets broadband data from the GDSN and RSTN using methods described by Harvey and Choy (1982) and by Choy and Bootwright (1981) for events with  $M_B \geq 5.8$ . The notation that a depth is obtained from broadband seismograms indicates that a depth was obtained by inversion of differential travel times of depth phases that are clearly identifiable at several stations using broadband records that are flat to displacement between approximately 0.01 and 5.0 Hz.

Choy, G. L. and Engdahl, E. R., 1987, Analysis of broadband seismograms from selected IASPEI events: Physics of the Earth and Planetary Interiors, v. 47, p. 80-92.

Harvey, D. and Choy, G. L., 1982, Broadband deconvolution of GDSN data: Geophysical Journal of the Royal Astronomical Society, v. 69, p. 659-668.

## FAULT PLANE SOLUTIONS

A fault plane solution is determined when possible for any earthquake having a magnitude  $\geq 5.8$ , using first motions from P, PKP, pP and pPKP waves. A description of the solution is reported in the Additional Focal Parameters section of the Preliminary Determination of Epicenters Monthly Listing. First motion data used to compute the solution are available upon request from the National Earthquake Information Center at the address given above.

## NEIS MAGNITUDES

All magnitudes are NEIS magnitudes unless otherwise indicated. Beginning with August, 1983, average magnitudes are computed by a 25% trimmed mean as described by Rosenberger, J. L. and Gasko, M., 1983, "Comparing location estimators: trimmed means, medians, and trimean" in Understanding Robust and Exploratory Data Analysis, ed. Hoaglin, D.C., Mosteller, F., and Tukey, J. W., John Wiley, New York.

Ms These surface wave magnitudes are computed from the I.A.S.P.E.I. formula:

$$M_s = \log(A/T) + 1.66 \log D + 3.3$$

where:

A is the maximum ground amplitude in micrometers (microns) of the vertical component of the surface wave within the period range  $18 \leq T \leq 22$ .

T is the period in seconds.

D is the distance in geocentric degrees (station to epicenter) and  $20^\circ \leq D \leq 160^\circ$ .

No depth corrections are applied, and  $M_s$  magnitudes are not generally computed for depths greater than 50 km. The  $M_s$  value published is the average of the individual station magnitudes from reported T and A data.

If the uncertainty of the computed depth is considered great enough that the depth could be less than 50 km, an  $M_s$  value may still be published, computed by the I.A.S.P.E.I. formula and  $M_s$  corrected for depth.

In general, the  $M_s$  magnitude is more reliable than the  $M_b$  magnitude as a means of yielding the relative "size" of a shallow-focus earthquake.

$M_b$  These compressional body wave (P-wave) magnitudes are computed according to the formula:

$$M_b = \log(A/T) + Q(D, h)$$

defined by Gutenberg and Richter (1956) except that T, the period in seconds, is restricted to  $0.1 \leq T \leq 3.0$  and A, the ground amplitude in micrometers, is not necessarily the maximum in the P group. Q is a function of distance (D) and depth (h) where  $D \geq 5^\circ$ .

$mblg$  These  $Lg$  body wave magnitudes are computed according to the formula:

$$mblg = 3.75 + 0.90 \log D + \log(A/T) \text{ for } 0.5^\circ \leq D \leq 4^\circ$$

$$mblg = 3.30 + 1.66 \log D + \log(A/T) \text{ for } 4^\circ \leq D \leq 30^\circ$$

as proposed by Nuttli (1973) where A is the ground amplitude in micrometers and T is the period in seconds calculated from the vertical component 1-second  $Lg$  waves. D is the distance in geocentric degrees.

ML These local magnitudes are computed according to the formula:

$$M_L = \log A - \log A_0$$

defined by Richter (1935) where A is the maximum trace amplitude in micrometers recorded on a standard short-period torsion seismometer and  $\log A_0$  is a standard value as a function of distance where distance  $\leq 600$  km.

## CONTRIBUTED MAGNITUDES

Magnitudes appearing in the comments which have been contributed by organizations operating a network of stations may have been calculated from any one station in the network or may be an average magnitude from a number of stations from the network.

Beginning with January, 1986, a contributed magnitude of unspecified type may be quoted (using the designator MG) for events which have no other magnitudes given or computed. These MG magnitudes either have been reported by the contributor without listing the type (such as "Mag 3.5") or have been computed using procedures which are not defined by the magnitude types routinely reported in this bulletin. Direct inquiries should be made to the contributor (shown in parentheses after the magnitude) concerning the specific details of the computational procedures used to determine these values.

## REFERENCES

- Gutenberg, B., and Richter, C. F., 1956, Magnitude and energy of earthquakes: *Annali di Geofisica*, v. 9, no. 1, p. 1-15.
- Nuttli, O. W., 1973, Seismic wave attenuation and magnitude relations for eastern North America: *Journal of Geophysical Research*, v. 78, no. 5, p. 876-885.
- Richter, C. F., 1935, An instrumental earthquake scale: *Bulletin of the Seismological Society of America*, v. 25, p. 1-32.

## FOCAL MECHANISM MAPS

Best double couple focal mechanisms are plotted as lower-hemisphere, equal-area projections for earthquakes having a seismic moment greater than  $1 \times 10^{17}$  Nm. The shaded quadrants represent compressional first motions. For each event, the mechanism shown is selected from either the Fault Plane Solution, Moment Tensor Solution or Centroid, Moment Tensor Solution. All these solutions are given in the Additional Source Parameters section of the Monthly Listing.

## WAVEFORM PLOTS

Each month selected events with  $M_B \geq 5.8$  will be shown. For each event, up to sixteen body phase waveforms will be selected for display around the periphery of an equal area plot of the lower hemisphere of the focal sphere. Each waveform will be connected by a dotted line to a symbol marking the corresponding azimuth and take-off angle on the focal sphere. For reference, the nodal planes, compression axis (P), and tension axis (T) will also be plotted when solutions are available. The dominant double couple of the USGS moment tensor will be shown in solid lines with the axes designated by P and T respectively. The NEIS first motions fault plane solution will be shown in dashed lines with the axes designated by P' and T' respectively. If both solutions are available, the primed axes may be suppressed unless they are sufficiently different from the unprimed axes. Each event will be titled with its origin date-time and Flinn-Engdahl region name to facilitate cross-referencing with the Monthly Listing text.

Each waveform will be identified by station code, data type, phase name and scale factor. The data type will be identified by a code conforming with the channel-naming conventions adopted for the Standard for the Exchange of Earthquake Data (SEED) by the Federation of Digital Seismograph Networks. Long period channels, designated by LH or LL (where the second letter denotes a high-gain channel, H, or a low-gain channel, L) will display approximately one-half minute of noise followed by three minutes of signal. Time and amplitude are referenced to a set of axes labeled L and shown at the bottom of each plot. The scale factor is an integer from which absolute amplitude, in micrometers of ground displacement at the dominant period of the pass-band (25 sec), may be determined. Absolute amplitude may be recovered by measuring the amplitude of the seismogram relative to the amplitude axis and dividing it by the scale factor. Note that long period channels with pass-bands which extend well into the microseism noise peak will be processed for presentation using a four-pole Butterworth low-pass filter with a corner at 25 sec. period. Other data types are indicated by BH or BL (broad-band), MH or ML (mid-band), SH or SL (short period), or EH or EL (extremely short period). As these types of data have different pass-bands than long period data, different time and amplitude scales will generally be needed. These scales will be labeled M and B for broad-band and mid-band and S and E for short and extremely short period and will be shown at the bottom of each plot as needed. As with the long period waveforms, the absolute amplitudes of the other data types may be recovered from the amplitude scale and the scale factor. For broad-band and mid-band data, the absolute amplitude is referenced to 10 seconds. For short and extremely short period data, the absolute amplitude is referenced to 1 second. Broad-band and mid-band data will be processed to be proportional to displacement from 0.01 Hz to at least 2 Hz. In some cases, BH channels will be synthesized by combining LH and SH data. In addition, each component will be identified by a direction indicator (ie. N, E, Z, R and T for north-south, east-west, vertical, radial, and transverse, respectively). Note that the dominant period approximation will not be valid for broad-band, mid-band or some long period data. However, the scaling will still be correct.

Waveforms will primarily be selected to display variations in the P waveform as a function of azimuth. If space permits, some PKP waveforms may be shown as well. To this end, waveforms which are clipped, non-linear, or very noisy will be rejected. Further, only one of several stations at similar distance and azimuth may be used if all show similar waveforms. Note that the importance of a record in focal parameter derivation will not be considered. Thus, many seismograms will be shown which have not been used in the USGS moment tensor solution. Conversely, records which have been important in constraining one or both solutions may have been passed over for lack of space. The data are derived from globally distributed digital stations collected by the USGS Albuquerque Seismological Laboratory from a number of cooperating networks. For details on data sources, see the National Earthquake Information Center Newsletter.

R. P. Buland and M. Zirbes, U.S. Geological Survey, Mail Stop 967, Box 25046, Denver Federal Center, Denver, CO 80225 USA

## USGS RADIATED ENERGY

The energy radiated by an earthquake is estimated from the energy spectral density of the broadband P waves, using the method described by Bootwright and Choy (1986), where the energy flux in the P waves is integrated directly. No correction for source directivity or frequency-dependent interference of the depth phases is incorporated into these estimates of radiated energy. Data used are either direct P waves (for deep earthquakes) or the P wave group consisting of P, pP and sP (for shallow earthquakes) from GDSN and other stations that contribute digital data to the NEIC within two months of the occurrence of an event. The data are processed using the method of Harvey and Choy (1982) so that they are flat to velocity from low frequencies (generally 0.01 Hz) to at least 2.0 Hz. The effect of attenuation is corrected with the frequency-dependent  $Q$  of Choy and Carmier (1986). The focal mechanism used is either the P-wave first-motion solution (F), the USGS moment tensor solution (M) or the Harvard centroid solution (C).

Bootwright, J. and Choy, G. L., 1986, Teleseismic estimates of the energy radiated by shallow earthquakes: *Journal of Geophysical Research*, v. 91, p. 2095-2112.

Choy, G. L. and Carmier, V. F., 1986, Direct measurement of the mantle attenuation operator from broadband P and S waveforms: *Journal of Geophysical Research*, v. 91, p. 7326-7342.

Harvey, D. and Choy, G. L., 1982, Broadband deconvolution of GDSN data: *Geophysical Journal of the Royal Astronomical Society*, v. 69, p. 659-668.

## EXPLANATION OF THE ENTRIES "MOMENT TENSOR SOLUTION" (USGS)

These solutions have been determined using the body-wave moment tensor inversion method described by Sipkin (1982).

1. NUMBER OF STATIONS: Number of GDSN stations with distances between approximately 30 and 95 degrees found to have suitable P waveforms. Only unfiltered long-period vertical components are used.
2. DEPTH: The source depth which gives the smallest normalized mean-squared-error. This is the only hypocentral parameter determined since the inversion procedure is insensitive to small errors in both epicenter and origin time.
3. SCALE )
4. PRINCIPAL AXES ) See "Centroid, Moment Tensor (HRV)"
5. BEST DOUBLE COUPLE )

S. A. Sipkin, U.S. Geological Survey, Mail Stop 967, Box 25046, Denver Federal Center, Denver, CO 80225 USA

Sipkin, S. A., 1982, Estimation of earthquake source parameters by the inversion of waveform data: synthetic seismograms: *Physics of the Earth and Planetary Interiors*, v. 30, no. 2-3, p. 242-259.

## EXPLANATION OF THE ENTRIES "GEOSCOPE MOMENT TENSOR (PAR)"

These solutions have been obtained from very long period Rayleigh wave data in the period range 180–310 seconds (R1 and R2 trains) using a two step moment tensor inversion method as described in Romanowicz and Guillemont (1984) and Romanowicz and Monfret (1986). Parameters solved for are centroid time, seismic moment, depth and moment tensor. Origin time and epicentral coordinates are kept fixed as given in the USGS Quick Epicenter Determinations (QED) or PDE. For shallow earthquakes the precision on depth is in general no greater than  $\pm 10$  km.

The data used presently come from GEOSCOPE teletransmitted stations (usually 8 – 10 stations) and are available within a week after the event. The solutions are computed by the Institut de Physique du Globe, Université Pierre et Marie Curie, Paris, France.

Romanowicz, B. and Guillemont, P., 1984, An experiment in the retrieval of depth and source mechanism of large earthquakes using very long-period Rayleigh wave data: *Bulletin of the Seismological Society of America*, v. 74, no. 2, p. 417–437.

Romanowicz, B. and Monfret, T., 1986, Source process times and depths of large earthquakes by moment tensor inversion of mantle wave data and the effect of lateral heterogeneity: *Annales de Géophysique*, v. 84, no. 3, p. 271–282.

## EXPLANATION OF THE ENTRIES "CENTROID, MOMENT TENSOR (HRV)"

These solutions have been determined using the long period body and mantle wave moment tensor inversion method described by Dziewonski, et al. (1981) considering corrections due to an aspherical earth structure of model M84C (Woodhouse and Dziewonski, 1984).

1. DATA USED: currently both GDSN and IDA data are used. The numbers following the entries L. P. BODY WAVES and MANTLE WAVES indicate the number of stations (S), total number of records (C) and T is the cut-off period of the low pass filter for each of the subsets of data. Mantle waves are routinely used in inversion for sources with moments greater than  $10^{19}$  Newton-meters (Nm).
2. CENTROID LOCATION: hypocentral parameters obtained by adding perturbations resulting from inversion to the parameters reported in the PDE; standard errors follow the individual entries. If a given parameter is not perturbed in inversion, this is indicated by the letters FLX. If the depth is fixed to be consistent with waveform matching of reconstructed broad-band body waves, this is indicated by the letters BDY. The default depth for shallow earthquakes is increased to 15 km. in order to improve the stability of solutions; it was 10 km. in 1981–1985.
3. MOMENT TENSOR. The scale factor (e.g.,  $10^{20}$  Nm) is the number by which all subsequent entries related to values of the moment should be multiplied. For the moment tensor the components are given in a spherical coordinate system: MRR = Mrr; MTT =  $M_{\theta\theta}$ ; MFF =  $M_{\phi\phi}$ ; MRT = Mr $\theta$ ; MRF = Mr $\phi$ ; MTF = M $\theta\phi$ . In another frequently used notation: MRR = Mzz; MTT = Mxx; MFF = Myy; MRT = Mxz; MRF = -Myz; MTF = -Mxy (see Aki and Richards, 1980, p. 118). The solutions are constrained to have MRR + MTT + MFF = 0. The values following the entries for the elements of the moment tensor and centroid co-ordinates are standard errors, calculated under the usual assumption of uncorrelated errors in the data. The lateral heterogeneity of the Earth, however, clearly leads to systematic errors, and so the errors listed probably underestimate the true error in the solution.
4. PRINCIPAL AXES: rotation of the moment tensor into the principal axes system. Most of the solutions are predominantly of the double couple type; the largest positive eigenvalue corresponds to the tension axis (T); the usually small, intermediate eigenvalue is associated with the null axis (N); the smallest negative eigenvalue is identified with the compression axis (P). PLG are the plunges and AZM the azimuths of the axes.
5. BEST DOUBLE COUPLE. If the eigenvalue (T) is  $\sigma_1$  and (P) is  $-\sigma_2$ , then the scalar seismic moment is defined as  $M_0 = 1/2(\sigma_1 + \sigma_2)$ . The strike, dip and slip of the first (NP1) and second (NP2) nodal planes are calculated from the directions of the P, T, and N axes. The remainder is a linear-vector dipole (Knapoff and Randall, 1970); in most cases the magnitude of LVD is small. Although all such decompositions are highly non-unique, this particular one is the best in estimating the starting solution for the non-linear, constrained double couple inverse problem. The angles strike, dip, and slip are defined using the convention of Aki and Richards (1980, p. 106) and are the angles designated there as  $\phi_s, \delta, \lambda$ , respectively.

A. M. Dziewonski, J. Durek, G. Ekström, J. H. Woodhouse and G. Zwart, Department of Geological Sciences, Harvard University, Cambridge, MA 02138

Aki, K. and Richards, P. G., *Quantitative Seismology*, Volume 1, W. H. Freeman, San Francisco, 1980, 557 pp.

Dziewonski, A. M., Chou, T. A., and Woodhouse, J. H., 1980, Determination of earthquake source parameters from waveform data for studies of global and regional seismicity: *Journal of Geophysical Research*, v. 86, p. 2825–2852.

Knapoff, L. and Randall, M. J., 1970, The compensated linear-vector dipole: A possible mechanism for deep earthquakes: *Journal of Geophysical Research*, v. 75, p. 4957–4963.

Woodhouse, J. H. and Dziewonski, A. M., 1984, Mapping the upper mantle: Three dimensional modelling of earth structure by inversion of seismic waveforms: *Journal of Geophysical Research*, v. 89, p. 5953–5986.

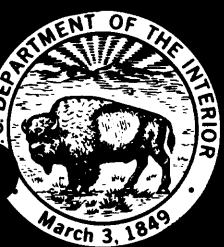
## OTHER SEISMIC MOMENTS

1. The seismic moment ( $M_0$ ) contributed by the University of California, Berkeley (BRK), is given for regional earthquakes based on Wood-Anderson torsion seismograms recorded within 300 km of the epicenter with peak-to-peak amplitudes of at least 3 mm. This seismic moment ( $M_0$ ) in dyne-cm is defined by  $\log M_0 = 16.74 + 1.22 \log(CD/A)$ , where C is the maximum peak-to-peak amplitude in mm, D is the duration in seconds from the time of the S-wave onset to the last time that the peak-to-peak amplitude exceeds C/3, and A is the epicentral distance in km. Seismic moments quoted in "Preliminary Determination of Epicenters" are converted to Newton-meters (1 Newton-meter =  $10^9$  dyne-cm).

Balt, B.A. and Herraiz, M. 1983, Simplified estimation of seismic moment from seismograms: *Bulletin of the Seismological Society of America*, v. 73, p. 735–748.

2. Beginning with November, 1988, seismic moments for selected events have been contributed by the Laboratoire de Géophysique, Popeete, French Polynesia (PPT). These moments are computed from the mantle Rayleigh wave using the method of Talondier, Raymond and Okal (1987).

Talondier, J., Raymond, D. and Okal, E.A. 1987, Use of a variable period mantle magnitude for the rapid one-station estimation of seismic moments: *Geophysical Research Letters*, v. 14, no. 8, p. 840–843.



# PRELIMINARY DETERMINATION OF EPICENTERS

## MONTHLY LISTING

### U.S. DEPARTMENT OF THE INTERIOR / GEOLOGICAL SURVEY National Earthquake Information Center

FEBRUARY 1990

K E Y	DAY	ORIGIN TIME UTC	TIME HR MN SEC	GEOGRAPHIC COORDINATES LAT LONG	DEPTH	MAGNITUDES GS MB Msz	SD	NO. STA USED	REGION, CONTRIBUTED MAGNITUDES AND COMMENTS
	01	00 11 08.2		36.282 N 70.660 E	137 *	4.5	1.5	30	HINDU KUSH REGION
	01	01 25 32.6		9.857 S 160.136 E	52 *	4.9	1.0	29	SOLOMON ISLANDS. Felt at Honiara.
	01	02 12 15.87		16.60 N 100.23 W	33 N		1.2	5	NEAR COAST OF GUERRERO, MEXICO
	01	03 27 32.67		35.65 N 26.66 E	10 G		0.6	4	CRETE. MD 3.4 (ATH).
	01	03 33 29.6*		24.296 N 123.775 E	10 G	4.6	1.4	11	SOUTHWESTERN RYUKYU ISLANDS
	01	03 38 48.0*		1.580 S 123.446 E	44 ?	4.4	0.8	6	SULAWESI
	01	05 06 23.2		2.667 S 134.959 E	46 *	5.1 4.4	1.1	57	WEST IRIAN REGION
	01	05 43 02.5*		37.901 N 16.039 E	10 G		0.1	5	IONIAN SEA
	01	05 51 15.1*		59.939 N 152.266 W	81			41	SOUTHERN ALASKA. <AGS-P>.
	01	06 24 14.8		42.204 N 15.566 E	10 G		1.4	112	ADRIATIC SEA. ML 4.8 (ZAG), 4.7 (KBA), 4.4 (LDG), 4.3 (TTG). MD 4.7 (TRI).
	01	06 55 20.9*		42.200 N 15.554 E	10 G		0.4	5	ADRIATIC SEA
	01	07 10 27.8		38.179 N 26.587 E	10 G		1.2	9	AEGEAN SEA. MD 3.3 (ATH).
	01	07 11 54.57		31.72 S 117.10 E	33 N		0.2	4	WESTERN AUSTRALIA
a	01	11 16 24.0		7.912 N 126.909 E	63 *	4.9	1.3	56	MINDANAO, PHILIPPINE ISLANDS
	01	11 49 43.9		46.956 N 10.583 E	10 G		1.2	9	NORTHERN ITALY. ML 2.4 (KBA).
	01	13 45 16.1*		42.489 N 24.155 E	10 G		0.6	5	BULGARIA
	01	14 18 40.0*		60.847 N 131.269 W	18 G			5	SOUTHERN YUKON TERRITORY, CANADA. <PGC-P>. ML 3.8 (PGC).
	01	16 05 47.4?		33.22 N 141.18 E	33 N	4.5	0.7	8	OFF EAST COAST OF HONSHU, JAPAN
	01	17 00 53.6*		2.970 S 130.155 E	33 N	4.6	0.9	7	CERAM
	01	17 06 02.8*		5.816 S 154.569 E	413 *		0.7	13	SOLOMON ISLANDS
	01	17 37 55.1*		35.330 N 26.860 E	10 G		0.9	5	CRETE. MD 3.7 (ATH).
a	01	18 33 53.8		8.247 N 126.712 E	61 D	5.3	1.2	113	MINDANAO, PHILIPPINE ISLANDS
	01	19 28 19.3*		8.046 N 126.928 E	38 D	4.4	1.4	12	MINDANAO, PHILIPPINE ISLANDS
	01	19 33 44.8*		38.008 N 24.398 E	10 G		0.7	5	AEGEAN SEA. ML 2.5 (ATH).
	01	20 19 42.6*		28.864 S 67.362 W	10 G		0.3	7	LA RIOJA PROVINCE, ARGENTINA
	01	20 27 40.27		31.20 S 68.42 W	97 ?		0.8	5	SAN JUAN PROVINCE, ARGENTINA
	01	21 47 43.5*		61.720 N 150.927 W	62			34	SOUTHERN ALASKA. <AGS-P>.
	01	22 25 07.1		43.987 N 8.604 E	10 G		1.0	27	CORSICA. ML 2.8 (GEN), 2.7 (LDG). MD 2.3 (STR).
	01	22 28 42.7*		23.280 N 120.105 E	10 G		1.1	7	TAIWAN
	01	23 07 50.4*		24.116 N 121.661 E	10 G	3.5	0.5	5	TAIWAN
	01	23 25 53.87		13.64 N 91.86 W	10 G	4.2	1.5	8	NEAR COAST OF GUATEMALA
	02	01 20 21.6*		25.368 S 70.138 E	10 G	5.1 4.6	0.8	20	MID-INDIAN RISE
	02	01 56 38.7		32.176 S 69.437 W	138 *		0.7	17	MENDOZA PROVINCE, ARGENTINA
	02	02 03 06.7		48.011 N 9.341 E	10 G		1.2	16	GERMANY. ML 2.9 (LDG), 2.3 (GRF). MD 2.1 (STR).
	02	02 52 46.7		37.798 N 15.036 E	10 G		0.9	9	SICILY
	02	03 24 05.2		37.814 N 15.000 E	10 G		1.4	16	SICILY
	02	03 26 44.1		37.779 N 15.016 E	10 G		0.8	8	SICILY
	02	03 36 17.6		37.786 N 15.033 E	10 G		1.0	7	SICILY
	02	04 18 03.9		44.588 N 8.317 E	10 G		0.9	19	NORTHERN ITALY. ML 2.6 (GEN), 2.5 (LDG).
	02	04 41 03.0*		12.692 N 145.064 E	33 N	4.5	0.4	6	SOUTH OF MARIANA ISLANDS. Felt (III) in central Guam.
	02	05 19 02.4		37.788 N 14.982 E	19		1.0	16	SICILY
	02	05 35 09.87		51.23 N 15.98 E	10 G		1.6	5	POLAND. ML 2.8 (KBA).
	02	06 02 10.5		40.335 N 29.266 E	10 G		1.4	10	TURKEY
	02	06 24 08.0*		17.645 S 168.027 E	72	4.8	0.8	16	VANUATU ISLANDS
	02	06 52 09.4*		61.478 N 151.013 W	68			38	SOUTHERN ALASKA. <AGS-P>.
	02	07 02 32.0*		62.715 N 149.688 W	69			28	CENTRAL ALASKA. <AGS-P>.
	02	07 49 08.6*		44.390 N 112.737 W	0			20	EASTERN IDAHO. <BUT>. ML 3.9 (BUT).
	02	08 53 15.4?		31.34 S 69.17 W	33 N		1.0	4	SAN JUAN PROVINCE, ARGENTINA
	02	09 27 17.9*		36.818 N 121.597 W	3			14	CENTRAL CALIFORNIA. <BRK>. ML 3.0 (BRK).
	02	09 39 19.87		11.97 N 87.35 W	33 N	4.2	0.8	9	NEAR COAST OF NICARAGUA
	02	10 05 10.0		40.282 N 29.269 E	10 G		1.2	7	TURKEY
	02	10 30 50.4		0.468 S 79.057 W	10 G		0.6	11	ECUADOR
	02	11 27 40.2*		17.402 N 94.792 W	104 *	3.9	1.3	16	CHIAPAS, MEXICO
	02	11 54 24.0*		34.654 N 86.872 E	33 N	3.6	1.4	11	TIBET
	02	12 47 17.4*		51.196 N 15.783 E	10 G		1.5	8	POLAND. ML 2.7 (KRA).
	02	13 21 53.5		38.258 N 28.029 E	5 G		1.1	19	TURKEY

02	13 42 20.07	8.21 S	127.80 E	174 ?	1.5	6	TIMOR
02	14 04 25.5*	42.219 N	76.270 E	33 N 4.4	1.5	11	ALMA-ATA REGION. Felt (III) at Alma-Ata.
o 02	14 49 09.4	18.407 S	176.924 E	10 G 5.6 5.7	1.3	160	FIJI ISLANDS REGION. Felt (V) at Singatoka and Navua; (IV) at Nadi, Viti Levu. Felt throughout Viti Levu.
02	14 53 14.7&	36.825 N	121.592 W	1		13	CENTRAL CALIFORNIA. <BRK>. ML 2.8 (BRK).
02	15 20 21.3*	31.079 S	71.672 W	33 N	0.8	14	NEAR COAST OF CENTRAL CHILE
02	15 29 34.7%	35.736 N	52.103 E	10 G	0.9	6	IRAN
02	15 56 56.1*	18.723 S	71.337 W	47 * 4.7	1.5	14	OFF COAST OF NORTHERN CHILE
02	16 48 46.1*	24.199 S	69.681 W	33 N	0.9	6	NORTHERN CHILE
02	16 55 45.97	13.71 S	166.89 E	33 N 4.4	1.3	11	VANUATU ISLANDS
02	17 58 19.0*	18.683 S	71.409 W	33 N	1.7	5	OFF COAST OF NORTHERN CHILE
o 02	18 34 46.2	18.073 S	178.307 W	576 D 5.3	1.0	201	FIJI ISLANDS REGION
o 02	18 53 40.3	5.294 S	151.099 E	44 * 5.7 5.5	1.1	134	NEW BRITAIN REGION
02	19 25 37.3	33.880 S	70.071 W	10 G	1.4	14	CHILE-ARGENTINA BORDER REGION
02	19 26 58.97	32.54 N	49.15 E	33 N 4.0	0.7	6	WESTERN IRAN
02	19 32 31.4&	61.360 N	151.516 W	77		48	SOUTHERN ALASKA. <AGS-P>.
02	19 58 59.7	33.773 S	69.967 W	10 G	0.2	9	CHILE-ARGENTINA BORDER REGION
02	19 59 23.0	44.049 N	8.620 E	10 G	1.0	23	NORTHERN ITALY. ML 2.5 (LDG), 2.4 (GEN).
02	21 04 14.5	41.415 N	22.703 E	10 G	1.2	7	YUGOSLAVIA. ML 2.5 (SKO).
02	22 17 17.0%	46.964 N	5.750 E	10 G	0.6	8	FRANCE. ML 2.3 (LDG).
02	23 58 00.37	15.14 N	60.27 W	28	0.2	7	LEEWARD ISLANDS. ML 2.5 (LDG).
03	00 01 54.3	47.037 N	10.598 E	5 G	1.3	35	AUSTRIA. ML 3.4 (FUR), 3.0 (LDG), 2.9 (KBA). Felt (V) at Pfunds.
03	00 18 51.4&	36.875 N	122.152 W	7		13	CENTRAL CALIFORNIA. <BRK>. ML 3.1 (BRK).
03	01 07 09.7	36.419 N	1.727 E	10 G	0.8	16	ALGERIA. mbLg 3.4 (MDD).
03	01 53 55.37	43.31 N	1.63 W	10 G	0.8	10	PYRENEES
03	02 23 43.8*	7.910 N	126.859 E	81 ? 4.4	1.0	19	MINDANAO, PHILIPPINE ISLANDS
03	02 31 45.7*	4.724 S	153.515 E	91 * 4.6	0.8	18	NOW IRELAND REGION
03	03 15 29.8*	0.397 S	124.578 E	33 N 4.5	1.0	13	MOLUCCA SEA
03	03 39 16.47	33.56 S	71.82 W	10 G	0.2	6	NEAR COAST OF CENTRAL CHILE
o 03	04 43 42.9	3.065 S	126.361 E	85 * 5.1	1.2	47	BURU
03	05 10 42.4*	32.151 S	71.098 W	80 ?	1.0	13	NEAR COAST OF CENTRAL CHILE
03	05 37 21.9*	24.228 S	68.490 W	33 N	1.2	7	CHILE-ARGENTINA BORDER REGION
03	05 55 39.6	31.388 S	67.923 W	10 G	1.1	14	SAN JUAN PROVINCE, ARGENTINA
03	06 33 10.2*	39.751 N	20.565 E	10 G	1.2	5	GREECE-ALBANIA BORDER REGION. MD 3.1 (ATH).
03	07 26 29.4%	44.561 N	7.294 E	10 G	0.3	10	NORTHERN ITALY. ML 2.2 (GEN).
03	07 30 54.2	18.672 N	64.647 W	62 5.0	0.9	144	VIRGIN ISLANDS. Felt in U.S. and British Virgin Islands. Also felt on Culebra, Vieques and eastern Puerto Rico.
03	08 23 56.2	39.208 N	23.757 E	5 G	1.4	16	AEGEAN SEA. ML 3.3 (ATH).
o 03	09 54 55.6	51.125 N	130.238 W	10 G 5.2 5.4	1.1	103	QUEEN CHARLOTTE ISLANDS REGION. ML 5.0 (PGC).
03	10 00 42.7*	32.111 S	71.671 W	97 ? 3.7	1.2	15	NEAR COAST OF CENTRAL CHILE
03	10 59 21.0*	58.948 S	25.531 W	33 N 4.8	0.7	16	SOUTH SANDWICH ISLANDS REGION
03	11 12 33.8*	41.447 N	22.389 E	10 G	1.0	7	YUGOSLAVIA. ML 2.3 (SKO).
03	11 57 30.5	36.040 N	27.126 E	10 G	1.0	10	DODECANESE ISLANDS
03	12 04 50.8	7.050 S	129.191 E	172 * 5.1	1.3	51	BANDA SEA
03	12 17 26.07	50.98 N	130.51 W	10 G	0.1	5	VANCOUVER ISLAND REGION. ML 3.7 (PGC).
03	12 27 45.3%	10.524 N	61.957 W	10 G	1.1	7	TRINIDAD. ML 3.0 (TRN).
03	13 00 54.6*	17.063 S	121.707 E	10 G	1.5	14	WESTERN AUSTRALIA
03	13 03 03.87	45.00 N	14.46 E	10 G	0.6	4	ADRIATIC SEA. ML 2.1 (KBA).
03	13 18 07.7	44.410 N	6.925 E	10 G	0.4	13	FRANCE. ML 2.2 (GEN), 2.1 (LDG).
03	16 35 20.17	15.12 N	60.27 W	28 *	0.4	6	LEEWARD ISLANDS. ML 2.5 (LDG).
03	16 37 24.1&	62.455 N	151.788 W	98		44	CENTRAL ALASKA. <AGS-P>.
03	17 56 58.37	37.50 N	73.12 E	33 N	0.4	7	TAJIK SSR
03	18 49 00.3*	39.933 N	24.056 E	10 G	0.8	10	AEGEAN SEA. MD 3.2 (ATH).
03	18 56 49.5&	61.623 N	151.335 W	68		25	SOUTHERN ALASKA. <AGS-P>.
03	18 57 57.4	39.985 N	23.900 E	10 G	1.0	26	AEGEAN SEA. ML 3.5 (ATH).
03	19 44 25.2*	39.997 N	24.013 E	5 G	1.4	11	AEGEAN SEA
o 03	20 06 24.6&	40.055 N	123.050 W	23		13	NORTHERN CALIFORNIA. <BRK>. ML 3.1 (BRK).
o 03	22 27 30.8	2.282 S	125.086 E	37 * 5.2 4.3	1.2	47	CERAM SEA
03	22 50 20.2*	41.438 N	22.647 E	10 G	1.4	6	YUGOSLAVIA. ML 2.0 (SKO).
03	23 22 45.0	37.890 N	20.012 E	16 4.0	1.1	20	IONIAN SEA. MD 3.8 (ATH).
03	23 52 31.4	24.255 S	67.110 W	180 4.7	1.1	39	CHILE-ARGENTINA BORDER REGION
04	01 05 35.9%	43.567 N	11.793 E	33 N	1.6	8	CENTRAL ITALY
04	01 06 05.5&	49.289 N	119.536 W	10 G		11	BRITISH COLUMBIA. <PGC>. ML 2.3 (PGC). Felt mildly from Penticton to Oliver with most reports from Okanagan Falls and Kelowna.
04	02 02 23.1	28.064 N	130.076 E	25 D 5.1	1.1	86	RYUKYU ISLANDS
04	02 04 20.8*	50.116 N	153.338 E	209 ? 4.5	0.6	27	KURIL ISLANDS
04	02 15 21.2	51.152 N	130.452 W	10 G 3.8	1.4	25	QUEEN CHARLOTTE ISLANDS REGION. ML 4.1 (PGC).
04	02 30 41.1	37.474 N	20.968 E	56 5.0	1.1	99	IONIAN SEA. MD 4.5 (ATH).
04	02 47 16.8*	17.675 S	178.769 W	571 4.6	1.0	41	FIJI ISLANDS REGION
04	03 12 59.4&	61.507 N	146.404 W	22		35	SOUTHERN ALASKA. <AGS-P>.
04	04 02 47.4&	36.860 N	121.612 W	5		12	CENTRAL CALIFORNIA. <BRK>. ML 2.8 (BRK).
04	04 52 48.7	36.034 N	27.108 E	10 G	0.9	7	DODECANESE ISLANDS
04	05 08 24.2&	62.330 N	151.391 W	90		40	CENTRAL ALASKA. <AGS-P>.
04	06 07 01.6	22.377 S	70.141 W	60 * 4.7	1.5	27	NEAR COAST OF NORTHERN CHILE
04	06 15 37.47	24.43 N	122.45 E	10 G	1.4	5	TAIWAN REGION
04	06 22 58.37	46.48 N	152.08 E	124 ? 4.4	1.1	13	KURIL ISLANDS
04	06 23 45.47	2.96 N	98.11 E	117 * 4.3	0.9	7	NORTHERN SUMATERA
04	07 10 43.4*	44.200 N	10.257 E	10 G	0.8	6	NORTHERN ITALY
04	07 27 04.97	35.89 N	53.23 E	33 N	0.9	6	IRAN. Felt in the Firuz Kuh area.
04	07 50 21.2	39.688 N	24.117 E	37 * 3.8	1.0	53	AEGEAN SEA. ML 3.6 (ATH).
o 04	07 58 14.0	10.233 S	110.290 E	46 D 5.7 5.4	1.1	210	SOUTH OF JAVA
04	08 05 59.0*	31.940 S	71.051 W	10 G	0.8	10	NEAR COAST OF CENTRAL CHILE
04	08 13 13.6	46.174 N	13.593 E	10 G	0.9	10	AUSTRIA. MD 3.1 (LJU), 2.6 (TRI). ML 2.4 (KBA).
04	08 46 15.77	34.92 S	71.94 W	10 G	0.3	8	NEAR COAST OF CENTRAL CHILE
04	09 06 38.0%	39.128 N	27.611 E	10 G	0.5	5	TURKEY
04	09 22 15.2	46.182 N	13.604 E	10 G	1.2	12	AUSTRIA. ML 2.6 (KBA). MD 2.9 (LJU), 2.7 (TRI). Felt (IV) in the Tolmin area, Yugoslavia.
04	10 32 18.7	44.604 N	6.762 E	10 G	0.3	8	FRANCE. ML 2.0 (GEN).
04	10 57 40.97	19.59 S	169.26 E	57 ? 4.8	1.3	11	VANUATU ISLANDS
04	11 34 33.77	19.31 S	175.02 W	210 G 4.3	1.4	10	TONGA ISLANDS

04	12 17 55.3	31.355 S	68.649 W	105 *	0.6	8	SAN JUAN PROVINCE, ARGENTINA
04	12 50 57.4	4.846 S	153.320 E	65	5.0	0.8	61 NEW IRELAND REGION
04	14 47 41.07	0.39 S	132.77 E	33 N	4.5 3.7	1.5	7 WEST IRIAN REGION
04	14 50 27.1	32.496 N	98.133 E	33 N	3.7	1.3	8 SICHUAN PROVINCE, CHINA
04	15 04 53.6	6.864 S	153.707 E	35 *	4.7 3.6	0.9	18 NEW BRITAIN REGION
04	16 36 15.8	59.583 N	152.974 W	99		25	SOUTHERN ALASKA. <AGS-P>.
04	16 55 03.9	7.452 S	128.617 E	118 *	5.0	1.0	74 BANDA SEA
04	16 55 36.2	36.106 N	1.940 E	10 G		0.9	18 ALGERIA. ML 3.8 (LDG). mbLg 3.4 (MDD).
04	18 15 52.7	9.715 N	126.353 E	55 ?	4.6	1.1	27 MINDANAO, PHILIPPINE ISLANDS
04	19 05 38.8	14.573 N	146.932 E	33 N	5.0	1.1	21 MARIANA ISLANDS
04	19 34 42.1	22.874 N	121.618 E	10 G		0.9	6 TAIWAN REGION
04	19 35 13.4	32.872 S	71.477 W	13		0.5	10 NEAR COAST OF CENTRAL CHILE
04	20 07 57.77	18.58 N	65.64 W	122 *		1.3	7 PUERTO RICO REGION
04	20 26 13.1	22.374 S	68.423 W	101	5.3	1.3	69 NORTHERN CHILE. Felt (III) at Antafagasta.
04	20 29 03.1	37.515 N	21.598 E	10 G	3.9	1.3	12 SOUTHERN GREECE. ML 3.3 (ATH).
04	20 34 42.2	28.078 N	57.619 E	39 *	4.8 4.5	1.3	107 SOUTHERN IRAN
04	21 05 15.9	47.928 N	9.399 E	10 G		1.2	10 GERMANY. ML 2.9 (LDG), 2.4 (KBA), 2.0 (GRF). MD 2.6 (KRW).
04	21 15 57.2	47.993 N	4.704 E	10 G		0.3	7 FRANCE. ML 2.3 (LDG).
04	21 21 14.2	44.059 N	7.923 E	10 G		0.4	6 NORTHERN ITALY. ML 1.7 (GEN).
04	21 33 55.4	18.951 N	65.844 W	60 *	4.6	1.1	41 PUERTO RICO REGION
04	21 54 58.5	53.104 N	172.675 E	33 N	4.8	1.2	23 NEAR ISLANDS, ALEUTIAN ISLANDS
04	21 55 11.3	18.761 N	65.896 W	33 N		0.8	9 PUERTO RICO REGION
04	23 27 25.6	8.141 N	127.086 E	33 N	4.4	1.2	13 PHILIPPINE ISLANDS REGION
04	23 59 56.37	62.06 N	2.40 E	10 G		0.7	4 NORWEGIAN SEA. MD 2.2 (BER).
05	00 51 01.9	33.500 N	116.450 W	9		21	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.4 (PAS). Felt (III) at North Palm Springs and Warner Springs. Also felt at Anza, Indio and Palm Desert.
05	01 12 37.5	38.125 N	29.325 E	33 N		1.2	7 TURKEY
05	01 21 11.2	35.190 N	28.389 E	10 G		1.0	5 EASTERN MEDITERRANEAN SEA. MD 2.8 (ATH).
05	02 06 47.7	24.877 N	92.425 E	33 N	4.1	1.1	8 INDIA-BANGLADESH BORDER REGION
05	02 09 04.9	24.062 S	66.989 W	196	4.6	1.0	16 SALTA PROVINCE, ARGENTINA
05	03 24 50.8	59.930 N	153.223 W	129		26	SOUTHERN ALASKA. <AGS-P>.
05	03 30 36.6	36.248 N	120.385 W	7		14	CENTRAL CALIFORNIA. <BRK>. ML 2.5 (BRK).
05	03 33 00.8	50.426 N	6.079 E	10 G		1.0	10 GERMANY. ML 2.7 (LDG). MD 2.1 (UCC).
05	03 41 16.2	47.945 N	9.307 E	10 G		1.0	6 GERMANY. ML 2.9 (LDG), 2.2 (GRF).
05	04 04 54.2	42.176 N	15.540 E	10 G		1.2	36 ADRIATIC SEA. ML 3.0 (KBA).
05	04 55 20.2	1.004 S	78.445 W	10 G		1.2	8 ECUADOR
f 05	05 16 46.1	37.047 N	71.250 E	110 G	6.1	1.0	552 AFGHANISTAN-USSR BORDER REGION. Slight damage (VI) at Khorog. Felt (V) at Ishkashim, Kulyab, Garm, Nurek, Dushanbe and Obigarm; (IV) at Pyondzh; (III) at Andizhan, Fergana, Tashkent, Namangan and Leninabad, USSR. Felt (IV) at Kabul, Afghanistan. Also felt at Islamabad, Peshawar and Rawalpindi, Pakistan and in the Srinagar area, Kashmir. Depth from broadband displacement seismograms.
05	07 03 13.3	14.044 N	61.160 W	180	4.4	0.6	23 WINDWARD ISLANDS
05	07 17 44.5	36.749 N	2.534 E	10 G	4.3	1.1	43 ALGERIA. mbLg 3.7 (MDD).
05	08 11 26.3	43.969 N	8.682 E	9		0.7	27 CORSICA. ML 3.2 (LDG), 3.0 (GEN). MD 2.4 (STR).
05	09 20 04.4	32.081 N	98.323 E	10 G	5.0	1.0	22 SICHUAN PROVINCE, CHINA
05	09 28 46.2	36.450 N	70.462 E	206 *	4.6	1.0	43 HINDU KUSH REGION
05	09 29 34.87	5.91 S	131.37 E	141 ?	4.1	0.7	6 BANDA SEA
05	09 48 45.87	34.35 S	71.08 W	33 N		0.3	7 NEAR COAST OF CENTRAL CHILE
05	10 17 36.9	43.575 N	7.973 E	11		0.3	14 NEAR SOUTH COAST OF FRANCE. ML 2.2 (GEN). MD 1.7 (STR).
05	10 23 25.2	39.504 N	111.517 W	10		14	UTAH. <SLC-P>. ML 3.1 (SLC). Felt (III) at Moroni and Wales. Also felt at Mt. Pleasant.
05	10 26 08.1	38.803 N	122.805 W	4		16	NORTHERN CALIFORNIA. <BRK>. ML 3.1 (BRK).
05	10 53 07.3	14.317 N	61.170 W	33 N		0.2	5 WINDWARD ISLANDS. ML 2.0 (FDF).
05	13 13 07.2	39.439 N	16.407 E	10 G		1.4	6 SOUTHERN ITALY
05	16 13 19.7	44.215 N	113.591 W	5 G		0.5	9 EASTERN IDAHO. ML 3.3 (BUT).
05	16 18 11.2	37.222 N	28.278 E	10 G		1.2	6 TURKEY
05	17 19 13.7	20.347 S	167.912 E	33 N	4.2	1.4	15 LOYALTY ISLANDS
05	19 01 47.7	33.313 S	67.854 W	10 G		1.2	12 MENDOZA PROVINCE, ARGENTINA
05	19 36 46.1	37.066 N	71.851 E	135 ?	4.0	1.5	13 AFGHANISTAN-USSR BORDER REGION
05	21 14 30.07	4.72 S	147.93 E	156 *	4.8	1.2	10 BISMARCK SEA
05	21 19 55.1	36.932 N	141.377 E	56 *	4.6	1.3	25 NEAR EAST COAST OF HONSHU, JAPAN
05	23 04 03.8	45.893 N	13.860 E	10 G		0.7	7 NORTHERN ITALY. MD 2.9 (TRI), 2.8 (LJU). ML 1.6 (KBA).
05	23 23 18.2	44.009 N	7.445 E	10 G		0.6	15 NORTHERN ITALY. ML 2.0 (LDG), 1.9 (GEN).
05	23 37 16.0	39.654 N	20.717 E	5 G		0.6	8 GREECE-ALBANIA BORDER REGION MD 3.3 (ATH).
05	23 49 25.8	36.574 N	73.248 E	75 ?	4.0	1.3	12 NORTHWESTERN KASHMIR
05	23 57 04.2	6.371 N	126.007 E	33 N	5.0	0.6	9 MINDANAO, PHILIPPINE ISLANDS
06	01 11 30.2	38.546 N	25.746 E	10 G		1.1	15 AEGEAN SEA. ML 3.3 (ATH)
06	02 15 38.1	44.755 N	6.804 E	10 G		0.5	5 FRANCE
06	02 49 58.0	43.677 N	12.075 E	33 N		1.0	38 CENTRAL ITALY. MD 2.9 (TRI). ML 3.1 (LDG), 2.5 (KBA).
06	05 13 32.3	34.979 N	121.163 W	10 G		0.5	9 OFF COAST OF CALIFORNIA. ML 2.7 (BRK).
06	06 56 03.9	36.852 N	121.620 W	3		14	CENTRAL CALIFORNIA. <BRK>. ML 2.8 (BRK).
06	07 34 29.3	10.117 N	72.593 W	44	5.3 4.5	0.8	266 VENEZUELA. Felt (IV) at Volledupar, Colombia. Felt in much of northern Colombia. Also felt at Morocaibo and Merido.
06	07 41 27.4	36.553 N	4.498 W	90		0.5	23 STRAIT OF GIBRALTAR. MD 3.0 (RBA).
06	08 08 45.3	32.136 N	131.124 E	130 *	4.7	0.7	26 KYUSHU, JAPAN
06	11 06 55.6	36.186 N	71.349 E	118 *	5.0	1.3	31 AFGHANISTAN-USSR BORDER REGION. Felt (III) at Ishkashim, Khorog and Dushanbe, USSR.
06	11 26 01.27	17.93 N	62.09 W	10 G		0.2	9 LEEWARD ISLANDS. ML 3.5 (FDF).
06	12 16 33.7	62.249 N	148.434 W	31		41	CENTRAL ALASKA. <AGS-P>. ML 3.1 (PMR).
06	12 25 49.07	19.99 N	62.15 W	33 N		0.6	16 LEEWARD ISLANDS. ML 4.3 (FDF).
06	12 32 20.0	59.258 N	152.512 W	66		16	SOUTHERN ALASKA. <AGS-P>.
06	14 29 11.2	8.845 S	119.360 E	141 ?	4.3	0.9	11 FLORES ISLAND REGION
06	14 54 35.67	20.73 S	172.77 E	33 N	4.8	1.2	6 VANUATU ISLANDS REGION
06	15 03 24.6	49.421 N	129.697 W	10 G	4.2	1.3	31 VANCOUVER ISLAND REGION
06	17 25 40.7	31.771 S	70.337 W	138 ?		0.4	10 CHILE-ARGENTINA BORDER REGION
06	18 14 08.0	34.977 N	121.077 W	11		21	OFF COAST OF CALIFORNIA. <BRK>. ML 3.9 (BRK), 3.6 (PAS) Felt at the Diablo Canyon Nuclear Power Plant.



06	18 19 32.6	1.006 S	77.978 W	10 G	0.7	6	ECUADOR
06	18 28 42.3	34.976 N	121.122 W	10 G	0.6	8	OFF COAST OF CALIFORNIA. ML 2.6 (BRK).
06	19 08 09.2	47.976 N	9.139 E	12	1.3	22	GERMANY. MD 2.7 (KRW). ML 2.5 (FUR), 2.6 (KBA).
06	20 06 23.6	44.306 N	9.774 E	5 G	0.7	15	NORTHERN ITALY
06	20 19 08.1	38.753 N	14.356 E	10 G	1.5	5	SICILY
06	22 43 24.0	10.489 S	110.178 E	33 N 4.6	1.0	13	SOUTH OF JAVA
06	22 52 23.8	6.590 N	73.263 W	200 4.9	1.2	53	NORTHERN COLOMBIA
06	23 50 24.3	17.278 N	61.004 W	27 4.5	0.7	28	LEEWARD ISLANDS. ML 4.0 (FDF).
06	23 51 01.5	39.012 N	20.220 E	33 N	1.3	44	GREECE-ALBANIA BORDER REGION. ML 3.7 (ATH), 3.7 (TTG).
07	01 52 29.5	7.030 S	129.328 E	172 * 4.6	1.2	18	BANDA SEA
07	02 07 09.8	40.490 N	21.314 E	5 G	1.0	17	GREECE. MD 3.6 (ATH). ML 3.1 (SKO).
07	02 12 41.7	22.043 S	170.281 E	43 * 4.6	1.4	35	LOYALTY ISLANDS REGION
07	02 20 04.4	45.689 N	26.701 E	142 *	0.7	16	ROMANIA
07	02 43 37.7	50.417 N	5.962 E	12	0.8	20	BELGIUM. ML 3.0 (LDG). MD 2.4 (UCC).
07	03 34 04.1	39.350 N	73.154 E	10 G 4.7	1.2	27	TAJIK-XINJIANG BORDER REGION
07	04 16 03.1	9.90 S	124.44 E	33 N 4.1	1.5	7	TIMOR
07	05 28 35.0	26.080 N	103.107 E	10 G	1.2	6	YUNNAN PROVINCE, CHINA. ML 3.7 (BJI).
07	06 02 55.6	9.783 N	124.715 E	61 * 4.9 3.9	1.1	43	MINDANAO, PHILIPPINE ISLANDS
07	06 24 00.6	17.702 S	179.052 W	558 5.0	0.9	50	FIJI ISLANDS REGION
07	07 41 39.9	32.908 N	80.163 W	9	1.8	18	SOUTH CAROLINA. <GLD>. MD 2.7 (GLD). mbLg 2.9 (NEIS). Felt at Middleton Gardens and Summerville.
07	07 58 01.6	17.74 N	65.49 W	10 G	0.2	5	PUERTO RICO REGION. Felt at San Juan and Naranjito.
07	08 19 56.2	15.276 N	61.329 W	155 *	0.4	17	LEEWARD ISLANDS
07	08 33 52.7	44.238 N	7.505 E	10 G	0.5	7	NORTHERN ITALY. ML 2.2 (GEN).
07	09 29 41.7	8.202 N	126.683 E	86 * 4.6	1.2	40	MINDANAO, PHILIPPINE ISLANDS
07	10 20 58.4	23.71 S	174.93 W	45 D 4.8 4.7	0.9	21	TONGA ISLANDS REGION
07	10 32 39.7	18.912 N	120.559 E	12 4.8 4.3	0.9	51	LUZON, PHILIPPINE ISLANDS
07	10 58 33.1	36.850 N	121.628 W	7	1.4	14	CENTRAL CALIFORNIA. <BRK>. ML 3.0 (BRK).
07	11 03 43.3	35.506 N	24.096 E	33 N	0.8	6	CRETE. MD 3.6 (ATH).
07	11 44 58.7	47.475 N	115.980 W	0 G	0.3	16	MONTANA. ML 2.9 (BUT). Possible rockburst.
07	12 02 14.1	35.629 N	98.827 W	5 G	9	9	OKLAHOMA. <TUL>. MD 2.5 (TUL).
07	13 37 00.5	51.32 N	16.28 E	10 G	1.2	5	POLAND. ML 2.9 (KBA).
07	14 12 14.9	36.928 N	121.702 W	8	3.3	33	CENTRAL CALIFORNIA. <BRK>. ML 4.0 (BRK). Felt (V) at Aromas, Gilroy and Watsonville; (IV) at Aptos, Ben Lamond, Castroville, Hollister, La Selva Beach, San Juan Bautista and Soquel; (III) at Chualar and Monterey.
07	14 16 54.6	25.000 N	123.511 E	33 N 3.9	1.2	14	NORTHEAST OF TAIWAN
07	14 36 26.9	36.023 N	27.292 E	33 N	0.9	5	DODECANESE ISLANDS. MD 3.6 (ATH).
07	14 51 09.7	11.283 S	162.906 E	33 N 3.9	0.6	8	SOLOMON ISLANDS
07	15 32 30.8	32.633 N	142.095 E	33 N 4.3	0.5	7	SOUTH OF HONSHU, JAPAN
07	16 22 57.7	38.700 N	20.866 E	5 G	1.4	14	GREECE. MD 3.4 (ATH).
07	17 08 03.5	61.884 N	150.401 W	47	4.1	41	SOUTHERN ALASKA. <AGS-P>.
07	19 15 46.8	34.166 N	33.432 E	10 G	1.6	5	CYPRUS. ML 3.5 (CSS).
07	20 14 05.4	40.465 N	21.278 E	10 G	0.6	7	GREECE. MD 3.3 (ATH). ML 2.8 (SKO).
07	22 00 52.2	34.365 N	76.647 E	84 ? 4.6	1.1	17	EASTERN KASHMIR
07	22 29 35.0	36.811 N	71.498 E	33 N 4.3	0.5	8	AFGHANISTAN-USSR BORDER REGION
07	23 00 04.6	6.776 S	129.274 E	33 N 4.8	1.0	13	BANDA SEA
08	01 43 16.6	40.556 N	21.375 E	5 G	1.0	15	GREECE. MD 3.3 (ATH). ML 3.3 (SKO).
08	01 53 22.6	53.138 N	1.159 W	10 G	1.1	32	UNITED KINGDOM. ML 3.5 (LDG). MD 3.6 (UCC).
08	02 06 22.5	37.270 N	15.171 E	10 G	1.4	5	SICILY
08	02 45 25.4	13.551 N	90.035 W	98 4.8	1.1	113	NEAR COAST OF GUATEMALA. Felt (III) at San Salvador, El Salvador.
08	03 27 27.1	31.467 S	67.955 W	33 N	0.1	7	SAN JUAN PROVINCE, ARGENTINA
08	03 45 00.1	38.734 N	20.310 E	18	1.1	18	GREECE. MD 3.6 (ATH).
08	04 33 43.2	47.467 N	152.621 E	96 ? 4.6	0.8	17	KURIL ISLANDS
08	04 34 21.6	38.963 N	16.233 E	10 G	1.0	11	SOUTHERN ITALY
08	04 56 59.8	24.542 N	123.604 E	33 N 4.0	0.6	7	SOUTHWESTERN RYUKYU ISLANDS
08	05 05 17.5	37.056 N	3.568 W	10 G	0.8	7	SPAIN. mbLg 2.9 (MDD).
f 08	07 15 32.2	9.755 N	124.694 E	26 G 6.2 6.6	1.4	322	MINDANAO, PHILIPPINE ISLANDS. Ms 6.5 (BRK), 6.3 (PAS). Mo+3.0+10+19 Nm (PPT). Felt (VII RF) on Bohol; (VI) at Cebu; (V) at Cagayan de Oro and on Camiguin; (IV) at Cotabato and (III) at Palo. Also felt on Negros. Two events about 2 seconds apart. Depth from broadband displacement seismograms, based on second event.
08	07 21 58.5	9.788 N	124.619 E	33 N 5.2	1.2	17	MINDANAO, PHILIPPINE ISLANDS
08	07 39 51.1	9.674 N	124.858 E	33 N 5.2	1.4	58	MINDANAO, PHILIPPINE ISLANDS
o 08	07 46 59.7	9.725 N	124.625 E	30 D 6.0 6.5	1.2	248	MINDANAO, PHILIPPINE ISLANDS. Felt (V RF) on Mactan.
08	07 47 28.9	39.153 N	23.736 E	8 4.7	1.0	44	AEGEAN SEA. ML 4.0 (ATH).
08	08 00 36.7	64.479 N	152.085 W	6	4.7	47	CENTRAL ALASKA. <AGS-P>. ML 3.7 (PMR).
08	08 21 41.8	16.65 N	95.57 W	33 N	0.5	5	OAXACA, MEXICO
08	08 23 30.3	27.971 S	137.274 E	10 G 4.5	1.4	16	SOUTH AUSTRALIA
08	08 26 42.2	9.707 N	124.489 E	33 N 5.3	1.1	61	MINDANAO, PHILIPPINE ISLANDS
08	09 06 14.9	46.02 N	16.25 E	10 G	0.1	5	YUGOSLAVIA. ML 2.8 (ZAG), 2.7 (KBA).
08	09 09 38.0	33.048 N	47.196 E	89 * 4.7	1.0	13	WESTERN IRAN
08	09 18 16.7	45.37 N	2.53 E	10 G	0.6	4	FRANCE. MD 2.3 (STR).
08	09 47 32.3	36.675 N	121.345 W	3	1.9	19	CENTRAL CALIFORNIA. <BRK>. ML 3.4 (BRK). Felt (IV) at Freedom and (III) at Aromas and Marina.
08	09 48 23.5	9.589 N	124.546 E	33 N 4.9	1.5	34	MINDANAO, PHILIPPINE ISLANDS
08	10 10 34.6	9.35 N	124.48 E	33 N 4.8	1.0	9	MINDANAO, PHILIPPINE ISLANDS
08	10 36 04.2	25.180 N	123.716 E	139 * 3.6	0.7	8	NORTHEAST OF TAIWAN
08	11 23 44.8	46.188 N	13.643 E	10 G	0.7	12	AUSTRIA. ML 2.7 (KBA). MD 3.1 (LJU), 2.9 (TRI).
08	12 07 29.7	25.170 N	123.688 E	37 * 4.4	1.3	33	NORTHEAST OF TAIWAN
08	12 19 53.3	25.654 N	123.337 E	151 * 4.3	1.5	21	NORTHEAST OF TAIWAN
08	13 14 07.8	9.19 N	125.56 E	175 ? 4.0	1.5	12	MINDANAO, PHILIPPINE ISLANDS
08	13 18 25.7	20.864 N	100.919 E	33 N	1.1	6	SOUTHEAST ASIA
08	13 24 15.2	24.90 N	123.67 E	33 N	0.6	7	SOUTHWESTERN RYUKYU ISLANDS
08	14 13 59.3	25.176 N	123.630 E	52 * 4.7 4.4	1.0	35	NORTHEAST OF TAIWAN
08	14 34 55.4	16.16 S	73.62 W	33 N	1.2	5	NEAR COAST OF PERU
08	14 49 44.7	9.753 N	124.816 E	53 * 4.7	1.0	29	MINDANAO, PHILIPPINE ISLANDS
08	15 14 04.9	19.30 N	65.08 W	10 G	0.1	5	PUERTO RICO REGION
08	15 47 31.4	36.259 N	12.100 W	10 G 5.0	1.2	175	NORTH ATLANTIC OCEAN. mbLg 5.0 (MDD). MD 4.7 (RBA). Felt (III) at Lisbon and Coimbra, Portugal.

08	17	13	33.4	45.954	N	2.825	E	10	G	0.5	15	FRANCE. ML 2.6 (LDG). MD 2.1 (STR).			
08	17	50	15.7	38.988	N	16.198	E	20		0.8	16	SOUTHERN ITALY			
08	18	17	17.7	36.690	N	29.033	E	10	G	0.6	5	TURKEY			
08	18	18	33.2	43.087	N	0.831	W	10	G	0.2	7	PYRENEES. MD 1.0 (STR).			
08	18	27	23.2	0.855	N	120.272	E	61	*	4.7	1.2	22	MINAHASSA PENINSULA		
08	18	31	01.87	8.19	N	126.05	E	33	N	4.9	4.0	1.1	10	MINDANAO, PHILIPPINE ISLANDS	
08	20	17	52.2	36.642	N	27.045	E	158		4.5	1.1	124	DODECANESE ISLANDS		
08	20	28	12.87	29.82	N	90.45	E	33	N		0.8	6	TIBET		
08	22	55	14.87	3.49	S	129.89	E	109	?	4.1	1.4	10	CERAM		
08	23	13	38.4	43.826	N	18.695	E	10	G		1.4	23	YUGOSLAVIA. ML 2.7 (TTG).		
08	23	53	34.2	64.470	N	146.918	W	12			25	CENTRAL ALASKA. <AGS-P>.			
09	01	22	18.6	9.742	N	124.843	E	56	*	5.1	4.3	1.0	75	MINDANAO, PHILIPPINE ISLANDS	
09	02	01	12.1	9.651	N	124.489	E	63	*	4.6		0.8	23	MINDANAO, PHILIPPINE ISLANDS	
09	02	41	11.5	39.445	N	23.915	E	18			1.3	29	AEGEAN SEA. ML 3.3 (ATH).		
09	02	42	08.3	66.245	N	149.560	W	33	N		0.6	12	ALASKA		
09	03	53	19.4	18.863	N	145.777	E	33	N	4.8	0.9	15	MARIANA ISLANDS		
09	03	57	04.6	33.957	N	138.813	E	33	N	4.2	0.9	6	SOUTH OF HONSHU, JAPAN		
09	04	04	34.5	26.066	N	98.900	E	10	G	4.7	1.1	42	BURMA-CHINA BORDER REGION		
09	04	22	20.47	31.17	S	68.57	W	86	?		0.7	5	SAN JUAN PROVINCE, ARGENTINA		
09	04	41	34.4	27.127	N	44.462	W	10	G	4.7	4.1	0.9	18	NORTH ATLANTIC RIDGE	
09	04	58	13.2	44.177	N	10.008	E	10	G		1.3	8	NORTHERN ITALY		
09	06	16	02.4	45.148	N	7.074	E	10	G		0.6	13	NORTHERN ITALY. ML 2.5 (LDG), 2.3 (GEN).		
09	09	16	40.8	44.348	N	7.281	E	14			0.7	17	NORTHERN ITALY. ML 2.4 (GEN).		
o	09	09	31	47.6	36.775	N	2.477	E	12	D	5.0	4.4	1.1	318	ALGERIA. mbLg 4.9 (MDD). Felt in the Algiers area. Also felt (III) at Santa Pola, Spain.
09	11	16	54.5	36.699	N	2.500	E	10	G	4.3	1.0	24	ALGERIA. mbLg 4.0 (MDD). Felt at Algiers.		
09	11	19	56.4	36.640	N	2.581	E	10	G		1.0	31	ALGERIA. mbLg 3.9 (MDD). Felt at Algiers.		
09	12	57	29.5	31.551	S	69.144	W	120	D	4.7	1.1	53	SAN JUAN PROVINCE, ARGENTINA. Felt (II) at Mendoza.		
09	13	09	53.8	36.713	N	2.477	E	10	G	4.1	1.1	25	ALGERIA. mbLg 3.9 (MDD).		
09	13	19	30.2	36.794	N	2.500	E	10	G	4.2	1.1	26	ALGERIA. mbLg 3.8 (MDD).		
09	14	10	49.6	41.972	N	20.419	E	10	G		1.5	16	ALBANIA. ML 3.2 (SKO), 2.7 (TTG).		
09	15	23	26.9	38.916	N	26.959	E	10	G		1.3	6	AEGEAN SEA		
09	15	47	46.4	40.262	N	29.188	E	10	G		0.3	8	TURKEY		
09	15	51	23.0	29.925	N	80.730	E	33	N	4.6	1.0	39	NEPAL-INDIA BORDER REGION		
09	16	12	05.4	30.346	N	50.551	E	59	*	4.5	0.9	15	IRAN		
09	16	24	55.1	39.990	N	143.848	E	23		4.6	4.1	1.3	39	OFF EAST COAST OF HONSHU, JAPAN	
09	16	49	33.0	45.849	N	15.903	E	10	G		1.5	7	YUGOSLAVIA. MD 2.5 (TRI). ML 2.4 (KBA). Felt at Zagreb.		
09	17	01	22.2	9.873	N	124.799	E	34		4.8	1.2	17	MINDANAO, PHILIPPINE ISLANDS		
09	17	03	41.6	38.752	N	20.341	E	10	G		1.2	26	GREECE. MD 3.5 (ATH).		
09	17	09	18.3	14.984	S	75.667	W	9		5.4	1.0	128	NEAR COAST OF PERU. Felt (III) at Ica.		
09	17	10	46.3	44.358	N	7.340	E	10	G		0.6	7	NORTHERN ITALY. ML 2.2 (GEN).		
09	17	39	02.0	33.571	N	116.375	W	10	G		0.7	5	SOUTHERN CALIFORNIA. ML 2.9 (NEIS).		
09	17	57	26.4	31.677	N	121.032	E	10	G	5.0	4.3	1.2	72	EASTERN CHINA. One person injured slightly and minor damage in the Chongshu area. Felt at Jiaxing, Nanjing, Nantong, Shanghai and Wuxi.	
09	18	08	35.6	9.734	N	124.820	E	69	*	4.8	1.1	44	MINDANAO, PHILIPPINE ISLANDS		
09	18	20	00.2	41.088	N	31.853	E	10	G		0.9	5	TURKEY		
09	19	53	23.0	10.547	S	120.293	E	58	?	4.0	1.4	13	SUMBA ISLAND REGION		
09	20	11	41.67	30.10	N	90.23	E	33	N		0.6	6	TIBET		
09	20	12	39.3	45.852	N	11.008	E	15			1.2	39	NORTHERN ITALY. ML 3.4 (KBA), 3.0 (LDG). MD 3.3 (TRI).		
09	21	33	40.3	9.886	S	119.050	E	42	*	4.6	0.9	33	SUMBA ISLAND REGION		
09	22	29	06.3	3.499	N	82.992	W	33	N	4.9	1.2	21	SOUTH OF PANAMA		
o	09	22	30	23.5	26.972	N	140.315	E	436	*	4.7	0.8	110	BONIN ISLANDS REGION	
09	23	17	33.9	31.813	S	70.019	W	107	?		0.6	11	CHILE-ARGENTINA BORDER REGION		
09	23	19	39.6	38.897	N	26.951	E	10	G		1.3	6	AEGEAN SEA		
10	00	41	54.57	33.30	N	49.22	E	33	N		1.2	5	WESTERN IRAN		
10	00	58	48.6	9.580	N	124.499	E	33	N	4.4	1.2	20	MINDANAO, PHILIPPINE ISLANDS		
10	01	24	50.8	10.080	N	125.245	E	52	D	4.5	1.5	21	LEYTE, PHILIPPINE ISLANDS		
10	01	32	04.27	41.53	N	12.35	E	10	G		0.6	6	SOUTHERN ITALY		
10	01	32	15.0	9.817	N	125.004	E	33	N	4.8	4.4	1.2	31	MINDANAO, PHILIPPINE ISLANDS	
10	02	09	28.6	10.148	N	124.816	E	33	N	4.6	0.6	10	LEYTE, PHILIPPINE ISLANDS		
10	02	46	13.2	18.784	S	71.271	W	51		5.0	1.2	37	OFF COAST OF NORTHERN CHILE		
10	02	54	00.9	15.015	S	75.747	W	33	N	4.7	0.8	12	NEAR COAST OF PERU		
o	10	03	27	41.2	42.343	S	172.798	E	10		6.0	6.0	1.3	102	SOUTH ISLAND, NEW ZEALAND. ML 6.0 (WEL). Slight damage in Canterbury Province where seiches were observed on some lakes. Felt at Blenheim, Christchurch, Greymouth and Nelson. Also felt at Wellington and Wanganui, North Island.
10	03	34	31.9	18.756	S	71.456	W	34		4.8	5.9	0.9	22	OFF COAST OF NORTHERN CHILE	
o	10	03	54	47.7	42.347	S	172.595	E	10	G	5.0	5.7	1.5	26	SOUTH ISLAND, NEW ZEALAND
10	03	57	29.2	42.163	S	172.483	E	10	G	5.1	1.4	11	SOUTH ISLAND, NEW ZEALAND		
10	04	03	47.9	19.243	S	71.470	W	33	N	4.9	1.3	7	OFF COAST OF NORTHERN CHILE		
10	04	50	00.6	50.086	N	155.916	E	114	D	4.8	1.0	66	KURIL ISLANDS		
10	06	45	10.2	3.449	N	82.848	W	10	G	5.0	1.0	62	SOUTH OF PANAMA		
10	06	56	13.3	3.452	N	82.865	W	10	G	5.2	0.9	77	SOUTH OF PANAMA		
10	07	52	39.4	3.450	N	82.947	W	10	G	4.2	0.9	21	SOUTH OF PANAMA		
10	08	03	28.9	3.571	N	82.749	W	10	G	4.8	0.8	42	SOUTH OF PANAMA		
10	09	29	18.1	19.117	S	71.624	W	33	N		0.7	6	OFF COAST OF NORTHERN CHILE		
10	09	42	07.67	39.16	N	27.50	E	10	G		1.0	4	TURKEY		
10	09	43	28.8	51.205	N	178.964	W	33	N	4.9	0.8	58	ANDREANOF ISLANDS, ALEUTIAN IS. ML 4.6 (PMR).		
10	09	57	16.87	2.85	N	95.99	E	33	N		1.1	7	OFF W COAST OF NORTHERN SUMATRA		
10	10	35	57.8	15.327	N	104.360	W	33	N	5.0	1.1	33	OFF COAST OF MICHOACAN, MEXICO		
10	11	00	15.0	41.606	N	12.630	E	10	G		0.7	8	SOUTHERN ITALY		
10	12	40	59.2	17.813	N	94.944	W	133	D	4.6	0.7	47	CHIAPAS, MEXICO. Felt on the Isthmus of Tehuantepec.		
10	12	51	10.5	7.334	S	128.867	E	197	?	4.1	1.3	12	BANDA SEA		
o	10	13	12	14.2	5.263	S	151.271	E	10	G	5.3	4.6	1.2	48	NEW BRITAIN REGION
10	13	44	33.1	18.111	N	66.470	W	10	G		0.5	5	PUERTO RICO REGION		
10	13	58	07.9	10.506	S	120.304	E	33	N	4.6	1.1	21	SUMBA ISLAND REGION		
10	14	15	55.9	44.328	N	11.098	E	10	G		1.4	5	NORTHERN ITALY		
10	14	30	55.6	44.058	N	7.925	E	10	G		0.2	7	NORTHERN ITALY. ML 2.3 (GEN).		
10	14	32	09.7	7.704	S	128.368	E	163	?	4.3	1.3	10	BANDA SEA		
10	14	37	53.7	29.736	N	139.033	E	438	*	4.4	0.8	18	SOUTH OF HONSHU, JAPAN		
10	14	59	03.9	47.859	N	9.059	E	10	G		1.5	8	GERMANY. ML 2.8 (LDG), 2.1 (KBA).		

10	15	12	32.4%	44.064 N	7.911 E	10 G	0.4	7	NORTHERN ITALY. ML 2.1 (GEN).		
10	15	13	59.2	44.065 N	7.935 E	10 G	0.3	7	NORTHERN ITALY. ML 2.0 (GEN).		
10	15	50	22.2%	44.066 N	7.953 E	10 G	0.3	5	NORTHERN ITALY. ML 1.8 (GEN).		
10	16	58	49.6	9.839 N	125.005 E	61 *	5.0	1.0	44 MINDANAO, PHILIPPINE ISLANDS		
10	17	08	35.5	6.293 S	154.754 E	79 ?	5.0	1.3	23 SOLOMON ISLANDS		
a	10	17	12	10.4	3.170 S	80.829 W	57 D	5.5	1.0	145 PERU-ECUADOR BORDER REGION	
10	17	49	37.5?	32.27 S	71.84 W	10 G		0.5	7	NEAR COAST OF CENTRAL CHILE	
10	18	40	29.2?	3.22 S	81.75 W	33 N	5.1	0.4	5	NEAR COAST OF NORTHERN PERU	
10	18	52	30.3%	60.084 N	153.106 W	124			24	SOUTHERN ALASKA. <AGS-P>.	
10	18	59	16.8	41.779 N	20.303 E	10 G		0.6	5	ALBANIA	
10	19	47	57.6	39.344 N	27.766 E	10 G		0.9	7	TURKEY	
10	20	01	58.8	9.905 N	125.022 E	33 N	4.7	0.9	10	MINDANAO, PHILIPPINE ISLANDS	
a	10	20	45	39.1	51.623 N	178.043 E	61 D	5.3	1.0	292 RAT ISLANDS, ALEUTIAN ISLANDS	
10	20	55	16.3?	9.72 N	124.51 E	33 N	5.1	1.1	12	MINDANAO, PHILIPPINE ISLANDS	
10	22	23	31.7?	3.42 S	103.04 W	10 G	4.5	3.5	1.2	27 NORTHERN EASTER I. CORDILLERA	
10	22	41	55.3?	44.01 N	7.57 E	10 G		0.2	6	NORTHERN ITALY. MD 1.0 (STR).	
10	22	47	29.5?	30.98 S	68.31 W	33 N		0.6	5	SAN JUAN PROVINCE, ARGENTINA	
10	23	04	08.3	3.846 S	104.331 E	297 *	4.6	1.2	27	SOUTHERN SUMATERA	
10	23	51	00.7	31.294 S	70.225 W	33 N		1.0	12	CHILE-ARGENTINA BORDER REGION	
11	00	19	37.3	28.152 S	67.633 W	146 *		1.1	10	LA RIOJA PROVINCE, ARGENTINA	
11	00	31	04.4	40.403 N	125.358 W	6			7	OFF COAST OF NORTHERN CALIFORNIA. <BRK>. ML 3.5 (BRK).	
11	01	12	19.2	0.903 N	125.958 E	57 *	5.1	4.3	1.3	51 MOLUCCA PASSAGE	
11	02	01	50.8	30.665 S	71.765 W	150 ?		0.6	14	NEAR COAST OF CENTRAL CHILE	
11	02	02	22.4	58.928 N	143.061 W	10 G			7	GULF OF ALASKA. <AGS-P>.	
11	02	10	46.6	61.571 N	150.943 W	68			22	SOUTHERN ALASKA. <AGS-P>.	
11	03	06	21.2	7.542 S	130.037 E	174 ?	4.7	1.3	10	TANIMBAR ISLANDS REGION	
11	04	04	12.0%	40.024 N	27.342 E	10 G		0.4	7	TURKEY	
11	04	07	16.1%	42.653 N	13.067 E	10 G		0.7	8	CENTRAL ITALY	
11	05	01	25.5	34.185 N	25.035 E	33 N		1.4	12	CRETE. MD 4.0 (ATH).	
11	06	23	36.5	39.169 N	15.203 E	29 *		1.5	7	SOUTHERN ITALY	
11	06	34	52.5	8.564 S	128.106 E	318 ?	4.2	0.4	9	TIMOR SEA	
11	07	00	35.9	45.008 N	7.609 E	10 G	4.3	1.3	155	NORTHERN ITALY. ML 4.9 (GRF), 4.8 (LDG), MD 4.6 (TRI), 4.5 (STR).	
11	07	07	46.8	44.957 N	7.571 E	10 G		0.6	42	NORTHERN ITALY. ML 2.7 (GEN), 2.7 (LDG).	
11	07	22	51.9?	28.05 S	179.55 W	419 ?	4.0	0.6	15	KERMADEC ISLANDS REGION	
11	09	05	10.0	50.309 N	7.384 E	5 G		1.4	8	GERMANY. MD 2.6 (UCC).	
11	09	13	34.3%	40.468 N	27.884 E	10 G		0.6	7	TURKEY	
11	09	16	13.7%	39.099 N	27.584 E	10 G		1.0	5	TURKEY	
11	09	27	08.8	31.920 N	116.220 W	6 G			6	BAJA CALIFORNIA. <PAS-P>. ML 3.0 (PAS).	
11	09	32	17.1?	31.55 S	68.84 W	87 ?		0.2	5	SAN JUAN PROVINCE, ARGENTINA	
11	09	56	40.9	9.849 N	125.015 E	31 D	4.8	4.3	1.1	49 MINDANAO, PHILIPPINE ISLANDS	
11	11	23	53.8	3.876 S	81.745 W	33 D	5.0	1.0	32	NEAR COAST OF NORTHERN PERU	
11	11	43	50.2	44.323 N	149.993 E	43 D	4.4	1.1	37	KURIL ISLANDS	
11	12	10	28.2	5.326 S	151.391 E	33 N	5.4	4.5	1.3	55 NEW BRITAIN REGION	
11	12	29	58.2%	40.257 N	29.179 E	10 G		0.8	9	TURKEY	
11	12	38	41.6?	7.74 S	129.18 E	181 ?	4.6	1.7	7	BANDA SEA	
11	13	37	07.3	31.141 S	69.733 W	133 *		1.0	16	SAN JUAN PROVINCE, ARGENTINA	
11	13	54	08.6	6.376 S	146.797 E	63 D	5.1	1.1	65	EAST PAPUA NEW GUINEA REGION	
11	14	10	47.2	37.849 N	20.754 E	33 N	4.1	1.4	60	IONIAN SEA. ML 3.9 (ATH), 3.5 (TTG).	
11	14	43	59.7%	41.741 N	19.592 E	10 G		1.2	7	ALBANIA	
11	14	48	59.2	41.743 N	19.443 E	10 G		1.1	16	ALBANIA. ML 3.0 (TTG).	
11	15	48	18.3	42.815 S	75.838 W	31 D	5.3	1.3	34	OFF COAST OF SOUTHERN CHILE	
a	11	17	46	06.1	36.331 N	140.916 E	46 D	5.4	5.2	0.9	228 NEAR EAST COAST OF HONSHU, JAPAN. Felt (IV JMA) at Mito, (III JMA) at Chiba and Onahama and (II JMA) at Tokyo and Yokahama.
11	18	10	59.2	43.226 N	21.272 E	10 G		1.7	6	YUGOSLAVIA. ML 2.5 (SKO).	
11	18	45	23.1?	8.44 S	118.39 E	33 N	4.5	1.0	12	SUMBAWA ISLAND REGION	
11	18	50	23.7	40.355 N	140.734 E	132	4.5	0.9	37	HONSHU, JAPAN	
11	19	23	13.0	9.709 N	124.888 E	50 D	4.7	0.9	22	MINDANAO, PHILIPPINE ISLANDS	
11	19	30	53.6	31.293 S	71.699 W	118 ?		0.9	13	NEAR COAST OF CENTRAL CHILE	
11	20	13	00.8	43.148 N	0.192 W	10 G		1.0	18	PYRENEES. ML 3.7 (LDG). Felt (IV) at Arthez d'Asson and in the Bearn area, France.	
11	20	41	34.4?	39.51 N	28.98 E	10 G		0.7	4	TURKEY	
a	11	21	58	39.4	31.184 S	177.634 W	29 D	5.3	5.0	1.5	49 KERMADEC ISLANDS REGION. Felt on Raoul Island.
11	22	03	55.1	38.012 N	14.466 E	10 G		1.3	7	SICILY	
11	22	16	24.2	33.311 S	71.951 W	10 G		1.1	14	NEAR COAST OF CENTRAL CHILE	
11	23	03	26.9	9.650 N	124.491 E	33 N	4.8	4.2	0.9	17 MINDANAO, PHILIPPINE ISLANDS	
11	23	45	00.1	63.005 N	150.382 W	105			33	CENTRAL ALASKA. <AGS-P>.	
12	01	00	32.0	61.565 N	146.239 W	38			19	SOUTHERN ALASKA. <AGS-P>.	
12	01	08	12.7	46.822 N	9.763 E	10 G		1.3	27	SWITZERLAND. ML 3.0 (FUR), 3.0 (LDG), 2.8 (KBA).	
12	01	13	11.7	18.042 S	178.507 W	563	5.0	0.9	83	FIJI ISLANDS REGION	
12	01	34	40.6	5.583 N	0.326 W	10 G		0.3	7	NORTHWEST AFRICA. MG 2.7 (KUK).	
12	01	48	17.7	36.855 N	121.612 W	5			21	CENTRAL CALIFORNIA. <BRK>. ML 3.9 (BRK). Mo=1.2*10**15 Nm (BRK). Felt (III) at Aramas, Gilroy and Moss Landing.	
12	02	51	53.4	36.855 N	121.613 W	6			14	CENTRAL CALIFORNIA. <BRK>. ML 2.8 (BRK).	
12	02	55	47.9?	48.66 N	3.72 W	10 G		0.9	13	FRANCE. ML 3.2 (LDG).	
12	03	13	28.8	64.814 N	147.766 W	18			11	CENTRAL ALASKA. <AGS-P>.	
12	03	26	03.5	61.340 N	150.296 W	42			34	SOUTHERN ALASKA. <AGS-P>.	
a	12	03	30	52.8	5.186 S	151.777 E	49 D	5.1	4.7	1.1	75 NEW BRITAIN REGION
12	05	51	34.2	49.143 S	122.328 E	10 G	5.0	0.9	35	SOUTH OF AUSTRALIA	
12	06	24	19.9	48.176 N	7.014 E	10 G		0.5	13	FRANCE. ML 3.0 (LDG).	
12	08	48	55.9	10.330 N	125.602 E	98 ?	4.5	1.2	6	LEYTE, PHILIPPINE ISLANDS	
12	09	14	16.8?	39.10 N	27.47 E	10 G		0.3	4	TURKEY	
12	10	57	31.0	33.340 S	71.939 W	10 G		1.3	12	NEAR COAST OF CENTRAL CHILE	
12	11	01	13.5%	39.109 N	27.573 E	10 G		1.6	5	TURKEY	
12	11	30	05.2%	39.242 N	29.061 E	10 G		1.0	11	TURKEY	
12	11	34	54.4	45.618 N	6.960 E	10 G		0.2	10	FRANCE. ML 2.1 (GEN).	
12	11	52	42.9?	41.47 N	12.56 E	10 G		0.5	6	SOUTHERN ITALY	
12	12	16	11.9?	4.76 S	151.27 E	33 N	4.5	0.6	9	NEW BRITAIN REGION	
12	12	22	18.7?	4.04 S	150.55 E	112 ?	4.7	1.7	7	NEW BRITAIN REGION	
a	12	12	25	33.5	5.256 S	151.330 E	15 D	5.5	5.2	1.2	147 NEW BRITAIN REGION. Ms 5.4 (BRK).
12	12	38	29.9?	4.58 S	134.93 E	33 N	4.7	0.6	6	WEST IRIAN REGION	

12	12	43	49.37	3.67	S	134.82	E	33	N	4.5	1.6	7	WEST IRIAN REGION
12	12	54	28.9	44.397	N	7.401	E	10	G		0.4	10	NORTHERN ITALY. ML 1.9 (GEN).
12	13	04	38.0	14.252	S	167.283	E	10	G	4.5 4.8	1.4	18	VANUATU ISLANDS
12	13	28	08.5	9.617	N	124.591	E	64	*	4.7 4.3	1.2	24	MINDANAO, PHILIPPINE ISLANDS
12	13	44	29.2	44.130	N	128.926	W	10	G	5.1 5.2	0.9	127	OFF COAST OF OREGON
12	14	30	10.2	59.353	N	154.443	W	161				21	SOUTHERN ALASKA. <AGS-P>.
12	15	12	33.67	38.82	S	175.90	E	33	N		1.1	9	NORTH ISLAND, NEW ZEALAND
12	15	24	30.3	31.829	S	68.016	W	10	G		1.2	6	SAN JUAN PROVINCE, ARGENTINA
12	15	42	06.5	36.131	N	27.153	E	10	G	4.5	1.5	33	DODECANESE ISLANDS. ML 4.3 (ATH), 4.2 (CSS).
12	16	09	15.47	11.30	N	61.37	W	33	N		0.5	4	WINDWARD ISLANDS. MD 2.7 (TRN).
12	16	49	07.7	37.053	N	121.887	W	11				13	CENTRAL CALIFORNIA. <BRK>. ML 2.7 (BRK).
12	17	18	00.97	31.26	S	68.48	W	106	?		0.4	5	SAN JUAN PROVINCE, ARGENTINA
12	19	50	59.37	36.16	N	141.54	E	10	G		0.3	5	NEAR EAST COAST OF HONSHU, JAPAN
12	19	53	43.87	15.32	N	61.23	W	117	?		0.3	9	LEEWARD ISLANDS
12	20	23	30.1	51.193	N	179.242	W	33	N	4.8	1.2	54	ANDREANOF ISLANDS, ALEUTIAN IS. ML 5.0 (PMR).
12	20	48	06.3	39.271	N	16.731	E	10	G		1.1	7	SOUTHERN ITALY
12	20	51	01.4	39.239	N	16.519	E	10	G		1.1	5	SOUTHERN ITALY
12	22	06	26.97	39.76	N	20.70	E	10	G		0.8	6	GREECE-ALBANIA BORDER REGION
12	22	28	31.4	43.065	N	0.628	W	10	G		0.6	5	PYRENEES. MD 1.0 (STR).
12	23	31	00.2	9.899	N	124.613	E	33	N	4.8	1.1	15	MINDANAO, PHILIPPINE ISLANDS
12	23	39	14.2	6.107	N	92.218	E	33	N	4.3	0.7	7	NICOBAR ISLANDS REGION
12	23	56	38.0	31.193	S	48.919	W	30	D	5.5 4.4	1.4	90	SOUTH ATLANTIC OCEAN. Felt (III) at Porto Alegre, Brazil.
13	00	07	36.7	31.334	N	140.377	E	33	N	4.9	0.9	23	SOUTH OF HONSHU, JAPAN
13	00	25	04.6	38.181	N	72.264	E	33	N	4.3	0.4	8	TAJIK SSR
13	01	49	16.47	43.21	N	0.60	W	10	G		0.1	4	PYRENEES. MD 1.0 (STR).
13	02	28	42.67	31.18	S	68.89	W	33	N		1.9	5	SAN JUAN PROVINCE, ARGENTINA
13	02	51	40.3	13.744	N	90.601	W	33	N	4.8	1.0	30	NEAR COAST OF GUATEMALA
13	04	40	26.8	42.212	N	25.163	E	5	G		1.5	7	BULGARIA
13	05	54	38.6	43.077	N	0.451	W	10	G		0.4	5	PYRENEES. MD 1.0 (STR).
13	08	04	53.6	36.274	N	141.148	E	41	D	4.9	1.2	69	NEAR EAST COAST OF HONSHU, JAPAN
13	08	28	05.27	40.81	N	28.33	E	10	G		0.5	4	TURKEY
13	09	15	28.7	42.182	N	15.564	E	10	G	3.9	1.2	81	ADRIATIC SEA. ML 4.4 (ZAG), 4.0 (VKA), 4.0 (KBA), 3.7 (TTG).
13	09	50	27.7	38.259	N	14.964	E	33	N		0.5	5	SICILY
13	11	27	00.6	52.120	N	177.890	E	123	D	4.8	1.0	64	RAT ISLANDS, ALEUTIAN ISLANDS
13	12	09	09.3	39.134	N	23.417	E	10	G		1.1	16	AEGEAN SEA. ML 3.2 (ATH).
13	12	21	36.2	2.353	N	96.819	E	41	D	4.7 4.2	1.1	37	NORTHERN SUMATERA
13	13	30	58.2	23.077	S	66.211	W	239		4.5	1.2	70	JUJUY PROVINCE, ARGENTINA
13	14	31	03.27	54.75	S	130.61	W	10	G	4.9 4.7	1.1	9	SOUTH PACIFIC CORDILLERA
13	14	38	31.2	43.265	N	12.497	E	10	G		0.8	6	CENTRAL ITALY
13	15	47	28.0	16.971	N	122.080	E	33	N	4.6	0.6	9	LUZON, PHILIPPINE ISLANDS
13	16	17	00.0	59.389	N	153.564	W	113				20	SOUTHERN ALASKA. <AGS-P>.
13	17	07	38.97	40.29	N	142.58	E	33	N	4.1	0.7	8	NEAR EAST COAST OF HONSHU, JAPAN
13	18	30	01.67	31.76	S	69.67	W	33	N		1.4	4	SAN JUAN PROVINCE, ARGENTINA
13	19	26	03.8	37.419	N	71.484	E	33	N		0.4	8	AFGHANISTAN-USSR BORDER REGION
13	20	13	36.5	31.477	N	102.376	E	33	N		1.7	6	SICHUAN PROVINCE, CHINA
13	20	19	26.37	40.32	N	24.06	E	10	G		1.0	6	AEGEAN SEA
13	20	25	47.37	17.33	N	60.97	W	33	N		0.5	9	LEEWARD ISLANDS. ML 3.6 (FDF).
13	21	09	22.17	36.85	N	27.58	E	10	G		0.4	4	DODECANESE ISLANDS. MD 3.6 (ATH).
13	21	13	07.4	26.011	N	98.980	E	33	N	4.8 4.3	1.2	44	BURMA-CHINA BORDER REGION. ML 5.2 (BJI).
13	21	41	40.9	36.637	N	71.071	E	119	?	4.1	0.6	12	AFGHANISTAN-USSR BORDER REGION
13	21	56	29.9	59.570	N	137.207	W	18	G			5	SOUTHEASTERN ALASKA. <PGC>. ML 3.8 (PGC).
13	22	19	07.8	38.830	N	122.760	W	1				12	NORTHERN CALIFORNIA. <BRK>. ML 3.3 (BRK).
14	00	05	21.8	32.012	N	141.807	E	10	G	4.3	0.9	16	SOUTH OF HONSHU, JAPAN
14	00	31	21.7	41.227	N	20.034	E	5	G		0.9	17	ALBANIA. ML 3.0 (SKO), 2.5 (TTG).
14	01	37	48.0	9.803	N	124.948	E	64	*	4.7	1.1	43	MINDANAO, PHILIPPINE ISLANDS
14	02	21	29.2	33.238	S	71.772	W	10	G		1.4	11	NEAR COAST OF CENTRAL CHILE
14	02	46	09.1	33.652	N	38.570	W	10	G	4.8 4.7	1.0	38	NORTH ATLANTIC RIDGE
14	03	11	03.3	37.632	N	118.942	W	6				19	CALIFORNIA-NEVADA BORDER REGION. <BRK>. ML 3.1 (BRK).
14	05	24	30.7	23.236	N	99.361	E	33	N	4.2	1.5	15	BURMA-CHINA BORDER REGION. ML 4.5 (BJI).
14	05	26	22.57	31.24	S	73.22	W	33	N		1.0	10	OFF COAST OF CENTRAL CHILE
14	05	49	32.4	23.128	N	99.605	E	33	N	4.7	1.4	48	BURMA-CHINA BORDER REGION
14	06	49	48.3	31.362	S	67.823	W	10	G		1.3	9	SAN JUAN PROVINCE, ARGENTINA
14	07	58	10.1	24.092	N	122.612	E	33	N	4.4	1.5	13	TAIWAN REGION
14	08	18	33.4	41.870	N	19.899	E	10	G		0.8	5	ALBANIA
14	08	31	37.8	41.243	N	20.066	E	10	G		0.9	7	ALBANIA. ML 1.3 (SKO).
14	08	37	25.5	9.513	N	124.206	E	58	?	4.2	1.0	10	MINDANAO, PHILIPPINE ISLANDS
14	09	25	44.17	43.80	N	7.35	E	10	G		0.6	7	NEAR SOUTH COAST OF FRANCE
14	09	32	04.2	61.403	N	149.780	W	28				26	SOUTHERN ALASKA. <AGS-P>.
14	10	15	40.3	49.260	S	163.817	E	33	N	5.0	1.5	13	AUCKLAND ISLANDS REGION
14	10	30	03.07	39.13	N	27.53	E	10	G		0.7	4	TURKEY
14	11	16	25.2	62.221	N	151.422	W	91				20	CENTRAL ALASKA. <AGS-P>.
14	11	25	16.2	24.411	S	179.808	W	567	?	5.0	0.8	19	SOUTH OF FIJI ISLANDS
14	12	14	06.7	36.862	N	121.623	W	5				15	CENTRAL CALIFORNIA. <BRK>. ML 2.7 (BRK).
14	12	17	01.7	40.773	N	29.153	E	10	G		1.2	9	TURKEY
14	12	27	14.4	26.286	S	27.507	E	5	G	4.5	0.9	12	REPUBLIC OF SOUTH AFRICA. mbLg 3.8 (BUL).
14	13	12	56.9	36.945	N	121.688	W	6				15	CENTRAL CALIFORNIA. <BRK>. ML 2.6 (BRK).
14	14	07	45.1	9.800	N	124.989	E	33	N	3.8	0.5	8	MINDANAO, PHILIPPINE ISLANDS
14	14	50	22.3	37.456	N	71.618	E	33	N	4.1	1.1	9	AFGHANISTAN-USSR BORDER REGION
14	15	08	51.77	61.51	N	3.48	E	10	G		1.5	7	NORWEGIAN SEA. MD 1.5 (BER).
14	15	55	03.1	26.343	S	27.384	E	5	G		1.4	12	REPUBLIC OF SOUTH AFRICA. mbLg 3.9 (BUL).
14	15	55	54.0	46.356	N	6.665	E	10	G		1.0	92	SWITZERLAND. ML 4.0 (LDG). MD 3.6 (STR). mbLg 3.5 (UCC).
14	16	39	43.77	4.09	S	143.27	E	83	?	3.3	0.1	5	PAPUA NEW GUINEA
14	16	44	33.5	6.777	S	108.023	E	266	*	4.3	0.8	30	JAVA
14	18	03	57.3	6.273	N	126.352	E	88	*	5.2	1.1	79	MINDANAO, PHILIPPINE ISLANDS
14	20	33	34.5	17.038	S	69.674	W	184	*		1.2	11	PERU-BOLIVIA BORDER REGION
14	20	51	53.3	29.258	S	71.637	W	33	N	4.4	1.3	18	NEAR COAST OF CENTRAL CHILE
14	23	01	52.5	3.284	N	73.998	W	33	N		0.4	7	COLOMBIA
15	00	13	38.1	44.325	N	112.780	W	5	G		0.8	12	EASTERN IDAHO. ML 3.6 (BUT).
15	00	26	50.1	0.212	S	125.171	E	63	*	5.0	1.3	58	MOLUCCA SEA
15	01	15	14.7	26.226	S	27.375	E	5	G		1.6	9	REPUBLIC OF SOUTH AFRICA. mbLg 3.7 (BUL)

15	02 09 53.64	63.112 N	150.832 W	125				12	CENTRAL ALASKA. <AGS-P>.
15	02 20 18.7	36.123 N	27.196 E	10 G	3.2	1.2	7	DODECANESE ISLANDS. MD 3.3 (ATH).	
15	02 23 09.4	50.733 N	18.519 E	10 G		1.5	8	POLAND. ML 3.7 (KBA), 3.4 (VKA).	
15	02 24 33.7	20.819 N	143.807 E	33 N	4.8	1.0	22	MARIANA ISLANDS REGION	
15	03 43 41.3	37.442 N	22.342 E	10 G		1.4	7	SOUTHERN GREECE. ML 3.0 (ATH).	
15	04 39 01.5	41.294 N	142.248 E	33 N	4.6	1.3	18	HOKKAIDO, JAPAN REGION	
15	04 56 13.8	38.691 N	15.253 E	261	4.4	1.1	108	SICILY	
15	05 11 58.7	22.718 N	122.778 E	33 N	4.2	1.3	24	TAIWAN REGION. ML 4.4 (BJI).	
15	06 23 20.5	36.142 N	27.266 E	10 G		1.4	7	DODECANESE ISLANDS. MD 3.6 (ATH).	
15	06 26 43.8	36.149 N	27.242 E	10 G		1.0	7	DODECANESE ISLANDS. MD 3.7 (ATH).	
15	07 41 44.9	37.437 N	22.470 E	10 G		1.6	6	SOUTHERN GREECE. MD 3.5 (ATH).	
15	07 56 08.7	30.15 S	68.50 W	28 ?		0.6	5	SAN JUAN PROVINCE, ARGENTINA	
15	08 31 06.9	46.814 N	146.187 E	342 *	4.5	0.8	45	NORTHWEST OF KURIL ISLANDS	
15	09 54 39.5	36.868 N	121.628 W	6			15	CENTRAL CALIFORNIA. <BRK>. ML 2.5 (BRK).	
15	10 18 35.4	45.135 N	23.035 E	10 G		1.4	9	ROMANIA	
15	11 13 39.4	33.90 N	26.20 E	33 N		0.4	6	EASTERN MEDITERRANEAN SEA	
15	14 39 27.3	44.547 N	6.851 E	10 G		0.4	16	FRANCE. ML 2.5 (GEN).	
15	15 40 57.6	44.535 N	6.800 E	10 G		0.7	5	FRANCE. ML 2.2 (GEN).	
15	17 17 16.3	38.525 N	26.812 E	10 G		1.6	8	AEGEAN SEA	
15	18 29 06.7	5.269 S	151.354 E	33 N	4.7	1.3	13	NEW BRITAIN REGION	
15	18 34 59.1	47.922 N	121.923 W	16			39	WASHINGTON. <SEA>. CL 3.4 (SEA). ML 3.2 (NEIS). Felt (IV) at Gold Bar and Startup. Felt (III) at Darrington, Granite Falls, Snohomish and Sultan.	
15	19 23 03.9	61.395 N	145.997 W	31	3.8		72	SOUTHERN ALASKA. <AGS-P>. ML 4.5 (PMR). Felt (IV) at Glennallen and Valdez and (III) at Anchorage, Copper Center, Gakona, Girdwood, Moose Pass, Palmer and Seward.	
15	19 45 49.2	14.388 N	119.107 E	33 N	4.6	1.3	9	LUZON, PHILIPPINE ISLANDS	
15	19 53 06.1	0.106 S	123.086 E	99 *	4.5	0.9	17	MINAHASSA PENINSULA	
15	19 59 37.0	14.399 N	119.389 E	34 D	4.8	1.1	27	LUZON, PHILIPPINE ISLANDS	
15	20 23 14.0	24.05 N	122.67 E	10 G		0.7	4	TAIWAN REGION	
15	21 09 51.9	5.163 S	151.209 E	33 N	3.9	0.9	8	NEW BRITAIN REGION	
15	21 31 39.8	53.273 N	167.241 W	33 N	4.5	1.0	21	FOX ISLANDS, ALEUTIAN ISLANDS	
15	21 51 23.5	37.18 N	28.95 E	10 G		0.7	4	TURKEY	
15	21 55 27.4	53.359 N	167.218 W	33 N	4.5	0.6	22	FOX ISLANDS, ALEUTIAN ISLANDS	
o 15	22 08 01.5	5.225 S	151.355 E	16 D	5.7 4.9	1.1	149	NEW BRITAIN REGION	
16	00 15 18.5	14.392 N	119.229 E	30 D	5.1	1.1	49	LUZON, PHILIPPINE ISLANDS	
16	00 30 37.8	14.414 N	119.390 E	33 D	4.8 4.1	1.1	36	LUZON, PHILIPPINE ISLANDS	
16	02 54 02.2	60.770 N	150.955 W	48			25	KENAI PENINSULA, ALASKA. <AGS-P>.	
16	04 25 59.2	23.852 N	121.835 E	33 N	4.0	0.7	9	TAIWAN	
16	05 13 21.0	8.826 S	117.612 E	110 ?	4.1	1.0	11	SUMBAWA ISLAND REGION	
16	05 55 03.2	35.918 N	54.405 E	23 D	4.8 4.3	1.0	74	IRAN. ML 5.0 (MHI). Felt in the Emamshahr area.	
o 16	06 22 09.8	22.295 S	174.329 W	33 N	5.1 5.0	1.2	34	TONGA ISLANDS REGION	
16	07 14 28.3	6.36 S	147.36 E	69 *	3.8	1.7	6	EAST PAPUA NEW GUINEA REGION	
16	07 14 45.7	60.014 N	153.215 W	135			33	SOUTHERN ALASKA. <AGS-P>.	
16	07 43 16.4	37.771 N	29.181 E	10 G		1.1	6	TURKEY	
16	07 46 35.2	33.029 S	70.559 W	33 N		0.8	9	CHILE-ARGENTINA BORDER REGION	
16	07 49 30.8	8.770 N	83.095 W	33 N	5.2	1.1	116	COSTA RICA	
16	08 14 23.6	17.66 N	65.97 W	33 N		0.3	5	PUERTO RICO REGION	
16	09 37 56.5	45.007 N	111.774 W	5 G		0.7	11	MONTANA. ML 3.3 (BUT).	
16	10 18 29.6	33.758 S	71.293 W	33 N		0.5	8	NEAR COAST OF CENTRAL CHILE	
16	10 44 21.6	44.501 N	6.759 E	5 G		0.2	6	FRANCE. ML 2.3 (GEN).	
16	10 48 33.6	36.873 N	121.628 W	7			14	CENTRAL CALIFORNIA. <BRK>. ML 3.3 (BRK). Felt at Prunedale, Salinas and San Jose.	
16	10 55 17.6	44.56 N	128.54 W	10 G		0.4	23	OFF COAST OF OREGON	
16	11 08 34.6	43.066 N	0.766 W	10 G		0.3	5	PYRENEES. MD 1.0 (STR).	
16	11 58 17.5	9.884 N	124.996 E	21 D	4.8 3.6	1.2	38	MINDANAO, PHILIPPINE ISLANDS	
16	12 42 10.0	14.612 N	120.192 E	33 N	4.5	0.7	6	LUZON, PHILIPPINE ISLANDS	
16	12 45 48.9	31.990 S	69.674 W	150 ?		0.5	13	SAN JUAN PROVINCE, ARGENTINA	
o 16	13 28 42.8	49.121 N	127.714 W	10 G	5.2 4.9	1.0	164	VANCOUVER ISLAND REGION. Felt at Port Alice and on Nootka Island. Felt mildly at Holberg, Port Hardy and Sointula.	
16	15 02 18.3	39.273 N	28.241 E	10 G		1.5	7	TURKEY	
o 16	15 12 46.4	3.121 S	80.683 W	76 D	5.0	1.2	37	PERU-ECUADOR BORDER REGION	
16	15 15 31.5	36.146 N	27.212 E	10 G		1.2	7	DODECANESE ISLANDS. MD 3.6 (ATH).	
16	17 25 35.3	40.207 N	23.951 E	5 G		1.3	5	GREECE	
16	17 38 04.4	42.997 N	0.414 W	10 G		1.4	12	PYRENEES. ML 3.0 (LDG). Felt (III) in the Bearn area, France.	
16	18 06 41.8	3.424 S	129.046 E	33 N	4.7 3.5	0.9	28	CERAM	
16	18 58 38.8	29.855 S	65.690 W	33 N		1.4	10	SANTIAGO DEL ESTERO PROV., ARG.	
16	18 59 02.6	40.711 N	29.880 E	10 G		1.1	7	TURKEY	
16	19 18 54.2	62.238 N	1.157 E	33 N		1.0	12	NORWEGIAN SEA. MD 2.9 (BER).	
16	20 29 36.8	22.572 N	93.820 E	33 N		0.6	7	BURMA-INDIA BORDER REGION	
16	21 00 01.6	40.579 N	25.768 E	5 G		1.2	7	AEGEAN SEA. MD 3.0 (ATH).	
o 16	21 02 53.7	3.564 S	140.272 E	47 D	5.3 4.8	0.8	120	WEST IRIAN	
o 16	21 29 53.3	15.816 N	147.277 E	33 N	5.2 4.9	1.0	111	MARIANA ISLANDS REGION	
16	21 37 37.1	44.523 N	6.794 E	10 G		0.6	5	FRANCE. ML 1.7 (GEN).	
16	21 46 25.1	49.200 N	7.051 E	10 G		0.3	6	GERMANY. MD 2.2 (UCC).	
16	21 54 14.5	31.42 S	68.78 W	82 ?		0.4	5	SAN JUAN PROVINCE, ARGENTINA	
16	22 16 46.2	40.732 N	27.480 E	10 G		0.7	14	TURKEY. MD 3.5 (ATH).	
16	22 22 12.5	38.796 N	27.609 E	10 G		0.8	6	TURKEY	
16	22 50 51.9	9.690 N	124.421 E	33 N	4.9	0.9	22	MINDANAO, PHILIPPINE ISLANDS	
16	22 51 32.6	19.62 S	179.51 W	617 *	4.6	1.1	19	FIJI ISLANDS REGION	
16	23 32 39.0	33.626 S	71.666 W	31		0.6	16	NEAR COAST OF CENTRAL CHILE	
16	23 34 52.5	36.920 N	4.808 W	10 G		1.5	8	STRAIT OF GIBRALTAR. mLg 2.8 (MDD).	
16	23 58 06.7	36.962 N	121.743 W	13			5	CENTRAL CALIFORNIA. <BRK>. ML 2.5 (BRK).	
17	00 44 04.8	61.620 N	146.787 W	3			37	SOUTHERN ALASKA. <AGS-P>.	
17	00 59 03.0	68.598 N	148.444 W	10 G	4.6 4.3	1.1	49	ALASKA	
17	01 04 10.0	33.507 N	141.085 E	33 N	5.0 4.2	1.3	36	OFF EAST COAST OF HONSHU, JAPAN	
o 17	01 22 06.8	4.567 S	105.583 W	10 G	5.5 5.8	1.4	42	NORTHERN EASTER I. CORDILLERA	
17	01 22 42.1	19.60 S	175.62 W	208 ?	4.9	1.4	16	TONGA ISLANDS	
17	01 24 27.6	15.942 N	98.105 W	33 N	5.0 4.9	1.0	39	OFF COAST OF GUERRERO, MEXICO. Felt slightly at Mexico City.	

17	01 38 06.0	16.089 N	97.934 W	33 N	5.2	1.0	95	OAXACA, MEXICO. Felt slightly at Mexico City.
17	01 50 48.3?	15.59 N	97.95 W	33 N	4.6	1.1	15	NEAR COAST OF OAXACA, MEXICO
17	02 11 31.5&	63.547 N	150.077 W	11	4.3		72	CENTRAL ALASKA. <AGS-P>. ML 4.8 (PMR). Felt (III) at Contwell and McKinley Park.
o 17	02 28 01.8	29.533 N	130.732 E	66 G	5.9	1.1	402	RYUKYU ISLANDS. Felt (III JMA) on Yaku. Depth from broadband displacement seismograms.
o 17	02 50 56.5	15.835 N	147.197 E	32 D	5.6 5.6	1.1	144	MARIANA ISLANDS REGION
17	03 02 21.9%	11.023 N	61.849 W	33 N		0.8	5	WINDWARD ISLANDS. MD 2.7 (TRN).
17	03 18 36.2	15.920 N	97.943 W	16 D	4.8	1.0	62	NEAR COAST OF OAXACA, MEXICO
17	03 21 07.9+	15.944 N	98.064 W	20 D	4.8	1.0	23	OFF COAST OF GUERRERO, MEXICO
17	03 42 59.6+	16.329 N	97.881 W	33 N	4.8	1.2	30	OAXACA, MEXICO
17	03 46 03.5&	34.350 N	117.210 W	5			14	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.2 (PAS). Felt (III) at Crestline, Lake Arrowhead, San Bernardino and Victorville.
17	04 44 37.3+	8.333 N	126.707 E	33 N	4.5 4.0	1.1	28	MINDANAO, PHILIPPINE ISLANDS
17	05 39 19.0&	63.515 N	150.038 W	10			43	CENTRAL ALASKA. <AGS-P>. ML 3.4 (PMR).
17	05 52 04.5+	50.626 N	175.116 E	33 N	4.3	1.1	14	RAT ISLANDS, ALEUTIAN ISLANDS
17	06 37 03.3+	38.781 N	26.584 E	10 G		0.5	5	AEGEAN SEA. MD 3.0 (ATH).
17	06 37 55.9+	14.422 N	119.392 E	33 N	4.6	1.0	12	LUZON, PHILIPPINE ISLANDS
17	07 03 09.0	38.718 N	26.472 E	10 G		1.1	23	AEGEAN SEA. ML 3.7 (ATH).
17	07 04 15.8+	36.819 N	71.513 E	105 ?	4.7	1.6	19	AFGHANISTAN-USSR BORDER REGION
17	09 01 52.8&	59.343 N	152.857 W	83			28	SOUTHERN ALASKA. <AGS-P>.
17	10 00 49.1?	42.32 N	19.11 E	10 G		0.8	4	YUGOSLAVIA. ML 2.2 (TTG).
17	12 00 19.7	40.767 N	27.478 E	10 G		1.1	10	TURKEY
17	12 31 37.1	41.635 N	144.090 E	31 D	5.0 4.3	1.0	75	HOKKAIDO, JAPAN REGION
17	12 38 56.9+	41.728 N	144.033 E	30 D	4.8	1.2	35	HOKKAIDO, JAPAN REGION
17	13 05 24.0%	10.936 N	62.057 W	88 ?		0.4	11	NEAR COAST OF VENEZUELA. MD 3.6 (TRN).
17	14 01 02.9+	36.077 N	31.907 E	10 G		0.7	5	TURKEY. ML 3.4 (CSS).
17	15 06 36.4?	31.52 S	69.04 W	33 N		1.0	4	SAN JUAN PROVINCE, ARGENTINA
17	15 23 20.6?	36.74 N	2.53 E	10 G	4.1	0.6	6	ALGERIA. mblg 3.4 (MDD).
17	16 17 50.2?	31.18 S	68.59 W	103 ?		0.3	5	SAN JUAN PROVINCE, ARGENTINA
17	16 30 51.1	16.790 N	61.807 W	33 N		1.2	12	LEEWARD ISLANDS. ML 3.3 (FDF).
17	16 46 19.4	42.176 N	15.551 E	10 G		0.6	9	ADRIATIC SEA
17	17 37 58.6?	14.45 N	97.53 W	33 N		1.0	6	OFF COAST OF OAXACA, MEXICO
17	18 15 54.5	36.457 N	137.661 E	10 G	4.4 4.2	1.1	20	HONSHU, JAPAN
17	18 27 31.9+	16.744 N	98.529 W	72 +	3.7	1.5	12	NEAR COAST OF GUERRERO, MEXICO
17	18 31 14.1%	44.313 N	7.236 E	10 G		0.1	5	NORTHERN ITALY. ML 1.8 (GEN).
17	18 36 22.7	42.614 N	16.551 E	10 G		1.1	14	ADRIATIC SEA. ML 2.5 (TTG).
17	18 42 12.3+	20.159 S	169.147 E	33 N	4.9	1.5	12	VANUATU ISLANDS
17	18 48 36.7&	36.815 N	121.557 W	3			9	CENTRAL CALIFORNIA. <BRK>. ML 2.6 (BRK).
17	18 54 06.3?	40.84 N	27.56 E	10 G		1.0	4	TURKEY
17	18 58 07.7	51.987 N	169.549 W	33 N	4.9	1.0	89	FOX ISLANDS, ALEUTIAN ISLANDS
17	19 40 53.0?	31.38 S	68.66 W	94 ?		0.1	5	SAN JUAN PROVINCE, ARGENTINA
17	19 55 09.0	40.120 N	19.846 E	10 G	3.4	1.4	39	ALBANIA. MD 3.2 (ATH).
17	20 14 59.0+	36.416 N	137.787 E	10 G	4.1 4.1	1.1	5	HONSHU, JAPAN
17	20 16 33.9	40.491 N	21.546 E	10 G		0.9	8	GREECE. ML 2.9 (SKO). MD 3.1 (ATH).
17	20 31.08.7&	36.808 N	121.555 W	3			13	CENTRAL CALIFORNIA. <BRK>. ML 3.0 (BRK).
17	21 10 48.3?	18.91 S	177.65 W	580 +	4.8	1.2	20	FIJI ISLANDS REGION
17	22 24 48.1&	36.802 N	121.548 W	5			10	CENTRAL CALIFORNIA. <BRK>. ML 2.5 (BRK).
17	22 28 12.0&	36.943 N	121.595 W	3			10	CENTRAL CALIFORNIA. <BRK>. ML 2.6 (BRK).
17	22 40 16.7?	46.81 S	10.91 W	10 G	4.7	1.3	7	SOUTH ATLANTIC RIDGE
17	23 43 31.2%	39.234 N	29.108 E	5 G		1.2	12	TURKEY
18	00 28 45.8	38.183 N	15.094 E	10 G		0.7	16	SICILY
18	03 57 46.3	2.351 N	127.007 E	70 ?	4.8	1.1	32	MOLUCCA PASSAGE
18	04 47 12.8%	42.363 N	13.824 E	5 G		1.0	6	CENTRAL ITALY
18	05 00 23.9+	14.129 S	166.418 E	33 N	4.6 3.8	1.2	22	VANUATU ISLANDS
18	05 16 27.3	39.521 N	28.696 E	10 G		1.2	26	TURKEY. MD 3.8 (ATH).
18	08 21 30.1	40.137 N	19.918 E	5 G		0.9	9	ALBANIA
18	08 39 52.2?	42.71 N	8.96 E	10 G		0.6	6	CORSICA. ML 2.4 (LDG).
18	08 44 14.1?	32.14 S	71.57 W	33 N		1.1	9	NEAR COAST OF CENTRAL CHILE
18	08 48 48.1	50.272 N	129.889 W	10 G	4.6	1.1	61	VANCOUVER ISLAND REGION
18	12 02 09.0?	33.19 S	72.12 W	33 N		1.3	12	OFF COAST OF CENTRAL CHILE
18	12 05 30.8+	36.148 N	27.258 E	10 G		1.7	5	DODECANESE ISLANDS
18	12 05 39.7+	38.048 N	22.247 E	10 G		1.6	8	GREECE. ML 2.9 (ATH).
o 18	12 21 58.0	5.516 S	149.432 E	142 G	5.9	1.0	252	NEW BRITAIN REGION. Depth from broadband displacement seismograms.
18	12 23 28.8?	44.06 N	7.03 E	10 G		0.1	4	NORTHERN ITALY. ML 1.8 (GEN).
18	12 28 50.2+	50.561 N	130.311 W	10 G		0.7	19	VANCOUVER ISLAND REGION. ML 3.4 (PGC).
18	12 34 25.5	36.232 N	27.022 E	10 G	3.9	1.3	24	DODECANESE ISLANDS ML 4.2 (CSS), 4.1 (ATH).
18	13 49 36.0+	28.827 S	67.324 W	213 ?		1.1	17	LA RIOJA PROVINCE, ARGENTINA
18	14 51 53.7+	35.976 N	27.160 E	5 G		1.4	6	DODECANESE ISLANDS. MD 3.4 (ATH).
18	15 34 19.7?	50.48 N	173.66 W	33 N	4.0	1.3	12	ANDREANOF ISLANDS, ALEUTIAN IS.
18	15 52 59.9&	33.510 N	116.450 W	9			27	SOUTHERN CALIFORNIA. <PAS-P>. ML 4.1 (PAS). Felt (V) at Anza and La Quinta; (IV) at Alpine, Coachella, Idyllwild, Santa Ysabel and Warner Springs; (III) at Carlsbad, Cathedral City, Hemet, India, Mecca, North Palm Springs, Palo, Ramona, Santee and Thermal.
18	15 54 55.5&	33.510 N	116.450 W	9			3	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.3 (PAS).
18	16 00 56.4	42.084 N	15.689 E	10 G		0.8	8	ADRIATIC SEA
18	16 23 13.4?	36.61 N	2.58 E	10 G		0.5	6	ALGERIA. mblg 3.4 (MDD).
18	17 08 31.9%	31.177 S	67.947 W	10 G		0.5	5	SAN JUAN PROVINCE, ARGENTINA
18	18 12 47.2+	29.078 N	90.031 E	10 G	4.5	1.3	10	TIBET
18	19 03 36.3	39.155 N	8.991 W	10 G		1.1	17	PORTUGAL. mblg 3.6 (MDD).
18	19 14 55.5%	10.925 N	62.145 W	85 G		0.2	7	NEAR COAST OF VENEZUELA. MD 2.9 (TRN).
18	20 10 48.7	42.177 N	16.445 E	10 G	3.9	1.4	131	ADRIATIC SEA. ML 4.7 (ZAG), 4.4 (KBA), 4.4 (TTG), 4.2 (ROM).
18	20 19 44.2+	33.507 N	116.371 W	10 G		0.7	5	SOUTHERN CALIFORNIA. ML 3.0 (PAS).
18	21 43 36.4	39.378 N	28.238 E	10 G		1.0	13	TURKEY. MD 3.2 (ATH).
18	21 47 27.4&	33.520 N	116.450 W	11			10	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.1 (PAS).
18	21 58 47.1+	38.265 N	22.253 E	33 N		0.7	5	GREECE. ML 2.8 (ATH).
18	22 45 20.6	26.695 S	64.830 W	33 N		1.4	23	TUCUMAN PROVINCE, ARGENTINA. Felt in the San Miguel de Tucuman area.
18	22 47 26.8?	18.06 S	117.88 E	33 N	4.3	1.2	13	NORTHWEST OF AUSTRALIA

18	22	51	18.3*	51.535 S	159.765 E	10 G		1.1	11	NORTH OF MACQUARIE ISLAND
18	23	12	12.7*	40.645 N	127.543 W	5	3.5	15	15	OFF COAST OF NORTHERN CALIFORNIA. <BRK>. ML 3.9 (BRK).
18	23	45	57.47	31.65 S	68.18 W	10 G		1.0	4	SAN JUAN PROVINCE, ARGENTINA
18	23	46	52.37	15.26 N	61.32 E	33 N		0.5	5	LEEWARD ISLANDS. ML 2.3 (FDF).
19	00	51	12.9*	7.265 S	128.976 E	201 ?	4.9	0.6	11	BANDA SEA
19	01	27	24.7	39.180 N	23.430 E	10 G		1.4	7	AEGEAN SEA. ML 2.9 (ATH).
19	01	58	56.6	43.030 N	17.832 E	10 G		1.5	25	YUGOSLAVIA. ML 3.0 (TTG), 2.8 (KBA).
19	02	12	48.5*	32.120 S	69.601 W	33 N		1.1	6	MENDOZA PROVINCE, ARGENTINA
19	04	18	17.67	43.21 N	129.27 W	10 G		0.3	26	OFF COAST OF OREGON
19	04	25	22.5	43.714 N	127.800 W	10 G	4.5	0.6	56	OFF COAST OF OREGON
19	04	56	46.6	15.198 N	61.178 W	10 G		0.5	8	LEEWARD ISLANDS. ML 2.6 (FDF).
f 19	05	34	37.0	40.347 S	176.102 E	24 G	5.9 6.3	1.1	376	NORTH ISLAND, NEW ZEALAND. Ms 6.3 (BRK), 6.0 (PAS). ML 6.0 (WEL). Mo=1.8*10**18 Nm (PPT). Estimated 440,000 U.S. dollars damage in the Dannevirke-Palmerston North area. Maximum intensity VII. Some cracks in roads reported in the area. Felt from Hamilton to Wellington, North Island and at Blenheim, South Island. Depth from broadband displacement seismograms.
19	05	43	44.4	36.105 N	27.176 E	10 G	4.3	1.5	63	DODECANESE ISLANDS. ML 4.5 (CSS), 4.2 (ATH). MD 4.1 (HLW).
19	06	05	11.8*	36.034 N	27.216 E	10 G		1.6	7	DODECANESE ISLANDS. MD 3.6 (ATH).
a 19	06	48	10.1	15.465 S	166.385 E	12 G	6.4 6.7	1.2	375	VANUATU ISLANDS. Ms 6.8 (BRK), 6.5 (PAS). Mo=2.0*10**19 Nm (PPT). Two events about 2 seconds apart. Depth from broadband displacement seismograms, based on second event.
19	07	02	09.2*	38.969 N	27.096 E	10 G		0.4	6	TURKEY
19	07	15	23.4*	38.939 N	27.060 E	10 G		0.7	6	TURKEY
19	07	28	12.1*	15.748 S	166.280 E	33 N	4.6	1.4	29	VANUATU ISLANDS
19	08	41	19.3*	50.354 N	129.997 W	10 G	4.0	1.7	17	VANCOUVER ISLAND REGION
19	08	45	42.5*	32.516 S	71.919 W	10 G		1.0	9	NEAR COAST OF CENTRAL CHILE
19	08	56	39.4*	15.677 S	166.295 E	30 D	4.6	1.2	33	VANUATU ISLANDS
19	09	11	45.7*	50.331 N	129.949 W	10 G	4.3	1.6	15	VANCOUVER ISLAND REGION
19	10	04	36.1*	16.903 S	166.037 E	33 N	4.6	0.4	5	VANUATU ISLANDS
19	11	02	06.5	17.983 N	65.356 W	10 G	4.5	1.2	37	PUERTO RICO REGION. ML 4.7 (FDF). MD 4.5 (SJC). Felt on Vieques. Also felt on St. Thomas and St. Croix, Virgin Islands.
19	11	27	15.5*	15.651 S	166.277 E	33 N	4.5	1.4	29	VANUATU ISLANDS
19	11	28	29.3	39.001 N	122.916 W	10 G		0.7	13	NORTHERN CALIFORNIA. ML 2.5 (BRK).
19	13	22	07.1*	16.648 N	96.283 W	77 *	4.2	1.4	11	OAXACA, MEXICO. Felt at Oaxaca.
19	13	43	01.6*	15.696 S	166.352 E	31 D	4.5	1.5	17	VANUATU ISLANDS
19	14	24	30.67	37.96 N	4.42 W	10 G		0.6	4	SPAIN. mbLg 2.8 (MDD).
19	16	39	56.5	6.652 S	129.322 E	215 *	5.3	1.2	57	BANDA SEA
19	16	46	54.4*	16.534 S	174.926 W	168 D	5.1	1.3	87	TONGA ISLANDS
19	17	24	30.87	31.54 S	68.56 W	93 ?		0.5	5	SAN JUAN PROVINCE, ARGENTINA
19	17	43	51.77	44.50 N	6.75 E	10 G		0.5	4	FRANCE. ML 1.6 (GEN).
19	18	59	16.4	31.105 N	41.339 W	10 G	4.8	0.6	35	NORTH ATLANTIC RIDGE
19	20	03	36.27	31.28 S	68.60 W	88 ?		0.6	5	SAN JUAN PROVINCE, ARGENTINA
19	20	35	27.1*	15.922 N	147.334 E	33 N	4.3	1.0	20	MARIANA ISLANDS REGION
19	20	56	37.3	36.124 N	27.164 E	10 G	4.4	1.5	81	DODECANESE ISLANDS. ML 4.6 (CSS), 4.2 (ATH). MD 4.4 (HLW).
19	21	07	43.0	36.168 N	27.146 E	10 G	4.6	1.4	117	DODECANESE ISLANDS. ML 4.6 (CSS), 4.6 (ATH). MD 4.4 (HLW).
19	21	23	56.1	36.169 N	27.172 E	10 G		0.8	8	DODECANESE ISLANDS. MD 3.7 (ATH).
19	21	33	29.87	16.49 S	178.22 W	457 *	4.8	1.2	21	FIJI ISLANDS REGION
19	21	34	00.9*	36.182 N	27.182 E	10 G		1.3	6	DODECANESE ISLANDS. MD 3.2 (ATH).
19	21	45	49.4	36.111 N	27.202 E	10 G		1.6	27	DODECANESE ISLANDS. ML 4.1 (CSS), 4.0 (ATH).
19	22	04	03.6	36.216 N	27.116 E	10 G		1.3	19	DODECANESE ISLANDS. ML 3.9 (ATH), 3.8 (CSS).
19	22	24	12.4	36.304 N	21.799 E	70 *	4.0	1.2	55	SOUTHERN GREECE
19	22	51	44.6	43.415 N	5.436 E	10 G		0.7	15	NEAR SOUTH COAST OF FRANCE. MD 2.5 (STR).
19	23	04	50.47	31.20 S	68.35 W	94 ?		0.6	5	SAN JUAN PROVINCE, ARGENTINA
19	23	18	14.9	34.517 N	24.873 E	65 *	4.1	1.2	39	CRETE
19	23	29	53.27	16.28 N	99.56 W	10 G		1.4	7	NEAR COAST OF GUERRERO, MEXICO
19	23	48	45.8	33.897 N	46.590 E	50	4.9	0.8	19	IRAN-IRAQ BORDER REGION. Felt at Islamabad, Iran.
20	00	47	09.6*	29.288 N	142.434 E	33 N	4.6	0.8	12	SOUTH OF HONSHU, JAPAN
20	01	34	07.97	31.60 S	69.67 W	33 N		1.6	5	SAN JUAN PROVINCE, ARGENTINA
20	03	20	51.07	31.29 S	68.69 W	84 ?		0.3	5	SAN JUAN PROVINCE, ARGENTINA
20	04	37	35.5	45.885 N	11.107 E	10 G		1.2	10	NORTHERN ITALY. ML 2.5 (KBA).
20	05	15	48.0*	37.068 N	112.104 E	10 G		1.6	9	NORTHEASTERN CHINA. ML 3.6 (BJI)
20	05	55	03.7	32.592 N	44.204 E	38	4.6	1.0	70	IRAQ. Felt at Baghdad.
20	06	47	40.5*	38.806 N	29.076 E	10 G		1.4	5	TURKEY
f 20	06	53	39.8	34.706 N	139.252 E	14 G	6.1 6.4	1.3	380	NEAR S. COAST OF HONSHU, JAPAN. Ms 6.4 (BRK), 6.4 (PAS). Mo=7.0*10**18 Nm (PPT). Felt (IV JMA) at Tokyo and Yokohama; (III JMA) at Chiba and Kumagaya; (II JMA) at Kofu and Nagoya. Depth from broadband displacement seismograms.
20	07	16	30.0*	5.492 S	152.376 E	33 N	4.4	1.1	8	NEW BRITAIN REGION
20	07	17	51.8	34.595 N	139.243 E	11 D	5.0	1.2	55	NEAR S. COAST OF HONSHU, JAPAN
20	08	43	11.1	36.189 N	27.063 E	10 G	4.3	1.3	40	DODECANESE ISLANDS. ML 4.3 (ATH), 4.3 (CSS).
20	08	44	11.67	31.33 S	68.26 W	101 ?		0.4	5	SAN JUAN PROVINCE, ARGENTINA
a 20	09	15	22.8	46.922 N	153.996 E	34 D	5.6 5.4	0.8	265	KURIL ISLANDS
20	09	48	29.5*	34.546 N	139.212 E	10 G	4.2	1.3	14	NEAR S. COAST OF HONSHU, JAPAN
20	10	39	57.2	18.175 N	94.705 E	44 D	4.9 4.8	1.2	69	BURMA
20	11	07	54.1	0.832 N	127.250 E	212 D	5.1	1.1	48	HALMAHERA
20	11	27	04.8	42.502 N	20.035 E	10 G		1.3	11	YUGOSLAVIA. ML 2.9 (TTG).
20	11	44	20.9	44.024 N	16.749 E	10 G		1.4	40	YUGOSLAVIA. MD 3.8 (TRI). ML 3.7 (TTG), 3.6 (ZAG), 3.6 (KBA), 3.5 (VKA).
20	11	55	00.57	39.15 N	27.60 E	10 G		0.1	4	TURKEY
20	12	59	43.9*	41.381 N	19.624 E	10 G		1.4	7	ALBANIA. MD 2.8 (ATH).
20	13	01	11.8	41.274 N	19.778 E	10 G		1.2	26	ALBANIA. MD 3.4 (ATH). ML 3.0 (TTG).
20	13	05	39.5*	34.884 N	110.473 E	33 N		1.3	6	EASTERN CHINA. ML 3.3 (BJI).
20	13	06	52.3	41.286 N	19.804 E	10 G		1.5	12	ALBANIA. MD 3.1 (ATH).
20	13	12	28.0	41.192 N	19.689 E	10 G		1.1	28	ALBANIA. MD 3.2 (ATH). ML 2.7 (TTG).
20	14	09	22.0*	14.373 N	119.217 E	10 G	4.8	1.0	38	LUZON, PHILIPPINE ISLANDS

20	14	18	56.6%	16.714	S	128.531	E	10	G	1.0	7	WESTERN AUSTRALIA		
20	14	56	59.7	47.870	N	16.030	E	10	G	1.5	14	AUSTRIA. ML 3.5 (KBA), 3.0 (FUR), 2.9 (VKA). Felt (V) at Puchberg.		
20	15	24	37.1*	4.362	S	151.139	E	315	?	4.2	0.4	11	NEW BRITAIN REGION	
20	15	40	02.9	36.412	N	137.717	E	10	G	4.1	1.3	10	HONSHU, JAPAN	
20	15	52	26.1	36.475	N	137.680	E	5	G	4.2	0.8	7	HONSHU, JAPAN	
20	15	56	44.67	14.22	N	143.35	E	170	*	3.9	0.9	9	MARIANA ISLANDS REGION	
20	16	12	15.6	63.147	N	150.655	W	123			43	CENTRAL ALASKA. <AGS-P>.		
20	16	15	42.1	36.465	N	137.692	E	10	G		0.8	8	HONSHU, JAPAN	
20	16	29	52.1*	15.371	N	92.099	W	33	N	4.8	1.0	9	MEXICO-GUATEMALA BORDER REGION	
20	16	31	32.1	41.202	N	19.710	E	10	G		1.4	28	ALBANIA. MD 3.5 (ATH). ML 3.0 (TTG).	
20	16	36	25.2	40.709	N	20.774	E	10	G		1.0	6	GREECE-ALBANIA BORDER REGION. MD 2.9 (ATH).	
20	17	25	27.7	14.736	N	147.098	E	33	N	4.8	0.5	25	MARIANA ISLANDS REGION	
20	17	47	33.8%	31.629	S	67.595	W	33	N		1.1	6	SAN JUAN PROVINCE, ARGENTINA	
20	18	14	01.8*	36.132	N	27.170	E	10	G		1.0	5	DODECANESE ISLANDS. MD 3.3 (ATH).	
a	20	18	17	56.2	21.559	S	170.437	E	161	5.3	1.0	87	LOYALTY ISLANDS REGION	
20	18	41	39.4	41.221	N	19.627	E	10	G		1.2	51	ALBANIA. ML 4.1 (SKO). MD 3.8 (ATH). Felt (III) at Tirana.	
a	20	18	48	04.0	25.413	S	116.169	W	10	G	5.3 5.5	1.1	70	EASTER ISLAND CORDILLERA
20	18	53	05.1	31.229	S	68.620	W	114	*		0.9	19	SAN JUAN PROVINCE, ARGENTINA	
20	19	25	08.1*	37.213	N	29.996	E	10	G		0.3	5	TURKEY	
20	19	25	35.9*	5.454	S	129.564	E	196	*	4.8	0.9	9	BANDA SEA	
20	19	33	44.3*	38.328	N	20.655	E	10	G		0.8	5	GREECE. MD 3.0 (ATH).	
20	19	46	41.8*	3.856	N	97.279	E	33	N	4.5	1.1	9	NORTHERN SUMATRA	
20	20	08	28.67	31.29	S	68.46	W	98	?		0.7	5	SAN JUAN PROVINCE, ARGENTINA	
20	20	40	14.57	33.88	S	72.35	W	33	N		1.1	16	OFF COAST OF CENTRAL CHILE	
20	21	43	07.8	42.953	N	13.935	E	10	G		1.0	25	CENTRAL ITALY. ML 3.0 (KBA).	
20	21	54	04.7*	34.491	S	179.208	E	33	N	4.7	0.6	8	SOUTH OF KERMADEC ISLANDS	
20	22	30	42.67	41.83	N	12.80	E	10	G		0.4	4	SOUTHERN ITALY	
20	22	34	58.87	41.91	N	12.77	E	10	G		0.0	4	SOUTHERN ITALY	
20	22	51	46.9*	40.735	N	20.805	E	10	G		1.3	6	GREECE-ALBANIA BORDER REGION. MD 2.9 (ATH). ML 2.3 (SKO).	
20	22	56	01.97	29.55	S	70.56	W	110	?		1.2	8	CENTRAL CHILE	
20	23	02	10.07	31.54	S	67.78	W	10	G		0.8	5	SAN JUAN PROVINCE, ARGENTINA	
21	00	12	18.7%	44.546	N	6.865	E	10	G		0.5	6	FRANCE. ML 1.7 (GEN).	
21	00	24	45.8	36.034	N	27.215	E	61	*	3.8	1.4	52	DODECANESE ISLANDS. MD 4.2 (ATH).	
21	00	33	31.4	38.365	N	118.913	W	14				12	CALIFORNIA-NEVADA BORDER REGION. <BRK>. ML 3.1 (BRK).	
21	01	16	37.1	52.641	N	168.237	W	33	N	4.8	1.1	75	FOX ISLANDS, ALEUTIAN ISLANDS	
21	03	19	50.4*	34.383	N	139.454	E	33	N	4.6	1.2	22	NEAR S. COAST OF HONSHU, JAPAN	
21	03	51	39.3*	38.355	N	118.900	W	10	G		0.6	5	CALIFORNIA-NEVADA BORDER REGION. ML 2.5 (NEIS).	
21	04	41	13.2	38.609	N	119.493	W	5	G		1.1	8	CALIFORNIA-NEVADA BORDER REGION. ML 2.8 (BRK).	
21	04	58	03.4*	45.855	N	151.627	E	33	N	4.6	0.4	10	KURIL ISLANDS	
21	05	06	11.6%	37.386	N	2.261	W	10	G		0.6	13	SPAIN. mbLg 3.3 (MDD). Felt (IV) at Fines and Portaleo; (III) at Albax and Olula del Rio.	
21	05	20	19.4	61.280	N	150.674	W	49				24	SOUTHERN ALASKA. <AGS-P>.	
21	05	40	11.37	11.52	S	112.20	E	33	N	4.3	1.0	7	SOUTH OF JAVA	
21	05	45	00.8%	43.119	N	0.618	W	10	G		0.2	6	PYRENEES. MD 1.0 (STR).	
21	07	21	17.3*	28.082	N	82.430	E	33	N	4.8	1.2	14	NEPAL. Felt in southwestern Nepal.	
21	08	13	06.17	43.74	N	127.81	W	10	G	4.3	0.4	22	OFF COAST OF OREGON	
21	08	16	12.27	11.13	N	61.52	W	33	N		0.6	4	WINDWARD ISLANDS. MD 2.4 (TRN).	
21	12	02	19.3	34.014	N	106.544	W	5	G		0.8	10	NEW MEXICO. ML 3.6 (NEIS). Felt.	
21	12	04	29.1	40.522	N	29.192	E	10	G		0.9	8	TURKEY	
21	12	33	34.6	50.433	N	5.942	E	10	G		0.9	19	BELGIUM. ML 2.3 (GSH), 2.8 (LDG), 2.3 (UCC).	
21	13	22	34.3*	26.273	S	27.268	E	5	G		1.2	6	REPUBLIC OF SOUTH AFRICA. mbLg 3.5 (BUL).	
21	13	22	35.6*	42.598	N	24.007	E	10	G		0.5	6	BULGARIA	
21	13	46	21.9	42.188	N	16.585	E	10	G		1.2	15	ADRIATIC SEA. ML 3.0 (TTG).	
21	14	10	46.8	29.253	N	142.220	E	42	D	4.7 3.9	0.9	39	SOUTH OF HONSHU, JAPAN	
21	14	15	45.77	44.14	N	142.28	E	33	N	5.1	0.8	10	HOKKAIDO, JAPAN REGION	
21	15	24	31.5*	36.203	N	9.380	W	33	N		1.0	13	WEST OF GIBRALTAR. MD 3.1 (RBA).	
a	21	18	20	14.5	16.903	N	62.326	W	110	G	5.9	0.9	473	LEEWARD ISLANDS. Felt (V) on Guadeloupe and (II) on Martinique. Felt on Antigua, Barbuda, Montserrat, Nevis, St. Kitts and St. Martin. Depth from broadband displacement seismograms.
21	18	29	52.97	19.94	S	177.51	W	637	?	4.8	0.4	10	FIJI ISLANDS REGION	
21	18	46	08.67	31.93	S	69.84	W	33	N		1.0	4	SAN JUAN PROVINCE, ARGENTINA	
21	19	11	14.87	37.13	N	16.35	E	10	G		0.8	5	IONIAN SEA	
21	19	29	26.2	8.320	S	119.984	E	192	*	4.5	0.9	16	FLORES ISLAND REGION	
21	19	37	51.87	31.58	S	69.61	W	33	N		1.5	5	SAN JUAN PROVINCE, ARGENTINA	
21	20	13	34.97	28.44	S	69.87	W	134	?		0.9	14	CHILE-ARGENTINA BORDER REGION	
21	20	34	48.07	2.96	N	129.38	E	33	N	4.9	1.2	10	HALMAHERA	
21	20	39	53.1	52.102	N	174.369	E	33	N	4.9 4.4	1.0	144	NEAR ISLANDS, ALEUTIAN ISLANDS	
21	20	50	56.4*	16.327	N	99.079	W	37	*	4.1	1.4	16	NEAR COAST OF GUERRERO, MEXICO	
21	21	28	18.3*	16.773	N	61.988	W	10	G		0.4	7	LEEWARD ISLANDS. ML 2.8 (FDF).	
21	21	33	32.27	0.18	N	80.20	W	58	?	4.8	0.9	12	NEAR COAST OF ECUADOR	
21	22	12	11.8	53.790	N	166.568	W	18				8	FOX ISLANDS, ALEUTIAN ISLANDS. <PAL>.	
21	22	14	37.9	19.981	N	121.810	E	42	*	5.0	1.0	32	PHILIPPINE ISLANDS REGION	
21	22	31	59.6	15.069	N	119.199	E	33	N	4.7	1.0	33	LUZON, PHILIPPINE ISLANDS	
22	00	40	23.37	14.86	N	60.81	W	33	N		0.1	4	WINDWARD ISLANDS. ML 2.2 (FDF).	
22	02	23	01.4*	31.902	S	67.306	W	10	G		1.0	7	SAN JUAN PROVINCE, ARGENTINA	
22	02	50	20.4*	31.694	S	72.704	W	10	G		0.7	16	OFF COAST OF CENTRAL CHILE	
22	03	26	22.3	16.108	N	122.453	E	42	*	4.7 4.3	0.9	35	LUZON, PHILIPPINE ISLANDS	
22	03	49	36.37	29.81	S	68.64	W	10	G		0.8	6	SAN JUAN PROVINCE, ARGENTINA	
22	04	26	13.7*	16.082	N	122.542	E	33	N	4.4	1.3	15	LUZON, PHILIPPINE ISLANDS	
22	04	30	19.2*	16.093	N	122.584	E	33	N	4.3 4.0	0.8	15	LUZON, PHILIPPINE ISLANDS	
22	05	26	23.4	44.407	N	7.339	E	10	G		0.6	19	NORTHERN ITALY. ML 2.3 (GEN), 2.4 (STR), 2.4 (LDG).	
22	05	32	50.4	33.190	N	115.560	W	1				6	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.0 (PAS).	
22	06	08	01.8*	9.597	S	109.906	E	33	N	4.3	0.2	6	SOUTH OF JAVA	
22	06	09	31.5	62.975	N	151.148	W	125				23	CENTRAL ALASKA. <AGS-P>.	
22	06	33	50.9*	31.842	S	72.141	W	20			1.2	19	OFF COAST OF CENTRAL CHILE	
22	06	47	08.97	14.66	N	97.52	W	33	N		0.4	5	OFF COAST OF OAXACA, MEXICO	
22	07	38	33.87	31.58	S	68.30	W	87	?		0.0	5	SAN JUAN PROVINCE, ARGENTINA	
22	07	47	33.9	15.514	S	166.268	E	33	N	5.0 4.6	1.0	83	VANUATU ISLANDS	
22	08	27	25.47	2.37	N	89.86	W	10	G	4.5 4.0	1.1	7	GALAPAGOS ISLANDS REGION	



22	08 39 18.0*	45.462 N	26.232 E	150 ?	1.0	10	ROMANIA
22	08 57 51.27	14.52 N	97.70 W	33 N	1.6	5	OFF COAST OF OAXACA, MEXICO
22	09 40 03.8*	31.790 S	72.244 W	33 N	0.6	16	OFF COAST OF CENTRAL CHILE
22	10 58 11.5*	59.314 N	153.190 W	92		29	SOUTHERN ALASKA. <AGS-P>.
22	11 05 04.87	31.11 S	68.11 W	10 G	1.2	4	SAN JUAN PROVINCE, ARGENTINA
22	11 47 32.9*	40.530 N	127.657 W	5 G	4.2	16	OFF COAST OF NORTHERN CALIFORNIA. <BRK>. ML 3.9 (BRK).
22	12 51 43.9	5.659 N	94.231 E	57 D	5.0	1.1	NORTHERN SUMATERA
22	12 56 29.2*	39.071 N	16.700 E	10 G	0.7	6	SOUTHERN ITALY
22	13 02 24.6*	38.132 N	21.935 E	10 G	1.2	5	GREECE. MD 3.1 (ATH).
22	13 11 57.8	21.872 S	179.365 W	600	5.2	151	FIJI ISLANDS REGION
22	13 31 12.67	16.02 N	122.41 E	55 ?	4.5	1.3	7 LUZON, PHILIPPINE ISLANDS
22	13 33 13.3	29.216 N	90.092 E	26 *	5.0 4.2	1.2	50 TIBET
22	13 52 23.4*	37.120 N	121.515 W	5		12	CENTRAL CALIFORNIA. <BRK>. ML 2.7 (BRK).
22	14 02 09.77	34.38 S	69.94 W	33 N	0.4	7	CHILE-ARGENTINA BORDER REGION
22	14 17 52.77	10.51 S	166.11 E	225 *	4.6	0.7	15 SANTA CRUZ ISLANDS
22	14 59 29.07	30.38 S	71.34 W	155 ?	0.6	12	NEAR COAST OF CENTRAL CHILE
22	15 19 51.0*	15.738 N	147.268 E	33 N	0.7	10	MARIANA ISLANDS REGION
22	16 03 43.8	36.102 N	27.372 E	10 G	1.5	6	DODECANESE ISLANDS. MD 3.4 (ATH).
22	16 38 18.67	30.56 S	68.84 W	33 N	0.4	5	SAN JUAN PROVINCE, ARGENTINA
22	16 44 32.1	24.764 S	68.860 W	103 D	5.2	1.1	97 CHILE-ARGENTINA BORDER REGION
o 22	16 51 51.0	11.458 S	66.380 E	12 G	5.7 5.6	0.9	331 MID-INDIAN RISE. Complex event. Depth from broadband displacement seismograms.
22	17 19 36.5	16.183 N	122.451 E	39 *	4.9	1.0	51 LUZON, PHILIPPINE ISLANDS
22	17 48 19.3	40.714 N	23.615 E	10 G	1.4	13	GREECE. MD 3.0 (ATH).
22	18 48 34.7*	59.854 N	152.568 W	84		46	SOUTHERN ALASKA. <AGS-P>.
o 22	18 59 45.1	11.654 N	86.622 W	32 D	5.1 5.2	1.2	141 NEAR COAST OF NICARAGUA. Felt in Nicaragua and in the Liberia area, Costa Rica.
22	19 37 40.8	51.302 N	15.751 E	13		1.1	29 POLAND. ML 3.8 (KBA), 4.2 (VKA), 4.1 (GRF).
22	20 00 57.9*	7.522 S	129.543 E	105 ?	4.8	1.1	9 BANDA SEA
22	22 03 05.1*	15.820 N	147.281 E	43 ?	4.6	0.9	23 MARIANA ISLANDS REGION
22	22 07 00.1*	24.946 N	93.104 E	52 *	5.1	1.3	18 BURMA-INDIA BORDER REGION
22	22 20 45.57	16.58 N	61.10 W	33 N		0.1	5 LEEWARD ISLANDS. ML 2.3 (FDF).
22	22 37 11.37	31.33 S	68.53 W	96 ?		0.6	5 SAN JUAN PROVINCE, ARGENTINA
22	22 59 20.7	35.331 N	23.142 E	5 G	4.2	1.0	40 CRETE. ML 3.8 (ATH).
22	23 04 31.17	38.99 N	112.96 E	33 N		1.0	4 NORTHEASTERN CHINA. ML 3.3 (BJI).
22	23 42 17.8*	7.323 N	94.443 E	33 N	4.6	0.9	14 NICOBAR ISLANDS REGION
22	23 51 19.3*	61.621 N	152.025 W	120		23	SOUTHERN ALASKA. <AGS-P>.
23	00 12 35.5	38.045 N	29.041 E	10 G		1.5	8 TURKEY
23	01 27 42.9	35.262 N	23.174 E	5 G	3.8	1.2	28 CRETE. ML 3.7 (ATH).
23	01 28 53.4*	40.694 N	30.176 E	10 G		1.3	9 TURKEY
23	04 22 40.9*	64.468 N	146.934 W	13		28	CENTRAL ALASKA. <AGS-P>.
23	04 41 30.5*	60.390 N	147.696 W	4		54	SOUTHERN ALASKA. <AGS-P>. ML 3.2 (PMR).
23	04 54 41.1	7.986 N	126.620 E	75 *	5.1	1.2	75 MINDANAO, PHILIPPINE ISLANDS
23	04 54 49.47	45.14 N	7.04 E	10 G		0.6	4 NORTHERN ITALY. ML 2.1 (GEN).
23	04 57 03.97	37.11 N	29.27 E	10 G		0.1	4 TURKEY
23	04 58 14.77	27.04 N	32.73 E	10 G		0.8	4 ARAB REPUBLIC OF EGYPT. MD 4.0 (HLW).
23	05 44 03.0*	11.825 S	166.647 E	294 ?	4.6	1.0	23 SANTA CRUZ ISLANDS
23	05 53 45.6*	41.716 N	12.703 E	10 G		0.1	6 SOUTHERN ITALY
23	07 00 49.2*	60.412 N	152.118 W	78		29	SOUTHERN ALASKA. <AGS-P>.
23	07 03 43.0*	41.687 N	12.647 E	10 G		0.5	6 SOUTHERN ITALY
23	07 11 54.2	37.101 N	29.243 E	10 G		1.4	6 TURKEY
23	07 20 35.0*	35.480 N	23.499 E	10 G		1.3	7 CRETE. MD 3.7 (ATH).
23	08 01 59.27	51.58 N	16.17 E	10 G		0.6	8 POLAND. ML 3.6 (KBA).
23	09 00 43.67	39.14 N	27.58 E	10 G		1.0	4 TURKEY
23	09 10 37.3*	60.205 N	153.224 W	145	3.8	62	SOUTHERN ALASKA. <AGS-P>.
23	09 44 28.77	36.05 N	51.59 E	10 G		0.2	5 IRAN
23	10 43 48.3*	27.959 N	139.939 E	506 *	4.0	0.4	14 BONIN ISLANDS REGION
23	10 50 59.3*	28.303 S	62.988 W	599 *	4.6	0.9	23 SANTIAGO DEL ESTERO PROV., ARG.
23	11 40 38.8*	39.126 N	27.607 E	10 G		1.3	5 TURKEY
23	11 56 08.67	39.32 N	27.64 E	10 G		0.8	4 TURKEY
23	12 08 47.3*	63.233 N	149.543 W	90		35	CENTRAL ALASKA. <AGS-P>.
23	12 43 16.07	32.83 S	150.69 E	10 G		0.8	4 NEW SOUTH WALES, AUSTRALIA. ML 3.0 (CNB), 2.4 (COO). Felt at Newcastle.
23	13 22 32.47	32.02 S	70.16 W	10 G		1.1	5 CHILE-ARGENTINA BORDER REGION
23	14 25 18.3*	29.321 N	90.114 E	10 G	4.3	0.8	10 TIBET
23	15 10 22.37	1.18 S	78.28 W	10 G		0.1	4 ECUADOR
23	15 13 19.37	1.74 N	123.72 E	33 N	4.8	1.0	9 MINAHASSA PENINSULA
23	15 22 23.0	37.191 N	22.880 E	10 G	3.8	1.0	19 SOUTHERN GREECE. MD 3.3 (ATH).
23	15 23 05.9*	7.613 N	94.393 E	68 ?	4.5	1.0	14 NICOBAR ISLANDS REGION
23	15 40 16.4*	7.376 N	94.513 E	44 ?	4.6	1.2	16 NICOBAR ISLANDS REGION
23	15 46 09.9*	16.415 N	98.977 W	33 N		0.7	5 NEAR COAST OF GUERRERO, MEXICO
23	16 51 19.8	37.557 N	21.252 E	33 N	4.0	1.2	34 SOUTHERN GREECE. MD 3.6 (ATH).
23	16 59 37.8*	38.463 N	26.760 E	10 G		0.6	5 AEGEAN SEA
23	17 22 26.0	43.415 N	5.429 E	10 G		0.8	14 NEAR SOUTH COAST OF FRANCE. MD 2.6 (STR).
23	17 45 27.6	17.852 S	178.510 W	542 *	4.8	0.9	74 FIJI ISLANDS REGION
23	17 51 58.67	28.24 N	84.58 E	33 N		0.9	5 NEPAL
23	18 24 14.97	31.17 S	68.34 W	97 ?		0.5	5 SAN JUAN PROVINCE, ARGENTINA
23	19 02 18.7	48.557 N	128.442 W	10 G	4.7	1.2	62 VANCOUVER ISLAND REGION
23	19 51 52.1	34.034 S	68.459 W	38 *		1.0	19 MENDOZA PROVINCE, ARGENTINA
23	20 20 23.0*	39.544 N	29.001 E	10 G		0.3	5 TURKEY
23	20 40 23.3	25.357 N	124.494 E	140	4.3	0.8	29 NORTHEAST OF TAIWAN
23	21 29 06.1	8.455 S	158.824 E	122 *	4.9	0.9	26 SOLOMON ISLANDS
23	21 35 24.7*	44.417 N	114.039 W	5 G		0.4	8 WESTERN IDAHO. ML 3.4 (BUT).
23	22 40 12.7*	41.199 N	113.179 W	7		1.0	10 UTAH. <SLC-P>. ML 3.0 (SLC).
23	22 59 13.3	34.436 N	25.286 E	54	4.5	1.2	123 CRETE. MD 4.5 (HLW).
23	23 22 54.4	35.290 N	23.221 E	5 G	4.3	1.3	73 CRETE. ML 3.9 (ATH). MD 4.4 (HLW).
23	23 55 27.5	36.101 N	27.179 E	32	4.2	1.4	36 DODECANESE ISLANDS. ML 4.0 (ATH), 4.3 (CSS).
24	01 03 54.8	44.102 N	11.962 E	23		1.1	26 NORTHERN ITALY. ML 2.9 (KBA), 2.9 LDG).
24	01 06 13.77	43.95 N	11.99 E	10 G		0.5	4 CENTRAL ITALY
24	02 32 44.07	16.48 N	60.72 W	10 G		0.2	5 LEEWARD ISLANDS. ML 3.2 (FDF).
24	05 06 07.97	7.03 S	126.62 E	430 ?	4.3	0.9	9 BANDA SEA
24	05 27 29.2	43.370 N	12.363 E	48 *		0.9	53 CENTRAL ITALY
24	05 54 25.6*	37.849 N	1.906 W	10 G		0.8	5 SPAIN. mbLg 2.6 (MDD).

24	06 18 37.6*	35.328 N	23.205 E	10 G	4.4	1.2	11	CRETE
24	06 34 51.3*	43.981 N	7.348 E	10 G		0.4	5	NEAR SOUTH COAST OF FRANCE. ML 1.4 (GEN).
24	06 38 22.8*	39.895 N	15.759 E	10 G		0.3	7	SOUTHERN ITALY
24	08 16 01.4*	29.03 S	178.26 W	33 N	4.3	0.6	8	KERMADEC ISLANDS. Felt on Raoul Island.
24	08 23 53.9*	35.508 N	23.570 E	10 G		1.2	5	CRETE. MD 3.5 (ATH).
24	09 02 15.6*	20.243 S	69.592 W	33 N		0.8	5	NORTHERN CHILE
24	09 39 58.2*	35.764 N	23.746 E	10 G		1.4	7	CRETE. MD 3.5 (ATH).
24	09 40 43.1	50.413 N	5.964 E	10 G		1.1	23	BELGIUM. ML 2.4 (GSH), 3.0 (LDG).
24	09 41 55.3	31.764 S	68.751 W	12	4.1	0.9	16	SAN JUAN PROVINCE, ARGENTINA
24	10 42 49.8*	39.12 N	27.64 E	10 G		1.1	4	TURKEY
24	11 39 44.4*	35.517 N	25.200 E	33 N		1.4	6	CRETE. MD 3.9 (ATH).
24	11 39 48.4*	59.289 N	151.893 W	57		21		KENAI PENINSULA, ALASKA. <AGS-P>.
24	14 10 23.6*	38.014 N	28.967 E	10 G		1.3	8	TURKEY
24	14 35 15.4	39.166 N	27.645 E	10 G		0.4	8	TURKEY
24	15 14 29.1*	30.84 S	72.21 W	33 N		0.2	6	OFF COAST OF CENTRAL CHILE
24	15 19 36.8	35.310 N	23.170 E	10 G	4.5	1.5	21	CRETE. MD 3.9 (ATH).
24	15 52 19.4*	42.299 N	13.666 E	10 G		1.2	6	CENTRAL ITALY
24	15 54 50.2*	22.99 S	178.32 W	421 ?	4.7	1.1	23	SOUTH OF FIJI ISLANDS
24	16 02 02.7	12.469 S	166.862 E	295 ?	4.7	1.2	42	SANTA CRUZ ISLANDS
24	16 05 49.8*	60.652 N	150.357 W	44		24		KENAI PENINSULA, ALASKA. <AGS-P>.
24	16 24 59.6*	39.11 N	27.44 E	10 G		0.5	4	TURKEY
24	16 38 58.7*	11.753 N	87.342 W	10 G	4.8	0.4	13	NEAR COAST OF NICARAGUA
24	18 32 53.4*	26.31 S	177.21 W	178 ?	4.7	0.6	14	SOUTH OF FIJI ISLANDS
24	18 43 51.4	15.047 S	167.282 E	135 *	5.3	0.9	122	VANUATU ISLANDS
a 24	19 13 14.8	15.523 S	175.236 W	33 N	5.7 6.0	1.1	161	TONGA ISLANDS. Ms 5.9 (BRK). Mo=1.6*10**18 Nm (PPT).
24	19 30 57.7*	44.386 N	11.099 E	10 G		1.1	5	NORTHERN ITALY
24	19 55 30.5*	13.83 N	90.97 W	33 N		0.3	6	NEAR COAST OF GUATEMALA
24	20 44 05.5*	58.616 N	153.999 W	81		14		KODIAK ISLAND REGION. <AGS-P>.
24	21 29 41.1*	39.60 N	16.16 E	10 G		0.2	4	SOUTHERN ITALY
24	22 00 27.5*	5.208 S	151.404 E	125 *	4.3	1.0	13	NEW BRITAIN REGION
24	23 04 18.5*	46.560 N	0.566 E	10 G		1.5	15	FRANCE. ML 2.7 (LDG).
25	00 51 51.0*	31.26 S	68.61 W	90 ?		0.5	5	SAN JUAN PROVINCE, ARGENTINA
25	01 04 49.8*	31.46 S	68.88 W	82 ?		0.1	5	SAN JUAN PROVINCE, ARGENTINA
25	01 30 46.6*	46.359 N	0.999 W	10 G		1.1	12	FRANCE. ML 2.9 (LDG).
25	01 41 41.6	36.232 N	27.231 E	10 G		1.0	7	DODECANESE ISLANDS. MD 3.4 (ATH).
25	01 43 38.8*	58.556 N	142.773 W	10 G	5.1	124		GULF OF ALASKA. <AGS-P>.
25	01 45 44.0	39.514 N	28.311 E	13		0.7	8	TURKEY
25	02 49 51.2*	35.102 N	26.205 E	10 G		1.3	9	CRETE. MD 3.7 (ATH).
25	02 54 41.9*	45.90 N	3.22 E	10 G		0.7	4	FRANCE
25	03 00 35.3*	29.52 S	178.25 W	75 ?	4.7	1.4	9	KERMADEC ISLANDS
o 25	03 08 15.8	10.553 S	165.190 E	25 D	5.4 5.1	1.0	59	SANTA CRUZ ISLANDS
25	04 39 23.0*	11.15 S	163.05 E	33 N	4.5 4.5	1.5	9	SOLOMON ISLANDS
25	05 05 24.5	36.125 N	27.241 E	22	3.9	1.2	16	DODECANESE ISLANDS. ML 4.0 (CSS).
25	05 10 37.3*	9.27 N	123.57 E	84 *	4.1	1.0	7	NEGROS, PHILIPPINE ISLANDS
25	05 21 39.3	41.954 N	21.499 E	10 G		1.4	13	YUGOSLAVIA. ML 3.4 (SKO), 2.9 (TTG). Felt (V) at Skopje.
25	05 53 13.3*	44.467 N	149.285 E	33 N	4.7	0.8	20	KURIL ISLANDS
25	06 25 46.4	38.237 N	21.886 E	10 G		1.2	16	GREECE. MD 3.4 (ATH).
25	06 37 32.3*	15.59 N	97.43 W	67 ?	4.6	0.8	8	NEAR COAST OF OAXACA, MEXICO
25	07 04 32.3	36.069 N	70.894 E	80 *	4.6	1.4	28	HINDU KUSH REGION
25	08 01 53.6	24.057 S	66.954 W	209 *	4.4	0.9	14	SALTA PROVINCE, ARGENTINA
25	08 04 58.0*	37.090 N	121.865 W	6		17		CENTRAL CALIFORNIA. <BRK>. ML 3.1 (BRK). Felt in the Santa Cruz Mountains.
25	08 11 26.0*	62.945 N	150.940 W	114		39		CENTRAL ALASKA. <AGS-P>.
25	08 47 53.7*	36.567 N	70.472 E	33 N	3.8	0.6	7	HINDU KUSH REGION
25	08 58 43.0*	39.13 N	27.55 E	10 G		0.3	4	TURKEY
25	09 05 10.7*	17.81 S	178.91 W	628 ?	4.9	0.7	12	FIJI ISLANDS REGION
25	09 45 42.8*	2.47 N	128.25 E	33 N	4.0	0.4	6	HALMAHERA
25	10 00 23.4*	59.662 N	6.249 E	10 G		0.9	11	SOUTHERN NORWAY. MD 3.0 (BER). Felt (IV) in Rogaland and Hordaland Counties.
25	10 28 23.8*	62.609 N	149.775 W	68		40		CENTRAL ALASKA. <AGS-P>.
25	10 30 42.1*	42.345 N	142.452 E	33 N	4.6	0.9	9	HOKKAIDO, JAPAN REGION
25	11 25 54.7*	18.058 S	167.624 E	10 G	4.6 3.8	0.9	13	VANUATU ISLANDS
25	11 57 25.7	0.316 S	124.490 E	113 ?	4.6	0.9	22	MOLUCCA SEA
25	12 02 46.2	38.139 N	21.990 E	10 G		1.1	6	GREECE. MD 3.1 (ATH).
25	12 08 07.7*	31.952 S	179.573 W	316 ?	4.1	1.1	26	KERMADEC ISLANDS REGION
25	12 49 44.8	38.134 N	28.902 E	21 *		1.0	7	TURKEY
25	12 57 05.7	23.367 N	121.785 E	48	4.1	1.1	28	TAIWAN
25	13 29 11.0*	41.602 N	74.843 E	33 N	4.2	1.2	6	KIRGHIZ SSR
25	13 37 32.0*	28.70 S	176.54 W	60 G	4.7	1.3	9	KERMADEC ISLANDS REGION
25	13 41 33.5*	40.67 N	29.85 E	10 G		1.0	4	TURKEY
25	14 12 01.2*	31.41 S	68.70 W	81 ?		0.1	5	SAN JUAN PROVINCE, ARGENTINA
25	14 35 17.2	39.491 N	28.269 E	10 G		1.4	10	TURKEY
25	14 36 16.4	36.903 N	71.309 E	103 D	4.8	1.1	61	AFGHANISTAN-USSR BORDER REGION. Felt (III) at Khorog, USSR.
o 25	14 57 39.6	20.011 S	177.843 W	572	4.8	1.1	102	FIJI ISLANDS REGION
25	18 58 01.1	43.644 N	127.508 W	10 G	4.0	1.1	53	OFF COAST OF OREGON
25	19 17 11.2	35.775 N	27.289 E	10 G		0.4	6	DODECANESE ISLANDS. MD 3.4 (ATH).
25	20 52 11.4	36.179 N	27.107 E	10 G		1.1	7	DODECANESE ISLANDS. MD 3.4 (ATH).
25	21 40 23.1*	5.195 S	151.175 E	33 *	4.6 3.5	1.0	15	NEW BRITAIN REGION
25	21 53 10.8*	25.332 S	70.855 W	75 ?		0.8	8	NEAR COAST OF NORTHERN CHILE
25	22 05 42.7	36.209 N	27.192 E	10 G		1.5	9	DODECANESE ISLANDS. MD 3.8 (ATH).
25	22 21 03.7*	47.42 N	12.37 E	10 G		0.6	4	AUSTRIA. ML 1.9 (KBA).
25	22 23 28.9*	32.008 S	69.723 W	138 ?		0.4	10	MENDOZA PROVINCE, ARGENTINA
25	22 36 50.0*	44.51 N	7.28 E	10 G		0.2	4	NORTHERN ITALY. ML 1.7 (GEN).
a 25	22 51 09.1	18.042 S	69.135 W	141 D	5.5	1.1	247	NORTHERN CHILE
25	23 16 04.7	20.740 S	176.296 W	238 *	4.9	1.1	39	FIJI ISLANDS REGION
25	23 51 36.9*	5.32 S	151.52 E	55 ?	4.2	0.5	6	NEW BRITAIN REGION
26	00 31 24.1*	25.336 N	142.367 E	33 N	4.9	0.7	12	VOLCANO ISLANDS REGION
26	01 31 24.5*	25.262 N	94.140 E	50 ?	4.8	1.2	12	BURMA-INDIA BORDER REGION
26	02 42 10.5	39.055 N	21.843 E	10 G		1.4	11	GREECE. MD 3.2 (ATH).
26	03 11 59.8*	38.597 N	14.390 E	17		0.9	19	SICILY
26	06 00 44.5	37.164 N	30.211 E	111 *		0.9	20	TURKEY MD 4.3 (HLW).

26	06	20	13.4	23.030 N	94.011 E	90 *	5.0	0.6	12	BURMA+INDIA BORDER REGION	
26	07	34	46.87	49.47 S	108.81 E	10 G	4.9	0.4	10	SOUTHEAST INDIAN RISE	
26	08	07	10.0	42.140 N	19.525 E	15 *		0.7	14	YUGOSLAVIA. ML 2.5 (TTG).	
26	08	28	49.9	40.050 N	21.954 E	10 G		0.9	9	GREECE. MD 3.4 (ATH).	
26	08	34	13.8	14.351 N	146.939 E	49 D	5.1	0.9	19	MARIANA ISLANDS	
26	08	45	00.7*	3.677 S	140.285 E	33 N	4.0 3.6	1.0	10	WEST IRIAN	
26	10	16	09.9*	18.134 N	65.888 W	10 G		0.2	5	PUERTO RICO REGION	
26	11	39	41.1*	58.485 S	143.399 W	10 G			41	GULF OF ALASKA. <AGS-P>. ML 4.0 (PMR).	
26	12	10	55.4*	34.487 N	27.049 E	10 G		1.5	8	EASTERN MEDITERRANEAN SEA. MD 3.8 (ATH).	
26	12	14	33.6*	4.526 S	143.671 E	33 N	4.0	0.8	9	PAPUA NEW GUINEA	
26	12	44	16.2*	39.126 N	27.548 E	10 G		0.5	5	TURKEY	
26	13	18	29.1*	31.434 S	69.094 W	130 *		1.3	15	SAN JUAN PROVINCE, ARGENTINA	
26	14	06	48.4	47.460 N	12.002 E	10 G		1.1	6	AUSTRIA. ML 3.2 (FUR), 2.6 (KBA).	
26	15	01	19.77	44.40 N	7.43 E	10 G		0.0	4	NORTHERN ITALY. ML 1.5 (GEN).	
26	15	16	41.8*	37.445 N	118.735 W	15			19	CALIFORNIA-NEVADA BORDER REGION. <BRK>. ML 3.8 (BRK). Felt at Friant and Northfork, California.	
26	16	19	28.4*	36.093 N	122.498 E	33 N		1.4	10	EASTERN CHINA. ML 4.3 (BJI).	
26	16	28	11.5	40.713 N	34.192 E	10 G		0.4	7	TURKEY	
26	17	19	44.9	39.672 N	16.806 E	10 G		1.0	15	SOUTHERN ITALY	
26	17	46	58.6	36.172 N	120.220 W	10 G		0.7	11	CENTRAL CALIFORNIA. ML 2.6 (BRK).	
26	18	13	59.8	9.577 S	149.798 E	33 N	5.2 3.9	1.0	43	EAST PAPUA NEW GUINEA REGION	
26	18	21	26.2	29.845 N	67.526 E	17 *	5.4 5.2	0.9	72	PAKISTAN	
26	18	28	29.77	31.19 S	68.52 W	87 ?		0.4	5	SAN JUAN PROVINCE, ARGENTINA	
a	26	18	29	11.3	26.682 S	114.763 W	10 G	5.2 5.2	0.8	76	EASTER ISLAND REGION
26	18	59	10.3	38.541 N	26.878 E	10 G		1.0	27	AEGEAN SEA. MD 3.8 (ATH).	
a	26	19	06	36.4	26.651 S	114.726 W	14 G	5.6 6.1	1.1	197	EASTER ISLAND REGION. Ms 6.1 (BRK). Mo=3.0*10**18 Nm (PPT). Depth from broadband displacement seismograms.
26	19	31	00.5	37.106 N	29.281 E	10 G		1.0	8	TURKEY	
26	19	45	40.5*	37.255 N	121.668 W	6			14	CENTRAL CALIFORNIA. <BRK>. ML 3.1 (BRK). Felt in the San Felipe Valley.	
26	20	30	14.4	57.450 N	7.064 E	10 G		0.8	16	NORTH SEA. ML 4.0 (NAO). Felt.	
26	21	10	38.9	44.636 N	111.062 W	5 G		0.4	9	HEBGEN LAKE REGION. ML 3.2 (BUT). Largest of 15 events with magnitudes of 2.4 or greater over the past 20 hours (BUT).	
26	21	28	53.27	42.29 N	22.65 E	10 G		0.7	4	BULGARIA. ML 2.7 (SKO).	
26	21	49	43.5*	11.712 S	117.348 E	33 N	4.6	1.5	7	SOUTH OF SUMBAWA ISLAND	
26	21	54	26.4*	40.319 N	63.747 E	33 N	4.4	0.7	8	UZBEK SSR. Felt (III) at Gazli.	
26	22	10	47.0	44.629 N	111.070 W	5 G		0.4	9	HEBGEN LAKE REGION. ML 3.0 (BUT).	
26	22	59	33.7*	56.180 N	160.409 E	33 N	4.3	0.3	6	KAMCHATKA	
27	00	01	49.3	38.911 N	24.819 E	10 G		1.0	11	AEGEAN SEA. ML 3.1 (ATH).	
27	00	18	06.27	31.21 S	68.38 W	102 ?		0.5	5	SAN JUAN PROVINCE, ARGENTINA	
27	01	39	34.0*	4.650 S	136.756 E	33 N	4.4	1.5	8	WEST IRIAN REGION	
27	02	57	13.77	42.92 N	12.85 E	10 G		0.7	4	CENTRAL ITALY	
27	03	11	59.6*	42.924 N	12.901 E	10 G		0.8	5	CENTRAL ITALY	
27	03	26	10.6	36.457 N	71.448 E	126 *	4.9	1.2	63	AFGHANISTAN-USSR BORDER REGION. Felt (III) at Ishkashim and Khorog, USSR.	
27	04	18	19.6*	60.205 N	153.044 W	134			23	SOUTHERN ALASKA. <AGS-P>.	
27	04	37	42.67	31.80 S	69.77 W	33 N		0.7	5	SAN JUAN PROVINCE, ARGENTINA	
27	05	20	18.7*	4.373 N	94.741 E	33 N	3.9	1.4	6	OFF W COAST OF NORTHERN SUMATERA	
27	05	41	12.77	3.24 S	141.23 E	62 ?	3.6	0.5	7	PAPUA NEW GUINEA	
27	06	34	46.77	17.93 N	65.74 W	10 G		1.0	4	PUERTO RICO REGION	
27	08	00	53.8*	40.706 N	27.399 E	10 G		0.7	9	TURKEY	
27	08	28	25.7*	4.382 S	153.775 E	180	4.9	0.8	18	NEW IRELAND REGION	
27	09	15	26.2	38.060 N	21.821 E	10 G		1.1	6	GREECE. ML 3.1 (ATH).	
27	09	27	37.6*	55.857 N	161.526 W	197			4	ALASKA PENINSULA. <PAL>.	
a	27	09	28	54.1	17.159 S	64.141 W	601	5.4	1.1	282	BOLIVIA
27	10	04	33.0*	31.357 N	86.870 E	33 N	4.1	1.5	15	TIBET	
27	10	14	50.47	61.12 N	2.48 E	10 G		0.3	7	NORWEGIAN SEA	
27	11	24	37.3	38.130 N	22.080 E	10 G		1.5	10	GREECE. ML 3.1 (ATH).	
27	12	33	03.1	51.296 N	175.276 W	33 N	4.9	0.8	31	ANDREANOF ISLANDS, ALEUTIAN IS.	
27	13	16	12.5*	40.443 N	15.289 E	10 G		0.9	5	SOUTHERN ITALY	
27	13	16	14.37	8.64 S	126.67 E	188 ?	4.5	0.0	5	TIMOR	
27	13	23	22.0*	33.953 N	106.588 W	5 G			27	NEW MEXICO. <SNM>. MD 3.9 (SNM). Felt (IV) at Socorro and (III) at San Antonio.	
27	13	27	08.5*	40.766 N	27.729 E	10 G		0.2	5	TURKEY	
27	13	55	43.87	17.73 N	65.51 W	10 G		0.2	4	PUERTO RICO REGION	
27	14	19	30.2*	10.291 N	126.970 E	33 N	4.8	1.3	25	PHILIPPINE ISLANDS REGION	
27	14	31	25.4*	33.949 S	71.182 W	33 N		0.1	5	NEAR COAST OF CENTRAL CHILE	
27	14	54	08.07	8.34 S	130.24 E	136 ?	4.7	1.0	14	TANIMBAR ISLANDS REGION	
27	15	55	38.2	9.823 N	124.803 E	33 N	5.0 4.3	1.1	51	MINDANAO, PHILIPPINE ISLANDS	
27	16	17	09.9	26.872 S	26.736 E	5 G	4.6	0.9	8	REPUBLIC OF SOUTH AFRICA	
27	16	47	27.6	36.043 N	27.092 E	10 G		1.2	5	DODECANESE ISLANDS	
27	18	13	06.9*	61.703 N	151.636 W	100 ?		0.4	8	SOUTHERN ALASKA	
27	19	51	05.37	36.10 N	27.20 E	10 G		0.4	4	DODECANESE ISLANDS	
27	20	15	35.6	1.799 S	129.102 E	33 N	5.0 4.3	1.1	34	HALMAHERA	
27	21	49	56.0	52.013 N	166.897 W	33 N	5.3 4.5	1.1	155	FOX ISLANDS, ALEUTIAN ISLANDS	
27	23	15	19.4*	31.949 S	68.205 W	112 ?		0.3	7	SAN JUAN PROVINCE, ARGENTINA	
27	23	35	20.07	36.08 N	27.13 E	10 G		0.2	4	DODECANESE ISLANDS	
28	02	00	01.27	31.03 S	68.96 W	33 N		1.2	4	SAN JUAN PROVINCE, ARGENTINA	
28	02	01	45.7	21.257 S	68.743 W	138 *	4.9	1.0	16	CHILE-BOLIVIA BORDER REGION	
28	02	19	24.0	40.303 N	22.043 E	5 G		1.0	9	GREECE. MD 3.5 (ATH).	
28	04	00	46.27	2.54 S	129.10 E	33 N	3.9	0.6	7	CERAM	
28	04	21	53.4*	62.563 N	152.548 W	138			40	CENTRAL ALASKA. <AGS-P>.	
28	04	57	15.87	31.34 S	68.65 W	100 G		0.1	4	SAN JUAN PROVINCE, ARGENTINA	
28	07	19	25.37	30.91 S	67.44 W	10 G		1.3	4	SAN JUAN PROVINCE, ARGENTINA	
28	07	49	13.07	33.11 S	72.39 W	139 *		1.6	11	OFF COAST OF CENTRAL CHILE	
28	10	53	46.1	40.256 N	29.585 E	10 G		1.5	7	TURKEY	
28	11	56	37.7	43.054 N	13.783 E	10 G		1.4	9	CENTRAL ITALY. ML 2.7 (KBA).	
28	12	15	55.6	43.067 N	13.699 E	10 G		1.4	28	CENTRAL ITALY. ML 3.2 (ROM), 3.4 (KBA). MD 3.8 (TRI).	
28	12	21	46.9	6.791 N	123.727 E	607 *	4.6	0.8	36	MINDANAO, PHILIPPINE ISLANDS	
28	13	07	00.8*	37.560 N	118.455 W	5			14	CALIFORNIA-NEVADA BORDER REGION. <BRK>. ML 3.1 (BRK).	
28	13	21	05.87	40.60 N	27.80 E	10 G		1.1	5	TURKEY	
28	13	22	27.7	15.638 N	60.764 W	32		0.6	14	LEEWARD ISLANDS. ML 2.9 (FDF).	

28 13 23 42.1 42.990 N 1.016 W 29 1.0 69 PYRENEES. ML 4.2 (LDG). mbLg 3.9 (MDD). Felt (V) at Ochagavia; (IV) at Navascues and Isaba, Spain. Felt (V) at Larrau and in the Basque and Bearn districts, France.

28 14 15 28.7 33.188 S 69.550 W 28 3.8 1.2 15 CHILE-ARGENTINA BORDER REGION

28 15 18 33.5 44.057 N 11.423 E 10 G 0.7 7 NORTHERN ITALY. ML 2.3 (KBA).

28 15 21 55.3 50.680 N 16.650 E 10 G 0.8 6 POLAND. ML 3.4 (KBA), 3.7 (VKA).

28 16 07 01.8% 44.426 N 6.453 E 10 G 0.4 6 FRANCE

28 16 10 22.6 8.990 N 126.636 E 57 \* 5.2 4.2 1.1 74 MINDANAO, PHILIPPINE ISLANDS

28 16 43 51.17 31.37 S 68.71 W 85 ? 0.2 5 SAN JUAN PROVINCE, ARGENTINA

28 17 29 25.4% 31.156 S 67.959 W 10 G 0.2 5 SAN JUAN PROVINCE, ARGENTINA

28 17 41 09.5% 31.660 N 115.910 W 6 G 5 BAJA CALIFORNIA. <PAS-P>. ML 3.1 (PAS).

28 18 01 22.6 15.482 S 166.313 E 10 G 5.1 4.6 1.0 90 VANUATU ISLANDS

28 18 55 09.9% 17.039 N 95.886 E 33 N 0.1 5 BURMA

28 19 33 48.1% 34.788 N 26.028 E 5 G 0.7 5 CRETE

28 20 05 31.7 13.969 S 34.107 E 33 N 5.1 4.1 0.9 44 MALAWI

28 20 37 24.1% 34.140 N 117.700 W 6 20 SOUTHERN CALIFORNIA. <PAS-P>. ML 3.6 (PAS). Foreshock.

28 20 54 22.3% 13.645 S 33.934 E 33 N 4.7 1.5 13 MALAWI

28 21 13 32.1 2.710 N 79.765 W 13 4.8 3.8 1.1 36 SOUTH OF PANAMA

28 21 37 24.7% 21.711 N 143.052 E 303 ? 4.1 0.6 10 MARIANA ISLANDS REGION

28 21 55 57.6% 38.93 N 20.39 E 10 G 1.1 6 GREECE

28 22 11 45.3% 15.35 N 94.17 W 33 N 0.9 5 NEAR COAST OF OAXACA, MEXICO

28 22 18 21.6 13.852 S 34.063 E 33 N 4.9 3.8 1.2 32 MALAWI. mbLg 4.4 (BUL).

28 23 20 35.6% 15.87 N 60.41 W 24 \* 0.4 6 LEEWARD ISLANDS. ML 2.6 (FDF).

28 23 38 52.4% 6.363 S 153.866 E 63 \* 4.2 0.7 12 NEW BRITAIN REGION

28 23 43 36.6% 34.140 N 117.700 W 5 5.5 5.5 191 SOUTHERN CALIFORNIA. <PAS-P>. ML 5.2 (PAS), 6.2 (BRK). Thirty people received minor injuries and damage was estimated to be at least 12.7 million dollars. Some damage (VII) at Claremont, Covina, La Verne, Montclair, Mount Baldy, Ontario, Pomona, San Dimas, Upland and Walnut. Slight damage (VI) at Arcadia, Azusa, China, Caltan, Compton, Glendora, Lincoln Heights, Lytle Creek, Pico Rivera and West Covina. Felt from Santa Barbara to Ensenada, Mexico and northeast as far as Las Vegas, Nevada.

28 23 46 54.1% 34.130 N 117.720 W 6 G 1 SOUTHERN CALIFORNIA. <PAS-P>. ML 3.1 (PAS).

## A D D I T I O N A L S O U R C E P A R A M E T E R S

01 11 16 24.04 7.912N 126.909E 63km  
4.9mb ( 15 obs.)  
MINDANAO, PHILIPPINE ISLANDS  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 8S, 16C  
Centroid Location:  
Origin Time 11:16:21.4 1.3  
Lat 7.57N 0.16 Lon 126.94E 0.22  
Dep 27.414.3 Half-duration 1.3  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 4.25 Plg=58 Azm=259  
N -0.92 14 13  
P -3.33 28 111  
Best Double Couple:Mo=3.8\*10\*\*16  
NP1:Strike=234 Dip=21 Slip= 133  
NP2: 9 74 75

01 18 33 53.86 8.247N 126.712E 61km  
5.3mb ( 31 obs.)  
MINDANAO, PHILIPPINE ISLANDS  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 12S, 22C  
Centroid Location:  
Origin Time 18:33:53.5 0.4  
Lat 8.06N 0.07 Lon 127.18E 0.08  
Dep 16.7 3.4 Half-duration 2.1  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 1.87 Plg=71 Azm=226  
N -0.08 15 7  
P -1.79 11 100  
Best Double Couple:Mo=1.8\*10\*\*17  
NP1:Strike=208 Dip=36 Slip= 116  
NP2: 357 58 72

02 14 49 09.48 18.407S 176.924E 10km  
5.6mb ( 31 obs.) 5.7Msz ( 18 obs.)  
FIJI ISLANDS REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 16S, 38C  
Centroid Location:  
Origin Time 14:49:17.6 0.5  
Lat 18.46S 0.03 Lon 176.70E 0.04  
Dep 15.0 FIX Half-duration 4.0  
Principal Axes:  
Scale 10\*\*18 Nm  
T Val= 1.34 Plg= 1 Azm=277  
N -0.01 83 181  
P -1.32 7 7

Best Double Couple:Mo=1.3\*10\*\*18  
NP1:Strike= 52 Dip=85 Slip= -4  
NP2: 142 86 -174

02 18 34 46.20 18.073S 178.307W 576km  
5.3mb ( 41 obs.)  
FIJI ISLANDS REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 17S, 33C  
Centroid Location:  
Origin Time 18:34:57.0 0.5  
Lat 17.64S 0.04 Lon 178.91W 0.04  
Dep 589.9 2.3 Half-duration 2.8  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 4.73 Plg= 9 Azm= 15  
N 0.71 23 109  
P -5.43 65 266  
Best Double Couple:Mo=5.1\*10\*\*17  
NP1:Strike= 80 Dip=42 Slip=-126  
NP2: 304 58 -62

02 18 53 40.35 5.294S 151.099E 44km  
5.7mb ( 31 obs.) 5.5Msz ( 10 obs.)  
NEW BRITAIN REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 15S, 33C  
Centroid Location:  
Origin Time 18:53:43.3 0.4  
Lat 5.18S 0.03 Lon 151.06E 0.04  
Dep 42.9 4.3 Half-duration 3.0  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 5.76 Plg= 6 Azm=149  
N 0.82 82 286  
P -6.58 5 59  
Best Double Couple:Mo=6.2\*10\*\*17  
NP1:Strike=194 Dip=82 Slip= 180  
NP2: 284 90 8

03 04 43 42.95 3.065S 126.361E 85km  
5.1mb ( 11 obs.)  
BURU  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 12S, 21C  
Centroid Location:  
Origin Time 04:43:39.7 1.1  
Lat 2.36S 0.10 Lon 126.03E 0.16  
Dep 34.6 9.5 Half-duration 1.6  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 6.19 Plg=40 Azm=278  
N -0.12 50 101  
P -6.07 2 9  
Best Double Couple:Mo=6.1\*10\*\*16  
NP1:Strike= 61 Dip=62 Slip= 29  
NP2: 316 64 148

03 09 54 55.63 51.125N 130.238W 10km  
5.2mb ( 22 obs.) 5.4Msz ( 15 obs.)  
QUEEN CHARLOTTE ISLANDS REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 14S, 32C  
Centroid Location:  
Origin Time 09:54:58.8 0.3  
Lat 50.99N FIX;Lon 130.69W FIX  
Dep 15.0 FIX Half-duration 2.1  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 2.29 Plg= 0 Azm=113  
N -0.56 90 180  
P -1.73 0 23  
Best Double Couple:Mo=2.0\*10\*\*17  
NP1:Strike=158 Dip=90 Slip=-180  
NP2: 248 90 0

03 22 27 30.81 2.282S 125.086E 37km  
5.2mb ( 10 obs.) 4.3Msz ( 2 obs.)  
CERAM SEA  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 11S, 22C  
Centroid Location:  
Origin Time 22:27:32.4 0.8  
Lat 2.06S 0.13 Lon 125.17E 0.16  
Dep 31.710.1 Half-duration 1.5  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 5.52 Plg= 7 Azm=299  
N 0.82 55 199  
P -6.34 34 33  
Best Double Couple:Mo=5.9\*10\*\*16  
NP1:Strike= 71 Dip=62 Slip= -21  
NP2: 171 72 -150

04 07 58 14.07 10.233S 110.290E 46km  
5.7mb ( 37 obs.) 5.4Msz ( 16 obs.)  
SOUTH OF JAVA  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 16S, 38C  
Centroid Location:

Origin Time 07:58:14.3 0.6  
 Lat 10.73S 0.05 Lon 110.75E 0.05  
 Dep 45.0 3.1 Half-duration 3.1  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 7.53 Plg= 9 Azm=357  
 N -3.32 0 267  
 P -4.21 81 175  
 Best Double Couple: Mo=5.9\*10\*\*17  
 NP1: Strike= 87 Dip=36 Slip= -89  
 NP2: 267 54 -90

05 05 16 46.15 37.047N 71.250E 110km  
 6.1mb (102 obs.)  
 AFGHANISTAN-USSR BORDER REGION  
 FAULT PLANE SOLUTION: P-Waves  
 NP1: Strike=235 Dip=55 Slip= 70  
 NP2: 87 40 116  
 Principal Axes:  
 T Plg=72 Azm= 94  
 P 8 339  
 Comment: The focal mechanism is moderately well controlled and corresponds to reverse faulting with a moderate strike-slip component. The preferred fault plane is NP1.  
 RADIATED ENERGY  
 No. of sta: 5 Focal mech. M  
 Energy 5.9±2.5\*10\*\*13 Nm  
 MOMENT TENSOR SOLUTION  
 Dep 120 No. of sta: 12  
 Principal Axes:  
 Scale 10\*\*18 Nm  
 T Val= 2.55 Plg=68 Azm=105  
 N 0.54 21 270  
 P -3.09 5 2  
 Best Double Couple: Mo=2.8\*10\*\*18  
 NP1: Strike=114 Dip=44 Slip= 121  
 NP2: 254 53 64  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 12S, 32C M.W.: 12S, 18C  
 Centroid Location:  
 Origin Time 05:16:53.5 0.2  
 Lat 36.56N 0.02 Lon 70.84E 0.03  
 Dep 113.5 1.1 Half-duration 4.9  
 Principal Axes:  
 Scale 10\*\*18 Nm  
 T Val= 2.65 Plg=53 Azm= 99  
 N 0.41 36 260  
 P -3.05 9 357  
 Best Double Couple: Mo=2.8\*10\*\*18  
 NP1: Strike=121 Dip=48 Slip= 142  
 NP2: 239 63 49

08 07 15 32.23 9.755N 124.694E 26km  
 6.2mb (82 obs.) 6.6Msz (32 obs.)  
 MINDANAO, PHILIPPINE ISLANDS  
 FAULT PLANE SOLUTION: P-Waves  
 NP1: Strike= 32 Dip=62 Slip= 55  
 NP2: 268 44 137  
 Principal Axes:  
 T Plg=58 Azm=253  
 P 10 146  
 Comment: The focal mechanism is moderately well controlled and corresponds to reverse faulting with a large strike-slip component. The preferred fault plane is not determined.  
 RADIATED ENERGY  
 No. of sta: 6 Focal mech. M  
 Energy 1.8±0.7\*10\*\*14 Nm  
 MOMENT TENSOR SOLUTION  
 Dep 21 No. of sta: 14  
 Principal Axes:  
 Scale 10\*\*19 Nm  
 T Val= 1.25 Plg=69 Azm=287  
 N 0.27 18 75  
 P -1.53 10 169  
 Best Double Couple: Mo=1.4\*10\*\*19  
 NP1: Strike=280 Dip=38 Slip= 120  
 NP2: 63 58 69  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 15S, 43C M.W.: 14S, 34C  
 Centroid Location:  
 Origin Time 07:15:35.9 0.2  
 Lat 9.79N 0.02 Lon 124.85E 0.02  
 Dep 16.2 0.9 Half-duration 9.6  
 Principal Axes:  
 Scale 10\*\*19 Nm

T Val= 1.61 Plg=81 Azm=340  
 N -0.14 2 240  
 P -1.48 9 149  
 Best Double Couple: Mo=1.5\*10\*\*19  
 NP1: Strike=237 Dip=36 Slip= 87  
 NP2: 61 54 92

08 07 46 59.78 9.725N 124.625E 30km  
 6.0mb (66 obs.) 6.5Msz (9 obs.)  
 MINDANAO, PHILIPPINE ISLANDS  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 6S, 18C M.W.: 9S, 20C  
 Centroid Location:  
 Origin Time 07:47: 5.2 0.4  
 Lat 9.71N 0.03 Lon 124.86E 0.04  
 Dep 15.0 FIX Half-duration 7.4  
 Principal Axes:  
 Scale 10\*\*18 Nm  
 T Val= 8.66 Plg=79 Azm=312  
 N 0.24 2 55  
 P -8.89 11 145  
 Best Double Couple: Mo=8.8\*10\*\*18  
 NP1: Strike=238 Dip=34 Slip= 94  
 NP2: 53 56 87

09 09 31 47.63 36.775N 2.477E 12km  
 5.0mb (44 obs.) 4.4Msz (2 obs.)  
 ALGERIA  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 12S, 27C  
 Centroid Location:  
 Origin Time 09:31:53.9 0.8  
 Lat 36.26N 0.17 Lon 2.83E 0.19  
 Dep 15.0 FIX Half-duration 1.5  
 Principal Axes:  
 Scale 10\*\*16 Nm  
 T Val= 7.40 Plg=63 Azm=132  
 N 1.60 1 225  
 P -9.00 27 316  
 Best Double Couple: Mo=8.2\*10\*\*16  
 NP1: Strike= 49 Dip=18 Slip= 95  
 NP2: 225 72 88

09 22 30 23.52 26.972N 140.315E 436km  
 4.7mb (24 obs.)  
 BONIN ISLANDS REGION  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 10S, 23C  
 Centroid Location:  
 Origin Time 22:30:26.6 0.8  
 Lat 26.87N 0.08 Lon 139.92E 0.08  
 Dep 435.6 4.8 Half-duration 1.5  
 Principal Axes:  
 Scale 10\*\*16 Nm  
 T Val= 9.03 Plg=15 Azm=112  
 N -1.50 8 204  
 P -7.53 73 321  
 Best Double Couple: Mo=8.3\*10\*\*16  
 NP1: Strike=190 Dip=31 Slip= -105  
 NP2: 28 60 -81

10 03 27 41.28 42.343S 172.798E 10km  
 6.0mb (12 obs.) 6.0Msz (19 obs.)  
 SOUTH ISLAND, NEW ZEALAND  
 FAULT PLANE SOLUTION: P-Waves  
 NP1: Strike=175 Dip=83 Slip= 7  
 NP2: 84 83 173  
 Principal Axes:  
 T Plg=10 Azm= 40  
 P 0 130  
 Comment: The focal mechanism is poorly controlled and corresponds to strike-slip faulting with a small reverse component. The preferred fault plane is not determined.  
 MOMENT TENSOR SOLUTION  
 Dep 14 No. of sta: 7  
 Principal Axes:  
 Scale 10\*\*18 Nm  
 T Val= 1.26 Plg= 8 Azm= 19  
 N 0.01 78 151  
 P -1.27 9 287  
 Best Double Couple: Mo=1.3\*10\*\*18  
 NP1: Strike= 63 Dip=78 Slip= -180  
 NP2: 333 90 -12  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 13S, 30C  
 Centroid Location:

Origin Time 03:27:43.6 0.6  
 Lat 42.41S 0.05 Lon 172.78E 0.06  
 Dep 15.0 FIX Half-duration 3.4  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 9.66 Plg=20 Azm= 25  
 N 2.29 55 147  
 P -11.95 27 284  
 Best Double Couple: Mo=1.1\*10\*\*18  
 NP1: Strike= 67 Dip=56 Slip= -174  
 NP2: 333 85 -34

10 03 54 47.72 42.347S 172.595E 10km  
 5.0mb (4 obs.) 5.7Msz (1 obs.)  
 SOUTH ISLAND, NEW ZEALAND  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 10S, 22C  
 Centroid Location:  
 Origin Time 03:54:49.2 1.4  
 Lat 42.19S FIX Lon 172.74E FIX  
 Dep 15.0 FIX Half-duration 2.6  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 4.28 Plg=17 Azm= 22  
 N -0.37 52 135  
 P -3.91 33 280  
 Best Double Couple: Mo=4.1\*10\*\*17  
 NP1: Strike= 65 Dip=54 Slip= -167  
 NP2: 328 80 -37

10 13 12 14.23 5.263S 151.271E 10km  
 5.3mb (11 obs.) 4.6Msz (1 obs.)  
 NEW BRITAIN REGION  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 11S, 18C  
 Centroid Location:  
 Origin Time 13:12:21.8 1.2  
 Lat 5.35S 0.09 Lon 150.91E 0.13  
 Dep 32.910.9 Half-duration 1.5  
 Principal Axes:  
 Scale 10\*\*16 Nm  
 T Val= 7.74 Plg=13 Azm=208  
 N -0.05 48 313  
 P -7.69 39 107  
 Best Double Couple: Mo=7.7\*10\*\*16  
 NP1: Strike=256 Dip=53 Slip= -159  
 NP2: 152 73 -39

10 17 12 10.49 3.170S 80.829W 57km  
 5.5mb (44 obs.)  
 PERU-ECUADOR BORDER REGION  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 15S, 34C  
 Centroid Location:  
 Origin Time 17:12:14.0 0.5  
 Lat 3.54S 0.06 Lon 81.07W 0.09  
 Dep 15.0 FIX Half-duration 2.3  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 2.43 Plg=31 Azm=101  
 N 0.16 56 252  
 P -2.60 13 3  
 Best Double Couple: Mo=2.5\*10\*\*17  
 NP1: Strike=138 Dip=58 Slip= 167  
 NP2: 235 79 32

10 20 45 39.15 51.623N 178.043E 61km  
 5.3mb (73 obs.)  
 RAT ISLANDS, ALEUTIAN ISLANDS  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 15S, 30C  
 Centroid Location:  
 Origin Time 20:45:47.0 0.4  
 Lat 52.04N 0.09 Lon 177.45E 0.07  
 Dep 36.5 4.7 Half-duration 1.9  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 1.32 Plg=25 Azm= 97  
 N 0.09 40 211  
 P -1.42 40 345  
 Best Double Couple: Mo=1.4\*10\*\*17  
 NP1: Strike=138 Dip=42 Slip= -167  
 NP2: 38 81 -49

11 17 46 06.17 36.331N 140.916E 46km  
 5.4mb (68 obs.) 5.2Msz (15 obs.)  
 NEAR EAST COAST OF HONSHU, JAPAN  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN

L.P.B.: 12S, 28C  
Centroid Location:  
Origin Time 17:46: 9.0 0.3  
Lat 35.99N 0.04 Lon 140.88E 0.04  
Dep 38.9 2.6 Half-duration 2.7  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 3.39 Plg=74 Azm=302  
N 0.44 3 203  
P -3.83 15 112  
Best Double Couple:Mo=3.6\*10\*\*17  
NP1:Strike=198 Dip=30 Slip= 85  
NP2: 24 60 93

11 21 58 39.45 31.184S 177.634W 29km  
5.3mb ( 8 obs.) 5.0Msz ( 5 obs.)  
KERMADEC ISLANDS REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 15S, 29C  
Centroid Location:  
Origin Time 21:58:50.3 0.8  
Lat 30.34S 0.06 Lon 177.98W 0.06  
Dep 45.0 4.0 Half-duration 2.0  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 1.29 Plg=75 Azm=270  
N 0.55 3 12  
P -1.83 15 103  
Best Double Couple:Mo=1.6\*10\*\*17  
NP1:Strike=198 Dip=31 Slip= 96  
NP2: 10 60 86

12 03 30 52.82 5.186S 151.777E 49km  
5.1mb ( 12 obs.) 4.7Msz ( 3 obs.)  
NEW BRITAIN REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 15S, 29C  
Centroid Location:  
Origin Time 03:30:58.2 0.4  
Lat 5.41S 0.06 Lon 151.96E 0.08  
Dep 18.4 3.8 Half-duration 1.9  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 1.57 Plg=63 Azm= 46  
N -0.15 23 259  
P -1.42 13 163  
Best Double Couple:Mo=1.5\*10\*\*17  
NP1:Strike=225 Dip=38 Slip= 50  
NP2: 92 62 117

12 12 25 33.57 5.256S 151.330E 15km  
5.5mb ( 30 obs.) 5.2Msz ( 17 obs.)  
NEW BRITAIN REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 14S, 31C  
Centroid Location:  
Origin Time 12:25:39.7 0.3  
Lat 5.25S 0.04 Lon 150.88E 0.04  
Dep 21.2 4.1 Half-duration 2.8  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 4.45 Plg= 6 Azm=196  
N 0.20 56 294  
P -4.65 34 102  
Best Double Couple:Mo=4.6\*10\*\*17  
NP1:Strike=244 Dip=62 Slip=158  
NP2: 144 71 -29

12 13 44 29.22 44.130N 128.926W 10km  
5.1mb ( 20 obs.) 5.2Msz ( 4 obs.)  
OFF COAST OF OREGON  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 14S, 28C  
Centroid Location:  
Origin Time 13:44:31.7 0.6  
Lat 44.15N FIX;Lon 128.91W FIX  
Dep 15.0 FIX Half-duration 2.0  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 2.04 Plg= 0 Azm=105  
N -0.45 90 180  
P -1.59 0 15  
Best Double Couple:Mo=1.8\*10\*\*17  
NP1:Strike=150 Dip=90 Slip=180  
NP2: 240 90 0

15 22 08 01.55 5.225S 151.355E 16km  
5.7mb ( 24 obs.) 4.9Msz ( 12 obs.)  
NEW BRITAIN REGION

CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 11S, 21C  
Centroid Location:  
Origin Time 22:08:10.2 0.4  
Lat 4.97S 0.04 Lon 150.79E 0.04  
Dep 21.7 3.5 Half-duration 2.3  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 2.57 Plg= 0 Azm=200  
N -0.27 47 290  
P -2.30 43 110  
Best Double Couple:Mo=2.4\*10\*\*17  
NP1:Strike=254 Dip=61 Slip=147  
NP2: 147 61 -33

16 06 22 09.81 22.295S 174.329W 33km  
5.1mb ( 9 obs.) 5.0Msz ( 5 obs.)  
TONGA ISLANDS REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 12S, 21C  
Centroid Location:  
Origin Time 06:22:19.1 1.8  
Lat 21.61S 0.10 Lon 174.25W 0.13  
Dep 15.0 FIX Half-duration 1.8  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 10.27 Plg=69 Azm=302  
N 1.53 0 32  
P -11.80 21 122  
Best Double Couple:Mo=1.1\*10\*\*17  
NP1:Strike=212 Dip=24 Slip= 90  
NP2: 32 66 90

16 13 28 42.83 49.121N 127.714W 10km  
5.2mb ( 41 obs.) 4.9Msz ( 7 obs.)  
VANCOUVER ISLAND REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 11S, 20C  
Centroid Location:  
Origin Time 13:28:52.3 0.6  
Lat 49.16N 0.08 Lon 128.79W 0.08  
Dep 15.0 FIX Half-duration 1.7  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 1.41 Plg=12 Azm= 73  
N -0.01 77 229  
P -1.41 5 342  
Best Double Couple:Mo=1.4\*10\*\*17  
NP1:Strike=117 Dip=78 Slip= 175  
NP2: 208 85 12

16 15 12 46.48 3.121S 80.683W 76km  
5.0mb ( 10 obs.)  
PERU-ECUADOR BORDER REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 10S, 16C  
Centroid Location:  
Origin Time 15:12:45.0 0.7  
Lat 3.93S 0.07 Lon 81.18W 0.12  
Dep 76.0 FIX Half-duration 1.5  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 8.93 Plg=21 Azm=113  
N 1.35 53 235  
P -10.28 28 11  
Best Double Couple:Mo=9.6\*10\*\*16  
NP1:Strike=154 Dip=54 Slip=-174  
NP2: 61 85 -36

16 21 02 53.73 3.564S 140.272E 47km  
5.3mb ( 23 obs.) 4.8Msz ( 4 obs.)  
WEST IRIAN  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 10S, 19C  
Centroid Location:  
Origin Time 21:03: 0.1 0.6  
Lat 3.38S 0.05 Lon 139.89E 0.07  
Dep 31.0 4.6 Half-duration 1.7  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 8.42 Plg=71 Azm=283  
N 1.90 19 112  
P -10.33 3 21  
Best Double Couple:Mo=9.4\*10\*\*16  
NP1:Strike= 92 Dip=45 Slip= 63  
NP2: 308 51 115

5.2mb ( 25 obs.) 4.9Msz ( 12 obs.)  
MARIANA ISLANDS REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 9S, 17C  
Centroid Location:  
Origin Time 21:29:58.0 0.7  
Lat 15.68N 0.10 Lon 147.33E 0.08  
Dep 15.0 FIX Half-duration 1.5  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 8.06 Plg=69 Azm=315  
N -0.78 13 189  
P -7.28 17 95  
Best Double Couple:Mo=7.7\*10\*\*16  
NP1:Strike=166 Dip=61 Slip= 64  
NP2: 16 63 104

17 01 22 06.80 4.567S 105.583W 10km  
5.5mb ( 5 obs.) 5.8Msz ( 2 obs.)  
NORTHERN EASTER I. CORDILLERA  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 15S, 33C  
Centroid Location:  
Origin Time 01:22:16.5 0.6  
Lat 4.50S 0.05 Lon 106.03W 0.06  
Dep 15.0 FIX Half-duration 2.3  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 6.74 Plg= 3 Azm=325  
N 0.20 87 114  
P -6.94 2 235  
Best Double Couple:Mo=6.8\*10\*\*17  
NP1:Strike= 10 Dip=87 Slip= 179  
NP2: 100 89 3

17 02 28 01.82 29.533N 130.732E 66km  
5.9mb ( 80 obs.)  
RYUKYU ISLANDS  
FAULT PLANE SOLUTION: P-Waves  
NP1:Strike=217 Dip=70 Slip= 70  
NP2: 84 28 133  
Principal Axes:  
T Plg=60 Azm= 98  
P 22 322  
Comment: The focal mechanism is poorly controlled and corresponds to reverse faulting with a moderate strike-slip component. The preferred fault plane is not determined.

RADIATED ENERGY  
No. of sta: 6 Focal mech. F  
Energy 2.0±0.5\*10\*\*13 Nm  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 9S, 25C  
Centroid Location:  
Origin Time 02:28: 5.0 0.3  
Lat 29.28N 0.03 Lon 130.45E 0.04  
Dep 44.3 3.6 Half-duration 4.0  
Principal Axes:  
Scale 10\*\*18 Nm  
T Val= 1.79 Plg=55 Azm=107  
N -0.02 21 231  
P -1.77 26 332  
Best Double Couple:Mo=1.8\*10\*\*18  
NP1:Strike=102 Dip=27 Slip= 144  
NP2: 224 75 68

17 02 50 56.55 15.835N 147.197E 32km  
5.6mb ( 29 obs.) 5.6Msz ( 3 obs.)  
MARIANA ISLANDS REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 9S, 20C  
Centroid Location:  
Origin Time 02:50:54.5 1.8  
Lat 15.94N 0.15 Lon 147.43E 0.22  
Dep 15.0 FIX Half-duration 2.3  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 3.06 Plg=17 Azm=139  
N -0.55 7 46  
P -2.51 72 294  
Best Double Couple:Mo=2.8\*10\*\*17  
NP1:Strike=240 Dip=29 Slip= -75  
NP2: 43 62 -98

18 12 21 58.09 5.516S 149.432E 142km  
5.9mb ( 50 obs.)

## NEW BRITAIN REGION

FAULT PLANE SOLUTION: P-Waves

NP1: Strike= 55 Dip=54 Slip=-100  
NP2: 252 37 -77

Principal Axes:

T P1g= 8 Azm=152  
P 78 288

Comment: The focal mechanism is moderately well controlled and corresponds to normal faulting with a small strike-slip component. The preferred fault plane is not determined.

## MOMENT TENSOR SOLUTION

Dep 146 No. of sta: 11

Principal Axes:

Scale 10<sup>17</sup> NmT Vol= 6.34 P1g= 3 Azm=178  
N 0.27 30 86  
P -6.62 60 273Best Double Couple: Mo=6.5<sup>10</sup>17

NP1: Strike=295 Dip=49 Slip=-49

NP2: 62 55 -127

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 11S, 27C

Centroid Location:

Origin Time 12:22: 5.9 0.6

Lat 5.57S 0.05 Lon 149.07E 0.04

Dep 152.6 1.0 Half-duration 3.3

Principal Axes:

Scale 10<sup>17</sup> NmT Vol= 8.06 P1g= 2 Azm=171  
N -0.31 14 81  
P -7.75 76 267Best Double Couple: Mo=7.9<sup>10</sup>17

NP1: Strike=276 Dip=45 Slip=-70

NP2: 68 48 -109

19 05 34 37.04 40.347S 176.102E 24km

5.9mb ( 36 obs.) 6.3Msz ( 18 obs.)

NORTH ISLAND, NEW ZEALAND

FAULT PLANE SOLUTION: P-Waves

NP1: Strike=242 Dip=79 Slip=-90

NP2: 62 11 -90

Principal Axes:

T P1g=34 Azm=332  
P 56 152

Comment: The focal mechanism is poorly controlled and corresponds to normal faulting. The preferred fault plane is NP1.

## MOMENT TENSOR SOLUTION

Dep 20 No. of sta: 10

Principal Axes:

Scale 10<sup>18</sup> NmT Vol= 3.11 P1g=32 Azm=329  
N 0.18 10 233  
P -3.29 56 128Best Double Couple: Mo=3.2<sup>10</sup>18

NP1: Strike= 91 Dip=16 Slip=-51

NP2: 231 77 -100

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 14S, 35C

Centroid Location:

Origin Time 05:34:38.4 0.3

Lat 40.76S 0.04 Lon 176.09E 0.06

Dep 32.1 2.1 Half-duration 5.2

Principal Axes:

Scale 10<sup>18</sup> NmT Vol= 2.92 P1g=24 Azm=316  
N -0.54 21 216  
P -2.38 57 90Best Double Couple: Mo=2.7<sup>10</sup>18

NP1: Strike= 81 Dip=28 Slip=-41

NP2: 209 72 -112

19 06 48 10.12 15.465S 166.385E 12km

6.4mb ( 42 obs.) 6.7Msz ( 33 obs.)

VANUATU ISLANDS

FAULT PLANE SOLUTION: P-Waves

NP1: Strike=109 Dip=70 Slip= 11

NP2: 15 80 160

Principal Axes:

T P1g=27 Azm=331  
P 7 63

Comment: The focal mechanism is moderately well controlled and corresponds to strike-slip faulting with a moderate reverse component. The

preferred fault plane is not determined.

## RADIATED ENERGY

No. of sta: 6 Focal mech. C

Energy 1.9<sup>10</sup>14 Nm

## MOMENT TENSOR SOLUTION

Dep 32 No. of sta: 8

Principal Axes:

Scale 10<sup>19</sup> NmT Vol= 2.18 P1g=16 Azm=328  
N 0.00 73 169  
P -2.17 6 60Best Double Couple: Mo=2.2<sup>10</sup>19

NP1: Strike=105 Dip=74 Slip= 7

NP2: 13 83 164

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 13S, 35C M.W.: 10S, 23C

Centroid Location:

Origin Time 06:48:17.9 0.2

Lat 15.54S 0.02 Lon 166.19E 0.02

Dep 15.0 FIX Half-duration 9.0

Principal Axes:

Scale 10<sup>19</sup> NmT Vol= 1.33 P1g=32 Azm=100  
N 0.65 35 345  
P -1.98 39 221Best Double Couple: Mo=1.7<sup>10</sup>19

NP1: Strike=246 Dip=35 Slip=-7

NP2: 342 86 -125

20 06 53 39.89 34.706N 139.252E 14km

6.1mb ( 97 obs.) 6.4Msz ( 29 obs.)

NEAR S. COAST OF HONSHU, JAPAN

FAULT PLANE SOLUTION: P-Waves

NP1: Strike= 70 Dip=82 Slip= 173

NP2: 161 83 8

Principal Axes:

T P1g=11 Azm= 26  
P 1 295

Comment: The focal mechanism is moderately well controlled and corresponds to strike-slip faulting with a small reverse component. The preferred fault plane is not determined.

## RADIATED ENERGY

No. of sta: 6 Focal mech. F

Energy 5.3<sup>10</sup>14 Nm

## MOMENT TENSOR SOLUTION

Dep 37 No. of sta: 15

Principal Axes:

Scale 10<sup>18</sup> NmT Vol= 2.34 P1g= 6 Azm=206  
N 0.23 71 98  
P -2.58 10 298Best Double Couple: Mo=2.5<sup>10</sup>18

NP1: Strike=341 Dip=73 Slip=-9

NP2: 73 82 -163

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 10S, 28C M.W.: 10S, 20C

Centroid Location:

Origin Time 06:53:45.3 0.2

Lat 34.62N 0.02 Lon 139.05E 0.02

Dep 32.2 1.7 Half-duration 5.6

Principal Axes:

Scale 10<sup>18</sup> NmT Vol= 4.16 P1g=15 Azm=219  
N 0.35 75 41  
P -4.50 1 309Best Double Couple: Mo=4.3<sup>10</sup>18

NP1: Strike=355 Dip=79 Slip= 10

NP2: 263 80 169

20 09 15 22.84 46.922N 153.996E 34km

5.6mb ( 69 obs.) 5.4Msz ( 2 obs.)

KURIL ISLANDS

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 9S, 17C

Centroid Location:

Origin Time 09:15:23.4 0.9

Lat 46.85N 0.12 Lon 154.74E 0.12

Dep 34.5 7.9 Half-duration 2.0

Principal Axes:

Scale 10<sup>17</sup> NmT Vol= 2.94 P1g=68 Azm= 72  
N 0.13 15 204  
P -3.08 16 298Best Double Couple: Mo=3.0<sup>10</sup>17

NP1: Strike= 50 Dip=32 Slip= 120

NP2: 196 63 73

20 18 17 56.29 21.559S 170.437E 161km

5.3mb ( 18 obs.)

LOYALTY ISLANDS REGION

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 11S, 23C

Centroid Location:

Origin Time 18:18: 4.8 0.8

Lat 21.53S 0.07 Lon 169.80E 0.06

Dep 157.3 2.0 Half-duration 2.3

Principal Axes:

Scale 10<sup>17</sup> NmT Vol= 3.46 P1g=18 Azm=321  
N -0.77 71 144  
P -2.69 1 51Best Double Couple: Mo=3.1<sup>10</sup>17

NP1: Strike= 98 Dip=76 Slip= 13

NP2: 5 78 166

20 18 48 04.03 25.413S 116.169W 10km

5.3mb ( 17 obs.) 5.5Msz ( 4 obs.)

EASTER ISLAND CORDILLERA

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 14S, 31C

Centroid Location:

Origin Time 18:48:15.8 0.7

Lat 25.84S 0.04 Lon 116.44W 0.06

Dep 15.0 FIX Half-duration 2.7

Principal Axes:

Scale 10<sup>17</sup> NmT Vol= 3.73 P1g= 0 Azm=245  
N -0.35 90 180  
P -3.38 0 155Best Double Couple: Mo=3.5<sup>10</sup>17

NP1: Strike=290 Dip=90 Slip=-180

NP2: 20 90 0

21 18 20 14.55 16.903N 62.326W 110km

5.9mb ( 64 obs.)

LEEWARD ISLANDS

FAULT PLANE SOLUTION: P-Waves

NP1: Strike=170 Dip=85 Slip= 90

NP2: 350 5 90

Principal Axes:

T P1g=50 Azm= 80  
P 40 260

Comment: The focal mechanism is poorly controlled and corresponds to reverse faulting. The preferred fault plane is NP2.

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 14S, 30C

Centroid Location:

Origin Time 18:20:20.9 0.2

Lat 16.75N 0.03 Lon 61.85W 0.03

Dep 110.3 1.8 Half-duration 3.2

Principal Axes:

Scale 10<sup>17</sup> NmT Vol= 6.73 P1g=43 Azm= 75  
N -0.32 7 339  
P -6.41 46 242Best Double Couple: Mo=6.6<sup>10</sup>17

NP1: Strike=234 Dip= 7 Slip=-14

NP2: 339 88 -97

22 16 51 51.06 11.458S 66.380E 12km

5.7mb ( 58 obs.) 5.6Msz ( 23 obs.)

MID-INDIAN RISE

FAULT PLANE SOLUTION: P-Waves

NP1: Strike=215 Dip=82 Slip= -8

NP2: 306 82 -172

Principal Axes:

T P1g= 0 Azm= 81  
P 11 171

Comment: The focal mechanism is moderately well controlled and corresponds to strike-slip faulting with a small normal component. The preferred fault plane is not determined.

## RADIATED ENERGY

No. of sta: 8 Focal mech. M

Energy 1.6<sup>10</sup>14 Nm

## MOMENT TENSOR SOLUTION

Dep 22 No. of sta: 12

Principal Axes:

Scale 10<sup>17</sup> NmT Vol= 7.56 P1g= 4 Azm= 85  
N 0.73 82 326  
P -8.29 7 176

Best Double Couple:Mo=7.9\*10\*\*17  
NP1:Strike=220 Dip=83 Slip=-2  
NP2: 310 88 -173  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 19S, 45C  
Centroid Location:  
Origin Time 16:51:56.3 0.4  
Lat 11.58S 0.05 Lon 66.39E 0.04  
Dep 15.0 FIX Half-duration 3.0  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 6.22 P1g= 0 Azm=235  
N -1.52 30 145  
P -4.70 60 325  
Best Double Couple:Mo=5.5\*10\*\*17  
NP1:Strike=351 Dip=52 Slip=-51  
NP2: 119 52 -129

22 18 59 45.19 11.654N 86.622W 32km  
5.1mb ( 36 obs.) 5.2Msz ( 7 obs.)  
NEAR COAST OF NICARAGUA  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 11S, 19C  
Centroid Location:  
Origin Time 18:59:46.9 0.5  
Lat 11.36N 0.08 Lon 87.36W 0.08  
Dep 17.8 3.8 Half-duration 2.2  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 2.00 P1g=63 Azm=334  
N -0.32 23 123  
P -1.68 13 218  
Best Double Couple:Mo=1.8\*10\*\*17  
NP1:Strike=336 Dip=38 Slip= 130  
NP2: 109 62 63

24 19 13 14.87 15.523S 175.236W 33km  
5.7mb ( 36 obs.) 6.0Msz ( 26 obs.)  
TONGA ISLANDS  
FAULT PLANE SOLUTION: P-Waves  
NP1:Strike=125 Dip=75 Slip=-3  
NP2: 216 87 -165  
Principal Axes:  
T P1g= 8 Azm=349  
P 13 81  
Comment: The focal mechanism is  
poorly controlled and  
corresponds to strike-slip  
faulting with a moderate  
normal component. The  
preferred fault plane is not  
determined.  
MOMENT TENSOR SOLUTION  
Dep 18 No. of sto: 9  
Principal Axes:  
Scale 10\*\*18 Nm  
T Val= 1.98 P1g= 9 Azm=352  
N -0.23 81 178  
P -1.74 1 82  
Best Double Couple:Mo=1.9\*10\*\*18  
NP1:Strike=127 Dip=83 Slip= 6  
NP2: 36 84 173  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 14S, 40C M.W.: 9S, 16C  
Centroid Location:  
Origin Time 19:13:19.4 0.2  
Lat 15.38S 0.02 Lon 175.36W 0.02  
Dep 15.0 FIX Half-duration 4.0  
Principal Axes:  
Scale 10\*\*18 Nm  
T Val= 1.63 P1g= 4 Azm=340  
N 0.20 62 76  
P -1.84 28 248  
Best Double Couple:Mo=1.7\*10\*\*18

NP1:Strike= 27 Dip=68 Slip=-162  
NP2: 291 74 -23

25 03 08 15.81 10.553S 165.190E 25km  
5.4mb ( 10 obs.) 5.1Msz ( 10 obs.)  
SANTA CRUZ ISLANDS  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 15S, 33C  
Centroid Location:  
Origin Time 03:08:20.2 0.5  
Lat 10.57S FIX;Lon 165.19E FIX  
Dep 15.0 FIX Half-duration 2.4  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 3.07 P1g=59 Azm=275  
N 0.31 12 26  
P -3.38 28 123  
Best Double Couple:Mo=3.2\*10\*\*17  
NP1:Strike=243 Dip=20 Slip= 129  
NP2: 23 74 77

25 14 57 39.64 20.011S 177.843W 572km  
4.8mb ( 31 obs.)  
FIJI ISLANDS REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 10S, 16C  
Centroid Location:  
Origin Time 14:57:47.2 0.8  
Lat 19.57S 0.09 Lon 178.31W 0.09  
Dep 573.3 4.6 Half-duration 1.8  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 11.05 P1g=18 Azm= 34  
N 1.77 22 131  
P -12.82 61 267  
Best Double Couple:Mo=1.2\*10\*\*17  
NP1:Strike= 93 Dip=33 Slip=-133  
NP2: 321 67 -66

25 22 51 09.19 18.042S 69.135W 141km  
5.5mb ( 67 obs.)  
NORTHERN CHILE  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 16S, 38C  
Centroid Location:  
Origin Time 22:51:16.3 0.4  
Lat 18.35S 0.04 Lon 68.72W 0.05  
Dep 141.5 2.0 Half-duration 2.5  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 3.37 P1g=16 Azm= 79  
N -0.02 0 169  
P -3.36 74 261  
Best Double Couple:Mo=3.4\*10\*\*17  
NP1:Strike=169 Dip=29 Slip= -91  
NP2: 350 61 -89

26 18 29 11.34 26.682S 114.763W 10km  
5.2mb ( 12 obs.) 5.2Msz ( 1 obs.)  
EASTER ISLAND REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 10S, 20C  
Centroid Location:  
Origin Time 18:29:18.9 0.8  
Lat 27.05S 0.08 Lon 114.72W 0.10  
Dep 15.0 FIX Half-duration 2.0  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 0.86 P1g= 0 Azm=207  
N 0.18 0 117  
P -1.04 90 180  
Best Double Couple:Mo=0.9\*10\*\*17  
NP1:Strike=297 Dip=45 Slip= -90

NP2: 117 45 -90

26 19 06 36.44 26.651S 114.726W 14km  
5.6mb ( 27 obs.) 6.1Msz ( 18 obs.)  
EASTER ISLAND REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 16S, 40C M.W.: 11S, 17C  
Centroid Location:  
Origin Time 19:06:44.7 0.2  
Lat 27.24S 0.03 Lon 114.91W 0.03  
Dep 15.0 FIX Half-duration 4.5  
Principal Axes:  
Scale 10\*\*18 Nm  
T Val= 1.41 P1g=10 Azm= 39  
N 0.09 10 131  
P -1.50 75 265  
Best Double Couple:Mo=1.5\*10\*\*18  
NP1:Strike=117 Dip=36 Slip=-108  
NP2: 318 56 -78

27 09 28 54.16 17.159S 64.141W 601km  
5.4mb ( 66 obs.)  
BOLIVIA  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 16S, 33C  
Centroid Location:  
Origin Time 09:29: 3.4 0.4  
Lat 17.14S 0.04 Lon 64.09W 0.05  
Dep 618.6 2.6 Half-duration 3.1  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 7.84 P1g=43 Azm=290  
N 0.44 19 182  
P -8.28 41 75  
Best Double Couple:Mo=8.1\*10\*\*17  
NP1:Strike= 96 Dip=19 Slip= 4  
NP2: 2 89 109

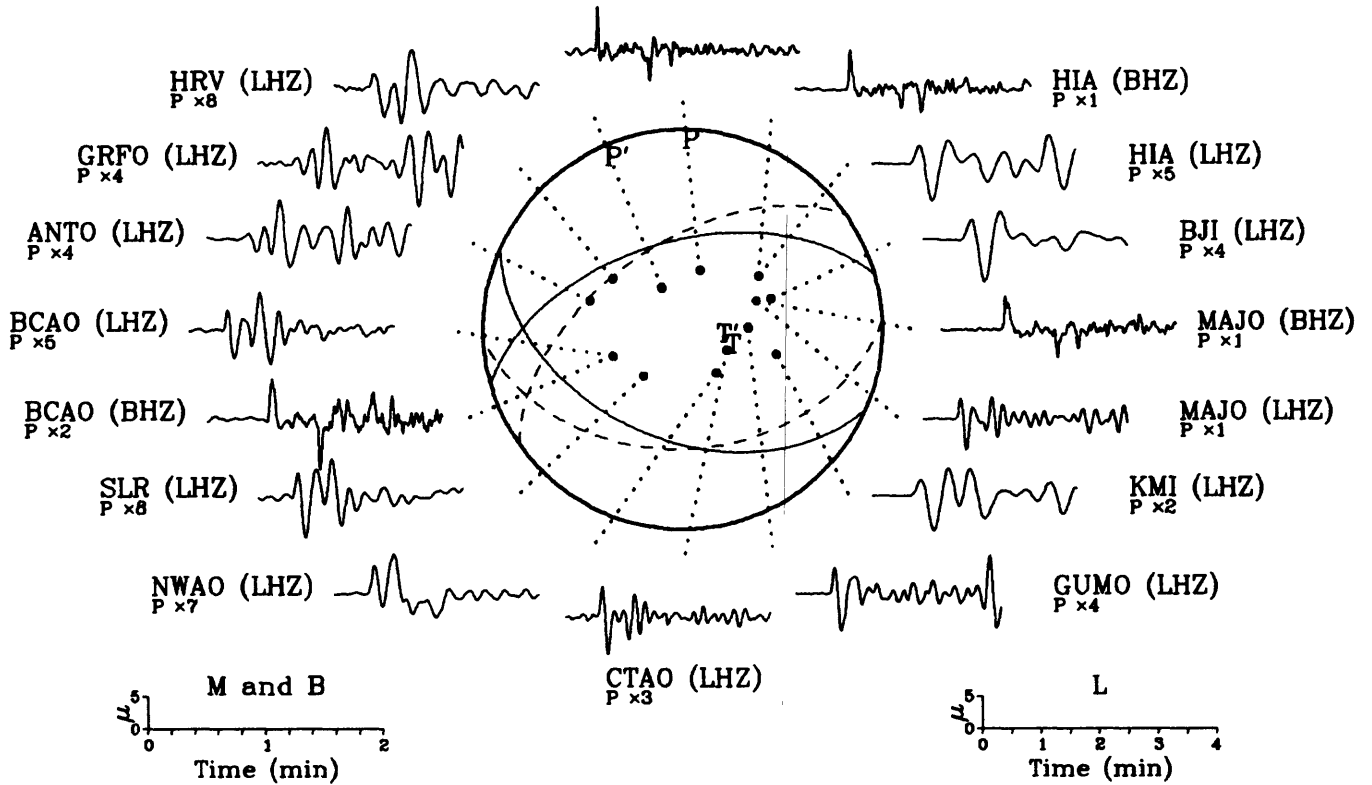
28 18 01 22.65 15.482S 166.313E 10km  
5.1mb ( 17 obs.) 4.6Msz ( 3 obs.)  
VANUATU ISLANDS  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 10S, 17C  
Centroid Location:  
Origin Time 18:01:27.4 0.9  
Lat 15.42S 0.13 Lon 166.00E 0.12  
Dep 33.8 8.1 Half-duration 1.6  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 4.47 P1g= 5 Azm=226  
N 0.43 4 135  
P -4.89 83 8  
Best Double Couple:Mo=4.7\*10\*\*16  
NP1:Strike=320 Dip=40 Slip= -84  
NP2: 132 50 -95

28 23 43 36.60 34.140N 117.700W 5km  
5.5mb ( 58 obs.) 5.5Msz ( 7 obs.)  
SOUTHERN CALIFORNIA  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 11S, 28C  
Centroid Location:  
Origin Time 23:43:45.5 0.9  
Lat 34.11N 0.06 Lon 118.06W 0.06  
Dep 15.0 FIX Half-duration 2.8  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 3.46 P1g=19 Azm=264  
N 1.03 70 69  
P -4.49 5 172  
Best Double Couple:Mo=4.0\*10\*\*17  
NP1:Strike=307 Dip=73 Slip= 169  
NP2: 40 80 17



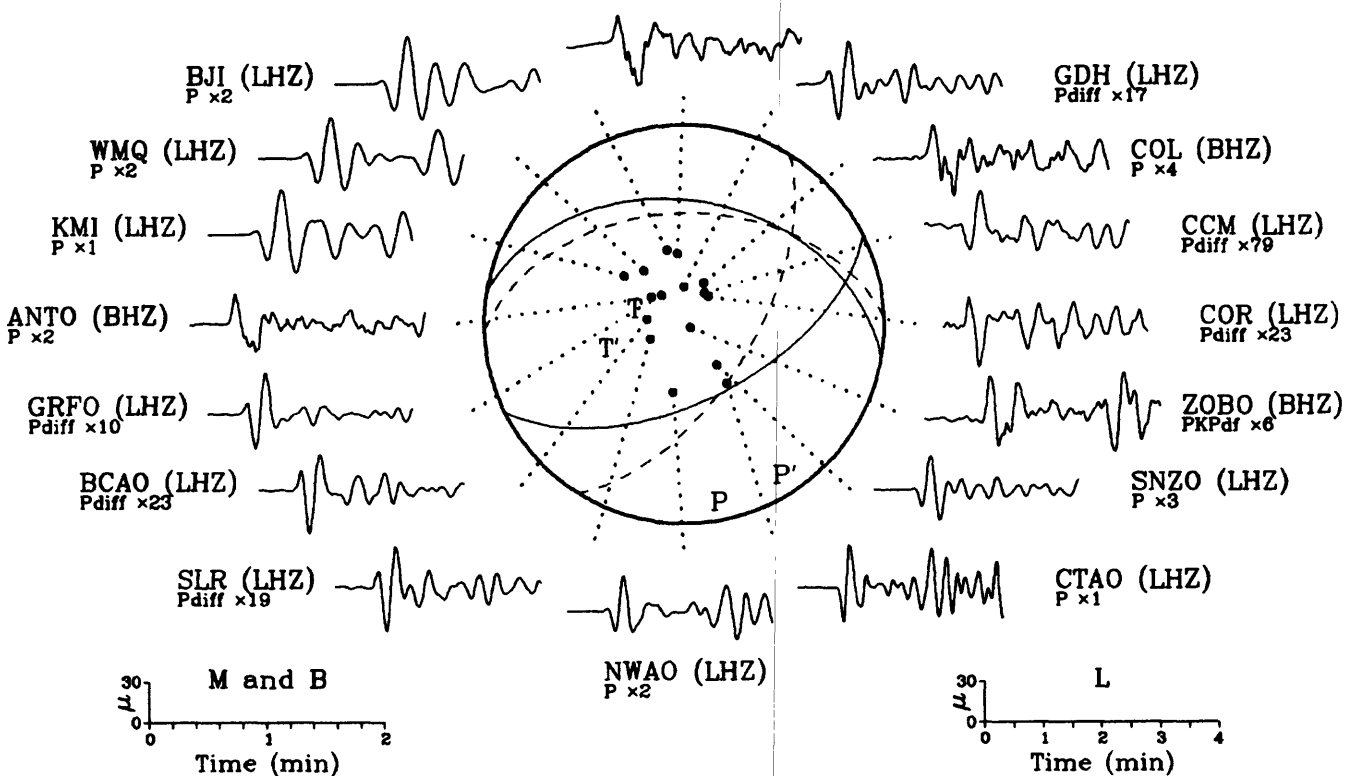
05 February 1990 05:16:46.15  
Afghanistan-USSR Border Region

COL (BHZ)  
P x1



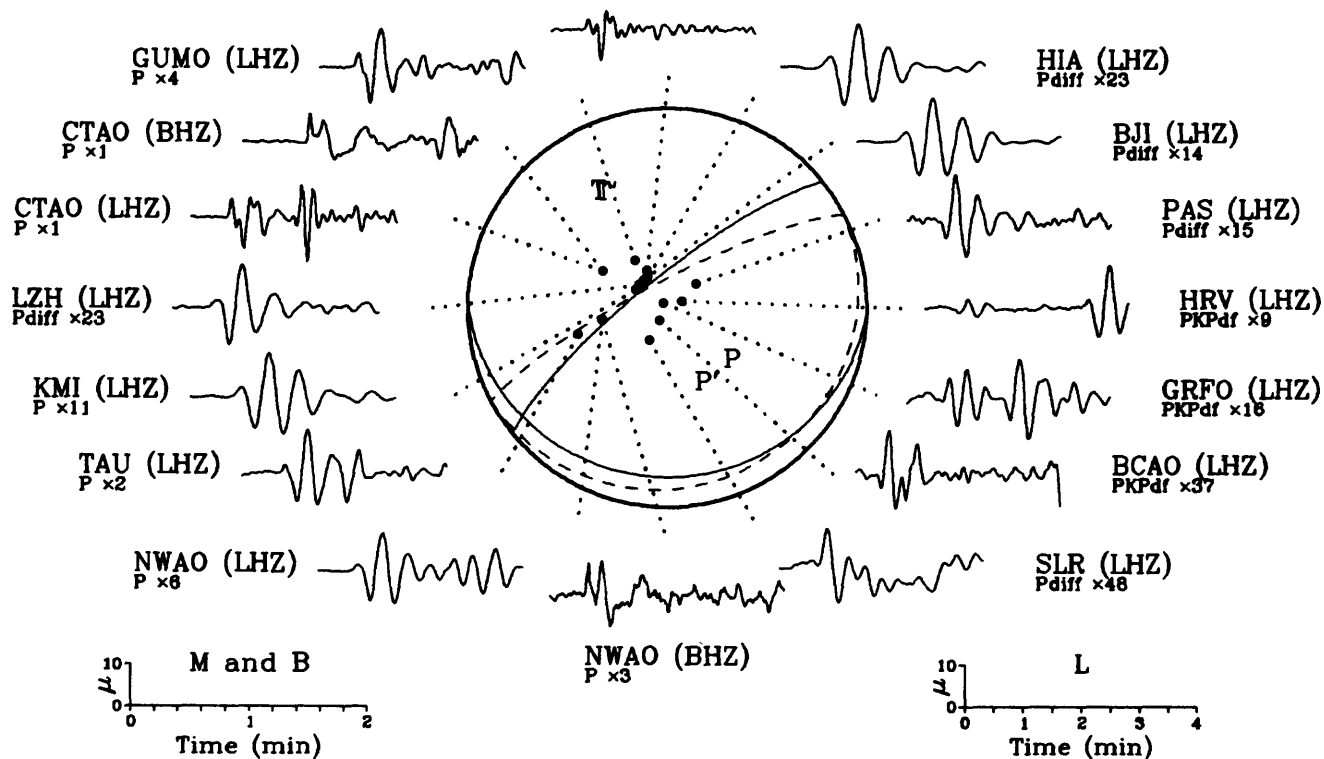
08 February 1990 07:15:32.23  
Mindanao, Philippine Islands

HIA (BHZ)  
P x2



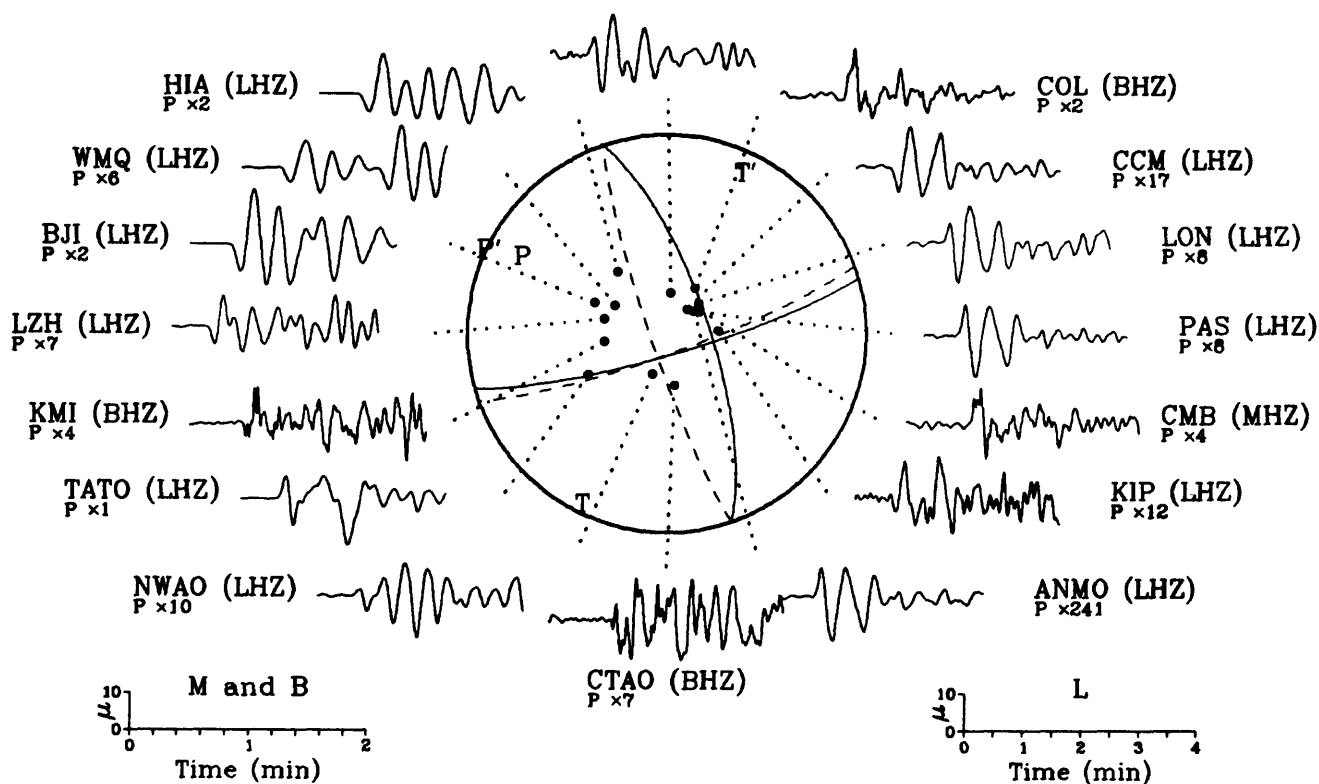
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North Island, New Zealand

MAJO (LHZ)  
P x2

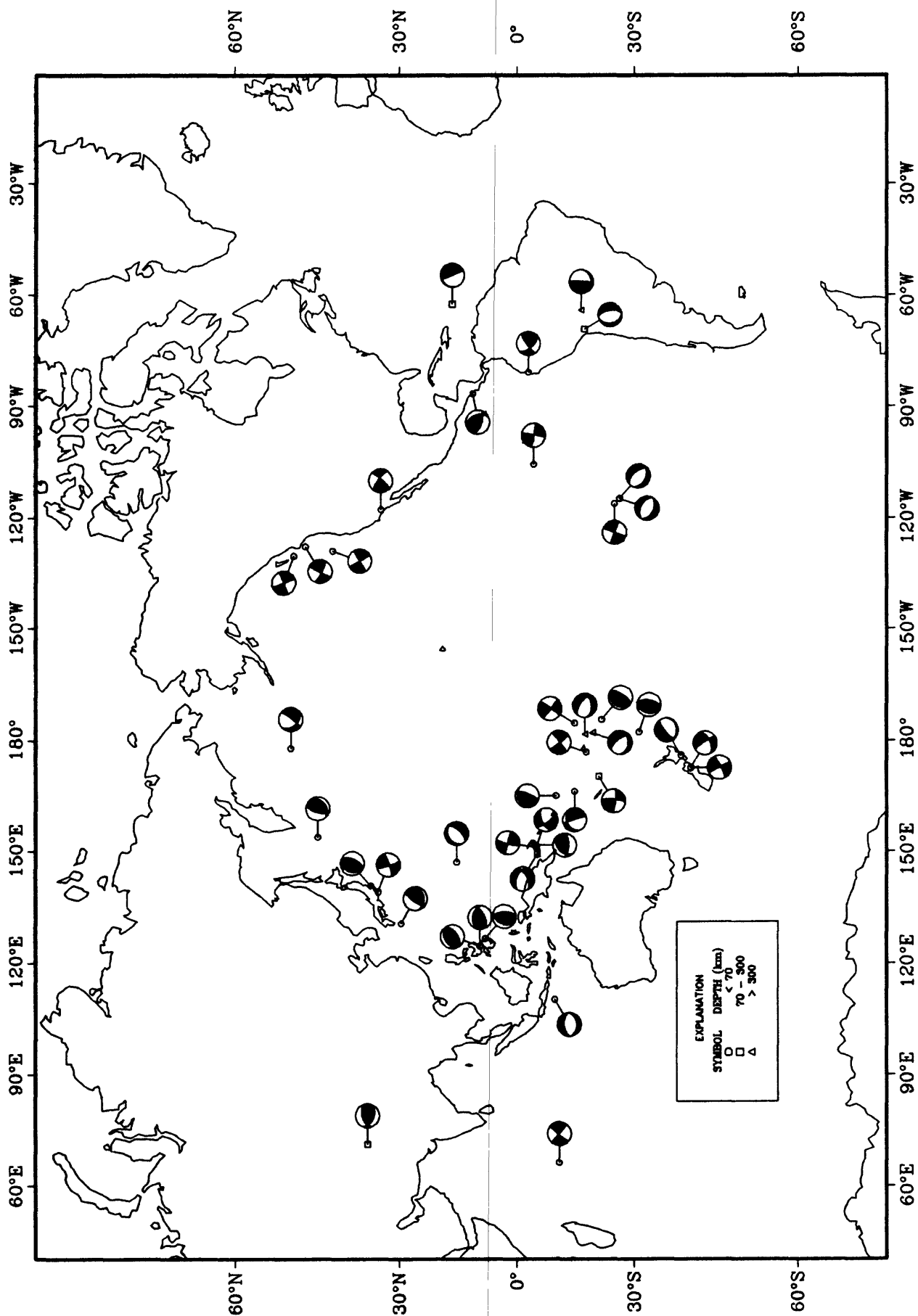


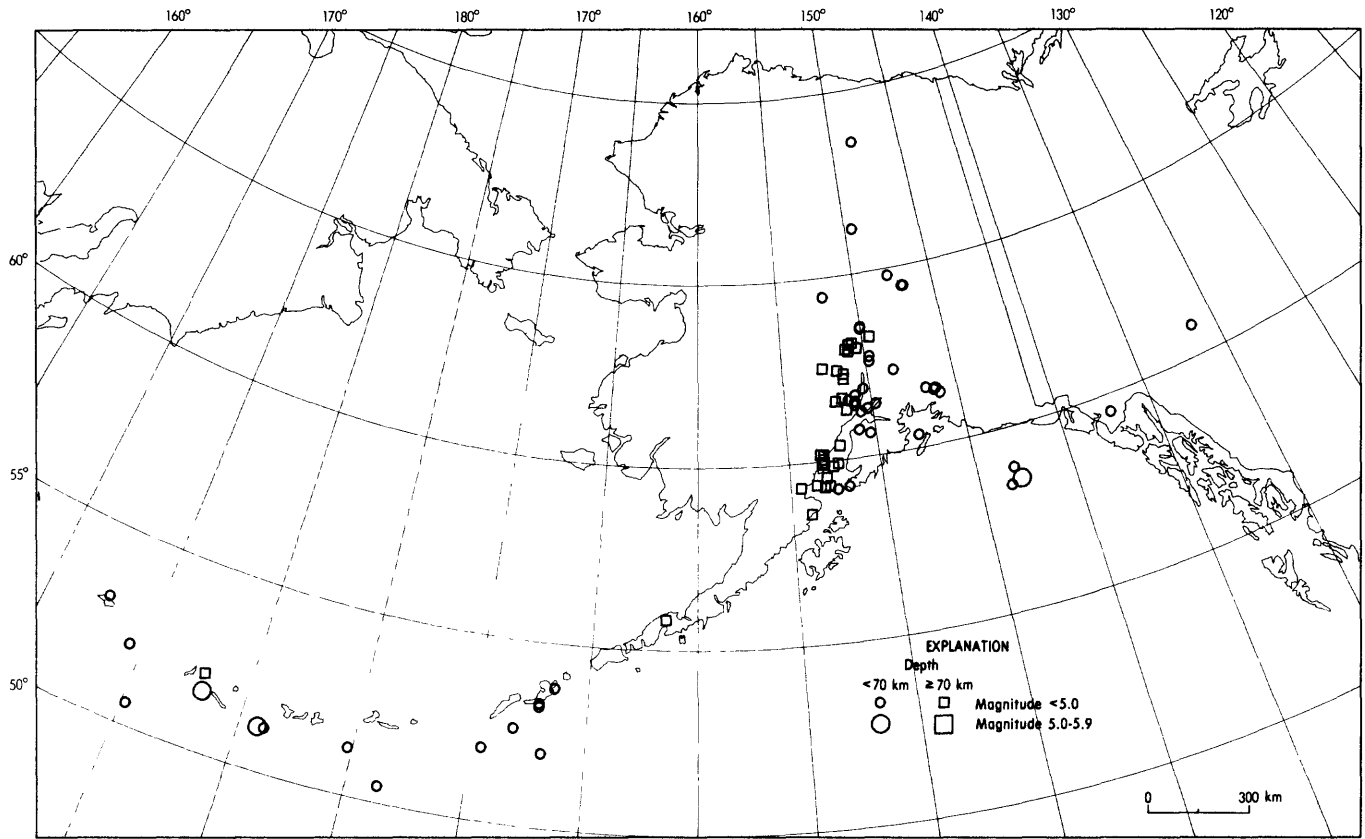
20 February 1990 06:53:39.89  
Near S. Coast of Honshu, Japan

GDH (LHZ)  
P x9

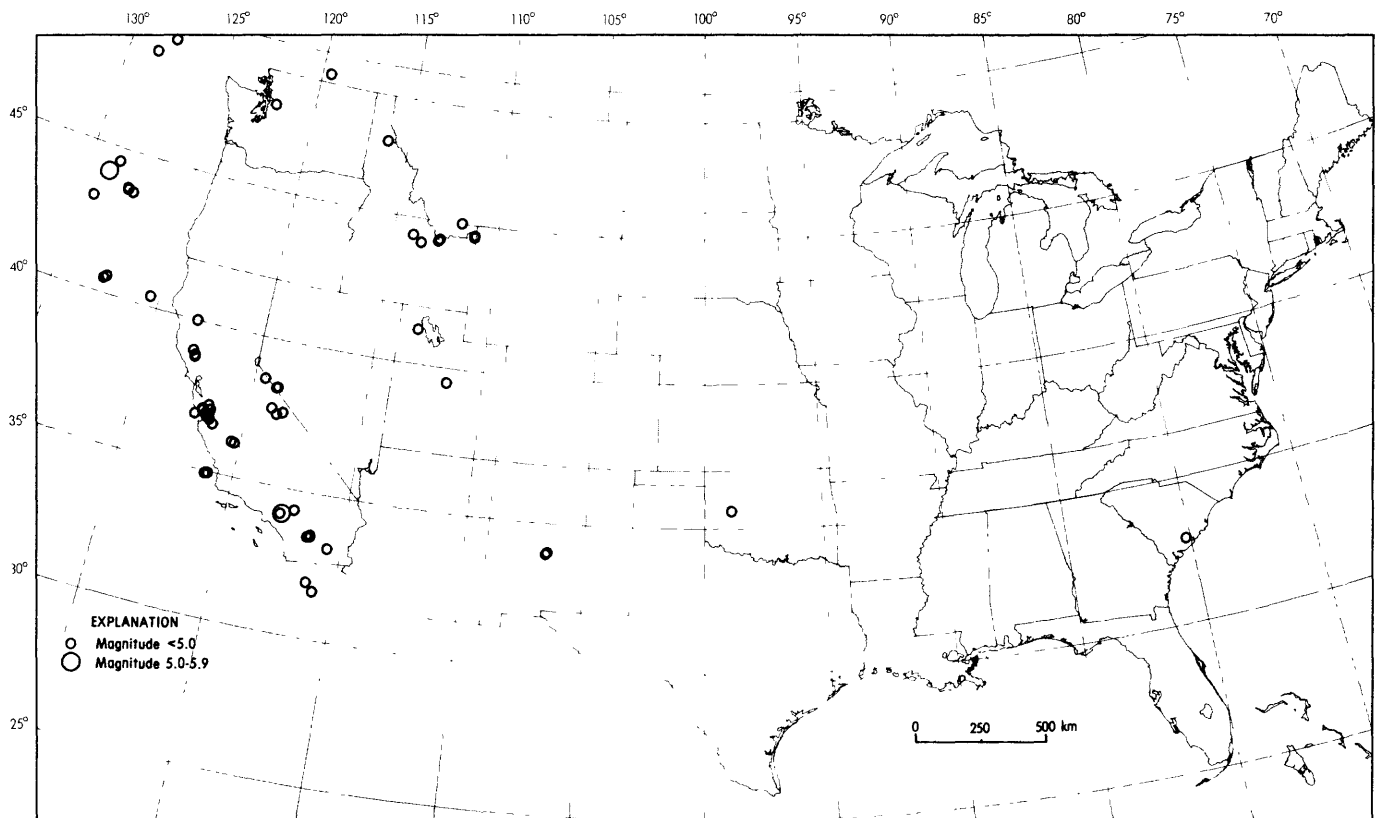


# Earthquake Focal Mechanisms for February 1990

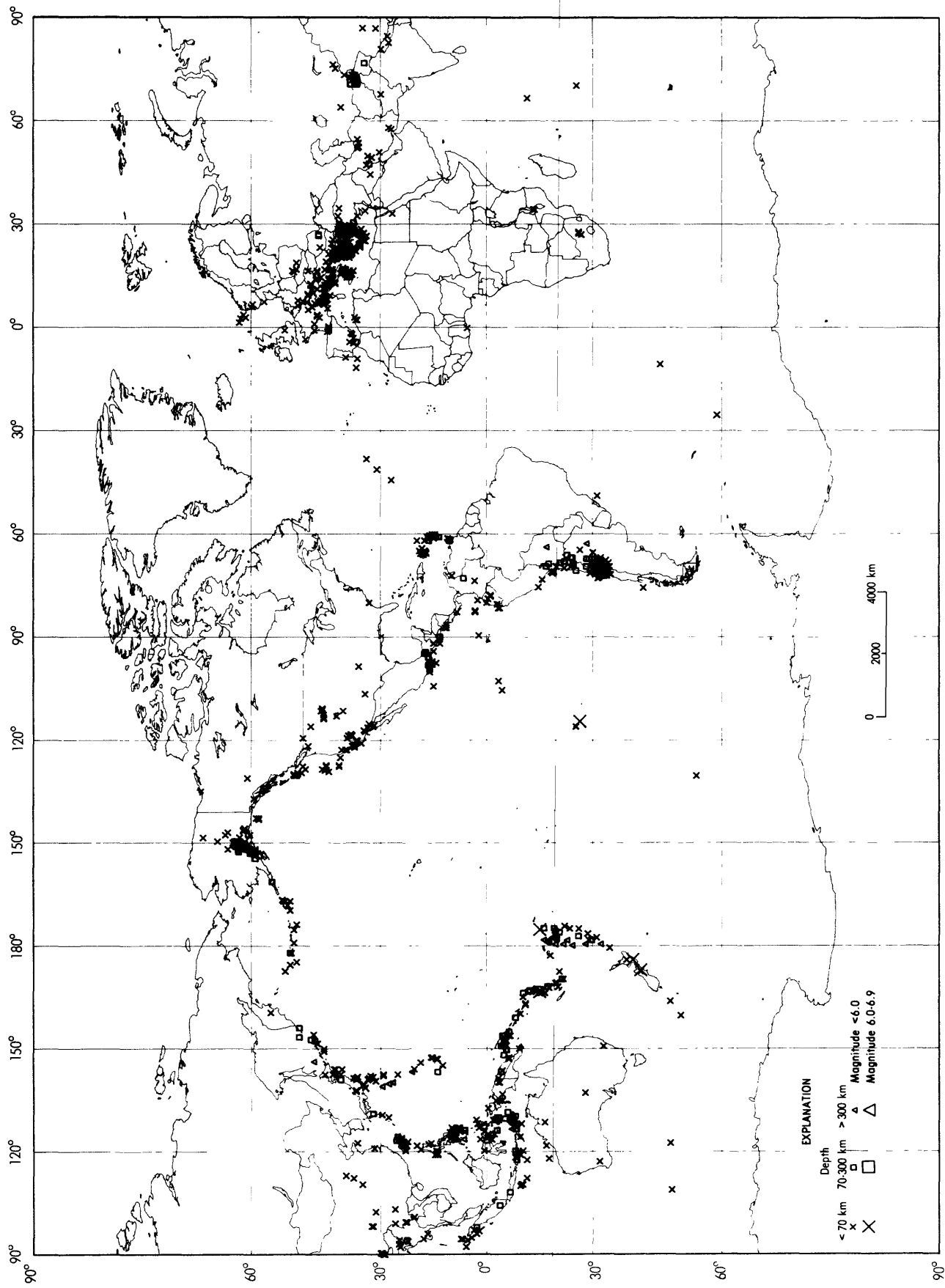




Earthquake epicenters in Alaska and adjacent regions for February, 1990 (C. Stover).



Earthquake epicenters in the conterminous United States and adjacent regions for February, 1990 (C. Stover).



Earthquakes located in February, 1990 (C. Stover).



# PRELIMINARY DETERMINATION OF EPICENTERS

## MONTHLY LISTING

### U.S. DEPARTMENT OF THE INTERIOR / GEOLOGICAL SURVEY National Earthquake Information Center

MARCH 1990

K E Y	DAY	ORIGIN TIME UTC HR MN SEC	GEOGRAPHIC COORDINATES LAT LONG	DEPTH	MAGNITUDES GS MB Msz	SD	NO. STA USED	REGION, CONTRIBUTED MAGNITUDES AND COMMENTS
	01	00 02 08.9	34.130 N 117.710 W	5			9	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.2 (PAS).
	01	00 03 21.2	34.150 N 117.700 W	9			5	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.3 (PAS).
	01	00 06 29.9	34.140 N 117.700 W	5			12	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.5 (PAS).
	01	00 11 10.7	34.130 N 117.710 W	5			8	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.3 (PAS).
	01	00 25 37.0	36.486 N 68.860 E	33 N	4.6	1.1	26	HINDU KUSH REGION
	01	00 28 24.5	34.139 N 117.697 W	5 G		0.7	6	SOUTHERN CALIFORNIA. ML 2.6 (NEIS).
	01	00 34 57.1	34.130 N 117.700 W	4			18	SOUTHERN CALIFORNIA. <PAS-P>. ML 4.0 (PAS).
	01	00 39 57.2	34.198 N 117.652 W	5 G		0.6	6	SOUTHERN CALIFORNIA. ML 2.7 (NEIS).
	01	00 43 48.0	34.107 N 117.703 W	5 G		1.2	6	SOUTHERN CALIFORNIA. ML 2.7 (NEIS).
	01	00 51 50.9	40.575 N 23.737 E	10 G		0.7	6	GREECE. ML 2.2 (THE).
	01	00 55 44.6	34.225 N 117.654 W	5 G		0.2	6	SOUTHERN CALIFORNIA. ML 2.6 (NEIS).
	01	01 08 30.9	34.204 N 117.679 W	5 G		0.8	6	SOUTHERN CALIFORNIA. ML 2.8 (NEIS).
	01	01 35 48.9	34.130 N 117.710 W	6			9	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.3 (PAS).
	01	01 39 56.8	34.140 N 117.720 W	9			12	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.6 (PAS).
	01	01 41 43.7	34.120 N 117.690 W	6			9	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.0 (PAS).
	01	01 41 47.3	34.160 N 117.690 W	6			2	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.2 (PAS).
	01	02 00 22.5	34.130 N 117.700 W	5			7	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.1 (PAS).
a	01	02 23 23.1	53.340 N 160.030 E	27 D	5.4 5.6	1.2	239	NEAR EAST COAST OF KAMCHATKA. Ms 5.3 (BRK). Felt (IV) at Petropavlovsk-Kamchatskiy.
	01	02 45 27.3	34.147 N 117.681 W	5 G		0.6	6	SOUTHERN CALIFORNIA. ML 2.5 (NEIS).
	01	03 08 45.1	34.130 N 117.700 W	5			7	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.3 (PAS).
	01	03 23 03.0	34.150 N 117.720 W	11	4.3		52	SOUTHERN CALIFORNIA. <PAS-P>. ML 4.7 (PAS), 4.8 (BRK). Felt throughout the Los Angeles-Long Beach-Riverside area.
	01	03 29 26.4	38.834 N 14.305 E	10 G		0.7	5	SICILY
	01	03 31 14.9	34.150 N 117.720 W	12			8	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.3 (PAS).
	01	03 57 07.5	40.918 N 22.217 E	9		1.2	35	GREECE. ML 3.5 (SKO), 3.2 (THE). MD 3.6 (ATH).
	01	04 04 30.7	46.641 N 12.490 E	10 G		1.2	12	NORTHERN ITALY. ML 2.3 (KBA).
	01	04 06 07.8	46.79 N 12.38 E	10 G		1.4	5	NORTHERN ITALY
	01	04 28 50.5	2.825 S 79.678 W	47 ?	4.3	1.3	19	NEAR COAST OF ECUADOR
	01	05 39 39.8	47.774 N 120.957 W	1			59	WASHINGTON. <SEA>. CL 3.1 (SEA).
	01	07 34 49.0	51.269 N 175.181 W	33 N	4.9 4.9	0.9	44	ANDREANOF ISLANDS, ALEUTIAN IS. ML 4.6 (PMR). Felt (III) on Adak.
a	01	07 35 21.0	51.218 N 175.214 W	33 N	4.9 4.6	1.1	55	ANDREANOF ISLANDS, ALEUTIAN IS.
	01	10 55 24.3	0.30 S 78.93 W	33 N		0.8	6	ECUADOR
	01	11 27 28.2	51.094 N 175.101 W	33 N	4.4 4.4	1.1	26	ANDREANOF ISLANDS, ALEUTIAN IS.
	01	12 06 53.5	40.533 N 23.753 E	10 G		0.8	11	GREECE. ML 2.3 (THE).
	01	12 11 55.6	33.02 S 72.18 W	10 G		0.6	6	OFF COAST OF CENTRAL CHILE
	01	12 12 02.7	48.80 N 8.98 E	10 G		0.4	4	GERMANY. MD 1.0 (STR).
	01	12 46 42.9	60.996 N 149.438 W	36			30	KENAI PENINSULA, ALASKA. <AGS-P>.
	01	13 22 38.0	39.811 N 20.704 E	5 G		1.0	23	GREECE-ALBANIA BORDER REGION. MD 3.4 (ATH). ML 3.1 (THE).
	01	13 25 34.4	51.851 N 175.989 W	49 D	5.3 4.6	1.0	112	ANDREANOF ISLANDS, ALEUTIAN IS. ML 5.1 (PMR). Felt (IV) on Adak.
	01	14 29 39.4	31.43 S 69.34 W	33 N		1.0	5	SAN JUAN PROVINCE, ARGENTINA
	01	14 43 54.3	36.637 N 121.288 W	3			16	CENTRAL CALIFORNIA. <BRK>. ML 2.7 (BRK).
	01	15 06 30.1	41.95 N 24.75 E	10 G		0.6	6	GREECE-BULGARIA BORDER REGION. ML 2.7 (THE).
	01	15 39 08.5	43.419 N 5.448 E	5 G		1.0	9	NEAR SOUTH COAST OF FRANCE. MD 2.5 (STR).
a	01	16 06 00.8	7.892 S 121.112 E	39 D	5.5 4.9	1.2	90	FLORES SEA. Felt strongly on the ship USNS Harkness at 08° 01.5' S, 121° 21.9' E. Felt at Lambeo, Macan Islands.
	01	16 24 38.7	15.725 N 61.302 W	33 N		1.2	6	LEEWARD ISLANDS. ML 2.9 (FDF).
	01	17 58 27.1	44.034 N 11.036 E	10 G		0.3	5	NORTHERN ITALY
	01	18 47 26.7	28.50 N 88.60 E	33 N	4.3	1.3	9	TIBET
	01	20 01 20.0	40.147 N 25.217 E	10 G		1.2	19	AEGEAN SEA. ML 2.9 (THE).
	01	20 32 14.1	34.130 N 117.700 W	5			13	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.0 (PAS).
	01	20 55 05.6	16.723 N 60.947 W	42	5.4 4.6	0.8	288	LEEWARD ISLANDS. Felt (III) on Guadalupe.
	01	21 15 46.7	3.46 S 80.85 W	33 N		0.4	7	PERU-ECUADOR BORDER REGION

01	21	27	31.3	38.553	N	1.789	W	10	G	0.9	7	SPAIN. mbLg 3.3 (MDD).	
01	21	29	06.6	38.363	N	118.920	W	9			22	CALIFORNIA-NEVADA BORDER REGION. <BRK>. ML 3.8 (BRK).	
01	21	40	58.9	30.614	N	131.099	E	58 *	5.1 5.0	1.2	80	KYUSHU, JAPAN	
01	22	56	42.4	14.004	S	34.209	E	10	G	4.9 4.7	0.8	25	MALAWI. mbLg 4.2 (BUL).
01	22	59	26.9	15.710	S	174.485	W	33	N	5.0 5.2	1.2	44	TONGA ISLANDS. Ms 5.2 (BRK).
01	23	01	10.7	39.789	N	5.719	E	10	G		1.2	75	WESTERN MEDITERRANEAN SEA. ML 3.6 (LDG), MD 3.6 (STR)
02	00	00	11.4	34.158	N	117.685	W	10	G		0.2	6	SOUTHERN CALIFORNIA. ML 2.9 (NEIS).
02	01	19	32.9	42.837	N	0.188	E	10	G		1.5	11	PYRENEES. ML 2.9 (LDG). Felt (II) at Bagneres de Bigarre, France.
02	01	36	26.3	72.527	N	3.007	E	10	G	4.6	1.1	34	NORWEGIAN SEA
02	02	22	53.27	32.24	S	175.85	E	33	N	3.8	1.0	12	NORTH OF NEW ZEALAND
02	02	40	49.37	33.56	S	72.09	W	27 *			0.9	9	OFF COAST OF CENTRAL CHILE
02	03	04	00.6	0.243	S	125.151	E	80 *	4.6		1.4	14	MOLUCCA SEA
02	03	15	36.2	51.695	N	16.308	E	10	G		0.5	18	POLAND. ML 3.9 (KBA).
02	03	20	04.87	33.53	S	72.00	W	33	N		0.8	6	OFF COAST OF CENTRAL CHILE
02	04	15	27.0	43.300	N	102.500	W	5	G			3	SOUTH DAKOTA. <MACRO>. ML 3.2 (NEIS). Felt (IV) at Oglala and Manderson. Felt (III) at Pine Ridge.
02	04	58	14.1	40.166	N	24.204	E	10	G		1.1	13	AEGEAN SEA. ML 2.4 (THE).
02	05	26	17.8	6.986	S	155.769	E	286 *	4.6		1.1	21	SOLOMON ISLANDS
02	06	11	23.5	46.255	N	7.429	E	10	G		1.0	9	SWITZERLAND
02	07	01	47.7	38.868	N	89.219	W	10	G		0.7	12	SOUTHERN ILLINOIS. mbLg 3.6 (NEIS). Felt (V) at Greenville, Hagarstown, Saint Peter, Smithboro and Vernon; (IV) at Alma, Keyesport, Odin and Shabonier; (III) at Altamont, Ashley, Beecher City, Carlyle, Clay City, Edgewood, Effingham, Farina, Flora, Kinmundy, Mason, Okawville, Pataka, Ramsey, Saint Elmo, Salem and Vandalia.
02	07	35	36.8	18.021	S	178.674	W	620 ?	5.0		0.8	38	FIJI ISLANDS REGION
02	07	48	17.3	36.796	N	6.312	E	10	G	3.6	1.2	41	ALGERIA. ML 4.2 (LDG).
02	08	11	32.0	32.837	S	178.626	E	49	D	5.0	0.9	18	SOUTH OF KERMADEC ISLANDS
02	09	30	01.0	44.084	N	7.050	E	10	G		0.6	5	NORTHERN ITALY. ML 1.7 (GEN).
02	09	52	19.0	5.267	S	102.850	E	33	N	4.8 3.7	1.0	13	SOUTHERN SUMATRA
02	09	52	53.0	38.128	N	28.905	E	10	G		1.6	6	TURKEY
02	10	35	24.97	39.17	N	27.63	E	10	G		0.6	4	TURKEY
02	11	25	16.4	33.135	S	71.984	W	10	G		1.4	11	NEAR COAST OF CENTRAL CHILE
02	11	31	41.4	20.039	N	122.014	E	32		4.1	0.9	10	PHILIPPINE ISLANDS REGION
02	11	50	00.07	44.47	N	7.17	E	11	G		0.2	4	NORTHERN ITALY. ML 1.5 (GEN).
02	13	02	58.97	33.56	S	71.97	W	33	N		1.0	5	NEAR COAST OF CENTRAL CHILE
02	13	15	08.6	44.589	N	7.394	E	10	G		0.2	5	NORTHERN ITALY
02	13	17	42.3	42.572	N	23.832	E	10	G		1.4	11	BULGARIA. ML 2.9 (THE).
02	13	26	00.77	11.02	N	61.85	W	33	N		1.2	5	WINDWARD ISLANDS. MD 3.1 (TRN).
02	15	07	29.6	36.133	N	139.964	E	68		4.9	1.0	31	HONSHU, JAPAN
02	16	20	34.1	46.311	N	7.386	E	10	G		1.0	32	SWITZERLAND. ML 3.0 (LDG).
02	16	50	03.7	0.954	S	77.399	W	33	N		0.8	6	ECUADOR
02	17	25	08.8	56.808	N	33.969	W	10	G	4.7 3.7	0.9	40	NORTH ATLANTIC OCEAN
02	17	26	25.4	34.140	N	117.690	W	6		4.5		51	SOUTHERN CALIFORNIA. <PAS-P>. ML 4.6 (PAS), 4.6 (BRK). Felt in the Los Angeles area.
02	18	08	35.1	39.045	N	23.667	E	24		4.4	1.4	152	AEGEAN SEA. ML 4.3 (ATH), 4.1 (THE). Felt at Athens, Volos, Larisa and on Evvoia.
02	18	43	15.3	39.100	N	23.566	E	10	G		1.1	14	AEGEAN SEA. ML 3.0 (ATH), 2.7 (THE).
02	19	08	04.17	1.21	S	77.31	W	33	N		1.5	9	ECUADOR
02	22	06	25.2	21.934	S	174.135	W	33	N	5.4 4.9	1.0	74	TONGA ISLANDS
02	22	52	04.7	40.219	N	25.220	E	10	G		0.4	6	AEGEAN SEA. MD 3.3 (ATH).
02	23	19	21.5	40.191	N	25.203	E	10	G		0.9	5	AEGEAN SEA. MD 2.9 (ATH).
02	23	31	39.4	5.284	S	151.395	E	33	N	4.4 3.5	1.3	14	NEW BRITAIN REGION
02	23	37	04.07	45.04	N	152.53	E	33	N	4.7	0.7	12	KURIL ISLANDS REGION
02	23	42	29.6	32.190	S	71.733	W	33	N		0.8	7	NEAR COAST OF CENTRAL CHILE
03	00	14	50.18	61.751	N	151.706	W	84		3.5		52	SOUTHERN ALASKA. <AGS-P>.
03	01	36	06.9	36.053	N	21.444	E	33	N		1.3	15	SOUTHERN GREECE. ML 3.4 (ATH).
03	02	00	34.0	35.622	N	26.746	E	10	G		0.8	7	CRETE. MD 3.5 (ATH).
03	02	25	39.0	8.484	S	159.138	E	106 *	5.0		1.0	23	SOLOMON ISLANDS
03	04	26	53.97	62.37	N	5.27	E	10	G		1.1	5	SOUTHERN NORWAY. MD 1.0 (BER).
03	04	42	31.0	35.293	N	23.063	E	68 *	3.6		1.1	28	CRETE. MD 3.8 (ATH).
03	04	59	46.7	5.174	S	151.217	E	33 *	4.5 3.8		1.5	12	NEW BRITAIN REGION
03	05	11	33.7	32.097	N	139.619	E	143	D	5.3	0.9	187	SOUTH OF HONSHU, JAPAN
03	06	22	29.37	40.16	N	106.34	E	33	N	3.9	0.2	5	NORTHERN CHINA. ML 3.8 (BJI).
03	06	25	22.5	20.557	N	143.842	E	68 *	4.9		1.1	36	MARIANA ISLANDS REGION
03	07	29	17.2	26.988	S	26.732	E	5	G		1.5	7	REPUBLIC OF SOUTH AFRICA. mbLg 3.6 (BUL).
03	07	40	55.0	40.205	N	25.188	E	10	G		1.3	5	AEGEAN SEA. ML 3.1 (ATH).
03	08	26	00.2	24.302	N	66.368	E	33	N	4.5	1.3	20	PAKISTAN
03	08	41	44.2	16.128	N	94.307	W	88		5.4	0.7	173	OAXACA, MEXICO
03	09	36	22.8	40.890	N	22.921	E	10	G		0.8	7	GREECE. ML 2.3 (SKO), 2.2 (THE).
03	10	11	56.2	11.742	S	73.903	W	52 *	4.7		0.9	26	PERU
03	11	08	59.5	60.652	N	151.093	W	47		2.5		35	KENAI PENINSULA, ALASKA. <AGS-P>.
03	11	58	31.0	17.172	S	172.550	W	45	D	5.0	1.3	27	TONGA ISLANDS REGION
03	12	16	27.9	22.122	S	175.163	E	33	G	6.3 7.4	1.3	322	SOUTH OF FIJI ISLANDS. Ms 7.4 (BRK), 7.1 (PAS). Mo=4.0*10**20 Nm (PPT). Depth from broadband displacement seismograms.
03	12	34	59.2	21.557	S	175.753	E	33	N	5.6 6.2	1.0	75	SOUTH OF FIJI ISLANDS
03	12	44	22.4	22.405	S	174.164	E	33	N	6.1 6.6	1.0	156	LOYALTY ISLANDS REGION
03	13	04	03.97	46.16	N	154.40	E	33	N	4.6	1.3	12	KURIL ISLANDS REGION
03	13	11	38.2	38.385	N	21.918	E	10	G		1.4	7	GREECE. ML 3.0 (ATH).
03	13	18	28.87	21.27	S	174.15	E	33	N	4.3	1.5	9	VANUATU ISLANDS REGION
03	13	37	31.67	21.00	S	174.67	E	33	N	4.5	1.0	12	VANUATU ISLANDS REGION
03	13	43	15.17	21.43	S	176.04	E	33	N	4.1	0.9	8	SOUTH OF FIJI ISLANDS
03	13	52	30.47	21.18	S	175.30	E	33	N	4.2	1.3	7	SOUTH OF FIJI ISLANDS
03	14	24	44.6	41.124	N	28.464	E	10	G		0.3	5	TURKEY
03	14	30	43.6	40.880	N	28.399	E	10	G		0.6	5	TURKEY
03	14	42	07.2	22.273	S	175.301	E	33	N	4.7	1.1	15	SOUTH OF FIJI ISLANDS
03	14	43	55.87	51.00	N	179.71	E	33	N	5.1	1.2	10	RAT ISLANDS, ALEUTIAN ISLANDS
03	14	57	04.2	21.376	S	176.053	E	33	N	4.8	1.2	16	SOUTH OF FIJI ISLANDS
03	15	35	32.6	22.084	S	174.148	E	33	N	3.8	0.7	14	LOYALTY ISLANDS REGION
03	15	54	44.4	21.158	S	175.282	E	33	N	4.4	1.3	20	SOUTH OF FIJI ISLANDS

03	16 51 24.47	28.61 S	69.90 W	155 ?	1.5	8	CHILE-ARGENTINA BORDER REGION
03	16 53 44.18	60.075 N	141.896 W	0		5	SOUTHEASTERN ALASKA. <AGS-P>.
03	17 03 15.9*	21.118 S	174.988 E	33 N 5.1	1.5	24	VANUATU ISLANDS REGION
03	17 15 33.5*	52.272 N	169.029 W	33 N 4.9	1.3	33	FOX ISLANDS, ALEUTIAN ISLANDS
03	17 22 11.27	21.89 S	175.28 E	33 N 4.5	1.3	10	SOUTH OF FIJI ISLANDS
03	17 55 06.77	21.29 S	175.90 E	33 N 3.9	1.4	6	SOUTH OF FIJI ISLANDS
03	17 57 46.4*	21.944 S	174.911 E	33 N 4.2	1.0	17	VANUATU ISLANDS REGION
03	18 32 50.5	21.721 S	175.344 E	33 N 5.3 5.0	0.9	106	SOUTH OF FIJI ISLANDS
03	19 01 56.4*	9.697 N	124.760 E	39 * 4.9 4.2	1.2	35	MINDANAO, PHILIPPINE ISLANDS
03	19 03 31.6	36.043 N	27.208 E	10 G	1.3	7	DOECANESE ISLANDS. MD 3.5 (ATH).
03	19 21 02.2*	21.292 S	174.978 E	33 N 4.4	1.2	22	VANUATU ISLANDS REGION
03	19 29 01.7	21.683 S	175.569 E	33 N 5.1 4.8	1.1	85	SOUTH OF FIJI ISLANDS
03	19 44 26.7	22.501 S	174.205 E	33 N 5.0 4.7	1.1	72	LOYALTY ISLANDS REGION
03	20 09 23.58	59.996 N	151.621 W	73		30	KENAI PENINSULA, ALASKA. <AGS-P>.
03	20 41 11.3*	33.000 S	70.809 W	79 ?	0.6	9	CHILE-ARGENTINA BORDER REGION
03	21 26 25.0*	22.151 S	174.166 W	33 N 5.1 4.8	1.2	30	TONGA ISLANDS REGION
03	22 02 46.47	43.82 N	16.38 E	10 G	0.8	23	YUGOSLAVIA. ML 4.8 (LDG).
04	00 00 35.97	21.43 S	175.95 E	33 N 4.1	1.5	7	SOUTH OF FIJI ISLANDS
04	00 07 08.9*	73.032 N	7.080 E	10 G 4.7	1.3	15	GREENLAND SEA
04	00 18 47.1	52.828 N	1.994 W	10 G	1.3	17	UNITED KINGDOM. ML 3.3 (LDG).
04	00 22 35.3	44.892 N	6.671 E	10 G	0.7	49	FRANCE. ML 3.0 (LDG).
04	01 12 59.5	21.864 S	175.355 E	33 N 5.0	1.2	27	SOUTH OF FIJI ISLANDS
04	01 40 27.77	34.35 N	14.84 W	10 G	0.8	5	MADEIRA ISLANDS REGION. MD 3.6 (RBA).
04	01 51 13.27	9.87 N	124.89 E	33 N 4.6	1.1	10	MINDANAO, PHILIPPINE ISLANDS
04	01 56 59.4*	44.233 N	7.294 E	10 G	0.8	5	NORTHERN ITALY. ML 2.2 (GEN).
04	01 57 11.2	36.113 N	27.249 E	10 G	0.3	6	DOECANESE ISLANDS. MD 3.3 (ATH).
04	02 46 04.4*	21.103 S	175.485 E	33 N 4.9	1.3	9	SOUTH OF FIJI ISLANDS
04	03 49 06.87	22.10 S	175.55 E	33 N	0.9	7	SOUTH OF FIJI ISLANDS
04	04 08 46.1*	21.654 S	175.782 E	33 N 4.5	1.0	6	SOUTH OF FIJI ISLANDS
04	04 23 48.1*	7.227 N	82.363 W	10 G 4.3 3.4	1.3	8	SOUTH OF PANAMA. MD 4.4 (UPA).
04	04 38 30.1*	41.254 N	20.093 E	10 G	0.8	5	ALBANIA. ML 2.0 (SKO).
04	05 19 41.7	51.254 N	15.686 E	5 G	0.9	15	POLAND. ML 4.0 (KBA), 3.8 (VKA), 3.8 (GRF).
04	06 04 00.2*	28.543 N	139.802 E	466 ? 4.2	1.1	16	BONIN ISLANDS REGION
04	06 35 30.9	7.823 N	135.782 E	33 N 5.1 4.3	1.0	57	WEST CAROLINE ISLANDS
04	08 33 22.5*	11.586 S	73.776 W	33 N 3.8	0.7	6	PERU
04	08 39 29.0	21.963 S	175.233 E	33 N 4.6	1.1	47	SOUTH OF FIJI ISLANDS
04	08 55 35.57	11.95 S	75.65 W	33 N	0.7	4	PERU
04	09 18 38.8*	7.919 N	74.578 W	79 * 4.6	1.0	9	NORTHERN COLOMBIA
04	10 09 02.47	20.07 S	177.16 E	33 N 4.6	0.7	5	SOUTH OF FIJI ISLANDS
04	11 51 11.4	34.616 N	79.849 E	33 N 4.7 4.2	1.1	53	KASHMIR-TIBET BORDER REGION
04	12 28 08.6*	59.950 N	153.363 W	153 * 3.3	0.5	9	SOUTHERN ALASKA
04	12 28 25.2	22.481 S	174.512 E	33 N 4.5	1.2	25	LOYALTY ISLANDS REGION
04	12 57 40.87	44.68 N	140.97 E	253 ? 4.4	0.8	9	EASTERN SEA OF JAPAN
04	13 24 06.8	21.247 S	67.758 W	200 * 4.6	1.5	38	CHILE-BOLIVIA BORDER REGION
04	14 48 12.57	23.31 S	176.26 E	33 N 4.5	1.4	8	SOUTH OF FIJI ISLANDS
04	14 50 42.0*	17.047 S	64.880 W	33 N 4.6	1.3	10	BOLIVIA
04	15 07 41.8	34.088 N	117.703 W	5 G	0.6	8	SOUTHERN CALIFORNIA. ML 2.7 (NEIS).
04	15 08 17.7	40.864 N	22.958 E	10 G	0.3	6	GREECE. ML 2.1 (THE), 1.7 (SKO).
04	15 42 04.8	37.737 N	21.132 E	10 G 4.4	1.3	28	SOUTHERN GREECE. ML 3.8 (THE), 3.4 (ATH).
04	16 06 11.3	39.393 N	23.621 E	10 G	0.6	13	AEGEAN SEA. MD 3.2 (ATH), ML 3.1 (THE).
04	16 24 27.1	10.707 N	126.257 E	33 N 4.5	0.7	20	PHILIPPINE ISLANDS REGION
04	16 30 52.0*	20.069 S	69.311 W	125 * 4.2	1.7	8	NORTHERN CHILE
04	16 45 15.78	34.120 N	117.680 W	4		21	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.4 (PAS).
04	16 46 25.4	44.560 N	6.876 E	5 G	0.5	13	FRANCE. ML 2.5 (GEN).
o 04	17 21 59.0	15.539 S	167.568 E	141 5.4	0.9	204	VANUATU ISLANDS
04	19 40 28.1*	21.267 S	175.939 E	33 N 4.9	1.2	16	SOUTH OF FIJI ISLANDS
f 04	19 46 19.6	28.925 N	66.331 E	10 D 5.8 6.1	1.2	339	PAKISTAN. At least 11 people killed, about 40 injured and many homes and buildings damaged in the Kalat area. Also felt at Quetta and Mostung. Complex event, observed on broadband displacement seismograms.
04	20 18 52.6*	28.986 N	66.649 E	54 ? 4.3	1.5	16	PAKISTAN
04	20 34 56.2	28.703 N	66.175 E	10 G 4.7	1.1	62	PAKISTAN. Felt at Kalat.
04	21 02 32.6*	12.987 N	50.555 E	10 G 4.8	1.3	22	EASTERN GULF OF ADEN
04	22 12 40.3*	21.276 S	175.960 E	33 N 4.5	1.4	20	SOUTH OF FIJI ISLANDS
04	23 09 01.47	13.33 N	50.36 E	10 G 4.7	1.3	15	EASTERN GULF OF ADEN
04	23 42 07.6*	20.967 N	66.574 E	33 N 4.4	1.3	11	PAKISTAN
05	01 20 23.0	38.390 N	25.052 E	13	0.8	40	AEGEAN SEA. ML 3.7 (ATH), 3.5 (THE).
05	02 45 52.97	28.58 N	66.53 E	33 N 4.2	1.2	6	PAKISTAN
05	02 59 42.4	38.211 N	40.571 E	33 N 4.4	1.2	30	TURKEY. Felt in the Diyarbakir area.
05	04 05 34.4*	33.423 S	71.896 W	33 N	0.9	8	NEAR COAST OF CENTRAL CHILE
05	04 37 02.8	36.514 N	7.799 W	10 G	1.0	15	STRAIT OF GIBRALTAR. mbLg 3.4 (MDD).
05	04 59 07.3*	19.696 S	175.216 W	261 ? 4.6	1.2	28	TONGA ISLANDS
05	06 06 19.1*	29.459 S	70.416 W	96 * 4.4	1.3	20	CENTRAL CHILE
05	06 13 06.8	20.730 N	143.838 E	22 D 5.0 4.1	1.1	82	MARIANA ISLANDS REGION
05	06 32 11.67	5.93 N	78.98 W	33 N 4.6	1.4	12	SOUTH OF PANAMA
05	06 50 56.2	43.401 N	110.717 W	5 G 3.5	0.7	34	WYOMING. ML 3.9 (NEIS), 4.1 (BUT). Felt (IV) at Wilson and (III) at Moran. Felt (III) at Irwin and Swan Valley, Idaho. Also felt at Jackson, Wyoming.
05	07 00 48.3*	20.699 N	143.764 E	33 N 4.7	1.0	17	MARIANA ISLANDS REGION
05	07 30 53.1	17.768 N	65.668 W	10 G	1.0	11	PUERTO RICO REGION
05	07 54 43.8*	28.960 S	70.968 W	33 N	1.5	9	CENTRAL CHILE
05	08 06 55.1	20.702 N	143.820 E	23 D 4.9	1.1	38	MARIANA ISLANDS REGION
05	08 14 52.98	60.158 N	153.087 W	133		30	SOUTHERN ALASKA. <AGS-P>.
05	08 26 27.3*	13.126 N	50.423 E	10 G 4.8	1.1	33	EASTERN GULF OF ADEN
05	11 59 19.67	39.136 N	27.696 E	10 G	1.3	5	TURKEY
05	12 58 21.8*	26.341 S	127.880 E	10 G	1.2	7	WESTERN AUSTRALIA
05	14 13 05.48	60.089 N	152.913 W	111 4.1		55	SOUTHERN ALASKA. <AGS-P>.
05	15 57 18.1	5.309 S	146.405 E	185 5.0	0.6	38	EAST PAPUA NEW GUINEA REGION
05	16 15 40.07	15.02 N	99.25 W	33 N	0.7	5	OFF COAST OF GUERRERO, MEXICO
f 05	16 38 12.5	18.318 S	168.063 E	21 G 5.6 7.0	1.2	335	VANUATU ISLANDS. Ms 7.0 (BRK), 6.8 (PAS). Mo=6.0*10**19 Nm (PPT). Felt (V) at Port Vila. Depth from broadband displacement seismograms.
05	16 51 22.7*	18.200 S	168.109 E	33 N 4.7	1.2	20	VANUATU ISLANDS



05	17	10	39.5	18.353 S	168.013 E	34 *	5.4	1.2	114	VANUATU ISLANDS
05	18	01	23.5*	38.576 N	12.840 E	10 G		0.8	9	SICILY
05	18	18	01.9	18.195 S	168.046 E	45 D	4.4	1.2	32	VANUATU ISLANDS
05	19	16	42.9*	18.437 S	168.061 E	10 G	4.4	1.2	20	VANUATU ISLANDS
05	20	02	31.6*	3.668 N	126.393 E	33 N	4.6	0.8	10	TALAUD ISLANDS
05	20	47	00.7	36.907 N	73.021 E	12 G	5.8 6.0	1.1	439	NORTHWESTERN KASHMIR. Felt (IV) at Kharag, Ishkashim and Murgab; (III) at Rushan and Kulyab, USSR. Also felt at Chitral, Pakistan. Depth from broadband displacement seismograms.
05	20	51	13.0	36.738 N	73.061 E	10 G	5.7	1.4	67	NORTHWESTERN KASHMIR
05	20	51	14.4?	39.84 N	23.84 E	10 G		0.5	5	AEGEAN SEA
05	20	55	24.1	29.224 N	141.848 E	33 N	5.1	1.4	35	SOUTH OF HONSHU, JAPAN
05	21	02	42.8	35.350 N	135.477 E	369	4.5	0.7	58	SOUTHERN HONSHU, JAPAN
05	21	34	20.7*	14.834 S	167.292 E	148 ?	4.6	1.2	54	VANUATU ISLANDS
05	23	04	22.1	36.770 N	73.030 E	20 D	5.0 4.9	1.3	125	NORTHWESTERN KASHMIR. Felt (II) at Ishkashim and Kharag, USSR.
06	00	23	50.2*	44.287 N	112.836 W	5 G		1.1	8	EASTERN IDAHO. ML 3.1 (BUT).
06	01	19	57.3*	36.679 N	73.073 E	10 G	4.6	0.8	10	NORTHWESTERN KASHMIR
06	02	26	54.0	44.231 N	6.693 E	10 G		0.6	13	FRANCE. ML 2.4 (GEN), 2.2 (LDG).
06	02	44	10.4*	37.331 N	2.097 W	10 G		0.4	5	SPAIN. mbLg 2.7 (MDD).
06	02	49	25.3*	51.243 N	15.827 E	10 G		1.4	10	POLAND. ML 3.6 (GRF), 3.5 (VKA), 3.2 (KBA), 2.8 (KRA).
06	02	59	42.8*	14.887 N	60.194 W	33 N		0.6	10	WINDWARD ISLANDS. ML 3.2 (FDF).
06	04	17	56.8	33.423 S	69.999 W	114	3.9	0.8	19	CHILE-ARGENTINA BORDER REGION
06	04	36	18.3?	41.07 N	23.43 E	10 G		0.8	4	GREECE-BULGARIA BORDER REGION. ML 1.8 (THE).
06	05	19	02.4?	25.02 N	126.86 E	33 N	4.2	1.1	12	RYUKYU ISLANDS
06	05	22	52.7	18.178 S	168.208 E	33 N	4.9 4.6	1.0	62	VANUATU ISLANDS
06	05	35	56.6?	25.21 N	127.04 E	33 N	4.2	0.5	10	RYUKYU ISLANDS
06	07	12	48.1	3.841 N	126.422 E	33 N	5.0 3.6	1.0	48	TALAUD ISLANDS
06	07	46	42.8?	37.13 N	74.00 E	33 N	4.0	1.1	9	TAJIK-XINJIANG BORDER REGION
06	08	25	28.1*	31.329 S	68.982 W	114 ?		1.4	9	SAN JUAN PROVINCE, ARGENTINA
06	09	16	05.0*	36.881 N	72.759 E	48 *	4.7	1.4	19	AFGHANISTAN-USSR BORDER REGION
06	09	33	18.8	42.502 N	19.330 E	10 G		0.9	12	YUGOSLAVIA. ML 2.5 (TTG).
06	09	55	47.6*	40.454 N	29.091 E	10 G		0.2	5	TURKEY
06	11	36	51.3?	33.67 S	72.03 W	33 N		0.6	5	OFF COAST OF CENTRAL CHILE
06	11	40	52.7	12.124 N	143.833 E	19	4.8	0.8	31	SOUTH OF MARIANA ISLANDS
06	12	24	43.5	20.267 S	177.882 W	552	5.0	0.9	35	FIJI ISLANDS REGION
06	13	00	18.4	40.822 N	28.100 E	10 G	3.4	0.9	33	TURKEY. ML 3.5 (THE). Felt at Istanbul.
06	13	22	19.9*	15.048 N	60.277 W	33 N		0.3	11	LEEWARD ISLANDS. ML 2.8 (FDF).
06	13	30	58.4	11.147 S	117.440 E	22 D	5.6 4.8	1.2	165	SOUTH OF SUMBAWA ISLAND. Felt (III) at Kahang-Kahang, Bali.
06	13	43	51.7*	35.705 N	141.000 E	33 N	4.6	0.9	12	NEAR EAST COAST OF HONSHU, JAPAN
06	14	12	28.5*	39.085 N	27.576 E	10 G		1.0	5	TURKEY
06	14	26	10.2*	18.617 S	167.900 E	33 N	4.9	1.2	38	VANUATU ISLANDS
06	15	07	53.4*	23.747 N	121.990 E	33 N	3.7	0.9	7	TAIWAN
06	15	25	04.1	10.991 S	119.474 E	33 N	5.0	1.2	58	SUMBA ISLAND REGION
06	16	06	38.3	22.367 N	122.757 E	33 N	4.2	1.2	19	TAIWAN REGION
06	16	15	25.6*	34.203 S	176.800 E	10 G	3.8	0.9	13	NORTH OF NEW ZEALAND
06	17	07	10.8?	38.19 N	23.26 E	10 G		1.2	4	GREECE. ML 2.3 (ATH).
06	17	16	22.9?	37.36 N	73.33 E	33 N	4.6	1.4	9	TAJIK SSR
06	18	01	48.0	34.133 N	117.679 W	5 G		0.5	10	SOUTHERN CALIFORNIA. ML 3.5 (NEIS).
06	18	07	04.7	36.909 N	73.038 E	20 D	5.0 4.9	1.4	132	NORTHWESTERN KASHMIR
06	18	17	37.9*	45.101 N	2.889 E	10 G		1.3	10	FRANCE. ML 2.3 (LDG).
06	18	22	12.7*	36.954 N	73.460 E	10 G	4.1	1.0	12	NORTHWESTERN KASHMIR
06	19	02	04.2*	43.326 N	127.493 W	10 G		0.4	52	OFF COAST OF OREGON. CL 3.2 (SEA).
06	19	05	08.4*	33.445 S	70.895 W	33 N		0.8	5	CHILE-ARGENTINA BORDER REGION
06	20	32	35.3?	36.17 N	71.38 E	33 N		0.6	8	AFGHANISTAN-USSR BORDER REGION
06	21	09	56.2	41.053 N	22.428 E	10 G		0.7	8	YUGOSLAVIA. ML 2.1 (THE), 1.7 (SKO).
06	21	11	08.2	42.632 N	140.982 E	156	4.5	1.1	37	HOKKAIDO, JAPAN REGION
06	21	39	50.2	36.913 N	73.095 E	24 D	5.2 4.7	1.0	183	NORTHWESTERN KASHMIR
06	22	58	45.9*	17.016 N	99.790 W	10 G		1.2	6	GUERRERO, MEXICO. Felt at Acapulco.
06	23	13	01.7	44.064 N	7.243 E	10 G		0.3	15	NORTHERN ITALY. ML 2.3 (GEN), 2.1 (LDG). MD 1.7 (STR).
06	23	28	51.6*	21.435 S	175.819 E	50 D	5.1	1.1	39	SOUTH OF FIJI ISLANDS
07	00	48	13.5?	31.75 S	69.90 W	33 N		0.8	5	SAN JUAN PROVINCE, ARGENTINA
07	01	31	10.8	38.615 N	14.367 E	16		0.9	16	SICILY
07	02	13	31.0	33.802 S	70.079 W	109	4.8	1.0	29	CHILE-ARGENTINA BORDER REGION. Felt (III) at Valparaiso, Chile.
07	02	16	18.2	3.517 N	126.702 E	85 *	5.1	1.2	62	TALAUD ISLANDS
07	02	32	52.9	40.494 N	22.666 E	10 G		1.1	18	GREECE. ML 3.1 (SKO), 2.9 (THE). MD 3.3 (ATH).
07	02	47	40.4	40.431 N	29.110 E	10 G		0.5	15	TURKEY
07	03	19	11.3%	12.777 S	76.730 W	10 G		0.6	5	NEAR COAST OF PERU
07	03	27	04.6?	45.09 N	7.31 E	10 G		1.0	4	NORTHERN ITALY. ML 2.0 (GEN).
07	04	18	21.4*	41.138 N	22.625 E	10 G		1.2	9	YUGOSLAVIA. ML 1.7 (SKO).
07	05	25	41.9?	32.92 S	72.39 W	10 G		0.2	7	OFF COAST OF CENTRAL CHILE
07	05	56	31.3*	29.080 N	130.107 E	33 N	4.1	1.0	10	RYUKYU ISLANDS
07	06	50	03.5	45.703 N	26.492 E	162	3.2	0.8	19	ROMANIA
07	07	11	03.2%	44.144 N	7.930 E	10 G		0.5	7	NORTHERN ITALY. ML 2.3 (GEN).
07	07	16	36.7*	37.468 N	118.620 W	11			28	CALIFORNIA-NEVADA BORDER REGION. <BRK>. ML 4.0 (BRK). Felt (III) at Benton and Bishop, California.
07	07	20	48.2*	1.835 N	127.507 E	33 N	4.9	0.9	13	HALMAHERA
07	08	56	30.8*	43.413 N	5.453 E	10 G		0.5	7	NEAR SOUTH COAST OF FRANCE. MD 2.6 (STR).
07	09	06	47.5	22.151 S	174.949 E	33 N	5.2 3.9	1.0	71	LOYALTY ISLANDS REGION
07	09	55	41.2%	39.099 N	27.626 E	10 G		0.1	5	TURKEY
07	10	17	59.7*	31.848 S	69.213 W	33 N		1.2	8	SAN JUAN PROVINCE, ARGENTINA
07	13	00	31.5	22.051 S	175.246 E	33 N	4.7	1.5	40	SOUTH OF FIJI ISLANDS
07	13	07	47.9*	39.141 N	20.099 E	10 G		1.1	6	GREECE-ALBANIA BORDER REGION. MD 2.8 (ATH).
07	13	31	59.0*	20.933 S	178.780 W	578 *	4.9	0.9	25	FIJI ISLANDS REGION
07	13	58	14.7%	17.652 N	100.716 W	10 G		0.7	5	GUERRERO, MEXICO
07	14	51	58.0	42.578 N	24.163 E	5 G		1.2	18	BULGARIA. ML 2.9 (THE).
07	15	31	23.5%	60.408 N	5.007 E	10 G		0.4	7	SOUTHERN NORWAY. MD 1.2 (BER).
07	15	42	23.6%	39.600 N	28.416 E	10 G		1.1	8	TURKEY
07	18	14	01.9*	32.093 S	70.135 W	23 *		1.3	10	CHILE-ARGENTINA BORDER REGION
07	18	22	03.1	17.295 S	66.675 E	10 G	5.2 5.2	1.2	66	MASCARENE ISLANDS REGION
07	19	22	22.1?	7.44 N	124.29 E	475 ?	4.3	0.6	12	MINDANAO, PHILIPPINE ISLANDS

07	20 02 21.8	39.673 N	16.054 E	33 N		0.8	8	SOUTHERN ITALY
07	21 14 20.7	10.384 S	110.170 E	33 N	4.4	0.4	13	SOUTH OF JAVA
07	21 18 56.6	27.401 S	72.116 W	33 N		0.8	14	OFF COAST OF NORTHERN CHILE
07	21 25 04.8	38.41 N	21.88 E	10 G		1.5	5	GREECE. ML 2.5 (THE).
07	22 30 18.7	39.632 N	21.791 E	7		1.1	56	GREECE. ML 3.5 (ATH), 3.5 (THE).
07	23 03 58.7	59.569 N	152.832 W	112			38	SOUTHERN ALASKA. <AGS-P>.
07	23 14 26.6	41.257 N	19.941 E	10 G	4.5	1.2	114	ALBANIA. ML 4.5 (SKO), 4.0 (TTG), 3.7 (THE), 3.6 (ROM). MD 4.3 (ATH). Felt (IV) at Kilaake, Krrabe, Elbasan and Tirane.
07	23 32 04.3	34.254 N	25.220 E	10 G	4.0	1.0	14	CRETE. MD 4.1 (ATH).
07	23 35 19.0	34.36 N	25.29 E	10 G		1.4	6	CRETE. MD 3.9 (ATH).
08	00 06 06.3	40.349 N	21.556 E	10 G		0.7	9	GREECE. ML 2.5 (THE).
08	00 11 56.4	40.569 N	105.724 E	10 G	4.6	1.0	32	NORTHERN CHINA. ML 4.7 (BJI).
08	00 27 15.7	31.57 S	69.39 W	129 ?		1.0	11	SAN JUAN PROVINCE, ARGENTINA
08	00 53 28.4	41.155 N	19.987 E	10 G		1.1	8	ALBANIA. ML 2.5 (SKO).
08	01 06 14.9	15.630 S	174.914 W	309	4.9	0.8	75	TONGA ISLANDS
08	01 37 15.3	36.885 N	3.691 W	625	4.1	0.8	105	STRAIT OF GIBRALTAR
08	01 51 29.5	14.95 S	173.88 W	33 N	4.6	0.9	25	SAMOA ISLANDS REGION
08	01 54 30.8	33.146 N	140.857 E	58 *	4.6	1.1	39	SOUTH OF HONSHU, JAPAN
08	02 03 48.9	5.873 S	146.521 E	123 *	4.2	1.2	13	EAST PAPUA NEW GUINEA REGION
08	02 08 38.5	29.202 N	142.222 E	33 N	4.9 4.2	1.0	74	SOUTH OF HONSHU, JAPAN
08	02 39 09.2	42.907 N	11.409 W	10 G		1.1	29	NORTH ATLANTIC OCEAN. mbLg 3.5 (MDD).
08	03 19 32.6	17.793 N	65.652 W	21	4.3	0.8	29	PUERTO RICO REGION. Felt at Humacao, Ceiba, Fajardo and San Juan.
08	03 40 11.5	38.411 N	118.866 W	5 G		0.9	22	CALIFORNIA-NEVADA BORDER REGION. ML 3.5 (NEIS).
08	03 59 35.2	24.625 S	70.263 W	59 *	4.5	1.3	13	NEAR COAST OF NORTHERN CHILE. Felt (III) in the Antafagasta area.
08	05 13 38.1	3.417 N	126.708 E	47 D	4.6	1.3	22	TALAU ISLANDS
08	05 17 43.2	42.03 N	24.93 E	10 G		0.4	6	BULGARIA. ML 2.6 (THE).
08	05 39 03.7	49.198 N	6.896 E	10 G		1.0	6	GERMANY. MD 2.4 (UCC).
08	06 24 46.9	32.851 S	71.658 W	17 *		0.9	13	NEAR COAST OF CENTRAL CHILE
08	06 25 17.9	34.130 N	117.720 W	8			22	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.5 (PAS). Felt in the Los Angeles area.
08	07 05 50.6	41.283 N	20.001 E	11		1.1	36	ALBANIA. MD 3.6 (ATH). ML 3.1 (THE), 3.0 (TTG).
a 08	07 08 43.3	11.625 N	140.998 E	45 D	5.4 4.6	1.1	136	WEST CAROLINE ISLANDS
08	07 14 58.5	45.211 N	7.155 E	10 G		1.5	21	NORTHERN ITALY. ML 2.6 (LDG), 2.5 (GEN). MD 2.5 (STR).
08	07 36 40.7	11.533 N	141.031 E	69 *	4.8	0.9	18	WEST CAROLINE ISLANDS
08	08 31 39.4	25.089 S	179.945 W	520 *	4.6	0.8	17	SOUTH OF FIJI ISLANDS
08	09 42 19.8	36.451 N	137.641 E	10 G	4.1	1.3	15	HONSHU, JAPAN
a 08	09 47 45.3	58.391 N	152.960 W	67	5.8		515	KODIAK ISLAND REGION. <AGS-P>. Felt (IV) at Kodiak, Larsen Bay and Port Lions. Felt (III) at Clam Gulch, Hamer, Pedro Bay and Seldovia.
08	09 48 46.3	19.462 S	169.234 E	165	5.4	1.0	216	VANUATU ISLANDS
08	09 59 28.4	58.362 N	152.933 W	77			23	KODIAK ISLAND REGION. <AGS-P>.
08	10 15 14.5	18.468 S	168.051 E	17	5.2	1.2	71	VANUATU ISLANDS
08	10 31 30.5	45.369 N	7.902 E	5 G		0.6	8	NORTHERN ITALY. ML 2.5 (GEN).
08	10 34 29.9	28.393 N	130.498 E	33 N	4.1	1.1	14	RYUKYU ISLANDS
08	10 49 27.8	58.382 N	152.956 W	74			44	KODIAK ISLAND REGION. <AGS-P>.
08	10 59 22.5	58.354 N	152.936 W	87			26	KODIAK ISLAND REGION. <AGS-P>.
08	11 03 28.3	34.102 N	118.247 W	10 G		0.4	13	SOUTHERN CALIFORNIA. ML 2.8 (NEIS). Felt in the Glendale area.
08	11 10 56.4	45.60 N	2.67 E	10 G		0.2	4	FRANCE. MD 1.4 (STR).
08	11 34 29.6	45.216 N	14.165 E	10 G		1.2	7	YUGOSLAVIA. MD 2.9 (LJU), 2.3 (TRI). ML 2.2 (KBA).
08	11 35 58.6	22.42 S	174.19 W	33 N	4.6	0.7	6	TONGA ISLANDS REGION
08	12 03 08.6	36.726 N	72.710 E	33 N	4.3	1.3	9	AFGHANISTAN-USSR BORDER REGION
08	12 10 41.2	42.76 N	23.78 E	10 G		0.7	6	BULGARIA. ML 2.6 (THE).
08	13 23 10.1	58.370 N	152.930 W	78	2.9		25	KODIAK ISLAND REGION. <AGS-P>.
08	13 26 13.7	58.443 N	152.728 W	64			21	KODIAK ISLAND REGION. <AGS-P>.
08	13 30 19.9	43.459 N	127.058 W	10 G	4.5	0.7	108	OFF COAST OF OREGON
08	13 30 37.3	58.410 N	152.892 W	86			24	KODIAK ISLAND REGION. <AGS-P>.
08	13 58 48.5	10.676 S	110.255 E	33 N	4.3	1.5	5	SOUTH OF JAVA
08	15 08 58.7	46.703 N	2.350 E	10 G		0.5	11	FRANCE. ML 2.8 (LDG).
08	15 19 39.4	42.570 N	13.033 E	9		0.5	12	CENTRAL ITALY
08	16 25 24.9	16.415 S	167.334 E	10 G	4.5 4.0	1.1	40	VANUATU ISLANDS
08	16 52 53.2	10.84 N	125.45 E	33 N	4.7	0.5	14	LEYTE, PHILIPPINE ISLANDS
08	17 39 29.0	41.307 N	20.101 E	10 G		1.5	7	ALBANIA. ML 2.5 (SKO).
08	17 44 17.3	46.041 N	2.932 E	10 G		0.7	6	FRANCE. ML 1.6 (LDG).
08	17 53 13.2	36.706 N	73.157 E	10 G	4.3	1.5	17	NORTHWESTERN KASHMIR
a 08	18 57 01.4	25.452 N	96.559 E	33 N	4.8 5.1	1.4	110	BURMA
08	19 28 17.8	49.200 N	6.841 E	10 G		0.8	6	GERMANY. MD 2.5 (UCC).
08	20 01 08.6	25.471 N	96.547 E	33 N	4.1	1.1	23	BURMA
08	20 23 00.0	47.642 N	19.697 E	10 G		0.9	8	HUNGARY. ML 2.5 (BRA), 2.4 (KBA).
08	20 24 06.5	16.581 N	61.896 W	33 N		1.5	6	LEEWARD ISLANDS
08	20 41 55.7	5.22 N	127.88 E	33 N	4.8	1.1	15	PHILIPPINE ISLANDS REGION
08	21 59 24.8	40.096 N	15.820 E	10 G		1.0	8	SOUTHERN ITALY
08	22 11 09.3	48.273 N	121.757 W	2	3.2		55	WASHINGTON. <SEA>. CL 3.6 (SEA). Felt in the Darrington area.
09	00 25 39.6	48.273 N	121.772 W	4			31	WASHINGTON. <SEA>. CL 2.9 (SEA).
09	00 43 12.8	40.901 N	24.026 E	10 G		0.7	13	AEGEAN SEA. MD 3.1 (ATH). ML 2.4 (SKO).
09	01 09 51.5	37.083 N	4.257 W	10 G		1.4	10	SPAIN. mbLg 3.1 (MDD).
09	01 58 18.7	37.149 N	4.499 W	10 G		1.1	8	SPAIN. mbLg 2.9 (MDD).
09	04 26 27.8	47.662 N	124.237 W	26			32	NEAR COAST OF WASHINGTON. <SEA>. CL 2.8 (SEA).
09	04 58 10.8	44.120 N	10.112 E	5 G		0.9	25	NORTHERN ITALY. MD 2.9 (FIR). Felt at Fivizzano.
09	05 12 25.6	21.394 S	174.390 E	29 D	4.4	1.0	28	VANUATU ISLANDS REGION
09	05 27 44.4	22.55 S	179.94 W	583 ?	4.8	0.8	10	SOUTH OF FIJI ISLANDS
09	05 36 13.6	32.725 S	71.603 W	10 G		0.9	12	NEAR COAST OF CENTRAL CHILE
09	07 08 00.8	40.390 N	22.050 E	10 G		1.1	12	GREECE. MD 3.3 (ATH). ML 2.5 (THE).
09	07 09 09.2	40.463 N	23.611 E	10 G		0.6	5	GREECE. ML 1.8 (THE).
09	07 31 59.7	36.796 N	26.687 E	10 G		0.3	6	ODDECANESE ISLANDS. MD 3.5 (ATH).
09	07 33 09.4	16.081 N	61.533 W	10 G		0.7	9	LEEWARD ISLANDS. ML 2.3 (FDF).
09	08 11 01.4	1.683 S	78.390 W	155	3.9	1.1	17	ECUADOR
09	08 13 20.8	32.378 N	140.831 E	75 *	4.6	1.0	24	SOUTH OF HONSHU, JAPAN
09	09 47 58.0	24.717 S	179.571 W	511 *	4.7	0.8	17	SOUTH OF FIJI ISLANDS

09	10	10	09.8%	44.449 N	7.274 E	10 G	0.1	5	NORTHERN ITALY. ML 1.7 (GEN).	
09	10	59	32.0	36.091 N	30.214 E	33 N	1.4	10	TURKEY. MD 3.7 (ATH).	
09	11	21	00.5%	48.261 N	8.162 E	10 G	0.5	8	GERMANY. MD 1.4 (STR).	
09	11	34	00.0	32.976 S	70.231 W	98 ?	0.6	12	CHILE-ARGENTINA BORDER REGION	
a 09	12	34	03.3%	60.307 N	152.286 W	85	5.0	238	SOUTHERN ALASKA. <AGS-P>. Felt (IV) at Anchorage, Fort Richardson, Homer, Kasilaf, Kenai, Ninilchik, Palmer, Seward, Soldatno, Sterling and Wasilla. Felt (III) at Anchor Point, Chugiak, Iliamna, Kodiak, Moose Pass, Willow and Elmendorf Air Force Base.	
09	12	47	05.6%	16.168 N	96.563 W	33 N	3.7	1.5	6	OAXACA, MEXICO. Felt in Oaxaca.
09	13	15	18.9	11.521 N	140.640 E	68 *	4.8	0.9	43	WEST CAROLINE ISLANDS
09	13	59	14.5%	39.841 N	106.287 E	33 N		1.4	5	NORTHERN CHINA. ML 3.6 (BJI).
09	14	27	30.4%	5.890 S	153.483 E	68 *	4.8	0.8	13	NEW IRELAND REGION
09	15	12	33.9	39.213 N	22.220 E	10 G		0.7	13	GREECE. MD 3.1 (ATH). ML 2.8 (THE).
09	16	01	33.0%	4.269 S	139.962 E	72 *	4.6	1.0	12	WEST IRIAN
09	16	53	16.1%	21.79 S	178.15 W	550 ?	4.2	1.3	24	FIJI ISLANDS REGION
09	17	03	21.0	63.739 N	152.495 W	15 G	4.8	0.9	93	CENTRAL ALASKA. ML 5.3 (PMR). Felt (IV) at Lake Minchumina and (III) at Manley Hot Springs, McGrath and Nenana.
09	17	10	27.7	63.688 N	152.531 W	15 G		1.3	10	CENTRAL ALASKA. ML 4.0 (PMR).
09	19	01	44.7	40.569 N	23.456 E	5 G		0.8	22	GREECE. ML 2.8 (THE), 2.5 (SKO). MD 3.1 (ATH).
09	19	23	50.5%	40.506 N	23.410 E	10 G		1.0	6	GREECE. ML 1.6 (THE).
09	19	28	36.0%	63.725 N	152.503 W	15 G		1.6	8	CENTRAL ALASKA. ML 3.4 (PMR).
09	20	58	00.9	39.088 N	10.746 W	10 G		0.9	16	NORTH ATLANTIC OCEAN. mbLg 3.8 (MDD).
09	21	27	56.9	37.903 N	23.094 E	5		1.0	37	SOUTHERN GREECE. ML 3.1 (THE). MD 3.5 (ATH). Felt at Carlinth and Lautrakian.
09	21	41	31.6%	12.082 N	144.796 E	27 D	4.8 4.7	1.0	23	SOUTH OF MARIANA ISLANDS
09	21	42	56.5%	7.593 S	129.345 E	33 N	4.7	0.9	8	BANDA SEA
09	21	49	31.8	40.591 N	23.426 E	5 G		1.2	8	GREECE. MD 2.5 (ATH).
09	21	59	26.7%	45.62 N	148.92 E	33 N	4.0	0.3	7	KURIL ISLANDS
09	22	14	50.6%	10.350 N	62.452 W	19	4.3	1.1	25	NEAR COAST OF VENEZUELA
09	22	53	48.4%	41.17 N	20.02 E	10 G		0.0	4	ALBANIA. ML 2.6 (SKO).
09	23	19	51.5%	36.717 N	25.666 E	10 G		1.5	6	DODECANESE ISLANDS. ML 3.4 (ATH).
10	01	30	49.7%	32.235 S	69.749 W	28 *		1.5	13	MENDOZA PROVINCE, ARGENTINA
10	01	53	44.2%	62.591 N	151.265 W	87		0.8	39	CENTRAL ALASKA. <AGS-P>.
10	02	04	13.3%	22.671 S	68.267 W	123 ?	4.8	0.8	10	NORTHERN CHILE
10	02	11	03.1%	60.298 N	152.322 W	84	4.9	1.71	171	SOUTHERN ALASKA. <AGS-P>. Felt (IV) at Homer and Ninilchik. Also felt at Anchorage, Palmer, Seward and Wasilla.
a 10	03	31	20.8	21.797 S	170.542 E	51 D	5.1	1.1	54	LOYALTY ISLANDS REGION
10	04	09	39.2	43.016 N	17.306 E	14		1.0	27	YUGOSLAVIA. ML 3.0 (TTG), 2.9 (KBA).
10	04	39	37.7%	44.065 N	7.031 E	10 G		0.2	5	NORTHERN ITALY. ML 1.9 (GEN).
10	05	34	24.6	37.994 N	21.590 E	5 G		1.1	14	SOUTHERN GREECE. ML 3.1 (ATH).
10	05	45	22.3	43.428 N	5.464 E	11		0.7	13	NEAR SOUTH COAST OF FRANCE
10	06	33	27.8	30.522 N	97.333 E	33 N	4.3	1.1	23	TIBET
10	09	02	35.7%	35.24 N	27.02 E	5 G		1.0	4	DODECANESE ISLANDS. MD 3.1 (ATH).
10	10	11	31.0%	48.280 N	121.761 W	2		0.9	35	WASHINGTON. <SEA>. CL 2.7 (SEA).
a 10	10	15	03.9	50.907 N	157.244 E	51 D	5.7	0.9	396	KURIL ISLANDS. Felt on Shumshu and Paramushir.
10	10	25	52.7%	33.785 S	71.996 W	10 G		0.9	13	NEAR COAST OF CENTRAL CHILE
10	11	19	24.3	4.631 S	137.260 E	33 N	4.9	1.3	17	WEST IRIAN
10	12	01	11.4%	19.715 S	133.811 E	10 G		1.2	6	NORTHERN TERRITORY, AUSTRALIA
10	13	05	39.6%	40.466 N	16.400 E	10 G		0.4	5	SOUTHERN ITALY
10	14	48	59.0%	62.307 S	164.313 E	10 G	5.3 4.5	0.6	12	BALLENY ISLANDS REGION
10	14	49	27.8%	60.626 N	152.751 W	137		0.9	29	SOUTHERN ALASKA. <AGS-P>.
10	16	00	00.0%	37.113 N	116.055 W	0	5.0	1.52	152	SOUTHERN NEVADA. <DOE>. ML 5.1 (BRK). 37' 06" 45.02" N., 116' 03" 18.64" W., Surface Elev. 1273 m., Depth of Burial 500 m., Shot Time 160000.83, "METROPOLIS," Nevada Test Site (Dept. of Energy).
10	16	59	52.8	42.314 N	23.836 E	10 G		0.6	8	BULGARIA
10	17	05	11.1%	28.34 N	56.44 E	33 N	4.3	1.2	17	SOUTHERN IRAN
10	17	26	30.3%	37.113 N	116.055 W	0 G	4.0	1.8	18	SOUTHERN NEVADA. <SPEC>. Collapse. Held to "METROPOLIS" location.
10	17	39	06.2%	44.526 N	150.023 E	33 N	4.2	0.9	20	KURIL ISLANDS REGION
10	17	53	04.3	18.941 N	64.836 W	10 G	3.4	0.7	10	VIRGIN ISLANDS. ML 4.8 (FDF).
10	18	04	24.7%	19.52 N	65.91 W	10 G		0.2	5	PUERTO RICO REGION
10	18	16	28.1%	39.008 N	14.464 E	10 G		1.4	10	TYRRHENIAN SEA
10	18	40	42.4%	32.740 N	115.490 W	12		0.6	6	CALIFORNIA-MEXICO BORDER REGION. <PAS-P>. ML 3.2 (PAS).
10	18	50	45.3%	6.906 N	72.925 W	150 ?	4.6	1.1	17	NORTHERN COLOMBIA
10	19	06	54.7	45.037 N	6.791 E	10 G		0.8	31	FRANCE. ML 3.0 (GEN), 2.7 (LDG). MD 2.6 (STR).
10	20	05	17.4%	36.750 N	73.308 E	10 G	3.8	0.8	7	NORTHWESTERN KASHMIR
10	23	13	05.1%	57.993 N	142.694 W	10 G	3.8	1.5	15	GULF OF ALASKA. <AGS-P>.
10	23	30	38.2%	38.66 N	15.56 E	127 ?		0.4	10	SICILY
a 11	00	55	31.2	37.278 S	78.241 E	10 G	5.1 4.9	1.0	37	MID-INDIAN RISE
11	01	51	09.9	31.267 S	68.578 W	100 G		0.5	5	SAN JUAN PROVINCE, ARGENTINA
11	02	34	15.0%	38.08 N	26.94 E	5 G		0.3	4	AEGEAN SEA. MD 3.2 (ATH).
11	02	58	06.6%	1.63 N	126.69 E	150 ?	4.2	0.2	7	MOLUCCA PASSAGE
11	03	15	30.1	27.971 S	66.483 W	172 D	4.2	1.4	39	CATAMARCA PROVINCE, ARGENTINA
11	03	29	55.9%	31.739 S	70.352 W	133 ?		0.8	11	CHILE-ARGENTINA BORDER REGION
11	03	47	30.3%	6.779 S	130.440 E	80 *	4.7	1.2	27	BANDA SEA
11	04	19	18.4	46.194 N	1.630 E	10 G		1.1	19	FRANCE. ML 2.8 (LDG). MD 2.7 (STR).
11	05	01	36.7%	31.51 S	69.16 W	110 G		0.1	5	SAN JUAN PROVINCE, ARGENTINA
11	05	03	24.9%	34.150 N	135.330 E	33 N	4.6	1.5	15	NEAR S. COAST OF SOUTHERN HONSHU
11	05	57	48.2	38.880 N	24.064 E	22		0.6	26	AEGEAN SEA. ML 3.9 (ATH). MD 3.5 (THE).
11	06	01	07.6%	60.046 N	152.864 W	110		0.8	28	SOUTHERN ALASKA. <AGS-P>.
11	06	05	12.3%	31.36 S	67.88 W	117 ?		1.1	12	SAN JUAN PROVINCE, ARGENTINA
11	06	08	50.8%	36.149 N	27.226 E	10 G		0.3	5	DODECANESE ISLANDS. MD 3.6 (ATH).
11	07	08	31.3%	31.30 S	68.56 W	83 ?		0.0	5	SAN JUAN PROVINCE, ARGENTINA
11	07	56	19.9	11.266 N	85.632 W	38 D	4.5 4.5	1.1	47	NICARAGUA
11	08	01	20.9%	60.255 N	152.541 W	101		1.2	30	SOUTHERN ALASKA. <AGS-P>.
11	08	28	27.3%	36.578 N	2.585 E	33 N	4.6	1.2	20	ALGERIA. ML 3.9 (LDG). mbLg 3.9 (MDD).
11	08	30	41.5%	61.234 N	149.653 W	35		0.6	46	SOUTHERN ALASKA. <AGS-P>. ML 3.3 (PMR).
11	08	35	48.6%	13.194 N	143.617 E	126 *	4.4	1.0	16	SOUTH OF MARIANA ISLANDS
11	09	05	21.2	44.998 N	7.367 E	10 G		0.7	53	NORTHERN ITALY. ML 3.1 (GEN), 3.0 (LDG). MD 3.1 (STR)

11	10	40	53.7%	45.604 N	10.645 E	10 G	0.3	5	NORTHERN ITALY
11	11	40	25.1%	23.186 N	121.398 E	33 N	1.0	5	TAIWAN
11	11	40	43.9%	44.430 N	7.165 E	10 G	0.7	7	NORTHERN ITALY. ML 1.9 (GEN).
11	14	04	12.0%	34.801 N	139.444 E	131 *	0.5	12	NEAR S. COAST OF HONSHU, JAPAN
11	14	32	37.5%	46.312 N	1.426 E	10 G	0.9	9	FRANCE. ML 2.2 (LDG).
11	15	38	19.3%	55.55 N	167.15 E	29 D	4.3	1.6	13 KOMANDORSKY ISLANDS REGION
11	15	52	32.7%	44.34 N	7.36 E	10 G	0.2	4	NORTHERN ITALY. ML 1.5 (GEN).
11	16	06	04.5	5.247 S	151.021 E	40 D	4.6	0.9	26 NEW BRITAIN REGION
11	16	47	39.9%	30.405 S	69.509 W	33 N	1.6	10	CHILE-ARGENTINA BORDER REGION
11	17	12	03.3	36.549 N	21.199 E	33 N	4.0	1.3	38 SOUTHERN GREECE. ML 3.9 (ATH).
11	17	23	46.5%	38.04 N	22.75 E	10 G	0.2	4	GREECE. ML 2.6 (ATH).
11	17	47	29.2%	36.288 N	120.418 W	8		12	CENTRAL CALIFORNIA. <BRK>. ML 2.6 (BRK).
11	17	53	44.2%	45.473 N	3.693 E	10 G	1.0	11	FRANCE. ML 2.3 (LDG).
11	17	54	06.9	41.854 N	23.272 E	10 G	0.9	29	GREECE-BULGARIA BORDER REGION. MD 3.9 (THE). ML 3.5 (SKO).
11	17	55	37.2%	45.539 N	3.523 E	10 G	1.2	10	FRANCE. ML 2.5 (LDG).
11	17	59	18.2	45.525 N	3.498 E	10 G	1.2	17	FRANCE. ML 3.0 (LDG). MD 2.8 (STR).
11	18	10	08.4%	45.47 N	3.68 E	10 G	0.1	4	FRANCE. MD 1.3 (STR).
11	19	22	25.3%	14.63 N	61.05 W	10 G	0.1	4	WINDWARD ISLANDS. ML 1.4 (FDF).
11	20	44	36.4%	7.01 S	129.64 E	142 ?	4.6	1.6	9 BANDA SEA
11	21	23	08.3%	35.34 N	27.03 E	10 G	0.8	4	DODECANESE ISLANDS. MD 3.1 (ATH).
a 11	22	20	50.4	20.529 S	168.207 E	38 D	5.3 5.3	1.1	218 LOYALTY ISLANDS
a 11	22	46	34.6	33.493 N	138.654 E	24 D	5.3 4.6	1.3	156 SOUTH OF HONSHU, JAPAN
11	22	59	03.2%	32.44 S	71.65 W	10 G	0.5	7	NEAR COAST OF CENTRAL CHILE
11	23	03	40.3	32.557 S	71.617 W	7		0.6	11 NEAR COAST OF CENTRAL CHILE
11	23	16	46.9%	32.594 S	71.576 W	10 G		0.8	11 NEAR COAST OF CENTRAL CHILE
11	23	33	12.0%	67.73 N	21.08 E	5 G		1.7	4 SWEDEN. MD 2.1 (BER).
12	00	08	50.7%	18.58 N	101.76 W	33 N		1.0	7 GUERRERO, MEXICO
12	00	15	32.9%	18.07 N	102.68 W	33 N		1.7	7 MICHOACAN, MEXICO
12	00	31	39.0	12.533 S	75.799 W	33 N	3.6	1.0	8 PERU
12	02	15	29.0	60.328 N	150.329 W	74 *	2.9	0.6	10 KENAI PENINSULA, ALASKA
12	03	04	14.0%	8.061 S	150.686 E	33 N	4.8 4.6	1.4	19 EAST PAPUA NEW GUINEA REGION. ML 4.9 (PMG).
12	05	06	23.5%	18.857 N	155.240 W	12			41 HAWAII. <HVO-P>. MD 4.0 (HVO).
12	05	23	27.5%	7.03 S	151.03 E	33 N	3.9	1.4	6 NEW BRITAIN REGION. ML 4.5 (PMG).
12	05	48	48.4%	38.36 N	23.73 E	10 G		1.3	4 GREECE. MD 2.6 (ATH).
12	06	30	38.2	14.020 N	145.036 E	32 D	4.9	1.0	39 MARIANA ISLANDS. Felt (IV) at Tamuning and (III) at Agaña, Guam.
12	06	39	14.7	31.994 S	71.119 W	33 N		0.6	11 NEAR COAST OF CENTRAL CHILE
12	06	43	46.5	6.450 S	104.529 E	33 N	4.9 4.5	1.3	34 SUNDA STRAIT
12	06	54	47.6%	18.972 N	155.212 W	18			40 HAWAII. <HVO-P>. MD 4.4 (HVO).
12	07	32	08.7%	1.040 S	78.019 W	10 G	4.1	1.4	11 ECUADOR. Felt (IV) at Ambato.
12	07	47	23.7%	31.141 S	68.594 W	33 N		1.5	5 SAN JUAN PROVINCE, ARGENTINA
12	07	59	29.6%	37.030 N	113.593 E	33 N	3.7	1.5	9 NORTHEASTERN CHINA. ML 3.8 (BJI).
12	08	08	55.3	61.239 N	150.953 W	66 *		0.7	9 SOUTHERN ALASKA
12	08	15	02.7%	45.655 N	111.962 W	6	2.6	18	MONTANA. <BUT>. ML 3.5 (BUT). Felt (V) at Harrison and (IV) at Pony.
12	08	25	26.4%	58.483 N	152.866 W	79 *	3.6	0.7	11 KODIAK ISLAND REGION
12	08	45	31.4%	33.900 N	140.876 E	79 ?	4.6	1.4	13 SOUTH OF HONSHU, JAPAN
12	10	01	03.0%	10.263 S	161.270 E	10 G	4.7 4.4	1.5	11 SOLOMON ISLANDS
12	10	10	10.0%	37.704 N	20.726 E	5 G		1.2	11 IONIAN SEA. ML 3.4 (ATH).
12	11	09	10.9%	42.196 N	13.260 E	10 G		0.5	6 CENTRAL ITALY
12	11	26	10.9%	34.130 N	117.700 W	5			17 SOUTHERN CALIFORNIA. <PAS-P>. ML 3.1 (PAS).
12	11	29	35.3	34.134 N	117.663 W	5 G		0.7	11 SOUTHERN CALIFORNIA. ML 2.9 (NEIS).
12	12	05	11.6%	35.231 N	27.137 E	10 G		1.3	5 DODECANESE ISLANDS. MD 3.4 (ATH).
12	12	08	41.7	46.187 N	12.425 E	10 G		0.9	14 NORTHERN ITALY. MD 3.1 (LJU), 2.6 (TRI). ML 2.5 (KBA).
a 12	12	59	50.6%	47.895 S	165.318 E	19 D	5.4 5.0	1.6	30 OFF W. COAST OF S. ISLAND, N.Z.
12	13	28	28.2	19.399 N	67.100 W	33 N	3.8	0.7	12 MONA PASSAGE
a 12	13	32	55.5	3.158 S	128.838 E	26 D	5.2 5.0	1.1	113 CERAM
12	13	55	37.8%	39.470 N	19.965 E	33 N		1.0	5 GREECE-ALBANIA BORDER REGION. MD 3.0 (ATH).
12	14	00	07.3%	3.64 S	128.46 E	99 ?	3.9	1.2	6 CERAM
f 12	14	41	19.4	51.484 N	175.032 W	14 G	6.0 6.2	1.1	487 ANDREANOF ISLANDS, ALEUTIAN IS. ML 5.7 (PMR). Ms 6.5 (BRK), 5.9 (PAS). Felt (IV) on Adak and Atka. Depth from broadband displacement seismograms.
12	14	47	18.7	51.399 N	174.987 W	15 G	5.0	1.0	54 ANDREANOF ISLANDS, ALEUTIAN IS. ML 5.0 (PMR).
12	14	55	31.5%	51.247 N	174.799 W	15 G	4.9	0.8	25 ANDREANOF ISLANDS, ALEUTIAN IS.
a 12	15	06	29.7	51.479 N	174.984 W	15 G	5.1	1.1	118 ANDREANOF ISLANDS, ALEUTIAN IS. ML 5.1 (PMR).
12	15	08	48.3%	51.336 N	174.822 W	15 G	4.9	0.8	40 ANDREANOF ISLANDS, ALEUTIAN IS.
12	15	26	51.8%	3.258 S	128.887 E	75 *	4.7	0.7	12 CERAM
12	16	08	39.6%	51.104 N	177.903 W	33 N	4.7	1.2	37 ANDREANOF ISLANDS, ALEUTIAN IS. ML 4.1 (PMR).
12	16	37	15.1%	43.49 N	6.92 E	10 G		1.4	4 NEAR SOUTH COAST OF FRANCE
12	16	48	01.4%	36.413 N	92.300 W	0		5	MISSOURI-ARKANSAS BORDER REGION. <TEIC>. CL 2.8 (TEIC). Felt (IV) at Clarkridge, Henderson, Lakeview and Mountain Home, Arkansas. Also felt (IV) at Howards Ridge, Missouri. Felt (III) at Gamaliel and Midway, Arkansas.
12	17	05	40.1%	40.505 N	26.676 E	10 G		1.6	6 TURKEY. MD 3.0 (ATH).
12	18	17	51.8%	41.825 N	22.782 E	10 G		1.1	5 YUGOSLAVIA. ML 2.0 (SKO).
12	18	46	18.9%	43.71 N	8.32 E	33 N		1.1	7 CORSICA. ML 2.3 (GEN).
12	20	19	41.1%	3.282 S	139.831 E	33 N	4.0	0.6	8 WEST IRIAN
12	20	58	03.1%	6.89 S	152.45 E	33 N	4.3	0.6	7 NEW BRITAIN REGION
12	21	34	12.5%	63.191 N	149.587 W	94			32 CENTRAL ALASKA. <AGS-P>.
12	21	50	18.9%	39.502 N	20.975 E	5 G		1.0	5 GREECE-ALBANIA BORDER REGION. MD 2.5 (ATH).
12	22	06	01.6%	39.74 N	20.54 E	10 G		1.7	4 GREECE-ALBANIA BORDER REGION. MD 2.5 (ATH).
12	22	18	12.7%	51.452 N	174.910 W	15 G	4.9	0.9	29 ANDREANOF ISLANDS, ALEUTIAN IS.
12	22	40	07.8%	28.370 N	102.697 E	33 N	4.0	1.6	13 SICHUAN PROVINCE, CHINA. ML 4.1 (BJI).
12	23	07	55.5%	39.741 N	113.817 E	10 G		1.5	6 NORTHEASTERN CHINA. ML 3.7 (BJI).
12	23	16	09.8%	51.463 N	174.825 W	15 G	4.7	0.9	14 ANDREANOF ISLANDS, ALEUTIAN IS.
a 12	23	18	14.3	13.231 S	167.044 E	163 D	5.1	1.4	137 VANUATU ISLANDS
12	23	39	08.1%	30.96 S	67.85 W	33 N		1.6	5 SAN JUAN PROVINCE, ARGENTINA
12	23	58	19.8	5.212 S	151.781 E	102 *	4.7	1.1	30 NEW BRITAIN REGION
a 13	00	02	52.7	23.942 N	145.035 E	30 D	5.2 4.5	1.0	114 NORTH PACIFIC OCEAN
a 13	00	32	59.1	73.325 N	134.909 E	18 D	5.5 4.9	0.9	351 LAPTEV SEA. Ms 5.7 (BRK).
a 13	00	42	27.4%	7.28 S	106.44 W	10 G	4.6 4.9	1.1	22 NORTHERN EASTER I. CORDILLERA

o 13	01 04 50.4	16.611 S	172.530 W	30 D	5.2 5.2	1.1	52	SAMOA ISLANDS REGION
13	01 29 11.5	9.822 N	124.996 E	29 D	4.9 4.6	0.9	34	MINDANAO, PHILIPPINE ISLANDS
13	03 18 02.9&	36.828 N	121.428 W	9			21	CENTRAL CALIFORNIA. <BRK>. ML 3.3 (BRK).
13	04 27 03.9&	60.321 N	152.274 W	86			29	SOUTHERN ALASKA. <AGS-P>.
13	04 57 21.0*	15.579 N	92.406 W	180 *	4.0	1.1	22	MEXICO-GUATEMALA BORDER REGION
13	06 09 45.0*	25.009 S	69.068 W	33 N		1.1	9	NORTHERN CHILE
13	06 16 21.0?	35.33 N	25.15 E	10 G		1.3	4	CRETE. MD 3.6 (ATH).
13	08 15 10.9*	19.793 N	71.316 W	33 N	4.3	1.2	11	DOMINICAN REPUBLIC REGION. MD 4.3 (SDD). Felt at Mao, Monte Cristi and Villa Vasquez.
13	08 44 42.3	19.928 N	71.313 W	33 N	3.9	1.0	7	DOMINICAN REPUBLIC REGION. MD 4.5 (SDD). Felt at Mao, Monte Cristi and Villa Vasquez.
13	09 20 49.2	35.005 N	3.779 W	10 G		1.2	10	STRAIT OF GIBRALTAR. mbLg 2.8 (MDD).
13	09 23 12.4	7.448 N	126.483 E	171 D	4.9	1.2	66	MINDANAO, PHILIPPINE ISLANDS
13	09 46 04.4	24.876 N	99.162 E	10 G	4.5	0.9	15	YUNNAN PROVINCE, CHINA. ML 4.5 (BJI).
13	10 26 07.5*	28.409 S	71.449 W	33 N	3.6	1.6	18	NEAR COAST OF CENTRAL CHILE
13	10 42 55.3&	43.087 N	0.606 W	10 G		0.5	5	PYRENEES. MD 1.0 (STR).
13	12 04 52.4	39.997 N	22.488 E	10 G	4.1	1.5	70	GREECE. ML 4.0 (ATH), 4.0 (SKO).
o 13	13 30 40.3*	47.906 S	165.653 E	33 N	5.1 5.1	1.6	22	OFF W. COAST OF S. ISLAND. N.Z.
13	14 21 11.4?	15.28 N	61.45 W	152	3.1	0.5	13	LEEWARD ISLANDS
13	14 34 12.3*	15.879 N	61.296 W	54 ?		0.3	6	LEEWARD ISLANDS
13	14 58 21.8	43.201 N	0.116 W	10 G		1.0	24	PYRENEES. mbLg 3.2 (MDD). Felt (IV) at Argeles Gazost and Lourdes; (II) at Pau, France.
13	15 05 38.8	44.510 N	150.058 E	33 N	4.8	0.9	52	KURIL ISLANDS REGION
13	15 18 49.0*	1.398 S	78.471 W	33 N		1.3	11	ECUADOR. Felt (IV) at Tena.
13	15 30 06.0*	47.000 N	144.741 E	373 ?	4.7	1.0	33	SEA OF OKHOTSK
13	16 09 11.8?	30.17 S	178.51 W	200 ?	4.3	0.5	6	KERMADEC ISLANDS
13	16 15 10.1?	40.16 N	22.35 E	33 N		0.5	4	GREECE
13	17 41 53.9&	61.746 N	151.088 W	74			45	SOUTHERN ALASKA. <AGS-P>.
13	18 09 21.8?	41.76 N	13.32 E	10 G		0.2	4	SOUTHERN ITALY
13	18 20 21.1?	30.94 S	68.07 W	33 N		1.4	4	SAN JUAN PROVINCE, ARGENTINA
13	19 00 16.7*	10.758 N	61.998 W	84 *	3.4	0.7	22	TRINIDAD. MD 3.8 (TRN). Felt on Trinidad.
13	19 12 53.0*	40.063 N	22.369 E	10 G		1.1	5	GREECE. MD 2.7 (ATH).
o 13	19 40 33.6	3.429 S	76.913 W	112 G	5.7	0.9	374	NORTHERN PERU. Felt (III) at Tena, Ecuador. Depth from broadband displacement seismograms.
13	20 00 02.3?	36.09 N	24.20 E	10 G		1.3	4	SOUTHERN GREECE. MD 3.0 (ATH).
13	20 30 03.2?	31.63 S	69.48 W	120 G		0.3	5	SAN JUAN PROVINCE, ARGENTINA
13	20 53 08.5&	40.815 N	124.448 W	21			6	NEAR COAST OF NORTHERN CALIF. <BRK>. ML 3.2 (BRK).
13	21 09 11.6&	37.783 N	122.227 W	7			11	CENTRAL CALIFORNIA. <BRK>. ML 2.2 (BRK). Ma=3.1*10**12 Nm (BRK).
13	22 06 27.2?	50.33 N	18.85 E	10 G		0.2	4	POLAND. ML 2.6 (KRA).
13	22 10 41.8*	19.293 N	65.107 W	33 N		0.4	8	PUERTO RICO REGION
13	22 57 14.9	39.427 N	23.394 E	10 G		1.3	16	AEGEAN SEA. ML 3.2 (ATH).
o 13	23 05 29.4	3.994 S	39.925 E	10 G	5.3 5.2	1.0	194	KENYA. Felt by many people in the epicentral area.
13	23 32 08.6?	67.99 N	20.57 E	10 G		0.8	4	SWEDEN. MD 2.1 (BER).
13	23 55 00.8	39.247 N	25.478 E	18	4.2	1.1	89	AEGEAN SEA. ML 4.1 (ATH).
14	00 42 58.1*	50.300 N	19.011 E	10 G		0.4	5	POLAND. ML 2.9 (KRA), 2.8 (VKA). mbLg 2.8 (BRA).
14	00 44 58.5&	62.991 N	150.403 W	99			34	CENTRAL ALASKA. <AGS-P>.
14	01 24 48.8*	38.646 N	20.581 E	5 G		1.7	7	GREECE. MD 3.1 (ATH).
14	01 27 55.8	45.865 N	14.655 E	5 G		1.0	52	YUGOSLAVIA. MD 3.8 (LJU). ML 3.5 (VKA), 3.4 (KBA). Felt (VI) at Dobro Polje and Videm; (V) at Ponikve and Velike Lasce.
14	01 43 35.0&	55.052 N	160.880 W	73			5	ALASKA PENINSULA. <PAL>.
14	02 15 12.9	45.860 N	14.669 E	10 G		1.4	14	YUGOSLAVIA. MD 3.2 (LJU), 2.7 (TRI). ML 2.7 (KBA). Felt (V) in the Videm-Dobro Polje area.
14	02 31 46.5	49.650 N	155.945 E	49 D	5.0	0.9	121	KURIL ISLANDS
14	02 32 48.9	38.976 N	20.661 E	10 G		1.2	9	GREECE. MD 3.0 (ATH).
o 14	03 33 17.3	10.212 N	59.800 W	47 D	5.1 4.8	1.2	177	NORTH ATLANTIC OCEAN. MD 5.2 (TRN). Felt (III) on Trinidad.
o 14	03 44 49.6	4.575 N	122.620 E	639 D	5.6	1.1	200	CELEBES SEA
14	03 48 38.4?	39.882 N	142.223 E	33 N		1.2	9	NEAR EAST COAST OF HONSHU, JAPAN
14	04 11 39.0*	33.119 S	72.038 W	10 G		1.0	13	OFF COAST OF CENTRAL CHILE
14	04 34 20.1*	10.273 N	59.700 W	13	3.7	1.0	16	NORTH ATLANTIC OCEAN. MD 3.9 (TRN).
14	05 31 24.4	40.000 N	23.466 E	10 G		1.5	9	GREECE. MD 3.4 (ATH).
14	05 36 13.7	45.883 N	14.687 E	5 G	4.0	1.0	31	YUGOSLAVIA. MD 3.7 (LJU), 3.2 (TRI). ML 3.4 (KBA), 3.2 (VKA). Felt (VI) in the Videm-Dobro Polje area.
14	05 50 26.9?	44.584 N	6.774 E	10 G		0.4	5	FRANCE. ML 1.8 (GEN).
14	07 55 32.1&	57.398 N	142.906 W	10 G	3.2		30	GULF OF ALASKA. <AGS-P>.
14	08 01 32.0?	30.16 S	68.01 W	33 N		1.0	5	SAN JUAN PROVINCE, ARGENTINA
14	08 04 37.3?	16.847 N	99.554 W	10 G		1.5	6	NEAR COAST OF GUERRERO, MEXICO
14	08 15 39.5	40.004 N	23.548 E	10 G		1.3	13	GREECE. ML 3.3 (ATH).
14	08 27 34.3&	60.153 N	150.211 W	53	2.8		46	KENAI PENINSULA, ALASKA. <AGS-P>.
14	09 04 07.7	43.875 N	7.753 E	10 G		0.6	20	NEAR SOUTH COAST OF FRANCE. ML 2.6 (GEN). MD 2.2 (STR).
14	10 06 06.1*	53.297 S	160.050 E	33 N	4.7 3.9	1.1	10	MACQUARIE ISLANDS REGION
14	10 28 02.4?	59.18 N	18.07 E	5 G		1.1	4	SWEDEN
14	11 33 39.4?	31.14 S	68.69 W	98 ?		0.1	5	SAN JUAN PROVINCE, ARGENTINA
14	11 56 37.3	19.632 N	71.241 W	35 *	4.3 4.1	0.7	27	DOMINICAN REPUBLIC REGION. MD 4.8 (SDD). Felt at Mao, Monte Cristi and Villa Vasquez.
14	11 58 46.6*	51.238 N	174.986 W	15 G	4.3	0.6	10	ANDREANOF ISLANDS, ALEUTIAN IS.
14	12 03 21.9?	51.39 N	174.96 W	15 G	4.8	1.1	10	ANDREANOF ISLANDS, ALEUTIAN IS.
14	13 12 53.2	66.906 N	156.195 W	33 N	2.8	0.7	19	ALASKA
14	13 33 09.1	8.109 S	121.788 E	174 *	5.1	0.9	31	FLORES ISLAND REGION
14	14 14 43.7?	41.06 N	19.88 E	10 G		0.3	4	ALBANIA. ML 2.2 (SKO).
14	15 30 17.5&	63.627 N	149.853 W	143			33	CENTRAL ALASKA. <AGS-P>.
14	15 57 48.8	29.212 N	142.319 E	33 N	4.6	1.0	18	SOUTH OF HONSHU, JAPAN
14	16 32 51.9*	21.425 N	122.431 E	33 N	3.8	1.2	5	TAIWAN REGION
14	17 39 22.9	36.860 N	73.275 E	33 N	4.6 4.1	1.6	48	NORTHWESTERN KASHMIR
14	17 40 55.9*	39.927 N	21.748 E	5 G		1.5	6	GREECE. MD 3.1 (ATH).
14	18 18 05.0?	41.824 N	13.266 E	33 N		0.8	7	SOUTHERN ITALY
14	18 35 56.9*	23.971 N	122.992 E	33 N		0.7	7	TAIWAN REGION
14	18 43 27.9	39.864 N	142.783 E	33 N	4.6 3.6	1.1	44	NEAR EAST COAST OF HONSHU, JAPAN
14	18 55 04.5?	38.33 N	18.99 E	10 G		1.3	8	IONIAN SEA
14	18 56 36.3&	53.952 N	162.570 W	22	3.5		8	SOUTH OF ALASKA. <PAL>.
14	19 11 55.6	22.745 S	169.969 E	44 D	5.0	1.4	64	LOYALTY ISLANDS REGION

14	19 16 00.5& 60.012 N	151.491 W	43				27	KENAI PENINSULA, ALASKA. <AGS-P>.
14	19 21 49.7 36.109 N	27.214 E	30 *	4.0	1.6	17	DODECANESE ISLANDS. ML 4.1 (ATH).	
14	19 43 38.17 31.77 S	71.51 W	33 N		1.0	11	NEAR COAST OF CENTRAL CHILE	
14	20 19 17.77 31.15 S	68.29 W	94 ?		0.2	5	SAN JUAN PROVINCE, ARGENTINA	
14	21 59 53.3& 37.113 N	121.963 W	11			12	CENTRAL CALIFORNIA. <BRK>. ML 2.7 (BRK).	
14	22 16 32.0 38.591 N	14.798 E	13		0.6	12	SICILY	
14	22 53 34.1 36.151 N	27.242 E	10 G		1.2	10	DODECANESE ISLANDS. MD 3.5 (ATH).	
a 15	00 12 42.9 31.658 N	60.213 E	16 D	4.9 4.6	1.2	118	IRAN. Felt at Nahbandan.	
15	00 16 27.57 44.07 N	11.22 E	10 G		0.4	4	NORTHERN ITALY	
15	00 59 58.0* 8.220 N	126.815 E	33 N	4.4 4.0	1.4	15	MINDANAO, PHILIPPINE ISLANDS	
15	02 28 56.9 35.281 N	27.053 E	37	4.2	1.4	136	DODECANESE ISLANDS. MD 4.4 (ATH), 4.3 (HLW).	
15	03 38 01.1* 11.840 S	73.857 W	72 ?	3.9	0.7	9	PERU	
15	03 49 50.3% 40.537 N	15.188 E	10 G		0.9	6	SOUTHERN ITALY	
15	04 03 14.07 40.20 N	28.11 E	5 G		0.0	4	TURKEY	
a 15	04 56 34.5 15.130 S	167.238 E	132 D	5.6	1.5	338	VANUATU ISLANDS	
15	05 32 42.9 40.371 N	22.028 E	5 G		1.1	11	GREECE. MD 3.3 (ATH).	
15	06 12 30.6* 24.476 S	177.418 W	33 N	5.2 5.0	0.8	45	SOUTH OF FIJI ISLANDS	
15	06 17 46.6 43.433 N	5.471 E	5 G		0.4	15	NEAR SOUTH COAST OF FRANCE. MD 2.7 (STR).	
15	07 49 48.57 10.20 N	59.91 W	109 ?		0.4	12	NORTH ATLANTIC OCEAN. MD 4.0 (TRN).	
15	08 13 30.3 29.043 N	142.360 E	39 D	4.7	0.8	49	SOUTH OF HONSHU, JAPAN	
15	08 25 43.1 53.635 N	163.727 W	33 N	4.8 4.5	1.1	61	UNIMAK ISLAND REGION	
15	09 00 47.0& 61.958 N	148.371 W	30			37	SOUTHERN ALASKA. <AGS-P>.	
15	09 07 01.1* 21.143 S	68.748 W	120 *	4.6	1.0	13	CHILE-BOLIVIA BORDER REGION	
15	11 24 30.1* 28.005 N	34.575 E	5 G		0.5	7	ARAB REPUBLIC OF EGYPT. MD 4.0 (HLW).	
15	12 17 46.8% 41.558 N	12.617 E	5 G		0.7	8	SOUTHERN ITALY	
15	12 26 07.3 21.253 S	68.878 W	117 D	4.5	1.2	33	CHILE-BOLIVIA BORDER REGION	
15	12 26 15.9 46.529 N	9.606 E	10 G		1.1	37	SWITZERLAND. ML 2.8 (LDG).	
15	12 33 56.07 21.06 S	175.79 E	33 N	4.3	1.6	10	SOUTH OF FIJI ISLANDS	
15	13 22 58.1& 63.655 N	148.782 W	17			37	CENTRAL ALASKA. <AGS-P>. ML 3.2 (PMR).	
15	14 14 07.17 38.69 N	14.81 E	10 G		0.3	4	SICILY	
15	14 18 23.4& 63.094 N	149.620 W	88			33	CENTRAL ALASKA. <AGS-P>.	
15	14 20 37.0* 45.886 N	16.029 E	10 G		0.8	12	YUGOSLAVIA. MD 2.8 (TRI). ML 2.7 (KBA), 2.4 (LUJ). Felt in the Zagreb area.	
15	14 58 45.67 7.49 S	127.70 E	178 ?	4.6	1.4	10	BANDA SEA	
15	17 24 18.67 31.42 S	68.81 W	91 ?		0.6	6	SAN JUAN PROVINCE, ARGENTINA	
15	17 47 12.2& 63.554 N	152.346 W	16			27	CENTRAL ALASKA. <AGS-P>.	
15	18 16 11.27 31.24 S	68.44 W	89 ?		0.3	5	SAN JUAN PROVINCE, ARGENTINA	
15	18 35 19.2% 66.953 N	20.943 E	10 G		1.2	6	SWEDEN. MD 2.6 (BER).	
15	18 39 57.47 51.07 N	174.49 W	15 G	4.6	1.3	14	ANDREANOF ISLANDS, ALEUTIAN IS.	
15	18 45 58.1% 37.129 N	1.488 E	33 N		0.6	6	WESTERN MEDITERRANEAN SEA. mbLg 3.3 (MDD).	
15	19 12 35.87 9.10 S	124.15 E	83 ?	4.1	1.5	8	TIMOR	
15	19 19 52.4& 38.848 N	122.795 W	4			13	NORTHERN CALIFORNIA. <BRK>. ML 4.1 (BRK). Mo=5.8+10+14 Nm (BRK). Felt (IV) at Cobb, Finley and Loch Lamond.	
15	19 25 48.6 25.334 N	96.498 E	33 N	4.0	1.3	21	BURMA	
15	20 00 21.3 26.825 S	26.720 E	5 G		1.4	9	REPUBLIC OF SOUTH AFRICA. mbLg 3.3 (BUL).	
15	20 54 41.07 31.67 S	70.09 W	33 N		1.5	5	CHILE-ARGENTINA BORDER REGION	
15	21 28 37.2 44.286 N	7.355 E	10 G		0.4	11	NORTHERN ITALY. ML 2.1 (GEN).	
15	22 02 41.2 26.784 S	26.704 E	5 G		1.5	10	REPUBLIC OF SOUTH AFRICA. mbLg 3.8 (BUL).	
15	22 19 42.07 4.76 N	126.04 E	182 ?	4.9	1.1	12	TALAUD ISLANDS	
16	00 29 21.0* 17.437 S	70.614 W	126 *	4.8	1.2	10	NEAR COAST OF PERU	
16	01 05 06.57 39.49 N	28.26 E	5 G		1.6	4	TURKEY	
16	01 05 18.17 35.45 N	26.69 E	10 G		1.7	4	CRETE. MD 3.4 (ATH).	
16	01 58 58.6* 16.193 N	97.864 W	33 N		1.5	7	OAXACA, MEXICO	
16	02 01 50.2 13.527 S	77.008 W	32 D	4.9	0.9	44	OFF COAST OF PERU	
16	03 18 58.5% 38.654 N	15.176 E	10 G		0.7	9	SICILY	
16	04 03 23.4* 37.861 N	14.989 E	10 G		0.9	5	SICILY	
16	04 07 08.5 32.494 N	48.501 E	57	4.5	0.9	38	WESTERN IRAN	
16	04 51 29.3* 6.608 S	75.709 W	33 N	4.6	1.4	8	NORTHERN PERU	
16	04 56 30.2 21.741 N	142.993 E	321 *	4.7	1.2	64	MARIANA ISLANDS REGION	
16	05 04 47.9& 60.534 N	152.870 W	143			21	SOUTHERN ALASKA. <AGS-P>.	
16	05 46 13.0& 65.946 N	148.232 W	10			11	ALASKA. <AGS-P>.	
16	05 59 02.17 6.44 N	33.80 W	10 G	5.1 4.1	1.6	6	CENTRAL MID-ATLANTIC RIDGE	
16	06 14 57.27 33.74 N	33.29 W	10 G	4.8	1.6	7	NORTH ATLANTIC RIDGE	
16	06 36 57.0* 5.790 N	32.860 W	10 G	5.0 5.1	0.7	19	CENTRAL MID-ATLANTIC RIDGE	
16	06 41 48.6 37.747 N	14.988 E	10 G		0.9	12	SICILY	
16	06 43 58.8& 58.310 N	152.948 W	67			13	KODIAK ISLAND REGION. <AGS-P>.	
16	07 05 10.4% 38.043 N	14.931 E	10 G		1.1	5	SICILY	
16	07 16 14.47 5.83 S	129.03 E	278 ?	4.3	1.0	7	BANDA SEA	
16	08 51 03.4 6.624 S	75.631 W	33 N	4.9	1.1	26	NORTHERN PERU	
16	09 25 53.9 37.700 N	15.070 E	10 G		0.6	8	SICILY	
16	09 30 04.4* 37.752 N	15.032 E	10 G		1.1	7	SICILY	
16	09 52 06.6 37.649 N	15.087 E	10 G	3.4	1.0	31	SICILY	
16	10 14 49.1 37.695 N	15.036 E	10 G		1.2	9	SICILY	
16	10 15 55.9% 43.393 N	5.421 E	10 G		0.7	12	NEAR SOUTH COAST OF FRANCE. MD 2.5 (STR).	
16	10 18 53.87 37.82 N	14.98 E	10 G		0.6	4	SICILY	
16	11 22 43.6% 37.664 N	15.025 E	10 G		1.0	6	SICILY	
16	11 26 32.6% 37.674 N	15.036 E	10 G		1.1	7	SICILY	
16	11 43 58.3 4.399 N	126.218 E	104 *	5.0	1.1	67	TALAUD ISLANDS	
16	12 14 20.2 18.117 S	178.173 W	544	4.9	1.1	70	FIJI ISLANDS REGION	
16	12 14 41.8& 59.486 N	153.430 W	119	2.9		51	SOUTHERN ALASKA. <AGS-P>.	
16	12 38 50.97 7.68 S	129.51 E	184 ?	4.4	1.3	7	BANDA SEA	
16	13 22 26.1* 42.551 N	24.053 E	10 G		1.1	6	BULGARIA	
16	13 39 13.6 37.661 N	15.064 E	33 N		1.5	27	SICILY	
16	13 46 28.8* 14.999 N	93.619 W	73	4.7	1.0	22	NEAR COAST OF CHIAPAS, MEXICO	
16	14 07 15.6% 19.634 S	133.825 E	10 G		0.3	5	NORTHERN TERRITORY, AUSTRALIA	
16	14 24 13.6% 39.466 N	28.284 E	10 G		1.4	7	TURKEY	
16	15 03 01.6& 58.857 N	153.950 W	156	3.0		17	KODIAK ISLAND REGION. <AGS-P>.	
a 16	15 52 42.6 24.897 N	109.035 W	10 G	5.5 6.1	1.3	136	GULF OF CALIFORNIA. Felt at Culiacan and Los Mochis, Mexico.	
16	15 58 10.2* 22.563 N	120.528 E	33 N	3.5	1.5	5	TAIWAN	
16	16 30 31.3 45.706 N	8.353 E	10 G		0.8	15	NORTHERN ITALY	
16	16 32 44.57 37.50 N	15.06 E	10 G		0.8	4	SICILY	
16	16 33 46.0 23.771 N	123.359 E	33	5.1	0.9	94	SOUTHWESTERN RYUKYU ISLANDS. ML 4.5 (BJI).	

16	16	42	30.5	41.513 N	27.733 E	10 G		1.2	12	TURKEY
16	16	46	39.3*	24.399 N	108.804 W	10 G	4.7	0.8	25	GULF OF CALIFORNIA
16	16	51	00.1%	37.642 N	15.036 E	10 G		1.3	6	SICILY
16	16	51	10.6%	63.404 N	149.611 W	7			34	CENTRAL ALASKA. <AGS-P>. ML 3.1 (PMR).
16	16	54	09.6%	37.680 N	14.744 E	10 G		1.7	5	SICILY
16	17	03	06.4%	37.690 N	14.995 E	10 G		1.3	6	SICILY
16	17	04	40.1	37.628 N	15.041 E	10 G		1.3	6	SICILY
16	17	07	43.4%	37.655 N	15.011 E	10 G		0.9	6	SICILY
16	18	23	54.2*	37.310 N	7.924 W	33 N		1.5	11	PORTUGAL. mblg 3.5 (MDD).
16	18	35	25.7	37.651 N	15.034 E	10 G		0.8	6	SICILY
16	18	43	04.4%	59.941 N	141.323 W	3			4	SOUTHEASTERN ALASKA. <AGS-P>.
16	18	46	05.0	37.704 N	15.031 E	10 G		1.0	18	SICILY
16	18	54	40.7%	37.712 N	15.041 E	10 G		1.0	6	SICILY
16	19	21	56.3	41.326 N	22.741 E	10 G		1.2	10	YUGOSLAVIA. MD 3.4 (ATH). ML 3.0 (SKO).
16	19	26	35.7*	41.485 N	22.717 E	10 G		1.1	6	YUGOSLAVIA. ML 2.5 (SKO).
16	19	30	13.3%	37.664 N	15.029 E	10 G		1.1	6	SICILY
16	19	43	00.3%	61.539 N	150.185 W	43			25	SOUTHERN ALASKA. <AGS-P>.
16	20	34	45.9?	37.65 N	15.02 E	10 G		0.1	4	SICILY
16	20	55	16.8%	0.431 S	77.607 W	10 G		0.7	7	ECUADOR
16	20	56	08.7	31.760 S	69.374 W	128	4.3	0.9	15	SAN JUAN PROVINCE, ARGENTINA
16	21	03	03.2	35.651 N	26.389 E	114 *		1.2	27	CRETE. MD 4.3 (HLW).
16	22	24	33.3*	27.814 S	66.071 E	10 G	4.6	0.7	19	SOUTH INDIAN OCEAN
16	22	32	09.4%	38.629 N	15.662 E	10 G		1.0	7	SICILY
17	00	02	43.9?	24.09 N	122.62 E	33 N		0.5	4	TAIWAN REGION
17	00	41	01.0	28.077 S	26.742 E	5 G	4.5	0.6	10	REPUBLIC OF SOUTH AFRICA
17	01	34	07.3%	37.655 N	14.990 E	10 G		1.2	6	SICILY
17	01	44	30.8?	3.52 S	79.54 W	172 ?		0.4	8	NEAR COAST OF ECUADOR
17	02	01	04.9*	7.147 S	129.572 E	103 ?	5.0	1.6	26	BANDA SEA
17	03	04	06.8?	17.23 N	62.53 W	10 G		0.7	5	LEEWARD ISLANDS. ML 3.1 (FDF).
17	03	55	10.5	44.772 N	7.611 E	10 G		0.9	14	NORTHERN ITALY. ML 2.2 (GEN).
17	04	38	59.2%	54.225 N	161.517 W	23			5	ALASKA PENINSULA. <PAL>.
17	04	49	44.5	40.773 N	19.711 E	10 G		1.4	25	ALBANIA. MD 3.6 (ATH). ML 3.0 (TTG).
17	05	11	58.1*	24.346 N	66.070 E	10 G	4.2	1.6	10	PAKISTAN
17	05	27	11.0*	51.220 N	16.110 E	10 G		1.0	10	POLAND. ML 3.7 (VKA), 3.2 (KBA).
17	05	48	40.4	33.073 S	118.086 E	5 G	4.0	1.2	9	WESTERN AUSTRALIA
17	06	21	15.0	37.112 N	29.065 E	10 G		0.7	10	TURKEY. MD 3.7 (ATH).
17	06	24	14.9%	44.792 N	7.620 E	10 G		0.2	6	NORTHERN ITALY. ML 1.7 (GEN).
17	06	52	29.0%	19.519 S	133.952 E	10 G		1.5	6	NORTHERN TERRITORY, AUSTRALIA
17	08	39	36.8%	47.323 N	122.301 W	7			66	WASHINGTON. <SEA>. ML 2.9 (SEA).
17	09	23	16.3?	7.08 S	130.08 E	110 G	4.6	1.3	7	TANIMBAR ISLANDS REGION
17	10	45	54.1*	19.707 N	71.250 W	33 N	4.3	1.5	9	DOMINICAN REPUBLIC REGION
17	11	10	50.3%	60.176 N	152.857 W	116			41	SOUTHERN ALASKA. <AGS-P>.
17	11	14	18.3?	15.98 S	168.06 E	249 ?	4.6	1.3	23	VANUATU ISLANDS
17	11	51	52.7?	31.29 S	68.63 W	90 ?		0.1	5	SAN JUAN PROVINCE, ARGENTINA
17	12	15	35.8?	30.35 S	178.13 W	191 ?	4.8	1.2	20	KERMADEC ISLANDS
17	12	20	14.1	4.398 S	144.068 E	123 D	5.4	0.8	144	NEAR N COAST OF PAPUA NEW GUINEA
17	12	48	02.2*	47.295 S	13.344 W	10 G	5.2 4.7	1.1	48	SOUTH ATLANTIC RIDGE
17	15	01	01.6*	38.260 N	75.578 E	114 ?	4.1	0.3	11	SOUTHERN XINJIANG, CHINA
17	16	00	36.4*	33.434 S	70.545 W	80 ?		1.0	11	CHILE-ARGENTINA BORDER REGION
17	16	03	39.9*	41.428 N	19.850 E	10 G		1.0	5	ALBANIA. ML 2.1 (SKO).
17	16	06	33.6?	20.25 S	169.08 E	77 ?	4.8	1.3	21	VANUATU ISLANDS
17	16	20	57.0%	41.766 N	12.733 E	10 G		0.3	5	SOUTHERN ITALY
17	16	53	37.5*	8.251 S	159.663 E	33 N	4.1	0.3	5	SOLOMON ISLANDS
17	17	26	38.4?	41.83 N	12.79 E	10 G		0.7	4	SOUTHERN ITALY
17	17	52	42.0*	36.143 N	27.158 E	10 G		1.0	5	DODECANESE ISLANDS. MD 3.2 (ATH).
17	17	54	46.3	36.195 N	27.169 E	10 G		1.4	21	DODECANESE ISLANDS. ML 3.9 (ATH).
17	17	56	38.7%	35.988 N	27.315 E	33 N		0.7	5	DODECANESE ISLANDS. MD 3.4 (ATH).
17	20	08	58.4	44.156 N	16.655 E	10 G		1.3	24	YUGOSLAVIA. ML 2.9 (KBA), 2.9 (LJU), 2.7 (TTG).
17	20	35	15.2%	41.684 N	12.746 E	10 G		0.8	11	SOUTHERN ITALY
17	20	51	57.3	41.777 N	12.598 E	10 G		1.0	11	SOUTHERN ITALY
17	21	21	41.3	43.799 N	7.528 E	10 G		1.0	17	NEAR SOUTH COAST OF FRANCE. ML 2.7 (LDG). MD 2.2 (STR).
17	23	01	36.3%	35.250 N	116.710 W	11			11	CENTRAL CALIFORNIA. <PAS-P>. ML 3.3 (PAS).
18	00	45	16.8*	9.634 N	124.403 E	79 *	4.6	0.9	17	MINDANAO, PHILIPPINE ISLANDS
18	00	49	18.6%	19.307 N	99.190 W	10 G		0.8	6	CENTRAL MEXICO
18	01	06	23.5%	46.624 N	0.477 E	5 G		1.3	9	FRANCE. ML 2.4 (LDG).
18	01	24	33.2%	39.735 N	16.660 E	5 G		1.0	8	SOUTHERN ITALY
18	02	09	25.9?	2.59 N	128.41 E	196 ?	4.6	0.7	7	HALMAHERA
18	02	12	36.6%	46.744 N	0.408 E	5 G		1.6	7	FRANCE. ML 2.3 (LDG).
18	02	46	57.1*	10.958 N	65.631 W	10 G	4.2	1.0	10	NEAR COAST OF VENEZUELA. MD 4.4 (TRN).
18	03	55	26.9	11.385 S	165.826 E	33 N	4.9 4.6	1.0	35	SANTA CRUZ ISLANDS
18	04	21	45.2	5.198 S	129.447 E	234	4.9	0.9	28	BANDA SEA
18	04	29	33.3?	16.17 N	97.96 W	33 N		0.9	5	OAXACA, MEXICO
18	04	30	12.4%	61.134 N	151.114 W	51			41	SOUTHERN ALASKA. <AGS-P>.
18	05	42	32.1?	20.49 N	96.23 W	33 N		0.7	9	VERA CRUZ, MEXICO
18	06	57	13.9*	19.459 N	65.275 W	33 N		0.8	10	PUERTO RICO REGION
18	07	28	42.4*	30.335 N	68.339 E	10 G	4.4	1.6	14	PAKISTAN
18	08	21	43.8?	33.09 S	71.61 W	10 G		0.4	7	NEAR COAST OF CENTRAL CHILE
18	08	41	21.6?	16.84 N	99.88 W	10 G		1.6	7	NEAR COAST OF GUERRERO, MEXICO
18	08	48	25.3%	38.541 N	23.507 E	10 G		0.3	5	GREECE. ML 2.7 (ATH).
18	08	53	18.7%	39.212 N	27.847 E	10 G		0.6	7	TURKEY
18	09	19	14.3%	44.787 N	7.608 E	10 G		0.3	10	NORTHERN ITALY. ML 2.0 (GEN).
18	09	44	14.4%	59.189 N	145.160 W	10 G			19	GULF OF ALASKA. <AGS-P>.
18	09	54	31.1	46.867 N	9.841 E	10 G		1.1	76	SWITZERLAND. ML 3.6 (FUR), 3.4 (KBA), 3.4 (LDG), 3.4 (GRF).
18	09	58	48.2	46.848 N	9.795 E	10 G		1.5	24	SWITZERLAND. ML 2.9 (LDG), 2.8 (FUR), 2.7 (GRF), 2.6 (KBA).
18	10	19	26.7%	39.146 N	27.493 E	10 G		0.6	5	TURKEY
18	10	56	31.4%	39.460 N	28.301 E	10 G		0.4	7	TURKEY
18	12	23	28.9?	31.40 S	68.61 W	100 G		0.5	4	SAN JUAN PROVINCE, ARGENTINA
18	12	50	56.9%	37.791 N	14.953 E	10 G		0.8	13	SICILY
18	13	03	36.5?	37.84 N	15.40 E	10 G		0.3	4	SICILY
18	13	19	20.9*	50.585 N	13.678 E	10 G		0.9	5	CZECHOSLOVAKIA. ML 2.6 (GRF).
18	13	25	25.1*	22.235 S	174.088 E	21 D	4.9 4.5	1.3	42	LOYALTY ISLANDS REGION

18	13	30	18.7*	37.671 N	15.045 E	10 G		0.4	5	SICILY
18	13	33	09.7?	37.69 N	15.05 E	10 G		0.1	4	SICILY
18	13	37	07.7?	37.686 N	15.046 E	10 G		0.7	5	SICILY
18	13	56	38.1&	34.150 N	117.710 W	9		15	SOUTHERN CALIFORNIA. <PAS-P>. ML 3.2 (PAS).	
18	14	04	26.5%	37.666 N	15.075 E	10 G		0.7	5	SICILY
18	15	03	46.4?	40.50 N	2.82 W	10 G		0.2	4	SPAIN. mbLg 2.5 (MDD).
18	15	06	31.1?	14.34 N	61.24 W	135 ?		0.6	10	WINDWARD ISLANDS
18	15	46	41.0?	40.79 N	14.14 E	10 G		1.0	4	SOUTHERN ITALY
18	16	22	33.0&	36.720 N	91.490 W	5 G		15	MISSOURI-ARKANSAS BORDER REGION. <SLM-P>. MD 3.0 (TEIC). Felt (IV) at Alton, Missouri.	
18	16	25	45.6%	44.651 N	8.145 E	10 G		0.5	9	NORTHERN ITALY. ML 2.5 (GEN).
18	16	48	58.2	6.245 N	125.540 E	61 D	5.0	1.1	34	MINDANAO, PHILIPPINE ISLANDS
18	17	08	20.5*	16.749 N	61.204 W	33 N		0.4	7	LEEWARD ISLANDS. ML 2.9 (FDF).
18	19	35	03.9*	13.697 N	144.551 E	99	4.4	1.0	22	MARIANA ISLANDS. Felt (III) on Guam.
18	20	03	46.5?	45.86 N	154.46 E	33 N	4.6	1.6	10	KURIL ISLANDS REGION
18	21	41	14.8?	35.33 N	32.91 E	10 G		1.0	6	CYPRUS
18	21	45	40.2?	33.08 S	72.11 W	10 G		0.4	8	OFF COAST OF CENTRAL CHILE
18	22	13	53.8	38.975 N	15.594 E	282	3.5	0.9	29	SICILY
18	22	30	07.6*	48.688 S	106.802 E	10 G	5.2 5.2	1.5	59	SOUTHEAST INDIAN RISE
18	23	19	29.7	20.286 S	66.740 E	20 D	5.8 5.4	0.9	361	MASCARENE ISLANDS REGION
19	00	05	00.4&	37.927 N	121.998 W	10		15	CENTRAL CALIFORNIA. <BRK>. ML 2.8 (BRK). Mo=5.5*10**13 Nm (BRK). Felt at Orinda, Pleasant Hill and Walnut Creek.	
19	00	22	03.7*	25.375 N	125.310 E	33 N	4.1	1.0	10	SOUTHWESTERN RYUKYU ISLANDS
19	00	38	26.8	43.007 N	0.395 W	10 G		1.1	11	PYRENEES. ML 2.4 (LDG). Felt (III) at Asson, France.
19	00	43	04.5&	40.288 N	124.932 W	4		6	NEAR COAST OF NORTHERN CALIF. <BRK>. ML 3.2 (BRK).	
19	01	12	19.7	1.693 S	77.909 W	162	4.3	1.2	31	ECUADOR
19	02	03	52.1%	38.376 N	24.436 E	10 G		0.7	5	AEGEAN SEA. ML 2.8 (ATH).
19	02	30	59.9&	55.294 N	162.532 W	163	3.3	6	ALASKA PENINSULA. <PAL>.	
19	02	36	26.6	39.399 N	25.555 E	10 G		1.1	25	AEGEAN SEA. ML 3.4 (ATH).
19	04	02	31.8	32.572 S	71.341 W	33 N		0.1	10	NEAR COAST OF CENTRAL CHILE
19	04	32	40.2?	33.96 S	70.94 W	72 ?		0.1	6	CHILE-ARGENTINA BORDER REGION
19	04	58	05.9?	51.45 N	16.66 E	10 G		0.9	6	POLAND. ML 3.4 (GRF).
19	04	59	43.5	25.027 S	68.730 W	122 D	5.0	1.0	98	CHILE-ARGENTINA BORDER REGION. Felt (III) in the Antofagosto area, Chile.
19	05	55	34.0*	37.736 N	21.304 E	33 N		1.6	7	SOUTHERN GREECE. MD 3.2 (ATH).
19	06	14	36.1%	37.737 N	21.374 E	10 G		1.6	5	SOUTHERN GREECE. MD 2.6 (ATH).
19	07	15	15.9?	31.23 S	68.37 W	99 ?		0.6	5	SAN JUAN PROVINCE, ARGENTINA
19	07	23	05.6	8.210 S	121.559 E	40 D	5.0 4.5	1.2	45	FLORES ISLAND REGION
19	07	58	55.0?	12.42 N	145.41 E	33 N	3.9	1.5	6	SOUTH OF MARIANA ISLANDS
19	08	08	38.7&	61.284 N	150.702 W	57		24	SOUTHERN ALASKA. <AGS-P>.	
19	09	08	40.6?	51.61 N	16.38 E	10 G		0.4	4	POLAND
19	10	19	19.4?	39.07 N	21.94 E	33 N		0.2	4	GREECE
19	10	36	17.0%	39.114 N	27.611 E	10 G		0.9	5	TURKEY
19	10	46	31.9	63.883 N	22.074 W	10 G	4.8 4.5	1.1	111	ICELAND REGION. Felt in the Reykjavik area.
19	11	21	09.9%	40.079 N	15.911 E	10 G		0.5	6	SOUTHERN ITALY
19	11	41	18.2?	15.87 N	61.04 W	33 N		0.4	6	LEEWARD ISLANDS. ML 2.3 (FDF).
19	12	50	48.9	0.097 S	122.903 E	169	4.6	0.8	18	MINAHASSA PENINSULA
19	13	13	27.7%	32.864 S	71.367 W	10 G		0.8	8	NEAR COAST OF CENTRAL CHILE
19	13	15	02.1	2.695 N	79.682 W	33 N	4.7 4.1	1.2	50	SOUTH OF PANAMA
19	14	20	56.0*	12.735 N	145.571 E	49 *	4.6	1.2	18	SOUTH OF MARIANA ISLANDS
19	14	46	15.8	44.410 N	7.298 E	11		0.5	18	NORTHERN ITALY. ML 2.8 (GEN).
19	14	49	40.9%	44.406 N	7.329 E	10 G		0.0	6	NORTHERN ITALY. ML 2.0 (GEN).
19	15	12	02.2%	44.388 N	7.299 E	10 G		0.3	7	NORTHERN ITALY. ML 2.2 (GEN).
19	16	16	42.4%	44.382 N	7.281 E	10 G		0.3	6	NORTHERN ITALY. ML 1.8 (GEN).
19	16	42	05.1?	31.00 S	175.64 W	33 N	4.8 4.3	1.1	13	KERMADEC ISLANDS REGION
19	16	43	07.0?	14.50 N	60.92 W	10 G		0.0	4	WINDWARD ISLANDS. ML 1.8 (FDF).
19	17	22	56.1%	11.032 N	61.109 W	10 G		0.1	5	WINDWARD ISLANDS. MD 2.5 (TRN).
19	20	17	34.9%	40.633 N	27.444 E	10 G		0.4	6	TURKEY
19	21	15	08.2&	63.058 N	148.558 W	79		35	CENTRAL ALASKA. <AGS-P>.	
19	22	08	39.8	5.593 S	149.444 E	147 D	5.1	1.2	39	NEW BRITAIN REGION
19	23	05	17.1?	38.31 N	15.12 E	10 G		0.7	4	SICILY
19	23	06	55.1?	37.95 N	15.19 E	10 G		0.4	4	SICILY
19	23	32	13.5?	44.35 N	7.33 E	10 G		0.1	4	NORTHERN ITALY. ML 1.8 (GEN).
19	23	36	08.1*	26.333 S	178.313 E	602 ?	4.8	0.9	33	SOUTH OF FIJI ISLANDS
19	23	55	49.1	15.275 N	91.879 W	145 D	4.5	1.2	49	MEXICO-GUATEMALA BORDER REGION
19	23	58	25.3&	36.878 N	121.407 W	8		14	CENTRAL CALIFORNIA. <BRK>. ML 2.5 (BRK).	
20	00	14	35.7?	31.38 S	68.69 W	97 ?		1.2	11	SAN JUAN PROVINCE, ARGENTINA
20	01	12	19.7	27.220 N	141.605 E	47 G	5.8 5.0	0.9	318	BONIN ISLANDS REGION. Ms 5.3 (BRK). Depth from broadband displacement seismograms.
20	06	16	22.3%	39.023 N	15.857 E	220 ?		0.6	12	SOUTHERN ITALY
20	06	39	27.1?	18.82 S	178.28 W	522 ?	4.3	1.4	14	FIJI ISLANDS REGION
20	06	44	18.0%	44.387 N	7.278 E	10 G		0.2	8	NORTHERN ITALY. ML 2.0 (GEN).
20	07	07	06.5?	24.50 N	109.10 W	10 G	4.3	1.0	12	GULF OF CALIFORNIA
20	07	51	55.9	15.797 N	46.797 W	10 G	4.8 3.8	1.0	85	NORTH ATLANTIC RIDGE
20	07	53	50.5	41.151 N	20.368 E	10 G		1.0	15	ALBANIA. MD 3.0 (ATH). ML 2.9 (SKO).
20	08	08	57.0?	22.62 N	120.50 E	47 *	3.8	1.5	6	TAIWAN
20	09	15	00.6%	39.458 N	28.325 E	10 G		0.8	6	TURKEY
20	09	55	57.6?	39.47 N	28.34 E	10 G		0.4	5	TURKEY
20	10	23	54.2%	11.055 N	61.907 W	33 N		1.0	7	WINDWARD ISLANDS. MD 3.5 (TRN).
20	10	50	47.0	8.330 N	103.368 W	10 G	4.8	1.0	24	OFF COAST OF MEXICO
20	10	55	50.3*	34.732 N	121.058 W	10 G		0.7	9	OFF COAST OF CALIFORNIA. ML 2.6 (BRK).
20	11	25	36.0*	6.976 N	73.277 W	155	4.2	0.3	7	NORTHERN COLOMBIA
20	11	52	28.5	42.168 N	15.687 E	10 G		1.3	23	ADRIATIC SEA
20	11	54	34.2	18.263 N	61.742 W	33 N	4.5	1.1	26	LEEWARD ISLANDS. ML 4.1 (FDF). MD 3.7 (TRN).
20	13	03	47.0*	22.333 S	69.865 W	61 *	4.7	1.4	19	NORTHERN CHILE. Felt (IV) in the Pedro de Valdivia-Tocopilla area.
20	13	31	22.1&	37.928 N	122.002 W	10		11	CENTRAL CALIFORNIA. <BRK>. ML 1.9 (BRK). Felt at Concord.	
20	13	33	39.6*	5.341 S	152.893 E	47 ?	4.4	1.2	17	NEW BRITAIN REGION
20	14	03	03.8%	41.155 N	28.685 E	10 G		0.8	9	TURKEY
20	14	33	26.8?	39.25 N	27.80 E	10 G		1.0	4	TURKEY
20	15	24	59.1?	31.68 S	69.79 W	33 N		0.9	5	SAN JUAN PROVINCE, ARGENTINA



20	15	35	15.2	39.278	N	138.735	E	33	N	4.7	0.8	28	EASTERN SEA OF JAPAN
20	16	28	08.9*	38.247	N	15.124	E	10	G		0.5	5	SICILY
20	16	44	55.4?	27.56	S	175.48	W	33	N	4.8	0.9	9	KERMADEC ISLANDS REGION
20	17	11	39.7	5.561	S	129.633	E	34	D	5.1 4.3	1.2	54	BANDA SEA
20	17	41	48.6?	33.51	S	72.15	W	25			1.2	14	OFF COAST OF CENTRAL CHILE. Felt (III) at Valparaiso.
20	17	42	15.7*	35.002	N	26.541	E	10	G		1.4	8	CRETE. MD 3.9 (ATH).
20	18	38	45.7	11.675	S	76.100	W	96	*	4.5	1.2	29	PERU. Felt (IV) at Lima.
a 20	18	55	22.3*	45.846	S	96.229	E	10	G	5.1 5.1	1.1	29	SOUTHEAST INDIAN RISE
20	18	58	37.2?	19.97	S	177.65	W	550	*	4.7	1.0	24	FIJI ISLANDS REGION
20	19	59	57.1?	33.12	S	70.27	W	10	G		0.2	5	CHILE-ARGENTINA BORDER REGION
20	20	43	10.8?	34.88	N	23.55	E	10	G		1.0	5	CRETE. MD 3.5 (ATH).
20	20	57	09.9	36.420	N	26.513	E	165	*		0.8	14	DODECANESE ISLANDS
20	21	08	17.6	43.883	N	7.843	E	10	G		0.6	19	NEAR SOUTH COAST OF FRANCE. ML 2.3 (LDG), 2.1 (GEN).
20	21	09	20.7%	18.489	S	124.311	E	33	N		1.6	8	WESTERN AUSTRALIA
20	21	47	57.1*	38.709	N	74.098	E	33	N	4.2	1.2	13	TAJIK-XINJIANG BORDER REGION
20	21	57	50.2?	1.37	N	126.47	E	33	N	4.6	1.2	6	MOLUCCA PASSAGE
a 20	22	04	48.4	29.496	N	131.595	E	31	D	5.6 5.1	0.9	326	RYUKYU ISLANDS REGION
20	22	28	07.3	43.439	N	5.471	E	5	G		0.4	14	NEAR SOUTH COAST OF FRANCE. MD 2.5 (STR).
20	22	44	11.2	60.391	N	147.702	W	33	N	3.3	1.2	13	SOUTHERN ALASKA. ML 3.9 (PMR). Felt (IV) at Whittier.
20	23	19	09.8	42.651	N	16.159	E	10	G		1.2	11	ADRIATIC SEA
20	23	54	37.8%	63.459	N	151.175	W	2				26	CENTRAL ALASKA. <AGS-P>.
21	00	00	55.6%	42.700	N	19.004	E	10	G		0.6	7	YUGOSLAVIA. ML 2.0 (TTG).
21	01	27	34.6?	44.32	N	6.66	E	10	G		0.6	4	FRANCE. ML 2.1 (GEN).
21	01	29	49.7	44.490	N	7.098	E	10	G		0.3	30	NORTHERN ITALY. ML 3.0 (GEN), 2.7 (LDG).
21	01	35	44.1?	6.74	S	146.81	E	33	N	3.9	1.3	5	EAST PAPUA NEW GUINEA REGION
21	02	12	26.1*	19.625	S	175.469	W	33	N	4.8 5.2	1.0	25	TONGA ISLANDS
21	03	37	23.1*	32.114	S	71.542	W	10	G		0.9	8	NEAR COAST OF CENTRAL CHILE
21	04	13	31.1%	38.720	N	28.965	E	10	G		1.0	6	TURKEY
21	06	08	16.2%	33.986	S	71.397	W	33	N		0.4	8	NEAR COAST OF CENTRAL CHILE
21	06	20	30.4	42.445	N	19.185	E	14			1.1	13	YUGOSLAVIA. ML 2.7 (TTG).
21	06	24	33.5%	63.008	N	149.365	W	80				28	CENTRAL ALASKA. <AGS-P>.
21	06	54	26.2%	17.103	N	61.615	W	10	G		0.8	6	LEEWARD ISLANDS. ML 3.2 (FDF).
21	08	40	25.4?	38.96	N	23.87	E	10	G		0.2	4	GREECE. ML 2.1 (THE).
21	09	03	11.8?	39.28	N	29.31	E	10	G		1.5	4	TURKEY
21	09	09	46.2	37.928	N	27.272	E	10	G		1.3	20	TURKEY. MD 3.6 (ATH).
21	09	15	22.3?	42.71	N	19.11	E	10	G		0.2	4	YUGOSLAVIA. MD 2.0 (TTG).
21	09	16	03.1?	5.33	S	151.90	E	60	*	4.3	0.7	9	NEW BRITAIN REGION
21	09	39	35.8%	59.371	N	148.122	W	12		2.8		33	KENAI PENINSULA, ALASKA. <AGS-P>. ML 3.0 (PMR).
21	09	46	40.9?	19.47	N	66.16	W	10	G		0.3	5	PUERTO RICO REGION
21	09	52	25.7*	37.850	N	27.143	E	10	G		1.6	6	TURKEY. MD 3.3 (ATH).
21	09	56	40.0?	37.07	N	43.76	E	10	G		0.6	4	TURKEY
21	10	14	45.2*	39.401	N	143.502	E	33	N	4.2	0.7	10	OFF EAST COAST OF HONSHU, JAPAN
21	10	34	51.7?	37.05	S	176.90	E	33	N		1.1	8	NORTH ISLAND, NEW ZEALAND
21	10	48	31.5%	38.612	N	0.495	W	10	G		0.4	5	SPAIN. mbLg 2.9 (MDD). Felt (III) at Alcay and Beniloba.
21	10	59	32.3?	34.40	N	26.92	E	10	G		1.4	7	CRETE. MD 3.6 (ATH).
21	11	38	15.7%	40.352	N	124.502	W	16				14	NEAR COAST OF NORTHERN CALIF. <BRK>. ML 3.4 (BRK).
21	11	42	05.9	35.954	N	27.280	E	10	G		1.1	9	DODECANESE ISLANDS. MD 3.5 (ATH).
21	11	57	32.6%	40.625	N	22.504	E	10	G		1.0	5	GREECE. ML 1.7 (THE).
21	12	24	13.7%	41.904	N	14.807	E	10	G		0.5	5	SOUTHERN ITALY
21	12	24	33.3%	58.544	N	142.697	W	10	G			14	GULF OF ALASKA. <AGS-P>.
21	13	25	02.5	42.505	N	24.115	E	10	G		1.5	12	BULGARIA. ML 2.9 (THE).
21	13	37	22.8	25.194	S	129.531	E	10	G		1.4	12	NORTHERN TERRITORY, AUSTRALIA
21	14	22	24.7	40.081	N	19.907	E	10	G		1.0	29	ALBANIA. ML 3.2 (ATH), 3.2 (THE).
21	15	51	46.9%	63.379	N	151.396	W	11		3.2		43	CENTRAL ALASKA. <AGS-P>. ML 3.8 (PMR).
21	16	01	02.0%	40.507	N	27.493	E	10	G		0.6	5	TURKEY
f 21	16	46	05.4	31.092	S	179.093	W	145	G	6.2	1.1	480	KERMADEC ISLANDS REGION. mb 6.2 (BRK). Mo=2.0*10**19 Nm (PPT). Felt on Raoul Island. Felt on North Island, New Zealand from the Bay of Plenty region to Wellington. Two events about 1.8 seconds apart. Depth from broadband displacement seismograms, based on second event.
21	17	20	05.6	38.305	N	28.818	E	8			1.3	14	TURKEY
21	18	26	19.5	29.996	N	68.235	E	25	D	4.9	1.0	109	PAKISTAN
21	18	30	33.7*	29.927	N	68.311	E	33	N	4.7	0.9	11	PAKISTAN
21	18	51	09.5	10.825	N	65.389	W	24	D	5.4 4.6	1.0	145	NEAR COAST OF VENEZUELA. MD 5.4 (CAR), 5.4 (TRN). Felt at Caracas and along the north coast of Venezuela as far east as the state of Sucre.
21	19	50	21.7?	30.19	N	68.88	E	33	N	4.1	1.4	11	PAKISTAN
21	20	09	00.3?	8.95	S	127.77	E	110	?	4.0	1.1	6	TIMOR
21	20	23	21.3%	46.980	N	0.230	E	13			1.5	13	FRANCE. ML 2.7 (LDG).
21	21	31	47.7	38.753	N	12.918	E	10	G		1.2	16	SICILY
21	21	40	07.5?	35.16	S	71.25	W	91	?		0.5	11	CENTRAL CHILE
21	21	45	55.3%	44.787	N	7.616	E	10	G		0.2	5	NORTHERN ITALY. ML 2.1 (GEN).
21	21	50	53.9%	32.181	N	35.462	E	10	G		0.1	6	DEAD SEA REGION
o 21	22	05	55.6	5.503	S	152.007	E	61		5.3	0.9	63	NEW BRITAIN REGION
21	22	42	17.0	33.468	N	54.360	E	33	N	4.7	1.2	104	IRAN
21	22	43	54.6?	44.77	N	7.61	E	10	G		0.5	4	NORTHERN ITALY. ML 2.0 (GEN).
21	23	04	24.3	46.179	N	12.324	E	10	G		0.9	10	NORTHERN ITALY. ML 2.6 (KBA). MD 2.5 (TRI).
21	23	08	04.9*	38.398	N	21.715	E	10	G		1.0	5	GREECE. MD 2.4 (ATH).
a 22	00	00	16.4	36.919	S	177.197	E	225		5.8	1.1	273	OFF E. COAST OF N. ISLAND, N.Z. Felt at Gisborne, Lower Hutt, Palmerston North, Napier and Wellington.
22	00	28	41.7	40.352	N	20.269	E	10	G		1.2	10	GREECE-ALBANIA BORDER REGION. ML 2.3 (SKO), 2.0 (THE). MD 2.8 (ATH).
a 22	02	11	50.6	8.473	S	158.891	E	116	D	5.5	0.9	223	SOLOMON ISLANDS
22	02	46	06.5*	29.993	N	68.390	E	33	N	4.6	1.1	14	PAKISTAN
22	03	56	03.9?	24.32	S	67.15	W	187	?	4.0	1.1	7	CHILE-ARGENTINA BORDER REGION
22	04	38	42.7%	40.729	N	27.393	E	10	G		0.6	5	TURKEY
22	05	12	15.0	44.349	N	7.292	E	14			0.4	24	NORTHERN ITALY. ML 2.6 (GEN), 2.6 (LDG).
22	05	14	06.9%	15.476	N	62.782	W	24			0.9	8	LEEWARD ISLANDS. ML 3.0 (FDF).
22	07	15	49.7	41.916	N	23.059	E	10	G		0.8	25	GREECE-BULGARIA BORDER REGION. ML 3.1 (SKO), 3.3 (ATH).
22	07	26	14.1	38.385	N	21.868	E	9		3.8	1.4	38	GREECE. ML 3.6 (THE), 3.5 (ATH).
22	07	59	58.8?	33.80	S	71.75	W	23	*		0.1	8	NEAR COAST OF CENTRAL CHILE

22	09 00 31.0*	39.518 N	22.075 E	10 G	0.8	6	GREECE. ML 2.1 (THE).
22	09 12 08.3*	28.843 S	72.390 W	33 N	0.8	12	OFF COAST OF CENTRAL CHILE
22	09 54 14.77	39.11 N	27.61 E	10 G	0.6	4	TURKEY
22	10 21 39.1%	46.645 N	9.871 E	10 G	0.2	5	SWITZERLAND
22	10 59 53.8	37.633 N	15.097 E	10 G	1.3	22	SICILY
22	11 08 32.27	22.77 N	121.13 E	10 G	1.2	4	TAIWAN REGION
22	11 37 22.9%	37.655 N	15.032 E	10 G	0.4	5	SICILY
22	11 40 07.6%	45.450 N	26.870 E	33 N	1.4	5	ROMANIA
22	11 45 21.3%	58.393 N	152.979 W	79	3.1	26	KODIAK ISLAND REGION. <AGS-P>.
22	12 36 17.6%	40.416 N	27.920 E	10 G	0.9	7	TURKEY
22	13 19 48.37	42.29 N	23.93 E	10 G	0.1	5	BULGARIA. ML 2.6 (THE).
22	13 22 14.4%	63.187 N	149.372 W	88		31	CENTRAL ALASKA. <AGS-P>.
22	13 26 09.9	40.257 N	28.940 E	10 G	1.3	10	TURKEY
22	13 27 44.9	7.816 N	126.747 E	76 *	4.9	1.2	75 MINDANAO, PHILIPPINE ISLANDS
22	13 48 29.0	44.532 N	10.394 E	10 G	1.1	21	NORTHERN ITALY. ML 3.0 (LDG).
22	15 09 37.4*	34.967 N	26.744 E	10 G	1.3	17	CRETE. ML 4.0 (CSS).
22	15 50 19.1*	50.716 N	177.855 W	33 N	4.0	1.0	14 ANDREANOF ISLANDS, ALEUTIAN IS.
22	16 11 06.77	44.34 N	7.32 E	10 G	0.1	4	NORTHERN ITALY. ML 1.5 (GEN).
22	16 27 38.2*	36.718 N	70.820 E	154 ?	4.2	1.1	15 HINDU KUSH REGION
22	16 33 13.1*	23.090 S	66.172 W	249 ?	4.5	1.3	13 JUJUY PROVINCE, ARGENTINA
22	17 10 14.3%	43.080 N	0.441 W	10 G	0.2	6	PYRENEES. MD 1.1 (STR).
22	17 53 25.7*	28.170 N	57.473 E	33 N	4.4	1.0	17 SOUTHERN IRAN
22	18 21 22.5	40.121 N	29.617 E	10 G	1.1	9	TURKEY
22	18 23 40.6	15.979 N	97.860 W	33 N	4.9	1.0	52 NEAR COAST OF OAXACA, MEXICO
22	18 56 57.07	10.96 N	62.11 W	33 N		1.0	9 NEAR COAST OF VENEZUELA
22	19 22 10.4%	62.874 N	150.814 W	99			20 CENTRAL ALASKA. <AGS-P>.
23	01 36 51.2	4.210 S	102.302 E	63 *	5.0 4.5	1.1	83 SOUTHERN SUMATERA
23	02 26 32.3*	45.895 N	15.957 E	10 G	1.1	5	YUGOSLAVIA. MD 2.3 (LJU). ML 1.6 (KBA).
23	02 59 18.1%	60.187 N	153.014 W	126		20	SOUTHERN ALASKA. <AGS-P>.
23	03 14 07.0	39.038 N	22.478 E	5 G	1.0	10	GREECE. ML 2.4 (THE).
23	03 16 00.6	36.402 N	9.833 W	100 *	0.8	35	WEST OF GIBRALTAR. MD 3.6 (RBA).
23	03 33 52.8	39.048 N	23.545 E	10 G	0.9	11	AEGEAN SEA. ML 2.4 (THE).
23	03 58 21.0*	3.171 S	130.182 E	33 N	4.1 3.7	1.1	9 CERAM
23	04 17 43.5	43.263 N	4.456 W	10 G	0.9	21	SPAIN. mbLg 3.5 (MDD). ML 3.4 (LDG). Felt (iii) at Cerverea.
23	04 39 03.27	53.64 N	164.71 W	33 N	3.6	1.2	6 UNIMAK ISLAND REGION
23	05 37 37.6	29.725 N	51.320 E	33 N	4.8	0.9	16 SOUTHERN IRAN
23	05 42 41.4*	39.032 N	20.093 E	10 G	1.1	6	GREECE-ALBANIA BORDER REGION
23	07 23 12.67	37.50 N	22.15 E	10 G	1.2	4	SOUTHERN GREECE. MD 2.8 (ATH).
23	07 56 56.8	5.709 S	149.117 E	148	4.9	0.7	30 NEW BRITAIN REGION
23	08 25 09.8%	40.529 N	23.675 E	10 G	0.3	6	GREECE. ML 2.0 (THE).
23	09 33 01.1%	41.800 N	12.700 E	10 G	1.0	5	SOUTHERN ITALY
23	09 40 33.9*	6.207 S	151.876 E	54 ?	4.5	1.5	9 NEW BRITAIN REGION
23	10 05 36.8%	45.109 N	28.480 E	10 G	1.2	6	SOUTHWESTERN USSR
23	10 19 55.9*	33.736 N	25.351 E	10 G	1.0	11	EASTERN MEDITERRANEAN SEA
23	11 37 20.9	26.255 S	70.636 W	35 *	4.6	1.0	19 NEAR COAST OF NORTHERN CHILE
23	11 43 27.9*	60.023 S	26.572 W	33 N	5.1 3.9	1.1	13 SOUTH SANDWICH ISLANDS REGION
o 23	13 35 37.4*	49.235 S	122.283 E	10 G	5.0 5.4	1.3	39 SOUTH OF AUSTRALIA
23	13 50 19.0%	36.855 N	121.618 W	7		16	CENTRAL CALIFORNIA. <BRK>. ML 3.7 (BRK). Ma=8.9*10**14 Nm (BRK). Felt (iv) at Aramas, Gilray, Morgan Hill and San Martin. Felt (iii) at Carmel Valley, Castroville, Hollister, Moss Landing, Salinas, San Juan Bautista and Watsonville.
23	13 50 43.1	16.044 N	96.361 W	50 *	4.9	1.0	39 OAXACA, MEXICO. Felt in the state of Oaxaca.
o 23	14 07 15.4	16.132 N	96.278 W	63	5.2	0.9	122 OAXACA, MEXICO. Felt in the state of Oaxaca.
23	14 39 04.7	45.552 S	96.137 E	10 G	5.1 4.7	0.9	34 SOUTHEAST INDIAN RISE
23	16 45 24.97	17.82 N	66.71 W	33 N		0.7	5 PUERTO RICO REGION
23	18 47 43.0	41.637 N	19.638 E	9		0.9	23 ALBANIA. ML 2.8 (TTG).
23	19 46 44.7	39.312 N	25.505 E	10 G	3.8	0.9	62 AEGEAN SEA. ML 3.9 (THE), 3.7 (ATH).
23	19 49 06.9	39.420 N	25.532 E	10 G		1.3	11 AEGEAN SEA. MD 3.5 (ATH).
23	20 09 50.7*	36.537 N	141.558 E	33 N	4.7	1.0	26 NEAR EAST COAST OF HONSHU, JAPAN
23	20 31 38.3*	32.706 S	71.623 W	20 *		0.8	13 NEAR COAST OF CENTRAL CHILE
23	21 00 50.7	39.120 N	20.059 E	10 G		1.4	16 GREECE-ALBANIA BORDER REGION. ML 3.0 (THE). MD 3.1 (ATH).
o 23	21 06 03.0	43.718 N	147.756 E	33 D	5.2 4.7	0.9	203 KURIL ISLANDS
23	21 07 16.6%	63.516 N	152.365 W	6		21	CENTRAL ALASKA. <AGS-P>.
23	21 37 02.17	41.74 N	12.57 E	10 G		0.6	4 SOUTHERN ITALY
23	21 37 36.8%	35.056 N	25.819 E	10 G		1.6	5 CRETE. MD 3.6 (ATH).
23	23 28 12.6*	39.007 N	19.941 E	10 G		1.3	5 GREECE-ALBANIA BORDER REGION. MD 2.5 (ATH).
23	23 32 28.17	45.96 N	14.59 E	10 G		1.2	4 YUGOSLAVIA. MD 2.2 (LJU). ML 1.8 (KBA).
24	01 54 40.9%	44.909 N	6.627 E	10 G		0.3	7 FRANCE. ML 2.1 (LDG).
24	02 44 44.7%	31.445 N	35.705 E	10 G		0.3	7 DEAD SEA REGION
24	02 53 06.0%	31.453 N	35.711 E	10 G		0.4	5 DEAD SEA REGION
24	03 08 06.47	22.78 N	121.12 E	10 G		1.5	4 TAIWAN REGION
24	03 10 19.6%	63.314 N	151.202 W	17		18	CENTRAL ALASKA. <AGS-P>.
24	03 26 10.77	9.97 N	59.45 W	33 N	3.7	0.7	13 NORTH ATLANTIC OCEAN. MD 4.0 (TRN).
24	04 58 00.07	51.34 N	15.97 E	10 G		1.1	6 POLAND
24	06 09 05.4*	47.315 S	165.281 E	33 N	4.5 4.3	1.3	13 OFF W. COAST OF S. ISLAND, N.Z.
24	06 28 07.2	40.712 N	21.782 E	10 G		0.6	7 GREECE. ML 2.1 (THE), 2.4 (SKO).
o 24	07 05 52.1	47.624 S	165.261 E	33 N	5.4 5.1	1.3	96 OFF W. COAST OF S. ISLAND, N.Z.
24	07 44 07.3%	40.327 N	124.787 W	5	3.7		16 NEAR COAST OF NORTHERN CALIF. <BRK>. ML 4.0 (BRK).
24	08 09 14.4*	51.483 N	174.228 W	33 N	4.6	0.5	26 ANDREANOF ISLANDS, ALEUTIAN IS.
24	08 16 41.0%	38.475 N	118.202 W	6	3.9		31 CALIFORNIA-NEVADA BORDER REGION. <BRK>. Felt (v) at Luning and Mina, Nevada.
24	09 04 35.27	39.16 N	27.61 E	10 G		0.8	4 TURKEY
24	09 21 05.07	48.08 S	165.34 E	33 N	4.1	0.4	7 OFF W. COAST OF S. ISLAND, N.Z.
24	10 01 26.3%	39.106 N	27.590 E	10 G		0.2	5 TURKEY
24	10 27 53.5*	5.744 S	146.893 E	117 *	4.8	1.2	12 EAST PAPUA NEW GUINEA REGION
24	12 04 40.77	43.96 N	147.82 E	33 N	3.8	1.4	6 KURIL ISLANDS
24	12 43 43.07	39.10 N	27.64 E	10 G		0.2	4 TURKEY
24	12 58 45.9*	51.528 N	174.347 W	33 N	4.6	0.6	19 ANDREANOF ISLANDS, ALEUTIAN IS.
24	13 25 49.87	15.83 N	61.04 W	33 N		0.1	4 LEEWARD ISLANDS. ML 2.2 (FDF).
24	13 35 08.0*	47.689 S	165.394 E	33 N	4.4 4.0	1.3	18 OFF W. COAST OF S. ISLAND, N.Z.

24	13	50	52.0%	39.046	N	27.990	E	10	G	1.1	5	TURKEY			
24	14	13	46.5%	46.86	N	15.34	E	10	G	1.3	5	YUGOSLAVIA. ML 2.3 (KBA).			
24	14	49	56.0*	0.687	N	125.235	E	81 *	4.5	0.6	11	MOLUCCA PASSAGE			
24	15	02	42.0%	43.991	N	7.585	E	10	G	0.2	7	NEAR SOUTH COAST OF FRANCE. ML 2.2 (GEN).			
24	15	28	50.8	72.789	N	5.001	E	10	G	4.6	1.4	45	NORWEGIAN SEA		
24	16	42	58.4%	47.244	N	0.665	W	10	G	1.1	7	FRANCE. ML 2.4 (LDG).			
24	16	55	30.9?	3.29	S	150.28	E	121 ?	3.7	0.2	5	NEW IRELAND REGION			
24	17	01	32.7?	48.86	N	0.92	W	10	G	0.5	4	FRANCE. ML 2.1 (LDG).			
a	24	17	20	18.3	16.247	S	173.058	W	30	D	5.3	4.9	1.1	154	TONGA ISLANDS. Ms 5.2 (BRK).
24	18	43	05.4%	19.505	N	155.485	W	6			44	HAWAII. <HVO-P>. MD 4.2 (HVO). Felt at Hawaii Volcanoes National Park.			
24	18	47	30.6*	35.927	N	23.598	E	10	G	1.1	10	CRETE. ML 3.5 (ATH).			
24	19	11	32.2	51.238	N	178.910	W	33	N	4.9	0.9	57	ANDREANOF ISLANDS, ALEUTIAN IS.		
24	19	53	01.1%	60.038	N	153.079	W	133		3.8	50	SOUTHERN ALASKA. <AGS-P>.			
24	20	06	16.5%	1.039	S	78.283	W	10	G	0.1	6	ECUADOR			
24	20	34	05.0%	40.811	N	15.291	E	10	G	1.1	13	SOUTHERN ITALY			
24	21	39	02.9?	32.66	S	73.13	W	10	G	0.6	10	OFF COAST OF CENTRAL CHILE			
24	23	04	40.8?	23.49	S	179.54	E	522 ?	4.4	1.0	12	SOUTH OF FIJI ISLANDS			
24	23	16	33.2%	37.722	N	1.501	W	10	G	0.6	6	SPAIN. mbLg 3.1 (MDD).			
a	25	00	01	10.6	33.619	N	57.022	E	33	N	4.8	4.6	1.4	117	IRAN. Felt at Tabas.
25	00	38	14.9?	15.18	N	60.18	W	10	G	0.3	6	LEEWARD ISLANDS. ML 2.6 (FDF).			
25	00	39	25.0%	39.166	N	29.354	E	10	G	0.9	5	TURKEY			
25	00	56	14.7	22.178	S	63.619	W	524		4.9	0.9	95	SALTA PROVINCE, ARGENTINA		
a	25	01	10	42.8	32.958	S	178.447	W	33	N	5.1	5.1	1.2	59	SOUTH OF KERMADEC ISLANDS
25	01	32	19.3	37.010	N	72.873	E	33	N	4.9	4.1	1.1	72	TAJIK SSR	
25	01	57	23.9	36.185	N	27.219	E	10	G	0.6	7	DODECANESE ISLANDS			
25	02	10	03.3*	17.298	N	94.390	W	33	N	4.0	1.1	7	CHIAPAS, MEXICO		
25	02	20	27.3%	60.863	N	152.763	W	147			32	SOUTHERN ALASKA. <AGS-P>.			
25	03	14	59.5*	8.821	S	124.170	E	114 ?	4.5	1.3	12	TIMOR			
25	03	23	24.9	40.582	N	20.615	E	10	G	1.1	22	GREECE-ALBANIA BORDER REGION. ML 3.1 (THE).			
25	03	32	48.1	36.605	N	28.788	E	10	G	1.3	8	DODECANESE ISLANDS			
25	03	37	34.9*	2.374	S	79.946	W	33	N	4.1	1.2	9	NEAR COAST OF ECUADOR		
25	03	59	33.8	37.167	N	28.670	E	10	G	1.3	10	TURKEY			
25	05	10	34.0*	32.644	N	30.450	E	33	N	1.2	11	EASTERN MEDITERRANEAN SEA. MD 3.4 (HLW). ML 3.9 (CSS).			
25	05	14	44.7*	60.359	N	138.358	W	10	G	0.5	5	SOUTHERN YUKON TERRITORY, CANADA			
25	05	51	38.3*	9.063	S	116.848	E	33	N	4.1	1.3	7	SUMBAWA ISLAND REGION		
25	06	05	33.4	40.645	N	20.657	E	10	G	0.6	7	GREECE-ALBANIA BORDER REGION. ML 2.7 (SKO).			
a	25	06	22	20.3	7.944	N	127.329	E	53 *	5.0	4.3	1.3	70	PHILIPPINE ISLANDS REGION	
25	06	34	18.2%	39.717	N	16.172	E	10	G	1.0	6	SOUTHERN ITALY			
25	06	43	38.1	7.913	N	127.102	E	33	N	4.6	1.2	31	PHILIPPINE ISLANDS REGION		
25	07	24	04.1*	21.002	N	122.128	E	10	G	4.5	1.3	12	TAIWAN REGION		
25	07	31	57.7%	38.800	N	122.790	W	3			6	NORTHERN CALIFORNIA. <BRK>. ML 3.1 (BRK).			
25	07	54	50.0	38.918	N	21.919	E	5	G	1.3	13	GREECE. ML 2.7 (THE). MD 2.9 (ATH).			
25	08	15	04.7%	39.122	N	27.611	E	10	G	0.7	5	TURKEY			
25	08	49	12.7?	39.14	N	27.59	E	10	G	0.1	4	TURKEY			
25	09	02	01.7%	41.538	N	14.814	E	10	G	0.8	6	SOUTHERN ITALY			
25	09	32	57.1	13.139	N	70.085	W	10	G	4.9	4.5	1.1	30	CARIBBEAN SEA	
25	10	11	13.8?	39.08	N	27.57	E	10	G	0.2	4	TURKEY			
25	10	17	54.4%	41.162	N	28.992	E	10	G	0.6	7	TURKEY			
25	10	22	29.0*	35.763	N	118.265	W	5	G	0.9	7	CENTRAL CALIFORNIA. ML 3.4 (BRK).			
25	10	42	40.2	36.711	N	21.257	E	49 *	3.8	1.1	54	SOUTHERN GREECE. MD 3.8 (ATH).			
25	10	54	30.9%	39.285	N	28.251	E	10	G	0.4	5	TURKEY			
25	11	10	31.8%	41.494	N	14.507	E	10	G	0.9	5	SOUTHERN ITALY			
25	12	02	17.7*	28.846	N	33.160	E	10	G	0.6	6	ARAB REPUBLIC OF EGYPT. MD 3.8 (HLW).			
25	12	21	03.9*	14.992	S	70.575	W	215 *	4.6	1.5	24	PERU			
25	12	34	41.9*	44.033	N	149.555	E	33	N	3.7	1.2	8	KURIL ISLANDS		
f	25	13	16	06.9	9.814	N	84.828	W	27	G	5.8	6.4	1.0	399	COSTA RICA. Felt (V) at San Jose. Felt throughout Costa Rica, in western Panama and in the San Marcos area, Nicaragua. Depth from broadband displacement seismograms.
f	25	13	22	55.6	9.919	N	84.808	W	22	G	6.2	7.0	1.1	494	COSTA RICA. Ms 6.8 (BRK). Mo=6.0+10+19 Nm (PPT). Ten people slightly injured. Damage (VIII) in the Puntarenas area and about 60 buildings severely damaged (VII) in the San Jose area. Several landslides blocked roads in the area for a short time. Felt throughout Costa Rica and southwestern Nicaragua. Felt (IV) at Almirante and Puerto Armuelles and (III) at David, Ponomo. Depth from broadband displacement seismograms.
25	13	52	18.2	45.842	N	14.624	E	10	G	1.1	35	YUGOSLAVIA. MD 3.7 (LJU). ML 3.5 (VKA). 3.5 (KBA). Felt (VI) at Dobra Polje, Videm and Ponikve; (V) at Velike Lasce and on Krk.			
25	14	17	18.8	37.034	N	72.942	E	33	N	6.0	6.3	1.3	474	TAJIK SSR. Slight damage to old buildings in the Pamir Mountains. Felt (VI) at Kharag and Ishkashim and (III) at Dushanbe. Also felt at Abbottabad and Gilgit, Pakistan.	
25	14	28	54.0?	30.57	S	71.62	W	33	N	1.1	8	NEAR COAST OF CENTRAL CHILE			
25	14	50	55.1*	18.399	S	167.931	E	33	N	4.6	1.4	20	VANUATU ISLANDS		
25	15	02	07.6?	47.15	N	0.99	W	10	G	0.4	6	FRANCE. ML 2.1 (LDG).			
25	15	10	40.1	36.979	N	73.062	E	33	N	5.1	1.3	136	NORTHWESTERN KASHMIR		
25	15	39	37.3*	36.983	N	72.591	E	33	N	4.3	1.4	19	AFGHANISTAN-USSR BORDER REGION		
25	15	46	36.3	36.953	N	73.051	E	33	N	5.3	5.2	1.0	209	NORTHWESTERN KASHMIR	
25	15	51	22.4%	36.963	N	121.613	W	4			11	CENTRAL CALIFORNIA. <BRK>. ML 2.9 (BRK).			
25	16	20	35.5*	37.239	N	72.727	E	33	N	4.3	1.2	9	TAJIK SSR		
25	16	22	14.8*	36.824	N	72.659	E	33	N	4.5	1.5	11	AFGHANISTAN-USSR BORDER REGION		
25	16	26	07.5	36.970	N	72.962	E	33	N	4.8	1.3	45	AFGHANISTAN-USSR BORDER REGION		
25	17	13	22.8	36.958	N	72.734	E	33	N	4.7	1.3	21	AFGHANISTAN-USSR BORDER REGION		
25	17	25	46.6	19.625	S	177.544	W	543 *	4.8	1.1	67	FIJI ISLANDS REGION			
25	17	28	26.8	37.131	N	72.938	E	33	N	4.9	4.6	1.0	105	TAJIK SSR	
25	18	11	21.0	36.873	N	23.866	E	159 *		0.9	31	SOUTHERN GREECE			
25	18	23	28.3*	39.214	N	15.075	E	261 ?		0.5	14	SOUTHERN ITALY			
25	18	32	31.8*	10.912	S	166.250	E	182 *	4.5	1.0	27	SANTA CRUZ ISLANDS			
25	18	33	07.8	39.956	N	22.411	E	10	G	0.3	8	GREECE. ML 1.7 (THE).			
25	18	59	58.9*	37.148	N	72.825	E	33	N	4.3	0.9	8	TAJIK SSR		

25	20 22 06.17	7.79 S	128.49 E	129 *	4.6	1.0	13	BANDA SEA
25	20 53 45.5%	37.447 N	12.318 E	10 G		1.0	9	SICILY
25	21 28 05.5%	62.385 N	149.507 W	59	3.2		38	CENTRAL ALASKA. <AGS-P>.
25	21 31 09.1*	36.571 N	21.227 E	33 N		1.3	13	SOUTHERN GREECE. MD 3.2 (ATH).
o 25	21 35 24.4	9.591 N	84.659 W	41	5.6 5.4	0.9	290	COSTA RICA. MD 5.3 (UPA). Ms 5.2 (BRK).
25	22 26 33.9%	43.770 N	11.535 E	10 G		0.7	5	CENTRAL ITALY
25	22 44 30.87	37.95 N	29.88 E	10 G		0.9	4	TURKEY
26	00 28 06.3*	47.713 S	165.225 E	10 G	4.4 3.8	0.8	12	OFF W. COAST OF S. ISLAND, N.Z.
26	00 46 50.6*	41.351 N	22.699 E	10 G		0.1	5	YUGOSLAVIA. ML 2.2 (THE).
26	01 17 33.5%	11.234 N	62.288 W	33 N		0.5	8	WINDWARD ISLANDS. MD 3.7 (TRN).
26	01 27 18.3%	46.850 N	121.913 W	11			48	WASHINGTON. <SEA>. ML 3.4 (SEA).
26	01 34 55.4%	39.275 N	28.222 E	10 G		0.8	11	TURKEY
26	01 51 28.9	44.769 N	6.732 E	10 G		0.6	42	FRANCE. ML 3.0 (GEN), 2.7 (LDG).
26	03 17 36.1*	29.951 N	132.040 E	33 N	4.9	1.1	18	SOUTHEAST OF SHIKOKU, JAPAN
26	04 12 42.8	5.236 S	102.520 E	34 D	5.0 4.8	1.1	72	SOUTHERN SUMATERA
26	05 06 29.6*	6.512 S	130.288 E	182 *	4.5	1.1	14	BANDA SEA
26	05 24 30.7	26.737 S	70.781 W	30 D	5.1 4.7	1.0	74	NEAR COAST OF NORTHERN CHILE
26	05 58 22.2	26.793 S	70.793 W	33 N	5.1	1.2	54	NEAR COAST OF NORTHERN CHILE. Felt (IV) at Caldera.
26	06 18 18.3*	39.142 N	23.624 E	10 G		0.7	13	AEGEAN SEA. ML 2.6 (THE).
26	08 33 23.87	39.22 N	27.73 E	10 G		0.3	4	TURKEY
26	08 45 12.27	42.78 N	19.16 E	10 G		0.6	4	YUGOSLAVIA. ML 2.0 (TTG).
26	10 38 15.3%	44.284 N	7.281 E	10 G		0.4	6	NORTHERN ITALY. ML 1.8 (GEN).
26	10 48 16.2*	9.749 N	84.947 W	10 G	3.3	0.6	6	COSTA RICA
26	11 23 09.5	5.667 S	112.873 E	33 *	5.0 5.0	1.1	45	JAVA SEA
26	11 31 29.2%	39.116 N	27.550 E	10 G		0.5	6	TURKEY
26	11 43 26.6	39.541 N	26.063 E	5		0.8	35	TURKEY. MD 3.6 (ATH). ML 3.4 (THE).
26	12 11 13.97	36.52 N	14.88 E	10 G		0.5	5	SICILY
26	12 28 47.2%	36.568 N	121.198 W	5			17	CENTRAL CALIFORNIA. <BRK>. ML 2.8 (BRK).
26	12 41 48.7	13.183 N	145.551 E	56	4.9 4.3	0.8	52	MARIANA ISLANDS
26	13 52 11.07	31.45 N	35.61 E	10 G		0.3	8	DEAD SEA REGION
26	15 27 39.17	37.65 N	20.69 E	10 G		1.1	9	IONIAN SEA. ML 3.3 (ATH).
26	16 52 51.07	18.14 N	146.90 E	33 N	4.1	1.4	9	MARIANA ISLANDS
26	17 35 33.4*	37.111 N	72.673 E	33 N	4.5	1.4	11	TAJIK SSR
26	19 06 28.57	31.37 S	69.33 W	33 N		1.5	9	SAN JUAN PROVINCE, ARGENTINA
26	19 12 28.3%	55.586 N	160.606 W	91			8	ALASKA PENINSULA. <PAL>.
26	19 12 45.1*	37.137 N	72.839 E	33 N	4.1	1.1	9	TAJIK SSR
26	20 22 04.8%	62.235 N	150.976 W	76			29	CENTRAL ALASKA. <AGS-P>.
26	20 31 07.9*	6.231 S	112.399 E	33 N	4.6	1.2	10	JAVA
26	20 52 22.0%	59.931 N	151.057 W	41	3.0		46	KENAI PENINSULA, ALASKA. <AGS-P>. ML 3.6 (PMR).
26	21 03 00.5%	60.394 N	152.266 W	79			21	SOUTHERN ALASKA. <AGS-P>.
26	21 12 30.77	16.75 N	61.01 W	10 G		0.4	5	LEEWARD ISLANDS. ML 2.7 (FDF).
26	21 25 45.7*	34.634 S	72.617 W	33 N	5.0	0.4	14	NEAR COAST OF CENTRAL CHILE
26	21 37 12.3%	58.314 N	152.979 W	73	3.3		23	KODIAK ISLAND REGION. <AGS-P>.
26	21 53 28.3	17.317 N	121.425 E	28	4.8	1.3	41	LUZON, PHILIPPINE ISLANDS. Felt (I RF) at Caliao Caves and Cagayan de Oro.
26	22 08 57.1	44.462 N	148.772 E	33 N	5.0 5.8	0.9	75	KURIL ISLANDS
26	22 19 29.8	37.000 N	72.771 E	33 N	4.8	1.2	55	TAJIK SSR
o 26	22 47 16.7	9.253 N	125.606 E	39	5.6 5.5	1.1	190	MINDANAO, PHILIPPINE ISLANDS. One person killed, two injured and some damage in the Santiago area. Felt (IV RF) on Camiguin and (II) at Cotabato. Also felt at Gingoog.
26	22 57 43.4	39.864 N	23.403 E	10 G		0.7	10	AEGEAN SEA. ML 2.4 (THE).
26	23 13 26.67	2.53 N	84.29 W	33 N	4.5 3.9	0.9	9	OFF COAST OF CENTRAL AMERICA
27	00 02 43.3	43.302 N	4.418 W	10 G		0.8	19	SPAIN. mbLg 3.2 (MDD). ML 3.2 (LDG). Felt (III) at Cervera.
27	00 03 44.47	16.75 N	94.16 W	74 ?	4.2	0.3	5	OAXACA, MEXICO
27	00 20 53.6	15.071 S	167.282 E	189 *	5.2	1.1	133	VANUATU ISLANDS
27	00 27 29.3*	54.635 N	160.931 E	71 D	4.6	1.1	37	NEAR EAST COAST OF KAMCHATKA
27	00 53 29.2*	31.332 S	69.805 W	33 N		1.1	12	SAN JUAN PROVINCE, ARGENTINA
27	01 12 31.1	24.649 S	179.996 W	550	4.9	0.7	41	SOUTH OF FIJI ISLANDS
27	01 13 02.1%	38.980 N	27.741 E	10 G		1.4	6	TURKEY
27	01 22 28.5*	15.230 S	167.387 E	129 ?	5.1	1.1	41	VANUATU ISLANDS
27	01 59 34.67	7.78 S	128.53 E	187 ?	3.7	1.0	10	BANDA SEA
27	02 03 28.3%	62.544 N	150.341 W	20			37	CENTRAL ALASKA. <AGS-P>. ML 3.0 (PMR).
27	02 53 05.9	51.731 N	16.341 E	10 G		0.2	13	POLAND. ML 3.7 (GRF), 3.7 (VKA), 3.4 (KBA).
27	03 00 20.8	7.850 N	126.961 E	45 D	4.6 4.3	1.3	41	MINDANAO, PHILIPPINE ISLANDS
27	03 32 12.4	43.208 N	0.641 W	14		0.9	42	PYRENEES. mbLg 3.1 (MDD). ML 3.6 (LDG). Felt (IV) at Born and Soule; (II) at Pau, France.
27	03 45 45.9%	36.677 N	121.352 W	2			12	CENTRAL CALIFORNIA. <BRK>. ML 2.6 (BRK).
27	03 56 41.17	0.64 S	124.69 E	106 ?	4.7	0.4	6	MOLUCCA SEA
27	04 29 31.9%	61.676 N	151.033 W	72			32	SOUTHERN ALASKA. <AGS-P>.
27	06 48 20.5	39.114 N	21.896 E	10 G		1.1	6	GREECE. ML 2.7 (THE). MD 2.9 (ATH).
27	06 53 54.4%	58.624 N	142.750 W	10 G			8	GULF OF ALASKA. <AGS-P>.
27	07 55 05.3	0.893 S	120.513 E	47 *	4.8 4.4	0.9	24	MINAHASSA PENINSULA
27	08 37 33.8	46.767 N	10.159 E	6		1.1	17	NORTHERN ITALY. ML 2.7 (KBA).
27	08 43 27.8	43.397 N	5.427 E	10 G		0.7	16	NEAR SOUTH COAST OF FRANCE. MD 2.6 (STR).
27	08 54 01.57	39.07 N	27.64 E	10 G		0.1	4	TURKEY
27	08 55 27.87	39.12 N	27.62 E	10 G		0.2	4	TURKEY
27	09 01 30.77	42.71 N	12.79 E	10 G		0.9	4	CENTRAL ITALY
27	09 40 42.0%	64.539 N	152.308 W	59	3.5		55	CENTRAL ALASKA. <AGS-P>.
27	10 41 09.1	43.211 N	0.652 W	10 G		0.9	13	PYRENEES. ML 3.2 (LDG). mbLg 3.2 (MDD). Felt (IV) at Oloron Sainte Marie, France. Also felt in the Aspe Valley, France.
27	14 27 21.6	6.675 S	154.849 E	92 *	4.6	1.2	30	SOLOMON ISLANDS
27	14 52 19.5	9.540 N	84.755 W	36	4.9	1.0	84	COSTA RICA. Felt in the San Jose area.
27	15 35 25.6	29.445 N	131.436 E	33 N	4.6	1.1	23	RYUKYU ISLANDS REGION
27	16 21 29.6%	63.281 N	151.212 W	6			25	CENTRAL ALASKA. <AGS-P>.
27	16 25 54.5*	31.795 S	71.746 W	32		0.4	13	NEAR COAST OF CENTRAL CHILE
27	16 27 33.3*	31.840 S	71.603 W	10 G		0.4	9	NEAR COAST OF CENTRAL CHILE
27	16 37 13.1	45.491 N	9.779 E	10 G		1.2	39	NORTHERN ITALY. ML 3.1 (LDG), 3.0 (KBA).
27	17 04 43.2*	6.041 S	127.817 E	424 *	4.8	0.7	12	BANDA SEA
27	17 50 47.4%	44.810 N	7.634 E	10 G		0.9	9	NORTHERN ITALY. ML 2.4 (GEN).
27	19 16 02.4	44.483 N	13.215 E	10 G		0.9	21	ADRIATIC SEA. ML 2.8 (KBA). MD 2.8 (TRI).

27	19 18 38.3	44.460 N	13.182 E	10 G	0.9	19	ADRIATIC SEA. ML 2.7 (KBA). MD 2.7 (TRI).
27	19 21 31.94	40.327 N	124.598 W	8		11	NEAR COAST OF NORTHERN CALIF. <BRK>. ML 3.4 (BRK). Felt (III) at Rio Dell.
o 27	20 04 16.2	5.298 S	145.865 E	82 D 5.3	0.9	116	EAST PAPUA NEW GUINEA REGION
27	20 45 56.4*	6.017 S	145.739 E	94 * 4.0	1.2	15	PAPUA NEW GUINEA
27	21 01 00.3*	4.638 S	152.934 E	74 * 4.6	0.7	17	NEW BRITAIN REGION
27	22 27 26.77	39.50 N	25.93 E	10 G	0.6	5	AEGEAN SEA
27	22 41 24.8*	33.584 S	71.770 W	19 *	0.2	9	NEAR COAST OF CENTRAL CHILE
28	00 33 43.3	39.302 N	28.225 E	10 G	0.9	9	TURKEY
28	00 39 56.7*	39.005 N	26.518 E	10 G	0.2	5	TURKEY
28	00 43 36.0	43.573 N	147.924 E	33 N 4.5	1.1	30	KURIL ISLANDS
28	00 50 31.5	13.872 N	120.803 E	205 4.6	1.0	36	MINDORO, PHILIPPINE ISLANDS
28	00 53 57.67	36.23 S	179.38 E	202 *	1.4	31	OFF E. COAST OF N. ISLAND, N.Z.
o 28	01 20 41.5	21.810 S	175.190 E	10 G 5.1 4.9	1.0	86	SOUTH OF FIJI ISLANDS. Ms 5.1 (BRK).
28	02 22 35.9	40.200 N	25.063 E	10 G	1.0	35	AEGEAN SEA. ML 3.8 (THE). MD 3.8 (ATH).
28	02 46 45.4*	40.576 N	27.505 E	10 G	0.5	9	TURKEY
28	03 30 11.3	38.361 S	176.244 E	171 4.2	1.0	39	NORTH ISLAND, NEW ZEALAND. Felt at Wellington, Napier, Gisborne and Palmerston North. Also felt at Blenheim, South Island.
28	05 47 31.5	38.191 N	14.930 E	37 4.7	1.3	92	SICILY. MD 4.0 (ATH). ML 4.4 (TTG).
28	06 08 25.4*	36.850 N	121.578 W	5		22	CENTRAL CALIFORNIA. <BRK>. ML 3.8 (BRK). Felt (II) at Aromas and Moss Landing. Also felt at Pacific Grove and Salinas.
28	06 54 39.67	55.38 N	135.11 W	10 G 4.1	0.8	6	OFF COAST OF SOUTHEASTERN ALASKA
28	07 10 00.87	13.97 S	74.59 W	89 ? 4.4	0.6	10	PERU
28	07 19 23.6*	23.248 N	142.587 E	33 N 4.6	1.0	9	VOLCANO ISLANDS REGION
28	08 21 51.0	47.412 N	11.896 E	10 G	1.1	35	AUSTRIA. ML 2.7 (FUR), 2.8 (KBA), 3.0 (GRF), 3.4 (LDG).
28	10 38 25.9*	23.617 S	70.744 W	33 N 4.1	1.0	6	NEAR COAST OF NORTHERN CHILE. Felt (IV) at Antofagasto.
28	10 47 25.9*	38.245 N	112.530 W	1		11	UTAH. <SLC-P>. MD 3.1 (SLC). Felt at Beaver.
28	11 06 45.1*	37.080 N	72.815 E	33 N 4.6	1.3	12	TAJIK SSR
28	11 34 57.8	39.347 N	26.186 E	10 G	0.9	20	TURKEY. ML 3.6 (ATH).
28	12 15 20.3	42.458 N	24.241 E	10 G	0.5	10	BULGARIA. ML 3.1 (THE). MD 3.1 (ATH).
28	12 20 02.8*	35.604 N	28.337 E	29 *	1.2	13	EASTERN MEDITERRANEAN SEA
28	13 48 01.87	51.60 N	16.18 E	10 G	0.5	8	POLAND. ML 2.9 (KBA).
28	14 27 23.3	5.610 S	149.474 E	167 5.3	1.0	89	NEW BRITAIN REGION
28	14 31 09.2	49.509 N	128.131 W	10 G 4.5	1.3	69	VANCOUVER ISLAND REGION
28	14 33 01.37	42.41 N	7.73 E	10 G	0.2	4	WESTERN MEDITERRANEAN SEA. ML 2.7 (LDG).
28	15 40 27.5*	61.687 N	147.944 W	8		26	SOUTHERN ALASKA. <AGS-P>.
28	17 24 50.87	10.86 N	83.91 W	33 N 4.2	1.1	14	COSTA RICA
28	18 45 53.3*	32.397 S	71.636 W	20	0.7	10	NEAR COAST OF CENTRAL CHILE
28	18 53 19.77	19.50 N	67.39 W	10 G	0.3	5	MONA PASSAGE
28	19 28 56.3*	40.051 N	78.797 E	33 N 4.4	1.0	13	SOUTHERN XINJIANG, CHINA
o 28	19 50 19.9	16.094 S	173.112 W	33 N 5.3 4.3	1.2	104	TONGA ISLANDS. Ms 5.1 (BRK).
28	19 57 22.6*	46.899 N	0.497 E	10 G	0.8	11	FRANCE. ML 2.3 (LDG).
28	21 48 15.2*	40.525 N	23.644 E	10 G	0.2	5	GREECE. ML 1.9 (THE).
28	21 58 31.4	36.490 N	87.381 E	33 N 4.8	0.9	33	SOUTHERN XINJIANG, CHINA
28	22 27 31.7*	32.340 N	30.886 E	33 N	1.3	11	EASTERN MEDITERRANEAN SEA. MD 4.3 (HLW). ML 3.7 (CSS)
28	22 56 44.0*	37.085 N	72.776 E	33 N 4.0	0.2	5	TAJIK SSR
28	23 11 14.27	43.05 N	0.83 W	10 G	0.2	4	PYRENEES. MD 1.0 (STR).
29	00 13 22.2	44.366 N	7.176 E	10 G	0.3	16	NORTHERN ITALY. ML 2.3 (GEN), 2.2 (LDG).
29	01 01 53.9*	49.017 S	109.015 E	10 G 4.9	1.1	19	SOUTHEAST INDIAN RISE
29	01 42 24.3	20.930 S	175.910 W	33 N 5.0 4.9	0.9	44	TONGA ISLANDS
29	01 49 27.7*	38.833 N	122.797 W	3		11	NORTHERN CALIFORNIA. <BRK>. ML 3.3 (BRK).
29	03 10 19.2	38.337 N	0.202 E	13	1.1	34	SPAIN. mbLg 3.7 (MDD). ML 3.7 (LDG). Felt (III) at Altea, Benidorm and Villajoyosa.
29	04 11 18.6*	62.121 N	5.981 E	10 G	0.8	9	SOUTHERN NORWAY. MD 2.9 (BER). Felt in northwestern Norway.
o 29	04 34 04.2	45.331 N	150.204 E	50 D 5.2 4.1	0.7	230	KURIL ISLANDS
29	04 44 17.6*	40.442 N	124.175 W	23		11	NEAR COAST OF NORTHERN CALIF. <BRK>. ML 3.5 (BRK). Felt (III) at Rio Dell.
29	05 36 42.0	44.805 N	141.673 E	262 * 4.4	0.9	51	HOKKAIDO, JAPAN REGION
29	05 54 14.77	32.86 S	177.17 W	33 N 4.6 3.8	1.6	7	SOUTH OF KERMADEC ISLANDS
29	06 03 30.6*	63.329 N	149.699 W	104		51	CENTRAL ALASKA. <AGS-P>.
29	06 48 18.37	18.44 S	168.02 E	33 N 4.6 4.0	1.7	10	VANUATU ISLANDS
29	08 34 13.67	33.40 S	71.79 W	31 *	0.4	7	NEAR COAST OF CENTRAL CHILE
29	08 38 11.1	39.867 N	28.908 E	10 G	1.0	12	TURKEY
29	09 00 14.07	39.13 N	27.54 E	10 G	0.5	4	TURKEY
29	09 14 33.7	53.768 N	159.700 W	33 N 4.5	1.2	28	SOUTH OF ALASKA
29	09 54 13.2*	19.966 S	175.548 E	33 N 4.7 4.2	1.1	27	SOUTH OF FIJI ISLANDS
29	10 29 51.3*	39.884 N	28.918 E	10 G	0.9	8	TURKEY
29	11 49 15.77	51.19 N	16.03 E	10 G	0.9	4	POLAND
29	12 05 54.5	39.944 N	23.884 E	10 G	0.9	29	AEGEAN SEA. ML 3.2 (THE), 3.4 (ATH).
29	12 20 55.0*	59.987 N	153.278 W	155 * 3.5	0.7	10	SOUTHERN ALASKA
29	13 25 03.0*	41.245 N	122.129 W	5 G	0.6	5	NORTHERN CALIFORNIA. ML 2.9 (BRK).
o 29	14 15 44.8	16.572 N	145.831 E	24 D 5.3 4.6	1.0	116	MARIANA ISLANDS
29	14 36 29.2	16.546 N	145.867 E	33 N 4.8	1.1	32	MARIANA ISLANDS
o 29	16 19 15.8	39.408 N	73.256 E	25 D 5.4 5.1	1.0	312	TAJIK-XINJIANG BORDER REGION. Felt (IV) at Sufi-Kurgon and (III) at Osh, USSR.
29	16 24 09.37	39.40 N	25.96 E	10 G	1.6	6	AEGEAN SEA
29	16 36 05.7	55.660 N	158.893 W	56 4.4	0.8	39	ALASKA PENINSULA
29	16 44 19.9*	50.308 N	18.892 E	10 G	0.5	6	POLAND. ML 3.8 (KBA), 3.3 (VKA), 3.5 (KRA).
29	17 17 56.67	31.22 S	178.11 W	88 ? 4.7	1.3	13	KERMADEC ISLANDS REGION
29	18 26 39.2	45.833 N	14.633 E	10 G	0.5	8	YUGOSLAVIA. MD 2.5 (LJU), 2.3 (TRI).
29	18 50 04.7	45.810 N	14.667 E	10 G	0.9	7	YUGOSLAVIA. MD 2.5 (LJU), 2.3 (TRI).
29	19 51 25.5	51.595 N	16.235 E	19	0.9	28	POLAND. ML 3.1 (KRA), 4.0 (VKA), 3.6 (KBA).
29	19 55 37.37	51.32 N	16.08 E	10 G	0.9	5	POLAND. ML 3.5 (VKA).
29	19 56 34.2	51.120 N	15.787 E	10 G 4.5	1.1	17	POLAND. ML 4.2 (VKA), 4.0 (KBA), 4.1 (GRF).
29	21 49 16.27	9.86 N	59.19 W	33 N	0.8	10	NORTH ATLANTIC OCEAN. MD 3.8 (TRN).
29	23 30 29.87	34.19 S	72.30 W	60 ? 4.9	0.7	15	NEAR COAST OF CENTRAL CHILE
29	23 31 52.3*	40.221 N	21.929 E	10 G	0.8	6	GREECE. ML 2.0 (THE).
29	23 47 55.2*	39.889 N	28.916 E	10 G	0.8	10	TURKEY
30	00 31 40.17	5.09 S	129.35 E	33 N 4.7	1.9	4	BANDA SEA
o 30	00 42 06.9	20.231 N	122.038 E	124 5.5	0.9	317	PHILIPPINE ISLANDS REGION

30	00	53	55.6%	39.066 N	27.156 E	10 G	0.7	6	TURKEY
30	01	54	09.0%	47.280 N	68.230 W	18 G		8	GASPE PENINSULA. <OTT-P>. mblg 3.5 (OTT).
30	02	13	01.9	52.418 N	170.669 W	33 N 4.7	1.0	57	FOX ISLANDS, ALEUTIAN ISLANDS
30	02	15	01.1%	39.84 N	24.04 E	10 G	0.6	7	AEGEAN SEA. ML 2.3 (THE).
30	02	16	42.6	62.778 N	17.129 E	10 G	0.8	9	SWEDEN. MD 2.9 (BER).
30	02	33	31.0%	39.96 N	23.85 E	10 G	0.4	4	AEGEAN SEA. ML 2.2 (THE).
30	02	47	32.2%	51.08 N	15.93 E	10 G	1.4	4	POLAND
30	02	53	57.6	16.479 N	145.990 E	22 D 5.3 4.2	1.1	73	MARIANA ISLANDS
30	02	59	04.2	40.281 N	22.028 E	10 G	0.7	9	GREECE. ML 2.4 (THE).
30	03	39	51.9%	2.66 S	134.01 E	33 N 4.1	0.7	6	WEST IRIAN REGION
30	03	58	03.2%	16.520 N	146.265 E	33 N 4.3	1.6	15	MARIANA ISLANDS
30	04	22	48.1	39.895 N	23.989 E	10 G	0.8	14	AEGEAN SEA. ML 2.6 (THE).
30	05	20	30.2%	23.641 S	179.194 E	530 * 4.7	1.4	27	SOUTH OF FIJI ISLANDS
30	05	44	26.1%	38.635 N	122.278 W	2		13	NORTHERN CALIFORNIA. <BRK>. ML 3.3 (BRK).
30	07	08	00.0	36.426 N	70.534 E	210 4.5	0.9	57	HINDU KUSH REGION
30	07	29	54.6%	17.633 N	61.905 W	17 *	0.5	8	LEEWARD ISLANDS. ML 3.0 (FDF).
30	07	41	53.1%	16.525 N	146.013 E	33 N 4.4	1.0	8	MARIANA ISLANDS
30	07	43	34.7	16.507 N	145.937 E	33 N 5.1 4.2	1.1	61	MARIANA ISLANDS
30	08	11	32.2%	24.303 S	179.846 E	628 ? 4.9	1.0	26	SOUTH OF FIJI ISLANDS
30	08	27	19.2	16.479 N	145.956 E	33 N 4.8	1.1	43	MARIANA ISLANDS
30	10	26	29.8%	40.428 N	137.722 E	300 * 4.2	0.6	10	EASTERN SEA OF JAPAN
30	10	43	57.8	34.820 N	29.042 E	33 N	1.1	13	EASTERN MEDITERRANEAN SEA. MD 3.9 (ATH), 4.0 (HLW). ML 4.1 (CSS).
30	11	35	39.9	61.450 N	150.943 W	33 N	0.7	8	SOUTHERN ALASKA. ML 3.0 (PMR).
30	11	35	41.7	16.600 N	145.948 E	33 N 4.6	1.2	31	MARIANA ISLANDS
30	12	44	38.4%	40.101 N	28.087 E	10 G	0.4	5	TURKEY
30	13	22	23.2%	32.91 S	72.40 W	10 G	1.5	7	OFF COAST OF CENTRAL CHILE
30	13	48	21.2	39.514 N	28.472 E	10 G	1.2	16	TURKEY
30	14	05	59.7%	31.40 N	51.24 E	33 N 4.1	1.5	6	IRAN
30	14	57	00.8%	31.45 S	70.60 W	33 N	0.7	7	CHILE-ARGENTINA BORDER REGION
30	15	07	28.7	16.349 N	145.933 E	33 N 4.8	1.0	26	MARIANA ISLANDS
30	15	09	13.3%	11.423 N	61.902 W	10 G	0.5	6	WINDWARD ISLANDS
30	18	35	42.0	36.490 N	25.470 E	10 G	1.2	8	DODECANESE ISLANDS. MD 3.6 (ATH).
30	19	26	46.5%	38.454 N	28.206 E	10 G	0.7	5	TURKEY
30	19	41	37.2%	0.89 S	79.52 W	33 N	0.9	5	ECUADOR
30	21	40	02.0%	0.47 S	77.43 W	10 G	0.5	5	ECUADOR
30	21	51	30.9%	51.165 N	15.991 E	10 G	0.6	6	POLAND
30	22	33	49.1%	44.88 N	6.52 E	10 G	1.0	6	FRANCE. ML 2.0 (GEN).
31	01	38	17.1	39.932 N	24.001 E	14 4.1	1.2	149	AEGEAN SEA. ML 4.4 (THE), 4.4 (ATH).
31	01	39	54.5	39.926 N	23.837 E	10 G 4.4	0.9	10	AEGEAN SEA. ML 4.0 (THE).
31	01	46	31.7%	35.51 N	52.32 E	10 G	0.7	5	IRAN
31	01	48	40.2	39.943 N	24.050 E	13 4.0	1.3	48	AEGEAN SEA. ML 3.7 (THE), 3.7 (ATH).
31	01	53	29.9	39.962 N	23.874 E	10 G	1.0	15	AEGEAN SEA. ML 3.0 (THE). MD 3.2 (ATH).
31	02	03	33.7	39.977 N	23.930 E	10 G	1.1	13	AEGEAN SEA. ML 2.8 (THE).
31	02	06	32.3%	40.010 N	23.826 E	10 G	1.3	8	GREECE. ML 2.5 (THE).
31	02	11	02.5	37.375 N	23.251 E	127 *	1.0	23	SOUTHERN GREECE
31	02	58	38.7	39.982 N	23.877 E	10 G	0.8	8	AEGEAN SEA. ML 2.5 (THE).
31	03	10	49.5%	51.51 N	16.31 E	10 G	1.7	4	POLAND
31	03	15	59.5	39.935 N	23.921 E	10 G	0.9	7	AEGEAN SEA. ML 2.3 (THE).
31	03	50	10.0	40.024 N	23.833 E	10 G	0.9	15	GREECE. ML 3.0 (THE), 3.1 (ATH).
31	03	59	20.6	39.957 N	22.468 E	10 G	0.5	7	GREECE. ML 2.1 (THE).
31	04	21	39.2	39.986 N	24.021 E	10 G	1.0	21	AEGEAN SEA. ML 3.5 (THE), 3.5 (ATH).
31	04	27	16.8%	16.46 S	176.83 W	432 * 4.0	0.4	7	FIJI ISLANDS REGION
31	04	52	01.6%	24.00 S	179.91 W	499 ? 4.6	0.8	21	SOUTH OF FIJI ISLANDS
31	05	18	49.6	13.100 N	70.215 W	10 G 4.5 4.7	1.0	32	CARIBBEAN SEA
31	06	19	28.1%	39.557 N	23.601 E	10 G	0.5	6	AEGEAN SEA. ML 2.6 (THE).
31	06	34	02.8%	39.80 N	24.13 E	10 G	0.7	6	AEGEAN SEA. ML 2.3 (THE).
31	06	35	53.6	16.495 N	145.892 E	33 N 4.7 4.1	0.9	40	MARIANA ISLANDS
31	07	08	56.9%	47.402 N	1.019 W	10 G	0.6	5	FRANCE. ML 2.4 (LDG).
31	08	19	22.6%	59.838 N	151.766 W	65 2.7		27	KENAI PENINSULA, ALASKA. <AGS-P>.
31	08	29	30.7	45.114 N	7.387 E	5 G	0.7	24	NORTHERN ITALY. ML 2.6 (GEN), 2.4 (LDG).
31	08	54	55.6%	23.539 S	114.988 W	10 G 5.0 4.9	1.2	37	EASTER ISLAND REGION
31	10	02	15.4%	2.779 S	79.403 W	86 ? 4.4	1.0	16	NEAR COAST OF ECUADOR
31	10	02	33.2%	39.61 N	29.36 E	10 G	0.6	4	TURKEY
31	10	33	42.5%	40.010 N	23.889 E	10 G	1.1	5	GREECE. ML 2.5 (THE).
31	10	56	53.5%	46.048 N	16.156 E	5 G	0.7	9	YUGOSLAVIA. MD 3.0 (LJU).
31	11	01	09.8%	44.504 N	6.719 E	10 G	0.2	6	FRANCE. ML 2.3 (GEN).
31	11	26	11.3%	39.879 N	24.071 E	10 G	0.6	8	AEGEAN SEA. ML 2.5 (THE).
31	12	23	3.7%	53.889 N	163.413 E	33 N 4.5	0.8	17	OFF EAST COAST OF KAMCHATKA
31	12	14	16.2%	39.15 N	27.63 E	10 G	0.3	4	TURKEY
31	12	20	14.7%	8.196 N	126.428 E	33 N 4.5	0.5	15	MINDANAO, PHILIPPINE ISLANDS
31	12	58	51.4%	39.09 N	27.60 E	10 G	0.6	4	TURKEY
31	13	28	59.2%	36.148 N	120.748 W	9		16	CENTRAL CALIFORNIA. <BRK>. ML 2.9 (BRK).
31	13	48	34.0	39.968 N	23.985 E	10 G 3.7	0.9	31	AEGEAN SEA. ML 3.7 (THE), 3.5 (ATH).
31	14	08	02.5	16.451 N	145.800 E	33 N 4.7 3.8	1.1	30	MARIANA ISLANDS
31	14	16	16.4%	60.003 N	152.609 W	84		46	SOUTHERN ALASKA. <AGS-P>.
31	16	37	13.9	39.942 N	23.877 E	10 G	1.0	13	AEGEAN SEA. ML 3.0 (THE). MD 3.4 (ATH).
31	16	54	51.0%	16.006 S	167.805 E	33 N 4.8 4.0	1.0	37	VANUATU ISLANDS
31	16	58	45.4%	35.269 N	4.541 W	10 G	1.2	6	STRAIT OF GIBRALTAR. mblg 2.5 (MDD).
31	17	42	01.1	36.229 N	137.868 E	16 4.4 4.1	1.1	18	HONSHU, JAPAN
31	17	45	05.6%	62.835 N	150.546 W	83		24	CENTRAL ALASKA. <AGS-P>.
31	18	51	33.5	39.948 N	23.857 E	10 G	1.0	13	AEGEAN SEA. ML 2.7 (THE).
f 31	19	31	42.7	42.891 N	146.969 E	21 G 5.9 5.8	0.9	384	OFF COAST OF HOKKAIDO, JAPAN. Ms 5.3 (BRK). Depth from broadband displacement seismograms.
31	20	15	25.6	39.982 N	23.798 E	10 G	1.1	12	AEGEAN SEA. ML 2.4 (THE).
31	20	19	35.3%	39.970 S	45.783 E	10 G 5.3 5.8	1.3	36	ATLANTIC-INDIAN RISE
31	20	55	34.2	42.960 N	146.980 E	41 D 4.7 5.0	0.9	54	OFF COAST OF HOKKAIDO, JAPAN
31	21	05	46.8%	61.624 N	151.945 W	111		17	SOUTHERN ALASKA. <AGS-P>.
31	21	09	23.5	42.792 N	147.001 E	35 D 4.7	1.0	64	OFF COAST OF HOKKAIDO, JAPAN
31	21	12	34.3	42.853 N	146.973 E	33 N 4.9 4.5	1.2	82	OFF COAST OF HOKKAIDO, JAPAN
31	21	47	58.2	39.981 N	23.841 E	10 G	1.2	17	AEGEAN SEA. ML 2.9 (THE), 3.2 (ATH).
31	22	59	48.0%	32.380 N	115.240 W	6 G 3.4		21	CALIFORNIA-MEXICO BORDER REGION. <PAS-P>. ML 4.3 (PAS).

## ADDITIONAL SOURCE PARAMETERS

01 02 23 23.10 53.340N 160.030E 27km  
5.4mb ( 60 obs.) 5.6Msz ( 23 obs.)  
NEAR EAST COAST OF KAMCHATKA  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 12S, 27C  
Centroid Location:  
Origin Time 02:23:30.3 0.4  
Lat 53.48N 0.07 Lon 160.06E 0.07  
Dep 33.0 FIX Half-duration 3.1  
Principal Axes:  
Scale 10\*\*17 Nm  
T Vol= 5.87 Plg= 6 Azm=268  
N -0.82 64 10  
P -5.04 25 175  
Best Double Couple:Mo=5.5\*10\*\*17  
NP1:Strike=315 Dip=68 Slip=-166  
NP2: 219 77 -23

01 07 35 21.09 51.218N 175.214W 33km  
4.9mb ( 27 obs.) 4.6Msz ( 3 obs.)  
ANDREANOF ISLANDS, ALEUTIAN IS.  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 13S, 23C  
Centroid Location:  
Origin Time 07:35:27.3 0.9  
Lat 51.88N 0.17 Lon 175.14W 0.12  
Dep 20.8 6.4 Half-duration 1.5  
Principal Axes:  
Scale 10\*\*16 Nm  
T Vol= 6.59 Plg=52 Azm= 21  
N -0.65 28 248  
P -5.94 24 145  
Best Double Couple:Mo=6.3\*10\*\*16  
NP1:Strike=193 Dip=33 Slip= 30  
NP2: 77 74 120

01 16 06 00.84 7.892S 121.112E 39km  
5.5mb ( 33 obs.) 4.9Msz ( 15 obs.)  
FLORES SEA  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 15S, 39C  
Centroid Location:  
Origin Time 16:06: 4.6 0.5  
Lat 7.66S 0.05 Lon 121.65E 0.07  
Dep 33.5 4.7 Half-duration 2.0  
Principal Axes:  
Scale 10\*\*17 Nm  
T Vol= 2.68 Plg=11 Azm= 42  
N 0.61 79 229  
P -3.29 1 133  
Best Double Couple:Mo=3.0\*10\*\*17  
NP1:Strike=178 Dip=81 Slip= 7  
NP2: 87 83 171

01 21 40 58.94 30.614N 131.099E 58km  
5.1mb ( 25 obs.) 5.0Msz ( 4 obs.)  
KYUSHU, JAPAN  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 6S, 9C  
Centroid Location:  
Origin Time 21:41: 1.4 1.8  
Lat 30.37N 0.18 Lon 130.34E 0.26  
Dep 55.215.3 Half-duration 1.5  
Principal Axes:  
Scale 10\*\*16 Nm  
T Vol= 8.27 Plg=54 Azm=347  
N 1.25 14 238  
P -9.52 32 139  
Best Double Couple:Mo=8.9\*10\*\*16  
NP1:Strike=188 Dip=18 Slip= 39  
NP2: 60 79 104

02 22 06 25.25 21.934S 174.135W 33km  
5.4mb ( 24 obs.) 4.9Msz ( 8 obs.)  
TONGA ISLANDS  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 13S, 23C  
Centroid Location:  
Origin Time 22:06:35.2 2.8  
Lat 21.88S 0.18 Lon 174.68W 0.19  
Dep 15.0 FIX Half-duration 1.7  
Principal Axes:  
Scale 10\*\*16 Nm  
T Vol= 6.21 Plg=63 Azm=343  
N 0.66 3 246

P -6.87 27 154  
Best Double Couple:Mo=6.5\*10\*\*16  
NP1:Strike=236 Dip=18 Slip= 79  
NP2: 67 72 94

03 05 11 33.72 32.097N 139.619E 143km  
5.3mb ( 65 obs.)  
SOUTH OF HONSHU, JAPAN  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 9S, 11C  
Centroid Location:  
Origin Time 05:11:37.2 1.1  
Lat 32.14N 0.09 Lon 139.31E 0.13  
Dep 145.9 3.1 Half-duration 1.5  
Principal Axes:  
Scale 10\*\*16 Nm  
T Vol= 7.98 Plg=39 Azm= 71  
N -0.11 11 170  
P -7.88 48 273  
Best Double Couple:Mo=7.9\*10\*\*16  
NP1:Strike=103 Dip=12 Slip=-158  
NP2: 351 86 -79

03 12 16 27.96 22.122S 175.163E 33km  
6.3mb ( 32 obs.) 7.4Msz ( 20 obs.)  
SOUTH OF FIJI ISLANDS  
FAULT PLANE SOLUTION: P-Waves  
NP1:Strike=135 Dip=83 Slip= 156  
NP2: 228 66 8  
Principal Axes:  
T Plg=22 Azm= 89  
P 11 184  
Comment: The focal mechanism is poorly controlled and corresponds to strike-slip faulting with a moderate reverse component. The preferred fault plane is not determined.

RADIATED ENERGY  
No. of sta: 8 Focal mech. F  
Energy 1.7±0.6\*10\*\*15 Nm  
MOMENT TENSOR SOLUTION  
Dep 23 No. of sta: 14  
Principal Axes:  
Scale 10\*\*20 Nm  
T Vol= 1.37 Plg= 7 Azm= 96  
N -0.05 76 338  
P -1.32 13 187  
Best Double Couple:Mo=1.3\*10\*\*20  
NP1:Strike=231 Dip=76 Slip= -4  
NP2: 322 86 -166  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 14S, 42C M.W.: 11S, 33C  
Centroid Location:  
Origin Time 12:16:43.7 0.1  
Lat 22.05S 0.01 Lon 175.35E 0.01  
Dep 25.3 1.2 Half-duration 10.0  
Principal Axes:  
Scale 10\*\*20 Nm  
T Vol= 2.75 Plg=18 Azm= 90  
N 0.53 68 309  
P -3.27 13 184  
Best Double Couple:Mo=3.0\*10\*\*20  
NP1:Strike=228 Dip=68 Slip= 4  
NP2: 137 87 158

04 17 21 59.05 15.539S 167.568E 141km  
5.4mb ( 36 obs.)  
VANUATU ISLANDS  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 14S, 28C  
Centroid Location:  
Origin Time 17:21:40.4 0.8  
Lat 15.68S 0.10 Lon 168.62E 0.09  
Dep 33.0 FIX Half-duration 1.6  
Principal Axes:  
Scale 10\*\*16 Nm  
T Vol= 7.39 Plg=13 Azm=144  
N 1.75 77 306  
P -9.14 4 53  
Best Double Couple:Mo=8.3\*10\*\*16  
NP1:Strike=187 Dip=78 Slip= 174  
NP2: 279 84 12

04 19 46 19.67 28.925N 66.331E 10km  
5.8mb ( 71 obs.) 6.1Msz ( 34 obs.)

PAKISTAN  
FAULT PLANE SOLUTION: P-Waves  
NP1:Strike=235 Dip=55 Slip= 45  
NP2: 115 55 135  
Principal Axes:  
T Plg=55 Azm= 85  
P 0 355  
Comment: The focal mechanism is poorly controlled and corresponds to reverse faulting with a large strike-slip component. The preferred fault plane is not determined.

RADIATED ENERGY  
No. of sta: 7 Focal mech. F  
Energy 6.2±1.7\*10\*\*12 Nm  
MOMENT TENSOR SOLUTION  
Dep 30 No. of sta: 13  
Principal Axes:  
Scale 10\*\*17 Nm  
T Vol= 7.61 Plg=51 Azm= 93  
N 1.50 37 247  
P -9.11 13 347  
Best Double Couple:Mo=8.4\*10\*\*17  
NP1:Strike=114 Dip=45 Slip= 147  
NP2: 229 67 50  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 14S, 35C  
Centroid Location:  
Origin Time 19:46:23.9 0.3  
Lat 28.66N 0.04 Lon 66.16E 0.03  
Dep 28.0 FIX Half-duration 4.0  
Principal Axes:  
Scale 10\*\*18 Nm  
T Vol= 1.32 Plg= 6 Azm=233  
N 0.07 77 350  
P -1.39 11 142  
Best Double Couple:Mo=1.4\*10\*\*18  
NP1:Strike=278 Dip=78 Slip=-176  
NP2: 187 86 -12

05 16 38 12.57 18.318S 168.063E 21km  
5.6mb ( 34 obs.) 7.0Msz ( 32 obs.)  
VANUATU ISLANDS  
FAULT PLANE SOLUTION: P-Waves  
NP1:Strike=155 Dip=70 Slip= 45  
NP2: 46 48 153  
Principal Axes:  
T Plg=45 Azm= 20  
P 13 276  
Comment: The focal mechanism is poorly controlled and corresponds to reverse faulting with a large strike-slip component. The preferred fault plane is not determined.

RADIATED ENERGY  
No. of sta: 8 Focal mech. C  
Energy 1.3±0.3\*10\*\*14 Nm  
MOMENT TENSOR SOLUTION  
Dep 22 No. of sta: 16  
Principal Axes:  
Scale 10\*\*19 Nm  
T Vol= 5.35 Plg=26 Azm= 14  
N -0.11 64 189  
P -5.25 2 283  
Best Double Couple:Mo=5.3\*10\*\*19  
NP1:Strike= 56 Dip=70 Slip= 162  
NP2: 152 73 21  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 17S, 49C M.W.: 11S, 29C  
Centroid Location:  
Origin Time 16:38:21.8 0.2  
Lat 18.35S 0.01 Lon 168.04E 0.01  
Dep 36.9 0.7 Half-duration 9.0  
Principal Axes:  
Scale 10\*\*19 Nm  
T Vol= 3.42 Plg=71 Azm= 47  
N -0.13 7 157  
P -3.29 18 249  
Best Double Couple:Mo=3.3\*10\*\*19  
NP1:Strike=350 Dip=28 Slip= 104  
NP2: 153 63 83

05 20 47 00.76 36.907N 73.021E 12km  
5.8mb ( 90 obs.) 6.0Msz ( 12 obs.)  
NORTHWESTERN KASHMIR  
MOMENT TENSOR SOLUTION

Dep 22 No. of sta: 10  
Principal Axes:  
Scale 10\*\*18 Nm  
T Val= 1.98 Plg=18 Azm= 54  
N -0.01 16 319  
P -1.98 65 191  
Best Double Couple:Mo=2.0\*10\*\*18  
NP1:Strike=169 Dip=30 Slip= -57  
NP2: 311 65 -108  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 12S, 31C  
Centroid Location:  
Origin Time 20:47: 6.7 0.2  
Lat 37.04N 0.06 Lon 72.85E 0.05  
Dep 17.5 2.7 Half-duration 4.3  
Principal Axes:  
Scale 10\*\*18 Nm  
T Val= 2.10 Plg=16 Azm= 71  
N -0.29 24 334  
P -1.81 60 192  
Best Double Couple:Mo=2.0\*10\*\*18  
NP1:Strike=192 Dip=36 Slip= -46  
NP2: 322 65 -117

06 13 30 58.41 11.147S 117.440E 22km  
5.6mb ( 38 obs.) 4.8Msz ( 14 obs.)  
SOUTH OF SUMBAWA ISLAND  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 14S, 31C  
Centroid Location:  
Origin Time 13:31: 2.1 0.6  
Lat 11.52S 0.07 Lon 117.62E 0.08  
Dep 33.0 FIX Half-duration 2.2  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 2.17 Plg= 0 Azm=147  
N -0.11 12 57  
P -2.06 78 237  
Best Double Couple:Mo=2.1\*10\*\*17  
NP1:Strike=250 Dip=46 Slip= -73  
NP2: 45 46 -107

06 18 07 04.76 36.909N 73.038E 20km  
5.0mb ( 40 obs.) 4.9Msz ( 6 obs.)  
NORTHWESTERN KASHMIR  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 11S, 23C  
Centroid Location:  
Origin Time 18:07: 8.7 0.6  
Lat 37.18N 0.11 Lon 72.84E 0.08  
Dep 33.0 FIX Half-duration 1.9  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 1.52 Plg=20 Azm= 71  
N -0.13 25 331  
P -1.39 58 195  
Best Double Couple:Mo=1.5\*10\*\*17  
NP1:Strike=195 Dip=33 Slip= -41  
NP2: 321 69 -116

06 21 39 50.26 36.913N 73.095E 24km  
5.2mb ( 55 obs.) 4.7Msz ( 11 obs.)  
NORTHWESTERN KASHMIR  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 10S, 22C  
Centroid Location:  
Origin Time 21:39:53.8 0.7  
Lat 37.20N 0.12 Lon 73.08E 0.10  
Dep 17.4 4.8 Half-duration 1.6  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 6.88 Plg= 0 Azm=264  
N -0.91 7 354  
P -5.97 83 174  
Best Double Couple:Mo=6.4\*10\*\*16  
NP1:Strike=347 Dip=45 Slip= -100  
NP2: 182 45 -80

07 02 16 18.28 3.517N 126.702E 85km  
5.1mb ( 11 obs.)  
TALAUD ISLANDS  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 11S, 22C  
Centroid Location:  
Origin Time 02:16:15.7 0.9  
Lat 4.01N 0.13 Lon 127.56E 0.16  
Dep 15.710 Half-duration 1.5  
Principal Axes:

Scale 10\*\*16 Nm  
T Val= 6.51 Plg=28 Azm=158  
N -0.80 51 289  
P -5.72 25 54  
Best Double Couple:Mo=6.1\*10\*\*16  
NP1:Strike=195 Dip=51 Slip= 177  
NP2: 287 88 39

07 18 22 03.19 17.295S 66.675E 10km  
5.2mb ( 14 obs.) 5.2Msz ( 12 obs.)  
MASCARENE ISLANDS REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 15S, 39C  
Centroid Location:  
Origin Time 18:22:14.0 0.2  
Lat 17.03S 0.03 Lon 66.41E 0.03  
Dep 15.0 FIX Half-duration 3.5  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 9.97 Plg=13 Azm=102  
N -2.00 72 240  
P -7.98 11 9  
Best Double Couple:Mo=9.0\*10\*\*17  
NP1:Strike=145 Dip=72 Slip= 179  
NP2: 236 89 18

08 07 08 43.33 11.625N 140.998E 45km  
5.4mb ( 40 obs.) 4.6Msz ( 11 obs.)  
WEST CAROLINE ISLANDS  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 11S, 27C  
Centroid Location:  
Origin Time 07:08:45.2 0.4  
Lat 11.46N 0.05 Lon 140.85E 0.08  
Dep 43.4 4.9 Half-duration 1.7  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 8.16 Plg=79 Azm= 32  
N 3.43 9 250  
P -11.59 7 159  
Best Double Couple:Mo=9.9\*10\*\*16  
NP1:Strike=239 Dip=39 Slip= 76  
NP2: 77 52 101

08 09 47 45.34 58.391N 152.960W 67km  
5.8mb ( 84 obs.)  
KODIAK ISLAND REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 14S, 35C  
Centroid Location:  
Origin Time 09:47:50.5 0.3  
Lat 58.30N 0.06 Lon 153.17W 0.07  
Dep 59.7 3.0 Half-duration 2.6  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 3.58 Plg= 3 Azm=126  
N -0.25 52 220  
P -3.33 37 33  
Best Double Couple:Mo=3.5\*10\*\*17  
NP1:Strike=176 Dip=62 Slip= -154  
NP2: 73 67 -31

08 18 57 01.43 25.452N 96.559E 33km  
4.8mb ( 29 obs.) 5.1Msz ( 6 obs.)  
BURMA  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 8S, 15C  
Centroid Location:  
Origin Time 18:57: 5.1 0.7  
Lat 25.11N 0.09 Lon 96.61E 0.11  
Dep 56.5 8.9 Half-duration 1.5  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 7.92 Plg=17 Azm=349  
N -0.49 71 143  
P -7.44 8 256  
Best Double Couple:Mo=7.7\*10\*\*16  
NP1:Strike= 32 Dip=73 Slip= 173  
NP2: 124 84 18

09 12 34 03.36 60.307N 152.286W 85km  
5.0mb ( 47 obs.)  
SOUTHERN ALASKA  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 13S, 27C  
Centroid Location:  
Origin Time 12:34: 4.6 0.9  
Lat 60.54N 0.08 Lon 152.34W 0.17

Dep 110.2 3.9 Half-duration 1.8  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 10.47 Plg=45 Azm=269  
N -0.34 43 109  
P -10.14 11 9  
Best Double Couple:Mo=1.0\*10\*\*17  
NP1:Strike= 60 Dip=51 Slip= 28  
NP2: 311 68 137

10 03 31 20.85 21.797S 170.542E 51km  
5.1mb ( 11 obs.)  
LOYALTY ISLANDS REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 13S, 25C  
Centroid Location:  
Origin Time 03:31:26.2 0.7  
Lat 21.84S 0.08 Lon 169.86E 0.07  
Dep 53.9 5.0 Half-duration 1.6  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 10.70 Plg= 7 Azm=321  
N -1.17 59 63  
P -9.53 30 227  
Best Double Couple:Mo=1.0\*10\*\*17  
NP1:Strike= 8 Dip=64 Slip= -162  
NP2: 270 74 -27

10 10 15 03.90 50.907N 157.244E 51km  
5.7mb ( 86 obs.)  
KURIL ISLANDS  
FAULT PLANE SOLUTION: P-Waves  
NP1:Strike= 45 Dip=67 Slip= 90  
NP2: 225 23 90  
Principal Axes:  
T Plg=68 Azm=315  
P 22 135  
Comment: The focal mechanism is poorly controlled and corresponds to reverse faulting. The preferred fault plane is NP2.  
MOMENT TENSOR SOLUTION  
Dep 53 No. of sta: 9  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 2.13 Plg=85 Azm= 5  
N -0.02 4 221  
P -2.12 3 130  
Best Double Couple:Mo=2.1\*10\*\*17  
NP1:Strike=216 Dip=42 Slip= 84  
NP2: 44 48 95  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 14S, 32C  
Centroid Location:  
Origin Time 10:15: 8.5 0.5  
Lat 50.67N 0.05 Lon 157.60E 0.06  
Dep 48.1 3.2 Half-duration 2.1  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 1.57 Plg=73 Azm= 21  
N 0.55 17 213  
P -2.12 4 122  
Best Double Couple:Mo=1.8\*10\*\*17  
NP1:Strike=195 Dip=44 Slip= 65  
NP2: 48 51 112

11 00 55 31.29 37.278S 78.241E 10km  
5.1mb ( 16 obs.) 4.9Msz ( 5 obs.)  
MID-INDIAN RISE  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 11S, 23C  
Centroid Location:  
Origin Time 00:55:39.6 0.9  
Lat 37.30S 0.10 Lon 78.47E 0.09  
Dep 15.0 FIX Half-duration 1.7  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 9.89 Plg=12 Azm=272  
N -1.32 74 135  
P -8.58 11 4  
Best Double Couple:Mo=9.2\*10\*\*16  
NP1:Strike= 48 Dip=74 Slip= 1  
NP2: 318 89 164

11 22 20 50.49 20.529S 168.207E 38km  
5.3mb ( 19 obs.) 5.3Msz ( 6 obs.)  
LOYALTY ISLANDS  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN



L.P.B.: 13S, 29C  
Centroid Location:  
Origin Time 22:20:54.6 0.3  
Lot 20.68S 0.04 Lon 167.78E 0.04  
Dep 15.0 FIX Half-duration 2.4  
Principal Axes:  
Scale 10\*\*17 Nm  
T Vol= 3.35 Plg= 7 Azm= 85  
N -0.63 32 351  
P -2.72 57 186  
Best Double Couple: Mo=3.0\*10\*\*17  
NP1: Strike=206 Dip=48 Slip=-44  
NP2: 329 59 -128

11 22 46 34.68 33.493N 138.654E 24km  
5.3mb ( 44 obs.) 4.6Msz ( 2 obs.)  
SOUTH OF HONSHU, JAPAN  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 11S, 20C  
Centroid Location:  
Origin Time 22:46:36.8 0.5  
Lot 33.45N 0.06 Lon 138.04E 0.06  
Dep 52.1 5.8 Half-duration 2.0  
Principal Axes:  
Scale 10\*\*17 Nm  
T Vol= 2.17 Plg= 0 Azm=269  
N -0.38 83 0  
P -1.78 7 179  
Best Double Couple: Mo=2.0\*10\*\*17  
NP1: Strike=314 Dip=85 Slip=-175  
NP2: 223 85 -5

12 12 59 50.65 47.895S 165.318E 19km  
5.4mb ( 7 obs.) 5.0Msz ( 2 obs.)  
OFF W. COAST OF S. ISLAND, N.Z.  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 13S, 31C  
Centroid Location:  
Origin Time 12:59:57.3 0.6  
Lot 47.56S 0.07 Lon 164.59E 0.07  
Dep 15.0 FIX Half-duration 2.0  
Principal Axes:  
Scale 10\*\*17 Nm  
T Vol= 1.84 Plg= 0 Azm=162  
N -0.46 90 180  
P -1.38 0 72  
Best Double Couple: Mo=1.6\*10\*\*17  
NP1: Strike=207 Dip=90 Slip=-180  
NP2: 297 90 0

12 13 32 55.50 3.158S 128.838E 26km  
5.2mb ( 27 obs.) 5.0Msz ( 11 obs.)  
CERAM  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 9S, 17C  
Centroid Location:  
Origin Time 13:33: 3.6 0.6  
Lot 3.38S 0.05 Lon 128.84E 0.11  
Dep 71.7 7.7 Half-duration 2.0  
Principal Axes:  
Scale 10\*\*17 Nm  
T Vol= 1.45 Plg=61 Azm=256  
N 0.68 25 110  
P -2.13 14 14  
Best Double Couple: Mo=1.8\*10\*\*17  
NP1: Strike= 74 Dip=38 Slip= 47  
NP2: 303 63 118

12 14 41 19.48 51.484N 175.032W 14km  
6.0mb ( 61 obs.) 6.2Msz ( 45 obs.)  
ANDREANOF ISLANDS, ALEUTIAN IS  
FAULT PLANE SOLUTION: P-Waves  
NP1: Strike= 52 Dip=74 Slip= 90  
NP2: 232 16 90  
Principal Axes:  
T Plg=61 Azm=322  
P 29 142  
Comment: The focal mechanism is poorly controlled and corresponds to reverse faulting. The preferred fault plane is NP2.

RADIATED ENERGY  
No. of sto: 8 Focal mech. C  
Energy 2.9±0.9\*10\*\*13 Nm  
MOMENT TENSOR SOLUTION  
Dep 30 No. of sto: 24  
Principal Axes:  
Scale 10\*\*18 Nm  
T Vol= 3.50 Plg=58 Azm=313

N 0.03 16 70  
P -3.53 27 168  
Best Double Couple: Mo=3.5\*10\*\*18  
NP1: Strike=291 Dip=23 Slip= 134  
NP2: 65 74 74  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 18S, 51C M.W.: 10S, 17C  
Centroid Location:  
Origin Time 14:41:26.6 0.2  
Lot 51.70N 0.02 Lon 174.90W 0.03  
Dep 19.4 1.0 Half-duration 5.8  
Principal Axes:  
Scale 10\*\*18 Nm  
T Vol= 3.73 Plg=65 Azm=342  
N 0.07 5 242  
P -3.80 25 149  
Best Double Couple: Mo=3.8\*10\*\*18  
NP1: Strike=229 Dip=21 Slip= 76  
NP2: 63 70 95

12 15 06 29.70 51.479N 174.984W 15km  
5.1mb ( 48 obs.)  
ANDREANOF ISLANDS, ALEUTIAN IS.  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 12S, 24C  
Centroid Location:  
Origin Time 15:06:31.3 1.5  
Lot 51.50N FIX; Lon 174.94W FIX  
Dep 15.0 FIX Half-duration 2.3  
Principal Axes:  
Scale 10\*\*17 Nm  
T Vol= 3.80 Plg=54 Azm=327  
N 0.43 8 68  
P -4.23 35 163  
Best Double Couple: Mo=4.0\*10\*\*17  
NP1: Strike=288 Dip=12 Slip= 131  
NP2: 66 81 82

12 23 18 14.34 13.231S 167.044E 163km  
5.1mb ( 23 obs.)  
VANUATU ISLANDS  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 10S, 20C  
Centroid Location:  
Origin Time 23:18:20.5 1.1  
Lot 13.73S 0.11 Lon 166.57E 0.11  
Dep 168.3 2.9 Half-duration 1.6  
Principal Axes:  
Scale 10\*\*16 Nm  
T Vol= 8.98 Plg=78 Azm= 74  
N -1.71 3 330  
P -7.26 11 240  
Best Double Couple: Mo=8.1\*10\*\*16  
NP1: Strike=326 Dip=34 Slip= 85  
NP2: 152 56 93

13 00 02 52.75 23.942N 145.035E 30km  
5.2mb ( 27 obs.) 4.5Msz ( 6 obs.)  
NORTH PACIFIC OCEAN  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 11S, 22C  
Centroid Location:  
Origin Time 00:02:54.1 1.1  
Lot 24.02N 0.08 Lon 144.68E 0.10  
Dep 15.0 FIX Half-duration 1.5  
Principal Axes:  
Scale 10\*\*16 Nm  
T Vol= 6.51 Plg=10 Azm=222  
N 1.64 78 3  
P -8.15 8 130  
Best Double Couple: Mo=7.3\*10\*\*16  
NP1: Strike=266 Dip=78 Slip= 179  
NP2: 356 89 12

13 00 32 59.18 73.325N 134.909E 18km  
5.5mb ( 82 obs.) 4.9Msz ( 7 obs.)  
LAPTEV SEA  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 12S, 24C  
Centroid Location:  
Origin Time 00:32:56.0 1.0  
Lot 73.08N 0.12 Lon 136.66E 0.60  
Dep 15.0 FIX Half-duration 1.7  
Principal Axes:  
Scale 10\*\*17 Nm  
T Vol= 0.99 Plg= 0 Azm= 96  
N 0.05 0 6  
P -1.04 90 180

Best Double Couple: Mo=1.0\*10\*\*17  
NP1: Strike=186 Dip=45 Slip=-90  
NP2: 6 45 -90

13 00 42 27.46 7.28 S 106.44 W 10km  
4.6mb ( 6 obs.) 4.9Msz ( 3 obs.)  
NORTHERN EASTER I. CORDILLERA  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 17S, 32C  
Centroid Location:  
Origin Time 00:42:40.2 0.5  
Lot 6.37S 0.05 Lon 107.24W 0.03  
Dep 15.0 FIX Half-duration 2.2  
Principal Axes:  
Scale 10\*\*17 Nm  
T Vol= 2.06 Plg= 0 Azm=144  
N -0.38 90 180  
P -1.69 0 54  
Best Double Couple: Mo=1.9\*10\*\*17  
NP1: Strike=189 Dip=90 Slip=-180  
NP2: 279 90 0

13 01 04 50.41 16.611S 172.530W 30km  
5.2mb ( 12 obs.) 5.2Msz ( 5 obs.)  
SAMOA ISLANDS REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 14S, 25C  
Centroid Location:  
Origin Time 01:04:52.3 0.9  
Lot 16.72S FIX; Lon 172.39W FIX  
Dep 31.9 8.0 Half-duration 1.7  
Principal Axes:  
Scale 10\*\*17 Nm  
T Vol= 1.40 Plg=60 Azm=294  
N 0.12 6 193  
P -1.52 29 100  
Best Double Couple: Mo=1.5\*10\*\*17  
NP1: Strike=174 Dip=17 Slip= 70  
NP2: 15 74 96

13 13 30 40.37 47.906S 165.653E 33km  
5.1mb ( 3 obs.) 5.1Msz ( 2 obs.)  
OFF W. COAST OF S. ISLAND, N.Z.  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 15S, 35C  
Centroid Location:  
Origin Time 13:30:48.0 0.5  
Lot 47.64S 0.06 Lon 164.62E 0.06  
Dep 15.0 FIX Half-duration 2.1  
Principal Axes:  
Scale 10\*\*17 Nm  
T Vol= 2.08 Plg= 0 Azm=162  
N -0.52 90 180  
P -1.55 0 72  
Best Double Couple: Mo=1.8\*10\*\*17  
NP1: Strike=207 Dip=90 Slip=-180  
NP2: 297 90 0

13 19 40 33.68 3.429S 76.913W 112km  
5.7mb ( 64 obs.)  
NORTHERN PERU  
FAULT PLANE SOLUTION: P-Waves  
NP1: Strike=145 Dip=84 Slip=-74  
NP2: 255 17 -159  
Principal Axes:  
T Plg=37 Azm=221  
P 49 72

Comment: The focal mechanism is moderately well controlled and corresponds to normal faulting with a moderate strike-slip component. The preferred fault plane is not determined.

RADIATED ENERGY  
No. of sto: 4 Focal mech. F  
Energy 1.4±0.6\*10\*\*12 Nm  
MOMENT TENSOR SOLUTION  
Dep 91 No. of sto: 10  
Principal Axes:  
Scale 10\*\*16 Nm  
T Vol= 7.12 Plg=39 Azm=231  
N 0.02 6 325  
P -7.14 51 62  
Best Double Couple: Mo=7.1\*10\*\*16  
NP1: Strike=281 Dip= 8 Slip=-135  
NP2: 146 84 -84  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 13S, 28C  
Centroid Location:

Origin Time 19:40:39.1 0.4  
 Lat 3.46S 0.04 Lon 76.91W 0.06  
 Dep 117.5 2.0 Half-duration 2.4  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 3.20 Plg= 3 Azm=254  
 N -0.42 12 164  
 P -2.79 78 357  
 Best Double Couple:Mo=3.0\*10\*\*17  
 NP1:Strike=357 Dip=44 Slip=-72  
 NP2: 153 49 -106

13 23 05 29.42 3.994S 39.925E 10km  
 5.3mb ( 60 obs.) 5.2Msz ( 12 obs.)  
 KENYA  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 12S, 26C  
 Centroid Location:  
 Origin Time 23:05:36.8 0.8  
 Lat 3.87S 0.05 Lon 40.48E 0.06  
 Dep 15.0 FIX Half-duration 2.2  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 2.25 Plg= 3 Azm=255  
 N -0.20 22 346  
 P -2.04 68 157  
 Best Double Couple:Mo=2.2\*10\*\*17  
 NP1:Strike=323 Dip=46 Slip=-121  
 NP2: 185 52 -62

14 03 33 17.34 10.212N 59.800W 47km  
 5.1mb ( 41 obs.) 4.8Msz ( 5 obs.)  
 NORTH ATLANTIC OCEAN  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 9S, 20C  
 Centroid Location:  
 Origin Time 03:33:21.3 1.0  
 Lat 9.99N 0.10 Lon 59.25W 0.08  
 Dep 30.4 8.3 Half-duration 1.7  
 Principal Axes:  
 Scale 10\*\*16 Nm  
 T Val= 14.30 Plg=24 Azm=336  
 N -1.85 57 110  
 P -12.45 21 236  
 Best Double Couple:Mo=1.3\*10\*\*17  
 NP1:Strike= 16 Dip=57 Slip= 178  
 NP2: 107 88 33

14 03 44 49.62 4.575N 122.620E 639km  
 5.6mb ( 64 obs.)  
 CELEBES SEA  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 9S, 20C  
 Centroid Location:  
 Origin Time 03:44:50.9 0.5  
 Lat 4.30N 0.05 Lon 122.25E 0.07  
 Dep 615.9 4.4 Half-duration 2.8  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 4.46 Plg=45 Azm= 90  
 N -0.09 4 356  
 P -4.37 44 262  
 Best Double Couple:Mo=4.4\*10\*\*17  
 NP1:Strike=272 Dip= 4 Slip= 6  
 NP2: 176 90 94

15 00 12 42.92 31.658N 60.213E 16km  
 4.9mb ( 37 obs.) 4.6Msz ( 5 obs.)  
 IRAN  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 11S, 19C  
 Centroid Location:  
 Origin Time 00:12:48.1 0.9  
 Lat 31.44N 0.09 Lon 60.30E 0.10  
 Dep 15.0 FIX Half-duration 1.5  
 Principal Axes:  
 Scale 10\*\*16 Nm  
 T Val= 6.21 Plg= 5 Azm=325  
 N 0.25 82 196  
 P -6.47 7 56  
 Best Double Couple:Mo=6.3\*10\*\*16  
 NP1:Strike=100 Dip=82 Slip=-1  
 NP2: 190 89 -172

15 04 56 34.52 15.130S 167.238E 132km  
 5.6mb ( 39 obs.)  
 VANUATU ISLANDS  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN

L.P.B.: 15S, 40C M.W.: 11S, 25C  
 Centroid Location:  
 Origin Time 04:56:40.2 0.2  
 Lat 15.17S 0.02 Lon 167.22E 0.02  
 Dep 120.9 0.6 Half-duration 6.6  
 Principal Axes:  
 Scale 10\*\*18 Nm  
 T Val= 5.44 Plg=76 Azm=176  
 N 0.37 14 13  
 P -5.81 4 282  
 Best Double Couple:Mo=5.6\*10\*\*18  
 NP1:Strike=358 Dip=43 Slip= 70  
 NP2: 204 50 108

16 15 52 42.63 24.897N 109.035W 10km  
 5.5mb ( 38 obs.) 6.1Msz ( 15 obs.)  
 GULF OF CALIFORNIA  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 12S, 30C M.W.: 9S, 20C  
 Centroid Location:  
 Origin Time 15:52:49.0 0.2  
 Lat 24.34N 0.02 Lon 108.66W 0.02  
 Dep 15.0 FIX Half-duration 4.8  
 Principal Axes:  
 Scale 10\*\*18 Nm  
 T Val= 1.78 Plg= 0 Azm=259  
 N 0.05 90 180  
 P -1.83 0 169  
 Best Double Couple:Mo=1.8\*10\*\*18  
 NP1:Strike=304 Dip=90 Slip=-180  
 NP2: 34 90 0

17 12 20 14.16 4.398S 144.068E 123km  
 5.4mb ( 22 obs.)  
 NEAR N COAST OF PAPUA NEW GUINEA  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 9S, 12C  
 Centroid Location:  
 Origin Time 12:20:18.8 1.1  
 Lat 4.23S 0.11 Lon 144.97E 0.17  
 Dep 102.610.1 Half-duration 1.5  
 Principal Axes:  
 Scale 10\*\*16 Nm  
 T Val= 4.46 Plg=33 Azm= 50  
 N 1.77 34 294  
 P -6.23 39 171  
 Best Double Couple:Mo=5.3\*10\*\*16  
 NP1:Strike=197 Dip=34 Slip=-6  
 NP2: 292 87 -124

18 22 30 07.60 48.688S 106.802E 10km  
 5.2mb ( 5 obs.) 5.2Msz ( 7 obs.)  
 SOUTHEAST INDIAN RISE  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 12S, 26C  
 Centroid Location:  
 Origin Time 22:30:17.2 0.5  
 Lat 48.58S 0.05 Lon 107.42E 0.11  
 Dep 15.0 FIX Half-duration 2.2  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 1.65 Plg= 0 Azm=161  
 N 0.52 90 180  
 P -2.16 0 71  
 Best Double Couple:Mo=1.9\*10\*\*17  
 NP1:Strike=206 Dip=90 Slip=-180  
 NP2: 296 90 0

18 23 19 29.72 20.286S 66.740E 20km  
 5.8mb ( 74 obs.) 5.4Msz ( 12 obs.)  
 MASCARENE ISLANDS REGION  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 9S, 19C  
 Centroid Location:  
 Origin Time 23:19:30.8 1.1  
 Lat 20.45S FIX Lon 66.76E FIX  
 Dep 15.0 FIX Half-duration 1.6  
 Principal Axes:  
 Scale 10\*\*16 Nm  
 T Val= 6.86 Plg=64 Azm=324  
 N -0.17 25 132  
 P -6.69 5 224  
 Best Double Couple:Mo=6.8\*10\*\*16  
 NP1:Strike=339 Dip=46 Slip= 127  
 NP2: 113 55 58

20 01 12 19.72 27.220N 141.605E 47km  
 5.8mb ( 89 obs.) 5.0Msz ( 18 obs.)  
 BONIN ISLANDS REGION

FAULT PLANE SOLUTION: P-Waves  
 NP1:Strike= 3 Dip=70 Slip=-38  
 NP2: 108 55 -155  
 Principal Axes:  
 T Plg=10 Azm= 59  
 P 41 320  
 Comment: The focal mechanism is poorly controlled and corresponds to strike-slip faulting with a large normal component. The preferred fault plane is not determined.

MOMENT TENSOR SOLUTION  
 Dep 41 Na. of sta: 13  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 5.09 Plg=13 Azm= 50  
 N 0.04 50 155  
 P -5.13 37 310  
 Best Double Couple:Mo=5.1\*10\*\*17  
 NP1:Strike= 97 Dip=54 Slip=-160  
 NP2: 355 74 -37  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 11S, 27C  
 Centroid Location:  
 Origin Time 01:12:28.3 0.5  
 Lat 27.70N 0.08 Lon 141.32E 0.05  
 Dep 15.0 FIX Half-duration 2.9  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 6.31 Plg=29 Azm= 85  
 N -0.22 19 185  
 P -6.09 54 304  
 Best Double Couple:Mo=6.2\*10\*\*17  
 NP1:Strike=133 Dip=23 Slip=-144  
 NP2: 10 77 -71

20 18 55 22.33 45.846S 96.229E 10km  
 5.1mb ( 8 obs.) 5.1Msz ( 3 obs.)  
 SOUTHEAST INDIAN RISE  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 13S, 25C  
 Centroid Location:  
 Origin Time 18:55:30.8 0.8  
 Lat 45.50S 0.08 Lon 95.86E 0.13  
 Dep 15.0 FIX Half-duration 1.7  
 Principal Axes:  
 Scale 10\*\*16 Nm  
 T Val= 6.64 Plg= 0 Azm=241  
 N 2.60 90 180  
 P -9.25 0 151  
 Best Double Couple:Mo=7.9\*10\*\*16  
 NP1:Strike=286 Dip=90 Slip=-180  
 NP2: 16 90 0

20 22 04 48.44 29.496N 131.595E 31km  
 5.6mb ( 78 obs.) 5.1Msz ( 10 obs.)  
 RYUKYU ISLANDS REGION  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 8S, 17C  
 Centroid Location:  
 Origin Time 22:04:52.1 1.3  
 Lat 29.35N 0.10 Lon 131.43E 0.08  
 Dep 57.4 4.8 Half-duration 2.1  
 Principal Axes:  
 Scale 10\*\*17 Nm  
 T Val= 2.16 Plg=71 Azm=223  
 N -0.13 19 45  
 P -2.03 1 315  
 Best Double Couple:Mo=2.1\*10\*\*17  
 NP1:Strike= 27 Dip=47 Slip= 64  
 NP2: 243 49 115

21 16 46 05.45 31.092S 179.093W 145km  
 6.2mb ( 52 obs.)  
 KERMADEC ISLANDS REGION  
 FAULT PLANE SOLUTION: P-Waves  
 NP1:Strike=320 Dip=80 Slip= 90  
 NP2: 140 10 90  
 Principal Axes:  
 T Plg=55 Azm=230  
 P 35 50  
 Comment: The focal mechanism is poorly controlled and corresponds to reverse faulting. The preferred fault plane is NP2.  
 RADIATED ENERGY  
 No. of sta: 6 Focal mech. C  
 Energy 5.2±1.8\*10\*\*13 Nm

CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 14S, 35C M.W.: 17S, 37C  
Centroid Location:  
Origin Time 16:46:16.9 0.2  
Lat 30.71S 0.02 Lon 179.38W 0.03  
Dep 157.3 0.8 Half-duration 7.6  
Principal Axes:  
Scale 10\*\*18 Nm  
T Val= 7.98 Plg=57 Azm=218  
N 0.78 1 309  
P -8.76 33 39  
Best Double Couple:Mo=8.4\*10\*\*18  
NP1:Strike=131 Dip=12 Slip= 93  
NP2: 309 78 89

21 22 05 55.61 5.503S 152.007E 61km  
5.3mb ( 18 obs.)  
NEW BRITAIN REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 10S, 16C  
Centroid Location:  
Origin Time 22:05:51.1 3.4  
Lat 6.04S 0.33 Lon 152.59E 0.16  
Dep 62.512.5 Half-duration 1.7  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 10.71 Plg= 4 Azm= 56  
N -1.62 67 317  
P -9.09 23 148  
Best Double Couple:Mo=9.9\*10\*\*16  
NP1:Strike=189 Dip=71 Slip= -14  
NP2: 284 77 -161

22 00 00 16.41 36.919S 177.197E 225km  
5.8mb ( 30 obs.)  
OFF E. COAST OF N. ISLAND, N.Z.  
FAULT PLANE SOLUTION: P-Waves  
NP1:Strike=215 Dip=80 Slip= -90  
NP2: 35 10 -90  
Principal Axes:  
T Plg=35 Azm=305  
P 55 125  
Comment: The focal mechanism is poorly controlled and corresponds to normal faulting. The preferred fault plane is NP1.  
MOMENT TENSOR SOLUTION  
Dep 211 No. of sta: 8  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 3.03 Plg=38 Azm=286  
N -0.01 24 36  
P -3.01 43 150  
Best Double Couple:Mo=3.0\*10\*\*17  
NP1:Strike=314 Dip=24 Slip=-173  
NP2: 218 87 -66  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 13S, 26C  
Centroid Location:  
Origin Time 00:00:21.2 0.6  
Lat 36.85S 0.08 Lon 176.78E 0.07  
Dep 210.5 2.8 Half-duration 2.4  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 2.62 Plg=45 Azm=288  
N -0.16 14 33  
P -2.46 42 136  
Best Double Couple:Mo=2.5\*10\*\*17  
NP1:Strike=296 Dip=14 Slip= 173  
NP2: 32 88 76

22 02 11 50.68 8.473S 158.891E 116km  
5.5mb ( 38 obs.)  
SOLOMON ISLANDS  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 16S, 37C  
Centroid Location:  
Origin Time 02:11:58.1 0.4  
Lat 8.46S 0.05 Lon 158.58E 0.04  
Dep 114.7 2.9 Half-duration 2.3  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 2.87 Plg=44 Azm=137  
N -0.87 18 245  
P -2.01 40 350  
Best Double Couple:Mo=2.4\*10\*\*17  
NP1:Strike=147 Dip=18 Slip= 173  
NP2: 244 88 72

23 13 35 37.42 49.235S 122.283E 10km  
5.0mb ( 5 obs.) 5.4Msz ( 1 obs.)  
SOUTH OF AUSTRALIA  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 13S, 22C  
Centroid Location:  
Origin Time 13:35:42.6 0.8  
Lat 49.60S 0.12 Lon 122.43E 0.12  
Dep 15.0 FIX Half-duration 1.6  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 8.55 Plg=56 Azm=176  
N -1.27 23 48  
P -7.28 24 307  
Best Double Couple:Mo=7.9\*10\*\*16  
NP1:Strike= 0 Dip=29 Slip= 38  
NP2: 235 72 114

23 14 07 15.47 16.132N 96.278W 63km  
5.2mb ( 47 obs.)  
OAXACA, MEXICO  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 12S, 22C  
Centroid Location:  
Origin Time 14:07:16.2 1.9  
Lat 16.44N 0.14 Lon 96.03W 0.14  
Dep 44.1 8.0 Half-duration 1.7  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 9.43 Plg=36 Azm= 52  
N 3.82 45 275  
P -13.25 23 160  
Best Double Couple:Mo=1.1\*10\*\*17  
NP1:Strike=201 Dip=46 Slip= 12  
NP2: 103 82 135

23 21 06 03.06 43.718N 147.756E 33km  
5.2mb ( 59 obs.) 4.7Msz ( 15 obs.)  
KURIL ISLANDS  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 10S, 22C  
Centroid Location:  
Origin Time 21:06:10.4 0.6  
Lat 43.66N 0.10 Lon 147.22E 0.07  
Dep 20.4 7.2 Half-duration 1.7  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 1.02 Plg=30 Azm=197  
N 0.15 57 347  
P -1.17 14 99  
Best Double Couple:Mo=1.1\*10\*\*17  
NP1:Strike=234 Dip=59 Slip= 168  
NP2: 331 79 32

24 07 05 52.17 47.624S 165.261E 33km  
5.4mb ( 21 obs.) 5.1Msz ( 7 obs.)  
OFF W. COAST OF S. ISLAND, N.Z.  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 15S, 35C  
Centroid Location:  
Origin Time 07:05:53.8 0.6  
Lat 47.96S 0.05 Lon 164.53E 0.05  
Dep 15.0 FIX Half-duration 2.0  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 2.84 Plg= 0 Azm=190  
N -1.06 90 180  
P -1.78 0 100  
Best Double Couple:Mo=2.3\*10\*\*17  
NP1:Strike=235 Dip=90 Slip=-180  
NP2: 325 90 0

24 17 20 18.32 16.247S 173.058W 30km  
5.3mb ( 33 obs.) 4.9Msz ( 6 obs.)  
TONGA ISLANDS  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 13S, 27C  
Centroid Location:  
Origin Time 17:20:22.8 0.5  
Lat 16.52S 0.07 Lon 172.49W 0.06  
Dep 29.6 4.3 Half-duration 1.9  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 1.42 Plg=52 Azm= 24  
N -0.07 33 170  
P -1.35 17 271  
Best Double Couple:Mo=1.4\*10\*\*17  
NP1:Strike= 39 Dip=40 Slip= 146

NP2: 156 69 55

25 00 01 10.68 33.619N 57.022E 33km  
4.8mb ( 31 obs.) 4.6Msz ( 2 obs.)  
IRAN  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 10S, 16C  
Centroid Location:  
Origin Time 00:01:11.1 0.8  
Lat 33.34N 0.13 Lon 56.99E 0.06  
Dep 15.0 FIX Half-duration 1.5  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 5.98 Plg= 0 Azm=178  
N 1.02 90 180  
P -7.00 0 88  
Best Double Couple:Mo=6.5\*10\*\*16  
NP1:Strike=223 Dip=90 Slip=-180  
NP2: 313 90 0

25 01 10 42.85 32.958S 178.447W 33km  
5.1mb ( 11 obs.) 5.1Msz ( 3 obs.)  
SOUTH OF KERMADEC ISLANDS  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 12S, 25C  
Centroid Location:  
Origin Time 01:10:46.8 0.7  
Lat 32.78S 0.08 Lon 178.07W 0.08  
Dep 15.0 FIX Half-duration 1.7  
Principal Axes:  
Scale 10\*\*17 Nm  
T Val= 1.13 Plg=72 Azm=323  
N 0.28 8 206  
P -1.42 16 114  
Best Double Couple:Mo=1.3\*10\*\*17  
NP1:Strike=192 Dip=40 Slip= 73  
NP2: 31 61 99

25 06 22 20.38 7.944N 127.329E 53km  
5.0mb ( 21 obs.) 4.3Msz ( 6 obs.)  
PHILIPPINE ISLANDS REGION  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 12S, 27C  
Centroid Location:  
Origin Time 06:22:22.7 0.7  
Lat 7.82N 0.08 Lon 127.16E 0.07  
Dep 32.9 5.2 Half-duration 1.5  
Principal Axes:  
Scale 10\*\*16 Nm  
T Val= 6.94 Plg= 6 Azm=259  
N -0.82 9 350  
P -6.11 79 136  
Best Double Couple:Mo=6.5\*10\*\*16  
NP1:Strike=339 Dip=40 Slip=-104  
NP2: 177 52 -78

25 13 16 06.92 9.814N 84.828W 27km  
5.8mb ( 76 obs.) 6.4Msz ( 2 obs.)  
COSTA RICA  
FAULT PLANE SOLUTION: P-Waves  
NP1:Strike= 98 Dip=70 Slip= 90  
NP2: 278 20 90  
Principal Axes:  
T Plg=65 Azm= 8  
P 25 188  
Comment: The focal mechanism is poorly controlled and corresponds to reverse faulting. The preferred fault plane is NP2.  
RADIATED ENERGY  
No. of sta: 4 Focal mech. F  
Energy 1.3±0.6\*10\*\*13 Nm

25 13 22 55.60 9.919N 84.808W 22km  
6.2mb ( 56 obs.) 7.0Msz ( 23 obs.)  
COSTA RICA  
FAULT PLANE SOLUTION: P-Waves  
NP1:Strike=102 Dip=72 Slip= 130  
NP2: 212 43 27  
Principal Axes:  
T Plg=47 Azm= 54  
P 17 164  
Comment: The focal mechanism is poorly controlled and corresponds to reverse faulting with a large left-lateral strike-slip component. The preferred fault plane is NP2.

**RADIATED ENERGY**  
 No. of sta: 9 Focal mech. F  
 Energy  $2.2 \pm 0.7 \times 10^{14}$  Nm  
**CENTROID, MOMENT TENSOR (HRV)**  
 Data Used: GDSN  
 L.P.B.: 18S, 50C M.W.: 14S, 38C  
 Centroid Location:  
 Origin Time 13:23: 7.8 0.1  
 Lat 9.95N 0.02 Lon 84.58W 0.01  
 Dep 17.9 0.8 Half-duration 15.0  
 Principal Axes:  
 Scale  $10^{19}$  Nm  
 T Val= 10.96 Plg=56 Azm= 15  
 N 0.10 3 109  
 P -11.06 34 201  
 Best Double Couple: Mo=1.1\*10<sup>20</sup>  
 NP1:Strike=303 Dip=11 Slip= 104  
 NP2: 108 79 87  
**GEOSCOPE MOMENT TENSOR (PAR)**  
 Dep 15.0 Half-duration 25.0  
 Best Double Couple: Mo=7.8\*10<sup>19</sup>  
 NP1:Strike=275 Dip=26 Slip= 43  
 NP2: 145 73 110

25 21 35 24.44 9.591N 84.659W 41km  
 5.6mb ( 64 obs.) 5.4Msz ( 14 obs.)  
**COSTA RICA**  
**CENTROID, MOMENT TENSOR (HRV)**  
 Data Used: GDSN  
 L.P.B.: 15S, 33C  
 Centroid Location:  
 Origin Time 21:35:30.5 0.6  
 Lat 9.65N FIX; Lon 84.67W FIX  
 Dep 15.0 FIX Half-duration 2.4  
 Principal Axes:  
 Scale  $10^{17}$  Nm  
 T Val= 4.13 Plg=54 Azm= 51  
 N -0.28 11 305  
 P -3.85 33 207  
 Best Double Couple: Mo=4.0\*10<sup>17</sup>  
 NP1:Strike=259 Dip=16 Slip= 43  
 NP2: 127 79 102

26 22 47 16.75 9.253N 125.606E 39km  
 5.6mb ( 39 obs.) 5.5Msz ( 20 obs.)  
**MINDANAO, PHILIPPINE ISLANDS**  
**CENTROID, MOMENT TENSOR (HRV)**  
 Data Used: GDSN  
 L.P.B.: 12S, 29C  
 Centroid Location:  
 Origin Time 22:47:14.4 0.4  
 Lat 9.04N 0.06 Lon 125.74E 0.06  
 Dep 44.0 4.6 Half-duration 3.5  
 Principal Axes:  
 Scale  $10^{17}$  Nm  
 T Val= 6.72 Plg=23 Azm=205  
 N 2.62 61 64  
 P -9.34 16 302  
 Best Double Couple: Mo=8.0\*10<sup>17</sup>  
 NP1:Strike=345 Dip=61 Slip= 5  
 NP2: 252 85 151

27 20 04 16.23 5.298S 145.865E 82km  
 5.3mb ( 32 obs.)  
**EAST PAPUA NEW GUINEA REGION**  
**CENTROID, MOMENT TENSOR (HRV)**  
 Data Used: GDSN  
 L.P.B.: 14S, 25C  
 Centroid Location:  
 Origin Time 20:04:21.4 0.5  
 Lat 5.38S 0.04 Lon 145.67E 0.06  
 Dep 69.3 4.3 Half-duration 1.7  
 Principal Axes:  
 Scale  $10^{17}$  Nm  
 T Val= 1.18 Plg=33 Azm=287  
 N 0.21 51 72  
 P -1.38 18 185  
 Best Double Couple: Mo=1.3\*10<sup>17</sup>  
 NP1:Strike=322 Dip=53 Slip= 167  
 NP2: 59 80 38

28 01 20 41.52 21.810S 175.190E 10km  
 5.1mb ( 15 obs.) 4.9Msz ( 4 obs.)  
**SOUTH OF FIJI ISLANDS**  
**CENTROID, MOMENT TENSOR (HRV)**  
 Data Used: GDSN  
 L.P.B.: 14S, 33C  
 Centroid Location:  
 Origin Time 01:20:52.5 0.6  
 Lat 21.94S 0.05 Lon 174.62E 0.05  
 Dep 15.0 FIX Half-duration 1.9  
 Principal Axes:  
 Scale  $10^{17}$  Nm  
 T Val= 1.36 Plg= 0 Azm=234  
 N -0.20 90 180  
 P -1.15 0 144  
 Best Double Couple: Mo=1.3\*10<sup>17</sup>  
 NP1:Strike=279 Dip=90 Slip=-180  
 NP2: 9 90 0

28 19 50 19.97 16.094S 173.112W 33km  
 5.3mb ( 17 obs.) 4.3Msz ( 2 obs.)  
**TONGA ISLANDS**  
**CENTROID, MOMENT TENSOR (HRV)**  
 Data Used: GDSN  
 L.P.B.: 15S, 30C  
 Centroid Location:  
 Origin Time 19:50:24.4 1.0  
 Lat 16.47S 0.10 Lon 172.74W 0.09  
 Dep 15.0 FIX Half-duration 1.5  
 Principal Axes:  
 Scale  $10^{16}$  Nm  
 T Val= 6.00 Plg=53 Azm=215  
 N 0.97 30 355  
 P -6.96 20 97  
 Best Double Couple: Mo=6.5\*10<sup>16</sup>  
 NP1:Strike=226 Dip=37 Slip= 147  
 NP2: 343 71 58

29 04 34 04.29 45.331N 150.204E 50km  
 5.2mb ( 70 obs.) 4.1Msz ( 2 obs.)  
**KURIL ISLANDS**  
**CENTROID, MOMENT TENSOR (HRV)**  
 Data Used: GDSN  
 L.P.B.: 11S, 21C  
 Centroid Location:  
 Origin Time 04:34:12.9 0.7  
 Lat 45.59N 0.08 Lon 149.26E 0.10  
 Dep 60.7 8.3 Half-duration 1.5  
 Principal Axes:  
 Scale  $10^{16}$  Nm  
 T Val= 4.80 Plg=67 Azm=278  
 N 0.01 14 44  
 P -4.81 18 139  
 Best Double Couple: Mo=4.8\*10<sup>16</sup>  
 NP1:Strike=251 Dip=30 Slip= 120  
 NP2: 37 65 74

29 14 15 44.82 16.572N 145.831E 24km  
 5.3mb ( 21 obs.) 4.6Msz ( 11 obs.)  
**MARIANA ISLANDS**  
**CENTROID, MOMENT TENSOR (HRV)**  
 Data Used: GDSN  
 L.P.B.: 13S, 28C  
 Centroid Location:  
 Origin Time 14:15:43.2 0.7  
 Lat 16.72N 0.06 Lon 146.11E 0.08  
 Dep 15.0 FIX Half-duration 1.7  
 Principal Axes:  
 Scale  $10^{16}$  Nm  
 T Val= 9.12 Plg= 2 Azm=301  
 N -3.14 63 207  
 P -5.98 27 32  
 Best Double Couple: Mo=7.6\*10<sup>16</sup>  
 NP1:Strike= 73 Dip=70 Slip= -18  
 NP2: 170 73 -159

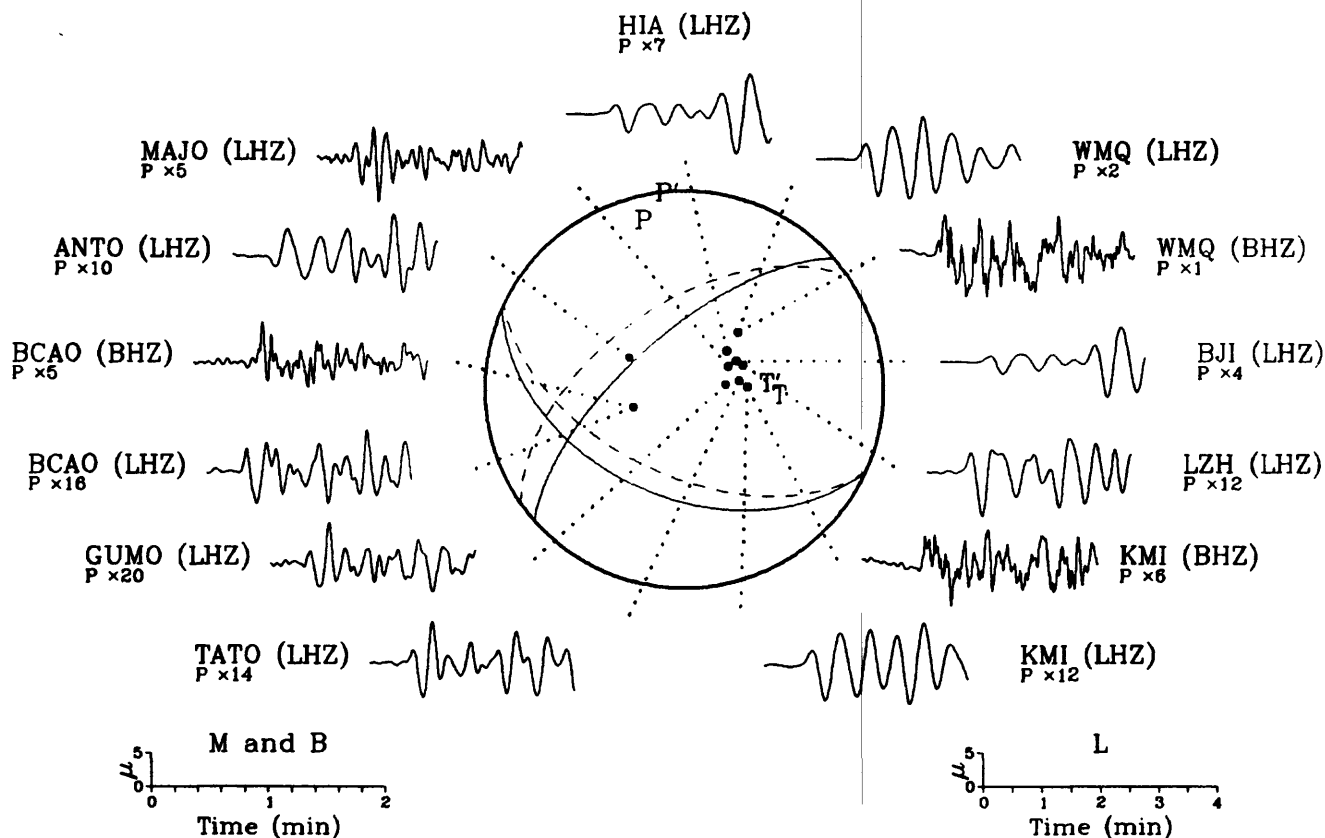
29 16 19 15.80 39.408N 73.256E 25km  
 5.4mb ( 78 obs.) 5.1Msz ( 8 obs.)  
**TAJIK-XINJIANG BORDER REGION**  
**CENTROID, MOMENT TENSOR (HRV)**

Data Used: GDSN  
 L.P.B.: 13S, 29C  
 Centroid Location:  
 Origin Time 16:19:21.0 0.7  
 Lat 39.04N 0.08 Lon 73.09E 0.08  
 Dep 22.0 FIX Half-duration 1.8  
 Principal Axes:  
 Scale  $10^{17}$  Nm  
 T Val= 1.41 Plg=24 Azm=236  
 N -0.25 56 8  
 P -1.16 22 136  
 Best Double Couple: Mo=1.3\*10<sup>17</sup>  
 NP1:Strike=276 Dip=56 Slip= 178  
 NP2: 6 89 34

30 00 42 06.96 20.231N 122.038E 124km  
 5.5mb ( 91 obs.)  
**PHILIPPINE ISLANDS REGION**  
**CENTROID, MOMENT TENSOR (HRV)**  
 Data Used: GDSN  
 L.P.B.: 10S, 22C  
 Centroid Location:  
 Origin Time 00:42: 7.0 0.4  
 Lat 20.10N 0.05 Lon 121.64E 0.05  
 Dep 70.6 5.5 Half-duration 2.3  
 Principal Axes:  
 Scale  $10^{17}$  Nm  
 T Val= 2.35 Plg=57 Azm=105  
 N 0.46 18 345  
 P -2.81 27 246  
 Best Double Couple: Mo=2.6\*10<sup>17</sup>  
 NP1:Strike=299 Dip=24 Slip= 41  
 NP2: 170 75 109

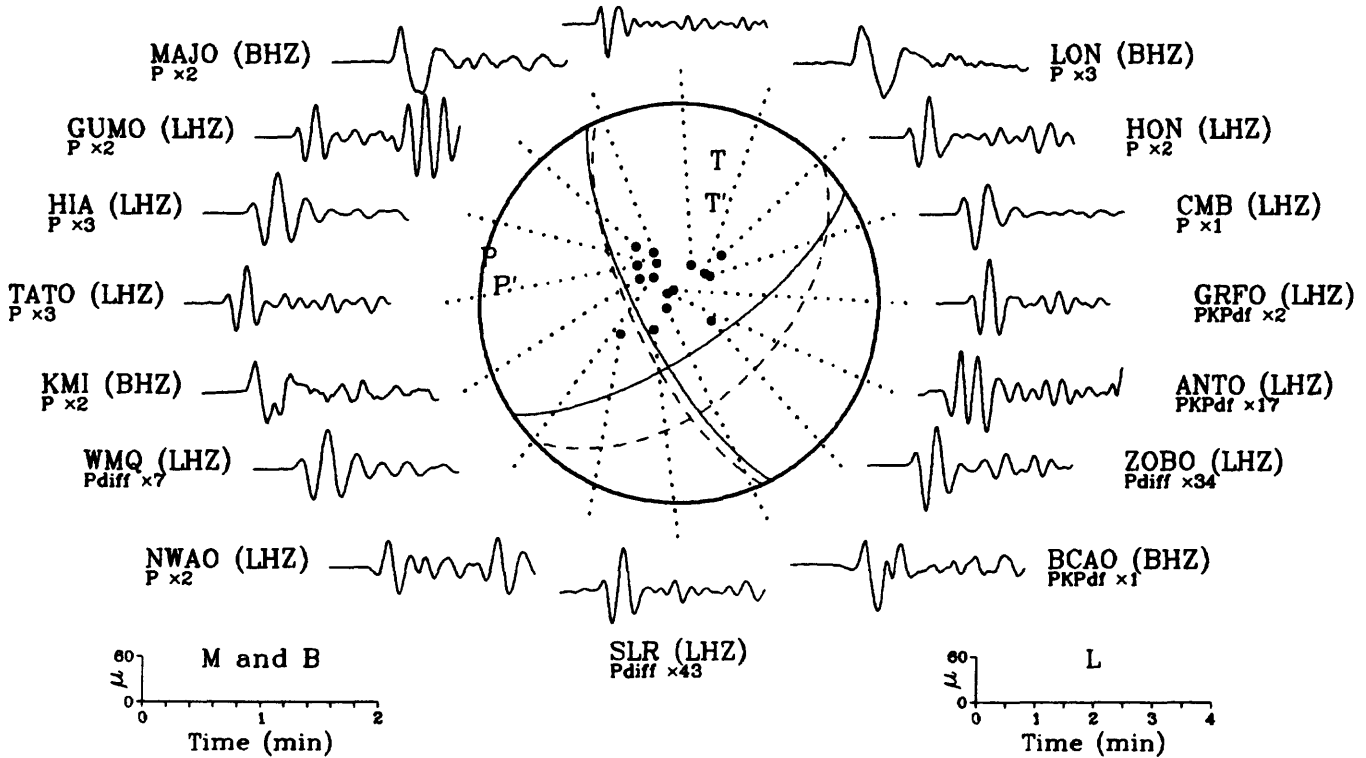
31 19 31 42.75 42.891N 146.969E 21km  
 5.9mb ( 76 obs.) 5.8Msz ( 25 obs.)  
**OFF COAST OF HOKKAIDO, JAPAN**  
**FAULT PLANE SOLUTION: P-Waves**  
 NP1:Strike= 34 Dip=80 Slip= 67  
 NP2: 282 25 156  
 Principal Axes:  
 T Plg=50 Azm=279  
 P 31 143  
 Comment: The focal mechanism is moderately well controlled and corresponds to reverse faulting with a moderate right-lateral strike-slip component. The preferred fault plane is NP2.

**RADIATED ENERGY**  
 No. of sta: 7 Focal mech. M  
 Energy  $8.7 \pm 3.2 \times 10^{12}$  Nm  
**MOMENT TENSOR SOLUTION**  
 Dep 18 Na. of sta: 18  
 Principal Axes:  
 Scale  $10^{18}$  Nm  
 T Val= 1.16 Plg=46 Azm=280  
 N 0.00 29 46  
 P -1.16 29 155  
 Best Double Couple: Mo=1.2\*10<sup>18</sup>  
 NP1:Strike=295 Dip=31 Slip= 161  
 NP2: 41 80 60  
**CENTROID, MOMENT TENSOR (HRV)**  
 Data Used: GDSN  
 L.P.B.: 13S, 35C  
 Centroid Location:  
 Origin Time 19:31:48.7 0.3  
 Lat 42.98N 0.03 Lon 146.49E 0.05  
 Dep 15.0 FIX Half-duration 3.6  
 Principal Axes:  
 Scale  $10^{18}$  Nm  
 T Val= 1.27 Plg=56 Azm=292  
 N 0.11 8 35  
 P -1.39 32 130  
 Best Double Couple: Mo=1.3\*10<sup>18</sup>  
 NP1:Strike=248 Dip=15 Slip= 125  
 NP2: 33 78 81



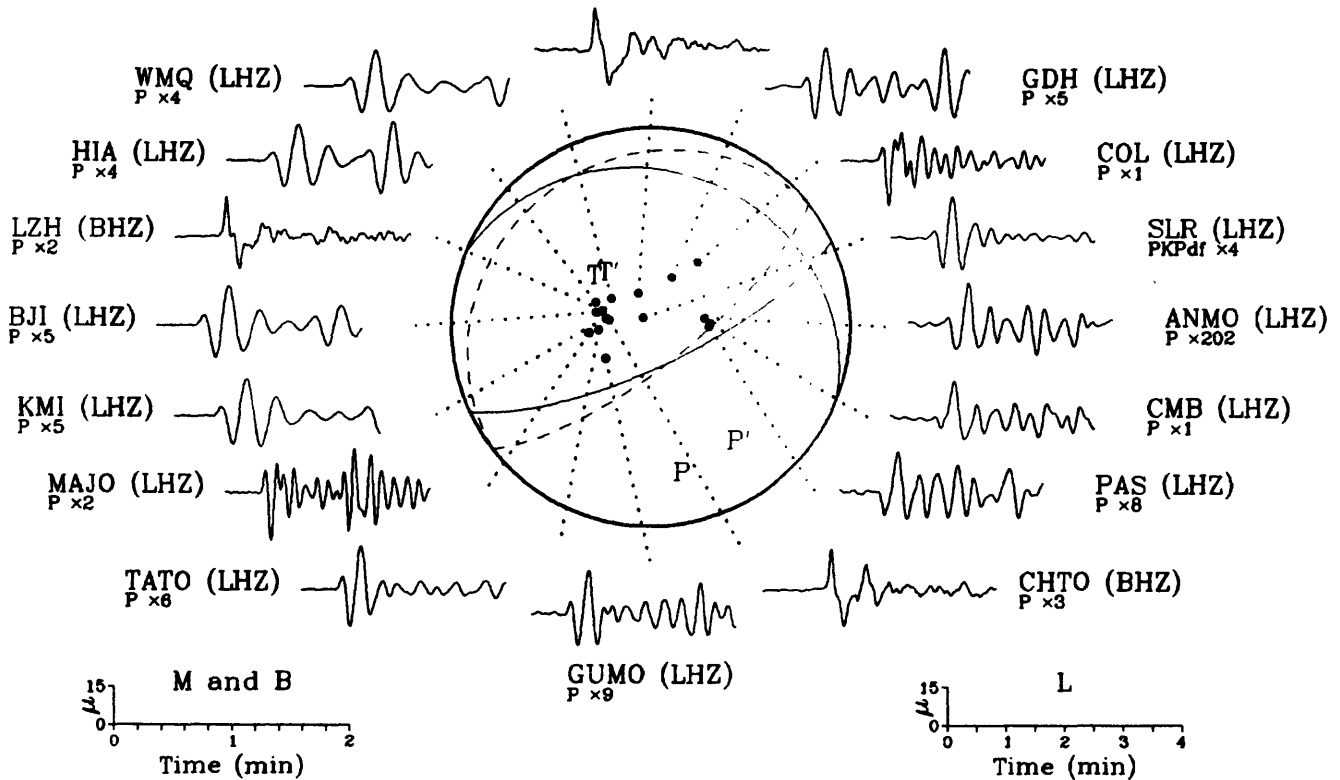
05 March 1990 16:38:12.57  
Vanuatu Islands

COL (LHZ)  
P x2

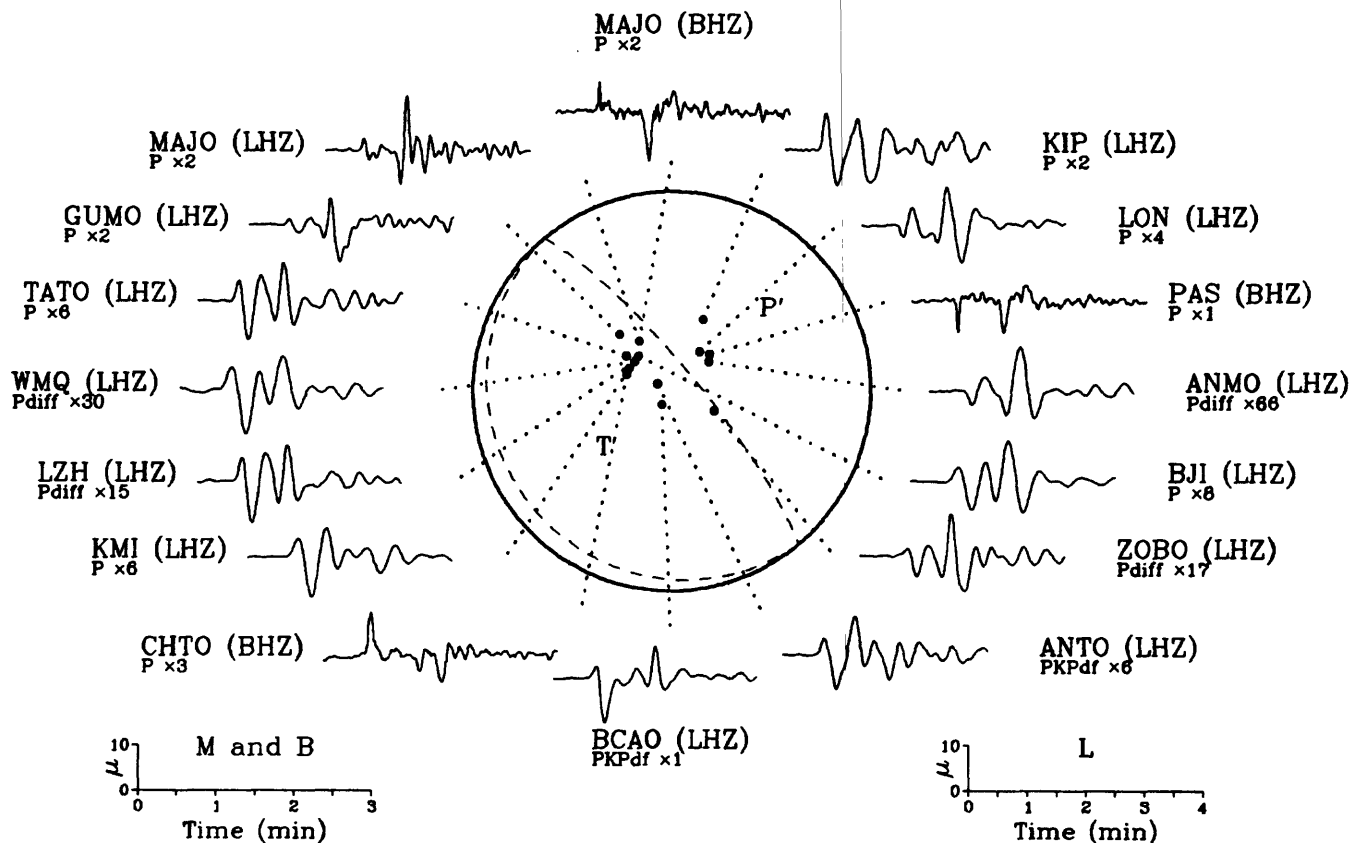


12 March 1990 14:41:19.48  
Andreanof Islands, Aleutian Is.

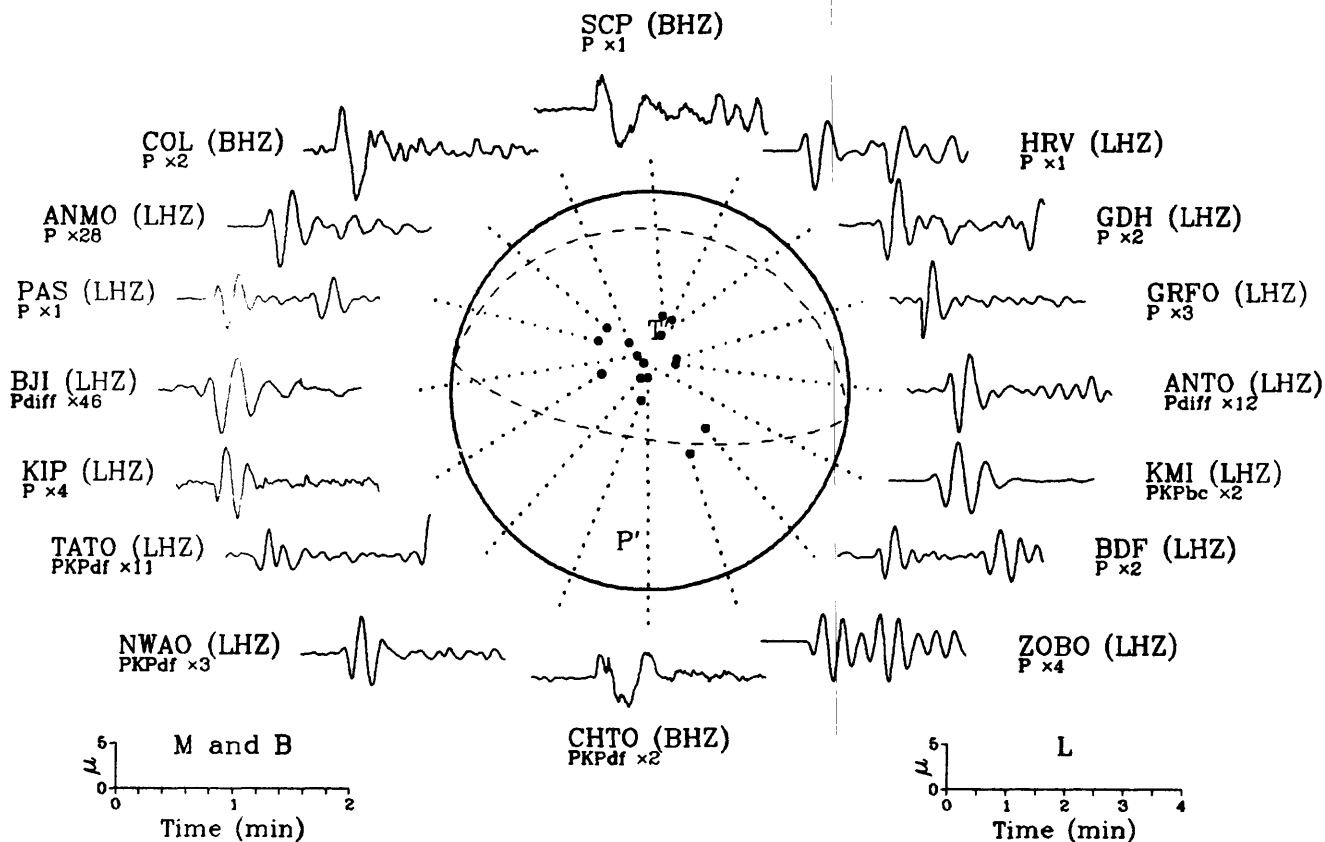
ANTO (BHZ)  
P x4



21 March 1990 16:46:05.45  
Kermadec Islands Region

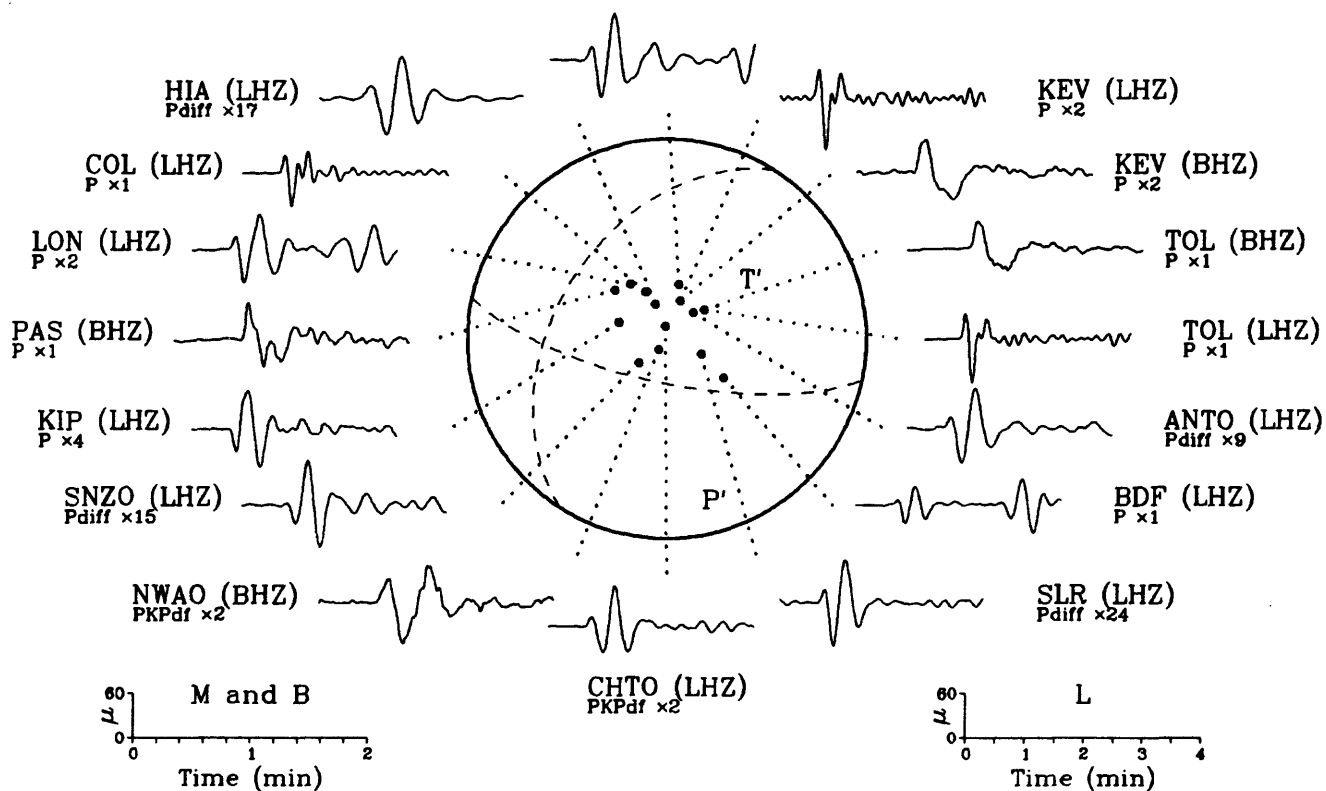


25 March 1990 13:16:06.92  
Costa Rica



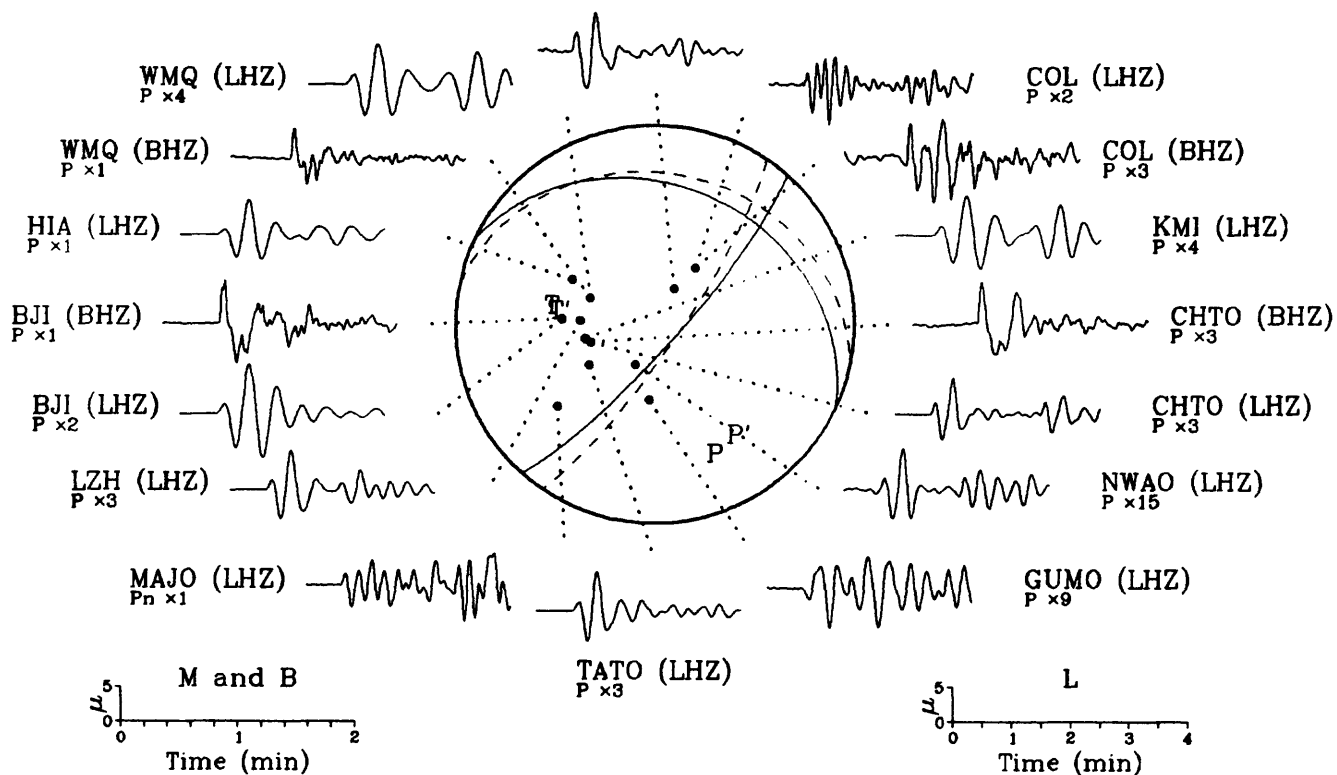
25 March 1990 13:22:55.60  
Costa Rica

GDH (LHZ)  
P x2



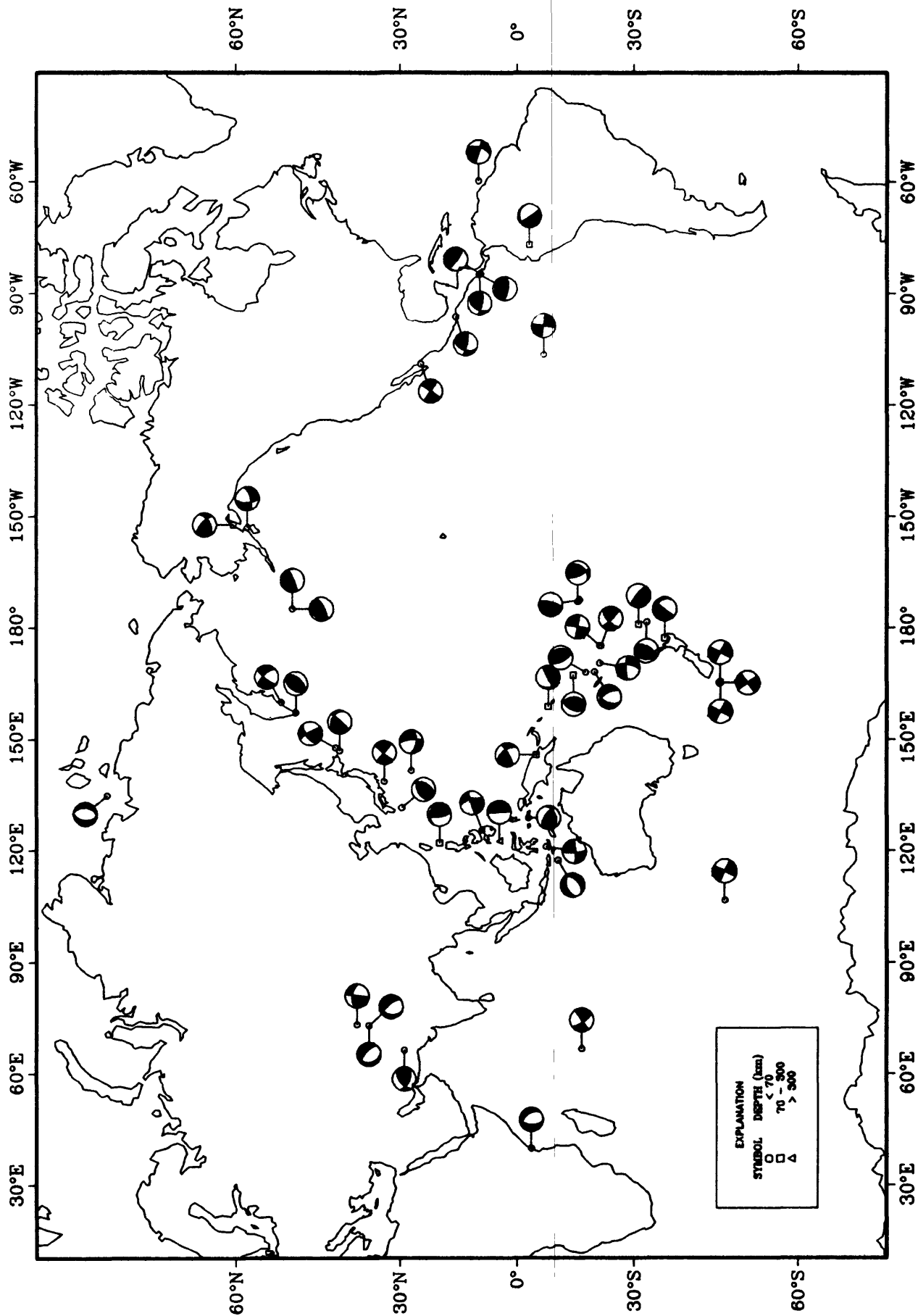
31 March 1990 19:31:42.75  
Off Coast of Hokkaido, Japan

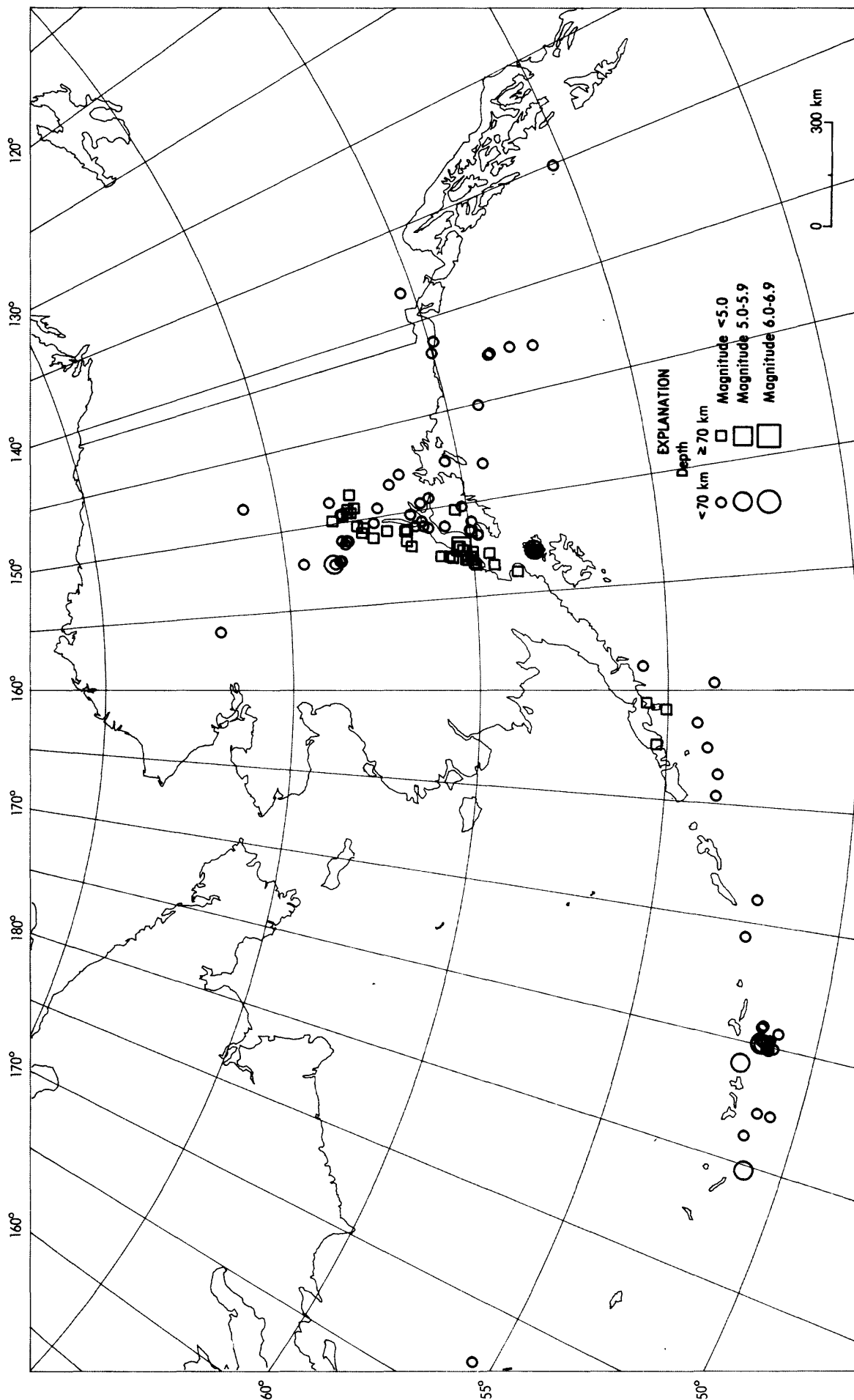
HRV (LHZ)  
P x13



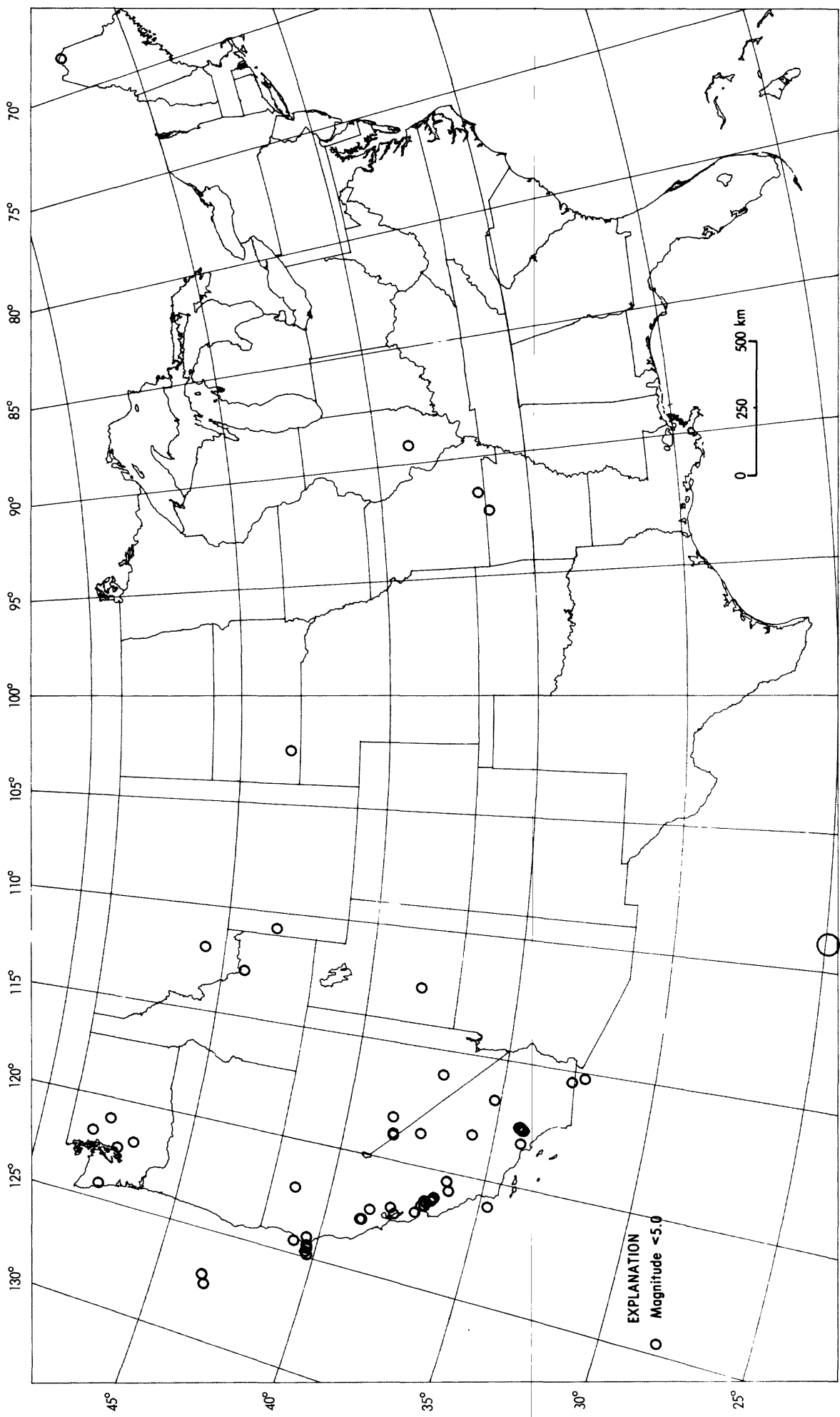


# Earthquake Focal Mechanisms for March 1990

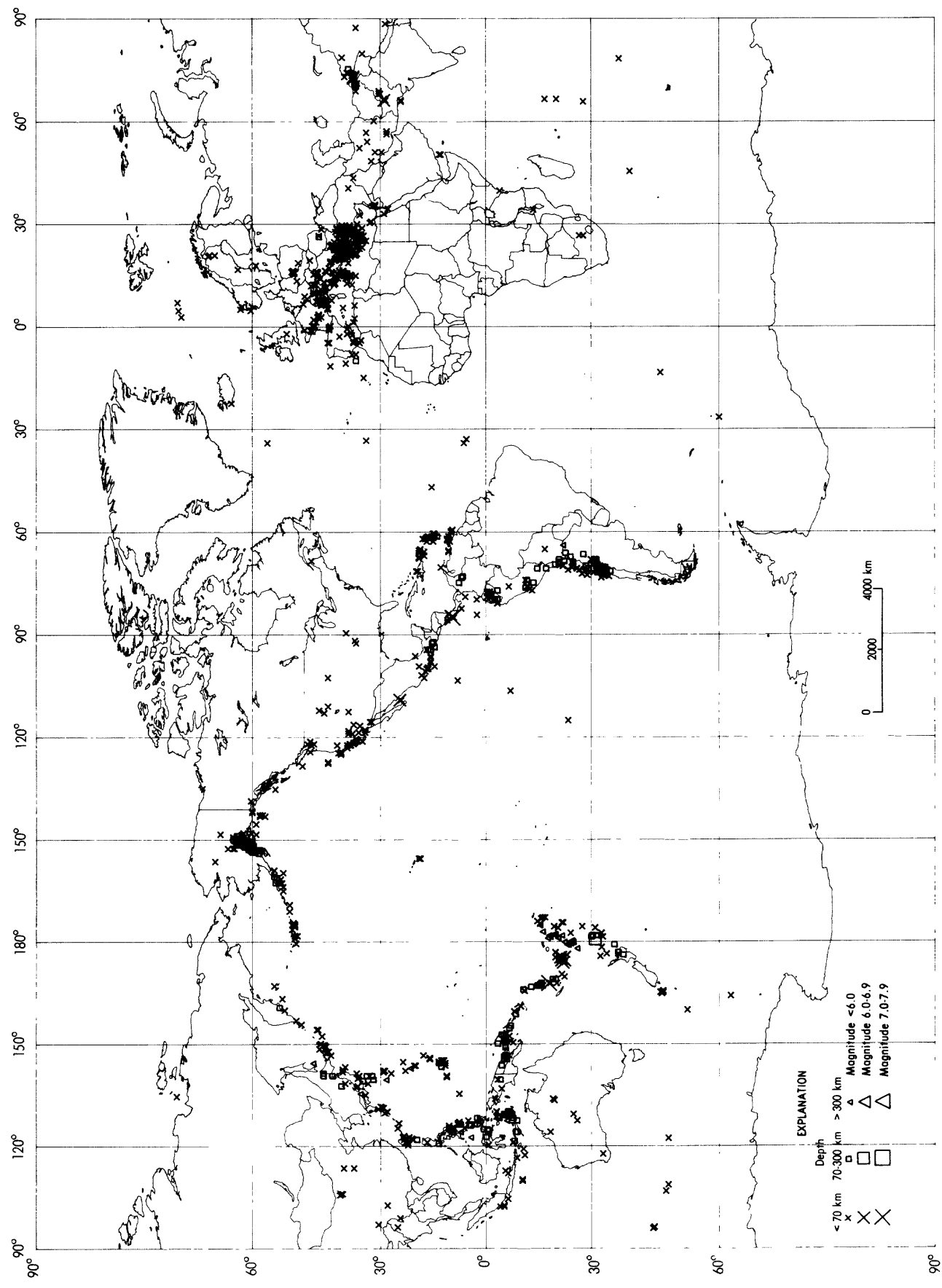




Earthquake epicenters in Alaska and adjacent regions for March, 1990 (C. Stover).



Earthquake epicenters in the conterminous United States and adjacent regions for March, 1990 (C. Stover).



Earthquakes located in March, 1990 (C. Stover).

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