Bulletin of the Seismographic Stations

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ARCATA--BERKELEY--FICKLE HILL--FRIANT--GRANITE

CREEK--JAMESTOWN--LLANADA--MINA--MINERAL--MOUNT HAMILTON

OROVILLE--PARAISO--PILARCITOS CREEK--PRIEST

SAN ANDREAS GEOPHYSICAL OBSERVATORY--WHISKEYTOWN

Earthquakes and the Registration of Earthquakes

From January 1, 1976 to June 30, 1976

by

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BULLETIN OF THE SEISMOGRAPHIC STATIONS

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CONTENTS

INTRODUCTION

Each issue of the Bulletin includes determination of epicenters, origin times, magnitudes, and other information available at the time of writing, for earthquakes in Northern California and adjoining areas. Recorded arrival times of seismic waves are tabulated for the above earthquakes and for teleseisms.

Information items regarding the seismographic stations which comprise the Berkeley network are repeated in each issue.

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HISTORY OF THE UNIVERSITY OF CALIFORNIA STATIONS

"The Seismographic Stations at Mount Hamilton and Berkeley present several items of interest in the history of earthquake science, one of which is that according to the available records they were the first seismographic stations set up in America. Furthermore, they have functioned continuously from their founding to the present day, with improvements in instrumental equipment from time to time as the development of the science and opportunity have permitted.

Several outstanding figures in the seismology of the 1880's were impressed with the importance of these stations, and Ewing, Milne, and Gray each took a personal interest in aiding one or both stations to obtain their own best and most modern types of instruments."

The quotation is from "History of the University of California Seismographic Stations and Related Activities" by Professor George D. Louderback, published in the Bulletin of the Seismological Society of America, Vol. 32, No. 3, pp. 205-229, 1942. In this paper may be found a detailed account of the development of the Berkeley stations from the installation of the instruments (the first earthquake known recorded at Mount Hamilton was on April 24, 1887) to 1942.

Since 1942, the number of seismographic stations associated with the University of California has increased from six to eighteen in 1975. In 1950, Professor Perry Byerly was appointed Director by the Regents; he had been in charge of instruction and research since 1925. Professor Bruce A. Bolt was appointed Director in 1963. Since 1960, the stations have entered into research and service contracts with the Air Force Office of Scientific Research, the National Science Foundation, the California Department of Water Resources and the California State Division of Mines and Geology. A telemetry network of fifteen stations in Central California, recording on film and selected stations on magnetic tape, is now operated together with seismographs with broad-band frequency response at Berkeley, Jamestown, and Whiskeytown. Copies of records from instruments at the Berkeley laboratory are available, together with response characteristics, on request to the Director.

THE BYERLY SEISMOGRAPHIC STATION (BKS)

Equipment of a WWSS station began operating in a newly constructed tunnel east of the main campus on June 8, 1962. The closest buildings, part of the Lawrence Berkeley Laboratory, are about 0.8 km away. The tunnel was cut into the upper part of the Claremont Formation. Of Miocene age, this formation consists of thin layers of cherty material alternating with shale.

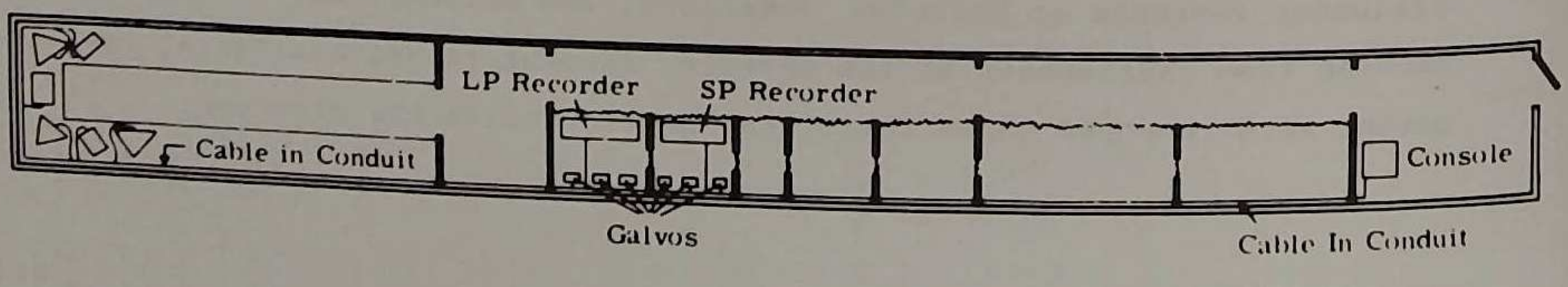
A plan of the tunnel is shown in the diagram below. Piers are constructed of reinforced concrete with no isolation from floor and walls. The temperature is stable. A ventilating and dehumidifying system is connected to all rooms.

The short-period world-wide standard instruments are operated with an approximate magnification of 25,000 at 1 sec and the long-period standard instruments with a peak magnification of 3,000 at about 15 sec.

On March 20, 1964, the Regents of the University of California named this station the "Byerly Seismographic Station" in recognition of the work of Professor Perry Byerly.

Geology

The portal of the adit is in an old quarry which exposes near-vertical, intensely contorted, thinly-bedded, brittle chert, and softer interbedded shale of the Miocene Claremont Formation. Individual beds are one to a few inches thick; the chert beds are intensely fractured and intricately criss-crossed by fine patterns of jointing. Near-surface beds are warped by downhill creep; soil is very thin. The area is crossed by numbers of minor faults, and is about one mile from the active trace of the Hayward fault.



STATIONS IN OPERATION: January 1, 1976 to June 30, 1976

Station (From N to S)	North Latitude	West Longitude	Elev. Meters	Foundation Material	Symbol	Present Auspices and Date Established
Arcata	40° 52!6	124° 04!5	60	Sandstone (loose)	ARC	Humboldt State Univ. 1948
Fickle Hill	40° 48!1	123° 59!1	610	Siltstone over graywacke	FHC	Humboldt State Univ. Sept. 4, 1968
Whiskeytown	40° 34!8	122° 32!4	300	Pre-Devonian meta-volcanic	WDC	National Park Service March 8, 1973
Mineral	40° 20!7	121° 36!3	1495	Volcanic	MIN	National Park Service 1938
Oroville	39° 33!3	121° 30!0	360	Basalt	ORV	Dept. of Water Resources 1963
Mina (Nevada)	38° 26!0	118° 09!2	1524	Limestone	MNV	Lawrence Livermore Lab. 1969
Jamestown	37° 56!8	120° 26!3	457	Metamorphic (serpentine)	JAS	Dept. of Water Resources 1964
Berkeley (Byerly)	37° 52!6	122° 14!1	276	Claremont shales & cherts	BKS	University of Calif. 1962
Berkeley	37° 52!4	122° 15!6	81	Franciscan sandstone	BRK	University of Calif. 1887
Pilarcitos Creek	37° 30!0	122° 22!9	91	Grano-diorite (weathered)	PCC	Sare Ranch, 1965
Mt. Hamilton	37° 20!5	121° 38!5	1282	Franciscan formation (greenstone)	MHC	Lick Observatory 1887
Granite Creek	37° 01!8	121° 59!8	122	Granite	GCC	Richard E. Randolph Santa Cruz, 1965
Friant	36° 59!5	119° 42!5	119	Alluvium overlying granite	FRI	Bureau of Reclamation March 9, 1971
San Andreas Geophysical Observatory	36° 45!9	121° 26!7	350	Granite	SAO	University of Calif. 1966
Llanada	36° 37!0	120° 56!6	475	Alluvium overlying sandstone	LLA	Charles McCullough Ranch 1961
Paraiso	36° 19!9	121° 22!2	363	Grano-diorite	PRS	Paraiso Hot Springs 1961
Priest	36° 08!5	120° 39!9	1187	Greenstone basic metamorphic	PRI	Federal Aviation Agency 1961

STATION INSTRUMENTATION

January 1, 1976 to June 30, 1976

Station	Type of Instrument	T_o sec	T_g sec	Component	Mag at T_o	1	2	3	4	5	6
ARC	Wood-Anderson torsion	0.8	-	S, W	2,000	x					
BKS	Benioff 100 kg	1.0	0.75	N, E, Z	25,000	x					
	Sprengnether S-5007	15	100	N, E, Z	3,000	x					
	Wood-Anderson torsion	0.8	-	S, W	2,000	x					
	Sprengnether ULP S-5100	100	300 Filter	N45°W, N45°E, Z	500	x					
	Filtered Displacement				- - -				x		
	Displacement				- - -				x		
BRK	Benioff 100 kg	1.0	0.2	Z	25,000			x			
	Benioff 100 kg	1.0	8.0	Z	Variable						x
	14000X torsion	0.8	-	N, E	14,000 max		x				
	700X torsion	0.8	-	N, E	700 max		x				
	100X torsion	0.8	-	N, E	100 max	x					
	4X torsion	0.8	-	N, E	4 max	x					
	Press-Ewing	15	30	Z	1,000		x				
	Press-Ewing	30	BB	N45°W, N45°E, Z	- - -				x		
FHC	Benioff 14 kg	1.0	0.2	Z	50,000			x			
FRI	Benioff 14 kg	1.0	0.33 Filter	Z	150,000			x			
GCC	Benioff 14 kg	1.0	0.2	Z	50,000			x			
JAS	Benioff 100 kg	1.0	0.75	N, E, Z	250,000	x					
	Benioff 14 kg	1.0	0.2	Z	600,000		x	x	x		
	Sprengnether S-5100	40	-	Z							
	BB velocity								x		
	Displacement								x		
	Filtered Displacement								x		

1 Signals recorded on photographic paper.
2 Signals recorded on heat sensitive paper.
3 Signals telemetered to Berkeley. Magnifications using 20X viewer.
4 Signals recorded on magnetic tape, Berkeley.
5 Signals recorded on magnetic tape at SAO.
6 Ink recording.

STATION INSTRUMENTATION

January 1, 1976 to June 30, 1976

Station	Type of Instrument	T_o sec	T_g sec	Component	Mag at T_o	1	2	3	4	5	6
LLA	Benioff 14 kg	1.0	0.2	Z	50,000			x			
MHC	Benioff 14 kg	1.0	0.2	Z	50,000		x	x			
	Wood-Anderson torsion	0.8	-	S, E	2,000	x					
MIN	Wood-Anderson torsion	0.8	-	S, E	2,000	x					
	Teledyne S-13	1.0	0.2 Filter	Z	150,000			x			
MNV	Broadband instrument to give short-period response	filtered		Z	600,000 at 1 sec			x			
ORV	Benioff 100 kg	1.0	0.2	Z	220,000			x			
PCC	Benioff 14 kg	1.0	0.2	Z	50,000			x			
PRI	Benioff 14 kg	1.0	0.2	Z	50,000		x	x	x		
PRS	Benioff 14 kg	1.0	0.2	Z	50,000			x			
SAO	Benioff 14 kg	1.0	0.2	Z	- - -				x		
	Sprengnether 0.70 kg	0.2	0.05 Filter	Z	1,500,000		x	x		x	
	Sprengnether 0.70 kg	0.44	0.05 Filter	N, E, Z						x	
	Sprengnether S-5007										
	Displacement	30	BB	N, E, Z						x	
	Strainmeter									x	x
SAO(E)	Sprengnether S-5007										
	Displacement	15	BB	N, E						x	
WDC	Sprengnether S-5100	40	-	Z							
	BB Velocity				- - -				x		
	Displacement								x		
	Filtered Displacement								x		
	Short Period (Filter)				500,000		x	x	x		

1 Signals recorded on photographic paper
2 Signals recorded on heat sensitive paper.
3 Signals telemetered to Berkeley. Magnifications using 20X viewer.
4 Signals recorded on magnetic tape, Berkeley.
5 Signals recorded on magnetic tape at SAO.
6 Ink recording.

Direction of motion: In the "Component" column, each horizontal component seismograph is designated by the direction of ground motion corresponding to upward trace motion on the seismogram when it is oriented so that time increases from left to right. On all vertical component (Z) instruments, upward trace motion corresponds to upward ground motion.

Relative magnification curves of instruments recording photographically and through the telemeter system are listed on pages 6 and 7. Absolute magnification may be obtained by use of calibration pulses recorded daily from each station.

A network of broadband seismographs is now operated by the University of California at seismographic stations at Berkeley (BKS), Jamestown (JAS), San Andreas Geophysical Observatory (SAO), and Whiskeytown (WDC). The instrumentation at Whiskeytown was installed in January 1973 and at Jamestown in November 1973. The Jamestown and Whiskeytown seismographs are closely matched and consist of a single vertical seismometer, a Sprengnether S-5100, operating with a free period of 40 seconds and a damping ratio of 0.70. Signals from these seismometers are telemetered to Berkeley via FM telemetry components and leased telephone lines where they are recorded on analog magnetic tape recorders. Low- (± 2mm) and high- (± 0.01mm) gain displacement signals from JAS and WDC and a short period high-gain channel from WDC are recorded along with BKS and SAO strain on the 0.03 ips tape recorder. Velocity signals from JAS (one level) and WDC (two levels) are recorded at Berkeley on the 0.06 ips tape recorder. The seismometers at JAS and WDC are operated in sealed pressure vessels identical to those used with high-gain long-period (HGLP) instruments. At Berkeley, broadband instrumentation has been gradually developed, starting with the installation in June 1964 of Press-Ewing seismometers operating at a free period of 30 seconds. Recently, a 3-component set of special ultra-long period seismometers has been installed in the Byerly Seismographic Vault. The seismometers are Sprengnether S-5100 operated at a free period of 100 seconds and utilize electronic recentering feedback for long term stability and temperature/barometric feedback also for the vertical component. Low- (± 2.0mm) and high- (± 0.020mm) gain displacement signals from each of the three components are telemetered to the laboratory and recorded on 0.03 ips, 0-10 Hz, magnetic tape. High-gain displacement signals from BRK, JAS, and WDC are high-pass filtered at 500 sec to reduce tidal signals. The Berkeley ultra-long period system also generates photographic paper records equivalent to a 100 second pendulum with a velocity transducer recorded by a 300 second galvanometer.

At SAO, the central vault is instrumented with Sprengnether S-5000 (WWSSN-type) 3-component long period (30 sec) seismometers with displacement transducers recording 0-10 Hz on 0.06 ips magnetic tape at SAO with 10 mm full-scale displacement; Sprengnether S-7000 3-component short period (0.44 sec) seismometers recording on SAO magnetic tape (0-20 Hz) at two gain levels separated by a factor of 100; and a single vertical component S-7000 (5 Hz) telemetered to Berkeley and recorded on Develocorders ('William' channel). At the SAO-East vault, two S-5000 horizontal instruments at 15 sec period with displacement transducers are recorded on SAO magnetic tape (0-10 Hz) with 10 mm full-scale sensitivity. The south vault, a tunnel 300 m SW of the San Andreas fault zone, houses a quartz-tube strainmeter 19 m long, operating with full-scale sensitivity of 2×10^{-7} and recorded on 0.03 ips FM tape (0-10 Hz) at Berkeley.

Response curves for these broadband instruments are shown on pages 12 and 13.

UNIVERSITY OF CALIFORNIA ACCELEROGRAPH STATIONS

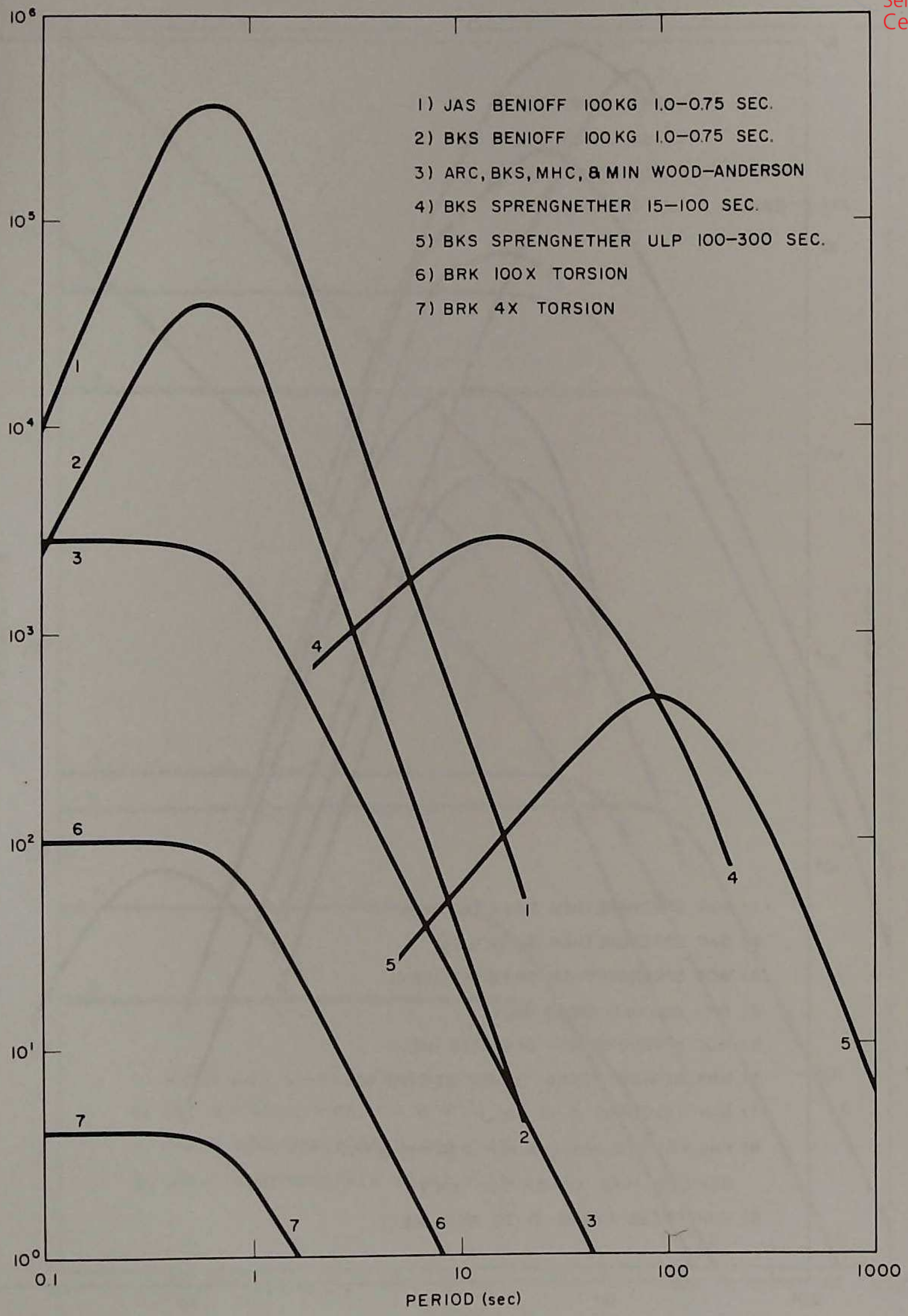
Station Name	Coordinates	Installation Date	Instrument S.N.	Component	Sensitivity (cm/g)	Period (sec)	Damping % of Critical	Structure	Location in Structure
BERKELEY MEMORIAL STADIUM	37.87 N 122.25 W	3 Aug 76	CRA-1 #148 (Recorder) FBA-3 downhole	V	1.79	.018	.64	4" I.D. cased borehole (163m deep)	Downhole (163m)
				L unknown	1.82	.019	.62		
				T unknown	1.83	.018	.66		
			FBA-3 uphole	V Down	1.90	.019	.63	Metal Box	Ground Level
				L North	1.83	.018	.63		
				T East	1.82	.018	.65		
BERKELEY UNIVERSITY LIBRARY	37.87 N 122.26 W	3 May 76	MO-2 trace #6	A Up	1.65	.03	.6		Ground Level
				B S45W	1.66	.03	.6		
				C S45E	2.40	.03	.6		

					Sensitivity (g/F.S.)	Bandwidth (Hz)		
RICHMOND FIELD STATION	37.92 N 122.33 W	12 May 76	Columbia Research Force Balance Accelerometer SA-107 (±2g units) (0-50Hz)	Z,H_1^*,H_2^{**}	±0.010	.05-50	5" I.D. uncased backfilled borehole (43.8m deep)	Downhole (43.7m)
				Z,H_1,H_2	±0.50	0-50		
				Z,H_1,H_2	±0.010	.05-50		Midhole (15.7m)
				Z,H_1,H_2	±0.50	0-50		
				Z,H_1,H_2	±0.010	.05-50	Metal Box	Ground Surface Level
				Z,H_1,H_2	±0.50	0-50		

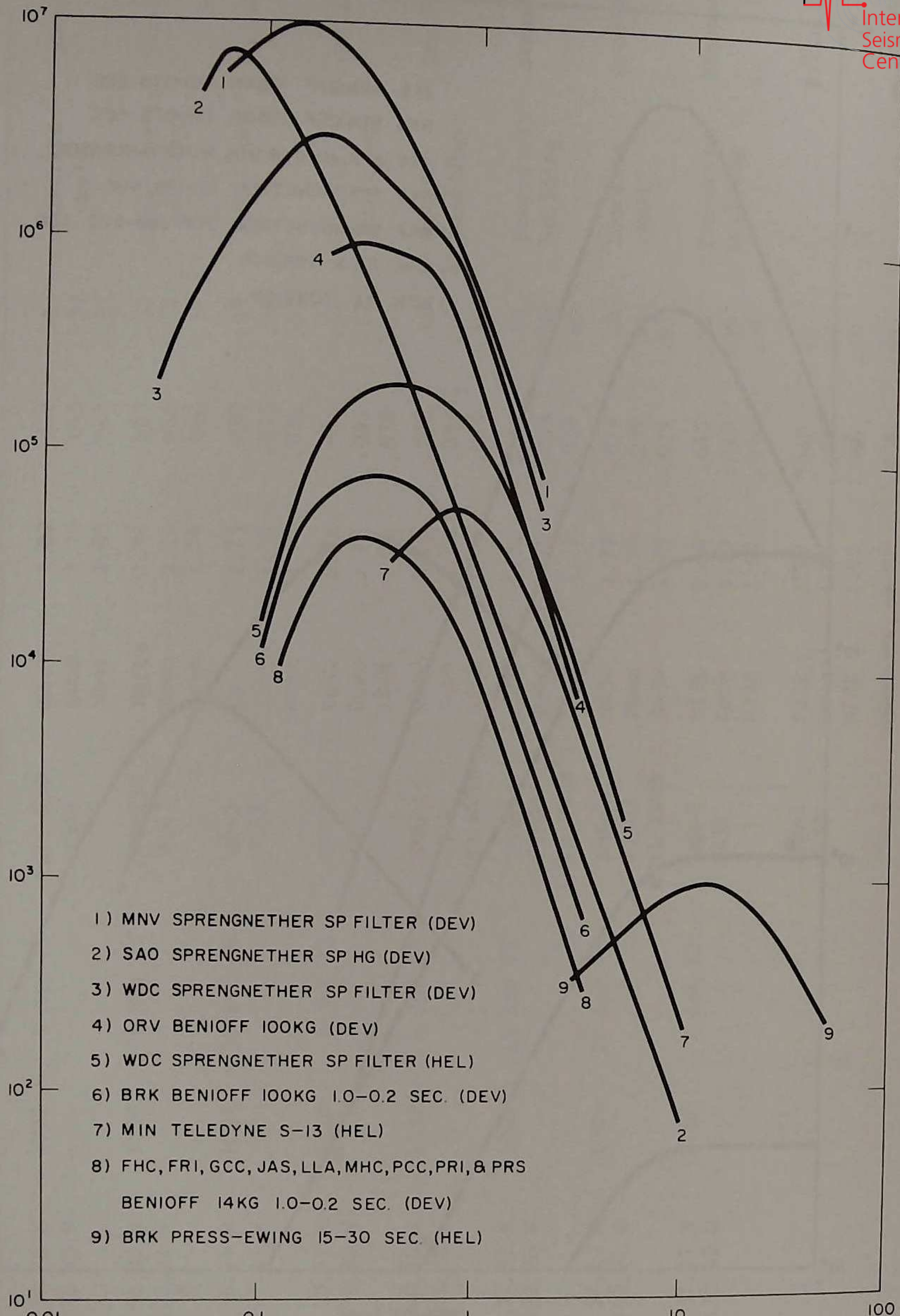
* - accelerometer aligned S45W
** - accelerometer aligned S45E
\+ - recorded on magnetic tape

UNIVERSITY OF CALIFORNIA ACCELEROGRAPH STATIONS MAINTAINED BY USGS

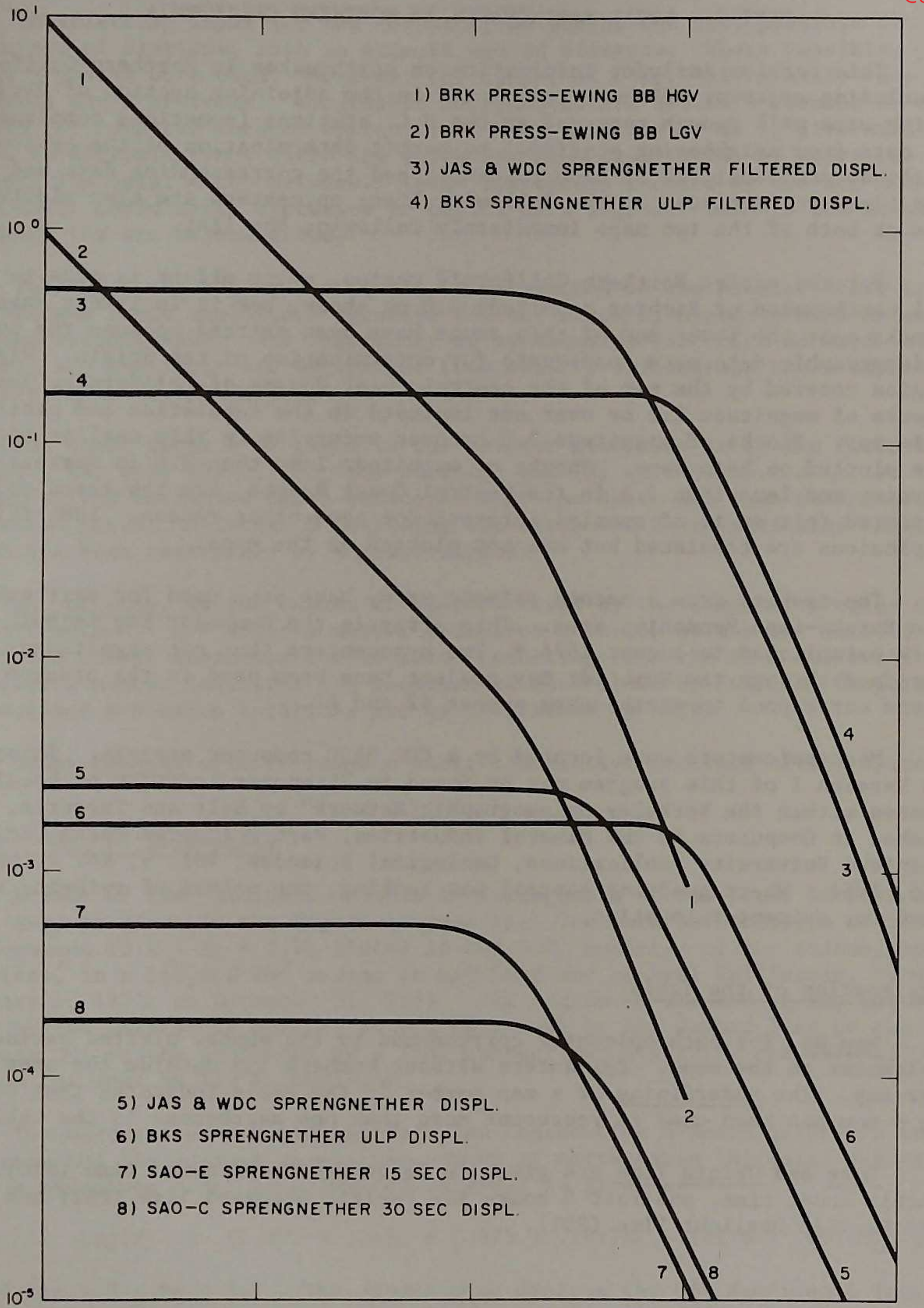
Station Name	Coordinates	USGS Number	Installation Date	Instrument S.N.	Component	Sensitivity (cm/g)	Period (Sec.)	Damping % of Critical	Structure	Location in Structure
SAGO CENTRAL	36.76 N 121.45 W	1032	5 Mar 73	RFT-250 #343	North Down West	1.82 2.14 1.89	.042 .045 .045	.57 .57 .57	Concrete vault	Ground level
SAGO EAST	36.81 N 121.41 W	1033	5 Mar 73	RFT-250 #347	North Down West	1.89 2.14 1.74	.045 .045 .045	.57 .57 .57	One-story building	Ground level
REEVES RANCH	36.74 N 121.47 W	1034	18 Dec 68	MO-2 #182	Up South West	2.75 1.73 1.77	.030 .030 .030	.59 .59 .59	Metal box	Ground level
UTLER VALLEY 1 (RANCH)	40.77 N 123.90 W	1110	9 Jul 71	SMA-1 #314	S66W Down S24E	4.24 3.72 4.10	.054 .057 .058	.57 .57 .55	Prefab building	Ground level
VALLEY . 2 (ABUTMENT)	40.79 N 123.88 W	1112	9 Jul 71	SMA-1 #319 with WWVB	S66W Down S24E	1.96 1.76 1.86	.040 .039 .038	.60 .60 .60	Prefab building	Ground level
ERKELEY VILAND HALL	37.87 N 122.26 W	1006	15 Apr 76	SMA-1 #2500 with WWVB	N45W Down S45W	1.74 1.70 1.71	.038 .038 .039	.59 .58 .60	Four-story building	Basement
ERKELEY ERLY SEIS. STATION	37.87 N 122.24 W	1005	29 Apr 76	SMA-1 #2503 with WWVB	N45W Down S45W	1.79 1.79 1.73	.038 .039 .039	.60 .55 .57	Concrete vault	Ground level
ANS HALL	37.87 N 123.90 W	1182	7 Jan 72	SMA-1 #411	S12E Down N78E	1.64 1.83 1.92	.040 .040 .040	.59 .59 .59	Ten-story building	Basement
				SMA-1 #412	S12E Down N78E	1.67 1.96 1.92	.040 .038 .040	.61 .61 .59		Fifth floor
				SMA-1 #413	S12E Down N78E	2.01 1.88 1.85	.038 .037 .037	.60 .53 .55		Tenth floor



Response curves for photographically recording seismographs. The BKS Benioff and Sprengnether 15-100 second instruments are the WWSSN system.



Response curves for Helicorder (HEL) and Develocorder (DEV) channels when viewed at 20X enlargement. The Benioff 14KG curve (8) represents several different stations and is normalized to 10,000 magnification at 1 second period. (See station instru-



Response curves for broadband seismographs recorded on slow-speed FM magnetic tape at BRK and SAO. Displacement sensitivity (magnification) in volts/micrometer when reproduced on Honeywell LAR 7400 system ($\pm$ 4 volts output).

PART I. LOCAL EARTHQUAKES IN NORTHERN CALIFORNIA

This section includes information on earthquakes in Northern California (including adjacent offshore areas) and in the adjoining section of Nevada which were well enough recorded at the U.C. stations (sometimes complemented by data from neighboring stations) to permit determination of the epicenter. Latitude and longitude of each epicenter and the corresponding date and origin time are tabulated in the following list; epicenters are also plotted on one or both of the two maps immediately following the list.

For the entire Northern California region, every effort is made to list all earthquakes of Richter magnitude 3.0 or above, but it is likely that some shocks near the lower end of this range have been omitted because the available seismographic data were inadequate for determination of the origin. Within the region covered by the map of the central Coast Ranges of California, locatable shocks of magnitude 2.5 or over are included in the tabulation and plotted on this map. Shocks of magnitude 3.0 or over occurring in this smaller region are plotted on both maps. Shocks of magnitude less than 3.0 in Northern California, and less than 2.5 in the central Coast Ranges, are tabulated only if reported felt or if of special interest for some other reason. Identified explosions are tabulated but are not plotted on the maps.

The results from a second seismic array have been used for earthquakes in the Eureka-Cape Mendocino area. This array is the Humboldt Bay Seismic Network established in August 1974.* Two hypocenters (but not magnitudes) determined through the Humboldt Bay project have been used in the present report. These correspond to earthquakes number 42 and 47.

Most epicenters were located by a CDC 6400 computer program. Information on Version I of this program may be found in "Computer Location of Local Earthquakes within the Berkeley Seismographic Network" by Bolt and Turcotte, published in Computers in the Mineral Industries, Part 2 (George Parks, Editor); Stanford University Publications, Geological Sciences, Vol. 9, No. 2, pp. 561-576, 1964. Where quadrant control was lacking, the method of swinging arcs was used for epicenter location.

Explanation of the Table:

Map No. for each epicenter corresponds to the number plotted beside that epicenter on the maps. Epicenters without numbers lie outside the area of the map. The underlining of a map number in the table indicates that one point on a map has been used to represent more than one earthquake in the table.

Date and Origin Time are given in Universal Coordinated Time (UTC). To obtain local time, subtract 8 hours for Pacific Standard Time (PST) and 7 hours for Pacific Daylight Time (PDT).

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* Humboldt Bay Seismic Network, Annual Report, August 1975 - August 1976, submitted to Pacific Gas and Electric Company by TERA Corporation (Teknekron Energy Resource Analysts); Stewart W. Smith, Principal Investigator.

In selecting input for the computer, we sought the best possible distribution of stations, both in azimuth and in distance. Where possible, both P and S phases were used. However, the number of P arrivals greatly outnumbered the S arrivals. Geographic coordinates are quoted to tenths of a minute for computer located epicenters. Uncertainties of up to give minutes exist in determinations where the depth has been restricted, or where the epicenters lie outside the network. Those epicenters located by the arc method have their coordinates expressed to tenths of a degree. This is the accuracy to which the arc method allows.

The Magnitude of the earthquake is determined on the Richter scale from the maximum trace amplitudes recorded for the shock by standard Wood-Anderson torsion seismographs. The magnitudes of earthquakes for which no Wood-Anderson records are available are determined from Benioff seismograph trace amplitudes, and are listed in parentheses.

The focal depth h is given to the nearest kilometer or by the following ranges: (a) 0-5; (b) 5.1-10; (c) 10.1-15; and (d) 15.1-50 km. A letter R following the estimated depth indicates that the depth has been restricted to the value given. A letter b following the estimated depth indicates that the depth has been restrained by a geophysicist.

No. of Stas. is the number of stations used by the computer program or the arc method. A # after a number indicates location by the arc method; a † after a number indicates the location resulting from the NEIS Bulletin; and †† after a number indicates the location as determined by PGE/TERA Corporation. All nuclear explosion locations are as determined by ERDA.

Under Remarks will be found a short descriptive location of the epicenter.

Recent Rate of Seismicity

A plot of the cumulative number of earthquakes versus local Richter magnitude (M_L) is given in the figure on page 17. The data set consists of 509 earthquakes ($3.0 \leq M_L \leq 5.7$) listed in the U.C. Bulletin of the Seismographic Stations, in a 180,000 km^2 region in northern and central California, from January 1, 1971, to December 31, 1975. The region is bounded on the north and east by the California border, on the southeast by the dashed line on the map on page 21, on the southwest by a line connecting 35°N-121°W and 39°N-125°W, and on the west by 125°W longitude.

The earthquakes are grouped into ten consecutive 6-month intervals for analysis and the average cumulative number of earthquakes (N)(total number with a magnitude $\geq M_L$) in a 6-month interval is given by

$$\log(N) = (1.475 \pm .613) + (.575 \pm .284)M_L - (.178 \pm .032)M_L^2 ,$$

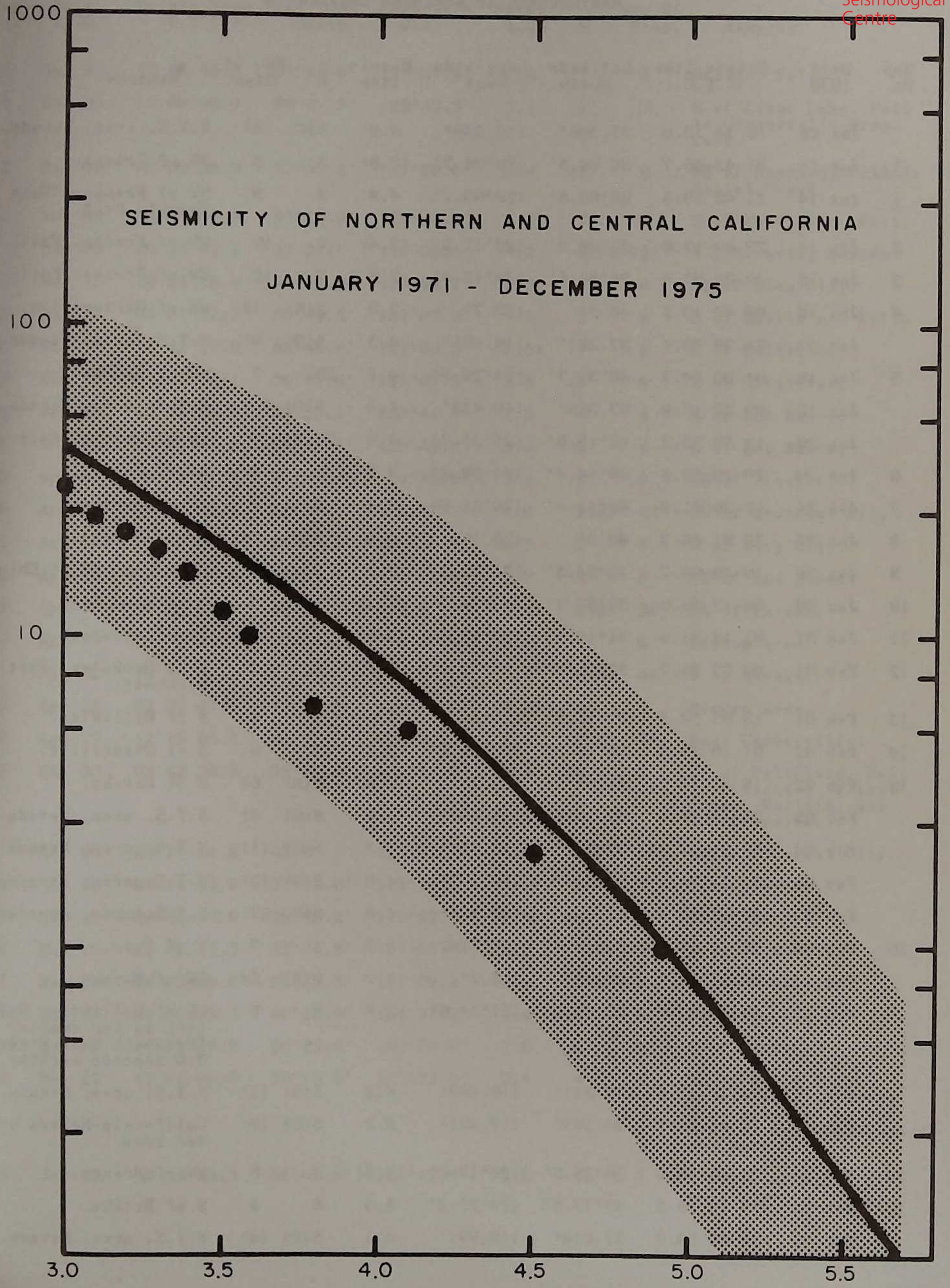
valid for $3.0 \leq M_L \leq 5.7$. The shaded zone depicts the 95% confidence interval for log(N). Hence, the approximate interoccurrence time for earthquakes in

northern and central California is 4 days for $M_L \geq 3$, 3 weeks for $M_L \geq 4$, and 8 months for $M_L \geq 5$.

The solid circles give the cumulative number of earthquakes (30 earthquakes, $3.0 \leq M_L \leq 4.9$) in the 6-month interval covered by the present Bulletin. There is thus no indication of a significant deviation in earthquake occurrence from the recent norm.

Acknowledgments

We should like to thank the following institutions for their assistance in supplying readings for the epicenter locations: Seismological Laboratory, California Institute of Technology; Seismological Laboratory, University of Nevada; National Center for Earthquake Research, United States Geological Survey; Pacific Gas and Electric Company, and California Department of Water Resources.



EARTHQUAKES IN NORTHERN CALIFORNIA

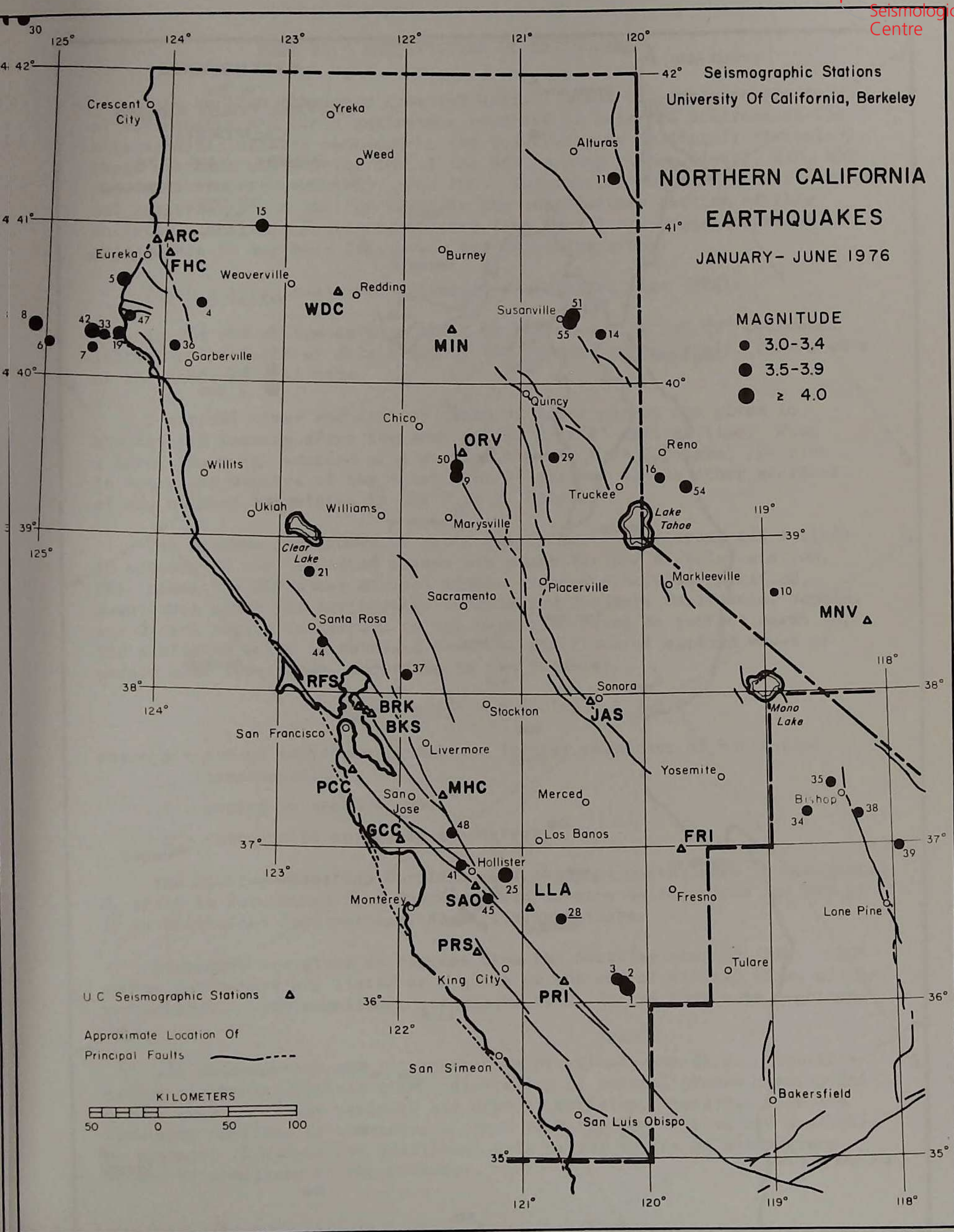
Map No.	Date 1976	Origin Time (U.T.C.)	Latitude North	Longitude West	Magnitude	h	No. Of Stas.	Remarks
	Jan 08	16 14 19.9	37.306°	116.358°	4.6	5(G)	9†	N.T.S. area, Nevada.
- 1	Jan 14	21 43 46.7	36°06.5'	120°09.7'	(3.0)	5	9	SW of Fresno.
- 1	Jan 14	21 43 59.3	36°06.5'	120°09.7'	4.9	5	9	SW of Fresno. (Main Shock). Felt.
: 2	Jan 14	23 40 17.6	36°08.3'	120°12.5'	(3.4)	2	10	SW of Fresno. Felt.
: 3	Jan 15	00 09 37.4	36°08.8'	120°15.0'	3.6	7	10	SW of Fresno. Felt.
· 4	Jan 16	05 44 13.2	40.5°	123.7°	3.0	2(R)	4#	NE of Garberville.
	Jan 17	21 39 33.4	37.281°	116.405°	4.3	5(G)	9†	N.T.S. area, Nevada.
: 5	Jan 18	01 00 24.7	40°38.7'	124°20.9'	4.1	23	7	SW of Eureka.
	Jan 18	07 20 17.9	37.309°	116.433°	4.4	5(G)	22†	N.T.S. area, Nevada.
	Jan 20	13 59 35.2	40°15.6'	125°31.7'	4.6	20(R)	7	SW of Eureka. Felt.
6	Jan 20	20 19 53.3	40°14.4'	124°58.9'	3.3	8	5	SW of Eureka.
: 7	Jan 24	12 26 01.8	40°11.4'	124°35.6'	3.4	6	7	SW of Eureka.
: 8	Jan 25	22 01 06.3	40.3°	125.1°	4.0	2(R)	5#	SW of Eureka.
: 9	Jan 26	19 40 00.2	39°24.5'	121°33.0'	3.5	7	6	Oroville. SE of Chico.
10	Jan 28	06 17 39.0	38°37.7'	118°54.7'	(3.2)	11	5	N of Mono Lake.
11	Jan 31	01 17 21.4	41°19.1'	120°12.9'	(3.6)	17	5	SE of Alturas.
:12	Feb 01	02 57 39.7	37°55.8'	122°18.8'	2.6	4	5	N of Berkeley. Felt in Richmond.
:13	Feb 01	13 01 54.5	37°15.9'	121°38.4'	2.5	4	8	N of Hollister.
·14	Feb 02	01 10 29.4	40°19.5'	120°19.2'	3.1	17	6	E of Susanville.
:15	Feb 02	18 47 36.2	41.0°	123.2°	3.6	2(R)	6#	E of Eureka.
	Feb 03	00 14 28.4	37.331°	116.362°	4.2	5(G)	9†	N.T.S. area, Nevada.
	Feb 04	06 51 47.8	37.317°	116.459°	4.2	5(G)	11†	N.T.S. area, Nevada.
	Feb 06	01 14 24.2	37.319°	116.367°	4.0	5(G)	12†	N.T.S. area, Nevada.
	Feb 07	07 36 55.6	37.249°	116.388°	4.8	5(G)	27†	N.T.S. area, Nevada.
16	Feb 08	06 09 27.5	39°22.8'	119°51.2'	3.3	1	7	S of Reno.
	Feb 11	04 21 55.6	40.4°	125.7°	3.9	2(R)	6#	SW of Eureka.
17	Feb 12	18 27 44.6	36°49.0'	121°14.6'	2.8	6	6	SE of Hollister. Solution is for smaller foreshock occurring 3.6 seconds earlier.
	Feb 17	23 18 17.6	37.311°	116.484°	4.2	5(G)	11†	N.T.S. area, Nevada.
	Feb 19	17 01 01.1	36.169°	117.431°	4.2	5(G)	17†	California-Nevada border area.
18	Feb 21	23 40 10.9	36°25.5'	120°17.0'	(2.6)	2	6	SW of Fresno.
19	Feb 24	15 13 10.5	40°17.5'	124°22.2'	3.5	6	5	S of Eureka.
	Feb 26	14 49 59.9	37.014°	115.971°	4.1	5(G)	14†	N.T.S. area, Nevada.

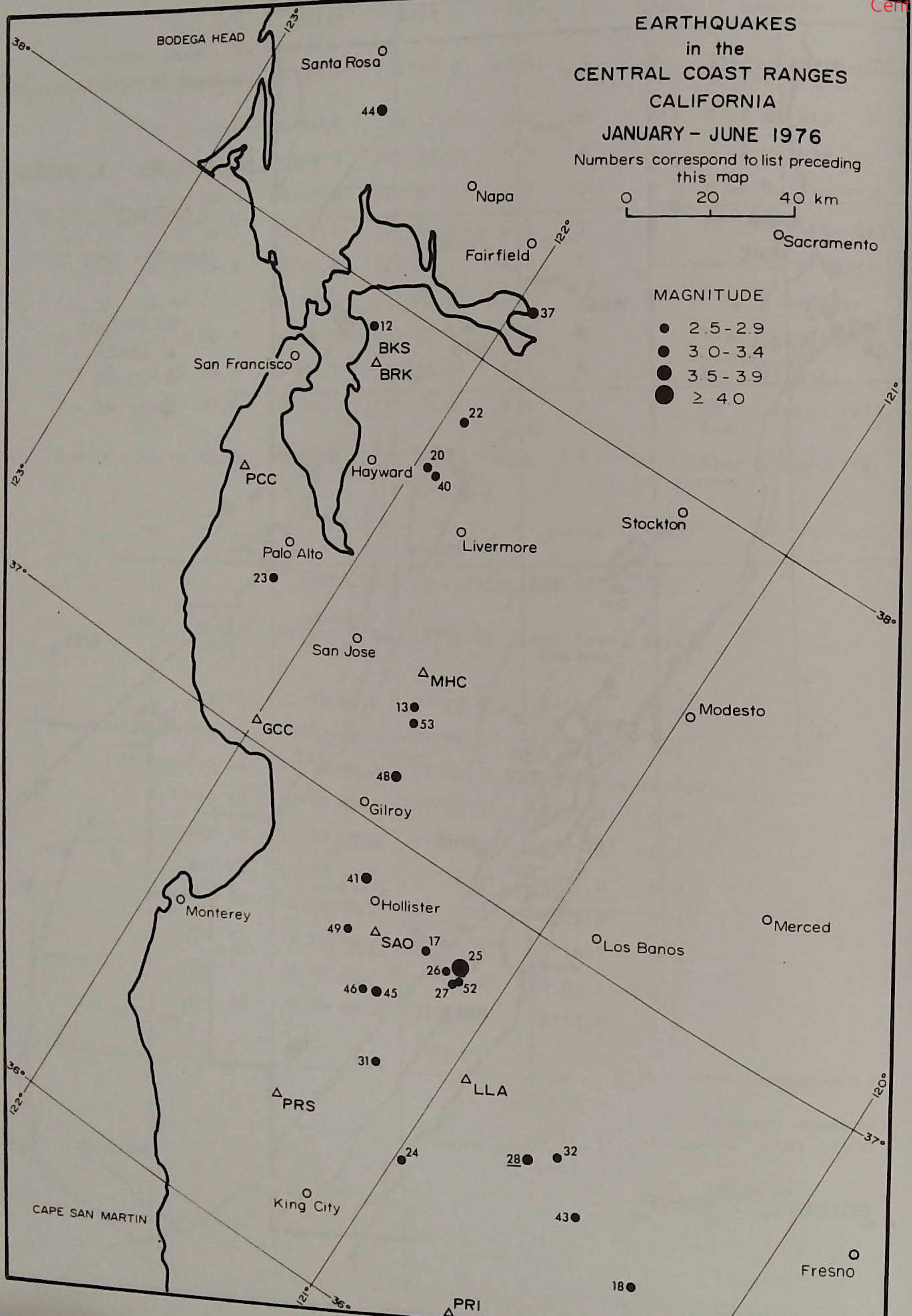
Map No.	Date 1976	Origin Time (U.T.C.)	Latitude North	Longitude West	Magnitude	h	No. Of Stas.	Remarks
20	Mar 01	17 06 40.3	37°43.6'	121°57.8'	2.8	7	6	Dublin. Felt.
21	Mar 04	15 08 09.7	38°47.5'	122°45.3'	3.1	2	7	S of Clear Lake. Felt in Geyserville area, Cobb.
22	Mar 09	02 00 38.9	37°52.2'	121°58.0'	2.4	11	8	NE of Hayward. Felt in Walnut Creek.
23	Mar 09	19 45 00.3	37°19.9'	122°10.8'	2.5	7	6	S of Palo Alto. Felt.
	Mar 09	20 54 07.2	37.321°	116.293°	4.2	5(G)	12†	N.T.S. area, Nevada.
24	Mar 13	10 54 26.4	36°22.8'	120°59.2'	(2.5)	11	8	NE of King City.
25	Mar 17	04 01 52.7	36°49.5'	121°07.9'	4.3	8	9	E of Hollister. Felt.
26	Mar 17	14 42 27.9	36°48.4'	121°09.5'	(2.5)	7	6	E of Hollister.
27	Mar 18	01 55 14.1	36°47.6'	121°07.5'	2.6	10	8	E of Hollister.
28	Mar 20	10 38 10.3	36°33.1'	120°41.6'	2.9	4	8	S of Los Banos.
28	Mar 20	10 50 42.0	36°32.6'	120°42.1'	3.2	8	8	S of Los Banos.
29	Apr 03	16 12 21.5	39°31.4'	120°43.9'	3.4	5	5	NW of Truckee.
30	Apr 12	00 36 00.6	42.3°	125.3°	4.0	2(R)	4#	NW of Crescent City.
31	Apr 14	20 44 06.3	36°32.4'	121°10.9'	2.7	2	8	N of King City.
32	Apr 16	17 07 30.8	36°35.4'	120°37.8'	2.7	4	5	SE of Los Banos.
33	Apr 17	20 26 07.2	40.3°	124.5°	(3.0)	2(R)	3#	SW of Eureka.
34	Apr 18	05 12 51.1	37°16.2'	118°39.0'	(3.1)	5	6	Bishop area.
	Apr 22	19 56 42.1	41.1°	126.0°	3.8	2(R)	4#	W of Eureka.
35	Apr 23	03 07 02.5	37°24.6'	118°29.4'	(3.3)	5	9	Bishop area.
36	Apr 27	12 19 06.6	40.2°	123.9°	2.8	2(R)	4#	Near Garberville.
37	May 03	05 42 38.9	38°08.4'	121°57.0'	3.4	26	9	SE of Fairfield. Felt in Pittsburg, Walnut Creek, Vallejo, and San Francisco.
	May 04	20 37 11.8	42.0°	126.7°	4.6	2(R)	5#	NW of Crescent City.
38	May 09	04 14 35.6	37°12.0'	118°16.8'	(3.0)	5	4	Bishop area.
39	May 10	00 02 47.6	36°59.2'	117°57.1'	(3.0)	6	5	SE of Bishop.
40	May 19	01 35 15.2	37°44.0'	121°55.6'	2.7	2(R)	8	E of Hayward.
41	May 20	04 32 38.6	36°53.5'	121°29.2'	3.0	2(R)	5	NW of Hollister.
42	May 22	00 51 49.1	40°18.0'	124°37.2'	4.0	17	6††	SW of Eureka.
43	May 23	17 39 39.2	36°29.9'	120°29.8'	2.6	6	9	W of Fresno.
44	May 27	17 01 08.9	38°19.9'	122°37.6'	3.4	4	6	SE of Santa Rosa. Widely felt in Santa Rosa area and as far away as San Francisco and Daly City.
45	Jun 02	06 34 48.3	36°40.8'	121°17.4'	3.0	5	7	Stone Canyon. SE of Hollister.

Map No.	Date 1976	Origin Time (U.T.C.)	Latitude North	Longitude West	Magnitude	h	No. Of Stas.	Remarks
46	Jun 04	05 50 11.4	36°39.8'	121°19.4'	(2.6)	4	8	Stone Canyon. SE of Hollister.
47	Jun 06	22 22 03.8	40°24.0'	124°17.4'	3.2	20	6††	S of Eureka.
48	Jun 13	06 12 12.9	37°07.2'	121°34.2'	3.2	6	7	N of Gilroy.
49	Jun 14	19 23 40.4	36°46.0'	121°27.4'	2.7	17	8	S of Hollister.
50	Jun 14	23 30 26.5	39°28.1'	121°32.6'	3.8	7	9	SE of Chico. Felt.
51	Jun 20	10 15 24.8	40°25.6'	120°34.1'	4.5	5	7	Near Susanville.
52	Jun 20	15 07 45.1	36°48.0'	121°06.8'	(2.6)	7	9	E of Hollister.
51	Jun 20	21 44 00.4	40°25.6'	120°33.3'	(3.1)	8	5	Near Susanville.
53	Jun 21	02 07 30.7	37°14.7'	121°36.3'	2.9	5	8	N of Gilroy.
54	Jun 24	00 24 47.8	39°20.4'	119°38.9'	3.6	4	7	SE of Reno. Felt in Reno.
55	Jun 24	15 44 45.4	40°23.6'	120°35.1'	4.2	5	8	Near Susanville.

EXPLOSIONS AT NEVADA TEST SITE

Date 1976	Origin Time (U.T.C.)	Latitude North	Longitude West	Magnitude
Jan 03	19 15 00.2	37°17.8'	116°20.0'	6.3
Feb 04	14 20 00.1	37°04.2'	116°01.8'	5.4
Feb 04	14 40 00.2	37°06.4'	116°02.2'	5.5
Feb 12	14 45 00.2	37°16.3'	116°29.3'	6.3
Feb 14	11 30 00.2	37°14.6'	116°25.2'	5.8
Mar 09	14 00 00.1	37°18.6'	116°21.9'	5.9
Mar 14	12 30 00.2	37°18.4'	116°28.3'	6.3
Mar 17	14 15 00.1	37°15.4'	116°18.7'	5.9
Mar 17	14 45 00.1	37°06.4'	116°03.1'	5.8
May 12	19 50 00.2	37°12.5'	116°12.7'	4.6





PART II. REGISTRATION OF EARTHQUAKES

This section tabulates measured arrival times of prominent phases of earthquakes and large explosions recorded at selected stations of the seismographic network operated by the University of California (Berkeley). These stations are BKS (or BRK if the BKS reading is not clear), SAO, MNV, JAS, MHC, WDC, PRI, MIN, FRI, and FHC. Information regarding these stations and instrumentation will be found in the introductory section of this Bulletin. Berkeley source parameters from Part I are repeated for all earthquakes in Northern California and adjoining areas.

Phase arrival times are Universal Coordinated Time (UTC).

In the column identifying the P or PKP phase, "C" or "D" indicates initial compression or dilatation of the ground, respectively, from a wave of the compressional type.

S arrival times and arrival times of later phases are given in minutes and seconds after the hour of the P or P' arrival time. When a later phase is recorded at a station, but no P or P' phase, the time in hours and minutes of the first P or P' arrival at the other stations of the network is printed in the P or P' column.

The maximum amplitudes of earth displacement in microns and periods in seconds of the indicated phases are given for the Berkeley station, BKS, under the BKS phase arrival times. Unless otherwise specified, magnitudes given for earthquakes outside the Northern California, Nevada, and Oregon region correspond to the magnitude based on surface waves (M_S). The published value is obtained from the amplitude of surface waves of period near 20 seconds, according to the formula:

$$M_S = \log\left(\frac{A}{T}\right) + 1.66 \log \Delta + 3.3 \ ,$$

where A = ground amplitude in microns (vector resultant of horizontal components),

T = period in seconds, and

Δ = distance to epicenter in degrees.

The Richter magnitude for local and regional earthquakes is designated M_L if it is determined from Wood-Anderson torsion seismographs and MAG if it is determined from vertical Benioff seismographs.

Distances are given in degrees from the Berkeley station, BRK. USGS source parameters are listed as a guide at the end of arrival times of the earthquakes. USGS magnitude, designated by M, is the body wave magnitude (m_b).

All measurements and interpretation of seismograms (i.e., identification of phases, arrival times, directions of initial ground motion, and ground amplitudes and periods) are done at Berkeley. Readings from the remaining stations in the network other than the ten listed are available on request. Requests for additional data or for copies of seismograms should be addressed to the Director.

UNIVERSITY OF CALIFORNIA
SEISMOGRAPHIC STATIONS
BERKELEY, CALIFORNIA 97420

JANUARY 01 THROUGH JUNE 30, 1976

"•" PRECEDING ALPHABETIC CHARACTER INDICATES LOWER CASE.

DATE	STA	P OR PKP (Phase h m s)	S (m s)	OTHER PHASES (Phase m s	Phase m s	Phase m s)
JAN 01	SAO	EP 01 42 02.7		•PP 42 19	•SP 42 36	
	PRI	EPC 01 42 04.0		•PP 42 20	•SP 42 37	
	MHC	EPC 01 42 05.0		•PP 42 21	SS 57 36	LQ 04 20
	BKS	EP 01 42 06.0	S2 30	LR 07 42		
			MICRON	PERIOD		
		PZ	0.34	1.0		
		MAXR(Z) 21		20		
		MAXH(N) 34		20		
		MAXH(E) 33		20		
				PKKP 00 19		
	FRI	EPC 01 42 09.0		•PP 42 25	•SP 42 41	PP 45 59
	JAS	EPC 01 42 10.0	S3 00	PKKP 00 18		
	FHC	EP 01 42 10.4				
	WDC	EPC 01 42 13.1	S3 05	•PP 42 28	•SP 42 46	PP 46 02
				PKKP 00 24		
	MIN	EP 01 42 14.4		•PP 42 30	•SP 42 42	
		Ms=6.9, DISTANCE=84°				
		USGS 01 29 39.6, 28.6S, 177.6W, H= 59 KM, M=6.2				
		KERMADEC ISLANDS REGION				
JAN 01	PRI	EP 01 57 47.3				
	MHC	EP 01 57 48.4				
	FRI	EP 01 57 52.1		•PP 58 08		
	JAS	EP 01 57 53.0		•PP 58 09		PP 01 55
	WDC	EP 01 57 56.6		•PP 58 12		PP 01 58
	MIN	EP 01 57 57.7		•PP 58 13		
		KERMADEC ISLANDS REGION				
JAN 01	MHC	EP 02 08 14.7				
	PRI	02 08		•E 08 16		
	FRI	EP 02 08 18.7				
	JAS	EPC 02 08 19.7		•PP 08 37		PP 11 48
	WDC	EPC 02 08 22.8		•PP 08 40		PP 11 50
	MIN	EP 02 08 24.0				
		KERMADEC ISLANDS REGION				
JAN 01	PRI	EP 02 19 04.1				
	MHC	E(P) 02 19 05				
	FRI	EP 02 19 08.9		•PP 19 24		
	JAS	EP 02 19 09.8		•PP 19 25		
	WDC	EP 02 19 13.0		•PP 19 28		
	MIN	EP 02 19 14.3				
		KERMADEC ISLANDS REGION				
JAN 01	PRI	EP 02 33 37.3				
	MHC	EP 02 33 38.2				
	FRI	EP 02 33 42.2		•PP 33 56		
	JAS	EPC 02 33 43.3		•PP 33 58		
	WDC	EPC 02 33 46.4		•PP 34 00		
	MIN	EP 02 33 47.7				
		USGS 02 21 10.6, 28.9S, 177.5W, H= 50 KM, M=5.5				
		KERMADEC ISLANDS				
JAN 01	FHC	EP 03 06 23				
	WDC	EPD 03 06 32.0				
	MIN	EP 03 06 38.0				
	JAS	EP 03 07 12.5				
	FRI	EP 03 07 26.0				
	PRI	EP 03 07 33.1				
		USGS 03 03 54.5, 50.3N, 129.7W, H= 33 KM, M=4.6				
		VANCOUVER ISLAND REGION				
JAN 01	WDC	EPC 04 14 20.7				
	MIN	EP 04 14 27.0				
	JAS	EP 04 15 01.2				
	MHC	EP 04 15 03.0				
	FRI	EP 04 15 15.0				
	FRI	EP 04 15 28.0				
		USGS 04 11 41.8, 50.3N, 129.8W, H= 19 KM, M=4.9				
		VANCOUVER ISLAND REGION				
JAN 01	WDC	EP 06 10 02				
	JAS	EP 06 10 49				
		USGS 06 07 27.0, 50.2N, 129.6W, H= 33 KM, M=4.3				
		VANCOUVER ISLAND REGION				
JAN 01	FRI	E(P) 07 15 18				
	MHC	EP 07 15 18.5				
	FRI	EP 07 15 22.5				
	JAS	EP 07 15 23.5		•PP 15 39		
	WDC	EP 07 15 26.5		•PP 15 42		
		USGS 07 02 48.9, 29.6S, 177.0W, H= 33 KM, M=5.0				
		KERMADEC ISLANDS				
JAN 01	PRI	EP 09 16 07.4				
	BKS	E(P) 09 16 08	25 36	LQ 34 28	•E 39 24	
			MICRON	PERIOD		
		MAXR(Z)	2.4	20		
		MAXH(N)	2.1	20		
		MAXH(E)	2.3	20		
	MHC	09 16		•E 16 10		
	FRI	EP 09 16 13.0				
	JAS	EP 09 16 13.9		PP 20 47		
	MIN	EP 09 16 14.2				
	WDC	EP 09 16 16.2		PP 20 52		
		Ms=5.6, DISTANCE=73°				
		USGS 09 04 44.6, 16.6S, 172.8W, H= 33 KM, M=5.7				
		SAMOA ISLANDS REGION				
JAN 01	FRI	EP 09 46 29.0				
	JAS	EP 09 46 30.2				
	WDC	EP 09 46 33.2				
		KERMADEC ISLANDS REGION				
JAN 01	PRI	14 39		•E 39 34		
	FRI	EP 14 39 38.5				
	JAS	EP 14 39 39.7				
	WDC	EP 14 39 42.8				
	MIN	EP 14 39 44.0				
		USGS 14 27 07.6, 29.2S, 177.3W, H= 51 KM, M=5.0				
		KERMADEC ISLANDS				
JAN 01	PRI	EP 14 57 33.1				
	FRI	EP 14 57 38.8				
	JAS	EP 14 57 39.5				
	WDC	EP 14 57 42.0				
	MIN	EP 14 57 44.0				
		USGS 14 46 11.1, 16.4S, 172.9W, H= 33 KM, M=5.3				
		SAMOA ISLANDS REGION				
JAN 01	SAO	EP 16 27 51.0				
	PRI	EP 16 27 52.0				
	BKS	EPD 16 27 52.4				
			MICRON	PERIOD		
		PZ	0.14	1.2		
	MHC	EP 16 27 52.7				
	JAS	IPD 16 27 57.5				
	WDC	IPD 16 28 00.9				
	MIN	EP 16 28 01.0		•E 28 53		
		USGS 16 15 49.7, 26.6S, 178.2W, H=208 KM, M=5.4				
		SOUTH OF FIJI ISLANDS				
JAN 01	SAO	EP 17 21 13.5	22 01			
	BKS	EP 17 21 31.0		•E 23 18		
	WDC	17 22		•E 22 11	•E 24 08	
		USGS 17 20 12.9, 34.0N, 117.9W, H= 8 KM, M=4.6				
		SOUTHERN CALIFORNIA				
JAN 01	FRI	EP 18 56 21.2				
	JAS	EP 18 56 22.1		•E 56 36		
	WDC	18 56		•E 56 36		
		USGS 18 43 38.2, 16.8S, 167.2E, H= 25 KM, M=5.2				
		NEW HEBRIDES ISLANDS				
JAN 01	MHC	19 08		•E 08 58		
	JAS	EP 19 09 03.4				
	FRI	19 09		•E 09 04		
	WDC	19 09		•E 09 07		
		USGS 18 57 35.9, 16.5S, 172.7W, H= 33 KM, M=5.0				
		SAMOA ISLANDS REGION				
JAN 01	MHC	EP 19 15 56.7				
	FRI	EP 19 16 00.5				
	JAS	EP 19 16 01.5		•PP 16 19		
	WDC	EP 19 16 04.5		•PP 16 22		
	MIN	EP 19 16 05.9				
		USGS 19 03 29.4, 29.0S, 177.8W, H= 63 KM, M=5.2				
		KERMADEC ISLANDS				
JAN 01	MHC	22 29		•E 29 19		
	JAS	EP 22 29 23.0				
	FRI	22 29		•E 29 23		
	WDC	EP 22 29 25.5				
	MIN	22 29		•E 29 28		
		USGS 22 17 55.8, 16.3S, 172.8W, H= 33 KM, M=4.8				
		SAMOA ISLANDS REGION				
JAN 02	PRI	EP 01 20 57.5				
	MHC	EP 01 20 58.5				
	BKS	EPD 01 21 00.0		•E 21 16	•E 47 00	
	FRI	EP 01 21 02.5		•PP 21 20		
	JAS	EP 01 21 03.5		•PP 21 21		
	WDC	EP 01 21 06.5		•PP 21 24		
	MIN	EP 01 21 08.0		•PP 21 26		
		USGS 01 08 31.3, 29.2S, 177.1W, H= 47 KM, M=5.3				
		KERMADEC ISLANDS				
JAN 02	PRI	EP 02 23 10.5				
	BKS	EP 02 23 11.4		•E 23 20	•E 43 48	
	FRI	EP 02 23 16.7				
	JAS	EP 02 23 17.6		•PP 23 26		
	WDC	EP 02 23 19.7		•PP 23 28		
	MIN	EP 02 23 21.5				
		USGS 02 11 55.8, 15.5S, 172.0W, H= 28 KM, M=5.3				
		SAMOA ISLANDS REGION				
JAN 02	JAS	EP 03 31 53.3				
	WDC	EP 03 31 55.3				
JAN 02	FHC	EP 03 38 52.2				
	WDC	EPC 03 39 01.2				
	MIN	EPC 03 39 08.2				
	BKS	EPC 03 39 34.0	42 14	•E 40 10	•E 45 10	•E 46 52
			MICRON	PERIOD		
		PZ	0.25	1.8		
	JAS	EPC 03 39 40.8				
	MHC	EP 03 39 42.7				
	FRI	EP 03 39 55.0				
	PRI	EP 03 40 02.0				
		USGS 03 36 20.4, 50.4N, 129.8W, H= 23 KM, M=5.1				
		VANCOUVER ISLAND REGION				
JAN 02	MHC	EP 04 22 40.4				
	FRI	EP 04 22 44.5				
	JAS	EPC 04 22 45.7		PS 34 13		
	WDC	EPC 04 22 48.7		PS 34 17		
	MIN	EP 04 22 51.0				
		USGS 04 10 14.8, 29.1S, 177.3W, H= 64 KM, M=5.1				
		KERMADEC ISLANDS				
JAN 02	PRI	EP 04 55 48				
	MHC	EP 04 55 48.5				
	BKS	04 55		•E 16 24	•E 16 48	
	FRI	EP 04 55 54				
	JAS	EP 04 55 54.6				
	WDC	EP 04 55 58.6				
	MIN	EP 04 55 59				
		KERMADEC ISLANDS REGION				
JAN 02	PRI	06 01		•E 01 15		
	BKS	06 01		•E 27 00		
			MICRON	PERIOD		
		MAXR(Z)	1.6	20		
		MAXH(N)	1.1	20		
		MAXH(E)	1.1	20		
	FRI	EP 06 01 08.0				
	JAS	EP 06 01 08.6				
	WDC	EP 06 01 12.0				
		Ms=5.3, DISTANCE=85°				
		USGS 05 48 32.5, 29.5S, 177.1W, H= 33 KM, M=4.9				
		KERMADEC ISLANDS				
JAN 02	PRI	EP 06 19 56.3				
	FRI	EP 06 20 02.0				
	JAS	EP 06 20 03.5				
	WDC	EP 06 20 05.5				
		KERMADEC ISLANDS REGION				
JAN 02	WDC	EP 06 58 30.2				
	MIN	06 58		•E 58 35		
	JAS	EP 06 58 48.3				
		USGS 06 47 59.4, 43.4N, 147.2E, H= 42 KM, M=5.2				
		KURIL ISLANDS				
JAN 02	FRI	EP 07 47 06.3				
	JAS	EP 07 47 07.0				
	WDC	EP 07 47 09.2				
JAN 02	JAS	EP 08 05 08.2				
	WDC	EP 08 05 09.9				
JAN 02	WDC	EP 10 02 35.0				
	MIN	EP 10 02 38.3				
	BKS	EP 10 02 39.3		•E 03 00		
			MICRON	PERIOD		
		PZ	0.03	1.0		
	MHC	EP 10 02 41.6				
	JAS	EP 10 02 45.6				
	PRI	EP 10 02 47.8				
	FRI	EP 10 02 49.8				
		USGS 09 50 20.6, 14.1N, 146.6E, H= 50 KM, M=5.1				
		MARIANA ISLANDS				
JAN 02	BKS	EP 10 53 35.5				
	FRI	EP 10 53 39.4				
	JAS	EP 10 53 40.4				
	WDC	EP 10 53 43.4				
	MIN	EP 10 53 44.1				
		KERMADEC ISLANDS REGION				
JAN 02	JAS	EP 11 39 42.2				
	FRI	EP 11 39 42.5				
	WDC	EP 11 39 43.2				
JAN 02	FRI	22 09 04.5				
	JAS	EP 22 09 05.4				
	WDC	EP 22 09 08.8				
		USGS [illegible] 6S, 177.1W, H= 32 KM, M=5.1				
		[illegible] 14.1N, H= 35 KM, M=2.1				

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JAN 03  FRI   IPC    19 15 44.6
        JAS   IPC    19 15 53.1
        PRI   IPC    19 15 58.6
        SAO   IPC    19 16 05.2
        MHC   IPC    19 16 07.3
        BKS   IPC    19 16 13.6
        MIN   IPC    19 16 19.1
        WDC   IPC    19 16 28.6
        FHC   EPC    19 16 42.8
                     ML=6.3, EXPLOSION, NEVADA TEST SITE
                     USGS  19 15 00.2, 37.3N, 116.3W, H=  0 KM, M=6.2
                           SOUTHERN NEVADA

JAN 03  BKS   EP     23 49 05.5
        MHC   EP     23 49 06
        PRI   EP     23 49 10.2
        WDC   EP     23 49 11.2
        JAS   EP     23 49 14.0
        MIN   EP     23 49 15.7
        MNV   EP     23 49 20.2
                     USGS  23 37 15.9, 21.7S, 174.6W, H= 53 KM, M=5.3
                           TONGA ISLANDS

JAN 04  MNV   IP     01 18 49.5
        PRI   EP     01 19 02.6
        JAS   EP     01 19 12.1
        PRI   EP     01 19 24.3
        MHC   EP     01 19 26.0
        SAO   EP     01 19 31.0
        BKS   EPD    01 19 42.2                 *E 20 28    *E 20 52
        WDC   EP     01 19 47
        MIN   EP     01 19 50.2
                     ML=4.2, COLLAPSE, NEVADA TEST SITE
                     USGS  01 18 18.3, 37.3N, 116.4W, H=  5 KM, M=4.1
                           SOUTHERN NEVADA

JAN 04  WDC   EPKP   04 15 53.7
        MIN   EPKP   04 15 55.0
        BKS   EPKP   04 15 56.2
                           MICRON      PERIOD
                     PZ      0.03        1.2
        MHC   EPKP   04 15 57.8
        JAS   EPKP   04 15 59.4
        PRI   EPKP   04 16 00.5
        FRI   EPKP   04 16 00.6
                     USGS  03 56 55.8, 10.1S, 109.1E, H= 59 KM, M=5.5
                           SOUTH OF JAVA

JAN 04  MIN   EP     04 39 30.1
        WDC   EP     04 39 30.1
        MNV   EP     04 39 33.2
        JAS   EP     04 39 41.6
        FRI   EP     04 39 46.3
        BKS   EPD    04 39 47.5                 *E 47 22    *E 48 33    *E 59 00
                                                *E 08 02
        MHC   EP     04 39 49.8
        PRI   EP     04 39 54.4
                     USGS  04 29 29.3, 66.0N,  16.7W, H= 33 KM, M=5.2
                           ICELAND REGION

JAN 04  WDC   EP     08 50 38.6
        MIN   EP     08 50 44.0
        BKS   EP     08 50 54.8  56 07          *E 51 12    *E 51 15
        JAS   EP     08 51 03.8
        MNV   EP     08 51 12.5
        FRI   EP     08 51 13
                     USGS  08 44 11.2, 52.9N, 166.8W, H= 40 KM, M=5.2
                           FOX ISLANDS, ALEUTIAN ISLANDS

JAN 04  FRI          11 41                      P*CP 44 17    *E 44 35
        MNV   EP     11 41 55.4                 P*CP 44 17    *E 44 34
        PRI          11 41                      P*CP 44 19
        JAS   EP     11 42 04                   P*CP 44 20    *E 44 38
        BKS   EP     11 42 09.8                 P*CP 44 25    *E 44 42    *E 48 12
        WDC          11 42                      P*CP 44 28
        FHC          11 42                      *E 44 33
                     USGS  11 34 50.2, 13.0N,  88.7W, H= 33 KM, M=5.3
                           EL SALVADOR

JAN 04  MNV   IPD    16 16 41.2
        FRI   EP     16 16 53.9                 *E 17 02
        JAS   EPD    16 17 02.2                 *E 17 11
        PRI          16 17                      *E 17 18
        SAO          16 17                      *E 17 22
        MHC          16 17                      *E 17 26
        BKS   EP     16 17 34.0                 *E 18 12    *E 18 43
        MIN          16 17                      *E 17 34
        WDC          16 18                      *E 18 00
                     ML=4.2, COLLAPSE, NEVADA TEST SITE
                     USGS  16 16 09.0, 37.3N, 116.3W, H=  0 KM, M=4.2
                           SOUTHERN NEVADA

JAN 05  FHC   E(P)   02 14 17
        WDC   EP     02 14 21.6
        MIN   EP     02 14 26.5
        MHC   EP     02 14 41.9
        JAS   EPC    02 14 44.4
        MNV   EP     02 14 50.5
        FRI   EP     02 14 51.2
                     USGS  02 05 29.2, 54.5N, 159.8E, H=145 KM, M=4.6
                           NEAR EAST COAST OF KAMCHATKA

JAN 05  FRI   EPD    02 42 09.9
        PRI   EPD    02 42 11.7                 *E 42 52
        MNV   IPD    02 42 11.8
        SAO   EP     02 42 16.7
        JAS   IPD    02 42 17.9                 *E 42 46  RPKP 10 52
        MHC   EPD    02 42 20.7
        BKS   IPD    02 42 25.2
                           MICRON      PERIOD
                     PZ      0.18        1.0
        MIN   EPD    02 42 31.2
        WDC   EPD    02 42 34.6               RPKP 10 43
        FHC   EPD    02 42 42.8
                     USGS  02 31 36.3, 13.3S,  74.9W, H= 95 KM, M=6.0
                           PERU

JAN 05  MHC   EP     03 12 11.4
        BKS   EPD    03 12 12.2
                           MICRON      PERIOD
                     PZ      0.03        1.0
        FRI   EP     03 12 15.4
        JAS   EPC    03 12 16.6
        WDC   EPC    03 12 19.6
        MIN   EP     03 12 20.7
        MNV   IPC    03 12 24.7
                     KERMADEC ISLANDS REGION

JAN 05  MNV   EP     06 25 34.0                 *E 25 44
        FRI   EP     06 25 51.0
        JAS   EPC    06 26 01.1               S*G 28 47
        PRI          06 26                    S*G 29 03
        MIN   EPC    06 26 20.0
        WDC   EPC    06 26 33.2
        BKS          06 26                      *E 26 42
                           MICRON      PERIOD
                     PZ      0.03        1.0
        FHC   EP     06 26 45.5
                     USGS  06 23 32.9, 35.8N, 108.3W, H= 25 KM, M=5.0
                           NEW MEXICO

JAN 06  WDC   EP     19 37 28.8
        JAS   EP     19 37 51.5
        MNV   EP     19 37 58.0
                     USGS  19 28 36.5, 54.9N, 162.6E, H= 33 KM, M=5.0
                           NEAR EAST COAST OF KAMCHATKA

JAN 06  WDC   EPC    20 00 46.9
        JAS   EPC    20 01 10.0
        MNV   EP     20 01 16.6
                     USGS  19 51 54.9, 54.9N, 262.5E, H= 33 KM, M=5.0
                           NEAR EAST COAST OF KAMCHATKA

JAN 06  WDC   EP     21 06 26.5
        MIN          21 06                      *E 06 46
        BKS          21 06                      *E 06 51    *E 11 36    *E 14 20
        JAS   EP     21 06 48.3
        FRI          21 06                      *E 06 54
        MNV   EP     21 06 55.7
                     USGS  20 57 11.4, 51.5N, 159.3E, H= 33 KM, M=5.1
                           OFF EAST COAST OF KAMCHATKA

JAN 06  FHC   EP     21 17 26.0
        WDC   EP     21 17 34.5
        MIN   EP     21 17 40.3
        BKS   EP     21 17 47.0  25 39          SS 29 00    LQ 31 47    LR 34 29
                           MICRON      PERIOD
                     PZ      0.02        1.0
                     MAXR(Z) 6.4         20
                     MAXH(N) 4.3         20
                     MAXH(E) 7.5         20
        MHC   EP     21 17 53.5
        JAS   EP     21 17 55.7
        MNV   EP     21 18 02.5
        FRI   EP     21 18 02.7
        PRI   EP     21 18 06.5
                     M=5.8, DISTANCE=58°
                     USGS  21 08 19.3, 51.6N, 159.3E, H= 33 KM, M=5.7
                           OFF EAST COAST OF KAMCHATKA

JAN 06  WDC   EP     21 54 46.2                 *I 54 54    *I 55 04
        BKS          21 55                      *I 55 09
        JAS   EP     21 55 07.6                 *I 55 16
        FRI   EP     21 55 10.4
        MNV   IP     21 55 13.9                 *I 55 23
        PRI          21 55                      *E 55 23
                     USGS  21 45 25.1, 51.7N, 159.2E, H= 33 KM, M=5.3
                           OFF EAST COAST OF KAMCHATKA

JAN 06  WDC   EP     22 27 02.9                 *I 27 10
        MIN          22 27                      *E 27 07
        BKS          22 27                      *E 27 28
        JAS   EP     22 27 23.7
        MNV          22 27                      *E 27 31
                     USGS  22 17 47.9, 51.7N, 159.2E, H= 33 KM, M=5.6
                           OFF EAST COAST OF KAMCHATKA

JAN 07  FRI   EP     00 05 41.3
        MNV   EP     00 05 42.0                 *E 06 11
        PRI   EP     00 05 42.5                 *E 06 12
        JAS   IPD    00 05 48.0                 *I 06 18
        MHC   EP     00 05 50.7                 *E 06 20
        BKS   EPD    00 05 53.8                 *E 06 25
                           MICRON      PERIOD
                     PZ      0.7         1.0
        WDC   EP     00 06 02.7
        FHC          00 06                      *E 06 12
                     USGS  23 54 22.2, 17.9S,  69.5W, H= 76 KM, M=5.6
                           PERU-BOLIVIA BORDER REGION

JAN 07  MHC   EP     08 10 48.4
        BKS   EPD    08 10 49.2
                           MICRON      PERIOD
                     PZ      0.02        0.6
        FRI   EP     08 10 52.2                 *E 11 06
        JAS   EP     08 10 53.0
        WDC   EP     08 10 56.6                 *I 11 10
        MIN   EP     08 10 58.5                 *E 11 12
        MNV   EP     08 11 01.3                 *E 11 15
                     USGS  07 58 17.3, 29.6S, 177.3W, H= 33 KM, M=5.4
                           KERMADEC ISLANDS

JAN 07  WDC   EP     13 46 32.3
        JAS   EP     13 46 35.3
        MNV   EP     13 46 49.8
                     USGS  13 37 01.4, 51.5N, 159.3E, H= 63 KM, M=5.0
                           OFF EAST COAST OF KAMCHATKA

JAN 07  FHC          18 44                      *E 44 47
        WDC   EP     18 44 50.1
        MIN   EP     18 44 53.8
        BKS   EP     18 44 58.8
                           MICRON      PERIOD
                     PZ      0.05        1.0
        MHC          18 45                      *E 45 02
        JAS          18 45                      *E 45 04
        FRI          18 45                      *E 45 08
        MNV   EP     18 45 09.5
                     USGS  18 32 10.2, 26.4N, 127.6E, H= 58 KM, M=5.3
                           RYUKYU ISLANDS

JAN 07  FHC          23 43                      *E 43 37
        WDC   EP     23 43 38.5
        MIN          23 43                      *E 43 47
        BKS   E(P)   23 43 53                   *E 43 58    *E 44 25    *E 44 34
                                                *E 51 36    LQ 57 43    LR 00 23
                           MICRON      PERIOD
                     PZ      0.04        1.0
                     MAXR(Z) 4.5         20
                     MAXH(N) 2.7         20
                     MAXH(E) 4.8         20
        MHC   EP     23 43 57.1
        JAS   EP     23 43 58.1
        FRI   EP     23 44 06.8
        MNV   EP     23 44 07.3
        PRI          23 44                      *E 44 12
                     M=5.6, DISTANCE=56°
                     USGS  23 24 23.7, 51.6N, 159.5E, H= 33 KM, M=5.7
                           OFF EAST COAST OF KAMCHATKA

JAN 08  WDC          10 40                      *E 40 08
        MIN          10 40                      *E 40 12
        BKS   EPC    10 40 15.6  48 04          PP 42 35    LQ 54 00    LR 56 30
                           MICRON      PERIOD
                     PZ      0.03        1.0
                     MAXR(Z) 1.7         20
                     MAXH(N) 1.0         20
                     MAXH(E) 1.8         20
        MHC          10 40                      *E 40 31
        JAS          10 40                      *E 40 22
        MNV   EP     10 40 29.0
        PRI          10 40                      *E 40 37
                     M=5.1, DISTANCE=59°
                     USGS  10 30 45.0, 51.7N, 159.1E, H= 33 KM, M=5.5
                           OFF EAST COAST OF KAMCHATKA

JAN 08  WDC   EP     15 59 28
        MIN   EP     15 59 30
        BKS   EPD    15 59 39.2
                           MICRON      PERIOD
                     PZ      0.02        1.0
        JAS   EP     15 59 46.2
        MHC   EP     15 59 48
        PRI          16 00                      *E 00 06
                     USGS  15 50 11.3, 51.4N, 159.8E, H= 33 KM, M=5.4
                           OFF EAST COAST OF KAMCHATKA

JAN 08  MNV   EP     16 14 51
        FRI   EP     16 15 05.5
        JAS   EP     16 15 14
        PRI   EP     16 15 28
        BKS   EPD    16 15 43.2  16 39
                     ML=4.6, NEVADA TEST SITE AREA
                     USGS  16 14 19.9, 37.3N, 116.4W, H=  5 KM, M=4.5
                           SOUTHERN NEVADA

JAN 09  PRI   EPC    04 35 01.0
        FRI   EPC    04 35 01.8
        MNV   EPC    04 35 10.3
        JAS   EPC    04 35 13.9
        MHC   EP     04 35 14.5
                     USGS  04 30 28.9, 19.2N, 108.8W, H= 33 KM, M=4.3
                           REVILLA GIGEDO ISLANDS REGION
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JAN 09  WDC  EPKPD 21 51 06.5
        MIN        21 51                    *E 51 08
        MHC  EPKPD 21 51 11.0
        JAS  EPKPD 21 51 11.8
        FRI  EPKPD 21 51 14.0
        PRI        21 51                    *E 51 14
        MNV  EPKPD 21 51 15.4
             USGS  21 32 16.1,  7.8S, 108.2E, H=101 KM, M=5.8
                   JAVA

JAN 10  SAO        00 06                    *E 06 51   *E 07 39
        BKS  EPD   00 06 51.9               *E 07 18   *E 07 37   *E 10 00
                                            *E 25 00
                          MICRON    PERIOD
                   PZ       0.09       1.2
                   MAXR(Z)  3.6         20
                   MAXH(N)  2.7         20
                   MAXH(E)  2.8         20
        MHC  EPD   00 06 52.2               *E 07 39   *E 10 10
        PRI  EPD   00 06 53.8               *E 07 41   *E 10 13
        WDC  EPD   00 06 55.5               *E 07 42   *E 10 16
        JAS  EPD   00 06 57.2               *E 07 44   *E 10 19
        MIN  EPD   00 06 57.7               *E 07 45
        FRI  EPD   00 06 58.1               *E 07 45   *E 10 20
        FHC        00 06                    *E 06 52   *E 07 38   *E 10 10
        MNV  EPD   00 07 06.5               *E 07 52
             USGS  23 54 35.6, 15.8S, 167.9E, H=168 KM, M=6.1
                   NEW HEBRIDES ISLANDS

JAN 10  FHC  IPC   08 59 43.0
        WDC  EP    08 59 55.8
        MIN  EP    09 00 06.0
        BKS  EPD   09 00 25.0  01 28
                          MICRON    PERIOD
                   PZ       0.20       0.75
        MHC  EP    09 00 34.5               *I 00 40
        JAS  EP    09 00 38.0
        SAO  EP    09 00 43.5
        FRI  EP    09 00 52.5
        MNV  EP    09 00 52.5
        PRI  EP    09 00 55.2
             USGS  08 58 45.2, 43.6N, 127.4W, H= 33 KM, M=5.4
                   OFF COAST OF OREGON

JAN 10  PRI  IP    12 59 50.5               *I 00 47
        SAO  EP    12 59 59.0
        JAS  EP    13 00 00.1               *E 01 08
        MHC  EP    13 00 05
        MIN        13 00                    *E 00 50
             USGS  12 58 15.9, 32.0N, 115.5W, H= 33 KM, M=4.6
                   CALIFORNIA-MEXICO BORDER REGION

JAN 10  PRI  IP    13 37 35.6
        BKS        13 37                    *E 37 36   *E 13 47   *E 13 48
        MHC  EP    13 37 37.2
        JAS  IPC   13 37 42.0               *I 37 58
        WDC  EPC   13 37 44.8               *I 38 02
        MIN  IPC   13 37 45.8               *I 37 57
             USGS  13 25 07.2, 28.9S, 177.5W, H= 33 KM, M=5.4
                   KERMADEC ISLANDS REGION

JAN 10  JAS  IPC   13 49 41.1


JAN 10  JAS  EP    14 40 21.4
        MIN        14 40                    *E 40 21
             USGS  14 27 34.9, 22.9S, 171.5E, H= 40 KM
                   LOYALTY ISLANDS REGION

JAN 11  JAS  EP    21 12 42.8
        FRI  EP    21 12 57.5


JAN 11  PRI  EP    23 35 10.5
        FRI  EP    23 35 12.2
        JAS  IPD   23 35 18.2
        MNV  EP    23 35 18.7
        WDC  EPD   23 35 30.7
             USGS  23 22 40.5, 46.5S, 101.1W, H= 33 KM, M=5.6
                   SOUTHERN PACIFIC OCEAN

JAN 12  MHC  EP    07 07 35.0
        BKS        07 07                    *E 07 35
        PRI  E(P)  07 07 36
        FRI  EP    07 07 39.9
        JAS  EP    07 07 40.2
        WDC  EP    07 07 42.0
        MIN  EP    07 07 44.0
        MNV  EP    07 07 49.5
             USGS  06 56 31.3, 21.0S, 179.2W, H=634 KM, M=5.1
                   FIJI ISLANDS REGION

JAN 12  PRI  EP    12 34 29.0
        FRI  EP    12 34 34.0
        JAS  EP    12 34 35.2
        WDC  EP    12 34 38.5
        MIN  EP    12 34 39.6
        MNV  EP    12 34 42.8
                   KERMADEC ISLANDS REGION

JAN 12  WDC  EP    12 50 21.0
        MIN  EP    12 50 24.3
        BKS  EP    12 50 27.5
                          MICRON    PERIOD
                   PZ       0.04       0.9
        MHC  EP    12 50 30.8
        JAS  EPD   12 50 34.1
        FRI  EP    12 50 38.9
        PRI  E(P)  12 50 40
        MNV  EP    12 50 41.9
             USGS  12 38 29.6, 23.3N, 142.8E, H=113 KM, M=5.2
                   VOLCANO ISLANDS REGION

JAN 12  MHC  EP    18 37 40.7
        JAS  EP    18 37 44.0
        FRI  EP    18 37 44.5
        WDC  EP    18 37 49.0
        MNV  EP    18 37 53.7
             USGS  18 25 09.3, 30.0S, 176.8W, H= 33 KM, M=4.7
                   KERMADEC ISLANDS REGION

JAN 12  MHC  EP    19 47 58.6
        PRI        19 47                    *E 47 59
        BKS        19 48                    *E 14 00   *E 16 00
                          MICRON    PERIOD
                   MAXR(Z)  6.3         20
                   MAXH(N)  3.9         20
                   MAXH(E)  3.6         20
        FRI  EP    19 48 01.0
        JAS  EP    19 48 03.6
        WDC  EP    19 48 07.0
        MIN        19 48                    *E 48 08
        MNV  EP    19 48 11.5
             USGS  19 35 25.8, 30.1S, 176.8W, H= 33 KM, M=5.3
                   KERMADEC ISLANDS REGION

JAN 13  WDC  EP    04 44 34.0
        MIN  EP    04 44 34.5
        JAS  EP    04 44 46.5
        FRI  EP    04 44 52
        MHC  EP    04 44 55
        PRI        04 45                    *E 45 02
             USGS  04 34 34.3, 66.1N,  16.6W, H= 33 KM, M=5.0
                   ICELAND REGION

JAN 13  PRI  E(P)  09 51 32
        MHC  EP    09 51 32.4
        FRI  EP    09 51 37.7
        JAS  EP    09 51 38.6
        WDC  EP    09 51 40.7
        MIN  EP    09 51 42.5
        MNV  EP    09 51 49.0
                   TONGA ISLANDS

JAN 13  PRI  EP    11 28 28
        MHC  EP    11 28 29.2
        FRI  EP    11 28 33.0
        JAS  EP    11 28 34.0
        WDC  EP    11 28 37.1
        MNV  EP    11 28 42.0
             USGS  11 15 57.3, 29.8S, 177.2W, H= 33 KM, M=4.7
                   KERMADEC ISLANDS

JAN 13  MIN  EP    13 39 20.2
        WDC  EPC   13 39 20.3
        MNV  EP    13 39 23.3
        FHC  E(P)  13 39 23.5
        JAS  IP    13 39 32.2
        FRI  EP    13 39 36.5
        BKS  EPC   13 39 37.8  48 10       *E 40 00   LQ 54 50
                          MICRON    PERIOD
                   PZ       0.07       0.8
        MHC  EP    13 39 39.6
        SAO  EP    13 39 41.9
        PRI  EP    13 39 45.0
             USGS  13 29 19.5, 66.2N,  16.6W, H= 33 KM, M=6.0
                   ICELAND REGION

JAN 13  FHC  EP    18 29 45.0
        WDC  EPC   18 29 50.8
        JAS  EPC   18 30 14.3
        MNV  EP    18 30 21.2
             USGS  18 21 16.2, 55.3N, 166.5E, H= 33 KM, M=4.8
                   KOMANDORSKY ISLANDS REGION

JAN 14  WDC  EP    06 08 14.5
        JAS  EPC   06 08 57.3
        FRI        06 09                    *E 09 12
        MNV        06 09                    *E 09 12
             USGS  06 06 55.8, 44.1N, 128.0W, H= 33 KM, M=4.5
                   OFF COAST OF OREGON

JAN 14  PRI  EP    08 40 32.3
        MHC  EP    08 40 33.5
        BKS        08 40                    *E 40 34   *E 06 20
        FRI  EP    08 40 37.2
        JAS  EP    08 40 38.4
        WDC  EP    08 40 41.4
        MIN  EP    08 40 44.0
        MNV  EP    08 40 46.5
             USGS  08 28 07.4, 29.3S, 177.2W, H= 64 KM, M=5.3
                   KERMADEC ISLANDS

JAN 14  FHC  EPC   15 41 07.9
        WDC  IPC   15 41 12.9
        MIN  EPC   15 41 16.4
        BKS  EP    15 41 22.0
                          MICRON    PERIOD
                   PZ       0.3        1.5
        MHC  EP    15 41 25.4
        SAO  EP    15 41 27.1
        JAS  EPC   15 41 27.7
        FRI  EPC   15 41 32.8
        PRI  EPC   15 41 32.8
        MNV  EPC   15 41 34.5
             USGS  15 30 04.5, 32.5N, 137.3E, H=407 KM, M=5.2
                   SOUTH OF HONSHU, JAPAN

JAN 14  JAS  EP    16 07 05.2
        WDC  EP    16 07 08.3
        MNV  EP    16 07 13.2
                   KERMADEC ISLANDS REGION

JAN 14  BKS  EP    16 07 51
                          MICRON    PERIOD
                   PZ       0.08       1.2
        MHC  EP    16 07 52.2
        PRI        16 07                    *E 07 53
        FHC  E(P)  16 07 56.2
        FRI  EP    16 07 57.7
        JAS  EP    16 07 58.2
        WDC  EP    16 08 00.0
        MIN  EP    16 08 02.0
        MNV  EP    16 08 08.5
             USGS  15 56 33.1, 15.2S, 173.5W, H= 33 KM, M=5.7
                   TONGA ISLANDS

JAN 14  SAO  EP    16 08 59
        PRI  EP    16 09 00.3
        BKS  EP    16 09 00.5                                SKS 19 35
                          MICRON    PERIOD
                   PZ       0.81       1.0
                   MAXH(N)  500         20
                   MAXH(E)  260         20
        MHC  EP    16 09 01.0                    SKS 19 26  PKKP 27 30
        FRI  EP    16 09 05.0                    SKS 19 23    SS 24 44  PKKP 27 26
        FHC  EP    16 09 05.3
        JAS  EP    16 09 06.3                    SKS 19 34    SS 24 45  PKKP 27 31
                                                 RPKP 35 28  P9KP 24 40     T 43 00
        WDC  EP    16 09 09.6                    SKS 19 36    SS 24 48  RPKP 35 29
                                                 P9KP 24 50     T 43 00
        MIN  EP    16 09 10.5                    RPKP 35 29
        MNV  EP    16 09 14.0
                   Ms=7.9, DISTANCE=83°
             USGS  15 56 34.9, 29.2S, 177.9W, H=69  KM, M=6.3
                   KERMADEC ISLANDS

JAN 14  JAS  EP    16 40 42.0
        WDC  EP    16 40 45.0
                   KERMADEC ISLANDS REGION

JAN 14  SAO  E(P)  16 59 59
        PRI  EP    16 59 59.9                    RPKP 26 28     T 92 00
        MHC  EP    17 00 01.2
        BKS  EP    17 00 02
                          MICRON    PERIOD
                   PZ       0.83       2
                   MAXH(N)  1100        20
                   MAXH(E)  580         20
        FRI  EP    17 00 04.8                    PKKP 18 21  RPKP 26 26
        JAS  EP    17 00 06.0                     SKS 10 30    SS 16 09  PKKP 18 20
                                                 RPKP 26 25  P9KP 76 40     T 92 00
        FHC  EP    17 00 06.5                      T 92 00
        WDC  EP    17 00 09.3                     SKS 10 34    SS 16 07  RPKP 26 23
                                                 P9KP 76 50     T 92 00
        MIN  EP    17 00 10.8                    RPKP 26 25
                   Ms=8.3, DISTANCE=85°
             USGS  16 47 33.5, 28.4S, 177.7W, H= 33 KM, M=6.5
                   KERMADEC ISLAND REGION

JAN 14  MHC  EP    17 07 18.9
        FRI  EP    17 07 22.5
        JAS  EP    17 07 24.0
        WDC  EP    17 07 27.0
                   KERMADEC ISLANDS REGION

JAN 14  PRI  EP    17 57 48.5                    PP 01 08
        MHC  EP    17 57 49.6                    PP 01 10
        BKS  E(P)  17 57 53
                          MICRON    PERIOD
                   PZ       0.06       0.8
        FRI  EP    17 57 53.5                    PP 01 13
        JAS  EPC   17 57 54.7                    PP 01 15
        WDC  EPC   17 57 57.7                    PP 01 18
        MIN  EP    17 57 59                      PP 01 19
             USGS  17 45 17.4, 29.9S, 177.4W, H= 33 KM, M=5.5
                   KERMADEC ISLANDS
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JAN 14  BKS  EP    18 10 23
                          MICRON      PERIOD
                     PZ     0.03         1.0
        PRI  EP    18 10 25.7
        MHC  EP    18 10 27.5
        FRI  EP    18 10 30.6
        JAS  EP    18 10 32.0
        FHC  EP    18 10 32.2
        WDC  EP    18 10 35.0
        MIN  EP    18 10 36.5
                   KERMADEC ISLANDS REGION

JAN 14  PRI  EP    18 29 30.4
        MHC  EP    18 29 31.5
        BKS  EP    18 29 32
                          MICRON      PERIOD
                     PZ     0.03         1.0
        FRI  EP    18 29 35.6
        JAS  EP    18 29 36.7
        WDC  EP    18 29 39.7
        MIN  EP    18 29 41.0
                   KERMADEC ISLANDS REGION

JAN 14  JAS  EP    18 40 47.0
        WDC  EP    18 40 50.0
                   KERMADEC ISLANDS REGION

JAN 14  PRI  EP    18 47 15.8
        MHC  EP    18 47 16.6
        BKS  EP    18 47 17
                          MICRON      PERIOD
                     PZ     0.04         1.0
        FRI  EP    18 47 20.6
        JAS  EP    18 47 21.8
        FHC  EP    18 47 22.3
        WDC  EP    18 47 25.0
        MIN  EP    18 47 26.2
                   USGS  18 34 50.0, 28.6S, 176.7W, H= 37 KM, M=5.4
                         KERMADEC ISLAND REGION

JAN 14  PRI  EP    19 02 56.2
        MHC  EP    19 02 57.0
        FRI  EP    19 03 01.2
        JAS  EP    19 03 02.7
        BKS  E(P)  19 03 03.5
                          MICRON      PERIOD
                     PZ     0.14         1.2
        WDC  EP    19 03 05.7
        MIN  EP    19 03 06.7
                   USGS  18 50 25.6, 29.7S, 176.9W, H= 33 KM, M=5.4
                         KERMADEC ISLAND REGION

JAN 14  FRI  EP    19 12 40              *E 12 56
        JAS  EP    19 12 41.5            *E 12 57
        WDC  EP    19 12 44.5            *E 13 00
        MIN        19 12                 *E 13 02
                   KERMADEC ISLANDS REGION

JAN 14  FRI  EP    19 15 11.2
        JAS  EP    19 15 13.0
        WDC  EP    19 15 16.0

JAN 14  JAS  EP    19 34 39.5
        WDC  EP    19 34 42.5
                   KERMADEC ISLANDS REGION

JAN 14  FRI  EP    19 59 56.0
        JAS  EP    19 59 57.5            *E 00 12
        WDC  EP    20 00 00.5            *E 00 15
                   USGS  19 47 21.9, 29.2S, 177.1W, H= 33 KM, M=5.1
                         KERMADEC ISLANDS

JAN 14  FRI  EP    20 03 04.7
        JAS  EP    20 03 05.8
        WDC  EP    20 03 09.0
        BKS        20 03                 *E 03 11
                   KERMADEC ISLANDS REGION

JAN 14  MHC  EP    20 20 24.3
        FRI  EP    20 20 28.2
        JAS  EP    20 20 29.6            *E 20 44
        WDC  EP    20 20 32.6            *E 20 47
                   KERMADEC ISLANDS REGION

JAN 14  JAS  EP    20 23 00.7            *E 23 12
        WDC  EP    20 23 03.6            *E 23 16
                   USGS  20 10 23.7, 30.1S, 176.5W, H= 33 KM, M=5.1
                         KERMADEC ISLANDS REGION

JAN 14  PRI  EP    20 33 03.5
        MHC  EP    20 33 04.4
        FRI  EP    20 33 08.3
        FHC  EP    20 33 09.0
        JAS  EP    20 33 09.5
        WDC  EP    20 33 12.8            *E 33 35
        MIN  EP    20 33 14.0
        MNV  EP    20 33 17.8
                   USGS  20 20 35.3, 29.1S, 177.1W, H= 33 KM, M=5.3
                         KERMADEC ISLANDS

JAN 14  PRI  EP    21 03 43.8
        BKS        21 03                 *E 03 44
        MHC  EP    21 03 44.4
        FRI  EP    21 03 48.4
        JAS  EP    21 03 49.5
        WDC  EP    21 03 52.6
        MIN  EP    21 03 54.2
        MNV  EP    21 03 57.8
                   USGS  20 51 17.7, 28.7S, 176.9W, H= 33 KM, M=5.2
                         KERMADEC ISLANDS REGION

JAN 14  PRI  EPC   21 43 54.2  44 01
        SAO  EP    21 44 08.0
                   BRK   21 43 46.7, 36.1N, 120.2W, H=  5 KM, MAG=3.0
                         SOUTHWEST OF FRESNO, CALIFORNIA

JAN 14  JAS  IP    21 44 02.5
        WDC  E(P)  21 44 05.3
        MNV  EP    21 44 10.0
                   USGS  21 31 29.5, 29.2S, 177.3W, H= 33 KM, M=5.3
                         KERMADEC ISLANDS

JAN 14  FRI  IPD   21 44 16.7
        SAO  EP    21 44 21.0
        MHC  IPC   21 44 27.4
        JAS  IPC   21 44 30.8
        BKS  IPC   21 44 36.8
        MNV  EPC   21 44 46.0
        MIN  EP    21 45 07.4
        MIN  EP    21 45 07.4
        WDC  E(P)  21 45 12
        FHC  E(P)  21 45 24
                   BRK   21 43 59.3, 36.1N, 120.2W, H=  5 KM, ML=4.9
                         SOUTHWEST OF FRESNO, CALIFORNIA

JAN 14  MHC  EP    21 57 20.2
        JAS  EP    21 57 25.0
        WDC  EP    21 57 28.0
        MNV  EP    21 57 33.2
                   KERMADEC ISLANDS REGION

JAN 14  MHC  EP    22 56 09.0
        PRI  EP    22 56 09.8
        BKS  EP    22 56 10.5
                          MICRON      PERIOD
                     PZ     0.11         1.0
        SAO  EP    22 56 12.3
        FRI  EP    22 56 13.9
        JAS  EP    22 56 15
        MIN        22 56                 *E 56 18
        WDC  IP    22 56 18.7
        MNV  EP    22 56 22.7
                   USGS  22 43 43.1, 28.7S, 176.8W, H= 31 KM, M=5.5
                         KERMADEC ISLANDS REGION

JAN 14  JAS  EP    23 17 09.5
        WDC  EP    23 17 13.3
        MNV  EP    23 17 18.3

JAN 14  FRI        23 26                 *E 26 12
        JAS  EP    23 26 13.2          PKKP 44 58
        WDC  EP    23 26 16.5          PKKP 45 00

JAN 14  PRI  IPC   23 40 25.4
        FRI  IPC   23 40 35.4
        SAO  EPD   23 40 38.8
        MHC  EP    23 40 45.4
        JAS  IPC   23 40 48.9
        BKS  EP    23 40 51.0
                   BRK   23 40 17.6, 36.1N, 120.2W, H=  2 KM, MAG=3.4
                         SOUTHWEST OF FRESNO, CALIFORNIA

JAN 15  PRI  IPC   00 09 44.3
        FRI  IPC   00 09 54.2
        SAO  EPD   00 09 57.7
        MHC  EPD   00 10 04.7
        JAS  IPC   00 10 07.8
        BKS  EP    00 10 14.5
        MNV  EP    00 10 23.0
                   BRK   00 09 37.4, 36.1N, 120.2W, H=  7 KM, ML=3.6
                         SOUTHWEST OF FRESNO, CALIFORNIA

JAN 15  PRI  EP    00 58 25.0
        BKS  EP    00 58 26.0
                          MICRON      PERIOD
                     PZ     0.02         1.0
        MHC  EP    00 58 26.2
        FRI  EP    00 58 30.0
        JAS  EP    00 58 31.0
        WDC  EP    00 58 34.4
        MIN  EP    00 58 36.5
        MNV  EP    00 58 39.0
                   USGS  00 45 57.0, 29.3S, 176.4W, H= 33 KM, M=5.2
                         KERMADEC ISLANDS REGION

JAN 15  BKS  EP    02 07 18.0
                          MICRON      PERIOD
                     PZ     0.06         1.2
        MHC  EP    02 07 19.0
        PRI  EP    02 07 19.7
        FRI  EP    02 07 21.5
        JAS  EP    02 07 22.7
        WDC  EP    02 07 26.1
        MIN  EP    02 07 27.7
        MNV  EP    02 07 30.6
                   USGS  01 54 51.0, 28.6S, 176.8W, H= 33 KM, M=5.4
                         KERMADEC ISLANDS REGION

JAN 15  PRI  EP    02 12 39.2
        BKS  EP    02 12 40.0
                          MICRON      PERIOD
                     PZ     0.06         1.2
        MHC  EP    02 12 40.0
        FRI  EP    02 12 44.0
        JAS  EP    02 12 45.0
        WDC  EP    02 12 48.5
        MIN  EP    02 12 50.0
        MNV  EP    02 12 52.7
                   USGS  02 00 11.7, 29.0S, 176.8W, H= 33 KM, M=5.2
                         KERMADEC ISLANDS REGION

JAN 15  MHC        02 17                 *E 17 41
        FRI  EP    02 17 44.4
        JAS  EP    02 17 45.2
        WDC  EP    02 17 48.9
        MNV  EP    02 17 53.8
                   USGS  02 05 13.2, 28.8S, 176.7W, H= 33 KM, M=5.3
                         KERMADEC ISLANDS REGION

JAN 15  FRI  EP    03 19 25.0
        JAS  EP    03 19 26.1
        WDC  EP    03 19 29.2
                   KERMADEC ISLANDS REGION

JAN 15  PRI  EP    03 42 38.1
        BKS  EP    03 42 40.5
                          MICRON      PERIOD
                     PZ     0.05         1.0
        FRI  EP    03 42 43.0
        JAS  EP    03 42 43.5
        WDC  EP    03 42 46.5
        MIN  EP    03 42 49.2
        MNV  EP    03 42 51.5
                   USGS  03 30 09.0, 29.4S, 176.8W, H= 33 KM, M=5.2
                         KERMADEC ISLANDS REGION

JAN 15  BKS        03 52                 *E 52 34
        FRI  EP    03 52 34.4
        JAS  EP    03 52 34.6
        WDC  EP    03 52 40.6
        MNV  EP    03 52 46.5
                   KERMADEC ISLANDS REGION

JAN 15  SAO  EP    03 54 20.1
        BKS  EP    03 54 20.5
                          MICRON      PERIOD
                     PZ     0.07         1.2
        MHC  EP    03 54 21.0
        FRI  EP    03 54 23.6
        JAS  EP    03 54 24.5
        WDC  EP    03 54 28.1
        MIN  EP    03 54 30.4
        MNV  EP    03 54 32.8
                   USGS  03 41 51.3, 29.3S, 176.8W, H= 33 KM, M=5.3
                         KERMADEC ISLANDS REGION

JAN 15  PRI  EP    04 01 06.0
        BKS  EP    04 01 07.0
                          MICRON      PERIOD
                     PZ     0.14         1.7
        MHC  EP    04 01 07.5
        FRI  EP    04 01 11.3
        JAS  EP    04 01 12.4
        WDC  EP    04 01 15.5
        MIN  EP    04 01 18.0
                   USGS  03 48 33.1, 30.1S, 177.5W, H= 33 KM, M=5.4
                         KERMADEC ISLANDS

JAN 15  FRI  EP    04 14 04.5
        JAS  EP    04 14 06.6
        WDC  EP    04 14 10.0
        MNV  EP    04 14 13.0
                   USGS  04 01 30.2, 29.9S, 176.8W, H= 33 KM
                         KERMADEC ISLANDS REGION
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JAN 15  MHC  EP    04 53 28.7
        PRI  EP    04 53 29.9                    *E 53 50
        BKS        04 53                        *E 56 54
        WDC  EP    04 53 31.0
        JAS  EP    04 53 33.2
        MIN  EP    04 53 33.5
        FRI  EP    04 53 34.0
        MNV  EP    04 53 43.0
                   USGS  04 41 07.4, 15.4S, 167.6E, H=132 KM, M=5.2
                         NEW HEBRIDES ISLANDS

JAN 15  BKS        05 57                        *E 57 30
        PRI  EP    05 57 29
        FRI  EP    05 57 34.6
        JAS  EP    05 57 35.7
        WDC  EP    05 57 39.0
        MIN  EP    05 57 40.2
        MNV  EP    05 57 44.0
                   USGS  05 45 01.8, 29.1S, 177.0W, H= 33 KM, M=4.9
                         KERMADEC ISLANDS

JAN 15  MHC  EP    06 19 18.7
        BKS  EP    06 19 19.2
                                 MICRON    PERIOD
                   PZ              0.06       1.0
        PRI  EP    06 19 19.7
        FRI  EP    06 19 22.5
        JAS  EP    06 19 24.0
        WDC  EP    06 19 27.0
        MIN  EP    06 19 30.0
        MNV  EP    06 19 31.7
                   USGS  06 06 46.1, 30.4S, 176.8W, H= 33 KM, M=5.3
                         KERMADEC ISLANDS REGION

JAN 15  FRI  EP    06 27 47.9
        JAS  EP    06 27 49.0
        WDC  EP    06 27 52.2
        MNV  EP    06 27 57.8

JAN 15  PRI  E(P)  06 40 51.3
        MHC  EP    06 40 52.1
        BKS  E(P)  06 40 53.5                   *E 44 00
                                 MICRON    PERIOD
                   PZ              0.06       1.2
        FRI  EP    06 40 55.0
        JAS  EP    06 40 56.0
        WDC  EP    06 40 59.5
        MIN  EP    06 41 01.6
        MNV  EP    06 41 04.0
                   USGS  06 28 18.1, 30.0S, 176.8W, H= 33 KM, M=5.5
                         KERMADEC ISLANDS REGION

JAN 15  PRI  EP    07 14 47.0
        FRI  EP    07 14 52.0
        JAS  EP    07 14 53.3
        WDC  EP    07 14 56.7
        MNV  EP    07 15 02.0
                   USGS  07 02 15.2, 30.2S, 176.7W, H= 33 KM, M=5.2
                         KERMADEC ISLANDS REGION

JAN 15  FRI  EP    08 29 28.7
        JAS  EP    08 29 30.0
        WDC  EP    08 29 33.0
        MIN  EP    08 29 34.4
        MNV  EP    08 29 38.0
                   USGS  08 17 00.7, 27.2S, 177.6W, H= 33 KM, M=4.8
                         KERMADEC ISLANDS REGION

JAN 15  PRI  EP    08 42 26.0
        MHC  EP    08 42 27.1
        BKS  E(P)  08 42 28.8
                                 MICRON    PERIOD
                   PZ              0.09       1.2
        FRI  EP    08 42 30.9
        JAS  EP    08 42 32.1
        FHC  EP    08 42 32.6
        WDC  EP    08 42 35.2
        MIN  EP    08 42 36.7
        MNV  EP    08 42 40.1
                   USGS  08 29 54.6, 30.2S, 177.4W, H= 44 KM, M=5.5
                         KERMADEC ISLANDS

JAN 15  JAS  EP    08 49 22.5
        WDC  EP    08 49 25.6
        MNV  EP    08 49 30.5
                   USGS  08 36 46.8, 29.7S, 176.8W, H= 33 KM, M=4.6
                         KERMADEC ISLANDS REGION

JAN 15  JAS  EP    09 41 56.7                   *E 42 08
        WDC  EP    09 41 59.8                   *E 42 12
        MNV        09 42                        *E 42 05
                   USGS  09 29 24.1, 28.9S, 177.0W, H= 33 KM
                         KERMADEC ISLANDS REGION

JAN 15  SAO  EP    10 22 18.0
        PRI  EP    10 22 19.5                   *E 22 37
        BKS  EP    10 22 20.0                   *E 22 38    *E 08 00
                                 MICRON    PERIOD
                   PZ              0.05       1.2
                   MAXR(Z)         3.6         18
                   MAXH(N)         3.4         18
                   MAXH(E)         3.3         18
        MHC  EP    10 22 20.5                   *E 22 39
        FRI  EP    10 22 24.5                   *E 22 42
        JAS  EPC   10 22 25.6                   *E 22 43
        FHC  EP    10 22 26.0                   *E 22 44
        WDC  EPC   10 22 28.6                   *E 22 46
        MIN  EP    10 22 29.8                   *E 22 58
        MNV  EP    10 22 33.5                   *E 22 52
                   M=5.9, DISTANCE=84°
                   USGS  10 09 51.9, 28.6S, 177.6W, H= 33 KM, M=5.6
                         KERMADEC ISLANDS REGION

JAN 15  PRI  EP    10 28 17.3
        MHC  EP    10 28 18.0
        BKS        10 28                        *E 28 20
        FRI  EP    10 28 21.8
        JAS  EP    10 28 23.0
        FHC  EP    10 28 23.6
        WDC  EP    10 28 26.0
        MIN  EP    10 28 28.2
        MNV  EP    10 28 31.0
                   USGS  10 15 50.9, 29.5S, 176.6W, H= 52 KM, M=5.0
                         KERMADEC ISLANDS REGION

JAN 15  FRI  EP    10 31 21.8
        JAS  EP    10 31 23.2
        WDC  EP    10 31 26.5
        MNV  EP    10 31 31.5
                   KERMADEC ISLANDS REGION

JAN 15  MHC  EP    10 44 23.0
        FRI  EP    10 44 26.8
        JAS  EP    10 44 28.0
        WDC  EP    10 44 31.0
        MNV  EP    10 44 36.0
                   KERMADEC ISLANDS REGION

JAN 15  PRI  EP    11 28 10.5
        MHC  EP    11 28 11.5
        FRI  EP    11 28 15.6
        JAS  EP    11 28 16.8
        WDC  EP    11 28 20.0
        MIN  EP    11 28 21.0
        MNV  EP    11 28 25.1
                   USGS  11 15 46.4, 28.3S, 176.8W, H= 33 KM, M=5.0
                         KERMADEC ISLANDS REGION

JAN 15  JAS  EP    12 11 43.5
        WDC  EP    12 11 46.5
        MNV  EP    12 11 51.5
                   USGS  11 59 09.1, 29.2S, 176.9W, H= 33 KM, M=5.0
                         KERMADEC ISLANDS REGION

JAN 15  JAS  EP    12 21 17.0
        WDC  EP    12 21 20.0
        MNV  EP    12 21 25.0
                   USGS  12 08 42.4, 29.6S, 176.6W, H= 33 KM, M=5.0
                         KERMADEC ISLANDS REGION

JAN 15  JAS  EP    12 41 42.0
        WDC  EP    12 41 45.0
                   KERMADEC ISLANDS REGION

JAN 15  JAS  EP    12 44 36.5
        WDC  EP    12 44 39.5                   *E 44 52
        MNV  EP    12 44 44.5                   *E 44 57
                   USGS  12 32 03.3, 29.4S, 176.4W, H= 33 KM, M=4.7
                         KERMADEC ISLANDS REGION

JAN 15  JAS  EP    13 11 52.7                   *E 12 06    *E 15 08
        WDC  EP    13 11 55.8                   *E 15 11
        MNV  E(P)  13 12 01
                   USGS  12 59 18.9, 29.1S, 177.1W, H= 33 KM, M=4.5
                         KERMADEC ISLANDS

JAN 15  PRI  EP    13 16 57.8
        FRI  EP    13 17 01.8
        JAS  EP    13 17 03.0                   *E 17 15
        WDC  EP    13 17 06.3                   *E 17 18
        MIN  EP    13 17 07.5
        MNV  EP    13 17 10.8
                   KERMADEC ISLANDS REGION

JAN 15  JAS  EP    13 40 31.0                   *E 43 47
        WDC  EP    13 40 34.0                   *E 40 44    *E 40 54
        MNV  EP    13 40 39.0
                   KERMADEC ISLANDS REGION

JAN 15  JAS  EP    14 01 53.2                   *E 02 07
        WDC  EP    14 01 56.2
        MNV  EP    14 02 01.0                   *E 02 13
                   USGS  13 49 15.9, 29.8S, 177.4W, H= 33 KM, M=4.5
                         KERMADEC ISLANDS

JAN 15  FRI  EP    14 02 53.0
        JAS  EP    14 02 54.0
        WDC  EP    14 02 57.0                   *E 03 14
        MIN  EP    14 02 57.5
        MNV  EP    14 03 02.0
                   KERMADEC ISLANDS REGION

JAN 15  FRI  EP    15 46 25.2
        JAS  EP    15 46 26.5                   *E 46 38
        WDC  EP    15 46 29.6                   *E 46 41
        MNV  EP    15 46 34.5
                   KERMADEC ISLANDS REGION

JAN 15  SAO  EP    16 24 54.5
        PRI  EP    16 24 54.6
        MHC  EP    16 24 55.8
        BKS  E(P)  16 24 58.8                   *E 48 30    *E 50 00
                                 MICRON    PERIOD
                   PZ              0.05       1.0
                   MAXR(Z)         9           20
                   MAXH(N)         8           20
                   MAXH(E)         5           20
        FRI  EP    16 24 59.6
        FHC  EP    16 25 00.8
        JAS  EPD   16 25 00.9                   *E 25 20
        WDC  EPD   16 25 04.1                   *E 25 23
        MIN  EP    16 25 05.4
        MNV  EPD   16 25 09.0
                   M=6.2, DISTANCE=84°
                   USGS  16 12 22.3, 30.2S, 177.2W, H= 33 KM, M=5.1
                         KERMADEC ISLANDS

JAN 15  PRI  EP    17 34 33.0
        BKS        17 34                        *E 01 00
        FRI  EP    17 34 37.9
        JAS  EP    17 34 39.2
        WDC  EP    17 34 42.3
        MIN  EP    17 34 43.6
        MNV  EP    17 34 47.0
                   USGS  17 22 04.0, 29.7S, 176.7W, H= 33 KM, M=5.1
                         KERMADEC ISLANDS REGION

JAN 15  MHC  EP    18 14 38.0
        PRI        18 14                        *E 14 49
        FRI  EP    18 14 42.0                   *E 14 54
        JAS  EP    18 14 43.5                   *E 14 56
        WDC  EP    18 14 46.5                   *E 14 58
        MIN        18 14                        *E 15 00
        MNV  EP    18 14 51.5                   *E 15 04
                   USGS  18 02 09.7, 29.3S, 176.7W, H= 33 KM, M=5.2
                         KERMADEC ISLANDS REGION

JAN 15  MHC  EP    18 35 05.7
        BKS        18 35                        *E 35 20    *E 09 00
        FRI  EP    18 35 10.0
        JAS  EP    18 35 11.0
        WDC  EP    18 35 13.8                   *E 35 29
        MIN  EP    18 35 15.2
        MNV  EP    18 35 19.0
                   USGS  18 22 36.9, 28.2S, 178.3W, H= 33 KM, M=5.0
                         KERMADEC ISLANDS REGION

JAN 15  BKS        19 35                        *E 08 00
        FRI  EP    19 35 40.0
        JAS  EP    19 35 41.0
        WDC  EP    19 35 44.0
        MNV  EP    19 35 49.0
                   KERMADEC ISLANDS REGION

JAN 15  MHC  EP    19 37 52.4
        FRI  EP    19 37 56.0
        WDC  EP    19 38 00.8
        MNV  EP    19 38 05.8
                   USGS  19 25 25.2, 28.9S, 176.6W, H= 33 KM, M=4.9
                         KERMADEC ISLANDS REGION

JAN 15  FRI  EP    19 43 39.5
        JAS  EP    19 43 40.8
        WDC  EP    19 43 43.8
        MNV  EP    19 43 49.0
                   KERMADEC ISLANDS REGION

JAN 15  PRI  EP    21 59 31.5
        MHC  EP    21 59 32.4
        BKS        21 59                        *E 59 33    *E 25 20    *E 25 40
        FRI  EP    21 59 36.5
        FHC  EP    21 59 37.5
        JAS  EP    21 59 37.5                   *E 03 05
        WDC  EP    21 59 40.5
        MIN  EP    21 59 41.5
        MNV  EP    21 59 45.5
                   USGS  21 47 04.2, 28.1S, 178.4W, H= 39 KM, M=5.2
                         KERMADEC ISLANDS REGION

JAN 15  WDC  EP    22 44 21.8
        MIN  EP    22 44 25.5
        JAS  EP    22 44 36.8
        FRI  EP    22 44 41.8
        MNV  EP    22 44 43.5
                   USGS  22 32 43.1, 28.8N, 143.3E, H= 33 KM, M=4.9
                         BONIN ISLANDS REGION
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JAN 15  SAO  EP    23 06 13
        MHC  EP    23 06 13.2
        PRI  EP    23 06 16.7
        WDC  EP    23 06 19.5
        JAS  EP    23 06 22.6
        MIN  EP    23 06 23.5
        FRI  EP    23 06 24.0
        MNV  EP    23 06 39.2
                   USGS  22 59 24.0, 19.3N, 155.3W, H= 30 KM, M=4.8
                         HAWAII

JAN 16  PRI        00 33                    *E 33 32
        MHC        00 33                    *E 33 33
        FRI  EP    00 33 30.5
        JAS  EP    00 33 31.7               *E 33 38
        WDC  EP    00 33 34.5               *E 33 42
        MNV  EP    00 33 39.5               *E 33 47
                   USGS  00 20 55.5, 28.5S, 177.9W, H= 23 KM, M=4.8
                         KERMADEC ISLANDS REGION

JAN 16  JAS  EP    03 03 14.5               *E 03 24
        WDC  EP    03 03 17.5               *E 03 28
        MNV  EP    03 03 22.5
                   KERMADEC ISLANDS REGION

JAN 16  JAS  EP    03 05 40.2
        WDC  EP    03 05 43.5
        MNV  EP    03 05 48.2
                   KERMADEC ISLANDS REGION

JAN 16  JAS  EP    03 12 37.0
        WDC  EP    03 12 40.0
                   KERMADEC ISLANDS REGION

JAN 16  PRI  EP    03 25 30.8
        MHC  EP    03 25 31.5
        BKS        03 25                    *E 32 00
                                  MICRON     PERIOD
                   MAXR(Z)  2.1    20
                   MAXH(N)  2.1    20
                   MAXH(E)  2.1    20
        FHC  EP    03 25 36.0
        FRI  EP    03 25 37.0
        JAS  EP    03 25 37.7
        WDC  EP    03 25 40.0
        MNV  EP    03 25 48.0
                   USGS  03 14 09.5, 16.7S, 172.4W, H= 33 KM, M=5.3
                         SAMOA ISLANDS REGION

JAN 16  BKS        04 23                    *E 51 00    *E 53 20
        PRI  EP    04 23 52.0
        MHC  EP    04 23 52.9
        FRI  EP    04 23 56.6
        JAS  EP    04 23 57.8
        WDC  EP    04 24 00.8
        MNV  EP    04 24 05.8
                   USGS  04 11 19.9, 29.9S, 177.3W, H= 33 KM, M=5.0
                         KERMADEC ISLANDS

JAN 16  JAS  EP    05 03 36.5
        WDC  EP    05 03 40.0

JAN 16  FHC  IPC   05 44 24.6  44 33
        WDC  IPC   05 44 30.8  44 43
        MIN  EP    05 44 41.1
                   BRK   05 44 13.2, 40.5N, 123.7W, H=  2 KM, ML=3.0
                         NORTHEAST OF GARBERVILLE, CALIFORNIA

JAN 16  BKS        09 07                    *E 37 00
        JAS  EP    09 07 10.8
        WDC  EP    09 07 13.8
                   USGS  08 54 36.1, 29.4S, 176.8W, H= 33 KM, M=4.9
                         KERMADEC ISLANDS REGION

JAN 16  BKS  EPC   10 57 49.7                *E 34 25
                                  MICRON     PERIOD
                   PZ       0.03    0.8
                   MAXR(Z)  2.3     20
                   MAXH(N)  1.5     20
                   MAXH(E)  1.7     20
        SAO  EP    10 57 48.1
        PRI  EP    10 57 49.6
        MHC  EPC   10 57 50.0
        FHC  EPC   10 57 53.7
        FRI  IPC   10 57 54.4
        JAS  IPC   10 57 55.2               *E 59 43
        WDC  IPC   10 57 57.3               *E 59 46
        MIN  EP    10 57 58.7
        MNV  IPC   10 58 03.5
                   M=5.5, DISTANCE=83°
                   USGS  10 46 15.1, 25.1S, 180.0E, H=487 KM, M=5.3
                         SOUTH OF FIJI ISLANDS

JAN 16  BKS        11 07                    *E 17 00
        SAO  E(P)  11 07 12
        MHC  EP    11 07 13.2               *E 07 26
        PRI  EP    11 07 14.0
        WDC  EPC   11 07 18.0               *E 07 30    *E 08 06
        JAS  EPC   11 07 18.7               *E 07 31
        FRI  EP    11 07 18.8               *E 07 31
        MIN  EP    11 07 19.3               *E 07 33
        MNV  EP    11 07 26.6               *E 07 40
                   USGS  10 54 28.0, 21.2S, 168.7E, H= 33 KM, M=5.3
                         LOYALTY ISLANDS

JAN 16  MHC  EP    12 13 20.5
        JAS  EP    12 13 25.5
        FRI  EP    12 13 26.3
        WDC  EP    12 13 29.0
        MNV  EP    12 13 34.0
                   KERMADEC ISLANDS REGION

JAN 16  JAS  EP    12 16 16.5               *E 16 29
        WDC  EP    12 16 19.5               *E 16 32
        MNV  EP    12 16 24.5               *E 16 37
                   KERMADEC ISLANDS REGION

JAN 16  SAO  E(P)  13 08 02.7
        PRI  EP    13 08 03.7
        MHC  EP    13 08 05.0
        BKS        13 08                    *E 08 28    *E 37 45
                                  MICRON     PERIOD
                   MAXR(Z)  2.2    20
                   MAXH(N)  1.5    20
                   MAXH(E)  1.4    20
        FRI  EP    13 08 09.2
        JAS  EPC   13 08 10.3               *E 11 26
        FHC  EP    13 08 10.5
        WDC  EPC   13 08 13.6               *E 11 29
        MIN  EP    13 08 14.8
        MNV  EPC   13 08 18.5
                   M=5.5, DISTANCE=84°
                   ISCS  12 55 36.6, 29.0S, 177.0W, H= 33 KM, M=5.4
                         KERMADEC ISLANDS

JAN 16  PRI        13 31                    *E 31 50
        MHC  EP    13 31 45.0
        BKS        13 31                    *E 00 15    *E 01 00
                                  MICRON     PERIOD
                   MAXR(Z)  2.3    20
                   MAXH(N)  1.8    20
                   MAXH(E)  2.3    20
        FRI  EP    13 31 49.0
        JAS  EP    13 31 50.0
        WDC  EP    13 31 53.5
        MIN  EP    13 31 55
        MNV  EP    13 31 58.5
                   M=5.6, DISTANCE=84°
                   ISCS  13 19 14.8, 29.8S, 176.6W, H= 33 KM, M=5.4
                         KERMADEC ISLANDS

JAN 16  FRI  EP    15 35 43.5
        JAS  EP    15 35 44.8
        WDC  EP    15 35 48.2
        MNV  EP    15 35 53
                   USGS  15 23 05.4, 30.1S, 177.7W, H= 33 KM, M=4.8
                         KERMADEC ISLANDS

JAN 16  MHC  EP    15 40 38.8
        PRI        15 40                    *E 40 39
        FRI  EP    15 40 42.5
        JAS  EP    15 40 43.5
        WDC  EP    15 40 47.0
        MIN        15 40                    *E 40 50
        MNV  EP    15 40 52.5
                   USGS  15 28 09.3, 29.6S, 176.7W, H= 33 KM, M=5.0
                         KERMADEC ISLANDS REGION

JAN 16  MHC        17 10                    *E 10 27
        FRI        17 10                    *E 10 30
        JAS  EP    17 10 27.0
        WDC  EP    17 10 31.0
        MNV  EP    17 10 35.5
                   KERMADEC ISLANDS REGION

JAN 16  PRI  EPC   21 58 54.7
        MHC  EP    21 58 56.1
        BKS  EP    21 58 57.3
                                  MICRON     PERIOD
                   PZ       0.07    1.0
        FRI  EP    21 58 59.7
        FHC  EP    21 59 01.0
        JAS  IPC   21 59 01.0
        WDC  IPC   21 59 04.1
        MIN  EPC   21 59 05.5
        MNV  EPC   21 59 09.0
                   USGS  21 46 21.5, 30.1S, 177.6W, H= 33 KM, M=5.4
                         KERMADEC ISLANDS

JAN 16  SAO  EP    23 44 38.9
        PRI  IPC   23 44 40.0
        BKS  EPC   23 44 40.9               *E 44 56
                                  MICRON     PERIOD
                   PZ       0.09    0.9
        MHC  IPC   23 44 40.9
        FRI  IPC   23 44 44.9               *E 45 00
        JAS  IPC   23 44 46.1               *E 45 00    SKS 05 28
        WDC  IPC   23 44 49.0               *E 45 03    SKS 05 42
        MIN  EPC   23 44 50.3
        MNV  IPC   23 44 54.0               *E 45 08    SKS 05 39
                   USGS  23 32 09.4, 29.7S, 177.7W, H= 51 KM, M=5.5
                         KERMADEC ISLANDS

JAN 17  JAS  EP    03 38 43.5               *E 38 52
        WDC  EP    03 38 46.5
        MNV  EP    03 38 51.7               *E 39 00
                   USGS  03 26 09.7, 29.1S, 176.8W, H= 28 KM, M=4.9
                         KERMADEC ISLANDS REGION

JAN 17  PRI  EP    06 02 39.5
        MHC        06 02                    *E 02 40
        FRI        06 02                    *E 02 44
        JAS  EP    06 02 45.3
        WDC  EP    06 02 48.7
        MIN        06 02                    *E 02 50
        MNV  EP    06 02 53.3
                   USGS  05 49 55.2, 32.6S, 178.2W, H= 33 KM, M=5.8
                         SOUTH OF KERMADEC ISLANDS

JAN 17  JAS  EP    06 40 57.7
        WDC  EP    06 41 01.2
        MNV  EP    06 41 05.2
                   USGS  06 28 08.1, 32.4S, 178.4W, H= 33 KM, M=4.5
                         SOUTH OF KERMADEC ISLANDS

JAN 17  PRI  EP    07 18 15.8
        BKS  EP    07 18 16.5
                                  MICRON     PERIOD
                   PZ       0.04    1.0
        MHC  EP    07 18 17.0               *E 18 29
        FRI  EP    07 18 20.8               *E 18 33
        JAS  EP    07 18 22.0               *E 18 34
        FHC        07 18                    *E 18 28
        WDC  EP    07 18 25.2               *E 18 27
        MIN  EP    07 18 26.5
        MNV  EP    07 18 30.0               *E 18 42
                   USGS  07 05 50.0, 29.4S, 176.5W, H= 41 KM, M=5.1
                         KERMADEC ISLANDS REGION

JAN 17  MHC        09 28                    *E 28 02
        PRI        09 28                    *E 28 02
        FRI  EP    09 28 04.3
        FHC        09 28                    *E 28 12
        JAS  EP    09 28 05.5
        WDC  EP    09 28 08.8
        MIN  EP    09 28 09.8
        MNV  EP    09 28 13.6
                   USGS  09 15 36.9, 29.3S, 176.7W, H= 65 KM, M=5.3
                         KERMADEC ISLANDS REGION

JAN 17  PRI  EP    10 08 55.0
        MHC  EP    10 08 55.8
        BKS        10 08                    *E 08 56
        FRI  EP    10 08 59.7
        JAS  EPC   10 09 00.8               *E 09 16
        WDC  EPC   10 09 04.0               *E 09 20
        MIN  EP    10 09 05.4
        MNV  EPC   10 09 08.8               *E 09 24
                   USGS  09 56 28.8, 28.8S, 177.6W, H= 56 KM, M=5.1
                         KERMADEC ISLANDS REGION

JAN 17  MHC  EP    10 35 09.0
        FRI  EP    10 35 12.8
        JAS  EP    10 35 14.0
        WDC  EP    10 35 17.2
        MNV  EP    10 35 22.0
                   USGS  10 22 57.6, 30.1S, 177.5W, H=227 KM, M=4.4
                         KERMADEC ISLANDS

JAN 17  PRI  EP    14 05 23.8
        MHC        14 05                    *E 05 25
        FRI        14 05                    *E 05 29
        JAS  EP    14 05 29.8
        WDC  EP    14 05 33.2
        MNV        14 05                    *E 05 37
                   USGS  13 52 39.4, 32.6S, 178.2W, H= 33 KM, M=4.8
                         SOUTH OF KERMADEC ISLANDS

JAN 17  MNV  IPC   21 40 05.4
        FRI  EPC   21 40 18.0               *E 40 23
        JAS  EPC   21 40 26.4               *E 40 34    S*G 41 19
        PRI  E(P)  21 40 41
        MHC  E(P)  21 40 50
        SAO  E(P)  21 40 50
                   ML=4.3, NEVADA TEST SITE AREA
                   USGS  21 39 33.4, 37.3N, 116.4W, H=  5 KM
                         SOUTHERN NEVADA

JAN 18  FHC  IPC   01 00 31.6
        WDC  IPC   01 00 47.3
        MIN  IPC   01 00 57.7
        BKS  EP    01 01 13.5  01 50
        MHC  EPD   01 01 23.5
        JAS  EPC   01 01 25.6
        SAO  EP    01 01 29.8
        FRI  IPD   01 01 41.5
        MNV  EP    01 01 42.5
        PRI  EP    01 01 44.0
                   BRK   01 00 24.7, 40.6N, 124.3W, H= 23 KM, ML=4.1
                         SOUTHWEST OF EUREKA, CALIFORNIA
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JAN 18  WDC  EPKPC 01 55 30.7
        MIN        01 55                    *E 55 32
        JAS  EPKP  01 55 35.1
        PRI        01 55                    *E 55 37
        FRI  EPKP  01 55 37.6
        MNV        01 56                    *E 56 10
                   USGS  01 36 31.1, 10.3S, 109.9E, H= 33 KM, M=5.1
                         SOUTH OF JAVA

JAN 18  WDC  EP    04 56 24.8
        FHC  EP    04 56 25.8
        MIN  EP    04 56 26.4
        MNV  EP    04 56 36.4
        JAS  EP    04 56 41.7
        BKS  EP    04 56 45.0  05 12     *E 57 22    SS 09 16    *E 12 04
                                          LR 16 04
                          MICRON          PERIOD
                   PZ       0.16           1.0
                   MAXR(Z)  6              20
                   MAXH(N)  11             20
                   MAXH(E)  15             20
        MHC  EP    04 56 47.6
        FRI  EP    04 56 47.7
        SAO  EP    04 56 50.6
        PRI  EP    04 56 55.5
                   Ms=6.2, DISTANCE=62°
                   USGS  04 46 24.4, 77.9N,  18.6E, H= 33 KM, M=5.6
                         SVALBARD REGION

JAN 18  FRI  EP    05 12 21.6               *E 12 38
        JAS  EP    05 12 23.1               *I 12 39
        WDC  EP    05 12 26.2
        MIN  EP    05 12 28.0
        MNV  EP    05 12 31.3               *I 12 47
                   USGS  04 59 51.2, 29.0S, 177.4W, H= 57 KM, M=5.2
                         KERMADEC ISLANDS

JAN 18  JAS  EP    05 21 57.6
        WDC  EP    05 22 01.0

JAN 18  MNV  IPC   07 20 49.4
        FRI  EP    07 21 02.6
        JAS  IPC   07 21 10.5
        PRI  EP    07 21 22.0
                   ML=4.4, NEVADA TEST SITE AREA
                   USGS  07 20 17.9, 37.3N, 116.4W, H=  5 KM, M=4.4
                         SOUTHERN NEVADA

JAN 18  JAS  EP    08 05 41.4
        WDC  EP    08 05 44.5

JAN 18  PRI  EP    13 42 16
        JAS  EP    13 42 22
        WDC  EP    13 42 27
                   USGS  13 29 32.8, 32.4S, 178.3W, H= 32 KM, M=5.2
                         SOUTH OF KERMADEC ISLANDS

JAN 18  JAS  EP    15 22 00
                   USGS  15 09 26.0, 32.5S, 178.7W, H=172 KM, M=4.8
                         SOUTH OF KERMADEC ISLANDS

JAN 18  PRI  EP    18 38 21.8
        MHC  EP    18 38 22.8
        FRI  EP    18 38 26.7
        JAS  EPC   18 38 28.0
        FHC  EPC   18 38 29.0
        WDC  EPC   18 38 31.0
        MIN  EP    18 38 32.0
        MNV  EPC   18 38 36.0
                   USGS  18 25 49.7, 30.3S, 177.1W, H= 33 KM, M=5.3
                         KERMADEC ISLANDS

JAN 18  PRI        19 32                    *E 32 42
        MHC  EP    19 32                    *E 32 43
        FRI  EP    19 32 45.7
        JAS  EP    19 32 47.0
        WDC  EP    19 32 50.0
        MNV  EP    19 32 55.0
                   USGS  19 20 16.3, 30.2S, 177.1W, H= 96 KM, M=4.8
                         KERMADEC ISLANDS

JAN 18  JAS  EP    21 15 11.0
        WDC  EP    21 15 14.4
        MNV  EP    21 15 19.0

JAN 18  PRI  EP    21 30 43.0
        FRI  EP    21 30 44.5
        MNV  EP    21 30 51.0
        JAS  EP    21 30 55.8
        MHC  EP    21 30 57.0
                   USGS  21 25 38.3, 17.2N, 105.5W, H= 33 KM, M=4.7
                         OFF COAST OF JALISCO, MEXICO

JAN 19  FRI  EP    07 44 39.3
        JAS  EPC   07 44 41.5
        WDC  EPC   07 44 44.5
        MNV  EPC   07 44 49.5
                   USGS  07 32 07.6, 28.8S, 177.3W, H= 33 KM, M=4.9
                         KERMADEC ISLANDS REGION

JAN 19  PRI  EP    15 51 54.2
        MHC  EP    15 51 54.7
        FRI  EP    15 52 00.0
        JAS  EP    15 52 01.0
        WDC  EPC   15 52 03.2
        MNV  EPC   15 52 10.8
                   USGS  15 40 31.2, 16.8S, 172.6W, H= 33 KM, M=5.3
                         SAMOA ISLANDS REGION

JAN 20  WDC  EP    04 20 51.0
        MIN  EP    04 20 52.5
        BKS        04 20
        MHC  EP    04 20 59.0               *E 20 54
        JAS  EP    04 21 01.0
        PRI  E(P)  04 21 04.0
        FRI  EP    04 21 04.5
        MNV        04 21                    *E 21 10
                   USGS  04 08 45.9, 17.1N, 147.3E, H= 38 KM, M=5.2
                         MARIANA ISLANDS REGION

JAN 20  FRI  EP    10 17 21.5
        PRI  EP    10 17 22.0
        MNV  EP    10 17 28.5
        JAS  EP    10 17 37.0
        MHC        10 17                    *E 17 37
        BKS        10 17                    *E 17 46    *E 17 48    *E 21 10
                          MICRON           PERIOD
                   MAXR(Z)  2.8             20
                   MAXH(N)  6               20
                   MAXH(E)  10              20
        MIN  EP    10 18 05
        WDC  EP    10 18 09.5
        FHC  EP    10 18 20.7
                   Ms=5.2, DISTANCE=18°
                   USGS  10 13 37.9, 24.1N, 108.7W, H= 33 KM, M=4.7
                         GULF OF CALIFORNIA

JAN 20  FRI  EPC   11 31 32.5          P*CP 34 43    *E 34 48
        PRI  EP    11 31 33
        MNV  EPC   11 31 39.4          P*CP 34 50
        JAS  EPC   11 31 46.0          P*CP 34 55
        MHC  EP    11 31 48
        BKS        11 31                *E 31 59    *E 35 24
        MIN  EPC   11 32 16
        WDC  EPC   11 32 21
        FHC  EPC   11 32 31.5
                   USGS  11 27 48.6, 24.0N, 108.7W, H= 33 KM, M=4.5
                         GULF OF CALIFORNIA

JAN 20  FHC  IPC   13 59 56.3
        WDC  IPC   14 00 11.2
        MIN  EPC   14 00 20.9  00 55
        BKS  EP    14 00 27.5                *E 01 11
        MHC  EP    14 00 38.3
        JAS  EPD   14 00 45.0
        SAO  EP    14 00 45
        FRI  EP    14 00 58.8
        PRI  EP    14 01 00
        MNV  EP    14 01 05
                   BRK   13 59 35.2, 40.3N, 125.5W, H= 20 KM, ML=4.6
                         SOUTHWEST OF EUREKA, CALIFORNIA

JAN 20  SAO  EP    17 33 17
        BKS  EP    17 33 18.0
                          MICRON           PERIOD
                   PZ       0.06           1.0
        PRI  EPD   17 33 18.5
        MHC  EPD   17 33 18.8
        FRI  EPD   17 33 23.6
        JAS  EPD   17 33 24.2
        WDC  EPD   17 33 25.7
        MIN  EPD   17 33 27.8
        MNV  EPD   17 33 33.4
                   USGS  17 22 15.2, 20.1S, 177.9W, H=544 KM, M=5.0
                         FIJI ISLANDS REGION

JAN 20  SAO        19 28                    *E 28 02
        PRI  EPC   19 28 02.5
        BKS  EPC   19 28 03.0
                          MICRON           PERIOD
                   PZ       0.07           0.7
        MHC  EPC   19 28 03.3
        FRI  EPC   19 28 07.9
        FHC  EPC   19 28 08.7
        JAS  EPC   19 28 09.1
        WDC  EPC   19 28 11.7
        MIN  EPC   19 28 13.5
        MNV  EPC   19 28 18.4
                   USGS  19 16 12.0, 21.9S, 174.1W, H= 33 KM, M=5.4
                         TONGA ISLANDS

JAN 20  FHC  EPC   20 20 10.5
        WDC  EPC   20 20 25.6
        MIN  EPC   20 20 35.3
        BKS        20 20                    *E 20 44
        MHC  EP    20 20 54.9
        SAO  EP    20 21 01.1
        FRI  EP    20 21 15.5
                   BRK   20 19 53.3, 40.2N, 125.0W, H=  8 KM, ML=3.3
                         SOUTHWEST OF EUREKA, CALIFORNIA

JAN 21  JAS  EPC   02 35 02.8
        WDC  EPC   02 35 06.2
        MNV  EPC   02 35 10.9
                   KERMADEC ISLANDS REGION

JAN 21  PRI  EP    04 34 12                 *E 34 26
        BKS        04 34                    *E 34 12    *E 34 28
        MHC  EP    04 34 12.6               *E 34 28
        FRI  EPC   04 34 16.5               *E 34 32
        JAS  EPC   04 34 17.7
        WDC  EPC   04 34 20.7
        MIN  EP    04 34 22                 *E 34 37
        MNV  EPC   04 34 26.6               *E 34 40
                   USGS  04 21 41.8, 29.6S, 177.8W, H= 51 KM, M=4.8
                         KERMADEC ISLANDS

JAN 21  FHC  EP    06 11 22.5
        WDC  EPD   06 11 26.8
        MIN  EP    06 11 30                 *E 11 32
        BKS        06 11                    *E 11 36
        JAS  EPD   06 11 49.3               *E 11 45
        MNV  EPD   06 11 51.5               *E 11 54
                   USGS  06 01 50.9, 67.8N, 140.1E, H= 33 KM, M=5.0
                         EASTERN SIBERIA

JAN 21  FHC  EP    10 15 34.4
        WDC  EP    10 15 41.0                RPKP 44 50
        MIN  EP    10 15 45.0
        BKS  EP    10 15 54.0  24 32     LQ 31 40    LR 34 40
                          MICRON           PERIOD
                   PZ       0.23           1.2
                   MAXR(Z)  52             20
                   MAXH(N)  34             20
                   MAXH(E)  43             20
        MHC  EP    10 15 57.3
        JAS  EP    10 15 59.5                RPKP 44 40
        SAO  EP    10 16 02
        MNV  EP    10 16 05.5
        FRI  EP    10 16 06.1
        PRI  EP    10 16 06.3
                   Ms=6.7, DISTANCE=66°
                   USGS  10 05 24.1, 44.9N, 149.1E, H= 41 KM, M=6.3
                         KURIL ISLANDS

JAN 21  FHC  EP    10 24 22.8               *E 24 36
        WDC  EP    10 24 28.3               *E 24 42
        MIN        10 24                    *E 24 40
        BKS  EP    10 24 40.8               *E 24 54
                          MICRON           PERIOD
                   PZ       0.41           0.8
        MHC        10 24                    *E 24 58
        JAS  EP    10 24 48.0               *E 25 00
        FRI        10 24                    *E 24 54
        MNV        10 24                    *E 24 55
        PRI        10 25                    *E 25 06
                   USGS  10 14 13.1, 44.6N, 149.5E, H= 49 KM, M=5.8
                         KURIL ISLANDS

JAN 21  FHC        10 29                    *E 29 17    *E 29 22
        WDC  EP    10 29 14.6               *I 29 28
        MIN  EP    10 29 19.0               *E 29 33
        JAS  EP    10 29 33.7               *I 29 48
        BKS        10 29                    *E 29 40    *E 29 54
        MHC        10 29                    *E 29 44
        SAO        10 29                    *E 29 48
        MNV        10 29                    *E 29 52
        FRI        10 29                    *E 29 54    *E 30 08
        PRI        10 29                    *E 29 54
                   USGS  10 19 12.0, 44.5N, 149.4E, H= 47 KM, M=5.8
                         KURIL ISLANDS

JAN 21  FHC  EPC   10 32 59.5               *E 33 13
        WDC  EPC   10 33 05.8               *E 33 20
        MIN  EPC   10 33 09.7               *E 33 24
        BKS        10 33                    *E 33 17    *E 33 30
        MHC  EPC   10 33 21.5               *E 33 36
        JAS  EPC   10 33 24.6               *E 33 38
        FRI  EPC   10 33 31.0               *E 33 45
        MNV        10 33                    *E 33 32
        PRI        10 33                    *E 33 32
                   USGS  10 22 49.0, 44.5N, 149.3E, H= 50 KM, M=5.6
                         KURIL ISLANDS

JAN 21  FHC        11 02                    *E 02 23
        WDC  EP    11 02 31.5               *I 02 43
        MIN  EP    11 02 36.1
        BKS        11 02                    *E 02 42    *E 02 59
        JAS  EP    11 02 48.7               *I 03 03
        MHC        11 02                    *E 02 49
        FRI        11 02                    *E 02 57
        PRI        11 02                    *E 02 58
                   KURIL ISLANDS

JAN 21  FHC        12 58                    *E 58 06
        WDC  EP    12 58 09.2               *E 58 18
        MIN        12 58                    *E 58 14
        JAS  EP    12 58 28.0
                   USGS  12 47 49.9, 44.4N, 149.4E, H= 28 KM, M=5.3
                         KURIL ISLANDS
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JAN 21  FHC        13 24                    *E 24 48
        WDC  EP    13 24 36.5               *E 24 50
        MIN        13 24                    *E 24 49
        JAS  EP    13 24 55.0               *E 25 00
        MHC        13 25                    *E 25 12
        FRI        13 25                    *E 25 15
        MNV  EP    13 25 03                 *E 25 16
                   USGS  13 14 19.7, 44.4N, 149.3E, H= 47 KM, M=5.1
                         KURIL ISLANDS

JAN 21  BKS        13 44                    *E 44 53
        MHC  EP    13 44 53.3
        PRI  EP    13 44 54.0
        FRI  EP    13 44 57.1
        JAS  EPD   13 44 58.3
        FHC  EP    13 44 58.7
        WDC  EP    13 45 01.3
        MNV  EPD   13 45 05.8
                   USGS  13 32 18.0, 32.4S, 179.2W, H=130 KM, M=5.5
                         SOUTH OF KERMADEC ISLANDS

JAN 21  WDC  EP    14 04 21.0               *E 04 36
        JAS  EP    14 04 40.0
        MNV  EP    14 04 47.3               *E 05 02
                   USGS  13 54 05.1, 44.6N, 149.4E, H= 49 KM, M=5.0
                         KURIL ISLANDS

JAN 21  FHC        15 29                    *E 29 10
        WDC  EP    15 29 15.0               *E 29 28
        JAS  EP    15 29 33.3               *E 29 46
                   USGS  15 18 58.3, 44.7N, 149.4E, H= 47 KM, M=5.1
                         KURIL ISLANDS

JAN 21  FHC  EP    16 01 54.5
        WDC  EP    16 02 01.7               *E 02 15
        MIN        16 02                    *E 02 19
        JAS  EP    16 02 20.3               *E 02 34
        FRI        16 02                    *E 02 40
        MNV        16 02                    *E 02 41
                   USGS  15 51 44.0, 44.6N, 149.2E, H= 50 KM, M=4.9
                         KURIL ISLANDS

JAN 21  FHC        18 10                    *E 10 45
        WDC  EPD   18 10 49.5
        MIN  EP    18 10 54.0
        BKS        18 10                    *E 18 28    *E 22 28    *E 25 48
        MHC  EP    18 11 11.5
        JAS  EPD   18 11 13.0
        MNV  EPD   18 11 18.8
        FRI  EP    18 11 21.0
        PRI  EP    18 11 23.0
                   USGS  10 02 00.1, 58.9N, 163.6E, H= 33 KM, M=5.6
                         KAMCHATKA

JAN 22  PRI        04 10                    *E 10 39
        JAS  EP    04 10 41.5               *E 10 54
        WDC  EP    04 10 44.5               *E 10 57
        FRI        04 10                    *E 10 56
        MIN        04 10                    *E 10 58
        MNV        04 11                    *E 11 02
                   USGS  03 57 36.5, 38.0S, 178.2E, H=137 KM, M=5.2
                         OFF EAST COAST OF NORTH ISLAND, NEW ZEALAND

JAN 22  FHC  EP    05 36 12.3
        WDC  EP    05 36 18.3               *E 36 47
        MIN  EP    05 36 22.5
        MHC  EP    05 36 34.5
        JAS  EPC   05 36 37.3               *E 36 55
        PRI  EP    05 36 43.8
        MNV  EPC   05 36 44.7               *E 37 02
                   USGS  05 26 01.8, 44.4N, 149.6E, H= 44 KM, M=5.4
                         KURIL ISLANDS

JAN 22  FHC  EP    06 22 55.4
        WDC  EP    06 23 01.5               *E 23 15
        MIN  EP    06 23 05.7
        JAS  EPC   06 23 20.5               *E 23 34
        FRI  EP    06 23 26.6
        MNV  EPC   06 23 27.7               *E 23 42
                   USGS  06 12 44.7, 44.6N, 149.2E, H= 49 KM, M=5.2
                         KURIL ISLANDS

JAN 22  WDC  EP    06 43 56.5
        MIN  EP    06 44 01.4
        JAS  EP    06 44 20.2
        MHC        06 44                    *E 44 22
        FRI        06 44                    *E 44 30
        MNV  EP    06 44 26.0
        PRI        06 44                    *E 44 32
                   USGS  06 35 15.1, 59.0N, 163.7E, H= 33 KM, M=5.2
                         KAMCHATKA

JAN 22  FHC  EP    08 17 20
        WDC  EP    08 17 27.0
        MIN        08 17                    *E 17 23
        JAS  E(P)  08 17 47
        MNV  EP    08 17 53.5
        FRI        08 17                    *E 17 56
        PRI        08 17                    *E 17 57
                   USGS  08 07 10.4, 44.4N, 149.6E, H= 44 KM, M=5.4
                         KURIL ISLANDS

JAN 22  WDC  EP    08 25 53.0               *E 26 10
        MIN        08 26                    *E 26 15
        JAS  EP    08 26 12.0               *E 26 29
        FRI        08 26                    *E 26 17
        MNV        08 26                    *E 26 38
                   USGS  08 15 36.3, 44.2N, 149.7E, H= 46 KM, M=5.1
                         KURIL ISLANDS

JAN 22  WDC  EP    08 28 53.3               *E 29 10
        JAS  EP    08 29 12.5               *E 29 30
        MNV        08 29                    *E 29 37
                   USGS  08 18 40.5, 45.0N, 149.6E, H= 45 KM, M=5.3
                         KURIL ISLANDS

JAN 22  FHC  EP    09 11 07.0               *E 11 22
        WDC  EP    09 11 14.0               *E 11 28
        MIN  EP    09 11 17.8               *E 11 32
        BKS        09 11                    *E 11 26    *E 11 40
        MHC  EP    09 11 30.0               *E 11 44
        JAS  EP    09 11 32.0               *E 11 46
        PRI  EP    09 11 38.8
        FRI  EP    09 11 39.0               *E 11 54
        MNV  EP    09 11 39.7               *E 11 54
                   USGS  09 00 56.8, 44.5N, 149.2E, H= 55 KM, M=5.6
                         KURIL ISLANDS

JAN 22  MHC        10 19                    *E 19 27
        JAS  EP    10 19 30.6
        FRI  EP    10 19 30.8
        WDC  EP    10 19 33.4
        MNV        10 19                    *E 19 40
                   KERMADEC ISLANDS REGION

JAN 22  WDC  EP    10 49 19.0               *E 49 33
        MIN        10 49                    *E 49 37
        JAS  EP    10 49 38.0               *E 49 52
        MNV        10 49                    *E 49 58
                   USGS  20 39 02.6, 44.8N, 149.3E, H= 52 KM, M=4.9
                         KURIL ISLANDS

JAN 22  WDC  EP    10 59 40.7
        JAS  EP    11 00 02.5
        FRI  EP    11 00 09.1
        MNV  EP    11 00 09.5
                   USGS  10 50 25.7, 51.6N, 159.4E, H= 22 KM, M=5.0
                         OFF EAST COAST OF KAMCHATKA

JAN 22  SAO  EP    11 11 45
        PRI  EP    11 11 46.4
        BKS  EP    11 11 46.5
                              MICRON      PERIOD
                        PZ      0.03        0.6
        MHC  EP    11 11 46.8
        FRI  EPC   11 11 51.3
        JAS  IPC   11 11 51.9
        WDC  IPC   11 11 53.9
        MIN  EP    11 11 55.3
        MNV  EPC   11 11 59.8
                   USGS  11 00 09.9, 24.6S, 179.4E, H=456 KM, M=5.1
                         SOUTH OF FIJI ISLANDS

JAN 22  WDC  EP    11 29 57.0
        JAS  EP    11 30 16.0
        MNV  EP    11 30 23.5
                   USGS  11 19 41.1, 44.7N, 149.4E, H= 44 KM, M=4.8
                         KURIL ISLANDS

JAN 22  WDC  EP    11 52 20.0
        JAS  EP    11 52 39.0
                   USGS  11 42 01.6, 44.2N, 149.3E, H= 46 KM, M=5.3
                         KURIL ISLANDS

JAN 22  PRI  EP    13 14 55.7
        MHC  EP    13 14 56.2
        JAS  EP    13 15 02.5
        FRI        13 15                    *E 15 03
        WDC  EP    13 15 04.7
        MNV  EP    13 15 12.5
                   TONGA ISLANDS REGION

JAN 22  WDC  EP    15 25 44
        JAS  EP    15 26 03
                   USGS  15 15 24.8, 45.1N, 149.1E, H= 33 KM, M=5.0
                         KURIL ISLANDS

JAN 22  MNV        15 27                    *E 27 10
        PRI        15 27                    *E 27 10
        FRI        15 27                    *E 27 11
        JAS  EP    15 27 18.5
        WDC  EP    15 27 43.5

JAN 22  FHC  EPC   16 18 44.5
        WDC  EPC   16 18 48.6
        MIN  EP    16 18 51.5
        JAS  EPC   16 19 01.2
        FRI  EP    16 19 05.5
        MNV  EPC   16 19 07.2
                   USGS  16 05 17.0, 18.9N, 120.0E, H= 32 KM, M=5.2
                         LUZON, PHILIPPINE ISLANDS

JAN 22  WDC  EP    16 31 32.0
        JAS  EP    16 31 51.0
        MNV  EP    16 31 58.6
                   USGS  16 21 15.1, 44.4N, 149.2E, H= 52 KM, M=5.2
                         KURIL ISLANDS

JAN 22  WDC  EP    17 36 33.5
        JAS  EP    17 36 52.5
        MNV  EP    17 37 00.0
                   USGS  17 26 16.8, 44.5N, 149.1E, H= 52 KM, M=5.2
                         KURIL ISLANDS

JAN 22  WDC  EP    17 59 20.0               *E 59 36
        JAS  EP    17 59 39.0
        MNV  EP    17 59 46.0               *E 00 03
                   USGS  17 49 03.0, 44.6N, 149.4E, H= 46 KM, M=5.2
                         KURIL ISLANDS

JAN 23  WDC  EP    00 20 54.5               *E 21 08
        MIN        00 21                    *E 21 12
        JAS  EP    00 21 13.5               *E 21 26
        MNV        00 21                    *E 21 34
                   USGS  00 10 37.2, 44.7N, 149.2E, H= 47 KM, M=5.1
                         KURIL ISLANDS

JAN 23  WDC  EP    01 01 55.0
        JAS        01 02                    *E 02 20
        MNV        01 02                    *E 02 24
                   USGS  00 51 30.5, 44.9N, 149.9E, H= 33 KM, M=4.8
                         KURIL ISLANDS

JAN 23  WDC  EP    02 35 10.9               *E 35 30
        JAS  EP    02 35 29.5               *E 35 48
        MNV  EP    02 35 36.0               *E 35 56
                   USGS  02 24 51.5, 44.1N, 149.6E, H= 33 KM, M=5.4
                         KURIL ISLANDS

JAN 23  WDC  EP    02 55 31.8
        JAS  EP    02 55 51.0
        MNV  EP    02 55 58.5
                   USGS  02 45 13.4, 44.4N, 149.4E, H= 33 KM, M=4.9
                         KURIL ISLANDS

JAN 23  FHC  EP    05 59 18.2          PKP 03 04 *PPKP 04 20 *SPKP 05 41
                                       PKKP 13 45
        WDC  EPD   05 59 23.0          PKP 03 06 *PPKP 04 20 *SPKP 05 42
                                       PKKP 13 39
        BKS        05 59               PKP 03 08 *PPKP 04 19    *E 05 44
                                       *E 11 12    *E 13 04    *E 13 10
                                       PKKP 13 39  *E 17 06    *E 17 09
                                       SS 19 40    *E 19 56
        MIN  EP    05 59 25.6          PKP 03 07 *SPKP 05 44  PKKP 13 38
        MHC        05 59               PKP 03 09 *PPKP 04 29 *SPKP 05 46
                                       PKKP 13 42
        SAO        05 59               PKP 03 09  PKKP 13 40
        JAS  EPD   05 59 32.8          PKP 03 10 *PPKP 04 33 *SPKP 05 47
                                       PKKP 13 34  SKKP 16 20
        FRI  EP    05 59 36.2          PKP 03 12 *PPKP 04 38 *SPKP 05 49
                                       PKKP 13 30
        PRI  EP    05 59 39.4          PKP 03 12 *PPKP 04 37 *SPKP 05 49
                                       PKKP 13 38
        MNV  EP    05 59 40.0          PKP 03 14 *SPKP 05 50  PKKP 13 28
                                       SKKP 16 15
                   USGS  05 45 30.5,  7.5S, 119.9E, H=614 KM, M=6.4
                         FLORES SEA

JAN 23  PRI  EPKP  18 52 21
        JAS  EPKP  18 52 23.0
        FRI  EPKP  18 52 24.0
        WDC  EPKP  18 52 24.5
        MNV  EPKP  18 52 28.5
                   USGS  18 33 30.3, 50.3S, 139.6E, H= 33 KM, M=5.6
                         SOUTH OF AUSTRALIA

JAN 24  WDC  EP    02 02 10.5
        MIN        02 02                    *E 02 15
        JAS  EP    02 02 29.5
        MNV  EP    02 02 36.5
        FRI        02 02                    *E 02 39
                   USGS  01 51 38.4, 43.0N, 147.2E, H= 33 KM, M=5.1
                         KURIL ISLANDS

JAN 24  WDC  EP    02 10 44.5
        MIN        02 10                    *E 10 55
        JAS  EP    02 11 03.7
        MNV  EP    02 11 11.0
        FRI        02 11                    *E 11 15
                   USGS  02 00 12.3, 43.0N, 147.1E, H= 33 KM, M=5.3
                         KURIL ISLANDS
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JAN 24  BKS  EP    02 13 39.4
                                MICRON        PERIOD
                          PZ      0.04          1.0
               PRI  EP    02 13 40.0
               FRI  EP    02 13 45.0
               JAS  EP    02 13 45.9
               WDC  EP    02 13 48.5
               MIN  EP    02 13 50.0
               MNV  EP    02 13 54.0
                     USGS  02 01 14.1, 27.4S, 178.4W, H= 33 KM, M=4.9
                           KERMADEC ISLANDS REGION

JAN 24  WDC  EPC   03 32 32.2
               MIN  EP    03 32 35.0
               JAS  EPC   03 32 45.6
               FRI        03 32                    *E 32 50
               MNV  EP    03 32 51.5
                     USGS  03 19 57.3, 27.4N, 128.3E, H= 56 KM, M=5.4
                           RYUKYU ISLANDS

JAN 24  JAS  EP    07 07 39.0
               WDC  EP    07 07 42.3
               MNV  EP    07 07 47.0
                     USGS  06 55 02.9, 29.6S, 177.1W, H= 33 KM, M=5.3
                           KERMADEC ISLANDS

JAN 24  WDC  EP    09 54 23.4                    *I 54 36
               MIN        09 54                 *E 54 40
               JAS  EP    09 54 42.3            *I 54 55
               MNV  EP    09 54 49.5            *I 55 02
                     USGS  09 44 04.8, 44.5N, 149.0E, H= 44 KM, M=5.1
                           KURIL ISLANDS

JAN 24  FHC  IPC   12 26 16.8
               WDC  IPC   12 26 29.7
               MIN  IPC   12 26 39.4  27 05     *I 26 45
               MHC  EP    12 27 00.5
               JAS  EP    12 27 04.9
               SAO  IPC   12 27 06.5
               FRI  EP    12 27 20.3
                     BRK   12 26 01.8, 40.2N, 124.6W, H=  6 KM, ML=3.4
                           SOUTHWEST OF EUREKA, CALIFORNIA

JAN 24  SAO  EP    22 00 48.0
               BKS  EPC   22 00 48.4  11 20    *E 01 42    *E 16 00    *E 20 14
                                               LQ 22 36    LR 26 24
                                MICRON        PERIOD
                          PZ      0.26          1.5
                          MAXR(Z) 3.6           20
                          MAXH(N) 3.9           20
                          MAXH(E) 3.1           20
               MHC  EP    22 00 49.7
               FRI  EP    22 00 49.9
               FRI  IP    22 00 53.6                RPKP 27 09
               JAS  IPC   22 00 54.7                RPKP 27 09
               FHC  IPC   22 00 55.1
               WDC  IPC   22 00 57.8
               MIN  EPC   22 00 59.0                RPKP 27 09
               MNV  EP    22 00 59.9                RPKP 27 06
                                                    RPKP 27 06
                     Ms=5.9, DISTANCE=84°
                     USGS  21 48 25.9, 28.6S, 177.6W, H= 78 KM, M=6.1
                           KERMADEC ISLANDS REGION

JAN 25  FHC  EP    12 34 07.0
               WDC  EP    12 34 08.0
               MIN  EP    12 34 12.0            *I 34 24
               BKS  EP    12 34 20.5  42 52     *E 34 36    SS 47 06    LQ 50 22
                                MICRON        PERIOD
                          PZ      0.02          0.8
                          MAXR(Z) 4.5           20
                          MAXH(N) 2.8           20
                          MAXH(E) 4.3           20
               JAS  EP    12 34 27.0            *I 34 41  RPKP 03 22
               MHC  EP    12 34 27.8
               MNV  EP    12 34 31.5
               FRI  EP    12 34 36.8
               FRI  EP    12 34 38.2
                     Ms=5.7, DISTANCE=65°
                     USGS  12 23 55.5, 44.8N, 149.8E, H= 54 KM, M=5.9
                           KURIL ISLANDS

JAN 25  WDC  EP    13 06 17.3
               JAS  EP    13 06 36.2            *E 06 33
               MNV        13 06                 *E 06 52
                                                *E 06 46
                     USGS  12 55 59.3, 44.4N, 149.2E, H= 47 KM, M=5.1
                           KURIL ISLANDS

JAN 25  MNV  EP    15 51 13.7
               JAS  EP    15 51 22.6
                     USGS  15 41 06.9, 66.3N,  17.0W, H= 10 KM, M=4.4
                           ICELAND REGION

JAN 25  WDC  EP    17 56 25.0
               JAS  EP    17 56 44.0            *E 56 42
               MIN        17 56                 *E 57 01
               MNV  EP    17 56 52.0            *E 56 46
                                                *E 57 08
                     USGS  17 46 08.7, 44.5N, 149.0E, H= 57 KM, M=5.1
                           KURIL ISLANDS

JAN 25  WDC  EP    19 24 59.1
               JAS        19 25
                     USGS  19 14 38.6, 44.4N, 149.1E, H= 33 KM, M=4.9
                           KURIL ISLANDS

JAN 25  FHC  IPC   22 01 24.5
               WDC  IPC   22 01 39.2
               MIN  IPC   22 01 49.2
               BKS  EPC   22 01 57.5
               MHC  EP    22 02 06.2            *E 02 23    *E 02 53
               JAS  EPD   22 02 13.2
               SAO  EP    22 02 13.8
               FRI  EP    22 02 27.0
                     BRK   22 01 06.3, 40.3N, 125.1W, H=  2 KM, ML=4.0
                           SOUTHWEST OF EUREKA, CALIFORNIA

JAN 26  MNV  EPC   03 24 28.4                    P*CP 27 05
               FRI  EP    03 24 28.9            P*CP 27 08
               PRI  EP    03 24 30.4            P*CP 27 14
               JAS  EP    03 24 36.1            P*CP 27 10
               MHC        03 24                 *E 24 44
               BKS        03 24                 *E 35 00    *E 37 08
                                MICRON        PERIOD
                          MAXR(Z) 1.5           20
                          MAXH(N) 0.8           20
                          MAXH(E) 1.9           20
               MIN  EP    03 24 55
               WDC  EP    03 24 59.8
               FHC  EP    03 25 11.5            P*CP 27 17
                     USGS  03 17 46.3, 13.9N,  91.6W, H= 69 KM, M=5.1
                           NEAR COAST OF GUATEMALA

JAN 26  SAO  EP    08 39 15.5
               FRI  EP    08 39 16.3
               MHC  EP    08 39 16.6
               BKS  EP    08 39 16.7
                                MICRON        PERIOD
               FHC  EP  PZ      0.03          0.7
               FRI  EP    08 39 20.8
               JAS  EPD   08 39 21.7
               WDC  EPD   08 39 22.1
               MIN  EP    08 39 24.2            *PP 40 24
               MNV  EPD   08 39 26.3            *PP 40 26
                          08 39 32.0
                     USGS  08 27 52.8, 19.8S, 176.2W, H=261 KM, M=5.1
                           FIJI ISLANDS REGION

JAN 26  JAS  EP    10 51 59.0
               FRI        10 52
               WDC  EP    10 52 03.5
               MNV  EP    10 52 08.5            *E 52 02

JAN 26  PRI  EP    19 03 03.1
               MHC  EP    19 03 03.8
               BKS  EPC   19 03 05
                                MICRON        PERIOD
                          PZ      0.30          2.5
                          MAXR(Z) 3.3           20
                          MAXH(N) 2.6           20
                          MAXH(E) 1.9           20
               FRI  EP    19 03 07.8
               JAS  EP    19 03 09.2
               FHC  EP    19 03 09.6
               WDC  EP    19 03 12.2
               MIN        19 03
               MNV  EP    19 03 17.0            *E 03 15
                     Ms=5.7, DISTANCE=82°
                     USGS  18 50 36.9, 29.5S, 177.1W, H= 59 KM, M=5.5
                           KERMADEC ISLANDS

JAN 26  MIN  IPC   19 40 18.0
               WDC  IPC   19 40 24.5
               BKS  EP    19 40 29.0  40 49
               JAS  EPC   19 40 29.6
               MHC  EP    19 40 35.3
               SAO  EP    19 40 43.3
               MNV  EP    19 40 46
               FRI  EP    19 40 46.8
                     BRK   19 40 00.2, 39.4N, 121.6W, H=  7 KM, ML=3.5
                           OROVILLE, CALIFORNIA

JAN 26  PRI  EP    21 57 31.9
               MHC  EP    21 57 32.3
               FRI  EP    21 57 37.8
               JAS  EP    21 57 38.7
               WDC  EP    21 57 40.9
               MIN  EP    21 57 42.6
               MNV  EP    21 57 48.8
                     USGS  21 46 13.4, 15.9S, 172.5W, H= 36 KM, M=5.0
                           SAMOA ISLANDS REGION

JAN 26  PRI  E(P)  23 46 33.0
               MHC  EP    23 46 34.2
               BKS        23 46
               FRI  EP    23 46 38.2                LQ 14 00
               JAS  EPC   23 46 39.3
               WDC  EPC   23 46 42.7
               MNV  EPC   23 46 47.6
                     USGS  23 34 02.8, 29.9S, 176.8W, H= 33 KM, M=4.5
                           KERMADEC ISLANDS REGION

JAN 27  PRI  E(P)  00 42 29
               FRI  E(P)  00 42 30
               SAO  E(P)  00 42 40
               JAS  EP    00 42 43.0
               MNV  E(P)  00 42 46                  S*G 44 44
               MHC        00 42                     *E 42 50
                     USGS  00 40 56.5, 31.9N, 115.5W, H= 33 KM, M=3.9
                           BAJA CALIFORNIA

JAN 27  WDC  E(P)  04 13 59.2
               PRI  EP    04 14 04.5
               MHC        04 14
               JAS  EP    04 14 06.0                *E 14 05
               FRI        04 14
               MNV  EP    04 14 14.0                *E 14 08
                     USGS  04 01 08.9,  6.8S, 154.9E, H= 38 KM, M=5.5
                           SOLOMON ISLANDS

JAN 27  BKS  EP    04 30 32.0
                                MICRON        PERIOD
                          PZ      0.05          1.3
               MHC  EP    04 30 35.0
               FRI  E(P)  04 30 40
               JAS  EP    04 30 40.3
               WDC  EP    04 30 43.5
               MIN  EP    04 30 44.6
               MNV  EP    04 30 48.5
                     USGS  04 18 08.8, 29.4S, 176.8W, H= 55 KM, M=5.1
                           KERMADEC ISLANDS REGION

JAN 27  JAS  EP    04 33 07.0
               FRI        04 33
               WDC  EP    04 33 10.0                *E 33 08
               MIN        04 33
               MNV  EP    04 33 15.2                *E 33 14
                     KERMADEC ISLANDS REGION

JAN 27  JAS  EP    06 26 09                          *E 27 07
               WDC  EP    06 26 12                  *E 27 10
               MIN        06 27                     *E 27 13
               MNV        06 26                     *E 26 15    *E 27 16
                     USGS  06 13 35.5, 30.0S, 176.7W, H= 51 KM, M=4.8
                           KERMADEC ISLANDS REGION

JAN 27  PRI  EP    09 58 20.5                        *E 58 30
               MHC  EP    09 58 21.0                *E 58 30
               BKS        09 58                     *E 58 30
               JAS  EP    09 58 26.2                *E 58 36
               WDC  EP    09 58 29.5                *E 58 39
               MIN  EP    09 58 31.2                *E 58 41
               MNV  EP    09 58 37.3                *E 58 47
                     USGS  09 47 00.0, 16.7S, 172.2W, H= 44 KM, M=4.9
                           SAMOA ISLANDS REGION

JAN 27  SAO  EP    11 21 18.6
               PRI  EP    11 21 19.7
               MHC  EP    11 21 20.8
               BKS  E(P)  11 21 21.5  31 52     LQ 46 30
                                MICRON        PERIOD
                          PZ      0.07          1.5
                          MAXR(Z) 9             20
                          MAXH(N) 8             20
                          MAXH(E) 6             20
               FRI  EP    11 21 24.7
               JAS  EP    11 21 25.8
               FHC  EP    11 21 26.5
               WDC  EP    11 21 29.1
               MIN  EP    11 21 30.3
               MNV  EP    11 21 33.7
                     Ms=6.2, DISTANCE=82°
                     USGS  11 08 50.2, 29.9S, 176.8W, H= 33 KM, M=5.4
                           KERMADEC ISLANDS REGION

JAN 27  MHC
               JAS  EP    12 50                     *E 50 55
               WDC  EP    12 51 00.0
               MNV  EP    12 51 03.0
                          12 51 07.9
                     USGS  12 38 24.0, 29.7S, 176.7W, H= 33 KM, M=4.6
                           KERMADEC ISLANDS REGION

JAN 27  PRI  EP    15 14 00.5
               MHC  EP    15 14 00.7
               BKS        15 14
                                               LQ 41 22
                                MICRON        PERIOD
                          MAXR(Z) 3.3           20
                          MAXH(N) 2.9           20
                          MAXH(E) 2.0           20
               FRI  EP    15 14 04.7                *E 14 18
               JAS  EP    15 14 05.8                *E 14 20
               FHC  EP    15 14 06.5
               WDC  EP    15 14 09.2                *E 14 23
               MIN  EP    15 14 10.5
                     Ms=5.7, DISTANCE=84°
                     USGS  15 01 33.1, 29.5S, 176.8W, H= 47 KM, M=5.1
                           KERMADEC ISLANDS REGION
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JAN 27  FHC  EP     16 07 42.5              *E 07 45
        WDC  EP     16 07 56.4              *I 08 00
        MIN  EP     16 08 09.5
        BKS  EPC    16 08 27.4
        MBC  EP     16 08 36.6
        JAS  EP     16 08 41.0
        SAO  EP     16 08 44
        MNV  EP     16 08 53.4
        FRI  EP     16 08 56
        PRI  EP     16 08 58.6
                    ML=4.9, 400 KM NORTHWEST OF ARCATA, CALIFORNIA
                    USGS  16 06 47.5, 43.6N, 127.4W, H= 33 KM, M=5.2
                    OFF COAST OF OREGON

JAN 27  WDC  EP     17 39 04.0
        MNV  EP     17 39 09.0
                    USGS  17 26 31.1, 28.5S, 177.4W, H= 57 KM, M=4.7
                    KERMADEC ISLANDS REGION

JAN 27  FHC  EPC    23 39 26.3
        WDC  EPC    23 39 31.4
        MIN  EPC    23 39 35.0
        BKS  EPC    23 39 40.2
                          MICRON      PERIOD
                    PZ      0.14         0.8
        MBC  EPC    23 39 43.8
        JAS  EPC    23 39 46.2
        PRI  EPC    23 39 51.0
        FRI  EPC    23 39 51.3
        MNV  EPC    23 39 53.0
                    USGS  23 28 20.9, 31.4N, 138.0E, H=394 KM, M=5.0
                    SOUTH OF HONSHU, JAPAN

JAN 28  MNV  IPC    06 17 58.4
        JAS  IPC    06 18 03.0  18 20
        FRI  EPD    06 18 09.2  18 32
        BKS  EPC    06 18 22.0
        MIN  EP     06 18 37.0
        FRI  E(P)   06 18 39
        WDC  E(P)   06 18 41
                    BRK   06 17 39.0, 38.6N, 118.9W, H= 11 KM, MAG=3.2
                    NORTH OF MONO LAKE, CALIFORNIA

JAN 28  JAS  EP     12 46 39.5              *E 46 50
        WDC  EP     12 46 42.5              *E 46 53


JAN 28  FHC         19 46                   *E 46 13
        WDC  IPD    19 46 09.8              *I 46 24
        MIN  EP     19 46 13.2              *E 46 28
        BKS         19 46                   *E 46 36
        MBC         19 46                   *E 46 22    *E 46 40
        JAS  EP     19 46 28.4              *I 46 44
        FRI  EP     19 46 34.5
        MNV         19 46                   *E 46 36
        PRI         19 46                   *E 46 55
                    USGS  19 35 51.9, 44.3N, 149.3E, H= 48 KM, M=5.6
                    KURIL ISLANDS

JAN 29  WDC  EP     00 16 35.5
        MIN  EP     00 16 39.5
        JAS  EP     00 16 49.7
        MNV         00 16                   *E 16 56
                    USGS  00 06 08.3, 44.2N, 149.3E, H= 30 KM, M=5.4
                    KURIL ISLANDS

JAN 29  JAS  EPD    12 53 54.0
        WDC  EPD    12 54 11.7
                    USGS  12 43 33.2, 24.3S, 116.2W, H= 33 KM, M=4.8
                    EASTER ISLAND CORDILLERA

JAN 29  FHC  EP     18 46 48.6
        WDC  EP     18 47 04.2
        MIN  EP     18 47 15
        BKS  IPC    18 47 31.7
        MBC  EP     18 47 43
        JAS  EPC    18 47 47.0
        SAO         18 47                   *E 47 50
        MNV         18 47                   *E 47 59
        FRI  EPD    18 48 02.2
        PRI         18 48                   *E 48 05
                    ML=4.7, 400 KM NORTHWEST OF ARCATA, CALIFORNIA
                    USGS  18 45 54.3, 43.6N, 127.2W, H= 33 KM, M=5.2
                    OFF COAST OF OREGON

JAN 29  WDC  EPC    23 17 39.3
        JAS  EP     23 17 40.2
        FRI  EPD    23 17 41.0
        MIN         23 17                   *E 17 41
                    USGS  23 04 50.5, 17.6S, 167.2E, H=  6 KM, M=4.9
                    NEW HEBRIDES ISLANDS

JAN 31  WDC  EP     00 35 52.0
        MIN         00 35                   *E 35 54
        BKS         00 36                   *E 36 19
        JAS  EP     00 36 08.0
        MBC         00 36                   *E 36 09
        FRI         00 36                   *E 36 18
                    USGS  00 25 31.4, 44.0N, 149.2E, H= 41 KM, M=5.4
                    KURIL ISLANDS

JAN 31  MIN  IPD    01 17 46.2  18 03
        WDC  IPD    01 17 52.9
        FHC         01 18                   *E 18 14
        JAS  E(P)   01 18 15              P*G 18 20   S*G 19 00
                    BRK   01 17 21.4, 41.3N, 120.2W, H= 17 KM, MAG=3.6
                    SOUTHEAST OF ALTURAS, CALIFORNIA

JAN 31  WDC  EPD    02 07 36.5              *E 07 52
        MIN  EP     02 07 40.8              *E 07 56
        BKS         02 07                   *E 08 03
        JAS  EPD    02 07 55.5              *E 08 11
        MBC         02 07                   *E 07 58
        FRI  EP     02 08 01.8              *E 08 17
        PRI         02 08                   *E 08 09
                    USGS  01 57 15.1, 44.1N, 149.1E, H= 47 KM, M=5.3
                    KURIL ISLANDS

JAN 31  PRI  EP     05 39 33.8
        MBC  EP     05 39 34.8
        FRI  EP     05 39 38.7
        JAS  EPC    05 39 39.8
        WDC  EPC    05 39 43.2
        MIN  EP     05 39 45.6
                    USGS  05 27 01.3, 30.3S, 177.0W, H= 33 KM, M=5.0
                    KERMADEC ISLANDS

JAN 31  PRI  EP     08 33 14.5
        MBC  EP     08 33 14.8
        BKS  EPD    08 33 15
        FRI  EP     08 33 19.5
        JAS  EPC    08 33 20.0              *E 35 30
        WDC  EPC    08 33 21.8              *E 35 36
        MIN  EP     08 33 23.5
                    USGS  08 22 07.4, 21.5S, 179.3W, H=628 KM, M=5.5
                    FIJI ISLANDS REGION

JAN 31  JAS  EP     09 28 56.4
        WDC  EP     09 28 59.5
                    USGS  09 16 24.0, 29.3S, 177.4W, H= 55 KM, M=5.0
                    KERMADEC ISLANDS

FEB 01  BKS  IPD    02 57 41.3  57 43
        MBC  IPD    02 57 55.0
        SAO  EPC    02 58 02.2
        JAS  EPC    02 58 05.1
                    BRK   02 57 39.7, 37.9N, 122.3W, H=  4 KM, ML=2.6
                    NORTH OF BERKELEY, CALIFORNIA

FEB 01  JAS  EP     06 00 24.3
        WDC         06 00                   *E 00 26

FEB 01  SAO  EP     06 50 25.5
        PRI  EP     06 50 26.5
        MBC  EPC    06 50 27.5
        BKS  IPD    06 50 28.1
                          MICRON      PERIOD
                    PZ      0.06         1.0
        FRI  EPC    06 50 31.4
        JAS  EPC    06 50 32.5              *E 50 46
        FHC  EP     06 50 33.0
        WDC  EPC    06 50 35.5              *E 50 49
        MIN  EP     06 50 37.0
        MNV  EPC    06 50 40.5              *E 50 54
                    USGS  06 38 00.0, 29.4S, 177.3W, H= 62 KM, M=5.6
                    KERMADEC ISLANDS

FEB 01  FRI  EPC    11 20 29.1          P*CP 23 55
        PRI  EPC    11 20 30.0          P*CP 23 56
        MNV  IPC    11 20 32.4          P*CP 23 56    *E 28 50
        SAO  EP     11 20 36.8
        JAS  EPC    11 20 39.5          P*CP 23 58    *E 29 37
        MBC  EPC    11 20 42.4          P*CP 23 59
        BKS  IPC    11 20 49.1  25 44      *E 24 00    LR 30 00
                          MICRON      PERIOD
                    MAXR(Z) 14           20
                    MAXH(N)  8           20
                    MAXH(E) 10           20
        MIN  EPC    11 21 00.3
        WDC  EPC    11 21 04.1          P*CP 24 04    *E 30 30
        FHC  EPC    11 21 15.3
                    M=5.5, DISTANCE=35°
                    USGS  11 14 57.3, 17.2N, 100.2W, H= 52 KM, M=5.7
                    GUERRERO, MEXICO

FEB 01  BKS  E(P)   12 15 39
        FRI  EP     12 15 44.2
        JAS  EPC    12 15 44.8
        WDC  EPC    12 15 46.4
        MIN  EP     12 15 48.2
                    USGS  12 04 33.2, 21.6S, 179.4W, H=635 KM, M=5.1
                    FIJI ISLANDS REGION

FEB 01  FHC  EP     12 54 49.0
        WDC  EPD    12 54 54.1
        MIN  EP     12 54 57.5
        BKS  EP     12 55 00
        MBC  EP     12 55 02.5
        JAS  EPD    12 55 06.1
        PRI  EP     12 55 08.5
        FRI  EP     12 55 10.2
        MNV  EPD    12 55 14.0
                    USGS  12 43 27.7, 18.5N, 145.2E, H=406 KM, M=5.0
                    MARIANA ISLANDS

FEB 01  MBC  IPD    13 01 56.1
        SAO  IPD    13 02 05.1
        BKS  IP     13 02 09.0  02 21
        JAS  EP     13 02 15.7
                    BRK   13 01 54.5, 37.3N, 121.6W, H=  4 KM, ML=2.5
                    NORTH OF HOLLISTER, CALIFORNIA

FEB 01  MBC  EP     14 11 55.6
        FRI  EP     14 12 00.5
        JAS  EP     14 12 01.7
        WDC  EP     14 12 04.3
        MIN  EP     14 12 06.0
        MNV  EP     14 12 11.2
                    USGS  14 00 17.2, 19.6S, 173.1W, H= 33 KM, M=4.9
                    TONGA ISLANDS

FEB 01  WDC  EP     14 40 42.0              *E 40 54
        JAS  EP     14 41 01.0              *E 41 13
                    USGS  14 30 26.6, 44.4N, 149.9E, H= 41 KM, M=4.8
                    KURIL ISLANDS

FEB 01  FRI  EP     16 08 06.7
        PRI  EPC    16 08 08.5
        MNV  EPC    16 08 09.0              *E 08 21
        JAS  EPC    16 08 15.4              *E 08 28
        MBC  EP     16 08 18.3
        BRK  EP     16 08 22.6
        MIN  EP     16 08 30.5
        WDC  EPC    16 08 33.9
        FHC  EPC    16 08 43.0
                    USGS  15 58 20.9,  7.4S,  80.4W, H= 43 KM, M=5.4
                    OFF COAST OF NORTHERN PERU

FEB 01  WDC  EP     16 23 40.5              *E 23 54
        JAS  EP     16 24 00.0
        MNV         16 24                   *E 24 22
                    USGS  16 13 27.7, 44.7N, 149.9E, H= 47 KM, M=5.0
                    KURIL ISLANDS

FEB 01  FRI  EP     18 08 08.4
        JAS  EPC    18 08 08.6
        WDC  EP     18 08 11.8
                    USGS  17 55 30.3, 29.9S, 177.6W, H= 34 KM
                    KERMADEC ISLANDS

FEB 02  MIN  IPC    01 10 47.0
        WDC  EP     01 10 58.7
        JAS  EP     01 11 07.8
        MNV  EP     01 11 11.5
        BKS  E(P)   01 11 25                *E 11 50
                    BRK   01 10 29.4, 40.2N, 120.2W, H= 17 KM, ML=3.1
                    EAST OF SUSANVILLE, CALIFORNIA

FEB 02  FHC  EP     03 09 23.4
        WDC  EP     03 09 30.0
        MIN  EP     03 09 34.8
        BKS  EP     03 09 44    17 28       *E 18 52    LQ 21 58    *E 23 36
                          MICRON      PERIOD
                    MAXR(Z)  1.2         20
                    MAXH(N)  1.8         20
                    MAXH(E)  3.0         20
        MBC  E(P)   03 09 49.2
        JAS  EP     03 09 52.0
        MNV  EP     03 09 59.0
        FRI  E(P)   03 09 58.8
        PRI         03 10                   *E 10 02
                    M=5.4, DISTANCE=53°
                    USGS  03 00 16.2, 51.5N, 159.5E, H= 33 KM, M=5.6
                    OFF EAST COAST OF KAMCHATKA

FEB 02  SAO  EPD    03 56 49.0
        BKS  IPD    03 56 50.0
                          MICRON      PERIOD
                    PZ      0.18         0.6
        PRI  EPD    03 56 50.7
        MBC  EPD    03 56 50.9
        FHC  EPD    03 56 54.5
        FRI  IPD    03 56 56.4
        JAS  IPD    03 56 56.8              *E 59 48
        WDC  IPD    03 56 58.2
        MIN  EPD    03 57 00.0
        MNV  IPD    03 57 06.9              *E 00 02
                    USGS  03 45 53.2, 16.0S, 175.2W, H=328 KM, M=5.5
                    TONGA ISLANDS

FEB 02  MIN  EP     13 26 50.3
        FHC  EP     13 26 54.0
        MNV  EPC    13 26 54.0
        JAS  EPC    13 27 02.4
                    USGS  13 16 45.7, 66.1N,  16.8W, H=  5 KM, M=4.8
                    ICELAND REGION
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FEB 02  BRK  EP    14 00 48.3
        MHC  EP    14 00 49.0
        FHC  EP    14 00 52.0
        FRI  EP    14 00 54.0
        JAS  EPD   14 00 54.4
        WDC  EPD   14 00 56.3
        MIN  EP    14 00 58.0
        MNV  EPD   14 01 03.2
                   USGS  13 49 40.0, 21.3S, 178.7W, H=563 KM, M=4.8
                         FIJI ISLANDS REGION

FEB 02  FHC  IPC   18 47 47.4
        WDC  IP    18 47 50.8
        MIN  IP    18 48 01.1  48 23
        JAS  EP    18 48 34.8
                   BRK  18 47 36.2, 41.0N, 123.2W, H=  2 KM, ML=3.6
                        EAST OF EUREKA, CALIFORNIA

FEB 03  MNV  IPC   00 15 00.1          •I 15 54
        FRI  EP    00 15 14.1          •I 15 30
        JAS  IP    00 15 21.6          •E 15 34
        FRI        00 15
        SAO  EP    00 15 41.7          •E 15 46
        MHC        00 15               •E 16 53
        BKS  EP    00 15 56
                   ML=4.2, NEVADA TEST SITE AREA
                   USGS  00 14 28.4, 37.3N, 116.4W, H=  5 KM
                         SOUTHERN NEVADA

FEB 03  MNV  EPKP  05 10 39.4
        JAS  EPKP  05 10 40.3          •E 10 43
        FRI        05 10
                   USGS  04 51 03.2,  3.8S,  68.3E, H= 33 KM
                         CHAGOS ARCHIPELAGO REGION

                                       •E 03 28
FEB 03  WDC        11 03
        MIN  EP    11 03 28.8
        MHC  EP    11 03 31.8
        JAS  EP    11 03 32.2
        PRI  EP    11 03 33.8
        FRI  EP    11 03 34.0
        MNV  EP    11 03 36.1
                   USGS  10 45 58.1,  7.0S, 123.7E, H=611 KM, M=5.2
                         BANDA SEA

FEB 03  SAO  EP    11 24 00.1
        MHC  EP    11 24 01.1
        FRI  EP    11 24 06.2
        JAS  IPC   11 24 06.8
        WDC  EP    11 24 07.9
        MIN  EP    11 24 09.8
        MNV  EP    11 24 16.5
                   USGS  11 12 59.6, 18.0S, 178.2W, H=485 KM, M=4.7
                         FIJI ISLANDS REGION

FEB 03  SAO  EPC   12 39 05.5
        BKS  IPC   12 39 06.9  48 50     PP 42 48    •E 43 34    •E 51 22
                                         •E 52 00    SS 54 18    SSS 57 48
                                         LQ 01 00
                                MICRON   PERIOD
                           PZ     0.11     1.2
        PRI  IPC   12 39 06.9
        MHC  IPC   12 39 07.3
        FHC  IP    12 39 10.4
        FRI  IPC   12 39 10.6
        JAS  IPC   12 39 12.2  48 48      •E 42 39 SKPPKP 08 04
        WDC  IPC   12 39 14.2  48 50      •E 42 38 SKPPKP 08 04
        MIN  EPC   12 39 15.4         SKPPKP 08 02
        MNV  IPC   12 39 20.5         SKPPKP 07 58
                   USGS  12 27 30.1, 25.1S, 179.7E, H=477 KM, M=5.8
                         SOUTH OF FIJI ISLANDS

FEB 03  SAO  EP    18 15 07.8
        BKS  IPC   18 15 09.4          •E 15 24    •E 16 03
                                MICRON   PERIOD
                           PZ     0.21     0.8
        PRI  EPC   18 15 09.5
        MHC  EPC   18 15 09.8
        FHC  EPC   18 15 13.8
        FRI  EP    18 15 15.0
        JAS  IPC   18 15 15.7          •PP 16 06
        WDC  EPC   18 15 17.3          •PP 16 08
        MIN  EPC   18 15 19.4
        MNV  EPC   18 15 25.7          •PP 16 20
                   USGS  18 03 52.0, 18.1S, 175.0W, H=212 KM, M=5.7
                         TONGA ISLANDS

FEB 04  FRI  EP    00 06 32.3          •E 08 16
        PRI  EPC   00 06 42.6
        JAS  IPC   00 06 47.5          •E 08 49
        SAO  EP    00 06 52.2
        MHC  EP    00 06 54.8
                   USGS  00 04 58.1, 34.7N, 112.5W, H= 12 KM, M=4.9
                         WESTERN ARIZONA

FEB 04  FHC  EP    00 06 447
        WDC  EP    00 06 51.5
        MIN  EPC   00 06 56.2
        BKS  EP    00 07 07    14 32     PP 09 12   PPP 10 16    •E 16 40
                                         SS 18 16    LQ 20 40    LR 22 00
                                MICRON   PERIOD
                   MAXR(Z)  5.2          20
                   MAXH(N)  1.8          20
                   MAXH(E)  4.8          20
        MHC        00 07                 20
                   M=5.6, DISTANCE=54°
                   USGS  23 57 54.9, 54.5N, 161.9E, H= 33 KM, M=6.0
                         NEAR EAST COAST OF KAMCHATKA

FEB 04  FRI  EP    01 36 49.3
        JAS  EPC   01 36 50.3
        WDC  EPC   01 36 53.3
                   KERMADEC ISLANDS REGION

FEB 04  JAS  EP    01 43 25.7
        WDC        01 43
                                       •E 43 45
                   USGS  01 31 36.6, 23.0S, 67.3W, H=122 KM, M=4.6
                         CHILE-ARGENTINA BORDER REGION

FEB 04  MNV  EP    06 52 19.5
        FRI  EP    06 52 31.5          •E 52 21
        JAS  EP    06 52 40.0          •E 52 36    S•G 53 12
        PRI  EP    06 52 49.5          •E 52 48
        SAO        06 53
        MHC        06 53               •E 53 01
        BKS  EP    06 53 15            •E 53 04
                                       •E 54 13
                   ML=4.2, NEVADA TEST SITE AREA
                   USGS  06 51 47.8, 37.3N, 116.5W, H=  5 KM
                         SOUTHERN NEVADA

FEB 04  MNV  EP    09 08 34.3
        FRI  EPC   09 08 35.3
        FRI  EPC   09 08 38.5
        JAS  EPC   09 08 44.5
        SAO  EP    09 08 46.0
        MHC  EPC   09 08 49.9
        BKS  EP    09 08 56    14 44
                                MICRON   PP 10 40     LR 19 28
                   MAXH(N)  3300 PERIOD
                   MAXH(E)  2800 20
        MIN  EP    09 09 01.3    20
        WDC  EP    09 09 05.3
        FHC  EP    09 09 18.5
                   M=8.2, DISTANCE=37°
                   USGS  09 01 43.4, 15.3N,  89.1W, H=  5 KM, M=6.2
                         GUATEMALA

FEB 04  PRI        11 13                  •E 13 30
        FRI        11 13                  •E 13 35
        JAS  EPC   11 13 35.0
        WDC  EPC   11 13 39.4
                   USGS  11 01 04.0, 28.8S, 176.3W, H= 33 KM, M=4.9
                         KERMADEC ISLANDS REGION

FEB 04  PRI        12 49                  •E 49 28
        FRI        12 49                  •E 49 34
        JAS  EP    12 49 35.0
        WDC  EP    12 49 37.4
        MIN        12 49                  •E 49 40
                   USGS  12 38 05.6, 16.8S, 172.5W, H= 33 KM, M=5.2
                         SAMOA ISLANDS REGION

FEB 04  SAO        13 31                  •E 31 00
        PRI  EP    13 31 01.0
        MHC  EP    13 31 01.5
        FRI  EP    13 31 06.9
        JAS  EP    13 31 07.7
        WDC  EP    13 31 09.9
        MIN        13 31                  •E 31 13
                   USGS  13 19 39.4, 16.5S, 172.6W, H= 33 KM, M=5.3
                         SAMOA ISLANDS REGION

FEB 04  MNV  IPC   14 20 37.3
        FRI  IPC   14 20 48.6
        JAS  IPC   14 20 57.6
        PRI  IPC   14 21 01.2
        SAO  EP    14 21 07.8
        MHC  IPC   14 21 10.4
        BKS  IPC   14 21 16.0          •E 22 48
        MIN  IP    14 21 24.1
        WDC  IPC   14 21 33.2
        FHC  IPC   14 21 53.7
                   ML=5.4, EXPLOSION, NEVADA TEST SITE
                   USGS  14 20 00.1, 37.1N, 116.0W, H=  0 KM, M=5.8
                         SOUTHERN NEVADA

FEB 04  MNV  IPC   14 40 36.7
        FRI  IPC   14 40 48.4
        JAS  IPC   14 40 57.4
        PRI  IPC   14 41 01.2
        SAO  EPC   14 41 07.7
        MHC  IPC   14 41 10.2
        BKS  IPC   14 41 16.5          •E 42 38
        MIN  IPC   14 41 23.2
        WDC  IPC   14 41 32.5
        FHC  EP    14 41 53.0
                   ML=5.5, EXPLOSION, NEVADA TEST SITE
                   USGS  14 40 00.2, 37.1N, 116.0W, H=  0 KM, M=5.7
                         SOUTHERN NEVADA

FEB 04  WDC  IP    23 39 55.3
        JAS  EP    23 40 09.0
                   USGS  23 27 20.6, 27.4N, 128.3E, H= 59 KM, M=5.4
                         RYUKYU ISLANDS

FEB 04  FRI  EP    23 53 29.4
        JAS  EP    23 53 30.4
        WDC  EP    23 53 32.7
        MNV  EP    23 53 40.5
                   USGS  23 42 02.0, 16.9S, 172.0W, H= 33 KM, M=5.0
                         SAMOA ISLANDS REGION

FEB 05  FRI  EP    01 27 43.5
        JAS  EP    01 27 44.3
        WDC  EP    01 27 46.3
        MNV  EP    01 27 54.5
                   USGS  01 16 17.0, 16.6S, 172.2W, H= 33 KM, M=4.7
                         SAMOA ISLANDS REGION

FEB 05  WDC  IPD   04 21 52.7
        MHC  EP    04 22 03.8
        JAS  EP    04 22 05.6
        FRI  IP    04 22 10.5
        MNV  EP    04 22 11.7
                   USGS  04 08 52.9, 23.4N, 125.6E, H= 33 KM, M=5.5
                         SOUTHWESTERN RYUKYU ISLANDS

FEB 05  MHC  EP    09 41 39.4
        FRI  EP    09 41 43.7
        JAS  EP    09 41 44.7
        WDC  EP    09 41 47.9          •E 42 08
        MNV  EP    09 41 51.5
                   USGS  09 29 10.1, 28.3S, 178.2W, H=33  KM, M=5.0
                         KERMADEC ISLANDS REGION

FEB 05  FRI  EP    10 04 49.7          •I 05 14
        MNV  IPD   10 04 49.7
        PRI  EP    10 04 49.9
        SAO  EP    10 04 54.3
        JAS  IPD   10 04 55.2
        MHC  IPD   10 04 57.7
        BRK  EP    10 05 01.4
        MIN  EP    10 05 06.6
        WDC  IPD   10 05 09.7
        FHC  IPD   10 05 17.2
                   USGS  09 53 11.7, 21.7S,  68.2W, H= 98 KM, M=5.8
                         CHILE-BOLIVIA BORDER REGION

FEB 05  WDC  EPC   17 23 45.1          •E 24 02
        MIN  EP    17 23 49.2
        MHC  EP    17 24 01.2
        JAS  EPC   17 24 03.9          •E 24 20
        FRI  EPC   17 24 10.0
        MNV  EPC   17 24 10.1          •E 24 27
                   USGS  17 13 12.5, 43.2N, 145.8E, H= 78 KM, M=5.6
                         HOKKAIDO, JAPAN REGION

FEB 05  MNV  EPC   18 00 28.0          •E 00 36    •E 00 46
        JAS  EPC   18 00 31.6          •E 00 40
        FRI        18 00               •E 00 37

FEB 05  JAS  EP    18 06 35.2
        MNV  EP    18 06 36.0
        WDC  EP    18 06 51.0

FEB 06  SAO  EPC   00 13 25.0
        BKS  IPC   00 13 26.2
                                MICRON   PERIOD
                           PZ     0.11     1.0
        MHC  EPC   00 13 26.6
        PRI  EPC   00 13 26.6
        FRI  EPC   00 13 31.8
        JAS  IPC   00 13 32.2
        WDC  IPC   00 13 33.1
        MIN  EPC   00 13 35.0
        MNV  IPC   00 13 41.7
                   USGS  00 02 32.5, 18.2S, 178.4W, H=590 KM, M=5.2
                         FIJI ISLANDS REGION

FEB 06  MNV  IPC   01 14 56.0                      S•G 15 50
        FRI  EP    01 15 08.5          •E 15 14    S•G 16 10
        JAS  EP    01 15 17.3          •E 15 25
        PRI        01 15               •E 15 31
        SAO        01 15               •E 15 39    S•G 16 40
        MHC        01 15               •E 15 40
        WDC        01 16               •E 16 14
        BKS        01 16               •E 16 55
                   ML=4.0, NEVADA TEST SITE AREA
                   USGS  01 14 24.2, 37.3N, 116.4W, H=  5 KM
                         SOUTHERN NEVADA
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FEB 06  SAO  EP    02 03 16
        PRI  EP    02 03 17.0
        MHC  EP    02 03 17.8
        BKS  EP    02 03 18
        FRI  EP    02 03 21.5
        JAS  EP    02 03 22.5
        WDC  EP    02 03 25.7
        MIN  EP    02 03 27
        MNV  EP    02 03 29.9
                   USGS  01 50 30.0, 33.4S, 179.4W, H= 60 KM, M=5.3
                         SOUTH OF KERMADEC ISLANDS

FEB 06  JAS  EP    04 20 11.5
                   USGS  04 09 42.3, 28.1N,  43.8W, H= 33 KM, M=4.8
                         NORTH ATLANTIC RIDGE

FEB 06  WDC  EPC   17 07 09.0              PP 11 03
        BKS  E(P)  17 07 10.2              *E 07 26     LQ 37 15
                                MICRON     PERIOD
                   PZ             0.25      1.8
        MHC  EP    17 07 11.5
        MIN        17 07                   *E 07 12
        PRI  EP    17 07 15.3
        JAS  EPC   17 07 15.5              PP 11 09
        FRI  EP    17 07 17.9
                   USGS  16 53 50.5,  6.0S, 146.3E, H= 37 KM, M=6.0
                         EAST PAPUA, NEW GUINEA REGION

FEB 06  MNV  EPD   18 26 04.5              *E 38 18
        FRI  EP    18 26 04.9
        PRI  EP    18 26 07.5
        JAS  EP    18 26 14.1              *E 38 48
        MHC  EP    18 26 19.3
        BKS        18 26                   LQ 28 08
                                MICRON     PERIOD
                   MAXR(Z)  5              20
                   MAXH(N) 14              20
                   MAXH(E) 14              20
        MIN  E(P)  18 26 31.5
        WDC  EP    18 26 35.5              *E 39 24
                   Ms=5.9, DISTANCE=36°
                   USGS  18 19 17.9, 14.8N,  90.6W, H=  5 KM, M=5.7
                         GUATEMALA

FEB 06  JAS  EPD   23 51 37.5
        MNV  EPD   23 51 48.5
                   USGS  23 38 53.6, 23.1S, 172.1E, H= 38 KM
                         LOYALTY ISLANDS REGION

FEB 07  FRI  EP    07 20 27.8
        MHC  EP    07 20 28.2
        BKS  EP    07 20 28.7
                                MICRON     PERIOD
                   PZ             0.16      1.6
        FRI  EP    07 20 33.0
        JAS  EP    07 20 33.8
        WDC  EP    07 20 35.4
        MIN  EP    07 20 37.1
        MNV  EP    07 20 42.4
                   USGS  07 09 22.9, 21.2S, 178.8W, H=607 KM, M=5.4
                         FIJI ISLANDS REGION

FEB 07  MNV  IPC   07 37 27.6
        FRI  IPC   07 37 40.2              *E 37 45
        JAS  IPC   07 37 48.6              *E 37 56     *E 38 42
        PRI  EP    07 37 54.0
        SAO        07 38                   *E 38 08
        MHC        07 38                   *E 38 10
        MIN        07 38                   *E 38 16
        BKS  EP    07 38 17.5              *E 39 52
        WDC        07 38                   *E 38 25
                   ML=4.8, NEVADA TEST SITE AREA
                   USGS  07 36 55.6, 37.2N, 116.4W, H=  5 KM, M=4.3
                         SOUTHERN NEVADA

FEB 08  JAS  IPC   06 09 55.0  10 14
        MIN  EPC   06 09 57.0  10 20
        MNV  EP    06 09 56.2
        FRI  EP    06 10 08.0
        WDC  EPD   06 10 08.0
        MHC  E(P)  06 10 09.0
        BKS  EP    06 10 10.1              *I 10 42
        SAO        06 10                   *E 10 18
        FHC        06 10                   *E 10 30
        PRI        06 10                   *E 10 34
                   BRK   06 09 27.5, 39.4N, 119.9W, H=  1 KM, ML=3.3
                         SOUTH OF RENO, NEVADA

FEB 08  MNV  EP    08 20 39.7
        FRI  EP    08 20 41.0
        PRI  EP    08 20 44.2
        JAS  EP    08 20 50.2
        MHC  EP    08 20 55.3
        BKS  EP    08 21 01.6              *E 22 36     LQ 26 50     LR 29 00
                                MICRON     PERIOD
                   PZ             0.04      1.2
                   MAXR(Z)  9              20
                   MAXH(N) 10              20
                   MAXH(E) 16              20
        MIN        08 21                   *E 21 08
        WDC  EP    08 21 10.6
        FHC  EP    08 21 22.5
                   Ms=5.8, DISTANCE=37°
                   USGS  08 13 46.7, 15.6N,  88.5W, H=  5 KM, M=5.2
                         HONDURAS

FEB 09  MNV  EP    02 42 30.3
        FRI  E(P)  02 42 38.2
        JAS  EPC   02 42 42.0
        MHC  EP    02 42 48.5
        MIN  EP    02 42 50.2
        WDC  EPC   02 42 54.0
        FHC  EPC   02 43 04.8
                   USGS  02 33 07.3, 11.6N,  62.4W, H=179 KM, M=4.9
                         WINDWARD ISLANDS

FEB 09  MNV  EPC   11 51 37.7
        FRI  EP    11 51 38.3
        PRI  EP    11 51 41.7
        JAS  EPC   11 51 47.5
        MHC  EP    11 51 52.7
        BKS        11 52                   LQ 12 00
                                MICRON     PERIOD
                   MAXR(Z)  2.3            20
                   MAXH(N)  2.0            20
                   MAXH(E)  2.9            20
        MIN  EP    11 52 04.0
        WDC  E(P)  11 52 11
        FHC  EP    11 52 20.3
                   Ms=5.1, DISTANCE=37°
                   USGS  11 44 46.6, 15.3N,  89.1W, H=  5 KM, M=5.2
                         GUATEMALA

FEB 09  FRI  EPC   21 34 18.0
        PRI  EPC   21 34 18.3
        MNV  EPC   21 34 23.4
        JAS  EPC   21 34 29.6              *E 42 45
        MHC  EPC   21 34 31.3
        BKS  EP    21 34 40.0              *E 35 32     *E 35 46     LQ 38 44
                                MICRON     PERIOD
                   PZ             0.66      1.8
                   MAXR(Z) 10              20
                   MAXH(N)  8              20
                   MAXH(E) 21              20
        MIN  EP    21 34 56.3
        WDC  EP    21 35 09.7
        FHC  EP    21 35 11.0
                   Ms=5.5, DISTANCE=21°
                   USGS  21 29 57.1, 21.6N, 106.6W, H= 48 KM, M=5.5
                         OFF COAST OF CENTRAL MEXICO

FEB 10  BKS        04 28                   *E 28 33     LQ 59 42
        JAS  EP    04 28 23.5
        WDC  EP    04 28 27
        MIN  EP    04 28 29.0
                   USGS  04 15 53.5, 28.4S, 176.6W, H= 33 KM, M=4.9
                         KERMADEC ISLANDS REGION

FEB 10  WDC        07 50                   *I 50 56
        MIN        07 51                   *E 51 00
        JAS  I(P)  07 51 11.3
        FRI        07 51                   *E 51 19
        PRI        07 51                   *E 51 29
                   USGS  07 40 34.4, 44.5N, 149.3E, H= 44 KM, M=5.5
                         KURIL ISLANDS

FEB 10  WDC  EP    22 44 06.4              *E 44 25
        JAS  EP    22 44 25.5              *E 44 44
        MNV  EP    22 44 33.0              *E 44 52
                   USGS  22 33 47.3, 43.9N, 149.3E, H= 45 KM, M=5.3
                         KURIL ISLANDS REGION

FEB 11  FHC  IPC   04 22 20.2
        WDC  IPC   04 22 35.0  23 02
        MIN  IPC   04 22 45.1  23 22
        BKS  EP    04 22 53.2              *E 23 36
        MHC  EP    04 23 03.0
        JAS  EPC   04 23 09.5
        SAO  EP    04 23 09.6
        MNV        04 23                   *E 23 17
        FRI        04 23                   *E 23 23
                   BRK   04 21 55.6, 40.4N, 125.7W, H=  2 KM, ML=3.9
                         SOUTHWEST OF EUREKA, CALIFORNIA

FEB 11  FHC  EP    05 15 53.0
        BKS  EP    05 15 55.8
                                MICRON     PERIOD
                   PZ             0.06      0.8
        WDC  EPC   05 15 56.5
        MHC  EP    05 15 57.0
        MIN  EP    05 15 58.7
        PRI  EP    05 16 01.5
        JAS  EPC   05 16 02.1
        FRI  EP    05 16 04.5
        MNV  EP    05 16 10.6
                   USGS  05 03 09.6,  6.4S, 155.0E, H= 67 KM, M=5.6
                         SOLOMON ISLANDS

FEB 11  WDC  EP    09 13 07.0
        JAS  EP    09 13 19.1

FEB 11  PRI  EP    15 45 10.2
        SAO  EP    15 45 11.5
        BKS  E(P)  15 45 12.4
                                MICRON     PERIOD
                   PZ             0.05      1.2
        MHC  EP    15 45 12.9
        FRI  EP    15 45 18.5
        JAS  IPD   15 45 18.5
        WDC  EPD   15 45 19.6
        MIN  EP    15 45 21.6
        MNV  IPD   15 45 28.0
                   USGS  15 34 22.5, 18.1S, 177.8W, H=612 KM, M=5.0
                         FIJI ISLANDS REGION

FEB 11  BKS  EP    21 55 10.5  04 28       LQ 12 40     LR 15 28
                                MICRON     PERIOD
                   PZ             0.08      1.0
                   MAXR(Z) 10              20
                   MAXH(N)  8              20
                   MAXH(E)  8              20
        PRI  EP    21 55 10.6
        MHC  EP    21 55 10.7
        FRI  EP    21 55 16.3
        JAS  IPD   21 55 17.0
        WDC  EP    21 55 18.8
        MNV  EP    21 55 27.6
                   Ms=6.1, DISTANCE=69°
                   USGS  21 43 55.4, 15.3S, 172.3W, H= 33 KM, M=5.6
                         SAMOA ISLANDS REGION

FEB 11  BKS  EP    21 59 56.3
                                MICRON     PERIOD
                   PZ             0.05      1.1
        PRI  EP    21 59 56.3
        MHC  EP    21 59 56.4
        FRI  EP    22 00 02.1
        JAS  EP    22 00 02.8
        WDC  EP    22 00 04.8
        MIN  EP    22 00 06.6
        MNV  EP    22 00 13.2
                   TONGA ISLANDS

FEB 12  JAS  EP    00 27 58.1
        WDC  EP    00 27 58.4

FEB 12  WDC  EP    07 54 53.5                        PKKP 14 24
        JAS  EP    07 55 00.1                        PKKP 14 09
        FRI  EP    07 55 03.9
                   USGS  07 42 04.7,  4.6S, 152.8E, H= 73 KM, M=5.5
                         NEW BRITAIN REGION

FEB 12  JAS  EP    09 08 42.0
        MIN  EP    09 08 54.7
        WDC  EP    09 08 56.8

FEB 12  MNV  IPC   14 45 31.6
        FRI  IPC   14 45 43.4
        JAS  IPC   14 45 52.0
        PRI  IPC   14 45 56.7
        SAO  IPC   14 46 02.7
        MHC  IPC   14 46 05.0
        BKS  IPC   14 46 11.5                        *E 47 14
        MIN  EPC   14 46 17.8
        WDC  IPC   14 46 27.3
        FHC  EPC   14 46 42.3
                   ML=6.3, EXPLOSION, NEVADA TEST SITE
                   USGS  14 45 00.2, 37.3N, 116.5W, H=  0 KM, M=6.3
                         SOUTHERN NEVADA

FEB 12  FRI  EP    17 38 12.2
        JAS  EP    17 38 23.5
        PRI  EP    17 38 30
        MHC        17 38                   *E 38 38
        SAO        17 38                   *E 38 42
        MIN        17 38                   *E 38 50
        BKS  EP    17 38 53.8              *E 40 00
        WDC        17 39                   *E 39 05
                   ML=4.3, COLLAPSE, NEVADA TEST SITE
                   USGS  17 37 29.0, 37.3N, 116.5W, H=  0 KM, M=4.8
                         SOUTHERN NEVADA

FEB 12  BKS  EP    18 06 45                *E 07 52
                                MICRON     PERIOD
                   PZ             0.03      1.0
        MHC  EP    18 06 46.5
        PRI  EP    18 06 48.5
        JAS  EP    18 06 51.5
        FRI  EPC   18 06 52.0
                   USGS  17 54 18.6, 12.4S, 166.4E, H= 39 KM, M=5.4
                         SANTA CRUZ ISLANDS
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FEB 12  SAO  IPC   18 27 48.2
        MHC  EP    18 27 56.6
        PRI  EP    18 28 02.3
        FRI  EP    18 28 07.0
        JAS  EP    18 28 09
        BKS  EP    18 28 12.5  28 30
                   BRK   18 27 44.6, 36.8N, 121.2W, H=  6 KM, ML=2.8
                   NOTE: BRK SOLUTION IS FOR FORESHOCK OCCURRING
                   3.6 SECONDS EARLIER.
                   SOUTHEAST OF HOLLISTER, CALIFORNIA

FEB 13  JAS  EP    00 10 13
        WDC  EP    00 10 16

FEB 14  FHC  EPD   11 01 22.2
        WDC  IPD   11 01 27.3          •PP 03 24
        MIN  EPD   11 01 30.7
        BKS  EP    11 01 34.0          •E 03 32    •E 10 38
                          MICRON       PERIOD
                   PZ        0.14        0.8
        MHC  EPD   11 01 39.0          •PP 03 40
        SAO  EP    11 01 39.2
        JAS  IPD   11 01 40.8          •PP 03 39
        PRI  EPD   11 01 44.8
        FRI  EPD   11 01 45.5          •PP 03 44
                   USGS  10 50 22.2, 26.6N, 140.3E, H=548 KM, M=5.5
                   BONIN ISLANDS REGION

FEB 14  MNV  IPC   11 30 32.4
        FRI  IPC   11 30 44.2
        JAS  IPC   11 30 52.7
        PRI  IPC   11 30 57.3
        SAO  IPC   11 31 03.4
        MHC  IPC   11 31 05.8
        BKS  EPC   11 31 12.2          •E 31 19
        MIN  EPC   11 31 18.9
        WDC  IPC   11 31 28.0
        FHC  EPC   11 31 43.0
                   ML=5.8, EXPLOSION, NEVADA TEST SITE
                   USGS  11 30 00.2, 37.2N, 116.4W, H=  0 KM, M=6.0
                   SOUTHERN NEVADA

FEB 14  WDC        13 38               •E 38 00    •E 39 57
        MIN  E(P)  13 38 05
        BKS  E(P)  13 38 21.3
                          MICRON       PERIOD
                   PZ        0.02        0.8
        JAS  EP    13 38 18.8          •E 38 30
        MHC        13 38               •E 38 19
        FRI  EP    13 38 26.5          •E 38 37
        PRI  EP    13 38 27.0          •E 38 38
        MNV  EP    13 38 27.3          •E 38 38
                   USGS  13 29 59.5, 51.7N, 176.3E, H= 25 KM, M=4.4
                   RAT ISLANDS, ALEUTIAN ISLANDS

FEB 14  MNV  EP    16 09 53.0
        FRI        16 10
        JAS  EP    16 10 03.5          •E 10 07
                   USGS  16 02 55.9, 13.3N,  89.7W, H= 33 KM, M=4.7
                   EL SALVADOR

FEB 14  WDC  EPKP  20 50 34.4
        MIN  EPKP  20 50 36.4
        MHC  EPKP  20 50 37.7          •E 51 03
        JAS  EPKP  20 50 39.7          •E 51 03
        FRI  EPKP  20 50 41.8          •E 51 06
        PRI  EPKP  20 50 42.6          •E 51 07
        MNV  EPKP  20 50 43.0          •E 51 08
                   USGS  20 31 38.2,  8.1S, 108.6E, H= 53 KM, M=5.9
                   JAVA

FEB 15  WDC  IPC   02 07 58.5          PKKP 24 36
        MIN  EP    02 07 58.8
        BKS  E(P)  02 08 04.5  19 30   PP 12 16    PS 20 56    SS 26 36
                                       LR 39 40
                          MICRON       PERIOD
                   PZ        0.34        2.2
                   MAXR(Z)   8.2         21
                   MAXH(N)   2.9         21
                   MAXH(E)   7.5         21
        MHC  EP    02 08 05.3
        JAS  EP    02 08 10.0          PKKP 24 27  RPKP 32 47
        PRI  EP    02 08 13.0
        MNV  EP    02 08 13.7          PKKP 24 23  RPKP 32 43
        FRI  EP    02 08 14.1
                   USGS  01 54 23.1, 13.0N, 125.8E, H= 33 KM, M=6.1
                   PHILIPPINE ISLANDS REGION

FEB 15  JAS  EP    12 14 03.1
        FRI  EP    12 14 11
        MNV  EP    12 14 11.8
                   USGS  12 05 44.8, 52.6N, 175.9E, H= 50 KM, M=4.1
                   RAT ISLANDS, ALEUTIAN ISLANDS

FEB 15  MHC  EPD   21 35 46.5
        BKS  EP    21 35 49    46 10   SS 51 48    LQ 57 08    LR 01 08
                          MICRON       PERIOD
                   MAXR(Z)   3.9         20
                   MAXH(N)   3.6         20
                   MAXH(E)   3.6         20
        PRI  EPD   21 35 49.9
        FRI  EP    21 35 50.2
        JAS  EPD   21 35 51.4
        WDC  EP    21 35 54.0
        MIN  EP    21 35 56.5
        MNV  EP    21 35 59.0
                   M=5.9, DISTANCE=83°
                   USGS  21 23 22.6, 28.4S, 176.8W, H= 54 KM, M=5.5
                   KERMADEC ISLANDS REGION

FEB 15  JAS        23 04
        WDC  EP    23 04 58.0          •E 04 54
                   USGS  22 52 22.0, 29.0S, 176.3W, H= 33 KM, M=4.7
                   KERMADEC ISLANDS

FEB 16  SAO  EP    08 25 07.0
        BKS  EP    08 25 07.9
                          MICRON
                   PZ        0.02        PERIOD
        PRI  EP    08 25 08.0             0.8
        MHC  EP    08 25 08.3
        FRI  EP    08 25 12.8
        JAS  EP    08 25 13.2
        WDC  EP    08 25 15.0
        MIN  EP    08 25 17.5
        MNV  EP    08 25 22.0
                   USGS  08 13 45.0, 23.5S, 180.0E, H=539 KM, M=5.0
                   SOUTH OF FIJI ISLANDS

FEB 16  MNV  EP    13 40 07.0
        JAS  EP    13 40 19.5
                   USGS  13 29 38.9, 22.7N,  45.0W, H= 33 KM, M=5.3
                   NORTH ATLANTIC RIDGE

FEB 17  MNV  EP    23 18 48.4
        FRI  EP    23 19 00.8
        JAS  EP    23 19 09.8
        PRI  EP    23 19 15.8          •E 19 16    S•G 20 00
        MHC        23 19
        BKS  EP    23 19 39.2          •E 19 32
        MIN        23 19               •E 20 37
        WDC        23 20               •E 19 52
                                       •E 20 06
                   ML=4.2, NEVADA TEST SITE AREA
                   USGS  23 18 17.6, 37.3N, 116.5W, H=  5 KM, M=4.0
                   SOUTHERN NEVADA
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FEB 18  FHC  EP    08 08 20.2
        WDC  EPC   08 08 28.2
        MIN  EP    08 08 34.0
        BKS  EP    08 08 42.6
                          MICRON       PERIOD
                   PZ        0.06        0.8
        MHC  EP    08 08 48.4
        JAS  EP    08 08 51.8
        FRI  EP    08 09 00
        PRI  EP    08 09 00.2
        MNV  EP    08 09 00.7
                   USGS  08 00 58.6, 51.6N, 178.7W, H= 39 KM, M=4.9
                   ANDREANOF ISLANDS, ALEUTIAN ISLANDS

FEB 18  PRI  EP    09 36 45.1
        BKS  EP    09 36 46.0
                                       LR 02 40
                          MICRON       PERIOD
                   PZ        0.07        1.3
                   MAXR(Z)   3.2         20
                   MAXH(N)   2.1         20
                   MAXH(E)   1.8         20
        MHC  EP    09 36 46.1
        FRI  EP    09 36 50.1
        JAS  EPC   09 36 51.1
        WDC  EPC   09 36 54.2
        MIN  EP    09 36 55.6
        MNV  EP    09 36 59.1
                   Ms=5.6, DISTANCE=85°
                   USGS  09 24 14.6, 29.8S, 177.2W, H= 37 KM, M=5.4
                   KERMADEC ISLANDS

FEB 18  FRI  EP    18 15 00.6
        MNV  EP    18 15 01.9          •I 15 30
        PRI  EP    18 15 02.2
        JAS  EPD   18 15 07.4          •I 15 36
        MHC  EP    18 15 09.8          •E 15 38
        BKS  EP    18 15 13.3          •E 15 43    •E 16 11
                          MICRON       PERIOD
                   PZ        0.07        1.0
        MIN  EP    18 15 18.7
        WDC  IPD   18 15 22.3          •I 15 51
                   USGS  18 03 22.7, 22.5S,  68.6W, H=111 KM, M=5.4
                   NORTHERN CHILE

FEB 19  WDC  IPD   05 01 20.8
        MIN  EP    05 01 24.3
        JAS  EP    05 01 47.2
        MNV  EP    05 01 47.2
        FRI  EP    05 01 56.6
        PRI  EP    05 02 03.8
                   USGS  04 55 41.9, 66.4N, 135.7W, H= 33 KM, M=5.0
                   NORTHERN YUKON TERRITORY, CANADA

FEB 19  WDC  EP    07 55 14.1
        JAS  EP    07 55 41.8
        MNV  EP    07 55 45.8
        FRI  EP    07 55 51.3
                   USGS  07 49 31.8, 62.2N, 151.3W, H= 85 KM, M=3.9
                   CENTRAL ALASKA

FEB 19  FHC  EP    10 35 42.4
        WDC  IPC   10 35 49.5          •I 36 37    S•CP 41 15
        BKS  E(P)  10 36 04.4          •E 43 44    •E 48 00
                          MICRON       PERIOD
                   PZ        0.03        0.7
        MHC  EP    10 36 10.0
        JAS  IPC   10 36 13.2          •E 37 03    S•CP 41 27
        FRI  EPC   10 36 21.0    S•CP 41 31
        MNV  IPC   10 36 21.5    S•CP 41 31
        PRI  EP    10 36 22.2    S•CP 41 31
                   USGS  10 28 33.5, 52.5N, 179.5W, H=212 KM, M=4.9
                   ANDREANOF ISLANDS, ALEUTIAN ISLANDS

FEB 19  MNV  EP    14 07 35.5
        FRI  EP    14 07 43.0          •E 07 59
        JAS  EP    14 07 49.7          •I 07 55
        PRI  EP    14 07 49.8
        MHC        14 07               •E 07 58
        BKS        14 07               •E 14 34    •E 19 30    •E 20 46
        WDC  EP    14 08 09.3
                   USGS  13 59 59.8, 19.9N,  76.9W, H= 20 KM, M=5.3
                   CUBA REGION

FEB 19  FRI  IPC   17 01 35.0  02 00
        MNV  EP    17 01 40.2
        PRI  IPC   17 01 45.5  02 18
        JAS  EP    17 01 50.2
        SAO  EP    17 01 55.5
        MHC  EPD   17 01 59.5
        BKS  E(P)  17 02 07.9
        MIN        17 02               •E 02 37
        WDC  E(P)  17 02 45            •E 04 00
                   ML=4.2, EAST OF HAIWEE, CALIFORNIA
                   USGS  17 01 01.1, 36.2N, 117.4W, H=  5 KM
                   CALIFORNIA-NEVADA BORDER

FEB 19  MNV  EPD   18 37 42.4
        PRI        18 37
        JAS  EP    18 37 50.9          •E 37 44
                   USGS  18 31 31.1, 15.9N,  95.1W, H= 33 KM, M=5.1
                   NEAR COAST OF OAXACA, MEXICO

FEB 20  WDC  EPC   14 01 54.2
        MIN  EPC   14 01 58.5
        JAS  EPC   14 02 15.4
        FRI        14 02
        MNV  EPC   14 02 22.3          •E 02 22
                   USGS  13 52 39.6, 51.6N, 157.2E, H=122 KM, M=4.6
                   NEAR EAST COAST OF KAMCHATKA

FEB 20  PRI  EP    14 27 24
        JAS  EPD   14 27 32.0
        MHC  EP    14 27 36            •E 30 04
        BKS  E(P)  14 27 42.2
        MIN  EPD   14 27 50.7          •E 30 08    •E 34 00    •E 38 30
        WDC  EPD   14 27 54.5
                                       •E 30 12
                   USGS  14 20 42.2, 13.7N,  92.3W, H= 32 KM, M=5.5
                   OFF COAST OF CHIAPAS, MEXICO

FEB 21  FHC        04 23
        WDC  EP    04 23 46.4          •E 23 42
        MIN  EP    04 23 50.2
        BKS        04 23
        JAS  EP    04 24 04.0          •E 23 57
        MNV  EP    04 24 10.1
                   USGS  04 13 02.7, 43.2N, 137.3E, H=271 KM, M=4.9
                   EASTERN SEA OF JAPAN

FEB 21  BKS  EP    05 58 00.5
                          MICRON       PERIOD
                   PZ        0.09        1.0
        FHC  EPC   05 58 00.6          •E 59 10    T 33 03    T 33 08
        SAO  EP    05 58 01.0             T 33 03
        MHC  EP    05 58 02.2             T 33 02
        PRI  EP    05 58 05.5             T 33 30
        WDC  EPC   05 58 07.6          •E 59 20
        JAS  EPC   05 58 11.6          •E 59 27    T 33 18
        MIN  EP    05 58 12.0                      T 33 20
        FRI  EP    05 58 13.5
        MNV  EPC   05 58 27.7
                   USGS  05 51 13.8, 20.2N, 156.3W, H= 33 KM, M=4.9
                   HAWAII
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FEB 21  BKS  EP    08 57 47.2                    LQ 21 00    LR 25 30
                                  MICRON         PERIOD
                              PZ     0.10          1.5
                              MAXR(Z)  3.4         20
                              MAXH(N)  2.1         20
                              MAXH(E)  2.9         20
        SAO  EP    08 57 47.4
        MHC  EP    08 57 47.9                    *E 58 02
        PRI  EP    08 57 48.5
        FHC  EP    08 57 49.7
        JAS  EP    08 57 52.8                    *E 58 07
        FRI  EP    08 57 52.9                    *E 58 07
        WDC  EP    08 57 53.0                    *E 58 07
        MIN  EP    08 57 54.8
        MNV  EP    08 58 01.3                    *E 58 15
                   Ms=5.8, DISTANCE=87°
                   USGS  08 45 07.0, 23.6S, 171.8E, H= 48 KM, M=5.5
                         LOYALTY ISLANDS REGION

FEB 21  PRI  EP    11 32 02.5
        BKS        11 32                         *E 32 16
        FRI  EP    11 32 07.2
        JAS  EP    11 32 07.5                    *E 32 22
        WDC  EP    11 32 07.5
        MNV  EP    11 32 15.0                    *E 32 31
                   USGS  11 19 23.2, 23.0S, 171.9E, H= 53 KM, M=5.0
                         LOYALTY ISLANDS REGION

FEB 21  PRI  IPD   23 40 20.1  40 26
        FRI  EP    23 40 25.0  40 36
        SAO  IPC   23 40 29.1
        JAS  EPD   23 40 38.5  40 59
                   BRK   23 40 10.9, 36.4N, 120.3W, H=  2 KM, MAG=2.6
                         SOUTHWEST OF FRESNO, CALIFORNIA

FEB 22  FHC        06 05                         *E 05 07
        WDC  EP    06 05 08.5                    *E 05 15    *E 05 26
        BKS  EP    06 05 30                      *E 06 15
                                  MICRON         PERIOD
                              PZ     0.04          1.0
                              MAXR(Z)  2.5         20
                              MAXH(N)  1.1         20
                              MAXH(E)  3.2         20
        JAS  EP    06 05 32.8                    *E 05 40
        MHC        06 05                         *E 05 35
        FRI        06 05                         *E 05 43
        MNV        06 05                         *E 05 44
        PRI        06 05                         *E 05 48
                   Ms=5.1, DISTANCE=36°
                   USGS  05 58 27.7, 52.2N, 169.5W, H= 44 KM, M=5.3
                         FOX ISLANDS, ALEUTIAN ISLANDS

FEB 22  WDC  EP    07 28 45.5
        MIN        07 28                         *E 28 55
        BKS        07 28                         *E 28 58
        JAS  EP    07 29 07.2
        MNV  EP    07 29 16.1
        FRI        07 29                         *E 29 22
                   USGS  07 21 25.8, 51.7N, 176.9W, H= 58 KM, M=5.0
                         ANDREANOF ISLANDS, ALEUTIAN ISLANDS

FEB 22  FHC  EPKP  08 06 34.0
        WDC  EPKPC 08 06 34.6                    *E 07 59
        MIN  EPKP  08 06 36.0
        BKS  EPKP  08 06 39.6
                                  MICRON         PERIOD
                              PKPZ   0.05          1.0
        MHC  EPKP  08 06 40.6
        JAS  EPKPC 08 06 40.7                    *E 08 24    *E 09 43    *E 09 59
        FRI  EPKP  08 06 42.9
        MNV  EPKPC 08 06 43.5                    *E 08 33    *E 09 48    *E 10 02
        PRI  EPKP  08 06 44.0
                   USGS  07 47 59.5,  3.2N,  99.0E, H=180 KM, M=5.6
                         NORTHERN SUMATRA

FEB 22  MNV  EPC   08 21 03.0
        PRI  EP    08 21 04.6
        JAS  EPC   08 21 09.3
        MHC  EP    08 21 12.3
        BKS  EP    08 21 16.0
        MIN  EP    08 21 20.5
        WDC  EPC   08 21 23.7
                   USGS  08 09 22.3, 18.4S,  65.2W, H= 41 KM, M=5.3
                         BOLIVIA

FEB 22  FHC        18 41                         *E 41 43
        BKS  EP    18 41 46.0
                                  MICRON         PERIOD
                              PZ     0.11          0.8
        WDC  EPC   18 41 46.8
        MHC  EP    18 41 48.4
        PRI  EPC   18 41 52.0
        JAS  EPC   18 41 52.8
        MIN  E(P)  18 41 52.6
        FRI  EPC   18 41 55.0
        MNV  EPC   18 42 01.8
                   USGS  18 28 58.3,  6.3S, 154.8E, H= 56 KM, M=5.9
                         SOLOMON ISLANDS

FEB 22  FHC        23 47                         *E 47 11
        FRI        23 47                         *E 47 14
        JAS  EP    23 47 03.1                    *E 47 15
        WDC        23 47                         *E 47 04    *E 47 12
        MIN        23 47                         *E 47 21
        MNV  EP    23 47 11.1                    *E 47 23
                   USGS  23 34 34.4, 28.5S, 176.1W, H= 41 KM, M=5.5
                         KERMADEC ISLANDS REGION

FEB 23  WDC  EPC   09 15 44.0                    *E 19 51
        MIN  EPC   09 15 53.2
        JAS  EPC   09 15 57.0                    *E 19 53
        FRI        09 16                         *E 16 02
        MNV  EPC   09 16 06.0                    *E 20 08
                   USGS  09 02 31.6, 23.0N, 121.7E, H= 33 KM, M=5.5
                         TAIWAN

FEB 23  PRI        14 11                         *E 11 37
        JAS  EP    14 11 42.5                    *E 13 45
        MNV        14 11                         *E 11 42
                   USGS  14 09 54.4, 34.7N, 112.4W, H= 10 KM
                         WESTERN ARIZONA

FEB 23  FHC  IPD   15 17 04.4
        WDC  IPC   15 17 11.5
        MIN  E(P)  15 17 19.5
        BKS  EP    15 17 46.5  20 36
                                  MICRON         PERIOD
                              PZ     1.65          2.5
        JAS  EPC   15 17 53.0
        MHC  EP    15 17 53.0
        MNV  EPC   15 17 57.0
        SAO        15 18                         *E 18 06
        FRI  EP    15 18 08.2
        PRI  EPD   15 18 13.2
                   USGS  15 14 16.0, 51.5N, 130.4W, H= 16 KM, M=5.6
                         QUEEN CHARLOTTE ISLANDS REGION

FEB 23  FHC        15 33                         *PP 33 55
        WDC        15 34                         *PP 34 00
        MIN  EP    15 33 13.5                    *PP 34 04
        BRK        15 34                         *PP 34 05
        MHC  EP    15 33 19.0                    *PP 34 09
        JAS  EP    15 33 22.5                    *PP 34 12
        PRI  EP    15 33 25.0                    *PP 34 15
        FRI  EP    15 33 26.8                    *PP 34 17
                   USGS  15 21 22.2, 18.6N, 145.7E, H=207 KM, M=4.8
                         MARIANA ISLANDS

FEB 23  WDC  EPC   16 15 19.3
        MIN  EPC   16 15 26.0
        BKS        16 15                         *E 15 53
        JAS  EP    16 16 04.2
        MNV  EPC   16 16 05.0
        FRI  EP    16 16 16.5
        PRI  EPC   16 16 21.7
                   USGS  16 12 26.8, 51.6N, 130.1W, H= 33 KM, M=4.6
                         QUEEN CHARLOTTE ISLANDS REGION

FEB 23  PRI        21 03                         *E 03 08
        FRI  EP    21 03 03.5                    *E 03 13
        WDC  EP    21 03 03.5                    *E 03 14
        JAS  EP    21 03 04.0                    *E 03 13
        MIN        21 03                         *E 03 14
        MNV  EP    21 03 12.0                    *E 03 21
                   USGS  20 50 19.5, 22.9S, 171.4E, H= 74 KM, M=5.4
                         LOYALTY ISLANDS

FEB 24  FHC  IPC   15 13 22.0
        WDC  IPC   15 13 35.5
        MIN  IPD   15 13 45.0  14 10
        BKS        15 13                         *E 13 58
        MHC  EP    15 14 07.6
        JAS  IPD   15 14 10.5
        SAO  EP    15 14 13.1
        FRI        15 14                         *E 14 27
                   BRK   15 13 10.5, 40.3N, 124.4W, H=  6 KM, ML=3.5
                         SOUTH OF EUREKA, CALIFORNIA

FEB 24  BKS  EP    17 53 25.6
                                  MICRON         PERIOD
                              PZ     0.04          1.0
        MHC  EPC   17 53 26.2
        FHC  EPC   17 53 26.6
        PRI  EPC   17 53 27.0
        WDC  EPC   17 53 30.0
        JAS  EPC   17 53 31.1
        FRI  EPC   17 53 31.4
        MIN  EPC   17 53 32.0
        MNV  EPC   17 53 39.8
                   USGS  17 40 43.1, 20.2S, 168.8E, H= 36 KM, M=5.1
                         LOYALTY ISLANDS

FEB 25  MNV  IPC   16 36 37.1                    P*CP 38 38  S*CP 42 26
        FRI  EP    16 36 37.7                    S*CP 42 26
        PRI  EP    16 36 40.7
        JAS  IPC   16 36 46.5                    P*CP 38 42  S*CP 42 31
        SAO        16 36                         *E 36 47
        MHC  EP    16 36 50.5                    *PP 37 06
        BKS  EP    16 36 56.2  43 20             *PP 37 13   *SP 37 26  P*CP 38 46
                                                 *E 48 00    *E 52 40
                                  MICRON         PERIOD
                              PZ     0.07          1.0
                              MAXR(Z)  3.4         21
                              MAXH(N)  7           21
                              MAXH(E) 11           21
        MIN        16 37                         *E 37 04    *I 37 18
        WDC  EP    16 37 06.1                    S*CP 42 41
        FHC  EP    16 37 17.0
                   Ms=5.8, DISTANCE=41°
                   USGS  16 29 00.5, 10.4N,  85.1W, H= 66 KM, M=5.2
                         COSTA RICA

FEB 26  MNV  IPC   14 50 38.0
        FRI  EP    14 50 49.0                    *I 50 58
        JAS  EP    14 50 58.4                    *I 51 09    *I 51 54
        PRI  EP    14 51 01.9
        SAO  EP    14 51 09.3
        MHC  EP    14 51 13.6
        BKS  E(P)  14 51 32.2
                   ML=4.1, NEVADA TEST SITE AREA
                   USGS  14 49 59.9, 37.0N, 116.0W, H=  5 KM, M=4.2
                         SOUTHERN NEVADA

FEB 27  FRI  EPD   03 47 37.3
        MNV  EPD   03 47 38.8                    *PP 48 05
        PRI  EPD   03 47 39.1                    *PP 48 06
        SAO  EP    03 47 43.5                    *PP 48 10
        JAS  EPD   03 47 44.8                    *PP 48 11
        MHC  EPD   03 47 47.3                    *PP 48 14
        BKS  EPD   03 47 51.0                    *PP 48 17
                                  MICRON         PERIOD
                              PZ     0.13          1.1
        MIN  EPD   03 47 56.3                    *E 48 23
        WDC  EPD   03 47 59.6                    *PP 48 26
        FHC  EPD   03 48 07.5                    *PP 48 24
                   USGS  03 36 13.6, 19.5S,  69.1W, H=103 KM, M=5.5
                         NORTHERN CHILE

FEB 27  WDC  EPC   05 45 37.9
        BKS  EP    05 45 52.3
        MHC  EPC   05 45 58.5
        JAS  EPC   05 46 01.5
        FRI  EPC   05 46 09.3
        PRI  EP    05 46 10.5
                   USGS  05 38 12.6, 52.3N, 179.1E, H=184 KM, M=4.4
                         RAT ISLANDS, ALEUTIAN ISLANDS

FEB 27  MHC  EP    11 13 12.0                    *E 13 49
        PRI  EP    11 13 12                      *E 13 49
        FRI  EP    11 13 16.3                    *E 13 53
        JAS  EP    11 13 16.8                    *E 13 53
        WDC  EP    11 13 19.5                    *E 13 57
        MIN        11 13                         *E 14 00
                   USGS  11 00 58.0, 28.1S, 177.6W, H=146 KM, M=5.3
                         KERMADEC ISLANDS REGION

FEB 28  WDC  EP    09 51 27.4
        MIN  EP    09 51 32.5
        BKS  EP    09 51 42
        MHC  EP    09 51 47.9
        JAS  EP    09 51 51.0
        FRI  EP    09 51 58.8
        MNV  EP    09 52 00.5
        PRI  EP    09 52 00.5
                   USGS  09 43 58.0, 51.6N, 178.5W, H= 32 KM, M=4.8
                         ANDREANOF ISLANDS, ALEUTIAN ISLANDS

FEB 28  JAS  EP    12 55 57.4
        WDC        12 55                         *E 55 58
        MNV        12 55                         *E 56 05
                   USGS  12 43 15.3, 14.8S, 166.7E, H=  4 KM, M=5.2
                         NEW HEBRIDES ISLANDS

FEB 28  FRI  EP    16 39 55.3
        PRI  EP    16 39 56.0
        MNV  EPD   16 39 59.3
        JAS  EPD   16 40 02.0
        MHC  EP    16 40 02.7
        BKS  IPD   16 40 06.0                    *E 40 17    *E 40 20
                                  MICRON         PERIOD
                              PZ     0.11          1.4
        MIN  EP    16 40 12.6
        WDC  IPD   16 40 15.3
        FHC  IPD   16 40 22.9
                   USGS  16 27 09.0, 40.0S, 74.7W , H=  9 KM, M=6.0
                         OFF COAST OF SOUTHERN CHILE

FEB 28  BRK        21 03                         *E 03 13
        PRI        21 03                         *E 03 13
        MHC        21 03                         *E 03 14
        FRI        21 03                         *E 03 17
        JAS  EPD   21 03 17.3
        WDC        21 03                         *E 03 20
        MIN        21 03                         *E 03 22
        MNV  EPD   21 03 27.8
                   USGS  20 51 50.3, 16.4S, 172.4W, H= 33 KM, M=4.7
                         SAMOA ISLANDS REGION
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FEB 28  JAS  EP    23 11 31.0                    *E 11 39
        MHC  EP    23 11 31.7                    *E 11 39
        WDC  EP    23 11 44
                   USGS  22 58 41.1, 40.1S,  75.0W, H= 26 KM, M=5.2
                         OFF COAST OF SOUTHERN CHILE

FEB 29  WDC  EPC   09 38 33.6
        MIN        09 38                         *E 38 39
        BKS  EP    09 38 43.5
        JAS  EPC   09 38 50.2
        PRI  EP    09 38 55.5
        FRI  EPC   09 38 55.7
                   USGS  09 27 15.6, 36.7N, 140.7E, H= 57 KM, M=4.7
                         NEAR EAST COAST OF HONSHU, JAPAN

FEB 29  MNV  EPC   18 11 56.0                    *E 12 24
        PRI  EP    18 11 56.0
        JAS  IPC   18 12 02.2                    *E 12 30
        MHC  EP    18 12 04.9
        WDC  EP    18 12 18.5
                   USGS  18 01 20.8, 13.3S,  74.9W, H=103 KM, M=5.2
                         PERU

FEB 29  PRI  EP    22 31 07.0
        FRI  EP    22 31 11.0                    *E 31 19   S*G 32 06
        MNV  EP    22 31 18.0                    *E 31 33
        SAO        22 31                         *E 31 21
        MHC        22 31                         *E 31 25
        JAS  EP    22 31 25.5                  S*G 32 39
                   USGS  22 30 09.9, 34.1N, 116.7W, H=  8 KM
                         SOUTHERN CALIFORNIA

FEB 29  SAO  EP    23 02 43.3
        MHC  EP    23 02 45.2
        FRI  EP    23 02 48.9
        JAS  EP    23 02 49.9                    *E 03 08
        WDC  EP    23 02 53.0                    *E 03 11
        MNV  EP    23 02 58.5                    *E 03 16
                   USGS  22 50 21.8, 28.2S, 177.3W, H= 64 KM, M=5.3
                         KERMADEC ISLANDS REGION

MAR 01  BKS  IPD   17 06 45.9  06 50              *E 06 47    *E 06 49
        MHC  EPC   17 06 49.8                    *E 06 56
        SAO  EP    17 06 59.4
        JAS  EPC   17 07 02.2                    *I 07 12
        FRI  EP    17 07 16.1
        PRI  EP    17 07 17.1
                   BRK   17 06 40.3, 37.7N, 122.0W, H=  7 KM, ML=2.8
                         DUBLIN, CALIFORNIA

MAR 02  BKS  EPD   11 03 57.2
                                 MICRON      PERIOD
                   PZ              0.07        0.8
        WDC  IP    11 03 57.9
        MHC  EP    11 03 59.0
        SAO  EP    11 03 59.6
        MIN  EP    11 03 59.8
        PRI  EP    11 04 02.2
        JAS  EPC   11 04 03.4
        FRI  EPC   11 04 05.5
        MNV  EP    11 04 12.3
                   USGS  10 51 09.6,  6.3S, 154.8E, H= 61 KM, M=5.7
                         SOLOMON ISLANDS

MAR 04  MHC  EP    02 04 35.3
        WDC  EP    02 04 38.4
        JAS  IPC   02 04 40.3
        MIN  EP    02 04 41.2
        FRI  IPC   02 04 41.7
        MNV  IPC   02 04 49.0
                   USGS  01 52 05.9, 19.4S, 169.2E, H=124 KM, M=4.9
                         NEW HEBRIDES ISLANDS

MAR 04  FHC  EP    03 02 23.7
        BKS  EPD   03 02 24.4                  P*CP 02 30   *PP 02 49   *SP 03 01
                                                 PP 05 41  *PPP 05 58    SKS 12 39
                                                 PS 13 41    SS 17 38  *SSS 18 09
                                               PKKP 20 36   SSS 21 37     LQ 23 22
                                                 LR 27 54
                                 MICRON      PERIOD
                   PZ              0.16        0.7
                   MAXR(Z) 37                  20
                   MAXH(N) 25                  23
                   MAXH(E) 37                  22
        SAO  EP    03 02 24.5
        MHC  EP    03 02 25.5
        FRI  EP    03 02 27.5
        WDC  EPD   03 02 28.5
                                         *E 05 42 PKKP 20 34  RPKP 28 40
        MIN  EP    03 02 30.7          SKPPKP 31 52
        JAS  IPD   03 02 30.8            *E 05 53
                                           PP 05 49 PKKP 20 36  RPKP 28 39
        FRI  EP    03 02 31.7          SKPPKP 31 53
        MNV  IPD   03 02 40.2            PKKP 20 34
                   Ms=6.8, DISTANCE=81°  PKKP 20 33
                   USGS  02 50 00.5, 14.7S, 167.1E, H= 90 KM, M=6.4
                         NEW HEBRIDES ISLANDS

MAR 04  BKS  E(P)  15 08 29    08 43
        MHC        15 08
        MIN        15 08                         *E 08 40
        JAS  EP    15 08 43.2                    *E 08 40
        SAO        15 08
        WDC        15 08                         *E 08 45
        FHC        15 08                         *E 08 50
        FRI        15 08                         *E 08 58
        MNV  EP    15 09 07.0                    *E 08 59
                   BRK   15 08 09.7, 38.8N, 122.8W, H=  2 KM, ML=3.1
                         SOUTH OF CLEAR LAKE, CALIFORNIA

MAR 05  SAO  E(P)  00 21 06
        BKS  EP    00 21 07.0
        PRI  EPC   00 21 07.1
        MHC  E(P)  00 21 07.5
        FHC  E(P)  00 21 11
        FRI  EPC   00 21 12.7
        JAS  EPC   00 21 13.2
        WDC  EPC   00 21 14.5
        MIN  EPC   00 21 16.6
        MNV  EPC   00 21 23.1
                   USGS  00 10 04.5, 16.2S, 176.2W, H=324 KM, M=4.9
                         FIJI ISLANDS REGION

MAR 05  PRI  EP    18 39 28.7
        BKS  EP    18 39 29.2
                                 MICRON      PERIOD
                   PZ              0.03        0.8
        MHC  EP    18 39 29.2
        FRI  EP    18 39 33.4
        JAS  EP    18 39 34.2
        WDC  EP    18 39 36.1
        MNV  EP    18 39 42.5
                   USGS  18 27 58.8, 25.5S, 179.6E, H=559 KM, M=4.7
                         SOUTH OF FIJI ISLANDS

MAR 06  WDC  E(P)  12 27 36.5
        BKS  EP    12 27 55.5
        JAS  EPC   12 28 03.7
        MNV  EP    12 28 09.5
        FRI  E(P)  12 28 12.9
        PRI  EP    12 28 15.5
                   USGS  12 21 56.9, 58.2N, 157.1W, H=155 KM, M=4.5
                         ALASKA PENINSULA

MAR 06  BKS        15 19
        WDC  EP    15 19 23.5                    *E 43 00    *E 50 00
        PRI        15 19
        JAS  EP    15 19 29.2                    *E 19 28
        FRI  EP    15 19 30.8
        MNV  EP    15 19 37.8
                   USGS  15 06 34.4,  7.3S, 155.4E, H= 45 KM, M=5.8
                         SOLOMON ISLANDS
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MAR 06  FHC  EPC   17 06 13.0
        WDC  EPC   17 06 18.2
        MIN  EP    17 06 21.8
        BKS  EP    17 06 27.5
                                 MICRON      PERIOD
                   PZ              0.02        0.8
        MHC  EP    17 06 31.1
        JAS  EPC   17 06 33.6
        FRI  EP    17 06 38.6
        PRI  EP    17 06 38.8
        MNV  EP    17 06 40.0
                   USGS  16 55 07.5, 34.5N, 137.4E, H=314 KM, M=4.7
                         NEAR SOUTH COAST OF HONSHU, JAPAN

MAR 07  MNV  EP    03 00 48.3
        PRI  E(P)  03 00 51.5
        FRI  E(P)  03 00 52
        JAS  EP    03 00 58.7
        MHC        03 01                         *E 01 03
        SAO        03 01                         *E 01 03
        BKS        03 01                         *E 06 52    *E 10 32
                                 MICRON      PERIOD
                   MAXR(Z)  1.4                20
                   MAXH(N)  3.2                20
                   MAXH(E)  4.6                20
        MIN  EP    03 01 15
        WDC        03 01                         *E 01 22
        FHC  EP    03 01 31.5
                   Ms=5.3, DISTANCE=37°
                   USGS  02 54 04.2, 14.7N,  91.0W, H=  5 KM, M=5.1
                         GUATEMALA

MAR 07  MNV  EP    03 22 26.0
        FRI  EP    03 22 26.6
        PRI        03 22                         *E 22 31
        JAS  EP    03 22 36.0
        MHC  EP    03 22 40.0
        BKS        03 23                         *E 32 12
                                 MICRON      PERIOD
                   MAXR(Z)  3.6                20
                   MAXH(N)  9                  20
                   MAXH(E) 14                  20
        MIN  EP    03 22 53.3
        WDC  EP    03 22 57.4
        FHC  EP    03 23 08.5
                   Ms=5.8, DISTANCE=36°
                   USGS  03 15 41.2, 14.8N,  90.9W, H=  5 KM, M=5.1
                         GUATEMALA

MAR 07  FHC  IPC   09 44 45.4
        WDC  IPC   09 44 59.0
        MIN  EP    09 45 09.6
        BKS  EP    09 45 25.5  47 16
                                 MICRON      PERIOD
                   PZ              0.03        1.0
        MHC  EP    09 45 34.7
        JAS  IPC   09 45 39.5
        FRI  EP    09 45 53.5
        MNV  EP    09 45 54.2
        PRI  E(P)  09 45 55.7
                   USGS  09 43 20.4, 44.4N, 130.0W, H= 33 KM, M=5.2
                         OFF COAST OF OREGON

MAR 07  FRI  EP    21 53 38.2                  P*CP 57 28
        PRI  EP    21 53 38.3                  P*CP 57 29
        SAO        21 53                         *E 53 49
        JAS  IPD   21 53 49.4                  P*CP 57 31
        MHC  EP    21 53 50.4                  P*CP 57 32
        BKS  EP    21 53 57.5                  P*CP 57 34    *E 58 32    *E 00 00
                                 MICRON      PERIOD
                   PZ              0.06        1.0
        MIN  EP    21 54 11.4
        WDC  EP    21 54 15.5                    *E 54 22  P*CP 57 36
        FHC  EP    21 54 25.8
                   USGS  21 48 42.2, 18.9N, 103.8W, H= 86 KM, M=4.9
                         NEAR COAST OF MICHOACAN, MEXICO

MAR 08  JAS  EP    00 05 23.6
        FRI        00 05
        WDC  EP    00 05 26.7                    *E 05 23
                   USGS  23 52 47.8, 29.1S, 177.7W, H= 33 KM, M=4.6
                         KERMADEC ISLANDS

MAR 08  FHC  EPC   04 52 18.3
        BKS  EPC   04 52 19.0  02 52             *E 52 44   PPS 03 42    *E 06 32
                                                   SS 07 36    LQ 14 00    LR 17 24
                                 MICRON      PERIOD
                   PZ              0.19        1.2
                   MAXR(Z)         6.8         20
                   MAXH(N)         3.8         20
                   MAXH(E)         6.4         20
        SAO  EP    04 52 19.8
        MHC  EPC   04 52 21.2
        WDC  IP    04 52 22.6
        PRI  EP    04 52 23.3                  PP 55 35
        MIN  EPC   04 52 25.2
        JAS  IPC   04 52 26.0                  PP 55 40
        FRI  EPC   04 52 27.5                  PP 55 42
        MNV  IPC   04 52 35.4                  PP 55 43
                   Ms=6.1, DISTANCE=83°        PP 55 56
                   USGS  04 39 55.9, 10.7S, 165.0E, H= 47 KM, M=6.1
                         SANTA CRUZ ISLANDS

MAR 08  FRI  EP    09 09 06.0
        PRI  EP    09 09 08.4
        MNV  EP    09 09 09.1
        JAS  EPD   09 09 14.2
        MHC  EP    09 09 17
        BKS  EPC   09 09 21.8
                                         *E 09 46
                                 MICRON      PERIOD
                   PZ              0.05        1.0
        MIN  EP    09 09 27
        WDC  EPD   09 09 30.7
        FHC  EP    09 09 40
                   USGS  08 58 17.3, 15.5S,  74.4W, H= 71 KM, M=5.1
                         NEAR COAST OF PERU

MAR 08  BKS  EP    11 50 54.5
                                 MICRON      PERIOD
                   PZ              0.02        0.8
        MHC  EP    11 50 55.2
        JAS  EPD   11 51 00.6
        WDC  EPD   11 51 02.1
        MIN  EP    11 51 04.0
        MNV  EP    11 51 09.5
                   USGS  11 39 53.3, 20.7S, 178.6W, H=616 KM, M=4.7
                         FIJI ISLANDS REGION

MAR 08  PRI        17 01
        FRI  EP    17 01 06.5                    *E 01 02
        BKS        17 01          11 30
                                 MICRON      PERIOD  LQ 24 12    *E 26 08    LR 29 00
                   MAXR(Z)         2.3         20
                   MAXH(N)         1.8         20
                   MAXH(E)         1.5         20
        JAS  EP    17 01 07.7
        WDC  EP    17 01 11.0
        MNV  EP    17 01 16.0
                   USGS  16 48 38.6, 28.3S, 176.6W, H= 38 KM, M=5.2
                         KERMADEC ISLANDS REGION

MAR 08  BRK  EPKP  17 56 32.7
        MHC  EPKP  17 56 33.5
        FHC  EPKP  17 56 34.2
        PRI  EPKP  17 56 34.2
        WDC  EPKP  17 56 34.7
        FRI  EPKP  17 56 36.0
        JAS  EPKP  17 56 36.0
        MNV  EPKP  17 56 40.0
                   USGS  17 36 40.7, 45.1S,  95.4E, H= 33 KM, M=5.3
                         SOUTHEAST INDIAN RISE
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MAR 08  MHC  E(P)  20 12 43
        BKS  EP    20 12 43.5
        PRI  E(P)  20 12 43.5
        FRI  EP    20 12 48.5
        JAS  EP    20 12 49.0
        WDC  EP    20 12 50.8
        MNV  EP    20 12 57.2
                   KERMADEC ISLANDS REGION

MAR 08  FHC  EP    20 18 51.5
        BKS  EP    20 18 52.0  29 12     *SP 19 20     PP 22 12    PPS 30 27
                                          *E 33 25      SS 34 30     LQ 40 26
                                          LR 43 54
                                MICRON    PERIOD
                           PZ     0.1       1.0
                           MAXR(Z) 12       20
                           MAXH(N)  6       20
                           MAXH(E) 10       20
        MHC  EPC   20 18 53.7
        SAO  E(P)  20 18 54
        PRI  EP    20 18 55.7
        WDC  EPC   20 18 56.0              *E 19 14     PP 22 25
        JAS  EPC   20 18 57.3              PP 22 30
        MIN  E(P)  20 18 58
        FRI  EPC   20 19 00.0              *E 19 16
        MNV  EPC   20 19 08.2              PP 22 46
                   M=6.2, DISTANCE=82°
                   USGS  20 06 33.3, 11.8S, 166.4E, H= 72 KM, M=5.6
                         SANTA CRUZ ISLANDS

MAR 08  WDC  EP    20 26 51.7
        JAS  EP    20 26 52.5
        FRI  EP    20 26 53.3
        MNV  EP    20 26 59.5

MAR 09  BKS  IPC   02 00 44.7  00 49
        MHC  IPC   02 00 50.1  00 59
        SAO  EP    02 00 59.8
        JAS  EPC   02 01 00.2
                   BRK   02 00 38.9, 37.9N, 122.0W, H= 11 KM, ML=2.4
                         NORTHEAST OF HAYWARD, CALIFORNIA

MAR 09  PRI  EP    10 28 30.5              *E 28 42
        BKS  E(P)  10 28 31.0  39 00       LQ 50 46     LR 54 36
                                MICRON     PERIOD
                           MAXR(Z)  2.9      20
                           MAXH(N)  2.7      20
                           MAXH(E)  2.5      20
        MHC  EP    10 28 31.7
        FRI  EPC   10 28 35.5
        FHC  EP    10 28 36.0
        JAS  EPC   10 28 36.5              *E 28 49
        WDC  EPC   10 28 40.0              *E 28 51
        MIN  EP    10 28 41.2              *E 28 53
                   M=5.8, DISTANCE=84°
                   USGS  10 16 05.8, 29.3S, 177.3W, H= 72 KM, M=5.1
                         KERMADEC ISLANDS

MAR 09  PRI  EP    11 22 17.9
        JAS  EP    11 22 23.2
        MHC  EP    11 22 25.0
        WDC  EP    11 22 36.5
                   USGS  11 10 00.6, 32.1S,  68.3W, H=125 KM, M=4.6
                         MENDOZA PROVINCE, ARGENTINA

MAR 09  MNV  IPC   14 00 32.3
        FRI  IPC   14 00 44.8
        JAS  IPC   14 00 53.3
        PRI  IPC   14 00 58.1
        SAO  EPC   14 01 04.1
        MHC  IPC   14 01 06.4
        BKS  IPC   14 01 12.6
        MIN  EPC   14 01 18.6
        WDC  IPC   14 01 28.1
        FHC  EP    14 01 43
                   ML=5.9, EXPLOSION, NEVADA TEST SITE
                   USGS  14 00 00.1, 37.3N, 116.4W, H=  0 KM, M=6.0
                         SOUTHERN NEVADA

MAR 09  FRI  EP    16 55 51
        JAS  EP    16 56 02
        PRI  EP    16 56 10
        MHC  E(P)  16 56 20
        SAO        16 56              *E 56 20
        BKS        16 57              *E 57 36
        WDC        16 56              *E 56 53
                   MAG=4.0, COLLAPSE, NEVADA TEST SITE
                   USGS  16 55 02.0, 37.3N, 116.4W, H=  0 KM, M=4.1
                         SOUTHERN NEVADA

MAR 09  MHC  EPD   19 45 08.9
        BKS  EP    19 45 10.9  45 19
        SAO  IPD   19 45 15.5
        JAS  EP    19 45 25.7
                   BRK   19 45 00.3, 37.8N, 122.3W, H=  7 KM, ML=2.5
                         SOUTH OF PALO ALTO, CALIFORNIA

MAR 09  MNV  EP    20 54 39.1
        FRI  EP    20 54 52.0              *E 54 57
        JAS  EP    20 55 02.0              *E 55 08
        PRI  EP    20 55 07.6              *E 55 15
        SAO        20 55                   *E 55 21
        MHC        20 55                   *E 55 24
        MIN        20 55                   *E 55 44
        WDC        20 55                   *E 55 54
                   ML=4.2, NEVADA TEST SITE AREA
                   USGS  20 54 07.2, 37.3N, 116.3W, H=  5 KM, M=4.1
                         SOUTHERN NEVADA

MAR 10  SAO  EP    03 26 03.7
        PRI  EP    03 26 04.4
        BRK  EP    03 26 04.7
        MHC  EP    03 26 05.5
        FHC  EP    03 26 09.4
        FRI  EP    03 26 10.4
        JAS  EP    03 26 10.9
        WDC  EPD   03 26 12.7
        MIN  EP    03 26 14.3
                   USGS  03 14 58.0, 21.2S, 178.8W, H=580 KM, M=5.1
                         FIJI ISLANDS REGION

MAR 10  FRI  EPD   09 14 27.3
        JAS  IPD   09 14 33.1
        PRI  EP    09 14 33.1
        SAO  EP    09 14 38.0
        MHC  EPD   09 14 40.2
        MIN  EPD   09 14 41.8
        BKS  EPD   09 14 43.5  22 36     PPP 18 08     *E 27 00     LQ 29 28
                                          LR 35 56
                                MICRON     PERIOD
                           PZ     0.13      1.0
                           MAXR(Z)  8       20
                           MAXH(N)  6       20
                           MAXH(E) 10       20
        WDC  IPD   09 14 44.3
        FHC  EPD   09 14 54.5
                   M=6.0, DISTANCE=57°
                   USGS  09 05 01.1, 16.8N,  61.1W, H= 77 KM, M=5.9
                         LEEWARD ISLANDS

MAR 11  PRI        00 51                   *E 51 48
        FRI  EP    00 51 52.6
        MHC  EP    00 52 00.6
        JAS  IPC   00 52 02.7
        BKS        00 52                   *E 52 06     *E 01 36
        WDC  EPC   00 52 27.0
                   WEST OF GALAPAGOS ISLANDS

MAR 11  PRI  EP    09 28 33.0
        JAS  EP    09 28 40.2
        MHC  EP    09 28 43.7
        WDC  EP    09 29 04.0
                   USGS  09 20 15.6,  4.2N,  85.5W, H= 33 KM, M=4.8
                         OFF COAST OF CENTRAL AMERICA

MAR 11  MNV  EPD   20 48 53.5              *E 49 12
        JAS  EPD   20 49 03.0              *E 49 21
        MHC  EP    20 49 08.0              *E 49 27
        WDC  EP    20 49 21
                   USGS  20 40 06.1,  6.3N,  76.0W, H= 74 KM, M=5.1
                         NORTHERN COLOMBIA

MAR 12  FRI  EP    06 58 15
        MNV  EPC   06 58 16.2
        PRI  EPC   06 58 17.5
        JAS  EPD   06 58 24.0
        MHC  EPD   06 58 27.7
        WDC  EP    06 58 43.0
                   USGS  06 49 59.4,  4.0N,  85.8W, H= 33 KM, M=5.1
                         OFF COAST OF CENTRAL AMERICA

MAR 12  WDC  EP    17 05 49.7
        BKS        17 05                   *E 05 59     *PP 06 20    LQ 33 32
                                MICRON     PERIOD
                           MAXR(Z)  1.1      20
        JAS  EP    17 06 01.4
        FRI  EP    17 06 05.6
        MNV  EP    17 06 09.7
                   M=5.2, DISTANCE=80°
                   USGS  16 53 47.3, 17.2N, 147.1E, H= 48 KM, M=5.0
                         MARIANA ISLANDS REGION

MAR 12  PRI  EP    18 52 47.5
        MHC  EP    18 52 48.0
        BKS  E(P)  18 52 48.6
                                MICRON     PERIOD
                           PZ     0.01       0.8
        FRI  EP    18 52 53.3
        JAS  EP    18 52 54.0
        WDC  EP    18 52 56.6
        MNV  EP    18 53 04.2
                   USGS  18 41 26.2, 17.0S, 171.9W, H= 33 KM, M=4.9
                         TONGA ISLANDS REGION

MAR 13  PRI        03 15                   *E 15 54
        JAS  EP    03 16 05.0
        MHC        03 16                   *E 16 09
        MIN        03 16                   *E 16 27
        WDC  E(P)  03 16 27
                   USGS  03 07 38.7,  4.0N,  85.8W, H= 20 KM, M=5.0
                         OFF COAST OF CENTRAL AMERICA

MAR 13  FHC  E(P)  05 35 29
        WDC  EP    05 35 33.5              *E 35 48     PP 39 14
        MHC  EP    05 35 34.8              *E 35 50
        BKS  E(P)  05 35 33.4  46 07       *E 35 48     *E 35 55    PPS 47 22
                                           *E 48 10     SS 51 23    SSS 56 06
                                           LQ 58 58     LR 02 20
                                MICRON     PERIOD
                           MAXR(Z)  8.6      20
                           MAXH(N)  2.3      20
                           MAXH(E)  7.1      20
        MIN  EP    05 35 36
        PRI  EP    05 35 38.2              *E 35 53
        JAS  EP    05 35 39.0              *E 35 54     PP 39 26   PIP1 01 30
        FRI  EP    05 35 41.0              *E 35 56
                   M=6.1, DISTANCE=88°
                   USGS  05 22 44.0,  6.2S, 154.7E, H= 50 KM, M=5.5
                         SOLOMON ISLANDS

MAR 13  FRI  EP    10 40 01.0
        PRI  EP    10 40 03.0
        JAS  EP    10 40 10.5
        MHC  EP    10 40 14.0
        BKS  E(P)  10 40 20     47 23      LQ 52 38     LR 55 20
                                MICRON     PERIOD
                           MAXR(Z)  1.4      20
                           MAXH(N)  1.1      20
                           MAXH(E)  2.0      20
        MIN  E(P)  10 40 27
        WDC  EP    10 40 30.5
        FHC  EP    10 40 41.5
                   M=5.1, DISTANCE=47°
                   USGS  10 31 45.9,  4.0N,  85.8W, H= 33 KM, M=5.0
                         OFF COAST OF CENTRAL AMERICA

MAR 13  PRI  IPD   10 54 33.7
        SAO  EPC   10 54 36.3
        MHC  EP    10 54 47.0
        FRI  EP    10 54 47.4
        JAS  EP    10 54 55.0  55 16
        BKS        10 54                   *E 55 21     *E 55 23
                   BRK   10 54 26.4, 36.4N, 121.0W, H= 11 KM, MAG=2.5
                         NORTHEAST OF KING CITY, CALIFORNIA

MAR 13  FRI  EP    16 37 25.5
        PRI  EP    16 37 27.3
        JAS  EP    16 37 35.5
        MHC  EP    16 37 38.6
        BKS        16 37       43 31      LQ 46 18     LR 51 19
                                MICRON     PERIOD
                           MAXR(Z)  5        20
                           MAXH(N) 21        20
                           MAXH(E) 30        20
        MIN  EP    16 37 52.5
        WDC  EP    16 37 58.3
        FHC  E(P)  16 38 10
                   M=6.1, DISTANCE=36°
                   USGS  16 30 41.5, 14.8N,  91.1W, H=  5 KM, M=5.4
                         GUATEMALA

MAR 13  FRI  EPC   21 53 34.8
        PRI  EPC   21 53 39.0
        JAS  IPC   21 53 42.3                        P*CP 54 50   S*CP 58 32
        MHC  EPC   21 53 47.9
        BKS  IPC   21 53 52.3
                                MICRON     PERIOD
                           PZ     0.10       0.9
        MIN  EPC   21 53 55.0
        WDC  IPC   21 53 58.6
        FHC  IPC   21 54 09.4
                   USGS  21 44 41.3,  6.8N,  73.0W, H=165 KM, M=5.4
                         NORTHERN COLOMBIA

MAR 14  FHC  EP    06 52 04.5
        WDC  EPC   06 52 12.5
        MIN  EP    06 52 17.8
        BKS  E(P)  06 52 27.6
                                MICRON     PERIOD
                           PZ     0.01       0.7
        MHC  EP    06 52 33.2
        JAS  EPC   06 52 36.6
        FRI  EP    06 52 44.5
        PRI  EP    06 52 45.0
                   USGS  06 45 21.4, 53.0N, 174.9W, H=222 KM, M=4.6
                         ANDREANOF ISLANDS, ALEUTIAN ISLANDS

MAR 14  MNV  IPC   12 30 31.4
        FRI  IPC   12 30 43.6
        JAS  IPC   12 30 52.0
        PRI  IPC   12 30 56.9
        SAO  IPC   12 31 02.9
        MHC  IPC   12 31 05.2
        BKS  IPC   12 31 11.6              *E 32 20     *E 32 21    S*G 32 28
        MIN  IPC   12 31 17.7
        WDC  IPC   12 31 27.1
        FHC  EPC   12 31 42.3
                   ML=6.3, EXPLOSION, NEVADA TEST SITE
                   USGS  12 30 00.2, 37.3N, 116.5W, H=  0 KM, M=6.3
                         SOUTHERN NEVADA
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MAR 14  PRI  EP    12 55 36.3
        MNV  EP    12 55 38.0
        JAS  EP    12 55 44.5
        MHC  EP    12 55 46.5
        WDC  EP    12 56 02.7
        FHC  EP    12 56 13.3
                   USGS  12 47 18.9,  4.0N,  85.8W, H= 33 KM, M=4.9
                         OFF COAST OF CENTRAL AMERICA

MAR 14  MNV  E(P)  14 10 22.5
                   ML=4.1, COLLAPSE, NEVADA TEST SITE
                   USGS  14 09 52.0, 37.3N, 116.5W, H=  0 KM, M=4.3
                         SOUTHERN NEVADA

MAR 14  MNV  E(P)  14 18 45.5
        BKS  E(P)  14 19 39
                   ML=4.3, COLLAPSE, NEVADA TEST SITE
                   USGS  14 18 15.0, 37.3N, 116.5W, H=  0 KM, M=4.2
                         SOUTHERN NEVADA

MAR 14  MNV  E(P)  15 25 00                    *E 25 14
        FRI        15 25                       *E 25 21
        JAS        15 25                       *E 25 32
        PRI        15 25                       *E 25 44
        MHC        15 25                       *E 26 58
        BKS  E(P)  15 25 56                    *E 25 52
        MIN        15 25                       *E 25 58
        WDC        15 25
                   ML=4.7, COLLAPSE, NEVADA TEST SITE
                   USGS  15 24 28.8, 37.3N, 116.5W, H=  0 KM, M=4.1
                         SOUTHERN NEVADA

MAR 14  FRI  EP    20 19 23.3
        PRI  EP    20 19 24.7
        MNV  EP    20 19 29.7
        JAS  EP    20 19 33.9
        MHC        20 19                       *E 19 40
        BKS        20 19                       *E 26 28
                   USGS  20 13 55.9, 15.1N, 104.4W, H= 33 KM, M=4.9
                         OFF COAST OF MICHOACAN, MEXICO

MAR 14  PRI  EP    22 03 44.8                  *E 03 57
        FRI  E(P)  22 03 47.3
        JAS  EPD   22 03 54.7                  *E 04 05
        MNV  EPD   22 03 55.3                  *E 04 06
        WDC  EPD   22 04 10.9                  *E 04 22
                   USGS  21 52 18.9, 35.4S, 105.1W, H= 33 KM, M=4.9
                         EASTER ISLAND CORDILLERA

MAR 15  WDC  EP    04 08 18.0
        MIN  EP    04 08 22.9
        JAS  EP    04 08 36.1
        FRI        04 08                       *E 08 43
        MNV  EP    04 08 43.1
        FRI        04 08                       *E 08 46
                   USGS  03 57 23 3, 42.0N, 142.7E, H= 34 KM, M=4.6
                         HOKKAIDO, JAPAN REGION

MAR 15  PRI        04 19                       *E 19 37
        FRI        04 19                       *E 19 42
        JAS  EP    04 19 42.3
        WDC  EP    04 19 44.0
        MIN  EP    04 19 46.0
        MNV  EP    04 19 52.5

MAR 16  FHC  E(P)  08 21 55.5                  *PP 22 08
        WDC  EP    08 22 01.2                  *PP 22 13
        MIN  EP    08 22 04.8                  *PP 22 16
        BKS        08 22                       *PP 22 18
        MHC  EP    08 22 09                    *PP 22 21
        JAS  EPD   08 22 12.9                  *PP 22 25
        PRI  EP    08 22 15.2                  *PP 22 27
        FRI  EPD   08 22 17.0                  *PP 22 29
        MNV  EP    08 22 21.2                  *PP 22 33
                   USGS  08 09 57.8, 16.9N, 147.4E, H= 41 KM, M=5.1
                         MARIANA ISLANDS REGION

MAR 16  FRI  EP    10 01 07.0
        MNV  EP    10 01 12.5
        FRI  EPC   10 01 17.2
        JAS  EP    10 01 24.0
        SAO  EP    10 01 27.5
        MHC  EP    10 01 31.0
        MIN        10 01                       *E 02 10
                   ML=3.9, EAST OF HAIWEE, CALIFORNIA
                   USGS  10 09 34.4, 36.2N, 117.6W, H= 10 KM
                         CALIFORNIA-NEVADA BORDER

MAR 16  FHC  EP    11 55 45.0
        WDC  EP    11 56 00.3
        MIN  EP    11 56 10.0
        BKS        11 56
        MHC  EP    11 56 40                    LQ 58 01    LR 58 26
        JAS  EP    11 56 41.8
        FRI        11 56
        MNV  EP    11 56 56.0                  *E 56 53
        FRI  EP    11 56 57.5
                   USGS  11 54 42.5, 43.8N, 128.0W, H= 33 KM, M=4.3
                         OFF COAST OF OREGON

MAR 17  SAO  IPC   04 01 58.4
        MHC  IPC   04 02 05.7
        PRI  IPD   04 02 07.9
        FRI  IPC   04 02 13.2
        JAS  IPD   04 02 15.2
        BKS  IPC   04 02 16.3
        MNV  IPD   04 02 44.3                  *E 02 24    *E 02 34
        WDC        04 02
        FHC        04 02                       *E 02 53
                                               *E 03 02
                   BRK   04 01 52.7, 36.8N, 121.1W, H=  8 KM, ML=4.3
                         EAST OF HOLLISTER, CALIFORNIA

MAR 17  WDC  EP    04 37 08.4                  *PP 37 20
        MIN  EP    04 37 11.7                  *PP 37 24
        BKS  E(P)  04 37 13.6                  *PP 37 25
                                 MICRON        PERIOD
                             PZ    0.02          1.0
        MHC  EP    04 37 16.3                  *PP 37 28
        JAS  EP    04 37 20.5                  *PP 37 32
        FRI  EP    04 37 22.4                  *PP 37 34
        FRI  EP    04 37 24.4                  *PP 37 37
                   USGS  04 25 06.1, 17.0N, 147.4E, H= 41 KM, M=5.0
                         MARIANA ISLANDS REGION

MAR 17  JAS  IPC   14 15 54.0
        PRI  IPC   14 15 58.0
        SAO  IPC   14 16 04.3
        MHC  IPC   14 16 06.5
        BKS  IPC   14 16 13.4
        MIN  IPC   14 16 19.2                  *E 16 26    *E 17 24    *E 17 34
        WDC  IPC   14 16 28.8
                   ML=5.9, EXPLOSION, NEVADA TEST SITE
                   USGS  14 15 00.1, 37.3N, 116.3W, H=  0 KM, M=6.1
                         SOUTHERN NEVADA

MAR 17  SAO  IPC   14 42 30.0
        MHC  EP    14 42 40.8
        JAS  EP    14 42 50.3  43 07
                   BRK   14 42 27.9, 36.8N, 121.2W, H=  7 KM, MAG=2.5
                         EAST OF HOLLISTER, CALIFORNIA

MAR 17  JAS  IPC   14 45 57.0
        PRI  IPC   14 46 00.9
        SAO  IPC   14 46 07.2
        MHC  IPC   14 46 09.9
        BKS  IPC   14 46 16.5
        MIN  EPC   14 46 22.2                  *E 47 36
        WDC  IPC   14 46 32.0
                   ML=5.8, EXPLOSION, NEVADA TEST SITE
                   USGS  14 45 00.1, 37.1N, 116.1W, H=  0 KM, M=5.8
                         SOUTHERN NEVADA

MAR 17  BKS        19 37                       *E 37 36
                                 MICRON        PERIOD
                             PZ    0.02          1.0
        MHC        19 37                       *E 37 38
        PRI  EP    19 37 32                    *E 37 45
        FRI  EPD   19 37 33.9                  *E 37 47
                   USGS  19 25 15.6, 16.9N, 147.4E, H= 45 KM, M=5.0
                         MARIANA ISLANDS REGION

MAR 18  SAO  IPC   01 55 19.7
        MHC  EPC   01 55 27.1
        PRI  EP    01 55 30.0
        FRI  EP    01 55 34.5
        JAS  EPD   01 55 36.8
                   BRK   01 55 14.1, 36.8N, 121.1W, H=  10 KM, ML=2.6
                         EAST OF HOLLISTER, CALIFORNIA

MAR 18  MHC  EP    19 56 53.0                  *E 56 56
        BKS  EP    19 56 55.3
                                 MICRON        PERIOD
                             PZ    0.03          0.8
        PRI        19 56                       *E 56 56
        FRI        19 57                       *E 57 01
        JAS  EP    19 56 57.8                  *E 57 01
        WDC  EP    19 57 00.0                  *E 57 03
                   USGS  19 45 20.2, 24.6S, 179.9E, H=455 KM, M=5.0
                         SOUTH OF FIJI ISLANDS

MAR 20  FHC  EP    01 20 03.2
        WDC  EP    01 20 06.7
        MIN  EP    01 20 10.3
        BKS  EP    01 20 13.5
                                 MICRON        PERIOD
                             PZ    0.04          1.0
        MHC  EP    01 20 17.5
        JAS  EP    01 20 19.4
        FRI  EP    01 20 23.9
        MNV  EP    01 20 25.5
        PRI  EP    01 20 27.2
                   USGS  01 06 58.7, 24.3N, 121.8E, H= 40 KM, M=5.5
                         TAIWAN

MAR 20  WDC  EP    09 33 03.5                  *PP 33 16
        MHC  EP    09 33 11.5
        JAS  EP    09 33 14.5                  *PP 33 28
        FRI  EP    09 33 19.4                  *PP 33 32
                   USGS  09 21 01.0, 17.0N, 147.5E, H= 43 KM, M=4.8
                         MARIANA ISLANDS REGION

MAR 20  PRI  IPD   10 38 18.9
        SAO  IPD   10 38 22.9
        FRI  EP    10 38 27.0
        MHC  EP    10 38 31.0
        JAS  IPD   10 38 35.7
        BKS        10 38                       *E 38 39
                   BRK   10 38 10.3, 36.6N, 120.7W, H=  4 KM, ML=2.9
                         SOUTH OF LOS BANOS, CALIFORNIA

MAR 20  PRI  IPD   10 50 50.3
        SAO  EPC   10 50 54.3
        FRI  EPD   10 50 58.7
        MHC  EPC   10 51 02.2
        JAS  IPD   10 51 07.2
        BKS  E(P)  10 51 13.0                  *E 51 43
        MNV        10 51                       *E 51 32
        MIN        10 51                       *E 51 50
        WDC        10 51                       *E 52 00
                   BRK   10 50 42.0, 36.5N, 120.7W, H=  8 KM, ML=3.2
                         SOUTH OF LOS BANOS, CALIFORNIA

MAR 20  FHC  EP    12 45 34.2
        WDC  EP    12 45 40.0                  *PP 45 52
        MIN  EP    12 45 43.5
        BRK  EP    12 45 44.0
        MHC  EP    12 45 47.7
        JAS  EP    12 45 51.5                  *PP 46 04
        PRI  EP    12 45 54.0
        FRI  EP    12 45 55.9                  *PP 46 08
        MNV  EP    12 46 00.5                  *PP 46 12
                   USGS  12 33 37.4, 16.9N, 147.6E, H= 41 KM, M=5.0
                         MARIANA ISLANDS REGION

MAR 20  SAO  E(P)  13 58 39.1
        PRI  EP    13 58 41.2
        BKS  E(P)  13 58 41.4
                                 MICRON        PERIOD
                             PZ    0.04          0.8
        FHC  EP    13 58 45.2
        MHC  EP    13 58 41.5
        FRI  EPC   13 58 46.4
        JAS  EPC   13 58 46.8
        WDC  EPC   13 58 48.5
        MIN  EPC   13 58 50.3
        MNV  EPC   13 58 55.5
                   USGS  13 47 33.9, 21.6S, 179.3W, H=622 KM, M=5.2
                         FIJI ISLANDS REGION

MAR 20  JAS  EP    18 18 52.8
        WDC  EP    18 18 56.5
                   USGS  18 05 29.3, 39.2S, 177.1E, H= 45 KM, M=5.4
                         OFF EAST COAST OF NORTH ISLAND, NEW ZEALAND

MAR 21  FHC  EP    23 23 31.6
        WDC  EP    23 23 35.9
        MIN  EP    23 23 38.7
        BRK  EP    23 23 43.3
        MHC  EP    23 23 47.0
        JAS  EP    23 23 48.7
        FRI  EP    23 23 53.0
        PRI  EP    23 23 53.3
        MNV  EP    23 23 54.2
                   USGS  23 10 42.6, 24.8N, 122.6E, H=124 KM, M=4.9
                         TAIWAN REGION

MAR 22  FHC  EP    05 15 20
        WDC  EP    05 15 28.4
        MIN  EP    05 15 34.0
        BKS  E(P)  05 15 45.2                  *E 16 18
                                 MICRON        PERIOD
                             PZ    0.02          0.8
        MHC  EP    05 15 50
        JAS  EP    05 15 52.6
        MNV  EP    05 16 02.0
        FRI  EP    05 16 03.0
        PRI  EP    05 16 03
                   USGS  05 09 08.0, 54.0N, 166.1W, H= 79 KM, M=4.8
                         FOX ISLANDS, ALEUTIAN ISLANDS

MAR 22  JAS  EP    09 26 32.8
        WDC  EP    09 26 36.0
        MNV        09 26                       *E 26 58
                   USGS  09 13 55.5, 30.4S, 176.7W, H= 33 KM
                         KERMADEC ISLANDS REGION

MAR 23  WDC  IP    12 57 54.6                  *I 58 07
        MIN  EP    12 57 58.3                  *E 58 10
        BKS        12 58                       *E 58 12
        MHC  EP    12 58 02.6
        JAS  IPC   12 58 06.6                  *I 58 19
        PRI  EP    12 58 08.7
        FRI  EPC   12 58 10.7                  *E 58 23
        MNV  IPC   12 58 15.2                  *I 58 27
                   USGS  12 45 52.3, 17.0N, 147.5E, H= 42 KM, M=5.3
                         MARIANA ISLANDS REGION
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MAR 23  BKS  EP    14 49 27.4                  *E 49 44
                                  MICRON      PERIOD
                             PZ     0.004       0.9
        WDC          14 49                    *E 49 30    *E 49 40
        MHC          14 49                    *E 49 46
        MIN          14 49                    *E 49 47
        JAS  IPC     14 49 33.7               *I 49 50
        PRI          14 49                    *E 49 34    *E 49 49
        FRI  EP      14 49 35.8
        MNV  IPC     14 49 42.7               *I 49 58
                     USGS  14 36 39.2,  6.3S, 154.8E, H= 55 KM, M=5.3
                           SOLOMON ISLANDS

MAR 24  SAO  EP    04 58 36.6
        PRI  EPC   04 58 37.8
        BKS  EPC   04 58 38.7  09 06    *PP 58 59     SS 14 12     LQ 20 22
                                         LR 24 32
                                  MICRON      PERIOD
                             PZ     2           1.5
                             MAXR(Z) 42         20
                             MAXH(N) 33         20
                             MAXH(E) 29         20
        MHC  EPC   04 58 38.7
        FHC  EPC   04 58 40.1
        FRI  EPC   04 58 42.3            PKKP 16 46   RPKP 24 52
        JAS  IPC   04 58 43.7              PP 02 28   PKKP 16 47   RPKP 24 53
        WDC  EPC   04 58 46.6
        MIN  EP    04 58 47.9
        MNV  EPC   04 58 51.7            PKKP 16 43   RPKP 24 47
                     Ms=6.8, DISTANCE=85°
                     USGS  04 46 04.4, 29.9S, 177.9W, H= 33 KM, M=6.4
                           KERMADEC ISLANDS

MAR 24  FRI  EPKP  10 04 31.8
        JAS  EPKP  10 04 34.5
        MHC  EPKP  10 04 35.5
        BKS  EPKP  10 04 35.8
                                  MICRON      PERIOD
                             PZ     0.05        0.8
        WDC  EPKP  10 04 39.5
                     USGS  09 45 43.0, 56.1S,  27.4W, H= 33 KM, M=5.9
                           SOUTH SANDWICH ISLANDS REGION

MAR 25  MIN          07 49                    *E 49 22
        BKS          07 49                    *E 49 23
        JAS          07 49                    *E 49 20    *I 49 31
        FRI  EP      07 49 22.6               *E 49 35
        MNV  IP      07 49 28.0               *I 49 39
                     USGS  07 37 03.7, 17.0N, 147.4E, H= 41 KM, M=4.9
                           MARIANA ISLANDS REGION

MAR 25  WDC  EP    07 55 06.4                 *I 55 18
        MIN  EP    07 55 11.8
        JAS  EP    07 55 33.7                 *I 55 41
        MNV  EP    07 55 40.0
        FRI  EP    07 55 43.1
                     USGS  07 49 33.6, 57.0N, 153.7W, H= 28 KM, M=5.0
                           KODIAK ISLANDS REGION

MAR 25  FRI  EPD   22 24 21.2
        PRI  EPD   22 24 21.5
        MNV  EPD   22 24 25.0
        SAO  EP    22 24 30
        JAS  EPD   22 24 30.7
        MHC  EPD   22 24 33.5
        BKS  EP    22 24 38.8  31 36     *E 24 43    *E 36 46    *E 39 10
                                         *E 44 40
                                  MICRON      PERIOD
                             PZ     0.48        1.7
                             MAXR(Z) 10         20
                             MAXH(N)  7         20
                             MAXH(E)  7         20
        MIN  EP    22 24 49
        WDC  EPD   22 24 52.5
        FHC  EP    22 25 05
                     Ms=5.8, DISTANCE=47°
                     USGS  22 16 10.6,  1.2N,  90.6W, H= 33 KM, M=5.5
                           GALAPAGOS ISLANDS REGION

MAR 25  MNV  E(P)  23 10 23.0               *E 18 13
        FRI        23 10                    *E 18 30
        JAS  E(P)  23 10 32                 *E 18 25
                     USGS  23 05 07.1, 20.6N,  99.1W, H= 33 KM, M=5.0
                           CENTRAL MEXICO

MAR 27  PRI  EP    02 47 44
        BKS  EP    02 47 44.7               *E 14 16
                                  MICRON      PERIOD
                             PZ     0.05        1.0
                             MAXR(Z) 1.7        20
                             MAXH(N) 1.6        20
                             MAXH(E) 1.6        20
        MHC  EP    02 47 46                 *E 48 06
        FRI  EPC   02 47 47.7               *E 48 06
        JAS  EPC   02 47 48.8               *E 48 07
        WDC  EPC   02 47 51.7
        MNV  EPC   02 47 56.8
                     Ms=5.6, DISTANCE=85°
                     USGS  02 35 08.1, 30.1S, 177.9W, H= 36 KM, M=5.4
                           KERMADEC ISLANDS

MAR 27  SAO  EP    19 54 34.7
        PRI  EPC   19 54 35.5               *PP 54 52
        MHC  EP    19 54 36.5               *PP 54 53
        BKS  EPC   19 54 36.6               *PP 54 53    *E 21 16
                                  MICRON      PERIOD
                             PZ     0.17        1.0
        FRI  IPC   19 54 40.4               *PP 54 57
        WDC  IPC   19 54 41.4                *I 54 51    PP 58 04
        FHC  EP    19 54 42.0
        JAS  IPC   19 54 44.5                *I 54 58    PP 58 18
        MIN  EP    19 54 45.0
        MNV  IPC   19 54 49.2               *PP 55 06
                     USGS  19 42 00.8, 30.6S, 178.2W, H= 59 KM, M=5.8
                           KERMADEC ISLANDS

MAR 27  FRI  EP    21 17 23.4
        PRI  EP    21 17 25.8
        MNV  EP    21 17 26.5
        JAS  IPD   21 17 31.0
        MHC  EP    21 17 32.8
        BKS  EP    21 17 35.9
                                  MICRON      PERIOD
                             PZ     0.16        1.3
        WDC  IPD   21 17 44.2
                     USGS  21 05 06.9, 31.8S,  67.6W, H=119 KM, M=5.3
                           SAN JUAN PROVINCE, ARGENTINA

MAR 28  MNV  EP    00 27 34.0
        PRI  EP    00 27 36.2
        FRI  EP    00 27 37.1
        JAS  EP    00 27 42.5
                     USGS  00 19 16.8,  4.0N,  85.8W, H= 33 KM, M=5.0
                           OFF COAST OF CENTRAL AMERICA

MAR 28  FHC  IPD   01 54 38.0
        WDC  IPD   01 54 43.0
        MIN  IPD   01 54 46.2
        BKS  EP    01 54 47.1
                                  MICRON      PERIOD
                             PZ     0.57        0.8
        MHC  IPD   01 54 50.4
        SAO  EP    01 54 51.2
        JAS  IPD   01 54 53.5
        FRI  IPD   01 54 55.8
        FRI  IPD   01 54 57.7
        MNV  IPD   01 55 02.1
                     USGS  01 42 27.3, 13.8N, 144.7E, H=116 KM, M=5.5
                           MARIANA ISLANDS

MAR 28  WDC  EP    07 01 43.7
        MIN  EP    07 01 50.5
        BKS        07 02                    *E 10 00
                                  MICRON      PERIOD
                             MAXR(Z)  1.8       20
                             MAXH(N)  1.8       20
        JAS  EP    07 02 09.8
        MNV  EP    07 02 19.0
        FRI  EP    07 02 19.1
                     Ms=4.8, DISTANCE=34°
                     USGS  06 55 15.2, 52.7N, 167.2W, H= 36 KM, M=5.2
                           FOX ISLANDS, ALEUTIAN ISLANDS

MAR 28  MNV  EP    15 00 33.4
        JAS  EP    15 00 40.8
                     USGS  14 52 15.8,  3.9N,  85.7W, H= 33 KM, M=5.0
                           OFF COAST OF CENTRAL AMERICA

MAR 28  MNV  EP    15 06 37.5
        PRI  EP    15 06 37.6
        FRI  EP    15 06 37.7
        JAS  EP    15 06 45.2
        MHC        15 06                    *E 06 49
                     USGS  14 58 21.2,  4.0N,  85.8W, H= 33 KM, M=5.0
                           OFF COAST OF CENTRAL AMERICA

MAR 28  PRI        18 09                    *E 09 16
        FRI        18 09                    *E 09 17
        MNV  IPD   18 09 23.5
        MHC        18 09                    *E 09 27
        JAS  IPD   18 09 27.1
        WDC  IP    18 09 51.4
                     USGS  18 02 13.6,  5.0N, 100.6W, H= 33 KM, M=5.0
                           EAST CENTRAL PACIFIC OCEAN

MAR 28  MNV  IPC   20 30 07.7
        MIN  EP    20 30 18.9
        FRI  EP    20 30 19.2
        WDC  E(P)  20 30 20.5
        JAS  IPC   20 30 20.6
        PRI  EP    20 30 27.3
        MHC  EP    20 30 28.2
        FHC  IP    20 30 29.9
        BKS        20 30       39 26     LQ 46 36     LR 51 00
                                  MICRON      PERIOD
                             MAXR(Z)  2.3       20
                             MAXH(N)  2.4       20
                             MAXH(E)  2.3       20
                     Ms=5.5, DISTANCE=66°
                     USGS  20 19 45.6, 33.8N,  38.6W, H= 33 KM, M=5.5
                           NORTH ATLANTIC RIDGE

MAR 29  FRI  EP    05 47 51.0
        MNV  EP    05 47 52.5
        PRI  EP    05 47 53.0
        JAS  EP    05 47 59.5               *E 04 34
        SAO  EP    05 48 01.5
        MHC  EP    05 48 03.5
        BKS  EP    05 48 09     55 04       PP 58 05     SS 59 04     LQ 00 16
                                            LR 02 52
                                  MICRON      PERIOD
                             PZ     0.8         1.8
                             MAXR(Z) 10         20
                             MAXH(N) 16         20
                             MAXH(E) 13         20
        MIN  EP    05 48 16.5
        WDC  EP    05 48 20.0
        FHC  EP    05 48 31
                     Ms=6.1, DISTANCE=53°
                     USGS  05 39 35.5,  3.9N,  85.9W, H= 33 KM, M=5.9
                           OFF COAST OF CENTRAL AMERICA

MAR 29  SAO  EPD   12 03 14.2
        BKS  EPD   12 03 14.7
                                  MICRON      PERIOD
                             PZ     0.05        1.0
        MHC  EPD   12 03 15.5
        PRI  EPD   12 03 15.7
        FHC  EP    12 03 18
        FRI  EPD   12 03 20.9
        JAS  EPD   12 03 21.2
        WDC  EPD   12 03 22.2
        MIN  EPD   12 03 24.0
        MNV  EPD   12 03 31.0
                     USGS  11 52 19.3, 17.1S, 179.1W, H=543 KM, M=4.9
                           FIJI ISLANDS REGION

MAR 29  FHC  EPC   19 58 32.4
        WDC  EPC   19 58 38.6
        MIN  EPC   19 58 43.0
        BKS  EPC   19 58 50.5
                                  MICRON      PERIOD
                             PZ     0.11        1.0
        MHC  EPC   19 58 55.2
        JAS  EPC   19 58 57.7
        FRI  EPC   19 59 04.2
        PRI  EPC   19 59 04.6
        MNV  EPC   19 59 05.0
                     USGS  19 48 39.8, 46.0N, 149.5E, H=162 KM, M=5.5
                           KURIL ISLANDS

MAR 30  WDC  EP    06 04 15.5
        MIN  EP    06 04 18.0
        JAS  EP    06 04 31.7
        FRI  EP    06 04 37.3
        MNV  EP    06 04 38.7
                     USGS  05 53 14.3, 39.6N, 143.2E, H= 42 KM, M=5.4
                           OFF EAST COAST OF HONSHU, JAPAN

MAR 30  WDC  EP    06 15 14.1
        MIN  EP    06 15 18.2
        JAS  EP    06 15 32.0
        FRI  EP    06 15 37.5
        MNV  EP    06 15 38.2
                     USGS  06 04 14.5, 39.5N, 143.4E, H= 40 KM, M=5.3
                           OFF EAST COAST OF HONSHU, JAPAN

MAR 30  MHC        23 10                    *E 10 08
        FRI        23 10                    *E 10 14
        JAS  EP    23 10 01.2
        WDC  EP    23 10 03.0
        MNV  EP    23 10 11.4
                     USGS  22 58 37.7, 15.5S, 172.4W, H= 33 KM, M=5.1
                           SAMOA ISLANDS REGION

MAR 31  FHC  EP    00 07 24.4               *I 07 39
        WDC        00 07                    *I 07 38
        JAS        00 08                    *E 08 24

APR 01  MIN        04 43                    *E 43 39
        JAS  IPC   04 43 52.7
        MNV  EP    04 43 53.8
        FRI  E(P)  04 43 58.0
                     USGS  04 31 16.7, 51.1N,  98.0E, H= 33 KM, M=5.2
                           USSR-MONGOLIA BORDER REGION

APR 01  MNV  EPD   19 30 06.0
        FRI  EPD   19 30 08.5
        PRI  EPD   19 30 12.0
        JAS  EPD   19 30 15.9
        SAO  EP    19 30 18
        MHC  EPD   19 30 21.7
        BKS  EP    19 30 26.0
                                  MICRON      PERIOD
                             PZ     0.06        0.8
        MIN  EPD   19 30 28.7
        WDC  EPD   19 30 32.1
        FHC  EPD   19 30 43.2
                     USGS  19 21 14.4,  6.8N,  73.0W, H=160 KM, M=5.2
                           NORTHERN COLOMBIA
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APR 01  WDC  EPC   21 16 21.5                LQ 41 48
        BKS        21 16                    PERIOD
                                  MICRON      20
                   MAXR(Z)          1.1      20
                   MAXH(E)          0.9
        JAS  EPC   21 16 24.2
        FRI  EP    21 16 25.0
        MNV  EP    21 16 33.5
                   Ms=5.2, DISTANCE=84°
                   USGS  21 03 57.3, 12.9S, 166.4E, H= 84 KM, M=5.8
                         SANTA CRUZ ISLANDS

APR 02  MNV  EP    08 39 39.8
        FRI  EP    08 39 41
        PRI  EP    08 39 42
        JAS  EP    08 39 49.8
        MHC  EP    08 39 54.5
        MIN  EP    08 40 05
        WDC  EP    08 40 09.5
                   USGS  08 31 27.0,  7.1N,  82.6W, H= 33 KM, M=5.2
                         SOUTH OF PANAMA

APR 02  MHC  EP    10 36 26                 •E 36 42
        FRI  EP    10 36 29.5               •E 36 46
        JAS  EPC   10 36 30.4               •E 36 48
        WDC  EP    10 36 33.5               •E 36 56
        MNV  EP    10 36 38.5
                   USGS  10 23 49.7, 30.3S, 177.9W, H= 32 KM, M=5.1
                         KERMADEC ISLANDS

APR 02  MNV  IP    12 56 58.5
        JAS  EPC   12 57 19.8
        MIN  EPC   12 57 26.9
        MHC  EPC   12 57 36.2
        WDC  EPC   12 57 36.7
        BKS  E(P)  12 57 50.1
        PRI  EPC   12 57 51.7
                   ML=4.3, CENTRAL NEVADA
                   USGS  12 56 36.5, 39.6N, 117.7W, H=  5 KM
                         NEVADA

APR 02  FRI  EPC   16 02 39.7
        JAS  EP    16 02 41.0
        WDC  EPC   16 02 44.0
        MNV  EP    16 02 48.8
                   USGS  15 49 58.1, 30.7S, 178.1W, H= 33 KM, M=5.1
                         KERMADEC ISLANDS

APR 02  WDC  EP    17 19 16.0               •E 19 26
        JAS        17 19                    •E 19 32
        FRI  EP    17 19 38                 •E 20 18
        PRI        17 19                    •E 19 42
        MNV        17 19                    •E 19 49
                   USGS  17 07 54.8, 36.0N, 141.6E, H= 34 KM, M=5.5
                         NEAR EAST COAST OF HONSHU, JAPAN

APR 02  FRI  EPKP  20 52 00.3
        FRI  EPKPC 20 52 00.4
        MNV  EPKPC 20 52 00.7
        JAS  EPKPC 20 52 02.3
        MHC  EPKPC 20 52 03.1
        BKS  EPKPC 20 52 04.5
                                  MICRON      PERIOD
                   PKPZ             0.09        0.75
        MIN  EPKP  20 52 06.5
        WDC  EPKPC 20 52 07.0
                   USGS  20 33 07.1, 57.4S,  25.7W, H= 33 KM, M=5.8
                         SOUTH SANDWICH ISLANDS REGION

APR 03  WDC  EPC   00 33 37.5               •E 33 44
        MIN  E(P)  00 33 43                 •E 33 49
        JAS  EPC   00 34 02.6               •E 34 09
        MNV  E(P)  00 34 11                 •E 34 18
        FRI  EP    00 34 11
                   USGS  00 26 54.0, 52.2N, 169.6W, H= 22 KM, M=5.0
                         FOX ISLANDS, ALEUTIAN ISLANDS

APR 03  MIN  EP    16 12 40.5
        JAS  IPD   16 12 49.0
        WDC  EP    16 12 51.8  13 15
        BKS  EP    16 12 55.6               •E 13 22
        MHC  EP    16 12 59.8
        SAO        16 13                    •E 13 07
        FRI  EP    16 13 04.3
                   BRK   16 12 21.5, 39.5N, 120.7W, H=  5 KM, ML=3.4
                         NORTHWEST OF TRUCKEE, CALIFORNIA

APR 04  FRI  EPC   17 52 50.5
        JAS  EPC   17 52 51.5
        WDC  EPC   17 52 54.0
        MNV  EPC   17 53 00
                   USGS  17 41 05.4, 20.1S, 173.9W, H= 57 KM, M=5.0
                         TONGA ISLANDS

APR 04  MNV  EPC   18 02 23.5
        JAS  EP    18 02 33
        MHC  EP    18 02 38.4
                   USGS  17 55 21.9, 14.3N,  87.6W, H= 45 KM, M=4.8
                         HONDURAS

APR 04  WDC  EP    22 47 55.5
        JAS  EP    22 48 15.6
                   USGS  22 38 29.5, 49.4N, 150.6E, H=332 KM, M=4.7
                         NORTHWEST OF KURIL ISLANDS

APR 05  MHC  EP    09 59 40.0
        FRI  EPC   09 59 45.6
        JAS  EP    09 59 46.3
        WDC  EP    09 59 48.2
        MIN  EP    09 59 50
        MNV  EP    09 59 56.6
                   USGS  09 48 20.6, 15.2S, 173.3W, H= 33 KM, M=5.5
                         TONGA ISLANDS

APR 05  WDC  EP    17 07 18.0
        MIN  EP    17 07 20.9
        JAS  EP    17 07 33.0
        MNV  EP    17 07 34.0
        FRI  EP    17 07 38.5
        PRI  EP    17 07 40.5
                   USGS  16 54 40.1, 40.2N, 112.2E, H= 27 KM, M=5.3
                         NORTHEASTERN CHINA

APR 06  FHC  E(P)  09 20 51.8
        WDC  EP    09 20 56.8
        BKS  IP    09 21 05.4
                                  MICRON      PERIOD
                   PZ               0.07        1.0
        MHC  EP    09 21 08.5
        JAS  IPC   09 21 11.3
        PRI  EP    09 21 15.8
        FRI  EP    09 21 16.3
        MNV  IPC   09 21 18.5
                   USGS  09 09 45.4, 29.5N, 139.0E, H=416 KM, M=4.9
                         SOUTH OF HONSHU, JAPAN

APR 06  WDC  E(P)  14 02 15.4
        JAS  E(P)  14 02 19.6               •E 05 32
        MNV  E(P)  14 02 27.2               •E 05 38
                   USGS  13 49 10.8,  3.9S, 152.1E, H= 21 KM, M=5.8
                         NEW IRELAND REGION

APR 07  PRI  EP    00 50 11.8
        MHC  E(P)  00 50 12.7
        FRI  E(P)  00 50 17.6
        JAS  EP    00 50 18.4
        WDC  EPC   00 50 20.9
        MNV  EP    00 50 28.8
                   USGS  00 38 28.0, 20.8S, 173.9W, H= 33 KM, M=4.8
                         TONGA ISLANDS

APR 07  WDC  IPC   07 22 04.1               •E 22 53
        MIN  EP    07 22 07.8
        BKS  EPC   07 22 08.6               •E 23 04
                                  MICRON      PERIOD
                   PZ               0.12        1.0
        MHC  EPC   07 22 12.2               •E 23 01
        JAS  IPC   07 22 15.8               •E 23 05
        PRI  EP    07 22 17.3
        FRI  EPC   07 22 20.0               •E 23 09
        MNV  EPC   07 22 24.1               •E 23 15
                   USGS  07 10 15.8, 17.6N, 145.5E, H=217 KM, M=5.5
                         MARIANA ISLANDS

APR 08  FRI  EP    00 43 55.0               •E 44 10
        PRI  EP    00 43 56.2               •E 44 11
        MNV  EP    00 43 57.2               •I 44 12
        JAS  EP    00 44 02.0               •I 44 17
        MHC  EP    00 44 03.8
        BRK  E(P)  00 44 06.3               •E 44 22
        MIN  EP    00 44 13                 •E 44 28
        WDC  EP    00 44 16.5               •I 44 30
        FHC  EP    00 44 21.5               •E 44 37
                   USGS  00 31 53.1, 28.1S,  70.8W, H= 52 KM, M=5.5
                         CENTRAL CHILE

APR 08  FHC  E(P)  02 54 07.7
        WDC  E(P)  02 54 08.5
        MIN  E(P)  02 54 09.5
        MNV  E(P)  02 54 17.3
        JAS  E(P)  02 54 21.2
        BKS  E(P)  02 54 22                 •E 58 35    •E 05 03    •E 13 27
                                            •E 13 41    •E 29 49
                                  MICRON      PERIOD
                   PZ               0.17        1.5
        MHC  E(P)  02 54 24
        FRI  E(P)  02 54 25.2
        PRI  E(P)  02 54 30.0
                   USGS  02 40 27.0, 40.3N,  63.8E, H= 33 KM, M=6.5
                         UZBEK SSR

APR 08  WDC  E(P)  03 12 45.7
        JAS  E(P)  03 12 59.8
        FRI  E(P)  03 13 06
                   USGS  02 59 05.5, 40.2N,  63.8E, H= 33 KM, M=6.2
                         UZBEK SSR

APR 08  PRI  EPC   15 22 16.3
        FRI  EPC   15 22 21.0
        SAO  EP    15 22 27.7
        MHC  EP    15 22 35.8
        JAS  EPC   15 22 36.8
        MNV  EP    15 22 41.5
        BKS  EP    15 22 45.2               •E 23 49
        MIN  EPC   15 23 13.7
        WDC  EP    15 23 20
        FHC        15 23                    •E 23 32
                   ML=5.0, NEWHALL AREA
                   USGS  15 21 37.9, 34.4N, 118.7W, H= 16 KM, M=4.7
                         SOUTHERN CALIFORNIA

APR 09  MNV  EPC   07 17 54.4
        FRI  EP    07 17 55
        PRI  E(P)  07 17 58.0
        JAS  EPC   07 18 02.3               •E 19 27    •E 23 07
        MHC  E(P)  07 18 07.1
        BKS  EP    07 18 12.0  25 54        •E 18 41    •E 19 31    •E 28 03
                                            •E 32 04    •E 35 33
                                  MICRON      PERIOD
                   PZ               0.71        1.5
                   MAXR(Z) 35              20
                   MAXH(N) 12              20
                   MAXH(E) 44              20
        WDC  EP    07 18 21
        FHC  EP    07 18 32
                   Ms=6.5, DISTANCE=54°
                   USGS  07 08 47.0,  0.8N,  79.8W, H=  9 KM, M=6.1
                         NEAR COAST OF ECUADOR

APR 10  SAO  EP    17 23 02.5
        BKS  EP    17 23 03.6               •E 25 01    •E 25 42
                                  MICRON      PERIOD
                   PZ               0.2         1.0
        MHC  EPD   17 23 03.9
        PRI  EPD   17 23 04.0
        FHC  EP    17 23 07.0
        FRI  EPD   17 23 09.1               •E 32 18
        JAS  EPD   17 23 09.5               •E 25 09    •E 32 18
        WDC  EP    17 23 10.8               •E 25 10    •E 32 20
        MNV  EPD   17 23 19.2               •E 25 18    •E 32 39
                   USGS  17 12 09.2, 17.6S, 178.5W, H=560 KM, M=5.7
                         FIJI ISLANDS REGION

APR 11  WDC  IPD   03 03 28.6
        MIN  EP    03 03 32.8
        JAS  IPD   03 03 47.4
        FRI  EP    03 03 53.4
                   USGS  02 53 02.6, 43.8N, 146.3E, H= 97 KM, M=5.1
                         KURIL ISLANDS

APR 11  BKS  EPC   08 03 49.6
                                  MICRON      PERIOD
                   PZ               0.03        1.0
        MHC  EP    08 03 50.1
        FRI  EP    08 03 55.4
        JAS  EP    08 03 56.5
        WDC  EP    08 03 57.2
        MNV  EP    08 04 07.0
                   SAMOA ISLANDS REGION

APR 11  FHC  EP    13 12 24.5
        WDC  IPC   13 12 29.1
        MIN  EP    13 12 32.5
        BKS  E(P)  13 12 40.5
        MHC  EP    13 12 44.4
        JAS  IPC   13 12 45.9
        MNV  IPC   13 12 51.0
        FRI  EP    13 12 51.3
        PRI  EP    13 12 52.1
                   USGS  13 01 49.6, 43.0N, 130.9E, H=545 KM, M=4.8
                         EASTERN USSR-NORTHEASTERN CHINA BORDER REGION

APR 11  FHC  IPC   13 14 12.4
        WDC  IPC   13 14 17.2                        PP 16 12
        MIN  EPC   13 14 20.6
        BKS  EPC   13 14 28.4
                                  MICRON      PERIOD
                   PZ               0.09        1.0
        MHC  EP    13 14 32.3
        JAS  IPC   13 14 33.9                        PP 16 31    •E 17 42
        SAO  EP    13 14 34.3
        MNV  IPC   13 14 39.1                        PP 16 37
        FRI  EP    13 14 39.3                        PP 16 37
        PRI  EP    13 14 40.5
                   USGS  13 03 35.7, 42.8N, 130.9E, H=529 KM, M=5.0
                         EASTERN USSR-NORTHEASTERN CHINA BORDER REGION

APR 12  FHC  IPC   00 36 31.0  36 53
        WDC  IPD   00 36 46.9  37 18
        MIN  EP    00 36 56.9
        BRK  E(P)  00 36 58
        MHC  EP    00 37 12.3
        SAO  EP    00 37 18.4
        JAS  EP    00 37 20.7  38 22
        PRI  EP    00 37 31.8
        FRI  EPD   00 37 33.9
        MNV  EP    00 37 41.8
                   BRK   00 36 00.6, 42.3N, 125.3W, H=  2 KM, ML=4.0
                         NORTHWEST OF CRESCENT CITY, CALIFORNIA
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APR 12  WDC  EP     04 48 36.3
        MIN  EP     04 48 42.2
        BKS         04 48                    *E 58 40
        MHC  EP     04 48 58.2
        JAS  EP     04 49 01.0
        FRI  EP     04 49 09.8
        MNV  EP     04 49 10.0
        PRI         04 49                    *E 49 15
                USGS  04 41 51.4, 52.4N, 170.2W, H= 38 KM, M=5.2
                      FOX ISLANDS, ALEUTIAN ISLANDS

APR 12  WDC  EP     05 41 18.2
        MIN  EP     05 41 21.6
        MHC  EP     05 41 26.1
        JAS  EP     05 41 30.0
        FRI  EP     05 41 34.2
        MNV  EP     05 41 38.4
                USGS  05 29 15.3, 17.5N, 147.2E, H= 36 KM, M=5.1
                      MARIANA ISLANDS REGION

APR 12  PRI  E(P)   23 02 26.3
        BKS  EP     23 02 27.0
                              MICRON      PERIOD
                    PZ          0.04         1.0
        MHC  EP     23 02 27.1
        FRI  EP     23 02 30.5
        JAS  IPD    23 02 31.8
        FHC  EP     23 02 32.0
        WDC  IPD    23 02 34.5
        MIN  EP     23 02 35.7
                USGS  22 49 50.3, 32.7S, 179.7W, H=143 KM, M=5.5
                      SOUTH OF KERMADEC ISLANDS

APR 13  WDC  IPC    00 48 29.7
        FHC  IPD    00 48 31.3
        MIN  EP     00 48 31.8
        MNV  EP     00 49 03.5
        JAS  EP     00 49 06.3
        BKS  EPC    00 49 07.0                *E 49 24    *E 51 38
                              MICRON      PERIOD
                    PZ          0.09         1.0
        MHC  EP     00 49 14.0
        FRI  IPC    00 49 21.1
        PRI  EP     00 49 31.5
                USGS  00 47 17.1, 45.2N, 120.8W, H= 15 KM, M=4.5
                      WASHINGTON-OREGON BORDER REGION

APR 13  WDC  EP     07 36 10.0
        MIN  EP     07 36 14.5
        JAS  EP     07 36 29.9
                USGS  07 26 20.2, 47.1N, 152.5E, H= 94 KM, M=5.0
                      KURIL ISLANDS

APR 13  FRI  EP     16 22 12.1
        JAS  EP     16 22 13.2
        WDC  EP     16 22 16.2
        MNV  EP     16 22 21.0


APR 13  PRI  EP     20 22 46.1
        FRI  EP     20 22 46.3
        MNV  EP     20 22 50.0
        JAS  EP     20 22 57.6
        MHC  EP     20 22 59.5
        BKS  EPC    20 23 07.5  27 36     LR 30 24
                              MICRON      PERIOD
                    PZ          0.12         1.2
                    MAXR(Z)     5            20
                    MAXH(N)     4.3          20
                    MAXH(E)     3.8          20
        MIN  EP     20 23 19.8
        WDC  EP     20 23 23.1
                    M=5.1, DISTANCE=25°
                USGS  20 17 48.2, 18.5N, 104.8W, H= 33 KM, M=5.3
                      NEAR COAST OF JALISCO, MEXICO

APR 14  FHC  EPC    00 00 33.4
        WDC  EPC    00 00 39.1
        MIN  EP     00 00 43.2
        BKS  E(P)   00 00 49.5
        MHC  EP     00 00 54.6
        JAS  EPC    00 00 57.1
        FRI  EP     00 01 02.8
        MNV  E(P)   00 01 04
                USGS  23 49 46.1, 41.7N, 141.2E, H= 99 KM, M=5.3
                      HOKKAIDO, JAPAN REGION

APR 14  MHC  EP     00 57 04.2
        PRI  EPC    00 57 04.5
        FRI  EPC    00 57 10.1
        JAS  EPC    00 57 10.2
        WDC  EPC    00 57 10.8
        MIN  EP     00 57 12
        MNV  EPC    00 57 20.4
                USGS  00 46 05.3, 14.8S, 177.8W, H=367 KM, M=4.9
                      FIJI ISLANDS REGION

APR 14  MHC  EP     08 11 43
        FRI  EPC    08 11 47.5
        JAS  EPC    08 11 48.2
        WDC  EPC    08 11 49.8
        MIN  EPC    08 11 51.5
        MNV  EPC    08 11 57.0
                USGS  08 00 28.8, 22.2S, 179.5W, H=576 KM, M=4.6
                      SOUTH OF FIJI ISLANDS

APR 14  WDC         14 14                    *E 14 00
        JAS  EPC    14 14 12.7
                USGS  14 00 46.0, 23.2N, 120.8E, H= 33 KM, M=5.5
                      TAIWAN

APR 14  JAS  EPKP   15 45 19.5
        WDC  EPKP   15 45 20.5
        MIN  EPKP   15 45 20.6
        MNV  EPKP   15 45 21.5
                USGS  15 26 16.8, 51.9S, 139.5E, H= 33 KM, M=5.4
                      SOUTH OF AUSTRALIA

APR 14  SAO  IP     20 44 12.1
        PRI  IPD    20 44 18.1
        MHC  EP     20 44 23.5  44 37
        FRI  EP     20 44 28.8
        BKS  EPD    20 44 35.8                *E 45 05
                BRK   20 44 06.3, 36.5N, 121.2W, H=  2 KM, ML=2.7
                      NORTH OF KING CITY CALIFORNIA

APR 16  PRI  IPC    17 07 39.8
        SAO  IPC    17 07 43.8
        FRI  IPD    17 07 46.6
        MHC  EPC    17 07 50.9
        JAS  IPC    17 07 55.4
        MNV  EPC    17 08 20.1
                BRK   17 07 30.8, 36.6N, 120.6W, H=  4 KM, ML=2.7
                      SOUTHEAST OF LOS BANOS, CALIFORNIA

APR 17  FHC  IPC    20 26 21.9  26 32
        WDC  IPC    20 26 34.9
        MIN  EP     20 26 44.6
        MHC         20 27                    *E 27 05
        SAO         20 27                    *E 27 12
                BRK   20 26 07.2, 40.3N, 124.5W, H=  2 KM, MAG=3.0
                      SOUTHWEST OF EUREKA, CALIFORNIA

APR 18  MNV  EPKP   00 41 13.4
        FRI  EPKP   00 41 13.5
        JAS  EPKP   00 41 14.0
        PRI         00 41                    *E 41 15
        MHC         00 41                    *E 41 20
                USGS  00 21 24.5, 53.2S,  25.3E, H= 33 KM, M=5.4
                      SOUTH OF AFRICA

APR 18  FRI  IPC    05 13 07.3  13 18
        MNV  IPD    05 13 14.8
        JAS  IPD    05 13 19.4  13 40
        PRI  EP     05 13 27.5
                BRK   05 12 51.1, 37.3N, 118.6W, H=  5 KM, MAG=3.1
                      BISHOP AREA, CALIFORNIA

APR 18  FRI  EPD    19 52 11.4               *PP 52 40
        PRI  EPD    19 52 12.6
        MNV  IPD    19 52 13.4               *PP 52 42
        SAO  EP     19 52 16.5
        JAS  IPD    19 52 18.3               *PP 52 48
        MHC  EPD    19 52 20.3
        BKS  EP     19 52 23.6                *E 52 53
                              MICRON      PERIOD
                    PZ          0.32         1.3
        MIN  EPD    19 52 29.4
        WDC  IPD    19 52 32.2               *PP 53 02
        FHC  EPD    19 52 39.0               *PP 53 09
                USGS  19 40 20.5, 25.8S,  68.8W, H=113 KM, M=5.6
                      CHILE-ARGENTINA BORDER REGION

APR 19  WDC  EPD    07 15 39.3                *E 15 48
        JAS  EP     07 15 44.5                *E 15 54
        FRI  EP     07 15 46.9                *E 15 56
        MNV  EPD    07 15 53.7                *E 16 03
                USGS  07 02 17.3,  8.5S, 148.3E, H= 30 KM, M=5.2
                      EAST PAPUA, NEW GUINEA REGION

APR 19  WDC  EP     11 01 53
        MIN  EP     11 01 58
        JAS  EP     11 02 12
        FRI  EP     11 02 17
        MNV  EP     11 02 19
                USGS  10 50 53.3, 40.2N, 143.2E, H= 17 KM, M=5.3
                      OFF EAST COAST OF HOSHU, JAPAN

APR 20  SAO  EP     06 15 14.9
        PRI  EP     06 15 16.5
        MHC  EP     06 15 16.6
        FRI  EP     06 15 22.0
        JAS  IPC    06 15 22.3
        WDC  EP     06 15 23.1
        MIN  EP     06 15 25.5
        MNV  IPC    06 15 31.8
                USGS  06 04 17.7, 17.8S, 178.6W, H=523 KM, M=4.7
                      FIJI ISLANDS REGION

APR 20  JAS  EP     08 43 33.2
        MNV  EP     08 43 42.5
                USGS  08 30 35.7,  7.2S, 155.1E, H= 33 KM, M=5.1
                      SOLOMON ISLANDS

APR 20  MIN         09 20                    *E 20 17
        JAS  IPD    09 20 25.4
        FRI         09 20                    *E 20 30
        MNV  IP     09 20 33.7

APR 20  FRI  EP     10 02 31                 *E 06 26
        PRI         10 02                    *E 02 36
        MNV  EP     10 02 39.0               *E 06 15
        JAS  EP     10 02 47.5               *E 06 14    *E 06 48
        BKS  E(P)   10 03 09                 LQ 06 00
        MIN  EP     10 03 21
        WDC  EP     10 03 24.7
                USGS  09 59 56.8, 28.4N, 112.0W, H= 33 KM, M=4.7
                      GULF OF CALIFORNIA

APR 20  MNV         11 58                    *E 58 36
        FRI         11 58                    *E 58 43
        JAS         11 58 48.0
        MIN  EP     11 58 52.2
        WDC  EP     11 58 54.5
        FHC         11 59                    *E 59 04
                USGS  11 47 40.3, 15.0N,  45.1W, H= 33 KM, M=5.2
                      NORTH ATLANTIC RIDGE

APR 20  FHC  EP     14 32 16.1               *E 32 22
        WDC  IPD    14 32 22.1               *I 32 27
        MIN  EP     14 32 27.0
        JAS  IP     14 32 50.7               *I 32 59
        MHC         14 32                    *E 32 53
        MNV  EP     14 32 54.3               *I 33 00
        FRI         14 33                    *E 33 01
                USGS  14 27 20.6, 60.4N, 140.6W, H= 33 KM, M=4.8
                      SOUTHEASTERN ALASKA

APR 21  FHC  EP     05 15 49.8
        WDC  EPC    05 15 50.4
        MIN  EPC    05 15 52.5
        JAS  EPC    05 16 04.5
        MNV  EPC    05 16 04.7
        FRI  EP     05 16 10.4
                USGS  05 02 57.4, 49.9N,  78.8E, H=  0 KM, M=5.3
                      EASTERN KAZAKH, SSR

APR 21  MHC         20 37                    *E 37 32
        FRI  EP     20 37 36.6
        JAS  IPC    20 37 37.2
        WDC  EP     20 37 39.2
        MNV  EP     20 37 45.1
                USGS  20 25 58.4, 24.9S, 179.9E, H=501 KM, M=5.4
                      SOUTH OF FIJI ISLANDS

APR 22  FHC  EP     04 22 32.2
        WDC  IPC    04 22 47.3
        JAS  EP     04 23 29.2
        MNV  EP     04 23 43.0
        FRI  EP     04 23 44.2
                USGS  04 21 39.1, 43.6N, 127.0W, H= 33 KM, M=4.2
                      OFF COAST OF OREGON

APR 22  FHC  EPC    19 57 10.6  57 32
        WDC  EP     19 57 26.0
        MIN  E(P)   19 57 44                 *E 58 23
        MHC  E(P)   19 57 57.5
        JAS  E(P)   19 58 03.6
        FRI  E(P)   19 58 16
                BRK   19 56 42.1, 41.1N, 126.0W, H=  2 KM, ML=3.8
                      WEST OF EUREKA, CALIFORNIA

APR 23  FRI  IPC    03 07 21.4  07 35
        MNV  IPD    03 07 21.8
        JAS  IPC    03 07 31.4
        PRI  EP     03 07 39.7
        SAO  EP     03 07 43.8
        MHC  EP     03 07 45.0
                BRK   03 07 02.5, 37.4N, 118.5W, H=  5 KM, MAG=3.3
                      BISHOP AREA, CALIFORNIA

APR 23  FHC  EP     08 47 13
        FRI  EP     08 47 14.5
        JAS  EPC    08 47 15.0
        WDC  EPC    08 47 16.5
        MIN  EP     08 47 18.5
        MNV  EP     08 47 25
                USGS  08 36 06.9, 20.1S, 177.8W, H=564 KM, M=5.1
                      FIJI ISLANDS REGION

APR 23  WDC  EP     09 46 30.7
        MIN  EP     09 46 35
        JAS  EP     09 46 48
        MNV  EP     09 46 57.0
                USGS  09 35 46.4, 43.3N, 146.3E, H= 52 KM, M=4.7
                      KURIL ISLANDS
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APR 24  WDC  EP     01 36 44
        JAS  EP     01 37 00
        MNV  EP     01 37 10
                    USGS  01 25 17.5, 34.1N, 141.6E, H= 43 KM, M=5.1
                          OFF EAST COAST OF HONSHU, JAPAN

APR 24  BKS  EP     08 41 49
        PRI  EP     08 41 49.1
        MHC  EP     08 41 49.9
        FRI  EP     08 41 53.8
        JAS  EPC    08 41 54.8
        WDC  EP     08 41 57.5
        MNV  EPC    08 42 02.7
                    USGS  08 29 23.2, 30.3S, 178.2W, H=117 KM, M=4.7
                          KERMADEC ISLANDS

APR 24  FRI  EP     11 17 14.5
        PRI  EP     11 17 15.5
        MNV  EP     11 17 16.7
        JAS  EP     11 17 21.1
        MHC  EP     11 17 22.9
        BKS  E(P)   11 17 27
        MIN  EP     11 17 32.5
        WDC  EP     11 17 35.4
        FHC  EP     11 17 42.0
                    USGS  11 05 15.7, 28.5S,  70.3W, H= 94 KM, M=5.5
                          CENTRAL CHILE

APR 25  MNV  EP     06 27 50.8
        JAS  EP     06 28 00.9
        FRI  EP     06 28 04.1
                    USGS  06 18 07.6, 59.9N,  29.9W, H= 33 KM, M=4.7
                          NORTH ATLANTIC OCEAN

APR 25  PRI  E(P)   06 54 44
        SAO  EP     06 54 44.5
        MHC  EP     06 54 46.3
        BKS  EP     06 54 46.5
                          MICRON      PERIOD
                    PZ      0.07         0.8
        FRI  EP     06 54 50.9
        JAS  EP     06 54 51.4
        WDC  EP     06 54 53.2
        MIN  EP     06 54 55
        MNV  EP     06 55 00.0
                    USGS  06 43 16.1, 23.5S, 179.9W, H=464 KM, M=5.0
                          SOUTH OF FIJI ISLANDS

APR 25  FHC  EP     11 22 23
        WDC  EPC    11 22 31.4          *E 22 38
        MIN  EP     11 22 38.0          *E 22 45
        BRK  E(P)   11 23 04.5
        JAS  EP     11 23 12.5
        MNV  EP     11 23 16.2
                    USGS  11 20 15.2, 49.5N, 126.6W, H= 33 KM, M=4.3
                          VANCOUVER ISLANDS REGION

APR 25  BRK  EP     20 58 53
        SAO  EP     20 58 53
        PRI  EP     20 58 54
        JAS  EP     20 58 59.3
        WDC  EP     20 59 01.0
        MIN  EP     20 59 01.9
        MNV  EP     20 59 08.7
                    USGS  20 47 46.9, 20.5S, 177.8W, H=522 KM, M=5.2
                          FIJI ISLANDS REGION

APR 25  WDC  EPKP   22 41 28.5
        JAS  EPKP   22 41 29
        FRI         22 41                 *E 41 29
        BKS         22 41                 *E 41 31
        MNV  EPKP   22 41 34
                    USGS  22 21 41.1, 47.6S,  99.9E, H= 33 KM, M=5.1
                          SOUTHEAST INDIAN RISE

APR 25  WDC  EPKP   23 22 15
        JAS  EPKP   23 22 15.5
        FRI         23 22
        MNV  EPKP   23 22 20.5          *E 22 18
                    USGS  23 02 24.9, 47.6S, 100.2E, H= 33 KM, M=5.2
                          SOUTHEAST INDIAN RISE

APR 26  WDC  EP     13 59 48
        MIN  E(P)   13 59 58
        JAS  EP     14 00 21
        MNV  EP     14 00 40
                    USGS  13 58 20.2, 44.3N, 128.7W, H= 33 KM, M=4.7
                          OFF COAST OF OREGON

APR 26  WDC  EP     17 19 56.5
        JAS  EP     17 20 33.4
        MNV  EP     17 20 49.5
                    USGS  17 18 28.1, 44.2N, 128.7W, H= 33 KM, M=4.7
                          OFF COAST OF OREGON

APR 26  FRI  EP     19 30 48.8
        JAS  IPD    19 30 55.9
        MNV  IPD    19 30 57.3
        WDC  EPD    19 31 11.6
                    USGS  19 19 25.3, 34.9S, 108.9W, H= 33 KM, M=5.0
                          EASTER ISLAND CORDILLERA

APR 27  BKS  EP     10 30 16.2
                          MICRON      PERIOD
                    PZ      0.06         0.9
        MHC  EP     10 30 17.5
        PRI  E(P)   10 30 18.7
        WDC  EP     10 30 19.2
        JAS  EP     10 30 22.7
        FRI  EP     10 30 23.9
        MNV  EP     10 30 32.0
                    USGS  10 17 54.0, 10.8S, 165.9E, H= 36 KM, M=5.3
                          SANTA CRUZ ISLANDS

APR 27  FHC  IPC    12 19 18.0  19 26
        WDC  IPC    12 19 32.1
        MIN  IP     12 19 42.1
                    BRK   12 19 06.6, 40.2N, 123.9W, H=  2 KM, ML=2.8
                          NEAR GARBERVILLE, CALIFORNIA

APR 27  MNV  EP     18 20 04.0
        JAS  EP     18 20 12.0          *E 20 13
                                        *E 20 20
                    USGS  18 14 19.8, 16.4N,  99.7W, H= 33 KM, M=4.9
                          NEAR COAST OF GUERRERO, MEXICO

APR 28  SAO  EP     02 25 11.2
        BKS  EPC    02 25 11.8
                          MICRON      PERIOD
                    PZ      0.03         0.8
        MHC  EPC    02 25 12.7
        PRI  IPC    02 25 12.9
        FHC  EPC    02 25 15.7
        FRI  EPC    02 25 18.0
        JAS  EPC    02 25 18.2
        WDC  IPC    02 25 19.3
        MIN  EP     02 25 21.6
        MNV  EPC    02 25 27.8
                    USGS  02 14 20.8, 17.9S, 178.4W, H=605 KM, M=4.9
                          FIJI ISLANDS

APR 28  FRI  EP     04 46 18.9
        MNV  IP     04 46 19.6
        PRI  EP     04 46 21.8          *PP 46 36  P*CP 49 12
        JAS  EP     04 46 27.5          *PP 46 38
        MHC  EP     04 46 32.7          *PP 46 45  P*CP 49 15
        MIN  EP     04 46 46.3          *PP 46 50
        WDC  EP     04 46 50.0          *PP 47 03
        FHC  EP     04 47 02.6         P*CP 49 22
                                        *PP 47 19
                    USGS  04 39 34.7, 13.9N,  90.6W, H= 69 KM, M=4.8
                          NEAR COAST OF GUATEMALA

APR 28  FHC  EP     08 11 26.0
        WDC  IPD    08 11 30.0
        BKS  EPD    08 11 30.2
                          MICRON      PERIOD
                    PZ      0.04         0.7
        MHC  EPD    08 11 32.0
        SAO  EP     08 11 32
        MIN  EPD    08 11 32.5
        PRI  EPD    08 11 35.6
        JAS  IPD    08 11 36.3
        FRI  EPD    08 11 38.8          *E 11 55
        MNV  EPD    08 11 44.9          PP 15 30    PP 15 20
                                        *E 13 38
                    USGS  07 59 19.7, 4.6S, 149.9E, H=521 KM, M=5.6
                          BISMARCK SEA

APR 29  PRI  EP     06 45 08.8
        SAO  E(P)   06 45 09
        MHC  EP     06 45 10.0
        BKS  EP     06 45 11.2  55 36    SS 00 20    LQ 06 40    LR 10 20
                          MICRON      PERIOD
                    PZ      0.05         1.0
                    MAXR(Z)  10          20
                    MAXH(N)   7          20
                    MAXH(E)   7          20
        FRI  EP     06 45 14.0
        JAS  EPC    06 45 15.1
        FHC  E(P)   06 45 15.6
        WDC  EPC    06 45 18.0
        MIN  EP     06 45 19.6
        MNV  EP     06 45 23.3
                    Ms=6.2, DISTANCE=83°
                    USGS  06 32 49.0, 28.2S, 176.9W, H= 62 KM, M=5.3
                          KERMADEC ISLANDS REGION

APR 29  FHC  EP     10 46 35.9
        BKS  EP     10 46 37.0
                          MICRON      PERIOD
                    PZ      0.03         1.0
        MHC  EP     10 46 38.5
        WDC  EP     10 46 39.5
        PRI  EP     10 46 40.6
        MIN  EP     10 46 42.5
        JAS  EP     10 46 43.4
        FRI  EP     10 46 44.7
        MNV  EP     10 46 53.0
                    USGS  10 34 33.5, 10.8S, 166.0E, H=192 KM, M=4.7
                          SANTA CRUZ ISLANDS

APR 30  MHC  EP     07 03 42
        JAS  EP     07 03 46.0
        WDC  EP     07 03 48.0
        MIN  EP     07 03 50

APR 30  BKS  EP     15 35 15.0  45 30    LQ 58 15    LR 02 30
                          MICRON      PERIOD
                    PZ      0.04         1.0
                    MAXR(Z)  1.4          20
                    MAXH(N)  1.4          20
                    MAXH(E)  1.2          20
        PRI  EP     15 35 15.5
        MHC  EP     15 35 16
        WDC  EP     15 35 23
                    Ms=5.4, DISTANCE=83°
                    USGS  15 22 50.8, 28.2S, 176.6W, H= 33 KM, M=5.1
                          KERMADEC ISLANDS REGION

MAY 01  WDC  IPC    02 43 43.3
        MIN  EP     02 43 47.7
        JAS  IPC    02 44 05.0
        MNV  EP     02 44 11.7
                    USGS  02 34 41.7, 53.3N, 157.8E, H=179 KM, M=4.4
                          KAMCHATKA

MAY 01  MNV  EP     14 58 33.2
        PRI  EP     14 58 33.2
        FRI  EP     14 58 34
        JAS  EP     14 58 38.5          *E 59 37
        MHC  EP     14 58 41.0
        BKS  EP     14 58 44.5
        MIN  EP     14 58 49.3
        WDC  EP     14 58 52.3
        FHC  EP     14 58 59.2
                    USGS  14 46 52.4, 23.9S,  66.5W, H=202 KM, M=4.9
                          JUJUY PROVINCE, ARGENTINA

MAY 01  WDC  EP     19 45 12.8          *E 45 31
        JAS  EP     19 45 30.8          *E 45 50
        MNV  EP     19 45 37.7          *E 45 57
                    USGS  19 34 19.5, 41.8N, 142.1E, H= 69 KM, M=5.0
                          HOKKAIDO, JAPAN REGION

MAY 02  JAS  EP     12 07 37.8
        FRI  EP     12 07 38.3
                    USGS  11 54 52.0, 18.2S, 167.9E, H= 26 KM, M=4.5
                          NEW HEBRIDES ISLANDS

MAY 02  FHC  E(P)   15 29 51
        WDC  EP     15 29 58.8
        MIN  EP     15 30 03.2
        JAS  EPC    15 30 19.6
        MNV  EPC    15 30 26.9
                    USGS  15 20 24.9, 49.8N, 156.0E, H= 33 KM, M=5.0
                          KURIL ISLANDS

MAY 02  SAO  EP     15 58 23.3
        PRI  EP     15 58 24.8
        BKS  EPC    15 58 25.1
                          MICRON      PERIOD
                    PZ      0.03         0.7
        MHC  EP     15 58 25.2
        FHC  EP     15 58 30.0
        FRI  EP     15 58 30.0
        JAS  IPC    15 58 30.9          *PP 59 20
        WDC  IPC    15 58 33.2          *PP 59 23
        MIN  EP     15 58 34.7          *PP 59 25
        MNV  IPC    15 58 39.8
                    USGS  15 46 36.4, 23.3S, 177.2W, H=193 KM, M=5.4
                          SOUTH OF FIJI ISLANDS

MAY 02  FHC  EP     17 36 10
        BRK  EP     17 36 15
        WDC  EP     17 36 15.0
        MIN  EP     17 36 17.5
        MHC  EP     17 36 17.7
        JAS  EP     17 36 21.5
        FRI  EP     17 36 24
        MNV  EP     17 36 30.0
                    USGS  17 22 58.5,  6.0S, 146.3E, H= 50 KM, M=5.5
                          EAST PAPUA, NEW GUINEA REGION

MAY 02  FHC  E(P)   17 39 43
        BRK  EP     17 39 45.6
        WDC  IPC    17 39 46.2
        MHC  EP     17 39 48.1
        MIN  EP     17 39 48.5
        JAS  IPC    17 39 52.3
        FRI  EP     17 39 54.6
        MNV  EP     17 40 00.8
                    USGS  17 27 01.9,  5.2S, 150.7E, H=183 KM, M=5.4
                          NEW BRITAIN REGION
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MAY 03  BKS   IPD   05 42 46.4   42 51
        MHC   IPD   05 42 53.5
        JAS   IPD   05 42 59.2
        SAO   IPD   05 43 02.1
        FRI   E(P)  05 43 13
        MIN   E(P)  05 43 13.5
        PRI   E(P)  05 43 16
        WDC   EP    05 43 16.4
        MNV   E(P)  05 43 26
                BRK   05 42 38.9, 38.1N, 122.0W, H= 26 KM, ML=3.4
                      SOUTHEAST OF FAIRFIELD, CALIFORNIA

MAY 03  BRK   E(P)  14 03 12
        PRI   EP    14 03 12.5
        MHC   EP    14 03 14.0
        FRI   EP    14 03 18.9
        JAS   EP    14 03 19.9
        WDC   EP    14 03 22.4
        MIN   EP    14 03 24
        MNV   EP    14 03 29.5
                USGS  13 51 25.9, 21.0S, 174.1W, H= 33 KM, M=5.1
                      TONGA ISLANDS

MAY 04  MNV   EPC   04 52 40.6
        FRI   EP    04 52 46.3
        JAS   EPC   04 52 50.5
        PRI   EP    04 52 52
        MIN   EP    04 52 54.5
        MHC   EP    04 52 56
        WDC   EP    04 52 56.4
        BKS         04 52                  S-CS 09 07     LQ 14 30     LR 18 50
                                  MICRON      PERIOD
                    MAXR(Z)  1.9              20
                    MAXH(N)  1.1              22
                    MAXH(E)  1.5              21
                    M=5.4, DISTANCE=81°
                    USGS  04 40 46.5,  8.0N,  38.0W, H= 33 KM, M=5.5
                          CENTRAL MID-ATLANTIC RIDGE

MAY 04  MHC   EP    08 41 57.5
        BKS   EP    08 42 03                S-CS 51 30     LQ 02 00     LR 05 00
                                  MICRON      PERIOD
                    PZ       0.04             1
                    MAXR(Z)  2.4              20
                    MAXH(N)  2.7              20
                    MAXH(E)  2.9              20
        JAS   EP    08 42 03.0
        FRI         08 42                    -E 42 04
        WDC   EP    08 42 06.2
        MIN   EP    08 42 07.5               -E 42 09
        MNV   EP    08 42 11                 -E 42 14
                    M=5.7, DISTANCE=77°
                    USGS  08 30 07.1, 21.9S, 175.0W, H=54  KM, M=5.1
                          TONGA ISLANDS

MAY 04  MNV   IPD   08 50 37.9
        FRI   EP    08 50 38.5
        JAS   EPD   08 50 47.5
        MHC   EP    08 50 52.2
        MIN   EP    08 51 04.2
        WDC   EP    08 51 07.7
                    USGS  08 43 27.3, 13.1N,  87.6W, H= 33 KM, M=5.3
                          HONDURAS

MAY 04  BKS   EPD   14 10 36                 -E 13 46     PP 14 46     PS 24 00
                                             PPS 24 51    LQ 39 00     LR 43 40
                                  MICRON      PERIOD
                    MAXR(Z)  13               20
                    MAXH(N)  13               20
                    MAXH(E)   7               20
        JAS         14 10                    -E 14 55
        WDC         14 10                    -E 14 57
                    M=6.4, DISTANCE=103°
                    USGS  13 56 29.9, 44.6S, 167.6E, H= 19 KM, M=6.0
                          SOUTH ISLAND, NEW ZEALAND

MAY 04  PRI   EP    17 38 34.2
        MHC   EP    17 38 35.0
        BKS   EP    17 38 36     48 37      SS 53 42     LR 03 26
                                  MICRON      PERIOD
                    MAXR(Z)  3.1              20
                    MAXH(N)  2.7              20
                    MAXH(E)  3.1              20
        FRI   EP    17 38 39.4
        FHC   EP    17 38 40
        JAS   EPC   17 38 40.8
        WDC   EPC   17 38 43.5
        MIN   EP    17 38 44.8
                    M=5.8, DISTANCE=79°
                    USGS  17 26 31.9, 23.8S, 175.5W, H= 40 KM, M=5.2
                          TONGA ISLANDS REGION

MAY 04  FHC   IPC   20 37 51.2
        WDC   IPC   20 38 07.0
        MIN   IPC   20 38 17.2
        BKS   I(P)  20 38 32.5   39 30      LQ 39 31     -E 39 43
        MHC   E(P)  20 38 43     39 48
        JAS   E(P)  20 38 46.5
        SAO   E(P)  20 38 49.4
        FRI         20 39                    -E 39 02
        MNV   E(P)  20 39 03
        PRI   E(P)  20 39 05.3
                BRK   20 37 11.8, 42.0N, 126.7W, H=  2 KM, ML=4.6
                      NORTHWEST OF CRESCENT CITY, CALIFORNIA

MAY 05  SAO   EP    05 05 24.0
        PRI   IPC   05 05 24.2                PKKP 23 39   RPKP 31 43
        BKS   IPC   05 05 24.9   15 36       PP 08 45     -E 15 50     SS 20 30
                                             PKKP 23 38   LQ 27 30     LR 30 50
                                             RPKP 31 45
                                  MICRON      PERIOD
                    PZ       0.22             0.7
                    MAXR(Z)  23               20
                    MAXH(N)  15               20
                    MAXH(E)  18               20
        MHC   EPC   05 05 25.0                PKKP 23 38
        FRI   IPC   05 05 29.0                PKKP 23 34
        JAS   IPC   05 05 30.2                -E 09 20     PKKP 23 34   RPKP 31 41
        FHC   EPC   05 05 30.7
        WDC   IPC   05 05 33.0                RPKP 31 40
        MIN   EPC   05 05 34.2                PKKP 23 27   RPKP 31 39
        MNV   IPC   05 05 38.3                -I 09 24     PKKP 23 32   RPKP 31 38
                    M=6.6, DISTANCE=85°
                    USGS  04 52 51.0, 29.9S, 177.8W, H= 35 KM, M=6.2
                          KERMADEC ISLANDS

MAY 05  FRI   EP    16 48 49.2
        MNV   EPD   16 48 50.7
        PRI   EP    16 48 51.0
        JAS   IPD   16 48 56.2
        MHC   EP    16 48 58.7
        BKS   EP    16 49 02                 -PP 49 35
                                  MICRON      PERIOD
                    PZ       0.09             1.2
        MIN   EP    16 49 07.7               -PP 49 40
        WDC   IPD   16 49 10.8               -PP 49 43
        FHC   EP    16 49 17.8
                    USGS  16 37 09.1, 21.7S,  68.2W, H= 73 KM, M=5.6
                          CHILE-BOLIVIA BORDER REGION

MAY 06  WDC   EPC   20 12 47.5                PKKP 39 58
        MIN   EP    20 12 47.8
        MNV   EP    20 12 48.8
        FHC   EP    20 12 50.3
        JAS   EPC   20 12 56.2                -E 13 48     -E 14 32     PKKP 31 00
                                              RPKP 38 58
        FRI   EP    20 12 58.5                PP 16 20
        BKS   EP    20 13 00     23 00        PP 16 26     PPP 17 59    SS 29 28
                                              LQ 39 50     LR 44 00
                                  MICRON      PERIOD
                    PZ       0.76             2
                    MAXR(Z)  25               20
                    MAXH(N)  16               20
                    MAXH(E)  20               20
        MHC   EP    20 13 01.5                -E 13 53     PP 16 30
        SAO   EP    20 13 03.7
        PRI   EP    20 13 04.1
                    M=6.6, DISTANCE=87°
                    USGS  20 00 11.6, 46.4N,  13.3E, H=  9 KM, M=6.0
                          AUSTRIA

MAY 07  WDC   EP    04 18 21
        JAS   EP    04 18 45
        MNV   EP    04 18 54
                    USGS  04 11 22.6, 51.8N, 173.0W, H= 55 KM, M=4.3
                          ANDREANOF ISLANDS, ALEUTIAN ISLANDS

MAY 07  FRI   EP    05 20 55.7
        MNV   IPD   05 20 57.0
        PRI   EP    05 20 58.0
        JAS   EPD   05 21 04.0
        MHC   EPD   05 21 07.2
        BKS   EP    05 21 11.9
                                  MICRON      PERIOD
                    PZ       0.02             0.6
        MIN   EP    05 21 17.2
        WDC   EPD   05 21 20.7
        FHC   EP    05 21 29.9
                    USGS  05 10 49.3,  8.6S,  74.7W, H=133 KM, M=5.3
                          PERU-BRAZIL BORDER REGION

MAY 07  MHC   EP    06 23 24.8
        PRI   EP    06 23 26
        FRI   EP    06 23 35.7
        JAS   EP    06 23 36.5
        WDC   EP    06 23 39.1
        MNV   EP    06 23 46.7

MAY 07  PRI   EP    18 39 43.6
        MNV   EP    18 39 44.9
        JAS   EP    18 39 49.5
        MHC   EP    18 39 51.0
        WDC   EP    18 40 03.5
                    USGS  18 27 39.3, 28.0S,  71.3W, H= 33 KM, M=5.3
                          NEAR COAST OF CENTRAL CHILE

MAY 07  SAO   EP    23 15 24
        PRI   EP    23 15 25.5
        MHC   EP    23 15 25.8
        FRI   EP    23 15 31.5
        JAS   EP    23 15 32.0
        WDC   EP    23 15 33.8
        MNV   EP    23 15 42.5
                    USGS  23 04 04.8, 15.2S, 173.4W, H= 21 KM, M=4.9
                          TONGA ISLANDS

MAY 08  WDC   EP    11 31 26.7
        MIN   EP    11 31 29.5
        JAS   EP    11 31 51.9
        MNV   EP    11 32 04.5
                    USGS  11 25 36.3, 61.6N, 151.5W, H= 16 KM, M=4.4
                          SOUTHERN ALASKA

MAY 08  FRI   EP    22 14 35.0
        MNV   EP    22 14 36.4
        PRI   EP    22 14 36.9
        JAS   EP    22 14 44.3
        MHC   EP    22 14 47.5
                    USGS  22 06 20.0,  3.9N,  85.9W, H= 33 KM, M=4.7
                          OFF COAST OF CENTRAL AMERICA

MAY 09  MIN   EP    01 06 19.2
        WDC   EP    01 06 19.4
        MNV   EP    01 06 20.5
        JAS   EP    01 06 27.9
        FRI   EP    01 06 30
        MHC   EP    01 06 33.5
        PRI   EP    01 06 36
                    USGS  00 53 44.0, 46.2N,  13.3E, H= 14 KM, M=5.1
                          AUSTRIA

MAY 09  FRI   IPC   04 14 57.0   15 12
        MNV   IPC   04 14 58.3
        JAS   IPC   04 15 08.9   15 33
        PRI   E(P)  04 15 14.0   15 43
                    BRK   04 14 35.6, 37.2N, 118.3W, H=  5 KM, MAG=3.0
                          BISHOP AREA, CALIFORNIA

MAY 09  JAS   EP    14 22 40                 -E 22 51
        WDC   EP    14 22 43                 -E 22 54
        MNV   EP    14 22 50                 -E 23 02

MAY 09  FHC   EP    20 57 35.3
        BKS   EP    20 57 38.9
                                  MICRON      PERIOD
                    PZ       0.06             0.8
        WDC   EPD   20 57 39.7               PP 01 08
        MHC   EP    20 57 41.0
        SAO   EP    20 57 41
        MIN   EP    20 57 42.3
        PRI   EP    20 57 44.3
        JAS   IPD   20 57 45.3
        FRI   EPD   20 57 47.5
        MNV   EPD   20 57 54.3
                    USGS  20 44 44.7,  7.4S, 154.6E, H= 34 KM, M=5.8
                          SOLOMON ISLANDS

MAY 09  FHC   EP    22 01 21
        BKS   EP    22 01 25.9
                                  MICRON      PERIOD
                    PZ       0.02             0.7
        WDC   EP    22 01 26.4
        MHC   EP    22 01 27.8
        PRI   EP    22 01 31
        JAS   EPD   22 01 32.0
        FRI   EP    22 01 34.2
        MNV   EPD   22 01 41.0
                    USGS  21 48 30.5,  7.4S, 154.7E, H= 26 KM, M=5.6
                          SOLOMON ISLANDS

MAY 09  WDC   EP    22 02 43.5
        MHC   EP    22 02 44.9
        PRI   EP    22 02 48.2
        JAS   EP    22 02 49.2
        FRI   EP    22 02 51.4
        MNV   EP    22 02 58.2
                    SOLOMON ISLANDS REGION

MAY 10  FRI   IPC   00 03 12.7   03 30
        MNV   EP    00 03 13.1
        JAS   EPC   00 03 25.6   03 52
                    BRK   00 02 47.6, 37.0N, 118.0W, H=  6 KM, MAG=3.0
                          SOUTHEAST OF BISHOP, CALIFORNIA
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                                        S*G 26 11
MAY 10  FRI  EP     10 25 20
        PRI  EP     10 25 20
        MNV  EP     10 25 28
        SAO  EP     10 25 29.5          S*G 26 43
        JAS  EP     10 25 33.5
        MHC  E(P)   10 25 34.5
                    USGS  10 24 24.4, 34.5N, 116.9W, H= 24 KM, M=3.8
                          SOUTHERN CALIFORNIA

MAY 10  FHC  EP     10 33 37
        WDC  EP     10 33 41.4
        MHC  EP     10 33 42.6
        MIN  EP     10 33 44
        PRI  EP     10 33 46.1
        JAS  EP     10 33 47.2
        FRI  EP     10 33 49.1
        MNV  EP     10 33 56.2
                    USGS  10 20 46.6,  7.5S, 154.6E, H=37  KM, M=5.3
                          SOLOMON ISLANDS

MAY 10  FHC  EP     10 45 15.6
        WDC  EP     10 45 20.4
        MHC  EP     10 45 21.3
        PRI  EP     10 45 25
        JAS  EP     10 45 26.0
        FRI  EP     10 45 27.8
        MNV  EP     10 45 34.8
                    USGS  10 32 26.4,  7.4S, 154.5E, H= 45 KM, M=5.3
                          SOLOMON ISLANDS

MAY 11  WDC  EP     10 11 43.5                    *E 35 52    LR 39 00
        BKS  EP     10 11 44.5
                                MICRON      PERIOD
                          PZ      0.13        1.3
                          MAXR(Z) 3.0         20
                          MAXH(N) 0           20
                          MAXH(E) 3.4         20
        MHC  EP     10 11 44.7
        MIN  EP     10 11 46.0
        PRI  EP     10 11 48.0
        JAS  EP     10 11 49.0                *E 15 28
        FRI  EP     10 11 51.3
        MNV  IPD    10 11 58.2
                    Ms=5.8, DISTANCE=89°
                    USGS  09 58 48.1,  7.6S, 154.6E, H= 33 KM, M=5.7
                          SOLOMON ISLANDS

MAY 11  WDC  EP     10 35 25.3
        MHC  EP     10 35 26.5
        MIN  EP     10 35 27.8
        PRI  EP     10 35 29.5
        JAS  EP     10 35 30.5
        FRI  EP     10 35 32.8
        MNV  EP     10 35 39.5
                    USGS  10 22 28.2,  7.6S, 154.7E, H= 22 KM, M=5.8
                          SOLOMON ISLANDS

MAY 11  WDC  EPKP   11 48 02.8
        JAS  EPKP   11 48 05.5
        MNV  EPKP   11 48 07.0
                    USGS  11 29 06.2, 51.5S, 139.7E, H= 33 KM, M=5.6
                          SOUTH OF AUSTRALIA

MAY 11  BKS  EPKP   16 09 38.5                   SS 28 14    LQ 41 28    LR 47 39
                                MICRON      PERIOD
                          PKPZ    0.03        0.9
                          MAXR(Z) 12          20
                          MAXH(N) 8           20
                          MAXH(E) 9           20
        FRI  EPKP   16 09 39
        JAS  EPKP   16 09 40
        WDC  EPKP   16 09 40
        MNV  EPKP   16 09 43
                    Ms=6.6, DISTANCE=123°
                    USGS  15 50 41.6, 51.6S, 139.7E, H= 33 KM, M=5.8
                          SOUTH OF AUSTRALIA

MAY 11  MIN         17 13                     *E 13 14
        JAS         17 13                     *E 13 18
        WDC         17 13                     *E 13 18
        MHC         17 13                     *E 13 27
        FRI         17 13                     *E 13 29
        BKS  E(P)   17 13 32.1  24 48         SS 31 36    *E 42 16    *E 47 00
                                MICRON      PERIOD
                          PZ      0.03        1.0
                          MAXR(Z) 13          20
                          MAXH(N) 12          20
                          MAXH(E) 11          18
                          Ms=6.5, DISTANCE=97°
                          USGS  16 59 48.2, 37.6N,  20.4E, H= 33 KM, M=5.8
                                IONIAN SEA

MAY 11  MIN  EP     22 56 35.6
        JAS  EPC    22 56 44.0
                    USGS  22 44 00.2, 46.3N,  13.0E, H= 11 KM, M=5.2
                          AUSTRIA

MAY 12  JAS  IPC    11 18 27.1
        FRI  EPC    11 18 31.6
        MNV  EP     11 18 35.3

MAY 12  MNV  IPC    19 50 34.3
        FRI  IPC    19 50 46.6
        JAS  IPC    19 50 55.2
        PRI  EPC    19 50 59.6
        SAO  EP     19 51 05.4
        MHC  EPC    19 51 08.1
        BKS  EP     19 51 15.0
        MIN  EP     19 51 21.0                *E 51 25    *E 51 33
        WDC         19 51                     *I 51 32
                    ML=4.6, EXPLOSION, NEVADA TEST SITE
                    USGS  19 50 00.2, 37.2N, 116.2W, H=  0 KM, M=4.9
                          SOUTHERN NEVADA

MAY 13  WDC  EP     00 49 26.5
        JAS  IPC    00 49 38.5
        FRI  EP     00 49 43.0
        MNV  IPC    00 49 46.7
                    USGS  00 37 23.5, 20.8N, 144.5E, H= 37 KM, M=4.9
                          MARIANA ISLANDS

MAY 13  WDC  EP     07 15 11.5
        JAS  EP     07 15 44.3
        MNV  EP     07 15 49.0
                    USGS  07 11 44.0, 53.1N, 132.1W, H= 26 KM, M=4.8
                          QUEEN CHARLOTTE ISLANDS REGION

MAY 13  FHC  EP     17 53 48.9
        WDC  EPC    17 53 54.2
        MIN  EP     17 53 57.8
        BKS  EP     17 54 00.4
                                MICRON      PERIOD
                          PZ      0.03        0.7
        MHC  EP     17 54 03.8
        SAO  EP     17 54 05
        JAS  EP     17 54 07.1
        PRI  EP     17 54 10.3
        FRI  EP     17 54 11.5
        MNV  EP     17 54 14.7
                    USGS  17 42 11.6, 22.3N, 143.0E, H=209 KM, M=4.9
                          VOLCANO ISLANDS REGION

MAY 14  MNV  EPC    06 36 52.7                    *E 37 04
        FRI  EP     06 36 59.3                    *E 37 10
        JAS  EPC    06 37 04.0                    *E 37 15
        PRI  EP     06 37 05.2                    *E 37 18
        MIN  EP     06 37 09.2                    *E 37 20
        MHC  EP     06 37 10.3                    *E 37 21
        WDC  EP     06 37 11.0                    *E 37 22
        BKS  EP     06 37 12    46 56             *E 37 23
                                                  SS 55 36
                                MICRON      PERIOD
                          MAXR(Z) 1.9         20
                          MAXH(N) 1.6         20
                          MAXH(E) 1.9         20
        FHC  EPC    06 37 20.0                    *E 37 31
                    Ms=5.5, DISTANCE=75°
                    USGS  06 25 34.4, 10.8N,  43.5W, H= 33 KM, M=5.6
                          NORTH ATLANTIC RIDGE

MAY 14  JAS  EP     07 52 37.5
        MNV  EP     07 52 41.8
        BKS         07 52                     *E 19 52
                    USGS  07 40 03.6, 28.2S, 176.8W, H= 33 KM, M=4.6
                          KERMADEC ISLANDS REGION

MAY 14  WDC  IPD    13 39 40.2
        MHC  EP     13 39 42.0
        MIN  EP     13 39 42.6
        PRI  EP     13 39 46.1
        JAS  IPD    13 39 46.6
        FRI  EP     13 39 48.5
        MNV  EPD    13 39 55.1
                    USGS  13 26 30.7,  6.4S, 150.3E, H= 17 KM, M=5.6
                          NEW BRITAIN REGION

MAY 14  FRI  EP     14 09 48.0
        JAS  EP     14 09 48.0
        WDC  EP     14 09 50.8
        MNV  EP     14 09 56.0
                    USGS  13 57 38.9, 28.6S, 178.7W, H=271 KM, M=5.0
                          KERMADEC ISLANDS REGION

MAY 15  FHC  EP     08 19 50
        WDC  EPC    08 20 01.0
        MIN  EP     08 20 08.3
        JAS  EP     08 20 42.5
        MNV  EP     08 20 50.0
        PRI  EP     08 21 01.5
                    USGS  08 17 41.4, 49.1N, 128.8W, H= 17 KM, M=4.5
                          VANCOUVER ISLAND REGION

MAY 15  SAO  EP     19 58 22.4
        BKS  EPD    19 58 23.8
                                MICRON      PERIOD
                          PZ      0.05        1.1
        MHC  EP     19 58 23.9
        PRI  EP     19 58 24.0
        FHC  EP     19 58 28.0
        FRI  EP     19 58 29.2
        JAS  EP     19 58 29.5
        WDC  EP     19 58 30.6
        MIN  EP     19 58 32.6
        MNV  EP     19 58 39.0
                    USGS  19 47 25.9, 17.7S, 178.6W, H=525 KM, M=5.1
                          FIJI ISLANDS REGION

MAY 15  FRI  IPC    22 06 32.3                RPKP 35 36
        MNV  IPC    22 06 33.7
        PRI  IPC    22 06 34.2                  *E 06 52  RPKP 35 36
        JAS  IPC    22 06 40.4                RPKP 35 34
        SAO  EP     22 06 40.9
        MHC  IPC    22 06 43.4                RPKP 35 30
        BKS  IPC    22 06 43.0  15 45           *E 08 18    PP 09 22    *E 10 00
                                                PPP 11 22   *E 12 06    *E 14 37
                                                 *I 15 46   SS 20 14    SSS 23 35
                                                LQ 25 52    LR 29 48
                                MICRON      PERIOD
                          PZ      0.23        1.2
                          MAXR(Z) 10          20
                          MAXH(N) 11          20
                          MAXH(E) 21          20
        MIN  EPC    22 06 53.8                RPKP 35 28
        WDC  IPC    22 06 57.0                RPKP 35 24
        FHC  EPC    22 07 06.0
                    Ms=6.4, DISTANCE=67°
                    USGS  21 55 58.5, 11.6S,  74.5W, H= 33 KM, M=6.0
                          PERU

MAY 15  FRI  EP     23 38 50.0
        MNV  EPC    23 38 51.5
        PRI  EPC    23 38 52.0
        JAS  IPC    23 38 58.1
        MHC  EPC    23 39 01.2
        BKS  IPC    23 39 05.6                  *I 39 12    *I 39 18
                                MICRON      PERIOD
                          PZ      0.05        0.8
        WDC  EP     23 39 14.7
        FHC  EP     23 39 23.6
                    USGS  23 28 16.1, 11.5S,  74.4W, H= 33 KM, M=5.3
                          PERU

MAY 16  WDC  EP     04 55 06.2
        JAS  EP     04 55 06.4
        MIN  EP     04 55 07.7
        MNV  EP     04 55 12.8

MAY 16  FHC  EPC    08 37 10.0
        WDC  EP     08 37 15.0
        MIN  EP     08 37 20.0
        BKS  EPD    08 37 53.5                  *E 40 44    LQ 41 42    LR 42 03
                                MICRON      PERIOD
                          PZ      0.03        0.5
        JAS  EP     08 37 54.0
        MNV  EP     08 37 55
        MHC  EP     08 38 00.5
        FRI  EP     08 38 07.5
        SAO  EP     08 38 08.5
        PRI  EP     08 38 18
                    USGS  08 35 14.8, 48.8N, 123.4W, H= 62 KM, M=5.1
                          VANCOUVER ISLAND REGION

MAY 16  PRI  EP     22 23 34.0
        FRI  EP     22 23 37.4
        JAS  EP     22 23 41.7
        MNV  EP     22 23 44.8
        BKS         22 23                     LR 52 50
                                MICRON      PERIOD
                          MAXR(Z) 1.2         20
                          MAXH(N) 0.9         20
                          MAXH(E) 0.8         20
                          Ms=5.3, DISTANCE=93°
                          USGS  22 10 31.2, 54.6S, 132.5W, H= 33 KM, M=5.5
                                SOUTH PACIFIC CORDILLERA

MAY 17  FHC  EP     03 12 21.2
        WDC  EP     03 12 23.5                  PP 16 27    PKKP 28 47  RPKP 37 06
        MIN  EP     03 12 25.5                   *E 15 40    *E 16 16     PP 16 30
        MNV  EP     03 12 34.8                PKKP 28 43    RPKP 36 59
        JAS  EP     03 12 36.4                  PP 16 53    PKKP 28 41  RPKP 37 00
        BKS  EP     03 12 38    24 21           *E 16 47      PP 16 49    PPP 19 10
                                                SKS 23 24     PS 25 58     SS 31 32
                                                 *E 32 22    SSS 35 25     LQ 41 08
                                                LR 46 30
                                MICRON      PERIOD
                          PZ      0.05        1.0
                          MAXR(Z) 20          20
                          MAXH(N) 27          20
                          MAXH(E) 10          20
        PRI  E(P)   03 12 45.2                PP 17 05    RPKP 36 58
                    Ms=6.8, DISTANCE=102°
                    USGS  02 58 40.6, 40.4N,  63.5E, H= 10 KM, M=6.3
                          UZBEK SSR
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MAY 18  MNV  EP    02 13 27.4                 *PP 13 38
        PRI  EP    02 13 27.6
        JAS  EP    02 13 33.5                 *PP 13 45
        MHC  EP    02 13 36.1                 *PP 13 47
        BKS        02 13                      *PP 13 51
        WDC  EP    02 13 49.2
        FHC  EP    02 13 57.5
                   USGS  02 02 15.5, 16.8S,  72.7W, H= 65 KM, M=5.4
                         NEAR COAST OF PERU

MAY 18  BKS  EP    05 07 21                   PS 18 50    LR 33 30
                                MICRON        PERIOD
                   PZ             0.15         1.6
                   MAXR(Z)        3.2          20
                   MAXH(N)        2.1          20
                   MAXH(E)        2.5          20
        MHC  EP    05 07 22.0
        PRI  EP    05 07 22.6
        FRI  EP    05 07 27.2
        JAS  EP    05 07 27.3
        WDC  EP    05 07 27.6
        MIN  EP    05 07 29.3
        MNV  EP    05 07 36.3
                   Ms=5.7, DISTANCE=85°
                   USGS  04 54 52.3, 21.6S, 173.3E, H= 52 KM, M=5.2
                         NEW HEBRIDES ISLANDS REGION

MAY 18  FRI  EPKP  07 59 17.3
        MNV  EPKP  07 59 18.0
        PRI  EPKP  07 59 18.8
        JAS  EPKP  07 59 21.5
        MHC  EPKP  07 59 22.8
        BKS  EPKP  07 59 24.5
                                MICRON        PERIOD
                   PKPZ           0.02         0.8
        MIN  EPKP  07 59 26.5
        WDC  EPKP  07 59 28.2
                   USGS  07 39 40.0, 51.8S,  15.8E, H= 33 KM, M=4.8
                         SOUTHWEST OF AFRICA

MAY 18  FRI  E(P)  16 46 42
        JAS  EPD   16 46 42.7
        WDC  EP    16 46 44.9
        MIN  E(P)  16 46 47
        MNV  EP    16 46 52.7
                   SOUTH OF FIJI ISLANDS

MAY 18  FHC  EPD   17 32 08.0
        WDC  EPD   17 32 13.4
        MIN  E(P)  17 32 17
        BKS  EPD   17 32 21.5
                                MICRON        PERIOD
                   PZ             0.10         0.7
        MHC  EPD   17 32 25.4
        JAS  EPD   17 32 28.0
        PRI  EP    17 32 32.6
        FRI  EP    17 32 33.0
        MNV  EP    17 32 34.8
                   USGS  17 21 05.1, 30.2N, 138.5E, H=446 KM, M=5.0
                         SOUTH OF HONSHU, JAPAN

MAY 19  BKS  IPC   01 35 21.3                  S°G 35 25    S° 35 28
        MHC  EPC   01 35 24.3  35 33
        SAO  EP    01 35 35.0
        JAS  EPC   01 35 36.8
        FRI  EP    01 35 50
        PRI  EP    01 35 51.6
        MIN        01 35                      *E 35 59
        MNV  EP    01 36 12.5
                   BRK   01 35 15.2, 37.7N, 121.9W, H=  2 KM, ML=2.7
                         EAST OF HAYWARD, CALIFORNIA

MAY 19  MNV  EPD   04 16 05.6                 S°CP 21 00
        FRI  EPD   04 16 07.3
        FRI  EPD   04 16 10.3
        JAS  EPD   04 16 14.6                 *PP 16 49  P°CP 17 17  S°CP 21 07
        SAO  EP    04 16 16.2
        MHC  E(P)  04 16 20                   *PP 16 56  *SP 17 15  S°CP 21 08
        BKS  EP    04 16 24.3  17 17         *PP 17 01  *SP 17 17  *SS 24 55
                                              SS 27 39  *SS 28 22   SS 30 06
                                MICRON        PERIOD
                   PZ             0.17         0.8
        MIN  EPD   04 16 28.2                 *PP 17 05
        WDC  EPD   04 16 31.7                 *PP 17 06   *E 18 18  S°CP 21 15
        FHC  EPD   04 16 42.5
                   USGS  04 07 15.8,  4.5N,  75.8W, H=157 KM, M=5.9
                         COLOMBIA

MAY 19  MNV  EPC   17 50 57.1                 *E 51 09
        FRI  EPC   17 51 00.2
        PRI  EP    17 51 04.2
        JAS  EPC   17 51 08.8                 *E 51 20
        SAO  EP    17 51 10.4
        MHC  EPC   17 51 14.7                 *E 51 26
        BKS  EPC   17 51 19.9  57 25         *E 51 32  *PP 51 35    PP 52 53
                                              *E 57 17  *SS 57 53    LQ 00 14
                                              LR 02 08   *E 03 00
                                MICRON        PERIOD
                   PZ             0.13         1.2
        WDC  EP    17 51 25.2
        FHC  EP    17 51 38
                   USGS  17 43 59.6, 16.9N,  85.5W, H= 43 KM, M=5.3
                         CARIBBEAN SEA

MAY 19  BKS  EPD   19 18 30.7
                                MICRON        PERIOD
                   PZ             0.06         0.8
        FHC  EPD   19 18 31.0
        SAO  EP    19 18 31.3
        MHC  EPD   19 18 32.3
        PRI  EPD   19 18 34.0
        WDC  EP    19 18 34.8
        MIN  EP    19 18 37.2
        JAS  EPD   19 18 37.4
        FRI  EPD   19 18 38.2
        MNV  IPD   19 18 46.5
                   USGS  19 07 17.2, 12.8S, 169.2E, H=647 KM, M=5.2
                         SANTA CRUZ ISLANDS REGION

MAY 19  BKS  EPD   19 21 43.9  32 00      PP 25 10    SS 37 51
                                MICRON        PERIOD
                   PZ             0.09         0.9
        FHC  EPD   19 21 44.2
        SAO  EP    19 21 44.7
        MHC  EPD   19 21 45.7
        PRI  EPD   19 21 47.3
        WDC  EP    19 21 48.5
        JAS  IPD   19 21 50.7
        MIN  EP    19 21 50.7
        FRI  IPD   19 21 51.7
        MNV  EPD   19 21 59.7
                   USGS  19 10 30.7, 12.7S, 169.2E, H=644 KM, M=5.2
                         SANTA CRUZ ISLANDS REGION

MAY 19  SAO  EP    19 23 13.5
        PRI  EPC   19 23 14.6
        BKS  EPC   19 23 15.5  33 47         *E 23 37    *E 23 49    SE 34 30
                                              *E 36 21    SS 39 27    LR 49 30
                                MICRON        PERIOD
                   PZ             0.11         1.0
                   MAXR(Z)        13           20
                   MAXH(N)        11           20
                   MAXH(E)        9            20
        MHC  EP    19 23 15.5
        FRI  EPC   19 23 19.2
        JAS  IPC   19 23 20.4
        FHC  EP    19 23 21.4
        MIN  EP    19 23 23.7
        WDC  EP    19 23 25.0
        MNV  EPC   19 23 28.2
                   Ms=6.4, DISTANCE=86°
                   USGS  19 10 41.7, 31.1S, 177.8W, H= 72 KM, M=5.8
                         KERMADEC ISLANDS REGION

MAY 19  PRI  EP    19 25 30.2
        MHC  EP    19 25 31.5
        FRI  EP    19 25 35.2
        JAS  EP    19 25 36.3
        MNV  EP    19 25 44.2
                   SOUTH OF FIJI ISLANDS

MAY 20  SAO  IPD   04 32 41.9
        MHC  IPD   04 32 48.1
        PRI  EPD   04 32 57.5
        BKS  EPC   04 33 00.4  33 17
        JAS  EPD   04 33 02.1  33 18
        FRI  EP    04 33 03.0
        MNV  EP    04 33 34.2
                   BRK   04 32 38.6, 36.9N, 121.5W, H=  2 KM, ML=3.0
                         NORTHWEST OF HOLLISTER, CALIFORNIA

MAY 20  SAO  EPC   05 10 45.8
        BKS  EPC   05 10 47.0  19 54         LR 29 30
                                MICRON        PERIOD
                   PZ             0.15         0.8
        PRI  EPC   05 10 47.4
        MHC  IPC   05 10 47.5
        FHC  IPC   05 10 51.4
        FRI  IPC   05 10 53.0
        JAS  IPC   05 10 53.6                 *PP 12 02
        WDC  IPC   05 10 55.1                 *PP 12 04
        MIN  EP    05 10 57.0
        MNV  EPC   05 11 03.3                 *PP 12 11
                   USGS  04 59 47.1, 15.9S, 175.1W, H=292 KM, M=5.5
                         TONGA ISLANDS

MAY 20  MHC  EP    22 20 12.0
        WDC  EP    22 20 16.3
        JAS  EP    22 20 17.2
        FRI  EP    22 20 18
        MNV  EP    22 20 26.7
                   USGS  22 09 00.8, 12.7S, 169.7E, H=661 KM, M=4.3
                         SANTA CRUZ ISLANDS REGION

MAY 21  FRI  EP    02 45 31.4
        PRI  EP    02 45 31.6
        MNV  EP    02 45 38.5
        JAS  EP    02 45 44.0
        BKS  EPC   02 46 01.6  49 10         LR 50 10
                                MICRON        PERIOD
                   PZ             0.12         1.4
        MIN  EP    02 46 18.2
        WDC  EP    02 46 23.3
        FHC  EP    02 46 28.5
                   USGS  02 42 07.7, 25.2N, 109.7W, H= 33 KM, M=4.6
                         GULF OF CALIFORNIA

MAY 21  FHC  EP    04 25 01.6
        WDC  EP    04 25 02.7                 PP 29 26   PKKP 40 48    *E 41 07
        MIN  EP    04 25 04.0                PKKP 40 47   *E 41 04
        BKS  EP    04 25 05.5  36 49         *PP 25 48   *SP 26 06     PP 29 31
                                              *SPP 30 42   *E 32 28    SKS 35 31
                                              SKKS 35 49   *E 37 50     SP 38 24
                                              PS 38 40     *E 39 40     SS 44 10
                                              *E 45 18    SSS 48 12     *E 49 25
                                              LQ 54 20     LR 59 20
                                MICRON        PERIOD
                   PZ             0.16         2.2
        MHC  EP    04 25 08.8
        JAS  EP    04 25 13.0                 PP 29 37   PPP 31 47   PKKP 40 43
                                              *E 40 58   PKKS 44 05  P°CPKP44 47
        PRI  EP    04 25 14.5                PKKP 40 42   *E 40 56
        FRI  EP    04 25 17.0                PKKP 40 39   *E 40 53
        MNV  EP    04 25 20.3                 PP 29 40   PPP 31 58   PKKP 40 38
                                              *E 40 50
                   USGS  04 11 15.2,  3.7N, 125.1E, H=173 KM, M=5.9
                         TALAUD ISLANDS

MAY 21  WDC  EPKP  04 32 35.5
        MIN  EPKP  04 32 37.3
        MHC  EPKP  04 32 38.6
        JAS  EPKP  04 32 39.6
        FRI  EPKP  04 32 41.5
        PRI  EPKP  04 32 42.5
        MNV  EPKP  04 32 43.3
                   SOUTHERN SUMATRA REGION

MAY 21  WDC  EP    06 18 01
        MIN        06 18                      *E 18 19
        JAS  EP    06 18 25
        FRI  E(P)  06 18 35
        MNV  E(P)  06 18 37
                   USGS  06 10 59.0, 51.7N, 173.6W, H= 46 KM, M=4.2
                         ANDREANOF ISLANDS, ALEUTIAN ISLANDS

MAY 21  FHC  EPC   06 55 31.4
        WDC  IPC   06 55 36.0                 *PP 56 08    PP 59 26
        BKS  IPC   06 55 37.1                 *E 14 18
                                MICRON        PERIOD
                   PZ             0.16         1.3
        MHC  EP    06 55 38.5                 PP 59 29
        MIN  EP    06 55 38.6
        PRI  EP    06 55 42.3                 *PP 56 16
        JAS  IPC   06 55 42.6                 *PP 56 21    PP 59 37
        FRI  EP    06 55 45.0                 *PP 56 18    PP 59 41
        MNV  EP    06 55 50.9                 PP 59 50
                   USGS  06 42 26.1,  5.9S, 145.8E, H=126 KM, M=5.9
                         EAST PAPUA, NEW GUINEA REGION

MAY 21  FHC  EP    11 22 16.7                 *E 22 30
        WDC  EP    11 22 26.8                 *E 22 39
        MIN  EP    11 22 32.0                 *E 22 44
        BKS  E(P)  11 22 41
                                MICRON        PERIOD
                   PZ             0.01         0.8
        MHC  EP    11 22 47                   *E 23 00
        JAS  EP    11 22 50.5                 *E 23 03
        FRI  EP    11 22 58.7                 *E 23 12
        PRI  EP    11 22 59.0                 *E 23 11
        MNV  EP    11 22 59.2                 *E 23 12
                   USGS  11 15 24.5, 51.7N, 173.5W, H= 45 KM, M=4.9
                         ANDREANOF ISLANDS, ALEUTIAN ISLANDS

MAY 21  WDC  EP    15 15 54.7
        MIN  E(P)  15 15 59
        JAS  EP    15 16 10.0
        FRI  E(P)  15 16 14.5
        MNV  EP    15 16 17.5
                   USGS  15 04 17.2, 31.0N, 141.6E, H= 33 KM, M=5.2
                         SOUTH OF HONSHU, JAPAN
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MAY 22 FHC IPC 00 52 01.8
WDC IPC 00 52 14.9 52 33
MIN EPC 00 52 24.6
BKS IPC 00 52 34.8
MHC E(P) 00 52 45
JAS E(P) 00 52 50
SAO EP 00 52 51.4
FRI E(P) 00 53 05
ML=4.0, SOUTHWEST OF EUREKA
PGE 00 51 49.1, 40.3N, 124.6W, H= 17 KM
NORTHERN CALIFORNIA

MAY 22 BKS EP 03 13 02.2 •E 23 43 •E 24 46 •E 40 12
MICRON PERIOD
PZ 0.04 1.0
WDC IPC 03 13 03.0
MHC EPC 03 13 04.7
SAO EP 03 13 05.5
MIN EP 03 13 07.3
PRI EP 03 13 08.2
JAS IPC 03 13 09.2
FRI EPC 03 13 11.3
MNV IPC 03 13 18.0
USGS 03 00 22.0, 5.6S, 154.3E, H=115 KM, M=5.8
SOLOMON ISLANDS

MAY 22 PRI EP 10 10 26.3
MHC EP 10 10 27.4
BKS EP 10 10 27.8 •PP 10 38 •E 22 13 LQ 40 40
LR 48 36
MICRON PERIOD
PZ 0.02 1.0
MAXR(Z) 3.8 20
MAXH(N) 3.2 20
MAXH(E) 2.7 20
FRI EP 10 10 31.1 •PP 10 44
JAS EP 10 10 32.2 •PP 10 45
WDC EP 10 10 35.4
MNV EP 10 10 39.8 •PP 10 52
Ms=5.8, DISTANCE=86°
USGS 09 57 48.5, 31.1S, 177.8W, H= 31 KM, M=4.8
KERMADEC ISLANDS REGION

MAY 22 PRI EP 10 11 26
MHC EP 10 11 27.6
BKS EP 10 11 30.0
FRI EP 10 11 31
JAS EP 10 11 32
WDC EP 10 11 35
MNV EP 10 11 40
USGS 09 58 48.7, 31.4S, 177.6W, H= 33 KM, M=5.0
KERMADEC ISLANDS REGION

MAY 22 FHC EP 10 25 31.7
BKS EP 10 25 35.2 LR 59 32
MICRON PERIOD
PZ 0.07 1.0
WDC IPC 10 25 36.3 PP 29 27
MHC EPC 10 25 38.2
SAO EP 10 25 38.2
MIN EPC 10 25 38.8
PRI EPC 10 25 42.2
JAS IPC 10 25 42.7 PP 29 37
FRI EPC 10 25 44.5
MNV IPC 10 25 51.0 PP 29 45
USGS 10 12 40.9, 5.6S, 148.3E, H=174 KM, M=5.9
NEW BRITAIN REGION

MAY 22 FRI EP 10 56 27.5
MHC EP 10 56 28.5
FRI EP 10 56 32.5
JAS EP 10 56 33.5
WDC EP 10 56 36.7
MNV EP 10 56 41.3
USGS 10 43 34.7, 33.9S, 179.9W, H= 33 KM, M=4.6
SOUTH OF KERMADEC ISLANDS

MAY 22 FRI EP 13 11 58
JAS EP 13 11 58.7
WDC EP 13 12 02.0
MNV EP 13 12 06.7
USGS 12 59 15.2, 31.4S, 177.6W, H= 33 KM, M=4.3
KERMADEC ISLANDS REGION

MAY 22 MNV EP 14 58 35.3
JAS EP 14 58 39.4
WDC EP 14 58 53
USGS 14 46 17.9, 32.7S, 70.2W, H=111 KM, M=4.4
CHILE-ARGENTINA BORDER REGION

MAY 22 FRI EP 16 06 05.5
PRI EP 16 06 06.1 •E 06 31
MNV EP 16 06 08.0
JAS EP 16 06 12.0 •E 06 36
MHC EP 16 06 13.2
MIN EP 16 06 22.6
WDC EP 16 06 25.3 •E 06 50
FHC EP 16 06 31.4
USGS 15 53 37.6, 36.1S, 71.5W, H= 91 KM, M=5.0
CENTRAL CHILE

MAY 23 FHC EP 06 13 53
WDC EPC 06 13 57.5 •E 14 22
MHC E(P) 06 13 58.5
BKS E(P) 06 14 00.5 24 36 •E 14 20 •E 14 39 •E 14 50
•E 16 04 •E 16 07 SKS 24 18 PS 25 17
•E 18 03 SS 30 30 SSS 33 46 LQ 37 22
LR 41 00
MICRON PERIOD
PZ 0.02 0.8
MAXR(Z) 20 20
MAXH(N) 7 20
MAXH(E) 20 21
MIN E(P) 06 14 00 •E 14 26
PRI E(P) 06 14 02
JAS EPC 06 14 03.6 •E 14 28 PKKP 32 28
FRI EP 06 14 05 •E 14 32
MNV EPC 06 14 12 PKKP 32 20
Ms=6.5, DISTANCE=88°
USGS 06 01 14.6, 4.9S, 153.7E, H=103 KM, M=5.8
NEW IRELAND REGION

MAY 23 MNV EPC 07 24 59.5
FRI E(P) 07 25 02
JAS EPC 07 25 10.0
MIN E(P) 07 25 22
WDC EPC 07 25 25.6
FHC EPC 07 25 36.5
USGS 07 16 09.0, 6.8N, 73.0W, H=166 KM, M=4.7
NORTHERN COLOMBIA

MAY 23 FRI EP 14 11 34
JAS EP 14 11 34.5
WDC EP 14 11 37.5
MNV EP 14 11 42.5
USGS 13 58 54.9, 30.2S, 177.7W, H= 33 KM, M=4.1
KERMADEC ISLANDS

MAY 23 FRI IPD 16 42 41.2
PRI EPD 16 42 42.8 •PP 43 07
MNV EPD 16 42 43.5 RPKP 12 07
SAO EP 16 42 47.8
JAS IPD 16 42 49.5 •PP 43 17 •E 43 51 •E 51 15
RPKP 12 04
MHC EPD 16 42 52.5 •PP 43 18
BKS EP 16 42 56.2 51 28 •PP 43 21 P•CP 43 32 •PPP 45 46
SS 55 49 SSS 58 42 LR 03 56
MICRON PERIOD
PZ 0.33 1.0
MIN IPD 16 43 03.9 •PP 43 22 RPKP 11 57
WDC IPD 16 43 07.4 RPKP 11 55
FHC IPD 16 43 16.2
USGS 16 32 33.0, 10.5S, 78.3W, H= 73 KM, M=5.9
NEAR COAST OF PERU

MAY 23 PRI IPD 17 39 47.0 39 52
FRI IPD 17 39 54.1
SAO IPD 17 39 54.5
MHC EPD 17 40 01.5
JAS IPD 17 40 05.0 40 22
BKS EP 17 40 15.8
MNV E(P) 17 40 24.5
BRK 17 39 39.2, 36.5N, 120.5W, H= 6 KM, ML=2.6
WEST OF FRESNO, CALIFORNIA

MAY 24 MHC EP 03 38 38.8
FRI EP 03 38 43.3
JAS EPC 03 38 43.9
WDC EPC 03 38 45.9
MIN EP 03 38 47.5

MAY 24 PRI E(P) 05 22 59.0
MHC EP 05 23 00.1
BKS EP 05 23 00.8 •E 52 00
MICRON PERIOD
PZ 0.09 1.0
MAXR(Z) 3.2 20
MAXH(N) 3.6 20
MAXH(E) 2.9 20
FRI EPC 05 23 03.7
JAS EPC 05 23 04.8
FHC E(P) 05 23 05.6
WDC EP 05 23 08.1
MIN EP 05 23 09.3
MNV EP 05 23 12.7
Ms=5.9, DISTANCE=86°
USGS 05 10 21.2, 31.2S, 177.7W, H= 33 KM, M=5.3
KERMADEC ISLANDS REGION

MAY 24 MNV EP 11 02 16.8 P•CP 04 30
FRI EP 11 02 17.1 P•CP 04 31
PRI E(P) 11 02 20 P•CP 04 32
JAS EP 11 02 26.5 P•CP 04 34
MHC EP 11 02 30.7
BKS EP 11 02 36 08 58 •E 04 11 •E 04 38 •E 12 38
•E 15 16 •E 19 04 •E 20 05
MICRON PERIOD
PZ 0.06 1.0
MIN EP 11 02 42.3
WDC EP 11 02 48.0
FHC EP 11 02 57.8
USGS 10 54 53.4, 11.5N, 86.8W, H= 33 KM, M=5.3
NEAR COAST OF NICARAGUA

MAY 24 FHC EPD 11 35 56.4
WDC IPD 11 36 01.9
MIN EP 11 36 05.4
BKS EP 11 36 10.0 45 50 •E 36 18 •E 37 09 LQ 56 57
LR 58 55
MICRON PERIOD
PZ 0.04 1.0
MAXR(Z) 2.8 20
MAXH(N) 3.2 20
MAXH(E) 2.8 20
MHC E(P) 11 36 14.0
JAS IPD 11 36 17.0 •E 39 22
SAO E(P) 11 36 17.0
PRI EP 11 36 21.7
FRI EPD 11 36 22.3
MNV IPD 11 36 24.7 •E 39 31
Ms=5.8, DISTANCE=76°
USGS 11 24 25.2, 31.3N, 141.6E, H= 33 KM, M=5.7
SOUTH OF HONSHU, JAPAN

MAY 24 JAS EP 12 57 32.5
WDC EP 12 57 34.5

MAY 25 MHC E(P) 00 51 44.5 •PP 52 04
JAS EP 00 51 49.7 •PP 52 09
FRI EP 00 51 50.2 •PP 52 09
WDC EP 00 51 50.3 •PP 52 10
MNV EP 00 51 58.4 •PP 52 18
USGS 00 39 08.4, 19.8S, 169.0E, H= 70 KM, M=5.1
NEW HEBRIDES ISLANDS

MAY 25 SAO EP 03 39 06.2
BKS EP 03 39 07.4
MICRON PERIOD
PZ 0.06 1.0
MHC EP 03 39 07.9
PRI EP 03 39 07.9
FHC EPC 03 39 11.1
FRI EP 03 39 13.1
JAS IPC 03 39 13.5
WDC IPC 03 39 14.5
MIN EP 03 39 16.6
MNV IPC 03 39 23.0
USGS 03 28 18.0, 18.0S, 178.0W, H=614 KM, M=5.4
FIJI ISLANDS REGION

MAY 25 PRI E(P) 07 28 04
Ms=5.6, DISTANCE=87°
FRI EP 07 28 06
MNV EPD 07 28 10.8
JAS E(P) 07 28 16
WDC EP 07 28 43
FHC E(P) 07 28 53
USGS 07 23 03.5, 18.4N, 104.4W, H= 33 KM, M=4.3
NEAR COAST OF JALISCO, MEXICO

MAY 25 WDC 08 18 •E 18 28
MIN E(P) 08 18 30
JAS EP 08 18 44
MNV EP 08 18 54
USGS 08 09 08.3, 51.6N, 159.4E, H= 33 KM, M=5.3
OFF EAST COAST OF KAMCHATKA

MAY 25 MIN E(P) 08 26 07.5
WDC EP 08 26 08
JAS E(P) 08 26 20
MNV E(P) 08 26 30
USGS 08 16 45.8, 51.6N, 159.4E, H= 43 KM, M=5.5
OFF EAST COAST OF KAMCHATKA

MAY 25 BKS EP 16 25 43.0 •E 36 24 •E 37 38 LQ 53 44
LR 58 44
MICRON PERIOD
PZ 0.31 2.0
MAXR(Z) 1.8 20
MAXH(N) 1.4 20
MAXH(E) 1.8 20
MHC E(P) 16 25 43.5
PRI EP 16 25 44.6
FHC EP 16 25 45.3
WDC EP 16 25 48.2
JAS EP 16 25 48.4
FRI EP 16 25 48.7
MNV EP 16 25 57.2
Ms=5.6, DISTANCE=87°
USGS 16 13 04.3, 20.4S, 169.2E, H= 60 KM, M=5.4

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MAY 25  JAS  EP    23 45 31
        MNV  EP    23 45 40
                   USGS  23 33 39.0, 31.2N, 141.8E, H= 25 KM, M=4.8
                         SOUTH OF HONSHU, JAPAN

MAY 26  WDC  EP    07 01 19.3
        MIN  EP    07 01 22.2
        MHC  EP    07 01 26.3
        JAS  EP    07 01 29.5
        PRI  EP    07 01 31.8
        FRI  EP    07 01 33.5
        MNV  EP    07 01 38.0
                   USGS  06 48 51.4, 12.5N, 142.3E, H=120 KM, M=4.8
                         SOUTH OF MARIANA ISLANDS

MAY 27  SAO  EP    07 06 52.9
        BRK  EP    07 06 53.9
        PRI  EP    07 06 54.2
        MHC  EPC   07 06 54.5
        FHC  EP    07 06 58.2
        FRI  EP    07 06 59.2
        JAS  IPC   07 06 59.7
        WDC  EP    07 07 01.3
        MIN  EP    07 07 03.0
                   USGS  06 55 40.2, 22.3S, 179.5W, H=576 KM, M=5.0
                         SOUTH OF FIJI ISLANDS

MAY 27  BKS  IPD   17 01 19.5
        MHC  EP    17 01 31.6
        SAO  EP    17 01 38.4
        JAS  EP    17 01 38.7
        WDC        17 01                    *E 01 50
        FRI  E(P)  17 01 52
        PRI        17 01                    *E 01 52
                   BRK   17 01 08.9, 38.3N, 122.6W, H=  4 KM, ML=3.4
                         SOUTHEAST OF SANTA ROSA, CALIFORNIA

MAY 29  WDC        12 38                    PP 41 55  PKKP 53 12
        BKS        12 38       49 40        PP 42 10   PS 51 30   PPS 52 35
                                            SS 56 20   *E 57 40   SSS 01 08
                                            LQ 05 00   LR 16 00
                              MICRON        PERIOD
                   MAXR(Z) 21               20
                   MAXH(N) 26               20
                   MAXH(E) 38               20
        JAS  PDIF  12 38 00                 PP 42 18  PKKP 53 04
        MNV        12 38                    PP 42 22  PKKP 53 01
                   M=7.0, DISTANCE=107°
                   USGS  12 23 18.7, 24.6N,  99.0E, H=  8 KM, M=6.1
                         YUNNAN PROVINCE, CHINA

MAY 29  FHC        14 14                    PP 18 50
        MIN        14 14                    PP 18 55
        WDC        14 14                    PP 18 58  PKKP 30 22
        BKS        14 14                    *E 34 40   *E 45 50   *E 52 56
                              MICRON        PERIOD
                   MAXR(Z) 21               20
                   MAXH(N) 19               20
                   MAXH(E) 17               20
        JAS  PDIF  14 14 45                 PP 19 15  PKKP 30 13
        MNV        14 14                    PP 19 20  PKKP 30 10
                   M=6.8, DISTANCE=105°
                   USGS  14 01 18.5, 24.5N,  98.7E, H= 10 KM, M=6.0
                         BURMA-CHINA BORDER REGION

MAY 30  FRI  EPD   03 21 43.0
        PRI  EPD   03 21 43.2
        SAO  E(P)  03 21 46.3
        MNV  IPD   03 21 47.0
        JAS  IPD   03 21 49.4
        MHC  EPD   03 21 49.9
        BKS  EPD   03 21 53.8  32 28       PP 25 20   PPP 27 00   *E 34 00
                                            SS 39 00   *E 42 24   LQ 45 44
                                            LR 50 18
                              MICRON        PERIOD
                   PZ           0.13        1.0
                   MAXR(Z)      3.6         20
                   MAXH(N)      2.8         20
                   MAXH(E)      2.5         20
        MIN  EP    03 22 00
        WDC  EPD   03 22 02.4
                   M=5.8, DISTANCE=90°
                   USGS  03 08 54.2, 41.6S,  75.4W, H= 28 KM, M=6.0
                         OFF COAST OF SOUTHERN CHILE

MAY 31  JAS  EP    02 10 09.7
        WDC  EP    02 10 12.9
        MNV  EP    02 10 17.4
                   USGS  01 57 33.2, 29.9S, 177.8W, H= 56 KM, M=4.7
                         KERMADEC ISLANDS

MAY 31  MNV  EP    13 27 16.8
        WDC  EP    13 27 19.8
        JAS  EP    13 27 39.5
                   USGS  13 17 35.7, 48.1N, 152.7E, H=111 KM, M=5.1
                         KURIL ISLANDS

MAY 31  FRI  EP    14 55 06.9
        PRI  EP    14 55 07.0
        MNV  EPC   14 55 08.8
        JAS  EPC   14 55 16.1
        MHC  EP    14 55 19.5
                   USGS  14 50 05.2, 19.4N, 100.9W, H=159 KM, M=5.1
                         MICHOACAN, MEXICO

MAY 31  FRI        20 51                    *E 51 17
        JAS  EP    20 51 23.0
        MNV        20 51                    *E 51 36
                   USGS  20 38 54.2, 31.2S, 177.9W, H=154 KM, M=5.1
                         KERMADEC ISLANDS

MAY 31  BKS  EP    22 34 41.5               *E 45 52   SS 50 40   LR 59 40
                              MICRON        PERIOD
                   PZ           0.08        1.1
                   MAXR(Z)      1.2         20
                   MAXH(N)      0.7         20
                   MAXH(E)      1.4         20
        SAO  EP    22 34 42.4
        MHC  EP    22 34 42.9
        WDC  EPC   22 34 44.7
        PRI  EP    22 34 45.1
        JAS  EP    22 34 47.5
        FRI  EP    22 34 49.4
        MNV  EPC   22 34 57.0
                   M=5.4, DISTANCE=83°
                   USGS  22 22 13.9, 11.2S, 165.3E, H= 21 KM, M=5.3
                         SANTA CRUZ ISLANDS

JUN 01  SAO  EPC   14 25 07.6
        BRK  EP    14 25 08.2
        MHC  EPC   14 25 09.2
        PRI  IPC   14 25 09.3
        FHC  EP    14 25 12.1
        FRI  EPC   14 25 14.6
        JAS  IPC   14 25 14.9
        WDC  IPC   14 25 15.7
        MIN  EP    14 25 17.8
        MNV  IPC   14 25 24.5
                   USGS  14 14 18.5, 17.8S, 178.8W, H=625 KM, M=5.1
                         FIJI ISLANDS REGION

JUN 01  FHC  EP    22 42 55.6               P*CP 43 08
        WDC  EPD   22 43 01.3               P*CP 43 14
        MIN  EP    22 43 05.5
        BKS  IPD   22 43 07.0               P*CP 43 19   *PP 43 28
                              MICRON        PERIOD
                   PZ           0.06        1.0
        MHC  EP    22 43 09.0               P*CP 43 22
        SAO  EP    22 43 10                 P*CP 43 23
        JAS  EPD   22 43 13.0               P*CP 43 26
        PRI  EPD   22 43 15.1
        FRI  EP    22 43 17.0               P*CP 43 30
        MNV  EPD   22 43 21.5               P*CP 43 34
                   USGS  22 30 58.8, 16.9N, 147.5E, H= 45 KM, M=5.4
                         MARIANA ISLANDS REGION

JUN 02  WDC  EP    06 00 28                 *E 00 47
        MIN  EP    06 00 32                 *E 00 51
        JAS  EP    06 00 46                 *E 01 05
                   USGS  05 49 32.4, 41.5N, 142.0E, H= 62 KM, M=5.2
                         HOKKAIDO, JAPAN REGION

JUN 02  SAO  IPC   06 34 51.4
        PRI  EP    06 35 02.5
        MHC  EP    06 35 02.6
        FRI  EP    06 35 11.5
        JAS  EPD   06 35 14.1
        BKS  IPC   06 35 15.0  35 34
        MNV        06 35                    *E 35 43
                   BRK   06 34 48.3, 36.7N, 121.3W, H=  5 KM, ML=3.0
                         SOUTHEAST OF HOLLISTER, CALIFORNIA

JUN 02  FHC  IPD   10 37 10.0
        WDC  IPD   10 37 14.0
        MIN  EPD   10 37 16.7
        BKS  EPD   10 37 22.0
                              MICRON        PERIOD
                   PZ           0.09        1.0
        MHC  EPD   10 37 25.2
        SAO  EP    10 37 26.7
        JAS  EPD   10 37 26.9
        FRI  EPD   10 37 31.6
        PRI  EPD   10 37 31.6
        MNV  IPD   10 37 32.6
                   USGS  10 24 31.8, 25.3N, 122.2E, H=215 KM, M=5.4
                         TAIWAN REGION

JUN 02  JAS  EP    12 38 26.3
        MNV  EP    12 38 33.3

JUN 03  WDC  IPD   10 35 10.9
        MIN  EP    10 35 14.4
        MHC  EP    10 35 19.2
        JAS  IPD   10 35 22.9
        FRI  EPD   10 35 27.2
        MNV  IPD   10 35 31.0
                   USGS  10 23 16.1, 18.4N, 145.7E, H=129 KM, M=5.1
                         MARIANA ISLANDS

JUN 03  WDC  EP    13 51 38.5               *I 52 18
        BKS        13 51                    *E 51 56   *E 52 56
                              MICRON        PERIOD
                   MAXR(Z)      2.0         20
                   MAXH(N)      2.2         20
                   MAXH(E)      2.5         20
        JAS  EP    13 52 08.6
                   GULF OF ALASKA

JUN 03  BKS  EP    13 57 17.6  07 00        PS 08 00
        PRI  EP    13 57 17.7
        SAO        13 57                    *E 57 18
        MHC  EP    13 57 18.2
        FHC  EP    13 57 22.0
        JAS  IP    13 57 22.3
        FRI  EP    13 57 22.7
        WDC  EP    13 57 22.8
        MIN  EP    13 57 25.5
        MNV  EP    13 57 30.3
                   USGS  13 45 43.8, 26.6S, 178.3E, H=617 KM, M=5.6
                         SOUTH OF FIJI ISLANDS

JUN 03  WDC  EPC   16 57 24
        MHC  EPC   16 57 25
        BKS  EP    16 57 26.5  08 00        PP 01 00   SKS 07 40   PPS 09 04
                                            SS 13 00   SSS 17 44   LQ 20 50
                                            LR 24 20
                              MICRON        PERIOD
                   MAXR(Z) 26               20
                   MAXH(N) 10               20
                   MAXH(E) 20               20
        MIN  EP    16 57 27
        PRI  EP    16 57 28
        JAS  EPC   16 57 30.3
        FRI  EPC   16 57 32
        MNV  EPC   16 57 38.5
                   M=6.6, DISTANCE=89°
                   USGS  16 44 38.8,  5.2S, 153.4E, H= 88 KM, M=6.2
                         NEW IRELAND REGION

JUN 03  BKS  EP    21 15 07
        MHC  EP    21 15 08                 *E 15 18
        FRI  EPC   21 15 13.4               *E 15 23
        JAS  EPC   21 15 14.1               *E 15 24
        WDC  EPC   21 15 16.3               *E 15 26
        MNV  EPC   21 15 24.5               *E 15 34
                   USGS  21 03 49.2, 15.3S, 172.3W, H= 13 KM, M=5.3
                         SAMOA ISLANDS REGION

JUN 04  WDC  EPC   04 34 41.4
        MIN  EPC   04 34 45.5
        BKS  EP    04 34 47.0  44 20        *E 44 50   LQ 52 00   LR 57 12
                              MICRON        PERIOD
                   MAXR(Z)      1.6         20
                   MAXH(N)      1.8         20
                   MAXH(E)      3.2         20
        MHC  EPC   04 34 56.0
        SAO  EP    04 34 58
        JAS  EPC   04 34 58.7
        FRI  EPC   04 35 04.5
        PRI  EPC   04 35 04.5
        MNV  EPC   04 35 06.0
                   M=5.6, DISTANCE=71°
                   USGS  04 23 32.4, 38.3N, 142.7E, H= 21 KM, M=5.7
                         NEAR EAST COAST OF HONSHU, JAPAN

JUN 04  WDC  EP    05 46 24.0
        MIN  EPD   05 46 27.4
        BRK  EP    05 46 30.5
        MHC  EP    05 46 34.0
        JAS  EPD   05 46 37.4
        PRI  EP    05 46 41
        FRI  EP    05 46 42.0
        MNV  EP    05 46 46.0
                   USGS  05 34 26.5, 23.9N, 143.1E, H= 33 KM, M=5.5
                         VOLCANO ISLANDS REGION

JUN 04  SAO  IPC   05 50 14.2
        PRI  EP    05 50 25.8
        MHC  EP    05 50 26.0  50 36
        FRI  EP    05 50 35.2
        BKS  EP    05 50 37.5
        JAS  EP    05 50 39
                   BRK   05 50 11.4, 36.7N, 121.3W, H=  4 KM, MAG=2.6
                         SOUTHEAST OF HOLLISTER, CALIFORNIA
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JUN 04  FRI  EPD  23 51 17.3                 •PP 51 45
        PRI  IPD  23 51 19.1                 •PP 51 45
        MNV  IPD  23 51 19.2
        SAO  EP   23 51 24                   •PP 51 50      •E 59 01
        JAS  IPD  23 51 24.7                 •PP 51 53
        MHC  EPD  23 51 26.8                 •PP 51 56
        BKS  EP   23 51 30.1                  PERIOD
                        MICRON                 0.9
                  PZ      0.07
        MIN  EPD  23 51 35.5                 •PP 52 05
        WDC  IPD  23 51 39.0
        FHC  EPD  23 51 46.0
                  USGS  23 39 36.0, 23.1S,  68.5W, H=101 KM, M=5.4
                        NORTHERN CHILE

JUN 05  FHC  EPC  08 32 40.5                 •E 34 27       SS 49 40       LQ 55 30
        BKS  EPC  08 32 42.0  43 00            LR 59 00
                                               PERIOD
                        MICRON                   1.1
                  PZ      0.28                 20
                  MAXR(Z) 11                   20
                  MAXH(N) 4.3                  20
                  MAXH(E) 9
        SAO  EPC  08 32 43.4
        MHC  EPC  08 32 44.0                 •E 32 57       •E 33 22
        WDC  IPC  08 32 44.9
        PRI  EPC  08 32 46.5                 •E 33 02       •E 33 25       •E 34 31
        MIN  EPC  08 32 47.3                  RPKP 58 43
                                             •E 33 04       •E 34 30       PP 36 19
        JAS  IPC  08 32 48.9                  RPKP 58 47

        FRI  EPC  08 32 50.3                  PP 36 27
        MNV  IPC  08 32 57.9
                  Ms=6.2, DISTANCE=86°
                  USGS  08 20 07.2, 10.1S, 161.0E, H= 61 KM, M=6.2
                        SOLOMON ISLANDS

JUN 06  FHC  EPD  02 19 21.5                 •E 20 56  P•CP 25 58
        WDC  EPD  02 19 31.5                 •E 20 20    •E 21 02
        MIN  EPD  02 19 38.4
        BKS  EPD  02 20 08.2  22 17
                        MICRON                 PERIOD
                  PZ      0.83                 2.0
        JAS  IPD  02 20 12.3                 P•CP 26 50
        MHC  EP   02 20 15.0                 •E 21 38
        MNV  EPD  02 20 19.3  22 52
        SAO  EP   02 20 24.8
        FRI  EP   02 20 26.6
        PRI  EP   02 20 34.3                 •E 21 54
                  USGS  02 17 17.4, 49.0N, 127.9W, H= 33 KM, M=5.2
                        VANCOUVER ISLANDS REGION

JUN 06  WDC  EPD  02 37 45
        MIN  EP   02 37 51.5
        JAS  EP   02 38 29.0
        MNV  EP   02 38 32.8
                  USGS  02 35 31.6, 49.1N, 127.7W, H= 33 KM, M=4.5
                        VANCOUVER ISLAND REGION

JUN 06  BKS  EP   03 45 04.3
                        MICRON       PERIOD
                  PZ      0.07         0.7
        FHC  EP   03 45 04.5
        MHC  EP   03 45 05.8
        WDC  EP   03 45 07.0
        SAO  EP   03 45 07.5
        PRI  EP   03 45 08.4
        MIN  EP   03 45 09.5
        JAS  EP   03 45 09.9
        FRI  EP   03 45 12.0
        MNV  EP   03 45 19.9
                  USGS  03 32 28.2, 10.1S, 161.0E, H= 54 KM, M=5.5
                        SOLOMON ISLANDS

JUN 06  PRI  EP   12 03 27.6
        BKS  EP   12 03 28.5
                        MICRON       PERIOD
                  PZ      0.04         1.0
        MHC  EP   12 03 28.6
        FRI  EP   12 03 32.1
        JAS  EPD  12 03 33.2
        FHC  EP   12 03 33.8
        WDC  EPD  12 03 36.6
        MIN  EP   12 03 37.8
        MNV  EPD  12 03 40.8
                  USGS  11 50 39.4, 33.3S, 179.3W, H= 45 KM, M=5.4
                        SOUTH OF KERMADEC ISLANDS

JUN 06  WDC  EPD  14 12 44.7
        MIN  EP   14 12 48.3
        BRK  EP   14 12 54
        JAS  EP   14 13 00.8
        PRI  EP   14 13 05.2
        FRI  EP   14 13 06.4
        MNV  EP   14 13 07.6
                  USGS  14 01 21.1, 36.1N, 139.6E, H= 73 KM, M=4.9
                        HONSHU, JAPAN

JUN 06  FHC  EPD  17 51 25.6
        WDC  IPD  17 51 34.0
        MIN  EPD  17 51 39.3
        BKS  EPD  17 51 47.9                 •E 17 58       •E 18 01
                        MICRON       PERIOD
                  PZ      0.08         1.0
        MHC  IPD  17 51 54.0
        SAO  EP   17 51 57.0
        JAS  IPD  17 51 57.5
        FRI  EPD  17 52 05.3
        PRI  EP   17 52 05.3
        MNV  EPD  17 52 06.3
                  USGS  17 44 09.1, 51.5N, 178.0W, H= 54 KM, M=5.2
                        ANDREANOF ISLANDS, ALEUTIAN ISLANDS

JUN 06  FHC  IPC  22 22 12.2  22 18
        WDC  EPC  22 22 25.8
        MIN  EP   22 22 35.3
        MHC  EP   22 22 56.5
        JAS  E(P) 22 23 01
        SAO  EP   22 23 03.5
        FRI       22 23                      •E 23 18
                  ML=3.2, SOUTH OF EUREKA
                  PGE   22 22 03.8, 40.4N, 124.3W, H= 20 KM
                        NORTHERN CALIFORNIA

JUN 07  MNV  IPC  00 33 17.8
        FRI  EPD  00 33 24.0
        JAS  EPC  00 33 35.5
        PRI  EP   00 33 37.5
        MHC       00 33
        SAO       00 33                      •E 33 50
        MIN       00 34                      •E 33 54
        WDC       00 34                      •E 34 08
                                             •E 34 32
                  ML=4.4, BEATTY, NEVADA
                  USGS  00 32 38.6, 36.6N, 116.4W, H=  5 KM
                        CALIFORNIA-NEVADA BORDER REGION

JUN 07  MNV  IPC  00 37 52.3
        FRI  EPD  00 37 58.5
        JAS  IPC  00 38 10.2
        PRI  EP   00 38 10.3
        MHC  EP   00 38 23
        SAO       00 38
        BRK       00 38                      •E 38 28
        MIN       00 38                      •E 38 42
        WDC       00 38                      •E 38 42
                                             •E 38 42
                  ML=4.4, BEATTY, NEVADA
                  USGS  00 37 13.1, 36.6N, 116.3W, H=  5 KM, M=4.0
                        CALIFORNIA-NEVADA BORDER REGION

JUN 07  FHC  EP   05 58 50.2
        WDC  EP   05 58 56.4
        MIN  EP   05 59 01.0
        JAS  EP   05 59 17.0
        MNV  EP   05 59 24.5
                  USGS  05 49 15.4, 48.8N, 154.9E, H= 33 KM, M=5.1
                        KURIL ISLANDS

JUN 07  WDC  EP   07 37 14.0
        MIN  EP   07 37 21
        JAS  EP   07 37 55.5
        MNV       07 38                      •E 38 09
                  USGS  07 34 59.6, 49.0N, 127.7W, H= 10 KM, M=4.2
                        VANCOUVER ISLAND REGION

JUN 07  FHC  EPC  07 50 23.1
        WDC  EPC  07 50 27.2                                PP 53 35  PKKP 07 34
        MIN  EPC  07 50 30.0
        BKS  EP   07 50 32    01 16          SS 08 35       •E 12 32       LQ 18 00
                                             LR 22 00
                        MICRON               PERIOD
                  PZ      1.98               15.6
                  MAXR(Z) 13                 20
                  MAXH(N) 9                  20
                  MAXH(E) 14                 20
        MHC  EP   07 50 36.7
        JAS  EPC  07 50 39.0                                PP 53 52  PKKP 07 24  RPKP 15 30
        FRI  EP   07 50 43.1
        PRI  EP   07 50 44.2
        MNV  EPC  07 50 45.5                                PP 54 08  RPKP 07 17
                  Ms=6.5, DISTANCE=99°
                  USGS  07 36 55.4, 14.1N, 124.8E, H= 33 KM, M=6.1
                        LUZON, PHILIPPINE ISLANDS

JUN 07  FRI  EPC  14 32 06.8
        PRI  EPC  14 32 07.7
        MNV  EPC  14 32 10.0
        SAO  EP   14 32 14.5
        JAS  IPC  14 32 17.3
        MHC  EPC  14 32 20.2
        BKS  EP   14 32 26.3  37 14           •E 39 18       •E 41 30
                        MICRON               PERIOD
                  PZ      0.19               1.6
                  MAXR(Z) 55                 20
                  MAXH(N) 64                 20
                  MAXH(E) 57                 20
        MIN  EPC  14 32 38.7
        WDC  EPC  14 32 42.3
        FHC  EPC  14 32 53.3
                  Ms=6.3, DISTANCE=28°
                  USGS  14 26 39.1, 17.4N, 100.6W, H= 45 KM, M=6.1
                        GUERRERO, MEXICO

JUN 07  MHC  EP   21 05 15.2                 •E 05 22
        PRI  EP   21 05 15.8
        WDC  EP   21 05 19.8                 •I 05 27
        JAS  IPD  21 05 20.0                 •I 05 27
        FRI  EP   21 05 20.2                 •E 05 26
        MIN  EP   21 05 21.3
        MNV       21 05                      •E 05 28
                  USGS  20 52 34.1, 21.2S, 170.2E, H= 43 KM, M=5.2
                        LOYALTY ISLANDS REGION

JUN 08  PRI  EP   17 59 07.3
        MNV  EP   17 59 08.0
        JAS  IPD  17 59 13.1
        MHC  EP   17 59 15
        BKS  EP   17 59 18.5
                        MICRON       PERIOD
                  PZ      0.02         0.7
        WDC  EPD  17 59 27.0
                  USGS  17 47 13.7, 25.6S,  68.7W, H= 97 KM, M=5.0
                        CHILE-ARGENTINA BORDER REGION

JUN 09  FHC  EPC  03 15 48.8
        WDC  EP   03 15 51
        MIN  EP   03 15 51.5
        MNV  EP   03 16 03.5
        JAS  IPC  03 16 04.3
        MHC  EP   03 16 06
        FRI  EPC  03 16 09.0
        PRI  EP   03 16 13
                  USGS  03 02 57.6, 50.0N,  79.1E, H=  0 KM, M=5.4
                        EASTERN KAZAKH, SSR

JUN 09  WDC  EP   06 06 08.3
        MIN  EP   06 06 11.7
        MHC  EP   06 06 16.0
        JAS  IPD  06 06 20.0
        PRI  E(P) 06 06 21
        FRI  EP   06 06 24.2
        MNV  EP   06 06 27.7
                  USGS  05 54 07.1, 17.1N, 147.7E, H= 43 KM, M=4.9
                        MARIANA ISLANDS REGION

JUN 09  BKS  EP   08 57 47.5
        MHC  EP   08 57 49.1
        PRI  EP   08 57 49.8
        WDC  EP   08 57 54.0
        FRI  EP   08 57 54.2
        JAS  EPC  08 57 54.2
        MNV  EPC  08 58 02.7
                  USGS  08 45 06.4, 21.2S, 170.2E, H= 28 KM, M=4.8
                        LOYALTY ISLANDS REGION

JUN 09  WDC  EP   16 43 44.0
        BKS       16 43                      •E 43 46
        MIN  EP   16 43 46.0
        MHC  EP   16 43 47.0                 •E 47 26
        PRI  EP   16 43 49.4
        JAS  EP   16 43 51.7                 •E 47 31
                  USGS  16 30 39.7,  6.5S, 151.4E, H= 18 KM, M=5.5
                        NEW BRITAIN REGION

JUN 10  WDC       10 29                      •E 29 02
        MIN  EP   10 29 03.0
        JAS  EP   10 29 06.4
        MHC       10 29                      •E 29 16
                  USGS  10 19 31.5, 51.6N, 159.4E, H= 40 KM, M=5.0
                        OFF EAST COAST OF KAMCHATKA

JUN 10  MNV  IPD  10 40 12.6                 •I 40 16
        FRI  EP   10 40 40.2                 •E 41 41
        JAS  EP   10 40 40.2                 •I 40 51       •I 41 40
        PRI       10 41                      •E 41 12
                  USGS  10 39 35.9, 39.6N, 115.9W, H=  2 KM
                        NEVADA

JUN 11  FRI  EPC  03 51 30.4
        JAS  EPC  03 51 36.4
        MHC  EPC  03 51 43.5
        MIN  EPC  03 51 43.8
        WDC  EPC  03 51 47.2
        FHC  EPC  03 51 57.6
                  USGS  03 41 58.3, 17.0N,  60.6W, H= 42 KM, M=5.3
                        LEEWARD ISLANDS

JUN 11  BKS  EP   15 39 02.4                 •E 39 13       •E 39 17
                        MICRON       PERIOD
                  PZ      0.03         0.6
        MHC  EP   15 39 03.8
        WDC  EPC  15 39 04.4
        PRI  EP   15 39 06.0
        JAS  EPC  15 39 08.7                 •E 39 23
        FRI  EP   15 39 10.0
        MNV  EPC  15 39 17.6
                  USGS  15 26 26.0, 10.1S, 161.1E, H= 52 KM, M=5.4
                        SOLOMON ISLANDS
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JUN 11  PRI  E(P)  20 08 32.8
        MHC  EP    20 08 33.5                 •E 08 45
        FRI  EP    20 08 38.6                 •E 08 50
        JAS  EP    20 08 39.7                 •E 08 50
        WDC  EP    20 08 42.2                 •E 08 53
        MNV  EP    20 08 49.3                 •E 09 00
                   USGS  19 56 51.1, 20.0S, 174.0W, H= 34 KM, M=5.0
                         TONGA ISLANDS

JUN 12  MIN        01 12                      •E 12 42
        MNV  EP    01 12 43
        WDC  E(P)  01 12 43
        JAS  EP    01 12 48.5
        BKS        01 12                      •E 16 50    LR 55 10
        MHC        01 12                      •E 12 55
        PRI        01 12                      •E 13 00
                   USGS  00 59 16.9, 37.5N,  20.6E, H=  8 KM, M=5.5
                         IONIAN SEA

JUN 12  MHC  EP    03 13 35.5
        BKS  EP    03 13 36    24 02
                          MICRON     PERIOD
                   MAXR(Z)  1.9       20
                   MAXH(N)  1.7       20
                   MAXH(E)  1.5       20
        PRI  E(P)  03 13 36
        FRI  EP    03 13 39.6
        JAS  EP    03 13 40.8
        WDC  EP    03 13 44.0
        MIN        03 13                      •E 13 50
        MNV  EP    03 13 49.0
                   Ms=5.6, DISTANCE=84°
                   USGS  03 01 11.3, 28.8S, 176.5W, H= 43 KM, M=5.1
                         KERMADEC ISLANDS REGION

JUN 12  JAS  EP    03 20 44.0
        WDC  EP    03 20 47.2
        MNV        03 20                      •E 20 53
                   USGS  03 08 12.1, 28.8S, 176.6W, H= 33 KM, M=4.5
                         KERMADEC ISLANDS REGION

JUN 12  FRI  EP    03 36 34.8
        MNV  EP    03 36 35
        JAS  EP    03 36 44
        MHC  EP    03 36 49.5
        BKS        03 36                      •E 36 59
        FHC  EP    03 37 17
                   USGS  03 29 46.1, 13.4N,  89.9W, H= 94 KM, M=4.6
                         EL SALVADOR

JUN 12  PRI  EP    05 38 54.9
        MHC  EP    05 38 55.5
        BKS  EP    05 38 55.6  48 45      LR 02 30
                          MICRON     PERIOD
                   MAXR(Z)  1.3       20
                   MAXH(N)  1.1       18
                   MAXH(E)  1.2       18
        FRI  EP    05 39 00.3
        JAS  EP    05 39 01.7
        WDC  EP    05 39 04.2
        MIN  EP    05 39 05.8
        MNV  EP    05 39 10.7
                   Ms=5.3, DISTANCE=79°
                   USGS  05 27 06.5, 21.4S, 174.3W, H= 34 KM, M=5.4
                         TONGA ISLANDS

JUN 13  MHC  IPD   06 12 17.4
        SAO  IPD   06 12 20.6
        BKS  IPC   06 12 30.3  12 43
        JAS  EPC   06 12 34.6
        PRI  EPC   06 12 35.6
        FRI  EP    06 12 38.7
        MNV        06 13                      •E 13 06
                   BRK   06 12 12.9, 37.1N, 121.6W, H=  6 KM, ML=3.2
                         NORTH OF GILROY, CALIFORNIA

JUN 13  MNV  EPD   19 15 00.0
        FRI  EP    19 15 06.5
        PRI  EP    19 15 12.3
        JAS  IPD   19 15 12.9              P•CP 16 36
        SAO  E(P)  19 15 17.6
        MHC  EP    19 15 20.1
        MIN  EP    19 15 20.9
        BRK  E(P)  19 15 23.5
        WDC  EPD   19 15 24.9
        FHC  EP    19 15 36.0
                   USGS  19 06 27.4, 19.0N,  67.9W, H= 51 KM, M=5.4
                         MONA PASSAGE

JUN 13  FRI  EP    22 13 36.0
        PRI  EPC   22 13 37.5
        MNV  EPC   22 13 38.2
        JAS  EPC   22 13 44.4              RPKP 42 06
        MHC  EP    22 13 46.7
        BKS  EP    22 13 51.4  22 59      SS 27 33    LQ 31 17
                          MICRON     PERIOD
                   PZ       0.04       0.8
                   MAXR(Z)  3.1        18
                   MAXH(N)  1.3        16
                   MAXH(E)  4.5        18
        MIN  EP    22 13 57.5
        WDC  EPC   22 14 00.6              RPKP 42 16
        FHC  EPC   22 14 07.7
                   Ms=5.7, DISTANCE=69°
                   USGS  22 02 47.6, 15.3S,  75.4W, H= 33 KM, M=5.6
                         NEAR COAST OF PERU

JUN 14  MNV  E(P)  09 39 26                P•G 39 45   •E 40 33   S•G 40 59
        JAS  E(P)  09 40 15                S•G 41 50
                   USGS  09 37 57.8, 42.1N, 112.5W, H=  7 KM
                         EASTERN IDAHO

JUN 14  FRI  E(P)  14 00 04
        MNV  EPC   14 00 05.5                  LR 13 23
        PRI  E(P)  14 00 05.7
        JAS  EPC   14 00 13.8              LR 14 05
        BKS        14 00                   •E 05 51    •E 08 58    •E 11 00
                                           •E 12 46
        FHC  E(P)  14 00 50
                   USGS  13 53 58.4, 15.9N,  95.2W, H= 59 KM, M=5.0
                         NEAR COAST OF OAXACA, MEXICO

JUN 14  WDC  EP    18 08 28.4                  •E 08 40
        BKS  E(P)  18 08 46    14 30       •E 08 58    LQ 17 22
        JAS  EP    18 08 52.9              •E 09 04
                          MICRON     PERIOD
                   MAXR(Z)  2.7        18
                   MAXH(N)  2.6        18
                   MAXH(E)  2.1        19
        FRI  EP    18 09 01.4              •E 09 12
        MNV  EP    18 09 02.4              •E 09 14
                   Ms=5.1, DISTANCE=37°
                   USGS  18 01 34.1, 51.8N, 171.3W, H= 10 KM, M=5.1
                         FOX ISLANDS, ALEUTIAN ISLANDS

JUN 14  SAO  IPC   19 23 43.5
        MHC  EPC   19 23 52.1  24 00
        PRI  IPC   19 23 57.0  24 10
        FRI  EP    19 24 04.9
        JAS  IPC   19 24 05.0
        BKS  EP    19 24 05.7                  S• 24 22   S•N 24 22   S•G 24 24
                   BRK   19 23 40.4, 36.8N, 121.5W, H= 17 KM, ML=2.7
                         SOUTH OF HOLLISTER, CALIFORNIA

JUN 14  MIN  IP    23 30 42.4
        WDC  IPC   23 30 48.5
        BKS  EP    23 30 54.2  31 14
        JAS  IPD   23 30 56.5
        MHC  EP    23 31 02.0
        FHC  EP    23 31 04.9
        SAO  EP    23 31 09.0
        MNV  IP    23 31 12.1
        FRI  EP    23 31 12.5
        PRI  EP    23 31 21.7
                   BRK   23 30 26.5, 39.5N, 121.5W, H=  7 KM, ML=3.8
                         SOUTHEAST OF CHICO, CALIFORNIA

JUN 15  WDC  EP    06 22 44.2                  PP 26 38
        BKS  EP    06 22 48.7  34 22       SKS 33 14    PS 35 48    PPS 36 28
                                           SS 41 22    LQ 49 22    LR 54 00
                          MICRON     PERIOD
                   PZ       0.02       0.9
                   MAXR(Z)  8.6        20
                   MAXH(N)  2.8        22
                   MAXH(E)  7.1        20
        MHC  EP    06 22 49.3
        JAS  EP    06 22 53.5              PP 27 00
        PRI  EP    06 22 54.4
        FRI  EP    06 22 56.2
        MNV  EP    06 23 00.6              PP 27 14
                   Ms=6.2, DISTANCE=100°
                   USGS  06 09 01.8,  0.5N, 134.8E, H= 33 KM, M=6.0
                         WEST IRIAN

JUN 15  FHC  EP    07 27 42.0                  •I 28 05
        WDC  EP    07 27 47.9
        MIN  EP    07 27 51.5
        BKS        07 28 04.8
                          MICRON     PERIOD
                   PZ       0.02       0.6
        MHC  EP    07 28 12.0
        JAS  EP    07 28 23.9
                   OFF THE OREGON COAST

JUN 15  WDC  EP    12 33 03.5                  •E 33 15
        MIN  EP    12 33 10.6                  •E 33 23
        JAS  EP    12 33 26.8
        MNV  EP    12 33 34.0                  •E 33 46
                   USGS  12 23 55.1, 53.1N, 159.6E, H= 32 KM, M=5.4
                         NEAR EAST COAST OF KAMCHATKA

JUN 15  JAS  EP    15 24 13.5
        WDC  EP    15 24 16.0
        MNV  EP    15 24 23.0
                   USGS  15 12 19.3, 21.2S, 174.2W, H= 33 KM, M=4.8
                         TONGA ISLANDS

JUN 15  MHC  EP    16 22 09
        PRI  E(P)  16 22 09
        FRI  EP    16 22 13.2
        JAS  IP    16 22 14.2
        WDC  EP    16 22 16.9
        MNV  EP    16 22 22.5
                   USGS  16 09 57.4, 28.1S, 178.5W, H=185 KM, M=4.9
                         KERMADEC ISLANDS REGION

JUN 15  FHC  EP    22 47 46.3
        WDC  EP    22 47 50.7                  •E 47 59
        MHC        22 48                       •E 48 05
        JAS  EP    22 48 07.4                  •E 48 15
        FRI  EP    22 48 12.7
                   USGS  22 36 18.3, 35.5N, 139.0E, H= 28 KM, M=5.4
                         NEAR SOUTH COAST OF HONSHU, JAPAN

JUN 16  JAS  EP    01 36 15.3
        WDC  EP    01 36 18.3
        MNV  E(P)  01 36 23
                   USGS  01 23 57.5, 25.5S, 176.2W, H= 33 KM, M=5.0
                         SOUTH OF FIJI ISLANDS

JUN 17  WDC  IPD   02 50 33.7                  •PP 50 47
        MIN  EP    02 50 39.2                  •PP 50 52
        BKS        02 51                        •E 58 22
        JAS  IPD   02 51 01.0                  •PP 51 14
        MNV  EP    02 51 07.7
        FRI  EP    02 51 10.5                  •PP 51 23
        PRI  EP    02 51 13.7
                   USGS  02 44 58.9, 57.4N, 154.3W, H= 50 KM, M=5.2
                         KODIAK ISLAND REGION

JUN 18  WDC  EP    01 00 43
        JAS  EP    01 00 54.7
                   USGS  00 48 42.0, 17.6N, 147.6E, H= 33 KM, M=5.2
                         MARIANA ISLANDS REGION

JUN 18  SAO  EP    01 57 43.0
        PRI  EPD   01 57 43.9
        MHC  EPD   01 57 45.1
        BKS  EP    01 57 45.4  07 52      PS 08 44    •E 21 40    LR 23 20
                          MICRON     PERIOD
                   PZ       0.04       0.7
                   MAXR(Z)  2.7        20
                   MAXH(N)  2.3        20
                   MAXH(E)  2.1        20
        FRI  EPD   01 57 48.2
        JAS  EPD   01 57 50.4
        WDC  EPD   01 57 53.0
        MIN  EPD   01 57 54.9
        MNV  EP    01 57 59.4
                   Ms=5.6, DISTANCE=80°
                   USGS  01 45 37.3, 24.8S, 175.4W, H= 33 KM, M=5.6
                         SOUTH OF TONGA ISLANDS

JUN 18  PRI  EP    10 24 41
        MNV  EPC   10 24 41.6
        JAS  EPC   10 24 47.5              RPKP 53 10
        MHC  EP    10 24 49.5
        BKS  EP    10 24 55.1  34 02      •E 25 07    SS 38 36    SSS 42 17
                                           LQ 43 34    LR 47 42
                          MICRON     PERIOD
                   PZ       0.04       1.1
                   MAXR(Z)  2.6        21
                   MAXH(N)  2.6        20
                   MAXH(E)  2.7        18
        WDC  EPC   10 25 04.1
                   Ms=5.6, DISTANCE=69°
                   USGS  10 13 51.0, 15.3S,  75.5W, H= 33 KM, M=5.6
                         NEAR COAST OF PERU

JUN 18  FRI  EP    15 09 43.5
        MNV  EPC   15 09 44.0
        PRI  EP    15 09 44.0
        JAS  EPC   15 09 50.0              RPKP 38 13
        MHC  EPC   15 09 52.5
        BKS  EP    15 09 57.1  19 02
                          MICRON     PERIOD
                   PZ       0.11       1.5
        WDC  EPC   15 10 06.5
                   USGS  14 58 53.6, 15.2S,  75.4W, H= 32 KM, M=5.7
                         NEAR COAST OF PERU

JUN 18  WDC  EP    18 22 40.3
        JAS  EP    18 22 46.7
        MNV  EP    18 22 55.5
                   USGS  18 09 39.6,  3.2S, 150.5E, H= 32 KM, M=5.4
                         NEW IRELAND REGION

JUN 18  WDC  EP    22 49 00.3
        MIN        22 49                       •E 49 01
        JAS  EP    22 49 07
        PRI  E(P)  22 49 08
        FRI  EP    22 49 09.2
        MNV        22 49                       •E 49 20
                   USGS  22 36 02.7,  3.2S, 150.5E, H= 33 KM, M=5.3
                         NEW IRELAND REGION
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JUN 19  JAS  EP    00 17 36.6
        FRI  EP    00 17 40.8
        MNV  EP    00 17 44.8
                   USGS  00 05 39.3, 19.0N, 145.5E, H=201 KM, M=4.7
                         MARIANA ISLANDS

JUN 19  BKS  EP    07 50 53.3
                                MICRON      PERIOD
                          PZ      0.05        0.9
        SAO  EP    07 50 53.7
        MHC  EPD   07 50 54.3
        FHC  EPD   07 50 54.4
        PRI  EPD   07 50 55.3
        WDC  IPD   07 50 58.3                •PP 51 30
        JAS  IPD   07 50 59.4                •PP 51 31    PP 54 33
        FRI  EP    07 50 59.8
        MIN  EP    07 51 00.3
        MNV  IPD   07 51 08.1                •PP 51 40
                   USGS  07 38 26.2, 18.7S, 168.9E, H=121 KM, M=5.3
                         NEW HEBRIDES ISLANDS

JUN 19  WDC  EPKP  15 20 43.5                •E 21 20    •E 24 48
        MIN        15 20                     •E 21 16
        BKS  EPKP  15 20 49                  •E 21 17    •E 21 25    •E 21 47
                                             PP 26 40    SKS 27 55   PPP 28 52
                                            SKKKS 32 39 PCSPKP33 04  SKSP 36 05
                                             PPS 39 50    SS 45 54    SSS 51 30
                                             •E 52 08    LQ 09 00    LR 18 00
                                MICRON      PERIOD
                          PKPZ    0.02        1.0
                          MAXR(Z) 2.1         20
                          MAXH(N) 1.5         20
                          MAXH(E) 2.9         20
        MHC  EPKP  15 20 48.5                •E 21 28
        JAS  EPKP  15 20 49.0                •E 21 27    •E 25 12    •E 31 09
        SAO        15 20                     •E 21 30
        MNV  EPKP  15 20 46.0                •E 21 26    •E 25 00
        PRI  EPKP  15 20 50                  •E 25 20
        FRI  EPKP  15 20 50.5                •E 21 31
                   M=6.2, DISTANCE=159°
                   USGS  15 00 46.7, 18.0S,  65.4E, H= 33 KM, M=5.6
                         MASCARENE ISLANDS REGION

JUN 20  FHC  EP    04 50 57.4                •PP 51 13
        WDC  EPC   04 51 01.6                •PP 51 17    PP 54 56
        MIN  EP    04 51 04 7
        BRK  EP    04 51 09.1
        BKS        04 51          01 39     PPS 03 09    SS 07 15    LQ 15 40
                                             LR 20 46
        MHC  EP    04 51 12.8
        SAO  EP    04 51 14.2
        JAS  EPC   04 51 14.6                •PP 51 30    PP 55 06
        FRI  EP    04 51 19.1                •PP 51 34    PP 55 14
        PRI  EP    04 51 19.3
        MNV  EP    04 51 20.6                •PP 51 36    PP 55 15
                   USGS  04 38 08.0, 24.7N, 125.9E, H= 36 KM, M=5.8
                         SOUTHWESTERN RYUKYU ISLANDS

JUN 20  FRI  EP    09 20 22.2
        JAS  EP    09 20 23.5
        WDC  EP    09 20 26.2
        MNV  EP    09 20 31.6

JUN 20  MIN  IPC   10 15 39.5
        WDC  IPC   10 15 51.3
        JAS  EPD   10 16 05.6
        MNV  EPD   10 16 08.6
        FHC  EP    10 16 08.7
        BKS  EP    10 16 11.8
        MHC  EPD   10 16 15.7
        FRI  EPD   10 16 20.0
        SAO  EP    10 16 22.7
        PRI  E(P)  10 16 32
                   BRK   10 15 24.8, 40.4N, 120.6W, H=  5 KM, ML=4.5
                         NEAR SUSANVILLE, CALIFORNIA

JUN 20  SAO  IPC   15 07 50.8
        MHC  EPC   15 07 58.2
        PRI  EP    15 08 02.3
        FRI  EP    15 08 05.8
        JAS  IPD   15 08 07.8
                   BRK   15 07 45.1, 36.8N, 121.1W, H=  7 KM, MAG=2.6
                         EAST OF HOLLISTER, CALIFORNIA

JUN 20  FHC  EPKP  21 12 07.5
        WDC  EPKP  21 12 08.8  25 48    PKKP 22 05
        MIN  EPKP  21 12 09.8  25 50    PKKP 21 55
        BKS  EPKP  21 12 13              •E 09 00    •E 12 17     PP 14 09
                                         PKS 15 36   •E 20 00 SKKKS 21 17
                                         •E 21 50  SKSP 24 12     PS 25 04
                                         SS 31 34    LQ 45 10     LR 52 10
                                MICRON      PERIOD
                          PKPZ    0.02        1.0
                          MAXR(Z) 14          20
                          MAXH(N) 19          20
                          MAXH(E) 16          20
        JAS  EPKP  21 12 14.5  25 15       PP 14 25
        MHC  EPKP  21 12 14.6              PP 14 23
        SAO  EPKP  21 12 15.1
        FRI  EPKP  21 12 17.0
        MNV  EPKP  21 12 17.0
        PRI  EPKP  21 12 18.0  25 35       PP 14 21
                   M=6.9, DISTANCE=125°
                   USGS  20 53 13.4,  3.4N,  96.3E, H= 33 KM, M=6.3
                         NORTHERN SUMATRA

JUN 20  MIN  EPC   21 44 15.3  44 27
        WDC  EPC   21 44 27.2
        JAS  E(P)  21 44 43.5
        MNV  E(P)  21 44 45
        FHC        21 44
                   BRK   21 44 00.4, 40.4N, 120.6W, H=  8 KM, MAG=3.1
                         NEAR SUSANVILLE, CALIFORNIA

JUN 21  MHC  IPD   02 07 32.9
        SAO  IPD   02 07 40.9
        BKS  EPC   02 07 46.1  07 58
        JAS  EPD   02 07 52.1
        PRI  EPD   02 07 55.0
        FRI  EP    02 07 57.3
        MNV  E(P)  02 08 25
                   BRK   02 07 30.7, 37.2N, 121.6W, H=  5 KM, ML=2.9
                         NORTH OF GILROY, CALIFORNIA

JUN 21  FHC  EPKP  05 01 44.2
        WDC  EPKPD 05 01 45.4
        MIN  EPKP  05 01 46.6
        BKS  EPKP  05 01 49.7
                                MICRON      PERIOD
                          PKPZ    0.01        1.0
        MHC  EPKP  05 01 50.2
        JAS  EPKPD 05 01 51.7
        FRI  EPKP  05 01 53.4
        MNV  EPKPD 05 01 54.2
        PRI  EPKP  05 01 54.5
                   USGS  04 42 50.1,  3.3N,  96.4E, H= 45 KM, M=5.2
                         NORTHERN SUMATRA

JUN 21  FHC  EPKP  07 36 30.0
        WDC  EPKP  07 36 31.0
        MIN  EPKP  07 36 32.2
        BKS  EPKP  07 36 35.6
                                MICRON      PERIOD
                          PKPZ    0.04        1.0
        MHC  EPKP  07 36 37.1
        JAS  EPKP  07 36 37.4  50 04
        FRI  EPKP  07 36 39.4
        MNV  EPKP  07 36 39.6
        PRI  EPKP  07 36 40.5
                   USGS  07 17 34.8,  3.4N,  96.4E, H= 32 KM, M=5.8
                         NORTHERN SUMATRA

JUN 22  WDC  EPKP  02 43 06.0
        BKS        02 43
        JAS  EPKP  02 43 11.2                •E 43 14
        FRI  EPKP  02 43 13.7
        MNV  EPKP  02 43 14.0
                   USGS  02 24 09.9,  3.4N,  96.4E, H= 43 KM, M=5.3
                         NORTHERN SUMATRA

JUN 22  FRI  EP    12 05 05.8
        MNV  IPD   12 05 06.2
        PRI  EP    12 05 08.1                •I 05 20
        JAS  IPD   12 05 15.1
        MHC  EP    12 05 19.7                •E 05 28  S•CP 11 26
        WDC  EP    12 05 36.5
        FHC  EP    12 05 48.2          S•CP 11 34
                   USGS  11 58 23.1, 13.9N,  90.8W, H= 81 KM, M=4.9
                         NEAR COAST OF GUATEMALA

JUN 22  WDC  EPKP  12 18 02.3
        JAS  EPKP  12 18 06.6
        FRI        12 18
                                             •E 18 11
                   USGS  11 59 04.6,  3.4N,  96.2E, H= 33 KM, M=5.3
                         NORTHERN SUMATRA

JUN 22  WDC  EP    14 09 18.7
        JAS  EP    14 09 30.1
        FRI  EP    14 09 35.2
        MNV  EP    14 09 39.0
                   USGS  13 57 59.5, 18.4N, 145.2E, H=489 KM, M=4.6
                         MARIANA ISLANDS

JUN 23  FHC        14 03
        WDC  EP    14 03 38.7                •E 03 34
        MIN        14 03
        BKS        14 03                     •E 03 42
        MHC  EP    14 03 44.6                •E 03 42
        JAS  EP    14 03 48.0
        PRI        14 03
        FRI  EP    14 03 51.1                •E 03 50
        MNV  EP    14 03 55.7
                   USGS  13 49 58.0,  0.5N, 134.8E, H= 33 KM, M=5.8
                         WEST IRIAN

JUN 23  FRI  EPKP  21 02 03.1
        MNV  EPKP  21 02 03.5
        MHC  EPKP  21 02 05.8
        JAS  EPKP  21 02 06.3
                   USGS  20 43 13.1, 59.7S,  26.4W, H= 59 KM, M=5.8
                         SOUTH SANDWICH ISLANDS REGION

JUN 24  MNV  IPC   00 25 12.8
        JAS  IPD   00 25 15.2  25 37
        MIN  EPC   00 25 17.9
        FRI  EP    00 25 27.4
        WDC  IPC   00 25 28.7
        MHC  EPC   00 25 30.4
        BKS  E(P)  00 25 32.0
        SAO  EP    00 25 35.0
        PRI  EP    00 25 43.5
        FHC  EP    00 25 55.0
                   BRK   00 24 47.8, 39.3N, 119.6W, H=  4 KM, ML=3.6
                         SOUTHEAST OF RENO, NEVADA

JUN 24  PRI  EPD   05 05 26
        FRI  EP    05 05 28.8
        SAO  EP    05 05 34.5
        JAS  IPD   05 05 36.0
        MNV  EP    05 05 36.5
        MHC  EPD   05 05 38.0
        WDC  EP    05 05 51.0
                   USGS  04 54 00.1, 35.4S, 105.8W, H= 33 KM, M=4.5
                         EASTER ISLAND CORDILLERA

JUN 24  WDC  EPKP  06 18 32
        JAS  EPKP  06 18 36.6
        FRI  EPKP  06 18 38.5
        MNV  EPKP  06 18 37.5
                   USGS  05 59 33.3,  3.4N,  96.4E, H= 33 KM, M=5.5
                         NORTHERN SUMATRA

JUN 24  JAS  EP    09 47 24.7
        FRI  EP    09 47 26.7
        WDC        09 47
        MNV  EP    09 47 34.0          •E 47 27
                   USGS  09 34 40.4, 10.1S, 161.0E, H= 37 KM, M=4.9
                         SOLOMON ISLANDS

JUN 24  MIN  IPC   15 44 59.9
        WDC  IPC   15 45 11.6
        JAS  EPD   15 45 25.7
        FHC  EP    15 45 26.7
        MNV  EP    15 45 29.3
        BKS  EP    15 45 31.2
        MHC  EP    15 45 36.5
        FRI  EP    15 45 41
        SAO        15 45
        PRI  EP    15 45 54                  •E 45 44
                   BRK   15 44 45.4, 40.4N, 120.6W, H=  5 KM, ML=4.2
                         NEAR SUSANVILLE, CALIFORNIA

JUN 24  WDC  EPC   15 56 32.0
        MIN  EPC   15 56 36.4
        BKS        15 56
        JAS  EP    15 56 56.2                •E 56 41
        MNV  EPC   15 57 01.4

JUN 25  FHC  EPC   07 58 51.1
        WDC  IPC   07 58 59.0
        MIN  EPC   07 58 59.7                •E 01 57
        BKS  EPC   07 59 04.3
                                MICRON      PERIOD
                          PZ      0.7         0.8
        MHC  EPC   07 59 08.1
        SAO        07 59
        JAS  IPC   07 59 10.3                •E 59 10
        PRI  EPC   07 59 15.2                •E 02 18
        FRI  EPC   07 59 15.5                •E 59 23
        MNV  EPC   07 59 17.6                •E 02 28
                   USGS  07 47 46.3, 29.9N, 138.6E, H=433 KM, M=5.5
                         SOUTH OF HONSHU, JAPAN

JUN 25  FHC  EP
        WDC  EPC   19 32 29.7
        BKS  EP    19 32 34.0
                   19 32 36.1  44 14     PP 36 56    SKS 43 22    PS 45 36
                                         SS 50 20    SSS 55 00    LQ 58 14
                                         LR 04 00    •E 24 00
                                MICRON      PERIOD
                          PZ      0.24        1.2
                          MAXR(Z) 31          20
                          MAXH(N) 20          20
                          MAXH(E) 77          20
        MIN  EP    19 32 36.8
        MHC  EP    19 32 37.4
        JAS  EP    19 32 41.3
        PRI  EP    19 32 41.3               PP 37 04   PKKP 49 30
        FRI  EP    19 32 44.0              PKKP 49 30
        MNV  EP    19 32 49.5  44 00        PKKP 49 31
                   M=7.2, DISTANCE=99°      PP 37 17
                   USGS  19 18 56.9,  4.6S, 140.1E, H= 33 KM, M=6.1
                         WEST IRIAN
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JUN 26  WDC  EP   10 44 57.6                  PKKP 01 07
        BKS  EP   10 45 00     56 48          PP 49 18    SKS 55 52    PS 58 20
                                              SS 04 12    SSS 08 00    LQ 13 00
                                              *E 13 36     *E 15 09    LR 18 22
                            MICRON            PERIOD
                  MAXR(Z)   15                20
                  MAXH(N)   10                20
                  MAXH(E)   11                20
        JAS  EP   10 45 09                  PKKP 01 03
        FRI       10 45                      *E 45 14
        MNV       10 45                      *E 45 16  PKKP 00 58
                  Ms=6.5, DISTANCE=104°
                  USGS  10 30 59.4,  3.7N, 126.8E, H= 33 KM, M=5.8
                        TALAUD ISLANDS

JUN 26  FHC  EP   11 13 55.6
        WDC  EP   11 14 11.0
        MIN  EP   11 14 20
        JAS  EP   11 14 52.0
        MHC       11 14                      *E 14 58
        MNV  EP   11 15 06.5
        FRI  EP   11 15 07.5
                  USGS  11 12 55.3, 43.8N, 127.8W, H= 33 KM, M=4.6
                        OFF COAST OF OREGON

JUN 26  JAS  EP   14 41 07.5
        WDC  EP   14 41 08.1
        FRI       14 41                      *E 41 10
        MIN       14 41                      *E 41 12
        MNV       14 41                      *E 41 19
                  USGS  14 28 16.7, 21.9S, 169.9E, H= 14 KM
                        LOYALTY ISLANDS REGION

JUN 27  SAO  EP   01 25 11.0
        BKS  EP   01 25 12.1                 *E 34 14
                            MICRON           PERIOD
                  PZ          0.04           1.0
        MHC  EPD  01 25 12.6
        PRI  EP   01 25 12.6
        FRI  EP   01 25 17.8                *PP 27 25
        JAS  EPD  01 25 18.2
        WDC  EPD  01 25 19.1                *PP 27 26
        MIN  EP   01 25 21.1
        MNV  IPD  01 25 27.8
                  USGS  01 14 18.7, 18.0S, 178.3W, H=581 KM, M=5.2
                        FIJI ISLANDS REGION

JUN 27  FHC  EPD  19 26 02.0
        WDC  EPD  19 26 06.4
        BKS  EP   19 26 08.1                 *E 26 43   SKS 36 44    LQ 53 00
                                             LR 57 36
                            MICRON           PERIOD
                  PZ          0.07           1.0
                  MAXR(Z)     1.1            20
                  MAXH(N)     0.5            20
                  MAXH(E)     0.9            20
        MIN  EP   19 26 09.0
        MHC  EP   19 26 09.7
        JAS  EPD  19 26 13.5
        PRI  EP   19 26 13.5
        FRI  EP   19 26 16.2
        MNV  EPD  19 26 21.5
                  Ms=5.3, DISTANCE=99°
                  USGS  19 12 29.3,  4.6S, 140.2E, H= 33 KM, M=5.9
                        WEST IRIAN

JUN 27  MHC  EP   20 16 09
        FRI  EP   20 16 11.7
        JAS  EP   20 16 12.7
        WDC  EP   20 16 16
        MNV  EP   20 16 21.6
                  USGS  20 03 33.8, 30.3S, 177.7W, H= 44 KM, M=5.1
                        KERMADEC ISLANDS

JUN 28  FRI  EP   14 39 46.8
        MNV  EP   14 39 47.0
        PRI  EP   14 39 49.4
        JAS  EP   14 39 56.3
        MHC  EP   14 40 00.6
        BRK  E(P) 14 40 06
        MIN  EP   14 40 14.0
        WDC  EP   14 40 18.0
        FHC  EP   14 40 29.3
                  USGS  14 33 06.4, 13.9N,  90.7W, H=100 KM, M=4.8
                        NEAR COAST OF GUATEMALA

JUN 28  WDC  EP   17 02 10.8
        MIN  EP   17 02 15.2
        JAS  IPC  17 02 30.2
                  USGS  16 52 35.0, 48.4N, 157.1E, H= 17 KM, M=4.7
                        KURIL ISLANDS REGION

JUN 29  WDC  EP   03 24 25.7                 *E 24 36
        JAS  EP   03 24 45.7                 *E 24 58
        FRI  EP   03 24 54.4                 *E 25 05
                  USGS  03 15 26.0, 53.0N, 162.2E, H= 42 KM, M=4.9
                        OFF EAST COAST OF KAMCHATKA

JUN 29  FHC  EPC  05 12 48.5
        WDC  IPC  05 12 53.6
        MIN  EPC  05 12 57.2                 *E 14 15
        BKS  EP   05 13 00.0                 *E 13 05
                            MICRON           PERIOD
                  PZ          0.07           0 8
        MHC  EPC  05 13 03.2
        SAO  EP   05 13 04.5
        JAS  IPC  05 13 06.4                 *E 13 15    *E 14 25
        FRI  EPC  05 13 09.4
        FRI  EPC  05 13 10.9
        MNV  EP   05 13 14.1                 *E 14 34
                  USGS  05 01 16.8, 21.5N, 143.0E, H=291 KM, M=5.4
                        MARIANA ISLANDS REGION

JUN 29  SAO  EP   18 42 54.0
        PRI  EP   18 42 55.1
        BRK  EP   18 42 56.1
        MHC  EP   18 42 56.2
        FRI  EP   18 42 59.6                 PKKP 00 40
        JAS  EP   18 43 00.7                 P*CP 43 26  PKKP 00 40
        FHC  EP   18 43 02.0
        WDC  EP   18 43 04.2                 P*CP 43 33  PKKP 00 36
        MIN  EP   18 43 05.4
        MNV  EP   18 43 07.4                 PKKP 00 35
                  USGS  18 30 09.1, 33.8S, 177.8W, H= 48 KM, M=6.1
                        SOUTH OF KERMADEC ISLANDS

JUN 30  JAS  EP   09 40 02
        WDC  EP   09 40 03
        MIN       09 40                      *E 40 05
        MNV  EP   09 40 11.4
                  USGS  09 29 02.5, 18.3S, 177.7W, H=569 KM, M=4.3
                        FIJI ISLANDS REGION
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Bulletin of the Seismographic Stations

Vol. 46, No. 2, pp. 54 - 104

ARCATA--BERKELEY--FICKLE HILL--FRIANT--GRANITE

CREEK--JAMESTOWN--LLANADA--MINA--MINERAL--MOUNT HAMILTON

OROVILLE--PARAISO--PILARCITOS CREEK--PRIEST

SAN ANDREAS GEOPHYSICAL OBSERVATORY--WHISKEYTOWN

WALKER RIDGE

Earthquakes and the Registration of Earthquakes

From July 1, 1976 to December 31, 1976

by

Dayna J. Drowley

Bruce Schechter

Robert A. Uhrhammer

BULLETIN OF THE SEISMOGRAPHIC STATIONS

of the University of California

Volume 46, Number 2

July 1, 1976 to December 31, 1976

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CONTENTS

INTRODUCTION

Each issue of the Bulletin includes determination of epicenters, origin times, magnitudes, and other information available at the time of writing, for earthquakes in Northern California and adjoining areas. Recorded arrival times of seismic waves are tabulated for the above earthquakes and for teleseisms.

Information items regarding the seismographic stations which comprise the Berkeley network are repeated in each issue.

PERSONNEL (June 1978)

Director	Bruce A. Bolt
Director Emeritus	Perry Byerly
Assistant Director	Thomas V. McEvilly
Assistant Research Seismologist	Robert A. Uhrhammer
Associates	David Brillinger Lane Johnson Don Tocher
Associate Development Engineer	Russell W. Sell
Technical Staff	J. Carlson, J.E. Friday, M. Hilger, R. McKenzie, J.E. Meeker, R.D. Miller
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HISTORY OF THE UNIVERSITY OF CALIFORNIA STATIONS

"The Seismographic Stations at Mount Hamilton and Berkeley present several items of interest in the history of earthquake science, one of which is that according to the available records they were the first seismographic stations set up in America. Furthermore, they have functioned continuously from their founding to the present day, with improvements in instrumental equipment from time to time as the development of the science and opportunity have permitted.

Several outstanding figures in the seismology of the 1880's were impressed with the importance of these stations, and Ewing, Milne, and Gray each took a personal interest in aiding one or both stations to obtain their own best and most modern types of instruments."

The quotation is from "History of the University of California Seismographic Stations and Related Activities" by Professor George D. Louderback, published in the Bulletin of the Seismological Society of America, Vol. 32, No. 3, pp. 205-229, 1942. In this paper may be found a detailed account of the development of the Berkeley stations from the installation of the instruments (the first earthquake known recorded at Mount Hamilton was on April 24, 1887) to 1942.

Since 1942, the number of seismographic stations associated with the University of California has increased from six to eighteen in 1976. In 1950, Professor Perry Byerly was appointed Director by the Regents; he had been in charge of instruction and research since 1925. Professor Bruce A. Bolt was appointed Director in 1963. Since 1960, the stations have entered into research and service contracts with the Air Force Office of Scientific Research, the National Science Foundation, the California Department of Water Resources and the California State Division of Mines and Geology. A telemetry network of fifteen stations in Central California, recording on film and selected stations on magnetic tape, is now operated together with seismographs with broad-band frequency response at Berkeley, Jamestown, and Whiskeytown. Copies of records from instruments at the Berkeley laboratory are available, together with response characteristics, on request to the Director.

THE BYERLY SEISMOGRAPHIC STATION (BKS)

Equipment of a WWSS station began operating in a newly constructed tunnel east of the main campus on June 8, 1962. The closest buildings, part of the Lawrence Berkeley Laboratory, are about 0.8 km away. The tunnel was cut into the upper part of the Claremont Formation. Of Miocene age, this formation consists of thin layers of cherty material alternating with shale.

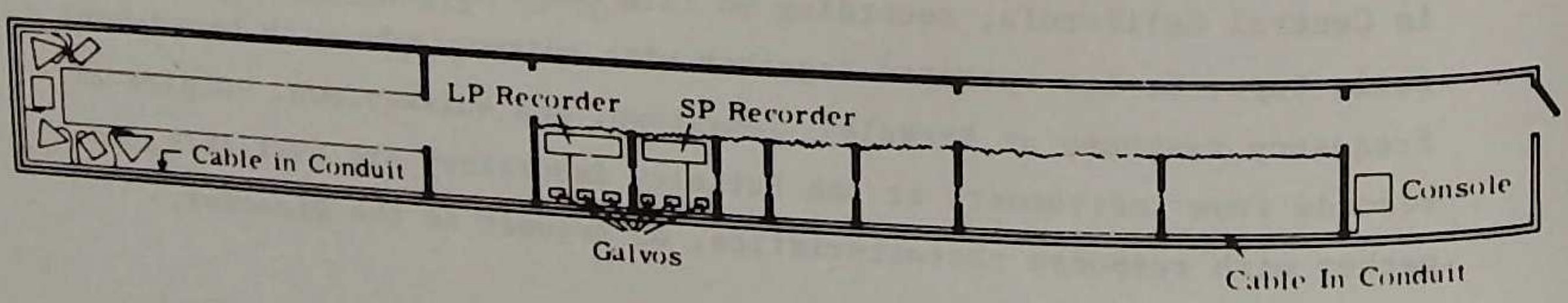
A plan of the tunnel is shown in the diagram below. Piers are constructed of reinforced concrete with no isolation from floor and walls. The temperature is stable. A ventilating and dehumidifying system is connected to all rooms.

The short-period world-wide standard instruments are operated with an approximate magnification of 25,000 at 1 sec and the long-period standard instruments with a peak magnification of 3,000 at about 15 sec.

On March 20, 1964, the Regents of the University of California named this station the "Byerly Seismographic Station" in recognition of the work of Professor Perry Byerly.

Geology

The portal of the adit is in an old quarry which exposes near-vertical, intensely contorted, thinly-bedded, brittle chert, and softer interbedded shale of the Miocene Claremont Formation. Individual beds are one to a few inches thick; the chert beds are intensely fractured and intricately criss-crossed by fine patterns of jointing. Near-surface beds are warped by downhill creep; soil is very thin. The area is crossed by numbers of minor faults, and is about one mile from the active trace of the Hayward fault.



STATIONS IN OPERATION: July 1, 1976 to December 31, 1976

Station (From N to S)	North Latitude	West Longitude	Elev. Meters	Foundation Material	Symbol	Present Auspices and Date Established
Arcata	40° 52!6	124° 04!5	60	Sandstone (loose)	ARC	Humboldt State Univ. 1948
Fickle Hill	40° 48!1	123° 59!1	610	Siltstone over graywacke	FHC	Humboldt State Univ. Sept. 4, 1968
Whiskeytown	40° 34!8	122° 32!4	300	Pre-Devonian meta-volcanic	WDC	National Park Service March 8, 1973
Mineral	40° 20!7	121° 36!3	1495	Volcanic	MIN	National Park Service 1938
Oroville	39° 33!3	121° 30!0	360	Basalt	ORV	Dept. of Water Resources 1963
Mina (Nevada)	38° 26!0	118° 09!2	1524	Limestone	MNV	Lawrence Livermore Lab. 1969
Jamestown	37° 56!8	120° 26!3	457	Metamorphic (serpentine)	JAS	Dept. of Water Resources 1964
Berkeley (Byerly)	37° 52!6	122° 14!1	276	Claremont shales & cherts	BKS	University of Calif. 1962
Berkeley	37° 52!4	122° 15!6	81	Franciscan sandstone	BRK	University of Calif. 1887
Pilarcitos Creek	37° 30!0	122° 22!9	91	Grano-diorite (weathered)	PCC	Sare Ranch, 1965
Mt. Hamilton	37° 20!5	121° 38!5	1282	Franciscan formation (greenstone)	MHC	Lick Observatory 1887
Granite Creek	37° 01!8	121° 59!8	122	Granite	GCC	Richard E. Randolph Santa Cruz, 1965
Friant	36° 59!5	119° 42!5	119	Alluvium overlying granite	FRI	Bureau of Reclamation March 9, 1971
San Andreas Geophysical Observatory	36° 45!9	121° 26!7	350	Granite	SAO	University of Calif. 1966
Llanada	36° 37!0	120° 56!6	475	Alluvium overlying sandstone	LLA	Charles McCullough Ranch 1961
Paraiso	36° 19!9	121° 22!2	363	Grano-diorite	PRS	Paraiso Hot Springs 1961
Priest	36° 08!5	120° 39!9	1187	Greenstone basic metamorphic	PRI	Federal Aviation Agency 1961
Walker Ridge	40° 23!6	124° 17!3	226	Undivided cretaceous marine	WKC	Pacific Gas & Electric Co. October 1976

STATION INSTRUMENTATION

July 1, 1976 to December 31, 1976

Station	Type of Instrument	T_o sec	T_g sec	Component	Mag at T_o	1	2	3	4	5	6
ARC	Wood-Anderson torsion	0.8	-	S, W	2,000	x					
BKS	Benioff 100 kg	1.0	0.75	N, E, Z	25,000	x					
	Sprengnether S-5007	15	100	N, E, Z	3,000	x					
	Wood-Anderson torsion	0.8	-	S, W	2,000	x					
	Sprengnether ULP S-5100	100	300 Filter	N45°W, N45°E, Z	500	x					
	Filtered Displacement				- - -				x		
	Displacement				- - -				x		
BRK	Benioff 100 kg	1.0	0.2	Z	25,000			x			
	Benioff 100 kg	1.0	8.0	Z	Variable						x
	14000X torsion	0.8	-	N, E	14,000 max		x				
	700X torsion	0.8	-	N, E	700 max		x				
	100X torsion	0.8	-	N, E	100 max	x					
	4X torsion	0.8	-	N, E	4 max	x					
	Press-Ewing	15	30	Z	1,000		x				
	Press-Ewing	30	BB	N45°W, N45°E, Z	- - -				x		
FHC	Benioff 14 kg	1.0	0.2	Z	50,000			x			
FRI	Benioff 14 kg	1.0	0.33 Filter	Z	150,000			x			
GCC	Benioff 14 kg	1.0	0.2	Z	50,000			x			
JAS	Benioff 100 kg	1.0	0.75	N, E, Z	250,000	x					
	Benioff 14 kg	1.0	0.2	Z	600,000		x	x	x		
	Sprengnether S-5100	40	-	Z							
	BB velocity								x		
	Displacement								x		
	Filtered Displacement								x		

1 Signals recorded on photographic paper.
2 Signals recorded on heat sensitive paper.
3 Signals telemetered to Berkeley. Magnifications using 20X viewer.
4 Signals recorded on magnetic tape, Berkeley.
5 Signals recorded on magnetic tape at SAO.
6 Ink recording.

STATION INSTRUMENTATION

July 1, 1976 to December 31, 1976

Station	Type of Instrument	T_o sec	T_g sec	Component	Mag at T_o	1	2	3	4	5	6
LLA	Benioff 14 kg	1.0	0.2	Z	50,000			x			
MHC	Benioff 14 kg	1.0	0.2	Z	50,000		x	x			
	Wood-Anderson torsion	0.8	-	S, E	2,000	x					
MIN	Wood-Anderson torsion	0.8	-	S, E	2,000	x					
	Teledyne S-13	1.0	0.2 Filter	Z	150,000			x			
MNV	Broadband instrument to give short-period	filtered response		Z	600,000 at 1 sec			x			
ORV	Benioff 100 kg	1.0	0.2	Z	220,000			x			
PCC	Benioff 14 kg	1.0	0.2	Z	50,000			x			
PRI	Benioff 14 kg	1.0	0.2	Z	50,000		x	x	x		
PRS	Benioff 14 kg	1.0	0.2	Z	50,000			x			
SAO	Benioff 14 kg	1.0	0.2	Z	- - -				x		
	Sprengnether 0.70 kg	0.2	0.05 Filter	Z	1,500,000		x	x		x	
	Sprengnether 0.70 kg	0.44	0.05 Filter	N, E, Z						x	
	Sprengnether S-5007 Displacement	30	BB	N, E, Z						x	
	Sprengnether S-5007 Strainmeter									x	x
SAO(E)	Sprengnether S-5007 Displacement	15	BB	N, E						x	
WDC	Sprengnether S-5100	40	-	Z							
	BB Velocity				- - -			x			
	Displacement							x			
	Filtered Displacement							x			
	Short Period (Filter)				500,000		x	x	x		
WKC	Kinemetrics SS-2 Ranger	1.0	0.2	Z	- - -		x				

1 Signals recorded on photographic paper
2 Signals recorded on heat sensitive paper.
3 Signals telemetered to Berkeley. Magnifications using 20X viewer.
4 Signals recorded on magnetic tape, Berkeley.
5 Signals recorded on magnetic tape at SAO.
6 Ink recording.

Direction of motion: In the "Component" column, each horizontal component seismograph is designated by the direction of ground motion corresponding to upward trace motion on the seismogram when it is oriented so that time increases from left to right. On all vertical component (Z) instruments, upward trace motion corresponds to upward ground motion.

Relative magnification curves of instruments recording photographically and through the telemeter system are listed on pages 64 and 65. Absolute magnification may be obtained by use of calibration pulses recorded daily from each station.

A network of broadband seismographs is now operated by the University of California at seismographic stations at Berkeley (BKS), Jamestown (JAS), San Andreas Geophysical Observatory (SAO), and Whiskeytown (WDC). The instrumentation at Whiskeytown was installed in January 1973 and at Jamestown in November 1973. The Jamestown and Whiskeytown seismographs are closely matched and consist of a single vertical seismometer, a Sprengnether S-5100, operating with a free period of 40 seconds and a damping ratio of 0.70. Signals from these seismometers are telemetered to Berkeley via FM telemetry components and leased telephone lines where they are recorded on analog magnetic tape recorders. Low- (± 2mm) and high- (± 0.01mm) gain displacement signals from JAS and WDC and a short period high-gain channel from WDC are recorded along with BKS and SAO strain on the 0.03 ips tape recorder. Velocity signals from JAS (one level) and WDC (two levels) are recorded at Berkeley on the 0.06 ips tape recorder. The seismometers at JAS and WDC are operated in sealed pressure vessels identical to those used with high-gain long-period (HGLP) instruments. At Berkeley, broadband instrumentation has been gradually developed, starting with the installation in June 1964 of Press-Ewing seismometers operating at a free period of 30 seconds. Recently, a 3-component set of special ultra-long period seismometers has been installed in the Byerly Seismographic Vault. The seismometers are Sprengnether S-5100 operated at a free period of 100 seconds and utilize electronic recentering feedback for long term stability and temperature/barometric feedback also for the vertical component. Low- (± 2.0mm) and high- (± 0.020mm) gain displacement signals from each of the three components are telemetered to the laboratory and recorded on 0.03 ips, 0-10 Hz, magnetic tape. High-gain displacement signals from BRK, JAS, and WDC are high-pass filtered at 500 sec to reduce tidal signals. The Berkeley ultra-long period system also generates photographic paper records equivalent to a 100 second pendulum with a velocity transducer recorded by a 300 second galvanometer.

At SAO, the central vault is instrumented with Sprengnether S-5000 (WWSSN-type) 3-component long period (30 sec) seismometers with displacement transducers recording 0-10 Hz on 0.06 ips magnetic tape at SAO with 10 mm full-scale displacement; Sprengnether S-7000 3-component short period (0.44 sec) seismometers recording on SAO magnetic tape (0-20 Hz) at two gain levels separated by a factor of 100; and a single vertical component S-7000 (5 Hz) telemetered to Berkeley and recorded on Develocorders ('William' channel). At the SAO-East vault, two S-5000 horizontal instruments at 15 sec period with displacement transducers are recorded on SAO magnetic tape (0-10 Hz) with 10 mm full-scale sensitivity. The south vault, a tunnel 300 m SW of the San Andreas fault zone, houses a quartz-tube strainmeter 19 m long, operating with full-scale sensitivity of 2×10^{-7} and recorded on 0.03 ips FM tape (0-10 Hz) at Berkeley.

Response curves for these broadband instruments are shown on pages 65 and 66.

UNIVERSITY OF CALIFORNIA ACCELEROGRAPH STATIONS

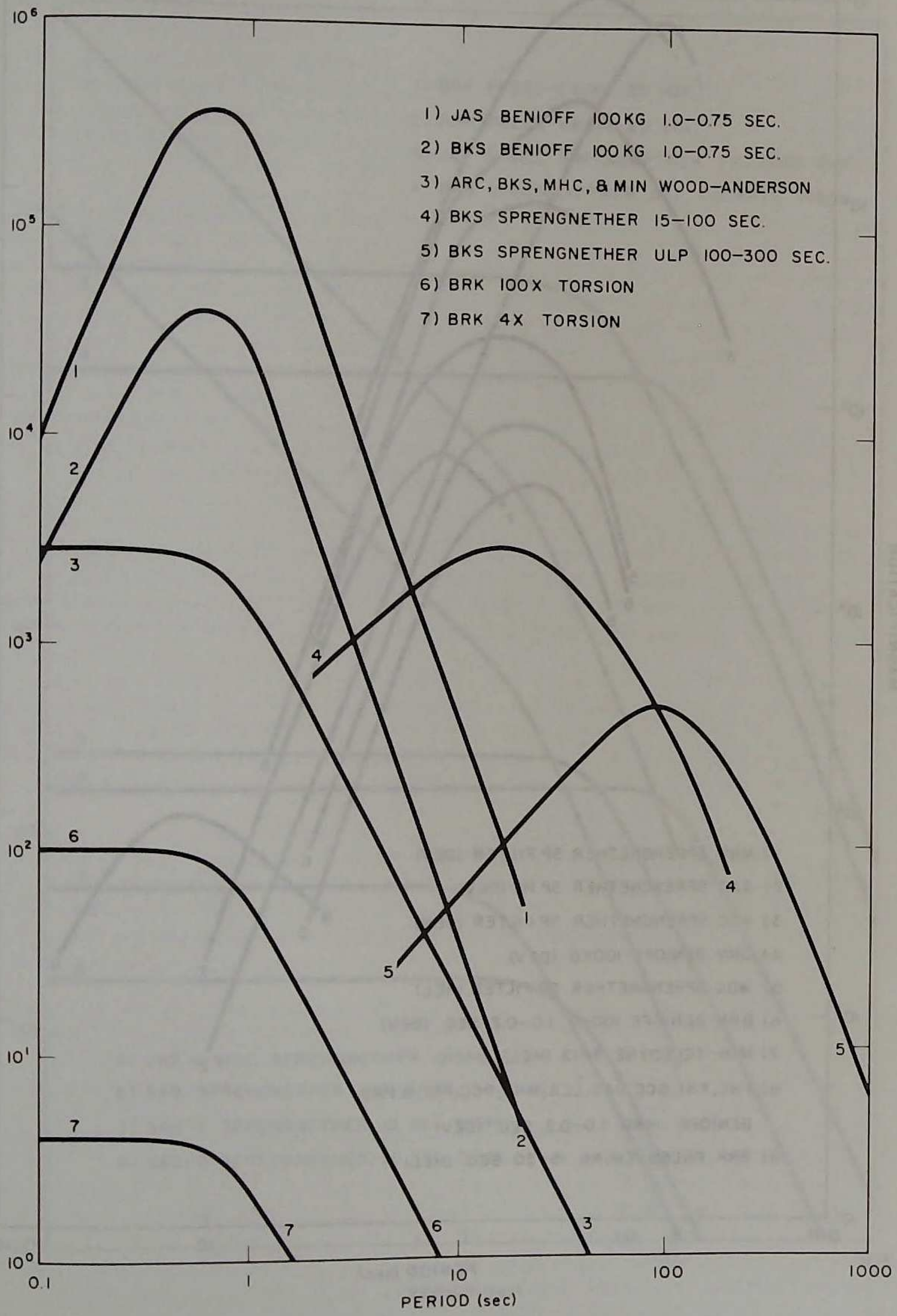
Station Name	Coordinates	Installation Date	Instrument S.N.	Component	Sensitivity (cm/g)	Period (sec)	Damping % of Critical	Structure	Location in Structure
BERKELEY MEMORIAL STADIUM	37.87 N 122.25 W	3 Aug 76	CRA-1 #148 (Recorder) FBA-3 downhole	V	1.79	.018	.64	4" I.D. cased borehole (163m deep)	Downhole (163m)
				L unknown	1.82	.019	.62		
				T unknown	1.83	.018	.66		
			FBA-3 uphole	V Down	1.90	.019	.63	Metal Box	Ground Level
				L North	1.83	.018	.63		
				T East	1.82	.018	.65		
BERKELEY UNIVERSITY LIBRARY	37.87 N 122.26 W	3 May 76	MO-2 trace #6	A Up	1.65	.03	.6		Ground Level
				B S45W	1.66	.03	.6		
				C S45E	2.40	.03	.6		

					Sensitivity (g/F.S.)	Bandwidth (Hz)		
RICHMOND FIELD STATION	37.92 N 122.33 W	12 May 76	Columbia Research Force Balance Accelerometer SA-107 (±2g units) (0-50Hz)	Z,H_1^*,H_2^{**}	±0.010	.05-50	5" I.D. uncased backfilled borehole (43.8m deep)	Downhole (43.7m)
				Z,H_1,H_2	±0.50	0-50		
				Z,H_1,H_2	±0.010	.05-50		Midhole (15.7m)
				Z,H_1,H_2	±0.50	0-50		
				Z,H_1,H_2	±0.010	.05-50	Metal Box	Ground Surface Level
				Z,H_1,H_2	±0.50	0-50		

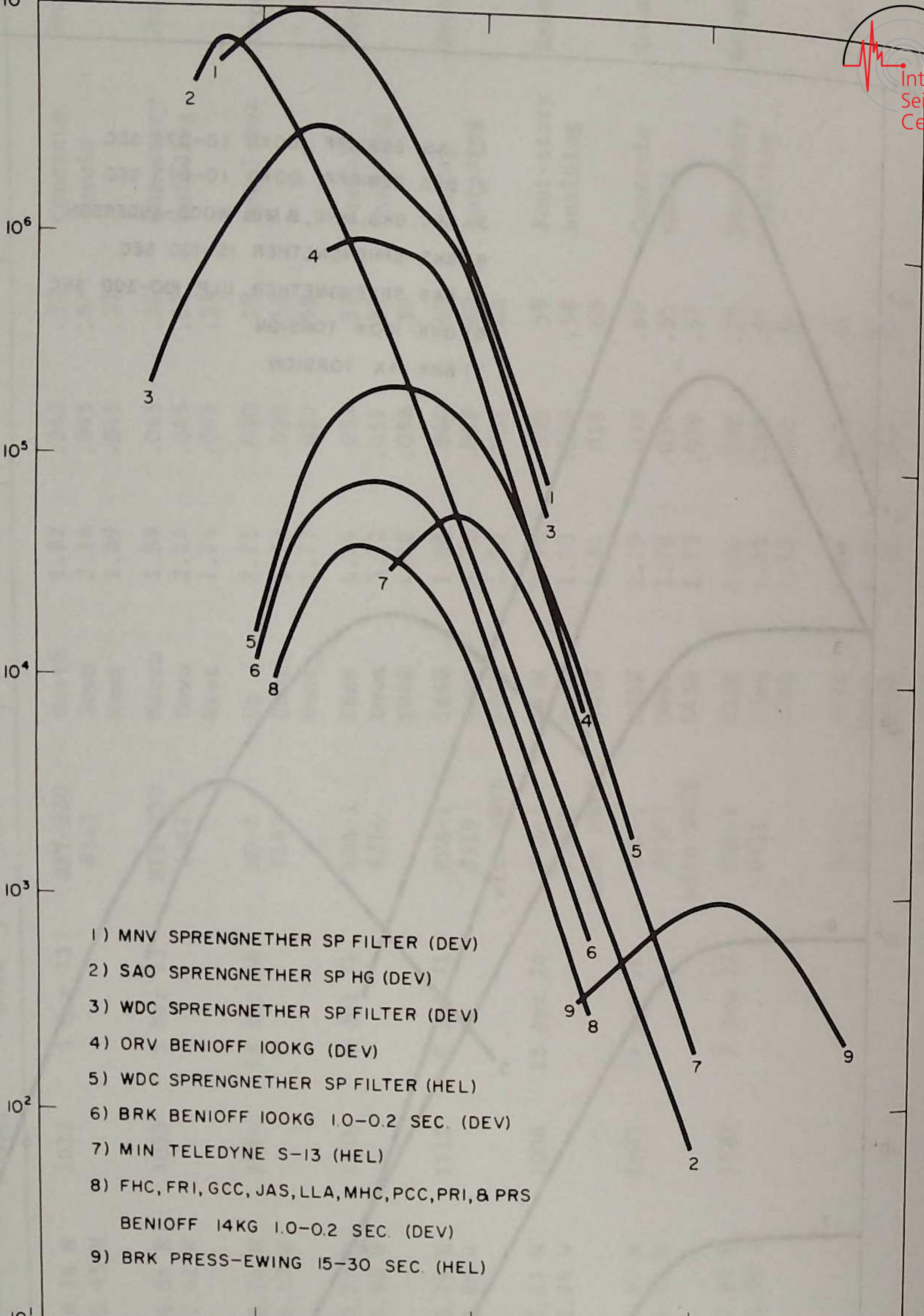
* - accelerometer aligned S45W
** - accelerometer aligned S45E
\+ - recorded on magnetic tape

UNIVERSITY OF CALIFORNIA ACCELEROGRAPH STATIONS MAINTAINED BY USGS

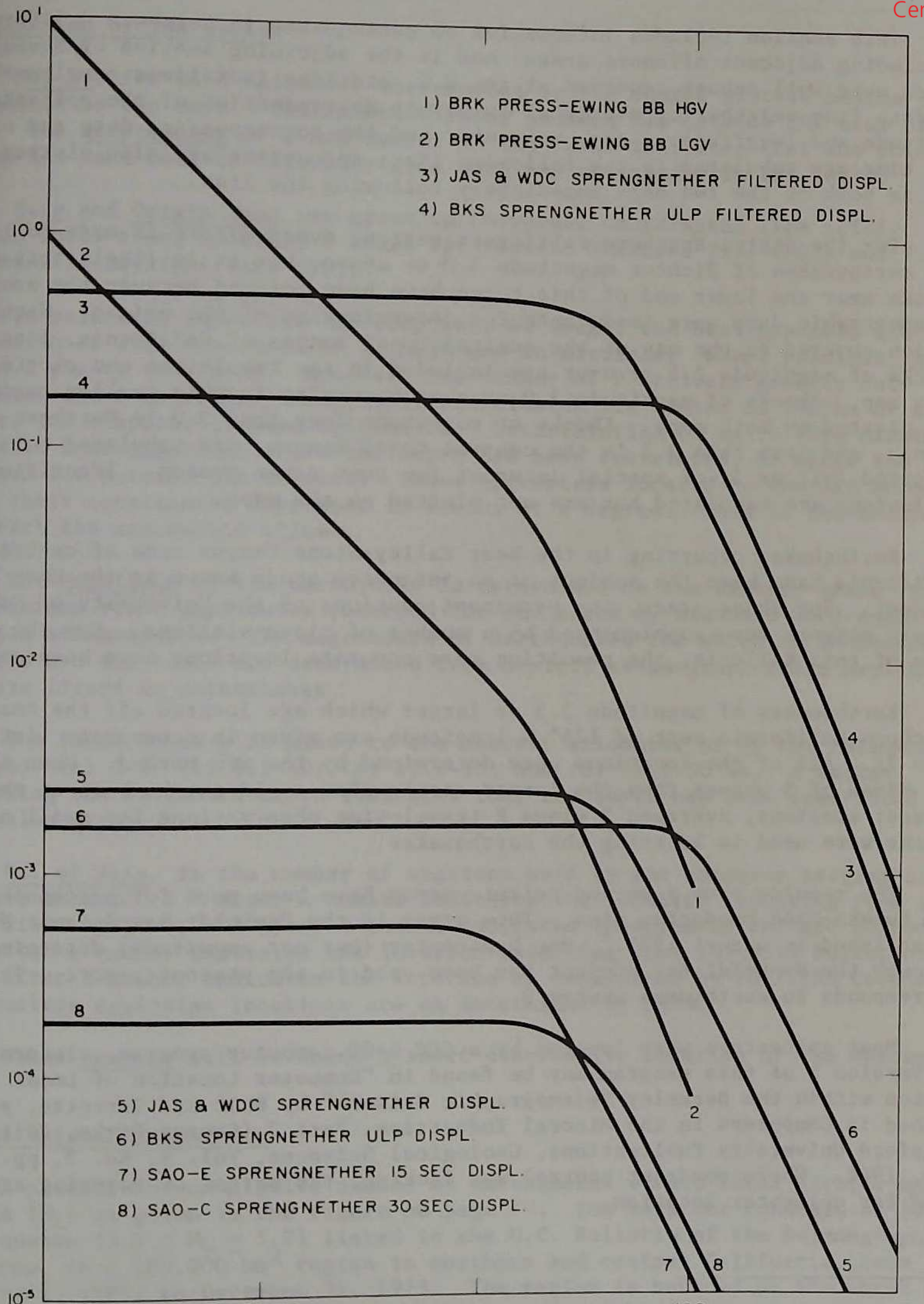
Station Name	Coordinates	USGS Number	Installation Date	Instrument S.N.	Component	Sensitivity (cm/g)	Period (Sec.)	Damping % of Critical	Structure	Location in Structure
SAGO CENTRAL	36.76 N 121.45 W	1032	5 Mar 73	RFT-250 #343	North Down West	1.82 2.14 1.89	.042 .045 .045	.57 .57 .57	Concrete vault	Ground level
SAGO EAST	36.81 N 121.41 W	1033	5 Mar 73	RFT-250 #347	North Down West	1.89 2.14 1.74	.045 .045 .045	.57 .57 .57	One-story building	Ground level
REEVES RANCH	36.74 N 121.47 W	1034	18 Dec 68	MO-2 #182	Up South West	2.75 1.73 1.77	.030 .030 .030	.59 .59 .59	Metal box	Ground level
BUTLER VALLEY STA. 1 (RANCH)	40.77 N 123.90 W	1110	9 Jul 71	SMA-1 #314	S66W Down S24E	4.24 3.72 4.10	.054 .057 .058	.57 .57 .55	Prefab building	Ground level
BUTLER VALLEY STA. 2 (ABUTMENT)	40.79 N 123.88 W	1112	9 Jul 71	SMA-1 #319 with WWVB	S66W Down S24E	1.96 1.76 1.86	.040 .039 .038	.60 .60 .60	Prefab building	Ground level
BERKELEY HAVILAND HALL	37.87 N 122.26 W	1006	15 Apr 76	SMA-1 #2500 with WWVB	N45W Down S45W	1.74 1.70 1.71	.038 .038 .039	.59 .58 .60	Four-story building	Basement
BERKELEY BYERLY SEIS. STATION	37.87 N 122.24 W	1005	29 Apr 76	SMA-1 #2503 with WWVB	N45W Down S45W	1.79 1.79 1.73	.038 .039 .039	.60 .55 .57	Concrete vault	Ground level
BERKELEY EVANS HALL	37.87 N 123.90 W	1182	7 Jan 72	SMA-1 #411	S12E Down N78E	1.64 1.83 1.92	.040 .040 .040	.59 .59 .59	Ten-story building	Basement
				SMA-1 #412	S12E Down N78E	1.67 1.96 1.92	.040 .038 .040	.61 .61 .59		*Fifth floor*
				SMA-1 #413	S12E Down N78E	2.01 1.88 1.85	.038 .037 .037	.60 .53 .55		*Tenth floor*



Response curves for photographically recording seismographs. The BKS Benioff and Sprengnether 15-100 second instruments are the WWSSN system.



Response curves for Helicorder (HEL) and Develocorder (DEV) channels when viewed at 20X enlargement. The Benioff 14KG curve (8) represents several different stations and is normalized to 10,000 magnification at 1 second period. (See station instrumentation for actual magnification at 1 second period).



Response curves for broadband seismographs recorded on slow-speed FM magnetic tape at BRK and SAO. Displacement sensitivity (magnification) in volts/micrometer when reproduced on Honeywell LAR 7400 system ($\pm$ 4 volts output).

PART I. LOCAL EARTHQUAKES IN NORTHERN CALIFORNIA

This section includes information on earthquakes in Northern California (including adjacent offshore areas) and in the adjoining section of Nevada which were well enough recorded at the U.C. stations (sometimes complemented by data from neighboring stations) to permit determination of the epicenter. Latitude and longitude of each epicenter and the corresponding date and origin time are tabulated in the following list; epicenters are also plotted on one or both of the two maps immediately following the list.

For the entire Northern California region, every effort is made to list all earthquakes of Richter magnitude 3.0 or above, but it is likely that some shocks near the lower end of this range have been omitted because the available seismographic data were inadequate for determination of the origin. Within the region covered by the map of the central Coast Ranges of California, locatable shocks of magnitude 2.5 or over are included in the tabulation and plotted on this map. Shocks of magnitude 3.0 or over occurring in this smaller region are plotted on both maps. Shocks of magnitude less than 3.0 in Northern California, and less than 2.5 in the central Coast Ranges, are tabulated only if reported felt or if of special interest for some other reason. Identified explosions are tabulated but are not plotted on the maps.

Earthquakes occurring in the Bear Valley-Stone Canyon area of central California have been the subject of an intensive study known as the Near Field project. For these areas, the permanent stations of the University of California network were supplemented by a number of close stations. For the purpose of this Bulletin, the resulting more accurate locations have been used.

Earthquakes of magnitude 3.5 or larger which are located off the coast of Northern California west of 125° W longitude are given in a separate list on page 74. All of the locations were determined by the arc method. When the onset times of S phases from the larger earthquakes could not be read at the closest stations, averaged S minus P travel-time observations for small aftershocks were used in locating the earthquakes.

The results from a second seismic array have been used for earthquakes in the Eureka-Cape Mendocino area. This array is the Humboldt Bay Seismic Network established in August 1974.* One hypocenter (but not magnitude) determined through the Humboldt Bay project has been used in the present report. This corresponds to earthquake number 9.

Most epicenters were located by a CDC 6400 computer program. Information on Version I of this program may be found in "Computer Location of Local Earthquakes within the Berkeley Seismographic Network" by Bolt and Turcotte, published in Computers in the Mineral Industries, Part 2 (George Parks, Editor); Stanford University Publications, Geological Sciences, Vol. 9, No. 2, pp. 561-576, 1964. Where quadrant control was lacking, the method of swinging arcs was used for epicenter location.

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*Humboldt Bay Seismic Network, Annual Report, August 1975-August 1976, submitted to Pacific Gas and Electric Company by TERA Corporation (Teknekron Energy Resource Analysts); Stewart W. Smith, Principal Investigator.

Explanation of the Table:

Map No. for each epicenter corresponds to the number plotted beside that epicenter on the maps. Epicenters without numbers lie outside the area of the map. The underlining of a map number in the table indicates that one point on a map has been used to represent more than one earthquake in the table.

Date and Origin Time are given in Universal Coordinated Time (UTC). To obtain local time, subtract 8 hours for Pacific Standard Time (PST) and 7 hours for Pacific Daylight Time (PDT).

In selecting input for the computer, we sought the best possible distribution of stations, both in azimuth and in distance. Where possible, both P and S phases were used. However, the number of P arrivals greatly outnumbered the S arrivals. Geographic coordinates are quoted to tenths of a minute for computer located epicenters. Uncertainties of up to five minutes exist in determinations where the depth has been restricted, or where the epicenters lie outside the network. Those epicenters located by the arc method have their coordinates expressed to tenths of a degree. This is the accuracy to which the arc method allows.

The Magnitude of the earthquake is determined on the Richter scale from the maximum trace amplitudes recorded for the shock by standard Wood-Anderson torsion seismographs. The magnitudes of earthquakes for which no Wood-Anderson records are available are determined from Benioff seismograph trace amplitudes, and are listed in parentheses.

The focal depth h is given to the nearest kilometer or by the following ranges: (a) 0-5; (b) 5.1-10; (c) 10.1-15; and (d) 15.1-50 km. A letter following the estimated depth indicates that the depth has been restricted to the value given.

No. of Stas. is the number of stations used by the computer program or the arc method. A * after a number indicates the location resulting from the Near Field project; a # after a number indicates location by the arc method; a † after a number indicates the location resulting from the NEIS Bulletin; and a †† after a number indicates the location as determined by PGE/TERA Corporation. All nuclear explosion locations are as determined by ERDA.

Under Remarks will be found a short descriptive location of the epicenter.

Recent Rate of Seismicity

A plot of the cumulative number of earthquakes versus local Richter magnitude (M_L) is given in the figure on page 70. The data set consists of 509 earthquakes ($3.0 \leq M_L \leq 5.7$) listed in the U.C. Bulletin of the Seismographic Stations, in a 180,000 km^2 region in northern and central California, from January 1, 1971, to December 31, 1975. The region is bounded on the north and east by the California border, on the southeast by the dashed line on the map on page 76, on the southwest by a line connecting 35°N-121°W and 39°N-125°W, and on the west by 125°W longitude.

The earthquakes are grouped into ten consecutive 6-month intervals for analysis and the average cumulative number of earthquakes (N) (total number with a magnitude $\geq M_L$) in a 6-month interval is given by

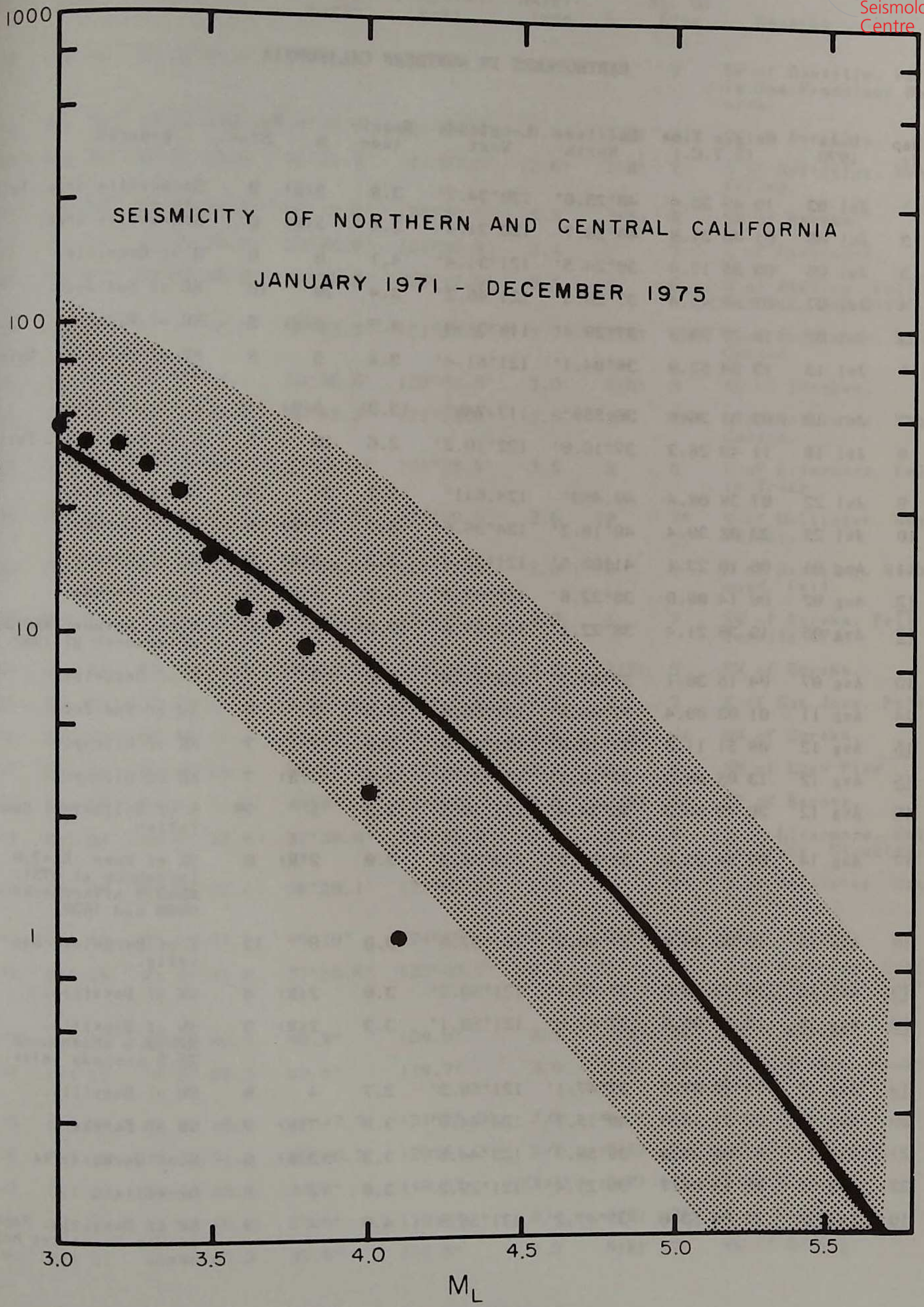
$$\log(N) = (1.475 \pm .613) + (.575 \pm .284)M_L - (.178 \pm .032)M_L^2 ,$$

valid for $3.0 \leq M_L \leq 5.7$. The shaded zone depicts the 95% confidence interval for log(N). Hence, the approximate interoccurrence time for earthquakes in northern and central California is 4 days for $M_L \geq 3$, 3 weeks for $M_L \geq 4$, and 8 months for $M_L \geq 5$.

The solid circles give the cumulative number of earthquakes (51 earthquakes, $3.0 \geq M_L \geq 4.1$) in the 6-month interval covered by the present Bulletin. There is thus a significant lack of events with $M_L > 4.0$.

Acknowledgments

We should like to thank the following institutions for their assistance in supplying readings for the epicenter locations: Seismological Laboratory, California Institute of Technology; Seismological Laboratory, University of Nevada; National Center for Earthquake Research, United States Geological Survey; Pacific Gas and Electric Company; and California Department of Water Resources.



EARTHQUAKES IN NORTHERN CALIFORNIA

Map No.	Date 1976	Origin Time (U.T.C.)	Latitude North	Longitude West	Magni-tude	h	No. Of Stas.	Remarks
1	Jul 03	19 45 20.4	40°23.6'	120°34.7'	3.8	5(R)	9	Susanville area. Felt.
2	Jul 06	01 40 21.8	40°28.7'	120°31.4'	3.4	5(R)	6	Susanville area.
3	Jul 06	03 55 17.4	39°24.5'	121°31.4'	4.1	8	6	S of Oroville.
4	Jul 07	07 50 45.4	37°26.5'	121°46.2'	3.4	10	10	NE of San Jose.
5	Jul 07	18 27 39.3	37°29.4'	118°31.0'	3.7	5(R)	5	NW of Bishop.
6	Jul 13	13 34 53.9	38°04.1'	121°51.4'	3.4	9	8	NE of Berkeley. Suisun Bay area.
7	Jul 18	03 01 36.8	36.559°	117.748°	(3.3)	5(R)	11†	E of Lone Pine.
8	Jul 18	11 49 28.3	37°16.8'	122°10.2'	2.6	10	5	S of Palo Alto. Felt in Cupertino.
9	Jul 22	07 38 08.4	40.489°	124.611°	3.7	21	14††	SW of Eureka.
10	Jul 25	23 02 39.4	40°18.2'	124°38.6'	3.7	2(R)	6	SW of Eureka.
11	Aug 01	06 19 23.1	41°00.5'	121°32.4'	3.2	2(R)	6	NE of Burney.
12	Aug 02	08 14 08.0	38°22.8'	118°07.3'	4.2	5(R)	5	Mina, Nevada.
12	Aug 05	19 38 21.4	38°22.1'	118°07.6'	(3.3)	4	6	Mina, Nevada. MAG=3.0 aftershock at 1952.
13	Aug 07	04 15 36.1	37°57.7'	122°21.8'	2.6	7	7	N of Berkeley.
14	Aug 11	01 03 09.4	37°05.5'	121°56.8'	2.5	3	6	SW of San Jose.
15	Aug 12	08 51 11.3	37°10.0'	121°32.0'	2.9	7	7	NE of Gilroy.
15	Aug 12	13 05 08.3	37°10.1'	121°31.8'	2.5	7(R)	7	NE of Gilroy.
16	Aug 12	20 49 50.3	36°34.4'	121°10.5'	2.5	5	7•	S of Hollister. Bear Valley.
17	Aug 14	07 58 33.6	39°24.9'	119°35.3'	3.0	2(R)	6	SE of Reno. ML=2.8 foreshock at 0751. ML=2.8 aftershocks at 0808 and 1639.
18	Aug 15	10 06 38.0	37°50.9'	121°57.0'	3.0	8	13	E of Berkeley. Danville.
19	Aug 15	10 19 43.6	37°47.1'	121°59.2'	3.0	2(R)	8	SW of Danville.
19	Aug 15	12 29 05.8	37°47.0'	121°58.1'	3.3	2(R)	9	SW of Danville. MAG=2.8 aftershock 25.5 seconds later.
19	Aug 15	14 10 37.7	37°47.1'	121°58.2'	2.7	4	8	SW of Danville.
20	Aug 16	22 31 15.0	40°15.7'	124°44.8'	3.4	7(R)	7	SW of Eureka.
21	Aug 17	07 05 39.9	39°58.7'	123°44.5'	3.3	12(R)	6	S of Garberville.
22	Aug 19	08 15 04.7	39°27.4'	121°29.2'	3.0	2	6	Oroville.
19	Aug 20	22 05 53.0	37°47.2'	121°58.8'	4.0	4	9	SW of Danville. Felt in San Francisco Bay area.

Map No.	Date 1976	Origin Time (U.T.C.)	Latitude North	Longitude West	Magnitude	h	No. Of Stas.	Remarks
19	Aug 20	22 08 01.4	37°46.9'	121°58.7'	3.8	2	9	SW of Danville. Felt in San Francisco Bay area.
19	Aug 22	17 28 43.4	37°47.7'	121°58.4'	3.0	7(R)	9	SW of Danville.
23	Aug 26	02 02 26.6	36°31.9'	121°07.5'	(2.6)	2(R)	7	S of Hollister. Bear Valley.
24	Aug 29	22 04 01.8	40°16.6'	124°31.2'	3.5	2(R)	5	SW of Eureka.
25	Aug 31	12 29 28.3	37°40.0'	121°39.9'	3.4	7	7	E of Livermore.
26	Sep 01	22 42 48.8	40°32.5'	122°12.9'	3.5	5	6	E of Redding. Felt in Redding, Red Bluff.
27	Sep 03	17 12 26.3	36°42.3'	121°23.6'	2.7	2(R)	7•	S of Hollister. Stone Canyon.
28	Sep 03	17 43 47.1	39°35.6'	120°03.5'	3.0	2(R)	5	NE of Truckee.
27	Sep 03	19 58 49.9	36°42.3'	121°24.0'	3.5	3	7•	S of Hollister. Stone Canyon.
29	Sep 05	03 15 09.3	37°36.2'	121°25.8'	3.5	9	6	E of Livermore. Felt in Tracy.
30	Sep 07	11 46 20.3	36°32.7'	121°09.9'	2.6	10	7•	S of Hollister. Bear Valley.
32	Sep 12	17 34 33.0	37°54.3'	122°12.9'	2.9	6	8	N of Berkeley. Richmond. Felt.
33	Sep 13	16 08 10.2	40°12.0'	124°23.4'	4.0	1	7	SW of Eureka. Felt Intensity IV.
34	Sep 13	19 32 25.5	40°13.2'	124°30.8'	3.2	2(R)	5	SW of Eureka.
35	Sep 16	12 37 11.7	37°21.8'	121°45.8'	2.5	2	7	E of San Jose. Felt.
36	Sep 20	03 33 12.4	40°22'	124°30'	3.6	2(R)	4#	SW of Eureka.
37	Sep 23	02 46 54.2	36°31.1'	117°48.5'	(3.7)	10	8	SE of Lone Pine.
38	Sep 28	09 07 11.6	40°47'	121°02'	3.8	2(R)	5#	SE of Burney.
39	Oct 06	20 54 19.9	37°38.0'	121°25.0'	3.3	2(R)	9	E of Livermore. Felt in Tracy, Stockton.
40	Oct 08	09 53 26.4	36°29.1'	121°03.8'	2.6	11	7•	S of Hollister. Bear Valley.
41	Oct 12	03 17 47.1	40°10'	124°45'	3.2	2(R)	3#	SW of Eureka.
42	Oct 15	01 35 31.9	37°59.8'	122°03.7'	3.4	22	8	E of Berkeley. Felt in Concord, Walnut Creek, and Orinda.
43	Oct 15	08 40 04.9	40.3°	124.8°	3.8	2(R)	3#	SW of Eureka.
44	Oct 15	16 27 07.3	37.5°	118.7°	3.0	2(R)	4#	NW of Bishop. Mammoth Lakes.
45	Oct 18	02 46 15.8	36°47.7'	121°35.5'	3.3	6	8	W of Hollister.
46	Oct 19	18 36 41.0	36°46.2'	120°51.2'	2.7	7(R)	6	SE of Hollister.
47	Oct 20	06 53 43.4	37.6°	118.6°	(3.1)	5(R)	14†	N of Bishop.
48	Oct 20	23 14 56.3	37.6°	118.0°	3.4	5(R)	7†	N of Bishop.
49	Oct 21	00 40 04.3	37.6°	118.5°	3.2	5(R)	7†	NW of Bishop.

Map No.	Date 1976	Origin Time (U.T.C.)	Latitude North	Longitude West	Magnitude	h	No. Of Stas.	Remarks
50	Oct 22	15 53 00.0	38°31.6'	122°39.8'	2.6	5	7	NE of Santa Rosa.
51	Oct 22	16 50 50.8	38.5°	119.7°	3.4	2(R)	3#	SE of Markleeville.
52	Oct 23	19 24 33.2	36°53.1'	121°29.6'	3.5	11	7	NW of Hollister. Felt in Hollister, Gilroy.
53	Oct 24	02 19 52.7	36°50.1'	121°37.7'	3.8	2(R)	5	W of Hollister. Felt in Hollister, Gilroy.
24	Oct 26	23 23 42.2	40°16.9'	124°34.5'	3.4	22	5	SW of Eureka.
54	Oct 29	08 23 57.3	37°51.9'	121°46.7'	2.7	7(R)	7	NE of Livermore.
56	Nov 04	00 32 33.3	36°33.8'	121°09.2'	(2.8)	10	7•	S of Hollister. Bear Valley.
57	Nov 05	19 43 11.1	35°47.5'	121°17.5'	3.4	2(R)	7	NW of San Simeon.
58	Nov 15	05 58 53.3	38°15.9'	121°52.4'	2.9	12(R)	5	S of Fairfeild.
59	Nov 15	18 11 17.5	36°27.0'	120°22.8'	3.0	2(R)	7	N of Coalinga. Ciervo Hills.
60	Nov 16	04 20 18.9	37°31.1'	121°40.2'	2.6	7(R)	7	S of Livermore.
61	Nov 19	14 23 30.9	35°43.5'	121°22.5'	3.2	10	5	NW of San Simeon.
62	Nov 25	15 58 25.7	36°38.5'	121°16.0'	3.5	6	7•	S of Hollister. Stone Canyon.
63	Nov 26	00 09 49.0	37°23.1'	118°21.3'	3.0	2(R)	8	Near Bishop.
64	Nov 26	18 52 39.4	36°35.4'	121°11.7'	2.5	5	7•	S of Hollister. Bear Valley.
65	Nov 27	02 49 48.5	40°52.3'	120°29.4'	3.8	7	5	N of Susanville.
66	Nov 28	01 23 19.8	37.6°	119.1°	3.1	2(R)	3#	NW of Bishop. Mammoth Lakes.
67	Dec 02	07 24 53.1	36°37.5'	121°14.5'	3.3	6	7•	S of Hollister. Stone Canyon. ML=2.9 aftershock at 0726 (lost in coda).
74	Dec 08	12 46 22.7	39°48'	122°33.0'	3.2	20(R)	5	Near Paskenta.
68	Dec 08	20 13 19.4	37°15.8'	121°38.7'	3.1	6	6	E of San Jose.
69	Dec 13	02 26 00.6	36°47.9'	121°37.0'	2.9	2	6	W of Hollister. San Juan Bautista.
75	Dec 17	21 36 27.5	38°46.9'	122°26.0'	3.2	2(R)	5	N of Berkeley.
70	Dec 18	19 55 56.0	35°51.4'	120°30.2'	3.3	7	6	SE of King City. Cholame Valley.
71	Dec 18	22 04 17.8	40°31.2'	124°05.7'	3.4	7(R)	7	S of Eureka.
72	Dec 21	02 32 01.4	35°48.4'	121°15.8'	3.2	2(R)	5	W of San Simeon.
76	Dec 22	00 42 19.0	38.6°	122.8°	3.5	2(R)	5#	NW of Berkeley.
73	Dec 22	01 09 23.3	40°17.5'	124°44.6'	3.3	25	7	SW of Eureka.

EARTHQUAKES OFF THE COAST OF NORTHERN CALIFORNIA (WEST OF 125°W LONGITUDE)

Date 1976	Origin Time (U.T.C.)	Latitude North	Longitude West	Magnitude	Remarks
Oct 23	02 16 11.7	40.6°	125.5°	3.7	
Oct 31	05 18 24.5	40.6°	125.1°	3.9	
Nov 26	11 19 19.7	41.3°	125.7°	4.2	Foreshock 11/26-1119.
Nov 26	11 19 22.6	41.3°	125.7°	6.3	150 km NW of Eureka. Main Shock.
Nov 26	11 36 52.5	41.5°	125.8°	3.8	Aftershock 11/26-1119.
Nov 26	11 39 46.0	41.3°	125.7°	4.1	Aftershock 11/26-1119.
Nov 26	11 42 06.8	41.3°	125.7°	4.0	Aftershock 11/26-1119.
Nov 26	12 27 29.0	41.3°	125.7°	3.8	Aftershock 11/26-1119.
Nov 26	14 50 38.6	41.3°	125.7°	3.6	Aftershock 11/26-1119.
Nov 26	18 16 11.5	41.3°	125.7°	3.6	Aftershock 11/26-1119.
Nov 26	19 12 25.5	41.2°	125.8°	3.7	Aftershock 11/26-1119.
Nov 27	01 01 28.3	41.3°	125.8°	3.5	Aftershock 11/26-1119.
Nov 27	02 04 15.7	41.5°	125.7°	3.5	Aftershock 11/26-1119.
Nov 27	02 22 16.5	41.4°	125.8°	3.6	Aftershock 11/26-1119.
Nov 27	07 01 30.0	41.3°	125.7°	3.5	Aftershock 11/26-1119.
Nov 28	04 30 14.3	41.3°	125.7°	4.2	Aftershock 11/26-1119.
Nov 28	11 14 11.3	41.3°	125.7°	3.5	Aftershock 11/26-1119.
Nov 30	04 20 48.1	41.3°	125.6°	3.8	Aftershock 11/26-1119.
Dec 06	09 19 06.2	41.2°	127.5°	3.9	
Dec 08	12 04 45.0	40.9°	125.5°	3.8	
Dec 08	14 21 26.6	41.3°	125.7°	3.8	Aftershock 11/26-1119.
Dec 10	20 18 52.1	41.3°	125.7°	3.5	Aftershock 11/26-1119.
Dec 14	10 58 44.7	41.4°	125.7°	3.6	Aftershock 11/26-1119.
Dec 21	19 04 34.6	42.1°	125.7°	3.5	Foreshock 12/23-0938.
Dec 23	09 38 53.8	42.1°	125.8°	5.1	200 km NW of Eureka. Main Shock.
Dec 23	09 53 55.5	42.0°	125.8°	3.7	Aftershock 12/23-0938.
Dec 23	10 42 20.0	42.1°	125.8°	3.5	Aftershock 12/23-0938.
Dec 23	12 40 24.4	42.1°	125.8°	3.5	Aftershock 12/23-0938.
Dec 25	16 35 45.0	42.0°	125.7°	4.1	Aftershock 12/23-0938.
Dec 26	07 44 32.3	40.5°	125.1°	4.1	
Dec 27	07 34 02.0	42.0°	125.8°	3.9	Aftershock 12/23-0938.

EXPLOSIONS AT NEVADA TEST SITE

Date 1976	Origin Time (U.T.C.)	Latitude North	Longitude West	Magnitude
Jul 27	20 30 00.1	37.075°	116.044°	5.3
Aug 26	14 30 00.2	37.125°	116.082°	5.2
Dec 08	14 49 30.1	37.079°	116.002°	4.6
Dec 21	15 09 00.2	37.124°	116.067°	4.2
Dec 28	18 00 00.1	37.100°	116.036°	5.5

NORTHERN CALIFORNIA EARTHQUAKES

JULY - DECEMBER 1976

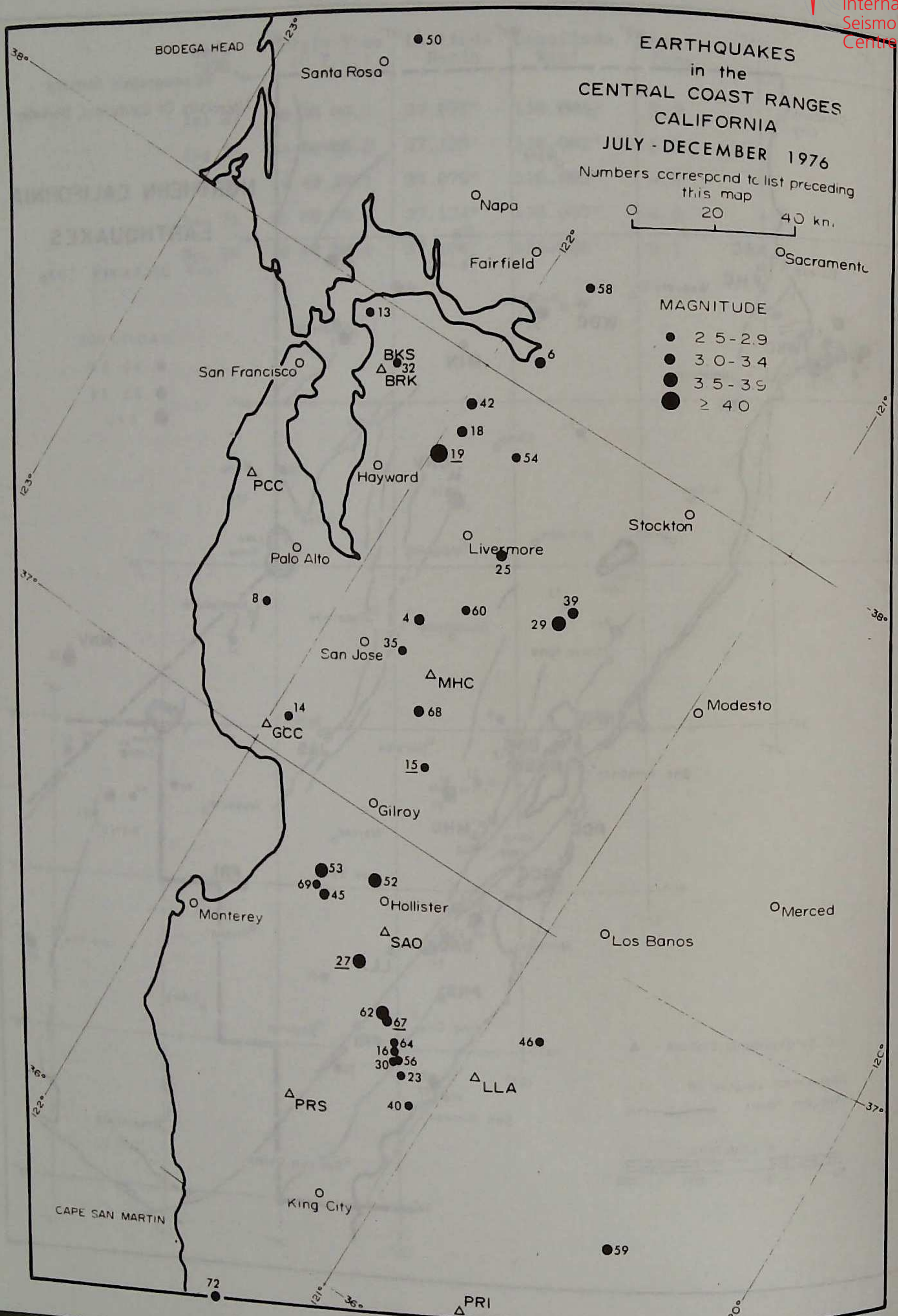
Seismographic Stations
University Of California, Berkeley

MAGNITUDE
- 3.0 - 3.4
- 3.5 - 3.9
- ≥ 4.0

U C Seismographic Stations △

Approximate Location Of Principal Faults

KILOMETERS
50 0 50 100



PART II. REGISTRATION OF EARTHQUAKES

This section tabulates measured arrival times of prominent phases of earthquakes and large explosions recorded at selected stations of the seismographic network operated by the University of California (Berkeley). These stations are BKS (or BRK if the BKS reading is not clear), SAO, MNV, JAS, MHC, WDC, PRI, MIN, FRI, and FHC. Information regarding these stations and instrumentation will be found in the introductory section of this Bulletin. Berkeley source parameters from Part I are repeated for all earthquakes in Northern California and adjoining areas.

Phase arrival times are Universal Coordinated Time (UTC).

In the column identifying the P or PKP phase, "C" or "D" indicates initial compression or dilatation of the ground, respectively, from a wave of the compressional type.

S arrival times and arrival times of later phases are given in minutes and seconds after the hour of the P or PKP arrival time. When a later phase is recorded at a station, but no P or PKP phase, the time in hours and minutes of the first P or PKP arrival at the other stations of the network is printed in the P or PKP column.

The maximum amplitudes of earth displacement in microns and periods in seconds of the indicated phases are given for the Berkeley station, BKS, under the BKS phase arrival times. Unless otherwise specified, magnitudes given for earthquakes outside the Northern California, Nevada, and Oregon region correspond to the magnitude based on surface waves (M_S). The published value is obtained from the amplitude of surface waves of period near 20 seconds, according to the formula:

$$M_S = \log\left(\frac{A}{T}\right) + 1.66 \log \Delta + 3.3 \ ,$$

where A = ground amplitude in microns (vector resultant of horizontal components),

T = period in seconds, and

Δ = distance to epicenter in degrees.

The Richter magnitude for local and regional earthquakes is designated M_L if it is determined from Wood-Anderson torsion seismographs and MAG if it is determined from vertical Benioff seismographs.

Distances are given in degrees from the Berkeley station, BRK. USGS source parameters are listed as a guide at the end of arrival times of the earthquakes. USGS magnitude, designated by M, is the body wave magnitude (m_b).

All measurements and interpretation of seismograms (i.e., identification of phases, arrival times, directions of initial ground motion, and ground amplitudes and periods) are done at Berkeley. Readings from the remaining stations in the network other than the ten listed are available on request. Requests for additional data or for copies of seismograms should be addressed to the Director.

UNIVERSITY OF CALIFORNIA
SEISMOGRAPHIC STATIONS
BERKELEY, CALIFORNIA 97420

JULY 01 THROUGH DECEMBER 31, 1976

"•" PRECEDING ALPHABETIC CHARACTER INDICATES LOWER CASE.

DATE	STA	P OR PKP (Phase h m s)	S (m s)	OTHER PHASES (Phase m s Phase m s Phase m s)
JUL 01	MNV	IPD 03 47 36.4		
	FRI	EP 03 47 42.9		
	JAS	IPD 03 47 48.6		
	MHC	EP 03 47 55.8		
	MIN	EP 03 47 56.5		
	WDC	IPD 03 47 59.8		
	FHC	EP 03 48 10.5		
		USGS 03 38 12.1, 16.6N, 61.2W, H= 36 KM, M=5.1 LEEWARD ISLANDS		
JUL 01	WDC	EP 11 28 23.0		
	MIN	EP 11 28 24.3		•E 28 32
	MNV	EP 11 28 35.0		•E 28 42
	JAS	IPC 11 28 40.4		•I 28 48
	BKS	11 28		•E 28 47 LQ 48 50
	FRI	EP 11 28 46.9		•E 28 54
		USGS 11 19 05.7, 82.2N, 7.4W, H= 33 KM, M=5.0 NORTH OF SVALBARD		
JUL 01	MNV	EPKP 11 43 56.0		•E 43 51
	FRI	EPKP 11 43 54.2		•E 43 50
	JAS	EPKP 11 43 55.0		
	MIN	EPKP 11 43 56.0		•E 43 51
	WDC	EPKP 11 43 56.9		
	PRI	EPKP 11 43 57.2		•E 43 52
	SAO	EPKP 11 43 57.5		
	MHC	EPKP 11 43 58.5		
	BKS	EPKP 11 43 59.2		•E 46 06 •E 46 40 •E 47 23 •E 47 35 •E 52 30 •E 54 36 •E 07 10 •E 39 40
	FHC	EPKP 11 44 00.8		
		USGS 11 24 05.3, 29.5S, 25.2E, H= 33 KM, M=5.9 REPUBLIC OF SOUTH AFRICA		
JUL 01	PRI	EP 12 46 50.6		
	FRI	EP 12 46 54.8		
	JAS	IP 12 47 06.9		
	MHC	12 47		•E 47 08
	BKS	EP 12 47 15.6	51 17	•E 47 27 •E 47 36 LQ 53 00
		MICRON: PZ 0.20; MAXR(Z) 5; MAXH(N) 4.0; MAXH(E) 3.5 — PERIOD: 1.6; 20; 20; 20		
	MIN	EP 12 47 34.3		
	WDC	EP 12 47 37.7		
		Ms=4.9, DISTANCE=21°		
		USGS 12 42 29.0, 19.8N, 109.2W, H= 33 KM, M=5.2 REVILLA GIGEDO ISLANDS REGION		
JUL 01	FRI	EPC 21 44 10.8		
	PRI	EPC 21 44 10.8		
	MNV	EPC 21 44 16.5		
	JAS	EP 21 44 22.0		
	BKS	21 44		•E 49 05 LQ 51 00
		USGS 21 39 09.2, 18.3N, 104.6W, H= 33 KM, M=4.9 NEAR COAST OF JALISCO, MEXICO		
JUL 02	JAS	EPC 08 01 20.0		
	WDC	EPC 08 01 23.0		
	MIN	EP 08 01 24		
	MNV	EPC 08 01 29.0		
		USGS 07 49 06.6, 24.8S, 175.5W, H= 33 KM, M=4.9 SOUTH OF TONGA ISLANDS		
JUL 02	MNV	EPC 12 46 23.8		
	JAS	EPC 12 46 37.0		
	MIN	EP 12 46 48		
	BKS	12 46		LQ 01 00 LR 07 20
		MICRON: MAXR(Z) 0.9; MAXH(N) 1.5; MAXH(E) 1.0 — PERIOD: 20; 20; 20		
	WDC	EPC 12 46 48.5		
		Ms=5.0, DISTANCE=48°		
		USGS 12 38 12.9, 19.8N, 70.9W, H= 57 KM, M=5.0 DOMINICAN REPUBLIC REGION		
JUL 02	FHC	EP 17 20 46.0		
	WDC	EP 17 20 51.6		
	JAS	EPD 17 21 07.0		
	FRI	EP 17 21 12.3		
		USGS 17 09 22.8, 32.2N, 142.3E, H= 53 KM, M=5.0 SOUTH OF HONSHU, JAPAN		
JUL 02	BKS	17 36		•E 47 14 •E 05 00
		MICRON: MAXR(Z) 0.7; MAXH(N) 0.5; MAXH(E) 0.6 — PERIOD: 20; 20; 20		
	MHC	EP 17 36 41		
	FRI	EP 17 36 45		•E 36 54
	JAS	EP 17 36 46.0		•E 36 58
	FHC	EP 17 36 47		•E 36 58
	WDC	EP 17 36 49.3		
	MNV	EP 17 36 54.0		•E 37 02 •E 37 06
		Ms=5.0, DISTANCE=85°		
		USGS 17 24 07.1, 30.4S, 177.1W, H= 33 KM, M=4.7 KERMADEC ISLANDS		
JUL 02	MNV	EP 20 30 32.5		
	JAS	E(P) 20 30 40		
	WDC	EP 20 30 56.5		
	FHC	EP 20 31 05.2		
		USGS 20 20 21.1, 10.3S, 78.6W, H= 45 KM, M=4.8 NEAR COAST OF PERU		
JUL 02	MHC	EP 22 09 29.5		
	FHC	EP 22 09 32.2		
	FRI	EP 22 09 34.0		
	JAS	EPD 22 09 34.5		
	WDC	EPD 22 09 36.5		
	MNV	EP 22 09 43.0		
		USGS 21 58 09.2, 23.3S, 179.9W, H=565 KM FIJI ISLANDS REGION		
JUL 03	MHC	EP 10 17 29.0		
	FHC	EP 10 17 33		
	FRI	EP 10 17 33.5		
	JAS	EP 10 17 34.0		
	WDC	EP 10 17 36.0		
	MIN	EP 10 17 37.5		
	MNV	EP 10 17 42.7		
JUL 03	MIN	IPC 19 45 34.9		
	WDC	EPC 19 45 46.8		
	JAS	EPD 19 46 01.4		
	MNV	EPC 19 46 03.9		
	FHC	E(P) 19 46 03.5		
	BKS	E(P) 19 46 08.3		
	MHC	E(P) 19 46 12		
		BRK 19 45 20.4, 40.4N, 120.6W, H= 5 KM, ML=3.8 SUSANVILLE AREA, CALIFORNIA		

DATE	STA	P OR PKP (Phase h m s)	S (m s)	OTHER PHASES (Phase m s Phase m s Phase m s)
JUL 04	MNV	EP 00 22 41.6		
	PRI	EP 00 22 41.7		
	JAS	EPD 00 22 46.8		
	WDC	EPD 00 23 01.1		•E 23 33
	FHC	EP 00 23 08.5		
		USGS 00 11 05.0, 22.1S, 67.4W, H=151 KM, M=4.8 CHILE-BOLIVIA, BORDER REGION		
JUL 04	FHC	EPC 03 09 49.5		
	WDC	EPC 03 09 50.6		
	MIN	EPC 03 09 52.5		
	BKS	EP 03 10 04.0		
		MICRON: PZ 0.05 — PERIOD: 0.8		
	MNV	EPC 03 10 04.7		
	JAS	EPC 03 10 05.1		
	MHC	EPC 03 10 07.0		
	SAO	EP 03 10 09.5		
	FRI	EPC 03 10 09.9		
	PRI	EPC 03 10 13.8		
		USGS 02 56 57.7, 49.9N, 78.9E, H= 0 KM, M=5.8 EASTERN KAZAKH, SSR		
JUL 04	SAO	EP 19 13 18		
	PRI	EP 19 13 18.5		
	BKS	EP 19 13 19.1	23 30	•E 13 39 LQ 35 57 •E 13 47 •PP 14 07
		MICRON: PZ 0.04 — PERIOD: 0.7		
	MHC	EP 19 13 19.5		
	FRI	EP 19 13 23.4		
	JAS	EPD 19 13 24.4		•E 31 30
	WDC	EPD 19 13 27.3		•E 14 12 •E 31 30
	MIN	E(P) 19 13 28.5		•E 14 16 •E 23 35
	MNV	EPD 19 13 32.5		•E 31 26
		USGS 19 01 08.2, 28.2S, 178.3W, H=196 KM, M=5.3 KERMADEC ISLANDS REGION		
JUL 05	WDC	EP 02 58 32.3		
	MIN	EP 02 58 36		
	JAS	EP 02 58 50.0		
	FRI	EP 02 58 57		
	MNV	EP 02 58 57.0		
		USGS 02 47 16.2, 38.8N, 140.6E, H= 16 KM, M=5.1 HONSHU, JAPAN		
JUL 05	SAO	EP 12 08 35.3		
	BKS	EP 12 08 36.6		•E 18 18
		MICRON: PZ 0.04 — PERIOD: 0.8		
	PRI	EP 12 08 36.8		
	MHC	EP 12 08 37.2		
	FRI	EP 12 08 41.4		
	FHC	EP 12 08 41.5		
	JAS	EPC 12 08 42.2		
	WDC	EPC 12 08 44.3		
	MIN	EP 12 08 46.0		•E 12 10 •E 18 22
	MNV	EP 12 08 50.2		
		USGS 11 57 02.4, 25.5S, 179.5E, H=510 KM, M=5.4 SOUTH OF FIJI ISLANDS		
JUL 05	MHC	EP 13 28 15.0		
	PRI	EP 13 28 15.0		
	FRI	EP 13 28 20.0		
	JAS	EP 13 28 20.3		
	WDC	EP 13 28 21.3		
	MIN	EP 13 28 23.3		
	MNV	EP 13 28 29.9		
		USGS 13 17 17.7, 18.0S, 178.8W, H=562 KM, M=4.8 FIJI ISLANDS REGION		
JUL 05	FHC	EPC 18 35 50.8		
	WDC	EPC 18 35 58.9		
	MIN	EP 18 36 04.1		
	BKS	E(P) 18 36 12.9		•E 47 52
		MICRON: PZ 0.02; MAXR(Z) 0.5; MAXH(N) 0; MAXH(E) 0.5 — PERIOD: 0.8; 20; 20; 20		
	MHC	EP 18 36 18.7		
	JAS	EPC 18 36 22.5		•E 36 38
	MNV	E(P) 18 36 30		
	PRI	E(P) 18 36 30		
	FRI	EP 18 36 30.1		
		Ms=4.5, DISTANCE=41°		
		USGS 18 28 28.0, 51.3N, 179.2W, H= 54 KM, M=5.2 ANDREANOF ISLANDS, ALEUTIAN ISLANDS		
JUL 05	PRI	E(P) 20 04 51		
	FRI	E(P) 20 04 53		
	JAS	EP 20 04 58.5		
	BKS	20 04	15 30	PS 16 30 SS 21 44 LQ 28 32 LR 32 52
		MICRON: MAXR(Z) 3.3; MAXH(N) 3.4; MAXH(E) 0.9 — PERIOD: 20; 20; 20		
	MNV	EP 20 05 00.5		
	WDC	EP 20 05 10		
		Ms=5.7, DISTANCE=88°		
		USGS 19 52 11.4, 50.1S, 114.8W, H= 33 KM, M=5.3 EASTER ISLAND CORDILLERA		
JUL 06	MIN	IPC 01 40 37.0		
	WDC	IPC 01 40 48.8		
	JAS	EPC 01 41 02.7		
		BRK 01 40 21.8, 40.5N, 120.5W, H= 5 KM, ML=3.4 SUSANVILLE AREA, CALIFORNIA		
JUL 06	MIN	IPC 03 55 35.0		
	WDC	IPC 03 55 40.9		
	BKS	IPC 03 55 45.0	56 05	
	JAS	IPC 03 55 46.5		
	MHC	EP 03 55 51.5		
	FHC	E(P) 03 55 56		
	SAO	EP 03 55 59.4		
	FRI	EP 03 56 03.0		
	MNV	EP 03 56 03.0		
	PRI	E(P) 03 56 11.5		
		BRK 03 55 17.4, 39.4N, 121.5W, H= 8 KM, ML=4.1 SOUTH OF OROVILLE, CALIFORNIA		
JUL 06	FHC	IPC 10 34 08.9		
	WDC	IPC 10 34 24.8		
	MIN	IPC 10 34 35.2		
	BKS	E(P) 10 34 50		LR 35 56
		MICRON: MAXR(Z) 2.5; MAXH(N) 2.6; MAXH(E) 2.6 — PERIOD: 18; 18; 18		
	MHC	E(P) 10 35 00		
	JAS	EPC 10 35 03.6		
	SAO	10 35		•E 35 09
	FRI	EP 10 35 19.5		
	PRI	E(P) 10 35 20		
	MNV	EP 10 35 22.5		
		USGS 10 33 32.8, 41.8N, 126.7W, H= 33 KM, M=4.9 OFF COAST OF NORTHERN CALIFORNIA		
JUL 06	BKS	11 21		•E 31 16 •E 42 24
	FRI	E(P) 11 21 35.2		
	JAS	EP 11 21 35.5		
	FHC	11 21		•E 21 41
	WDC	EP 11 21 37.0		•E 21 38
	MNV	EP 11 21 46.0		•E 21 42
		USGS 11 10 12.2, 14.5S, 174.5W, H= 46 KM, M=5.1 SAMOA ISLANDS REGION		

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JUL 06  MNV  EP     13 48 52.5
        FRI  EP     13 48 55.4
        PRI  EP     13 48 59.0
        JAS  EPD    13 49 02.7
        SAO  E(P)   13 49 05
        MHC  EP     13 49 08.3
        BKS  EP     13 49 12.6
                              MICRON      PERIOD
                     PZ         0.04         0.7
        MIN  EP     13 49 15.2
        WDC  EPD    13 49 18.9
        FHC  EPD    13 49 29.6
                     USGS   13 40 01.1,  6.7N,  73.1W, H=157 KM, M=4.9
                            NORTHERN COLOMBIA

JUL 06  FHC  EP     14 08 37.5
        WDC  EP     14 08 54
        JAS         14 08                    *E 09 35
                     USGS   14 07 46.0, 41.3N, 128.2W, H= 10 KM, M=4.1
                            OFF COAST OF NORTHERN CALIFORNIA

JUL 07  MHC  IPC    07 50 48.7
        BKS  IP     07 50 56.5  51 06
        SAO  IPD    07 50 59.5
        JAS  EPC    07 51 06.6
        PRI  EP     07 51 12.2
        FRI  EP     07 51 13.2
                     BRK    07 50 45.4, 37.4N, 121.8W, H= 10 KM, ML=3.4
                            NORTHEAST OF SAN JOSE, CALIFORNIA

JUL 07  MNV  EP     14 11 04.7
        JAS  IPD    14 11 17.2
        PRI  E(P)   14 11 21
        MHC  EP     14 11 25.0
                     USGS   14 00 29.6, 37.5N,  33.3W, H= 33 KM, M=4.8
                            AZORES ISLANDS REGION

JUL 07  FRI  EPD    18 27 57.2
        MNV  IPD    18 27 57.4
        JAS  IPC    18 28 06.4  28 26
        PRI  EPC    18 28 15.5              S*G 28 44
        SAO  IPC    18 28 19.2
        MHC  IPD    18 28 20.2
        BKS  EPD    18 28 28.0
                     BRK    18 27 29.3, 37.5N, 118.5W, H=  5 KM, ML=3.7
                            NORTHWEST OF BISHOP, CALIFORNIA

JUL 08  FRI  EP     00 24 53.4
        PRI  EP     00 24 54.5
        MNV  EPD    00 24 56.2
        JAS  EPD    00 25 00.5
        MHC  EP     00 25 02
        MIN  EP     00 25 14
        WDC  EPD    00 25 15.0
        FHC  E(P)   00 25 21
                     USGS   00 12 51.9, 28.6S,  72.2W, H= 33 KM, M=4.9
                            OFF COAST OF CENTRAL CHILE

JUL 08  MNV  EPD    07 23 47.6
        JAS  IPD    07 23 51.6
        MHC  EP     07 23 53
        BRK  E(P)   07 23 56
        WDC  IPD    07 24 05.2
        FHC  EPD    07 24 11.3
                     USGS   07 11 28.0, 32.9S,  70.1W, H=109 KM, M=4.7
                            CHILE-ARGENTINA BORDER REGION

JUL 08  FRI  E(P)   08 48 37
        MNV  E(P)   08 48 43
        JAS  EP     08 48 47
        WDC  EP     08 49 10.5
                     USGS   08 41 12.4,  2.3N, 100.2W, H= 33 KM, M=4.9
                            EAST CENTRAL PACIFIC OCEAN

JUL 08  FRI  EP     09 54 46
        MNV  EP     09 54 52.3
        JAS  EP     09 54 56
        WDC  EP     09 55 19.5
                     USGS   09 47 22.0,  2.3N, 100.2W, H= 33 KM, M=5.0
                            EAST CENTRAL PACIFIC OCEAN

JUL 08  MNV  EP     10 44 27.7          P*CP 46 33
        FRI  EP     10 44 28.5          P*CP 46 34
        JAS  EP     10 44 37.0          P*CP 46 38
        MHC  EP     10 44 41.5
        BKS         10 44                  *E 46 42
        FHC  EP     10 45 08.5
                     USGS   10 36 58.0, 11.1N,  85.8W, H= 58 KM, M=4.8
                            NICARAGUA

JUL 08  WDC  EPD    11 58 01.7
        MIN         11 58                  *E 58 06
        BKS         11 58                  *E 07 19    *E 19 00
                              MICRON      PERIOD
                     MAXR(Z)   1.2           20
                     MAXH(N)   0             20
                     MAXH(E)   0.9           20
        JAS  EPD    11 58 19.7
        FRI         11 58                  *E 58 25
        MNV  EP     11 58 26.2
        PRI         11 58                  *E 58 36
                     USGS   11 47 01.8, 40.2N, 142.3E, H= 55 KM, M=5.4
                            NEAR EAST COAST OF HONSHU, JAPAN

JUL 08  MNV  EP     12 55 48
                     USGS   12 46 16.9,  4.7S,  79.7W, H= 80 KM, M=4.6
                            PERU-ECUADOR BORDER REGION

JUL 09  MHC  EP     05 42 46.3
        FRI  EP     05 42 50.3             *E 44 10
        JAS  EP     05 42 51.2             *E 44 11
        WDC  EP     05 42 53.9             *E 44 14
                     USGS   05 30 44.9, 29.4S, 179.2W, H=340 KM, M=5.3
                            KERMADEC ISLANDS REGION

JUL 09  JAS  EP     08 10 00.3
        FRI  EP     08 10 00.5
        WDC  EP     08 10 00.5
                     USGS   07 58 43.4, 21.1S, 178.7W, H=537 KM, M=5.1
                            FIJI ISLANDS REGION

JUL 10  FHC  EPC    00 30 07.4
        WDC  IPC    00 30 12.2
        MIN  EPC    00 30 15.1
        BKS  EP     00 30 16.2
                              MICRON      PERIOD
                     PZ         0.05         0.7
        MHC  EPC    00 30 19.3
        JAS  IPC    00 30 22.6
        PRI  EPC    00 30 24.8
        FRI  EPC    00 30 26.4
        MNV  EPC    00 30 30.4
                     USGS   00 17 32.9, 11.9N, 140.9E, H= 87 KM, M=5.4
                            WEST CAROLINE ISLANDS

JUL 10  WDC  E(P)   02 40 07
        JAS  EP     02 40 49
        MNV         02 41                  *E 41 02
                     USGS   02 38 44.7, 44.0N, 128.3W, H= 15 KM, M=4.2
                            OFF COAST OF OREGON

JUL 10  FHC  EP     11 46 53.3
        WDC  EPC    11 46 58.8  55 13
        MIN  EPC    11 47 03.1
        BKS  EPC    11 47 11.7  55 22    P*CP 47 24    *PP 48 40    S*CS 56 28
                                          *SS 57 56
                              MICRON      PERIOD
                     PZ         0.17         1.0
        MHC  EPC    11 47 15.7            *PP 48 49
        JAS  EPC    11 47 17.9  55 33      *PP 48 51    *E 49 52
        SAO  EPC    11 47 18.4
        FRI  EPC    11 47 24.0
        MNV  EPC    11 47 24.4  55 46      *PP 49 00
        PRI  EP     11 47 24.8            *PP 49 07
                     USGS   11 37 12.8, 47.4N, 145.7E, H=387 KM, M=5.8
                            SEA OF OKHOTSK

JUL 10  SAO  EP     22 20 23.7
        BKS  EP     22 20 24.5
                              MICRON      PERIOD
                     PZ         0.03         0.7
        MHC  EP     22 20 25.3
        PRI  EP     22 20 25.8
        FHC  EP     22 20 27.8
        FRI  EP     22 20 30.9
        JAS  EPD    22 20 31.0
        WDC  EPD    22 20 31.5
        MIN  EP     22 20 34.0
        MNV  EPD    22 20 40.8
                     USGS   22 09 25.3, 16.3S, 179.7W, H=485 KM, M=4.8
                            FIJI ISLANDS REGION

JUL 11  PRI  EP     00 40 12.5
        MHC         00 40                  *E 40 18
        FRI  EP     00 40 18.5
        JAS  EP     00 40 23.8
        MNV  EP     00 40 30.6
        WDC  EP     00 40 36.1
                     USGS   00 29 54.8, 22.7S, 138.6W, H=  0 KM, M=5.0
                            TUAMOTU ARCHIPELAGO REGION

JUL 11  WDC  EP     02 05 53.5
        MIN  EP     02 05 57.8
        JAS  EP     02 06 20.7
        MNV  EP     02 06 24.0
        FRI  EP     02 06 29.9
        PRI  EP     02 06 35
                     USGS   02 00 11.1, 63.3N, 150.8W, H=133 KM, M=4.5
                            CENTRAL ALASKA

JUL 11  MNV  EPKP   04 38 41.5
        JAS  EPKP   04 38 43.3
        MHC  EPKP   04 38 44
        WDC  EPKP   04 38 48.2
                     USGS   04 19 48.5, 58.0S,  25.4W, H= 33 KM, M=4.9
                            SOUTH SANDWICH ISLANDS REGION

JUL 11  MNV  EP     17 03 06.5
        FRI  EP     17 03 08.3
        PRI  EP     17 03 11.7
        JAS  EP     17 03 16.7
        SAO  E(P)   17 03 17.3
        MHC  EP     17 03 21.7
        BKS  EP     17 03 25.5  10 48     LQ 16 00    LR 18 30
                              MICRON      PERIOD
                     PZ         0.28         1.0
                     MAXH(N)  67             20
                     MAXH(E) 110             20
        MIN  EP     17 03 30.7
        WDC  EP     17 03 34.2          RPKP 35 03
        FHC  EP     17 03 45.2
                     M=6.9, DISTANCE=50°
                     USGS   16 54 31.8,  7.3N,  78.5W, H= 22 KM, M=6.3
                            PANAMA

JUL 11  MNV  EP     18 28 58.0
        FRI  EP     18 29 00.0
        PRI  EP     18 29 03
        JAS  EP     18 29 08.0
        MHC  EP     18 29 13.0
        BKS  E(P)   18 29 15.2
        MIN  EP     18 29 22
        WDC  EP     18 29 25.6
        FHC  EP     18 29 36.6
                     USGS   18 20 23.7,  7.4N,  78.2W, H= 33 KM, M=5.7
                            PANAMA

JUL 11  MNV  EP     20 50 26.8
        FRI  EP     20 50 28.8
        PRI  EP     20 50 32.2
        JAS  EP     20 50 37.1          RPKP 22 32
        SAO  E(P)   20 50 38
        MHC  EP     20 50 42.0
        BKS  EP     20 50 47.0  58 00     *E 50 54    LQ 01 42    LR 04 16
                              MICRON      PERIOD
                     PZ         0.28         0.7
                     MAXH(N) 117             20
                     MAXH(E) 111             20
        MIN  EP     20 50 51.0
        WDC  EP     20 50 54.1          RPKP 22 20
        FHC  EP     20 51 05.4
                     M=7.1, DISTANCE=50°
                     USGS   20 41 17.5,  7.4N,  78.1W, H=  3 KM, M=6.2
                            PANAMA

JUL 11  FRI  EP     21 07 02.2
        PRI  EP     21 07 05.7
        JAS  EP     21 07 10.4
        SAO  EP     21 07 10.7
        MHC  EP     21 07 15.6
        BKS  EP     21 07 20.0
                              MICRON      PERIOD
                     PZ         0.11         1.0
        MIN  EP     21 07 24.4
        WDC  EP     21 07 28.2
        FHC  EP     21 07 39.1
                     USGS   20 58 23.7,  7.0N,  78.1W, H= 33 KM, M=5.5
                            PANAMA

JUL 11  MNV  EP     22 11 51.2
        FRI  EP     22 11 53.0
        PRI  EP     22 11 56.3
        JAS  EP     22 12 01.3
        MHC  EP     22 12 06.5
        BRK  E(P)   22 12 11.3
        WDC  EP     22 12 19.2
        FHC  EP     22 12 30.0
                     USGS   22 03 14.5,  7.4N,  78.4W, H=  8 KM, M=5.4
                            PANAMA

JUL 11  JAS  EP     22 19 31.3
        FHC  EP     22 20 00.0
                     USGS   22 10 45.8,  7.1N,  78.3W, H= 33 KM, M=4.9
                            PANAMA

JUL 11  MNV  EP     22 41 23.0
        JAS  EP     22 41 32.8
        FHC  EP     22 42 01.0
                     USGS   22 32 45.5,  7.0N,  78.2W, H= 33 KM, M=5.0
                            PANAMA

JUL 12  MNV  EP     00 17 02.7          *E 17 09    *E 19 08
        FRI         00 17               *E 17 15    *E 17 22
        JAS  EP     00 17 12.5          *E 17 18
                     USGS   00 08 24.0,  7.1N,  77.7W, H= 33 KM, M=4.5
                            PANAMA-COLOMBIA BORDER REGION
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JUL 12  MNV  EP    00 25 15.2
        FRI  EP    00 25 16.8
        JAS  EP    00 25 25.2                    •E 25 41
        MIN        00 25
        FHC  EP    00 25 54
                   USGS  00 16 43.1,  7.4N,  78.6W, H= 33 KM, M=5.2
                         PANAMA

JUL 12  MNV  EP    02 44 54.0
        JAS  EP    02 45 03.8
        FHC  EP    02 45 32
                   USGS  02 36 15.8,  7.1N,  78.0W, H= 21 KM, M=5.0
                         PANAMA

JUL 12  MNV  EPD   06 33 10.5                    •E 33 12
        FRI        06 33                         •E 33 20
        JAS        06 33
                   USGS  06 24 33.2,  7.3N,  78.0W, H= 21 KM, M=5.0
                         PANAMA

JUL 12  MNV  EP    11 16 44.7
        FRI  EP    11 16 46
        JAS  EPC   11 16 54.6
                   USGS  11 08 08.1,  7.3N,  77.9W, H= 33 KM, M=4.8
                         PANAMA-COLOMBIA BORDER REGION

JUL 12  JAS  EPD   14 11 53.0
        MNV  EPD   14 12 02.5

JUL 12  MNV  EP    14 51 45.5
        FRI        14 51                         •E 51 51
        JAS  EP    14 51 55.6
                   USGS  14 43 10.6,  7.2N,  78.3W, H= 33 KM, M=5.3
                         PANAMA

JUL 13  FRI  EPD   03 14 34.7
        JAS  IPD   03 14 35.8
        WDC  IPD   03 14 39.0
        MNV  EPD   03 14 43.8
                   USGS  03 01 54.6, 30.4S, 177.7W, H= 33 KM, M=5.1
                         KERMADEC ISLANDS

JUL 13  BKS  IPD   13 35 01.3  35 06
        MHC  EPC   13 35 08.0
        JAS  IPC   13 35 14.3  35 28
        SAO  EP    13 35 17
        FRI  EP    13 35 27.5
        PRI  EPC   13 35 31.5  35 58
        WDC  IPD   13 35 33.3
                   BRK   13 34 53.9,  38.1N,  121.9W, H=  9 KM, ML=3.4
                         SUISUN BAY AREA, CALIFORNIA

JUL 13  WDC  IPC   15 35 47.9
        MIN  EPC   15 35 48.6
        FHC  EPC   15 35 49.6
        MNV  EP    15 35 55.6
        JAS  IPC   15 36 02.5
        FRI  EPC   15 36 08.0
        MHC  EP    15 36 09
        PRI  EPC   15 36 15.4
                   USGS  15 25 35.6,  72.6N,   3.5E, H= 33 KM, M=5.2
                         NORWEGIAN SEA

JUL 13  WDC        17 10                         •E 10 05
        MNV  EP    17 10 13.2
        JAS  EP    17 10 19.8
        FRI        17 10                         •E 10 24
                   USGS  16 59 52.6,  72.7N,   3.7E, H= 33 KM, M=5.0
                         NORWEGIAN SEA

JUL 14  MNV  EPD   01 41 09.8
        FRI  E(P)  01 41 12
        PRI  E(P)  01 41 15
        JAS  EPD   01 41 19.5
        MHC        01 41                         •E 41 26
        BKS  EP    01 41 31.8  48 52             •E 42 00   •E 42 44   •E 52 56
                                                 •E 59 00
                              MICRON     PERIOD
                   PZ          0.21       1.5
                   MAXR(Z)     3.6       20
                   MAXH(N)     4.3       20
                   MAXH(E)     6         20
        MIN        01 41                         •E 41 34
        WDC  EPD   01 41 37.6
        FHC  EP    01 41 48
                   M=5.7, DISTANCE=50°
                   USGS  01 32 34.8,  7.4N,  78.0W, H= 33 KM, M=5.5
                         PANAMA

JUL 14  PRI        02 01
        FRI        02 01                         •E 01 22
        MHC        02 01                         •E 01 21
        JAS  EP    02 01 27                      •E 01 25
        MNV  EP    02 01 30
        WDC  EP    02 01 44.8
                   USGS  01 51 06.8, 24.5S, 116.0W, H= 33 KM, M=5.0
                         EASTER ISLAND CORDILLERA

JUL 14  WDC  EPKPC 07 32 12.2          PKKP 42 18  SKKP 45 43
        MIN  EPKP  07 32 13            PKKP 42 09
        BKS  EPKP  07 32 15              PP 33 42    •E 43 18    SS 50 08
                                         LQ 03 32    LR 10 25
                              MICRON     PERIOD
                   MAXR(Z)     8         20
                   MAXH(N)     2.9       20
                   MAXH(E)     8         20
        MHC  EPKPC 07 32 16            SKKP 46 03    SS 49 53
        JAS  EPKPC 07 32 17              PP 33 43  PKKP 42 14  SKKP 46 06
        FRI  EPKPC 07 32 18.7            SS 49 41
        PRI  EPKPC 07 32 18.7
        MNV  EPKPC 07 32 20.7          PKKP 42 13  SKKP 45 57
                   M=6.3, DISTANCE=121°
                   USGS  07 13 24.0,  8.2S, 114.9E, H= 40 KM, M=6.2
                         BALI ISLAND REGION

JUL 14  WDC  EPKPC 10 42 34.5          PKKP 52 50  SKKP 56 15
        MIN  EPKP  10 42 36
        MHC  EPKP  10 42 38.5
        JAS  EPKP  10 42 39.5          PKKP 52 42  SKKP 56 18
        FRI  EPKP  10 42 41.1
        PRI  EPKP  10 42 41.2
        MNV  EPKP  10 42 43.1          PKKP 52 36  SKKP 56 15
                   USGS  10 23 45.8,  8.1S, 114.9E, H= 33 KM, M=5.9
                         BALI ISLAND REGION

JUL 14  MNV  EP    19 11 27.5
        WDC        19 12
                   USGS  19 02 52.5,  7.2N,  78.2W, H= 33 KM, M=5.1
                         PANAMA

JUL 15  JAS  EPC   00 17 06.1
        MHC  E(P)  00 17 13
        WDC  EPC   00 17 17.0
                   USGS  00 07 56.6,  19.2N,  64.1W, H= 33 KM, M=5.0
                         VIRGIN ISLANDS

JUL 15  JAS  EP    00 44 16.9
                   USGS  00 35 32.4,  7.4N,  78.1W, H= 33 KM, M=5.3
                         PANAMA

JUL 15  MNV  EP    05 09 09.5
        FRI  E(P)  05 09 12
        PRI  E(P)  05 09 15
        JAS  EP    05 09 19.3
        MHC  EP    05 09 24.9
        MIN        05 09 33
        WDC        05 09
        FHC  EP    05 09 48                      •E 09 37
                   USGS  05 00 35.9,  7.3N,  78.3W, H= 33 KM, M=5.1
                         PANAMA

JUL 15  PRI  EP    05 44 44.0
        MNV  EPD   05 44 44.3
        JAS  EP    05 44 50
        MHC  EP    05 44 52.2
        WDC  EP    05 45 04.7
                   USGS  05 33 11.2, 20.8S,  70.3W, H= 51 KM, M=4.9
                         NEAR COAST OF NORTHERN CHILE

JUL 15  WDC  IPC   08 15 34.5
        MIN  EP    08 15 39.0
        BRK        08 15                         •E 15 57
        JAS  IPC   08 16 02.4
        FRI  EP    08 16 11.2
        PRI        08 16                         •E 16 26
                   USGS  08 09 47.4,  62.7N,  149.8W, H= 24 KM, M=4.2
                         CENTRAL ALASKA

JUL 15  JAS  EP    11 26 52
        MNV        11 27                         •E 27 06
        WDC        11 27                         •E 27 07

JUL 15  JAS  EPD   11 40 19.4

JUL 16  PRI  EP    02 23 08                      •E 23 23
        MHC  EP    02 23 08.5                    •E 23 24
        FRI  EP    02 23 12.4                    •E 23 28
        JAS  EPD   02 23 13.6                    •E 23 29
        WDC        02 23                         •E 23 14
        MNV  EP    02 23 21                      •E 23 37
                   USGS  02 10 30.6, 30.2S, 177.7W, H= 14 KM, M=5.0
                         KERMADEC ISLANDS

JUL 16  WDC        15 49                         •E 49 58
        MHC        15 50                         •E 50 22
        JAS  EP    15 50 27.5

JUL 16  FRI  EP    16 11 45.4
        PRI  EP    16 11 46.2                    •E 12 02
        MNV  EP    16 11 48.0
        JAS  EP    16 11 52.0                    •E 12 08
        MHC  EP    16 11 53.5                    •E 12 10
        BRK  E(P)  16 11 56.7
        WDC  EPC   16 12 06.0                    •E 12 21    •E 12 52
        FHC  E(P)  16 12 10
                   USGS  15 59 32.3, 31.5S,  71.3W, H= 60 KM, M=5.4
                         NEAR COAST OF CENTRAL CHILE

JUL 17  FRI  EP    02 13 44.0
        MNV  EPC   02 13 44.0
        PRI  EP    02 13 46.5
        JAS  EPC   02 13 53.0
        MHC  EP    02 13 57.2
        BKS  E(P)  02 14 02     21 08      PP 15 56    •E 29 12
        MIN  EP    02 14 08.0
        WDC  EPC   02 14 12.0
        FHC  EP    02 14 22.1
                   USGS  02 05 22.0,  5.8N,  82.7W, H= 25 KM, M=5.3
                         SOUTH OF PANAMA

JUL 17  MNV  EP    05 32 16.7
        FRI  E(P)  05 32 18.5
        PRI  E(P)  05 32 22
        JAS  E(P)  05 32 27
        MHC  EP    05 32 32
        MIN        05 32                         •E 32 44
                   USGS  05 23 38.8,  7.1N,  78.0W, H= 22 KM, M=5.1
                         PANAMA

JUL 17  FHC  EP    05 46 15.3
        WDC  EP    05 46 19.5                      PP 50 21
        BKS        05 46                           •E 46 22
        MHC  E(P)  05 46 24
        JAS  E(P)  05 46 27.3
        FRI        05 46                           •E 46 32
        MNV        05 46                           •E 46 38
                   USGS  05 32 43.2,  4.6S, 140.0E, H= 33 KM, M=5.6
                         WEST IRIAN

JUL 17  PRI  EPC   09 07 02.9
        FRI  EPC   09 07 03.4
        MNV  IPC   09 07 06.4                    P•CP 11 02
        JAS  EPC   09 07 14.9                    P•CP 11 03
        MHC  EPC   09 07 16.7                    P•CP 11 04
        BKS  EP    09 07 25.2  11 52              •E 12 28
                              MICRON     PERIOD
                   PZ          0.03       0.7
        MIN  EP    09 07 37.8
        WDC  EP    09 07 41.2                    P•CP 11 10
        FHC  E(P)  09 07 56
                   USGS  09 02 14.2,  19.4N,  104.6W, H= 67 KM, M=5.2
                         NEAR COAST OF JALISCO, MEXICO

JUL 17  FHC  EP    21 19 16.2
        WDC  EP    21 19 20.4                      PP 22 50    •E 29 50  PKKP 37 04
                                                 RPKP 45 10
        BKS  EPD   21 19 20.5  30 00              SS 36 00    LQ 43 04    LR 46 20
                              MICRON     PERIOD
                   PZ          0.04       0.7
                   MAXR(Z)    35         20
                   MAXH(N)     8         20
                   MAXH(E)    33         20
        MIN  EP    21 19 22.8
        MHC  EP    21 19 23.8
        PRI  EP    21 19 25.3
        JAS  EP    21 19 26.2                      PP 23 00    •E 29 57  PKKP 37 00
                                                 RPKP 45 10
        FRI  EP    21 19 28.4                    PKKP 37 00  RPKP 45 11
        MNV  EP    21 19 34.6                      PP 23 15    •E 30 12  PKKP 36 57
                                                 RPKP 45 05
                   M=6.7, DISTANCE=89°
                   USGS  21 06 32.1,  4.2S, 152.8E, H= 53 KM, M=6.0
                         NEW BRITAIN

JUL 18  FRI  E(P)  02 12 37.3
        JAS  EP    02 12 37.3
        WDC  EP    02 12 37.3
        MNV  EP    02 12 43.0

JUL 18  FRI  EPC   03 02 04.8  02 24
        MNV  IPC   03 02 10.1  02 37
        PRI  EPD   03 02 17.5
        JAS  EPD   03 02 20.9
        SAO  E(P)  03 02 25.5
                   MAG=3.3, EAST OF LONE PINE, CALIFORNIA
                   USGS  03 01 36.8,  36.6N,  117.7W, H=  5 KM
                         CALIFORNIA-NEVADA BORDER REGION

JUL 18  SAO  EP    04 01 53.9
        BRK  EP    04 01 55.0
        PRI  EP    04 01 55.2
        MHC  EP    04 01 55.6
        FHC  EP    04 02 00.2
        FRI  EP    04 02 00.5
        JAS  EP    04 02 00.8
        WDC  EP    04 02 02.8
        MIN  EP    04 02 05.3
        MNV  EP    04 02 10.2
                   USGS  03 50 39.2,  20.8S,  178.4W, H=450 KM, M=4.5
                         FIJI ISLANDS REGION
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JUL 18  BRK  EP    06 54 58
        MHC  EP    06 54 59.0
        FHC  EP    06 55 02.2
        FRI  EP    06 55 04.1
        JAS  EP    06 55 04.5
        WDC  EP    06 55 05.8
        MIN  EP    06 55 07.7
        MNV  EP    06 55 14.0
                   USGS  06 44 04.4, 18.5S, 177.7W, H=567 KM, M=4.8
                         FIJI ISLANDS REGION

JUL 18  MHC  IPD   11 49 36.7   49 43
        BKS  EP    11 49 39.7   49 48
        SAO  EP    11 49 42.5
        JAS  EPD   11 49 54.3
        PRI  EP    11 49 58.9
                   BRK   11 49 28.3, 37.3N, 122.2W, H= 10 KM, ML=2.6
                         SOUTH OF PALO ALTO, CALIFORNIA

JUL 19  SAO  EP    21 00 07.8
        PRI  EPC   21 00 08
        BKS  EP    21 00 08.6
                              MICRON      PERIOD
                   PZ            0.03        0.9
        MHC  EPC   21 00 08.7
        FHC  EPC   21 00 12.4
        FRI  EPC   21 00 13.5
        JAS  IPC   21 00 13.9
        WDC  EPC   21 00 15.5
                   USGS  20 49 00.1, 21.5S, 179.3W, H=603 KM, M=5.0
                         FIJI ISLANDS REGION

JUL 20  PRI  EP    01 21 59
        FRI  EP    01 22 02
        MHC  EP    01 22 08
        JAS  EP    01 22 10.9
        MNV  EP    01 22 13
        MIN  EP    01 22 27
        WDC  EP    01 22 29.0
        FHC  E(P)  01 22 33
                   USGS  01 12 07.2, 21.7S, 113.2W, H= 33 KM, M=5.3
                         EASTER ISLAND CORDILLERA

JUL 20  FHC  EPKPD 01 41 11.2
        WDC  EPKPD 01 41 12.2
        MIN  EPKP  01 41 13
        MHC  EPKP  01 41 18
        JAS  EPKPD 01 41 18.3
        FRI  EPKP  01 41 20
        PRI  EPKP  01 41 21
                   USGS  01 22 09.6,  4.7S, 101.8E, H= 33 KM, M=5.6
                         SOUTHERN SUMATRA

JUL 20  FRI  EP    15 02 50
        JAS  EP    15 02 58.5
        MNV  EP    15 03 01
        WDC  EP    15 03 16.5
                   USGS  14 52 52.3, 22.0S, 113.6W, H= 33 KM, M=5.0
                         EASTER ISLAND REGION

JUL 20  WDC  EP    17 36 24
        MHC        17 36                  *E 36 31
        JAS  EP    17 36 35
        PRI        17 36                  *E 36 38
        FRI  EP    17 36 39
                   USGS  17 23 46.5, 11.6N, 143.3E, H= 33 KM, M=5.1
                         SOUTH OF MARIANA ISLANDS

JUL 20  PRI  EPD   23 03 50.3
        BKS  EP    23 03 51.0
                              MICRON      PERIOD
                   PZ            0.06        0.7
        MHC  EPD   23 03 51.2
        FRI  EPD   23 03 54.8
        JAS  EPD   23 03 55.7
        FHC  EP    23 03 56.4
        WDC  IPD   23 03 58.8
        MNV  EPD   23 04 03.6
                   USGS  22 51 43.1, 31.2S, 180.0W, H=370 KM, M=5.2
                         KERMADEC ISLANDS REGION

JUL 21  MNV  EP    04 07 18.0
        FRI        04 07                  *E 07 20
        JAS  EP    04 07 28
                   USGS  03 58 44.6,  7.4N,  78.3W, H= 33 KM, M=5.1
                         PANAMA

JUL 21  JAS  EP    21 01 12               *E 01 19
        FRI  EP    21 01 15.7             *E 01 23
                   USGS  20 48 19.3, 11.9N, 141.6E, H= 37 KM, M=4.6
                         WEST CAROLINE ISLANDS

JUL 22  FHC  EP    07 07 15.4             *E 07 43
        WDC  IPC   07 07 21.6
        MIN  EPC   07 07 25.9
        BKS  EP    07 07 33.5
                              MICRON      PERIOD
                   PZ            0.07        0.9
        MHC  EPC   07 07 38.5             *E 08 01
        JAS  IPC   07 07 41.2
        SAO  EP    07 07 41.2
        FRI  EPC   07 07 47.6
        PRI  EP    07 07 47.9             *E 08 09
        MNV  EPC   07 07 48.2
                   USGS  06 57 22.1, 46.2N, 151.4E, H= 79 KM, M=5.3
                         KURIL ISLANDS

JUL 22  FHC  IPC   07 38 19.2
        WDC  IPC   07 38 33.7   38 48
        MIN  EPC   07 38 43.7
        MHC  E(P)  07 39 06
        JAS  E(P)  07 39 10
        SAO  EP    07 39 12.5
                   ML=3.7, SOUTHWEST OF EUREKA, CALIFORNIA
                   PGE   07 38 08.4, 40.5N, 124.6W, H= 21 KM
                         OFF THE COAST OF NORTHERN CALIFORNIA

JUL 22  MNV  EP    07 46 08.5
        MHC  EP    07 46 27.3
        MIN  EP    07 46 28.2
        WDC  E(P)  07 46 33
        FHC  E(P)  07 46 43
                   LEEWARD ISLANDS REGION

JUL 22  FHC  E(P)  12 07 31.7
        WDC  EPC   12 07 35.8
        MIN  EP    12 07 38.3
                   USGS  11 53 57.3,  4.7S, 140.0E, H= 33 KM, M=5.3
                         WEST IRIAN

JUL 22  FHC  E(P)  14 37 34.5
        WDC  EPC   14 37 41.1
        MHC  E(P)  14 38 01.8
        JAS  EPC   14 38 04.6
        FRI  E(P)  14 38 12.5
        MNV  EP    14 38 13.7
        PRI  E(P)  14 38 13.7
                   USGS  14 30 17.7, 51.5N, 177.9W, H= 58 KM, M=4.9
                         ANDREANOF ISLANDS, ALEUTIAN ISLANDS

JUL 22  MNV  EPD   16 43 54.7             *E 44 08
        FRI  EP    16 43 56.5
        JAS  EP    16 44 03               *E 44 26
        BRK  EP    16 44 15               *E 44 33
        FHC        16 44
                   USGS  16 35 17.8,  7.2N,  78.3W, H= 13 KM, M=5.1
                         PANAMA

JUL 23  WDC  EPD   02 45 52.5
        MIN  EP    02 45 54.3
        JAS  EPD   02 46 06.9
        FRI  EP    02 46 11.7
                   USGS  02 32 57.9, 49.8N,  78.1E, H=  0 KM, M=5.1
                         EASTERN KAZAKH, SSR

JUL 23  PRI  EPC   06 36 23.1             *E 36 42
        BKS  EP    06 36 24.0             *E 36 42
                              MICRON      PERIOD
                   PZ            0.02        0.7
        MHC  EPC   06 36 24.0             *E 36 42
        FRI  EPC   06 36 27.8             *E 36 46    *E 51 05
        JAS  EPC   06 36 28.9             *E 36 47    *E 40 08    *E 51 06
        WDC  EPC   06 36 31.7             *E 36 50    *E 51 07
        MIN  EP    06 36 33
        MNV  EPC   06 36 36.8             *E 36 55    *E 51 15
                   USGS  06 23 51.7, 30.1S, 178.1W, H= 61 KM, M=5.4
                         KERMADEC ISLANDS

JUL 23  PRI  EP    08 23 11.0
        FRI  EPD   08 23 14.6             *E 23 20
        MHC  EPD   08 23 19.2             *E 23 25
        JAS  EPD   08 23 22.1             *E 23 28
        BKS  E(P)  08 23 23
                              MICRON      PERIOD
                   PZ            0.06        1.2
        MNV  EPD   08 23 24.2             *E 23 30
        WDC  EPD   08 23 38.7             *E 23 44
                   USGS  08 12 30.3, 28.7S, 112.7W, H=180 KM, M=5.3
                         EASTER ISLAND REGION

JUL 23  WDC  EP    16 58 48
        JAS        16 59                  *E 59 05    PP 02 49
        BKS        16 59                  *E 01 34    *E 03 24    *E 05 00
                                          *E 09 20    SKS 10 46   SS 15 52
                                          LQ 22 00    LR 26 52
                              MICRON      PERIOD
                   MAXR(Z)       5.2         20
                   MAXH(N)       1.6         20
                   MAXH(E)       4.4         20
                   M=5.9, DISTANCE=91°
                   USGS  16 45 43.6,  3.5S, 148.6E, H= 37 KM, M=5.3
                         BISMARCK SEA

JUL 23  FRI  EP    17 55 16.2
        MHC  EP    17 55 20.9
        JAS  EPC   17 55 23.6
        MNV  EPC   17 55 25.8
        WDC  EP    17 55 40.7
                   USGS  17 44 26.8, 30.0S, 114.4W, H= 33 KM, M=5.1
                         EASTER ISLAND REGION

JUL 23  WDC  EP    22 28 09.7
        JAS  EP    22 28 28.4
        MNV  EP    22 28 35.5
                   USGS  22 17 56.5, 45.3N, 150.1E, H= 33 KM, M=5.1
                         KURIL ISLANDS

JUL 24  FRI  EPKP  06 31 45.4
        PRI  EPKP  06 31 46.0
        MNV  EPKP  06 31 46.3
        SAO  EPKP  06 31 46.7
        JAS  EPKP  06 31 48.0             *E 33 30
        MHC  EPKP  06 31 48.5
        BKS  EPKP  06 31 49.8
        MIN  EPKP  06 31 51.9
        WDC  EPKP  06 31 52.9
        FHC  EPKP  06 31 55.5
                   USGS  06 12 51.2, 59.0S,  25.5W, H= 31 KM, M=5.6
                         SOUTH SANDWICH ISLANDS REGION

JUL 24  FRI  EPC   10 51 48.6
        MNV  EP    10 51 49.3
        PRI  EPC   10 51 51.0
        JAS  IPC   10 51 57.4
        MHC  EPC   10 52 01.7
        BKS  EPC   10 52 06.6   59 10     *E 54 05    PPP 54 45    SS 02 58
                                          LR 07 24
                              MICRON      PERIOD
                   PZ            0.08        1.2
                   MAXR(Z)       2.4         20
                   MAXH(N)       1.5         20
                   MAXH(E)       3.9         20
        MIN  EPC   10 52 13.2
        WDC  EPC   10 52 16.9
        FHC  EPC   10 52 27.6
                   M=5.4, DISTANCE=49°
                   USGS  10 43 22.0,  4.8N,  82.6W, H= 33 KM, M=5.4
                         SOUTH OF PANAMA

JUL 25  FHC  IPC   23 02 53.4
        WDC  IPC   23 03 07.4
        MIN  EPC   23 03 17.2
        BKS  EP    23 03 28.0
        MHC  EP    23 03 38.2
        JAS  EPD   23 03 43.5
        SAO  EP    23 03 44.5
                   BRK   23 02 39.4, 40.3N, 124.6W, H=  2 KM, ML=3.7
                         SOUTHWEST OF EUREKA, CALIFORNIA

JUL 26  PRI  EP    01 51 18.5
        FRI  EPC   01 51 22.5
        MHC  EP    01 51 27.8
        JAS  EPC   01 51 30.4
        MNV  EPC   01 51 32.5
        BKS        01 51                  *E 06 38    LQ 09 32
        WDC  EPC   01 51 50.0
                   USGS  01 41 25.4, 21.9S, 113.3W, H= 33 KM, M=5.2
                         EASTER ISLAND CORDILLERA

JUL 26  BKS        03 15                  PP 15 30    *E 18 50    SKS 21 42
                                          PS 24 58    SS 31 00    *E 34 00
                                          SSS 35 44   LQ 41 30    LR 47 00
                              MICRON      PERIOD
                   MAXR(Z)       7           20
                   MAXH(N)       3.2         20
                   MAXH(E)       6           20
        WDC  EPKP  03 15 10               PP 15 40
        JAS  EPKP  03 15 12               PP 15 46
        MHC        03 15                  PP 15 50
        PRI        03 15                  PP 15 54
        FRI        03 15                  PP 15 55
        MNV  EPKP  03 15 18               PP 15 56
                   M=6.2, DISTANCE=110°
                   USGS  02 56 39.3,  5.0N, 118.3E, H= 33 KM, M=5.8
                         BORNEO

JUL 26  MNV  EP    10 47 15               P*G 47 42
        JAS  E(P)  10 47 35               P*G 48 06   S*G 49 56
        WDC        10 47                  P*G 47 50
                   USGS  10 45 28.2, 45.0N, 114.2W, H= 10 KM, M=4.3
                         WESTERN IDAHO

JUL 27  WDC  E(P)  01 06 59
        MNV  E(P)  01 07 04
        JAS  EP    01 07 11.1
        BKS        01 07                  *E 27 00    *E 32 44
                              MICRON      PERIOD
                   MAXR(Z)       2.0         20
                   MAXH(N)       2.3         20
                   MAXH(E)       1.1         20
        FRI  EP    01 07 16.4
        PRI  EP    01 07 24.2
                   M=5.4, DISTANCE=63°
                   USGS  00 56 46.9, 72.2N,   1.0E, H= 33 KM, M=5.1
                         NORWEGIAN SEA
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JUL 27  MIN          04 11                          •E 11 03
        BKS  E(P)    04 11 08                       LQ 33 00
                                   MICRON           PERIOD
                     MAXR(Z)  1.7                    20
                     MAXH(N)  1.8                    20
                     MAXH(E)  2.8                    20
        JAS  EP      04 11 14.1                     •E 11 19
        FRI          04 11
        FRI  EP      04 11 28.0
                     M=5.5, DISTANCE=62°
                     USGS  04 00 56.6, 64.6N,  17.2W, H= 33 KM, M=5.2
                           ICELAND

JUL 27  BKS  EPC     17 04 48.0                     •E 05 42   •E 06 48   •E 07 36
                                   MICRON           PERIOD
                                     0.39             1.2
                PZ
        SAO  EPC     17 04 48
        MHC  EPC     17 04 49.4
        FHC  EPC     17 04 50
        PRI  EPC     17 04 50.1
        WDC  EPC     17 04 53.3
        JAS  IPC     17 04 54.4                     PP 08 17
        FRI  IPC     17 04 54.7
        MIN  EPC     17 04 55.3
        MNV  IP      17 05 03.3
                     USGS  16 52 39.2, 19.2S, 169.6E, H=280 KM, M=5.2
                           NEW HEBRIDES ISLANDS

JUL 27  FHC  EP      19 55 15.5                     PKKP 13 46  RPKP 21 48
        WDC  EP      19 55 19.6
        MIN  EP      19 55 22.6
        BKS  EP      19 55 30.5  06 02              PP 59 04    SS 11 30    SSS 14 24
                                                    LR 19 56
                                   MICRON           PERIOD
                PZ                   1.28             1.6
                MAXH(N)122           20
                MAXH(E)222           20
        MHC  EPD     19 55 34.4
        JAS  EPD     19 55 35.2                     PKKP 13 34  RPKP 21 42
        SAO  EP      19 55 36.2
        MNV  EP      19 55 39.6
        FRI  EPD     19 55 40.6
        FRI  EPD     19 55 42.1                     PKKP 13 45
                     M=7.6, DISTANCE=85°
                     USGS  19 42 54.6, 39.6N, 118.0E, H= 23 KM, M=6.3
                           NORTHEASTERN CHINA

JUL 27  WDC  EP      20 19 41.0
        MIN  EP      20 19 44
        JAS  EP      20 19 56.6
        FRI  EP      20 20 02
        PRI  EP      20 20 03.5
                     USGS  20 07 15.3, 39.2N, 117.6E, H= 33 KM, M=4.8
                           NORTHEASTERN CHINA

JUL 27  MNV  IP      20 30 37.4
        FRI  IPC     20 30 48.4
        JAS  IPC     20 30 57.4
        PRI  IPC     20 31 01.1
        SAO  IP      20 31 08.0
        MHC  IPC     20 31 10.2
        BKS  EPC     20 31 16.5
        MIN  EPC     20 31 23.7
        WDC  EPC     20 31 33.1
        FHC  E(P)    20 31 50
                     ML=5.3, NUCLEAR EXPLOSION, NEVADA TEST SITE
                     USGS  20 30 00.1, 30.1N, 116.0W, H=  0 KM, M=5.3
                           SOUTHERN NEVADA

JUL 27  WDC  EP      21 17 02.3
        MIN          21 17                          •E 17 04
        JAS  EP      21 17 17.9
        FRI  EP      21 17 23
        PRI  EP      21 17 24.7
                     USGS  21 04 33.5, 39.2N, 117.5E, H= 33 KM, M=4.9
                           NORTHEASTERN CHINA

JUL 27  WDC  EPC     21 23 32.5
        MIN  EP      21 23 35.5
        MHC  EP      21 23 47
        JAS  EPC     21 23 48.2
        FRI  EP      21 23 53.4
        PRI  EP      21 23 55
                     USGS  21 11 06.9, 39.3N, 117.8E, H= 33 KM, M=4.9
                           NORTHEASTERN CHINA

JUL 27  FRI  EPC     22 13 27.5
        MHC          22 13                          •E 13 35
        JAS  EPC     22 13 36.3
        BKS  EP      22 13 39
                                   MICRON           PERIOD
                PZ                   0.04             1.0
        WDC  EPC     22 13 52.0
                     USGS  22 01 49.1, 36.3S,  99.9W, H= 33 KM, M=4.9
                           SOUTHERN PACIFIC OCEAN

JUL 27  FHC          23 29
        WDC  EPC     23 29 57.5                     •E 29 56
        MIN  EP      23 30 00.6
        BKS  EP      23 30 08.5
                                   MICRON           PERIOD
                PZ                   0.07             1.0
        MHC  EPC     23 30 12.2
        JAS  IPC     23 30 13.3
        SAO          23 30
        FRI  EPC     23 30 18.4                     •E 30 17
        PRI  EP      23 30 19.9
                     USGS  23 17 31.4, 39.4N, 117.8E, H= 31 KM, M=5.4
                           NORTHEASTERN CHINA

JUL 28  JAS  EP      01 11 26.6
        MHC          01 11
        PRI          01 11                          •E 11 33
                                                    •E 11 36
                     USGS  00 58 46.9, 39.4N, 117.8E, H= 33 KM, M=5.0
                           NORTHEASTERN CHINA

JUL 28  WDC          01 58
        JAS  EP      01 58 20                       •E 58 06
        MIN          01 58
        FRI          01 58                          •E 58 20
                                                    •E 58 31
                     USGS  01 45 38.5, 39.1N, 118.0E, H= 33 KM, M=5.1
                           NORTHEASTERN CHINA

JUL 28  WDC  EPD     10 57 58.8
        BKS  EP      10 58 09.5  08 34              RPKP 24 29    •E 27 54
                                                    PP 01 30    PPP 03 33    SPPS 09 16
                                                    PS 09 40    SSS 14 15    SSS 18 25
                                                    LQ 20 30    LR 25 00
                                   MICRON           PERIOD
                PZ                   0.62             1.4
                MAXH(N) 66           20
                MAXH(E) 66           20
        MHC  EP      10 58 13.3
        JAS  IPD     10 58 14.2
        SAO  EP      10 58 16                       PKKP 16 23  RPKP 24 26PKPPKS 27 47
        PRI  EPD     10 58 21.0                     PKKP 16 21    •E 24 25
                     M=7.2, DISTANCE=85°
                     USGS  10 45 35.2, 39.7N, 118.4E, H= 26 KM, M=6.3
                           NORTHEASTERN CHINA

JUL 28  WDC  EP      15 48 19.0
        MIN  EP      15 48 22.5
        MHC  EP      15 48 34.7
        JAS  EP      15 48 35.2
        FRI  EP      15 48 41.4
        PRI  EP      15 48 41.7
                     USGS  15 35 55.3, 39.9N, 118.7E, H= 13 KM, M=5.3
                           NORTHEASTERN CHINA

JUL 28  BKS  EP      17 27 44.8  38 20              •E 28 34    •E 30 42    SS 43 20
                                                    LQ 50 10    LR 54 12
                                   MICRON           PERIOD
                PZ                   0.05             1.0
        MHC  EPD     17 27 46.0
        PRI  EP      17 27 47.0
        WDC  EP      17 27 50.5
        JAS  EPD     17 27 51.0
        FRI  EP      17 27 51.2
        MIN  EP      17 27 52.3
        MNV  EP      17 27 59.5
                     USGS  17 15 01.7, 20.2S, 170.0E, H=  5 KM, M=5.6
                           NEW HEBRIDES ISLANDS

JUL 28  BKS  EP      17 33 44    44 05              SS 49 26    LQ 56 10
                                   MICRON           PERIOD
                PZ                   0.08             1.0
        MHC  EP      17 33 44.2
        PRI  EP      17 33 45.5
        FRI  EP      17 33 48.2
        WDC  EP      17 33 49.6
        JAS  IPD     17 33 49.9
        FHC          17 33                          •E 33 50
        MIN  E(P)    17 33 51
        MNV  EP      17 33 58.0
                     USGS  17 21 05.2, 20.3S, 170.0E, H= 39 KM, M=5.7
                           NEW HEBRIDES ISLANDS

JUL 28  WDC          20 31                          •E 31 09
        JAS          20 31                          •E 31 27
        BKS  E(P)    20 31 34                       PP 35 36    •E 39 28    SKS 42 07
                                                    PS 44 20    SS 49 44    SS 56 38
                                                    LQ 57 52    •E 00 35    LR 03 00
                                   MICRON           PERIOD
                     MAXR(Z)  10                     20
                     MAXH(N)  13                     20
                     MAXH(E)  13                     20
                     Ms=6.6, DISTANCE=99°
                     USGS  20 17 42.3, 43.2N,  45.6E, H= 21 KM, M=5.4
                           EASTERN CAUCASUS

JUL 29  WDC  EP      01 13 23.0
        MIN  EP      01 13 26.3
        JAS  EP      01 13 39.3
        MNV  EP      01 13 43.3
        PRI  EP      01 13 45.5
        FRI          01 13                          •E 13 48
                     USGS  01 01 03.2, 39.9N, 118.9E, H= 35 KM, M=5.1
                           NORTHEASTERN CHINA

JUL 29  FRI          02 24                          •E 24 56
        PRI          02 24                          •E 24 56
        MHC          02 25                          •E 25 04
        JAS  EP      02 25 07.1
        MNV  EP      02 25 09.4
        WDC  EP      02 25 25.3
                     USGS  02 14 55.9, 22.8S, 114.2W, H= 33 KM, M=5.0
                           EASTER ISLAND REGION

JUL 29  WDC  EPC     05 13 07.4
        FHC  EP      05 13 07.9
        MIN  EP      05 13 08.5
        MNV  EP      05 13 16.0
        JAS  IPC     05 13 19.4
        BKS  EP      05 13 20.5
                                   MICRON           PERIOD
                PZ                   0.06             1.0
        MHC  EP      05 13 23.0
        FRI  EP      05 13 23.2
        PRI  EP      05 13 28.5
                     USGS  04 59 57.7, 47.8N,  48.1E, H=  0 KM, M=5.9
                           WESTERN KAZAKH, SSR

JUL 29  FRI  EP      05 48 06.6
        JAS  EP      05 48 07.2
        WDC  EP      05 48 08.9
        MIN  EP      05 48 10.8
        MNV  EP      05 48 17.1
                     SOUTH OF FIJI ISLANDS REGION

JUL 29  FRI          07 03                          •E 03 09
        MNV  EP      07 03 10.9
        PRI          07 03                          •E 03 17
        JAS  EP      07 03 21.8
        MHC          07 03                          •E 03 26
        BKS  E(P)    07 03 32                       •E 11 00    •E 18 24
                                   MICRON           PERIOD
                     PZ                  0.03             1.0
                     MAXR(Z)  1.4                    20
                     MAXH(N)  1.4                    20
                     MAXH(E)  2.8                    20
        MIN          07 03                          •E 03 35
        WDC  EP      07 03 38.6
        FHC          07 03                          •E 03 50
                     Ms=5.3, DISTANCE=50°
                     USGS  06 54 33.5,  7.0N,  78.1W, H= 28 KM, M=5.2
                           PANAMA

JUL 30  FHC  EPD     14 13 10.5
        WDC  EPD     14 13 20.5
        MIN  EP      14 13 27.4
        BKS  EP      14 13 56.9                     •E 14 22    •E 16 45    •E 19 20
                                                    •E 20 00
                                   MICRON           PERIOD
                PZ                   0.14             1.8
        JAS  EPD     14 14 02.6
        MHC  EP      14 14 04
        MNV  EP      14 14 08.0
        FRI  EP      14 14 17
        PRI          14 14                          •E 14 24
                     USGS  14 11 03.7, 49.1N, 127.9W, H= 10 KM, M=4.3
                           VANCOUVER ISLAND REGION

JUL 30  FHC  EP      21 35 33.0
        WDC  EP      21 35 37.0
        MIN  EP      21 35 40
        BRK  EP      21 35 48.3
        MHC  EP      21 35 52.0
        JAS  EP      21 35 52.7
        MNV  EP      21 35 56.9
        FRI  EP      21 35 58.0
        PRI  EP      21 35 59.5
                     USGS  21 23 15.0, 39.8N, 118.3E, H= 33 KM, M=5.4
                           NORTHEASTERN CHINA

JUL 31  SAO  EP      00 59 33.8
        PRI  EPC     00 59 35.0                     PKKP 17 46  RPKP 25 48
        MHC  EPC     00 59 36.0                     RPKP 25 50
        BKS  EP      00 59 37    10 00              PP 03 09    •E 03 49    SPPS 09 20
                                                    PPS 11 06   •E 12 06    SSS 15 16
                                                    SSS 19 18   LQ 21 58    LR 25 00
                                   MICRON           PERIOD
                     PZ                  0.17             1.2
                     MAXR(Z)  15                     20
                     MAXH(N)  10                     20
                     MAXH(E)  11                     20
        FRI  EP      00 59 39.8                     PKKP 17 44  RPKP 25 50
        JAS  IPC     00 59 40.8                     •E 59 54    PP 03 05    PKKP 17 43
        FHC  EP      00 59 41.4                     RPKP 25 47
        WDC  EPC     00 59 44.0                     RPKP 25 49
        MIN  EP      00 59 45.0                     PKKP 17 40  RPKP 25 48
        MNV  EPC     00 59 48.8                     PKKP 17 39  RPKP 25 47
                     M=6.4, DISTANCE=86°
                     USGS  00 46 58.0, 30.3S, 178.0W, H= 20 KM, M=5.8
                           KERMADEC ISLANDS
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JUL 31  PRI  E(P)  01 45 01
        MBC  EP    01 45 01
        FRI  EP    01 45 04.5
        JAS  EP    01 45 06
        WDC  EP    01 45 09
        MNV  E(P)  01 45 14
                   USGS  01 32 24.0, 30.3S, 177.8W, H= 24 KM, M=4.6
                         KERMADEC ISLANDS

JUL 31  PRI        02 07                 *PP 07 34
        FRI  EP    02 07 22.3            *PP 07 38
        JAS  EP    02 07 23.5            *PP 07 40
        WDC  EP    02 07 26.4            *PP 07 42
        MNV  EP    02 07 31.4            *PP 07 48
                   USGS  01 54 46.1, 30.2S, 178.0W, H= 60 KM, M=5.2
                         KERMADEC ISLANDS

JUL 31  MBC  EP    03 24 32.2
        FRI  EP    03 24 36.0
        JAS  EP    03 24 37.2            *E 25 05
        WDC  EPC   03 24 40.7            *E 25 09
        MIN  EP    03 24 42
        MNV  EP    03 24 45.2            *E 25 14
                   USGS  03 12 09.9, 29.5S, 176.9W, H=106 KM, M=4.2
                         KERMADEC ISLANDS REGION

JUL 31  PRI  E(P)  04 16 21
        FRI  EP    04 16 24.3
        MBC  EP    04 16 28.8
        JAS  EP    04 16 31.3
        MNV  EP    04 16 33.1
        WDC  EP    04 16 46.9
                   USGS  04 05 03.1, 35.0S, 111.3W, H= 33 KM, M=4.8
                         EASTER ISLAND CORDILLERA

JUL 31  FRI  EPKP  05 13 33.8
        MNV  EPKP  05 13 34
        PRI  EPKP  05 13 35
        JAS  EPKP  05 13 36.2
        WDC  EPKP  05 13 41
                   USGS  04 54 24.4, 50.1S,   7.1W, H= 33 KM, M=5.1
                         SOUTH ATLANTIC RIDGE

JUL 31  PRI  EP    05 22 57.7            *E 23 08
        FRI  EP    05 23 01.5            *E 23 12
        MBC  EP    05 23 06.8            *E 23 17
        JAS  EP    05 23 09.5            *E 23 20
        MNV  EP    05 23 11.3            *E 23 22
        WDC  EPC   05 23 27.7            *E 23 38
        FHC        05 23                 *E 23 37    *E 23 48
                   USGS  05 11 20.0, 39.0S, 123.1W, H= 34 KM, M=4.3
                         SOUTH PACIFIC OCEAN

JUL 31  FRI  EP    07 39 00.9
        PRI  EP    07 39 02.5
        MNV  EPD   07 39 02.8
        JAS  EPD   07 39 07.8
        MBC  EPD   07 39 10.0
        BKS  EP    07 39 13.3
                              MICRON      PERIOD
                   PZ            0.02         0.6
        MIN  EP    07 39 19
        WDC  EPD   07 39 21.8
        FHC  EPD   07 39 28.9
                   USGS  07 27 08.3, 24.8S,  68.3W, H= 70 KM, M=5.2
                         CHILE-ARGENTINA BORDER REGION

JUL 31  MBC  EP    12 21 07.2
        FRI  E(P)  12 21 11
        FHC  EP    12 21 12
        JAS  EP    12 21 12.3
        WDC  EP    12 21 14.7
        MIN  EP    12 21 18.1
        MNV  EP    12 21 20.3
                   USGS  12 08 49.2, 29.5S, 176.9W, H=128 KM, M=4.5
                         KERMADEC ISLANDS REGION

JUL 31  PRI  EP    22 35 17.5
        FRI  EP    22 35 19.8
        MNV  EP    22 35 27.0
        JAS  EP    22 35 34.6
        MBC  EP    22 35 36
        BKS  EP    22 35 49.0            *E 38 32    *E 40 42
                              MICRON      PERIOD
                   MAXR(Z)       2.5          20
                   MAXH(N)       6            20
                   MAXH(E)      12            20
        MIN  EP    22 36 07
        WDC  EP    22 36 14.0
        FHC  EP    22 36 25
                   USGS  22 32 10.5, 26.2N, 110.3W, H= 33 KM, M=4.8
                         GULF OF CALIFORNIA

AUG 01  FHC  EP    04 48 34
        WDC  EP    04 48 41.6
        JAS  EP    04 49 04.0
        MNV  EP    04 49 10
        FRI  EP    04 49 11
                   USGS  04 39 44.1, 53.9N, 160.5E, H= 93 KM, M=4.9
                         NEAR EAST COAST OF KAMCHATKA

AUG 01  MIN  IPD   06 19 36.1  19 46
        WDC  IPC   06 19 39.2  19 52
        FHC  EP    06 19 55
        JAS  E(P)  06 20 18
                   BRK   06 19 23.1, 41.0N, 121.5W, H=  2 KM, ML=3.2
                         NORTHEAST OF BURNEY, CALIFORNIA

AUG 01  FRI  IPC   17 19 39.0
        PRI  EP    17 19 41.7
        MNV  IPC   17 19 45.5
        SAO  EP    17 19 53.6
        JAS  EP    17 19 54.2
        MBC  EP    17 19 59.2
        BKS  IPD   17 20 08.5
                   USGS  17 18 48.1, 34.9N, 116.6W, H= 12 KM
                         SOUTHERN CALIFORNIA

AUG 01  BKS  EP    18 18 33
                              MICRON      PERIOD
                   PZ            0.05         1.0
        PRI  EPC   18 18 33.3
        MBC  EPC   18 18 33.7
        FHC  EPC   18 18 38.3
        FRI  EPC   18 18 39.0
        JAS  IPC   18 18 39.8            *E 18 53
        WDC  IPC   18 18 41.7            *E 18 55
        MIN  EP    18 18 43.8
        MNV  IPC   18 18 49.7            *E 19 03
                   USGS  18 06 57.3, 18.4S, 174.1W, H= 33 KM, M=5.3
                         TONGA ISLANDS

AUG 02  MNV  IPD   08 14 09.7
        JAS  IPC   08 14 39.1
        FRI  IPD   08 14 39.8
        MBC  EP    08 14 55
        PRI  E(P)  08 14 57
        MIN  EP    08 15 00
        SAO  E(P)  08 15 01.5
        BKS  E(P)  08 15 04            *E 15 16    *E 15 47
        WDC  EP    08 15 10
                   BRK   08 14 08.0, 38.4N, 118.1W, H=  5 KM, ML=4.2
                         MINA, NEVADA

AUG 02  SAO  EP    11 08 05.7
        BKS  IPC   11 08 06.1  18 08      PP 11 30    *E 12 40    PPS 19 48
                                           SS 24 12    SS 28 00    LQ 37 20
                                           LR 35 00
                              MICRON      PERIOD
                   PZ            13           20
                   MAXR(Z)       79           20
                   MAXH(N)       63           20
                   MAXH(E)       44           20
        MBC  EPC   11 08 07.0            RPKP 34 16
        FHC  EPC   11 08 07.5            PKKP 26 03
        PRI  EPC   11 08 07.8            RPKP 34 16
        WDC  IPC   11 08 11.2            PKKP 26 02  RPKP 34 11
        JAS  IPC   11 08 11.9              PP 11 38  PKKP 26 02  RPKP 34 10
        FRI  EPC   11 08 12.2            PKKP 26 02  RPKP 34 09
        MIN  EPC   11 08 13.1
        MNV  IPC   11 08 20.8            RPKP 34 07
                   M=7.1, DISTANCE=87°
                   USGS  10 55 25.7, 20.6S, 169.3E, H= 52 KM, M=6.1
                         NEW HEBRIDES ISLANDS

AUG 02  JAS  EP    11 50 36.2
                   USGS  11 37 50.4, 20.7S, 169.3E, H= 51 KM, M=5.0
                         NEW HEBRIDES ISLANDS

AUG 04  FRI        04 29                 *E 29 17
        PRI  E(P)  04 29 18
        JAS  IPC   04 29 24.0
        WDC  EPC   04 29 38.2
        FHC  E(P)  04 29 45
                   USGS  04 17 26.4, 25.2S,  69.0W, H= 88 KM, M=4.9
                         NORTHERN CHILE

AUG 04  MNV  EP    06 10 02.7
        MIN  E(P)  06 10 27
        FHC  EP    06 10 41
                   USGS  06 01 19.3,  6.5N,  76.9W, H= 62 KM, M=4.6
                         NORTHERN COLOMBIA

AUG 04  MNV  EPKP  14 18 53.1
        FRI        14 18                 *E 18 54
        JAS  EPKPD 14 18 56.0            *E 20 31
        PRI        14 18                 *E 18 56
        MIN        14 18                 *E 18 58
        WDC  IPKPD 14 18 59.6
        FHC        14 19                 *E 19 03
                   USGS  14 00 01.8, 35.6S,  14.0W, H= 33 KM, M=5.8
                         TRISTAN DA CUNHA REGION

AUG 04  FHC  IPC   23 32 48.2
        WDC  IPC   23 32 53.8
        MIN  EPC   23 32 57.3
        BKS  IPC   23 33 02.0
                              MICRON      PERIOD
                   PZ            0.39         0.6
        SAO  EP    23 33 07.6
        MBC  IPC   23 33 05.9
        JAS  IPC   23 33 08.4
        PRI  IPC   23 33 13.0
        FRI  IPC   23 33 13.4
        MNV  IPC   23 33 15.4
                   USGS  23 21 44.2, 30.2N, 138.5E, H=435 KM, M=5.4
                         SOUTH OF HONSHU, JAPAN

AUG 05  WDC        06 59                 *E 59 23
        JAS        06 59                 *E 59 38
        FRI  EP    06 59 40.7
                   USGS  06 47 44.8, 32.5N, 141.3E, H= 35 KM, M=4.9
                         SOUTH OF HONSHU, JAPAN

AUG 05  FHC        09 23                 *E 23 38
        WDC  EP    09 23 43.3
        MIN  EP    09 23 47.4
        JAS  EP    09 24 02.9
        MNV  EP    09 24 09.7
        FRI  EP    09 24 10.3
                   USGS  09 13 50.3, 46.6N, 153.8E, H= 33 KM, M=4.9
                         KURIL ISLANDS

AUG 05  FHC  EPKP  13 55 59.0
        WDC  EPKP  13 55 59.8            *E 57 36
        MIN  EPKP  13 56 01.0
        BKS  EPKP  13 56 05
                              MICRON      PERIOD
                   PKPZ          0.04         1.0
        MBC  EPKP  13 56 06.0
        JAS  EPKP  13 56 06.4
        MNV  EPKP  13 56 07.7
        FRI  EPKP  13 56 08.0
        PRI  EPKP  13 56 09.5
                   USGS  13 37 16.7,  7.0S,  94.3E, H=106 KM, M=5.6
                         NICOBAR ISLANDS REGION

AUG 05  JAS  EP    16 41 22
        WDC  EP    16 41 24.5
        MNV  EP    16 41 30
                   USGS  16 28 57.0, 27.1S, 176.3W, H= 33 KM, M=5.1
                         KERMADEC ISLANDS REGION

AUG 05  FRI        18 55                 P*CP 57 36 *PP*CPS7 52
        MNV  EPC   18 55 16.5            P*CP 57 37 *PP*CPS7 51
        PRI  EP    18 55 19.5            P*CP 57 39 *PP*CPS7 53
        JAS  EP    18 55 25.9            P*CP 57 40 *PP*CPS7 55
        MBC  EP    18 55 30.6            P*CP 57 42 *PP*CPS7 56
        BRK  EP    18 55 35              P*CP 57 44 *PP*CPS7 59
        WDC  EP    18 55 46.4            P*CP 57 48 *PP*CPS8 02
        FHC  EP    18 55 57.9            P*CP 57 53 *PP*CPS8 08
                   USGS  18 48 11.4, 12.7N,  88.2W, H= 70 KM, M=5.2
                         OFF COAST OF CENTRAL AMERICA

AUG 05  MNV  IPC   19 38 23.0
        JAS  IPD   19 38 52.8
        FRI  EPD   19 38 53.0
        MBC  EP    19 39 09.2
        PRI  E(P)  19 39 11.0
        MIN  E(P)  19 39 15
        SAO  EP    19 39 15.5
        WDC  EP    19 39 34.5
                   BRK   19 38 21.4, 38.4N, 118.1W, H=  4 KM, MAG=3.3
                         MINA, NEVADA

AUG 06  WDC  EP    07 37 10              *E 37 22
        JAS  EP    07 37 30              *E 37 42
        FRI  EP    07 37 36.3            *E 37 48
        MNV  EP    07 37 36.5            *E 37 48
                   USGS  07 27 15.2, 46.8S, 153.8E, H= 19 KM, M=5.2
                         KURIL ISLANDS

AUG 06  MNV  EPC   14 41 29.0
        JAS  E(P)  14 41 37.4
        WDC  EPC   14 41 53.2
        FHC  E(P)  14 42 02
                   USGS  14 31 20.0, 10.3S,  78.7W, H= 60 KM, M=5.2
                         NEAR COAST OF PERU

AUG 06  FHC  EP    19 53 44.8
        WDC  EPC   19 53 49.9            *E 54 01
        BKS        19 54                 *E 54 13
        JAS  EP    19 54 06.5            *E 54 18
        PRI  E(P)  19 54 12.0
        FRI  EP    19 54 12.5
        MNV  EP    19 54 13.5            *E 54 25
                   USGS  19 42 37.2, 37.3N, 141.5E, H= 54 KM, M=5.3
                         NEAR EAST COAST OF HONSHU, JAPAN

AUG 07  BKS  IPD   04 15 38.4  15 41
        MBC  EPC   04 15 52.0
        SAO  IP    04 15 59.5
        JAS  IPC   04 16 02.0  16 22
                   BRK   04 15 36.1, 38.0N, 122.4W, H=  7 KM, ML=2.6
                         NORTH OF BERKELEY, CALIFORNIA
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AUG 07  BKS          09 49                    *E 01 46    *E 13 24    LR 17 00
        WDC  EP      09 49 58.5
        JAS  EP      09 49 59.0
        FRI  EP      09 49 59.5
        MNV  EP      09 50 07.7
                     USGS  09 37 11.8, 20.7S, 169.2E, H= 44 KM, M=5.1
                           NEW HEBRIDES ISLANDS

AUG 08  MNV  EPC     11 09 24.0               *E 12 00
        JAS  EP      11 09 33                 *E 12 04
        MIN          11 09                    *E 09 50
        FHC          11 10                    *E 10 06
                     USGS  11 02 45.7, 14.0N,  91.4W, H= 84 KM, M=4.8
                           GUATEMALA

AUG 08  FHC  EP      11 21 31
        WDC  EP      11 21 35
        MIN  EP      11 21 38
        JAS  EP      11 21 50.7
                     USGS  11 09 12.4, 39.7N, 118.5E, H= 33 KM, M=4.9
                           NORTHEASTERN CHINA

AUG 08  FHC          15 24                    *E 24 12
        WDC  E(P)    15 24 14.5
        MIN  EP      15 24 18
        JAS  EPC     15 24 27.5
        FRI  EPC     15 24 32.0
                     USGS  15 12 28.5, 22.3N, 143.1E, H=181 KM, M=4.8
                           VOLCANO ISLANDS REGION

AUG 09  SAO  EP      05 44 25.3
        BKS  EPC     05 44 26.6  54 10        LR 07 00
                                 MICRON       PERIOD
                          PZ       0.09         1.2
                          MAXR(Z)  0.5          20
                          MAXH(N)  0.4          20
                          MAXH(E)  0.4          20
        FRI  EP      05 44 26.6
        MHC  EPC     05 44 27.3
        FHC  EPC     05 44 32.0               *E 45 00
        FRI  EPC     05 44 32.2
        JAS  IPC     05 44 33.0
        WDC  EPC     05 44 35.5               *E 45 03
        MIN  EPC     05 44 37.2
        MNV  IPC     05 44 42.8               *E 45 10
                     M=4.9, DISTANCE=77°
                     USGS  05 32 37.1, 20.8S, 175.0W, H= 33 KM, M=5.6
                           TONGA ISLANDS

AUG 09  FRI  EP      13 03 44.3
        PRI  EP      13 03 46.2
        MNV  EPC     13 03 47.0
        JAS  EPC     13 03 54.2
        MHC  EP      13 03 57.5
        WDC  EP      13 04 14.6
        FHC  EP      13 04 25
                     USGS  12 55 39.7,  4.3N,  87.5W, H= 33 KM, M=4.9
                           OFF COAST OF CENTRAL AMERICA

AUG 09  PRI  EP      17 08 50.9               P*CP 11 15
        FRI          17 08                    *E 08 52   P*CP 11 15
        MNV  IPC     17 08 55.3               P*CP 11 16   *E 11 29
        JAS  EP      17 09 05.2               P*CP 11 19
        MHC  EP      17 09 10.4               P*CP 11 21
        BKS          17 09                    P*CP 11 23
        MIN  EP      17 09 24.5
        WDC          17 09                    P*CP 11 27
        FHC  EP      17 09 37.3
                     USGS  17 01 51.0, 12.7N,  88.2W, H= 82 KM, M=5.2
                           OFF COAST OF CENTRAL AMERICA

AUG 10  FRI  EP      00 19 27.4
        MNV  EP      00 19 27.5
        FRI  EP      00 19 30.6
        JAS  E(P)    00 19 37
        MHC  EP      00 19 40.3
        BKS  EPD     00 19 45.3  27 19        PP 21 45  S*CS 29 33    SS 31 08
                                               LR 36 40
                                 MICRON       PERIOD
                          PZ       0.02         0.8
                          MAXR(Z)  3.9          20
                          MAXH(N)  3.4          20
                          MAXH(E)  7            20
        MIN  E(P)    00 19 51
        WDC  EP      00 19 54.4
        FHC  EP      00 20 05.0
                     M=5.7, DISTANCE=53°
                     USGS  00 10 26.9,  2.1N,  79.0W, H= 33 KM, M=5.5
                           SOUTH OF PANAMA

AUG 10  WDC  EP      09 59 21.4
        MIN  EP      09 59 31.2

AUG 11  MHC  IPD     01 03 16.5
        SAO  IP      01 03 19.5
        BKS  EP      01 03 24.8  03 36        P*G 03 26   P*N 03 26
        FRI  E(P)    01 03 36.2
        JAS  E(P)    01 03 36.5
                     BRK   01 03 09.4, 37.1N, 121.9W, H=  3 KM, ML=2.5
                           SOUTHWEST OF SAN JOSE, CALIFORNIA

AUG 11  FRI  E(P)    15 26 00.8               *E 26 09    *E 27 24
        FRI  E(P)    15 26 03.0               *E 26 13
        SAO  E(P)    15 26 11
        MNV  E(P)    15 26 12.3               *E 26 16
        JAS  E(P)    15 26 14                 *E 26 22    S*G 27 47
        MHC  E(P)    15 26 20
        BKS  EP      15 26 31.8
                     ML=4.3, 25 MILES SOUTH OF PALM SPRINGS
                     USGS  15 24 55.5, 33.5N, 116.5W, H= 15 KM
                           SOUTHERN CALIFORNIA

AUG 11  JAS  EP      22 39 22.9
        FRI  EP      22 39 23.0
        WDC  EP      22 39 23.0
        MNV  EP      22 39 33
                     USGS  22 26 39.0, 20.6S, 169.2E, H= 60 KM, M=5.1
                           NEW HEBRIDES ISLANDS

AUG 12  FRI          04 01                    *E 01 59
        FRI          04 01                    *E 01 59
        MNV  EP      04 01 59.7
        JAS  EP      04 02 08.0
        MHC          04 02
        BKS          04 02                    *E 02 10
        MIN  EP      04 02 25.0  09 06        LR 14 35
        WDC  EP      04 02 26.7
                     USGS  03 53 50.9,  4.1N,  87.5W, H= 33 KM, M=5.0
                           OFF COAST OF CENTRAL AMERICA

AUG 12  MHC  IPC     08 51 15.3
        SAO  IPC     08 51 19.6
        BKS  IPC     08 51 28.2  51 40        P*G 51 29   S*G 51 42
        JAS  IPD     08 51 32.4
        PRI  EP      08 51 33.5
        FRI  IPC     08 51 36.9
        MIN  EP      08 52 03.3
        MNV  EP      08 52 04.2
                     BRK   08 51 11.3, 37.2N, 121.5W, H=  7 KM, ML=2.9
                           NORTHEAST OF GILROY, CALIFORNIA

AUG 12  FHC  EP      10 12 18.6
        BKS  IPC     10 12 20.2
                                 MICRON       PERIOD
                          PZ       0.1          0.8
        SAO  EP      10 12 21.7
        MHC  EPC     10 12 21.8
        WDC  IPC     10 12 23.0
        PRI  EP      10 12 24.3
        MIN  EP      10 12 25.3
        JAS  IPC     10 12 26.6
        FRI  EPC     10 12 28.0
        MNV  IPC     10 12 35.9
                     USGS  09 59 45.3, 11.0S, 162.5E, H= 43 KM, M=5.5
                           SOLOMON ISLANDS

AUG 12  MHC  IPC     13 05 12.4
        SAO  IPC     13 05 16.7
        BKS  EP      13 05 25.3  05 38        S*G 05 38   S*N 05 40
        JAS  IPC     13 05 29.2
        PRI  EP      13 05 31.0
        FRI  EP      13 05 33.9
                     BRK   13 05 08.3, 37.2N, 121.5W, H=  7 KM, ML=2.5
                           NORTHEAST OF GILROY, CALIFORNIA

AUG 12  SAO  IPC     20 49 55.8
        PRI  EP      20 50 02.1
        MHC  EPC     20 50 07.1
        FRI  EPC     20 50 12.8  50 30
        JAS  EP      20 50 17.0
        BKS  IPC     20 50 19.6  50 40        P*G 50 24   S* 50 40   S*G 50 45
                     BRK   20 49 50.3, 36.6N, 121.2W, H=  5 KM, ML=2.5
                           BEAR VALLEY, CALIFORNIA

AUG 12  WDC  EPC     23 39 19.5
        BKS  EP      23 39 32.2
                                 MICRON       PERIOD
                          PZ       0.03         0.9
        MHC  EP      23 39 36
        JAS  EPC     23 39 38.0
        FRI  EPC     23 39 44.1
        MNV  EPC     23 39 44.5
                     USGS  23 29 08.9, 46.5N, 142.2E, H=301 KM, M=5.0
                           SAKHALIN ISLAND

AUG 12  FHC  E(P)    23 44 36                 *E 44 58
        WDC          23 45                    *E 45 04
        BKS          23 45                    *E 45 27    SP 54 35    SS 00 08
                                              SSS 05 20   *E 10 20    LR 19 00
                                 MICRON       PERIOD
                          MAXR(Z)  2.4          20
                          MAXH(N)  2.0          20
                          MAXH(E)  1.9          20
        MHC          23 45                    *E 45 27
        JAS  E(P)    23 45 07                 *E 45 29    *E 56 29
        MNV  E(P)    23 45 10                 *E 45 32
        FRI  E(P)    23 45 13                 *E 45 35
        PRI          23 45                    *E 45 38
                     M=5.8, DISTANCE=115
                     USGS  23 26 46.2, 26.7N,  97.1E, H= 27 KM, M=6.4
                           BURMA

AUG 13  BRK          13 02                    *E 02 22
        PRI  EP      13 02 23
        FRI  EP      13 02 28
        JAS  EP      13 02 29.0
        WDC  EP      13 02 32.4
        MIN  EP      13 02 33.7
                     USGS  12 50 01.8, 28.3S, 175.8W, H= 33 KM, M=5.0
                           KERMADEC ISLANDS REGION

AUG 13  FRI  EP      23 10 05.7
        PRI  EP      23 10 06.5
        MNV  IPC     23 10 09.5
        JAS  EP      23 10 16.0
        MHC  EP      23 10 19.1
        WDC  EP      23 10 41.4
                     USGS  23 04 46.2, 17.7N, 101.2W, H= 68 KM, M=4.8
                           NEAR COAST OF GUERRERO, MEXICO

AUG 14  FRI  EP      01 17 15.7
        PRI  EP      01 17 16.3
        MNV  EP      01 17 19.2
        JAS  EP      01 17 26
                     USGS  01 11 55.5, 17.6N, 101.2W, H= 71 KM, M=4.5
                           NEAR COAST OF GUERRERO, MEXICO

AUG 14  MNV  IPC     07 58 59.9
        JAS  IPD     07 59 02.0
        MIN  EP      07 59 05.2
        FRI  E(P)    07 59 14                 *E 59 17
        MHC  EP      07 59 17.2
        WDC  EPC     07 59 18.0
                     BRK   07 58 33.6, 39.4N, 119.6W, H=  2 KM, ML=3.0
                           SOUTHEAST OF RENO, NEVADA

AUG 14  WDC  EP      15 57 58.8
        MIN  EP      15 58 02.0
        BKS  EP      15 58 02.8
                                 MICRON       PERIOD
                          PZ       0.12         0.4
        MHC  EP      15 58 06.8
        JAS  EP      15 58 11.4               *E 58 22
        PRI  EP      15 58 12.6
        FRI  EP      15 58 14.6               *E 58 27
        MNV  EP      15 58 19.0               *E 58 31
                     USGS  15 45 55.7, 16.7N, 147.5E, H= 42 KM, M=5.0
                           MARIANA ISLANDS REGION

AUG 14  WDC  EP      19 17 49.5
        MIN  EP      19 17 53.5
        JAS  EP      19 18 10.0
        FRI  E(P)    19 18 16.7
        MNV  EP      19 18 17.0
                     USGS  19 08 22.9, 51.4N, 156.8E, H= 33 KM, M=4.8
                           KAMCHATKA

AUG 14  WDC          19 59                    *E 59 04
        JAS  EP      19 59 21.7
        MNV  EP      19 59 27.5
                     USGS  19 49 40.6, 56.6N, 155.2E, H= 33 KM, M=5.1
                           KAMCHATKA

AUG 15  JAS  EP      06 10 06.5
        MNV  EP      06 10 08.7
        WDC  E(P)    06 10 21.5

AUG 15  JAS  EP      06 14 22
        MNV  EP      06 14 24
        WDC  EP      06 14 38

AUG 15  BKS  IPC     10 06 43.0  06 47
        MHC  IPC     10 06 49.2
        SAO  EP      10 06 59
        JAS  IPC     10 06 59.9
        FRI  E(P)    10 07 11
                     BRK   10 06 38.0, 37.8N, 121.9W, H=  8 KM, ML=3.0
                           DANVILLE, CALIFORNIA

AUG 15  BKS  IPC     10 19 47.9  19 52
        MHC  IPC     10 19 54.1
        SAO  EP      10 20 03.2
        JAS  IPC     10 20 04.5
        FRI  EP      10 20 15.6
                     BRK   10 19 43.6, 37.8N, 122.0W, H=  2 KM, ML=3.0
                           SOUTHWEST OF DANVILLE, CALIFORNIA
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AUG 15  BKS   IP    12 29 10.3   29 14        *E 29 49
        MIC   EPD   12 29 16.2
        SAO   EP    12 29 25.4
        JAS   IPC   12 29 26.6
        FRI   EP    12 29 37.8
        PRI         12 29                    *E 29 40
        MIN         12 29                    *E 29 50
        WDC         12 29                    *E 29 50
        MNV         12 30                    *E 30 00
                    MAG 2.8 AFTERSHOCK 25.5 SEC LATER
                    BRK   12 29 05.8, 37.8N, 122.0W, H=  2 KM, ML=3.3
                    SOUTHWEST OF DANVILLE, CALIFORNIA

AUG 15  BKS   IPC   14 10 41.9   10 46
        MIC   IPD   14 10 48.1
        SAO   E(P)  14 10 57
        JAS   IPC   14 10 58.5
                    BRK   14 10 37.7, 37.8N, 122.0W, H=  4 KM, ML=2.7
                    SOUTHWEST OF DANVILLE, CALIFORNIA

AUG 15  PRI   EP    15 06 14.0
        JAS   EPD   15 06 20.0
        MIN   E(P)  15 06 32.8
        WDC   EPD   15 06 36.2
                    USGS  14 55 15.1, 16.2S,  73.6W, H= 61 KM, M=5.2
                    NEAR COAST OF PERU

AUG 15  MNV   EP    18 28 30.5           P*CP 30 59
        FRI   EP    18 28 30.8
        JAS   EP    18 28 39.5           P*CP 31 02
        MIC   EP    18 28 44.5
        MIN   E(P)  18 28 58.5
        WDC   EP    18 29 00
        FHC   EP    18 29 12
                    USGS  18 21 37.9, 13.6N,  89.5W, H= 69 KM, M=4.4
                    EL SALVADOR

AUG 15  SAO   EP    18 55 16.9
        BKS   EPD   18 55 18.2
                              MICRON      PERIOD
                        PZ      0.07        0.9
        PRI   EPD   18 55 18.2
        MIC   EPD   18 55 18.6
        FHC   EPD   18 55 22.8
        FRI   EPD   18 55 23.0
        JAS   EPD   18 55 23.5
        WDC   IPD   18 55 25.7
        MIN   E(P)  18 55 27
                    USGS  18 43 45.0, 25.1S, 179.7E, H=509 KM, M=5.4
                    SOUTH OF FIJI ISLANDS

AUG 16  FHC   E(P)  05 18 56.5
        WDC   EPC   05 19 04.5
        BKS   EP    05 19 18.6
                              MICRON      PERIOD
                        PZ      0.02        0.8
        MIC   EP    05 19 24.8
        JAS   EPC   05 19 27.8
        PRI   E(P)  05 19 36.2
        FRI   EP    05 19 36.2
        MNV   EP    05 19 36.5
                    USGS  05 11 38.9, 51.5N, 178.4W, H= 65 KM, M=5.1
                    ANDREANOF ISLANDS, ALEUTIAN ISLANDS

AUG 16  FHC   EP    12 37 42.0
        WDC   EPC   12 37 48.0             *E 38 00
        MIN   EP    12 37 53.0
        BKS   EP    12 38 02.4             *E 38 15
                              MICRON      PERIOD
                        PZ      0.01        0.7
        MIC   EP    12 38 07.3             *E 38 20
        JAS   EPC   12 38 09.7             *E 38 22
        FRI   EP    12 38 16.5             *E 38 30
        MNV   EPC   12 38 16.5             *E 38 30
                    USGS  12 28 32.4, 51.9N, 158.4E, H= 50 KM, M=5.3
                    NEAR EAST COAST OF KAMCHATKA

AUG 16  FHC   EPC   14 20 07.0
        WDC   EPC   14 20 10.2             PP 24 04  PKKP 37 10
        MIN   EP    14 20 12.5
        BKS   EP    14 20 19.8  31 48      PP 24 24   PPP 26 31  SKKS 31 04
                                           SP 33 10    PS 33 16  PKKP 37 16
                                           SS 38 30   *E 39 04    LQ 47 04
                              MICRON      PERIOD
                        PZ      3.3         11
        MIC   EP    14 20 24.0
        JAS   EPC   14 20 24.3             PP 24 27  PKKP 37 00  RPKP 45 12
        MNV   EP    14 20 27.5             PP 24 35  PKKP 36 57  RPKP 45 10
        FRI   EP    14 20 28.8
        PRI   EP    14 20 30.5
                    USGS  14 06 45.9, 32.8N, 104.2E, H= 16 KM, M=6.1
                    SZECHWAN PROVINCE, CHINA

AUG 16  FHC         16 25                  *E 25 01
        WDC   EP    16 25 05
        BKS   EP    16 25 11.6  36 04      PP 30 30   SP 39 40   *E 44 50
                                           *E 50 04
                              MICRON      PERIOD
                    MAXH(N) 167             20
                    MAXH(E) 334             20
        MIC         16 25                  *E 25 12
        JAS   EP    16 25 18               PP 30 45
        FRI         16 25                  *E 25 21
        MNV   EP    16 25 26.6
        PRI   EP    16 25 27.2
                    M=7.9, DISTANCE=105°
                    USGS  16 11 07.3,  6.3N, 124.0E, H= 33 KM, M=6.4
                    MINDANOA, PHILIPPINE ISLANDS

AUG 16  FRI   IPD   16 37 53.8  38 18
        PRI   IP    16 38 04.0
        JAS   EP    16 38 09.6
        SAO   EP    16 38 14.0
        MIC   EP    16 38 18.0
                    USGS  16 37 20.5, 36.1N, 117.5W, H=  9 KM
                    CALIFORNIA NEVADA BORDER REGION

AUG 16  FHC   IPC   22 31 30.1
        WDC   IPC   22 31 43.3  32 11
        MIC   EP    22 32 13.6
        JAS   EP    22 32 18.4
        SAO   EP    22 32 19.5
        FRI   EP    22 32 33.4
                    BRK   22 31 15.0, 40.3N, 124.7W, H=  7 KM, ML=3.4
                    SOUTHWEST OF EUREKA, CALIFORNIA

AUG 17  WDC   EP    01 24 51.2
        MIN   EP    01 24 54.0
        BKS   EP    01 24 56.4
                              MICRON      PERIOD
                        PZ      0.06        1.4
        MIC   EP    01 25 00.3
        JAS   EP    01 25 02.0
        FRI   EP    01 25 06.4
        MNV   EP    01 25 09.2
                    USGS  01 11 10.2, 10.1N, 125.9E, H= 34 KM, M=6.0
                    LEYTE, PHILIPPINE ISLANDS

AUG 17  WDC   EP    04 33 28.5             *E 36 56
        BKS   EP    04 33 33    44 20      *E 33 48   PP 38 04   PPP 40 12
                                           PS 47 10  PKKP 50 00   *E 53 04
                                           SS 56 30   LQ 02 06    LR 07 00
                              MICRON      PERIOD
                    MAXR(Z) 23              20
                    MAXH(N) 14              20
                    MAXH(E) 21              20
        JAS         04 34                  *E 34 06   *E 36 50
        MNV         04 33                  *E 33 56
        FRI         04 34                  *E 34 04   *E 37 15
                    M=6.7, DISTANCE=105°
                    USGS  04 19 27.3,  7.2S, 122.9E, H= 22 KM, M=6.2
                    MINDANAO, PHILIPPINE ISLANDS

AUG 17  FHC   IPC   07 05 55.0
        WDC   IP    07 05 59.4
        MIN   IP    07 06 08.0
        SAO   EP    07 06 35.5
        JAS   EP    07 06 36
                    BRK   07 05 39.9, 40.0N, 123.7W, H= 12 KM, ML=3.3
                    SOUTH OF GARBERVILLE, CALIFORNIA

AUG 17  FHC         17 30                  *E 30 41
        WDC   EP    17 30 37.4             P*CP 30 47
        MIN   EP    17 30 41.4             P*CP 30 51
        BKS   EP    17 30 48.2             P*CP 30 56
                              MICRON      PERIOD
                        PZ      0.02        0.8
        MIC   EP    17 30 51               P*CP 31 01
        JAS   EP    17 30 53.0             P*CP 31 02
        FRI   EP    17 30 58.6             P*CP 31 08
        MNV         17 31                  *E 31 00  P*CP 31 10
        PRI   EP    17 31 00
                    USGS  17 19 02.1, 34.8N, 139.0E, H= 27 KM, M=5.1
                    NEAR SOUTHERN COAST OF HONSHU,JAPAN

AUG 19  BKS   EP    01 27 33.6
                              MICRON      PERIOD
                        PZ      0.02        0.7
        FRI   EP    01 27 37.3             *E 27 51
        JAS   IP    01 27 38.5             *I 27 52
        WDC   EP    01 27 41.5             *I 27 55
        MIN   EP    01 27 44.0
        MNV   EP    01 27 46.5
                    USGS  01 14 58.4, 30.5S, 177.5W, H= 33 KM, M=5.3
                    KERMADEC ISLANDS

AUG 19  PRI   EP    01 46 29.8
        MIC   EP    01 46 30.8
        FRI   EP    01 46 34.5
        JAS   EP    01 46 35.8
        WDC   EP    01 46 38.5
        MIN   EP    01 46 42.2
        MNV   EP    01 46 43.4
                    USGS  01 33 55.3, 30.4S, 177.7W, H= 33 KM, M=4.9
                    KERMADEC ISLANDS

AUG 19  FRI   EP    04 27 38.7
        JAS   IPC   04 27 39.8
        WDC   EP    04 27 43.0
        MNV   EP    04 27 49.6
                    USGS  04 14 56.8, 30.3S, 177.4W, H=  3 KM, M=5.2
                    KERMADEC ISLANDS

AUG 19  FRI   EP    04 33 41.8
        MNV   EP    04 33 47.5
        JAS   IPD   04 33 48.7
        WDC   EP    04 34 02.7
                    USGS  04 21 20.2, 41.3S,  89.0W, H= 33 KM, M=5.0
                    SOUTHERN PACIFIC OCEAN

AUG 19  MNV   EP    06 06 35.0
        JAS   EP    06 06 36.0             *I 06 43
                    USGS  05 54 08.0, 41.3S,  89.0W, H= 33 KM, M=4.8
                    SOUTHERN PACIFIC OCEAN

AUG 19  MIN   IP    08 15 21.1
        WDC   EP    08 15 27.8
        BKS   IPC   08 15 34.2             *E 15 54
        JAS   EPD   08 15 35.3
        MIC   EP    08 15 41.7
        SAO   I(P)  08 15 49.5
        FRI   EP    08 15 51.2
        MNV   IP    08 15 51.6
                    BRK   08 15 04.7, 39.5N, 121.5W, H=  2 KM, ML=3.0
                    OROVILLE, CALIFORNIA

AUG 20  MIC   EP    00 07 57.5
        FRI   EP    00 08 02.8
        JAS   EP    00 08 03.5
        WDC   EP    00 08 06.0
        MNV   EP    00 08 15
                    USGS  23 56 28.1, 17.7S, 172.8W, H= 59 KM, M=5.0
                    TONGA ISLANDS REGION

AUG 20  WDC   EP    04 06 13.7             *I 06 27
        JAS   EP    04 06 33.1
        FRI   EP    04 06 40
        MNV   EP    04 06 40.4             *I 06 54
                    USGS  03 56 00.6, 45.0N, 149.8E, H= 47 KM, M=5.5
                    KURIL ISLANDS

AUG 20  FRI   EPD   07 05 38.6
        MNV   EPD   07 05 40.4
        PRI   EPD   07 05 40.4
        SAO   E(P)  07 05 45
        JAS   EPD   07 05 46.0
        MIC   EPD   07 05 48.5
        BKS   EPD   07 05 52.0
                              MICRON      PERIOD
                        PZ      0.03        0.6
        MIN   EPD   07 05 57.8
        WDC   EPD   07 06 00.9
        FHC   EPD   07 06 08.4
                    USGS  06 54 11.3, 20.4S,  70.0W, H= 81 KM, M=5.6
                    NEAR COAST OF NORTHERN CHILE

AUG 20  BKS   IPC   22 05 57.3
        MIC   IPC   22 06 03.5
        SAO   EP    22 06 12.5
        JAS   IPC   22 06 14.0
        FRI   EPC   22 06 25.0
        PRI   E(P)  22 06 25.5
                    BRK   22 05 53.0, 37.8N, 122.0W, H=  4 KM, ML=4.0
                    SOUTHWEST OF DANVILLE, CALIFORNIA

AUG 20  BKS   IPC   22 08 06.0
        MIC   IPC   22 08 11.8
        SAO   EP    22 08 20.7
        JAS   IP    22 08 22.2
                    BRK   22 08 01.4, 37.8N, 122.0W, H=  2 KM, ML=3.8
                    SOUTHWEST OF DANVILLE, CALIFORNIA

AUG 21  PRI   E(P)  07 04 58
        FRI         07 05                  S*CP 15 07
        MNV   E(P)  07 05 10
        JAS   EP    07 05 11.5
        BKS         07 05                  *E 12 04
        WDC   EP    07 05 32.6
                    USGS  06 56 50.2,  6.4S, 107.4W, H= 33 KM, M=5.0
                    NORTHERN EASTER ISLAND CORDILLERA

AUG 21  FHC   EPKP  07 15 01
        WDC   EPKP  07 15 02               PP 16 14
        MIN   EPKP  07 15 04
        MIC   EPKP  07 15 05
        JAS   EPKP  07 15 06               PP 16 19  PKKP 26 10   *E 26 22
        FRI   EPKP  07 15 07
        PRI   EPKP  07 15 08               PP 16 26  PKKP 26 14   *E 26 27
        MNV   EPKP  07 15 10
                    USGS  06 56 47.2,  6.7S, 129.6E, H=120 KM, M=6.0
                    BANDA SEA
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AUG 21  FHC  EP    22 03 13.0                PP 07 10
        WDC  EP    22 03 16.0
        MIN  E(P)  22 03 18                  PP 07 24    SS 21 48    LQ 31 04
        BKS  EP    22 03 28      14 48       PERIOD
                              MICRON          20
                 MAXR(Z)  6                   20
                 MAXH(N)  10                  20
                 MAXH(E)  8                  •E 06 50    PP 07 38    PKKP 20 06
        JAS  EP    22 03 30.0                RPKP 28 15
        MHC  E(P)  22 03 30
        MNV  EP    22 03 34.0
        FRI  EP    22 03 35                 •E 03 38
        PRI        22 03
                   M=6.4, DISTANCE=92°
                   USGS  21 49 54.2, 32.6N, 104.2E, H= 33 KM, M=6.1
                         SZECHWAN PROVINCE, CHINA

                                            •PP 07 45   P•CP 10 36   S•CP 14 01
                                            •PP 07 50    •SP 08 03    •E 08 47
AUG 22  FHC  EP    02 07 13.0               P•CP 10 37   S•CP 14 03   S•CS 18 00
        WDC  EP    02 07 19.9               •PP 07 56    S•CP 14 05
        MIN  EP    02 07 25.0               S•CP 14 11
        BRK  EP    02 07 40.8                •E 07 46    •SP 08 08
        BKS  EP    02 07 42      12 32      P•CP 10 44   S•CP 14 13
        MHC  EP    02 07 47.2               S•CP 14 13
        JAS  EPC   02 07 47.3               P•CP 10 46   S•CP 14 16   S•CS 18 18
        MNV  EPC   02 07 52.5               •PP 08 29    P•CP 10 47   S•CP 14 16
        FRI  EP    02 07 56.6               S•CP 14 18
        PRI  EP    02 08 00.3
                   USGS  02 01 47.4, 60.2N, 153.3W, H=144 KM, M=5.5
                         SOUTHERN ALASKA

AUG 22  FRI  EPC   06 52 31.1   52 45
        MNV  IPD   06 52 33.1   52 49
        JAS  IPC   06 52 42.8   53 06
        PRI  EP    06 52 50     53 18
                   USGS  06 52 10.6, 37.3N, 118.4W, H=  5 KM
                         CALIFORNIA NEVADA BORDER REGION

AUG 22  MNV  IPD   10 14 33.8
        FRI  EP    10 14 59.3   15 49       •E 15 07
        JAS  EP    10 15 00                 •E 15 07
        MIN  EP    10 15 14
        WDC        10 15                    •E 15 24
        PRI  EP    10 15 27
        MHC        10 15                    •E 15 28
                   USGS  10 14 06.5, 38.9N, 116.4W, H=  1 KM, M=4.7
                         NEVADA

AUG 22  BKS  IPC   17 28 47.6
        BRK  IPC   17 28 48.2   28 52
        WDC  IPC   17 28 53.9
        SAO  EP    17 29 02.8
        JAS  IPC   17 29 04.4
        FRI  E(P)  17 29 15.3
        PRI  E(P)  17 29 18
                   BRK   17 28 43.4, 37.8N, 122.0W, H=  7 KM, ML=3.0
                         SOUTHWEST OF DANVILLE, CALIFORNIA

AUG 22  FHC  E(P)  20 16 11
        BKS        20 16                    •E 16 14
        MHC  EP    20 16 12.6
        FRI  EP    20 16 14.5
        WDC  EP    20 16 15.5
        MIN  E(P)  20 16 17
        JAS  EP    20 16 18.0
        FRI  EP    20 16 19.0
        MNV  EP    20 16 28.2
                   USGS  20 03 50.5, 12.4S, 166.5E, H= 63 KM, M=4.7
                         SANTA CRUZ ISLANDS

AUG 22  BKS  EP    21 21 55.5   32 10       •PP 22 56    SS 37 20
                              MICRON          PERIOD
                         PZ      0.05          1.0
        FHC  EPD   21 21 56.3                •PP 23 09
        MHC  EPD   21 21 56.9                •PP 23 09
        SAO  E(P)  21 21 57
        PRI  EP    21 21 58.5                •PP 23 10
        WDC  EPD   21 22 00.7                •PP 23 13
        JAS  EPD   21 22 02.4                •PP 23 12
        MIN  EP    21 22 03.0
        FRI  EPD   21 22 03.1                •PP 23 12
        MNV  EPD   21 22 12.0                •PP 23 24
                   USGS  21 09 41.9, 14.0S, 170.9E, H= 31 KM, M=5.7
                         NEW HEBRIDES ISLANDS REGION

AUG 23  FHC  EPC   03 43 27.7
        WDC  EPC   03 43 30.8                PP 47 19    PKKP 00 23    RPKP 08 33
        MIN  EPC   03 43 33.4
        BKS  EP    03 43 41      54 24      •E 47 41    •SP 43 40     PP 47 12
                                            •E 58 36     SS 01 20     •E 10 52
                                            LQ 15 00
                              MICRON          PERIOD
                         PZ      0.04          1.0
                 MAXR(Z)  16                  20
                 MAXH(N)  10                  20
                 MAXH(E)  13                  20
        MHC  EP    03 43 44.4                PP 47 46
        JAS  EPC   03 43 45.0                PP 47 40    PKKP 00 15    RPKP 08 27
        MNV  E(P)  03 43 48                  PP 47 53    PKKP 00 14    RPKP 08 27
        FRI  EP    03 43 49.5                PP 47 55    RPKP 08 24
        PRI  EP    03 43 51.3                PP 47 55    RPKP 08 23
                   M=6.5, DISTANCE=97°
                   USGS  03 30 07.6, 32.5N, 104.2E, H= 33 KM, M=6.2
                         SZECHWAN PROVINCE, CHINA

AUG 23  MNV  EP    14 05 47.6
        FRI  EP    14 05 52.7
        JAS  EP    14 05 58.1
        MHC  EP    14 06 05.4
        MIN  EP    14 06 07.8
        WDC  EP    14 06 11.1
        FHC  EP    14 06 21.7
                   USGS  13 56 09.3, 11.1N,  62.3W, H= 67 KM, M=5.1
                         WINDWARD ISLANDS

AUG 24  FRI  EP    21 38 08
        PRI  EPC   21 38 09.6
        MNV  EPC   21 38 10.3
        JAS  EPC   21 38 15.4
        MHC  EPC   21 38 17
        WDC  EPC   21 38 24.0
        FHC  EPC   21 38 36.8
                   USGS  21 26 12.2, 25.3S,  70.7W, H=  8 KM, M=5.6
                         NEAR COAST OF NORTHERN CHILE

AUG 25  FRI  EP    07 27 12.4               •E 27 24
        PRI        07 27                    •E 27 14
        MNV        07 27                    •E 27 25    •E 27 33
        JAS  EP    07 27 26.9
        MHC        07 27
        MIN  E(P)  07 27 58.5               •E 27 36
        WDC  EP    07 28 05.6
        FHC        07 28                    •E 28 20
                   USGS  07 23 59.9, 26.6N, 109.5W, H= 33 KM, M=4.3
                         GULF OF CALIFORNIA

AUG 25  FHC  EP    12 43 28
        WDC  EP    12 43 31.7               •PP 43 44
        MIN  EP    12 43 35                 •PP 43 48
        BKS        12 43                    •PP 43 51    PP 47 44
        MHC        12 43                    •E 43 56     •E 47 52    •E 54 12
        JAS  EP    12 43                    •E 56 36
        FRI  E(P)  12 43 44.2               •E 43 41
        PRI        12 43 48                 •PP 44 00
        MNV  EP    12 43                    •PP 43 58    PP 47 59
                   12 43 49.5               •E 43 48
                   USGS  12 29 54.2, 13.0N, 124.4E, H= 23 KM, M=5.6
                         LUZON, PHILIPPINE ISLANDS

AUG 26  SAO  EP    02 02 33.1
        PRI  IPC   02 02 37.5   02 48
        MHC  EP    02 02 44.1
        FRI  EP    02 02 48.4
        JAS  IPD   02 02 53.9   03 13
                   BRK   02 02 26.6, 36.5N, 121.1W, H=  2 KM, MAG=2.6
                         BEAR VALLEY, CALIFORNIA

AUG 26  WDC  EP    06 45 56.0
        MIN  EP    06 46 02.2
        JAS  IP    06 46 36.6
        FRI        06 46                    •E 46 55
                   USGS  06 43 15.8, 50.6N, 129.4W, H= 33 KM, M=4.4
                         VANCOUVER ISLAND REGION

AUG 26  MNV  IPC   14 30 36.2
        FRI  IPC   14 30 48.0
        JAS  IPC   14 30 57.0
        PRI  IPC   14 31 00.8
        SAO  EP    14 31 07.4
        MHC  EPC   14 31 09.8                •I 31 19
        BKS  E(P)  14 31 16
        MIN  I(P)  14 31 21.9
        WDC  EP    14 31 32.2
        FHC  EP    14 31 47.2
                   ML=5.2, NUCLEAR EXPLOSION, NEVADA TEST SITE
                   USGS  14 30 00.2, 37.1N, 116.1W, H=  0 KM, M=5.3
                         SOUTHERN NEVADA

AUG 28  FHC  EPD   02 37 02.0
        WDC  IPD   02 37 10.2
        MIN  EPD   02 37 15.8
        BKS  IPD   02 37 25.2
                              MICRON          PERIOD
                         PZ      0.12          0.8
        MHC  EPD   02 37 31.2
        JAS  IPD   02 37 34.6
        SAO  EP    02 37 34.6
        FRI  IPD   02 37 42.7
        PRI  EPD   02 37 43.0
        MNV  IPD   02 37 43.2
                   USGS  02 30 09.2, 52.6N, 175.3W, H=145 KM, M=5.1
                         ANDREANOF ISLANDS, ALEUTIAN ISLANDS

AUG 28  FHC  EPC   03 09 49.0
        WDC  IPC   03 09 50.2
        MIN  EPC   03 09 52.3
        BKS  EP    03 10 04.4
        MNV  IPC   03 10 04.5
        JAS  IPC   03 10 04.8
        MHC  EP    03 10 06.7
        FRI  EP    03 10 09.6
        PRI  EP    03 10 13.5
                   USGS  02 56 57.5, 50.0N,  79.0E, H=  0 KM, M=5.8
                         EASTERN KAZAKH, SSR

AUG 28  BKS  EPC   16 24 53.5                •E 25 04    LR 47 12
                              MICRON          PERIOD
                         PZ      0.04          1.0
        PRI  EPC   16 24 53.6
        MHC  EPC   16 24 54.0
        FHC  EPC   16 24 58.7
        FRI  EP    16 24 59.5
        JAS  IPC   16 25 00.2                •PP 25 26
        WDC  EPC   16 25 02.6                •PP 25 28
        MIN  EPC   16 25 04.5
        MNV  EPC   16 25 10.4                •PP 25 38
                   USGS  16 13 31.7, 16.0S, 173.2W, H= 33 KM, M=5.2
                         TONGA ISLANDS

AUG 28  FRI  E(P)  22 00 49
        PRI  EP    22 00 50.6
        MNV  EPC   22 00 50.8
        JAS  EPC   22 00 57.1
        MHC  EP    22 00 59.9
        BKS  E(P)  22 01 04.8                           LR 18 10
        WDC  EP    22 01 14.7
        FHC  EPC   22 01 23.5
                   USGS  21 50 37.8, 10.7S,  78.2W, H= 59 KM, M=5.1
                         NEAR COAST OF PERU

AUG 28  FHC  EP    22 15 38.0
        WDC  EP    22 15 52.0
        MHC  E(P)  22 16 33
        JAS  IPC   22 16 35.1
        FRI  EP    22 16 50
                   USGS  22 14 43.5, 43.6N, 127.1W, H= 33 KM, M=4.7
                         OFF COAST OF OREGON

AUG 29  PRI  EP    05 08 20.7
        FRI  EP    05 08 24.2
        MHC  EP    05 08 29.0
        JAS  EP    05 08 31.4
        BKS  EP    05 08 33      17 38      SS 22 05    LR 29 54
                              MICRON          PERIOD
                 MAXR(Z)  6                   20
                 MAXH(N)  5                   20
                 MAXH(E)  1.3                 20
        MNV  EP    05 08 33.5
        WDC  EP    05 08 48.3
        FHC  E(P)  05 08 54
                   Mc=5.7, DISTANCE=68°
                   USGS  04 57 34.9, 29.8S, 111.8W, H= 33 KM, M=5.5
                         EASTER ISLANDS REGION

AUG 29  JAS  EP    13 00 12.5
                   USGS  12 47 20.6, 41.0S,  75.3W, H= 33 KM, M=5.0
                         OFF COAST OF SOUTHERN CHILE

AUG 29  FHC  EP    16 17 40.3
        WDC  EPC   16 17 44.4
        MIN  EP    16 17 47.3
        BRK  EP    16 17 53.1
        MHC  EP    16 17 55.6
        JAS  EPC   16 17 57.4
        FRI  EP    16 18 01.8
        PRI  EP    16 18 02.0
        MNV  EPC   16 18 03.0
                   USGS  16 04 50.3, 24.9N, 122.2E, H=123 KM, M=5.0
                         TAIWAN REGION

AUG 29  FHC  IPC   22 04 15.1
        WDC  IPC   22 04 28.6
        MIN  EP    22 04 38.2
        MHC  E(P)  22 05 00.0
        SAO  EP    22 05 06.4
                   BRK   22 04 01.8, 40.3N, 124.5W, H=  2 KM, ML=3.5
                         SOUTHWEST OF EUREKA, CALIFORNIA

AUG 30  WDC  E(P)  02 14 17
        MNV  E(P)  02 14 26
                   USGS  02 00 10.3,  6.6N, 123.9E, H= 33 KM, M=5.3
                         MINDANAO, PHILIPPINE ISLANDS

AUG 30  PRI  EP    02 56 06.9
        MHC  EP    02 56 07.3
        FHC  EP    02 56 11.0
        FRI  EP    02 56 12.0
        JAS  EPD   02 56 12.5
        WDC  EP    02 56 14.0
        MIN  EP    02 56 15.7
        MNV  EP    02 56 20.8
                   USGS  02 44 44.3, 23.2S, 179.1E, H=571 KM, M=5.1
                         SOUTH OF FIJI ISLANDS
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AUG 30  MHC  EP    05 39 45.8
        FRI  EP    05 39 50.4
        JAS  EP    05 39 51.2
        WDC  EP    05 39 52.8
        MIN  EP    05 39 54.5
        MNV  EP    05 40 00.0
                   USGS  05 28 39.3, 21.2S, 179.1W, H=613 KM, M=4.9
                         FIJI ISLANDS REGION

AUG 30  WDC  EP    08 23 25.3
        MIN  EP    08 23 30.1
        JAS  EPC   08 23 53.1
        MNV  EPC   08 23 58.2
        FRI  EPC   08 24 02.5
                   USGS  08 17 50.6, 60.0N, 153.2W, H=119 KM
                         SOUTHERN ALASKA

AUG 30  FHC  EP    08 50 44.5
        WDC  EP    08 50 46.8                 *PP 51 02
        BKS  EPC   08 50 48.5  01 30           SP 02 48     PS 03 37     SS 07 40
                                               SSS 11 12    LQ 14 10     LR 17 56
                                  MICRON       PERIOD
                              PZ     0.08        1.0
                              MAXR(Z) 6          20
                              MAXH(N) 1.8        20
                              MAXH(E) 6          20
        MIN  EP    08 50 49.6
        MHC  EP    08 50 50.3                 *PP 51 06
        FRI  EP    08 50 54.4
        JAS  EP    08 50 54.5                 *PP 51 10    *E 51 39
        FRI  EP    08 50 57.0                 *PP 51 13
        MNV  EP    08 51 03.0
                   M=6.0, DISTANCE=90°
                   USGS  08 37 54.8,  1.1N, 147.5E, H= 53 KM, M=5.8
                         CAROLINE ISLANDS REGION

AUG 30  JAS  EP    09 48 30
                   USGS  09 42 51.6, 15.2N, 104.5W, H= 33 KM, M=4.5
                         OFF COAST OF MICHOACAN, MEXICO

AUG 31  FRI        09 19                      *E 19 23
        BKS  EP    09 19 24.0
        MHC  EP    09 19 24.0
        FRI  EP    09 19 27.7
        JAS  EP    09 19 29.0                 *I 19 39
        WDC  EP    09 19 31.9
        MIN  EP    09 19 33.3
        MNV  EP    09 19 36.9
                   USGS  09 06 50.4, 30.1S, 178.1W, H= 55 KM, M=5.4
                         KERMADEC ISLANDS

AUG 31  PRI  EP    11 22 18.0                 *E 22 25
        FRI  EP    11 22 20.0                 *E 22 26
        MNV  EP    11 22 20.4                 *E 22 27
        JAS  EP    11 22 24.4                 *I 22 35
        MHC  EP    11 22 26.0
        MIN        11 22                      *E 22 47
        WDC  EP    11 22 39.2                 *I 22 46
                   USGS  11 10 12.2, 29.7S,  73.3W, H= 20 KM, M=5.2
                         OFF COAST OF CENTRAL CHILE

AUG 31  MHC  IPD   12 29 34.7  29 40
        BKS  IPC   12 29 38.2  29 42
        SAO  EP    12 29 45.2
        JAS  IPC   12 29 46.7                 *E 29 59
        FRI  EP    12 29 57.0
        PRI        12 29                      *E 29 58
        MIN  EP    12 30 12.8
        WDC  EP    12 30 14.5
        MNV  EP    12 30 16.1
                   BRK   12 29 28.3, 37.7N, 121.7W, H=  7 KM, ML=3.4
                         EAST OF LIVERMORE, CALIFORNIA

AUG 31  BKS  EP    13 34 32                   *E 40 08     *E 45 00
        PRI  EP    13 34 32.7
        MHC  EP    13 34 33.6
        FRI  EP    13 34 37.4
        JAS  EP    13 34 38.3
        WDC  EP    13 34 41.9
        MIN  EP    13 34 43.0
        MNV  EP    13 34 46.8
                   USGS  13 22 10.9, 28.3S, 176.6W, H= 51 KM, M=5.5
                         KERMADEC ISLANDS REGION

SEP 01  SAO  EP    08 21 35
        BKS  EP    08 21 35.6
        MHC  EP    08 21 36
        FRI  EP    08 21 36
        FRI  EP    08 21 41.3
        JAS  EPC   08 21 41.7
        WDC  EPC   08 21 42.8
        MIN  EP    08 21 44.9
        MNV  EP    08 21 51.3
                   USGS  08 10 43.2, 18.1S, 178.4W, H=600 KM, M=5.0
                         FIJI ISLANDS REGION

SEP 01  BKS  EP    13 38 06.9
        SAO        13 38                      *E 38 09
        MHC  EPC   13 38 07.6
        FHC  IPC   13 38 08.4
        PRI  EPC   13 38 08.6
        WDC  IPC   13 38 11.9                 PP 41 52
        JAS  IPC   13 38 12.5                 PP 41 54
        FRI  EPC   13 38 12.8
        MIN  EP    13 38 14
        MNV  IPC   13 38 21.2                 PP 41 10
                   USGS  13 25 29.8, 20.4S, 169.4E, H= 75 KM, M=5.7
                         NEW HEBRIDES ISLANDS

SEP 01  WDC  IPD   22 42 54.1
        MIN  IPD   22 42 58.8
        FHC  IPC   22 43 12.9
        JAS  IPD   22 43 36.6
                   BRK   22 42 48.8, 40.5N, 122.2W, H=  5 KM, ML=3.5
                         EAST OF REDDING, CALIFORNIA

SEP 02  PRI        10 27                      *E 27 15
        FRI  EP    10 27 16.7
        MNV  EPC   10 27 17.0                 *I 27 26     *E 29 46
        JAS  EP    10 27 26.1                 *E 29 49
        MHC  EP    10 27 32.0
        BKS  EPC   10 27 38.0  33 36          S*CS 37 54   LR 43 06
                                  MICRON       PERIOD
                              MAXR(Z) 3.6        20
                              MAXH(N) 4.0        20
                              MAXH(E) 4.1        20
        MIN  EP    10 27 43.6
        WDC  EP    10 27 47.0
        FHC  EP    10 27 59.0
                   M=5.4, DISTANCE=38°
                   USGS  10 20 25.9, 13.2N,  90.0W, H= 81 KM, M=5.0
                         NEAR COAST OF GUATEMALA

SEP 02  PRI  EP    17 41 29.5
        FRI  EP    17 41 35.0
        JAS  EPD   17 41 35.5
        WDC  EPD   17 41 37.5
        MIN  EPD   17 41 39.5
        MNV  EPD   17 41 45.0
                   USGS  17 30 08.6, 20.1S, 176.7W, H=309 KM, M=4.9
                         FIJI ISLANDS REGION

SEP 03  WDC  EP    05 58 57
        JAS  EP    05 59 12
        MNV  EP    05 59 29.5
                   USGS  05 47 18.9, 30.4N, 142.0E, H= 38 KM, M=4.9
                         SOUTH OF HONSHU, JAPAN

SEP 03  JAS  EPD   12 10 38.3
        FRI  EP    12 10 39
                   USGS  11 57 52.9, 17.7S, 167.8E, H= 27 KM
                         NEW HEBRIDES ISLANDS

SEP 03  SAO  IPC   17 12 27.8
        MHC  EPD   17 12 39.7
        PRI  EPD   17 12 41.9
        BKS  EP    17 12 49.5
        FRI  EP    17 12 50.8
        JAS  E(P)  17 12 51
                   BRK   17 12 26.3, 36.7N, 121.4W, H=  2 KM, ML=2.7
                         STONE CANYON, CALIFORNIA

SEP 03  MIN  EP    17 44 12.7
        JAS  EPC   17 44 16.2  44 38
        MNV  I(P)  17 44 17.5
        WDC  EPD   17 44 25.0
        BKS  EP    17 44 30
        FRI  EP    17 44 31
        MHC  EP    17 44 31
                   BRK   17 43 47.1, 39.6N, 120.1W, H=  2 KM, ML=3.0
                         NORTHEAST OF TRUCKEE, CALIFORNIA

SEP 03  MNV  EPD   18 04 46.0
        JAS  EPD   18 04 49.0
        MHC  EPD   18 04 50.9
        BKS  EP    18 04 55.0
                                  MICRON       PERIOD
                              PZ     0.03        0.7
        WDC  EPD   18 05 02.7
        FHC  EPD   18 05 07.9
                   USGS  17 52 34.7, 28.9S,  67.1W, H=115 KM, M=5.1
                         LA RIOJA PROVINCE, ARGENTINA

SEP 03  SAO  IPC   19 58 51.4
        MHC  IP    19 59 03.3
        PRI  IPD   19 59 05.5
        BKS  IPC   19 59 13.0  59 31
        FRI  EP    19 59 14.2
        JAS  IPC   19 59 15.9
                   BRK   19 58 49.9, 36.7N, 121.4W, H=  3 KM, ML=3.5
                         STONE CANYON, CALIFORNIA

SEP 04  BKS        04 23                      *E 04 52
        WDC  EP    04 23 10
        JAS  EP    04 23 12
        MNV  EP    04 23 19.5
                   USGS  04 10 42.1, 28.2S, 176.4W, H= 33 KM, M=5.0
                         KERMADEC ISLANDS REGION

SEP 04  MHC  EP    05 17 28.4
        PRI  EP    05 17 30.4
        JAS  EP    05 17 31.3
        FRI        05 17                      *E 17 33
        MNV  EP    05 17 43.8
                   USGS  05 04 56.3, 11.1S, 165.1E, H= 11 KM, M=5.4
                         SANTA CRUZ ISLANDS

SEP 04  FHC  IPC   11 54 31.0
        BKS  EPC   11 54 32.8
                                  MICRON       PERIOD
                              PZ     0.16        0.6
        SAO  EP    11 54 34.0
        MHC  IPC   11 54 34.7
        WDC  IPC   11 54 35.5
        PRI  IPC   11 54 37.2
        MIN  EPC   11 54 37.9
        JAS  IPC   11 54 39.5
        FRI  IPC   11 54 41.0
        MNV  IPC   11 54 48.6
                   USGS  11 41 59.7, 10.2S, 161.1E, H= 83 KM, M=5.6
                         SOLOMON ISLANDS

SEP 05  MNV  EP    02 45 09.5
        FRI  EP    02 45 10.5
        JAS  EP    02 45 20.8
        MIN  EP    02 45 34.0
                   USGS  02 36 33.3,  7.4N,  77.9W, H= 26 KM, M=4.8
                         PANAMA-COLOMBIA BORDER REGION

SEP 05  MHC  IPD   03 15 15.6
        BKS  IPC   03 15 22.3
        JAS  IPD   03 15 25.2
        SAO  IPD   03 15 25.6
        FRI  IPC   03 15 34.8
        PRI  IPC   03 15 37.4
        MIN  IP    03 15 54.7
        WDC  IP    03 15 56.2
                   BRK   03 15 09.3, 37.6N, 121.4W, H=  9 KM, ML=3.5
                         EAST OF LIVERMORE, CALIFORNIA

SEP 05  WDC  IP    10 53 09.2
        JAS  IPC   10 53 27.1
        MNV  EPC   10 53 33.6
                   USGS  10 42 51.0, 46.1N, 142.3E, H=243 KM, M=4.8
                         SAKHALIN ISLAND

SEP 05  PRI        12 02                      *E 03 05
        MHC  EP    12 02 48.2
        FRI  EP    12 02 52.3
        JAS  EP    12 02 53.4
        WDC  EP    12 02 56.4
        MIN  EP    12 02 57.2
        MNV  EP    12 03 01.5
                   USGS  11 50 25.0, 28.2S, 177.3W, H= 61 KM, M=5.1
                         KERMADEC ISLANDS REGION

SEP 05  PRI        19 18                      *E 18 58
        MHC        19 18                      *E 18 59
        BKS        19 18                      *E 19 46
        FRI        19 19                      *E 19 02
        JAS  EP    19 19 04.1
        WDC  EP    19 19 07.5
        MNV  EP    19 19 12.4
                   USGS  19 06 38.8, 28.3S, 176.6W, H= 70 KM, M=4.6
                         KERMADEC ISLANDS REGION

SEP 05  FRI  EP    20 16 49.2                 *PP 17 04    P*CP 20 44
        PRI  EP    20 16 49.5                 P*CP 20 45
        MNV  EPD   20 16 52.5                 *PP 17 07    P*CP 20 45
        JAS  EP    20 16 59.7                 *PP 17 15    P*CP 20 47
        MHC  EP    20 17 03                   *PP 17 18    P*CP 20 48
        WDC  E(P)  20 17 31                   *PP 17 46    P*CP 20 53
                   USGS  20 11 37.9, 18.7N, 101.1W, H= 86 KM, M=5.3
                         GUERRERO, MEXICO

SEP 06  WDC        03 31                      *E 31 22
        JAS  EP    03 32 06
        MNV        03 32                      *E 32 20

SEP 06  MNV  EP    10 06 05.5
        MIN        10 06                      *E 06 08
        WDC  EP    10 06 09.0
        FHC        10 06                      *E 06 12
        JAS  EP    10 06 16.0
        FRI  EP    10 06 19
        MHC        10 06                      *E 06 27
        PRI        10 06                      *E 06 34
                   USGS  09 56 25.6, 58.2N,  32.2W, H= 33 KM, M=4.9
                         NORTH ATLANTIC OCEAN

SEP 07  WDC  E(P)  06 10 01.0
        JAS  EP    06 10 01.3
        FRI  EP    06 10 02.3
        MNV  EP    06 10 10.5
                   USGS  05 57 31.6, 13.2S, 166.4E, H= 69 KM, M=5.3
                         NEW HEBRIDES ISLANDS

SEP 07  PRI  E(P)  06 12 31.7
        FRI  E(P)  06 12 32.3
        JAS  EP    06 12 37.2                 *E 13 07
        MIN  E(P)  06 12 48.5
        WDC  EP    06 12 51.8                 *E 13 22
                   USGS  06 00 46.1, 23.3S,  68.2W, H= 92 KM, M=4.9
                         NORTHERN CHILE
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SEP 07 MHC E(P) 10 21 44
PRI E(P) 10 21 46
JAS EP 10 21 49.7
FRI EP 10 21 50.5
WDC EP 10 21 50.5
MNV EP 10 22 01
USGS 10 09 23.5, 14.9S, 167.2E, H=114 KM, M=5.5
NEW HEBRIDES ISLANDS

SEP 07 SAO IPC 11 46 26.5
PRI EPD 11 46 31.3
MHC E(P) 11 46 37.5
FRI E(P) 11 46 42.2
JAS EPD 11 46 47.0 47 06
BKS E(P) 11 46 50
BRK 11 46 20.3, 36.5N, 121.2W, H= 10 KM, ML=2.6
BEAR VALLEY, CALIFORNIA

SEP 08 FHC IPC 08 22 37.7
WDC EP 08 22 42.2
MIN EPC 08 22 46.6
BKS EP 08 23 19.5
MICRON PERIOD
PZ 0.02 0.4
MNV EP 08 23 21.4
JAS EPC 08 23 23.2
MHC EP 08 23 28
SAO EP 08 23 35.3
FRI EP 08 23 39
FRI EPC 08 23 46.9
USGS 08 21 01.6, 47.4N, 123.1W, H= 48 KM, M=4.6
WASHINGTON

SEP 08 PRI EP 13 21 23.4
FRI EP 13 21 23.8
MNV EPD 13 21 28.8
MHC EP 13 21 30
JAS EPD 13 21 30.3
BKS EP 13 21 33.5
MICRON PERIOD
PZ 0.03 1.0
•E 21 44
WDC 13 21
USGS 13 08 54.1, 41.5S, 84.6W, H= 33 KM, M=5.3
WEST CHILE RISE

SEP 08 PRI EP 15 54 08.4
PRI EP 15 54 09.7
MNV EP 15 54 09.8
JAS IPC 15 54 15.6 P•CP 54 27
MHC EP 15 54 17.5 •PP 54 35
BKS EP 15 54 21.3
MICRON PERIOD
PZ 0.04 1.0
MIN EP 15 54 28.4 P•CP 54 39 •PP 54 47
WDC IPC 15 54 30.4
USGS 15 42 20.1, 24.6S, 70.5W, H= 45 KM, M=5.3
NEAR COAST OF NORTHERN CHILE

SEP 09 WDC EPC 09 37 41.1
MIN EPC 09 37 42.5
MNV EPC 09 37 51.3
JAS EPC 09 37 57.4
BKS EP 09 38 00.5 46 20 •E 39 52 •E 41 30
MICRON PERIOD
PZ 0.06 1.2
FRI EP 09 38 03.2
MHC EP 09 38 03.3
PRI EP 09 38 10.8
USGS 09 27 45.2, 77.8N, 7.8E, H= 5 KM, M=5.2
SVALBARD REGION

SEP 09 WDC EP 09 52 46.2
MIN EP 09 52 51.6
BKS 09 52 •E 52 56
JAS EP 09 53 00.1
FRI EP 09 53 04.6
MNV E(P) 09 53 05
PRI 09 53 •E 53 07
USGS 09 39 38.0, 24.4N, 121.8E, H= 23 KM, M=5.3
TAIWAN

SEP 09 WDC EP 10 16 23.8
BKS EP 10 16 33.8
MICRON PERIOD
PZ 0.02 0.8
JAS EP 10 16 39.9
FRI EP 10 16 45.1
USGS 10 05 20.1, 37.3N, 134.9E, H=370 KM, M=4.6
SEA OF JAPAN

SEP 10 JAS EPC 09 05 10.8
FRI EPC 09 05 12.0
USGS 08 54 28.1, 46.7N, 27.3W, H= 33 KM, M=4.6
NORTH ATLANTIC RIDGE

SEP 11 FHC EP 02 47 46.5
WDC EPC 02 47 54.2
MIN E(P) 02 47 59.6
BKS EP 02 48 08.5
MICRON PERIOD
PZ 0.03 0.8
MHC EP 02 48 14.7
JAS EPC 02 48 17.9
FRI EP 02 48 25.7
PRI EP 02 48 26.0
MNV EPC 02 48 26.4
USGS 02 40 25.8, 51.9N, 179.8W, H=100 KM, M=4.9
ANDREANOF ISLANDS, ALEUTIAN ISLANDS

SEP 11 BKS 07 34 •E 35 15
PRI EP 07 34 51.8 •E 35 03
MHC EP 07 34 52.2 •E 35 03
FRI EP 07 34 57.8 •E 35 09
JAS EPC 07 34 58.3 •E 35 09
WDC EP 07 35 00.5 •E 35 12
MIN EP 07 35 02.6 •E 35 14
MNV EPC 07 35 08.7 •E 35 20
USGS 07 23 30.7, 16.2S, 172.7W, H= 29 KM, M=5.1
SAMOA ISLANDS REGION

SEP 11 MIN E(P) 16 43 47.4
MNV E(P) 16 43 48.6
JAS EP 16 43 56.1
USGS 16 31 12.0, 46.2N, 13.2E, H= 16 KM, M=5.2
AUSTRIA

SEP 11 MIN EPC 16 47 37.3
WDC EPC 16 47 37.3
FHC E(P) 16 47 40.1
JAS EPC 16 47 46.0
FRI 16 47 •E 47 48
MHC 16 47 •E 47 51
PRI 16 47 •E 47 58
USGS 16 35 03.3, 46.3N, 13.2E, H= 20 KM, M=5.3
AUSTRIA

SEP 11 JAS EP 20 52 23.6
MNV EP 20 52 26.3
WDC EP 20 52 41

SEP 11 PRI EP 20 58 05.3
JAS EP 20 58 13.0
MNV EP 20 58 15.5
WDC EP 20 58 30.6
FHC E(P) 20 58 33.3
SOUTHERN PACIFIC OCEAN REGION

SEP 11 PRI E(P) 21 15 02.3
FRI EP 21 15 06.3
MHC EP 21 15 10.8
JAS EPD 21 15 13.5
BKS 21 15 •E 15 14
MNV EPD 21 15 16.2
WDC EPD 21 15 31.0
USGS 21 04 40.6, 26.3S, 115.4W, H= 33 KM, M=5.3
EASTER ISLAND CORDILLERA

SEP 11 PRI E(P) 21 44 19.2
FRI EP 21 44 23.5
MHC EP 21 44 28.0
JAS EP 21 44 31.0
MNV EP 21 44 33.5
WDC EPD 21 44 48.1
USGS 21 33 57.4, 26.4S, 115.5W, H= 33 KM, M=5.3
EASTER ISLAND CORDILLERA

SEP 11 PRI E(P) 22 38 21.2
FRI EP 22 38 25.0
MHC EP 22 38 29.7
JAS EP 22 38 32.7
MNV EP 22 38 35.0
WDC EP 22 38 49.8
FHC E(P) 22 38 53.3
USGS 22 28 03.1, 25.7S, 115.0W, H= 33 KM, M=4.8
EASTER ISLAND CORDILLERA

SEP 11 PRI E(P) 23 16 49.8
FRI E(P) 23 16 53.5
MHC E(P) 23 16 58
JAS EP 23 17 01.2
MNV EP 23 17 03.7
WDC EP 23 17 18.5
FHC E(P) 23 17 21.6
USGS 23 06 29.3, 26.1S, 115.3W, H= 33 KM, M=5.0
EASTER ISLAND CORDILLERA

SEP 12 FHC EPC 03 59 06.0
WDC IPC 03 59 12.2
MIN EPC 03 59 16.7
BKS EP 03 59 25.5
MICRON PERIOD
PZ 0.02 0.8
MHC EPC 03 59 30.2
JAS IPC 03 59 33.0
FRI EPC 03 59 39.6
MNV IPC 03 59 40.0
PRI EP 03 59 40.3
USGS 03 49 45.6, 50.2N, 154.5E, H=146 KM, M=5.0
KURIL ISLANDS

SEP 12 PRI E(P) 04 03 09
MNV E(P) 04 03 09.5
JAS EP 04 03 13.0
MHC EP 04 03 15.4
WDC EP 04 03 27.0
FHC EP 04 03 35.5
USGS 03 51 23.9, 24.1S, 66.8W, H=173 KM, M=5.6
SALTA PROVINCE, ARGENTINA

SEP 12 JAS EP 05 01 13.0
MNV EP 05 01 15.5
WDC EP 05 01 30.4
SOUTHERN PACIFIC OCEAN REGION

SEP 12 JAS EP 05 02 47.6
MNV EP 05 02 50.2
WDC EP 05 03 05.0
SOUTHERN PACIFIC OCEAN REGION

SEP 12 FRI EP 05 07 27.6
JAS EP 05 07 35.0
MNV EP 05 07 37.5
WDC EP 05 07 52.2
SOUTHERN PACIFIC OCEAN REGION

SEP 12 FRI EP 07 17 05.6 •E 17 12
MHC EP 07 17 10 •E 17 17
JAS EP 07 17 13.0 •E 17 20
MNV EP 07 17 15.4 •E 17 22
WDC EP 07 17 30.5 •E 17 37
USGS 07 06 27.5, 28.4S, 114.2W, H= 33 KM, M=4.6
EASTER ISLAND REGION

SEP 12 JAS EP 11 40 02.0 •E 40 09 •E 40 13
MNV EP 11 40 04.5 •E 40 11
WDC EP 11 40 19.5
USGS 11 29 27.6, 26.5S, 115.2W, H= 33 KM, M=4.7
EASTER ISLAND CORDILLERA

SEP 12 MNV EPC 14 00 24.5
JAS EPC 14 00 30.3
MHC EP 14 00 32.5
WDC EP 14 00 51
FHC EP 14 01 01.0
USGS 13 52 05.0, 0.1S, 91.3W, H= 33 KM, M=4.6
GALAPAGOS ISLANDS

SEP 12 MNV EP 14 30 19.7
PRI EP 14 30 19.8
JAS EP 14 30 25.0
MHC EP 14 30 27.5
WDC EP 14 30 39.0
USGS 14 18 37.7, 23.8S, 66.5W, H=193 KM, M=4.6
JUJUY PROVINCE, ARGENTINA

SEP 12 SAO EP 17 32 23.8
BKS EP 17 32 24.8
MICRON PERIOD
PZ 0.01 0.5
MHC EP 17 32 25.5
FRI EP 17 32 30.1
JAS EPC 17 32 30.6 PKKP 51 44
WDC EP 17 32 33.0
MIN EP 17 32 34.1
MNV EP 17 32 39.1
USGS 17 21 03.3, 23.4S, 179.9E, H=551 KM, M=4.8
SOUTH OF FIJI ISLANDS

SEP 12 BKS IPD 17 34 34.0 34 35
MHC EP 17 34 47.1 34 59
SAO EP 17 34 55.4
JAS EP 17 34 57.6 •E 35 16
BRK 17 34 33.0, 37.9N, 122.2W, H= 6 KM, ML=2.9
RICHMOND, CALIFORNIA

SEP 13 FRI EP 03 52 13.2
MHC EP 03 52 17.6
JAS EP 03 52 20.6
MNV EP 03 52 23.0
WDC EP 03 52 37.7
USGS 03 41 46.4, 26.4S, 115.0W, H= 33 KM, M=4.9
EASTER ISLAND CORDILLERA

SEP 13 JAS EP 08 08 25.7
MNV EP 08 08 28.2
WDC EP 08 08 43.0
SOUTHERN PACIFIC OCEAN REGION

SEP 13 FRI EP 08 15 56
MHC EP 08 16 00.6
JAS EP 08 16 03.5
MNV EP 08 16 06.0
WDC EP 08 16 20.8
USGS 08 05 28.0, 26.6S, 115.2W, H= 33 KM, M=4.9
EASTER ISLAND CORDILLERA

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SEP 13  SAO  EP     09 02 17
        PRI  EP     09 02 17
        BKS  EP     09 02 17.8
                                MICRON      PERIOD
                        PZ        0.02         0.8
        MBC  EP     09 02 18.5
        FBC  EP     09 02 22.5
        FRI  EP     09 02 23.0
        JAS  EP     09 02 23.5
        WDC  EP     09 02 25.5
        MIN  EP     09 02 27.0
        MNV  EP     09 02 32.0
                    USGS  08 50 49.3, 24.4S, 179.9E, H=519 KM, M=5.0
                          SOUTH OF FIJI ISLANDS

SEP 13  FBC  IPD    16 08 23.6
        WDC  IPC    16 08 36.1
        MIN  IPC    16 08 46.0
        BKS  EPD    16 08 56.0  09 32
        MBC  EPD    16 09 06.9  09 49
        JAS  EP     16 09 11.2
        SAO  EP     16 09 13.2
        FRI  IP     16 09 26.7
        PRI  E(P)   16 09 26.9
                    BRK   16 08 10.2, 40.2N, 124.4W, H=  1 KM, ML=4.0
                          SOUTHWEST OF EUREKA, CALIFORNIA

SEP 13  FBC  IPD    19 32 39.5
        WDC  IPC    19 32 52.4
        MIN  EP     19 33 02.5
        MBC  EP     19 33 23.1
                    BRK   19 32 25.5, 40.2N, 124.5W, H=  2 KM, ML=3.2
                          SOUTHWEST OF EUREKA, CALIFORNIA

SEP 13  FRI  EP     21 58 12.6
        JAS  EP     21 58 13.5
        WDC  EP     21 58 16.2
        MNV  EP     21 58 21.5
                    USGS  21 45 36.1, 30.1S, 178.0W, H= 60 KM, M=5.5
                          KERMADEC ISLANDS

SEP 14  MNV  EP     07 13 26.2
        JAS  EP     07 13 27.3
        WDC  EP     07 13 36.0

SEP 14  FBC         15 16                   *E 16 18
        WDC  EP     15 16 23.4
        MIN  EP     15 16 27.3
        BRK         15 16                   *E 16 28
        MBC  EP     15 16 32.2
        JAS  IPD    15 16 35.7
        FRI  EP     15 16 40.0
        MNV  IPD    15 16 44.0
                    USGS  15 04 37.0, 18.6N, 145.6E, H=197 KM, M=5.0
                          MARIANA ISLANDS

SEP 14  PRI  E(P)   15 56 32
        FRI  EP     15 56 34.3
        MBC  EP     15 56 39.3
        JAS  EP     15 56 42.3
        BKS  EP     15 56 43.8  05 34      *E 07 15    *E 10 07    LQ 14 49
                                            LR 16 16
                                MICRON      PERIOD
                        PZ        2.2          4.0
                        MAXR(Z)   2.1           16
                        MAXH(N)   2.6           16
                        MAXH(E)   2.2           16
        MNV  EP     15 56 45.1
        MIN         15 56                   *E 56 58
        WDC  EP     15 56 59.6
        FBC  E(P)   15 57 04
                    M=5.5, DISTANCE=65°
                    USGS  15 46 08.6, 26.4S, 115.1W, H= 33 KM, M=5.5
                          EASTER ISLAND CORDILLERA

SEP 14  FBC  EP     23 03 05                *E 03 40
        WDC  EPD    23 03 09.5              *E 03 44
        BKS  EP     23 03 12.4  14 41       *E 03 50    SKS 13 44   SS 21 36
                                            LQ 30 44    *E 34 56
                                MICRON      PERIOD
                        PZ        0.03         0.5
                        MAXR(Z)   2.2           20
                        MAXH(N)   0.0           20
                        MAXH(E)   2.0           20
        MBC  EP     23 03 13
        JAS  EP     23 03 17
        FRI  EP     23 03 19
        MNV  EP     23 03 25.4
                    M=5.6, DISTANCE=100°
                    USGS  22 49 32.4,  3.7S, 138.0E, H= 75 KM, M=5.8
                          WEST IRIAN

SEP 15  WDC  EP     02 11 29.7
        JAS  EP     02 11 52.7
        BKS         02 11                   *E 18 55    *E 26 16
                    USGS  02 02 53.6, 55.5N, 166.3E, H= 33 KM, M=5.0
                          KOMANDORSKY ISLANDS REGION

SEP 15  WDC  EPD    03 27 55.9
        MIN  EPD    03 27 56.0
        MNV  EPD    03 27 57.5
        FBC         03 27                   *E 27 59
        JAS  EPD    03 28 04.1
        FRI  EPD    03 28 07.1
        BKS  EP     03 28 09.5  38 46       *E 28 45    *E 29 42    PS 39 48
                                            SS 45 12    LQ 54 47    LR 57 12
                                MICRON      PERIOD
                        PZ        0.08         1.5
                        MAXR(Z)   6             22
                        MAXH(N)   7             22
                        MAXH(E)   6             22
        MBC  EP     03 28 09.7
        FRI  EP     03 28 13.1
                    M=6.2, DISTANCE=87°
                    USGS  03 15 19.9, 46.3N,  13.2E, H= 10 KM, M=5.7
                          AUSTRIA

SEP 15  MIN  EP     09 33 53.7
        WDC  EPC    09 33 53.8
        MNV  EP     09 33 54.3
        JAS  EP     09 34 02.1
        FRI         09 34                   *E 34 04
        MBC         09 34                   *E 34 07
        BKS  EP     09 34 08    44 41       *E 37 04    *E 45 00    SS 50 41
                                            LQ 56 50    *E 00 52    LR 02 44
                                MICRON      PERIOD
                        PZ        1.5            8
                        MAXR(Z)   6             20
                        MAXH(N)   4.2           20
                        MAXH(E)   5             20
        PRI         09 34                   *E 34 14
                    M=6.0, DISTANCE=87°
                    USGS  09 21 19.1, 46.3N,  13.1E, H= 17 KM, M=5.4
                          AUSTRIA

SEP 15  BKS  EP     12 55 40.6
                                MICRON      PERIOD
                        PZ        0.03         0.8
        MBC  EP     12 55 40.8
        FRI  EP     12 55 44.4
        JAS  EP     12 55 45.6
                    USGS  12 43 41.0, 31.0S, 179.6E, H=450 KM, M=5.1
                          KERMADEC ISLANDS REGION

SEP 15  MNV  IPD    14 10 12.3
        JAS  EP     14 10 36.7
        FRI  EP     14 10 39.0              S*G 11 47
        MBC         14 10                   P*G 10 53   SPG 11 51
        PRI         14 10                   *E 10 54
        WDC         14 11                   *E 10 57
                                            *E 11 08
                    ML=4.1, NEVADA
                    USGS  14 09 27.8, 39.8N, 115.2W, H=  5 KM
                          NEVADA

SEP 16  WDC  EPD    03 36 09.2
        MIN  EPD    03 36 11.1
        MNV  EP     03 36 23.0
        JAS  EP     03 36 26.5
        BKS  EP     03 36 29.6              *E 44 30    *E 48 08    LR 53 28
                                MICRON      PERIOD
                        PZ        0.02         1.0
                        MAXR(Z)   11            18
                        MAXH(N)   13            18
                        MAXH(E)   4.2           18
        FRI  EP     03 36 34.2
        PRI  EP     03 36 40
                    M=6.0, DISTANCE=56°
                    USGS  03 26 52.0, 84.3N,   0.8E, H=  8 KM, M=5.3
                          NORTH OF SVALBARD

SEP 16  WDC  EP     11 40 02.5
        BKS  EPC    11 40 02.8  51 22       *E 40 06    PS 52 40    SS 57 50
                                            LQ 05 10    LR 09 40
                                MICRON      PERIOD
                        PZ        0.12         1.5
                        MAXR(Z)   6             20
                        MAXH(N)   2.6           20
                        MAXH(E)   4.6           20
        MBC  EP     11 40 05.0
        MIN  EP     11 40 05.5
        SAO  EP     11 40 05
        JAS  EP     11 40 08.4              *E 40 13
        PRI  EP     11 40 08.4
        FRI  EP     11 40 11.1
        MNV  EP     11 40 17.6
                    M=6.0, DISTANCE=95°
                    USGS  11 26 36.8,  9.2S, 148.1E, H= 15 KM, M=5.7
                          EAST PAPUA , NEW GUINEA REGION

SEP 16  MBC  IPD    12 37 13.7
        BKS  IPC    12 37 24.2  37 34
        SAO  EPD    12 37 24.7
        JAS  EPC    12 37 33.8
        PRI  EP     12 37 38
        FRI  EP     12 37 41
                    BRK   12 37 11.7, 37.4N, 121.8W, H=  2 KM, ML=2.5
                          EAST OF SAN JOSE, CALIFORNIA

SEP 16  PRI  EP     23 24 38.0
        BKS  EPD    23 24 38.8
                                MICRON      PERIOD
                        PZ        0.06         0.7
        MBC  EP     23 24 39.0
        FRI  EP     23 24 43.6
        JAS  IPC    23 24 44.3              *I 24 53
        FBC         23 24                   *E 24 45
        WDC  IPC    23 24 46.3              *I 24 53
        MIN  EP     23 24 47.4
        MNV  IPC    23 24 52.4
                    USGS  23 12 59.7, 25.3S, 179.8E, H=445 KM, M=5.0
                          SOUTH OF FIJI ISLANDS

SEP 18  WDC  EP     01 34 39.1
        FRI         01 34                   *E 34 47
                    USGS  01 21 34.2,  5.9S, 148.2E, H= 95 KM, M=5.4
                          NEW BRITAIN REGION

SEP 18  MBC         01 40                   *E 40 55
        FRI  EP     01 41 03.1

SEP 18  WDC  EP     10 42 10.2
        BKS         10 42                   LR 58 50
        JAS  EP     10 42 30.9
        MNV  EP     10 42 38.0
        FRI         10 42                   *E 42 38
                    USGS  10 32 57.2, 52.3N, 159.5E, H= 36 KM, M=4.9
                          OFF EAST COAST OF KAMCHATKA

SEP 18  FRI  EPC    19 20 55.5
        BKS         19 21                   *E 40 46
        JAS  EPC    19 21 03.2
        MNV  EPC    19 21 04.6
        WDC  EP     19 21 21.0
                    USGS  19 10 27.9, 26.5S, 115.2W, H= 33 KM, M=4.8
                          EASTER ISLAND CORDILLERA

SEP 18  FRI  EP     21 28 35
        JAS  EP     21 28 42.0
        MNV  EP     21 28 43.6
        WDC  E(P)   21 28 59.6
                    USGS  21 18 18.1, 24.7S, 114.7W, H= 33 KM, M=4.7
                          EASTER ISLANDS REGION

SEP 18  FRI  EP     23 45 57
        JAS  EP     23 46 04.5
        MNV  EP     23 46 05

SEP 19  WDC  EP     10 45 39.4
        MIN  EP     10 45 42
        JAS  EP     10 45 50.0
        FRI  EP     10 45 53.7
        MNV         10 45                   *E 45 58
                    USGS  10 33 22.5, 13.3N, 144.3E, H=131 KM, M=4.6
                          MARIANA ISLANDS

SEP 19  FRI  EPC    12 31 49.2
        MNV  EPC    12 31 49.2
        PRI  EPC    12 31 52.0
        JAS  EPC    12 31 57.7
        SAO  E(P)   12 31 59
        MBC  EPC    12 32 02.5
        BKS  EP     12 32 07.6              *E 46 50
                                MICRON      PERIOD
                        PZ        0.08         0.9
                        MAXR(Z)   0.8           20
                        MAXH(N)   0.5           20
                        MAXH(E)   1.1           20
        MIN  EPC    12 32 13.5
        WDC  EPC    12 32 17.0
        FBC  EPC    12 32 29.0
                    M=4.8, DISTANCE=47°
                    USGS  12 23 30.7,  7.3N,  82.2W, H=  5 KM, M=5.2
                          SOUTH OF PANAMA

SEP 19  MNV  EPKP   15 19 11.5
        MIN  EPKP   15 19 14.5
        WDC  EPKP   15 19 15.0
        FBC  EPKP   15 19 17.2
        JAS  EPKP   15 19 17.2
        FRI  EPKP   15 19 18.0
        BKS  EPKP   15 19 21.3              *E 19 31    *E 20 12
                                MICRON      PERIOD
                        MAXR(Z)   2.3           20
                        MAXH(N)   2.1           20
                        MAXH(E)   2.1           20
        MBC  EPKP   15 19 21.6
        PRI  EPKP   15 19 22.5
                    M=6.0, DISTANCE=145°
                    USGS  14 59 43.7, 11.1S,  32.9E, H= 27 KM, M=5.7
                          ZAMBIA
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                                                P*CP 06 59      *E 07 16   S*CP 10 48
                                                P*CP 07 00      *I 07 17   S*CP 10 47
SEP 19  FRI  EP   21 03 26.8                    P*CP 07 00
        PRI  EP   21 03 28.5
        MNV  IPD  21 03 30.0                     *I 03 58   P*CP 07 02      *E 07 19
        SAO  EP   21 03 35.8                    S*CP 10 50
        JAS  IPD  21 03 37.2                    P*CP 07 03
                                                *PP 04 06   *E 04 33       *E 11 20
        MHC  EP   21 03 40.8
        BKS  EP   21 03 46.7  08 29               PERIOD
                        MICRON                     0.8
                  PZ      0.03                    20
                  MAXR(Z) 1.4                     20
                  MAXH(N) 1.8                     20
                  MAXH(E) 1.6                    *E 04 02
        MIN       21 04                         P*CP 07 08
        WDC  EP   21 04 01.8
        PHC  EP   21 04 13.3
                  Ms=4.8, DISTANCE=27°
                  USGS  20 58 05.1, 18.2S, 100.5W, H= 55 KM, M=5.6
                        GUERRERO, MEXICO

SEP 20  PHC  IP   03 33 25.0
        WDC  IPC  03 33 39.9
        MIN  IPD  03 33 59.3  34 18
        JAS  EP   03 34 17.0
                  BRK   03 33 12.4, 40.4N, 124.5W, H=  2 KM, ML=3.6
                        SOUTHWEST OF EUREKA, CALIFORNIA

SEP 20  MNV  IPC  03 41 17.5                    *E 41 24
        PRI       03 41
        JAS  EP   03 41 30.0
        MHC  EP   03 41 35.2
        MIN  EP   03 41 37.3
        WDC  EP   03 41 40.7
                  USGS  03 31 55.1, 16.7N,  61.1W, H= 51 KM, M=4.9
                        LEEWARD ISLANDS

SEP 20  JAS  EP   10 24 53.7
                  USGS  10 13 13.7, 23.1S,  66.1W, H=245 KM, M=4.4
                        JUJUY PROVINCE, ARGENTINA

SEP 20  PRI  EP   19 19 24.0
        MHC  EP   19 19 28.6
        JAS  EP   19 19 31.7
        MNV  EP   19 19 33.9
        MIN  EP   19 19 47.8
        WDC  EP   19 19 48.8
                  USGS  19 08 56.0, 26.6S, 115.2W, H= 33 KM, M=5.0
                        EASTER ISLAND CORDILLERA

SEP 21  PRI  EP   01 44 01.4
        MHC  EP   01 44 05.9
        JAS  IPD  01 44 08.7
        MNV  EP   01 44 11.2
        WDC  EP   01 44 25.9
                  USGS  01 33 32.5, 26.5S, 114.7W, H= 25 KM, M=5.1
                        EASTER ISLAND REGION

SEP 21  PRI  EP   02 29 31.0
        JAS  EP   02 29 31.3                    *PP 31 36
        WDC  EP   02 29 32.8                    *PP 31 34
        MIN  EP   02 29 34.3
        MNV  EP   02 29 38.8                    *PP 31 46
                  USGS  02 18 19.3, 20.9S, 178.7W, H=581 KM, M=5.3
                        FIJI ISLANDS REGION

SEP 22  PHC  EPC  00 26 16.1
        WDC  IPC  00 26 22.1                     PP 28 45
        MIN  EPC  00 26 26.5
        BKS  EP   00 26 34.6  35 00             SS 39 16    LQ 42 20    LR 45 04
                        MICRON                     PERIOD
                  PZ      0.28                      1.4
                  MAXR(Z) 1.1                       20
        MHC  EPC  00 26 38.6
        SAO  EP   00 26 41.2
        JAS  IPC  00 26 41.3                    P*CP 27 10    PP 29 07
        PRI  EPC  00 26 47.6
        PRI  EP   00 26 47.9
        MNV  IPC  00 26 48.6
                  USGS  00 16 08.2, 44.9N, 149.2E, H= 64 KM, M=6.1
                        KURIL ISLANDS

SEP 22  WDC  EP   02 37 39
        BKS       02 38                         *E 43 58    *E 47 04    *E 48 44
        JAS       02 38                         *E 38 07
        MHC       02 38                         *E 38 08
        PRI       02 38                         *E 38 13
        MNV       02 38                         *E 38 15
                  USGS  02 30 25.7, 51.7N, 176.0W, H= 43 KM, M=4.8
                        ANDREANOF ISLANDS, ALEUTIAN ISLANDS

SEP 22  PHC  EPC  08 32 14.1
        WDC  IPC  08 32 19.4
        MIN  EPC  08 32 22.8
        BKS  EPC  08 32 25.6
                        MICRON      PERIOD
                  PZ      0.09        0.8
        MHC  EPC  08 32 29.4
        SAO  E(P) 08 32 31
        JAS  IPC  08 32 32.6
        PRI  EPC  08 32 36.1
        PRI  EPC  08 32 37.1
        MNV  IPC  08 32 41.3
                  USGS  08 20 27.8, 23.4N, 142.1E, H=129 KM, M=5.2
                        VOLCANO ISLANDS REGION

SEP 22  PRI  EPKP 16 33 08.6
        MNV  EPKP 16 33 08.6
        PRI  EPKP 16 33 09.6
        JAS  EPKPD 16 33 11.0
        MHC       16 33                         *E 33 13
        MIN  EPKP 16 33 14.4
        WDC  EPKP 16 33 15.2
        PHC       16 33                         *E 33 19
                  USGS  16 14 08.2, 46.2S,  13.9W, H= 25 KM, M=5.7
                        SOUTH ATLANTIC RIDGE

SEP 22  PHC  EP   20 19 49.0
        WDC  EP   20 19 53.2
        MIN  EP   20 19 56.2
        JAS  IPC  20 20 08.8
        MNV  EP   20 20 10.2
        PRI       20 20                         *E 20 14
                  USGS  20 07 03.2, 40.0N, 106.3E, H= 29 KM, M=5.6
                        NORTHERN CHINA

SEP 23  PRI  EP   01 04 41.1
        PRI  EP   01 04 41.3
        MNV  EP   01 04 45.7
        JAS  EP   01 04 53.3
        MHC  EP   01 04 54.1
        MIN  EP   01 05 15.8
        WDC  EP   01 05 19.5
                  USGS  00 59 48.0, 18.8N, 105.5W, H= 33 KM, M=4.3
                        OFF COAST OF JALISCO, MEXICO

SEP 23  PRI  IPC  02 47 29.4  47 40              *I 47 42
        MNV  IPD  02 47 25.5
        PRI  IPD  02 47 32.9  48 01
        JAS  EP   02 47 36.1  48 07
        SAO  EP   02 47 40.9
        MHC  EP   02 47 44.9
                  BRK   02 46 54.2, 36.5N, 117.8W, H= 10 KM, MAG=3.7
                        SOUTHEAST OF LONE PINE, CALIFORNIA

SEP 23  WDC  EP   10 01 43.5
        MIN  EP   10 01 47.5
        JAS  EP   10 02 00.9
        MNV  EP   10 02 02.7
                  USGS  09 50 08.1, 55.6N, 110.2E, H= 33 KM, M=4.6
                        LAKE BAIKAL REGION

SEP 23  WDC  EP   22 35 51.2
        JAS  EP   22 35 57.5
        PRI  EP   22 35 59.9
                  USGS  22 22 45.8,  5.9S, 148.2E, H= 94 KM, M=5.5
                        NEW BRITAIN REGION

SEP 25  PRI  E(P) 06 18 18
        FRI  EP   06 18 22
        MHC  EP   06 18 27
        JAS  EP   06 18 30
        MNV  EP   06 18 32
        WDC  EP   06 18 47
                  EASTER ISLANDS REGION

SEP 25  PRI  EP   10 51 04.4
        FRI  EP   10 51 08.3
        MHC  EP   10 51 13.0
        JAS  EPD  10 51 15.8
        MNV  EPD  10 51 18.2
        WDC  EPD  10 51 32.9
        PHC  EP   10 51 35
                  EASTER ISLANDS REGION

SEP 25  JAS  EP   11 02 36.5
        WDC  EP   11 02 51.5
                  USGS  10 51 20.8, 17.7S,  69.7W, H=152 KM
                        EASTER ISLANDS REGION

SEP 25  PRI  EP   21 57 46.5
        FRI  EP   21 57 50.4
        MHC  EP   21 57 55.0
        JAS  EP   21 57 57.7                    *E 58 12
        BKS  EP   21 57 59.6  06 44             *PP 58 11    SS 11 03    LQ 14 12
                                                LR 17 05
                        MICRON      PERIOD
                  PZ      0.17        2.0
                  MAXR(Z) 2.7         19
                  MAXH(N) 3.6         20
                  MAXH(E) 1.0         19
        MNV  EP   21 58 00.2                    *E 58 14
        WDC  EP   21 58 15.2                    *E 58 29
                  Ms=5.5, DISTANCE=6S°
                  USGS  21 47 23.2, 26.6S, 115.0W, H= 33 KM, M=5.5
                        EASTER ISLAND CORDILLERA

SEP 26  PRI  EP   07 26 01.8
        MNV  EP   07 26 02.2
        JAS  EP   07 26 06.5
        MHC  EP   07 26 08.7
        WDC  EP   07 26 19.5
        PHC  EP   07 26 27
                  USGS  07 13 37.8, 28.0S,  64.7W, H= 24 KM, M=5.0
                        SANTIAGO DEL ESTERO PROVINCE, ARGENTINA

SEP 26  PRI  EPKP 14 53 24.5                    *E 53 35
        MNV  EPKP 14 53 24.5                    *E 53 35
        FRI       14 53                         *E 53 28
        JAS  EPKP 14 53 26.0                    *E 53 37
        MHC       14 53                         *E 53 38
        BKS       14 53                         *E 53 40
        WDC       14 53                         *E 53 39
                  USGS  14 33 29.3, 52.0S,  28.2E, H= 39 KM, M=5.0
                        SOUTH OF AFRICA

SEP 27  MHC  EP   08 35 32.8
        FRI  EP   08 35 36.6
        JAS  EPC  08 35 37.7
        WDC  EP   08 35 40.7
        MNV  EPC  08 35 45.5
                  USGS  08 22 56.0, 30.6S, 178.0W, H= 39 KM, M=4.8
                        KERMADEC ISLANDS

SEP 27  PRI  EP   12 56 33.5
        BKS  EP   12 56 34.3  07 24             *E 58 30    PS 08 26    *E 10 38
                                                LR 23 50
                        MICRON      PERIOD
                  PZ      0.02        0.7
                  MAXR(Z) 1.4         20
                  MAXH(N) 2.0         20
                  MAXH(E) 1.2         20
        MHC  EP   12 56 34.5
        FRI  EP   12 56 38.0
        JAS  EPC  12 56 39.0
        PHC  EP   12 56 41.7
        WDC  EP   12 56 42.3
        MIN  EP   12 56 43.5
        MNV  EP   12 56 48.0
                  Ms=5.6, DISTANCE=88°
                  USGS  12 43 45.4, 33.1S, 179.3W, H= 44 KM, M=5.2
                        SOUTH OF KERMADEC ISLANDS

SEP 28  MIN  IPC  09 07 24.5  07 33
        WDC  IPC  09 07 34.0  07 50
        JAS  IPD  09 08 02.5
        BKS  EP   09 08 06.4  08 45             P* 08 12    S* 08 56
        MHC  EP   09 08 12.0
                  BRK   09 07 11.6, 40.8N, 121.0W, H=  2 KM, ML=3.8
                        SOUTHEAST OF BURNEY, CALIFORNIA

SEP 29  PHC  EP   03 10 48.6
        WDC  IPC  03 10 48.7                     RPKP 39 23
        MIN  EPC  03 10 50.5
        MNV  EP   03 11 02.5                     RPKP 39 17
        JAS  IPC  03 11 06.0                     RPKP 39 18
        BKS  EPC  03 11 06.7
                        MICRON      PERIOD
                  PZ      0.03        0.8
        MHC  EP   03 11 10.1
        FRI  EPC  03 11 11.7                     RPKP 39 14
        SAO  EP   03 11 13.4
        PRI  EPC  03 11 18.1                     RPKP 39 14
                  USGS  02 59 57.4, 73.4N,  54.8E, H=  0 KM, M=5.8
                        NOVAYA ZEMLYA

SEP 29  WDC       09 40                         *E 40 08
        MIN       09 40                         *E 40 11
        BKS       09 40                         *E 40 14
        MHC  EP   09 40 11.0                    *E 40 18
        JAS  EP   09 40 14.5                    *E 40 21
        FRI  EP   09 40 19.0                    *E 40 26
        MNV  EP   09 40 22.3                    *E 40 29
                  USGS  09 28 00.4, 21.7N, 144.3E, H= 24 KM, M=5.2
                        MARIANA ISLANDS REGION

SEP 29  MNV  IPC  09 59 49.9
        FRI  EPC  09 59 54.5
        PRI  EP   09 59 59
        JAS  EPC  10 00 02.0
        MHC  EPC  10 00 08.0
        BKS  EP   10 00 14.2  06 38             LR 12 30
                        MICRON      PERIOD
                  PZ      0.18        1.6
                  MAXR(Z) 0.9         20
                  MAXH(N) 1.8         20
                  MAXH(E) 1.6         20
        MIN  EP   10 00 14.9
        WDC  EPC  10 00 18.6
        PHC  EP   10 00 30.6
                  Ms=5.0, DISTANCE=40°
                  USGS  09 52 33.8, 19.0N,  80.8W, H= 33 KM, M=5.2
                        CUBA REGION
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SEP 29  FRI  EP    14 59 32.4
        BKS  EP    14 59 33.3                    *E 15 24
                                MICRON      PERIOD
                        PZ        0.02         1.0
        MHC  EP    14 59 33.6
        FRI  EP    14 59 38.5
        JAS  IP    14 59 39.1
        WDC  EP    14 59 43.3
        MNV  IP    14 59 48.4
                   USGS  14 47 44.5, 21.1S, 174.5W, H= 33 KM, M=4.9
                         TONGA ISLANDS

SEP 29  FRI  EP    15 51 02.4
        MHC  EP    15 51 03.2
        BKS  EP    15 51 03.4
                                MICRON      PERIOD
                        PZ        0.07         0.6
        FRI  EP    15 51 07.8
        FHC  EP    15 51 08.2
        JAS  IPC   15 51 08.8
        WDC  EP    15 51 11.0
        MIN  EP    15 51 12.9
        MNV  IP    15 51 17.8
                   USGS  15 39 01.0, 23.0S, 176.1W, H= 33 KM, M=5.4
                         SOUTH OF FIJI ISLANDS

SEP 29  MNV  EP    16 57 36.5
                   USGS  16 48 32.9,  5.9N,  77.4W, H= 17 KM, M=5.1
                         NEAR WEST COAST OF COLOMBIA

SEP 30  FRI  EP    08 16 10.4
        PRI  EPD   08 16 12.0
        MNV  IPD   08 16 12.1
        JAS  IPD   08 16 17.3
        MHC  EP    08 16 19.3                    *E 16 51
        BKS  EP    08 16 22.8
                                MICRON      PERIOD
                        PZ        0.04         0.8
        MIN  EP    08 16 28.3
        WDC  IPD   08 16 31.4                    *I 17 05
        FHC  EP    08 16 38.5
                   USGS  08 04 26.5, 24.0S,  67.9W, H=131 KM, M=5.3
                         CHILE-ARGENTINA BORDER REGION

SEP 30  FHC  E(P)  17 36 56
        WDC  EP    17 37 10.6
        MIN  E(P)  17 37 13
        BKS  EP    17 37 39.4
                                MICRON      PERIOD
                        PZ        0.02         0.6
        MHC  EP    17 37 49
        JAS  EP    17 37 52
        MNV  EP    17 38 04.5
        FRI  EP    17 38 07
                   USGS  17 36 02.6, 43.5N, 127.0W, H= 33 KM, M=5.2
                         OFF COAST OF OREGON

SEP 30  PRI  EP    23 46 48.9
        SAO  EP    23 46 49
        BKS  EP    23 46 49.7  57 22     SS 03 20   SSS 06 12    LQ 09 10
                                         LR 12 40
                                MICRON      PERIOD
                        PZ        0.34         1.6
                        MAXR(Z)  28            20
                        MAXH(N)  29            20
                        MAXH(E)  23            20
        MHC  EP    23 46 49.8
        FRI  EP    23 46 53.5
        JAS  EP    23 46 54.7
        FHC  EP    23 46 55.4
        WDC  EP    23 46 57.9
        MIN  EP    23 46 59
        MNV  EPC   23 47 02.4
                   M=6.7, DISTANCE=85°
                   USGS  23 34 14.4, 30.2S, 177.9W, H= 32 KM, M=5.7
                         KERMADEC ISLANDS

OCT 01  SAO  EP    03 46 05.5
        PRI  EP    03 46 06.0
        BKS  EP    03 46 06.5
                                MICRON      PERIOD
                        PZ        0.03         0.8
        MHC  EP    03 46 06.5
        FRI  EP    03 46 11.2
        JAS  EPC   03 46 11.5
        WDC  EP    03 46 13.8
        MIN  EP    03 46 15.6
        MNV  EP    03 46 20.9
                   USGS  03 34 36.3, 22.4S, 178.1W, H=369 KM, M=4.9
                         SOUTH OF FIJI ISLANDS

OCT 01  SAO  EP    07 25 05.3
        PRI  EP    07 25 06.9                    *PP 26 31
        BKS  EP    07 25 07.1                    *PP 26 30
                                MICRON      PERIOD
                        PZ        0.13         0.9
        MHC  EP    07 25 07.1                    *PP 26 31
        FHC  EP    07 25 10.8
        FRI  EP    07 25 12.2                    *PP 26 36
        JAS  EPC   07 25 12.7                    *PP 26 37
        WDC  EP    07 25 14.3                    *PP 26 38
        MIN  EP    07 25 16.2                    *PP 26 40
        MNV  EPC   07 25 22.2                    *PP 26 47
                   USGS  07 13 51.2, 19.7S, 177.6W, H=384 KM, M=5.3
                         FIJI ISLANDS REGION

OCT 01  JAS  EPKP  22 27 29
        WDC        22 27                         *E 27 43
                   USGS  22 08 32.0, 58.3S,  24.8W, H= 33 KM, M=5.3
                         SOUTH SANDWICH ISLANDS REGION

OCT 02  PRI  EP    14 00 26.7
        BKS  E(P)  14 00 27    11.28
                                MICRON      PERIOD
                        MAXR(Z)   3.3          20
                        MAXH(N)   3.2          20
                        MAXH(E)   2.2          20
        MHC  EP    14 00 27.7
        FRI  EP    14 00 31
        JAS  EP    14 00 32.5
        WDC  EP    14 00 35.7
        MNV  EP    14 00 46.5
                   M=5.8, DISTANCE=90°
                   USGS  13 47 30.4, 35.1S, 179.4W, H= 34 KM, M=5.4
                         EAST OF NORTH ISLAND, NEW ZEALAND

OCT 02  BKS  EP    15 51 25
        MHC  EP    15 51 24.7
        PRI  E(P)  15 51 25.5
        WDC  EP    15 51 29.9
        JAS  EP    15 51 30.0
        FRI  EP    15 51 30.2
        MNV        15 51                         *E 51 40
                   USGS  15 39 02.0, 19.6S, 173.4E, H= 49 KM, M=4.7
                         NEW HEBRIDES ISLANDS REGION

OCT 02  PRI  EP    18 50 34
        MHC  EP    18 50 35
        FRI  EP    18 50 38.8
        JAS  EP    18 50 39.8
        WDC  EP    18 50 43.3
        MNV  EP    18 50 48.0
                   USGS  18 38 06.0, 29.8S, 177.4W, H= 65 KM, M=4.7
                         KERMADEC ISLANDS

OCT 02  BKS  E(P)  22 07 16
        PRI  EP    22 07 16.5
        MHC  EP    22 07 17.6
        FRI  EP    22 07 20.9
        JAS  EP    22 07 22.1
        WDC  EP    22 07 25.5
        MNV  EP    22 07 29.4
                   USGS  21 54 21.3, 34.9S, 179.5W, H= 32 KM, M=5.1
                         SOUTH OF KERMADEC ISLANDS

OCT 03  BKS  EP    15 29 52.5
        PRI  EP    15 29 53.6
        MHC  EP    15 29 53.8
        FRI  EP    15 29 58.4
        JAS  EP    15 29 59.0
        WDC  EP    15 30 00.6
        MIN  EP    15 30 02.5
        MNV  EP    15 30 06.8
                   USGS  15 18 37.6, 22.6S, 179.6W, H=579 KM, M=4.7
                         SOUTH OF FIJI ISLANDS

OCT 04  BRK  EP    00 12 49.3
        PRI  EP    00 12 49.8
        MHC  EP    00 12 50.0
        FRI  EP    00 12 55.7
        JAS  EP    00 12 56.2
        WDC  EP    00 12 58.3
        MIN  EP    00 13 00.2
        MNV  EP    00 13 06.5
                   USGS  00 01 30.6, 15.6S, 173.3W, H= 39 KM, M=4.8
                         TONGA ISLANDS

OCT 04  FHC  EPKP  02 42 01.8
        WDC  EPKP  02 42 02.9
        MIN  EPKP  02 42 04.3
        BRK  EPKP  02 42 06.5
        MHC  EPKP  02 42 08.0
        JAS  EPKP  02 42 08.7
        FRI  EPKP  02 42 10.8
        PRI  EPKP  02 42 11.1
        MNV  EPKP  02 42 11.5
                   USGS  02 23 00.6,  5.3S, 102.6E, H= 30 KM, M=5.5
                         SOUTHERN SUMATRA

OCT 04  PRI  EP    07 02 43.4
        MHC  EP    07 02 44.3
        BKS  EP    07 02 45                      *E 33 00
        FRI  EP    07 02 48.2
        JAS  EP    07 02 49.3
        WDC  EP    07 02 52.5
        MIN  EP    07 02 53.6
        MNV  E(P)  07 02 57.3
                   USGS  06 50 08.8, 30.5S, 177.5W, H= 33 KM, M=5.5
                         KERMADEC ISLANDS

OCT 04  FRI  EP    07 04 38.4
        MNV  EP    07 04 39.3
        PRI  EP    07 04 40.9
        JAS  EP    07 04 48.2
        MHC  EP    07 04 52.6
        BKS        07 04          10 00      LQ 12 20
                                MICRON      PERIOD
                        MAXR(Z)   6            20
                        MAXH(N)   8            20
                        MAXH(E)   8            20
        MIN  E(P)  07 05 07.2
        WDC  E(P)  07 05 12.3
                   M=5.4, DISTANCE=27°
                   USGS  06 59 18.9, 20.4N,  99.0W, H= 16 KM, M=5.1
                         CENTRAL MEXICO

OCT 04  PRI  EP    13 58 53.0
        MHC  EP    13 58 53.6
        FRI  EP    13 58 59.0
        JAS  EP    13 58 59.7
        WDC  EP    13 59 01.9
        MIN  EP    13 59 03.7
        MNV  EP    13 59 10.0
                   USGS  13 47 30.8, 16.1S, 172.9W, H= 25 KM, M=4.9
                         SAMOA ISLANDS REGION

OCT 04  MNV  EP    23 45 27.9
        PRI  EP    23 45 28.4
        FRI  EP    23 45 29.0
        JAS  IP    23 45 35.7
                   USGS  23 36 11.1,  0.7S,  78.6W, H= 55 KM, M=5.1
                         ECUADOR

OCT 05  SAO  EP    01 12 29.9
        PRI  EP    01 12 31.3
        BKS  EPD   01 12 31.4
                                MICRON      PERIOD
                        PZ        0.04         0.8
        MHC  EP    01 12 31.6
        FRI  EP    01 12 36.9
        JAS  IPD   01 12 37.4
        WDC  IPD   01 12 39.4
        MIN  EP    01 12 41.8
        MNV  IPD   01 12 47.5
                   USGS  01 01 04.1, 17.8S, 174.7W, H=104 KM, M=4.9
                         TONGA ISLANDS

OCT 05  PRI  EP    13 56 08.0
        BKS  IPC   13 56 08.3
                                MICRON      PERIOD
                        PZ        0.02         0.7
        MHC  EP    13 56 08.4
        FRI  EP    13 56 12.7
        JAS  EPC   13 56 13.5
        WDC  EPC   13 56 15.6
        MIN  EP    13 56 17.4
        MNV  EPC   13 56 21.6
                   USGS  13 44 33.7, 25.2S, 179.7E, H=500 KM, M=5.0
                         SOUTH OF FIJI ISLANDS

OCT 05  PRI        16 10                         *E 10 11
        BKS        16 10                         *E 10 12
        MHC  E(P)  16 10 06
        FRI  EP    16 10 09.5
        JAS  EP    16 10 10.4
        WDC  EP    16 10 13.6
        MIN  EP    16 10 15.3
        MNV  EP    16 10 18.1
                   USGS  15 57 27.4, 30.4S, 177.3W, H= 15 KM, M=5.5
                         KERMADEC ISLANDS

OCT 05  MNV  EP    16 45 46.5
                   USGS  16 36 29.1,  0.6S,  78.7W, H= 33 KM, M=5.2
                         ECUADOR

OCT 05  FHC        18 15                         *E 15 11
        WDC  EPD   18 15 14.7                    PP 18 49
        BKS        18 15                         *E 15 17    LR 43 00
                                MICRON      PERIOD
                        MAXR(Z)   4.3          20
        MHC  EPD   18 15 16.1                    PP 18 49
        MIN  EP    18 15 17.4
        PRI  EP    18 15 20.0
        JAS  IPD   18 15 20.9                    PP 19 53
        FRI  EPD   18 15 23.0
        MNV  IPD   18 15 29.7
                   M=5.9, DISTANCE=89°
                   USGS  18 02 15.4,  6.4S, 153.0E, H= 22 KM, M=6.3
                         NEW BRITAIN REGION

OCT 06  WDC  EP    01 13 34.4
        JAS  EP    01 13 49.6
        MNV  E(P)  01 13 53.5
        FRI  EP    01 13 54.0
                   USGS  01 01 11.1, 35.3N, 124.3E, H= 33 KM, M=5.2
                         YELLOW SEA
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OCT 06  MNV  EPD   09 21 57.4
        FRI  EP    09 21 58.8
        FRI  EP    09 21 59.4                    •E 45 11
        JAS  EPD   09 22 05.5
        SAO  EP    09 22 06
        MHC  EP    09 22 09.1
        BKS  E(P)  09 22 16
        MIN  EP    09 22 20
        WDC  EPD   09 22 23.6
        FHC  EP    09 22 33.2
                   USGS 09 12 38.9,  0.7S,  78.8W, H= 33 KM, M=5.7
                   ECUADOR

OCT 06  FHC  EPD   13 49 48.7
        WDC  IPD   13 49 54.0                    •E 50 17    •E 50 25
        MIN  EPD   13 49 58.0
        BKS  IPD   13 50 03.8
                              MICRON     PERIOD
                          PZ    0.17        1.3
        MHC  EPD   13 50 08.1
        SAO  EP    13 50 10
        JAS  IPD   13 50 10.8                    •I 50 37
        FRI  EPD   13 50 16.1
        PRI  EPD   13 50 16.3
        MNV  EPD   13 50 17.6
                   USGS 13 38 42.1, 37.1N, 141.3E, H= 81 KM, M=5.6
                   NEAR EAST COAST OF HONSHU, JAPAN

OCT 06  MHC  IPD   20 54 26.7
        BKS  IPC   20 54 33.5
        JAS  IPD   20 54 36.2
        SAO  IPD   20 54 36.8                    •I 54 49    •I 55 05
        FRI  EP    20 54 46.0
        PRI  EP    20 54 48.4
        MNV  EP    20 55 08.1
                   BRK 20 54 19.9, 37.6N, 121.4W, H=  2 KM, ML=3.3
                   EAST OF LIVERMORE, CALIFORNIA

OCT 07  FHC  EPC   04 46 12.6
        WDC  IPC   04 46 17.8
        MIN  IPC   04 46 21.4                    •E 47 05
        BKS  IPC   04 46 24.0
                              MICRON     PERIOD
                          PZ    0.09        0.9
        MHC  EPC   04 46 27.4                    •E 47 13
        SAO  EP    04 46 28.7
        JAS  IPC   04 46 30.6
        PRI  EPC   04 46 33.9
        PRI  IPC   04 46 35.2                    •E 47 17
        MNV  IPC   04 46 38.5
                   USGS 04 34 29.9, 22.1N, 143.2E, H=166 KM, M=5.2
                   VOLCANO ISLANDS REGION

OCT 07  JAS  EP    11 46 30.4
                   USGS 11 33 52.1, 39.8N, 118.5E, H= 33 KM, M=5.0
                   NORTHEASTERN CHINA

OCT 07  MNV  EP    22 10 25.0
        FRI  EP    22 10 27
        JAS  EP    22 10 33
        MHC  E(P)  22 10 36.5
        WDC  EP    22 10 51.5
                   USGS 22 01 18.5,  0.3S,  80.4W, H= 48 KM, M=5.0
                   NEAR COAST OF ECUADOR

OCT 07  WDC  EP    22 39 07
        MHC  E(P)  22 39 44
        JAS  EP    22 39 48.0
        FRI  EP    22 40 03.2
        PRI  E(P)  22 40 05
                   USGS 22 37 34.3, 44.2N, 129.4W, H= 33 KM, M=4.6
                   OFF COAST OF OREGON

OCT 08  SAO  EP    01 52 56
        BRK  EP    01 52 57.0
        PRI  EP    01 52 57.2
        MHC  EP    01 52 57.6
        FRI  EP    01 53 02.0
        JAS  EP    01 53 02.5
        WDC  EP    01 53 04.4
        MIN  EP    01 53 06
        MNV  EP    01 53 11.0
                   USGS 01 41 31.4, 24.3S, 179.3E, H=565 KM, M=5.1
                   SOUTH OF FIJI ISLANDS

OCT 08  WDC  EP    09 31 32.5
        JAS  EP    09 31 57
        MNV  EP    09 32 04
                   USGS 09 22 48.9, 55.1N, 164.3E, H= 36 KM, M=4.9
                   KOMANDORSKY ISLANDS REGION

OCT 08  SAO  IPC   09 53 34.6
        PRI  IPD   09 53 35.7
        MHC  EP    09 53 45.3
        FRI  EP    09 53 47.6
        JAS  EP    09 53 53.8
        BKS  EP    09 54 02                      •E 54 20
                   BRK 09 53 26.4, 36.5N, 121.1W, H= 11 KM, ML=2.6
                   BEAR VALLEY, CALIFORNIA

OCT 09  FRI        02 10                         •E 10 40
        FRI  E(P)  02 10 40                      •E 11 02    •E 11 53
        MNV  EP    02 10 49                      •E 11 06    S•G 12 20
        JAS  E(P)  02 10 54                      •E 11 00    S•G 12 24
        MHC        02 11                         •E 11 00
                   USGS 02 09 28.1, 33.3N, 116.2W, H= 16 KM
                   SOUTHERN CALIFORNIA

OCT 09  WDC  EPC   03 02 25.5
        MIN  EP    03 02 29.8
        BRK  EP    03 02 37
        MHC  EP    03 02 41.8
        JAS  EP    03 02 44.5
        PRI  EP    03 02 51
        PRI  EP    03 02 51.5
        MNV  E(P)  03 02 52.5
                   USGS 02 52 26.4, 45.2N, 153.5E, H= 34 KM, M=5.1
                   KURIL ISLANDS REGION

OCT 09  MNV  EPC   12 38 44.0                    P•CP 40 51
        FRI  EP    12 38 44.5                    P•CP 40 51
        PRI  EP    12 38 47.0
        JAS  EPC   12 38 53.4                    P•CP 40 54
        SAO  E(P)  12 38 54.6
        MHC  EP    12 38 58.2
        BKS  EPC   12 39 04.0  45 28    •E 39 12    •E 39 21  P•CP 40 59
                                        S•CS 49 08  •E 51 12    LR 56 12
                              MICRON     PERIOD
                          PZ    0.06        1.0
                          MAXR(Z) 5         20
                          MAXH(N) 7         20
                          MAXH(E) 7         20
        MIN  EP    12 39 09.8
        WDC  EPC   12 39 13.4                    P•CP 41 02
        FHC  EPC   12 39 24.6                    P•CP 41 08
                   M=5.7, DISTANCE=42°
                   USGS 12 31 15.8, 10.8N,  85.8W, H= 85 KM, M=5.3
                   COSTA RICA

OCT 09  MNV  EP    21 20 36.8
        WDC  EP    21 21 01.0
        FHC  EP    21 21 10
                   USGS 21 10 28.6, 10.7S,  79.5W, H= 64 KM, M=5.1
                   OFF COAST OF PERU

OCT 10  MNV  EP    06 28 41
        WDC        06 29                         •E 29 10
                   USGS 06 19 24.2,  0.8S,  78.6W, H= 51 KM, M=4.8
                   ECUADOR

OCT 10  WDC  EP    14 42 30
        JAS  EP    14 42 50
                   USGS 14 31 59.9, 43.3N, 147.7E, H= 21 KM, M=5.1
                   KURIL ISLANDS

OCT 10  PRI  EP    22 40 52.2
        MHC  EP    22 40 52.6
        FRI  EP    22 40 57.0
        JAS  EP    22 40 57.7
        WDC  EP    22 40 59.6
        MNV  EP    22 41 05.9
                   SOUTH OF FIJI ISLANDS

OCT 11  PRI        21 13                         •E 13 54
        SAO  EP    21 13 54.4
        BKS  EP    21 13 55.5
        MHC  EP    21 13 56.0
        FRI  EP    21 14 01.2
        JAS  IPD   21 14 01.8
        WDC  IPD   21 14 03.1
        MNV  IPD   21 14 11.5
                   USGS 21 02 49.1, 17.9S, 177.4W, H=396 KM, M=5.3
                   FIJI ISLANDS REGION

OCT 12  FHC  IPC   00 53 21.6                    •E 53 48
        BKS  IPC   00 53 23.2                    •PP 53 50   SKS 03 39   PS 04 24
                                                 •E 05 21    LQ 16 31   RPKP 19 36
                              MICRON     PERIOD
                          PZ    0.21        1.0
        SAO  EP    00 53 24.5
        MHC  IPC   00 53 25.0                    •E 53 52
        WDC  IPC   00 53 25.8                    •E 53 53
        PRI  EPC   00 53 27.5                    •I 53 54
        MIN  EPC   00 53 28.4
        JAS  IPC   00 53 29.6                    •I 53 57
        FRI  IPC   00 53 31.3                    •I 53 58
        MNV  IPC   00 53 39.0                    •I 53 44
                   USGS 00 40 52.9, 10.5S, 161.3E, H=106 KM, M=6.0
                   SOLOMON ISLANDS

OCT 12  FHC  IP    03 18 04.6  18 16
        WDC  IP    03 18 19.3  18 42
        MIN  IP    03 18 29.8
        BKS  EP    03 18 38.2
        MHC  EP    03 18 48.1
        JAS  EP    03 18 54.5
        FRI  EP    03 19 09.0
                   BRK 03 17 47.1, 40.2N, 124.8W, H=  2 KM, ML=3.2
                   SOUTHWEST OF EUREKA, CALIFORNIA

OCT 12  WDC  EP    04 36 33.1
        JAS  EP    04 36 47.0                    •I 36 59
        FRI        04 36                         •E 36 52
        MNV  EP    04 36 54.5
                   USGS 04 24 54.7, 31.3N, 141.7E, H= 29 KM, M=5.1
                   SOUTH OF HONSHU, JAPAN

OCT 13  FRI        11 42                         •E 42 57
        PRI        11 42                         •E 42 57
        JAS  EP    11 42 56.4                    •E 43 03
        MHC        11 43                         •E 43 04
        WDC        11 43                         •E 43 17
                   USGS 11 30 16.6, 36.5S,  73.1W, H= 27 KM, M=5.1
                   NEAR COAST OF CENTRAL CHILE

OCT 14  PRI  EP    17 20 07.6
        JAS  EP    17 20 17.7
        WDC  EP    17 20 33.4
                   SOUTHERN PACIFIC OCEAN REGION

OCT 14  FHC  EPC   20 49 31.0
        WDC  EPC   20 49 38.4
        MIN  EP    20 49 43.3
        MHC  EP    20 49 58.5
        JAS  EPC   20 50 01.4
        PRI  E(P)  20 50 09.5
                   ANDREANOF ISLANDS REGION, ALEUTIAN ISLANDS

OCT 14  PRI  EP    21 52 59.7
        MHC  EP    21 53 00.2
        FRI  EP    21 53 04.8
        JAS  EP    21 53 05.4
        WDC  EP    21 53 07.2
                   USGS 21 41 34.6, 24.0S, 179.9E, H=540 KM, M=4.8
                   SOUTH OF FIJI ISLANDS

OCT 14  FRI  EPKP  22 12 42.2
        PRI  EPKP  22 12 43.5
        JAS  EPKP  22 12 45.9
        MHC  EPKP  22 12 47.4
        BKS  EPKP  22 12 49.7
                              MICRON     PERIOD
                          PKPZ  0.05        1.0
        MIN        22 12                         •E 12 53
        WDC  EPKP  22 12 53.2
        FHC  EPKP  22 12 57
                   USGS 21 53 08.5, 52.1S,  14.9E, H= 33 KM, M=5.0
                   SOUTHWEST OF AFRICA

OCT 15  BKS  IPC   01 35 37
        MHC  IPD   01 35 45.4
        JAS  IPC   01 35 53.5
        SAO  IPD   01 35 53.9
        FRI  EP    01 36 06.2
        PRI  EP    01 36 06.5
        MIN  EP    01 36 10.7
        WDC  E(P)  01 36 11.6
                   BRK 01 35 31.9, 38.0N, 122.1W, H= 22 KM, ML=3.4
                   EAST OF BERKELEY, CALIFORNIA

OCT 15  PRI  EP    03 08 03.2
        JAS  EP    03 08 09.0
        WDC  EP    03 08 23.7                    •E 08 36
                   USGS 02 56 05.4, 27.1S,  71.9W, H= 33 KM, M=4.9
                   NEAR COAST OF NORTHERN CHILE

OCT 15  FHC  IPC   08 40 20.9
        WDC  IPC   08 40 35.2
        MIN  IPC   08 40 45.0
        BKS  IPC   08 40 54.5  41 33
        MHC  IPC   08 41 04.8
        JAS  EPC   08 41 10.3
        SAO  IPD   08 41 11.1
        FRI  EP    08 41 25.1
                   BRK 08 40 04.9, 40.3N, 124.8W, H=  2 KM, ML=3.8
                   SOUTHWEST OF EUREKA, CALIFORNIA

OCT 15  JAS  EP    08 54 27.3
        MHC  EP    08 54 30.2
        WDC  EP    08 54 42.5
                   USGS 08 43 05.7, 18.4S,  69.7W, H=127 KM
                   NORTHERN CHILE

OCT 15  FRI  IPC   16 27 25.5
        JAS  IPC   16 27 32.8  27 18
        PRI  EP    16 27 44.7
        SAO  EP    16 27 47.6
        MHC  EP    16 27 48.0
                   BRK 16 27 07.3, 37.5N, 118.7W, H=  2 KM, ML=3.0
                   MAMMOTH LAKES, CALIFORNIA

OCT 15  FHC  EPD   17 00 40.4
        WDC  EPD   17 00 44.9
                   USGS 16 47 57.9, 26.8N, 125.6E, H= 39 KM, M=5.1
                   NORTHEAST OF TAIWAN
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OCT 15  FRI  EP     19 59 44.1
        JAS  EP     19 59 50.1
        MHC  EP     19 59 57.3
        WDC  EPD    20 00 01.5
        FHC  EPD    20 00 12.3
                    USGS  19 50 42.0, 18.9N,  64.5W, H= 45 KM, M=5.0
                    VIRGIN ISLANDS

OCT 16  WDC  EPC    01 18 22.6              *E 18 51
        MHC  E(P)   01 18 32                *E 19 01
        JAS  EP     01 18 36.3              *E 19 05
        PRI  EP     01 18 40                *E 19 09
        FRI  EP     01 18 41.7              *E 19 10
                    USGS  01 06 29.0, 24.0N, 141.4E, H=112 KM, M=4.9
                    VOLCANO ISLANDS REGION

        FHC         09 31                   *E 31 44
OCT 16  JAS  EPKP   09 31 48.9
        FRI  EPKP   09 31 52.4
        PRI         09 31                   *E 31 56
                    USGS  09 12 13.7,  3.5S,  68.3E, H= 33 KM, M=4.3
                    CHAGOS ARCHIPELAGO REGION

OCT 16  SAO  E(P)   13 43 14
        BKS  EP     13 43 14.5
                              MICRON      PERIOD
                    PZ          0.03        0.8
        PRI  EP     13 43 14.6
        MHC  EPC    13 43 14.8
        FHC  EP     13 43 18.3
        FRI  EPC    13 43 19.7
        JAS  IPC    13 43 20.3
        WDC  EPC    13 43 21.6
        MIN  EP     13 43 24
                    USGS  13 32 11.8, 20.3S, 178.4W, H=580 KM, M=4.9
                    FIJI ISLANDS REGION

OCT 17  WDC  EP     04 07 22.6
        MIN  EP     04 07 28.0
        JAS  EP     04 07 45.8
                    USGS  03 59 42.1, 50.2N, 179.6E, H= 31 KM, M=5.0
                    RAT ISLANDS, ALEUTIAN ISLANDS

OCT 17  PRI  EP     05 38 51.3
        FRI  EP     05 38 55.1
        SAO  EPC    05 39 02.1
        MHC  EP     05 39 10.4
        JAS  EP     05 39 11.1          S*N 39 56
        BKS  E(P)   05 39 21
        MIN         05 39                *E 39 49
        WDC         05 40                *E 40 10
                    ML=4.1, LOS ANGELES AREA
                    USGS  05 38 11.9, 34.5N, 118.4W, H= 15 KM, M=4.3
                    SOUTHERN CALIFORNIA

OCT 18  WDC  IPD    00 42 14.2
        MIN  EPD    00 42 18.7
        JAS  IPD    00 42 41.2
        MHC  EP     00 42 42.5
        PRI  EP     00 42 55.6
                    USGS  00 36 31.6, 63.3N, 150.7W, H=126 KM, M=4.9
                    CENTRAL ALASKA

OCT 18  SAO  EP     01 04 41.8
        PRI  EP     01 04 42.7
        MHC  EP     01 04 43.6
        BKS  EPC    01 04 43.7
                              MICRON      PERIOD
                    PZ          0.06        1.0
        FRI  EP     01 04 47.3
        JAS  IPC    01 04 48.3
        WDC  IPC    01 04 51.6
        MIN  EP     01 04 52.5
                    USGS  00 51 55.1, 33.1S, 178.7W, H= 33 KM, M=5.7
                    SOUTH OF KERMADEC ISLANDS

OCT 18  SAO  IP     02 46 18.4
        MHC  IPC    02 46 26.9          *I 46 33
        PRI  IPD    02 46 35.4
        BKS  EP     02 46 37.2  46 56    S*G 46 57
        JAS  IPD    02 46 41.3
        FRI  E(P)   02 46 42.9
                    BRK   02 46 15.8, 36.8N, 121.6W, H=  6 KM, ML=3.3
                    WEST OF HOLLISTER, CALIFORNIA

OCT 18  MHC  EP     12 36 40.6
        PRI  EP     12 36 42.0
        WDC  EP     12 36 44.3
        JAS  EP     12 36 45.7
        MIN  E(P)   12 36 47
                    USGS  12 24 16.4, 17.9S, 168.5E, H=135 KM, M=4.8
                    NEW HEBRIDES ISLANDS

OCT 18  PRI  EP     17 27 54.0
        FRI  EP     17 28 00.8
        SAO  EP     17 28 05.3
        MHC  EP     17 28 15.4
        JAS         17 28                *E 28 16
        MNV  EP     17 28 19.6
                    USGS  17 26 52.6, 32.7N, 117.9W, H= 15 KM, M=4.6
                    CALIFORNIA-MEXICO BORDER REGION

OCT 18  FRI  EP     18 46 37.9
        MNV  EP     18 46 38.3
        JAS  EP     18 46 44.5
        MHC  EP     18 46 47.5
        WDC  EP     18 47 02.3
                    USGS  18 36 36.7,  9.2S,  79.0W, H= 62 KM, M=5.3
                    OFF COAST OF NORTHERN PERU

OCT 19  PRI         08 42                *E 42 56
        FRI         08 42                *E 42 59
        MNV  E(P)   08 43 05.4
        JAS  E(P)   08 43 12.9
        MHC         08 43                *E 43 17
        WDC  E(P)   08 43 52.0
                    USGS  08 40 52.5, 30.0N, 113.4W, H= 33 KM, M=4.6
                    GULF OF CALIFORNIA

OCT 19  FRI  E(P)   09 38 21.8
        JAS  EP     09 38 23.0
        WDC  EP     09 38 26.3
                    USGS  09 25 45.0, 30.3S, 177.3W, H= 41 KM, M=4.5
                    KERMADEC ISLANDS

OCT 19  SAO  EP     13 06 18.9
        PRI  EP     13 06 19.7
        MHC  EP     13 06 20.7
        FRI  EP     13 06 25.7
        JAS  EP     13 06 26.3
        WDC  EP     13 06 26.8
        MNV  EP     13 06 35.0          *E 08 42
                    USGS  12 55 29.9, 18.2S, 177.8W, H=604 KM, M=5.5
                    FIJI ISLANDS REGION

OCT 19  FHC  EPD    17 52 54.6
        WDC  EPD    17 52 59.9
        MIN  EPD    17 53 03.6
        BKS  EPD    17 53 08.4          *E 53 35
                              MICRON      PERIOD
                    PZ          0.09        0.8
        MHC  EPD    17 53 12.3
        SAO  EPD    17 53 15.0
        JAS  IPD    17 53 15.2          PP 56 08
        FRI  EPD    17 53 20.0
        FRI  EPD    17 53 20.4
        MNV  EPD    17 53 22.7
                    USGS  17 41 26.0, 31.3N, 141.2E, H= 69 KM, M=5.4
                    SOUTH OF HONSHU, JAPAN

OCT 19  SAO  IPC    18 36 50.4
        PRI  E(P)   18 36 55.4
        MHC  EP     18 36 57.0
        FRI  EP     18 36 58.4
        JAS  IPC    18 37 02.8
                    BRK   18 36 41.0, 36.8N, 120.9W, H=  7 KM, ML=2.7
                    SOUTHEAST OF HOLLISTER, CALIFORNIA

OCT 20  FRI         00 22                *E 22 34
        JAS  E(P)   00 22 35.6
        WDC  E(P)   00 22 38.0
        MNV         00 22                *E 22 39
                    USGS  00 09 38.0, 33.2S, 178.7W, H=  6 KM, M=4.9
                    SOUTH OF KERMADEC ISLANDS

OCT 20  MNV  IPD    06 53 58.9
        FRI  EPC    06 54 08.7  54 26
        JAS  IPD    06 54 16.6
        PRI  EP     06 54 26.9
        SAO  EPD    06 54 30.9
        MHC  EP     06 54 31.9
        MIN  EP     06 54 53.6
                    MAG=3.1, BISHOP AREA
                    USGS  06 53 43.4, 37.6N, 118.1W, H=  5 KM
                    CALIFORNIA NEVADA BORDER REGION

OCT 20  WDC  EP     08 10 48.8
        MIN  EP     08 10 51.0
        MNV  EP     08 11 04.4
        JAS         08 11                *E 11 06
        MHC         08 11                *E 11 11
        FRI  EP     08 11 12.2
        PRI         08 11                *E 11 18
                    USGS  07 59 57.7, 73.4N,  54.6E, H=  0 KM, M=5.1
                    NOVAYA ZEMLYA

OCT 20  FHC  EPD    11 46 51.8
        WDC  EPD    11 46 59.6
        MIN  EP     11 47 05.5
        JAS  IPD    11 47 27.1
        MNV  EPD    11 47 34.1
        FRI  EPD    11 47 36.4
                    USGS  11 41 32.1, 56.2N, 153.2W, H= 22 KM, M=5.0
                    KODIAK ISLANDS REGION

OCT 20  FRI         12 41                *E 41 02
        PRI         12 41                *E 41 03
        MNV  EP     12 41 12.2
        JAS  EP     12 41 18.0
        BKS         12 41                LO 43 44
        WDC  EP     12 41 59.8
        FHC         12 42                *E 42 07
                    USGS  12 38 51.7, 29.6N, 113.5W, H= 33 KM, M=4.7
                    GULF OF CALIFORNIA

OCT 20  MHC  EP     15 34 33.6
        WDC  EP     15 34 35.3
        PRI  EP     15 34 36.9
        JAS  IPC    15 34 39.9
        FRI  EP     15 34 40.5
                    USGS  15 22 07.9, 11.0S, 165.4E, H= 33 KM, M=4.6
                    SANTA CRUZ ISLANDS

OCT 20  MNV  IPD    23 15 12.1
        FRI  IPC    23 15 22.0  15 39    *I 15 28
        JAS  IPC    23 15 29.9  15 53
        PRI  EP     23 15 40.0  16 15
        SAO  EP     23 15 44.2
        MHC  IPD    23 15 45.6
                    ML=3.4, BISHOP AREA
                    USGS  23 14 56.3, 37.6N, 118.0W, H=  5 KM
                    CALIFORNIA NEVADA BORDER REGION

OCT 21  MNV  IPD    00 40 21.0
        FRI  IPC    00 40 25.8  40 40    *I 40 31
        JAS  IPC    00 40 32.5  40 51
        PRI  EP     00 40 44.2
        SAO  IPD    00 40 47.1
        MHC  EPD    00 40 48.1
                    ML=3.2, BISHOP AREA
                    USGS  00 40 04.3, 37.6N, 118.5W, H=  5 KM
                    CALIFORNIA NEVADA BORDER REGION

OCT 21  MNV  EP     04 36 02.0
        JAS  EP     04 36 07.5
        WDC  EP     04 36 22.2
                    USGS  04 24 23.2, 22.1S,  69.9W, H= 64 KM, M=5.1
                    NORTHERN CHILE

OCT 21  FHC         13 34                *E 34 12
        WDC  EP     13 34 17
        MIN         13 34                *E 34 21
        JAS  EP     13 34 32.7
        FRI  EP     13 34 38.4
        MNV  EP     13 34 39.9
                    USGS  13 22 43.4, 33.1N, 140.9E, H= 33 KM, M=4.9
                    SOUTH OF HONSHU, JAPAN

OCT 21  FHC         15 00                *E 00 37
        WDC  EPD    15 01 16.3
        JAS         15 01                *E 01 37
                    USGS  14 54 35.6, 52.2N, 169.4W, H= 36 KM, M=5.4
                    FOX ISLANDS, ALEUTIANS ISLANDS

OCT 22  MNV  EP     04 11 33.5          P*CP 13 51
        FRI  EP     04 11 34            P*CP 13 51
        PRI  EP     04 11 36.6          P*CP 13 53
        JAS  EP     04 11 43.1          P*CP 13 55
        MHC  EP     04 11 47.6          P*CP 13 57
        MIN  EP     04 12 00
        WDC  EP     04 12 03.3          P*CP 14 03
        FHC  EP     04 12 14.8          P*CP 14 08
                    USGS  04 04 24.1, 12.6N,  87.9W, H= 59 KM, M=4.9
                    NEAR COAST OF NICARAGUA

OCT 22  BKS  EPC    15 53 13.5  53 25
        MHC  EP     15 53 26
        JAS  EP     15 53 31.0  53 52
                    BRK   15 53 00.0, 38.5N, 122.7W, H=  5 KM, ML=2.6
                    NORTHEAST OF SANTA ROSA, CALIFORNIA

OCT 22  SAO         16 31                *E 31 34
        PRI  EP     16 31 08.5           *E 31 36
        MHC         16 31                *E 31 36
        BRK         16 31                *E 31 36
        FHC         16 31                *E 31 41
        FRI  EP     16 31 14.0           *E 31 42
        JAS  EP     16 31 15.0           *E 31 42
        WDC  EP     16 31 17.6           *E 31 44
        MIN         16 31                *E 31 45
        MNV  EP     16 31 23.3           *E 31 51
                    USGS  16 19 01.2, 25.9S, 177.1W, H=102 KM, M=5.2
                    SOUTH OF FIJI ISLANDS

OCT 22  JAS  IPD    16 51 07.1
        MNV  IPC    16 51 13.7
        FRI  IPD    16 51 19.4  51 40
        MHC  EPC    16 51 27.0
        BKS  EP     16 51 28.9          *E 51 56
        SAO  EP     16 51 30.2
        MIN  EP     16 51 33.2
        PRI  EPD    16 51 36.8
                    BRK   16 50 50.8, 38.5N, 119.7W, H=  2 KM, ML=3.4
                    SOUTHEAST OF MARKLEEVILLE, CALIFORNIA
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OCT 22  FHC  EPD  18 40 45.5
        WDC  IPD  18 40 53.3
        MIN  EP   18 40 59.0                    LQ 49 00
        BKS  E(P) 18 41 12.2
        MHC  EP   18 41 19.0
        JAS  IPD  18 41 21.0
        MNV  EPD  18 41 27.5
        FRI  EP   18 41 30.0
        PRI  EP   18 41 32.6
                  USGS  18 35 25.9, 56.1N, 153.3W, H= 26 KM, M=5.5
                  KODIAK ISLANDS REGION

OCT 23  FHC  IPC  02 16 33.8
        WDC  IPC  02 16 48.6  17 14
        MIN  IP   02 16 58.8
        BKS  EP   02 17 07.0
        MHC  E(P) 02 17 16.9
        JAS  EP   02 17 23
        SAO  E(P) 02 17 23.1
        FRI  E(P) 02 17 37
        MNV  EP   02 17 41 9
                  BRK   02 16 11.7, 40.6N, 125.5W, H=  2 KM, ML=3.7
                  WEST OF EUREKA, CALIFORNIA

                                    •E 09 50
OCT 23  WDC  EP   16 06 20          •E 10 01
        JAS  E(P) 16 06 28
        FRI  E(P) 16 06 29
        MNV  EP   16 06 35.8
                  USGS  15 53 38.5,  4.5S, 153.4E, H=105 KM, M=5.5
                  NEW IRELAND REGION

OCT 23  SAO  IPD  19 24 36.4
        MHC  IPD  19 24 42.5  24 49       •1 24 48
        PRI  IPD  19 24 51.9
        BKS  EP   19 24 53.4  25 10
        JAS  IPD  19 24 56.6
        FRI  EPD  19 24 57.5
        MNV  E(P) 19 25 23.9
                  BRK   19 24 33.2, 36.9N, 121.5W, H= 11 KM, ML=3.5
                  NORTHWEST OF HOLLISTER, CALIFORNIA

OCT 23  FRI  EPKP 23 09 16
        PRI  EPKP 23 09 16.7
        MNV  EPKP 23 09 16.8
        JAS  EPKP 23 09 18.5
        MHC  EPKP 23 09 19
        WDC  EPKP 23 09 23
                  USGS  22 50 22.3, 56.3S,  24.2W, H= 33 KM, M=5.3
                  SOUTH SANDWICH ISLANDS REGION

OCT 24  SAO  IPD  02 19 56.1
        MHC  IPD  02 20 02.9  20 10       •1 20 08
        PRI  EP   02 20 12.5  20 28       •1 20 25
        BKS  EPD  02 20 12.5  20 28
        JAS  EP   02 20 17.7  20 36       •1 20 33
        FRI  EPC  02 20 18.6
        MNV  E(P) 02 20 47.6
        MIN  E(P) 02 20 48.5
        WDC  E(P) 02 20 52.4
                  BRK   02 19 52.7, 36.8N, 121.6W, H=  2 KM, ML=3.8
                  WEST OF HOLLISTER, CALIFORNIA

OCT 24  FHC  EP   05 16 09.6
        WDC  EPC  05 16 14.5
        MIN  EP   05 16 17.6
        BKS  EP   05 16 18.8
                            MICRON      PERIOD
                  PZ           0.01         0.6
        MHC  EP   05 16 21.6
        JAS  EPC  05 16 25.1
        PRI  EP   05 16 27
        FRI  EP   05 16 28.8
        MNV  EPC  05 16 33.0
                  USGS  05 03 44.7, 12.2N, 141.2E, H=144 KM, M=4.9
                  SOUTH OF MARIANA ISLANDS

OCT 24  MNV  EPKPD 08 40 57.7
        JAS  EPKP  08 41 00.0
                  USGS  08 21 08.2, 53.4S,  24.6E, H= 33 KM, M=5.0
                  SOUTH OF AFRICA

OCT 24  FHC  EP   17 25 28.3
        WDC  EPC  17 25 32.5                •E 25 57
        MIN  EP   17 25 36.9                •E 26 02
        BKS  EP   17 25 55.2                •E 26 20
                            MICRON      PERIOD
                  PZ           0.03         0.7
        JAS  EPC  17 25 59.7                •E 26 25
        MHC  EP   17 26 01.0                •E 26 26
        MNV  EPC  17 26 03.2                •E 26 29
        FRI  EP   17 26 09.1                •E 26 34
        PRI  EP   17 26 14.2                •E 26 40
                  USGS  17 19 53.7, 62.6N, 149.1W, H= 75 KM, M=4.9
                  CENTRAL ALASKA

OCT 24  FRI  EP   20 32 32.8
        JAS  EP   20 32 34.0
        WDC  EP   20 32 37.3
        MNV  EP   20 32 42.0
                  USGS  20 19 51.7, 30.5S, 177.1W, H= 11 KM, M=4.9
                  KERMADEC ISLANDS

OCT 25  PRI  EP   06 54 03.2
        BKS  EP   06 54 03.5
                            MICRON      PERIOD
                  PZ           0.02         0.8
        MHC  EP   06 54 03.6
        FRI  EP   06 54 08.2
        JAS  EP   06 54 08.6
        WDC  EP   06 54 10.6
        MNV  EP   06 54 17.5
                  USGS  06 42 48.4, 23.8S, 179.7E, H=657 KM, M=5.0
                  SOUTH OF FIJI ISLANDS

OCT 25  WDC  EPD  11 16 12.6
        MIN  EP   11 16 18.1
        JAS  EP   11 16 39.9
        MNV  EP   11 16 47.0
                  USGS  11 10 45.3, 56.2N, 153.4W, H= 33 KM, M=4.8
                  KODIAK ISLAND REGION

OCT 25  MNV  EP   22 30 22.7
        PRI  EP   22 30 24.3
        JAS  EP   22 30 29.0
                  USGS  22 19 04.9, 17.8S,  71.2W, H= 37 KM, M=5.3
                  NEAR COAST OF PERU

OCT 26  FHC       06 09                     •E 09 44
        WDC  IPD  06 09 50.7
        MIN  EPD  06 09 55.0
        BKS  EPC  06 10 03.9
                            MICRON      PERIOD
                  PZ           0.32         0.7
        MHC  EP   06 10 07.5
        JAS  IPD  06 10 10.2
        FRI  EP   06 10 16.4
        PRI  EP   06 10 17.0
        MNV  IPD  06 10 17.4
                  USGS  05 59 53.0, 46.1N, 150.8E, H=120 KM, M=5.3
                  KURIL ISLANDS

OCT 26  PRI       13 13
        BKS       13 13                     •E 13 05
        FRI  EP   13 13 16.0                •E 13 16
        JAS  IPD  13 13 17.2
        WDC  IPD  13 13 20.3
        MIN  EP   13 13 21.4
        MNV  IPD  13 13 25.0
                  USGS  13 00 37.0, 30.9S, 177.3W, H= 43 KM, M=5.0
                  KERMADEC ISLANDS

OCT 26  FHC  IPD  23 23 54.9
        WDC  IPD  23 24 07.9
        MIN  EP   23 24 17.5
                  BRK   23 23 42.2, 40.3N, 124.6W, H= 22 KM, ML=3.4
                  SOUTHWEST OF EUREKA, CALIFORNIA

OCT 27  FRI  EP   00 15 13.0
        MNV  EP   00 15 13.2
        PRI  EP   00 15 15.3
        JAS  EP   00 15 21.3
        MHC  EP   00 15 25.2
        BKS  EP   00 15 31
                            MICRON      PERIOD
                  PZ           0.05         1.0
        MIN  EP   00 15 35.5
        WDC  EP   00 15 38.8
        FHC  E(P) 00 15 49
                  ECUADOR REGION

OCT 27  PRI  EP   17 05 32.0
        BKS  EP   17 05 33.4
                            MICRON      PERIOD
                  PZ           0.04         0.7
        MHC  EP   17 05 34.0
        FHC  EP   17 05 37.2
        FRI  EP   17 05 38.5
        JAS  IPC  17 05 39.1
        WDC  EP   17 05 40.7
        MIN  EP   17 05 43.2
        MNV  EP   17 05 47.4
                  USGS  16 53 50.8, 23.5S, 179.8W, H=327 KM, M=5.1
                  SOUTH OF FIJI ISLANDS

OCT 28  JAS  EP   08 55 48.1
        MNV  EP   08 55 55.5
        WDC  EP   08 56 05.7
                  USGS  08 45 28.5, 24.3S, 115.7W, H= 33 KM, M=4.5
                  EASTER ISLAND CORDILLERA

OCT 29  WDC  EPKP 00 59 31.7
        MIN       00 59                     •E 59 34
        JAS  EPKP 00 59 39.2
        MNV  EPKP 00 59 40.7
        FRI       00 59                     •E 59 43
                  USGS  00 39 51.6,  8.9S,  67.3E, H= 33 KM, M=4.8
                  MID-INDIAN RISE

OCT 29  FHC  EP   03 04 41.4
        WDC  EP   03 04 45.6                •E 15 48
        BKS  EP   03 04 46.0                PP 08 50   SKS 15 25   PS 17 40
                                            SS 23 20   •E 26 40   LQ 31 20
                                            LR 36 08
                            MICRON      PERIOD
                  PZ           2.4          14
                  MAXR(Z) 41                20
                  MAXH(N) 16                20
                  MAXH(E) 61                20
        SAO       03 04                     •E 04 46
        MHC  E(P) 03 04 49
        MIN  E(P) 03 04 49.0
        PRI  EP   03 04 52.6                •E 05 26   •E 15 29
        JAS  E(P) 03 04 53.5                PP 08 59   •E 15 38   PKKP 21 31
        FRI  EP   03 04 55.1
        MNV  EP   03 05 00.7                •E 15 25   PKKP 21 27
                  Ms=7.1, DISTANCE=99°
                  USGS  02 51 07.6,  4.5S, 139.9E, H= 33 KM, M=6.1
                  WEST IRIAN

OCT 29  FRI  EP   04 55 30.0
        MNV  IPC  04 55 31.0                •PP 55 40  P•CP 58 11 •PP•CPS8 22
        PRI  EP   04 55 32.8
        JAS  EP   04 55 39.6              P•CP 58 14 •PP•CPS8 24
        MHC  EP   04 55 44.2
        MIN  EP   04 55 58.3
        WDC  EP   04 56 01.8                •PP 56 12  P•CP 58 22 •PP•CPS8 32
        FHC  IP   04 56 13.5                •PP 56 23
                  USGS  04 48 51.7, 14.2N,  92.0W, H= 33 KM, M=5.0
                  NEAR COAST OF CHIAPAS, MEXICO

OCT 29  BKS  IPC  08 24 04.4  24 10
        MHC  EPD  08 24 09.2
        JAS  IPC  08 24 16.5
        SAO  EP   08 24 18.0
                  BRK   08 23 57.3, 37.9N, 121.8W, H=  7 KM, ML=2.7
                  NORTHEAST OF LIVERMORE, CALIFORNIA

OCT 29  PRI  EP   09 58 22.7
        MNV  EPD  09 58 24.2
        JAS       09 58                     •E 58 29
        WDC       09 58                     •E 58 52
                  USGS  09 50 40.4,  2.9N,  95.3W, H= 33 KM, M=4.9
                  GALAPAGOS ISLANDS REGION

OCT 30  FHC       09 43                     •E 43 39
        WDC  EPKP 09 43 40.8
        MIN       09 43                     •E 43 44
        JAS  EPKP 09 43 45                  •E 45 42
        FRI       09 43                     •E 43 47
        MNV  EPKP 09 43 49.5
                  USGS  09 24 40.1,  3.5N,  96.3E, H= 14 KM, M=5.5
                  NORTHERN SUMATRA

OCT 30  FHC  EP   22 33 23
        BKS  EPC  22 33 24.0
                            MICRON      PERIOD
                  PZ           0.03         0.7
        MHC  EP   22 33 25.2
        PRI  EP   22 33 27.2
        WDC  EPC  22 33 27.8
        JAS  EPC  22 33 30.4
        FRI  EPC  22 33 31.3
        MNV  EPC  22 33 39.7
                  USGS  22 21 28.8, 12.2S, 167.2E, H=271 KM, M=4.7
                  SANTA CRUZ ISLANDS

OCT 31  FHC  IPC  05 18 42.5
        WDC  IPC  05 18 57.8                •E 19 22
        MIN  EPC  05 19 07.7
        BKS  EP   05 19 16.0  19 55
        MHC  E(P) 05 19 26.0
        JAS  EP   05 19 32.8
        SAO  E(P) 05 19 32.6
        FRI  E(P) 05 19 46
                  BRK   05 18 24.5, 40.6N, 125.1W, H=  2 KM, ML=3.9
                  SOUTHWEST OF EUREKA, CALIFORNIA

OCT 31  FHC  E(P) 12 40 45.5
        WDC  EP   12 40 51.0
        MIN  E(P) 12 40 55
        MHC  E(P) 12 41 07
        JAS  EP   12 41 09.0
        MNV  EP   12 41 16.9
        FRI  E(P) 12 41 16
        PRI  E(P) 12 41 17.0
                  USGS  12 30 02.9, 42.2N, 143.0E, H= 62 KM, M=5.1
                  HOKKAIDO, JAPAN REGION

OCT 31  FHC  EP   18 58 45
        WDC  EP   18 58 52
        BKS       18 58                     LR 28 16
        JAS  EP   18 58 58
        FRI  EP   18 59 00
        PRI       18 59                     •E 59 03
                  USGS  18 45 43.9,  6.1S, 148.5E, H= 77 KM, M=5.7
                  NEW BRITAIN REGION
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OCT 31  FHC  EP     19 34 46
        WDC  EP     19 34 50.0
        MIN  EP     19 34 52.9
        BRK  E(P)   19 34 57.7
        MHC  EP     19 35 01.4
        JAS  EP     19 35 03.1
        FRI  EP     19 35 07.5
        PRI  EP     19 35 08.0
        MNV  EP     19 35 09.0
                    USGS  19 22 07.3, 25.6N, 124.4E, H=146 KM, M=5.2
                          NORTHEAST OF TAIWAN

NOV 01  WDC  EPD    04 15 45.9
        MIN  EP     04 15 50
        JAS  EPD    04 16 04.3
        FRI  EP     04 16 10.2
        PRI  EP     04 16 10.6
        MNV  EPD    04 16 11.0
                    USGS  04 04 56.9, 42.2N, 143.0E, H= 63 KM, M=4.9
                          HOKKAIDO, JAPAN REGION

NOV 01  PRI  EP     06 31 50.6
        BKS  E(P)   06 31 50.7
                              MICRON      PERIOD
                    PZ           0.02         0.5
        FRI  EP     06 31 56.7
        JAS  EP     06 31 57.1
        WDC  EP     06 31 59.1
        MIN  EP     06 32 01
        MNV  EP     06 32 07.6
                    USGS  06 20 33.7, 15.3S, 173.0W, H= 38 KM, M=5.1
                          TONGA ISLANDS

NOV 01  WDC  EP     10 21 51.2
        JAS  EP     10 21 57.2
        MNV  EP     10 22 05.7
                    USGS  10 08 49.3,  5.8S, 152.1E, H= 18 KM, M=5.4
                          NEW BRITAIN REGION

NOV 02  FHC  EPKP   07 33 12.5          *PPKP 33 49
        WDC  EPKP   07 33 12.5          *PPKP 33 52    PP 37 32
        MIN  EPKP   07 33 13.2          *PPKP 33 54
        BKS  EPKP   07 33 14.6          *PPKP 33 59    *E 59 00    *E 35 56
                              MICRON      PERIOD
                    MAXR(Z)      10          20
                    MAXH(N)     4.3          20
                    MAXH(E)      5           20
        JAS  EPKP   07 33 15.9          *PPKP 34 04
        MHC  EPKP   07 33 16.0
        FRI  EPKP   07 33 17.0          *PPKP 34 08
        MNV  EPKPD  07 33 18.0          *PPKP 34 11    PP 37 52
        PRI  EPKP   07 33 18.0
                    M=6.5, DISTANCE=161°
                    USGS  07 13 15.7, 29.3S,  77.7E, H= 33 KM, M=5.8
                          MID-INDIAN RISE

NOV 02  FHC         11 39                   *E 39 46
        WDC  EPKP   11 39 10.5              *I 39 50    *I 39 56
        MIN  EPKP   11 39 11.9              *E 39 53
        BKS         11 39                   *E 39 56
        JAS  EPKP   11 39 14.2              *I 40 02    *I 40 07
        FRI  EPKP   11 39 15.2              *E 40 06
        PRI  EPKP   11 39 15.8              *E 40 03
        MNV  EPKP   11 39 16.1              *I 40 18
                    USGS  11 19 14.0, 29.2S,  77.8E, H= 33 KM, M=5.7
                          MID-INDIAN RISE

NOV 02  FHC  EP     15 07 28.3
        WDC  IPD    15 07 31.6              *I 07 36
        MIN  EP     15 07 34.6
        JAS  IP     15 07 49.7              *I 07 54
        MNV  EP     15 07 51.9
        FRI         15 07                   *E 07 56
        PRI         15 07                   *E 07 59
                    USGS  14 56 01.8, 56.2N, 111.6E, H= 33 KM, M=5.1
                          LAKE BAIKAL REGION

NOV 02  FHC  EP     19 41 54.2
        WDC  EPC    19 41 58.4              *E 42 56
        MIN  EP     19 42 01.4
        BKS  E(P)   19 42 07.7
                              MICRON      PERIOD
                    PZ           0.02         0.6
        MHC  E(P)   19 42 10
        JAS  EP     19 42 11.8              *E 43 10
        FRI  EP     19 42 16.2              *E 43 14
        PRI  EP     19 42 16.5
        MNV  EPC    19 42 17.5              *E 43 14
                    USGS  19 29 30.0, 26.7N, 125.2E, H=218 KM, M=5.5
                          NORTHEAST OF TAIWAN

NOV 03  FHC  EPKP   10 13 35.7
        WDC  EPKP   10 13 36.1
        MIN  EPKP   10 13 37.8
        BKS  EPKP   10 13 41.4
        JAS  EPKP   10 13 42.6              *E 15 46
        FRI  EPKP   10 13 45.0
        MNV  EPKP   10 13 45.2
        PRI  EPKP   10 13 45.8
                    USGS  09 54 38.2,  4.1N,  95.1E, H= 20 KM, M=5.5
                          NORTHERN SUMATRA

NOV 04  SAO  IPD    00 32 29.5
        PRI  EP     00 32 34.4  32 46
        MHC  EP     00 32 41.5
        FRI  EP     00 32 45.0
        JAS  IP     00 32 51.0  33 20
                    BRK   00 32 33.3, 36.6N, 121.2W, H= 10 KM, MAG=2.8
                          BEAR VALLEY, CALIFORNIA

NOV 04  FRI  EP     10 13 21.8
        PRI  EP     10 13 31.6
        MNV  EP     10 13 38.8
        JAS  EP     10 13 42.4
                    USGS  10 11 51.3, 33.1N, 115.6W, H=  4 KM
                          SOUTHERN CALIFORNIA

NOV 04  FRI  EP     10 42 53.0              *E 43 07    *I 43 15
        PRI  EP     10 42 54.7              *I 43 05
        MNV         10 43                   *I 43 02
        SAO         10 43                   *E 43 05
        JAS  EP     10 43 06.9
        MHC  EP     10 43 12.6              *E 43 24
        BKS  EP     10 43 22.1              *E 44 56
                    ML=5.5, BRAWLEY
                    USGS  10 41 37.8, 33.1N, 115.3W, H=  6 KM, M=4.6
                          SOUTHERN CALIFORNIA

NOV 04  WDC  EP     11 30 53.2
        JAS  EP     11 31 11.5
        MNV  EP     11 31 18.5
                    USGS  11 20 07.3, 42.1N, 144.3E, H= 56 KM, M=5.1
                          HOKKAIDO, JAPAN REGION

NOV 04  FRI  EP     14 14 16.0
        PRI  EP     14 14 16.4
        MNV  EP     14 14 20.8
        BKS  EP     14 14 48.7
                    USGS  14 12 50.0, 33.2N, 115.6W, H= 12 KM, M=4.2
                          SOUTHERN CALIFORNIA

NOV 04  BKS  EPC    16 55 46.6
                              MICRON      PERIOD
                    PZ           0.01         0.6
        SAO         16 55                   *E 55 46
        PRI  EP     16 55 47.0
        MHC  EPC    16 55 47.5
        FHC         16 55                   *E 55 51
        FRI  EPC    16 55 52.2
        JAS  IPC    16 55 52.7              *E 58 01
        WDC  EPC    16 55 54.4
        MNV  EPC    16 56 01.9              *E 58 08
                    USGS  16 44 36.3, 21.9S, 179.3W, H=591 KM, M=5.3
                          FIJI ISLANDS REGION

NOV 04  SAO  EP     17 17 58.7
        PRI  EP     17 18 00
        BKS  EP     17 18 00.2
                              MICRON      PERIOD
                    PZ           0.02         0.7
        MHC  EPC    17 18 00.6
        FHC  EPC    17 18 04.5
        FRI  EPC    17 18 05.2
        JAS  EPC    17 18 06.0              *PP 19 47
        WDC  IPC    17 18 07.8              *PP 19 49
        MNV  IPC    17 18 15.1              *PP 19 57
                    USGS  17 06 42.2, 21.5S, 178.3W, H=460 KM, M=5.1
                          FIJI ISLANDS REGION

NOV 05  FHC  EPC    04 11 01.5
        WDC  EPC    04 11 04.7
        MIN  EP     04 11 07.8
        JAS  EPC    04 11 24.1
        MHC  EP     04 11 25.0
        MNV  EP     04 11 25.7
        FRI  EP     04 11 30.5
        PRI  EPC    04 11 34.0
                    USGS  03 59 56.7, 61.5N, 112.7E, H=  0 KM, M=5.3
                          CENTRAL SIBERIA

NOV 05  PRI  IPD    19 43 23.2
        SAO  IPD    19 43 29.4
        MHC  EPC    19 43 39.8
        FRI  E(P)   19 43 40.8
        JAS  EPC    19 43 48.6
        BKS  E(P)   19 43 52.5                          *E 44 26
                    BRK   19 43 11.1, 35.8N, 121.3W, H=  2 KM, ML=3.4
                          NORTHWEST OF SAN SIMEON, CALIFORNIA

NOV 06  FHC  IPC    08 08 37.7
        WDC  IPC    08 08 43.0
        MIN  EPC    08 08 46.6
        BKS  EPC    08 08 52.5
                              MICRON      PERIOD
                    PZ           0.10         1.0
        MHC  EPC    08 08 56.4
        SAO  EP     08 08 58.4
        JAS  IPC    08 08 59.0
        FRI  EPC    08 09 04.3
        PRI  EPC    08 09 04.3
        MNV  IPC    08 09 05.8
                    USGS  07 57 24.7, 35.3N, 138.4E, H=176 KM, M=5.0
                          HONSHU, JAPAN

NOV 06  FRI  EP     12 44 27.0
        MNV  IPC    12 44 27.7
        PRI  EP     12 44 29.8
        JAS  EPC    12 44 36.4
        MHC  EP     12 44 41.1
        BKS  EP     12 44 47                *E 56 00    *E 13 00    *E 13 03
                              MICRON      PERIOD
                    PZ           0.02         1.0
        MIN  EP     12 44 54.5
        WDC  EPC    12 44 58.3
        FHC  EPC    12 45 09.7
                    USGS  12 37 42.7, 13.6N,  90.6W, H= 86 KM, M=4.9
                          NEAR COAST OF GUATEMALA

NOV 07  SAO  EP     00 44 47.2
        BKS  EPD    00 44 48.3
                              MICRON      PERIOD
                    PZ           0.05         1.0
        PRI  EPD    00 44 48.7
        MHC  EPD    00 44 48.9
        FHC  EPD    00 44 52.6
        FRI  EPD    00 44 53.9
        JAS  EP     00 44 54.3
        WDC  EP     00 44 55.8
        MIN  EP     00 44 57.8
        MNV  EP     00 45 03.3
                    USGS  00 33 43.7, 20.8S, 178.4W, H=582 KM, M=5.3
                          FIJI ISLANDS REGION

NOV 07  FRI  EP     06 48 27.1
        MNV  E(P)   06 48 27.5
        PRI  E(P)   06 48 29.5
        JAS  EP     06 48 36.5
        MHC  EP     06 48 40.9
        MIN  EP     06 48 54.4
        WDC  EP     06 48 58.2
        FHC  EP     06 49 09.5
                    USGS  06 41 42.8, 13.7N,  90.4W, H= 85 KM, M=4.6
                          NEAR COAST OF GUATEMALA

NOV 07  FRI  EPC    15 34 17.0
        PRI  E(P)   15 34 17
        MNV  EPC    15 34 22.4
        JAS  EPC    15 34 28.3
        MHC  EP     15 34 30.8
        BKS  EPC    15 34 38.2
                              MICRON      PERIOD
                    PZ           0.02         1.0
        MIN  EP     15 34 55.0
        WDC  EPC    15 34 58.7
                    USGS  15 29 46.3, 20.9N, 106.1W, H= 36 KM, M=5.0
                          OFF COAST OF JALISCO, MEXICO

NOV 07  PRI  EP     16 33 15.5
        BKS  EP     16 33 15.7
        MHC  EP     16 33 15.7
        FHC  EP     16 33 19.8
        FRI  EP     16 33 21.2
        JAS  EPD    16 33 21.8
        WDC  EPD    16 33 23.7
        MIN  EP     16 33 25.7
        MNV  EPD    16 33 32.2
                    SAMOA ISLANDS REGION

NOV 07  FHC  EP     17 22 43.2
        WDC  EP     17 22 47.6              PKKP 39 06
        MIN  EP     17 22 50.4
        BKS  EP     17 22 52.0  34 32        PP 27 00    SKS 33 30    SP 36 00
                                            PS 36 20    SS 40 56    SKS 45 12
                                            LQ 50 00    LR 55 00
                              MICRON      PERIOD
                    PZ           0.06         1.0
                    MAXR(Z)      52          20
                    MAXH(N)      20          20
                    MAXH(E)      45          20
        MHC  EP     17 22 56.0
        JAS  EP     17 22 58.6              PKKP 38 59
        PRI  EP     17 23 01.5              PKKP 38 58
        FRI  EP     17 23 02.4              PKKP 38 56
        MNV  EP     17 23 08.1              PKKP 38 54
                    M=7.0, DISTANCE=101°
                    USGS  17 09 06.1,  8.5S, 126.4E, H= 60 KM, M=6.0
                          MINDANAO, PHILIPPINE ISLANDS
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                                    •E 07 25
NOV 07  WDC  EP   21 03 10          •E 21 32    •E 21 37
        BKS       21 03
        JAS  EP   21 03 22          •E 08 15
        MNV       21 03   USGS  20 49 13.3,  6.9N, 123.9E, H= 30 KM, M=5.9
                          MINDANAO, PHILIPPINE ISLANDS

                                    •E 22 08

NOV 08  BKS       02 22
        WDC  EP   02 22 05.1
        JAS  EP   02 22 09.2
        FRI  EP   02 22 10.8
        MNV  EP   02 22 18.5   USGS  02 09 17.3,  9.9S, 159.9E, H=  9 KM, M=5.1
                               SOLOMON ISLANDS

                                    P•CP 30 44
                                    P•CP 30 50  •PP 31 58   •SP 33 12
NOV 08  FHC  EP   08 30 30.0        RPKP 58 35
        WDC  EP   08 30 35.7        P•CP 30 54
                                    P•CP 31 00  SS 44 45    •SSS 47 00
        MIN  EP   08 30 39.7        SSS 48 00   LQ 52 00
        BKS  EP   08 30 46.0  40 00
                            MICRON  PERIOD
                  MAXR(Z)   6       20
                  MAXH(N)   3.2     20
                  MAXH(E)   6       20
                                    P•CP 31 04
        MHC  EP   08 30 50.2        P•CP 31 06  •PP 32 20   •SP 33 37
        JAS  EP   08 30 52.8        P•CP 31 06
        SAO       08 30             P•CP 31 12
        FRI  E(P) 08 30 58.5        P•CP 31 12
        FRI  EP   08 30 58.5        P•CP 31 12
        MNV  EP   08 30 59.8
                  Ms=5.9, DISTANCE=72°
                  USGS  08 19 27.1,  38.1N, 142.2E, H= 38 KM, M=5.9
                        NEAR EAST COAST OF HONSHU, JAPAN

NOV 08  FHC  EP   09 17 35.2
        WDC  IPC  09 17 40.9              •E 18 45
        MIN       09 17
        BKS  EPC  09 17 53.2
        MHC  EP   09 17 57.5              •E 19 32
        JAS  IPC  09 17 59.9
        FRI  EP   09 18 04.7
        MNV  EPC  09 18 06.3
        PRI  EP   09 18 06.7
                  USGS  09 07 56.7,  47.4N, 145.9E, H=402 KM, M=5.0
                        SEA OF OKHOTSK

NOV 08  PRI  EP   18 41 54.7              •E 07 52    •E 09 44    •E 12 00
        BKS  EPC  18 41 55.6              •E 22 30
                            MICRON  PERIOD
                  PZ        0.04    1.0
        MHC  EP   18 41 55.9
        FRI  EP   18 41 59.5
        JAS  IPC  18 42 00.8
        WDC  EP   18 42 03.9
        MIN  EP   18 42 05.3
        MNV  EP   18 42 08.8
                  USGS  18 29 24.0,  29.7S, 177.3W, H= 33 KM, M=5.4
                        KERMADEC ISLANDS

NOV 08  FRI  EP   21 07 25.9
        PRI  EP   21 07 27.0
        MNV  EPC  21 07 28.6
        JAS  IPC  21 07 32.8
        MHC  EP   21 07 34.3
        BKS  EP   21 07 37.6
        WDC  EPC  21 07 46.8
                  USGS  20 55 17.1,  30.4S,  71.3W, H= 59 KM, M=5.4
                        NEAR COAST OF CENTRAL CHILE

NOV 09  MHC       01 38             •E 38 14
        FRI  EP   01 38 16.4
        WDC  EP   01 38 18.8
        JAS  IPD  01 38 20.0
        FRI  EP   01 38 20.9
        MNV  EP   01 38 28.9
                  USGS  01 25 36.7,  18.1S, 168.3E, H= 32 KM, M=5.0
                        NEW HEBRIDES ISLANDS

NOV 09  MHC       10 31             •E 31 48
        BKS  EP   10 31 48.8  41 30  SS 46 00   LQ 50 50    LR 53 40
                            MICRON  PERIOD
                  MAXR(Z)   3.9     20
                  MAXH(N)   3.0     20
                  MAXH(E)   2.9     20
        PRI       10 31             •E 31 49
        FRI       10 31             •E 31 54
        JAS       10 31             •E 31 55
        WDC       10 31             •E 31 56
                  Ms=5.7, DISTANCE=75°
                  USGS  10 20 09.7,  19.6S, 173.3W, H= 33 KM, M=5.3
                        TONGA ISLANDS

NOV 09  FHC  EP   12 18 33.6
        WDC  EP   12 18 44.1
        MIN  EP   12 18 51.6
        JAS       12 19             •E 19 29
        MNV       12 19             •E 19 37
        PRI       12 19             •E 19 47

NOV 09  FHC  EP   20 19 52.1
        WDC  EPC  20 20 00.0
        MIN  EP   20 20 05
        BKS  EPC  20 20 34.3        •E 23 20    •E 25 24
        JAS  EPC  20 20 48.3
        FRI  EP   20 21 00.4
        PRI  EP   20 21 06.8
                  USGS  20 17 19.4,  50.6N, 129.8W, H= 33 KM, M=4.6
                        VANCOUVER ISLAND REGION

NOV 10  SAO  EP   15 01 13.3
        BRK  EP   15 01 13.9
        PRI  EPC  15 01 14.8
        MHC  EP   15 01 14.9
        FHC  EP   15 01 17.9
        FRI  EPC  15 01 20.2
        JAS  IPC  15 01 20.3
        WDC  IPC  15 01 21.5
        MNV  IPC  15 01 29.6
                  USGS  14 50 05.2,  19.5S, 179.7E, H=539 KM, M=4.9
                        SOUTH OF FIJI ISLANDS

NOV 10  WDC  EP   19 19 28.5
        MIN       19 19
        BKS       19 20             •E 19 35
        JAS  IPC  19 20 14.1        •E 35 28    •E 39 24
        MNV       19 20
        FRI  EP   19 20 26.0        •E 20 20
        PRI       19 20             •E 20 32
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NOV 11  MNV  EPC  03 25 03.4
        FRI  EP   03 25 03.8
        PRI  EP   03 25 07.9
        JAS  EP   03 25 12.3              •I 25 22
        SAO  EP   03 25 14.6
        MHC  EP   03 25 17.4              •E 25 25
        BKS  EP   03 25 22.1  32 40      •I 25 30    PP 27 16    SS 36 08
                                          LQ 38 30    LR 41 36
                            MICRON  PERIOD
                  PZ        0.04    1.0
                  MAXR(Z)   5       20
                  MAXH(N)   3.6     20
                  MAXH(E)   5       20
        MIN  EP   03 25 27.1
        WDC  EP   03 25 32.1
        FHC       03 25             •E 25 40
                  Ms=5.6, DISTANCE=52°
                  USGS  03 16 15.3,  5.0N,  78.2W, H= 33 KM, M=5.5
                        SOUTH OF PANAMA

NOV 12  WDC  EPC  14 55 01.9              •E 08 56
        MIN  EP   14 55 02.6
        FHC  EPC  14 55 05.9
        MNV  EPC  14 55 09.4              •E 08 57
        JAS  EPC  14 55 18.3              •E 55 26    •E 09 40
        BKS  IPC  14 55 23.8  02 12       •E 07 42    •E 10 25    •E 11 28
                                          •E 15 13
                            MICRON  PERIOD
                  PZ        0.07    1.0
                  MAXR(Z)   8       20
                  MAXH(N)   6       20
                  MAXH(E)   6       20
        FRI  EPC  14 55 24.4
        MHC  EPC  14 55 26.8
        PRI  E(P) 14 55 34
                  Ms=5.6, DISTANCE=43°
                  USGS  14 47 24.9,  72.4N,  70.2W, H= 33 KM, M=5.4
                        BAFFIN BAY

NOV 12  WDC  EP   18 53 26.1
        MIN  EP   18 53 31.1
        JAS  EP   18 53 56.5
        MNV  EP   18 53 59.1
                  SOUTHERN ALASKA REGION

NOV 12  SAO  EP   23 12 44.7
        BKS  EP   23 12 46.1
                            MICRON  PERIOD
                  PZ        0.08    1.0
        PRI  EP   23 12 46.3
        MHC  EP   23 12 46.4
        FHC  EP   23 12 50.2
        FRI  EP   23 12 51.4
        JAS  EPC  23 12 52.0
        WDC  EPC  23 12 53.5
        MIN  EP   23 12 55.5
        MNV  EPC  23 13 01.2
                  USGS  23 01 52.5,  19.2S, 177.7W, H=602 KM, M=5.3
                        FIJI ISLANDS REGION

NOV 14  WDC  EPC  06 58 29.4
        MIN  E(P) 06 58 32.3
        MHC  E(P) 06 58 37.1
        JAS  IPC  06 58 41.4              •E 59 30
        FRI  EPC  06 58 45.7              •E 59 35
        MNV  IPC  06 58 49.8              •E 59 39
                  USGS  06 46 43.2,  18.7N, 145.4E, H=202 KM, M=4.8
                        MARIANA ISLANDS

NOV 14  FRI  EPKP 13 46 32.7
        PRI  EPKP 13 46 33.1
        MNV  EPKPC 13 46 33.3
        JAS  EPKPC 13 46 35.1             •E 47 09    •E 50 00
        MHC  EPKP 13 46 35.8
        BKS  EPKP 13 46 37.4
        MIN  EPKP 13 46 39.8
        WDC  EPKP 13 46 40.1
                  USGS  13 27 48.7,  57.4S,  25.9W, H=102 KM, M=5.8
                        SOUTH SANDWICH ISLANDS REGION

NOV 15  WDC  EP   03 24 24.9
        JAS  EP   03 24 43.6
        MNV  EP   03 24 51.8
                  USGS  03 14 49.8,  49.3N, 155.6E, H= 49 KM, M=5.3
                        KURIL ISLANDS

NOV 15  WDC  EP   04 15 24.5
        MIN  EP   04 15 27.9
        MHC  EP   04 15 33.8
        JAS  EPC  04 15 37.3
        PRI  EP   04 15 40.6
        FRI  EP   04 15 41.8
        MNV  EPC  04 15 45.4
                  USGS  04 03 40.3,  21.6N, 143.8E, H=185 KM, M=4.5
                        MARIANA ISLANDS REGION

NOV 15  BKS  EP   05 59 02.6  59 09
        MHC  EP   05 59 09.9
        JAS  EP   05 59 14.1
        SAO  EP   05 59 18.8
                  BRK   05 58 53.3,  38.3N, 121.9W, H= 12 KM, ML=2.9
                        SOUTH OF FAIRFIELD, CALIFORNIA

NOV 15  FHC  EPD  14 05 22.0
        WDC  EPD  14 05 28.9
        MIN  EP   14 05 31.8
        BKS  EP   14 05 40.2  16 20     SS 22 00    LQ 28 30
                            MICRON  PERIOD
                  MAXR(Z)   6       20
                  MAXH(N)   11      20
                  MAXH(E)   8       20
        MHC  EP   14 05 43.2
        JAS  EPD  14 05 44.4
        MNV  EPD  14 05 48.6
        FRI  EP   14 05 49.4
        PRI  E(P) 14 05 51.0
                  Ms=6.3, DISTANCE=85°
                  USGS  13 53 00.6,  39.4N, 117.7E, H= 15 KM, M=6.0
                        NORTHEASTERN CHINA

NOV 15  PRI  IPD  18 11 25.2
        FRI  IPD  18 11 32.1
        SAO  IPC  18 11 34.8
        MHC  EP   18 11 41.2
        JAS  IPC  18 11 44.7
        BKS       18 11             •E 11 56
        MNV  IP   18 12 02.6
                  BRK   18 11 17.5,  36.4N, 120.4W, H=  2 KM, ML=3.0
                        NORTH OF COALINGA, CALIFORNIA

NOV 16  MHC  IPC  04 20 22.6
        BKS  EPC  04 20 30.0  20 38
        SAO  IPC  04 20 33.8
        JAS  IPD  04 20 38.1
        FRI  EP   04 20 46.9
                  BRK   04 20 18.9,  37.5N, 121.7W, H=  7 KM, ML=2.6
                        SOUTH OF LIVERMORE, CALIFORNIA

NOV 17  FHC  IPC  05 42 49.1              •PP 43 15
        WDC  IPC  05 42 55.5              •PP 43 20
        MIN  IPC  05 43 00.1
        BKS  EP   05 43 09.1
                            MICRON  PERIOD
                  PZ        0.11    1.0
        MHC  EP   05 43 14.1
        JAS  IPC  05 43 16.5              •PP 43 42
        SAO  EP   05 43 17.0
        FRI  EPC  05 43 23.3
        MNV  IPC  05 43 23.7              •PP 43 49
        PRI  EPC  05 43 24.1
                  USGS  05 33 34.6,  51.0N, 156.2E, H=112 KM, M=5.5
                        KAMCHATKA
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NOV 17  MNV  IPD   08 24 18.6
        JAS  IPD   08 24 40.9                P* 24 55   P*G 25 03    *E 25 33
                                             S*G 25 51
        MIN  E(P)  08 24 40.6                P*G 24 55   S*G 25 50
        FRI  EP    08 24 45.1
        MHC  EP    08 24 57.3
        WDC  E(P)  08 25 02.5                S*G 26 12
                   USGS  08 23 35.0, 40.5N, 116.0W, H= 15 KM
                   NEVADA

NOV 17  MNV  EP    18 49 12.2                *E 49 38
        FRI  EP    18 49 12.5
        FRI  EP    18 49 12.8
        JAS  IPC   18 49 18.1                *E 49 44
        MHC  EP    18 49 29.6
        WDC  IP    18 49 33.0                *E 49 59
        FHC  EP    18 49 40.7
                   USGS  18 37 46.4, 19.7S,  69.2W, H=105 KM, M=4.9
                   NORTHERN CHILE

NOV 17  FHC  EP    23 26 40.0
        WDC  IPC   23 26 47.3
        MIN  EP    23 26 53.4
        MNV  EP    23 27 31
        MHC  E(P)  23 27 34
                   USGS  23 24 31.0, 49.5N, 125.8W, H= 10 KM, M=4.2
                   VANCOUVER ISLAND REGION

NOV 18  FHC  EP    03 36 46.5
        BKS  EP    03 36 50.2  47 30      SS 53 30     LQ 00 00     LR 04 00
                                MICRON     PERIOD
                   PZ             0.06        1.0
                   MAXR(Z) 21                 20
                   MAXH(N) 12                 20
                   MAXH(E) 18                 20
        MHC  EP    03 36 52.3
        SAO  EP    03 36 52.8
        WDC  EP    03 36 52.8
        MIN  EP    03 36 54.5
        FRI  EP    03 36 55.0
        JAS  EP    03 36 56.8
        FRI  EP    03 36 57.9
        MNV  EP    03 37 05
                   M=6.5, DISTANCE=88°
                   USGS  03 24 00.2,  8.8S, 156.9E, H= 33 KM, M=6.1
                   SOLOMON ISLANDS

NOV 18  WDC  EP    05 57 35.2
        JAS        05 57                    *E 57 40    *E 01 00
        MHC        05 57                    *E 57 42
        FRI        05 57                    *E 57 46
        MNV        05 57                    *E 57 50
        PRI        05 57                    *E 57 52
                   USGS  05 43 41.3,  4.2S, 135.1E, H= 33 KM, M=5.8
                   WEST IRIAN

NOV 19  PRI  IPD   14 23 43.9  23 55
        SAO  IPD   14 23 50.0
        MHC  EPD   14 23 59.2  23 21
        FRI  EP    14 24 01.7
        JAS  IPC   14 24 09.3               *E 24 35
        BKS        14 24                    *E 24 10
                   BRK   14 23 30.9, 35.7N, 121.4W, H= 10 KM, ML=3.2
                   NORTHWEST OF SAN SIMEON, CALIFORNIA

NOV 19  SAO  EP    23 41 19.7
        BKS  EP    23 41 20.5
                                MICRON     PERIOD
                   PZ             0.07        1.0
        PRI  EP    23 41 21.2
        MHC  EPD   23 41 21.4
        FHC  EP    23 41 25.3
        FRI  EPD   23 41 26.4
        JAS  IPD   23 41 27.0
        WDC  IPD   23 41 28.7               *E 41 44
        MIN  EP    23 41 30.3
        MNV  EPD   23 41 36.0               *E 41 51
                   USGS  23 30 16.3, 20.6S, 178.5W, H=569 KM, M=4.9
                   FIJI ISLANDS REGION

NOV 20  MNV  EP    12 09 35.3
        JAS  EP    12 09 47.7
                   USGS  11 58 58.6, 37.0N,  33.2W, H= 33 KM, M=4.8
                   AZORES ISLANDS REGION

NOV 21  SAO  EP    15 04 03.0
        BKS  EP    15 04 04.2
                                MICRON     PERIOD
                   PZ             0.02        0.8
        PRI  EP    15 04 04.6
        MHC  EPC   15 04 04.7
        FHC  EP    15 04 07.9
        FRI  EP    15 04 09.9
        JAS  IPC   15 04 10.3
        WDC  IPC   15 04 11.4
        MIN  EP    15 04 13.3
        MNV  EPC   15 04 19.3
                   USGS  14 53 12.1, 18.2S, 178.3W, H=605 KM, M=4.7
                   FIJI ISLANDS REGION

NOV 22  WDC  EPKP  05 07 18.4
        MHC  EPKP  05 07 21.0
        PRI  EPKP  05 07 23.3
        JAS  EPKP  05 07 24.8
        FRI  EPKP  05 07 26.6
        MNV  EPKP  05 07 33.0
                   USGS  04 46 26.0, 38.5S,  78.6E, H= 33 KM, M=5.5
                   MID-INDIAN RISE

NOV 22  FHC  EP    15 27 01
        WDC  IPD   15 27 06.2
        MIN  EPD   15 27 09.8
        BKS  EP    15 27 11.2
                                MICRON     PERIOD
                   PZ             0.03        0.5
        MHC  EP    15 27 14.5
        JAS  IPD   15 27 18.1
        PRI  EP    15 27 20.6
        FRI  EPD   15 27 22.3
        MNV  IPD   15 27 26.4
                   USGS  15 15 21.7, 17.8N, 145.4E, H=247 KM, M=5.0
                   MARIANA ISLANDS

NOV 22  PRI  IPC   17 55 55.4
        FRI  E(P)  17 56 00.9
        SAO  EP    17 56 06.5
        MHC  EPD   17 56 14.5
        JAS  E(P)  17 56 16.7
        BKS  EP    17 56 23.7               *E 57 18
                   USGS  17 55 10.8, 34.0N, 118.6W, H=  2 KM
                   SOUTHERN CALIFORNIA

NOV 22  PRI  EP    18 19 06.6
        MHC  EP    18 19 06.9
        FRI  EP    18 19 11.8
        JAS  IPD   18 19 12.4
        WDC  EP    18 19 13.9
        MNV  IPD   18 19 21.5
                   USGS  18 08 03.0, 20.4S, 178.4W, H=579 KM, M=5.2
                   FIJI ISLANDS REGION

NOV 23  FHC  EP    05 15 48.8
        WDC  IPC   05 15 50.0
        MIN  EP    05 15 50.9
        BKS  EP    05 16 03.4
                                MICRON     PERIOD
                   PZ             0.05        0.8
        MNV  IPC   05 16 04.3
        JAS  IPC   05 16 04.5
        MHC  EP    05 16 06.5
        SAO  EP    05 16 07.0
        FRI  EP    05 16 09.3
        PRI  EP    05 16 13.0
                   USGS  05 02 57.4, 50.0N,  79.0E, H=  0 KM, M=5.9
                   EASTERN KAZAKH, SSR

NOV 23  WDC  EP    10 56 03.9
        JAS  EP    10 56 13.3
        MNV  EP    10 56 21.4
                   USGS  10 46 36.0, 51.2N, 159.3E, H= 33 KM, M=5.5
                   OFF EAST COAST OF KAMCHATKA

NOV 24  WDC  EP    12 35 58.7                *E 36 08    PP 40 10   RPKP 00 28
        FHC        12 36                     *E 36 08
        MIN  EP    12 36 00.0                *E 36 08
        JAS  EP    12 36 09.9                *E 36 18    PP 40 28   PKKP 52 17
                                            RPKP 00 27
        BKS  EP    12 36 14.4  48 00         PP 40 24    SKS 47 00    PS 49 42
                                             *E 51 32    SS 54 30   SKS 59 40
                                             LR 05 00    *E 09 00
                                MICRON     PERIOD
                   PZ             2.6         8
                   MAXR(Z) 71                 20
                   MAXH(N) 64                 20
                   MAXH(E) 57                 20
        FRI        12 36                     *E 36 20    PP 40 30
        PRI        12 36                     *E 36 27
                   M=7.2, DISTANCE=102
                   USGS  12 22 18.8, 39.1N,  44.0E, H= 36 KM, M=6.1
                   NORTHWEST IRAN-USSR BORDER REGION

NOV 24  FHC  EPC   16 18 16.0
        WDC  IPC   16 18 22.9               *E 18 32
        MIN  IPC   16 18 27.8
        BKS  EP    16 18 36.5               *E 18 46    *E 18 56
                                MICRON     PERIOD
                   PZ             0.04        1.0
        MHC  EPC   16 18 42.4
        JAS  IPC   16 18 44.9               *E 18 55
        SAO  EP    16 18 45.3
        FRI  EPC   16 18 52.0               *E 19 02
        PRI  EPC   16 18 52.9
                   USGS  16 09 18.0, 52.0N, 161.4E, H= 33 KM, M=5.6
                   OFF EAST COAST OF KAMCHATKA

NOV 24  FRI  EPC   21 59 25.9
        JAS  EPC   21 59 28.9
        MHC  EPC   21 59 38.7
                   USGS  21 50 54.6, 33.0N,  61.5W, H= 33 KM, M=5.1
                   NORTH ATLANTIC OCEAN

NOV 25  MHC  EP    04 35 25.9
        FRI  EP    04 35 30.4
        JAS  IPC   04 35 31.0
        WDC  EP    04 35 32.9
                   FIJI ISLANDS REGION

NOV 25  FRI  EPC   06 53 07.7
        PRI  EPC   06 53 10.7
        JAS  EPC   06 53 16.5               *E 55 09
        SAO  E(P)  06 53 16.8
        MHC  EPC   06 53 21.4
        BKS  EP    06 53 26.7
                                MICRON     PERIOD
                   PZ             0.04        1.0
        WDC  EPC   06 53 35.6               *E 55 18
        FHC  EPC   06 53 46.9
                   USGS  06 45 22.2,  9.7N,  84.7W, H= 45 KM, M=5.2
                   COSTA RICA

NOV 25  SAO  EPD   14 17 44.2
        BKS  EPD   14 17 44.7  27 00     *PP 19 24   *SP 20 08   *E 30 28
                                          SS 32 14    *E 35 28   *E 38 26
                                MICRON     PERIOD
                   PZ             0.49        1.0
                   MAXS(H) 11                 18
        MHC  IPD   14 17 45.6
        PRI  IPD   14 17 45.6               *PP 19 33   RPKP 44 56   *E 47 45
        FHC  IPD   14 17 49.2
        FRI  IPD   14 17 50.6              RPKP 44 53
        JAS  IPD   14 17 51.0              *PP 19 26   RPKP 44 53   *E 47 40
        WDC  IPD   14 17 52.6              *PP 19 30    SKS 27 28   RPKP 44 51
                                           *E 47 54
        MIN  IPD   14 17 54.5
                   USGS  14 06 35.4, 19.5S, 177.7W, H=442 KM, M=6.0
                   FIJI ISLANDS REGION

NOV 25  SAO  IPC   15 58 29.5
        PRI  IPD   15 58 39.1
        MHC  EPD   15 58 40.9
        FRI  IPC   15 58 48.7
        BKS  EP    15 58 50.5  59 12
        JAS  EPC   15 58 51.2
                   BRK   15 58 25.7, 36.6N, 121.3W, H=  6 KM, ML=3.5
                   STONE CANYON, CALIFORNIA

NOV 25  MHC  EP    16 24 36.8
        FRI  EP    16 24 40.7
        JAS  EPC   16 24 41.8
        WDC  EPC   16 24 44.7
        MIN  E(P)  16 24 45
                   USGS  16 12 12.3, 28.9S, 177.5W, H= 76 KM, M=5.0
                   KERMADEC ISLANDS REGION

NOV 25  JAS  EPC   20 36 42.3
        PRI        20 36                    *E 36 47
        BKS        20 36                    *E 58 40    *E 02 48
                                MICRON     PERIOD
                   MAXR(Z)         7          20
                   MAXH(N)         7          20
                   MAXH(E)         2.3        20
        WDC  EPC   20 36 57.3
                   M=6.0, DISTANCE=80°
                   USGS  20 24 29.5, 38.9S,  91.5W, H= 33 KM, M=5.4
                   WEST CHILE RISE

NOV 26  FRI  IPC   00 10 07.9  10 22
        JAS  IPC   00 10 18.4               *E 10 55
        PRI  EPD   00 10 25.9
        SAO  IPD   00 10 31.1
        MHC  EPD   00 10 32.3
                   BRK   00 09 49.0, 37.4N, 118.4W, H=  2 KM, ML=3.0
                   NEAR BISHOP, CALIFORNIA

NOV 26  SAO  EP    00 47 40.3               *E 47 58
        BKS  EP    00 47 41.5
                                MICRON     PERIOD
                   PZ             0.04        1.0
        PRI  EP    00 47 41.7
        MHC  EPC   00 47 42.4               *E 48 02
        FRI  EPC   00 47 46.5               *E 48 04
        JAS  EPC   00 47 47.4               *E 48 07
        WDC  EPC   00 47 50.5
        MIN  EPC   00 47 51.8
                   USGS  00 35 11.0, 29.4S, 177.5W, H= 33 KM, M=5.3
                   KERMADEC ISLANDS
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                                    *E 35 34
NOV 26  FRI     06 35
        FRI  EP 06 35 36.6
        JAS  EP 06 35 43.0          *E 35 47
        MHC     06 35               LR 06 51
        BKS     06 35               PERIOD
                        MICRON        20
                MAXR(Z)  1.5          20
                MAXH(N)  1.4          20
                MAXH(E)  2.0          20
        WDC  EP 06 36 04.1
                M=5.2, DISTANCE=48°
                USGS  06 27 10.9,  5.4N,  82.6W, H= 33 KM, M=5.1
                SOUTH OF PANAMA

NOV 26  WDC  EP 10 05 58.5
        MHC  EP 10 06 01.0
        MIN  EP 10 06 01.0
        PRI  EP 10 06 04.4
        JAS  EP 10 06 04.8
        FRI  EP 10 06 07.5
                USGS  09 53 05.3,  5.6S, 148.2E, H=191 KM, M=5.4
                NEW BRITAIN REGION

NOV 26  FHC  IPC 11 19 45.9
        WDC  IPC 11 20 02.0
        MIN  IPC 11 20 12.3
        BKS  EP  11 20 26.7
        MHC  EP  11 20 37.0
        JAS  EP  11 20 40.8
        SAO  EP  11 20 45.5
        FRI  EP  11 20 56.7
        PRI  EP  11 20 59.0
                FORESHOCK OF 11:19:22.6, NOV 26.
                BRK   11 19 19.7, 41.3N, 125.7W, H=  2 KM, ML=4.2
                      150 KM NORTHWEST OF EUREKA, CALIFORNIA

NOV 26  FHC  EP  11 19 49.2
        WDC  EP  11 20 05.3
        MIN  EP  11 20 15.6
        BKS  EP  11 20 30.2  21 20
        MHC  EP  11 20 40.3  21 34
        JAS  EP  11 20 44.1
        FRI  EP  11 21 02    22 16
                MAIN SHOCK
                BRK   11 19 22.6, 41.3N, 125.7W, H=  2 KM, ML=6.3
                      150 KM NORTHWEST OF EUREKA, CALIFORNIA.

                                    *F 36 43
NOV 26  FHC  E(P) 11 36 23
        WDC  E(P) 11 36 39    37 10
        MIN  EP  11 36 48.4   37 31
        SAO  EP  11 37 19.5
        FRI  EP  11 37 33.5
                AFTERSHOCK OF 1119, NOV 26.
                BRK   11 36 52.5, 41.5N, 125.8W, H=  2 KM, ML=3.8
                      150 KM NORTHWEST OF EUREKA, CALIFORNIA

NOV 26  FHC  IPC 11 40 13.2  40 32
        WDC  IPC 11 40 29.1
        MIN  IPC 11 40 39.6
        MHC      11 40               *E 41 07
        JAS  EP  11 41 08
                AFTERSHOCK OF 1119, NOV 26.
                BRK   11 39 46.0, 41.3N, 125.7W, H=  2 KM, ML=4.1
                      150 KM NORTHWEST OF EUREKA, CALIFORNIA

NOV 26  FHC  IPC 11 42 32.7  42 52
        WDC  IPC 11 42 48.4
        MIN  EP  11 42 58.7
        MHC      11 43               *E 43 26
        JAS  EP  11 43 29
                AFTERSHOCK OF 1119, NOV 26.
                BRK   11 42 06.8, 41.3N, 125.7W, H=  2 KM, ML=4.0
                      150 KM NORTHWEST OF EUREKA, CALIFORNIA

NOV 26  FHC  IPC 12 27 56.2  28 15
        WDC  EPC 12 28 12.1  28 42
        MIN  EP  12 28 22.5
                AFTERSHOCK OF 1119, NOV 26.
                BRK   12 27 29.0, 41.3N, 125.7W, H=  2 KM, ML=3.8
                      150 KM NORTHWEST OF EUREKA, CALIFORNIA

NOV 26  FHC  EPC 14 51 05.8  51 25    *I 51 23
        WDC  IPC 14 51 22.1  51 52
        MIN  EP  14 51 33.6           *I 52 12   *E 52 15
        SAO  E(P) 14 52 04
                AFTERSHOCK OF 1119, NOV 26.
                BRK   14 50 39.6, 41.3N, 125.7W, H=  2 KM, ML=3.6
                      150 KM NORTHWEST OF EUREKA, CALIFORNIA

NOV 26  FHC  IPC 18 16 38.8  16 58
        WDC  IPC 18 16 54.8
        MIN  IPC 18 17 05.3
        JAS  E(P) 18 17 34
        SAO  EP  18 17 38
                AFTERSHOCK OF 1119, NOV 26.
                BRK   18 16 11.5, 41.3N, 125.7W, H=  2 KM, ML=3.6
                      150 KM NORTHWEST OF EUREKA, CALIFORNIA

NOV 26  SAO  IPC 18 52 44.6
        PRI  EP  18 52 51.7
        MHC  EP  18 52 55.9
        FRI  EPD 18 53 02.0
        JAS  IPC 18 53 06.2
        BKS  EP  18 53 08.9
                BRK   18 52 39.4, 36.6N, 121.2W, H=  5 KM, ML=2.5
                      BEAR VALLEY, CALIFORNIA

NOV 26  FHC  IPC 19 12 53.1           *E 13 13
        WDC  IPC 19 13 09.3
        MIN  IPC 19 13 19.5
        SAO  EP  19 13 51
                AFTERSHOCK OF 1119, NOV 26.
                BRK   19 12 25.5, 41.2N, 125.8W, H=  2 KM, ML=3.7
                      150 KM NORTHWEST OF EUREKA, CALIFORNIA

NOV 26  PRI  EP  23 52 52.0
        FRI  E(P) 23 52 52
        JAS  EP  23 52 58.0
        MHC  EP  23 53 02.0
        BKS  EP  23 53 06.5
        MIN  EP  23 53 12
        WDC  IPC 23 53 15.6
        FHC  EPC 23 53 25.8
                USGS  23 43 40.8,  1.4S,  77.7W, H=196 KM, M=4.8
                ECUADOR

NOV 27  FHC  IPD 01 01 56.4
        WDC  IPC 01 02 12.8           *I 02 17
                AFTERSHOCK OF 1119, NOV 26.
                BRK   01 01 28.3, 41.3N, 125.8W, H=  2 KM, ML=3.5
                      150 KM NORTHWEST OF EUREKA, CALIFORNIA

NOV 27  FHC  EPC 02 04 43.8
        WDC  EPC 02 05 00.2           *I 05 04   *I 05 06
                                      *I 05 32
                AFTERSHOCK OF 1119, NOV 26.
                BRK   02 04 15.7, 41.5N, 125.7W, H=  2 KM, ML=3.5
                      150 KM NORTHWEST OF EUREKA, CALIFORNIA

NOV 27  FHC  EPD 02 22 45.5
        WDC  EPD 02 23 02.1
        SAO  E(P) 02 23 43            *E 23 29   *E 23 34
                AFTERSHOCK OF 1119, NOV 26.
                BRK   02 22 16.5, 41.4N, 125.8W, H=  2 KM, ML=3.6
                      150 KM NORTHWEST OF EUREKA, CALIFORNIA

NOV 27  MIN  IPC 02 50 07.0
        WDC  IPC 02 50 15.2  50 35
        FHC  IPC 02 50 30.8  51 17    *I 50 36
        JAS  IPC 02 50 34.6  51 09    *I 50 39   *I 51 17
        BKS  E(P) 02 50 52            *E 51 26
        MHC  EP  02 50 47.8
        FRI  EP  02 50 49.0
                BRK   02 49 48.5, 40.9N, 120.5W, H=  7 KM, ML=3.8
                      NORTH OF SUSANVILLE, CALIFORNIA

NOV 27  SAO  EP  04 11 03.2
        BKS  EP  04 11 03.8
                        MICRON        PERIOD
                PZ        0.06          0.9
        MHC  IPC 04 11 04.8
        PRI  EPC 04 11 04.9
        FHC  EP  04 11 07.7
        FRI  EP  04 11 10.0           *E 13 11
        JAS  IPC 04 11 10.3           *E 13 11
        WDC  IPC 04 11 11.2           *E 13 12
                USGS  04 00 09.7, 17.9S, 178.8W, H=576 KM, M=5.5
                FIJI ISLANDS REGION

NOV 27  FHC  IPD 07 01 57.4  02 17    *I 02 13
        WDC  IPD 07 02 13.7  02 45
                AFTERSHOCK OF 1119, NOV 26.
                BRK   07 01 30.0, 41.3N, 125.7W, H=  2 KM, ML=3.5
                      150 KM NORTHWEST OF EUREKA, CALIFORNIA

NOV 27  FRI  EP  12 25 25.5
        JAS  IPC 12 25 26.1
        WDC  EP  12 25 28.0
                USGS  12 14 05.5, 22.5S, 179.6W, H=585 KM, M=5.2
                SOUTH OF FIJI ISLANDS

NOV 27  FHC      21 55                PP 59 50
        WDC  EPC 21 55 47.0           PP 59 50   PKKP 11 46
        JAS  EPC 21 56 00.5           *E 56 58   PP 00 15   PKKP 11 39
        PRI      21 56                PP 00 20   PKKP 11 34
        FRI  EP  21 56 05        PKKP 11 36
                USGS  21 42 12.2, 36.5N,  71.0E, H=190 KM, M=6.1
                AFGHANISTAN-USSR BORDER REGION

NOV 28  FRI  IPC 01 23 36.1  23 48
        JAS  IPC 01 23 43.1
        PRI  EPD 01 23 55.8
        SAO  EPC 01 23 58.0
        MHC  EPD 01 23 58.8
                BRK   01 23 19.8, 37.6N, 119.1W, H=  2 KM, ML=3.1
                MAMMOTH LAKES, CALIFORNIA

NOV 28  FHC  IPD 04 30 41.7
        WDC  IPC 04 30 57.9           *I 31 29
        MIN  IP  04 31 08.7           *I 31 50
        BKS  EP  04 31 21.2           *E 32 12
        MHC  EP  04 31 31.7
        JAS  EPC 04 31 35.4
        SAO  EP  04 31 37
        FRI  EPC 04 31 51.2
        PRI  E(P) 04 31 52
                AFTERSHOCK OF 1119, NOV 26.
                BRK   04 30 14.3, 41.3N, 125.7W, H=  2 KM, ML=4.2
                      150 KM NORTHWEST OF EUREKA, CALIFORNIA

NOV 28  FHC  EP  13 04 26.3
        WDC  EPC 13 04 31.8
        MIN  EP  13 04 35.8
        BRK      13 04               *E 04 43
        JAS  EPC 13 04 49.2          *E 05 15
        FRI      13 04               *E 04 55
                USGS  12 53 24.0, 41.1N, 140.7E, H= 13 KM, M=5.2
                HOKKAIDO, JAPAN REGION

NOV 29  FHC  E(P) 08 26 48
        WDC  IPD 08 26 53.1
        MIN  EP  08 26 57
        MHC  EP  08 27 08.7
        JAS  EPD 08 27 11.0
        SAO  E(P) 08 27 11
        FRI  EP  08 27 16.4
        PRI  EP  08 27 17
                USGS  08 16 01.6, 42.0N, 142.5E, H= 65 KM, M=5.1
                HOKKAIDO, JAPAN REGION

NOV 29  FHC  EPC 11 14 38.5
        WDC  E(P) 11 14 54.9
        MIN  E(P) 11 15 05.1
                AFTERSHOCK OF 1119, NOV 26.
                BRK   11 14 11.3, 41.3N, 125.7W, H=  2 KM, ML=3.5
                      150 KM NORTHWEST OF EUREKA, CALIFORNIA

NOV 30  FRI  IPD 00 52 29.1
        PRI  IPD 00 52 30.7  02 03    *I 53 00  RPKP 20 03
        SAO  EP  00 52 35.3
        JAS  IPD 00 52 36.2  02 13  RPKP 19 58
        MHC  EPD 00 52 38.7  02 21    *I 53 06  RPKP 20 01
        BKS  IPD 00 52 42.3  02 25  P*CP 52 59   *PP 53 12    PP 56 16
                                    *SS 03 11     PS 03 38    SS 07 32
                                    SSS 11 22     *E 18 53  RPKP 20 04
                                 SKPPKP 23 18     *E 27 42    *E 39 06
                        MICRON      PERIOD
                PZ        1.51        1.4
        MIN  EPD 00 52 47.8         RPKP 19 55
        WDC  IPD 00 52 49.8         RPKP 19 56 SKPPKP23 10  RPKP 39 39
        FHC  IPD 00 52 58.6
                USGS  00 40 57.8, 20.5S,  68.9W, H= 82 KM, M=6.5
                CHILE-BOLIVIA BORDER REGION

NOV 30  FHC  IPD 04 21 14.7  21 33
        WDC  IPD 04 21 30.7  22 03
        MIN  IPC 04 21 41.2
        BKS  EP  04 21 56.4
                AFTERSHOCK OF 1119, NOV 26.
                BRK   04 20 48.1, 41.3N, 125.6W, H=  2 KM, ML=3.8
                      150 KM NORTHWEST OF EUREKA, CALIFORNIA

NOV 30  BKS  E(P) 09 03 04.5
        MHC  EP  09 03 05.0
        FRI  EP  09 03 09.7
        FHC  EP  09 03 10.1
        JAS  IPD 09 03 10.7
        WDC  EP  09 03 13.3
        MIN  EP  09 03 15.2
                USGS  08 51 00.8, 24.2S, 175.1W, H= 33 KM, M=5.3
                SOUTH OF TONGA ISLANDS

NOV 30  JAS  EP  11 49 05.8
        MHC  EP  11 49 08.0
        MIN  EP  11 49 18.3
        WDC  EP  11 49 20.4
                USGS  11 37 23.6, 21.2S,  68.4W, H= 89 KM, M=4.3
                CHILE-BOLIVIA BORDER REGION

NOV 30  PRI  EP  17 20 12.0           *E 20 37
        JAS  EP  17 20 17.3           *E 20 43
        MHC  EP  17 20 19.5           *E 20 46
        WDC  EP  17 20 31.0           *E 20 58
        FHC  EP  17 20 40             *E 21 06
                USGS  17 08 40.9, 19.9S,  69.2W, H= 69 KM, M=5.5
                NORTHERN CHILE
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DEC 01  FRI  EPC   14 23 23.1                  *E 23 32
        FRI  EPC   14 23 25.8
        JAS  EPC   14 23 31.7                  *E 23 41    *E 25 24
        SAO  EP    14 23 32.3
        MHC  EPC   14 23 36.8                  *E 23 46
        BKS  EP    14 23 42.0  30 20          PP 25 30    LQ 33 58    *E 36 30
                                               *E 40 30
                          MICRON               PERIOD
                     PZ     0.15                 1.1
        MIN  EP    14 23 47.2
        WDC  EPC   14 23 51.3                  *E 25 32
        FHC  EPC   14 24 02.5                  *E 24 10
                   USGS  14 15 39.0,  9.8N,  84.8W, H= 58 KM, M=5.3
                         COSTA RICA

DEC 02  FHC  EP    01 31 09.1                 *E 31 16
        WDC  IPC   01 31 15.3                 *I 31 22
        MIN        01 31                      *E 31 19
        BKS  E(P)  01 31 23.2  41 16          *PP 31 30   SS 46 23    LR 54 24
                          MICRON               PERIOD
                     PZ     0.28                 1.2
                     MAXR(Z)  1.8                20
                     MAXH(N)  1.2                20
                     MAXH(E)  2.1                20
        MHC  EP    01 31 26.9                 *E 31 59
        JAS  IPC   01 31 30.4                 *I 31 37
        SAO        01 31                      *I 31 34
        PRI  EP    01 31 34.0                 *I 31 41
        FRI  EP    01 31 34.5                 *I 31 42
                   M=5.5, DISTANCE=78°
                   USGS  01 19 29.2, 31.0N, 139.5E, H= 36 KM, M=5.6
                         SOUTH OF HONSHU, JAPAN

DEC 02  SAO  IPD   07 24 57.4
        PRI  IPD   07 25 06.1
        MHC  IPC   07 25 08.7
        FRI  IP    07 25 16.1
        BKS  EP    07 25 17.9
        JAS  EP    07 25 19.3
                   ML=2.9 AFTERSHOCK AT 0726.
                   BRK   07 24 53.1, 36.6N, 121.2W, H=  6 KM, ML=3.3
                         STONE CANYON, CALIFORNIA

DEC 02  FRI        16 24                      *E 24 53
        WDC  E(P)  16 24 54.3
        JAS  EP    16 24 56.6
        FRI  EP    16 24 56.7
                   USGS  16 11 59.5, 21.5S, 168.5E, H= 13 KM, M=4.9
                         LOYALTY ISLANDS

DEC 03  FRI  EP    05 39 05                   *E 39 43
        PRI  EP    05 39 06.8
        SAO  EP    05 39 10.8
        JAS  EPD   05 39 12.2                 *E 39 41
        MHC  EPD   05 39 14.7
        BKS  EP    05 39 18.4                 *E 39 47
                          MICRON               PERIOD
                     PZ     0.03                 0.8
        MIN  EP    05 39 23.8
        WDC  EPD   05 39 26.9
        FHC  EPD   05 39 34.4
                   USGS  05 27 31.7, 20.5S,  68.6W, H= 71 KM, M=5.4
                         CHILE-BOLIVIA BORDER REGION

DEC 03  FRI  EP    06 53 14.0                 *E 53 22
        MHC        06 53                      *E 53 28    *E 53 36
        JAS        06 53                      *E 53 33    *E 53 40
        BKS        06 53                      *E 57 22    *E 00 06
        WDC  EP    06 54 05.6                 *E 54 14
        FHC        06 54                      *E 54 17
                   USGS  06 49 46.0, 25.4N, 109.5W, H= 33 KM, M=4.1
                         GULF OF CALIFORNIA

DEC 03  MHC  E(P)  17 14 00
        BKS        17 14                      *E 14 11    *E 14 20    *E 14 28
                                               LR 41 00
        FRI  E(P)  17 14 03
        JAS  EP    17 14 04.5
        WDC  EPC   17 14 07.8
                   USGS  17 01 18.1, 31.6S, 178.4W, H= 33 KM, M=5.2
                         KERMADEC ISLANDS REGION

DEC 03  PRI  EP    23 22 14.1                 *E 22 50
        JAS  IPD   23 22 19.5                 *E 22 56
        MHC  EP    23 22 21.6                 *E 22 58
        BKS  EP    23 22 24.9
                          MICRON               PERIOD
                     PZ     0.01                 0.7
        WDC  IPD   23 22 34.0                 *E 23 10
        FHC  EP    23 22 41.0                 *E 23 18
                   USGS  23 10 32.6, 22.6S,  68.7W, H= 93 KM, M=5.0
                         NORTHERN CHILE

DEC 04  FRI  E(P)  05 18 10.5
        PRI  EP    05 18 12.3
        JAS  EPD   05 18 17.5
        MHC  EP    05 18 20.0
        BKS  EP    05 18 24.3
                          MICRON               PERIOD
                     PZ     0.06                 1.5
        MIN  EP    05 18 29.7
        WDC  IPD   05 18 32.6
                   USGS  05 06 37.9, 20.5S,  68.5W, H= 78 KM, M=5.2
                         CHILE-BOLIVIA BORDER REGION

DEC 04  FRI  EPD   12 44 02.5
        PRI  EPD   12 44 04.2                 *PP 44 31
        SAO  EP    12 44 08.5
        JAS  IPD   12 44 09.7                 *PP 44 36
        MHC  EPD   12 44 12.3                 *PP 44 40
        BKS  IPC   12 44 16.1                  *E 44 42
                          MICRON               PERIOD
                     PZ     0.13                 1.4
        MIN  EPD   12 44 21.3
        WDC  IPD   12 44 24.5                 *PP 44 52
        FHC  IPD   12 44 32.0                 *PP 45 00
                   USGS  12 32 29.6, 20.4S,  68.5W, H= 72 KM, M=5.6
                         CHILE-BOLIVIA BORDER REGION

DEC 04  FRI  EPKP  14 36 26.5
        JAS  EPKP  14 36 28.2
        MHC  EPKP  14 36 29.2
        BKS  EPKP  14 36 30.2
                          MICRON               PERIOD
                     PKPZ   0.03                 0.8
        MIN  EPKP  14 36 32.2
        WDC  IPKPD 14 36 33.4
                   USGS  14 17 35.0, 56.2S,  26.8W, H= 33 KM, M=5.5
                         SOUTH SANDWICH ISLANDS REGION

DEC 05  PRI  EP    04 41 39.9                 *E 42 06
        FRI  EP    04 41 40.2
        SAO  EP    04 41 52.0
        JAS  IPC   04 41 58.1                 *E 42 39
        MHC  EP    04 41 59.5
        BKS  EP    04 42 09.3  42 54
                   ML=3.8, 20 MILES EAST OF BAKERSFIELD
                   USGS  04 41 09.0, 35.4N, 118.6W, H=  6 KM
                         CENTRAL CALIFORNIA

DEC 05  SAO  EP    17 22 37.2
        PRI  EP    17 22 38.6
        MHC  EP    17 22 39.3
        BKS  EP    17 22 39.4
                          MICRON               PERIOD
                     PZ     0.06                 1.0
        FHC  EP    17 22 44.3
        FRI  EP    17 22 44.3
        JAS  EP    17 22 45.4
        WDC  EP    17 22 48.0
        MIN  EP    17 22 49.6
                   USGS  17 11 08.6, 18.0S, 172.4W, H= 15 KM, M=5.3
                         TONGA ISLANDS REGION

DEC 05  FHC  EPD   22 12 31.2
        WDC  IPD   22 12 36.3
        MIN  EP    22 12 39.8
        BKS  IPC   22 12 44.4
                          MICRON               PERIOD
                     PZ     0.07                 0.9
        MHC  EPD   22 12 47.8
        JAS  EPD   22 12 50.5
        PRI  EP    22 12 54.5
        FRI  EPD   22 12 55.4
                   USGS  22 01 18.8, 28.6N, 139.7E, H=366 KM, M=5.2
                         BONIN ISLANDS REGION

DEC 06  FHC  IPC   09 19 50.0
        WDC  IPD   09 20 06.3
        MIN  EPC   09 20 16.5
        BKS  EP    09 20 21.8
        MHC  EPD   09 20 31.9
        SAO  EP    09 20 38.0
        JAS  IPD   09 20 40.7
        FRI  EP    09 20 53.0
                   BRK   09 19 06.2, 41.2N, 127.5W, H=  2 KM, ML=3.9
                         300 KM NORTHWEST OF EUREKA, CALIFORNIA

DEC 06  WDC        11 05                      *E 05 05
        JAS  E(P)  11 05 07
        FRI        11 05                      *E 05 09
                   USGS  10 52 26.2, 15.8S, 167.2E, H= 29 KM, M=4.8
                         NEW HEBRIDES ISLANDS

DEC 06  FRI  EP    19 57 24.8
        MHC  EP    19 57 29.4
        JAS  IPC   19 57 31.8                 *I 57 41
        BKS  E(P)  19 57 33.0  07 11          *E 04 53    LQ 17 20    LR 20 15
                          MICRON               PERIOD
                     MAXR(Z)  1.6                18
                     MAXH(N)  1.0                18
                     MAXH(E)  1.0                18
        WDC  IPC   19 57 47.3
                   M=5.3, DISTANCE=73°
                   USGS  19 46 06.0, 34.6S, 112.2W, H= 33 KM, M=5.4
                         EASTER ISLAND CORILLERA

DEC 07  FHC  EP    05 09 49.3
        WDC  IPC   05 09 50.6
        MIN  EP    05 09 52.5
        BKS  EP    05 10 04.0
                          MICRON               PERIOD
                     PZ     0.04                 0.8
        JAS  IPC   05 10 05.0
        MHC  EP    05 10 07.2
        SAO  EP    05 10 09.4
        FRI  EP    05 10 09.9
        PRI  EP    05 10 13.8
                   USGS  04 56 57.4, 49.9N,  78.9E, H=  0 KM, M=5.9
                         EASTERN KAZAKH, SSR

DEC 07  FHC  EP    09 47 44.6
        WDC  EP    09 47 49.6
        MIN  EP    09 47 53.1
        BKS  EP    09 47 58.8
                          MICRON               PERIOD
                     PZ     0.04                 0.7
        MHC        09 48                      *E 48 03
        SAO  EP    09 48 04.0
        JAS  EP    09 48 05.2
        FRI  EP    09 48 10.3
        PRI  EP    09 48 10.4
                   USGS  09 36 39.1, 33.9N, 137.0E, H=342 KM, M=5.0
                         NEAR SOUTH COAST OF HONSHU, JAPAN

DEC 07  PRI  EP    11 27 26.8
        MHC  EP    11 27 26.9
        BKS  EP    11 27 27.5  37 16          *E 27 37    LQ 46 58    LR 50 00
                          MICRON               PERIOD
                     PZ     0.07                 1.7
                     MAXR(Z)  7                  20
                     MAXH(N)  6                  20
                     MAXH(E)  6                  20
        FRI  EP    11 27 32.3
        JAS  EP    11 27 32.8
        WDC  EP    11 27 35.8
        MIN  EP    11 27 36.9
                   M=6.1, DISTANCE=76°
                   USGS  11 15 41.5, 18.9S, 176.6W, H= 46 KM, M=5.6
                         FIJI ISLANDS REGION

DEC 07  FRI  EP    13 01 34.6
        PRI  EP    13 01 35.6
        SAO  EP    13 01 44.4
        JAS  EP    13 01 51.4
        MHC  EP    13 01 53.3
        BKS  EP    13 02 08.9  03 33          *E 03 40    LR 04 40
        MIN  EP    13 02 27.0
        WDC        13 02                      *E 02 36
        FHC        13 02                      *E 02 41
                   USGS  12 59 56.3, 32.0N, 114.8W, H=  8 KM, M=5.5
                         WESTERN ARIZONA-MEXICO BORDER REGION

DEC 08  MNV  EPKP  08 58 13.0
        FRI  EPKP  08 58 16.0
        MIN  EPKP  08 58 17.4
        WDC  EPKP  08 58 17.9
        PRI  EPKP  08 58 19.0
        MHC  EPKP  08 58 20.2
        BKS  EPKP  08 58 20.6
                          MICRON               PERIOD
                     PKPZ   0.02                 1.0
                   USGS  08 38 25.7, 28.0S,  26.7E, H= 33 KM, M=5.2
                         REPUBLIC OF SOUTH AFRICA

DEC 08  FHC  IPC   12 05 08.4
        WDC  IPC   12 05 23.5  05 50
        MIN  EPC   12 05 33.3  06 08
        BKS  EP    12 05 41.1  06 22          *E 06 12
        MHC  EPC   12 05 51.3
        SAO  EP    12 05 57.5
        JAS  IPC   12 05 58.0
        FRI  EP    12 06 11.3
                   BRK   12 04 45.0, 40.9N, 125.5W, H=  2 KM, ML=3.8
                         WEST OF EUREKA, CALIFORNIA

DEC 08  WDC  IPD   12 46 36.4
        MIN  IPC   12 46 39.4
        FHC  IPD   12 46 47.8
        BKS  EP    12 47 00.2
        JAS  EPD   12 47 02.8
        MHC  E(P)  12 47 04
                   BRK   12 46 22.7, 39.8N, 122.6W, H=  2 KM, ML=3.2
                         NEAR PASKENTA, CALIFORNIA
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DEC 08  FHC  IPC   14 21 53.8   22 13
        WDC  IPD   14 22 10.2   22 42
        MIN  EP    14 22 19.0
        BKS  EP    14 22 33.3
        MHC  EP    14 22 43.5
        SAO  EP    14 22 50.3
        JAS  EP    14 22 52
        FRI  EP    14 23 04.4
                   AFTERSHOCK OF 1119, NOV 26.
                   BRK   14 21 26.6, 41.3N, 125.7W, H=  2 KM, ML=3.8
                   150 KM NORTHWEST OF EUREKA, CALIFORNIA

DEC 08  MNV  IPC   14 50 07.1
        FRI  IPC   14 50 18.8
        JAS  IPC   14 50 28.0
        PRI  EPC   14 50 31.5
        SAO  EPC   14 50 38.5
        MHC  EPC   14 50 40.5
        BKS  EP    14 50 49.1
        MIN  E(P)  14 50 53.5
        WDC  EP    14 51 03.3
                   ML=4.6, NUCLEAR EXPLOSION, NEVADA TEST SITE
                   USGS  14 49 30.1, 37.1N, 116.0W, H=  0 KM, M=4.9
                   SOUTHERN NEVADA

DEC 08  MHC  IPD   20 13 21.4
        SAO  IPD   20 13 30.0
        BKS  EP    20 13 34.4   13 46
        JAS  IPC   20 13 40.6
        PRI  EP    20 13 43.7
        FRI  IPC   20 13 46.3          *E 14 11
        MIN        20 14
        MNV  E(P)  20 14 11.1
        WDC  EP    20 14 11.8
                   BRK   20 13 19.4, 37.3N, 121.6W, H=  6 KM, ML=3.1
                   EAST OF SAN JOSE, CALIFORNIA

DEC 09  MHC  EP    03 31 13.3
        BKS  EP    03 31 13.5
                              MICRON      PERIOD
                   PZ            0.4         1.2
        FRI  EP    03 31 17.3
        JAS  EP    03 31 18.4
        WDC  EP    03 31 21.8
        MNV  EP    03 31 26.8
                   USGS  03 18 49.6, 29.0S, 176.7W, H= 65 KM, M=4.9
                   KERMADEC ISLANDS REGION

DEC 09  FHC  EP    09 52 28.7
        WDC  IPC   09 52 40.6
        MIN  EP    09 52 52.1
        BKS  EP    09 53 07.9          *E 54 18    LR 55 01
                              MICRON      PERIOD
                   PZ            0.04        0.9
        MHC  EP    09 53 16.3
        JAS  IPC   09 53 20.8
        FRI  EP    09 53 35.2
        MNV  EP    09 53 35.5
        PRI  EP    09 53 37.3
                   USGS  09 50 59.5, 44.5N, 130.0W, H= 18 KM, M=5.3
                   OFF COAST OF OREGON

DEC 09  FHC  IP    09 59 40.5
        WDC  IP    09 59 55.3
        MIN        10 00               *E 00 07
        MHC  EP    10 00 32.4
        JAS  EP    10 00 37.8
        FRI  EP    10 00 52.0
        PRI  EP    10 00 52.4
                   USGS  09 58 13.0, 44.5N, 130.1W, H= 15 KM, M=4.9
                   OFF COAST OF OREGON

DEC 09  FHC  EP    10 29 31
        WDC  E(P)  10 29 46.0
        MIN  EP    10 29 54.9
        BKS  EP    10 30 16.8
                              MICRON      PERIOD
                   PZ            0.02        0.6
        MHC  EP    10 30 21.1
        JAS  EP    10 30 23.4
        FRI  EP    10 30 39.5
        MNV  EP    10 30 40.0
        PRI        10 30               *E 30 42
                   USGS  10 28 06.9, 44.6N, 129.4W, H= 15 KM, M=5.1
                   OFF COAST OF OREGON

DEC 09  WDC  EP    10 37 54.2
        MIN        10 38               *E 38 13
        JAS  EP    10 38 28.3
        FRI  EP    10 38 44.9
                   USGS  10 36 06.8, 44.7N, 129.8W, H= 15 KM
                   OFF COAST OF OREGON

DEC 09  WDC  EP    10 39 54.2
        MIN  EP    10 40 05.0
        JAS  EP    10 40 33.1
                   USGS  10 38 14.2, 44.6N, 129.6W, H= 15 KM, M=4.9
                   OFF COAST OF OREGON

DEC 09  MNV  EP    22 38 31.4          *E 40 55
        WDC        22 38               *E 38 43
        JAS  EP    22 38 52.5          *E 39 37    *E 41 48    *E 44 12
        BKS        22 38               *E 42 23
        PRI        22 39               *E 39 20
                   USGS  22 36 23.7, 44.8N, 110.6W, H=  5 KM, M=4.5
                   YELLOWSTONE NATIONAL PARK, WYOMING

DEC 10  WDC  EPD   10 41 20.6
        MIN  EP    10 41 24.0
        BKS  EPC   10 41 25.3
                              MICRON      PERIOD
                   PZ            0.06        1.0
        MHC  E(P)  10 41 29
        JAS  EPD   10 41 32.0
        PRI  EP    10 41 34
        FRI  EP    10 41 36.2
        MNV  EP    10 41 40.1
                   USGS  10 29 57.8, 17.2N, 145.4E, H=481 KM, M=4.9
                   MARIANA ISLANDS

DEC 10  FHC  IPC   20 19 18.8   19 38
        WDC  IPC   20 19 34.7   20 06
        MIN  EP    20 19 45
                   AFTERSHOCK OF 1119, NOV 26.
                   BRK   20 18 52.1, 41.3N, 125.7W, H=  2 KM, ML=3.5
                   150 KM NORTHWEST OF EUREKA, CALIFORNIA

DEC 11  FRI  EP    14 18 52.2
        PRI        14 18
        MNV  EPD   14 18 59.5          *E 18 54
        JAS  E(P)  14 19 05.2
        MHC        14 19
        WDC  E(P)  14 19 45            *E 19 08
                   USGS  14 15 29.6, 25.4N, 109.7W, H= 33 KM, M=4.5
                   GULF OF CALIFORNIA

DEC 11  MNV  EP    17 27 33.8          P*CP 29 59
        FRI        17 27               *E 27 35
        PRI  EP    17 27 36.5          P*CP 30 03
        JAS  E(P)  17 27 42            *E 27 48
        MHC        17 27               P*CP 30 10
        WDC        17 27
                   USGS  17 20 39.1, 13.6N,  88.9W, H= 79 KM, M=5.0
                   EL SALVADOR

DEC 11  FHC  EPKP  18 27 00.3
        WDC  EPKP  18 27 01.3          *E 40 46
        MIN  EPKP  18 27 02.5
        BRK  EPKP  18 27 04.6
        JAS  EPKP  18 27 06.4          PP 28 50    *E 40 40
        MHC  EPKP  18 27 06.5
        FRI  EPKP  18 27 08.6
        MNV  EPKP  18 27 09.8
        PRI  EPKP  18 27 09.8
                   USGS  18 08 04.4,  7.5N,  93.8E, H= 33 KM, M=5.6
                   NICOBAR ISLANDS REGION

DEC 11  PRI  EPC   23 11 40.8
        FRI  EPD   23 11 41.8
        MNV  EPD   23 11 48.5          *E 16 07
        SAO        23 11               *E 11 52
        JAS  EPD   23 11 56.2
        MHC  E(P)  23 11 58
        BKS  EP    23 12 08.5          *E 15 10
                              MICRON      PERIOD
                   PZ            0.38        1.2
                   MAXR(Z) 16            20
                   MAXH(N) 25            20
                   MAXH(E) 53            20
        MIN  EPD   23 12 28.5
        WDC  EPD   23 12 36.0
        FHC  EPD   23 12 47.0
                   M=5.8, DISTANCE=16°
                   USGS  23 08 27.7, 25.9N, 110.3W, H= 33 KM, M=5.2
                   GULF OF CALIFORNIA

DEC 12  FHC  IPC   01 19 52.6          *PP 21 44
        WDC  IPC   01 19 57.5          *PP 21 48   PP 23 01    *E 45 47
        MIN  EPC   01 20 01.0
        BKS  IPC   01 20 05.0  29 25  *PP 21 56   *SS 32 28    *E 37 20
                                       *E 40 44    *E 49 00
                              MICRON      PERIOD
                   PZ            1.16        0.7
        MHC  EPC   01 20 08.9          *PP 22 00   PP 23 18
        SAO  EPC   01 20 10.0          *PP 22 03
        JAS  IPC   01 20 11.4          *PP 22 07   PP 23 22    *E 45 37
                                       *E 49 30
        PRI  EPC   01 20 15.7          *PP 22 06   *E 49 29
        FRI  EPC   01 20 16.3          *PP 22 08   PP 23 30
        MNV  IPC   01 20 18.6  29 53     PP 23 32   *E 45 31    *E 49 26
                   USGS  01 08 50.1, 28.0N, 139.6E, H=491 KM, M=5.9
                   BONIN ISLANDS REGION

DEC 12  PRI  EP    05 40 27.4
        BRK  EP    05 40 28
        MHC  EP    05 40 28.3
        FRI  EP    05 40 32.5
        JAS  EPC   05 40 33.6          *E 40 44
        WDC  EPC   05 40 36.7          *E 40 48
        MIN  EP    05 40 38.0
                   USGS  05 28 12.1, 27.5S, 176.3W, H= 68 KM, M=5.1
                   KERMADEC ISLANDS REGION

DEC 13  MNV  EP    01 28 14.2
        JAS  EP    01 28 19.7
        MHC  EP    01 28 22.2
        WDC  EP    01 28 34.3
        FHC  EP    01 28 41.8
                   USGS  01 16 38.1, 20.9S,  68.6W, H= 77 KM, M=4.8
                   CHILE-BOLIVIA BORDER REGION

DEC 13  SAO  IPD   02 26 03.4
        MHC  IPD   02 26 11.6
        PRI  EP    02 26 19.6
        BKS  EP    02 26 21.1   26 39
        JAS  EPC   02 26 25.6
        FRI  EP    02 26 26.3
                   BRK   02 26 00.6, 36.8N, 121.6W, H=  2 KM, ML=2.9
                   SAN JUAN BAUTISTA, CALIFORNIA

DEC 13  FHC  EPD   23 13 00.6
        WDC  EPD   23 13 06.1
        MIN  EP    23 13 09.7
        BKS  EP    23 13 14.5
                              MICRON      PERIOD
                   PZ            0.02        0.7
        MHC  EP    23 13 18.4
        SAO        23 13               *E 13 20
        JAS  EP    23 13 21.4
        PRI  E(P)  23 13 26
        FRI  EPD   23 13 26.7
        MNV  EPD   23 13 29.0
                   USGS  23 01 32.1, 31.1N, 142.4E, H= 33 KM, M=5.4
                   SOUTH OF HONSHU, JAPAN

DEC 14  JAS  EP    07 41 06.6
        FRI        07 41               *E 41 08
        MNV  EP    07 41 15.4
                   USGS  07 28 28.4, 17.7S, 168.1E, H= 68 KM, M=4.9
                   NEW HEBRIDES ISLANDS

DEC 14  FHC  IPC   10 59 10.0   59 28
        WDC  EP    10 59 26.2   59 56
        MIN  EP    10 59 36.6          *E 00 16
                   AFTERSHOCK OF 1119, NOV 26.
                   BRK   10 58 44.7, 41.4N, 125.7W, H=  2 KM, ML=3.6
                   150 KM NORTHWEST OF EUREKA, CALIFORNIA

DEC 14  FHC  EPD   16 19 05.5          *E 19 18
        WDC  IPD   16 19 10.2
        MIN  EPD   16 19 13.4          *E 19 25
        BKS  EPD   16 19 18.4  29 48  *E 19 30    *E 42 00    *E 52 00
                              MICRON      PERIOD
                   PZ            0.85        1.6
                   MAXR(Z)  6            20
                   MAXH(N)  3.4          20
                   MAXH(E)  6            20
        MHC  EP    16 19 21.8          *E 19 35
        SAO  EP    16 19 23.4
        JAS  EPD   16 19 24.0          *E 19 37    *E 19 44
        FRI  EPD   16 19 29.0          *E 19 41
        PRI  EPD   16 19 29.0
        MNV  EPD   16 19 30.0
                   M=6.0, DISTANCE=85°
                   USGS  16 06 44.4, 28.3N, 130.7E, H= 41 KM, M=6.3
                   RYUKYU ISLANDS

DEC 14  FHC  EPD   19 47 26.0
        WDC  EPD   19 47 30.7
        MIN  EPD   19 47 34.0
        BKS  EP    19 47 39.0
                              MICRON      PERIOD
                   PZ            0.08        1.4
        MHC  EP    19 47 42.4
        JAS  EPD   19 47 44.5
        FRI  EP    19 47 49.5
        PRI  EP    19 47 49.5
        MNV  EPD   19 47 51.0
                   USGS  19 35 04.4, 28.3N, 130.6E, H= 39 KM, M=5.6
                   RYUKYU ISLANDS

DEC 14  FHC  EPC   20 31 22.0
        WDC  EPC   20 31 28.0
        MIN  EPC   20 31 32.8
        BRK  EP    20 31 43
        MHC  EP    20 31 49.0
        JAS  EPC   20 31 51.0
        MNV  E(P)  20 31 57
        FRI  EP    20 31 58.2
        PRI  EP    20 31 59.7
                   USGS  20 22 28.9, 55.3N, 160.5E, H= 44 KM, M=5.3
                   KAMCHATKA
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DEC 15 SAO EP 07 21 51.1
BKS EP 07 21 52.7
MICRON PERIOD
PZ 0.03 0.8
PRI EPC 07 21 52.8
MHC EPC 07 21 53.3
FHC EPC 07 21 57.8
FRI EPC 07 21 58.7 •E 22 20
JAS EPC 07 22 01.5 •E 22 21
WDC EPC 07 22 03.3 •E 22 23
MIN EPC 07 22 09.6 •E 22 31
MNV EPC
USGS 07 10 27.8, 17.3S, 174.0W, H= 79 KM, M=5.5
TONGA ISLANDS

DEC 15 FHC EP 12 38 22.2
WDC EPD 12 38 27.0
MIN EP 12 38 30.2
BKS E(P) 12 38 35.5
MICRON PERIOD
PZ 0.02 0.8
MHC EP 12 38 38.7
JAS EPD 12 38 40.8
PRI EP 12 38 44.5
FRI EP 12 38 45.6
MNV EPD 12 38 47.3
USGS 12 25 54.9, 28.2N, 130.6E, H= 3 KM, M=5.3
RYUKYU ISLANDS

DEC 15 FHC EP 13 27 32.6
WDC EP 13 27 37.8
MIN EP 13 27 40.7
BRK EP 13 27 41.5
BKS 13 27 •E 27 44
MHC EP 13 27 45.0
JAS EP 13 27 48.4
PRI EP 13 27 50.5
FRI EP 13 27 52.2
MNV EP 13 27 56.7
USGS 13 15 17.0, 13.1N, 145.1E, H= 77 KM, M=5.5
MARIANA ISLANDS

DEC 16 SAO EP 12 41 48.7
BKS EP 12 41 49.5
MICRON PERIOD
PZ 0.06 1.0
PRI EPC 12 41 50.2
MHC EPC 12 41 50.3
FHC EPC 12 41 53.3
FRI EPC 12 41 55.6
JAS IPC 12 41 56.0
WDC IPC 12 41 56.7
MIN EP 12 41 58.9
MNV IPC 12 42 05.1
USGS 12 30 53.9, 17.9S, 178.7W, H=560 KM, M=5.2
FIJI ISLANDS REGION

DEC 17 FRI EPD 20 34 43.2 •E 35 24
MNV IPD 20 34 44.9 •E 35 26
PRI EPD 20 34 45.2 •E 35 26
SAO EP 20 34 49.4
JAS IPD 20 34 50.6 •E 35 31
MHC EPD 20 34 53.0 •E 35 34
BKS IPD 20 34 56.4
MICRON PERIOD
PZ 0.03 0.6
MIN EPD 20 35 02
WDC IPD 20 35 05.3 •E 35 46
FHC EPD 20 35 12.6
USGS 20 23 06.2, 20.9S, 68.5W, H= 57 KM, M=5.6
CHILE-BOLIVIA BORDER REGION

DEC 17 BKS EP 21 36 45.4 37 00
MHC EP 21 36 54.8
MIN EP 21 36 57.0
JAS EP 21 36 58.0
WDC EP 21 36 58.0
BRK 21 36 27.5, 38.8N, 122.4W, H= 2 KM, ML=3.2
NORTH OF BERKELEY, CALIFORNIA

DEC 18 FHC EPD 05 16 36.8
WDC IPD 05 16 41.3
MIN EP 05 16 44.6
BKS EP 05 16 49.5
MHC EP 05 16 53.1
JAS EPD 05 16 55.5
PRI EP 05 17 00.0
FRI EP 05 17 00.1
MNV EPD 05 17 01.8
USGS 05 04 14.9, 28.3N, 130.7E, H= 33 KM, M=5.3
RYUKYU ISLANDS

DEC 18 FHC E(P) 14 07 45
BKS 14 07 •E 07 49
MHC E(P) 14 07 48.7
PRI E(P) 14 07 51.6
WDC EP 14 07 55.2
JAS EP 14 07 58.3
MIN EP 14 07 59.3
FRI E(P) 14 07 59.8
MNV EP 14 08 14.0
USGS 14 01 00.5, 19.3N, 155.1W, H= 9 KM, M=5.0
HAWAII

DEC 18 BKS 15 07 •E 07 50
MHC 15 07 •E 07 50
PRI 15 07 •E 07 50
FRI 15 07 •E 07 55
JAS EP 15 07 56.5
WDC EP 15 07 59.5
MIN 15 08 •E 08 02
MNV EP 15 08 05.0
USGS 14 55 34.0, 27.5S, 176.3W, H= 57 KM, M=5.1
KERMADEC ISLANDS REGION

DEC 18 PRI IPC 19 56 02.3 •E 56 06
SAO IPD 19 56 17.0
FRI IPD 19 56 19.2
MHC EP 19 56 25.5
JAS EPD 19 56 30.5
BKS EP 19 56 35.0
BRK 19 55 56.0, 35.9N, 120.5W, H= 7 KM, ML=3.3
SOUTHEAST OF KING CITY, CALIFORNIA

DEC 18 FHC IPC 22 04 23.7
WDC IPC 22 04 39.2
MIN IPC 22 04 49.5
JAS EP 22 05 16
BRK 22 04 17.8, 40.5N, 124.1W, H= 7 KM, ML=3.4
SOUTH OF EUREKA, CALIFORNIA

DEC 18 BKS EP 23 49 38.5
JAS EP 23 49 45.5
FRI EP 23 49 47.0
MNV EP 23 49 54.5
USGS 23 37 07.9, 10.4S, 161.3E, H= 93 KM, M=4.9
SOLOMON ISLANDS

DEC 19 MHC EP 01 05 17.2
PRI EP 01 05 18.2 •E 05 48
WDC EPC 01 05 18.7 •E 05 48
JAS EPC 01 05 21.5 •E 05 50
FRI EP 01 05 22.5 •E 06 52
MNV EP 01 05 31.0 •E 06 00
USGS 00 53 01.1, 11.9S, 166.6E, H=110 KM, M=5.2
SANTA CRUZ ISLANDS

DEC 19 SAO EP 09 22 13
BKS IPC 09 22 14.0
MICRON PERIOD
PZ 0.02 0.7
PRI EPC 09 22 14.1
MHC EP 09 22 14.3
FHC EPC 09 22 18.2
FRI EPC 09 22 19.2
JAS IPC 09 22 19.8
WDC IPC 09 22 21.5
MIN EP 09 22 23.0
MNV EPC 09 22 28.5
USGS 09 11 03.5, 21.9S, 179.5W, H=600 KM, M=5.3
FIJI ISLANDS REGION

DEC 19 FHC E(P) 11 02 29
WDC EPC 11 02 33.2
MIN EP 11 02 36.2
BKS IPC 11 02 37.8
MICRON PERIOD
PZ 0.03 1.0
MHC EP 11 02 40.3
JAS EPC 11 02 43.4
PRI E(P) 11 02 45.8
FRI EPC 11 02 47.1
MNV EPC 11 02 51.0
USGS 10 49 10.1, 7.7N, 133.6E, H= 33 KM, M=5.8
WEST CAROLINE ISLANDS

DEC 19 WDC EPC 14 47 48.7
MIN EP 14 47 52.5
BRK E(P) 14 48 01
JAS EPC 14 48 08.1
FRI EP 14 48 14.8
PRI EP 14 48 15.2
MNV EPC 14 48 15.3
USGS 17 37 52.8, 46.6N, 151.6E, H= 91 KM, M=5.3
KURIL ISLANDS

DEC 19 FHC EP 19 01 36.5
WDC EP 19 01 48.5
MIN EP 19 01 52.0
JAS EP 19 02 33.5
FRI EP 19 02 48.3
USGS 19 00 59.5, 42.8N, 125.6W, H= 15 KM
OFF COAST OF OREGON

DEC 20 FHC EP 04 48 05.0
WDC EP 04 48 15.0
MIN EP 04 48 23.0
JAS EP 04 49 00.0
MHC 04 49 •E 49 02
MNV EP 04 49 03.3
PRI EP 04 49 14.0
FRI 04 49 •E 49 15
USGS 04 45 55.9, 49.1N, 128.7W, H= 10 KM, M=4.2
VANCOUVER ISLAND REGION

DEC 20 SAO EP 05 27 22.3
PRI EP 05 27 22.9
BRK EP 05 27 23.1
MHC EP 05 27 23.9
FRI EP 05 27 29.2
JAS EPD 05 27 29.5
WDC EPD 05 27 30.4
MIN EP 05 27 32.5
USGS 05 16 28.9, 18.0S, 178.1W, H=556 KM, M=4.7
FIJI ISLANDS REGION

DEC 20 MNV EPC 10 26 46.7
FRI EP 10 26 47.2
PRI EP 10 26 50.3
JAS EPC 10 26 56.0 P•CP 28 24
SAO E(P) 10 27 00.5
MHC EPC 10 27 01.3
BKS EP 10 27 06.5 •E 28 48 •E 29 04
MIN EP 10 27 11.0
WDC EPC 10 27 15.0 P•CP 28 53
FHC EPC 10 27 26.0
USGS 10 18 56.8, 9.3N, 83.9W, H= 66 KM, M=5.5
COSTA RICA

DEC 20 FHC EP 17 14 51.9
WDC IPD 17 15 02.7
MIN EPD 17 15 10.2 •I 16 23
BKS EP 17 15 36.0 •E 18 00
JAS EP 17 15 43.7
MHC EP 17 15 45.2
MNV EP 17 15 51.2
SAO EP 17 15 52.5
FRI EP 17 15 58.3
PRI EP 17 16 04.7
USGS 17 12 41.0, 49.1N, 129.0W, H= 10 KM, M=5.1
VANCOUVER ISLAND REGION

DEC 20 FHC IP 20 35 17.7
WDC EP 20 35 27.0
MIN EP 20 35 35.4
BKS EP 20 36 02.0 38 26
JAS EP 20 36 09.8
MHC EP 20 36 11.0
MNV IP 20 36 17.2
SAO EP 20 36 18.2
FRI EP 20 36 24.0
PRI EP 20 36 30.5
USGS 20 33 07.8, 48.8N, 129.3W, H= 10 KM, M=5.9
VANCOUVER ISLAND REGION

DEC 20 FHC EP 21 08 46.2
WDC EP 21 08 57.0
MIN EP 21 09 04.5
BKS EPD 21 09 31.0
JAS EP 21 09 39.5
MHC EP 21 09 40.7
SAO EP 21 09 48.5
FRI EP 21 09 54.2
PRI EP 21 10 00.5
USGS 21 06 39.1, 48.9N, 128.7W, H= 10 KM, M=5.1
VANCOUVER ISLAND REGION

DEC 20 FHC EP 21 15 01.8
WDC IPD 21 15 12.8
MIN EP 21 15 20.0
BKS EP 21 15 46.0
JAS EP 21 15 53.3
MHC EP 21 15 55.2
SAO EP 21 16 02.4
FRI EP 21 16 07.6
PRI EP 21 16 14.4
USGS 21 12 48.8, 49.2N, 129.0W, H= 10 KM, M=5.1
VANCOUVER ISLAND REGION

DEC 20 FHC EP 21 23 40.5
WDC IPD 21 23 50.9
MIN EP 21 23 58.3
BKS IPC 21 24 25.0
JAS EP 21 24 32.0
MHC EP 21 24 33.7
SAO EP 21 24 39.3
FRI EP 21 24 46.5
PRI EP 21 24 52.5
USGS 21 21 32.5, 48.9N, 128.6W, H= 10 KM, M=4.9
VANCOUVER ISLAND REGION

DEC 20 WDC EP 23 13 24.1
USGS 23 11 00.8, 49.2N, 129.1W, H= 10 KM
VANCOUVER ISLAND REGION

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DEC 21  PRI  IPD   02 32 13.1
        MHC  EP    02 32 28.2
        FRI  EP    02 32 30.9                    •I 33 06
        JAS  IPC   02 32 36.6
        BKS  E(P)  02 32 44      33 14
                   BRK   02 32 01.4, 35.8N, 121.3W, H=  2 KM, ML=3.2
                         WEST OF SAN SIMEON, CALIFORNIA

DEC 21  MNV  IPC   15 09 36.5
        FRI  IPC   15 09 48.4
        JAS  IPC   15 09 57.4
        PRI  IPC   15 10 02.3
        SAO  EP    15 10 09.0
        MHC  EP    15 10 10.2
        BKS  EP    15 10 26
        MIN  EP    15 10 23.2
        WDC  EP    15 10 32.6
                   ML=4.2, NUCLEAR EXPLOSION, NEVADA TEST SITE
                   USGS  15 09 00.2, 37.1N, 116.1W, H=  0 KM
                         SOUTHERN NEVADA

DEC 21  FHC  IPC   19 05 08.0  05 31
        WDC  IPC   19 05 23.9  06 00
        MIN  EP    19 05 34.0
                   FORESHOCK OF 0938, DEC 23.
                   BRK   19 04 34.6, 42.1N, 125.7W, H=  2 KM, ML=3.5
                         200 KM NORTHWEST OF EUREKA, CALIFORNIA

DEC 21  WDC  EPD   22 28 09.5
        MIN  EP    22 28 13.3
        BKS  E(P)  22 28 17.4
                                  MICRON     PERIOD
                              PZ    0.02       0.7
        MHC  EP    22 28 20.8
        JAS  EPD   22 28 24.2
        FRI  EP    22 28 29.3
        MNV  E(P)  22 28 30.7
                   USGS  22 16 29.6, 28.5N, 143.3E, H= 33 KM, M=5.3
                         BONIN ISLANDS REGION

DEC 22  BKS  EP    00 42 39.5  42 54
        MHC  EP    00 42 48.8
        MIN  EP    00 42 49.5
        WDC  EP    00 42 50.5
        JAS  EP    00 42 53.0  43 19
        SAO  EP    00 42 56.7
                   BRK   00 42 19.0, 38.6N, 122.8W, H=  2 KM, ML=3.5
                         NORTHWEST OF BERKELEY, CALIFORNIA

DEC 22  FHC  IPC   01 09 37.5
        WDC  IPC   01 09 50.2
        MIN  IPD   01 10 00.0
        MHC  EP    01 10 20.5
        SAO  EP    01 10 27.0
                   BRK   01 09 23.3, 40.3N, 124.7W, H= 25 KM, ML=3.3
                         SOUTHWEST OF EUREKA, CALIFORNIA

DEC 22  FHC  IPD   01 13 30.5
        WDC  IPD   01 13 35.8
        MIN  EPD   01 13 39.5
        BKS  IPD   01 13 42.4                 LR 37 00
                                  MICRON     PERIOD
                              PZ    0.21       1.0
                              MAXR(Z) 5        20
                              MAXH(N) 3.6      20
                              MAXH(E) 4.3      20
        MHC  EPD   01 13 45.9
        SAO  EPD   01 13 47.4
        JAS  IPD   01 13 49.2
        FRI  EPD   01 13 52.3
        FRI  IPD   01 13 54.0
        MNV  IPD   01 13 57.4
                   Ms=5.9, DISTANCE=79°
                   USGS  01 01 41.0, 23.3N, 143.7E, H= 49 KM, M=5.8
                         VOLCANO ISLANDS REGION

DEC 22  FRI  EPKP  09 35 40.0
        MNV  EPKP  09 35 40.5
        PRI  EPKP  09 35 41.0
        SAO  EPKP  09 35 41.5
        JAS  EPKP  09 35 42.5
        MHC  EPKP  09 35 43.0
        BKS  IPKPD 09 35 44.7
                                  MICRON     PERIOD
                              PKPZ  0.04       0.7
        MIN  EPKP  09 35 46.0
        WDC  EPKP  09 35 47.3
        FHC  EPKP  09 35 51.0
                   USGS  09 16 47.4, 57.9S,  25.5W, H= 33 KM, M=5.1
                         SOUTH SANDWICH ISLANDS REGION

DEC 22  FRI  EP    11 18 49.3
        PRI  E(P)  11 18 51
        MNV  E(P)  11 18 52
        JAS  EP    11 18 57.0
        MHC  EP    11 18 59.9
        MIN  EP    11 19 09.8
        WDC  EP    11 19 12.3
                   USGS  11 07 58.1, 15.3S,  70.3W, H=185 KM, M=4.6
                         SOUTHERN PERU

DEC 22  MNV  EP    17 51 03.8
        FRI  EP    17 51 06.2
        PRI  EP    17 51 10.0
        JAS  IPD   17 51 14.2
        MHC  EP    17 51 19.2
        BKS  IPD   17 51 23.4
                                  MICRON     PERIOD
                              PZ    0.04       0.7
        MIN  EP    17 51 25.8
        WDC  IPD   17 51 29.7
        FHC  IPD   17 51 40.5
                   USGS  17 42 12.3,  6.7N,  73.0W, H=163 KM, M=5.1
                         NORTHERN COLOMBIA

DEC 23  MHC  EP    08 48 47.5
        PRI  EP    08 48 48.5
        FRI  EP    08 48 51.6
        JAS  IPD   08 48 52.3
        WDC  IPD   08 48 54.3
        MIN  EP    08 48 56.0
        MNV  EP    08 49 00.0
                   USGS  08 37 19.8, 24.9S, 179.4E, H=573 KM, M=4.4
                         SOUTH OF FIJI ISLANDS

DEC 23  FHC  IPC   09 39 27.2
        WDC  IPC   09 39 43.1
        MIN  IPD   09 39 53.6
        BKS  EPD   09 40 09.3  41 06
        JAS  EP    09 40 12.7
        MHC  EP    09 40 19.5
        SAO  EP    09 40 26.8
        FRI  EP    09 40 39.1
        MNV  IPC   09 40 40.0
        PRI  EP    09 40 40.5
                   MAIN SHOCK.
                   BRK   09 38 53.8, 42.1N, 125.8W, H=  2 KM, ML=5.1
                         200 KM NORTHWEST OF EUREKA, CALIFORNIA

DEC 23  FHC  IPC   09 54 29.8
        WDC  IPC   09 54 45.8
        MIN  EP    09 54 55.8
        BKS  EP    09 55 11.5  56 08
        JAS  EP    09 55 25.2
                   AFTERSHOCK OF 0938, DEC 23.
                   BRK   09 53 55.5, 42.0N, 125.8W, H=  2 KM, ML=3.7
                         200 KM NORTHWEST OF EUREKA, CALIFORNIA

DEC 23  FHC  IPC   10 42 53.6
        WDC  IPC   10 43 09.5
        MIN  EP    10 43 19.8
        BKS  EP    10 43 36    44 32
        JAS  EP    10 43 51.0
                   AFTERSHOCK OF 0938, DEC 23.
                   BRK   10 42 20.0, 42.1N, 125.8W, H=  2 KM, ML=3.5
                         200 KM NORTHWEST OF EUREKA, CALIFORNIA

DEC 23  FHC  IPC   12 40 57.8
        WDC  IPC   12 41 13.7
        MIN  EP    12 41 24.0
                   AFTERSHOCK OF 0938, DEC 23.
                   BRK   12 40 24.4, 42.1N, 125.8W, H=  2 KM, ML=3.5
                         200 KM NORTHWEST OF EUREKA, CALIFORNIA

DEC 23  FRI  EPKP  16 19 20.5                 •E 19 28
        PRI  EPKP  16 19 23.8                 •E 19 31
                   USGS  15 59 45.6,  2.4S,  68.0E, H= 33 KM, M=5.1
                         CARLSBERG RIDGE

DEC 24  WDC  EP    12 13 08.8
        JAS  EP    12 13 13.0
        FRI  EP    12 13 15.8
        MNV  EP    12 13 22.3
                   USGS  12 00 32.5,  8.9S, 159.9E, H= 68 KM, M=5.1
                         SOLOMON ISLANDS

DEC 24  PRI  E(P)  14 30 38.0
        BRK  E(P)  14 30 38.4
        MHC  EP    14 30 38.7
        FRI  EP    14 30 42.5
        JAS  EP    14 30 43.3
        WDC  EP    14 30 46.4
        MNV  EP    14 30 51.3
                   USGS  14 18 06.6, 31.1S, 178.8W, H=108 KM, M=5.3
                         KERMADEC ISLANDS REGION

DEC 25  FHC  IPC   16 36 15.8
        WDC  IPC   16 36 31.6
        MIN  EPC   16 36 41.5
        BKS  EP    16 36 57.5                 •E 37 52
        MHC  E(P)  16 37 07.5
        JAS  EP    16 37 11.0
        SAO  EP    16 37 14.5
                   AFTERSHOCK OF 0938, DEC 23.
                   BRK   16 35 45.0, 42.0N, 125.7W, H=  2 KM, ML=4.1
                         200 KM NORTHWEST OF EUREKA, CALIFORNIA

DEC 25  FRI  EP    21 36 00.4
        JAS  EP    21 36 01.0                 •E 39 17
        WDC        21 36                      •E 36 03
        MNV  EP    21 36 07.0
                   USGS  21 23 02.8,  5.7S, 153.9E, H= 54 KM, M=5.3
                         NEW IRELAND REGION

DEC 25  WDC  EP    23 23 26.3
        JAS  EP    23 23 41.4
        FRI  EP    23 23 46.4
        MNV  EP    23 23 49.0
                   USGS  23 11 46.3, 28.4N, 143.2E, H= 33 KM, M=4.8
                         BONIN ISLANDS REGION

DEC 26  SAO  EP    02 39 33.6
        PRI  EP    02 39 33.9
        MHC  EP    02 39 35.2
        BKS  EP    02 39 35.4
                                  MICRON     PERIOD
                              PZ    0.02       0.7
        FRI  EP    02 39 38.6
        JAS  IPD   02 39 39.6
        WDC  EP    02 39 43.1
        MIN  EP    02 39 44.8
        MNV  EP    02 39 47.4
                   USGS  02 26 57.0, 30.7S, 178.2W, H=38  KM, M=5.5
                         KERMADEC ISLANDS

DEC 26  FHC  IPC   07 44 48.4
        WDC  IPC   07 45 03.2
        MIN  IPC   07 45 12.9
        BKS  EP    07 45 21.7
        MHC  EP    07 45 30.9
        SAO  EP    07 45 37.5
        JAS  IPC   07 45 37.9
        FRI  EP    07 45 52.5
                   BRK   07 44 32.3, 40.5N, 125.1W, H=  2 KM, ML=4.1
                         SOUTHWEST OF EUREKA, CALIFORNIA

DEC 26  WDC  EP    10 50 51.4
        MIN        10 51                      •E 51 00
        JAS  IPD   10 51 32.2
        MNV        10 51                      •E 51 38
        FRI  EP    10 51 45.1
                   USGS  10 48 21.1, 49.4N, 129.6W, H= 10 KM, M=4.7
                         VANCOUVER ISLAND REGION

DEC 26  WDC  IPC   10 55 16.0
        MIN  EP    10 55 23.4
        JAS  EP    10 55 57.8
        MNV  EP    10 56 04.7
        FRI  EP    10 56 11.0
                   USGS  10 52 47.5, 49.4N, 129.5W, H= 10 KM, M=4.7
                         VANCOUVER ISLAND REGION

DEC 26  FHC  EP    14 53 23.4                 •E 53 40
        WDC  IPD   14 53 31.2                 •E 53 47
        MIN  EP    14 53 37.2
        BKS  EP    14 53 49.3
                                  MICRON     PERIOD
                              PZ    0.02       0.5
        MHC        14 53                      •E 53 56
        JAS  IPD   14 53 58.2
        MNV  IPD   14 54 06.1                 •I 54 22
        FRI  EP    14 54 07.3
        PRI  EP    14 54 10.6
                   USGS  14 47 38.1, 55.2N, 159.5W, H= 40 KM, M=5.1
                         ALASKA PENINSULA

DEC 27  FHC  IPC   07 34 32.5
        WDC  IPC   07 34 48.5
        MIN  EP    07 34 58.3
        BKS  EP    07 35 14.7                 •E 36 10
        JAS  EP    07 35 18.5
        MHC  EP    07 35 25.0
        FRI  EP    07 35 44.6
                   AFTERSHOCK OF 0938, DEC 23.
                   BRK   07 34 02.0, 42.0N, 125.8W, H=  2 KM, ML=3.9
                         200 KM NORTHWEST OF EUREKA, CALIFORNIA

DEC 28  MNV  EP    03 06 26.5
        JAS  EP    03 06 39.5
        WDC        03 06                      •E 06 50
                   USGS  02 57 38.2, 22.1N,  63.5W, H= 33 KM, M=5.2
                         NORTH ATLANTIC OCEAN

DEC 28  FRI  EPD   14 03 31.0
        MNV  IPD   14 03 32.7                 RPKP 31 35
        PRI  EPD   14 03 32.8                 •E 04 06
        SAO  EP    14 03 36.9
        JAS  IPD   14 03 38.1                 •E 04 12  RPKP 31 30
        MHC  EPD   14 03 40.7                                        LQ 18 30
        BKS  EPD   14 03 44.0  13 30          •E 14 00  •E 14 20    •E 29 48
                                              LQ 25 08  •E 26 50
                                  MICRON     PERIOD
                              PZ    0.11       1.0
                              MAXS(H) 6.8      12
        MIN  EPD   14 03 49.7
        WDC  IPD   14 03 52.9                 •E 04 23
        FHC  EPD   14 04 00.4
                   USGS  13 51 56.9, 21.1S,  68.6W, H= 89 KM, M=5.8
                         CHILE-BOLIVIA BORDER REGION
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DEC 28  MNV   IPC    18 00 36.7
        FRI   IPC    18 00 48.4
        JAS   IPC    18 00 57.4
        PRI   IPC    18 01 01.1
        SAO   EPC    18 01 07.5
        MHC   EPC    18 01 10.2
        BKS   EPC    18 01 16.4              *E 02 16
        MIN   EPC    18 01 23.2
        WDC   EPC    18 01 32.7
        FHC   E(P)   18 01 48
                     ML=5.5, NUCLEAR EXPLOSION, NEVADA TEST SITE
                     USGS  18 00 00.1, 37.1N, 116.0W, H=  0 KM, M=5.5
                           SOUTHERN NEVADA

DEC 28  PRI   E(P)   20 28 03.6
        MHC   EPC    20 28 04.1
        FRI   EPC    20 28 08.4
        JAS   EPC    20 28 09.0
        WDC   EPC    20 28 11.0
        MNV   EPC    20 28 17.3
                     USGS  20 16 28.2, 25.6S, 179.8E, H=491 KM, M=4.6
                           SOUTH OF FIJI ISLANDS

DEC 28  FRI   EP     20 30 22
        JAS   EP     20 30 31
        PRI   E(P)   20 30 36
                     ML=4.6, COLLAPSE, NEVADA TEST SITE
                     USGS  20 29 26.0, 37.1N, 116.0W, H=  0 KM, M=4.4
                           SOUTHERN NEVADA

DEC 29  WDC   E(P)   08 04 49
        BKS   EP     08 05 19.6
                                MICRON       PERIOD
                        PZ        0.03         0.5
        MHC   EP     08 05 30.0
        JAS   EP     08 05 33.5
        FRI   EP     08 05 48
        MNV          08 05                   *E 05 50
                     USGS  08 03 43.2, 43.4N, 126.8W, H= 15 KM, M=5.0
                           OFF COAST OF OREGON

DEC 29  MNV   EP     13 31 55.7
        JAS   EP     13 32 00.0
        MHC   EP     13 32 01.5
        WDC   EP     13 32 14.0
                     USGS  13 19 44.7, 30.3S,  71.3W, H= 59 KM, M=5.1
                           NEAR COAST OF CENTRAL CHILE

DEC 29  FHC   EP     14 47 57.7
        WDC   EPC    14 48 03.2
        MIN   EP     14 48 06.7
        BKS   EP     14 48 13.3
                                MICRON       PERIOD
                        PZ        0.05         0.5
        MHC   EP     14 48 17.0
        SAO   EP     14 48 19.0
        JAS   EPC    14 48 19.5
        FRI   EP     14 48 25.0
        PRI   EP     14 48 25.2
        MNV   EPC    14 48 26.4
                     USGS  14 36 49.5, 36.7N, 139.0E, H=147 KM, M=5.4
                           HONSHU, JAPAN

DEC 30  SAO   EP     13 21 14.5
        PRI   EP     13 21 15.8
        MHC   EP     13 21 16.1
        FRI   EP     13 21 20.6
        JAS   IPC    13 21 21.2
        WDC   IPC    13 21 23.2
        MIN   EP     13 21 24.3
        MNV   EP     13 21 29.4
                     USGS  13 09 41.7, 25.2S, 179.6E, H=501 KM, M=5.1
                           SOUTH OF FIJI ISLANDS

DEC 30  WDC   EPC    18 39 02.3
        MIN   E(P)   18 39 06
        BRK   E(P)   18 39 07
        MHC   EP     18 39 10.5
        JAS   EPC    18 39 13.7
        PRI   E(P)   18 39 16.0
        FRI   EP     18 39 17.7
        MNV   EP     18 39 22.0
                     USGS  18 26 30.2, 12.3N, 144.0E, H= 31 KM, M=5.4
                           SOUTH OF MARIANA ISLANDS

DEC 30  FHC   E(P)   20 13 42.7
        WDC   E(P)   20 13 46
        MIN   E(P)   20 13 50
        BRK   E(P)   20 13 52.5
        JAS   EP     20 13 57.2
        PRI   E(P)   20 13 58.5
        FRI   EP     20 14 01.2
        MNV   EPC    20 14 05.5
                     USGS  20 01 12.4, 12.3N, 144.0E, H= 22 KM, M=5.3
                           SOUTH OF MARIANA ISLANDS

DEC 30  WDC   EP     22 12 10.4              *E 12 22
        JAS   EP     22 12 30.8              *E 12 42
        FRI   E(P)   22 12 37.5
                     USGS  22 02 26.0, 48.2N, 154.5E, H= 41 KM, M=5.2
                           KURIL ISLANDS

DEC 30  FRI   EP     23 22 12.8
        JAS   EP     23 22 14.0
        WDC   EP     23 22 17.3
        MNV   EP     23 22 22.0
                     USGS  23 09 45.7, 28.2S, 176.4W, H= 33 KM
                           KERMADEC ISLANDS REGION

DEC 31  WDC   EP     09 27 48.1              *E 28 15
        JAS   EP     09 28 06.5              *E 28 33
        MNV   EP     09 28 13.0              *E 28 40
                     USGS  09 17 06.6, 42.6N, 143.2E, H=107 KM, M=5.2
                           HOKKAIDO, JAPAN REGION
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