International Seismological Centre

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ARCATA–BERKELEY–COLUMBIA COLLEGE–ELK RIVER–FICKLE HILL
FOX CREEK–FRIANT–GRANITE CREEK–LLANADA–MINA–MINERAL
MOUNT HAMILTON–OROVILLE–PARAISO–PILARCITOS CREEK
PRIEST–SAN ANDREAS GEOPHYSICAL OBSERVATORY
SAN PABLO DAM–WHISKEYTOWN DAM

Earthquakes and the Registration of Earthquakes

From January 1, 1988 to December 31, 1988

Eric R. Collins
Shyh-Jeng Chiou
Robert A. Uhrhammer

International Seismological Centre

BULLETIN OF THE SEISMOGRAPHIC STATIONS

of the University of California

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January 1, 1988 to December 31, 1988

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INTRODUCTION

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

Information items regarding the seismographic stations that comprise the Berkeley network are reported in each issue.

Note that the No. 1 and No. 2 issues of Volume 58 are published together in the current issue.

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History of the University of California Stations

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

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

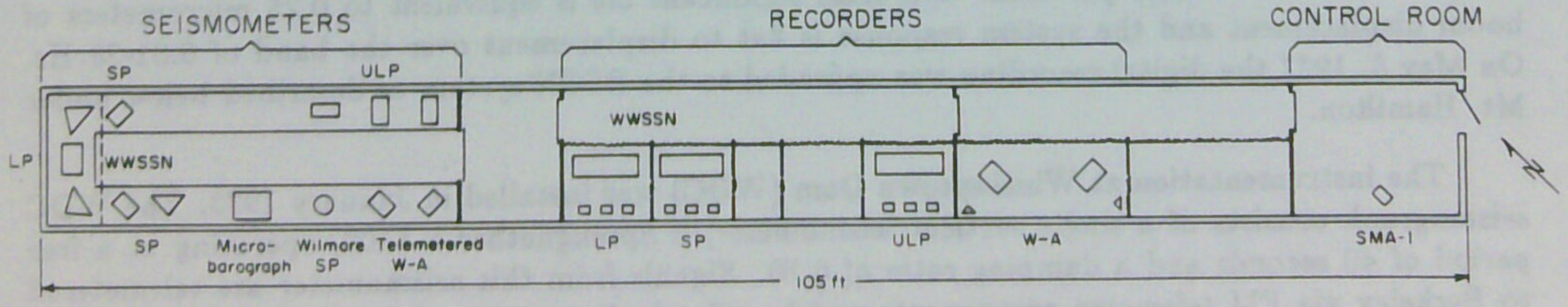
The quotation is from 'History of the University of California Seismographic Stations and Related Activities' by Professor George D. Louderback, published in the Bulletin of the Seismological Society of America, Vol. 32, No. 3, pp. 205-229, 1942. In this paper may be found a detailed account of the development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

Since 1942, the number of seismographic stations associated with the University of California has increased from six to nineteen in 1979. 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 1969, 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, the California Division of Mines and Geology, the U.S. Geological Survey, the U.S. Corps of Engineers, the East Bay Municipal Utility District, and others. A telemetry network of nineteen stations in Central and Northern California, recording on film and selected stations on magnetic tape, is now operated together with seismographs with broadband frequency response at Berkeley, Mt. Hamilton, Columbia College, Oroville, San Andreas Geophysical Observatory, and Whiskeytown Dam. Copies of seismograms and magnetic tapes or disks from seismographs of the Berkeley network are available, together with response characteristics, on request to the Director.

The Byerly Seismographic Station (BKS)

Equipment of a WWSSN station began operating in a newly constructed adit east of the main campus on June 8, 1962. The closest buildings, part of the Lawrence Berkeley Laboratory, are about 0.8 km away.

A plan of the adit 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.



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Twelve seismographs are currently operating in the adit. Their free periods range from 0.8 sec to 100 sec and the magnification of the photographic recordings ranges from approximately 500 to 25,000. Details are given in the table on instrumentation.

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 down-hill 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.

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.

Broadband Seismometers

A network of broadband seismometers is now operated by the University of California at seismographic stations at Berkeley (BKS), Columbia College (CMB), Mt. Hamilton (MHC), Oroville (ORV), San Andreas Geophysical Observatory (SAO) and Whiskeytown Dam (WDC).

At Berkeley, broadband instrumentation has been gradually developed, starting with the installation, in 1963, of a Press-Ewing seismometer operating at a free period of 30 seconds. In 1971, the installation of a 3-component set of special ultra-long period (ULP) seismometers in the Byerly Seismographic Vault was completed. The seismometers are Sprengnether S-5100 operated at a period of 100 seconds and they utilize electronic recentering feedback for long-term stability and temperature/barometric feedback also for the vertical component. The ultra-long period system generates photographic paper records equivalent to a 100 second pendulum with a velocity transducer recorded by a 300 second galvanometer with a magnification of 500 at a period of 100 seconds.

Starting in September 1975, low- ($\pm$2 mm) and high- ($\pm$0.02 mm) gain displacement signals from each of the three components were telemetered to the laboratory and recorded on 0.03 ips, 0-10 Hz, FM magnetic tape. The high-gain displacement signals are high-pass filtered at 500 seconds to reduce tidal signals. In 1980, a digital telemetry system was installed where the displacement signals from the three ULP seismometers are sampled at 99 samples per second each channel, with a resolution of 16 binary digits through a Phoenix Data 6816 ADC. An RCA COSMAC 1802 microprocessor system controls the analog-to-digital conversion process and buffers the incoming data. The digital data are temporarily stored in the microprocessor RAM memory, extra synchronization words are inserted, and finally the data are sent out bit-serially to a modem. The bit-serial digital data are transmitted over a leased phone line by modem pair. At the receiving end, the reconstructed serial data are applied to a PCM encode module which codes the data as DM-M. The coded PCM data are applied through a high-density digital encoder to the record head for one track of a Honeywell Model 96 tape transport, recording at 15/16 inches per second. With a 7200 foot reel of tape, data may be recorded continuously for 26 hours. The density at which the data are recorded on tape is equivalent to 5120 bits per inch. The least significant bit is equivalent to 0.25 micrometers of boom displacement and the system response is flat to displacement over the band of 0.01-25 Hz. On May 5, 1987 the digital recording was upgraded to the BDSN system as described below under Mt. Hamilton.

The instrumentation at Whiskeytown Dam (WDC) was installed in January 1973. The WDC seismograph consists of a single vertical seismometer, a Sprengnether S-5100, operating at a free period of 40 seconds and a damping ratio of 0.70. Signals from this seismometer are telemetered to Berkeley via FM telemetry components and leased telephone lines where they are recorded on analog magnetic tape recorders. Low- ($\pm$2 mm) and high- ($\pm$0.01-mm) gain displacement signals and velocity signals (two levels) from WDC are recorded on a Honeywell Model 96 tape transport at 15/16 inches per second. The seismometer at WDC is operated in a sealed pressure vessel identical

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to those used with high-gain long-period (HGLP) instruments.

An on-site digital recording system (DRS) was installed at Jamestown in September 1980. The DRS continuously recorded a three-component long-period (LP) channel at one sample per second each component and recorded, in an event detect mode, a three-component intermediate-period (IP) channel at 10 samples per second each component, and a vertical short-period (SP) channel at 20 samples per second. The DRS records the filtered output of Teledyne 210 and 200 seismometers operating with 16 bit resolution (no gain-ranging) on 1600 bpi magnetic tape for the LP and IP channels. The DRS was upgraded by the USGS, Albuquerque Seismological Laboratory to allow remote recording, calibration and control over a duplex 2400 bits per second telemetry link and the upgraded version was installed at JAS in February, 1982. At the same time, the control and recording part of the DRS was installed at Berkeley (150 km west of JAS) and a dedicated telephone line was used for the digital telemetry link. On July 26, 1984 the JAS station was moved to a temporary site (JAS1) 3 km to the south. During 1986 a new seismographic vault was constructed at Columbia College (11 km NNE of JAS) to permanently house the DRS equipment which was temporarily installed at JAS1. The Columbia College Seismographic Station (CMB) began operation on November 6, 1986.

Equipment was installed at Oroville in June 1979 to telemeter three-component broadband velocity signals from the Geotech 7505 and 8700 seismometers, operating at a free period of 15 seconds, to Berkeley via FM telemetry over leased telephone lines. In December 1979, the free period of the seismometers was changed to 20 seconds. In February 1986, a vertical Streckeisen broadband seismometer was installed, followed, in March 1986, by the installation of two horizontal Streckeisen broadband seismometers. The operation of the corresponding Geotech seismometers was discontinued at these times.

In March and April 1985, three component Streckeisen broadband seismometers were installed at Mt. Hamilton. The broadband signals are sent to Berkeley via FM telemetry over leased phone lines. On September 10, 1986 a microcomputer based digital data acquisition and telemetry system was installed at Mt. Hamilton as the first step in setting up the newly developed Berkeley Digital Seismograph Network (BDSN). The BDSN continuously records the BRB channels from the Streckeisen STS-1 broadband seismometers at 20 samples per second each component and the short-period at 40 samples per second using a 16 bit resolution digitizing system with no gain ranging. The digital data are telemetered to Berkeley over a duplex 2400 bit per second leased line and archived on 20 Megabyte disc cartridges. Details of the BDSN system are given in 'A PC-Based Broadband Digital Seismograph Network' (B. A. Bolt, J. E. Friday and R. A. Uhrhammer, *Geophys. J. R. astr. Soc.*, **93**, 565-573, 1988). On October 27, 1987, the VBB upgrade was installed in the Streckeisen instruments at MHC which changed the free period to 360 seconds.

In November 1985, a vertical and on June 11, 1987, two horizontal Streckeisen broadband seismometers were installed at San Andreas Geophysical Observatory. The broadband signals are telemetered to Berkeley via FM telemetry over leased phone lines.

Response curves for these broadband instruments are shown in figures 2 and 3. The displacement transfer functions for the broadband instruments in the Berkeley network are given in the Table on page 9. The transfer function is computed from the poles, zeroes and scaling constant (k) by:

$$\tau(\omega) = \frac{k \prod_{i=1}^{\#zeroes} (s_i - j\omega)}{\prod_{l=1}^{\#poles} (s_l - j\omega)}$$

where $\tau(\omega)$ is normalized to counts/meter and $j = \sqrt{-1}$.

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STATIONS IN OPERATION: January 1 to December 31, 1988

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 1968
Elk River	40°41.7'	124°08.4'	49	Marine siltstone	EKR	Buck Noel Ranch 1986
Whiskeytown	40°34.8'	122°32.4'	300	Pre-Devonian metavolcanic	WDC	National Park Service 1973
Fox Creek	40°31.3'	123°59.5'	113	Quaternary alluvium	FOX	Richard McKenna Ranch 1986
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 1969
Mina (Nevada)	38°26.0'	118°09.4'	1529	Limestone	MNA	Univ. of Nevada, Reno 1969
Columbia College	38°02.1'	120°23.1'	719	Paleozoic marine limestone	CMB	Columbia College November 1986
San Pablo Dam	37°56.7'	122°15.4'	119	Middle Miocene marine	ZSP	East Bay M.U.D. 1978
Berkeley (Byerly)	37°52.6'	122°14.1'	276	Claremont shales and 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	Granodiorite (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	Peter Nash Santa Cruz 1965
Friant	36°59.5'	119°42.5'	119	Alluvium overlying granite	FRI	Bureau of Reclamation 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	Granodiorite	PRS	Paraiso Hot Springs 1961
Priest	36°08.5'	120°39.9'	1187	Greenstone basic metamorphic	PRI	Federal Aviation Agency 1961

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STATION INSTRUMENTATION: January 1 to Decemember 31, 1988

Station	Type of Instrument	T_o sec	T_g sec	Component*	Mag at T_o**	1	2	3	4	5	6
ARC	Wood-Anderson Torsion	0.8	-	S,W	2,000	x					
BKS	Benioff 100Kg	1.0	0.75	Z	25,000	x					
	Sprengnether S-5007	15	100	N,E,Z	3,000	x					
	Wood-Anderson Torsion	0.8	-	S,W	2,000	x					
	Sprengnether ULP S-5100	100	300 Filter	N45°W,N45°E,Z	500	x					
	Filtered Displacement				-				x		
	Displacement				-				x		
	Velocity Digital				Digital Disc				x	x	
	Willmore MK II	1.0	0.04 Filter	Z	-				x	x	
	14000 X Torsion	0.8	-	N,E	14,000 max		x		x		
	700 X Torsion	0.8	-	N,E	700 max		x		x		
BRK	Benioff 100 kg	1.0	0.2	Z	25,000			x			
	Benioff 100 kg	1.0	8.0	Z	Variable						x
	100 X Torsion	0.8	-	N,E	100 max	x					
	Press-Ewing	15	30	Z	1,000		x				
CMB	Teledyne 210 & 220	15	-	N,E,Z	Digital Tape		x			x	
	Teledyne S-13	1.0	-	Z	Digital Tape		x	x		x	
ELK	Mark Products L-4C	1.0	-	Z					x		
FHC	Benioff 14 kg	1.0	0.2	Z	50,000		x	x	x		
FOX	Mark Products L-4C	1.0	-	Z					x		
FRI	Benioff 14 kg	1.0	0.33 Filter	Z	150,000		x	x	x		
GCC	Benioff 14 kg	1.0	0.2	Z	50,000			x	x		
LLA	Benioff 14 kg	1.0	0.2	Z	50,000			x	x		
MHC	Benioff 14 kg	1.0	0.2	Z	50,000			x	x	x	
	Wood-Anderson Torsion	0.8	-	S,E	2,000	x					
	Streckeisen	360	-	N,E,Z	Digital Disc		x		x		
MIN	Wood-Anderson Torsion	0.8	-	S,E	2,000	x					
	Teledyne S-13	1.0	0.2 Filter	Z	150,000			x	x		
MNA	Geotech SL210	15	1.0 Filter	Z			x	x	x		
	Filtered to give short-period response										
ORV	Benioff 100 kg	1.0	0.2	Z	220,000			x	x		
	Streckeisen	20	-	N, E, Z	-				x		
PCC	Benioff 14 kg	1.0	0.2	Z	50,000			x	x		
PRI	Benioff 14 kg	1.0	0.2	Z	50,000		x	x	x		
PRS	Benioff 14 kg	1.0	0.2	Z	50,000			x	x		
SAO	Sprengnether 0.70 kg	0.2	0.05 Filter	Z	1,500,000		x	x	x		
	Streckeisen	20	-	N,E,Z	Digital Disc		x		x	x	
WDC	Sprengnether S-5100	40	-	Z					x		
	BB velocity				-				x		
	Displacement								x		
	Filtered Displacement								x		
	Short Period (Filter)				500,000		x	x	x		
ZSP	Teledyne S-13	1.0	0.2 Filter	Z	-		x		x		

1 Signals recorded on photographic paper
2 Signals recorded on heat sensitive paper
3 Signals telemetered to Berkeley. Magnification using 20X viewer
4 Signals recorded on magnetic tape, Berkeley
5 Signals recorded on digital magnetic tape or disc
6 Ink recording

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

** Relative magnification curves of instruments recording photographically and through the telemetry system are listed on pages 10-13. Absolute magnification may be obtained by use of calibration pulses recorded daily for most stations.

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UNIVERSITY OF CALIFORNIA ACCELEROGRAPH STATIONS

Station Name	Coordinates	Installation Date	Instrument S.N.	Component	Sensitivity (cm/g)	Period (Sec)	Damping % of Critical	Structure	Location in Structure
BERKELEY MEMORIAL STADIUM	37.87°N 122.25°W	03 Aug 76	CRA-1 #148 (Recorder) FBA-3	V Down L North T East	1.90 1.83 1.82	.019 .018 .018	.63 .63 .65	Metal Box	Ground level
EARTH SCIENCES BUILDING	37.87°N 122.26°W	01 Nov 68	Wilmot Seismoscope SR-100	Duplex Horizontal	0.0545 (m/rad)	.75	≈ 10	Six-story building	Ground level
SAGO CENTRAL USGS #1032	36.77°N 121.45°W	08 Apr 78	SMA-1 #832	North Down West	1.94 1.85 1.81	.040 .039 .038	.60 .60 .60	Concrete vault	Ground level
SAGO EAST USGS #1657	36.81°N 121.41°N	21 Sep 78	SMA-1 #1419	North Down West	1.85 1.80 1.81	.040 .037 .038	.66 .63 .62	One-story building	Ground level
BERKELEY HAVILAND HALL USGS #1006	37.87°N 122.26°W	15 Apr 76	SMA-1 #2500 with WWVB	N45°W Down S45°W	1.79 1.73 1.71	.038 .038 .039	.60 .58 .57	Concrete building	Ground level
BERKELEY BYERLY SEISM STATION USGS #1005	37.87°N 122.24°W	29 Apr 76	SMA-1 #2503 with WWVB	N45°W Down S45°W	1.79 1.79 1.73	.038 .039 .039	.60 .55 .57	Concrete vault	Ground level
					Sensitivity (g/F.S.)	Bandwidth (Hz)			
RICHMOND FIELD STATION	37.92°N 122.33°W	12 May 76	Columbia Research Force Balance Accelerometer	Z, H_1^*, H_2^{**} Z, H_1, H_2	± 0.010 ± 0.50	.05-50 0-50		5" I.D. uncased backfilled borehole (43.8m deep)	Downhole (43.7m)
			SA-107 (+2g units) (0-50 Hz)	Z, H_1, H_2 Z,H_1,H_2	± 0.010 ± 0.50	.05-50 0-50			Midhole (15.7m)
				Z,H_1, H_2 Z,H_1, H_2	± 0.010 ± 0.50	.05-50 0-50			Metal Box surface level

* accelerometer aligned S45°W

** accelerometer aligned S45°E

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DISPLACEMENT TRANSFER FUNCTIONS

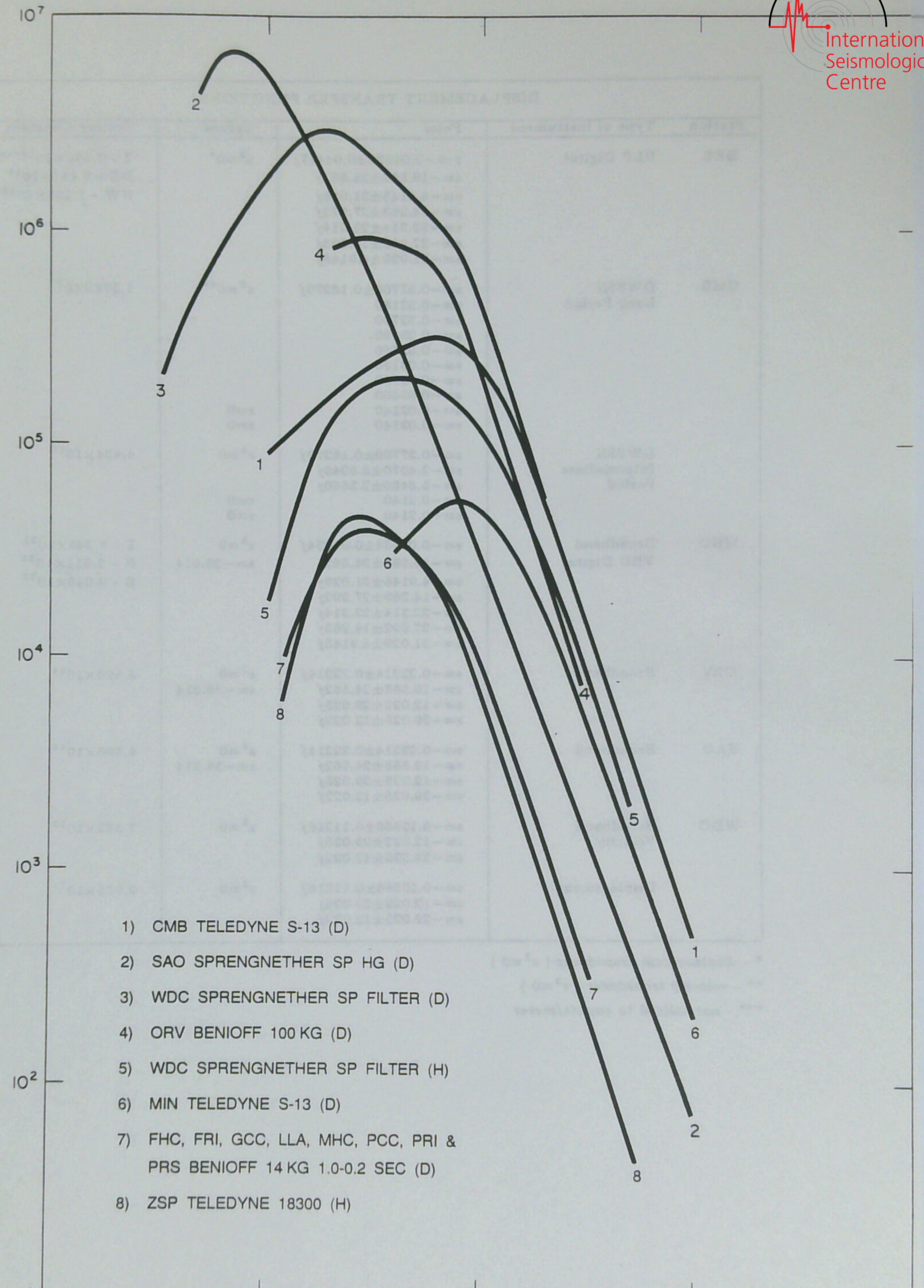
Station	Type of Instrument	Poles	Zeroes	Scaling Constant (k)
BKS	ULP Digital	$s=-0.04398\pm0.04487j$ $s=-19.588\pm24.562j$ $s=-4.9145\pm31.029j$ $s=-14.263\pm27.992j$ $s=-22.214\pm22.214j$ $s=-27.992\pm14.263j$ $s=-31.029\pm4.9145j$	$s^2=0$*	Z - 7.698×10^{18}*** NE - 8.447×10^{18} NW - 7.295×10^{18}
CMB	DWSSN Long Period	$s=-0.37700\pm0.18270j$ $s=-0.23180$ $s=-0.32760$ $s=-0.23180$. $s=-0.32760$ $s=-0.23180$ $s=-0.32760$ $s=-0.23180$ $s=-0.32760$ $s=-0.65400$ $s=-0.02140$ $s=-0.02140$	$s^3=0$** $s=0$ $s=0$	1.378×10^{7}
	DWSSN Intermediate Period	$s=-0.37700\pm0.18270j$ $s=-2.4070\pm5.8040j$ $s=-5.8480\pm2.3660j$ $s=-0.2140$ $s=-0.2140$	$s^3=0$ $s=0$ $s=0$	4.434×10^{10}
MHC	Broadband VBB Digital	$s=-0.01234\pm0.01234j$ $s=-19.588\pm24.562j$ $s=-4.9145\pm31.029j$ $s=-14.263\pm27.992j$ $s=-22.214\pm22.214j$ $s=-27.992\pm14.263j$ $s=-31.029\pm4.9145j$	$s^3=0$ $s=-38.314$	Z - 8.346×10^{23} N - 8.911×10^{23} E - 9.043×10^{23}
ORV	Broadband	$s=-0.22214\pm0.22214j$ $s=-19.588\pm24.562j$ $s=-12.022\pm29.025j$ $s=-29.025\pm12.022j$	$s^3=0$ $s=-38.314$	8.896×10^{14}
SAO	Broadband	$s=-0.22214\pm0.22214j$ $s=-19.588\pm24.562j$ $s=-12.022\pm29.025j$ $s=-29.025\pm12.022j$	$s^3=0$ $s=-38.314$	8.896×10^{14}
WDC	Broadband Velocity	$s=-0.10966\pm0.11218j$ $s=-12.022\pm29.025j$ $s=-29.025\pm12.022j$	$s^3=0$	7.382×10^{12}
	Displacement	$s=-0.10996\pm0.11218j$ $s=-12.022\pm29.025j$ $s=-29.025\pm12.022j$	$s^2=0$	9.975×10^{11}

* - displacement transducer ($s^2=0$)

** - velocity transducer ($s^3=0$)

*** - normalized to counts/meter

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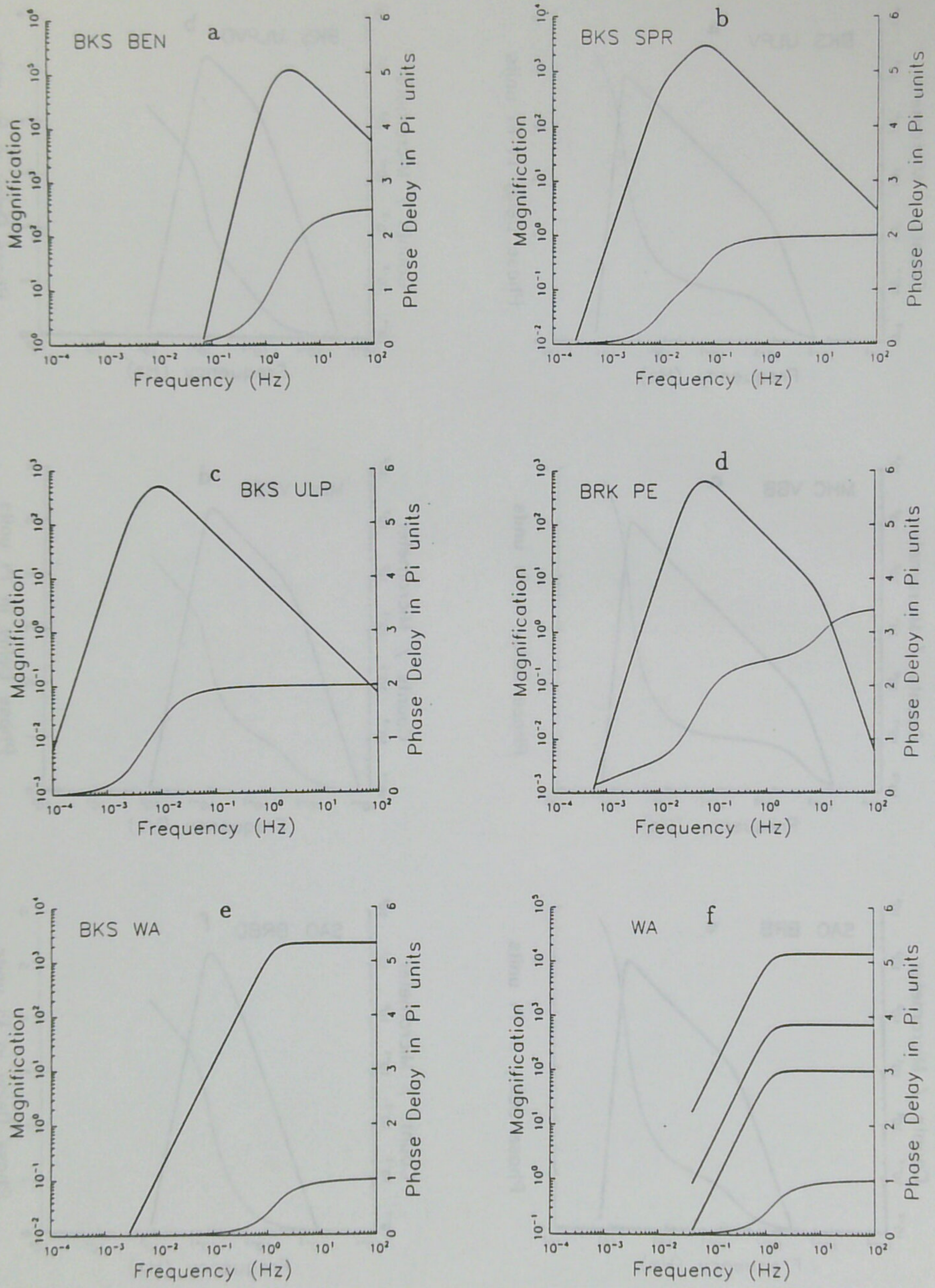
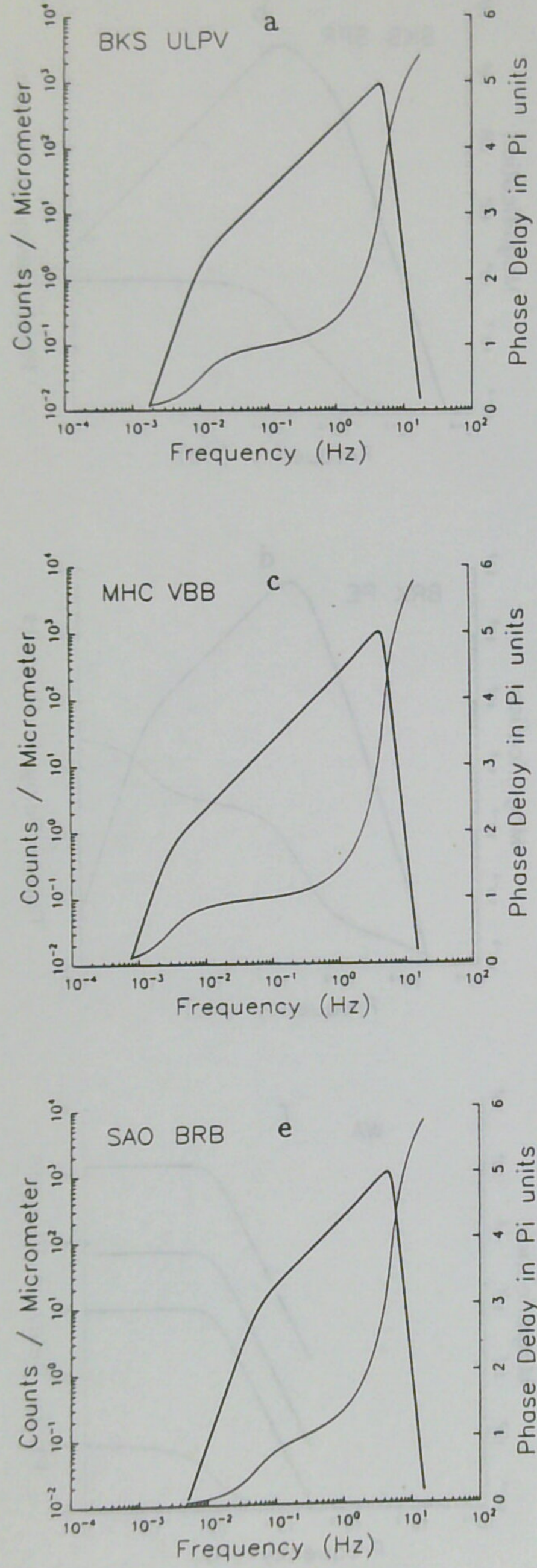
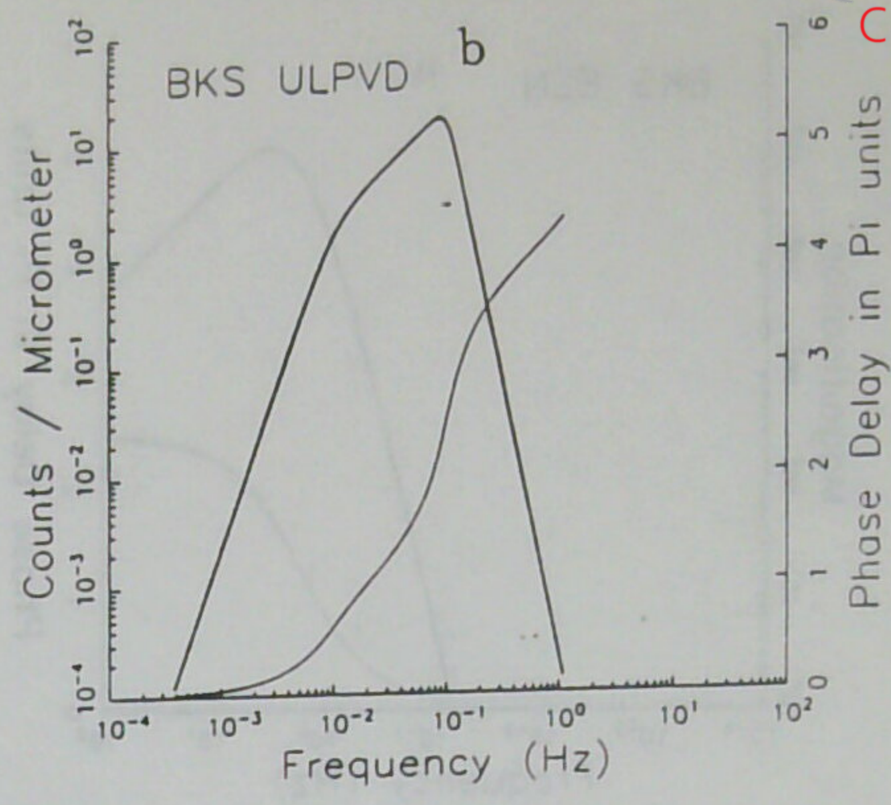
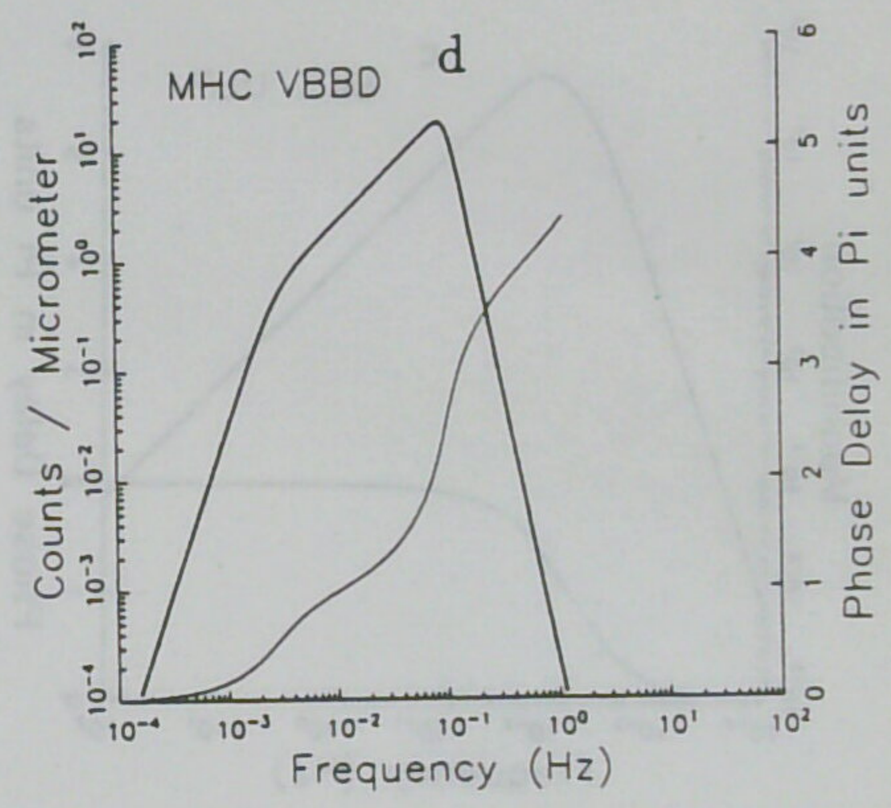


Figure 1. Response curves for the BRK and BKS records at Berkeley. The thick (upper) curve in each figure is the magnification. The thin (lower) curve is the corresponding phase response. (a) and (b) are WWSSN stations, (c) is the ultralong period seismographs (ULP), and (e) is the standard Wood-Anderson torsion seismograph. (a), (b), (c) and (e) are for photographic records at BKS. (d) is the response of the long period Press-Ewing at BRK recorded on heat sensitive paper. (f) gives the response of three additional Wood-Anderson torsion instruments, the upper two curves are the high-gain and low-gain channels of the telemetered Wood-Anderson instruments from BKS (recorded on heat sensitive paper), and the lower curve is the 100x torsion instrument at BRK (recorded photographically).

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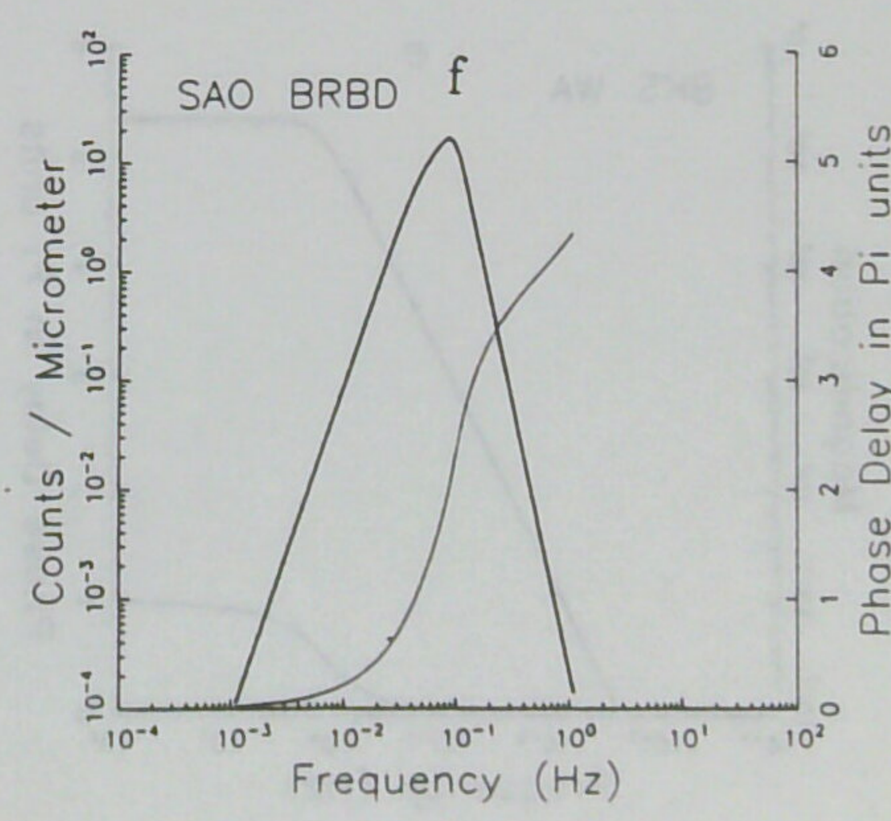


Figure 2. Berkeley Digital Seismograph Network (BDSN) station response curves. In each figure the thick (upper) curve is the count sensitivity while the thin (lower) curve is the corresponding phase response. (a), (c) and (e) are the high sampling rate broadband channels (20/sec). (b), (d) and (f) are the low sample rate (1/sec) decimated data.

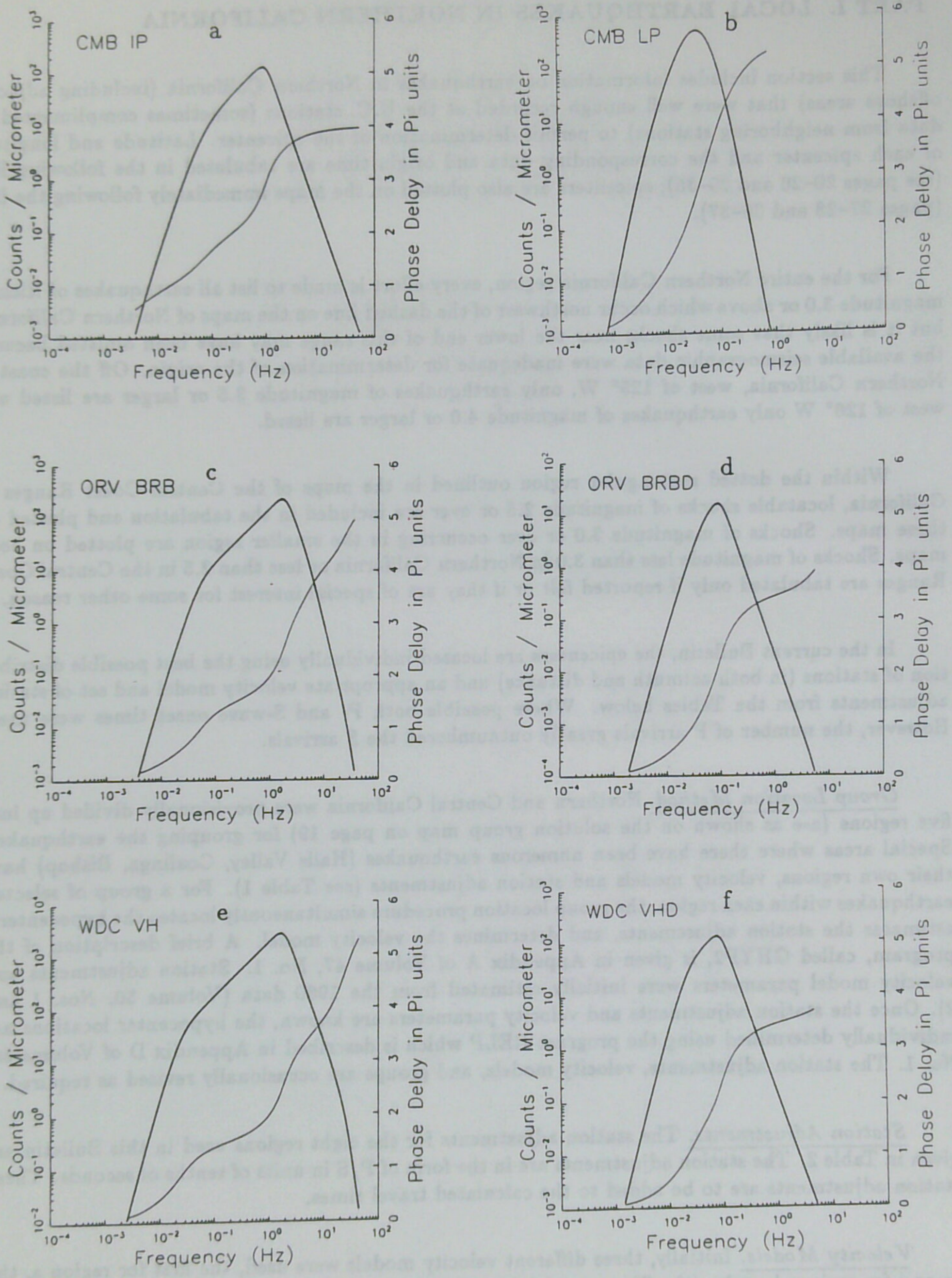


Figure 3. Additional broadband seismographs in the Berkeley network. The thick (upper) curve in each figure is the count sensitivity while the thin (lower) curve is the corresponding phase sensitivity. (a) and (b) are the LP and IP channels of the telemetered DWWSSN station CMB. (c) – (f) are the broadband station ORV and WDC which use FM analog telemetry and are recorded on analog magnetic tape (Honeywell 96 tape recorded). The signals are digitized (with 12 bit resolution) upon play back after discrimination and auto-alias filtering. (c) and (e) are the high (20/sec) sampling rate channels and (d) and (f) are the low (1/sec) sampling rate channels.

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PART I. LOCAL EARTHQUAKES IN NORTHERN CALIFORNIA

This section includes information on earthquakes in Northern California (including adjacent offshore areas) that were well enough recorded at the U.C. stations (sometimes complimented by data from neighboring stations) to permit determination of the epicenter. Latitude and longitude of each epicenter and the corresponding data and origin time are tabulated in the following lists (see pages 20–26 and 29–35); epicenters are also plotted on the maps immediately following the lists (pages 27–28 and 36–37).

For the entire Northern California region, every effort is made to list all earthquakes of Richter magnitude 3.0 or above which occur northwest of the dashed line on the maps of Northern California, but it is likely that some shocks near the lower end of this range may have been omitted because the available seismographic data were inadequate for determination of the origin. Off the coast of Northern California, west of 125° W, only earthquakes of magnitude 3.5 or larger are listed and west of 126° W only earthquakes of magnitude 4.0 or larger are listed.

Within the dotted rectangular region outlined in the maps of the Central Coast Ranges of California, locatable shocks of magnitude 2.5 or over are included in the tabulation and plotted on these maps. Shocks of magnitude 3.0 or over occurring in the smaller region are plotted on both maps. Shocks of magnitude less than 3.0 in Northern California or less than 2.5 in the Central Coast Ranges are tabulated only if reported felt or if they are of special interest for some other reason.

In the current Bulletin, the epicenters are located individually using the best possible distribution of stations (in both azimuth and distance) and an appropriate velocity model and set of station adjustments from the Tables below. Where possible both P- and S-wave onset times were used. However, the number of P arrivals greatly outnumbered the S arrivals.

Group Location Method. Northern and Central California were provisionally divided up into five regions (a-e as shown on the solution group map on page 19) for grouping the earthquakes. Special areas where there have been numerous earthquakes (Halls Valley, Coalinga, Bishop) have their own regions, velocity models and station adjustments (see Table 1). For a group of selected earthquakes within each region, the group location procedure simultaneously locates the hypocenters, estimates the station adjustments, and determines the velocity model. A brief description of the program, called GHYP2, is given in Appendix A of Volume 47, No. 1. Station adjustments and velocity model parameters were initially estimated from the 1980 data (Volume 50, Nos. 1 and 2). Once the station adjustments and velocity parameters are known, the hypocenter locations are individually determined using the program RELP which is described in Appendix D of Volume 50, No. 1. The station adjustments, velocity models, and groups are occasionally revised as required.

Station Adjustments. The station adjustments for the eight regions used in this Bulletin are given in Table 2. The station adjustments are in the form of P/S in units of tenths of seconds. These station adjustments are to be added to the calculated travel times.

Velocity Models. Initially, three different velocity models were used, the first for region a, the second for regions b and e (the Sierra model described in Appendix B of Volume 48), and the third for regions c and d (the Coastal model described in Volume 47, No. 2, page 72). The velocity models are comprised of a layer with a linear velocity gradient ($v_o = a + bz$) over a halfspace ($v_1 = c$) where a is the velocity at the top of the layer, b is the velocity gradient, and c is the velocity in the halfspace. In this Bulletin, four velocity models are used for locating the hypocenters in the eight regions. The parameters for the velocity models are given in Table 3.

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Table 1

SOLUTION GROUPS		
Region	Number of Earthquakes	Region Name
a	51	Northern Coast
b	9	Northern California
c	36	Ukiah-Willits
d	117	Central Coast
e	17	Sierra Nevada
h	21	Halls Valley
k	11	Coalinga
s	4	Bishop
o	2	Outside

Table 2

STATION ADJUSTMENTS								
	Region							
STATION	a	b	c	d	e	h	k	s
ARC	-2/-9							
BKS	1/15		0/5	-1/1				11/
BRK	1/0		2/5	-1/1		1/		-2/
CMB								
EKR								
FHC	-1/-7	3/10	11/		1/-1			
FOX								
FRI				0/-6			-2	0/-4
GCC			-2/	-4/-5		2/		1/0
LLA				-2/0		-6/	-2/	6/
MHC			-1/	2/1		0/	3/	5/
MIN	-2/15	-2/0	3/3					2/
MNA					1/1			5/1
ORV	-1/13	-4/-3	-5/-7	-6/				5/
PCC	0/		-1/6	-4/-4		-3/		0/
PRI				3/3		-1/		1/26
PRS				-2/-4		-2/	2/	4/
SAO				-2/		2/	5/	5/
WDC	0/7	-5/0	-4/4					
ZSP	-2/		0/6	1/6				13/

Table 3

VELOCITY MODELS							
Region	P-wave			S-wave			Layer Thickness
	a (km/sec)	b (1/sec)	c (km/sec)	a (km/sec)	b (1/sec)	c (km/sec)	(km)
a	5.24	.068	7.98	3.03	.039	4.61	25.
b,e & s	6.00	.024	7.85	3.46	.014	4.53	45.
c, d & h	5.28	.075	7.70	2.98	.043	4.36	25.
k	5.20	.120	7.50	2.20	.042	4.50	18.

Explanation of the Listing of Earthquakes :

KEY is a letter and number combination which indicates the grid location of the earthquake on the maps. The map key is set up on half-degree grid intervals and a map key index is given at the end of each list as a cross reference (including date, time and magnitude) for identifying the earthquakes plotted on the maps.

DATE and **O-TIME(UTC)** are the date and origin time of the earthquake given in Coordinated Universal Time (UTC). To obtain local time, subtract 8 hours for Pacific Standard Time (PST) and 7 hours for Pacific Daylight Time (PDT).

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N LAT and **W LONG** are the north latitude and west longitude of the epicenter. Geographic coordinates are quoted to tenths of a minute for computer-located epicenters. Uncertainties of order five kilometers or more may exist in determinations where the depth has been restricted, or where the epicenters lie outside the network.

DEPTH of focus for each earthquake is given to the nearest kilometer. If the depth is restrained, an 'R' is added.

SE is the standard error of the observations in seconds.

SLN indicates the number of stations and the letter indicates the regional station adjustments and velocity model used in determining the location of the hypocenter. A letter 'o' is used for the cases where the earthquake was either outside the above regions or no station adjustments were used in the solution.

MAG is the local magnitude (M_L) of the earthquake (on the Richter scale) determined from the maximum trace amplitudes recorded for the shock by standard Wood-Anderson torsion seismographs. The number of observations used to determine M_L is given in parenthesis immediately following the magnitude value. The magnitudes of earthquakes for which no Wood-Anderson records are available are determined from Benioff seismograph maximum trace amplitudes, and are indicated by an asterisk.

MOMENT is the seismic moment (M_o) in dyne-cm for regional earthquakes as calculated from standard Wood-Anderson torsion seismographs recorded within 300 km of the epicenter with peak-to-peak amplitudes of at least 3 mm. Seismic moment in dyne-cm is defined by (Bolt and Herraiz, *Bull. Seis. Soc. Am.*, **73**, 735-748, 1983):

$$log(M_o) \;=\; 16.74 \;+\; 1.22\, log(CDE)$$

where C is the maximum peak-to-peak amplitude in mm, D is the duration in seconds from the S-wave onset to the last point where the peak-to-peak amplitude exceeds $C/3$, and E is the epicentral distance in kilometers. The number of observations used to determine M_o is given in parenthesis immediately following the moment value.

COMMENTS gives a short descriptive location of the epicenter and any other information concerning the event including felt reports.

Recent Rate of Seismicity

Northern and Central California.

The Bulletin of the Seismographic Stations lists 3638 earthquakes ($3.0 \leq M_L \leq 6.9$), which occurred in the 280,000 km^2 area of northern and central California, from 1949 through 1983. The 3638 earthquakes were declustered into 2312 earthquake sequences (of one or more earthquakes). The cumulative number of earthquake sequences (N) was fit to the Gutenberg-Richter relation by the maximum likelihood method and the result is

$$log\ N \;=\; 4.23 \;-\; 0.815\ M_L$$

with a corresponding variance of

$$\sigma^2_{logN} \;=\; .000781 \;-\; .000792 M_L \;+\; .000525 M_L^2$$

(normalized to earthquake sequences per year per 280,000 km^2).

The annual rate of seismicity ($r = 10^{logN}$) in earthquake sequences per year and the percent probability of one or more earthquakes of magnitude M_L or larger occurring in one day, week, month, year or decade is given in Table 4.

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Table 4

Northern and Centeral California						
	r	Percent Probability in one				
$M_L \geq$	(eq/yr)	day	week	month	year	decade
3.0	60.	15.	69.	99.	100.	100.
3.5	24.	6.3	36.	86.	100.	100.
4.0	9.2	2.5	16.	54.	100.	100.
4.5	3.6	0.99	6.7	26.	97.	100.
5.0	1.4	0.39	2.7	11.	76.	100.
5.5	0.55	0.15	1.1	4.5	43.	100.
6.0	0.22	0.059	0.42	1.8	19.	89.
6.5	0.085	0.023	0.16	0.71	8.1	57.
7.0	0.033	0.009	0.064	0.28	3.3	28.

During 1988, 82 earthquake sequences ($M_L \geq 3.0$) occurred in Northern and Central California. Thus the observed rate of seismicity in 1988 is not significantly different than the average annual rate of seismicity during the past 40 years.

Central Coast Ranges.

The Bulletin of the Seismographic Stations lists 4267 earthquakes $M_L \geq 2.5$, which occurred in the 40,000 km^2 area of the Central Coast Ranges, from 1949 through 1983. The 4267 earthquakes were declustered into 2386 sequences (of one or more earthquakes). The cumulative number of sequences (N) was fit to the Gutenberg-Richter relation by the maximum likelihood method and the result is

$$logN = 3.78 - 0.793M_L$$

with a corresponding variance of

$$\sigma^2_{logN} = 0.000615 - 0.000598M_L + 0.000603M_L^2$$

(normalized to earthquake sequences per year per 40,000 km^2).

The annual rate of seismicity ($r = 10^{logN}$) in earthquake sequences per year and the percent probability of one or more earthquakes of magnitude M_L or larger occurring in one day, week, month, year or decade is given in Table 5

Table 5

Central Coast Ranges						
	r	Percent Probability in one				
$M_L \geq$	(eq/yr)	day	week	month	year	decade
2.5	62.	16.	70.	99.	100.	100.
3.0	25.	6.6	38.	88.	100.	100.
3.5	10.	2.7	17.	57.	100.	100.
4.0	4.0	1.1	7.4	29.	98.	100.
4.5	1.6	0.44	3.0	13.	80.	100.
5.0	0.65	0.18	1.2	5.3	48.	100.
5.5	0.26	0.071	0.50	2.1	23.	93.
6.0	0.10	0.029	0.20	0.87	9.9	65.
6.5	0.042	0.011	0.080	0.35	4.1	34.
7.0	0.017	0.005	0.032	0.14	1.7	15.

During 1988, 79 earthquake sequences ($M_L \geq 2.5$) occurred in the Central Coast Ranges. Thus the observed rate of seismicity in 1988 is not significantly different than the average annual rate of seismicity during the past 35 years.

Significant Earthquake Sequences

During 1988, three earthquakes sequences ($M_L \geq 5$) occurred in Northern California and vicinity: a M_L 5.1 sequence near Hollister (K12 on map); a M_L 5.3 sequence in Alum Rock (J11

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on map); and a M_L 5.3 sequence near Lake Elsman (J11 on map). In addition, a M_L 4.3 sequence occurred near Lake Medicine (J2 on map).

The Hollister mainshock occurred at 08:39 UTC on February 20 with $M_L = 5.1$. Two aftershocks with $M_L \geq 2.5$ were observed. Conversely, a 1986 sequence in the same area followed a more typical Central Coast Ranges earthquake distribution pattern having many aftershocks.

The Alum Rock mainshock occurred at 01:45 UTC on June 13 with $M_L = 5.3$ and MMI=IV. Six aftershocks with $M_L \geq 2.5$ were observed, the largest was at 05:08 UTC on November 10 with $M_L = 4.8$. This sequence fits an interesting pattern observed on the Calaveras fault: $M_L \geq 5$ earthquakes chronologically progressing northward and rupturing to the south (1979, Coyote Lake $M_L = 5.8$; 1984, Morgan Hill $M_L = 6.2$; 1988, Alum Rock $M_L = 5.3$).

The Lake Elsman mainshock occurred at 18:43 UTC on June 27 with $M_L = 5.3$. This event lies at the San Andreas/Sargent fault junction. One aftershock ($M_L \geq 2.5$) occurred 3 days later. Along with the 1957 South San Francisco $M_L = 5.3$ event, these events are the largest earthquakes along the 1906 $M_L = 8+$ rupture since 1906. Another significant earthquake located on the San Andreas fault at Sea Ranch (G8 on map) occurred at 14:43 UTC on October 25 with $M_L = 3.8$.

The Lake Medicine sequence began at 15:05 UTC on September 29 with a pair of earthquakes of $M_L = 3.5$ and 3.6 about 9 hours apart, then a $M_L = 4.3$ mainshock about 30 minutes later at 00:30 UTC on September 30. Two aftershocks with $M_L = 3.6$, 3.4 followed within 4 days.

Finally, we recorded a rare event off the coast 650 km southwest of San Luis Obispo at 20:55 UTC on June 5 with $M_L = 3.9$.

Acknowledgements.

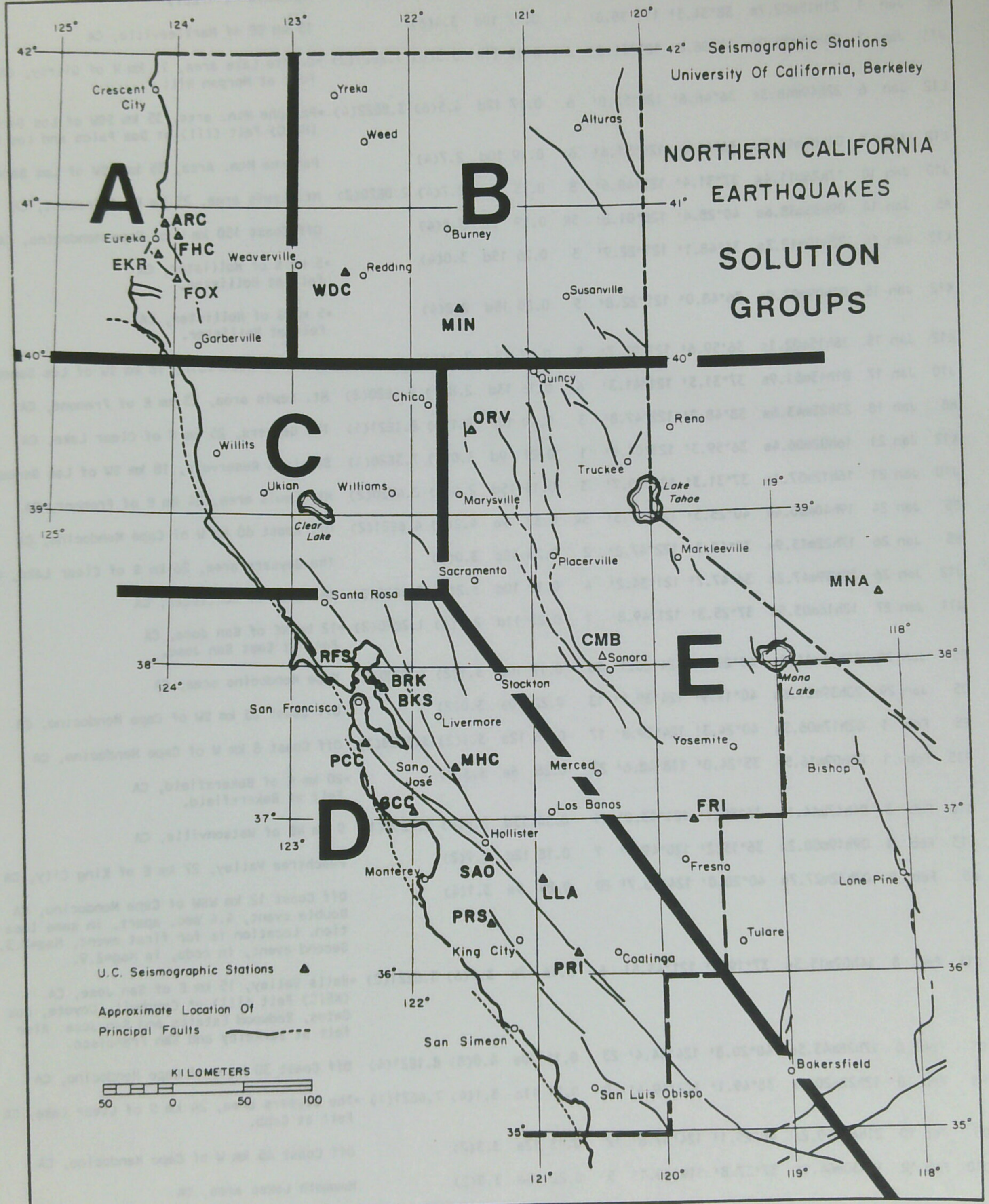
We would like to thank the following institutions for their assistance in supplying readings for the epicenter locations: Seismological Laboratory, California Institute of Technology; Seismological Laboratory, University of Nevada at Reno; Pacific Gas and Electric Company; Lawrence Livermore National Laboratory; California Division of Mines and Geology; California Department of Water Resources; National Earthquake Information Center, U. S. Geological Survey; and Northern California Seismic Analysis Group, U. S. Geological Survey.

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NORTHERN CALIFORNIA EARTHQUAKES

SOLUTION GROUPS

Seismographic Stations
University Of California, Berkeley



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KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
N8	Jan 1	21h15m02.7s	38°34.5'	119°38.8'	4	0.17	10e	3.4(6)		15 km SE of Markleeville, CA
J11	Jan 2	03h15m20.9s	37°06.6'	121°31.8'	6	0.15	11h	3.5(6)	1.2E21(2)	•Coyote Lake area, 11 km N of Gilroy, CA Felt at Morgan Hill.
L12	Jan 6	22h49m48.3s	36°46.6'	120°52.0'	6	0.17	12d	4.5(6)	3.8E22(4)	•Panoche Mtn. area, 35 km SSW of Los Banos, CA (NEIC) Felt (III) at Dos Palos and Los Banos.
L12	Jan 7	01h05m11.5s	36°46.6'	120°51.6'	6	0.19	10d	2.7(4)		Panoche Mtn. Area, 35 km SSW of Los Banos, CA
J10	Jan 10	17h26m11.4s	37°31.4'	121°40.6'	8	0.15	9d	2.7(4)	2.0E20(2)	Mt. Lewis area, 25 km E of Fremont, CA
A5	Jan 14	09h36m38.6s	40°28.4'	126°01.2'	5R	0.19	7a	3.8(4)		Off Coast 150 km W of Cape Mendocino, CA
K12	Jan 14	22h10m12.3s	36°48.1'	121°22.9'	3	0.25	15d	3.0(4)		•5 km S of Hollister, CA Felt at Hollister.
K12	Jan 15	01h09m03.9s	36°48.0'	121°22.8'	5	0.20	15d	2.8(4)		•5 km S of Hollister, CA Felt at Hollister.
K12	Jan 15	16h15m02.1s	36°59.6'	121°02.7'	5	0.22	12d	3.2(4)		San Luis Reservoir, 18 km SW of Los Banos, CA
J10	Jan 17	01h43m51.9s	37°31.5'	121°41.3'	6	0.16	13d	2.8(4)	2.4E20(2)	Mt. Lewis area, 23 km E of Fremont, CA
H8	Jan 18	23h25m43.6s	38°48.2'	122°47.8'	3	0.10	10c	3.1(4)	2.1E21(1)	The Geysers, 25 km S of Clear Lake, CA
K12	Jan 21	16h02m06.4s	36°59.3'	121°01.9'	1	0.21	9d	3.0(4)	7.3E20(1)	San Luis Reservoir, 18 km SW of Los Banos, CA
J10	Jan 21	16h12m57.1s	37°31.3'	121°40.7'	3	0.15	15d	2.6(4)	2.4E20(2)	Mt. Lewis area, 24 km E of Fremont, CA
C5	Jan 24	19h40m30.4s	40°25.3'	125°07.3'	5R	0.37	9a	4.2(4)	4.6E21(2)	Off Coast 60 km W of Cape Mendocino, CA
H8	Jan 26	17h22m15.9s	38°48.3'	122°47.2'	2	0.26	10c	3.0(6)		The Geysers area, 26 km S of Clear Lake, CA
J12	Jan 26	20h39m47.2s	36°47.7'	121°34.2'	4	0.19	10d	3.2(4)	8.5E20(2)	16 km SW of Hollister, CA
J11	Jan 27	12h16m03.5s	37°25.3'	121°49.8'	1	0.23	11d	2.3(4)	1.2E20(2)	•12 km NE of San Jose, CA Felt at East San Jose.
E5	Jan 28	10h45m14.0s	40°29.7'	124°20.1'	20	0.17	10a	3.1(2)	3.7E20(2)	Cape Mendocino area, CA
D5	Jan 29	20h39m09.6s	40°19.9'	124°39.5'	13	0.22	10a	3.0(2)		Off Coast 25 km SW of Cape Mendocino, CA
E5	Feb 1	02h17m06.3s	40°24.3'	124°29.8'	17	0.16	12a	3.1(2)	3.3E20(1)	Off Coast 8 km W of Cape Mendocino, CA
P15	Feb 1	06h09m16.5s	35°24.0'	118°48.6'	22	0.28	6e	3.3(2)		•20 km E of Bakersfield, CA Felt at Bakersfield.
J12	Feb 3	04h47m44.1s	36°59.1'	121°43.0'	11	0.16	15d	2.8(4)	2.3E19(1)	9 km NE of Watsonville, CA
L13	Feb 3	09h19m00.2s	36°13.2'	120°49.4'	7	0.18	12d	2.9(2)		Peachtree Valley, 27 km E of King City, CA
D5	Feb 5	07h32m27.7s	40°20.0'	124°30.7'	20	0.20	9a	3.1(4)		Off Coast 12 km WSW of Cape Mendocino, CA Double event, 4.4 sec. apart, in same location. Location is for first event, Mag=2.3. Second event, in coda, is Mag=2.9.
J11	Feb 8	14h09m15.3s	37°19.4'	121°43.5'	6	0.16	7h	3.9(6)	3.8E21(2)	•Halls Valley, 15 km E of San Jose, CA (NEIC) Felt (III) at Campbell, Coyote, Los Gatos, Redwood Estates and San Jose. Also felt at Berkeley and San Francisco.
D5	Feb 8	17h28m43.5s	40°20.8'	124°44.4'	23	0.14	10a	4.0(8)	8.1E21(4)	Off Coast 30 km W of Cape Mendocino, CA
H8	Feb 10	12h22m20.0s	38°49.1'	122°49.4'	0	0.21	11c	3.1(4)	7.4E21(1)	•The Geysers area, 24 km S of Clear Lake, CA Felt at Cobb.
D5	Feb 10	21h44m50.2s	40°25.1'	124°57.8'	17	0.13	12a	3.3(2)		Off Coast 45 km W of Cape Mendocino, CA
O10	Feb 12	19h30m04.1s	37°37.8'	119°00.1'	5	0.22	13e	3.0(2)		Mammoth Lakes area, CA

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KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
J10	Feb 14	01h22m54.3s	37°33.7'	121°41.5'	3	0.20	12d	2.5(4)	1.5E20(2)	16 km SE of Livermore, CA
J11	Feb 17	06h53m58.5s	37°20.3'	121°44.5'	5	0.15	8h	2.9(4)	1.3E20(2)	Halls Valley, 12 km E of San Jose, CA
J10	Feb 18	18h00m46.2s	37°46.9'	121°43.0'	11	0.13	12d	3.5(4)	2.8E21(4)	•12 km NE of Livermore, CA Felt at Dublin, Livermore and Pleasanton.
J11	Feb 19	01h33m49.4s	37°08.6'	121°31.9'	6	0.21	14d	2.9(4)	1.6E20(2)	15 km NNE of Gilroy, CA
K12	Feb 20	08h39m57.5s	36°48.2'	121°18.1'	9	0.18	12d	5.1(10)	3.5E23(4)	•12 km SE of Hollister, CA (NEIC) Felt (V) at Carmel Valley, Chualar, Tres Pinos and Watsonville. Felt in Alameda, Merced, Monterey, San Benito, Santa Clara, Santa Cruz, San Luis Obispo, San Mateo and Stanislaus Counties.
M3	Feb 21	15h33m26.8s	41°06.0'	120°16.9'	7	0.17	8b	3.1 *		•48 km SE of Alturas, CA Felt at Likely.
N14	Feb 22	07h43m14.1s	35°30.5'	119°44.0'	15	0.29	16d	4.3(6)	6.3E22(1)	•65 km WNW of Bakersfield, CA (NEIC) Felt (IV) at Lost Hills and Paso Robles, (III) at Avenal, Creston, New Cuyuma Shandon and Templeton. Also felt at Bakersfield and San Luis Obispo.
H8	Feb 23	08h10m21.9s	38°50.5'	122°48.2'	6	0.15	11c	3.4(8)	6.0E21(2)	•The Geysers area, 20 km S of Clear Lake, CA Felt (IV) at Cobb and (III) at Middletown.
K11	Feb 28	13h03m51.6s	37°15.8'	121°26.9'	2	0.13	13d	2.5(2)		30 km NE of Gilroy, CA
H5	Feb 28	22h29m25.7s	40°02.5'	122°51.5'	11	0.35	8b	3.0(3)		55 km SW of Red Bluff, CA
J12	Feb 29	21h53m45.6s	36°55.3'	121°32.5'	8	0.16	11d	2.9(4)		10 km SE of Gilroy, CA
D5	Mar 2	04h59m49.9s	40°22.8'	124°55.0'	16	0.18	13a	3.5(4)	1.4E21(2)	Off Coast 35 km W of Cape Mendocino, CA
G4	Mar 6	14h52m13.5s	40°39.6'	123°23.9'	5R	0.45	4a	3.2(3)	2.8E20(2)	65 km SE of Eureka, CA
G7	Mar 8	14h01m24.2s	39°14.1'	123°11.7'	1R	0.18	8c	2.2 *		•10 km N of Ukiah, CA Felt at Redwood Valley.
H8	Mar 10	19h36m52.0s	38°31.3'	122°44.8'	1	0.27	10d	2.8(2)		•10 km NNW of Santa Rosa, CA Felt in Larkfield area of Santa Rosa.
L12	Mar 13	19h21m04.6s	36°43.1'	120°41.8'	3	0.26	9d	2.7(4)		Panoche Hills, 41 km SE of Los Banos, CA
D5	Mar 14	18h24m41.8s	40°25.8'	124°36.9'	21	0.16	9a	3.3(3)	2.5E20(2)	Off Coast 55 km SW of Eureka, CA
D5	Mar 15	22h40m33.3s	40°28.8'	124°32.8'	15	0.11	10a	3.5(4)	2.0E21(2)	Off Coast 47 km SW of Eureka, CA
K12	Mar 16	06h18m50.8s	36°33.8'	121°12.2'	7	0.18	16d	3.2(4)		•Bear Valley, 36 km SE of Hollister, CA (NEIC) Felt (III) at Soledad.
J11	Mar 16	23h10m06.9s	37°17.0'	121°41.8'	3	0.13	8h	2.7(4)	9.5E19(2)	Halls Valley, 17 km ESE of San Jose, CA
H8	Mar 18	21h18m13.3s	38°48.6'	122°48.0'	2	0.18	10c	2.9(6)	3.7E21(2)	•The Geysers area, 23 km S of Clear Lake, CA Felt at The Geysers.
G3	Mar 20	13h30m59.7s	41°16.3'	123°25.7'	24	0.14	10a	3.8(6)	7.7E21(4)	10 km SE of Orleans, 82 km NE of Eureka, CA
I10	Mar 20	13h32m03.9s	37°39.8'	122°04.4'	3	0.19	17d	2.2(2)	2.1E20(2)	•Hayward, 28 km SE of Berkeley, CA Felt at Hayward.
D5	Mar 20	18h41m07.3s	40°24.8'	124°59.5'	14	0.12	10a	3.0(2)		Off Coast 50 km W of Cape Mendocino, CA
C5	Mar 21	03h03m16.2s	40°26.6'	125°18.0'	5R	0.28	12a	4.0(4)	3.6E21(2)	Off Coast 75 km W of Cape Mendocino, CA
E5	Mar 22	09h06m44.3s	40°26.8'	124°17.1'	3	0.20	11a	3.4(3)	1.8E21(2)	Cape Mendocino area, CA
J12	Mar 22	23h35m09.2s	36°50.0'	121°34.7'	4	0.16	14d	3.0(4)		16 km W of Hollister, CA

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KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
J11	Mar 23	19h32m22.7s	37°05.7'	121°30.1'	7	0.19	14d	2.7(4)	1.9E20(2)	Coyote Lake, 11 km NE of Gilroy, CA
J11	Mar 26	21h05m26.1s	37°15.0'	121°39.8'	5	0.19	8h	2.7(4)	8.9E19(2)	San Felipe Valley, 22 km SE of San Jose, CA
H8	Mar 29	16h12m12.5s	38°47.4'	122°46.0'	1	0.23	16c	3.0(4)		The Geysers area, 23 km S of Clear Lake, CA
F4	Apr 1	08h42m00.1s	40°30.7'	123°52.3'	8	0.12	12a	3.6(2)	1.6E21(2)	10 km ENE Scotia, 38 km SE of Eureka, CA
D5	Apr 1	10h27m22.7s	40°21.4'	124°33.1'	15	0.25	14a	3.7(2)	5.5E21(2)	Off Coast 15 km W of Cape Mendocino, CA
H8	Apr 2	00h26m55.1s	38°47.7'	122°45.9'	5	0.17	9c	3.4(4)	8.7E21(2)	•The Geysers area, 23 km S of Clear Lake, CA Felt at Cobb Mountain.
M13	Apr 4	20h42m00.9s	36°18.1'	120°24.5'	9	0.10	14k	3.6(6)		•19 km NW of Coalinga, CA Felt in the Coalinga area.
M13	Apr 4	20h45m48.7s	36°18.2'	120°24.3'	10	0.17	14k	3.7(6)		•19 km NW of Coalinga, CA Felt in the Coalinga area.
G7	Apr 8	13h55m22.5s	39°24.6'	123°15.8'	9	0.31	13c	3.6(6)	1.0E22(4)	•7 km E of Willits, CA (NEIC) Felt (V) at Willits and (III) at Dos Rios, Elk, Fort Bragg and Potter Valley.
H8	Apr 9	14h14m58.7s	38°48.6'	122°47.7'	3	0.17	13c	3.0(5)	2.0E21(2)	The Geysers area, 23 km S of Clear Lake, CA
A2	Apr 9	23h41m15.1s	41°36.8'	126°14.0'	5R	0.22	11a	3.9(4)	4.6E21(1)	170 km W of Crescent City, CA
G7	Apr 14	23h22m33.3s	39°23.6'	123°15.5'	3	0.20	8c	2.3(2)		•8 km ESE of Willits, CA Felt at Willits.
K12	Apr 16	18h47m38.8s	36°39.2'	121°19.0'	4	0.22	17d	2.6(4)		Stone Canyon area, 23 km SE of Hollister, CA
I10	Apr 18	22h30m54.8s	37°52.7'	122°13.8'	6	0.10	14d	2.0(4)		•Berkeley, CA Felt at Berkeley.
L12	Apr 19	06h42m47.4s	36°43.6'	120°46.0'	5	0.16	11d	3.2(6)		38 km SSE of Los Banos, CA
E5	Apr 19	08h44m14.6s	40°29.4'	124°16.6'	24	0.14	14a	4.1(8)	1.2E22(2)	•Near Capetown, 34 km SSW of Eureka, CA (NEIC) Felt (IV) at Carlotta, Fortuna, Honeydew, Petrolia, Redcrest and Rio Dell; (III) at Arcata, Bridgeville, Eureka, Loleta, Miranda, Myers Flat, Scotia and Weott.
K12	Apr 20	14h23m51.9s	36°31.0'	121°08.3'	7	0.21	17d	2.9(4)		Bear Valley, 44 km SE of Hollister, CA
J12	Apr 21	02h01m09.3s	36°49.6'	121°34.2'	5	0.14	15d	3.1(5)		17 km WSW of Hollister, CA
J11	Apr 21	15h00m32.4s	37°20.5'	121°44.8'	5	0.17	7h	3.1(4)	3.9E20(2)	•Halls Valley, 12 km E of San Jose, CA Felt at San Jose.
J10	Apr 26	05h34m32.2s	37°36.7'	121°40.7'	6	0.20	9d	2.6(4)	1.7E20(2)	12 km SE of Livermore, CA
K12	Apr 30	21h30m26.0s	36°41.2'	121°21.5'	3	0.16	15d	2.6(4)		Stone Canyon area, 18 km SSE of Hollister, CA
E5	Apr 30	23h51m09.0s	40°26.0'	124°24.7'	18	0.14	11a	3.7(2)	3.2E21(2)	Cape Mendocino, CA
K12	May 2	19h23m28.0s	36°39.9'	121°19.9'	4	0.19	17d	3.1(4)	1.9E21(2)	Stone Canyon area, 22 km SSE of Hollister, CA
L12	May 4	00h21m27.7s	36°44.7'	120°44.8'	7	0.19	14d	3.1(4)		Panoche Mtn., 37 km SSE of Los Banos, CA
K12	May 7	09h07m51.8s	36°40.8'	121°22.1'	3	0.16	11d	2.8(4)		•Stone Canyon, 19 km S of Hollister, CA Felt South of Hollister.
K12	May 7	14h15m37.3s	36°40.7'	121°21.7'	5	0.15	11d	2.9(4)		•Stone Canyon, 19 km S of Hollister, CA Felt South of Hollister.
K12	May 7	14h19m44.0s	36°40.7'	121°21.3'	2	0.09	11d	2.6(4)		•Stone Canyon, 19 km S of Hollister, CA Felt South of Hollister.
K12	May 8	20h51m24.6s	36°32.4'	121°06.6'	9	0.15	12d	2.9(4)		Bear Valley area, 43 km SE of Hollister, CA

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KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
K12	May 9	04h14m47.0s	36°40.8'	121°21.6'	4	0.16	11d	2.7(4)		•Stone Canyon, 19 km S of Hollister, CA Felt south of Hollister.
J12	May 10	12h31m31.3s	36°50.5'	121°34.9'	5	0.21	9d	3.1(6)	2.0E21(2)	•16 km W of Hollister, CA (NEIC) Felt (IV) at Carmel Valley and (III) at Castroville. Also felt at Aromas and Salinas. Felt in parts of Monterey and San Benito Counties.
J12	May 10	21h27m15.8s	36°50.2'	121°34.9'	4	0.15	12d	2.6(4)		•16 km W of Hollister, CA Felt at Salinas.
J12	May 10	21h30m11.6s	36°49.9'	121°34.1'	6	0.22	10d	2.6(4)		•15 km W of Hollister, CA Felt at Salinas.
J12	May 10	22h50m23.2s	36°49.9'	121°34.8'	4	0.17	8d	2.9(4)		•16 km W of Hollister, CA Felt at Salinas.
J12	May 11	14h18m45.0s	36°50.1'	121°34.1'	4	0.15	10d	2.4(4)		•15 km W of Hollister, CA Felt at Prunedale and Salinas.
J12	May 11	14h30m43.4s	36°50.1'	121°34.3'	4	0.16	10d	2.3(4)		•15 km W of Hollister, CA Felt at Prunedale and Salinas.
E5	May 13	00h52m31.2s	40°14.6'	124°17.4'	6	0.13	10a	3.3(4)	1.8E21(2)	61 km S of Eureka, CA
J11	May 13	07h15m11.0s	37°21.2'	121°44.9'	5	0.22	8h	2.9(4)	3.4E20(2)	Halls Valley, 12 km E of San Jose, CA
J11	May 13	07h19m39.5s	37°20.8'	121°43.9'	3	0.17	8h	2.8(4)	9.8E19(2)	Halls Valley, 13 km E of San Jose, CA Small foreshock about 2.5 seconds earlier.
J11	May 13	07h50m22.1s	37°21.5'	121°43.8'	8	0.21	12d	2.5(4)	7.1E19(2)	Halls Valley, 13 km E of San Jose, CA
K11	May 15	07h32m35.8s	37°04.7'	121°28.8'	4	0.17	7d	2.9(2)		Coyote Lake, 11 km NE of Gilroy, CA
H8	May 15	22h49m05.6s	38°48.7'	122°48.1'	3	0.16	9c	3.4(6)	6.6E21(2)	The Geysers area, 22 km S of Clear Lake, CA
E5	May 17	03h09m15.6s	40°21.7'	124°15.3'	22	0.18	10a	3.6(4)	3.9E21(2)	•Near Petrolia, 48 km SSW of Eureka, CA (NEIC) Felt (III) at Fortuna, Garberville, Honeydew, Loleta, Miranda, Myers Flat, Phillipsville and Rio Dell.
K12	May 20	23h29m46.1s	36°44.7'	121°28.1'	6	0.17	18d	2.5(2)		Fremont Peak, 13 km SW of Hollister, CA
K12	May 24	20h21m03.8s	36°35.6'	121°15.1'	6	0.12	13d	3.3(4)	3.0E21(2)	Stone Canyon area, 32 km SE of Hollister, CA
R12	May 26	03h56m50.0s	36°59.2'	117°41.0'	4	0.06	16s	4.1(4)		Eureka Valley, 76 km SE of Bishop, CA
P11	May 28	18h08m55.5s	37°29.8'	118°52.8'	3	0.20	8s	4.3(6)	1.3E22(2)	Mammoth Lakes area, CA
H8	May 30	08h24m31.5s	38°49.5'	122°47.6'	3	0.17	8c	3.5(2)	1.3E21(2)	•The Geysers area, 20 km S of Clear Lake, CA Felt west of Calistoga.
R13	May 30	16h05m10.7s	36°26.9'	117°52.5'	5R	0.25	7e	4.2(5)		•25 km SSE of Lone Pine, CA (NEIC) Felt (IV) at Keeler, (III) at Lone Pine and (II) at Olancha.
R13	May 30	17h28m18.4s	36°26.6'	117°52.7'	5R	0.23	7e	4.4(5)		25 km SE of Lone Pine, CA (NEIC) Felt at Keeler.
H8	May 30	23h12m48.2s	38°50.3'	122°47.7'	4	0.14	9c	3.0(3)		The Geysers area, 18 km S of Clear Lake, CA
M5	Jun 1	22h56m48.7s	40°18.4'	120°29.3'	15	0.05	6b	3.5(3)	4.5E21(1)	•19 km SE of Susanville, CA Felt at Susanville.
K12	Jun 5	16h25m27.5s	36°45.9'	121°29.2'	7	0.14	10d	3.1(4)	1.5E21(2)	•Fremont Peak, 12 km SW of Hollister, CA (NEIC) Felt (II) at Hollister.
A16	Jun 5	20h55m23.1s	31°37.1'	126°02.7'	8R	0.27	7d	3.9 *		Off Coast 650 km SW of San Luis Obispo, CA

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KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (*=FELT)
K12	Jun 7	15h51m27.4s	36°32.7'	121°08.7'	6	0.19	9d	2.5(2)		37 km N of King City, CA
K12	Jun 10	00h03m18.5s	36°42.8'	121°05.6'	6	0.19	11d	2.7(2)		31 km SE of Hollister, CA
I9	Jun 12	21h44m21.8s	38°24.2'	122°09.2'	10	0.18	9d	3.2(5)	3.6E21(2)	*Near Lake Berryessa, 16 km NE of Napa, CA Felt at Napa, Vacaville and in Solano County.
J11	Jun 13	01h45m36.8s	37°23.1'	121°46.3'	7	0.13	8h	5.3(5)	2.8E23(4)	*Alum Rock, 11 km NE of San Jose, CA (NEIC) Slight damage (VI) at Milpitas and San Jose. Felt at Aptos, Aromas, Alameda, Gilroy, Half Moon Bay, Hayward, Hollister, Mountain View, San Bruno, Santa Clara and San Martin. Felt strongly throughout the San Francisco Bay area as far North as Santa Rosa, south to Salinas and east to Modesto.
J11	Jun 13	04h06m52.6s	37°21.5'	121°45.0'	5	0.11	8h	3.2(4)	5.9E20(4)	Alum Rock, 12 km ENE of San Jose, CA
E5	Jun 14	14h15m50.6s	40°17.4'	124°16.9'	38	0.15	7a	3.2(2)		Near Petrolia, 55 km SSW of Eureka, CA
D5	Jun 14	15h44m54.2s	40°26.7'	124°45.2'	19	0.12	18a	3.8(2)		Off Coast 30 km W of Cape Mendocino, CA
J11	Jun 16	12h58m24.1s	37°27.4'	121°45.0'	1	0.18	8h	2.6(4)	1.2E20(2)	18 km NE of San Jose, CA
M13	Jun 18	20h06m11.7s	36°16.0'	120°19.8'	9	0.08	12k	3.0(2)		14 km N of Coalinga, CA
J9	Jun 20	01h15m58.9s	38°07.4'	121°51.7'	20	0.17	8d	2.8(4)		21 km SE of Fairfield, CA
J11	Jun 20	15h26m38.2s	37°07.3'	121°30.7'	7	0.18	10d	4.1(8)	1.1E22(4)	*13 km NE of Gilroy, CA (NEIC) Felt (V) at San Jose; (IV) at Fremont, Gilroy, and Santa Cruz; (III) at Ben Lomond, Holt, Livermore, Merced, Oakland and San Martin.
J11	Jun 20	18h36m40.2s	37°07.8'	121°30.6'	6	0.11	9d	2.7(4)	1.7E20(2)	14 km N of Gilroy, CA
J11	Jun 25	06h49m40.2s	37°29.6'	121°36.0'	6	0.14	12d	2.6(4)	1.3E20(2)	25 km SE of Livermore, CA
H7	Jun 25	07h24m52.8s	39°23.1'	122°50.7'	11	0.24	9c	3.4(2)		43 km E of Willits, CA
N9	Jun 26	03h08m04.8s	38°25.1'	119°33.3'	6	0.13	5e	3.4(2)		35 km SE of Markleeville, CA
H8	Jun 26	07h30m06.8s	38°49.4'	122°48.2'	6	0.06	9c	3.6(4)	1.9E21(2)	*The Geysers area, 21 km S of Clear Lake, CA (NEIC) Felt (IV) at Cobb. Also felt at Hobergs and Loch Lomond.
J11	Jun 26	07h54m25.3s	37°28.8'	121°47.9'	6	0.11	8d	3.2(4)	2.8E21(4)	*18 km NE of San Jose, CA (NEIC) Felt (V) at San Jose, (IV) at Pleasanton and (II) at Santa Clara. Also felt at San Francisco.
E5	Jun 26	08h55m33.9s	40°20.6'	124°29.9'	21	0.26	12a	3.1(2)		Off Coast 10 km W of Cape Mendocino, CA
J10	Jun 27	01h13m14.1s	37°51.1'	121°46.6'	12	0.17	8d	3.0(4)	8.7E20(2)	19 km N of Livermore, CA
J11	Jun 27	04h18m53.0s	37°18.0'	121°40.4'	5	0.07	5d	2.9(2)	6.6E19(2)	San Felipe Valley, 18 km ESE of San Jose, CA Small foreshock 15 sec earlier.
J11	Jun 27	18h43m22.3s	37°07.8'	121°52.7'	13	0.07	6o	5.3(4)		*Lake Elsman area, 22 km NE of Santa Cruz, CA (NEIC) Slight damage (VI) at Los Gatos and items knocked from shelves at several locations in the San Jose-San Francisco area. Felt (V) at Boulder Creek, Brookdale, Cambell Half Moon Bay, Hayward, La Selva Beach, Livermore, Millbrae, Moss Landing, Mountain View, Mount Herman, Oakland, Palo Alto, San Gregorio, Scotts Valley and Watsonville. Felt from Sonoma to Monterey.

EARTHQUAKES IN NORTHERN CALIFORNIA ... 1988

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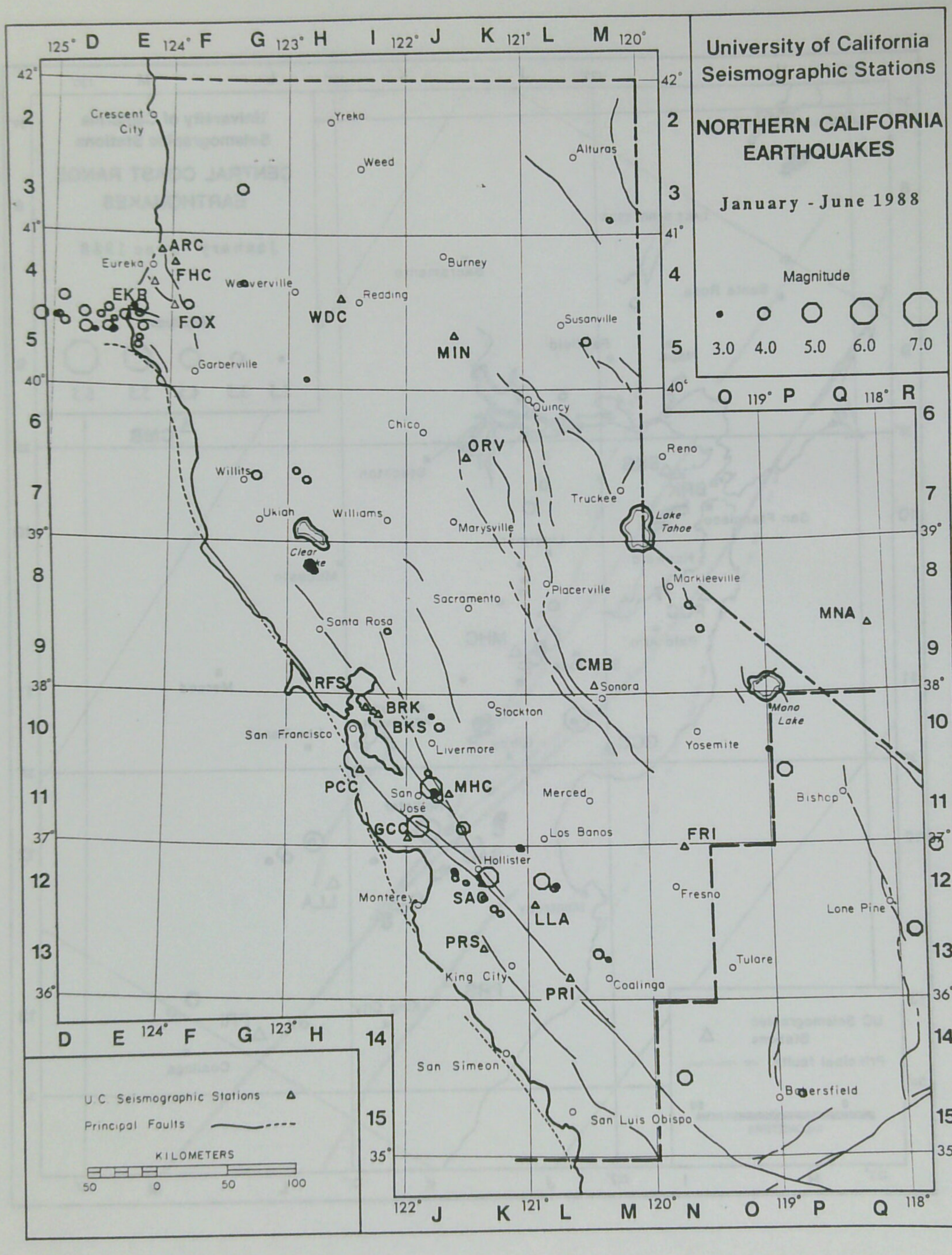
KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
D4	Jun 28	00h59m12.7s	40°32.6'	124°55.8'	15	0.17	7a	3.8(2)	1.4E21(2)	Gorda Basin, 70 km SW of Eureka, CA
H7	Jun 28	07h58m14.4s	39°26.6'	122°55.6'	7	0.26	10c	3.3(2)		36 km E of Willits, CA
J11	Jun 30	03h08m44.7s	37°07.6'	121°51.9'	12	0.08	6o	2.6(4)	1.3E20(1)	Lake Elsman area, 22 km NE of Santa Cruz, CA
K12	Jun 30	09h36m19.9s	36°34.4'	121°10.0'	2	0.21	7d	2.9(2)		Bear Valley area, 37 km SE of Hollister, CA

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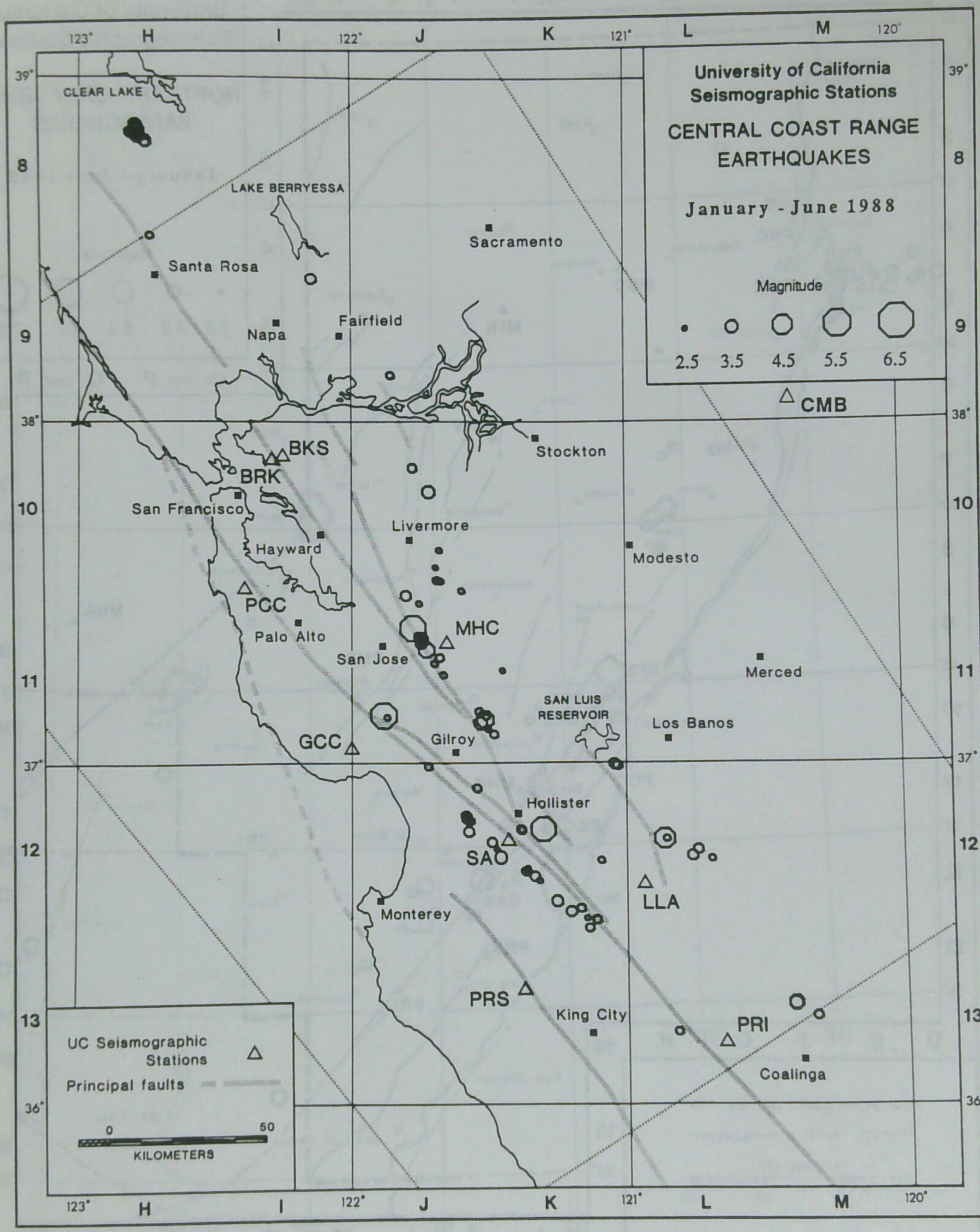
KEY	DATE	TIME	MAG
A2	Apr 9	23:41	3.9
A5	Jan 14	09:36	3.8
A16	Jun 5	20:55	3.9
C5	Jan 24	19:40	4.2
	Mar 21	03:03	4.0
D4	Jun 28	00:59	3.8
D5	Jan 29	20:39	3.0
	Feb 5	07:32	3.1
	Feb 8	17:28	4.0
	Feb 10	21:44	3.3
	Mar 2	04:59	3.5
	Mar 14	18:24	3.3
	Mar 15	22:40	3.5
	Mar 20	18:41	3.0
	Apr 1	10:27	3.7
	Jun 14	15:44	3.8
E5	Jan 28	10:45	3.1
	Feb 1	02:17	3.1
	Mar 22	09:06	3.4
	Apr 19	08:44	4.1
	Apr 30	23:51	3.7
	May 13	00:52	3.3
	May 17	03:09	3.6
	Jun 14	14:15	3.2
	Jun 26	08:55	3.1
F4	Apr 1	08:42	3.6
G3	Mar 20	13:30	3.8
G4	Mar 6	14:52	3.2
G7	Mar 8	14:01	2.2
	Apr 8	13:55	3.6
	Apr 14	23:22	2.3
H5	Feb 28	22:29	3.0
H7	Jun 25	07:24	3.4
	Jun 28	07:58	3.3
H8	Jan 18	23:25	3.1
	Jan 26	17:22	3.0
	Feb 10	12:22	3.1
	Feb 23	08:10	3.4
	Mar 10	19:36	2.8
	Mar 18	21:18	2.9
	Mar 29	16:12	3.0
	Apr 2	00:26	3.4
	Apr 9	14:14	3.0
	May 15	22:49	3.4
	May 30	08:24	3.5
	May 30	23:12	3.0
	Jun 26	07:30	3.6
I9	Jun 12	21:44	3.2
I10	Mar 20	13:32	2.2
	Apr 18	22:30	2.0
J9	Jun 20	01:15	2.8
J10	Jan 10	17:26	2.7
	Jan 17	01:43	2.8
	Jan 21	16:12	2.6
	Feb 14	01:22	2.5
	Feb 18	18:00	3.5
	Apr 26	05:34	2.6
	Jun 27	01:13	3.0
J11	Jan 2	03:15	3.5
	Jan 27	12:16	2.3
	Feb 8	14:09	3.9
	Feb 17	06:53	2.9
	Feb 19	01:33	2.9
	Mar 16	23:10	2.7
	Mar 23	19:32	2.7
	Mar 26	21:05	2.7
	Apr 21	15:00	3.1
	May 13	07:15	2.9
	May 13	07:19	2.8
	May 13	07:50	2.5
	Jun 13	01:45	5.3
	Jun 13	04:06	3.2
	Jun 16	12:58	2.6
	Jun 20	15:26	4.1
	Jun 20	18:36	2.7
	Jun 25	06:49	2.6
	Jun 26	07:54	3.2
	Jun 27	04:18	2.9
	Jun 27	18:43	5.3
	Jun 30	03:08	2.6
J12	Jan 26	20:39	3.2
	Feb 3	04:47	2.8
	Feb 29	21:53	2.9
	Mar 22	23:35	3.0
	Apr 21	02:01	3.1
	May 10	12:31	3.1
	May 10	21:27	2.6
	May 10	21:30	2.6
	May 10	22:50	2.9
	May 11	14:18	2.4
	May 11	14:30	2.3
K11	Feb 28	13:03	2.5
	May 15	07:32	2.9
K12	Jan 14	22:10	3.0
	Jan 15	01:09	2.8
	Jan 15	16:15	3.2
	Jan 21	16:02	3.0
	Feb 20	08:39	5.1
	Mar 16	06:18	3.2
	Apr 16	18:47	2.6
	Apr 20	14:23	2.9
	Apr 30	21:30	2.6
	May 2	19:23	3.1
	May 7	09:07	2.8
	May 7	14:15	2.9
	May 7	14:19	2.6
	May 8	20:51	2.9
	May 9	04:14	2.7
	May 20	23:29	2.5
	May 24	20:21	3.3
	Jun 5	16:25	3.1
	Jun 7	15:51	2.5
	Jun 10	00:03	2.7
	Jun 30	09:36	2.9
L12	Jan 6	22:49	4.5
	Jan 7	01:05	2.7
	Mar 13	19:21	2.7
	Apr 19	06:42	3.2
	May 4	00:21	3.1
L13	Feb 3	09:19	2.9
M3	Feb 21	15:33	3.1
M5	Jun 1	22:56	3.5
M13	Apr 4	20:42	3.6
	Apr 4	20:45	3.7
	Jun 18	20:06	3.0
N8	Jan 1	21:15	3.4
N9	Jun 26	03:08	3.4
N14	Feb 22	07:43	4.3
O10	Feb 12	19:30	3.0
P11	May 28	18:08	4.3
P15	Feb 1	06:09	3.3
R12	May 26	03:56	4.1
R13	May 30	16:05	4.2
	May 30	17:28	4.4

KEY	DATE	TIME	MAG

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KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
D4	Jul 1	19h51m08.7s	40°41.3'	124°42.7'	14	0.12	6a	3.4(2)	7.3E20(2)	48 km WSW of Eureka, CA
K12	Jul 3	15h20m12.3s	36°45.4'	121°29.2'	6	0.14	14d	2.5(4)		Fremont Peak, 13 km SW of Hollister, CA
K12	Jul 4	08h47m13.2s	36°45.2'	121°29.5'	6	0.17	13d	2.9(4)		Fremont Peak, 13 km SW of Hollister, CA
K12	Jul 4	08h48m42.3s	36°45.7'	121°29.4'	6	0.10	12d	3.0(4)	1.4E21(1)	Fremont Peak, 13 km SW of Hollister, CA
H8	Jul 4	15h42m07.9s	38°48.0'	122°46.7'	6	0.19	15c	3.6(6)	7.3E21(2)	•The Geysers area, 25 km S of Clear Lake, CA (NEIC) Felt (V) at Middletown. Also felt at The Geysers.
Q13	Jul 5	18h18m47.9s	36°25.8'	118°01.6'	7	0.04	7e	4.8(4)		•20 km SSE of Lone Pine, CA (NEIC) Felt (IV) at Olancha, CA and (III) at Lone Pine, CA. Also felt at Keeler, CA.
K11	Jul 11	06h22m07.5s	37°01.3'	121°27.1'	8	0.12	12d	3.6(4)	2.5E21(4)	•9 km E of Gilroy, CA (NEIC) Felt (III) at Gilroy and San Martin.
D5	Jul 11	20h40m04.9s	40°23.6'	124°30.3'	18	0.11	16a	3.9(2)	6.9E21(2)	•Off Coast 9 km W of Cape Mendocino, CA
E5	Jul 12	02h49m42.8s	40°26.5'	124°24.7'	19	0.15	13a	3.6(2)	1.5E21(2)	Cape Mendocino, CA
K12	Jul 12	23h13m26.2s	36°45.7'	121°29.3'	6	0.16	17d	2.9(4)		12 km SW of Hollister, CA
D5	Jul 15	06h13m30.8s	40°22.5'	124°32.3'	16	0.17	15a	3.0(2)		Off Coast 14 km SW of Cape Mendocino, CA
E4	Jul 15	13h30m42.8s	40°44.0'	124°12.9'	19	0.21	16a	3.0(2)	1.5E21(2)	•7 km SW of Eureka, CA (NEIC) Felt (IV) at Fields Landing and (III) at Rio Dell.
G7	Jul 16	05h23m03.9s	39°10.3'	123°18.1'	2	0.09	13c	3.6(8)	6.4E21(2)	•8 km WNW of Ukiah, CA (NEIC) Felt (III) at Boonville, Potter Valley and Ukiah.
M13	Jul 17	21h36m49.4s	36°24.5'	120°27.2'	2	0.17	10k	2.8(2)		30 km NNW of Coalinga, CA
I10	Jul 18	03h25m07.7s	37°40.4'	122°01.5'	1	0.13	8d	2.1(6)		•Hayward area, 69 km SE of Berkeley, CA (NEIC) Felt at Hayward and Castro Valley.
J10	Jul 18	22h48m27.7s	37°31.2'	121°41.6'	6	0.15	9d	2.7(4)	2.5E20(2)	Mt. Lewis area, 27 km NE of San Jose, CA
K11	Jul 19	10h10m54.5s	37°08.2'	121°10.2'	8	0.19	10d	2.7(4)	6.7E19(1)	San Luis Reservoir, 29 km NW of Los Banos, CA
G7	Jul 20	05h05m12.3s	39°15.8'	123°12.0'	1	0.23	11c	2.1 *		•17 km S of Willits, CA Felt in Ukiah.
K12	Jul 20	13h52m06.1s	36°52.8'	121°18.6'	5	0.25	13d	2.8(2)		9 km ENE of Hollister, CA
Q13	Jul 20	20h45m45.5s	36°28.3'	118°02.5'	5R	0.27	6e	4.1(2)		•15 km S of Lone Pine, CA (NEIC) Felt (III) at Lone Pine, CA.
K12	Jul 25	01h22m06.5s	36°53.0'	121°20.3'	5	0.14	15d	2.6(4)		7 km NE of Hollister, CA
K12	Jul 26	03h26m56.0s	36°33.8'	121°10.9'	3	0.18	12d	4.7(10)	1.7E23(4)	•Bear Valley, 39 km N of King City, CA (NEIC) Felt (III) at Gonzales, Moss Landing and San Lucas. Small landslide reported along Panoche Road 13 km E of Paicines.
K12	Jul 26	03h48m36.0s	36°34.4'	121°10.9'	4	0.19	12d	3.3(6)	3.2E21(1)	Bear Valley, 39 N km of King City, CA
K12	Jul 27	16h57m40.4s	36°34.1'	121°10.8'	3	0.19	12d	3.6(4)	9.4E21(2)	•Bear Valley, 39 km N of King City, CA Felt at Bear Valley and Beaver Valley Fire Stations, Chalome Peak and Call Mtn. Lookouts
Q13	Jul 28	11h20m24.4s	36°25.7'	118°03.8'	5R	0.23	7e	4.5(4)		•20 km S of Lone Pine, CA (NEIC) Felt (III) at Lone Pine and Olancha,CA
Q13	Jul 28	11h33m14.7s	36°24.9'	118°03.2'	6	0.12	7e	4.0(4)		21 km S of Lone Pine, CA

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K12	Jul 29	01h47m05.7s	36°33.6'	121°11.0'	5	0.21	10d	3.1(3)		Bear Valley, 39 km N of King City, CA
M13	Jul 29	14h58m36.9s	36°17.5'	120°23.7'	8	0.18	13k	2.6(2)		17 km NW of Coalinga, CA
M13	Jul 31	10h26m03.6s	36°10.7'	120°16.0'	9	0.18	13k	3.2(2)		▪9 km NE of Coalinga, CA (NEIC) Felt at Coalinga.
L13	Aug 1	23h30m22.1s	36°10.6'	120°47.0'	9	0.14	11d	2.9(2)		Peachtree Valley, 30 km ESE of King City, CA
H8	Aug 10	17h03m27.6s	38°50.3'	122°47.5'	3	0.25	14c	3.4(4)	2.0E21(2)	The Geysers area, 18 km S of Clear Lake, CA
Q13	Aug 10	18h24m51.6s	36°26.3'	118°03.2'	6	0.13	7e	4.6(2)		▪19 km S of Lone Pine, CA (NEIC) Felt (II) at Olancha, CA.
Q13	Aug 10	18h27m01.5s	36°27.5'	118°03.5'	5R	0.36	7e	4.3(2)		17 km SSW of Lone Pine, CA
M6	Aug 10	21h58m19.3s	39°40.1'	120°19.5'	9	0.39	5e	2.2 *		▪40 km NW of Truckee, CA Reported felt at Nevada City.
M13	Aug 12	14h40m57.8s	36°12.6'	120°23.2'	10	0.21	14k	3.3(4)		8 km NW of Coalinga, CA
C4	Aug 12	19h37m10.8s	40°39.8'	125°14.2'	11	0.27	13a	4.4(6)	2.5E22(2)	Off Coast 100 km WSW of Eureka, CA
J10	Aug 13	02h23m45.8s	37°51.0'	121°47.3'	10	0.09	9d	2.9(4)	3.6E20(2)	20 km N of Livermore, CA
K13	Aug 16	00h11m49.2s	36°24.3'	121°01.0'	8	0.23	12d	2.7(4)		23 km NE of King City, CA
I9	Aug 16	07h16m14.4s	38°19.3'	122°11.7'	7	0.16	7d	2.2(2)		▪8 km E of Napa, CA Felt at Napa.
K12	Aug 17	03h11m09.2s	36°34.1'	121°11.3'	4	0.12	11d	2.6(2)		40 km NNW of King City, CA
J11	Aug 20	09h25m45.9s	37°22.6'	121°46.0'	7	0.14	8h	2.8(4)	1.3E20(2)	Alum Rock, 11 km NE of San Jose, CA
D4	Aug 22	12h49m39.3s	40°44.0'	124°36.4'	23	0.16	7a	3.3(1)		Off Coast 38 km WSW of Eureka, CA
J11	Aug 23	06h30m21.9s	37°25.9'	121°47.0'	8	0.16	8d	2.5(4)	7.5E19(2)	Calaveras Reservoir, 13 km NE of San Jose, CA
K12	Aug 24	16h01m46.1s	36°33.2'	121°10.8'	4	0.17	12d	3.2(4)	5.9E21(1)	▪Bear Valley, 37 km NNW of King City, CA (NEIC) Felt (III) at Soledad.
D5	Aug 25	19h47m05.1s	40°29.7'	124°36.6'	18	0.09	7a	3.4(4)	3.0E20(2)	50 km SW of Eureka, CA
J11	Aug 28	22h55m51.7s	37°13.8'	121°39.2'	5	0.15	8h	3.0(4)	3.3E20(2)	San Felipe Valley, 23 km SE of San Jose, CA
L13	Aug 29	10h25m48.3s	36°08.8'	120°45.0'	8	0.09	11d	2.6(4)		Peachtree Valley, 34 km SE of King City, CA
H8	Sep 1	12h29m20.1s	38°49.0'	122°44.9'	2R	0.26	6c	3.1(6)		▪The Geysers area, 20 km S of Clear Lake, CA (NEIC) Felt (III) at Loch Lomand.
K12	Sep 5	18h43m29.7s	36°33.2'	121°03.2'	8	0.17	13d	2.9(4)		Bear Valley area, 38 km NE of King City, CA
E4	Sep 6	19h47m22.8s	40°44.0'	124°12.4'	17	0.08	7a	2.8 *		▪6 km SW of Eureka, CA Felt at Eureka.
H8	Sep 11	06h38m00.3s	38°50.1'	122°45.2'	3	0.13	13c	2.8(2)		▪The Geysers area, 19 km S of Clear Lake, CA Felt at Cobb Mountain.
H8	Sep 12	14h51m57.4s	38°50.0'	122°45.1'	1	0.13	13c	3.1(4)		▪The Geysers area, 19 km S of Clear Lake, CA
K12	Sep 12	22h24m28.1s	36°51.6'	121°18.6'	6	0.21	15d	2.5(4)		8 km E of Hollister, CA
H8	Sep 15	00h05m05.7s	38°49.8'	122°49.6'	3	0.18	11c	3.1(6)		The Geysers area, 20 km S of Clear Lake, CA
J11	Sep 15	16h07m52.9s	37°15.0'	121°39.9'	5	0.14	8h	3.3(4)	7.0E20(2)	San Felipe Valley, 21 km SE of San Jose, CA
A4	Sep 16	04h56m51.3s	40°30.1'	127°22.1'	5R	0.38	6a	4.3(8)		Off Coast 250 km W of Cape Mendocino, CA
C5	Sep 17	09h52m51.9s	40°26.7'	125°26.6'	5R	0.23	8a	3.8(4)		Off Coast 87 km W of Cape Mendocino, CA

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N14	Sep 17	15h50m20.8s	35°36.6'	119°33.6'	22	0.17	18d	3.4(2)		55 km NW of Bakersfield, CA
Q8	Sep 19	02h56m31.1s	38°31.1'	118°21.7'	9	0.12	11e	5.3(6)		•21 km E of Hawthorne, NV (NEIC) Felt (V) at Fallon and Hawthorne; (IV) at Gabbs, Schurz and Wellington; (III) at Carson City, Silver Springs and Yerington, Nevada. Felt (IV) at Bridgeport and (III) at Lee Vining and Mono Lake, California. Also felt at Tonopah, Nevada and South Lake Tahoe, California.
L13	Sep 21	09h23m33.7s	36°10.3'	120°50.2'	6	0.12	5d	2.6(2)		27 km E of King City, CA
H8	Sep 21	12h49m12.0s	38°49.8'	122°49.5'	2	0.19	12c	3.3(6)	7.4E21(2)	•The Geysers area, 21 km S of Clear Lake, CA Reported felt and heard at Cobb.
H8	Sep 21	12h56m28.6s	38°49.8'	122°48.4'	2R	0.19	12c	2.9(4)		•The Geysers area, 21 km S of Clear Lake, CA Reported felt and heard at Cobb.
H8	Sep 25	09h21m19.9s	38°48.0'	122°46.0'	3	0.16	13c	3.1(4)	3.6E21(1)	The Geysers area, 22 km S of Clear Lake, CA
B5	Sep 28	04h54m35.2s	40°28.2'	125°47.3'	5R	0.27	5a	3.9(2)	5.3E20(2)	Off Coast 115 km W of Cape Mendocino, CA
J2	Sep 29	15h05m00.3s	41°37.4'	121°32.3'	2R	0.32	7b	3.5(4)	8.9E21(2)	Medicine Lake area, 74 km ENE of Weed, CA
J2	Sep 30	00h03m55.9s	41°38.8'	121°33.2'	7	0.14	6b	3.6(4)	5.6E21(2)	Medicine Lake area, 74 km ENE of Weed, CA
J2	Sep 30	00h30m13.7s	41°37.7'	121°33.2'	9	0.21	7b	4.3(8)	3.9E22(4)	•Medicine Lake area, 73 km ENE of Weed, CA (NEIC) Felt (IV) at Tulelake.
J2	Sep 30	00h40m03.6s	41°36.6'	121°34.5'	7	0.20	7b	3.6(6)	7.3E21(2)	Medicine Lake area, 70 km ENE of Weed, CA
H8	Oct 1	03h05m24.3s	38°47.6'	122°45.8'	3	0.19	10c	3.1(6)		The Geysers area, 23 km S of Clear Lake, CA
J2	Oct 4	00h34m07.8s	41°35.5'	121°34.3'	2R	0.17	6b	3.4(4)	4.5E21(2)	Medicine Lake area, 70 km ENE of Weed, CA
H8	Oct 4	14h04m27.5s	38°49.3'	122°48.5'	4	0.15	13c	3.2(8)		•The Geysers area, 22 km S of Clear Lake, CA (NEIC) Felt (III) at Cobb.
R13	Oct 8	21h14m20.4s	36°06.2'	117°52.2'	5	0.10	11e	4.6(4)		•59 km SE of Lone Pine, CA (NEIC) Felt in the Little Lake area, California. Felt (II) at Olancha, California.
R13	Oct 8	21h26m06.3s	36°06.1'	117°52.6'	6	0.18	13e	4.1(4)		59 km SE of Lone Pine, CA
D5	Oct 10	00h19m18.4s	40°19.5'	124°39.2'	11	0.26	9a	3.3(4)		Off Coast 23 km W of Cape Mendocino, CA
B5	Oct 11	13h30m09.3s	40°25.6'	125°30.9'	19	0.14	10a	4.6(4)	2.3E22(2)	Off Coast 96 km W of Cape Mendocino, CA
J11	Oct 12	12h47m30.6s	37°22.5'	121°45.4'	1	0.12	8h	3.4(4)	2.9E21(4)	•Alum Rock, 11 km NE of San Jose, CA (NEIC) Felt (III) at La Honda, Santa Clara, Santa Cruz and San Jose. Also felt at Brookdale, Campbell and Livermore.
B4	Oct 14	18h18m06.2s	40°46.0'	125°51.4'	5R	0.22	6a	3.8(5)		143 km W of Eureka, CA
K12	Oct 17	09h53m00.2s	36°41.3'	121°21.9'	5	0.14	10d	3.4(6)	3.5E21(2)	Stone Canyon area, 20 km SSE of Hollister, CA
K12	Oct 17	11h23m48.7s	36°41.3'	121°21.9'	4	0.14	11d	2.7(3)		Stone Canyon area, 20 km SSE of Hollister, CA
Q11	Oct 19	16h08m23.8s	37°12.2'	118°27.1'	13	0.23	8s	4.3(6)	1.1E22(1)	•20 km SSW of Bishop, CA (NEIC) Felt (III) at Bishop, Mammoth Lakes, Toms Place and Sequoia National Park, Calif.

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H8	Oct 20	17h33m02.1s	38°48.2'	122°48.1'	6	0.38	7c	3.7(8)		•The Geysers area, 22 km S of Clear Lake, CA (NEIC) Felt (IV) at Cobb and (II) at Lower Lake. Small foreshock about two seconds earlier.
F5	Oct 20	23h19m52.2s	40°15.9'	123°30.1'	24	0.17	10a	3.6(4)	5.0E21(4)	30 km NE of Garberville, CA (NEIC) Felt (III) at Miranda. Also felt at Garberville.
E4	Oct 22	03h27m16.0s	40°31.8'	124°14.3'	24	0.15	12a	3.3(4)	1.8E21(2)	•Near Ferndale, 29 km SSW of Eureka, CA (NEIC) Felt (II) at Rio Dell.
J11	Oct 22	16h26m19.3s	37°24.7'	121°42.4'	6	0.11	8h	2.5(4)	8.4E19(2)	18 km NE of San Jose, CA
I10	Oct 25	11h11m55.2s	37°31.7'	122°04.3'	13	0.03	5d	2.7(4)	3.7E20(1)	•3 km W of Newark, CA (NEIC) Felt at Atherton, Fremont, Newark and Palo Alto.
I10	Oct 25	11h12m47.4s	37°31.6'	122°04.1'	13	0.03	5d	2.9(6)	7.0E20(4)	•3 km W of Newark, CA (NEIC) Felt at Atherton, Fremont, Newark and Palo Alto.
G8	Oct 25	14h43m24.9s	38°42.4'	123°26.3'	5	0.23	18c	3.8(8)	3.1E22(2)	•Sea Ranch, 37 km SE of Point Arena, CA (NEIC) Felt (V) at Annapolis, (IV) at Stewarts Point and (III) Duncan Mills, Manchester and Point Arena. Felt in northwestern Sonoma County including Cotati, Cloverdale, Forestville, Santa Rosa and Sebastopol.
B5	Oct 29	00h05m35.6s	40°22.3'	125°59.0'	22	0.16	8a	4.2(4)		Off Coast 134 km W of Cape Mendocino, CA
B5	Oct 30	00h39m37.6s	40°22.9'	125°57.4'	5R	0.40	5a	4.1(6)	5.7E21(2)	Off Coast 132 km W of Cape Mendocino, CA
K12	Nov 1	02h18m27.2s	36°33.3'	121°10.6'	4	0.18	10d	2.7(4)		San Benito area, 38 km N of King City, CA
M13	Nov 1	03h11m17.9s	36°09.2'	120°09.3'	8	0.14	15k	2.8(4)		18 km E of Coalinga, CA
E5	Nov 2	12h50m38.3s	40°23.0'	124°29.4'	17	0.13	12a	3.8(8)	2.2E22(4)	•Off Coast 8 km W of Cape Mendocino, CA (NEIC) Felt (IV) at Ferndale and Miranda; (III) at Blocksburg, Carlotta, Eureka, Honeydew, Loleta, Rio Dell and Scotia.
H7	Nov 4	00h09m57.3s	39°04.0'	122°46.2'	10	0.20	4c	2.3(4)		•20 km SE of Ukiah, CA Felt at Ukiah.
D5	Nov 4	16h18m53.5s	40°27.1'	124°42.7'	5R	0.29	5a	3.2(4)		Off Coast 26 km W of Cape Mendocino, CA
M7	Nov 7	10h11m55.0s	39°20.5'	120°16.4'	3	0.19	6b	3.1(4)		8 km W of Truckee, CA
J11	Nov 8	12h49m56.9s	37°20.5'	121°44.1'	6	0.10	8h	3.1(3)		Halls Valley, 13 km E of San Jose, CA
J11	Nov 10	05h08m03.0s	37°22.4'	121°45.4'	7	0.11	8h	4.8(6)	9.9E22(2)	•Alum Rock, 12 km NE of San Jose, CA (NEIC) Some items knocked from shelves at San Jose. Felt (V) at Alviso, Aptos, French Camp, Half Moon Bay, Pacifica, San Jose and Scotts Valley; (IV) at Alameda, Albany, Boulder Creek, Holt, Loma Mar, Los Gatos, Moss Beach, Mountain View, New Almaden, Palo Alto, Ripon, Redwood Estates, San Carlos, San Gregorio, Santa Clara, Santa Cruz and Saratoga. Felt north to Eureka, south to Monterey and east as far as Modesto.
J11	Nov 11	02h42m18.5s	37°22.2'	121°46.3'	6	0.11	8h	2.9(3)		Alum Rock, 10 km NE of San Jose, CA
I11	Nov 14	18h58m06.0s	37°21.8'	122°16.7'	11	0.16	10d	2.9(4)	3.5E20(2)	•Portola Valley, 13 km SW of Palo Alto, CA Felt on San Francisco Peninsula.

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KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
I11	Nov 14	19h21m47.5s	37°22.0'	122°16.4'	11	0.12	10d	3.6(6)	2.0E21(4)	•Portola Valley, 13 km SW of Palo Alto, CA (NEIC) Felt (IV) at La Honda, San Gregorio and Hayward; (III) at Belmont and San Carlos; (II) at San Lorenzo. Also felt at San Mateo, Redwood City and Woodside.
I11	Nov 14	19h52m58.4s	37°22.0'	122°16.4'	11	0.13	10d	3.4(4)	9.3E20(4)	•Portola Valley, 13 km SW of Palo Alto, CA Felt on the San Francisco Peninsula.
I11	Nov 15	00h02m43.0s	37°21.8'	122°15.5'	11	0.18	7d	2.4(4)		Portola Valley, 12 km SW of Palo Alto, CA
I11	Nov 16	02h24m14.1s	37°22.2'	122°16.3'	11	0.14	10d	3.1(4)	2.8E20(2)	Portola Valley, 12 km SW of Palo Alto, CA
J11	Nov 16	22h30m06.5s	37°16.2'	121°41.1'	4	0.10	8h	2.6(3)	6.0E19(1)	San Felipe Valley, 19 km SE of San Jose, CA
C5	Nov 17	16h19m10.8s	40°28.2'	125°04.8'	10	0.10	9a	3.3(4)		Off Coast 55 km W of Cape Mendocino, CA
H8	Nov 18	09h48m43.8s	38°49.8'	122°46.0'	2R	0.35	6c	3.2(4)		•The Geysers area, 18 km S of Clear Lake, CA Felt in Cobb area.
L12	Nov 21	05h36m30.8s	36°55.3'	120°59.0'	4	0.15	11d	3.0(2)		20 km SW of Los Banos, CA
L12	Nov 21	05h38m20.3s	36°55.9'	120°57.4'	4	0.16	7d	2.6(2)		18 km SW of Los Banos, CA
P11	Nov 22	07h57m39.7s	37°23.4'	118°34.4'	7	0.11	16s	4.4(7)		•16 km WNW of Bishop, CA (NEIC) Felt at Bishop.
M13	Nov 30	20h15m38.2s	36°17.8'	120°29.0'	8	0.14	12k	2.9(2)		21 km NW of Coalinga, CA
K12	Dec 2	02h45m51.8s	36°37.8'	121°17.3'	9	0.15	11d	2.6(4)		Stone Canyon area, 27 km SE of Hollister, CA
J13	Dec 4	10h57m16.4s	36°06.6'	121°33.0'	5	0.17	12d	2.9(4)		40 km WSW of King City, CA
P10	Dec 5	15h00m56.0s	37°32.7'	118°52.1'	7	0.17	15e	3.1(2)		15 km SE of Mammoth Lakes, CA
H8	Dec 7	02h52m39.2s	38°49.4'	122°51.2'	8	0.12	6c	3.2(3)		The Geysers area, 22 km S of Clear Lake, CA
D5	Dec 7	03h02m55.4s	40°19.5'	124°55.7'	7	0.18	6a	3.9(5)		•Off Coast 45 km WSW of Cape Mendocino, CA (NEIC) Felt (IV) at Honeydew; (III) at Ferndale and Rio Dell.
J11	Dec 7	10h41m24.2s	37°16.3'	121°40.1'	3	0.15	7d	2.9(3)	1.0E20(1)	San Felipe Valley, 20 km SE of San Jose, CA
J13	Dec 8	01h16m58.8s	36°09.3'	121°33.5'	9	0.15	9d	2.6(4)		40 km WSW of King City, CA
K14	Dec 9	00h29m13.4s	35°52.4'	121°12.5'	6	0.16	13d	3.0(4)		27 km NNW of San Simeon, CA
K12	Dec 12	03h54m26.1s	36°58.7'	121°26.9'	5	0.09	13d	2.8(4)		11 km SE of Gilroy, CA
K12	Dec 12	05h28m19.9s	36°58.8'	121°27.2'	5	0.07	13d	3.2(4)	8.5E20(2)	9 km SE of Gilroy, CA
K12	Dec 12	06h40m26.9s	36°58.6'	121°27.0'	5	0.08	13d	2.9(4)	5.6E20(1)	11 km SE of Gilroy, CA
J14	Dec 15	19h21m12.8s	35°45.0'	121°33.5'	3	0.19	13d	3.4(4)		Off Coast 35 km NW of San Simeon, CA
K12	Dec 16	01h50m27.9s	36°49.8'	121°16.3'	8	0.15	10d	3.8(4)	1.4E22(3)	•12 km ESE of Hollister, CA (NEIC) Felt (IV) at Tres Pinos and (III) at Hollister.
K12	Dec 16	02h30m12.4s	36°49.2'	121°17.3'	5	0.06	11d	2.7(4)		11 km ESE of Hollister, CA
J10	Dec 18	09h37m52.6s	37°32.2'	121°41.4'	6	0.13	10d	2.7(2)		Mt. Lewis area, 18 km SE of Livermore, CA
M13	Dec 22	22h21m14.4s	36°12.2'	120°21.0'	11	0.12	16k	3.3(4)		•7 km N of Coalinga, CA (NEIC) Felt (III) at Coalinga.
K12	Dec 23	23h18m13.3s	36°52.8'	121°18.6'	5	0.18	11d	2.6(4)		9 km ENE of Hollister, CA
F5	Dec 24	05h29m33.4s	40°29.7'	123°42.5'	29	0.07	9a	3.3(2)	6.5E20(2)	45 km NE of Garberville, CA

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KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
H8	Dec 28	22h58m32.3s	38°49.5'	122°47.2'	6	0.10	11c	3.2(4)		The Geysers area, 19 km S of Clear Lake, CA
J11	Dec 29	21h41m14.3s	37°21.4'	121°42.9'	7	0.17	7d	2.6(1)		Alum Rock area, 15 km E of San Jose, CA
J11	Dec 30	23h54m24.4s	37°17.2'	121°41.4'	7	0.14	8h	4.3(6)	4.9E22(2)	•San Felipe Valley, 18 km SE of San Jose, CA (NEIC) Felt (IV) at Santa Cruz and (III) at Aptos, Castle AFB, Cupertino, Felton, Morgan Hill and San Jose.
K14	Dec 31	02h17m40.9s	35°47.5'	121°29.3'	3	0.16	10d	2.8(4)		Off Coast 31 km NW of San Simeon, CA

MAP KEY INDEX ... EARTHQUAKES IN NORTHERN CALIFORNIA ... 1988

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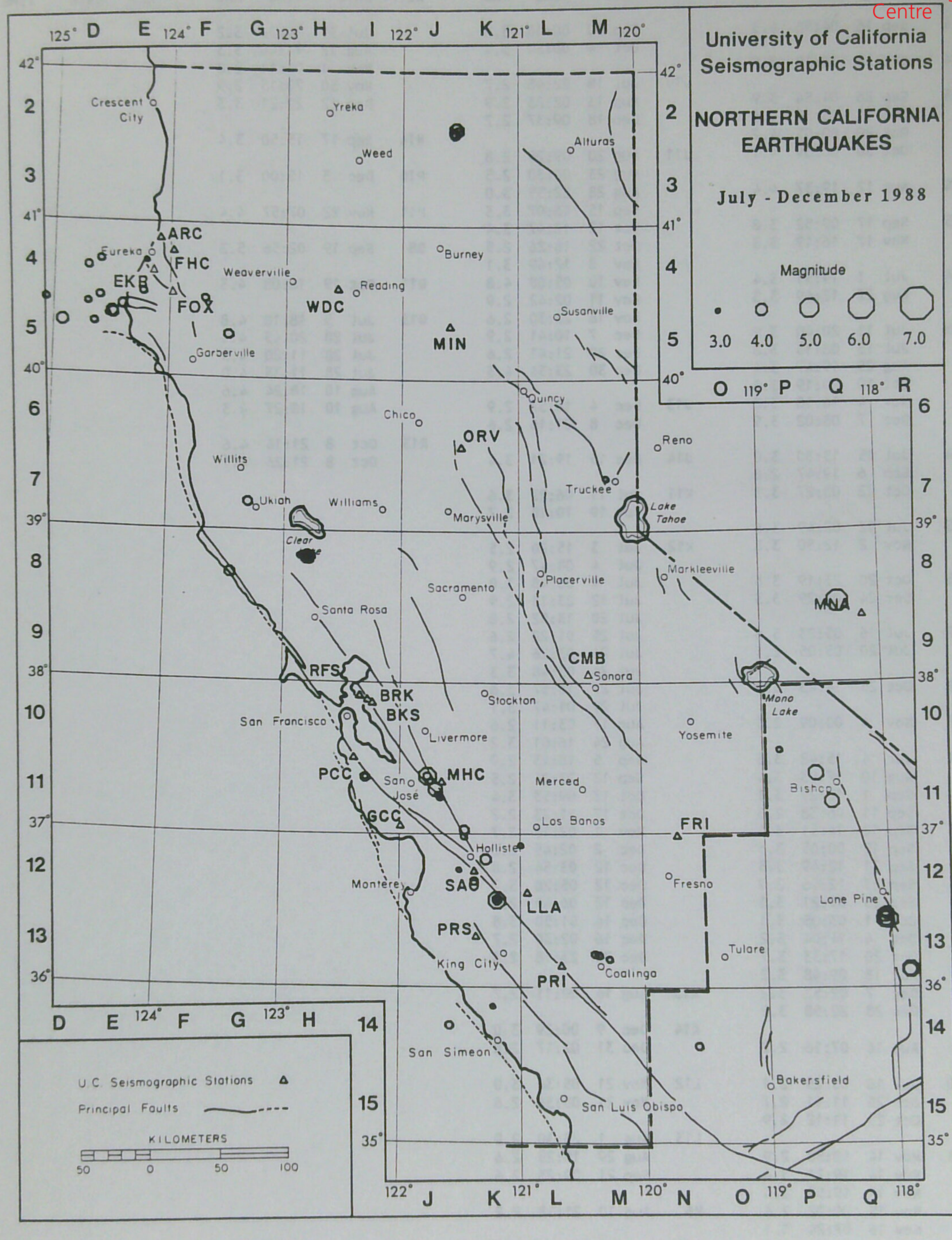
KEY	DATE	TIME	MAG
A4	Sep 16	04:56	4.3
B4	Oct 14	18:18	3.8
B5	Sep 28	04:54	3.9
	Oct 11	13:30	4.6
	Oct 29	00:05	4.2
	Oct 30	00:39	4.1
C4	Aug 12	19:37	4.4
C5	Sep 17	09:52	3.8
	Nov 17	16:19	3.3
D4	Jul 1	19:51	3.4
	Aug 22	12:49	3.3
D5	Jul 11	20:40	3.9
	Jul 15	06:13	3.0
	Aug 25	19:47	3.4
	Oct 10	00:19	3.3
	Nov 4	16:18	3.2
	Dec 7	03:02	3.9
E4	Jul 15	13:30	3.0
	Sep 6	19:47	2.8
	Oct 22	03:27	3.3
E5	Jul 12	02:49	3.6
	Nov 2	12:50	3.8
F5	Oct 20	23:19	3.6
	Dec 24	05:29	3.3
G7	Jul 16	05:23	3.6
	Jul 20	05:05	2.1
G8	Oct 25	14:43	3.8
H7	Nov 4	00:09	2.3
H8	Jul 4	15:42	3.6
	Aug 10	17:03	3.4
	Sep 1	12:29	3.1
	Sep 11	06:38	2.8
	Sep 12	14:51	3.1
	Sep 15	00:05	3.1
	Sep 21	12:49	3.3
	Sep 21	12:56	2.9
	Sep 25	09:21	3.1
	Oct 1	03:05	3.1
	Oct 4	14:04	3.2
	Oct 20	17:33	3.7
	Nov 18	09:48	3.2
	Dec 7	02:52	3.2
	Dec 28	22:58	3.2
I9	Aug 16	07:16	2.2
I10	Jul 18	03:25	2.1
	Oct 25	11:11	2.7
	Oct 25	11:12	2.9
I11	Nov 14	18:58	2.9
	Nov 14	19:21	3.6
	Nov 14	19:52	3.4
	Nov 15	00:02	2.4
	Nov 16	02:24	3.1
J2	Sep 29	15:05	3.5
	Sep 30	00:03	3.6
	Sep 30	00:30	4.3
	Sep 30	00:40	3.6
	Oct 4	00:34	3.4
J10	Jul 18	22:48	2.7
	Aug 13	02:23	2.9
	Dec 18	09:37	2.7
J11	Aug 20	09:25	2.8
	Aug 23	06:30	2.5
	Aug 28	22:55	3.0
	Sep 15	16:07	3.3
	Oct 12	12:47	3.4
	Oct 22	16:26	2.5
	Nov 8	12:49	3.1
	Nov 10	05:08	4.8
	Nov 11	02:42	2.9
	Nov 16	22:30	2.6
	Dec 7	10:41	2.9
	Dec 29	21:41	2.6
	Dec 30	23:54	4.3
J13	Dec 4	10:57	2.9
	Dec 8	01:16	2.6
J14	Dec 15	19:21	3.4
K11	Jul 11	06:22	3.6
	Jul 19	10:10	2.7
K12	Jul 3	15:20	2.5
	Jul 4	08:47	2.9
	Jul 4	08:48	3.0
	Jul 12	23:13	2.9
	Jul 20	13:52	2.8
	Jul 25	01:22	2.6
	Jul 26	03:26	4.7
	Jul 26	03:48	3.3
	Jul 27	16:57	3.6
	Jul 29	01:47	3.1
	Aug 17	03:11	2.6
	Aug 24	16:01	3.2
	Sep 5	18:43	2.9
	Sep 12	22:24	2.5
	Oct 17	09:53	3.4
	Oct 17	11:23	2.7
	Nov 1	02:18	2.7
	Dec 2	02:45	2.6
	Dec 12	03:54	2.8
	Dec 12	05:28	3.2
	Dec 12	06:40	2.9
	Dec 16	01:50	3.8
	Dec 16	02:30	2.7
	Dec 23	23:18	2.6
K13	Aug 16	00:11	2.7
K14	Dec 9	00:29	3.0
	Dec 31	02:17	2.8
L12	Nov 21	05:36	3.0
	Nov 21	05:38	2.6
L13	Aug 1	23:30	2.9
	Aug 29	10:25	2.6
	Sep 21	09:23	2.6
M6	Aug 10	21:58	2.2
M7	Nov 7	10:11	3.1
M13	Jul 17	21:36	2.8
	Jul 29	14:58	2.6
	Jul 31	10:26	3.2
	Aug 12	14:40	3.3
	Nov 1	03:11	2.8
	Nov 30	20:15	2.9
	Dec 22	22:21	3.3
N14	Sep 17	15:50	3.4
P10	Dec 5	15:00	3.1
P11	Nov 22	07:57	4.4
Q8	Sep 19	02:56	5.3
Q11	Oct 19	16:08	4.3
Q13	Jul 5	18:18	4.8
	Jul 20	20:45	4.1
	Jul 28	11:20	4.5
	Jul 28	11:33	4.0
	Aug 10	18:24	4.6
	Aug 10	18:27	4.3
R13	Oct 8	21:14	4.6
	Oct 8	21:26	4.1

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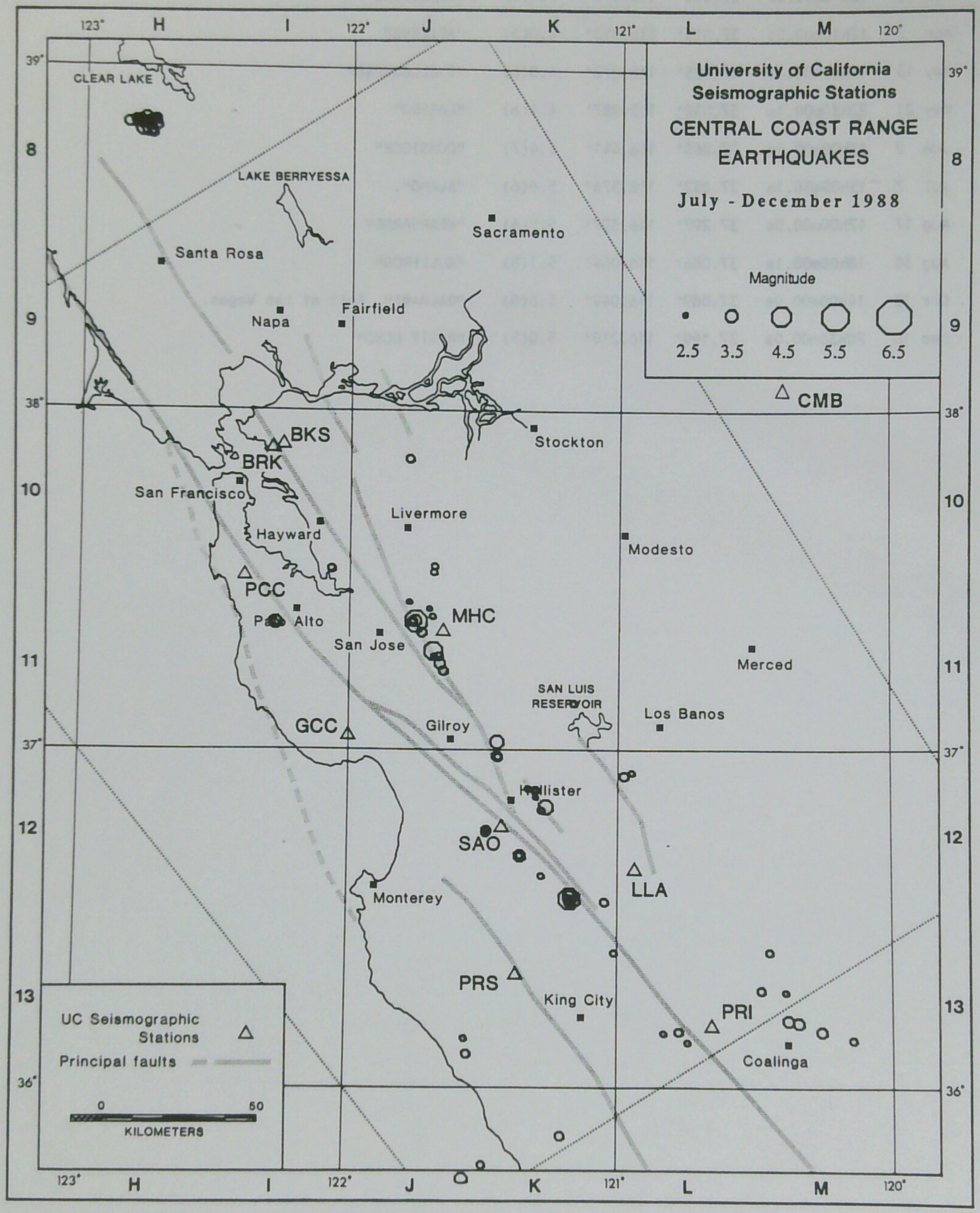
University of California Seismographic Stations

NORTHERN CALIFORNIA EARTHQUAKES

July - December 1988



International Seismological Centre



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DATE	O-TIME(UTC)	N LAT	W LONG	MAG	COMMENTS
Feb 15	18h10m00.0s	37.314°	116.471°	5.3(8)	"KERNVILLE"
Apr 7	17h15m00.0s	37.013°	116.053°	4.0(3)	"ABILENE"
May 13	15h35m00.1s	37.123°	116.072°	4.8(6)	"SHELLBOURNE"
May 21	22h30m00.1s	37.032°	115.987°	4.4(6)	"LAREDO"
Jun 2	13h00m00.1s	37.260°	116.441°	5.4(7)	"COMSTOCK"
Jul 7	15h05m30.1s	37.252°	116.376°	5.6(6)	"ALAMO".
Aug 17	17h00m00.0s	37.297°	116.307°	5.5(6)	"KEARSARGE"
Aug 30	18h00m00.1s	37.086°	116.069°	5.1(8)	"BULLFROG"
Oct 13	14h00m00.0s	37.089°	116.049°	5.6(8)	"DALHART". Felt at Las Vegas.
Dec 10	20h30m00.0s	37.199°	116.210°	5.0(5)	"MISTY ECHO"

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PART II. REGISTRATION OF EARTHQUAKES

This section tabulates measured arrival times of prominent phases of earthquakes and large explosions recorded at stations in the seismographic network operated by the University of California (Berkeley). Information regarding these stations and instrumentation may be found in the introductory section of this Bulletin. Berkeley source parameters from part I (indicated by BRK) are repeated for all earthquakes in Northern California and adjoining areas. For earthquakes in the list that are located outside of Northern and Central California, location information from the California Institute of Technology (CIT) for Southern California earthquakes and the National Earthquake Information Center (USGS) for teleseisms are given as a guide when appropriate.

Phase arrival times are Coordinated Universal Time (UTC).

CMP indicates the component of ground motion for that particular phase – including radial (R) and transverse (T). The first motion polarity of phases measured from the Z component is represented by the conventional 'c' for compression and 'd' for dilatation. The first motion polarity of transverse component phases is '+' for clockwise and '–' for counterclockwise with the source as origin. Also, the first motion polarity of radial component phases is '+' from the source.

When available, the maximum amplitude of earth displacement in micrometers and periods in seconds of the indicated phases are given for teleseisms. Unless otherwise specified, magnitudes given for the earthquakes outside the Northern California, Nevada, and Oregon region correspond to the magnitude based on surface waves (M_S). The published value is obtained from the amplitude of surface waves of period 20 seconds, according to the formula

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

where:

A = ground amplitude in microns (horizontal vector resultant)
T = period in seconds
Δ = distance to epicenter in degrees

The Richter magnitude for local and regional earthquakes is designated 'M_L' if it is determined from Wood-Anderson torsion seismographs and 'MAG' if it is determined from vertical Benioff seismographs. The number of observations used to determine magnitude is given in parenthesis immediately following the magnitude value.

The seismic moment (M_o) is given for local and regional earthquakes as described in Part I.

Distances are given in degrees from the Berkeley station, BKS.

All measurements and interpretation of seismograms (i.e., identification of phases, arrival times, directions of initial ground motion, and ground amplitudes and periods) are done at Berkeley. Requests for additional data or for copies of seismograms should be addressed to the Director.

DATE	STA	CMP	PHASE	TIME (UTC)
Jan 1	WDC	Z	e	00 15 07.1
	CMB	Z	eP	00 15 09.1
	FRI	Z	eP	00 15 14.1
	MNA	Z	eP	00 15 17.4
USGS 00h03m10.0s 28.0N 142.7E				
h=28km mb=5.1				
Bonin Islands Region				
Jan 1	FRI	Z	eP	01 08 52.6
	CMB	Z	eP	01 08 53.8
	ORV	Z	eP	01 08 54.8
	WDC	Z	ePd	01 08 55.2
	MIN	Z	eP	01 08 57.0
	MNA	Z	eP	01 09 02.0
USGS 00h57m33.6s 22.4S 179.5W				
h=580km mb=4.9				
South of Fiji Islands				
Jan 1	FHC	Z	iPd	14 45 42.8
	WDC	Z	iPd	14 45 45.7
	MIN	Z	iPd	14 45 49.2
		Z	e	14 45 53.7
	ORV	Z	ePd	14 45 53.8
	BRK	Z	eP	14 46 04.9
	BKS	Z	ePd	14 46 05.3
			AMP(μm)	PER(s)
		PZ	0.087	1.
	CMB	Z	ePd	14 46 06.5
		Z	i	14 46 12.8
	PCC	Z	eP	14 46 06.5
	MNA	Z	iPd	14 46 08.6
	MHC	Z	ePd	14 46 09.3
	SAO	Z	eP	14 46 13.3
	FRI	Z	ePd	14 46 14.8
	LLA	Z	ePd	14 46 16.2
	PRS	Z	iPd	14 46 17.0
	PRI	Z	iPd	14 46 20.3
USGS 14h36m09.6s 74.7N 131.0E				
h=10km mb=5.1 Ms=4.6				
Laptev Sea				
Jan 1	CMB	Z	iPd	21 15 17.3
		Z	iS	21 15 27.9
	MNA	Z	iPc	21 15 24.1
		Z	iS	21 15 40.7
	FRI	Z	iPd	21 15 31.8
		Z	iS	21 15 51.4
	ORV	Z	eP	21 15 32.8
		Z	iS	21 15 56.2
	MHC	Z	eP	21 15 38.3
		Z	i	21 16 05.7
	BKS	Z	ePd	21 15 40.5
		Z	i	21 15 42.0
	BRK	Z	ePc	21 15 40.7
	LLA	Z	ePd	21 15 40.8
	SAO	Z	ePd	21 15 41.9
	ZSP	Z	eP	21 15 42.4
		Z	e	21 16 07.8
	PCC	Z	ePc	21 15 43.9
	MIN	Z	eP	21 15 44.3
	PRS	Z	eP	21 15 46.4
	GCC	Z	e	21 15 46.6
	PRI	Z	ePc	21 15 46.8
	WDC	Z	ePc	21 15 52.1
BRK 21h15m02.7s 38.6N 119.6W				
h=4km ML=3.4(6)				
15 km SE of Markleeville, CA				
Jan 2	SAO	Z	iPc	03 15 28.4
	GCC	Z	iPc	03 15 28.8
	LLA	Z	iPc	03 15 33.7
	PCC	Z	iPc	03 15 35.4
	PRS	Z	ePd	03 15 35.7
	BKS	Z	iPd	03 15 38.7
		Z	iS	03 15 52.7
	BRK	Z	iPc	03 15 38.9
		Z	iS	03 15 53.4
	ZSP	Z	iPd	03 15 39.8
		Z	iS	03 15 55.7
	PRI	Z	ePd	03 15 42.7
	CMB	Z	ePd	03 15 43.9
		Z	iS	03 16 00.5
	FRI	Z	ePc	03 15 45.9
	ORV	Z	e(P)	03 16 00.2
	MNA	Z	e	03 16 13.2
	MIN	Z	e	03 16 13.3
	WDC	Z	e	03 16 16.2
BRK 03h15m20.9s 37.1N 121.5W				
h=6km ML=3.5(6) Mo=1.2E21(2)				
Coyote Lake area, 11 km N of Gilroy, CA				
Jan 2	PCC	Z	eP	06 48 36.3
	GCC	Z	e(P)	06 48 36.5
	PRS	Z	eP	06 48 37.5
		Z	epP	06 49 12.5
	LLA	Z	eP	06 48 39.6
	FHC	Z	eP	06 48 39.8
	PRI	Z	ePd	06 48 40.0
		Z	epP	06 49 14.8
	WDC	Z	eP	06 48 43.2
		Z	epP	06 49 18.0
	ORV	Z	eP	06 48 44.2
		Z	e(pP)	06 49 19.0
	FRI	Z	ePd	06 48 44.2
		Z	epP	06 49 19.1
	CMB	Z	ePd	06 48 44.3
		Z	epP	06 49 19.2
	MIN	Z	ePd	06 48 45.2
	MNA	Z	ePd	06 48 52.8
		Z	epP	06 49 27.7
USGS 06h36m09.8s 20.5S 169.8E				
h=136km mb=5.6				
Vanuatu Islands				
Jan 2	WDC	Z	eP	10 42 10.0
	MIN	Z	eP	10 42 13.6
	ORV	Z	e(P)	10 42 17.2
	CMB	Z	eP	10 42 32.6
	PRS	Z	eP	10 42 37.0
	LLA	Z	eP	10 42 38.0
	MNA	Z	eP	10 42 40.7
	FRI	Z	eP	10 42 40.9
USGS 10h33m30.0s 55.1N 165.5E				
h=33km mb=4.9				
Komandorsky Islands Region				
Jan 2	FHC	Z	ePc	12 52 31.3
		Z	epP	12 53 13.0
	WDC	Z	iPc	12 52 36.8
		Z	ipP	12 53 19.0
	MIN	Z	ePc	12 52 40.7
		Z	epP	12 53 22.7
	ORV	Z	iPc	12 52 44.1
		Z	ipP	12 53 26.4
	BKS	Z	iPc	12 52 48.0
		Z	ipPd	12 53 31.0
		Z	e	12 54 27.2
			AMP(μm)	PER(s)
		PZ	0.32	1.2
	BRK	Z	iPc	12 52 48.1
		Z	epP	12 53 30.5
	PCC	Z	ePc	12 52 48.6
	GCC	Z	iPc	12 52 52.3
		Z	epP	12 53 34.7
	CMB	Z	iPc	12 52 54.8
		Z	ipP	12 53 36.9
	SAO	Z	eP	12 52 55.0
		Z	epP	12 53 37.7
	PRS	Z	iPc	12 52 57.6
		Z	epP	12 53 40.2
	LLA	Z	ePc	12 52 58.0
		Z	epP	12 53 40.8
	FRI	Z	ePc	12 53 01.0
		Z	ipP	12 53 43.6
	PRI	Z	iPc	12 53 01.5
		Z	epP	12 53 43.7
	MNA	Z	iPc	12 53 01.7
		Z	ipP	12 53 44.2
BRK mb=6.4 h=175km Distance=69°				
USGS 12h42m02.5s 43.3N 142.4E				
h=177km mb=6.0				
Hokkaido, Japan, Region				
Jan 2	WDC	Z	ePc	13 49 56.6
	MIN	Z	eP	13 50 00.0
	PCC	Z	eP	13 50 00.2
	BRK	Z	eP	13 50 00.5
	BKS	Z	eP	13 50 00.7
			AMP(μm)	PER(s)
		PZ	0.025	0.9
	ORV	Z	eP	13 50 01.0
	PRS	Z	eP	13 50 05.8
	LLA	Z	eP	13 50 07.0
	CMB	Z	ePc	13 50 07.5
	PRI	Z	eP	13 50 09.5
	FRI	Z	ePc	13 50 11.1
	MNA	Z	ePc	13 50 15.6
USGS 13h37m24.9s 12.4N 143.6E				
h=51km mb=5.3 Ms=4.5				
South of Mariana Islands				
Jan 2	FRI	Z	eP	18 36 04.8
	CMB	Z	eP	18 36 06.1
	ORV	Z	e(P)	18 36 07.2
	MNA	Z	eP	18 36 16.1
USGS 18h24m34.2s 16.5S 173.3W				
h=33km mb=5.0 Ms=4.5				
Tonga Islands				
Jan 2	FRI	Z	eP	20 15 32.2
	CMB	Z	eP	20 15 33.4
	WDC	Z	e(P)	20 15 35.1
	ORV	Z	e(P)	20 15 36.5
	MNA	Z	eP	20 15 43.5
USGS 20h04m02.2s 16.5S 173.3W				
h=33km mb=4.4				
Tonga Islands				
Jan 4	WDC	Z	ePc	10 46 54.4
	MIN	Z	ePc	10 46 59.0
	ORV	Z	ePc	10 47 02.2
	CMB	Z	ePc	10 47 13.5
	SAO	Z	e(P)	10 47 13.7
	PRS	Z	eP	10 47 16.4
	LLA	Z	ePc	10 47 17.0
	FRI	Z	ePc	10 47 20.2
	MNA	Z	ePc	10 47 21.2
USGS 10h37m03.5s 46.5N 149.9E				
h=204km mb=5.2				
Kurile Islands				
Jan 5	MNA	Z	iPKPc	07 01 08.1
	FRI	Z	ePKPc	07 01 11.0
	CMB	Z	ePKPc	07 01 11.8
	MIN	Z	iPKPc	07 01 11.9
	ORV	Z	e(PKP)	07 01 12.4
	WDC	Z	ePKPc	07 01 12.7
	PRS	Z	e(PKP)	07 01 14.1
	PRI	Z	e(PKP)	07 01 14.3
	SAO	Z	ePKPc	07 01 17.5
USGS 06h41m16.9s 26.8S 26.6E				
h=5km mb=5.2				
Republic of South Africa				
Jan 6	LLA	Z	iPd	22 49 51.7
	SAO	Z	iPc	22 49 57.7
	PRS	Z	iPd	22 50 00.0
	PRI	Z	iPc	22 50 01.3
	MHC	Z	iPc	22 50 04.50
		Z	iS	22 50 17.6
	FRI	Z	iPd	22 50 05.8
	CMB	Z	iPd	22 50 11.6
	PCC	Z	ePc	22 50 12.1
	BKS	Z	iPd	22 50 14.6
	BRK	Z	ePd	22 50 14.7
		Z	eS	22 50 36.7
	MNA	Z	eP	22 50 33.4
	ORV	Z	eP	22 50 33.5
	MIN	Z	e(P)	22 50 45.1
	WDC	Z	e(P)	22 50 50.3
BRK 22h49m48.3s 36.8N 120.9W				
h=6km ML=4.5(6) Mo=3.8E22(4)				
Panoche Mtn. area, 35 km SSW of Los Banos, CA				
Jan 7	LLA	Z	iPd	01 05 15.0
	SAO	Z	iPc	01 05 20.9
	PRS	Z	iPd	01 05 23.3
	PRI	Z	e(P)	01 05 25.7
	MHC	Z	ePc	01 05 27.6
		Z	eS	01 05 41.1
	GCC	Z	ePc	01 05 28.8
	FRI	Z	eP	01 05 28.9
		Z	iS	01 05 41.5
	CMB	Z	eP	01 05 34.8
	PCC	Z	eP	01 05 36.4
	BKS	Z	ePd	01 05 40.4
	MNA	Z	e(P)	01 06 00.2
BRK 01h05m11.5s 36.8N 120.9W				
h=6km ML=2.7(4)				
Panoche Mtn. Area, 35 km SSW of Los Banos, CA				
Jan 7	FRI	Z	ePKP	09 43 15.5
	PRI	Z	ePKP	09 43 16.0
	PRS	Z	ePKP	09 43 16.0
	CMB	Z	ePKP	09 43 17.2
	MNA	Z	ePKP	09 43 17.9
	MHC	Z	ePKP	09 43 18.9
	BKS	Z	e(PKP)	09 43 20.5
			AMP(μm)	PER(s)
		PKPZ	0.022	0.7
	MIN	Z	ePKP	09 43 21.8
	WDC	Z	ePKP	09 43 22.9
USGS 09h24m19.3s 59.0S 23.6W				
h=31km mb=5.3 Ms=5.2				
South Sandwich Islands Region				
Jan 8	FHC	Z	ePc	02 50 41.9
	WDC	Z	iPc	02 50 47.3
		Z	e(pP)	02 51 09.7
		Z	esP	02 51 15.6
	MIN	Z	e(P)	02 50 51.2
	ORV	Z	ePc	02 50 54.0
		Z	e(sP)	02 51 23.2
	BRK	Z	e(P)	02 50 58
	PCC	Z	ePc	02 50 59.3
	GCC	Z	e(P)	02 51 03.1
	CMB	Z	iPc	02 51 06.0
		Z	epP	02 51 25.8
		Z	esP	02 51 33.5
	PRS	Z	ePc	02 51 08.6
	LLA	Z	ePc	02 51 09.0
	FRI	Z	ePc	02 51 12.5
		Z	esP	02 51 41.0
	PRI	Z	ePc	02 51 13.3
	MNA	Z	ePc	02 51 13.7
		Z	epP	02 51 34.0
		Z	esP	02 51 42.1
USGS 02h40m29.8s 44.2N 148.8E				
h=73km mb=5.2				
Kurile Islands				
Jan 8	WDC	Z	ePc	12 36 12.0
	LLA	Z	ePc	12 36 16.7
	CMB	Z	ePc	12 36 24.7
	MNA	Z	ePc	12 36 34.9
USGS 12h24m02.2s 14.5S 173.2W				
h=33km mb=4.7				
Samoa Islands Region				
Jan 9	MIN	Z	e(P)	01 16 52.4
		Z	e	01 17 02.8
	ORV	Z	e(P)	01 16 53.5
		Z	e	01 17 03.7
	MNA	Z	e(P)	01 16 57.1
	CMB	Z	eP	01 16 57.9
		Z	e	01 17 07.5
	MHC	Z	eP	01 17 03.6
	FRI	Z	e(P)	01 17 04
		Z	e	01 17 13.4
	LLA	Z	e(P)	01 17 08
		Z	e	01 17 17.2
	PRI	Z	eP	01 17 08.8
		Z	e	01 17 19.0
	BKS	E	e	01 45 36
USGS 01h02m46.7s 41.2N 19.6E				
h=24km mb=5.3 Ms=5.8				
Albania				
Jan 9	PRS	Z	eP	21 37 09.3
	GCC	Z	eP	21 37 09.9
	SAO	Z	eP	21 37 10.7
	BRK	Z	ePc	21 37 10.9
	LLA	Z	e(P)	21 37 11.5
	PRI	Z	ePc	21 37 11.8
	MHC	Z	ePc	21 37 12.5
	CMB	Z	eP	21 37 17.5
	ORV	Z	ePc	21 37 19.8
	WDC	Z	iPc	21 37 20.2
	MIN	Z	ePc	21 37 22.1
	MNA	Z	eP	21 37 26.6
USGS 21h25m26.4s 22.4S 177.0W				
h=180km mb=5.0				
South of Fiji Islands				
Jan 9	PRS	Z	ePc	23 19 00.6
	GCC	Z	eP	23 19 00.6
	PRI	Z	eP	23 19 01.6
	BRK	Z	e(P)	23 19 01.7
	LLA	Z	e(P)	23 19 02.9
	MHC	Z	ePc	23 19 03.0
	FRI	Z	ePc	23 19 07.5
	CMB	Z	ePc	23 19 08.7
	ORV	Z	ePc	23 19 09.7
	WDC	Z	eP	23 19 10.0
	MIN	Z	eP	23 19 12.0
	MNA	Z	eP	23 19 17.3
USGS 23h07m35.1s 23.3S 180.0W				
h=485km mb=4.6				
South of Fiji Islands				
Jan 10	MNA	Z	e(P)	02 52 46.7
	MIN	Z	e	02 52 58.3
	CMB	Z	e(P)	02 53 03.5
USGS 02h51m00.8s 44.9N 114.4W				
h=5km				
Western Idaho				
Jan 10	PRI	Z	ePd	03 30 17.4
	PRS	Z	ePd	03 30 22.2
	LLA	Z	eP	03 30 22.3
	MNA	Z	ePd	03 30 28.6
	GCC	Z	eP	03 30 30.8
	MHC	Z	eP	03 30 32.2
	CMB	Z	ePd	03 30 32.3
	BRK	Z	eP	03 30 39.3
	BKS	Z	e(P)	03 30 45
		E	iS	03 34 44
		E	eLq	03 35 34
		Z	eLr	03 36 34
			AMP(μm)	PER(s)
		PZ	0.34	1.2
		LZ	8.4	20.
		LN	13	20.
		LE	9.3	20.
	ORV	Z	eP	03 30 51.6
	MIN	Z	ePd	03 30 58.8
	WDC	Z	e(P)	03 31 02.0
BRK Ms=5.5 Distance=23°				
USGS 03h25m50.4s 19.8N 109.2W				
h=10km mb=5.2 Ms=5.2				
Revilla Gigedo Islands Region				
Jan 10	PRS	Z	eP	14 00 57.3
	CMB	Z	eP	14 01 05.7
	ORV	Z	e(P)	14 01 06.8
	WDC	Z	eP	14 01 07.0
	MNA	Z	eP	14 01 14.5
USGS 13h49m52.6s 20.5S 178.0W				
h=520km mb=4.8				
Fiji Islands Region				
Jan 10	MHC	Z	ePc	17 26 15.35
		T	eS	17 26 18.64
	PCC	Z	iPd	17 26 22.0
		Z	eS	17 26 29.2
	GCC	Z	eP	17 26 22.0
	BKS	Z	iPc	17 26 22.4
		N	iS	17 26 31.0
	BRK	Z	iPc	17 26 22.5
	ZSP	Z	iPd	17 26 23.7
	SAO	Z	iPc	17 26 26.4
	LLA	Z	eP	17 26 30.8
	CMB	Z	eP	17 26 31.6
		Z	iS	17 26 48.1
	PRS	Z	eP	17 26 33.1
	FRI	Z	eP	17 26 39.5
		Z	iS	17 27 01.5
BRK 17h26m11.4s 37.5N 121.7W				
h=8km ML=2.7(4) Mo=2.0E20(2)				
Mt. Lewis area, 25 km E of Fremont, CA				
Jan 10	MNA	Z	eP	23 24 05.5
	ORV	Z	eP	23 24 11.8
	CMB	Z	eP	23 24 22.4
	FRI	Z	eP	23 24 31.9
USGS 23h22m19.5s 44.4N 114.4W				
h=5km mb=4.8				
Western Idaho				

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DATE	STA	CMP	PHASE	TIME (UTC)
Jan 11	ORV	Z	eP	13 46 46.7
	CMB	Z	eP	13 46 46.8
	FRI	Z	e(P)	13 46 47.0
	MNA	Z	e(P)	13 46 55.5
USGS 13h33m59.4s 18.0S 167.5E				
h=21km mb=4.5				
Vanuatu Islands				
Jan 11	FHC	Z	ePc	21 16 19.0
	WDC	Z	iPc	21 16 25.5
	MIN	Z	iPc	21 16 30.2
	ORV	Z	iPc	21 16 34.5
	BRK	Z	ePc	21 16 40.3
	BKS	Z	iPc	21 16 40.7
		Z	e	21 33 10
	PCC	Z	ePc	21 16 41.5
	GCC	Z	ePc	21 16 45.9
	MHC	Z	ePc	21 16 46.1
	CMB	Z	iPc	21 16 47.7
	SAO	Z	ePd	21 16 50.2
	PRS	Z	ePc	21 16 51.2
	LLA	Z	ePc	21 16 52.7
	MNA	Z	iPc	21 16 55.0
	FRI	Z	iPc	21 16 55.7
	PRI	Z	ePc	21 16 56.8
USGS 21h07m29.7s 54.8N 161.7E				
h=42km mb=5.8 Ms=4.9				
Near East Coast of Kamchatka				
Jan 11	BKS	Z	iPc	22 40 02
		E	iS	22 50 38
		E	ePPS	22 52 16
		Z	eLr	23 08 12
			AMP(μm)	PER(s)
		LZ	3.9	20.
		LN	2.1	20.
		LE	3.9	20.
	WDC	Z	eP	22 40 03.6
	PRS	Z	eP	22 40 05.8
	LLA	Z	ePd	22 40 06.0
	ORV	Z	ePd	22 40 06.5
	MIN	Z	eP	22 40 07.0
	CMB	Z	ePd	22 40 08.9
	FRI	Z	e(P)	22 40 11.8
	MNA	Z	ePd	22 40 17.9
BRK Ms=5.9 Distance=88°				
USGS 22h27m09.4s 6.2S 154.4E				
h=20km mb=5.3 Ms=5.6				
Solomon Islands				
Jan 12	PRS	Z	ePc	07 41 57.2
		Z	e	07 42 00.4
	GCC	Z	ePc	07 41 57.5
		Z	i	07 42 00.9
	SAO	Z	ePc	07 41 58.0
		Z	iS	07 52 39
		Z	iLr	08 07 48
	PCC	Z	ePc	07 41 58.1
	PRI	Z	iPd	07 41 59.1
		Z	i	07 42 02.3
		Z	epP	07 42 17.0
	LLA	Z	ePc	07 41 59.4
		Z	e	07 42 02.6
	BRK	Z	iPc	07 41 59.7
		Z	e	07 42 01.4
		Z	eS	07 52 23
		Z	e	07 53 24
		Z	eSS	07 57 44
		Z	iLr	08 07 46
			AMP(μm)	PER(s)
		LZ	14	20.

DATE	STA	CMP	PHASE	TIME (UTC)
	BKS	Z	iPc	07 42 00
		Z	ePP	07 45 18
		N	iS	07 52 24
		NE	ePS	07 53 15
		NE	ePPS	07 53 58
		NE	eSS	07 57 10
		E	eSSS	08 01 20
		NW	eLq	08 03 40
		Z	eLr	08 07 16
			AMP(μm)	PER(s)
		PZ	0.38	1.0
		LZ	31	20.
		LN	22	20.
		LE	18	20.
	MHC	Z	ePc	07 42 00.0
		Z	iS	07 52 46
		Z	iLr	08 07 32
	ZSP	Z	ePc	07 42 00.0
		Z	i	07 42 03.2
		Z	ipP	07 42 18.1
	FRI	Z	iPc	07 42 04.4
		Z	i	07 42 07.3
	FHC	Z	ePc	07 42 05.3
	CMB	Z	iPc	07 42 05.5
		Z	i	07 42 08.5
		Z	ipP	07 42 22.9
		Z	e	07 43 23.7
		Z	iPP	07 45 18.0
		Z	epPP	07 45 39.5
		Z	e	07 46 38.5
		Z	ePKKP	08 00 12.5
		Z	ePKPPKP	08 08 20.0
	ORV	Z	iPc	07 42 07.2
	WDC	Z	iPc	07 42 08.0
		Z	i	07 42 11.2
		Z	ipP	07 42 25.5
		Z	i	07 43 16.5
		Z	epPP	07 45 34.0
		Z	ePKPPKP	08 08 22.0
	MIN	Z	ePc	07 42 09.1
	MNA	Z	iPc	07 42 13.3
		Z	i	07 42 16.6
		Z	ipP	07 42 31.3
		Z	i	07 43 04.8
		Z	ePKKP	08 00 08.4
		Z	ePKPPKP	08 08 17.8
BRK Ms=6.7 Distance=85°				
USGS 07h29m28.0s 28.8S 177.4W				
h=14km mb=6.1 Ms=6.4				
Kermadec Islands Region				
Jan 12	WDC	Z	ePd	13 02 33.7
	ORV	Z	ePd	13 02 38.8
	BRK	Z	e	13 02 41.0
	PCC	Z	e	13 02 45.2
	CMB	Z	ePd	13 02 47.7
	PRS	Z	eP	13 02 48.1
USGS 12h51m25.8s 27.8N 139.8E				
h=493km mb=4.6				
Bonin Islands Region				
Jan 13	WDC	Z	eP	01 14 31
	MIN	Z	eP	01 14 40
	BRK	Z	eP	01 14 48
		Z	eLr	01 20 20
	MHC	Z	eP	01 14 54
	CMB	Z	eP	01 14 56
	FRI	Z	eP	01 15 06
	MNA	Z	eP	01 15 07
	PRS	Z	eP	01 15 07
	BKS	N	e(S)	01 18 08
		Z	e(Lr)	01 20 20

DATE	STA	CMP	PHASE	TIME (UTC)
USGS 01h09m35.2s 51.3N 174.7W				
h=33km mb=5.1				
Andreanof Islands, Aleutian Is.				
Jan 13	PRS	Z	ePKP	12 00 18.0
	MHC	Z	ePKP	12 00 20.5
	PCC	Z	ePKP	12 00 21
	PRI	Z	ePKP	12 00 22.5
	FRI	Z	ePKP	12 00 24.6
	MIN	Z	ePKP	12 00 29.6
	WDC	Z	ePKP	12 00 31.4
	MNA	Z	ePKP	12 00 33.5
USGS 11h40m32.1s 61.5S 154.8E				
h=10km mb=5.3				
Balleny Islands Region				
Jan 13	GCC	Z	ePd	15 50 10.1
	PRS	Z	iPd	15 50 11.0
	PRI	Z	iPd	15 50 13.1
	LLA	Z	ePd	15 50 13.3
	BKS	Z	iPc	15 50 13.5
	MHC	Z	iPd	15 50 13.7
	FRI	Z	iPd	15 50 18.1
	WDC	Z	iPd	15 50 21.5
	MNA	Z	iPd	15 50 38.4
USGS 15h38m15.8s 23.3S 177.0W				
h=109km mb=5.7				
South of Fiji Islands				
Jan 13	PRS	Z	eP	17 45 03.5
	WDC	Z	e(P)	17 45 04.1
	FRI	Z	e(P)	17 45 05.8
	MNA	Z	e(P)	17 45 13.1
USGS 17h32m04.2s 15.0S 167.3E				
h=149km mb=5.5				
Vanuatu Islands				
Jan 13	PRI	Z	eP	22 29 33.3
	BKS	Z	iPc	22 29 34.6
			AMP(μm)	PER(s)
		PZ	0.14	1.6
	FRI	Z	eP	22 29 38.0
	CMB	Z	eP	22 29 39.5
	WDC	Z	eP	22 29 42.1
	MNA	Z	eP	22 29 47.2
USGS 22h16m49.1s 32.4S 179.6W				
h=58km mb=5.6 Ms=4.9				
South of Kermadec Islands				
Jan 14	FRI	Z	eP	01 28 58.5
	CMB	Z	eP	01 28 59.3
	WDC	Z	eP	01 29 01.2
	MNA	Z	eP	01 29 07.1
USGS 01h16m49.1s 24.7S 176.1W				
h=67km mb=4.9 Ms=5.4				
South of Fiji Islands				
Jan 14	FHC	Z	iPd	09 37 05.0
	WDC	Z	iPd	09 37 20.5
		Z	eS	09 37 50.7
	MIN	Z	eP	09 37 30.0
	ORV	Z	eP	09 37 33.1
		Z	eS	09 38 14.6
	PCC	Z	e(P)	09 37 38.7
	CMB	Z	eP	09 37 55.4
BRK 09h36m38.6s 40.5N 126.0W				
h=5kmR ML=3.8(4)				
Off Coast 150 km W of Cape Mendocino, CA				
Jan 14	WDC	Z	eP	10 44 53.2
	MIN	Z	e(P)	10 44 58.1

DATE	STA	CMP	PHASE	TIME (UTC)
	CMB	Z	eP	10 45 03.1
	FRI	Z	eP	10 45 07.3
	MNA	Z	eP	10 45 11.1
USGS 10h32m54.5s 20.6N 146.4E				
h=33km mb=4.7 Ms=4.0				
Mariana Islands Region				
Jan 14	FRI	Z	eP	14 56 36.6
	PRS	Z	eP	14 56 40.5
	MNA	Z	eP	14 56 45.0
	CMB	Z	eP	14 56 48.8
USGS 14h52m09.6s 19.6N 109.2W				
h=33km mb=4.2				
Revilla Gigedo Islands Region				
Jan 14	PRS	Z	ePc	19 15 15.2
	GCC	Z	ePc	19 15 15.3
	PRI	Z	e(P)	19 15 16.8
	MHC	Z	ePc	19 15 17.7
	LLA	Z	e(P)	19 15 17.7
	FRI	Z	ePc	19 15 22.1
	CMB	Z	ePc	19 15 23.4
	ORV	Z	ePc	19 15 24.4
	WDC	Z	ePc	19 15 25.3
	MNA	Z	ePc	19 15 31.3
USGS 19h03m32.8s 25.9S 178.8W				
h=367km mb=5.0				
South of Fiji Islands				
Jan 14	SAO	Z	iPc	22 10 13.8
	LLA	Z	iPc	22 10 20.1
	PRS	Z	iPd	22 10 21.2
	GCC	Z	iPc	22 10 22.6
	MHC	Z	iPd	22 10 23.8
	PRI	Z	ePd	22 10 29.8
	PCC	Z	ePc	22 10 31.5
	BKS	Z	iPc	22 10 34.7
		N	iS	22 10 55.3
	BRK	Z	ePc	22 10 34.8
	FRI	Z	ePd	22 10 36.7
		Z	iS	22 10 54.4
	ZSP	Z	ePc	22 10 37.9
	CMB	Z	iPd	22 10 38.1
		Z	iS	22 10 57.8
	ORV	Z	e	22 10 57.0
	MNA	Z	e	22 11 05.9
BRK 22h10m12.3s 36.8N 121.4W				
h=3km ML=3.0(4)				
5 km S of Hollister, CA				
Jan 15	SAO	Z	iPc	01 09 05.4
	LLA	Z	iPc	01 09 11.7
	PRS	Z	iPd	01 09 12.8
	GCC	Z	iPc	01 09 14.1
	MHC	Z	iPd	01 09 15.4
	PRI	Z	eP	01 09 20.8
	PCC	Z	ePd	01 09 23.0
	BRK	Z	eP	01 09 26.2
	BKS	Z	eP	01 09 26.7
		N	iS	01 09 46.6
	FRI	Z	ePd	01 09 27.8
		Z	eS	01 09 45.3
	ZSP	Z	eP	01 09 29.4
	CMB	Z	iPd	01 09 29.8
		Z	iS	01 09 49.7
	ORV	Z	e	01 09 48.7
	MNA	Z	e	01 09 58.2
BRK 01h09m03.9s 36.8N 121.4W				
h=5km ML=2.8(4)				
5 km S of Hollister, CA				
Jan 15	GCC	Z	ePc	08 51 53.8

DATE	STA	CMP	PHASE	TIME (UTC)
	PRS	Z	iPc	08 51 53.8
		Z	e	08 52 46.1
	PCC	Z	iPc	08 51 54.1
	SAO	Z	ePc	08 51 55.7
	BRK	Z	ePc	08 51 55.9
	BKS	Z	iPc	08 51 55.9
			AMP(μm)	PER(s)
		PZ	0.48	0.9
	PRI	Z	iPc	08 51 56.1
	LLA	Z	ePc	08 51 56.1
	MHC	Z	iPc	08 51 56.5
		Z	e	08 52 49.1
	FHC	Z	ePc	08 52 01.0
	FRI	Z	ePc	08 52 01.3
		Z	i	08 52 55.5
	CMB	Z	ePc	08 52 02.5
		Z	e	08 52 56.5
	ORV	Z	ePc	08 52 03.5
	WDC	Z	iPc	08 52 04.1
		Z	e	08 52 55.3
	MIN	Z	ePc	08 52 05.8
	MNA	Z	iPc	08 52 11.8
USGS 08h00m23.9s 20.8S 176.0W				
h=213km mb=6.2				
Tonga Islands				
Jan 15	LLA	Z	iPd	16 15 09.7
	SAO	Z	iPc	16 15 10.2
	MHC	Z	iPd	16 15 14.0
		Z	iS	16 15 22.5
	PRS	Z	iPd	16 15 15.8
		Z	eS	16 15 26.3
	GCC	Z	ePc	16 15 16.6
	PRI	Z	iPd	16 15 20.3
		Z	iSn	16 15 35.8
	FRI	Z	ePc	16 15 21.3
		Z	iSn	16 15 35.3
	CMB	Z	iPd	16 15 23.5
		Z	iSn	16 15 40.8
	PCC	Z	e(P)	16 15 23.8
		Z	iSg	16 15 42.6
	BKS	Z	iPc	16 15 25.4
		N	e(S)	16 15 48.5
	BRK	Z	e(P)	16 15 25.5
	ZSP	Z	iPd	16 15 29.6
	ORV	Z	eP	16 15 50.5
	MNA	Z	ePd	16 15 51.3
BRK 16h15m02.1s 37.0N 121.0W				
h=5km ML=3.2(4)				
San Luis Reservoir, 18 km SW of Los Banos, CA				
Jan 16	PRS	Z	eP	08 13 38.6
	SAO	Z	e(P)	08 13 39.1
	FRI	Z	eP	08 13 44.8
	CMB	Z	eP	08 13 46.3
	ORV	Z	eP	08 13 48.0
	WDC	Z	eP	08 13 49.1
	MNA	Z	eP	08 13 53.8
USGS 08h00m52.3s 32.5S 179.7W				
h=33km mb=5.2				
South of Kermadec Islands				
Jan 16	PRS	Z	ePd	13 12 17.0
	SAO	Z	eP	13 12 17.5
	BRK	Z	e(P)	13 12 18.5
	PRI	Z	ePd	13 12 19.1
	MHC	Z	eP	13 12 19.3
	FRI	Z	ePd	13 12 24.2
	CMB	Z	iPd	13 12 25.2
	ORV	Z	eP	13 12 25.9
	WDC	Z	ePd	13 12 26.0

DATE	STA	CMP	PHASE	TIME (UTC)
	MIN	Z	eP	13 12 27.8
	MNA	Z	ePd	13 12 34.3
USGS 13h01m24.3s 18.5S 178.0W				
h=573km mb=4.9				
Fiji Islands Region				
Jan 17	MHC	Z	iPc	01 43 55.9
	GCC	Z	eP	01 44 02.5
	BKS	Z	iPc	01 44 02.8
		N	iS	01 44 11.5
	BRK	Z	iPc	01 44 02.9
	ZSP	Z	iPc	01 44 03.8
	SAO	Z	iPd	01 44 07.0
	LLA	Z	eP	01 44 11.2
	CMB	Z	ePd	01 44 12.1
		Z	iS	01 44 28.6
	PRS	Z	e(P)	01 44 13.6
	FRI	Z	eP	01 44 20.3
		Z	eS	01 44 41.8
	PRI	Z	e(P)	01 44 21.9
BRK 01h43m51.9s 37.5N 121.7W				
h=6km ML=2.8(4) Mo=2.4E20(2)				
Mt. Lewis area, 23 km E of Fremont, CA				
Jan 17	CMB	Z	eP	14 04 29.0
	WDC	Z	eP	14 04 31.5
	MNA	Z	eP	14 04 36.4
USGS 13h51m36.8s 32.4S 179.6W				
h=51km mb=5.3 Ms=5.1				
South of Kermadec Islands				
Jan 18	CMB	Z	eP	04 42 11.3
		Z	e	04 42 17.1
	WDC	Z	e(P)	04 42 13.9
		Z	e	04 42 20.0
	MNA	Z	eP	04 42 18.8
USGS 04h36m12.9s 32.5S 179.6W				
h=33km mb=5.2 Ms=5.6				
South of Kermadec Islands				
Jan 18	FRI	Z	e(P)	10 06 21.6
	CMB	Z	e(P)	10 06 24.1
	WDC	Z	eP	10 06 25.4
	ORV	Z	eP	10 06 25.6
	MIN	Z	e(P)	10 06 27.9
	MNA	Z	eP	10 06 31.5
USGS 09h53m34.2s 32.5S 179.5W				
h=71km mb=5.2				
South of Kermadec Islands				
Jan 18	FRI	Z	e(P)	13 57 37.1
	MNA	Z	eP	13 57 37.8
		Z	epP	13 58 11.8
	PRI	Z	eP	13 57 38.8
	CMB	Z	ePd	13 57 45.2
		Z	epP	13 58 18.4
	ORV	Z	ePd	13 57 57.0
		Z	epP	13 58 30.2
	MIN	Z	e(P)	13 57 59.0
		Z	epP	13 58 32.5
	WDC	Z	eP	13 58 03.0
		Z	epP	13 58 36.0
USGS 13h48m12.5s 2.4S 76.6W				
h=148km mb=4.9				
Peru-Ecuador Border Region				
Jan 18	ZSP	Z	e(P)	23 26 01.6
	BRK	Z	iPc	23 26 02.3
	BKS	Z	iPc	23 26 03.0
		E	iS	23 26 18.0
	ORV	Z	eP	23 26 06.3

International Seismological Centre

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REGISTRATION OF EARTHQUAKES 1988

DATE	STA	CMP	PHASE	TIME (UTC)
	MHC	Z	eP	23 26 13.3
	GCC	Z	eP	23 26 14.2
	WDC	Z	ePd	23 26 14.6
	MIN	Z	e(P)	23 26 14.6
	CMB	Z	iPc	23 26 18.0
		Z	e(S)	23 26 41.8
	SAO	Z	e(P)	23 26 20.3
	LLA	Z	e(P)	23 26 25.4
	FRI	Z	eP	23 26 31.6

BRK 23h25m43.6s 38.8N 122.8W
h=3km ML=3.1(4) Mo=2.1E21(1)
The Geysers, 25 km S of Clear Lake, CA

Jan 19	WDC	Z	ePKP	03 43 04.9
	MIN	Z	ePKP	03 43 06.2
	ORV	Z	ePKP	03 43 07.0
		Z	e	03 43 18.4
	CMB	Z	ePKP	03 43 09.6
		Z	e	03 43 28.3
	PRS	Z	e(PKP)	03 43 09.8
	FRI	Z	ePKP	03 43 10.7
	MNA	Z	ePKP	03 43 13.2

USGS 03h25m21.2s 4.2N 124.6E
h=334km mb=5.7
Celebes Sea

Jan 19	FRI	Z	iPc	07 42 21.5
		Z	ePKPPKP	08 09 38.6
	PRI	Z	iPc	07 42 22.9
	MNA	Z	iPc	07 42 23.7
		Z	ePKPPKP	08 09 40.1
	LLA	Z	iPc	07 42 25.0
	PRS	Z	ePc	07 42 25.8
	CMB	Z	iPc	07 42 28.6
		Z	ePKPPKP	08 09 42.5
	GCC	Z	iPc	07 42 30.3
	MHC	Z	iPc	07 42 30.9
	BRK	Z	ePc	07 42 33.9
	BKS	Z	e(P)	07 42 35
		NW	ePP	07 45 55
		Z	iS	07 52 04
		NE	eSS	07 57 46
		NE	eG	08 04 10
			AMP(μm)	PER(s)
		PZ	0.84	1.9
		LZ	18	20.
		LN	11	20.
		LE	15	20.
	ORV	Z	iPc	07 42 38.2
	MIN	Z	ePc	07 42 40.3
	WDC	Z	iPc	07 42 43.3
		Z	ePKPPKP	08 09 51.0
	FHC	Z	ePc	07 42 50.5

BRK Ms=6.4 Distance=80°
USGS 07h30m31.9s 24.7S 70.6W
h=33km mb=6.3 Ms=6.7
Near Coast of Northern Chile

Jan 19	FRI	Z	ePc	16 05 29.7
	PRI	Z	iPc	16 05 30.5
	MNA	Z	iPc	16 05 34.2
	PRS	Z	ePc	16 05 35.1
	CMB	Z	ePc	16 05 40.7
	ORV	Z	eP	16 05 55.5

USGS 16h00m28.6s 18.9N 103.0W
h=78km mb=5.3
Near Coast of Michoacan, Mexico

Jan 20	FRI	Z	eP	15 13 21.0
	MNA	Z	eP	15 13 21.5
	LLA	Z	ePc	15 13 23.3
	PRS	Z	ePc	15 13 23.5
	CMB	Z	eP	15 13 26.4
	ORV	Z	ePc	15 13 36.0
	WDC	Z	iPc	15 13 40.9

USGS 15h01m29.7s 24.7S 70.5W
h=32km mb=5.3 Ms=5.1
Near Coast of Northern Chile

Jan 20	MIN	Z	ePKP	21 10 33.4
	ORV	Z	ePKPc	21 10 37.2
	MNA	Z	ePKP	21 10 41.0
	CMB	Z	ePKPc	21 10 41.2
	PRS	Z	ePKP	21 10 43.7
	FRI	Z	ePKP	21 10 43.8
	PRI	Z	ePKPc	21 10 51.3

USGS 20h50m46.5s 9.2S 67.1E
h=10km mb=5.0 Ms=4.9
Mid-Indian Rise

Jan 21	PCC	Z	eP	08 34 56.8
	GCC	Z	eP	08 34 57.2
	BRK	Z	ePc	08 34 58.3
	SAO	Z	eP	08 34 58.4
	PRS	Z	ePc	08 34 58.7
	FHC	Z	e(P)	08 34 59.1
	BKS	Z	iPd	08 35 00.0
		Z	i	08 35 02.3
		NE	eS	08 45 35
		NE	ePPS	08 46 45
		E	e	08 47 39
		NE	eSS	08 50 52
		NW	eLq	08 57 32
		E	e(Lr)	09 01 13
			AMP(μm)	PER(s)
		PZ	0.22	1.0
		LZ	4.0	20.
		LN	2.3	20.
		LE	4.2	20.
	LLA	Z	ePc	08 35 00.7
	PRI	Z	iPc	08 35 01.3
	WDC	Z	iPc	08 35 03.7
	ORV	Z	iPc	08 35 04.5
	CMB	Z	iPc	08 35 05.3
	FRI	Z	iPc	08 35 05.5
	MIN	Z	ePc	08 35 05.6
	MNA	Z	iPc	08 35 14.1

BRK Ms=5.9 Distance=85°
USGS 08h22m22.9s 18.2S 168.1E
h=44km mb=5.7 Ms=5.9
Vanuatu Islands

Jan 21	BKS	Z	eP	09 43 38.5
	PRS	Z	ePc	09 43 41.4
	PRI	Z	ePc	09 43 42.0
	WDC	Z	iPc	09 43 45.3
	ORV	Z	iPc	09 43 47.2
	CMB	Z	iPc	09 43 48.1
	FRI	Z	iPc	09 43 48.2
	MNA	Z	iPc	09 43 56.7

USGS 09h31m01.8s 18.3S 168.1E
h=33km mb=4.6
Vanuatu Islands

Jan 21	LLA	Z	iPd	16 02 14.2
	SAO	Z	iP	16 02 14.7
	PRS	Z	eP	16 02 20.3
	GCC	Z	eP	16 02 21.2
	PRI	Z	eP	16 02 24.8
		Z	e(S)	16 02 40.8
	FRI	Z	eP	16 02 25.9
	CMB	Z	ePd	16 02 28.1
		Z	eS	16 02 44.2
	PCC	Z	eP	16 02 28.7
		Z	e(S)	16 02 47.1
	BKS	Z	e(P)	16 02 29.8
	BRK	Z	eP	16 02 30.2
	MNA	Z	eP	16 02 55.9

BRK 16h02m06.4s 37.0N 121.0W
h=1km ML=3.0(4) Mo=7.3E20(1)
San Luis Reservoir, 18 km SW of Los Banos, CA

Jan 21	GCC	Z	eP	16 13 07.6
		Z	eS	16 13 16.5
	PCC	Z	ePd	16 13 07.7
	BKS	Z	iPc	16 13 08.3
		N	eS	16 13 16.6
	BRK	Z	iPc	16 13 08.4
	SAO	Z	iPc	16 13 12.2
	LLA	Z	ePc	16 13 16.5
	CMB	Z	eP	16 13 17.2
		Z	eS	16 13 34.0
	PRS	Z	eP	16 13 18.7
	FRI	Z	eP	16 13 25.4
		Z	eS	16 13 47.0

BRK 16h12m57.1s 37.5N 121.7W
h=3km ML=2.6(4) Mo=2.4E20(2)
Mt. Lewis area, 24 km E of Fremont, CA

Jan 21	BKS	Z	iPc	16 29 40.2
	CMB	Z	eP	16 29 46.7
	PRS	Z	eP	16 29 47.0
	LLA	Z	eP	16 29 48.0
	PRI	Z	eP	16 29 50.5
	FRI	Z	eP	16 29 51.4
	MNA	Z	eP	16 29 54.8

USGS 16h17m43.6s 26.4N 141.3E
h=89km mb=5.1
Bonin Islands Region

Jan 22	FRI	Z	eP400P	00 53 20.0
		Z	e	00 53 29.5
		Z	e	00 54 18.7
		Z	ePKP	00 54 42.0
		Z	ePP	00 55 39.2
	PRI	Z	eP400P	00 53 20.5
	MNA	Z	eP400P	00 53 32.8
		Z	e	00 53 47.7
		Z	ePKP	00 54 45.5
		Z	ePP	00 55 48.8
		Z	ePKKP	01 05 16.4
	CMB	Z	e	00 53 35.8
		Z	ePP	00 55 37.0
	WDC	Z	ePKP	00 54 18.1
		Z	ePP	00 55 27.1
	ORV	Z	ePP	00 55 30.8
	BKS	E	ePKKP	01 05 02
		E	e	01 10 38
		E	e	01 15 48
		E	e(Lr)	01 27 50
			AMP(μm)	PER(s)
		LZ	11	20.
		LN	3.6	20.
		LE	8.9	20.

BRK Ms=6.4 Distance=113°
USGS 00h35m58.1s 19.8S 133.8E
h=5km mb=6.1 Ms=6.3
Northern Territory, Australia

Jan 22	WDC	Z	ePKP	04 16 05.6
		Z	ePP	04 16 54.8
		Z	ePKKP	04 26 54
	BKS	Z	e(PKP)	04 16 06.5
		Z	e(PP)	04 16 50.6
		Z	e	04 17 02.0
		NW	ePKKP	05 27 33
		NW	ePKPPKP	05 36 42
		E	eLr	05 47 08
			AMP(μm)	PER(s)
		LZ	16	20.
		LN	3.6	20.
		LE	5.0	20.
	LLA	Z	ePKP	04 16 06.6
	ORV	Z	ePKP	04 16 06.8
		Z	ePP	04 17 00.8
	PRI	Z	ePKP	04 16 08.2
		Z	e(PP)	04 17 06.0
	FRI	Z	ePKP	04 16 08.6
		Z	ePP	04 17 04.6
	CMB	Z	ePKP	04 16 08.7
		Z	ePP	04 17 03.8
		Z	ePKKP	04 26 53
	MNA	Z	ePKP	04 16 11.2
		Z	ePP	04 17 16.1
		Z	ePKKP	04 26 43.2
	MIN	Z	ePP	04 17 01.2

BRK Ms=6.6 Distance=113°
USGS 03h57m25.3s 19.8S 133.9E
h=5km mb=6.1 Ms=6.4
Northern Territory, Australia

Jan 22	WDC	Z	e	12 19 47.8
		Z	ePKPc	12 23 37.4
		Z	ePP	12 24 22.7
		Z	ePKKP	12 34 28.5
	MNA	Z	e	12 20 06.2
		Z	iPKPc	12 23 44.7
		Z	ePP	12 24 46.4
		Z	ePKKP	12 34 17.0
	ORV	Z	ePKP	12 23 38.6
		Z	ePP	12 24 26.7
	BKS	Z	e(PKP)	12 23 38.6
		NW	ePKKP	12 34 04.0
		NW	e	12 39 29
		NW	ePKPPKP	12 44 17
		NW	eLq	12 52 03
		NW	eLr	12 57 20
			AMP(μm)	PER(s)
		LZ	42	20.
		LNE	21	20.
		LNW	20	20.
	CMB	Z	ePKPc	12 23 39.8
		Z	ePP	12 24 35.3
		Z	ePKKP	12 34 25.0
	PRI	Z	ePKP	12 23 40.2
		Z	ePP	12 24 34.2
		Z	ePKKP	12 34 27.4
	FRI	Z	iPKPc	12 23 41.3
		Z	ePP	12 24 39.5
		Z	ePKKP	12 34 22.2
	LLA	Z	ePKKP	12 34 27.9

BRK Ms=6.9 Distance=113°
USGS 12h04m57.9s 19.8S 133.9E
h=5km mb=6.5 Ms=6.7
Northern Territory, Australia

Jan 22	PRS	Z	eP	23 26 07.0
	PRI	Z	eP	23 26 09.5
	WDC	Z	iPd	23 26 12.8
	ORV	Z	iPd	23 26 13.6
	CMB	Z	iPd	23 26 14.1
	FRI	Z	iPd	23 26 14.2
	MIN	Z	eP	23 26 14.9
	MNA	Z	eP	23 26 22.2

USGS 23h13m29.1s 19.6S 168.9E
h=42km mb=5.0
Vanuatu Islands

Jan 23	WDC	Z	iPc	02 52 41.5
	MIN	Z	eP	02 52 47.9
		Z	epP	02 53 02.2
	CMB	Z	ePc	02 53 05.2
		Z	epP	02 53 17.7
	BRK	Z	epP	02 53 08.3
	PRI	Z	eP	02 53 12.9
	FRI	Z	ePc	02 53 13.6
		Z	epP	02 53 26.4
	MNA	Z	iPc	02 53 14.6
		Z	epP	02 53 27.3
	PRS	Z	epP	02 53 21.4
	LLA	Z	epP	02 53 22.5

USGS 02h45m35.7s 51.4N 174.3W
h=48km mb=5.5 Ms=4.7
Andreanof Islands, Aleutian Is.

Jan 23	WDC	Z	iPd	11 55 40.4
	MIN	Z	iPd	11 55 44.7
	ORV	Z	iPd	11 55 48.3
	BRK	Z	ePd	11 55 52.1
	BKS	Z	eP	11 55 54.1
			AMP(μm)	PER(s)
		PZ	0.10	1.2
	GCC	Z	ePd	11 55 56.7
	CMB	Z	iPd	11 55 59.9
	PRS	Z	ePd	11 56 02.4
	LLA	Z	ePd	11 56 03.2
	FRI	Z	iPd	11 56 06.6
	PRI	Z	iPd	11 56 06.7
	MNA	Z	iPd	11 56 07.8

USGS 11h45m45.1s 46.2N 153.5E
h=34km mb=5.7 Ms=5.3
Kurile Islands

Jan 23	MNA	Z	ePc	15 31 22.6
	FRI	Z	ePc	15 31 25.7
	LLA	Z	eP	15 31 33.0
	CMB	Z	ePc	15 31 33.9
	SAO	Z	eP	15 31 35.8
	MHC	Z	iPc	15 31 39.9
	ORV	Z	ePc	15 31 46.3
	MIN	Z	eP	15 31 49.0

USGS 15h24m25.4s 17.8N 85.3W
h=10km mb=4.8
Caribbean Sea

Jan 23	PRI	Z	iPc	22 11 05.0
	PRS	Z	ePc	22 11 06.3
	LLA	Z	ePc	22 11 08.3
	SAO	Z	ePc	22 11 10.9
	MHC	Z	iPc	22 11 14.6
	CMB	Z	iPc	22 11 18.2
	MNA	Z	iPc	22 11 20.6
	ORV	Z	ePc	22 11 29.8

USGS 22h01m57.3s 15.3S 116.2W
h=10km mb=5.1 Ms=4.4
Easter Island Cordillera

Jan 23	PRS	Z	iPc	23 00 16.6
	GCC	Z	ePc	23 00 16.7
	SAO	Z	ePc	23 00 17.2
	PRI	Z	ePc	23 00 18.5
	MHC	Z	iPc	23 00 19.2
	CMB	Z	iPc	23 00 25.1
	ORV	Z	ePc	23 00 26.4
	MIN	Z	ePc	23 00 28.5
	MNA	Z	iPc	23 00 33.3

USGS 22h48m30.2s 23.6S 177.4W
h=202km mb=5.3
South of Fiji Islands

Jan 24	WDC	Z	iPc	14 28 02.8
	MIN	Z	e	14 28 05.4
	ORV	Z	ePc	14 28 08.2
	BKS	Z	eP	14 28 09.1
			AMP(μm)	PER(s)
		PZ	0.061	1.0
	BRK	Z	e	14 28 10.5
	PRI	Z	e	14 28 11.2
	GCC	Z	e	14 28 14.5
	CMB	Z	iPc	14 28 16.1
	LLA	Z	e	14 28 19.3
	FRI	Z	e	14 28 20.9
	MNA	Z	eP	14 28 22.3

USGS 14h15m24.6s 26.7N 128.0E
h=56km mb=5.6
Ryukyu Islands

Jan 24	PCC	Z	ePc	16 10 57.5
		Z	i	16 11 06.8
	GCC	Z	eP	16 10 57.7
	PRS	Z	iPc	16 10 58.2
	SAO	Z	iPc	16 10 58.7
	BRK	Z	eP	16 10 59.3
	BKS	Z	iPc	16 10 59.8
			AMP(μm)	PER(s)
		PZ	0.59	1.2
	MHC	Z	iPc	16 11 00.3
	LLA	Z	ePc	16 11 00.4
	PRI	Z	iPc	16 11 00.5
	FHC	Z	eP	16 11 03.3
	FRI	Z	iPc	16 11 05.5
		Z	e	16 13 05.3
	CMB	Z	iPc	16 11 06.3
		Z	e	16 13 06.4
	WDC	Z	iPc	16 11 06.6
		Z	i	16 11 12.8
		Z	e	16 13 07.1
	ORV	Z	iPc	16 11 06.8
	MIN	Z	ePc	16 11 08.4
	MNA	Z	iPc	16 11 15.7
		Z	e	16 13 16.3

USGS 16h00m04.6s 17.8S 178.7W
h=565km mb=5.7
Fiji Islands Region

Jan 24	FHC	Z	iPc	19 40 48.0
		Z	iS	19 41 00.3
	EKR		iPc	19 40 48.1
			iS	19 41 00.2
	FOX		iPc	19 40 49.6
	WDC	Z	iPc	19 41 03.0
		Z	iS	19 41 26.4
	MIN	Z	iPc	19 41 13.0
		Z	iS	19 41 44.8
	ORV	Z	eP	19 41 14.7
		Z	iS	19 41 49.9
	BKS	Z	eP	19 41 20.4
		Z	eS	19 42 03.6
	ZSP	Z	eP	19 41 20.6
		Z	i	19 42 03.5
	BRK	Z	eP	19 41 20.7
	PCC	Z	eP	19 41 33.1
	GCC	Z	eP	19 41 30.3
	MHC	Z	iPc	19 41 30.9
	SAO	Z	eP	19 41 36.7
	CMB	Z	eP	19 41 37.5
	LLA	Z	eP	19 41 42.8
	PRS	Z	eP	19 41 43.3
	FRI	Z	eP	19 41 51.1

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DATE	STA	CMP	PHASE	TIME (UTC)
BRK 19h40m30.4s 40.4N 125.1W				
h=5kmR ML=4,2(4) Mo=4.6E21(2)				
Off Coast 60 km W of Cape Mendocino, CA				
Jan 25	PRI	Z	eP	07 26 07.1
	MNA	Z	iPc	07 26 07.8
	CMB	Z	iPc	07 26 13.7
	BKS	Z	iPc	07 26 20.7
				AMP(μm) PER(s)
		PZ		0.17 1.0
	WDC	Z	iPc	07 26 31.6
	FHC	Z	iPc	07 26 40.1
USGS 07h15m53.5s 10.6S 78.1W				
h=52km mb=5.6				
Near Coast of Peru				
Jan 25	PRI	Z	eP	13 18 43.5
		Z	e	13 19 22.1
		Z	eS	13 20 44.2
		Z	e	13 21 02.2
	MNA	Z	eP	13 18 55.6
		Z	e	13 19 19.4
	CMB	Z	eP	13 18 59.6
		Z	e	13 19 40.3
		Z	e	13 21 13.0
		Z	eS	13 21 34.0
	BKS	Z	eP	13 19 51.1
	SAO	Z	e	13 20 51.3
	WDC	Z	e(S)	13 23 14.1
BRK ML=5.3(4)				
PAS 13h17m10.6s 31.7N 115.8W				
h=5km ML=5.6				
Northern Baja California				
Jan.25	WDC	Z	eP	20 32 21.4
	ORV	Z	eP	20 32 27.4
	CMB	Z	eP	20 32 37.2
	FRI	Z	eP	20 32 43.0
	MNA	Z	eP	20 32 45.0
USGS 20h20m06.7s 37.3N 141.6E				
h=44km mb=5.5 Ms=5.1				
Near East Coast of Honshu, Japan				
Jan 26	FHC	Z	iPc	14 03 42.6
	WDC	Z	iPc	14 03 50.0
	MIN	Z	iPc	14 03 55.3
	ORV	Z	eP	14 04 01.0
	BKS	Z	eP	14 04 14.6
				AMP(μm) PER(s)
		PZ		0.065 1.0
	BRK	Z	iPc	14 04 14.7
	CMB	Z	iPc	14 04 19.2
	MHC	Z	iPc	14 04 21.0
	LLA	Z	iPc	14 04 29.3
	FRI	Z	eP	14 04 29.7
	PRS	Z	eP	14 04 29.9
	PRI	Z	iPc	14 04 34.6
USGS 13h58m58.3s 58.2N 142.8W				
h=10km mb=4.9 Ms=4.2				
Gulf of Alaska				
Jan 26	PRS	Z	eP	16 13 29.2
	PRI	Z	eP	16 13 31.7
	MHC	Z	iPd	16 13 32.4
	FHC	Z	eP	16 13 35.8
	FRI	Z	ePd	16 13 37.1
	CMB	Z	ePd	16 13 38.0
	ORV	Z	ePd	16 13 38.9
	WDC	Z	iPd	16 13 39.4
USGS 16h02m26.3s 21.0S 178.7W				
h=589km mb=4.9				

DATE	STA	CMP	PHASE	TIME (UTC)
Fiji Islands Region				
Jan 26	ZSP	Z	iPd	17 22 34.3
		Z	iS	17 22 51.0
	BRK	Z	eP	17 22 35.1
		Z	iS	17 22 49.4
	BKS	Z	eP	17 22 35.2
		Z	iS	17 22 52.2
	ORV	Z	eP	17 22 37.5
	PCC	Z	e(P)	17 22 38.6
		Z	eS	17 22 59.5
	MHC	Z	eP	17 22 45.4
	MIN	Z	eP	17 22 47.1
	WDC	Z	eP	17 22 48.0
	CMB	Z	eP	17 22 50.4
	GCC	Z	e(P)	17 22 52.2
	SAO	Z	eP	17 22 52.3
	LLA	Z	eP	17 22 58.8
	FHC	Z	eP	17 23 02.0
	FRI	Z	e(P)	17 23 04.8
BRK 17h22m15.9s 38.8N 122.8W				
h=2km ML=3.0(6)				
The Geysers area, 26 km S of Clear Lake, CA				
Jan 26	WDC	Z	ePc	19 34 07.8
	MIN	Z	iPc	19 34 10.5
	ORV	Z	eP	19 34 14.7
	CMB	Z	iPc	19 34 19.2
	FRI	Z	iPc	19 34 22.9
	MHC	Z	iPc	19 34 28.4
	LLA	Z	iPc	19 34 29.9
	PRI	Z	eP	19 34 31.8
USGS 19h24m26.7s 57.8N 32.5W				
h=10km mb=5.1 Ms=4.9				
North Atlantic Ocean				
Jan 26	SAO	Z	iPd	20 39 49.0
	GCC	Z	ePc	20 39 55.2
	PRS	Z	iPd	20 39 57.0
	LLA	Z	ePd	20 39 57.8
	MHC	Z	iPc	20 39 58.5
	PCC	Z	eP	20 40 04.7
		Z	eS	20 40 21.5
	PRI	Z	eP	20 40 05.7
	BKS	Z	iPd	20 40 08.4
	BRK	Z	eP	20 40 09.9
	FRI	Z	ePc	20 40 13.0
	CMB	Z	eP	20 40 14.1
BRK 20h39m47.2s 36.8N 121.6W				
h=4km ML=3.2(4) Mo=8.5E20(2)				
16 km SW of Hollister, CA				
Jan 27	MIN	Z	iPc	12 06 11.5
	CMB	Z	iPc	12 06 20.2
	FRI	Z	iPc	12 06 23.9
	LLA	Z	iPc	12 06 30.7
USGS 11h56m27.8s 57.8N 32.6W				
h=10km mb=4.7 Ms=4.4				
North Atlantic Ocean				
Jan 27	MHC	Z	iPc	12 16 06.9
		T	iS	12 16 10.1
	GCC	Z	eP	12 16 11.7
	PCC	Z	ePc	12 16 12.1
	BRK	Z	eP	12 16 14.7
	BKS	Z	eP	12 16 14.7
	SAO	Z	eP	12 16 17.5
	LLA	Z	eP	12 16 23.1
	PRS	Z	eP	12 16 24.8
	CMB	Z	eP	12 16 27.6
	PRI	Z	eP	12 16 31.1

DATE	STA	CMP	PHASE	TIME (UTC)
BRK 12h16m03.5s 37.4N 121.8W				
h=1km ML=2.3(4) Mo=1.2E20(2)				
12 km NE of San Jose, CA				
Jan 27	PRS	Z	ePd	12 53 56.9
	BRK	Z	eP	12 53 57.6
	MHC	Z	ePd	12 53 59.3
	FRI	Z	iPd	12 54 04.5
	CMB	Z	iPd	12 54 05.2
	WDC	Z	iPd	12 54 05.7
	ORV	Z	eP	12 54 05.8
USGS 12h43m04.2s 17.8S 178.5W				
h=554km mb=4.7				
Fiji Islands Region				
Jan 27	MIN	Z	ePc	19 26 29.0
		Z	e	19 29 00.1
		Z	e	19 30 01.0
	WDC	Z	ePc	19 26 31.4
		Z	e	19 30 07.0
	ORV	Z	ePc	19 26 32.4
	FHC	Z	ePc	19 26 35.2
	CMB	Z	ePc	19 26 37.4
		Z	e	19 29 09.9
		Z	e	19 30 10.3
	FRI	Z	iPc	19 26 41.2
		Z	e	19 29 09.8
		Z	e	19 30 15.0
	BRK	Z	e	19 26 45.4
	MHC	Z	ePc	19 26 46.0
		Z	e	19 30 20.2
	PCC	Z	e	19 26 46.4
	LLA	Z	ePc	19 26 48.2
		Z	e	19 29 16.8
		Z	e	19 30 22.1
	SAO	Z	e	19 26 50.0
	PRI	Z	ePc	19 26 50.0
		Z	e	19 30 23.7
	PRS	Z	ePc	19 26 50.6
	BKS	Z	Lq	19 48 40.0
		Z	Lr	19 49 12.0
				AMP(μm) PER(s)
		LZ		1.1 20.
		LN		2.8 20.
		LE		4.1 20.
USGS 19h16m45.5s 57.9N 32.7W				
h=10km mb=5.1 Ms=5.1				
North Atlantic Ocean				
Jan 28	FRI	Z	ePd	02 55 19.7
		Z	iSg	02 56 47.7
	PRI	Z	eP	02 55 20.3
	LLA	Z	eP	02 55 25.7
	PRS	Z	eP	02 55 26.0
	SAO	Z	e(P)	02 55 31.1
	CMB	Z	ePc	02 55 37.0
	MHC	Z	e(P)	02 55 37.5
	BKS	Z	e(P)	02 55 54.3
	BRK	Z	e(P)	02 56 00.0
BRK ML=4.6(4)				
PAS 02h54m02.4s 32.9N 115.7W				
h=5km ML=4.7				
Imperial Valley area, Southern California				
Jan 28	EKR		iPd	10 45 20.2
			iS	10 45 23.9
	FOX		iPc	10 45 20.6
	FHC	Z	iPd	10 45 22.2
		Z	iS	10 45 29.6
	WDC	Z	iPc	10 45 36.0
	MIN	Z	ePd	10 45 46.1

DATE	STA	CMP	PHASE	TIME (UTC)
	ORV	Z	ePc	10 45 50.5
	PCC	Z	e(P)	10 46 05.1
	SAO	Z	eP	10 46 19.3
BRK 10h45m14.0s 40.5N 124.3W				
h=20km ML=3.1(2) Mo=3.7E20(2)				
Cape Mendocino area, CA				
Jan 28	WDC	Z	e	11 37 55.8
	CMB	Z	e	11 38 12.6
USGS 11h20m08.2s 5.3N 126.4E				
h=43km mb=5.5 Ms=5.5				
Mindanao, Philippine Islands				
Jan 28	WDC	Z	ePc	14 10 48.0
	MIN	Z	eP	14 10 49.0
	CMB	Z	e(P)	14 10 56.3
	FRI	Z	eP	14 10 57.0
USGS 13h58m42.9s 25.2S 175.4W				
h=33km mb=4.8				
South of Tonga Islands				
Jan 29	WDC	Z	ePc	02 49 23.3
	ORV	Z	eP	02 49 31.2
	BRK	Z	e(P)	02 49 34.3
	MHC	Z	ePc	02 49 39.9
	CMB	Z	ePc	02 49 41.2
	GCC	Z	e(P)	02 49 41.4
	PRS	Z	ePc	02 49 45.1
	LLA	Z	ePc	02 49 45.7
	FRI	Z	ePc	02 49 49.1
	PRI	Z	ePc	02 49 49.2
USGS 02h39m18.8s 45.3N 151.8E				
h=46km mb=5.5 Ms=5.6				
Kurile Islands				
Jan 29	GCC	Z	eP	16 59 12.6
	PCC	Z	ePd	16 59 12.8
	PRS	Z	ePd	16 59 12.8
		Z	epP	16 59 39.7
		Z	e	16 59 44.3
	SAO	Z	ePd	16 59 13.7
	BRK	Z	ePd	16 59 14.7
	PRI	Z	ePd	16 59 15.2
		Z	epP	16 59 41.9
		Z	e	16 59 47.0
	LLA	Z	eP	16 59 15.3
	MHC	Z	ePd	16 59 15.5
		Z	epP	16 59 42.3
		Z	e	16 59 47.0
	BKS	Z	ePd	16 59 15.5
		E	eS	17 08 25.6
		Z	e	17 09 14
		N	e	17 09 55
		E	e	17 10 54
		N	e	17 17 51
		Z	e	17 24 06
				AMP(μm) PER(s)
		PZ		0.11 0.7
		LZ		2.3 20.
		LN		1.8 20.
		LE		1.3 20.
	FHC	Z	eP	16 59 19.5
		Z	e	16 59 49.4
	FRI	Z	ePd	16 59 20.9
		Z	epP	16 59 48.0
		Z	e	16 59 52.5
	CMB	Z	ePd	16 59 22.1
		Z	epP	16 59 49.0
		Z	e	16 59 53.7
	ORV	Z	ePd	16 59 23.0
		Z	e	16 59 54.8
	WDC	Z	ePd	16 59 23.2

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	epP	16 59 50.3
		Z	i	16 59 55.3
		Z	isP	17 00 05.7
	MIN	Z	ePd	16 59 25.3
BRK mb=6.2 h=101km Distance=73°				
USGS 16h48m01.4s 15.3S 174.1W				
h=106km mb=5.6				
Tonga Islands				
Jan 29	FHC	Z	iPd	20 39 22.6
		Z	iS	20 39 32.3
	WDC	Z	iPc	20 39 35.6
	ORV	Z	e(P)	20 39 48.6
		Z	iSg	20 40 19.5
	PCC	Z	e	20 40 01.5
	CMB	Z	e	20 40 11.8
BRK 20h39m09.6s 40.3N 124.7W				
h=13km ML=3.0(2)				
Off Coast 25 km SW of Cape Mendocino, CA				
Jan 29	PRI	Z	ePd	21 12 35.0
		Z	e	21 12 44.2
	LLA	Z	e(P)	21 12 38.6
		Z	e	21 12 46.9
	PRS	Z	e(P)	21 12 40.8
		Z	e	21 12 48.5
	CMB	Z	ePd	21 12 42.5
		Z	e	21 12 51.6
	ORV	Z	ePd	21 12 58.5
	MIN	Z	e(P)	21 13 01.0
	WDC	Z	ePd	21 13 05.2
		Z	e	21 13 14.6
	BKS	N	e	21 23 53
USGS 21h06m01.1s 14.2N 93.1W				
h=29km mb=5.0				
Near Coast of Chiapas, Mexico				
Jan 29	WDC	Z	eP	21 30 04.3
	MIN	Z	e(P)	21 30 08.1
	ORV	Z	eP	21 30 10.9
	CMB	Z	ePc	21 30 20.9
	PRS	Z	ePc	21 30 22.5
	LLA	Z	ePc	21 30 23.1
	PRI	Z	ePc	21 30 26.3
	FRI	Z	eP	21 30 26.7
USGS 21h18m48.3s 36.7N 140.7E				
h=77km mb=5.0				
Near East Coast of Honshu, Japan				
Jan 30	WDC	Z	e(P)	04 16 37.0
	ORV	Z	e(P)	04 16 37.4
	FRI	Z	eP	04 16 40.9
	PRS	Z	e(P)	04 16 44.4
	CMB	Z	e	04 16 44.9
	BKS	Z	e	05 07 00
USGS 03h56m43.8s 46.3S 96.1E				
h=10km mb=5.3 Ms=5.4				
Southeast Indian Rise				
Jan 31	PRS	Z	eP	15 53 43.7
		Z	e	15 53 52.2
	PRI	Z	eP	15 53 44.1
	BRK	Z	eP	15 53 45.3
	LLA	Z	e(P)	15 53 46.0
	MHC	Z	eP	15 53 46.3
	BKS	Z	ePc	15 53 46.3
				AMP(μm) PER(s)
		PZ		0.029 0.9
	FHC	Z	ePd	15 53 50.4
	FRI	Z	ePd	15 53 51.7
		Z	e	15 54 06.2

DATE	STA	CMP	PHASE	TIME (UTC)
	CMB	Z	ePd	15 53 52.8
		Z	e	15 54 02.8
	ORV	Z	eP	15 53 53.7
	WDC	Z	ePd	15 53 54.0
		Z	e	15 54 02.9
	MIN	Z	ePd	15 53 56.1
USGS 15h42m27.8s 16.6S 174.1W				
h=117km mb=5.4				
Tonga Islands				
Feb 1	FHC	Z	iPd	02 17 17.0
		Z	iS	02 17 24.6
	WDC	Z	ePc	02 17 30.2
		Z	eS	02 17 37.3
	MIN	Z	ePc	02 17 40.5
	ORV	Z	e(P)	02 17 45.5
		Z	e	02 18 12.8
	BRK	Z	e	02 18 07.5
BRK 02h17m06.3s 40.4N 124.5W				
h=17km ML=3.1(2) Mo=3.3E20(1)				
Off Coast 8 km W of Cape Mendocino, CA				
Feb 1	PRI	Z	ePd	06 09 45.3
		Z	e	06 10 06.7
		Z	i	06 10 07.4
	FRI	Z	ePc	06 09 46.8
		Z	e	06 10 05.2
		Z	iS	06 10 09.2
	LLA	Z	ePc	06 09 51.8
	PRS	Z	ePd	06 09 53.2
	SAO	Z	eP	06 09 57.5
	MHC	Z	e(P)	06 10 04.5
	CMB	Z	ePc	06 10 05.3
	GCC	Z	e	06 10 05.3
	PCC	Z	e	06 10 11.8
BRK 06h09m16.5s 35.4N 118.8W				
h=22km ML=3.3(2)				
20 km E of Bakersfield, CA				
Feb 1	FRI	Z	eP	08 32 41.8
	CMB	Z	eP	08 32 44.0
	WDC	Z	e(P)	08 32 45.0
	ORV	Z	e(P)	08 32 45.6
	MIN	Z	eP	08 32 48.0
USGS 08h21m18.0s 15.4S 174.1W				
h=62km mb=4.9				
Tonga Islands				
Feb 1	WDC	Z	eP	09 14 57.5
	MIN	Z	eP	09 15 01.4
	ORV	Z	eP	09 15 01.8
	PRS	Z	eP	09 15 03.1
	CMB	Z	eP	09 15 06.0
	BKS	Z	ePc	09 15 06.0
		Z	e(PKKP)	09 32 39
		N	eLq	09 39 09
		N	e	09 41 53
		Z	e	09 42 21
		Z	eLr	09 43 46
				AMP(μm) PER(s)
		PZ		0.026 1.1
		LZ		1.9 20.
		LN		0.0 20.
		LE		1.9 20.
	FRI	Z	eP	09 15 06.9
BRK Ms=5.5 Distance= 93°				
USGS 09h01m46.2s 1.2S 145.9E				
h=10km mb=5.4 Ms=5.5				
Admiralty Islands Region				
Feb 1	PRS	Z	eP	12 34 49.4

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DATE	STA	CMP	PHASE	TIME (UTC)
	PRI	Z	eP	12 34 51.3
	BKS	Z	ePd	12 34 51.7
		N	eLr	12 59 40
		Z	e	12 59 54
				AMP(μm) PER(s)
			PZ	0.043 1.0
			LZ	1.2 20.
			LN	0.75 20.
	MHC	Z	eP	12 34 52.3
	FRI	Z	eP	12 34 57.1
	CMB	Z	eP	12 34 58.5
	ORV	Z	e(P)	12 35 00.0
	WDC	Z	eP	12 35 00.2
	MIN	Z	eP	12 35 02.3
BRK mb=5.4 h=33km Distance= 81°				
USGS 12h23m03.3s 21.2S 174.4W				
h=33km mb=5.4 Ms=5.0				
Tonga Islands				
Feb 1	MIN	Z	eP	12 53 06.4
	ORV	Z	eP	12 53 06.5
	CMB	Z	eP	12 53 10.2
	FRI	Z	eP	12 53 12.1
USGS 12h39m59.1s 6.1S 150.7E				
h=36km mb=5.0				
New Britain Region				
Feb 1	FRI	Z	eP	13 44 42.3
		Z	epP	13 44 51.8
	PRI	Z	eP	13 44 43.7
		Z	epP	13 44 54.4
	LLA	Z	eP	13 44 46.3
		Z	epP	13 44 55.7
	PRS	Z	e(P)	13 44 46.5
		Z	epP	13 44 56.0
	CMB	Z	eP	13 44 50.0
		Z	epP	13 44 59.1
	ORV	Z	eP	13 44 59.4
		Z	epP	13 45 08.8
	WDC	Z	ePc	13 45 04.5
		Z	epP	13 45 13.8
USGS 13h32m51.9s 24.7S 70.4W				
h=30km mb=5.2				
Near Coast of Northern Chile				
Feb 2	WDC	Z	iPc	16 09 01.5
		Z	e	16 09 22.7
	MIN	Z	eP	16 09 05.6
	ORV	Z	ePc	16 09 09.2
		Z	epP	16 09 23.1
		Z	e	16 19 09.7
	BKS	Z	ePd	16 09 13.6
				AMP(μm) PER(s)
			PZ	0.048 1.0
	GCC	Z	eP	16 09 17.4
	MHC	Z	eP	16 09 18.2
	CMB	Z	ePc	16 09 20.5
		Z	epP	16 09 34.6
		Z	e	16 19 33.4
	PRS	Z	eP	16 09 23.0
		Z	epP	16 09 37.1
	LLA	Z	eP	16 09 23.9
	FRI	Z	eP	16 09 27.1
		Z	epP	16 09 41.5
USGS 15h58m50.2s 45.3N 150.1E				
h=50km mb=5.2				
Kurile Islands				
Feb 2	FRI	Z	ePc	23 55 11.1
	PRI	Z	e(P)	23 55 15.2
	LLA	Z	ePc	23 55 17.7
	CMB	Z	ePc	23 55 18.7
	PRS	Z	e(P)	23 55 19.3
	SAO	Z	ePc	23 55 20.7
	MHC	Z	ePc	23 55 24.6
	GCC	Z	ePc	23 55 25.0
	BRK	Z	ePc	23 55 28.8
	BKS	Z	ePd	23 55 29.1
		Z	e	23 55 33.4
				AMP(μm) PER(s)
			PZ	0.041 0.8
	ORV	Z	ePc	23 55 29.5
	MIN	Z	ePc	23 55 31.3
	WDC	Z	ePc	23 55 35.0
	FHC	Z	ePc	23 55 46.0
USGS 23h46m16.8s 6.9N 73.0W				
h=152km mb=5.2				
Northern Colombia				
Feb 3	WDC	Z	ePd	04 31 44.3
		Z	e	04 31 55.6
	MIN	Z	ePd	04 31 47.7
	PRS	Z	ePd	04 31 54.4
		Z	e	04 32 05.8
	CMB	Z	ePd	04 31 56.1
		Z	e	04 32 07.5
	FRI	Z	ePd	04 32 00.1
		Z	e	04 32 11.4
USGS 04h19m41.5s 16.4N 148.0E				
h=36km mb=4.8				
Mariana Islands Region				
Feb 3	GCC	Z	iPc	04 47 48.7
		Z	iS	04 47 52.0
	SAO	Z	ePd	04 47 49.8
		T	e	04 47 51.5
	MHC	Z	iPd	04 47 51.45
		T	iS	04 47 56.8
	PRS	Z	iPd	04 47 57.2
	PCC	Z	iPc	04 47 57.6
	LLA	Z	iPc	04 47 57.7
	BRK	Z	e(P)	04 48 01.4
	BKS	Z	e(P)	04 48 02.0
		Z	e	04 48 06.0
		N	eS	04 48 16.1
	ZSP	Z	eP	04 48 02.7
	PRI	Z	eP	04 48 06.0
	CMB	Z	ePd	04 48 09.5
	FRI	Z	eP	04 48 12.2
BRK 04h47m44.1s 37.0N 121.7W				
h=11km ML=2.8(4) Mo=2.3E19(1)				
9 km NE of Watsonville, CA				
Feb 3	FHC	Z	e(P)	05 54 19.1
	WDC	Z	eP	05 54 24.8
	MIN	Z	e(P)	05 54 28.3
	ORV	Z	eP	05 54 30.9
	BKS	Z	ePd	05 54 32.4
				AMP(μm) PER(s)
			PZ	0.019 0.7
	BRK	Z	eP	05 54 33.9
	GCC	Z	ePc	05 54 37.2
	MHC	Z	eP	05 54 38.1
	CMB	Z	ePc	05 54 40.6
	PRS	Z	ePc	05 54 42.2
	LLA	Z	ePc	05 54 42.8
	PRI	Z	eP	05 54 45.9
	FRI	Z	ePc	05 54 46.2
USGS 05h43m00.2s 34.8N 140.1E				
h=87km mb=4.9				
Near East Coast of Honshu, Japan				
Feb 3	PRI	Z	ePc	09 19 03.8
	LLA	Z	iPd	09 19 08.2
	PRS	Z	iPc	09 19 08.7
	SAO	Z	iPc	09 19 13.4
	FRI	Z	ePc	09 19 20.9
		Z	iS	09 19 36.6
	GCC	Z	eP	09 19 22.0
	CMB	Z	eP	09 19 31.3
	BKS	Z	ePd	09 19 33.3
	ZSP	Z	e	09 20 42.2
BRK 09h19m00.2s 36.2N 120.8W				
h=7km ML=2.9(2)				
Peachtree Valley, 27 km E of King City, CA				
Feb 3	FHC	Z	ePc	09 52 49.9
	WDC	Z	iPc	09 52 56.0
		Z	e	09 53 08.6
		Z	e	10 22 54.4
	MIN	Z	ePc	09 53 00.9
	ORV	Z	eP	09 53 03.7
		Z	e	09 53 17.4
	PCC	Z	ePc	09 53 10.5
	BRK	Z	ePc	09 53 10.6
	GCC	Z	eP	09 53 12.6
	CMB	Z	ePc	09 53 17.5
		Z	e	09 53 27.1
		Z	e	10 22 54.1
	PRS	Z	eP	09 53 20.4
		Z	e	09 53 32.5
		Z	e	10 22 55.6
	LLA	Z	ePc	09 53 21.8
	PRI	Z	ePc	09 53 23.8
	FRI	Z	ePc	09 53 24.1
		Z	e	09 53 35.5
USGS 09h43m49.7s 51.4N 161.3E				
h=41km mb=5.1 Ms=4.5				
Off East Coast of Kamchatka				
Feb 3	WDC	Z	ePc	11 00 11.6
	MIN	Z	eP	11 00 15.4
	ORV	Z	ePc	11 00 18.7
	CMB	Z	iPc	11 00 29.3
	PRS	Z	e(P)	11 00 32.0
	LLA	Z	e(P)	11 00 33.8
	FRI	Z	e(P)	11 00 35.3
USGS 10h49m32.9s 43.5N 138.7E				
h=260km mb=4.7				
Eastern Sea of Japan				
Feb 3	LLA	Z	e(P)	15 43 26.5
	PRI	Z	e(P)	15 43 27.3
	CMB	Z	e(P)	15 43 35.6
	ORV	Z	eP	15 43 46.1
	WDC	Z	eP	15 43 50.0
	MIN	Z	eP	15 43 50.0
USGS 15h34m45.1s 1.0N 85.1W				
h=10km mb=5.0 Ms=4.3				
Off Coast of Ecuador				
Feb 3	WDC	Z	eP	17 46 38.4
	MIN	Z	eP	17 46 42.8
	ORV	Z	eP	17 46 43.7
	CMB	Z	eP	17 46 51.5
	LLA	Z	eP	17 46 53.0
	FRI	Z	eP	17 46 56.5
USGS 17h34m53.2s 27.8N 142.8E				
h=39km mb=5.2 Ms=5.0				
Bonin Islands Region				
Feb 3	WDC	Z	ePKP	20 44 47.9
	CMB	Z	ePKP	20 44 51.9
	FRI	Z	e(PKP)	20 44 54.9
USGS 20h24m54.0s 9.2S 67.0E				
h=10km mb=5.1 Ms=5.1				
Mid-Indian Rise				
Feb 4	WDC	Z	e(P)	02 44 11.5
		Z	e	02 44 19.8
	MIN	Z	eP	02 44 16.7
	CMB	Z	e(P)	02 44 30.0
		Z	e	02 44 42.6
	FRI	Z	eP	02 44 40.5
		Z	e	02 44 49.1
	MHC	Z	e	02 44 40.6
USGS 02h35m59.6s 50.8N 173.5E				
h=33km mb=5.0				
Aleutian Islands Region				
Feb 4	WDC	Z	eP	02 53 39.2
	ORV	Z	e(P)	02 53 47.8
	CMB	Z	eP	02 54 00.5
	PRS	Z	eP	02 54 04.9
	LLA	Z	eP	02 54 05.7
	FRI	Z	eP	02 54 08.3
USGS 02h44m29.9s 52.9N 159.9E				
h=32km mb=5.4 Ms=5.0				
Off East Coast of Kamchatka				
Feb 4	WDC	Z	e(P)	18 56 33.7
	ORV	Z	e(P)	18 56 39.1
	MHC	Z	eP	18 56 42.3
	PRS	Z	ePc	18 56 44.7
	LLA	Z	e(P)	18 56 45.9
	CMB	Z	ePc	18 56 46.0
	FRI	Z	ePc	18 56 49.9
USGS 18h44m47.3s 18.3N 145.6E				
h=208km mb=4.5				
Mariana Islands				
Feb 5	FHC	Z	iPc	07 32 38.9
		Z	iP2	07 32 43.3
		Z	iS	07 32 47.4
		Z	iS2	07 32 51.8
	WDC	Z	iPc	07 32 51.8
	MIN	Z	e	07 33 01.4
		Z	i	07 33 29.3
	ORV	Z	e	07 33 05.0
		Z	e	07 33 33.2
	BKS	Z	e c	07 33 12.3
	CMB	Z	e	07 33 38.7
BRK 07h32m27.7s 40.3N 124.5W				
h=20km ML=3.1(4)				
Off Coast 12 km WSW of Cape Mendocino, CA				
Feb 5	FHC	Z	ePc	08 16 49.9
	WDC	Z	ePc	08 16 54.7
	MIN	Z	ePc	08 16 58.0
	PCC	Z	ePc	08 16 58.2
	BRK	Z	ePc	08 16 58.5
	BKS	Z	iPc	08 16 58.8
		Z	e	08 17 35.0
				AMP(μm) PER(s)
			PZ	0.17 1.0
	ORV	Z	ePc	08 16 59.4
	GCC	Z	ePc	08 17 00.4
	MHC	Z	ePc	08 17 01.9
	SAO	Z	ePc	08 17 02.6
	PRS	Z	ePc	08 17 03.9
	LLA	Z	ePc	08 17 05.4
	CMB	Z	ePc	08 17 05.7
	PRI	Z	ePc	08 17 07.4
	FRI	Z	ePc	08 17 09.4
USGS 08h04m34.6s 13.0N 145.7E				
h=66km mb=5.5				
South of Mariana Islands				
Feb 5	PCC	Z	e(P)	13 55 35.8
	GCC	Z	e(P)	13 55 36.7
	PRS	Z	eP	13 55 37.1
	SAO	Z	eP	13 55 38.3
	BKS	Z	eP	13 55 39.0
				AMP(μm) PER(s)
			PZ	0.038 1.2
	MHC	Z	eP	13 55 39.2
	FRI	Z	eP	13 55 44.4
	CMB	Z	eP	13 55 45.4
	WDC	Z	eP	13 55 45.7
	ORV	Z	eP	13 55 45.9
USGS 13h44m47.3s 18.1S 178.2W				
h=608km mb=5.2				
Fiji Islands Region				
Feb 5	FRI	Z	iPc	14 12 52.0
		Z	ePKPPKP	14 40 06.0
	PRI	Z	iPc	14 12 53.5
	LLA	Z	iPc	14 12 56.0
	PRS	Z	iPc	14 12 56.5
	SAO	Z	ePc	14 12 58.5
	CMB	Z	iPc	14 12 59.3
		Z	i	14 13 57.4
		Z	i	14 14 15
		Z	e	14 16 50.6
		Z	ePKKP	14 32 39.2
		Z	ePKPPKP	14 39 56.5
		Z	ePKSPKP	14 43 07.1
	MHC	Z	iPc	14 13 01.2
		T	e	14 13 12.4
		T	e	14 14 15.5
		Z	ePP	14 17 11.67
		T	e(SKS)	14 22 56.69
		T	eS	14 23 18.63
		R	e	14 27 49.32
		T	e	14 28 14.24
	GCC	Z	ePc	14 13 01.2
	PCC	Z	ePc	14 13 03.4
	BRK	Z	ePc	14 13 04.8
	BKS	Z	ePc	14 13 04.9
		Z	i	14 13 07.5
		Z	e	14 13 11.7
		Z	e	14 13 16.1
		Z	e	14 13 31.2
		E	eS	14 23 01
		Z	e	14 26 16
		E	eSS	14 28 06
		E	e	14 30 34
		E	e	14 31 04
		N	eSSS	14 32 00
		N	eLq	14 34 01
		E	e	14 34 26
		Z	eLr	14 37 24
		Z	e	14 38 37
				AMP(μm) PER(s)
			PZ	0.092 0.7
			LN	19 20.
			LE	20 20.
	ORV	Z	iPc	14 13 08.9
	MIN	Z	iPc	14 13 10.4
	WDC	Z	iPc	14 13 13.9
		Z	i	14 15 05.2
		Z	i	14 15 27.4
		Z	ePKKP	14 31 58.0
		Z	ePKPPKP	14 39 54.8
		Z	ePKSPKP	14 43 11.6
	FHC	Z	iPc	14 13 20.9
		Z	e	14 14 05.5
		Z	e	14 14 12.1
BRK Ms=6.6 Distance=80°				
USGS 14h01m02.8s 24.8S 70.4W				
h=36km mb=6.2 Ms=6.7				
Near Coast of Northern Chile				
Feb 5	PRS	Z	ePc	18 26 28.2
	MHC	Z	ePc	18 26 30.2
	FHC	Z	e(P)	18 26 30.2
	LLA	Z	e(P)	18 26 30.3
	PRI	Z	ePc	18 26 30.5
	WDC	Z	ePc	18 26 34.1
	ORV	Z	ePc	18 26 35.0
	FRI	Z	ePc	18 26 35.3
	CMB	Z	ePc	18 26 35.5
USGS 18h15m26.4s 15.1S 175.2E				
h=617km mb=4.9				
Fiji Islands Region				
Feb 5	FRI	Z	ePc	19 01 22.9
	PRI	Z	ePc	19 01 24.0
	LLA	Z	ePc	19 01 26.7
	PRS	Z	iPc	19 01 27.1
	SAO	Z	ePc	19 01 29.1
	CMB	Z	ePc	19 01 29.9
	GCC	Z	e(P)	19 01 31.2
	MHC	Z	ePc	19 01 32.2
	PCC	Z	ePc	19 01 33.7
	BRK	Z	ePc	19 01 35.3
	ORV	Z	iPc	19 01 39.7
	MIN	Z	ePc	19 01 41.6
	WDC	Z	iPc	19 01 44.6
	FHC	Z	ePc	19 01 51.7
	BKS	N	eG	19 23 00
		NE	eLr	19 27 52
				AMP(μm) PER(s)
			PZ	0.29 1.8
	ORV	Z	iPc	19 01 39.7
		Z	e	19 01 48.5
	MIN	Z	ePc	19 01 41.6
	WDC	Z	iPc	19 01 44.6
		Z	i	19 01 53.5
	FHC	Z	ePc	19 01 51.7
BRK mb=6.0 h=33km Distance= 79°				
USGS 18h49m31.9s 24.9S 70.6W				
h=30km mb=6.0 Ms=6.1				
Near Coast of Northern Chile				
Feb 6	FHC	Z	e(P)	05 16 21.9
	WDC	Z	ePc	05 16 30.4
	MIN	Z	ePc	05 16 35.9
	BRK	Z	e(P)	05 16 45.1
	BKS	Z	eP	05 16 49.0
				AMP(μm) PER(s)
			PZ	0.017 0.7
	MHC	Z	eP	05 16 52.7
	CMB	Z	ePc	05 16 55.3
	PRS	Z	ePc	05 16 59.7
	LLA	Z	ePc	05 17 00.8
	FRI	Z	eP	05 17 04.6
	PRI	Z	eP	05 17 05.2
USGS 05h10m00.8s 53.6N 167.1W				
h=33km mb=4.7				
Fox Islands, Aleutian Islands				
Feb 6	FRI	Z	eP	07 54 01.7
		Z	epP	07 54 30.3
		Z	esP	07 54 43.9
	PRI	Z	ePc	07 54 01.8
		Z	epP	07 54 31.3
	LLA	Z	ePc	07 54 03.5
		Z	epP	07 54 33.7
		Z	esP	07 54 46.2

Northern California Seismological Center

DATE	STA	CMP	PHASE	TIME (UTC)
	PRS	Z	eP	07 54 03.9
		Z	epP	07 54 34.3
	CMB	Z	ePc	07 54 07.0
		Z	epP	07 54 36.1
	GCC	Z	eP	07 54 08.3
		Z	epP	07 54 39.0
	MHC	Z	ePc	07 54 09.5
	ORV	Z	e(P)	07 54 16.8
		Z	epP	07 54 46.5
	WDC	Z	ePc	07 54 21.0
		Z	ipP	07 54 51.6
	FHC	Z	eP	07 54 28.0
	MIN	Z	epP	07 54 48.5
USGS 07h42m34.7s 20.1S 68.5W				
h=132km mb=5.2				
Chile-Bolivia Border Region				
Feb 6	FRI	Z	ePc	11 40 47.7
	CMB	Z	ePc	11 40 48.7
	ORV	Z	ePc	11 40 49.7
	WDC	Z	ePc	11 40 49.9
	MIN	Z	eP	11 40 51.7
USGS 11h29m16.7s 23.9S 178.9E				
h=569km mb=5.1				
South of Fiji Islands				
Feb 6	WDC	Z	ePKPc	15 05 39.0
		Z	e	15 09 46.5
	CMB	Z	ePKPc	15 05 41.2
		Z	e	15 10
	FRI	Z	e(PKP)	15 05 43.4
	MIN	Z	e(PKP)	15 05 46.3
		Z	e	15 09 48.6
USGS 14h50m45.3s 24.7N 91.6E				
h=33km mb=5.8 Ms=5.8				
India-Bangladesh Border Region				
Feb 6	WDC	Z	ePc	15 29 51.8
		Z	e	15 34 04.8
	MIN	Z	e(P)	15 29 54.4
	CMB	Z	e	15 29 58.7
		Z	e	15 34 21.6
	FRI	Z	eP	15 30 03.0
		Z	e	15 34 28.9
	BKS	N	eLq	15 59 20
		Z	eLr	16 06 00
			AMP(μm)	PER(s)
		LZ	2.9	20.
		LN	2.1	20.
		LE	0.89	20.
USGS 15h15m41.0s 6.5S 131.9E				
h=38km mb=5.9 Ms=5.6				
Tanimbar Islands Region				
Feb 6	FRI	Z	ePd	18 14 59.1
		Z	eS	18 24 12.4
	PRI	Z	iPd	18 15 01.3
		Z	epP	18 16 09.6
		Z	iS	18 24 18.0
	LLA	Z	ePd	18 15 03.3
		Z	ipP	18 16 11.5
		Z	eS	18 24 20
	PRS	Z	eP	18 15 04.0
		Z	epP	18 16 12.5
		Z	eS	18 24 24.3
	SAO	Z	eP	18 15 05.0
	CMB	Z	ePd	18 15 06.3
		Z	eS	18 24 26.0
	GCC	Z	ePd	18 15 09.0
	MHC	Z	ePd	18 15 09.3
	PCC	Z	ePd	18 15 11.8
	BKS	Z	ePd	18 15 12.7
		Z	epP	18 16 22
		Z	esP	18 16 48
		E	ePP	18 18 12
		Z	ePPP	18 19 36
		N	eS	18 24 36
		E	eScS	18 24 58
		N	esS	18 26 28
		N	eSS	18 29 40
		Z	eG	18 35 54
		N	e	18 47 16
			AMP(μm)	PER(s)
		PZ	0.51	1.0
	BRK	Z	ePd	18 15 12.7
	ORV	Z	ePd	18 15 16.0
		Z	ipP	18 16 24.3
		Z	eS	18 24 46.4
	MIN	Z	iPd	18 15 17.8
	WDC	Z	iPd	18 15 20.4
		Z	eS	18 24 53.2
	FHC	Z	ePd	18 15 28.6
BRK mb=6.2 h=300km Distance=77°				
USGS 18h03m54.8s 17.8S 67.0W				
h=285km mb=6.0				
Bolivia				
Feb 6	PCC	Z	ePd	21 41 16.1
	GCC	Z	ePd	21 41 16.2
	PRS	Z	ePd	21 41 16.3
		Z	epP	21 41 48.6
	SAO	Z	eP	21 41 16.8
	BKS	Z	ePd	21 41 18.4
		N	eS	21 50 36
		E	e	21 51 20
		N	eLq	22 00 12
		Z	eLr	22 03 04
			AMP(μm)	PER(s)
		PZ	0.12	0.7
		LZ	1.8	20.
		LN	1.4	20.
		LE	1.4	20.
	BRK	Z	ePd	21 41 18.4
		Z	epP	21 41 50.6
	PRI	Z	iPd	21 41 18.8
	LLA	Z	ePd	21 41 19.0
		Z	epP	21 41 51.1
	MHC	Z	ePd	21 41 19.0
		Z	epP	21 41 50.3
	FHC	Z	ePd	21 41 23.6
	FRI	Z	iPd	21 41 24.3
		Z	e(pP)	21 41 55.5
	CMB	Z	ePd	21 41 25.4
		Z	epP	21 41 56.0
		Z	ePP	21 44 10.0
	ORV	Z	iPd	21 41 26.6
		Z	epP	21 41 58.1
		Z	ePP	21 44 11.2
	WDC	Z	iPd	21 41 26.8
		Z	epP	21 41 57.6
		Z	ePP	21 44 11.3
	MIN	Z	iPd	21 41 28.7
		Z	epP	21 42 00.7
BRK Ms=5.5 Distance= 74°				
USGS 21h30m04.4s 16.2S 173.8W				
h=125km mb=5.8				
Tonga Islands				
Feb 7	PRI	Z	e	03 45 56.1
	WDC	Z	eP	03 46 03.2
	CMB	Z	eP	03 46 03.7
	FRI	Z	eP	03 46 03.8
USGS 03h33m16.5s 17.7S 167.7E				
h=10km mb=5.4 Ms=4.3				
Vanuatu Islands				
Feb 7	PRI	Z	e	04 18 19.2
	WDC	Z	e	04 18 22
	CMB	Z	e	04 18 23.6
	FRI	Z	e	04 18 26.1
	BKS	Z	e	04 45 08
			AMP(μm)	PER(s)
		LZ	1.6	20.
		LN	0.0	20.
		LE	1.1	20.
USGS 04h05m31.3s 17.6S 167.9E				
h=22km mb=5.3 Ms=4.9				
Vanuatu Islands				
Feb 7	FHC	Z	ePd	08 52 27.2
		Z	ipP	08 52 56.5
		Z	eScP	08 59 11.7
	WDC	Z	ePd	08 52 32.5
		Z	i	08 52 40.4
		Z	ipP	08 52 59.4
		Z	iScP	08 59 12.9
		Z	e	09 00 21.2
	MIN	Z	ePd	08 52 37.6
		Z	ipP	08 53 07.0
		Z	iScP	08 59 14.7
	ORV	Z	eP	08 52 42.7
		Z	ipP	08 53 13.9
		Z	iScP	08 59 16.8
	BRK	Z	eP	08 52 53.5
		Z	ipP	08 53 24.8
		Z	eScP	08 59 19.3
	BKS	Z	eP	08 52 53.7
		Z	ipP	08 53 25.0
		N	e	08 56 00
		N	eS	08 57 45
		N	esS	08 58 22
		Z	eScP	08 59 21.5
		Z	ePcS	08 59 23.3
		E	iG	08 59 40
			AMP(μm)	PER(s)
		PZ	0.12	0.9
	PCC	Z	eP	08 52 55.3
		Z	ePc	08 53 26.7
		Z	eScP	08 59 21.5
	CMB	Z	ePd	08 52 59.1
		Z	ipP	08 53 30.4
		Z	iScP	08 59 23.0
		Z	e	09 00 30.9
	MHC	Z	ePd	08 52 59.6
		Z	ipP	08 53 31.3
		Z	eScP	08 59 23.5
	GCC	Z	e(P)	08 53 01.0
		Z	epP	08 53 31.8
		Z	eScP	08 59 23.5
	SAO	Z	e(P)	08 53 04.2
		Z	epP	08 53 35.9
		Z	eScP	08 59 24.4
	LLA	Z	ePd	08 53 08.0
		Z	ipP	08 53 39.6
		Z	eScP	08 59 26.5
	PRS	Z	ePd	08 53 08.3
		Z	ipP	08 53 39.8
		Z	eScP	08 59 26.4
	FRI	Z	ePd	08 53 09.4
		Z	ipP	08 53 40.5
		Z	i	08 54 01.1
		Z	iScP	08 59 26.7
	PRI	Z	ePd	08 53 12.9
		Z	ipP	08 53 44.8
		Z	eScP	08 59 28.5
BRK mb=5.6 h=175km Distance= 32°				
USGS 08h46m58.6s 60.3N 153.0W				
h=137km mb=5.6				
Southern Alaska				
Feb 7	FHC	Z	eP	18 23 08.8
		Z	ePcP	18 24 58.1
	WDC	Z	ePc	18 23 16.3
		Z	i	18 24 37.3
		Z	iPcP	18 25 00.3
	MIN	Z	ePc	18 23 21.5
		Z	iPcP	18 25 03.0
	ORV	Z	eP	18 23 25.3
		Z	iPcP	18 25 04.7
	BRK	Z	eP	18 23 30.0
		Z	ePcP	18 25 07.2
	PCC	Z	eP	18 23 30.8
		Z	ePcP	18 25 07.1
	BKS	Z	ePc	18 23 32.2
		Z	epP	18 23 56.3
		Z	ePcP	18 25 07.2
		Z	ePP	18 25 34
		E	eS	18 30 22
		NE	eSS	18 33 44
		NE	eG	18 34 44
			AMP(μm)	PER(s)
		PZ	0.19	1.0
		LZ	23	20.
		LN	20	20.
		LE	19	20.
	GCC	Z	eP	18 23 35.3
		Z	ePcP	18 25 09.6
	MHC	Z	eP	18 23 35.9
		Z	iPcP	18 25 10.0
	CMB	Z	iPc	18 23 38.5
		Z	i	18 24 00.0
		Z	i	18 24 05.5
		Z	e	18 24 20.1
		Z	i	18 24 38.4
		Z	iPcP	18 25 10.9
		Z	iPP	18 25 37.5
		Z	e	18 27 45.6
	SAO	Z	eP	18 23 39.1
	PRS	Z	eP	18 23 42.0
		Z	ePcP	18 25 12.6
	LLA	Z	eP	18 23 42.8
		Z	ePcP	18 25 13.0
	FRI	Z	ePc	18 23 46.6
		Z	iPcP	18 25 14.7
	PRI	Z	e(P)	18 23 47.1
		Z	ePcP	18 25 14.3
BRK Ms=6.3 Distance=48°				
USGS 18h15m05.6s 50.8N 173.5E				
h=33km mb=6.2 Ms=6.0				
Aleutian Islands Region				
Feb 8	CMB	Z	ePd	06 23 47.3
	MIN	Z	eP	06 24 05.5
	WDC	Z	e	06 24 09.2
USGS 06h16m59.8s 14.1N 92.0W				
h=60km mb=4.8				
Guatemala				
Feb 8	FRI	Z	ePd	13 56 56.9
	PRI	Z	ePd	13 56 58.3
	PRS	Z	ePd	13 57 02.6
	CMB	Z	ePd	13 57 07.6
		Z	i	13 57 22.4
		Z	ipP	13 57 43.5
		Z	ePcP	14 00 11.0
		Z	epPcP	14 00 41.0
		Z	eLr	14 05 49.5
	MHC	Z	ePd	13 57 10.6
	BKS	Z	eP	13 57 14
		Z	eS	14 02 24
		NE	eLq	14 04 04
		Z	eLr	14 05 32
			AMP(μm)	PER(s)
		LZ	14	20.
		LN	16	20.
		LE	9.3	20.
	ORV	Z	ePd	13 57 23.9
	MIN	Z	ePd	13 57 29.0
	WDC	Z	ePd	13 57 31.7
	FHC	Z	ePd	13 57 43.3
BRK Ms=5.8 Distance= 33°				
USGS 13h51m34.0s 17.7N 101.0W				
h=58km mb=5.5				
Guerrero, Mexico				
Feb 8	MHC	Z	iPc	14 09 17.0
		T	iS	14 09 18.39
	GCC	Z	iPd	14 09 23.0
	PCC	Z	iPc	14 09 26.0
	SAO	Z	iPd	14 09 27.3
		T	iS	14 09 36.00
	BKS	Z	iPc	14 09 28.6
		Z	iPc	14 09 28.96
		T	iS	14 09 39.70
	BRK	Z	iPc	14 09 28.7
	ZSP	Z	iPd	14 09 30.0
	PRS	Z	iPd	14 09 33.8
	CMB	Z	iPd	14 09 38.0
	PRI	Z	iPd	14 09 40.4
	FRI	Z	iPc	14 09 42.35
	ORV	Z	iPc	14 09 51.5
	MIN	Z	ePd	14 10 03.4
	WDC	Z	ePd	14 10 05.4
	FHC	Z	ePd	14 10 16.0
BRK 14h09m15.3s 37.3N 121.7W				
h=6km ML=3.9(6) Mo=3.8E21(2)				
Halls Valley, 15 km E of San Jose, CA				
Feb 8	PRI	Z	e(P)	16 08 52.6
		Z	e	16 09 05.8
	CMB	Z	e(P)	16 08 58.1
		Z	e	16 09 06.7
		Z	e	16 09 19.3
	WDC	Z	eP	16 09 13.2
		Z	e	16 09 22.6
	FHC	Z	e	16 09 29.7
	BKS	Z	eLr	16 35 40
			AMP(μm)	PER(s)
		LZ	1.8	20.
		LN	1.8	20.
		LE	0.0	20.
USGS 15h57m00.2s 24.8S 70.4W				
h=32km mb=5.6 Ms=5.2				
Near Coast of Northern Chile				
Feb 8	EKR		iPc	17 28 45.9
			i	17 29 39.7
	FOX		iPc	17 28 46.6
	FHC	Z	iPc	17 28 56.5
		Z	iS	17 29 01.3
		Z	i	17 29 11.0
	WDC	Z	iPc	17 29 09.7
	MIN	Z	iPc	17 29 19.5
	ORV	Z	ePc	17 29 22.2
		Z	i	17 29 44.8
		Z	i	17 29 51.8
	ZSP	Z	eP	17 29 30.2
		Z	eS	17 30 04.5
	BRK	Z	iPc	17 29 30.3
		Z	e	17 30 04.9
	BKS	Z	eP	17 29 30.7
	PCC	Z	iPc	17 29 33.3
		Z	e	17 30 09.8
	MHC	Z	ePd	17 29 40.5
	GCC	Z	ePc	17 29 40.8
	CMB	Z	iPc	17 29 45.1
	SAO	Z	iPd	17 29 46.9
	PRS	Z	ePc	17 29 52.3
	FRI	Z	ePc	17 30 00.6
	PRI	Z	eP	17 30 00.7
BRK 17h28m43.5s 40.3N 124.7W				
h=23km ML=4.0(8) Mo=8.1E21(4)				
Off Coast 30 km W of Cape Mendocino, CA				
Feb 9	FRI	Z	ePc	02 31 42.5
	CMB	Z	iPc	02 31 48.3
	PRS	Z	eP	02 31 52.8
	ORV	Z	ePc	02 31 54.8
	MIN	Z	ePc	02 31 55.4
	MHC	Z	eP	02 31 55.9
	GCC	Z	e(P)	02 31 56.8
	BKS	Z	ePc	02 31 59.2
		N	eLq	02 50 20
			AMP(μm)	PER(s)
		PZ	0.044	0.8
		LZ	1.1	20.
		LN	1.4	20.
		LE	1.4	20.
	WDC	Z	ePc	02 31 59.6
	PCC	Z	eP	02 32 00.0
	FHC	Z	eP	02 32 10.5
USGS 02h22m31.2s 18.6N 62.9W				
h=50km mb=5.3 Ms=5.0				
Leeward Islands				
Feb 9	FRI	Z	eP	04 44 29.3
	CMB	Z	eP	04 44 32.1
	WDC	Z	eP	04 44 43.8
	ORV	Z	eP	04 44 47.8
USGS 03h51m38.4s 16.5S 172.5W				
h=33km mb=4.7 Ms=4.6				
Samoa Islands Region				
Feb 9	CMB	Z	eP	13 00 00.7
		Z	e	13 00 14.3
	WDC	Z	e	13 00 04.3
	FRI	Z	e	13 00 10.5
	ORV	Z	e	13 00 15.3
USGS 12h48m39.4s 15.0S 172.2W				
h=33km mb=4.7				
Samoa Islands				
Feb 9	FRI	Z	ePc	19 21 55.0
	CMB	Z	iPc	19 22 00.7
	LLA	Z	ePc	19 22 03.2
	PRS	Z	ePc	19 22 05.2
	MHC	Z	iPc	19 22 08.4
	ORV	Z	iPd	19 22 08.6
	WDC	Z	iPc	19 22 12.1
	PCC	Z	iPc	19 22 12.3
USGS 19h12m44.1s 18.6N 62.9W				
h=52km mb=5.1 Ms=4.9				
Leeward Islands				
Feb 9	WDC	Z	ePd	23 39 13.0
	CMB	Z	ePd	23 39 25.8
	FRI	Z	ePd	23 39 28.8
USGS 23h26m41.5s 12.2N 144.1E				
h=35km mb=5.1 Ms=4.5				
South of Mariana Islands				

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DATE	STA	CMP	PHASE	TIME (UTC)
Feb 10	WDC	Z	ePd	10 44 36.6
	MIN	Z	ePd	10 44 42.1
	ORV	Z	ePd	10 44 46.6
	CMB	Z	ePd	10 45 01.6
	FRI	Z	ePd	10 45 10.6
USGS 10h38m00.0s 54.2N 168.2W				
h=33km mb=4.4				
Fox Islands, Aleutian Islands				
Feb 10	ZSP	Z	iPd	12 22 39.2
		Z	e(S)	12 22 54.0
	BRK	Z	eP	12 22 39.6
		Z	eS	12 22 55.3
	BKS	Z	eP	12 22 40.1
		E	iS	12 22 55.2
	ORV	Z	eP	12 22 42.7
	PCC	Z	e(P)	12 22 43.6
	MHC	Z	eP	12 22 50.5
	MIN	Z	ePd	12 22 50.9
	WDC	Z	eP	12 22 51.2
	GCC	Z	eP	12 22 51.8
	CMB	Z	iPc	12 22 54.5
	SAO	Z	e(P)	12 22 57.0
	LLA	Z	eP	12 23 03.1
	PRS	Z	eP	12 23 03.6
	FHC	Z	e(P)	12 23 05.0
	FRI	Z	eP	12 23 09.5
BRK 12h22m20.0s 38.8N 122.8W				
h=0km ML=3.1(4) Mo=7.4E21(1)				
The Geysers area, 24 km S of Clear Lake, CA				
Feb 10	EKR		iPc	21 45 03.0
			eS	21 45 11.3
	FOX		iPc	21 45 04.2
			iS	21 45 13.8
	FHC	Z	iPc	21 45 05.3
		Z	iS	21 45 15.6
	WDC	Z	iPc	21 45 19.5
		Z	eS	21 45 36.8
	MIN	Z	iPc	21 45 29.4
	ORV	Z	ePc	21 45 32.4
		Z	i	21 46 05.2
	BRK	Z	eP	21 45 39.7
	PCC	Z	ePc	21 45 42.0
		Z	e	21 46 20.8
	MHC	Z	eP	21 45 49.5
		Z	e	21 46 34.6
	GCC	Z	eP	21 45 50.2
		Z	e	21 46 34.1
	CMB	Z	ePd	21 45 55.4
	SAO	Z	iP	21 45 55.6
	PRS	Z	e(P)	21 46 01.5
		Z	e	21 46 56.3
	FRI	Z	ePc	21 46 09.6
BRK 21h44m50.2s 40.4N 125.0W				
h=17km ML=3.3(2)				
Off Coast 45 km W of Cape Mendocino, CA				
Feb 11	WDC	Z	iPd	02 34 24.2
	MIN	Z	iPd	02 34 31.8
	ORV	Z	e(P)	02 34 40.9
	CMB	Z	e(P)	02 35 03.2
	FRI	Z	ePd	02 35 18.9
USGS 02h31m51.9s 49.6N 129.7W				
h=10km mb=4.5				
Vancouver Island Region				
Feb 11	FRI	Z	e(P)	03 07 44.0
	PRI	Z	ePd	03 07 44.3
	PRS	Z	ePd	03 07 44.9
	CMB	Z	ePd	03 07 53.8
	GCC	Z	e	03 08 03.5
	ORV	Z	ePd	03 08 06.1
	WDC	Z	ePd	03 08 09.0
USGS 02h56m10.1s 35.6S 102.3W				
h=10km mb=5.3 Ms=5.3				
Southern Pacific Ocean				
Feb 11	PRI	Z	iPc	15 26 41.6
		Z	iS	15 27 39.0
	FRI	Z	iPc	15 26 45.1
	PRS	Z	iPc	15 26 48.2
	LLA	Z	iPc	15 26 48.8
	SAO	Z	iPc	15 26 53.2
	GCC	Z	ePc	15 26 59.7
	CMB	Z	iPc	15 27 02.2
		Z	iS	15 27 55.0
	PCC	Z	e(P)	15 27 07.9
	BRK	Z	e(P)	15 27 10.5
	BKS	Z	eP	15 27 11.1
	ORV	Z	e(P)	15 27 25.0
	MIN	Z	e	15 27 39
	WDC	Z	e	15 27 45.9
	FHC	Z	e	15 27 56.5
BRK ML=4.7(4)				
PAS 15h25m55.7s 34.1N 118.0W				
h=km ML=4.7				
Los Angeles area, CA				
Feb 12	WDC	Z	ePc	01 30 24.1
	MIN	Z	ePc	01 30 28.2
	ORV	Z	ePc	01 30 31.5
	CMB	Z	ePc	01 30 42.6
	FRI	Z	ePc	01 30 48.2
	MNA	Z	ePc	01 30 49.3
USGS 01h20m18.4s 46.4N 142.9E				
h=333km mb=4.4				
Sakhalin Island				
Feb 12	FRI	Z	e	05 26 05.5
	MNA	Z	iPc	05 26 13.2
	SAO	Z	iPc	05 26 13.59
		T	iS	05 28 12.8
		T	Lq	05 28 52
		Z	Lr	05 29 30
	CMB	Z	iPc	05 26 19.5
		Z	iS	05 28 08.5
	MHC	Z	e	05 26 24.31
		T	eS	05 28 25.85
		T	Lq	05 29 01
		Z	Lr	05 29 49
	BKS	Z	iPc	05 26 29.13
		N	eS	05 28 26
		E	eLr	05 28 44
		T	Lq	05 29 17
		Z	Lr	05 30 19
			AMP(μm)	PER(s)
		PZ	0.14	1.3
		LZ	52	20.
		LNE	82	20.
		LNW	310	20.
BRK Ms=6.5 Distance= 10°				
USGS 05h23m56.5s 30.1N 113.9W				
h=10km mb=5.3 Ms=5.4				
Gulf of California				
Feb 12	PRI	Z	e	05 52 55.9
		Z	e(S)	05 55 22.1
	MNA	Z	e	05 53 06.7
		Z	iS	05 56 03.5
	CMB	Z	ePc	05 53 08.0
		Z	iS	05 55 47.5
	MHC	Z	e	05 53 13.7
	BKS	Z	e	05 53 23.7
		N	eS	05 55 44
		Z	eLr	05 56 10
			AMP(μm)	PER(s)
		PZ	0.043	1.0
	WDC	Z	e(P)	05 53 49.5
BRK mb=5.6 h=33km Distance= 13°				
USGS 05h50m46.9s 29.9N 114.1W				
h=10km mb=5.1				
Baja California				
Feb 12	PRI	Z	ePc	12 17 54.8
	FRI	Z	ePc	12 17 55.2
	PRS	Z	ePc	12 17 59.7
	MNA	Z	ePc	12 18 01.7
	CMB	Z	ePc	12 18 05.7
	MHC	Z	ePc	12 18 06.7
	ORV	Z	ePc	12 18 20.8
	WDC	Z	ePc	12 18 29.0
	BKS	Z	eLr	12 30 36
			AMP(μm)	PER(s)
		LZ	3.6	20.
		LN	2.3	20.
		LE	2.9	20.
USGS 12h10m23.1s 2.2N 98.8W				
h=10km mb=5.4 Ms=4.8				
West of Galapagos Islands				
Feb 12	WDC	Z	ePd	16 31 52.8
	CMB	Z	eP	16 32 08.9
	FRI	Z	e	16 32 14.7
	PRI	Z	e	16 32 14.9
	MNA	Z	e	16 32 30.2
USGS 16h20m29.4s 35.5N 140.6E				
h=58km mb=5.2				
Near East Coast of Honshu, Japan				
Feb 12	FHC	Z	e(P)	19 28 36.4
	WDC	Z	ePc	19 28 42.8
		Z	e	19 28 53.7
	ORV	Z	ePc	19 28 47.8
		Z	e	19 28 58.7
	MHC	Z	e(P)	19 28 54.7
	CMB	Z	ePc	19 28 55.5
		Z	i	19 29 06.5
	PRS	Z	ePc	19 28 57.1
		Z	e	19 29 07.9
	LLA	Z	ePc	19 28 58.7
		Z	e	19 29 08.7
	FRI	Z	ePc	19 29 00.0
		Z	e	19 29 11.0
	PRI	Z	e(P)	19 29 00.2
		Z	e	19 29 11.2
	MNA	Z	e(P)	19 29 01.5
		Z	e	19 29 12.3
USGS 19h15m35.4s 23.9N 122.5E				
h=34km mb=5.6 Ms=5.3				
Taiwan Region				
Feb 12	FRI	Z	iPc	19 30 19.7
		Z	iS	19 30 31.0
	MNA	Z	iPc	19 30 23.0
		Z	iS	19 30 37.7
	CMB	Z	iPd	19 30 25.0
		Z	iS	19 30 39.5
	LLA	Z	ePc	19 30 37.1
	PRI	Z	ePd	19 30 39.4
	SAO	Z	iPd	19 30 41.4
	MHC	Z	eP	19 30 41.8
	PRS	Z	ePc	19 30 43.5
	GCC	Z	e	19 30 47.3
	ORV	Z	e	19 30 49
BRK 19h30m04.1s 37.6N 119.0W				
h=5km ML=3.0(2)				
Mammoth Lakes area, CA				
Feb 13	FHC	Z	eP	03 17 57.8
	WDC	Z	iPc	03 17 58.9
	MIN	Z	iPc	03 18 01.8
	ORV	Z	ePc	03 18 04.2
	BRK	Z	eP	03 18 12.3
	BKS	Z	iPc	03 18 12.3
			AMP(μm)	PER(s)
		PZ	0.11	0.8
	CMB	Z	iPc	03 18 12.7
	MNA	Z	iPc	03 18 13.2
	PCC	Z	eP	03 18 13.2
	MHC	Z	ePc	03 18 15.4
	GCC	Z	eP	03 18 16.0
	SAO	Z	eP	03 18 17.8
	FRI	Z	iPc	03 18 18.0
	LLA	Z	ePc	03 18 19.2
	PRS	Z	ePc	03 18 20.0
	PRI	Z	eP	03 18 21.8
USGS 03h05m06.0s 50.0N 78.9E				
h=0km mb=6.1 Ms=4.5				
Eastern Kazakh SSR				
Feb 13	PRI	Z	eP	03 27 13.2
	MNA	Z	eP	03 27 13.6
	FRI	Z	eP	03 27 13.9
	LLA	Z	eP	03 27 15.7
	PRS	Z	eP	03 27 16.0
	CMB	Z	eP	03 27 18.6
	GCC	Z	e(P)	03 27 20.7
	MHC	Z	eP	03 27 21.0
	ORV	Z	eP	03 27 28.1
	WDC	Z	iPd	03 27 38.2
USGS 03h15m35.6s 22.3S 68.3W				
h=127km mb=5.1				
Northern Chile				
Feb 13	PRS	Z	eP	11 20 50.9
	PRI	Z	eP	11 20 55.7
	WDC	Z	eP	11 20 56.3
	ORV	Z	eP	11 20 57.1
	CMB	Z	eP	11 20 57.6
	FRI	Z	eP	11 20 57.6
	MNA	Z	eP	11 21 06.2
USGS 11h08m21.9s 19.4S 169.4E				
h=103km				
Vanuatu Islands				
Feb 13	MNA	Z	ePd	20 31 42.6
	MIN	Z	eP	20 31 53.8
	ORV	Z	eP	20 31 54.2
	CMB	Z	ePd	20 31 55.0
	WDC	Z	e(P)	20 31 58.0
	FRI	Z	e(P)	20 31 59.2
USGS 20h21m17.0s 33.8N 38.9W				
h=10km mb=5.0 Ms=4.5				
North Atlantic Ridge				
Feb 14	FHC	Z	ePc	00 04 37.9
		Z	epP	00 04 51.8
		Z	ePcP	00 07 06.7
	WDC	Z	ePc	00 04 46.1
		Z	epP	00 04 59.7
		Z	iPcP	00 07 09.0
		Z	epPcP	00 07 24.6
	MIN	Z	ePc	00 04 51.6
		Z	epP	00 05 05.3
		Z	ePcP	00 07 10.9
		Z	epPcP	00 07 26.5
	ORV	Z	ePc	00 04 55.7
		Z	ePcP	00 07 12.3
		Z	epPcP	00 07 28.3
	BRK	Z	ePc	00 05 00.8
		Z	epP	00 05 14.5
		Z	ePcP	00 07 14.7
	BKS	Z	eP	00 05 01.4
			AMP(μm)	PER(s)
		PZ	0.096	1.0
	PCC	Z	ePc	00 05 02.4
		Z	ePcP	00 07 14.7
	MHC	Z	ePc	00 05 07.2
		Z	epP	00 05 21.0
		Z	ePcP	00 07 17.3
		Z	epPcP	00 07 32.8
	CMB	Z	iPc	00 05 10.0
		Z	ipP	00 05 23.9
		Z	iPcP	00 07 18.0
		Z	epPcP	00 07 33.6
	PRS	Z	ePc	00 05 13.7
		Z	epP	00 05 27.8
		Z	ePcP	00 07 19.5
		Z	epPcP	00 07 35.2
	LLA	Z	ePc	00 05 14.7
		Z	ePcP	00 07 20.1
	FRI	Z	iPc	00 05 18.7
		Z	ePcP	00 07 21.3
		Z	epPcP	00 07 36.9
	PRI	Z	ePc	00 05 18.9
		Z	ePcP	00 07 22.2
		Z	epPcP	00 07 37.8
	MNA	Z	iPc	00 05 19.4
		Z	ipP	00 05 33.4
		Z	iPcP	00 07 22.3
		Z	epPcP	00 07 38.0
	GCC	Z	ePcP	00 07 16.7
USGS 23h57m45.6s 52.3N 173.4W				
h=53km mb=5.7				
Andreanof Islands, Aleutian Is.				
Feb 14	FHC	Z	iPc	01 00 12.6
	WDC	Z	iPc	01 00 17.7
	MIN	Z	iPc	01 00 21.1
	ORV	Z	iPc	01 00 23.1
	PCC	Z	iPc	01 00 23.4
	BRK	Z	iPc	01 00 23.5
	BKS	Z	ePc	01 00 23.7
			AMP(μm)	PER(s)
		PZ	0.23	1.0
	GCC	Z	ePc	01 00 26.0
	MHC	Z	iPc	01 00 27.3
	SAO	Z	ePc	01 00 28.5
	PRS	Z	iPc	01 00 30.1
	CMB	Z	iPc	01 00 30.6
	LLA	Z	ePc	01 00 31.1
	PRI	Z	iPc	01 00 33.6
	FRI	Z	iPc	01 00 34.7
	MNA	Z	iPc	01 00 38.3
USGS 00h48m43.2s 21.7N 142.9E				
h=311km mb=5.3				
Mariana Islands Region				
Feb 14	MHC	Z	iPc	01 22 58.8
		Z	iS	01 23 03.0
	PCC	Z	iPc	01 23 04.9
	BRK	Z	iPc	01 23 05.1
		Z	e	01 23 10.5
	BKS	Z	iPc	01 23 05.2
	GCC	Z	ePd	01 23 05.5
	ZSP	Z	eP	01 23 06.3
	SAO	Z	iPc	01 23 10.2
	CMB	Z	e(P)	01 23 14.3
	LLA	Z	eP	01 23 14.4
	PRS	Z	e(P)	01 23 16.7
	FRI	Z	ePc	01 23 22.9
		Z	iS	01 23 45.1
	PRI	Z	e(P)	01 23 27.0
BRK 01h22m54.3s 37.6N 121.7W				
h=3km ML=2.5(4) Mo=1.5E20(2)				
16 km SE of Livermore, CA				
Feb 14	ORV	Z	e(P)	16 16 28.2
	CMB	Z	ePd	16 16 31.9
	FRI	Z	ePd	16 16 36.7
USGS 16h03m13.9s 24.0N 122.5E				
h=43km mb=5.1				
Taiwan Region				
Feb 14	FRI	Z	eP	23 57 27.2
	CMB	Z	ePc	23 57 27.8
	ORV	Z	ePc	23 57 29.6
	MIN	Z	ePc	23 57 31.5
	MNA	Z	eP	23 57 37.2
USGS 23h46m23.0s 18.7S 178.0W				
h=532km mb=5.0				
Fiji Islands Region				
Feb 15	ORV	Z	ePc	12 11 25.3
	CMB	Z	ePc	12 11 25.8
	FRI	Z	ePc	12 11 25.8
USGS 11h58m39.2s 19.8S 168.8E				
h=33km mb=4.4 Ms=4.0				
Vanuatu Islands				
Feb 15	MNA	Z	iPc	18 10 31.5
	FRI	Z	iPc	18 10 43.7
	CMB	Z	iPc	18 10 51.8
	PRI	Z	iPc	18 10 57.1
	LLA	Z	ePc	18 10 59.0
	SAO	Z	iP	18 11 03.4
	PRS	Z	iPc	18 11 03.5
	MHC	Z	iPc	18 11 05.4
	GCC	Z	e(P)	18 11 09.9
	ORV	Z	iPc	18 11 10.2
	BRK	Z	ePc	18 11 11.6
	ZSP	Z	ePnc	18 11 11.8
		Z	iP*	18 11 24.2
		Z	i	18 11 30.1
	BKS	Z	eP	18 11 12.1
	PCC	Z	iPc	18 11 12.6
	MIN	Z	iPc	18 11 17.8
	WDC	Z	iPc	18 11 27.0
	FHC	Z	e	18 11 43.1
BRK ML=5.3(8)				
USGS 18h10m00.0s 37.3N 116.5W				
h=0km mb=5.3				
Underground Nuclear Explosion, N.T.S.				
Feb 15	WDC	Z	ePc	19 21 12.4
	FHC	Z	eP	19 21 15.1
	MIN	Z	e(P)	19 21 18.7
	CMB	Z	eP	19 21 42.6
USGS 19h16m14.2s 59.0N 142.8W				
h=10km mb=5.0 Ms=4.7				
Gulf of Alaska				
Feb 16	CMB	Z	iPc	02 17 36.3
		Z	e	02 19 23.3
	WDC	Z	iPc	02 17 38.4
		Z	ePc	02 19 25.7
USGS 02h10m57.1s 51.5N 175.0E				

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DATE	STA	CMP	PHASE	TIME (UTC)
h=33km mb=4.9				
Near Islands, Aleutian Islands				
Feb 16	WDC	Z	iPc	03 37 46.5
	MIN	Z	ePc	03 37 51.8
	ORV	Z	ePc	03 37 56.4
	BKS	Z	e(P)	03 38 02.2
			AMP(μm)	PER(s)
		PZ	0.028	0.8
	MHC	Z	ePc	03 38 06.3
	CMB	Z	iPc	03 38 10.7
	PRS	Z	ePc	03 38 12.7
	LLA	Z	ePc	03 38 14.3
	FRI	Z	ePc	03 38 17.2
	MNA	Z	ePc	03 38 18.1
	PRI	Z	ePc	03 38 18.3
USGS 03h29m44.4s 51.6N 175.0E				
h=33km mb=5.2 Ms=4.7				
Near Islands, Aleutian Islands				
Feb 16	WDC	Z	iPc	04 30 38.1
		Z	eScP	04 36 15.5
		Z	iS	04 37 23.4
	MIN	Z	iPc	04 30 43.3
	ORV	Z	iPc	04 30 47.2
		Z	eScP	04 36 21.6
		Z	eS	04 37 37
	ZSP	Z	ePc	04 30 51.8
	BRK	Z	iPc	04 30 52.5
	BKS	Z	eP	04 30 53.3
		E	e	04 33 37.5
		NW	iS	04 37 34.7
		E	e	04 40 09.6
		E	e	04 41 12.0
		E	eLq	04 42 22.0
		Z	eLr	04 44 11.0
			AMP(μm)	PER(s)
		PZ	0.18	0.9
		LZ	6.7	20.
		LN	2.2	20.
		LE	7.2	20.
	PCC	Z	iPc	04 30 53.6
	GCC	Z	iPc	04 30 58.0
	MHC	Z	iPc	04 30 58.5
		Z	eScP	04 36 26.4
		NW	iS	04 37 46.8
	CMB	Z	iPc	04 31 00.9
		Z	eScP	04 36 27.4
		Z	iS	04 37 49.4
	SAO	Z	iPc	04 31 02.1
		N	iS	04 37 53.1
	PRS	Z	iPc	04 31 04.2
	LLA	Z	iPc	04 31 05.5
	FRI	Z	iPc	04 31 09.1
		Z	eScP	04 36 31.6
		Z	eS	04 38 05
	PRI	Z	iPc	04 31 09.5
		Z	eScP	04 36 33.7
	MNA	Z	iPc	04 31 09.6
		Z	eScP	04 36 32.1
		Z	iS	04 38 09.8
BRK Ms=5.6 Distance=45°				
USGS 04h22m36.2s 51.6N 175.0E				
h=33km mb=5.9 Ms=5.7				
Rat Islands, Aleutian Islands				
Feb 16	WDC	Z	iPc	05 33 20.9
	ORV	Z	iPc	05 33 25.3
	BKS	Z	e(P)	05 33 27.8
			AMP(μm)	PER(s)
		PZ	0.069	0.9
	MHC	Z	iPc	05 33 31.7
	SAO	Z	iPc	05 33 33.3
	CMB	Z	iPc	05 33 34.3
	PRS	Z	iPc	05 33 35.3
	LLA	Z	iPc	05 33 36.1
	PRI	Z	iPc	05 33 38.8
	FRI	Z	iPc	05 33 39.2
	MNA	Z	iPc	05 33 41.5
USGS 05h22m07.9s 30.0N 138.8E				
h=402km mb=4.9				
South of Honshu, Japan				
Feb 16	WDC	Z	iPc	05 52 40.2
	MIN	Z	ePc	05 52 45.4
	ORV	Z	ePc	05 52 49.4
	BRK	Z	eP	05 52 54.1
	BKS	Z	eP	05 52 54.1
			AMP(μm)	PER(s)
		PZ	0.14	1.2
	GCC	Z	eP	05 53 00.5
	MHC	Z	iPc	05 53 01.9
	CMB	Z	iPc	05 53 03.4
	PRS	Z	iPc	05 53 07.3
	LLA	Z	iPc	05 53 08.2
	PRI	Z	ePc	05 53 10.5
	FRI	Z	iPc	05 53 11.6
	MNA	Z	ePc	05 53 12.2
USGS 05h44m38.7s 51.5N 175.1E				
h=33km mb=5.5 Ms=5.0				
Rat Islands, Aleutian Islands				
Feb 16	WDC	Z	e	06 13 51.4
	ORV	Z	e	06 14 04.2
	CMB	Z	e	06 14 17.9
	MHC	Z	e	06 14 18.1
	PRI	Z	iPc	06 14 24.1
	MNA	Z	e	06 14 26.8
USGS 06h05m49.6s 51.6N 175.0E				
h=33km mb=4.9				
Near Islands, Aleutian Islands				
Feb 16	WDC	Z	iPd	21 55 12.0
	ORV	Z	e(P)	21 55 12.9
	CMB	Z	ePd	21 55 13.4
	FRI	Z	ePd	21 55 13.6
	MNA	Z	ePd	21 55 22.2
USGS 21h42m30.2s 18.5S 168.3E				
h=38km mb=5.1 Ms=4.2				
Vanuatu Islands				
Feb 17	FHC	Z	e(P)	05 30 20.6
	WDC	Z	iPd	05 30 26.3
	ORV	Z	eP	05 30 36.0
	BRK	Z	eP	05 30 40.8
	CMB	Z	ePd	05 30 49.7
	SAO	Z	e	05 30 50.0
	MHC	Z	e	05 30 51.8
	PRS	Z	ePd	05 30 53.1
	LLA	Z	eP	05 30 54.1
	FRI	Z	ePd	05 30 57.7
	MNA	Z	ePd	05 30 58.6
	PRI	Z	ePd	05 30 58.6
USGS 05h22m23.6s 51.5N 174.8E				
h=33km mb=5.2 Ms=5.0				
Near Islands, Aleutian Islands				
Feb 17	MHC	Z	iPc	06 54 00.4
		Z	iS	06 54 01.7
	GCC	Z	iPd	06 54 06.3
		Z	eS	06 54 12.5
	PCC	Z	iPc	06 54 09.0
		Z	iS	06 54 17.2
	SAO	Z	iPd	06 54 10.8
	BRK	Z	eP	06 54 11.6
		Z	eS	06 54 21.3
	BKS	Z	eP	06 54 11.8
	ZSP	Z	ePc	06 54 13.2
		Z	eS	06 54 24.8
	LLA	Z	iPd	06 54 15.9
		Z	eS	06 54 29.7
	PRS	Z	ePc	06 54 17.7
	CMB	Z	iPc	06 54 21.4
		Z	iS	06 54 36.3
	PRI	Z	e	06 54 23.9
	FRI	Z	ePc	06 54 26.6
		Z	iS	06 54 47.5
BRK 06h53m58.5s 37.3N 121.7W				
h=5km ML=2.9(4) Mo=1.3E20(2)				
Halls Valley, 12 km E of San Jose, CA				
Feb 17	FHC	Z	ePd	07 23 03.6
	WDC	Z	eP	07 23 09.1
		Z	e	07 23 15.4
		Z	e	07 23 39.6
	ORV	Z	ePd	07 23 18.0
	BRK	Z	e(P)	07 23 22.1
	MHC	Z	e(P)	07 23 28.6
		Z	e	07 23 35.2
	GCC	Z	e(P)	07 23 28.6
	CMB	Z	ePd	07 23 31.7
		Z	e	07 23 39.0
	PRS	Z	e(P)	07 23 35.3
	LLA	Z	ePd	07 23 36.7
	FRI	Z	ePd	07 23 40.2
		Z	e	07 23 46.8
	PRI	Z	ePd	07 23 40.5
	MNA	Z	ePd	07 23 40.7
		Z	e	07 23 47.7
		Z	e	07 24 11.0
USGS 07h15m05.9s 51.5N 174.9E				
h=33km mb=5.4 Ms=4.9				
Near Islands, Aleutian Islands				
Feb 17	WDC	Z	ePd	08 01 20.7
	ORV	Z	e(P)	08 01 26.1
	CMB	Z	e(P)	08 01 41.6
	MNA	Z	ePd	08 01 53.3
USGS 07h53m14.6s 51.7N 174.8E				
h=33km mb=5.2				
Near Islands, Aleutian Islands				
Feb 17	WDC	Z	eP	23 53 02.4
	ORV	Z	eP	23 53 11.4
	CMB	Z	eP	23 53 24.7
	PRS	Z	eP	23 53 29.4
	LLA	Z	eP	23 53 30.0
	FRI	Z	e(P)	23 53 31.1
	MNA	Z	eP	23 53 32.0
USGS 23h43m58.8s 54.6N 160.1E				
h=33km mb=4.5				
Near East Coast of Kamchatka				
Feb 18	GCC	Z	eP	00 33 51.4
	PRS	Z	eP	00 33 51.5
	PCC	Z	e(P)	00 33 51.7
	PRI	Z	eP	00 33 53.2
	LLA	Z	eP	00 33 53.5
	MHC	Z	eP	00 33 53.9
	FRI	Z	ePc	00 33 58.1
	CMB	Z	ePc	00 33 59.1
	ORV	Z	eP	00 34 00.4
	WDC	Z	ePc	00 34 00.8
	MNA	Z	eP	00 34 07.1
USGS 00h22m15.4s 26.1S 179.4E				
h=503km mb=5.1				
South of Fiji Islands				
Feb 18	FRI	Z	eP	11 31 05.0
		Z	epP	11 31 16.4
	CMB	Z	eP	11 31 06.5
		Z	epP	11 31 17.8
	ORV	Z	eP	11 31 07.7
		Z	epP	11 31 19.2
	WDC	Z	e(P)	11 31 08.3
		Z	epP	11 31 19.6
	PRS	Z	e(pP)	11 31 08.7
	MNA	Z	eP	11 31 16.2
		Z	epP	11 31 27.7
	PRI	Z	e	11 31 18.0
USGS 11h19m38.0s 17.2S 172.0W				
h=38km mb=5.0 Ms=4.4				
Tonga Islands Region				
Feb 18	FRI	Z	ePd	14 04 17.2
	PRI	Z	ePd	14 04 18.8
	MNA	Z	iPd	14 04 19.0
		Z	ePP	14 07 16.5
	LLA	Z	ePd	14 04 21.6
	PRS	Z	ePd	14 04 22.0
	SAO	Z	eP	14 04 23.0
	CMB	Z	iPd	14 04 24.2
	GCC	Z	ePd	14 04 26.3
	MHC	Z	ePd	14 04 26.5
	PCC	Z	ePd	14 04 29.0
	BKS	Z	e	14 04 29.7
	BRK	Z	ePd	14 04 30.0
	ORV	Z	ePd	14 04 33.4
	MIN	Z	ePd	14 04 35.5
	WDC	Z	iPd	14 04 38.3
	FHC	Z	ePd	14 04 45.5
USGS 13h52m36.1s 23.5S 67.7W				
h=142km mb=5.7				
Chile-Argentina Border Region				
Feb 18	BKS	Z	iPd	18 00 54.45
		Z	i	18 00 54.70
		Z	iS	18 01 01.17
	BRK	Z	iPc	18 00 54.7
	MHC	Z	iPc	18 00 55.05
		Z	iS	18 01 01.1
		Z	i	18 01 10.0
	PCC	Z	iPc	18 00 57.5
	GCC	Z	e(P)	18 01 00.2
		Z	ePc	18 01 00.4
	SAO	Z	iPd	18 01 04.6
		T	iS	18 01 21.45
	CMB	Z	iPc	18 01 05.4
		Z	iS	18 01 20.0
	PRS	Z	e(P)	18 01 06.7
	LLA	Z	e(P)	18 01 08.6
	PRI	Z	eP	18 01 14.8
		Z	e	18 01 18.9
	FRI	Z	iPc	18 01 15.2
	ORV	Z	e(P)	18 01 15.4
	WDC	Z	iPc	18 01 30.2
		Z	i(S)	18 02 04.9
BRK 18h00m46.2s 37.8N 121.7W				
h=11km ML=3.5(4) Mo=2.8E21(4)				
12 km NE of Livermore, CA				
Feb 19	MHC	Z	iPd	01 33 53.8
	GCC	Z	ePc	01 33 56.9
		Z	iS	01 33 59.4
	LLA	Z	ePc	01 34 02.6
		Z	iS	01 34 13.8
	PCC	Z	ePc	01 34 03.3
		Z	i(S)	01 34 15.8
	PRS	Z	ePd	01 34 04.8
	BKS	Z	eP	01 34 06.5
	BRK	Z	iPd	01 34 07.0
		Z	iS	01 34 20.7
	CMB	Z	ePc	01 34 12.2
		Z	iS	01 34 27.9
	PRI	Z	ePc	01 34 12.8
		Z	i	01 34 34.6
	FRI	Z	ePc	01 34 14.9
		Z	e(S)	01 34 33.6
BRK 01h33m49.4s 37.1N 121.5W				
h=6km ML=2.9(4) Mo=1.6E20(2)				
15 km NNE of Gilroy, CA				
Feb 19	WDC	Z	e(P)	02 41 54.3
	MHC	Z	eP	02 42 14.3
	GCC	Z	ePc	02 42 14.6
	SAO	Z	e(P)	02 42 17.7
	CMB	Z	ePc	02 42 18.1
	LLA	Z	ePc	02 42 22.4
	FRI	Z	e(P)	02 42 25.6
	MNA	Z	ePc	02 42 36.9
USGS 02h33m51.9s 51.6N 174.8E				
h=33km mb=4.9				
Near Islands, Aleutian Islands				
Feb 19	WDC	Z	eP	04 58 27.3
	MIN	Z	e(P)	04 58 30.8
	CMB	Z	e(P)	04 58 44.2
	MNA	Z	eP	04 58 44.2
	MHC	Z	e(P)	04 58 51.0
USGS 04h53m31.7s 58.5N 142.7W				
h=10km mb=4.7				
Gulf of Alaska				
Feb 19	FRI	Z	ePc	09 49 46.3
	CMB	Z	ePc	09 49 47.1
	WDC	Z	e(P)	09 49 47.6
	MNA	Z	e(P)	09 49 56.3
USGS 09h38m52.0s 17.8S 178.9W				
h=651km mb=4.8				
Fiji Islands Region				
Feb 19	WDC	Z	eP	11 50 00.5
	ORV	Z	eP	11 50 08.2
	CMB	Z	ePd	11 50 19.1
USGS 11h39m23.1s 43.0N 146.0E				
h=33km mb=4.9				
Off Coast of Hokkaido, Japan				
Feb 19	FHC	Z	eP	19 20 12.0
	BRK	Z	e(P)	19 20 13.5
		Z	i	19 20 37.1
	GCC	Z	e(P)	19 20 13.6
	BKS	Z	ePd	19 20 14.1
		Z	e	19 20 15.5
		Z	e	19 20 29.1
		Z	e	19 20 37.5
		Z	e	19 20 44.6
			AMP(μm)	PER(s)
		PZ	0.038	.8
	PRS	Z	eP	19 20 15.1
		Z	e	19 20 38.7
	MHC	Z	ePd	19 20 15.8
		Z	i	19 20 39.7
	WDC	Z	ePd	19 20 16.5
		Z	i	19 20 39.7
	LLA	Z	eP	19 20 17.2
		Z	e	19 20 40.6
	PRI	Z	eP	19 20 18.3
		Z	i	19 20 41.5
	ORV	Z	ePd	19 20 18.5
		Z	e	19 20 41.7
	CMB	Z	ePd	19 20 20.5
		Z	i	19 20 44.0
	FRI	Z	ePd	19 20 21.9
		Z	i	19 20 45.3
	MNA	Z	ePd	19 20 29.9
		Z	i	19 20 53.2
USGS 19h07m43.0s 10.2S 161.4E				
h=86km mb=5.4				
Solomon Islands				
Feb 19	FHC	Z	e	22 46 10.0
	WDC	Z	ePc	22 46 19.2
		Z	i	22 46 47.6
	MIN	Z	ePc	22 46 23.3
	ORV	Z	ePc	22 46 27.2
	BRK	Z	ePc	22 46 32.5
	BKS	Z	ePc	22 46 33.0
		Z	e	22 46 37.9
			AMP(μm)	PER(s)
		PZ	0.058	.9
	PCC	Z	ePc	22 46 33.6
	GCC	Z	ePc	22 46 37.7
	MHC	Z	ePc	22 46 38.0
		Z	e	22 47 15.3
	CMB	Z	ePc	22 46 39.7
		Z	e	22 47 23.2
	SAO	Z	eP	22 46 42.0
	PRS	Z	ePc	22 46 43.9
		Z	e	22 47 22.2
	LLA	Z	eP	22 46 44.4
	FRI	Z	ePc	22 46 47.0
	MNA	Z	iPc	22 46 47.1
		Z	e	22 47 30.3
	PRI	Z	ePc	22 46 48.3
USGS 22h37m11.6s 52.8N 158.3E				
h=119km mb=5.2				
Near East Coast of Kamchatka				
Feb 20	WDC	Z	ePdiffc	01 39 56.4
		Z	ePKPc	01 43 54.2
		Z	e	01 44 31
		Z	e	01 47 00
	FHC	Z	ePdiffc	01 39 56.7
		Z	ePKPc	01 43 52.9
	MIN	Z	e(Pdif)	01 39 59.1
		Z	ePKPc	01 43 55.5
	BRK	Z	e(Pdif)	01 40 00.3
		Z	ePKP	01 43 55.7
	ORV	Z	e(Pdif)	01 40 00.5
		Z	ePKPc	01 43 55.9
		Z	e	01 44 36
		Z	e	01 47 02
	MHC	Z	ePdiffc	01 40 04.3
		Z	iPKPc	01 43 57.4
		Z	e	01 47 03.1
	PRS	Z	ePdiffc	01 40 05.5
		Z	ePKP	01 43 57.5
		Z	e	01 44 40
		Z	e	01 47 02.9
	CMB	Z	ePdiffc	01 40 05.5
		Z	iPKPc	01 43 58.4
		Z	e	01 44 46
		Z	e	01 47 04.3
	LLA	Z	ePdiffc	01 40 07.1
		Z	ePKPc	01 43 58.6
		Z	e	01 44 45
		Z	e	01 47 04.5
	PRI	Z	e(Pdif)	01 40 09.0
		Z	ePKPc	01 43 59.6
		Z	e	01 47 04.6

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DATE	STA	CMP	PHASE	TIME (UTC)
	FRI	Z	ePdiff	01 40 10.6
		Z	iPKPc	01 44 00.1
		Z	e	01 44 50
		Z	e	01 47 05.0
	MNA	Z	ePdiffc	01 40 13.2
		Z	iPKPc	01 44 02.4
		Z	e	01 44 58
		Z	e	01 47 08.5
	PCC	Z	e(PKP)	01 43 53.4
	GCC	Z	ePKP	01 43 56.0
USGS 01h25m58.2s 7.1S 127.0E				
h=314km mb=5.8				
Banda Sea				
Feb 20	FHC	Z	e(P)c	06 50 35.0
	WDC	Z	iPc	06 50 42.7
	MIN	Z	e(P)	06 50 52.5
	ORV	Z	ePc	06 51 01.3
	BRK	Z	e(P)	06 51 09
	BKS	Z	ePc	06 51 11.9
			AMP(μm)	PER(s)
		PZ	0.022	.7
	MHC	Z	eP	06 51 22.0
	CMB	Z	ePd	06 51 24.8
	FRI	Z	ePd	06 51 39.8
USGS 06h49m32.9s 43.4N 127.1W				
h=10km mb=4.3				
Off Coast of Oregon				
Feb 20	SAO	Z	iPc	08 40 00.6
	LLA	Z	iPc	08 40 04.2
	PRS	Z	iPd	08 40 06.6
	GCC	Z	iPc	08 40 08.5
	MHC	Z	iPd	08 40 09.3
	PRI	Z	iPc	08 40 13.4
	PCC	Z	iPc	08 40 16.7
	BRK	Z	iPd	08 40 19.7
	BKS	Z	iPd	08 40 19.7
		Z	eS	08 40 36.9
	FRI	Z	iPc	08 40 20.2
	ZSP	Z	iPd	08 40 20.9
	CMB	Z	iPd	08 40 22.5
	ORV	Z	iPc	08 40 40.4
	MNA	Z	eP	08 40 45.8
	MIN	Z	iPc	08 40 52.7
	WDC	Z	iPnc	08 40 55.2
		Z	iP*	08 40 59.5
		Z	iPg	08 41 11.8
		Z	iSn	08 41 48.3
		Z	iS*	08 41 52.3
	FHC	Z	iPd	08 41 06.3
BRK 08h39m57.5s 36.8N 121.3W				
h=9km ML=5.1(10) Mo=3.5E23(4)				
12 km SE of Hollister, CA				
Feb 20	WDC	Z	eP	14 54 08.2
		Z	e	14 54 27.0
	ORV	Z	eP	14 54 18.4
	CMB	Z	e(P)	14 54 34.6
	MHC	Z	ePc	14 54 37.6
	MNA	Z	ePc	14 54 38.3
	FRI	Z	e	14 54 46
	PRI	Z	e	14 54 50.7
USGS 14h48m50.8s 61.7N 141.3W				
h=0km mb=4.5				
Southern Alaska				
Feb 20	CMB	Z	eP	15 38 48.6
	MNA	Z	eP	15 38 54.2
	FRI	Z	eP	15 38 54.6
USGS 15h27m12.2s 36.6N 141.7E				
h=17km mb=4.6 Ms=4.0				

DATE	STA	CMP	PHASE	TIME (UTC)
Near East Coast of Honshu, Japan				
Feb 20	FHC	Z	e(P)	22 21 49.4
	WDC	Z	ePc	22 21 55.6
		Z	i	22 22 10.4
	MIN	Z	ePc	22 22 00.2
		Z	e	22 22 15.0
	ORV	Z	ePc	22 22 03.7
		Z	i	22 22 18.5
	BRK	Z	e(P)	22 22 07.8
		Z	e	22 22 22.8
	BKS	Z	ePc	22 22 08.0
		Z	e	22 22 23.0
			AMP(μm)	PER(s)
		PZ	0.022	.7
	GCC	Z	e(P)	22 22 12.5
		Z	e	22 22 22.0
		Z	e	22 22 27.2
	MHC	Z	ePc	22 22 12.9
		Z	i	22 22 27.9
	CMB	Z	ePc	22 22 15.2
		Z	e	22 22 25.1
		Z	i	22 22 30.2
	SAO	Z	e(P)	22 22 17.5
		Z	e	22 22 33.9
	PRS	Z	ePc	22 22 18.2
		Z	i	22 22 33.1
	LLA	Z	ePc	22 22 18.9
		Z	i	22 22 33.9
	FRI	Z	ePc	22 22 21.9
		Z	e	22 22 32.1
		Z	i	22 22 36.9
	PRI	Z	e(P)	22 22 22.5
	MNA	Z	ePc	22 22 22.7
		Z	e	22 22 33.1
		Z	i	22 22 38.1
USGS 22h12m00.1s 46.7N 152.6E				
h=53km mb=5.6				
Kurile Islands				
Feb 21	FHC	Z	ePc	01 16 21.2
	WDC	Z	ePc	01 16 24.7
	MIN	Z	ePc	01 16 27.9
	ORV	Z	iPc	01 16 30.7
	PCC	Z	e(P)	01 16 32.4
	BKS	Z	ePc	01 16 32.7
			AMP(μm)	PER(s)
		PZ	0.036	0.9
	BRK	Z	ePc	01 16 33.0
	SAO	Z	e	01 16 35.0
	MHC	Z	e(P)	01 16 36.1
	CMB	Z	ePc	01 16 39.0
	PRS	Z	ePc	01 16 39.7
	LLA	Z	e(P)	01 16 40
	FRI	Z	ePc	01 16 43.8
	MNA	Z	iPc	01 16 46.3
USGS 01h05m14.1s 28.9N 139.3E				
h=434km mb=4.5				
Bonin Islands Region				
Feb 21	PCC	Z	ePc	05 31 30.8
	PRS	Z	iPc	05 31 30.9
		Z	e	05 31 44.1
	SAO	Z	e	05 31 31.8
	BRK	Z	e(P)	05 31 32.4
	BKS	Z	ePd	05 31 33.1
			AMP(μm)	PER(s)
		PZ	0.043	1.0
	PRI	Z	iPc	05 31 33.3
	LLA	Z	ePc	05 31 33.5
	MHC	Z	ePc	05 31 33.6
	FRI	Z	iPc	05 31 39.1

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	e	05 31 56.6
	CMB	Z	iPc	05 31 40.4
		Z	e	05 31 57.5
	ORV	Z	ePc	05 31 41.6
	WDC	Z	iPc	05 31 41.9
		Z	e	05 31 55.5
	MIN	Z	ePc	05 31 43.8
	MNA	Z	iPc	05 31 50.4
		Z	e	05 32 07.8
USGS 05h20m17.3s 15.8S 172.8W				
h=63km mb=5.0				
Samoa Islands Region				
Feb 21	CMB	Z	ePd	09 17 36.2
	ORV	Z	e(P)	09 17 37.4
	WDC	Z	iPd	09 17 37.9
	MIN	Z	eP	09 17 40.8
	MNA	Z	ePd	09 17 46.2
USGS 09h06m07.5s 15.9S 173.3W				
h=33km mb=4.5				
Tonga Islands				
Feb 21	WDC	Z	ePKPc	09 40 50.0
	ORV	Z	ePKPc	09 40 54.4
	MIN	Z	ePKPc	09 40 55.0
	CMB	Z	ePKPc	09 40 58.0
	FRI	Z	e(PKP)	09 41 04.8
	MNA	Z	e(PKP)	09 41 11.5
USGS 09h22m12.9s 6.9S 129.4E				
h=148km mb=5.4				
Banda Sea				
Feb 21	MIN	Z	iPc	15 33 49.2
		Z	iS	15 34 06.1
	WDC	Z	iPc	15 33 56.8
		Z	eS	15 34 18.0
		Z	iSg	15 34 21.6
	ORV	Z	iPc	15 33 58.5
		Z	e	15 34 18.7
		Z	i	15 34 20.6
		Z	iS	15 34 22.3
	FHC	Z	e	15 34 14.7
	CMB	Z	e(P)	15 34 16.1
		Z	iS	15 34 59.2
	MNA	Z	eP	15 34 20.5
	MHC	Z	e	15 34 27.7
	FRI	Z	e	15 34 31.1
BRK 15h33m26.8s 41.1N 120.3W				
h=7km Mag=3.1				
48 km SE of Alturas, CA				
Feb 21	FHC	Z	e(P)	17 07 36.3
	WDC	Z	ePd	17 07 41.1
	MIN	Z	eP	17 07 44.2
		Z	e	17 08 52.0
	PCC	Z	eP	17 07 44.5
	BRK	Z	eP	17 07 45.1
	ORV	Z	eP	17 07 45.4
	BKS	Z	ePd	17 07 45.5
		N	eS	17 18 14.0
		N	e	17 30 37.0
			AMP(μm)	PER(s)
		PZ	0.042	0.7
		LN	1.1	20.
	MHC	Z	eP	17 07 47.9
	GCC	Z	e(P)	17 07 50.0
	PRS	Z	eP	17 07 50.2
	LLA	Z	eP	17 07 51.4
	CMB	Z	ePd	17 07 52.1
		Z	e	17 07 59.3
	PRI	Z	eP	17 07 53.5
	FRI	Z	eP	17 07 55.4

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	e	17 08 03.0
	MNA	Z	eP	17 08 00.3
		Z	e	17 08 08.1
BRK mb=5.7 h=33km Distance=87°				
USGS 16h55m21.1s 13.3N 145.7E				
h=57km mb=5.5 Ms=5.3				
Mariana Islands				
Feb 21	MNA	Z	eP	19 10 43.6
		Z	ePcP	19 12 55.4
	FRI	Z	eP	19 10 45.0
		Z	ePcP	19 12 55.0
	PRI	Z	e(P)	19 10 49.4
	LLA	Z	eP	19 10 50.2
		Z	ePcP	19 10 58.2
	PRS	Z	eP	19 10 51.9
		Z	ePcP	19 12 58.5
	CMB	Z	eP	19 10 53.8
		Z	ePcP	19 12 58.5
	MHC	Z	eP	19 10 58.3
	BKS	Z	ePd	19 11 04.0
		Z	e	19 27 30.5
		Z	e	19 28 39.5
			AMP(μm)	PER(s)
		PZ	0.036	0.7
		LZ	1.3	20.
	BRK	Z	e(P)	19 11 04.5
	ORV	Z	eP	19 11 07.3
	MIN	Z	eP	19 11 09.7
	WDC	Z	eP	19 11 13.7
	FHC	Z	eP	19 11 25.1
USGS 19h03m23.1s 11.7N 86.6W				
h=58km mb=5.2				
Near Coast of Nicaragua				
Feb 22	WDC	Z	e(P)	00 23 40.9
	ORV	Z	eP	00 23 49.0
	CMB	Z	eP	00 24 02.5
	MNA	Z	e(P)	00 24 09.1
	FRI	Z	eP	00 24 10.2
USGS 00h15m37.4s 51.4N 174.9E				
h=33km mb=4.7				
Near Islands, Aleutian Islands				
Feb 22	PRI	Z	ePd	07 43 31.2
	LLA	Z	iPd	07 43 38.1
	FRI	Z	iPd	07 43 38.8
	PRS	Z	iPc	07 43 39.0
	SAO	Z	eP	07 43 43.3
	GCC	Z	eP	07 43 50.3
	MHC	Z	e(P)	07 43 51.0
	CMB	Z	eP	07 43 54.7
	PCC	Z	eP	07 43 57.8
	BRK	Z	eP	07 44 01.3
	BKS	Z	ePd	07 44 01.7
		Z	e	07 45 20.1
	ZSP	Z	e(P)	07 44 04.0
	MNA	Z	ePd	07 44 04.4
	ORV	Z	e(P)	07 44 19.2
	MIN	Z	eP	07 44 32.2
	WDC	Z	e(P)	07 44 36.5
BRK 07h43m14.1s 35.5N 119.7W				
h=15km ML=4.3(6) Mo=6.3E22(1)				
65 km WNW of Bakersfield, CA				
Feb 22	FHC	Z	ePKP	09 04 40.2
	WDC	Z	ePKP	09 04 40.3
	MIN	Z	ePKP	09 04 42.7
	ORV	Z	ePKPd	09 04 43.6
	MHC	Z	ePKP	09 04 46.5
	CMB	Z	ePKPd	09 04 47.1
	LLA	Z	ePKP	09 04 48.1

DATE	STA	CMP	PHASE	TIME (UTC)
	PRS	Z	ePKP	09 04 48.2
	FRI	Z	ePKP	09 04 48.9
	MNA	Z	ePKPd	09 04 50.7
	PRI	Z	e(PKP)	09 04 50.7
USGS 08h45m45.5s 4.5S 102.8E				
h=68km mb=5.3				
Southern Sumatra				
Feb 22	WDC	Z	eP	15 49 06.7
	CMB	Z	eP	15 49 30.2
	PRS	Z	eP	15 49 34.5
	LLA	Z	eP	15 49 35.1
	FRI	Z	eP	15 49 39.0
	MNA	Z	eP	15 49 39.8
	PRI	Z	e(P)	15 49 40.9
USGS 15h42m03.8s 52.7N 173.5W				
h=33km mb=4.7				
Andreanof Islands, Aleutian Is.				
Feb 22	FRI	Z	eP	19 24 48.5
	PRI	Z	ePd	19 24 50.3
		Z	epP	19 25 09.6
	MNA	Z	ePd	19 24 50.5
		Z	epP	19 25 10.0
	LLA	Z	eP	19 24 52.7
		Z	epP	19 25 12.1
	PRS	Z	eP	19 24 53.4
		Z	epP	19 25 12.7
	CMB	Z	iPd	19 24 55.9
		Z	epP	19 25 15.1
	GCC	Z	eP	19 24 58.0
		Z	epP	19 25 17.3
	MHC	Z	e(P)	19 24 58.2
		Z	epP	19 25 17.9
	PCC	Z	eP	19 25 00.8
		Z	epP	19 25 20.2
	BKS	Z	ePd	19 25 01.9
		Z	e	19 25 21
		N	iS	19 34 45
		N	e(SS)	19 40 05
		NE	e(SSS)	19 43 38.5
		N	eLq	19 45 22
			AMP(μm)	PER(s)
		PZ	0.16	0.7
		LZ	3.0	20.
		LN	4.3	20.
		LE	2.5	20.
	BRK	Z	e(P)	19 25 02.0
	ORV	Z	eP	19 25 05.8
	MIN	Z	eP	19 25 07.5
		Z	epP	19 25 27.3
	WDC	Z	iPd	19 25 10.9
		Z	epP	19 25 30.3
	FHC	Z	eP	19 25 18.2
		Z	epP	19 25 37.9
BRK Ms=5.7 Distance=78°				
USGS 19h13m17.7s 20.8S 69.8W				
h=70km mb=5.9				
Northern Chile				
Feb 23	ZSP	Z	eP	08 10 40.5
	BRK	Z	eP	08 10 40.9
		Z	iS	08 10 57.4
	BKS	Z	ePc	08 10 41.4
		Z	e	08 10 55.4
		N	eS	08 10 56.3
	ORV	Z	eP	08 10 43.0
	PCC	Z	eP	08 10 45.7
	MIN	Z	eP	08 10 52.2
	WDC	Z	e(P)	08 10 52.2
	GCC	Z	eP	08 10 53.2
	CMB	Z	iPc	08 10 56.6

DATE	STA	CMP	PHASE	TIME (UTC)
	SAO	Z	eP	08 10 59.3
	LLA	Z	eP	08 11 04.1
	PRS	Z	e(P)	08 11 05.0
	FHC	Z	e(P)	08 11 05.5
	FRI	Z	eP	08 11 10.8
	PRI	Z	eP	08 11 12.0
	MNA	Z	eP	08 11 20.0
BRK 08h10m21.9s 38.8N 122.8W				
h=6km ML=3.4(8) Mo=6.0E21(2)				
The Geysers area, 20 km S of Clear Lake, CA				
Feb 24	FHC	Z	ePc	03 01 29.7
		Z	epP	03 01 50.6
	WDC	Z	iPc	03 01 40.3
		Z	epP	03 01 58.9
		Z	iPcP	03 03 51.7
		Z	iScP	03 07 34.4
	MIN	Z	iPc	03 01 45.7
		Z	epP	03 02 03.1
		Z	iPcP	03 03 53.6
	ORV	Z	iPc	03 01 49.6
		Z	epP	03 02 08.0
		Z	iPcP	03 03 55.0
	ZSP	Z	ePc	03 01 53.7
	BRK	Z	ePc	03 01 54.5
		Z	epP	03 02 12.6
	BKS	Z	ePc	03 01 54.6
		Z	e	03 02 03.7
		Z	e	03 02 22.1
			AMP(μm)	PER(s)
		PZ	0.036	0.7
	PCC	Z	ePc	03 01 55.4
	GCC	Z	ePc	03 02 00.0
		Z	epP	03 02 25.2
		Z	iPcP	03 04 02.4
	MHC	Z	iPc	03 02 00.7
		Z	epP	03 02 17.7
	CMB	Z	iPc	03 02 03.8
		Z	epP	03 02 21.1
		Z	iPcP	03 04 01.1
		Z	iScP	03 07 45.6
	PRS	Z	iPc	03 02 07.2
	LLA	Z	iPc	03 02 08.0
		Z	epP	03 02 26.2
		Z	iPcP	03 04 03.3
	FRI	Z	iPc	03 02 12.1
		Z	epP	03 02 30.6
		Z	iPcP	03 04 04.5
		Z	iScP	03 07 49.6
	PRI	Z	ePc	03 02 12.2
		Z	epP	03 02 30.9
		Z	iPcP	03 04 05.0
	MNA	Z	iPc	03 02 13.2
		Z	epP	03 02 31.7
		Z	iPcP	03 04 05.5
USGS 02h54m22.6s 51.7N 176.8W				
h=60km mb=5.5				
Andreanof Islands, Aleutian Is.				
Feb 24	FHC	Z	iPd	04 05 35.4
	WDC	Z	iPd	04 05 39.5
	MIN	Z	ePd	04 05 42.3
	ORV	Z	ePd	04 05 44.2
	BKS	Z	ePd	04 05 45.9
		Z	e	04 09 44.2
		Z	ePP	04 10 09.2
		R	eSKS	04 16 17.3
		R	eS	04 18 36.3
		R	eS	04 23 19.2
		R	eSSS	04 28 01.8
		T	eSSSS	04 29 10.4

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DATE	STA	CMP	PHASE	TIME (UTC)
		T	e	04 33 50.4
		R	eLr	04 37 20.8
		T	e	04 40 58.2
			AMP(μm)	PER(s)
		PZ	0.025	0.9
		LN	34	20.
		LE	48	20.
	GCC	Z	eP	04 05 46.3
	MHC	Z	ePd	04 05 48.8
		R	iSKS	04 16 25
		R	iSKKS	04 17 03
		T	iS	04 17 21
		R	iPS	04 18 34
		Z	iSP	04 18 35
		T	iSS	04 23 57
		Z	iSPSP	04 24 21
		T	iScSScS	04 29 33
		T	eLq	04 33 25
		Z	eLr	04 37 15
	CMB	Z	iPd	04 05 51.2
	PRS	Z	ePd	04 05 51.4
	LLA	Z	eP	04 05 52.5
	FRI	Z	ePd	04 05 55.1
	PRI	Z	eP	04 05 56.7
BRK Ms=7.1 Distance=100°				
USGS 03h52m03.3s 13.5N 124.6E				
h=24km mb=6.0 Ms=7.0				
Luzon, Philippine Islands				
Feb 24	WDC	Z	eP	08 58 38.1
	CMB	Z	eP	08 58 51.7
	FRI	Z	e(P)	08 58 55.5
USGS 08h44m54.6s 13.3N 124.8E				
h=33km mb=5.2 Ms=5.6				
Luzon, Philippine Islands				
Feb 24	PRI	Z	eP	10 12 58.1
	LLA	Z	eP	10 13 01.2
	MNA	Z	eP	10 13 01.7
	PRS	Z	eP	10 13 01.9
	CMB	Z	eP	10 13 07.3
	GCC	Z	e(P)	10 13 08.4
	MHC	Z	eP	10 13 09.3
	ORV	Z	eP	10 13 21.0
	WDC	Z	eP	10 13 28.5
USGS 10h04m36.9s 0.5S 91.6W				
h=10km mb=5.0				
Galapagos Islands				
Feb 24	PRI	Z	eP	14 10 10.5
	LLA	Z	e(P)	14 10 13.7
	MNA	Z	eP	14 10 14.3
	PRS	Z	eP	14 10 14.6
	CMB	Z	eP	14 10 19.8
	ORV	Z	eP	14 10 33.5
USGS 14h01m48.8s 0.6S 91.6W				
h=10km mb=4.7				
Galapagos Islands				
Feb 24	FRI	Z	iPc	15 51 36.0
		Z	ePcP	15 53 14.2
	MNA	Z	ePc	15 51 36.4
		Z	ePcP	15 53 15.2
	LLA	Z	iPc	15 51 40.0
		Z	ePcP	15 53 16.6
	PRI	Z	iPc	15 51 40.4
		Z	ePcP	15 53 16.0
	PRS	Z	iPc	15 51 40.7
		Z	ePcP	15 53 16.7
	SAO	Z	e(P)	15 51 42.9
	CMB	Z	iPc	15 51 45.8
		Z	ePcP	15 53 18.9
	GCC	Z	ePc	15 51 47.0
	MHC	Z	iPc	15 51 48.0
	PCC	Z	ePc	15 51 51.3
	BRK	Z	eP	15 51 53.1
	BKS	Z	ePc	15 51 53.1
		Z	e	15 53 22.7
		N	e	16 00 00.0
		E	e	16 04 12.0
			AMP(μm)	PER(s)
		PZ	0.11	0.9
	ORV	Z	iPc	15 51 59.7
	MIN	Z	eP	15 52 03.3
	WDC	Z	iPc	15 52 07.1
		Z	ePcP	15 53 28.8
	FHC	Z	ePc	15 52 16.4
USGS 15h43m15.3s 0.5S 91.7W				
h=10km mb=5.5 Ms=4.5				
Galapagos Islands				
Feb 24	PRI	Z	eP	20 31 05.1
		Z	ePcP	20 32 44.0
	LLA	Z	eP	20 31 08.7
		Z	ePcP	20 32 45.4
	MNA	Z	iPc	20 31 09.0
		Z	ePcP	20 32 45.2
	PRS	Z	ePc	20 31 09.4
		Z	ePcP	20 32 45.5
	FRI	Z	e(P)	20 31 09.5
	CMB	Z	eP	20 31 14.5
		Z	ePcP	20 32 47.5
	GCC	Z	eP	20 31 15.6
	MHC	Z	eP	20 31 16.6
	PCC	Z	eP	20 31 20.0
	BRK	Z	eP	20 31 21.7
	ORV	Z	ePc	20 31 28.2
	MIN	Z	eP	20 31 32.0
	WDC	Z	iPc	20 31 35.7
		Z	e(PcP)	20 32 57.7
	FHC	Z	eP	20 31 44.9
USGS 20h22m44.5s 0.4S 91.6W				
h=10km mb=5.3 Ms=4.0				
Galapagos Islands				
Feb 24	PRI	Z	eP	22 17 03.4
	LLA	Z	eP	22 17 07.0
	MNA	Z	ePc	22 17 07.5
		Z	ePcP	22 18 43.0
	PRS	Z	eP	22 17 07.8
	CMB	Z	ePc	22 17 12.7
	MHC	Z	eP	22 17 15.0
	ORV	Z	eP	22 17 26.7
	WDC	Z	ePc	22 17 34.1
		Z	ePcP	22 18 55.8
	FHC	Z	eP	22 17 43.5
USGS 22h08m42.8s 0.4S 91.6W				
h=10km mb=5.1 Ms=4.0				
Galapagos Islands				
Feb 24	PRI	Z	eP	23 53 01.6
	LLA	Z	eP	23 53 05.4
	MNA	Z	ePc	23 53 05.6
	PRS	Z	eP	23 53 06.0
	CMB	Z	eP	23 53 11.1
	GCC	Z	e(P)	23 53 12.3
	PCC	Z	e(P)	23 53 16.7
	ORV	Z	eP	23 53 24.9
	WDC	Z	ePc	23 53 32.3
	FHC	Z	eP	23 53 41.7
USGS 23h44m42.2s 0.2S 91.5W				
h=10km mb=5.1				
Galapagos Islands				
Feb 24	PRI	Z	eP	23 59 17.7
		Z	ePcP	00 00 57.3
	LLA	Z	eP	23 59 21.0
	MNA	Z	ePc	23 59 21.6
		Z	ePcP	00 00 58.5
	PRS	Z	ePc	23 59 21.7
	CMB	Z	eP	23 59 27.1
	GCC	Z	e(P)	23 59 28.1
	MHC	Z	eP	23 59 29.0
	ORV	Z	eP	23 59 40.7
	WDC	Z	eP	23 59 48.1
	FHC	Z	eP	23 59 57.4
USGS 23h50m57.5s 0.3S 91.5W				
h=10km mb=5.1				
Galapagos Islands				
Feb 25	FHC	Z	eP	11 55 43.9
	WDC	Z	eP	11 55 48.2
	MIN	Z	eP	11 55 51.6
	CMB	Z	eP	11 56 05.0
	PRS	Z	eP	11 56 07.8
	MNA	Z	eP	11 56 11.1
	FRI	Z	eP	11 56 11.5
USGS 11h45m06.0s 41.8N 133.5E				
h=468km mb=4.4				
Sea of Japan				
Feb 25	PRI	Z	eP	14 33 55.0
	CMB	Z	ePc	14 34 01.8
	WDC	Z	ePc	14 34 04.2
	MNA	Z	ePc	14 34 11.5
USGS 14h22m10.8s 21.2S 173.8W				
h=54km mb=4.7 Ms=4.5				
Tonga Islands				
Feb 26	FRI	Z	ePd	02 42 32.8
	MNA	Z	ePd	02 42 34.5
	PRI	Z	ePd	02 42 34.6
	LLA	Z	ePd	02 42 37.5
	PRS	Z	ePd	02 42 38.1
	CMB	Z	ePd	02 42 40.3
	GCC	Z	ePd	02 42 42.7
	MHC	Z	ePd	02 42 43.1
	PCC	Z	ePd	02 42 45.8
	BRK	Z	ePd	02 42 46.8
	BKS	Z	ePd	02 42 46.9
		Z	e	02 43 18.4
			AMP(μm)	PER(s)
		PZ	0.056	0.7
	ORV	Z	ePd	02 42 50.1
	MIN	Z	eP	02 42 52.2
	WDC	Z	ePd	02 42 55.5
USGS 02h31m20.1s 18.0S 69.6W				
h=124km mb=5.2				
Northern Chile				
Feb 26	MNA	Z	e(PKP)	06 37 40.2
		Z	ePKP2	06 38 54.8
		Z	ePP	06 42 46.4
		Z	ePcPPKP	06 46 04.3
	MIN	Z	ePKP	06 37 40.4
		Z	ePKP2	06 39 06.3
		Z	ePP	06 42 57.1
		Z	ePcPPKP	06 46 17.9
	WDC	Z	ePKP	06 37 40.5
		Z	ePKP2	06 39 00.1
		Z	ePP	06 43 00.1
		Z	ePcPPKP	06 46 15.1
	FRI	Z	ePKP	06 37 40.8
		Z	ePKP2	06 39 01.0
		Z	ePP	06 42 58.5
		Z	ePcPPKP	06 46 15.1
	CMB	Z	ePKP	06 37 41.0
		Z	ePKP2	06 39 00.3
		Z	ePP	06 42 59.6
		Z	ePcPPKP	06 46 15.7
	SAO	Z	e(PKP)	06 37 41.3
		Z	ePKP2	06 39 00.7
		Z	ePP	06 43 06.0
		Z	ePcPPKP	06 46 21.1
	PRS	Z	ePKP	06 37 41.8
		Z	ePKP2	06 39 02.6
		Z	ePP	06 42 59.7
		Z	ePcPPKP	06 46 20.4
	LLA	Z	ePKP	06 37 41.8
		Z	ePKP2	06 39 06.6
		Z	ePP	06 42 53.6
		Z	ePcPPKP	06 46 24.7
	BRK	Z	ePKP	06 37 41.9
		Z	ePKP2	06 39 10.5
		Z	ePP	06 43 08.4
		Z	ePcPPKP	06 46 22.5
	GCC	Z	e(PKP)	06 37 41.9
		Z	ePKP2	06 39 08.6
		Z	ePP	06 43 07.9
		Z	ePcPPKP	06 46 26.5
	PCC	Z	ePKP	06 37 42.0
		Z	ePKP2	06 39 14.7
		Z	ePP	06 43 06.8
		Z	ePcPPKP	06 46 11.6
	PRI	Z	ePKP	06 37 42.1
		Z	ePKP2	06 39 06.7
		Z	ePP	06 42 56.9
		Z	ePcPPKP	06 46 17.0
	FHC	Z	ePKP	06 37 42.3
		Z	ePKP2	06 39 10.7
		Z	ePP	06 43 00.9
		Z	ePcPPKP	06 46 22.7
	MHC	Z	ePKP	06 37 42.4
		Z	ePKP2	06 39 10.0
		Z	ePP	06 43 02.0
		Z	ePcPPKP	06 46 17.2
	ORV	Z	e(PKP)	06 37 42.5
		Z	ePKP2	06 39 03.6
		Z	ePP	06 42 57.9
		Z	ePcPPKP	06 46 16.9
	BKS	Z	ePKP	06 37 46.5
		T	e	06 38 30.8
		Z	ePKP2	06 39 12.6
		Z	e	06 40 05.8
		T	e	06 40 45.7
		Z	ePKS	06 41 06.8
		Z	e	06 42 58.7
		Z	ePP1	06 43 06.7
		Z	ePP2	06 43 48.9
		Z	e	06 44 42.8
		T	e	06 45 47.6
		T	ePcPPKP	06 46 27.7
		R	e	06 47 54.9
		T	ePPP1	06 49 13.7
		R	ePPP2	06 50 22.7
		Z	e	06 51 08.9
		T	eSKKS	06 51 35.9
		R	ePPS	06 57 33.7
		R	eSKSSKS	07 04 22.6
		T	eSS	07 05 31.7
		R	e(SSS)	07 11 00.0
		T	e(SSSS)	07 18 38.6
		T	eG1	07 28 36.1
		R	eG2	07 35 36
		R	eR1	07 39 17.6
		Z	eR2	07 49 05
		Z	eG3	10 00 20
		Z	eG4	10 07 08
		Z	eR3	10 33 00
		Z	eR4	10 43 28
			AMP(μm)	PER(s)
		LZ	18	20.
		LN	18	20.
		LE	16	20.
BRK Ms=7.1 Distance=171°				
USGS 06h17m31.5s 37.3S 48.0E				
h=10km mb=6.1 Ms=6.7				
Atlantic-Indian Rise				
Feb 26	MNA	Z	eP	09 48 38.0
	PRI	Z	eP	09 48 38.2
	LLA	Z	eP	09 48 41.0
	PRS	Z	eP	09 48 41.5
	MHC	Z	eP	09 48 46.7
	ORV	Z	eP	09 48 54.0
	WDC	Z	ePd	09 48 58.8
USGS 09h36m23.5s 18.2S 69.1W				
h=150km mb=4.5				
Northern Chile				
Feb 26	FRI	Z	ePc	09 58 00.5
	PRS	Z	e(P)	09 58 03.5
	MNA	Z	eP	09 58 09.0
	GCC	Z	e(P)	09 58 12.0
	MHC	Z	eP	09 58 12.6
	CMB	Z	ePc	09 58 12.9
USGS 09h53m27.8s 19.2N 109.1W				
h=33km mb=4.3				
Revilla Gigedo Islands Region				
Feb 26	PRS	Z	ePc	10 06 58.6
	GCC	Z	ePc	10 06 58.7
	SAO	Z	e(P)	10 06 59.7
	PRI	Z	ePc	10 07 00.9
	BRK	Z	ePc	10 07 01.0
	BKS	Z	ePc	10 07 01.1
			AMP(μm)	PER(s)
		PZ	0.040	0.9
	LLA	Z	eP	10 07 01.3
	MHC	Z	ePc	10 07 01.6
	FRI	Z	ePc	10 07 06.7
	CMB	Z	ePc	10 07 08.2
	ORV	Z	eP	10 07 09.5
	WDC	Z	ePc	10 07 10.1
	MIN	Z	ePc	10 07 11.9
	MNA	Z	ePc	10 07 18.0
USGS 09h55m35.3s 17.9S 172.0W				
h=33km mb=5.5 Ms=5.3				
Tonga Islands Region				
Feb 26	WDC	Z	ePKP	14 02 36.5
	CMB	Z	ePKP	14 02 37.0
	FRI	Z	ePKP	14 02 37.0
USGS 13h42m27.1s 37.2S 47.8E				
h=10km mb=5.5 Ms=5.2				
Atlantic-Indian Rise				
Feb 27	PRS	Z	iPc	11 03 24.0
	PRI	Z	ePc	11 03 25.8
	MHC	Z	iPc	11 03 26.5
	BKS	Z	iPd	11 03 26.7
	FRI	Z	iPc	11 03 31.0
	CMB	Z	iPc	11 03 32.4
	ORV	Z	ePc	11 03 33.7
	WDC	Z	ePc	11 03 34.4
	MIN	Z	ePc	11 03 35.9
	MNA	Z	iPc	11 03 40.8
USGS 10h51m29.9s 24.6S 177.3W				
h=172km mb=4.9				
South of Fiji Islands				
Feb 27	WDC	Z	iPc	12 09 54.6
	ORV	Z	iPc	12 10 04.1
	CMB	Z	iPc	12 10 18.1
	FRI	Z	iPc	12 10 26.2
	MNA	Z	iPc	12 10 27.8
	PRI	Z	iPc	12 10 28.3
USGS 12h02m42.6s 50.9N 175.1W				
h=33km mb=4.6				
Andreanof Islands, Aleutian Is.				
Feb 27	PRS	Z	ePc	13 11 46.0
	MHC	Z	ePc	13 11 48.5
	FRI	Z	iPc	13 11 53.2
	CMB	Z	iPc	13 11 54.2
	ORV	Z	iPc	13 11 55.2
	WDC	Z	iPc	13 11 55.5
	MNA	Z	iPc	13 12 02.6
USGS 13h00m33.1s 22.3S 179.4W				
h=559km mb=4.4				
South of Fiji Islands				
Feb 27	GCC	Z	eP	13 57 58.1
	PRS	Z	eP	13 57 58.1
	PCC	Z	iPc	13 57 58.7
	BKS	Z	ePc	13 58 3.2
		Z	e	14 26 16.0
		Z	e	14 32 30.0
			AMP(μm)	PER(s)
		PZ	0.030	1.0
		LZ	1.2	20.
		LN	1.2	20.
		LE	1.3	20.
	PRI	Z	eP	13 58 00.3
	MHC	Z	eP	13 58 01.1
	FRI	Z	ePc	13 58 05.9
	CMB	Z	iPc	13 58 07.4
	ORV	Z	eP	13 58 08.7
	WDC	Z	iPc	13 58 09.6
	MIN	Z	eP	13 58 12.2
	MNA	Z	iPc	13 58 16.7
USGS 13h46m15.9s 21.0S 173.8W				
h=33km mb=5.2 Ms=5.3				
Tonga Islands				
Feb 28	WDC	Z	iPKPc	03 38 10.9
	MIN	Z	iPKPc	03 38 12.1
	ORV	Z	ePKPc	03 38 14.2
	CMB	Z	iPKPc	03 38 17.0
	MHC	Z	iPKPc	03 38 17.4
	PRS	Z	ePKPc	03 38 19.0
	MNA	Z	iPKPc	03 38 19.5
	FRI	Z	iPKPc	03 38 19.5
USGS 03h19m35.1s 11.1N 93.5E				
h=120km mb=5.1				
Andaman Islands Region				
Feb 28	GCC	Z	iPd	13 04 01.3
	SAO	Z	iPd	13 04 01.6
	LLA	Z	iPc	13 04 06.8
	PCC	Z	iPc	13 04 07.2
		Z	iS	13 04 18.9
	BRK	Z	iPc	13 04 08.6
		Z	iS	13 04 23.1
	BKS	E	iP	13 04 09.2
		N	iS	13 04 21.7
	PRS	Z	iPc	13 04 09.3
	CMB	Z	iPd	13 04 16.3
		Z	iS	13 04 27.9
	FRI	Z	iPc	13 04 18.6
		Z	iS	13 04 34.4
BRK 13h03m51.6s 37.3N 121.4W				

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DATE	STA	CMP	PHASE	TIME (UTC)
	h=2km ML=2.5(2)			
30 km NE of Gilroy, CA				
Feb 28	WDC	Z	iPc	22 29 36.6
		Z	iS	22 29 44.7
	MIN	Z	eP	22 29 43.4
		Z	eS	22 30 00.0
	ORV	Z	eP	22 29 45.8
	FHC	Z	eP	22 29 47.3
		Z	eS	22 30 06.4
	CMB	Z	eP	22 30 10.6
		Z	eS	22 30 49.7
BRK 22h29m25.7s 40.0N 122.9W				
h=11km ML=3.0(3)				
55 km SW of Red Bluff, CA				
Feb 29	PCC	Z	eP	03 09 42.9
	MHC	Z	eP	03 09 45.2
	BKS	Z	eP	03 09 45.2
	FRI	Z	ePc	03 09 49.9
	CMB	Z	ePc	03 09 51.0
	ORV	Z	eP	03 09 52.0
	WDC	Z	ePc	03 09 52.2
	MIN	Z	eP	03 09 54.1
	MNA	Z	eP	03 10 00.1
USGS 02h58m31.9s 22.3S 179.5W				
h=594km mb=5.2				
South of Fiji Islands				
Feb 29	FHC	Z	iPc	05 40 05.2
	WDC	Z	iPc	05 40 12.1
		Z	e	05 46 36.4
	MIN	Z	iPc	05 40 17.0
	ORV	Z	iPc	05 40 21.4
	BKS	Z	iPc	05 40 27.0
		Z	ePP	05 42 20.0
		Z	eS	05 47 32.0
		Z	eSS	05 50 55.0
		NE	eLq	05 51 38.0
		NE	eG	05 53 48.0
		Z	eLr	05 54 35.0
			AMP(μm)	PER(s)
		PZ	1.1	1.6
		LZ	62	20.
		LNE	30	20.
		LNW	34	20.
	BRK	Z	iPc	05 40 27.4
		Z	ePP	05 42 20
		Z	eS	05 47 40
		Z	eSS	05 51 22
		Z	eLr	05 54 30
			AMP(μm)	PER(s)
		LZ	80	20.
	PCC	Z	eP	05 40 28.5
	GCC	Z	eP	05 40 32.8
	MHC	Z	iPc	05 40 33.1
	CMB	Z	iPc	05 40 34.9
		Z	e	05 46 47.0
	LLA	Z	eP	05 40 40.4
	MNA	Z	iPc	05 40 42.6
	FRI	Z	iPc	05 40 43.0
	PRI	Z	iPc	05 40 44.2
BRK Ms=6.5 Distance=51°				
USGS 05h31m41.5s 55.1N 167.4E				
h=33km mb=6.1 Ms=6.8				
Komandorsky Islands Region				
Feb 29	FHC	Z	eP	05 57 37.4
	WDC	Z	ePc	05 57 39.5
	MIN	Z	eP	05 57 44.2
	ORV	Z	eP	05 57 48.4
	CMB	Z	eP	05 58 02.0
	MNA	Z	eP	05 58 09.7
	FRI	Z	eP	05 58 10.3
USGS 05h49m05.6s 55.2N 167.0E				
h=33km mb=5.3				
Komandorsky Islands Region				
Feb 29	WDC	Z	ePc	06 26 08.2
	MIN	Z	eP	06 26 12.9
	ORV	Z	eP	06 26 17.2
	CMB	Z	eP	06 26 30.7
	MNA	Z	eP	06 26 38.5
	FRI	Z	eP	06 26 38.8
USGS 06h17m34.7s 55.1N 167.1E				
h=33km mb=5.0				
Komandorsky Islands Region				
Feb 29	WDC	Z	ePc	07 54 20.4
	MIN	Z	eP	07 54 25.1
	ORV	Z	eP	07 54 29.4
	CMB	Z	eP	07 54 43.0
	FRI	Z	eP	07 54 49.4
	MNA	Z	eP	07 54 50.7
USGS 07h45m47.3s 55.1N 167.2E				
h=33km mb=5.0				
Komandorsky Islands Region				
Feb 29	BRK	Z	eP	11 29 54.5
	BKS	Z	ePd	11 29 54.8
			AMP(μm)	PER(s)
		PZ	0.025	0.8
	FRI	Z	eP	11 29 59.5
	ORV	Z	eP	11 30 02.0
	WDC	Z	eP	11 30 02.3
	MIN	Z	eP	11 30 04.0
	MNA	Z	eP	11 30 08.6
USGS 11h18m22.2s 24.8S 179.6E				
h=502km mb=4.8				
South of Fiji Islands				
Feb 29	SAO	Z	iPc	21 53 49.5
		T	iS	21 53 53.00
	GCC	Z	iPc	21 53 52.7
	MHC	Z	iPd	21 53 54.15
		T	iS	21 54 03.20
	LLA	Z	iPc	21 53 56.4
	BKS	E	eP	21 54 5.8
		N	S	21 54 20.8
	PCC	Z	iPc	21 54 01.9
	BRK	Z	eP	21 54 06.0
		Z	eS	21 54 20.5
	PRI	Z	iPc	21 54 06.2
	FRI	Z	eP	21 54 10.5
	ORV	Z	eP	21 54 28.2
BRK 21h53m45.6s 36.9N 121.5W				
h=8km ML=2.9(4)				
10 km SE of Gilroy, CA				
Mar 1	WDC	Z	eP	02 22 25.2
	ORV	Z	eP	02 22 36.4
	MNA	Z	eP	02 22 55.2
	FRI	Z	e	02 22 59.3
	BKS	Z	eLr	02 39 14.0
			AMP(μm)	PER(s)
		LZ	1.6	20.
		LN	0.75	20.
		LE	1.5	20.
USGS 02h13m50.6s 55.6N 166.5E				
h=33km mb=4.9 Ms=5.0				
Komandorsky Islands Region				
Mar 1	FRI	Z	eP	02 29 43.9
	WDC	Z	eP	02 29 47.3
	MNA	Z	eP	02 29 54.8
USGS 02h17m51.2s 21.4S 173.8W				
h=33km mb=4.3				
Tonga Islands				
Mar 2	FHC	Z	iPc	05 00 04.6
		Z	iS	05 00 19.4
	WDC	Z	iPc	05 00 18.7
		Z	i	05 00 40.5
	MIN	Z	iPc	05 00 28.5
	ZSP	Z	eP	05 00 37.8
		Z	eS	05 01 15.9
	BRK	Z	ePc	05 00 38.0
	BKS	Z	iPc	05 00 38.5
		Z	i	05 01 15.9
	PCC	Z	iPc	05 00 41.0
BRK 04h59m49.9s 40.4N 124.9W				
h=16km ML=3.5(4) Mo=1.4E21(2)				
Off Coast 35 km W of Cape Mendocino, CA				
Mar 2	MNA	Z	iPc	07 21 01.5
	FRI	Z	iPc	07 21 02.0
	PRI	Z	iPc	07 21 04.9
	LLA	Z	ePc	07 21 07.7
	CMB	Z	iPc	07 21 11.1
	ORV	Z	iPc	07 21 23.3
	BKS	Z	e(P)c	07 21 24.0
		Z	e	07 21 30.1
		N	eLq	07 34 11.0
		Z	eLr	07 38 16.0
			AMP(μm)	PER(s)
		PZ	0.028	0.8
		LZ	1.4	20.
		LN	1.8	20.
		LE	2.2	20.
	WDC	Z	iPc	07 21 32.2
USGS 07h13m16.4s 9.7N 84.7W				
h=44km mb=5.0 Ms=5.1				
Costa Rica				
Mar 2	WDC	Z	ePKP	09 47 27.4
	MIN	Z	ePKPd	09 47 28.6
	ORV	Z	ePKP	09 47 29.2
	CMB	Z	ePKP	09 47 32.6
	FRI	Z	ePKPd	09 47 34.5
	MNA	Z	ePKPd	09 47 35.9
USGS 09h28m30.1s 6.4S 104.8E				
h=65km mb=5.4				
Sunda Strait				
Mar 3	WDC	Z	eP	03 34 30.0
	MIN	Z	eP	03 34 31.5
	ORV	Z	eP	03 34 35.2
	CMB	Z	eP	03 34 41.8
	FRI	Z	eP	03 34 46.1
	MNA	Z	eP	03 34 48.7
USGS 03h21m20.1s 23.9N 121.8E				
h=34km mb=4.9 Ms=4.9				
Taiwan				
Mar 3	MNA	Z	iPnc	07 34 47.2
		Z	ePg	07 34 54.8
		Z	eSg	07 35 40.2
	FRI	Z	ePn	07 35 00.3
		Z	ePg	07 35 12.8
		Z	eSg	07 36 05.2
	CMB	Z	ePn	07 35 09.3
		Z	ePg	07 35 25.1
		Z	eSg	07 36 28.2
	PRI	Z	e(Pg)	07 35 32.1
	MIN	Z	eP	07 35 33.7
		Z	e	07 35 58.4
BRK ML=4.3(2)				
USGS 07h35m55.5s 36.9N 114.5W				
h=5km mb=3.8				
Southern Nevada				
Mar 4	GCC	Z	ePc	03 19 06.4
	PCC	Z	iPc	03 19 06.5
	SAO	Z	eP	03 19 07.4
	BRK	Z	ePc	03 19 07.5
	BKS	Z	iPc	03 19 08.4
		Z	epP	03 21 13.1
		Z	e(sP)	03 22 14.3
		Z	e	03 22 16.5
			AMP(μm)	PER(s)
		PZ	0.22	1.0
	PRI	Z	iPc	03 19 09.2
	MHC	Z	iPc	03 19 09.2
		Z	epP	03 21 11.9
	LLA	Z	eP	03 19 09.9
	FHC	Z	eP	03 19 11.8
	FRI	Z	iPc	03 19 14.3
		Z	epP	03 21 17.0
	CMB	Z	iPc	03 19 15.1
		Z	epP	03 21 18.3
		Z	esP	03 22 21.4
	ORV	Z	iPc	03 19 15.7
		Z	epP	03 21 19.0
	WDC	Z	iPc	03 19 15.7
		Z	epP	03 21 19.0
		Z	esP	03 22 21.9
	MIN	Z	iPc	03 19 17.5
		Z	epP	03 21 21.1
	MNA	Z	iPc	03 19 24.4
		Z	epP	03 21 27.8
		Z	esP	03 22 31.3
BRK mb=5.5 h=580km Distance=79°				
USGS 03h08m15.5s 18.0S 178.5W				
h=590km mb=5.5				
Fiji Islands Region				
Mar 4	WDC	Z	eP	23 24 49.1
	CMB	Z	eP	23 25 13.3
	MNA	Z	eP	23 25 19.7
	FRI	Z	eP	23 25 26.9
USGS 23h19m54.8s 58.4N 142.7W				
h=10km mb=4.8				
Gulf of Alaska				
Mar 5	FRI	Z	eP	01 46 22.8
	CMB	Z	eP	01 46 23.8
	ORV	Z	eP	01 46 24.6
	WDC	Z	eP	01 46 24.9
	MIN	Z	eP	01 46 26.7
	MNA	Z	eP	01 46 32.8
USGS 01h35m19.1s 19.7S 178.3W				
h=601km mb=4.7				
Fiji Islands Region				
Mar 5	MNA	Z	eP	02 18 27.7
	FRI	Z	eP	02 18 29.4
	BKS	Z	eLr	03 04 15
			AMP(μm)	PER(s)
		LZ	0.89	20.
		LN	0.89	20.
		LE	0.71	20.
USGS 01h58m58.6s 52.3S 114.5E				
h=10km mb=5.6 Ms=5.3				
South of Australia				
Mar 5	BRK	Z	e(P)	12 19 24.8
	MHC	Z	eP	12 19 26.0
	SAO	Z	e(P)	12 19 27.9
	WDC	Z	eP	12 19 30.4
	ORV	Z	eP	12 19 30.6
	CMB	Z	ePd	12 19 31.4
	MIN	Z	eP	12 19 31.6
	FRI	Z	eP	12 19 31.6
	MNA	Z	eP	12 19 40.0
USGS 12h06m49.6s 18.1S 168.2E				
h=47km mb=5.3 Ms=5.4				
Vanuatu Islands				
Mar 5	MIN	Z	e(P)	12 53 05.0
	CMB	Z	eP	12 53 12.0
	FRI	Z	eP	12 53 12.2
	MNA	Z	eP	12 53 20.5
USGS 12h40m01.5s 3.8S 151.2E				
h=10km mb=5.3 Ms=5.1				
New Ireland Region				
Mar 6	FRI	Z	e(P)	00 17 02.2
	CMB	Z	eP	00 17 03.2
	ORV	Z	eP	00 17 04.0
	WDC	Z	eP	00 17 04.2
	MIN	Z	eP	00 17 06.0
	MNA	Z	eP	00 17 12.0
USGS 00h05m56.0s 20.1S 178.4W				
h=591km mb=4.9				
Fiji Islands Region				
Mar 6	FRI	Z	eP	08 36 37.2
	CMB	Z	eP	08 36 38.9
	ORV	Z	eP	08 36 40.3
	WDC	Z	e(P)	08 36 41.5
	MNA	Z	eP	08 36 46.2
USGS 08h23m41.6s 33.7S 179.4W				
h=33km mb=4.7 Ms=4.0				
South of Kermadec Islands				
Mar 6	MIN	Z	ePKP	14 42 52.8
	ORV	Z	ePKP	14 42 55.0
	CMB	Z	ePKP	14 43 01.1
	MNA	Z	ePKP	14 43 01.2
	MHC	Z	e(PKP)	14 43 02.0
	FRI	Z	ePKP	14 43 04.2
	PRI	Z	e(PKP)	14 43 06.8
USGS 14h23m17.2s 5.3S 68.7E				
h=10km mb=5.2 Ms=4.3				
Chagos Archipelago Region				
Mar 6	FHC	Z	iPd	14 52 22.4
		Z	i	14 52 29.5
		Z	iS	14 52 31.8
	WDC	Z	iPd	14 52 26.3
		Z	iS	14 52 36.7
	MIN	Z	eP	14 52 38.4
	ORV	Z	eP	14 52 43.3
BRK 14h52m13.5s 40.7N 123.4W				
h=5kmR ML=3.2(3) Mo=2.8E20(2)				
65 km SE of Eureka, CA				
Mar 6	FHC	Z	ePc	22 40 15.9
		Z	ePcP	22 44 27.7
	WDC	Z	iPc	22 40 23.8
	MIN	Z	iPc	22 40 29.4
		Z	iPcP	22 44 32.5
	ORV	Z	ePc	22 40 36.0
	BKS	Z	iPc	22 40 48
		R	e	22 44 57.8
		R	e	22 45 18.3
		T	iS	22 45 33.1
		Z	iLr	22 47 00.7
			AMP(μm)	PER(s)
			LN	1300 20.
			LE	1300 20.
	BRK	Z	ePc	22 40 48.5
		Z	ePcP	22 44 36.3
	PCC	Z	ePc	22 40 50.7
	CMB	Z	iPc	22 40 54.2
	MHC	Z	iPc	22 40 55.4
		Z	ipP	22 41 09
		Z	ePP	22 41 57
		N	e	22 44 02
		N	iS	22 44 54
		R	i	22 45 07.8
		Z	e	22 45 19.7
		N	e	22 45 24
		N	e	22 45 34
		N	eLq	22 46 41
		R	iLr	22 47 16.0
			AMP(μm)	PER(s)
		LZ	900	20.
		LN	1100	20.
		LE	970	20.
	GCC	Z	eP	22 40 56.3
	SAO	Z	e(P)	22 40 59.9
		T	iS	22 45 44.9
		Z	iLr	22 47 39.4
	MNA	Z	iPc	22 41 00.0
	LLA	Z	ePc	22 41 03.8
	FRI	Z	ePc	22 41 04.8
		Z	iPcP	22 44 40.2
	PRI	Z	iPc	22 41 09.3
		Z	iPcP	22 44 40.5
BRK Ms=7.5 Distance=26°				
USGS 22h35m38.1s 57.0N 143.0W				
h=10km mb=6.8 Ms=7.6				
Gulf of Alaska				
Mar 6	FHC	Z	e(P)	23 10 33.8
	WDC	Z	iPc	23 10 41.8
	MIN	Z	iPc	23 10 47.8
	ORV	Z	e(P)	23 10 54.1
	BRK	Z	e(P)	23 11 04.9
	CMB	Z	e(P)	23 11 12.7
	MHC	Z	ePc	23 11 13.9
	FRI	Z	ePc	23 11 23.1
	PRI	Z	ePc	23 11 27.6
USGS 23h05m56.8s 56.8N 143.0W				
h=10km mb=5.1				
Gulf of Alaska				
Mar 6	FHC	Z	iPc	23 19 20.5
	WDC	Z	iPc	23 19 27.5
	MIN	Z	iPc	23 19 33.3
	ORV	Z	ePc	23 19 40.2
	BRK	Z	ePc	23 19 52.5
	BKS	Z	eP	23 19 53.5
	PCC	Z	ePc	23 19 55.2
	CMB	Z	iPc	23 19 57.5
	MHC	Z	iPc	23 19 59.0
	GCC	Z	ePc	23 20 00.2
	SAO	Z	ePc	23 20 04.8
	LLA	Z	eP	23 20 07.3
	FRI	Z	iPc	23 20 08.3
	PRI	Z	iPc	23 20 12.5
USGS 23h14m38.5s 57.5N 142.8W				
h=10km mb=6.2				
Gulf of Alaska				
Mar 7	WDC	Z	ePc	00 59 14.7
	MIN	Z	ePc	00 59 20.5
	FRI	Z	ePc	00 59 54.0
	PRI	Z	ePc	01 00 02.8
USGS 00h54m27.5s 3.6S 151.3W				

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DATE	STA	CMP	PHASE	TIME (UTC)
			h=10km	
			Gulf of Alaska	
Mar 7	FHC	Z	ePc	02 02 00.2
	WDC	Z	eP	02 02 05.0
	MIN	Z	ePc	02 02 10.9
	CMB	Z	e(P)	02 02 34.8
	MNA	Z	e(P)	02 02 40.7
	FRI	Z	ePc	02 02 47.3
USGS 01h57m14.2s 57.1N 144.1W				
			h=10km mb=4.3	
			Gulf of Alaska	
Mar 7	FHC	Z	e(P)	02 33 16.9
	WDC	Z	e(P)	02 33 22.6
	MIN	Z	ePc	02 33 29.1
	ORV	Z	e(P)	02 33 36.0
	CMB	Z	ePc	02 33 55.0
	MNA	Z	ePc	02 34 00.0
	FRI	Z	eP	02 34 05.5
	PRI	Z	e(P)	02 34 09.7
USGS 02h28m48.5s 56.8N 140.7W				
			h=10km mb=4.3	
			Off Coast of Southeastern Alaska	
Mar 7	FHC	Z	e(P)	03 04 34.2
	WDC	Z	ePc	03 04 42.3
	MIN	Z	ePc	03 04 48.1
	ORV	Z	e(P)	03 04 54.7
	CMB	Z	ePc	03 05 11.6
	MHC	Z	ePc	03 05 13.7
	MNA	Z	ePc	03 05 18.6
	FRI	Z	ePc	03 05 23.3
	PRI	Z	ePc	03 05 29.7
USGS 02h59m53.9s 57.0N 143.3W				
			h=10km mb=4.4	
			Gulf of Alaska	
Mar 7	FHC	Z	ePc	03 33 25.2
	WDC	Z	e(P)	03 33 31.4
	MIN	Z	ePc	03 33 36.8
	ORV	Z	ePc	03 33 43.5
	CMB	Z	e(P)	03 34 01.6
	MHC	Z	e(P)	03 34 01.7
	MNA	Z	ePc	03 34 08.0
	FRI	Z	eP	03 34 11.6
	PRI	Z	e(P)	03 34 17.5
USGS 03h28m43.0s 57.5N 142.9W				
			h=10km mb=4.0	
			Gulf of Alaska	
Mar 7	WDC	Z	e	04 03 08.3
	CMB	Z	eP	04 03 10.6
	FRI	Z	ePc	04 03 15.6
	MNA	Z	eP	04 03 18.2
USGS 03h51m20.7s 30.0N 141.4E				
			h=92km mb=4.5	
			South of Honshu, Japan	
Mar 7	WDC	Z	ePc	05 38 26.5
	MIN	Z	ePc	05 38 32.3
	CMB	Z	e(P)	05 38 59.0
	MNA	Z	eP	05 39 04.1
	FRI	Z	ePc	05 39 08.9
	PRI	Z	ePc	05 39 14.3
USGS 05h33m44.0s 57.0N 142.7W				
			h=10km mb=4.2	
			Gulf of Alaska	
Mar 7	FRI	Z	e(P)	11 30 40.7
	MNA	Z	ePd	11 30 40.8
	PRI	Z	e(P)	11 30 41.2
	LLA	Z	ePd	11 30 43.7
	CMB	Z	ePd	11 30 46.9
	MHC	Z	e(P)	11 30 48.2
	BRK	Z	e(P)	11 30 52.4
	ORV	Z	ePd	11 30 58.3
	WDC	Z	ePd	11 31 02.2
	MIN	Z	e	11 31 03
USGS 11h20m04.0s 11.7S 74.1W				
			h=43km mb=5.1	
			Peru	
Mar 7	BRK	Z	ePc	13 57 15.5
	PRI	Z	ePc	13 57 16.8
	LLA	Z	e(P)	13 57 18.9
	FRI	Z	ePc	13 57 21.8
		Z	e	13 57 26.5
	CMB	Z	ePc	13 57 23.1
		Z	e	13 57 27.7
	WDC	Z	ePc	13 57 24.8
	ORV	Z	e(P)	13 57 25.2
	MIN	Z	ePc	13 57 27.8
	MNA	Z	ePc	13 57 33.0
		Z	e	13 57 37.5
USGS 13h45m55.8s 16.0S 172.9W				
			h=33km mb=5.0 Ms=4.7	
			Samoa Islands Region	
Mar 7	FHC	Z	eP	15 31 20.5
		Z	e	15 31 29.1
	WDC	Z	ePd	15 31 26.1
		Z	i	15 31 32.1
		Z	i	15 31 42.1
	MIN	Z	eP	15 31 30.9
		Z	i	15 31 39.7
	ORV	Z	ePd	15 31 34.1
		Z	i	15 31 42.8
		Z	i	15 31 51.0
	BRK	Z	ePd	15 31 36.9
		Z	e	15 31 46.0
	BKS	Z	eP	15 31 38.5
		Z	e	15 31 46.5
		N	eLq	15 47 46
		N	e	15 53 34
			AMP(μm)	PER(s)
		LZ	2.0	20.
		LN	1.5	20.
		LE	2.0	20.
	GCC	Z	ePd	15 31 41.0
		Z	e	15 31 50.2
		Z	e	15 31 58.5
	MHC	Z	ePd	15 31 42.0
		Z	i	15 31 50.9
	CMB	Z	iPd	15 31 45.1
		Z	i	15 31 53.6
	LLA	Z	e(P)	15 31 47.9
		Z	e	15 31 56.5
	PRI	Z	e(P)	15 31 51.1
		Z	i	15 32 06.9
	FRI	Z	ePd	15 31 51.6
		Z	i	15 32 00.3
		Z	e	15 32 07.0
	MNA	Z	iPd	15 31 53.3
		Z	i	15 32 02.1
BRK Ms=5.4 Distance=67°				
USGS 15h21m06.9s 41.7N 152.2E				
			h=10km mb=5.9 Ms=5.1	
			North Pacific Ocean	
Mar 8	WDC	Z	ePd	09 34 31.9
	MIN	Z	e(P)	09 34 36.0
	ORV	Z	e(P)	09 34 39.5
	CMB	Z	ePd	09 34 50.9
	LLA	Z	e(P)	09 34 53.9
	PRI	Z	e(P)	09 34 54.3
	FRI	Z	e(P)	09 34 56.0
	MNA	Z	e(P)	09 34 58.7
USGS 09h24m25.4s 45.5N 151.5E				
			h=33km mb=5.3 Ms=4.5	
			Kurile Islands	
Mar 8	WDC	Z	ePc	11 13 50.7
	ORV	Z	ePc	11 13 54.4
	CMB	Z	ePc	11 14 05.7
	LLA	Z	ePc	11 14 07.0
	FRI	Z	eP	11 14 08.5
	MNA	Z	eP	11 14 16.2
USGS 11h02m08.7s 28.7N 142.5E				
			h=37km mb=4.9 Ms=4.5	
			Bonin Islands Region	
Mar 8	WDC	Z	iPc	14 01 49.3
		Z	e(S)	14 02 08.6
	ORV	Z	eP	14 01 49.7
		Z	e(S)	14 02 06.8
	MIN	Z	e(P)	14 01 51.8
		Z	i	14 01 54.5
	FHC	Z	e(P)	14 01 57.8
	CMB	Z	e(P)	14 02 08.0
BRK 14h01m24.2s 39.2N 123.2W				
			h=1kmR Mag=2.2	
			10 km N of Ukiah, CA	
Mar 8	CMB	Z	ePc	16 25 48.1
	WDC	Z	e(P)	16 25 49.0
USGS 16h14m50.5s 17.7S 178.8W				
			h=607km mb=4.8	
			Fiji Islands Region	
Mar 8	FHC	Z	ePd	16 35 04.3
		Z	i	16 35 18
	WDC	Z	iPd	16 35 12.0
		Z	i	16 35 26
		Z	i	16 40 54
	MIN	Z	ePd	16 35 17.3
	ORV	Z	iPd	16 35 21.2
	BRK	Z	ePd	16 35 26.0
	PCC	Z	iPd	16 35 26.9
	BKS	Z	iPc	16 35 27.0
		Z	e	16 35 42.9
		T	iS	16 42 00.8
		N	eLq	16 45 28
		Z	eLr	16 48 40
			AMP(μm)	PER(s)
		LZ	5.5	20.
		LN	4.8	20.
		LE	6.6	20.
	GCC	Z	ePd	16 35 31.2
	MHC	Z	iPd	16 35 31.8
		T	iS	16 42 11.0
	CMB	Z	iPd	16 35 35.0
		Z	i	16 35 48
		Z	i	16 41 05
		Z	iS	16 42 16
		Z	i	16 43 26.5
	LLA	Z	ePd	16 35 39.2
	FRI	Z	iPd	16 35 42.7
	PRI	Z	ePd	16 35 43.2
	MNA	Z	iPd	16 35 43.8
		Z	i	16 35 58
	SAO	T	iS	16 42 19.9
BRK Ms=6.1 Distance=43°				
USGS 16h27m18.9s 51.3N 176.9E				
			h=33km mb=5.5 Ms=5.5	
			Rat Islands, Aleutian Islands	
Mar 9	WDC	Z	iPd	00 18 08.1
	MIN	Z	iPd	00 18 13.9
USGS 00h13m19.7s 57.6N 142.9W				
			h=10km mb=4.0	
			Gulf of Alaska	
Mar 9	FRI	Z	ePd	05 12 48.4
	PRI	Z	iPd	05 12 49.5
	MNA	Z	iPd	05 12 51.0
	LLA	Z	ePd	05 12 52.0
	PRS	Z	ePd	05 12 52.3
	CMB	Z	iPd	05 12 55.1
		Z	e	05 13 04.0
		Z	e	05 13 25.5
	GCC	Z	ePd	05 12 56.3
	MHC	Z	iPd	05 12 57.3
	ORV	Z	iPd	05 13 03.8
	WDC	Z	iPd	05 13 08.7
		Z	e	05 13 17.5
		Z	e	05 13 39.0
	FHC	Z	ePd	05 13 15.0
USGS 05h00m34.9s 31.2S 68.6W				
			h=111km mb=5.4	
			San Juan Province, Argentina	
Mar 9	ORV	Z	eP	17 16 55.4
	BRK	Z	e(P)	17 17 00.3
	MHC	Z	e(P)	17 17 07
	CMB	Z	ePd	17 17 09.3
	FRI	Z	eP	17 17 18.5
	MNA	Z	ePd	17 17 18.7
USGS 17h08m47.1s 52.0N 175.4E				
			h=33km mb=4.9 Ms=4.7	
			Rat Islands, Aleutian Islands	
Mar 9	FRI	Z	ePd	21 44 57.1
		Z	ePKPPKP	22 13 08.8
	PRI	Z	iPd	21 44 58.5
		Z	ePKPPKP	22 13 07.9
	MNA	Z	ePd	21 44 59.3
		Z	ePKPPKP	22 13 09.8
	LLA	Z	iPd	21 45 01.6
	PRS	Z	ePd	21 45 01.9
	SAO	Z	eP	21 45 03.3
	CMB	Z	iPd	21 45 04.9
		Z	ePKPPKP	22 13 05.2
	GCC	Z	ePd	21 45 07.0
	MHC	Z	iPd	21 45 07.6
		Z	ePKPPKP	22 13 04.2
	PCC	Z	eP	21 45 10.2
	BRK	Z	ePd	21 45 11.5
	BKS	Z	eP	21 45 11.5
	ORV	Z	iPd	21 45 15.6
		Z	ePKPPKP	22 13 04.0
	MIN	Z	ePd	21 45 18.0
	FHC	Z	ePd	21 45 29.3
USGS 21h33m53.8s 17.3S 74.2W				
			h=32km mb=6.0 Ms=5.9	
			Off Coast of Peru	
Mar 9	MNA	Z	iPd	21 52 27.7
	PRI	Z	ePd	21 52 28.0
	FRI	Z	eP	21 52 28.2
	LLA	Z	iPd	21 52 30.5
	PRS	Z	iPd	21 52 31.0
	CMB	Z	ePd	21 52 33.3
	GCC	Z	ePd	21 52 35.7
	MHC	Z	ePd	21 52 36.2
	PCC	Z	ePd	21 52 38.0
	BRK	Z	ePd	21 52 39.7
	ORV	Z	iPd	21 52 43.1
	MIN	Z	e(P)	21 52 45.0
	FHC	Z	ePd	21 52 56.2
USGS 21h41m10.8s 18.3S 69.5W				
			h=118km mb=5.4	
			Northern Chile	
Mar 10	MIN	Z	eP	04 21 47.9
	ORV	Z	eP	04 21 54.7
	BRK	Z	ePc	04 22 09.0
	CMB	Z	ePc	04 22 11.5
	MNA	Z	ePc	04 22 16.5
	FRI	Z	ePc	04 22 22.0
	PRI	Z	e(P)	04 22 27.1
USGS 04h16m34.6s 59.2N 144.3W				
			h=10km mb=5.1 Ms=5.1	
			Gulf of Alaska	
Mar 10	MNA	Z	ePc	06 27 14.2
		Z	ipP	06 27 27.2
		Z	i	06 29 00.9
		Z	iPP	06 29 33.5
		Z	ePPP	06 31 02.5
		Z	eSP	06 35 22.5
		Z	ePKPPKP	06 55 56
	FRI	Z	eP	06 27 19.3
		Z	ePKPPKP	06 55 55
	PRI	Z	ePc	06 27 24.2
	CMB	Z	ePc	06 27 25.2
		Z	ipP	06 27 36.6
		Z	ePPP	06 31 06.5
		Z	eSP	06 35 31.9
	PRS	Z	ePc	06 27 28.2
	SAO	Z	ePc	06 27 28.4
	LLA	Z	ePc	06 27 28.5
	MHC	Z	ePc	06 27 32.6
		Z	ipP	06 27 44
		Z	iS	06 35 49
	GCC	Z	eP	06 27 33.1
	ORV	Z	ePc	06 27 33.8
	MIN	Z	ePc	06 27 34.1
		Z	ePKPPKP	06 55 51
	BRK	Z	ePc	06 27 35.3
	PCC	Z	ePc	06 27 35.7
	BKS	Z	iPd	06 27 36.2
		Z	epP	06 27 50.5
		N	iS	06 36 00
		N	eLq	06 43 10
		N	eLr	06 47 18
			AMP(μm)	PER(s)
		LZ	29	20.
		LN	25	20.
		LE	39	20.
	FHC	Z	ePc	06 27 48.1
		Z	ipP	06 28 00.0
		Z	isP	06 28 05.0
BRK Ms=6.6 Distance=64°				
USGS 06h17m23.3s 10.4N 60.6W				
			h=56km mb=6.2 Ms=6.4	
			Trinidad	
Mar 10	MNA	Z	ePc	06 40 17.1
	FRI	Z	eP	06 40 29.2
	CMB	Z	e(P)	06 40 30.0
	ORV	Z	eP	06 40 36.6
	MIN	Z	ePc	06 40 37.6
	PRS	Z	e(P)	06 40 38.0
	BRK	Z	e(P)	06 40 39.0
USGS 06h30m25.5s 10.4N 60.6W				
			h=53km mb=5.4	
			Trinidad	
Mar 10	MNA	Z	iPc	06 43 17.3
	FRI	Z	ePc	06 43 22.1
	CMB	Z	ePc	06 43 28.3
	LLA	Z	ePc	06 43 29.2
	PRS	Z	ePc	06 43 30.2
	MHC	Z	ePc	06 43 35.6
	ORV	Z	ePc	06 43 36.3
	BRK	Z	ePc	06 43 36.9
	MIN	Z	ePc	06 43 37.2
USGS 06h33m24.3s 10.4N 60.5W				
			h=47km mb=5.1	
			Trinidad	
Mar 10	ORV	Z	ePKP	08 15 55.0
	MIN	Z	ePKP	08 15 55.5
	CMB	Z	ePKP	08 15 57.2
		Z	e	08 17 09.7
	GCC	Z	ePKP	08 15 57.3
		Z	e	08 17 07.8
	LLA	Z	ePKP	08 15 58.6
	FRI	Z	ePKP	08 15 59.2
	MNA	Z	ePKP	08 16 01.3
		Z	e	08 17 22.9
	BRK	Z	e	08 17 15.7
USGS 07h58m21.0s 7.3S 122.3E				
			h=613km mb=5.6	
			Flores Sea	
Mar 10	PCC	Z	ePd	10 36 05.3
	GCC	Z	ePd	10 36 05.5
	PRS	Z	ePd	10 36 05.6
	BKS	Z	iPc	10 36 05.8
	SAO	Z	ePd	10 36 06.1
	BRK	Z	ePd	10 36 07.1
	PRI	Z	iPd	10 36 07.5
		Z	epP	10 38 20.0
		Z	esP	10 39 22.0
		Z	ePKPPKP	11 05 37.5
	LLA	Z	ePd	10 36 07.7
	MHC	Z	iPd	10 36 08.0
	FHC	Z	ePd	10 36 11.7
	FRI	Z	iPd	10 36 12.8
	CMB	Z	iPd	10 36 13.7
		Z	ipP	10 38 29
		Z	isP	10 39 28
		Z	eSP	10 45 03.3
		N	iS	10 45 44
		N	isS	10 49 31
	ORV	Z	iPd	10 36 14.7
	MIN	Z	iPd	10 36 16.7
	MNA	Z	iPd	10 36 22.5
		Z	epP	10 38 42.7
		Z	i	10 39 10.2
		Z	isP	10 39 38.9
		Z	e	10 40 10.6
		Z	eSP	10 45 56.6
		Z	ePKPPKP	11 05 26.1
BRK mb=6.1 h=660km Distance=76°				
USGS 10h25m05.3s 20.9S 178.6W				
			h=623km mb=6.1	
			Fiji Islands Region	
Mar 10	CMB	Z	eP	14 30 32.5
	MNA	Z	eP	14 30 42.1
	PRI	Z	eP	14 30 52.1
USGS 14h25m20.0s 57.2N 143.5W				
			h=10km mb=4.6	
			Gulf of Alaska	
Mar 10	CMB	Z	ePc	14 56 08.0
	MNA	Z	ePc	14 56 11.8
USGS 14h42m12.9s 23.9S 177.7W				
			h=266km mb=5.1	

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DATE	STA	CMP	PHASE	TIME (UTC)
South of Fiji Islands				
Mar 10	BKS	Z	iPc	19 37 04.4
		N	iS	19 37 18.0
	BRK	Z	iPc	19 37 06.2
		Z	e	19 37 17.2
		Z	iS	19 37 19.0
	ZSP	Z	ePd	19 37 06.6
		Z	eS	19 37 18.1
	PCC	Z	ePd	19 37 11.1
		Z	i	19 37 11.7
	MHC	Z	iPd	19 37 17.6
	SAO	Z	e	19 37 24.4
	CMB	Z	e(P)	19 37 26.2
BRK 19h36m52.0s 38.5N 122.7W				
h=1km ML=2.8(2)				
10 km NNW of Santa Rosa, CA				
Mar 11	FRI	Z	eP	03 53 02.1
	MNA	Z	eP	03 53 02.5
	PRI	Z	eP	03 53 04.6
	CMB	Z	eP	03 53 10.0
	MHC	Z	eP	03 53 14.3
	ORV	Z	eP	03 53 22.8
	MIN	Z	eP	03 53 27.9
	BKS	N	Lq	04 05 08
		Z	Lr	04 09 24
			AMP(μm)	PER(s)
		LZ	5.7	20.
		LN	6.3	20.
		LE	4.1	20.
BRK Ms=5.6 Distance= 49°				
USGS 03h44m57.1s 9.1N 83.0W				
h=22km mb=5.4 Ms=6.0				
Panama-Costa Rica Border Region				
Mar 11	SAO	Z	eP	04 31 39.8
	PRI	Z	eP	04 31 41.7
	FRI	Z	eP	04 31 46.4
	CMB	Z	eP	04 31 47.5
	ORV	Z	eP	04 31 48.4
	MIN	Z	eP	04 31 50.6
	MNA	Z	eP	04 31 56.3
USGS 04h20m42.4s 19.5S 177.5W				
h=554km mb=4.7				
Fiji Islands Region				
Mar 11	CMB	Z	eP	21 55 07.3
	FRI	Z	eP	21 55 22.5
USGS 21h53m16.1s 43.5N 127.0W				
h=10km mb=4.0				
Off Coast of Oregon				
Mar 12	FRI	Z	eP	00 57 01.4
	CMB	Z	eP	00 57 03.0
	MNA	Z	e(P)	00 57 10.7
USGS 00h44m14.8s 32.7S 179.0W				
h=66km mb=5.3				
South of Kermadec Islands				
Mar 12	MNA	Z	eP	04 42 03.8
	FRI	Z	eP	04 42 08.6
	CMB	Z	eP	04 42 14.7
		Z	ePcP	04 43 02.6
	LLA	Z	eP	04 42 15.9
	PRS	Z	e(P)	04 42 17.1
	MHC	Z	eP	04 42 21.9
	ORV	Z	eP	04 42 22.5
		Z	ePcP	04 43 06.0
	GCC	Z	eP	04 42 22.6
	BRK	Z	e(P)	04 42 24.8
	BKS	Z	eP	04 42 25.4

DATE	STA	CMP	PHASE	TIME (UTC)
		N	iSc	04 50 46
		N	iLq	04 57 52
		Z	eLr	05 02 38
			AMP(μm)	PER(s)
		PZ	0.039	1.0
		LZ	3.4	20.
		LN	1.4	20.
		LE	3.9	20.
	FHC	Z	eP	04 42 37.4
BRK Ms=5.6 Distance=64°				
USGS 04h32m10.3s 10.1N 60.6W				
h=51km mb=5.7 Ms=5.4				
Trinidad				
Mar 12	FHC	Z	iPc	08 47 42.0
	MIN	Z	iPc	08 47 53.3
	ORV	Z	iPc	08 47 57.5
	BRK	Z	eP	08 48 03.3
		Z	e(PcP)	08 49 13.0
	PCC	Z	eP	08 48 04.5
	GCC	Z	eP	08 48 08.8
	MHC	Z	iPc	08 48 09.2
	CMB	Z	iPc	08 48 10.7
		Z	ePcP	08 49 16.5
	SAO	Z	eP	08 48 12.3
	PRS	Z	eP	08 48 15.3
	LLA	Z	iPc	08 48 16.0
	MNA	Z	iPc	08 48 18.2
	FRI	Z	iPc	08 48 18.5
		Z	ePcP	08 49 20.6
	PRI	Z	eP	08 48 19.8
USGS 08h38m49.3s 54.7N 161.6E				
h=19km mb=5.7 Ms=4.5				
Near East Coast of Kamchatka				
Mar 12	FHC	Z	eP	11 09 39.5
	MIN	Z	eP	11 09 50.0
	ORV	Z	ePc	11 09 54.0
	PCC	Z	ePc	11 10 00.7
	GCC	Z	eP	11 10 04.7
	MHC	Z	eP	11 10 05.0
	CMB	Z	iPc	11 10 06.7
		Z	ePcP	11 10 56.5
	PRS	Z	eP	11 10 10.8
	LLA	Z	eP	11 10 11.3
	MNA	Z	iPc	11 10 13.6
	FRI	Z	ePc	11 10 13.8
		Z	ePcP	11 11 00.5
	PRI	Z	eP	11 10 14.6
USGS 11h00m50.9s 53.3N 155.8E				
h=325km mb=4.8				
Kamchatka				
Mar 12	ORV	Z	eP	23 05 41.0
	BRK	Z	e(P)	23 05 43.0
	BKS	Z	iPc	23 05 43.3
			AMP(μm)	PER(s)
		PZ	0.034	0.8
	MHC	Z	eP	23 05 46.9
	CMB	Z	ePd	23 05 49.7
	PRS	Z	eP	23 05 50.3
	PRI	Z	e(P)	23 05 54.2
	FRI	Z	ePd	23 05 54.4
USGS 22h54m22.1s 29.8N 139.0E				
h=396km mb=5.0				
South of Honshu, Japan				
Mar 13	FRI	Z	e	11 43 59.1
	PRS	Z	e(P)	11 44 01.0
	MNA	Z	eP	11 44 01.2
	CMB	Z	eP	11 44 04.6
	ORV	Z	eP	11 44 10.5

DATE	STA	CMP	PHASE	TIME (UTC)
	BKS	NE	iSc	11 54 38
		E	iSS	12 00 32
		NE	eLq	12 07 14
		Z	eLr	12 13 35
			AMP(μm)	PER(s)
		LZ	1.3	20.
		LN	3.0	20.
		LE	0.89	20.
USGS 11h31m32.9s 33.7S 72.2W				
h=41km mb=5.3 Ms=6.0				
Off Coast of Central Chile				
Mar 13	PRS	Z	eP	12 37 55.6
	MHC	Z	e(P)	12 37 55.8
	PRI	Z	eP	12 37 58.2
	ORV	Z	eP	12 38 01.1
	CMB	Z	ePd	12 38 02.0
	FRI	Z	eP	12 38 02.6
	MNA	Z	ePd	12 38 11.1
	BKS	Z	i	12 41 02
USGS 12h25m41.8s 16.4S 167.9E				
h=194km mb=5.3				
Vanuatu Islands				
Mar 13	MIN	Z	ePKP	13 19 26.4
	MNA	Z	ePKP	13 19 26.8
		Z	e	13 20 55.0
		Z	e	13 24 50
	FRI	Z	ePKP	13 19 26.9
	LLA	Z	e(PKP)	13 19 27.5
	CMB	Z	ePKP	13 19 28.1
		Z	e	13 20 58.4
		Z	e	13 24 58.2
	ORV	Z	ePKP	13 19 29.0
		Z	e	13 21 04.5
	BKS	Z	e	13 20 58
		NE	e	13 54 22
		Z	e	13 56 13
		NW	e	13 59 44
		NW	e	14 13 16
		Z	eLr	14 24 10
			AMP(μm)	PER(s)
		LZ	3.2	20.
		LN	2.0	20.
		LE	3.0	20.
	PRI	Z	e	13 20 58.5
USGS 12h59m15.9s 37.3S 51.8E				
h=10km mb=5.7 Ms=5.9				
South Indian Ocean				
Mar 13	LLA	Z	iPd	19 21 09.0
		Z	iS	19 21 12.3
	SAO	Z	iPd	19 21 16.5
		T	iS	19 21 26.0
	PRI	Z	ePd	19 21 16.8
		Z	iS	19 21 27.3
	PRS	Z	iPd	19 21 17.2
	FRI	Z	iPc	19 21 20.5
		Z	iS	19 21 32.3
	MHC	Z	ePc	19 21 23.35
		Z	iS	19 21 37.3
	GCC	Z	ePc	19 21 24.7
	CMB	Z	ePd	19 21 28.6
		Z	iS	19 21 47.0
	PCC	Z	ePc	19 21 30.8
	BKS	Z	eP	19 21 33.2
	BRK	Z	eP	19 21 35.3
	ORV	Z	ePc	19 21 52.5
	MNA	Z	ePd	19 21 53.1
BRK 19h21m04.6s 36.7N 120.7W				
h=3km ML=2.7(4)				
Panoche Hills, 41 km SE of Los				

DATE	STA	CMP	PHASE	TIME (UTC)
Banos, CA				
Mar 13	MHC	Z	ePcP	23 35 17.2
		Z	ePc	23 35 58.2
	FRI	Z	ePc	23 35 43.9
		Z	ePcP	23 38 10.2
	MNA	Z	ePc	23 35 44.1
		Z	ePcP	23 38 09.3
	PRI	Z	ePc	23 35 45.7
		Z	ePcP	23 38 12.8
	LLA	Z	ePc	23 35 48.5
	PRS	Z	e(P)	23 35 50.6
		Z	ePcP	23 38 14.3
	SAO	Z	e(P)	23 35 52.7
	CMB	Z	eP	23 35 53.4
		Z	ePcP	23 38 12.8
	PCC	Z	e(P)	23 36 02.4
	ORV	Z	e(P)	23 36 06.0
		Z	ePcP	23 38 16.3
USGS 23h28m48.9s 13.2N 89.2W				
h=87km mb=4.9				
El Salvador				
Mar 14	PRS	Z	ePc	11 11 54.2
		Z	e	11 12 10.8
	PRI	Z	eP	11 11 57.3
	FRI	Z	ePc	11 12 03.7
		Z	e	11 12 17.3
	CMB	Z	ePc	11 12 03.7
		Z	e	11 12 18.8
	MNA	Z	ePc	11 12 11.4
USGS 10h59m49.6s 30.0S 178.3W				
h=267km mb=4.7				
Kermadec Islands				
Mar 14	MNA	Z	eP	12 39 49.1
	PRI	Z	e(P)	12 39 49.7
	CMB	Z	eP	12 39 55.9
	FHC	Z	eP	12 40 22.5
USGS 12h29m49.5s 7.4S 74.8W				
h=141km mb=5.4				
Peru-Brazil Border Region				
Mar 14	FHC	Z	iPc	18 24 53.0
		Z	i	18 24 57.8
		Z	iS	18 25 01.1
	MIN	Z	iPc	18 25 16.4
	ORV	Z	eP	18 25 20.2
BRK 18h24m41.8s 40.4N 124.6W				
h=21km ML=3.3(3) Mo=2.5E20(2)				
Off Coast 55 km SW of Eureka, CA				
Mar 14	FHC	Z	ePd	19 26 27.4
	MIN	Z	eP	19 26 38.3
	ORV	Z	eP	19 26 41.8
		Z	e	19 26 57.8
	BRK	Z	e(P)	19 26 46
	PCC	Z	e(P)	19 26 46.6
	BKS	Z	eP	19 26 47.6
			AMP(μm)	PER(s)
		PZ	0.019	1.0
	GCC	Z	eP	19 26 51.5
	MHC	Z	ePd	19 26 52.2
	CMB	Z	ePd	19 26 54.3
		Z	e	19 27 10.7
	PRS	Z	ePd	19 26 57.5
		Z	e	19 27 14.0
	LLA	Z	ePd	19 26 58.3
	FRI	Z	e(P)	19 27 01.0
	MNA	Z	ePd	19 27 02.9
		Z	e	19 27 18.3
USGS 19h17m04.1s 49.7N 156.3E				

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h=61km mb=5.3				
Kurile Islands				
Mar 15	FHC	Z	ePc	09 37 39.8
	WDC	Z	ePc	09 37 44.9
	PCC	Z	ePc	09 37 48.1
	BRK	Z	eP	09 37 48.8
	ORV	Z	eP	09 37 49.2
	BKS	Z	ePd	09 37 49.4
			AMP(μm)	PER(s)
		PZ	0.025	1.1
	GCC	Z	ePc	09 37 50.5
	MHC	Z	ePc	09 37 51.7
	PRS	Z	ePc	09 37 53.8
	LLA	Z	eP	09 37 55.2
	CMB	Z	iPc	09 37 55.5
	PRI	Z	e(P)	09 37 57.3
	MNA	Z	ePc	09 38 03.9
USGS 09h25m05.7s 11.8N 143.3E				
h=16km mb=5.3 Ms=5.2				
South of Mariana Islands				
Mar 15	PRI	Z	iPc	17 29 52.9
	FRI	Z	iPc	17 29 58.8
USGS 17h10m47.5s 7.0N 123.7E				
h=33km mb=4.9				
Mindanao, Philippine Islands				
Mar 15	FHC	Z	iPc	22 40 43.7
		Z	i	22 40 50.9
		Z	iS	22 40 52.3
	WDC	Z	iPc	22 40 57.8
		Z	iS	22 41 12.3
	MIN	Z	iPc	22 41 08.4
	ORV	Z	ePc	22 41 11.5
		Z	i	22 41 35.7
	BRK	Z	eP	22 41 19.6
	PCC	Z	eP	22 41 23.0
	MHC	Z	eP	22 41 30.7
	GCC	Z	ePd	22 41 32.5
	SAO	Z	iPd	22 41 37.0
	PRS	Z	e	22 41 43.5
BRK 22h40m33.3s 40.5N 124.5W				
h=15km ML=3.5(4) Mo=2.0E21(2)				
Off Coast 47 km SW of Eureka, CA				
Mar 16	FHC	Z	ePc	00 00 51.6
	WDC	Z	iPc	00 00 59.8
		Z	ipP	00 01 19.2
	MIN	Z	iPc	00 01 06.3
	ORV	Z	ePc	00 01 12.0
	BKS	Z	iPd	00 01 25.5
		Z	ipP	00 01 41.7
		Z	e	00 07 33
		Z	e	00 07 38
		N	e	00 08 42
			AMP(μm)	PER(s)
		PZ	0.20	1.5
	CMB	Z	iPc	00 01 30.6
		Z	ipP	00 01 41.4
	MHC	Z	iPc	00 01 32.3
	MNA	Z	iPc	00 01 36.2
	PRS	Z	ePc	00 01 40.4
	FRI	Z	iPc	00 01 41.0
	PRI	Z	iPc	00 01 45.6
USGS 23h56m17.2s 57.0N 142.9W				
h=10km mb=5.0 Ms=4.6				
Gulf of Alaska				
Mar 16	MNA	Z	iPd	05 57 56.4
	FRI	Z	ePd	05 58 01.2
	PRI	Z	ePd	05 58 06.1

DATE	STA	CMP	PHASE	TIME (UTC)
	CMB	Z	iPd	05 58 07.2
	LLA	Z	iPd	05 58 08.5
	PRS	Z	iPd	05 58 10.4
	GCC	Z	ePd	05 58 14.8
	ORV	Z	iPd	05 58 15.2
	MIN	Z	iPd	05 58 16.0
	BKS	Z	iP	05 58 17.4
		Z	e	06 07 35
		NE	e	06 07 40
		Z	e	06 11 18
		NE	e	06 14 42
		N	e	06 15 35
		Z	eLq	06 18 08
		Z	eLr	06 21 40
			AMP(μm)	PER(s)
		PZ	0.048	1.0
		LZ	2.7	20.
		LN	1.4	20.
		LE	1.8	20.
	WDC	Z	iPd	05 58 19.4
	FHC	Z	iPd	05 58 29.9
BRK Ms=5.2 Distance=53°				
USGS 05h48m03.8s 10.2N 60.6W				
h=56km mb=5.7				
Trinidad				
Mar 16	LLA	Z	iPc	06 18 55.15
		Z	iS	06 18 58.9
	SAO	Z	iPc	06 18 56.15
	PRS	Z	iPd	06 18 56.3
	PRI	Z	iPd	06 19 02.5
		Z	iS	06 19 13.6
	GCC	Z	iPd	06 19 05.3
	FRI	Z	iPc	06 19 13.0
		Z	i	06 19 25.5
		Z	iSg	06 19 29.8
	PCC	Z	iPc	06 19 13.9
	BRK	Z	ePc	06 19 17.1
	BKS	Z	iPc	06 19 17.2
		Z	eS	06 19 41.5
	CMB	Z	ePc	06 19 18.4
	ORV	Z	e	06 19 37.4
	MNA	Z	e	06 19 44.0
BRK 06h18m50.8s 36.6N 121.2W				
h=7km ML=3.2(4)				
Bear Valley, 36 km SE of Hollister, CA				
Mar 16	PRS	Z	ePd	12 22 14.7
	FRI	Z	ePd	12 22 22.6
	CMB	Z	iPd	12 22 23.7
		Z	epP	12 23 23.8
	ORV	Z	iPd	12 22 24.6
	WDC	Z	iPd	12 22 25.1
		Z	i	12 23 27.1
	MIN	Z	ePd	12 22 27.1
	MNA	Z	ePd	12 22 33.4
		Z	epP	12 23 33.7
USGS 12h11m06.0s 17.8S 175.0W				
h=255km mb=5.3				
Tonga Islands				
Mar 16	GCC	Z	iPc	13 41 21.2
	PCC	Z	iPc	13 41 21.4
	PRS	Z	iPc	13 41 21.6
	PRI	Z	iPc	13 41 23.3
	BKS	Z	iPd	13 41 23.7
			AMP(μm)	PER(s)
		PZ	038	0.8
	FRI	Z	iPc	13 41 28.0
	CMB	Z	iPc	13 41 28.3
	ORV	Z	iPc	13 41 30.3

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	WDC	Z	iPc	13 41 30.8
	MIN	Z	ePc	13 41 32.3
	MNA	Z	iPc	13 41 37.2
USGS 13h29m56.7s 23.9S 179.8E				
h=528km mb=4.7				
South of Fiji Islands				
Mar 16	PRI	Z	ePd	23 06 57.0
	MNA	Z	ePd	23 06 57.3
	FRI	Z	e(P)	23 06 57.8
	LLA	Z	ePd	23 06 59.7
	PRS	Z	eP	23 07 00.0
	CMB	Z	ePd	23 07 02.5
	GCC	Z	ePd	23 07 04.4
	MHC	Z	ePd	23 07 05.0
	PCC	Z	eP	23 07 06.4
	ORV	Z	iPd	23 07 11.9
	WDC	Z	ePd	23 07 17.0
	FHC	Z	ePd	23 07 24.6
USGS 22h55m24.2s 21.2S 68.5W				
h=116km mb=5.1				
Chile-Bolivia Border Region				
Mar 16	MHC	Z	iPd	23 10 08.5
	GCC	Z	iPd	23 10 14.4
		Z	iS	23 10 20.4
	SAO	Z	iPc	23 10 18.1
	PCC	Z	iPc	23 10 18.3
	BKS	Z	iPd	23 10 21.3
		N	iS	23 10 32.2
	BRK	Z	iPd	23 10 21.4
		Z	iS	23 10 32.7
	ZSP	Z	eP	23 10 22.9
	LLA	Z	ePd	23 10 23.5
	PRS	Z	iPc	23 10 25.3
	CMB	Z	eP	23 10 30.0
		Z	iS	23 10 47.0
	PRI	Z	ePd	23 10 32.7
	FRI	Z	ePc	23 10 34.4
BRK 23h10m06.9s 37.3N 121.7W				
h=3km ML=2.7(4) Mo=9.5E19(2)				
Halls Valley, 17 km ESE of San Jose, CA				
Mar 17	PRS	Z	ePc	08 56 36.3
	PRI	Z	ePc	08 56 37.0
	BRK	Z	e(P)	08 56 37.6
	FRI	Z	ePd	08 56 43.8
	CMB	Z	ePc	08 56 44.3
	WDC	Z	ePc	08 56 44.8
	MNA	Z	eP	08 56 53.5
USGS 08h45m44.9s 18.2S 179.3W				
h=626km mb=4.7				
Fiji Islands Region				
Mar 17	PRS	Z	e(P)	10 36 13
	MHC	Z	e(P)	10 36 13.5
	WDC	Z	e(P)	10 36 13.8
	CMB	Z	e(P)	10 36 14.9
	MIN	Z	e	10 36 16
	FRI	Z	e	10 36 21.8
	MNA	Z	e(P)	10 36 26
USGS 10h23m07.3s 10.2S 154.1E				
h=33km mb=5.0 Ms=4.6				
Dentrecasteaux Islands Region				
Mar 17	MNA	Z	ePc	12 12 39.3
	PRI	Z	eP	12 12 39.9
	LLA	Z	ePc	12 12 42.9
	PRS	Z	ePc	12 12 44.0
	CMB	Z	ePc	12 12 46.2
		Z	e	12 13 54.3
	SAO	Z	e	12 12 48.6
	MHC	Z	eP	12 12 49.6
	ORV	Z	ePc	12 12 58.0
		Z	e	12 13 05.9
	WDC	Z	ePc	12 13 03.8
	FHC	Z	ePc	12 13 13.4
		Z	e	12 13 21.0
USGS 12h02m42.4s 5.9S 76.4W				
h=33km mb=4.9				
Northern Peru				
Mar 17	GCC	Z	eP	12 30 49.2
	PCC	Z	ePc	12 30 49.4
	PRS	Z	ePc	12 30 49.5
		Z	ePP	12 32 44.7
	SAO	Z	eP	12 30 50.2
	BRK	Z	eP	12 30 51.0
	MHC	Z	ePc	12 30 51.9
		Z	epP	12 31 02.3
	LLA	Z	ePc	12 30 52.0
		Z	epP	12 32 47.2
	PRI	Z	ePc	12 30 52.0
		Z	epP	12 31 02.0
		Z	esP	12 31 05.2
		Z	ePP	12 32 47.1
	BKS	Z	iPc	12 30 52.5
			AMP(μm)	PER(s)
		PZ	0.033	0.7
	FRI	Z	ePc	12 30 57.1
		Z	ePP	12 32 52.6
	CMB	Z	ePc	12 30 57.8
		Z	epP	12 31 07.9
		Z	ePP	12 32 43.7
	WDC	Z	iPc	12 30 58.3
		Z	epP	12 32 53.8
	ORV	Z	ePc	12 30 58.3
		Z	ePP	12 32 54.0
	MIN	Z	eP	12 31 00.7
		Z	ePP	12 32 56.0
	MNA	Z	iPc	12 31 07.3
		Z	epP	12 31 17.3
		Z	ePP	12 33 03.4
USGS 12h19m57.0s 17.6S 178.5W				
h=550km mb=5.3				
Fiji Islands Region				
Mar 17	GCC	Z	ePc	15 48 07.9
	PRS	Z	ePc	15 48 08.0
		Z	e	15 48 15.3
	PCC	Z	ePc	15 48 08.8
	PRI	Z	e(P)	15 48 09.1
		Z	e	15 48 16.1
	BRK	Z	e(P)	15 48 10.9
	BKS	Z	iPc	15 48 11.1
			AMP(μm)	PER(s)
		PZ	0.025	1.0
	MHC	Z	ePc	15 48 11.2
		Z	e	15 48 18.5
	FRI	Z	ePc	15 48 15.7
		Z	i	15 48 23.1
	FHC	Z	eP	15 48 16.2
	CMB	Z	iPc	15 48 17.5
		Z	e	15 48 24.6
	ORV	Z	ePc	15 48 19.2
	WDC	Z	iPc	15 48 19.8
		Z	i	15 48 26.7
	MIN	Z	ePc	15 48 21.1
		Z	e	15 48 28.2
	MNA	Z	ePc	15 48 26.6
		Z	i	15 48 33.9
USGS 15h36m23.9s 21.4S 173.9W				
h=39km mb=5.2 Ms=5.9				

DATE	STA	CMP	PHASE	TIME (UTC)
Tonga Islands				
Mar 17	FHC	Z	ePd	20 45 45.3
		Z	ePcP	20 46 13.6
		Z	epP	20 46 22.3
	WDC	Z	ePd	20 45 50.3
		Z	ePcP	20 46 15.7
		Z	epP	20 46 26.8
	MIN	Z	e(P)	20 45 54.1
	ORV	Z	ePd	20 45 57.2
	BKS	Z	iPd	20 46 00.3
			AMP(μm)	PER(s)
		PZ	0.091	1.0
	BRK	Z	e(P)	20 46 00.6
	PCC	Z	eP	20 46 01.2
	GCC	Z	eP	20 46 03.5
	MHC	Z	ePd	20 46 04.2
	CMB	Z	ePd	20 46 06.8
		Z	ePcP	20 46 32.9
	SAO	Z	e(P)	20 46 06.9
	PRS	Z	ePd	20 46 08.4
	LLA	Z	ePd	20 46 09.2
	PRI	Z	ePd	20 46 12.2
		Z	ePcP	20 47 08.8
	FRI	Z	ePd	20 46 12.2
	MNA	Z	ePd	20 46 13.9
		Z	ePcP	20 46 40.0
		Z	epP	20 47 10.7
USGS 20h34m29.2s 35.6N 139.6E				
h=103km mb=5.4				
Near S. Coast of Honshu, Japan				
Mar 18	WDC	Z	eP	01 06 58.0
	GCC	Z	ePd	01 07 06.9
	PRS	Z	ePd	01 07 08.0
	CMB	Z	ePd	01 07 09.3
	FRI	Z	ePd	01 07 13.1
	MNA	Z	ePd	01 07 17.5
USGS 00h54m45.1s 13.8N 144.7E				
h=138km mb=4.6				
Mariana Islands				
Mar 18	MNA	Z	ePc	06 08 29.3
	PRI	Z	ePc	06 08 29.4
	FRI	Z	eP	06 08 30.1
	LLA	Z	ePc	06 08 32.1
	PRS	Z	ePc	06 08 32.6
	CMB	Z	ePc	06 08 35.0
	GCC	Z	ePc	06 08 37.2
	MHC	Z	ePc	06 08 37.7
	BKS	Z	ePc	06 08 41.0
			AMP(μm)	PER(s)
		PZ	0.017	0.7
	BRK	Z	eP	06 08 41.3
	ORV	Z	ePc	06 08 44.9
	MIN	Z	ePc	06 08 46.8
	WDC	Z	ePc	06 08 50.0
USGS 05h57m08.3s 19.2S 69.7W				
h=114km mb=5.0				
Northern Chile				
Mar 18	ZSP	Z	iPc	21 18 32.0
		Z	iS	21 18 47.2
	BKS	Z	iPc	21 18 32.6
		E	iS	21 18 47.1
	CMB	Z	eP	21 18 47.6
	WDC	Z	e(P)	21 18 49.2
BRK 21h18m13.3s 38.8N 122.8W				
h=2km ML=2.9(6) Mo=3.7E21(2)				
The Geysers area, 23 km S of Clear Lake, CA				

DATE	STA	CMP	PHASE	TIME (UTC)
Mar 18	PRI	Z	eP	22 29 19.6
	MNA	Z	eP	22 29 19.7
	FRI	Z	eP	22 29 20.4
	LLA	Z	eP	22 29 22.3
	PRS	Z	eP	22 29 22.8
	CMB	Z	eP	22 29 25.2
	MHC	Z	eP	22 29 27.9
	ORV	Z	eP	22 29 35.1
	WDC	Z	eP	22 29 40.4
USGS 22h17m55.8s 19.3S 70.1W				
h=77km mb=4.9				
Near Coast of Northern Chile				
Mar 18	WDC	Z	eP	23 04 31.0
		Z	e	23 08 13
	ORV	Z	e(P)	23 04 35.0
	CMB	Z	eP	23 04 38.0
		Z	e	23 08 19.2
	FRI	Z	eP	23 04 41.5
USGS 22h51m19.6s 3.7S 146.6E				
h=33km mb=5.5 Ms=6.1				
Bismarck Sea				
Mar 18	WDC	Z	eP	23 25 12.4
	BKS	Z	e	23 25 13.1
	MHC	Z	e(P)	23 25 14.9
	ORV	Z	eP	23 25 15.2
	CMB	Z	eP	23 25 19.1
	FRI	Z	eP	23 25 21.4
	MNA	Z	eP	23 25 29.9
USGS 23h12m00.7s 3.7S 146.6E				
h=33km mb=5.5 Ms=5.8				
Bismarck Sea				
Mar 19	PRI	Z	eP	01 30 40.4
	MNA	Z	eP	01 30 40.5
	FRI	Z	e(P)	01 30 41.2
	LLA	Z	eP	01 30 43.1
	PRS	Z	eP	01 30 43.5
	GCC	Z	eP	01 30 47.8
	MHC	Z	eP	01 30 48.3
	ORV	Z	eP	01 30 54.9
	WDC	Z	ePd	01 30 59.8
USGS 01h19m01.1s 23.7S 66.4W				
h=220km mb=4.9				
Juyjuy Province, Argentina				
Mar 19	MNA	Z	eP	04 56 31.8
	CMB	Z	eP	04 56 41.0
	BKS	E	e	05 17 07.2
		Z	e	05 22 07.2
		E	Lq	05 29 16.8
		Z	Lr	05 33 26.4
			AMP(μm)	PER(s)
		LZ	5.6	20.
		LN	1.4	20.
		LE	6.5	20.
USGS 04h49m23.0s 12.5N 89.1W				
h=23km mb=4.6 Ms=3.6				
Off Coast of Central America				
Mar 20	MNA	Z	eP	04 18 09.1
	FRI	Z	e(P)	04 18 11.6
	CMB	Z	eP	04 18 18.5
USGS 04h08m48.8s 4.1N 73.5W				
h=10km mb=4.5 Ms=4.7				
Colombia				
Mar 20	GCC	Z	eP	04 18 32.9
	WDC	Z	eP	04 18 33.5
	PRS	Z	eP	04 18 34.6
	ORV	Z	e(P)	04 18 36.2
	PRI	Z	eP	04 18 37.5
	CMB	Z	eP	04 18 38.9
	FRI	Z	eP	04 18 40.7
	MNA	Z	eP	04 18 48.0
USGS 04h05m28.1s 10.1S 153.9E				
h=33km mb=5.4 Ms=4.7				
Dentrecasteaux Islands Region				
Mar 20	WDC	Z	eP	10 54 56.7
	MHC	Z	eP	10 54 57.4
	PRS	Z	eP	10 54 57.5
	MIN	Z	eP	10 54 59.0
	ORV	Z	e(P)	10 54 59.0
	PRI	Z	eP	10 55 00.3
	CMB	Z	eP	10 55 01.6
	FRI	Z	eP	10 55 03.2
	MNA	Z	eP	10 55 10.5
USGS 10h41m51.1s 10.0S 153.8E				
h=33km mb=5.8 Ms=5.2				
Dentrecasteaux Islands Region				
Mar 20	FHC	Z	iPc	13 31 11.1
		Z	iS	13 31 21.2
	WDC	Z	iPd	13 31 16.2
		Z	iS	13 31 29.5
	MIN	Z	ePc	13 31 25.6
	ORV	Z	eP	13 31 35.2
	CMB	Z	eP	13 32 04.5
BRK 13h30m59.7s 41.3N 123.4W				
h=24km ML=3.8(6) Mo=7.7E21(4)				
10 km SE of Orleans, 82 km NE of Eureka, CA				
Mar 20	BRK	Z	eP	13 32 08.8
	BKS	Z	iPd	13 32 08.9
		T	iS	13 32 13.0
	PCC	Z	eP	13 32 09.8
	ZSP	Z	eP	13 32 10.5
		Z	eS	13 32 16.3
	MHC	Z	eP	13 32 13.2
		T	i(S)	13 32 24.0
	GCC	Z	eP	13 32 15.9
		Z	eS	13 32 26.6
BRK 13h32m03.9s 37.7N 122.1W				
h=3km ML=2.2(2) Mo=2.1E20(2)				
Hayward, 28 km SE of Berkeley, CA				
Mar 20	FOX	Z	i(P)	18 41 20.4
	FHC	Z	iPc	18 41 22.9
		Z	eS	18 41 33.7
	EKR	Z	iPc	18 41 24.4
		Z	i(S)	18 41 28.4
	WDC	Z	iPc	18 41 37.0
		Z	eS	18 41 56.4
	MIN	Z	iPd	18 41 47.2
		Z	eS	18 42 18.3
	ORV	Z	e(P)	18 41 49.8
		Z	iS	18 42 23.0
	BRK	Z	e(P)c	18 41 56.1
	PCC	Z	ePc	18 41 59.5
	GCC	Z	ePc	18 42 07.0
	SAO	Z	eP	18 42 12.9
	FRI	Z	iPd	18 42 27.3
BRK 18h41m07.3s 40.4N 125.0W				
h=14km ML=3.0(2)				
Off Coast 50 km W of Cape Mendocino, CA				
Mar 21	EKR	Z	iPc	03 03 33.9
		Z	iS	03 03 46.7
	FOX	Z	iPc	03 03 35.4
	FHC	Z	iPc	03 03 36.0
		Z	iS	03 03 49.0
	WDC	Z	iPc	03 03 50.7
		Z	iS	03 04 15.5
	MIN	Z	iPc	03 04 00.8
		Z	iS	03 04 35.8
	ORV	Z	iPc	03 04 03.1
		Z	iS	03 04 40.0
	ZSP	Z	e(P)	03 04 08.4
	BKS	Z	iPc	03 04 08.8
	BRK	Z	iPc	03 04 09.4
	PCC	Z	ePc	03 04 12.3
	GCC	Z	e(P)	03 04 18.3
	MHC	Z	e(P)	03 04 18.6
	SAO	Z	e(P)	03 04 25.2
	CMB	Z	eP	03 04 25.3
	PRS	Z	e(P)	03 04 30.6
	LLA	Z	e(P)	03 04 31.1
	FRI	Z	eP	03 04 38.8
	PRI	Z	e(P)	03 04 39.7
BRK 03h03m16.2s 40.4N 125.3W				
h=5kmR ML=4.0(4) Mo=3.6E21(2)				
Off Coast 75 km W of Cape Mendocino, CA				
Mar 21	FHC	Z	ePc	04 57 05.5
	WDC	Z	ePc	04 57 15.3
	MIN	Z	eP	04 57 19.4
	BRK	Z	e(P)	04 57 21.5
	ORV	Z	ePc	04 57 21.9
	MHC	Z	eP	04 57 24.6
	CMB	Z	ePc	04 57 28.7
	PRS	Z	ePc	04 57 29.5
	FRI	Z	eP	04 57 33.1
	MNA	Z	e(P)	04 57 35.5
USGS 04h45m17.5s 23.8N 142.9E				
h=33km mb=5.0 Ms=4.0				
Volcano Islands Region				
Mar 21	WDC	Z	ePd	10 43 44.7
	MIN	Z	eP	10 43 45.8
	ORV	Z	e(P)	10 43 48.5
	LLA	Z	ePd	10 43 55.2
	PRS	Z	eP	10 43 55.5
	CMB	Z	ePd	10 43 56.1
	FRI	Z	eP	10 44 00.6
	MNA	Z	eP	10 44 04.0
USGS 10h31m40.7s 22.2N 143.3E				
h=33km mb=4.6				
Volcano Islands Region				
Mar 21	FHC	Z	ePc	12 25 17.4
	WDC	Z	ePc	12 25 23.7
	MIN	Z	ePc	12 25 29.5
	ORV	Z	eP	12 25 35.8
	BRK	Z	ePc	12 25 48.3
	CMB	Z	ePc	12 25 54.4
	MHC	Z	eP	12 25 55.8
	MNA	Z	eP	12 26 00.8
	FRI	Z	ePc	12 26 04.5
USGS 12h20m36.0s 57.0N 143.4W				
h=10km mb=4.6 Ms=4.7				
Gulf of Alaska				
Mar 21	WDC	Z	eP	13 03 15.0
	CMB	Z	ePd	13 03 28.1
	FRI	Z	ePd	13 03 32.4
	MNA	Z	eP	13 03 36.1
USGS 12h51m19.6s 22.5N 144.7E				
h=33km mb=4.7				
Volcano Islands Region				
Mar 21	GCC	Z	ePd	23 35 26.8

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DATE	STA	CMP	PHASE	TIME (UTC)
	PRS	Z	iPd	23 35 27.0
	SAO	Z	ePd	23 35 27.5
	PCC	Z	ePd	23 35 27.8
	BRK	Z	eP	23 35 28.5
	PRI	Z	eP	23 35 28.8
	LLA	Z	e(P)	23 35 29.1
	BKS	Z	iPc	23 35 29.2
			AMP(μm)	PER(s)
		PZ	0.22	1.0
	MHC	Z	ePd	23 35 29.3
	FHC	Z	ePd	23 35 33.0
	FRI	Z	ePd	23 35 34.1
	CMB	Z	iPd	23 35 35.1
	ORV	Z	iPd	23 35 36.1
	WDC	Z	iPd	23 35 36.2
		Z	e	23 37 37.7
	MIN	Z	eP	23 35 38.0
	MNA	Z	iPd	23 35 43.6
USGS 23h24m26.0s 21.0S 178.9W				
h=626km mb=5.4				
Fiji Islands Region				
Mar 21	FHC	Z	ePc	23 40 53.2
	WDC	Z	iPc	23 40 56.0
		Z	ePKPPKP	00 11 13.2
	MIN	Z	iPc	23 40 59.2
	ORV	Z	iPc	23 41 04.2
	BRK	Z	iPc	23 41 15.8
		Z	ePPP	23 44 52
		Z	eS	23 49 20
		Z	e(SS)	23 54 03
		Z	eLr	23 59 58
			AMP(μm)	PER(s)
		LZ	4.5	20.
	BKS	Z	iPc	23 41 15.9
		Z	e	23 41 25.2
		N	ePPP	23 44 52.4
		N	e	23 45 10.1
		E	iS	23 49 20.4
		E	e	23 49 32.8
		N	eSS	23 53 27.0
		N	e	23 55 54.4
		Z	e	23 59 21.2
		Z	e	00 01 05.6
			AMP(μm)	PER(s)
		PZ	0.70	1.0
		LZ	7.2	20.
		LN	4.8	20.
		LE	19	20.
	PCC	Z	eP	23 41 16.8
	CMB	Z	iPc	23 41 16.8
		Z	ipP	23 41 29.5
		Z	isP	23 41 38.8
		Z	ePPP	23 44 45.8
		Z	eS	23 49 20.9
		Z	e	23 53 08.5
		Z	ePKPPKP	00 11 10.0
	MNA	Z	iPc	23 41 17.4
		Z	ipP	23 41 30.7
		Z	isP	23 41 39.9
		Z	ipPP	23 43 49.5
		Z	e	23 44 19.4
		Z	ePPP	23 44 46
		Z	eS	23 49 21.4
		Z	i	23 53 08.5
		Z	ePKPPKP	00 11 09.3
	MHC	Z	iPc	23 41 20.4
	GCC	Z	ePc	23 41 21.5
	SAO	Z	ePc	23 41 24.1
	FRI	Z	ePc	23 41 24.8
		Z	ePKPPKP	00 11 05.1
	LLA	Z	iPc	23 41 26.5

DATE	STA	CMP	PHASE	TIME (UTC)
	PRS	Z	ePc	23 41 27.5
	PRI	Z	iPc	23 41 30.4
BRK Ms=6.2 Distance=60°				
USGS 23h31m21.7s 77.6N 125.5E				
h=10km mb=6.0 Ms=6.0				
Laptev Sea				
Mar 22	FHC	Z	ePc	06 47 54.4
	WDC	Z	iPc	06 48 04.6
	MIN	Z	ePc	06 48 10.0
	BRK	Z	e(P)	06 48 17.8
	MHC	Z	e(P)	06 48 24.1
	CMB	Z	ePc	06 48 28.2
	PRS	Z	ePc	06 48 32.0
	FRI	Z	ePc	06 48 36.5
	MNA	Z	ePc	06 48 37.4
USGS 06h41m02.4s 52.5N 175.6W				
h=150km mb=4.8				
Andreanof Islands, Aleutian Is.				
Mar 22	FHC	Z	iPd	09 06 53.2
		Z	iS	09 07 00.7
	WDC	Z	iPc	09 07 07.5
	MIN	Z	ePc	09 07 17.4
	ORV	Z	ePc	09 07 20.8
	PCC	Z	e(P)	09 07 35.3
	GCC	Z	e(P)	09 07 43.4
	CMB	Z	e(P)	09 07 44.1
	PRS	Z	e	09 07 55.2
	FRI	Z	eP	09 08 00.1
BRK 09h06m44.3s 40.4N 124.3W				
h=3km ML=3.4(3) Mo=1.8E21(2)				
Cape Mendocino area, CA				
Mar 22	SAO	Z	iPd	23 35 11.6
		Z	iS	23 35 15.8
	GCC	Z	iPc	23 35 16.5
	PRS	Z	iPd	23 35 19.3
	MHC	Z	iPd	23 35 19.8
		Z	iS	23 35 27.5
	LLA	Z	iPd	23 35 20.3
	PCC	Z	ePd	23 35 26.1
	PRI	Z	iPc	23 35 28.6
	BKS	Z	eP	23 35 31.4
	FRI	Z	eP	23 35 35.9
		Z	eS	23 35 57.7
	CMB	Z	eP	23 35 36.6
BRK 23h35m09.2s 36.8N 121.6W				
h=4km ML=3.0(4)				
16 km W of Hollister, CA				
Mar 23	PRI	Z	iPd	00 36 32.1
	FRI	Z	iPd	00 36 32.6
	PRS	Z	iPd	00 36 37.2
	MNA	Z	iPd	00 36 38.1
	CMB	Z	iPd	00 36 45.4
	MHC	Z	iPd	00 36 46.1
	ORV	Z	iPd	00 37 03.3
	MIN	Z	ePd	00 37 07.8
	WDC	Z	iPd	00 37 12.5
USGS 00h31m44.1s 19.7N 104.9W				
h=25km mb=4.9 Ms=4.4				
Near Coast of Jalisco, Mexico				
Mar 23	CMB	Z	ePc	05 19 43.2
	WDC	Z	ePc	05 19 45.6
USGS 05h07m15.7s 27.6S 176.1W				
h=33km mb=5.4 Ms=5.0				
Kermadec Islands Region				
Mar 23	PRI	Z	iPc	08 43 20.0
	SAO	Z	iPc	08 43 31.0

DATE	STA	CMP	PHASE	TIME (UTC)
	MHC	Z	iPc	08 43 39.1
		Z	e	08 44 02.3
		T	eS	08 44 38.5
	CMB	Z	iPc	08 43 45.1
		Z	e(S)	08 44 40.4
	BKS	Z	e(P)	08 43 48.7
	MNA	Z	e(P)	08 44 02.0
		Z	eS	08 45 00.6
BRK ML=4.4(3)				
PAS 08h42m47.0s 34.3N 119.6W				
h=km ML=4.0				
Santa Barbara area, Southern California				
Mar 23	CMB	Z	ePc	13 56 06.4
		Z	e	13 56 19.0
	WDC	Z	ePc	13 56 10.7
	MNA	Z	eP	13 56 16.4
		Z	e	13 56 23.5
USGS 13h43m58.1s 26.9S 176.5W				
h=161km mb=4.7				
South of Fiji Islands				
Mar 23	WDC	Z	iPc	15 24 33.8
	CMB	Z	iPc	15 24 55.5
	MNA	Z	eP	15 25 03.0
USGS 15h15m29.7s 53.8N 160.6E				
h=33km mb=4.9				
Near East Coast of Kamchatka				
Mar 23	MHC	Z	iPd	19 32 28.3
	SAO	Z	iPc	19 32 29.55
	GCC	Z	iPc	19 32 30.5
		Z	iS	19 32 36.5
	LLA	Z	iPc	19 32 34.85
		Z	iS	19 32 45.4
	PRS	Z	iPd	19 32 37.2
	PCC	Z	ePc	19 32 37.4
	BRK	Z	eP	19 32 40.5
	BKS	Z	eP	19 32 40.6
	ZSP	Z	eP*c	19 32 41.6
		Z	iSg	19 32 58.7
	PRI	Z	eP	19 32 43.2
	FRI	Z	iPd	19 32 47.8
		Z	iS	19 33 06.0
	ORV	Z	iP*c	19 33 04.6
BRK 19h32m22.7s 37.1N 121.5W				
h=7km ML=2.7(4) Mo=1.9E20(2)				
Coyote Lake, 11 km NE of Gilroy, CA				
Mar 23	FHC	Z	eP	20 29 17.8
	WDC	Z	ePc	20 29 23.9
		Z	i	20 29 27.0
	ORV	Z	i	20 29 36.9
	BRK	Z	e(P)	20 29 40.2
	MHC	Z	e	20 29 47.6
	CMB	Z	ePc	20 29 48.3
		Z	e	20 29 51.7
		Z	e	20 30 15.1
		Z	ePcP	20 31 08.8
		Z	ePPP	20 32 22.7
		E	e	20 35 55.3
	FRI	Z	eP	20 29 56.6
		Z	e	20 30 00.6
	MNA	Z	e(P)	20 29 57.7
		Z	e	20 30 01.1
	PRI	Z	e	20 29 58.8
USGS 20h22m44.7s 52.5N 169.3W				
h=33km mb=5.1 Ms=5.1				
Fox Islands, Aleutian Islands				
Mar 24	PRI	Z	ePd	15 41 45.5

DATE	STA	CMP	PHASE	TIME (UTC)
	MNA	Z	ePd	15 41 45.7
	FRI	Z	ePd	15 41 46.5
	LLA	Z	ePd	15 41 48.0
	PRS	Z	ePd	15 41 48.5
	CMB	Z	ePd	15 41 50.8
	GCC	Z	ePd	15 41 52.9
	MHC	Z	ePd	15 41 53.3
	ORV	Z	ePd	15 42 00.5
	MIN	Z	ePd	15 42 02.2
	WDC	Z	iPd	15 42 05.0
	FHC	Z	ePd	15 42 12.6
USGS 15h30m09.4s 21.9S 68.4W				
h=124km mb=5.1				
Chile-Bolivia Border Region				
Mar 25	SAO	Z	eP	00 36 44.7
		Z	eT	01 12 07.0
	MHC	Z	ePc	00 36 45.8
	PRI	Z	ePc	00 36 49.0
	WDC	Z	ePc	00 36 51.0
		Z	ePcP	00 39 28.3
	ORV	Z	ePc	00 36 53.2
	MIN	Z	ePc	00 36 55.6
	CMB	Z	ePc	00 36 55.7
	FRI	Z	eP	00 36 56.5
	MNA	Z	ePc	00 37 11.2
USGS 00h29m50.5s 20.0N 156.5W				
h=0km mb=5.3 Ms=4.5				
Hawaiian Islands				
Mar 25	PRS	Z	eP	05 32 39.9
	SAO	Z	ePc	05 32 41.0
	FRI	Z	ePc	05 32 47.7
	CMB	Z	ePc	05 32 48.1
		Z	epP	05 34 47.0
	WDC	Z	eP	05 32 49.7
		Z	epP	05 34 49.4
		Z	eS	05 42 13.5
	ORV	Z	ePc	05 32 50.0
	MIN	Z	ePc	05 32 52.0
	MNA	Z	ePc	05 32 57.5
		Z	epP	05 34 57.3
USGS 05h21m44.5s 19.3S 177.5W				
h=559km mb=5.5				
Fiji Islands Region				
Mar 25	MNA	Z	ePc	16 30 40.1
		Z	i	16 31 00.2
	FRI	Z	ePc	16 30 45.9
	PRI	Z	e(P)	16 30 48.8
	CMB	Z	ePc	16 30 51.0
		Z	e	16 31 10
	LLA	Z	ePc	16 30 52.3
	PRS	Z	e(P)	16 30 53.8
	MHC	Z	ePc	16 30 57.9
	ORV	Z	ePc	16 30 59.2
	MIN	Z	ePc	16 31 00.1
	WDC	Z	eP	16 31 03.4
	FHC	Z	ePc	16 31 13.8
USGS 16h20m47.2s 10.2N 60.6W				
h=56km mb=5.2				
Trinidad				
Mar 25	FRI	Z	ePc	17 33 18.9
	PRI	Z	ePc	17 33 19.8
		Z	ipP	17 33 32.1
	MNA	Z	ePc	17 33 21.5
		Z	epP	17 33 33.3
	LLA	Z	eP	17 33 22.4
		Z	epP	17 33 33.8
	PRS	Z	ePc	17 33 22.8
		Z	epP	17 33 40

DATE	STA	CMP	PHASE	TIME (UTC)
	CMB	Z	ePc	17 33 25.7
		Z	ipP	17 33 37.3
		Z	esP	17 33 46.9
		Z	e	17 35 35.3
	GCC	Z	eP	17 33 26.8
	MHC	Z	ePc	17 33 27.3
	BRK	Z	ePc	17 33 31.7
		Z	epP	17 33 43.3
	ORV	Z	iPc	17 33 34.4
		Z	ipP	17 33 45.8
	MIN	Z	e(P)	17 33 36.3
	WDC	Z	ePc	17 33 38.9
		Z	ipP	17 33 50.7
USGS 17h20m53.1s 31.3S 67.8W				
h=26km mb=5.3				
San Juan Province, Argentina				
Mar 25	WDC	Z	ePc	18 48 57.7
	MIN	Z	e(P)	18 49 01.3
		Z	e	18 49 15.7
	ORV	Z	e(P)	18 49 03.5
		Z	e	18 49 17.5
	CMB	Z	ePc	18 49 11.3
		Z	e	18 49 25.6
	FRI	Z	ePc	18 49 15.0
		Z	e	18 49 30.0
	MNA	Z	eP	18 49 20.3
		Z	e	18 49 34.8
	PRI	Z	e	18 49 20.3
USGS 18h37m01.2s 23.4N 143.2E				
h=49km mb=4.8 Ms=3.9				
Volcano Islands Region				
Mar 25	FHC	Z	ePc	19 41 36.3
	WDC	Z	iPc	19 41 38.0
	MIN	Z	iPc	19 41 42.3
	ORV	Z	iPc	19 41 48.6
		Z	i	19 42 04.3
	BKS	Z	ePc	19 42 6.1
		N	eS	19 46 18.8
		Z	eLr	19 48 13
		E	e	19 48 48
		N	eLq	19 50 34
		Z	e	19 51 22
		E	eLr	19 51 44
		Z	e	19 53 0
			AMP(μm)	PER(s)
		PZ	0.39	.8
		LN	60	20.
		LE	10	20.
	MNA	Z	iPc	19 42 03.5
	CMB	Z	iPc	19 42 04.7
		Z	ePcP	19 45 14.0
		Z	iS	19 46 31.5
		Z	i	19 49 45.3
		Z	i	19 50 08.0
	BRK	Z	ePc	19 42 06.0
		Z	i	19 42 39
		Z	i	19 45 40
		Z	i	19 48 31
		Z	iLr	19 51 14
			AMP(μm)	PER(s)
		LZ	36	18.
	MHC	Z	iPc	19 42 09
		Z	e	19 42 38
		Z	i	19 42 39
		Z	i	19 43 45
		Z	iS	19 46 16
		T	i	19 48 40
		Z	i	19 50 10
		Z	iLq	19 50 33
		T	iLr	19 52 57

DATE	STA	CMP	PHASE	TIME (UTC)
			AMP(μm)	PER(s)
		LZ	50	20.
		LN	50	20.
		LE	60	20.
	PCC	Z	ePc	19 42 09.1
	GCC	Z	ePc	19 42 13.7
	FRI	Z	iPc	19 42 15.2
	SAO	Z	ePc	19 42 16.2
	LLA	Z	iPc	19 42 18.5
	PRS	Z	iPc	19 42 19.7
	PRI	Z	ePc	19 42 23.4
BRK Ms=6.1 Distance=25°				
USGS 19h36m46.5s 62.2N 124.2W				
h=10km mb=6.1 Ms=6.0				
Northwest Territories, Canada				
Mar 25	FHC	Z	ePc	19 57 27.6
	WDC	Z	ePc	19 57 28.1
	MIN	Z	ePc	19 57 31.4
	ORV	Z	ePc	19 57 38.9
	CMB	Z	ePc	19 57 55.8
	BKS	Z	eP	19 57 57.9
			AMP(μm)	PER(s)
		PZ	0.047	.8
	PCC	Z	e	19 58 00.1
	MHC	Z	ePc	19 58 02.7
	GCC	Z	ePc	19 58 04.7
	FRI	Z	eP	19 58 05.4
	LLA	Z	ePc	19 58 09.0
	PRS	Z	e(P)	19 58 12.4
	PRI	Z	e(P)	19 58 14.5
USGS 19h52m36.7s 62.2N 124.2W				
h=10km mb=5.4				
Northwest Territories, Canada				
Mar 25	FHC	Z	eP	22 04 06.7
	WDC	Z	ePd	22 04 14.8
	ORV	Z	eP	22 04 25.1
	BRK	Z	e	22 04 35.9
	MHC	Z	e	22 04 36.0
	CMB	Z	eP	22 04 39.5
	LLA	Z	e	22 04 41.0
	PRS	Z	e	22 04 41.2
	BKS	Z	e	22 04 42.1
		Z	eLr	22 12 46
			AMP(μm)	PER(s)
		PZ	0.12	1.4
	FRI	Z	e	22 04 45.9
	PRI	Z	e	22 04 47.0
	MNA	Z	eP	22 04 49.5
BRK mb=5.6 h=33km Distance= 32°				
USGS 21h58m20.5s 54.8N 159.8W				
h=33km mb=5.4 Ms=4.6				
South of Alaska				
Mar 26	WDC	Z	iPd	04 16 12.5
		Z	e	04 16 26.6
USGS 04h03m32.6s 33.5S 71.7W				
h=70km mb=4.7				
Near Coast of Central Chile				
Mar 26	FHC	Z	ePc	06 16 05.5
	WDC	Z	iPc	06 16 13.1
	MIN	Z	iPc	06 16 18.7
	ORV	Z	e(P)	06 16 24.1
	BRK	Z	e(P)	06 16 37.1
	BKS	Z	ePd	06 16 38.2
			AMP(μm)	PER(s)
		PZ	0.11	1.3
	CMB	Z	ePc	06 16 42.7
	MHC	Z	ePc	06 16 43.0
	MNA	Z	iPc	06 16 48.3

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DATE	STA	CMP	PHASE	TIME (UTC)
	LLA	Z	eP	06 16 52.2
	PRS	Z	ePc	06 16 52.5
	FRI	Z	ePc	06 16 53.4
	PRI	Z	ePc	06 16 58.2
USGS 06h11m23.1s 57.6N 143.2W				
h=10km mb=4.8				
Gulf of Alaska				
Mar 26	GCC	Z	ePc	09 55 19.6
	BRK	Z	ePc	09 55 20.3
	PRS	Z	ePc	09 55 20.5
	BKS	Z	ePd	09 55 20.9
			AMP(μm)	PER(s)
		PZ	0.030	0.4
	FHC	Z	ePc	09 55 21.2
	MHC	Z	ePc	09 55 21.9
	PRI	Z	iPc	09 55 23.1
	LLA	Z	e(P)	09 55 24.0
	WDC	Z	ePc	09 55 25.4
	ORV	Z	ePc	09 55 26.3
	CMB	Z	ePc	09 55 27.0
	FRI	Z	ePc	09 55 27.4
	MIN	Z	ePc	09 55 27.5
	MNA	Z	iPc	09 55 36.0
USGS 09h42m39.4s 18.3S 167.9E				
h=17km mb=5.1 Ms=4.7				
Vanuatu Islands				
Mar 26	MHC	Z	iPd	21 05 28.1
		Z	i	21 05 30.0
	GCC	Z	iPc	21 05 33.5
		Z	iS	21 05 39.4
	SAO	Z	iPd	21 05 36.6
	PCC	Z	iPc	21 05 38.1
		Z	i	21 05 39.4
		Z	i	21 05 41.3
		Z	iS	21 05 49.4
	BRK	Z	ePc	21 05 41.15
	BKS	Z	iPd	21 05 52.5
		E	eS	21 05 52.9
		Z	e	21 05 53.7
	LLA	Z	ePc	21 05 41.7
	PRS	Z	ePd	21 05 43.6
	CMB	Z	ePd	21 05 49.1
		Z	eS	21 06 04.8
		Z	iSg	21 06 06.3
	PRI	Z	e(P)	21 05 51.3
	FRI	Z	e(P)	21 05 52.9
BRK 21h05m26.1s 37.2N 121.7W				
h=5km ML=2.7(4) Mo=8.9E19(2)				
San Felipe Valley, 22 km SE of San Jose, CA				
Mar 27	PCC	Z	e(P)	07 57 13.6
	GCC	Z	ePd	07 57 14.1
	BRK	Z	e(P)	07 57 14.2
	SAO	Z	e(P)	07 57 15.2
	PRS	Z	ePd	07 57 15.9
	PRI	Z	ePd	07 57 17.8
	FRI	Z	ePd	07 57 24.0
	CMB	Z	iPd	07 57 25.0
	WDC	Z	ePd	07 57 25.8
	ORV	Z	ePd	07 57 25.8
	MIN	Z	eP	07 57 28.0
	MNA	Z	iPd	07 57 34.9
USGS 07h46m19.9s 15.4S 174.9W				
h=283km mb=5.2				
Tonga Islands				
Mar 28	PCC	Z	ePc	03 40 29.8
	GCC	Z	ePc	03 40 30.8
	BRK	Z	ePc	03 40 32.2
	ZSP	Z	ePc	03 40 32.6
		Z	e	03 41 07.8
	BKS	Z	ePc	03 40 32.7
		Z	e	03 47 14
		N	eLr	03 48 4
			AMP(μm)	PER(s)
		PZ	0.32	1.0
		LN	2.5	20.
		LE	2.2	20.
	FHC	Z	ePc	03 40 33.2
	PRS	Z	ePc	03 40 33.5
	SAO	Z	eP	03 40 33.8
	MHC	Z	iPc	03 40 35.2
	LLA	Z	ePc	03 40 37.3
		Z	ePcP	03 43 07.6
	PRI	Z	iPc	03 40 38.2
		Z	i	03 40 44.9
	WDC	Z	iPc	03 40 40.4
		Z	ePcP	03 43 07.8
		Z	e	03 43 18.9
	ORV	Z	iPc	03 40 42.4
		Z	ePcP	03 43 08.9
	MIN	Z	iPc	03 40 44.7
		Z	ePcP	03 43 05.7
	CMB	Z	iPc	03 40 44.8
		Z	i	03 41 05.5
		Z	ePP	03 42 08.6
		Z	ePcP	03 43 03.0
		Z	e	03 43 55.8
	FRI	Z	iPc	03 40 46.0
		Z	ePcP	03 43 10.2
	MNA	Z	iPc	03 41 00.3
		Z	i	03 41 05.7
		Z	i	03 41 13.8
		Z	ePcP	03 43 15.9
		Z	e	03 43 30.6
		Z	e	03 50 28.8
BRK Ms=5.0 Distance=30°				
USGS 03h33m40.9s 19.9N 156.4W				
h=1km mb=5.6 Ms=5.1				
Hawaiian Islands				
Mar 28	PRI	Z	eP	18 48 02.6
	PRS	Z	eP	18 48 04.0
	FRI	Z	eP	18 48 04.8
	LLA	Z	e(P)	18 48 05.0
	SAO	Z	eP	18 48 07.2
	MHC	Z	eP	18 48 11.5
	PCC	Z	e(P)	18 48 12.1
	CMB	Z	ePd	18 48 12.2
	MNA	Z	ePd	18 48 12.3
	BRK	Z	eP	18 48 13.7
	BKS	Z	ePd	18 48 16.9
		Z	eLr	19 12 18
		N	e	19 12 32
			AMP(μm)	PER(s)
		PZ	0.11	1.0
	ORV	Z	eP	18 48 21.7
	WDC	Z	eP	18 48 27.7
	FHC	Z	eP	18 48 31.7
BRK mb=5.7 h=33km Distance= 80°				
USGS 18h36m26.5s 36.0S 102.8W				
h=10km mb=5.7 Ms=5.2				
Southern Pacific Ocean				
Mar 29	FHC	Z	eP	01 21 04.3
	WDC	Z	iPc	01 21 12.5
	MIN	Z	iPc	01 21 18.2
	ORV	Z	eP	01 21 24.3
	BRK	Z	eP	01 21 35.8
	BKS	Z	ePd	01 21 38.1
			AMP(μm)	PER(s)
		PZ	0.041	0.8
	CMB	Z	ePc	01 21 42.7
		Z	e	01 23 30.2
	MHC	Z	ePc	01 21 44.0
	MNA	Z	ePc	01 21 48.3
	PRS	Z	e(P)	01 21 50.7
	LLA	Z	e(P)	01 21 51.8
	FRI	Z	eP	01 21 52.9
	PRI	Z	ePc	01 21 57.6
USGS 01h16m26.1s 57.3N 143.1W				
h=10km mb=5.0 Ms=4.1				
Gulf of Alaska				
Mar 29	BKS	Z	ePd	08 37 22.0
		Z	eS	08 43 0.0
		E	eLq	08 43 58
		N	e	08 44 6.8
		Z	eLr	08 46 24.4
			AMP(μm)	PER(s)
		PZ	0.025	0.8
		LZ	3.0	20.
		LN	4.0	20.
		LE	4.4	20.
	FHC	Z	eP	08 37 57.5
	WDC	Z	ePd	08 38 06.4
	MIN	Z	ePd	08 38 12.0
	ORV	Z	eP	08 38 15.8
	BRK	Z	eP	08 38 22.7
	PCC	Z	ePd	08 38 24.4
	MHC	Z	ePd	08 38 28.0
	CMB	Z	eP	08 38 31.0
	PRS	Z	eP	08 38 35.2
	LLA	Z	eP	08 38 35.3
	FRI	Z	eP	08 38 40.0
	PRI	Z	ePd	08 38 40.3
	MNA	Z	ePd	08 38 40.5
BRK Ms=5.3 Distance= 35°				
USGS 08h31m32.0s 52.3N 168.2W				
h=33km mb=5.4 Ms=5.5				
Fox Islands, Aleutian Islands				
Mar 29	MNA	Z	e(P)	13 47 29.8
	FRI	Z	e(P)	13 47 31.9
	LLA	Z	e(P)	13 47 39
	CMB	Z	e(P)	13 47 41.2
	MHC	Z	e(P)	13 47 45.0
	ORV	Z	e(P)	13 47 50
	MIN	Z	e(P)	13 47 50.5
	FHC	Z	e(P)	13 48 01.2
	BKS	N	e	14 08 36.8
		N	e	14 14 12
		E	e	14 16 34
		Z	e	14 17 8
USGS 13h37m54.5s 10.5N 65.0W				
h=17km mb=5.1 Ms=4.8				
Near Coast of Venezuela				
Mar 29	WDC	Z	ePd	15 39 14.9
	MIN	Z	eP	15 39 21.7
	ORV	Z	eP	15 39 25.2
	BRK	Z	eP	15 39 28.9
	CMB	Z	eP	15 39 40.7
	LLA	Z	e(P)	15 39 46.5
	MNA	Z	ePd	15 39 50.0
USGS 15h33m03.8s 54.2N 163.5W				
h=33km mb=5.0				
Unimak Island Region				
Mar 29	WDC	Z	ePc	15 59 28.7
		Z	e	15 59 38.0
	ORV	Z	e(P)	15 59 38
		Z	e	15 59 47.4
	CMB	Z	ePc	15 59 49.1
	MNA	Z	ePc	15 59 57.5
		Z	e	16 00 08.0
	PRI	Z	e	16 00 07.3
		Z	e	16 00 16.3
USGS 15h50m44.2s 56.5N 164.0E				
h=34km mb=5.0				
Near East Coast of Kamchatka				
Mar 29	ZSP	Z	iPc	16 12 30.3
		Z	iS	16 12 45.1
	BRK	Z	ePc	16 12 31.2
		Z	eS	16 12 46
	BKS	Z	ePc	16 12 31.5
		N	eS	16 12 45.2
		Z	e	16 12 45.7
		E	iS	16 12 46.7
	ORV	Z	eP	16 12 35.3
	PCC	Z	ePc	16 12 37.6
	MIN	Z	eP	16 12 44.4
	WDC	Z	eP	16 12 44.5
	CMB	Z	iPc	16 12 46.3
		Z	iS	16 13 12.8
BRK 16h12m12.5s 38.8N 122.8W				
h=1km ML=3.0(4)				
The Geysers area, 23 km S of Clear Lake, CA				
Mar 30	WDC	Z	iPc	04 48 35.4
		Z	e	04 51 47.2
	MIN	Z	iPc	04 48 40.9
	ORV	Z	iPc	04 48 44.9
	BKS	Z	e(P)	04 48 50.6
	CMB	Z	iPc	04 48 59.1
		Z	e	04 51 45.8
	FRI	Z	iPc	04 49 07.4
		Z	e	04 51 44.5
	MNA	Z	iPc	04 49 07.9
		Z	e	04 51 53.8
USGS 04h41m36.6s 52.8N 176.5W				
h=233km mb=4.6				
Andreanof Islands, Aleutian Is.				
Mar 31	PRI	Z	ePc	00 02 48.5
	MNA	Z	ePc	00 02 49.6
		Z	e(pP)	00 06 10.1
	LLA	Z	ePc	00 02 51.0
	PRS	Z	ePc	00 02 51.4
	CMB	Z	ePc	00 02 54.3
	MHC	Z	e(P)	00 02 56.5
	ORV	Z	ePc	00 03 04.0
	WDC	Z	ePc	00 03 09.1
		Z	epP	00 06 12.7
USGS 23h50m56.9s 24.9S 70.5W				
h=40km mb=5.8 Ms=5.7				
Near Coast of Northern Chile				
Mar 31	FRI	Z	eP	01 57 35.7
	MNA	Z	eP	01 57 36.0
	CMB	Z	ePc	01 57 45.4
USGS 01h50m38.9s 13.2N 89.6W				
h=56km mb=4.3				
El Salvador				
Mar 31	FRI	Z	e(P)	07 40 04.5
	PRI	Z	ePd	07 40 06.4
	MNA	Z	ePd	07 40 08.3
		Z	epP	07 40 22.2
		Z	isP	07 40 29.2
	CMB	Z	ePd	07 40 14.8
	MHC	Z	ePd	07 40 18.2
	ORV	Z	eP	07 40 29.9
USGS 07h34m28.9s 18.2N 97.8W				
h=61km mb=5.1				
Central Mexico				
Mar 31	WDC	Z	e(P)	08 51 18.8
	CMB	Z	ePc	08 51 19.4
	MNA	Z	eP	08 51 28.4
USGS 08h39m05.9s 24.7S 176.3W				
h=50km mb=5.3 Ms=5.2				
South of Fiji Islands				
Mar 31	CMB	Z	eP	22 34 22.6
	FRI	Z	eP	22 34 28.3
USGS 22h22m43.2s 35.5N 140.1E				
h=72km mb=4.8				
Near East Coast of Honshu, Japan				
Apr 1	FOX		iPc	08 42 02.6
	EKR		iPc	08 42 05.7
			iS	08 42 10.0
	FHC	Z	iPc	08 42 06.3
		Z	i	08 42 08.5
		Z	e	08 42 19.2
	WDC	Z	iPd	08 42 18.7
		Z	iS	08 42 32.9
	MIN	Z	ePd	08 42 28.8
		Z	iS	08 42 51.5
	ORV	Z	eP	08 42 32.9
	BRK	Z	e(P)	08 42 45.5
	PCC	Z	e(P)	08 42 49.4
	CMB	Z	e(P)	08 43 01.0
BRK 08h42m00.1s 40.5N 123.9W				
h=8km ML=3.6(2) Mo=1.6E21(2)				
10 km ENE Scotia, 38 km SE of Eureka, CA				
Apr 1	FOX	Z	iPc	10 27 32.0
	EKR	Z	iPd	10 27 32.1
		Z	i(S)	10 27 38.3
	FHC	Z	iPd	10 27 34.4
		Z	iS	10 27 43.1
	WDC	Z	iPc	10 27 47.3
	MIN	Z	ePc	10 27 57.1
		Z	iS	10 28 26.5
	ORV	Z	ePc	10 28 00.3
	BRK	Z	e(P)	10 28 09.0
	PCC	Z	eP	10 28 12.0
	MHC	Z	eP	10 28 20.4
	CMB	Z	e(P)	10 28 23.2
	SAO	Z	e(P)	10 28 25.8
	GCC	Z	e(P)	10 28 32.2
	PRS	Z	e(P)	10 28 32.2
	FRI	Z	ePd	10 28 39.0
	MNA	Z	ePc	10 28 41.8
BRK 10h27m22.7s 40.4N 124.6W				
h=15km ML=3.7(2) Mo=5.5E21(2)				
Off Coast 15 km W of Cape Mendocino, CA				
Apr 1	PCC	Z	eP	14 37 33.9
	GCC	Z	ePc	14 37 33.9
	PRS	Z	ePc	14 37 34.3
		Z	ePP	14 39 32.5
	SAO	Z	e(P)	14 37 34.6
	BRK	Z	e(P)	14 37 35.6
	BKS	Z	ePd	14 37 36.5
	PRI	Z	iPc	14 37 36.5
	MHC	Z	ePc	14 37 36.5
		Z	ePP	14 39 34.8
	FRI	Z	eP	14 37 41.5
	CMB	Z	iPc	14 37 42.6
		Z	ePP	14 39 41.2
		Z	e	14 40 46.0
	ORV	Z	iPc	14 37 43.4
		Z	ePP	14 39 42.0
	WDC	Z	iPc	14 37 43.5
		Z	ePP	14 39 42.3
	MNA	Z	iPc	14 37 51.8
		Z	ePP	14 39 51.0
	MIN	Z	ePP	14 39 43.9
USGS 14h26m40.6s 18.8S 177.9W				
h=572km mb=5.7				
Fiji Islands Region				
Apr 2	ZSP	Z	eP	00 27 12.9
		Z	iS	00 27 24.7
	BRK	Z	iPd	00 27 14.2
		Z	iS	00 27 28.2
	BKS	E	eP	00 27 14.5
		E	iS	00 27 26.7
	ORV	Z	ePc	00 27 16.7
	PCC	Z	eP	00 27 18.2
	MHC	Z	eP	00 27 24.1
	GCC	Z	e(P)	00 27 24.3
	MIN	Z	eP	00 27 26.7
	CMB	Z	iPc	00 27 29.2
	WDC	Z	iP*c	00 27 29.4
	SAO	Z	e(P)	00 27 31.8
	PRS	Z	eP	00 27 37.6
	FHC	Z	eP	00 27 41.7
	FRI	Z	e(P)	00 27 42.7
	MNA	Z	eP	00 27 52.5
BRK 00h26m55.1s 38.8N 122.8W				
h=5km ML=3.4(4) Mo=8.7E21(2)				
The Geysers area, 23 km S of Clear Lake, CA				
Apr 2	PRS	Z	e(P)	04 55 01.8
	MHC	Z	eP	04 55 03.2
	PRI	Z	eP	04 55 06.4
	WDC	Z	eP	04 55 08.6
	ORV	Z	eP	04 55 10.7
	MIN	Z	eP	04 55 13.0
	CMB	Z	eP	04 55 13.1
		Z	e(PKP)	05 05 07.8
	FRI	Z	eP	04 55 14.2
	MNA	Z	eP	04 55 28.5
USGS 04h48m07.2s 19.7N 156.6W				
h=10km mb=4.7				
Hawaiian Islands				
Apr 2	PRS	Z	iPd	05 26 25.8
		Z	e	05 26 40.4
	GCC	Z	eP	05 26 26.0
	PCC	Z	ePd	05 26 26.4
	SAO	Z	eP	05 26 26.5
	PRI	Z	ePd	05 26 27.4
	LLA	Z	eP	05 26 27.7
	BRK	Z	ePd	05 26 28.0
	MHC	Z	iPd	05 26 28.4
		Z	e	05 26 43.0
	FRI	Z	iPd	05 26 32.0
		Z	e	05 26 46.7
	CMB	Z	iPd	05 26 33.4
		Z	e	05 26 48.0
	FHC	Z	eP	05 26 33.5
	ORV	Z	eP	05 26 34.9
	WDC	Z	iPd	05 26 35.8
		Z	e	05 26 50.5
	MIN	Z	ePd	05 26 36.5
	MNA	Z	iPd	05 26 40.8
USGS 05h14m17.9s 31.0S 179.8W				
h=332km mb=5.0				

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REGISTRATION OF EARTHQUAKES 1988

DATE	STA	CMP	PHASE	TIME (UTC)
Kermadec Islands Region				
Apr 2	PRS	Z	eP	14 37 45.0
	PRI	Z	eP	14 37 47.5
	MHC	Z	eP	14 37 48.0
	FRI	Z	eP	14 37 53.7
	CMB	Z	eP	14 37 54.8
	ORV	Z	eP	14 37 55.8
	BKS	Z	e(P)	14 37 56
		N	eS	14 47 06
		E	esS	14 47 16
		E	eScS	14 48 08
		E	eSS	14 51 28
		E	e	14 51 36
		N	eLq	14 55 36
		N	eLr	14 58 56
			AMP(μm)	PER(s)
		LZ	14	20.
		LN	11	20.
		LE	11	20.
	WDC	Z	eP	14 37 56.2
	MNA	Z	eP	14 38 04.8
BRK Ms=6.3 Distance= 73°				
USGS 14h26m29.0s 15.4S 173.1W				
h=33km mb=5.7 Ms=6.1				
Tonga Islands				
Apr 2	CMB	Z	eP	14 54 21.5
	MNA	Z	eP	14 54 31.8
USGS 14h42m54.8s 15.5S 173.1W				
h=33km mb=4.9				
Tonga Islands				
Apr 2	CMB	Z	eP	15 08 22.5
	WDC	Z	eP	15 08 27.4
	MNA	Z	eP	15 08 32.5
USGS 14h56m58.6s 15.3S 172.7W				
h=33km mb=5.0				
Samoa Islands Region				
Apr 2	MNA	Z	e(P)	19 54 42.1
	CMB	Z	e(P)	19 54 48.9
	ORV	Z	eP	19 55 00.0
	WDC	Z	e(P)	19 55 06.4
USGS 19h45m03.8s 5.8S 80.9W				
h=33km mb=5.2				
Near Coast of Northern Peru				
Apr 3	BKS	Z	eP	01 45 12.0
			AMP(μm)	PER(s)
		PZ	0.11	0.9
	FHC	Z	ePc	01 45 57.7
	WDC	Z	iPc	01 45 58.9
		Z	e	01 46 05.5
	MIN	Z	iPc	01 46 00.7
	ORV	Z	iPc	01 46 04.1
	BRK	Z	ePc	01 46 12.4
	CMB	Z	ePc	01 46 12.6
		Z	e	01 46 44.0
	MNA	Z	iPc	01 46 13.0
	PCC	Z	eP	01 46 13.5
	MHC	Z	ePc	01 46 15.3
	GCC	Z	ePc	01 46 16.1
	SAO	Z	eP	01 46 17.8
	FRI	Z	iPc	01 46 18.0
		Z	e	01 46 42.1
	LLA	Z	ePc	01 46 19.4
	PRS	Z	iPc	01 46 20.1
	PRI	Z	ePc	01 46 22.0
BRK mb=6.0 h=33km Distance= 85°				
USGS 01h33m05.9s 49.9N 78.9E				
h=0km mb=6.1				

DATE	STA	CMP	PHASE	TIME (UTC)
Eastern Kazakh SSR				
Apr 3	WDC	Z	ePKPd	14 46 05.4
	MIN	Z	ePKPd	14 46 06.7
	ORV	Z	ePKP	14 46 08.8
	BRK	Z	e(PKP)	14 46 10.0
	CMB	Z	iPKPd	14 46 11.7
	PRS	Z	ePKPd	14 46 13.4
	FRI	Z	ePKPd	14 46 14.1
	PRI	Z	ePKPd	14 46 14.2
	MNA	Z	ePKPd	14 46 14.6
	LLA	Z	e(PKP)	14 46 15.2
USGS 14h27m09.0s 4.7N 94.4E				
h=30km mb=5.9 Ms=5.7				
Off W. Coast of Northern Sumatra				
Apr 3	PRI	Z	eP	17 46 08.2
	PRS	Z	eP	17 46 09.2
	SAO	Z	eP	17 46 11.3
	FRI	Z	eP	17 46 11.4
	MHC	Z	eP	17 46 15.9
	CMB	Z	eP	17 46 18.9
	BRK	Z	eP	17 46 19.2
	MNA	Z	eP	17 46 20.5
	ORV	Z	e	17 46 30.4
	WDC	Z	ePc	17 46 34.7
USGS 17h34m59.6s 32.9S 112.1W				
h=10km mb=4.9				
Easter Island Cordillera				
Apr 3	WDC	Z	e(P)c	20 20 31.8
	ORV	Z	eP	20 20 34.7
	MHC	Z	e(P)	20 20 42.5
	CMB	Z	eP	20 20 49.4
	MNA	Z	eP	20 20 57.8
USGS 20h11m51.8s 55.5N 166.5E				
h=33km mb=4.4				
Komandorsky Islands Region				
Apr 4	WDC	Z	ePc	15 24 31.8
	SAO	Z	e(P)	15 24 44.2
	CMB	Z	ePc	15 24 46.1
	PRS	Z	e(P)	15 24 48.9
	FRI	Z	e(P)	15 24 51.2
	MNA	Z	e(P)	15 24 52.4
USGS 15h12m13.1s 30.3N 131.1E				
h=28km mb=5.2 Ms=4.6				
Kyushu, Japan				
Apr 4	FHC	Z	eP	15 55 18.7
	WDC	Z	ePc	15 55 20.9
	MIN	Z	eP	15 55 24.0
	ORV	Z	ePc	15 55 26.6
	MHC	Z	eP	15 55 33.2
	CMB	Z	eP	15 55 35.4
	PRS	Z	eP	15 55 37.1
	FRI	Z	eP	15 55 40.2
	PRI	Z	eP	15 55 40.2
	BKS	N	e	16 18 00
		N	eLr	16 27 00
			AMP(μm)	PER(s)
		LZ	2.1	20.
		LN	0.0	20.
		LE	1.8	20.
BRK Ms=5.6 Distance= 99°				
USGS 15h43m04.0s 30.4N 131.1E				
h=39km mb=5.2 Ms=6.0				
Kyushu, Japan				
Apr 4	FHC	Z	ePKP	16 31 13.3
	WDC	Z	ePKP	16 31 15.1
	ORV	Z	e(PKP)	16 31 17.0

DATE	STA	CMP	PHASE	TIME (UTC)
	CMB	Z	ePKPc	16 31 19.1
		Z	e	16 33 07.3
	PRI	Z	e(PKP)	16 31 19.6
	PRS	Z	ePKP	16 31 19.9
	FRI	Z	ePKP	16 31 21.0
	MNA	Z	ePKP	16 31 23.2
		Z	e	16 33 20.0
USGS 16h12m25.3s 9.4S 112.9E				
h=60km mb=5.5				
South of Java				
Apr 4	PRI	Z	iPd	20 42 06.2
	LLA	Z	iPc	20 42 10.5
	PRS	Z	iPd	20 42 15.0
	FRI	Z	iPd	20 42 16.0
	SAO	Z	iPc	20 42 17.8
		T	eS	20 42 33.4
	GCC	Z	iPc	20 42 24.6
		Z	i	20 42 25.6
	MHC	Z	iPc	20 42 24.6
	CMB	Z	iPc	20 42 29.7
	PCC	Z	ePc	20 42 31.7
	BRK	Z	e(P)	20 42 34.8
	BKS	N	eP	20 42 35.3
	ZSP	Z	e(P)	20 42 35.4
	MNA	Z	ePd	20 42 45.8
		Z	i	20 42 49.7
	ORV	Z	iPd	20 42 53.2
	MIN	Z	ePd	20 43 05.4
	WDC	Z	e	20 43 09
BRK 20h42m00.9s 36.3N 120.4W				
h=9km ML=3.6(6)				
19 km NW of Coalinga, CA				
Apr 4	PRI	Z	ePd	20 45 53.8
	LLA	Z	iPc	20 45 58.3
	PRS	Z	iPd	20 46 02.5
	FRI	Z	eP	20 46 03.3
	SAO	Z	iPc	20 46 05.5
	GCC	Z	eP	20 46 12.5
	MHC	Z	iPc	20 46 12.6
	CMB	Z	eP	20 46 17.4
	PCC	Z	e	20 46 21
	ZSP	Z	e(P)	20 46 24.1
	BRK	Z	ePc	20 46 25.2
	MNA	Z	ePc	20 46 34.1
		Z	i	20 46 37.5
	ORV	Z	iPd	20 46 41.0
	MIN	Z	e	20 47 01.5
	WDC	Z	e	20 47 03
BRK 20h45m48.7s 36.3N 120.4W				
h=10km ML=3.7(6)				
19 km NW of Coalinga, CA				
Apr 5	WDC	Z	eP	15 54 59.4
	CMB	Z	eP	15 55 16.9
USGS 15h36m56.9s 13.3N 120.4E				
h=30km mb=5.4 Ms=5.5				
Mindoro, Philippine Islands				
Apr 6	MNA	Z	ePc	00 35 43.3
	FRI	Z	eP	00 35 43.6
	CMB	Z	ePc	00 35 52.6
USGS 00h28m43.8s 12.9N 89.3W				
h=59km mb=4.7				
Off Coast of Central America				
Apr 6	PRS	Z	ePd	21 18 09.4
	GCC	Z	e(P)	21 18 09.5
	PRI	Z	ePd	21 18 11.7
	BRK	Z	eP	21 18 11.7
	MHC	Z	eP	21 18 12.2

DATE	STA	CMP	PHASE	TIME (UTC)
	FRI	Z	ePd	21 18 16.9
	CMB	Z	iPd	21 18 18.2
	ORV	Z	eP	21 18 19.4
	WDC	Z	iPd	21 18 20.4
	MNA	Z	ePd	21 18 27.5
USGS 21h06m11.0s 23.2S 175.6W				
h=33km mb=5.2 Ms=4.7				
Tonga Islands Region				
Apr 6	GCC	Z	ePc	22 10 43.3
	PCC	Z	ePc	22 10 43.5
	PRS	Z	ePc	22 10 43.7
	SAO	Z	eP	22 10 44.4
	BRK	Z	e(P)	22 10 44.8
	LLA	Z	e(P)	22 10 45.4
	PRI	Z	ePc	22 10 46.2
	MHC	Z	ePc	22 10 46.2
	FHC	Z	eP	22 10 50.3
	FRI	Z	ePc	22 10 51.5
	CMB	Z	ePc	22 10 52.6
	ORV	Z	ePc	22 10 53.3
	WDC	Z	iPc	22 10 53.4
	MIN	Z	iPc	22 10 55.1
	MNA	Z	iPc	22 11 02.3
USGS 21h59m51.8s 16.2S 175.8W				
h=389km mb=5.0				
Tonga Islands				
Apr 7	FHC	Z	ePd	03 18 15.5
	WDC	Z	iPd	03 18 18.4
	MIN	Z	ePd	03 18 21.1
	ORV	Z	eP	03 18 23.4
	BRK	Z	e(P)	03 18 25
	PCC	Z	eP	03 18 29.0
	MHC	Z	ePd	03 18 29.7
	CMB	Z	ePd	03 18 31.2
	PRS	Z	ePd	03 18 32.8
	LLA	Z	e(P)	03 18 33.3
	FRI	Z	ePd	03 18 35.7
	PRI	Z	e(P)	03 18 35.9
	MNA	Z	ePd	03 18 37.1
USGS 03h05m07.2s 24.0N 121.6E				
h=17km mb=5.3 Ms=4.5				
Taiwan				
Apr 7	WDC	Z	e(P)	03 37 47.8
	CMB	Z	eP	03 38 00.3
	FRI	Z	eP	03 38 05.0
USGS 03h24m35.9s 24.0N 121.6E				
h=23km mb=4.9				
Taiwan				
Apr 7	WDC	Z	eP	05 47 39.0
	ORV	Z	e(P)	05 47 44.2
	BRK	Z	e(P)	05 47 47
	CMB	Z	ePd	05 47 53.6
		Z	e	05 48 22.8
	FRI	Z	ePd	05 47 58.5
		Z	e	05 48 28.1
	MNA	Z	ePd	05 48 01.1
USGS 05h36m01.3s 29.6N 140.7E				
h=111km mb=4.8				
South of Honshu, Japan				
Apr 7	MNA	Z	ePc	14 37 06.4
	CMB	Z	ePc	14 37 13.1
	MHC	Z	eP	14 37 16.3
	ORV	Z	ePc	14 37 24.3
	WDC	Z	eP	14 37 29.9
USGS 14h26m30.7s 11.0S 74.7W				
h=10km mb=5.1				
Peru				

DATE	STA	CMP	PHASE	TIME (UTC)
Apr 7	MNA	Z	iPc	17 15 38.0
	FRI	Z	ePc	17 15 48.6
	CMB	Z	ePc	17 15 57.7
	PRI	Z	ePc	17 16 01.5
	LLA	Z	e(P)	17 16 04.5
	SAO	Z	iP	17 16 08.2
	PRS	Z	eP	17 16 08.4
	ORV	Z	ePc	17 16 17.6
	MHC	Z	eP	17 16 19.0
BRK ML=4.0(3)				
USGS 17h15m00.0s 37.0N 116.1W				
h=0km mb=4.1				
Underground Nuclear Explosion, N.T.S.				
Apr 7	CMB	Z	ePKP	22 05 23.5
	MNA	Z	ePKPc	22 05 24.9
	FRI	Z	ePKPc	22 05 26.8
	PRI	Z	e(PKP)	22 05 28.7
USGS 21h45m37.8s 6.9S 71.8E				
h=10km mb=5.3				
Chagos Archipelago Region				
Apr 8	MHC	Z	e(LR)	05 33 56.0
	BRK	Z	eLR	05 37 56.0
			AMP(μm)	PER(s)
		LZ	1.4	20.
		LN	0.71	20.
		LE	1.8	20.
USGS 04h42m30.8s 13.4N 120.4E				
h=31km mb=5.6 Ms=5.6				
Mindoro, Philippine Islands				
Apr 8	WDC	Z	ePKP	11 39 28.0
		Z	eSKP	11 42 52.7
		Z	e(PKKP)	11 49 47.9
	MIN	Z	ePKP	11 39 29.4
		Z	ePKKP	11 49 44.4
	ORV	Z	ePKP	11 39 29.6
		Z	eSKP	11 42 54.8
	CMB	Z	ePKP	11 39 32.4
		Z	e	11 40 00.9
		Z	eSKP	11 42 57.1
		Z	ePKKP	11 49 40.8
	PRS	Z	ePKP	11 39 32.4
	FRI	Z	ePKP	11 39 34.3
		Z	e	11 40 02.8
		Z	eSKP	11 42 58.9
		Z	ePKKP	11 49 37.6
	LLA	Z	e(PKP)	11 39 35.1
		Z	ePKKP	11 49 42.1
	PRI	Z	ePKP	11 39 35.4
		Z	eSKP	11 42 59.7
		Z	ePKKP	11 49 42.7
	MNA	Z	ePKP	11 39 36.4
		Z	e	11 40 04.8
		Z	eSKP	11 43 01.2
		Z	ePKKP	11 49 34.1
USGS 11h20m51.4s 8.8S 117.5E				
h=106km mb=5.8				
Sumbawa Island Region				
Apr 8	ORV	Z	ePd	13 55 45.4
	WDC	Z	iPc	13 55 45.9
	FHC	Z	iPc	13 55 48.1
		Z	i	13 55 52.7
		Z	iS	13 56 06.3
	MIN	Z	ePc	13 55 50.1
	ZSP	Z	eP	13 55 50.7
		Z	iS	13 56 00.2
	BKS	Z	iPd	13 55 51.8

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	e	13 55 56.8
		E	eS	13 56 24.7
	PCC	Z	eP	13 55 54.4
	ARC	N	ePc	13 55 57.4
	MHC	Z	eP	13 56 01.3
	GCC	Z	eP	13 56 02.4
	CMB	Z	ePc	13 56 04.8
	PRS	Z	eP	13 56 13.7
	FRI	Z	eP	13 56 20.5
	MNA	Z	eP	13 56 27.8
BRK 13h55m22.5s 39.4N 123.3W				
h=9km ML=3.6(6) Mo=1.0E22(4)				
7 km E of Willits, CA				
Apr 8	FRI	Z	eP	14 04 12.8
	CMB	Z	eP	14 04 14.5
	WDC	Z	eP	14 04 16.4
	MNA	Z	eP	14 04 23.0
USGS 13h52m29.3s 22.8S 176.2W				
h=229km mb=4.5				
South of Fiji Islands				
Apr 8	WDC	Z	eP	23 26 40.7
		Z	e	23 26 50.9
		Z	e	23 30 29.4
		Z	e	23 34 45.2
	ORV	Z	eP	23 26 43.2
		Z	e	23 26 53.4
	MHC	Z	e(P)	23 26 43.4
		Z	e	23 26 53.7
	PRS	Z	e(P)	23 26 44.0
		Z	e	23 27 54.2
	CMB	Z	eP	23 26 47.4
		Z	e	23 26 57.8
		Z	e	23 30 41.4
		Z	e	23 34 47.5
	FRI	Z	e(P)	23 26 49.5
		Z	e	23 27 00.0
		Z	e	23 30 45.5
	BKS	Z	eP	23 26 52.0
		Z	i	23 27 03.1
		E	eSP	23 39 01.2
		Z	iSS	23 44 14.8
		E	eLq	23 52 16.8
		Z	eLr	23 55 44.4
			AMP(μm)	PER(s)
		PZ	0.088	1.2
		LZ	33	20.
		LN	28	20.
		LE	6.4	20.
	MNA	Z	eP	23 26 55.9
		Z	e	23 27 06.4
	GCC	Z	e	23 27 52.2
BRK Ms=6.7 Distance= 93°				
USGS 23h13m24.1s 3.4S 145.7E				
h=32km mb=5.6 Ms=6.4				
Near North Coast of New Guinea				
Apr 9	BKS	Z	e(P)	04 16 41.2
		E	i	04 27 52.0
		NE	eS	04 27 53.2
		Z	e	04 32 42.8
		Z	eLr	04 40 [illegible]
			AMP(μm)	PER(s)
		PZ	0.062	1.1
		LZ	4.8	20.
		LN	2.7	20.
		LE	4.6	20.
	PRS	Z	eP	04 16 42.4
	MHC	Z	eP	04 16 43.1
	WDC	Z	eP	04 16 45.3
	ORV	Z	eP	04 16 47.1

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DATE	STA	CMP	PHASE	TIME (UTC)
	MIN	Z	eP	04 16 48.0
	CMB	Z	eP	04 16 48.8
	FRI	Z	eP	04 16 49.5
	MNA	Z	eP	04 16 58.3
BRK Ms=5.9 Distance= 80°				
USGS 04h04m23.1s 10.9S 166.8E				
h=33km mb=5.5 Ms=5.5				
Santa Cruz Islands				
Apr 9	BKS	Z	eP	04 34 51.7
	WDC	Z	eP	04 34 52.3
	MHC	Z	e(P)	04 34 52.6
	ORV	Z	eP	04 34 54.0
	MIN	Z	eP	04 34 55.0
	CMB	Z	eP	04 34 55.7
	FRI	Z	eP	04 34 56.5
	MNA	Z	eP	04 35 05.3
USGS 04h22m30.6s 10.8S 166.7E				
h=33km mb=5.3 Ms=5.5				
Santa Cruz Islands				
Apr 9	ZSP	Z	iPd	14 15 16.8
		Z	i	14 15 23.4
		Z	i	14 15 30.3
		Z	iS	14 15 32.5
	BRK	Z	ePd	14 15 17.6
	BKS	Z	iPd	14 15 17.7
		N	iS	14 15 33.5
	ORV	Z	eP	14 15 20.4
		Z	i	14 15 27.7
	PCC	Z	ePd	14 15 21.9
		Z	i	14 15 24.4
	MHC	Z	e(P)	14 15 27.2
	GCC	Z	ePc	14 15 28.9
		Z	i	14 15 35.8
	MIN	Z	iPd	14 15 29.5
	WDC	Z	eP	14 15 32.8
	CMB	Z	iPc	14 15 32.9
	LLA	Z	ePc	14 15 40.6
	PRS	Z	e(P)	14 15 40.8
	SAO	Z	eP	14 15 45.5
	FHC	Z	e	14 15 53.6
	MNA	Z	ePc	14 15 56.8
		Z	i	14 16 04.6
	FRI	Z	e(P)	14 15 57.0
	PRI	Z	e	14 15 58.2
BRK 14h14m58.7s 38.8N 122.8W				
h=3km ML=3.0(5) Mo=2.0E21(2)				
The Geysers area, 23 km S of Clear Lake, CA				
Apr 9	PRS	Z	e(P)	18 55 42.3
	MHC	Z	e(P)	18 55 44.7
	FRI	Z	eP	18 55 49.3
	CMB	Z	eP	18 55 50.2
	ORV	Z	eP	18 55 51.3
	WDC	Z	eP	18 55 51.7
	MNA	Z	e(P)	18 55 58.8
USGS 18h44m33.3s 21.9S 179.6W				
h=600km mb=5.0				
Fiji Islands Region				
Apr 9	EKR	Z	iPc	23 41 45.0
			iPc	23 41 45.0
		Z	iS	23 42 07.2
			iS	23 42 07.2
	ARC	N	eP	23 41 45.3
		N	eS	23 42 05.8
	FHC	Z	iPc	23 41 45.9
		Z	iS	23 42 08.2
	FOX	Z	iPc	23 41 48.3
			iPc	23 41 48.3

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		Z	i(S)	23 42 11.5
			i(S)	23 42 11.5
	WDC	Z	iPc	23 42 01.7
		Z	e(S)	23 42 36.0
	MIN	Z	eP	23 42 11.9
		Z	eS	23 42 55.5
	ORV	Z	eP	23 42 17.8
		Z	e(S)	23 43 06.7
	BKS	Z	eP	23 42 29.0
		Z	eS	23 43 23.5
	PCC	Z	eP	23 42 30.6
	CMB	Z	eP	23 42 41.1
BRK 23h41m15.1s 41.6N 126.2W				
h=5kmR ML=3.9(4) Mo=4.6E21(1)				
170 km W of Crescent City, CA				
Apr 10	PCC	Z	ePc	22 50 33.7
	PRS	Z	ePc	22 50 33.8
	BRK	Z	ePc	22 50 35.3
	PRI	Z	ePc	22 50 35.8
	MHC	Z	ePc	22 50 36.3
	BKS	Z	ePd	22 50 36.5
				AMP(μm) PER(s)
			PZ	0.031 0.7
	FRI	Z	ePc	22 50 41.2
	CMB	Z	ePc	22 50 42.0
	ORV	Z	ePc	22 50 43.1
	WDC	Z	ePc	22 50 43.3
	MNA	Z	eP	22 50 50.8
USGS 22h39m29.4s 20.4S 178.2W				
h=528km mb=4.6				
Fiji Islands Region				
Apr 11	GCC	Z	e(P)	06 41 54.3
		Z	e	06 42 05.6
		Z	ePP	06 45 14.2
	PRS	Z	eP	06 41 54.4
		Z	e	06 42 05.7
		Z	ePP	06 45 14.2
	PCC	Z	ePd	06 41 54.6
	BRK	Z	e(P)	06 41 56.4
		Z	e	06 42 07.7
	PRI	Z	eP	06 41 56.6
		Z	e	06 42 07.8
		Z	ePP	06 45 16.6
	MHC	Z	eP	06 41 57.0
		Z	e	06 42 08.5
		Z	ePP	06 45 17.1
	BKS	Z	eP	06 41 57.7
				AMP(μm) PER(s)
			PZ	0.069 1.3
	FRI	Z	ePd	06 42 02.3
		Z	e	06 42 13.7
	CMB	Z	ePc	06 42 03.6
		Z	e	06 42 15.0
		Z	ePP	06 45 23.5
	ORV	Z	ePd	06 42 05.0
		Z	e	06 42 16.3
	WDC	Z	ePd	06 42 05.8
		Z	e	06 42 17.1
		Z	ePP	06 45 25.6
	MIN	Z	eP	06 42 07.6
		Z	e	06 42 18.8
	MNA	Z	eP	06 42 13.3
		Z	e	06 42 24.8
		Z	ePP	06 45 32.6
USGS 06h30m30.6s 17.9S 172.3W				
h=37km mb=5.3 Ms=4.8				
Tonga Islands Region				
Apr 11	WDC	Z	ePc	06 49 45.0
	MIN	Z	eP	06 49 50.8

DATE	STA	CMP	PHASE	TIME (UTC)
	MHC	Z	ePc	06 50 05.7
	CMB	Z	ePc	06 50 07.7
	PRS	Z	e	06 50 11.8
	FRI	Z	ePc	06 50 15.3
	MNA	Z	ePc	06 50 15.4
USGS 06h40m34.4s 52.5N 159.5E				
h=33km mb=4.7				
Off East Coast of Kamchatka				
Apr 11	PRS	Z	ePc	18 21 39.9
	MHC	Z	eP	18 21 41.3
	PRI	Z	ePc	18 21 42.3
	WDC	Z	e(P)	18 21 44.3
	CMB	Z	ePc	18 21 46.5
	FRI	Z	ePd	18 21 46.7
	MIN	Z	eP	18 21 46.7
	MNA	Z	ePc	18 21 55.3
USGS 18h09m06.5s 16.8S 167.9E				
h=33km mb=4.8				
Vanuatu Islands				
Apr 11	GCC	Z	ePc	22 47 29.9
	PCC	Z	ePc	22 47 29.9
	PRS	Z	iPc	22 47 30.2
		Z	e	22 49 40.5
	SAO	Z	ePc	22 47 30.7
	BRK	Z	ePc	22 47 31.5
	BKS	Z	iP	22 47 31.9
				AMP(μm) PER(s)
			PZ	0.14 0.8
	PRI	Z	iPc	22 47 32.2
	LLA	Z	e(P)	22 47 32.4
	MHC	Z	ePc	22 47 32.5
	FHC	Z	ePc	22 47 36.2
	FRI	Z	ePc	22 47 37.3
		Z	e	22 49 46.9
	CMB	Z	iPc	22 47 38.2
		Z	e	22 49 48.0
	ORV	Z	iPc	22 47 39.2
	WDC	Z	iPc	22 47 39.3
		Z	e	22 49 49.0
	MIN	Z	eP	22 47 41.3
	MNA	Z	iPc	22 47 46.8
		Z	e	22 49 57.5
USGS 22h36m25.0s 21.5S 179.3W				
h=619km mb=5.6				
Fiji Islands Region				
Apr 11	PRS	Z	e(P)	23 12 55
	CMB	Z	ePc	23 13 02.3
	FRI	Z	ePc	23 13 03.7
	WDC	Z	eP	23 13 04.3
	MNA	Z	ePc	23 13 11.5
USGS 23h00m35.7s 26.9S 177.3W				
h=33km mb=5.1 Ms=5.1				
South of Fiji Islands				
Apr 12	PCC	Z	ePd	03 03 42.9
	GCC	Z	e(P)	03 03 42.9
	PRS	Z	ePd	03 03 43.3
	SAO	Z	eP	03 03 43.9
	BRK	Z	e(P)	03 03 44.8
	BKS	Z	eP	03 03 45.1
				AMP(μm) PER(s)
			PZ	0.035 0.6
	PRI	Z	ePd	03 03 45.8
	MHC	Z	ePd	03 03 46.3
	FHC	Z	e(P)	03 03 49.7
	FRI	Z	ePc	03 03 51.2
	CMB	Z	ePc	03 03 51.8
	WDC	Z	ePd	03 03 52.2
	ORV	Z	eP	03 03 52.3

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	MIN	Z	e(P)	03 03 54.0
	MNA	Z	ePd	03 04 01.2
USGS 02h52m48.1s 17.7S 178.9W				
h=539km mb=5.0				
Fiji Islands Region				
Apr 12	PRS	Z	ePc	05 17 00.6
	PCC	Z	ePc	05 17 01.5
	PRI	Z	ePc	05 17 02.0
	LLA	Z	e	05 17 03.6
	MHC	Z	ePc	05 17 03.8
	FRI	Z	ePc	05 17 06.1
	CMB	Z	ePc	05 17 08.0
	ORV	Z	eP	05 17 09.8
	WDC	Z	ePc	05 17 11.5
	MIN	Z	eP	05 17 12.5
	MNA	Z	ePc	05 17 15.0
USGS 05h03m45.1s 39.2S 178.4E				
h=20km mb=5.6 Ms=4.7				
Off E. Coast of N. Island, N.Z.				
Apr 12	BRK	Z	e(P)	11 33 17.2
	GCC	Z	ePc	11 33 17.8
	WDC	Z	ePc	11 33 18.5
	MHC	Z	ePc	11 33 20.1
	PRS	Z	ePc	11 33 20.2
	MIN	Z	ePc	11 33 21.3
	ORV	Z	ePc	11 33 22.0
	LLA	Z	e	11 33 22.6
	PRI	Z	ePc	11 33 22.7
	CMB	Z	ePd	11 33 24.0
	FRI	Z	ePc	11 33 26.0
	MNA	Z	e(P)	11 33 32.9
USGS 11h20m25.9s 6.2S 154.4E				
h=28km mb=4.8				
Solomon Islands				
Apr 12	MNA	Z	iPc	15 35 55.5
	PRI	Z	ePc	15 35 56.7
	FRI	Z	ePc	15 35 57.3
	CMB	Z	iPc	15 36 03.0
	MHC	Z	iPc	15 36 07.1
	ORV	Z	iPc	15 36 14.7
	WDC	Z	iPc	15 36 20.8
USGS 15h26m19.8s 2.8S 77.6W				
h=27km mb=5.5				
Peru-Ecuador Border Region				
Apr 12	PRS	Z	ePd	16 33 20.8
	PRI	Z	eP	16 33 22.9
	BKS	Z	eP	16 33 23.5
				AMP(μm) PER(s)
			PZ	0.044 0.9
	MHC	Z	ePd	16 33 24.0
	FRI	Z	ePd	16 33 28.8
	CMB	Z	ePd	16 33 29.9
	ORV	Z	eP	16 33 30.8
	WDC	Z	iPd	16 33 31.2
	MIN	Z	ePd	16 33 33.0
	MNA	Z	iPd	16 33 39.5
USGS 16h22m10.1s 17.5S 174.6W				
h=211km mb=5.0				
Tonga Islands				
Apr 12	MNA	Z	iPc	19 51 16.7
	FRI	Z	ePc	19 51 21.4
	CMB	Z	iPc	19 51 27.5
		Z	e	19 51 45
		Z	e	19 52 07
	PRI	Z	ePc	19 51 27.7
	LLA	Z	ePc	19 51 28.6
	PRS	Z	ePc	19 51 31.6

DATE	STA	CMP	PHASE	TIME (UTC)
	MHC	Z	iPc	19 51 34.7
	ORV	Z	ePc	19 51 35.8
	MIN	Z	ePc	19 51 37.0
	WDC	Z	ePc	19 51 42.1
	FHC	Z	ePc	19 51 51.9
USGS 19h41m42.8s 10.7N 62.9W				
h=97km mb=5.5				
Near Coast of Venezuela				
Apr 12	CMB	Z	iPKP1c	20 46 32.0
		Z	ePKP2	20 46 42.8
	MNA	Z	iPKP1c	20 46 32.3
		Z	ePKP2	20 46 42.1
	FRI	Z	ePKP1c	20 46 32.6
		Z	ePKP2	20 46 43.2
	PRI	Z	ePKP1c	20 46 33.6
		Z	ePKP2	20 46 43.6
	WDC	Z	ePKP1c	20 46 35.8
		Z	ePKP2	20 46 46.0
USGS 20h26m19.3s 33.8S 56.3E				
h=10km mb=5.3 Ms=5.4				
Atlantic-Indian Rise				
Apr 12	FRI	Z	ePc	23 31 06.2
	PRI	Z	ePc	23 31 06.3
		Z	e	23 31 17
	MNA	Z	ePc	23 31 07.9
		Z	e	23 31 16
	LLA	Z	ePc	23 31 10.7
	PRS	Z	ePc	23 31 11.3
	CMB	Z	iPc	23 31 12.8
		Z	e	23 31 23
	BKS	Z	i(P)c	23 31 20.0
		Z	i	23 31 32.7
		Z	e	23 32 21.2
		Z	e(PP)	23 34 07.2
		Z	e	23 35 08.4
		NE	iS	23 40 46.4
		NW	ePPs	23 41 47.6
		Z	e	23 42 13.5
		NE	eSS	23 45 50.4
		NE	eSSS	23 49 10.4
		NE	iLq	23 52 04.0
		NW	iLr	23 55 26.0
		Z	ePKPPKP	23 59 15.5
				AMP(μm) PER(s)
			PZ	0.21 0.9
			LZ	56 20.
			LNE	49 20.
			LNW	37 20.
	ORV	Z	iPc	23 31 23.2
	BRK	Z	ePc	23 31 28.0
	WDC	Z	iPc	23 31 28.4
		Z	e	23 31 38
	ZSP	Z	e	23 31 30
	FHC	Z	e	23 31 46
BRK Ms=6.9 Distance=73°				
USGS 23h19m55.6s 17.2S 72.3W				
h=33km mb=6.1 Ms=7.0				
Near Coast of Peru				
Apr 13	PRI	Z	iPc	00 06 35.2
	MNA	Z	iPc	00 06 35.6
	PRS	Z	ePc	00 06 37.5
	LLA	Z	ePc	00 06 38.0
	CMB	Z	iPc	00 06 41.4
	MHC	Z	iPc	00 06 44.5
	ORV	Z	iPc	00 06 52.0
	MIN	Z	iPc	00 06 55.5
	BKS	Z	iPc	00 06 56.2
				AMP(μm) PER(s)
			PZ	0.048 1.0

DATE	STA	CMP	PHASE	TIME (UTC)
USGS 23h55m23.4s 17.5S 72.5W				
h=33km mb=5.4				
Near Coast of Peru				
Apr 13	FHC	Z	iPc	00 07 26.7
	WDC	Z	iPc	00 07 35.5
	MIN	Z	iPc	00 07 40.5
	BRK	Z	ePc	00 07 59.3
	BKS	Z	iPc	00 07 59.5
				AMP(μm) PER(s)
			PZ	0.069 0.8
	PCC	Z	iPc	00 08 01.5
	CMB	Z	iPc	00 08 05.0
	MHC	Z	iPc	00 08 06.8
	GCC	Z	ePc	00 08 08.7
	MNA	Z	iPc	00 08 10.8
	SAO	Z	ePc	00 08 11.6
	LLA	Z	iPc	00 08 14.6
	PRS	Z	iPc	00 08 15.2
	FRI	Z	iPc	00 08 15.7
	PRI	Z	iPc	00 08 20.1
USGS 00h02m46.8s 57.0N 143.3W				
h=10km mb=5.2				
Gulf of Alaska				
Apr 13	MNA	Z	ePc	00 48 33.6
	PRI	Z	ePc	00 48 33.7
	LLA	Z	ePc	00 48 36.0
	PRS	Z	ePc	00 48 36.6
	CMB	Z	ePc	00 48 39.6
	MHC	Z	ePc	00 48 42.5
	BKS	Z	iP	00 48 47.7
				AMP(μm) PER(s)
			PZ	0.025 0.7
	ORV	Z	ePc	00 48 50.0
	WDC	Z	ePc	00 48 55.2
USGS 00h37m22.0s 17.3S 72.4W				
h=33km mb=5.3				
Near Coast of Peru				
Apr 13	PRI	Z	ePd	00 50 44.5
	MNA	Z	ePd	00 50 45.0
	LLA	Z	ePd	00 50 47.0
	PRS	Z	ePd	00 50 47.7
	CMB	Z	ePd	00 50 49.2
	MHC	Z	ePd	00 50 53.5
	BKS	Z	iPd	00 50 57.5
				AMP(μm) PER(s)
			PZ	0.055 0.9
	ORV	Z	ePd	00 50 59.6
	WDC	Z	eP	00 51 06.3
USGS 00h39m31.2s 17.3S 72.5W				
h=16km mb=5.9 Ms=6.2				
Near Coast of Peru				
Apr 13	PRI	Z	ePc	02 27 13.7
	MNA	Z	ePc	02 27 13.8
	PRS	Z	ePc	02 27 16.9
	CMB	Z	ePc	02 27 19.6
USGS 02h16m01.8s 17.2S 72.3W				
h=33km mb=4.9				
Near Coast of Peru				
Apr 13	PRI	Z	iPc	06 33 44.2
	MNA	Z	iPc	06 33 44.3
	LLA	Z	iPc	06 33 46.6
	PRS	Z	iPc	06 33 47.3
	CMB	Z	iPc	06 33 50.1
	MHC	Z	iPc	06 33 53.2
	BKS	Z	iPc	06 33 56.7
				AMP(μm) PER(s)
			PZ	0.036 0.9

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DATE	STA	CMP	PHASE	TIME (UTC)
	ORV	Z	iPc	06 34 00.7
	WDC	Z	iPc	06 34 05.9
USGS 06h22m31.5s 17.5S 72.5W				
h=36km mb=5.2				
Near Coast of Peru				
Apr 13	BRK	Z	ePc	11 00 58.6
	GCC	Z	ePc	11 00 58.8
	BKS	Z	iPd	11 00 59.3
			AMP(μm)	PER(s)
		PZ	0.078	1.0
	WDC	Z	iPc	11 01 00.5
	PRS	Z	ePc	11 01 00.9
	SAO	Z	ePc	11 01 01.3
	MHC	Z	iPc	11 01 01.3
	LLA	Z	ePc	11 01 02.8
	ORV	Z	ePc	11 01 03.0
	PRI	Z	iPc	11 01 03.8
	CMB	Z	iPc	11 01 05.5
	FRI	Z	iPc	11 01 07.1
	MNA	Z	iPc	11 01 14.5
USGS 10h48m08.5s 9.0S 157.3E				
h=23km mb=5.7 Ms=5.1				
Solomon Islands				
Apr 13	PRI	Z	ePc	12 18 40.9
	MNA	Z	ePc	12 18 41.6
	CMB	Z	ePc	12 18 57.3
	ORV	Z	ePc	12 18 57.8
USGS 12h07m32.8s 17.5S 72.4W				
h=67km mb=4.9				
Near Coast of Peru				
Apr 13	WDC	Z	ePd	20 58 26.2
	MIN	Z	ePd	20 58 31.2
	ORV	Z	ePd	20 58 36.1
	BRK	Z	ePd	20 58 41.3
	BKS	Z	iPc	20 58 41.9
			AMP(μm)	PER(s)
		PZ	0.036	0.7
	MHC	Z	ePd	20 58 47.8
	PRS	Z	ePd	20 58 54.7
	LLA	Z	eP	20 58 55.7
	FRI	Z	ePd	20 58 59.4
	MNA	Z	ePd	20 58 59.5
	PRI	Z	ePd	20 58 59.9
USGS 20h51m44.6s 53.0N 171.3W				
h=126km mb=4.9				
Fox Islands, Aleutian Islands				
Apr 13	GCC	Z	ePd	23 13 03.5
	PCC	Z	ePd	23 13 03.6
	SAO	Z	e(P)	23 13 04.3
	PRS	Z	ePd	23 13 04.7
	BRK	Z	eP	23 13 05.3
	PRI	Z	ePd	23 13 06.0
		Z	e	23 14 32.7
	LLA	Z	ePd	23 13 06.1
	MHC	Z	ePd	23 13 06.2
	BKS	N	iPc	23 13 06.2
			AMP(μm)	PER(s)
		PZ	0.11	1.0
	FHC	Z	eP	23 13 09.9
	FRI	Z	iPd	23 13 11.3
	WDC	Z	ePd	23 13 13.2
		Z	e	23 14 36.4
	ORV	Z	ePd	23 13 13.4
		Z	e	23 14 38.2
	MIN	Z	ePd	23 13 15.2
		Z	e	23 14 40.4
	MNA	Z	ePd	23 13 21.3
		Z	e	23 14 46.7

DATE	STA	CMP	PHASE	TIME (UTC)
USGS 23h01m48.5s 20.0S 177.7W				
h=373km mb=5.3				
Fiji Islands Region				
Apr 14	WDC	Z	iPc	23 22 57.0
		Z	iS	23 23 16.7
	ORV	Z	eP	23 22 57.2
	MIN	Z	e(P)	23 23 02.4
	FHC	Z	ePc	23 23 03.5
	BKS	Z	iPd	23 23 11.3
	CMB	Z	eP	23 23 18.0
BRK 23h22m33.3s 39.4N 123.3W				
h=3km ML=2.3(2)				
8 km ESE of Willits, CA				
Apr 15	CMB	Z	eP	19 48 08.6
	MNA	Z	eP	19 48 16.0
USGS 19h36m03.5s 25.6N 142.8E				
h=45km mb=5.0				
Volcano Islands Region				
Apr 16	FHC	Z	eP	02 05 19.6
	WDC	Z	iPd	02 05 24.6
	MIN	Z	eP	02 05 28.0
	PCC	Z	eP	02 05 28.5
	BRK	Z	eP	02 05 29.0
	BKS	Z	ePd	02 05 29.2
			AMP(μm)	PER(s)
		PZ	0.091	0.9
	ORV	Z	iPd	02 05 29.6
	GCC	Z	eP	02 05 31.0
	MHC	Z	ePd	02 05 32.5
	PRS	Z	iPd	02 05 34.8
	LLA	Z	eP	02 05 35.9
	CMB	Z	iPd	02 05 36.1
	PRI	Z	ePd	02 05 38.2
	FRI	Z	iPd	02 05 39.9
	MNA	Z	iPd	02 05 44.5
USGS 01h53m22.4s 16.1N 145.9E				
h=127km mb=5.4				
Mariana Islands				
Apr 16	WDC	Z	eP	08 43 07.2
	ORV	Z	eP	08 43 13.5
	CMB	Z	eP	08 43 22.6
	FRI	Z	eP	08 43 28.0
USGS 08h31m56.9s 33.9N 136.7E				
h=359km mb=4.3				
Near S. Coast of Southern Honshu				
Apr 16	SAO	Z	iPc	18 47 41.8
	LLA	Z	iPc	18 47 45.0
	PRS	Z	iPd	18 47 45.4
	GCC	Z	eP	18 47 51.1
	PRI	Z	eP	18 47 52.9
		Z	i	18 47 54.3
	MHC	Z	eP	18 47 53.3
	BKS	Z	eP	18 48 6.4
	FRI	Z	eP	18 48 02.5
		Z	iS	18 48 18.7
	BRK	Z	e(P)	18 48 04.0
	CMB	Z	eP	18 48 06.1
		Z	eS	18 48 28.0
BRK 18h47m38.8s 36.7N 121.3W				
h=4km ML=2.6(4)				
Stone Canyon area, 23 km SE of Hollister, CA				
Apr 17	MNA	Z	eP	02 25 09.6
	FRI	Z	eP	02 25 10.5
	CMB	Z	e(P)	02 25 20.0
	ORV	Z	eP	02 25 32.8

DATE	STA	CMP	PHASE	TIME (UTC)
USGS 02h17m45.2s 11.2N 86.7W				
h=63km mb=4.7				
Near Coast of Nicaragua				
Apr 17	FRI	Z	e(P)	03 01 49.5
	MNA	Z	eP	03 01 50.0
	LLA	Z	eP	03 01 52.4
	PRS	Z	e(P)	03 01 53.2
	CMB	Z	eP	03 01 55.8
	MHC	Z	eP	03 01 58.3
	ORV	Z	eP	03 02 06.3
	WDC	Z	eP	03 02 11.4
USGS 02h50m37.7s 17.4S 72.4W				
h=33km mb=5.4 Ms=5.3				
Near Coast of Peru				
Apr 17	FRI	Z	e	05 32 13.0
		Z	ePKP	05 30 28.4
	PRS	Z	e	05 32 14.1
		Z	e(PKP)	05 30 29.6
	MNA	Z	e	05 32 14.2
		Z	ePKP	05 30 30.0
	LLA	Z	e	05 32 14.6
	PRI	Z	ePKP	05 30 30.8
	GCC	Z	e	05 32 15.3
	CMB	Z	ePKP	05 30 31.3
		Z	e	05 32 15.5
	GCC	Z	ePKP	05 30 31.8
	MHC	Z	e	05 32 16.3
		Z	ePKP	05 30 32.0
	BRK	Z	e	05 32 17.2
		Z	e(PKP)	05 30 32.8
	MIN	Z	e	05 32 19.0
	ORV	Z	ePKP	05 30 33.5
		Z	e	05 32 19.8
	MIN	Z	ePKP	05 30 34.9
	WDC	Z	e	05 32 20.0
		Z	ePKP	05 30 36.0
USGS 05h11m34.7s 58.4S 25.1W				
h=33km mb=5.5 Ms=6.1				
South Sandwich Islands Region				
Apr 17	WDC	Z	eP	10 00 47.0
	ORV	Z	eP	10 00 53.8
	CMB	Z	eP	10 01 04.1
	MNA	Z	eP	10 01 10.6
	PRS	Z	e(P)	10 01 10.9
USGS 09h49m44.0s 39.2N 143.5E				
h=30km mb=4.8 Ms=4.9				
Off East Coast of Honshu, Japan				
Apr 17	WDC	Z	eP	10 05 30.4
		Z	e	10 05 40.3
	ORV	Z	e(P)	10 05 37.3
		Z	e	10 05 46.8
	MIN	Z	e(P)	10 05 43.7
	CMB	Z	eP	10 05 47.7
		Z	e	10 05 57.1
	FRI	Z	e(P)	10 05 54.5
USGS 09h54m30.5s 39.2N 143.4E				
h=48km mb=4.7 Ms=4.9				
Off East Coast of Honshu, Japan				
Apr 17	WDC	Z	eP	14 02 18.2
	MIN	Z	eP	14 02 23.5
	ORV	Z	eP	14 02 27.5
	CMB	Z	eP	14 02 40.3
	PRS	Z	eP	14 02 45.0
	LLA	Z	e(P)	14 02 45.9
	FRI	Z	eP	14 02 49.8
	PRI	Z	e(P)	14 02 50.0
	MNA	Z	eP	14 02 50.5

DATE	STA	CMP	PHASE	TIME (UTC)
USGS 13h54m56.6s 52.1N 179.1W				
h=137km mb=4.4				
Andreanof Islands, Aleutian Is.				
Apr 18	GCC	Z	eP	17 25 22.6
	PRS	Z	ePd	17 25 22.9
	PRI	Z	ePd	17 25 24.9
	LLA	Z	eP	17 25 25.0
	BRK	Z	eP	17 25 25.0
	MHC	Z	eP	17 25 25.7
	FRI	Z	ePd	17 25 29.9
	FHC	Z	eP	17 25 30.4
	CMB	Z	ePd	17 25 31.4
	ORV	Z	eP	17 25 32.8
	WDC	Z	ePd	17 25 33.5
	MIN	Z	ePd	17 25 34.9
	MNA	Z	ePd	17 25 39.3
USGS 17h13m29.9s 25.0S 177.4W				
h=196km mb=5.1				
South of Fiji Islands				
Apr 18	BKS	Z	iPc	22 30 55.7
		E	iS	22 30 56.9
	BRK	Z	iPc	22 30 55.8
		Z	iS	22 30 56.9
	ZSP	Z	iPd	22 30 56.6
		Z	iS	22 30 58.6
	MHC	Z	iPc	22 31 08.6
		Z	e(S)	22 31 17.0
	GCC	Z	ePd	22 31 10.5
	SAO	Z	iPc	22 31 16.5
	CMB	Z	ePd	22 31 21.0
		Z	iS	22 31 39.4
	PRS	Z	ePd	22 31 22.5
BRK 22h30m54.8s 37.9N 122.2W				
h=6km ML=2.0(4)				
Berkeley, CA				
Apr 19	FHC	Z	eP	06 05 44.1
	WDC	Z	ePcP	06 06 50.8
		Z	ePc	06 05 49.3
		Z	ipPcP	06 07 00.8
		Z	ipP	06 05 57.9
	MIN	Z	ePcP	06 06 53.3
		Z	ePc	06 05 52.5
	ORV	Z	ePcP	06 06 56.3
		Z	eP	06 05 54.4
	MHC	Z	ePcP	06 07 03.4
	ORV	Z	epP	06 06 03.2
	CMB	Z	ePcP	06 07 04.1
	BRK	Z	eP	06 05 55.0
	CMB	Z	ipPcP	06 07 09.3
	BRK	Z	esP	06 06 08.1
	CMB	Z	i	06 07 13.8
	BKS	Z	ePd	06 05 55.0
	PRS	Z	ePcP	06 07 05.3
			AMP(μm)	PER(s)
		PZ	0.055	0.9
		Z	e(PcP)	06 07 08.4
	MHC	Z	eP	06 05 58.8
			AMP(μm)	PER(s)
		PZ	0.055	0.9
	PRS	Z	ePc	06 06 01.5
	FRI	Z	ePcP	06 07 08.6
	CMB	Z	ePc	06 06 01.9
	FRI	Z	epPcP	06 07 18.9
	CMB	Z	esP	06 06 15.3
	PRI	Z	ePcP	06 07 08.9
	LLA	Z	eP	06 06 02.4
	MNA	Z	ePcP	06 07 12.2
	PRI	Z	ePc	06 06 05.1
	MNA	Z	epPcP	06 07 21.2

DATE	STA	CMP	PHASE	TIME (UTC)
	PRI	Z	esP	06 06 18.3
	FRI	Z	ePc	06 06 06.3
		Z	e	06 06 11.4
	MNA	Z	ePc	06 06 09.9
		Z	epP	06 06 18.3
USGS 05h54m13.1s 21.8N 142.9E				
h=292km mb=5.2				
Mariana Islands Region				
Apr 19	LLA	Z	iP	06 42 51.1
	SAO	Z	iPc	06 42 58.65
	PRI	Z	iPd	06 42 59
		Z	iS	06 43 05.8
	PRS	Z	iPd	06 42 59.5
	FRI	Z	iPd	06 43 02.5
	MHC	Z	iPc	06 43 05.3
	GCC	Z	ePd	06 43 06.0
	CMB	Z	iPd	06 43 10.6
		Z	iS	06 43 28.9
	BRK	Z	ePd	06 43 15.0
		Z	e	06 43 18.6
		Z	i	06 43 21.4
	BKS	Z	ePd	06 43 15.0
	ZSP	Z	iPd	06 43 16.2
	MNA	Z	ePd	06 43 32.0
		Z	i	06 43 34.7
	ORV	Z	ePc	06 43 33.0
	MIN	Z	e	06 43 45.0
	WDC	Z	e	06 43 54.8
BRK 06h42m47.4s 36.7N 120.8W				
h=5km ML=3.2(6)				
38 km SSE of Los Banos, CA				
Apr 19	EKR	Z	i(P)c	08 44 20.5
	FOX	Z	i(P)d	08 44 21.6
	FHC	Z	iPd	08 44 22.5
		Z	iS	08 44 27.7
	ARC	N	iPc	08 44 23.5
		N	i(S)	08 44 28.7
	WDC	Z	iPc	08 44 35.8
		Z	iS	08 44 55.5
		Z	i	08 45 05.8
	MIN	Z	iPc	08 44 45.6
	ORV	Z	iPc	08 44 49.3
	BKS	Z	eP	08 44 59.9
	BRK	Z	e(P)	08 45 00.0
	ZSP	Z	iPd	08 45 06.1
	MHC	Z	iPc	08 45 10.2
		Z	i	08 45 53.7
	GCC	Z	ePc	08 45 10.2
	CMB	Z	ePc	08 45 12.2
	SAO	Z	iPd	08 45 16.3
	LLA	Z	e(P)	08 45 23.4
	PRS	Z	iPc	08 45 23.6
	FRI	Z	iPd	08 45 28.3
	MNA	Z	iPd	08 45 30.1
	PRI	Z	e(P)c	08 45 32.5
BRK 08h44m14.6s 40.5N 124.3W				
h=24km ML=4.1(8) Mo=1.2E22(2)				
Near Capetown, 34 km SSW of Eureka, CA				
Apr 19	PRS	Z	iPc	19 04 34.4
	PRI	Z	ePc	19 04 36.6
	MHC	Z	ePc	19 04 36.6
	FRI	Z	iPc	19 04 41.8
	CMB	Z	iPc	19 04 42.7
USGS 18h53m42.4s 18.0S 178.5W				
h=580km mb=5.1				
Fiji Islands Region				
Apr 19	MIN	Z	iPc	22 10 47.2

DATE	STA	CMP	PHASE	TIME (UTC)
	CMB	Z	iPc	22 11 08.2
	MNA	Z	iPc	22 11 16.1
USGS 22h05m04.3s 56.4N 156.4W				
h=76km mb=5.2				
Alaska Peninsula				
Apr 20	MNA	Z	iPc	04 38 28.0
	WDC	Z	eP	04 38 29.7
	CMB	Z	iPc	04 38 36.3
		Z	e	04 42 10.5
USGS 04h25m36.6s 1.0N 30.3W				
h=10km mb=5.8 Ms=5.3				
Central Mid-Atlantic Ridge				
Apr 20	CMB	Z	iPc	08 14 57.7
	MNA	Z	iPc	08 15 07.5
USGS 08h03m11.0s 16.8S 177.1W				
h=33km mb=5.1 Ms=5.0				
Fiji Islands Region				
Apr 20	CMB	Z	iPc	10 40 26.6
USGS 10h27m42.8s 28.1N 129.9E				
h=31km mb=5.2 Ms=5.3				
Ryukyu Islands				
Apr 20	CMB	Z	iPc	12 30 18.2
	MNA	Z	iPc	12 30 28.0
USGS 12h18m51.6s 15.7S 173.0W				
h=33km mb=4.7 Ms=4.5				
Samoa Islands Region				
Apr 20	LLA	Z	iPc	14 23 55.7
	PRS	Z	iPd	14 23 57.3
	SAO	Z	iPc	14 23 58.4
	PRI	Z	iPd	14 24 02.5
		Z	iS	14 24 12.9
	GCC	Z	iPd	14 24 07.8
	MHC	Z	iPd	14 24 09.7
		Z	iS	14 24 23.6
	FRI	Z	iPc	14 24 13.5
		Z	iS	14 24 30.3
	BKS	Z	eP	14 24 19.4
	CMB	Z	iPc	14 24 20.5
BRK 14h23m51.9s 36.5N 121.1W				
h=7km ML=2.9(4)				
Bear Valley, 44 km SE of Hollister, CA				
Apr 21	SAO	Z	iPd	02 01 11.7
	GCC	Z	iPc	02 01 16.7
	PRS	Z	iPd	02 01 19.25
	MHC	Z	iPd	02 01 19.9
		Z	iS	02 01 27.8
	LLA	Z	iPc	02 01 20.1
	PRI	Z	ePd	02 01 28.0
		Z	iPc	02 01 28.6
	BKS	Z	ePc	02 01 30.0
		Z	eS	02 01 48.3
	BRK	Z	ePd	02 01 30.8
		Z	iS	02 01 48.0
	ZSP	Z	iPd	02 01 31.0
		Z	iPc	02 01 33.3
		Z	iS	02 01 51.8
	FRI	Z	ePc	02 01 34.7
		Z	iPd	02 01 36.2
		Z	iS	02 01 55.3
	CMB	Z	eP	02 01 35.7
		Z	iS	02 01 38.8
		Z	iPc	02 01 42.8
		Z	iS	02 01 54.8
		Z	iS	02 01 56.6
	ORV	Z	eP	02 01 53.6

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DATE	STA	CMP	PHASE	TIME (UTC)
	MNA	Z	e	02 02 00.0
	MIN	Z	e	02 02 09.7
BRK 02h01m09.3s 36.8N 121.6W				
h=5km ML=3.1(5)				
17 km WSW of Hollister, CA				
Apr 21	MHC	Z	iPc	15 00 34.4
	GCC	Z	iPd	15 00 40.3
	SAO	Z	iPd	15 00 44.7
	BRK	Z	iPc	15 00 45.5
		Z	iS	15 00 56.8
		Z	i	15 00 57.3
	BKS	Z	ePc	15 00 45.5
		Z	iS	15 00 58.2
	ZSP	Z	iPc	15 00 47.0
		Z	iS	15 00 59.6
	LLA	Z	ePd	15 00 49.8
	PRS	Z	ePc	15 00 51.7
	CMB	Z	iPc	15 00 55.3
		Z	i	15 01 09.0
		Z	iS	15 01 11.3
	PRI	Z	ePc	15 00 58.0
	FRI	Z	iPc	15 01 00.5
		Z	iS	15 01 20.6
	ORV	Z	e	15 01 08.7
		Z	i	15 01 11.0
	MIN	Z	e	15 01 22.2
	MNA	Z	ePd	15 01 26.4
		Z	e	15 01 28.7
BRK 15h00m32.4s 37.3N 121.7W				
h=5km ML=3.1(4) Mo=3.9E20(2)				
Halls Valley, 12 km E of San Jose, CA				
Apr 21	FHC	Z	eP	18 38 00.7
	WDC	Z	ePd	18 38 07.0
	MIN	Z	ePd	18 38 11.3
	ORV	Z	ePd	18 38 14.6
	BRK	Z	eP	18 38 18.3
	BKS	Z	ePd	18 38 18.5
			AMP(μm)	PER(s)
		PZ	0.10	0.8
	GCC	Z	ePd	18 38 22.7
	MHC	Z	eP	18 38 23.2
	CMB	Z	ePd	18 38 25.9
	LLA	Z	eP	18 38 28.2
	PRS	Z	eP	18 38 29.2
	PRI	Z	ePd	18 38 32.4
	FRI	Z	eP	18 38 32.5
	MNA	Z	ePd	18 38 33.9
USGS 18h27m58.0s 44.3N 152.2E				
h=26km mb=5.4 Ms=5.0				
Kurile Islands Region				
Apr 22	MNA	Z	ePc	04 12 52.4
	FRI	Z	ePc	04 12 58.1
	CMB	Z	ePc	04 13 04.4
	LLA	Z	ePc	04 13 06.5
	PRS	Z	ePc	04 13 08.6
	SAO	Z	eP	04 13 09.4
	ORV	Z	ePc	04 13 11.4
	MHC	Z	ePc	04 13 11.8
	MIN	Z	eP	04 13 12.0
	GCC	Z	ePc	04 13 13.0
	BKS	Z	ePc	04 13 14.9
			AMP(μm)	PER(s)
		PZ	0.042	0.7
	BRK	Z	eP	04 13 15.0
	WDC	Z	ePc	04 13 15.2
	PCC	Z	ePc	04 13 15.5
	FHC	Z	ePd	04 13 26.7
USGS 04h03m34.8s 17.1N 61.5W				
h=60km mb=5.0				
Leeward Islands				
Apr 22	ORV	Z	eP	15 27 18.2
	CMB	Z	eP	15 27 24.2
	FRI	Z	eP	15 27 28.5
	MNA	Z	eP	15 27 32.8
USGS 15h14m43.0s 18.4N 145.8E				
h=143km mb=4.2				
Mariana Islands				
Apr 23	MHC	Z	e(P)	04 26 12.8
		Z	epP	04 26 29.8
	FRI	Z	eP	04 26 17.0
		Z	epP	04 26 33.8
	CMB	Z	eP	04 26 18.2
		Z	epP	04 26 35.3
	WDC	Z	eP	04 26 21.0
		Z	epP	04 26 38.0
	MIN	Z	eP	04 26 22.0
		Z	e(pP)	04 26 40.8
USGS 04h13m37.9s 30.9S 178.0W				
h=60km mb=5.2				
Kermadec Islands				
Apr 24	FRI	Z	eP	07 40 35.2
	CMB	Z	eP	07 40 36.2
	ORV	Z	eP	07 40 37.2
	WDC	Z	eP	07 40 37.5
	MIN	Z	e(P)	07 40 39.3
	MNA	Z	eP	07 40 44.4
USGS 07h29m21.9s 21.6S 179.8W				
h=629km mb=4.5				
Fiji Islands Region				
Apr 24	FHC	Z	ePc	16 06 55.7
	WDC	Z	ePc	16 07 08.3
		Z	e	16 07 30.4
	MIN	Z	eP	16 07 13.5
		Z	e	16 07 35.8
	ORV	Z	ePc	16 07 17.4
		Z	e	16 07 39.7
	BRK	Z	ePc	16 07 22.7
	MHC	Z	ePc	16 07 28.5
	GCC	Z	e(P)	16 07 29.0
	CMB	Z	ePc	16 07 31.2
		Z	e	16 07 43.2
	PRS	Z	eP	16 07 34.6
	LLA	Z	e(P)	16 07 35.3
	FRI	Z	ePc	16 07 39.4
	MNA	Z	ePc	16 07 39.9
	PRI	Z	ePc	16 07 40.3
USGS 15h59m11.3s 51.8N 175.9E				
h=33km mb=5.0 Ms=4.5				
Rat Islands, Aleutian Islands				
Apr 24	FHC	Z	ePc	20 16 34.0
		Z	epP	20 16 47.8
	WDC	Z	iPc	20 16 38.1
		Z	e	20 16 43.2
		Z	ipP	20 16 51.5
	MIN	Z	e(P)	20 16 39.8
		Z	epP	20 16 53.5
	ORV	Z	ePc	20 16 43.3
		Z	epP	20 16 56.7
	BRK	Z	ePc	20 16 46.0
	BKS	Z	ePd	20 16 46.9
	MHC	Z	ePc	20 16 49.3
		Z	e	20 16 54.3
		Z	epP	20 17 02.8
	CMB	Z	ePc	20 16 51.2
		Z	e	20 16 56.2
		Z	ipP	20 17 04.5
	PRS	Z	eP	20 16 52.7
		Z	epP	20 17 05.8
	LLA	Z	ePc	20 16 53.3
		Z	e	20 16 58.2
		Z	epP	20 17 06.7
	FRI	Z	ePc	20 16 55.5
		Z	ipP	20 17 09.0
	PRI	Z	ePc	20 16 55.9
		Z	e	20 17 00.7
		Z	epP	20 17 09.2
	MNA	Z	ePc	20 16 56.9
		Z	e	20 17 01.9
		Z	epP	20 17 10.4
USGS 20h03m29.2s 23.5N 121.9E				
h=43km mb=5.5 Ms=5.5				
Taiwan				
Apr 25	PRS	Z	ePd	01 31 29.2
		Z	e	01 31 51.9
	GCC	Z	ePd	01 31 29.3
		Z	e	01 31 51.9
	PCC	Z	ePd	01 31 29.3
	BKS	Z	ePd	01 31 30.4
		Z	e	01 31 52.5
		Z	e	01 32 09.1
			AMP(μm)	PER(s)
		PZ	0.048	1.
	PRI	Z	ePd	01 31 31.2
	BRK	Z	ePd	01 31 31.4
		Z	e	01 31 53.3
	MHC	Z	ePd	01 31 32.0
	FRI	Z	ePd	01 31 36.4
		Z	e	01 31 59.3
	FHC	Z	ePd	01 31 36.8
	CMB	Z	ePd	01 31 38.7
		Z	e	01 31 59.4
	ORV	Z	ePd	01 31 39.1
	WDC	Z	ePd	01 31 39.7
		Z	e	01 32 01.8
	MIN	Z	eP	01 31 41.4
	MNA	Z	ePd	01 31 46.5
		Z	e	01 32 08.7
USGS 01h19m29.5s 23.9S 176.9W				
h=84km mb=5.5				
South of Fiji Islands				
Apr 25	FRI	Z	ePKPc	06 30 27.3
		Z	ePKPPKP	06 49 07.2
	PRI	Z	ePKPc	06 30 28.1
		Z	ePKPPKP	06 49 08.2
	PRS	Z	ePKPc	06 30 28.5
		Z	ePKPPKPc	06 49 08.7
	LLA	Z	ePKPc	06 30 28.6
		Z	ePKPPKP	06 49 09.5
	MNA	Z	ePKPc	06 30 28.7
		Z	ePKPPKPc	06 49 08.7
	GCC	Z	ePKPc	06 30 29.6
	CMB	Z	ePKPc	06 30 30.0
		Z	ePKPPKPc	06 49 09.9
	MHC	Z	ePKPc	06 30 30.7
		Z	ePKPPKPc	06 49 10.8
	PCC	Z	ePKP	06 30 30.9
		Z	ePKPPKP	06 49 11.4
	BRK	Z	ePKPc	06 30 31.5
		Z	ePKPPKP	06 49 11.5
	BKS	Z	ePKPd	06 30 32.0
		Z	ePKPPKPd	06 49 11.9
			AMP(μm)	PER(s)
		PKPZ	0.044	0.7
		PKPZ	0.056	0.7
	ORV	Z	ePKP	06 30 33.2
		Z	ePKPPKP	06 49 13.3
	MIN	Z	ePKPc	06 30 33.7
		Z	ePKPPKP	06 49 13.4
	WDC	Z	ePKPc	06 30 34.8
		Z	ePKPPKPc	06 49 14.8
USGS 06h11m33.8s 58.7S 25.3W				
h=33km mb=5.4 Ms=4.3				
South Sandwich Islands Region				
Apr 25	FHC	Z	ePd	10 23 12.0
		Z	e	10 26 28.2
	PCC	Z	ePd	10 23 13.2
	BKS	Z	iPd	10 23 14.2
		Z	e	10 23 29.5
		Z	eS	10 23 38.4
			AMP(μm)	PER(s)
		PZ	1.1	1.5
		LZ	3.9	20.
		LN	2.5	20.
		LE	3.4	20.
	BRK	Z	iPd	10 23 14.5
		Z	e	10 23 29.4
	GCC	Z	ePd	10 23 14.7
	WDC	Z	iPd	10 23 16.0
		Z	e	10 25 18.2
		Z	e	10 26 36.0
	PRS	Z	ePd	10 23 16.6
	MHC	Z	ePd	10 23 16.6
	LLA	Z	ePd	10 23 18.5
	ORV	Z	iPd	10 23 18.7
	MIN	Z	ePd	10 23 18.8
	PRI	Z	iPd	10 23 19.7
		Z	e	10 23 33.0
	CMB	Z	iPd	10 23 21.4
		Z	i	10 23 36.9
		Z	e	10 24 24.5
		Z	e	10 24 58.1
		Z	e	10 26 42.2
		Z	ePP	10 27 03.8
		Z	e	10 28 17.8
	FRI	Z	iPd	10 23 23.0
		Z	i	10 23 38.1
	MNA	Z	iPd	10 23 30.5
		Z	i	10 23 45.7
		Z	e	10 27 08.3
BRK Ms=5.8 Distance=86°				
USGS 10h10m33.8s 7.8S 158.3E				
h=44km mb=6.1 Ms=6.0				
Solomon Islands				
Apr 25	FHC	Z	ePd	19 06 18.5
	GCC	Z	ePd	19 06 21.2
	WDC	Z	ePd	19 06 22.7
	PRS	Z	ePd	19 06 23.1
	MHC	Z	eP	19 06 23.1
	LLA	Z	ePd	19 06 25.0
	ORV	Z	ePd	19 06 25.3
	PRI	Z	ePd	19 06 26.0
	CMB	Z	ePd	19 06 28.0
	FRI	Z	ePd	19 06 29.6
	MNA	Z	ePd	19 06 36.8
USGS 18h53m42.3s 7.8S 158.3E				
h=55km mb=4.8 Ms=4.6				
Solomon Islands				
Apr 25	WDC	Z	e(P)	20 19 15.0
	CMB	Z	e	20 19 17.6
	MNA	Z	ePc	20 19 25.1
USGS 20h09m24.8s 78.6N 6.1E				
h=10km mb=4.8 Ms=4.4				
Svalbard Region				
Apr 26	MIN	Z	ePc	01 06 43.2
	MNA	Z	ePc	01 06 44.6
	ORV	Z	ePc	01 06 45.9
	CMB	Z	eP	01 06 51.2
	FRI	Z	ePc	01 06 53.3
	WDC	Z	e	01 06 54.9
USGS 00h53m44.8s 42.4N 16.6E				
h=14km mb=5.1 Ms=5.4				
Adriatic Sea				
Apr 26	PRI	Z	iPc	01 46 56.9
	FRI	Z	iPd	01 46 58.7
	PRS	Z	ePd	01 47 03.0
	LLA	Z	ePc	01 47 03.1
	MNA	Z	iPd	01 47 05.3
	SAO	Z	ePd	01 47 08.1
	CMB	Z	ePd	01 47 12.3
	GCC	Z	ePd	01 47 12.7
	MHC	Z	ePd	01 47 13.6
	BKS	Z	ePd	01 47 21.7
		Z	iS	01 51 00.0
			AMP(μm)	PER(s)
		PZ	0.26	1.5
	PCC	Z	ePd	01 47 22.3
	BRK	Z	e(P)	01 47 22.8
			AMP(μm)	PER(s)
		LZ	13	20.
	ORV	Z	ePd	01 47 31.9
	MIN	Z	ePd	01 47 39.5
	WDC	Z	ePd	01 47 44.0
	FHC	Z	e(P)	01 47 55.3
BRK Ms=5.2 Distance=19°				
USGS 01h42m55.6s 22.9N 108.0W				
h=10km mb=5.4 Ms=5.1				
Off Coast of Central Mexico				
Apr 26	FHC	Z	iPc	01 52 17.2
		Z	eScP	01 59 59.4
	WDC	Z	iPc	01 52 24.9
		Z	iPP	01 53 11.5
		Z	ePcP	01 56 32.7
		Z	eScP	02 00 00.2
	MIN	Z	iPc	01 52 30.6
		Z	eScP	02 00 01.9
	ORV	Z	iPc	01 52 37.1
	BRK	Z	iPc	01 52 49.8
	BKS	Z	iPc	01 52 49.9
		Z	e	01 53 23.5
			AMP(μm)	PER(s)
		PZ	2.6	1.6
	PCC	Z	iPc	01 52 51.7
	CMB	Z	iPc	01 52 54.6
		Z	i	01 53 16.6
		Z	eScP	02 00 08.5
	MHC	Z	iPc	01 52 56.1
			AMP(μm)	PER(s)
		LZ	10	20.
		LR	8.5	20.
		LT	9.7	20.
	GCC	Z	ePc	01 52 57.4
	MNA	Z	iPc	01 52 59.9
		Z	eScP	02 00 11.2
	SAO	Z	e(P)	01 53 01.4
	LLA	Z	iPc	01 53 04.7
	PRS	Z	ePc	01 53 05.2
	FRI	Z	iPc	01 53 05.3
		Z	eScP	02 00 12.2
	PRI	Z	iPc	01 53 09.9
BRK Ms=5.4 Distance=22°				
USGS 01h47m35.0s 57.5N 143.1W				
h=10km mb=5.4 Ms=5.6				
Gulf of Alaska				
Apr 26	MHC	Z	iPc	05 34 37.7
		Z	iS	05 34 42.1
	BRK	Z	iPc	05 34 42.4
		Z	iS	05 34 50.6
	BKS	Z	iPgc	05 34 42.5
		Z	iPnd	05 34 44.8
		Z	iSg	05 34 50.2
		N	iS*	05 34 50.7
	PCC	Z	ePc	05 34 42.9
		Z	iS	05 34 51.9
	GCC	Z	ePd	05 34 44.1
		Z	i	05 34 45.2
		Z	iS	05 34 55.1
	SAO	Z	iPd	05 34 48.8
	CMB	Z	ePc	05 34 51.9
		Z	e	05 34 53.7
		Z	iS	05 35 07.3
	LLA	Z	ePc	05 34 53.6
	PRS	Z	ePd	05 34 55.4
	FRI	Z	ePc	05 35 01.1
		Z	iS	05 35 23.5
	PRI	Z	e(P)	05 35 02.8
	ORV	Z	e(P)	05 35 04.6
		Z	i	05 35 29.5
	MIN	Z	e(P)	05 35 17.3
BRK 05h34m32.2s 37.6N 121.7W				
h=6km ML=2.6(4) Mo=1.7E20(2)				
12 km SE of Livermore, CA				
Apr 26	WDC	Z	ePd	11 53 56.2
	MIN	Z	e(P)	11 53 58.2
	ORV	Z	eP	11 54 01.6
	CMB	Z	ePd	11 54 08.8
	MHC	Z	e(P)	11 54 12.0
	PRI	Z	e(P)	11 54 13.5
	FRI	Z	eP	11 54 14.3
	MNA	Z	eP	11 54 16.4
USGS 11h42m02.5s 25.6N 142.7E				
h=33km mb=4.8				
Volcano Islands Region				
Apr 26	WDC	Z	eP	22 19 42
	ORV	Z	e(P)	22 19 52
	CMB	Z	eP	22 20 05
	MNA	Z	e(P)	22 20 13
	PRI	Z	e(P)	22 20 13
	FRI	Z	e(P)	22 20 13
USGS 22h11m40.2s 51.5N 175.0E				
h=33km mb=4.7				
Rat Islands, Aleutian Islands				
Apr 27	CMB	Z	iPc	06 56 56.2
	FRI	Z	ePc	06 57 00.3
	MNA	Z	iPc	06 57 04.6
USGS 06h45m00.4s 19.0N 145.1E				
h=229km mb=4.1				
Mariana Islands				
Apr 27	MNA	Z	ePd	19 24 22.8
	FRI	Z	e(P)	19 24 24.2
	PRI	Z	e(P)	19 24 24.5
	LLA	Z	ePd	19 24 26.9
		Z	e	19 24 33.4
	PRS	Z	ePd	19 24 27.4
		Z	e	19 24 33.8
	CMB	Z	ePd	19 24 29.2
	MHC	Z	eP	19 24 31.8
	PCC	Z	ePd	19 24 36.5
	BRK	Z	e(P)	19 24 36.9
	ORV	Z	ePd	19 24 38.3
		Z	e	19 24 44.8

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DATE	STA	CMP	PHASE	TIME (UTC)
	MIN	Z	ePd	19 24 39.6
	WDC	Z	ePd	19 24 43.2
		Z	e	19 24 48.8
	FHC	Z	ePd	19 24 50.3
USGS 19h12m31.9s 18.5S 63.5W				
h=20km mb=4.8				
Bolivia				
Apr 27	GCC	Z	ePc	21 33 20.4
	PRS	Z	ePc	21 33 20.5
	PCC	Z	ePc	21 33 20.9
	BRK	Z	ePc	21 33 21.2
	PRI	Z	ePc	21 33 22.4
	MHC	Z	ePc	21 33 23.0
	FHC	Z	e(P)	21 33 23.9
	LLA	Z	e(P)	21 33 24.8
	FRI	Z	ePc	21 33 27.2
	CMB	Z	ePc	21 33 28.2
	ORV	Z	ePc	21 33 29.5
	WDC	Z	iPc	21 33 30.0
	MIN	Z	e(P)	21 33 32.4
	MNA	Z	ePc	21 33 36.3
USGS 21h21m47.8s 25.2S 179.6E				
h=494km mb=5.0				
South of Fiji Islands				
Apr 27	FRI	Z	e	23 45 43.4
	MHC	Z	e	23 46 03.0
	CMB	Z	e	23 46 07.5
	MNA	Z	e	23 46 14.2
	WDC	Z	e	23 46 28.7
USGS 23h41m19.7s 30.2N 114.1W				
h=10km mb=3.7				
Gulf of California				
Apr 28	FHC	Z	ePc	00 55 28.7
	WDC	Z	ePc	00 55 34.1
	MIN	Z	ePc	00 55 39.9
	CMB	Z	e(P)	00 56 04.5
	MNA	Z	ePc	00 56 10.2
	MHC	Z	e(P)	00 56 14.3
	FRI	Z	ePc	00 56 14.9
	PRI	Z	ePc	00 56 19.3
USGS 00h50m47.2s 57.0N 143.4W				
h=10km mb=4.3				
Gulf of Alaska				
Apr 28	PCC	Z	ePc	22 51 56.5
	GCC	Z	eP	22 51 56.7
	PRS	Z	ePc	22 51 57.2
		Z	epP	22 54 07.0
	SAO	Z	eP	22 51 57.5
	BRK	Z	eP	22 51 58.3
		Z	e(pP)	22 54 08.6
	BKS	Z	ePc	22 51 58.8
			AMP(μm)	PER(s)
		PZ	0.19	1.2
	PRI	Z	ePc	22 51 59.2
	MHC	Z	ePc	22 51 59.4
		Z	epP	22 54 09.5
	FRI	Z	ePc	22 52 04.6
		Z	epP	22 54 14.8
	WDC	Z	ePc	22 52 05.9
		Z	epP	22 54 16.6
	ORV	Z	ePc	22 52 06.0
		Z	epP	22 54 16.5
	MIN	Z	ePc	22 52 07.5
	MNA	Z	ePc	22 52 14.7
		Z	epP	22 54 25.9
USGS 22h41m08.8s 18.0S 178.5W				
h=628km mb=5.3				
Fiji Islands Region				

DATE	STA	CMP	PHASE	TIME (UTC)
Apr 29	PRI	Z	eP	17 34 46.1
		Z	epP	17 34 52.8
	FRI	Z	eP	17 34 48.8
		Z	epP	17 34 55.2
	PRS	Z	eP	17 34 49.7
	MNA	Z	eP	17 34 56.9
	MHC	Z	eP	17 34 57.5
		Z	epP	17 35 04.2
	ORV	Z	eP	17 35 13.0
		Z	epP	17 35 20.0
	WDC	Z	eP	17 35 21.1
		Z	epP	17 35 27.9
	FHC	Z	e(P)	17 35 28.5
	BKS	Z	eS	17 41 47
		T	eLq	17 45 19
		Z	eL	17 46 48
		Z	eLr	17 47 32
			AMP(μm)	PER(s)
		LZ	7.8	20.
		LNE	5.3	20.
		LNW	4.7	20.
BRK Ms=5.6 Distance=46°				
USGS 17h26m47.0s 3.9S 103.8W				
h=20km mb=5.3 Ms=5.1				
Northern Easter I. Cordillera				
Apr 30	SAO	Z	iPd	21 30 28.2
	LLA	Z	eP	21 30 32.1
	PRS	Z	iPd	21 30 33.1
	GCC	Z	eP	21 30 37.5
	MHC	Z	eP	21 30 39.8
	PRI	Z	e(P)	21 30 41.0
		Z	e	21 30 42.1
	PCC	Z	ePd	21 30 46.5
	FRI	Z	iPc	21 30 50.9
		Z	eS	21 31 08.0
	ZSP	Z	eP	21 30 51.2
	BKS	Z	e(P)	21 30 52.5
BRK 21h30m26.0s 36.7N 121.4W				
h=3km ML=2.6(4)				
Stone Canyon area, 18 km SSE of Hollister, CA				
Apr 30	FOX		iPd	23 51 16.4
	EKR		iPd	23 51 16.5
			i(S)	23 51 22.6
	FHC	Z	iPd	23 51 18.9
		Z	iS	23 51 25.0
	ARC	N	ePc	23 51 19.4
		N	iS	23 51 27.7
	WDC	Z	ePc	23 51 31.5
	MIN	Z	iPc	23 51 41.9
	ORV	Z	iPc	23 51 45.4
		Z	eS	23 52 05.7
	PCC	Z	eP	23 51 58.8
	GCC	Z	e(P)	23 52 06.4
	SAO	Z	e(P)	23 52 14
BRK 23h51m09.0s 40.4N 124.4W				
h=18km ML=3.7(2) Mo=3.2E21(2)				
Cape Mendocino, CA				
May 1	WDC	Z	eP	05 59 39.3
		Z	e	06 00 08.5
	MIN	Z	eP	05 59 42.5
	ORV	Z	eP	05 59 44.2
		Z	e	06 00 13.1
	PRI	Z	e(P)	05 59 54.7
	FRI	Z	eP	05 59 55.2
		Z	e	06 00 25.4
	MNA	Z	ePd	05 59 59.5
		Z	e	06 00 28.9

DATE	STA	CMP	PHASE	TIME (UTC)
USGS 05h47m42.3s 18.2N 145.7E				
h=114km mb=5.1				
Mariana Islands				
May 1	WDC	Z	eP	10 16 14.5
		Z	e	10 16 29.7
	MIN	Z	eP	10 16 19.0
		Z	e	10 16 34.5
	ORV	Z	eP	10 16 22.8
		Z	e	10 16 38.0
	MNA	Z	eP	10 16 43.0
		Z	e	10 16 59.7
USGS 10h06m47.5s 49.2N 157.6E				
h=50km mb=5.1				
Kurile Islands Region				
May 1	FRI	Z	ePKPc	23 25 10.3
		Z	e	23 28 14.0
		Z	e	23 28 34.8
		Z	e	23 29 56.2
		Z	e	23 30 52.8
	PRI	Z	ePKP	23 25 11.1
		Z	e	23 28 36.3
	MNA	Z	ePKPc	23 25 11.4
		Z	e	23 28 35.8
	PRS	Z	ePKP	23 25 11.5
		Z	e	23 28 36.9
	LLA	Z	ePKP	23 25 11.9
		Z	e	23 28 37.0
	GCC	Z	ePKP	23 25 12.6
		Z	e	23 28 37.5
	PCC	Z	e(PKP)	23 25 12.9
	BRK	Z	ePKP	23 25 13.6
		Z	e	23 28 39.0
	BKS	Z	ePKP	23 25 14.9
		Z	e	23 25 41.5
		Z	e	23 28 38.5
		Z	ePSPS	23 44 16
		E	eSSS	23 48 20
		Z	eL	00 06 20
	ORV	Z	ePKPc	23 25 16.2
		Z	e	23 28 42.8
	MIN	Z	ePKP	23 25 16.8
		Z	e	23 28 21.8
		Z	e	23 28 41.0
	WDC	Z	ePKPc	23 25 17.7
		Z	e	23 25 43.7
		Z	e	23 25 55.5
		Z	e	23 28 20.5
		Z	e	23 28 31.9
		Z	e	23 28 43.2
		Z	e	23 29 52.6
USGS 23h06m33.6s 55.9S 27.7W				
h=137km mb=5.9				
South Sandwich Islands Region				
May 2	SAO	Z	iPc	19 23 30.6
	LLA	Z	iPc	19 23 34.5
	PRS	Z	iPd	19 23 34.7
	GCC	Z	iPd	19 23 40.0
	MHC	Z	iPd	19 23 42.3
	PRI	Z	iPd	19 23 42.4
		Z	i	19 23 43.6
	PCC	Z	iPd	19 23 49.2
	FRI	Z	iPc	19 23 51.8
		Z	iS	19 24 09.1
	BRK	Z	ePc	19 23 52.8
	BKS	Z	iPd	19 23 53.1
		Z	e	19 23 55.2
	ZSP	Z	ePd	19 23 53.5
		Z	i	19 24 18.9
	ORV	Z	ePc	19 24 14.7

DATE	STA	CMP	PHASE	TIME (UTC)
	MNA	Z	e(P)	19 24 23.1
BRK 19h23m28.0s 36.7N 121.3W				
h=4km ML=3.1(4) Mo=1.9E21(2)				
Stone Canyon area, 22 km SSE of Hollister, CA				
May 3	ORV	Z	ePc	20 38 45.6
	CMB	Z	iPc	20 38 54.1
	MHC	Z	iPc	20 38 56.8
	PRI	Z	ePc	20 38 58.6
	FRI	Z	iPc	20 39 03.7
	MNA	Z	ePc	20 39 04.0
	BKS	Z	ePc	20 39 06.5
			AMP(μm)	PER(s)
		PZ	0.065	1.0
USGS 20h28m19.7s 44.5N 149.3E				
h=38km mb=5.7 Ms=5.0				
Kurile Islands				
May 3	BKS	Z	ePc	23 34 55.5
		Z	e	23 35 25.5
		Z	iS	23 45 24
		E	i	23 45 42
		E	ePS	23 46 40
		E	eSSS	23 54 42
		Z	e	23 55 00
		N	eLq	23 58 00
		Z	eLr	00 02 24
			AMP(μm)	PER(s)
		LZ	3.9	20.
		LN	2.9	20.
		LE	3.6	20.
	PRS	Z	iPc	23 34 56.5
	MHC	Z	iPc	23 34 58.1
	WDC	Z	iPc	23 35 02.8
		Z	i	23 35 09.0
	CMB	Z	iPc	23 35 03.2
		Z	i	23 35 09.3
	FRI	Z	iPc	23 35 03.2
	ORV	Z	ePc	23 35 03.3
		Z	i	23 35 09.3
	MNA	Z	iPc	23 35 11.7
		Z	i	23 35 19.4
BRK Ms=6.0 Distance=89°				
USGS 23h22m07.7s 22.8S 170.3E				
h=10km mb=5.9 Ms=5.8				
Loyalty Islands Region				
May 4	LLA	Z	iPd	00 21 31.6
	SAO	Z	iPd	00 21 39.1
		Z	iS	00 21 48.6
	PRS	Z	iPd	00 21 40.0
	PRI	Z	iPc	00 21 40.1
		Z	iS	00 21 51.0
	FRI	Z	iPd	00 21 43.1
		Z	iS	00 21 54.5
	MHC	Z	iPc	00 21 45.8
		Z	iS	00 22 00.6
	GCC	Z	ePc	00 21 47.0
	CMB	Z	iPd	00 21 51.3
		Z	iS	00 22 09.5
	PCC	Z	iPd	00 21 53.3
	BKS	Z	iPc	00 21 55.5
		Z	e	00 21 59.7
BRK 00h21m27.7s 36.7N 120.7W				
h=7km ML=3.1(4)				
Panoche Mtn., 37 km SSE of Los Banos, CA				
May 4	FHC	Z	iPc	01 09 58.9
	WDC	Z	iPc	01 09 59.9
	MIN	Z	iPc	01 10 01.6

DATE	STA	CMP	PHASE	TIME (UTC)
	ORV	Z	iPc	01 10 05.2
	BRK	Z	iPc	01 10 13.2
	BKS	Z	iPc	01 10 13.3
			AMP(μm)	PER(s)
		PZ	0.13	0.8
	CMB	Z	iPc	01 10 13.7
	MNA	Z	iPc	01 10 14.1
	PCC	Z	iPc	01 10 14.4
	MHC	Z	iPc	01 10 16.3
	GCC	Z	iPc	01 10 16.8
	SAO	Z	iPc	01 10 18.7
	FRI	Z	iPc	01 10 19.0
	LLA	Z	iPc	01 10 20.4
	PRS	Z	iPc	01 10 21.0
	PRI	Z	iPc	01 10 22.9
USGS 00h57m06.8s 49.9N 78.8E				
h=0km mb=6.1				
Eastern Kazakh SSR				
May 4	SAO	Z	eP	07 33 20.2
	BKS	Z	eP	07 33 21.5
			AMP(μm)	PER(s)
		PZ	0.043	1.0
	MHC	Z	iPd	07 33 22.0
	FRI	Z	eP	07 33 26.7
	CMB	Z	iPd	07 33 27.7
	ORV	Z	ePd	07 33 28.5
	WDC	Z	iPd	07 33 28.8
	MIN	Z	eP	07 33 30.6
	MNA	Z	iPd	07 33 36.6
USGS 07h22m19.5s 20.1S 178.4W				
h=579km mb=5.0				
Fiji Islands Region				
May 4	FHC	Z	ePd	23 58 51.8
	WDC	Z	iPd	23 58 57.1
		Z	iPcP	23 59 03.3
		Z	eSKS	00 08 44.5
		Z	i	00 12 21.0
		Z	ePKKP	00 13 34.5
		Z	e	00 13 50.5
		Z	ePKKP	00 17 34.5
		Z	eSKPPKP	00 28 58.1
	MIN	Z	ePd	23 59 00.7
		Z	iPcP	23 59 07.0
		Z	ipP	23 59 37.1
		Z	ipPcP	23 59 42.7
		Z	eSKS	00 09 54.1
	PCC	Z	ePd	23 59 01.6
	BRK	Z	iPd	23 59 02.0
	BKS	Z	iPd	23 59 02.1
		Z	iPcP	23 59 09.1
		Z	epP	23 59 30
		Z	esP	23 59 42.1
		Z	e	00 00 00
		Z	i	00 02 04
		Z	iS	00 08 45
		E	iSKS	00 08 55
		N	e	00 09 26
		Z	i	00 09 40
		E	iPS	00 09 44
		N	isPS	00 10 12
		E	eSS	00 14 15
		Z	e	00 14 34
		N	e	00 15 05
		N	eLq	00 19 00
		N	e	00 20 15
		E	i	00 20 32
		Z	e	00 21 32
		E	eLR	00 22 40
		Z	eLr	00 22 40
		N	i	00 23 55

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		E	eSKPPKP	00 30 35
			AMP(μm)	PER(s)
		PZ	0.74	1.3
		LZ	2.9	20.
		LN	0.0	20.
		LE	2.1	20.
	ORV	Z	iPd	23 59 02.4
	GCC	Z	ePd	23 59 04.2
		Z	ePcP	23 59 10.6
	MHC	Z	iPd	23 59 05.6
		Z	iPcP	23 59 12.3
		Z	epP	23 59 40.5
		Z	epPcP	23 59 47.6
	SAO	Z	eP	23 59 06.5
	PRS	Z	ePd	23 59 08.0
		Z	iPcP	23 59 14.5
		Z	epP	23 59 43.5
	CMB	Z	ePd	23 59 09.2
		Z	iPcP	23 59 15.5
		Z	ipP	23 59 44.0
		Z	ipPcP	23 59 49.2
		Z	isP	00 00 06.1
		Z	isPcP	00 00 10.9
		Z	ePP	00 02 00.6
		Z	i	00 02 07.2
		Z	i	00 03 20.5
		Z	e	00 06 51.4
		Z	iSKS	00 09 12.4
		Z	eS	00 09 18.8
		Z	esSKS	00 10 23.8
		Z	esS	00 10 32.6
		Z	e	00 11 40.4
		Z	ePKKP	00 13 32.9
		Z	e	00 13 40.8
		Z	ePKKP	00 17 32.9
		Z	eSKPPKP	00 28 53.9
	LLA	Z	ePd	23 59 09.5
		Z	iPcP	23 59 16.1
	PRI	Z	ePd	23 59 11.5
	FRI	Z	iPd	23 59 13.4
		Z	iPcP	23 59 19.8
		Z	ipP	23 59 49.0
		Z	epPcP	23 59 54.2
		Z	eSKs	00 09 19.2
		Z	eS	00 09 33
	MNA	Z	iPd	23 59 17.7
		Z	iPcP	23 59 24.3
		Z	ipP	23 59 54.5
		Z	iSKS	00 09 27.6
		Z	eS	00 09 42.7
		Z	eSKPPKP	00 28 51.5
BRK Ms=5.5 Distance=79°				
USGS 23h47m02.4s 18.5N 145.9E				
h=122km mb=5.9				
Mariana Islands				
May 5	FHC	Z	ePc	03 00 40.2
	WDC	Z	iPc	03 00 46.3
	MIN	Z	ePc	03 00 50.5
		Z	e	03 00 56
		Z	e	03 01 05.7
	ORV	Z	ePc	03 00 53.8
	GCC	Z	ePc	03 01 02.0
	MHC	Z	ePc	03 01 02.6
	CMB	Z	ePc	03 01 04.1
		Z	e	03 01 10.7
		Z	e	03 01 18.2
	PRS	Z	ePc	03 01 07.6
	LLA	Z	ePc	03 01 08.5
	FRI	Z	ePc	03 01 11.4
	PRI	Z	ePc	03 01 11.6
	MNA	Z	ePc	03 01 12.5

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		Z	e	03 01 18.2
		Z	e	03 01 27.9
USGS 02h50m30.8s 44.8N 148.8E				
h=77km mb=4.8				
Kurile Islands				
May 5	PRS	Z	ePd	05 27 33.9
	MHC	Z	ePd	05 27 36.4
	PRI	Z	ePd	05 27 36.8
	FRI	Z	eP	05 27 40.8
	CMB	Z	ePd	05 27 42.0
	WDC	Z	ePd	05 27 43.9
	MIN	Z	ePd	05 27 46.9
	MNA	Z	ePd	05 27 49.8
USGS 05h15m47.0s 26.6S 178.6W				
h=341km mb=4.0				
South of Fiji Islands				
May 5	PRS	Z	ePc	08 10 27.1
	BRK	Z	e(P)	08 10 27.8
	SAO	Z	ePc	08 10 28.2
	GCC	Z	e	08 10 30.5
	PRI	Z	ePc	08 10 30.6
		Z	e	08 10 42.2
		Z	e	08 10 50.5
	WDC	Z	ePc	08 10 32.0
	ORV	Z	ePc	08 10 32.9
		Z	e	08 10 45.2
	CMB	Z	ePc	08 10 33.7
		Z	e	08 10 47.1
		Z	e	08 10 53.7
	FRI	Z	ePc	08 10 33.9
		Z	e	08 10 47.4
	MIN	Z	ePc	08 10 34.3
	MNA	Z	ePc	08 10 42.4
		Z	e	08 10 54.5
	BKS	Z	eLr	08 37 20
			AMP(μm)	PER(s)
		LZ	0.89	20.
		LN	0.0	20.
		LE	0.71	20.
USGS 07h57m50.0s 18.2S 168.2E				
h=35km mb=5.2 Ms=5.3				
Vanuatu Islands				
May 5	PRS	Z	ePc	08 24 34.9
	ORV	Z	ePc	08 24 36.3
	CMB	Z	ePc	08 24 37.2
	FRI	Z	eP	08 24 37.4
	MIN	Z	ePc	08 24 37.5
	MNA	Z	e	08 24 46.6
USGS 08h11m52.9s 18.3S 168.2E				
h=27km mb=4.7				
Vanuatu Islands				
May 5	PRI	Z	ePd	10 14 44.1
		Z	e	10 14 49.3
		Z	i	10 14 53.5
	PRS	Z	ePd	10 14 45.4
		Z	i	10 14 50.4
		Z	e	10 14 54.8
	LLA	Z	e(P)	10 14 46.8
		Z	e	10 14 52.5
		Z	e	10 14 56.7
	FRI	Z	ePd	10 14 47.8
		Z	i	10 14 53.0
		Z	i	10 14 57.4
		Z	ePKPPKP	10 43 47.2
	MHC	Z	ePd	10 14 52.6
		Z	e	10 14 57.9
		Z	e	10 15 02.2
		Z	ePKPPKP	10 43 45

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	PCC	Z	ePd	10 14 53.2
	CMB	Z	ePd	10 14 55.8
		Z	i	10 15 01.1
		Z	i	10 15 05.2
		Z	ePKPPKP	10 43 42.1
	BRK	Z	eP	10 14 55.9
		Z	i	10 15 01.1
		Z	e	10 15 05.2
	BKS	Z	eP	10 14 56.0
		Z	i	10 15 00.8
		Z	e	10 15 04.5
		Z	e	10 15 09.4
		Z	ePcP	10 15 31.9
		Z	iPPP	10 18 36
		Z	eS	10 23 36
		NE	e	10 24 16
		E	eScS	10 24 38
		N	eSS	10 27 40
		E	eLq	10 31 16
		Z	e	10 31 40
		Z	iLr	10 34 32
			AMP(μm)	PER(s)
		PZ	0.19	1.2
		LZ	24	20.
		LN	21	20.
		LE	5.4	20.
	MNA	Z	ePd	10 14 57.8
		Z	i	10 15 03.0
		Z	i	10 15 07.4
		Z	ePKPPKP	10 43 43.9
	ORV	Z	ePd	10 15 06.1
		Z	i	10 15 11.7
		Z	i	10 15 15.8
		Z	ePKPPKP	10 43 41.0
	MIN	Z	eP	10 15 10.5
		Z	i	10 15 15.6
		Z	i	10 15 20.0
		Z	ePKPPKP	10 43 39.5
	WDC	Z	iPd	10 15 12.6
		Z	ePKPPKP	10 43 37.0
BRK Ms=6.3 Distance=65°				
USGS 10h04m14.1s 26.9S 113.3W				
h=10km mb=6.1 Ms=6.3				
Easter Island Region				
May 5	FHC	Z	ePc	11 31 03.3
	WDC	Z	eP	11 31 08.5
		Z	i	11 31 58.7
	MIN	Z	ePc	11 31 11.8
		Z	e	11 32 02.2
	PCC	Z	ePc	11 31 13.0
	BRK	Z	e(P)	11 31 13.0
	ORV	Z	ePc	11 31 13.6
		Z	e	11 32 04.1
	MHC	Z	ePc	11 31 16.8
	PRS	Z	ePc	11 31 19.5
		Z	e	11 32 06.6
	CMB	Z	ePc	11 31 20.5
		Z	e	11 32 06.9
	LLA	Z	eP	11 31 20.9
	PRI	Z	ePc	11 31 23.1
	FRI	Z	ePc	11 31 24.5
		Z	e	11 32 12.1
	MNA	Z	iPc	11 31 28.9
		Z	e	11 32 15.8
USGS 11h19m22.2s 19.0N 145.6E				
h=192km mb=4.9				
Mariana Islands				
May 5	PRI	Z	ePc	17 51 25.9
	MNA	Z	ePc	17 51 27.7
	LLA	Z	ePc	17 51 28.2

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	PRS	Z	ePc	17 51 28.5
	CMB	Z	eP	17 51 31.8
	GCC	Z	ePc	17 51 33.0
	MHC	Z	eP	17 51 33.5
	ORV	Z	ePc	17 51 41.7
	MIN	Z	ePc	17 51 43.2
	WDC	Z	ePc	17 51 46.1
USGS 17h39m20.2s 29.4S 71.7W				
h=53km mb=5.4 Ms=5.2				
Near Coast of Central Chile				
May 5	PRI	Z	e(P)c	22 43 21.4
	FRI	Z	eP	22 43 21.7
	PRS	Z	e(P)	22 43 21.9
	MHC	Z	eP	22 43 26.6
	CMB	Z	ePc	22 43 29.7
		Z	ePKPPKP	23 12 20.5
	MNA	Z	ePc	22 43 30.6
	ORV	Z	eP	22 43 39.8
	WDC	Z	ePc	22 43 46.6
		Z	ePKPPKP	23 12 24.8
	BKS	E	eS	22 52 16
		Z	e	22 52 58
		E	e	22 53 16
		E	e	22 55 42
		Z	e	22 55 58
		Z	eSS	22 56 26
		E	eLq	22 59 34
		Z	eLr	23 03 06
			AMP(μm)	PER(s)
		LZ	10	20.
		LN	11	20.
		LE	2.1	20.
BRK Ms=6.1 Distance=66°				
USGS 22h32m49.0s 26.6S 113.7W				
h=10km mb=5.5 Ms=5.9				
Easter Island Region				
May 5	WDC	Z	ePd	23 55 02.6
	CMB	Z	eP	23 55 04.7
	PRI	Z	eP	23 55 05.2
	MNA	Z	ePd	23 55 05.3
USGS 23h35m33.6s 49.9S 115.4E				
h=10km mb=5.6 Ms=5.5				
South of Australia				
May 6	WDC	Z	ePc	05 17 38.2
	MIN	Z	ePc	05 17 41.2
	ORV	Z	eP	05 17 42.1
	BRK	Z	eP	05 17 42.1
	MHC	Z	ePc	05 17 45.3
	CMB	Z	ePc	05 17 49.1
		Z	epP	05 19 06.5
	PRI	Z	e(P)	05 17 50.9
	FRI	Z	ePc	05 17 52.0
	MNA	Z	ePc	05 17 57.1
USGS 05h04m58.3s 11.7N 142.8E				
h=27km mb=5.7 Ms=5.3				
South of Mariana Islands				
May 6	PRI	Z	e(P)	05 59 34.7
	CMB	Z	eP	05 59 40.3
	WDC	Z	eP	05 59 42.3
	MNA	Z	eP	05 59 50.0
USGS 05h47m47.0s 21.1S 174.0W				
h=33km mb=5.2 Ms=5.0				
Tonga Islands				
May 6	MNA	Z	iPd	14 53 40.9
		Z	ePcP	14 55 48.8
		Z	eScP	14 59 28.9
		Z	e	15 03 45.6

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	ePKPPKP	15 27 29.5
	FRI	Z	eP	14 53 41.0
		Z	ePcP	14 55 50.7
		Z	eScP	14 59 26.9
	PRI	Z	eP	14 53 46.5
	LLA	Z	eP	14 53 46.7
		Z	ePcP	14 55 53.3
	PRS	Z	eP	14 53 49.2
		Z	ePcP	14 55 51.8
		Z	eScP	14 59 32.8
	CMB	Z	eP	14 53 49.7
		Z	ePcP	14 55 52.0
		Z	eScP	14 59 33.5
		Z	e	15 03 48.8
		Z	ePKPPKP	15 27 23.5
	SAO	Z	eP	14 53 52.0
		Z	epP	14 54 16.6
		Z	iPcP	14 55 39.3
		Z	epPcP	14 55 53.3
		Z	eS	14 59 57.0
		T	eLq	15 03 51.0
	MHC	Z	eP	14 53 54.9
		Z	epP	14 54 20.8
		T	esP	14 54 33.4
		Z	ePcP	14 55 46.0
		Z	eScP	14 59 45.3
		T	eS	15 00 01.5
		R	eLq	15 03 53.2
	GCC	Z	eP	14 53 55.2
	BKS	Z	eP	14 53 59.7
		Z	ipP	14 54 22.9
		Z	e	14 54 37.3
		Z	esP	14 54 43.5
		Z	e	14 54 51.8
		Z	iPcP	14 55 55.1
		Z	iScP	14 59 38.3
		N	iS	15 00 13
		N	isS	15 00 46
		T	e	15 01 00.8
		N	i	15 01 30
		R	eLq	15 01 56.4
		E	iScS	15 03 57
		NE	eLq	15 04 11
		Z	eLr	15 06 56
			AMP(μm)	PER(s)
		PZ	0.31	0.8
		LZ	11	20.
		LNE	13	20.
		LNW	14	20.
	BRK	Z	e(P)	14 54 00.0
	ORV	Z	eP	14 54 02.8
		Z	eScP	14 59 39.2
	MIN	Z	eP	14 54 05.7
	WDC	Z	eP	14 54 10.7
		Z	eScP	14 59 43.2
	FHC	Z	eP	14 54 21.2
BRK Ms=6.0 Distance=41°				
USGS 14h46m17.0s 11.5N 85.9W				
h=86km mb=5.7				
Nicaragua				
May 6	FRI	Z	eP	16 44 39.7
		Z	epP	16 44 55.3
		Z	ePKPPKP	17 11 28.2
	PRI	Z	eP	16 44 41.3
		Z	epP	16 44 55.7
	MNA	Z	iPc	16 44 42.0
		Z	epP	16 44 56.4
		Z	ePKPPKP	17 11 31.3
	LLA	Z	eP	16 44 44.5
		Z	epP	16 44 58.5
	PRS	Z	eP	16 44 45.0

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		Z	epP	16 44 59.3
	CMB	Z	iPc	16 44 48.1
		Z	epP	16 45 02.3
		Z	ePKPPKP	17 11 20.5
	GCC	Z	eP	16 44 50.1
	MHC	Z	ePc	16 44 50.8
		Z	epP	16 45 04.0
	BKS	Z	iPc	16 44 54.9
		Z	e	16 45 06.2
		NW	e	16 56 26
			AMP(μm)	PER(s)
		PZ	0.11	0.8
	BRK	Z	eP	16 44 55.0
		Z	epP	16 45 09.1
	ORV	Z	eP	16 44 59.4
		Z	epP	16 45 13.6
	MIN	Z	eP	16 45 01.5
	WDC	Z	iPc	16 45 04.9
		Z	epP	16 45 19.4
		Z	ePKPPKP	17 11 17.0
	FHC	Z	eP	16 45 13.3
		Z	epP	16 45 27.9
USGS 16h34m05.6s 13.4S 76.2W				
h=50km mb=5.9				
Near Coast of Peru				
May 6	FRI	Z	e(P)	18 18 17.8
	MNA	Z	e(P)	18 18 25.5
	CMB	Z	e(P)	18 18 29.2
USGS 18h13m06.5s 17.5N 102.2W				
h=77km mb=4.4				
Near Coast of Michoacan, Mexico				
May 6	PRS	Z	eP	19 27 41.2
	PRI	Z	eP	19 27 43.5
	MHC	Z	eP	19 27 44.5
	FRI	Z	eP	19 27 47.4
	CMB	Z	eP	19 27 49.2
		Z	e	19 28 51.6
	ORV	Z	eP	19 27 51.5
	WDC	Z	eP	19 27 52.0
		Z	e	19 28 49.0
	MIN	Z	eP	19 27 53.0
	BKS	Z	e(P)	19 27 58.0
		N	i	19 38 21
		E	eSS	19 45 20
		NW	e	19 50 48
		E	eLq	19 51 18
		Z	e	19 55 14
		Z	eLr	19 56 24
			AMP(μm)	PER(s)
		PZ	0.025	1.3
		LZ	7.9	20.
		LN	6.9	20.
		LE	6.4	20.
BRK Ms=6.2 Distance=91°				
USGS 19h14m57.2s 33.0S 178.8W				
h=44km mb=5.6 Ms=5.8				
South of Kermadec Islands				
May 7	WDC	Z	eP	01 05 00.2
	CMB	Z	eP	01 05 02.5
	MNA	Z	eP	01 05 10.8
	FRI	Z	eP	01 05 14.6
USGS 00h54m13.0s 43.3N 147.9E				
h=25km mb=5.4 Ms=5.0				
Kurile Islands				
May 7	WDC	Z	eP	01 32 51.0
	CMB	Z	eP	01 33 04.3
	FRI	Z	e(P)	01 33 10.2
USGS 01h22m17.6s 43.4N 147.8E				

DATE	STA	CMP	PHASE	TIME (UTC)
h=41km mb=5.3 Ms=4.5				
Kurile Islands				
May 7	FHC	Z	iPc	02 10 04.1
	WDC	Z	iPc	02 10 09.6
	MIN	Z	iPc	02 10 13.8
	ORV	Z	iPc	02 10 17.0
	BRK	Z	ePc	02 10 20.9
	BKS	Z	iPc	02 10 20.9
		Z	iPcP	02 10 34.3
		Z	e	02 10 43.6
		Z	i	02 11 01.6
		N	iS	02 19 18
		E	i	02 20 14
		NW	eLr	02 30 50
			AMP(μm)	PER(s)
		PZ	0.46	1.4
	PCC	Z	eP	02 10 21.4
	GCC	Z	ePc	02 10 24.9
	MHC	Z	iPc	02 10 25.5
	CMB	Z	iPc	02 10 27.7
		Z	ePcP	02 10 47.7
		Z	e	02 18 30
	SAO	Z	eP	02 10 27.8
	PRS	Z	iPc	02 10 30.2
	LLA	Z	ePc	02 10 31.1
	FRI	Z	iPc	02 10 33.9
		Z	ePcP	02 10 47.5
	PRI	Z	iPc	02 10 34.2
	MNA	Z	iPc	02 10 35.0
		Z	ePcP	02 10 47.6
USGS 01h59m26.2s 42.6N 143.8E				
h=72km mb=6.1				
Hokkaido, Japan, Region				
May 7	SAO	Z	iPd	09 07 54.0
	LLA	Z	iPc	09 07 58.8
	PRS	Z	iPc	09 07 58.9
	GCC	Z	eP	09 08 03.3
	MHC	Z	ePd	09 08 05.7
	PRI	Z	ePd	09 08 06.7
	PCC	Z	eP	09 08 12.3
	FRI	Z	eP	09 08 15.9
		Z	iS	09 08 34.0
	BRK	Z	eP	09 08 15.9
	ZSP	Z	eP	09 08 17.2
	BKS	Z	iPd	09 08 18.4
		Z	i(S)	09 08 40.1
	CMB	Z	eP	09 08 19.0
		Z	iS	09 08 38.4
BRK 09h07m51.8s 36.7N 121.4W				
h=3km ML=2.8(4)				
Stone Canyon, 19 km S of Hollister, CA				
May 7	SAO	Z	iPc	14 15 39.5
	LLA	Z	iPc	14 15 44.1
	PRS	Z	iPd	14 15 44.2
	GCC	Z	eP	14 15 48.7
	MHC	Z	ePd	14 15 51.2
	PRI	Z	eP	14 15 52.2
	PCC	Z	iPd	14 15 58.2
	BRK	Z	eP	14 16 00.8
	FRI	Z	eP	14 16 01.0
		Z	eS	14 16 20.2
	ZSP	Z	eP	14 16 02.4
	BKS	Z	iPc	14 16 03.6
		Z	i(S)	14 16 12.2
	CMB	Z	eP	14 16 00.2
		Z	e(S)	14 16 24.0
	MNA	Z	eP	14 16 22.0
	ORV	Z	eP	14 16 23.0

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UNIVERSITY OF CALIFORNIA SEISMOGRAPHIC STATIONS
REGISTRATION OF EARTHQUAKES 1988

DATE	STA	CMP	PHASE	TIME (UTC)
BRK 14h15m37.3s 36.7N 121.4W				
h=5km ML=2.9(4)				
Stone Canyon, 19 km S of Hollister, CA				
May 7	SAO	Z	eP	14 15 50.8
		T	iS	14 15 52.5
	MHC	Z	eP	14 16 04.4
		T	eS	14 16 15.8
BRK 14h15m48.7s 36.7N 121.4W				
h=5kmR ML=2.8(4)				
Stone Canyon, 19 km S of Hollister, CA				
May 7	SAO	Z	iP	14 19 46.3
	LLA	Z	iPc	14 19 50.8
	PRS	Z	iPd	14 19 51.0
	GCC	Z	eP	14 19 56.0
	MHC	Z	eP	14 19 58.0
	PRI	Z	eP	14 19 58.6
	PCC	Z	eP	14 20 04.7
	FRI	Z	eP	14 20 08.1
		Z	iS	14 20 26.3
	BRK	Z	eP	14 20 10.5
	BKS	Z	iPd	14 20 10.5
		Z	i(S)	14 20 31.5
	CMB	Z	eP	14 20 11.2
		Z	eS	14 20 30.6
	ZSP	Z	e(P)	14 20 12.8
BRK 14h19m44.0s 36.7N 121.4W				
h=2km ML=2.6(4)				
Stone Canyon, 19 km S of Hollister, CA				
May 7	BKS	Z	iPd	15 30 00.8
				AMP(μm) PER(s)
			PZ	0.019 0.7
	WDC	Z	iPc	15 30 46.2
	MIN	Z	iPc	15 30 51.6
	ORV	Z	iPc	15 30 55.5
	CMB	Z	ePc	15 31 08.5
	PRS	Z	eP	15 31 12.4
	FRI	Z	eP	15 31 16.4
	MNA	Z	eP	15 31 18.2
USGS 15h22m57.8s 51.4N 177.9E				
h=33km mb=4.9 Ms=4.2				
Rat Islands, Aleutian Islands				
May 7	PRS	Z	eP	19 22 00.0
	BKS	Z	iPc	19 22 02.2
				AMP(μm) PER(s)
			PZ	0.022 0.7
	MHC	Z	eP	19 22 02.5
	FRI	Z	eP	19 22 07.1
	CMB	Z	ePd	19 22 08.1
	ORV	Z	eP	19 22 09.1
	WDC	Z	ePd	19 22 09.5
	MIN	Z	eP	19 22 10.2
	MNA	Z	ePd	19 22 17.0
USGS 19h10m49.3s 21.0S 178.3W				
h=490km mb=4.6				
Fiji Islands Region				
May 7	WDC	Z	iPc	23 00 49.5
		Z	ePKPPKP	23 29 25.0
	MIN	Z	ePc	23 00 51.5
	ORV	Z	eP	23 00 55.8
	MNA	Z	eP	23 01 03.5
		Z	ePKPPKP	23 29 17.6
	CMB	Z	eP	23 01 05.4
		Z	ePKPPKP	23 29 18.0
	BRK	Z	e(P)	23 01 07.3
	BKS	Z	iPd	23 01 07.9
				AMP(μm) PER(s)
			PZ	0.043 1.0
	PCC	Z	e(P)	23 01 10.2
	MHC	Z	ePc	23 01 11.0
	FRI	Z	ePc	23 01 12.4
		Z	ePKPPKP	23 29 14.7
	LLA	Z	ePc	23 01 15.5
	PRS	Z	ePc	23 01 16.8
	PRI	Z	ePc	23 01 18.7
USGS 22h49m58.1s 73.4N 54.4E				
h=0km mb=5.6 Ms=3.8				
Novaya Zemlya				
May 8	WDC	Z	e(P)	03 17 58.7
	MIN	Z	ePc	03 18 01.3
	ORV	Z	e(P)	03 18 02.6
	BRK	Z	e(P)	03 18 03.4
	CMB	Z	eP	03 18 08.0
	FRI	Z	e(P)	03 18 15.2
	MNA	Z	eP	03 18 16.7
	BKS	Z	eLr	03 45 30
				AMP(μm) PER(s)
			LZ	0.50 20.
			LE	0.57 20.
USGS 03h05m56.8s 18.8N 146.8E				
h=33km mb=5.0 Ms=4.5				
Mariana Islands				
May 8	WDC	Z	ePc	18 03 15.3
	ORV	Z	e(P)	18 03 20.2
	CMB	Z	ePc	18 03 27.8
	MNA	Z	e(P)	18 03 33.4
USGS 17h49m48.4s 19.1N 121.2E				
h=30km mb=5.2 Ms=5.2				
Philippine Islands Region				
May 8	WDC	Z	e	19 58 25.9
	CMB	Z	e	19 58 58.5
		Z	i	19 59 19.5
		Z	e	20 02 28.7
	MNA	Z	e	19 59 03.6
		Z	e	20 02 37.8
	FRI	Z	e	19 59 23.6
	BKS	Z	e	20 11 50
		E	e	20 18 18
		N	eLr	20 31 30
				AMP(μm) PER(s)
			LZ	0.93 20.
			LE	0.75 20.
USGS 19h44m55.2s 14.9N 120.1E				
h=49km mb=5.6 Ms=5.8				
Luzon, Philippine Islands				
May 8	LLA	Z	iPc	20 51 28.0
	PRS	Z	iPd	20 51 30.5
	SAO	Z	iPc	20 51 31.25
	PRI	Z	iPc	20 51 35.3
	GCC	Z	iPc	20 51 40.3
	MHC	Z	ePc	20 51 41.65
		Z	iS ,	20 51 56.2
	FRI	Z	ePc	20 51 45.9
		Z	iS	20 52 01.7
	PCC	Z	ePc	20 51 48.3
	BRK	Z	eP	20 51 50.9
	BKS	Z	iPd	20 51 51.8
		Z	i(S)	20 52 24.7
	CMB	Z	ePc	20 51 51.9
		Z	iS	20 52 14.2
	ZSP	Z	ePd	20 51 52.6
	ORV	Z	e	20 52 13.3
	MNA	Z	e	20 52 16.8
BRK 20h51m24.6s 36.5N 121.1W				
h=9km ML=2.9(4)				
Bear Valley area, 43 km SE of Hollister, CA				
May 8	FHC	Z	ePc	22 54 45.3
	WDC	Z	iPc	22 54 50.0
		Z	ePcP	22 54 58.2
		Z	i	22 55 04.8
	ORV	Z	iPc	22 54 57.5
		Z	i	22 55 11.9
	BRK	Z	e(P)	22 55 01.2
	GCC	Z	ePc	22 55 05.5
	MHC	Z	ePc	22 55 06.1
	CMB	Z	iPc	22 55 08.2
		Z	e	22 55 12.6
		Z	ePcP	22 55 13.8
	PRS	Z	ePc	22 55 10.8
	PRI	Z	e(P)	22 55 14.2
	FRI	Z	ePc	22 55 14.3
		Z	e	22 55 29.5
	MNA	Z	iPc	22 55 15.3
		Z	e	22 55 31.3
USGS 22h44m02.5s 42.3N 143.0E				
h=69km mb=5.1				
Hokkaido, Japan, Region				
May 9	SAO	Z	iPc	04 14 49.3
	LLA	Z	iPc	04 14 53.9
	PRS	Z	iPd	04 14 54.0
	GCC	Z	eP	04 14 58.5
	MHC	Z	ePd	04 15 00.8
	PRI	Z	iPc	04 15 02.2
	PCC	Z	ePd	04 15 07.7
	FRI	Z	ePc	04 15 10.8
		Z	i	04 15 32.4
	BRK	Z	e(P)	04 15 13.2
	BKS	Z	ePd	04 15 13.6
	CMB	Z	ePc	04 15 14.2
		Z	iS	04 15 33.9
		Z	i	04 15 38.1
	ZSP	Z	e(P)	04 15 16.3
	ORV	Z	e	04 15 37.9
	MNA	Z	e	04 15 47.7
BRK 04h14m47.0s 36.7N 121.4W				
h=4km ML=2.7(4)				
Stone Canyon, 19 km S of Hollister, CA				
May 9	FRI	Z	ePc	05 47 07.6
	PRI	Z	ePc	05 47 09.3
	MNA	Z	ePc	05 47 10.5
		Z	e	05 56 30
	CMB	Z	ePc	05 47 18.2
		Z	e	05 50 31.0
	WDC	Z	e	05 47 33.2
		Z	e	05 50 38.9
	BKS	NE	eLq	05 55 40
		Z	eLr	05 58 24
				AMP(μm) PER(s)
			LZ	0.46 20.
			LE	0.93 20.
USGS 05h41m21.1s 16.8N 97.9W				
h=42km mb=5.0				
Oaxaca, Mexico				
May 9	MHC	Z	ePc	09 08 40.4
	MIN	Z	eP	09 08 44.1
	PRI	Z	eP	09 08 44.3
	CMB	Z	ePc	09 08 45.3
USGS 08h55m51.9s 32.9S 178.9W				
h=33km mb=5.0				
South of Kermadec Islands				
May 9	PRS	Z	ePc	12 34 33.3
	PCC	Z	ePc	12 34 33.8
	PRI	Z	eP	12 34 34.9
	LLA	Z	eP	12 34 35.2
	BRK	Z	ePc	12 34 35.4
	MHC	Z	ePc	12 34 36
	BKS	Z	iPd	12 34 36.6
		Z	eLr	13 00 55
				AMP(μm) PER(s)
			PZ	0.028 0.7
			LZ	0.54 20.
			LE	0.32 20.
	FRI	Z	ePc	12 34 39.8
		Z	e	12 34 54.5
	CMB	Z	iPc	12 34 41.1
		Z	e	12 34 56.0
	ORV	Z	ePc	12 34 42.6
		Z	e	12 34 57.4
	WDC	Z	ePc	12 34 43.8
		Z	e	12 34 53.8
		Z	e	12 34 58.5
	MIN	Z	ePc	12 34 45.7
	MNA	Z	ePc	12 34 48.8
		Z	e	12 35 03.9
BRK Ms=5.5 Distance=86°				
USGS 12h22m03.7s 29.9S 177.9W				
h=53km mb=5.6				
Kermadec Islands				
May 9	MNA	Z	ePc	16 31 52.5
	ORV	Z	ePc	16 32 14.8
	WDC	Z	eP	16 32 21.1
	CMB	Z	ePc	16 32 22.7
USGS 16h23m59.7s 18.1N 76.5W				
h=10km mb=4.5 Ms=4.0				
Jamaica Region				
May 10	WDC	Z	eP	08 08 59.4
	ORV	Z	ePc	08 09 06.8
	CMB	Z	ePc	08 09 17.7
	MNA	Z	ePc	08 09 24.3
USGS 07h58m53.5s 46.4N 142.9E				
h=333km mb=4.3				
Sakhalin Island				
May 10	WDC	Z	ePKP	10 21 45.6
	FHC	Z	e(PKP)	10 21 46.2
	MIN	Z	e(PKP)	10 21 46.9
	ORV	Z	ePKPc	10 21 47.5
	BRK	Z	e(PKP)	10 21 47.6
	MHC	Z	ePKPc	10 21 48.4
	PRS	Z	ePKP	10 21 49.0
	CMB	Z	ePKPc	10 21 49.7
	LLA	Z	ePKP	10 21 50.5
	PRI	Z	ePKP	10 21 50.8
	FRI	Z	ePKPc	10 21 51.7
	MNA	Z	ePKP	10 21 53.3
USGS 10h04m12.5s 7.2S 123.9E				
h=577km mb=5.4				
Banda Sea				
May 10	SAO	Z	iPd	12 31 34.0
		T	eS	12 31 36.0
	GCC	Z	iPc	12 31 38.4
	PRS	Z	iPd	12 31 41.6
	MHC	Z	iPd	12 31 41.7
		Z	iS	12 31 47.3
	LLA	Z	iPc	12 31 42.5
	PCC	Z	iPc	12 31 47.8
	PRI	Z	iPd	12 31 50.4
	BRK	Z	iPd	12 31 51.4
		Z	i	12 31 53.2
		Z	eS	12 32 08.7
	BKS	Z	eP	12 31 51.8
		Z	e	12 32 03.2
		Z	i	12 32 09.4
		E	iS	12 32 09.6
	ZSP	Z	iPd	12 31 52.9
		Z	i	12 31 55.2
		Z	iS	12 32 10.4
		Z	i	12 32 14.3
	FRI	Z	e(P)	12 31 56.8
		Z	i	12 31 58.4
		Z	eS	12 32 08.7
	CMB	Z	ePd	12 31 57.9
		Z	iS	12 32 17.4
	ORV	Z	iPc	12 32 15.9
		Z	i	12 32 18.3
		Z	i	12 32 25.4
	MNA	Z	e	12 32 27.2
	MIN	Z	ePc	12 32 27.5
BRK 12h31m31.3s 36.8N 121.6W				
h=5km ML=3.1(6) Mo=2.0E21(2)				
16 km W of Hollister, CA				
May 10	FHC	Z	ePc	13 08 44.2
	WDC	Z	ePc	13 08 52.1
	MIN	Z	eP	13 08 58.0
	ORV	Z	e(P)	13 09 05.3
	BRK	Z	eP	13 09 17.3
	BKS	Z	ePc	13 09 18.2
				AMP(μm) PER(s)
			PZ	0.011 0.7
	CMB	Z	eP	13 09 22.6
	MHC	Z	eP	13 09 23.8
	MNA	Z	eP	13 09 28.2
	PRS	Z	e(P)	13 09 32.6
	LLA	Z	e(P)	13 09 33.0
	FRI	Z	eP	13 09 33.1
	PRI	Z	e(P)	13 09 37.7
USGS 13h04m03.9s 57.3N 143.0W				
h=10km mb=4.6				
Gulf of Alaska				
May 10	SAO	Z	iPd	21 27 18.5
		Z	iS	21 27 20.5
	GCC	Z	iPc	21 27 23.0
	PRS	Z	iPc	21 27 26.1
	MHC	Z	iPd	21 27 26.25
		Z	iS	21 27 34.15
	LLA	Z	iPd	21 27 26.9
	PCC	Z	iPc	21 27 32.9
	BKS	Z	iPc	21 27 33.2
		N	e	21 27 39.6
		Z	i	21 27 49.5
		Z	iS	21 27 53.95
		Z	i	21 27 54.9
		N	i	21 27 55.4
		Z	i	21 28 01.9
	PRI	Z	iPc	21 27 35.4
	BRK	Z	iPc	21 27 38.0
	FRI	Z	ePd	21 27 42.9
	CMB	Z	iPc	21 27 43.4
		Z	iS	21 27 57.8
BRK 21h27m15.8s 36.8N 121.6W				
h=4km ML=2.6(4)				
16 km W of Hollister, CA				
May 10	SAO	Z	iPd	21 30 14.25
		Z	iS	21 30 16.20
	GCC	Z	iPc	21 30 18.9
	PRS	Z	iPc	21 30 21.
	LLA	Z	iPc	21 30 21.
	MHC	Z	iPd	21 30 22.
		Z	iS	21 30 30.
	PCC	Z	ePc	21 30 28.
	PRI	Z	iPc	21 30 31.
	BKS	Z	iPd	21 30 33.
		Z	i(S)	21 30 50.
	FRI	Z	iPd	21 30 38.
	CMB	Z	ePc	21 30 39.
BRK 21h30m11.6s 36.8N 121.6W				
h=6km ML=2.6(4)				
15 km W of Hollister, CA				
May 10	SAO	Z	iPd	22 50 25.
		Z	iS	22 50 27.
	GCC	Z	iPc	22 50 30.
	PRS	Z	iPd	22 50 33.
	MHC	Z	iPd	22 50 33.
		Z	iS	22 50 41.
	LLA	Z	iPc	22 50 34.
	PCC	Z	iP	22 50 40.
	PRI	Z	iPc	22 50 42.
	BKS	Z	iPc	22 50 44.
		Z	i(S)	22 51 02.
	ZSP	Z	iP	22 50 44.
		Z	iS	22 51 04.
	FRI	Z	iPd	22 50 50.
		Z	iS	22 51 08.
	CMB	Z	iPd	22 50 50.
		Z	iS	22 51 09.
BRK 22h50m23.2s 36.8N 121.6W				
h=4km ML=2.9(4)				
16 km W of Hollister, CA				
May 11	SAO	Z	iPd	14 18 47.
		Z	iS	14 18 49.
	GCC	Z	iPc	14 18 52.
	PRS	Z	iPd	14 18 55.
	MHC	Z	iPd	14 18 55.
		Z	iS	14 19 03.
	LLA	Z	iPd	14 18 56.
	PCC	Z	iPc	14 19 02.
	PRI	Z	iPc	14 19 04.
	BKS	Z	iPd	14 19 07.
		Z	e(S)	14 19 24.
	ZSP	Z	iPc	14 19 08.
		Z	iS	14 19 26.
	FRI	Z	iPd	14 19 12.
	CMB	Z	ePc	14 19 12.
BRK 14h18m45.0s 36.8N 121.6W				
h=4km ML=2.4(4)				
15 km W of Hollister, CA				
May 11	SAO	Z	iPd	14 30 45.
		Z	iS	14 30 47.
	GCC	Z	iPc	14 30 50.
	PRS	Z	iPd	14 30 53.
	MHC	Z	iPd	14 30 53.
		Z	iS	14 31 01.
	LLA	Z	iPc	14 30 54.
	PCC	Z	iPc	14 31 00.
	PRI	Z	iPc	14 31 03.
	BKS	Z	iPd	14 31 05.
		E	eS	14 31 2
	ZSP	Z	iPc	14 31 0
		Z	iS	14 31 2
	FRI	Z	iPd	14 31 10.
	CMB	Z	iPc	14 31 11.
BRK 14h30m43.4s 36.8N 121.6W				
h=4km ML=3.0				
15 km W of Hollister, CA				

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DATE	STA	CMP	PHASE	TIME (UTC)
May 11	WDC	Z	e(P)	15 56 31.2
	CMB	Z	ePc	15 56 47.3
	MHC	Z	e(P)	15 56 48.3
USGS 15h44m50.4s 34.4N 139.0E				
h=5km mb=4.5				
Near S. Coast of Honshu, Japan				
May 11	PRS	Z	ePc	17 10 11.7
	PRI	Z	eP	17 10 12.0
	SAO	Z	ePc	17 10 13.7
	LLA	Z	eP	17 10 14.0
	GCC	Z	ePc	17 10 14.8
	MHC	Z	ePc	17 10 17.9
	FRI	Z	eP	17 10 18.2
	BRK	Z	eP	17 10 19.8
	BKS	Z	iPd	17 10 20.4
			AMP(μm)	PER(s)
		PZ	0.028	0.8
	CMB	Z	ePc	17 10 24.0
	MNA	Z	ePc	17 10 31.0
	ORV	Z	ePc	17 10 31.3
	WDC	Z	ePc	17 10 36.0
USGS 16h59m58.4s 21.9S 139.1W				
h=0km mb=5.5				
Tuamotu Archipelago Region				
May 11	FHC	Z	e(PKP)	17 46 46.9
	WDC	Z	ePKPc	17 46 48.4
		Z	ePP	17 48 16.8
	ORV	Z	ePKPc	17 46 50.4
		Z	ePP	17 48 21.5
	BRK	Z	e(PKP)	17 46 50.7
	SAO	Z	e(PKP)	17 46 51.4
	MHC	Z	ePKPc	17 46 51.9
	PRS	Z	ePKPc	17 46 52.7
		Z	ePP	17 48 28.4
	CMB	Z	ePKPc	17 46 52.9
		Z	ePP	17 48 29.7
	LLA	Z	ePKP	17 46 53.3
	PRI	Z	ePKP	17 46 54.3
		Z	ePP	17 48 42.6
	FRI	Z	ePKPc	17 46 54.5
		Z	ePP	17 48 34.4
	MNA	Z	ePKPc	17 46 56.8
		Z	ePP	17 48 40.5
USGS 17h27m58.4s 11.1S 116.3E				
h=40km mb=5.6 Ms=4.8				
South of Sumbawa Island				
May 11	PRS	Z	ePc	20 08 01.5
	GCC	Z	ePc	20 08 01.8
	SAO	Z	eP	20 08 02.3
	BRK	Z	ePc	20 08 02.5
	LLA	Z	e(P)	20 08 03.6
	PRI	Z	ePc	20 08 04.6
	MHC	Z	ePc	20 08 04.7
	BKS	Z	ePd	20 08 04.7
			AMP(μm)	PER(s)
		PZ	0.014	0.7
	FRI	Z	ePc	20 08 09.0
	CMB	Z	ePc	20 08 10.4
		Z	e	20 08 36.7
	ORV	Z	ePc	20 08 11.9
	WDC	Z	iPc	20 08 12.5
		Z	e	20 08 38.9
	MIN	Z	eP	20 08 14.2
	MNA	Z	ePc	20 08 19.5
		Z	e	20 08 45.9
USGS 19h56m14.9s 22.7S 176.6W				
h=146km mb=5.1				
South of Fiji Islands				

DATE	STA	CMP	PHASE	TIME (UTC)
May 11	PRI	Z	eP	22 46 02.2
	FRI	Z	ePc	22 46 03.7
	MNA	Z	ePc	22 46 09.2
	PRS	Z	e(P)	22 46 09.4
	CMB	Z	ePc	22 46 14.9
	SAO	Z	eP	22 46 15.0
	MHC	Z	e(P)	22 46 20.6
	ORV	Z	e(P)	22 46 34.0
	MIN	Z	e(P)	22 46 44.2
	WDC	Z	e(P)	22 46 48.0
	BKS	N	iS	22 50 16
		E	eLq	22 51 08
		Z	eLr	22 51 48
			AMP(μm)	PER(s)
		LZ	1.8	20.
		LN	2.7	20.
		LE	2.5	20.
USGS 22h41m44.6s 21.2N 108.8W				
h=10km mb=4.8				
Revilla Gigedo Islands Region				
May 12	FRI	Z	ePc	02 44 03.2
	PRI	Z	e(P)	02 44 04.2
	MNA	Z	ePc	02 44 06.2
	CMB	Z	ePc	02 44 13.2
	ORV	Z	ePc	02 44 34.3
	MIN	Z	e(P)	02 44 41.1
	WDC	Z	ePc	02 44 43.0
	FHC	Z	e(P)	02 44 46.7
	BKS	E	eLq	02 49 04
		Z	eLr	02 50 07
USGS 02h39m34.2s 21.0N 107.8W				
h=10km mb=4.2				
Off Coast of Jalisco, Mexico				
May 12	FHC	Z	ePd	02 48 19.5
	WDC	Z	ePd	02 48 26.3
	MIN	Z	ePd	02 48 32.3
	ORV	Z	e(P)	02 48 36.1
	CMB	Z	ePd	02 48 52.7
	MNA	Z	eP	02 49 07.0
		Z	e	02 49 20.3
	PRS	Z	e(P)	02 49 12.4
USGS 02h42m27.7s 55.2N 160.4W				
h=24km mb=4.8 Ms=4.6				
Alaska Peninsula				
May 12	ORV	Z	e	09 14 37.8
	CMB	Z	ePd	09 14 38.5
	WDC	Z	e(P)	09 14 40.8
	FRI	Z	e(P)	09 14 41.2
	MNA	Z	ePd	09 14 45.9
USGS 09h01m56.2s 22.5S 172.9E				
h=33km mb=4.3				
Loyalty Islands Region				
May 12	FRI	Z	e(P)	11 26 30.5
		Z	e	11 27 05.3
		Z	e	11 27 23.4
	MNA	Z	ePc	11 26 31.3
		Z	e	11 27 08.2
		Z	e	11 27 24.0
	PRI	Z	e(P)	11 26 33.5
		Z	e	11 27 07.3
	LLA	Z	ePc	11 26 35.2
	PRS	Z	e(P)	11 26 37.9
		Z	e	11 27 13.6
		Z	e	11 27 30.5
	CMB	Z	eP	11 26 40.4
		Z	e	11 27 13.5
		Z	e	11 27 33.0

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	MHC	Z	ePc	11 26 44.8
		Z	e	11 27 20.3
		Z	e	11 27 37.6
	ORV	Z	ePc	11 26 54.4
		Z	e	11 27 47.7
	MIN	Z	ePc	11 26 58.2
	WDC	Z	ePc	11 27 02.1
		Z	e	11 27 53.0
	FHC	Z	ePc	11 27 14.0
USGS 11h20m19.3s 15.9N 92.6W				
h=170km mb=4.9				
Mexico-Guatemala Border Region				
May 13	SAO	Z	e(P)	00 03 57.9
	WDC	Z	e(P)	00 04 03.4
	ORV	Z	e(P)	00 04 04.4
	CMB	Z	ePc	00 04 05.3
	FRI	Z	ePc	00 04 05.4
	MNA	Z	ePc	00 04 14.1
USGS 23h51m19.4s 17.9S 167.8E				
h=27km mb=4.7				
Vanuatu Islands				
May 13	EKR		iPd	00 52 38.8
	FOX		iP	00 52 40.9
			iS	00 52 48.4
	FHC	Z	iPd	00 52 43.2
		Z	iS	00 52 51.6
	ARC	N	iP	00 52 45.6
		N	iS	00 52 54.5
	WDC	Z	iPc	00 52 54.1
	MIN	Z	ePc	00 53 03.8
		Z	e(P)	00 53 07.1
		Z	e(S)	00 53 33.3
	ORV	Z	eP	00 53 06.9
	PCC	Z	eP	00 53 23.0
	CMB	Z	e(P)	00 53 23.4
	GCC	Z	ePc	00 53 27.6
	PRS	Z	ePc	00 53 39.0
BRK 00h52m31.2s 40.2N 124.3W				
h=6km ML=3.3(4) Mo=1.8E21(2)				
61 km S of Eureka, CA				
May 13	WDC	Z	ePc	01 33 52.7
	ORV	Z	ePc	01 34 01.9
	BKS	Z	iPd	01 34 07.5
			AMP(μm)	PER(s)
		PZ	0.053	0.8
	CMB	Z	ePc	01 34 15.8
		Z	eScP	01 39 41.6
	PRS	Z	ePc	01 34 19.4
	LLA	Z	ePc	01 34 20.3
	FRI	Z	e(P)	01 34 24.0
	PRI	Z	ePc	01 34 24.3
	MNA	Z	ePc	01 34 24.7
USGS 01h26m13.2s 51.8N 178.4E				
h=86km mb=5.0				
Rat Islands, Aleutian Islands				
May 13	CMB	Z	ePc	02 08 01.8
	FRI	Z	eP	02 08 03.3
	MNA	Z	ePc	02 08 11.1
	BKS	Z	e	02 36 00
		Z	eLr	02 37 00
USGS 01h55m26.0s 12.6S 165.7E				
h=33km mb=5.3				
Santa Cruz Islands				
May 13	PRS	Z	eP	03 34 53.0
	FRI	Z	ePc	03 35 01.4
	CMB	Z	ePc	03 35 01.8
	ORV	Z	eP	03 35 03.4

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	WDC	Z	ePc	03 35 04.0
	MNA	Z	ePc	03 35 10.7
	BKS	Z	eLr	04 00 32
			AMP(μm)	PER(s)
		LZ	1.6	20.
		LN	1.6	20.
		LE	1.4	20.
USGS 03h22m58.6s 22.8S 174.9W				
h=33km mb=5.1 Ms=5.2				
Tonga Islands Region				
May 13	PCC	Z	ePc	04 55 37.0
	PRS	Z	ePc	04 55 37.2
	SAO	Z	ePc	04 55 37.9
	BRK	Z	ePc	04 55 38.8
	BKS	Z	iPc	04 55 39.2
			AMP(μm)	PER(s)
		PZ	0.22	0.9
	PRI	Z	ePc	04 55 39.6
	LLA	Z	ePc	04 55 39.8
	FHC	Z	ePc	04 55 43.3
	FRI	Z	ePc	04 55 45.1
		Z	esSP	05 16 36.2
	CMB	Z	ePc	04 55 46.2
		Z	esSP	05 16 37.4
	ORV	Z	ePc	04 55 46.8
		Z	esSP	05 16 38.6
	WDC	Z	ePc	04 55 47.0
		Z	esSP	05 16 38.4
	MIN	Z	ePc	04 55 49.1
	MNA	Z	ePc	04 55 56.1
		Z	esSP	05 16 45.6
USGS 04h44m39.8s 15.4S 175.0W				
h=271km mb=5.7				
Tonga Islands				
May 13	MHC	Z	iPc	07 15 12.5
		Z	i c	07 15 12.90
		Z	iP	07 15 13.7
		T	iS	07 15 14.55
	GCC	Z	iPc	07 15 19.0
		Z	iS	07 15 25.3
	PCC	Z	iPc	07 15 21.2
	SAO	Z	iPc	07 15 23.1
		Z	i d	07 15 23.67
		T	e	07 15 31.96
		T	eS	07 15 32.45
	BRK	Z	ePc	07 15 23.7
		Z	iS	07 15 33.9
	BKS	Z	ePc	07 15 23.83
		E	eS	07 15 33.4
	ZSP	Z	ePc	07 15 25.2
		Z	iS	07 15 37.3
	LLA	Z	ePc	07 15 28.3
	PRS	Z	ePc	07 15 30.4
		Z	iS	07 15 44.5
	CMB	Z	iPc	07 15 33.9
		Z	iS	07 15 50.4
	PRI	Z	ePc	07 15 37.2
	FRI	Z	iPc	07 15 39.2
		Z	iS	07 15 59.1
BRK 07h15m11.0s 37.4N 121.7W				
h=5km ML=2.9(4) Mo=3.4E20(2)				
Halls Valley, 12 km E of San Jose, CA				
May 13	MHC	Z	iPc	07 19 41.1
		Z	i(S)	07 19 43.8
	GCC	Z	iPd	07 19 47.8
	PCC	Z	eP	07 19 49.9
	SAO	Z	iPd	07 19 52.0
	BKS	Z	iPc	07 19 52.5

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		E	e(S)	07 20 02.6
	BRK	Z	ePc	07 19 53.0
	LLA	Z	ePc	07 19 57.2
		Z	e(S)	07 20 13.8
	PRS	Z	ePc	07 19 59.0
		Z	eS	07 20 12.9
	CMB	Z	ePc	07 20 02.5
		Z	eS	07 20 17.0
	PRI	Z	i	07 20 06.7
	FRI	Z	ePc	07 20 07.8
		Z	eS	07 20 27.6
BRK 07h19m39.5s 37.3N 121.7W				
h=3km ML=2.8(4) Mo=9.8E19(2)				
Halls Valley, 13 km E of San Jose, CA				
May 13	MHC	Z	iPc	07 50 24.6
		Z	iSc	07 50 26.2
	GCC	Z	eP	07 50 29.8
	PCC	Z	iPc	07 50 32.2
	SAO	Z	iPd	07 50 34.3
	BRK	Z	eP	07 50 34.7
		Z	eS	07 50 45.9
	BKS	Z	iPd	07 50 35.0
		E	eS	07 50 45.0
	LLA	Z	e(P)	07 50 40.4
	PRS	Z	eP	07 50 41.2
		Z	eS	07 50 55.3
	CMB	Z	eP	07 50 44.7
		Z	eS	07 51 01.3
	FRI	Z	eP	07 50 50.1
BRK 07h50m22.1s 37.4N 121.7W				
h=8km ML=2.5(4) Mo=7.1E19(2)				
Halls Valley, 13 km E of San Jose, CA				
May 13	MNA	Z	eP	15 04 06.7
	CMB	Z	eP	15 04 07.6
	ORV	Z	eP	15 04 16.4
USGS 14h51m39.7s 41.0S 91.2W				
h=10km mb=5.2 Ms=4.9				
Southern Pacific Ocean				
May 13	MNA	Z	iPc	15 35 36.5
	FRI	Z	iPc	15 35 48.2
	CMB	Z	iPc	15 35 56.8
	PRI	Z	iPc	15 36 02.0
	LLA	Z	eP	15 36 02.6
	PRS	Z	eP	15 36 07.6
	SAO	Z	eP	15 36 08.1
	MHC	Z	ePc	15 36 10.0
	ORV	Z	eP	15 36 15.7
	BKS	E	eP*	15 36 21.6
		E	ePg	15 36 35.9
		E	eSn	15 37 05.1
		N	eSg	15 37 41.8
	WDC	Z	eP	15 36 32.4
BRK ML=4.8(6)				
USGS 15h35m00.1s 37.1N 116.1W				
h=0km mb=4.8 Ms=4.4				
Underground Nuclear Explosion, N.T.S.				
May 14	FRI	Z	eP	01 01 32.3
		Z	e	01 01 42.8
	MNA	Z	eP	01 01 38.7
		Z	e	01 01 52.2
	CMB	Z	eP	01 01 46.8
		Z	e	01 02 04.6
	PRS	Z	e(P)	01 01 47.3
	MHC	Z	e(P)	01 01 49.3
	BRK	Z	eP	01 02 05.0

DATE	STA	CMP	PHASE	TIME (UTC)
	BKS	Z	eP	01 02 05.3
		N	iLq	01 05 10.0
		Z	iLr	01 06 46
			AMP(μm)	PER(s)
		PZ	0.16	1.4
		LZ	2.6	20.
		LN	3.8	20.
		LE	2.5	20.
	ORV	Z	eP	01 02 09.1
	WDC	Z	eP	01 02 25.0
		Z	e	01 03 05.9
USGS 00h58m07.7s 25.6N 109.7W				
h=10km mb=4.9 Ms=4.6				
Gulf of California				
May 15	MHC	Z	iPd	07 32 41.8
		T	iS	07 32 46.6
	SAO	Z	iPd	07 32 42.0
		T	iS	07 32 47.1
	GCC	Z	eP	07 32 43.7
	LLA	Z	iPc	07 32 47.4
	PRS	Z	eP	07 32 49.7
	PCC	Z	ePd	07 32 51.3
	BKS	Z	iPc	07 32 54.7
		E	iS	07 33 09.3
	ZSP	Z	eP	07 32 55.7
	PRI	Z	eP	07 32 57.5
	CMB	Z	iPd	07 32 59.4
		Z	iS	07 33 16.0
	FRI	Z	eP	07 33 00.7
	ORV	Z	eP	07 33 17.7
BRK 07h32m35.8s 37.1N 121.5W				
h=4km ML=2.9(2)				
Coyote Lake, 11 km NE of Gilroy, CA				
May 15	FHC	Z	eP	08 32 24.5
	WDC	Z	eP	08 32 30.7
	MIN	Z	eP	08 32 34.9
	ORV	Z	eP	08 32 38.0
	CMB	Z	eP	08 32 49.2
	PRS	Z	eP	08 32 52.5
	MNA	Z	eP	08 32 56.7
USGS 08h22m05.6s 43.8N 147.7E				
h=56km mb=5.4				
Kurile Islands				
May 15	CMB	Z	ePd	18 24 34.4
	MNA	Z	ePd	18 24 42.3
USGS 18h12m37.6s 29.3N 142.3E				
h=33km mb=4.5				
South of Honshu, Japan				
May 15	ZSP	Z	ePd	22 49 23.8
		Z	i	22 49 32.8
		Z	iS	22 49 39.3
	BRK	Z	ePd	22 49 25.0
		Z	iS	22 49 39.7
	BKS	Z	i	22 49 25.20
		Z	iPd	22 49 25.5
		Z	i	22 49 29.5
		T	iS	22 49 39.46
	ORV	Z	eP	22 49 27.5
	PCC	Z	iPc	22 49 28.8
		Z	eS	22 49 48.8
	MHC	Z	ePc	22 49 34.8
	MIN	Z	eP	22 49 36.2
		Z	eP	22 49 36.3
	GCC	Z	eP	22 49 36.4
	WDC	Z	eP	22 49 36.9
	CMB	Z	iPc	22 49 38.0
	SAO	Z	eP	22 49 42.3
	LLA	Z	e	22 49 48.0

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DATE	STA	CMP	PHASE	TIME (UTC)
	PRS	Z	eP	22 49 48.2
	FHC	Z	eP	22 49 50.9
	FRI	Z	eP	22 49 54.8
	PRI	Z	e	22 49 57.8
	MNA	Z	e	22 49 59.0
BRK 22h49m05.6s 38.8N 122.8W				
h=3km ML=3.4(6) Mo=6.6E21(2)				
The Geysers area, 22 km S of Clear Lake, CA				
May 16	BRK	Z	e(P)	23 20 09.5
	FHC	Z	eP	23 20 09.5
	PRS	Z	eP	23 20 10.1
	BKS	Z	eP	23 20 10.4
		Z	e	23 20 28.0
		Z	e	23 20 47.1
		Z	i	23 23 10.0
		E	eS	23 30 31.0
		E	iSS	23 36 47.0
		E	eLq	23 41 38.0
		Z	iLr	23 46 02.0
			AMP(μm)	PER(s)
		PZ	0.12	1.4
		LZ	9.3	20.
		LN	3.3	20.
		LE	7.1	20.
	MHC	Z	eP	23 20 11.0
	LLA	Z	e(P)	23 20 12.4
	WDC	Z	ePc	23 20 13.4
		Z	e	23 20 38.0
	PRI	Z	ePc	23 20 14.0
	ORV	Z	e(P)	23 20 15.0
	CMB	Z	eP	23 20 16.4
	FRI	Z	eP	23 20 17.1
	MNA	Z	eP	23 20 25.5
		Z	e	23 20 51.3
BRK Ms=6.1 Distance= 84°				
USGS 23h07m36.6s 13.9S 166.3E				
h=16km mb=6.0 Ms=5.7				
Vanuatu Islands				
May 17	FHC	Z	iPd	03 09 25.3
		Z	iS	03 09 30.4
	ARC	N	iPc	03 09 26.4
		N	iS	03 09 34.8
	WDC	Z	iPc	03 09 36.95
		Z	i	03 09 46.8
		Z	i	03 09 53.5
	MIN	Z	iPc	03 09 46.6
		Z	eP	03 09 48.1
		Z	i	03 09 48.7
		Z	iS	03 10 11.3
		Z	eS	03 10 12.0
	ORV	Z	ePc	03 09 49.6
		Z	i	03 09 51.3
		Z	i	03 10 18.4
	BRK	Z	eP	03 09 58.3
		Z	e	03 10 00.3
	PCC	Z	ePc	03 10 02.7
		Z	i	03 10 05.2
	MHC	Z	eP	03 10 08.2
		Z	e	03 10 10.7
	GCC	Z	e(P)	03 10 11.5
		Z	e	03 10 13.3
	CMB	Z	ePc	03 10 13.3
	SAO	Z	eP	03 10 16.85
	PRS	Z	e	03 10 23.8
	FRI	Z	eP	03 10 28.4
	PRI	Z	e	03 10 32.8
BRK 03h09m15.6s 40.4N 124.3W				
h=22km ML=3.6(4) Mo=3.9E21(2)				
Near Petrolia, 48 km SSW of Eureka, CA				
May 17	BRK	Z	eP	14 37 59.0
		Z	e	14 38 07.9
	FHC	Z	eP	14 37 59.3
		Z	e	14 38 08.6
	PRS	Z	eP	14 37 59.5
		Z	e	14 38 08.8
	SAO	Z	eP	14 37 59.7
	BKS	Z	eP	14 38 00.0
		N	iSd	14 48 05.0
		E	ePPS	14 48 56
		E	eSS	14 52 44
		N	eLq	14 58 20
		E	eLr	15 01 33
			AMP(μm)	PER(s)
		PZ	0.33	1.2
		LZ	7.7	20.
		LN	2.3	20.
		LE	6.3	20.
	MHC	Z	ePc	14 38 00.8
		Z	e	14 38 10.0
	LLA	Z	eP	14 38 01.7
	PRI	Z	ePc	14 38 02.1
		Z	e	14 38 11.7
	WDC	Z	ePc	14 38 03.7
		Z	i	14 38 12.7
	ORV	Z	ePc	14 38 05.1
		Z	e	14 38 14.3
	MIN	Z	ePc	14 38 06.2
	CMB	Z	ePc	14 38 06.3
		Z	i	14 38 15.6
	FRI	Z	ePc	14 38 07.0
		Z	i	14 38 16.4
	MNA	Z	ePc	14 38 16.0
BRK Ms=6.0 Distance=79°				
USGS 14h25m53.1s 11.4S 170.7E				
h=30km mb=5.7 Ms=6.0				
Santa Cruz Islands Region				
May 17	FRI	Z	ePc	19 39 52
		Z	eS	19 40 59.3
	CMB	Z	eP	19 40 09.2
		Z	eS	19 41 35
	MNA	Z	eP	19 40 17
		Z	eS	19 41 35
BRK mb=4.5 h= 5.0km Distance=°				
USGS 19h38m37.9s 33.2N 116.3W				
h=8km				
Southern California				
May 18	ORV	Z	ePd	05 31 05.0
	CMB	Z	ePd	05 31 09.5
USGS 05h17m42.6s 38.4N 20.5E				
h=26km mb=5.4				
Greece				
May 18	MNA	Z	iPc	05 50 58.0
		Z	i	05 51 01.5
		Z	i	05 51 04.4
		Z	i	05 51 12.5
		Z	i	05 51 19.2
		Z	i	05 55 51
		Z	i	05 56 47
	FRI	Z	iPc	05 51 05.0
	CMB	Z	iPc	05 51 09.3
		Z	i	05 51 15.3
		Z	i	05 51 19.1
		Z	i	05 51 35.2
		Z	i	05 51 56
		Z	i	05 52 04.0
		Z	i	05 52 45
		Z	i	05 56 06.9
		Z	i	05 56 27.1
		Z	i	05 56 60.20
	PRI	Z	iPc	05 51 11.0
	LLA	Z	iPc	05 51 12.4
	ORV	Z	iPc	05 51 13.7
		Z	i	05 51 20.6
		Z	i	05 56 06.7
		Z	i	05 56 11.6
	MHC	Z	iPc	05 51 15.9
		Z	i	05 51 23.0
		Z	i	05 51 27.1
		Z	i	05 56 14.8
	WDC	Z	iPc	05 51 16.7
		Z	i	05 51 23.2
		Z	i	05 51 27.8
		Z	i	05 52 03.4
		Z	i	05 52 45
		Z	i	05 56 09.6
		Z	i	05 56 14.9
		Z	i	05 56 47.3
	BKS	Z	eP	05 51 18.3
		E	e	06 00 52
		N	eLq	06 08 03
		Z	eLr	06 13 16
			AMP(μm)	PER(s)
		PZ	0.015	0.9
		LZ	2.3	20.
		LN	1.6	20.
		LE	2.7	20.
	FHC	Z	iPc	05 51 26.0
BRK Ms=5.5 Distance=59°				
USGS 05h39m51.4s 13.5N 44.9W				
h=10km mb=5.3 Ms=5.5				
North Atlantic Ridge				
May 18	FHC	Z	ePc	08 10 42.0
	WDC	Z	iPc	08 10 47.3
	ORV	Z	iPc	08 10 54.5
	GCC	Z	ePc	08 11 03.9
	CMB	Z	iPc	08 11 05.6
	PRS	Z	iPc	08 11 09.3
	LLA	Z	iPc	08 11 10.4
	MNA	Z	iPc	08 11 11.6
	FRI	Z	ePc	08 11 11.8
USGS 08h00m52.7s 47.8N 139.7E				
h=529km mb=4.5				
Near E. Coast of Eastern Russia				
May 18	FRI	Z	eP	22 03 23.3
	CMB	Z	ePc	22 03 25.1
	WDC	Z	ePc	22 03 27.4
	MNA	Z	ePc	22 03 33.1
USGS 21h50m15.3s 28.8S 178.3W				
h=239km mb=5.1				
Kermadec Islands Region				
May 19	PRI	Z	e(P)	03 34 13.7
	MHC	Z	ePd	03 34 14.1
	FRI	Z	eP	03 34 19.0
	CMB	Z	ePd	03 34 20.3
	ORV	Z	eP	03 34 21.9
	WDC	Z	ePd	03 34 22.7
	MIN	Z	eP	03 34 24.3
	MNA	Z	ePd	03 34 30.0
USGS 03h22m32.2s 20.6S 173.1W				
h=33km mb=5.5 Ms=5.1				
Tonga Islands				
May 19	CMB	Z	ePc	05 07 58.4
	FRI	Z	eP	05 08 03.3
	PRI	Z	ePc	05 08 04.5
USGS 04h56m00.6s 28.1N 142.6E				
h=33km mb=4.7				
Bonin Islands Region				
May 19	MNA	Z	ePc	10 54 47.3
	PRI	Z	e(P)	10 54 48.5
	ORV	Z	ePc	10 55 08.0
	WDC	Z	eP	10 55 14.4
USGS 10h46m04.3s 2.5N 82.9W				
h=10km mb=5.0 Ms=4.4				
South of Panama				
May 19	MNA	Z	iPc	21 21 50.4
	FRI	Z	e(P)	21 21 55.9
	CMB	Z	ePc	21 22 02.1
	LLA	Z	ePc	21 22 04.4
	PRS	Z	ePc	21 22 06.5
	ORV	Z	ePc	21 22 09.2
	WDC	Z	ePc	21 22 13.3
	FHC	Z	e(P)	21 22 24.2
	BRK	Z	e	21 22 34.0
	BKS	Z	e	21 22 40.2
USGS 21h12m29.0s 16.8N 61.1W				
h=57km mb=4.9				
Leeward Islands				
May 20	FRI	Z	ePd	03 31 05.3
		Z	epP	03 31 35.5
	MNA	Z	ePd	03 31 06.8
		Z	epP	03 31 37.9
	PRI	Z	ePd	03 31 07.0
		Z	epP	03 31 38.1
	LLA	Z	ePd	03 31 09.7
		Z	ipP	03 31 40.7
	PRS	Z	ePd	03 31 10.4
		Z	ipP	03 31 41.7
	CMB	Z	ePd	03 31 12.7
		Z	ePc	03 31 43.9
	GCC	Z	ePd	03 31 16.0
	BRK	Z	ePd	03 31 18.9
		Z	epP	03 31 50.5
	BKS	Z	ePc	03 31 19.7
			AMP(μm)	PER(s)
		PZ	0.041	0.8
	ORV	Z	ePd	03 31 22.6
		Z	ipP	03 31 54.0
	MIN	Z	ePd	03 31 24.6
		Z	epP	03 31 56.4
	WDC	Z	ePd	03 31 27.8
		Z	ipP	03 31 59.3
	FHC	Z	e(P)	03 31 35.6
		Z	epP	03 32 07.4
USGS 03h19m54.2s 17.5S 69.5W				
h=124km mb=5.5				
Peru-Bolivia Border Region				
May 20	GCC	Z	eP	09 28 37.5
	PCC	Z	eP	09 28 37.6
	PRS	Z	eP	09 28 37.8
	SAO	Z	ePd	09 28 39.3
	BRK	Z	ePd	09 28 39.5
	PRI	Z	eP	09 28 40.1
		Z	e	09 29 13.9
	MHC	Z	ePd	09 28 40.4
	LLA	Z	e(P)	09 28 40.5
	BKS	Z	ePc	09 28 40.5
		Z	ePcP	09 28 55.2
		Z	ePPP	09 33 48.4
		N	eS	09 38 05
		E	eLq	09 46 32
		Z	eLr	09 51 50
			AMP(μm)	PER(s)
		PZ	0.044	0.8
		LZ	0.93	20.
		LN	0.88	20.
		LE	0.54	20.
	FRI	Z	ePd	09 28 45.9
		Z	e	09 29 06.9
		Z	e	09 29 13.4
	CMB	Z	ePd	09 28 47.0
		Z	e	09 29 13.0
		Z	e	09 29 43.9
		Z	e	09 30 10.2
	ORV	Z	ePd	09 28 47.8
		Z	e	09 29 13.9
	WDC	Z	iPd	09 28 48.2
		Z	e	09 29 14.1
		Z	e	09 30 15.5
	MIN	Z	eP	09 28 49.8
	MNA	Z	ePd	09 28 57.0
		Z	e	09 29 22.7
BRK Ms=5.2 Distance=73°				
USGS 09h17m27.1s 15.2S 173.9W				
h=100km mb=5.5				
Tonga Islands				
May 20	FRI	Z	ePc	10 26 21.5
	PRI	Z	ePc	10 26 22.3
	LLA	Z	ePc	10 26 25.8
	MNA	Z	iPc	10 26 26.2
		Z	i	10 26 34.7
		Z	e	10 27 00.2
	PRS	Z	eP	10 26 26.3
		Z	e	10 27 35.1
	SAO	Z	e(P)	10 26 28.4
	CMB	Z	ePc	10 26 31.4
		Z	e	10 26 40.4
		Z	e	10 27 06.7
		Z	e	10 28 18.4
	GCC	Z	eP	10 26 32.6
	MHC	Z	ePc	10 26 33.6
	PCC	Z	ePc	10 26 37.1
	BRK	Z	eP	10 26 38.8
	BKS	Z	iPd	10 26 39.3
	ORV	Z	iPc	10 26 45.2
	MIN	Z	ePc	10 26 49.2
	WDC	Z	iPc	10 26 52.8
		Z	e	10 27 22.5
	FHC	Z	eP	10 27 02.1
USGS 10h18m01.3s 0.5S 91.7W				
h=10km mb=5.3				
Galapagos Islands				
May 20	MNA	Z	eP	15 10 39.5
	FRI	Z	eP	15 10 46.7
	CMB	Z	eP	15 10 49.7
	PRI	Z	eP	15 10 51.1
	LLA	Z	eP	15 10 51.4
	MIN	Z	eP	15 10 53.7
	ORV	Z	eP	15 10 53.7
	PRS	Z	e(P)	15 10 54.3
	MHC	Z	eP	15 10 55.8
	WDC	Z	eP	15 10 56.3
	BRK	Z	e(P)	15 10 57.9
	FHC	Z	e(P)	15 11 04.8
	BKS	E	e(S)	15 21 06.4
		E	e	15 21 50.7
		E	e	15 26 42.0
		N	eLq	15 32 04.0
		Z	eLr	15 37 08.0
			AMP(μm)	PER(s)
		LZ	4.9	20.
		LN	2.4	20.
		LE	6.6	20.
USGS 14h58m43.5s 8.1N 38.4W				
h=10km mb=5.8 Ms=5.9				
Central Mid-Atlantic Ridge				
May 20	SAO	Z	iPc	23 29 47.26
		T	iS	23 29 48.25
	PRS	Z	iPd	23 29 54.2
	LLA	Z	iPc	23 29 54.8
	GCC	Z	ePc	23 29 55.4
	MHC	Z	iPd	23 29 58.4
		T	eS	23 30 07.51
	PRI	Z	eP	23 30 02.8
	PCC	Z	ePd	23 30 04.9
	BKS	Z	e(P)	23 30 08.1
	FRI	Z	eP	23 30 10.7
		Z	eS	23 30 28.1
	CMB	Z	eP	23 30 12.8
		Z	iS	23 30 31.8
BRK 23h29m46.1s 36.7N 121.5W				
h=6km ML=2.5(2)				
Fremont Peak, 13 km SW of Hollister, CA				
May 21	FRI	Z	e(P)	14 41 00.5
	PRI	Z	eP	14 41 01.5
	MNA	Z	eP	14 41 02.6
	LLA	Z	eP	14 41 02.7
	PRS	Z	eP	14 41 03.2
	CMB	Z	eP	14 41 06.8
	ORV	Z	eP	14 41 16.2
	WDC	Z	eP	14 41 20.5
USGS 14h28m39.8s 32.8S 71.7W				
h=42km mb=5.5 Ms=5.7				
Near Coast of Central Chile				
May 21	MHC	Z	eP	15 28 03.9
	FRI	Z	eP	15 28 08.5
	CMB	Z	eP	15 28 09.8
	ORV	Z	eP	15 28 11.5
	WDC	Z	e(P)	15 28 12.0
	MIN	Z	eP	15 28 13.8
	MNA	Z	eP	15 28 19.5
USGS 15h16m22.6s 20.4S 173.6W				
h=46km mb=5.2 Ms=5.7				
Tonga Islands				
May 21	MNA	Z	iPc	22 30 38.1
		Z	i	22 30 41.2
		Z	iS	22 31 22.3
	FRI	Z	ePc	22 30 49.1
	CMB	Z	eP	22 30 57.7
	PRI	Z	eP	22 31 02.6
	LLA	Z	eP	22 31 03.5
	PRS	Z	eP	22 31 08.5
	SAO	Z	e(P)	22 31 09.5
	ORV	Z	eP	22 31 17.3
	MIN	Z	eP	22 31 25.1
	WDC	Z	e(P)	22 31 34.5
BRK ML=4.4(6)				
USGS 22h30m00.1s 37.0N 116.0W				
h=0km mb=4.3				
Underground Nuclear Explosion, N.T.S.				
May 21	WDC	Z	eP	23 58 35.2
	CMB	Z	eP	23 59 01.5
	MNA	Z	eP	23 59 06.1
USGS 23h52m52.3s 63.0N 150.9W				
h=118km mb=4.4				
Central Alaska				
May 22	FRI	Z	eP	00 20 53.5

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	MNA	Z	eP	06 20 58.4
USGS 06h15m22.4s 16.3N 101.7W				
h=33km mb=4.1				
Near Coast of Guerrero, Mexico				
May 22	WDC	Z	eP	09 46 06.3
		Z	eScP	09 46 45.2
		Z	ePcP	09 49 04.2
	MIN	Z	eP	09 46 12.1
		Z	eScP	09 46 47.3
		Z	ePcP	09 49 06.7
	ORV	Z	e(P)	09 46 15.6
		Z	ePcP	09 49 08.1
	BKS	Z	e(P)	09 46 22.7
		Z	e	09 46 34.9
		Z	e	09 46 40.4
		E	eS	09 51 38.8
		N	eLq	09 53 53.6
		Z	eLr	09 54 50.8
			AMP(μm)	PER(s)
		PZ	0.12	1.2
		LZ	9.6	20.
		LN	3.9	20.
		LE	9.5	20.
	PRS	Z	eP	09 46 36.5
		Z	ePcP	09 49 14.5
	LLA	Z	eP	09 46 40.8
	FRI	Z	eP	09 46 41.0
		Z	eScP	09 46 59.1
		Z	ePcP	09 49 16.1
	MNA	Z	eP	09 46 41.1
BRK Ms=5.5 Distance=33°				
USGS 09h39m56.0s 53.6N 163.3W				
h=33km mb=5.7 Ms=5.7				
Unimak Island Region				
May 22	FRI	Z	ePd	12 58 31.5
	MNA	Z	ePd	12 58 33.0
	PRI	Z	ePd	12 58 33.5
	LLA	Z	ePd	12 58 36.0
	PRS	Z	ePd	12 58 36.8
	GCC	Z	ePd	12 58 41.4
	MHC	Z	ePd	12 58 41.6
	PCC	Z	ePd	12 58 45.4
	BRK	Z	ePd	12 58 45.5
	BKS	Z	eP	12 58 45.5
			AMP(μm)	PER(s)
		PZ	0.050	0.8
	ORV	Z	eP	12 58 48.9
		Z	e	12 59 30.0
	MIN	Z	ePd	12 58 51.0
	WDC	Z	ePd	12 58 54.1
		Z	e	12 59 35.4
USGS 12h47m25.8s 17.4S 69.4W				
h=169km mb=5.3				
Peru-Bolivia Border Region				
May 22	FHC	Z	ePc	19 23 39.2
	WDC	Z	ePc	19 23 40.3
		Z	i	19 23 42.8
	MIN	Z	iPc	19 23 43.7
		Z	i	19 23 46.2
	ORV	Z	ePc	19 23 51.2
	MNA	Z	ePc	19 24 06.0
		Z	e	19 27 46.2
	BKS	Z	eP	19 24 08.5
			AMP(μm)	PER(s)
		PZ	0.087	0.9
	BRK	Z	e(P)	19 24 08.9
	PCC	Z	ePc	19 24 11.4
	MHC	Z	ePc	19 24 13.9
	GCC	Z	ePc	19 24 15.9

DATE	STA	CMP	PHASE	TIME (UTC)
	FRI	Z	iPc	19 24 17.6
		Z	e	19 27 49.2
	SAO	Z	e(P)	19 24 18.7
	PRS	Z	ePc	19 24 22.9
	PRI	Z	e(P)	19 24 25.5
USGS 19h18m47.6s 62.2N 124.2W				
h=10km mb=5.2 Ms=4.2				
Northwest Territories, Canada				
May 23	FRI	Z	iPd	00 40 06.3
		Z	epP	00 40 36.5
	PRI	Z	iPd	00 40 07.3
		Z	epP	00 40 37.9
	LLA	Z	eP	00 40 09.7
		Z	epP	00 40 40.0
	PRS	Z	e(P)	00 40 10.0
		Z	ipP	00 40 40.3
	SAO	Z	e(P)	00 40 11.2
	GCC	Z	ePd	00 40 14.4
	MHC	Z	eP	00 40 14.6
		Z	epP	00 40 45.1
	BRK	Z	ePd	00 40 18.1
		Z	epP	00 40 48.6
	BKS	Z	e(P)	00 40 18.4
			AMP(μm)	PER(s)
		PZ	0.26	1.6
	ORV	Z	ePd	00 40 21.6
		Z	ipP	00 40 52.2
	MIN	Z	eP	00 40 23.8
		Z	ePcP	00 40 32.0
		Z	epP	00 40 53.8
	WDC	Z	iPd	00 40 26.8
		Z	ePcP	00 40 35.0
		Z	i	00 40 47.8
		Z	ipP	00 40 56.3
	FHC	Z	ePd	00 40 33.1
USGS 00h28m04.8s 28.4S 68.6W				
h=117km mb=5.6				
La Rioja Province, Argentina				
May 23	GCC	Z	ePc	07 57 14.0
	PRS	Z	ePc	07 57 14.5
	SAO	Z	ePc	07 57 15.8
	PRI	Z	ePc	07 57 16.6
	MHC	Z	ePc	07 57 16.8
	FRI	Z	iPc	07 57 21.7
	ORV	Z	ePc	07 57 23.5
	WDC	Z	iPc	07 57 23.8
	MIN	Z	eP	07 57 25.5
	MNA	Z	ePc	07 57 31.0
USGS 07h46m00.7s 22.3S 179.9W				
h=570km mb=4.9				
South of Fiji Islands				
May 23	WDC	Z	ePc	19 00 18.0
	ORV	Z	ePc	19 00 27.1
	CMB	Z	eP	19 00 39.9
	PRI	Z	e(P)	19 00 44.0
	FRI	Z	e(P)	19 00 45.9
	MNA	Z	ePc	19 00 47.3
USGS 18h51m03.9s 52.5N 158.9E				
h=33km mb=5.0 Ms=4.1				
Near East Coast of Kamchatka				
May 23	PRI	Z	e	21 02 27.9
	CMB	Z	ePc	21 02 40.8
USGS 20h51m48.0s 17.4S 178.6W				
h=652km mb=4.4				
Fiji Islands Region				
May 23	GCC	Z	ePc	23 07 39.8
	WDC	Z	ePc	23 07 40.6

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		Z	e	23 07 51.3
	PRS	Z	ePc	23 07 42.0
	MHC	Z	ePc	23 07 42.5
	ORV	Z	ePc	23 07 44.3
	MIN	Z	ePc	23 07 44.4
	CMB	Z	ePc	23 07 47.0
	MNA	Z	eP	23 07 54.2
		Z	e	23 08 05.0
USGS 22h54m27.8s 10.5S 152.3E				
h=28km mb=5.4 Ms=4.8				
Dentrecasteaux Islands Region				
May 24	GCC	Z	ePc	05 12 26.3
		Z	e	05 12 35.0
	PRS	Z	ePc	05 12 29.9
		Z	e	05 12 37.7
	MHC	Z	ePc	05 12 33.2
	FRI	Z	iPc	05 12 36.7
	CMB	Z	ePc	05 12 38.2
		Z	i	05 12 46.0
	WDC	Z	iPc	05 12 40.9
		Z	e	05 12 48.8
	MNA	Z	ePc	05 12 45.3
		Z	e	05 12 52.5
USGS 04h59m39.3s 34.1S 179.6E				
h=49km mb=5.2 Ms=4.2				
South of Kermadec Islands				
May 24	PRS	Z	ePc	06 04 05.1
	MHC	Z	ePc	06 04 07.5
	FRI	Z	ePc	06 04 12.4
	CMB	Z	ePc	06 04 13.4
	ORV	Z	eP	06 04 13.5
	WDC	Z	ePc	06 04 13.9
	MIN	Z	ePc	06 04 16.8
	MNA	Z	ePc	06 04 22.4
USGS 05h52m45.9s 21.1S 177.9W				
h=392km mb=4.6				
Fiji Islands Region				
May 24	SAO	Z	iP	20 21 08.3
		T	iS	20 21 12.15
	LLA	Z	iPc	20 21 08.9
	PRS	Z	iPd	20 21 09.9
	PRI	Z	iPd	20 21 16.8
		Z	iPg	20 21 19
		Z	iSn	20 21 30
	GCC	Z	iPd	20 21 17.8
	MHC	Z	iPd	20 21 19.9
		T	iS	20 21 31.50
		Z	iSn	20 21 31.8
	PCC	Z	iPc	20 21 26.4
	FRI	Z	iPc	20 21 26.8
		Z	i(S)	20 21 42.4
	BKS	Z	eP	20 21 28.6
		Z	iSn	20 21 52
	BRK	Z	e(P)	20 21 31.4
	CMB	Z	eP	20 21 31.6
		Z	iPg	20 21 35
		Z	iSn	20 21 52
		Z	iSg	20 21 56.5
	ORV	Z	eP	20 21 51.5
BRK 20h21m03.8s 36.6N 121.3W				
h=6km ML=3.3(4) Mo=3.0E21(2)				
Stone Canyon area, 32 km SE of Hollister, CA				
May 25	WDC	Z	iPc	04 52 40.2
	CMB	Z	iPc	04 52 49.1
USGS 04h39m25.9s 10.5S 152.3E				
h=26km mb=5.3 Ms=4.8				
Dentrecasteaux Islands Region				

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May 25	FHC	Z	iPc	12 52 12.1
	WDC	Z	iPc	12 52 17.0
		Z	ipP	12 54 16.7
	MIN	Z	iPc	12 52 20.8
	ORV	Z	iPc	12 52 23.3
		Z	ipP	12 54 17.8
	CMB	Z	iPc	12 52 31.3
		Z	ipP	12 54 27.0
	PRS	Z	iPc	12 52 31.6
	FRI	Z	iPc	12 52 35.8
	MNA	Z	iPc	12 52 38.5
	BKS	Z	iPc	12 52 50.4
			AMP(μm)	PER(s)
		PZ	0.078	0.8
USGS 12h41m11.9s 27.9N 139.4E				
h=532km mb=5.0				
Bonin Islands Region				
May 25	FHC	Z	iPd	14 12 17.8
		Z	i	14 12 25.3
	WDC	Z	iPd	14 12 27.5
		Z	i	14 12 39.4
		Z	i	14 12 46.0
	MIN	Z	iPd	14 12 32.2
	ORV	Z	iPd	14 12 36.0
	BRK	Z	iPd	14 12 40.5
	BKS	Z	iPd	14 12 40.8
		E	e(S)	14 18 36.8
		E	eLq	14 21 56.0
		Z	eLr	14 23 49.2
			AMP(μm)	PER(s)
		PZ	0.20	1.0
		LZ	2.3	20.
		LN	3.7	20.
		LE	1.5	20.
	GCC	Z	iPd	14 12 45.6
	CMB	Z	iPd	14 12 50.1
		Z	i	14 12 59.6
		Z	i	14 13 08.8
		Z	iPcP	14 14 54.1
	SAO	Z	iPd	14 12 50.1
	PRS	Z	iPd	14 12 53.1
	LLA	Z	iPd	14 12 54.3
	PRI	Z	iPd	14 12 58.2
		Z	i	14 13 05.2
		Z	i	14 13 16.9
	FRI	Z	iPd	14 12 58.6
	MNA	Z	iPd	14 12 59.9
		Z	i	14 13 09.4
		Z	i	14 13 16.0
BRK Ms=5.3 Distance=40°				
USGS 14h05m17.7s 50.5N 174.6W				
h=40km mb=5.7 Ms=4.9				
Andreanof Islands, Aleutian Is.				
May 25	WDC	Z	i(P)c	14 48 24.4
	CMB	Z	iPc	14 48 30.6
	MNA	Z	iPc	14 48 40.3
USGS 14h40m57.8s 50.7N 174.6W				
h=39km mb=4.9				
Andreanof Islands, Aleutian Is.				
May 25	CMB	Z	ePc	17 02 30.7
	WDC	Z	ePc	17 02 35.5
	MNA	Z	ePc	17 02 38.0
USGS 16h49m47.7s 31.7S 178.2W				
h=33km mb=4.9				
Kermadec Islands Region				
May 25	PRS	Z	ePc	17 11 11.8
	PRI	Z	ePc	17 11 12.1

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	e	17 11 22.0
	SAO	Z	ePc	17 11 14.0
	GCC	Z	ePc	17 11 14.9
	PCC	Z	ePc	17 11 17.2
	MHC	Z	ePc	17 11 18.0
	FRI	Z	ePc	17 11 18.3
		Z	e	17 11 28.1
	BRK	Z	e(P)	17 11 19.4
	BKS	Z	e(P)	17 11 19.8
		Z	eLr	17 31 31.6
			AMP(μm)	PER(s)
		PZ	0.075	1.2
		LZ	1.2	20.
		LN	1.1	20.
		LE	0.71	20.
	CMB	Z	ePc	17 11 24.0
		Z	i	17 11 31.1
	MNA	Z	ePc	17 11 30.9
	ORV	Z	ePc	17 11 31.3
	MIN	Z	ePc	17 11 34.5
	WDC	Z	iPc	17 11 36.0
		Z	e	17 11 42.2
USGS 17h00m58.4s 21.9S 139.0W				
h=0km mb=5.6 Ms=4.9				
Tuamotu Archipelago Region				
May 26	MNA	Z	iPc	03 57 17.4
		Z	eS	03 57 38
	FRI	Z	iPc	03 57 19.3
		Z	iS	03 57 40.2
	CMB	Z	iPd	03 57 30.3
		Z	iPg	03 57 32.8
		Z	eS	03 58 00.3
	LLA	Z	e(P)	03 57 33.3
	PRI	Z	ePc	03 57 33.5
		Z	iS	03 58 10.5
	SAO	Z	iPc	03 57 40.3
		R	e(S)	03 58 24.25
	PRS	Z	ePc	03 57 40.4
	MHC	Z	ePc	03 57 42.3
		Z	i	03 57 49.0
		Z	i	03 57 54.1
		Z	iS	03 58 30.4
	GCC	Z	e(P)	03 57 46.8
	PCC	Z	ePd	03 57 51.1
	BKS	Z	eP	03 57 51.1
	BRK	Z	ePc	03 57 51.5
		Z	e	03 57 56.5
	ZSP	Z	ePc	03 57 52.0
		Z	i	03 58 48.8
	ORV	Z	ePc	03 57 52.3
	MIN	Z	e(P)	03 58 01.4
	WDC	Z	e	03 58 11.1
BRK 03h56m50.0s 37.0N 117.7W				
h=4km ML=4.1(4)				
Eureka Valley, 76 km SE of Bishop, CA				
May 26	FHC	Z	eP	19 03 44.2
	WDC	Z	ePc	19 03 53.9
		Z	eS	19 05 13.0
	MIN	Z	ePc	19 04 01.7
	ORV	Z	eP	19 04 10.9
	BRK	Z	eP	19 04 28.5
	BKS	Z	eP	19 04 28.9
		Z	e	19 06 49.2
		N	e	19 07 04.2
		Z	e	19 07 41.2
			AMP(μm)	PER(s)
		PZ	0.091	1.0
	CMB	Z	e(P)	19 04 33.4
		Z	eS	19 05 34.7

DATE	STA	CMP	PHASE	TIME (UTC)
	MHC	Z	eP	19 04 37.9
	MNA	Z	eP	19 04 42.0
		Z	eS	19 05 43.8
	SAO	Z	e(P)	19 04 43.1
	PRS	Z	e(P)	19 04 50.5
	PRI	Z	ePc	19 04 57.3
USGS 19h01m34.5s 49.1N 128.3W				
h=10km mb=5.1 Ms=4.8				
Vancouver Island Region				
May 26	FHC	Z	ePc	23 29 35.9
	WDC	Z	eP	23 29 45.3
	MIN	Z	ePc	23 29 53.0
	ORV	Z	ePc	23 30 02.6
	CMB	Z	e(P)	23 30 25.6
	MHC	Z	e(P)	23 30 28.0
	MNA	Z	eP	23 30 33.9
	FRI	Z	e(P)	23 30 39.8
	PRI	Z	ePc	23 30 48.3
USGS 23h27m28.0s 49.0N 128.2W				
h=10km mb=4.8 Ms=4.0				
Vancouver Island Region				
May 27	PRS	Z	eP	02 56 25.5
	GCC	Z	eP	02 56 25.8
	PRI	Z	e(P)	02 56 26.3
	MHC	Z	eP	02 56 28.4
	FRI	Z	eP	02 56 32.5
	CMB	Z	eP	02 56 33.9
		Z	ePcP	02 57 41.0
	ORV	Z	eP	02 56 35.8
	WDC	Z	ePc	02 56 36.0
	MNA	Z	eP	02 56 42.2
USGS 02h44m21.7s 25.1S 177.0W				
h=93km mb=5.2				
South of Fiji Islands				
May 28	PCC	Z	eP	08 08 39.1
	GCC	Z	eP	08 08 39.1
	PRS	Z	eP	08 08 39.3
	BRK	Z	eP	08 08 40.7
	BKS	Z	ePd	08 08 41.3
			AMP(μm)	PER(s)
		PZ	0.038	0.8
	MHC	Z	eP	08 08 41.4
	FRI	Z	ePd	08 08 46.2
	CMB	Z	ePd	08 08 47.1
	ORV	Z	ePd	08 08 48.2
	WDC	Z	iPd	08 08 48.4
	MIN	Z	eP	08 08 50.2
	MNA	Z	ePd	08 08 56.0
USGS 07h57m38.0s 20.7S 178.7W				
h=606km mb=4.8				
Fiji Islands Region				
May 28	PRS	Z	eP	10 35 43.2
	FRI	Z	eP	10 35 45.1
	CMB	Z	eP	10 35 52.6
	MNA	Z	eP	10 35 54.5
	ORV	Z	eP	10 36 04.4
	WDC	Z	eP	10 36 09.0
USGS 10h24m38.5s 31.9S 111.4W				
h=10km mb=5.2				
Easter Island Region				
May 28	GCC	Z	iPc	16 38 17.7
	PCC	Z	iPc	16 38 17.8
	PRS	Z	iPc	16 38 18.2
		Z	esP	16 39 17.8
	SAO	Z	iPc	16 38 18.5
		Z	esP	16 40 08.01
		Z	ePP	16 41 20.93

International Seismological Centre

DATE	STA	CMP	PHASE	TIME (UTC)
	BRK	Z	iPc	16 38 19.4
	BKS	Z	iPc	16 38 19.5
		Z	e	16 40 14
		Z	epP	16 40 18.13
		Z	e	16 41 10
		Z	ePP	16 41 21.93
		T	eS	16 46 59.16
		T	esS	16 50 56.16
				AMP(μm) PER(s)
		PZ		0.53 1.2
	MHC	Z	iPc	16 38 20.4
		Z	esP	16 40 19.4
	PRI	Z	iPc	16 38 20.5
		Z	ePcP	16 38 28.7
		Z	esP	16 40 09.6
	FHC	Z	ePc	16 38 23.3
	FRI	Z	iPc	16 38 25.6
		Z	esP	16 40 25.2
	CMB	Z	iPc	16 38 26.3
		Z	ePcP	16 38 34.7
		Z	esP	16 40 26.4
	WDC	Z	iPc	16 38 26.7
		Z	e(PcP)	16 38 33.9
		Z	esP	16 40 26.6
	ORV	Z	iPc	16 38 26.9
	MIN	Z	iPc	16 38 28.5
	MNA	Z	iPc	16 38 35.6
		Z	ePcP	16 38 40.7
		Z	esP	16 40 35.2

BRK mb=5.9 h=500km Distance=76°
USGS 16h27m24.2s 17.9S 178.7W
h=558km mb=5.7
Fiji Islands Region

May 28	FRI	Z	iPc	18 09 11.0
		Z	eS	18 09 23.0
	MNA	Z	iPc	18 09 15.7
		Z	eS	18 09 30.6
	CMB	Z	iPc	18 09 19.0
		Z	iS	18 09 34.9
	PRI	Z	iPd	18 09 30.9
	SAO	Z	iPd	18 09 33.6
	MHC	Z	eP	18 09 34.2
		Z	eS	18 10 03.5
	PRS	Z	ePc	18 09 35.2
	GCC	Z	eP	18 09 38.2
	BRK	Z	e(P)	18 09 40.4
	BKS	Z	ePc	18 09 40.4
		N	eS	18 10 15.7
	ZSP	Z	e(P)	18 09 41.1
	PCC	Z	eP	18 09 41.5
	ORV	Z	eP	18 09 44.8

BRK 18h08m55.5s 37.5N 118.9W
h=3km ML=4.3(6) Mo=1.3E22(2)
Mammoth Lakes area, CA

May 28	MNA	Z	eP	18 59 42.0
	CMB	Z	e(P)	18 59 53.5

USGS 18h51m06.5s 1.3N 85.3W
h=33km mb=4.7
Off Coast of Ecuador

May 29	PRS	Z	e(P)	06 35 41.3
	BKS	Z	e(P)c	06 35 50
		N	iS	06 45 06
		NW	eLq	06 54 04
		Z	eLr	07 00 06
				AMP(μm) PER(s)
		LZ		0.89 20.
		LN		1.1 20.
		LE		0.71 20.
	CMB	Z	eP	06 35 50.2
		Z	eS	06 35 51.6
	WDC	Z	eP	06 35 51.8
	MIN	Z	eP	06 35 53.9
	MNA	Z	eP	06 36 00.2

BRK Ms=5.2 Distance=75°
USGS 06h24m21.1s 16.6S 172.6W
h=33km mb=5.3 Ms=5.0
Samoa Islands Region

May 30	ZSP	Z	ePc	08 24 49.6
		Z	i	08 24 50.3
		Z	iS	08 25 04.9
	BRK	Z	iPc	08 24 50.9
		Z	iS	08 25 05.6
	BKS	Z	iPc	08 24 50.9
		N	iS	08 25 07.2
	ORV	Z	ePd	08 24 53.4
	PCC	Z	ePc	08 24 55.7
		Z	i	08 24 58.5
		Z	i	08 25 02.1
	MIN	Z	eP	08 25 02.2
	GCC	Z	ePc	08 25 02.9
	WDC	Z	e	08 25 03.7
	CMB	Z	ePc	08 25 05.8
		Z	e(S)	08 25 43.3
	SAO	Z	iPd	08 25 08.5
	PRS	Z	e(P)	08 25 14.2
	FRI	Z	e(P)	08 25 21.2
	PRI	Z	e	08 25 22.2
	MNA	Z	e(P)	08 25 29.9

BRK 08h24m31.5s 38.8N 122.8W
h=3km ML=3.5(2) Mo=1.3E21(2)
The Geysers area, 20 km S of Clear Lake, CA

May 30	MNA	Z	ePc	10 31 30.8
	CMB	Z	e(P)c	10 31 43.0
	ORV	Z	e(P)	10 31 48.6
	MIN	Z	e(P)	10 31 53.9

USGS 10h23m13.8s 7.4N 82.5W
h=10km mb=4.8 Ms=3.8
South of Panama

May 30	MIN	Z	eP	10 56 35.0
		Z	e	10 56 52.5
	CMB	Z	ePc	10 56 47.7
		Z	e	10 57 06.0
	MNA	Z	e	10 56 55.8

USGS 10h45m12.3s 36.4N 140.7E
h=64km mb=4.9
Near East Coast of Honshu, Japan

May 30	FRI	Z	iPc	16 05 39.0
		Z	iS	16 05 59.2
	MNA	Z	iPd	16 05 45.4
		Z	i	16 05 48.0
		Z	iS	16 06 15.3
	PRI	Z	iPd	16 05 50.4
		Z	i	16 05 51.6
		Z	iS	16 06 18.9
	CMB	Z	iPd	16 05 55.5
		Z	iS	16 06 28.2
	PRS	Z	iPd	16 05 57.8
	SAO	Z	iPd	16 05 59.0
		Z	iS	16 06 39.5
	MHC	Z	eP	16 06 02.9
	GCC	Z	eP	16 06 05.6
	PCC	Z	e(P)	16 06 11.0
	BRK	Z	ePd	16 06 11.3
	BKS	Z	ePc	16 06 11.3
		Z	iSd	16 06 59.6
	ZSP	Z	e(P)	16 06 12.3
		Z	i	16 07 07.0
	ORV	Z	ePd	16 06 21.4
	MIN	Z	e(P)	16 06 37.8
	WDC	Z	e	16 06 50.7
		Z	iS	16 07 58.7

BRK 16h05m10.7s 36.4N 117.9W
h=5kmR ML=4.2(5)
25 km SSE of Lone Pine, CA

May 30	FRI	Z	iPc	17 28 46.7
		Z	iS	17 29 06.9
	MNA	Z	iPd	17 28 53.0
		Z	i	17 28 55.8
		Z	iS	17 29 23.7
	PRI	Z	ePc	17 28 57.9
		Z	iS	17 29 27.9
	CMB	Z	iPc	17 29 03.4
		Z	iS	17 29 35.9
	PRS	Z	ePc	17 29 05.5
	SAO	Z	iPd	17 29 06.8
	MHC	Z	eP	17 29 09.8
	GCC	Z	eP	17 29 12.7
	PCC	Z	iPd	17 29 18.6
	BKS	Z	ePc	17 29 19.2
	BRK	Z	ePc	17 29 19.4
	ZSP	Z	eP	17 29 20.0
	ORV	Z	eP	17 29 27.7
	MIN	Z	iPc	17 29 36.4
	WDC	Z	e	17 29 42.4
		Z	iS	17 31 06.7

BRK 17h28m18.4s 36.4N 117.9W
h=5kmR ML=4.4(5)
25 km SE of Lone Pine, CA

May 30	WDC	Z	iPdiffd	21 25 31.4
		Z	e	21 28 40.0
		Z	iPKPd	21 29 34.2
		Z	i	21 30 03.3
		Z	i	21 30 11.0
		Z	iPKKP	21 40 39.9
		Z	eSKKP	21 44 40.7
	BKS	Z	iPc	21 25 34
		Z	iPP	21 30 05
		E	iSKS	21 36 11
		NW	iPS	21 38 44
		NW	ePPS	21 39 40
		Z	eSS	21 45 24
		NW	iPSPS	21 46 08
		Z	iPKPPKP	21 50 04
		Z	iSKPPKP	21 53 00
		NW	eLq	21 56 12
		N	iG	21 56 56
		Z	eLr	21 58 10
				AMP(μm) PER(s)
		PZ		0.13 1.4
		LZ		9.3 20.
		LN		3.0 20.
		LE		10 20.
	ORV	Z	iPdiffd	21 25 35.1
		Z	ePKPd	21 29 36.0
		Z	i	21 30 09.3
		Z	i	21 30 17.0
		Z	ePKKP	21 40 37.8
	GCC	Z	e(Pdif)	21 25 35.2
		Z	ePKP	21 29 35.8
		Z	i	21 30 16.9
	MIN	Z	ePdiff	21 25 36.6
		Z	ePKPd	21 29 36.0
		Z	i	21 30 08.5
		Z	i	21 30 16.4
	BRK	Z	ePdiffd	21 25 36.7
		Z	e(PKP)	21 29 35.3
	MHC	Z	ePdiffd	21 25 37.0
		Z	iPKPd	21 29 37.2
		Z	e	21 30 11.2
		Z	e	21 30 19.7
	PRS	Z	ePdiffd	21 25 37.2
		Z	ePKPd	21 29 37.8
	PRI	Z	iPdiffd	21 25 37.3
		Z	ePKPd	21 29 38.8
		Z	ePKKP	21 40 35.3
	CMB	Z	ePdiffd	21 25 40.0
		Z	e	21 28 45.9
		Z	ePKPd	21 29 38.3
		Z	e	21 30 15.3
		Z	i	21 30 21.3
		Z	ePKKP	21 40 34.9
		Z	eSKKP	21 44 40.0
	FRI	Z	ePdiffd	21 25 43.2
		Z	iPKPd	21 29 38.7
		Z	i	21 30 19.8
		Z	ePKKP	21 40 30.9
	MNA	Z	iPdiffd	21 25 48.4
		Z	iPKPd	21 29 41.7
		Z	i	21 30 27.8
		Z	ePKKP	21 40 29.8
	FHC	Z	ePKPd	21 29 32.3
	PCC	Z	ePKPd	21 29 35.3

BRK Ms=6.4 Distance=108°
USGS 21h11m11.3s 7.5S 128.3E
h=86km mb=6.5
Banda Sea

May 30	FRI	Z	ePd	21 34 27.3
	PRI	Z	ePd	21 34 28.7
	MNA	Z	ePd	21 34 30.7
		Z	iPcP	21 34 42.2
		Z	ipP	21 34 54.9
	PRS	Z	ePd	21 34 31.1
	SAO	Z	ePd	21 34 32.9
	CMB	Z	ePd	21 34 33.0
		Z	epP	21 35 02.8
	GCC	Z	ePd	21 34 35.4
	MHC	Z	ePd	21 34 35.8
	PCC	Z	ePd	21 34 38.0
	BRK	Z	ePd	21 34 39.0
	BKS	Z	iPc	21 34 39.5
				AMP(μm) PER(s)
		PZ		0.24 1.6
	ORV	Z	ePd	21 34 44.1
		Z	epP	21 35 12.4
		Z	e	21 35 32.0
	MIN	Z	ePd	21 34 45.2
	WDC	Z	ePd	21 34 48.1
		Z	ePcP	21 34 56.8
		Z	epP	21 35 13.7
		Z	e	21 35 38.2
	FHC	Z	ePd	21 34 54.1
		Z	e	21 35 23.6

USGS 21h22m12.5s 31.5S 69.1W
h=93km mb=5.8
San Juan Province, Argentina

May 30	ZSP	Z	iPc	23 13 07.0
		Z	iS	23 13 21.6
		Z	i	23 13 23.0
	BRK	Z	ePd	23 13 07.8
		Z	eS	23 13 23.2
	BKS	Z	iPc	23 13 08.2
		E	iSd	23 13 24.1
	ORV	Z	eP	23 13 09.7
		Z	i	23 13 16.7
	PCC	Z	eP	23 13 11.8
	MHC	Z	eP	23 13 18.9
	CMB	Z	ePc	23 13 22.5
		Z	eS	23 13 51.2
	WDC	Z	iPgc	23 13 24.4
	GCC	Z	eP	23 13 24.9
	PRS	Z	e	23 13 32.2
	FRI	Z	e(P)	23 13 37.2
	MNA	Z	e	23 13 53.2

BRK 23h12m48.2s 38.8N 122.8W
h=4km ML=3.0(3)
The Geysers area, 18 km S of Clear Lake, CA

May 31	WDC	Z	ePc	05 03 18.9
	CMB	Z	ePc	05 03 19.0
	FRI	Z	ePc	05 03 19.2
	ORV	Z	eP	05 03 19.2
	MIN	Z	ePc	05 03 23.6

USGS 04h50m50.6s 19.3S 173.3E
h=40km mb=4.8 Ms=4.1
Vanuatu Islands Region

May 31	WDC	Z	iPc	14 33 07.3
	CMB	Z	iPc	14 33 08.2
	MNA	Z	ePc	14 33 16.8

USGS 14h20m19.5s 20.0S 168.7E
h=28km mb=4.8 Ms=4.8
Loyalty Islands

May 31	WDC	Z	eP	16 19 49
	MIN	Z	eP	16 19 56

USGS 16h17m28.3s 49.1N 128.4W
h=10km mb=4.3
Vancouver Island Region

May 31	WDC	Z	iPc	16 38 15.5
	MIN	Z	eP	16 38 22.5
	ORV	Z	e(P)	16 38 37

USGS 16h35m55.8s 49.1N 128.4W
h=10km mb=4.6
Vancouver Island Region

May 31	PRS	Z	ePc	19 03 27.4
	PRI	Z	iPc	19 03 29.6
	MHC	Z	iPc	19 03 30.3
	FRI	Z	ePc	19 03 32.3
	CMB	Z	iPc	19 03 32.6
	WDC	Z	iPc	19 03 35.1
	MNA	Z	iPc	19 03 42.7

USGS 18h51m38.0s 20.5S 175.4W
h=33km mb=5.1
Tonga Islands

Jun 1	PRI	Z	ePc	07 53 26.2
	MNA	Z	ePc	07 53 27.8
	LLA	Z	ePc	07 53 28.5
	PRS	Z	ePc	07 53 28.6
	CMB	Z	iPc	07 53 32.2
	MHC	Z	ePc	07 53 33.3
	GCC	Z	ePc	07 53 33.3
	ORV	Z	iPc	07 53 41.4
	WDC	Z	iPc	07 53 46.3

USGS 07h41m18.4s 29.8S 71.7W
h=49km mb=4.9
Near Coast of Central Chile

Jun 1	WDC	Z	ePc	08 15 11.9
	ORV	Z	iPc	08 15 30.6
	CMB	Z	iPc	08 15 53.7
	FRI	Z	ePc	08 16 08.2
	MNA	Z	ePc	08 16 08.8

USGS 08h13m39.2s 44.3N 129.3W
h=10km mb=4.1
Off Coast of Oregon

Jun 1	MIN	Z	iPc	22 57 03.9
	ORV	Z	iPc	22 57 07.8
	WDC	Z	iPc	22 57 15.1
		Z	i	22 57 16.0
		Z	iS	22 57 38.0
	CMB	Z	ePnd	22 57 25.4
		Z	iP*c	22 57 28.0
		Z	iS*	22 57 56.8
	MNA	Z	eP	22 57 26.8
		Z	iP*d	22 57 27.3
		Z	iPg	22 57 34.0
		Z	iSg	22 58 09.7
	FHC	Z	e(P*)	22 57 35.2
		Z	e	22 57 37.8
	FRI	Z	e(P)	22 57 41.2
		Z	e	22 57 41.9
		Z	iP*	22 57 46.5
	PCC	Z	e	22 57 43.1
	BRK	Z	ePg	22 57 44.8
	BKS	Z	e	22 57 46.6
		Z	eS*	22 58 12.0

BRK 22h56m48.7s 40.3N 120.5W
h=15km ML=3.5(3) Mo=4.5E21(1)
19 km SE of Susanville, CA

Jun 2	WDC	Z	ePd	03 04 00.8
	PRI	Z	ePd	03 04 21.8
	FRI	Z	eP	03 04 23.2
	MNA	Z	ePd	03 04 31.2
	CMB	Z	ePd	03 04 32.3

USGS 02h53m45.5s 26.8S 108.2W
h=10km mb=4.7
Easter Island Region

Jun 2	MNA	Z	ePc	03 12 20.5
	FRI	Z	ePc	03 12 23.6
		Z	e	03 12 34.9
	PRI	Z	e(P)	03 12 26.4
	CMB	Z	ePc	03 12 31.3
	MHC	Z	ePc	03 12 36.9
	BRK	Z	eP	03 12 41.0
	BKS	Z	iPd	03 12 41.7
				AMP(μm) PER(s)
		PZ		0.025 0.8
	ORV	Z	ePc	03 12 41.9
	MIN	Z	eP	03 12 43.8
	WDC	Z	ePc	03 12 47.2
	FHC	Z	ePc	03 12 58.3

USGS 03h03m29.7s 6.9N 73.0W
h=156km mb=5.1
Northern Colombia

Jun 2	PRS	Z	eP	12 11 54.6
	PRI	Z	eP	12 11 54.7
	MHC	Z	eP	12 11 58.3
	CMB	Z	eP	12 12 00.5
	FRI	Z	e(P)	12 12 02.6
	WDC	Z	ePd	12 12 03.7
	MNA	Z	e	12 12 18.3

USGS 11h58m55.2s 36.8S 179.3E
h=87km mb=5.6
Off E. Coast of N. Island, N.Z.

Jun 2	MNA	Z	iPc	13 00 32.5
	FRI	Z	iPc	13 00 44.2
	CMB	Z	iPc	13 00 52.6
	PRI	Z	iPc	13 00 57.4
	LLA	Z	iPc	13 00 58.0
	SAO	Z	iPc	13 01 03.3
	PRS	Z	iPc	13 01 03.8

International Seismological Centre

DATE	STA	CMP	PHASE	TIME (UTC)
	MHC	Z	iPc	13 01 05.7
		T	e(S)	13 02 13.8
	GCC	Z	eP	13 01 08.5
		Z	i	13 01 15.7
	ORV	Z	iPc	13 01 11.3
	BRK	Z	ePc	13 01 12.0
		Z	i	13 01 21.9
	BKS	Z	iPc	13 01 12.2
		N	iS	13 01 25.1
	ZSP	Z	ePc	13 01 12.6
		Z	i	13 01 23.9
	PCC	Z	ePc	13 01 12.8
	MIN	Z	iPc	13 01 18.7
	WDC	Z	iPc	13 01 28.0
	FHC	Z	e	13 01 44.0

BRK ML=5.4(7)
USGS 13h00m00.1s 37.3N 116.4W
h=0km mb=5.3 Ms=4.2
Underground Nuclear Explosion, N.T.S.

Jun 2	PRS	Z	ePd	13 42 59.1
	MHC	Z	ePd	13 43 00.7
	FRI	Z	ePd	13 43 06.7
	CMB	Z	iPd	13 43 08.0
	ORV	Z	ePd	13 43 09.5
	WDC	Z	iPd	13 43 09.7
	MNA	Z	ePd	13 43 17.8

USGS 13h31m23.9s 18.5S 174.5W
h=33km mb=4.9
Tonga Islands

Jun 3	PCC	Z	ePc	01 25 01.4	
	PRS	Z	ePc	01 25 01.5	
	BKS	Z	iPc	01 25 03.3	
				AMP(μm)	PER(s)
		PZ		0.022	0.9
	PRI	Z	e(P)	01 25 03.5	
	MHC	Z	ePc	01 25 03.8	
	FRI	Z	ePc	01 25 08.8	
	CMB	Z	ePc	01 25 09.8	
	ORV	Z	ePc	01 25 10.7	
	WDC	Z	e(P)	01 25 11.0	
	MIN	Z	e(P)	01 25 11.6	
	MNA	Z	ePc	01 25 19.0	

USGS 01h13m46.5s 19.9S 177.7W
h=382km mb=4.8
Fiji Islands Region

Jun 3	PRS	Z	eP	10 25 28.7	
	BKS	Z	iPd	10 25 29.2	
				AMP(μm)	PER(s)
		PZ		0.025	1.0
	MHC	Z	eP	10 25 30.0	
	PRI	Z	eP	10 25 31.2	
	WDC	Z	ePc	10 25 34.2	
	ORV	Z	ePc	10 25 35.0	
	CMB	Z	ePc	10 25 35.5	
	FRI	Z	ePc	10 25 35.5	
	MIN	Z	eP	10 25 36.8	
	MNA	Z	ePc	10 25 44.1	

USGS 10h13m14.8s 18.7S 169.2E
h=226km mb=4.8
Vanuatu Islands

Jun 3	WDC	Z	eP	15 45 57.1
		Z	e(ScP)	15 51 59.6
	CMB	Z	eP	15 46 21.9
		Z	eScP	15 52 09.1
	MNA	Z	eP	15 46 31.8
		Z	eScP	15 52 15.0
	PRS	Z	e(ScP)	15 52 11.3
	FRI	Z	eScP	15 52 13.3

USGS 15h39m23.0s 53.1N 170.4W
h=165km mb=5.1
Fox Islands, Aleutian Islands

Jun 3	BKS	Z	e	23 41 52	
		N	ePP	23 46 10	
		Z	ePS	23 54 50	
		Z	i	23 54 58	
		NW	eSS	00 00 36	
		N	i	00 00 36	
		Z	i	00 05 00	
		NW	eLq	00 10 48	
		Z	eLr	00 14 58	
				AMP(μm)	PER(s)
		LZ		23	20.
		LN		18	20.
		LE		15	20.
	CMB	Z	e	23 41 55.0	
		Z	e	23 45 08.6	
		Z	e	23 46 14.5	
		Z	e	23 57 34.6	
	MNA	Z	e	23 41 55.3	
		Z	e	23 45 09.0	
		Z	e	23 46 26.0	
	FRI	Z	e	23 41 58.4	
		Z	e	23 57 36.1	
	WDC	Z	e	23 44 50.7	
		Z	e	23 46 03.6	
	PRS	Z	e	23 46 05.4	

USGS 23h27m35.3s 45.0S 167.6E
h=82km mb=6.0
South Island, New Zealand

Jun 4	FRI	Z	e(P)	13 58 31.7	
	WDC	Z	e(P)	13 58 33.8	
	CMB	Z	eP	13 58 34.4	
	MNA	Z	eP	13 58 42.2	

USGS 13h46m38.7s 16.5S 180.0E
h=49km mb=4.7
Fiji Islands

Jun 5	GCC	Z	e(P)	01 52 50.1
	PRS	Z	eP	01 52 50.3
	BRK	Z	eP	01 52 52.0
	MHC	Z	eP	01 52 52.8
	FRI	Z	eP	01 52 57.4
	CMB	Z	eP	01 52 58.5
	ORV	Z	eP	01 52 59.6
	WDC	Z	eP	01 53 00.0
	MNA	Z	eP	01 53 07.4

USGS 01h41m33.1s 21.5S 178.2W
h=439km mb=5.0
Fiji Islands Region

Jun 5	WDC	Z	ePd	08 21 24.5
	MIN	Z	ePd	08 21 31.7
	ORV	Z	ePd	08 21 41.2
	CMB	Z	eP	08 22 03.5
	MHC	Z	e(P)	08 22 07.5
	MNA	Z	eP	08 22 12.5
	GCC	Z	eP	08 22 13.8
	FRI	Z	eP	08 22 19.3
	PRS	Z	eP	08 22 24.3
	PRI	Z	eP	08 22 27.2

USGS 08h19m05.8s 49.1N 128.3W
h=10km mb=4.7
Vancouver Island Region

Jun 5	ORV	Z	eP	09 07 25.0
	CMB	Z	eP	09 07 35.3
	FRI	Z	eP	09 07 40.6

USGS 08h56m14.4s 39.4N 142.4E
h=51km mb=4.8
Near East Coast of Honshu, Japan

Jun 5	FRI	Z	eP	16 19 34.6
	MNA	Z	eP	16 19 35.1
	CMB	Z	eP	16 19 44.8
	ORV	Z	eP	16 19 58.0
	MIN	Z	e(P)	16 20 02.1
	WDC	Z	ePc	16 20 05.6

USGS 16h12m17.7s 11.7N 88.1W
h=22km mb=4.9 Ms=3.6
Off Coast of Central America

Jun 5	SAO	Z	iPd	16 25 28.6	
	PRS	Z	iPc	16 25 36.0	
	LLA	Z	iPc	16 25 36.6	
	GCC	Z	iPc	16 25 36.6	
		Z	i	16 25 38.0	
	MHC	Z	iPd	16 25 39.7	
		Z	eS	16 25 49.7	
	PRI	Z	iPd	16 25 44.6	
		Z	iS	16 26 00.9	
	PCC	Z	iPd	16 25 46.0	
	BRK	Z	iPc	16 25 49.4	
	BKS	Z	iPd	16 25 49.4	
		E	iS	16 26 09.8	
	ZSP	Z	iPc	16 25 50.8	
		Z	i	16 25 53.4	
	FRI	Z	iPc	16 25 52.2	
		Z	iS	16 26 10.6	
	CMB	Z	iPc	16 25 54.3	
		Z	iS	16 26 13.2	
	ORV	Z	ePc	16 26 12.7	
	MNA	Z	e(P)	16 26 21.9	
	MIN	Z	e	16 26 29.2	

BRK 16h25m27.5s 36.8N 121.5W
h=7km ML=3.1(4) Mo=1.5E21(2)
Fremont Peak, 12 km SW of Hollister, CA

Jun 5	PCC	Z	ePc	18 35 08.9	
	GCC	Z	ePc	18 35 09.7	
	BRK	Z	ePc	18 35 10.1	
		Z	ePP	18 38 26.9	
		Z	ePKPPKP	19 01 20.1	
	BKS	Z	iPc	18 35 10.6	
		Z	iPP	18 35 27.2	
		Z	ipPP	18 39 00	
		N	iSKS	18 45 28	
		N	iSP	18 46 25	
		N	iPS	18 46 27	
		N	i	18 47 15	
		N	isPS	18 47 16	
		N	iSS	18 51 10	
		N	i	18 51 58	
		N	iSSS	18 54 32	
		N	i	18 55 28	
		N	eG	18 57 28	
		Z	eLr	19 01 24	
				AMP(μm)	PER(s)
		PZ		0.35	1.4
		LZ		5.7	20.
		LN		2.5	20.
		LE		4.3	20.
	FHC	Z	ePc	18 35 10.9	
	PRS	Z	ePc	18 35 11.0	
		Z	ePP	18 38 25.7	
	SAO	Z	ePc	18 35 11.1	
	MHC	Z	iPc	18 35 12.0	
		Z	ePP	18 38 29.3	
	LLA	Z	ePc	18 35 13.1	
		Z	iPP	18 38 31.3	
	PRI	Z	iPc	18 35 13.5	
		Z	epP	18 35 48.4	
		Z	ePP	18 38 29.4	
		Z	eS	18 45 52.0	
		Z	ePKKP	18 53 22.2	
		Z	ePKPPKP	19 01 21.0	
	WDC	Z	iPc	18 35 14.7	
		Z	ipP	18 35 52.0	
		Z	iPP	18 38 34.8	
		Z	eS	18 45 45.1	
		Z	eSSS	18 55 41.2	
		Z	eScSScS	18 59 10.6	
		Z	ePKPPKP	19 01 19.7	
	ORV	Z	iPc	18 35 16.1	
		Z	ePP	18 38 36.2	
		Z	ePKPPKP	19 01 19.2	
	CMB	Z	iPc	18 35 17.3	
		Z	iPP	18 38 38.8	
		Z	eSSS	18 55 36.2	
		Z	eScSScS	18 59 12.2	
		Z	ePKPPKP	19 01 17.3	
	FRI	Z	iPc	18 35 17.8	
		Z	ipP	18 35 52.9	
		Z	iPP	18 38 38.3	
		Z	ePKKP	18 53 18.7	
		Z	ePKPPKP	19 01 18.6	
	MNA	Z	iPc	18 35 26.1	
		Z	ePP	18 38 52.6	
		Z	eS	18 45 36.7	
		Z	ePKKP	18 53 15.2	
		Z	eSSS	18 55 43.9	
		Z	eScSScS	18 59 16.7	
		Z	ePKPPKP	19 01 11.9	

BRK mb=6.0 h=147km Distance=85°
USGS 18h22m48.4s 15.4S 167.6E
h=110km mb=6.0
Vanuatu Islands

Jun 5	PRS	Z	eP	20 56 54.8	
				AMP(μm)	PER(s)
		PZ		0.52	0.3
	GCC	Z	eP	20 56 58.2	
	SAO	Z	iPc	20 56 58.4	
		Z	iS	20 58 12.8	
	PRI	Z	eP	20 56 59.00	
				AMP(μm)	PER(s)
		PZ		0.31	0.6
	FRI	Z	eP	20 57 15.4	
	CMB	Z	eP	20 57 20.8	
	WDC	Z	iPc	20 57 42.5	

BRK 20h55m23.1s 31.6N 126.0W
h=8kmR Mag=3.9
Off Coast 650 km SW of San Luis Obispo, CA

Jun 5	FHC	Z	ePc	21 58 48.9
	WDC	Z	ePc	21 58 51.7
	ORV	Z	ePc	21 58 56.7
	CMB	Z	eP	21 59 03.5
	PRS	Z	eP	21 59 03.9
	FRI	Z	eP	21 59 08.9
	MNA	Z	eP	21 59 12.0

USGS 21h46m58.5s 25.6N 142.6E
h=45km mb=5.1
Volcano Islands Region

Jun 6	MIN	Z	eP	06 11 03.5
	CMB	Z	ePc	06 11 11.3

Greece

Jun 6	WDC	Z	ePc	09 15 35.3
		Z	e	09 15 49.4
	MIN	Z	ePc	09 15 40.2
	ORV	Z	eP	09 15 44.1
		Z	e	09 15 57.7
	CMB	Z	ePc	09 15 56.2
		Z	e	09 16 10.2
	PRS	Z	e(P)	09 16 02.8
	FRI	Z	eP	09 16 03.9
	MNA	Z	ePc	09 16 04.2

USGS 09h06m15.8s 51.1N 158.1E
h=47km mb=4.7 Ms=4.2
Near East Coast of Kamchatka

Jun 6	MNA	Z	ePc	10 05 06.2
	MIN	Z	eP	10 05 09.4
	ORV	Z	eP	10 05 13.2
	WDC	Z	eP	10 05 14.1
	CMB	Z	eP	10 05 19.5
	FRI	Z	eP	10 05 20.7
	MHC	Z	ePc	10 05 26.9
	PRI	Z	e(P)	10 05 30.5

USGS 09h55m22.0s 53.2N 35.1W
h=10km mb=4.8 Ms=4.6
North Atlantic Ocean

Jun 6	PRS	Z	ePd	10 55 31.8
	PRI	Z	eP	10 55 33.8
	MHC	Z	ePd	10 55 34.7
	BKS	Z	iPc	10 55 34.8
	FRI	Z	ePd	10 55 39.8
		Z	e	10 55 52.0
	CMB	Z	ePd	10 55 41.1
		Z	e	10 55 53.4
	ORV	Z	eP	10 55 42.5
	WDC	Z	ePd	10 55 43.1
		Z	i	10 55 54.5
	MIN	Z	eP	10 55 45.0
	MNA	Z	ePc	10 55 50.3
		Z	i	10 56 01.0

USGS 10h43m52.3s 20.3S 173.8W
h=38km mb=5.1 Ms=4.9
Tonga Islands

Jun 6	FHC	Z	e(P)	12 46 48.5
		Z	e(pP)	12 47 31.1
	WDC	Z	ePd	12 46 50.5
		Z	epP	12 47 36.5
	MIN	Z	ePd	12 46 53.9
		Z	epP	12 47 40.0
	BRK	Z	e(P)	12 46 55.4
		Z	epP	12 47 41.5
	ORV	Z	ePd	12 46 55.6
		Z	epP	12 47 41.7
	PCC	Z	ePd	12 46 57.2
		Z	e(pP)	12 47 42.0
	MHC	Z	eP	12 46 58.9
		Z	epP	12 47 45.2
	PRS	Z	ePd	12 47 01.6
		Z	epP	12 47 48.0
	LLA	Z	e(P)	12 47 02.7
		Z	epP	12 47 49.0
	CMB	Z	iPd	12 47 02.8
		Z	epP	12 47 49.1
	PRI	Z	ePd	12 47 05.1
		Z	epP	12 47 51.4
	FRI	Z	ePd	12 47 06.7
		Z	epP	12 47 53.0
	MNA	Z	ePd	12 47 11.0
		Z	epP	12 47 57.3
	GCC	Z	epP	12 47 43.9

USGS 12h35m03.4s 18.5N 145.7E
h=199km mb=4.8

Mariana Islands

Jun 6	FHC	Z	eP	15 06 07.6
	WDC	Z	iPc	15 06 11.5
	MIN	Z	eP	15 06 16.5
	ORV	Z	eP	15 06 24.1
	BRK	Z	e	15 06 40.3
	CMB	Z	e(P)	15 06 40.8
	MNA	Z	ePc	15 06 44.5
	MHC	Z	ePc	15 06 45.3
	FRI	Z	e(P)	15 06 51.0
	LLA	Z	e(P)	15 06 53.1
	PRS	Z	e(P)	15 06 53.2
	PRI	Z	e(P)	15 06 58.8

USGS 15h01m28.5s 58.8N 138.0W
h=10km mb=5.0 Ms=4.6
Southeastern Alaska

Jun 7	PRI	Z	eP	05 38 13.3
	MNA	Z	ePd	05 38 14.3
	PRS	Z	eP	05 38 15.9
	CMB	Z	ePd	05 38 18.6
	MHC	Z	eP	05 38 19.7
	ORV	Z	eP	05 38 27.6
	WDC	Z	ePd	05 38 32.5

USGS 05h26m02.1s 30.2S 68.8W
h=106km mb=4.8
San Juan Province, Argentina

Jun 7	CMB	Z	ePc	15 35 26.8

USGS 15h24m01.7s 23.8S 179.7E
h=608km mb=4.7
South of Fiji Islands

Jun 7	LLA	Z	iP	15 51 31.0
	PRS	Z	iPd	15 51 33.15
	SAO	Z	iPc	15 51 33.40
		N	i	15 51 35.04
		E	iS	15 51 40.83
	PRI	Z	iPc	15 51 38.5
	GCC	Z	ePd	15 51 42.4
	MHC	Z	iPc	15 51 44.58
		E	iS	15 51 57.33
	FRI	Z	iPc	15 51 49.3
		Z	iS	15 52 04.3
	CMB	Z	iPc	15 51 55.0
		Z	iS	15 52 16

BRK 15h51m27.4s 36.5N 121.1W
h=6km ML=2.5(2)
37 km N of King City, CA

Jun 8	FRI	Z	e(P)	21 23 48.9
	PRI	Z	eP	21 23 50.3
	MNA	Z	iPc	21 23 52.1
		Z	iPc	21 23 52.1
	LLA	Z	ePc	21 23 53.5
	PRS	Z	ePc	21 23 54.8
	CMB	Z	ePc	21 23 59.6
	MHC	Z	ePc	21 24 02.5
	GCC	Z	ePc	21 24 03.1
	ORV	Z	ePc	21 24 15.2
	WDC	Z	ePc	21 24 23.6
	FHC	Z	ePc	21 24 34.8
	BKS	Z	eLq	21 31 12
		Z	eLr	21 35 08

USGS 21h18m04.9s 16.6N 98.7W
h=42km mb=5.1
Near Coast of Guerrero, Mexico

Jun 9	MNA	Z	eP	04 39 44.8
		Z	e	04 39 49.3
	CMB	Z	ePc	04 39 55.5

International Seismological Centre

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	e	04 40 02.0
	FRI	Z	ePc	04 39 57.0
	MHC	Z	ePc	04 40 03.8
USGS 04h29m08.3s 45.2N 28.0W				
h=10km mb=4.4				
North Atlantic Ridge				
Jun 9	MNA	Z	ePc	22 05 51.1
	ORV	Z	e(P)	22 05 56.6
	WDC	Z	eP	22 05 56.6
	CMB	Z	eP	22 06 02.3
	FRI	Z	eP	22 06 05.2
	MHC	Z	ePc	22 06 11.6
	PRI	Z	ePc	22 06 14.2
USGS 21h56m08.6s 53.5N 35.4W				
h=10km mb=4.6 Ms=4.6				
North Atlantic Ocean				
Jun 10	LLA	Z	iP	00 03 21.7
	SAO	Z	iP	00 03 24.6
	PRS	Z	iP	00 03 27.1
	PRI	Z	ePc	00 03 31.9
		Z	iS	00 03 45.3
	GCC	Z	ePd	00 03 33.0
	MHC	Z	ePc	00 03 33.4
		Z	eS	00 03 40.5
	FRI	Z	eP	00 03 38.7
		Z	eS	00 03 54.3
	PCC	Z	ePc	00 03 41.5
	CMB	Z	ePc	00 03 44.2
		Z	eS	00 04 02.3
BRK 00h03m18.5s 36.7N 121.1W				
h=6km ML=2.7(2)				
31 km SE of Hollister, CA				
Jun 10	GCC	Z	e(P)	03 22 36.8
	FHC	Z	e(P)	03 22 37.5
	BRK	Z	e(P)	03 22 37.9
	PRS	Z	ePc	03 22 38.3
	MHC	Z	ePc	03 22 39.2
	LLA	Z	e(P)	03 22 40.2
	PRI	Z	ePc	03 22 41.2
	WDC	Z	ePd	03 22 41.8
		Z	epP	03 23 10.0
	ORV	Z	ePc	03 22 43.1
	MIN	Z	eP	03 22 44.2
	CMB	Z	ePd	03 22 44.6
		Z	epP	03 23 44.6
		Z	e	03 25 54.9
		Z	e	03 26 29.5
	FRI	Z	ePc	03 22 45.4
	BKS	Z	e	03 22 45.4
		Z	e	03 34 33
		Z	e	03 34 35
		NE	eLq	03 44 08
		Z	eLr	03 48 03
			AMP(μm)	PER(s)
		LZ	1.3	20.
		LN	0.64	20.
		LE	1.4	20.
	MNA	Z	ePd	03 22 53.9
USGS 03h10m22.2s 12.7S 166.7E				
h=113km mb=5.7				
Santa Cruz Islands				
Jun 10	WDC	Z	ePKP	11 51 25.3
		Z	e	11 51 34.3
		Z	e	11 51 41.0
	MIN	Z	ePKPc	11 51 28.0
	ORV	Z	ePKP	11 51 30.8
	BRK	Z	ePKP	11 51 33.7
	CMB	Z	ePKPc	11 51 34.4

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	e	11 51 42.5
		Z	e	11 51 59.8
		Z	e	11 52 36.0
		Z	e	11 55 23.7
	MNA	Z	ePKPc	11 51 34.9
		Z	e	11 51 45.5
		Z	e	11 52 06.8
		Z	e	11 52 46.3
		Z	e	11 53 09.2
		Z	e	11 55 08.3
		Z	e	11 55 15.3
	PCC	Z	e(PKP)	11 51 35.7
	FRI	Z	ePKPc	11 51 36.5
	LLA	Z	ePKP	11 51 36.9
	PRS	Z	ePKP	11 51 37.0
	PRI	Z	ePKPc	11 51 41.7
		Z	e	11 51 48.8
		Z	e	11 55 12.0
	BKS	Z	e(PKP)	11 51 42.0
			AMP(μm)	PER(s)
		PKPZ	0.16	1.0
USGS 11h31m53.1s 6.9S 72.2E				
h=21km mb=5.5 Ms=5.3				
Chagos Archipelago Region				
Jun 10	CMB	Z	eP	17 26 47.4
		Z	e	17 27 02.8
	WDC	Z	eP	17 26 50.2
		Z	e	17 27 05.6
USGS 17h13m52.2s 33.9S 179.3W				
h=51km mb=4.9				
South of Kermadec Islands				
Jun 10	PRI	Z	iPd	23 07 15.5
	FRI	Z	ePd	23 07 18.5
	LLA	Z	iPd	23 07 22.1
	PRS	Z	iPd	23 07 23.3
	SAO	Z	iPd	23 07 27.7
		T	iS	23 08 03.3
	GCC	Z	iPd	23 07 34.1
	MHC	Z	ePd	23 07 34.5
		Z	e	23 07 37.46
		R	i	23 08 19.25
		T	eS	23 08 26.46
	CMB	Z	iP	23 07 36.0
		Z	iS	23 08 16.0
	MNA	Z	iPd	23 07 40.0
	PCC	Z	eP	23 07 41.6
	BRK	Z	eP	23 07 44.3
		Z	iS	23 09 00
	BKS	Z	iPd	23 07 44.75
		N	iSc	23 08 32.7
BRK ML=5.4(4)				
PAS 23h06m43.1s 34.9N 118.7W				
h=6.km ML=5.2				
68 km SSE of Bakersfield, CA				
Jun 11	WDC	Z	eP	03 03 04.6
	PRS	Z	eP	03 03 05.7
	ORV	Z	eP	03 03 08.2
	CMB	Z	eP	03 03 11.9
	FRI	Z	eP	03 03 13.8
	MNA	Z	eP	03 03 20.4
USGS 02h50m02.2s 5.9S 151.1E				
h=36km mb=5.3 Ms=4.7				
New Britain Region				
Jun 11	CMB	Z	e	09 01 29.0
		Z	e	09 04 43.8
	MNA	Z	e	09 04 41.7
USGS 08h58m35.3s 30.8N 109.3W				
h=5km mb=4.5				

DATE	STA	CMP	PHASE	TIME (UTC)
Northwestern Mexico				
Jun 11	WDC	Z	e(P)	11 40 40.2
	ORV	Z	eP	11 40 53.5
	CMB	Z	eP	11 41 17.2
	FRI	Z	e(P)	11 41 32.1
USGS 11h39m23.6s 43.6N 127.2W				
h=10km mb=4.4				
Off Coast of Oregon				
Jun 11	GCC	Z	eP	12 28 42.0
	PCC	Z	eP	12 28 42.2
	PRS	Z	eP	12 28 42.2
	SAO	Z	e(P)	12 28 44.0
	BRK	Z	e(P)	12 28 44.1
	LLA	Z	eP	12 28 44.6
	PRI	Z	eP	12 28 44.6
	MHC	Z	eP	12 28 44.8
	BKS	Z	ePc	12 28 44.8
		Z	e	12 28 56.0
		Z	ePP	12 31 37.2
		N	iS	12 38 08.4
		E	eSS	12 42 12.2
		N	eLq	12 45 44.2
		E	iLr	12 49 26.0
			AMP(μm)	PER(s)
		PZ	0.35	1.4
		LZ	14	20.
		LN	9.0	20.
		LE	11	20.
	FRI	Z	eP	12 28 50.3
	CMB	Z	ePd	12 28 51.6
	ORV	Z	eP	12 28 52.5
	WDC	Z	eP	12 28 52.7
	MIN	Z	eP	12 28 54.7
	MNA	Z	eP	12 29 01.8
BRK Ms=6.2 Distance= 72°				
USGS 12h17m27.0s 15.0S 173.5W				
h=35km mb=5.9 Ms=6.1				
Samoa Islands Region				
Jun 12	MHC	Z	e(P)	13 35 53.8
	WDC	Z	eP	13 35 55.5
	ORV	Z	eP	13 35 57.1
	MIN	Z	eP	13 35 58.0
	CMB	Z	ePd	13 35 59.2
	FRI	Z	eP	13 36 00.1
	MNA	Z	eP	13 36 08.6
USGS 13h23m31.3s 10.7S 165.1E				
h=62km mb=5.0				
Santa Cruz Islands				
Jun 12	GCC	Z	ePd	13 47 35.4
	BKS	Z	iPc	13 47 35.5
	PRS	Z	ePd	13 47 36.3
	MHC	Z	ePd	13 47 36.9
	WDC	Z	ePd	13 47 38.4
	ORV	Z	ePd	13 47 40.0
	MIN	Z	ePd	13 47 40.8
	CMB	Z	ePd	13 47 42.3
	FRI	Z	ePd	13 47 43.3
	MNA	Z	ePd	13 47 51.4
USGS 13h35m11.8s 10.8S 165.2E				
h=43km mb=5.0				
Santa Cruz Islands				
Jun 12	GCC	Z	eP	13 52 03.1
	PRS	Z	eP	13 52 04.8
	MHC	Z	eP	13 52 05.2
	BKS	Z	iPc	13 52 05.3
		N	iSc	14 02 30.4
		N	ePPS	14 03 44.0

DATE	STA	CMP	PHASE	TIME (UTC)
		N	iLq	14 13 42.2
		Z	iLr	14 16 33.6
			AMP(μm)	PER(s)
		PZ	0.047	0.8
		LZ	12	20.
		LN	3.4	20.
		LE	9.1	20.
	WDC	Z	eP	13 52 07.1
	PRI	Z	eP	13 52 07.9
	LLA	Z	eP	13 52 08.3
	MIN	Z	eP	13 52 09.5
	ORV	Z	eP	13 52 10.0
	CMB	Z	eP	13 52 10.7
		Z	ePP	13 55 31.2
	FRI	Z	eP	13 52 11.6
	MNA	Z	eP	13 52 19.9
BRK Ms=6.2 Distance=82°				
USGS 13h39m37.5s 10.7S 165.2E				
h=14km mb=5.7 Ms=6.4				
Santa Cruz Islands				
Jun 12	GCC	Z	ePc	17 20 19.6
	BRK	Z	e(P)	17 20 19.8
	PRS	Z	ePc	17 20 21.2
	MHC	Z	ePc	17 20 22.0
	LLA	Z	ePc	17 20 23.4
	PRI	Z	ePc	17 20 25.1
	ORV	Z	eP	17 20 25.3
	WDC	Z	e(P)	17 20 26.3
	CMB	Z	ePc	17 20 27.3
	FRI	Z	ePc	17 20 28.2
	MNA	Z	ePc	17 20 36.6
USGS 17h07m55.8s 11.0S 165.3E				
h=33km mb=4.9				
Santa Cruz Islands				
Jun 12	PCC	Z	ePc	18 19 36.9
	GCC	Z	iPc	18 19 37.6
	BRK	Z	ePc	18 19 38.1
	BKS	Z	iPc	18 19 38.7
		E	eS	18 30 20.2
		E	eSS	18 35 04.1
		N	eG	18 41 44.6
		Z	eLr	18 44 43.0
			AMP(μm)	PER(s)
		PZ	0.11	0.9
		LZ	2.0	20.
		LN	1.1	20.
		LE	1.9	20.
	PRS	Z	ePc	18 19 39.4
	SAO	Z	ePc	18 19 40.3
	LLA	Z	ePc	18 19 41.0
	WDC	Z	iPc	18 19 41.7
	PRI	Z	ePc	18 19 41.9
	ORV	Z	ePc	18 19 43.5
	MIN	Z	iPc	18 19 44.2
	CMB	Z	iPc	18 19 45.4
		Z	ePP	18 23 00.2
	FRI	Z	iPc	18 19 46.3
	MNA	Z	iPc	18 19 54.7
		Z	ePP	18 23 14.8
BRK Ms=5.5 Distance=83°				
USGS 18h07m13.6s 10.9S 165.4E				
h=29km mb=5.4 Ms=5.4				
Santa Cruz Islands				
Jun 12	BRK	Z	e(P)	18 25 26.2
	GCC	Z	ePc	18 25 26.6
	PRS	Z	eP	18 25 27.5
	WDC	Z	e(P)	18 25 30.0
	LLA	Z	ePc	18 25 30.2
	PRI	Z	ePc	18 25 31.2

DATE	STA	CMP	PHASE	TIME (UTC)
	ORV	Z	ePc	18 25 31.4
	CMB	Z	ePc	18 25 33.5
	FRI	Z	ePc	18 25 34.4
	MIN	Z	ePc	18 25 34.7
	MNA	Z	ePc	18 25 42.6
USGS 18h13m02.0s 10.9S 165.2E				
h=34km mb=4.9				
Santa Cruz Islands				
Jun 12	ZSP	Z	iPc	21 44 31.5
	BRK	Z	iPc	21 44 32.5
		Z	iS	21 44 42.0
	BKS	N	iP	21 44 32.5
		E	iS	21 44 40.8
	PCC	Z	iPc	21 44 38.8
		Z	iS	21 44 52.0
	MHC	Z	iPc	21 44 41.7
		Z	i	21 44 48.0
		Z	iS	21 44 59.6
	ORV	Z	ePc	21 44 42.9
		Z	i	21 44 49.7
		Z	iS	21 45 05.8
	GCC	Z	ePc	21 44 45.0
	CMB	Z	iPc	21 44 46.7
		Z	iS	21 45 07.7
	SAO	Z	iPc	21 44 50.3
	LLA	Z	e(P)c	21 44 53.4
	WDC	Z	iPc	21 44 55.7
	PRS	Z	ePc	21 44 56.3
	MIN	Z	iPc	21 44 57.6
	FRI	Z	iPc	21 45 01.3
	PRI	Z	eP	21 45 02.4
	MNA	Z	eP	21 45 18.1
BRK 21h44m21.8s 38.4N 122.2W				
h=10km ML=3.2(5) Mo=3.6E21(2)				
Near Lake Berryessa, 16 km NE of Napa, CA				
Jun 13	MHC	Z	iPc	01 45 39.25
		T	iS	01 45 41.95
	GCC	Z	iPd	01 45 45.0
	PCC	Z	iPc	01 45 46.5
	BKS	Z	iPd	01 45 48.7
		E	iSc	01 45 57.4
	BRK	Z	iPd	01 45 48.8
	ZSP	Z	iPd	01 45 50.0
	SAO	Z	iPd	01 45 50.0
		Z	iS	01 45 58.7
	LLA	Z	iPc	01 45 54.7
	PRS	Z	iPd	01 45 56.3
	CMB	Z	iPd	01 45 59.3
		Z	iPc	01 45 59.50
		T	iS	01 46 16.10
	PRI	Z	iPc	01 46 02.8
	FRI	Z	iPc	01 46 04.6
	ORV	Z	ePd	01 46 10.4
	MIN	Z	e(P)	01 46 22.7
	MNA	Z	eP	01 46 24.8
		Z	i	01 46 25.3
		Z	i	01 46 31.4
	WDC	Z	iPc	01 46 25.0
	FHC	Z	iPc	01 46 35.8
		Z	i	01 46 54.1
		Z	i	01 47 00.3
	ARC	N	eP	01 46 37.7
		N	ePc	01 46 37.7
BRK 01h45m36.8s 37.4N 121.8W				
h=7km ML=5.3(5) Mo=2.8E23(4)				
Alum Rock, 11 km NE of San Jose, CA				
Jun 13	MHC	Z	iP	04 06 39.5
		Z	iS	04 06 41.1

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	iPc	04 06 54.6
	GCC	Z	ePd	04 07 00.5
		Z	iS	04 07 07.1
	PCC	Z	iPc	04 07 02.8
		Z	i	04 07 13.5
	SAO	Z	iPd	04 07 05.2
	BRK	Z	ePc	04 07 05.4
		Z	iS	04 07 15.0
		Z	i	04 07 17.4
	BKS	Z	iPc	04 07 05.4
		N	eSc	04 07 15.1
	ZSP	Z	ePc	04 07 06.7
		Z	iS	04 07 18.7
	LLA	Z	ePc	04 07 10.3
		Z	i	04 07 12.3
		Z	iS	04 07 24.9
		Z	i	04 07 27.2
	PRS	Z	iPc	04 07 12.2
		Z	i	04 07 13.9
	CMB	Z	ePd	04 07 15.2
		Z	i	04 07 30.3
	PRI	Z	ePc	04 07 18.4
	FRI	Z	iPc	04 07 21.0
		Z	i	04 07 40.8
	ORV	Z	e	04 07 27.3
		Z	i	04 07 31.1
	MIN	Z	e	04 07 42.7
	MNA	Z	e	04 07 45.9
BRK 04h06m52.6s 37.4N 121.7W				
h=5km ML=3.2(4) Mo=5.9E20(4)				
Alum Rock, 12 km ENE of San Jose, CA				
Jun 14	GCC	Z	ePc	02 55 18.7
	BRK	Z	e(P)	02 55 20.3
	PRS	Z	ePc	02 55 23.4
	MHC	Z	ePc	02 55 24.1
	LLA	Z	ePc	02 55 25.4
	WDC	Z	ePc	02 55 25.8
	BKS	Z	ePc	02 55 26.3
	PRI	Z	ePc	02 55 26.5
	ORV	Z	ePc	02 55 27.3
	MIN	Z	ePc	02 55 27.9
	MNA	Z	ePc	02 55 28.7
	CMB	Z	ePc	02 55 29.5
	FRI	Z	ePc	02 55 30.4
USGS 02h42m59.1s 10.8S 165.2E				
h=41km mb=5.0 Ms=4.6				
Santa Cruz Islands				
Jun 14	PRI	Z	ePc	04 48 16.6
	FRI	Z	e(P)	04 48 17.1
	LLA	Z	ePc	04 48 19.0
	PRS	Z	ePc	04 48 19.6
	CMB	Z	e(P)	04 48 23.2
	MHC	Z	ePc	04 48 24.3
	ORV	Z	eP	04 48 31.0
	WDC	Z	ePc	04 48 35.7
USGS 04h36m45.8s 21.4S 67.9W				
h=176km mb=4.7				
Chile-Bolivia Border Region				
Jun 14	GCC	Z	e(P)	06 17 23.0
	BRK	Z	e(P)	06 17 23.4
	PRS	Z	e(P)	06 17 24.3
	MHC	Z	eP	06 17 25.0
	LLA	Z	ePc	06 17 27.4
	PRI	Z	ePc	06 17 27.4
	WDC	Z	ePc	06 17 28.3
	MIN	Z	ePc	06 17 29.2
	ORV	Z	ePc	06 17 29.8
	CMB	Z	ePc	06 17 30.4
	FRI	Z	ePc	06 17 31.4

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DATE	STA	CMP	PHASE	TIME (UTC)
	MNA	Z	e(P)	06 17 39.8
USGS 06h04m59.7s 10.9S 165.2E				
h=33km mb=4.9 Ms=4.6				
Santa Cruz Islands				
Jun 14	FHC	Z	iPd	14 16 00.9
		Z	iS	14 16 08.2
	ARC	N	iPc	14 16 01.7
		N	iSc	14 16 09.9
	WDC	Z	iPc	14 16 12.3
		Z	eS	14 16 28.5
	MIN	Z	iPc	14 16 21.8
	ORV	Z	iPd	14 16 24.7
	BKS	Z	ePc	14 16 45.6
BRK 14h15m50.6s 40.3N 124.3W				
h=38km ML=3.2(2)				
Near Petrolia, 55 km SSW of Eureka, CA				
Jun 14	FOX		iPc	15 45 04.4
			iS	15 45 12.1
	EKR		iPc	15 45 05.7
			i(S)	15 45 13.3
	FHC	Z	iPc	15 45 06.8
		Z	iS	15 45 15.4
	ARC	N	iPd	15 45 07.1
		N	iS	15 45 15.9
	WDC	Z	iPc	15 45 20.9
	MIN	Z	iPc	15 45 30.8
	ORV	Z	iPc	15 45 34.2
		Z	eS	15 46 05.6
	BKS	Z	ePc	15 45 41.8
		Z	iSc	15 46 18.7
	MHC	Z	iPc	15 45 51.8
	GCC	Z	iPc	15 45 52.5
	CMB	Z	e	15 45 55.5
BRK 15h44m54.2s 40.4N 124.8W				
h=19km ML=3.8(2)				
Off Coast 30 km W of Cape Mendocino, CA				
Jun 15	CMB	Z	iPc	08 16 13.2
	MNA	Z	iPc	08 16 22.3
	FRI	Z	e(P)	08 16 22.4
USGS 08h09m37.3s 53.9N 163.3W				
h=33km mb=4.4				
Unimak Island Region				
Jun 15	FHC	Z	iPc	12 12 15.9
	WDC	Z	iPc	12 12 21.1
	MIN	Z	iPc	12 12 24.4
	ORV	Z	iPc	12 12 26.4
	PCC	Z	iPc	12 12 26.8
	BRK	Z	iPc	12 12 26.9
	BKS	Z	iPc	12 12 27.3
	GCC	Z	iPc	12 12 29.3
	MHC	Z	iPc	12 12 30.6
	PRS	Z	iPc	12 12 33.4
	CMB	Z	iPc	12 12 33.8
		Z	i	12 13 41.4
	LLA	Z	iPc	12 12 34.3
	PRI	Z	iPc	12 12 36.8
	FRI	Z	iPc	12 12 38.1
	MNA	Z	iPc	12 12 41.7
		Z	e	12 13 51
USGS 12h00m45.6s 21.7N 143.0E				
h=298km mb=5.2				
Mariana Islands Region				
Jun 15	PRS	Z	ePc	14 44 53.9
	PRI	Z	e(P)	14 44 56.3
	ORV	Z	eP	14 44 59.8

DATE	STA	CMP	PHASE	TIME (UTC)
	FRI	Z	ePc	14 45 00.6
	CMB	Z	ePc	14 45 00.6
	MNA	Z	ePc	14 45 09.1
USGS 14h32m11.8s 19.1S 167.7E				
h=33km mb=4.5 Ms=3.7				
Vanuatu Islands Region				
Jun 16	BRK	Z	ePc	00 55 13.4
	PRS	Z	ePc	00 55 13.5
	MHC	Z	ePc	00 55 15.4
	PRI	Z	ePc	00 55 15.9
	WDC	Z	eP	00 55 18.9
	FRI	Z	ePc	00 55 19.9
	ORV	Z	e(P)	00 55 19.9
	CMB	Z	ePc	00 55 20.2
	MNA	Z	e(P)	00 55 28.7
USGS 00h43m04.7s 19.1S 169.4E				
h=270km				
Vanuatu Islands				
Jun 16	FHC	Z	e(P)	05 35 00.5
	WDC	Z	ePc	05 35 06.0
	MIN	Z	ePc	05 35 11.8
	ORV	Z	e	05 35 18.3
	BKS	Z	ePc	05 35 32.1
	CMB	Z	e(P)	05 35 33.9
	MNA	Z	ePc	05 35 41.9
	FRI	Z	ePc	05 35 46.8
	PRI	Z	e(P)	05 35 53.3
USGS 05h30m15.1s 57.6N 143.0W				
h=10km mb=4.4				
Gulf of Alaska				
Jun 16	MHC	Z	iPc	12 58 18.7
		Z	iS	12 58 21.6
		Z	iPc	12 58 26.9
		T	iS	12 58 29.65
	GCC	Z	ePc	12 58 33.8
	PCC	Z	iPc	12 58 34.3
	BKS	Z	iPc	12 58 35.6
		E	iSd	12 58 44.4
	BRK	Z	iPd	12 58 35.7
	ZSP	Z	iPd	12 58 37.0
	SAO	Z	ePc	12 58 38.5
	LLA	Z	e(P)	12 58 43.6
	PRS	Z	eP	12 58 45.3
	CMB	Z	eP	12 58 46.4
BRK 12h58m24.1s 37.5N 121.8W				
h=1km ML=2.6(4) Mo=1.2E20(2)				
18 km NE of San Jose, CA				
Jun 16	BKS	Z	ePc	23 50 16.6
	PRI	Z	eP	23 50 43.8
	MNA	Z	e(P)	23 50 44.5
	LLA	Z	eP	23 50 46.4
	CMB	Z	e(P)	23 50 49.6
	GCC	Z	e(P)	23 50 51.6
	MHC	Z	eP	23 50 51.8
	ORV	Z	eP	23 50 59.5
	WDC	Z	eP	23 51 04.2
USGS 23h39m09.6s 21.7S 69.9W				
h=87km mb=5.2				
Northern Chile				
Jun 17	GCC	Z	eP	13 04 25.6
	BKS	Z	ePc	13 04 26.2
		N	eS	13 14 20.2
		N	eLq	13 26 06.4
		Z	eLr	13 30 01.0
				AMP(μm) PER(s)
			PZ	0.074 1.0
			LZ	1.8 20.

DATE	STA	CMP	PHASE	TIME (UTC)
			LN	0.96 20.
			LE	1.9 20.
	PRS	Z	ePc	13 04 27.2
	MHC	Z	eP	13 04 27.8
	LLA	Z	e(P)	13 04 28.0
	WDC	Z	ePc	13 04 29.4
	PRI	Z	ePc	13 04 30.0
	ORV	Z	ePc	13 04 31.3
	SAO	Z	e(P)	13 04 31.6
	MIN	Z	ePc	13 04 31.9
	BRK	Z	e(P)	13 04 32.2
	CMB	Z	ePc	13 04 33.0
	FRI	Z	ePc	13 04 34.1
	MNA	Z	ePc	13 04 42.5
BRK Ms=5.5 Distance=82°				
USGS 12h52m03.8s 10.7S 165.2E				
h=48km mb=5.6 Ms=5.5				
Santa Cruz Islands				
Jun 17	GCC	Z	eP	17 13 48.2
	PRS	Z	e(P)	17 13 49.7
	WDC	Z	e(P)	17 13 52.0
	PRI	Z	e(P)	17 13 52.6
	ORV	Z	eP	17 13 53.6
	CMB	Z	eP	17 13 55.7
	FRI	Z	eP	17 13 56.6
	MNA	Z	eP	17 14 05.0
USGS 17h01m24.9s 10.7S 165.2E				
h=33km mb=4.7 Ms=4.7				
Santa Cruz Islands				
Jun 18	FHC	Z	eP	15 11 17.5
	WDC	Z	eP	15 11 25.6
	MIN	Z	eP	15 11 31.2
	CMB	Z	eP	15 11 55.6
	MNA	Z	eP	15 12 01.2
	FRI	Z	eP	15 12 06.4
USGS 15h06m33.1s 57.8N 142.9W				
h=10km mb=4.3				
Gulf of Alaska				
Jun 18	PRI	Z	e(P)	17 28 46.5
	FRI	Z	e(P)	17 28 53.5
	CMB	Z	e(P)	17 28 59.4
	MNA	Z	eP	17 29 01.3
	WDC	Z	eP	17 29 18.0
USGS 17h17m21.1s 35.4S 104.8W				
h=10km mb=4.8				
Southern Pacific Ocean				
Jun 18	FRI	Z	ePd	18 48 48.1
		Z	ePcP	18 51 23.0
		Z	eScP	18 55 23.8
	MNA	Z	eP	18 48 49.0
		Z	ePcP	18 51 23.3
		Z	eScP	18 55 14.5
	PRI	Z	e(P)	18 48 50.5
	LLA	Z	eP	18 48 53.5
	PRS	Z	e(P)	18 48 55.0
	CMB	Z	eP	18 48 57.8
		Z	e	18 49 08.3
		Z	ePcP	18 51 26.4
		Z	eScP	18 55 20.2
	MHC	Z	eP	18 49 06.8
	BKS	Z	eP	18 49 08.5
		Z	epP	18 49 18
		E	ePP	18 50 46
		N	eS	18 54 56
		N	eLq	19 00 22
		Z	eLr	19 02 22
				AMP(μm) PER(s)
			PZ	0.029 2.0

DATE	STA	CMP	PHASE	TIME (UTC)
			LN	18 20.
			LE	24 20.
	ORV	Z	eP	18 49 11.8
		Z	ePcP	18 51 31.5
	MIN	Z	eP	18 49 15.8
	WDC	Z	eP	18 49 19.6
		Z	ePcP	18 51 34.2
		Z	eScP	18 55 29.9
BRK Ms=6.1 Distance= 38°				
USGS 18h42m03.4s 13.6N 91.1W				
h=59km mb=5.3 Ms=5.7				
Near Coast of Guatemala				
Jun 18	PRI	Z	iPc	20 06 17.5
	LLA	Z	eP	20 06 23.6
	PRS	Z	eP	20 06 26.5
	FRI	Z	iPd	20 06 26.5
	SAO	Z	eP	20 06 29.8
	GCC	Z	e(P)	20 06 36.4
	CMB	Z	eP	20 06 40.8
	PCC	Z	e(P)	20 06 45.0
BRK 20h06m11.7s 36.3N 120.3W				
h=9km ML=3.0(2)				
14 km N of Coalinga, CA				
Jun 18	FRI	Z	eP	20 19 12.4
	MNA	Z	eP	20 19 13.5
	CMB	Z	eP	20 19 22.3
	ORV	Z	eP	20 19 36.3
	WDC	Z	eP	20 19 44.0
USGS 20h12m27.2s 13.6N 91.2W				
h=51km mb=5.0 Ms=4.7				
Near Coast of Guatemala				
Jun 18	CMB	Z	e(P)	22 03 06.5
	FRI	Z	eP	22 03 11.1
USGS 21h51m09.1s 28.1N 142.6E				
h=30km mb=4.6 Ms=4.2				
Bonin Islands Region				
Jun 18	PRI	Z	eP	22 52 40.8
	FRI	Z	eP	22 52 43.5
	LLA	Z	eP	22 52 46.8
	PRS	Z	eP	22 52 47.4
	MNA	Z	eP	22 52 51.4
	GCC	Z	eP	22 52 58.7
	CMB	Z	eP	22 52 59.0
		Z	eS	22 57 04.8
	MHC	Z	eP	22 52 59.7
	PCC	Z	eP	22 53 06.8
	BRK	Z	eP	22 53 09.4
	BKS	Z	iPd	22 53 10
		Z	i	22 53 14.7
		Z	i	22 53 15.5
		Z	i	22 53 17.5
		Z	eLq	22 55 45
		E	eS	22 55 52
		Z	eLr	22 57 40
				AMP(μm) PER(s)
			PZ	4.4 1.6
			LNE	1900 20.
			LNW	600 20.
	ORV	Z	eP	22 53 21.8
	MIN	Z	eP	22 53 31.9
	WDC	Z	eP	22 53 38.4
BRK Ms=6.4 Distance=15°				
USGS 22h49m42.4s 26.9N 111.0W				
h=10km mb=5.9 Ms=7.0				
Gulf of California				
Jun 19	MNA	Z	e(P)	07 29 34.6
	FRI	Z	e(P)	07 29 36.0

DATE	STA	CMP	PHASE	TIME (UTC)
	CMB	Z	e(P)	07 29 40.9
USGS 07h26m42.3s 27.5N 112.4W				
h=10km mb=4.2				
Baja California				
Jun 19	PCC	Z	e(P)	13 16 10.6
	GCC	Z	eP	13 16 10.7
	PRS	Z	eP	13 16 11.0
	BKS	Z	ePc	13 16 12.6
				AMP(μm) PER(s)
			PZ	0.065 1.0
	PRI	Z	e(P)	13 16 13.0
	MHC	Z	eP	13 16 13.3
	FRI	Z	eP	13 16 18.5
	CMB	Z	eP	13 16 19.4
	ORV	Z	eP	13 16 20.0
	WDC	Z	eP	13 16 20.2
	MIN	Z	eP	13 16 22.0
	MNA	Z	eP	13 16 28.8
USGS 13h05m04.8s 18.3S 177.8W				
h=407km mb=5.2				
Fiji Islands Region				
Jun 19	WDC	Z	ePdiff	20 33 46.8
	ORV	Z	ePdiff	20 33 51.7
	CMB	Z	ePdiff	20 33 58.5
	BKS	NE	eSS	20 52 20
		NE	eLq	21 02 00
		Z	eLr	21 07 00
				AMP(μm) PER(s)
			LZ	13 20.
			LN	12 20.
			LE	5.7 20.
BRK Ms=6.5 Distance=106°				
USGS 20h19m52.7s 12.4N 121.1E				
h=16km mb=5.6 Ms=6.4				
Mindoro, Philippine Islands				
Jun 20	BKS	Z	iPd	01 16 6.6
		Z	i	01 16 10.88
		T	i(S)	01 16 11.16
		T	i	01 16 13.69
	ZSP	Z	iPd	01 16 06.2
		Z	iS	01 16 10.7
	BRK	Z	iPd	01 16 06.8
		Z	eS	01 16 15.3
	PCC	Z	iPd	01 16 12.7
		Z	iS	01 16 22.6
	MHC	Z	iPd	01 16 13.45
		R	e	01 16 20.58
		T	e(S)	01 16 21.99
		R	e	01 16 24.56
		T	i	01 16 25.78
	GCC	Z	eP	01 16 17.6
	CMB	Z	eP	01 16 19.3
	ORV	Z	eP	01 16 21.4
		Z	iS	01 16 40.5
	SAO	Z	eP	01 16 22.0
	LLA	Z	e(P)	01 16 27.5
	PRS	Z	eP	01 16 28.9
	FRI	Z	eP	01 16 32.7
		Z	eS	01 16 58.5
	MIN	Z	e(P)	01 16 32.8
	WDC	Z	eP	01 16 36.2
BRK 01h15m58.9s 38.1N 121.9W				
h=20km ML=2.8(4)				
21 km SE of Fairfield, CA				
Jun 20	FRI	Z	ePdiff	13 51 20.0
	MNA	Z	ePdiff	13 51 29.5
	CMB	Z	ePdiff	13 51 36.6
	ORV	Z	ePdiff	13 52 04.0

DATE	STA	CMP	PHASE	TIME (UTC)
	BKS	N	eLq	13 55 00
		Z	eLr	13 56 40
				AMP(μm) PER(s)
			LZ	1.4 20.
			LN	0.71 20.
			LE	2.5 20.
USGS 13h35m44.8s 12.3N 121.1E				
h=33km mb=5.2 Ms=5.3				
Mindoro, Philippine Islands				
Jun 20	MHC	Z	iPd	15 26 43.20
		T	iS	15 26 47.30
	SAO	Z	iPc	15 26 45.9
	GCC	Z	iPc	15 26 46.1
	LLA	Z	iPc	15 26 51.1
	PCC	Z	iPc	15 26 52.6
	PRS	Z	ePd	15 26 53.1
	BRK	Z	iPc	15 26 55.9
	BKS	Z	ePd	15 26 56.0
	ZSP	Z	iPd	15 26 57.0
	PRI	Z	ePc	15 26 59.8
		Z	i	15 27 00.5
	CMB	Z	iPd	15 27 01.0
	FRI	Z	iPc	15 27 03.4
	ORV	Z	eP	15 27 17.5
	WDC	Z	eP	15 27 32.1
	MNA	Z	eP	15 27 36.5
	MIN	Z	eP	15 27 38.6
BRK 15h26m38.2s 37.1N 121.5W				
h=7km ML=4.1(8) Mo=1.1E22(4)				
13 km NE of Gilroy, CA				
Jun 20	MHC	Z	iPd	18 36 45.3
		Z	iS	18 36 52.1
	GCC	Z	iPc	18 36 48.0
	SAO	Z	eP	18 36 48.0
	LLA	Z	eP	18 36 53.2
	PCC	Z	ePc	18 36 54.5
	PRS	Z	eP	18 36 55.6
	BKS	Z	ePc	18 36 57.8
	BRK	Z	eP	18 36 58.1
	PRI	Z	eP	18 37 02.4
	CMB	Z	iPc	18 37 03.7
	FRI	Z	eP	18 37 05.5
	ORV	Z	eP	18 37 21.6
BRK 18h36m40.2s 37.1N 121.5W				
h=6km ML=2.7(4) Mo=1.7E20(2)				
14 km N of Gilroy, CA				
Jun 21	BKS	Z	eP	06 36 01
		E	eS	06 45 44
		Z	eLr	06 56 48
				AMP(μm) PER(s)
			LZ	16 20.
			LN	3.2 20.
			LE	18 20.
	FRI	Z	e(P)	06 36 42.4
	CMB	Z	eP	06 36 45.5
	MIN	Z	eP	06 36 48.3
	ORV	Z	eP	06 36 48.7
	PRI	Z	e(P)	06 36 49.5
	WDC	Z	eP	06 36 50.8
BRK Ms=6.4 Distance= 76°				
USGS 06h26m16.6s 24.9N 45.9W				
h=25km mb=5.9 Ms=5.7				
North Atlantic Ridge				
Jun 21	FRI	Z	eP	07 37 39.0
	CMB	Z	e(P)	07 37 53.3
	BKS	E	eLq	07 42 52
				AMP(μm) PER(s)
			LZ	0.86 20.

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			LN	0.0 20.
			LE	1.8 20.
USGS 07h34m32.1s 26.3N 111.0W				
h=10km mb=4.5				
Gulf of California				
Jun 21	BKS	Z	ePKPab	16 30 07.4
		Z	ePKPdfc	16 38 52.8
	PRI	Z	ePKPdfc	16 38 49.2
		Z	iPKPab	16 39 03.6
	FRI	Z	iPKPdfc	16 38 49.3
		Z	iPKPab	16 39 03.1
	PRS	Z	ePKPdfc	16 38 49.5
		Z	iPKPab	16 39 04.3
	MNA	Z	ePKPdfc	16 38 49.6
		Z	iPKPab	16 39 03.9
	CMB	Z	iPKPdfc	16 38 51.1
		Z	iPKPab	16 39 05.6
	BRK	Z	ePKPdfc	16 38 52.4
		Z	iPKPab	16 39 07.3
	ORV	Z	ePKPdfc	16 38 55.2
	WDC	Z	iPKPdfc	16 38 55.8
		Z	iPKPab	16 39 10.3
USGS 16h19m55.4s 57.7S 25.3W				
h=33km mb=5.2 Ms=4.2				
South Sandwich Islands Region				
Jun 21	WDC	Z	iPc	21 35 12.3
	CMB	Z	iPc	21 35 13.5
	MNA	Z	ePc	21 35 22.0
USGS 21h22m44.2s 19.1S 169.0E				
h=164km mb=5.0				
Vanuatu Islands				
Jun 21	WDC	Z	iPc	21 49 12.3
	ORV	Z	ePc	21 49 19.7
	BRK	Z	ePc	21 49 23.8
	BKS	Z	eP	21 49 24.5
			AMP(μm)	PER(s)
		PZ	0.043	1.0
	GCC	Z	ePc	21 49 28.1
	CMB	Z	iPc	21 49 31.1
	PRS	Z	iPc	21 49 33.9
	LLA	Z	iPc	21 49 34.5
	FRI	Z	ePc	21 49 37.6
	PRI	Z	ePc	21 49 37.7
	MNA	Z	iPc	21 49 38.7
USGS 21h38m54.2s 44.6N 148.9E				
h=49km mb=5.7 Ms=4.9				
Kurile Islands				
Jun 22	BKS	Z	eP	22 05 35.1
			AMP(μm)	PER(s)
		PZ	0.13	1.0
	PCC	Z	ePc	22 05 35.2
	GCC	Z	ePc	22 05 35.8
	BRK	Z	ePc	22 05 36.6
	SAO	Z	e(P)	22 05 36.8
	PRS	Z	ePc	22 05 37.1
	LLA	Z	ePc	22 05 39.0
	PRI	Z	ePc	22 05 39.8
	WDC	Z	ePc	22 05 41.3
	ORV	Z	ePc	22 05 42.7
	MIN	Z	e(P)	22 05 43.4
	CMB	Z	ePc	22 05 43.6
	FRI	Z	ePc	22 05 44.2
	MNA	Z	ePc	22 05 52.7
USGS 21h53m07.6s 15.2S 168.2E				
h=26km mb=5.3				
Vanuatu Islands				
Jun 22	WDC	Z	eP	22 51 10.6

DATE	STA	CMP	PHASE	TIME (UTC)
	MIN	Z	eP	22 51 14.6
	ORV	Z	eP	22 51 16.4
	BRK	Z	e(P)	22 51 18.0
	CMB	Z	eP	22 51 24.7
	MNA	Z	eP	22 51 32.2
USGS 22h39m54.0s 28.0N 140.0E				
h=380km mb=4.7				
Bonin Islands Region				
Jun 23	FRI	Z	ePc	06 10 37.5
	CMB	Z	ePc	06 10 38.0
	WDC	Z	ePc	06 10 38.4
	ORV	Z	e(P)	06 10 38.5
	MIN	Z	eP	06 10 40.7
	MNA	Z	ePc	06 10 48.0
USGS 05h59m34.5s 15.2S 178.3W				
h=412km mb=4.8				
Fiji Islands Region				
Jun 23	PRS	Z	ePc	17 41 11.6
	PRI	Z	ePc	17 41 12.8
	SAO	Z	e(P)	17 41 14.2
	LLA	Z	eP	17 41 14.5
	GCC	Z	e(P)	17 41 15.0
	PCC	Z	e(P)	17 41 17.3
	FRI	Z	eP	17 41 18.6
	BRK	Z	e(P)	17 41 20.6
	CMB	Z	eP	17 41 23.9
	MNA	Z	ePc	17 41 30.8
	ORV	Z	e(P)	17 41 33.4
	WDC	Z	eP	17 41 36.0
USGS 17h30m58.6s 21.9S 139.0W				
h=0km mb=5.3				
Tuamotu Archipelago Region				
Jun 24	MNA	Z	e(P)	09 07 47.9
	FRI	Z	eP	09 07 53.2
	CMB	Z	eP	09 07 58.5
	PRI	Z	eP	09 08 00.0
	LLA	Z	eP	09 08 00.1
	PRS	Z	eP	09 08 02.0
	ORV	Z	eP	09 08 06.2
	MIN	Z	eP	09 08 07.4
	BRK	Z	e(P)	09 08 09.5
	WDC	Z	eP	09 08 10.7
	FHC	Z	eP	09 08 21.6
	BKS	NW	eS	09 17 00
		Z	e	09 23 54
		N	eLq	09 25 00
		Z	eLr	09 27 30
			AMP(μm)	PER(s)
		LZ	4.1	20.
		LN	2.1	20.
		LE	5.0	20.
USGS 08h57m53.3s 10.2N 60.6W				
h=38km mb=6.0 Ms=5.6				
Trinidad				
Jun 24	CMB	Z	eP	12 39 24.7
	WDC	Z	eP	12 39 26.0
	MNA	Z	eP	12 39 31.8
			AMP(μm)	PER(s)
		LZ	1.8	20.
		LN	0.0	20.
		LE	1.4	20.
USGS 12h25m40.0s 6.3S 148.9E				
h=41km mb=5.5 Ms=5.3				
New Britain Region				
Jun 24	PRS	Z	eP	13 08 54.6
	PCC	Z	ePc	13 08 55.3
	PRI	Z	ePc	13 08 56.3

DATE	STA	CMP	PHASE	TIME (UTC)
	BRK	Z	eP	13 08 57.7
	FRI	Z	eP	13 09 00.5
	CMB	Z	ePc	13 09 02.0
	ORV	Z	ePc	13 09 03.7
	WDC	Z	ePc	13 09 04.2
	MIN	Z	ePc	13 09 05.8
	MNA	Z	ePc	13 09 09.4
USGS 12h56m48.1s 34.4S 177.9E				
h=519km mb=5.3				
North of New Zealand				
Jun 24	WDC	Z	eP	15 42 37.8
	ORV	Z	eP	15 42 50.4
	MNA	Z	eP	15 43 05.2
USGS 15h37m48.7s 61.9N 124.3W				
h=10km mb=4.9 Ms=3.9				
Northwest Territories, Canada				
Jun 25	GCC	Z	eP	06 37 10.5
	PRS	Z	e(P)	06 37 10.6
	PRI	Z	eP	06 37 12.0
	BKS	Z	ePd	06 37 13.5
		Z	eLr	07 04 50
			AMP(μm)	PER(s)
		PZ	0.057	1.0
		LZ	0.93	20.
		LN	0.64	20.
		LE	1.0	20.
	FRI	Z	eP	06 37 16.3
	CMB	Z	eP	06 37 17.6
	ORV	Z	eP	06 37 19.5
	WDC	Z	eP	06 37 20.7
	MNA	Z	eP	06 37 25.1
BRK Ms=5.4 Distance=99°				
USGS 06h24m23.8s 33.3S 179.4W				
h=52km mb=5.4 Ms=5.1				
South of Kermadec Islands				
Jun 25	MHC	Z	ePd	06 49 44.1
		Z	iS	06 49 47.0
	GCC	Z	ePd	06 49 50.9
		Z	eS	06 49 59.2
	PCC	Z	iPc	06 49 51.8
	BRK	Z	eP	06 49 52.3
	BKS	Z	iPd	06 49 52.5
		E	eS	06 50 2.9
	SAO	Z	iPc	06 49 54.5
	LLA	Z	eP	06 49 58.7
	CMB	Z	eP	06 50 00.0
		Z	eS	06 50 15.1
	PRS	Z	eP	06 50 01.2
	FRI	Z	eP	06 50 07.4
		Z	eS	06 50 27.8
BRK 06h49m40.2s 37.5N 121.6W				
h=6km ML=2.6(4) Mo=1.3E20(2)				
25 km SE of Livermore, CA				
Jun 25	ORV	Z	iPc	07 25 10.8
	WDC	Z	iPd	07 25 14.0
	MIN	Z	iPd	07 25 15.8
	FHC	Z	eP	07 25 22.0
	BKS	Z	ePd	07 25 23.2
		Z	e	07 25 26.6
	PCC	Z	eP	07 25 23.7
	BRK	Z	eP	07 25 24.2
	ARC	N	ePc	07 25 29.4
	CMB	Z	eP	07 25 30.9
	GCC	Z	eP	07 25 31.0
	FRI	Z	e(P)	07 25 45.8
	MNA	Z	eP	07 25 52.4
BRK 07h24m52.8s 39.4N 122.8W				
h=11km ML=3.4(2)				

DATE	STA	CMP	PHASE	TIME (UTC)
43 km E of Willits, CA				
Jun 26	CMB	Z	iPc	03 08 18.8
		Z	eS	03 08 29.5
	MNA	Z	eP	03 08 25.1
	FRI	Z	eP	03 08 30.5
		Z	eS	03 08 38.9
	ORV	Z	eP	03 08 38.6
		Z	iS	03 09 03.3
	BRK	Z	eP	03 08 43.5
	SAO	Z	eP	03 08 43.6
	BKS	Z	iPc	03 08 44.0
		E	eS	03 09 12.8
		Z	e	03 09 13.9
	PCC	Z	eP	03 08 46.0
	PRI	Z	eP	03 08 48.3
	MIN	Z	e(P)	03 08 50.7
BRK 03h08m04.8s 38.4N 119.6W				
h=6km ML=3.4(2)				
35 km SE of Markleeville, CA				
Jun 26	MNA	Z	eP	04 26 39.8
	FRI	Z	eP	04 26 50.9
	CMB	Z	eP	04 26 54.0
	PRS	Z	eP	04 27 02.5
	BKS	Z	eLr	04 45 27
USGS 04h18m31.3s 31.3N 64.8W				
h=10km mb=5.1 Ms=4.1				
North Atlantic Ocean				
Jun 26	MNA	Z	eP	07 13 16.5
	FRI	Z	eP	07 13 25.6
	CMB	Z	eP	07 13 28.9
	ORV	Z	eP	07 13 35.8
	MIN	Z	eP	07 13 36.8
	WDC	Z	eP	07 13 40.2
USGS 07h03m24.8s 10.3N 60.6W				
h=58km mb=5.0				
Trinidad				
Jun 26	BRK	Z	eP	07 30 26.0
		Z	eS	07 30 42.1
	BKS	Z	iPd	07 30 26.2
		Z	e	07 30 41.0
		E	iS	07 30 41.8
	ORV	Z	eP	07 30 28.4
	PCC	Z	eP	07 30 30.6
	MIN	Z	eP	07 30 37.1
	GCC	Z	eP	07 30 37.9
	CMB	Z	eP	07 30 41.7
	SAO	Z	eP	07 30 43.6
	PRS	Z	e(P)	07 30 49.4
	FHC	Z	eP	07 30 50.2
	LLA	Z	e(P)	07 30 53.2
	FRI	Z	eP	07 30 55.6
BRK 07h30m06.8s 38.8N 122.8W				
h=6km ML=3.6(4) Mo=1.9E21(2)				
The Geysers area, 21 km S of Clear Lake, CA				
Jun 26	MHC	Z	iPc	07 54 29.2
		Z	iS	07 54 32.5
	PCC	Z	iPd	07 54 34.1
	GCC	Z	iPd	07 54 34.4
	BRK	Z	iPc	07 54 35.6
		Z	eS	07 54 44.2
	BKS	Z	iPc	07 54 35.6
		N	eS	07 54 44.6
	SAO	Z	eP	07 54 40.0
	CMB	Z	iPd	07 54 47.4
	MIN	Z	eP	07 55 10.2
	WDC	Z	eP	07 55 12.7

DATE	STA	CMP	PHASE	TIME (UTC)
	MNA	Z	e(P)	07 55 16.2
	LLA	Z	eP	07 55 44.0
	PRS	Z	eP	07 55 46.0
	PRI	Z	e(P)	07 55 52.0
	FRI	Z	eP	07 55 54.0
	ORV	Z	eP	07 55 58.5
BRK 07h54m25.3s 37.5N 121.8W				
h=6km ML=3.2(4) Mo=2.8E21(4)				
18 km NE of San Jose, CA				
Jun 26	FOX		iPc	08 55 42.7
			iS	08 55 48.7
	EKR		iPc	08 55 43.1
			i(S)	08 55 50.6
	FHC	Z	iPc	08 55 45.0
		Z	iS	08 55 54.9
	ARC	N	ePd	08 55 45.3
		N	iS	08 55 52.2
	WDC	Z	ePc	08 55 58.2
		Z	e(S)	08 56 27.5
	MIN	Z	eP	08 56 08.0
		Z	eS	08 56 35.4
	ORV	Z	eP	08 56 11.5
		Z	eS	08 56 40.0
BRK 08h55m33.9s 40.3N 124.5W				
h=21km ML=3.1(2)				
Off Coast 10 km W of Cape Mendocino, CA				
Jun 26	FHC	Z	eP	09 32 56.5
	WDC	Z	iPc	09 33 01.9
	MIN	Z	ePc	09 33 06.1
	ORV	Z	iPc	09 33 09.5
	BKS	Z	ePd	09 33 14.3
	GCC	Z	ePc	09 33 18.2
	CMB	Z	iPc	09 33 20.5
	PRS	Z	ePc	09 33 23.5
	LLA	Z	ePc	09 33 24.3
	FRI	Z	ePc	09 33 26.8
	MNA	Z	iPc	09 33 27.3
USGS 09h22m59.7s 46.3N 144.1E				
h=326km mb=5.2				
Sea of Okhotsk				
Jun 26	BKS	Z	ePc	15 05 16.7
	PRS	Z	e(P)	15 05 47.5
	PRI	Z	eP	15 05 47.7
	FRI	Z	eP	15 05 50.2
	LLA	Z	eP	15 05 54.5
	SAO	Z	iP	15 05 59.5
	GCC	Z	eP	15 06 05.7
	MNA	Z	eP	15 06 06.0
	CMB	Z	ePc	15 06 07.0
		Z	eS	15 06 55.0
	PCC	Z	ePc	15 06 14.2
	ZSP	Z	eP	15 06 17.8
	ORV	Z	eP	15 06 32.2
	MIN	Z	e(P)	15 06 43.9
	WDC	Z	eP	15 06 52.5
		Z	eS	15 08 40.9
	FHC	Z	e(P)	15 07 04.5
BRK ML=5.0(2)				
PAS 15h04m58.8s 34.1N 117.7W				
h=km ML=4.6				
Southern California				
Jun 26	CMB	Z	eP	23 08 07.4
	FRI	Z	eP	23 08 22.4
	MNA	Z	eP	23 08 22.6
	BKS	Z	e	23 09 52
USGS 23h05m54.0s 44.2N 129.2W				
h=10km mb=4.5 Ms=3.9				

DATE	STA	CMP	PHASE	TIME (UTC)
Off Coast of Oregon				
Jun 27	BKS	Z	iPd	01 13 21.3
		N	iS	01 13 26.9
	BRK	Z	iPd	01 13 21.6
	ZSP	Z	iPc	01 13 22.0
		Z	iS	01 13 28.4
	PCC	Z	iPd	01 13 25.3
	MHC	Z	eP	01 13 25.8
		Z	eS	01 13 33.9
	GCC	Z	eP	01 13 28.8
	CMB	Z	eP	01 13 33.4
		Z	iS	01 13 48.3
	SAO	Z	e(P)	01 13 33.4
	PRS	Z	e(P)	01 13 36.4
	LLA	Z	eP	01 13 37.7
		Z	eS	01 13 51.0
	ORV	Z	eP	01 13 41.9
	FRI	Z	eP	01 13 44.1
		Z	eS	01 13 50.4
	PRI	Z	e(P)	01 13 45.0
	MIN	Z	e(P)	01 13 55.6
	WDC	Z	e(P)	01 13 57.4
	MNA	Z	eP	01 14 07.4
BRK 01h13m14.1s 37.9N 121.8W				
h=12km ML=3.0(4) Mo=8.7E20(2				
19 km N of Livermore, CA				
Jun 27	GCC	Z	ePd	04 19 03.0
	PCC	Z	iPd	04 19 04.4
	BRK	Z	iP	04 19 07.2
		Z	iS	04 19 18.5
	LLA	Z	e(P)	04 19 09.6
		Z	eS	04 19 13.4
	PRS	Z	ePc	04 19 11.2
	CMB	Z	iPc	04 19 17.5
		Z	iS	04 19 32.3
	FRI	Z	ePc	04 19 20.3
		Z	eS	04 19 41.0
	MHC	Z	iPc	04 19 55.1
		Z	iS	04 19 56.4
BRK 04h18m53.0s 37.3N 121.7W				
h=5km ML=2.9(2) Mo=6.6E19(2				
San Felipe Valley, 18 km ESE of San Jose, CA				
Jun 27	PRS	Z	e(P)	06 20 27.
	GCC	Z	e(P)	06 20 28.
	ZSP	Z	eP	06 20 28.
		Z	ePKKP	06 20 49.
	BKS	Z	ePd	06 20 28.
		N	eS	06 30 55
		E	e	06 31 38
		E	e	06 32 46
		N	eSS	06 36 48
		N	eSSS	06 40 00
		N	eLq	06 43 24
		Z	eLr	06 47 20
			AMP(μm)	PER(
		PZ	0.063	0.
		LZ	0.89	20.
		LN	0.71	20.
		LE	0.78	20.
	FHC	Z	eP	06 20 3
	PRI	Z	e(P)	06 20 3
	WDC	Z	eP	06 20 3
		Z	ePKKP	06 20 5
	ORV	Z	eP	06 20 34
	FRI	Z	eP	06 20 34
	CMB	Z	eP	06 20 34
		Z	ePKKP	06 20 55
		Z	eS	06 21 10

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DATE	STA	CMP	PHASE	TIME (UTC)
	MIN	Z	ePd	06 20 35.5
	MNA	Z	eP	06 20 43.0
BRK Ms=5.2 Distance= 86°				
USGS 06h07m50.9s 20.2S 169.4E				
h=65km mb=5.8				
Vanuatu Islands				
Jun 27	PCC	Z	ePc	16 26 59.0
	FHC	Z	ePc	16 27 05.3
	FRI	Z	eP	16 27 06.3
	CMB	Z	ePc	16 27 07.2
		Z	e	16 29 04.3
	ORV	Z	eP	16 27 08.0
	WDC	Z	ePc	16 27 08.6
		Z	e	16 29 05.7
	MIN	Z	eP	16 27 09.8
	MNA	Z	ePc	16 27 15.7
		Z	e	16 29 13.8
USGS 16h15m46.1s 21.9S 179.1W				
h=538km mb=5.4				
Fiji Islands Region				
Jun 27	WDC	Z	iPKPc	17 58 06.2
	CMB	Z	ePKPc	17 58 08.5
	PRI	Z	iPKPc	17 58 11.1
	MNA	Z	iPKPc	17 58 16.8
USGS 17h46m43.1s 58.3S 24.5W				
h=33km mb=5.0				
South Sandwich Islands Region				
Jun 27	GCC	Z	iPd	18 43 25.8
	MHC	Z	iPd	18 43 28.3
	SAO	Z	iPd	18 43 31.8
		T	eS	18 43 39.51
		R	i	18 43 43.19
		T	i	18 43 44.69
		R	i	18 43 47.22
	PCC	Z	iPd	18 43 32.8
	BRK	Z	iPd	18 43 37.0
	BKS	Z	iPd	18 43 37.2
		E	eS	18 43 46.6
	LLA	Z	iPd	18 43 38.3
	PRS	Z	iPd	18 43 38.8
	PRI	Z	iPd	18 43 47.0
	CMB	Z	iPd	18 43 48.5
		Z	iS	18 44 13.0
	FRI	Z	eP	18 43 51.6
	ORV	Z	iPd	18 44 00.7
	MIN	Z	ePc	18 44 12.9
	MNA	Z	ePd	18 44 14.0
	WDC	Z	iPc	18 44 14.5
	FHC	Z	ePc	18 44 24.3
BRK 18h43m22.3s 37.1N 121.9W				
h=13km ML=5.3(4)				
Lake Elsman area, 22 km NE of Santa Cruz, CA				
Jun 28	ARC	N	iPd	00 59 26.3
		N	iS	00 59 35.0
	FHC	Z	iPc	00 59 26.6
		Z	iS	00 59 36.4
	WDC	Z	iPc	00 59 41.6
	MIN	Z	iPc	00 59 51.8
	ORV	Z	iPd	00 59 55.5
		Z	iS	01 00 26.3
	GCC	Z	eP	01 00 14.4
	CMB	Z	e(P)	01 00 18.3
	SAO	Z	eP	01 00 20.6
BRK 00h59m12.7s 40.5N 124.9W				
h=15km ML=3.8(2) Mo=1.4E21(2)				
Gorda Basin, 70 km SW of Eureka, CA				

DATE	STA	CMP	PHASE	TIME (UTC)
Jun 28	ORV	Z	iPd	07 58 33.4
		Z	iS	07 58 49.2
	WDC	Z	iPd	07 58 35.7
		Z	iS	07 58 51.7
	MIN	Z	iPd	07 58 37.7
	FHC	Z	eP	07 58 46.2
	CMB	Z	ePc	07 58 54.7
		Z	iS	07 59 26.6
BRK 07h58m14.4s 39.4N 122.9W				
h=7km ML=3.3(2)				
36 km E of Willits, CA				
Jun 28	ORV	Z	e(PKP)	16 59 15.6
	WDC	Z	iPKPc	16 59 16.0
	MNA	Z	ePKPc	16 59 17.1
	BKS	N	e	17 17 24
		N	e	17 30 14
		E	e	17 34 48
		Z	e	17 35 16
		Z	eLr	17 36 20
USGS 16h40m19.0s 56.4S 147.1E				
h=10km mb=5.7 Ms=5.9				
West of Macquarie Island				
Jun 29	PRS	Z	ePd	15 09 12.8
	GCC	Z	ePd	15 09 12.8
	LLA	Z	eP	15 09 14.9
	FRI	Z	eP	15 09 18.4
	CMB	Z	ePd	15 09 19.2
	ORV	Z	eP	15 09 20.3
	WDC	Z	ePd	15 09 20.5
	MNA	Z	ePd	15 09 28.9
USGS 14h57m51.9s 23.3S 179.9W				
h=539km mb=5.1				
South of Fiji Islands				
Jun 30	GCC	Z	iPd	03 08 48.2
		Z	iS	03 08 50.4
	MHC	Z	iPc	03 08 51.8
		Z	i	03 08 55.5
		Z	iS	03 08 56.7
	SAO	Z	iP	03 08 54.3
	PCC	Z	iPd	03 08 55.5
		Z	eS	03 09 03.6
	BKS	Z	ePd	03 09 0.5
		Z	e	03 09 11.4
		E	eS	03 09 12.6
	BRK	Z	ePd	03 09 00.4
		Z	eS	03 09 12.0
	PRS	Z	eP	03 09 01.3
		Z	eS	03 09 14.3
	LLA	Z	ePc	03 09 01.9
		Z	eS	03 09 15.3
	ZSP	Z	iP	03 09 02.1
		Z	iS	03 09 15.5
	PRI	Z	eP	03 09 10.7
	CMB	Z	eP	03 09 12.8
BRK 03h08m44.7s 37.1N 121.9W				
h=12km ML=2.6(4) Mo=1.3E20(1)				
Lake Elsman area, 22 km NE of Santa Cruz, CA				
Jun 30	LLA	Z	iPd	09 36 23.9
	PRS	Z	iPd	09 36 25.8
		Z	iS	09 36 29.7
	SAO	Z	iPd	09 36 25.8
	PRI	Z	ePc	09 36 31.7
		Z	i	09 36 46.8
	GCC	Z	ePc	09 36 35.2
	MHC	Z	eP	09 36 37.0
	FRI	Z	ePd	09 36 42.2
		Z	iS	09 36 58.8

DATE	STA	CMP	PHASE	TIME (UTC)
	PCC	Z	ePc	09 36 44.2
	CMB	Z	ePc	09 36 48.3
	BRK	Z	ePd	09 36 49.1
	BKS	Z	ePc	09 36 49.6
		Z	e	09 36 55.8
	ORV	Z	e(P)	09 37 08.7
	MNA	Z	e	09 37 13.2
BRK 09h36m19.9s 36.6N 121.2W				
h=2km ML=2.9(2)				
Bear Valley area, 37 km SE of Hollister, CA				
Jun 30	FRI	Z	eP	15 10 42.3
	PRI	Z	ePd	15 10 43.6
		Z	e	15 11 22.9
	MNA	Z	iPd	15 10 44.2
		Z	e	15 11 22.8
	LLA	Z	ePd	15 10 46.4
	PRS	Z	ePd	15 10 46.7
	SAO	Z	e(P)	15 10 49
	CMB	Z	iPd	15 10 49.3
		Z	e	15 11 37.5
	GCC	Z	ePd	15 10 51.3
	MHC	Z	ePd	15 10 51.6
	BKS	Z	e(P)	15 10 52.5
	BRK	Z	ePd	15 10 54.6
	ORV	Z	iPd	15 10 59.4
	MIN	Z	ePd	15 11 00.3
		Z	e	15 11 08.2
	WDC	Z	iPd	15 11 03.3
		Z	e	15 11 11.6
	FHC	Z	ePd	15 11 10.2
USGS 14h58m57.2s 23.8S 67.5W				
h=124km mb=5.2				
Chile-Argentina Border Region				
Jun 30	FRI	Z	ePd	15 32 52.6
	MNA	Z	ePd	15 32 54.4
	PRI	Z	ePd	15 32 54.4
	LLA	Z	ePd	15 32 56.8
	PRS	Z	ePd	15 32 57.0
	CMB	Z	ePd	15 32 59.8
	GCC	Z	ePd	15 33 02.5
	MHC	Z	ePd	15 33 03.5
	ORV	Z	ePd	15 33 08.5
	WDC	Z	eP	15 33 13.1
USGS 15h21m08.2s 23.8S 67.1W				
h=143km mb=5.1				
Chile-Argentina Border Region				

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DATE	STA	CMP	PHASE	TIME (UTC)
Jul 1	GCC	Z	eP	02 18 38.9
	PRS	Z	ePc	02 18 39.0
	MHC	Z	eP	02 18 40.3
	BKS	Z	eP	02 18 41.1
		N	eLq	02 37 52
		Z	eLr	02 41 8
			AMP(μm)	PER(s)
		PZ	0.040	0.9
		LZ	1.1	20.
		LN	1.0	20.
		LE	1.3	20.
	PRI	Z	eP	02 18 41.7
	SAO	Z	e(P)	02 18 42.9
	BRK	Z	e(P)	02 18 44.5
	ORV	Z	eP	02 18 47.1
	CMB	Z	ePc	02 18 47.2
	FRI	Z	ePc	02 18 47.2
	WDC	Z	ePc	02 18 48.3
	MIN	Z	e(P)	02 18 49.3
	LLA	Z	e	02 18 49.8
	MNA	Z	ePc	02 18 56.4
BRK Ms=5.3 Distance= 77°				
USGS 02h07m01.0s 16.2S 177.7W				
h=33km mb=5.4 Ms=5.2				
Fiji Islands Region				
Jul 1	GCC	Z	ePd	03 07 08.7
	PRI	Z	e(P)	03 07 09.4
	PRS	Z	ePd	03 07 10.7
	BRK	Z	e(P)	03 07 10.9
	MHC	Z	eP	03 07 12.6
	BKS	Z	e(P)	03 07 16.0
		N	e(S)	03 17 34
		E	eLq	03 25 46
		Z	eLr	03 29 28
			AMP(μm)	PER(s)
		PZ	0.036	0.9
		LZ	1.6	20.
		LN	1.7	20.
		LE	1.6	20.
	FRI	Z	eP	03 07 17.8
	CMB	Z	ePd	03 07 18.2
	ORV	Z	eP	03 07 18.8
	WDC	Z	ePd	03 07 18.9
	MIN	Z	ePd	03 07 21.3
	MNA	Z	eP	03 07 28.0
BRK Ms=5.5 Distance= 76°				
USGS 02h55m32.8s 16.2S 177.6W				
h=32km mb=5.5 Ms=5.5				
Fiji Islands Region				
Jul 1	PRI	Z	e(P)	07 55 15.3
	MNA	Z	ePd	07 55 17.8
	CMB	Z	eP	07 55 26.5
USGS 07h48m42.4s 14.3N 92.1W				
h=57km mb=4.4				
Near Coast of Chiapas, Mexico				
Jul 1	BKS	Z	e(P)	12 54 28.6
		N	eLq	13 03 00
		Z	eLr	13 04 8
			AMP(μm)	PER(s)
		PZ	0.23	1.8
		LZ	1.4	20.
		LN	1.1	20.
		LE	1.9	20.
	WDC	Z	ePd	12 54 35.9
	MIN	Z	ePd	12 54 39.2
	FHC	Z	eP	12 54 39.9
	CMB	Z	ePd	12 54 59.7
	FRI	Z	e(P)	12 55 09.0
	MNA	Z	eP	12 55 09.3

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BRK Ms=4.6 Distance= 24°				
USGS 12h48m07.5s 52.9N 166.8W				
h=33km mb=5.0 Ms=4.9				
Fox Islands, Aleutian Islands				
Jul 1	FOX		iPc	19 51 17.5
			iS	19 51 23.9
	EKR		iPc	19 51 19.7
	FHC	Z	iPc	19 51 19.8
	ARC	N	e(P)	19 51 19.8
		N	iS	19 51 26.6
	WDC	Z	iPc	19 51 35.2
		Z	e(S)	19 51 56.4
	MIN	Z	iPd	19 51 45.6
		Z	eS	19 52 14.6
	ORV	Z	eP	19 51 49.2
	PCC	Z	e(P)	19 52 00.3
BRK 19h51m08.7s 40.7N 124.7W				
h=14km ML=3.4(2) Mo=7.3E20(2)				
48 km WSW of Eureka, CA				
Jul 2	FRI	Z	eP	00 28 06
		Z	iS	00 29 15.0
	PRI	Z	eP	00 28 06.5
	PRS	Z	iPc	00 28 13.9
	LLA	Z	iPc	00 28 14.2
	MNA	Z	eP	00 28 16.2
		Z	iS	00 29 47
	CMB	Z	iPc	00 28 23.8
		Z	iS	00 29 36.6
BRK ML=4.5(2)				
Southern California				
Jul 2	WDC	Z	e(P)	00 35 31.8
	PRI	Z	e(P)	00 35 34.5
	ORV	Z	e(P)	00 35 35.2
	CMB	Z	eP	00 35 36.0
	FRI	Z	e(P)	00 35 37.7
	MNA	Z	eP	00 35 44.9
USGS 00h22m40.5s 8.4S 156.3E				
h=49km mb=5.5 Ms=5.1				
Solomon Islands				
Jul 2	PCC	Z	eP	10 13 43.8
	GCC	Z	e(P)	10 13 43.8
	BRK	Z	eP	10 13 44.4
	BKS	Z	eP	10 13 44.4
		Z	epP	10 14 20
		Z	e(PP)	10 17 24
		E	eS	10 23 49
		Z	e(pS)	10 24 44
		N	eLg	10 35 44
		E	eLr	10 39 22
			AMP(μm)	PER(s)
		PZ	0.27	0.9
		LZ	3.6	20.
		LN	2.0	20.
		LE	3.9	20.
	FHC	Z	e(P)	10 13 44.5
	PRS	Z	eP	10 13 44.9
	SAO	Z	eP	10 13 45.9
	LLA	Z	eP	10 13 47.0
	PRI	Z	eP	10 13 47.6
	WDC	Z	eP	10 13 48.5
	ORV	Z	eP	10 13 49.8
	MIN	Z	eP	10 13 50.9
	CMB	Z	eP	10 13 51.2
	FRI	Z	eP	10 13 51.9
	MNA	Z	eP	10 14 00.4
BRK Ms=5.8 Distance=83°				
USGS 10h01m28.9s 14.3S 167.2E				
h=142km mb=5.9				

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Vanuatu Islands				
Jul 2	PRS	Z	ePd	17 44 05.6
	PRI	Z	ePd	17 44 07.8
	MHC	Z	iPd	17 44 08.3
	FRI	Z	iPd	17 44 13.4
	CMB	Z	iPd	17 44 14.7
	WDC	Z	iPd	17 44 16.4
	MNA	Z	iPd	17 44 24.2
USGS 17h32m39.0s 18.7S 174.5W				
h=116km mb=5.5				
Tonga Islands				
Jul 3	PRS	Z	iPc	05 21 11.4
	GCC	Z	iPc	05 21 11.5
	PCC	Z	iPc	05 21 11.7
	SAO	Z	iPc	05 21 12.2
	BRK	Z	iPc	05 21 13.3
	PRI	Z	iPc	05 21 13.5
	LLA	Z	ePc	05 21 13.6
	BKS	Z	eP	05 21 13.6
			AMP(μm)	PER(s)
		PZ	0.28	1.0
	ZSP	Z	iPc	05 21 13.8
	MHC	Z	iPc	05 21 13.9
	FHC	Z	iPc	05 21 18.0
	FRI	Z	iPc	05 21 18.2
	CMB	Z	iPc	05 21 19.2
	ORV	Z	iPc	05 21 20.4
	WDC	Z	iPc	05 21 20.6
	MNA	Z	iPc	05 21 27.4
USGS 05h09m43.0s 24.8S 179.4E				
h=537km mb=5.5				
South of Fiji Islands				
Jul 3	FHC	Z	iPc	11 56 18.2
	WDC	Z	iPc	11 56 20.6
	MIN	Z	iPc	11 56 23.4
	BKS	Z	ePc	11 56 24.3
		N	eS	12 07 30
		N	e(PPS)	12 08 44
		Z	e(SSS)	12 17 21
		N	eLg	12 21 18
		Z	eLr	12 25 38
			AMP(μm)	PER(s)
		PZ	0.044	0.9
		LZ	6.4	20.
		LN	2.5	20.
		LE	6.1	20.
	ORV	Z	iPc	11 56 24.9
	CMB	Z	iPc	11 56 30.8
	FRI	Z	iPc	11 56 34.0
	MNA	Z	iPc	11 56 38.3
	PRI	Z	i(P)c	11 56 38.5
BRK Ms=6.0 Distance=89°				
USGS 11h43m12.7s 8.9N 137.9E				
h=14km mb=5.9 Ms=6.3				
West Caroline Islands				
Jul 3	SAO	Z	iPd	15 20 13.3
		Z	iS	15 20 14.8
	GCC	Z	iPc	15 20 20.2
	PRS	Z	iPd	15 20 20.7
	LLA	Z	iPc	15 20 21.4
		Z	iS	15 20 28.7
	MHC	Z	iPd	15 20 24.4
		N	eSd	15 20 33.7
		Z	iPd	15 20 24.32
		R	eS	15 20 33.30
	PRI	Z	ePc	15 20 29.4
	PCC	Z	iPd	15 20 30.7
	BKS	Z	e(P)	15 20 36.4

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	FRI	Z	iPc	15 20 37.0
		Z	iS	15 20 57.6
	CMB	Z	iPc	15 20 38.8
BRK 15h20m12.3s 36.8N 121.5W				
h=6km ML=2.5(4)				
Fremont Peak, 13 km SW of Hollister, CA				
Jul 4	BRK	Z	eP	05 44 57.8
	PRS	Z	eP	05 44 58.1
	MHC	Z	eP	05 44 58.8
	FHC	Z	e(P)	05 44 59.4
	PRI	Z	ePc	05 45 03.1
	WDC	Z	e(P)	05 45 05.9
	ORV	Z	ePc	05 45 08.2
	MIN	Z	eP	05 45 10.4
	CMB	Z	eP	05 45 11.2
	FRI	Z	eP	05 45 12.0
	MNA	Z	ePc	05 45 45.5
USGS 05h38m09.3s 19.2N 155.5W				
h=10km mb=5.1				
Hawaiian Islands				
Jul 4	GCC	Z	ePc	08 39 25.8
	BRK	Z	e(P)	08 39 25.9
	SAO	Z	e(P)	08 39 27.4
	PRI	Z	ePc	08 39 28.1
	LLA	Z	eP	08 39 28.2
	MHC	Z	ePc	08 39 28.5
	FRI	Z	ePc	08 39 33.1
	CMB	Z	ePc	08 39 34.2
	ORV	Z	ePc	08 39 35.1
	MIN	Z	ePc	08 39 37.1
	MNA	Z	ePc	08 39 42.6
USGS 08h28m17.6s 21.7S 179.4W				
h=595km mb=5.3				
Fiji Islands Region				
Jul 4	SAO	Z	iPd	08 47 14.3
	PRS	Z	iPd	08 47 21.6
	GCC	Z	iPc	08 47 22.2
	LLA	Z	iPc	08 47 22.3
		Z	iS	08 47 29.6
	MHC	Z	iPd	08 47 25.3
		N	iS	08 47 34.5
	PRI	Z	iPc	08 47 30.4
	PCC	Z	ePc	08 47 31.2
	BRK	Z	eP	08 47 34.5
	BKS	Z	eP	08 47 35.0
	ZSP	Z	ePc	08 47 36.4
		Z	i	08 47 39.0
		Z	eS	08 47 57.1
	FRI	Z	eP	08 47 37.9
		Z	eS	08 47 56.8
	CMB	Z	eP	08 47 40.0
	ORV	Z	e(P)	08 47 59.9
BRK 08h47m13.2s 36.8N 121.5W				
h=6km ML=2.9(4)				
Fremont Peak, 13 km SW of Hollister, CA				
Jul 4	SAO	Z	iPd	08 48 43.5
	PRS	Z	iPd	08 48 50.7
	GCC	Z	iPc	08 48 51.3
	LLA	Z	iPc	08 48 51.4
		Z	iS	08 48 59.5
	MHC	Z	iPc	08 48 54.8
		Z	iS	08 49 03.7
		N	ePc	08 49 55.5
		N	iSc	08 50 04.8
	PRI	Z	iPc	08 48 59.7
	PCC	Z	iPd	08 49 00.8

DATE	STA	CMP	PHASE	TIME (UTC)
	BKS	Z	eP	08 49 02.0
	BRK	Z	eP	08 49 03.6
	ZSP	Z	iPd	08 49 05.3
		Z	i	08 49 08.5
	FRI	Z	iPc	08 49 07.0
		Z	iS	08 49 25.6
	CMB	Z	ePd	08 49 09.2
	ORV	Z	e(P)	08 49 29.0
BRK 08h48m42.3s 36.8N 121.5W				
h=6km ML=3.0(4) Mo=1.4E21(1)				
Fremont Peak, 13 km SW of Hollister, CA				
Jul 4	FRI	Z	ePc	14 05 29.9
		Z	e	14 05 37.5
	PRI	Z	ePc	14 05 31.8
		Z	e	14 06 39.1
	MNA	Z	ePc	14 05 31.9
		Z	e	14 06 39.3
	LLA	Z	ePc	14 05 34.6
		Z	e	14 06 42.1
	PRS	Z	ePc	14 05 35.3
		Z	e	14 06 42.4
	CMB	Z	ePc	14 05 37.7
	GCC	Z	ePc	14 05 39.9
	MHC	Z	ePc	14 05 40.2
		Z	e	14 05 48.0
	BRK	Z	ePc	14 05 44.2
	BKS	Z	ePc	14 05 44.5
			AMP(μm)	PER(s)
		PZ	0.0039	1.0
	ORV	Z	ePc	14 05 48.0
		Z	e	14 05 55.3
		Z	i	14 06 02.0
	MIN	Z	iPc	14 05 49.9
		Z	e	14 05 57.7
	WDC	Z	ePc	14 05 53.3
		Z	e	14 06 00.6
	FHC	Z	ePc	14 06 01.5
USGS 13h54m14.2s 17.6S 71.7W				
h=19km mb=5.8 Ms=5.4				
Near Coast of Peru				
Jul 4	ZSP	Z	iPc	15 42 25.8
		Z	iS	15 42 41.4
	BRK	Z	ePc	15 42 26.3
		Z	eS	15 42 40.9
	BKS	Z	eP	15 42 26.5
		N	eS	15 42 41.4
	ORV	Z	ePc	15 42 29.9
	PCC	Z	ePc	15 42 30.8
	MHC	Z	ePc	15 42 36.6
	GCC	Z	ePd	15 42 38.4
	MIN	Z	eP	15 42 38.6
	WDC	Z	ePc	15 42 40.8
	CMB	Z	iPc	15 42 42.2
	SAO	Z	iPc	15 42 44.7
	LLA	Z	iPc	15 42 49.9
	PRS	Z	ePc	15 42 50.5
	FHC	Z	e	15 42 52.4
	FRI	Z	ePc	15 42 56.0
	PRI	Z	eP	15 42 58.5
	MNA	Z	ePc	15 43 05.2
BRK 15h42m07.9s 38.8N 122.8W				
h=6km ML=3.6(6) Mo=7.3E21(2)				
The Geysers area, 25 km S of Clear Lake, CA				
Jul 5	FRI	Z	iPc	18 19 14.3
	MNA	Z	iPc	18 19 23.4
	PRI	Z	iPc	18 19 25.3
	LLA	Z	ePc	18 19 27.6

DATE	STA	CMP	PHASE	TIME (UTC)
	CMB	Z	iPc	18 19 31.3
		Z	iS	18 20 00.3
	PRS	Z	iPc	18 19 32.8
	SAO	Z	iPc	18 19 34.17
		R	eS	18 20 07.88
	MHC	Z	iPc	18 19 38.3
		N	iS	18 20 21.4
	GCC	Z	iPd	18 19 40.1
	ZSP	Z	iS	18 19 43.7
		Z	ePd	18 19 47.4
	PCC	Z	iPd	18 19 46.2
	BKS	Z	eP	18 19 46.5
	BRK	Z	iPd	18 19 46.8
	ORV	Z	e(P)	18 19 55.8
	MIN	Z	e	18 20 07.9
	WDC	Z	e	18 20 20.0
BRK 18h18m47.9s 36.4N 118.0W				
h=7km ML=4.8(4)				
20 km SSE of Lone Pine, CA				
Jul 5	FHC	Z	e(P)	20 45 06.1
	BRK	Z	eP	20 45 10.6
	WDC	Z	ePc	20 45 10.9
		Z	i	20 45 16.3
	GCC	Z	eP	20 45 11.4
	MHC	Z	ePc	20 45 12.9
		Z	e	20 45 18.5
	ORV	Z	ePc	20 45 13.8
		Z	e	20 45 19.2
	PRS	Z	eP	20 45 13.9
	BKS	Z	e(P)	20 45 14.3
		Z	ePP	20 48 58
		Z	e	20 57 36
		NW	eSS	21 02 08
		Z	e(SSS)	21 06 20
		N	eG	21 09 52
		Z	eLr	21 14 00
			AMP(μm)	PER(s)
		LZ	12	20.
		LN	4.3	20.
		LE	8.6	20.
	LLA	Z	eP	20 45 15.5
	PRI	Z	ePc	20 45 16.7
		Z	e	20 45 22.1
	CMB	Z	ePc	20 45 17.4
		Z	i	20 45 22.9
		Z	e	20 46 15.5
		Z	e	20 49 15.0
	FRI	Z	ePc	20 45 19.5
		Z	i	20 45 25.1
	MNA	Z	ePc	20 45 26.0
		Z	i	20 45 31.4
		Z	e	20 46 35.3
		Z	ePP	20 49 16.4
BRK Ms=6.3 Distance=92°				
USGS 20h32m02.3s 6.1S 148.8E				
h=59km mb=5.1				
New Britain Region				
Jul 6	GCC	Z	ePc	01 21 47.6
	PCC	Z	ePc	01 21 47.7
		Z	epP	01 23 43.6
	PRS	Z	ePc	01 21 48.1
	SAO	Z	ePc	01 21 48.6
	BKS	Z	eP	01 21 49.1
			AMP(μm)	PER(s)
		Z	0.32	1
	BRK	Z	eP	01 21 49.4
	MHC	Z	eP	01 21 50.0
		Z	e	01 23 56.0
	PRI	Z	ePc	01 21 50.3
	LLA	Z	ePc	01 21 50.3

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DATE	STA	CMP	PHASE	TIME (UTC)
	FHC	Z	ePc	01 21 53.3
	FRI	Z	ePc	01 21 55.4
		Z	epP	01 23 53.1
	CMB	Z	ePc	01 21 56.1
		Z	epP	01 23 54.0
	WDC	Z	ePc	01 21 56.6
		Z	epP	01 23 54.3
	ORV	Z	ePc	01 21 56.7
		Z	epP	01 23 55.2
	MIN	Z	ePc	01 21 58.7
	MNA	Z	ePc	01 22 05.5
		Z	epP	01 24 05.4

USGS 01h10m52.8s 17.7S 178.8W
h=547km mb=5.6
Fiji Islands Region

Jul 6	FHC	Z	eP	04 27 46.0
	WDC	Z	eP	04 28 01.7
	MIN	Z	e(P)	04 28 10.2
	ORV	Z	eP	04 28 18.8
	CMB	Z	eP	04 28 41.6
	MNA	Z	eP	04 28 56.3
	FRI	Z	eP	04 28 57.6

BRK mb=3.1 h=33km Distance=°
USGS 04h26m36.6s 43.9N 128.4W
h=10km mb=4.5 Ms=4.3
Off Coast of Oregon

Jul 6	BKS	Z	eP	11 08 28.0	
				AMP(μm)	PER(s)
		PZ		0.074	1.0
	FHC	Z	ePc	11 08 44.2	
	WDC	Z	ePd	11 08 54.6	
	MIN	Z	ePd	11 09 01.8	
	ORV	Z	eP	11 09 11.1	
	BRK	Z	eP	11 09 27.6	
	CMB	Z	eP	11 09 34.0	
	MHC	Z	e(P)	11 09 37.5	
	MNA	Z	ePd	11 09 43.0	
	FRI	Z	eP	11 09 49.7	
	LLA	Z	ePc	11 09 50.3	
	PRI	Z	ePd	11 09 56.4	

USGS 11h06m31.8s 49.1N 128.9W
h=10km mb=4.7 Ms=4.5
Vancouver Island Region

Jul 6	FHC	Z	eP	16 05 04.0	
	WDC	Z	eP	16 05 08.5	
	MIN	Z	eP	16 05 15.2	
	ORV	Z	eP	16 05 16.5	
	BKS	Z	e(P)	16 05 20.0	
		E	eS	16 14 20	
		N	eSSS	16 21 58	
		N	e	16 23 36	
		Z	eLr	16 25 59	
		Z	e	16 26 17	
				AMP(μm)	PER(s)
		PZ		0.043	1.0
		LZ		5.0	20.
		LN		3.2	20.
		LE		6.1	20.
	BRK	Z	e(P)	16 05 24.0	
	GCC	Z	e(P)	16 05 26.5	
	CMB	Z	eP	16 05 27.8	
	MHC	Z	e(P)	16 05 28.7	
	PRS	Z	eP	16 05 30.5	
	LLA	Z	eP	16 05 30.9	
	FRI	Z	eP	16 05 36.0	
	MNA	Z	eP	16 05 36.5	
	PRI	Z	e(P)	16 05 38.6	

BRK Ms=5.8 Distance=69°
USGS 15h54m19.1s 41.7N 144.2E
h=30km mb=5.9 Ms=6.3
Hokkaido, Japan, Region

Jul 6	WDC	Z	eP	16 42 22.4
	CMB	Z	eP	16 42 49.7
	MNA	Z	eP	16 42 55.5

USGS 16h31m32.7s 41.7N 144.1E
h=39km mb=5.3
Hokkaido, Japan, Region

Jul 6	WDC	Z	eP	17 06 11.5
	CMB	Z	eP	17 06 27.7
	FRI	Z	e(P)	17 06 35.5
	MNA	Z	eP	17 06 36.5

USGS 16h55m21.1s 41.7N 144.2E
h=33km mb=5.6 Ms=5.7
Hokkaido, Japan, Region

Jul 6	MNA	Z	eP	19 58 21.7
	FRI	Z	eP	19 58 27.1
	CMB	Z	eP	19 58 32.3
	LLA	Z	e(P)	19 58 33.4
	MHC	Z	eP	19 58 39.0
	ORV	Z	e(P)	19 58 41.0
	MIN	Z	eP	19 58 41.7
	WDC	Z	e(P)	19 58 42.0

USGS 19h48m50.4s 11.1N 62.6W
h=117km mb=5.1
Windward Islands

Jul 7	WDC	Z	eP	02 22 21.1
	ORV	Z	eP	02 22 24.0
	CMB	Z	eP	02 22 27.8
	FRI	Z	e(P)	02 22 30.0
	MNA	Z	eP	02 22 36.1

USGS 02h09m03.6s 6.0S 146.6E
h=45km mb=5.1 Ms=4.9
East New Guinea Region

Jul 7	MNA	Z	iPc	15 06 02.9
	FRI	Z	iPc	15 06 14.7
	CMB	Z	iPc	15 06 22.9
		Z	iS	15 07 30
	PRI	Z	iPc	15 06 27.8
		Z	i	15 06 36.0
	LLA	Z	ePc	15 06 28.5
		Z	i	15 06 40.3
	SAO	Z	iPc	15 06 34.0
		Z	i	15 06 41.5
	PRS	Z	iPc	15 06 34.3
	MHC	Z	iPc	15 06 36.3
		Z	iS	15 07 44
	GCC	Z	ePc	15 06 39.0
		Z	i	15 06 46.5
	ORV	Z	iPc	15 06 41.6
	BKS	Z	ePc	15 06 42.6
	BRK	Z	iPc	15 06 42.9
	ZSP	Z	eP	15 06 43.3
		Z	i	15 06 54.1
	PCC	Z	iPc	15 06 43.5
	MIN	Z	iPc	15 06 49.1
	WDC	Z	iPc	15 06 58.4
	FHC	Z	ePc	15 07 14.2

BRK ML=5.6(6)
Underground Nuclear Explosion,
N.T.S.

Jul 7	FRI	Z	eP	21 56 24.0
	PRI	Z	ePc	21 56 24.2
	MNA	Z	ePc	21 56 24.7
		Z	e	21 56 41.9
	LLA	Z	ePc	21 56 26.9
	PRS	Z	ePc	21 56 27.5
	CMB	Z	ePc	21 56 30.6
	GCC	Z	ePc	21 56 32.7
	ORV	Z	ePc	21 56 41.0
		Z	e	21 56 56.0
	WDC	Z	ePc	21 56 46.5

USGS 21h45m22.7s 16.5S 73.0W
h=66km mb=5.1
Near Coast of Peru

Jul 8	FHC	Z	eP	16 48 19.1	
	PCC	Z	e(P)	16 48 20.9	
	BRK	Z	ePc	16 48 21.0	
	BKS	Z	eP	16 48 22.3	
		Z	eLr	17 15 42.0	
				AMP(μm)	PER(s)
		PZ		0.072	0.8
		LZ		0.75	20.
		LN		0.57	20.
		LE		0.71	20.
	GCC	Z	ePc	16 48 22.4	
	WDC	Z	ePc	16 48 22.5	
	MHC	Z	ePc	16 48 23.5	
	PRS	Z	ePc	16 48 24.7	
	ORV	Z	eP	16 48 24.8	
	MIN	Z	ePc	16 48 25.2	
	SAO	Z	e(P)	16 48 26.2	
	LLA	Z	eP	16 48 26.3	
	PRI	Z	ePc	16 48 27.1	
	CMB	Z	ePc	16 48 28.1	
	FRI	Z	ePc	16 48 30.1	
	MNA	Z	ePc	16 48 37.1	

USGS 16h35m35.7s 6.3S 154.7E
h=74km mb=5.8
Solomon Islands

Jul 8	FHC	Z	e(P)	23 59 09.3
	WDC	Z	ePd	23 59 13.0
	MIN	Z	e(P)	23 59 16.2
	PCC	Z	eP	23 59 16.9
	BRK	Z	ePd	23 59 17.2
	ORV	Z	ePd	23 59 17.9
	MHC	Z	ePd	23 59 20.7
	PRS	Z	ePd	23 59 23.1
	LLA	Z	ePd	23 59 24.3
	CMB	Z	ePd	23 59 24.4
	PRI	Z	ePd	23 59 26.4
	FRI	Z	ePd	23 59 28.2
	MNA	Z	ePd	23 59 32.8

USGS 23h47m13.3s 15.9N 145.5E
h=166km mb=4.8
Mariana Islands

Jul 9	WDC	Z	ePc	03 52 56.1
	ORV	Z	eP	03 52 58.8
	PRS	Z	e(P)	03 52 58.8
	MIN	Z	eP	03 52 58.9
	PRI	Z	e(P)	03 53 01.6
	CMB	Z	ePc	03 53 02.5
	FRI	Z	e(P)	03 53 04.2
	MNA	Z	ePc	03 53 11.1

USGS 03h40m07.2s 5.0S 151.9E
h=103km mb=5.7
New Britain Region

Jul 9	PRS	Z	iPd	15 23 06.5
	GCC	Z	ePd	15 23 06.7
	PCC	Z	ePd	15 23 07.2
	SAO	Z	e(P)	15 23 07.2
	PRI	Z	ePd	15 23 08.2
	LLA	Z	ePd	15 23 08.5
	BRK	Z	ePd	15 23 08.7
	MHC	Z	ePd	15 23 09.0
	BKS	Z	eP	15 23 09.3
		N	e	15 33 11.6
				AMP(μm)	PER(s)
		PZ		0.30	0.9
	FRI	Z	ePd	15 23 12.9
	FHC	Z	e(P)	15 23 13.2
	CMB	Z	ePd	15 23 14.3
		Z	ePP	15 26 41.5
	ORV	Z	ePd	15 23 15.8
	WDC	Z	ePd	15 23 16.6
	MNA	Z	ePd	15 23 21.9
		Z	ePP	15 26 44.1

USGS 15h10m58.0s 29.8S 179.0W
h=262km mb=5.5
Kermadec Islands

Jul 9	PRI	Z	eP	18 38 10.6
	FRI	Z	eP	18 38 11.2
	MNA	Z	eP	18 38 11.7
	LLA	Z	eP	18 38 12.6
	PRS	Z	eP	18 38 12.8
	CMB	Z	eP	18 38 16.3
	GCC	Z	e(P)	18 38 17.2
	MHC	Z	eP	18 38 17.6
	ORV	Z	eP	18 38 24.9
	MIN	Z	e(P)	18 38 26.6
	WDC	Z	ePd	18 38 29.7

USGS 18h25m54.7s 32.4S 69.4W
h=121km mb=4.9
Mendoza Province, Argentina

Jul 10	PRI	Z	eP	16 57 04.5
	FRI	Z	eP	16 57 08.5
	CMB	Z	eP	16 57 17.0
	MNA	Z	eP	16 57 18.7
	ORV	Z	eP	16 57 27.7
	MIN	Z	eP	16 57 32.2
	WDC	Z	eP	16 57 35.0

USGS 16h47m10.7s 21.5S 114.1W
h=10km mb=5.3 Ms=5.1
Easter Island Cordillera

Jul 10	PRI	Z	e(P)	17 48 43.0
	WDC	Z	eP	17 48 45.5
	ORV	Z	eP	17 48 46.0
	FRI	Z	eP	17 48 46.4
	CMB	Z	eP	17 48 46.5
	MNA	Z	eP	17 48 54.5

USGS 17h36m00.7s 20.0S 168.8E
h=43km mb=5.0 Ms=5.1
Vanuatu Islands

Jul 11	SAO	Z	iPc	06 22 13.2
	MHC	Z	iPd	06 22 14.5
		N	iS	06 22 21.0
	GCC	Z	iPc	06 22 15.7
	LLA	Z	iPc	06 22 18.5
	PRS	Z	iPd	06 22 20.6
	PCC	Z	iPc	06 22 23.4
	BKS	Z	iPc	06 22 26.9
	PRI	Z	iPc	06 22 28.1
	CMB	Z	eP	06 22 31.1
	FRI	Z	iPc	06 22 31.8
	ORV	Z	e(P)	06 22 48.1
	MNA	Z	e(P)	06 23 00.3
	MIN	Z	e(P)	06 23 02.0

BRK 06h22m07.5s 37.0N 121.5W
h=8km ML=3.6(4) Mo=2.5E21(4)
9 km E of Gilroy, CA

Jul 11	WDC	Z	iPc	14 47 10.9
	MIN	Z	eP	14 47 18.0
	ORV	Z	eP	14 47 27.7
	CMB	Z	eP	14 47 51.0
	MNA	Z	eP	14 48 01.3
	FRI	Z	eP	14 48 06.9

USGS 14h45m07.9s 47.7N 128.4W
h=10km mb=4.0
Off Coast of Washington

Jul 11	FHC	Z	iPd	20 40 15.8
		Z	i	20 40 20.8
		Z	iS	20 40 23.5
	ARC	N	iPc	20 40 23.4
		N	i(S)	20 40 31.2
	WDC	Z	iPc	20 40 28.8
	MIN	Z	iPc	20 40 38.7
		Z	iS	20 41 00.8
	ORV	Z	ePc	20 40 41.7
		Z	iS	20 41 03.7
	BRK	Z	e(P)	20 40 52.8
	PCC	Z	e(P)	20 40 55.1
	MHC	Z	e(P)	20 41 01.4
	GCC	Z	ePc	20 41 03.3
	CMB	Z	eP	20 41 05.2
	SAO	Z	eP	20 41 08.3
	FRI	Z	ePc	20 41 20.6

BRK 20h40m04.9s 40.4N 124.5W
h=18km ML=3.9(2) Mo=6.9E21(2)
Off Coast 9 km W of Cape Mendocino, CA

Jul 12	FHC	Z	iPd	02 49 52.3
		Z	i	02 49 57.6
		Z	iS	02 49 59.0
	ARC	N	iPc	02 50 00.3
		N	i(S)	02 50 07.8
	WDC	Z	ePc	02 50 05.7
	MIN	Z	eP	02 50 15.8
		Z	eS	02 50 41.7
	ORV	Z	eP	02 50 19.5
		Z	eS	02 50 46.8
	PCC	Z	eP	02 50 32.0
	GCC	Z	eP	02 50 41.4

BRK 02h49m42.8s 40.4N 124.4W
h=19km ML=3.6(2) Mo=1.5E21(2)
Cape Mendocino, CA

Jul 12	WDC	Z	eP	08 54 38.0
	MIN	Z	eP	08 54 41.6
	ORV	Z	eP	08 54 43.9
	MHC	Z	e(P)	08 54 49.1
	CMB	Z	eP	08 54 52.1
	PRS	Z	eP	08 54 52.5
	FRI	Z	eP	08 54 57.0
	MNA	Z	e(P)	08 55 00.0

USGS 08h41m47.3s 26.4N 141.8E
h=55km mb=5.2 Ms=4.1
Bonin Islands Region

Jul 12	MNA	Z	e	10 04 54.2
	FRI	Z	e	10 04 57
	ORV	Z	e	10 05 12
	MIN	Z	e	10 05 15
	WDC	Z	e	10 05 26.9

USGS 09h55m54.0s 9.9N 71.4W
h=29km mb=5.5 Ms=4.4
Lake Maracaibo

Jul 12	PRS	Z	eP	10 07 27.7
	GCC	Z	eP	10 07 27.9
	PCC	Z	eP	10 07 28.2
	PRI	Z	eP	10 07 29.5
	BRK	Z	eP	10 07 30.0
	MHC	Z	eP	10 07 30.2
	BKS	Z	e	10 07 30.7
	FRI	Z	eP	10 07 33.9
	CMB	Z	ePd	10 07 35.2
	FHC	Z	eP	10 07 35.2
	ORV	Z	eP	10 07 37.0
	WDC	Z	iPd	10 07 37.7
	MIN	Z	eP	10 07 38.9
	MNA	Z	eP	10 07 52.9

USGS 09h55m26.7s 31.3S 179.8E
h=423km mb=5.2
Kermadec Islands Region

Jul 12	MNA	Z	iPc	18 09 03.3
		Z	i	18 09 22.6
	FRI	Z	ePc	18 09 06.9
		Z	i	18 09 27.3
	CMB	Z	iPc	18 09 13.1
		Z	i	18 09 33.6
	LLA	Z	ePc	18 09 13.8
		Z	i	18 09 34.3
	ORV	Z	iPc	18 09 21.9
		Z	i	18 09 41.7
	WDC	Z	i(P)c	18 09 25.5
		Z	i	18 09 46.2
	FHC	Z	ePc	18 09 35.9
		Z	i	18 09 56.8

USGS 17h59m12.8s 10.2N 62.5W
h=5km mb=5.2 Ms=4.7
Near Coast of Venezuela

Jul 12	SAO	Z	iPd	23 13 27.30
		T	iS+	23 13 28.25
	PRS	Z	iPd	23 13 34.7
	GCC	Z	iPc	23 13 35.2
	LLA	Z	iPc	23 13 35.4
	MHC	Z	iPd	23 13 38.35
		T	iS-	23 13 47.00
	PRI	Z	iPc	23 13 43.5
		Z	iS	23 13 59.7
	PCC	Z	iPd	23 13 44.6
	BKS	Z	ePd	23 13 47.36
	FRI	Z	iPc	23 13 50.9
	ZSP	Z	iPd	23 13 52.1
		Z	iS	23 14 10.0
	CMB	Z	iPc	23 13 53.5
		Z	eS	23 14 11.9

BRK 23h13m26.2s 36.8N 121.5W
h=6km ML=2.9(4)
12 km SW of Hollister, CA

Jul 13	WDC	Z	iPc	00 46 56.9
	ORV	Z	iPc	00 47 07.5
	CMB	Z	iPc	00 47 30.1

USGS 00h45m15.6s 44.3N 129.2W
h=10km mb=4.3
Off Coast of Oregon

Jul 14	MNA	Z	eP	17 33 14.7
		Z	e	17 33 18.0
		Z	eS	17 35 12.8
	MIN	Z	e(P)	17 33 15.6
		Z	e	17 33 21.1
	ORV	Z	eP	17 33 20.5
		Z	e	17 33 27.4
	WDC	Z	eP	17 33 23.0
		Z	e	17 33 25.3
		Z	eS	17 35 32.0
	CMB	Z	ePd	17 33 27.8
		Z	e	17 33 35.3
		Z	eS	17 35 58.4

International Seismological Centre

UNIVERSITY OF CALIFORNIA SEISMOGRAPHIC STATIONS
REGISTRATION OF EARTHQUAKES 1988

DATE	STA	CMP	PHASE	TIME (UTC)
	BRK	Z	e(P)	17 33 28.2
		Z	e	17 34 10.5
	FHC	Z	eP	17 33 38.3
		Z	e	17 33 43.4
		Z	eS	17 37 09.1
	FRI	Z	eP	17 33 44.0
	MHC	Z	eP	17 33 48.4
		Z	e	17 33 51.3
	BKS	Z	e	17 33 50.4
		N	e	17 35 57.6
	GCC	Z	e(P)	17 33 55.0
		Z	e	17 34 09.0
	LLA	Z	eP	17 33 56.6
		Z	e	17 34 04.4
	SAO	Z	e	17 34 07.0
	PRS	Z	e	17 34 07.8
	PRI	Z	e	17 34 19.9
		Z	eS	17 37 41.4

BRK mb=5.0 h=33km Distance=°
USGS 17h31m33.1s 44.5N 114.1W
h=5km mb=4.9 Ms=4.1
Western Idaho

Jul 14	CMB	Z	eP	18 41 03.0
	MIN	Z	eP	18 41 12.0
	WDC	Z	e(P)	18 41 18.4

USGS 18h28m23.8s 10.3S 161.2E
h=81km mb=5.1
Solomon Islands

Jul 14	MNA	Z	ePd	21 48 33.1
	ORV	Z	eP	21 48 52.5
	WDC	Z	ePd	21 48 56.1
	FHC	Z	eP	21 49 07.2

USGS 21h39m11.5s 16.9N 61.1W
h=51km mb=5.1 Ms=3.8
Leeward Islands

Jul 15	PRI	Z	ePKP	02 11 24.8
	FRI	Z	e(PKP)	02 11 30.7
	CMB	Z	ePKP	02 11 31.1
	ORV	Z	ePKP	02 11 31.5
	WDC	Z	ePKP	02 11 32.2
	MNA	Z	ePKP	02 11 40.5

USGS 02h00m28.3s 16.2S 176.0W
h=370km mb=4.8
Fiji Islands Region

Jul 15	FOX		iPd	06 13 39.8
			iS	06 13 46.6
	EKR		iPc	06 13 40.0
			i(S)	06 13 46.6
	FHC	Z	eP	06 13 42.3
		Z	eS	06 13 50.4
	WDC	Z	ePc	06 13 55.4
	MIN	Z	eP	06 14 05.1
	ORV	Z	eP	06 14 09.0
		Z	eS	06 14 37.6

BRK 06h13m30.8s 40.4N 124.5W
h=16km ML=3.0(2)
Off Coast 14 km SW of Cape Mendocino, CA

Jul 15	FHC	Z	iPc	13 30 47.4
		Z	iS	13 30 50.5
	ARC	N	iP	13 30 47.7
	WDC	Z	iPc	13 31 03.6
	MIN	Z	iPc	13 31 14.0
	ORV	Z	e(P)	13 31 19.0
	CMB	Z	e(P)	13 31 41.3

BRK 13h30m42.8s 40.7N 124.2W
h=19km ML=3.0(2) Mo=1.5E21(2)

DATE	STA	CMP	PHASE	TIME (UTC)

7 km SW of Eureka, CA

Jul 16	PRI	Z	eP	01 29 14.0
	PCC	Z	eP	01 29 18.0
	MNA	Z	eP	01 29 21.0
	CMB	Z	ePd	01 29 22.3
	ORV	Z	eP	01 29 34.0
	WDC	Z	eP	01 29 36.0
	BKS	N	iS	01 39 57
		E	iLq	01 52 32
		Z	iLr	01 56 57

USGS 01h16m49.4s 41.3S 88.5W
h=10km mb=5.1 Ms=4.8
West Chile Rise

Jul 16	ORV	Z	iPc	05 23 28.8
	BKS	Z	iPc	05 23 30.47
		E	i	05 23 35.8
		E	eS	05 23 57.7
	ZSP	Z	iPc	05 23 30.6
	WDC	Z	iPd	05 23 31.2
	PCC	Z	iPc	05 23 33.5
	MIN	Z	iPd	05 23 34.0
	FHC	Z	iPc	05 23 39.0
	MHC	Z	iPc	05 23 39.48
		T	iS+	05 24 19.46
	ARC	N	eP	05 23 40.8
	CMB	Z	iPc	05 23 45.3
	SAO	Z	iP	05 23 48.0

BRK 05h23m03.9s 39.2N 123.3W
h=2km ML=3.6(8) Mo=6.4E21(2)
8 km WNW of Ukiah, CA

Jul 16	BKS	Z	ePdiff	06 20 45
		N	e	06 31 04
		Z	e	06 39 32
		N	iLq	06 48 08
		Z	iLr	06 53 12
			AMP(μm)	PER(s)
		LZ	0.89	20.
		LN	0.36	20.
		LE	0.64	20.

USGS 06h05m01.9s 3.3N 127.0E
h=30km mb=5.4 Ms=5.4
Talaud Islands

Jul 16	PRS	Z	eP	06 52 02.5
	MHC	Z	iPc	06 52 04.0
	WDC	Z	iPc	06 52 07.9
	CMB	Z	iPc	06 52 09.3
	FRI	Z	iPc	06 52 09.3
	MIN	Z	iPc	06 52 10.1
	MNA	Z	iPc	06 52 17.8

USGS 06h39m40.3s 19.2S 169.5E
h=148km mb=4.9
Vanuatu Islands

Jul 16	FHC	Z	ePKPd	08 52 09.8
	WDC	Z	iPKPd	08 52 11.1
		Z	i	08 53 17.1
	MIN	Z	ePKPd	08 52 12.4
	PCC	Z	ePKPd	08 52 12.8
		Z	i	08 53 42.2
	ORV	Z	iPKPd	08 52 13.1
		Z	i	08 53 14.9
	BRK	Z	ePKPd	08 52 13.2
	GCC	Z	ePKPd	08 52 13.6
	MHC	Z	ePKPd	08 52 14.6
	BKS	Z	iPKPc	08 52 14.6
		R	i -	09 05 28.41
		Z	i d	09 06 35.66
		T	i +	09 08 59.41

DATE	STA	CMP	PHASE	TIME (UTC)
		R	i +	09 11 53.48
		T	i +	09 16 12.71
		R	i -	09 20 36.25
			AMP(μm)	PER(s)
		PZ	0.063	1.2
	PRS	Z	iPKPd	08 52 15.4
	CMB	Z	iPKPd	08 52 15.6
		Z	i	08 53 32.2
	LLA	Z	ePKPd	08 52 16.1
	PRI	Z	iPKPd	08 52 17.0
	FRI	Z	iPKPd	08 52 17.3
	MNA	Z	iPKPd	08 52 19.7
		Z	i	08 53 44.7

USGS 08h34m17.7s 7.3S 120.2E
h=424km mb=5.5
Flores Sea

Jul 16	CMB	Z	ePKPc	09 01 10.6
	MNA	Z	ePKPc	09 01 11.4
	FRI	Z	ePKPc	09 01 12.4
	GCC	Z	ePKPc	09 01 15.8
	BKS	E	e(PKP)	09 05 20
		E	e	09 09 11
		E	e(PP)	09 11 44
		NW	e	09 39 16
		E	eLq	09 40 12
		Z	eLr	09 44 30
			AMP(μm)	PER(s)
		LZ	0.89	20.
		LN	1.1	20.
		LE	0.79	20.

USGS 08h42m02.6s 14.0N 51.7E
h=10km mb=5.5 Ms=5.1
Eastern Gulf of Aden

Jul 16	FRI	Z	eP	16 33 47.3
	MNA	Z	eP	16 33 55.5
	CMB	Z	e(P)	16 34 03.5

USGS 16h29m08.1s 18.9N 108.4W
h=10km mb=4.5 Ms=3.9
Revilla Gigedo Islands Region

Jul 16	PRS	Z	eP	17 07 19.4
	GCC	Z	eP	17 07 19.8
	PRI	Z	eP	17 07 21.5
	MHC	Z	eP	17 07 22.0
	BKS	Z	iPc	17 07 22.0
		N	eS	17 17 43
		E	e	17 23 00
		NW	eLq	17 28 48
		NE	eLr	17 32 16
			AMP(μm)	PER(s)
		PZ	0.081	1.2
		LZ	1.0	20.
		LN	0.75	20.
		LE	0.75	20.
	FRI	Z	eP	17 07 26.3
	CMB	Z	eP	17 07 27.5
	ORV	Z	eP	17 07 29.7
	WDC	Z	eP	17 07 30.4
	MIN	Z	eP	17 07 31.6
	MNA	Z	eP	17 07 36.0

BRK Ms=5.2 Distance=84°
USGS 16h55m00.5s 27.3S 176.8W
h=30km mb=5.4 Ms=5.3
Kermadec Islands Region

Jul 16	WDC	Z	e(P)	20 53 44.5
		Z	e	20 54 00.2
	BKS	Z	iPd	20 53 57.1
		Z	eLr	21 03 36
			AMP(μm)	PER(s)

DATE	STA	CMP	PHASE	TIME (UTC)
		PZ	0.044	1.2
		LZ	0.89	20.
		LN	1.4	20.
	CMB	Z	e(P)	20 54 08.9
	MNA	Z	eP	20 54 15.1
	FRI	Z	e(P)	20 54 17.8

USGS 20h46m53.4s 52.1N 170.6W
h=33km mb=5.4 Ms=4.6
Fox Islands, Aleutian Islands

Jul 16	BKS	Z	i(P)d	21 27 19.9
			AMP(μm)	PER(s)
		PZ	0.022	0.9
	PRS	Z	eP	21 27 25.4
	WDC	Z	eP	21 27 29.1
	ORV	Z	eP	21 27 30.4
	CMB	Z	eP	21 27 31.7
	FRI	Z	eP	21 27 32.3
	MNA	Z	eP	21 27 40.8

USGS 21h15m13.7s 13.9S 167.3E
h=177km mb=5.1
Vanuatu Islands

Jul 17	MIN	Z	eP	03 36 35.6
	ORV	Z	e(P)	03 36 36.7
	CMB	Z	e	03 36 46.2
	BKS	Z	ePP	03 40 48
		Z	ePPP	03 43 00
		NW	ePS	03 49 12
		NE	e	03 53 24
		Z	iSS	03 54 27
		N	e	03 56 24
		N	eSSS	03 58 30
		NE	eLq	04 01 32
		Z	eLr	04 07 32
			AMP(μm)	PER(s)
		LZ	1.2	20.
		LE	1.1	20.

BRK Ms=5.3 Distance=95°
USGS 03h23m05.1s 20.1N 122.0E
h=9km mb=5.4 Ms=5.6
Philippine Islands Region

Jul 17	WDC	Z	e(P)	13 24 54.0
	ORV	Z	eP	13 24 54.7
	CMB	Z	eP	13 24 55.5
	FRI	Z	eP	13 24 55.9
	BKS	Z	iP	13 24 58
		N	e	13 29 25
		E	e	13 36 38
		Z	eLr	13 52 12
			AMP(μm)	PER(s)
		PZ	0.040	1.1
	MNA	Z	eP	13 25 04.4

USGS 13h12m11.6s 17.8S 167.9E
h=33km mb=5.1 Ms=4.8
Vanuatu Islands

Jul 17	WDC	Z	eP	15 17 13.0
	MIN	Z	eP	15 17 16.5
	ORV	Z	eP	15 17 18.9
	PRS	Z	eP	15 17 27.6
	CMB	Z	eP	15 17 28.8
	FRI	Z	eP	15 17 35.1
	BKS	E	iS	15 26 43
		N	eLq	15 36 10
		Z	eLr	15 39 08
			AMP(μm)	PER(s)
		LZ	0.64	20.
		LN	1.0	20.
		LE	0.50	20.

BRK Ms=5.2 Distance=74°

DATE	STA	CMP	PHASE	TIME (UTC)

USGS 15h05m58.3s 37.1N 142.2E
h=31km mb=5.1 Ms=5.4
Off East Coast of Honshu, Japan

Jul 17	FHC	Z	ePc	18 56 12.9
	WDC	Z	ePc	18 56 18.6
	MIN	Z	ePc	18 56 22.7
	ORV	Z	ePc	18 56 25.8
	CMB	Z	ePc	18 56 37.0
	LLA	Z	ePc	18 56 40.8
	FRI	Z	e(P)	18 56 43.3
	MNA	Z	ePc	18 56 43.7
	BKS	E	eLr	19 17 30

USGS 18h46m12.7s 46.3N 142.9E
h=331km mb=4.4
Sakhalin Island

Jul 17	MNA	Z	ePc	21 30 13.0
	MIN	Z	ePc	21 30 20.5
	ORV	Z	eP	21 30 21.7
	CMB	Z	ePc	21 30 23.3
	FRI	Z	e(P)	21 30 24.6
	LLA	Z	eP	21 30 31.5
	BKS	Z	eLr	21 58 12
			AMP(μm)	PER(s)
		PZ	0.031	0.8

USGS 21h19m29.9s 41.7N 29.3W
h=10km mb=4.6 Ms=4.0
Azores Islands Region

Jul 17	MNA	Z	ePd	21 32 01.8
	FRI	Z	ePd	21 32 04.1
	PRI	Z	eP	21 32 08.8
	LLA	Z	eP	21 32 10.5
	PRS	Z	e(P)	21 32 11.4
	CMB	Z	ePd	21 32 11.7
	GCC	Z	ePd	21 32 16.7
	MHC	Z	ePd	21 32 17.3
	BRK	Z	eP	21 32 21.6
	BKS	Z	iPc	21 32 22.1
			AMP(μm)	PER(s)
		PZ	0.031	0.8
	ORV	Z	ePd	21 32 22.5
	MIN	Z	ePd	21 32 24.2
	WDC	Z	iPd	21 32 28.0
	FHC	Z	ePd	21 32 38.7

USGS 21h23m10.1s 6.8N 73.1W
h=155km mb=4.9
Northern Colombia

Jul 17	PRI	Z	iPd	21 36 55.8
	LLA	Z	ePc	21 36 58.0
	PRS	Z	ePd	21 37 03.2
		Z	iS	21 37 15.2
	FRI	Z	iPc	21 37 04.4
		Z	iS	21 37 16.2
	SAO	Z	iPc	21 37 06.1
		T	eS	21 37 22.04
	MHC	Z	iPc	21 37 12.56
		R	iS	21 37 35.50
	GCC	Z	eP	21 37 13.7
	CMB	Z	ePc	21 37 17.7
		Z	eS	21 37 38.4

BRK 21h36m49.4s 36.4N 120.5W
h=2km ML=2.8(2)
30 km NNW of Coalinga, CA

Jul 18	PRI	Z	ePc	02 42 13.4
		Z	e	02 42 31.1
	MNA	Z	ePc	02 42 13.8
		Z	e	02 42 26.5
	FRI	Z	ePc	02 42 14.2

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	e	02 42 26.9
		Z	e	02 42 31.9
	LLA	Z	ePc	02 42 15.9
		Z	e	02 42 28.5
		Z	e	02 42 33.6
	PRS	Z	eP	02 42 16.2
		Z	e	02 42 28.9
	CMB	Z	ePc	02 42 18.9
		Z	e	02 42 31.7
	MHC	Z	ePc	02 42 21.3
		Z	e	02 42 33.9
		Z	e	02 42 39.1
	GCC	Z	ePc	02 42 21.9
		Z	e	02 42 33.6
		Z	e	02 42 38.8
	BRK	Z	eP	02 42 24.1
		Z	e	02 42 37.6
		Z	e	02 42 42.1
	ORV	Z	ePc	02 42 28.5
		Z	e	02 42 41.1
		Z	e	02 42 46.2
	MIN	Z	eP	02 42 30.1
		Z	e	02 42 43.1
	WDC	Z	ePc	02 42 33.8
		Z	i	02 42 46.4
		Z	e	02 42 51.8

USGS 02h30m29.4s 22.1S 70.0W
h=18km mb=5.3 Ms=4.8
Northern Chile

Jul 18	BKS	Z	iPc	03 25 13.4
		Z	iS	03 25 17.4
	BRK	Z	ePd	03 25 13.8
		Z	iS	03 25 17.8
	PCC	Z	iPc	03 25 14.0
		Z	iS	03 25 19.0
	ZSP	Z	iPd	03 25 14.2
		Z	iS	03 25 21.2
	MHC	Z	ePd	03 25 17.6
	GCC	Z	ePd	03 25 20.0
	SAO	Z	iP	03 25 26.0
	CMB	Z	e(P)	03 25 31.6
		Z	eS	03 25 50.0
	PRS	Z	e(P)	03 25 32.2
	LLA	Z	e	03 25 35.6

BRK 03h25m07.7s 37.7N 122.0W
h=1km ML=2.1(6)
Hayward area, 69 km SE of Berkeley, CA

Jul 18	FHC	Z	e(P)	13 30 32.2
	WDC	Z	e(P)	13 30 35.2
	MIN	Z	e(P)	13 30 44.2
	ORV	Z	eP	13 30 48.2
	CMB	Z	e(P)	13 31 01.2
		Z	e	13 31 11.2
		Z	e	13 32 02.2
		Z	e	13 32 24.2
		Z	e	13 32 36.2
		Z	e	13 33 19.2
		Z	e	13 36 42.2
	BRK	Z	e(P)d	13 31 04.2
		Z	eS	13 38 21.2
		Z	eLr	13 45 10.2
			AMP(μm)	PER(s)
		LZ	2.0	20.
	BKS	Z	i(P)	13 31 0
		Z	ePP	13 32 4
		N	iS	13 38 0
		E	eScS	13 40 26
		Z	iSS	13 41 44
		NE		13 43 34

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DATE	STA	CMP	PHASE	TIME (UTC)
		T	eLq	13 44 19.86
		Z	eLr	13 45 08
			AMP(μm)	PER(s)
		LZ	1.6	20.
		LN	0.93	20.
		LE	1.8	20.
	MHC	Z	e	13 31 05
	MNA	Z	eP	13 31 09.4
	FRI	Z	e(P)	13 31 09.8
	SAO	Z	e(P)d	13 31 10.74
		Z	ePP	13 33 17.25
		R	iS	13 38 28.88
		T	eLq	13 44 06.44
		Z	eLr	13 45 44.04
	PRI	Z	e	13 31 21.0
BRK Ms=5.1 Distance=50°				
USGS 13h22m11.2s 54.6N 168.5E				
h=23km mb=4.9 Ms=5.4				
Komandorsky Islands Region				
Jul 18	MNA	Z	ePd	20 11 37.2
	PRI	Z	ePd	20 11 37.6
	FRI	Z	eP	20 11 38.4
	LLA	Z	ePd	20 11 40.1
		Z	e	20 12 11.3
	PRS	Z	ePd	20 11 40.6
	CMB	Z	ePd	20 11 42.8
	GCC	Z	eP	20 11 45.2
	MHC	Z	ePd	20 11 45.5
	ORV	Z	ePd	20 11 52.6
		Z	e	20 12 24.2
	WDC	Z	iPd	20 11 57.6
	FHC	Z	ePd	20 12 04.7
USGS 20h00m02.5s 21.6S 68.3W				
h=124km mb=4.8				
Chile-Bolivia Border Region				
Jul 18	MHC	Z	iPc	22 48 31.4
		T	iS-	22 48 34.55
	GCC	Z	iPd	22 48 38.0
	PCC	Z	iPc	22 48 38.1
	BRK	Z	iPc	22 48 38.8
	BKS	Z	iPc	22 48 38.8
		N	iS	22 48 47.6
	ZSP	Z	iPc	22 48 39.7
	SAO	Z	iPd	22 48 42.69
		T	eS+	22 48 53.95
	LLA	Z	iPc	22 48 47.1
	CMB	Z	ePc	22 48 48.1
		Z	iS	22 49 04.8
	PRS	Z	ePd	22 48 49.2
	PRI	Z	eP	22 48 55.0
	FRI	Z	eP	22 48 55.9
		Z	iS	22 49 17.2
BRK 22h48m27.7s 37.5N 121.7W				
h=6km ML=2.7(4) Mo=2.5E20(2)				
Mt. Lewis area, 27 km NE of San Jose, CA				
Jul 19	GCC	Z	ePc	01 11 48.9
	PRS	Z	iPc	01 11 49.1
	PCC	Z	ePc	01 11 49.3
	SAO	Z	eP	01 11 49.6
		Z	isPc	01 12 30
		Z	ePP	01 14 46
		Z	e	01 15 04
		T	iS-	01 21 26
		T	eSP+	01 22 10
		R	isPS	01 23 03
		R	e	01 23 34
		Z	iSS	01 26 05
		R	ipSS	01 26 50

DATE	STA	CMP	PHASE	TIME (UTC)
		T	iSSS+	01 29 36
		R	i	01 33 06
		T	i -	01 35 05
		Z	i	01 41 13
	BRK	Z	iPc	01 11 51.1
		Z	eS	01 21 29
			AMP(μm)	PER(s)
		LZ	1.5	20.
	BKS	Z	iPc	01 11 51.2
		Z	ipP	01 12 22
		Z	isP+	01 12 33
		Z	i	01 13 02
		N	isPP	01 15 36
		N	i	01 19 58
		N	iS	01 21 25
		N	iPS	01 21 56
		T	i +	01 21 58.00
		N	isPS	01 22 55
		R	i -	01 23 10
		N	eSS	01 26 09
		E	eSSS	01 29 32
		T	iG+	01 31 29
		T	i -	01 32 02
		Z	e	01 32 16
		Z	e	01 32 18
		R	i +	01 32 24
		Z	eLr	01 34 25
			AMP(μm)	PER(s)
		PZ	0.33	1.0
		LZ	2.1	18.
		LN	0.90	18.
		LE	1.4	18.
	ZSP	Z	ePc	01 11 51.3
	PRI	Z	iPc	01 11 51.4
	LLA	Z	eP	01 11 51.5
	MHC	Z	ePc	01 11 51.8
		Z	isSc	01 12 34
		T	iS-	01 21 29
		T	ipS-	01 22 07
		R	ePS	01 22 36
		R	epPS	01 23 01
		T	iSS+	01 26 24
		R	isSS	01 26 59
		T	iSSS+	01 29 37
		T	iG+	01 31 30
		R	e	01 34 17
	FHC	Z	ePc	01 11 56.4
	FRI	Z	iPc	01 11 57.0
	CMB	Z	iPc	01 11 58.0
		Z	i	01 12 07.7
		Z	i	01 12 44.2
		Z	e	01 12 58.4
	ORV	Z	iPc	01 11 59.4
	WDC	Z	iPc	01 11 59.8
		Z	i	01 12 37.0
		Z	e	01 12 55.6
	MIN	Z	ePc	01 12 01.7
	MNA	Z	ePc	01 12 07.6
		Z	i	01 12 17.2
BRK mb=6.1 h=100km Distance=77°				
USGS 01h00m19.7s 19.6S 175.0W				
h=137km mb=6.1				
Tonga Islands				
Jul 19	MHC	Z	iPc	10 11 03.2
		Z	iS	10 11 09.6
		Z	i	10 11 11.9
		N	e(S)	10 11 12.0
	SAO	Z	iPd	10 11 03.7
	LLA	Z	iPd	10 11 05.4
	GCC	Z	iPc	10 11 07.7
	PRS	Z	eP	10 11 09.9

DATE	STA	CMP	PHASE	TIME (UTC)
	PCC	Z	ePc	10 11 13.7
	CMB	Z	ePd	10 11 13.9
		Z	i	10 11 27.0
		Z	iS	10 11 29.6
	FRI	Z	iPc	10 11 15.2
		Z	iS	10 11 30.4
	PRI	Z	ePc	10 11 15.3
	BRK	Z	eP	10 11 15.4
	BKS	Z	iPc	10 11 15.64
		T	eS-	10 11 32.99
	ZSP	Z	ePc	10 11 17.1
	ORV	Z	e	10 11 32.1
		Z	i	10 11 41.0
	MNA	Z	e(P)	10 11 43.2
BRK 10h10m54.5s 37.1N 121.2W				
h=8km ML=2.7(4) Mo=6.7E19(1)				
San Luis Reservoir, 29 km NW of Los Banos, CA				
Jul 19	FHC	Z	ePc	10 57 16.6
	WDC	Z	iPc	10 57 26.0
	MIN	Z	iPc	10 57 32.9
	ORV	Z	iPc	10 57 42.4
	BRK	Z	ePc	10 57 59.1
	BKS	Z	iPc	10 57 59.5
		Z	ipP+	10 58 02.28
		T	iS-	11 00 40.76
		E	eLq	11 01 10
		Z	eLr	11 01 24
		N	i	11 03 08
	PCC	Z	ePc	10 58 02.5
	CMB	Z	ePc	10 58 04.6
	MHC	Z	eP	10 58 07.4
	GCC	Z	ePc	10 58 09.3
	MNA	Z	iPc	10 58 12.7
	SAO	Z	ePc	10 58 16.3
	LLA	Z	ePc	10 58 19.6
	PRS	Z	ePc	10 58 20.2
	FRI	Z	ePc	10 58 20.2
	PRI	Z	ePc	10 58 26.8
BRK Ms=5.2 Distance=15°				
USGS 10h54m41.7s 50.5N 129.9W				
h=10km mb=5.4 Ms=5.4				
Vancouver Island Region				
Jul 19	CMB	Z	eP	15 35 03.8
USGS 15h24m12.2s 41.6N 29.4W				
h=10km mb=4.6 Ms=3.7				
Azores Islands Region				
Jul 19	PRI	Z	e(P)	23 55 36.3
	LLA	Z	e(P)	23 55 38.3
	PRS	Z	e(P)	23 55 38.4
	CMB	Z	eP	23 55 41.9
	WDC	Z	eP	23 55 55.3
USGS 23h43m21.9s 31.2S 68.9W				
h=109km mb=5.0				
San Juan Province, Argentina				
Jul 20	WDC	Z	iPc	05 05 37.6
		Z	eS	05 05 57.2
	MIN	Z	eP	05 05 41.2
	FHC	Z	eP	05 05 46
	ORV	Z	eS	05 05 56.5
BRK 05h05m12.3s 39.3N 123.2W				
h=1km Mag=2.1				
17 km S of Willits, CA				
Jul 20	PRI	Z	e(P)	09 46 48.0
	PRS	Z	eP	09 46 53.0
	CMB	Z	eP	09 46 55.6
	BKS	Z	i(P)d	09 47 08.0

DATE	STA	CMP	PHASE	TIME (UTC)
		E	iS	09 52 55
		N	eLq	09 56 38
		Z	eLr	10 00 12
			AMP(μm)	PER(s)
		PZ	0.0083	0.7
		LZ	1.4	20.
		LN	1.1	20.
		LE	2.5	20.
	MIN	Z	eP	09 47 13.5
	FHC	Z	eP	09 47 28.4
BRK Ms=5.1 Distance=39°				
USGS 09h40m01.4s 13.7N 91.1W				
h=57km mb=4.9				
Near Coast of Guatemala				
Jul 20	SAO	Z	iPd	13 52 09.39
		T	eS	13 52 12.39
	LLA	Z	eP	13 52 13.9
	MHC	Z	e(P)d	13 52 15.19
		T	eS	13 52 24.97
	GCC	Z	iPc	13 52 16.2
		Z	iS	13 52 23.0
	PRS	Z	eP	13 52 16.5
	PRI	Z	eP	13 52 23.8
		Z	eS	13 52 39.2
	PCC	Z	iPd	13 52 25.2
	BKS	Z	iPc	13 52 28.5
		Z	iS	13 52 53.4
	CMB	Z	eP	13 52 30.8
		Z	eS	13 52 49.1
BRK 13h52m06.1s 36.9N 121.3W				
h=5km ML=2.8(2)				
9 km ENE of Hollister, CA				
Jul 20	CMB	Z	e	14 58 18.7
	BKS	N	iS	15 04 12
		E	eLq	15 06 49
		Z	eLr	15 07 52
USGS 14h51m09.2s 51.9N 170.1W				
h=33km mb=4.9 Ms=4.7				
Fox Islands, Aleutian Islands				
Jul 20	FHC	Z	eP	18 32 11.7
	WDC	Z	iPc	18 32 16.7
	PCC	Z	e(P)	18 32 20.2
	BRK	Z	e(P)	18 32 20.4
	ORV	Z	eP	18 32 21.4
	BKS	Z	iPc	18 32 21.7
			AMP(μm)	PER(s)
		PZ	0.017	0.7
	MHC	Z	ePc	18 32 23.9
	PRS	Z	eP	18 32 26.0
	SAO	Z	e(P)c	18 32 26.5
	LLA	Z	eP	18 32 27.4
	CMB	Z	ePc	18 32 27.6
	PRI	Z	ePc	18 32 29.6
	FRI	Z	eP	18 32 31.2
	MNA	Z	ePc	18 32 35.7
USGS 18h19m58.5s 13.1N 143.9E				
h=135km mb=5.1				
South of Mariana Islands				
Jul 20	FRI	Z	iPc	20 46 11.5
		Z	iS	20 46 30.1
	MNA	Z	e(P)	20 46 20.9
	PRI	Z	iPd	20 46 23.0
	LLA	Z	ePc	20 46 25.0
	CMB	Z	iPc	20 46 28.5
		Z	iS	20 46 59.9
	PRS	Z	eP	20 46 30.4
	SAO	Z	iP	20 46 32.1
	MHC	Z	ePc	20 46 36.6

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	iS	20 47 11.9
	MIN	Z	e	20 47 11.3
	BKS	Z	iPc	20 47 27.1
		E	iS	20 47 36.3
BRK 20h45m45.5s 36.5N 118.0W				
h=5kmR ML=4.1(2)				
15 km S of Lone Pine, CA				
Jul 20	FHC	Z	ePc	23 28 40.6
	WDC	Z	iPc	23 28 44.5
	MIN	Z	ePc	23 28 47.5
	ORV	Z	ePc	23 28 48.6
	BRK	Z	ePc	23 28 52.0
	PCC	Z	eP	23 28 52.2
	BKS	Z	iPd	23 28 52.9
		E	iSKS	23 39 22
		E	iS	23 40 03
		Z	iPS	23 41 02
		Z	e	23 41 26
		N	eLq	23 53 46
		Z	eLr	23 58 52
			AMP(μm)	PER(s)
		PZ	0.095	0.9
		LZ	1.3	20.
		LN	0.54	20.
		LE	1.1	20.
	GCC	Z	ePc	23 28 54.9
	MHC	Z	ePc	23 28 55.0
	CMB	Z	iPc	23 28 56.8
	SAO	Z	e(P)	23 28 57.0
	PRS	Z	ePc	23 28 58.2
	LLA	Z	iPc	23 28 59.9
	FRI	Z	ePc	23 29 01.3
	PRI	Z	ePc	23 29 02.3
	MNA	Z	ePc	23 29 03.3
BRK Ms=5.4 Distance=96°				
USGS 23h15m36.7s 23.9N 121.6E				
h=50km mb=5.8 Ms=5.7				
Taiwan				
Jul 21	PRI	Z	eP	11 54 13.3
	FRI	Z	ePd	11 54 14.5
	MHC	Z	ePd	11 54 22.0
	CMB	Z	ePd	11 54 25.3
	MNA	Z	ePd	11 54 27.1
	ORV	Z	e(P)	11 54 36.3
	WDC	Z	ePd	11 54 42.9
	BKS	N	i(S)	12 03 32
		Z	eLr	12 12 16
			AMP(μm)	PER(s)
		LZ	0.25	20.
		LN	0.29	20.
USGS 11h44m08.2s 22.9S 112.2W				
h=10km mb=5.0 Ms=4.7				
Easter Island Region				
Jul 22	PRS	Z	ePc	04 51 37.6
	BKS	Z	ePc	04 51 37.7
			AMP(μm)	PER(s)
		PZ	0.043	1.0
	MHC	Z	ePc	04 51 39.2
	PRI	Z	ePc	04 51 39.9
	WDC	Z	ePc	04 51 43.2
	ORV	Z	ePc	04 51 44.0
	CMB	Z	ePc	04 51 44.3
	FRI	Z	ePc	04 51 44.3
	MIN	Z	ePc	04 51 45.3
	MNA	Z	ePc	04 51 52.9
USGS 04h39m21.4s 19.5S 169.3E				
h=221km mb=4.6				
Vanuatu Islands				

DATE	STA	CMP	PHASE	TIME (UTC)
Jul 22	WDC	Z	e(P)	07 58 14.7
	MIN	Z	eP	07 58 19.6
	BRK	Z	e(P)	07 58 32.7
	BKS	Z	iPc	07 58 37.3
			AMP(μm)	PER(s)
		PZ	0.019	0.7
	CMB	Z	eP	07 58 41.5
	MHC	Z	eP	07 58 43.2
	MNA	Z	eP	07 58 46.3
	FRI	Z	eP	07 58 51.4
	PRS	Z	e(P)	07 58 51.6
	PRI	Z	eP	07 58 56.3
USGS 07h52m36.5s 61.9N 149.7W				
h=55km mb=4.8				
Southern Alaska				
Jul 22	PRS	Z	eP	15 18 48.7
	MHC	Z	eP	15 18 50.1
	PRI	Z	ePc	15 18 50.9
	ORV	Z	eP	15 18 55.0
	CMB	Z	ePc	15 18 55.5
	FRI	Z	eP	15 18 55.5
	BKS	Z	e	15 42 34
USGS 15h06m39.9s 18.9S 169.3E				
h=270km mb=4.2				
Vanuatu Islands				
Jul 22	PRI	Z	ePc	15 35 30.0
	FRI	Z	ePc	15 35 31.2
		Z	e	15 35 49.3
	PRS	Z	ePc	15 35 35.0
	MNA	Z	ePc	15 35 37.7
	CMB	Z	ePc	15 35 43.2
	MHC	Z	ePc	15 35 45.5
USGS 15h30m36.0s 18.4N 105.7W				
h=33km mb=4.4				
Off Coast of Jalisco, Mexico				
Jul 22	MNA	Z	ePc	21 26 51.1
	WDC	Z	e(P)c	21 26 57.3
	ORV	Z	e(P)	21 26 59.1
	CMB	Z	ePc	21 27 02.5
	FRI	Z	ePc	21 27 04.0
	MHC	Z	eP	21 27 10.6
	LLA	Z	ePc	21 27 11.3
	PRI	Z	ePc	21 27 12.0
	PRS	Z	ePc	21 27 12.6
	BKS	E	e(S)	21 36 14
		Z	eLr	21 48 50
			AMP(μm)	PER(s)
		LZ	1.4	20.
		LN	2.6	20.
		LE	1.4	20.
BRK Ms=5.6 Distance=70°				
USGS 21h16m04.1s 39.9N 29.6W				
h=10km mb=5.0 Ms=5.3				
Azores Islands				
Jul 23	FRI	Z	ePc	01 40 23.7
	MNA	Z	ePc	01 40 25.1
	PRI	Z	ePc	01 40 26.2
	LLA	Z	ePc	01 40 29.1
	PRS	Z	ePc	01 40 30.6
	CMB	Z	ePc	01 40 33.7
	ORV	Z	ePc	01 40 48.1
	WDC	Z	ePc	01 40 55.7
	FHC	Z	ePc	01 41 04.5
	BKS	E	e	02 01 35
USGS 01h33m43.9s 13.6N 91.9W				
h=57km mb=4.4				
Near Coast of Guatemala				

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REGISTRATION OF EARTHQUAKES 1988

DATE	STA	CMP	PHASE	TIME (UTC)
Jul 23	WDC	Z	ePc	07 50 53.3
		Z	e	07 50 58.3
	MIN	Z	ePc	07 50 55.5
		Z	e	07 51 00.5
	ORV	Z	ePc	07 50 59.0
		Z	e	07 51 03.9
	BRK	Z	e(P)	07 51 05.1
		Z	e	07 51 11.4
	MHC	Z	eP	07 51 07.8
		Z	e	07 51 13.9
	CMB	Z	e(P)	07 51 08.0
		Z	i	07 51 13.1
	MNA	Z	ePc	07 51 09.3
		Z	e	07 51 14.3
	FRI	Z	ePc	07 51 13.4
		Z	i	07 51 18.4
	LLA	Z	e(P)	07 51 13.7
		Z	e	07 51 19.0
	PRS	Z	e(P)	07 51 14.3
		Z	e	07 51 19.4
	PRI	Z	eP	07 51 17.0
		Z	e	07 51 21.9
	BKS	N	eLr	08 26 22
USGS 07h38m09.7s 48.7N 90.6E				
h=18km mb=5.5 Ms=5.8				
Mongolia				
Jul 23	PCC	Z	eP	14 38 05.2
	GCC	Z	eP	14 38 05.7
	PRS	Z	eP	14 38 06.1
	SAO	Z	eP	14 38 06.4
	BRK	Z	ePc	14 38 07.2
			AMP(μm)	PER(s)
		LZ	21	21.
	MHC	Z	ePc	14 38 08.0
	PRI	Z	eP	14 38 08.2
	LLA	Z	eP	14 38 08.2
	BKS	Z	iPc	14 38 08.5
		NE	iS	14 48 34
		NE	iPS	14 49 33
		NE	eLq	15 00 00
		Z	iLr	15 04 08
			AMP(μm)	PER(s)
		PZ	0.47	1.2
		LZ	19	20.
		LNE	19	20.
		LNW	21	20.
	FHC	Z	ePc	14 38 10.2
	FRI	Z	ePc	14 38 13.0
	CMB	Z	ePc	14 38 13.3
	WDC	Z	iPc	14 38 13.5
	ORV	Z	ePc	14 38 14.0
	MIN	Z	eP	14 38 15.2
	MNA	Z	ePc	14 38 21.8
BRK Ms=6.6 Distance=85°				
USGS 14h25m36.8s 22.1S 174.9E				
h=18km mb=5.9 Ms=6.4				
Loyalty Islands Region				
Jul 23	FHC	Z	ePd	15 30 05.5
	BRK	Z	ePd	15 30 08.9
			AMP(μm)	PER(s)
		LZ	37	20.
	GCC	Z	ePd	15 30 09.4
	BKS	Z	iPd	15 30 09.4
		Z	iPPd	15 33 33.9
		NE	iS	15 40 43
		NE	iPPS	15 42 07
		NE	eLq	15 53 39
		Z	eLr	15 57 29
	WDC	Z	iPd	15 30 09.5
		Z	ePP	15 33 50.0
		Z	i	15 34 02.8
		Z	ePKPPKP	15 55 54.7
	MHC	Z	ePd	15 30 11.2
	PRS	Z	ePd	15 30 11.7
	MIN	Z	ePd	15 30 12.0
		Z	ePP	15 33 48.6
		Z	ePKPPKP	15 55 37.0
		Z	ePKPPKP	15 55 48.0
	ORV	Z	ePd	15 30 12.3
	LLA	Z	ePd	15 30 13.6
	PRI	Z	ePd	15 30 14.9
		Z	ePP	15 33 50.4
		Z	ePKPPKP	15 55 47.8
	CMB	Z	ePd	15 30 15.9
		Z	i	15 31 10.2
		Z	ePP	15 33 58.1
		Z	e	15 34 12.9
		Z	i	15 34 28.9
		Z	i	15 34 43.5
		Z	i	15 35 00.4
		Z	iS	15 41 37.1
		Z	iSP	15 42 25.1
		Z	ePKKP	15 48 12.6
		Z	ePKPPKP	15 55 44.3
	FRI	Z	ePd	15 30 17.9
	MNA	Z	ePd	15 30 24.5
		Z	i	15 31 08.5
		Z	iPP	15 34 07.3
		Z	e	15 34 20.4
		Z	e	15 34 43.6
		Z	ePKKP	15 47 51.6
		Z	ePKPPKP	15 55 30.8
BRK Ms=6.8 Distance=88°				
USGS 15h17m08.2s 6.5S 152.8E				
h=16km mb=6.7 Ms=6.7				
New Britain Region				
Jul 23	MHC	Z	eP	17 24 36.4
		Z	e	17 24 45.2
	PRS	Z	eP	17 24 37.7
		Z	e	17 24 46.2
	LLA	Z	eP	17 24 39.4
	ORV	Z	ePd	17 24 39.5
		Z	e	17 24 48.5
	PRI	Z	ePd	17 24 40.5
		Z	e	17 24 49.2
	CMB	Z	ePd	17 24 41.8
		Z	e	17 24 50.2
	BRK	Z	e	17 24 43.1
	FRI	Z	ePd	17 24 43.7
		Z	e	17 24 52.3
	GCC	Z	e	17 24 44.2
	MNA	Z	ePd	17 24 50.4
		Z	i	17 24 59.3
USGS 17h11m37.2s 6.5S 153.0E				
h=27km mb=5.6 Ms=5.5				
New Britain Region				
Jul 24	PRS	Z	e(P)	00 18 02.5
	MHC	Z	ePc	00 18 04.7
	PRI	Z	eP	00 18 04.9
	FRI	Z	ePc	00 18 09.7
	CMB	Z	iPc	00 18 10.2
	ORV	Z	ePc	00 18 10.6
	WDC	Z	ePc	00 18 12.0
	MNA	Z	eP	00 18 18.9
USGS 00h05m35.0s 22.3S 174.9E				
h=32km mb=4.8 Ms=4.5				
Loyalty Islands Region				
Jul 24	PRS	Z	ePd	00 41 33.2
	GCC	Z	e(P)	00 41 33.2
	PCC	Z	eP	00 41 33.5
	SAO	Z	eP	00 41 33.9
	BRK	Z	e(P)	00 41 34.9
	PRI	Z	ePd	00 41 35.2
	LLA	Z	e(P)	00 41 35.3
	MHC	Z	ePd	00 41 35.7
	BKS	Z	e(P)c	00 41 36.0
			AMP(μm)	PER(s)
		PZ	0.055	0.9
	FHC	Z	eP	00 41 39.0
	FRI	Z	eP	00 41 40.5
		Z	e	00 42 33.9
	CMB	Z	ePd	00 41 41.6
		Z	e	00 42 35.8
	ORV	Z	eP	00 41 42.9
		Z	e	00 42 37.2
	WDC	Z	ePd	00 41 43.2
		Z	e	00 42 36.5
	MIN	Z	eP	00 41 45.1
	MNA	Z	eP	00 41 50.4
		Z	e	00 42 45.0
USGS 00h29m54.4s 22.4S 177.1W				
h=223km mb=5.0				
South of Fiji Islands				
Jul 24	FHC	Z	eP	05 17 19.1
	WDC	Z	ePc	05 17 23.6
		Z	e	05 17 33.3
		Z	i	05 17 44.3
		Z	e	05 17 52.7
	MIN	Z	ePc	05 17 26.8
		Z	e	05 17 36.5
	PCC	Z	ePc	05 17 27.2
	BRK	Z	eP	05 17 27.4
	BKS	Z	ePc	05 17 28.0
			AMP(μm)	PER(s)
		PZ	0.052	1.0
	ORV	Z	ePc	05 17 28.1
	GCC	Z	ePc	05 17 30.1
	MHC	Z	ePc	05 17 30.9
		Z	e	05 17 40.6
	PRS	Z	ePc	05 17 32.9
		Z	e	05 17 33
		Z	e	05 17 43
	LLA	Z	eP	05 17 33.9
	CMB	Z	ePc	05 17 34.1
		Z	e	05 17 44.0
	PRI	Z	ePc	05 17 36.1
	FRI	Z	ePc	05 17 37.8
		Z	e	05 17 47.7
		Z	e	05 17 58.2
	MNA	Z	ePc	05 17 42.2
BRK mb=5.7 h=33km Distance=90°				
USGS 05h04m38.6s 11.5N 141.3E				
h=32km mb=5.4 Ms=4.5				
West Caroline Islands				
Jul 24	PCC	Z	ePd	09 10 55.6
	GCC	Z	ePd	09 10 55.6
	PRS	Z	iPd	09 10 56.2
	SAO	Z	ePd	09 10 56.4
	BRK	Z	ePd	09 10 57.0
	BKS	Z	ePd	09 10 57.2
		E	eLq	09 32 51
		Z	eLr	09 37 04
			AMP(μm)	PER(s)
		PZ	0.16	0.9
	MHC	Z	ePd	09 10 58.0
	LLA	Z	ePd	09 10 58.1
	PRI	Z	iPd	09 10 58.3
	FRI	Z	ePd	09 11 03.1
	CMB	Z	ePd	09 11 03.4
	WDC	Z	iPd	09 11 03.8
	ORV	Z	ePd	09 11 04.1
	MIN	Z	ePd	09 11 05.5
	MNA	Z	ePd	09 11 12.1
BRK mb=6.3 h=33km Distance=85°				
USGS 08h58m27.7s 22.0S 174.9E				
h=25km mb=5.4 Ms=5.0				
Loyalty Islands Region				
Jul 24	GCC	Z	ePd	16 27 21.8
	PCC	Z	ePd	16 27 21.9
	PRS	Z	ePd	16 27 22.2
	BRK	Z	ePd	16 27 22.5
	BKS	Z	ePc	16 27 24.4
			AMP(μm)	PER(s)
		PZ	0.10	1.2
	PRI	Z	eP	16 27 24.5
	LLA	Z	eP	16 27 24.5
	MHC	Z	ePd	16 27 24.5
	FRI	Z	eP	16 27 30.2
	CMB	Z	ePd	16 27 31.3
	WDC	Z	ePd	16 27 31.3
	ORV	Z	ePd	16 27 32.0
	MIN	Z	eP	16 27 34.2
	MNA	Z	ePd	16 27 41.0
USGS 16h16m24.5s 15.3S 174.5W				
h=247km mb=4.6				
Tonga Islands				
Jul 24	FRI	Z	iPd	22 34 03.4
	ORV	Z	iPd	22 34 53.1
	CMB	Z	iPd	22 35 00.4
	MNA	Z	iPd	22 35 09.0
USGS 22h22m50.9s 18.3N 146.4E				
h=87km mb=4.9				
Mariana Islands				
Jul 25	SAO	Z	iPd	01 22 10.0
	PRS	Z	iPc	01 22 14.4
		Z	iS	01 22 20.9
	MHC	Z	iPc	01 22 16.7
	GCC	Z	iPc	01 22 16.8
		Z	iS	01 22 23.7
	LLA	Z	iPd	01 22 17.1
	PRI	Z	ePd	01 22 24.8
	PCC	Z	eP	01 22 25.4
	BKS	Z	iPc	01 22 29.3
	FRI	Z	ePc	01 22 29.6
		Z	iS	01 22 47.2
	CMB	Z	iPc	01 22 31.3
		Z	iS	01 22 49.8
	ZSP	Z	ePd	01 22 31.5
BRK 01h22m06.5s 36.9N 121.3W				
h=5km ML=2.6(4)				
7 km NE of Hollister, CA				
Jul 25	FHC	Z	ePd	07 00 09.5
	WDC	Z	ePd	07 00 10.9
	BRK	Z	eP	07 00 13
		Z	ePP	07 04 29
		Z	e	07 07 45
		Z	e	07 35 38
			AMP(μm)	PER(s)
		LZ	37	20.
	ORV	Z	ePd	07 00 13.2
	MIN	Z	eP	07 00 13.3
	BKS	Z	iPd	07 00 14
		Z	i	07 04 32
		Z	e	07 04 34.0
		Z	iPPd	07 04 36.00
		Z	e	07 04 38
		Z	ePP	07 04 45.0
		Z	i c	07 07 46.19
		Z	eSKS	07 10 48
		Z	e	07 13 36
		NE	e	07 13 56
		R	i	07 13 57.74
		NE	eSS	07 19 31
		R	i	07 20 31.73
		NE	eSSS	07 23 20
		T	eLq	07 29 03.65
		NE	eG	07 29 05
		NE	eLq	07 29 06
		Z	eLr	07 34 09.48
			AMP(μm)	PER(s)
		PZ	0.99	2.1
		LZ	30	20.
		LNE	30	20.
		LNW	7.5	20.
	MHC	Z	ePd	07 00 14.8
		Z	iPPd	07 04 39.97
		R	i	07 07 40.80
		R	iSKKS	07 11 15.67
		R	iS	07 12 32.10
		R	iPS	07 14 09.90
		R	iSS	07 19 51.60
		R	iPSPS	07 20 43.09
		Z	iSSS	07 23 54.43
		R	iScSScS	07 24 43.82
		T	eLq	07 29 20.65
		Z	iLr	07 34 20.88
			AMP(μm)	PER(s)
		LZ	25	20.
		LN	1.7	20.
		LE	36	20.
	GCC	Z	eP	07 00 15.4
	PRS	Z	eP	07 00 16.0
	SAO	Z	iPd	07 00 18.25
		Z	iPP	07 04 39.87
		R	iSKS	07 11 16.68
		R	iPS	07 14 07.00
		R	iPPS	07 15 07.99
		Z	i	07 21 46.30
		T	iSSS	07 23 48.47
		T	iScSScS	07 24 53.76
		T	iLq	07 30 25.67
		Z	iLr	07 35 00.74
			AMP(μm)	PER(s)
		LZ	40	20.
		LN	6.4	20.
		LE	38	20.
	CMB	Z	ePd	07 00 19.0
	PRI	Z	eP	07 00 19.3
	FRI	Z	ePd	07 00 21.3
	MNA	Z	ePd	07 00 26.9
BRK Ms=6.9 Distance=106°				
USGS 06h46m06.7s 6.1S 133.7E				
h=27km mb=6.5 Ms=6.7				
Aroe Islands Region				
Jul 25	FHC	Z	ePc	10 37 39.3
	WDC	Z	iPc	10 37 45.7
		Z	iP	10 38 24.6
	MIN	Z	iPc	10 37 50.2
	ORV	Z	iPc	10 37 54.1
		Z	iP	10 38 33.5
	PCC	Z	ePc	10 38 00.5
	GCC	Z	iPc	10 38 04.3
	MHC	Z	iPc	10 38 04.6
		Z	iP	10 38 44.35
	CMB	Z	iPc	10 38 06.5
		Z	iP	10 38 46.2
	PRS	Z	iPc	10 38 10.5
	LLA	Z	iPc	10 38 11.0
	MNA	Z	iPc	10 38 13.8
		Z	iP	10 38 53.7
	FRI	Z	iPc	10 38 13.8
		Z	iP	10 38 54.6
	PRI	Z	iPc	10 38 14.7
USGS 10h28m37.1s 52.4N 156.8E				
h=172km mb=5.1				
Kamchatka				
Jul 25	BKS	Z	e(P)	21 05 27.3
		E	eLq	21 31 44
		E	eLr	21 36 26
			AMP(μm)	PER(s)
		PZ	0.092	1.4
		LZ	0.57	20.
		LE	0.54	20.
	PRI	Z	ePc	21 05 27.4
		Z	ePc	21 05 27.4
	ORV	Z	ePc	21 05 28.4
		Z	ePc	21 05 28.4
	CMB	Z	ePc	21 05 29.6
		Z	ePc	21 05 29.6
	WDC	Z	e(P)c	21 05 30.3
BRK Ms=5.0 Distance=84°				
USGS 20h52m52.8s 11.4S 164.2E				
h=33km mb=5.3 Ms=4.8				
Santa Cruz Islands Region				
Jul 25	FHC	Z	ePc	23 51 46.0
	WDC	Z	iPc	23 51 52.7
	MIN	Z	ePc	23 51 57.5
	ORV	Z	ePc	23 52 01.0
	GCC	Z	ePc	23 52 10.1
	MHC	Z	ePc	23 52 13.6
	CMB	Z	iPc	23 52 13.9
	PRS	Z	ePc	23 52 16.5
	LLA	Z	ePc	23 52 17.1
	FRI	Z	ePc	23 52 20.5
	MNA	Z	ePc	23 52 21.6
	PRI	Z	ePc	23 52 21.4
	BKS	Z	eLr	00 08 44
USGS 23h42m35.2s 50.9N 157.7E				
h=84km mb=5.6				
Kurile Islands				
Jul 26	WDC	Z	ePc	00 40 08.0
		Z	e	00 40 13.6
		Z	i	00 40 18.4
	MIN	Z	e(P)	00 40 12.6
		Z	e	00 40 22.6
	ORV	Z	ePc	00 40 17.6
	MHC	Z	ePc	00 40 29.6
	CMB	Z	ePc	00 40 30.6
		Z	e	00 40 40.6
	PRS	Z	ePc	00 40 35.6
	MNA	Z	ePc	00 40 38.6
		Z	e	00 40 48.6
	PRI	Z	e(P)	00 40 39.6
	FRI	Z	ePc	00 40 39.6
		Z	e	00 40 42.6
		Z	e	00 40 48.6
	BKS	N	e(S)	00 47 42
		N	e(Lr)	00 54 36
USGS 00h31m34.0s 55.5N 166.6E				
h=33km mb=4.9 Ms=4.5				
Komandorsky Islands Region				
Jul 26	LLA	Z	ePc	03 26 59.0
		Z	iS	03 27 03.6
	SAO	Z	ePc	03 27 01.6
	PRS	Z	ePc	03 27 01.6
		Z	iS	03 27 05.6

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	PRI	Z	iPd	03 27 07.4
	MHC	N	iPd	03 27 10.7
		N	iS	03 27 23.7
	GCC	Z	iPd	03 27 11.2
	FRI	Z	iPc	03 27 17.9
	PCC	Z	iPc	03 27 19.6
	BRK	Z	ePc	03 27 22.8
	BKS	Z	iPc	03 27 22.9
		N	iS	03 27 43.9
	CMB	Z	iPc	03 27 23.8
	ZSP	Z	iPc	03 27 24.0
		Z	iS	03 27 53.0
	ORV	Z	ePd	03 27 43.8
	MNA	Z	iPc	03 27 46.8
	MIN	Z	ePd	03 27 55.8
	WDC	Z	eP	03 27 58.4
	FHC	Z	ePc	03 28 09.8
BRK 03h26m56.0s 36.6N 121.2W				
h=3km ML=4.7(10) Mo=1.7E23(4)				
Bear Valley, 39 km N of King City, CA				
Jul 26	LLA	Z	iPd	03 48 39.8
	SAO	Z	iPd	03 48 41.6
	PRS	Z	iPd	03 48 41.7
	PRI	Z	iPc	03 48 47.6
	MHC	N	ePd	03 48 50.5
	GCC	Z	ePc	03 48 50.9
		Z	e(S)	03 49 05.1
	FRI	Z	iPd	03 48 58.1
		Z	iS	03 49 14.9
	PCC	Z	ePc	03 48 59.3
	BRK	Z	e(P)	03 49 02.8
	BKS	Z	ePd	03 49 03.1
		N	e(S)	03 49 28.3
	CMB	Z	ePc	03 49 03.8
		Z	iS	03 49 25.4
	ORV	Z	e	03 49 23.8
	MNA	Z	e	03 49 25.8
		Z	i	03 49 31.1
	MIN	Z	e	03 49 35.2
BRK 03h48m36.0s 36.6N 121.2W				
h=4km ML=3.3(6) Mo=3.2E21(1)				
Bear Valley, 39 N km of King City, CA				
Jul 26	BKS	N	e	16 24 43.41
	WDC	Z	eP	16 24 44.7
		Z	e	16 25 06.7
	MIN	Z	e(P)	16 24 48.1
	MNA	Z	eP	16 25 08.7
		Z	e	16 25 24
	CMB	Z	ePc	16 25 00.0
		Z	e	16 25 20
USGS 16h13m17.0s 34.1N 141.3E				
h=40km mb=5.1 Ms=4.4				
Off East Coast of Honshu, Japan				
Jul 26	MHC	Z	e(P)	19 25 06.3
		Z	e	19 25 22.2
	WDC	Z	ePc	19 25 06.5
		Z	e	19 25 21.7
	BKS	Z	eP	19 25 08
		N	eSKS	19 35 22
		Z	ePS	19 37 06
		N	eG	19 49 14
		Z	eLr	19 52 46
			AMP(μm)	PER(s)
		LZ	1.3	20.
		LN	0.57	20.
		LE	1.0	20.

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	PRS	Z	e(P)	19 25 08.8
	ORV	Z	ePc	19 25 09.4
	PRI	Z	ePc	19 25 11.8
	FRI	Z	e(P)	19 25 12.5
	CMB	Z	ePc	19 25 12.7
		Z	e	19 25 22.9
		Z	e	19 25 28.3
	MNA	Z	ePc	19 25 21.7
		Z	i	19 25 31.6
		Z	e	19 25 36.9
BRK Ms=5.3 Distance=89°				
USGS 19h12m07.1s 6.5S 152.7E				
h=30km mb=5.4 Ms=5.3				
New Britain Region				
Jul 26	PRI	Z	eP	23 27 27.5
	CMB	Z	ePc	23 27 34.5
	WDC	Z	e(P)	23 27 46.0
USGS 23h14m51.3s 42.6S 85.2W				
h=10km mb=4.8				
West Chile Rise				
Jul 27	PCC	Z	e(P)	04 47 24.8
	PRS	Z	eP	04 47 25.3
	PRI	Z	ePd	04 47 26.3
	MHC	Z	ePd	04 47 27.0
	BKS	Z	ePc	04 47 27.6
		Z	ePcP	04 47 31.4
		Z	e	04 47 35.0
			AMP(μm)	PER(s)
		PZ	0.056	0.7
	FRI	Z	eP	04 47 32.5
	CMB	Z	ePd	04 47 33.6
	ORV	Z	e(P)	04 47 34.5
	WDC	Z	ePd	04 47 34.7
	MIN	Z	ePd	04 47 36.6
	MNA	Z	ePd	04 47 43.0
USGS 04h36m12.6s 19.4S 177.5W				
h=373km mb=4.9				
Fiji Islands Region				
Jul 27	CMB	Z	ePKP	12 36 56.5
	MNA	Z	ePKP	12 36 57.3
	MHC	Z	ePKP	12 36 58.4
	FRI	Z	e(PKP)	12 37 00.4
	PRS	Z	e(PKP)	12 37 01.5
	LLA	Z	e(PKP)	12 37 01.5
	PRI	Z	e(PKP)	12 37 01.8
USGS 12h17m18.6s 3.2S 68.0E				
h=10km mb=5.1 Ms=4.8				
Chagos Archipelago Region				
Jul 27	GCC	Z	e(P)	12 56 17.7
	PCC	Z	e(P)	12 56 17.8
	PRI	Z	eP	12 56 19.7
	MHC	Z	ePc	12 56 20
	BKS	Z	iPd	12 56 20.1
		Z	ePcP	12 56 22.5
		N	e	13 10 21
			AMP(μm)	PER(s)
		PZ	0.050	0.8
	FRI	Z	ePc	12 56 24.5
	CMB	Z	ePc	12 56 25.5
	ORV	Z	ePc	12 56 26.8
	WDC	Z	ePc	12 56 27.2
	MIN	Z	e(P)	12 56 29.5
	MNA	Z	eP	12 56 33.7
USGS 12h44m51.3s 24.2S 179.9E				
h=514km mb=4.8				
South of Fiji Islands				
Jul 27	LLA	Z	iPd	16 57 44.2

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	SAO	Z	iP	16 57 46.0
	PRS	Z	iPd	16 57 46.1
	PRI	Z	iPd	16 57 52.4
	GCC	Z	iPc	16 57 55.5
	MHC	Z	iPc	16 57 58.0
	FRI	Z	iPd	16 58 02.6
		Z	iS	16 58 17.3
	PCC	Z	iPc	16 58 04.5
	BKS	Z	iPd	16 58 07.9
		N	e(S)	16 58 29.0
	CMB	Z	ePc	16 58 08.3
		Z	iS	16 58 33.0
	BRK	Z	ePd	16 58 09.4
	ORV	Z	ePc	16 58 30.4
	MNA	Z	e(P)	16 58 35.0
	MIN	Z	e(P)	16 58 43.5
	WDC	Z	e(P)	16 58 54.7
BRK 16h57m40.4s 36.6N 121.2W				
h=3km ML=3.6(4) Mo=9.4E21(2)				
Bear Valley, 39 km N of King City, CA				
Jul 27	FHC	Z	eP	17 09 55.9
	WDC	Z	ePd	17 10 01.8
		Z	iPcP	17 10 05.2
		Z	epP	17 10 52.6
		Z	epPcP	17 10 55.2
	MIN	Z	ePd	17 10 05.4
	PCC	Z	ePd	17 10 06.4
	BRK	Z	eP	17 10 06.7
		Z	ePcP	17 10 09.1
		Z	e	17 10 12.6
		Z	epPcP	17 10 59.4
	BKS	Z	iPd	17 10 06.9
		Z	ePcP	17 10 21.4
		Z	epP	17 11 05.4
		N	esS	17 21 16
		N	esSS	17 26 18
		N	eG	17 30 42
			AMP(μm)	PER(s)
		PZ	0.14	1.0
	ORV	Z	ePd	17 10 07.1
		Z	e	17 10 13.7
		Z	epPcP	17 11 05.2
	GCC	Z	eP	17 10 08.6
	MHC	Z	ePd	17 10 10.1
		Z	epP	17 11 01.6
	SAO	Z	e(P)	17 10 12.7
		Z	e	17 10 17.9
	PRS	Z	ePd	17 10 12.9
	CMB	Z	ePd	17 10 14.1
		Z	iPcP	17 10 15.8
		Z	i	17 10 20.3
		Z	epP	17 11 06.1
		Z	epPcP	17 11 08.4
		Z	e	17 11 14.1
		Z	ePP	17 13 18.0
	LLA	Z	ePd	17 10 14.1
		Z	ePcP	17 10 15.8
		Z	epP	17 11 06.1
		Z	epPcP	17 11 08.4
	PRI	Z	ePd	17 10 16.4
		Z	e	17 10 22.8
	FRI	Z	ePd	17 10 18.0
		Z	iPcP	17 10 19.9
		Z	epP	17 11 10.3
		Z	epPcP	17 11 12.6
	MNA	Z	ePd	17 10 22.3
		Z	ePcP	17 10 24.1
		Z	epP	17 11 14.5
		Z	ipPcP	17 11 16.7
		Z	ePP	17 13 38.7

DATE	STA	CMP	PHASE	TIME (UTC)
BRK mb=6.0 h=245km Distance=79°				
USGS 16h58m17.0s 18.6N 145.6E				
h=217km mb=5.4				
Mariana Islands				
Jul 27	WDC	Z	ePc	20 23 28.1
		Z	e	20 23 49.8
	CMB	Z	ePc	20 23 52.4
		Z	e	20 24 06.0
	MNA	Z	e(P)	20 23 52.9
		Z	e	20 24 06.0
USGS 20h18m02.4s 14.0N 93.0W				
h=28km mb=5.2 Ms=4.5				
Near Coast of Chiapas, Mexico				
Jul 27	FRI	Z	eP	20 24 36.3
		Z	ePcP	20 27 19.5
	MNA	Z	ePd	20 24 38.2
		Z	e	20 24 47.2
		Z	esP	20 24 55.8
		Z	ePcP	20 27 20.0
	PRI	Z	ePd	20 24 38.6
	LLA	Z	ePd	20 24 41.9
	PRS	Z	ePd	20 24 43.2
	CMB	Z	ePd	20 24 46.6
		Z	epP	20 24 57.0
		Z	esP	20 25 04.1
		Z	ePcP	20 27 22.7
	MHC	Z	ePd	20 24 50.4
	GCC	Z	e(P)	20 24 51.4
	ORV	Z	ePd	20 25 01.1
		Z	epP	20 25 12.4
		Z	ePcP	20 27 28.6
	WDC	Z	ePd	20 25 08.8
		Z	ePcP	20 27 30.5
	FHC	Z	ePd	20 25 20.3
		Z	e	20 25 28.8
	BKS	E	e	20 31 14
		N	e	20 36 18
USGS 20h18m02.4s 14.0N 93.0W				
h=28km mb=5.2 Ms=4.5				
Near Coast of Chiapas, Mexico				
Jul 27	FRI	Z	ePd	21 33 41.4
		Z	esP	21 33 58.3
	MNA	Z	iPd	21 33 43.3
		Z	ePcP	21 36 25.1
		Z	epP	21 36 34.5
	PRI	Z	ePd	21 33 43.7
		Z	epP	21 33 54.5
	LLA	Z	ePd	21 33 47.0
	PRS	Z	ePd	21 33 48.5
	CMB	Z	ePd	21 33 51.4
		Z	epP	21 34 02.4
		Z	esP	21 34 09.4
		Z	ePcP	21 36 27.8
		Z	epPcP	21 36 37.5
	GCC	Z	ePd	21 33 55.3
		Z	epP	21 34 06.9
	MHC	Z	ePd	21 33 55.6
		Z	epP	21 34 06.7
	ORV	Z	ePd	21 34 05.9
		Z	epP	21 34 16.6
		Z	ePcP	21 36 33.8
	BKS	Z	e(P)	21 34 12.0
		E	eLr	21 44 18
		NE	e	21 44 42
			AMP(μm)	PER(s)
		LZ	1.0	20.
		LE	1.0	20.
	WDC	Z	iPd	21 34 13.9
		Z	ePcP	21 36 35.4

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	epPcP	21 36 44.7
	FHC	Z	ePd	21 34 25.3
BRK Ms=4.4 Distance=25°				
USGS 21h27m07.2s 14.1N 93.0W				
h=27km mb=5.4 Ms=4.6				
Near Coast of Chiapas, Mexico				
Jul 27	FHC	Z	ePc	22 07 17.5
		Z	epP	22 08 06.8
	GCC	Z	ePc	22 07 17.9
		Z	epP	22 08 06.2
	PCC	Z	ePc	22 07 18.4
		Z	epP	22 08 05.3
	BKS	Z	ePc	22 07 18.5
		Z	ipP	22 08 03
		Z	isP	22 08 19.1
		Z	i	22 08 42.9
		N	iS	22 17 22
		N	iScS	22 18 15
		Z	iLq	22 29 06
		Z	eLr	22 32 42
			AMP(μm)	PER(s)
		PZ	0.31	1.2
		LZ	18	20.
		LN	7.0	20.
		LE	14	20.
		LZ	1.3	20.
		LNE	28	20.
		LNW	10	20.
	BRK	Z	ePc	22 07 18.6
		Z	epP	22 08 06.7
			AMP(μm)	PER(s)
		PZ	0.077	1.0
		LZ	30	19.
	PRS	Z	ePc	22 07 19.1
		Z	epP	22 08 07.5
	MHC	Z	ePc	22 07 20.2
		Z	epP	22 08 08.5
	SAO	Z	ePc	22 07 20.3
		Z	epP	22 08 07.4
	LLA	Z	ePc	22 07 21.4
		Z	epP	22 08 09.8
	PRI	Z	ePc	22 07 21.7
		Z	ePKPPKP	22 07 41.8
		Z	epP	22 08 10.5
	WDC	Z	iPc	22 07 22.7
		Z	ipP	22 08 10.9
		Z	ePKPPKP	22 33 41.8
	ORV	Z	ePc	22 07 24.2
		Z	ipP	22 08 12.5
		Z	ePKPPKP	22 33 41.0
	CMB	Z	iPc	22 07 25.5
		Z	ipP	22 08 14.1
		Z	epPP	22 11 27.7
		Z	ePKPPKP	22 33 40.3
	FRI	Z	ePc	22 07 26.1
		Z	ipP	22 08 15.1
		Z	ePKPPKP	22 33 39.7
			AMP(μm)	PER(s)
		PZ	0.15	1.0
	MNA	Z	iPc	22 07 34.8
		Z	ipP	22 08 23.3
		Z	isP	22 08 49.5
		Z	e	22 10 22.8
		Z	e	22 11 22.5
		Z	e(pPP)	22 11 41.3
		Z	e(PPP)	22 13 08.2
		Z	e(SP)	22 19 23.5
		Z	e(sSP)	22 20 16.4
		Z	ePKPPKP	22 33 32.0
	MIN	Z	ipP	22 08 13.7
BRK Ms=6.5 Distance=83°				

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USGS 21h55m09.7s 13.1S 167.1E				
h=171km mb=5.9				
Vanuatu Islands				
Jul 27	WDC	Z	ePd	22 52 45.1
		Z	e	22 53 34.4
	CMB	Z	ePd	22 52 47.0
		Z	e	22 53 37.0
	PRI	Z	e	22 53 34.9
USGS 22h44m35.0s 13.2S 167.0E				
h=176km mb=5.8				
Vanuatu Islands				
Jul 27	GCC	Z	ePd	22 56 44.1
		Z	epP	22 57 27.7
		Z	epPcP	22 57 30.6
	BRK	Z	ePd	22 56 44.6
		Z	ePcP	22 56 48.8
		Z	epPcP	22 57 21:3
		Z	epP	22 57 28.3
		Z	epPcP	22 57 31.3
	PRS	Z	ePd	22 56 45.2
		Z	ePcP	22 56 49.9
		Z	epP	22 57 29.1
		Z	epPcP	22 57 32.0
	MHC	Z	ePd	22 56 46.1
		Z	ePcP	22 56 50.5
		Z	ipP	22 57 30.0
		Z	epPcP	22 57 32.9
	PRI	Z	ePd	22 56 47.8
		Z	ePcP	22 56 52.5
		Z	ipP	22 57 31.9
		Z	ipPcP	22 57 34.7
	WDC	Z	iPd	22 56 48.7
		Z	iPcP	22 56 53.1
		Z	ipP	22 57 32.7
		Z	ipPcP	22 57 35.3
	ORV	Z	ePd	22 56 50.2
		Z	ePcP	22 56 54.4
		Z	epP	22 57 34.0
		Z	ipPcP	22 57 36.8
	CMB	Z	eP	22 56 51.6
		Z	ePcP	22 56 55.1
		Z	ipP	22 57 35.5
		Z	ipPcP	22 57 38.3
	FRI	Z	ePd	22 56 51.9
		Z	ipP	22 57 36.0
		Z	ipPcP	22 57 39.0
	MNA	Z	ePd	22 57 00.6
		Z	ePcP	22 57 05.2
		Z	ipP	22 57 44.9
		Z	ipPcP	22 57 47.6
	FHC	Z	epP	22 57 28.4
		Z	ipPcP	22 57 31.9
	SAO	Z	epP	22 57 29.3
		Z	epPcP	22 57 31.9
	LLA	Z	epP	22 57 29.8
		Z	epP	22 57 31.5
		Z	epPcP	22 57 34.0
	PCC	Z	epPcP	22 57 29.8
	MIN	Z	ipPcP	22 57 37.9
USGS 22h44m35.0s 13.2S 167.0E				
h=176km mb=5.8				
Vanuatu Islands				
Jul 28	CMB	Z	ePc	00 01 09.4
	MNA	Z	ePc	00 01 18.0
	FRI	Z	e(P)	00 01 31.0
USGS 23h48m10.7s 8.1S 155.5E				
h=47km mb=4.9				
Solomon Islands				

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DATE	STA	CMP	PHASE	TIME (UTC)
Jul 28	CMB	Z	ePc	02 34 55.5
		Z	e	02 34 59.1
	FRI	Z	ePc	02 35 04.1
		Z	e	02 35 07.9
	MNA	Z	eP	02 35 04.9
	PRI	Z	eP	02 35 05.0
USGS 02h27m37.3s 52.6N 174.8W				
h=181km mb=4.5				
Andreanof Islands, Aleutian Is.				
Jul 28	FHC	Z	ePd	04 07 29.6
	WDC	Z	iPd	04 07 36.0
		Z	e	04 08 02.6
		Z	i	04 08 35.0
	MIN	Z	iPd	04 07 40.7
	ORV	Z	ePd	04 07 44.3
	BRK	Z	ePd	04 07 47.0
	GCC	Z	ePd	04 07 54.1
	MHC	Z	eP	04 07 54.2
	CMB	Z	ePd	04 07 56.4
		Z	e	04 08 48.4
	PRS	Z	ePd	04 08 00.3
	LLA	Z	ePd	04 08 01.0
	FRI	Z	ePd	04 08 03.7
	MNA	Z	ePd	04 08 04.1
	PRI	Z	ePd	04 08 04.5
	BKS	Z	eS	04 15 38
		E	eSS	04 19 40
		Z	eLr	04 23 18
USGS 03h58m18.0s 51.0N 156.8E				
h=117km mb=5.0				
Kamchatka				
Jul 28	FRI	Z	iPc	11 20 50.1
		Z	iS	11 21 09.2
	MNA	Z	ePc	11 21 00.2
	PRI	Z	ePc	11 21 01.6
		Z	i	11 21 04.5
		Z	i	11 21 27.4
		Z	iS	11 21 30.4
	LLA	Z	ePc	11 21 04.2
	CMB	Z	iPc	11 21 07.9
		Z	iS	11 21 37.8
		Z	i	11 21 40.2
	PRS	Z	ePc	11 21 09.3
	SAO	Z	iPd	11 21 10.8
	MHC	Z	ePc	11 21 14.5
	GCC	Z	ePd	11 21 16.4
	PCC	Z	ePc	11 21 22.8
	BKS	Z	ePc	11 21 23.0
	BRK	Z	e	11 21 24.7
	ZSP	Z	e	11 21 26.2
	ORV	Z	e(P)	11 21 32.1
	MIN	E	e	11 21 44.2
BRK 11h20m24.4s 36.4N 118.1W				
h=5kmR ML=4.5(4)				
20 km S of Lone Pine, CA				
Jul 28	FRI	Z	iPc	11 33 41.1
		Z	i	11 33 43.2
		Z	iS	11 33 59.7
	MNA	Z	ePc	11 33 50.3
	PRI	Z	ePd	11 33 51.9
	LLA	Z	ePd	11 33 54.6
		Z	iS	11 34 25.4
	CMB	Z	iPc	11 33 58.0
		Z	eS	11 34 27.9
		Z	iS*	11 34 30.2
	PRS	Z	eP	11 34 00.1
	SAO	Z	iPd	11 34 00.7
	MHC	Z	ePd	11 34 05.2
		Z	iSg	11 34 47.8
		Z	i	11 34 53.2
	GCC	Z	e(P)	11 34 07.3
	PCC	Z	eP	11 34 13.0
	BRK	Z	e	11 34 25.0
	BKS	Z	ePd	11 34 25.4
		Z	e(S)	11 35 06.7
	ORV	Z	eP*	11 34 27.6
		Z	i	11 35 23.2
	MIN	Z	e	11 34 41.8
BRK 11h33m14.7s 36.4N 118.1W				
h=6km ML=4.0(4)				
21 km S of Lone Pine, CA				
Jul 28	WDC	Z	ePd	13 27 29.2
	MIN	Z	ePd	13 27 32.8
	BRK	Z	e(P)	13 27 33.9
	ORV	Z	ePd	13 27 34.4
	PCC	Z	ePd	13 27 34.6
	GCC	Z	e(P)	13 27 36.3
	MHC	Z	ePd	13 27 37.6
	PRS	Z	ePd	13 27 40.2
	LLA	Z	eP	13 27 41.2
	CMB	Z	ePd	13 27 41.6
	PRI	Z	ePd	13 27 43.8
	FRI	Z	ePd	13 27 45.4
	MNA	Z	ePd	13 27 50.0
	BKS	E	eLr	13 51 35
			AMP(μm)	PER(s)
		LZ	0.55	20.
		LE	0.46	20.
USGS 13h15m31.1s 18.3N 146.5E				
h=72km mb=4.9				
Mariana Islands				
Jul 28	FRI	Z	ePd	17 24 00.2
		Z	epP	17 25 10.3
	PRI	Z	ePd	17 24 01.9
		Z	epP	17 25 10.4
	MNA	Z	ePd	17 24 02.0
		Z	ipP	17 25 10.0
		Z	epPP	17 28 06.3
		Z	eSP	17 33 52.0
	LLA	Z	ePd	17 24 04.5
		Z	ipP	17 25 12.7
	PRS	Z	ePd	17 24 05.0
		Z	ipP	17 25 13.3
	SAO	Z	eP	17 24 06.3
	CMB	Z	ePd	17 24 07.1
		Z	ipP	17 25 15.6
		Z	ipP	17 25 15.6
		Z	epPP	17 28 13.7
	GCC	Z	eP	17 24 09.5
		Z	epP	17 25 17.6
	MHC	Z	ePd	17 24 09.8
		Z	epP	17 25 17.0
	PCC	Z	eP	17 24 12.1
	BRK	Z	ePd	17 24 12.8
		Z	epP	17 25 21.3
	BKS	Z	iPc	17 24 13.3
		Z	ePcP	17 24 20.5
		Z	ipP	17 25 20
		Z	ipPcP	17 25 28.1
		Z	isP	17 25 49
		Z	iS	17 33 55
		E	isS	17 35 52
		N	iSS	17 39 24
		N	esSS	17 41 00
		Z	eSSS	17 43 08
		E	e(sSSS)	17 46 56
			AMP(μm)	PER(s)
		PZ	0.14	1.2
	ORV	Z	ePd	17 24 16.2
		Z	ipP	17 25 24.8
	MIN	Z	ePd	17 24 18.2
		Z	epP	17 25 26.1
	WDC	Z	iPd	17 24 20.9
		Z	ipP	17 25 29.3
		Z	epPP	17 28 39.2
		Z	eSP	17 34 11.0
	FHC	Z	ePd	17 24 28.2
		Z	epP	17 25 41.4
BRK mb=5.9 h=289km Distance=77°				
USGS 17h12m33.3s 22.1S 65.7W				
h=279km mb=5.8				
Juyjuy Province, Argentina				
Jul 28	WDC	Z	iPc	22 48 05.4
		Z	i	22 48 17.6
	ORV	Z	iPc	22 48 11.5
		Z	i	22 48 23.8
	MHC	Z	ePc	22 48 18.7
	CMB	Z	iPc	22 48 20.4
		Z	i	22 48 32.3
	PRS	Z	ePc	22 48 20.8
	LLA	Z	e(P)	22 48 24.1
	PRI	Z	ePc	22 48 24.6
	FRI	Z	iPc	22 48 25.5
		Z	e	22 48 37.6
		Z	e	22 48 42.8
	MNA	Z	ePc	22 48 28.1
		Z	i	22 48 40.3
		Z	e	22 48 45.6
	BKS	N	e	22 56 48
		E	eS	22 58 48
		N	eLq	23 10 22
		N	eLr	23 14 48
USGS 22h36m25.1s 29.4N 142.1E				
h=40km mb=5.0 Ms=4.8				
South of Honshu, Japan				
Jul 29	LLA	Z	iPd	01 47 09.7
	PRS	Z	iPd	01 47 11.2
		Z	iS	01 47 15.2
	SAO	Z	iPd	01 47 11.4
	PRI	Z	iPc	01 47 17.3
		Z	i	01 47 18.1
		Z	iS	01 47 31.0
		Z	i	01 47 32.5
	GCC	Z	ePc	01 47 20.9
		Z	iS	01 47 34.5
	MHC	Z	ePd	01 47 22.9
		Z	i	01 47 25.7
	FRI	Z	ePd	01 47 27.8
		Z	iS	01 47 44.5
	PCC	Z	ePd	01 47 29.3
	BRK	Z	ePc	01 47 32.8
		Z	e	01 47 34.7
	CMB	Z	ePc	01 47 33.7
		Z	iS	01 47 56.8
	BKS	Z	iPd	01 47 35.2
	ZSP	Z	eP	01 47 36.0
	ORV	Z	e	01 47 53.2
	MNA	Z	ePd	01 47 58.9
BRK 01h47m05.7s 36.6N 121.2W				
h=5km ML=3.1(3)				
Bear Valley, 39 km N of King City, CA				
Jul 29	FRI	Z	iPc	02 55 20.4
		Z	e(PcP)	02 57 49.3
	MNA	Z	iPc	02 55 21.2
		Z	iPcP	02 57 49.6
	PRI	Z	ePc	02 55 23.2
		Z	ePcP	02 57 51.1
	LLA	Z	ePc	02 55 26.0
	PRS	Z	ePc	02 55 27.8
	CMB	Z	iPc	02 55 30.0
		Z	ePcP	02 57 51.5
	MHC	Z	ePc	02 55 34.5
	PCC	Z	ePc	02 55 42.0
	BRK	Z	ePc	02 55 42.6
		Z	ePcP	02 57 55.5
	ORV	Z	ePc	02 55 44.1
		Z	ePcP	02 57 57.6
	MIN	Z	ePc	02 55 47.3
		Z	ePcP	02 57 58.4
	WDC	Z	iPc	02 55 51.3
		Z	iPcP	02 58 00.5
	FHC	Z	ePc	02 56 02.7
	BKS	Z	eLr	03 06 56
USGS 02h48m25.9s 13.3N 90.0W				
h=40km mb=4.5 Ms=4.2				
Near Coast of Guatemala				
Jul 29	MIN	Z	ePc	05 01 27.5
		Z	i	05 01 36.1
	ORV	Z	ePc	05 01 29.4
		Z	e	05 01 40.5
	WDC	Z	ePc	05 01 30.3
	CMB	Z	e	05 02 03.7
	MNA	Z	e	05 02 08.1
USGS 04h59m47.3s 46.9N 121.9W				
h=11km mb=3.9				
Washington				
Jul 29	WDC	Z	ePd	10 11 32.6
	MIN	Z	ePd	10 11 35.8
	ORV	Z	ePd	10 11 38.7
	CMB	Z	ePd	10 11 47.7
	PRI	Z	eP	10 11 52.3
	FRI	Z	e(P)	10 11 52.8
	MNA	Z	ePd	10 11 54.0
	BKS	Z	e(SS)	10 27 23
		E	e(G)	10 33 47
USGS 09h59m31.5s 33.6N 132.3E				
h=43km mb=4.9 Ms=4.2				
Shikoku, Japan				
Jul 29	PRI	Z	ePc	14 20 37.2
	MNA	Z	iPc	14 20 37.9
	PRS	Z	e(P)	14 20 40.0
	LLA	Z	ePc	14 20 40.3
	CMB	Z	ePc	14 20 44.2
		Z	e	14 22 14.6
	GCC	Z	e(P)	14 20 47.0
	BRK	Z	e(P)	14 20 51.9
	ORV	Z	iPc	14 20 56.6
	MIN	Z	e(P)	14 20 58.9
	WDC	Z	iPc	14 21 02.9
	FHC	Z	ePc	14 21 12.3
USGS 14h10m58.7s 5.9S 80.9W				
h=33km mb=5.4				
Near Coast of Northern Peru				
Jul 29	MNA	Z	e	14 58 25.7
	PRI	Z	iPd	14 58 41.9
	LLA	Z	iPc	14 58 47.2
		Z	iS	14 58 55.1
	PRS	Z	eP	14 58 50.8
	FRI	Z	iPd	14 58 51.8
		Z	iS	14 59 03.5
	SAO	Z	iPd	14 58 54.2
	GCC	Z	ePc	14 59 02.2
	CMB	Z	iPd	14 59 05.9
		Z	iS	14 59 28.0
BRK 14h58m36.9s 36.3N 120.4W				
h=8km ML=2.6(2)				
17 km NW of Coalinga, CA				
Jul 30	FRI	Z	eP	02 55 30.0
	BKS	Z	ePc	02 55 31.2
		N	iS	03 04 44
		E	iLq	03 11 39
		Z	iLr	03 14 42
			AMP(μm)	PER(s)
		PZ	0.035	1.0
		LZ	1.4	20.
		LN	1.3	20.
		LE	0.0	20.
	MHC	Z	e(P)	02 55 35.7
	CMB	Z	eP	02 55 38.0
	MNA	Z	eP	02 55 40.4
	ORV	Z	e(P)	02 55 47.9
	WDC	Z	eP	02 55 54.9
BRK Ms=5.1 Distance=66°				
USGS 02h45m13.7s 24.4S 115.9W				
h=10km mb=5.2 Ms=5.1				
Easter Island Cordillera				
Jul 30	MIN	Z	eP	06 02 39.6
	CMB	Z	eP	06 02 39.7
	ORV	Z	e(P)	06 02 41.2
	WDC	Z	e(P)	06 02 44.4
	BKS	Z	eLr	06 26 40
USGS 05h52m07.0s 31.3N 41.1W				
h=20km mb=5.0 Ms=4.6				
North Atlantic Ridge				
Jul 30	WDC	Z	eP	08 09 45.6
	MIN	Z	eP	08 09 52.5
	ORV	Z	eP	08 10 03.3
	MNA	Z	e(P)	08 10 33.9
	CMB	Z	e(P)	08 10 37.5
	FRI	Z	eP	08 10 45.7
	PRI	Z	e(P)	08 10 50.0
	BKS	Z	i c	08 13 08
USGS 08h07m01.8s 50.6N 129.7W				
h=10km mb=4.5				
Vancouver Island Region				
Jul 30	FRI	Z	eP	10 10 55.4
	PRI	Z	e(P)	10 10 55.5
	MNA	Z	eP	10 11 01.2
	CMB	Z	eP	10 11 06.6
USGS 10h05m59.1s 18.9N 104.6W				
h=33km mb=4.7				
Near Coast of Jalisco, Mexico				
Jul 30	CMB	Z	eP	11 31 27.5
	MNA	Z	eP	11 31 37.2
USGS 11h19m39.1s 21.3S 174.2W				
h=78km mb=4.9				
Tonga Islands				
Jul 30	CMB	Z	ePKP	16 47 03.1
	WDC	Z	e(PKP)	16 47 04.7
	FRI	Z	ePKP	16 47 05.7
USGS 16h26m23.9s 33.1S 83.8E				
h=10km mb=5.3 Ms=5.1				
Amsterdam-Naturaliste Ridge				
Jul 30	FHC	Z	eP	21 17 27.5
		Z	epP	21 17 44.9
		Z	esP	21 17 52.7
	WDC	Z	iPc	21 17 33.4
		Z	epP	21 17 51.1
		Z	esP	21 18 58.7
	MIN	Z	eP	21 17 38.0
		Z	epP	21 17 55.4
		Z	esP	21 18 03.3
	ORV	Z	eP	21 17 41.0
		Z	epP	21 17 58.7
		Z	esP	21 18 06.7
	BKS	Z	iPc	21 17 45
		N	iS	21 26 17
		N	eLq	21 33 48
		Z	eLr	21 36 24
			AMP(μm)	PER(s)
		PZ	0.10	0.8
		LZ	0.71	20.
		LN	0.54	20.
		LE	1.3	20.
	BRK	Z	eP	21 17 45.1
	GCC	Z	eP	21 17 49.4
		Z	epP	21 18 07.1
	MHC	Z	eP	21 17 49.8
		Z	epP	21 18 07.6
	CMB	Z	iPc	21 17 52.2
		Z	epP	21 18 10.2
		Z	esP	21 18 17.7
	SAO	Z	e(P)	21 17 52.5
	PRS	Z	eP	21 17 54.7
		Z	epP	21 18 12.6
	LLA	Z	eP	21 17 55.6
	FRI	Z	eP	21 17 58.7
		Z	epP	21 18 16.6
		Z	esP	21 18 24.3
	PRI	Z	eP	21 17 59.0
	MNA	Z	eP	21 18 00.1
		Z	epP	21 18 17.7
		Z	esP	21 18 25.3
BRK Ms=5.1 Distance=65°				
USGS 21h07m21.2s 44.8N 149.9E				
h=61km mb=6.3				
Kurile Islands				
Jul 30	CMB	Z	eP	23 52 34.5
	FRI	Z	eP	23 52 40.0
USGS 23h40m41.2s 34.8N 139.3E				
h=10km mb=5.2 Ms=4.5				
Near S. Coast of Honshu, Japan				
Jul 31	CMB	Z	e(P)	01 41 56.0
	FRI	Z	e(P)	01 41 58.0
	MNA	Z	eP	01 42 05.0
	BKS	Z	eLr	02 09 56
USGS 01h28m53.1s 6.4S 153.1E				
h=33km mb=5.2 Ms=5.0				
New Britain Region				
Jul 31	PRI	Z	iPc	10 26 09.0
	LLA	Z	eP	10 26 15.0
	FRI	Z	iPd	10 26 19.0
	PRS	Z	iPc	10 26 19.0
	SAO	Z	iPc	10 26 23.0
	MHC	Z	eP	10 26 29.0
	GCC	Z	eP	10 26 30.0
	CMB	Z	eP	10 26 33.0
		Z	eS	10 26 56.0
	PCC	Z	eP	10 26 38.0
	BKS	Z	e(P)	10 26 39.0
	BRK	Z	e(P)	10 26 40.0
	ORV	Z	e(P)	10 26 57.0
BRK 10h26m03.6s 36.2N 120.3W				
h=9km ML=3.2(2)				
9 km NE of Coalinga, CA				
Jul 31	CMB	Z	eP	12 11 27.0
	FRI	Z	e(P)	12 11 30.0
	MNA	Z	eP	12 11 36.0

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DATE	STA	CMP	PHASE	TIME (UTC)
USGS 11h59m21.0s 20.1N 147.3E				
h=33km mb=4.7				
Mariana Islands Region				
Jul 31	PCC	Z	eP	13 02 45.6
	GCC	Z	e(P)	13 02 45.6
	PRS	Z	eP	13 02 46.7
	SAO	Z	e(P)	13 02 47.0
		R	eS	13 13 28
		T	e(ScS)	13 13 55
		R	e	13 18 46
		Z	eLr	13 30 07
	BKS	Z	iPd	13 02 47.9
		Z	e	13 03 12
		Z	i	13 03 13
		Z	i	13 03 17
		R	i	13 03 44
		R	eS	13 13 23
		T	eScS	13 13 49
		NW	eSS	13 18 22
		R	e	13 18 43
		N	iSS	13 18 45
		N	i	13 19 38
		NW	e	13 19 42
		N	iSSS	13 22 46
		NW	eLq	13 26 10
		Z	eLr	13 29 40
			AMP(μm)	PER(s)
		PZ	0.065	0.9
		LZ	13	20.
		LN	8.0	20.
		LE	9.6	20.
	MHC	Z	eP	13 02 48.3
		Z	i	13 03 11
		T	eS	13 13 27
		T	iScS	13 13 48
		R	i	13 14 56
		R	e	13 18 43
		T	eLq	13 25 50
		Z	eLr	13 29 59
	PRI	Z	eP	13 02 48.8
	WDC	Z	eP	13 02 53.1
	FRI	Z	eP	13 02 53.3
	ORV	Z	eP	13 02 53.5
	CMB	Z	eP	13 02 53.6
	MIN	Z	eP	13 02 54.8
	MNA	Z	eP	13 03 02.1
			AMP(μm)	PER(s)
		LZ	14	20.
BRK Ms=6.3 Distance=86°				
USGS 12h50m07.8s 22.2S 171.1E				
h=55km mb=5.8 Ms=6.3				
Loyalty Islands Region				
Jul 31	WDC	Z	ePKPc	15 42 58.4
		Z	epPKP	15 43 06.0
		Z	ePKP2	15 44 13.3
		Z	epPKP2	15 44 18.8
		Z	ePP	15 48 14.0
		Z	e	15 48 26.7
		Z	e	15 50 29.4
		Z	ePKKP	15 51 11.8
	ORV	Z	ePKPc	15 42 59.3
		Z	epPKP	15 43 06.7
		Z	ePKP2	15 44 25.7
		Z	epPKP2	15 44 28.8
	CMB	Z	ePKPc	15 43 00.5
		Z	epPKP	15 43 08.2
		Z	ePKP2c	15 44 30.7
		Z	epPKP2	15 44 34.3
		Z	ePP	15 48 20.2
		Z	e	15 48 30.8
		Z	e	15 50 27.6
		Z	ePKKP	15 51 10.2
	MNA	Z	ePKPc	15 43 01.0
		Z	epPKP	15 43 08.3
		Z	ePKP2	15 44 25.2
		Z	epPKP2	15 44 29.5
		Z	ePP	15 48 16.2
		Z	ePKKP	15 51 07.0
	FRI	Z	ePKPc	15 43 01.0
		Z	epPKP	15 43 08.8
		Z	ePKP2c	15 44 35.1
		Z	epPKP2	15 44 35.2
		Z	e(PP)	15 48 26.6
	MHC	Z	ePKP	15 43 01.2
		Z	ePKP2c	15 44 36.9
		Z	epPKP2	15 44 39.5
	MIN	Z	ePKP	15 43 01.3
		Z	epPKP	15 43 05.9
		Z	ePKP2	15 44 20.8
		Z	epPKP2	15 44 25.9
		Z	ePP	15 48 11.3
	LLA	Z	ePKPc	15 43 01.8
		Z	epPKP	15 43 08.9
		Z	ePKP2	15 44 37.8
	PRS	Z	ePKPc	15 43 02.0
		Z	epPKP	15 43 08.9
		Z	ePKP2	15 44 38.6
	PRI	Z	e(PKP)c	15 43 02.2
		Z	ePKP2c	15 44 40.0
		Z	epPKP2	15 44 42.5
		Z	ePP	15 48 31.9
	BRK	Z	ePKP	15 43 08.2
		Z	ePKP2	15 44 34.9
		Z	epPKP2	15 44 37.6
		Z	eLr	16 48 58
			AMP(μm)	PER(s)
		LZ	2.8	20.
	FHC	Z	ePKP2	15 44 12.5
		Z	epPKP2	15 44 16.6
	BKS	Z	ePKPd	15 48 36
		N	iSS	16 14 04
		N	iSSS	16 19 58
		NW	e	16 37 08
		Z	eLr	16 47 10
			AMP(μm)	PER(s)
		LZ	2.5	20.
		LN	1.8	20.
		LE	2.1	20.
BRK Ms=6.1 Distance=168°				
USGS 15h22m48.8s 31.9S 57.4E				
h=10km mb=5.8 Ms=5.9				
Atlantic-Indian Rise				
Jul 31	CMB	Z	eP	16 22 11.6
	WDC	Z	ePc	16 22 22.9
	MNA	Z	eP	16 22 25.8
USGS 16h10m19.0s 35.0N 139.2E				
h=7km mb=4.6				
Near S. Coast of Honshu, Japan				
Jul 31	WDC	Z	e(P)	21 04 36.3
	ORV	Z	e(P)	21 04 39.3
		Z	e	21 04 52.1
	BRK	Z	eP	21 04 43.8
	MHC	Z	e(P)	21 04 52
		Z	e	21 05 02.1
	CMB	Z	e(P)	21 04 53.8
		Z	e	21 05 06.2
	PRS	Z	e(P)	21 05 05.7
	LLA	Z	ePc	21 05 05.8
	PRI	Z	e(P)	21 05 06.8
		Z	e(P)	21 05 12.1
	MNA	Z	eP	21 05 11.3
		Z	e	21 05 25.5
	FRI	Z	e(P)	21 05 11.8
		Z	e	21 05 14.0
	BKS	Z	eLr	21 16 28
USGS 20h57m15.9s 51.3N 176.2W				
h=33km mb=5.0 Ms=4.6				
Andreanof Islands, Aleutian Is.				
Jul 31	WDC	Z	e	21 13 34.6
	CMB	Z	e(P)c	21 14 03.5
	MNA	Z	eP	21 14 12.6
	FRI	Z	e	21 14 17.5
USGS 21h06m18.1s 51.3N 176.1W				
h=33km mb=4.9 Ms=4.7				
Andreanof Islands, Aleutian Is.				
Aug 1	GCC	Z	ePc	02 57 52.2
	PCC	Z	eP	02 57 52.3
	PRS	Z	ePc	02 57 52.6
	SAO	Z	eP	02 57 53.4
	MHC	Z	ePc	02 57 54.7
	PRI	Z	ePc	02 57 54.9
	LLA	Z	eP	02 57 55.0
	FRI	Z	eP	02 58 00.2
	CMB	Z	iPc	02 58 00.9
	WDC	Z	eP	02 58 01.4
	ORV	Z	eP	02 58 01.5
	MIN	Z	eP	02 58 03.0
	MNA	Z	ePc	02 58 10.1
USGS 02h46m58.5s 17.8S 178.8W				
h=560km mb=4.9				
Fiji Islands Region				
Aug 1	GCC	Z	ePc	04 50 56.2
	PCC	Z	ePc	04 50 56.3
	PRS	Z	ePc	04 50 56.6
	SAO	Z	ePc	04 50 57.3
	BRK	Z	ePc	04 50 58.2
	MHC	Z	ePc	04 50 58.8
	PRI	Z	ePc	04 50 58.9
	LLA	Z	ePc	04 50 59.9
	FHC	Z	ePc	04 51 03.2
	FRI	Z	ePc	04 51 04.2
	CMB	Z	ePc	04 51 05.1
	WDC	Z	iPc	04 51 06.0
	MNA	Z	ePc	04 51 14.5
USGS 04h39m53.0s 18.0S 177.0W				
h=389km mb=4.8				
Fiji Islands Region				
Aug 1	PRI	Z	iPc	23 30 24.8
	LLA	Z	iPd	23 30 31.3
	PRS	Z	iPc	23 30 31.6
		Z	iS	23 30 39.7
	SAO	Z	iP	23 30 36.8
	FRI	Z	iPc	23 30 42.8
		Z	iS	23 30 58.2
	GCC	Z	eP	23 30 44.9
	MHC	Z	ePc	23 30 46.1
	CMB	Z	ePc	23 30 53.7
	PCC	Z	e(P)	23 30 54.7
	BRK	Z	e	23 30 57.7
BRK 23h30m22.1s 36.2N 120.8W				
h=9km ML=2.9(2)				
Peachtree Valley, 30 km ESE of King City, CA				
Aug 2	GCC	Z	ePc	08 41 51.7
	PRS	Z	ePc	08 41 52.2
	SAO	Z	ePc	08 41 52.8
	PCC	Z	ePc	08 41 52.8
	BRK	Z	eP	08 41 53.3
	BKS	Z	iPd	08 41 54.2
			AMP(μm)	PER(s)
		PZ	0.13	1.2
	MHC	Z	ePc	08 41 54.3
	LLA	Z	ePc	08 41 54.4
	PRI	Z	ePc	08 41 54.4
	FHC	Z	ePc	08 41 57.3
	FRI	Z	iPc	08 41 59.3
	CMB	Z	ePc	08 42 00.2
	WDC	Z	iPc	08 42 00.8
	ORV	Z	ePc	08 42 00.8
	MIN	Z	ePc	08 42 02.6
	MNA	Z	ePc	08 42 09.5
USGS 08h31m01.8s 18.1S 178.5W				
h=607km mb=5.1				
Fiji Islands Region				
Aug 2	WDC	Z	ePc	11 27 39.7
	MIN	Z	ePc	11 27 43.2
	ORV	Z	eP	11 27 46.3
	BRK	Z	e(P)	11 27 49.1
	MHC	Z	e(P)	11 27 53.2
	CMB	Z	ePc	11 27 55.8
	PRS	Z	ePc	11 27 57.5
	FRI	Z	eP	11 28 01.5
	MNA	Z	ePc	11 28 02.9
	PRI	Z	e(P)	11 28 03.0
USGS 11h16m03.1s 34.8N 139.3E				
h=10km mb=5.0 Ms=4.7				
Near S. Coast of Honshu, Japan				
Aug 2	WDC	Z	iPd	15 03 00.4
	MIN	Z	ePd	15 03 04.0
	ORV	Z	ePd	15 03 05.7
	MHC	Z	ePd	15 03 09.1
	PRS	Z	ePd	15 03 11.8
	CMB	Z	iPd	15 03 13.2
	PRI	Z	ePd	15 03 15.5
	FRI	Z	ePd	15 03 17.5
	MNA	Z	iPd	15 03 21.7
USGS 14h51m07.0s 20.1N 147.3E				
h=34km mb=5.0 Ms=4.2				
Mariana Islands Region				
Aug 2	CMB	Z	ePd	17 10 11.4
USGS 16h58m04.2s 20.1N 147.0E				
h=33km mb=4.5				
Mariana Islands Region				
Aug 2	FRI	Z	iPKPc	22 27 25.6
	PRI	Z	iPKPc	22 27 26.3
	MNA	Z	iPKPc	22 27 26.8
	PRS	Z	ePKPc	22 27 26.8
	CMB	Z	iPKPc	22 27 28.1
		Z	i	22 27 43.0
	LLA	Z	ePKPc	22 27 28.1
	GCC	Z	ePKPc	22 27 28.2
	MHC	Z	ePKPc	22 27 28.8
	FHC	Z	ePKPc	22 27 29.2
	BKS	Z	ePc	22 27 30.9
			AMP(μm)	PER(s)
		PZ	0.047	0.9
	ORV	Z	iPKPc	22 27 32.6
	WDC	Z	iPKPc	22 27 33.1
USGS 22h08m31.5s 58.0S 25.1W				
h=26km mb=5.5 Ms=5.3				
South Sandwich Islands Region				
Aug 3	PRI	Z	iPKPc	06 01 11.0
		Z	iPKKP	06 12 36.5
	CMB	Z	iPKPc	06 01 14.0
		Z	iPKKP	06 12 40.4
	MNA	Z	iPKPc	06 01 15.6
	MHC	Z	iPKPc	06 01 17.9
	WDC	Z	iPKPc	06 01 20.9
		Z	iPKKP	06 12 48.8
	FRI	Z	iPKKP	06 12 37.1
	GCC	Z	ePKKP	06 12 43.4
	ORV	Z	iPKKP	06 12 45.9
USGS 05h43m14.8s 36.5N 71.0E				
h=201km mb=5.5				
Hindu Kush Region				
Aug 3	PRI	Z	ePc	17 35 03.3
		Z	e	17 35 11.3
		Z	e	17 35 15.3
	FRI	Z	iPc	17 35 04.6
		Z	e	17 35 21.1
	PRS	Z	ePc	17 35 08.0
		Z	i	17 35 24.4
	LLA	Z	e(P)c	17 35 09.3
	CMB	Z	ePc	17 35 16.7
		Z	i	17 35 35.7
	MHC	Z	iPc	17 35 18.9
		Z	e	17 35 35.7
	MNA	Z	i	17 35 20.5
		Z	i	17 35 30.2
	BRK	Z	ePd	17 35 25
		Z	e	17 40 32
		Z	e	17 41 52
		Z	eLr	17 42 45
			AMP(μm)	PER(s)
		LZ	15	20.
	BKS	Z	iP	17 35 25
		NW	eS	17 39 40
		Z	iLr	17 41 20
			AMP(μm)	PER(s)
		PZ	0.090	2.3
		LZ	10	20.
		LN	10	20.
		LE	6.6	20.
	ORV	Z	ePc	17 35 34.2
		Z	e	17 35 52.6
	MIN	Z	ePc	17 35 40.0
	WDC	Z	ePc	17 35 45.6
	FHC	Z	ePc	17 35 56.5
BRK Ms=5.4 Distance=24°				
USGS 17h30m15.5s 18.7N 106.5W				
h=33km mb=4.9 Ms=5.4				
Off Coast of Jalisco, Mexico				
Aug 3	FRI	Z	ePc	17 55 30.2
	PRI	Z	iPc	17 55 30.6
	PRS	Z	ePc	17 55 35.2
	LLA	Z	ePc	17 55 38.7
	MNA	Z	iPc	17 55 38.9
	CMB	Z	ePc	17 55 43.9
	MHC	Z	eP	17 55 44.9
	ORV	Z	ePc	17 56 02.9
	MIN	Z	ePc	17 56 07.6
	WDC	Z	ePc	17 56 12.6
	BKS	N	iS	18 00 48
		Z	eLr	18 02 10
			AMP(μm)	PER(s)
		LZ	3.2	20.
		LN	3.9	20.
		LE	3.2	20.
BRK Ms=4.9 Distance=21°				
USGS 17h50m42.7s 18.6N 106.5W				
h=33km mb=4.3				
Off Coast of Jalisco, Mexico				
Aug 3	PRI	Z	ePc	18 47 30.8
	FRI	Z	ePc	18 47 32.9
	PRS	Z	ePc	18 47 36.5
	MNA	Z	ePc	18 47 39.8
	CMB	Z	ePc	18 47 45.0
	ORV	Z	ePc	18 48 02.8
	WDC	Z	e(P)	18 48 12.4
	MIN	Z	e	18 48 13.8
	BKS	Z	eLr	18 54 18
			AMP(μm)	PER(s)
		LZ	2.3	20.
		LN	2.5	20.
		LE	1.4	20.
BRK Ms=4.6 Distance=20°				
USGS 18h42m44.4s 18.8N 106.2W				
h=33km mb=4.3				
Off Coast of Jalisco, Mexico				
Aug 3	FHC	Z	ePKPc	19 38 08.8
	WDC	Z	iPKPc	19 38 11.0
	MIN	Z	ePKPc	19 38 12.7
	ORV	Z	ePKP	19 38 14.8
	CMB	Z	ePKPc	19 38 20.2
		Z	e	19 38 23.7
	MNA	Z	ePKPc	19 38 21.3
	MHC	Z	ePKPc	19 38 21.3
		Z	e	19 38 26.2
	PRS	Z	ePKPc	19 38 22.8
	FRI	Z	ePKPc	19 38 23.1
		Z	i	19 38 27.9
	PRI	Z	ePKPc	19 38 25.4
		Z	e	19 38 30.7
USGS 19h18m31.6s 7.4S 69.4E				
h=10km mb=4.9 Ms=4.6				
Chagos Archipelago Region				
Aug 4	PRI	Z	ePc	06 31 20.3
	FRI	Z	ePc	06 31 21.2
	PRS	Z	ePc	06 31 22.3
	LLA	Z	ePc	06 31 22.7
	SAO	Z	ePc	06 31 25.4
	GCC	Z	ePc	06 31 26.1
	MNA	Z	iPc	06 31 26.7
	MHC	Z	iPc	06 31 27.4
	CMB	Z	ePc	06 31 27.8
	PCC	Z	iPc	06 31 28.6
	BRK	Z	ePc	06 31 30.4
	BKS	Z	iPd	06 31 31.1
		Z	iPP	06 36 06
		Z	eLr	07 00 12
			AMP(μm)	PER(s)
		PZ	0.075	1.3
		LZ	0.71	20.
		LN	0.36	20.
		LE	0.0	20.
	ORV	Z	ePc	06 31 36.4
	MIN	Z	ePc	06 31 39.0
	WDC	Z	ePc	06 31 41.3
	FHC	Z	ePc	06 31 45.4
BRK Ms=4.8 Distance=92°				
USGS 06h18m42.7s 42.9S 85.8W				
h=6km mb=5.9 Ms=4.9				
West Chile Rise				
Aug 4	CMB	Z	eP	16 08 00.4
	MNA	Z	e(P)	16 08 10.3
	WDC	Z	e(P)	16 08 20.0
USGS 15h56m38.3s 16.1S 173.9W				
h=113km mb=4.8				
Tonga Islands				
Aug 4	PRS	Z	eP	17 29 39.7
	GCC	Z	ePc	17 29 40.2

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DATE	STA	CMP	PHASE	TIME (UTC)
	PCC	Z	ePc	17 29 40.4
	SAO	Z	e(P)	17 29 40.5
	PRI	Z	ePc	17 29 41.4
	LLA	Z	eP	17 29 41.7
	BRK	Z	e(P)	17 29 42.2
	MHC	Z	ePc	17 29 42.4
	BKS	Z	iPc	17 29 42.5
		N	eS	17 40 28
		Z	eLr	17 57 45
			AMP(μm)	PER(s)
		PZ	0.11	0.9
		LZ	0.71	20.
		LN	0.54	20.
		LE	0.36	20.
	FRI	Z	ePc	17 29 45.8
	CMB	Z	ePc	17 29 47.4
	FHC	Z	e(P)	17 29 47.9
	ORV	Z	ePc	17 29 49.3
	WDC	Z	ePc	17 29 50.3
	MNA	Z	ePc	17 29 54.6
BRK Ms=5.0 Distance=94°				
USGS 17h16m45.3s 33.7S 179.8W				
h=10km mb=5.5 Ms=5.0				
South of Kermadec Islands				
Aug 4	GCC	Z	eP	21 39 16.3
	PRS	Z	ePc	21 39 16.5
	PCC	Z	eP	21 39 16.6
	SAO	Z	e(P)	21 39 17.7
	BRK	Z	e(P)	21 39 18.2
	PRI	Z	ePc	21 39 18.4
	BKS	Z	iPd	21 39 18.4
			AMP(μm)	PER(s)
		PZ	0.25	.8
	LLA	Z	eP	21 39 18.5
	MHC	Z	ePc	21 39 18.7
	FRI	Z	ePc	21 39 23.2
	CMB	Z	ePc	21 39 24.3
	ORV	Z	ePc	21 39 25.5
	WDC	Z	ePc	21 39 25.8
	MNA	Z	ePc	21 39 32.2
USGS 21h27m51.4s 24.0S 179.8E				
h=524km mb=4.9				
South of Fiji Islands				
Aug 5	WDC	Z	eP	08 53 50.6
	MIN	Z	e(P)	08 53 54.2
	ORV	Z	e(P)	08 53 57.1
	CMB	Z	ePc	08 54 06.5
	FRI	Z	eP	08 54 11.5
	MNA	Z	eP	08 54 13.5
USGS 08h42m10.9s 34.5N 139.0E				
h=10km mb=4.1				
Near S. Coast of Honshu, Japan				
Aug 6	FHC	Z	ePdiffc	00 50 27.0
	WDC	Z	iPdiffc	00 50 27.4
		Z	ePP	00 55 58.7
		Z	ePKKP	01 06 02.2
	MIN	Z	e(Pdif)c	00 50 32.0
	ORV	Z	ePdiffc	00 50 33.6
	BKS	Z	ePdiff	00 50 38
		Z	ipPdif	00 50 50.8
		Z	iPKiKP	00 54 23
		Z	iPP	00 55 14
		Z	e	00 56 03
		Z	iPPP	00 57 20
		Z	eSKP	00 58 12
		NW	iSKS	01 01 18
		R	eSKS2	01 02 10
		NE	eS	01 02 39
		NE	iPS	01 04 29
		Z	iSP	01 04 29
		NW	ePS	01 04 30.0
		Z	eSP	01 04 36
		Z	ePKKP	01 05 54
		NW	i	01 08 38
		Z	ePcPPKP	01 10 22
		NW	iSS	01 10 32
		T	eSKKS	01 14 36
		Z	ePKPPKP	01 14 45
		NE	iScSScS	01 15 00
		NE	iLq	01 21 15
		NE	iLr	01 28 58
			AMP(μm)	PER(s)
		PZ	0.052	1.3
		LZ	44	20.
		LE	37	20.
		LZ	50	20.
		LNE	61	20.
		LNW	36	20.
	CMB	Z	ePdiffc	00 50 41.6
		Z	ePP	00 55 16.6
		Z	ePKKP	01 05 53.3
		Z	e	01 33 38.2
	MHC	Z	iPdiffc	00 50 42
		Z	iPP	00 55 23
		Z	i	00 56 08
		Z	eSKP	00 58 28
		R	e	00 59 48
		R	eSKS	01 01 32
		R	eSKS2	01 02 08
		R	e	01 02 08
		T	e	01 03 06
		T	e	01 03 38
		Z	eSP	01 04 40
		R	eSPP	01 05 25
		Z	ePKKP	01 06 01
		Z	ePcPPKP	01 10 27
		T	eSS	01 10 44
		Z	e	01 11 06
		Z	e	01 12 31
		T	eSKKS	01 14 41
		Z	ePKPPKP	01 14 56
		Z	e	01 21 45
		T	eLq	01 23 17
		Z	eLr	01 30 16
	FRI	Z	ePdiffc	00 50 46.8
		Z	ePKKP	01 06 50.7
	PRI	Z	e(Pdif)c	00 50 47.3
		Z	e	00 55 22.0
		Z	ePKKP	01 05 52.1
	SAO	Z	ePdiffc	00 50 50
		Z	ePP	00 55 14
		Z	e	00 56 00
		R	eSKS	01 01 31
		Z	eSKS2	01 02 11
		Z	eSP	01 04 42
		Z	ePKKP	01 06 31
		R	ePcPPKP	01 10 37
		T	eSS	01 10 56
		Z	e(Lr)	01 30 44
	PRS	Z	ePKKP	01 05 52.8
	PCC	Z	ePKKP	01 05 55.2
			AMP(μm)	PER(s)
		LZ	43	20.
BRK Ms=7.3 Distance=108°				
USGS 00h36m24.7s 25.1N 95.1E				
h=90km mb=6.8 Ms=7.2				
Burma-India Border Region				
Aug 6	BRK	Z	e(P)	06 40 03.9
		Z	epP	06 40 13.5
	BKS	Z	ePc	06 40 04.3
		Z	e	06 43 45.0
		E	eS	06 50 34.0
		E	eScS	06 51 05.6
		E	ePPS	06 52 12.8
			AMP(μm)	PER(s)
		PZ	0.025	000.7
		LZ	5.2	20.
		LN	1.8	20.
		LE	4.5	20.
	WDC	Z	iPc	06 40 04.5
		Z	epP	06 40 14.0
		Z	ePP	06 43 52.1
	GCC	Z	eP	06 40 04.5
		Z	epP	06 40 14.0
	MHC	Z	eP	06 40 06.0
	PRS	Z	eP	06 40 06.8
		Z	epP	06 40 16.3
		Z	ePP	06 44 00.7
	MIN	Z	eP	06 40 06.9
		Z	epP	06 40 16.7
		Z	ePP	06 43 57.2
	ORV	Z	eP	06 40 07.2
		Z	epP	06 40 16.9
	LLA	Z	eP	06 40 08.6
		Z	epP	06 40 18.0
	PRI	Z	eP	06 40 09.7
		Z	epP	06 40 19.3
	CMB	Z	ePc	06 40 11.8
		Z	epP	06 40 20.3
		Z	ePP	06 44 00.0
	FRI	Z	eP	06 40 12.6
		Z	epP	06 40 22.4
	MNA	Z	eP	06 40 19.5
		Z	epP	06 40 29.1
		Z	ePP	06 44 16.5
BRK Ms=5.9 Distance=87°				
USGS 06h26m55.6s 7.1S 151.1E				
h=25km mb=5.9 Ms=5.7				
New Britain Region				
Aug 6	WDC	Z	eP	08 18 21.0
	MIN	Z	eP	08 18 25.8
	ORV	Z	eP	08 18 26.8
	MHC	Z	eP	08 18 31.5
	PRS	Z	eP	08 18 34.7
	CMB	Z	eP	08 18 34.9
	FRI	Z	eP	08 18 39.5
	MNA	Z	eP	08 18 42.8
USGS 08h06m25.0s 24.2N 142.9E				
h=33km mb=4.8				
Volcano Islands Region				
Aug 6	WDC	Z	ePdiff	09 16 56.1
		Z	epPdif	09 17 44.4
		Z	ePP	09 21 47.2
		Z	e(SP)	09 30 12.5
		Z	ePKKP	09 33 55.9
	MIN	Z	ePdiff	09 16 57.8
		Z	epPdif	09 17 46.1
		Z	ePP	09 21 59.4
	MNA	Z	ePdiff	09 17 09.1
		Z	epPdif	09 17 57.8
		Z	ePP	09 22 08.3
		Z	eSP	09 30 28.6
		Z	ePKKP	09 33 49.3
	CMB	Z	ePdiff	09 17 09.2
		Z	epPdif	09 17 57.7
		Z	ePP	09 22 13.6
		Z	eSP	09 30 28.5
		Z	ePKKP	09 33 48.3
	FRI	Z	e(Pdif)	09 17 14.0
		Z	ePP	09 22 26.1
		Z	eSP	09 30 37.7
		Z	ePKKP	09 33 44.9
	ORV	Z	epPdif	09 17 49.3
		Z	e(SP)	09 30 15
		Z	ePKKP	09 33 53.2
	PRI	Z	ePKKP	09 33 43.3
	PRS	Z	ePKKP	09 33 44.1
	MHC	Z	ePKKP	09 33 47.5
	BRK	Z	e(PKKP)	09 33 48.6
USGS 09h03m22.0s 36.5N 71.0E				
h=195km mb=6.1				
Afghanistan-USSR Border Region				
Aug 6	PRI	Z	eP	15 07 58.8
	FRI	Z	eP	15 08 00.3
	PRS	Z	e(P)	15 08 02.5
	MNA	Z	eP	15 08 09.0
	GCC	Z	eP	15 08 11.5
	MHC	Z	eP	15 08 12.9
	CMB	Z	eP	15 08 12.9
	BKS	Z	ePc	15 08 21.4
		E	eS	15 12 24.0
		N	e	15 12 33.6
			AMP(μm)	PER(s)
		PZ	0.081	001.2
		LZ	1.1	20.
		LN	1.4	20.
		LE	0.71	20.
	ORV	Z	eP	15 08 32.2
	WDC	Z	eP	15 08 44.1
BRK Ms=4.4 Distance=24°				
USGS 15h03m32.6s 19.8N 109.2W				
h=10km mb=4.7 Ms=4.2				
Revilla Gigedo Islands Region				
Aug 6	PRI	Z	eP	18 30 29.9
	FRI	Z	eP	18 30 31.2
	MNA	Z	eP	18 30 39.8
	CMB	Z	eP	18 30 43.8
USGS 18h26m03.8s 19.8N 109.4W				
h=10km mb=3.9				
Revilla Gigedo Islands Region				
Aug 7	FHC	Z	ePc	22 37 47.2
	WDC	Z	iPc	22 37 52.2
		Z	e	22 39 24.2
	ORV	Z	iPc	22 37 58.2
	BRK	Z	iPc	22 38 00.4
	BKS	Z	ePc	22 38 00.4
			AMP(μm)	PER(s)
		PZ	0.11	0.7
	PCC	Z	ePc	22 38 00.5
	GCC	Z	ePc	22 38 03.5
	MHC	Z	ePc	22 38 04.2
	SAO	Z	ePc	22 38 05.8
	CMB	Z	iPc	22 38 06.8
		Z	e	22 39 39.4
	PRS	Z	iPc	22 38 07.8
	LLA	Z	ePc	22 38 08.7
	PRI	Z	ePc	22 38 11.5
	FRI	Z	iPc	22 38 11.7
	MNA	Z	iPc	22 38 13.8
		Z	e	22 39 51.0
USGS 22h26m43.0s 30.4N 138.5E				
h=426km mb=5.2				
South of Honshu, Japan				
Aug 8	WDC	Z	ePc	09 20 52.8
		Z	e	09 24 01.2
	MIN	Z	ePc	09 20 56.2
	ORV	Z	ePc	09 20 58.9
	BRK	Z	ePc	09 21 01.6
	PCC	Z	eP	09 21 01.7
	GCC	Z	ePc	09 21 04.7
	MHC	Z	ePc	09 21 05.6
	CMB	Z	ePc	09 21 08.0
	PRS	Z	ePc	09 21 09.3
	FRI	Z	ePc	09 21 13.2
	MNA	Z	ePc	09 21 14.9
USGS 09h09m42.6s 33.8N 137.1E				
h=351km mb=4.8				
Near S. Coast of Honshu, Japan				
Aug 8	FHC	Z	ePc	11 03 00.6
		Z	e	11 03 06.5
	WDC	Z	ePc	11 03 11.5
		Z	e	11 03 17.7
	MIN	Z	e(P)	11 03 16.7
		Z	e	11 03 22.5
		Z	e	11 03 22.8
	ORV	Z	e(P)	11 03 21.0
		Z	e	11 03 27.0
	CMB	Z	e(P)	11 03 37.6
		Z	e	11 03 43.0
	MNA	Z	e(P)	11 03 46.2
		Z	e	11 03 51.7
	FRI	Z	e(P)	11 03 46.2
		Z	e	11 03 52.6
USGS 10h57m09.1s 55.4N 162.4W				
h=33km mb=4.7				
Alaska Peninsula				
Aug 8	FHC	Z	ePc	11 13 28.1
	WDC	Z	ePc	11 13 37.1
	MIN	Z	ePc	11 13 42.9
	ORV	Z	ePc	11 13 47.4
	CMB	Z	ePc	11 14 03.0
	PRS	Z	e(P)	11 14 09.6
	MNA	Z	ePc	11 14 11.4
	FRI	Z	eP	11 14 12.4
USGS 11h07m28.6s 55.4N 162.5W				
h=33km mb=4.7				
Alaska Peninsula				
Aug 8	FHC	Z	e(P)	13 42 54.6
		Z	e	13 43 02.4
	WDC	Z	ePd	13 43 02.1
		Z	i	13 43 10.4
	MIN	Z	ePd	13 43 07.8
		Z	i	13 43 15.9
	ORV	Z	ePd	13 43 12.8
		Z	e	13 43 20.9
	CMB	Z	ePd	13 43 29.0
		Z	e	13 43 37.1
	MNA	Z	ePd	13 43 36.7
		Z	e	13 43 44.8
	FRI	Z	ePd	13 43 38.2
		Z	e	13 43 46.9
USGS 13h37m31.6s 56.3N 153.6W				
h=15km mb=4.8 Ms=4.8				
Kodiak Island Region				
Aug 8	WDC	Z	iPc	20 10 27.9
		Z	e	20 13 10.9
		Z	e	20 13 21.5
		Z	ePKPPKP	20 38 51.5
	MIN	Z	ePc	20 10 28.0
		Z	e	20 10 40.3
	FHC	Z	ePc	20 10 30.2
	ORV	Z	ePc	20 10 31.8
	MNA	Z	ePc	20 10 32.0
		Z	e	20 10 43.9
		Z	ePKPPKP	20 38 47.8
	CMB	Z	ePc	20 10 39.2
		Z	e	20 10 50.8
		Z	ePKPPKP	20 38 43.4
	BKS	Z	ePc	20 10 43.5
		T	eS+	20 19 53
		R	e	20 20 38
		Z	eScS	20 20 45.2
		Z	e	20 24 19
		R	eSS+	20 24 36
		T	eSSS+	20 27 21
		T	e	20 30 54
		Z	e c	20 33 42
		T	e	20 35 57
		Z	eLrc	20 37 02
		Z	e d	20 39 58
		R	e	20 40 39
			AMP(μm)	PER(s)
		PZ	0.056	000.8
		LZ	1.6	20.
		LN	2.1	20.
		LE	0.89	20.
	FRI	Z	ePc	20 10 43.8
		Z	e	20 10 55.7
		Z	ePKPPKP	20 38 42.6
	BRK	Z	ePc	20 10 44.2
	PCC	Z	ePc	20 10 45.8
	MHC	Z	ePc	20 10 46.4
		T	iS+	20 20 03
		T	iSSS+	20 27 53
		R	e	20 28 46
		R	e	20 34 20
		Z	eLrd	20 36 21
		R	e	20 38 00
		T	e	20 38 27
	GCC	Z	eP	20 10 48.1
	SAO	Z	e(P)	20 10 48.5
		R	e	20 16 40
		R	eS	20 20 02
		T	eScS-	20 20 54
		R	eSS+	20 24 27
		T	e	20 24 52
		T	eSSS-	20 28 09
		Z	e c	20 28 26
		T	e	20 28 48
		T	e	20 34 20
		R	e	20 36 40
		T	i	20 36 56
		R	e	20 37 35
		Z	e c	20 38 04
		T	e	20 38 43
		Z	e c	20 40 50
	LLA	Z	ePc	20 10 49.2
	PRS	Z	ePc	20 10 51.2
	PRI	Z	ePc	20 10 51.4
		Z	e	20 11 03.9
BRK Ms=5.4 Distance=72°				
USGS 19h59m31.9s 63.7N 2.4E				
h=10km mb=5.7 Ms=5.3				
Norwegian Sea				
Aug 9	CMB	Z	eP	11 57 32.0
	FRI	Z	eP	11 57 36.2
	MNA	Z	ePc	11 57 40.4
USGS 11h45m34.8s 19.1N 1[illegible].4E				
h=200km				
Mariana Islands				
Aug 9	WDC	Z	ePc	17 04 40.6
	MIN	Z	ePc	17 04 43.4
	ORV	Z	ePc	17 04 45.6
	MHC	Z	e(P)	17 04 51.8
	CMB	Z	ePc	17 04 53.4
	PRS	Z	ePc	17 04 54.9

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DATE	STA	CMP	PHASE	TIME (UTC)
	FRI	Z	eP	17 04 57.8
	PRI	Z	eP	17 04 58.1
	MNA	Z	eP	17 04 59.0
USGS 16h51m36.6s 24.2N 122.3E				
h=52km mb=5.3 Ms=4.5				
Taiwan Region				
Aug 10	WDC	Z	eP	02 14 09.5
	MIN	Z	eP	02 14 13.8
	ORV	Z	eP	02 14 17.2
	CMB	Z	eP	02 14 28.8
	PRS	Z	eP	02 14 32.0
	MNA	Z	eP	02 14 36.5
USGS 02h04m25.1s 47.4N 153.0E				
h=120km mb=5.2				
Kurile Islands				
Aug 10	GCC	Z	ePd	04 51 03.7
	PRS	Z	ePd	04 51 05.4
		Z	e	05 22 10.4
	MHC	Z	ePd	04 51 05.7
	BKS	Z	ePd	04 51 05.8
		Z	i	04 51 20
		Z	iPP	04 54 42
		Z	e	04 55 54
		NE	i	05 00 32
		Z	eS	05 01 45.2
		NE	i	05 05 44
		NW	eSSS	05 11 19.8
		NE	eLq	05 13 40
		NE	eLr	05 17 09
		NW	e	05 32 10
		NW	e	05 39 36
		Z	e	05 47 10
		Z	e	08 13 15
		NW	e	09 48 10
		Z	e	12 51 10
			AMP(μm)	PER(s)
		PZ	0.087	001.0
		LZ	190	20.
		LNE	45	20.
		LNW	84	20.
	BRK	Z	eP	04 51 06
		Z	eLr	05 17 20
			AMP(μm)	PER(s)
		LZ	150	20.
	WDC	Z	iPd	04 51 06.4
	LLA	Z	ePd	04 51 07.3
	ORV	Z	ePd	04 51 08.2
	PRI	Z	ePd	04 51 08.3
		Z	e	05 22 13.3
	MIN	Z	ePd	04 51 08.9
	CMB	Z	ePd	04 51 10.5
		Z	ePP	04 54 56.3
		Z	e	05 22 16.0
	FRI	Z	ePd	04 51 12.0
		Z	e	05 22 16.7
	MNA	Z	iPd	04 51 21.5
BRK Ms=7.4 Distance=86°				
USGS 04h38m26.2s 10.4S 160.8E				
h=34km mb=6.1 Ms=7.4				
Solomon Islands				
Aug 10	BKS	Z	ePc	05 09 18.1
			AMP(μm)	PER(s)
		PZ	0.072	000.8
	PRS	Z	eP	05 09 20.7
	MHC	Z	eP	05 09 21.1
	WDC	Z	eP	05 09 21.8
	LLA	Z	eP	05 09 22.5
	ORV	Z	eP	05 09 23.2
	PRI	Z	eP	05 09 23.5
	MIN	Z	eP	05 09 24.0
	CMB	Z	eP	05 09 26.0
	FRI	Z	eP	05 09 27.1
	MNA	Z	eP	05 09 32.4
USGS 04h56m40.2s 10.0S 160.7E				
h=33km mb=5.9				
Solomon Islands				
Aug 10	GCC	Z	eP	05 28 28.5
	BKS	Z	ePd	05 28 28.7
			AMP(μm)	PER(s)
		PZ	0.047	000.9
	PRS	Z	eP	05 28 30.3
	WDC	Z	eP	05 28 31.3
	PRI	Z	eP	05 28 33.1
	MIN	Z	eP	05 28 33.9
	CMB	Z	eP	05 28 35.4
	FRI	Z	eP	05 28 36.6
USGS 05h15m41.5s 9.9S 158.4E				
h=33km mb=5.3				
Solomon Islands				
Aug 10	BKS	Z	ePc	06 51 20.8
			AMP(μm)	PER(s)
		PZ	0.11	000.7
	GCC	Z	ePc	06 51 20.9
	BRK	Z	ePc	06 51 21.2
	SAO	Z	e(P)	06 51 22.6
		Z	i	06 51 35.6
	PRS	Z	ePc	06 51 22.6
	MHC	Z	ePc	06 51 22.9
	WDC	Z	ePc	06 51 23.5
		Z	e	06 51 32.1
	LLA	Z	ePc	06 51 24.5
	PRI	Z	ePc	06 51 25.5
		Z	i	06 51 37.7
	ORV	Z	eP	06 51 25.6
	MIN	Z	ePc	06 51 26.0
	CMB	Z	ePc	06 51 27.8
		Z	ePP	06 55 12.5
	FHC	Z	e	06 51 28.3
	FRI	Z	ePc	06 51 29.0
	MNA	Z	ePc	06 51 36.9
		Z	epP	06 52 04.0
		Z	ePP	06 55 13.5
USGS 06h38m42.9s 10.2S 160.9E				
h=39km mb=5.8 Ms=6.6				
Solomon Islands				
Aug 10	WDC	Z	eP	07 31 12.0
	PRI	Z	eP	07 31 12.4
	CMB	Z	e(P)	07 31 13.7
	MIN	Z	e(P)	07 31 15.8
	FRI	Z	eP	07 31 16.9
	MNA	Z	eP	07 31 19.4
USGS 07h18m30.7s 9.8S 160.2E				
h=33km mb=5.2				
Solomon Islands				
Aug 10	PRS	Z	ePc	08 42 16.5
	MHC	Z	ePc	08 42 16.7
	WDC	Z	ePc	08 42 17.5
	SAO	Z	e(P)	08 42 17.6
	PRI	Z	e(P)	08 42 18.1
	CMB	Z	ePc	08 42 21.6
	MIN	Z	eP	08 42 22.0
	FRI	Z	ePc	08 42 22.7
	MNA	Z	ePc	08 42 30.8
USGS 08h29m35.1s 10.3S 160.8E				
h=33km mb=4.8				
Solomon Islands				
Aug 10	LLA	Z	e(P)	09 42 26.9
	FRI	Z	eP	09 42 33.7
	CMB	Z	ePc	09 42 34.9
	ORV	Z	eP	09 42 36.0
	WDC	Z	ePc	09 42 36.3
	MIN	Z	e(P)	09 42 38.1
	MNA	Z	eP	09 42 43.0
USGS 09h30m59.2s 24.4S 179.8E				
h=511km mb=4.2				
South of Fiji Islands				
Aug 10	BKS	Z	ePd	10 47 12.8
		E	eS	10 57 36.0
		Z	eLr	11 13 35
			AMP(μm)	PER(s)
		PZ	0.022	000.7
		LZ	2.3	20.
		LN	0.82	20.
		LE	1.9	20.
	SAO	Z	e(PKP)	10 47 13.2
	BRK	Z	e(PKP)	10 47 13.4
	PRI	Z	ePKP	10 47 16.8
	MHC	Z	ePKP	10 47 17.0
	WDC	Z	ePKP	10 47 17.5
	FRI	Z	ePKP	10 47 20.8
	CMB	Z	ePKP	10 47 21.0
	MNA	Z	ePKPc	10 47 27.5
BRK Ms=5.5 Distance=86°				
USGS 10h34m32.7s 10.1S 160.5E				
h=35km mb=5.6 Ms=5.3				
Solomon Islands				
Aug 10	PRS	Z	e(P)	10 55 37.9
	CMB	Z	eP	10 55 44.1
	FRI	Z	eP	10 55 44.3
	MNA	Z	e(P)	10 55 55.0
USGS 10h42m56.5s 10.4S 160.7E				
h=33km mb=4.7				
Solomon Islands				
Aug 10	PRI	Z	ePc	11 57 25.1
	PRS	Z	eP	11 57 26.6
	LLA	Z	eP	11 57 27.7
	FRI	Z	eP	11 57 29.0
	GCC	Z	eP	11 57 31.6
	MHC	Z	eP	11 57 34.1
	CMB	Z	ePc	11 57 37.0
	MNA	Z	ePc	11 57 38.7
	BRK	Z	eP	11 57 39.4
	BKS	Z	ePd	11 57 39.9
		N	eS	12 06 34.4
		N	eLq	12 14 19
		N	eLr	12 18 02
			AMP(μm)	PER(s)
		PZ	0.66	002.2
		LZ	11	20.
		LN	12	20.
		LE	2.5	20.
	ORV	Z	eP	11 57 46.7
	MIN	Z	ePc	11 57 51.0
	WDC	Z	e(P)	11 57 53.5
BRK Ms=6.1 Distance=69°				
USGS 11h46m46.7s 28.2S 112.6W				
h=10km mb=5.9 Ms=5.9				
Easter Island Region				
Aug 10	PCC	Z	eP	13 23 37.6
	BKS	Z	ePc	13 23 37.9
		Z	eS	13 33 45.6
			AMP(μm)	PER(s)
		PZ	0.18	000.8
		LZ	21	20.
		LN	11	20.
		LE	15	20.
	GCC	Z	eP	13 23 38.2
	BRK	Z	ePc	13 23 39.0
		Z	e	13 24 15.0
		Z	eS	13 33 52
		Z	ePS	13 34 47
		Z	eSS	13 39 47
		Z	eLq	13 46 40
		Z	eLr	13 49 23
	PRS	Z	eP	13 23 39.5
		Z	ePKPPKP	13 49 58.0
	FHC	Z	e(P)	13 23 39.5
	SAO	Z	eP	13 23 39.8
	LLA	Z	e(P)	13 23 40.3
	MHC	Z	ePc	13 23 40.6
		Z	ePKPPKP	13 49 59.4
	PRI	Z	ePc	13 23 42.2
	WDC	Z	ePc	13 23 43.5
		Z	ePKPPKP	13 49 54.6
	ORV	Z	ePc	13 23 44.9
		Z	ePKPPKP	13 49 53.0
	CMB	Z	ePc	13 23 46.0
		Z	eP	13 23 51
		Z	e	13 34 10
		Z	ePS	13 36 11
		Z	eLq	13 46 51
		Z	ePKPPKP	13 49 53.5
		Z	eLr	13 50 15
	FRI	Z	ePc	13 23 46.5
		Z	ePKPPKP	13 49 50.5
	MIN	Z	ePc	13 23 55.0
		Z	ePKPPKP	13 49 51.9
	MNA	Z	ePc	13 23 55.0
		Z	ePKPPKP	13 49 50.0
BRK Ms=6.5 Distance=82°				
USGS 13h11m19.4s 14.9S 167.3E				
h=124km mb=6.2				
Vanuatu Islands				
Aug 10	BRK	Z	e(P)	15 47 12.2
	MHC	Z	e(P)	15 47 13.7
	WDC	Z	eP	15 47 17.7
	FRI	Z	eP	15 47 19.7
	PRI	Z	eP	15 47 20.0
	CMB	Z	eP	15 47 21.3
	MNA	Z	eP	15 47 28.7
USGS 15h34m33.1s 10.5S 161.0E				
h=33km mb=4.9 Ms=5.4				
Solomon Islands				
Aug 10	PRI	Z	ePc	16 05 03.5
	FRI	Z	ePc	16 05 04.3
	PRS	Z	ePc	16 05 05.2
	LLA	Z	ePc	16 05 05.8
	GCC	Z	eP	16 05 09.0
	MNA	Z	ePc	16 05 09.5
	MHC	Z	ePc	16 05 09.7
	PCC	Z	ePc	16 05 10.4
	CMB	Z	ePc	16 05 10.6
	BRK	Z	ePc	16 05 12.5
	ORV	Z	ePc	16 05 19.8
	WDC	Z	ePc	16 05 23.8
	FHC	Z	ePc	16 05 28.5
USGS 15h52m26.0s 43.0S 85.8W				
h=10km mb=5.4 Ms=5.2				
West Chile Rise				
Aug 10	ZSP	Z	iPc	17 03 46.0
		Z	iS	17 03 59.1
	BKS	Z	iPc	17 03 46.6
		Z	iS	17 04 02.7
	BRK	Z	eP	17 03 47.3
		Z	eS	17 04 02.4
	ORV	Z	ePd	17 03 49.8
		Z	i	17 03 56.5
	PCC	Z	eP	17 03 51.1
		Z	i	17 03 55.7
	MHC	Z	e(P)	17 03 56.1
	MIN	Z	eP	17 03 58.3
	GCC	Z	eP	17 03 58.3
	WDC	Z	eP	17 04 00.6
	CMB	Z	ePc	17 04 02.2
	SAO	Z	eP	17 04 05.5
	LLA	Z	ePd	17 04 09.9
	PRS	Z	e(P)	17 04 10.2
	FHC	Z	e	17 04 11.9
	FRI	Z	ePc	17 04 17.4
	PRI	Z	ePc	17 04 17.8
	MNA	Z	e(P)	17 04 24.7
BRK 17h03m27.6s 38.8N 122.8W				
h=3km ML=3.4(4) Mo=2.0E21(2)				
The Geysers area, 18 km S of Clear Lake, CA				
Aug 10	FRI	Z	iPc	18 25 17.7
		Z	iS	18 25 36.3
	MNA	Z	ePc	18 25 26.9
	PRI	Z	ePc	18 25 28.8
	LLA	Z	ePc	18 25 31.0
	CMB	Z	ePc	18 25 34.7
		Z	iS	18 26 05.0
	PRS	Z	e(P)	18 25 35.7
	SAO	Z	ePd	18 25 37.6
	MHC	Z	ePd	18 25 41.8
	GCC	Z	e(P)	18 25 43.9
	PCC	Z	e(P)	18 25 50.2
	ZSP	Z	ePc	18 25 51.2
		Z	e	18 26 43.8
	BKS	Z	ePd	18 25 51.3
	BRK	Z	ePc	18 25 52.0
	ORV	Z	e	18 26 02.4
		Z	i	18 26 06.3
	WDC	Z	e	18 26 28.7
BRK 18h24m51.6s 36.4N 118.1W				
h=6km ML=4.6(2)				
19 km S of Lone Pine, CA				
Aug 10	FRI	Z	iPc	18 27 27.8
		Z	iS	18 27 46.3
	MNA	Z	ePc	18 27 38.2
	PRI	Z	iPc	18 27 39.5
	LLA	Z	ePc	18 27 41.4
	CMB	Z	eP	18 27 45.2
		Z	iS	18 28 15.3
	PRS	Z	e(P)	18 27 46.3
	SAO	Z	iPc	18 27 48.0
	MHC	Z	e(P)	18 27 52.0
	GCC	Z	e(P)	18 27 54.2
	BRK	Z	e(P)	18 27 54.6
	ORV	Z	e	18 28 16.6
BRK 18h27m01.5s 36.5N 118.1W				
h=5kmR ML=4.3(2)				
17 km SSW of Lone Pine, CA				
Aug 10	PRS	Z	e(P)	21 31 51.2
	MHC	Z	eP	21 31 51.2
	GCC	Z	e	21 31 53.8
	WDC	Z	ePd	21 31 55.9
	PRI	Z	ePd	21 31 57.8
	ORV	Z	eP	21 31 57.9
	CMB	Z	eP	21 32 00.3
	FRI	Z	eP	21 32 00.7
	MNA	Z	eP	21 32 05.4
USGS 21h19m13.1s 10.2S 160.5E				
h=41km mb=5.2 Ms=5.3				
Solomon Islands				
Aug 10	ORV	Z	eP	21 58 35.8
		Z	eS	21 58 48.4
	BKS	Z	ePd	21 58 43.2
	MHC	Z	e(P)	21 58 48.2
	CMB	Z	eP	21 58 49.0
		Z	eS	21 59 09.5
	WDC	Z	e	21 58 55.5
	MNA	Z	e(P)	21 58 55.8
	GCC	Z	e(P)	21 58 58.8
BRK 21h58m19.3s 39.7N 120.3W				
h=9km Mag=2.2				
40 km NW of Truckee, CA				
Aug 11	MNA	Z	ePc	03 16 02.7
		Z	e	03 16 08.5
	WDC	Z	ePc	03 16 07.7
		Z	e	03 16 13.7
	ORV	Z	ePc	03 16 09.8
		Z	e	03 16 15.8
	CMB	Z	ePc	03 16 13.1
		Z	e	03 16 19.2
	FHC	Z	ePc	03 16 14.4
		Z	e	03 16 20.5
	FRI	Z	ePc	03 16 15.4
		Z	e	03 16 21.4
	MHC	Z	ePc	03 16 21.8
		Z	e	03 16 27.9
	LLA	Z	ePc	03 16 22.6
		Z	e	03 16 28.6
	PRI	Z	ePc	03 16 23.8
		Z	e	03 16 29.7
	PRS	Z	ePc	03 16 25.0
		Z	e	03 16 31.0
	BKS	Z	ePd	03 16 25.2
			AMP(μm)	PER(s)
		PZ	0.069	001.5
		LZ	1.1	20.
		LN	1.6	20.
		LE	1.3	20.
USGS 03h05m40.5s 49.2N 28.4W				
h=10km mb=5.4 Ms=5.2				
North Atlantic Ridge				
Aug 11	WDC	Z	ePKP	13 49 21.8
	CMB	Z	ePKP	13 49 26.2
	MNA	Z	ePKP	13 49 27.3
	FRI	Z	ePKP	13 49 28.0
	PRS	Z	ePKP	13 49 30.0
	PRI	Z	ePKP	13 49 31.0
USGS 13h29m20.6s 18.1S 65.4E				
h=10km mb=5.5 Ms=5.6				
Mascarene Islands Region				
Aug 11	MNA	Z	ePKP	16 23 18.8
	PRI	Z	ePKP	16 23 22.8
	FRI	Z	e	16 23 26.0
USGS 16h04m45.6s 30.0N 51.7E				
h=33km mb=5.7 Ms=6.1				
Southern Iran				
Aug 12	FHC	Z	eP	02 03 22.2
	WDC	Z	ePd	02 03 31.2
		Z	e	02 03 42.9
	MIN	Z	eP	02 03 39.5
	ORV	Z	ePd	02 03 41.3
		Z	e	02 03 53.0
	BRK	Z	e(P)	02 03 47.7
	PCC	Z	ePd	02 03 51.0

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	MHC	Z	eP	02 03 53.7
		Z	e	02 04 04.5
	CMB	Z	ePd	02 03 56.2
		Z	e	02 04 06.3
	PRS	Z	eP	02 04 00.5
		Z	e	02 04 11.5
	LLA	Z	eP	02 04 01.3
		Z	e	02 04 12.1
	FRI	Z	ePd	02 04 05.0
		Z	e	02 04 16.3
	MNA	Z	eP	02 04 05.6
	PRI	Z	eP	02 04 05.7
USGS 01h57m01.9s 53.1N 167.1W				
h=33km mb=4.6				
Fox Islands, Aleutian Islands				
Aug 12	FHC	Z	ePc	05 26 16.7
	WDC	Z	ePc	05 26 20.3
	MIN	Z	ePc	05 26 24.3
	ORV	Z	ePc	05 26 27.2
	BRK	Z	eP	05 26 29.6
	PCC	Z	ePc	05 26 30.0
	GCC	Z	ePc	05 26 33.4
	MHC	Z	ePc	05 26 33.9
	SAO	Z	ePc	05 26 36.0
	CMB	Z	ePc	05 26 36.6
	PRS	Z	ePc	05 26 38.2
	LLA	Z	ePc	05 26 39.2
	PRI	Z	ePc	05 26 41.9
	FRI	Z	ePc	05 26 42.2
	MNA	Z	ePc	05 26 43.9
USGS 05h14m54.1s 35.0N 139.8E				
h=70km mb=5.2				
Near S. Coast of Honshu, Japan				
Aug 12	FRI	Z	ePc	05 39 19.5
	MNA	Z	ePc	05 39 20.7
	PRI	Z	ePc	05 39 21.8
	PRS	Z	ePc	05 39 26.3
	CMB	Z	ePc	05 39 29.1
	MHC	Z	ePc	05 39 33.4
	ORV	Z	eP	05 39 43.9
	MIN	Z	ePc	05 39 47.6
	WDC	Z	e(P)	05 39 51.3
	FHC	Z	ePc	05 40 02.4
USGS 05h32m45.2s 14.1N 92.3W				
h=65km mb=4.8				
Near Coast of Chiapas, Mexico				
Aug 12	PRI	Z	iPd	14 41 02.4
	LLA	Z	ePc	14 41 08.5
	PRS	Z	ePd	14 41 11.7
	FRI	Z	iPd	14 41 13.4
		Z	iS	14 41 23.5
		Z	i	14 41 25.0
	SAO	Z	iPc	14 41 15.5
	MHC	Z	ePd	14 41 22.6
		N	e(S)	14 41 50.1
	GCC	Z	ePc	14 41 23.4
	CMB	Z	iPc	14 41 27.5
	PCC	Z	e	14 41 34.2
	BKS	Z	e	14 41 39
	ORV	Z	ePc	14 41 51.2
BRK 14h40m57.8s 36.2N 120.4W				
h=10km ML=3.3(4)				
8 km NW of Coalinga, CA				
Aug 12	ARC	E	iPd	19 36 58.6
		E	iS	19 37 10.2
	FHC	Z	iPc	19 37 28.2
		Z	i	19 37 34.4
		Z	i	19 37 36.0

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		Z	iS	19 37 40.0
		Z	i	19 37 54.4
	WDC	Z	iPc	19 37 43.7
		Z	i	19 37 54.1
		Z	i	19 38 03.1
		Z	i	19 38 15.2
	MIN	Z	iPc	19 37 53.8
	ORV	Z	ePc	19 37 57.2
	BRK	Z	iPc	19 38 04.7
	BKS	Z	iPc	19 38 04.91
		Z	e	19 38 45.7
		E	eS	19 38 46.6
	PCC	Z	iPd	19 38 07.8
	CMB	Z	iPd	19 38 20.4
	PRS	Z	eP	19 38 26.8
	LLA	Z	e(P)	19 38 27.8
	FRI	Z	iPc	19 38 35.6
BRK 19h37m10.8s 40.7N 125.2W				
h=11km ML=4.4(6) Mo=2.5E22(2)				
Off Coast 100 km WSW of Eureka, CA				
Aug 13	BKS	Z	iPc	02 23 52.9
		T	eS	02 23 58.40
	BRK	Z	iPc	02 23 53.1
		Z	iS	02 23 59.4
	ZSP	Z	eP	02 23 53.2
	MHC	Z	iPd	02 23 56.2
		T	iS+	02 24 03.90
	PCC	Z	iPc	02 23 56.8
	GCC	Z	eP	02 24 01.3
		Z	eS	02 24 12.5
	CMB	Z	eP	02 24 05.5
		Z	eS	02 24 19.7
	SAO	Z	eP	02 24 06.8
	ORV	Z	e(P)	02 24 15.4
BRK 02h23m45.8s 37.8N 121.8W				
h=10km ML=2.9(4) Mo=3.6E20(2)				
20 km N of Livermore, CA				
Aug 13	WDC	Z	ePKP	06 00 00.0
		Z	e(SKP)	06 04 16.7
	ORV	Z	ePKP	06 00 05.0
		Z	eSKP	06 04 18.6
	CMB	Z	ePKP	06 00 10.1
		Z	eSKP	06 04 21.8
	FRI	Z	ePKP	06 00 14.7
	BKS	Z	eLr	06 34 30
			AMP(μm)	PER(s)
		LZ	0.54	20.
		LN	0.0	20.
		LE	0.54	20.
USGS 05h46m15.1s 4.8N 125.7E				
h=143km mb=5.6				
Talaud Islands				
Aug 13	GCC	Z	eP	14 28 07.6
	ORV	Z	eP	14 28 08.5
	CMB	Z	eP	14 28 08.8
	WDC	Z	eP	14 28 10.0
	MIN	Z	eP	14 28 12.0
	FRI	Z	e(P)	14 28 20.8
	BKS	N	e	14 37 46
		Z	e	14 38 28
		N	e	14 47 36
			AMP(μm)	PER(s)
		LZ	2.7	20.
		LN	2.0	20.
		LE	2.0	20.
USGS 14h16m20.8s 18.5S 175.6W				
h=33km mb=4.9 Ms=5.3				
Tonga Islands				

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Aug 13	PRS	Z	eP	16 33 08.1
	WDC	Z	eP	16 33 10.4
		Z	e	16 34 38.1
	CMB	Z	e(P)	16 33 13.6
	FRI	Z	eP	16 33 14.8
		Z	e	16 34 36.2
			AMP(μm)	PER(s)
		LZ	0.89	20.
		LN	0.36	20.
		LE	0.89	20.
USGS 16h20m26.0s 10.0S 160.1E				
h=33km mb=5.2 Ms=4.8				
Solomon Islands				
Aug 13	WDC	Z	eP	17 21 20.5
	ORV	Z	eP	17 21 36.9
	CMB	Z	eP	17 22 00.2
	FRI	Z	eP	17 22 15.4
USGS 17h19m44.9s 44.2N 129.4W				
h=10km mb=4.6				
Off Coast of Oregon				
Aug 13	FHC	Z	ePc	18 49 06.1
	WDC	Z	ePc	18 49 12.1
	MIN	Z	ePc	18 49 17.1
	ORV	Z	e(P)	18 49 21.7
	CMB	Z	ePc	18 49 39.0
	MHC	Z	ePc	18 49 45.0
	FRI	Z	e(P)	18 49 46.6
	PRI	Z	e(P)	18 49 54.3
	BKS	Z	eLr	18 56 45
			AMP(μm)	PER(s)
		LZ	0.71	20.
		LN	0.54	20.
		LE	0.71	20.
USGS 18h43m51.5s 60.0N 146.6W				
h=15km mb=4.9 Ms=4.5				
Southern Alaska				
Aug 14	FHC	Z	e(P)	09 17 24.5
	WDC	Z	ePc	09 17 32.4
	MIN	Z	ePc	09 17 38.4
	ORV	Z	eP	09 17 42.2
	CMB	Z	ePc	09 17 56.9
	FRI	Z	ePc	09 18 05.4
	PRI	Z	ePc	09 18 05.5
USGS 09h10m31.6s 52.0N 173.3W				
h=33km mb=4.2				
Andreanof Islands, Aleutian Is.				
Aug 14	FHC	Z	iPc	11 05 29.9
	WDC	Z	iPc	11 05 35.4
		Z	i	11 05 54.8
		Z	i	11 06 02.5
		Z	iPcP	11 06 27.8
		Z	ipP	11 07 36.4
		Z	isP	11 08 49.0
		Z	eS	11 12 38.2
	MIN	Z	iPc	11 05 39.7
	ORV	Z	iPc	11 05 43.6
	BRK	Z	ePc	11 05 49.4
	BKS	Z	iPc	11 05 49.6
		Z	e	11 05 52.6
		Z	e	11 06 05.9
		Z	e	11 06 33.9
		Z	ePcP	11 06 36
		Z	iPP	11 07 48
		Z	epPd	11 07 53
		Z	esPc	11 08 56
		N	eS	11 13 05
		Z	e	11 13 30
		R	i	11 13 37

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		R	i	11 14 11
		N	eScS	11 14 36
		E	esS	11 16 42
		R	i	11 17 10
		Z	e	11 20 09
		Z	e c	11 20 26
			AMP(μm)	PER(s)
		PZ	0.26	1.0
		LZ	3.6	20.
		LN	1.3	20.
		LE	0.71	20.
	PCC	Z	iPc	11 05 50.5
	GCC	Z	iPc	11 05 54.4
	MHC	Z	iPc	11 05 54.5
		Z	epPc	11 07 54
		Z	esPd	11 09 07
		T	iS+	11 13 18
		R	iScS-	11 14 23
		R	e	11 14 45
		T	i	11 14 53
		R	esS+	11 16 59
		T	e	11 18 22
		Z	e c	11 20 12
		R	i	11 20 34
	CMB	Z	iPc	11 05 55.7
		Z	i	11 06 04.3
		Z	i	11 06 10.0
		Z	ipP	11 07 56.5
		Z	e	11 09 17.7
		Z	eScP	11 09 34.2
		Z	eS	11 13 16.8
	SAO	Z	ePc	11 05 57.6
		Z	ePcP	11 06 42
		Z	ipPd	11 08 04
		Z	isPc	11 09 00
		Z	i d	11 09 19
		T	iS+	11 13 23
		Z	e c	11 13 52
		R	e	11 13 59
		R	e	11 14 15
		R	eScS+	11 14 50
		T	e	11 15 22
		T	esS+	11 17 11
		R	i	11 17 33
		T	iSS+	11 17 55
		R	e	11 20 28
		Z	e	11 20 55
		T	iG+	11 21 24
	PRS	Z	iPc	11 06 00.3
	LLA	Z	iPc	11 06 00.7
	FRI	Z	iPc	11 06 02.8
	PRI	Z	iPc	11 06 04.3
		Z	e	11 06 34.3
		Z	ePcP	11 06 45.7
		Z	epP	11 08 16.3
BRK Ms=5.1 Distance=58°				
USGS 10h56m57.6s 54.6N 152.7E				
h=644km mb=5.4				
Sea of Okhotsk				
Aug 14	FRI	Z	ePd	13 23 18.0
		Z	e	13 23 40.7
	PRI	Z	ePd	13 23 19.4
		Z	e	13 23 40.2
	LLA	Z	ePd	13 23 22.3
		Z	e	13 23 36.0
		Z	e	13 23 41.7
	PRS	Z	ePd	13 23 22.5
		Z	e	13 23 40.9
	CMB	Z	ePd	13 23 25.4
		Z	e	13 23 44.5
	GCC	Z	ePd	13 23 27.0

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	MHC	Z	ePd	13 23 27.7
		Z	e	13 23 47.0
	BKS	Z	e(P)	13 23 30.9
	BRK	Z	ePd	13 23 31.2
	ORV	Z	iPd	13 23 35.1
		Z	e	13 23 54.4
	MIN	Z	ePd	13 23 37.2
	WDC	Z	iPd	13 23 40.2
		Z	e	13 23 58.2
	FHC	Z	ePd	13 23 47.7
		Z	e	13 24 07.3
USGS 13h11m43.4s 21.8S 70.0W				
h=71km mb=5.1				
Northern Chile				
Aug 14	FRI	Z	ePc	15 06 54.6
	CMB	Z	eP	15 07 04.4
	ORV	Z	e(P)	15 07 15.2
	MIN	Z	e(P)	15 07 17.8
	WDC	Z	e(P)	15 07 22.8
USGS 14h58m24.3s 7.1N 79.6W				
h=33km mb=4.5				
South of Panama				
Aug 14	FRI	Z	iPd	18 05 08.7
		Z	epP	18 05 20.6
	PRI	Z	iPd	18 05 10.0
		Z	ipP	18 05 21.4
	LLA	Z	iPd	18 05 12.5
		Z	ipP	18 05 24.0
	PRS	Z	iPd	18 05 12.7
		Z	epP	18 05 24.5
	SAO	Z	iPd	18 05 14.0
	CMB	Z	iPd	18 05 15.8
		Z	ipP	18 05 27.4
		Z	iS	18 15 21
	GCC	Z	iPd	18 05 17.2
		Z	epP	18 05 28.8
	PCC	Z	iPd	18 05 20.0
		Z	epP	18 05 31.4
	BRK	Z	iPd	18 05 21.0
		Z	epP	18 05 32.7
		Z	iS	18 15 28
		Z	eLr	18 31 50
	BKS	Z	iPd	18 05 21.0
		Z	e	18 05 30.4
		Z	e	18 05 31.2
		Z	i	18 05 32.8
		Z	ePP	18 08 44
		Z	e	18 09 55
		E	iS	18 15 28
		NW	e	18 16 20
		NW	ePPS	18 16 54
		Z	e	18 16 58
		Z	e	18 20 40
		NW	eSS	18 21 04
		Z	eLr	18 31 30
			AMP(μm)	PER(s)
		PZ	0.087	1.0
		LZ	13	20.
		LN	19	20.
		LE	7.9	20.
	ORV	Z	iPd	18 05 25.1
		Z	ipP	18 05 36.7
	MIN	Z	iPd	18 05 27.1
		Z	ipP	18 05 39.0
	WDC	Z	iPd	18 05 30.3
		Z	ipP	18 05 41.9
	FHC	Z	iPd	18 05 37.0
BRK Ms=6.5 Distance=81°				
USGS 17h53m09.8s 27.3S 71.1W				
h=32km mb=5.7 Ms=6.5				

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Near Coast of Northern Chile				
Aug 14	FRI	Z	eP	20 04 54.2
	CMB	Z	eP	20 04 58.0
		Z	e(S)	20 05 45
	ORV	Z	eP	20 05 07.6
	LLA	Z	eP	20 05 09.1
	PRI	Z	eP	20 05 09.5
	MIN	Z	e(P)	20 05 10.7
	MHC	Z	eP	20 05 14.3
		Z	eS	20 07 20
	SAO	Z	eP	20 05 14.6
	PRS	Z	e(P)	20 05 14.9
	BKS	Z	eP	20 05 18.9
		Z	e	20 06 00.4
		N	eS	20 07 48
		Z	eLr	20 08 40
	BRK	Z	ePd	20 05 19.4
	GCC	Z	ePd	20 05 19.4
	WDC	Z	i	20 05 20.2
	PCC	Z	ePd	20 05 21.9
	FHC	Z	eP	20 05 35.8
BRK ML=6.0(6)				
USGS 20h03m03.9s 39.1N 110.9E				
h=10km mb=5.5				
Eastern Utah				
Aug 15	FHC	Z	ePc	10 13 16.4
	WDC	Z	ePc	10 13 20.4
	MIN	Z	iPc	10 13 23.5
	ORV	Z	ePc	10 13 25.2
	BRK	Z	ePc	10 13 25.8
	BKS	Z	e(P)	10 13 26.2
		E	eSKS	10 23 48
		E	e	10 24 08
		E	ePS	10 26 28
		E	e	10 27 20
		E	eSS	10 31 20
		N	e	10 41 45
		N	eLr	10 45 20
			AMP(μm)	PER(s)
		PZ	0.069	1.2
		LZ	2.1	20.
		LN	0.89	20.
		LE	2.1	20.
	GCC	Z	ePc	10 13 27.7
	PRS	Z	ePc	10 13 31.3
	CMB	Z	ePc	10 13 31.6
		Z	ePP	10 16 15.5
		Z	ePPP	10 17 49.5
	LLA	Z	ePc	10 13 32.5
	PRI	Z	ePc	10 13 34.8
	FRI	Z	ePc	10 13 35.1
	SAO	Z	eT	12 07 54
BRK Ms=5.7 Distance=100°				
USGS 09h59m24.1s 8.8N 126.3E				
h=52km mb=5.6				
Mindanao, Philippine Islands				
Aug 16	LLA	Z	iPd	00 11 53.8
	PRS	Z	iPc	00 11 55.1
	PRI	Z	iPd	00 11 57.0
		Z	eS	00 12 04.7
	SAO	Z	iPc	00 12 58.3
		T	eS	00 13 06.3
	GCC	Z	eP	00 12 07.2
		Z	eS	00 12 22.2
	MHC	Z	ePc	00 12 09.0
	FRI	Z	eP	00 12 10.2
		Z	eS	00 12 25.7
	PCC	Z	eP	00 12 16.0
	CMB	Z	eP	00 12 18.8

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BRK 00h11m49.2s 36.4N 121.0W				
h=8km ML=2.7(4)				
23 km NE of King City, CA				
Aug 16	PRS	Z	e(P)	04 02 21.1
	WDC	Z	eP	04 02 22.2
	CMB	Z	eP	04 02 26.1
	FRI	Z	eP	04 02 27.6
USGS 03h49m40.7s 10.3S 160.8E				
h=39km mb=4.8 Ms=4.8				
Solomon Islands				
Aug 16	BKS	Z	iPd	07 16 23.14
		Z	i	07 16 24.2
		N	eS	07 16 29.5
	BRK	Z	eP	07 16 23.3
		Z	eS	07 16 30.5
	ZSP	Z	eP	07 16 23.3
		Z	eS	07 16 29.1
	PCC	Z	eP	07 16 29.7
		Z	eS	07 16 41.7
	MHC	Z	eP	07 16 33.7
	ORV	Z	e(P)	07 16 38.1
	CMB	Z	e(P)	07 16 39.5
		Z	eS	07 16 56.7
BRK 07h16m14.4s 38.3N 122.2W				
h=7km ML=2.2(2)				
8 km E of Napa, CA				
Aug 16	FHC	Z	e(P)	10 08 28.4
	WDC	Z	eP	10 08 37.1
	MIN	Z	eP	10 08 42.5
	ORV	Z	eP	10 08 47.6
	CMB	Z	eP	10 09 00.3
	FRI	Z	eP	10 09 08.5
USGS 10h01m09.1s 51.2N 178.2W				
h=33km mb=5.4 Ms=4.8				
Andreanof Islands, Aleutian Is.				
Aug 16	CMB	Z	ePc	22 08 33.7
				AMP(μm) PER(s)
			LZ	0.36 20.
			LN	0.0 20.
			LE	0.36 20.
USGS 21h55m58.5s 13.3N 144.7E				
h=55km mb=4.9				
Mariana Islands				
Aug 17	FHC	Z	iPKPc	02 18 06.7
	WDC	Z	iPKPc	02 18 07.9
		Z	epPKP	02 20 04.4
		Z	isPKP	02 21 27.9
		Z	eSKKP	02 31 42
	MIN	Z	iPKPc	02 18 09.2
	ORV	Z	iPKPc	02 18 10.0
	PCC	Z	iPKPc	02 18 10.7
	BRK	Z	ePKPc	02 18 10.8
	BKS	Z	iPKP	02 18 10.8
		Z	e	02 18 40
		Z	e	02 21 17
		Z	ePS	02 29 56
		E	ePSPS	02 37 05
		E	e	02 37 50
				AMP(μm) PER(s)
			LZ	1.4 20.
			LN	0.54 20.
			LE	1.1 20.
	ZSP	Z	ePKPc	02 18 10.9
	MHC	Z	iPKPc	02 18 12.3
	CMB	Z	iPKPc	02 18 12.9
		Z	ipPKP	02 20 08.9
		Z	isPKP	02 21 27.6

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	iSKKP	02 31 34.0
	PRS	Z	iPKPc	02 18 13.5
	LLA	Z	ePKPc	02 18 14.0
	FRI	Z	iPKPc	02 18 15.0
	PRI	Z	iPKPc	02 18 15.2
	MNA	Z	iPKPc	02 18 16.6
		Z	isPKP	02 21 34.3
BRK Ms=5.5 Distance=123°				
USGS 01h59m07.7s 7.7S 107.2E				
h=27km mb=6.1 Ms=5.8				
Java				
Aug 17	LLA	Z	iPc	03 11 13.4
	SAO	Z	iPc	03 11 14.8
		T	iS+	03 11 19.35
	PRS	Z	iPd	03 11 14.8
		Z	iS	03 11 18.7
	PRI	Z	iPc	03 11 21.1
	GCC	Z	eP	03 11 24.3
	FRI	Z	iPc	03 11 31.5
		Z	iS	03 11 47.8
	CMB	Z	eP	03 11 38.1
	BRK	Z	ePc	03 11 38.4
	BKS	Z	ePc	03 11 38.4
BRK 03h11m09.2s 36.6N 121.2W				
h=4km ML=2.6(2)				
40 km NNW of King City, CA				
Aug 17	FRI	Z	ePc	06 03 35.4
	CMB	Z	iPc	06 03 36.4
	MNA	Z	ePc	06 03 46.0
USGS 05h52m35.6s 17.6S 178.9W				
h=570km mb=4.6				
Fiji Islands Region				
Aug 17	CMB	Z	eP	08 28 32.7
	ORV	Z	iPc	08 28 38.5
	WDC	Z	iPc	08 28 43.4
USGS 08h16m23.0s 27.0S 71.0W				
h=29km mb=5.4				
Near Coast of Northern Chile				
Aug 17	PRS	Z	ePc	09 06 01.4
	BRK	Z	iPc	09 06 02.6
	PRI	Z	iPc	09 06 03.0
	WDC	Z	iPc	09 06 07.3
	ORV	Z	iPc	09 06 07.8
	FRI	Z	iPc	09 06 08.1
	CMB	Z	iPc	09 06 08.2
	MNA	Z	iPc	09 06 16.5
USGS 08h53m17.2s 21.2S 168.7E				
h=41km mb=4.8				
Loyalty Islands				
Aug 17	PRI	Z	ePc	11 46 50.6
	LLA	Z	ePc	11 46 53.3
	PRS	Z	ePc	11 46 53.5
	CMB	Z	iPc	11 46 56.8
	GCC	Z	ePc	11 46 57.9
	BKS	Z	iPc	11 47 01
		Z	e	11 47 11
		Z	e	11 47 12
		Z	e	11 49 36
		Z	ePP	11 50 10
		N	iS	11 57 10
		N	eScS	11 57 46
		N	e	12 02 18
		N	eSS	12 02 48
		N	eSSS	12 06 20
		N	eLq	12 08 48
		Z	eLr	12 13 28
				AMP(μm) PER(s)

DATE	STA	CMP	PHASE	TIME (UTC)
		LZ		2.1 20.
		LN		2.5 20.
		LE		0.0 20.
	MNA	Z	iPc	11 47 06.9
	MIN	Z	ePc	11 47 08.0
	WDC	Z	iPc	11 47 10.9
BRK Ms=5.7 Distance=83°				
USGS 11h34m52.3s 27.0S 70.9W				
h=38km mb=5.5 Ms=5.7				
Near Coast of Northern Chile				
Aug 17	PRI	Z	ePd	12 42 44.5
	CMB	Z	iPd	12 42 47.7
	WDC	Z	iPd	12 42 49.1
	MIN	Z	ePd	12 42 50.6
USGS 12h31m30.6s 21.5S 178.8W				
h=544km mb=4.8				
Fiji Islands Region				
Aug 17	PRI	Z	e	12 50 25.3
	CMB	Z	e	12 50 28.6
	WDC	Z	iPc	12 50 34.6
USGS 12h38m15.5s 26.9S 71.0W				
h=37km mb=5.4 Ms=5.5				
Near Coast of Northern Chile				
Aug 17	PRS	Z	eP	14 38 05.2
	LLA	Z	ePc	14 38 06.6
	CMB	Z	eP	14 38 10.1
	WDC	Z	e(P)	14 38 18.2
	MNA	Z	e	14 38 18.9
	MIN	Z	e(P)	14 38 21.7
USGS 14h26m03.6s 27.1S 71.1W				
h=31km mb=5.2 Ms=4.7				
Near Coast of Northern Chile				
Aug 17	MNA	Z	e(P)	14 59 41.1
	PRS	Z	e(P)	14 59 44
	LLA	Z	eP	14 59 45.6
	CMB	Z	e	14 59 48.6
	ORV	Z	e(P)	15 00 05.2
				AMP(μm) PER(s)
			LZ	1.1 20.
			LN	0.89 20.
			LE	0.36 20.
USGS 14h52m27.2s 12.2N 87.9W				
h=53km mb=5.0 Ms=4.0				
Near Coast of Nicaragua				
Aug 17	MNA	Z	iPc	17 00 32.9
		Z	i	17 01 06.0
	FRI	Z	iPc	17 00 45.3
	CMB	Z	iPc	17 00 53.5
	PRI	Z	iPc	17 00 58.8
	LLA	Z	ePc	17 00 59.3
	SAO	Z	ePc	17 01 04.7
	PRS	Z	iPc	17 01 05.2
	GCC	Z	ePc	17 01 09.8
	ORV	Z	iPc	17 01 11.8
	BRK	Z	ePc	17 01 13.6
	BKS	Z	iPc	17 01 13.6
		Z	i	17 01 24.0
		Z	eLr	17 02 40
		E	iSg	17 02 45.0
	PCC	Z	ePc	17 01 14.3
	MIN	Z	iPc	17 01 19.1
	WDC	Z	iPc	17 01 28.5
	FHC	Z	ePc	17 01 44.8
BRK ML=5.5(6)				
USGS 17h00m00.0s 37.3N 116.3W				
h=0km mb=5.4				
Underground Nuclear Explosion,				

DATE	STA	CMP	PHASE	TIME (UTC)
N.T.S.				
Aug 17	PCC	Z	eP	19 51 38.0
	GCC	Z	ePd	19 51 38.0
	PRS	Z	ePd	19 51 38.3
	SAO	Z	e(P)	19 51 38.9
	BRK	Z	eP	19 51 39.8
	LLA	Z	eP	19 51 40.2
	PRI	Z	iPd	19 51 40.3
	FRI	Z	ePd	19 51 45.7
	CMB	Z	iPd	19 51 46.7
	ORV	Z	ePd	19 51 47.5
	WDC	Z	iPd	19 51 47.9
	MNA	Z	ePd	19 51 55.5
USGS 19h40m35.7s 20.3S 178.1W				
h=547km mb=4.8				
Fiji Islands Region				
Aug 18	PRI	Z	e(P)	07 46 33.5
	FRI	Z	ePc	07 46 34.1
	PRS	Z	ePc	07 46 35.1
	LLA	Z	ePc	07 46 35.7
	GCC	Z	ePc	07 46 38.7
	MNA	Z	ePc	07 46 39.8
	CMB	Z	ePc	07 46 40.7
	BRK	Z	ePc	07 46 43.0
	ORV	Z	ePc	07 46 49.2
	MIN	Z	e(P)	07 46 54.2
	WDC	Z	ePc	07 46 56.5
USGS 07h33m57.3s 42.8S 85.6W				
h=10km mb=5.2				
West Chile Rise				
Aug 19	WDC	Z	eP	09 10 19.8
	MIN	Z	eP	09 10 23.2
	ORV	Z	ePc	09 10 24.3
	BRK	Z	eP	09 10 24.5
	BKS	Z	ePc	09 10 24.8
				AMP(μm) PER(s)
		PZ		0.033 0.7
	MHC	Z	ePc	09 10 28.2
	CMB	Z	ePc	09 10 31.6
	FRI	Z	ePc	09 10 35.6
	MNA	Z	eP	09 10 39.9
USGS 08h58m59.8s 18.5N 145.3E				
h=471km mb=4.8				
Mariana Islands				
Aug 19	FRI	Z	eP	10 48 53.8
	PRS	Z	e(P)	10 48 59.2
	MNA	Z	eP	10 48 59.9
	CMB	Z	eP	10 49 05.0
	BKS	Z	eLr	10 56 10
				AMP(μm) PER(s)
		LZ		1.3 20.
		LN		0.89 20.
		LE		0.71 20.
USGS 10h43m53.5s 18.0N 105.3W				
h=33km mb=4.8				
Off Coast of Jalisco, Mexico				
Aug 19	FHC	Z	ePc	18 23 01.3
	WDC	Z	iPc	18 23 05.3
	MIN	Z	ePc	18 23 09.0
	ORV	Z	iPc	18 23 10.6
	BKS	Z	ePc	18 23 15.5
	GCC	Z	ePc	18 23 15.7
	MHC	Z	iPc	18 23 16.5
	CMB	Z	iPc	18 23 18.3
	PRS	Z	ePc	18 23 19.8
	LLA	Z	ePc	18 23 20.4
	PRI	Z	iPc	18 23 22.9

DATE	STA	CMP	PHASE	TIME (UTC)
	FRI	Z	iPc	18 23 22.9
	MNA	Z	iPc	18 23 24.3
USGS 18h10m08.9s 24.7N 122.5E				
h=98km mb=5.2				
Taiwan Region				
Aug 19	FRI	Z	ePKPc	18 47 19.0
	MNA	Z	iPKPc	18 47 20.1
	CMB	Z	iPKPc	18 47 21.3
	MHC	Z	iPKPc	18 47 21.9
	BKS	Z	iPKPc	18 47 23.5
	MIN	Z	iPKPc	18 47 25.3
	WDC	Z	iPKPc	18 47 26.1
USGS 18h28m18.9s 60.9S 23.4W				
h=14km mb=5.6 Ms=5.4				
South Sandwich Islands Region				
Aug 20	SAO	Z	ePc	08 32 12.9
	MHC	Z	ePc	08 32 13.8
	BKS	Z	iPc	08 32 14.74
		N	ePPd	08 35 32.4
		N	iS	08 42 41.6
		R	iSKS-	08 42 48.01
		Z	iPS+	08 43 37.80
		N	iPPS	08 43 48.4
		R	i	08 44 29.42
		N	iSS	08 48 05.0
		N	eLq	08 54 08.2
		N	eG	08 54 42.8
		R	eLr+	08 58 24.11
				AMP(μm) PER(s)
			LZ	4.6 20.
			LN	2.9 20.
			LN	2.2 20.
			LE	4.2 20.
			LE	2.1 20.
			LZ	5.5 20.
	MNA	Z	ePc	08 32 30.5
BRK Ms=5.7 Distance=85°				
USGS 08h19m37.6s 16.5S 167.2E				
h=21km mb=5.3 Ms=5.8				
Vanuatu Islands				
Aug 20	MHC	Z	iPc	09 25 48.27
		R	iS+	09 25 50.20
	GCC	Z	iPd	09 25 54.0
		Z	iS	09 26 01.0
	PCC	Z	iPc	09 25 55.7
	BRK	Z	iPc	09 25 58.0
		Z	iS	09 26 09.7
	BKS	Z	iPc	09 25 58.04
		Z	iS	09 26 07.5
	SAO	Z	iPc	09 25 58.95
		T	iS-	09 26 08.45
	ZSP	Z	iPd	09 25 59.6
		Z	iS	09 26 10.6
	LLA	Z	eP	09 26 03.7
	PRS	Z	eP	09 26 05.4
	CMB	Z	eP	09 26 08.4
	PRI	Z	eP	09 26 12.4
	FRI	Z	eP	09 26 14.4
BRK 09h25m45.9s 37.4N 121.8W				
h=7km ML=2.8(4) Mo=1.3E20(2)				
Alum Rock, 11 km NE of San Jose, CA				
Aug 20	CMB	Z	e(P)	20 04 09.0
	MNA	Z	eP	20 04 19.2
	BKS	Z	ePd	20 04 35.1
		Z	ePcPd	20 05 24.8
		N	ePPPd	20 07 34.6
		N	eScS	20 14 11.6
		N	eSS	20 15 11.2

DATE	STA	CMP	PHASE	TIME (UTC)
		E	eLq	20 22 01.2
		Z	eLr	20 25 21.2
				AMP(μm) PER(s)
			LZ	1.4 20.
			LN	1.3 20.
			LE	1.3 20.
BRK Ms=5.0 Distance=48°				
USGS 19h52m43.2s 15.1S 173.5W				
h=33km mb=5.2 Ms=5.2				
Tonga Islands				
Aug 20	BKS	Z	ePdiffd	23 23 40.1
		Z	ePKPd	23 27 07.0
		Z	ePPd	23 28 16.1
		Z	iPPPd	23 30 49.2
		Z	iSKS	23 34 11.2
		Z	iSKKS	23 35 16.0
		Z	iPS	23 37 42.2
		Z	iPPS	23 38 58.0
		Z	iSS	23 43 56.2
		Z	eSPSP	23 44 34.1
		Z	iPKPPKP	23 47 38.4
		Z	eSSS	23 48 22.3
		Z	eG	23 55 12.6
		N	iLq	23 57 44.0
				AMP(μm) PER(s)
			PPZ	0.65 1.6
			LZ	19 20.
			LN	21 20.
			LE	7.1 20.
		Z	iLr	00 03 22.1
	CMB	Z	ePdiff	23 23 40.9
		Z	e	23 27 03.7
		Z	ePP	23 27 57.3
		Z	epPP	23 28 16.2
		Z	esPP	23 28 37.8
		Z	e	23 39 14
		Z	ePKKP	23 39 47.6
	WDC	Z	e	23 23 49.5
		Z	e	23 27 00.0
		Z	ePP	23 27 35.5
		Z	epPP	23 27 50.0
		Z	esPP	23 28 18.5
		Z	ePKKP	23 39 45.5
	FRI	Z	e(Pdif)	23 24 02.4
		Z	ePP	23 28 26.0
		Z	epPP	23 28 48.5
	MNA	Z	e(Pdif)	23 24 04.4
		Z	ePP	23 28 21.5
		Z	epPP	23 28 37.6
	PRS	Z	e	23 28 27.4
				AMP(μm) PER(s)
			LZ	19 19.
BRK Ms=6.8 Distance=112°				
USGS 23h09m09.6s 26.8N 86.6E				
h=57km mb=6.4 Ms=6.6				
Nepal-India Border Region				
Aug 21	FRI	Z	eP	08 30 14.5
		Z	e	08 30 15.9
	CMB	Z	eP	08 30 15.6
		Z	e	08 30 27.5
	MNA	Z	eP	08 30 23.4
		Z	e	08 30 34.8
	WDC	Z	e	08 30 24.5
USGS 08h17m21.5s 33.6S 178.6W				
h=38km mb=5.0				
South of Kermadec Islands				
Aug 21	PRI	Z	e(P)	11 19 42.5
	FRI	Z	e	11 19 44.6
	LLA	Z	eP	11 19 49.4

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	PRS	Z	e(P)	11 19 49.6
	MNA	Z	eP	11 19 54.3
	CMB	Z	eP	11 19 59.4
	BKS	Z	iPd	11 20 12.6
		N	iS	11 22 38.4
		N	iLq	11 24 24.2
		N	iLr	11 26 21.6
		Z	ePPd	11 42 22.8
		Z	ePPPc	11 45 09.2
		Z	eSKKKS	11 48 59.2
			AMP(μm)	PER(s)
		PZ	0.95	2.0
		LZ	13	20.
		LN	13	20.
		LE	14	20.
	ORV	Z	eP	11 20 21.1
	MIN	Z	e(P)	11 20 28.9
	WDC	Z	eP	11 20 34.6
			AMP(μm)	PER(s)
		PZ	17	18.

BRK Ms=5.2 Distance=15°
USGS 11h15m49.5s 23.4N 108.4W
h=10km mb=5.3 Ms=5.2
Gulf of California

Aug 21	CMB	Z	eP	11 55 03.0
	MNA	Z	eP	11 55 07.1

USGS 11h44m24.4s 44.6N 149.5E
h=52km mb=5.0
Kurile Islands

Aug 21	PRS	Z	e(P)	12 29 26.8
	FRI	Z	eP	12 29 26.9
	MHC	Z	eP	12 29 31.7
	CMB	Z	eP	12 29 34.8
	MNA	Z	eP	12 29 36.8
	WDC	Z	eP	12 29 51.8
	MIN	Z	e(P)	12 29 52.0

USGS 12h18m54.9s 26.5S 112.7W
h=10km mb=5.1 Ms=5.3
Easter Island Region

Aug 21	PRI	Z	eP	14 04 19.8
	FRI	Z	eP	14 04 20.6
	PRS	Z	eP	14 04 21.6
	LLA	Z	eP	14 04 22.1
	GCC	Z	eP	14 04 25.4
	MNA	Z	eP	14 04 25.6
	MHC	Z	eP	14 04 26.0
	CMB	Z	ePc	14 04 27.2
	BKS	Z	ePc	14 04 30.4
	ORV	Z	eP	14 04 35.9
	WDC	Z	eP	14 04 40.9

USGS 13h51m42.8s 42.9S 85.8W
h=10km mb=5.9 Ms=5.4
West Chile Rise

Aug 22	WDC	Z	i	05 33 03.5
	CMB	Z	eP	05 33 32.7
	FRI	Z	eP	05 33 40.9
	MNA	Z	ePd	05 33 42.1

USGS 05h26m19.6s 52.5N 170.7W
h=33km mb=4.9 Ms=4.2
Fox Islands, Aleutian Islands

Aug 22	PRS	Z	eP	10 51 18.7
	GCC	Z	eP	10 51 18.7
	PRI	Z	e(P)	10 51 20.4
	MHC	Z	eP	10 51 21.0
	FRI	Z	eP	10 51 25.8
	CMB	Z	ePc	10 51 26.9
	ORV	Z	eP	10 51 27.7
	WDC	Z	ePc	10 51 28.1
	MIN	Z	eP	10 51 29.8
	MNA	Z	eP	10 51 35.3

USGS 10h40m14.8s 22.1S 179.8W
h=673km mb=4.9
South of Fiji Islands

Aug 22	PRS	Z	ePc	11 24 42.1
	GCC	Z	ePc	11 24 42.3
	PCC	Z	iPc	11 24 42.5
	SAO	Z	eP	11 24 42.8
	PRI	Z	iPc	11 24 44.0
	LLA	Z	ePc	11 24 44.3
	BRK	Z	ePc	11 24 44.3
	BKS	Z	ePc	11 24 44.4
	MHC	Z	ePc	11 24 44.8
	FRI	Z	ePc	11 24 49.3
		Z	e	11 24 58.7
	CMB	Z	ePc	11 24 50.4
		Z	e	11 25 00.2
	WDC	Z	ePc	11 24 51.2
		Z	e	11 25 00.8
	ORV	Z	ePc	11 24 51.9
	MIN	Z	ePc	11 24 54.1
	MNA	Z	iPc	11 24 59.2
		Z	e	11 25 08.9

USGS 11h12m43.9s 24.0S 176.8W
h=101km mb=5.6
South of Fiji Islands

Aug 22	ARC	E	eP	12 49 47.6
		E	iS	12 49 53.1
	FHC	Z	iPc	12 49 48.4
		Z	iS	12 49 55.2
	WDC	Z	iPc	12 50 04.1
		Z	eS	12 50 22.7
	MIN	Z	iPc	12 50 14.5
		Z	eS	12 50 40.8
	ORV	Z	ePc	12 50 18.9

BRK 12h49m39.3s 40.7N 124.6W
h=23km ML=3.3(1)
Off Coast 38 km WSW of Eureka, CA

Aug 22	PRS	Z	ePc	14 05 23.9
	MHC	Z	e(P)	14 05 26.9
	FRI	Z	ePc	14 05 32.1
	CMB	Z	eP	14 05 32.2
	ORV	Z	e(P)	14 05 33.7
	WDC	Z	eP	14 05 34.1
	MIN	Z	e(P)	14 05 37.2
	MNA	Z	ePc	14 05 43.3

USGS 13h54m06.0s 16.1S 172.7W
h=33km mb=4.9 Ms=4.9
Samoa Islands Region

Aug 23	FHC	Z	e(P)	04 20 36.3
		Z	e	04 20 48.3
	WDC	Z	e(P)	04 20 43.6
		Z	e	04 20 55.5
	MIN	Z	e(P)	04 20 48.1
		Z	e	04 21 00.1
	ORV	Z	eP	04 20 51.6
		Z	e	04 21 03.6
	CMB	Z	eP	04 21 03.8
		Z	i	04 21 15.8
	PRS	Z	e(P)	04 21 06.8
		Z	e	04 21 18.8
	FRI	Z	e(P)	04 21 11.2
		Z	e	04 21 23.0
	MNA	Z	ePc	04 21 11.6
		Z	e	04 21 23.5

USGS 04h11m05.3s 49.1N 155.2E
h=42km mb=5.1 Ms=4.5
Kurile Islands

Aug 23	MHC	N	iPc	06 30 24.5
		N	iSd	06 30 27.1
	GCC	Z	iPd	06 30 30.2
		Z	eS	06 30 36.3
	PCC	Z	iPc	06 30 30.8
	BRK	Z	ePc	06 30 32.8
		Z	eS	06 30 42.2
	BKS	Z	ePc	06 30 32.9
		E	eS	06 30 42.1
	ZSP	Z	ePc	06 30 34.2
		Z	eS	06 30 44.8
	SAO	Z	iPd	06 30 35.7
		R	iS	06 30 46.2
	LLA	Z	eP	06 30 40.7
	PRS	Z	ePc	06 30 42.3
	CMB	Z	eP	06 30 44.0
		Z	e	06 30 58.0
		Z	iS	06 31 01.3
	FRI	Z	ePc	06 30 50.8
	PRI	Z	e	06 30 59.3

BRK 06h30m21.9s 37.4N 121.8W
h=8km ML=2.5(4) Mo=7.5E19(2)
Calaveras Reservoir, 13 km NE of San Jose, CA

Aug 23	PCC	Z	ePd	14 48 13.5
	GCC	Z	ePd	14 48 13.6
	PRS	Z	ePd	14 48 14.0
	SAO	Z	ePd	14 48 14.4
	BRK	Z	ePd	14 48 15.3
	BKS	Z	ePd	14 48 16.1
	PRI	Z	ePd	14 48 16.2
	LLA	Z	eP	14 48 16.2
	MHC	Z	ePd	14 48 16.2
	FHC	Z	eP	14 48 19.4
	FRI	Z	ePd	14 48 21.4
	CMB	Z	iPd	14 48 22.1
	WDC	Z	iPd	14 48 22.8
	ORV	Z	eP	14 48 22.8
	MIN	Z	eP	14 48 24.7
	MNA	Z	ePd	14 48 31.5

USGS 14h37m23.9s 17.9S 178.3W
h=589km mb=5.0
Fiji Islands Region

Aug 23	MNA	Z	iPc	18 30 38.4
		Z	iS	18 31 14.1
	FRI	Z	ePc	18 30 48.9
		Z	iPg	18 30 59.0
		Z	iS	18 31 34.7
	CMB	Z	ePc	18 30 57.9
		Z	i d	18 31 06.4
	PRI	Z	eP	18 30 59.8
	LLA	Z	ePc	18 31 03.9
	PRS	Z	ePc	18 31 08.6
	SAO	Z	e(P)	18 31 08.8
		Z	ePgd	18 31 27.9
		T	e	18 32 20.7
	MHC	Z	eP	18 31 10.1
		Z	iP*c	18 31 17.3
		T	iSg+	18 32 26.8
	ORV	Z	e	18 31 17.9

BRK ML=4.4(2)
USGS 18h29m59.8s 37.0N 116.0W
h=5km mb=3.8
Southern Nevada

Aug 23	WDC	Z	ePKP	20 07 13.8
		Z	e	20 11 26.2
		Z	e	20 11 33.3
	ORV	Z	ePKP	20 07 17.5
		Z	e	20 11 31.5
	BKS	Z	ePKPc	20 07 18.2
		E	ePPS	20 20 10.8
		Z	eSS	20 25 44.2
		E	eLq	20 38 05.2
		E	eLr	20 43 10.0
			AMP(μm)	PER(s)
		LZ	2.4	20.
		LN	0.75	20.
		LE	2.3	20.
	PRS	Z	ePKPc	20 07 18.9
	CMB	Z	ePKPc	20 07 21.8
		Z	e	20 11 32.4
		Z	e	20 11 39.2
	PRI	Z	e(PKP)	20 07 21.9
	FRI	Z	e(PKP)	20 07 24.2
		Z	e	20 11 38.3

BRK Ms=5.9 Distance=121°
USGS 19h53m40.2s 2.5S 138.9E
h=53km mb=5.4
West Irian

Aug 23	FHC	Z	ePc	21 08 33.6
	WDC	Z	iPc	21 08 38.7
	ORV	Z	ePc	21 08 45.6
	CMB	Z	ePc	21 08 55.9
	PRS	Z	ePc	21 08 59.0
	LLA	Z	eP	21 08 59.3
	MNA	Z	ePc	21 09 02.3
	FRI	Z	ePc	21 09 02.9
		Z	e	21 12 17.5

USGS 20h57m59.3s 43.0N 136.0E
h=362km mb=4.2
Eastern Sea of Japan

Aug 24	MIN	Z	eP	05 55 15.3
	ORV	Z	ePc	05 55 19.5
	BRK	Z	ePc	05 55 24.7
	CMB	Z	ePc	05 55 30.8
	PRS	Z	ePc	05 55 35.3
	MNA	Z	ePc	05 55 37.1
	FRI	Z	e(P)	05 55 37.5
	BKS	Z	eLr	06 14 22.8
			AMP(μm)	PER(s)
		LZ	1.1	18.
		LE	0.69	18.

USGS 05h44m49.5s 51.3N 143.3E
h=13km mb=4.5 Ms=4.9
Sakhalin Island

Aug 24	PRI	Z	ePd	09 34 57.0
	MNA	Z	ePd	09 34 57.1
	FRI	Z	eP	09 34 57.6
	LLA	Z	ePd	09 34 59.5
	PRS	Z	ePd	09 34 59.8
	CMB	Z	ePd	09 35 02.5
	SAO	Z	eP	09 35 03.1
	GCC	Z	eP	09 35 04.4
	MHC	Z	ePd	09 35 04.8
	BRK	Z	ePd	09 35 08.1
	ORV	Z	ePd	09 35 12.0
	MIN	Z	ePd	09 35 13.8
	WDC	Z	iPd	09 35 17.0
	FHC	Z	ePd	09 35 24.2

USGS 09h23m21.5s 22.0S 68.3W
h=129km mb=5.0
Chile-Bolivia Border Region

Aug 24	WDC	Z	ePd	09 58 16.8
		Z	e	09 58 25.8
	MIN	Z	eP	09 58 19.5
	CMB	Z	ePd	09 58 23.3
		Z	e	09 58 32.4
	FRI	Z	ePd	09 58 25.3
	MNA	Z	iPd	09 58 31.9
	PRI	Z	e(P)	09 58 35.5

USGS 09h45m12.7s 6.1S 150.9E
h=37km mb=5.0 Ms=4.4
New Britain Region

Aug 24	LLA	Z	iP	16 01 50.2
	PRS	Z	iPd	16 01 51.6
	SAO	Z	iPc	16 01 51.8
		T	eS-	16 01 56.0
	PRI	Z	iPc	16 01 57.6
	GCC	Z	iPd	16 02 01.4
	MHC	Z	iPc	16 02 03.17
		T	iS-	16 02 16.3
	FRI	Z	iPd	16 02 08.4
		Z	iS	16 02 25.0
	PCC	Z	iPd	16 02 10.2
	ZSP	Z	eP	16 02 13.4
	CMB	Z	ePd	16 02 13.8
	BRK	Z	e	16 02 15.0
	BKS	Z	iPc	16 02 15.3
		E	eS	16 02 35.1

BRK 16h01m46.1s 36.6N 121.2W
h=4km ML=3.2(4) Mo=5.9E21(1)
Bear Valley, 37 km NNW of King City, CA

Aug 24	CMB	Z	e(P)	23 56 50.2
	FRI	Z	eP	23 56 51.9
	MNA	Z	eP	23 56 59.0

USGS 23h43m48.8s 7.3S 154.2E
h=39km mb=4.9
Solomon Islands

Aug 25	FHC	Z	ePd	19 47 16.0
		Z	iS	19 47 23.6
	WDC	Z	iPd	19 47 30.2
		Z	i(S)	19 47 49.8
	MIN	Z	i(P)c	19 47 41.0
	ORV	Z	e(P)	19 47 44.0
		Z	e(S)	19 48 12.5

BRK 19h47m05.1s 40.5N 124.6W
h=18km ML=3.4(4) Mo=3.0E20(2)
50 km SW of Eureka, CA

Aug 26	BKS	Z	ePd	00 30 41.8
	PRS	Z	eP	00 30 43.1
	MHC	Z	eP	00 30 43.6
	LLA	Z	eP	00 30 45.1
	CMB	Z	ePd	00 30 48.5
	FRI	Z	eP	00 30 49.7
	MNA	Z	ePd	00 30 57.5

USGS 00h18m10.1s 10.3S 161.0E
h=95km mb=5.2
Solomon Islands

Aug 26	FRI	Z	eP	04 58 19.5
		Z	eS	04 59 12.0
	PRI	Z	eP	04 58 23.9
	MNA	Z	eP	04 58 25.4
		Z	e(S)	04 59 26.6
	LLA	Z	eP	04 58 30.1
	PRS	Z	e(P)	04 58 31.0
	CMB	Z	eP	04 58 37.5
		Z	eS	04 59 46.5
	MHC	Z	e(P)	04 58 38.5

BRK ML=4.0(2)
PAS 04h57m21.5s 34.5N 116.4W

	h=km ML=3.7			
	Southern California			
Aug 26	PRS	Z	e(P)	07 44 38.0
	BKS	Z	iPc	07 44 40.1
		E	ePPP	07 48 57.2
		N	eSS	07 54 00.4
		N	iScS	07 54 59.2
		N	eLq	08 02 15.2
		N	eG	08 03 00.1
		N	eLr	08 05 48.2
			AMP(μm)	PER(s)
		LZ	3.0	20.
		LN	1.8	20.
		LE	2.6	20.
	PRI	Z	eP	07 44 40.5
	MHC	Z	eP	07 44 40.7
	FRI	Z	ePc	07 44 46.1
	CMB	Z	ePc	07 44 46.4
	ORV	Z	eP	07 44 48.9
	WDC	Z	ePc	07 44 49.2
	MIN	Z	ePc	07 44 50.9
	MNA	Z	ePc	07 44 57.5

BRK Ms=5.6 Distance=71°
USGS 07h33m27.3s 15.4S 172.9W
h=77km mb=5.1
Samoa Islands Region

Aug 26	PRI	Z	eP	22 27 43.9
		Z	e	22 27 55.2
	MNA	Z	eP	22 27 45.6
		Z	e	22 27 57.1
	PRS	Z	eP	22 27 46.2
	CMB	Z	eP	22 27 49.7
	ORV	Z	eP	22 27 58.6

USGS 22h15m08.4s 31.1S 70.8W
h=88km mb=5.0
Chile-Argentina Border Region

Aug 27	WDC	Z	eP	01 38 02.1
	BKS	Z	eP	01 38 05.2
		N	eS	01 48 40.0
		Z	eLr	02 12 00
			AMP(μm)	PER(s
		LZ	1.1	20.
		LN	0.89	20.
		LE	1.1	20.
	ORV	Z	e(P)	01 38 06.2
	MHC	Z	eP	01 38 09.5
	PRS	Z	eP	01 38 11.0
	CMB	Z	eP	01 38 12.1
	MNA	Z	eP	01 38 19.5

BRK Ms=5.2 Distance=80°
USGS 01h25m17.6s 11.4N 141.4E
h=33km mb=5.3 Ms=5.6
West Caroline Islands

Aug 27	CMB	Z	eP	03 15 07.1
		Z	e	03 15 17.0
		Z	e	03 16 27.9
	ORV	Z	eP	03 15 07.5
	MNA	Z	eP	03 15 14.5

USGS 03h03m27.1s 34.7N 141.5E
h=45km mb=5.0 Ms=4.7
Off East Coast of Honshu, Japan

Aug 27	MNA			07 12 47
	FRI			07 12 58
	CMB			07 13 02.0
	LLA			07 13 07.5
	PRS	Z		07 13 10.
	MHC	Z		07 13 11.4

International Seismological Centre

DATE	STA	CMP	PHASE	TIME (UTC)
	ORV	Z	e(P)	07 13 19.0
USGS 07h04m38.8s 31.2N 64.8W				
h=10km mb=5.3 Ms=4.1				
North Atlantic Ocean				
Aug 27	PRS	Z	eP	10 14 36.0
	BRK	Z	e(P)	10 14 36.3
	BKS	Z	e(P)	10 14 36.6
			AMP(μm)	PER(s)
		PZ	0.036	0.9
	PRI	Z	eP	10 14 38.3
	WDC	Z	eP	10 14 41.5
	ORV	Z	eP	10 14 42.1
	FRI	Z	eP	10 14 42.5
	CMB	Z	eP	10 14 42.6
	MIN	Z	eP	10 14 43.7
	MNA	Z	eP	10 14 51.1
USGS 10h01m58.3s 20.7S 169.6E				
h=63km mb=5.2				
Vanuatu Islands				
Aug 27	PRS	Z	eP	10 26 49.4
	FRI	Z	eP	10 26 56.7
	CMB	Z	eP	10 26 57.1
	ORV	Z	e(P)	10 26 58.0
	WDC	Z	eP	10 26 58.5
	MIN	Z	eP	10 27 00.3
	MNA	Z	eP	10 27 06.6
	BKS	N	e(S)	10 36 40
		N	e	10 44 24
		Z	eLr	10 49 54
			AMP(μm)	PER(s)
		LZ	2.1	20.
		LN	1.6	20.
		LE	1.4	20.
BRK Ms=5.6 Distance=86°				
USGS 10h15m02.4s 19.7S 176.3W				
h=35km mb=5.3 Ms=5.4				
Fiji Islands Region				
Aug 27	GCC	Z	eP	16 41 31.8
	PRS	Z	ePc	16 41 32.0
	PCC	Z	eP	16 41 32.3
	SAO	Z	eP	16 41 32.7
	BRK	Z	eP	16 41 34.2
	PRI	Z	ePc	16 41 34.3
	LLA	Z	eP	16 41 34.5
	BKS	Z	ePc	16 41 34.5
		E	eS	16 50 50
		E	e(ScS)	16 51 40
		Z	eLr	17 02 12
			AMP(μm)	PER(s)
		PZ	0.28	1.2
		LZ	3.2	20.
		LN	2.1	20.
		LE	2.0	20.
	MHC	Z	ePc	16 41 34.8
	FHC	Z	ePc	16 41 39.5
	FRI	Z	iPc	16 41 40.3
	CMB	Z	iPc	16 41 41.5
	ORV	Z	eP	16 41 42.7
	WDC	Z	iPc	16 41 43.0
	MIN	Z	eP	16 41 45.0
	MNA	Z	iPc	16 41 51.4
BRK Ms=5.5 Distance=72°				
USGS 16h30m16.9s 15.9S 172.1W				
h=27km mb=6.0 Ms=5.4				
Samoa Islands Region				
Aug 28	GCC	Z	eP	17 27 26.1
	PCC	Z	eP	17 27 26.2
	PRS	Z	ePc	17 27 26.4

DATE	STA	CMP	PHASE	TIME (UTC)
	SAO	Z	ePc	17 27 27.0
	BRK	Z	e(P)	17 27 27.7
	MHC	Z	ePc	17 27 27.7
	BKS	Z	e(P)	17 27 27.9
			AMP(μm)	PER(s)
		PZ	0.028	0.8
	PRI	Z	eP	17 27 28.6
	FRI	Z	eP	17 27 33.7
	CMB	Z	ePc	17 27 34.5
	ORV	Z	ePc	17 27 35.4
	WDC	Z	ePc	17 27 35.5
	MIN	Z	ePc	17 27 37.5
	MNA	Z	ePc	17 27 43.4
USGS 17h16m29.2s 20.0S 178.6W				
h=615km mb=4.9				
Fiji Islands Region				
Aug 28	MHC	Z	iPd	22 55 54.0
		T	iS-	22 55 56.3
		E	iPc	22 55 56.8
		E	iS	22 55 58.9
	GCC	Z	ePc	22 55 59.0
		Z	iS	22 56 02.1
	SAO	Z	iPc	22 56 01.8
		T	iS-	22 56 08.6
	PCC	Z	iPc	22 56 04.0
		Z	iS	22 56 15.6
	LLA	Z	ePd	22 56 07.2
	BRK	Z	iPc	22 56 07.2
		Z	iS	22 56 20.2
	BKS	Z	iPc	22 56 07.3
		T	iS-	22 56 19.3
	ZSP	Z	ePc	22 56 08.4
		Z	eS	22 56 20.8
	PRS	Z	iPc	22 56 08.8
	CMB	Z	ePd	22 56 14.7
		Z	iS	22 56 31.6
	PRI	Z	ePc	22 56 15.8
	FRI	Z	ePd	22 56 18.2
		Z	eS	22 56 38.0
	ORV	Z	e(P)	22 56 30.1
		Z	i	22 56 31.5
BRK 22h55m51.7s 37.2N 121.7W				
h=5km ML=3.0(4) Mo=3.3E20(2)				
San Felipe Valley, 23 km SE of San Jose, CA				
Aug 29	MNA	Z	ePc	01 45 04.5
	FRI	Z	eP	01 45 04.6
	LLA	Z	eP	01 45 10.2
	CMB	Z	ePc	01 45 13.2
USGS 01h38m05.7s 13.0N 89.8W				
h=39km mb=4.4				
El Salvador				
Aug 29	PRI	Z	iPc	10 25 50.5
	LLA	Z	iPd	10 25 57.9
		Z	iS	10 26 06.5
	PRS	Z	iPc	10 25 58.1
		Z	iS	10 26 06.7
	SAO	Z	iP	10 26 03.1
	FRI	Z	eP	10 26 09.2
		Z	iS	10 26 23.9
	MHC	Z	eP	10 26 12.5
	GCC	Z	eP	10 26 12.8
	PCC	Z	eP	10 26 19.9
	CMB	Z	ePc	10 26 20.2
		Z	e(S)	10 26 45.7
BRK 10h25m48.3s 36.1N 120.8W				
h=8km ML=2.6(4)				
Peachtree Valley, 34 km SE of King City, CA				

DATE	STA	CMP	PHASE	TIME (UTC)
Aug 29	PRI	Z	e(P)	18 03 04.3
	MNA	Z	ePc	18 03 05.7
	LLA	Z	ePc	18 03 10.7
	CMB	Z	ePc	18 03 14.7
USGS 17h56m11.8s 13.1N 91.0W				
h=20km mb=4.4 Ms=4.0				
Near Coast of Guatemala				
Aug 29	PRI	Z	e(P)	21 43 00.9
		Z	e	21 43 19.1
	MNA	Z	ePc	21 43 02.1
		Z	e	21 43 26.7
	PRS	Z	e(P)	21 43 04.0
	LLA	Z	e(P)	21 43 04.4
	CMB	Z	e(P)	21 43 08.7
	MHC	Z	e(P)	21 43 11.0
	BKS	Z	ePc	21 43 18.8
			AMP(μm)	PER(s)
		PZ	0.025	1.0
	ORV	Z	ePc	21 43 20.6
		Z	e	21 43 45.4
USGS 21h33m22.7s 6.0S 80.0W				
h=66km mb=5.1				
Near Coast of Northern Peru				
Aug 30	FHC	Z	e(P)	14 01 11.1
	WDC	Z	ePc	14 01 16.6
	MIN	Z	iPc	14 01 22.9
	ORV	Z	eP	14 01 29.4
	BRK	Z	ePc	14 01 37.0
	BKS	Z	e(P)	14 01 37.0
			AMP(μm)	PER(s)
		PZ	0.030	1.0
	CMB	Z	ePc	14 01 47.7
	PRS	Z	e(P)	14 01 51.8
	MNA	Z	ePc	14 01 54.4
	FRI	Z	ePc	14 01 58.5
	PRI	Z	ePc	14 02 02.9
USGS 13h56m33.8s 57.1N 142.0W				
h=10km mb=4.7				
Off Coast of Southeastern Alaska				
Aug 30	MNA	Z	iPc	18 00 36.9
	FRI	Z	iPc	18 00 48.2
	CMB	Z	iPc	18 00 57.0
		Z	iPg	18 01 03.5
		Z	iPg	18 01 05
		Z	iS	18 01 47
	PRI	Z	iPc	18 01 00.9
		Z	iP*	18 01 09.5
		Z	iPg	18 01 12.7
		Z	iS*	18 02 05
		Z	iSg	18 02 13
	LLA	Z	iPc	18 01 02.5
	SAO	Z	ePc	18 01 07.1
		Z	iSg	18 01 17
		R	iS+	18 02 18.2
		Z	iSg	18 02 23
	PRS	Z	iPc	18 01 07.5
		Z	iPc	18 01 07.6
	MHC	Z	eP	18 01 10.0
		Z	iPg	18 01 25
		T	eS-	18 02 21.6
		T	i	18 02 22.9
		Z	iSg	18 02 24
	ORV	Z	iPc	18 01 15.9
	ZSP	Z	ePn	18 01 18
		Z	iP*	18 01 29
		Z	iPg	18 01 36
	BKS	Z	eP	18 01 18.4
		Z	iSg	18 02 52

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	eS	18 03 03.6
	MIN	Z	iPc	18 01 23.0
	WDC	Z	iPc	18 01 32.1
		Z	iPg	18 02 00
		Z	iSg	18 03 15
BRK ML=5.1(8)				
USGS 18h00m00.1s 37.1N 116.1W				
h=0km mb=5.0				
Underground Nuclear Explosion, N.T.S.				
Aug 31	PRI	Z	ePc	16 46 46.5
		Z	e(S)	16 47 33.0
		Z	i	16 47 55.9
	FRI	Z	ePc	16 46 48.3
		Z	i	16 47 44.5
		Z	eS	16 47 59.1
		Z	i	16 48 09.9
		Z	i	16 48 22.6
	PRS	Z	e(P)c	16 46 52.9
	LLA	Z	e(P)	16 46 52.9
	SAO	Z	eP	16 46 57.8
		T	e(S)	16 47 53.6
	MNA	Z	eP	16 46 59.4
		Z	i	16 48 56.9
	GCC	Z	ePc	16 47 04.2
	CMB	Z	ePc	16 47 05.1
		Z	e(S)	16 48 26.8
		Z	i	16 48 59.8
	MHC	Z	e(P)	16 47 06.4
		Z	e	16 48 10.6
	BKS	N	eS	16 49 24
	WDC	Z	e	16 50 37.2
BRK ML=5.1(4)				
PAS 16h45m13.4s 31.6N 115.7W				
h=km ML=5.1				
California-Mexico Border Region				
Sep 1	ZSP	Z	iPd	12 29 38.2
		Z	iS	12 29 53.0
		Z	i	12 29 54.4
		Z	i	12 29 56.6
	BRK	Z	iPd	12 29 39.1
		Z	eS	12 29 53.2
	BKS	Z	ePd	12 29 39.2
	ORV	Z	eP	12 29 41.8
	PCC	Z	ePc	12 29 44.5
	MHC	Z	e(P)	12 29 47.5
	MIN	Z	ePc	12 29 52.1
	WDC	Z	e(P)	12 29 52.9
		Z	e	12 29 56.8
	CMB	Z	ePd	12 29 53.8
		Z	i	12 30 20.8
	SAO	Z	ePd	12 29 56.7
BRK 12h29m20.1s 38.8N 122.7W				
h=2kmR ML=3.1(6)				
The Geysers area, 20 km S of Clear Lake, CA				
Sep 1	PRI	Z	e(P)	16 58 18.6
	FRI	Z	eP	16 58 33.0
	MNA	Z	eP	16 58 33.3
	CMB	Z	e(P)	16 58 43.4
USGS 16h52m45.5s 16.6N 99.3W				
h=10km mb=5.0 Ms=4.1				
Near Coast of Guerrero, Mexico				
Sep 2	FHC	Z	eP	10 36 39.4
	WDC	Z	ePc	10 36 46.3
		Z	e	10 36 53.5
		Z	epP	10 36 58.5
	MIN	Z	ePc	10 36 50.8

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	epP	10 37 04.3
	ORV	Z	eP	10 36 54.9
		Z	epP	10 37 08.4
	MHC	Z	eP	10 37 06.5
	CMB	Z	eP	10 37 08.1
		Z	epP	10 37 20.7
	PRS	Z	eP	10 37 12.6
		Z	epP	10 37 26.1
	MNA	Z	eP	10 37 15.8
		Z	epP	10 37 28.3
	FRI	Z	eP	10 37 15.8
		Z	epP	10 37 29.6
	BKS	Z	e(Lr)	10 53 20.0
			AMP(μm)	PER(s)
		LZ	0.89	20.
		LN	0.36	20.
		LE	0.89	20.
BRK Ms=4.7 Distance=52°				
USGS 10h27m48.6s 54.0N 161.5E				
h=48km mb=5.1 Ms=4.9				
Off East Coast of Kamchatka				
Sep 2	FHC	Z	iPd	21 00 07.6
	WDC	Z	iPd	21 00 12.9
	ORV	Z	iPd	21 00 18.7
	BKS	Z	ePd	21 00 20.4
		Z	e	21 00 21.4
			AMP(μm)	PER(s)
		PZ	0.047	0.9
	MHC	Z	iPd	21 00 24.3
	CMB	Z	iPd	21 00 27.2
	PRS	Z	iPd	21 00 27.5
	FRI	Z	iPd	21 00 32.0
	MNA	Z	iPd	21 00 34.6
USGS 20h48m36.4s 27.5N 140.6E				
h=192km mb=5.1				
Bonin Islands Region				
Sep 3	GCC	Z	eP	00 41 05.1
	PRS	Z	eP	00 41 05.2
	PCC	Z	eP	00 41 05.3
	MHC	Z	eP	00 41 07.6
	FRI	Z	eP	00 41 11.9
	CMB	Z	iPc	00 41 13.1
	ORV	Z	eP	00 41 14.4
	WDC	Z	ePc	00 41 14.6
	BKS	Z	ePd	00 41 17.4
			AMP(μm)	PER(s)
		PZ	0.028	0.7
	MNA	Z	eP	00 41 21.3
USGS 00h29m42.5s 23.5S 180.0W				
h=526km mb=5.1				
South of Fiji Islands				
Sep 3	GCC	Z	eP	09 20 27.6
	PCC	Z	eP	09 20 27.8
	PRS	Z	eP	09 20 28.0
	BRK	Z	eP	09 20 29.5
	SAO	Z	e(P)	09 20 29.8
	BKS	Z	ePc	09 20 30.0
			AMP(μm)	PER(s)
		PZ	0.13	1.1
	MHC	Z	eP	09 20 30.2
	PRI	Z	eP	09 20 30.6
	FHC	Z	eP	09 20 33.5
	FRI	Z	ePd	09 20 35.3
	CMB	Z	eP	09 20 36.4
	ORV	Z	eP	09 20 37.1
	WDC	Z	ePd	09 20 37.1
	MIN	Z	eP	09 20 38.5
	MNA	Z	eP	09 20 45.5
USGS 09h09m37.2s 18.3S 178.1W				

DATE	STA	CMP	PHASE	TIME (UTC)
h=591km mb=5.2				
Fiji Islands Region				
Sep 3	MNA	Z	eP	12 13 14.9
	FRI	Z	eP	12 13 21.0
	CMB	Z	eP	12 13 26.5
	LLA	Z	eP	12 13 28.9
	PRS	Z	eP	12 13 31.0
	ORV	Z	eP	12 13 33.8
	MHC	Z	eP	12 13 34.1
	MIN	Z	eP	12 13 34.8
	BKS	Z	e(P)d	12 13 37.7
		Z	e	12 13 46.8
			AMP(μm)	PER(s)
		PZ	0.025	0.9
	WDC	Z	eP	12 13 38.0
	FHC	Z	eP	12 13 48.4
USGS 12h03m53.1s 16.8N 61.1W				
h=56km mb=4.9				
Leeward Islands				
Sep 3	MHC	Z	e(P)	17 09 04.5
	FRI	Z	eP	17 09 09.6
	CMB	Z	eP	17 09 11.3
	ORV	Z	eP	17 09 12.5
	WDC	Z	eP	17 09 13.1
		Z	e	17 09 22.9
	MIN	Z	eP	17 09 14.9
	MNA	Z	eP	17 09 21.2
USGS 16h57m45.6s 16.3S 172.0W				
h=31km mb=5.0 Ms=4.6				
Samoa Islands Region				
Sep 4	WDC	Z	eP	00 43 58.5
	ORV	Z	eP	00 44 04.0
	PCC	Z	eP	00 44 04.4
	GCC	Z	eP	00 44 07.0
	PRS	Z	eP	00 44 10.9
	CMB	Z	eP	00 44 11.4
		Z	e	00 45 11.7
	LLA	Z	eP	00 44 12.3
	BKS	Z	e(P)d	00 44 14.9
			AMP(μm)	PER(s)
		PZ	0.044	0.8
	FRI	Z	eP	00 44 15.9
		Z	e	00 45 16.2
	MNA	Z	eP	00 44 19.4
USGS 00h32m19.2s 22.0N 143.0E				
h=252km mb=5.0				
Mariana Islands Region				
Sep 4	FRI	Z	eP	03 01 14.3
	CMB	Z	eP	03 01 15.3
	ORV	Z	eP	03 01 16.2
	WDC	Z	eP	03 01 16.5
	MIN	Z	eP	03 01 18.4
	MNA	Z	eP	03 01 23.7
USGS 02h49m58.2s 21.9S 179.4W				
h=594km mb=5.3				
Fiji Islands Region				
Sep 4	FHC	Z	ePd	16 00 47.8
	WDC	Z	eP	16 00 52.6
	MIN	Z	eP	16 00 56.3
	ORV	Z	eP	16 00 59.2
	BKS	Z	ePd	16 01 2.9
		Z	e	16 01 12.8
		Z	e(PcP)	16 01 19.4
		N	eS	16 21 0
			AMP(μm)	PER(s)
		PZ	0.035	1.0
	BRK	Z	e(P)	16 01 01.8

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DATE	STA	CMP	PHASE	TIME (UTC)
	MHC	Z	e(P)	16 01 06.7
	CMB	Z	ePd	16 01 08.7
		Z	e	16 01 18.3
		Z	e	16 01 25.4
	PRS	Z	eP	16 01 10.4
		Z	e	16 01 20.2
		Z	e	16 01 27.0
	FRI	Z	eP	16 01 14.0
		Z	e	16 01 23.8
		Z	e	16 01 31.3
	PRI	Z	e(P)	16 01 15.7
	MNA	Z	ePd	16 01 15.8
		Z	e	16 01 25.5
BRK mb=5.4 h=33km Distance=71°				
USGS 15h49m22.3s 35.4N 139.0E				
h=51km mb=5.3 Ms=4.9				
Honshu, Japan				
Sep 5	MNA	Z	ePd	06 21 41.0
	FRI	Z	ePd	06 21 46.3
	CMB	Z	ePd	06 21 53.1
	LLA	Z	ePd	06 21 54.1
	PRS	Z	e(P)	06 21 55.3
	BKS	Z	e(P)c	06 22 4.9
		Z	e	06 22 19.9
		Z	e(PP)	06 24 9
		E	eS	06 29 24.0
		Z	e	06 33 40
		N	e	06 36 00
		E	e	06 37 10
		Z	e	06 37 28
		N	eLg	06 40 8
		E	eLr	06 43 16.4
			AMP(μm)	PER(s)
		PZ	0.056	1.6
		LZ	0.89	20.
		LN	1.1	20.
		LE	0.61	20.
	MHC	Z	ePd	06 22 00.4
		Z	ePP	06 23 43
		T	iS+	06 29 31
		T	iScS+	06 31 34
		T	iSS+	06 33 02
		ZR	e	06 38 15
		T	e +	06 40 04
		R	e	06 41 41
		ZR	e c	06 44 23
	ORV	Z	ePd	06 22 01.6
	MIN	Z	ePd	06 22 02.5
	BRK	Z	e(P)	06 22 04.1
	PCC	Z	ePd	06 22 04.6
	WDC	Z	ePd	06 22 05.8
	FHC	Z	ePd	06 22 19.1
BRK Ms=5.0 Distance=48°				
USGS 06h13m17.4s 18.4N 70.4W				
h=27km mb=5.5 Ms=5.0				
Dominican Republic Region				
Sep 5	PRS	Z	ePc	09 26 32.9
	GCC	Z	ePc	09 26 32.9
	PCC	Z	ePc	09 26 33.2
	SAO	Z	ePc	09 26 33.9
	BRK	Z	ePc	09 26 34.9
	PRI	Z	ePc	09 26 34.9
	LLA	Z	ePc	09 26 35.1
	BKS	Z	ePd	09 26 35.6
			AMP(μm)	PER(s)
		PZ	0.062	0.9
	MHC	Z	ePc	09 26 35.7
	FRI	Z	ePc	09 26 40.2
		Z	e	09 26 50.0
	FHC	Z	eP	09 26 40.3
	CMB	Z	iPc	09 26 41.6
		Z	e	09 26 51.3
	ORV	Z	ePc	09 26 43.1
	WDC	Z	iPc	09 26 43.6
	MIN	Z	ePc	09 26 45.0
	MNA	Z	ePc	09 26 50.7
USGS 09h14m49.8s 22.2S 176.1W				
h=146km mb=5.3				
South of Fiji Islands				
Sep 5	LLA	Z	iPd	18 43 32.2
	PRS	Z	iPd	18 43 36.2
	SAO	Z	iPc	18 43 36.8
		R	i -	18 43 38.39
		T	i +	18 43 46.60
	PRI	Z	iPd	18 43 40.3
	GCC	Z	iPc	18 43 45.4
	MHC	Z	ePc	18 43 46.6
		Z	i c	18 43 46.85
		Z	e(P)d	18 43 47.09
		T	eS-	18 44 00.14
	FRI	Z	ePd	18 43 50.3
		Z	i	18 44 03.3
		Z	i	18 44 05.1
	PCC	Z	ePd	18 43 53.5
	CMB	Z	ePc	18 43 56.6
	BKS	Z	iPd	18 43 56.83
		N	eS	18 44 19.4
	BRK	Z	eP	18 43 57.0
BRK 18h43m29.7s 36.6N 121.1W				
h=8km ML=2.9(4)				
Bear Valley area, 38 km NE of King City, CA				
Sep 5	PRI	Z	ePd	20 16 13.5
	MNA	Z	ePd	20 16 13.9
	LLA	Z	e(P)	20 16 15.5
	PRS	Z	e(P)	20 16 16.6
	CMB	Z	e(P)	20 16 20.6
	ORV	Z	e(P)	20 16 31.2
	BKS	N	e	20 53 26
		E	e	20 54 46
		E	e	20 58 28.8
		Z	e	21 04 36
USGS 20h07m41.3s 0.8N 87.6W				
h=10km mb=4.7 Ms=4.5				
Galapagos Islands Region				
Sep 6	FHC	Z	e(P)	07 19 17.8
	WDC	Z	ePc	07 19 24.0
	MIN	Z	ePc	07 19 28.4
	ORV	Z	ePc	07 19 31.7
	BRK	Z	e(P)	07 19 36.3
	BKS	Z	e(P)	07 19 37.2
	PCC	Z	e(P)	07 19 37.4
	GCC	Z	eP	07 19 40.7
	CMB	Z	ePc	07 19 43.4
	PRS	Z	ePc	07 19 46.5
	LLA	Z	ePc	07 19 47.0
	MNA	Z	ePc	07 19 51.2
	PRI	Z	eP	07 19 51.3
	FRI	Z	eP	07 19 51.9
USGS 07h09m35.8s 47.4N 152.4E				
h=110km mb=4.5				
Kurile Islands				
Sep 6	PRS	Z	eP	16 00 12.7
	LLA	Z	e(P)	16 00 13.5
	MNA	Z	eP	16 00 17.4
	CMB	Z	ePc	16 00 18.5
USGS 15h47m34.8s 42.9S 85.9W				
h=10km mb=5.2				
West Chile Rise				
Sep 6	FHC	Z	iPc	19 47 27.3
		Z	eS	19 47 30.0
	WDC	Z	eP	19 47 43.8
		Z	eS	19 48 01.7
	MIN	Z	e(P)	19 47 55.0
	ORV	Z	e	19 48 28.3
BRK 19h47m22.8s 40.7N 124.2W				
h=17km Mag=2.8				
6 km SW of Eureka, CA				
Sep 7	FRI	Z	ePd	00 59 54.9
		Z	ePcP	01 02 58.2
	MNA	Z	iPd	00 59 55.4
		Z	ePcP	01 02 57.5
	PRI	Z	ePd	00 59 57.6
	LLA	Z	ePd	01 00 00.7
	PRS	Z	e(P)	01 00 00.7
	CMB	Z	ePd	01 00 04.6
		Z	ePcP	01 03 00.2
	MHC	Z	ePd	01 00 09.1
	ORV	Z	eP	01 00 19.0
	WDC	Z	ePd	01 00 26.7
		Z	ePcP	01 03 07.0
	FHC	Z	ePd	01 00 38.5
USGS 00h54m05.6s 17.8N 94.4W				
h=155km mb=5.0				
Chiapas, Mexico				
Sep 7	FHC	Z	eP	04 29 09.7
	WDC	Z	ePc	04 29 15.5
	MIN	Z	eP	04 29 17.6
	ORV	Z	eP	04 29 20.9
	CMB	Z	ePc	04 29 31.6
		Z	e	04 29 52.1
	PRS	Z	ePc	04 29 34.0
	FRI	Z	eP	04 29 37.8
USGS 04h18m22.3s 41.9N 142.2E				
h=73km mb=5.0				
Hokkaido, Japan, Region				
Sep 7	BRK	Z	eP	08 01 37.7
	MHC	Z	ePc	08 01 38.1
	FRI	Z	ePc	08 01 42.4
	CMB	Z	ePc	08 01 43.5
	ORV	Z	eP	08 01 44.7
	WDC	Z	iPc	08 01 45.1
	MIN	Z	eP	08 01 46.7
	MNA	Z	ePc	08 01 51.5
USGS 07h50m16.6s 24.3S 178.9E				
h=641km mb=4.4				
South of Fiji Islands				
Sep 7	FHC	Z	ePd	12 04 27.1
		Z	iPcP	12 04 32.0
		Z	epP	12 06 32.0
	WDC	Z	iPd	12 04 32.1
		Z	iPcP	12 06 37.1
		Z	eS	12 13 45.0
	MIN	Z	ePd	12 04 35.1
	ORV	Z	ePd	12 04 38.0
	BRK	Z	ePd	12 04 40.0
	PCC	Z	ePd	12 04 40.2
	BKS	Z	ePc	12 04 40.6
		Z	iPcPc	12 04 45.7
		E	epP	12 06 26.0
		Z	e	12 07 12
		Z	esPd	12 07 17.6
		E	e	12 07 45.6
		Z	esPP	12 10 18
		T	eS-	12 13 58.2
		E	eScS	12 14 4.8
		R	iSKS	12 14 04.1
		Z	eSPc	12 14 46.3
		N	e	12 16 9.2
		R	i -	12 16 00.5
		R	isS	12 17 13.8
		R	isPS-	12 17 38.3
		N	esPs	12 17 48
		R	i	12 18 03.4
		Z	e	12 18 20
		E	eSS	12 19 31
		N	eSSS	12 22 56
		Z	iPKKPc	12 22 57.4
		N	eLq	12 25 42.4
		T	eG-	12 25 47.1
		N	e	12 25 56
		Z	ePKPPKPd	12 31 27.3
		Z	iSKPPKPc	12 34 12.9
			AMP(μm)	PER(s)
		PZ	0.21	0.7
	GCC	Z	ePd	12 04 43.1
	MHC	Z	ePd	12 04 43.5
		Z	iPcPc	12 04 48.2
		Z	ipPd	12 06 33.8
		Z	isPc	12 07 25.3
		Z	i(PP)c	12 07 54.0
		Z	epPPc	12 09 32.3
		Z	e(PPP)d	12 10 09.4
		Z	isPPc	12 10 26.0
		T	eS-	12 14 08.8
		Z	iSPc	12 14 54.5
		R	i	12 16 09.1
		R	isPS	12 18 03.6
		R	iSS	12 19 43.0
		Z	iPKKP	12 22 47.6
		T	eG-	12 26 02.7
		Z	iSKPPKPc	12 34 08.7
	SAO	Z	eP	12 04 46.2
		Z	iPcPc	12 04 50.1
		Z	ipPd	12 06 35.7
		Z	isPc	12 07 29.2
		Z	ePPc	12 08 01.1
		Z	isPPc	12 10 28.4
		T	eS-	12 14 11.3
		T	iSKSc	12 14 17.1
		Z	eSPc	12 14 59.9
		R	e	12 16 18.0
		T	i(sPS)-	12 17 33.6
		R	eSS	12 19 50.5
		R	i(SSS)-	12 24 05.7
		R	eG	12 26 23.4
		Z	iSKPPKPc	12 33 59.2
	CMB	Z	iPd	12 04 46.4
		Z	iPcPc	12 04 50.6
		Z	i	12 05 05.4
		Z	ipP	12 06 37.0
		Z	i	12 06 53.4
		Z	isP	12 07 13.0
		Z	e(SP)	12 15 05.2
		Z	ePKPPKP	12 31 27
		Z	eSKPPKP	12 34 09.2
	PRS	Z	ePd	12 04 47.4
	LLA	Z	eP	12 04 48.2
	PRI	Z	eP	12 04 51.1
		Z	iPcP	12 04 56.0
		Z	i	12 05 03.2
		Z	epP	12 06 42.1
			AMP(μm)	PER(s)
		PZ	0.52	1.0
	FRI	Z	ePd	12 04 51.3
	MNA	Z	ePd	12 04 53.3
		Z	iPcP	12 04 57.9
		Z	i	12 05 04.1
		Z	i	12 08 13.0
		Z	eS	12 14 30.5
BRK mb=5.8 h=475km Distance=80°				
USGS 11h53m24.1s 30.2N 137.4E				
h=485km mb=6.1				
South of Honshu, Japan				
Sep 8	MNA	Z	eP	11 18 51.2
	CMB	Z	e(P)	11 18 59.1
	BKS	E	e	11 56 6
		Z	e	12 01 16
USGS 11h13m15.4s 16.9N 100.3W				
h=47km mb=4.5				
Near Coast of Guerrero, Mexico				
Sep 8	FRI	Z	eP	13 00 53.2
	CMB	Z	eP	13 00 54.9
	WDC	Z	e(P)	13 00 57.7
	MNA	Z	eP	13 01 03.4
USGS 12h48m35.3s 26.3S 175.9W				
h=33km mb=5.4				
South of Tonga Islands				
Sep 8	FRI	Z	e(P)	22 40 51.2
	CMB	Z	eP	22 40 52.1
	ORV	Z	e(P)	22 40 56.5
USGS 22h27m53.5s 35.6S 179.7E				
h=86km mb=5.5				
Off E. Coast of N. Island, N.Z.				
Sep 8	PRI	Z	eP	23 17 11.3
		Z	e	23 17 15.1
		Z	eS	23 17 25.3
	FRI	Z	iPd	23 17 15.4
		Z	e	23 17 19.7
	LLA	Z	eP	23 17 18.2
		Z	e	23 17 22.7
	PRS	Z	eP	23 17 19.0
		Z	e	23 17 23.5
	SAO	Z	eP	23 17 24.1
	CMB	Z	eP	23 17 32.7
		Z	e	23 17 38.4
		Z	eS	23 18 10.9
	MNA	Z	eP	23 17 38.2
	BKS	Z	eP	23 17 46.1
BRK ML=4.1(2)				
PAS 23h16m43.0s 35.0N 119.0W				
h=km ML=3.4				
40 km S of Bakersfield, CA				
Sep 9	PRI	Z	eP	05 42 56.7
	MHC	Z	eP	05 42 57.7
	FRI	Z	eP	05 43 01.2
	CMB	Z	eP	05 43 02.8
	WDC	Z	eP	05 43 05.4
	MNA	Z	eP	05 43 10.0
USGS 05h29m58.5s 34.1S 178.6E				
h=33km mb=4.5 Ms=4.1				
South of Kermadec Islands				
Sep 9	PRI	Z	eP	11 53 28.3
	FRI	Z	eP	11 53 30.0
	PRS	Z	eP	11 53 33.3
	MNA	Z	eP	11 53 37.7
	CMB	Z	e(P)	11 53 41.0
	MHC	Z	e(P)	11 53 42.7
USGS 11h48m38.6s 18.1N 107.7W				
h=10km mb=3.9				
Off Coast of Jalisco, Mexico				
Sep 9	FRI	Z	ePd	23 17 28.6
		Z	ePcP	23 18 26.4
		Z	ePKPPKP	23 47 34.0
	PRI	Z	eP	23 17 30.5
	MNA	Z	eP	23 17 31.4
		Z	ePcP	23 18 26.7
		Z	ePKPPKP	23 47 33.9
	LLA	Z	ePd	23 17 33.2
		Z	ePcP	23 18 28.4
	PRS	Z	ePd	23 17 34.2
	CMB	Z	ePd	23 17 37.5
		Z	ePcP	23 18 30.3
		Z	ePKPPKP	23 47 31.3
	GCC	Z	ePd	23 17 39.8
	MHC	Z	ePd	23 17 40.2
	BKS	Z	ePd	23 17 44.9
			AMP(μm)	PER(s)
		PZ	0.084	1.1
	ORV	Z	ePd	23 17 49.6
	WDC	Z	ePd	23 17 56.1
		Z	ePcP	23 18 40.7
	FHC	Z	eP	23 18 05.6
USGS 23h07m47.8s 7.2S 81.5W				
h=35km mb=5.6 Ms=4.8				
Off Coast of Northern Peru				
Sep 10	PRS	Z	e(P)	20 54 54.6
	FRI	Z	eP	20 55 02.8
	CMB	Z	eP	20 55 04.0
	ORV	Z	eP	20 55 05.4
	WDC	Z	eP	20 55 05.7
	MNA	Z	eP	20 55 14.0
USGS 20h43m33.6s 16.1S 173.5W				
h=33km mb=4.5 Ms=4.5				
Tonga Islands				
Sep 10	PRI	Z	e(P)	21 51 14.5
	FRI	Z	eP	21 51 17.2
	CMB	Z	e(P)	21 51 21.9
	MNA	Z	eP	21 51 25.0
	BKS	Z	e	22 20 44
USGS 21h38m09.5s 54.2S 134.2W				
h=10km mb=5.3 Ms=5.5				
South Pacific Cordillera				
Sep 11	FRI	Z	eP	01 12 01.8
		Z	ePcP	01 14 50.0
	MNA	Z	ePd	01 12 03.2
		Z	epP	01 12 16.8
		Z	ePcP	01 14 50.4
		Z	epPcP	01 16 04.0
	PRI	Z	eP	01 12 04.5
		Z	epP	01 12 18.2
		Z	ePcP	01 14 51.8
	LLA	Z	eP	01 12 07.4
		Z	epP	01 12 21.1
	PRS	Z	eP	01 12 08.8
		Z	epP	01 12 22.1
		Z	ePcP	01 14 53.0
	CMB	Z	ePd	01 12 11.9
		Z	epP	01 12 25.5
		Z	ePcP	01 14 53.3
	GCC	Z	eP	01 12 15.6
	MHC	Z	ePd	01 12 15.8
		Z	epP	01 12 29.5
		Z	ePcP	01 14 55.3
	ORV	Z	eP	01 12 25.8
	WDC	Z	ePcP	01 15 00.7
	BKS	E	e	01 21 45.1
		Z	e	01 25 25
USGS 01h05m34.4s 14.2N 92.6W				
h=77km mb=5.3				

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DATE	STA	CMP	PHASE	TIME (UTC)
Near Coast of Chiapas, Mexico				
Sep 11	PRS	Z	ePc	06 29 14.7
	GCC	Z	eP	06 29 14.8
	PCC	Z	eP	06 29 15.0
	SAO	Z	eP	06 29 15.5
	PRI	Z	ePc	06 29 16.7
	BRK	Z	eP	06 29 16.7
	LLA	Z	ePc	06 29 16.9
	BKS	Z	ePc	06 29 16.9
				AMP(μm) PER(s)
		PZ		0.066 0.8
	MHC	Z	ePc	06 29 17.0
	FRI	Z	ePc	06 29 21.5
	CMB	Z	ePc	06 29 22.1
	ORV	Z	ePc	06 29 23.6
	WDC	Z	ePc	06 29 24.1
	MIN	Z	e(P)	06 29 25.8
	MNA	Z	ePc	06 29 30.7
USGS 06h17m42.2s 25.5S 179.6E				
h=510km mb=5.1				
South of Fiji Islands				
Sep 11	ZSP	Z	eP	06 38 19.4
		Z	eS	06 38 34.4
	BRK	Z	eP	06 38 20.2
		Z	eS	06 38 35.2
	BKS	Z	eP	06 38 20.5
		T	eS+	06 38 35.00
		Z	e	06 38 35.2
		N	eS	06 38 35.3
	PCC	Z	eP	06 38 24.4
	ORV	Z	e(P)	06 38 26.0
	MHC	Z	eP	06 38 30.7
	CMB	Z	eP	06 38 34.5
		Z	eS	06 39 02.4
BRK 06h38m00.3s 38.8N 122.8W				
h=3km ML=2.8(2)				
The Geysers area, 19 km S of Clear Lake, CA				
Sep 11	FHC	Z	eP	11 42 33.3
	WDC	Z	ePc	11 42 39.6
	MIN	Z	e(P)	11 42 44.1
	ORV	Z	ePc	11 42 47.8
	BRK	Z	eP	11 42 52.5
	BKS	Z	e(P)d	11 42 53.2
	MHC	Z	ePc	11 42 57.9
	CMB	Z	ePc	11 43 00.1
	PRS	Z	ePc	11 43 03.6
	LLA	Z	eP	11 43 04.2
	FRI	Z	ePc	11 43 07.1
	MNA	Z	iPc	11 43 07.6
USGS 11h33m13.0s 50.3N 155.2E				
h=118km mb=5.0				
Kurile Islands				
Sep 11	FHC	Z	e(P)	11 48 33.8
	WDC	Z	ePc	11 48 39.2
		Z	e	11 49 25.8
	MIN	Z	eP	11 48 42.7
	PCC	Z	eP	11 48 43.9
	ORV	Z	ePc	11 48 44.3
		Z	e	11 49 31.7
	BKS	Z	ePd	11 48 44.5
				AMP(μm) PER(s)
		PZ		0.028 0.7
	MHC	Z	ePc	11 48 47.6
	PRS	Z	eP	11 48 50.1
		Z	e	11 49 37.7
	CMB	Z	iPc	11 48 51.3
		Z	e	11 49 35.3

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	e	11 49 39.2
	LLA	Z	e(P)	11 48 51.5
	PRI	Z	eP	11 48 55.4
	FRI	Z	ePc	11 48 55.4
		Z	e	11 49 39.8
	MNA	Z	ePc	11 48 59.8
		Z	e	11 49 43.7
		Z	e	11 49 47.4
USGS 11h36m51.2s 18.9N 145.6E				
h=175km mb=5.3				
Mariana Islands				
Sep 11	GCC	Z	eP	14 36 47.9
	PRS	Z	eP	14 36 48.0
	MHC	Z	eP	14 36 50.3
	FRI	Z	eP	14 36 54.7
	CMB	Z	ePc	14 36 55.7
	ORV	Z	eP	14 36 57.0
	WDC	Z	eP	14 36 57.3
	MNA	Z	eP	14 37 03.9
USGS 14h25m23.7s 24.3S 179.8E				
h=544km mb=4.7				
South of Fiji Islands				
Sep 11	PRI	Z	ePc	19 33 59.4
	PRS	Z	ePc	19 34 01.5
	MNA	Z	ePc	19 34 05.7
	MHC	Z	eP	19 34 10.8
	CMB	Z	ePc	19 34 12.2
	ORV	Z	e(P)	19 34 29.3
	WDC	Z	e	19 34 48.6
USGS 19h29m13.2s 18.9N 107.2W				
h=10km mb=4.4				
Off Coast of Jalisco, Mexico				
Sep 12	MNA	Z	ePKPc	02 52 11.9
	MIN	Z	ePKPc	02 52 15.6
	CMB	Z	ePKP	02 52 15.9
	WDC	Z	ePKPc	02 52 16.5
	ORV	Z	ePKP	02 52 16.6
	LLA	Z	ePKPc	02 52 18.2
	PRI	Z	ePKPc	02 52 18.4
	PRS	Z	ePKP	02 52 18.8
USGS 02h32m20.9s 26.9S 26.7E				
h=5km mb=4.7				
Republic of South Africa				
Sep 12	CMB	Z	ePc	13 19 17.5
	WDC	Z	ePc	13 19 21.7
	MNA	Z	eP	13 19 25.2
USGS 13h06m54.1s 16.6S 172.7E				
h=33km mb=4.9 Ms=4.2				
Vanuatu Islands Region				
Sep 12	PRI	Z	iPd	13 25 20.3
	FRI	Z	i(P)	13 25 25.5
		Z	e	13 25 35.1
	PRS	Z	ePc	13 25 26.1
	LLA	Z	ePc	13 25 27.9
	SAO	Z	iPc	13 25 32.1
	GCC	Z	e(P)c	13 25 38.0
	CMB	Z	ePc	13 25 42.5
		Z	e	13 25 51.9
		Z	e(S)	13 26 36.9
	MHC	Z	e(P)	13 25 42.5
	MNA	Z	eP	13 25 45.9
	ORV	Z	eP	13 26 06.8
BRK ML=4.2(2)				
PAS 13h24m34.2s 33.9N 118.5W				
h=km ML=3.9				
Off Coast 58 km SW of Los Angeles, CA				

DATE	STA	CMP	PHASE	TIME (UTC)
Sep 12	ZSP	Z	iPc	14 52 16.2
		Z	iS	14 52 31.8
	BKS	Z	eP	14 52 16.7
		T	iS+	14 52 32.6
	BRK	Z	ePc	14 52 17.0
		Z	eS	14 52 30.6
	ORV	Z	ePc	14 52 19.6
		Z	i	14 52 36.0
	PCC	Z	ePc	14 52 23.4
	WDC	Z	e	14 52 31.2
	CMB	Z	ePc	14 52 31.3
	GCC	Z	ePc	14 52 35.4
	MHC	Z	ePc	14 52 36.1
	LLA	Z	ePc	14 52 39.6
BRK 14h51m57.4s 38.8N 122.8W				
h=1km ML=3.1(4)				
The Geysers area, 19 km S of Clear Lake, CA				
Sep 12	WDC	Z	eP	20 29 17.7
	MNA	Z	ePc	20 29 18.4
	ORV	Z	e(P)	20 29 19.1
	CMB	Z	ePc	20 29 26.2
	FRI	Z	eP	20 29 31.6
	MHC	Z	eP	20 29 34.6
USGS 20h19m15.9s 66.6N 18.0W				
h=10km mb=4.8 Ms=4.6				
Iceland Region				
Sep 12	SAO	Z	iPc	22 24 31.4
		T	iS+	22 24 34.3
	LLA	Z	iPc	22 24 35.6
		Z	iS	22 24 41.4
	PRS	Z	iPd	22 24 38.3
	GCC	Z	iPc	22 24 38.8
	MHC	Z	ePd	22 24 38.8
		T	eS+	22 24 47.4
	PRI	Z	ePd	22 24 45.5
	PCC	Z	ePc	22 24 47.4
	FRI	Z	iPc	22 24 51.0
		Z	iS	22 25 08.4
	CMB	Z	ePc	22 24 52.9
BRK 22h24m28.1s 36.9N 121.3W				
h=6km ML=2.5(4)				
8 km E of Hollister, CA				
Sep 13	FHC	Z	iPc	01 09 50.7
	WDC	Z	iPc	01 09 55.3
		Z	epP	01 11 35.1
		Z	ePP	01 12 56.0
	MIN	Z	ePc	01 09 58.9
	ORV	Z	ePc	01 10 01.3
		Z	epP	01 11 41.2
	BRK	Z	ePc	01 10 03.3
	PCC	Z	eP	01 10 03.5
	GCC	Z	ePc	01 10 06.2
	MHC	Z	ePc	01 10 07.1
	SAO	Z	eP	01 10 09.5
	CMB	Z	ePc	01 10 09.7
		Z	epP	01 11 50.0
	PRS	Z	ePc	01 10 10.7
	LLA	Z	ePc	01 10 11.5
	PRI	Z	ePc	01 10 14.2
	FRI	Z	ePc	01 10 14.7
		Z	epP	01 11 55.2
		Z	e	01 13 26.2
	MNA	Z	ePc	01 10 16.7
		Z	epP	01 11 54.7
		Z	ePP	01 13 10.8
		Z	e	01 13 28.0
USGS 00h58m46.6s 29.9N 138.6E				

DATE	STA	CMP	PHASE	TIME (UTC)
h=448km mb=5.5				
South of Honshu, Japan				
Sep 13	FRI	Z	eP	19 52 14.6
		Z	ePcP	19 54 49.0
	MNA	Z	ePc	19 52 15.9
		Z	ePcP	19 54 48.3
	PRI	Z	ePc	19 52 17.4
		Z	ePcP	19 54 49.6
	LLA	Z	eP	19 52 19.4
		Z	ePcP	19 54 50.6
	PRS	Z	eP	19 52 21.0
		Z	ePcP	19 54 50.7
	CMB	Z	ePc	19 52 24.4
		Z	ePcP	19 54 51.1
	SAO	Z	e(P)	19 52 25.1
	GCC	Z	eP	19 52 28.1
	MHC	Z	eP	19 52 28.5
	BKS	Z	eP	19 52 32.5
		Z	ePcP	19 54 52.5
		E	eLq	20 03 24
		Z	eLr	20 05 56
				AMP(μm) PER(s)
		PZ		0.047 0.8
		LZ		2.7 20.
		LN		1.4 20.
		LE		2.7 20.
	PCC	Z	e(P)	19 52 32.6
	BRK	Z	eP	19 52 34.4
	ORV	Z	eP	19 52 38.8
	MIN	Z	eP	19 52 41.2
	WDC	Z	ePc	19 52 46.2
		Z	ePcP	19 54 58.1
BRK Ms=5.0 Distance= 36°				
USGS 19h45m28.3s 13.7N 90.9W				
h=55km mb=5.1				
Near Coast of Guatemala				
Sep 14	FHC	Z	ePc	04 12 49.6
	WDC	Z	iPc	04 12 50.7
	MIN	Z	iPc	04 12 52.5
	ORV	Z	iPc	04 12 55.9
	BRK	Z	ePc	04 13 04.2
	BKS	Z	ePc	04 13 04.3
				AMP(μm) PER(s)
		PZ		0.20 1.0
		PZ		0.12 0.7
	CMB	Z	ePc	04 13 04.5
	MNA	Z	iPc	04 13 04.9
	PCC	Z	ePc	04 13 05.3
	MHC	Z	ePc	04 13 07.6
	GCC	Z	ePc	04 13 07.8
	SAO	Z	eP	04 13 09.7
	FRI	Z	ePc	04 13 09.9
	LLA	Z	ePc	04 13 11.0
	PRS	Z	ePc	04 13 11.7
	PRI	Z	ePc	04 13 13.8
BRK mb=6.2 h=0km Distance=90°				
USGS 03h59m57.5s 49.8N 78.8E				
h=0km mb=6.1 Ms=4.5				
Eastern Kazakh SSR				
Sep 14	MNA	Z	ePc	05 48 12.1
	CMB	Z	e(P)	05 48 18.9
	WDC	Z	e(P)	05 48 25.1
	MIN	Z	ePc	05 48 25.2
USGS 05h37m50.7s 29.6N 42.4W				
h=10km mb=4.5				
North Atlantic Ridge				
Sep 14	FRI	Z	eP	06 12 57.0
	PRI	Z	eP	06 12 57.7

DATE	STA	CMP	PHASE	TIME (UTC)
	MNA	Z	eP	06 12 59.4
		Z	e	06 13 12.4
	CMB	Z	e	06 13 19.0
USGS 06h07m41.3s 18.7N 101.3W				
h=33km mb=3.6				
Guerrero, Mexico				
Sep 14	PRS	Z	eP	10 16 21.2
	FRI	Z	ePc	10 16 27.7
	CMB	Z	ePc	10 16 28.0
	WDC	Z	eP	10 16 34.9
	MNA	Z	ePc	10 16 36.2
USGS 10h03m42.3s 22.1S 170.2E				
h=66km mb=5.0				
Loyalty Islands Region				
Sep 14	FHC	Z	ePd	13 20 15.9
	WDC	Z	ePd	13 20 24.7
		Z	e	13 20 37.2
		Z	ePcP	13 23 06.5
	MIN	Z	eP	13 20 30.3
		Z	e	13 20 43.0
	ORV	Z	e(P)	13 20 34.3
		Z	e	13 20 47.2
	BRK	Z	eP	13 20 39.2
		Z	e	13 20 52.0
	PCC	Z	eP	13 20 40.3
	MHC	Z	eP	13 20 45.9
		Z	e	13 20 58.6
	CMB	Z	ePd	13 20 49.2
		Z	e	13 21 02.0
		Z	ePcP	13 23 14.8
	PRS	Z	eP	13 20 52.8
		Z	e	13 21 05.5
	LLA	Z	ePd	13 20 53.9
		Z	e	13 21 06.5
	PRI	Z	eP	13 20 58.2
	FRI	Z	ePd	13 20 58.3
		Z	e	13 21 10.6
	MNA	Z	ePd	13 20 59.1
		Z	e	13 21 11.8
		Z	ePcP	13 23 19.0
USGS 13h13m52.5s 51.8N 168.0W				
h=46km mb=5.2 Ms=4.1				
Fox Islands, Aleutian Islands				
Sep 14	MNA	Z	eP	16 20 21.5
	CMB	Z	eP	16 20 26.9
USGS 16h11m56.8s 0.3S 91.3W				
h=10km mb=4.6				
Galapagos Islands				
Sep 14	WDC	Z	eP	20 23 24.0
	ORV	Z	eP	20 23 27.8
	CMB	Z	e(P)	20 23 32.8
	MNA	Z	eP	20 23 46.8
USGS 20h11m32.9s 42.3N 143.0E				
h=71km mb=4.9				
Hokkaido, Japan, Region				
Sep 14	FRI	Z	eP	20 41 46.2
	PRI	Z	eP	20 41 47.5
	MNA	Z	eP	20 41 50.6
		Z	e	20 42 09.4
	LLA	Z	eP	20 41 50.8
	PRS	Z	eP	20 41 52.0
	CMB	Z	eP	20 41 57.4
	GCC	Z	eP	20 41 59.7
	MHC	Z	eP	20 42 00.0
	ORV	Z	eP	20 42 13.3
USGS 20h36m38.8s 18.5N 102.3W				
h=80km mb=4.9				

DATE	STA	CMP	PHASE	TIME (UTC)
Michoacan, Mexico				
Sep 14	FRI	Z	ePd	22 25 49.5
	PRI	Z	eP	22 25 51.1
		Z	epP	22 26 22.5
	MNA	Z	ePd	22 25 51.3
		Z	epP	22 26 22.7
	LLA	Z	iPd	22 25 53.3
		Z	epP	22 26 24.7
	PRS	Z	eP	22 25 53.8
		Z	epP	22 26 25.1
	SAO	Z	eP	22 25 55.4
	CMB	Z	iPd	22 25 56.4
		Z	epP	22 26 27.5
	GCC	Z	eP	22 25 58.4
		Z	epP	22 26 29.6
	MHC	Z	ePd	22 25 58.5
		Z	epP	22 26 30.0
	BRK	Z	ePd	22 26 02.0
	BKS	Z	ePd	22 26 02.3
		Z	e	22 26 33.3
				AMP(μm) PER(s)
		PZ		0.18 1.0
	ORV	Z	ePd	22 26 05.6
		Z	epP	22 26 37.2
	MIN	Z	ePd	22 26 07.3
		Z	epP	22 26 39.2
	WDC	Z	iPd	22 26 10.6
		Z	e	22 26 18.9
		Z	epP	22 26 42.0
USGS 22h14m07.5s 23.4S 68.0W				
h=122km mb=5.7				
Chile-Argentina Border Region				
Sep 15	ZSP	Z	eP	00 05 26.2
	BRK	Z	eP	00 05 26.7
		Z	e(S)	00 05 42.5
	BKS	Z	eP	00 05 26.8
		R	iS+	00 05 42.15
	ORV	Z	eP	00 05 29.6
		Z	e	00 05 39.2
		Z	e	00 05 46.7
	PCC	Z	eP	00 05 31.1
		Z	e	00 05 36.0
	MHC	Z	iPd	00 05 36.76
	WDC	Z	e(P)	00 05 38.5
	CMB	Z	eP	00 05 41.8
		Z	e(S)	00 06 10.0
BRK 00h05m05.7s 38.8N 122.8W				
h=3km ML=3.1(6)				
The Geysers area, 20 km S of Clear Lake, CA				
Sep 15	PRS	Z	e(P)	09 09 20.2
	MHC	Z	eP	09 09 25.5
	FRI	Z	e(P)	09 09 28.4
	CMB	Z	eP	09 09 29.8
	WDC	Z	eP	09 09 31.3
	ORV	Z	eP	09 09 35.0
	MIN	Z	e(P)	09 09 38.0
	MNA	Z	eP	09 09 49.6
USGS 08h58m00.2s 16.6S 172.7W				
h=33km mb=4.8 Ms=5.0				
Samoa Islands Region				
Sep 15	MHC	Z	iPd	16 07 56.85
		T	iS-	16 07 56.75
	GCC	Z	ePc	16 08 00.3
	SAO	Z	iPd	16 08 03.36
	PCC	Z	iPc	16 08 04.7
	BRK	Z	iPc	16 08 07.8
	BKS	Z	iPc	16 08 07.8

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DATE	STA	CMP	PHASE	TIME (UTC)
	LLA	Z	iPc	16 08 08.6
	PRS	Z	iPd	16 08 10.4
	CMB	Z	ePd	16 08 15.7
		Z	iS	16 08 32.2
	PRI	Z	eP	16 08 17.2
	FRI	Z	iPc	16 08 19.7
	ORV	Z	eP	16 08 30.8
BRK 16h07m52.9s 37.3N 121.7W				
h=5km ML=3.3(4) Mo=7.0E20(2)				
San Felipe Valley, 21 km SE of San Jose, CA				
Sep 15	FRI	Z	ePd	18 57 11.5
	MNA	Z	iPd	18 57 12.5
		Z	ePcP	18 58 18.0
		Z	ePKPPKP	19 27 42.7
	PRI	Z	ePd	18 57 13.9
	LLA	Z	iPd	18 57 16.8
	PRS	Z	ePd	18 57 17.9
	SAO	Z	eP	18 57 19.4
	CMB	Z	iPd	18 57 20.0
		Z	ePcP	18 58 22.6
		Z	ePKPPKP	19 27 32.6
	GCC	Z	ePd	18 57 23.8
	MHC	Z	iPd	18 57 23.9
	PCC	Z	e(P)	18 57 27.3
	BRK	Z	eP	18 57 28.3
	BKS	Z	ePd	18 57 28.5
		Z	e	18 58 12.6
		Z	e	18 58 25.5
		N	iS	19 05 12
		N	e	19 06 22
			AMP(μm)	PER(s)
		PZ	0.34	1.2
	ORV	Z	iPd	18 57 31.9
	MIN	Z	eP	18 57 34.3
	WDC	Z	iPd	18 57 37.9
		Z	ePKPPKP	19 27 25.5
	FHC	Z	eP	18 57 47.7
BRK mb=6.3 h=33km Distance=58°				
USGS 18h48m01.1s 1.4S 77.9W				
h=170km mb=5.8				
Ecuador				
Sep 16	PRS	Z	e(P)	00 18 49.2
	PRI	Z	e(P)	00 18 51.9
	FRI	Z	eP	00 18 57.1
	CMB	Z	eP	00 18 58.7
	WDC	Z	eP	00 19 01.0
	MNA	Z	eP	00 19 08.2
USGS 00h06m52.6s 23.2S 175.2W				
h=33km mb=4.8 Ms=4.9				
Tonga Islands Region				
Sep 16	FRI	Z	e(P)	00 29 27.4
	PRS	Z	eP	00 29 28.3
	MNA	Z	eP	00 29 32.6
	CMB	Z	eP	00 29 34.2
	ORV	Z	e(P)	00 29 44.6
	WDC	Z	e(P)	00 29 47.2
USGS 00h16m50.2s 42.9S 85.8W				
h=10km mb=5.2 Ms=5.2				
West Chile Rise				
Sep 16	PCC	Z	ePd	02 27 22.5
	GCC	Z	ePd	02 27 22.5
	PRS	Z	ePd	02 27 22.6
	SAO	Z	eP	02 27 23.3
	BRK	Z	ePd	02 27 24.4
	BKS	Z	ePd	02 27 24.5
			AMP(μm)	PER(s)
		PZ	0.16	0.8
	PRI	Z	ePd	02 27 24.7
	LLA	Z	ePd	02 27 24.8
	MHC	Z	ePd	02 27 25.1
	FHC	Z	eP	02 27 28.5
	FRI	Z	ePd	02 27 29.8
	CMB	Z	iPd	02 27 30.9
	ORV	Z	iPd	02 27 31.7
	WDC	Z	iPd	02 27 32.0
	MIN	Z	eP	02 27 33.6
	MNA	Z	iPd	02 27 39.7
USGS 02h16m18.8s 20.5S 178.4W				
h=550km mb=5.1				
Fiji Islands Region				
Sep 16	WDC	Z	eP	04 36 27.0
	ORV	Z	eP	04 36 28.1
	CMB	Z	eP	04 36 28.9
	FRI	Z	eP	04 36 28.9
USGS 04h23m46.7s 18.0S 168.6E				
h=32km mb=4.6 Ms=4.6				
Vanuatu Islands				
Sep 16	FHC	Z	eP	04 57 31.4
		Z	eS	04 58 01.0
	ARC	E	e(P)	04 57 39.9
		E	e(S)	04 58 03.2
	WDC	Z	eP	04 57 48.5
		Z	eS	04 58 29.2
	MIN	Z	eP	04 57 57.4
		Z	eS	04 58 43.5
	BRK	Z	eP	04 58 01.3
		Z	eS	04 58 54.0
	BKS	Z	ePc	04 58 01.6
	ORV	Z	eP	04 58 02.0
		Z	eS	04 58 51.5
	PCC	Z	eP	04 58 02.6
	MHC	Z	eP	04 58 10.0
	GCC	Z	eP	04 58 10.3
	SAO	Z	eP	04 58 17.1
	CMB	Z	eP	04 58 20.3
	PRS	Z	e(P)	04 58 21.5
	FRI	Z	eP	04 58 32.1
BRK 04h56m51.3s 40.5N 127.4W				
h=5kmR ML=4.3(8)				
Off Coast 250 km W of Cape Mendocino, CA				
Sep 16	PRS	Z	eP	06 40 02.2
	MHC	Z	eP	06 40 03.4
	PRI	Z	e(P)	06 40 05.2
	WDC	Z	eP	06 40 07.4
	ORV	Z	eP	06 40 08.5
	FRI	Z	eP	06 40 09.0
	CMB	Z	eP	06 40 09.1
		Z	e	06 43 32.5
		Z	e	06 46 18.5
		Z	e	06 48 48.6
		Z	ePKKP	06 56 43.1
	MIN	Z	eP	06 40 09.5
	BKS	Z	eP	06 40 12
		E	eS	06 50 40
		E	e	06 51 32
		Z	eLr	07 05 52
			AMP(μm)	PER(s)
		LZ	1.4	20.
		LN	1.6	20.
		LE	1.1	20.
	MNA	Z	eP	06 40 17.5
		Z	e	06 46 28
		Z	e	06 48 41.1
		Z	ePKKP	06 56 36.0
BRK Ms=5.5 Distance= 84°				
USGS 06h27m29.8s 17.9S 169.1E				
h=33km mb=5.2 Ms=5.4				
Vanuatu Islands				
Sep 16	MNA	Z	eP	07 24 01.6
	FRI	Z	eP	07 24 03.9
	CMB	Z	eP	07 24 11.7
	BKS	Z	eLr	07 34 44
			AMP(μm)	PER(s)
		LZ	2.3	20.
		LN	2.3	20.
		LE	0.89	20.
USGS 07h22m08.5s 27.7N 111.9W				
h=10km mb=3.7				
Gulf of California				
Sep 16	FRI	Z	eP	08 18 37.8
	MNA	Z	eP	08 18 39.0
	CMB	Z	eP	08 18 47.5
	ORV	Z	eP	08 19 01.9
	MIN	Z	eP	08 19 05.9
	WDC	Z	eP	08 19 09.7
			AMP(μm)	PER(s)
		LZ	1.3	20.
		LN	0.89	20.
		LE	0.54	20.
USGS 08h11m56.1s 13.9N 91.5W				
h=48km mb=5.1 Ms=4.4				
Near Coast of Guatemala				
Sep 17	MIN	Z	eP	02 53 16.9
	CMB	Z	eP	02 53 34.9
	MNA	Z	eP	02 53 44.2
USGS 02h45m38.3s 51.2N 179.2W				
h=33km mb=5.2 Ms=4.6				
Andreanof Islands, Aleutian Is.				
Sep 17	MNA	Z	e(P)	06 22 33.2
		Z	e	06 25 26.7
	CMB	Z	e	06 25 21
USGS 06h20m14.1s 29.9N 114.1W				
h=10km mb=4.1				
Baja California				
Sep 17	FHC	Z	iPc	09 53 12.8
		Z	eS	09 53 27.2
	ARC	N	ePd	09 53 15.3
		N	iS	09 53 29.3
	WDC	Z	iPc	09 53 27.7
		Z	e(S)	09 53 52.6
	MIN	Z	iPc	09 53 37.6
		Z	eS	09 54 13.4
	ORV	Z	eP	09 53 40.6
		Z	eS	09 54 15.2
	BRK	Z	eP	09 53 45.9
	PCC	Z	eP	09 53 48.5
	CMB	Z	eP	09 54 02.4
BRK 09h52m51.9s 40.4N 125.4W				
h=5kmR ML=3.8(4)				
Off Coast 87 km W of Cape Mendocino, CA				
Sep 17	MNA	Z	eP	13 48 31.3
	CMB	Z	eP	13 48 38.4
	MIN	Z	eP	13 48 45.1
	ORV	Z	e(P)	13 48 47.0
USGS 13h37m55.3s 21.1N 45.7W				
h=10km mb=5.2 Ms=4.6				
North Atlantic Ridge				
Sep 17	WDC	Z	eP	15 33 55.2
	MIN	Z	eP	15 33 59.7
	ORV	Z	ePd	15 34 03.0
	GCC	Z	eP	15 34 11.0
	MHC	Z	eP	15 34 11.8
	CMB	Z	eP	15 34 14.4
	PRS	Z	eP	15 34 16.7
	LLA	Z	eP	15 34 17.5
	MNA	Z	ePd	15 34 22.3
USGS 15h23m52.9s 44.8N 152.9E				
h=40km mb=5.4 Ms=4.7				
Kurile Islands Region				
Sep 17	PRI	Z	eP	15 50 38.6
	LLA	Z	eP	15 50 46.4
	PRS	Z	eP	15 50 46.6
	SAO	Z	eP	15 50 51.1
	CMB	Z	eP	15 51 01.9
		Z	eS	15 51 32.3
	MNA	Z	eP	15 51 14.1
BRK 15h50m20.8s 35.6N 119.6W				
h=22km ML=3.4(2)				
55 km NW of Bakersfield, CA				
Sep 18	CMB	Z	eP	01 54 20.8
	ORV	Z	eP	01 54 22.0
	WDC	Z	eP	01 54 22.3
	MNA	Z	eP	01 54 29.3
USGS 01h43m01.5s 22.1S 179.5W				
h=582km mb=4.9				
South of Fiji Islands				
Sep 18	ORV	Z	eP	13 17 57.1
		Z	e	13 18 14.0
	CMB	Z	eP	13 18 06.1
		Z	e	13 18 22.5
	PRS	Z	eP	13 18 07.0
		Z	e	13 18 23.4
	MNA	Z	eP	13 18 13.7
		Z	e	13 18 30.0
USGS 13h06m11.1s 29.7N 141.1E				
h=68km mb=4.8				
South of Honshu, Japan				
Sep 18	WDC	Z	eP	15 51 25.8
	CMB	Z	iPc	15 51 38.2
	MNA	Z	eP	15 51 44.1
USGS 15h38m25.6s 24.5N 122.3E				
h=82km mb=5.3				
Taiwan Region				
Sep 18	MNA	Z	eP	23 37 34.8
	MIN	Z	eP	23 37 46.6
	CMB	Z	eP	23 37 47.3
USGS 23h27m12.1s 32.4N 40.2W				
h=10km mb=4.7 Ms=5.0				
North Atlantic Ridge				
Sep 19	MNA	Z	iPc	02 56 34.9
		Z	eS	02 56 37.4
	CMB	Z	iPc	02 57 00.6
		Z	iS	02 57 22.5
	ORV	Z	iPc	02 57 15.1
	MHC	Z	eP	02 57 16.6
		Z	e	02 57 22.2
		Z	e	02 57 25.3
		T	eS+	02 57 57.4
	LLA	Z	iPd	02 57 17.3
		Z	i	02 57 21.6
	SAO	Z	ePd	02 57 19.91
		Z	i	02 57 24.4
		Z	e	02 57 27.7
		T	eS+	02 58 01.8
	PRI	Z	ePc	02 57 20.4
	BRK	Z	ePc	02 57 21.4
	BKS	Z	iPc	02 57 21.4
		Z	e	02 57 25.7
		Z	e	02 57 28.9
		T	eS	02 58 07.9
	ZSP	Z	iPc	02 57 21.6
		Z	i	02 57 27.5
		Z	iS	02 58 12.5
	MIN	Z	iPc	02 57 22.1
	GCC	Z	ePc	02 57 22.2
	PRS	Z	ePd	02 57 23.0
	PCC	Z	ePc	02 57 23.5
	WDC	Z	iPc	02 57 31.5
		Z	i	02 57 41.4
	FHC	Z	ePc	02 57 46.9
BRK 02h56m31.1s 38.5N 118.4W				
h=9km ML=5.3(6)				
21 km E of Hawthorne, NV				
Sep 19	MNA	Z	ePc	17 01 03.8
	PRI	Z	eP	17 01 04.4
	CMB	Z	e	17 01 15.3
USGS 16h54m20.0s 13.9N 91.6W				
h=27km mb=4.4				
Near Coast of Guatemala				
Sep 19	GCC	Z	e(P)	19 10 35.0
		Z	e	19 10 47.9
	PCC	Z	e(P)	19 10 36.0
		Z	e	19 10 48.9
	MHC	Z	eP	19 10 38.9
		Z	e	19 10 52.1
	FRI	Z	ePc	19 10 42.3
		Z	e	19 10 55.2
	CMB	Z	ePc	19 10 43.8
		Z	e	19 10 56.7
	ORV	Z	eP	19 10 45.5
		Z	e	19 10 58.2
	WDC	Z	eP	19 10 45.8
		Z	e	19 10 59.0
	MNA	Z	ePc	19 10 52.7
		Z	e	19 11 05.6
	BKS	E	e	19 20 39.2
		E	eLq	19 35 24.0
		Z	eLr	19 35 44.0
			AMP(μm)	PER(s)
		LZ	2.6	20.
		LN	1.9	20.
		LE	1.9	20.
USGS 18h58m38.4s 23.4S 175.3W				
h=42km mb=5.3 Ms=5.4				
Tonga Islands Region				
Sep 20	FRI	Z	e(P)	01 09 55.5
	CMB	Z	e(P)	01 09 55.8
		Z	e	01 10 07.3
	WDC	Z	e(P)	01 09 57.9
		Z	e	01 10 09.9
	MNA	Z	e(P)	01 10 04.5
		Z	e	01 10 16.2
USGS 00h57m49.5s 23.3S 175.4W				
h=33km mb=4.8				
Tonga Islands Region				
Sep 20	CMB	Z	e(P)	14 56 55.0
		Z	e	14 57 42.1
	MNA	Z	e	14 57 49.9
USGS 14h44m22.0s 31.5S 179.6W				
h=188km mb=5.4				
Kermadec Islands Region				
Sep 20	MNA	Z	eP	18 05 12.3
	FRI	Z	e(P)	18 05 12.9
	LLA	Z	eP	18 05 19.7
	ORV	Z	eP	18 05 33.0
	WDC	Z	eP	18 05 38.9
USGS 17h56m18.1s 4.7N 77.4W				
h=34km mb=5.6 Ms=5.5				
Near West Coast of Colombia				
Sep 20	WDC	Z	eP	22 54 23.8
	ORV	Z	eP	22 54 29.2
	CMB	Z	eP	22 54 34.9
	MNA	Z	e(P)	22 54 38.5
USGS 22h43m27.7s 42.3N 144.8E				
h=41km mb=5.3 Ms=4.5				
Hokkaido, Japan, Region				
Sep 21	PRI	Z	iPd	09 23 36.9
		Z	i(S)	09 23 39.6
	LLA	Z	iPd	09 23 42.6
	PRS	Z	eP	09 23 42.8
	SAO	Z	eP	09 23 47.8
	FRI	Z	ePd	09 23 54.3
		Z	iS	09 24 10.6
	GCC	Z	eP	09 23 56.3
	MHC	Z	eP	09 23 58.1
	CMB	Z	eP	09 24 05.1
BRK 09h23m33.7s 36.2N 120.8W				
h=6km ML=2.6(2)				
27 km E of King City, CA				
Sep 21	WDC	Z	iPc	10 08 52.8
	MIN	Z	eP	10 08 57.5
	ORV	Z	ePc	10 09 00.7
	BRK	Z	eP	10 09 04.8
	GCC	Z	eP	10 09 09.3
	MHC	Z	ePc	10 09 09.9
	CMB	Z	iPc	10 09 12.2
	PRS	Z	eP	10 09 14.8
	LLA	Z	eP	10 09 15.7
	FRI	Z	ePc	10 09 18.7
	PRI	Z	eP	10 09 19.4
	MNA	Z	ePc	10 09 20.0
USGS 09h58m53.6s 46.2N 152.2E				
h=51km mb=5.9				
Kurile Islands				
Sep 21	BRK	Z	eP	12 49 31.5
		Z	eS	12 49 47.7
	BKS	Z	ePd	12 49 31.9
	ORV	Z	eP	12 49 34.1
	PCC	Z	eP	12 49 36.0
	MHC	Z	eP	12 49 42.4
	MIN	Z	eP	12 49 42.5
	GCC	Z	eP	12 49 43.9
	WDC	Z	eP	12 49 44.2
	CMB	Z	iPc	12 49 46.8
BRK 12h49m12.0s 38.8N 122.8W				
h=2km ML=3.3(6) Mo=7.4E21(2)				
The Geysers area, 21 km S of Clear Lake, CA				
Sep 21	BRK	Z	eP	12 56 48.2
	BKS	Z	eP	12 56 48.4
	ORV	Z	eP	12 56 51.4
	PCC	Z	eP	12 56 53.2
	MHC	Z	eP	12 56 59.0
	MIN	Z	e(P)	12 56 59.5
	CMB	Z	eP	12 57 03.1
	FRI	Z	eP	12 57 18.3
BRK 12h56m28.6s 38.8N 122.8W				
h=2kmR ML=2.9(2)				
The Geysers area, 21 km S of Clear				

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DATE	STA	CMP	PHASE	TIME (UTC)
Lake, CA				
Sep 21	FRI	Z	eP	14 06 55.9
	MNA	Z	eP	14 06 56.9
	PRI	Z	e(P)	14 06 58.2
	CMB	Z	eP	14 07 04.6
	ORV	Z	ePd	14 07 16.5
	MIN	Z	eP	14 07 18.6
	WDC	Z	iPd	14 07 22.5
USGS 13h57m44.7s 1.5S 78.0W				
h=163km mb=4.9				
Ecuador				
Sep 22	GCC	Z	ePc	00 10 47.4
	PRS	Z	ePc	00 10 47.5
		Z	e	00 10 57.9
	SAO	Z	eP	00 10 48.2
	BRK	Z	ePc	00 10 49.7
	PRI	Z	ePc	00 10 49.8
	LLA	Z	ePc	00 10 49.9
	BKS	Z	eP	00 10 50.1
			AMP(μm)	PER(s)
		PZ	0.072	0.8
		LZ	1.6	20.
		LN	1.8	20.
		LE	1.5	20.
	MHC	Z	ePc	00 10 50.3
		Z	e	00 11 00.9
	FRI	Z	iPc	00 10 55.5
		Z	e	00 11 06.0
	CMB	Z	iPc	00 10 56.9
		Z	e	00 11 07.6
	ORV	Z	ePc	00 10 58.4
	WDC	Z	iPc	00 10 58.8
	MIN	Z	ePc	00 11 00.7
	MNA	Z	iPc	00 11 06.9
		Z	e	00 11 17.5
USGS 23h59m30.0s 16.5S 172.1W				
h=33km mb=5.4 Ms=5.3				
Samoa Islands Region				
Sep 22	MNA	Z	eP	08 02 23.3
	MIN	Z	ePd	08 02 34.7
	ORV	Z	eP	08 02 35.4
	CMB	Z	ePd	08 02 35.9
USGS 07h52m00.8s 26.5N 44.7W				
h=10km mb=5.3 Ms=5.2				
North Atlantic Ridge				
Sep 22	PRS	Z	ePc	10 59 46.6
	BRK	Z	e(P)	10 59 47.0
	MHC	Z	ePc	10 59 49.6
	FRI	Z	ePc	10 59 54.0
	CMB	Z	ePc	10 59 55.4
	ORV	Z	ePc	10 59 57.0
	WDC	Z	ePc	10 59 57.7
	MIN	Z	ePc	10 59 59.3
	MNA	Z	ePc	11 00 04.2
USGS 10h47m56.4s 23.2S 175.7W				
h=106km mb=4.4				
Tonga Islands Region				
Sep 22	WDC	Z	ePc	12 19 01.5
	MIN	Z	ePc	12 19 03.1
	MNA	Z	eP	12 19 03.9
	ORV	Z	ePc	12 19 05.7
	CMB	Z	eP	12 19 09.6
	FRI	Z	ePc	12 19 12.5
	MHC	Z	eP	12 19 14.7
	SAO	Z	ePc	12 19 17.2
	LLA	Z	e(P)	12 19 17.7

DATE	STA	CMP	PHASE	TIME (UTC)
USGS 12h05m40.9s 38.0N 21.1E				
h=28km mb=5.0 Ms=4.2				
Greece				
Sep 22	BKS	Z	e(P)	22 36 26.5
				AMP(μm) PER(s)
			PZ	0.069 0.8
	WDC	Z	eP	22 36 28.4
		Z	epP	22 36 34.4
	GCC	Z	eP	22 36 29.0
	MHC	Z	eP	22 36 30.2
	PRS	Z	eP	22 36 30.9
		Z	epP	22 36 36.2
	ORV	Z	eP	22 36 33.1
		Z	epP	22 36 38.5
	LLA	Z	eP	22 36 33.9
	CMB	Z	eP	22 36 38.7
		Z	epP	22 36 44.4
	FRI	Z	eP	22 36 41.9
		Z	epP	22 36 47.9
	MNA	Z	eP	22 36 53.2
		Z	epP	22 36 58.9
USGS 22h28m44.6s 23.8N 167.2W				
h=19km mb=5.5 Ms=4.6				
Hawaiian Islands Region				
Sep 23	WDC	Z	e(PKP)	03 58 33.9
	MIN	Z	ePKP	03 58 35.5
	CMB	Z	ePKPc	03 58 39.6
	FRI	Z	ePKP	03 58 41.4
		Z	e	04 02 03.2
	MNA	Z	e(PKP)	03 58 42.8
		Z	e	04 02 04.9
USGS 03h39m36.3s 4.9S 102.0E				
h=71km mb=5.1				
Southern Sumatra				
Sep 23	MNA	Z	ePd	08 21 02.6
		Z	e	08 21 27.4
	FRI	Z	ePd	08 21 03.1
		Z	e	08 21 27.5
	PRI	Z	eP	08 21 05.7
	LLA	Z	eP	08 21 08.7
		Z	e	08 21 33
	CMB	Z	eP	08 21 11.9
		Z	e	08 21 37.0
		Z	e	08 21 46.2
	MHC	Z	eP	08 21 16.7
		Z	e	08 21 42
	BRK	Z	e(P)	08 21 22.0
	ORV	Z	eP	08 21 24.9
	MIN	Z	eP	08 21 27.9
USGS 08h13m50.9s 12.1N 86.6W				
h=127km mb=4.6				
Nicaragua				
Sep 24	FRI	Z	eP	03 29 48.7
	CMB	Z	eP	03 29 59.3
	ORV	Z	eP	03 30 13.6
	WDC	Z	e(P)	03 30 23.1
USGS 03h22m25.6s 2.3N 101.5W				
h=10km mb=4.8 Ms=4.6				
East Central Pacific Ocean				
Sep 24	MNA	Z	eP	06 47 59.4
	CMB	Z	eP	06 48 08.3
USGS 06h41m14.6s 13.9N 91.4W				
h=33km mb=4.6				
Near Coast of Guatemala				
Sep 24	FHC	Z	eP	08 17 07.0
	WDC	Z	ePd	08 17 19.1

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	ePcP	08 20 01.5
	MIN	Z	eP	08 17 24.9
		Z	ePcP	08 20 03.0
	ORV	Z	eP	08 17 28.9
		Z	ePcP	08 20 04.2
	BRK	Z	eP	08 17 34.2
	BKS	Z	iPc	08 17 34.9
		Z	i	08 17 47.3
	MHC	Z	eP	08 17 40.5
	CMB	Z	eP	08 17 43.7
		Z	ePcP	08 20 09.5
	PRS	Z	eP	08 17 47.5
	LLA	Z	eP	08 17 48.5
	PRI	Z	eP	08 17 52.7
	FRI	Z	eP	08 17 52.7
		Z	ePcP	08 20 12.5
	MNA	Z	eP	08 17 53.5
		Z	ePcP	08 20 13.8
USGS 08h10m45.6s 51.9N 168.0W				
h=33km mb=5.2				
Fox Islands, Aleutian Islands				
Sep 24	WDC	Z	eP	11 42 19.2
	CMB	Z	e(P)	11 42 26.2
	FRI	Z	eP	11 42 30.8
	MNA	Z	e(P)	11 42 39.0
	BKS	Z	eLr	12 12 34
USGS 11h29m00.5s 6.6S 147.4E				
h=30km mb=5.3 Ms=4.9				
East New Guinea Region				
Sep 25	PRI	Z	eP	01 16 59.4
	FRI	Z	eP	01 17 00.4
	PRS	Z	eP	01 17 01.3
	MNA	Z	eP	01 17 05.5
	MHC	Z	eP	01 17 06.3
	CMB	Z	eP	01 17 06.9
	ORV	Z	eP	01 17 15.2
	WDC	Z	eP	01 17 20.0
USGS 01h04m22.4s 42.9S 85.8W				
h=10km mb=5.4				
West Chile Rise				
Sep 25	ZSP	Z	eP	09 21 37.7
	BRK	Z	eP	09 21 38.6
		Z	eS	09 21 52.5
	BKS	Z	iPc	09 21 38.6
		R	e +	09 21 53.1
		N	iS	09 21 53.4
		N	i	09 21 55.0
		N	i	09 21 58.8
	ORV	Z	eP	09 21 41.6
	PCC	Z	eP	09 21 43.0
	MHC	Z	iPd	09 21 48.92
	GCC	Z	eP	09 21 50.5
	MIN	Z	eP	09 21 51.2
	WDC	Z	e(P)	09 21 52.0
	CMB	Z	iPc	09 21 54.1
	SAO	Z	eP	09 21 56.7
BRK 09h21m19.9s 38.8N 122.8W				
h=3km ML=3.1(4) Mo=3.6E21(1)				
The Geysers area, 22 km S of Clear Lake, CA				
Sep 25	PRI	Z	ePc	20 14 56.1
	FRI	Z	e(P)	20 14 57.6
	PRS	Z	eP	20 14 57.8
	LLA	Z	e(P)	20 14 58.4
	MNA	Z	ePc	20 15 02.8
	CMB	Z	ePc	20 15 03.8
	ORV	Z	eP	20 15 14.0
	WDC	Z	ePc	20 15 19.0

DATE	STA	CMP	PHASE	TIME (UTC)
USGS 20h02m20.3s 42.9S 85.8W				
h=10km mb=5.3				
West Chile Rise				
Sep 25	WDC	Z	e	21 45 34.7
		Z	e	21 45 51.7
		Z	e	21 48 11.8
	CMB	Z	e	21 45 57.2
	MNA	Z	e	21 45 57.7
		Z	e	21 46 10.7
	BKS	N	e(Lq)	21 48 45
		Z	e(Lr)	21 51 20
USGS 21h28m04.9s 36.4N 70.7E				
h=212km mb=5.6				
Hindu Kush Region				
Sep 26	FHC	Z	eP	01 42 20.4
	WDC	Z	ePc	01 42 24.8
	MIN	Z	eP	01 42 27.7
	ORV	Z	eP	01 42 30.0
	BRK	Z	eP	01 42 31.8
	PCC	Z	eP	01 42 32.3
	MHC	Z	ePc	01 42 35.4
	CMB	Z	ePc	01 42 37.6
		Z	e	01 43 03.4
	LLA	Z	ePc	01 42 40.5
	PRI	Z	ePc	01 42 42.0
	FRI	Z	ePc	01 42 42.2
	MNA	Z	ePc	01 42 44.0
		Z	e	01 43 08.5
USGS 01h29m27.5s 23.9N 126.6E				
h=15km mb=5.4 Ms=5.1				
Ryukyu Islands Region				
Sep 26	PCC	Z	eP	02 34 52.9
	PRS	Z	eP	02 34 53.1
	GCC	Z	eP	02 34 53.1
	SAO	Z	e(P)	02 34 53.6
	BRK	Z	eP	02 34 54.7
	LLA	Z	eP	02 34 55.1
	PRI	Z	eP	02 34 55.3
	MHC	Z	ePd	02 34 55.6
	BKS	Z	iPc	02 34 55.6
	FRI	Z	ePd	02 35 00.4
	CMB	Z	ePd	02 35 01.1
	ORV	Z	ePd	02 35 02.3
	WDC	Z	ePd	02 35 02.7
	MIN	Z	eP	02 35 04.3
	MNA	Z	eP	02 35 09.7
USGS 02h23m31.8s 23.2S 179.6W				
h=508km mb=4.8				
South of Fiji Islands				
Sep 26	FHC	Z	ePc	05 10 15.7
	WDC	Z	ePc	05 10 20.8
	MIN	Z	ePc	05 10 24.1
	PCC	Z	ePc	05 10 24.5
	BRK	Z	e(P)	05 10 25.0
	BKS	Z	i(Pd)	05 10 25.2
	ORV	Z	ePc	05 10 25.5
	MHC	Z	ePc	05 10 28.0
	PRS	Z	ePc	05 10 30.5
	LLA	Z	ePc	05 10 32.6
	CMB	Z	ePc	05 10 32.8
	PRI	Z	ePc	05 10 34.2
	FRI	Z	ePc	05 10 35.7
	MNA	Z	ePc	05 10 40.2
USGS 04h58m09.1s 14.0N 144.5E				
h=143km mb=4.9				
Mariana Islands				
Sep 26	FHC	Z	ePc	08 34 39.5

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	e	08 34 48.0
	WDC	Z	ePc	08 34 44.7
	MIN	Z	ePc	08 34 48.7
		Z	e	08 34 58.3
	ORV	Z	ePc	08 34 51.5
	BRK	Z	ePc	08 34 54.1
		Z	e	08 35 04.0
	BKS	Z	iPc	08 34 54.5
		N	iS	08 44 26
		NW	e	08 45 28
		E	e	08 47 39
		E	e	08 48 43
		Z	e	08 52 30
		N	eLq	08 53 25
		Z	eLr	08 57 10
			AMP(μm)	PER(s)
		PZ	0.095	0.9
		LZ	0.89	20.
		LN	0.54	20.
		LE	0.71	20.
	PCC	Z	ePc	08 34 54.7
	GCC	Z	ePc	08 34 57.9
	MHC	Z	ePc	08 34 58.5
	SAO	Z	ePc	08 35 00.6
	CMB	Z	ePc	08 35 01.2
		Z	e	08 35 11.1
	PRS	Z	ePc	08 35 02.7
		Z	e	08 35 12.4
	LLA	Z	ePc	08 35 03.6
	PRI	Z	ePc	08 35 06.4
	FRI	Z	ePc	08 35 06.7
		Z	e	08 35 16.0
	MNA	Z	ePc	08 35 08.6
		Z	e	08 35 18.3
BRK Ms=5.1 Distance=74°				
USGS 08h23m19.8s 35.5N 141.1E				
h=29km mb=5.9 Ms=5.5				
Near East Coast of Honshu, Japan				
Sep 26	WDC	Z	ePdiff	14 17 32.9
	CMB	Z	ePdiff	14 17 44.3
	MNA	Z	e	14 17 57.8
	BKS	Z	e(Lr)	14 51 26
USGS 14h03m57.1s 10.1N 126.1E				
h=76km mb=5.5				
Philippine Islands Region				
Sep 26	PRI	Z	e(P)	18 43 48.0
	FRI	Z	e(P)	18 43 53.4
	CMB	Z	ePc	18 43 54.3
	WDC	Z	e(P)	18 43 55.0
	MNA	Z	eP	18 44 02.9
USGS 18h31m28.8s 26.5S 177.4W				
h=33km mb=4.8 Ms=4.6				
South of Fiji Islands				
Sep 26	MNA	Z	ePd	20 17 33.5
		Z	e	20 26 10.2
	FRI	Z	ePd	20 17 38.8
	CMB	Z	ePd	20 17 40.9
	MHC	Z	e(P)	20 17 43.0
	BKS	E	iLq	20 25 22
		Z	eLr	20 26 46
USGS 20h12m04.4s 17.4N 100.9W				
h=49km mb=5.0				
Guerrero, Mexico				
Sep 26	PRS	Z	ePd	21 19 37.6
	PRI	Z	eP	21 19 39.2
	MHC	Z	ePd	21 19 40.4
	FRI	Z	eP	21 19 45.5
	CMB	Z	ePd	21 19 45.8

DATE	STA	CMP	PHASE	TIME (UTC)
	ORV	Z	e(P)	21 19 47.4
	WDC	Z	ePd	21 19 48.2
	MNA	Z	ePd	21 19 52.6
	BKS	N	iS	21 31 26
		N	eLq	21 42 16
		Z	eLr	21 44 48
USGS 21h07m19.8s 26.5S 177.5W				
h=33km mb=5.4 Ms=5.4				
South of Fiji Islands				
Sep 28	CMB	Z	e	03 28 23.4
	MNA	Z	ePc	03 28 34.1
	BKS	E	eS	03 47 42
		Z	e	03 50 24
		E	iG	03 56 14
		N	eLr	03 57 44
USGS 03h16m33.9s 17.7S 176.8W				
h=33km mb=4.9 Ms=5.1				
Fiji Islands Region				
Sep 28	FRI	Z	e(P)	03 51 56.7
	MNA	Z	eP	03 52 04.9
USGS 03h47m24.1s 19.6N 109.1W				
h=10km mb=4.1 Ms=4.4				
Revilla Gigedo Islands Region				
Sep 28	ARC	N	e(P)	04 54 59.2
		N	iS	04 55 15.2
	FHC	Z	iPc	04 54 59.4
		Z	iS	04 55 16.3
	WDC	Z	iPd	04 55 15.1
		Z	i	04 55 39.7
		Z	i	04 55 44.3
	MIN	Z	ePc	04 55 24.4
		Z	eS	04 56 02.2
	ORV	Z	eP	04 55 25.2
		Z	i	04 56 07.3
	PCC	Z	e(P)	04 55 35.1
	CMB	Z	e	04 55 49.9
BRK 04h54m35.2s 40.5N 125.8W				
h=5kmR ML=3.9(2) Mo=5.3E20(2)				
Off Coast 115 km W of Cape Mendocino, CA				
Sep 28	FRI	Z	eP	05 00 17.8
	CMB	Z	eP	05 00 18.7
	ORV	Z	eP	05 00 20.0
	WDC	Z	eP	05 00 20.2
	MIN	Z	eP	05 00 22.1
	MNA	Z	eP	05 00 27.5
USGS 04h49m11.3s 20.6S 179.0W				
h=631km mb=4.8				
Fiji Islands Region				
Sep 29	FRI	Z	e(P)d	06 17 56.6
	PRI	Z	e(P)	06 17 57.8
	MNA	Z	ePd	06 18 03.5
	CMB	Z	ePd	06 18 06.9
	BRK	Z	ePd	06 18 12.1
	ORV	Z	ePd	06 18 24.9
USGS 06h13m31.4s 20.1N 110.3W				
h=10km mb=4.2 Ms=3.8				
Revilla Gigedo Islands Region				
Sep 29	FHC	Z	ePc	08 35 04.4
	WDC	Z	ePc	08 35 07.0
	MIN	Z	ePc	08 35 11.5
	ORV	Z	eP	08 35 16.1
	BRK	Z	e(P)	08 35 16.9
	CMB	Z	eP	08 35 21.6
	LLA	Z	eP	08 35 24.6
	PRS	Z	eP	08 35 24.9

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DATE	STA	CMP	PHASE	TIME (UTC)
	FRI	Z	ePc	08 35 28.9
	MNA	Z	eP	08 35 32.4
USGS 08h23m33.7s 35.9N 139.3E				
h=10km mb=4.8 Ms=3.9				
Near S. Coast of Honshu, Japan				
Sep 29	WDC	Z	iPc	15 05 22.7
		Z	i	15 05 37.9
		Z	iS	15 05 40.5
	MIN	Z	iPc	15 05 23.0
		E	iPc	15 05 25.9
		Z	iS	15 05 41.0
		E	iS	15 05 44.4
	FHC	Z	e(P)	15 05 35.6
		Z	i	15 05 37.6
		Z	i	15 05 38.7
	ORV	Z	iPd	15 05 36.9
	CMB	Z	ePc	15 06 00.4
	BKS	Z	i(P)d	15 06 06.8
	MNA	Z	e(P)	15 06 08.2
	FRI	Z	e	15 06 16.5
BRK 15h05m00.3s 41.6N 121.5W				
h=2kmR ML=3.5(4) Mo=8.9E21(2)				
Medicine Lake area, 74 km ENE of Weed, CA				
Sep 30	WDC	Z	iPd	00 04 18.6
		Z	iS	00 04 37.8
	MIN	Z	iPd	00 04 19.1
		N	iPd	00 04 21.3
		Z	iS	00 04 36.7
		N	iS	00 04 38.9
	FHC	Z	e(P)	00 04 31.2
	ORV	Z	ePc	00 04 32.0
	CMB	Z	e(P)c	00 04 55.6
	MNA	Z	e(P)	00 05 02.4
	FRI	Z	e	00 05 12.6
	BKS	Z	e(P)d	00 05 15.0
BRK 00h03m55.9s 41.6N 121.6W				
h=7km ML=3.6(4) Mo=5.6E21(2)				
Medicine Lake area, 74 km ENE of Weed, CA				
Sep 30	WDC	Z	ePd	00 30 36.0
		Z	iS	00 30 54.2
	MIN	Z	iPd	00 30 36.4
		Z	iS	00 30 54.0
	FHC	Z	ePd	00 30 48.6
		Z	iS	00 31 20.2
	ORV	Z	ePd	00 30 49.4
	ZSP	Z	eP	00 31 12.7
	CMB	Z	ePd	00 31 12.8
		Z	e	00 32 09.0
	BKS	Z	ePc	00 31 13.45
		Z	iPnd	00 31 13.9
		Z	e(P)	00 31 14.5
		Z	i	00 31 43.6
		Z	i	00 31 52.5
		T	e(S)	00 31 56.5
		Z	iSn	00 31 56.9
		Z	i	00 31 59.1
	BRK	Z	ePd	00 31 13.8
	MNA	Z	eP	00 31 19.1
	MHC	Z	e(P)	00 31 20.0
	FRI	Z	ePc	00 31 29.7
BRK 00h30m13.7s 41.6N 121.6W				
h=9km ML=4.3(8) Mo=3.9E22(4)				
Medicine Lake area, 73 km ENE of Weed, CA				
Sep 30	WDC	Z	iPc	00 40 25.5
		Z	iS	00 40 44.2
	MIN	Z	iPc	00 40 26.0
		N	ePd	00 40 28.0
		Z	iS	00 40 43.4
		N	iS	00 40 45.4
	FHC	Z	e(P)	00 40 38.6
	ORV	Z	ePc	00 40 39.2
	CMB	Z	e(P)c	00 41 02.8
	BKS	Z	ePc	00 41 05.5
	MNA	Z	e(P)	00 41 10.4
	FRI	Z	e	00 41 19.0
BRK 00h40m03.6s 41.6N 121.6W				
h=7km ML=3.6(6) Mo=7.3E21(2)				
Medicine Lake area, 70 km ENE of Weed, CA				
Sep 30	FRI	Z	ePd	03 35 10.4
	MNA	Z	iPd	03 35 12.0
		Z	epP	03 35 40.2
	PRI	Z	ePd	03 35 12.4
		Z	epP	03 35 40.4
	LLA	Z	iPd	03 35 14.8
		Z	epP	03 35 42.5
	PRS	Z	iPd	03 35 15.4
		Z	epP	03 35 43.3
	CMB	Z	iPd	03 35 17.7
	GCC	Z	iPd	03 35 20.0
		Z	epP	03 35 48.0
	MHC	Z	iPd	03 35 20.4
		Z	epP	03 35 48.1
	BKS	Z	iPd	03 35 23.9
		Z	i	03 35 52.4
		Z	i	03 36 14.8
	ORV	Z	ePd	03 35 27.3
		Z	epP	03 35 55.4
	MIN	Z	e(P)	03 35 29.4
	WDC	Z	iPd	03 35 32.6
		Z	epP	03 36 00.9
USGS 03h23m47.2s 19.6S 68.9W				
h=111km mb=5.3				
Chile-Bolivia Border Region				
Sep 30	WDC	Z	e(P)	04 55 44.0
		Z	e	04 56 04.2
	MIN	Z	eP	04 55 44.8
		Z	e	04 56 06.6
	CMB	Z	e(P)	04 56 09.2
		Z	e	04 56 29.4
	MNA	Z	eP	04 56 12.4
		Z	e	04 56 34.6
	FRI	Z	e(P)	04 56 16.9
		Z	e	04 56 38.4
	BKS	Z	ePd	04 56 24.2
USGS 04h50m03.8s 61.1N 151.5W				
h=86km mb=4.7				
Southern Alaska				
Sep 30	CMB	Z	ePKP	08 46 12.7
	FRI	Z	ePKP	08 46 14.0
	MNA	Z	ePKP	08 46 16.5
USGS 08h27m53.6s 7.4S 128.4E				
h=145km mb=5.5				
Banda Sea				
Sep 30	PRI	Z	eP	09 42 51.3
	FRI	Z	e(P)	09 42 52.0
	MNA	Z	e(P)	09 42 55.4
	CMB	Z	eP	09 42 56.7
USGS 09h30m14.3s 42.9S 85.9W				
h=10km mb=5.1				
West Chile Rise				
Sep 30	GCC	Z	eP	21 55 57.8
		Z	epP	21 57 54.6
	PCC	Z	eP	21 55 58.2
	PRS	Z	eP	21 55 58.2
		Z	epP	21 57 55.4
	PRI	Z	eP	21 56 00.3
	MHC	Z	eP	21 56 00.3
		Z	e(pP)	21 57 57.0
	LLA	Z	eP	21 56 00.4
	FRI	Z	eP	21 56 05.5
		Z	epP	21 58 03.4
	CMB	Z	eP	21 56 06.5
		Z	epP	21 58 03.5
	ORV	Z	eP	21 56 07.4
		Z	epP	21 58 05.5
	WDC	Z	eP	21 56 07.5
		Z	epP	21 58 06.2
	MIN	Z	eP	21 56 09.3
	MNA	Z	eP	21 56 15.5
		Z	epP	21 58 13.0
USGS 21h45m01.3s 19.4S 177.5W				
h=552km mb=5.8				
Fiji Islands Region				
Oct 1	ZSP	Z	eP	03 05 42.0
	BRK	Z	iPc	03 05 43.3
		Z	eS	03 05 57.4
	BKS	Z	iPd	03 05 43.4
		T	eS-	03 05 58.0
	ORV	Z	ePc	03 05 47.2
	PCC	Z	eP	03 05 47.9
	MHC	Z	iPd	03 05 54.18
	GCC	Z	eP	03 05 55.7
	MIN	Z	eP	03 05 56.3
	WDC	Z	e(P)	03 05 57.5
	CMB	Z	eP	03 05 58.8
		Z	eS	03 06 26.2
	PRS	Z	e(P)	03 06 06.0
	FRI	Z	eP	03 06 13.0
BRK 03h05m24.3s 38.8N 122.8W				
h=3km ML=3.1(6)				
The Geysers area, 23 km S of Clear Lake, CA				
Oct 1	PRI	Z	eP	09 54 52.7
	PRS	Z	e(P)	09 54 55.5
	FRI	Z	eP	09 54 56.8
	LLA	Z	eP	09 54 57.3
	MHC	Z	e(P)	09 55 01.2
	MNA	Z	eP	09 55 02.5
	CMB	Z	eP	09 55 03.1
	BRK	Z	eP	09 55 05.0
	ORV	Z	eP	09 55 14.2
	WDC	Z	e(P)	09 55 19.7
	BKS	Z	iPc	09 55 28
		E	iSc	10 04 44
		NE	eSS	10 09 22
		NE	eSSS	10 13 08
		E	iG	10 15 06
		Z	eLr	10 18 40
			AMP(μm)	PER(s)
		LZ	6.3	20.
		LN	5.9	20.
		LE	1.4	20.
BRK Ms=5.9 Distance=75°				
USGS 09h43m24.5s 35.3S 106.0W				
h=10km mb=5.6 Ms=5.7				
Easter Island Cordillera				
Oct 2	MNA	Z	eP	06 29 42.0
	PRI	Z	eP	06 29 42.2
	FRI	Z	eP	06 29 42.7
	LLA	Z	eP	06 29 44.4
	CMB	Z	eP	06 29 47.2
	GCC	Z	eP	06 29 49.1
	MHC	Z	eP	06 29 49.9
	PCC	Z	eP	06 29 51.9
	BRK	Z	e(P)	06 29 53.5
	BKS	Z	iPc	06 29 55.3
			AMP(μm)	PER(s)
		PZ	0.041	0.6
	ORV	Z	eP	06 29 56.3
	MIN	Z	eP	06 29 58.3
	WDC	Z	eP	06 30 01.0
USGS 06h18m08.2s 22.8S 66.3W				
h=238km mb=4.9				
Juyjuy Province, Argentina				
Oct 2	PCC	Z	eP	11 03 44.1
	SAO	Z	e(P)	11 03 45.3
	BKS	Z	iPc	11 03 45.4
			AMP(μm)	PER(s)
		PZ	0.025	0.8
	BRK	Z	eP	11 03 45.8
	PRI	Z	eP	11 03 46.7
	MHC	Z	eP	11 03 46.7
	FRI	Z	ePc	11 03 51.8
	CMB	Z	ePc	11 03 52.6
	ORV	Z	ePc	11 03 53.1
	WDC	Z	ePc	11 03 53.1
	MIN	Z	eP	11 03 55.0
	MNA	Z	eP	11 04 01.6
USGS 10h52m38.1s 17.4S 179.7W				
h=441km mb=4.7				
Fiji Islands Region				
Oct 2	FRI	Z	ePc	16 12 34.7
	MNA	Z	iPc	16 12 42.0
	CMB	Z	ePc	16 12 49.3
	MHC	Z	e(P)	16 12 54.1
	ORV	Z	e(P)	16 13 10.2
	MIN	Z	ePc	16 13 20.7
	WDC	Z	e(P)	16 13 27.3
	BKS	N	e	16 17 04
USGS 16h09m30.8s 27.2N 110.1W				
h=10km mb=4.4				
Gulf of California				
Oct 2	FRI	Z	eP	23 30 18.6
	LLA	Z	ePc	23 30 22.5
	PRS	Z	ePc	23 30 23.1
	CMB	Z	ePc	23 30 27.2
	ORV	Z	e(P)	23 30 40.9
USGS 23h21m03.2s 7.1S 88.6W				
h=10km mb=4.7				
Southeast of Galapagos Islands				
Oct 3	PCC	Z	eP	00 58 22.9
	BRK	Z	eP	00 58 24.0
		Z	e	00 58 41.4
	GCC	Z	eP	00 58 24.1
		Z	e	00 58 41.4
	BKS	Z	ePc	00 58 24.2
			AMP(μm)	PER(s)
		PZ	0.039	0.7
	SAO	Z	eP	00 58 25.5
	MHC	Z	ePc	00 58 26.0
		Z	e	00 58 43.3
	WDC	Z	ePc	00 58 26.9
		Z	e	00 58 44.5
	LLA	Z	ePc	00 58 27.7
		Z	e	00 58 34.9
	PRI	Z	ePc	00 58 28.4
	ORV	Z	eP	00 58 28.7
	MIN	Z	eP	00 58 29.3
	CMB	Z	ePc	00 58 31.2
		Z	e	00 58 48.3
	FRI	Z	eP	00 58 32.3
		Z	e	00 58 49.5
	MNA	Z	e	00 58 37.4
		Z	ePc	00 58 40.2
		Z	e	00 58 57.4
USGS 00h45m53.4s 10.3S 161.4E				
h=89km mb=5.5				
Solomon Islands				
Oct 4	WDC	Z	ePc	00 34 29.8
		Z	iS	00 34 47.2
	MIN	Z	ePc	00 34 30.2
		Z	iS	00 34 47.3
	FHC	Z	ePc	00 34 42.8
		Z	e	00 34 45.1
	ORV	Z	ePc	00 34 43.8
	CMB	Z	e(P)	00 35 07.1
		Z	e	00 35 14.1
	MNA	Z	e(P)	00 35 14.5
	FRI	Z	e	00 35 24.6
BRK 00h34m07.8s 41.6N 121.6W				
h=2kmR ML=3.4(4) Mo=4.5E21(2)				
Medicine Lake area, 70 km ENE of Weed, CA				
Oct 4	ZSP	Z	ePc	14 04 45.6
		Z	i	14 04 46.8
		Z	iS	14 04 59.7
	BKS	Z	ePd	14 04 45.86
		T	eS-	14 05 02.35
	MHC	Z	iPd	14 04 55.11
	CMB	Z	ePc	14 05 02.0
		Z	eS	14 05 27.1
	WDC	Z	e(P)	14 05 03.1
	SAO	Z	e(P)	14 05 04.0
	MNA	Z	e(P)	14 05 33.8
BRK 14h04m27.5s 38.8N 122.8W				
h=4km ML=3.2(8)				
The Geysers area, 22 km S of Clear Lake, CA				
Oct 4	BKS	Z	iPc	15 50 55.7
		R	iSKS-	16 01 31.01
		E	iS	16 01 36
		E	iPS	16 02 59
		R	i -	16 03 02.01
		R	iPS+	16 07 48.01
		Z	iSPd	16 07 52.02
		E	iSS	16 07 56
		Z	iSSS	16 11 38
		N	iLq	16 14 26
		R	eLr-	16 18 13.52
			AMP(μm)	PER(s)
		LZ	6.1	20.
		LN	3.0	20.
		LE	4.5	20.
	WDC	Z	iPc	15 50 58.3
	MHC	Z	iPc	15 50 58.4
	MIN	Z	e(P)c	15 51 03.3
	PRS	Z	e(P)c	15 51 03.8
	ORV	Z	iPc	15 51 03.9
	CMB	Z	iPc	15 51 04.7
		E	eSKS	16 01 50.0
		E	ePS	16 03 23.0
		E	eSS	16 08 12.0
		E	eLr	16 19 20.0
	PRI	Z	e(P)c	15 51 05.6
	FRI	Z	iPc	15 51 07.0
	MNA	Z	iPc	15 51 13.2
BRK Ms=6.0 Distance= 89°				
USGS 15h37m57.5s 3.5S 150.4E				
h=28km mb=5.5 Ms=6.0				
New Ireland Region				
Oct 5	CMB	Z	ePd	01 12 29.5
	WDC	Z	e(P)d	01 12 31.3
	MNA	Z	ePd	01 12 39.1
USGS 01h00m07.0s 14.8S 167.3E				
h=149km mb=5.4				
Vanuatu Islands				
Oct 6	PRI	Z	eP	14 13 10.9
	FRI	Z	eP	14 13 13.1
	LLA	Z	e(P)	14 13 15.6
	CMB	Z	eP	14 13 23.6
	MHC	Z	eP	14 13 23.67
		T	eS-	14 20 04
		T	e -	14 20 27
		T	eLq+	14 23 33
		Z	eLrd	14 26 16
	MNA	Z	eP	14 13 24.2
	SAO	Z	e	14 13 30
		T	eS-	14 19 56
		T	eLq-	14 23 23
		Z	eLrc	14 26 04
	BKS	Z	e(P)c	14 13 31
		T	eS-	14 20 16
		NW	e	14 20 25
		Z	e	14 20 40
		N	i	14 20 42
		N	i(Lq)	14 23 48
		Z	eSS	14 25 02
		Z	eLrc	14 26 32
			AMP(μm)	PER(s)
		LZ	21	20.
		LN	17	20.
		LE	7.1	20.
	ORV	Z	eP	14 13 38.0
	WDC	Z	eP	14 13 46.1
	FHC	Z	e(P)	14 13 56.8
BRK Ms=6.0 Distance=46°				
USGS 14h05m10.9s 4.0S 104.3W				
h=10km mb=4.9 Ms=5.6				
Northern Easter I. Cordillera				
Oct 7	WDC	Z	ePdiff	07 59 58.7
	ORV	Z	ePdiff	08 00 04.0
	CMB	Z	e	08 00 09.8
	FRI	Z	e	08 00 14.6
USGS 07h46m17.3s 2.2S 136.7E				
h=33km mb=5.2				
West Irian Region				
Oct 7	PRS	Z	eP	13 32 52.2
	FRI	Z	eP	13 32 59.0
	CMB	Z	eP	13 33 00.3
	ORV	Z	eP	13 33 01.4
	WDC	Z	eP	13 33 01.7
	MNA	Z	eP	13 33 08.4
USGS 13h21m34.3s 23.9S 180.0E				
h=593km mb=5.0				
South of Fiji Islands				
Oct 7	PCC	Z	eP	18 21 32.7
	GCC	Z	eP	18 21 32.8
	PRS	Z	eP	18 21 33.3
	MHC	Z	eP	18 21 35.2
	LLA	Z	eP	18 21 35.4
	PRI	Z	eP	18 21 35.6
	FRI	Z	eP	18 21 40.7
	CMB	Z	eP	18 21 41.3
	ORV	Z	eP	18 21 41.8

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DATE	STA	CMP	PHASE	TIME (UTC)
	WDC	Z	eP	18 21 41.8
	MNA	Z	eP	18 21 50.7
USGS 18h10m38.3s 17.7S 178.6W				
h=534km mb=5.3				
Fiji Islands Region				
Oct 7	GCC	Z	eP	18 53 37.1
	PRS	Z	eP	18 53 38.5
	MHC	Z	eP	18 53 39.2
	LLA	Z	eP	18 53 40.5
	WDC	Z	eP	18 53 40.6
	ORV	Z	eP	18 53 42.6
	CMB	Z	eP	18 53 44.5
	FRI	Z	eP	18 53 45.6
	MNA	Z	eP	18 53 53.7
USGS 18h41m36.4s 10.7S 166.0E				
h=204km mb=4.7				
Santa Cruz Islands				
Oct 8	PRS	Z	eP	04 57 52.1
	GCC	Z	e(P)	04 57 52.2
	PCC	Z	eP	04 57 52.4
	SAO	Z	eP	04 57 53.2
		R	eS+	05 07 25.2
	PRI	Z	eP	04 57 54.3
		Z	ePKPPKP	05 25 30.9
	BRK	Z	eP	04 57 54.3
			AMP(μm)	PER(s)
		LZ	41	20.
	MHC	Z	eP	04 57 54.4
		R	eS-	05 07 24.0
	LLA	Z	eP	04 57 54.5
	BKS	Z	ePc	04 57 54.9
		R	eS+	05 07 26.7
		Z	iSKKS	05 11 36.0
			AMP(μm)	PER(s)
		LZ	62	20.
		LNE	49	20.
		LNW	15	20.
	FRI	Z	eP	04 58 00.2
	FHC	Z	e(P)	04 58 00.3
	CMB	Z	eP	04 58 01.6
		Z	ePKPPKP	05 25 31.2
		Z	e	05 45 09
	ORV	Z	e(P)	04 58 02.9
		Z	ePKPPKP	05 25 29.0
	WDC	Z	iPc	04 58 03.7
		Z	ePKPPKP	05 25 24.9
		Z	e	05 45 12.3
	MIN	Z	eP	04 58 05.5
	MNA	Z	eP	04 58 11.2
		Z	ePKKP	05 17 21.7
		Z	e	05 45 12.1
BRK Ms=6.8 Distance=73°				
USGS 04h46m24.5s 18.8S 172.4W				
h=35km mb=6.6 Ms=6.8				
Tonga Islands Region				
Oct 8	PRS	Z	eP	07 45 47.4
	GCC	Z	eP	07 45 47.5
	SAO	Z	eP	07 45 48.3
	PRI	Z	eP	07 45 49.4
	LLA	Z	eP	07 45 49.8
	MHC	Z	eP	07 45 50.2
	FRI	Z	eP	07 45 55.3
	CMB	Z	eP	07 45 56.4
	ORV	Z	eP	07 45 58.2
	WDC	Z	eP	07 45 59.0
	MIN	Z	eP	07 46 01.0
	MNA	Z	eP	07 46 06.5
USGS 07h34m17.7s 19.0S 172.3W				
h=31km mb=5.4				

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Tonga Islands Region				
Oct 8	FRI	Z	eP	10 26 26.4
	MNA	Z	eP	10 26 35.4
	CMB	Z	eP	10 26 37.2
	ORV	Z	eP	10 26 50.8
USGS 10h18m20.7s 4.6S 104.9W				
h=10km mb=4.7				
Northern Easter I. Cordillera				
Oct 8	WDC	Z	eP	14 52 16.5
	ORV	Z	eP	14 52 21.3
	CMB	Z	eP	14 52 30.6
	PRS	Z	e(P)	14 52 32.1
	FRI	Z	eP	14 52 35.8
	MNA	Z	eP	14 52 38.0
USGS 14h39m51.1s 28.7N 130.1E				
h=47km mb=5.2 Ms=4.9				
Ryukyu Islands				
Oct 8	PCC	Z	e(P)	17 43 30.9
	MHC	Z	eP	17 43 33.2
	FRI	Z	eP	17 43 37.5
	CMB	Z	eP	17 43 38.7
	ORV	Z	eP	17 43 39.7
	WDC	Z	e(P)	17 43 40.2
	MIN	Z	eP	17 43 41.7
	MNA	Z	eP	17 43 47.0
USGS 17h32m10.5s 23.8S 179.9E				
h=563km mb=4.8				
South of Fiji Islands				
Oct 8	FRI	Z	iPc	21 14 50.9
		Z	eS	21 15 10.8
	PRI	Z	iPc	21 14 59.3
	MNA	Z	ePd	21 14 59.4
	LLA	Z	eP	21 15 02.6
	PRS	Z	eP	21 15 07.3
	CMB	Z	eP	21 15 08.9
		Z	eS	21 15 45.0
	SAO	Z	eP	21 15 09.1
	MHC	Z	eP	21 15 12.3
		T	eS+	21 16 01.0
	PCC	Z	eP	21 15 22.9
BRK 21h14m20.4s 36.1N 117.9W				
h=5km ML=4.6(4)				
59 km SE of Lone Pine, CA				
Oct 8	FRI	Z	iPc	21 26 36.9
		Z	eS	21 26 59.2
	PRI	Z	eP	21 26 45.2
	MNA	Z	eP	21 26 45.3
	LLA	Z	eP	21 26 48.9
	PRS	Z	eP	21 26 53.1
	CMB	Z	eP	21 26 54.7
		Z	eS	21 27 31.2
	SAO	Z	eP	21 26 55.2
BRK 21h26m06.3s 36.1N 117.9W				
h=6km ML=4.1(4)				
59 km SE of Lone Pine, CA				
Oct 8	WDC	Z	e(P)	22 17 48.6
	ORV	Z	eP	22 17 53.1
	CMB	Z	eP	22 18 02.0
	PRS	Z	eP	22 18 03.7
	LLA	Z	eP	22 18 04.4
	PRI	Z	eP	22 18 07.4
	FRI	Z	eP	22 18 07.5
	MNA	Z	eP	22 18 09.4
USGS 22h06m26.5s 33.3N 139.0E				
h=202km mb=5.0				
South of Honshu, Japan				

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Oct 9	WDC	Z	eP	00 41 05.9
	ORV	Z	eP	00 41 12.0
	BRK	Z	eP	00 41 14.3
	PCC	Z	eP	00 41 14.5
	GCC	Z	eP	00 41 17.1
	MHC	Z	eP	00 41 18.1
	CMB	Z	eP	00 41 20.6
	PRS	Z	eP	00 41 21.5
	LLA	Z	eP	00 41 22.5
	PRI	Z	eP	00 41 25.1
	FRI	Z	eP	00 41 25.4
	MNA	Z	eP	00 41 27.5
USGS 00h30m00.7s 30.5N 137.7E				
h=493km mb=5.1				
South of Honshu, Japan				
Oct 9	PRI	Z	ePc	17 15 28.3
	PRS	Z	ePc	17 15 29.9
	FRI	Z	ePc	17 15 30.2
	LLA	Z	eP	17 15 30.9
	SAO	Z	eP	17 15 32.7
	GCC	Z	ePc	17 15 35.1
	MHC	Z	ePc	17 15 36.3
	CMB	Z	ePc	17 15 38.1
		Z	e	17 15 41.1
	MNA	Z	ePc	17 15 38.3
		Z	e	17 15 41.2
	BRK	Z	eP	17 15 39.6
	ORV	Z	ePc	17 15 50.2
	WDC	Z	ePc	17 15 53.5
		Z	e	17 15 56.4
USGS 17h03m53.0s 35.9S 103.2W				
h=10km mb=5.3 Ms=4.7				
Southern Pacific Ocean				
Oct 9	CMB	Z	ePc	22 44 33.6
	FRI	Z	e(P)	22 44 36.0
	MNA	Z	ePc	22 44 43.2
USGS 22h32m55.7s 18.2S 173.0W				
h=33km mb=4.9				
Tonga Islands				
Oct 10	FHC	Z	iPc	00 19 31.6
		Z	eS	00 19 41.5
		Z	e	00 19 44.5
	ARC	N	eP	00 19 31.8
		N	iS	00 19 41.5
	WDC	Z	ePc	00 19 44.5
		Z	eS	00 20 04.0
	MIN	Z	ePc	00 19 54.3
	ORV	Z	eP	00 19 57.9
		Z	eS	00 20 25.8
	PCC	Z	e(P)	00 20 07.8
	SAO	Z	e(P)	00 20 21.4
BRK 00h19m18.4s 40.3N 124.7W				
h=11km ML=3.3(4)				
Off Coast 23 km W of Cape Mendocino, CA				
Oct 10	BKS	Z	ePc	06 02 04
		Z	epP	06 03 17
		Z	e	06 03 40
		Z	ePP	06 05 56
		Z	epPP	06 06 19
		Z	esPP	06 06 36
		Z	e	06 09 09
		N	eS	06 11 59
		N	e	06 12 34
		N	e	06 12 58
		E	e	06 16 10
		N	e	06 19 50

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		Z	eLr	06 23 40
	FHC	Z	ePc	06 02 47.2
		Z	epP	06 03 04.0
	WDC	Z	iPc	06 02 52.9
		Z	ipP	06 03 09.8
		Z	e(S)	06 11 48.4
		Z	ePKPPKP	06 31 18.6
	MIN	Z	ePc	06 02 57.0
		Z	epP	06 03 13.8
	ORV	Z	ePc	06 03 00.4
		Z	epP	06 03 16.9
	BRK	Z	ePc	06 03 04.2
		Z	epP	06 03 21.1
	PCC	Z	e(P)	06 03 04.7
		Z	epP	06 03 21.5
	GCC	Z	ePc	06 03 08.3
		Z	epP	06 03 25.1
	MHC	Z	ePc	06 03 08.8
		Z	epP	06 03 25.7
		Z	e c	06 04 15
		Z	ePPc	06 06 04
		T	eS+	06 12 07
		T	e +	06 12 38
		T	e +	06 13 04
		Z	e d	06 15 54
		T	eLq-	06 20 04
		R	eLr+	06 24 00
	CMB	Z	iPc	06 03 11.2
		Z	ipP	06 03 28.0
		Z	e	06 03 42.2
		Z	e(S)	06 12 05
		Z	ePKPPKP	06 31 09.2
	SAO	Z	ePc	06 03 11.2
		Z	epP	06 03 28.1
	PRS	Z	ePc	06 03 13.5
		Z	epP	06 03 40.6
		Z	e	06 03 44.7
	LLA	Z	e(P)	06 03 14.2
		Z	epP	06 03 31.0
		Z	e	06 03 45.7
	FRI	Z	ePc	06 03 17.3
		Z	epP	06 03 34.3
		Z	e	06 03 48.8
	PRI	Z	ePc	06 03 17.6
		Z	epP	06 03 34.5
	MNA	Z	iPc	06 03 18.4
		Z	ipP	06 03 35.2
		Z	e	06 03 49.6
		Z	e(S)	06 12 22.8
		Z	ePKPPKP	06 30 58.6
USGS 05h52m10.5s 42.6N 144.4E				
h=56km mb=5.8				
Hokkaido, Japan, Region				
Oct 10	GCC	Z	ePd	06 43 56.1
	MHC	Z	ePd	06 43 59
		T	eS+	06 54 41
		R	iPPS-	06 55 39
		T	e +	07 01 41
		T	eLq-	07 06 03
		Z	eLrc	07 09 52
			AMP(μm)	PER(s)
		LZ	1.5	20.
		LN	1.7	20.
		LE	0.28	20.
	PRS	Z	ePd	06 44 00.3
	WDC	Z	e(P)	06 44 00.8
	BKS	Z	e(P)	06 44 02
		Z	eS	06 55 50
		N	e(Lq)	07 06 56
		N	e(Lr)	07 09 40
			AMP(μm)	PER(s)

DATE	STA	CMP	PHASE	TIME (UTC)
		LZ	2.9	20.
		LN	1.3	20.
		LE	2.3	20.
	ORV	Z	e(P)	06 44 02.5
	CMB	Z	ePd	06 44 04.0
	FRI	Z	e(P)	06 44 04.3
	MNA	Z	e(P)	06 44 12.7
BRK Ms=5.6 Distance=84°				
USGS 06h31m28.1s 13.7S 166.4E				
h=37km mb=5.3 Ms=5.2				
Vanuatu Islands				
Oct 10	FHC	Z	ePd	07 06 36.0
	WDC	Z	iPd	07 06 42.2
	MIN	Z	ePd	07 06 46.2
	ORV	Z	ePd	07 06 49.7
	BRK	Z	e(P)	07 06 53.8
	GCC	Z	ePd	07 06 57.8
	MHC	Z	e(P)	07 06 58.3
	CMB	Z	ePd	07 07 00.8
	PRS	Z	eP	07 07 03.5
	LLA	Z	eP	07 07 04.3
	FRI	Z	e(P)	07 07 07.4
	PRI	Z	e(P)	07 07 07.8
	MNA	Z	ePd	07 07 08.3
USGS 06h56m28.1s 44.7N 147.7E				
h=125km mb=4.9				
Kurile Islands				
Oct 10	GCC	Z	eP	07 32 01.4
	PRS	Z	ePc	07 32 01.8
	BKS	Z	eP	07 32 02
		N	eScS	07 43 09
		N	eG	07 55 40
		N	eLr	07 59 27
			AMP(μm)	PER(s)
		LZ	3.6	20.
		LN	2.1	20.
		LE	2.8	20.
	BRK	Z	e(P)	07 32 02.4
	MHC	Z	ePc	07 32 03.4
		T	eLq	07 56 04
		R	eLr	07 59 27
			AMP(μm)	PER(s)
		LZ	3.4	20.
		LN	3.3	20.
		LE	0.85	20.
	PRI	Z	e(P)	07 32 04.0
	FHC	Z	eP	07 32 05.5
	FRI	Z	ePc	07 32 08.4
	WDC	Z	iPc	07 32 08.8
	CMB	Z	ePc	07 32 09.0
	ORV	Z	ePc	07 32 09.2
	MIN	Z	ePc	07 32 10.6
	MNA	Z	ePc	07 32 17.3
BRK Ms=5.8 Distance=89°				
USGS 07h19m22.2s 22.8S 171.8E				
h=36km mb=5.7 Ms=5.4				
Loyalty Islands Region				
Oct 10	PRS	Z	ePc	09 17 09.7
	GCC	Z	ePc	09 17 10.7
	BRK	Z	ePc	09 17 12.6
	MHC	Z	ePc	09 17 13.1
	FRI	Z	ePc	09 17 16.7
	CMB	Z	ePc	09 17 18.1
	WDC	Z	iPc	09 17 20.6
	MNA	Z	ePc	09 17 25.8
USGS 09h04m29.0s 32.3S 178.2W				
h=33km mb=4.7				
South of Kermadec Islands				

DATE	STA	CMP	PHASE	TIME (UTC)
Oct 10	GCC	Z	iPc	18 32 52.4
		Z	ePKKP	18 51 12.5
		Z	ePKPPKP	18 59 17.3
	PRS	Z	iPc	18 32 52.9
	SAO	Z	ePc	18 32 53.0
	PCC	Z	ePc	18 32 53.0
	MHC	Z	iPc	18 32 54.07
		Z	e c	18 34 32.69
		T	iS+	18 43 16.58
		T	eScS+	18 43 40.17
		T	iPS+	18 43 58.43
		R	e +	18 48 12.60
		T	eSS+	18 48 52.93
		Z	ePKKP	18 51 11.4
		Z	eSSSd	18 52 11.96
		T	eLq+	18 54 25.77
		Z	eLrc	18 58 22.14
		Z	ePKPPKP	18 59 16.7
			AMP(μm)	PER(s)
		LZ	8.0	20.
		LN	5.1	20.
		LE	5.8	20.
	PRI	Z	iPc	18 32 54.3
		Z	epP	18 33 12.2
		Z	ePKKP	18 51 12.5
		Z	ePKPPKP	18 59 16.6
	LLA	Z	iPc	18 32 54.7
		Z	ePKKP	18 51 11.6
		Z	ePKPPKP	18 59 16.4
	BRK	Z	iPc	18 32 54.9
		Z	eLr	18 58 32
	BKS	Z	iPc	18 32 55.2
		E	iS	18 43 14.8
			AMP(μm)	PER(s)
		PZ	1.8	1.9
		LZ	5.5	20.
		LN	4.8	20.
		LE	4.3	20.
	FRI	Z	iPc	18 32 59.4
		Z	ePKKP	18 51 08.6
		Z	ePKPPKP	18 59 14.3
	CMB	Z	iPc	18 33 00.7
		Z	ipP	18 33 18.6
		Z	i	18 33 22.0
		Z	ePP	18 36 17.0
		Z	epPP	18 36 34.1
		Z	ePKKP	18 51 07.8
		Z	ePKPPKP	18 59 13.8
	FHC	Z	iPc	18 33 00.9
		Z	epP	18 33 17.2
	ORV	Z	iPc	18 33 02.6
		Z	ePKKP	18 51 08.0
	WDC	Z	iPc	18 33 03.2
		Z	ipP	18 33 21.5
		Z	i	18 33 25.7
		Z	isP	18 33 40.0
		Z	e	18 43 25.8
		Z	ePKPPKP	18 59 12.7
	MIN	Z	iPc	18 33 04.4
	MNA	Z	iPc	18 33 08.6
		Z	epP	18 33 26.5
		Z	ePP	18 33 29.0
		Z	esP	18 33 41.0
		Z	e	18 43 49.0
		Z	ePKKP	18 51 04.7
		Z	ePKPPKP	18 59 08.1
BRK Ms=6.0 Distance=84°				
USGS 18h20m25.1s 28.6S 177.6W				
h=27km mb=6.[illegible] Ms=6.1				
Kermadec Islands Region				
Oct 10	WDC	Z	ePKP	18 45 42.7

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DATE	STA	CMP	PHASE	TIME (UTC)
		Z	iPKP2	19 45 54.8
		Z	ePP	19 47 46.2
	ORV	Z	ePKP	19 45 45.0
		Z	ePKP2	19 45 57.3
	CMB	Z	ePKPc	19 45 48.4
		Z	ePKP2	19 46 00.5
		Z	ePP	19 47 53.6
		Z	e	19 49 06.6
	PRS	Z	ePKP	19 45 49.4
	LLA	Z	ePKP	19 45 49.6
	FRI	Z	ePKP	19 45 50.3
		Z	ePKP2	19 46 02.6
		Z	e	19 49 10.4
	PRI	Z	ePKP	19 45 51.0
		Z	ePKP2	19 46 02.6
	MNA	Z	ePKP	19 45 51.7
		Z	ePKP2	19 46 03.9
		Z	ePP	19 48 03.8
		Z	e	19 49 12.4
USGS 19h26m41.6s 5.8S 103.1E				
h=36km mb=5.5 Ms=5.2				
Southern Sumatra				
Oct 11	PCC	Z	eP	02 04 46.1
	GCC	Z	ePc	02 04 46.2
	BRK	Z	ePc	02 04 47.9
	FRI	Z	ePc	02 04 52.7
	CMB	Z	ePc	02 04 53.9
	WDC	Z	iPc	02 04 55.5
	ORV	Z	eP	02 04 55.5
	MIN	Z	ePc	02 04 56.7
	MNA	Z	ePc	02 05 01.9
USGS 01h53m15.8s 25.6S 179.7E				
h=536km mb=5.3				
South of Fiji Islands				
Oct 11	ARC	N	eP	13 30 29.3
		N	iS	13 30 42.4
	FHC	Z	iPc	13 30 29.6
		Z	i	13 30 41.5
		Z	i	13 30 55.5
	WDC	Z	iPc	13 30 44.2
	MIN	Z	iPc	13 30 54.0
		Z	iPc	13 30 55.8
		Z	i(S)	13 31 27.7
	ORV	Z	iP	13 30 56.1
	BKS	Z	ePnc	13 31 02.08
		Z	iPd	13 31 02.4
		N	eS	13 31 42.5
	BRK	Z	ePc	13 31 02.1
		Z	i	13 31 03.0
	ZSP	Z	iPc	13 31 02.3
		Z	eS	13 31 42.8
	PCC	Z	ePc	13 31 03.9
	MHC	Z	eP	13 31 10.6
		Z	i	13 31 12.9
	GCC	Z	ePc	13 31 11.2
	CMB	Z	ePd	13 31 18.2
	SAO	Z	iPd	13 31 18.8
	LLA	Z	ePc	13 31 24.0
	PRS	Z	ePd	13 31 24.3
	FRI	Z	ePc	13 31 31.8
		Z	i	13 31 43.6
	PRI	Z	e(P)	13 31 32.7
	MNA	Z	ePc	13 31 37.7
BRK 13h30m09.3s 40.4N 125.5W				
h=19km ML=4.6(4) Mo=2.3E22(2)				
Off Coast 96 km W of Cape Mendocino, CA				
Oct 12	FHC	Z	ePc	03 37 14.5
	WDC	Z	iPc	03 37 20.6
	MIN	Z	iPc	03 37 25.0
	ORV	Z	ePc	03 37 28.2
	PRS	Z	ePc	03 37 36.2
	LLA	Z	ePc	03 37 36.3
	CMB	Z	iPc	03 37 39.3
	MNA	Z	iPc	03 37 47.0
USGS 03h27m00.6s 44.0N 148.6E				
h=65km mb=5.4				
Kurile Islands Region				
Oct 12	FRI	Z	iPd	09 33 46.0
	MNA	Z	iPd	09 33 46.5
		Z	epP	09 34 40.7
	PRI	Z	ePd	09 33 48.4
		Z	epP	09 34 42.6
	LLA	Z	iPd	09 33 51.5
	PRS	Z	ePd	09 33 53.0
	CMB	Z	iPd	09 33 55.6
		Z	epP	09 34 49.7
	MHC	Z	iPd	09 34 00.0
	GCC	Z	ePd	09 34 00.2
	ORV	Z	ePd	09 34 09.7
	MIN	Z	iPd	09 34 13.4
	WDC	Z	iPd	09 34 17.5
	FHC	Z	ePd	09 34 29.0
USGS 09h27m35.4s 16.0N 92.6W				
h=172km mb=5.2				
Mexico-Guatemala Border Region				
Oct 12	MHC	Z	iPc	12 47 32.72
		R	iS+	12 47 34.44
	GCC	Z	iPd	12 47 39.0
	PCC	Z	iPc	12 47 40.9
	BRK	Z	iPc	12 47 43.4
		Z	iS	12 47 53.4
	BKS	Z	iPc	12 47 43.43
		T	iS-	12 47 53.86
	SAO	Z	iPd	12 47 43.8
		T	iS-	12 47 52.17
	ZSP	Z	iPc	12 47 44.9
	LLA	Z	iPd	12 47 49.0
	PRS	Z	iPc	12 47 50.9
	CMB	Z	iPd	12 47 53.7
	FRI	Z	iPc	12 47 58.7
BRK 12h47m30.6s 37.4N 121.8W				
h=1km ML=3.4(4) Mo=2.9E21(4)				
Alum Rock, 11 km NE of San Jose, CA				
Oct 12	PRI	Z	e(P)	14 21 35.3
	FRI	Z	e(P)	14 21 38.4
	CMB	Z	ePc	14 21 48.6
	MNA	Z	ePc	14 21 48.9
	ORV	Z	ePc	14 22 03.1
	WDC	Z	ePc	14 22 11.2
USGS 14h13m38.4s 3.4S 103.4W				
h=10km mb=4.9 Ms=4.6				
Northern Easter I. Cordillera				
Oct 12	WDC	Z	e	18 13 33.2
	CMB	Z	e	18 14 03.2
	MNA	Z	e	18 14 09.9
USGS 18h04m39.6s 53.8N 160.9E				
h=29km mb=5.2 Ms=4.3				
Near East Coast of Kamchatka				
Oct 13	FHC	Z	ePc	00 40 21.0
	WDC	Z	iPc	00 40 27.2
	ORV	Z	e(P)	00 40 36.7
	BRK	Z	e(P)	00 40 45.6
	PCC	Z	e(P)	00 40 47.9
	MHC	Z	ePc	00 40 50.6
	CMB	Z	ePc	00 40 50.8
	SAO	Z	e(P)	00 40 55.3
	MNA	Z	iPc	00 40 57.0
	PRS	Z	ePc	00 40 57.9
	LLA	Z	ePc	00 40 58.2
	FRI	Z	ePc	00 40 59.0
	PRI	Z	ePc	00 41 02.5
USGS 00h32m12.8s 61.9N 169.6E				
h=33km mb=5.5 Ms=5.5				
Eastern Siberia				
Oct 13	MNA	Z	iPc	14 00 36.9
	FRI	Z	iPc	14 00 48.4
	CMB	Z	iPc	14 00 57.1
	PRI	Z	iPc	14 01 01.1
	LLA	Z	iPc	14 01 02.2
	SAO	Z	iPc	14 01 07.6
	PRS	Z	iPc	14 01 07.9
	MHC	Z	iPc	14 01 10.2
		Z	iPnc	14 01 10.25
		Z	eP*d	14 01 19.02
		Z	iPgc	14 01 29.31
		T	iS-	14 02 22.86
		T	i -	14 02 45.23
	GCC	Z	ePc	14 01 13.3
	ORV	Z	iPc	14 01 16.0
	BKS	Z	iPc	14 01 16.8
		Z	ePnc	14 01 16.84
		E	eP	14 01 17.0
		Z	iPgc	14 01 34.79
		T	i +	14 02 51.18
	BRK	Z	iPc	14 01 16.9
	ZSP	Z	iPnc	14 01 17.3
		Z	iP*c	14 01 29.1
		Z	iPgc	14 01 35.5
	PCC	Z	ePc	14 01 17.5
	MIN	Z	iPc	14 01 23.0
	WDC	Z	iPc	14 01 32.7
		Z	i	14 01 53.6
		Z	i	14 03 18.0
	FHC	Z	eP	14 01 47.9
BRK ML=5.6(8)				
USGS 14h00m00.0s 37.1N 116.0W				
h=0km mb=5.9 Ms=4.2				
Underground Nuclear Explosion, N.T.S.				
Oct 13	BKS	Z	ePc	16 18 44.0
	MNA	Z	eP	16 18 46.6
	FRI	Z	e(P)	16 19 02.1
	CMB	Z	e(P)	16 19 02.7
	LLA	Z	e(P)	16 19 18.1
	SAO	Z	e(P)	16 19 25.9
	MHC	Z	eP	16 19 27.58
		T	eS	16 20 32.0
BRK ML=4.5(4)				
Collapse, N.T.S.				
Oct 13	FRI	Z	e(P)	19 14 26.4
	CMB	Z	eP	19 14 26.9
	ORV	Z	e(P)	19 14 27.4
	MNA	Z	eP	19 14 35.7
USGS 19h01m39.6s 22.6S 171.3E				
h=33km mb=4.6				
Loyalty Islands Region				
Oct 14	FHC	Z	ePc	18 18 30.8
		Z	eS	18 18 47.9
	WDC	Z	eP	18 18 46.9
	MIN	Z	e(P)	18 18 57.0
	ORV	Z	eP	18 19 00.3
		Z	eS	18 19 50.0
	CMB	Z	eP	18 19 22.0
BRK 18h18m06.2s 40.8N 125.9W				
h=5kmR ML=3.8(5)				
143 km W of Eureka, CA				
Oct 14	FRI	Z	eP	19 23 24.2
	PRI	Z	eP	19 23 26.1
		Z	epP	19 24 14.0
	MNA	Z	eP	19 23 26.2
	LLA	Z	eP	19 23 28.3
	PRS	Z	eP	19 23 28.8
	CMB	Z	ePd	19 23 31.3
		Z	epP	19 24 19.7
	GCC	Z	eP	19 23 33.2
	BKS	Z	eP	19 23 37.2
	ORV	Z	eP	19 23 40.5
		Z	ePcP	19 24 15.2
		Z	epP	19 24 28.0
	WDC	Z	ePd	19 23 45.8
USGS 19h11m41.0s 23.2S 68.2W				
h=97km mb=5.3				
Northern Chile				
Oct 15	MNA	Z	eP	08 09 38.9
	CMB	Z	eP	08 09 48.1
	BKS	E	e	08 21 48
		Z	e	08 23 28
USGS 08h02m57.0s 14.6N 90.8W				
h=42km mb=4.6 Ms=4.3				
Guatemala				
Oct 15	MNA	Z	eP	10 20 07.9
	CMB	Z	eP	10 20 22.8
	BKS	E	e	10 32 15
		E	e	10 33 52
		NE	e	10 52 36
USGS 10h13m26.8s 14.7N 90.9W				
h=33km mb=4.8 Ms=4.4				
Guatemala				
Oct 16	MNA	Z	eP	06 26 44.6
	CMB	Z	e(P)	06 26 51.2
	WDC	Z	e(P)	06 26 52.9
	FRI	Z	eP	06 26 54.5
	BKS	NW	e	06 46 36
		N	e	06 47 18
USGS 06h15m29.4s 37.5N 25.4W				
h=10km mb=5.1 Ms=5.0				
Azores Islands				
Oct 16	WDC	Z	eP	09 52 57.7
	MIN	Z	eP	09 53 00.3
	ORV	Z	eP	09 53 02.2
	PRS	Z	eP	09 53 07.0
	LLA	Z	eP	09 53 08.2
	CMB	Z	eP	09 53 08.5
	FRI	Z	eP	09 53 11.9
	MNA	Z	eP	09 53 16.7
USGS 09h40m20.1s 12.1N 143.6E				
h=16km mb=5.4 Ms=4.6				
South of Mariana Islands				
Oct 16	WDC	Z	e	12 22 53.4
	ORV	Z	eP	12 22 54.0
	CMB	Z	eP	12 22 56.6
		Z	e	12 26 21.1
	FRI	Z	e(P)	12 23 06.1
	MNA	Z	e	12 23 11.2
	BKS	E	e	12 35 34
		E	e	12 41 00
		Z	e	12 53 24
		Z	e	12 54 00
USGS 12h09m27.7s 21.9N 121.7E				
h=33km mb=5.3 Ms=5.8				
Taiwan Region				
Oct 16	MNA	Z	ePdiff	12 47 31.7
	WDC	Z	ePdiff	12 47 32.4
	ORV	Z	ePdiff	12 47 34.6
	CMB	Z	ePdiff	12 47 39.3
		Z	e	12 50 23.2
	FRI	Z	ePdiff	12 47 41.7
	MHC	Z	ePdiff	12 47 42.1
	BKS	NW	e	13 16 06
		E	e	13 16 54
		Z	e	13 30 48
		Z	eLr	13 30 58
			AMP(μm)	PER(s)
		LZ	3.8	20.
		LN	3.4	20.
		LE	2.0	20.
USGS 12h34m05.7s 37.9N 20.9E				
h=25km mb=5.5 Ms=5.8				
Ionian Sea				
Oct 17	WDC	Z	eP	06 06 08.6
	MIN	Z	eP	06 06 13.4
	ORV	Z	eP	06 06 17.3
	BKS	Z	e(P)	06 06 20
		Z	e	06 07 52
		E	eScS	06 14 14
		NW	eS	06 14 20
		Z	e(SS)	06 17 58
		N	e	06 19 14
		N	eG	06 20 14
		Z	eLr	06 22 38
			AMP(μm)	PER(s)
		LZ	0.89	20.
		LN	0.89	20.
		LE	0.89	20.
	MHC	Z	e(P)	06 06 27.7
	CMB	Z	ePd	06 06 30.0
	PRS	Z	eP	06 06 33.5
	LLA	Z	e(P)	06 06 34.1
	MNA	Z	ePd	06 06 37.5
	FRI	Z	eP	06 06 37.5
	PRI	Z	e(P)	06 06 40.0
BRK Ms=5.1 Distance=59°				
USGS 05h56m54.2s 51.3N 159.5E				
h=37km mb=5.5 Ms=5.1				
Off East Coast of Kamchatka				
Oct 17	SAO	Z	iPc	09 53 02.28
		T	iS-	09 53 04.22
	LLA	Z	iPc	09 53 07.2
	PRS	Z	iPd	09 53 07.3
	GCC	Z	iPc	09 53 11.5
	MHC	Z	iPd	09 53 13.99
		T	iS-	09 53 25.04
	PRI	Z	iPd	09 53 15.2
	PCC	Z	ePc	09 53 20.5
	BRK	Z	ePc	09 53 23.7
	FRI	Z	iPc	09 53 24.3
	ZSP	Z	ePc	09 53 25.0
	CMB	Z	iPd	09 53 27.3
		Z	iS	09 53 46.6
	ORV	Z	ePc	09 53 46.5
	MNA	Z	ePd	09 53 53.2
BRK 09h53m00.2s 36.7N 121.4W				
h=5km ML=3.4(6) Mo=3.5E21(2)				
Stone Canyon area, 20 km SSE of Hollister, CA				
Oct 17	PRS	Z	eP	11 06 37.2
	PRI	Z	e(P)	11 06 40.0
	ORV	Z	eP	11 06 43.3
	FRI	Z	eP	11 06 44.4
	MIN	Z	ePc	11 06 44.4
	WDC	Z	ePc	11 06 44.7
	CMB	Z	ePc	11 06 44.9
	MNA	Z	e(P)	11 06 51.0
USGS 10h53m54.9s 23.1S 171.2E				
h=33km mb=4.8 Ms=4.6				
Loyalty Islands Region				
Oct 17	SAO	Z	iPc	11 23 50.77
		T	iS+	11 23 52.58
	LLA	Z	iPc	11 23 55.6
		Z	iS	11 24 01.3
	PRS	Z	iPd	11 23 55.8
		Z	iS	11 24 02.5
	GCC	Z	eP	11 24 00.1
	MHC	Z	iPd	11 24 02.38
		T	iS+	11 24 13.94
	PRI	Z	ePc	11 24 04.0
	PCC	Z	ePd	11 24 09.2
	BRK	Z	eP	11 24 12.4
	FRI	Z	ePd	11 24 12.9
	CMB	Z	eP	11 24 15.9
		Z	eS	11 24 35.0
BRK 11h23m48.7s 36.7N 121.4W				
h=4km ML=2.7(3)				
Stone Canyon area, 20 km SSE of Hollister, CA				
Oct 17	FRI	Z	eP	20 45 11.5
	PRI	Z	eP	20 45 11.8
	MNA	Z	eP	20 45 12.3
	LLA	Z	eP	20 45 14.2
		Z	e	20 45 35.2
	PRS	Z	ePc	20 45 14.8
	CMB	Z	ePc	20 45 17.3
	MHC	Z	eP	20 45 19.5
	BKS	Z	eP	20 45 21.4
		E	e	21 05 28
		N	e	21 08 40
	BRK	Z	eP	20 45 23.9
	ORV	Z	eP	20 45 26.9
		Z	e	20 45 48.0
	MIN	Z	ePc	20 45 30.1
	WDC	Z	ePc	20 45 31.8
	FHC	Z	eP	20 45 39.7
USGS 20h33m25.2s 24.0S 69.4W				
h=75km mb=5.3				
Northern Chile				
Oct 17	FRI	Z	e(P)	21 50 23.1
		Z	epP	21 50 37.0
		Z	e	21 50 46.2
	PRI	Z	ePc	21 50 24.7
		Z	epP	21 50 38.6
		Z	esP	21 50 44.6
	MNA	Z	ePc	21 50 25.9
		Z	epP	21 50 39.6
		Z	esP	21 50 45.1
	LLA	Z	ePc	21 50 27.0
		Z	epP	21 50 40.9
		Z	esP	21 50 46.4
	PRS	Z	eP	21 50 [illegible]
		Z	epP	21 50 41.[illegible]
		Z	esP	21 50 46.7
	CMB	Z	eP	21 50 30.5
		Z	epP	21 50 44.2
	GCC	Z	eP	21 50 31.9
		Z	epP	21 50 45.9
	ORV	Z	eP	21 50 39.9
		Z	epP	21 50 53.7

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DATE	STA	CMP	PHASE	TIME (UTC)
	WDC	Z	ePc	21 50 44.9
		Z	epP	21 50 58.9
		Z	esP	21 51 05.1
	MHC	Z	epP	21 50 46.6
		Z	esP	21 50 52.3
USGS 21h39m30.9s 25.5S 70.2W				
h=48km mb=5.2				
Near Coast of Northern Chile				
Oct 18	WDC	Z	eP	00 08 00.8
		Z	e	00 08 25.5
	CMB	Z	eP	00 08 18.7
		Z	e	00 08 44.8
	PRS	Z	eP	00 08 21.2
		Z	e	00 08 47.3
	LLA	Z	eP	00 08 21.9
	MNA	Z	ePc	00 08 26.0
		Z	e	00 08 52.3
USGS 23h57m46.6s 45.8N 149.6E				
h=33km mb=5.2				
Kurile Islands				
Oct 18	MNA	Z	eP	02 38 10.5
		Z	e	02 38 16.7
	CMB	Z	eP	02 38 20.0
		Z	e	02 38 26.2
	WDC	Z	eP	02 38 20.6
		Z	e	02 38 26.2
	LLA	Z	eP	02 38 23.2
	BKS	N	e	03 03 06
		E	e	03 05 52
USGS 02h26m01.8s 7.3N 35.9W				
h=10km mb=5.2 Ms=5.0				
Central Mid-Atlantic Ridge				
Oct 18	WDC	Z	eP	18 08 50.4
	ORV	Z	eP	18 09 00.2
	CMB	Z	eP	18 09 15.2
	PRS	Z	eP	18 09 17.1
	LLA	Z	eP	18 09 18.9
	FRI	Z	eP	18 09 22.0
	PRI	Z	eP	18 09 23.2
	MNA	Z	eP	18 09 24.2
USGS 18h01m49.6s 52.3N 174.0W				
h=90km mb=4.7				
Andreanof Islands, Aleutian Is.				
Oct 19	ORV	Z	iPc	00 20 02.1
	BKS	Z	ePc	00 20 08
		N	eS	00 29 28
		N	eG	00 38 42
		Z	eLr	00 41 47
		E	e	00 47 12
			AMP(μm)	PER(s)
		LZ	0.96	20.
		LN	0.43	20.
		LE	0.86	20.
	MHC	Z	ePc	00 20 09.4
	CMB	Z	iPc	00 20 12.0
		Z	i	00 20 24.1
		Z	i	00 20 29.9
	PRS	Z	ePc	00 20 13.6
	LLA	Z	ePc	00 20 15.7
	FRI	Z	iPc	00 20 17.8
	MNA	Z	iPc	00 20 19.3
	PRI	Z	i(P)c	00 20 24.1
BRK Ms=5.1 Distance=73°				
USGS 00h08m41.3s 37.0N 141.7E				
h=48km mb=5.8 Ms=5.4				
Near East Coast of Honshu, Japan				
Oct 19	PRI	Z	iPc	13 45 18.4
		Z	iS	13 45 45.8
	FRI	Z	iPc	13 45 22.2
	LLA	Z	iPc	13 45 25.0
	PRS	Z	iPc	13 45 26.3
	MHC	Z	iPc	13 45 38.8
	CMB	Z	iPc	13 45 39.3
		Z	iS	13 46 20.0
	BKS	Z	ePc	13 45 46.3
	MNA	Z	eP	13 45 48.0
		Z	eS	13 46 36.0
BRK ML=4.2(6)				
PAS 13h44m46.3s 34.9N 118.8W				
h=km ML=3.8				
Gorman area, CA				
Oct 19	FRI	Z	iPc	16 08 42.7
		Z	iS	16 08 55.4
	MNA	Z	iPd	16 08 46.7
		Z	i	16 09 06.2
	CMB	Z	iPc	16 08 54.4
		Z	iS	16 09 17.5
	LLA	Z	ePc	16 08 59.2
	PRI	Z	ePc	16 08 59.6
		Z	iS	16 09 27.8
	SAO	Z	ePc	16 09 04.68
		Z	iP*d	16 09 09.62
		Z	iPgc	16 09 12.74
		T	eS+	16 09 37.56
		T	i +	16 09 41.67
	PRS	Z	ePc	16 09 05.4
	MHC	Z	ePc	16 09 07.1
		Z	iP*c	16 09 11.78
		T	eSn-	16 09 41.23
		Z	iS*	16 09 45.0
		T	iSg+	16 09 48.76
	ORV	Z	e	16 09 07.1
	GCC	Z	eP	16 09 09.5
	BKS	Z	iPc	16 09 13.6
	PCC	Z	ePc	16 09 14.3
	BRK	Z	eP	16 09 14.3
	ZSP	Z	eP	16 09 14.8
BRK 16h08m23.8s 37.2N 118.5W				
h=13km ML=4.3(6) Mo=1.1E22(1)				
20 km SSW of Bishop, CA				
Oct 19	MIN	Z	ePc	20 01 27.4
	ORV	Z	ePc	20 01 38.7
		Z	e	20 02 11.6
		Z	e	20 02 15.1
	CMB	Z	ePc	20 01 40.3
		Z	e	20 02 23.9
	PRS	Z	ePc	20 01 44.1
		Z	e	20 02 25.3
	MNA	Z	ePc	20 01 47.8
		Z	e	20 02 31.5
	LLA	Z	e	20 02 28.0
	PRI	Z	e	20 02 31.1
	FRI	Z	e	20 02 31.3
USGS 19h51m37.8s 47.7N 151.3E				
h=184km mb=5.2				
Kurile Islands				
Oct 19	MNA	Z	ePc	20 51 35.2
		Z	e	20 51 43.0
		Z	e	20 51 46.2
		Z	e	20 52 11.8
	FRI	Z	e(P)	20 51 37.0
		Z	e	20 51 45.4
		Z	e	20 51 48.6
	PRI	Z	eP	20 51 37.5
		Z	e	20 51 48.2
	CMB	Z	eP	20 51 43.9
		Z	e	20 51 51.9
		Z	e	20 51 55.4
		Z	e	20 52 24.1
	LLA	Z	e	20 51 50.6
	ORV	Z	e(P)	20 51 58.7
		Z	e	20 52 06.7
		Z	e	20 52 09.7
	BKS	N	e	21 01 26
		E	e	21 02 38
		Z	e	21 04 44
USGS 20h44m56.3s 14.1N 91.9W				
h=48km mb=4.7 Ms=4.0				
Guatemala				
Oct 20	GCC	Z	ePc	01 19 58.6
	PRS	Z	ePc	01 19 58.9
	BRK	Z	eP	01 20 00.5
	MHC	Z	ePc	01 20 01.1
	FRI	Z	eP	01 20 05.9
	CMB	Z	ePc	01 20 06.7
	ORV	Z	ePc	01 20 07.8
	MIN	Z	eP	01 20 09.9
	MNA	Z	ePc	01 20 15.2
USGS 01h08m45.8s 22.2S 179.6W				
h=565km mb=5.1				
South of Fiji Islands				
Oct 20	ZSP	Z	iPd	17 33 20.0
		Z	eS	17 33 33.5
	BRK	Z	iPc	17 33 21.2
	BKS	Z	iPc	17 33 21.3
		T	eS-	17 33 35.90
	ORV	Z	ePd	17 33 23.3
	PCC	Z	eP	17 33 24.8
	MHC	Z	e(P)	17 33 31.5
	GCC	Z	eP	17 33 32.1
	MIN	Z	e(P)	17 33 32.8
	CMB	Z	ePd	17 33 35.8
	SAO	Z	eP	17 33 38.5
	FHC	Z	e(P)	17 33 46.2
	FRI	Z	e(P)	17 33 50.2
BRK 17h33m02.1s 38.8N 122.8W				
h=6km ML=3.7(8)				
The Geysers area, 22 km S of Clear Lake, CA				
Oct 20	FHC	Z	iPc	23 20 03.8
		Z	i	23 20 06.4
		Z	iS	23 20 13.9
		Z	i	23 20 16.3
	MIN	Z	iPc	23 20 15.2
		N	eP	23 20 16.0
		N	eS	23 20 35.1
	ORV	Z	iPc	23 20 18.2
		Z	iS	23 20 38.0
	BRK	Z	e(P)	23 20 31.7
	PCC	Z	ePc	23 20 34.8
	MHC	Z	eP	23 20 41.7
	GCC	Z	ePc	23 20 42.3
	CMB	Z	e(P)	23 20 42.3
	SAO	Z	iPc	23 20 48.7
BRK 23h19m52.2s 40.3N 123.5W				
h=24km ML=3.6(4) Mo=5.0E21(4)				
30 km NE of Garberville, CA				
Oct 21	PCC	Z	eP	09 04 08.8
	GCC	Z	eP	09 04 09.1
	BRK	Z	eP	09 04 10.0
		Z	epP	09 04 18.4
	BKS	Z	ePc	09 04 10.3
	PRS	Z	eP	09 04 10.4
		Z	epP	09 04 18.9
	SAO	Z	eP	09 04 10.5
	MHC	Z	eP	09 04 10.6
		Z	epP	09 04 20.0
	LLA	Z	eP	09 04 12.6
		Z	epP	09 04 20.8
	PRI	Z	eP	09 04 13.0
		Z	epP	09 04 21.6
	ORV	Z	eP	09 04 15.9
		Z	epP	09 04 24.3
	MIN	Z	eP	09 04 16.8
	CMB	Z	iPc	09 04 17.1
		Z	epP	09 04 25.4
		Z	e	09 04 31.9
	FRI	Z	ePc	09 04 17.4
		Z	epP	09 04 35.9
	MNA	Z	eP	09 04 26.2
		Z	epP	09 04 34.7
USGS 08h51m41.1s 15.3S 168.2E				
h=26km mb=5.3				
Vanuatu Islands				
Oct 21	FHC	Z	eP	19 05 47.5
	BKS	Z	eLr	19 06 07.48
			AMP(μm)	PER(s)
		LZ	0.89	20.
		LN	0.89	20.
		LE	0.89	20.
	MIN	Z	eP	19 06 13.7
	ORV	Z	eP	19 06 18.8
	CMB	Z	eP	19 06 43.5
	LLA	Z	eP	19 06 50.7
	FRI	Z	eP	19 06 59.2
USGS 19h05m07.9s 41.9N 126.8W				
h=10km mb=4.2				
Off Coast of Northern California				
Oct 22	FHC	Z	eP	01 30 39.0
	MIN	Z	e(P)	01 30 43.7
	ORV	Z	eP	01 30 50.7
	CMB	Z	eP	01 31 13.5
	FRI	Z	eP	01 31 29.3
	BKS	Z	e	01 32 00
		Z	eLr	01 33 50
			AMP(μm)	PER(s)
		LZ	1.8	20.
		LN	1.8	20.
		LE	1.4	20.
USGS 01h28m53.0s 44.5N 129.8W				
h=10km mb=4.7				
Off Coast of Oregon				
Oct 22	MIN	Z	e(P)	01 32 48.7
	ORV	Z	eP	01 32 56.5
	CMB	Z	eP	01 33 17.7
	FRI	Z	e(P)	01 33 33.7
USGS 01h29m57.6s 44.6N 129.7W				
h=10km mb=4.6				
Off Coast of Oregon				
Oct 22	MIN	Z	eP	01 37 26.2
	ORV	Z	eP	01 37 34.0
	CMB	Z	e(P)	01 37 56.0
	FRI	Z	e(P)	01 38 11.4
USGS 01h35m36.6s 44.6N 129.7W				
h=10km mb=4.5				
Off Coast of Oregon				
Oct 22	FHC	Z	iPd	03 27 23.2
		Z	e(S)	03 27 28.9
	MIN	Z	ePc	03 27 46.7
		N	iPc	03 27 46.7
		Z	iS	03 28 12.5
		N	eS	03 28 13.0
	ORV	Z	eP	03 27 50.7
		Z	eS	03 28 17.0
	PCC	Z	eP	03 28 05.3
	GCC	Z	eP	03 28 12.5
	CMB	Z	e(P)	03 28 14.6
BRK 03h27m16.0s 40.5N 124.2W				
h=24km ML=3.3(4) Mo=1.8E21(2)				
Near Ferndale, 29 km SSW of Eureka, CA				
Oct 22	MIN	Z	e(P)	05 19 30.0
	ORV	Z	e(P)	05 19 38.5
	CMB	Z	e(P)	05 19 56.5
	FRI	Z	e(P)	05 20 16.4
	BKS	Z	eLr	05 20 40
			AMP(μm)	PER(s)
		LZ	0.36	20.
		LN	0.54	20.
		LE	0.36	20.
USGS 05h16m45.2s 44.6N 129.1W				
h=10km mb=4.6				
Off Coast of Oregon				
Oct 22	BKS	Z	e(P)	16 13 48
		E	iS	16 22 00
		E	eLq	16 28 30
		Z	eLr	16 30 48
		Z	eL	16 32 10
			AMP(μm)	PER(s)
		LZ	1.1	20.
		LN	0.54	20.
		LE	1.1	20.
	MIN	Z	eP	16 13 51.3
		Z	epP	16 14 05.6
	ORV	Z	eP	16 13 55.3
		Z	epP	16 14 09.2
	CMB	Z	eP	16 14 07.5
		Z	epP	16 14 21.3
	PRS	Z	eP	16 14 10.7
		Z	epP	16 14 24.5
	LLA	Z	eP	16 14 11.3
		Z	epP	16 14 25.2
	FRI	Z	eP	16 14 14.3
		Z	epP	16 14 28.3
	MNA	Z	eP	16 14 15.3
		Z	epP	16 14 29.2
BRK Ms=5.0 Distance=61°				
USGS 16h04m13.3s 49.0N 156.1E				
h=50km mb=5.6 Ms=5.3				
Kurile Islands				
Oct 22	MHC	Z	iPd	16 26 21.4
		T	iS-	16 26 23.35
	GCC	Z	iPd	16 26 28.3
		Z	iS	16 26 35.6
	PCC	Z	eP	16 26 30.0
	BKS	Z	ePc	16 26 31.5
		Z	e	16 26 33.4
		Z	eS	16 26 44.2
	BRK	Z	e(P)	16 26 31.8
	SAO	Z	iPc	16 26 32.8
	LLA	Z	iPc	16 26 37.3
	PRS	Z	eP	16 26 39.1
	CMB	Z	iPd	16 26 40.9
		Z	e(S)	16 26 57.3
	PRI	Z	eP	16 26 45.4
	FRI	Z	eP	16 26 46.7
		Z	eS	16 27 07.9
BRK 16h26m19.3s 37.4N 121.7W				
h=6km ML=2.5(4) Mo=8.4E19(2)				
18 km NE of San Jose, CA				
Oct 23	PRS	Z	eP	00 34 54.3
		Z	epP	00 35 45.3
	PCC	Z	eP	00 34 54.5
	GCC	Z	eP	00 34 54.6
		Z	epP	00 35 45.6
	BKS	Z	ePc	00 34 56.4
		Z	e	00 35 02.7
		Z	e	00 35 42
		Z	epP	00 35 47.3
		N	eS	00 44 28
		N	eG	00 55 20
			AMP(μm)	PER(s)
		PZ	0.031	0.8
	PRI	Z	eP	00 34 56.5
		Z	epP	00 35 47.5
	BRK	Z	eP	00 34 56.5
		Z	epP	00 35 45.7
	LLA	Z	eP	00 34 57.0
		Z	epP	00 35 47.1
	MHC	Z	eP	00 34 57.2
	FRI	Z	eP	00 35 02.0
		Z	epP	00 35 52.5
	CMB	Z	ePc	00 35 03.2
		Z	epP	00 35 53.9
	ORV	Z	eP	00 35 04.3
	MIN	Z	eP	00 35 06.5
		Z	epP	00 35 58.4
	MNA	Z	eP	00 35 12.8
		Z	epP	00 36 02.5
BRK mb=5.1 h=254km Distance=78°				
USGS 00h23m27.2s 20.1S 175.9W				
h=212km mb=5.6				
Tonga Islands				
Oct 23	MIN	Z	eP	06 47 24.7
	ORV	Z	eP	06 47 28.7
	BKS	Z	e(P)	06 47 38
		Z	e	06 47 39.2
		Z	e	06 47 46
		Z	e	06 48 58
		E	iS	06 55 34
		Z	e	06 55 37
		N	e	06 57 04
		Z	e	06 59 00
		Z	e	07 00 58
		N	eLq	07 01 45
		Z	eLr	07 04 10
		Z	e	07 05 46
			AMP(μm)	PER(s)
		PZ	0.025	1.4
		LZ	3.2	20.
		LN	1.4	20.
		LE	3.6	20.
	GCC	Z	eP	06 47 38.1
	CMB	Z	eP	06 47 41.0
	PRS	Z	eP	06 47 43.1
	LLA	Z	eP	06 47 44.2
	FRI	Z	eP	06 47 47.7
	MNA	Z	eP	06 47 48.2
BRK Ms=5.5 Distance=59°				
USGS 06h37m44.6s 49.1N 156.1E				
h=29km mb=5.6 Ms=5.6				
Kurile Islands				
Oct 23	MIN	Z	eP	13 41 32.8
	ORV	Z	eP	13 41 36.0
	MNA	Z	eP	13 41 56.0
	CMB	Z	e(P)	13 41 57.3
	FRI	Z	e	13 42 01.1
USGS 13h31m52.2s 49.3N 156.1E				
h=32km mb=5.1				

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DATE	STA	CMP	PHASE	TIME (UTC)
Kurile Islands				
Oct 23	MIN	Z	e(P)	13 47 50.0
	CMB	Z	eP	13 48 01.0
	FRI	Z	e(P)	13 48 12.1
	MNA	Z	eP	13 48 13.6
USGS 13h38m09.9s 49.1N 156.2E				
h=26km mb=5.4 Ms=5.2				
Kurile Islands				
Oct 23	FHC	Z	eP	13 49 58.9
	MIN	Z	eP	13 50 24.5
	ORV	Z	eP	13 50 31.4
	BKS	Z	e(P)	13 50 41
		T	eS+	13 51 57
		T	eLq	13 52 20
		Z	eLr	13 52 35
			AMP(μm)	PER(s)
		LN	6.1	20.
		LE	0.0	20.
		LZ	4.3	20.
	PCC	Z	eP	13 50 42.1
	GCC	Z	eP	13 50 49.7
	MHC	Z	e(P)	13 50 51.1
		T	eS	13 52 41.0
	CMB	Z	eP	13 50 53.1
	SAO	Z	e(P)	13 51 01.1
		T	eS	13 53 04.6
	FRI	Z	eP	13 51 08.0
	MNA	Z	eP	13 51 09.8
USGS 13h48m35.7s 44.4N 129.5W				
h=10km mb=5.3 Ms=5.5				
Off Coast of Oregon				
Oct 23	MNA	Z	e(P)	14 52 21.1
	FRI	Z	e(P)	14 52 27.0
	CMB	Z	e(P)	14 52 40.0
USGS 14h48m03.0s 20.6N 108.8W				
h=10km mb=4.2				
Revilla Gigedo Islands Region				
Oct 24	FHC	Z	ePd	11 58 17.3
	MIN	Z	ePd	11 58 27.5
	ORV	Z	ePd	11 58 31.2
	MHC	Z	e(P)	11 58 41.0
		R	e +	12 06 21
		T	eS-	12 06 46
		T	iLq+	12 13 09
		R	iLr+	12 16 08
		Z	e	12 17 34
			AMP(μm)	PER(s)
		LZ	3.3	18.3
		LN	1.3	18.3
		LE	4.1	18.3
	CMB	Z	ePd	11 58 43.2
	PRS	Z	ePd	11 58 46.4
	LLA	Z	ePd	11 58 47.2
	BKS	Z	eP	11 58 49.5
		Z	e	11 59 29.0
		E	eS	12 06 36
		N	eLq	12 13 00
		Z	eLr	12 15 20
		Z	e	12 16 50
			AMP(μm)	PER(s)
		PZ	0.033	0.8
		LZ	1.1	20.
		LN	0.0	20.
		LE	1.1	20.
	FRI	Z	ePd	11 58 50.3
	MNA	Z	ePd	11 58 51.2
	PRI	Z	ePd	11 58 51.8
BRK Ms=5.4 Distance=58°				

DATE	STA	CMP	PHASE	TIME (UTC)
USGS 11h48m49.8s 49.1N 156.3E				
h=47km mb=5.6 Ms=5.3				
Kurile Islands				
Oct 24	ORV	Z	e	18 50 24.3
	MHC	Z	e	18 50 44.5
	CMB	Z	e	18 50 47.2
	FRI	Z	e	18 51 02.5
USGS 18h48m45.6s 42.9N 127.9W				
h=10km				
Off Coast of Oregon				
Oct 24	FHC	Z	e(P)	19 08 15.7
	MIN	Z	e	19 08 32.4
	ORV	Z	ePc	19 08 50.4
	BKS	Z	eP	19 09 00.8
		Z	e d	19 09 05
		E	eS	19 10 22
		T	e -	19 10 24
		Z	e d	19 10 43
		E	e	19 10 58
		E	i	19 12 02
		Z	i	19 12 36
			AMP(μm)	PER(s)
		LZ	1.8	20.
		LN	2.9	20.
		LE	1.4	20.
	GCC	Z	e	19 09 09.2
	MHC	Z	iPc	19 09 11.5
		T	e -	19 10 59
		Z	e c	19 11 14
	CMB	Z	iPc	19 09 14.2
	PRS	Z	ePc	19 09 24.3
	LLA	Z	ePc	19 09 24.9
	MNA	Z	eP	19 09 27.5
	FRI	Z	ePc	19 09 29.2
	PRI	Z	ePc	19 09 30.9
USGS 19h07m23.7s 43.4N 126.9W				
h=10km mb=4.6 Ms=4.3				
Off Coast of Oregon				
Oct 25	PRS	Z	ePc	03 55 14.9
	MHC	Z	eP	03 55 16.6
	PRI	Z	eP	03 55 17.1
	FRI	Z	ePc	03 55 21.6
	CMB	Z	ePc	03 55 21.7
	MNA	Z	ePc	03 55 30.2
USGS 03h42m35.7s 20.7S 169.4E				
h=43km mb=5.2 Ms=4.2				
Vanuatu Islands				
Oct 25	PCC	Z	iPc	11 12 00.1
		Z	eS	11 12 04.2
	BRK	Z	iPd	11 12 02.5
		Z	iS	11 12 07.9
	BKS	Z	iPd	11 12 02.6
		Z	i	11 12 06.2
		E	eS	11 12 08.3
		Z	i	11 12 08.6
	MHC	Z	iPc	11 12 03.1
		T	iS-	11 12 09.12
		Z	iPc	11 12 55.20
	ZSP	Z	iPd	11 12 04.2
	GCC	Z	iPd	11 12 04.6
		Z	iS	11 12 12.7
	SAO	Z	iPd	11 12 11.17
		T	iS+	11 12 24.82
	LLA	Z	ePd	11 12 16.8
	PRS	Z	iPd	11 12 17.7
	CMB	Z	ePc	11 12 19.7
	FRI	Z	ePc	11 12 26.9
BRK 11h11m55.2s 37.5N 122.1W				

DATE	STA	CMP	PHASE	TIME (UTC)
h=13km ML=2.7(4) Mo=3.7E20(1)				
3 km W of Newark, CA				
Oct 25	PCC	Z	iPc	11 12 52.2
		Z	iS	11 12 56.3
	BRK	Z	iPd	11 12 54.1
		Z	iS	11 13 00.1
	BKS	Z	iPd	11 12 54.8
		Z	i	11 12 58.3
		E	eS	11 13 00.4
		Z	i	11 13 01.1
	MHC	Z	iPc	11 12 55.21
		T	iS-	11 13 01.09
	ZSP	Z	iPd	11 12 56.3
	GCC	Z	iPd	11 12 56.7
	SAO	Z	iPd	11 13 03.31
		T	iS+	11 13 17.03
	LLA	Z	e(P)	11 13 08.9
	PRS	Z	eP	11 13 09.8
	CMB	Z	eP	11 13 11.5
	FRI	Z	ePc	11 13 19.1
BRK 11h12m47.4s 37.5N 122.1W				
h=13km ML=2.9(6) Mo=7.0E20(4)				
3 km W of Newark, CA				
Oct 25	ZSP	Z	eP	14 43 46.2
		Z	eS	14 44 06.9
	BRK	Z	iPc	14 43 46.6
	BKS	Z	iPc	14 43 46.7
		Z	iPc	14 43 47.06
		T	eS-	14 44 04.55
	PCC	Z	iPc	14 43 49.5
		Z	iS	14 44 07.2
	ORV	Z	iPc	14 43 53.6
		Z	i	14 44 12.2
		R	iS	14 44 16.6
	MHC	Z	iPc	14 43 57.02
		R	e +	14 44 22.30
		T	eS+	14 44 23.42
	GCC	Z	iPc	14 43 57.2
		Z	i	14 44 31.8
	MIN	Z	ePc	14 44 00.4
	FHC	Z	e(P)	14 44 00.6
		Z	e	14 44 08.7
	CMB	Z	iPc	14 44 05.1
		Z	eS	14 44 36.5
	PRS	Z	eP	14 44 09.0
	LLA	Z	iPc	14 44 09.2
	PRI	Z	ePd	14 44 17.4
	FRI	Z	iPc	14 44 17.7
	MNA	Z	ePc	14 44 28.8
BRK 14h43m24.9s 38.7N 123.4W				
h=5km ML=3.8(8) Mo=3.1E22(2)				
Sea Ranch, 37 km SE of Point Arena, CA				
Oct 25	CMB	Z	eP	21 35 21.8
	MNA	Z	eP	21 35 31.7
USGS 21h23m46.3s 16.9S 174.3W				
h=33km mb=4.4 Ms=4.5				
Tonga Islands				
Oct 26	MIN	Z	eP	03 45 46.8
	ORV	Z	eP	03 45 52.0
	CMB	Z	iPc	03 46 15.5
	PRI	Z	eP	03 46 32.0
	FRI	Z	eP	03 46 32.2
	MNA	Z	eP	03 46 32.5
USGS 03h43m54.3s 44.5N 129.8W				
h=10km mb=4.4				
Off Coast of Oregon				

DATE	STA	CMP	PHASE	TIME (UTC)
Oct 26	MNA	Z	e(P)d	06 13 44.5
	CMB	Z	eP	06 13 52.3
USGS 06h10m43.5s 27.2N 111.6W				
h=10km				
Gulf of California				
Oct 26	FHC	Z	e(P)	06 33 32.0
	MIN	Z	iPd	06 33 41.4
	ORV	Z	eP	06 33 47.0
	MHC	Z	e(P)	06 34 04.5
	CMB	Z	iPd	06 34 11.0
	PRI	Z	e(P)	06 34 24.0
	FRI	Z	eP	06 34 25.4
	MNA	Z	eP	06 34 27.0
USGS 06h31m50.4s 44.5N 129.8W				
h=10km mb=4.5				
Off Coast of Oregon				
Oct 26	CMB	Z	eP	11 26 07.5
	MNA	Z	eP	11 26 15.7
USGS 11h16m12.7s 49.1N 156.2E				
h=33km mb=4.8 Ms=4.7				
Kurile Islands				
Oct 26	MNA	Z	iPc	14 14 29.4
		Z	iS	14 14 32.0
	CMB	Z	eP	14 14 54.7
		Z	eS	14 15 18.9
	FRI	Z	iPd	14 14 57.6
		Z	eS	14 15 22.3
	ORV	Z	ePc	14 15 09.5
	PRI	Z	eP	14 15 14.6
	LLA	Z	ePc	14 15 14.8
	BKS	Z	e	14 15 15
		Z	e	14 15 19
		Z	i	14 15 24.6
	MIN	Z	ePc	14 15 16.5
BRK ML=4.0(4)				
UNR 14h14m26.2s 38.5N 118.4W				
h=8km ML=3.8				
Hawthorne area, NV				
Oct 27	MNA	Z	ePd	00 41 46.6
		Z	e	00 41 54.2
	MIN	Z	ePd	00 41 57.0
		Z	e	00 42 04.3
	ORV	Z	ePd	00 41 58.8
		Z	e	00 42 05.9
	CMB	Z	ePd	00 41 58.8
		Z	e	00 42 05.8
	PRI	Z	e(P)	00 42 05.9
		Z	e	00 42 13
	MHC	Z	e(P)d	00 42 10.4
		Z	e	00 42 17.3
USGS 00h31m08.7s 35.1N 35.2W				
h=10km mb=5.2 Ms=4.7				
North Atlantic Ridge				
Oct 27	MNA	Z	iPc	08 02 36.4
		Z	iS	08 02 38.9
	CMB	Z	iPc	08 03 02.9
		Z	iS	08 03 25.5
	FRI	Z	iPd	08 03 04.8
		Z	iS	08 03 29.5
	ORV	Z	ePc	08 03 16.3
	LLA	Z	e(P)	08 03 18.5
		Z	i	08 03 22.2
	MHC	Z	eP	08 03 18.9
		Z	e	08 03 22.9
		Z	ePc	08 03 22.95
		T	eS-	08 03 59.89
	PRI	Z	e(P)	08 03 21.2

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	i c	08 03 26.0
	SAO	Z	e(P)	08 03 21.42
		Z	e	08 03 21.92
		Z	i	08 03 26.7
		T	eS-	08 03 57.73
		T	e -	08 04 01.75
	BKS	Z	e(P)	08 03 22.8
		R	eS-	08 04 01.91
		TR	e +	08 04 04.38
	BRK	Z	e(P)	08 03 23.1
		Z	e	08 03 30.3
	MIN	Z	eP	08 03 23.3
	PRS	Z	e(P)	08 03 24.8
		Z	e	08 03 30.7
	PCC	Z	e(P)	08 03 26.2
		Z	i	08 03 32.4
	GCC	Z	e	08 03 26.8
		Z	e	08 03 32.5
	ZSP	Z	e	08 03 28.5
BRK ML=4.1(6)				
UNR 08h02m32.9s 38.5N 118.3W				
h=12km ML=3.6				
Hawthorne area, NV				
Oct 27	FRI	Z	ePKP	11 15 18.7
		Z	e	11 15 22.5
	MNA	Z	ePKPc	11 15 18.9
		Z	e	11 15 22.5
		Z	e	11 15 27.5
		Z	e	11 15 32.2
	PRI	Z	ePKP	11 15 20.1
		Z	e	11 15 23.6
	LLA	Z	ePKP	11 15 20.7
	CMB	Z	ePKPc	11 15 20.9
		Z	e	11 15 23.9
		Z	e	11 15 24.4
		Z	e	11 15 27.5
	PRS	Z	ePKP	11 15 20.9
		Z	e	11 15 24.5
	GCC	Z	ePKP	11 15 22.2
	MHC	Z	ePKP	11 15 22.8
	BRK	Z	e(PKP)	11 15 23.8
	ORV	Z	e(PKP)	11 15 23.8
	BKS	Z	ePKP	11 15 23.8
			AMP(μm)	PER(s)
		PKPZ	0.017	1.0
USGS 10h56m11.8s 47.0S 10.9W				
h=10km mb=5.2 Ms=4.9				
South Atlantic Ridge				
Oct 27	MNA	Z	eP	12 16 16.1
		Z	e	12 16 25.1
	FRI	Z	e(P)	12 16 16.8
		Z	e	12 16 26.5
	LLA	Z	eP	12 16 21.7
		Z	e	12 16 40.5
	CMB	Z	ePd	12 16 25.5
		Z	e	12 16 34.3
	MHC	Z	ePd	12 16 30.2
	ORV	Z	ePd	12 16 38.4
		Z	e	12 16 47.2
	MIN	Z	eP	12 16 40.5
USGS 12h08m43.6s 10.5N 86.1W				
h=52km mb=4.7 Ms=4.0				
Off Coast of Costa Rica				
Oct 27	MIN	Z	ePKP	15 24 54.7
	PCC	Z	ePKP	15 24 55.5
	ORV	Z	ePKP	15 24 55.5
	PRS	Z	ePKP	15 24 56.2
		Z	e	15 26 16.6
	GCC	Z	ePKP	15 24 56.2

DATE	STA	CMP	PHASE	TIME (UTC)
	BKS	Z	ePKP	15 24 56.6
			AMP(μm)	PER(s)
		PKPZ	0.025	1.2
	MHC	Z	ePKP	15 24 57.4
	LLA	Z	ePKP	15 24 57.8
	CMB	Z	ePKP	15 24 58.1
		Z	e	15 26 18.8
	PRI	Z	ePKP	15 24 59.6
	FRI	Z	ePKP	15 24 59.9
		Z	e	15 26 24.2
	MNA	Z	ePKP	15 25 02.0
		Z	e	15 26 30.2
USGS 15h07m17.6s 7.4S 120.3E				
h=595km mb=5.5				
Flores Sea				
Oct 28	PRS	Z	eP	05 08 30.9
	CMB	Z	eP	05 08 31,1
	FRI	Z	eP	05 08 35.5
	MNA	Z	eP	05 08 38.9
USGS 04h56m16.1s 23.0N 142.7E				
h=33km mb=4.0				
Volcano Islands Region				
Oct 28	WDC	Z	e(P)	05 22 23.6
	ORV	Z	e(P)	05 22 26.0
	MIN	Z	e(P)	05 22 29.2
	CMB	Z	eP	05 22 46.9
	BKS	Z	e	05 22 48
	FRI	Z	e(P)	05 22 55.3
	MNA	Z	eP	05 22 56.7
USGS 05h15m04.0s 51.2N 176.7W				
h=45km mb=5.0				
Andreanof Islands, Aleutian Is.				
Oct 28	WDC	Z	eP	06 25 09.8
	MIN	Z	eP	06 25 12.4
	ORV	Z	eP	06 25 16.4
	BKS	Z	eP	06 25 19.0
			AMP(μm)	PER(s)
		PZ	0.025	0.8
	GCC	Z	eP	06 25 22.6
	CMB	Z	ePc	06 25 26.2
	PRS	Z	eP	06 25 27.7
	PRI	Z	eP	06 25 31.4
	FRI	Z	eP	06 25 31.5
	MNA	Z	eP	06 25 33.3
USGS 06h13m46.2s 35.0N 140.2E				
h=81km mb=5.1				
Near East Coast of Honshu, Japan				
Oct 28	PCC	Z	eP	15 00 42.1
		Z	esP	15 01 17.3
	GCC	Z	eP	15 00 42.6
		Z	esP	15 01 17.0
	PRS	Z	eP	15 00 42.7
		Z	esP	15 01 17.2
	PRI	Z	eP	15 00 45.0
		Z	esP	15 01 20.0
	LLA	Z	eP	15 00 45.1
		Z	esP	15 01 19.7
	MHC	Z	eP	15 00 45.3
		Z	esP	15 01 20.1
	BKS	Z	eP	15 00 45.6
		Z	esP	15 01 18.6
		E	eS	15 10 00
		E	e	15 10 44
		N	eP	15 19 28
		ZE	eS	15 22 26
			AMP(μm)	PER(s)
		PZ	0.052	1.0
	FRI	Z	eP	15 00 50.4

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REGISTRATION OF EARTHQUAKES 1988

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	esP	15 01 25.5
	CMB	Z	eP	15 00 51.8
		Z	esP	15 01 26.6
	ORV	Z	eP	15 00 52.9
		Z	esP	15 01 27.1
	WDC	Z	eP	15 00 53.0
		Z	esP	15 01 27.2
	MNA	Z	eP	15 01 01.6
		Z	esP	15 01 36.5
BRK mb=5.3 h=33km Distance= 72°				
USGS 14h49m30.4s 16.3S 174.2W				
h=138km mb=5.5				
Tonga Islands				
Oct 28	WDC	Z	iPc	23 16 02.1
	MIN	Z	iPc	23 16 05.3
	ORV	Z	iPc	23 16 06.7
	MHC	Z	iPc	23 16 07.64
	PRS	Z	iPc	23 16 11.2
	LLA	Z	iPc	23 16 12.5
	CMB	Z	iPc	23 16 13.0
	PRI	Z	iPc	23 16 14.8
	FRI	Z	iPc	23 16 16.8
BRK mb=6.2 h=33km Distance=82°				
USGS 23h03m44.9s 14.1N 146.6E				
h=33km mb=5.1 Ms=4.8				
Mariana Islands				
Oct 29	ARC	N	ePd	00 05 59.7
		N	iS	00 06 16.8
	FHC	Z	iPc	00 06 00.3
		Z	iS	00 06 17.1
	WDC	Z	iPc	00 06 15.4
	MIN	Z	iPc	00 06 25.4
		Z	e(P)	00 06 25.9
	ORV	Z	iPc	00 06 28.8
	BKS	Z	iPc	00 06 33.19
	ZSP	Z	eP	00 06 33.6
		Z	eS	00 07 17.7
	PCC	Z	ePc	00 06 34.5
	CMB	Z	ePc	00 06 50.2
BRK 00h05m35.6s 40.4N 126.0W				
h=22km ML=4.2(4)				
Off Coast 134 km W of Cape Mendocino, CA				
Oct 29	WDC	Z	iPc	03 57 56.3
	MIN	Z	eP	03 58 09.7
	ORV	Z	iPc	03 58 18.9
	MHC	Z	iPc	03 58 39.9
	CMB	Z	iPd	03 58 42.7
	LLA	Z	ePc	03 58 52.8
	FRI	Z	iPc	03 58 57.6
	BKS	Z	eP	03 59 52
		E	eS	04 01 28
USGS 03h56m55.1s 43.3N 126.6W				
h=10km mb=4.7 Ms=4.3				
Off Coast of Oregon				
Oct 29	PRI	Z	eP	16 44 51.4
	CMB	Z	e(P)	16 44 54.2
	WDC	Z	e	16 45 08.5
USGS 16h33m02.0s 35.9S 97.8W				
h=10km mb=4.8				
West Chile Rise				
Oct 29	PRS	Z	eP	20 08 28.6
		Z	epP	20 08 40.8
	GCC	Z	eP	20 08 29.1
		Z	epP	20 08 41.7
	MHC	Z	eP	20 08 31.2

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	epP	20 08 43.6
	FRI	Z	eP	20 08 35.5
		Z	epP	20 08 47.7
	CMB	Z	eP	20 08 36.4
		Z	epP	20 08 49.3
	ORV	Z	eP	20 08 38.9
	WDC	Z	eP	20 08 39.6
		Z	epP	20 08 51.7
	PRI	Z	epP	20 08 42.6
USGS 19h56m12.1s 27.3S 176.3W				
h=41km mb=4.7				
Kermadec Islands Region				
Oct 30	ARC	N	ePc	00 40 02.5
		N	iS	00 40 19.8
	FHC	Z	iPc	00 40 03.4
		Z	eS	00 40 21.3
	WDC	Z	iPc	00 40 18.7
	MIN	Z	iPc	00 40 28.7
		N	ePc	00 40 30.5
		Z	e(S)	00 41 08.6
		N	iS	00 41 09.7
	ORV	Z	eP	00 40 32.0
		Z	eS	00 41 11.9
	ZSP	Z	e(P)	00 40 36.0
	PCC	Z	eP	00 40 37.8
	GCC	Z	eP	00 40 45.2
	SAO	Z	e(P)	00 40 52.4
	CMB	Z	eP	00 40 53.7
BRK 00h39m37.6s 40.4N 126.0W				
h=5kmR ML=4.1(6) Mo=5.7E21(2)				
Off Coast 132 km W of Cape Mendocino, CA				
Oct 30	WDC	Z	eP	09 38 18.7
	MIN	Z	eP	09 38 23.6
	ORV	Z	e	09 38 37.2
	CMB	Z	eP	09 38 45.4
	LLA	Z	eP	09 38 54.5
	PRS	Z	eP	09 38 55.5
	FRI	Z	eP	09 38 55.6
USGS 09h32m42.1s 60.5N 152.1W				
h=87km mb=4.8				
Southern Alaska				
Oct 30	FRI	Z	ePd	21 24 06.6
	CMB	Z	ePd	21 24 07.6
	ORV	Z	eP	21 24 08.6
	WDC	Z	ePd	21 24 09.0
	MIN	Z	eP	21 24 10.5
USGS 21h12m54.6s 21.0S 178.7W				
h=571km mb=4.6				
Fiji Islands Region				
Oct 30	WDC	Z	ePc	23 27 50.0
	ORV	Z	ePc	23 27 57.8
	CMB	Z	ePc	23 28 09.0
	PRS	Z	ePc	23 28 11.8
	PRI	Z	eP	23 28 16.1
	FRI	Z	ePc	23 28 17.2
USGS 23h17m49.3s 46.1N 149.6E				
h=143km mb=5.3				
Kurile Islands				
Oct 31	FRI	Z	ePd	02 19 49.5
	PRI	Z	iPd	02 19 51.3
	LLA	Z	ePd	02 19 53.9
	PRS	Z	ePd	02 19 54.2
	CMB	Z	ePd	02 19 56.5
	GCC	Z	ePd	02 19 58.4
	MHC	Z	ePd	02 19 58.9
	ORV	Z	iPd	02 20 05.7

DATE	STA	CMP	PHASE	TIME (UTC)
	MIN	Z	eP	02 20 07.3
	WDC	Z	iPd	02 20 10.5
	FHC	Z	ePd	02 20 17.6
USGS 02h08m15.3s 23.6S 66.6W				
h=242km mb=5.2				
Juyjuy Province, Argentina				
Oct 31	MIN	Z	ePc	10 25 51.9
	ORV	Z	eP	10 25 52.6
	WDC	Z	ePc	10 25 53.5
		Z	e	10 26 26.8
	CMB	Z	ePc	10 25 57.3
		Z	e	10 26 05.8
	FRI	Z	ePc	10 26 00.3
	LLA	Z	ePc	10 26 02.9
	MHC	Z	ePc	10 26 04.7
		T	eS-	10 37 03
		R	ePS-	10 38 09
		Z	eLr	10 55 55
		Z	i c	10 58 15
			AMP(μm)	PER(s)
		LZ	7.7	20.
		LN	5.9	20.
		LE	7.4	20.
	PRS	Z	e(P)	10 26 05.5
	PRI	Z	ePc	10 26 05.5
			AMP(μm)	PER(s)
		LZ	2.5	20.
		LN	2.3	20.
		LE	1.4	20.
BRK Ms=6.2 Distance=92°				
USGS 10h12m58.5s 36.4N 2.8E				
h=12km mb=5.4 Ms=5.6				
Algeria				
Oct 31	PRS	Z	eP	14 48 36.7
	CMB	Z	ePc	14 48 45.0
	WDC	Z	ePc	14 48 45.9
	ORV	Z	e(P)	14 48 46.0
	MIN	Z	ePc	14 48 49.0
USGS 14h37m37.3s 20.8S 178.7W				
h=621km mb=4.5				
Fiji Islands Region				
Oct 31	PRS	Z	eP	18 00 39.2
	PRI	Z	eP	18 00 40.4
	FRI	Z	eP	18 00 46.1
	CMB	Z	ePd	18 00 47.0
	ORV	Z	eP	18 00 48.2
	WDC	Z	eP	18 00 48.7
USGS 17h49m27.2s 21.7S 179.0W				
h=536km mb=5.0				
Fiji Islands Region				
Nov 1	LLA	Z	iPc	02 18 31.3
	PRS	Z	iPd	02 18 32.8
		Z	iS	02 18 35.0
	SAO	Z	iPd	02 18 33.09
		T	eS+	02 18 37.94
	PRI	Z	ePc	02 18 38.9
	GCC	Z	ePc	02 18 42.5
		Z	iS	02 18 56.4
	MHC	Z	iPd	02 18 44.39
		T	eS+	02 18 58.64
	FRI	Z	ePc	02 18 49.5
		Z	iS	02 19 06.2
	PCC	Z	ePc	02 18 51.4
	CMB	Z	ePc	02 18 56.0
BRK 02h18m27.2s 36.6N 121.2W				
h=4km ML=2.7(4)				
San Benito area, 38 km N of King City, CA				

DATE	STA	CMP	PHASE	TIME (UTC)
Nov 1	PRI	Z	iPd	03 11 25.8
		Z	i	03 11 34.2
	LLA	Z	ePc	03 11 31.5
	FRI	Z	ePd	03 11 33.1
		Z	iS	03 11 45.1
	PRS	Z	ePc	03 11 35.3
	SAO	Z	iP	03 11 38.5
		T	eS-	03 11 55.48
	MHC	Z	iPc	03 11 44.68
	GCC	Z	e(P)	03 11 45.2
	CMB	Z	ePc	03 11 48.8
		Z	eS	03 12 13.5
BRK 03h11m17.9s 36.2N 120.2W				
h=8km ML=2.8(4)				
18 km E of Coalinga, CA				
Nov 1	ORV	Z	ePd	15 49 18.6
	CMB	Z	ePd	15 49 26.8
		Z	e	15 51 17.3
	PRS	Z	ePd	15 49 27.4
		Z	e	15 51 18.0
	FRI	Z	eP	15 49 31.7
		Z	e	15 51 20.2
	PRI	Z	e(P)	15 49 32.3
USGS 15h38m05.7s 28.3N 139.6E				
h=494km mb=4.8				
Bonin Islands Region				
Nov 1	PRI	Z	eP	15 53 47.0
	PRS	Z	eP	15 53 48.7
	CMB	Z	ePc	15 53 54.2
	ORV	Z	eP	15 54 05.8
	WDC	Z	e(P)	15 54 08.8
USGS 15h41m10.6s 42.8S 85.7W				
h=10km mb=5.1				
West Chile Rise				
Nov 1	ORV	Z	ePdiff	22 48 37.0
		Z	ePKP	22 50 08.3
	CMB	Z	ePdiff	22 48 42.8
		Z	ePKP	22 50 03.7
	FRI	Z	ePKP	22 50 02.0
	PRI	Z	ePKP	22 50 02.0
	PRS	Z	ePKP	22 50 02.3
	LLA	Z	ePKP	22 50 02.5
	GCC	Z	ePKP	22 50 03.2
	MHC	Z	ePKP	22 50 04.4
	BRK	Z	ePKP	22 50 05.2
	WDC	Z	ePKP	22 50 08.9
USGS 22h31m09.3s 57.3S 25.1W				
h=33km mb=5.9 Ms=6.1				
South Sandwich Islands Region				
Nov 2	FHC	Z	ePd	12 50 49.3
		Z	iS	12 50 56.6
	WDC	Z	iPc	12 51 02.2
		Z	i	12 51 27.0
	MIN	Z	iPc	12 51 12.0
		Z	i	12 51 34.8
	ORV	Z	iPc	12 51 15.0
		Z	iS	12 51 41.8
	BRK	Z	e(P)	12 51 24.2
	ZSP	Z	e(P)	12 51 24.4
	BKS	Z	e	12 51 25.8
	PCC	Z	eP	12 51 27.2
	MHC	Z	ePc	12 51 34.80
	GCC	Z	eP	12 51 35.6
	CMB	Z	eP	12 51 37.9
	FRI	Z	eP	12 51 53.9
BRK 12h50m38.3s 40.4N 124.5W				
h=17km ML=3.8(8) Mo=2.2E22(4)				

DATE	STA	CMP	PHASE	TIME (UTC)
Off Coast 8 km W of Cape Mendocino, CA				
Nov 3	GCC	Z	eP	02 07 11.7
	PCC	Z	ePc	02 07 11.9
	BRK	Z	eP	02 07 12.4
	PRI	Z	ePc	02 07 13.9
	MHC	Z	ePc	02 07 14.2
	FRI	Z	ePc	02 07 19.2
	CMB	Z	ePc	02 07 20.0
	ORV	Z	ePc	02 07 21.0
	WDC	Z	iPc	02 07 21.3
	MIN	Z	eP	02 07 23.1
USGS 01h55m45.9s 19.9S 179.5W				
h=330km mb=5.0				
Fiji Islands Region				
Nov 3	FRI	Z	ePd	14 53 56.4
		Z	iPcP	14 56 29.0
		Z	isPcP	14 56 47.7
		Z	e	14 58 09.6
		Z	eScP	15 00 10.2
	MNA	Z	ePd	14 53 57.2
		Z	ePcP	14 56 29.8
		Z	esPcP	14 56 48.0
	PRI	Z	ePd	14 53 59.0
		Z	ePcP	14 56 32.5
		Z	isPcP	14 56 49.5
		Z	e	14.58 09.9
		Z	eScP	15 00 12.3
	LLA	Z	ePd	14 54 02.0
		Z	ePcP	14 56 32.3
		Z	esPcP	14 56 50.7
		Z	e	14 58 10.3
		Z	eScP	15 00 13.5
	PRS	Z	ePd	14 54 03.6
		Z	e	14 58 11.5
		Z	eScP	15 00 14.1
	SAO	Z	e(P)	14 54 05.5
	CMB	Z	ePd	14 54 06.0
		Z	ipP	14 54 19.3
		Z	isP	14 54 23.4
		Z	iPcP	14 56 33.1
		Z	esPcP	14 56 50.8
		Z	e	14 58 12.2
		Z	eS	14 59 43.5
		Z	eScP	15 00 14.5
		Z	eScS	15 04 25.0
	GCC	Z	ePd	14 54 10.4
		Z	e	14 58 14.4
	MHC	Z	ePd	14 54 10.4
		Z	eScP	15 00 17.0
	PCC	Z	eP	14 54 15.1
	BRK	Z	ePd	14 54 16.3
		Z	ePcP	14 56 36.7
		Z	esPcP	14 56 54.7
		Z	eScP	15 00 19.0
	BKS	Z	eP	14 54 16.5
		Z	e	14 56 53.1
		N	eS	15 00 00
		Z	e	15 00 19.6
		N	eLq	15 03 00
		Z	eLr	15 05 42
			AMP(μm)	PER(s)
		PZ	0.49	1.0
		LN	90	20.
		LE	45	20.
		LZ	30	20.
	ORV	Z	ePd	14 54 20.0
		Z	eS	15 00 09.8
		Z	eScP	15 00 21.6
	MIN	Z	eP	14 54 23.6

DATE	STA	CMP	PHASE	TIME (UTC)
	WDC	Z	ePd	14 54 27.2
		Z	iPcP	14 56 40.2
		Z	isPcP	14 56 58.8
		Z	eScP	15 00 22.1
		Z	eScS	15 04 35.3
	FHC	Z	ePd	14 54 38.8
		Z	ePcP	14 56 45.5
		Z	eScP	15 00 29.3
BRK Ms=6.0 Distance=37°				
USGS 14h47m10.8s 13.9N 90.5W				
h=68km mb=5.6				
Near Coast of Guatemala				
Nov 3	FRI	Z	eP	15 23 47.6
		Z	e	15 24 04.3
	PRI	Z	eP	15 23 50.3
		Z	e	15 24 06.7
	LLA	Z	eP	15 23 53.2
		Z	e	15 24 09.9
	PRS	Z	eP	15 23 54.6
	CMB	Z	ePd	15 23 57.2
		Z	e	15 24 14.0
	MHC	Z	eP	15 24 01.5
		Z	e	15 24 18.3
	ORV	Z	eP	15 24 11.0
		Z	e	15 24 27.8
	WDC	Z	e(P)	15 24 18.5
		Z	e	15 24 35.3
	FHC	Z	eP	15 24 29.9
		Z	e	15 24 47.0
USGS 15h17m02.5s 13.7N 90.8W				
h=70km mb=5.0				
Near Coast of Guatemala				
Nov 3	MNA	Z	eP	19 50 56.3
	FRI	Z	eP	19 51 02.6
		Z	eScP	19 56 20.3
	PRI	Z	eP	19 51 08.4
		Z	eScP	19 56 24.6
	CMB	Z	iPc	19 51 08.8
		Z	eScP	19 56 24.0
	LLA	Z	ePc	19 51 10.5
		Z	eScP	19 56 25.7
	PRS	Z	eP	19 51 13.0
		Z	eScP	19 56 27.0
	ORV	Z	eP	19 51 15.9
	MHC	Z	eP	19 51 16.4
	WDC	Z	eP	19 51 20.9
	BKS	Z	eP	19 51 21.3
		N	eS	19 58 44
			AMP(μm)	PER(s)
		PZ	0.065	0.9
		LZ	5.0	20.
		LN	8.9	20.
		LE	3.9	20.
BRK Ms=5.9 Distance= 54°				
USGS 19h42m18.1s 19.1N 67.3W				
h=33km mb=5.4 Ms=5.7				
Mona Passage				
Nov 4	ORV	Z	eP	00 10 16.6
	ZSP	Z	e(P)	00 10 18.4
	BKS	Z	eP	00 10 19.3
		Z	eS	00 10 36.3
	BRK	Z	eP	00 10 20.5
	WDC	Z	eP	00 10 22.4
		Z	eS	00 10 42.9
	PCC	Z	eP	00 10 25.8
	MHC	Z	eP	00 10 26.5
	CMB	Z	eP	00 10 31.4
BRK 00h09m57.3s 39.1N 122.8W				
h=10km ML=2.3(4)				

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DATE	STA	CMP	PHASE	TIME (UTC)
20 km SE of Ukiah, CA				
Nov 4	FRI	Z	eP	02 49 56.5
		Z	epP	02 50 12.9
		Z	ePcP	02 52 29.2
		Z	epPcP	02 52 47.5
	MNA	Z	eP	02 49 57.1
	PRI	Z	eP	02 49 59.1
		Z	ePcP	02 52 31.6
	LLA	Z	eP	02 50 02.0
		Z	epP	02 50 18.9
		Z	ePcP	02 52 32.6
	PRS	Z	eP	02 50 03,5
		Z	ePcP	02 52 32.7
		Z	epPcP	02 52 50.2
	SAO	Z	e(P)	02 50 05.8
	CMB	Z	eP	02 50 06.3
		Z	epP	02 50 22.7
		Z	ePP	02 51 55.0
		Z	ePcP	02 52 32.7
		Z	epPcP	02 52 50.9
		Z	eScP	02 56 14.4
	GCC	Z	eP	02 50 09.3
	MHC	Z	eP	02 50 10.6
		Z	epP	02 50 27.2
	PCC	Z	eP	02 50 14.1
	BRK	Z	eP	02 50 16.4
		Z	ePcP	02 52 36.2
	BKS	Z	eP	02 50 17.5
		Z	e	02 50 33.0
		N	eLq	03 00 12
		Z	eLr	03 03 48
			AMP(μm)	PER(s)
		PZ	0.070	1.0
	ORV	Z	eP	02 50 20
		Z	ePcP	02 52 38.1
		Z	epPcP	02 52 57.4
		Z	eScP	02 56 21.0
	MIN	Z	eP	02 50 23.6
		Z	epP	02 50 39.9
	WDC	Z	eP	02 50 26.9
		Z	epP	02 50 44.2
		Z	ePcP	02 52 40.5
		Z	epPcP	02 52 58.5
		Z	eScP	02 56 24.7
	FHC	Z	eP	02 50 39.4
		Z	epP	02 50 55.6
USGS 02h43m11.4s 13.8N 90.6W				
h=67km mb=5.2				
Near Coast of Guatemala				
Nov 4	FRI	Z	ePKP	03 13 55.7
	CMB	Z	ePKP	03 14 00.2
	WDC	Z	ePKP	03 14 04.6
USGS 02h55m09.7s 55.3S 29.3W				
h=33km mb=5.8 Ms=5.4				
South Sandwich Islands Region				
Nov 4	FHC	Z	eP	16 19 06.4
		Z	eS	16 19 15.2
	WDC	Z	eP	16 19 21.4
	MIN	Z	eP	16 19 31.3
	ORV	Z	eP	16 19 35.0
	PCC	Z	eP	16 19 45.9
	BRK	Z	e(P)	16 19 46.2
BRK 16h18m53.5s 40.5N 124.7W				
h=5kmR ML=3.2(4)				
Off Coast 26 km W of Cape Mendocino, CA				
Nov 5	BKS	E	e	02 39 48.8
		Z	e	02 41 44.4
		N	e	02 46 21.6
		E	e	02 47 42.6
		Z	e	02 52 48.4
		E	eLq	02 57 30.0
		Z	eLr	03 04 45.0
			AMP(μm)	PER(s)
		LZ	10	20.
		LN	5.4	20.
		LE	13	20.
USGS 02h14m30.3s 34.4N 91.9E				
h=7km mb=5.9 Ms=6.3				
Qinghai Province, China				
Nov 5	FHC	Z	eP	03 02 36.0
	WDC	Z	iPc	03 02 40.9
	MIN	Z	ePc	03 02 44.7
	ORV	Z	iPc	03 02 47.6
	BRK	Z	ePc	03 02 51.0
	PCC	Z	ePc	03 02 51.3
	BKS	Z	eP	03 02 53.6
			AMP(μm)	PER(s)
		PZ	0.15	0.8
	GCC	Z	eP	03 02 54.4
	MHC	Z	ePc	03 02 55.0
	SAO	Z	eP	03 02 57.0
	CMB	Z	iPc	03 02 57.2
	PRS	Z	iPc	03 02 59.2
	LLA	Z	eP	03 02 59.7
	FRI	Z	ePc	03 03 02.5
	PRI	Z	ePc	03 03 02.9
USGS 02h51m36.8s 37.1N 135.9E				
h=339km mb=5.2				
Sea of Japan				
Nov 5	FRI	Z	e(P)	03 16 35.2
	CMB	Z	eP	03 16 37.1
	WDC	Z	eP	03 16 39.5
USGS 03h04m41.4s 21.6S 174.2W				
h=33km mb=5.1 Ms=5.9				
Tonga Islands				
Nov 5	PRI	Z	eP	09 24 41.8
	FRI	Z	eP	09 24 42.1
	PRS	Z	eP	09 24 43.2
	LLA	Z	eP	09 24 43.7
	CMB	Z	eP	09 24 48.8
	ORV	Z	eP	09 24 59.8
	WDC	Z	eP	09 25 01.7
USGS 09h12m04.8s 42.8S 85.8W				
h=10km mb=5.6 Ms=4.6				
West Chile Rise				
Nov 5	BRK	Z	e(P)	12 28 33.6
	PRS	Z	ePd	12 28 34.0
	BKS	Z	eP	12 28 34.4
		N	eS	12 39 08.8
		Z	e	12 40 57.6
		Z	e	12 44 45.6
		Z	e	12 48 40.4
	MHC	Z	eP	12 28 35
		R	eS+	12 39 18
		R	ePS+	12 40 27
		T	eLq-	12 52 05
		Z	eLrc	12 55 56
			AMP(μm)	PER(s)
		LZ	4.7	20.
		LN	2.0	20.
		LE	4.5	20.
	PRI	Z	eP	12 28 36.2
	WDC	Z	ePd	12 28 40.0
	FRI	Z	ePd	12 28 40.3
	CMB	Z	ePd	12 28 40.7
	ORV	Z	eP	12 28 40.8
	MIN	Z	eP	12 28 41.7
BRK Ms=5.9 Distance=88°				
USGS 12h15m51.4s 22.0S 170.1E				
h=42km mb=5.5 Ms=5.8				
Loyalty Islands Region				
Nov 5	PRS	Z	eP	16 40 11.7
	PRI	Z	eP	16 40 12.3
	LLA	Z	eP	16 40 14.4
	GCC	Z	eP	16 40 15.0
	MHC	Z	eP	16 40 18.0
	FRI	Z	eP	16 40 18.5
	CMB	Z	ePc	16 40 24.1
	ORV	Z	eP	16 40 31.2
	WDC	Z	eP	16 40 36.1
USGS 16h29m58.4s 21.9S 139.0W				
h=0km mb=5.4				
Tuamotu Archipelago Region				
Nov 6	BRK	Z	eP	04 47 23.2
	PRI	Z	eP	04 47 25.0
	FRI	Z	eP	04 47 29.4
	ORV	Z	eP	04 47 29.6
	WDC	Z	eP	04 47 29.6
	CMB	Z	eP	04 47 29.8
USGS 04h34m40.0s 22.0S 170.1E				
h=36km mb=5.7 Ms=5.3				
Loyalty Islands Region				
Nov 6	WDC	Z	eP	08 28 25.0
	MIN	Z	eP	08 28 30.5
	ORV	Z	eP	08 28 34.5
	BKS	Z	e(P)	08 28 39.8
			AMP(μm)	PER(s)
		PZ	0.057	1.0
	CMB	Z	eP	08 28 48.3
	PRS	Z	eP	08 28 51.5
	LLA	Z	eP	08 28 52.4
	FRI	Z	eP	08 28 56.4
USGS 08h20m57.1s 51.3N 178.1W				
h=33km mb=5.5 Ms=4.8				
Andreanof Islands, Aleutian Is.				
Nov 6	WDC	Z	ePdiff	13 17 38.6
		Z	eP400P	13 20 50.0
		Z	ePKP	13 21 52.0
		Z	e	13 22 06.8
		Z	ePKKP	13 33 28.3
	MIN	Z	ePdiff	13 17 43.5
	ORV	Z	ePdiff	13 17 50.7
		Z	e	13 30 24
		Z	ePKKP	13 33 28
		Z	ePKPPKP	13 41 51.0
	MHC	Z	ePdiff	13 17 54
		Z	ePPd	13 22 25
		R	ePS-	13 31 51
		ZR	ePPS	13 32 54
		R	eSS+	13 37 46
		T	eLq-	13 48 34
		T	eG+	13 50 23
		Z	eLrd	13 55 44
			AMP(μm)	PER(s)
		LZ	29	20.
		LN	22	20.
		LE	35	20.
	CMB	Z	ePdiff	13 17 54.8
		Z	e	13 21 30.6
		Z	e	13 22 50.6
		Z	e	13 30 24.9
		Z	ePKKP	13 33 22.2
		Z	ePKPPKP	13 41 42.1
	FRI	Z	ePdiff	13 17 59.3
	BKS	Z	ePP	13 22 12.80
		NW	eSKS	13 28 30.8
		NW	ePS	13 31 42.8
		NE	eSS	13 37 41.2
		NW	ePSPS	13 38 04.4
		NE	eSSS	13 41 28.8
		NE	e	13 45 00.0
		NW	e	13 48 30.4
BRK Ms=7.0 Distance=108°				
USGS 13h03m19.3s 22.8N 99.6E				
h=17km mb=6.1 Ms=7.3				
Burma-China Border Region				
Nov 6	WDC	Z	ePc	13 27 39.1
	MIN	Z	ePc	13 27 43.5
	ORV	Z	eP	13 27 47.1
	CMB	Z	ePc	13 27 58.4
	PRS	Z	eP	13 28 01.1
	LLA	Z	eP	13 28 01.9
	FRI	Z	eP	13 28 06.5
USGS 13h17m33.8s 45.5N 151.7E				
h=33km mb=5.3				
Kurile Islands				
Nov 6	WDC	Z	ePKP	13 34 23.5
		Z	e	13 35 14.5
		Z	ePKKP	13 45 31.0
	CMB	Z	ePKP	13 34 47.7
		Z	ePKKP	13 45 33.5
	ORV	Z	ePKKP	13 45 36.1
USGS 13h15m43.4s 23.2N 99.4E				
h=10km mb=6.4				
Burma-China Border Region				
Nov 6	PRS	Z	ePc	18 55 36.6
	MHC	Z	ePc	18 55 38.7
	CMB	Z	ePc	18 55 46.0
	FRI	Z	e	18 55 47.5
	MIN	Z	e	18 55 49.1
	ORV	Z	e	18 55 51.3
	WDC	Z	e(P)c	18 55 51.4
USGS 18h44m18.3s 14.8S 174.2W				
h=33km mb=4.8 Ms=4.9				
Samoa Islands Region				
Nov 7	FHC	Z	ePc	03 37 02.8
	WDC	Z	iPc	03 37 06.9
		Z	ePP	03 40 41.0
		Z	ePcPPKP	04 00 25.7
	MIN	Z	eP	03 37 10.0
		Z	ePP	03 40 43.3
	ORV	Z	eP	03 37 12.5
		Z	epP	03 37 41.0
	BRK	Z	eP	03 37 14.6
	PCC	Z	eP	03 37 15.0
	BKS	Z	eP	03 37 15.1
			AMP(μm)	PER(s)
		PZ	0.11	1.0
	GCC	Z	eP	03 37 17.7
	MHC	Z	eP	03 37 18.4
	CMB	Z	ePc	03 37 20.2
		Z	epP	03 37 46.2
		Z	e	03 38 29
		Z	ePP	03 40 53.5
		Z	ePcPPKP	04 00 24.1
	PRS	Z	eP	03 37 21.7
	LLA	Z	eP	03 37 22.4
	FRI	Z	eP	03 37 24.8
		Z	ePP	03 41 02.2
		Z	ePcPPKP	04 00 22.5
	PRI	Z	eP	03 37 24.9
USGS 03h24m28.9s 26.5N 126.4E				
h=104km mb=5.7				
Ryukyu Islands				
Nov 7	PCC	Z	ePc	04 02 29.5
	GCC	Z	ePc	04 02 29.5
	PRS	Z	ePc	04 02 30.0
	SAO	Z	ePc	04 02 30.4
		R	iS	04 12 58.49
		R	i +	04 13 23.53
	BRK	Z	ePc	04 02 30.8
		Z	iS	04 13 01
		Z	iSP	04 13 57
		Z	i	04 21 49
		Z	i	04 26 47
		Z	eLr	04 28 44
			AMP(μm)	PER(s)
		LZ	47	20.
	BKS	Z	eP	04 02 30.8
		Z	ePP	04 05 48.4
		R	iS+	04 12 58.10
		NW	eSS	04 18 37.6
		NW	e	04 21 53.2
			AMP(μm)	PER(s)
		PZ	0.17	0.9
	ZSP	Z	ePc	04 02 31.5
	MHC	Z	ePc	04 02 31.7
		Z	ePPc	04 05 49.38
		Z	ePPPc	04 06 28.46
		T	eS-	04 13 02.56
		R	ePS+	04 13 59.51
		T	eSS-	04 18 29.68
		T	eLq+	04 25 03.96
		Z	eLrc	04 28 42.74
			AMP(μm)	PER(s)
		LZ	35	20.
		LN	22	20.
		LE	28	20.
	PRI	Z	ePc	04 02 32.1
	LLA	Z	ePc	04 02 32.1
	FHC	Z	ePc	04 02 34.2
	FRI	Z	iPc	04 02 36.8
	CMB	Z	iPc	04 02 37.3
		Z	ipP	04 02 45.0
		Z	isP	04 02 50.8
	WDC	Z	iPc	04 02 37.5
		Z	epP	04 02 45.7
		Z	isP	04 02 50.9
	ORV	Z	iPc	04 02 37.9
	MIN	Z	iPc	04 02 39.3
	MNA	Z	ePc	04 02 46.0
BRK Ms=6.8 Distance=84°				
USGS 03h50m00.8s 22.2S 175.0E				
h=21km mb=5.7 Ms=6.7				
South of Fiji Islands				
Nov 7	MHC	Z	ePc	07 05 44.9
	FRI	Z	eP	07 05 50.1
	CMB	Z	eP	07 05 50.6
	WDC	Z	ePc	07 05 50.6
	ORV	Z	e(P)	07 05 51.2
	MIN	Z	ePc	07 05 52.5
USGS 06h53m15.6s 22.3S 174.9E				
h=33km mb=3.9				
Loyalty Islands Region				
Nov 7	ORV	Z	iPc	10 12 12.6
		Z	iS	10 12 25.3
	CMB	Z	iPd	10 12 18.9
		Z	iS	10 12 36.1
	MIN	Z	ePc	10 12 20.4
		Z	eS	10 12 40.3
		Z	i	10 12 41.2
	WDC	Z	eP	10 12 32.0
	MHC	Z	ePc	10 12 34.4
	FRI	Z	ePd	10 12 36.0
		Z	iS	10 13 08.8
	PCC	Z	e	10 12 38.0
BRK 10h11m55.0s 39.3N 120.3W				
h=3km ML=3.1(4)				
8 km W of Truckee, CA				
Nov 7	PRS	Z	eP	17 19 14.4
	PRI	Z	eP	17 19 16.5
	FRI	Z	eP	17 19 21.7
	CMB	Z	ePd	17 19 22.6
	ORV	Z	ePd	17 19 23.7
	WDC	Z	ePc	17 19 24.1
USGS 17h08m07.2s 21.7S 179.1W				
h=588km mb=5.2				
Fiji Islands Region				
Nov 7	PRS	Z	ePd	23 28 35.2
	LLA	Z	ePd	23 28 37.3
	MHC	Z	eP	23 28 38.2
	FRI	Z	eP	23 28 42.6
	CMB	Z	ePd	23 28 43.5
	ORV	Z	eP	23 28 44.3
	WDC	Z	ePd	23 28 44.8
USGS 23h17m39.6s 19.5S 177.4W				
h=556km mb=5.1				
Fiji Islands Region				
Nov 7	WDC	Z	ePdiffd	23 29 44.0
		Z	e	23 29 54.4
		Z	ePKP1	23 33 58.4
		Z	iPKP2	23 34 02.4
		Z	ePKKP	23 45 43.5
	ORV	Z	ePdiffd	23 29 48.1
		Z	ePKP	23 34 07.4
		Z	ePKKP	23 45 40.4
	MHC	Z	ePdiff	23 29 51.4
		Z	ePKKP	23 45 38.8
	CMB	Z	ePdiffd	23 29 54.2
		Z	ePKP1	23 34 16.7
		Z	ePKP2	23 34 20.0
		Z	ePKKP	23 45 34.9
		Z	e	23 49 28.5
	FRI	Z	ePdiffd	23 29 57.7
		Z	e	23 30 05.7
		Z	ePKP	23 34 16.0
		Z	ePKKP	23 45 30.3
	MIN	Z	ePKP	23 34 07.2
		Z	ePKKP	23 45 41.2
		Z	e	23 49 35
	PRI	Z	ePKKP	23 45 34.0
	LLA	Z	iPKKP	23 45 35.6
		Z	e	23 49 31.2
	PRS	Z	ePKKP	23 45 36.6
USGS 23h15m41.8s 1.5N 126.4E				
h=65km mb=6.2				
Molucca Passage				
Nov 8	FRI	Z	ePc	11 16 24.8
	CMB	Z	eP	11 16 25.5
	WDC	Z	ePc	11 16 25.7
	ORV	Z	ePc	11 16 25.9
	MIN	Z	ePc	11 16 27.3
USGS 11h03m49.0s 22.2S 175.1E				
h=33km mb=4.7				
South of Fiji Islands				
Nov 8	MHC	Z	ePc	12 49 58.7
	GCC	Z	ePd	12 50 04.7

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DATE	STA	CMP	PHASE	TIME (UTC)
		Z	iS	12 50 11.6
	PCC	Z	iPc	12 50 07.2
		Z	eS	12 50 16.5
	SAO	Z	iPd	12 50 09.2
	BKS	Z	iPc	12 50 09.9
		E	iS	12 50 20.5
	BRK	Z	ePc	12 50 10.0
		Z	iS	12 50 21.2
	ZSP	Z	iPc	12 50 11.3
		Z	iS	12 50 24.1
	LLA	Z	ePc	12 50 14.0
	PRS	Z	eP	12 50 15.9
	CMB	Z	ePd	12 50 19.4
	PRI	Z	eP	12 50 22.5
	FRI	Z	iPc	12 50 24.9
		Z	eS	12 50 44.5
	ORV	Z	eP	12 50 33.0
BRK 12h49m56.9s 37.3N 121.7W				
h=6km ML=3.1(3)				
Halls Valley, 13 km E of San Jose, CA				
Nov 9	MNA	Z	e(P)	20 15 38.4
	FRI	Z	eP	20 15 48.9
		Z	iS	20 16 31.0
	CMB	Z	eP	20 15 58.1
	PRI	Z	ePc	20 16 02.3
	LLA	Z	eP	20 16 03.5
	SAO	Z	e(P)	20 16 08.3
	PRS	Z	eP	20 16 08.5
	MHC	Z	e	20 16 14.8
	ORV	Z	ePc	20 16 17.8
BRK ML=4.2(2)				
USGS 20h14m59.9s 37.0N 116.0W				
h=km mb=3.6				
Nevada Test Site area, NV				
Nov 9	WDC	Z	ePc	23 33 03.8
	PRS	Z	eP	23 33 09.2
	CMB	Z	ePc	23 33 09.6
	FRI	Z	eP	23 33 14.2
USGS 23h21m01.8s 25.0N 142.7E				
h=41km mb=4.9				
Volcano Islands Region				
Nov 9	FHC	Z	e(P)	23 40 12.2
	WDC	Z	iPc	23 40 18.3
	MIN	Z	ePc	23 40 22.2
	ORV	Z	ePc	23 40 25.5
	BRK	Z	e(P)	23 40 29.8
	GCC	Z	ePc	23 40 33.6
	MHC	Z	ePc	23 40 34.5
	CMB	Z	ePc	23 40 36.8
	PRS	Z	ePc	23 40 39.4
	LLA	Z	ePc	23 40 40.2
	FRI	Z	ePc	23 40 43.3
	PRI	Z	ePc	23 40 43.4
	MNA	Z	e(P)	23 40 44.6
USGS 23h29m55.2s 44.3N 148.3E				
h=36km mb=5.7 Ms=4.5				
Kurile Islands				
Nov 10	MHC	Z	iPc	05 08 05.27
		Z	iS	05 08 07.2
	GCC	Z	iPd	05 08 11.2
	PCC	Z	iPc	05 08 13.0
	BKS	Z	iPd	05 08 15.3
		N	iS	05 08 25.1
	BRK	Z	iPd	05 08 15.4
	SAO	Z	iPd	05 08 16.0
		T	iS+	05 08 25.24
	ZSP	Z	iPd	05 08 16.7

DATE	STA	CMP	PHASE	TIME (UTC)
	LLA	Z	iPc	05 08 20.7
	PRS	Z	iPd	05 08 22.4
	CMB	Z	iPd	05 08 25.5
	PRI	Z	iPc	05 08 28.8
	FRI	Z	iPc	05 08 30.6
	ORV	Z	iPd	05 08 37.9
	MIN	Z	ePc	05 08 49.1
	MNA	Z	e(P)	05 08 52.1
	WDC	Z	iPd	05 08 52.3
	FHC	Z	iPd	05 09 03.0
BRK 05h08m03.0s 37.4N 121.8W				
h=7km ML=4.8(6) Mo=9.9E22(2)				
Alum Rock, 12 km NE of San Jose, CA				
Nov 11	MHC	Z	iPc	02 42 20.75
		T	iS-	02 42 22.64
	GCC	Z	iPd	02 42 26.5
	PCC	Z	iPc	02 42 28.3
		Z	eS	02 42 37.6
	BRK	Z	iPc	02 42 30.8
		Z	e	02 42 40.2
		Z	eS	02 42 41.2
	BKS	Z	iPc	02 42 30.9
	SAO	Z	iPd	02 42 31.5
		T	eS+	02 42 40.54
	LLA	Z	eP	02 42 36.4
	PRS	Z	eP	02 42 37.9
	CMB	Z	eP	02 42 41.2
		Z	iS	02 42 57.9
	PRI	Z	eP	02 42 45.3
	FRI	Z	eP	02 42 47.0
BRK 02h42m18.5s 37.4N 121.8W				
h=6km ML=2.9(3)				
Alum Rock, 10 km NE of San Jose, CA				
Nov 11	CMB	Z	iPc	17 02 41.1
	ORV	Z	ePc	17 02 56.6
USGS 16h55m43.4s 13.5N 90.7W				
h=64km mb=4.5				
Near Coast of Guatemala				
Nov 11	WDC	Z	iPd	23 20 42.2
	ORV	Z	iPd	23 20 51.3
	MHC	Z	ePd	23 21 02.8
	CMB	Z	iPd	23 21 04.6
	GCC	Z	ePd	23 21 04.8
	LLA	Z	ePd	23 21 10.5
	FRI	Z	iPd	23 21 12.3
USGS 23h11m45.5s 54.6N 161.8E				
h=33km mb=4.9				
Near East Coast of Kamchatka				
Nov 12	MNA	Z	iPc	03 42 37.5
	FRI	Z	iPc	03 42 42.2
	PRI	Z	iPc	03 42 48.4
	CMB	Z	iPc	03 42 49.3
	LLA	Z	ePc	03 42 49.4
	BRK	Z	iPc	03 42 53.0
	WDC	Z	iPc	03 42 56.3
	MHC	Z	iPc	03 42 56.3
	GCC	Z	ePc	03 42 57.5
	MIN	Z	iPc	03 42 58.1
	PCC	Z	ePc	03 43 00.9
	BKS	Z	ePd	03 43 01.2
		N	e	03 53 28
		N	e	04 01 10
		Z	e	04 02 32
		E	e(Lq)	04 04 14
		Z	eLr	04 07 24
			AMP(μm)	PER(s)
		PZ	0.076	0.5
		LN	1.4	20.

DATE	STA	CMP	PHASE	TIME (UTC)
			LE	0.89 20.
BRK Ms=6.0 Distance= 54°				
USGS 03h34m48.7s 18.1N 76.6W				
h=16km mb=5.4 Ms=4.7				
Jamaica Region				
Nov 13	CMB	Z	e(P)	11 55 34.6
		Z	e	11 57 57.3
	ORV	Z	e	11 57 04.0
USGS 11h53m25.0s 42.6N 111.0W				
h=5km				
Wyoming				
Nov 13	PRI	Z	eP	23 51 35.5
		Z	e	23 51 43.2
	PRS	Z	ePd	23 51 36.7
	FRI	Z	ePd	23 51 38.5
		Z	e	23 51 46.7
	MHC	Z	eP	23 51 43.5
	CMB	Z	ePd	23 51 45.9
		Z	e	23 51 53.9
	ORV	Z	eP	23 51 55.2
	WDC	Z	ePd	23 52 01.5
USGS 23h40m12.1s 34.8S 108.6W				
h=10km mb=5.3				
Easter Island Cordillera				
Nov 14	FHC	Z	ePd	02 28 31.3
	WDC	Z	ePd	02 28 38.7
		Z	e	02 32 16.8
	MIN	Z	eP	02 28 41.0
	ORV	Z	ePd	02 28 41.8
	PRI	Z	eP	02 28 43.7
	CMB	Z	ePd	02 28 45.3
		Z	e	02 32 28.2
		Z	e	02 32 50.3
	BKS	Z	e(P)d	02 28 46.2
		Z	e	02 28 49.3
		Z	e	02 28 53.8
		E	eSKS	02 39 12
		N	ePS	02 40 30
		Z	e(PPS)	02 41 18
		E	eSS	02 45 26
		N	e	02 45 38
		E	eSSS	02 49 05
		N	e	02 49 16
		N	eLq	02 52 06
		Z	eLr	02 56 16
			AMP(μm)	PER(s)
		PZ	0.087	1.0
		LN	13	20.
		LE	18	20.
	FRI	Z	eP	02 28 46.6
	MHC	Z	e(P)	02 28 47
		R	eSKS-	02 39 17
		T	iS-	02 39 40
		R	ePS+	02 40 39
		R	eSS	02 45 19
		T	eG-	02 52 38
		Z	eLrc	02 56 30
			AMP(μm)	PER(s)
		LZ	40	18.4
		LN	16	18.4
		LE	39	18.4
			AMP(μm)	PER(s)
		LZ	42	20.
BRK Ms=6.6 Distance=89°				
USGS 02h15m39.1s 3.5S 150.1E				
h=33km mb=5.9 Ms=6.6				
New Ireland Region				
Nov 14	WDC	Z	iPc	10 55 11.3

DATE	STA	CMP	PHASE	TIME (UTC)
	MIN	Z	ePc	10 55 16.8
	ORV	Z	ePc	10 55 21.0
	BRK	Z	ePc	10 55 26.3
	BKS	Z	iPd	10 55 26.7
			AMP(μm)	PER(s)
		PZ	0.087	0.4
	MHC	Z	ePc	10 55 32.5
	CMB	Z	iPc	10 55 35.5
	SAO	Z	ePc	10 55 39.1
	PRS	Z	ePc	10 55 39.3
	LLA	Z	ePc	10 55 40.3
	FRI	Z	ePc	10 55 44.3
	PRI	Z	ePc	10 55 44.5
USGS 10h48m20.1s 52.3N 171.2W				
h=33km mb=5.0 Ms=4.6				
Fox Islands, Aleutian Islands				
Nov 14	PCC	Z	iPd	18 58 09.6
		Z	iS	18 58 12.0
	GCC	Z	ePc	18 58 13.6
	BRK	Z	iPd	18 58 15.9
		Z	iS	18 58 24.3
	BKS	Z	iPd	18 58 16.0
		Z	iS	18 58 22.9
	MHC	Z	ePd	18 58 16.04
		T	eS+	18 58 23.78
		T	i -	18 58 26.29
	ZSP	Z	iPd	18 58 17.7
		Z	iS	18 58 26.8
	SAO	Z	iP	18 58 22.0
	PRS	Z	ePc	18 58 27.7
	LLA	Z	e(P)	18 58 29.0
	CMB	Z	ePc	18 58 33.9
BRK 18h58m06.0s 37.4N 122.3W				
h=11km ML=2.9(4) Mo=3.5E20(2)				
Portola Valley, 13 km SW of Palo Alto, CA				
Nov 14	PCC	Z	iPc	19 21 50.9
	GCC	Z	iPc	19 21 55.1
		Z	iS	19 22 00.7
	BRK	Z	iPd	19 21 57.3
		Z	iS	19 22 04.2
	MHC	Z	ePd	19 21 57.45
		T	iS	19 22 05.08
	BKS	Z	iPd	19 21 57.48
		E	iS	19 22 04.3
		T	e	19 22 05.74
	ZSP	Z	iPd	19 21 59.0
		Z	iS	19 22 07.3
	SAO	Z	iPc	19 22 03.6
	PRS	Z	ePc	19 22 08.6
	LLA	Z	ePd	19 22 10.2
	CMB	Z	iPc	19 22 15.2
		Z	i	19 22 36.0
	FRI	Z	eP	19 22 21.0
	ORV	Z	e(P)	19 22 24.3
	PRI	Z	e(P)	19 22 27.8
BRK 19h21m47.5s 37.4N 122.3W				
h=11km ML=3.6(6) Mo=2.0E21(4)				
Portola Valley, 13 km SW of Palo Alto, CA				
Nov 14	PCC	Z	iPc	19 53 01.8
	GCC	Z	iPc	19 53 06.0
		Z	iS	19 53 11.6
	BRK	Z	iPd	19 53 08.2
	MHC	Z	iPd	19 53 08.4
		Z	iS	19 53 15.8
	BKS	Z	iPd	19 53 08.4
		T	iS+	19 53 15.24
	ZSP	Z	iPd	19 53 09.9

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	iS	19 53 19.0
	SAO	Z	iPc	19 53 14.3
	PRS	Z	ePc	19 53 20.1
	LLA	Z	ePd	19 53 21.2
	CMB	Z	iPc	19 53 26.1
	PRI	Z	e(P)	19 53 28.6
	FRI	Z	e(P)	19 53 31.6
	ORV	Z	e(P)	19 53 35.8
BRK 19h52m58.4s 37.4N 122.3W				
h=11km ML=3.4(4) Mo=9.3E20(4)				
Portola Valley, 13 km SW of Palo Alto, CA				
Nov 15	PCC	Z	iPc	00 02 46.6
		Z	iS	00 02 48.9
	GCC	Z	ePd	00 02 50.6
		Z	eS	00 02 56.0
	BRK	Z	eP	00 02 52.8
		Z	iS	00 03 01.3
	MHC	Z	ePd	00 02 53.0
		Z	iS	00 02 59.9
	BKS	Z	ePd	00 02 53.0
		N	eS	00 03 00.4
	ZSP	Z	iPc	00 02 54.6
		Z	eS	00 03 03.7
	SAO	Z	iPd	00 02 59.0
	PRS	Z	e(P)	00 03 05.1
	CMB	Z	e(P)	00 03 10.7
BRK 00h02m43.0s 37.4N 122.3W				
h=11km ML=2.4(4)				
Portola Valley, 12 km SW of Palo Alto, CA				
Nov 15	FHC	Z	ePc	08 48 25.7
	WDC	Z	iPc	08 48 34.7
		Z	epP	08 48 53.3
		Z	esP	08 49 03.0
		Z	ePcP	08 51 05.5
		Z	iScP	08 54 48.4
MIN	Z	ePc		08 48 40.4
	Z	epP		08 48 58.1
	Z	ePcP		08 51 07.5
	Z	iScP		08 54 50.7
ORV	Z	iPc		08 48 44.5
	Z	epP		08 49 02.6
	Z	eScP		08 54 52.5
BRK	Z	ePc		08 48 49.5
	Z	eS		08 54 32
	Z	eScP		08 54 54.9
	Z	e		08 57 25
	Z	eLr		08 58 41
			AMP(μm)	PER(s)
		LZ	7.4	20.
BKS	Z	ePd		08 48 50.0
	E	eS		08 54 34
	N	eLq		08 57 08
	Z	eLr		08 58 38
			AMP(μm)	PER(s)
		PZ	0.078	0.8
		LZ	0.89	20.
		LN	3.8	20.
		LE	6.8	20.
PCC	Z	ePc		08 48 51.2
MHC	Z	ePc		08 48 55.8
	Z	e c		08 49 08.82
	Z	epP		08 49 14.1
	Z	esP		08 49 23.3
	R	eS+		08 54 47.86
	Z	eScP		08 54 57.9
	T	eLq		08 57 16.56
	Z	eLrc		08 59 00.95
			AMP(μm)	PER(s)

DATE	STA	CMP	PHASE	TIME (UTC)
		LZ		5.7 20.
		LN		3.5 20.
		LE		6.0 20.
	SAO	Z	e(P)	08 48 58.9
	CMB	Z	iPc	08 48 59.0
		Z	epP	08 49 17.0
		Z	ePcP	08 51 14.4
		Z	eScP	08 54 59.0
	PRS	Z	ePc	08 49 02.5
		Z	ePcP	08 51 16.0
	LLA	Z	ePc	08 49 03.7
		Z	ePcP	08 51 17.1
		Z	eScP	08 55 00.6
	FRI	Z	ePc	08 49 07.1
		Z	ePcP	08 51 17.7
		Z	iScP	08 55 02.7
	PRI	Z	ePc	08 49 07.8
		Z	eScP	08 55 03.8
	MNA	Z	e(P)	08 49 09.5
BRK Ms=5.5 Distance=38°				
USGS 08h41m42.4s 52.1N 171.1W				
h=22km mb=5.9 Ms=5.4				
Fox Islands, Aleutian Islands				
Nov 16	PCC	Z	iPc	02 24 17.5
		Z	iS	02 24 20.0
	GCC	Z	ePc	02 24 21.7
		Z	iS	02 24 27.3
	BRK	Z	iPd	02 24 23.9
		Z	iS	02 24 32.4
	MHC	Z	ePd	02 24 24.04
		Z	iS	02 24 31.3
	BKS	Z	iPd	02 24 24.1
		E	eS	02 24 30.9
	ZSP	Z	iPd	02 24 25.6
		Z	iS	02 24 34.8
	SAO	Z	ePc	02 24 30.18
	PRS	Z	ePc	02 24 35.2
	LLA	Z	e(P)	02 24 36.5
	CMB	Z	eP	02 24 40.3
	PRI	Z	e	02 24 47.5
BRK 02h24m14.1s 37.4N 122.3W				
h=11km ML=3.1(4) Mo=2.8E20(2)				
Portola Valley, 12 km SW of Palo Alto, CA				
Nov 16	PRS	Z	ePd	05 22 57.5
	GCC	Z	ePd	05 22 57.8
	SAO	Z	eP	05 22 57.9
	PCC	Z	ePd	05 22 58.0
	PRI	Z	ePd	05 22 59.3
	BRK	Z	ePd	05 22 59.4
	LLA	Z	ePd	05 22 59.4
	MHC	Z	eP	05 23 00.0
	BKS	Z	ePc	05 23 00.5
		E	eLq	05 46 06
		Z	eLr	05 49 12
			AMP(μm)	PER(s)
		PZ	0.028	0.7
		LZ	1.6	20.
		LN	0.89	20.
		LE	2.9	20.
	CMB	Z	ePd	05 23 05.1
		Z	e	05 24 02.6
	FRI	Z	ePd	05 23 05.8
		Z	e	05 23 12.7
		Z	e	05 24 02.1
	ORV	Z	ePd	05 24 06.[illegible]
	WDC	Z	iPd	05 23 07.9
		Z	e	05 23 16.3
		Z	e	05 24 04.4
	MIN	Z	eP	05 23 09.8

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DATE	STA	CMP	PHASE	TIME (UTC)
BRK Ms=5.7 Distance=85°				
USGS 05h10m34.3s 31.5S 179.7W				
h=204km mb=5.3				
Kermadec Islands Region				
Nov 16	FRI	Z	ePc	05 35 00.2
		Z	e	05 35 14.5
		Z	ePcP	05 38 52.4
	PRI	Z	ePc	05 35 02.3
		Z	e	05 35 17.0
		Z	ePcP	05 37 54.1
	LLA	Z	e(P)	05 35 06.2
		Z	i	05 35 20.2
		Z	ePcP	05 37 55.0
	PRS	Z	e(P)	05 35 06.8
		Z	e	05 35 21.5
	CMB	Z	ePc	05 35 09.5
		Z	i	05 35 24.2
		Z	iPcP	05 37 55.5
	MHC	Z	eP	05 35 12.5
		Z	e	05 35 28.5
	MNA	Z	e	05 35 15.3
	ORV	Z	eP	05 35 23.3
		Z	e	05 35 38.5
	MIN	Z	eP	05 35 27.7
		Z	e	05 35 42.0
		Z	ePcP	05 38 01.5
	WDC	Z	ePc	05 35 29.1
		Z	ePcP	05 38 03.0
	FHC	Z	e	05 35 44.0
USGS 05h28m19.9s 14.1N 91.1W				
h=76km mb=4.9				
Guatemala				
Nov 16	GCC	Z	eP	06 04 29.5
	PRS	Z	ePc	06 04 29.7
	PCC	Z	ePc	06 04 29.7
	SAO	Z	eP	06 04 30.0
	BRK	Z	eP	06 04 30.6
	PRI	Z	ePc	06 04 31.7
	BKS	Z	ePd	06 04 31.7
			AMP(μm)	PER(s)
		PZ	0.034	0.8
	LLA	Z	e(P)	06 04 31.8
	CMB	Z	ePc	06 04 37.6
		Z	e	06 06 45.5
	FRI	Z	ePc	06 04 37.6
	ORV	Z	ePc	06 04 38.8
	WDC	Z	iPc	06 04 39.0
		Z	e	06 06 45.7
	MIN	Z	eP	06 04 40.4
	MNA	Z	e(P)	06 04 46.5
USGS 05h53m20.3s 21.8S 179.4W				
h=582km mb=5.8				
Fiji Islands Region				
Nov 16	CMB	Z	ePKPd	20 35 31.8
	MHC	Z	ePKPd	20 35 35.2
	FRI	Z	ePKPd	20 35 35.9
	LLA	Z	ePKPd	20 35 36.2
	PRI	Z	ePKPd	20 35 36.6
	PRS	Z	ePKPd	20 35 38.5
USGS 20h15m54.1s 3.4S 68.3E				
h=10km mb=5.2 Ms=5.1				
Chagos Archipelago Region				
Nov 16	MHC	Z	ePd	22 30 08.27
		T	iS+	22 30 09.84
	GCC	Z	ePd	22 30 13.9
		Z	iS	22 30 19.8
	SAO	Z	iPd	22 30 17.4
	PCC	Z	iPc	22 30 18.0
	BKS	Z	ePc	22 30 21.0
		Z	eS	22 30 31.8
	BRK	Z	eP	22 30 21.3
		Z	eS	22 30 32.3
	ZSP	Z	eP	22 30 22.4
		Z	iS	22 30 35.1
	LLA	Z	ePd	22 30 22.8
	PRS	Z	iPc	22 30 24.6
	CMB	Z	ePc	22 30 29.4
	FRI	Z	ePc	22 30 33.0
		Z	eS	22 30 52.6
BRK 22h30m06.5s 37.3N 121.7W				
h=4km ML=2.6(3) Mo=6.0E19(1)				
San Felipe Valley, 19 km SE of San Jose, CA				
Nov 17	FHC	Z	eP	01 08 38.3
	WDC	Z	iPc	01 08 44.8
		Z	ePcP	01 10 02.4
	ORV	Z	iPc	01 08 53.8
	BRK	Z	ePc	01 09 00.2
	PCC	Z	ePc	01 09 01.2
	GCC	Z	ePc	01 09 05.4
		Z	ePcP	01 10 12.8
	MHC	Z	ePc	01 09 05.8
		Z	ePcP	01 10 12.5
	CMB	Z	iPc	01 09 07.3
		Z	ePcP	01 10 13.9
	SAO	Z	ePc	01 09 09.1
	PRS	Z	ePc	01 09 11.9
	LLA	Z	ePc	01 09 12.5
	MNA	Z	ePc	01 09 14.5
	FRI	Z	iPc	01 09 15.2
		Z	ePcP	01 10 16.9
	PRI	Z	ePc	01 09 16.5
USGS 00h59m50.2s 55.6N 161.8E				
h=33km mb=5.6 Ms=4.5				
Near East Coast of Kamchatka				
Nov 17	FHC	Z	eP	07 09 18.4
	WDC	Z	ePc	07 09 25.9
		Z	e	07 10 33.8
		Z	ePP	07 12 49.2
	BRK	Z	e(P)	07 09 31.8
	MHC	Z	ePd	07 09 33.0
		Z	ePP	07 12 52.6
		T	e -	07 20 12.6
		R	e +	07 26 29.1
		T	e +	07 26 38.6
		T	e+	07 28 22.2
		T	e -	07 28 22.5
		T	e -	07 34 50.5
		T	e	07 37 24.6
		Z	i c	07 38 30.5
		Z	i c	07 40 13.8
	ORV	Z	eP	07 09 33.8
	BKS	Z	eP	07 09 34
		Z	ePP	07 13 20
		Z	eS	07 20 08
		N	e(ScS)	07 20 54
		Z	e	07 22 36
		N	e	07 25 20
		N	e	07 31 42
		N	eLq	07 34 48
		E	e	07 35 36
		N	e	07 36 18
		E	e	07 37 12
		N	e	07 38 06
		Z	eLr	07 38 16
		Z	e	07 38 28.8
			AMP(μm)	PER(s)
		LZ	11	20.
		LN	4.6	20.
		LE	11	20.
	CMB	Z	eP	07 09 37.5
		Z	e	07 09 52.0
		Z	ePP	07 13 07.0
		Z	e	07 24 11.1
	PRS	Z	e(P)	07 09 40.8
	PRI	Z	eP	07 09 41.6
	LLA	Z	eP	07 09 41.7
	FRI	Z	eP	07 09 43.5
		Z	ePP	07 13 11.8
		Z	e	07 24 27.9
BRK Ms=6.4 Distance= 93°				
USGS 06h55m46.1s 12.4N 124.5E				
h=19km mb=6.0 Ms=6.6				
Samar, Philippine Islands				
Nov 17	GCC	Z	eP	10 22 14.7
	PRS	Z	eP	10 22 14.9
	SAO	Z	eP	10 22 15.4
	BRK	Z	e(P)	10 22 16.2
	PRI	Z	eP	10 22 17.2
	MHC	Z	e(P)	10 22 17.4
	BKS	Z	e(P)c	10 22 17.5
			AMP(μm)	PER(s)
		PZ	0.088	1.2
	FRI	Z	eP	10 22 22.4
	CMB	Z	eP	10 22 23.2
	WDC	Z	ePc	10 22 24.3
	ORV	Z	ePc	10 22 24.3
	MIN	Z	e(P)	10 22 26.5
	MNA	Z	e(P)	10 22 32.0
USGS 10h11m06.2s 20.5S 178.0W				
h=475km mb=5.0				
Fiji Islands Region				
Nov 17	FHC	Z	iPc	16 19 27.4
		Z	e(S)	16 19 47.0
	WDC	Z	ePd	16 19 41.2
		Z	eS	16 20 05.4
	MIN	Z	eP	16 19 51.7
	ORV	Z	eP	16 19 55.2
		Z	iS	16 20 29.2
	PCC	Z	e(P)	16 20 03.6
	GCC	Z	e(P)	16 20 11.4
BRK 16h19m10.8s 40.5N 125.1W				
h=10km ML=3.3(4)				
Off Coast 55 km W of Cape Mendocino, CA				
Nov 18	PCC	Z	eP	08 17 43.2
	GCC	Z	eP	08 17 43.3
	PRS	Z	ePc	08 17 43.6
	PRI	Z	eP	08 17 45.8
	MHC	Z	eP	08 17 45.8
	LLA	Z	eP	08 17 45.9
	FRI	Z	ePc	08 17 51.0
	CMB	Z	iPc	08 17 51.7
	WDC	Z	ePc	08 17 52.1
	ORV	Z	eP	08 17 52.3
USGS 08h06m55.9s 18.0S 178.7W				
h=639km mb=5.2				
Fiji Islands Region				
Nov 18	BRK	Z	eP	09 49 03.1
		Z	eS	09 49 19.2
	ORV	Z	eP	09 49 05.7
	PCC	Z	eP	09 49 08.2
	MHC	Z	eP	09 49 12.2
	MIN	Z	eP	09 49 14.1
	WDC	Z	e(P)	09 49 14.5
	GCC	Z	eP	09 49 15.0
	CMB	Z	eP	09 49 16.2
		Z	eS	09 49 43.4
BRK 09h48m43.8s 38.8N 122.8W				
h=2kmR ML=3.2(4)				
The Geysers area, 18 km S of Clear Lake, CA				
Nov 18	BKS	Z	iP	19 51 57
		Z	iPP	19 55 44
		E	eS	20 02 34
		E	iSS	20 09 10
		Z	iSSS	20 12 35
		N	eLr	20 16 03
		Z	iLq	20 20 50
			AMP(μm)	PER(s)
		LZ	9.9	20.
		LN	4.5	20.
		LE	8.9	20.
	ORV	Z	eP	19 52 03.0
	CMB	Z	ePc	19 52 06.9
	WDC	Z	e(P)c	19 52 07.2
	FRI	Z	e(P)c	19 52 15.3
BRK Ms=6.8 Distance=88°				
USGS 19h38m54.6s 6.1S 149.8E				
h=61km mb=5.8 Ms=6.4				
New Britain Region				
Nov 19	WDC	Z	iPd	15 03 42.9
	MIN	Z	iPd	15 03 46.4
	ORV	Z	iPd	15 03 48.7
	BKS	Z	iPc	15 03 50.7
			AMP(μm)	PER(s)
		PZ	0.017	0.7
	MHC	Z	iPd	15 03 54.1
	CMB	Z	iPd	15 03 57.0
	PRS	Z	iPd	15 03 57.6
	FRI	Z	ePd	15 04 01.8
USGS 14h52m21.4s 27.7N 140.0E				
h=344km mb=4.9				
Bonin Islands Region				
Nov 19	MNA	Z	iPc	19 44 12.3
		Z	iS	19 45 55.0
	MIN	Z	iPc	19 44 34.6
	CMB	Z	iPc	19 44 35.1
		Z	iSg	19 46 48.2
	ORV	Z	iPc	19 44 38.1
	FRI	Z	iPc	19 44 39.0
		Z	eS	19 46 47.5
	WDC	Z	iPc	19 44 43.9
		Z	iS	19 47 03.5
	BKS	Z	iPc	19 44 50.4
		N	e(S)	19 47 32.4
	MHC	Z	iPc	19 44 52.77
		T	eS	19 47 26.9
		T	e	19 47 37.3
		Z	eLr	19 48 24
BRK ML=5.0(3)				
USGS 19h42m37.4s 42.0N 111.5W				
h=6km mb=4.9				
Utah				
Nov 19	PRI	Z	eP	23 42 05.2
	LLA	Z	e(P)	23 42 07.7
	CMB	Z	eP	23 42 11.3
	MHC	Z	eP	23 42 12.8
	ORV	Z	eP	23 42 20.3
	WDC	Z	eP	23 42 25.3
USGS 23h29m52.6s 30.5S 71.6W				
h=33km mb=5.2				
Near Coast of Central Chile				
Nov 20	PRS	Z	eP	04 34 50.3
	BRK	Z	eP	04 34 52.2
	MHC	Z	eP	04 34 52.8
	BKS	Z	iPd	04 34 52.8
			AMP(μm)	PER(s)
		PZ	0.019	0.8
	FRI	Z	eP	04 34 57.3
	CMB	Z	ePc	04 34 58.2
	ORV	Z	eP	04 34 59.3
	WDC	Z	eP	04 34 59.8
USGS 04h23m30.0s 24.3S 178.6E				
h=633km mb=4.8				
South of Fiji Islands				
Nov 20	PRI	Z	ePc	05 40 20.4
	FRI	Z	iPc	05 40 25.3
	PRS	Z	iPc	05 40 26.6
	LLA	Z	iPc	05 40 27.3
	SAO	Z	iPc	05 40 31.7
		Z	iS	05 41 19.2
	GCC	Z	ePc	05 40 37.7
	MHC	Z	eP	05 40 39.4
	CMB	Z	ePc	05 40 42.0
		Z	iSg	05 42 02.7
	PCC	Z	eP	05 40 45.2
	BRK	Z	eP	05 40 48.9
	BKS	Z	iPd	05 40 49.4
	MNA	Z	e	05 40 58.4
	ORV	Z	iPc	05 41 06.7
	MIN	Z	ePc	05 41 17.8
	WDC	Z	e	05 41 23.1
BRK ML=4.8(6)				
USGS 05h39m26.8s 33.5N 118.1W				
h=5km mb=5.1				
Off Coast S of the Los Angeles area, CA				
Nov 20	FRI	Z	eP	08 16 03.0
	CMB	Z	eP	08 16 04.4
	WDC	Z	eP	08 16 07.3
USGS 08h03m25.2s 32.8S 179.2W				
h=153km mb=5.2				
South of Kermadec Islands				
Nov 20	MHC	Z	e(PKP)	09 30 57.6
	BKS	Z	iPKPc	09 30 57.6
		E	e(SS)	09 54 30
		NE	e	09 59 40
		NW	e	10 03 08
		NW	e	10 06 30
		NW	eLq	10 13 06
		Z	eLr	10 20 00
			AMP(μm)	PER(s)
		PKPZ	0.043	1.2
		LZ	1.9	20.
		LN	1.4	20.
		LE	1.2	20.
	LLA	Z	e(PKP)	09 30 57.8
	PCC	Z	ePKP	09 30 58.5
	WDC	Z	ePKP	09 30 59.8
	CMB	Z	ePKP	09 31 00.3
	ORV	Z	ePKP	09 31 00.5
	MIN	Z	e(PKP)	09 31 01.4
	FRI	Z	e(PKP)	09 31 03.5
USGS 09h11m09.8s 47.8S 99.7E				
h=10km mb=5.6 Ms=5.9				
Southeast Indian Rise				
Nov 20	BKS	NE	e	15 24 36
		Z	eLq	15 59 48
	WDC	Z	e(P)	15 32 07.5
	ORV	Z	eP	15 32 07.6
	FRI	Z	e(P)	15 32 10.3
	CMB	Z	eP	15 32 10.6
		Z	e	15 32 27.4
USGS 15h19m20.0s 5.2S 153.8E				
h=91km mb=5.6				
New Ireland Region				
Nov 20	WDC	Z	ePc	22 45 16.3
	MIN	Z	e(P)	22 45 21.0
	ORV	Z	ePc	22 45 25.2
	MHC	Z	ePc	22 45 36.9
	CMB	Z	ePc	22 45 38.4
	PRS	Z	ePc	22 45 43.4
	LLA	Z	ePc	22 45 43.8
	FRI	Z	e(P)	22 45 46.5
	PRI	Z	ePc	22 45 48.6
USGS 22h36m20.6s 55.3N 161.6E				
h=33km mb=4.7				
Near East Coast of Kamchatka				
Nov 21	FRI	Z	eP	05 29 05.1
	CMB	Z	ePc	05 29 08.2
	LLA	Z	ePc	05 29 09.8
	ORV	Z	e(P)	05 29 15.6
	MHC	Z	ePc	05 29 15.6
	MIN	Z	ePc	05 29 16.1
	GCC	Z	ePc	05 29 16.7
USGS 05h19m17.6s 15.1N 59.6W				
h=40km mb=4.9 Ms=5.0				
Leeward Islands				
Nov 21	LLA	Z	iPd	05 36 37.1
		Z	iS	05 36 42.0
	SAO	Z	ePc	05 36 39.0
		T	iS-	05 36 46.4
	PRS	Z	iPd	05 36 43.8
	MHC	Z	iPc	05 36 44.0
		T	eS+	05 36 54.5
	GCC	Z	iPc	05 36 46.2
	PRI	Z	iPd	05 36 47.5
	FRI	Z	iPc	05 36 49.0
		Z	i	05 37 01.4
		Z	iS	05 37 02.5
	CMB	Z	iPd	05 36 52.4
	PCC	Z	e(P)d	05 36 53.7
	BRK	Z	e(P)	05 36 55.0
	BKS	Z	iPd	05 36 55.0
		N	iS	05 37 13.3
	ZSP	Z	eP	05 36 55.7
BRK 05h36m30.8s 36.9N 121.0W				
h=4km ML=3.0(2)				
20 km SW of Los Banos, CA				
Nov 21	LLA	Z	iPd	05 38 26.7
		Z	iS	05 38 31.7
	SAO	Z	iPc	05 38 28.8
		T	iS-	05 38 36.0
	PRS	Z	ePd	05 38 33.5
	MHC	Z	iPc	05 38 33.6
		T	eS+	05 38 44.3
	GCC	Z	ePc	05 38 35.9
	PRI	Z	e(P)	05 38 36.8
	FRI	Z	ePc	05 38 38.8
		Z	iS	05 38 52.1
	CMB	Z	iPd	05 38 [illegible]
		Z	iS	05 38 58.[illegible]
	PCC	Z	e(P)	05 38 42.[illegible]
BRK 05h38m20.3s 36.9N 121.0W				
h=4km ML=2.6(2)				
18 km SW of Los Banos, CA				
Nov 21	MIN	Z	iPd	17 07 08.[illegible]

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DATE	STA	CMP	PHASE	TIME (UTC)
	WDC	Z	ePd	17 07 09.0
	ORV	Z	ePd	17 07 09.8
	CMB	Z	ePd	17 07 11.2
		Z	i	17 07 17.8
		Z	e	17 07 21.5
	FRI	Z	ePd	17 07 11.8
	FHC	Z	e(P)	17 07 15.7
	LLA	Z	ePd	17 07 18.7
	PRI	Z	ePd	17 07 19.1
	BRK	Z	eP	17 07 19.3
	MHC	Z	ePd	17 07 19.3
	BKS	Z	iPd	17 07 19.8
		NE	e(S)	17 17 18
		NW	e(Lq)	17 27 00
		Z	eLr	17 31 32
			AMP(μm)	PER(s)
		PZ	0.019	1.0
		LZ	4.5	20.
		LN	4.1	20.
		LE	1.6	20.
	SAO	Z	eP	17 07 19.9
	PRS	Z	ePd	17 07 21.1
USGS 16h55m52.6s 37.9N 26.1W				
h=10km mb=5.8 Ms=5.3				
Azores Islands				
Nov 21	PRS	Z	ePc	18 02 38.7
	GCC	Z	eP	18 02 39.0
	PCC	Z	eP	18 02 39.3
	SAO	Z	eP	18 02 39.6
	PRI	Z	eP	18 02 40.7
	MHC	Z	ePc	18 02 41.7
	BKS	Z	iPd	18 02 42.2
			AMP(μm)	PER(s)
		PZ	0.025	0.9
	FRI	Z	ePc	18 02 46.2
	CMB	Z	ePc	18 02 47.5
	ORV	Z	eP	18 02 49.0
	WDC	Z	iPc	18 02 49.7
USGS 17h50m33.3s 24.8S 175.8W				
h=33km mb=5.1				
South of Tonga Islands				
Nov 21	WDC	Z	e(P)	21 50 08.0
		Z	e	21 50 20.4
	MIN	Z	e(P)	21 50 13.2
		Z	e	21 50 24.9
	ORV	Z	eP	21 50 15.7
		Z	e	21 50 28.3
	GCC	Z	e	21 50 20.4
	CMB	Z	ePc	21 50 26.9
		Z	i	21 50 40.0
	PRS	Z	e(P)	21 50 28.8
		Z	e	21 50 42.6
	LLA	Z	ePc	21 50 30.4
		Z	e	21 50 43.6
	BKS	Z	i(P)c	21 50 32.7
			AMP(μm)	PER(s)
		PZ	0.022	0.8
	FRI	Z	eP	21 50 33.8
		Z	e	21 50 46.7
	PRI	Z	e	21 50 46.9
USGS 21h40m12.2s 46.2N 153.2E				
h=44km mb=5.2 Ms=4.7				
Kurile Islands				
Nov 22	FRI	Z	iPc	07 57 57.8
		Z	iS	07 58 09.2
	MNA	Z	iPd	07 57 59.9
	CMB	Z	iPc	07 58 07.8
		Z	iS	07 58 26.2
	LLA	Z	ePc	07 58 15.0
	PRI	Z	iPc	07 58 16.1
		Z	iS	07 58 45.1
	SAO	Z	ePc	07 58 20.36
		T	iS+	07 58 51.18
	MHC	Z	iPc	07 58 21.24
		T	iS+	07 58 55.78
	PRS	Z	iPc	07 58 21.3
	GCC	Z	ePc	07 58 25.0
	BRK	Z	ePc	07 58 27.8
	BKS	Z	iPd	07 58 27.8
		T	eS+	07 58 58.60
		N	i	07 59 14.0
	PCC	Z	ePc	07 58 28.1
	ZSP	Z	eP	07 58 28.1
		Z	eS	07 59 09.0
	ORV	Z	ePd	07 58 30.6
	MIN	Z	e	07 58 33.3
	WDC	Z	e	07 58 52.4
BRK 07h57m39.7s 37.4N 118.6W				
h=7km ML=4.4(7)				
16 km WNW of Bishop, CA				
Nov 22	PRS	Z	ePc	10 17 02.6
	GCC	Z	ePc	10 17 02.8
	PRI	Z	ePc	10 17 04.9
	BRK	Z	e(P)	10 17 05.3
	MHC	Z	ePc	10 17 05.8
	FRI	Z	ePc	10 17 10.5
	CMB	Z	ePc	10 17 10.5
	ORV	Z	ePc	10 17 12.0
	WDC	Z	ePc	10 17 12.7
USGS 10h05m07.7s 22.7S 175.0W				
h=33km mb=5.0 Ms=4.5				
Tonga Islands Region				
Nov 23	CMB	Z	ePc	03 16 07.3
		Z	e	03 16 22.9
	PRS	Z	eP	03 16 08.0
		Z	e	03 16 23.7
	LLA	Z	eP	03 16 09.1
	FRI	Z	eP	03 16 12.5
	ORV	Z	e	03 16 13.9
USGS 03h04m14.8s 31.0N 141.6E				
h=41km mb=5.2 Ms=5.2				
South of Honshu, Japan				
Nov 23	GCC	Z	eP	09 38 03.4
	PCC	Z	eP	09 38 03.5
	PRS	Z	eP	09 38 03.6
	PRI	Z	eP	09 38 05.8
	LLA	Z	eP	09 38 05.8
	BKS	Z	iPc	09 38 06.0
			AMP(μm)	PER(s)
		PZ	0.27	0.9
	MHC	Z	eP	09 38 06.1
	FRI	Z	eP	09 38 11.0
	CMB	Z	eP	09 38 11.8
	ORV	Z	eP	09 38 12.8
	WDC	Z	eP	09 38 12.9
USGS 09h27m07.4s 19.8S 178.0W				
h=594km mb=5.6				
Fiji Islands Region				
Nov 23	PRS	Z	ePc	17 11 08.3
	PRI	Z	ePc	17 11 12.0
	GCC	Z	ePc	17 11 12.6
	SAO	Z	ePc	17 11 13.5
	LLA	Z	ePc	17 11 14.1
	FRI	Z	ePc	17 11 17.6
	MHC	Z	ePc	17 11 18.0
	CMB	Z	iPc	17 11 24.0
	WDC	Z	iPc	17 11 26.1

DATE	STA	CMP	PHASE	TIME (UTC)
USGS 17h00m58.0s 22.0S 138.9W				
h=0km mb=5.4				
Tuamotu Archipelago Region				
Nov 23	PRS	Z	ePc	23 17 01.6
	CMB	Z	ePc	23 17 09.9
	ORV	Z	ePc	23 17 11.3
USGS 23h06m09.7s 18.0S 178.3W				
h=581km mb=4.9				
Fiji Islands Region				
Nov 25	WDC	Z	ePKP	08 55 32.2
	ORV	Z	ePKP	08 55 32.3
	CMB	Z	ePKP	08 55 32.8
	FRI	Z	ePKP	08 55 32.9
	MIN	Z	ePKP	08 55 35.7
	BKS	NW	i	09 37 40
		Z	eLr	09 46 00
USGS 08h35m41.8s 47.9S 99.5E				
h=10km mb=5.5 Ms=6.2				
Southeast Indian Rise				
Nov 25	MIN	Z	iPc	23 53 07.5
		Z	ePcP	23 55 30.5
	ORV	Z	iPc	23 53 09.4
		Z	ePcP	23 55 31.5
	CMB	Z	iPc	23 53 09.7
		Z	e	23 53 34.9
		Z	ePcP	23 55 32.5
	WDC	Z	iPc	23 53 10.0
		Z	ePcP	23 55 31.3
	FRI	Z	iPc	23 53 11.0
		Z	ePcP	23 55 33.0
	FHC	Z	iPc	23 53 18.3
	LLA	Z	iPc	23 53 20.3
	PRI	Z	e(P)	23 53 21.6
		Z	ePcP	23 55 37.4
	MHC	Z	eP	23 53 21.6
		Z	ePcP	23 55 37.1
		R	eScP+	23 59 17
			AMP(μm)	PER(s)
		LZ	9.2	20.
		LN	7.8	20.
		LE	7.1	20.
		T	eLq	00 06 14
		R	eLr	00 09 17
	SAO	Z	eP	23 53 22.5
	BKS	Z	iPd	23 53 23.2
		Z	e	23 53 38
		E	iS	23 59 32
			AMP(μm)	PER(s)
		PZ	0.22	1.2
		LZ	13	20.
		LN	6.8	20.
		LE	11	20.
		E	iSS	00 02 01
		E	eScS	00 03 30
		Z	i	00 06 48
		Z	i	00 07 18
	BRK	Z	e(P)	23 53 23.8
	PRS	Z	ePc	23 53 24.0
	GCC	Z	eP	23 53 24.5
	PCC	Z	eP	23 53 24.8
BRK Ms=5.7 Distance=38°				
USGS 23h46m04.5s 48.1N 71.2W				
h=28km mb=5.9 Ms=5.8				
Southern Quebec				
Nov 26	PRS	Z	ePc	18 31 38.6
	WDC	Z	ePc	18 31 42.8
	FRI	Z	eP	18 31 43.5
	CMB	Z	ePc	18 31 43.7
	ORV	Z	ePc	18 31 44.0
	MIN	Z	e(P)	18 31 49.2
USGS 18h19m09.7s 22.0S 175.0E				
h=33km mb=4.4 Ms=4.4				
Loyalty Islands Region				
Nov 26	MNA	Z	eP	18 48 58.2
	FRI	Z	eP	18 48 59.4
	PRI	Z	ePd	18 49 02.7
	LLA	Z	ePd	18 49 05.6
	PRS	Z	eP	18 49 06.9
	CMB	Z	ePd	18 49 07.8
	SAO	Z	eP	18 49 10.2
	MHC	Z	eP	18 49 12.9
	GCC	Z	eP	18 49 13.1
	PCC	Z	eP	18 49 15.2
	BRK	Z	eP	18 49 17.6
	BKS	Z	iPc	18 49 18.4
			AMP(μm)	PER(s)
		PZ	0.28	1.6
	ORV	Z	ePd	18 49 19.4
	MIN	Z	eP	18 49 21.5
	WDC	Z	e(P)	18 49 24.9
	FHC	Z	ePd	18 49 36.2
USGS 18h40m12.3s 6.7N 77.5W				
h=5km mb=5.5 Ms=5.1				
Near West Coast of Colombia				
Nov 27	FHC	Z	e(P)c	00 39 02.5
	WDC	Z	i(P)c	00 39 09.1
		Z	i	00 39 23.7
	MIN	Z	ePc	00 39 13.7
		Z	i	00 39 26.0
	ORV	Z	eP	00 39 22.8
		Z	e	00 39 37.3
	BRK	Z	e(P)	00 39 39.2
		Z	e	00 42 25
	BKS	Z	e(P)d	00 39 41.3
		N	iS	00 42 44
			AMP(μm)	PER(s)
		PZ	0.27	1.8
	MHC	Z	ePc	00 39 50.92
		ZR	e -	00 42 23.79
		T	e -	00 42 43.04
	CMB	Z	e(P)c	00 39 51.7
		Z	e	00 40 05.8
	GCC	Z	e(P)c	00 39 54.4
	MNA	Z	e	00 39 58.8
	PRS	Z	e(P)	00 40 04.3
	LLA	Z	e(P)	00 40 04.3
	FRI	Z	e(P)c	00 40 05.9
	PRI	Z	e(P)	00 40 07.7
BRK mb=5.2 h=33km Distance=16°				
USGS 00h36m19.1s 50.8N 130.1W				
h=10km mb=5.1 Ms=5.3				
Vancouver Island Region				
Nov 27	GCC	Z	e(P)	09 01 10.9
	PRS	Z	iPc	09 01 11.2
		Z	iPc	09 01 11.2
	BRK	Z	eP	09 01 12.4
	BKS	Z	iPd	09 01 14.2
			AMP(μm)	PER(s)
		PZ	0.033	0.9
	FRI	Z	ePc	09 01 19.1
	CMB	Z	iPc	09 01 20.2
	ORV	Z	e(P)	09 01 21.0
	WDC	Z	iPc	09 01 21.4
	MIN	Z	ePc	09 01 23.5
USGS 08h49m53.8s 15.7S 174.9W				
h=100km mb=4.8				
Tonga Islands				
Nov 27	WDC	Z	eP	14 15 38.7
		Z	ePcP	14 17 50.0
	MIN	Z	ePc	14 15 44.1
		Z	ePcP	14 17 52.4
	ORV	Z	e(P)	14 15 51.7
	CMB	Z	eP	14 16 01.9
		Z	e	14 16 38.0
		Z	ePcP	14 17 59.6
	MHC	Z	e(P)	14 16 03.5
	FRI	Z	eP	14 16 11.2
USGS 14h08m17.6s 51.4N 176.7W				
h=33km mb=5.1				
Andreanof Islands, Aleutian Is.				
Nov 28	GCC	Z	e(P)	00 12 47.4
	PRS	Z	ePc	00 12 47.8
	PRI	Z	ePc	00 12 48.5
	LLA	Z	e(P)	00 12 49.0
	MHC	Z	eP	00 12 49.9
	FHC	Z	eP	00 12 52.6
	FRI	Z	ePc	00 12 53.1
	CMB	Z	ePc	00 12 54.8
	WDC	Z	ePc	00 12 57.8
	MIN	Z	ePc	00 12 59.8
USGS 00h00m02.6s 34.2S 178.3W				
h=63km mb=4.7				
South of Kermadec Islands				
Nov 28	FRI	Z	e(P)	00 42 54.2
		Z	epP	00 43 26.8
	PRI	Z	ePd	00 42 55.9
		Z	epP	00 43 28.0
	MNA	Z	e(P)	00 42 56.1
	LLA	Z	iPd	00 42 58.7
		Z	epP	00 43 29.0
	PRS	Z	ePd	00 42 59.0
		Z	epP	00 43 29.7
		Z	esP	00 43 42.6
	SAO	Z	eP	00 43 00.3
	CMB	Z	ePd	00 43 01.4
		Z	epP	00 43 32.3
	GCC	Z	ePd	00 43 03.7
	MHC	Z	ePd	00 43 03.8
		Z	epP	00 43 34.7
		Z	esP	00 43 48.0
	PCC	Z	e(P)	00 43 04.8
	BRK	Z	eP	00 43 05.5
	ORV	Z	ePd	00 43 11.2
		Z	epP	00 43 41.8
		Z	esP	00 43 54.6
	MIN	Z	eP	00 43 13.1
		Z	epP	00 43 44.0
	WDC	Z	iPd	00 43 16.0
		Z	i	00 43 24.5
		Z	epP	00 43 46.8
		Z	esP	00 44 00.2
	FHC	Z	eP	00 43 23.5
USGS 00h31m22.9s 21.3S 68.4W				
h=121km mb=5.2				
Chile-Bolivia Border Region				
Nov 28	PRS	Z	ePc	00 54 13.6
	MHC	Z	ePc	00 54 15.6
	PRI	Z	e(P)	00 54 15.8
	ORV	Z	eP	00 54 20.0
	WDC	Z	ePc	00 54 20.0
		Z	e	00 55 02.9
	CMB	Z	iPc	00 54 22.0
		Z	e	00 55 03.9
	FRI	Z	ePc	00 54 22.1
	MIN	Z	ePc	00 54 22.4
	MNA	Z	e(P)	00 54 26.9
USGS 00h41m30.9s 17.8S 167.1E				
h=10km mb=4.9				
Vanuatu Islands				
Nov 28	WDC	Z	eP	07 44 52.3
	MIN	Z	ePd	07 44 58.0
	ORV	Z	e(P)	07 45 01.9
	BRK	Z	eP	07 45 06.5
	BKS	Z	iPc	07 45 07.4
			AMP(μm)	PER(s)
		PZ	0.018	0.6
	MHC	Z	ePd	07 45 12.9
	CMB	Z	iPd	07 45 17.9
	PRS	Z	ePd	07 45 19.4
	LLA	Z	eP	07 45 20.3
	FRI	Z	ePd	07 45 24.1
	PRI	Z	eP	07 45 24.4
USGS 07h37m35.3s 51.7N 176.8W				
h=64km mb=5.2				
Andreanof Islands, Aleutian Is.				
Nov 29	PRS	Z	eP	10 50 12.5
	BRK	Z	e(P)	10 50 13.4
	LLA	Z	e(P)	10 50 13.9
	MHC	Z	ePc	10 50 14.5
	WDC	Z	ePc	10 50 17.5
	ORV	Z	ePc	10 50 18.4
	CMB	Z	ePc	10 50 19.0
	FRI	Z	eP	10 50 19.2
USGS 10h37m49.7s 17.9S 168.4E				
h=138km mb=4.7				
Vanuatu Islands				
Nov 29	MNA	Z	e(P)	11 32 29.1
		Z	epP	11 32 50.2
	FRI	Z	ePd	11 32 29.7
		Z	epP	11 32 50.8
	PRI	Z	e(P)	11 32 33.3
		Z	epP	11 32 54.6
	LLA	Z	ePd	11 32 35.7
		Z	epP	11 32 57.0
	PRS	Z	eP	11 32 37.5
		Z	epP	11 32 58.6
	CMB	Z	eP	11 32 37.8
		Z	ipP	11 32 59.3
		Z	e	11 33 04.3
	SAO	Z	e(P)	11 32 38.2
		Z	epP	11 33 00.3
	GCC	Z	e(P)	11 32 43.0
		Z	epP	11 33 04.9
	MHC	Z	e(P)	11 32 43.3
		Z	epP	11 33 04.5
	BRK	Z	ePd	11 32 45.5
		Z	epP	11 33 09.0
	PCC	Z	e(P)	11 32 46.7
		Z	epP	11 33 08.4
	BKS	Z	iPc	11 32 47.8
		Z	i	11 33 09.3
			AMP(μm)	PER(s)
		PZ	0.085	1.4
	ORV	Z	ePd	11 32 49.3
		Z	epP	11 33 10.6
	MIN	Z	ePd	11 32 51.5
		Z	epP	11 33 13.0
	WDC	Z	eP	11 32 55.1
		Z	ipP	11 33 17.8
	FHC	Z	eP	11 33 06.0
		Z	epP	11 33 27.6
USGS 11h23m38.7s 5.0N 76.6W				
h=85km mb=5.8				

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DATE	STA	CMP	PHASE	TIME (UTC)
Colombia				
Nov 30	CMB	Z	eP	08 56 28.2
	WDC	Z	eP	08 56 28.3
USGS 08h44m42.4s 16.7S 177.2W				
h=33km mb=5.1				
Fiji Islands Region				
Nov 30	FHC	Z	ePd	09 01 02.2
		Z	ePP	09 01 29.7
		Z	eScP	09 07 45.7
	WDC	Z	iPd	09 01 08.3
		Z	epP	09 01 11.8
		Z	ePP	09 01 40.3
		Z	ePcP	09 04 20.0
		Z	eScP	09 07 47.0
	MIN	Z	ePd	09 01 12.9
		Z	ePP	09 01 44.4
		Z	eScP	09 07 48.7
	ORV	Z	ePd	09 01 18.8
		Z	epP	09 01 21.9
		Z	ePP	09 01 50.6
		Z	ePcP	09 04 24.1
		Z	eScP	09 07 50.7
	BRK	Z	iPd	09 01 30.2
		Z	eScP	09 07 55.3
	BKS	Z	iPd	09 01 30.3
		N	e	09 03 54
				AMP(μm) PER(s)
			PZ	1.2 0.8
	PCC	Z	ePd	09 01 32.0
		Z	eScP	09 07 56.0
	CMB	Z	iPd	09 01 34.7
		Z	epP	09 01 38.2
		Z	ePcP	09 04 27.9
		Z	eScP	09 07 57.0
	MHC	Z	ePd	09 01 36.5
		Z	eScP	09 07 57.5
	GCC	Z	ePd	09 01 37.0
		Z	eScP	09 07 57.6
	MNA	Z	eP	09 01 40.6
		Z	ePP	09 02 11.5
	SAO	Z	ePd	09 01 40.9
	LLA	Z	ePd	09 01 44.5
		Z	epP	09 01 49.0
		Z	ePcP	09 04 31.0
		Z	eScP	09 08 00.6
	PRS	Z	ePd	09 01 45.0
		Z	epP	09 01 47.7
		Z	ePP	09 02 15.7
		Z	ePcP	09 04 31.3
		Z	eScP	09 08 00.7
	FRI	Z	ePd	09 01 45.2
		Z	ePP	09 02 16.5
		Z	ePcP	09 04 31.2
		Z	eScP	09 08 00.9
	PRI	Z	ePd	09 01 49.4
		Z	ePP	09 02 21.8
		Z	ePcP	09 04 33.0
		Z	eScP	09 08 03.0
USGS 08h55m30.7s 61.3N 152.3W				
h=143km mb=5.5				
Southern Alaska				
Nov 30	FRI	Z	e(P)	14 09 21.4
	MNA	Z	e(P)	14 09 26.4
	CMB	Z	eP	14 09 30.6
	LLA	Z	e(P)	14 09 33.4
	PRS	Z	e(P)	14 09 33.5
	ORV	Z	eP	14 09 44.0
	BKS	Z	ePc	14 09 47.0
				AMP(μm) PER(s)
			PZ	0.047 1.1
	MIN	Z	e(P)	14 09 51.9
	WDC	Z	eP	14 09 55.7
USGS 14h01m46.0s 10.2N 85.9W				
h=50km mb=4.5 Ms=3.7				
Costa Rica				
Nov 30	PRS	Z	ePc	18 05 13.2
	PRI	Z	ePc	18 05 13.7
	SAO	Z	eP	18 05 15.3
	LLA	Z	ePc	18 05 15.8
	GCC	Z	eP	18 05 16.4
	PCC	Z	ePc	18 05 18.8
	MHC	Z	ePc	18 05 19.9
	FRI	Z	ePc	18 05 20.2
	BRK	Z	eP	18 05 21.5
	BKS	Z	iPd	18 05 22.1
				AMP(μm) PER(s)
			PZ	0.065 1.0
	CMB	Z	ePc	18 05 25.7
	ORV	Z	ePc	18 05 33.0
	MIN	Z	ePc	18 05 37.1
	WDC	Z	iPc	18 05 37.7
USGS 17h54m58.0s 22.2S 138.8W				
h=0km mb=5.5				
Tuamotu Archipelago Region				
Nov 30	PRI	Z	iPd	20 15 42.6
	LLA	Z	iPc	20 15 47.2
		Z	i	20 15 59.9
	PRS	Z	iPd	20 15 51.0
	FRI	Z	iPd	20 15 53.5
		Z	iS	20 16 08.7
	SAO	Z	iPd	20 15 54.4
	GCC	Z	ePc	20 16 02.2
	MHC	Z	e(P)	20 16 03.5
	CMB	Z	iPc	20 16 07.3
		Z	iS	20 16 29.6
BRK 20h15m38.2s 36.3N 120.5W				
h=8km ML=2.9(2)				
21 km NW of Coalinga, CA				
Dec 1	PRS	Z	eP	18 24 49.7
	PRI	Z	eP	18 24 51.7
	FRI	Z	eP	18 24 56.7
	CMB	Z	eP	18 24 57.6
	ORV	Z	eP	18 24 58.7
	WDC	Z	eP	18 24 59.1
USGS 18h13m42.7s 22.2S 179.8W				
h=640km mb=5.0				
South of Fiji Islands				
Dec 2	WDC	Z	eP	02 06 21.3
	MIN	Z	eP	02 06 28.3
	ORV	Z	eP	02 06 37.3
USGS 02h04m01.6s 48.9N 128.8W				
h=10km mb=4.1				
Vancouver Island Region				
Dec 2	PRS	Z	eP	02 08 18.0
	PRI	Z	eP	02 08 20.0
	FRI	Z	eP	02 08 25.5
	CMB	Z	eP	02 08 27.0
	WDC	Z	eP	02 08 29.3
USGS 01h56m39.9s 23.6S 176.6W				
h=253km mb=4.4				
South of Fiji Islands				
Dec 2	SAO	Z	iPc	02 45 55.49
		T	eS+	02 45 57.07
		T	i	02 45 58.15
	LLA	Z	iPc	02 45 57.3
	PRS	Z	iPd	02 45 51.9
	GCC	Z	eP	02 46 04.4
	PRI	Z	eP	02 46 05.2
	MHC	Z	iPd	02 46 06.62
		T	eS-	02 46 17.58
	FRI	Z	eP	02 46 14.6
		Z	iS	02 46 31.5
	CMB	Z	eP	02 46 18.9
		Z	iS	02 46 38.1
	BKS	Z	iP	02 46 19.7
		Z	iS	02 46 40.6
BRK 02h45m51.8s 36.6N 121.3W				
h=9km ML=2.6(4)				
Stone Canyon area, 27 km SE of Hollister, CA				
Dec 2	PRS	Z	eP	06 06 39.0
	PRI	Z	eP	06 06 41.2
	FRI	Z	eP	06 06 46.5
	CMB	Z	eP	06 06 47.7
	ORV	Z	eP	06 06 48.5
	WDC	Z	eP	06 06 48.9
	MIN	Z	eP	06 06 50.9
USGS 05h55m16.6s 19.9S 177.6W				
h=300km mb=4.7				
Fiji Islands Region				
Dec 3	FHC	Z	ePd	03 25 23.4
	WDC	Z	iPd	03 25 28.7
	MIN	Z	ePd	03 25 32.4
	ORV	Z	iPd	03 25 34.6
	BRK	Z	ePd	03 25 36.1
	PCC	Z	ePd	03 25 36.1
	BKS	Z	ePd	03 25 36.3
				AMP(μm) PER(s)
			PZ	0.17 0.9
	GCC	Z	ePd	03 25 39.1
	MHC	Z	iPd	03 25 40.1
		Z	i	03 26 09.0
	SAO	Z	ePd	03 25 41.5
	CMB	Z	iPd	03 25 43.1
		Z	i	03 26 12.5
	PRS	Z	iPd	03 25 43.5
	LLA	Z	iPd	03 25 44.5
	PRI	Z	iPd	03 25 47.2
	FRI	Z	iPd	03 25 48.0
	MNA	Z	ePd	03 25 51.7
USGS 03h13m45.7s 27.8N 141.1E				
h=106km mb=5.5				
Bonin Islands Region				
Dec 3	CMB	Z	iPc	08 54 41.3
USGS 08h43m51.7s 43.5N 147.0E				
h=39km mb=5.2 Ms=4.0				
Kurile Islands				
Dec 3	PRI	Z	iPc	11 39 10.9
	FRI	Z	iPd	11 39 14.6
	LLA	Z	iPc	11 39 17.3
	PRS	Z	iPc	11 39 17.5
	SAO	Z	eP	11 39 22.1
		R	iS-	11 40 10.71
	GCC	Z	ePc	11 39 28.5
	CMB	Z	iPc	11 39 31.3
	MHC	Z	iPd	11 39 31.53
		T	eS+	11 40 34.69
	PCC	Z	iPc	11 39 36.3
	BKS	Z	ePd	11 39 40.0
		T	iS-	11 40 09.29
		N	e(Lg)	11 41 06.0
	BRK	Z	iPc	11 39 40.4
BRK ML=5.0(5)				
USGS 11h38m25.0s 34.2N 118.1W				
h=10km mb=5.0 Ms=4.2				
Southern California				
Dec 3	FRI	Z	ePKP	19 33 48.9
	PRI	Z	ePKP	19 33 49.6
	LLA	Z	ePKP	19 33 50.1
	PRS	Z	ePKP	19 33 51.2
	CMB	Z	ePKP	19 33 51.3
	BRK	Z	ePKP	19 33 53.0
	BKS	Z	ePKPd	19 33 53.2
				AMP(μm) PER(s)
			PKPZ	0.11 1.0
	MIN	Z	ePKP	19 33 55.0
	ORV	Z	e(PKP)	19 33 55.1
	WDC	Z	ePKP	19 33 56.4
USGS 19h14m55.6s 58.0S 25.3W				
h=33km mb=5.5 Ms=4.8				
South Sandwich Islands Region				
Dec 4	WDC	Z	e(P)	02 11 41.5
	ORV	Z	e(P)	02 11 47.2
	CMB	Z	eP	02 11 48.5
USGS 01h59m07.4s 12.6N 144.8E				
h=33km mb=5.2 Ms=5.1				
South of Mariana Islands				
Dec 4	WDC	Z	ePc	05 30 44.2
		Z	ePKPPKP	05 59 11.1
		Z	e	05 59 19.2
	FHC	Z	eP	05 30 44.4
	MIN	Z	eP	05 30 46.3
	ORV	Z	eP	05 30 50.5
	CMB	Z	eP	05 31 00.7
		Z	ePKPPKP	05 59 09.1
	BRK	Z	eP	05 31 02.5
	BKS	Z	ePc	05 31 02.6
				AMP(μm) PER(s)
			PZ	0.069 0.8
	PCC	Z	eP	05 31 04.5
	MHC	Z	eP	05 31 05.8
	GCC	Z	eP	05 31 07.2
	FRI	Z	eP	05 31 07.4
		Z	ePKPPKP	05 59 06.4
	SAO	Z	e(P)	05 31 09.1
	LLA	Z	eP	05 31 10.4
	PRS	Z	eP	05 31 11.8
	PRI	Z	eP	05 31 13.7
		Z	ePKPPKP	05 59 07.8
USGS 05h19m53.0s 73.4N 55.0E				
h=0km mb=5.9 Ms=4.6				
Novaya Zemlya				
Dec 4	MIN	Z	eP	06 27 38.0
	CMB	Z	eP	06 27 47.1
		Z	e	06 31 11.2
	FRI	Z	e(P)	06 27 57.0
USGS 06h14m10.4s 20.0N 121.9E				
h=10km mb=5.6 Ms=5.5				
Philippine Islands Region				
Dec 4	WDC	Z	eP	06 46 41.9
	CMB	Z	eP	06 46 55.0
USGS 06h33m18.1s 19.9N 122.1E				
h=16km mb=5.2 Ms=5.4				
Philippine Islands Region				
Dec 4	PRS	Z	iPc	10 57 21.8
		Z	eS	10 57 24.9
	SAO	Z	iPc	10 57 28.87
		T	eS+	10 57 38.05
	LLA	Z	eP	10 57 30.2
	PRI	Z	iPc	10 57 30.4
	GCC	Z	eP	10 57 34.5
	MHC	Z	eP	10 57 39.5
		T	eS	10 57 56.64
	BKS	Z	e(P)	10 57 40.0
	PCC	Z	e(P)	10 57 43.2
		Z	eS	10 58 05.9
	FRI	Z	eP	10 57 46.0
		Z	eS	10 58 07.6
	CMB	Z	eP	10 57 52.2
		Z	eS	10 58 18.0
BRK 10h57m16.4s 36.1N 121.5W				
h=5km ML=2.9(4)				
40 km WSW of King City, CA				
Dec 4	WDC	Z	e	13 44 22.4
	MIN	Z	e	13 44 26.9
	CMB	Z	e	13 45 06.1
	LLA	Z	e	13 45 18.7
	FRI	Z	e	13 45 19.2
	PRI	Z	e	13 45 25.4
	PRS	Z	e	13 45 25.7
USGS 13h41m32.3s 50.8N 130.0W				
h=10km mb=4.1				
Vancouver Island Region				
Dec 4	WDC	Z	eP	13 50 04.3
	MIN	Z	eP	13 50 08.0
	PCC	Z	eP	13 50 08.8
	BKS	Z	ePc	13 50 09.3
		E	eLr	14 14 08.0
				AMP(μm) PER(s)
			PZ	0.075 1.2
			LZ	3.0 20.
			LN	1.4 20.
			LE	2.5 20.
	ORV	Z	eP	13 50 09.6
	GCC	Z	eP	13 50 11.3
	PRS	Z	eP	13 50 15.2
	LLA	Z	eP	13 50 16.6
	CMB	Z	ePc	13 50 16.7
	PRI	Z	eP	13 50 19.0
	FRI	Z	eP	13 50 20.8
BRK Ms=5.6 Distance=79°				
USGS 13h38m06.4s 18.5N 146.4E				
h=76km mb=5.7				
Mariana Islands				
Dec 4	WDC	Z	eP	18 36 15.1
	MIN	Z	e(P)	18 36 18
	ORV	Z	eP	18 36 19.2
		Z	e	18 36 43.7
	CMB	Z	ePc	18 36 27.9
		Z	e	18 36 51.8
USGS 18h23m50.6s 28.6N 129.1E				
h=90km mb=4.9				
Ryukyu Islands				
Dec 5	FHC	Z	ePKP	11 39 47.5
	WDC	Z	iPKP	11 39 49.0
	MIN	Z	ePKP	11 39 49.8
	PCC	Z	ePKP	11 39 50.4
	ORV	Z	ePKPc	11 39 50.7
		Z	e	11 40 52.3
	BRK	Z	e(PKP)	11 39 50.8
	GCC	Z	ePKP	11 39 51.4
	MHC	Z	ePKPc	11 39 52.2
	PRS	Z	ePKPc	11 39 52.6
	CMB	Z	iPKPc	11 39 53.3
		Z	e	11 41 00.7
		Z	e	11 41 17.0
	LLA	Z	ePKP	11 39 53.5
	PRI	Z	ePKP	11 39 54.2
	FRI	Z	ePKPc	11 39 54.8
		Z	e	11 41 04.8
	MNA	Z	e(PKP)	11 39 57.0
USGS 11h18m04.7s 3.0S 130.0E				
h=62km mb=4.4				
Ceram				
Dec 5	FRI	Z	iPc	15 01 12.0
		Z	iS	15 01 23.3
	MNA	Z	e(P)	15 01 15.2
		Z	eS	15 01 28.3
		Z	i	15 01 29.4
	CMB	Z	iPc	15 01 19.2
		Z	iS	15 01 36.3
	LLA	Z	ePc	15 01 29.5
	PRI	Z	eP	15 01 31.1
	SAO	Z	ePc	15 01 32.9
	MHC	Z	eP	15 01 34.2
	PRS	Z	ePc	15 01 36.0
	GCC	Z	e	15 01 38.8
BRK 15h00m56.0s 37.5N 118.9W				
h=7km ML=3.1(2)				
15 km SE of Mammoth Lakes, CA				
Dec 5	GCC	Z	ePd	16 16 48.7
	PCC	Z	ePd	16 16 48.9
	PRS	Z	iPd	16 16 49.0
		Z	epP	16 17 01.5
	SAO	Z	e(P)	16 16 49.5
	BRK	Z	iPd	16 16 51.0
	BKS	Z	ePd	16 16 51.1
		Z	eS	16 26 07
		N	eLq	16 35 16
		N	eLr	16 38 18
				AMP(μm) PER(s)
			PZ	0.60 1.3
			LZ	19 20.
			LN	14 20.
			LE	15 20.
	PRI	Z	ePd	16 16 51.4
		Z	epP	16 17 03.9
	LLA	Z	ePd	16 16 51.5
	MHC	Z	ePd	16 16 51.6
		Z	epPd	16 17 03.36
		Z	e	16 17 13.2
		T	eS+	16 26 09.39
		T	eLq+	16 35 17.65
		Z	eLrc	16 37 43.30
	FHC	Z	ePd	16 16 56.0
	FRI	Z	iPd	16 16 57.2
		Z	epP	16 17 10.0
		Z	ePKPPKP	16 45 06.7
	CMB	Z	ePd	16 16 58.2
		Z	ipP	16 17 10.3
		Z	i	16 17 19.7
		Z	i	16 17 26.0
		Z	ePKPPKP	16 45 06.0
	ORV	Z	ePd	16 16 59.1
		Z	epP	16 17 12.0
		Z	ePKPPKP	16 45 04.6
	WDC	Z	iPd	16 16 59.6
	MIN	Z	ePd	16 17 01.7
		Z	epP	16 17 16.5
	MNA	Z	ePd	16 17 08.5
BRK Ms=6.3 Distance=72°				
USGS 16h05m32.6s 15.3S 173.5W				
h=40km mb=6.0 Ms=6.3				
Tonga Islands				
Dec 5	PRS	Z	ePd	16 16 58.8
	GCC	Z	ePd	16 46 59.6

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DATE	STA	CMP	PHASE	TIME (UTC)
	PCC	Z	eP	16 46 59.7
	SAO	Z	eP	16 47 00.2
	BRK	Z	eP	16 47 01.3
	BKS	Z	ePd	16 47 01.7
			AMP(μm)	PER(s)
		PZ	0.087	1.0
	PRI	Z	ePd	16 47 01.8
	MHC	Z	eP	16 47 01.9
	FHC	Z	eP	16 47 05.8
	FRI	Z	ePd	16 47 06.2
	CMB	Z	ePd	16 47 07.4
	ORV	Z	ePd	16 47 08.5
	WDC	Z	iPd	16 47 08.8
	MIN	Z	e(P)	16 47 10.6
	MNA	Z	e(P)	16 47 15.2
USGS 16h35m32.9s 24.7S 178.6E				
h=572km mb=5.4				
South of Fiji Islands				
Dec 6	LLA	Z	e	00 29 42.3
	CMB	Z	eP	00 29 49.2
		Z	e	00 29 55.7
	ORV	Z	eP	00 29 58.8
		Z	e	00 30 06.2
USGS 00h18m33.3s 17.9S 73.1W				
h=51km mb=5.1				
Off Coast of Peru				
Dec 6	WDC	Z	e(P)	05 05 58.2
	CMB	Z	e(P)	05 06 03.6
USGS 04h52m55.5s 21.9S 170.9E				
h=112km mb=4.9				
Loyalty Islands Region				
Dec 6	FHC	Z	e(P)	16 17 25.4
	WDC	Z	ePc	16 17 32.4
	MIN	Z	eP	16 17 37.1
	CMB	Z	eP	16 17 59.2
	FRI	Z	eP	16 18 09.5
USGS 16h11m36.8s 59.5N 152.9W				
h=94km mb=4.9				
Southern Alaska				
Dec 7	ZSP	Z	eP	02 52 56.9
		Z	eS	02 53 13.2
	BRK	Z	ePd	02 52 58.5
		Z	eS	02 53 12.7
	BKS	Z	ePc	02 52 58.5
		T	eS-	02 53 13.48
	ORV	Z	eP	02 53 00.9
	PCC	Z	eP	02 53 02.5
	MHC	Z	eP	02 53 08.36
	MIN	Z	eP	02 53 09.3
	GCC	Z	e(P)	02 53 09.7
	CMB	Z	eP	02 53 13.1
	WDC	Z	e(P)	02 53 14.3
BRK 02h52m39.2s 38.8N 122.9W				
h=8km ML=3.2(3)				
The Geysers area, 22 km S of Clear Lake, CA				
Dec 7	PRS	Z	eP	03 00 52.7
	PRI	Z	eP	03 00 54.5
	FRI	Z	eP	03 00 59.5
	CMB	Z	eP	03 01 00.6
	ORV	Z	eP	03 01 01.6
	WDC	Z	ePc	03 01 02.0
	MIN	Z	eP	03 01 03.4
USGS 02h49m47.2s 22.3S 180.0W				
h=670km mb=5.0				
South of Fiji Islands				

DATE	STA	CMP	PHASE	TIME (UTC)
Dec 7	FHC	Z	iPc	03 03 12.0
		Z	i	03 03 17.6
		Z	iS	03 03 23.2
	WDC	Z	iPc	03 03 25.3
		Z	i	03 03 43.1
		Z	iS	03 03 48.3
	MIN	Z	ePc	03 03 34.8
		Z	iS	03 04 05.9
	ORV	Z	eP	03 03 38.4
		Z	eS	03 04 09.0
	BRK	Z	eP	03 03 44.7
	BKS	Z	eP	03 03 45.2
	PCC	Z	eP	03 03 47.9
	GCC	Z	eP	03 03 55.8
	CMB	Z	e(P)	03 04 01.2
BRK 03h02m55.4s 40.3N 124.9W				
h=7km ML=3.9(5)				
Off Coast 45 km WSW of Cape Mendocino, CA				
Dec 7	MIN	Z	e(Pdif)	07 55 02.9
	WDC	Z	ePdiff	07 55 03.5
		Z	ePP	07 59 06.2
		Z	ePKKP	08 11 37.0
	ORV	Z	ePdiff	07 55 09.0
		Z	ePKKP	08 11 34.0
	CMB	Z	ePdiff	07 55 15.8
		Z	ePP	07 59 19.7
		Z	ePKKP	08 11 28.9
	FRI	Z	ePdiff	07 55 19.8
		Z	ePKKP	08 11 28.0
	BKS	Z	iPdiff	07 55 20
		Z	i	07 56 00
		Z	iPP	07 59 23
		Z	i	08 03 17
		N	iSKS	08 06 03
		NW	eS	08 06 41
		NW	ePS	08 08 16
		NW	e	08 10 09
		NW	eSS	08 13 29
		NW	e	08 18 08
		NW	eLq	08 24 07
		NW	eLr	08 28 29
			AMP(μm)	PER(s)
		PZ	0.0011	7.45
		SKS	0.0029	15.3
		LZ	48	20.
		LN	52	20.
		LE	52	20.
		LZ	39	20.2
		LZ	56	20.
		LNE	40	19.8
		LNE	35	20.
		LNW	23	19.3
		LNW	78	20.
	MHC	Z	ePdiff	07 55 23
		Z	ePP-	07 59 21
		Z	e(SKP)	08 03 23
		R	eSKS+	08 06 06
		T	eS-	08 06 49
		R	iPS-	08 08 28
		Z	eSPP	08 09 22
		Z	e +	08 12 38
		Z	ePKPPKP	08 21 22
		T	ePKPSKS	08 27 16
		T	e	08 30 08
		Z	e	08 37 28
			AMP(μm)	PER(s)
		LZ	31	21.5
		LN	41	21.5
		LE	19	22.1
	PRI	Z	e(Pdif)	07 55 28.4

DATE	STA	CMP	PHASE	TIME (UTC)
		Z	ePKKP	08 11 25.7
BRK Ms=7.0 Distance=100°				
USGS 07h45m44.9s 41.0N 44.2E				
h=10km mb=5.9				
Turkey-USSR Border Region				
Dec 7	MHC	Z	iPd	10 41 25.80
		T	eS	10 41 27.56
	GCC	Z	eP	10 41 31.3
		Z	eS	10 41 37.4
	SAO	Z	iPd	10 41 34.6
		T	eS	10 41 44.62
	PCC	Z	eP	10 41 35.8
		Z	eS	10 41 47.2
	BRK	Z	eP	10 41 39.0
		Z	eS	10 41 51.8
	BKS	Z	ePd	10 41 39.07
		Z	eS	10 41 51.3
	CMB	Z	eP	10 41 47.1
		Z	eS	10 42 04.3
	FRI	Z	eP	10 41 51.4
		Z	eS	10 42 11.6
BRK 10h41m24.2s 37.3N 121.7W				
h=3km ML=2.9(3) Mo=1.0E20(1)				
San Felipe Valley, 20 km SE of San Jose, CA				
Dec 7	WDC	Z	eP	14 02 34.2
	CMB	Z	e(P)	14 03 03.1
USGS 13h53m28.1s 52.4N 160.6E				
h=35km mb=5.0 Ms=4.6				
Off East Coast of Kamchatka				
Dec 8	PRS	Z	iPc	01 17 03.5
		Z	iS	01 17 07.1
	SAO	Z	iPd	01 17 10.6
		T	iS+	01 17 19.87
	LLA	Z	iPc	01 17 11.9
		Z	iS	01 17 20.4
	PRI	Z	iPc	01 17 12.1
		Z	iS	01 17 23.3
	GCC	Z	ePc	01 17 17.5
	MHC	Z	ePc	01 17 21.9
		Z	i	01 17 38.8
	FRI	Z	e(P)	01 17 27.9
BRK 01h16m58.8s 36.2N 121.6W				
h=9km ML=2.6(4)				
40 km WSW of King City, CA				
Dec 8	CMB	Z	eP	11 30 22.5
	FRI	Z	e	11 30 29.0
	WDC	Z	eP	11 30 29.3
USGS 11h18m54.7s 15.2S 174.4W				
h=33km mb=5.0 Ms=5.5				
Tonga Islands				
Dec 8	PRS	Z	e(P)	12 14 05.0
	FRI	Z	eP	12 14 13.2
	CMB	Z	ePc	12 14 13.3
	MIN	Z	eP	12 14 16.3
	WDC	Z	eP	12 14 16.8
	ORV	Z	e	12 14 18.7
USGS 12h02m44.5s 14.9S 174.5W				
h=33km mb=5.0 Ms=5.2				
Samoa Islands Region				
Dec 8	FRI	Z	ePc	13 07 16.2
	MNA	Z	e(P)	13 07 16.9
	PRI	Z	ePc	13 07 18.9
	LLA	Z	eP	13 07 21.6
	PRS	Z	eP	13 07 23.2
	BRK	Z	e(P)	13 07 25.0

DATE	STA	CMP	PHASE	TIME (UTC)
	CMB	Z	ePc	13 07 25.2
	GCC	Z	e(P)	13 07 29.8
	BKS	Z	e(P)	13 07 36.4
		E	eS	13 14 34
		N	eLq	13 18 16
		Z	eLr	13 22 38
			AMP(μm)	PER(s)
		PZ	0.043	1.0
		LZ	7.1	20.
		LN	7.5	20.
		LE	10	20.
	ORV	Z	ePc	13 07 37.5
	MIN	Z	e(P)	13 07 40.5
	WDC	Z	ePc	13 07 44.4
	FHC	Z	ePc	13 07 55.3
BRK Ms=5.9 Distance=48°				
USGS 12h59m00.0s 6.9N 82.7W				
h=10km mb=5.6 Ms=5.7				
South of Panama				
Dec 9	PRS	Z	iPd	00 29 22.5
	PRI	Z	iPd	00 29 23.8
	LLA	Z	iPd	00 29 28.4
	SAO	Z	eP	00 29 30.0
		T	eS	00 29 43.70
	GCC	Z	eP	00 29 36.4
	MHC	Z	ePd	00 29 39.50
	FRI	Z	iPc	00 29 41.9
		Z	eS	00 30 03.2
	CMB	Z	eP	00 29 50.6
		Z	eS	00 30 17.3
	BKS	Z	e(P)	00 29 55.4
	BRK	Z	e(P)	00 29 58.7
BRK 00h29m13.4s 35.9N 121.2W				
h=6km ML=3.0(4)				
27 km NNW of San Simeon, CA				
Dec 9	FRI	Z	ePKP	08 08 20.8
	CMB	Z	ePKP	08 08 21.5
	WDC	Z	ePKP	08 08 26.3
USGS 07h49m25.8s 59.9S 26.0W				
h=33km mb=5.5 Ms=5.6				
South Sandwich Islands Region				
Dec 9	PRI	Z	eP	09 37 38.0
	PRS	Z	eP	09 37 41.6
	CMB	Z	eP	09 37 45.2
USGS 09h31m04.2s 14.5N 92.5W				
h=59km mb=5.0				
Near Coast of Chiapas, Mexico				
Dec 9	WDC	Z	eP	11 28 51.4
	ORV	Z	eP	11 28 58.0
	GCC	Z	eP	11 29 05.4
	CMB	Z	eP	11 29 08.2
	PRS	Z	eP	11 29 10.3
	LLA	Z	eP	11 29 11.1
USGS 11h17m51.6s 39.7N 140.4E				
h=134km mb=4.6				
Honshu, Japan				
Dec 9	WDC	Z	eP	20 06 46.8
	ORV	Z	eP	20 06 53.3
	CMB	Z	eP	20 07 02.4
	PRS	Z	eP	20 07 03.8
	LLA	Z	eP	20 07 04.6
	FRI	Z	eP	20 07 07.6
USGS 19h55m37.1s 34.5N 136.8E				
h=336km mb=4.6				
Southern Honshu, Japan				
Dec 9	FRI	Z	eP	20 39 04.8

DATE	STA	CMP	PHASE	TIME (UTC)
	PRI	Z	eP	20 39 07.2
	LLA	Z	eP	20 39 10.0
	PRS	Z	eP	20 39 11.3
	CMB	Z	eP	20 39 12.1
	MHC	Z	eP	20 39 17.2
	ORV	Z	eP	20 39 24.2
	WDC	Z	eP	20 39 30.2
USGS 20h29m29.1s 2.9S 77.7W				
h=26km mb=5.2				
Peru-Ecuador Border Region				
Dec 10	CMB	Z	eP	03 25 39.0
		Z	epP	03 26 07.5
	WDC	Z	eP	03 25 41.5
		Z	epP	03 26 09.4
	FRI	Z	epP	03 26 06.1
USGS 03h13m50.6s 20.1S 176.6W				
h=116km mb=5.2				
Fiji Islands Region				
Dec 10	WDC	Z	eP	12 32 53.7
	ORV	Z	eP	12 33 02.6
	CMB	Z	eP	12 33 16.3
	FRI	Z	eP	12 33 23.3
USGS 12h24m57.8s 51.3N 176.4E				
h=33km mb=4.9 Ms=4.7				
Rat Islands, Aleutian Islands				
Dec 10	ORV	Z	e(P)	14 46 24.5
	BKS	Z	e(P)	14 46 27.5
	CMB	Z	eP	14 46 33.9
	PRS	Z	eP	14 46 35.1
	FRI	Z	eP	14 46 39.6
USGS 14h34m49.1s 33.3N 140.7E				
h=72km mb=4.9				
South of Honshu, Japan				
Dec 10	MNA	Z	iPc	20 30 34.7
		Z	i	20 30 37.0
		Z	eS	20 31 05.1
	FRI	Z	iPc	20 30 46.5
	CMB	Z	iPc	20 30 54.9
	PRI	Z	ePc	20 30 59.5
	LLA	Z	e(P)	20 31 01.7
	SAO	Z	e(P)	20 31 05.8
		Z	eS	20 32 16.2
	PRS	Z	iPc	20 31 06.1
	ORV	Z	ePc	20 31 13.6
	BKS	Z	iPc	20 31 14.80
		Z	i	20 31 25.65
		R	e(S)	20 32 35.55
		Z	eLr	20 32 58
	BRK	Z	eP	20 31 15.6
		Z	e	20 31 25.4
	PCC	Z	eP	20 31 15.7
	MIN	Z	e(P)	20 31 21.1
	WDC	Z	eP	20 31 30.7
BRK ML=5.0(5)				
USGS 20h30m00.0s 37.2N 116.2W				
h=0km				
Underground Nuclear Explosion, N.T.S.				
Dec 11	LLA	Z	iPd	08 59 08.8
	CMB	Z	eP	08 59 12.1
	ORV	Z	eP	08 59 24.2
	MIN	Z	eP	08 59 26.4
	WDC	Z	eP	08 59 30.0
USGS 08h49m33.9s 2.6S 77.7W				
h=56km mb=5.2 Ms=4.1				
Peru-Ecuador Border Region				

DATE	STA	CMP	PHASE	TIME (UTC)
Dec 11	PRS	Z	eP	12 16 33.3
	MHC	Z	e(P)	12 16 34.4
	WDC	Z	eP	12 16 37.2
	ORV	Z	eP	12 16 38.3
	FRI	Z	eP	12 16 39.0
	CMB	Z	eP	12 16 39.2
USGS 12h05m18.5s 13.7S 170.5E				
h=613km mb=4.4				
Vanuatu Islands Region				
Dec 12	SAO	Z	iPd	03 54 30.89
		R	iS-	03 54 34.03
	MHC	Z	iPc	03 54 34.24
		T	iS+	03 54 40.59
	GCC	Z	ePc	03 54 34.5
	LLA	Z	iPc	03 54 36.5
	PRS	Z	iPd	03 54 38.6
	PCC	Z	ePc	03 54 42.8
	BKS	Z	ePc	03 54 45.60
		Z	i	03 54 46.85
		T	iS	03 55 00.65
		T	iSg+	03 55 03.83
	BRK	Z	eP	03 54 46.1
	PRI	Z	ePd	03 54 46.2
	ZSP	Z	ePd	03 54 47.6
	CMB	Z	iPd	03 54 50.7
		Z	iS	03 55 08.9
	FRI	Z	eP	03 54 50.8
		Z	eS	03 55 09.0
BRK 03h54m26.1s 37.0N 121.4W				
h=5km ML=2.8(4)				
11 km SE of Gilroy, CA				
Dec 12	FHC	Z	ePc	05 03 47.4
	WDC	Z	ePc	05 03 52.9
	MIN	Z	ePc	05 03 56.2
	ORV	Z	eP	05 03 58.1
	BRK	Z	e(P)	05 04 00.8
	PCC	Z	eP	05 04 01.8
	MHC	Z	eP	05 04 04.6
	CMB	Z	ePc	05 04 06.6
	PRS	Z	ePc	05 04 07.9
	LLA	Z	eP	05 04 08.8
	FRI	Z	ePc	05 04 11.0
	PRI	Z	eP	05 04 11.3
USGS 04h51m18.9s 27.3N 128.4E				
h=63km mb=5.3				
Ryukyu Islands				
Dec 12	SAO	Z	ePc	05 28 24.57
		R	iS-	05 28 27.83
	MHC	Z	iPc	05 28 27.94
		T	iS+	05 28 34.40
	GCC	Z	iPc	05 28 28.2
	LLA	Z	iPc	05 28 30.5
	PRS	Z	iPd	05 28 32.4
	PCC	Z	iPc	05 28 36.6
	BKS	Z	iPc	05 28 39.90
		Z	i	05 28 40.60
		R	eS-	05 28 54.21
		T	iSg+	05 28 56.59
	BRK	Z	ePd	05 28 40.0
	PRI	Z	eP	05 28 40.0
	ZSP	Z	ePd	05 28 41.4
		Z	eS	05 29 01.4
	CMB	Z	iPd	05 28 44.5
		Z	iS	05 29 02.0
	FRI	Z	iPc	05 28 44.6
		Z	iS	05 29 02.7
BRK 05h28m19.9s 37.0N 121.5W				
h=5km ML=3.1(4) Mo=8.5E20(2)				
9 km SE of Gilroy, CA				

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DATE	STA	CMP	PHASE	TIME (UTC)
Dec 12	SAO	Z	ePc	06 40 31.52
		R	iS-	06 40 34.74
	MHC	Z	iPc	06 40 35.10
		T	iS-	06 40 41.29
	GCC	Z	ePc	06 40 35.3
	LLA	Z	iPc	06 40 37.4
	PRS	Z	iPd	06 40 39.3
	PCC	Z	ePc	06 40 43.6
	BKS	Z	iPc	06 40 46.90
		Z	i	06 40 47.60
		T	iS	06 41 01.65
	PRI	Z	ePd	06 40 47.0
	ZSP	Z	ePd	06 40 48.5
	CMB	Z	iPd	06 40 51.4
		Z	iS	06 41 09.4
	FRI	Z	ePc	06 40 51.5
		Z	iS	06 41 09.5
BRK 06h40m26.9s 37.0N 121.4W				
h=5km ML=2.9(4) Mo=5.6E20(1)				
11 km SE of Gilroy, CA				
Dec 12	FRI	Z	ePc	13 40 46.9
	MNA	Z	eP	13 40 47.7
	PRI	Z	ePc	13 40 50.7
	LLA	Z	ePc	13 40 52.2
	PRS	Z	ePc	13 40 53.6
	CMB	Z	ePc	13 40 56.0
	SAO	Z	eP	13 40 57.0
	MHC	Z	ePc	13 41 00.2
	BKS	Z	ePc	13 41 05.2
		Z	eS	13 48 10
		E	e	13 48 16
		E	e	13 52 04
		Z	eLr	13 56 20
				AMP(μm) PER(s)
			PZ	0.043 1.5
			LZ	3.2 20.
			LN	1.8 20.
			LE	4.3 20.
	BRK	Z	eP	13 41 05.3
	ORV	Z	ePc	13 41 08.5
	MIN	Z	ePc	13 41 11.8
	WDC	Z	ePc	13 41 15.4
	FHC	Z	eP	13 41 26.0
BRK Ms=5.5 Distance=50°				
USGS 13h32m20.4s 5.4N 82.6W				
h=10km mb=5.3 Ms=5.1				
South of Panama				
Dec 12	WDC	Z	iPc	19 02 02.6
	MIN	Z	ePc	19 02 07.5
	ORV	Z	e(P)	19 02 14.4
	CMB	Z	eP	19 02 33.7
	MHC	Z	ePc	19 02 36.3
	BKS	Z	e	19 02 39.8
				AMP(μm) PER(s)
			PZ	0.038 0.8
	FRI	Z	ePc	19 02 44.5
	LLA	Z	ePc	19 02 45.4
	PRS	Z	e(P)	19 02 47.5
	PRI	Z	ePc	19 02 51.2
USGS 18h57m20.7s 59.1N 136.8W				
h=10km mb=4.7				
Southeastern Alaska				
Dec 13	WDC	Z	iPc	04 11 41.9
		Z	i	04 11 48.7
	MIN	Z	ePc	04 11 42.4
		Z	i	04 11 49.1
	FHC	Z	ePc	04 11 44.7
	ORV	Z	eP	04 11 46.8
	CMB	Z	ePc	04 11 55.2
		Z	i	04 12 01.8
		Z	i	04 12 07.3
	BRK	Z	ePc	04 12 00.5
	BKS	Z	ePc	04 12 00.9
		R	ePPP	04 15 45.00
		R	e	04 18 56.00
		T	e	04 19 27.00
		Z	e	04 20 20.00
		T	iS+	04 20 31.00
		T	iScS+	04 21 58.00
		T	eSS	04 24 16.00
		R	e	04 25 11.00
		T	i	04 25 55.00
		T	eLq	04 27 01.00
		T	eLr	04 29 50.00
				AMP(μm) PER(s)
			PZ	0.057 1.0
			LN	2.0 20.
			LE	3.9 20.
			LZ	2.0 20.
	FRI	Z	ePc	04 12 01.3
		Z	i	04 12 07.8
	MHC	Z	ePc	04 12 03.0
		Z	e c	04 12 12
		T	iS+	04 20 36
		T	eScS+	04 21 55
		R	e -	04 24 21
		R	eSS+	04 24 40
		T	eLq+	04 27 14
		Z	eLr	04 30 58
				AMP(μm) PER(s)
			LZ	5.7 20.
			LN	4.7 20.
			LE	6.1 20.
	GCC	Z	ePc	04 12 05.2
	SAO	Z	ePc	04 12 05.5
	LLA	Z	iPc	04 12 06.3
		Z	i	04 12 12.8
	PRS	Z	ePc	04 12 08.6
	PRI	Z	ePc	04 12 09.2
BRK Ms=5.8 Distance=63°				
USGS 04h01m39.0s 71.1N 7.6W				
h=10km mb=5.7 Ms=5.6				
Jan Mayen Island Region				
Dec 13	WDC	Z	ePd	07 00 08.6
		Z	e	07 00 22.4
		Z	ePcP	07 02 22.5
		Z	eScP	07 06 05.7
		Z	epScP	07 06 12.5
	MIN	Z	eP	07 00 14.0
		Z	e	07 00 27.9
		Z	ePcP	07 02 24.2
		Z	eScP	07 06 07.0
	ORV	Z	e(P)	07 00 16.8
		Z	e	07 00 31.2
		Z	ePcP	07 02 26.2
	BKS	Z	e	07 00 23
		Z	eLr	07 11 15
				AMP(μm) PER(s)
			LZ	1.8 20.
			LN	0.71 20.
			LE	1.4 20.
	MHC	Z	eP	07 00 29.2
		Z	e	07 00 43.0
		Z	ePcP	07 02 30.9
	CMB	Z	eP	07 00 32.1
		Z	e	07 00 45.8
		Z	ePcP	07 02 31.7
		Z	eScP	07 06 15.3
		Z	epScP	07 06 23.9
		Z	e	07 06 40.7
	PRS	Z	eP	07 00 35.2
		Z	e	07 00 49.7
	LLA	Z	e(P)	07 00 36.3
		Z	e	07 00 50.7
		Z	ePcP	07 02 34.6
	FRI	Z	eP	07 00 39.4
		Z	e	07 00 54
		Z	ePcP	07 02 35.2
		Z	eScP	07 06 20.8
		Z	epScP	07 06 27.8
		Z	e	07 06 45.7
	PRI	Z	eP	07 00 41.3
	FHC	Z	ePcP	07 02 30.6
	BRK	Z	ePcP	07 02 39.5
USGS 06h52m53.9s 51.9N 176.0W				
h=52km mb=5.3				
Andreanof Islands, Aleutian Is.				
Dec 13	WDC	Z	eP	17 06 53.7
	ORV	Z	eP	17 07 00.3
	CMB	Z	ePc	17 07 07.3
	PRS	Z	eP	17 07 07.7
	LLA	Z	eP	17 07 08.7
	FRI	Z	eP	17 07 12.3
USGS 16h55m10.5s 28.6N 141.7E				
h=52km mb=5.3				
Bonin Islands Region				
Dec 14	PRI	Z	eP	21 06 43.8
	PRS	Z	eP	21 06 45.8
	LLA	Z	e	21 06 46
	FRI	Z	eP	21 06 46.3
	MHC	Z	e	21 07 03.5
	ORV	Z	ePc	21 07 10.9
	WDC	Z	e	21 07 19.0
	BKS	N	e	21 12 28
		Z	eLr	21 19 10
				AMP(μm) PER(s)
			LZ	3.2 20.
			LN	3.6 20.
			LE	1.8 20.
USGS 20h58m48.6s 3.5S 104.6W				
h=10km mb=4.8 Ms=4.7				
Northern Easter I. Cordillera				
Dec 15	WDC	Z	eP	09 30 39.3
	ORV	Z	eP	09 30 47.7
	CMB	Z	e(P)	09 31 00.3
	FRI	Z	e(P)	09 31 07.2
USGS 09h21m18.3s 51.1N 158.0E				
h=39km mb=5.3 Ms=4.5				
Near East Coast of Kamchatka				
Dec 15	PRS	Z	iPd	19 21 24.5
	PRI	Z	iPd	19 21 28.7
		Z	iS	19 21 40.2
	SAO	Z	iPc	19 21 31.9
		T	eS	19 21 46.65
	LLA	Z	iPc	19 21 32.1
	GCC	Z	eP	19 21 37.2
	MHC	Z	ePc	19 21 40.6
	FRI	Z	iPc	19 21 45.0
		Z	iS	19 22 09.2
	PCC	Z	e(P)	19 21 46.2
	BKS	Z	eP	19 21 51.5
	CMB	Z	eP	19 21 53.2
BRK 19h21m12.8s 35.7N 121.6W				
h=3km ML=3.4(4)				
Off Coast 35 km NW of San Simeon, CA				
Dec 16	SAO	Z	iPd	01 50 31.3
		T	eS+	01 50 34.00
	LLA	Z	iPc	01 50 34.6
	PRS	Z	iPd	01 50 37.5
	GCC	Z	iPc	01 50 39.3
	MHC	Z	iPc	01 50 39.5
		T	eS+	01 50 48.30
		T	i	01 50 50.85
		Z	i	01 50 52.85
	PCC	Z	iPd	01 50 47.8
	BKS	Z	iPd	01 50 50.45
		T	eS	01 51 08.35
		R	e	01 51 14.65
	FRI	Z	iPc	01 50 50.6
	CMB	Z	iPd	01 50 52.6
BRK 01h50m27.9s 36.8N 121.3W				
h=8km ML=3.8(4) Mo=1.4E22(3)				
12 km ESE of Hollister, CA				
Dec 16	SAO	Z	iPd	02 30 15.83
		T	iS+	02 30 18.65
	LLA	Z	iPc	02 30 19.2
	PRS	Z	iPd	02 30 22.0
	GCC	Z	iPc	02 30 23.8
	MHC	Z	iPc	02 30 23.87
		T	eS	02 30 35.05
	PRI	Z	eP	02 30 28.9
	PCC	Z	eP	02 30 32.1
	BKS	Z	e(P)	02 30 34.8
	FRI	Z	eP	02 30 34.9
		Z	iS	02 30 51.7
	CMB	Z	eP	02 30 37.3
		Z	eS	02 30 55.5
BRK 02h30m12.4s 36.8N 121.3W				
h=5km ML=2.7(4)				
11 km ESE of Hollister, CA				
Dec 16	PRI	Z	ePc	05 54 04.0
		Z	e	05 54 22.0
	FRI	Z	iPc	05 54 04.7
	LLA	Z	iPc	05 54 10.2
	PRS	Z	iPc	05 54 11.3
	MNA	Z	eP	05 54 16.0
		Z	eS	05 55 31.6
	SAO	Z	iPd	05 54 16.07
		T	eS	05 55 11.60
	CMB	Z	iPc	05 54 21.0
		Z	eS	05 54 41.5
	GCC	Z	eP	05 54 22.5
	MHC	Z	iPd	05 54 22.90
		T	eS	05 55 38.20
		T	e	05 55 49.55
		Z	e	05 55 55.25
	PCC	Z	eP	05 54 30.3
	BKS	Z	iPc	05 54 32.1
		T	eS	05 55 54.50
		R	e	05 55 56.80
		Z	e	05 56 47.50
	ORV	Z	e(P)	05 54 46.8
BRK ML=5.3(4)				
PAS 05h53m03.5s 34.0N 116.7W				
h=5km ML=4.8				
Southern California				
Dec 16	CMB	Z	eP	09 23 58.0
		Z	e	09 26 24.5
		Z	eScP	09 30 07.0
	ORV	Z	eP	09 24 11.8
		Z	e	09 26 29.5
	WDC	Z	eP	09 24 19.1
		Z	e	09 26 32.7
		Z	eScP	09 30 15.6
USGS 09h17m04.9s 14.0N 90.9W				
h=70km mb=5.2				
Near Coast of Guatemala				
Dec 16	BKS	Z	e(P)	09 41 13.7
	FRI	Z	eP	09 41 18.8
	CMB	Z	eP	09 41 21.0
	ORV	Z	eP	09 41 22.7
USGS 09h29m65.5s 15.3S 173.0W				
h=33km mb=5.2 Ms=5.2				
Tonga Islands				
Dec 16	PRS	Z	iPc	10 09 48.9
	GCC	Z	eP	10 09 49.2
	SAO	Z	eP	10 09 49.3
		Z	eT	11 56 55
	PCC	Z	ePc	10 09 49.6
	PRI	Z	ePc	10 09 50.7
	LLA	Z	eP	10 09 51.1
	BRK	Z	eP	10 09 51.6
				AMP(μm) PER(s)
			LZ	18 20.
	MHC	Z	eP	10 09 51.6
	BKS	Z	iPc	10 09 51.7
		Z	e -	10 11 00
		R	i -	10 19 39
		T	eS-	10 20 13
		T	i -	10 20 28
		Z	iPS+	10 21 12
		R	e	10 24 20
		T	eSS	10 25 48
		T	e	10 29 13
		Z	eSSS	10 29 25
		T	iLq	10 31 13
		R	eLr	10 35 18
				AMP(μm) PER(s)
			PZ	0.31 1.4
			LZ	10 20.
			LNE	9.9 20.
			LNW	0.0 20.
	FRI	Z	iPc	10 09 55.3
		Z	ePKPPKP	10 36 01.0
	CMB	Z	iPc	10 09 57.0
		Z	ePP	10 13 33.1
		Z	ePKPPKP	10 36 04.7
	FHC	Z	e(P)	10 09 57.0
	ORV	Z	ePc	10 09 58.8
	WDC	Z	iPc	10 09 59.7
	MNA	Z	eP	10 10 04.8
BRK Ms=6.2 Distance=84°				
USGS 09h57m16.6s 29.8S 177.9W				
h=30km mb=6.1 Ms=6.2				
Kermadec Islands				
Dec 16	FRI	Z	eP	12 38 09.8
	PRI	Z	eP	12 38 11.6
	LLA	Z	ePd	12 38 14.1
	PRS	Z	ePd	12 38 14.7
	CMB	Z	ePd	12 38 17.0
	GCC	Z	ePd	12 38 19.0
	PCC	Z	ePd	12 38 21.5
	BKS	Z	iPd	12 38 22.7
				AMP(μm) PER(s)
			PZ	0.035 1.0
	ORV	Z	ePd	12 38 25.8
	WDC	Z	ePd	12 38 30.7
	FHC	Z	eP	12 38 37.9
USGS 12h26m35.6s 23.0S 66.4W				
h=220km mb=5.2				
Juyjuy Province, Argentina				
Dec 16	WDC	Z	eP	19 40 48.7
	ORV	Z	eP	19 40 54.8
	BKS	Z	iPd	19 41 02.6
		E	eS	19 51 32
		E	e(Lq)	20 04 18
		Z	eLr	20 06 46
				AMP(μm) PER(s)
			PZ	0.075 0.8
			LZ	2.0 20.
			LN	1.4 20.
			LE	2.1 20.
	CMB	Z	eP	19 41 03.7
	PRS	Z	eP	19 41 04.0
	LLA	Z	eP	19 41 05.0
	FRI	Z	eP	19 41 08.8
BRK Ms=5.6 Distance=84°				
USGS 19h29m03.1s 29.4N 142.0E				
h=11km mb=5.4 Ms=5.2				
South of Honshu, Japan				
Dec 16	FHC	Z	eP	22 42 55.9
	WDC	Z	ePc	22 43 00.9
	PCC	Z	eP	22 43 04.5
	BKS	Z	iPd	22 43 05.3
				AMP(μm) PER(s)
			PZ	0.13 0.8
	ORV	Z	ePc	22 43 05.5
	PRS	Z	eP	22 43 10.3
	LLA	Z	eP	22 43 11.2
	CMB	Z	ePc	22 43 11.7
	PRI	Z	ePc	22 43 13.5
	FRI	Z	ePc	22 43 15.3
USGS 22h30m34.6s 12.7N 143.5E				
h=89km mb=5.0				
South of Mariana Islands				
Dec 17	CMB	Z	eP	01 11 54.3
	BKS	Z	iLr	01 40 55
USGS 00h58m15.3s 26.9S 167.5E				
h=33km mb=5.6 Ms=5.3				
New Caledonia Region				
Dec 17	FHC	Z	eP	04 30 58.8
	WDC	Z	iPc	04 31 00.1
	MIN	Z	eP	04 31 02.0
	ORV	Z	eP	04 31 05.2
	BRK	Z	eP	04 31 13.3
	BKS	Z	iPd	04 31 13.7
				AMP(μm) PER(s
			PZ	0.050 0.8
	CMB	Z	ePc	04 31 13.8
	MNA	Z	eP	04 31 14.4
	PCC	Z	e(P)	04 31 14.8
	MHC	Z	eP	04 31 16.5
	GCC	Z	e(P)	04 31 17.0
	FRI	Z	eP	04 31 18.9
	LLA	Z	eP	04 31 20.3
	PRS	Z	eP	04 31 21.2
	PRI	Z	eP	04 31 23.2
USGS 04h18m06.9s 49.9N 78.9E				
h=0km mb=5.9 Ms=4.5				
Eastern Kazakh SSR				
Dec 17	PRS	Z	eP	20 34 19.1
	PRI	Z	eP	20 34 20.6
	MHC	Z	eP	20 34 21.6
	BKS	Z	iPc	20 34 22.2
				AMP(μm) PER(
			PZ	0.011 0
	FRI	Z		20 34 25.0
	CMB	Z		20 34 26.4
			SKP	20 38 23
	FHC	Z		20 34 26.8
	ORV	Z		20 34 28.0

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DATE	STA	CMP	PHASE	TIME (UTC)
	WDC	Z	eP	10 51 03.3
USGS 20h21m37.7s 36.0S 177.8E				
h=234km mb=5.1				
Off E. Coast of N. Island, N.Z.				
Dec 18	PRI	Z	eP	09 10 45.0
	LLA	Z	eP	09 10 47.4
	PRS	Z	eP	09 10 47.6
	CMB	Z	eP	09 10 50.5
	ORV	Z	eP	09 10 59.9
	WDC	Z	eP	09 11 04.6
USGS 08h58m53.5s 25.4S 69.2W				
h=95km mb=4.9				
Northern Chile				
Dec 18	MHC	Z	iPc	09 37 56.65
		T	iS-	09 38 00.00
	PCC	Z	iPd	09 38 03.2
	GCC	Z	eP	09 38 03.4
		Z	iS	09 38 11.8
	BRK	Z	iPc	09 38 03.6
	BKS	Z	iPd	09 38 03.62
		T	e(S)	09 38 11.65
	SAO	Z	eP	09 38 07.8
	LLA	Z	eP	09 38 12.1
	CMB	Z	eP	09 38 13.0
	PRS	Z	eP	09 38 14.3
BRK 09h37m52.6s 37.5N 121.7W				
h=6km ML=2.7(2)				
Mt. Lewis area, 18 km SE of Livermore, CA				
Dec 18	PRS	Z	eP	10 51 00.8
	MHC	Z	eP	10 51 01.6
	WDC	Z	eP	10 51 03.3
	LLA	Z	eP	10 51 03.3
	PRI	Z	eP	10 51 03.9
	CMB	Z	ePc	10 51 06.9
	FRI	Z	eP	10 51 07.8
	BKS	Z	i	10 51 09.1
			AMP(μm)	PER(s)
		PZ	0.015	0.9
USGS 10h38m33.5s 10.8S 164.6E				
h=33km mb=5.0 Ms=4.5				
Santa Cruz Islands Region				
Dec 18	GCC	Z	eP	15 06 51.9
	PCC	Z	ePc	15 06 51.9
	PRS	Z	ePc	15 06 52.2
	SAO	Z	eP	15 06 52.9
	BRK	Z	eP	15 06 53.5
	BKS	Z	eP	15 06 54.2
			AMP(μm)	PER(s)
		PZ	0.022	0.8
	LLA	Z	eP	15 06 54.4
	PRI	Z	ePc	15 06 54.5
	MHC	Z	ePc	15 06 54.5
	FRI	Z	eP	15 06 59.6
	CMB	Z	ePc	15 07 00.4
	ORV	Z	eP	15 07 00.8
	WDC	Z	ePc	15 07 01.2
	MIN	Z	eP	15 07 03.0
USGS 14h55m58.1s 18.0S 178.0W				
h=532km mb=5.4				
Fiji Islands Region				
Dec 18	WDC	Z	ePc	19 31 43.2
		Z	i	19 31 48.2
	ORV	Z	eP	19 31 51.8
	MHC	Z	e(P)	19 32 01
	CMB	Z	ePc	19 32 02.9
		Z	i	19 32 07.8

DATE	STA	CMP	PHASE	TIME (UTC)
	BKS	Z	e(P)	19 32 04.7
		E	iS	19 40 13
		N	eLq	19 47 00
		Z	eLr	19 49 12
			AMP(μm)	PER(s)
		LZ	0.57	20.
		LE	1.1	20.
	PRS	Z	ePc	19 32 06.2
	LLA	Z	eP	19 32 06.6
	FRI	Z	eP	19 32 09.7
		Z	e	19 32 14.7
	PRI	Z	e	19 32 14.0
USGS 19h21m51.7s 46.8N 153.9E				
h=33km mb=5.4 Ms=5.3				
Kurile Islands				
Dec 19	WDC	Z	ePd	02 36 46.9
	MIN	Z	eP	02 36 50.2
	ORV	Z	eP	02 36 54.5
	BKS	Z	iPc	02 37 04.9
			AMP(μm)	PER(s)
		PZ	0.010	0.6
	CMB	Z	eP	02 37 05.3
	FRI	Z	e(P)	02 37 13.5
USGS 02h26m54.3s 46.7N 153.9E				
h=33km mb=5.2 Ms=4.5				
Kurile Islands				
Dec 19	PRI	Z	eP	05 31 17.1
	WDC	Z	ePc	05 31 19.2
	ORV	Z	eP	05 31 21.0
	CMB	Z	ePc	05 31 22.8
	FRI	Z	eP	05 31 23.8
	MIN	Z	e(P)	05 31 29.4
	BKS	Z	eLr	05 56 42
USGS 05h18m53.3s 10.7S 164.4E				
h=74km mb=4.7				
Santa Cruz Islands Region				
Dec 19	GCC	Z	eP	06 48 03.8
	FHC	Z	ePd	06 48 05.2
	PRS	Z	eP	06 48 05.4
	MHC	Z	ePd	06 48 06.0
	BRK	Z	e(P)	06 48 06.0
	LLA	Z	e(P)	06 48 07.6
	WDC	Z	ePd	06 48 07.7
	BKS	Z	iPc	06 48 10.0
		N	e(Lq)	07 10 04
		E	iLr	07 13 18
			AMP(μm)	PER(s)
		PZ	0.018	0.9
		LZ	0.79	20.
		LE	0.96	20.
	PRI	Z	eP	06 48 10.1
	ORV	Z	e(P)	06 48 11.0
	CMB	Z	ePd	06 48 11.4
	FRI	Z	eP	06 48 12.3
	MIN	Z	e(P)	06 48 14.5
BRK Ms=5.1 Distance=82°				
USGS 06h35m41.3s 10.8S 164.5E				
h=60km mb=5.3 Ms=5.2				
Santa Cruz Islands Region				
Dec 19	WDC	Z	e(P)c	11 32 27.2
	MIN	Z	e(P)	11 32 33.7
	ORV	Z	ePc	11 32 37.9
		Z	e	11 32 43.7
	CMB	Z	ePc	11 33 01.5
	FRI	Z	e(P)	11 33 16.5
USGS 11h30m48.6s 43.6N 129.6W				
h=10km mb=4.3				
Off Coast of Oregon				

DATE	STA	CMP	PHASE	TIME (UTC)
Dec 19	FHC	Z	eP	14 38 43.6
	WDC	Z	eP	14 38 57.4
	MIN	Z	eP	14 39 07.9
	ORV	Z	eP	14 39 15.6
		Z	i	14 39 23.7
	CMB	Z	e(P)	14 39 38.8
		Z	e	14 39 45.5
	FRI	Z	eP	14 39 54.5
	BKS	E	iS	14 40 59
USGS 14h37m35.3s 43.9N 128.3W				
h=10km mb=4.5 Ms=5.0				
Off Coast of Oregon				
Dec 20	LLA	Z	eP	02 56 49.5
	FRI	Z	eP	02 56 54.4
	CMB	Z	ePc	02 56 55.4
	ORV	Z	ePc	02 56 56.5
	WDC	Z	ePc	02 56 57.0
	MIN	Z	eP	02 56 59.5
USGS 02h45m21.5s 24.6S 180.0E				
h=524km mb=5.1				
South of Fiji Islands				
Dec 20	WDC	Z	ePKPc	03 54 14.7
		Z	e	03 54 31.5
	MIN	Z	ePKP	03 54 16.1
	ORV	Z	ePKPc	03 54 18.0
	PRS	Z	ePKP	03 54 20.8
	CMB	Z	ePKP	03 54 20.9
		Z	e	03 54 38.0
	FRI	Z	ePKP	03 54 23.8
USGS 03h35m17.8s 1.9N 97.1E				
h=36km mb=5.5 Ms=5.0				
Northern Sumatra				
Dec 20	PRS	Z	ePc	08 59 36.3
	PCC	Z	ePc	08 59 36.8
	BRK	Z	ePc	08 59 37.3
	SAO	Z	ePc	08 59 37.8
	PRI	Z	eP	08 59 38.0
	LLA	Z	ePc	08 59 38.5
	MHC	Z	eP	08 59 38.5
	BKS	Z	iPc	08 59 38.9
			AMP(μm)	PER(s)
		PZ	0.014	0.7
	FRI	Z	ePc	08 59 43.3
	CMB	Z	ePc	08 59 44.3
	ORV	Z	ePc	08 59 45.3
	WDC	Z	ePc	08 59 45.6
	MIN	Z	ePc	08 59 48.3
USGS 08h48m16.4s 20.2S 177.9W				
h=353km mb=4.9				
Fiji Islands Region				
Dec 20	FHC	Z	eP	10 28 58.0
	WDC	Z	ePd	10 29 02.0
		Z	epP	10 29 26.6
	MIN	Z	eP	10 29 06.3
	ORV	Z	ePd	10 29 09.6
		Z	epP	10 29 34.1
	BRK	Z	eP	10 29 13.7
	PCC	Z	eP	10 29 14.2
	GCC	Z	eP	10 29 18.8
	CMB	Z	ePd	10 29 20.6
		Z	epP	10 29 45.2
	PRS	Z	eP	10 29 23.3
		Z	epP	10 29 27.7
	LLA	Z	eP	10 29 24.0
		Z	epP	10 29 48.7
	FRI	Z	ePd	10 29 26.7
		Z	epP	10 29 51.8

DATE	STA	CMP	PHASE	TIME (UTC)
	PRI	Z	e(P)	10 29 28.9
USGS 10h18m37.7s 43.9N 146.1E				
h=114km mb=5.3				
Kurile Islands				
Dec 20	PRS	Z	eP	14 40 20.0
	GCC	Z	e(P)	14 40 20.6
	PRI	Z	ePc	14 40 21.8
	LLA	Z	e(P)	14 40 22.1
	BRK	Z	e(P)	14 40 22.7
	MHC	Z	ePc	14 40 23.0
	FRI	Z	ePc	14 40 26.9
		Z	epP	14 40 38.2
	CMB	Z	ePc	14 40 28.4
		Z	epP	14 40 39.9
		Z	e	14 40 52.9
	ORV	Z	ePc	14 40 30.3
		Z	epP	14 40 42.0
	WDC	Z	ePc	14 40 31.1
		Z	ipP	14 40 42.5
		Z	e	14 40 55.6
	MIN	Z	eP	14 40 32.6
		Z	epP	14 40 43.7
	BKS	N	eS	14 50 52
		N	iLq	15 03 11
		Z	e	15 06 41
		E	eLr	15 07 27
		Z	e	15 11 04
			AMP(μm)	PER(s)
		LZ	1.7	20.
		LN	1.4	20.
		LE	1.1	20.
BRK Ms=5.5 Distance=88°				
USGS 14h27m59.9s 27.9S 176.6W				
h=35km mb=5.3 Ms=5.2				
Kermadec Islands Region				
Dec 20	MHC	Z	ePc	20 36 51.2
	PRI	Z	ePc	20 36 54.0
	ORV	Z	eP	20 36 55.0
	CMB	Z	ePc	20 36 57.0
	FRI	Z	ePc	20 36 58.0
USGS 20h24m24.1s 10.8S 164.7E				
h=36km mb=5.4 Ms=4.8				
Santa Cruz Islands Region				
Dec 22	FHC	Z	eP	01 53 40.7
	WDC	Z	iPc	01 53 47.4
		Z	e	01 54 04.0
	MIN	Z	iPc	01 53 51.8
	ORV	Z	ePc	01 53 55.4
		Z	e	01 54 12.3
	BRK	Z	eP	01 54 00.0
	PCC	Z	ePc	01 54 00.7
	CMB	Z	ePc	01 54 07.6
	PRS	Z	ePc	01 54 11.0
	LLA	Z	ePc	01 54 11.4
	FRI	Z	ePc	01 54 14.7
	PRI	Z	ePc	01 54 15.0
	MNA	Z	e(P)	01 54 15.3
USGS 01h44m13.4s 49.6N 156.2E				
h=33km mb=5.3 Ms=4.5				
Kurile Islands				
Dec 22	WDC	Z	eP	06 05 48.7
	MIN	Z	eP	06 05 52.7
	CMB	Z	e	06 06 12
	MHC	Z	e	06 06 18
USGS 06h00m55.7s 62.1N 124.2W				
h=10km mb=4.8 Ms=4.2				
Northwest Territories, Canada				

DATE	STA	CMP	PHASE	TIME (UTC)
Dec 22	FHC	Z	iPc	10 48 26.0
		Z	epP	10 48 44.1
		Z	esP	10 48 55.2
	WDC	Z	ePc	10 48 33.7
		Z	ipP	10 48 52.4
		Z	ePcP	10 51 20.5
	MIN	Z	iPc	10 48 39.7
		Z	epP	10 48 58.3
		Z	ePcP	10 51 22.2
	ORV	Z	iPc	10 48 44.0
		Z	epP	10 49 02.6
		Z	ePcP	10 51 23.6
	BRK	Z	ePc	10 48 50.4
		Z	epP	10 49 08.8
	BKS	Z	iPc	10 48 50.8
		Z	ipP	10 49 09.1
			AMP(μm)	PER(s)
		PZ	0.11	0.8
	PCC	Z	ePc	10 48 51.7
	GCC	Z	ePc	10 48 56.3
	MHC	Z	ePc	10 48 56.8
		Z	epP	10 49 15.1
		Z	esP	10 49 25.0
		Z	ePcP	10 51 28.4
	CMB	Z	iPc	10 48 59.3
		Z	epP	10 49 17.7
		Z	iPcP	10 51 28.9
	SAO	Z	ePc	10 49 00.6
	PRS	Z	iPc	10 49 04.1
		Z	epP	10 49 22.5
		Z	ePcP	10 51 30.7
	LLA	Z	iPc	10 49 04.8
		Z	ipP	10 49 23.3
		Z	ePcP	10 51 31.1
	MNA	Z	e(P)	10 49 08.2
	FRI	Z	iPc	10 49 08.5
		Z	epP	10 49 27.1
		Z	ePcP	10 51 32.0
	PRI	Z	ePc	10 49 09.2
		Z	ePcP	10 51 33.1
USGS 10h42m12.5s 54.0N 166.2W				
h=76km mb=5.4				
Fox Islands, Aleutian Islands				
Dec 22	CMB	Z	e(P)	14 59 10.3
	ORV	Z	e(P)	14 59 16.3
	BKS	Z	eLr	15 14 32
USGS 14h49m51.3s 13.2S 111.2W				
h=10km mb=4.8 Ms=5.4				
Northern Easter I. Cordillera				
Dec 22	PRI	Z	iPd	22 21 19.6
	LLA	Z	iPd	22 21 25.7
	PRS	Z	iPd	22 21 28.8
	FRI	Z	iPd	22 21 29.8
	SAO	Z	iPd	22 21 32.3
	MHC	Z	ePc	22 21 39.1
	GCC	Z	e(P)	22 21 40.3
	CMB	Z	iPc	22 21 44.1
		Z	iS	22 22 07.5
	PCC	Z	e(P)	22 21 46.8
	ZSP	Z	e(P)	22 21 49.8
	ORV	Z	ePc	22 22 07.5
	BKS	E	iS	22 22 16.9
BRK 22h21m14.4s 36.2N 120.3W				
h=11km ML=3.3(4)				
7 km N of Coalinga, CA				
Dec 23	PRS	Z	iPc	03 18 52.5
	CMB	Z	iPc	03 18 53.0
	BRK	Z	e	03 18 53.0
	LLA	Z	ePc	03 18 53.5

DATE	STA	CMP	PHASE	TIME (UTC)
	FRI	Z	ePc	03 18 57.3
USGS 03h07m07.4s 21.6N 143.0E				
h=326km mb=4.6				
Mariana Islands Region				
Dec 23	PRS	Z	e(P)	04 42 32.9
	ORV	Z	e(P)	04 42 37.8
	FRI	Z	eP	04 42 39.9
	WDC	Z	e(P)	04 42 42.0
	CMB	Z	eP	04 42 47.9
	BKS	Z	eLr	05 07 42.0
			AMP(μm)	PER(s)
		LZ	2.3	20.
		LN	1.5	20.
		LE	2.3	20.
USGS 04h30m07.1s 10.8S 164.8E				
h=42km mb=5.2 Ms=5.3				
Santa Cruz Islands Region				
Dec 23	GCC	Z	e(P)	18 11 51.8
	PRS	Z	ePd	18 11 52.1
	PCC	Z	ePd	18 11 52.1
	BRK	Z	eP	18 11 52.5
	SAO	Z	eP	18 11 52.8
	PRI	Z	eP	18 11 54.5
	MHC	Z	ePd	18 11 54.5
	LLA	Z	eP	18 11 54.6
	FHC	Z	eP	18 11 57.4
	CMB	Z	ePd	18 12 00.4
	ORV	Z	ePd	18 12 01.3
	FRI	Z	eP	18 12 01.3
	WDC	Z	ePd	18 12 01.5
	MIN	Z	e(P)	18 12 03.3
USGS 18h00m46.6s 20.5S 178.3W				
h=530km mb=4.8				
Fiji Islands Region				
Dec 23	CMB	Z	eP	22 02 13.1
	PRS	Z	eP	22 02 13.6
	LLA	Z	eP	22 02 15.5
USGS 21h49m08.9s 0.8N 29.4W				
h=9km mb=5.8 Ms=5.5				
Central Mid-Atlantic Ridge				
Dec 23	SAO	Z	iPd	23 18 16.8
	LLA	Z	iPc	23 18 20.9
	MHC	Z	iPc	23 18 23.8
		T	eS+	23 18 32.05
	PRS	Z	iPd	23 18 23.8
	GCC	Z	iPc	23 18 24.0
	PRI	Z	e(P)	23 18 31.4
	PCC	Z	iPd	23 18 33.0
	BKS	Z	ePc	23 18 35.90
		T	e +	23 18 54.95
	BRK	Z	e(P)	23 18 36.0
	FRI	Z	ePc	23 18 36.2
		Z	iS	23 18 53.0
	ZSP	Z	e(P)	23 18 37.0
	CMB	Z	eP	23 18 37.4
		Z	eS	23 18 56.0
BRK 23h18m13.3s 36.9N 121.3W				
h=5km ML=2.6(4)				
9 km ENE of Hollister, CA				
Dec 24	FRI	Z	ePd	04 38 33.4
		Z	iPcP	04 38 35.8
	PRI	Z	ePd	04 38 35.2
	MNA	Z	eP	04 38 35.5
	LLA	Z	ePd	04 38 37.4
		Z	iPcP	04 38 41.2
	PRS	Z	ePd	04 38 37.9
		Z	iPcP	04 38 41.6

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DATE	STA	CMP	PHASE	TIME (UTC)
	SAO	Z	ePd	04 38 39.1
	CMB	Z	ePd	04 38 40.3
		Z	iPcP	04 38 43.7
		Z	ePd	04 38 49.4
	GCC	Z	ePd	04 38 42.4
		Z	iPcP	04 38 46.1
	MHC	Z	ePd	04 38 42.6
		Z	iPcP	04 38 45.8
	PCC	Z	ePd	04 38 45.0
		Z	iPcP	04 38 48.8
	BKS	Z	ePd	04 38 45.80
		Z	iPcPd	04 38 49.00
		Z	ipPc	04 39 24.10
		Z	isPc	04 39 40.55
			AMP(μm)	PER(s)
		PZ	0.29	1.1
	BRK	Z	ePd	04 38 46.0
		Z	ePcP	04 38 49.8
	ORV	Z	ePd	04 38 49.4
		Z	iPcP	04 38 53.0
	MIN	Z	ePd	04 38 51.2
		Z	ePcP	04 38 54.9
	WDC	Z	iPd	04 38 54.1
		Z	iPcP	04 38 57.8
		Z	eSP	04 48 49.6
	FHC	Z	ePd	04 39 01.4
		Z	ePcP	04 39 05.2

USGS 04h26m54.6s 23.5S 66.7W
h=193km mb=5.7
Juyjuy Province, Argentina

Dec 24	FHC	Z	iPc	05 29 41.1
		Z	i	05 29 48.3
	WDC	Z	iPc	05 29 48.4
		Z	iS	05 30 00.3
	MIN	Z	ePc	05 29 58.3
	ORV	Z	ePc	05 30 03.2

BRK 05h29m33.4s 40.5N 123.7W
h=29km ML=3.3(2) Mo=6.5E20(2)
45 km NE of Garberville, CA

Dec 24	FRI	Z	ePd	10 51 06.9
	PRI	Z	ePd	10 51 08.7
	MNA	Z	e(P)	10 51 08.8
	LLA	Z	iPd	10 51 10.7
	PRS	Z	ePd	10 51 11.1
	SAO	Z	ePd	10 51 12.3
	CMB	Z	iPd	10 51 13.3
	GCC	Z	ePd	10 51 15.0
	MHC	Z	ePd	10 51 15.3
	BRK	Z	ePd	10 51 18.3
	ORV	Z	iPd	10 51 21.2
	MIN	Z	ePd	10 51 23.1
	WDC	Z	iPd	10 51 25.8
	FHC	Z	ePd	10 51 32.6

USGS 10h39m40.3s 27.4S 63.2W
h=580km mb=5.5
Santiago Del Estero Prov., Arg.

Dec 26	WDC	Z	eP	07 59 07.0
	CMB	Z	eP	07 59 20.8

USGS 07h46m00.0s 39.0N 99.9E
h=10km mb=5.1 Ms=4.2
Kansu Province, China

Dec 27	LLA	Z	eP	04 17 18.5
		Z	e	04 17 45.2
	PRS	Z	eP	04 17 19.3
	ORV	Z	eP	04 17 31.0
	WDC	Z	eP	04 17 36.3

USGS 04h05m53.5s 20.0S 68.6W
h=151km mb=4.8

DATE	STA	CMP	PHASE	TIME (UTC)

Chile-Bolivia Border Region

Dec 27	LLA	Z	eP	10 18 45.3
	CMB	Z	eP	10 18 48.3
	ORV	Z	eP	10 18 56.8
	WDC	Z	eP	10 19 01.5

USGS 10h06m36.8s 29.1S 68.3W
h=117km mb=5.2
San Juan Province, Argentina

Dec 28	BRK	Z	eP	22 58 51.7
		Z	eS	22 59 05.5
	BKS	Z	iPc	22 58 52.2
		Z	iS	22 59 06.3
	ORV	Z	eP	22 58 53.7
	PCC	Z	e(P)	22 58 55.9
	MHC	Z	iPc	22 59 02.02
	GCC	Z	eP	22 59 03.8
	CMB	Z	ePc	22 59 06.8
	SAO	Z	eP	22 59 09.5
	WDC	Z	e(P)	22 59 10.3

BRK 22h58m32.3s 38.8N 122.8W
h=6km ML=3.2(4)
The Geysers area, 19 km S of Clear Lake, CA

Dec 29	GCC	Z	eP	05 20 35.0
	PRS	Z	eP	05 20 36.1
	BKS	Z	iPd	05 20 37.0
			AMP(μm)	PER(s)
		PZ	0.059	0.8
	FHC	Z	eP	05 20 37.4
	LLA	Z	eP	05 20 37.8
	PRI	Z	eP	05 20 38.4
	WDC	Z	ePc	05 20 41.2
	ORV	Z	eP	05 20 42.0
	FRI	Z	ePc	05 20 42.5
	CMB	Z	ePc	05 20 42.7
	MIN	Z	eP	05 20 43.3

USGS 05h08m25.3s 18.7S 169.2E
h=251km mb=5.0
Vanuatu Islands

Dec 29	WDC	Z	iPc	19 21 28.1
	ORV	Z	iPc	19 21 34.7
	CMB	Z	iPc	19 21 44.7
	PRS	Z	ePc	19 21 46.3
	LLA	Z	ePc	19 21 47.1
	FRI	Z	iPc	19 21 50.5

USGS 19h09m57.5s 36.6N 141.1E
h=56km mb=4.9
Near East Coast of Honshu, Japan

Dec 29	CMB	Z	iPc	19 40 16.4

USGS 19h30m04.5s 46.8N 154.0E
h=33km mb=5.2 Ms=5.1
Kurile Islands

Dec 29	MHC	Z	iPc	21 41 15.90
		Z	iS	21 41 17.4
	GCC	Z	iPc	21 41 22.0
	PCC	Z	iPc	21 41 24.4
	SAO	Z	iPd	21 41 26.3
	BKS	Z	iPc	21 41 27.8
		Z	iS	21 41 39.7

BRK 21h41m14.3s 37.4N 121.7W
h=7km ML=2.6(1)
Alum Rock area, 15 km E of San Jose, CA

Dec 30	WDC	Z	iPc	00 41 20.0
	MIN	Z	e(P)	00 41 21.7
	ORV	Z	iPc	00 41 23.3
	PRS	Z	ePc	00 41 24.6
	CMB	Z	iPc	00 41 27.3
	FRI	Z	iPc	00 41 31.4
	BKS	E	ePS	00 54 04
		E	eSS	00 59 24
		E	eLq	01 09 12
		E	i	01 11 28
		Z	i	01 11 30
		Z	eLr	01 14 42
			AMP(μm)	PER(s)
		LZ	3.9	20.
		LN	4.2	20.
		LE	0.25	20.

BRK Ms=6.1 Distance=106°
USGS 00h27m49.2s 2.9S 141.5E
h=21km mb=5.4 Ms=5.4
Near North Coast of New Guinea

Dec 30	MHC	Z	iPd	23 54 26.2
		T	iS+	23 54 27.65
	GCC	Z	iPd	23 54 31.9
	SAO	Z	iPd	23 54 35.6
	PCC	Z	iPc	23 54 35.8
	BKS	Z	iPd	23 54 38.5
		N	iS	23 54 49.8
	BRK	Z	iPd	23 54 38.6
	ZSP	Z	iPd	23 54 39.8
	LLA	Z	iPc	23 54 40.6
	PRS	Z	iPd	23 54 42.3
	CMB	Z	iPc	23 54 47.0
	PRI	Z	iPc	23 54 48.6
	FRI	Z	iPc	23 54 51.15
	ORV	Z	iPc	23 55 00.9
	MIN	Z	ePc	23 55 12.8
	MNA	Z	e	23 55 13.3
	WDC	Z	e(P)	23 55 15.0

BRK 23h54m24.4s 37.3N 121.7W
h=7km ML=4.3(6) Mo=4.9E22(2)
San Felipe Valley, 18 km SE of San Jose, CA

Dec 31	PRS	Z	iPd	02 17 51.5
		Z	i	02 18 03.9
	PRI	Z	ePd	02 17 55.7
		Z	iS	02 18 07.6
	LLA	Z	eP	02 17 58.8
	SAO	Z	iPd	02 17 58.9
		Z	iS	02 18 13.4
	GCC	Z	eP	02 18 05.1
	MHC	Z	e	02 18 09.2
	FRI	Z	e(P)	02 18 13.5
	PCC	Z	e(P)	02 18 15.9
	BKS	Z	e	02 18 23.0

BRK 02h17m40.9s 35.8N 121.5W
h=3km ML=2.8(4)
Off Coast 31 km NW of San Simeon, CA

Dec 31	GCC	Z	ePc	05 45 28.5
	BRK	Z	eP	05 45 28.7
	BKS	Z	ePc	05 45 28.8
			AMP(μm)	PER(s)
		PZ	0.029	0.9
	PRS	Z	ePc	05 45 30.2
	MHC	Z	ePc	05 45 30.5
	WDC	Z	ePc	05 45 31.5
	LLA	Z	ePc	05 45 32.1
	PRI	Z	eP	05 45 33.2
	ORV	Z	eP	05 45 33.8
	MIN	Z	ePc	05 45 34.3
	CMB	Z	ePc	05 45 35.7
	FRI	Z	ePc	05 45 37.2

DATE	STA	CMP	PHASE	TIME (UTC)

USGS 05h32m58.4s 10.3S 161.6E
h=87km mb=5.1
Solomon Islands

Dec 31	GCC	Z	ePc	07 26 45.7
	PCC	Z	ePc	07 26 45.7
	PRS	Z	ePc	07 26 46.3
	BRK	Z	ePc	07 26 47.4
	SAO	Z	ePc	07 26 47.4
	LLA	Z	eP	07 26 48.4
	PRI	Z	ePc	07 26 48.4
	MHC	Z	eP	07 26 48.4
	BKS	Z	ePc	07 26 48.5
			AMP(μm)	PER(s)
		PZ	0.043	1.0
	FRI	Z	ePc	07 26 53.7
	CMB	Z	ePc	07 26 54.0
	WDC	Z	ePc	07 26 54.7
	ORV	Z	e(P)	07 26 54.7
	MIN	Z	ePc	07 26 56.8

USGS 07h15m49.3s 17.7S 178.5W
h=508km mb=5.0
Fiji Islands Region

Dec 31	CMB	Z	eP	20 38 32.1
	PRI	Z	e	20 38 35.4
	LLA	Z	e	20 38 36.1
	ORV	Z	ePc	20 38 40.9
	WDC	Z	e	20 38 47.1

USGS 20h26m07.0s 32.5S 71.7W
h=40km mb=5.1 Ms=4.9
Near Coast of Central Chile

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Appendix A. Modified Mercalli Intensity Scale
(1956 Version)*

I. Not felt. Marginal and long-period effects of large earthquakes.

II. Felt by persons at rest, on upper floors, or favorably located.

III. Felt indoors. Hanging objects swing. Vibration like passing of light trucks. Duration estimated. May not be recognized as an earthquake.

IV. Hanging objects swing. Vibration like passing of heavy trucks; or sensation of a jolt like a heavy ball striking the walls. Standing cars rock. Windows, dishes, doors rattle. Glasses clink. Crockery clashes. In the upper range of IV, wooden walls and frames creak.

V. Felt outdoors; direction estimated. Sleepers wakened. Liquids disturbed, some spilled. Small unstable objects displaced or upset. Doors swing, close, open. Shutters, pictures move. Pendulum clocks stop, start, change rate.

VI. Felt by all. Many frightened and run outdoors. Persons walk unsteadily. Windows, dishes, glassware broken. Knicknacks, books, etc. off shelves. Pictures off walls. Furniture moved or overturned. Weak plaster and masonry D‡ cracked. Small bells ring (church, school). Trees, bushes shaken visibly, or heard to rustle.

VII. Difficult to stand. Noticed by drivers. Hanging objects quiver. Furniture broken. Damage to masonry D, including cracks. Weak chimneys broken at roof line. Fall of plaster, loose bricks, stone, tiles, cornices also unbraced parapets and architectural ornaments. Some cracks in masonry C. Waves on ponds, water turbid with mud. Small slides and caving in along sand or gravel banks. Large bells ring. Concrete irrigation ditches damaged.

VIII. Steering of cars affected. Damage to masonry C; partial collapse. Some damage to masonry B; none to masonry A. Fall of stucco and some masonry walls. Twisting, fall of chimneys, factory stacks, monuments, towers, elevated tanks. Frame houses moved on foundations if not bolted down; loose panel walls thrown out. Decayed piling broken off. Branches broken from trees. Changes in flow or temperature of springs and wells. Cracks in wet ground and on steep slopes.

IX. General panic. Masonry D destroyed; masonry C heavily damaged, sometimes with complete collapse; masonry B seriously damaged. General damage to foundations. Frame structures, if not bolted, shifted off foundations. Frames racked. Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground. In alluviated areas sand and mud ejected, earthquake fountains, sand craters.

X. Most masonry and frame structures destroyed with their foundations. Some well-built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments. Large landslides. Water thrown on banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flat land. Rails bent slightly.

XI. Rails bent greatly. Underground pipelines completely out of service.

XII. Damage nearly total. Large rock masses displaced. Lines of sight and level distorted. Objects thrown into the air.

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* 1956 version prepared by Charles F. Richter, in *Elementary Seismology*, 1958, pp. 137-138. W. H. Freeman and Company.

‡ Masonry A, B, C, D. To avoid ambiguity of language, the quality of masonry, brick or otherwise, is specified by the following lettering.

Masonry A. Good workmanship, mortar, and design; reinforced, especially laterally, and bound together by using steel, concrete, etc.; designed to resist lateral forces.

Masonry B. Good workmanship and mortar; reinforced, but not designed in detail to resist lateral forces.

Masonry C. Ordinary workmanship and mortar; no extreme weaknesses like failing to tie in at corners, but neither reinforced nor designed against horizontal forces.

Masonry D. Weak materials, such as adobe; poor mortar; low standards of workmanship; weak horizontally.

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Appendix B. Standard Wood-Anderson Torsion Seismograph Calibration

The Seismographic Stations has operated 'standard (T_o=0.8 sec)' Wood-Anderson type torsion seismographs (hereafter denoted WA) at the Lick Observatory on Mt. Hamilton (MHC) since 1927 and at two Berkeley sites: (BRK: Haviland Hall) from 1930 until July 1962 and (BKS: Byerly Seismographic Station) from July 1962 until the present. These seismographs are of importance because the local magnitude (M_L) of Northern and Central California earthquakes reported in the Bulletin of the Seismographic Stations (routinely since 1948) is determined from the maximum trace amplitude measured on WA seismographs as defined by Richter (*Bull. Seism. Soc. Am.*, **45**, 1–32, 1935) and using the Nordquist nomograph given by Gutenberg and Richter (*Bull. Seism. Soc. Am.*, **32**, 163–191, 1942).

The photographically recording WA seismographs installed at MHC and BKS were manufactured by Fred C. Henson Co. and Lehner and Griffith Instruments, respectively. The calibration procedure for these WA instruments consists of five steps:

1) Adjust the free period to 0.8 sec, with the damping magnet removed;
2) Determine the tilt sensitivity, with the damping magnet removed, by tilting through a known angle and measuring the resulting deflection of the light spot;
3) Replace the damping magnet and adjust the tilt sensitivity to the same value as measured in step 2 by rotating the period adjustment foot;
4) Adjust the magnetic damping to give an overshoot ratio of approximately 20 to 1 which is equivalent to a damping of about 0.7 critical; and
5) Repeat steps 3 and 4 as needed until both the damped tilt sensitivity and the fraction of critical damping are satisfactory.

The last three steps are necessary because magnetic contamination of the inertial mass can significantly alter the free period of the seismometer in the presence of the damping magnetic field. Setting the tilt sensitivity to the value determined in step 2, when the damping field is present, is equivalent to adjusting the free period to 0.8 sec. In step 4, a 20 to 1 overshoot ratio (equivalent to a damping of about 0.7 critical) is used, in place of the 50 to 1 overshoot ratio required to achieve 0.8 critical damping, in order to expedite adjustment at remote station sites as it can be set approximately without having to develop the photographic seismograms.

The WA calibration parameters obtained using the above calibration prodedure for BKS (May 1989) and MHC (June 1989) are:

Station	Component	T_S (sec)	V_S	h
BKS	SN	.804±.007	2060±36	.656±.003
	WE	.798±.019	2110±95	.713±.007
MHC	SN	.804±.005	2010±26	.700±.032
	EW	.799±.005	2030±44	.710±.034

where: T_S is the free period, V_S is the static magnification and h is the fraction of critical damping.

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BULLETIN ERRATA

1983, Vol 53, No. 2 (page 25)

(1) 29 Sep 10 160212.5 37°26.3' 118°38.5' **4.0** 13 10E
M_L should be **3.6**

1986, Vol 56, No. 2 (page 33)

(1) J11 Dec 31 **12**h05m50.5s 37°25.3' 121°40.3' 5 0.09 8d 3.0(4) 3.5E20(1)
Origin time should be **17**h05m50.5s. Phase readings in PART II are correct.

(2) H8 Dec 31 **19**h33m48.6s 38°49.0' 122°48.8' 5 0.20 8c 3.1(5) 46E22(2)
Origin time should be **18**h33m48.6s. Phase readings in PART II are correct.