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, 1975 to June 30, 1975

by

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Walter Silva

University of California
Berkeley

1976

BULLETIN OF THE SEISMOGRAPHIC STATIONS

of the University of California

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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 only for $M \geq 4$ earthquakes in the local area and for teleseisms.

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

PERSONNEL (August 1976)

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Assistant Director	Thomas V. McEvilly
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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 1974. 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 fourteen 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. Copies of records from instruments at the Berkeley observatory 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.

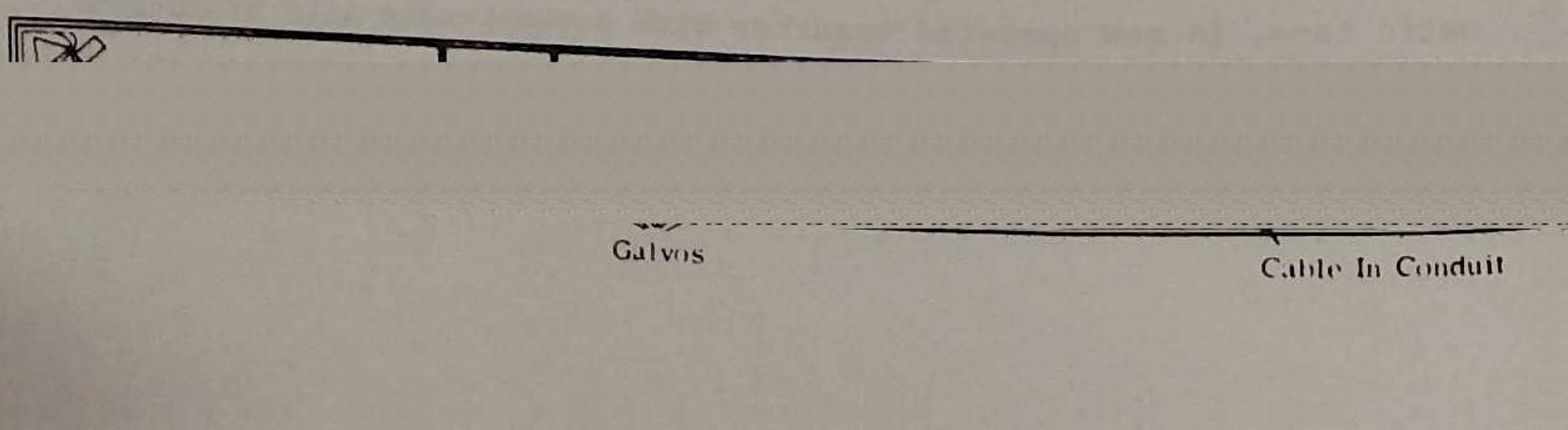
A plan of the tunnel is shown in the diagram below. Piers are constructed of reinforced concrete with no isolation from floor and walls. The temperature is stable. A ventilating and dehumidifying system is connected to all rooms.

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, 1975 to June 30, 1975

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	Geo-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, 1975 to June 30, 1975

Station	Type of Instrument	T_o sec	T_g sec	Component	Mag. at T_o
ARC	Wood-Anderson torsion	0.8	-	S, W	2,000
BKS	Benioff 100 kg	1.0	0.75	N, E, Z	25,000
	Sprengnether	15	100	N, E, Z	3,000
	Wood-Anderson torsion	0.8	-	S, W	2,000
	Sprengnether ULP	100	300 Filter	N45°E	250
	" "	100	300 Filter	N45°W	650
	" "	100	300 Filter	Z	570
BRK	#Benioff 100 kg	1.0	0.2	Z	25,000
	Benioff 100 kg	1.0	8.0	Z	Variable
	100X torsion	0.8	-	N, E	100 max
	4X torsion	0.8	-	N, E	4 max
	Press-Ewing	15	30	Z	1,000
	*Press-Ewing	30	BB	N45°W, N45°E, Z	- - - -
FHC	#Benioff 14 kg	1.0	0.2	Z	50,000
FRI	#Benioff 14 kg	1.0	0.33 Filter	Z	150,000
GCC	#Benioff 14 kg	1.0	0.2	Z	50,000
JAS	Benioff 100 kg	1.0	0.75	N, E, Z	250,000
	#*Benioff 14 kg	1.0	0.2	Z	600,000
	Sprengnether	40	-	Z	
	*BB Velocity				- - - -
	*Displacement				- - - -
	*Short Period(Filter)				- - - -
LLA	#Benioff 14 kg	1.0	0.2	Z	50,000
MHC	#Benioff 14 kg	1.0	0.2	Z	50,000
	Wood-Anderson torsion	0.8	-	S, E	2,000
MIN	Benioff 100 kg	1.0	0.4	Z	30,000
	Wood-Anderson torsion	0.8	-	S, E	2,000
	#Teledyne S-13	1.0	0.2 Filter	Z	150,000
MNV	#Broad band instrument filtered to give short-period response			Z	600,000
ORV	#Benioff 100 kg	1.0	0.2 Filter	Z	220,000
PCC	#Benioff 14 kg	1.0	0.2	Z	50,000
PRI	#*Benioff 14 kg	1.0	0.2	Z	50,000
PRS	#Benioff 14 kg	1.0	0.2	Z	50,000
SAO	*Benioff 14 kg	1.0	0.2	Z	50,000
	+#Sprengnether 0.70 kg	0.2	0.05 Filter	Z	- - - -
WDC	Sprengnether	40	-	Z	
	*BB Velocity				- - - -
	*Displacement				500,000 at 1 sec
	#*Short Period(Filter)				

\# Signals telemetered to Berkeley. Magnifications on 20X Viewer.
* Signals recorded on magnetic tape, Berkeley.
\+ Signals recorded on magnetic tape at SAO.

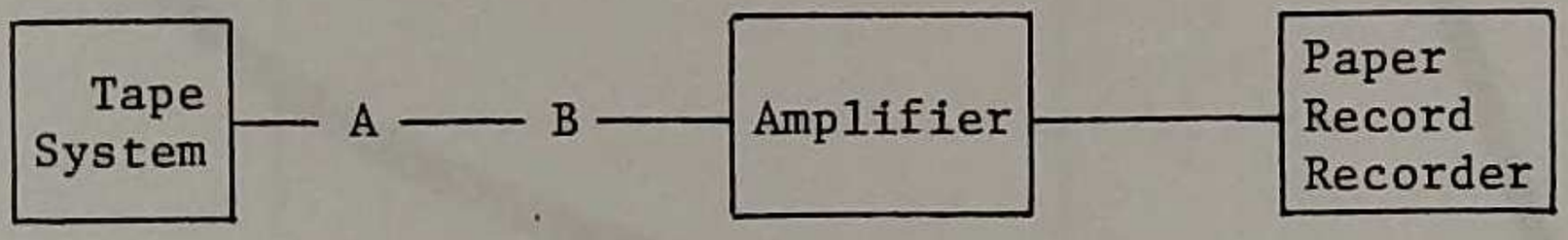
Direction of motion: In the "Component" column, each horizontal component seismograph is designated by the direction of ground motion corresponding to upward trace motion on the seismogram when it is oriented so that time increases from left to right. On all vertical component (Z) instruments, upward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

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

Tape-recorded long-period seismometers (BRK): On pages 8 and 9 are given the frequency response curves, amplitude and phase, for the Press-Ewing long-period broadband seismometers which record on magnetic tape at BRK.

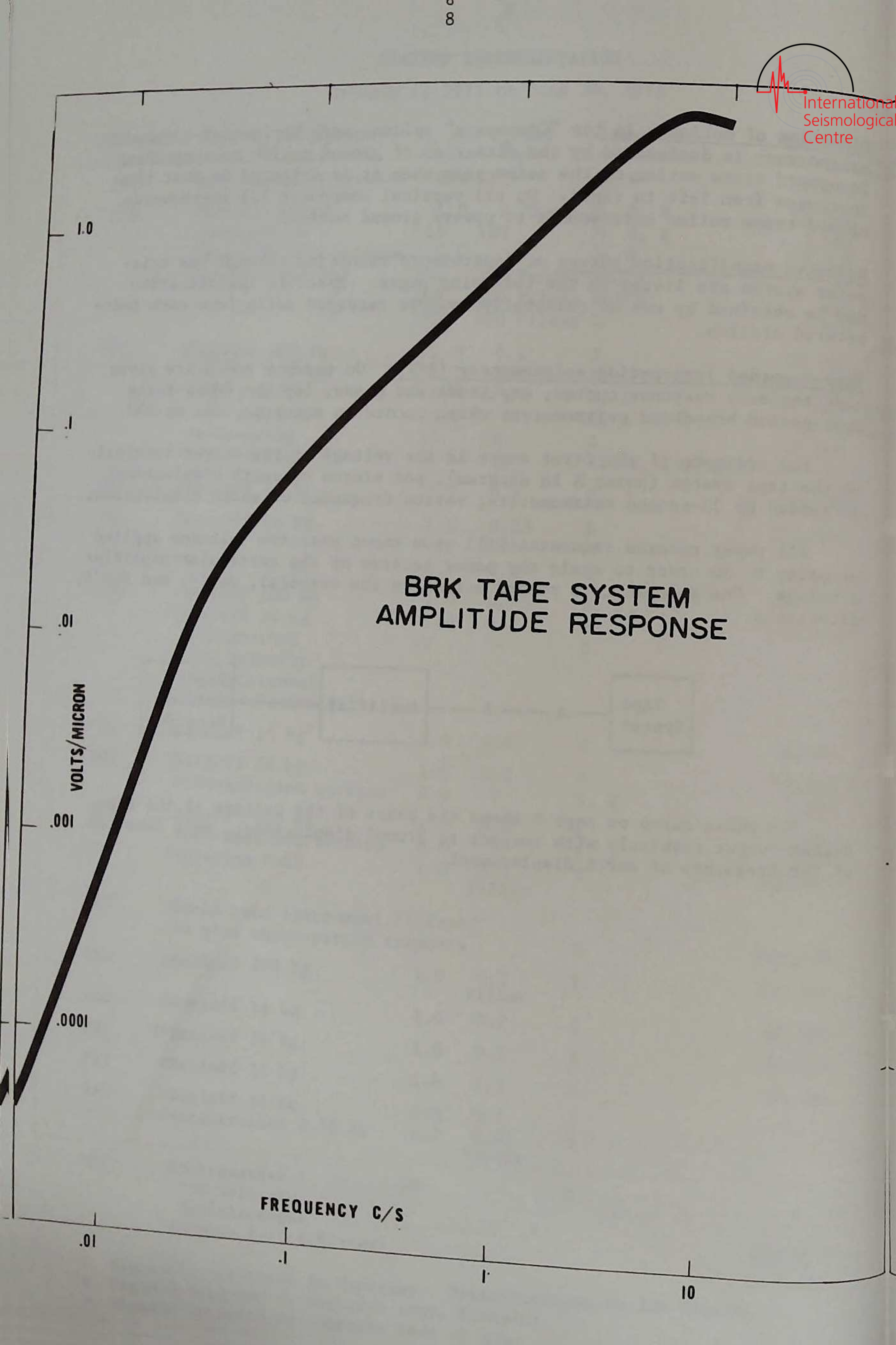
The ordinate of the first curve is the voltage at the output terminals of the tape system (point A in diagram), per micron of earth displacement as sensed by 30-second seismometers; versus frequency of earth displacement.

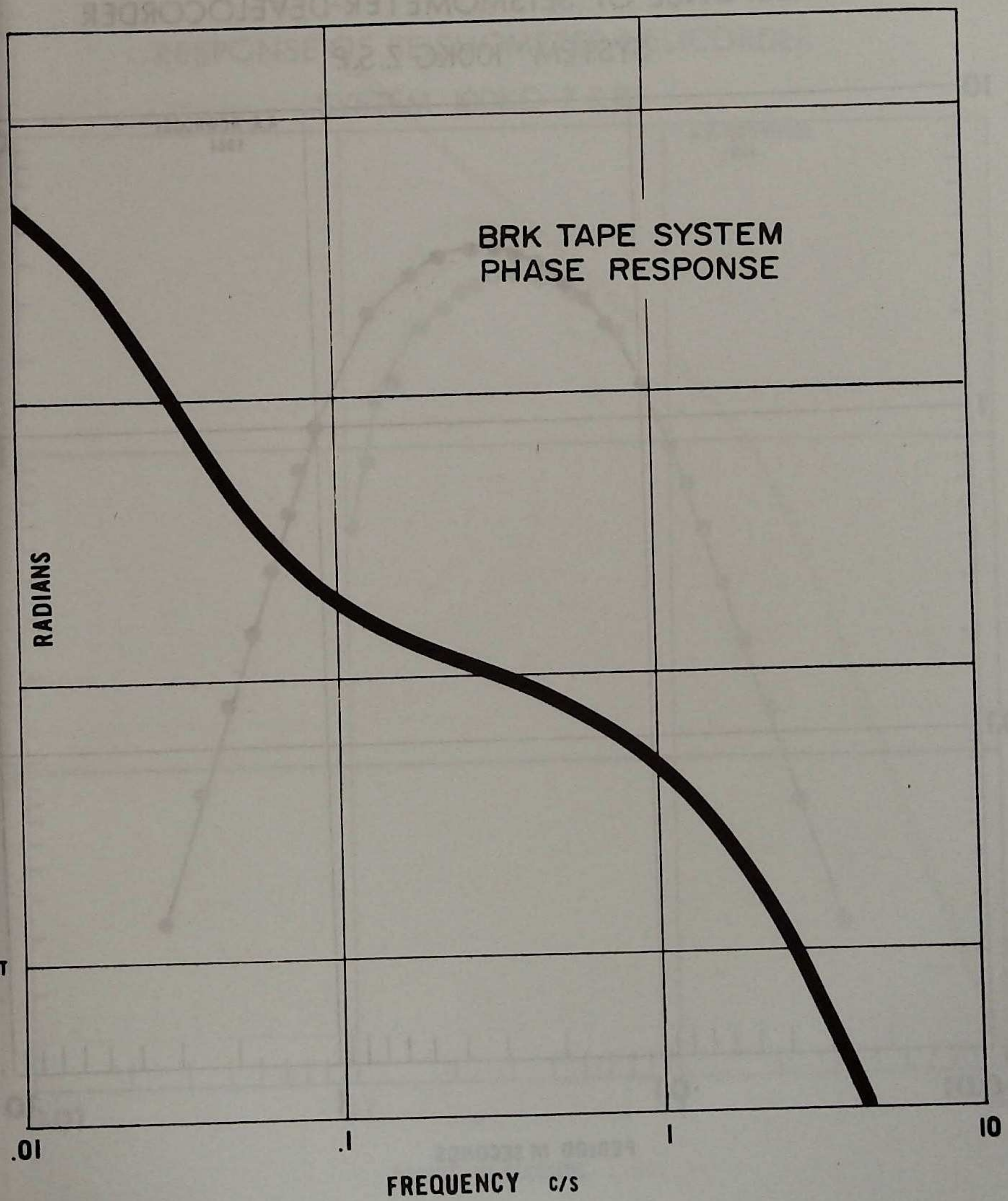
All paper records requested will show known positive voltages applied at point B, in order to scale the paper records at the particular amplifier settings. The seismometers record motion in the vertical, N45°W, and N45°E, directions.



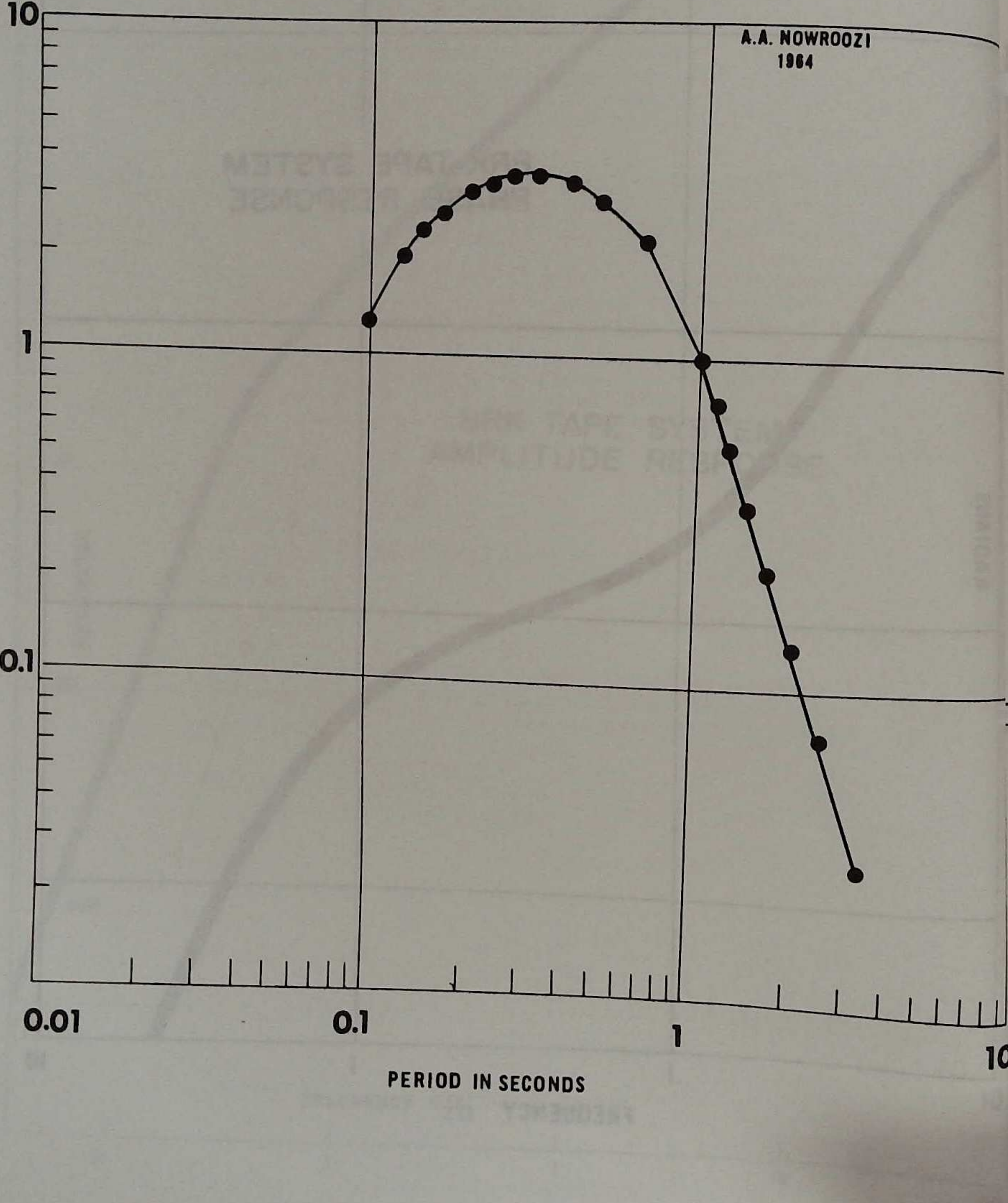
The phase curve on page 9 shows the phase of the voltage at the tape system output terminals with respect to ground displacement, as a function of the frequency of earth displacement.

BRK TAPE SYSTEM AMPLITUDE RESPONSE



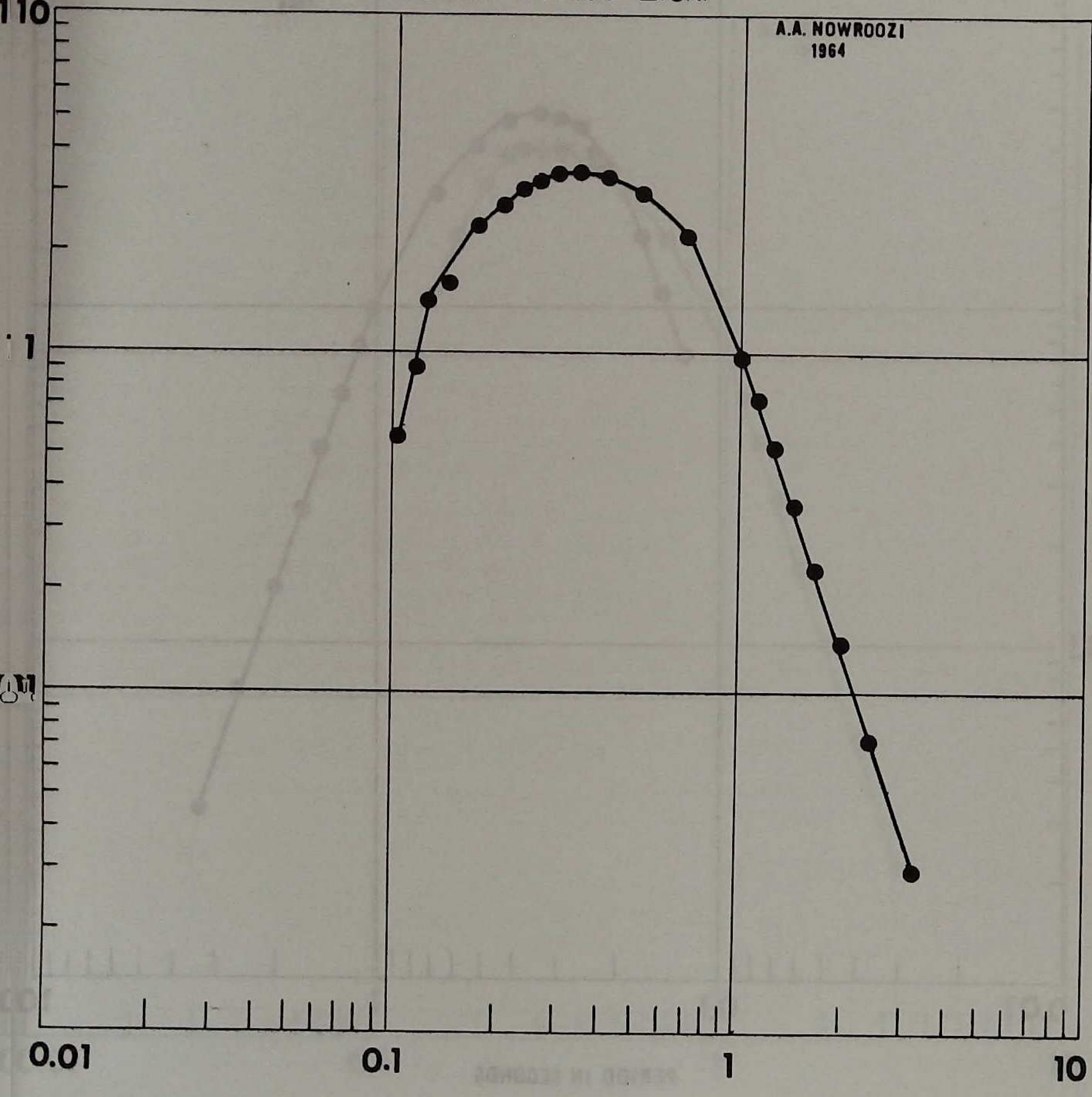


RESPONSE OF SEISMOMETER-DEVELOCORDER SYSTEM 100KG Z.S.P.



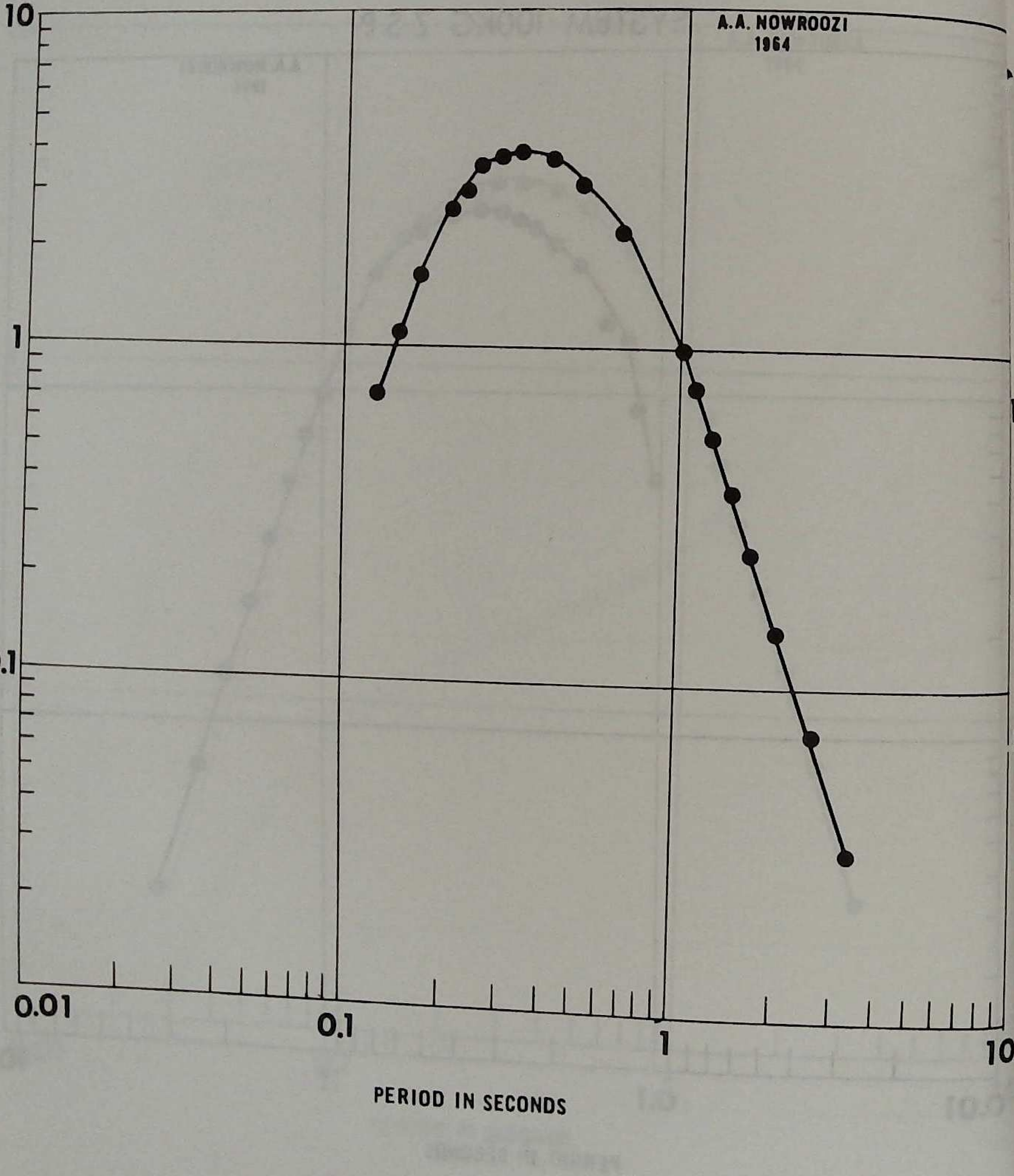
RESPONSE OF SEISMOMETER-HELICORDER

SYSTEM 100KG Z.S.P.

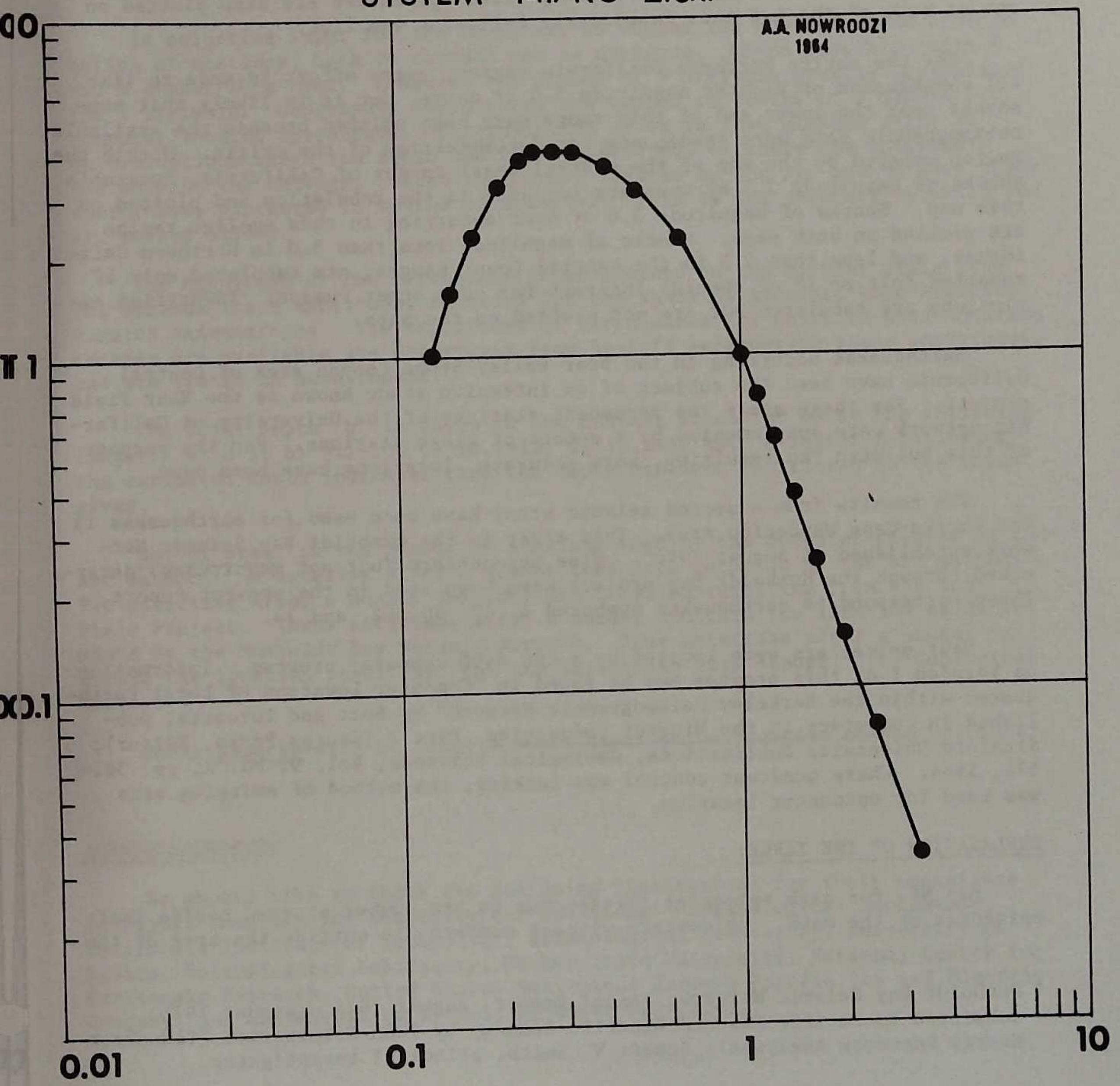


RESPONSE OF SEISMOMETER-HELICORDER

SYSTEM 14.7 KG Z.S.P.



RESPONSE OF SEISMOMETER-DEVELOCORDER SYSTEM 14.7KG Z.S.P.



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. station (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.

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*. Nine hypocenters (but not magnitudes) determined through the Humboldt Bay project have been used in the present report. These correspond to earthquakes numbered 4, 40, 60, 62, and 74.

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

* Humboldt Bay Seismic Network, Annual Report, August 1974 - August 1975, submitted to Pacific Gas and Electric Company by TERA Corporation (Teknekron Energy Resource Analysts); Stuart W. Smith, principal investigator.

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 Greenwich Civil Time (GCT). 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; d) 15.1-50 km. A letter R 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. An asterisk after a number indicates location by the arc method. Two asterisks after a number indicate the location resulting from the Near Field Project. Three asterisks after a number indicate the location as determined by the Humboldt Bay Seismic Network. Four asterisks after a number indicate the location resulting from the Earthquake Data Report, U.S. Geological Survey.

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

ACKNOWLEDGMENTS:

We should like to thank the following institutions for their assistance in supply readings for the epicenter locations: Seismological Laboratory, California Institute of Technology; Seismological Laboratory, University of Nevada; Seismological Laboratory, Oregon State University; 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 1975	Origin Time (G.C.T.)	Latitude North	Longitude West	Magnitude	h	No. of Stas.	Remarks
1	Jan 01	07 15 29.2	40.6°	125.2°	3.5	a(R)	5*	Cape Mendocino
2	Jan 05	01 48 39.3	40.3°	125.0°	3.7	a(R)	6*	Cape Mendocino
2	Jan 05	02 22 18.7	40.3°	125.0°	3.5	a(R)	4*	Cape Mendocino
3	Jan 06	11 17 12.8	35° 57.4'	120° 31.0'	4.4	13	12	S of Coalinga; felt in San Miguel, Paso Robles, San Luis Obi Morro Bay, Santa Mar
4	Jan 12	01 37 08.2	40° 19.7'	124° 24.7'	4.5	33	12***	SW of FHC
5	Jan 19	14 28 51.3	36° 17.6'	118° 20.5'	4.2	2(R)	11	S of Lone Pine
6	Jan 23	18 16 10.4	36° 53.8'	121° 28.5'	2.8	8	10	NW of Hollister
7	Jan 28	13 53 16.4	40° 24.9'	125° 26.8'	4.8	10(R)	25****	Cape Mendocino; felt Humboldt State Univ.
8	Jan 29	17 59 19.6	36° 50.9'	121" 34.1'	3.1	3	6	W of Hollister
9	Jan 30	07 22 51.7	37° 28.9'	118° 43.8'	(3.0)	2(R)	5	NE of Bishop
10	Jan 30	08 07 05.3	35° 52.0'	119° 53.6'	3.3	6	6	SW of Tulare
11	Feb 06	23 24 38.4	36° 50.1'	121° 35.7'	2.7	7	7	W of Hollister
12	Feb 07	04 42 47.9	36° 54.1'	121° 29.2'	3.1	9	11	NW of Hollister
13	Feb 12	12 03 17.0	36° 00.4'	120° 03.6'	3.4	5(R)	9	E of Coalinga
14	Feb 13	07 47 11.1	41° 24.0'	123° 24.5'	3.4	10	4	NE of FHC
15	Feb 15	16 02 54.8	36° 48.6'	121° 33.7'	2.9	2(R)	7	SW of Hollister
16	Feb 16	21 45 02.6	41° 19.1'	120° 04.6'	3.6	5(R)	5	SE of Alturas
17	Feb 17	04 57 49.2	37° 53.5'	121° 59.3'	3.1	10	14	E of Berkeley; felt Lafayette, Walnut Danville, San Ramon.
18	Feb 20	03 58 10.8	37° 20.3'	121° 19.2'	3.4	6	9	W of MHC
19	Feb 20	05 15 03.0	36° 36.0'	121° 12.8'	(2.5)	7	7**	Stone Canyon, Bear Valley
20	Feb 23	17 24 16.8	36° 34.3'	121° 10.3'	2.9	5	7**	Stone Canyon, Bear Valley
21	Feb 25	11 13 23.4	37° 09.6'	117° 48.9'	4.2	12	5	SE of Bishop
22	Feb 27	22 22 55.4	36° 13.3'	121° 39.0'	3.4	6	10	SE of Monterey
23	Feb 28	15 56 12.1	37° 00.2'	121° 35.4'	2.6	10	7	SE of Gilroy
24	Mar 02	00 15 22.1	37° 06.5'	121° 30.7'	3.2	9	11	N of Hollister
25	Mar 02	11 32 31.2	40° 13.8'	124° 15.4'	3.1	10(R)	5	Cape Mendocino
12	Mar 03	11 34 55.8	36° 55.9'	121° 28.7'	4.2	8	7	NE of Hollister. A ened people in Holl Long duration.
26	Mar 09	03 58 19.7	39° 36.8'	118° 27.7'	3.9	1(R)	5	NE of Fallon, Nev.

M. No.	Map No.	Date 1975	Origin Time (G.C.T)	Latitude North	Longitude West	Magnitude	h	No. of Stas.	Remarks
2	27	Mar 11	14 22 39.0	36° 40.1'	120° 46.2'	2.2	8	7	W of LLA
2	28	Mar 13	00 04 13.1	36° 47.5'	121° 32.8'	2.4	5	9	SW of Hollister
1	12	Mar 15	20 49 43.2	36° 55.8'	121° 29.6'	3.6	9	10	NE of Hollister; felt in Hollister.
2	29	Mar 19	20 59 39.0	39° 09.0'	122° 34.6'	3.5	6	13	E of Clear Lake
3	30	Mar 20	15 06 35.4	39° 23.6'	123° 15.8'	3.0	2(R)	5	NE of Willits
3	31	Mar 21	10 06 54.7	36° 53.9'	121° 28.9'	2.8	2	8	NW of Hollister
3	32	Mar 25	17 24 39.0	40.7°	125.5°	3.2	a(R)	4*	Cape Mendocino
3	33	Mar 26	20 13 11.9	36° 38.9'	121° 16.4'	3.0	4	7**	Stone Canyon, Bear Valley
3	34	Mar 30	03 57 31.8	36° 15.8'	120° 50.9'	3.1	6	10	E of King City
3	35	Apr 06	06 05 27.5	41° 01.5'	121° 30.3'	3.6	1(R)	5	NE of Burney
2	24	Apr 10	12 24 36.1	37° 07.7'	121° 31.1'	2.7	5	6	N of Hollister
3	36	Apr 12	17 42 28.6	36° 57.2'	121° 37.6'	2.9	7	9	NW of Hollister
3	36	Apr 12	20 20 49.6	36° 57.1'	121° 37.6'	3.0	8	10	NW of Hollister
3	37	Apr 13	13 06 16.1	36° 45.6'	121° 28.4'	2.6	8	8	SW of Hollister
3	38	Apr 13	19 49 50.4	40.9°	125.4°	3.2	a(R)	5*	Cape Mendocino
3	39	Apr 15	16 50 30.1	37° 07.8'	121° 32.1'	2.7	8	10	N of Hollister
4	40	Apr 15	23 09 10.6	41° 01.6'	124° 17.6'	3.4	32	14***	Cape Mendocino
4	41	Apr 18	01 41 32.6	37° 55.4'	122° 20.2'	3.3	9	9	NW of BRK; felt in Berkeley, Albany.
4	42	Apr 19	12 15 58.1	38° 49.7'	122° 40.2'	3.4	2(R)	7	S of Clear Lake
4	43	Apr 26	03 26 03.6	39° 15.9'	119° 45.6'	3.4	9	5	S of Reno, Nev.
4	44	May 01	12 03 40.3	35° 58.3'	120° 31.4'	3.1	11	8	S of Coalinga
4	45	May 01	14 54 24.6	40.9°	125.5°	3.4	a(R)	3*	Cape Mendocino
4	46	May 05	01 30 13.3	38° 36.0'	119° 43.2'	3.4	1(R)	5	SE of Markleeville
4	47	May 05	01 55 40.1	38° 39.5'	119° 43.2'	3.2	2(R)	5	SE of Markleeville
4	47	May 05	06 29 54.2	38° 38.5'	119° 44.1'	3.7	2(R)	5	SE of Markleeville
4	48	May 07	02 35 30.2	40° 16.8'	124° 41.2'	4.2	10(R)	6	Cape Mendocino
4	47	May 07	09 35 43.7	38° 38.6'	119° 43.1'	3.6	2(R)	5	SE of Markleeville
4	49	May 07	12 15 08.8	37° 03.8'	122° 20.9'	2.8	7	7	W of GCC
5	50	May 11	04 54 26.4	36° 57.8'	121° 34.4'	2.9	7	7	SE of Gilroy
5	51	May 14	21 52 03.7	36° 54.2'	121° 41.6'	3.0	5	7	NW of Hollister
		May 19	05 20 13.6	37° 11.3'	120° 57.3'	3.1	2	8	SW of Merced
		May 22	13 00 27.0	36° 12.7'	120° 49.2'	3.0	8	8	E of King City
		May 23	05 16 09.4	36° 40.0'	121° 18.0'	2.5	2	7**	Stone Canyon, Bear Valley

Map No.	Date 1975	Origin Time (G.C.T.)	Latitude North	Longitude West	Magnitude	h	No. of Stas.	Remarks
52	May 25	06 15 48.6	37° 11.3'	120° 57.3'	2.8	2(R)	9	SW of Merced
55	May 26	14 20 35.7	36° 53.8'	121° 28.9'	2.5	9	7	NW of Hollister
56	May 29	09 55 40.3	37° 53.3'	121° 51.5'	2.9	10	10	E of BRK
57	May 29	14 01 44.3	39° 33.0'	122° 54.2'	3.0	2(R)	5	NE of Willits
58	Jun 03	14 47 48.8	38° 40.8'	122° 34.4'	3.2	7	5	S of Clear Lake
59	Jun 07	05 31 31.4	41.1°	126.0°	4.0	a(R)	4*	Cape Mendocino
60	Jun 07	08 46 23.2	40° 32.3'	124° 17.2'	5.3	22	26***	Cape Mendocino
60	Jun 07	09 27 29.9	40° 30.7'	124° 16.8'	3.3	24	14***	Cape Mendocino
61	Jun 07	09 41 19.7	40° 31.0'	124° 20.3'	3.2	20	14***	Cape Mendocino
62	Jun 07	11 01 34.4	40° 22.4'	124° 02.3'	3.7	30	16***	Cape Mendocino
60	Jun 07	17 43 32.0	40° 32.1'	124° 18.4'	4.0	21	14***	Cape Mendocino
63	Jun 08	10 15 02.1	35° 40.5'	120° 17.5'	(3.1)	8	7	W of LLA
60	Jun 08	17 39 52.6	40° 30.7'	124° 21.8'	4.0	25	15***	Cape Mendocino
64	Jun 09	12 07 30.9	37° 58.2'	121° 39.4'	3.1	15	6	E of BRK
52	Jun 11	11 38 18.7	37° 11.3'	120° 56.4'	2.8	2(R)	7	SW of Merced
65	Jun 11	18 41 41.5	35° 58.7'	120° 39.4'	3.1	2(R)	5	SW of Coalinga
66	Jun 14	12 56 18.7	36° 40.8'	121° 19.3'	3.3	4	7**	Stone Canyon, Bearss Valley
67	Jun 17	05 27 08.0	38° 04.1'	121° 52.6'	3.5	22	6	NE of BRK; felt in Antioch, Pittsburg, Concord.
68	Jun 17	06 44 57.5	36° 44.9'	121° 00.1'	2.7	5	8	NW of LLA
52	Jun 18	17 50 19.7	37° 11.3'	120° 57.2'	4.1	2(R)	8	SW of Merced
69	Jun 19	16 17 53.7	37° 21.1'	122° 18.5'	3.4	11	5	W of Palo Alto; felt in Menlo Park, Palo Alto.
69	Jun 20	05 34 00.6	37° 20.3'	122° 19.5'	3.3	11	5	W of Palo Alto
69	Jun 20	08 16 17.7	37° 20.0'	122° 21.0'	3.4	14	5	W of Palo Alto; felt in San Francisco peninsula area.
69	Jun 22	00 12 35.4	37° 20.4'	122° 19.8'	3.5	12	5	W of Palo Alto
70	Jun 24	08 54 37.9	37° 20.2'	122° 17.0'	2.7	7	7	W of Palo Alto
71	Jun 27	10 21 23.4	37° 00.4'	120° 26.3'	(2.5)	2(R)	7	SE of Los Banos
72	Jun 28	04 19 53.1	39° 29.2'	121° 36.5'	3.5	6	7	ORV
73	Jun 28	10 04 30.2	35° 51.3'	120° 23.4'	3.5	10	6	S of Coalinga
74	Jun 29	16 23 43.1	40° 18.2'	124° 32.3'	3.3	27	14***	Cape Mendocino

EARTHQUAKES in the CENTRAL COAST RANGES CALIFORNIA JANUARY–JUNE 1975

Numbers correspond to list preceding this map

0 20 40 km

MAGNITUDE

- 2.5-2.9
- 3.0-3.4
- 3.5-3.9
- ≥ 4.0

BODEGA HEAD

Santa Rosa

Napa

Fairfield

Sacramento

San Francisco

BKS

BRK

Hayward

Stockton

Livermore

Palo Alto

San Jose

MHC

Modesto

SCC

Gilroy

Hollister

SAO

Merced

Los Banos

LLA

PRS

King City

CAPE SAN MAR

FRE

123°

122°

EARTHQUAKES in NORTHERN CALIFORNIA JANUARY - JUNE 1975

Numbers correspond to list preceding this map

0 80 km

MAGNITUDE

3.0-3.4
3.5-3.9
≥ 4.0

Crescent City
Grants Pass
Yreka
Dunsmuir
Weaverville
Garberville
Willits
Chico
Williams
Marysville
Sacramento
Placerville
Stockton
Livermore
Sonora
Monterey
Hollister
Merced
King City
San Simeon
Coalinga
San Luis Obispo
Tulare
Bishop
Lone Pine
Burney
Alturas
Susanville
Quincy
Gerlach
Truckee
Reno
Lovelock
Fallon
Yerington
Markleeville
Hawthorne
Yosemite
Tonopah
Austin

ARC FHC WDC MLC MIN ORV JAS BKS BRK PCC MHC GCC SAO PRS LLA FRI PRI FRE MNV

CALIFORNIA
OREGON
NEVADA

59 45 38 32 7 1 40 14 2 48 74 61 60 4 25 62 35 16 30 57 29 42 58 72 67 17 56 64 41 18 36 24 8 12 52 66 33 22 63 34 53 65 44 3 73 13 10 5 43 47 46 26 9 21

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, JAS, MHC, WDC, PRI, MIN, FRI, FHC. Information regarding these stations and instrumentation will be found in the introductory section of this Bulletin. Earthquakes in the Northern California, Nevada, and Oregon region are included in the following tabulation only if of magnitude 4.0 or over, or if of special interest.

Phase arrival times are G.C.T.

In the column after the P or P' phase arrival time, "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 (mu) and periods in seconds (sec) in the indicated phases are given for the Berkeley station, BKS, under the BKS phase arrival times. Total horizontal amplitudes combined from N and E components are designated by "H" (e.g., PH, PPH). 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 by combining the value of M_S determined from the amplitude of surface waves of period near 20 seconds with magnitudes determined from body waves according to the formula:

$$m_b = Q + \log_{10} (A/T),$$

where A = 1/2 peak-to-peak ground amplitude in microns,

T = period in seconds

Q is the empirically determined function of distance and depth given by Gutenberg and Richter ("magnitude and Energy of Earthquakes," Annali di Geofisica, 9:1-15, 1956).

The arithmetic average of the available values of m_b for long-period and short-period records of body waves is converted to an equivalent value M_S by

$$M_S = 1.59\ m_b - 3.97.$$

This value is then compared with the value of M_s determined from surface waves. Some events, particularly deep earthquakes and large explosions, give clear body waves, but only weakly developed surface waves. In these cases, the directly determined body-wave magnitude is given, designated MAG (m_b).

Distances are given in degrees from the Berkeley station, BRK. USGS origins are listed as a guide at the end of arrival times of the earthquakes. USGS magnitude is m_b .

All measurements and interpretation of seismograms (i.e., identi- fication 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 nine 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 94720
JAN 01 THROUGH JUN 30, 1975

* PRECEDING ALPHABET INDICATES LOWER CASE
P* IS TO BE READ AS PKP
Y IN THE USGS SOLUTION INDICATES FOCAL
DEPTH RESTRICTED TO 33 KM.

P OR PKP S OTHER PHASES

MHC JAN 01 04 00 43.8 PCP 04 09 *PPCP 04 27 SCP 07 40
WDC 04 00 49.3 D PCP 04 10 *PPCP 04 28 SCP 07 44
MNV 04 00 54.0 SCP 07 45
SKS 04 01 11.5 05 10 *PP 01 32 PP 02 32 *E 03 34
PCP 04 15 *E 04 34 *SS 06 40
SCP 07 50 *E 09 24 *E 10 48

MICRON PERIOD
PZ 0.7 1

ASK 04 01 16.7 D PCP 04 18 *PPCP 04 36 SCP 07 54
MHC 04 01 *E 01 19
WNV 04 01 21.7 D SCP 07 55
KAO 04 01 24.0
PAS 04 01 26.2 PCP 04 19 *PPCP 04 35 SCP 07 57
PRI 04 01 31.0
USGS 03 55 12.0, 61.9N, 149.7W, H= 55 KM, M=5.9
SOUTHERN ALASKA

MHC JAN 01 12 54 *E 54 53
SKS 12 54 57 *E 59 16

MICRON PERIOD
PZ 0.02 0.9

JAS 12 54 *E 54 57
FHC 12 55 14.2
USGS 12 45 50.3, 7.5N, 73.1W, H=162 KM, M=4.9
NORTHERN COLUMBIA

BKS JAN 01 13 27 43 34 28 *E 27 51 *E 28 08 *E 28 18
*E 28 25 *E 28 34 *E 35 06
*E 35 12 LQ 35 12 *E 39 00

MICRON PERIOD
MAXR(Z) 13.0 8
MAXH(N) 17.4 8
MAXH(E) 17.8 8

SAO 13 27 *E 27 44
FHC 13 27 44.5
MHC 13 27 45.5
PRI 13 27 47.5
WDC 13 27 *E 27 50
JAS 13 27 54 T 03 00
FRI 13 27 56
MIN 13 27 *E 27 56
MNV 13 28 09
USGS 13 20 54.5, 19.5N, 155.6W, H= 10 KM, M=5.1
HAWAII

MNV JAN 01 22 43 51
JAS 22 43 52.0 C
BKS 22 44 *E 44 02
USGS 22 31 06.0, 38.3S, 73.1W, H= Y KM, M=5.3
NEAR COAST OF CENTRAL CHILE

MNV JAN 01 22 59 11.6 C
PRI 22 59 13.0
JAS 22 59 20.0 C
BKS 22 59 *E 10 00 *E 12 00 *E 13 50
*E 15 22
WDC 22 59 43
USGS 22 52 36.4, 14.1N, 91.9W, H= 80 KM, M=5.0
GUATEMALA

MHC JAN 02 05 59 36.5
WDC 05 59 37.0 C
PRI 05 59 39.5 C
JAS 05 59 40.5 C
FRI 05 59 42.5
MNV 05 59 49.5 C
USGS 05 46 33.5, 9.5S, 155.1E, H= 23 KM, M=5.4
DENTRECASTEAUX ISLANDS REGION

FHC JAN 02 09 08 54.2
WDC 09 09 00.4 C *E 10 18
MIN 09 09 04.8 C
BKS 09 09 12 17 40 LQ 24 40 LR 27 40

MICRON PERIOD
MAXH(N) 14.2 10
MAXH(E) 6.9 10

MHC 09 09 17.6
SAO 09 09 *E 09 20
JAS 09 09 20.2 C P*P* 38 30
FRI 09 09 26.5 C
PRI 09 09 27.1 C
MNV 09 09 27.5 C *E 10 25 P*P* 38 38
DISTANCE(DEG) 62
USGS 08 59 00.5, 46.9N, 151.6E, H= 52 KM, M=5.7
KURIL ISLANDS

PRI JAN 02 13 35 *E 35 41
BKS 13 35 *E 45 20
JAS 13 34 46.0 C
MNV 13 35 02.0
USGS 13 27 45.0, 19.2N, 155.4W, H= 5 KM, M=4.5
HAWAII

FHC JAN 02 14 27 30.5 C
WDC 14 27 35.5 C
MIN 14 27 38.9 C *E 29 25
BKS 14 27 41.0 C *E 27 46 *E 27 53

MICRON PERIOD
PZ 0.28 0.7

MHC 14 27 45.1 C
SAO 14 27 46.2 C
JAS 14 27 48.3 C *E 29 33
PRI 14 27 51.4 C
FRI 14 27 52.7 C
MNV 14 27 56.1 C
USGS 14 16 01.0, 21.6N, 182.9E, H=313 KM, M=5.6
MARIANA ISLANDS REGION

BKS JAN 02 17 26 *E 26 18
JAS 17 26 18.8
WDC 17 26 *E 25 20
MNV 17 26 29.0
USGS 17 14 52.9, 15.3S, 173.3W, H= Y KM, M=5.1
TONGA ISLANDS

WDC JAN 02 19 40 55 *E 41 07
BKS 19 41 07 48 40 *E 41 21 LQ 54 44 LR 57 20
MHC 19 41 12.8
JAS 19 41 15.0 C *E 41 29
MNV 19 41 21.8 C *E 41 36
FRI 19 41 22.0
PRI 19 41 25
USGS 19 31 43.9, 53.0N, 159.4E, H= 47 KM, M=5.5
NEAR EAST COAST OF KAMCHATKA

FRI JAN 02 21 47 36
PRI 21 47 37
JAS 21 47 42.7 D
MHC 21 47 44.3
BKS 21 47 47.5 D

MICRON PERIOD
PZ 0.06 1.0

WDC 21 47 56.2 D
FHC 21 48 02.5
USGS 21 36 18.4, 33.1S, 70.0W, H=109 KM, M=5.2
CHILE-ARGENTINA BORDER REGION

FRI JAN 02 22 41 35
JAS 22 41 36.4

WDC 22 41 39.0 C
MNV 22 41 46.2 C

FHC JAN 02 23 00 25.5
WDC 23 00 36.6
MIN 23 00 43.5
JAS 23 01 *E 01 19
MNV 23 01 *E 01 24
USGS 22 58 13.0, 49.3N, 129.0W, H= Y KM, M=4.4
VANCOUVER ISLAND REGION

SAO JAN 03 00 41 31.2
BKS 00 41 31.5 *E 41 44

MICRON PERIOD
PZ 0.13 0.8

MHC 00 41 32.2
PRI 00 41 32.5
FHC 00 41 36
FRI 00 41 37
JAS 00 41 37.6 C *E 43 40
WDC 00 41 39.3 C *E 43 41
MIN 00 41 41 *E 43 44
MNV 00 41 46.8 C *E 43 50
USGS 00 30 28.0, 20.3S, 178.6W, H=572 KM, M=5.2
FIJI ISLANDS REGION

JAS JAN 03 01 50 37.0
WDC 01 50 38.5
MNV 01 50 47

FRI JAN 03 05 29 02
MNV 05 29 02.5
JAS 05 29 04.0 C
MHC 05 29 05.0 C
BKS 05 29 06 *E 29 38
MIN 05 29 08
WDC 05 29 09.0 C
USGS 05 10 12.9, 55.4S, 28.2W, H= Y KM, M=5.6
SOUTH SANDWICH ISLANDS REGION

JAS JAN 03 06 03 02.8
BKS 06 03 04.5 C

MICRON PERIOD
PZ 0.02 0.7

WDC 06 03 07.5 C
USGS 05 44 09.8, 55.4S, 28.1W, H= Y KM, M=5.5
SOUTH SANDWICH ISLANDS REGION

MHC JAN 03 17 40 *E 40 08
PRI 17 40 *E 40 10
WDC 17 40 14.2
JAS 17 40 17.7 C
MIN 17 40 18.5
FRI 17 40 19.0
MNV 17 40 33.5 C
USGS 17 32 48.1, 19.2N, 155.7W, H= 10 KM, M=4.7
HAWAII

WDC JAN 04 00 30 04.5 C
MIN 00 30 *E 30 10
JAS 00 30 26.2 C
PRI 00 30 *E 30 33
FRI 00 30 *E 30 33
MNV 00 30 33.2 C
USGS 00 20 43.0, 51.1N, 158.0E, H= Y KM, M=5.1
NEAR EAST COAST OF KAMCHATKA

BKS JAN 04 02 13 10.5

MICRON PERIOD
PZ 0.02 0.6

MHC 02 13 12.0
WDC 02 13 15.1 C
PRI 02 13 16.2
JAS 02 13 17.0 C
FRI 02 13 17.3 C
MIN 02 13 17.5
MNV 02 13 26.0 C
USGS 02 00 39.4, 17.1S, 168.1E, H= 52 KM, M=5.0
NEW HEBRIDES ISLANDS

FRI JAN 04 04 35 25.8
PRI 04 35 26.4 C
MNV 04 35 29.9 C
JAS 04 35 36.3 C
MHC 04 35 39.1
MIN 04 36 *E 36 00
FHC 04 36 *E 36 14
USGS 04 30 14.7, 19.3N, 102.6W, H= 47 KM, M=4.9
MICHOACAN, MEXICO

JAS JAN 04 12 42 12.1
MNV 12 42 14.3
USGS 12 28 42.3, 38.5N, 97.5E, H= Y KM, M=5.4
TSINGHAI PROVINCE, CHINA

BKS JAN 05 01 38 *E 38 08 LQ 45 12 *E 49[illegible]
T 13 49
MHC 01 38 *E 38 56
PRI 01 38 *E 38 56
JAS 01 39 07.3 C T 14 40
MIN 01 39 08.3
FRI 01 39 08.8
WDC 01 39 *E 39 09
MNV 01 39 23.2
FHC 01 39 T 13 48
SAO 01 39 T 14 05
USGS 01 32 06.9, 19.5N, 155.7W, H=105 KM, M=5.1
HAWAII

MHC JAN 05 09 52 39.5
PRI 09 52 *E 52 40
FHC 09 52 *E 52 44
FRI 09 52 45.1
JAS 09 52 45.6
WDC 09 52 47.2
MIN 09 52 *E 52 50
MNV 09 52 55.8
USGS 09 41 19.4, 15.6S, 174.3W, H= 71 KM, M=5.0
TONGA ISLANDS

PRI JAN 06 11 17 17.8 C
SAO 11 17 31.9 C
FRI 11 17 33.8 D
MHC 11 17 40.2 D
JAS 11 17 45.3 D
BKS 11 17 50.1 C 18 02
MNV 11 18 02.0 D
MIN 11 18 21.6 C
WDC 11 18 25.4 D
FHC 11 18 36.5
MAG 4.4, NE OF PASO ROBLES

WDC JAN 06 19 22 16.0
MIN 19 22 20.8
JAS 19 22 30.8 C
FRI 19 22 35.7
MNV 19 22 *E 22 36
PRI 19 22 *E 22 35
USGS 19 09 52.5, 29.2N, 130.3E, H= 41 KM, M=5.6
RYUKYU ISLANDS

FHC JAN 06 23 18 26.5
WDC 23 18 34.5
MIN 23 18 39.9
BKS 23 18 51.6

MICRON PERIOD
PZ 0.06 0.7

JAS 23 19 00.2
SAO 23 19 02.2
MNV 23 19 08.5
FRI 23 19 08.9
PRI 23 19 09.2

```
                    USGS  23 12 17.8, 54.3N, 165.8W, H=102 KM, M=5.1
                          FOX ISLANDS, ALEUTIAN ISLANDS

DC JAN 07   08 18 29.5
KS          08 18 37.8
                          MICRON      PERIOD
                PZ          0.02         0.7
AS          08 18 44.2
RI          08 18 49.1
                    USGS  08 07 20.3, 30.4N, 138.4E, H=433 KM, M=4.5
                          SOUTH OF HONSHU, JAPAN

HC JAN 08   02 17                    PKS  21 05
DC          02 17 46.5  C              SP  19 36  PKS  21 17
IN          02 17 47.8  C
KS          02 17                    *E  17 51
HC          02 17 52.0
AS          02 17 52.3  C             *E  19 53 PKS   21 05   *E  31 00
RI          02 17 54.5  C          PKS   21 09
RI          02 17 54.9  C          PKS   21 09
NV          02 17 55.2  C          PKS   21 10
                    USGS  01 58 55.1,  3.0S, 101.8E, H= 95 KM, M=6.0
                          SOUTHERN SUMATRA

DC JAN 08   13 04                   *E  04 54
IN          13 05                   *E  05 03
AS          13 05 36.2
NV          13 05                   *E  05 48
RI          13 05                   *E  05 50
                    USGS  13 03 01.4, 46.8N, 128.9W, H= N  KM, M=4.1
                          OFF COAST OF WASHINGTON

DC JAN 08   13 11                   *E  11 01
AS          13 11 42.0
NV          13 11 59
                    USGS  13 09 08.2, 46.7N, 128.7W, H= N  KM, M=4.4
                          OFF COAST OF WASHINGTON

DC JAN 08   13 49                   *E  49 28
AS          13 50 14.0  C
RI          13 50 28
                    USGS  13 47 41.6, 46.8N, 128.3W, H= N  KM, M=4.3
                          OFF COAST OF WASHINGTON

DC JAN 08   17 45 27.0  C
IN          17 45 29.6
KS          17 45                   *E  45 38
HC          17 45 44.5
AS          17 45 48.3  C
AO          17 45 48.3
RI          17 45 56.3  C
RI          17 45 56.6
NV          17 45 56.9  C
                    USGS  17 38 19.1, 52.4N, 175.6W, H=113 KM, M=5.1
                          ANDREANOF ISLANDS, ALEUTIAN ISLANDS

DC JAN 08   19 42 59.6
IN          19 43 04.9
AS          19 43 18.0
RI          19 43 19.5
RI          19 43 24.4
NV          19 43 25.3
                    USGS  19 32 37.1, 44.7N, 146.9E, H= 82 KM, M=5.2
                          KURIL ISLANDS

DC JAN 08   20 13 11.3
AS          20 13 52.6
NV          20 14 02.6
                    USGS  20 11 17.9, 46.8N, 128.8W, H= N  KM, M=4.1
                          OFF COAST OF WASHINGTON

AS JAN 08   21 27 36.6
NV          21 27 48.3
DC          21 27 55.0

RI JAN 09   04 17 02.2
RI          04 17 07.0
AS          04 17 07.4
DC          04 17 08.4
NV          04 17 17.4
                    USGS  04 06 06.0, 17.7S, 178.6W, H=551 KM, M=4.7
                          FIJI ISLANDS REGION

HC JAN 10   19 34 36.6
RI          19 34 38.1
AS          19 34 41.6  C
RI          19 34 42.5  C
IN          19 34
DC          19 34                   *E  34 43
NV          19 34 50.9  C           *E  34 44
                    USGS  19 22 05.7, 15.0S, 168.2E, H= 17 KM, M=5.2
                          NEW HEBRIDES ISLANDS

RI JAN 10   22 03 45.5
AS          22 03 46.3
NV          22 03 56.5

NV JAN 11   18 14 17.2                 *E  14 32
AS          18 14 26.2                 *E  14 41
HC          18 14                      *E  15 01
                    USGS  18 07 44.4, 14.5N,  91.4W, H=104 KM, M=4.6
                          GUATEMALA

HC JAN 12   01 37 29.5  D
DC          01 37 41.7  C
IN          01 37 51.3  C
KS          01 38 03.0  D          38 37    *E  38 25
HC          01 38 12.8  D
AO          01 38 15.3  D
AS          01 38 17.0  D
RI          01 38 32.0
RI          01 38 33.4
NV          01 38 35.0
                    MAG 4.4, NEAR PETROLIA

AO JAN 12   18 00 11.5
RI          18 00 11.9  D
KS          18 00 13.0  D
                          MICRON      PERIOD
                PZ          0.42         1.5
                MAXR(Z)     7.5           19
                MAXH(N)     6             20
                MAXH(E)     4.1           19
HC          18 00 13.1
RI          18 00 16.5  D
AS          18 00 17.7  D
HC          18 00 19.0
DC          18 00 21.3  D
IN          18 00 22.1
NV          18 00 25.4  D
                    USGS  17 47 23.5, 33.5S, 178.1W, H= 23 KM, M=5.8
                          SOUTH OF KERMADEC ISLANDS

RI JAN 12   21 23 14.8  D                *E  23 56
RI          21 23 21.2  D
AO          21 23 26.0  D    24 20
HC          21 23 34.1  C
AS          21 23 37.0  D    24 41
NV          21 23 39.0
KS          21 23 44.4  D                *I  24 55   *E  24 05
IN          21 24                        *E  24 15
DC          21 24                        *E  24 19
HC          21 24                        *E  24 30
                    USGS  21 22 14.9, 32.6N, 118.0W, H= 8  KM, M=5.1
                          OFF COAST OF SOUTHERN CALIFORNIA

DC JAN 12   22 06 49.5
IN          22 06 54.5
AS          22 07 17.0
NV          22 07 21.8
RI          22 07                    *E  07 26
                    USGS  22 01 25.7, 59.6N, 149.2W, H= 46 KM, M=4.7
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                          KENAI PENINSULA, ALASKA

DC JAN 13   00 37 32.6  D                *E  40 52
IN          00 37 37.4
KS          00 37 54.9  C
AS          00 38 00.0  D
AS          00 38 00.8
HC          00 38 04.5  D                *E  41 02
NV          00 38 09.4
RI          00 38 14.2
RI                USGS  00 31 55.6, 61.4N, 150.5W, H= 66 KM, M=4.8
                        SOUTHERN ALASKA

AO JAN 13   01 00 04.2
KS          01 00 05.1  C
RI          01 00 05.2  D
HC          01 00 05.5
HC          01 00                    *E  00 09
RI          01 00 10.2
AS          01 00 10.8  D            *E  02 15
DC          01 00 12.4  D            *E  02 17
IN          01 00 14.3
NV          01 00 20.0  D            *E  02 25
                    USGS  00 49 06.6, 20.1S, 178.5W, H=624 KM, M=5.1
                          FIJI ISLANDS REGION

NV JAN 13   04 48 43.5
AS          04 48 56.8
                    USGS  04 38 31.5, 23.7N,  47.5W, H= N  KM, M=4.6
                          NORTH ATLANTIC RIDGE

HC JAN 13   09 25 51.2                 SCP  32 10
DC          09 25 59.7  C              SCP  32 13
IN          09 26 05.3                 SCP  32 16
KS          09 26 15.5     31 52      *SP  27 31    LQ  34 45  SCS  35 07
                          MICRON      PERIOD
                PZ          0.05         0.8
                MAXR(Z)    10.3           20
                MAXH(N)     4.3           18
                MAXH(E)     8.5           20
HC          09 26 20.9                 SCP  32 23
AS          09 26 24.2  C              SCP  32 24
AO          09 26                      *E  28 25
RI          09 26 32.6  C              SCP  32 26
RI          09 26 32.9                 SCP  32 28
NV          09 26 33.3  C              SCP  32 29
                    MAG 5.5, DIST(DEG) 38
                    USGS  09 19 10.3, 52.2N, 171.1W, H= 42 KM, M=5.7
                          FOX ISLANDS, ALEUTIAN ISLANDS

DC JAN 13   19 36 46.0
IN          19 36 51.5
AS          19 36 56.8
KS          19 37                    *E  37 09
NV          19 37 15.0
                    USGS  19 29 16.2, 51.3N, 178.2W, H= 45 KM, M=4.9
                          ANDREANOF ISLANDS, ALEUTIAN ISLANDS

DC JAN 13   21 54 11.2
AS          21 54 12.2
                    USGS  21 41 28.8, 19.2S, 168.7E, H= 46 KM, M=4.9
                          NEW HEBRIDES ISLANDS

HC JAN 13   23 10 00.4
KS          23 10 00.4
DC          23 10 00.5
RI          23 10 04.8
IN          23 10 05.6
AS          23 10 06.4
RI          23 10 06.4
NV          23 10 14.0
                    USGS  22 57 26.9,  8.7S, 159.4E, H=105 KM, M=5.2
                          SOLOMON ISLANDS

DC JAN 14   19 51 34.5                 P↑  55 52
IN          19 51                      *E  55 10
AS          19 51 43.0                 P↑  55 08
RI          19 51                      *E  51 50   *E  55 15
RI          19 51                      *E  51 52   *E  56 08
NV          19 51 53.5                 P↑  55 06
                    USGS  19 37 19.4,  5.0S, 130.0E, H= 39 KM, M=5.9
                          BANDA SEA

DC JAN 14   20 03 08.7                 P↑  07 36
KS          20 03 16                   PP  07 46  PS  15 52  SCS  18 01
                          MICRON      SS  23 03  LR  37 30
                          PERIOD
                MAXR(Z)    17.3           18
                MAXH(N)     4.5           17
                MAXH(E)    16.5           20
HC          20 03                      *E  03 10
IN          20 03                      *E  03 17   P↑  07 41
AS          20 03                      P↑  07 40
RI          20 03 20.0                 P↑  07 51
RI          20 03 21.0                 P↑  07 55
NV          20 03 23.0                 P↑  08 02
            20 03 28.5
                    MAG 6.5, DIST(DEG) 110
                    USGS  19 48 59.2,  5.0S, 130.0E, H= N  KM, M=6.3
                          BANDA SEA

HC JAN 15   20 48 32.5
DC          20 48 33.6  C
IN          20 48 34.8  C
KS          20 48 36.3  C
HC          20 48 37.8  C              LR  40 40
AS          20 48 38.3
RI          20 48 40.3
RI          20 48 40.5  C
NV          20 48 42.0
                    USGS  20 29 53.9,  8.0S, 112.3E, H=141 KM, M=5.8
                          JAVA

NV JAN 16   07 01 41.6
RI          07 01 41.8
AS          07 01 46.8
IN          07 01
DC          07 02 01.3                 *E  01 59
                    USGS  06 50 03.4, 22.0S,  68.2W, H=115 KM, M=4.8
                          NORTHERN CHILE

RI JAN 16   08 24 07.0
HC          08 24 08.1
RI          08 24 11.6
AS          08 24 12.6
DC          08 24 15.7
IN          08 24 17.5
NV          08 24 19.7
                    USGS  08 11 17.8, 32.8S, 179.8W, H= N  KM, M=4.5
                          SOUTH OF KERMADEC ISLANDS

AO JAN 17   09 42 02.5  D
KS          09 42 03.8  D
                    51 28    PCP  42 15  *PP  42 42  PP  45 05
                             *PPP 45 45  *SP  46 00  PPP 46 33
                               SS 56 15    LQ  01 32
                          MICRON      PERIOD
                PZ          0.38         1.1
                MAXR(Z)     2.9           18
                MAXH(N)     2.5           16
                MAXH(E)     1.9           18
RI          09 42 03.9  D
HC          09 42 04.4  D
RI          09 42 08.8  D              *PP  42 42
AS          09 42 09.5  D              *PP  42 46
DC          09 42 10.3  D              *PP  42 47
IN          09 42 12.1  D              *PP  42 49
NV          09 42 14.1  D
            09 42 20.1  D              *PP  42 52
                    DISTANCE(DEG) 75
                    USGS  09 30 42.3, 17.9S, 174.6W, H=153 KM, M=5.8
                          TONGA ISLANDS

KS JAN 17   12 38 27.1
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                12 38
FHC             12 38 33.2  C                    *E   38 31
FRI             12 38 33.8  C
JAS             12 38 34.7  C
WDC             12 38 43.0  C
MNV                   USGS  12 27 41.8, 18.0S, 178.8W, H=592 KM, M=4.6
                            FIJI ISLANDS REGION

WDC JAN 18      00 29 53.4  C
MIN             00 29 57.9
JAS             00 30 12.9  C
MNV             00 30 19.7  C
PRI             00 30                *E   30 20
FRI             00 29                *E   30 20
                      USGS  00 19 35.4, 46.2N, 148.0E, H= 36 KM, M=4.9
                            NORTHWEST OF KURIL ISLANDS

SAO JAN 18      09 02 59.6
PRI             09 03 01.1  D
BKS             09 03 01.5                *E   03 04   *E   03 16   *E   13 12
                                          *E   13 28   LQ   25 00
                                MICRON    PERIOD
                          PZ      0.11      1.0
                          MAXR(Z) 0.70      20
                          MAXH(N) 0.70      20
                          MAXH(E) 0.54      20
MHC             09 03 01.9  D
FRI             09 03 06.7  D
FHC             09 03 08.8                *E   03 20
JAS             09 03 07.6  D             *E   03 21
WDC             09 03 10.0  D             *E   03 22
MIN             09 03 12.0                *E   03 24
MNV             09 03 17.5  D             *E   03 32
                      USGS  09 51 17.8, 20.5S, 173.8W, H= V  KM, M=5.6
                            TONGA ISLANDS

MNV JAN 18      19 20 05.8
JAS             19 20 06.0
MHC             19 20                     *E   20 07
FRI             19 20 08.7
PRI             19 20                     *E   20 09
                      USGS  19 00 25.5,  5.4S,  68.5E, H= V  KM, M=4.9
                            CHAGOS-ARCHIPELAGO REGION

MNV JAN 19      03 28 04.8  D
PRI             03 28 05.2
FRI             03 28                     *E   28 06
JAS             03 28 10.1  D
MHC             03 28 12.6
MIN             03 28 20.8
WDC             03 28 24.0  D
FHC             03 28 31.2
                      USGS  03 16 27.0, 23.1S, 66.4W, H=209 KM, M=4.8
                            JUJUY PROVINCE, ARGENTINA

FHC JAN 19      08 10 57.0
WDC             08 11 12.8
JAS             08 11 55.0
MNV             08 12 06.5
FRI             08 12 08.0
                      USGS  08 09 48.1, 44.2N, 128.4W, H= V  KM, M=4.5
                            OFF OREGON COAST

FHC JAN 19      08 16 04.2                PP   20 30
WDC             08 16 09.6                P    19 42   PP   20 30 PKKP  31 52
                                          PPP  40 00
MIN             08 16 11.5                PP   20 35   PPP  40 10
BKS             08 16 20.0  D   28 28     PP   20 48   PPP  23 04 SKS   27 06
                                          PS   30 06   SS   35 36   *E   36 40
                                          SSS  40 08   PPP  41 00   LQ   46 16
                                MICRON    PERIOD
                          PPZ     1.8       4.5
                          MAXR(Z) 21.5      20
                          MAXH(N)  6.1      20
                          MAXH(E) 34.2      20
MNV             08 16 23.5                P    19 51   PP   20 51 PKKP  31 48
JAS             08 16 23.7                P    19 52   PP   20 50 PKKP  31 43
                                          PPP  39 46
MHC             08 16                     *E   19 24   *E   31 49
FRI             08 16                     *E   16 28   *E   20 38
PRI             08 16                     *E   16 33   SS   21 00 PKKP  31 44
                      MAG 5.8, DIST(DEG) 107
                      USGS  08 02 02.5, 32.5N,  78.4E, H= V  KM, M=6.2
                            KASHMIR-TIBET BORDER REGION-47 KILLED

BKS JAN 19      10 04 32.7                *E   04 56
MHC             10 04 34.2                *E   04 56
WDC             10 04 35.2                *E   04 58
PRI             10 04 36.6                *E   04 59
MIN             10 04 37.8                *E   05 00
JAS             10 04 39.0                *E   05 02
FRI             10 04 40.4                *E   05 03
MNV             10 04 48.0                *E   05 10
                      USGS  09 52 00.7, 10.7S, 161.7E, H= 82 KM, M=5.2
                            SOLOMON ISLANDS

FHC JAN 20      17 42 30.4
WDC             17 42 36.4
MIN             17 42 40.6
BKS             17 42 46.1      52 20     *E   42 58   *E   52 30 SCS   53 10
                                          PPS  53 18   SS   57 30   SSS  01 10
                                          LQ   01 56   LR   05 16
                                MICRON    PERIOD
                          PZ      0.03      0.7
                          MAXR(Z) 1.43      20
                          MAXH(N) 0.9       20
                          MAXH(E) 1.44      20
MHC             17 42 50.4
JAS             17 42 52.6
SAO             17 42 53.1
FRI             17 42 58.2
PRI             17 42 58.4
MNV             17 42 59.9
                      MAG 5.3, DIST(DEG) 76
                      USGS  17 31 10.6, 35.0N, 141.2E, H= 28 KM, M= *
                            NEAR EAST COAST OF HONSHU, JAPAN

MHC JAN 20      19 09 33.6                *E   09 44
FRI             19 09 38.1                *E   09 48
JAS             19 09 39.2
WDC             19 09 41.7                *E   09 44   *E   09 54
MIN             19 09                     *E   09 50
MNV             19 09 48.5
                      USGS  18 57 44.0, 21.6S, 173.6W, H= V  KM, M=5.2
                            TONGA ISLANDS

FRI JAN 21      14 35 29.2
PRI             14 35 30.4
MNV             14 35 31.5  C
JAS             14 35 37.4  C
MIN             14 35 52.2
WDC             14 35 55.7  C
FHC             14 36                     *E   36 04
                      USGS  14 25 23.1,  9.9S,  79.1W, H= 35 KM, M=5.4
                            OFF COAST OF NORTHERN PERU

JAS JAN 21      21 25 37.4
WDC             21 25 37.8
FRI             21 25 38.1
MNV             21 25 46.1
                      USGS  21 13 11.2, 14.7S, 167.4E, H=121 KM, M=4.8
                            NEW HEBRIDES ISLANDS

FHC JAN 21      21 53 28.3
WDC             21 53 36.0
MIN             21 53 42.0
JAS             21 54 03.0
MNV             21 54 10.5
FRI             21 54 12.3
                      USGS  21 47 49.4, 55.8N, 158.0W, H= 35 KM, M=4.9
                            ALASKA PENINSULA

MHC JAN 22      05 36                     *E   36 12
PRI             05 36                     *E   36 13
FRI             05 36 18.0
JAS             05 36 18.6
WDC             05 36 21.0
                      USGS  05 24 18.5, 24.2S, 177.1W, H=188 KM, M=4.4
                            SOUTH OF FIJI ISLANDS

FRI JAN 22      10 58 16.4  D
PRI             10 58 17.7  D
MNV             10 58 18.6  D                *E   58 53
SAO             10 58 21.6
JAS             10 58 23.2  D                *E   58 58
MHC             10 58 25.1  D
BKS             10 58 28.4
                                MICRON    PERIOD
                          PZ      0.04      1.0
MIN             10 58 34.0  D                *E   58 45   *E   59 12
WDC             10 58 36.9  D
FHC             10 58 43.5  D
                      USGS  10 46 14.3, 29.3S,  67.8W, H=136 KM, M=5.5
                            LA RIOJA PROVINCE, ARGENTINA

JAS JAN 23      03 05 30.9
MIN             03 05 32.7
WDC             03 05 32.9
MNV             03 05 39.7
                      USGS  02 53 56.8, 17.8S, 174.7W, H= 97 KM, M=4.4
                            TONGA ISLANDS

FRI JAN 23      11 15 05.3                PCP  15 34
MNV             11 15 06.8  D             PCP  15 35
PRI             11 15 07.1                PCP  15 35
JAS             11 15 13.1  D             PCP  15 42
MHC             11 15 15.8                PCP  15 44
BKS             11 15 19.7                *E   15 48   *E   25 06
                                MICRON    PERIOD
                          PZ      0.04      1.0
MIN             11 15 26.2                PCP  15 58
WDC             11 15 29.3                PCP  16 06
FHC             11 15 37.4
                      USGS  11 04 15.6, 15.4S,  72.9W, H=112 KM, M=5.4
                            SOUTHERN PERU

MNV JAN 24      12 40 17.5
PRI             12 40                     *E   40 21
JAS             12 40                     *E   40 27   *E   41 54
WDC             12 40 45.0                *E   42 04
FHC             12 40                     *E   40 56
                      USGS  12 31 52.3,  4.7N,  82.5W, H= 60 KM, M=5.0
                            SOUTH OF PANAMA

FHC JAN 24      14 28                     *E   28 18
BKS             14 28 18.5
                                MICRON    PERIOD
                          PZ      0.04      0.8
MHC             14 28 19.5  C
PRI             14 28 21.5
WDC             14 28 22.0  C
MIN             14 28 24.5  C
JAS             14 28 25.0  C
FRI             14 28 25.9  C
MNV             14 28 34.3
                      USGS  14 16 22.4, 12.1S, 167.2E, H=259 KM, M=5.0
                            SANTA CRUZ ISLANDS

WDC JAN 24      18 45 59.2  C
MIN             18 46 02.6
BKS             18 46 04.5
MHC             18 46 07.4
JAS             18 46 11.1  C             *E   46 38
PRI             18 46 12.5
FRI             18 46 15.1
MNV             18 46 19.2                *E   46 46
                      USGS  18 33 59.6, 17.3N, 145.7E, H=120 KM, M=4.8
                            MARIANA ISLANDS

MNV JAN 25      02 17 18.2
FRI             02 17 20.2
PRI             02 17 23.4
JAS             02 17 28.6
SAO             02 17                     *E   17 34
MHC             02 17 33.2                *E   19 10
BKS             02 17 39.1      24 55     PP   19 44   SS   29 00   LR   34 00
                                MICRON    PERIOD
                          PZ      0.28      1.3
                          MAXR(Z) 60.7      20
                          MAXH(N) 71.5      20
                          MAXH(E) 64.4      20
MIN             02 17 42.4
WDC             02 17 48.0                *E   19 02
FHC             02 17 55.0
                      DISTANCE(DEG) 52
                      USGS  02 08 41.5,  7.2N,  77.8W, H= 36 KM, M=6.1
                            PANAMA-COLUMBIA BORDER REGION

JAS JAN 26      22 02 46.2  C
FRI             22 02 46.9
MNV             22 02 55.2
                      USGS  21 50 36.7, 15.9S, 168.4E, H=253 KM, M=4.5
                            NEW HEBRIDES ISLANDS

JAS JAN 27      03 14 29.8  D
WDC             03 14 31.5
MNV             03 14 38.7  D

WDC JAN 27      21 40 38.4  D
JAS             21 41 02.3
PRI             21 41 09.8
FRI             21 41 10.3
MNV             21 41 10.9  D
                      USGS  21 33 32.2, 52.5N, 176.2W, H=150 KM, M=4.9
                            ANDREANOF ISLANDS, ALEUTIAN ISLANDS

FHC JAN 28      12 02 04.6                PCP  02 13
WDC             12 02 12.6  C             PCP  02 23
MIN             12 02 17.4                PCP  02 28
BKS             12 02                     PCP  02 39
MHC             12 02 34.0                PCP  02 44
JAS             12 02 35.8                PCP  02 46
MNV             12 02 42.5                PCP  02 53
PRI             12 02 43.0                PCP  02 54
FRI             12 02 43.3                PCP  02 54
                      USGS  11 53 30.7, 56.1N, 164.6E, H= V  KM, M=5.2
                            KOMANDORSKY ISLANDS REGION

FHC JAN 28      13 53 39.2
WDC             13 53 54.4
MIN             13 54 04.3  C   54 40
BKS             13 54 11.5                *E   54 43   *E   54 52
MHC             13 54 22.0                *I   55 10
SAO             13 54 27.2
JAS             13 54 27.9                *I   55 12
FRI             13 54 41.1
PRI             13 54 42.6
MNV             13 54 47.3
                      MAG 4.8, W OF CAPE MENDOCINO
                      OFF COAST OF NORTHERN CALIFORNIA

WDC JAN 28      20 16 04.8                *E   16 16
MIN             20 16                     *E   16 12
JAS             20 16 27.7                *E   16 39
MNV             20 16                     *E   16 48
                      USGS  20 08 26.0, 51.5N, 179.0E, H= 77 KM, M=4.8
                            RAT ISLANDS, ALEUTIAN ISLANDS

PRI JAN 29      11 34                     *E   34 16
FRI             11 34                     *E   34 18
MHC             11 34 24.0
JAS             11 34 25.2
MNV             11 34 25.2
WDC             11 34 41.0
ADO             11 34 47.0
MHA             11 34 50.5
ADC             11 34 51.0
MHA             11 34 52.5
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                    USGS  11 22 40.4, 36.1S, 100.7W, H= N  KM, M=4.7
                          SOUTHERN PACIFIC OCEAN

[illegible]DC JAN  29     16 19 32.7  C
[illegible]               16 19 39.5
[illegible]               16 20 12.2
[illegible]               16 20 18.0
                    USGS  16 16 58.7, 50.1N, 129.3W, H= N  KM, M=4.5
                          VANCOUVER ISLAND REGION

[illegible]AS JAN  29     17 45                *E  45 28
[illegible]               17 45 34.2
[illegible]               17 45                *E  45 46
[illegible]               17 45 55.7

[illegible]I JAN  31      16 19 55.9
[illegible]               16 19 56.0
[illegible]               16 20                *E  29 01
[illegible]               16 20 06
[illegible]               16 20 09
[illegible]               16 20                *E  27 50   *E  30 00
                    USGS  16 14 31.0, 15.4N, 104.8W, H= 48 KM, M=5.1
                          OFF COAST OF MICHOACAN, MEXICO

[illegible]HC FEB  02     07 32 53.2  C
[illegible]               07 33 01.2  C
[illegible]               07 33 24.2  C
[illegible]               07 33 31.9  C
[illegible]               07 33 32.0  C
[illegible]               07 33                40 05   LR   46 00
                    USGS  07 24 57.3, 53.1N, 173.4E, H= 25 KM, M=5.9
                          NEAR ISLANDS, ALEUTIAN ISLANDS

[illegible]HC FEB  02     08 51 41.7
[illegible]               08 51 49.0  C
[illegible]               08 52 03    C   58 52   PCP   53 22   LQ   02 26
                                        MICRON      PERIOD
                                  PZ      0.35        1.7
                                  MAXR(Z) 42.8        18
                                  MAXH(N) 42.8        20
                                  MAXH(E) 60.8        18
[illegible]               08 52 08.5
[illegible]               08 52 11.3  C
[illegible]               08 52 12.5  C
[illegible]               08 52 13.5  C
[illegible]               09 52                *E  52 20
                          MAG 7.4, DIST(DEG) 45
                    USGS  09 43 39.1, 53.1N, 173.5E, H= 10 KM, M=6.1
                          NEAR ISLANDS, ALEUTIAN ISLANDS IS INJURED

[illegible] FEB  02       16 02 22.4
[illegible]               16 02 24.1
[illegible]               16 02 24.3
[illegible]               16 02 24.5  D
[illegible]               16 02 29.8
[illegible]               16 02 29.8
[illegible]               16 02 30.1
[illegible]               16 02 31.4                *E  03 58
[illegible]               16 02 40.0                *E  04 00
                                                    *E  04 08
                    USGS  16 51 26.7, 17.3S, 177.3W, H=461 KM, M=5.2
                          FIJI ISLANDS REGION

[illegible]HC FEB  02     16 28 02.8
[illegible]               16 28 05.1  C
[illegible]               16 28 11.4  C
[illegible]               16 28
[illegible]               16 28 12.1  C                *E  28 12
                    USGS  16 17 23.7, 44.6N, 146.9E, H= 80 KM, M=5.5
                          KURIL ISLANDS

[illegible] FEB  03       01 09 38.7
[illegible]               01 09 39.8  C                *PP  10 24  PCP   12 20  SCP   15 43
[illegible]               01 09                        *PP  10 24  PCP   12 20  SCP   15 44
                                                       *E   09 41  *PP   10 27  PCP   12 21
                                                  SCP  15 46
[illegible]               01 09 48.4  C                *PP  10 36  PCP   12 22  SCP   15 48
[illegible]               01 09 53.0                   *PP  10 38  PCP   12 25
[illegible]               01 10                15 20   *PP  10 44  PP    11 36  PCP   13 00
                                                  SCP  16 34
[illegible]               01 10 10.1  C                *PP  10 59  PCP   12 30  SCP   15 56
[illegible]               01 10 21.7  C                *PP  11 10
                    USGS  01 03 25.2, 15.6N,  91.8W, H=218 KM, M=5.4
                          MEXICO-GUATEMALA BORDER REGION

[illegible] FEB  03       06 13 55.7
[illegible]               06 13
[illegible]               06 13 56.5                   *E  13 56
[illegible]               06 14 05.3
[illegible]               06 14
[illegible]               06 14 20.5                   *E  14 08
[illegible]               06 14 24.0
                    USGS  06 05 43.4,  7.6N,  82.5W, H= N  KM, M=4.8
                          SOUTH OF PANAMA

[illegible] FEB  03       08 16 34.1
[illegible]               08 16 34.6
[illegible]               08 17 02.0  D
[illegible]               08 17                        *E  17 02
[illegible]               08 17                        *E  17 03
                    USGS  08 07 04.0, 48.3N, 157.1E, H= 55 KM, M=5.0
                          KURIL ISLANDS REGION

[illegible] FEB  04       01 35 16.3  C
[illegible]               01 35 24.4
[illegible]               01 35                        *E  38 16
[illegible]               01 35 47.8                   *E  35 39
                    USGS  01 32 52.1, 48.2N, 114.1W, H=  9 KM, M=4.6
                          MONTANA

[illegible] FEB  04       02 00 41.2
[illegible]               02 00 42.0
[illegible]               02 00 44.5
[illegible]               02 00 45.7
[illegible]               02 00 47.9

[illegible]HC FEB  04     11 48 11.4
[illegible]               11 48 15.5  D                *I   48 16
[illegible]               11 48 19.1                   *I   48 19   *I   00 16
[illegible]               11 48 26.5  C   58 42       *E   48 41   SS   04 00   LQ   10 00
                                        MICRON      PERIOD
                                  PZ      0.26        1.0
                                  MAXR(Z) 50.8        18
                                  MAXH(N) 42.8        20
                                  MAXH(E) 70.7        22
                          11 48 31.0
                          11 48 31.7  D                *I   48 47   *E   00 32
                          11 48 33.5
                          11 48 35.6
                          11 48 37.0
                          11 48 38.7
                          MAG 7.0, DIST(DEG) 83
                    USGS  11 36 07.5, 40.6N, 122.6E, H= N  KM, M=6.4
                          NORTHEASTERN CHINA. MANY CASUALTIES,
                          EXTENSIVE DAMAGE

[illegible] FEB  04       13 58 30.5
[illegible]               13 58 30.5
[illegible]               13 58 31.5

[illegible] FEB  05       07 06 23.3                   PKS   09 47
[illegible]               07 06 24.0                   PKS   09 48
[illegible]               07 06 24.0                   PKS   09 48
[illegible]               07 06 24.8
[illegible]               07 06 26.0                   PKS   09 50
[illegible]               07 06 26.5
[illegible]               07 06 28    D                *E   05 30
[illegible]               07 06 29.7
[illegible]               07 06 30.7                   PKS   09 55
[illegible]               07 06                        *E   05 32
                    USGS  08 47 35.2, 56.1S,  27.3W, H= N  KM, M=5.7
                          SOUTH SANDWICH ISLANDS REGION

[illegible] FEB  05       21 56 07.6

FRI                       21 56
                    USGS  21 43 43.2, 40.7N, 122.5E, H= N  KM, M=5.1
                          NORTHEASTERN CHINA                  *E  56 12

WDC FEB  06               04 37 04.7  D
JAS                       04 37                        *E  37 21
MNV                       04 37 29.5
                    USGS  04 24 56.5, 40.8N, 122.3E, H= N  KM, M=5.1
                          NORTHEASTERN CHINA

WDC FEB  06               06 26 28.2
MIN                       06 26 36.1
JAS                       06 27 10.5
                    USGS  06 24 04.0, 49.3N, 129.6W, H= N  KM, M=4.3
                          VANCOUVER ISLANDS REGION

PRI FEB  06               11 49 05.0
FRI                       11 49                        *E  49 10
JAS                       11 49                        *E  49 11
MNV                       11 49 20.2
                    USGS  11 37 00.2, 24.0S, 175.8W, H= N  KM, M=4.8
                          SOUTH OF TONGA ISLANDS

FRI FEB  06               15 52 32.5
JAS                       15 52 33.8
MNV                       15 52 40.4

MNV FEB  06               16 13 36.9
FRI                       16 13 46.8  C
JAS                       16 13 57.9
PRI                       16 14 02.3
SAD                       16 14 07.5
WHC                       16 14 10.5
BKS                       16 14                15 49   *E  14 28
WDC                       16 14                        *E  14 34
                          MAG 4.6
                          NEAR NEVADA TEST SITE

EHC FEB  07               05 04                        *E  08 30
BKS                       05 04 57.3  D                PP  08 36   PPS   17 08   LR   33 33
                                        MICRON      PERIOD
                                  PZ      0.39        1.7
                                  PPZ     5.07        7.5
                                  MAXR(Z) 28.6        21.5
                                  MAXH(N) 29.0        21
                                  MAXH(E)  3.9        18
WDC                       05 04 57.5  D                *E  08 40   *E  17 10   *E  30 15
WHC                       05 04 59.3  D
MIN                       05 05 00.2  D                *E  08 46   *E  30 18   *E  33 35
SAD                       05 05 00.5
PRI                       05 05 02.8  D
JAS                       05 05 03.4  D                *E  08 50   *E  17 33   *E  30 18
FRI                       05 05 05.6  D                *E  33 35
MNV                       05 05 12.0  D                *E  09 04
                          MAG 5.6, DIST(DEG) 93
                    USGS  04 51 44.0,  7.3S, 149.5E, H= N  KM, M=6.3
                          NEW BRITAIN REGION

WDC FEB  07               16 52 39.9  D
MIN                       16 52
BKS                       16 52 51.5                   *E  52 46
WHC                       16 52
JAS                       16 52
PRI                       16 52 56.5  D                *E  52 54
FRI                       16 53 01.6
MNV                       16 53 01.7
                          16 53 03.5  D
                    USGS  16 41 15.6, 35.7N, 140.0E, H= 55 KM, M=5.3
                          NEAR EAST COAST OF HONSHU, JAPAN

PRI FEB  07               18 32                        *E  32 10
JAS                       18 32
FRI                       18 32 15.0                   *E  32 20
MNV                       18 32                        *E  32 20
                    USGS  18 12 27.3, 47.4S, 100.2E, H= N  KM, M=4.7
                          SOUTHEAST INDIAN RISE

PRI FEB  07               19 59                        *E  59 04
JAS                       19 59
FRI                       19 59 05.0                   *E  59 06
MNV                       19 59 17.6
                    USGS  19 45 30.7, 22.5S, 172.7E, H=105 KM, M=4.4
                          LOYALTY ISLANDS REGION

PRI FEB  08               03 22 41.9                   MICRON      PERIOD
BKS                       03 22 42.3                     0.05        0.9

WHC                                   PZ
FRI                       03 22 42.3  C                *E  23 40
JAS                       03 22 47.5  C                *E  23 41
WDC                       03 22 48.3                   *E  23 43
MIN                       03 22 50.0
MNV                       03 22 51.7                   *E  23 51
                          03 22 58.2
                    USGS  03 11 25.8, 17.0S, 174.6W, H=152 KM, M=5.1
                          TONGA ISLANDS

BKS FEB  08               09 15                        LR  42 00
WHC                       09 15                        *E  15 21
PRI                       09 15                        *E  15 24
JAS                       09 15
FRI                       09 15 24.0                   *E  15 26
WDC                       09 15 27.5
MNV                       09 15 34.5
                    USGS  09 02 43.0, 22.9S, 173.0E, H= 57 KM, M=4.6
                          LOYALTY ISLANDS REGION

PRI FEB  08               11 42 16.2  D                LR  03 00
WHC                       11 42 16.7                   *E  42 22
BKS                       11 42 16.7
EHC                       11 42 17.3  D                *E  42 46
FRI                       11 42                        *E  42 48
JAS                       11 42 22.1
WDC                       11 42 22.9  D                *E  42 56
MIN                       11 42 24.9  D
MNV                       11 42 26.7
                          11 42 33.3  D
                    USGS  11 31 00.7, 15.4S, 173.5W, H= 72 KM, M=5.0
                          TONGA ISLANDS

WHC FEB  09               07 20
FRI                       07 21                        *E  20 57
JAS                       07 21 00.5  C                *E  21 16
WDC                       07 21 01.8  C                *E  21 18
MNV                       07 21 05.1  C                *E  21 21
                          07 21 09.7  C                *E  21 26
                    USGS  07 08 21.8, 29.8S, 177.7W, H= 24 KM, M=5.3
                          KERMADEC ISLANDS

WDC FEB  09               11 09 24.0  C
BKS                       11 09                16 16   SS  20 00   LQ  21 00   LR  22 00
                                        MICRON      PERIOD
                                  MAXR(Z) 3.21        20
                                  MAXH(N) 2.14        20
                                  MAXH(E) 2.50        20
WHC                       11 09 44.2
JAS                       11 09 47.6  C
FRI                       11 09 55.2  C                *E  10 55
MNV                       11 09 55.5  C
                    USGS  11 01 19.4, 52.8N, 174.5E, H= 14 KM, M=5.4
                          NEAR ISLANDS, ALEUTIAN ISLANDS

SAD FEB  10               06 02                        *E  02 55
PRI                       06 02 56.5  C
WHC                       06 02 56.7  C
FRI                       06 03 02.2  C
JAS                       06 03 02.8  C
WDC                       06 03 04.5  C
MIN                       06 03                        *E  03 06
MNV                       06 03 13.0  C
                    USGS  05 51 44.4, 15.6S, 174.5W, H=150 KM, M=4.8
                          TONGA ISLANDS

WDC FEB  10               10 11                        *E  11 02
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```
                10 11
MIN             10 11 30.2  D                *E  11 08
JAS             10 11 34.2  D
MNV                   USGS  10 05 38.0, 60.7N, 147.0W, H= N  KM, M=4.3
                            SOUTHERN ALASKA

FRI FEB 10      12 52 12.8        53 08      *E  52 22
PRI             12 52 15.6        53 21      *E  52 32
MNV             12 52                        *E  52 25
SAO             12 52 29.0        53 40      *E  52 28
JAS             12 52                        *E  52 40
MHC             12 52 41.6                   *E  52 32
BKS                   MAG 4.3, NEAR LUCERNE VALLEY
                      USGS  12 51 17.5, 34.4N, 116.6W, H= 5  KM, M=4.3
                            SOUTHERN CALIFORNIA

FRI FEB 11      22 07 53.8  D                *PP 09 54
PRI             22 07 55.9  D                *PP 09 56
SAO             22 07 59.5
JAS             22 08 00.3  D
MHC             22 08 03.0  D                *PP 10 05
BKS             22 08 06.0                   *PP 10 04
                                             *PP 10 07
                      MICRON          PERIOD
                PZ      0.09            0.9
MIN             22 08 10.2                   *PP 10 07
WDC             22 08 13.5  D                *PP 10 12
FHC             22 08 20.6  D                *PP 10 15
                      USGS  21 56 49.5, 20.7S,  62.9W, H=552 KM, M=5.3
                            SOUTHERN BOLIVIA

PRI FEB 12      02 50 30.8  D
FRI             02 50                        *E  50 33
JAS             02 50 40.0  D
MNV             02 50 40.7  D
WDC             02 50 54.7  D
FHC             02 50                        *E  50 58

JAS FEB 12      08 23 23.5  D
WDC             08 23                        *E  23 36
                      USGS  08 10 27.8, 44.8S,  81.3W, H= N  KM, M=4.8
                            WEST CHILE RISE

WDC FEB 13      01 14 41.8
MHC             01 14 43.8
PRI             01 14 47.4
JAS             01 14 48.0
FRI             01 14 50.4
MNV             01 14 57.0  C
                      USGS  01 02 46.4,  4.6S, 154.8E, H=492 KM, M=5.4
                            SOLOMON ISLANDS

PRI FEB 13      17 19 53.0
MHC             17 19 53.7
JAS             17 19 58.7  C
WDC             17 20 00.7  C
MIN             17 20 02
MNV             17 20 07.1
                      USGS  17 08 21.6, 25.0S, 179.9E, H=511 KM, M=4.9
                            SOUTH OF FIJI ISLANDS

FRI FEB 13      18 50 59.8  D
MNV             18 51 00.8  D
PRI             18 51                        *E  51 01
JAS             18 51 08.0  D
                      USGS  18 45 30.1, 17.6N,  99.8W, H= 33 KM, M=4.8
                            GUERRERO, MEXICO

MHC FEB 14      01 37 51.3  C
PRI             01 37                        *E  37 52
WDC             01 37 55.4  C
JAS             01 37 56.4  C
FRI             01 37 56.6  C
MNV             01 38                        *E  39 05
                      USGS  01 25 38.1, 19.0S, 169.4E, H=249 KM, M=4.8
                            NEW HEBRIDES ISLANDS

MNV FEB 15      00 04 23.0                   *I  04 25
JAS             00 04 34.1                   *E  04 36
MHC             00 04                        *E  04 38
WDC             00 04                        *E  04 52

MIN FEB 15      06 36 20.8
MNV             06 36 21.2
WDC             06 36 22.4
JAS             06 36 24.8
FRI             06 36 25.1
                      USGS  06 16 27.8, 16.2S,  41.5E, H= N  KM, M=5.3
                            MOZAMBIQUE CHANNEL

JAS FEB 15      21 23 08.4                   *E  24 25
WDC             21 24                        LR  37 15   *E  37 22
BKS             21 24
                      MICRON          PERIOD
                MAXR(Z)  1.62           20
                MAXH(N)  1.54           20

MHC FEB 16      05 12 00.0
WDC             05 12 03.2
BKS             05 12                        *E  12 04
MHC             05 12                        *E  12 06
MIN             05 12 06.4
JAS             05 12 09.8
PRI             05 12 09.8
FRI             05 12                        *E  02 13
MNV             05 12 17.8
                      USGS  04 58 55.7,  7.2S, 146.1E, H=174 KM, M=5.7
                            EAST NEW GUINEA REGION

MHC FEB 16      19 33 14.1
PRI             19 33 16.3
JAS             19 33 19.0                   *I  33 25
FRI             19 33 20.3                   *I  33 35
MNV             19 33 28.4
                      USGS  19 20 52.9, 10.6S, 166.6E, H= N  KM, M=4.8
                            SANTA CRUZ ISLANDS

MHC FEB 17      01 28 41.6  C    29 04
WDC             01 28 55.9  C    29 29
MIN             01 29 05.9        29 48
BKS             01 29 11.5  D
FHC             01 29 21.8  D                *I  29 32
SAO             01 29 27.8  D
JAS             01 29 28.8                   *I  29 30
PRI             01 29                        *E  29 41
FRI             01 29 41.8
MNV             01 29 49.3
                      MAG 4.5, OFF COAST OF NORTHERN CALIFORNIA

JAS FEB 17      06 24 36.8                   *E  24 39
WDC             06 24                        *E  24 54
MNV             06 24

[illegible] FEB 17  09 19 31.7
                    09 19 41.4
                    09 20 11.7
                    09 20 15.1  D
                    09 20 27.3
                    09 20 29.7
                          USGS  09 18 26.1, 43.6N, 126.9W, H= N  KM, M=4.6
                                OFF COAST OF OREGON

[illegible] FEB 17  13 07 01.2  C
                    13 07 04.2  C
                    13 07 05.2
                    13 07 13.8  C
                          USGS  12 54 38.2, 10.9S, 166.7E, H= N  KM, M=5.2
                                SANTA CRUZ ISLANDS

[illegible] FEB 17  13 21 53.3  D
                    13 21 55.7
                    13 21 56.3  D

FRI             13 21 57.7
MNV             13 22 06.1  D
                      USGS  13 09 30.3, 10.9S, 166.7E, H= N  KM, M=5.2
                            SANTA CRUZ ISLANDS

JAS FEB 17      13 42 37.7
WDC             13 42 39.5

WDC FEB 19      09 38 15.5
MIN             09 38 19
MHC             09 38 22
JAS             09 38 28.9
PRI             09 38 28
FRI             09 38 30
MNV             09 38 34.2  C
                      USGS  09 25 40.2, 12.1N, 143.6E, H= N  KM, M=5.2
                            SOUTH OF MARIANA ISLANDS

FHC FEB 20      04 13 57.7
WDC             04 14 02.6  C
MHC             04 14 14.8
JAS             04 14 17.2
PRI             04 14 21.9
FRI             04 14 22.1
MNV             04 14 24.1
                      USGS  04 02 55.6, 30.7N, 138.3E, H=452 KM, M=4.7
                            SOUTH OF HONSHU, JAPAN

WDC FEB 20      05 45 52.2
MIN             05 45 54.1
MNV             05 46 06.5  C
JAS             05 46 06.7
MHC             05 46 08.8
SAO             05 46 11.2
FRI             05 46 11.4
PRI             05 46 15.5
                      USGS  05 32 57.7, 49.8N,  78.1E, H=  0 KM, M=5.7
                            EASTERN KAZAKH, SSR

JAS FEB 21      16 47 03

FRI FEB 22      00 52 51.6  C
PRI             00 52 52.7
MNV             00 52 55.2  C                *E  01 54
SAO             00 53                        *E  53 02
JAS             00 53 02.0  C                *E  55 22   *E  02 04
MHC             00 53 05.0  C
BKS             00 53                        *E  53 12   LQ  00 00 LR  02 0
                      MICRON          PERIOD
                MAXR(Z) 23              20
                MAXH(N) 11              20
                MAXH(E) 20              20
MIN             00 53                        *E  53 24
WDC             00 53 27.0  C
FHC             00 53 37.7  C
                      MAG 5.6,DIST(DEG) 28
                      USGS  00 47 21.7, 17.4N, 100.5W, H= 40 KM, M=5.3
                            GUERRERO, MEXICO

MNV FEB 22      07 09 34.2
JAS             07 09 38.0
WDC             07 10 01.8
                      USGS  07 01 59.2,  2.3N,  99.0W, H= N  KM, M=4.6
                            WEST OF GALAPAGOS ISLANDS

FHC FEB 22      08 43 32.4  C                SCP 49 20
WDC             08 43 40.3  C    50 13       *E  43 58   *E  45 25 SCP  49 3
                                             SCS 53 53
MIN             08 43 45.6  C                SCP 49 32
BKS             08 43 54.3  C    50 10       PCP 45 45   LQ  53 10 LR  55 3
MHC             08 44 00.4  C
JAS             08 44 03.8  C    50 30       *E  44 24   *E  45 14 SCP  49 3
                                             P*P* 15 30
SAO             08 44 04.5
PRI             08 44 11.6  C                SCP 49 45 P*P* 15 10
FRI             08 44 11.6  C    50 44       SCP 49 42
MNV             08 44 12.5  C
                      USGS  08 36 07.4, 51.4N, 179.6W, H= 45 KM, M=6.3
                            ANDREANOF ISLANDS, ALEUTIAN ISLANDS

FHC FEB 22      15 37 36.6
WDC             15 37 40.6
MIN             15 37 44.5
JAS             15 37 58.5
FRI             15 38 04.5
MNV             15 38 05.5
PRI             15 38                        *E  38 21
                      USGS  15 26 48.9, 41.3N, 144.5E, H= 18 KM, M=5.4
                            HOKKAIDO, JAPAN REGION

FHC FEB 22      20 05                        *E  05 38
WDC             20 05 43.0                   *E  05 50
MIN             20 05
JAS             20 06 06.4
MNV             20 06 15.0
                      USGS  19 58 10.0, 51.4N, 179.5W, H= 45 KM, M=4.8
                            ANDREANOF ISLANDS, ALEUTIAN ISLANDS

SAO FEB 22      22 16 17.1
BKS             22 16 18.3  D     *PP 17 45  PP  19 34 SKS  26
                                  *SS 28 30  SS  31 30 PKKP 34
                                  LQ  38 10   *E  52 30  *E  55
                      MICRON          PERIOD
                        1.7             1.4
                PZ                    *PP 17 45 SKS  26 15 P*P* 42
PRI             22 16 18.6  D     SKPP* 45 42
                                  *PP 17 46 SKS  26 07 P*P* 42
MHC             22 16 19.2  D     SKPP* 45 45
                                  *PP 17 50  PP  19 40 SKPP* 45
FHC             22 16 23.7  D     *PP 17 50 PKKP 34 44 P*P* 42
FRI             22 16 23.7  D     SKPP* 45 38
                                  *PP 17 50  PP  19 40 SKS  26
JAS             22 16 24.4  D      *E 34 45
                                  *PP 17 54 SKS  26 15 P*P* 42
WDC             22 16 26.7  D     SKPP* 45 38   *E  36 10
                                  *PP 17 55 SKS  26 15 P*P* 42
MIN             22 16 28.2  D     SKPP* 45 38
                                  *PP 18 00 SKS  26 26 P*P* 42
MNV             22 16 32.8  D
                      USGS  22 04 37.7, 24.9S, 179.1W, H=375 KM, M=6.2
                            SOUTH OF FIJI ISLANDS

FHC FEB 22      22 55 12.6
WDC             22 55 17.5
MIN             22 55 22.6
BKS             22 55                        *E  55 40
MHC             22 55                        *E  55 51
JAS             22 55 41.3
FRI             22 55                        *E  55 53
PRI             22 55                        *E  55 54
MNV             22 55 49.4
                      USGS  22 47 45.8, 51.3N, 179.3W, H= 62 KM, M=5.1
                            ANDREANOF ISLANDS, ALEUTIAN ISLANDS

FHC FEB 23      01 23 38.4  C
WDC             01 23 46.2  C
MIN             01 23 51.5
BKS             01 24                        *E  24 07
                      MICRON          PERIOD
                PZ      0.02            0.8
JAS             01 24 10.3                   *E  24 18
FRI             01 24                        *E  24 18
PRI             01 24
MNV             01 24 18.3
                      USGS  01 16 14.4, 51.3N, 179.4W, H= 55 KM, M=5.0
                            ANDREANOF ISLANDS, ALEUTIAN ISLANDS

BKS FEB 23      02 57 57.9
                      MICRON          PERIOD
                PZ      0.02            0.8
FRI             02 58 05.0                   *E  59 34
JAS             02 58 05.5                   *E  59 37
WDC             02 58 08.0
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                                                                NORTH ATLANTIC OCEAN

                                                 20 26 26.3   D
FRI FEB 26                                       20 26 28.0   D
PRI                                              20 26 32.7
SAO                                              20 26 33.6   D
JAS                                              20 26 36.2   D
WHC                                              20 26 39.5   D
BKS                                                            MICRON      PERIOD
                                                    PZ           0.11         0.7
                                                 20 26 45.2   D
MIN                                              20 26 48.4
WDC                                              20 26 56.1
FHC                                                    USGS   20 14 59.6, 19.8S,  69.3W, H= 82 KM, M=5.7
                                                              NORTHERN CHILE

                                                                *E  37 00
                                                                *E  37 08
FHC FEB 27                                       14 37                      MICRON      PERIOD
BKS                                              14 37                        0.05         1.1
                                                    PZ
                                                 14 37 08.4
WDC                                              14 37 10.6
WHC                                              14 37 10.9
MIN                                              14 37 14.2
PRI                                              14 37 14.7                 *E  41 12
JAS                                              14 37 17.0
FRI                                                    USGS   14 23 59.3,  6.1S, 148.2E, H= 79 KM, M=5.9
                                                              NEW BRITAIN REGION

WDC FEB 27                                       15 18 41.5
MIN                                              15 18 47
JAS                                              15 19 04.8
                                                       USGS   15 11 10.9, 52.3N, 179.0E, H=183 KM, M=4.7
                                                              RAT ISLANDS, ALEUTIAN ISLANDS

SAO FEB 27                                       18 53 46.1   C
BKS                                              18 53 47.1   C                *PP  54 50
                                                                MICRON      PERIOD
                                                    PZ           0.56         1.0
PRI                                              18 53 47.7   C                *E  53 56
WHC                                              18 53 47.7   C                *E  55 51
FHC                                              18 53 50.8   C
FRI                                              18 53 53.0   C                *E  54 00   *E  55 55
JAS                                              18 53 53.3   C                *E  55 56   *E  56 58
WDC                                              18 53 54.2   C                *E  55 57   *E  55 59
MIN                                              18 53 56.1   C                *E  56 07
MNV                                              18 54 02.9   C
                                                       USGS   18 42 53.7, 17.9S, 178.6W, H=585 KM, M=5.9
                                                              FIJI ISLANDS REGION

MNV FEB 28                                       15 15 36.5   C
FRI                                              15 15 48.2   C
JAS                                              15 15 57.0   C
PRI                                              15 16 00.9   C
SAO                                              15 16 07.5   C
WHC                                              15 16 10.0   C
BKS                                              15 16 16.3
MIN                                              15 16 23.0   C
WDC                                              15 16 32.2   C
FHC                                              15 16                    *E  15 48
                                                    MAG 5.5
                                                       USGS   15 15 00.0, 37.1N, 116.0W, H= 0  KM, M=5.7
                                                              NEVADA TEST SITE

PRI MAR 01                                       06 02                    *E  02 00
JAS                                              06 02 05.0
WDC                                              06 02 07.6   D
MNV                                              06 02 14.3   D
                                                       USGS   05 50 17.5, 23.3S, 177.7W, H=270 KM, M=4.9
                                                              SOUTH OF FIJI ISLANDS

MNV MAR 01                                       12 44 35.5   D                *E  44 45
PRI                                              12 44                        *E  44 39
JAS                                              12 44 44.4
                                                       USGS   12 37 32.5, 12.6N,  89.5W, H= N  KM, M=4.4
                                                              OFF COAST OF CENTRAL AMERICA

FRI MAR 01                                       15 03 05.7
PRI                                              15 03 07.0   D
MNV                                              15 03 08.2   D
JAS                                              15 03 14.4   D
WHC                                              15 03 17.0
WDC                                              15 03 32.8   D
                                                       USGS   14 53 19.0,  9.4S,  82.0W, H=  N KM, M=5.5
                                                              OFF COAST OF NORTHERN PERU

FHC MAR 02                                       14 32                    *E  32 44
WDC                                              14 32 45.6
MIN                                              14 32 47.9
MNV                                              14 33 02.9
JAS                                              14 33 05.6
WHC                                              14 33 09.9
FRI                                              14 33 12.6
PRI                                              14 33 19.2
                                                       USGS   14 23 26.6, 85.0N,  98.2E, H= N  KM, M=5.0
                                                              NORTH OF SEVERNAYA ZEMLYA

WDC MAR 02                                       23 15 30.1
JAS                                              23 15 45.0
MNV                                              23 15 52.8
                                                       USGS   23 03 51.2, 28.6N, 143.5E, H=  N KM, M=5.0
                                                              BONIN ISLANDS REGION

FRI MAR 03                                       06 24 40.6
MNV                                              06 24 42
JAS                                              06 24 51
                                                       USGS   06 19 16.3, 17.5N, 101.0W, H= 30 KM, M=4.5
                                                              NEAR COAST OF GUERRERO, MEXICO

MNV MAR 03                                       09 52 44.0   D
JAS                                              09 52 56.5
WHC                                              09 53 03.7
MIN                                              09 53 04
WDC                                              09 53 07.3   D
FHC                                              09 53                    *E  53 18
                                                       USGS   09 43 21.6, 17.2N,  61.0W, H= 33 KM, M=5.2
                                                              LEEWARD ISLANDS

SAO MAR 03                                       11 34 59.8   D
WHC                                              11 35 04.9   D
PRI                                              11 35 15.6   C
BKS                                              11 35 15.9   D
JAS                                              11 35 19.0   D
FRI                                              11 35 20.4   C
MNV                                              11 35                    *E  35 45
MIN                                              11 35                    *E  35 48
WDC                                              11 35 52.0
FHC                                              11 36                    *E  36 02
                                                    MAG 4.3, NW OF HOLLISTER

PRI MAR 03                                       23 16 13.6
JAS                                              23 16 18.2
WDC                                              23 16 18.5
MNV                                              23 16 29.2
                                                       USGS   23 05 00.5, 16.1S, 178.2W, H=299 KM, M=4.6
                                                              FIJI ISLANDS REGION

WDC MAR 04                                       11 32 07.0
JAS                                              11 32 15.8                   PP  36 14
FRI                                              11 32 20.4                   PP  36 39
MNV                                              11 32 22.0
                                                                             PP  35 47
                                                       USGS   11 17 48.3,  5.0S, 130.0E, H= 29 KM, M=5.7
                                                              BANDA SEA

WDC MAR 05                                       00 36 43.5                   *E  41 10   *E  52 05   LR  11 30
BKS                                              00 37                        SS  55 30   LQ  06 00   LR  11 30
                                                    50 30        MICRON      PERIOD
                                                              MAXR(Z) 15          20
                                                              MAXH(N)  7          20
                                                              MAXH(E) 14          20
MIN                                              00 36
MHC                                              00 36 50.0                   *E  36 48
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IIN            02 58 09.7
INV            02 58 13.9
                     USGS  02 46 19.6, 25.0S, 179.5W, H=375 KM, M=4.7
                           SOUTH OF FIJI ISLANDS

NDC FEB 23     03 11 29.7                    *E  16 56
HAS            03 11 41.0                    *E  16 11
INV            03 11                         *E  11 50    *E  15 59
                     USGS  02 58 41.0, 8.0N, 124.1E, H=623 KM, M=5.6
                           MINDANAO, PHILIPPINE ISLANDS

INV FEB 23     03 27 17.3                    *E  27 29
IAS            03 27 23.5                    *E  27 45
IRI            03 27                         *E  27 26
IDC            03 27                         *E  27 55

ERI FEB 23     04 05 09.9
IRI            04 05 11.3  D
INV            04 05 11.9  D
HAD            04 05 15.3
IAS            04 05 17.1  D
HHC            04 05 19.6  D
IKS            04 05 22.5  D
                           MICRON      PERIOD
                      PZ     0.06         1.0
IIN            04 05 29.1
ADC            04 05 32.2  D
EHC            04 05 39.6  D
                     USGS  03 53 35.9, 21.7S,  71.6W, H= V  KM, M=5.6
                           OFF COAST OF NORTHERN CHILE

DC FEB 23      05 17 18.0
IIN            05 17                         *E  17 24
IAS            05 17 38.0
INV            05 17 47.5
                     USGS  05 09 43.3, 51.3N, 179.3W, H= 50 KM, M=5.0
                           ANDREANOF ISLANDS, ALEUTIAN ISLANDS

HC FEB 23      07 46 30.2
IKS            07 46 30.5  D
EHC            07 46 32.4  D
ERI            07 46 34.5  D
IDC            07 46 34.5  D
IIN            07 46 37.1  D
IAS            07 46 37.7  D
RI             07 46 38.7  D
INV            07 46 47.2  D
                     USGS  07 34 11.4, 10.9S, 166.7E, H= V  KM, M=5.4
                           SANTA CRUZ ISLANDS

IDC FEB 25     05 33 16.9
EHC            05 33 19.2
IIN            05 33 19.2
RI             05 33 21.2
IAS            05 33 22.4
ERI            05 33 25.3
INV            05 33 31.4
                     USGS  05 20 04.5,  7.4S, 149.8E, H= V  KM, M=5.5
                           NEW BRITAIN REGION

EHC FEB 25     06 28 26.4
ERI            06 28 26.5
IAS            06 28 31.9
IDC            06 28 33.1  D
IIN            06 28                         *E  28 36
INV            06 28 41.4  D
                     USGS  06 17 31.1, 19.6S, 177.8W, H=570 KM, M=4.3
                           FIJI ISLANDS REGION

INV FEB 25     11 13 45.7
ERI            11 13 48.4  C   14 07
IAS            11 11 58.8
RI             11 14 04.1
AD             11 14 10.1  D
HHC            11 14 12.5
IKS            11 14 19.5
IIN            11 14 33.3
IDC            11 14 48.7
                     MAG 4.0, SE OF BISHOP
                     USGS  11 13 22.4, 37.1N, 117.9W, H= 10 KM, M=4.1
                           CALIFORNIA-NEVADA BORDER REGION

RI FEB 25      19 39
HC             19 39                         *E  39 46
RI             19 39 53.5                    *E  39 48
IAS            19 39 53.7  D
IDC            19 39 53.8  D
IIN            19 39 56.0
INV            19 40 03.7  D
                     USGS  19 27 51.4, 16.3S, 179.1E, H= V  KM, M=5.0
                           FIJI ISLANDS

HC FEB 26      04 58 11.9  D
IDC            04 58 13.0  D
IIN            04 58 15.5  D
INV            04 58 30.7  D
IAS            04 58 33.3  D
IKS            04 58 33.4        06 30     *E  16 00  LQ   21 10   *E  23 00
                                           LR   27 00
                           MICRON      PERIOD
                      PZ     0.04         1.0
                      MAXR(Z)  2.5        20
                      MAXH(N)  3.6        20
                      MAXH(E)  3.5        20
HC             04 58 37.6  D
RI             04 58 40.2
AD             04 58 41
RI             04 58 47.0  D
                     MAG 5.0, DIST(DEG) 59
                     USGS  04 48 54.7, 85.0N,  98.0E, H= V  KM, M=5.4
                           NORTH OF SEVERNAYA ZEMLYA

RI FEB 26      07 27 13.4  C
FRI            07 27 14.1
INV            07 27 20.3  C
JAS            07 27 24.5  C
HHC            07 27 25.4
IIN            07 27                         *E  27 46
NDC            07 27 47.9  C
EHC            07 27 56.6  C
                     USGS  07 19 46.0,  2.5N,  98.8W, H= V  KM, M=5.1
                           WEST OF GALAPAGOS ISLANDS

RI FEB 26      08 11                         *E  11 12
INV            08 11 15.3  D
JAS            08 11 20.4
DC             08 11 41.5
EHC            08 11 50.5
                     USGS  08 02 54.4,  0.3S,  91.5W, H= V  KM, M=4.6
                           WEST OF GALAPAGOS ISLANDS

EHC FEB 26     14 41                         *E  41 47
IKS            14 41                         *E  41 49
                           MICRON      PERIOD
                      PZ     0.03         1.0
NDC            14 41 49.1
HHC            14 41 51.2
IIN            14 41                         *E  41 53
RI             14 41 54.3
JAS            14 41 55.3
ERI            14 41 57.5
INV            14 42 03.5
                     USGS  14 29 00.5,  6.5S, 154.9E, H= 56 KM, M=5.5
                           SOLOMON ISLANDS

INV FEB 26     18 39 50.7
NDC            18 39 55.5
IIN            18 39
JAS            18 40 02.3                    *E  39 54
ERI            18 40                         *E  40 04
RI             18 40 05.5
                     USGS  18 30 11.9, 53.8N,  35.3W, H= V  KM, M=4.8

FRI FEB 26     20 26 26.3  D
                  20 26 28.0  D
PRI               20 26 32.7
SAD               20 26 33.6  D
JAS               20 26 36.2  D
WHC               20 26 39.5  D
BKS                           MICRON      PERIOD
                      PZ        0.11         0.7
                  20 26 45.2
MIN               20 26 48.4  D
WDC               20 26 56.1
EHC                     USGS  20 14 59.6, 19.8S,  69.3W, H= 82 KM, M=5.7
                              NORTHERN CHILE

                                              *E  37 00
                                              *E  37 08
FHC FEB 27        14 37                       MICRON      PERIOD
BKS               14 37                         0.05         1.1
                      PZ
                  14 37 08.4
WDC               14 37 10.6
WHC               14 37 10.9                  *E  41 12
MIN               14 37 14.2
PRI               14 37 14.7
JAS               14 37 17.0
FRI                     USGS  14 23 59.3,  6.1S, 148.2E, H= 79 KM, M=5.9
                              NEW BRITAIN REGION

WDC FEB 27        15 18 41.5
MIN               15 18 47
JAS               15 19 04.8
                        USGS  15 11 10.9, 52.3N, 179.0E, H=183 KM, M=4.7
                              RAT ISLANDS, ALEUTIAN ISLANDS

SAD FEB 27        18 53 46.1  C
BKS               18 53 47.1  C                 *PP  54 50
                           MICRON      PERIOD
                      PZ     0.56         1.0
PRI               18 53 47.7  C                 *E  53 56
WHC               18 53 47.7  C                 *E  55 51
EHC               18 53 50.8  C
FRI               18 53 53.0  C                 *E  54 00    *E  55 55
JAS               18 53 53.3  C                 *E  55 56    *E  56 58
WDC               18 53 54.2  C                 *E  55 57    *E  56 59
MIN               18 53 56.1  C                 *E  56 07
WNV               18 54 02.9  C
                        USGS  18 42 53.7, 17.9S, 178.6W, H=585 KM, M=5.9
                              FIJI ISLANDS REGION

WNV FEB 28        15 15 36.5  C
FRI               15 15 48.2  C
JAS               15 15 57.0  C
PRI               15 16 00.9  C
SAO               15 16 07.5  C
WHC               15 16 10.0  C
BKS               15 16 16.3
MIN               15 16 23.0  C
WDC               15 16 32.2  C
EHC                                           *E  15 48
                        MAG 5.5
                        USGS  15 15 00.0, 37.1N, 116.0W, H= 0  KM, M=5.7
                              NEVADA TEST SITE

PRI MAR 01        06 02                       *E  02 00
JAS               06 02 05.0
WDC               06 02 07.6  D
WNV               06 02 14.3  D
                        USGS  05 50 17.5, 23.3S, 177.7W, H=270 KM, M=4.9
                              SOUTH OF FIJI ISLANDS

WNV MAR 01        12 44 35.5  D                 *E  44 45
PRI               12 44                         *E  44 39
JAS               12 44 44.4
                        USGS  12 37 32.5, 12.6N,  89.5W, H= V  KM, M=4.4
                              OFF COAST OF CENTRAL AMERICA

FRI MAR 01        15 03 05.7
PRI               15 03 07.0  D
WNV               15 03 08.2  D
JAS               15 03 14.4  D
WHC               15 03 17.0
WDC               15 03 32.8  D
                        USGS  14 53 19.0,  9.4S,  82.0W, H=  V KM, M=5.5
                              OFF COAST OF NORTHERN PERU

FHC MAR 02        14 32                       *E  32 44
WDC               14 32 45.6
MIN               14 32 47.9
WNV               14 33 02.9
JAS               14 33 05.6
WHC               14 33 09.9
FRI               14 33 12.6
PRI               14 33 19.2
                        USGS  14 23 26.6, 85.0N,  98.2E, H= V  KM, M=5.0
                              NORTH OF SEVERNAYA ZEMLYA

WDC MAR 02        23 15 30.1
JAS               23 15 45.0
WNV               23 15 52.8
                        USGS  23 03 51.2, 28.6N, 143.5E, H=  V KM, M=5.0
                              BONIN ISLANDS REGION

FRI MAR 03        06 24 40.6
WNV               06 24 42
JAS               06 24 51
                        USGS  06 19 16.3, 17.5N, 101.0W, H= 40 KM, M=4.5
                              NEAR COAST OF GUERRERO, MEXICO

WNV MAR 03        09 52 44.0  D
JAS               09 52 56.5
WHC               09 53 03.7
WDC               09 53 04
EHC               09 53 07.3  D
                                              *E  53 18
                        USGS  09 43 21.6, 17.2N,  61.0W, H= 33 KM, M=5.2
                              LEEWARD ISLANDS

SAD MAR 03        11 34 59.8  D
WHC               11 35 04.9  D
PRI               11 35 15.6  C
BKS               11 35 15.9  D
JAS               11 35 19.0  D
FRI               11 35 20.4  C
WNV               11 35
MIN               11 35                       *E  35 45
WDC               11 35                       *E  35 48
EHC               11 35 52.0
                  11 36                       *E  36 02
                        MAG 4.3, NW OF HOLLISTER

PRI MAR 03        23 16 13.6
JAS               23 16 18.2
WDC               23 16 18.5
WNV               23 16 29.2
                        USGS  23 05 00.5, 16.1S, 178.2W, H=298 KM, M=4.6
                              FIJI ISLANDS REGION

WDC MAR 04        11 32 07.0                  PP  36 14
JAS               11 32 15.8                  PP  36 39
FRI               11 32 20.4
WNV               11 32 22.0                  PP  35 47
                        USGS  11 17 48.3,  5.0S, 130.0E, H= 29 KM, M=5.7
                              BANDA SEA

WDC MAR 05        00 36 43.5                  *E  41 10    *E  52 05    LR  11 30
BKS               00 37                       SS  55 30    LQ  06 00
                           50 30    MICRON      PERIOD
                      MAXR(Z) 15       20
                      MAXH(N)  7       20
MIN                   MAXH(E) 14       20
MHC               00 36
                  00 36 50.0                  *F  36 48
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JAS          00 36 53.5
PRI          00 36                    *E  41 30 PKKP  52 00
FRI          00 36 57.0               *E  41 36  *E   52 00
MNV          00 37 01.0               *E  41 37
             USGS      00 22 19.7,  2.4S,  126.1E, H=  N KM, M=6.4
             CERAM SEA

BKS MAR 05   10 39 46.6
                        MICRON       PERIOD
             PZ           0.11          1.1
SAD          10 39 47.5  C
MHC          10 39 48.8  C
FHC          10 39 49.0  C
PRI          10 39 49.7  C
WDC          10 39 52.8  C
JAS          10 39 53.7  C
FRI          10 39 54.2
MIN          10 39 54.9  C
MNV          10 40 02.5  C
             USGS      10 27 09.9, 19.5S, 168.9E, H= 55 KM, M=5.6
             NEW HEBRIDES ISLANDS

MNV MAR 05   13 57 09.0
FRI          13 57 13.0
PRI          13 57 17.5
JAS          13 57 21.0               *E  58 26
SAD          13 57                    *E  57 23
MHC          13 57                    *E  57 25
BKS          13 57                    *E  57 30
MIN          13 57 31.4
WDC          13 57 34.5               *E  58 34
FHC          13 57 45.5
             USGS      13 48 00.7,  9.0N,  69.9W, H= 51 KM, M=5.6
             VENEZUELA

MHC MAR 05   19 55 37.7
WDC          19 55 39.7
JAS          19 55 42.4
PRI          19 55 43.5
             USGS      19 42 52.7, 12.1S, 166.6E, H=112 KM, M=4.9
             SANTA CRUZ ISLANDS

FRI MAR 05   21 50 47.2               *PP  51 14
PRI          21 50 47.8  C
MNV          21 50 48.2  C           *PP  51 14
JAS          21 50 50.0  C           *PP  51 14   *E  54 17
MHC          21 50 50.8
BKS          21 50 51.7
MIN          21 50 53.4  C
WDC          21 50 54.6  C           *PP  51 19   *E  54 22
FHC          21 50 57.5
             USGS      21 32 01.1, 56.0S,  27.2W, H= 57 KM, M=5.9
             SOUTH SANDWICH ISLANDS REGION

PRI MAR 07   02 42 10.8
FRI          02 42 15.3
JAS          02 42 16.2  C            *E  42 31
WDC          02 42                    *E  42 20
MNV          02 42 26.0  C
             USGS      02 30 26.9, 20.4S, 174.0W, H= 37 KM, M=5.2
             TONGA ISLANDS

MNV MAR 07   15 00 36.3  C
FRI          15 00 48.2  C
JAS          15 00 57.0  C
PRI          15 01 01.7
SAD          15 01 07.5
MHC          15 01 09.9  C
BKS          15 01 16.6
MIN          15 01 22.5
WDC          15 01 32.1  C
FHC          15 01                    *E  01 49
             MAG 5.2
             NEVADA TEST SITE
             USGS      15 00 00.0, 37.1N, 116.1W, H=  0 KM, M=5.5
             SOUTHERN NEVADA

MIN MAR 08   05 28                    *E  28 33
WDC          05 28 38.0
JAS          05 28 52.5
             USGS      05 20 40.9, 79.2N,  96.1W, H= N  KM, M=4.4
             QUEEN ELIZABETH ISLANDS

WDC MAR 08   09 44 33.9  D
JAS          09 44 46.1  D
FRI          09 44 50.3
             USGS      09 32 42.8, 19.2N, 145.3E, H=154 KM, M=4.8
             MARIANA ISLANDS

SAD MAR 09   15 56 47.7
PRI          15 56 48.2
BKS          15 56 49.0
                        MICRON       PERIOD
             PZ           0.03          0.9
MHC          15 56 49.0
FRI          15 56 53.4
JAS          15 56 54.4  C
WDC          15 56 57.1  C
             USGS      15 44 55.0, 24.4S, 176.7W, H=165 KM, M=4.9
             SOUTH OF FIJI ISLANDS

FRI MAR 09   17 13 41.4
JAS          17 13 42.0  D
WDC          17 13 44.0  D
MNV          17 13                    *E  13 52
             USGS      17 02 16.7, 15.2S, 173.3W, H= N  KM, M=4.6
             TONGA ISLANDS

WDC MAR 10   07 08 32.5
MIN          07 08                    *E  08 38
JAS          07 08 45.3
FRI          07 08                    *E  08 50
MNV          07 08                    *E  08 50
             USGS      06 55 30.7, 24.3N, 122.5E, H= 68 KM, M=5.1
             TAIWAN REGION

BKS MAR 10   17 23                    *E  23 23
WDC          17 23 38.2               *E  23 42
MIN          17 23
JAS          17 24 10.5               *E  24 23
MNV          17 24

WDC MAR 11   05 55 52.3
MIN          05 55 54.2
MNV          05 56 06.2  C
JAS          05 56 06.8  C
FRI          05 56 11.8
             USGS      05 42 57.6, 49.8N,  78.3E, H=  0 KM, M=5.4
             EASTERN KAZAKH SSR

MNV MAR 11   07 18 26.4
PRI          07 18 26.4
FRI          07 18 27.8
JAS          07 18 38.2  C
MHC          07 18 38.4
MIN          07 18 58.4
WDC          07 19 02.0
             USGS      07 11 06.0,  1.9N, 102.1W, H= N  KM, M=5.0
             EAST CENTRAL PACIFIC OCEAN

WDC MAR 12   10 50 56.6  C
MIN          10 51 02.0
BKS          10 51                    *E  51 11
MHC          10 51                    *E  51 18
JAS          10 51
FRI          10 51 20.1  C
MNV          10 51 28.1
PRI          10 51 29.0
             10 51 29
             USGS      10 43 33.1, 51.5N, 177.6W, H= 54 KM, M=5.4
             ANDREANOF ISLANDS, ALEUTIAN ISLANDS

FRI MAR 13   15 38 57.0

PRI          15 38 58.0  C
SAD          15 39 02
JAS          15 39 03.9  C
MHC          15 39 05.5  C            *E  05 54
BKS          15 39 09.0  C   49 32   PP  42 28   SS  55 12   SSS  58
                                     LQ  01 40   LR  06 08
                        MICRON       PERIOD
             PZ           0.38          1.0
             MAXR(Z)      16            20
             MAXH(N)      27            20
             MAXH(E)      12            20
MIN          15 39 15.0
WDC          15 39 18.0  C
FHC          15 39 24.5  C
             MAG 6.6, DIST(DEG) 86
             USGS      15 26 42.5, 29.9S,  71.3W, H=  4 KM, M=6.2
             NEAR COAST OF CENTRAL CHILE, 2 STIL_ED

WDC MAR 13   16 28 54                    *E  28 58   *E  29 06
JAS          16 29 14.0                  *E  29 18
MNV          16 29 21.5                  *E  29 26
             USGS      16 18 57.8, 45.5N, 153.8E, H= N  KM, M=5.2
             KURIL ISLANDS REGION

FRI MAR 13   17 03 24.0  D
PRI          17 03 24.9  D
JAS          17 03 30.7  D
MHC          17 03 32.7  D
WDC          17 03 45.2  D
             USGS      16 51 15.0, 29.7S,  71.4W, H= N  KM, M=5.3
             NEAR COAST OF CENTRAL CHILE

FHC MAR 13   18 58 05.0
BKS          18 58 06                    *E  59 17
                        MICRON       PERIOD
             PZ           0.17          1.0
             MAXR(Z) 51                 20
             MAXH(N) 33                 20
             MAXH(E) 36                 20
MHC          18 58 06.0
PRI          18 58 06.7
WDC          18 58 10.6                  *E  09 52
JAS          18 58 10.7                  *E  09 53
FRI          18 58 11.0
MIN          18 58 12.5                  *E  09 57
MNV          18 58 19.6
             MAG 6.8, DIST(DEG) 89
             USGS      18 45 29.5, 21.8S, 170.5E, H= 85 KM, M=6.1
             LOYALTY ISLANDS REGION

FRI MAR 13   19 25 40
PRI          19 25 40
JAS          19 25 45.5  C            *E  26 00
MHC          19 25 47
WDC          19 25 59.5  C
             USGS      19 13 31.2, 29.8S,  71.3W, H= 51 KM, M=5.2
             NEAR COAST OF CENTRAL CHILE

JAS MAR 13   21 58 28.9
WDC          21 58 43.0
             USGS      21 46 11.9, 29.8S,  71.5W, H= 25 KM, M=5.1
             NEAR COAST OF CENTRAL CHILE

WDC MAR 14   05 25 13
JAS          05 25 32.2
FRI          05 25 38
MNV          05 25 40
             USGS      05 15 15.2, 46.3N, 153.1E, H= N  KM, M=5.2
             KURIL ISLANDS

FRI MAR 14   06 10 35.0  D            *E  11 11
MNV          06 10 35.5  D            *E  11 10
PRI          06 10                    *E  10 36   *E  11 11
JAS          06 10 44.5  D            *E  11 18   SC  17 02
MHC          06 10 49.3
MIN          06 11 03
WDC          06 11 07.0  D
             USGS      06 04 31.3, 16.6N,  93.4W, H=155 KM, M=5.6
             CHIAPAS, MEXICO

WDC MAR 14   16 15 47.7
JAS          16 16 06.6
MNV          16 16 14.0
             USGS      16 05 25.3, 44.3N, 148.5E, H= N  KM, M=5.4
             KURIL  ISLANDS

FRI MAR 15   01 35 39.4
PRI          01 35 40.5                  *E  35 55
MNV          01 35 42.2
JAS          01 35 46.4  C            *E  36 01
MHC          01 35 48.1                  *E  36 02
BKS          01 35 52.3  D
                        MICRON       PERIOD
             PZ           0.05          1.0
WDC          01 36 00.5                  *E  36 15
             USGS      01 23 31.8, 29.9S,  71.4W, H= 47 KM, M=5.3
             NEAR COAST OF CENTRAL CHILE

WDC MAR 15   03 27                       *E  27 17
JAS          03 27 28.0
FRI          03 27                       *E  27 32
MNV          03 27 36.5
             USGS      03 14 36.6,  9.8S, 159.5E, H= 30 KM, M=5.2
             SOLOMON ISLANDS

WDC MAR 15   10 09                       *E  09 40
JAS          10 09 53.5                  *E  10 04
MNV          10 10 00.5                  *E  10 12
             USGS      10 00 23.6, 53.0N, 160.0E, H= N  KM, M=4.7
             NEAR EAST COAST OF KAMCHATKA

PRI MAR 15   11 30 36.8
MNV          11 30 38.3
JAS          11 30 42.5
BKS          11 30 48.9  C
                        MICRON       PERIOD
             PZ           0.02          0.8
WDC          11 30 56.7
             USGS      11 18 28.4, 30.1S,  71.2W, H= 62 KM, M=4.6
             NEAR COAST OF CENTRAL CHILE

FRI MAR 15   22 50 17.0                  *E  50 23
MNV          22 50 18.4                  *E  50 24
PRI          22 50 18.8                  *E  50 24
JAS          22 50 23.4                  *E  50 30
MHC          22 50 26.3                  *E  50 32
BRK          22 50 30.0                  *E  50 36
WDC          22 50 38.7                  *E  50 45
             USGS      22 38 39.3, 21.7S,  69.6W, H= 57 KM, M=5.1
             NORTHERN CHILE

PRI MAR 16   08 15 55.0
MHC          08 15 55.1
FRI          08 15 59.9
JAS          08 16 00.4  C
WDC          08 16 02.4  C
MNV          08 16 08.9  C
             USGS      08 04 47.6, 22.3S, 179.8W, H=669 KM, M=4.8
             SOUTH OF FIJI ISLANDS

WDC MAR 16   15 54 18.8
JAS          15 54 31.3  D
FRI          15 54 35.9  D
MNV          15 54 39.3  D
             USGS      15 42 47.2, 21.6N, 142.7E, H=348 KM, M=4.4
             MARIANA ISLANDS REGION

WDC MAR 16   23 51 13.6
MIN          23 51                       *E  51 18
JAS          23 51 32.2
MNV          23 51 39.4
PRI          23 51                       *E  51 40
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                USGS  23 40 41.0, 43.4N, 146.5E, H= 45 KM, M=5.0
                      KURIL ISLANDS

RI MAR 17   19 04 10.4                  *E  04 20
NV          19 04 12.4                  *E  04 21
BS          19 04 16.0                  *E  04 25
HC          19 04 17.6                  *E  04 27
DC          19 04 30.5                  *I  04 40
                USGS  18 51 58.2, 30.1S,  72.0W, H= 13 KM, M=5.1
                      OFF COAST OF CENTRAL CHILE

RI MAR 18   01 21 15.8                  *E  21 30
RI          01 21 18.0                  *E  21 35
BS          01 21 24.0                  *I  21 38
HC          01 21 27.4                  *E  21 43
KS          01 21 31.6  D               PERIOD
                          MICRON          0.8
                PZ          0.04
DC          01 21 40.4                  *I  21 52
                USGS  01 10 53.6, 10.1S,  75.3W, H= 40 KM, M=5.5
                      PERU

NV MAR 18   04 28 01.3
BS          04 28 14.5
                USGS  04 19 39.7, 19.2N,  69.9W, H= 39 KM, M=4.7
                      DOMINICAN REPUBLIC REGION

NV MAR 18   14 43 09.4
RI          14 43 11.2
BS          14 43 19.1
HC          14 43 24.8
KS          14 43 29.5
                          MICRON          PERIOD
                PZ          0.04            0.8
DC          14 43 35.7
                USGS  14 34 18.3,  6.8N,  73.0W, H=165 KM, M=5.0
                      NORTHERN COLOMBIA

RI MAR 18   17 31 00.5  D           P*P*  01 00    *E  01 34
NV          17 31 01.6  D
RI          17 31 02.7  D           P*P*  01 02    *E  01 32
AD          17 31 08.2
AS          17 31 08.9  D           P*P*  01 00    *E  01 31
HC          17 31 12.4  D           P*P*  00 59    *E  01 33
KS          17 31 17.0  D  39 22      SS  43 25   SSS  46 16
                                      LR  50 30
                          MICRON          PERIOD
                PZ          0.42            1.2
MIN         17 31 23.0
WDC         17 31 26.7  D
HC          17 31 36.0  D
                USGS  17 21 23.4,  4.2S,  77.0W, H= 98 KM, M=6.2
                      NORTHERN PERU

AD MAR 19   13 53                        *E  53 36
PI          13 53 37.5
KS          13 53 38.1  C               LR  14 40
                          MICRON          PERIOD
                PZ          0.04            0.9
HC          13 53 38.1
PRI         13 53 43.5
AS          13 53 44.3  D
DC          13 53 46.5
MIN         13 53
NV          13 53 54.7  D               *E  53 48
                USGS  13 42 21.0, 15.8S, 172.0W, H= N  KM, M=5.2
                      SAMOA ISLANDS REGION

DC MAR 20   03 30 52.2  D
MIN         03 30 56.0
KS          03 31 06.0  D
                          MICRON          PERIOD
                PZ          0.03            0.8
HC          03 31 12.0
AD          03 31
AS          03 31 15.7                  *E  31 14
PRI         03 31 23.7                  *E  35 04
PRI         03 31 24.8
NV          03 31 25.0
                USGS  03 23 33.5, 50.4N, 176.0W, H= 27 KM, M=4.9
                      ANDREANOF ISLANDS, ALEUTIAN ISLANDS

DC MAR 20   07 38 11.9                  *I  38 22
MIN         07 38 17.8
AS          07 38 35.3                  *I  38 46   SCP  44 24
KS          07 38                       *E  38 36   LR   50 00
                          MICRON          PERIOD
                MAXR(Z)     3.0             20
                MAXH(N)     4.3             20
                MAXH(E)     1.43            20
PRI         07 38 43.2                  SCP  44 26
NV          07 38 43.8                  SCP  44 24
PRI         07 38 47.8
                MAG 5.2, DIST(DEG) 42
                USGS  07 30 38.8, 51.3N, 179.6W, H= 57 KM, M=5.4
                      ANDREANOF ISLANDS, ALEUTIAN ISLANDS

KS MAR 21   04 35                        *E  35 52   *E  36 22
HC          04 35 54                    *E  35 22
AS          04 35 58.7  D               *E  36 27   *E  36 52
PRI         04 35 59.0  D               *E  36 27
DC          04 35 59.5
NV          04 36 07.3  D               *E  36 35
                USGS  04 23 21.2, 20.2S, 169.5E, H=107 KM, M=5.4
                      NEW HEBRIDES ISLANDS

NV MAR 21   16 05 04.0  D
AS          16 08 09.5
                USGS  15 58 43.9,  0.2S,  91.4W, H= N  KM, M=4.9
                      GALAPAGOS ISLANDS

IN MAR 22   19 03                        *E  03 30
HC          19 03 45.0
AS          19 03 47.6  C
NV          19 03
PRI         19 03 55.0                  *E  03 54
PRI         19 03                       *E  03 58
                USGS  18 54 26.7, 54.5N, 161.6E, H= N  KM, M=5.2
                      NEAR EAST COAST OF KAMCHATKA

IN MAR 23   07 45 50
KS          07 45 59.5  D  57 00       *E  02 00   SS   03 30   SSS  07 00
                                      LQ  10 15   LR   16 30
                          MICRON          PERIOD
                PZ          0.07            1.0
HC          07 45 59.7
AS          07 46 01.3                  *E  45 52
PRI         07 46 05.3
PRI         07 46 05.5
NV          07 46 07.2
                USGS  07 32 36.5, 22.7N, 122.6E, H= 21 KM, M=6.2
                      TAIWAN REGION

DC MAR 23   19 58 05.8  C               *E  58 21
IN          19 58 10.1                  *E  58 25
KS          19 58                       *E  58 29
HC          19 58 23.0                  *E  58 38
AS          19 58 25.5  C               *E  58 41
PRI         19 58 32.2                  *E  58 48
NV          19 58 33.0  C               *E  58 48
PRI         19 58                       *E  58 42
                USGS  19 48 07.8, 46.7N, 152.5E, H= N  KM, M=5.5
                      KURIL ISLANDS

PRI MAR 24  07 06 42.9                  PCP  09 17
NV          07 06 43.3  C               PCP  09 17
PRI         07 06 45.5  C
AS          07 06 52.6  C               PCP  09 19
HC          07 06 57.0
KS          07 07 02.8  C               PCP  09 24   *E  19 00   *E  20 00
                          MICRON          PERIOD
                PZ          0.02            0.6
                          MAXR(Z)     2.5             20
                          MAXH(N)     2.9             20
                          MAXH(E)     5.0             20
MIN         07 07 10.2
WDC         07 07 14.1  C               PCP  09 28
FHC         07 07 24                    PCP  09 33
                USGS  06 59 56.5, 13.6N,  90.8W, H= 59 KM, M=4.9
                      NEAR COAST OF GUATEMALA

MNV MAR 24  11 57 59.8                  *E  58 18   *E  00 26
JAS         11 58                       *E  58 08   *E  58 26   *E  00 29
                USGS  11 51 03.9, 13.0N,  89.3W, H= 93 KM, M=4.6
                      EL SALVADOR

PRI MAR 24  14 33 02.7
MHC         14 33                       *E  33 04
FRI         14 33 07.1
JAS         14 33 08.4  C
WDC         14 33                       *E  33 12
MNV         14 33 15.6  C
                USGS  14 20 12.6, 33.6S, 179.2W, H= N  KM, M=4.8
                      SOUTH OF KERMADEC ISLANDS

FRI MAR 24  15 36 40.7
JAS         15 36 41.1
WDC         15 36 42.8  D
MIN         15 36 44.6
MNV         15 36 49.9  D
                USGS  15 25 32.4, 21.2S, 179.0W, H=652 KM, M=5.3
                      FIJI ISLANDS REGION

FRI MAR 25  02 33 24.0
MNV         02 33 25.5                  *E  33 55
PRI         02 33 25.6
JAS         02 33 31.0                  *E  34 01
MHC         02 33 33.4
WDC         02 33 45.6
                USGS  02 21 45.9, 21.7S,  68.5W, H= 80 KM, M=5.1
                      CHILE-BOLIVIA BORDER REGION

FRI MAR 25  02 38 11.3                  PCP  40 46
MNV         02 38 12.1  C               PCP  40 44
PRI         02 38 14.0                  PCP  40 51
JAS         02 38 20.9  C               PCP  40 49  SCP  44 41
MHC         02 38 25.3
BKS         02 38 31.2  C  44 20       PCP  40 52   LQ  49 20   LR  52 00
                          MICRON          PERIOD
                PZ          0.07            0.8
                MAXR(Z)     8.2             20
                MAXH(N)     8.6             20
                MAXH(E)     3.2             20
MIN         02 38                       *E  38 40
WDC         02 38 44.6  C               PCP  40 56
                MAG 5.5, DIST(DEG) 39
                USGS  02 31 22.2, 13.6N,  90.7W, H= N  KM, M=5.2
                      NEAR COAST OF GUATEMALA

FRI MAR 25  06 53 31.1                  *PP  54 16  PKKP  12 04  P*P*  20 10
PRI         06 53 32.5                  *PP  54 18  PKKP  12 06  P*P*  20 12
MNV         06 53 33.1  D           PKKP  12 04  P*P*  20 05
SAO         06 53 36.1
JAS         06 53 37.9  D           *PP  54 23  PKKP  12 02  P*P*  20 08
MHC         06 53 39.8  D           *PP  54 25
BKS         06 53 43.0  D           *PP  54 24  SKS   03 45  SP  04 48
                                    *E  22 30
                          MICRON          PERIOD
                PZ          0.71            2.0
MIN         06 53 48.3
WDC         06 53 51.2  D           *PP  54 36
                USGS  06 41 33.0, 28.0S,  66.7W, H=178 KM, M=5.9
                      CATAMARCA PROVINCE, ARGENTINA

MNV MAR 27  04 50 19.1
JAS         04 50
FRI         04 50                       *E  50 44
MIN         04 50                       *E  50 51   *E  51 12
WDC         04 51                       *E  50 55
                                        *E  51 04
                USGS  04 48 51.6, 42.1N, 122.5W H= 6  KM, M=4.4
                      EASTERN IDAHO

WDC MAR 27  05 28 28.4
MIN         05 28
MNV                                     *E  28 29
JAS         05 28 31.9  C
BKS         05 28 37.7
                                        *E  45 49   *E  53 55   *E  56 00
                                        *E  01 00   *E  01 36   *E  09 00
                          MICRON          PERIOD
                MAXR(Z)    11.1             20
                MAXH(N)    32.1             20
                MAXH(E)    39.3             20
                USGS  05 15 06.2, 40.4N,  26.1E, H=  5 KM, M=5.7
                      TURKEY

FRI MAR 27  15 58 16.0
PRI         15 58 16.7
MNV         15 58 17.0
JAS         15 58 18.7
MHC         15 58 19.3
WDC         15 58 23.4
                USGS  15 39 15.6, 59.5S,  18.2W, H= N  KM, M=5.5
                      SOUTHWESTERN ATLANTIC OCEAN

MNV MAR 28  02 32 31.5  C
JAS         02 32 54.6  C
MIN         02 32 56.3  C
FRI         02 32
WDC         02 33 00.8                  *E  32 58
BKS         02 33 13
                          34 44         *E  33 16   *E  33 44
                PZ          MICRON          PERIOD
SAO                         0.37            1.2
PRI         02 33
FHC         02 33 17.0  C               *E  33 16
            02 33 17.0
                USGS  02 31 05.7, 42.1N, 112.5W, H= 5  KM, M=6.1
                      EASTERN IDAHO

MNV MAR 28  16 16 32
JAS         16 16 54.5
MIN         16 17                       *E  16 52
WDC         16 17                 18 57 *E  17 22
                                        *E  17 07
                                        *E  17 26
                USGS  16 15 06.9, 42.0N, 112.5W, H=  7 KM, M=4.1
                      EASTERN IDAHO

MNV MAR 28  22 41 44.2  D
PRI         22 41 44.2
JAS         22 41 49.5  D
MHC         22 41 51.9
MIN         22 42
WDC         22 42 03.9  D               *E  42 02
FHC         22 42 11.1
                USGS  22 30 07.1, 22.0S,  68.3W, H=123 KM, M=4.9
                      NORTHERN CHILE

MIN MAR 29  09 55
WDC         09 55
JAS         09 55 24.5                  *E  55 22
PRI         09 55 27.0
BKS         09 55
                                        *E  55 35
                                        *E  39 00   *E  51 00   *E  53 00
                          MICRON          PERIOD
                MAXR(Z)     2.1             20
                MAXH(N)     2.1             20
                MAXH(E)     2.7             20
                USGS  09 36 21.0, 13.3N,  50.7E, H= N  KM, M=5.4
                      EASTERN GULF OF ADEN

MNV MAR 29  13 02 45.3  D
JAS         13 03 08.8
MIN         13 03                       *E  03 36   *E  05 10
FRI         13 03                       *E  03 10   *E  03 36
WDC         13 03                       *E  03 14   *E  03 39
BKS         13 03                       *E  03 20   *E  03 40
                                        *E  03 25   *E  05 52   *E  05 22
                                                                *E  05 00
                          MICRON          PERIOD
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                MAXR(Z)  2.7          10
                MAXH(N)  3.4          10
                MAXH(E)  4.8          10
          13 03                 *E   03 30    *E   05 50
          13 03                 *E   03 32    *E   04 01    *E   05 55
                USGS  13 01 19.8, 42.0N, 112.5W, H=   5 KM, M=4.7
                EASTERN IDAHO

PRI MAR 29  15 14                 *E   14 18
PRI         15 14 22.8
BKS         15 14                 *E   14 25
JAS         15 14 27.3  C
MNV         15 14 32.7
WDC         15 14 38.7  C

PRI MAR 29  20 08 05.1
MHC         20 08 05.3
FRI         20 08 09.9
JAS         20 08 10.5
WDC         20 08 11.2
MIN         20 08                 *E   08 14
MNV         20 08 19.0

WDC MAR 29  20 08 26.5  C
MIN         20 08                 *E   08 30
BKS         20 08 31.0  C         *E   08 48    *E   08 56
JAS         20 08 37.4  C
MHC         20 08                 *E   08 38
FRI         20 08 43
PRI         20 08                 *E   08 44
MNV         20 08 44.7
                USGS  19 57 00.9, 36.2N, 140.0E, H=  8A KM, M=5.3
                NEAR EAST COAST OF HONSHU, JAPAN

MNV MAR 30  06 57 54.3  D
JAS         06 58 17.0            *E   58 44    *E   00 18
MIN         06 58                 *E   58 17
FRI         06 58                 *E   58 20    *E   58 47
WDC         06 58                 *E   58 44
                USGS  06 55 28.5, 42.0N, 112.5W, H=   5 KM, M=4.3
                EASTERN IDAHO

BKS MAR 30  22 47 24.5  C
                MICRON       PERIOD
          PZ      0.03         0.8
MHC         22 47 28.5  C
PRI         22 47 29.2  C
JAS         22 47 33.5  C
WDC         22 47 33.5  C
FRI         22 47 33.6  C
MNV         22 47 42.1  C

WDC MAR 31  01 50 15.5  C
MNV         01 50 34.2
                USGS  01 37 41.0, 27.0N, 126.4E, H=125 KM, M=5.2
                EAST CHINA SEA

FHC MAR 31  05 50 42.7  C
WDC         05 50 49.4  C
MIN         05 50 56.0  C
BKS         05 51 29.0  C   53 30     *E   54 00
                MICRON       PERIOD
          PZ      0.05         0.8
JAS         05 51 30.0  C
MNV         05 51 33.7  C
MHC                               *E   51 37
PRI         05 51                 *E   51 45
SAD         05 51                 *E   51 45
PRI         05 51                 *E   51 53
                USGS  05 48 37.8, 49.4N, 125.6W, H=  N  KM, M=5.3
                VANCOUVER ISLAND REGION

JAS MAR 31  10 18 29.7
MNV         10 18 30.3
FRI         10 18 35.0
                USGS  10 05 25.9, 46.7N,  91.3E, H=  N  KM, M=5.3
                MONGOLIA

BKS MAR 31  10 54 19                  *E   54 32
MHC         10 54 19.0                *E   54 32
PRI         10 54 19.1                *E   54 31
FRI         10 54 22.8                *E   54 36
JAS         10 54 23.8                *E   54 36
WDC         10 54 27.3                *E   54 40
MIN         10 54 30.6                *E   54 41
MNV         10 54 33.0                *E   54 46
                USGS  10 42 20.4, 23.1S, 175.1W, H=  45 KM, M=5.1
                TONGA ISLANDS REGION

BKS APR 01  02 06 37.6  C
                MICRON       PERIOD
          PZ      0.05         0.8
MHC         03 06 38.1
FRI         03 06 41.6
JAS         03 06 43.0
WDC         03 06 44.8
MIN         03 06 47.7
                USGS  02 55 08.2, 24.8S, 178.5E, H=584 KM, M=4.8
                SOUTH OF FIJI ISLANDS

FHC APR 02  08 55 24.2
WDC         08 55 29.6  C
MIN         08 55 33.2
BKS         08 55 38.3  C   05 30     *E   55 58    *E   56 10  LQ   14 30
                                    LR   18 30
                MICRON       PERIOD
          PZ      0.09         0.8
MHC         08 55 42.4
SAD         08 55 44.4
JAS         08 55 45.2  C
PRI         08 55 51.2
MNV         08 55 52.3  C
                DISTANCE(DEG) 75
                USGS  08 44 00.4, 33.6N, 140.4E, H=  71 KM, M=5.6
                SOUTH OF HONSHU, JAPAN

SAD APR 02  10 43 29.0
PRI         10 43 30.2
MHC         10 43 31.0
BKS         10 43 31.5  D   53 30     *E   05 00    *E   09 00
                MICRON       PERIOD
          PZ      0.11         1.0
FRI         10 43 35.5
FHC         10 43 36.2
JAS         10 43 36.6  D
WDC         10 43 39.3  D             *E   44 05
MIN         10 43 41.0
MNV         10 43 45.8  D
                DISTANCE(DEG) 80
                USGS  10 31 32.0, 23.0S, 175.1W, H=  N  KM, M=5.6
                TONGA ISLANDS REGION

WDC APR 02  14 50 47.3  C                 *E   50 53
MIN         14 50                         *E   51 00
BKS         14 51                         *E   51 08
MHC         14 51
JAS         14 51 10.7                    *E   51 18
MNV         14 51
                USGS  14 43 21.9, 51.6N, 178.3W, H=  62 KM, M=4.9
                ANDREANOF ISLANDS, ALEUTIAN ISLANDS

FRI APR 03  00 44 17.6
JAS         00 44 17.8
WDC         00 44 20.5
MNV         00 44 26.0

BKS APR 03  03 26 25.0  C                 *PP  26 59
                MICRON       PERIOD
          PZ      0.06         1.3
MHC         03 26 26.8                    *PP  26 58
PRI         03 26 28.7                    *PP  27 02
WDC         03 26 25.9                    *PP  26 59

JAS         03 26 32.0                    *PP  27 02
FRI         03 26 33.0                    *PP  27 04
MIN         03 26                         *PP  27 03
                USGS  03 14 11.5, 12.2S, 166.6E, H=115 KM, M=5.6
                SANTA CRUZ ISLANDS

WDC APR 03  14 45 10.9
MIN         14 45 15.0
JAS         14 45 28.5
MNV         14 45 35.5
                USGS  14 34 14.3, 40.8N, 141.9E, H=  75 KM, M=5.0
                NEAR EAST COAST OF HONSHU, JAPAN

MIN APR 04  05 29                     *E   29 52
MNV         05 29                     *E   29 53
JAS         05 29 43.5                *E   30 00
FRI         05 29 46.0                *E   30 02
PRI         05 29 52                  *E   30 08
                USGS  05 16 16.2, 38.1N,  22.0E, H=  53 KM, M=5.4
                GREECE

PRI APR 04  11 24 46
BKS         11 24 47.0  C
                MICRON       PERIOD
          PZ      0.06         0.7
MHC         11 24 47.0  C
FRI         11 24 50.6  C
JAS         11 24 51.7  C
WDC         11 24 55.0  C
MIN         11 24 56
MNV         11 24 59.8  C
                USGS  11 12 08.0, 31.1S, 178.4W, H=  45 KM, M=5.5
                KERMADEC ISLANDS REGION

FRI APR 05  08 53 49.3
JAS         08 53 50.0  C
WDC         08 53 51.0
MNV         08 53 58.5
                USGS  08 42 23.5, 23.4S, 180.0E, H=553 KM, M=4.6
                SOUTH OF FIJI ISLANDS

MNV APR 05  09 43 42.7
FRI         09 43 49.0
JAS         09 43 54.6
PRI         09 43 55.8
MHC         09 43 59.8
SAD         09 44                     *E   44 00
MIN         09 44 05.0                SS   58 00  LR   02 00
BKS         09 44 06
                MICRON       PERIOD
          PZ      0.02         0.8
          MAXR(Z) 7.9          20
          MAXH(N) 2.1          20
          MAXH(E) 7.1          20
WDC         09 44 09.5
FHC         09 44 19.5
                USGS  09 34 36.6, 10.0N,  69.5W, H=  N  KM, M=5.6
                VENEZUELA, 3 KILLED

WDC APR 05  17 01 56.5
MIN         17 02 01.6
BKS         17 02       10 00         *E   02 36  LQ   10 16  LR   10 18
MHC         17 02 16.2                *E   02 18
PRI         17 02
JAS         17 02 18.5
FRI         17 02 25.8
MNV         17 02 26.0
                USGS  16 52 47.2, 52.2N, 160.2E, H=  N  KM, M=5.5
                OFF EAST COAST OF KAMCHATKA

FHC APR 05  17 59                     *E   59 01
WDC         17 59 10.0
BKS         17 59 25    07 09        LQ   13 00  LR   16 00
                MICRON       PERIOD
          MAXR(Z) 2.1          20
          MAXH(N) 1.4          20
          MAXH(E) 1.8          20
JAS         17 59 31.0                *E   59 40
PRI         17 59                     *E   59 45
FRI         17 59
                MAG 5.7, DIST(DEG) 53
                USGS  17 49 58.9, 52.3N, 160.0E, H=  N  KM, M=5.5
                OFF EAST COAST OF KAMCHATKA

MNV APR 05  19 45 34.6
FRI         19 45 46.5  C
JAS         19 45 55.4  C
PRI         19 45 59.7
SAD         19 46 06.3
MHC         19 46 08.3                *E   46 24
BKS         19 46 15.3
MIN         19 46 21.0                *E   46 30
WDC         19 46                     *E   45 47
FHC         19 46
                MAG 4.5
                USGS  19 45 00.0, 37.1N, 116.1W, H=   0 KM, M=4.9
                SOUTHERN NEVADA

FHC APR 05  20 36 59
WDC         20 37 04.5
MIN         20 37 07.8
BKS         20 37 11.5
JAS         20 37 17.7
FRI         20 37 22.6
PRI         20 37 22.6
MNV         20 37 25.2
                USGS  20 25 18.9, 25.8N, 140.8E, H=155 KM, M=5.0
                VOLCANO ISLANDS REGION

MNV APR 05  20 47 01.0  D             *E   45 33
FRI         20 47 03.6  D             *E   45 34
PRI         20 47 07.7
JAS         20 47 11.4  D             *E   45 36
SAD         20 47 13.5
MHC         20 47 17.2
BKS         20 47 21.8      55 11    *E   47 35  PCP   49 18  LQ   12 00
                                    LR   16 00
                MICRON       PERIOD
          MAXR(Z) 3.6          20
          MAXH(N) 4.5          20
          MAXH(E) 10.7         20
MIN         20 47 24.5  D             *E   48 44
WDC         20 47 28.2  D
FHC         20 47 39.3  D
                MAG 5.1, DIST(DEG) 50
                USGS  20 38 30.1, 10.1N,  75.7W, H=  52 KM, M=5.5
                NEAR NORTH COAST OF COLOMBIA

SAD APR 06  00 23 33.9
PRI         00 23 35.3
BKS         00 23 35.5
                MICRON       PERIOD
          PZ      0.06         0.9
MHC         00 23 35.6
FRI         00 23 40.1  D
JAS         00 23 40.7  D
WDC         00 23 42.3  D
MIN         00 23 44.1
MNV         00 23 49.1  D
                USGS  00 12 02.8, 23.3S, 179.0E, H=464 KM, M=6.9
                SOUTH OF FIJI ISLANDS

FHC APR 06  10 04 22.0
WDC         10 04 27.2                *E   05 19
MIN         10 04 33                  SS   16 12  LQ   15 30  LR   21 00
BKS         10 04 42    12 20
                MICRON       PERIOD
          PZ      0.04         1.0
          MAXR(Z) 3.9          20
          MAXH(N) 2.5          20
          MAXH(E) 4.3          20
MHC         10 04 47.9
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JAS            10 04 50.4                     *E  05 10   *E  05 36
FRI            10 04 57.5
MNV            10 04 57.7
PRI            10 05                          *E  05 04
                     MAG 5.9, DIST(DEG) 54
                     USGS  09 55 18.9, 52.2N, 160.2E, H= N  KM, M=5.6
                           OFF EAST COAST OF KAMCHATKA

FHC APR   06   10 44 01
WDC            10 44 07.0
MIN            10 44 12.0
BKS            10 44 24          52 00  SCS   54 00  LQ   57 30  LR   00 00
MHC            10 44 26.6
JAS            10 44 29.0
FRI            10 44 36.0
MNV            10 44 36.0
PRI            10 44                          *E  44 40
                     USGS  10 34 56.7, 52.2N, 160.0E, H= N  KM, M=5.7
                           OFF EAST COAST OF KAMCHATKA

JAS APR   06   13 45 30.0
MNV            13 45 37.0
PRI            13 45 37
                     USGS  13 35 58.5, 52.3N, 160.1E, H= N  KM, M=4.9
                           OFF EAST COAST OF KAMCHATKA

WDC APR   06   15 26 11.5
MIN            15 26 16.8                     *E  25 42
JAS            15 26 34.9  C                  *E  27 00
MNV            15 26 42.9
FRI            15 26 42.9                     *E  27 02
PRI            15 26 43
                     USGS  15 18 35.6, 52.0N, 178.5E, H=113 KM, M=4.7
                           RAT ISLANDS, ALEUTIAN ISLANDS

MNV APR   07   01 49 05.9
JAS            01 49 13.9
                     USGS  01 39 50.5,  2.0S,  80.3W, H= 62 KM, M=4.9
                           NEAR COAST OF ECUADOR

MIN            01 50 53.0                     *E  51 03
BKS            01 51 25.0                     LR  55 00
MNV            01 51 31.1
JAS            01 51 31.2                     *I  51 40
MHC            01 51 32.4
PRI            01 51 53.3
                     USGS  01 47 49.3, 51.8N, 130.1W, H= N  KM, M=4.2
                           QUEEN CHARLOTTE ISLANDS REGION

WDC APR   07   08 20 02.2
MIN            08 20 03.4
JAS            08 20 07.0
FRI            08 20 10.2
MNV            08 20 11.1
                     USGS  08 00 59.8,  1.6S,  99.7E, H= 19 KM, M=5.4
                           SOUTHERN SUMATRA

JAS APR   08   03 39 10.0
                     USGS  03 28 22.2, 42.5N,  29.4W, H= N  KM, M=4.5
                           AZORES ISLANDS REGION

FHC APR   08   06 38 19.7
WDC            06 38 25.5  C                  *E  38 40
MIN            06 38 29.3
BKS            06 38 36.0       47 57         *E  39 19   *E  40 06 PPP   43 14
                                           LQ     57 00   LR  00 00
                             MICRON        PERIOD
                     PZ        0.03           0.7
                     MAXR(Z)   1.3           20
                     MAXH(N)   0.7           20
                     MAXH(E)   1.4           20
JAS            06 38 42.4  C                  *I  38 56
MHC            06 38 42.8
FRI            06 38 49.1
PRI            06 38 49.2
                     MAG 5.7, DIST(DEG) 74
                     USGS  06 27 13.3, 37.7N, 141.7E, H= 46 KM, M=5.8
                           NEAR EAST COAST OF HONSHU, JAPAN

MNV APR   08   08 36                          *E  36 35
JAS            08 36 44.6
                     USGS  08 25 56.1, 42.3N,  29.6W, H= N  KM, M=4.5
                           AZORES ISLANDS REGION

MNV APR   08   11 47 29.0                     *I  47 33
MIN            11 47 36.5                     *I  47 45
JAS            11 47 40.4                     *I  47 45
FRI            11 47 41.2                     *E  47 45
MHC            11 47 48.9                     *E  47 53
PRI            11 47 50.3
BKS            11 47 53.5
                     USGS  11 36 53.8, 42.7N,  29.6W, H= N  KM, M=5.2
                           AZORES ISLANDS REGION

MNV APR   08   16 27 04.8
JAS            16 27 20.6
                     USGS  16 16 33.9, 42.7N,  29.3W, H= N  KM, M=4.6
                           AZORES ISLANDS REGION

FHC APR   08   20 38 40.0
WDC            20 38 49.0  D                  *E  41 36
MIN            20 38 54.7
BKS            20 39 04.3  D                  LQ  47 00    LR  49 00
                            MICRON         PERIOD
                     PZ      0.03            0.8
MHC            20 39 10.2
JAS            20 39 14.0  D
PRI            20 39 22.5
FRI            20 39 22.5  D                  *E  41 48
MNV            20 39 23.4  D                  *E  41 49
                     USGS  20 32 24.9, 51.9N, 166.2W, H= N  KM, M=5.4
                           ALEUTIAN ISLANDS REGION

JAS APR   08   22 00 24.7                     *E  00 42
MNV            22 00 31.8                     *E  00 48
                     USGS  21 50 44.2, 51.6N, 159.5E, H= N  KM, M=4.9
                           OFF EAST COAST OF KAMCHATKA

FHC APR   09   06 38 57.0                     *E   39 35   *E    42 27
WDC            06 39 01.7  D                  *PP  39 40   PP    42 30   *E    49 25
BKS            06 39 03.3       49 23         *PP  39 37   PP    42 33  *PPP  43 08
                                              *E   45 24   *E    48 20   *SS   50 37
                                              SS   55 40   *E    56 53   LR    06 00
                            MICRON         PERIOD
                     PZ      0.17            1.0
MIN            06 39 04.8       49 30         *PP  39 48   PP    42 39  P'P'   04 40
MHC            06 39 05.0                     *PP  39 43   PP    42 36
SAO            06 39                          *E   39 06
PRI            06 39 07.3  D                  *PP  39 46   PP    42 40
JAS            06 39 08.2  D                  PP   42 40   *E    42 51   *E    49 31
                                            P'P'   04 53  S<PD'  08 17
FRI            06 39 09.5                     *E   39 48   *E    42 47
MNV            06 39 17.0  D    49 42         *PP  39 54
                     DISTANCE(DEG) 89
                     USGS  06 26 22.2,  4.0S, 152.7E, H=133 KM, M=6.3
                           NEW BRITAIN REGION

WDC APR   09   07 48 29.0
JAS            07 48 29.5
MNV            07 48 38.8

JAS APR   10   13 17 17.6
WDC            13 17 19.0
                     USGS  13 04 57.6, 11.0S, 166.2E, H=109 KM, M=4.7
                           SANTA CRUZ ISLANDS

PRI APR   10   17 02 39.5                     *E  02 42
JAS            17 02 44.5                     *E  02 47
WDC            17 02 44.5
FRI            17 02 44.5                     *E  02 47
                     USGS  16 50 12.2, 22.4S, 173.1E, H=113 KM, M=5.0
                           LOYALTY ISLANDS REGION
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FRI APR   10   18 23 25.5
JAS            18 23 26.3
WDC            18 23 28.5
MIN            18 23 30
                     USGS  18 12 01.6, 15.6S, 171.9W, H= 15 KM, M=5.1
                           SAMOA ISLANDS

                                           PP   31 15   *E  44 28   SS    48 03
BKS APR   11   00 29 27                    *E   48 37   *E  51 08   SSS   52 45
                                           LQ   01 00   LR  06 00
                             MICRON        PERIOD
                     MAXR(Z)   4.6           20
                     MAXH(N)   3.2           20
                     MAXH(E)   3.6           20
JAS            00 29 32
WDC            00 29 32.5
MNV            00 29 36.0
                     MAG 6.3, DIST(DEG) 124
                     USGS  00 10 35.1, 50.8S, 139.1E, H= N  KM, M=5.8
                           SOUTH OF AUSTRALIA

MNV APR   11   00 51 10.0
PRI            00 51 12
JAS            00 51 20
MIN            00 51 38
WDC            00 51 38
                     USGS  00 42 42.3,  4.7N,  82.7W, H= N  KM, M=4.9
                           SOUTH OF PANAMA

FHC APR   11   10 53 19.7
WDC            10 53 27.8  D
MIN            10 53 33.6  D
BKS            10 53 45.1       59 00      LQ   01 00    LR   02 00
                             MICRON        PERIOD
                     MAXR(Z)   5.0           20
                     MAXH(N)   2.1           20
                     MAXH(E)   4.6           20
MHC            10 53 50.8  D               *E   55 11   *E   59 17   *E   00 15
JAS            10 53 54.0  D               *E   59 32
MNV            10 54 02.7  D
FRI            10 54 02.8  D
PRI            10 54 04
                     MAG 5.7, DIST(DEG) 32
                     USGS  10 47 15.3, 54.1N, 163.2W, H= 20 KM, M=5.5
                           UNIMAK ISLAND REGION

SAO APR   11   11 53 40.0  C
BKS            11 53 40.5  C               *E   55 41
MHC            11 53 41.2  C               *E   55 41
PRI            11 53 41.3  C
FHC            11 53 44.2  C               *E   55 46
FRI            11 53 46.5  C               *E   55 47
JAS            11 53 46.7  C               *E   55 48
WDC            11 53 47.7  C
MIN            11 53 49.5  C               *E   55 58
MNV            11 53 56.5  C
                     USGS  11 42 46.1, 17.7S, 178.8W, H=571 KM, M=5.6
                           FIJI ISLANDS REGION

FRI APR   11   19 42 46.7
PRI            19 42 47.5
MNV            19 42 51.1  C
JAS            19 42 57.3  C
MHC            19 43 00.0
WDC            19 43                       *E   43 22
                     USGS  19 38 01.5, 19.5N, 102.7W, H=210 KM, M=4.6
                           MICHOACAN, MEXICO

WDC APR   11   22 27 11.0                  *E   27 24
JAS            22 27 27.8                  *E   27 41
                     USGS  22 15 48.1, 36.1N, 139.9E, H= 65 KM, M=5.1
                           HONSHU, JAPAN

MNV APR   12   13 28 32.5                  *E   28 39
JAS            13 28 44.2                  *E   28 50
                     USGS  13 18 28.9, 52.0N,  30.2W, H= N  KM, M=4.7
                           NORTH ATLANTIC RIDGE

SAO APR   12   14 36 57.0
BKS            14 36 58
MHC            14 36 58.6
PRI            14 36 58.7  C
FRI            14 37 04.0  C
JAS            14 37 04.3  C               *PP  39 04
WDC            14 37 05.1  C               *PP  39 05
MIN            14 37 07.2
MNV            14 37 13.9  C               *PP  39 14
                     USGS  14 26 02.8, 17.7S, 178.8W, H=562 KM, M=5.1
                           FIJI ISLANDS REGION

FRI APR   12   15 43 59.9                  *PP  44 26
MNV            15 44 01.3  D               *PP  44 28
PRI            15 44 01.5  D
JAS            15 44 07.5  D               *PP  44 34
SAO            15 44 07.6
MHC            15 44 10.2  D
BKS            15 44 14.4  D               *E   54 00
                            MICRON         PERIOD
                     PZ      0.28            1.2
MIN            15 44 20.2
WDC            15 44 23.6  D               *PP  44 50
FHC            15 44 31.7  D               *PP  44 59
                     USGS  15 33 08.6, 14.8S,  72.7W, H= 91 KM, M=5.9
                           PERU

MHC APR   12   21 01 37.6
FRI            21 01 42.2
JAS            21 01 43.2  C
WDC            21 01 45.7  C
MIN            21 01 47.3
MNV            21 01 51.7  C
                     USGS  20 49 36.0, 25.7S, 177.7W, H=177 KM, M=4.7
                           SOUTH OF FIJI ISLANDS

WDC APR   13   01 48 11.5  D               *E   52 27
JAS            01 48 22.2  D
BKS            01 48            58 38
FRI            01 48 26.2                  *E   52 37
MNV            01 48 29.2  D
                     USGS  01 34 36.2,  5.7N, 125.4E, H=225 KM, M=5.7
                           MINDANAO, PHILIPPINE ISLANDS

MNV APR   13   02 02 20.8
FRI            02 02 21.8
PRI            02 02 25.0  D               *E   03 35
JAS            02 02 29.7  D               *E   03 38
MHC            02 02 34.9
MIN            02 02 43.4  D               *E   03 41
WDC            02 02 46.5  D               *E   03 48
                     USGS  01 53 30.7,  4.8N,  75.8W, H=144 KM, M=5.2
                           COLOMBIA

PRI APR   13   19 49 40
FRI            19 49 45
SAO            19 49            51 40
MNV            19 49 59                    *E   49 56
JAS            19 50 00         52 08
BKS            19 49            52 10
                                52 20
                     USGS  19 49 05.4, 30.8N, 116.1W, H= N  KM, M=4.5
                           BAJA CALIFORNIA

MNV APR   14   00 16 02.8  C               *E   17 10
FRI            00 16 05.5
PRI            00 16 09.1
JAS            00 16 12.8  C               *E   17 21
MHC            00 16 18.7
MIN            00 16 27.6
WDC            00 16 29.6  C               *E   17 30
FHC            00 16 39.8  C
                     USGS  00 07 12.0,  6.7N,  73.1W, H=162 KM, M=5.7
                           NORTHERN COLOMBIA
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PRI APR 14   07 19 33.0  C
MNV          07 19 39.2  C
JAS          07 19 43.6  C
WDC          07 20 08.0  C
FHC          07 20 18.4
             USGS  07 11 59.4,  2.4N,  97.2W, H= N  KM, M=4.9
                   WEST GALAPAGOS ISLANDS

PRI APR 14   20 52 50.0
MNV          20 52 50.7
PRI          20 52 51.5
JAS          20 52 53.4
MHC          20 52 55.2
BKS          20 52 57.4
WDC          20 53 00.6
             USGS  20 33 13.8,  51.8S,  16.2E, H= N  KM, M=5.2
                   SOUTHWEST OF AFRICA

MNV APR 15   00 27 35.5
JAS          00 27 40.0
WDC          00 28 03.8
             USGS  00 19 54.0,  2.2N,  97.3W, H= N  KM, M=5.2
                   WEST OF GALAPAGOS ISLANDS

MNV APR 15   09 57 36.5  C          *I  57 58
PRI          09 57 41.4
JAS          09 57 47.6  C          *I  58 10
PRI          09 57 47.6
SAO          09 57       *E  57 52
FHC          09 57 54.2
MIN          09 57 56.8
BKS          09 57 57.6
WDC          09 57 59.0
FHC          09 58 10.5             *I  58 22
             USGS  09 47 43.6,  9.3N,  61.5W, H= 47 KM, M=5.4
                   NEAR COAST OF VENEZUELA

WDC APR 16   01 37 14.6  C          P*P*  07 10   *E  20 00
MIN          01 37 16.0  C          P*P*  07 11
FHC          01 37 17.6  C            *E  39 24
MNV          01 37 21.0  C            *E  39 30
JAS          01 37 28.9  C            *E  39 38   P*P*  07 06   *E  20 00
BKS          01 37 33.3  C    45 55   PPP   41 26   SS    49 52   *E  51 42
                                      LQ    52 30     *E  56 10   *E  00 05
                                      *E    05 25
                      MICRON          PERIOD
                PZ      0.18            1.1
                MAXR(Z) 38.6            20
                MAXH(N) 39.6            20
                MAXH(E) 35.7            20
PRI          01 37 34.0  C            *E  39 42   P*P*  07 05   *E  20 00
FHC          01 37 36.0  C
SAO          01 37 38.7
PRI          01 37 42.1  C            *E  20 00
             USGS  01 27 18.7,  71.5N,  10.4W, H= 13 KM, M=6.1
                   JAN MAYEN ISLAND REGION

MNV APR 16   04 53 54.4  C          PCP   55 59
PRI          04 53 54.8  C          PCP   56 01
PRI          04 53 57.7  C
JAS          04 54 03.7  C          PCP   56 03   SCP   59 56
SAO          04 54 03.8
MHC          04 54 08.8  C
BKS          04 54 14.2  C          *PP   54 36   PCP   56 08   LQ  06 00
                      MICRON          PERIOD
                PZ      0.22            1.0
                MAXR(Z) 1.9             24
                MAXH(N) 2.8             22
                MAXH(E) 3.3             22
MIN          04 54 19.6  C
WDC          04 54 23.5  C          PCP   56 11
FHC          04 54 34.7  C          PCP   56 16
             MAG 5.2, DIST(DEG) 41
             USGS  04 46 21.4,  10.5N,  85.8W, H= 69 KM, M=5.4
                   COSTA RICA

PRI APR 16   14 19 56.7
MHC          14 19 57.5
BKS          14 20 00.0
FRI          14 20 02.3             *E  20 14
JAS          14 20 03.3  D          *E  20 15
WDC          14 20 06.0  D          *E  20 18
MIN          14 20 07.7
MNV          14 20 12.5  D          *E  20 24
             USGS  14 07 59.5,  22.8S,  175.3W, H= 33 KM, M=5.3
                   TONGA ISLANDS REGION

PRI APR 16   15 51 29.0
MHC          15 51 29.2
FRI          15 51 34.5
JAS          15 51 35.2
WDC          15 51 38.0
MIN          15 51 40.3
MNV          15 51 45.2
             USGS  15 39 43.3,  20.9S,  174.0W, H= N  KM, M=4.9
                   TONGA ISLANDS

PRI APR 16   19 35 38.4
JAS          19 35 44.0
WDC          19 35 58.2
             USGS  19 23 14.9,  33.5S,  73.2W, H= 18 KM, M=5.2
                   OFF COAST OF CENTRAL CHILE

WDC APR 16   21 43 08.0
MIN          21 43 12.4
BKS          21 43 20.5       51 26   SCS  53 10   LQ  58 06   LR  00 24
                      MICRON          PERIOD
                PZ      0.05            1.4
                MAXR(Z) 2.1             20
                MAXH(N) 1.0             16
                MAXH(E) 2.0             20
MHC          21 43 25.6
JAS          21 43 28.0
PRI          21 43 34.4
FRI          21 43 34.7
MNV          21 43 35.5
             MAG 5.1, DIST(DEG) 60
             USGS  21 33 25.1,  48.4N,  154.9E, H= 32 KM, M=5.8
                   KURIL ISLANDS

BKS APR 17   01 27 47.5
PRI          01 27 47.6
MHC          01 27 49.4
JAS          01 27 54.4
WDC          01 27 57.6
             USGS  01 15 50.6,  22.8S,  175.2W, H= N  KM, M=5.0
                   TONGA ISLANDS REGION

JAS APR 17   04 17 25.0
WDC          04 17 26.9
MNV          04 17 35.0
             USGS  04 05 59.4,  15.0S,  173.6W, H= N  KM, M=4.9
                   TONGA ISLANDS

FRI APR 17   09 18 59.1  D
PRI          09 19 02.4  D    19 24     *I  19 04
SAO          09 19 13.7        19 45
JAS          09 19 16.0  C     19 47
MNV          09 19 17.3                  *I  19 22
MHC          09 19 19.0        19 55
BKS          09 19 28.8        20 09
MIN          09 19 58.5                  *E  20 00
WDC          09 20
             MAG 4.1, NEAR LAKE ISABELLA
             USGS  09 18 33.4,  35.8N,  118.6W, H= 8  KM, M=3.6
                   CENTRAL CALIFORNIA

FHC APR 17   18 52 26
WDC          18 52 31.4
JAS          18 52 48.0
FRI          18 52 53.5
             USGS  18 41 07.6,  36.1N,  139.8E, H= 65 KM, M=5.1
                   HONSHU, JAPAN

MNV APR 18   12 44 37.4  D
JAS          12 44 43.5
BKS          12 44
WDC          12 45 01                 *E  53 34
             USGS  12 34 09.8,  12.5S,  76.0W, H= N  KM, M=5.3
                   OFF COAST OF PERU

MNV APR 19   12 33 15.6
JAS          12 33 27.8
MIN          12 33 32
FRI          12 33                    *E  33 36
             USGS  12 22 32.6,  16.5N,  46.6W, H= N  KM, M=5.1
                   NORTH ATLANTIC RIDGE

WDC APR 19   18 28 26.9
MNV          18 28 31.9
JAS          18 28 32.7
FRI          18 28 34.2
             USGS  18 09 27.9,  14.5N,  56.3E, H= N  KM, M=5.2
                   ARABIAN SEA

FHC APR 19   19 23 52.4
WDC          19 24 00.7  D
MIN          19 24                    *E  24 06
JAS          19 24 26.9  D
MNV          19 24 35.5  D
FRI          19 24 36
             USGS  19 17 52.5,  54.2N,  163.2W, H= 42 KM, M=4.7
                   UNIMAK ISLAND REGION

MNV APR 19   20 34 47.5
JAS          20 34 48.1
             USGS  20 15 43.5,  14.4N,  58.4E, H= N  KM, M=5.4
                   ARABIAN SEA

PRI APR 20   11 52 20.2  D
FRI          11 52 22.0
MHC          11 52 28.3
MNV          11 52 28.9  D
JAS          11 52 29.1  D                *E  52 42   *E  52 58
BKS          11 52 31.8  D    02 25       SS  07 36   LQ  13 21   LR  16 48
                      MICRON          PERIOD
                PZ      0.15            0.8
                MAXR(Z) 20.4            20
                MAXH(N) 26.4            20
                MAXH(E)  6.9            20
MIN          11 52                    *E  52 43
WDC          11 52 44.9  D
FHC          11 52 50.2  D
             MAG 6.5, DIST(DEG) 79
             USGS  11 40 39.9,  36.4S,  98.8W, H= N  KM, M=6.0
                   SOUTHERN PACIFIC OCEAN

FHC APR 20   17 47 56.8  C
WDC          17 48 02.0
MIN          17 48                    *E  48 05
BKS          17 48 10.5  C            SP  58 32   *E  03 05   LQ  09 58
                                      LR  13 45
MHC          17 48                    *E  48 15
JAS          17 48 16.8               PP  51 26
FRI          17 48 21.7
MNV          17 48 23.0  C
PRI          17 48                    *E  48 24
             USGS  17 35 50.4,  33.2N,  131.3E, H=  7 KM, M=5.7
                   KYUSHU, JAPAN

WDC APR 20   18 57                    *E  57 52
MIN          18 58                    *E  58 00
JAS          18 58 15.3
MNV          18 58 22.5
PRI          18 58                    *E  58 28
             USGS  18 48 37.9,  51.8N,  159.9E, H= N  KM, M=5.0
                   OFF EAST COAST OF KAMCHATKA

PRI APR 20   22 07 12.7
MHC          22 07 13.7
FRI          22 07 17.7
FHC          22 07                    *E  07 18
JAS          22 07 18.5  D            P*P*  32 55
WDC          22 07 21.2
MNV          22 07 26.6  D
             USGS  21 55 20.2,  27.8S,  179.0W, H=353 KM, M=4.9
                   KERMADEC ISLANDS REGION

WDC APR 21   03 56 34.0
JAS          03 56 50.5
MNV          03 56 57.8
             USGS  03 45 14.9,  36.5N,  140.6E, H= 58 KM, M=5.1
                   NEAR EAST COAST OF HONSHU, JAPAN

MNV APR 21   06 25                    *E  25 09
MIN          06 25                    *E  25 10
JAS          06 25 16.5  D
FRI          06 25                    *E  25 17
MHC          06 25 23.2
PRI          06 25                    *E  25 25
             USGS  06 14 32.2,  45.3N,  28.0W, H= N  KM, M=5.0
                   NORTH ATLANTIC RIDGE

MNV APR 21   19 25                    *E  25 32
JAS          19 25 41.2
             USGS  19 14 56.3,  45.3N,  28.0W, H= N  KM, M=4.8
                   NORTH ATLANTIC RIDGE

JAS APR 21   23 46 59.5
WDC          23 47 02.8
MNV          23 47 07.1
             USGS  23 34 19.8,  30.3S,  177.9W, H= 45 KM, M=5.0
                   KERMADEC ISLANDS

MNV APR 22   00 20 14.3  D            *E  21 44
FRI          00 20 17.0               *E  21 50
JAS          00 20 24.8               *E  21 58
MIN          00 20 38.2
WDC          00 20 40.3
FHC          00 20 52.5
             USGS  00 11 41.9,  10.2N,  75.7W, H= 34 KM, M=5.1
                   NEAR NORTH COAST OF COLOMBIA

MNV APR 22   11 24 28.8
JAS          11 24 40.7  D
             USGS  11 13 50.9,  42.1N,  29.2W, H= N  KM, M=4.6
                   AZORES ISLANDS REGION

WDC APR 22   20 05 22.0
JAS          20 05 40.0
MNV          20 05 47
             USGS  19 54 33.5,  41.6N,  144.1E, H= 45 KM, M=4.9
                   HOKKAIDO, JAPAN REGION

FHC APR 23   00 28 29.7
WDC          00 28 34.5  C
MIN          00 28 38.0
MHC          00 28                    *E  28 50
JAS          00 28 51.6  C
MNV          00 28 57.3
             USGS  00 17 58.0,  44.0N,  131.9E, H=496 KM, M=4.7
                   EAST RUSSIA-NORTHEAST CHINA BORDER REGION

WDC APR 23   08 36 35.5
MNV          08 36 41.2
JAS          08 36 41.8
FRI          08 36 43.7
             USGS  08 17 36.2,  14.3N,  56.5E, H= N  KM, M=5.2
                   ARABIAN SEA

FRI APR 23   11 20 36.6  C
PRI          11 20 37.8  C
MNV          11 20 38.6  C
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                                                                  *E  30 30

JAS                 11 20 46.7  C
SAO                 11 20 49.0
MHC                 11 20 50.3  C                                 LQ  28 18    LR  31 48
BKS                 11 20 57.2  C     26 00                       PERIOD
                                  MICRON
                                    6.67                          11
                          PZ      MAXR(Z) 16                      20
                                  MAXH(N) 34                      20
                                  MAXH(E) 34                      20
MIN                 11 21 07.5  C
WDC                 11 21 11.2  C
FHC                 11 21 22.0  C
                          MAG 5.0, DIST(DEG) 32
                          USGS  11 14 49.0, 16.4N,  98.9W, H= 11 KM, M=6.0
                                NEAR COAST OF GUERRERO, MEXICO


PRI APR 23          14 52 52.3  C
FHC                 14 52 53.5  C
PRI                 14 52 58.5                                    *E  53 11
JAS                 14 52 59.3  C                                 *E  53 14
WDC                 14 53 02.1  C
MIN                 14 53 03.5                                    *E  53 21
MNV                 14 53 09.0  C
                          USGS  14 41 08.5, 20.6S, 173.9W, H= 40 KM, M=5.1
                                TONGA ISLANDS


MNV APR 24          14 10 36.4  C
PRI                 14 10 48.2  C
JAS                 14 10 56.7  C
PRI                 14 11 01.7
FHC                 14 11 10
SAO                 14 11 10
BKS                 14 11                                         *E  11 28
MIN                 14 11                                         *E  11 23
WDC                 14 11                                         *E  11 32
                          MAG 4.4
                          USGS  14 10 00.0, 37.1N, 116.1W, H= 0  KM, M=4.6
                                NEVADA TEST SITE


MNV APR 25          09 45 44.0
PRI                 09 45 45
JAS                 09 45 52
                          USGS  09 38 05.3,  5.9S,  81.1W, H= 22 KM, M=5.1
                                NEAR COAST OF NORTHERN PERU


JAS APR 25          14 32 52.9
MNV                 14 33 05
                          USGS  14 23 19.9, 51.8N, 160.0E, H= N  KM, M=5.0
                                OFF EAST COAST OF KAMCHATKA


WDC APR 25          17 48 40.7  D
MHC                 17 48 54.9
JAS                 17 48 57.8  D
PRI                 17 49                                         *E  49 03
FRI                 17 49 03.4
MNV                 17 49 04.7  D
                          USGS  17 37 33.0, 37.9N, 141.2E, H= 94 KM, M=5.1
                                NEAR EAST COAST OF HONSHU, JAPAN


SAO APR 25          21 23 16.1
BKS                 21 23 17.3
                                  MICRON      PERIOD
                          PZ        0.05        0.8
PRI                 21 23 17.6
MHC                 21 23 17.8  D
FHC                 21 23 21.5
JAS                 21 23 23.3  D
WDC                 21 23 24.9  D
MIN                 21 23 26.8  D
MNV                 21 23 32.2  D
                          USGS  21 12 13.3, 20.8S, 178.8W, H=605 KM, M=5.0
                                FIJI ISLANDS REGION


WDC APR 26          03 25 39.2  C                                 *E  26 04
MIN                 03 25 43.1
BKS                 03 25 49.1
                                  MICRON      PERIOD
                          PZ        0.06        0.8
MHC                 03 25 54.0  C
JAS                 03 25 56.6  C                                 *E  26 22
FRI                 03 26 01.7
MNV                 03 26 03.5  C
PRI                 03 26 03.5  C
                          USGS  03 14 37.8, 39.6N, 141.1E, H=100 KM, M=5.3
                                HONSHU, JAPAN


FRI APR 26          04 57 53.6
MNV                 04 57 55.5  D
PRI                 04 57 55.3  D
JAS                 04 58 00.6  D
MHC                 04 58 02.7  D                                 *E  38 32
BKS                 04 58 06.3
                                  MICRON      PERIOD
                          PZ        0.04        0.9
MIN                 04 58 11.7
WDC                 04 58 14.7  D
                          USGS  04 46 03.4, 24.7S,  68.1W, H= 95 KM, M=5.3
                                CHILE-ARGENTINA BORDER REGION


FHC APR 27          05 49 49.1  C
WDC                 05 49 50.1  C
MIN                 05 49 52.2  C
BKS                 05 50 03.6
                                  MICRON      PERIOD
                          PZ        0.03        0.8
MNV                 05 50 04.5  C
JAS                 05 50 04.6  C
MHC                 05 50 06.6
FRI                 05 50 09.5
PRI                 05 50                                         *E  50 14
                          USGS  05 36 57.3, 50.0N,  79.0E, H=  0 KM, M=5.6
                                EASTERN KAZAKH, SSR


FHC APR 27          07 18                                         *E  18 39
WDC                 07 18 43.0  C                                 *E  19 00
MIN                 07 18 46.5                                    *E  19 09
BKS                 07 18 52.2
                                  MICRON      PERIOD
                          PZ        0.04        0.9
MHC                 07 18 56.0
JAS                 07 18 58.9  C                                 *E  19 14
FRI                 07 19 02.8                                    *E  19 18
MNV                 07 19 04.2
PRI                 07 19 06.0  C                                 *E  19 22
                          USGS  07 07 13.8, 33.4N, 140.8E, H= 61 KM, M=5.3
                                SOUTH OF HONSHU, JAPAN


FRI APR 27          23 18 29.8
JAS                 23 18 30.7  D
WDC                 23 18 33.5  D
MNV                 23 18 38.8  D
                          USGS  23 06 15.9, 28.3S, 178.5W, H=212 KM, M=4.5
                                KERMADEC ISLANDS REGION


MNV APR 28          00 19
JAS                 00 19 42.2                                    *E  19 37    *E  20 03
FRI                 00 19                                         *E  19 50
BKS                 00 20                                         *E  20 41    *E  21 42
                          USGS  00 17 49.7, 32.0N, 114.8W, H= 10 KM, M=4.8
                                W. ARIZONA-MEXICO BORDER REGION


PRI APR 29          13 10 19.0
BKS                 13 10 19.2
                                  MICRON      PERIOD
                          PZ        0.02        0.9
MHC                 13 10 19.5
FRI                 13 10 23.1
JAS                 13 10 24.5  C
WDC                 13 10 26.4  C
MIN                 13 10 28.4
MNV                 13 10 32.7
                          USGS  12 58 42.4, 25.3S, 179.9W, H=470 KM, M=4.9
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SOUTH OF FIJI ISLANDS

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FHC APR 30          07 15 29
WDC                 07 15 37.8
MIN                 07 15 43
BKS                 07 15 52.5                                    LQ  25 34
                                  MICRON      PERIOD
                          MAXR(Z)   1.8         20
                          MAXH(N)   0.8         20
                          MAXH(E)   2.2         20
JAS                 07 16 01.0
PRI                 07 16 09
FRI                 07 16 09
MNV                 07 16 10.1
                          MAG 5.0, DIST(DEG) 43
                          USGS  07 08 00.1, 51.4N, 179.7E, H= 48 KM, M=5.2
                                RAT ISLANDS, ALEUTIAN ISLANDS


MNV APR 30          15 00 36.7  C
FRI                 15 00 48.5  C
JAS                 15 00 57.6  C
PRI                 15 01 01.2  C
SAO                 15 01 07.7
MHC                 15 01 10.2
BKS                 15 01 18.0  C                                 *E  01 28
MIN                 15 01 23.4
WDC                 15 01 32.9
                          MAG 5.0
                          USGS  15 00 00.0, 37.1N, 115.0W, H= 0  KM, M=5.2
                                NEVADA TEST SITE


MNV APR 30          23 59 34.1
JAS                 23 59 36.0
                          USGS  23 40 30.7, 14.6N,  56.5E, H= N  KM, M=5.3
                                ARABIAN SEA


MNV MAY 01          06 19 37
PRI                 06 19 37.0
JAS                 06 19 46.9  D                                 *E  20 26
MIN                 06 19 52.9
WDC                 06 19 55.4  D
FHC                 06 20 02.1
                          USGS  06 07 35.1, 28.0S,  66.6W, H=158 KM, M=5.2
                                CATAMARCA PROVINCE, ARGENTINA


WDC MAY 01          08 24 34.2                                    *E  24 50
JAS                 08 24 47.5                                    *E  25 07
                          USGS  08 13 09.8, 34.0N, 141.6E, H= 42 KM, M=4.9
                                OFF EAST COAST OF HONSHU, JAPAN


MHC MAY 01          14 41 27
PRI                 14 41 27
JAS                 14 41 32.6  C
WDC                 14 41 34.0
MNV                 14 41 42.0  C
                          USGS  14 30 29.9, 19.3S, 177.5W, H=567 KM, M=4.8
                                FIJI ISLANDS REGION


WDC MAY 01          18 54 26.8
BKS                 18 55                                         *E  00 16    *E  02 38
JAS                 18 54 52.5
MNV                 18 55 01.7  C
                          USGS  18 47 56.0, 52.7N, 167.0W, H= 17 KM, M=5.1
                                FOX ISLANDS, ALEUTIAN ISLANDS


WDC MAY 02          00 04 29.4  D
BKS                 00 04                                         *E  04 33
                                  MICRON      PERIOD
                          (P)Z      0.02        0.9
JAS                 00 04 40.2  D
FRI                 00 04 44.2
MNV                 00 04 48.6  D
                          USGS  23 52 13.9, 13.4N, 144.3E, H=140 KM, M=5.1
                                MARIANA ISLANDS


WDC MAY 02          11 15 26.1  C
JAS                 11 15 46.0  C
MNV                 11 15 52.5
                          USGS  11 05 14.7, 45.3N, 149.8E, H= 53 KM, M=4.8
                                KURIL ISLANDS


WDC MAY 02          14 15 37.6
JAS                 14 16 02.5
FRI                 14 16 11
MNV                 14 16 11.5
                          USGS  14 09 03.2, 51.9N, 168.1W, H= N  KM, M=4.9
                                FOX ISLANDS, ALEUTIAN ISLANDS


MNV MAY 02          16 18 34.0  C
JAS                 16 18                                         *E  19 40
                          USGS  16 12 35.4, 15.1N,  98.6W, H= N  KM, M=4.7
                                OFF COAST OF GUERRERO, MEXICO


FRI MAY 02          18 04 02.0
PRI                 18 04 06.0  C
MNV                 18 04 14.7  C
SAO                 18 04 17.5
JAS                 18 04 19.5
MHC                 18 04 22.8
BKS                 18 04 32.6  C
MIN                 18 05                                         *E  05 00
WDC                 18 05                                         *E  05 07
                          MAG 4.3, MOJAVE DESERT
                          USGS  18 03 22.7, 35.2N, 117.6W, H= 23 KM, M=4.2
                                CENTRAL CALIFORNIA


WDC MAY 03          05 26 04.1
JAS                 05 26 22.8
MNV                 05 26                                         *E  25 50
                          USGS  05 16 11.5, 46.9N, 145.1E, H=357 KM, M=4.5
                                SEA OF OKHOTSK


WDC MAY 03          06 56 37.5  C
MHC                 06 56                                         *E  55 46
JAS                 06 56 49.8  C
PRI                 06 56                                         *E  56 53
FRI                 06 56 54.2
MNV                 06 56 58.3  C
                          USGS  06 44 39.1, 18.6N, 145.3E, H= 55 KM, M=5.1
                                MARIANA ISLANDS


FRI MAY 03          17 37 22.0                                    *E  37 30
PRI                 17 37                                         *E  37 26
MNV                 17 37 28.0                                    *E  37 37
JAS                 17 37 36.0                                    *E  37 43
MHC                 17 37                                         *E  37 40
BKS                 17 37 44.7                                    *E  37 52    *E  42 00
                                  MICRON      PERIOD
                          PZ        0.05        1.3
                          MAXR(Z)   5.2         20
                          MAXH(N)   4.1         20
                          MAXH(E)   3.7         20
MIN                 17 38                                         *E  38 11
WDC                 17 38 12.0
                          USGS  17 33 33.9, 24.3N, 108.7W, H= N  KM, M=4.6
                                GULF OF CALIFORNIA


FHC MAY 04          09 43 08.8  C                                 *E  43 21
WDC                 09 43 14.5  C                                 *E  43 25
MIN                 09 43 18.5                                    *E  43 33    *E  53 09    *E  00 49
BKS                 09 43 25.3
                                  MICRON      PERIOD
                          PZ        0.10        0.9
MHC                 09 43 28.7                                    *E  43 31
SAO                 09 43                                         *E  43 38
JAS                 09 43 31.5  C
FRI                 09 43 37.2  C                                 *E  43 45
PRI                 09 43 37.2
MNV                 09 43 38.7  C
                          USGS  09 31 59.2, 37.1N, 142.1E, H= 24 KM, M=5.8
                                OFF EAST COAST OF HONSHU, JAPAN
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    MAY  05   20 40 03.0
              20 40 03.3
              20 40 04.5          50 00     *PP   40 32   *S?   40 46   SS    55 38
                                            *E    00 28   *E    03 34
                          MICRON        PERIOD
                    PZ      0.05          0.8
              20 40 04.8
              20 40 09.0
              20 40 10.3  D
              20 40 12.8
              20 40 15.0
                    USGS  20 28 08.3, 23.0S, 176.2W, H= 90 KM, M=5.6
                          SOUTH OF FIJI ISLANDS

    MAY  06   10 29 58.2
              10 30 01.0
              10 30 06.1          39 48     *E    40 39   SS    45 00   *E    52 52
                          MICRON        PERIOD
                    PZ      0.04          0.6
                    MAXR(Z) 3.6           20
                    MAXH(N) 3.2           20
                    MAXH(E) 3.9           20
              10 30 11.2
              10 30 12.6
              10 30 18.4
              10 30 19.6
              10 30 19.9
                    MAG 5.7, DIST(DEG) 74
                    USGS  10 18 20.6, 31.0N, 141.7E, H= N  KM, M=5.7
                          SOUTH OF HONSHU, JAPAN

    MAY  07   02 35 43.8  C
              02 35 57.9  C
              02 36 07.9  C
              02 36 17.4  C
              02 36 27.4  C
              02 36 32.7  D
              02 36 32.7  C
              02 36                     *E    36 47
              02 36 48.0                *E    36 51
              02 36
                    MAG 4.2, WEST OF PETROLIA

    MAY  08   10 34 32.7
              10 34 38.4
              10 34 46.2                *E    34 48   *E    34 56
                          MICRON        PERIOD
                    PZ      0.03          0.7
              10 34 55.6
              10 35 04.5
                    USGS  10 26 55.0, 50.3N, 179.8W, H= N  KM, M=4.8
                          ANDREANOF ISLANDS, ALEUTIAN ISLANDS

    MAY  09   18 47 50.7  C               *E    48 04
              18 47 51.7  C
              18 47 52.5  C               *E    48 06
              18 47 52.5  C    58 40      *E    48 06   LQ    10 00   LR    15 00
                                          *E    20 00
                          MICRON        PERIOD
                    PZ      0.22          1.2
                    MAXR(Z) 3.9           20
                    MAXH(N) 3.2           20
                    MAXH(E) 2.5           20
              18 47 56.0  C               *E    48 09
              18 47 57.1  C               *E    48 10
              18 47 58.1  C               *E    48 11
              18 48 00.2  C               *E    48 14
              18 48 01.7  C
              18 48 05.1  C
                    MAG 5.9, DIST(DEG) 88
                    USGS  18 35 05.1, 32.6S, 179.3W, H= 47 KM, M=5.5
                          SOUTH OF KERMADEC ISLANDS

    MAY  10   04 35 09
              04 35 28.4  D
              04 35 31.8  D
              04 35 40.5  D
                    USGS  04 27 15.6, 50.6N, 177.0W, H= N  KM, M=4.5
                          RAT ISLANDS, ALEUTIAN ISLANDS

    MAY  10   05 35 48
              05 35 52
              05 35 54.0
              05 35 57
              05 36 02.7  D
                    USGS  05 23 00.1,  5.1S, 151.4E, H=133 KM, M=5.1
                          NEW BRITAIN REGION

    MAY  10   14 40 22.5  C
              14 40 22.7
              14 40                     *E    40 23
              14 40 28.5  C             *E    54 51
              14 40 29.3  C
              14 40 33          50 30   *E    41 43   *E    53 00   SS    56 40
                                        LQ    01 00   LR    05 20   *E    09 30
                          MICRON        PERIOD
                    PZ      1             2.5
              14 40 39.5  C
              14 40 41.8  C
                    MAG 7.5, DIST(DEG) 88
                    USGS  14 27 38.7, 38.2S,  73.2W, H= 6  KM, M=6.5
                          NEAR COAST OF CENTRAL CHILE

    MAY  11   07 06 19.8  C
              07 06                     *E    06 24
              07 06                     *E    06 35
              07 06 39.2  C
              07 06 45
              07 06 47
              07 06 49
                    USGS  06 56 45.1, 49.3N, 156.1E, H= 58 KM, M=5.5
                          KURIL ISLANDS

    MAY  11   07 41 05.5
                          MICRON        PERIOD
                    PZ      0.05          1.0
              07 41 07
              07 41 07
              07 41 09.5
              07 41 09.7
              07 41 11.5
              07 41 12.2
              07 41 13.7
              07 41 21.7
                    USGS  07 28 41.2, 11.0S, 165.4E, H= 34 KM, M=5.3
                          SANTA CRUZ ISLANDS

    MAY  11   10 26 22
              10 26 22.2
                          MICRON        PERIOD
                    PZ      0.03          0.9
              10 26 25.7
              10 26 29.5
              10 26 33.5
              10 26 37.8
                    USGS  10 14 05.3, 15.2N, 146.5E, H= 35 KM, M=4.9
                          MARIANA ISLANDS

    MAY  12   00 54 31
              00 54 33.8
              00 54 42.2
                    USGS  00 42 03.5, 12.5S, 166.5W, H= 61 KM, M=5.1
                          SANTA CRUZ ISLANDS

    MAY  12   10 21 26.0
              10 21 32.2
              10 21 48.0
              10 21 54.0
                    USGS  10 11 52.8, 49.2N, 156.1E, H= 45 KM, M=5.4
                          KURIL ISLANDS

    MAY  12   20 16 16.8
              20 16 21.3
              20 16 25.4
                    USGS  20 04 15.8, 19.2N, 145.4E, H=172 KM, M=4.8
                          MARIANA ISLANDS

    MAY  13   00 22 02.3
              00 22 08.1  D
              00 22 14.5
              00 22 22.2  C
              00 22 23.8  D
              00 22 30.6
              00 23 01.4
              00 23 08.1
              00 23 18.1
                    MAG 4 3/4, SSW OF BAKERSFIELD
                    USGS  00 21 35.2, 35.0N, 119.1W, H= 10 KM, M=4.6
                          CENTRAL CALIFORNIA

    MAY  13   06 46 52.6
              06 46 57.4  C
              06 47 00.9
              06 47 03.7                *E    48 10
                          MICRON        PERIOD
                    PZ      0.05          0.9
              06 47 07.0
              06 47 10.2  C
              06 47 13
              06 47 14.4
              06 47 17.8  C             *E    48 26
                    USGS  06 35 20.5, 21.6N, 143.0E, H=288 KM, M=5.1
                          MARIANA ISLANDS REGION

    MAY  13   09 45 51
              09 45 55
              09 45 56.8
              09 45 57.4
              09 46 00.0
              09 46 07.1
                    USGS  09 34 00.7, 21.4S, 174.2W, H= 25 KM, M=5.0
                          TONGA ISLANDS

    MAY  13   21 18                      *E    18 17
              21 18                     *E    18 20
              21 18 27.5
                    USGS  21 06 50.4, 16.8S, 171.9W, H= 34 KM, M=4.9
                          SAMOA ISLANDS REGION

    MAY  13   21 32 51                  PP    37 10
              21 33                     *E    43 36   PS    45 28   SS    52 00
                                        LQ    02 20   LR    07 00
                          MICRON        PERIOD
                    MAXR(Z) 5.4           20
                    MAXH(N) 1.8           20
                    MAXH(E) 5.4           20
              21 33 00                  *E    37 20   PKKP  48 40
              21 33                     *E    33 08
              21 33 10                  PP    37 40   PKKP  48 30
                    USGS  21 18 41.3,  1.0N, 126.0E, H= 32 KM, M=5.8
                          MOLUCCA PASSAGE

    MAY  14   04 46 53.0
                          MICRON        PERIOD
                    PZ      0.04          1.0
              04 46 53.0
              04 46 57.8
              04 46 58.6  C
              04 47 00.6  C
              04 47 02.3
              04 47 06.2
                    USGS  04 35 27.5, 24.8S, 179.5E, H=584 KM, M=4.7
                          SOUTH OF FIJI ISLANDS

    MAY  14   09 51 05.5                *E    51 18
              09 51                     *E    51 20
              09 51 15.0                *E    51 28
                    USGS  09 39 07.3, 21.9S, 174.9W, H= N  KM, M=4.8
                          TONGA ISLANDS

    MAY  14   11 59 17.8
              11 59                     *E    59 23
              11 59 28.4
              11 59                     *E    59 30
              11 59 35.6
              11 59 42.0
                    USGS  11 49 41.0, 17.7S, 136.2W, H= 33 KM, M=5.0
                          TUAMOTU ARCHIPELAGO REGION

    MAY  14   14 00 32.0
              14 00 43.7  C
              14 00 52.4  C
              14 00 56.8  C
              14 01 02.9  C
              14 01 05.4  C
              14 01 11.8
              14 01 18.8
              14 01 27.9  C
              14 01                     *E    01 43
                    MAG 5.8
                    USGS  14 00 00.4, 39.2N, 116.5W, H= 0  KM, M=6.0
                          NEVADA TEST SITE

    MAY  14   18 46 27.1  C
              18 46 32.0
              18 46 48.5
                    USGS  18 37 07.1, 51.1N, 157.7E, H= 57 KM, M=5.0
                          NEAR EAST COAST OF KAMCHATKA

    MAY  14   20 51 31.7
              20 51 33.8
                    USGS  20 38 38.4, 38.0S,  72.6W, H= 39 KM, M=5.0
                          CENTRAL CHILE

    MAY  15   08 46 36.7
              08 46 37.5
                          MICRON        PERIOD
                    PZ      0.05          1.0
              08 46 38.2
              08 46 38.2
              08 46 41.0
              08 46 43.0
              08 46 43.7
              08 46 44.1
              08 46 46.6
              08 46 53.4
                    USGS  08 35 40.2, 17.4S, 178.6W, H=529 KM, M=5.1
                          FIJI ISLANDS REGION

    MAY  15   18 44 41
              18 44 41.2
              18 44 46.7
              18 44 46.7
              18 44 47.9
              18 44 56.3  D
                    USGS  18 33 52.6, 18.0S, 177.8W, H=636 KM, M=5.1
                          FIJI ISLANDS REGION

    MAY  16   01 25 26.0  C
              01 25 31.2  C
              01 25 35.3  C
              01 25 43
                          MICRON        PERIOD
                    PZ      0.14          1.5
              01 25 46.7  C
              01 25 48.7  C
              01 25 54.5  C
              01 25 55.0  C
              01 25 55.0  C
                    USGS  01 14 05.7, 41.3N, 136.1E, H=  2 KM, M=5.7
                          EASTERN SEA OF JAPAN

    MAY  16   02 40 24.7  C
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                  02 40 31.5
                  02 40 36.8  C
                  02 40 37
                  02 40                        *E  40 38
                  02 40 44.5
                        USGS  02 29 51.1, 43.7N,  28.9W, H= N  KM, M=4.9
                              NORTH ATLANTIC RIDGE

  MAY  16         08 03 54
                  08 04 00.3  D
                  08 04                        *E  04 06
                  08 04 17.4                   *E  12 00
                                MICRON         PERIOD
                        PZ        0.06           1.0
                  08 04                        *E  04 24
                  08 04 26.5  D
                  08 04 35.5  D
                  08 04 36
                  08 04 36.1  D
                        USGS  07 57 47.5, 54.0N, 163.0W, H=  9 KM, M=5.4
                              UNIMAK ISLANDS REGION

  MAY  16         17 37 18.0  D
                  17 37 30.0  D
                  17 37 30.3
                  17 37 37.7
                        USGS  17 26 43.1, 43.6N,  28.9W, H= 28 KM, M=4.8
                              NORTH ATLANTIC RIDGE

  MAY  17         15 04 48.5
                  15 04 50.5
                  15 05 05.5
                        USGS  14 54 12.9, 26.5S, 115.1W, H= N  KM, M=4.7
                              EASTER ISLAND CORDILLERA

  MAY  18         15 48                        *PP  48 59  PCP  51 53  SCP  55 24
                  15 48 41.8  C                *PP  49 05  *SP  49 15   PP  49 48
                                               PCP  51 53  SCP  55 25
                  15 48 46.4  C                *PP  49 10  *SP  49 23 PCP   51 56
                                              SCP   55 26
                  15 49 04.0  C                *PP  49 28
                                MICRON         PERIOD
                        PZ        0.4            2.0
                  15 49 08.6  C                *PP  49 32   PP   50 13 SCP   55 35
                                                *E  55 24
                  15 49                         *E  49 10  *PP  49 34 SCP   55 36
                  15 49 12.4  C                *PP  49 36  PCP  52 03 SCP   55 36
                  15 49                        *PP  49 38
                  15 49                        *PP  49 42  PCP  52 05 SCP   55 38
                  15 49 24.0  C                *PP  49 47  SCP  55 41
                        USGS  15 42 59.1, 63.1N, 150.2W, H=106 KM, M=5.4
                              CENTRAL ALASKA

  MAY  18         22 44 35.0  D
                  22 44                        *E  44 39
                  22 44 53.8  D
                  22 45 00.2
                  22 45 00.4
                  22 45 01.0  D
                        USGS  22 34 17.3, 44.3N, 147.7E, H=100 KM, M=5.3
                              KURIL ISLANDS

  MAY  19         00 05                        *E  05 38
                  00 05                        *E  05 58   *E  25 17   *E  29 00
                                MICRON         PERIOD
                  MAXR(Z)         4.2            20
                  MAXH(N)         3.9            20
                  MAXH(E)         3.0            20
                  00 05 39.0
                  00 05 39.8
                  00 05 44.6
                  00 05 45.8  D
                  00 05 49.2  D
                  00 05                        *E  05 52
                  00 05 55.3  D
                        USGS  23 53 53.8, 20.9S, 173.9W, H= 43 KM, M=5.4
                              TONGA ISLANDS

  MAY  19         22 51 42.4  C
                  22 52 03.2  C
                  22 52 10.5
                        USGS  22 42 17.0, 49.7N, 157.4E, H= 57 KM, M=5.4
                              KURIL ISLANDS REGION

  MAY  20         13 42 40.8
                  13 42 43.8
                  13 42 47.4  D
                  13 43 00.4  D
                        USGS  13 30 14.3, 36.0N,  71.0W, H=109 KM, M=4.9
                              CENTRAL CHILE

  MAY  20         14 43 34.4
                  14 43 38.8
                  14 43 39.9  D                *E  45 05
                  14 43 42.1  D                *E  45 05
                  14 43 44.0
                  14 43 48.2  D                *E  45 13
                        USGS  14 34 50.4, 25.0S, 178.9W, H=362 KM, M=5.1
                              SOUTH OF FIJI ISLANDS

  MAY  21         06 40 17.8
                  06 40 24.3
                  06 40 45.0
                  06 40 50.2
                        USGS  06 34 54.9, 60.2N, 147.6W, H= 35 KM, M=4.8
                              SOUTHERN ALASKA

  MAY  22         12 58 21.0
                  12 58                        *E  15 40
                  12 58 50.4
                        USGS  12 51 11.9, 12.7N,  87.9W, H= N  KM, M=5.0
                              NEAR COAST OF NICARAGUA

  MAY  22         15 12 39.1
                  15 12 47.6
                  15 12 49.6
                        USGS  14 59 53.8, 38.0S,  73.9W, H= N  KM, M=5.0
                              NEAR COAST OF CENTRAL CHILE

  MAY  23         15 15 23
                  15 15 29.9  C
                  15 15 36.9  C
                  15 16 05    C                *E  16 16   *E  16 34   *E  17 23
                                               *E  18 06   LR  18 58
                                MICRON         PERIOD
                        PZ        0.40           2.0
                  MAXR(Z)         2.3            20
                  MAXH(N)         6.1            20
                  MAXH(E)         3.6            20
                  15 16 12.0  C
                  15 16 16.5  C
                  15 16 24.3  C
                  15 16 31    C
                        MAG 5.4, DIST(DEG) 15
                        USGS  15 12 33.2, 51.3N, 131.2W, H= N  KM, M=5.1
                              QUEEN CHARLOTTE IS.ANDS REGION

  MAY  23         16 15 04.3                   *E  17 57
                  16 15 06.8
                  16 15 14.8  D   26 18  SKS   25 18  PS   27 32  SS   32 48
                                         *E  34 04   *E  35 00  SSS  36 41
                                        SCS  38 57   *E  39 16   LQ  40 06
                                        LR   44 50
                                MICRON         PERIOD
                        PZ        0.05           1.1
                  MAXR(Z)         5.7            20
                  MAXH(N)         2.5            20
                  MAXH(E)         4.3            20
                  16 15 15.2
                  16 15 21.2
                  16 15 21.5
                  16 15 22.7  C
                  16 15 55.4  C
                        MAG 5.8, DIST(DEG) 94
                        USGS  16 01 49.2, 22.6N, 122.5E, H=  5 KM, M=5.6
                              TAIWAN REGION

  WDC  MAY  24    01 08 13.4  D
  MIN             01 08 16.6
  JAS             01 08 26.3  D
  FRI             01 08 30.9
                        USGS  00 55 22.3, 25.0N, 122.8E, H=133 KM, M=4.9
                              TAIWAN REGION

  PRI  MAY  24    02 05 26.9
  WHC             02 05 27.3                   *E  05 38
  BKS             02 05                        *E  14 56   *E  25 00
  JAS             02 05 31.8                   *I  05 44
  FRI             02 05 32.6                   *E  05 43
  WDC             02 05 33.6
  MIN             02 05 38.2
  WNV             02 05 41.8                   *I  05 54
                        USGS  01 53 38.0, 20.9S, 173.7W, H= 13 KM, M=5.1
                              TONGA ISLANDS

  PRI  MAY  24    06 06 01.8
  WHC             06 06 04.0
  JAS             06 06 08.7
  FRI             06 06 07.7
  WDC             06 06 12.2
  MIN             06 06 13.0
  WNV             06 06 17.0
                        USGS  05 54 16.1, 20.7S, 173.8W, H= N  KM, M=5.1
                              TONGA ISLANDS

  SAO  MAY  24    10 48 34.5
  PRI             10 48 36.3
  WHC             10 48 36.7
  BKS             10 48 36.9  D
                                MICRON         PERIOD
                        PZ        0.06           1.0
  FRI             10 48 41.9
  JAS             10 48 42.7
  WDC             10 48 44.7  C
  MIN             10 48 47.3
  WNV             10 48 52.7
                        USGS  10 37 03.2, 18.2S, 174.2W, H= 55 KM, M=5.4
                              TONGA ISLANDS

  BKS  MAY  24    23 51 42.2  C
                                MICRON         PERIOD
                        PZ        0.03           0.9
  SAO             23 51 48.4
  PRI             23 51 50.0
  WHC             23 51                        *E  51 50
  FRI             23 51 55.3
  JAS             23 51 55.5  C
  WDC             23 51 56.5
  WNV             23 52 05.1  C
                        USGS  23 40 54.7, 17.5S, 178.6W, H=550 KM, M=5.5
                              FIJI ISLANDS REGION

  PRI  MAY  25    01 02 37.6
  WNV             01 02 42.5  C
  JAS             01 02 45.6

  PRI  MAY  25    14 26 08.9  D
  SAO             14 26 11
  FRI             14 26 15.1
  WHC             14 26 15.7
  BKS             14 26 18.6  C                *E  25 24
                                MICRON         PERIOD
                        PZ        0.03           0.8
  JAS             14 26 20.9  D
  WNV             14 26 27.8  D
  WDC             14 26 35.8  D
                        USGS  14 16 31.3, 18.4S, 132.9W, H= 19 KM, M=5.0
                              TUAMOTU ARCHIPELAGO REGION

  FHC  MAY  25    19 09 44.3
  WDC             19 09 51.3  C
  MIN             19 09 57.0  C
  BKS             19 10 12.5  C                *PP  10 21   *E  11 22  PCP   13 38
                                               *E  14 56   LQ  15 02   LR  15 00
                                MICRON         PERIOD
                        PZ        0.22           1.4
                  MAXR(Z)         6.6            20
                  MAXH(N)         5.7            20
                  MAXH(E)         4.1            20
  WHC             19 10 18.6
  JAS             19 10 19.4  C                *E  10 30   *E  17 17
  WNV             19 10 25.5  C
  FRI             19 10 29.1  C
  PRI             19 10 32.4  C
                        MAG 5.2, DIST(DEG) 27
                        USGS  19 04 34.4, 57.3N, 150.1W, H= N  KM, M=5.6
                              GULF OF ALASKA

  FHC  MAY  26    04 49
  WDC             04 49 32.6                   *E  49 30
  WHC             04 49
  MIN             04 49 35.4                   *E  49 34
  PRI             04 49 37.2
  JAS             04 49 37.7
  FRI             04 49
  WNV             04 49 47.2                   *E  49 40
                        USGS  04 36 48.6,  6.7S, 155.5E, H= 81 KM, M=5.6
                              SOLOMON ISLANDS

  WNV  MAY  26    09 23 35.1  C
  MIN             09 23 41.4  C
  WDC             09 23 42.5                   P*P*  51 13
  JAS             09 23 45.8  C                P*P*  51 03
  FRI             09 23 46.2                   P*P*  51 04
  FHC             09 23 49.0
  BKS             09 23 52.9  C   33 54  PPP   28 48   *E  35 01   SS   38 51
                                               *E  42 52   LQ  44 23   LR   48 00
                                MICRON         PERIOD
                        PZ        1.65           1.7
  WHC             09 23 52.9
  PRI             09 23 53.4
  SAO             09 23 54.6
                        MAG 7.9, DIST(DEG) 78
                        USGS  09 11 51.5, 36.0N,  17.5W, H= N  KM, M=6.7
                              NORTH ATLANTIC OCEAN

  PRI  MAY  26    16 56 19.5
  WHC             16 56 28.0
  JAS             16 56 30.3  C
  WDC             16 56 47.2  C
                        USGS  16 45 42.9, 28.4S, 113.9W, H= N  KM, M=5.2
                              EASTER ISLANDS REGION

  FHC  MAY  26    18 33 36.5
  WDC             18 33 42.6  C                *PP  33 48
  JAS             18 34 02.3  C                *PP  33 54
  WNV             18 34 08.1                   *PP  34 13
  WHC             18 34 10.5                   *PP  34 20
  PRI             18 34 19
  FRI             18 34 20
                        USGS  18 23 03.9, 42.9N, 145.1E, H= 53 KM, M=5.1
                              HOKKAIDO, JAPAN REGION

  WNV  MAY  26    20 31 19.3  D                *E  31 41
  MIN             20 31 25.6  D
  WDC             20 31 26.7  D
  JAS             20 31 30.1  D                *E  31 52
  FRI             20 31 30.4
  FHC             20 31 33.3  D
  WHC             20 31 37.0
  BKS             20 31 37.0  D                LR  56 00
                                MICRON         PERIOD
                        PZ        0.08           1.0
                  MAXR(Z)         1.25           20
                  MAXH(N)         1.33           30
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                    MAXH(E)  1.18          20
PRI             20 31 37.4
SAD             20 31 37.6
                USGS    20 19 35.2, 36.0N,  17.6W, H= 4  KM, M=5.6
                        NORTH ATLANTIC OCEAN

WDC MAY  27     06 51 42.0                      *DD   51 55
MIN             06 52                           *DD   52 04
JAS             06 52 00.0  C                   *DD   52 14
PRI             06 52                           *E    52 06
MNV             06 52 08.0                      *DD   52 22
                USGS    06 41 19.5, 44.1N, 148.3E, H= 45 KM, M=5.2
                        KURIL ISLANDS

SAD MAY  27     09 23 15.1
PRI             09 23 16.6  C
BKS             09 23 16.8  C
                     PZ          MICRON      PERIOD
                                   0.05        0.8
WHC             09 23 17.0
FHC             09 23 21.7
FRI             09 23 22.0
JAS             09 23 22.5  C
WDC             09 23 24.9  C
MIN             09 23 25.7  C
MNV             09 23 32.0  C
                USGS    09 11 35.1, 21.1S, 175.9W, H=142 KM, M=5.2
                        FIJI ISLANDS REGION

WDC MAY  27     10 32
BKS             10 33 20        44 02   *E   32 54   P*   36 58
                                        P*   37 28   *=   43 24    *E   45 40
                                        PS   47 16   SS   53 00    LQ   03 00
                     MICRON          LR   09 20
                     PERIOD
                MAXR(Z)  1.32        20
                MAXH(N)  0.43        20
                MAXH(E)  1.61        20
JAS             10 33                *E   33 10   P*   37 03
MNV             10 33                *E   33 30   P*   37 06
PRI             10 33                P*   37 04
                MAG 5.5, DIST(DEG) 109
                USGS  10 18 35.6,  0.7N, 122.6E, H= 70 KM, M=6.1
                      NORTHERN CELEBES

PRI MAY  28     03 06 43.4  C
WHC             03 06 44.0
BKS             03 06 46.0  C   15 42       *E   24 55    LQ   27 30
                     MICRON          PERIOD
                PZ        0.05          1.2
                MAXR(Z)   1.6           20
                MAXH(N)   1.21          20
                MAXH(E)   1.36          20
JAS             03 06 50.2  C
FRI             03 06                       *E   06 51
WDC             03 06 52.3  C
MNV             03 07 00.3  C
                MAG 5.3, DIST(DEG) 72
                USGS  02 55 21.1, 16.4S, 172.3W, H= 21 KM, M=5.2
                      SAMOA ISLANDS REGION

FRI MAY  28     14 10 13.9
PRI             14 10 14.4  D               *DD   10 22
MNV             14 10 17.1  D               *DD   10 25
JAS             14 10 20.3                  *DD   10 28
WHC             14 10 21.4
BKS             14 10 24.7  C               *DD   10 32    LR   39 30
                     MICRON          PERIOD
                PZ        0.06          1.2
                MAXR(Z)   1.25          20
                MAXH(N)   1.47          20
                MAXH(E)   1.14          20
MIN             14 10 29.6                  *DD   10 38
WDC             14 10 33.4                  *DD   10 41
                MAG 5.4, DIST(DEG) 88
                USGS  13 57 34.5, 37.9S,  73.4W, H= 24 KM, M=5.8
                      NEAR COAST OF CENTRAL CHILE

SAD MAY  29     06 53 27.1
BKS             06 53 28.2  D   02 34       *DD   55 37   *SD   55 37  *SDD   59 24
                                            SKS   02 53   *E   06 46    SS   08 29
                                            SSS   11 49   *E   15 08
                     MICRON          PERIOD
                PZ        0.16          0.8
PRI             06 53 28.5  D
WHC             06 53 28.9  D
FHC             06 53 32.6
FRI             06 53 33.3  D
JAS             06 53 33.9  D
WDC             06 53 35.3  D
MIN             06 53 37.0
MNV             06 53 42.6
                USGS  06 42 12.8, 22.4S, 179.5E, H=616 KM, M=5.6
                      SOUTH OF FIJI ISLANDS

WDC MAY  29     15 55 54.3
MIN             15 55 57.8
BKS             15 56 03.0  D
                     MICRON          PERIOD
                PZ        0.12          0.9
WHC             15 56 06.8
SAD             15 56                       *E   55 09
JAS             15 56 09.5                  *E   59 15
PRI             15 56 14.5
FRI             15 56 14.6
MNV             15 56 16.0
                USGS  15 44 44.5, 33.0N, 137.1E, H=378 KM, M=5.1
                      NEAR SOUTH COAST OF HONSHU

FRI JUN  01     01 39 45.2
PRI             01 39 47.7
MNV             01 39 53.3  D
SAD             01 39 58.8
JAS             01 40 00.8
WHC             01 40 04.6  C
BKS             01 40 14.0  D               *E   41 32
WDC             01 40 44
                MAG 5.4, MOJAVE DESERT
                USGS  01 38 49.2, 34.5N, 116.5W, H= 5  KM, M=5.1
                      SOUTHERN CALIFORNIA

WHC JUN  02     07 32 26.7
WDC             07 32 29.1  D
MIN             07 32 31.5
JAS             07 32 32.3  D
PRI             07 32                       *E   32 36
MNV             07 32 42.0  D
                USGS  07 20 12.7, 10.1S, 167.2E, H= 51 KM, M=5.0
                      SANTA CRUZ ISLANDS

WHC JUN  02     19 45 24.2                  *E   45 30
PRI             19 45 27.0                  *E   45 31
BKS             19 45           55 53       *E   45 30   *E   55 44    *E   00 04
                                            LQ   07 26   LR   11 44
FRI             19 45 31.6                  *I   45 36
WDC             19 45 31.6                  *I   45 36
JAS             19 45 31.8                  *E   45 38
MIN             19 45                       *I   45 44
MNV             19 45 38.5
                USGS  19 32 57.7, 20.8S, 173.0E, H= 55 KM, M=5.3
                      NEW HEBRIDES ISLANDS REGION

WHC JUN  02     19 55 13.0
JAS             19 55 17.2
WDC             19 55 18.3
MNV             19 55 27.0
                USGS  19 42 42.8, 20.6S, 173.1E, H= 4  KM, M=4.6
                      NEW HEBRIDES ISLANDS REGION

PRI JUN  02         2 42.5
FRI                 2 42.8
WHC                 2 55.3
                    5 [illegible]
WHC                 [illegible]

WDC                 23 13 12.9
                    USGS  23 04 17.6,  9.0S, 109.9W, H= 4  KM, M=4.4
                          NORTHERN EASTER ISLAND CORDILLERA

MNV JUN  03     14 20 30.7
FRI             14 20 43.3  C
JAS             14 20 51.6  C
PRI             14 20 56.7  C
SAD             14 21 02.5  C
WHC             14 21 04.8  C
BKS             14 21 11.1  C
MIN             14 21 17.1  C
WDC             14 21 26.4  C
FHC             14 21 41.4  C
                MAG 5.6
                USGS  14 20 00.2, 37.4N, 116.5W, H= 0  KM, M=5.6
                      NEVADA TEST SITE

MNV JUN  03     14 40 36.8  C
FRI             14 40 48.5  C
JAS             14 40 57.5  C
PRI             14 41 01.2  C
SAD             14 41 07.7  C
WHC             14 41 10.3  C
BKS             14 41 16.6  C
MIN             14 41 23.3  C
WDC             14 41 32.6  C
FHC             14 41 50.4  C
                MAG 5.6
                USGS  14 40 00.0, 37.1N, 116.0W, H= 0  KM, M=5.6
                      NEVADA TEST SITE

SAD JUN  04     04 45                       *E   45 21
BKS             04 45                       *E   45 22
WHC             04 45                       *E   45 22
WDC             04 45                       *E   45 28
JAS             04 45 17.5                  *E   45 29    *E   51 46
FRI             04 45 17.7                  *E   45 28
MIN             04 45 18.0
MNV             04 45 19                    *E   45 37
                04 45 23.6
                USGS  04 32 30.8, 21.2S, 170.1E, H= 40 KM, M=5.2
                      LOYALTY ISLANDS REGION

SAD JUN  04     05 37 26
PRI             05 37 27
WHC             05 37 27.6
FRI             05 37 33
JAS             05 37 33.1  D
WDC             05 37 35.0  D
MIN             05 37 37
                USGS  05 26 12.5, 21.1S, 178.0W, H=465 KM, M=4.
                      FIJI ISLANDS REGION

FRI JUN  04     16 42 37.0
MNV             16 42 37.6
PRI             16 42 39.5
JAS             16 42 46.7
WHC             16 42 51.0
WDC             16 43 08.4

MNV JUN  05     03 43 23.4                  *I   43 37
PRI             03 43 23.5                  *E   43 37
JAS             03 43 30.3                  *I   43 43
WHC             03 43 31.7                  *E   43 46
BKS             03 43                       *E   43 45    *E   43 50
WDC             03 43 46.6                  *I   44 00
                USGS  03 32 44.9, 13.7S,  76.1W, H= 53 KM, M=5.
                      NEAR COAST OF PERU

PRI JUN  05     14 47 13.4  C
FRI             14 47 17.9  D
SAD             14 47 25.3
WHC             14 47 32.9
JAS             14 47 34.0
BKS             14 47 43.4                  *E   48 08    *E   49 44
MNV             14 47                       *E   47 39    *E   47 43
MIN             14 48 11.3
WDC             14 48                       *E   49 17    *E   49 21
                MAG 4.2, NEAR WHEELER RIDGE

FRI JUN  05     20 40 37.3  D               *E   49 42
MNV             20 40 38.5  D
PRI             20 40 39.3  D               *E   49 48
SAD             20 40 44.0  D
JAS             20 40 44.5  D               *E   49 54
WHC             20 40 47.5
BKS             20 40 51.6  D   50 06       *DD   42 04   DD   43 40  *DDD
                                            SCS   50 30    *SS   51 40  *SSCS
                                            SS    55 00   SSS   55 24    *E
                     MICRON          PERIOD
                PZ        0.19          0.7
MIN             20 40 56.7  D               *E   49 44
WDC             20 40 59.9  D               *E   50 24
FHC             20 41 08.0  D               *E   41 20    *E   41 28
                USGS  20 29 36.8, 16.3S,  69.0W, H=192 KM, M=5.6
                      PERU-BOLIVIA BORDER REGION

SAD JUN  06     01 19 40.0  C
BKS             01 19 41.6  C               *E   21 54    DD   22 52    *E
                     MICRON          PERIOD
                PZ        0.58          0.9
PRI             01 19 42.0  C
WHC             01 19 42.3  C
FHC             01 19 45.6  C
FRI             01 19 47.0  C
WDC             01 19 47.4  C               *E   22 03
JAS             01 19 49.0  C               *E   22 01
MIN             01 19 50.6  C
MNV             01 19 56.4  C               *E   22 10
                USGS  01 09 40.8, 20.6S, 179.2W, H=535 KM, M=5.9
                      FIJI ISLANDS REGION

SAD JUN  06     05 58 29.7  C
BKS             05 58 30.6  C
                     MICRON          PERIOD
                PZ        0.20          0.9
WHC             05 58 31.4  C
PRI             05 58 31.6  C
FHC             05 58 34.2
FRI             05 58 36.8  C
JAS             05 58 37.1  C
WDC             05 58 37.9  C
MIN             05 58 40.0  C
MNV             05 58 47.3  C
                USGS  05 47 33.3, 15.6S, 177.6W, H=407 KM, M=5.3
                      FIJI ISLANDS REGION

WDC JUN  06     16 02 23.8  D
MIN             16 02 26.7
WHC             16 02 34.3
JAS             16 02 36.5  D
FRI             16 02 40.8
PRI             16 02 40.8
MNV             16 02 42.3
                USGS  15 49 24.9, 23.4N, 126.5E, H= 15 KM, M=5.6
                      RYUKYU ISLANDS REGION

FHC JUN  07     08 46 31.1  D
WDC             08 46 45.1  C
MIN             08 46 55.1
BKS             08 47 09.0  C               *E   47 46
WHC             08 47 19.2  C
JAS             08 47 22.2  C
SAD             08 47 26.3
FRI             08 47 37.4  C
MNV             08 47 39.4  C
PRI             08 47 40.3  D
                MAG 5.2, SW OF EUREKA

WDC JUN  07     15 22 06.5  D
MIN             15 22 11.2  D
BKS             15 22 20.5
WRS             12 55 50.2
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                                  MICRON        PERIOD
                        PZ         0.06           1
    HC          15 22 25.4
    AS          15 22 27.7   D
    RI          15 22 35
                      USGS   15 12 48.2, 51.3N, 158.3E, H= 47 KM, M=5.3
                             NEAR EAST COAST OF KAMCHATKA

    DC  JUN 08  03 39 52.3
    IN          03 39 54.0                    *E  40 06
    KS          03 39
    NV          03 40 06.2   C
    AS          03 40 06.7
    RI          03 40 11.7
                      USGS   03 25 57.5, 49.7N,  78.0E, H=  0 KM, M=5.5
                             EASTERN KAZAKH, SSR

    RI  JUN 08  04 47 25.5
    NV          04 47 27.0
    JAS         04 47 31.2   C
    FHC         04 47 33
    WDC         04 47 46
                      USGS   04 35 16.9, 29.8S,  71.3W, H= 53 KM, M=5.3
                             NEAR COAST OF CENTRAL CHILE

    HC  JUN 10  05 16 36.9
    JAS         05 16 39.6
    NV          05 16 40.5   D
    DC          05 16 55.3   D
                      USGS   05 05 19.5, 33.2S, 109.5W, H= N  KM, M=4.8
                             EASTER ISLAND CORDILLERA

    NV  JUN 10  06 15 29.9
    JAS         06 15 41.8
    RI          06 15                         *E  15 50
                      USGS   06 04 48.3, 40.6N,  29.4W, H= N  KM, M=5.1
                             AZORES ISLANDS REGION

    KS  JUN 10  09 11 11.5   D                *E  20 00
                              MICRON        PERIOD
                        PZ     0.19           1.5
    AD          09 11 12
    PRI         09 11 13.0
    HC          09 11 13.1   C
    RI          09 11 18.4   C                *E  13 21
    JAS         09 11 18.7   C                *E  13 21
    DC          09 11 19.5   C                *E  13 23
    MIN         09 11 21.9   C
    NV          09 11 28.2   C                *E  13 31
                      USGS   09 00 19.1, 17.8S, 178.4W, H=583 KM, M=5.3
                             FIJI ISLANDS REGION

    HC  JUN 10  13 57                         *E  57 50
    DC          13 57 48                      *E  58 08   *E  58 32
    IN          13 57                         *E  57 52   *E  58 29   *E  58 50
    KS          13 58 03         06 56        *E  59 19   *E  59 23   SS  10 58
                                              *E  14 24   LR  17 37
    HC          13 58                         *E  59 04
    JAS         13 58 06.3                    *E  58 23   *E  58 44
    NV          13 58 13.0                    *E  58 30
    RI          13 58                         *E  59 14
    RI          13 58                         *E  58 17
                      USGS   13 47 14.5, 43.3N, 147.7E, H= 15 KM, M=5.8
                             KURIL ISLANDS

    DC  JUN 10  14 21 47.7
    IN          14 21 52.0
    KS          14 21 59.0
    HC          14 22 03.7
    JAS         14 22 06.5
    RI          14 22 12.8
    RI          14 32 12.8
                      USGS   14 11 17.3, 43.2N, 147.8E, H= N  KM, M=5.5
                             KURIL ISLANDS

    WDC JUN 10  14 29 07.0
    MIN         14 29
    MHC         14 29                         *E  29 14
    JAS         14 29                         *E  29 23
    PRI         14 29                         *E  29 26
                      USGS   14 18 34.9, 42.9N, 147.6E, H= N  KM, M=5.4
                                              *E  29 34
                             OFF COAST OF HOKKAIDO, JAPAN

    WDC JUN 10  15 09 29.4   D
    MIN         15 09 33.7   D
    BKS         15 09
    MHC         15 09 45.4   D                *E  09 40
    JAS         15 09 48
    SAD         15 09
    PRI         15 09 54.5   D                *E  09 58
    FRI         15 09 54.5   D
    MNV         15 09 55.3
                      USGS   14 58 55.9, 43.3N, 147.4E, H= 19 KM, M=5.8
                             KURIL ISLANDS

    WDC JUN 10  15 31 50.7
    MIN         15 32
    JAS         15 32 19                      *E  32 04
    MNV         15 32 26.5
                      USGS   15 21 19.1, 43.3N, 147.2E, H= 35 KM, M=5.7
                             KURIL ISLANDS

    PRI JUN 11  05 18 52.7
    MHC         05 18 53.1
    JAS         05 18 58.5
    WDC         05 19 00.5
    MNV         05 19 08.3   C
                      USGS   05 07 18.1, 19.3S, 175.9W, H=136 KM, M=5.0
                             FIJI ISLANDS REGION

    WDC JUN 11  05 19 47.6   D
    MIN         05 19 52.0   D
    JAS         05 20 14.6
    MHC         05 20 15.8
    MNV         05 20 18.9   D
    PRI         05 20 29.5
                      USGS   05 14 08.2, 62.1N, 149.6W, H= 57 KM, M=4.3
                             CENTRAL ALASKA

    WDC JUN 12  00 24
    MHC         00 24 42.0                    *E  24 26   *E  24 39
    JAS         00 24 44.6                    *E  24 57
    FRI         00 24                         *E  25 00
    MNV         00 24 52                      *E  24 51   *E  25 06
    PRI         00 25                         *E  25 05
                      USGS   00 14 30.2, 46.6N, 152.5E, H= 60 KM, M=5.3
                                              *E  25 06
                             KURIL ISLANDS

    WDC JUN 12  01 59 45.7
    MIN         01 59 50
    MHC         02 00
    JAS         02 00 04.5                    *E  00 02
    FRI         02 00 10.9
    MNV         02 00 11.8
                      USGS   01 49 12.1, 43.0N, 147.2E, H= 21 KM, M=5.1
                             KURIL ISLANDS

    WDC JUN 12  15 34 06.5
    JAS         15 34
    MNV         15 34 32.7                    *E  34 26
                      USGS   15 23 35.3, 43.2N, 147.2E, H= N  KM, M=4.8
                             KURIL ISLANDS

    PRI JUN 12  20 12 46.0   C
    MNV         20 12 47.5   C
    JAS         20 12 51.5   C
    MHC         20 12 53.5   C
    WDC         20 13 08.0   C
                      USGS   20 00 39.7, 30.0S,  71.3W, H= 74 KM, M=4.9
                             NEAR COAST OF CENTRAL CHILE

    WDC JUN 12  23 31 34.6   C
    MIN         23 31
    JAS         23 31 53.5   C                *E  31 40
    MHC         23 32
                      USGS   23 21 04.3, 43.1N, 147.7E, H= [illegible] KM, M=5.1
                                              *E  32 03
                             KURIL ISLANDS

    WDC JUN 13  18 18 42.6   C                P*P*  47 44
    MIN         18 18 46.9                    P*P*  47 35
    BKS         18 18            27 37        SS    31 58
                              MICRON          PERIOD          LQ  35 00
                      MAXR(Z)  9.7              20
                      MAXH(N)  7.9              20
                      MAXH(E) 13.2              20
    MHC         18 18 58.6
    JAS         18 19 01.2   C                P*P*  47 30
    FRI         18 19 07.2
    PRI         18 19 07.8                    P*P*  47 35
    MNV         18 19 08.7   C
                      USGS   18 08 11.7, 43.4N, 147.7E, H= 19 KM, M=6.1
                             KURIL ISLANDS

    WDC JUN 13  19 50 57
    JAS         19 51                         *E  51 16
    FRI         19 51                         *E  51 18
    MNV         19 51 23
                      USGS   19 40 25.6, 43.4N, 147.7E, H= 17 KM, M=5.2
                             KURIL ISLANDS

    WDC JUN 13  20 03 05.3
    JAS         20 03                         *E  03 28
    MNV         20 03 31.5
                      USGS   19 52 36.0, 43.4N, 147.8E, H= 23 KM, M=5.2
                             KURIL ISLANDS

    WDC JUN 13  20 31 26.4
    JAS         20 31                         *E  31 44
                      USGS   20 20 57.7, 43.4N, 147.5E, H= 33 KM, M=5.1
                             KURIL ISLANDS

    WDC JUN 14  00 10 35
    JAS         00 10 54
    MNV         00 11 01
                      USGS   00 00 05.4, 43.6N, 147.8E, H= 21 KM, M=5.0
                             KURIL ISLANDS

    FHC JUN 14  01 58 13.7
    WDC         01 58 19.5
    MIN         01 58 23.8
    BKS         01 58 31
    MHC         01 58 35.7
    JAS         01 58 38.2
    FRI         01 58 44.5
    PRI         01 58 44.7
    MNV         01 58 45.7
                      USGS   01 47 49.3, 43.3N, 147.8E, H= 21 KM, M=5.2
                             KURIL ISLANDS

    FHC JUN 14  02 24 52.8
    WDC         02 25 00.0
    MIN         02 25 04.3
    MHC         02 25 16.0
    JAS         02 25 18.7
    PRI         02 25 24.8
    FRI         02 25 24.9
    MNV         02 25 26.0
                      USGS   02 14 26.4, 42.7N, 148.0E, H=  9 KM, M=5.1
                             OFF COAST OF HOKKAIDO, JAPAN

    PRI JUN 14  02 29 56.2
    FRI         02 29 57.8
    MNV         02 30 04.7   D
    JAS         02 30 11.1
    SAD         02 30 11.8
    MHC         02 30 13.2
    BKS         02 30 18.7       34 00   LQ   34 44   *E  35 00  LR  35
                                              *E  37 00
                              MICRON        PERIOD
                      MAXR(Z)  4.3            20
                      MAXH(N) 11.1            20
                      MAXH(E) 19.3            20
    MIN         02 30 38.5
    WDC         02 30 43.1
    FHC         02 30 54.3
                      USGS   02 25 59.0, 23.0N, 108.0W, H= N  KM, M=5.2
                             GULF OF CALIFORNIA

    PRI JUN 14  02 44 10.5
    FRI         02 44 12.1
    MNV         02 44 19.0
    JAS         02 44 25.5
    MHC         02 44 25.5
    MIN         02 44 53.2
    WDC         02 44 57.5
                      USGS   02 40 11.6, 22.9N, 108.1W, H= N  KM, M=4.8
                             OFF COAST OF CENTRAL MEXICO

    WDC JUN 14  03 09 49.8   C
    MIN         03 09 54.1
    MHC         03 10 06.0
    JAS         03 10 08.5
    FRI         03 10 14.8
    PRI         03 10 14.9
    MNV         03 10 15.7   C
                      USGS   02 59 20.7, 43.4N, 147.6E, H= 34 KM, M=5.3
                             KURIL ISLANDS REGION

    WDC JUN 14  03 11 51.7
    MIN         03 11 55.9
    MHC         03 12 07.8
    JAS         03 12 10.5
    PRI         03 12 16.6
    FRI         03 12 16.7
    MNV         03 12 17.7
                      USGS   03 01 24.7, 43.7N, 147.9E, H= N  KM, M=5.2
                             KURIL ISLANDS

    PRI JUN 14  04 11 20.5
    MHC         04 11 21.4
    JAS         04 11 27.3
    WDC         04 11 27.8
    MNV         04 11 36.8
                      USGS   03 59 36.9, 20.3S, 174.3W, H= 39 KM, M=5.0
                             TONGA ISLANDS

    PRI JUN 14  04 17 02.0
    MHC         04 17 02.8
    JAS         04 17 08.6
    WDC         04 17 11.3
    MIN         04 17 12.5
    MNV         04 17 18.3
                      USGS   04 05 16.8, 20.6S, 173.9W, H= N  KM, M=5.1
                             TONGA ISLANDS

    SAD JUN 14  04 25 02
    PRI         04 25 02.5
    MHC         04 25 03.5
    BKS         04 25 03.5
    FRI         04 25 07.2                    *E  35 44
    JAS         04 25 08.5
    WDC         04 25 11.6   C
    MIN         04 25 12.7   C
    MNV         04 25 16.2
                      USGS   04 12 28.9, 30.1S, 178.0W, H= 45 KM, M=5.6
                             KERMADEC ISLANDS

    WDC JUN 14  04 46 12.5
    MIN         04 46 16.8
    JAS         04 46 31.0
    PRI         04 46
    MNV         04 46 38.5                    *E  46 45
                      USGS   04 35 40.8, 43.3N, 147.6E, H= 17 KM, M=5.3
                             KURIL ISLANDS
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WDC JUN 14   05 13 30.6  C
MIN          05 13 34.8
MHC          05 13
JAS          05 13 49.5                *E  13 47
PRI          05 13
FRI          05 13                     *E  13 56
MNV          05 13 56.7  C             *E  13 56
             USGS  05 02 58.7, 43.4N, 147.8E, H= 11 KM, M=5.1
             KURIL ISLANDS

WDC JUN 14   08 53 49.2
MIN          08 53 54
BKS          08 54 03          02 44   LQ   10 20
JAS          08 54 09
MNV          08 54                     *E  54 18
             USGS  08 43 11.8, 43.4N, 147.5E, H= 11 KM, M=5.1
             KURIL ISLANDS

WDC JUN 14   09 12 53.2
MIN          09 14
JAS          09 13 12.0                *E  14 06
MNV          09 13 13.2
             USGS  09 02 14.6, 43.3N, 147.6E, H= 17 KM, M=5.1
             KURIL ISLANDS

PRI JUN 14   10 52 35.5
FRI          10 52 36.5  C
MNV          10 52 38.2  C             *E  53 08
SAO          10 52 40
JAS          10 52 42.2  C
MHC          10 52 43.7  C
BKS          10 52 47.0  C    03 09    *E  03 12   SS   08 54   *E  15 50
                          MICRON  0.45  PERIOD  1.8
             PZ
MIN          10 52 53.1  C
WDC          10 52 55.9  C             *E  53 23
MHC          10 53 02.0
             USGS  10 40 20.7, 32.5S,  70.7W, H= 94 KM, M=5.7
             CHILE-ARGENTINA BORDER REGION

SAO JUN 14   15 13 25.4
BKS          15 13 26.0  C
                          MICRON  0.03  PERIOD  0.8
             PZ
MHC          15 13 27.0  C
PRI          15 13 27.0  C
MHC          15 13
FRI          15 13 32.5                *E  13 30
JAS          15 13 32.8
WDC          15 13 33.8  C
MIN          15 13 35.9
MNV          15 13 42.0  C
             USGS  15 02 23.9, 17.4S, 177.5W, H=425 KM, M=5.0
             FIJI ISLANDS REGION

WDC JUN 14   17 21 46.8  D             *E  21 59   *E  22 08
JAS          17 22 05.3
MNV          17 22 12.7  D             *E  22 25
             USGS  17 11 16.2, 43.3N, 147.4E, H= 34 KM, M=5.4
             KURIL ISLANDS

WDC JUN 14   17 47 42.2  D             *E  47 54
MIN          17 47 46.4
BKS          17 47 53.7
MHC          17 47 59.3
JAS          17 48 00.9
PRI          17 48 07.4
MNV          17 48 08.2  D             *E  48 19
FRI          17 48 08.5
             USGS  17 37 11.3, 43.0N, 147.6E, H= N  KM, M=5.2
             KURIL ISLANDS

MHC JUN 14   18 48                     *E  48 24
WDC          18 48 29.6  D             *E  48 46
MIN          18 48 33.6
BKS          18 48                     *E  49 46   *E  57 28   *E  05 00
MHC          18 48 45.4
JAS          18 48 48.1
PRI          18 48 54.2
MNV          18 48 55.3                *E  49 11
FRI          18 48 56.4
             USGS  18 38 01.1, 43.5N, 147.8E, H= 21 KM, M=5.7
             KURIL ISLANDS

WDC JUN 14   19 00 07.0
JAS          19 00 25.8
BKS          19 00                     *E  00 27
MNV          19 00 32.5                *E  00 40
PRI          19 00
             USGS  18 49 40.2, 43.6N, 148.0E, H= 38 KM, M=5.3
             KURIL ISLANDS REGION

WDC JUN 14   19 24 33.0                *E  24 44
JAS          19 24 50.5                *E  25 09
MNV          19 24 58
             USGS  19 14 05.3, 43.8N, 147.8E, H= N  KM, M=5.2
             KURIL ISLANDS

WDC JUN 14   20 56 50.8                *E  57 02
MIN          20 56 54.0                *E  57 07
JAS          20 57 15.5                *E  57 28   *E  59 49
BKS          20 57 15.7
                          MICRON  0.04  PERIOD  1.0
             PZ
MHC          20 57 20.5                *E  57 45   *E  59 55
PRI          20 57 32.2
             USGS  20 50 25.7, 71.9N, 132.9W, H= N  KM, M=5.3
             BEAUFORT SEA

MHC JUN 14   23 47 35.9  D             *E  50 17
WDC          23 47 41.7  D
MIN          23 47 45.5  D             *E  05 32
BKS          23 47 51.2  D    57 12
                          MICRON  0.28  PERIOD  1.0
             PZ
MHC          23 47 55.5  D
SAO          23 47 57.5
JAS          23 47 58.3  D             *E  50 40
PRI          23 48 03.7  D
FRI          23 48 04.0  D
MNV          23 48 05.8  D
             USGS  23 36 27.7, 36.2N, 143.4E, H= 19 KM, M=6.1
             OFF EAST COAST OF HONSHU, JAPAN

WDC JUN 15   00 29 57.0                *I  30 16
MIN          00 30 02.3                *E  38 52
JAS          00 30 06.1
BKS          00 30 14
SAO          00 30 18.0
PRI          00 30 20.7
MHC          00 30 26.6
FRI          00 30 26.8
JAS          00 30 27.5
             USGS  00 19 34.0, 43.6N, 147.8E, H= 35 KM, M=6.1
             KURIL ISLANDS

WDC JUN 15   02 19 42.4
MIN          02 19 47.0
JAS          02 19 53.9
BKS          02 19 58.4
SAO          02 20 00.9
PRI          02 20 07.7
MHC          02 20 07.8
FRI          02 20 08.3
             USGS  02 09 08.7, 42.6N, 148.0E, H= 10 KM, M=5.6
             OFF COAST OF HOKKAIDO, JAPAN

WDC JUN 15   04 55 30.7
MIN          04 55 33.4
JAS          04 55 34.7  C    05 58    *E  06 00   *E  18 40   LR   22 12
                          MICRON        PERIOD
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                          MAXR(Z)  3.5          20
                          MAXH(N)  0.7          20
                          MAXH(E)  2.5          20
MHC          04 55 37.4
JAS          04 55 41.4
PRI          04 55 43.2
FRI          04 55 45.1
MNV          04 55 49.2  C
                          MAG 5.5, DIST(DEG) 86
             USGS  04 42 50.2, 11.8N, 141.4E, H= 51 KM, M=5.5
             WEST CAROLINE ISLANDS

MHC JUN 15   06 36 44.2
PRI          06 36 45.7
WDC          06 36 48.7
JAS          06 36 49.8
MIN          06 36 50.8
FRI          06 36 50.9
             USGS  06 24 29.9, 18.7S, 169.1E, H=231 KM, M=4.8
             NEW HEBRIDES ISLANDS

WDC JUN 15   08 01 31.7
MIN          08 01 37.2
BKS          08 01 49.3
                          MICRON        PERIOD
                            0.03          0.7
             PZ
MHC          08 01 52.0
JAS          08 01 55.3
SAO          08 01 56.2
FRI          08 02                     *E  02 01
MNV          08 02 04.0                *I  02 07
PRI          08 02 06.5
             USGS  07 53 57.0, 51.5N, 179.5E, H= 30 KM, M=5.1
             RAT ISLANDS, ALEUTIAN ISLANDS

MIN JUN 15   18 09 44.5
WDC          18 09 45.1
             USGS  17 59 16.7,  8.4S,  74.1W, H=175 KM, M=4.7
             PERU-BRAZIL BORDER REGION

WDC JUN 15   20 16 33.2
MNV          20 16 33.8
JAS          20 16 38.0

SAO JUN 16   00 41 23.0  C
BKS          00 41 24.0  C
                          MICRON        PERIOD
                            0.11          1.0
             PZ
PRI          00 41 24.5  C
MHC          00 41 24.9  C
FRI          00 41 30.5  C
JAS          00 41 31.0  C
WDC          00 41 32.6  C
MIN          00 41 34.7
MNV          00 41 41.0  C
             USGS  00 30 10.3, 16.4S, 174.4W, H=161 KM, M=5.4
             TONGA ISLANDS

JAS JUN 16   05 15 23.7
MNV          05 15 24.6
WDC          05 15 42.0
BKS          05 15                     *E  48 00   *E  48 28

MHC JUN 16   22 48 25.7
WDC          22 48 27.7
BKS          22 48 30.8       59 08   PS   00 44   SS   05 30   *E  13 18
                                      LR   16 32
                          MICRON        PERIOD
             PZ             0.09          1.0
                          MAXR(Z) 20.4          20
                          MAXH(N)  2.5          20
                          MAXH(E) 18.6          20
MIN          22 48 32.9
MHC          22 48 33.5
JAS          22 48 34.6
PRI          22 48 36.0
FRI          22 48 40.5
MNV          22 48 44.5
                          MAG 6.3, DIST(DEG) 92
             USGS  22 35 23.2,  3.0S, 147.8E, H= N  KM, M=6.1
             ADMIRALTY ISLANDS REGION

MNV JUN 17   05 09 51.0
JAS          05 09                     *E  10 04
WDC          05 10 16.3
             USGS  05 01 13.5, 18.5N,  66.3W, H=111 KM, M=5.0
             PUERTA RICA REGION

WDC JUN 18   05 55 01.3  D
MIN          05 55 04.1
JAS          05 55 19.1
BKS          05 55                     *E  16 00
             USGS  05 44 05.9, 40.9N, 143.0E, H= 50 KM, M=5.2
             OFF EAST COAST OF HONSHU, JAPAN

WDC JUN 18   08 36 04.5  D
MIN          08 36 10.0  D
JAS          08 36 32.1  D
FRI          08 36                     *E  36 42
             USGS  08 30 37.8, 56.5N, 151.4W, H= 13 KM, M=4.8
             KODIAK ISLANDS REGION

BKS JUN 18   12 23 56.5                *E  24 13
SAO          12 23 56.7
PRI          12 23 58.1
MHC          12 23 58.3
FRI          12 24 03.5
JAS          12 24 03.8  C
WDC          12 24 04.7  C
MIN          12 24 06.8
             USGS  12 13 04.4, 17.4S, 178.3W, H=562 KM, M=5.2
             FIJI ISLANDS REGION

BKS JUN 18   12 37                     *E  37 33
MHC          12 37 27.5
WDC          12 37 27.5
PRI          12 37 28.1
JAS          12 37 28.8
FRI          12 37 29.8
MIN          12 37 30.4
             USGS  12 17 36.1, 46.3S,  95.9E, H= N  KM, M=5.4
             SOUTHEAST INDIAN RISE

MHC JUN 18   13 30 43.0
WDC          13 30 45.0
JAS          13 30 46.0
MIN          13 30                     *E  30 46

WDC JUN 18   13 45 32.5                *E  45 37
MIN          13 45                     *E  45 57
JAS          13 45 51.2
FRI          13 45
             USGS  13 35 03.1, 42.8N, 147.6E, H= 47 KM, M=5.0
             OFF COAST OF HOKKAIDO, JAPAN

BKS JUN 18   16 44 36.0       54 30   *PP  45 20   *E  57 00   *SSS 01 30
                                      SSS  03 45   *E  07 00
                          MICRON        PERIOD
             PZ             0.08          1.0
SAO          16 44 37.5
MHC          16 44 38.0
PRI          16 44 39.8
WDC          16 44 40.5  C
JAS          16 44 43.1
FRI          16 44 44.0
             USGS  16 32 29.1, 13.7S, 167.1E, H=201 KM, M=5.5
             NEW HEBRIDES ISLANDS

MHC JUN 18   17 50 31.3  C
SAO          17 50 31.3  D
JAS          17 50 36.4  D
FRI          17 50 38.7  C
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                    17 50 40.4  D
                    17 50 42.3
                    17 51 16.0
                          MAG 4.1, GUSTINE AREA

                                                *E  02 27

                    09 02
                    09 02 27.8
                    09 02 32.6
                    09 02 35.2
                    09 02 38.0
                          USGS  08 50 38.0, 21.4S, 174.2W, H= N  KM, M=5.0
                                TONGA ISLANDS

JUN 19              13 00 45.4  C
                    13 00 53.6  C
                    13 00 58.8  C
                    13 01 04.6  C
                    13 01 07.0  C
                    13 01 13.4  C
                    13 01 18.5
                    13 01 29.0  C
                    13 01 43.0
                          MAG 5.9
                          USGS  13 00 00.1, 37.4N, 116.3E, H= 0  KM, M=6.1
                                NEVADA TEST SITE

JUN 20              00 31 15.9
                    00 31 16.2
                    00 31 19.7
                    00 31 21.8
                    00 31 23.4
                    00 31 25.2
                          USGS  00 19 48.2, 20.6S, 177.8W, H= 31 KM, M=4.7
                                FIJI ISLANDS REGION

JUN 20              07 46 32.0
                    07 46 37.1  D
                    07 46 40
                    07 46 41.5        57 00     *E  09 40
                    07 46 44.0
                    07 46 47.6  D
                    07 46 50
                    07 46 51.5
                    07 46 56.0  D
                          USGS  07 34 06.2, 12.4N, 144.3E, H= 35 KM, M=5.4
                                SOUTH OF MARIANA ISLANDS

JUN 20              12 23 03.7
                    12 23 06.2
                    12 23 21.7

JUN 20              13 15 47.3
                    13 16 06.0
                    13 16 13.6
                          USGS  13 05 19.0, 42.8N, 148.0E, H= N  KM, M=5.0
                                OFF COAST OF HOKKAIDO, JAPAN

JUN 21              01 33 01.4                  *E  33 10   *E  33 18
                    01 33                       *E  37 45   *E  38 20  LR  41 00
                                MICRON          PERIOD
                          MAXR(Z)  1.25          20
                          MAXH(N)  1.43          20
                          MAXH(E)  0.9           10
                    01 33 04.0                  *E  33 12   *E  33 20
                    01 33 19.2                  *E  33 28   *E  33 36
                          USGS  01 22 47.6, 23.1S, 114.8W, H= 27 KM, M=4.8
                                EASTER ISLANDS REGION

JUN 22              02 35 32.4
                    02 35 37.9
                    02 35 41.7  D
                    02 35 46    C     45 30     *E  50 38   LQ  55 19  LR  58 36
                                MICRON          PERIOD
                          PZ       0.26          1
                          MAXR(Z)  6             20
                          MAXH(N)  7.9           20
                          MAXH(E)  9.3           20
                    02 35 52.6
                    02 35 53.1  D
                    02 35 57.6
                    02 35 58.3  D
                    02 36 00.7  D
                          MAG 6.1, DIST(DEG) 76
                          USGS  02 23 58.7, 30.0N, 142.1E, H= N  KM, M=5.8
                                SOUTH OF HONSHU, JAPAN

JUN 22              04 34 19.2
                    04 34 25.7  D               *PP  34 57
                    04 34 30.3  D               *PP  35 02
                    04 34 47.0  D               *PP  35 19
                    04 34                       *E   34 47
                    04 34 53.1
                    04 34 53.9  D               *PP  35 25
                    04 34                       *E   34 58
                          USGS  04 25 15.3, 51.9N, 157.5E, H=133 KM, M=5.3
                                KAMCHATKA

JUN 22              22 54 38.0  C
                    22 54 42.0  C
                    22 54 47.9
                    22 54 56          03 38     SS  08 00  LR  11 18
                                MICRON          PERIOD
                          PZ       0.14          1.5
                          MAXR(Z)  3.0           20
                          MAXH(N)  3.6           20
                          MAXH(E)  3.2           20
                    22 54 59.5
                    22 55 02.1
                    22 55 08.3
                    22 55 08.6
                    22 55 09.6  C
                          MAG 5.5, DIST(DEG) 66
                          USGS  22 44 10.2, 43.2N, 147.2E, H= 21 KM, M=5.7
                                KURIL ISLANDS

JUN 22              23 04 42.1  D
                    23 04 42.2
                    23 04 47.5
                    23 04 50.0
                    23 04 54.3
                    23 05 02.0  D
                    23 05 09.4
                          USGS  22 53 04.3, 22.4S,  68.4W, H=124 KM, M=5.3
                                NORTHERN CHILE

JUN 22              23 11 25.3
                    23 11 29.7
                    23 11 41.1
                    23 11 43.9
                    23 11 50.2
                    23 11 50.7
                    23 11 50.9
                          USGS  23 00 53.0, 43.0N, 147.2E, H= N  KM, M=5.3
                                KURIL ISLANDS

JUN 22              23 47 46.0
                    23 48 04.7
                    23 48 11.8
                          USGS  23 37 14.0, 43.0N, 147.2E, H= 35 KM, M=4.8
                                KURIL ISLANDS

JUN 23              00 14 07.5
                    00 14 09.4
                    00 14 15.9
                          USGS  00 02 21.7, 24.0S, 179.8W, H=358 KM, M=4.9
                                SOUTH OF FIJI ISLANDS

JUN 23              01 53 32.8
                    01 53 39.4
                          USGS  01 44 18.9, 55.2N, 162.6E, H= 35 KM, M=4.8
                                NEAR EAST COAST OF KAMCHATKA

                    09 24 07.6
FHC JUN 23          09 24 13.6
WDC                 09 24 17.7
MIN                 09 24          33 14     *E  24 38
BKS                       MICRON              PERIOD
                    MAXH(N)  1.8               20
                    MAXH(E)  0.9               20
                    09 24 29.5
MHC                 09 24 32.1
JAS                 09 24                     *E  24 38
FRI                 09 24 38.6
PRI                 09 24 39.3  C
MNV                       USGS  09 13 41.5, 43.0N, 147.2E, H= 35 KM, M=5.4
                                KURIL ISLANDS

FHC JUN 23          09 37                     *E  37 00
JAS                 09 37 02.3                *PP 39 02
WDC                 09 37 03.3                *PP 39 03
MIN                 09 37 05.3                *PP 39 05
MNV                 09 37 11.9                *PP 39 12
                          USGS  09 26 01.4, 17.3S, 179.0W, H=563 KM, M=5.4
                                FIJI ISLANDS REGION

WDC JUN 23          12 07 00.0                *E  07 10
JAS                 12 07                     *E  07 28
MNV                 12 07 25.5                *E  07 36
                          USGS  11 56 27.2, 43.0N, 147.0E, H=380 KM, M=5.0
                                KURIL ISLANDS

MIN JUN 23          13 29 46.6
WDC                 13 29 46.8
JAS                 13 29 56.2
MHC                 13 30 01.9
PRI                 13 30 06.4
                          USGS  13 17 38.4, 50.6N,   9.8E, H= N  KM, M=5.3
                                GERMANY

PRI JUN 24          00 51 22.3
JAS                 00 51 27.9  D
MHC                 00 51 30.4
BKS                 00 51 33.3
WDC                 00 51 43.0
FHC                 00 51 50.4
                          USGS  00 39 47.4, 20.6S,  70.1W, H= N  KM, M=5.6
                                NEAR EAST COAST OF NORTHERN CHILE

BKS JUN 24          21 27                     *E  50 48
                            MICRON            PERIOD
                    MAXR(Z)  0.9               20
                    MAXH(N)  0.8               20
                    MAXH(E)  0.9               20
PRI                 21 27 04.8
MHC                 21 27 05.8
FHC                 21 27
JAS                 21 27                     *E  27 11
WDC                 21 27 11.8  C
FRI                 21 27 14.2  C
MIN                 21 27                     *E  27 15
MNV                 21 27 15.8
                    21 27 21.5  C
                          USGS  21 15 19.0, 20.6S, 174.1W, H= 23 KM, M=5.4
                                TONGA ISLANDS

WDC JUN 24          23 41 51.0                *E  45 47
MIN                 23 41 53.7
JAS                 23 42 03.8                *E  45 02
                          USGS  23 28 39.2, 22.9N, 122.9E, H= 13 KM, M=5.5
                                SOUTHEAST OF TAIWAN

PRI JUN 25          06 03 59.4  D
FRI                 06 03 59.7  D
SAO                 06 04                     *E  04 08
JAS                 06 04 10.8  D
MHC                 06 04 13.4  D
BKS                 06 04 20.5  D             *E  11 28
                            MICRON            PERIOD
                       PZ       0.09           1
MIN                 06 04 34.3
WDC                 06 04 38.1  D
FHC                 06 04 48.2  D
                          USGS  05 59 16.2, 19.7N, 104.7W, H= 90 KM, M=4.8
                                NEAR COAST OF JALISCO, MEXICO

PRI JUN 25          19 25 21.5
FRI                 19 25
MNV                 19 25                     *E  25 28
JAS                 19 25 33.8                *I  25 45
MHC                 19 25 38.6                *I  25 51
SAO                 19 25 38.9
BKS                 19 25                     *E  25 41
                          29 58               *E  25 50
                            MICRON            PERIOD
                    MAXH(N) 17.3               20
                    MAXH(E) 16.1               20
MIN                 19 26                     *E  26 04
WDC                 19 26 08.2
                          MAG 5.7, DIST(DEG) 23
                          USGS  19 20 44.3, 19.0N, 107.1W, H= N  KM, M=4.9
                                OFF COAST OF JALISCO, MEXICO

PRI JUN 26          06 52 03.0
JAS                 06 52 07.8
MHC                 06 52 14.4                PCP   54 38 SCP   58 53
BKS                 06 52                     *E  52 18   *E  52 40
MIN                 06 52 26.4          PCP   54 43
WDC                 06 52 30.5          PCP   54 44
FHC                 06 52 41.8
                          USGS  06 45 17.6, 13.9N,  90.7W, H= 75 KM, M=4.8
                                GUATEMALA

FHC JUN 26          08 05 54.5
WDC                 08 06 04.3
MIN                 08 06 10.0
BKS                 08 06 19
                          12 58
                            MICRON            PERIOD
                    MAXH(N)  1.2               20
                    MAXH(E)  1.6               20
MHC                 08 06                     *E  05 24
JAS                 08 06 30.2
FRI                 08 06                     *E  05 38
PRI                 08 06 38.7
                          USGS  07 59 27.2, 52.4N, 168.7W, H= 37 KM, M=5.0
                                FOX ISLANDS, ALEUTIAN ISLANDS

WDC JUN 26          09 28 06.0                *E  28 17
JAS                 09 28 28.9                *E  28 39
                          USGS  09 17 38.3, 43.1N, 147.0E, H= 39 KM, M=4.7
                                KURIL ISLANDS

FHC JUN 26          10 03 24.6
WDC                 10 03 29.8  C             PP  06 23
MIN                 10 03 33.4  C             PP  06 42
BKS                 10 03 38.3                *E  24 48
                          12 56
                            MICRON            PERIOD
SAO                    PZ       0.22           1.2
JAS                 10 03 44.3
MHC                 10 03 44.7  C             PP  06 49
PRI                 10 03 42.2
FRI                 10 03 49.8
                    10 03 49.9  C             PP  06 58
                          USGS  09 52 19.9, 31.9N, 138.1E, H=389 KM, M=5.4
                                SOUTH OF HONSHU, JAPAN

WDC JUN 26          12 00 12.0
MIN                 12 00 16.1
JAS                 12 00 38.7
                          USGS  11 54 37.9, 55.7N, 154.2W, H= 1  KM, M=4.5
                                SOUTH OF ALASKA

MNV JUN 26          12 30 32.5  C
FRI                 12 30 45.7  C
JAS                 12 30 53.5  C
PRI                 12 30 58.1  C
SAO                 12 31 00.0  C
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                 12 31 06.2   C
MHC              12 31 13     C
BKS              12 31 28.2   C
WDC              12 31 43.5   C
FHC                   MAG 5.1
                      USGS   12 30 00.2, 37.3N, 116.4W, H= 0  KM, M=6.2
                             NEVADA TEST SITE

WDC JUN  26      13 17 30.0   D                *I   17 44
BKS              13 17 41.7
MHC              13 17 46.0
JAS              13 17 48.5
PRI              13 17 54.8
FRI              13 17 55.4
                      USGS   13 07 02.5, 42.8N, 148.2E, H= 50 KM, M=5.4
                             OFF COAST OF HOKKAIDO, JAPAN

MNV JUN  27      07 27 16.1   D
FRI              07 27 28.5
JAS              07 27 37.0   D                *E   27 33
PRI              07 27                         *E   27 46
SAO              07 27                         *E   27 50
MHC              07 28                         *E   27 57
BKS              07 28                         *E   29 00
                                               *E   28 09
                      MAG 4.1
                      NEAR NEVADA TEST SITE

PRI JUN  28      04 29 51.3   D
MHC              04 29 53.0
FRI              04 29 56.2
JAS              04 29 57.0   D
WDC              04 29 59.8   D
MIN              04 30 01.5
MNV              04 30 05.3   D
                      USGS   04 17 48.2, 26.8S, 178.0W, H=205 KM, M=4.8
                             SOUTH OF FIJI ISLANDS

MNV JUN  28      09 48 05
FRI              09 48                         *E   48 20
JAS              09 48 27
PRI              09 48                         *E   48 40
SAO              09 48                         *E   48 47
MHC              09 48                         *E   48 47
BKS              09 48 58                      *E   51 10
                      MAG 4.0
                      NEAR NEVADA TEST SITE

WDC JUN  29      00 42 27.2
JAS              00 42 29.7
MNV              00 42 39.5
                      USGS   00 30 15.8, 13.3S, 167.1E, H=190 KM, M=5.3
                             NEW HEBRIDES ISLANDS

FHC JUN  29      10 48 33.8   C                *PP  50 35 SCS   57 35
WDC              10 48 38.1   C                *PP  50 40   SCS 57 39  PKKP 09 28
                                               P*P* 15 40   *E  17 55
MIN              10 48 41.6   C                *PP  50 39 SCS   57 52 P*P* 15 34
                                               *E   17 51
BKS              10 48 49.5   C              SCS    58 04   *SS 01 31   *E  06 04
                                               *E   09 28
                                MICRON         PERIOD
                      PZ          0.72           1.0
MHC              10 48 52.5   C                *PP  50 56 SCS   58 09 P*P* 15 38
                                               *E   18 14
JAS              10 48 54.1                    *PP  50 58 SCS   58 14 PKKP 09 40
                                               P*P* 15 36   *E  17 50
SAO              10 48 54.4                    *PP  50 59   *E  58 16
FRI              10 48 59.4   C                *PP  51 04 SCS   58 24 P*P* 15 36
                                               *E   18 06
PRI              10 49 00.0   C                *PP  51 04 SCS   58 25 P*P* 15 35
                                               *E   18 10
                      USGS   10 37 41.4, 39.8N, 130.0E, H=550 KM, M=6.2
                             SEA OF JAPAN

WDC JUN  29      12 35 33.0
MIN              12 35                         *E   35 36
JAS              12 35 52.3
MNV              12 35 56.4
                      USGS   12 24 43.4, 53.0N, 132.2E, H= N  KM, M=4.9
                             EASTERN USSR

WDC JUN  29      15 17                         *E   17 48
MIN              15 17                         *E   17 54
JAS              15 18 11.8
MNV              15 18 18.1

WDC JUN  29      22 37 13.2
JAS              22 37 35.0

PRI JUN  30      10 20 00.3
FRI              10 20 00.8
MNV              10 20 08.9
JAS              10 20 12.7
MHC              10 20 13.4

JAS JUN  30      10 45 15.1
WDC              10 45 17.3
MIN              10 45 19.2
MNV              10 45 24.0
                      USGS   10 33 22.3, 23.5S, 117.2W, H=220 KM, M=4.9
                             SOUTH OF FIJI ISLANDS

MNV JUN  30      18 56 22.6                    *E   57 08
MIN              18 56 35.0                    *E   57 23   *E  59 35
WDC              18 56 38.4                    *E   57 10   *E  57 25   *E  59 45
JAS              18 56 43
FRI              18 56 51.5                    *I   57 40   *E  00 05
FHC              18 56 56.4                    *E   59 18
BKS              18 57 00                      *E   57 49   *E  00 19
MHC              18 57 01.4                    *E   00 36
PRI              18 57 04                      *E   57 07
SAO              18 57
                      USGS   18 54 14.0, 44.7N, 110.8W, H= 10 KM, M=6.0
                             YELLOWSTONE NATIONAL PARK, WYOMING

                                               *E   19 17

MNV JUN  30      19 19
JAS              19 19 35.9
WDC              19 20 00.2

FRI JUN  30      23 03 36.0
PRI              23 03 36.7                    *E   11 30
MNV              23 03 40.3   C                *E   12 03
JAS              23 03 46.8   C
MHC              23 03 49.0                    *E   11 40
BKS              23 03 56          09 49    LR     11 40
                                MICRON         PERIOD
                      MAXR(Z)     3.7            22
                      MAXH(N)     7.3            23
                      MAXH(E)     8.7            22

MIN              23 04 08.5
WDC              23 04 12.5                    *E   04 23
FHC              23 04
                      MAG 5.2, DIST(DEG) 26
                      USGS   22 58 24.0, 18.3N, 102.7W, H= 27 KM, M=5.1
                             MICHOACAN, MEXICO

MNV JUN  30      23 56 10.8   C
JAS              23 56 17.2                    *E   56 20
MHC              23 56
FHC              23 56 54
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