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, 1987 to December 31, 1987

Eric R. Collins

Robert A. Uhrhammer

International Seismological Centre

BULLETIN OF THE SEISMOGRAPHIC STATIONS
of the University of California

Volume 57, Nos. 1 and 2
January 1, 1987 to December 31, 1987

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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 repeated in each issue.

Note that the No. 1 and No. 2 issues of Volume 57 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."

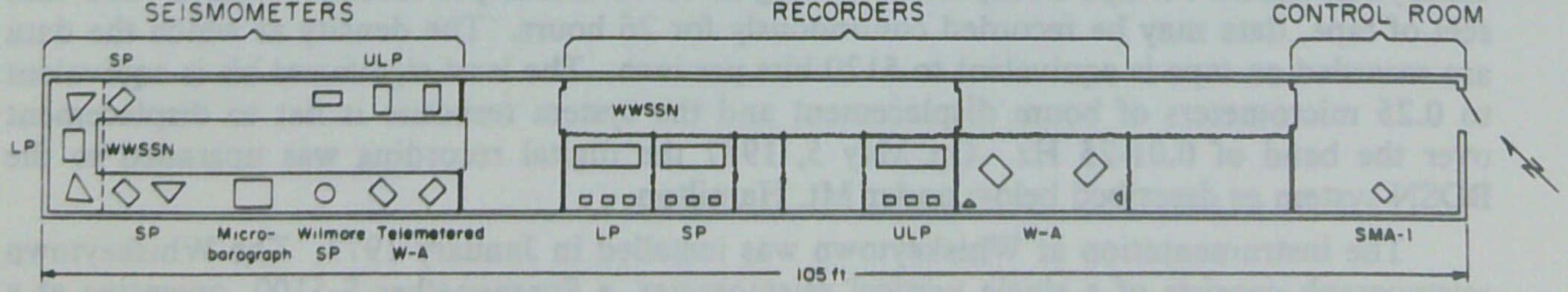
The quotation is from "History of the University of California Seismographic Stations and Related Activities" by Professor George D. Louderback, published in the Bulletin of the Seismological Society of America, Vol. 32, No. 3, pp. 205-229, 1942. In this paper may be found a detailed account of the development 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 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 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 25000. 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.

1987 is the centenary of the University of California Seismographic Stations and a Centennial Anniversary Symposium was held at Berkeley on May 28-30, 1987.

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 (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- (±2 mm) and high- (±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 was installed in January 1973. The Whiskeytown 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- (±2 mm) and high- (±0.01 mm) gain displacement signals and velocity signals (two levels) from WDC are recorded on a Honeywell

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Model 96 tape transport at 15/16 inches per second. The seismometer at WDC is operated in sealed pressure vessel identical 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 records a three-component long-period (LP) channel at one sample per second each component and records, 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, Geophysical Journal, June 1988). On October 27, 1987, the VBB upgrade was installed in the Streckeisen instruments 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 on pages 12-13. 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, 1987

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
Fox Creek	40°31.3'	123°59.5'	113	Quaternary alluvium	FOX	Richard McKenna Ranch, 1986
Whiskeytown	40°34.8'	122°32.4'	300	Pre-Devonian metavolcanic	WDC	National Park Service 1973
Elk River	40°41.7'	124°08.4'	49	Marine siltstone	EKR	Buck Noel 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	Richard E. Randolph Santa Cruz, 1965
Friant	36°59.5'	119°42.5'	119	Alluvium over-lying 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 December 31, 1987

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		
	Displacement Digital				---				x	x	
	Willmore MK II	1.0	0.2	Z	---				x	x	
	14000X torsion	0.8	-	N, E	14,000 max		x		x		
	700X 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
	100X torsion	0.8	-	N, E	100 max	x					
	Press-Ewing	15	30	Z	1,000		x				
CMB	Teledyne 210 & 200	15	-	N, E, Z	Digital Tape					x	
	Teledyne S-13	1.0	-	Z	Digital Tape					x	
ELK	Mark Products L-4C	1.0	-	Z					x		
FHC	Benioff 14 kg	1.0	0.2	Z	50,000			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	0.8	-	S, E	2,000	x					
	Streckeisen	360	-	N, E, Z	Digital Disc		x		x	x	
	Willmore	1.0	-	Z	Digital Disc					x	
MIN	Wood-Anderson	0.8	-	S, E	2,000	x					
	Teledyne S-13	1.0	0.2 Filter	Z	150,000			x	x		
MNA	Geotech SL210 filtered to give short-period response	15	1.0 Filter	Z				x	x		
ORV	Benioff 100 kg	1.0	0.2	Z	220,000			x	x		
	Geotech 7505 & 8700	20	BB	N, E, Z	---				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	1,5000,000		x	x	x		
	Streckeisen	20	-	N, E, Z	—		x		x		
WDC	Sprengnether S-5100	40	-	Z							
	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 10-12. Absolute magnification may be obtained by use of calibration pulses recorded daily from each station.

*** On January 27, 1987 the Benioff 100 kg seismometer replaced the Willmore.

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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	N45W Down S45W	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	N45W Down S45W	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

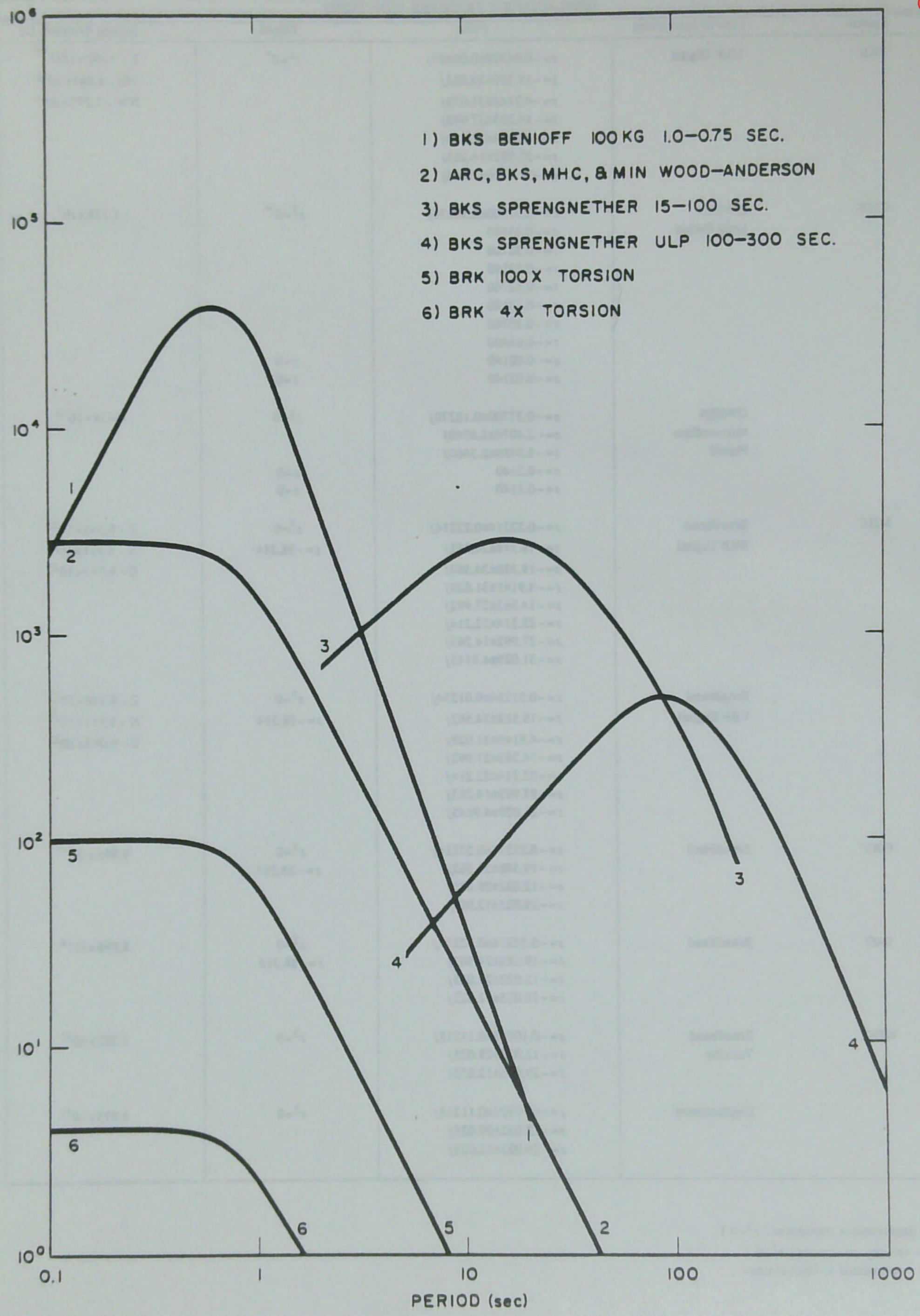
* accelerometer aligned S45W
** accelerometer aligned S45E

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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	$s=-0.37700\pm0.18270j$ $s=-0.23180$ $s=-0.32760$ $s=-0.23180$ $s=-0.32760$ $s=-0.23180$ $s=-0.32760$ $s=-0.65400$ $s=-0.02140$ $s=-0.02140$	$s^3=0$** $s=0$ $s=0$	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 BRB Digital	$s=-0.22214\pm0.22214j$ $s=-19.588\pm24.562j$ $s=-19.588\pm24.562j$ $s=-4.9145\pm31.029j$ $s=-14.263\pm27.992j$ $s=-22.214\pm22.214j$ $s=-27.992\pm14.263j$ $s=-31.029\pm4.9145j$	$s^3=0$ $s=-38.314$	Z - 8.346×10^{23} N - 8.911×10^{23} E - 9.043×10^{23}
	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}

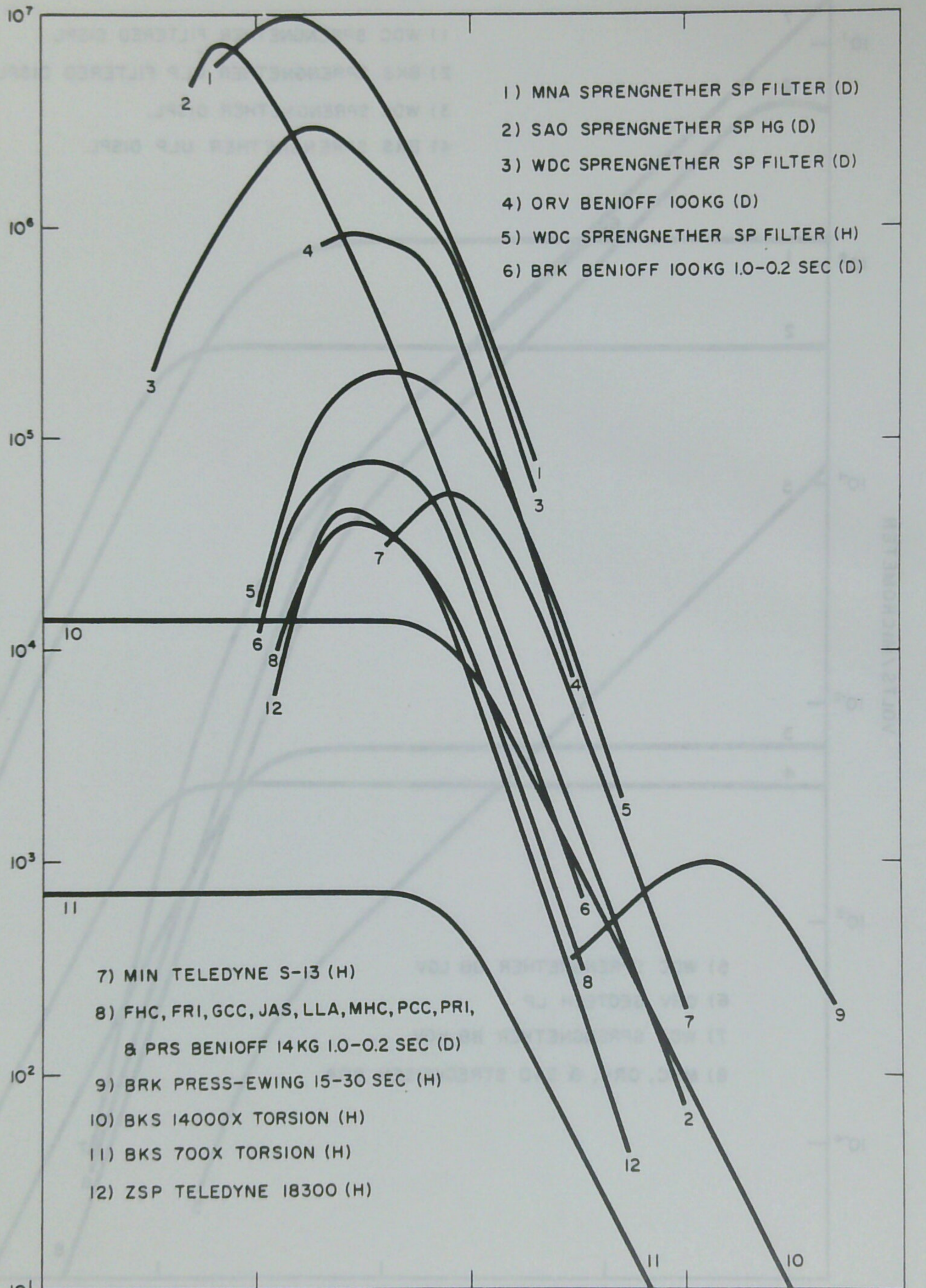
* - displacement transducer ($s^2=0$)
** - velocity transducer ($s^3=0$)
*** - normalized to counts/meter

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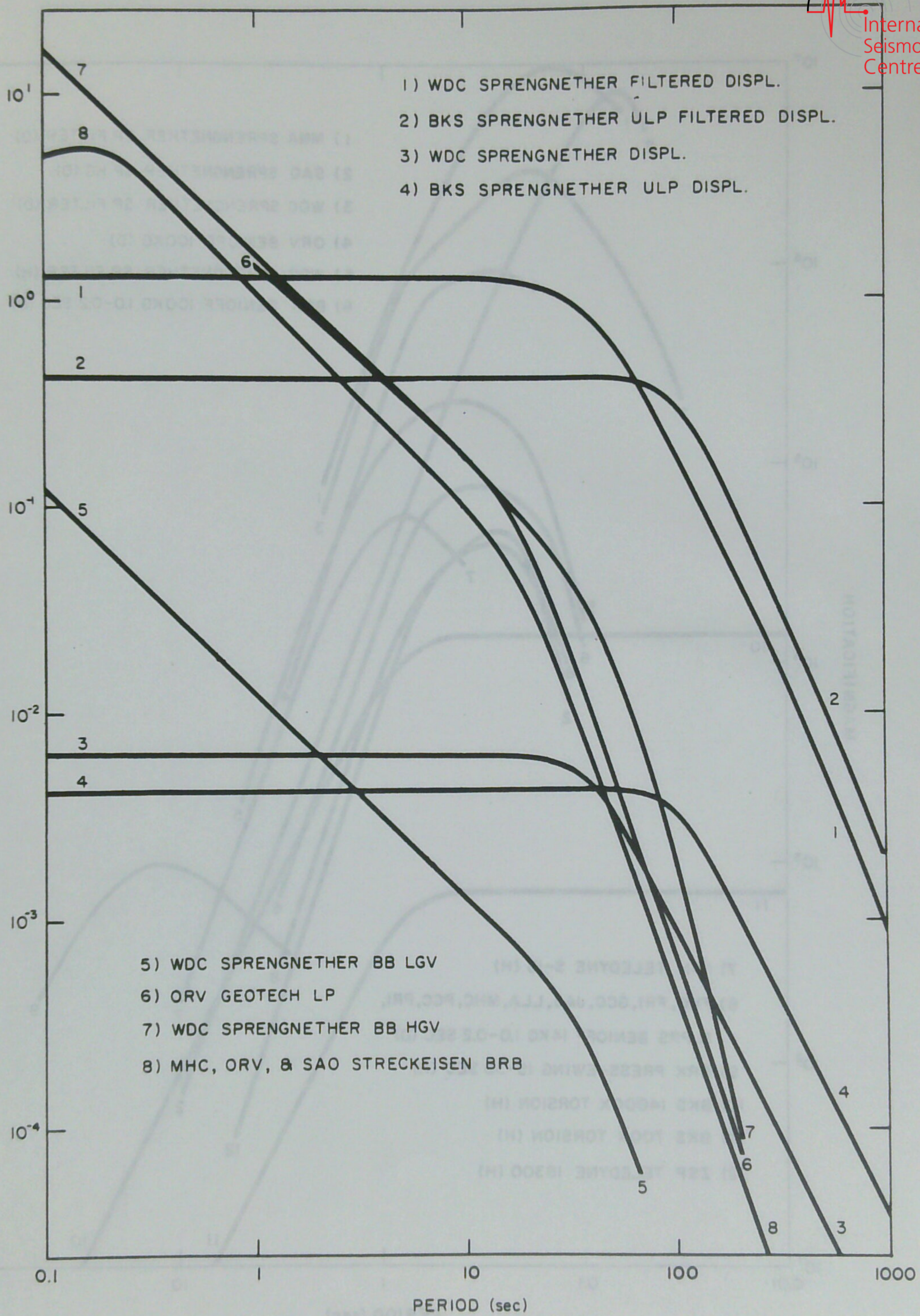
Response curves for photographically recording seismographs. The BKS Benioff and Sprengnether 15-100 second instruments are the WWSSN system.

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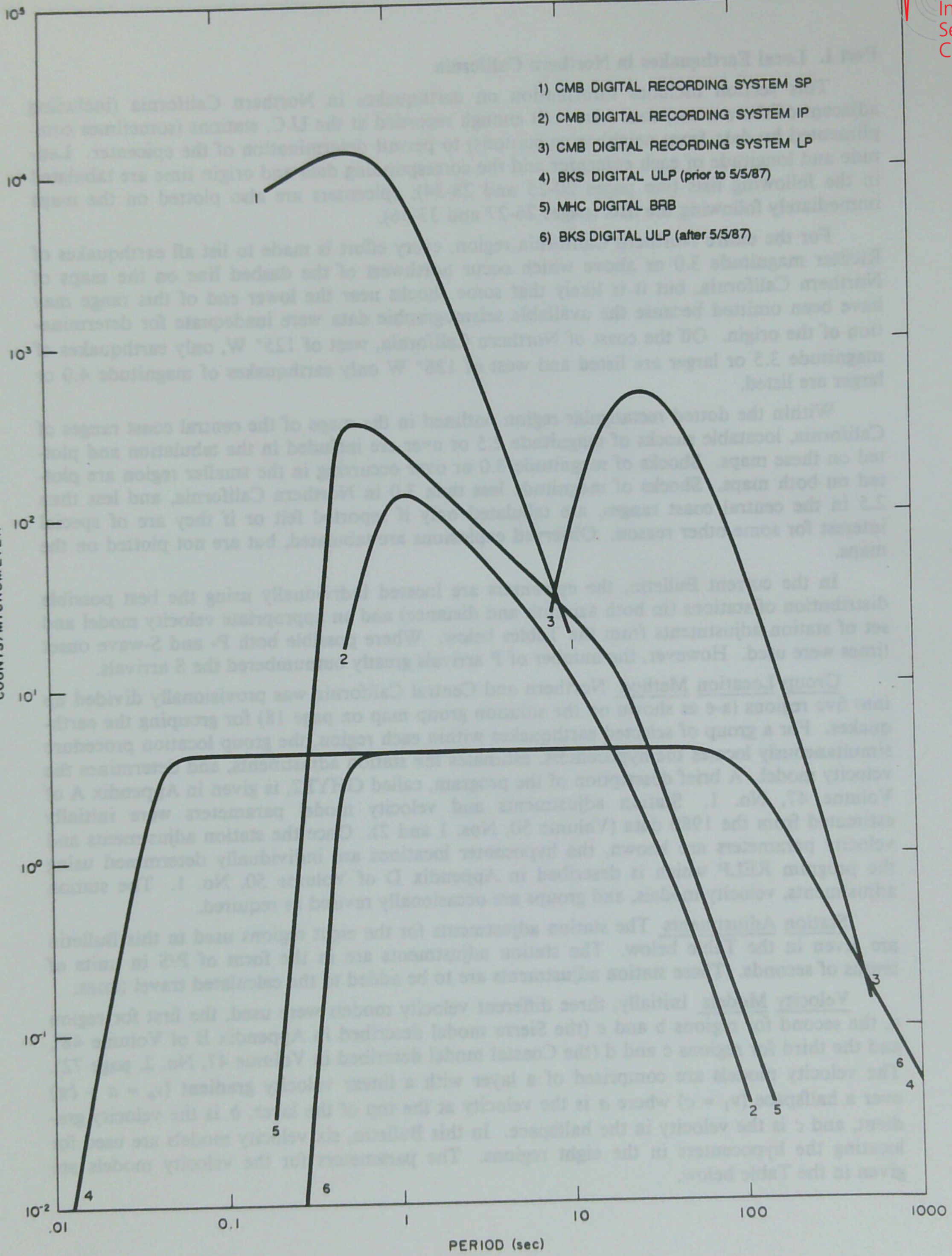
Response curves for Helicorder (HEL) and Develccorder (DEV) channels when viewed at 20X enlargement. The Benioff 14 kg curve (8) represents several different stations and is normalized to 10,000 magnification at 1 second period. (See station instrumentation table for actual magnification at 1 second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

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Response curves for broadband seismographs recorded analog on low-speed (15/16 ips) FM magnetic tape at Berkeley. Displacement sensitivity (magnification) in volts/micrometer is given for playback using a Honeywell 96 tape transport and ±10 volt FS discriminators.

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Response curves for digitally recorded seismographs. The Columbia College (CMB) digital WWSSN station data are recorded on 1600 bpi magnetic tape. The Berkeley (BKS) digital ULP and Mt. Hamilton (MHC) digital BRB station data are recorded on 20 megabyte Bernoulli cartridge disks.

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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 20-25 and 28-34); epicenters are also plotted on the maps immediately following the lists (pages 26-27 and 35-36).

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, and 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. Observed explosions are tabulated, but are not plotted on the maps.

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 was provisionally divided up into five regions (a-e as shown on the solution group map on page 18) for grouping the earthquakes. 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 the Table below. 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, six velocity models are used for locating the hypocenters in the eight regions. The parameters for the velocity models are given in the Table below.

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STATION ADJUSTMENTS								
Station	Region							
	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								0/0
FHC	-1/-7	3/10	11/		1/-1			
FRI				0/-6			-2/	0/-4
GCC			-2/	-4/-5		2/		1/0
JAS1		-12/-3	4/4	2/-3	-1/-9	2/	5/	-2/0
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/

VELOCITY MODELS							
Region	P-wave			S-wave			Layer Thickness (km)
	a (km/sec)	b (1/sec)	c (km/sec)	a (km/sec)	b (1/sec)	c (km/sec)	
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).

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 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, it is indicated by an "R".

SE is the standard error of the observations in seconds.

Region	Number of Earthquakes	Region Name
a	72	Northern coast
b	3	Northern California
c	33	Ukiah-Willits
d	102	Central coast
e	25	Sierra Nevada
h	18	Halls Valley
k	12	Coalinga
o	2	No Adjustments
s	1	Bishop

SLN indicates the number of stations and station adjustments and velocity model used in determining the hypocenter. The number indicates the number of stations and the letter

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(see above Table) 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, BSSA, Vol. 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 felt information.

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 280,000km^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 Gutenburg-Richter relation by the maximum likelihood method and the result is

$$\log N = 4.23 - .815\, M_L$$

with a corresponding variance of

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

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

The annual rate of seismicity ($r = 10^{\log N}$) 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:

Northern and Central California						
$M_L \geq$	r (eq/yr)	Percent Probability in one				
		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 1987, 66 earthquake sequences ($M_L \geq 3.0$) occurred in Northern and Central California. Earthquakes occurring in the vicinity of the Geysers geothermal field (south of Clear Lake, H8 on maps) were excluded from the count on the assumption that they may be

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induced by geothermal energy production activities. Thus the observed rate of seismicity in 1987 is not significantly different than the average annual rate of seismicity during the past 35 years.

Central Coast Ranges

The Bulletin of the Seismographic Stations lists 4267 earthquakes $M_L \geq 2.5$, which occurred in the 40,000km^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 Gutenburg-Richter relation by the maximum likelihood method and the result is

$$\log N = 3.78 - 0.793 M_L$$

with a corresponding variance of

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

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

The annual rate of seismicity ($r = 10^{\log N}$) 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:

Central Coast Ranges						
$M_L \geq$	r (eq/yr)	Percent Probability in one				
		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 1987, 67 earthquake sequences ($M_L \geq 2.5$) occurred in the central coast ranges. Thus the observed rate of seismicity in 1987 is not significantly different than the average annual rate of seismicity during the past 35 years.

Significant Earthquake Sequences

During 1987, two earthquakes sequences ($M_L \geq 5$) occurred in Northern California and vicinity: a M_L 5.3 sequence north of Coalinga (M13 on map); and a M_L 5.6 sequence in the Cape Mendocino area (E5 on map). In addition, a M_L 3.9 earthquake swarm occurred near Paskenta (62 km SW of Redding; H5 on map).

The Coalinga sequence began with a M_L 2.9 foreshock at 05:54 UTC on February 14 followed 1.5 hours later by the mainshock (M_L 5.3; MM V) at 07:26 UTC. Only one aftershock ($M_L \geq 2.5$) was identified, it occurred more than one month after the mainshock (on March 18) and registered M_L 2.8. This is rather unusual as virtually all $M_L \geq 5$ earthquake sequences occurring in the Central Coast Ranges have numerous aftershocks ($M_L \geq 2.5$).

The Cape Mendocino sequence started with a M_L 3.8 foreshock at 01:18 UTC on July 31 followed by the mainshock (M_L 5.6) at 23:56 UTC on the same day. Fourty aftershocks occurred in the following two months. The three largest aftershocks registered M_L 3.8. Sequences of this type are not unusual in the Cape Mendocino area.

The Paskenta swarm began on November 22 with the occurrence of a M_L 2.0 earthquake and more than 28 earthquakes with $M_L \geq 1.1$ occurred within the next four weeks.

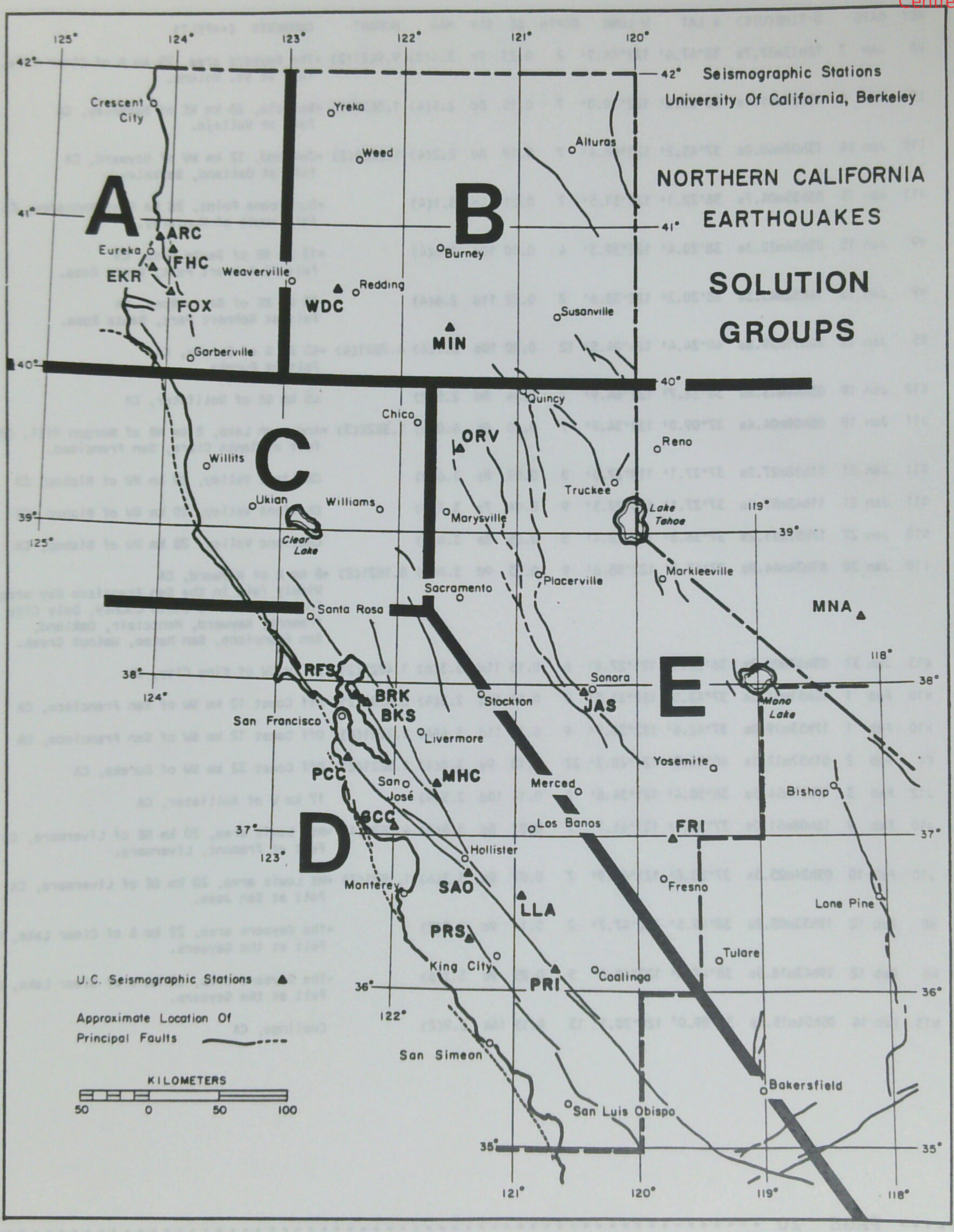
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One third of the earthquakes occurred during December 1 through 3 including the four largest earthquakes (M_L 3.4, 3.7, 3.9, and 3.4). This swarm is of particular interest because it occurred along the coast range thrust in Northern California in an area where few earthquakes (less than 1 per year $M_L \geq 3$ in a 1000 sq km area) have been observed historically.

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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KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (▪=FELT)
H8	Jan 7	12h13m37.7s	38°47.4'	122°46.9'	2	0.23	9c	3.4(8)	9.9E21(2)	▪The Geysers area, 25 km S of Clear Lake, CA Felt at St. Helena.
I9	Jan 8	13h27m31.1s	38°05.6'	122°10.0'	7	0.15	8d	2.4(4)	1.8E20(2)	▪Benicia, 26 km NE of Berkeley, CA Felt at Vallejo.
I10	Jan 14	13h07m40.0s	37°45.2'	122°08.4'	7	0.19	8d	2.2(4)	1.3E20(2)	▪Oakland, 12 km NW of Hayward, CA Felt at Oakland, Berkeley.
J13	Jan 15	03h35m04.7s	36°22.1'	121°51.5'	7	0.21	11d	3.1(4)		▪Hurricane Point, 28 km S of Monterey, CA Felt south of Monterey.
H9	Jan 15	03h36m12.3s	38°20.4'	122°39.3'	4	0.10	10d	2.6(4)		▪13 km SE of Santa Rosa, CA Felt at Rohnert Park, Santa Rosa.
H9	Jan 15	14h52m43.3s	38°20.2'	122°38.6'	2	0.22	11d	2.6(4)		▪13 km SE of Santa Rosa, CA Felt at Rohnert Park, Santa Rosa.
E5	Jan 16	20h19m59.8s	40°24.4'	124°04.5'	12	0.20	10a	3.7(6)	4.7E21(4)	▪42 km S of Eureka, CA Felt at Eureka.
K12	Jan 19	03h49m13.6s	36°32.7'	121°04.9'	7	0.34	8d	2.5(2)		45 km SE of Hollister, CA
J11	Jan 19	08h09m04.4s	37°09.0'	121°34.9'	7	0.10	8h	4.0(5)	1.3E22(3)	▪Anderson Lake, 8 km NE of Morgan Hill, CA Felt at Santa Clara, San Francisco.
Q11	Jan 21	11h18m27.3s	37°27.1'	118°22.5'	8	0.03	8s	3.6(2)		Chalfant Valley, 10 km NW of Bishop, CA
Q11	Jan 21	11h42m57.0s	37°27.1'	118°22.5'	9	0.04	7s	3.7(2)		Chalfant Valley, 10 km NW of Bishop, CA
Q10	Jan 27	17h57m11.2s	37°36.8'	118°28.4'	8	0.05	8s	3.8(2)		Chalfant Valley, 28 km NW of Bishop, CA
I10	Jan 30	01h34m44.9s	37°43.7'	122°08.6'	9	0.25	9d	3.6(8)	8.1E21(2)	▪8 km N of Hayward, CA Widely felt in the San Francisco Bay area; including Contra Costa County, Daly City Fremont, Hayward, Montclair, Oakland, San Francisco, San Mateo, Walnut Creek.
K13	Jan 31	03h03m00.8s	36°20.8'	121°27.8'	6	0.16	11d	3.3(6)	1.4E21(2)	34 km NW of King City, CA
H10	Feb 1	14h51m51.3s	37°43.0'	122°31.5'	9	0.13	10d	2.8(4)	3.0E20(2)	Off Coast 12 km SW of San Francisco, CA
H10	Feb 1	17h53m19.0s	37°42.6'	122°30.9'	9	0.17	11d	3.4(4)	1.1E21(4)	Off Coast 12 km SW of San Francisco, CA
E4	Feb 2	01h57m12.5s	40°36.2'	124°28.2'	22	0.18	9a	3.8(4)	1.8E21(2)	Off Coast 32 km SW of Eureka, CA
J12	Feb 3	17h21m54.5s	36°50.4'	121°34.8'	2	0.14	10d	2.5(4)		17 km W of Hollister, CA
J10	Feb 9	16h08m51.0s	37°31.1'	121°41.7'	7	0.07	8d	3.5(6)	4.5E21(4)	▪Mt. Lewis area, 20 km SE of Livermore, CA Felt at Fremont, Livermore.
J10	Feb 10	05h24m23.5s	37°30.8'	121°41.9'	7	0.07	9d	3.3(6)	1.1E21(2)	▪Mt Lewis area, 20 km SE of Livermore, CA Felt at San Jose.
H8	Feb 12	19h33m03.2s	38°49.5'	122°47.7'	2	0.14	9c	2.8(2)		▪The Geysers area, 22 km S of Clear Lake, CA Felt at the Geysers.
H8	Feb 12	19h43m18.5s	38°47.8'	122°48.3'	5	0.25	9c	3.1(6)		▪The Geysers area, 25 km S of Clear Lake, CA Felt at the Geysers.
M13	Feb 14	05h54m15.0s	36°09.0'	120°20.1'	13	0.13	16k	2.9(2)		Coalinga, CA

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KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (*=FELT)
M13	Feb 14	07h26m51.7s	36°08.9'	120°20.1'	13	0.17	15k	5.3(10)	3.2E23(4)	*Coalinga, CA Slight damage at Coalinga. Felt (V) at Firebaugh and Helm. Felt (IV) at Auberry, Bass Lake, Big Creek, Bradley, Cantua Creek, Clovis, Dos Palos, Ducar, Farmersville, Kingsburg, Lemoore, Los Banos, Mariposa, Planada, Riverbank, Tollhouse, Tulare and Twain Harte. Felt in much of central California and as far north as Sacramento. (NEIC)
J11	Feb 14	23h25m45.5s	37°18.4'	121°43.0'	4	0.15	7h	2.5(4)	2.5E19(2)	Halls Valley, 16 km E of San Jose, CA
J11	Feb 14	23h27m49.8s	37°18.2'	121°43.4'	4	0.13	7h	2.5(4)	4.2E19(2)	Halls Valley, 16 km E of San Jose, CA
J11	Feb 21	06h06m36.0s	37°14.2'	121°39.0'	3	0.21	8h	2.6(4)	1.2E20(2)	Anderson Lake area, 23 km SE of San Jose, CA
K12	Feb 21	13h02m19.6s	36°35.4'	121°13.7'	6	0.20	12d	3.3(4)	3.5E21(2)	Bear Valley, 35 km SE of Hollister, CA
P10	Feb 26	12h41m09.6s	37°32.7'	118°53.4'	7	0.24	8e	3.3(4)		Mammoth Lakes area, CA
P10	Feb 26	13h02m00.2s	37°32.8'	118°53.4'	8	0.24	8e	3.7(4)		Mammoth Lakes area, CA
G4	Feb 27	02h46m04.0s	40°53.3'	123°20.8'	18	0.27	10a	3.1(4)	2.8E20(1)	63 km E of Eureka, CA
H8	Feb 27	12h29m55.1s	38°48.9'	122°47.7'	5	0.22	9c	2.8(6)	2.2E21(2)	*The Geysers area, 20 km S of Clear Lake, CA Felt at Middletown.
P10	Feb 27	16h24m57.7s	37°32.5'	118°53.2'	8	0.24	9e	4.0(6)	9.0E21(2)	Mammoth Lakes area, CA
J11	Feb 28	13h42m30.2s	37°27.3'	121°41.9'	6	0.09	9d	2.8(4)	1.0E20(2)	Mt. Lewis area, 22 km NE of San Jose, CA
J11	Feb 28	16h24m28.3s	37°27.3'	121°42.0'	6	0.14	9d	3.9(6)	1.2E23(4)	*Mt. Lewis area, 22 km NE of San Jose, CA Felt at Fremont, Milpitas and San Jose.
J11	Feb 28	16h34m18.4s	37°27.4'	121°41.8'	6	0.14	9d	3.1(4)	6.8E20(4)	Mt. Lewis area, 22 km NE of San Jose, CA
D4	Mar 1	01h38m33.6s	40°55.0'	124°58.9'	5R	0.36	7a	3.2(4)		Off Coast 70 km WNW of Eureka, CA
P11	Mar 1	09h11m50.3s	37°28.9'	118°51.2'	6	0.10	7e	3.5(4)		Mammoth Lakes area, CA
D5	Mar 2	04h27m16.8s	40°18.6'	124°34.6'	21	0.21	9a	3.1(4)		Off Coast 63 km SW of Eureka, CA
M13	Mar 4	09h55m29.1s	36°08.2'	120°13.2'	5	0.31	16k	3.3(6)		13 km E of Coalinga, CA
K12	Mar 4	13h29m15.1s	36°53.0'	121°20.1'	4	0.30	12d	2.6(4)		7 km NE of Hollister, CA
K12	Mar 5	06h55m25.2s	36°34.7'	121°11.9'	4	0.14	9d	2.7(4)		Bear Valley, 35 km SE of Hollister, CA
K12	Mar 11	07h49m16.7s	36°35.6'	121°13.7'	5	0.17	12d	2.9(4)		Bear Valley, 32 km SE of Hollister, CA
K12	Mar 11	10h58m22.8s	36°35.5'	121°13.4'	5	0.15	11d	2.6(4)		Bear Valley, 33 km SE of Hollister, CA
M13	Mar 12	05h57m07.0s	36°02.9'	120°04.6'	8	0.28	10k	2.6 *		27 km SE of Coalinga, CA
H8	Mar 13	15h08m01.2s	38°47.8'	122°44.6'	2R	0.29	6c	3.0(6)	4.2E21(2)	The Geysers area, 22 km S of Clear Lake, CA
M13	Mar 18	16h59m48.3s	36°11.0'	120°20.9'	11	0.20	13k	2.8(2)		5 km N of Coalinga, CA
K12	Mar 18	18h17m56.8s	36°34.8'	121°12.7'	5	0.18	10d	1.9(2)		*Bear Valley, 35 km SE of Hollister, CA Reported felt at Salinas, Santa Cruz and parts of Monterey County.
H8	Mar 20	08h36m12.7s	38°49.9'	122°49.4'	3	0.21	11c	3.0(2)		The Geysers area, 21 km S of Clear Lake, CA
O9	Mar 20	15h45m11.0s	38°25.1'	119°27.0'	10	0.21	8e	3.7(6)		26 km NW of Bridgeport, CA
G4	Mar 23	11h01m14.4s	40°52.1'	123°19.8'	12	0.32	7a	3.2(4)		70 km E of Eureka, CA
M13	Mar 23	15h22m45.1s	36°02.2'	120°02.4'	6	0.30	16k	3.7(3)		30 km SE of Coalinga, CA

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KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
J10	Mar 28	21h12m17.9s	37°32.5'	121°38.5'	4	0.09	8d	2.8(3)	4.0E20(1)	Mt. Lewis area, 20 km SE of Livermore, CA
D5	Mar 31	09h58m10.3s	40°27.6'	124°43.0'	17	0.30	9a	3.6(4)	2.9E20(2)	Off Coast 60 km SW of Eureka, CA
I10	Apr 4	03h11m34.3s	37°42.8'	122°04.9'	4	0.24	11d	2.5(4)	3.7E20(2)	•6 km N of Hayward, CA Felt at San Leandro.
K12	Apr 6	04h11m28.3s	36°40.5'	121°21.6'	6	0.22	8d	2.6(4)		20 km S of Hollister, CA
M7	Apr 6	04h46m11.9s	39°11.3'	120°24.4'	14	0.22	8e	3.1(6)		23 km SW of Truckee, CA
G4	Apr 9	20h34m09.1s	40°57.1'	123°29.0'	22	0.12	8a	4.1(6)	6.6E22(3)	•60 km NE of Eureka, CA (NEIC) Felt (IV) at Big Bar, Burnt Ranch, Kneeland and Loleta. Felt (III) at Bayside, Eureka, French Gulch, Helena, Korbel, Orleans Platina, Salyer and Willow Creek. Also felt at Arcata, Dunsmire, Mad River and Myers Flat
J11	Apr 10	04h51m38.6s	37°20.4'	121°45.1'	5	0.36	8h	2.8(1)	1.4E19(1)	11 km E of San Jose, CA
J10	Apr 10	04h51m46.4s	37°33.8'	121°40.6'	8	0.09	6d	3.4(5)	4.5E21(3)	•Mt. Lewis area, 15 km SE of Livermore, CA (NEIC) Felt (III) at Fremont and Pleasanton.
J11	Apr 10	05h00m45.8s	37°20.7'	121°44.9'	4	0.21	8h	2.7(1)	5.7E19(1)	Halls Valley, 11 km E of San Jose, CA
K12	Apr 13	09h47m00.9s	36°51.2'	121°26.1'	3	0.25	11d	2.6(4)		•3 km NW Hollister, CA (NEIC) Felt at Hollister.
J11	Apr 13	11h23m47.0s	37°16.0'	121°39.6'	5	0.21	8d	3.3(6)	6.1E20(2)	•Halls Valley, 20 km SE of San Jose, CA (NEIC) Felt at San Jose and Sunnyvale.
L14	Apr 14	06h42m23.8s	35°39.5'	120°57.1'	6	0.18	12d	3.1(2)		•24 km W of Paso Robles, CA Felt at Adelaida.
E5	Apr 16	04h52m32.8s	40°26.2'	124°24.8'	22	0.29	10a	4.2(8)	1.9E22(4)	•Cape Mendocino, 44 km SW of Eureka, CA (NEIC) Felt (III) at Rio Dell. Also felt at Arcata and Trinidad.
D5	Apr 16	04h57m29.7s	40°25.6'	124°32.2'	22	0.19	9a	3.2(2)		Off Coast 51 km SW of Eureka, CA
K12	Apr 18	14h14m11.3s	36°35.5'	121°06.9'	10	0.10	11d	2.8(2)		Bear Valley area, 38 km SE of Hollister, CA
L13	Apr 18	16h31m57.0s	36°14.2'	120°51.7'	8	0.22	12d	2.8(2)		24 km E of King City, CA
L13	Apr 18	17h05m03.9s	36°14.6'	120°51.1'	9	0.32	12d	2.8(2)		25 km E of King City, CA
L13	Apr 18	18h02m07.4s	36°14.2'	120°51.7'	10	0.21	11d	2.9(2)		24 km E of King City, CA
J11	Apr 19	18h02m45.1s	37°07.1'	121°33.3'	5	0.12	8h	2.6(4)	2.9E20(2)	12 km N of Gilroy, CA
J11	Apr 21	15h47m15.5s	37°26.5'	121°48.0'	7	0.19	14d	3.2(6)	2.8E21(4)	•Calaveras Reservoir, 14 km NE of San Jose, CA Felt at Hayward, San Jose.
J11	Apr 23	12h01m27.6s	37°19.4'	121°42.9'	6	0.07	8h	3.1(4)	3.1E20(3)	•Halls Valley, 15 km E of San Jose, CA Felt at Morgan Hill.
H8	Apr 26	09h54m58.7s	38°59.2'	122°51.1'	2	0.23	7c	2.2(2)		•Kelseyville, 5 km S of Clear Lake, CA Felt at Lakeport.
K12	Apr 26	10h27m35.0s	36°47.5'	121°23.2'	13	0.25	11d	2.5(4)		7 km S of Hollister, CA
I10	Apr 27	20h02m49.8s	37°55.2'	122°03.2'	5R	0.11	8d	1.4(2)		•Walnut Creek, 19 km E of Berkeley, CA Felt at Walnut Creek.
I10	Apr 27	20h59m56.5s	37°54.5'	122°02.2'	6	0.24	6d	1.0(2)		•Walnut Creek, 18 km E of Berkeley, CA Felt at Walnut Creek.
I10	Apr 28	05h34m57.5s	37°54.3'	122°02.5'	1	0.24	10d	2.2(4)	3.4E20(2)	•Walnut Creek, 20 km E of Berkeley, CA Felt at Walnut Creek, Pleasant Hill.

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KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
K12	Apr 30	19h24m22.2s	36°50.4'	121°17.0'	7	0.23	14d	4.1(6)	2.1E22(4)	•10 km E of Hollister, CA (NEIC) Felt (V) at Hollister. Also felt at King City, Paicines and San Jose.
K12	Apr 30	22h51m13.0s	36°50.0'	121°16.8'	8	0.28	13d	2.8(4)		•10 km E of Hollister, CA Felt at Hollister.
G6	May 1	22h22m34.8s	39°48.8'	123°10.2'	7	0.30	11o	3.8(8)	2.0E22(4)	•Near Covelo, 50 km NE of Willits, CA (NEIC) Felt (IV) at Covelo and Willits. Felt (III) at Branscomb.
O10	May 7	03h14m54.4s	37°37.5'	119°00.2'	4	0.14	9e	4.2(3)		Mammoth Lakes area, CA
E5	May 7	10h26m43.5s	40°19.4'	124°16.8'	4	0.15	7a	3.7(6)	2.5E21(2)	52 km SW of Eureka, CA
H8	May 7	17h25m27.9s	38°49.9'	122°47.6'	4	0.15	10c	3.5(3)	2.1E21(2)	The Geysers area, 20 km S of Clear Lake, CA
H8	May 8	14h28m16.5s	38°51.1'	122°46.7'	2	0.14	10c	3.0(2)		The Geysers area, 20 km S of Clear Lake, CA
I10	May 11	06h45m47.5s	37°48.2'	122°10.5'	4	0.16	11d	4.0(3)	4.1E21(3)	•Oakland, CA (NEIC) Felt (V) at Canyon, Oakland and San Pablo. Felt (IV) at Alameda, Berkeley, Concord, El Sobrante, Lafayette, Moraga, Port Costa, Richmond, Rodeo and San Leandro. Also felt at El Cerrito and San Francisco.
I10	May 11	08h42m58.1s	37°48.6'	122°11.2'	2	0.17	10d	2.6(3)	3.0E20(2)	•Oakland, CA Felt at Kensington and Piedmont.
I11	May 12	02h29m14.3s	37°04.3'	122°14.3'	10	0.13	9d	2.6(2)		Near Coast 22 km NW of Santa Cruz, CA
J11	May 14	22h48m44.9s	37°26.6'	121°48.3'	6	0.25	12d	2.5(5)		Calaveras Reservoir, 15 km NE of San Jose, CA
I10	May 26	07h01m12.2s	37°45.3'	122°07.9'	4	0.17	11d	3.4(5)	7.6E21(3)	•San Leandro, 17 km SE of Berkeley, CA (NEIC) Felt (IV) at Castro Valley, Oakland, Orinda, Rheem Valley and San Leandro. Felt (III) at Berkeley, Hayward, Moraga and Pleasanton.
I10	May 26	07h59m40.4s	37°45.1'	122°08.0'	3	0.16	11d	3.0(3)	1.8E21(3)	•San Leandro, 17 km SE of Berkeley, CA Felt at Berkeley, Hayward and San Leandro.
I10	May 26	08h20m07.2s	37°45.6'	122°08.1'	4	0.10	11d	2.1(2)	8.2E19(2)	•San Leandro, 16 km SE of Berkeley, CA Felt at San Leandro.
I10	May 26	09h49m16.2s	37°45.3'	122°08.2'	4	0.12	10d	2.0(2)	6.7E19(2)	•San Leandro, 16 km SE of Berkeley, CA Felt at San Leandro.
I10	May 26	20h29m50.9s	37°45.3'	122°07.7'	4	0.17	11d	2.3(2)	1.3E20(2)	•San Leandro, 17 km SE of Berkeley, CA Felt at San Leandro.
H8	May 28	08h37m58.8s	38°47.3'	122°48.4'	4	0.16	8c	3.3(2)	1.3E21(2)	The Geysers area, 25 km S of Clear Lake, CA
I10	May 28	14h12m21.4s	37°44.7'	122°08.0'	2	0.18	11d	2.3(2)	2.0E20(2)	•San Leandro, 17 km SE of Berkeley, CA Felt at Oakland and San Leandro.
H8	May 30	00h54m40.4s	38°51.1'	122°46.8'	1	0.22	11c	3.3(2)	4.2E20(1)	The Geysers area, 20 km S of Clear Lake, CA
I10	May 31	03h34m50.2s	37°44.1'	122°07.4'	3	0.25	11d	3.2(2)	2.5E21(2)	•San Leandro, 19 km SE of Berkeley, CA (NEIC) Broken window reported at Montclair. Felt (III) at Hayward and San Leandro. Also felt at Alameda and Castro Valley.
I10	May 31	05h16m24.5s	37°44.7'	122°08.2'	3	0.06	10d	2.4(2)	3.8E20(2)	•San Leandro, 17 km SE of Berkeley, CA Felt at San Leandro.
I10	Jun 2	19h20m03.7s	37°45.3'	122°08.3'	3R	0.21	11d	2.1(3)	1.3E20(2)	•San Leandro, 16 km SE of Berkeley, CA Felt at San Leandro.
M13	Jun 2	23h53m42.2s	36°18.7'	120°26.7'	6	0.29	17k	3.0(2)		20 km NW of Coalinga, CA

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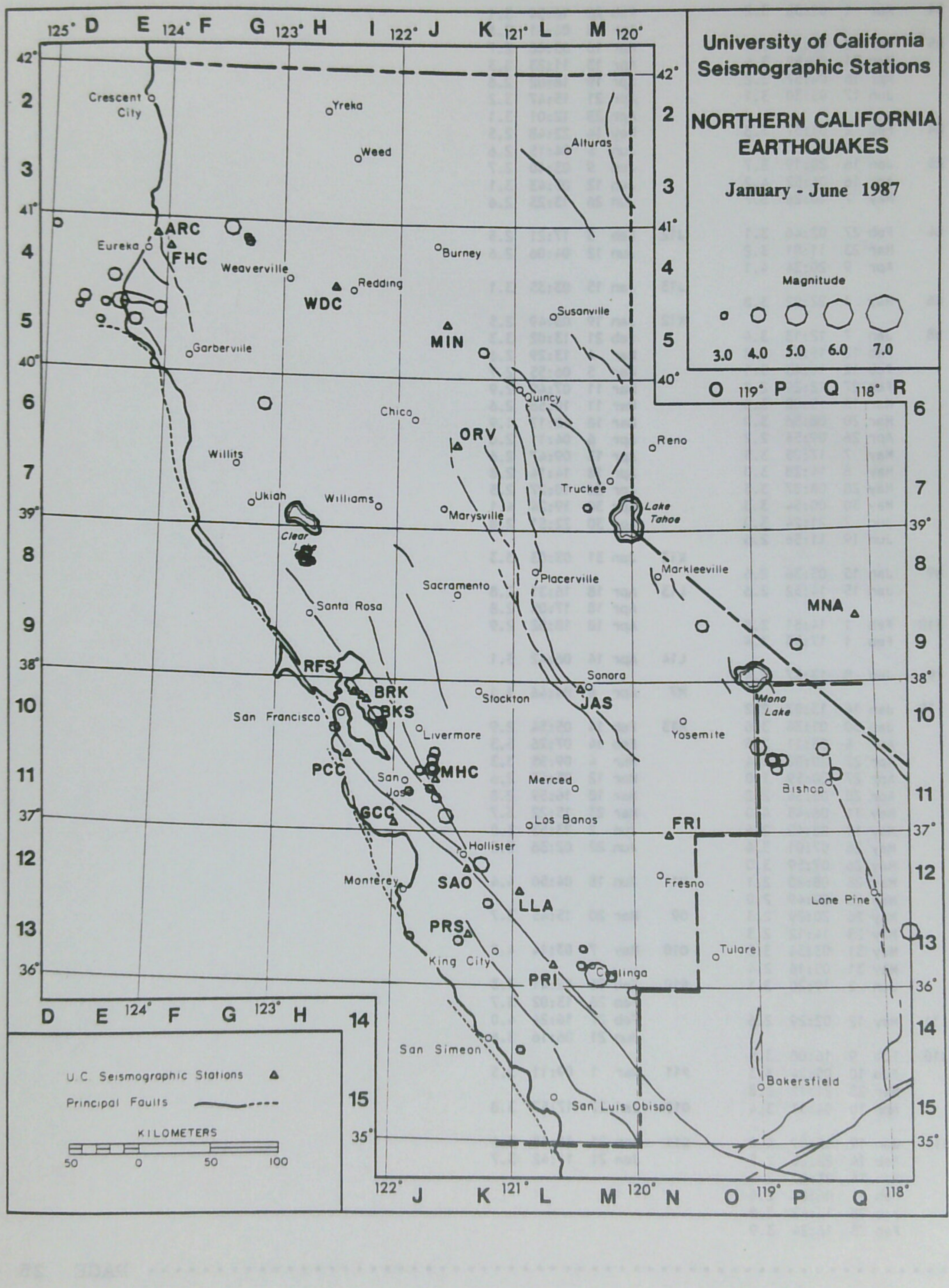
KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (*=FELT)
J11	Jun 5	04h15m14.8s	37°15.3'	121°40.2'	5	0.13	7h	2.6(3)	2.1E20(1)	San Felipe Valley, 20 km SE of San Jose, CA
H8	Jun 7	21h24m16.9s	38°49.4'	122°50.7'	2R	0.28	11c	3.0(5)	5.9E21(2)	*The Geysers area, 23 km S of Clear Lake, CA Felt (IV) at Cobb and Middletown.
J11	Jun 9	03h40m24.9s	37°15.6'	121°40.5'	5	0.16	7h	2.7(3)	8.6E19(1)	Halls Valley, 20 km SE of San Jose, CA
J12	Jun 12	04h06m11.6s	36°50.3'	121°35.8'	3	0.27	14d	2.6(3)		18 km W of Hollister, CA
J11	Jun 12	05h43m29.2s	37°18.3'	121°53.2'	10	0.22	12d	3.1(3)	1.4E21(3)	*San Jose, CA Felt (IV) at Campbell and New Almaden; (III) at Redwood Estates and Santa Clara. Also felt at Los Gatos and San Jose.
D5	Jun 17	03h30m36.6s	40°24.4'	124°45.5'	21	0.34	8a	3.1(4)		Off Coast 66 km SW of Eureka, CA
N1	Jun 18	04h50m07.3s	42°04.3'	119°50.5'	15	0.28	8b	4.4(5)		*85 km NE of Alturas, CA (NEIC) Felt (IV) at Fort Bidwell, California and Adel, Oregon. Also felt at Lakeview, Oregon; Alturas and South Lake Tahoe, California.
H8	Jun 19	11h56m18.4s	38°49.6'	122°50.8'	5	0.17	11c	2.6(2)		The Geysers area, 23 km S of Clear Lake, CA
P10	Jun 21	06h16m27.2s	37°32.4'	118°48.3'	2	0.13	7e	3.6(3)		Mammoth Lakes area, CA
M13	Jun 22	02h36m48.0s	36°12.2'	120°27.9'	2	0.30	15k	3.2(1)		12 km NW of Coalinga, CA
J11	Jun 26	13h23m07.7s	37°09.1'	121°35.2'	3	0.09	7h	2.6(2)		*Anderson Lake, 16 km N of Gilroy, CA Felt at Gilroy.

MAP KEY INDEX ... EARTHQUAKES IN NORTHERN CALIFORNIA ... 1987

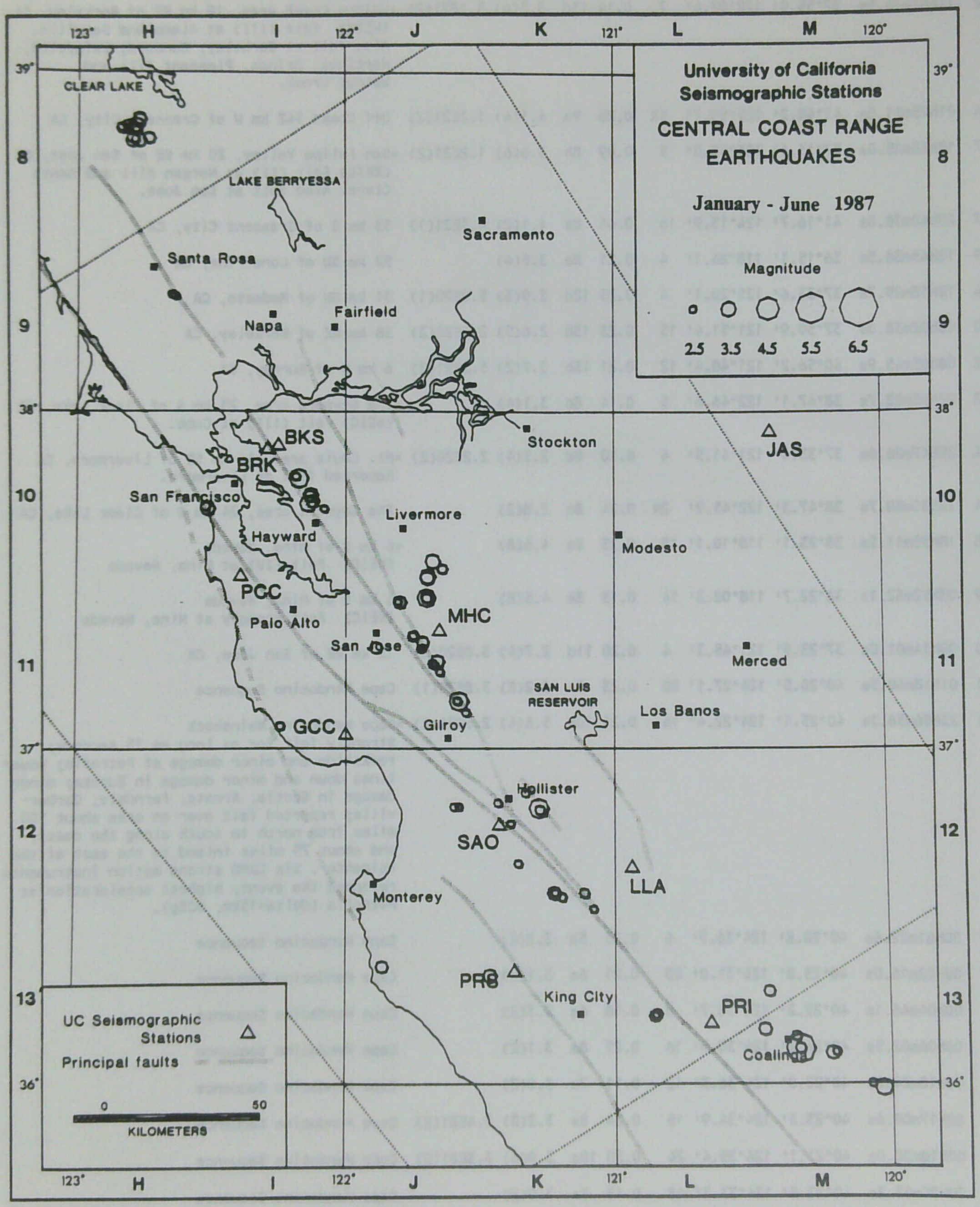
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KEY	DATE	TIME	MAG
D4	Mar 1	01:38	3.2
D5	Mar 2	04:27	3.1
	Mar 31	09:58	3.6
	Apr 16	04:57	3.2
	Jun 17	03:30	3.1
E4	Feb 2	01:57	3.8
E5	Jan 16	20:19	3.7
	Apr 16	04:52	4.2
	May 7	10:26	3.7
G4	Feb 27	02:46	3.1
	Mar 23	11:01	3.2
	Apr 9	20:34	4.1
G6	May 1	22:22	3.8
H8	Jan 7	12:13	3.4
	Feb 12	19:33	2.8
	Feb 12	19:43	3.1
	Feb 27	12:29	2.8
	Mar 13	15:08	3.0
	Mar 20	08:36	3.0
	Apr 26	09:54	2.2
	May 7	17:25	3.5
	May 8	14:28	3.0
	May 28	08:37	3.3
	May 30	00:54	3.3
	Jun 7	21:24	3.0
	Jun 19	11:56	2.6
H9	Jan 15	03:36	2.6
	Jan 15	14:52	2.6
H10	Feb 1	14:51	2.8
	Feb 1	17:53	3.4
I9	Jan 8	13:27	2.4
I10	Jan 14	13:07	2.2
	Jan 30	01:34	3.6
	Apr 4	03:11	2.5
	Apr 27	20:02	1.4
	Apr 27	20:59	1.0
	Apr 28	05:34	2.2
	May 11	06:45	4.0
	May 11	08:42	2.6
	May 26	07:01	3.4
	May 26	07:59	3.0
	May 26	08:20	2.1
	May 26	09:49	2.0
	May 26	20:29	2.3
	May 28	14:12	2.3
	May 31	03:34	3.2
	May 31	05:16	2.4
	Jun 2	19:20	2.1
I11	May 12	02:29	2.6
J10	Feb 9	16:08	3.5
	Feb 10	05:24	3.3
	Mar 28	21:12	2.8
	Apr 10	04:51	3.4
J11	Jan 19	08:09	4.0
	Feb 14	23:25	2.5
	Feb 14	23:27	2.5
	Feb 21	06:06	2.6
	Feb 28	13:42	2.8
	Feb 28	16:24	3.9
	Feb 28	16:34	3.1
	Apr 10	04:51	2.8
	Apr 10	05:00	2.7
	Apr 13	11:23	3.3
	Apr 19	18:02	2.6
	Apr 21	15:47	3.2
	Apr 23	12:01	3.1
	May 14	22:48	2.5
	Jun 5	04:15	2.6
	Jun 9	03:40	2.7
	Jun 12	05:43	3.1
	Jun 26	13:23	2.6
J12	Feb 3	17:21	2.5
	Jun 12	04:06	2.6
J13	Jan 15	03:35	3.1
K12	Jan 19	03:49	2.5
	Feb 21	13:02	3.3
	Mar 4	13:29	2.6
	Mar 5	06:55	2.7
	Mar 11	07:49	2.9
	Mar 11	10:58	2.6
	Mar 18	18:17	1.9
	Apr 6	04:11	2.6
	Apr 13	09:47	2.6
	Apr 18	14:14	2.8
	Apr 26	10:27	2.5
	Apr 30	19:24	4.1
	Apr 30	22:51	2.8
K13	Jan 31	03:03	3.3
L13	Apr 18	16:31	2.8
	Apr 18	17:05	2.8
	Apr 18	18:02	2.9
L14	Apr 14	06:42	3.1
M7	Apr 6	04:46	3.1
M13	Feb 14	05:54	2.9
	Feb 14	07:26	5.3
	Mar 4	09:55	3.3
	Mar 12	05:57	2.6
	Mar 18	16:59	2.8
	Mar 23	15:22	3.7
	Jun 2	23:53	3.0
	Jun 22	02:36	3.2
N1	Jun 18	04:50	4.4
O9	Mar 20	15:45	3.7
O10	May 7	03:14	4.2
P10	Feb 26	12:41	3.3
	Feb 26	13:02	3.7
	Feb 27	16:24	4.0
	Jun 21	06:16	3.6
P11	Mar 1	09:11	3.5
Q10	Jan 27	17:57	3.8
Q11	Jan 21	11:18	3.6
	Jan 21	11:42	3.7

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KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
I10	Jul 2	11h03m26.5s	37°55.9'	122°02.4'	7	0.14	13d	3.3(4)	3.1E21(2)	•Walnut Creek area, 18 km NE of Berkeley, CA (NEIC) Felt (III) at Alamo and Danville. Also felt at Berkeley, Concord, Lafayette, Martinez, Orinda, Pleasant Hill and Walnut Creek.
B2	Jul 4	01h25m11.0s	41°48.2'	125°55.7'	5R	0.26	9a	4.1(4)	1.2E21(2)	Off Coast 142 km W of Crescent City, CA
J11	Jul 7	18h30m25.0s	37°15.1'	121°40.0'	5	0.09	8h	3.6(6)	1.2E21(2)	•San Felipe Valley, 20 km SE of San Jose, CA (NEIC) Felt (II) at Morgan Hill and Santa Clara. Also felt at San Jose.
E3	Jul 7	20h40m38.0s	41°16.7'	124°13.9'	16	0.46	8a	4.1(2)	4.3E21(1)	53 km S of Crescent City, CA
Q13	Jul 9	16h45m36.3s	36°15.1'	118°26.1'	4	0.21	8e	3.5(4)		52 km SW of Lone Pine, CA
K10	Jul 14	12h18m29.7s	37°33.6'	121°20.1'	4	0.25	12d	2.9(3)	5.0E20(1)	31 km SW of Modesto, CA
J10	Jul 20	06h02m38.0s	37°59.9'	121°51.4'	15	0.23	13d	2.6(5)	2.4E20(2)	38 km NE of Berkeley, CA
J4	Jul 22	08h05m45.9s	40°56.2'	121°40.4'	12	0.21	13b	3.7(2)	5.3E21(2)	6 km N of Burney, CA
H8	Jul 22	22h05m22.7s	38°47.1'	122°46.6'	5	0.14	8c	3.1(4)		•The Geysers area, 23 km S of Clear Lake, CA (NEIC) Felt (III) at Cobb.
J10	Jul 24	20h47m26.6s	37°33.4'	121°41.5'	4	0.10	8d	2.5(4)	2.2E20(2)	•Mt. Lewis area, 16 km SE of Livermore, CA Reported felt at Livermore.
H8	Jul 24	22h31m50.7s	38°47.3'	122°45.9'	2R	0.24	8c	2.8(2)		The Geysers area, 24 km S of Clear Lake, CA
Q9	Jul 28	18h55m11.5s	38°23.1'	118°10.1'	13	0.23	8e	4.6(8)		•6 km S of Mina, Nevada (NEIC) Felt (IV) at Mina, Nevada
Q9	Jul 29	03h52m32.1s	38°22.7'	118°08.3'	14	0.13	8e	4.5(8)		•6 km S of Mina, Nevada (NEIC) Felt Srongly at Mina, Nevada
J11	Jul 30	00h14m01.0s	37°23.9'	121°45.3'	4	0.20	11d	2.7(4)	3.0E20(2)	13 km NE of San Jose, CA
E5	Jul 31	01h18m40.5s	40°20.5'	124°27.1'	20	0.23	9a	3.2(2)	3.8E20(1)	Cape Mendocino Sequence
E5	Jul 31	23h56m58.3s	40°25.1'	124°22.4'	16	0.21	10a	5.6(4)	2.5E24(2)	•Cape Mendocino Mainshock Strongly felt for as long as 15 seconds; rockslide and minor damage at Petrolia; power lines down and minor damage in Eureka; minor damage in Scotia, Arcata, Ferndale, Garberville; reported felt over an area about 100 miles from north to south along the coast, and about 75 miles inland to the east of the epicenter. Six CDMG strong motion instruments recorded the event; highest acceleration at Petrolia (delta=15km, 60%g).
D5	Aug 1	00h01m22.6s	40°20.8'	124°36.9'	4	0.25	5a	3.2(2)		Cape Mendocino Sequence
D5	Aug 1	00h02m16.0s	40°23.8'	124°31.0'	20	0.21	6a	3.1(2)		Cape Mendocino Sequence
D5	Aug 1	00h04m46.1s	40°22.2'	124°36.7'	6	0.18	6a	3.3(2)		Cape Mendocino Sequence
E5	Aug 1	00h06m02.5s	40°26.8'	124°30.0'	16	0.29	8a	3.1(2)		Cape Mendocino Sequence
D5	Aug 1	00h10m24.0s	40°22.0'	124°36.3'	12	0.11	7a	3.0(2)		Cape Mendocino Sequence
D5	Aug 1	00h17m08.6s	40°23.5'	124°34.9'	15	0.24	8a	3.2(2)	2.4E21(2)	Cape Mendocino Sequence
D5	Aug 1	00h18m38.0s	40°21.1'	124°35.4'	24	0.20	10a	3.8(6)	3.3E21(2)	Cape Mendocino Sequence
D5	Aug 1	00h25m03.2s	40°22.2'	124°33.3'	18	0.18	8a	3.0(2)		Cape Mendocino Sequence
E5	Aug 1	00h26m22.1s	40°25.1'	124°28.3'	19	0.28	9a	3.0(2)		Cape Mendocino Sequence

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KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
D5	Aug 1	00h29m25.5s	40°22.0'	124°32.2'	16	0.17	7a	3.1(2)		Cape Mendocino Sequence
D5	Aug 1	00h46m00.5s	40°23.2'	124°34.3'	18	0.20	11a	3.7(4)	5.0E21(2)	Cape Mendocino Sequence
D5	Aug 1	00h57m24.5s	40°21.9'	124°31.1'	23	0.20	11a	3.5(4)	1.3E21(2)	Cape Mendocino Sequence
D5	Aug 1	01h04m40.6s	40°24.1'	124°39.7'	11	0.30	11a	3.2(2)		Cape Mendocino Sequence
D5	Aug 1	01h22m20.6s	40°22.0'	124°35.5'	12	0.21	10a	3.0(2)		Cape Mendocino Sequence
F3	Aug 1	04h46m24.6s	41°28.5'	123°52.6'	20	0.21	10a	4.0(3)	1.6E22(1)	41 km SE of Crescent City, CA
D5	Aug 1	04h57m13.1s	40°23.1'	124°39.1'	11	0.26	10a	3.2(4)		Cape Mendocino Sequence
E5	Aug 1	05h07m37.5s	40°24.2'	124°29.1'	18	0.16	10a	3.8(4)	6.1E21(2)	Cape Mendocino Sequence
D5	Aug 1	06h22m55.1s	40°23.5'	124°32.0'	14	0.21	11a	3.3(4)	1.9E21(2)	Cape Mendocino Sequence
E5	Aug 1	08h54m03.6s	40°24.6'	124°27.8'	16	0.29	10a	3.1(2)		Cape Mendocino Sequence
D5	Aug 1	09h52m17.0s	40°23.2'	124°32.5'	17	0.19	10a	3.2(4)	1.0E21(2)	Cape Mendocino Sequence
E5	Aug 1	11h28m52.4s	40°24.2'	124°29.1'	18	0.27	10a	3.7(3)	4.4E21(1)	Cape Mendocino Sequence
E5	Aug 1	20h48m21.1s	40°24.2'	124°27.6'	19	0.28	9a	3.2(3)	1.0E21(2)	Cape Mendocino Sequence
D5	Aug 2	03h00m35.7s	40°20.6'	124°36.9'	15	0.17	9a	3.2(2)	1.3E21(1)	Cape Mendocino Sequence
E5	Aug 2	03h13m43.1s	40°25.0'	124°27.1'	17	0.05	6a	3.1(2)		Cape Mendocino Sequence
E5	Aug 2	04h39m49.2s	40°20.2'	124°27.4'	19	0.15	10a	3.4(2)		Cape Mendocino Sequence
E5	Aug 2	04h43m23.9s	40°22.5'	124°29.7'	17	0.23	9a	3.2(2)		Cape Mendocino Sequence
Q9	Aug 3	09h48m04.5s	38°20.6'	118°10.7'	11	0.24	7e	4.4(5)		•10 km S of Mina, Nevada (NEIC) Felt (IV) at Mina, Nevada.
E5	Aug 3	09h48m12.9s	40°21.9'	124°30.0'	15	0.19	12a	3.2(2)	1.1E21(1)	Cape Mendocino Sequence
M13	Aug 5	07h34m22.0s	36°11.7'	120°18.8'	9	0.13	15k	2.8(2)		7 km NE of Coalinga, CA
J11	Aug 5	13h44m11.1s	37°07.9'	121°31.9'	7	0.21	8d	2.5(4)	9.9E19(2)	14 km NNE of Gilroy, CA
D5	Aug 6	01h42m13.5s	40°22.6'	124°32.1'	12	0.16	10a	3.5(4)	1.3E21(2)	Cape Mendocino Sequence
E5	Aug 6	06h54m33.8s	40°25.2'	124°24.4'	18	0.23	11a	3.3(3)	1.3E21(1)	Cape Mendocino Sequence
Q14	Aug 6	07h53m47.6s	35°49.0'	118°18.2'	3	0.23	8e	3.3(2)		•16 km N of Lake Isabella, CA (NEIC) Felt (IV) at Lake Isabella.
D5	Aug 6	15h42m04.4s	40°22.5'	124°30.4'	13	0.20	10a	3.1(4)	5.7E20(2)	Cape Mendocino Sequence
P11	Aug 10	01h08m06.3s	37°27.7'	118°37.0'	11	0.14	12e	3.2(2)		23 km NW of Bishop, CA
E5	Aug 10	04h45m04.8s	40°24.5'	124°27.4'	17	0.29	9a	3.4(4)	1.7E21(2)	Cape Mendocino Sequence
E5	Aug 13	09h05m55.3s	40°23.0'	124°29.1'	16	0.15	12a	3.1(3)		Cape Mendocino Sequence
J12	Aug 13	15h14m04.3s	36°36.7'	121°51.7'	3	0.17	11d	2.8(2)		•Monterey area, CA Felt at Monterey and Salinas.
G4	Aug 14	15h34m11.3s	40°59.4'	123°10.1'	20	0.19	9a	3.6(4)	5.7E21(4)	34 km NW of Weaverville, CA
J12	Aug 14	20h41m42.8s	36°59.3'	121°39.3'	8	0.13	11d	2.6(4)		8 km W of Gilroy, CA
D5	Aug 16	19h10m23.7s	40°20.4'	124°36.1'	18	0.19	12a	3.8(6)	7.7E21(3)	Cape Mendocino Sequence
K12	Aug 17	14h28m07.4s	36°33.3'	121°09.5'	8	0.11	10d	2.8(4)		Bear Valley, 39 km SE of Hollister, CA
F4	Aug 19	13h47m43.0s	40°37.7'	123°57.0'	33	0.27	10a	3.1(4)	2.3E20(2)	24 km SE of Eureka, CA

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KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
I10	Aug 21	05h40m23.0s	37°44.5'	122°06.2'	7	0.10	10d	3.1(8)		•San Leandro Hills, 20 km SE of Berkeley, CA Felt at San Leandro, Castro Valley, Daly City, Emeryville.
C3	Aug 21	07h55m02.4s	41°27.4'	125°10.8'	20	0.20	9a	3.6(4)	1.2E21(2)	Off Coast 88 km SW of Crescent City, CA
E5	Aug 21	12h12m32.8s	40°23.2'	124°28.7'	16	0.18	11a	3.2(4)	4.7E20(2)	•Cape Mendocino Sequence Felt at Fortuna.
O9	Aug 26	08h51m22.3s	38°13.5'	119°22.7'	10	0.16	14e	3.6(4)		•14 km W of Bridgeport, CA (NEIC) Felt (III) at Bridgeport, California.
O9	Aug 26	09h10m21.4s	38°13.0'	119°23.3'	6	0.21	10e	3.5(4)		14 km W of Bridgeport, CA
K11	Aug 26	09h49m46.6s	37°09.0'	121°08.9'	3	0.24	12d	3.8(6)	5.7E21(4)	•5 km N of San Luis Reservoir, CA Felt at Gilroy.
I10	Aug 28	05h16m33.8s	37°55.4'	122°17.4'	8	0.14	12d	3.4(4)	6.9E20(4)	•San Pablo Ridge, 7 km N of Berkeley, CA Felt in East Bay Area.
I10	Aug 28	05h48m31.3s	37°55.3'	122°17.0'	7	0.20	12d	2.9(4)	1.7E20(2)	•San Pablo Ridge, 7 km N of Berkeley, CA Felt in East Bay Area.
A4	Aug 28	13h34m12.4s	40°30.2'	126°38.6'	5R	0.26	11a	3.5(4)		215 km SW of Eureka, CA
J13	Aug 29	00h06m24.5s	36°15.9'	121°44.0'	3	0.27	9d	3.2(4)		43 km SE of Monterey, CA
O9	Aug 29	03h59m33.7s	38°12.7'	119°24.7'	5R	0.24	6e	3.6(6)		14 km W of Bridgeport, CA
D4	Aug 31	06h40m42.7s	40°36.3'	124°50.3'	21	0.15	9a	3.2(4)	1.6E20(2)	Cape Mendocino Sequence
E5	Sep 5	17h01m14.0s	40°22.0'	124°29.4'	17	0.11	9a	3.1(2)		Cape Mendocino Sequence
Q13	Sep 9	08h57m20.8s	36°08.1'	118°15.3'	2	0.22	9e	4.3(6)		55 km SW of Lone Pine, CA
J11	Sep 12	18h54m16.8s	37°17.4'	121°41.3'	8	0.10	7h	3.3(4)	4.7E20(2)	Halls Valley, 18 km ESE of San Jose, CA
H7	Sep 14	07h25m43.7s	39°27.6'	122°56.5'	11	0.23	10c	3.0(6)		35 km E of Willits, CA
N13	Sep 15	02h06m43.2s	36°07.1'	119°56.6'	27	0.16	8d	3.4(4)		•37 km E of Coalinga, CA (NEIC) Felt (IV) at Avenal.
D5	Sep 16	00h07m33.2s	40°20.8'	124°43.7'	12	0.25	8a	3.4(4)	3.7E21(2)	Cape Mendocino Sequence
L12	Sep 17	18h48m44.3s	36°52.9'	120°56.4'	6	0.21	9d	2.6(3)		22 km SW of Los Banos, CA
E5	Sep 18	03h40m16.2s	40°28.5'	124°21.4'	20	0.19	9a	3.4(4)	2.2E21(2)	•Cape Mendocino Sequence (NEIC) Felt (II) at Rio Dell.
M13	Sep 18	09h40m51.7s	36°15.0'	120°21.3'	9	0.24	14k	2.7(4)		12 km N of Coalinga, CA
H10	Sep 19	18h33m59.3s	37°47.1'	122°34.6'	12	0.19	11d	3.3(4)	1.8E21(2)	•Off Coast 14 km W of San Francisco, CA Felt at San Francisco.
I10	Sep 19	19h59m25.6s	37°52.0'	122°14.3'	10	0.18	11d	3.0(6)	7.8E20(2)	•Berkeley, CA Felt at Berkeley.
D5	Sep 20	06h36m32.1s	40°11.3'	124°34.1'	12	0.30	8a	3.7(2)	1.3E21(2)	Off Coast 66 km NW of Garberville, CA
H8	Sep 20	18h23m24.1s	38°49.0'	122°45.6'	2	0.15	11c	3.4(10)		The Geysers area, 20 km S of Clear Lake, CA
I11	Sep 26	05h53m53.8s	37°07.9'	122°00.9'	14	0.24	11d	3.0(4)	2.9E20(2)	•Santa Cruz Mtns., 20 km NNE of Santa Cruz, CA Felt at Santa Cruz and Boulder Creek.
E5	Sep 26	16h40m56.8s	40°22.1'	124°28.6'	11	0.39	7a	3.0(2)		Cape Mendocino Sequence
E5	Sep 27	15h34m43.7s	40°21.2'	124°24.0'	14	0.30	7a	3.3(2)		Cape Mendocino Sequence
E5	Sep 27	23h02m11.7s	40°23.9'	124°24.7'	13	0.16	6a	3.1(2)	3.0E20(1)	Cape Mendocino Sequence

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H8	Sep 29	07h04m10.2s	38°47.7'	122°46.1'	1	0.13	10c	3.0(2)		The Geysers area, 23 km S of Clear Lake, CA
H8	Sep 29	07h04m50.0s	38°47.7'	122°46.1'	1R	0.00	6c	3.2(2)		The Geysers area, 23 km S of Clear Lake, CA
J11	Sep 30	14h05m28.1s	37°28.5'	121°44.5'	5	0.17	13d	2.5(4)	1.2E20(2)	Calaveras Reservoir, 20 km NE of San Jose, CA
F4	Oct 3	19h25m39.8s	40°50.5'	123°40.7'	11	0.20	11a	3.9(4)	2.6E22(4)	•40 km E of Eureka, CA (NEIC) Felt (IV) at Bayside, Blue Lake, Fortuna, Trinidad and Willow Creek. Felt (III) at Eureka and Salyer.
H8	Oct 6	16h30m25.9s	38°49.7'	122°47.9'	1	0.26	12c	3.1(2)		The Geysers area, 20 km S of Clear Lake, CA
I10	Oct 8	16h20m23.6s	37°50.9'	122°14.0'	4	0.12	12d	3.0(4)		•Lake Temescal area, 3 km SE of Berkeley, CA (NEIC) Felt (IV) at Berkeley and Oakland. Also felt at El Sobrante and Piedmont.
O11	Oct 9	14h09m26.1s	37°29.5'	119°23.2'	14	0.15	13e	3.3(4)		•33 km SE of Yosemite Village, CA (NEIC) Felt (II) at Ahwahnee.
J11	Oct 10	17h32m00.7s	37°26.3'	121°41.0'	5	0.15	8d	2.6(4)	1.3E20(2)	Mt. Lewis area, 21 km NE of San Jose, CA
J11	Oct 13	14h14m30.2s	37°14.9'	121°40.2'	3	0.17	8h	2.7(4)	1.0E20(2)	San Felipe Valley, 21 km SE of San Jose, CA
E4	Oct 15	20h16m25.8s	40°35.4'	124°26.7'	6	0.16	5a	3.9(4)	3.8E21(4)	•Off Coast 34 km SW of Eureka, CA Felt (IV) at Eureka.
J10	Oct 18	13h58m45.6s	37°32.4'	121°40.6'	6	0.10	10d	2.9(4)	5.3E20(2)	Mt. Lewis area, 18 km SE of Livermore, CA
K12	Oct 18	14h45m36.8s	36°32.0'	121°09.6'	8	0.25	12d	2.5(4)		Bear Valley area, 41 km SE of Hollister, CA
J10	Oct 22	03h48m00.3s	37°48.3'	121°44.6'	7	0.14	11d	4.4(8)	1.2E23(4)	•14 km NNE of Livermore, CA Felt (V) at Brentwood, Dublin, Livermore, San Ramon and Stockton; (IV) at Antioch, Byron, Canyon, Oakley and San Jose. Felt in Alameda, Contra Costa, Marin, San Francisco, San Joaquin and Santa Clara Counties.
O11	Oct 24	12h22m45.7s	37°05.0'	119°17.2'	44	0.07	4e	3.0(2)		•Lake Shaver area, 59 km NE of Fresno, CA (NEIC) Felt in the Bishop area.
K12	Oct 28	14h42m36.1s	36°40.7'	121°21.0'	2	0.17	11d	2.9(4)		20 km S of Hollister, CA
K12	Oct 28	19h52m29.3s	36°35.1'	121°14.2'	9	0.16	14d	3.3(4)		Bear Valley, 35 km SE of Hollister, CA
I10	Oct 30	23h10m42.7s	37°54.4'	122°17.9'	5	0.20	10d	3.2(4)	3.1E20(2)	•Berkeley Hills, CA Felt at Berkeley, El Cerrito, Oakland Hills, Pinole and Richmond.
J11	Oct 31	10h36m11.7s	37°20.7'	121°43.8'	6	0.08	8h	2.6(2)		Halls Valley, 13 km E of San Jose, CA
C5	Oct 31	14h07m58.1s	40°25.6'	125°29.8'	15R	0.25	6a	4.4(2)		Off Coast 120 km WSW of Eureka, CA
H8	Nov 1	01h42m53.7s	38°47.6'	122°44.5'	13	0.07	5c	3.1(2)		The Geysers area, 24 km S of Clear Lake, CA
J11	Nov 1	22h11m13.4s	37°17.8'	121°41.1'	7	0.14	8h	3.2(3)	5.9E20(1)	•Halls Valley, 18 km ESE of San Jose, CA Felt at San Jose.
K12	Nov 2	22h21m52.9s	36°46.2'	121°21.8'	8	0.16	14d	2.8(4)		9 km S of Hollister, CA
H8	Nov 2	23h21m36.6s	38°47.7'	122°45.5'	3	0.24	11c	3.2(6)	6.2E21(2)	•The Geysers area, 23 km S of Clear Lake, CA Felt at Cobb.
K12	Nov 4	20h24m23.9s	36°53.1'	121°19.9'	6	0.27	11d	2.5(4)		7 km NE of Hollister, CA
J11	Nov 7	04h00m20.5s	37°26.3'	121°39.5'	2	0.23	7d	2.5(4)	1.4E20(2)	Mt. Lewis area, 30 km SE of Livermore, CA

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K12	Nov 7	15h06m01.2s	36°35.0'	121°13.1'	8	0.24	8d	4.0(6)	2.3E22(4)	•Bear Valley, 34 km SE of Hollister, CA Felt (III) at Hollister and Paicines. Also Felt at Big Sur and Greenfield. Small foreshock 1.2 seconds earlier.
H8	Nov 7	23h14m57.6s	38°49.7'	122°47.8'	2	0.24	10c	3.0(6)	4.1E21(2)	The Geysers area, 20 km S of Clear Lake, CA
F6	Nov 9	02h50m32.8s	39°34.8'	123°45.7'	4	0.29	9c	3.0(6)		15 km NNE of Fort Bragg, CA
D4	Nov 12	08h46m31.0s	40°33.7'	124°55.2'	7	0.19	6a	3.4(2)		Off Coast 69 km SW of Eureka, CA
H8	Nov 12	13h28m14.2s	38°50.4'	122°47.2'	1	0.22	10c	3.0(4)		The Geysers area, 18 km S of Clear Lake, CA
D4	Nov 13	10h25m17.6s	40°54.7'	124°36.9'	20	0.18	9a	3.8(3)		41 km NW of Eureka, CA
K13	Nov 15	18h07m34.1s	36°19.5'	121°23.2'	7	0.22	11d	2.5(2)		26 km NW of King City, CA
K14	Nov 17	08h17m46.4s	35°49.8'	121°04.1'	4	0.16	11d	3.0(2)		23 km NE of San Simeon, CA
E5	Nov 18	16h42m36.3s	40°23.3'	124°28.6'	17	0.17	10a	3.2(2)		Cape Mendocino Sequence
E5	Nov 22	04h11m52.5s	40°24.0'	124°25.4'	22	0.13	11a	3.8(5)	1.2E22(3)	•Cape Mendocino Sequence (NEIC) Felt (III) at Rio Dell. Also felt at Eureka, Ferndale and Fortuna.
H5	Nov 22	09h32m18.1s	40°10.3'	122°49.7'	22	0.27	11c	3.0(3)		58 km SW of Redding, CA
P11	Nov 25	09h43m07.8s	37°25.8'	118°41.0'	8	0.28	13m	3.5(4)		26 km WNW of Bishop, CA
M13	Nov 27	06h39m23.6s	36°13.3'	120°20.8'	9	0.21	12k	2.6(2)		9 km N of Coalinga, CA
E5	Nov 29	01h43m11.4s	40°21.4'	124°26.2'	15	0.29	7a	3.2(4)	1.8E21(2)	Cape Mendocino Sequence
J10	Nov 30	02h37m10.3s	37°34.0'	121°39.8'	2	0.21	9d	2.7(3)	4.9E20(1)	Mt. Lewis, 16 km SE of Livermore, CA
D5	Nov 30	14h11m39.6s	40°21.5'	124°32.5'	15	0.18	6a	3.2(4)	1.7E21(2)	Cape Mendocino Sequence
J10	Nov 30	15h49m03.8s	37°32.5'	121°40.3'	6	0.15	9d	3.3(3)	1.3E21(1)	Mt. Lewis, 18 km SE of Livermore, CA
H5	Dec 1	11h15m27.3s	40°06.4'	122°45.1'	3	0.21	7c	3.4(4)	4.2E21(2)	61 km SW of Redding, CA
H5	Dec 1	14h53m28.5s	40°05.7'	122°44.9'	7	0.23	7c	3.7(6)	8.9E21(4)	•62 km SW of Redding, CA (NEIC) Felt (III) at Flournoy.
K12	Dec 1	17h20m32.7s	36°38.6'	121°17.8'	5	0.11	12d	2.8(2)		Stone Canyon area, 25 km SE of Hollister, CA
K11	Dec 2	11h14m55.8s	37°02.1'	121°27.0'	7	0.29	14d	3.7(6)	4.8E21(4)	•11 km ENE of Gilroy, CA (NEIC) Felt (IV) at Gilroy and (III) at San Martin. Also felt at Morgan Hill.
H5	Dec 2	23h56m02.7s	40°05.9'	122°45.8'	4	0.15	10c	3.2(2)	3.8E21(1)	62 km SW of Redding, CA
H5	Dec 3	00h00m43.8s	40°05.4'	122°45.3'	3	0.13	12c	3.9(6)	2.4E22(4)	62 km SW of Redding, CA
H5	Dec 3	00h18m51.7s	40°04.6'	122°45.2'	2	0.04	4c	3.4(8)	3.5E21(3)	63 km SW of Redding, CA
E5	Dec 5	10h37m52.0s	40°22.4'	124°22.3'	22	0.18	5a	3.1 *		•Cape Mendocino Sequence Felt at Ferndale
D5	Dec 7	08h02m16.9s	40°20.9'	124°30.9'	15	0.12	6a	3.3(2)	3.8E20(1)	Cape Mendocino Sequence
H8	Dec 8	15h32m16.1s	38°46.9'	122°44.9'	4	0.20	11c	3.2(5)	3.0E21(2)	The Geysers area, 25 km S of Clear Lake, CA
J11	Dec 9	04h31m53.6s	37°14.6'	121°39.3'	4	0.14	7h	2.8(4)	1.2E20(2)	Halls Valley, 25 km SE of San Jose, CA
L15	Dec 15	00h37m35.8s	35°20.5'	120°48.4'	5R	0.20	7d	2.5 *		•14 km NW of San Luis Obispo, CA Felt at Los Osos.
N8	Dec 17	04h35m45.4s	38°44.7'	119°46.6'	9	0.20	11e	3.1(6)		6 km N of Markleeville, CA

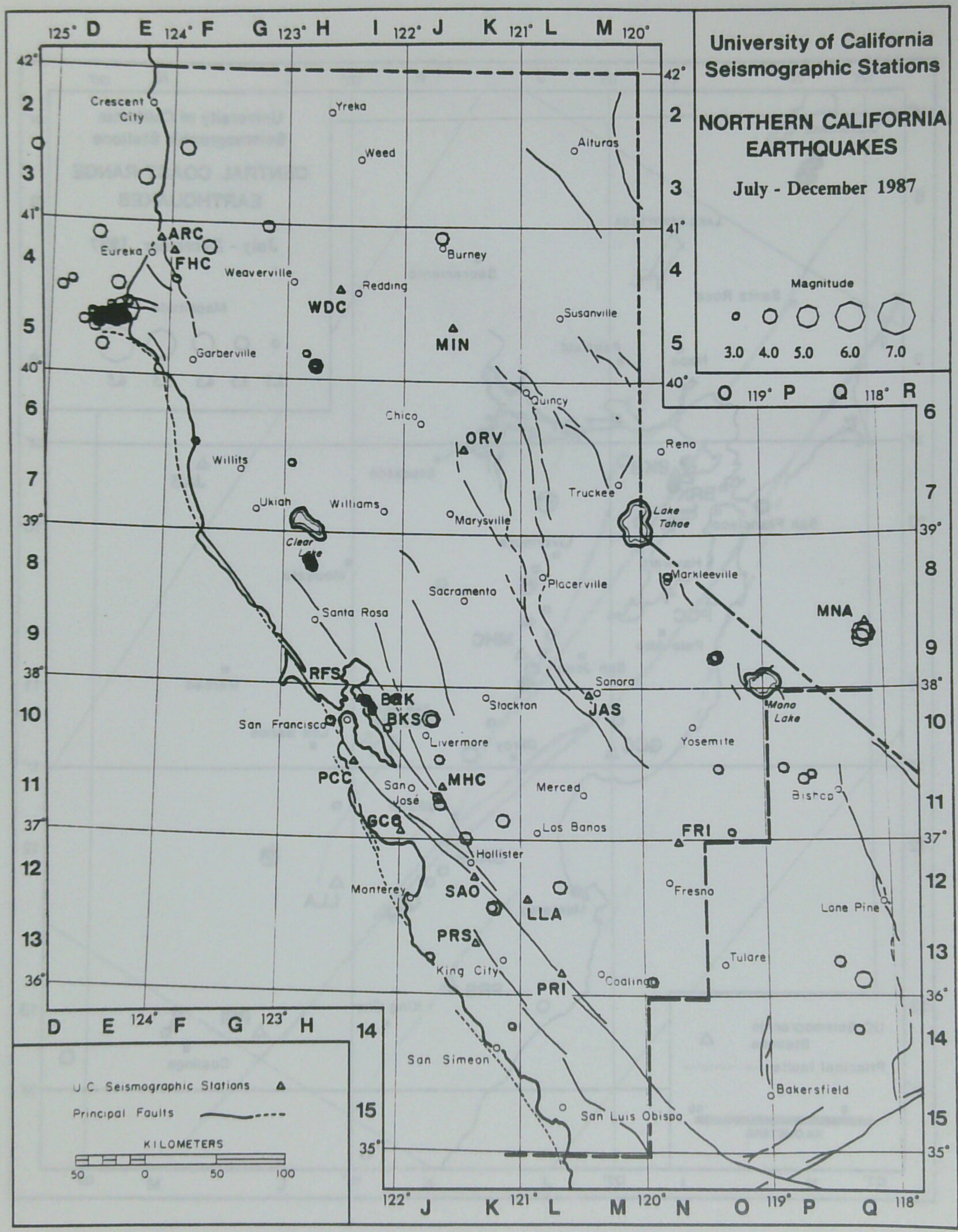
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KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (*=FELT)
J10	Dec 18	17h48m37.4s	37°36.2'	121°42.2'	1	0.21	9d	2.5(4)		11 km SE of Livermore, CA
K12	Dec 18	19h32m24.0s	36°43.6'	121°25.0'	4	0.21	11d	2.5(4)		12 km S of Hollister, CA
L12	Dec 22	14h36m02.2s	36°43.3'	120°41.2'	1	0.22	12d	3.8(6)	1.3E22(2)	Near Panoche Mtn., 41 km SE of Los Banos, CA
L12	Dec 22	14h47m58.7s	36°44.3'	120°40.4'	2	0.20	8d	2.5(2)		Panoche Mtn., 40 km SE of Los Banos, CA
L12	Dec 22	14h50m59.0s	36°43.7'	120°41.4'	0	0.20	10d	2.6(2)		Panoche Mtn., 40 km SE of Los Banos, CA
L12	Dec 26	23h53m23.7s	36°45.0'	120°42.5'	1	0.26	5d	2.5(3)		Panoche Mtn., 37 km SE of Los Banos, CA
H8	Dec 29	20h34m53.5s	38°48.7'	122°45.8'	0	0.18	14c	2.9(4)		*The Geysers area, 21 km S of Clear Lake, CA Felt at Cobb
H10	Dec 30	01h09m10.9s	37°46.9'	122°35.1'	11	0.12	11d	3.2(3)	1.3E21(3)	*Off Coast 14 km W of San Francisco, CA (NEIC) Felt (IV) at San Francisco. Also felt at Daly City, Pacifica and South San Fransisco.
J10	Dec 30	06h43m18.7s	37°48.1'	121°44.1'	7	0.13	12d	3.6(5)	3.2E21(4)	*14 km NNE of Livermore, CA (NEIC) Felt (IV) at Dublin, Livermore and Pleasanton.
P10	Dec 30	23h39m43.3s	37°30.2'	118°50.9'	9	0.20	10e	3.4(5)		Mammoth Lakes area, CA

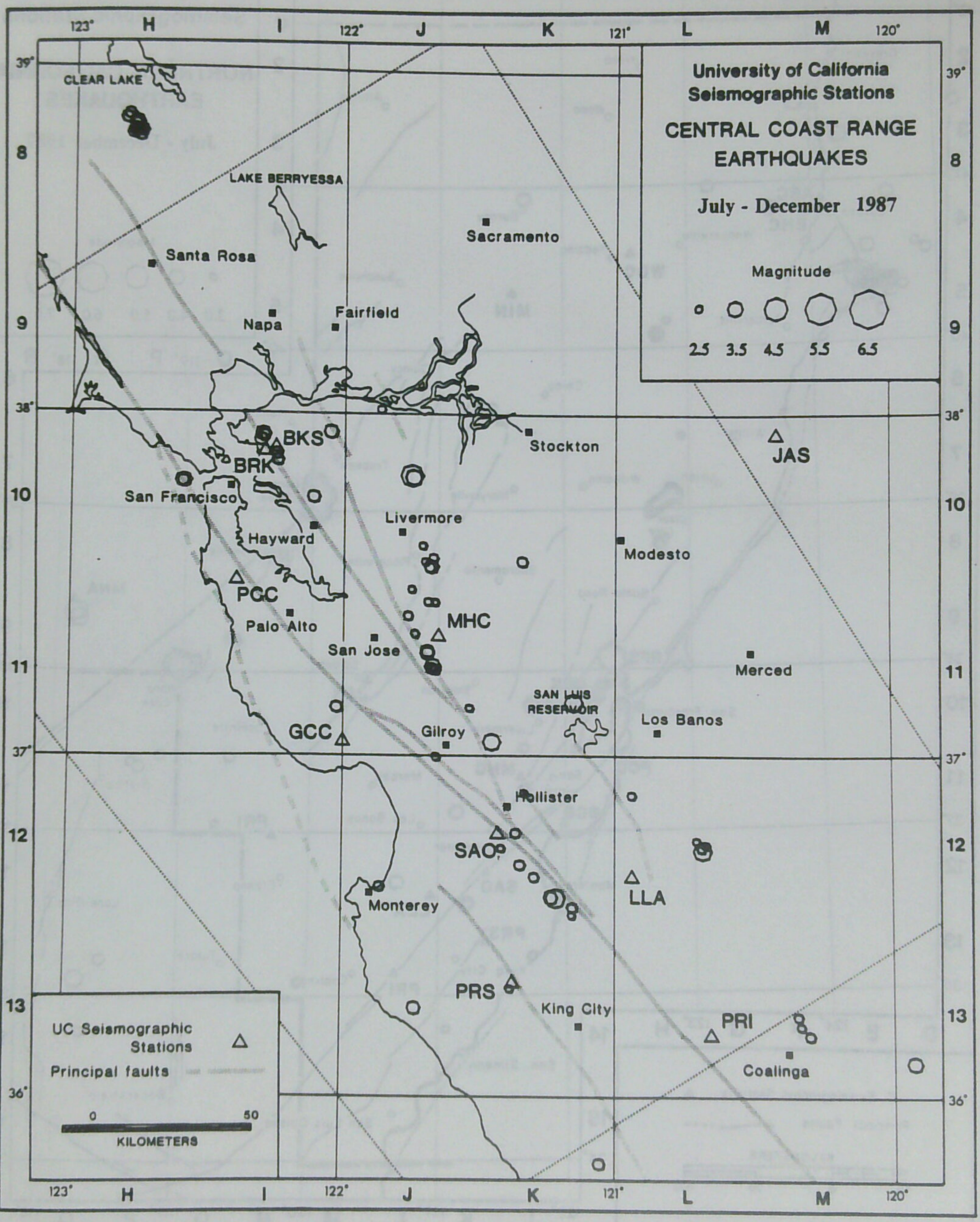
International Seismological Centre

KEY	DATE	TIME	MAG
A4	Aug 28	13:34	3.5
B2	Jul 4	01:25	4.1
C3	Aug 21	07:55	3.6
C5	Oct 31	14:07	4.4
D4	Aug 31	06:40	3.2
	Nov 12	08:46	3.4
	Nov 13	10:25	3.8
D5	Aug 1	00:01	3.2
	Aug 1	00:02	3.1
	Aug 1	00:04	3.3
	Aug 1	00:10	3.0
	Aug 1	00:17	3.2
	Aug 1	00:18	3.8
	Aug 1	00:25	3.0
	Aug 1	00:29	3.1
	Aug 1	00:46	3.7
	Aug 1	00:57	3.5
	Aug 1	01:04	3.2
	Aug 1	01:22	3.0
	Aug 1	04:57	3.2
	Aug 1	06:22	3.3
	Aug 1	09:52	3.2
	Aug 2	03:00	3.2
	Aug 6	01:42	3.5
	Aug 6	15:42	3.1
	Aug 16	19:10	3.8
	Sep 16	00:07	3.4
	Sep 20	06:36	3.7
	Nov 30	14:11	3.2
	Dec 7	08:02	3.3
E3	Jul 7	20:40	4.1
E4	Oct 15	20:16	3.9
E5	Jul 31	01:18	3.2
	Jul 31	23:56	5.6
	Aug 1	00:06	3.1
	Aug 1	00:26	3.0
	Aug 1	05:07	3.8
	Aug 1	08:54	3.1
	Aug 1	11:28	3.7
	Aug 1	20:48	3.2
	Aug 2	03:13	3.1
	Aug 2	04:39	3.4
	Aug 2	04:43	3.2
	Aug 3	09:48	3.2
	Aug 6	06:54	3.3
	Aug 10	04:45	3.4
	Aug 13	09:05	3.1
	Aug 21	12:12	3.2
	Sep 5	17:01	3.1
	Sep 18	03:40	3.4
	Sep 26	16:40	3.0
	Sep 27	15:34	3.3
	Sep 27	23:02	3.1
	Nov 18	16:42	3.2
	Nov 22	04:11	3.8
	Nov 29	01:43	3.2
	Dec 5	10:37	3.1
F3	Aug 1	04:46	4.0
F4	Aug 19	13:47	3.1
	Oct 3	19:25	3.9
F6	Nov 9	02:50	3.0
G4	Aug 14	15:34	3.6
H5	Nov 22	09:32	3.0
	Dec 1	11:15	3.4
	Dec 1	14:53	3.7
	Dec 2	23:56	3.2
	Dec 3	00:00	3.9
	Dec 3	00:18	3.4
H7	Sep 14	07:25	3.0
H8	Jul 22	22:05	3.1
	Jul 24	22:31	2.8
	Sep 20	18:23	3.4
	Sep 29	07:04	3.0
	Sep 29	07:04	3.2
	Oct 6	16:30	3.1
	Nov 1	01:42	3.1
	Nov 2	23:21	3.2
	Nov 7	23:14	3.0
	Nov 12	13:28	3.0
	Dec 8	15:32	3.2
	Dec 29	20:34	2.9
H10	Sep 19	18:33	3.3
	Dec 30	01:09	3.2
I10	Jul 2	11:03	3.3
	Aug 21	05:40	3.1
	Aug 28	05:16	3.4
	Aug 28	05:48	2.9
	Sep 19	19:59	3.0
	Oct 8	16:20	3.0
	Oct 30	23:10	3.2
I11	Sep 26	05:53	3.0
J4	Jul 22	08:05	3.7
J10	Jul 20	06:02	2.6
	Jul 24	20:47	2.5
	Oct 18	13:58	2.9
	Oct 22	03:48	4.4
	Nov 30	02:37	2.7
	Nov 30	15:49	3.3
	Dec 18	17:48	2.5
	Dec 30	06:43	3.6
J11	Jul 7	18:30	3.6
	Jul 30	00:14	2.7
	Aug 5	13:44	2.5
	Sep 12	18:54	3.3
	Sep 30	14:05	2.5
	Oct 10	17:32	2.6
	Oct 13	14:14	2.7
	Oct 31	10:36	2.6
	Nov 1	22:11	3.2
	Nov 7	04:00	2.5
	Dec 9	04:31	2.8
J12	Aug 13	15:14	2.8
	Aug 14	20:41	2.6
J13	Aug 29	00:06	3.2
K10	Jul 14	12:18	2.9
K11	Aug 26	09:49	3.8
	Dec 2	11:14	3.7
K12	Aug 17	14:28	2.8
	Oct 18	14:45	2.5
	Oct 28	14:42	2.9
	Oct 28	19:52	3.3
	Nov 2	22:21	2.8
	Nov 4	20:24	2.5
	Nov 7	15:06	4.0
	Dec 1	17:20	2.8
	Dec 18	19:32	2.5
K13	Nov 15	18:07	2.5
K14	Nov 17	08:17	3.0
L12	Sep 17	18:48	2.6
	Dec 22	14:36	3.8
	Dec 22	14:47	2.5
	Dec 22	14:50	2.6
	Dec 26	23:53	2.5
L15	Dec 15	00:37	2.5
M13	Aug 5	07:34	2.8
	Sep 18	09:40	2.7
	Nov 27	06:39	2.6
N8	Dec 17	04:35	3.1
N13	Sep 15	02:06	3.4
O9	Aug 26	08:51	3.6
	Aug 26	09:10	3.5
	Aug 29	03:59	3.6
O11	Oct 9	14:09	3.3
	Oct 24	12:22	3.0
P10	Dec 30	23:39	3.4
P11	Aug 10	01:08	3.2
	Nov 25	09:43	3.5
Q9	Jul 28	18:55	4.6
	Jul 29	03:52	4.5
	Aug 3	09:48	4.4
Q13	Jul 9	16:45	3.5
	Sep 9	08:57	4.3
Q14	Aug 6	07:53	3.3

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OBSERVED EXPLOSIONS AT THE NEVADA TEST SITE 1987

DATE	O-TIME(UTC)	N LAT	W LONG	MAG	COMMENTS
Feb 11	16h45m00.0s	37.011°	116.045°	4.2(6)	"TORNERO"
Mar 18	18h28m00.0s	37.210°	116.209°	4.3(4)	"MIDDLE NOTE"
Apr 18	13h40m00.6s	37.248°	116.509°	5.5(6)	"DELAMAR"
Apr 22	22h00m00.0s	36.983°	116.005°	4.2(4)	"PRESIDIO"
Apr 30	13h30m00.0s	37.233°	116.423°	5.4(8)	"HARDIN"
Jun 18	15h20m00.0s	37.194°	116.035°	4.4(3)	"BRIE'
Jun 30	16h05m00.1s	36.999°	116.043°	4.4(4)	"PANCHUELA"
Jul 16	19h00m00.0s	37.104°	116.023°	5.0(6)	"MIDLAND"
Aug 13	14h00m00.1s	37.061°	116.045°	5.6(8)	"TAHOKA"
Sep 24	15h00m00.1s	37.228°	116.375°	5.5(7)	"LOCKNEY"
Oct 23	16h00m00.1s	37.142°	116.079°	5.2(8)	"BORATE"
Dec 2	16h30m00.0s	36.996°	116.004°	4.0(4)	"WACO"

International Seismological Centre

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 will 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).

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

The maximum amplitude of earth displacement in micrometers and periods in seconds of the indicated phases are given for the Berkeley station, BKS, with its phase arrival times. 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, and
Δ = distance to epicenter in degrees.

The Richter magnitude for local and regional earthquakes is designated M_L if it is determined from Wood-Anderson torsion seismographs and MAG if it is determined from vertical Benioff seismographs. 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. USGS magnitude, designated by m_b, is the body wave magnitude.

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.

UNIVERSITY OF CALIFORNIA SEISMOGRAPHIC STATIONS
REGISTRATION OF EARTHQUAKES 1987

DATE	STA	PHASE	TIME (UTC)
Jan 3	GCC	eP	22 16 32.9
	BKS	eP	22 16 36
		eS	22 27 10
		e	22 27 53
		eSS	22 32 57
		eLq	22 38 30
		eLr	22 41 54
			AMP(μm) PER(s)
		PZ	0.19 1.1
		LZ	37 20.
		LNE	34 20.
		LNW	17 20.
	BRK	eP	22 16 36.4
	PRS	eP	22 16 36.8
	MHC	eP	22 16 37.2
	SAO	eP	22 16 37.9
	LLA	eP	22 16 39.0
	PRI	ePc	22 16 39.6
	WDC	iPc	22 16 41.1
		e	22 20 02.6
	ORV	ePc	22 16 41.4
	FRI	eP	22 16 42.3
	CMB	iPc	22 16 43.6
		e	22 20 06.1
BRK Ms=6.7 Distance=82°			
USGS 22h04m04.8s 15.0S 167.9E			
h=14km mb=6.0 Ms=6.5			
New Hebrides Islands			
Jan 4	PRS	eP	00 43 21.5
	BKS	e	00 43 23.4
	MHC	eP	00 43 23.9
		epP	00 44 18.8
	FRI	eP	00 43 28.5
		epP	00 44 23.8
	CMB	eP	00 43 29.2
		epP	00 44 25.5
	ORV	eP	00 43 30.2
	WDC	eP	00 43 30.4
		epP	00 44 28.2
	MIN	e	00 43 32.3
USGS 00h32m14.6s 21.0S 178.7W			
h=560km mb=5.1			
Fiji Islands Region			
Jan 4	PRI	e	01 51 14.5
	FRI	eP	01 51 16.7
	CMB	eP	01 51 18.3
	ORV	e	01 51 20.0
	WDC	eP	01 51 20.9
USGS 01h38m52.5s 27.2S 176.6W			
h=33km mb=5.4 Ms=5.4			
Kermadec Islands Region			
Jan 4	WDC	ePc	10 31 02.1
	MIN	eP	10 31 06.1
	ORV	eP	10 31 10.2
	CMB	iPc	10 31 21.4
	FRI	eP	10 31 28.1
	PRI	e	10 31 36.3
USGS 10h21m45.9s 49.8N 149.3E			
h=489km mb=5.1			
Northwest of Kuril Islands			
Jan 4	PRI	eP	18 01 03.2
	PRS	eP	18 01 07.3
	CMB	iPc	18 01 08.7
		iPc	18 01 14
		ePP	18 03 08
		eS	18 08 06
		eLr	18 15 39
	MHC	eP	18 01 14.9

DATE	STA	PHASE	TIME (UTC)
	ORV	eP	18 01 21.1
	BKS	eP	18 01 23.0
		eS	18 08 30
		eSS	18 12 17
		eLq	18 14 15
		eLr	18 16 18
			AMP(μm) PER(s)
		PZ	0.11 1.1
		LZ	11 20.
		LNE	13 20.
		LNW	13 20.
	FHC	eP	18 01 37.8
BRK Ms=6.1 Distance=52°			
USGS 17h52m36.8s 6.0N 82.6W			
h=10km mb=5.6 Ms=5.8			
South of Panama			
Jan 5	CMB	eLr	04 18 00
USGS 03h32m41.8s 3.4S 146.5E			
h=10km mb=5.2 Ms=5.0			
Bismarck Sea			
Jan 5	FHC	e(P)	12 18 33.6
		e	12 18 42.8
	WDC	e(P)	12 18 39.6
		e	12 18 52.9
		eScP	12 25 01
		eScS	12 29 08.2
	ORV	eP	12 18 47.9
	BKS	eP	12 18 56.1
		eS	12 24 48.0
		eLq	12 26 36.0
		eLr	12 28 00.0
			AMP(μm) PER(s)
		PZ	0.058 .7
		LZ	89 20.8
		LNE	55 20.8
		LNW	55 20.8
	CMB	ePd	12 19 02.9
		i	12 19 15.9
		eScP	12 25 02.0
		eScS	12 29 17.0
	SAO	e	12 19 11.2
		eT	12 57
	MHC	eP	12 19 11.8
BRK Ms=6.5 Distance=36°			
USGS 12h11m55.8s 52.4N 169.4W			
h=33km mb=6.1 Ms=6.7			
Fox Islands, Aleutian Islands			
Jan 5	WDC	eP	23 06 08.4
		e	23 10 00.7
	MIN	ePc	23 06 11.5
	ORV	ePc	23 06 14.8
	FRI	ePc	23 06 28.3
USGS 22h52m46.6s 42.0N 81.3E			
h=16km mb=5.9 Ms=5.8			
Southern Sinkiang Province, China			
Jan 6	FHC	ePc	05 20 52.5
	WDC	iPc	05 20 56.6
	MIN	ePc	05 20 59.4
	ORV	ePc	05 21 01.7
	BRK	eP	05 21 04.5
	PCC	eP	05 21 04.8
	BKS	iPd	05 21 05.1
			AMP(μm) PER(s)
		PZ	0.091 .9
	GCC	ePc	05 21 07.3
	MHC	ePc	05 21 07.9
	CMB	iPc	05 21 09.7
	PRS	ePc	05 21 11.1

DATE	STA	PHASE	TIME (UTC)
	LLA	ePc	05 21 11.7
	FRI	ePc	05 21 14.0
	PRI	ePc	05 21 14.3
USGS 05h07m48.1s 24.0N 121.7E			
h=38km mb=5.8 Ms=5.5			
Taiwan			
Jan 7	BRK	eP	12 13 55.8
	BKS	iPc	12 13 57.0
		eS	12 14 11.7
	ORV	eP	12 14 00.0
	PCC	eP	12 14 00.8
	MHC	e(P)	12 14 07.2
	GCC	eP	12 14 07.9
	MIN	e(P)	12 14 09.3
	WDC	ePc	12 14 09.6
	CMB	iPc	12 14 12.0
	SAO	eP	12 14 14.3
	FRI	eP	12 14 15.9
	LLA	eP	12 14 19.2
	PRS	e(P)	12 14 20.2
	FHC	e(P)	12 14 22.2
	PRI	e	12 14 30.7
BRK 12h13m37.7s 38.8N 122.8W			
h=2km ML=3.4(8) Mo=9.9E21(2)			
The Geysers area, 25 km S of Clear Lake, CA			
Jan 7	PRS	eP	14 30 13.5
	SAO	e(P)	14 30 13.7
	BRK	eP	14 30 14.5
	PRI	eP	14 30 15.5
	MHC	eP	14 30 15.7
	CMB	eP	14 30 20.7
	FRI	eP	14 30 20.8
	WDC	eP	14 30 22.2
	MIN	eP	14 30 24.1
USGS 14h19m20.5s 18.0S 178.5W			
h=573km mb=4.7			
Fiji Islands Region			
Jan 8	PRS	eP	07 01 10.8
	FRI	eP	07 01 19.0
	CMB	eP	07 01 19.8
	WDC	eP	07 01 21.2
	MIN	eP	07 01 22.8
USGS 06h50m08.4s 21.1S 178.9W			
h=603km mb=4.5			
Fiji Islands Region			
Jan 8	ZSP	iPd	13 27 34.7
	BKS	iPd	13 27 35.7
		eS	13 27 39.4
	BRK	iPd	13 27 35.9
		iS	13 27 39.6
	PCC	eP	13 27 42.9
	MHC	eP	13 27 47.2
	GCC	e(P)	13 27 50.2
	SAO	eP	13 27 55.3
	CMB	eP	13 27 55.5
	LLA	eP	13 28 00.6
	PRS	eP	13 28 02.0
BRK 13h27m31.1s 38.1N 122.2W			
h=7km ML=2.4(4) Mo=1.8E20(2)			
Benicia, 26 km NE of Berkeley, CA			
Jan 9	FHC	iPc	06 25 41.5
	WDC	iPc	06 25 46.6
		ipP	06 26 07.9
		ePKPPKP	06 53 52.8
	MIN	iPc	06 25 50.6
	ORV	iPc	06 25 54.0

DATE	STA	PHASE	TIME (UTC)
	BKS	iPc	06 25 57.1
		epP	06 26 21.2
		eS	06 35 10
		iPS	06 36 03
		eSS	06 39 50
		eG	06 43 09
		eLr	06 46 48
			AMP(μm) PER(s)
		PZ	0.98 1.0
	BRK	iPc	06 25 57.5
	PCC	iPc	06 25 58.0
	GCC	ePc	06 26 00.9
	MHC	iPc	06 26 02.0
		ipP	06 26 28.0
	SAO	iPc	06 26 04.2
	CMB	iPc	06 26 04.3
		ipP	06 26 30.7
	PRS	iPc	06 26 06.5
	LLA	ePc	06 26 06.5
	FRI	ePc	06 26 09.7
	PRI	ePc	06 26 09.8
BRK mb=6.6 h=92km Distance=73°			
USGS 06h14m44.9s 39.9N 141.7E			
h=67km mb=6.4			
Honshu, Japan			
Jan 9	GCC	ePc	08 13 21.9
	PCC	ePc	08 13 22.5
	PRS	ePc	08 13 22.7
	SAO	e(P)	08 13 23.2
	BRK	ePc	08 13 24.5
	LLA	ePc	08 13 24.8
	PRI	ePc	08 13 24.9
	BKS	eP	08 13 25.1
		iS	08 23 20
		eSS	08 28 13
		eLq	08 32 22
		eLr	08 36 22
			AMP(μm) PER(s)
		PZ	0.31 1.6
		LZ	45 20.
		LNE	52 20.
		LNW	8.2 20.
	MHC	ePc	08 13 25.3
	FRI	ePc	08 13 30.4
	CMB	iPc	08 13 31.8
		e	08 27 03.3
	ORV	ePc	08 13 32.4
	WDC	iPc	08 13 32.8
		e	08 27 04.4
	MIN	iPc	08 13 34.8
BRK Ms=6.8 Distance=76°			
USGS 08h01m36.0s 19.5S 176.5W			
h=33km mb=5.9 Ms=6.6			
Fiji Islands Region			
Jan 9	MHC	e(P)	10 08 05.0
	WDC	eP	10 08 09.5
	FRI	ePc	10 08 10.2
	CMB	e(P)	10 08 10.8
	PRI	e	10 08 12.4
USGS 09h55m22.6s 20.4S 168.9E			
h=33km mb=5.3 Ms=5.4			
Loyalty Islands			
Jan 10	WDC	ePc	00 53 47.5
	MIN	eP	00 53 52.6
	ORV	ePc	00 53 56.8
	BRK	eP	00 54 02.0
	BKS	ePc	00 54 02.2
			AMP(μm) PER(s)
		PZ	0.044 0.7

DATE	STA	PHASE	TIME (UTC)
	PCC	eP	00 54 03.1
	MHC	eP	00 54 08.0
	CMB	eP	00 54 10.7
	SAO	eP	00 54 11.5
	PRS	eP	00 54 14.5
	LLA	eP	00 54 15.1
	FRI	ePc	00 54 19.0
	PRI	ePc	00 54 19.5
USGS 00h46m35.6s 52.6N 179.1W			
h=235km mb=4.7			
Andreanof Islands, Aleutian Is.			
Jan 10	PRS	eP	10 10 57.2
	SAO	eP	10 10 58.0
	BRK	eP	10 10 58.9
	BKS	eP	10 10 59.0
			AMP(μm) PER(s)
		PZ	0.028 0.7
	MHC	eP	10 10 59.8
	FRI	eP	10 11 04.3
	CMB	eP	10 11 05.4
	MIN	e	10 11 06.4
	ORV	eP	10 11 06.5
	WDC	eP	10 11 06.7
USGS 09h59m50.5s 20.7S 178.4W			
h=525km mb=4.6			
Fiji Islands Region			
Jan 10	WDC	ePd	22 09 56.0
	MIN	eP	22 10 02.8
	ORV	eP	22 10 05.4
	BKS	eP	22 10 10.5
			AMP(μm) PER(s)
		PZ	0.022 0.7
	MHC	e	22 10 16.1
	CMB	e	22 10 20.5
	LLA	e	22 10 22.7
	GCC	e	22 10 26.8
	PRI	eP	22 10 27.5
	FRI	eP	22 10 27.7
USGS 22h02m25.6s 51.6N 178.7W			
h=33km mb=4.9			
Andreanof Islands, Aleutian Is.			
Jan 11	PRS	eP	07 41 38.2
	SAO	eP	07 41 38.9
	BKS	e(P)	07 41 40.0
	PRI	eP	07 41 40.5
		e	07 41 47.1
	MHC	ePc	07 41 40.8
	FRI	ePc	07 41 46.0
		e	07 41 52.6
	CMB	eP	07 41 47.2
		e	07 41 52.6
		i	07 42 11.0
	ORV	eP	07 41 48.4
	WDC	ePc	07 41 49.1
		i	07 41 53.7
	MIN	eP	07 41 50.9
		e	07 41 57.6
USGS 07h30m11.2s 18.8S 174.1W			
h=103km mb=5.1			
Tonga Islands			
Jan 13	MHC	ePc	11 07 44.9
		epP	11 08 02.4
	BRK	e	11 07 45.9
	PRI	ePc	11 07 47.6
	FRI	ePc	11 07 50.0
		epP	11 08 06.5
		e	11 08 22.2
	CMB	eP	11 07 52.0

DATE	STA	PHASE	TIME (UTC)
		ipP	11 08 08.2
		i	11 08 24.0
	ORV	ePc	11 07 53.3
		epP	11 08 10.0
	WDC	iPc	11 07 54.1
		epP	11 08 10.3
	MIN	ePc	11 07 55.1
USGS 10h55m18.0s 29.3S 177.5W			
h=59km mb=5.3			
Kermadec Islands			
Jan 13	FRI	ePc	13 32 42.7
	PRI	ePc	13 32 46.2
	PRS	ePc	13 32 50.2
	MHC	ePc	13 32 56.2
	GCC	eP	13 32 56.6
	ORV	iPc	13 33 03.4
	MIN	ePc	13 33 05.7
	WDC	eP	13 33 09.6
	FHC	eP	13 33 20.4
USGS 13h23m59.6s 5.8N 79.0W			
h=10km mb=5.5 Ms=5.2			
South of Panama			
Jan 14	FHC	eP	11 14 26.8
		i	11 14 30.0
	WDC	iPc	11 14 32.4
		eRPKP	11 42 48.1
	MIN	ePc	11 14 36.4
		i	11 14 39.7
		eRPKP	11 42 53.0
	ORV	ePc	11 14 39.7
		i	11 14 42.8
	BRK	eP	11 14 43.4
		e	11 14 46.9
	BKS	iPc	11 14 43.8
		i	11 14 47.0
		iPcP	11 15 00.0
		ipP	11 15 09
		esP	11 15 18.5
		ePP	11 17 18
		ePPP	11 19 07
		iS	11 23 42
		ipS	11 24 08
		isS	11 24 39
		isPS	11 25 24
		iSS	11 28 02
		esSS	11 28 53
		iG	11 31 29
		eLr	11 35 12
			AMP(μm) PER(s)
		PZ	1.4 1.3
	PCC	ePc	11 14 44.0
		i	11 14 47.1
	GCC	ePc	11 14 47.7
		i	11 14 51.0
	SAO	eP	11 14 50.0
		e	11 14 53.9
	CMB	iPc	11 14 50.2
	FRI	ePc	11 14 50.5
		i	11 14 56.5
	MHC	i	11 14 50.5
	PRS	iPc	11 14 52.9
		i	11 14 56.3
	LLA	ePc	11 14 53.6
		i	11 14 57.0
	PRI	ePc	11 14 57.8
		i	11 15 00.2
BRK mb=6.6 h=105km Distance=71°			
USGS 11h03m48.8s 42.6N 145.9E			
h=102km mb=6			
Hokkaido, Japan, Region			

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DATE	STA	PHASE	TIME (UTC)
Jan 14	FRI	eP	12 57 07.8
	PRI	eP	12 57 09.7
	LLA	eP	12 57 11.4
	PRS	eP	12 57 11.5
	CMB	eP	12 57 15.0
	BKS	eP	12 57 19.8
		AMP(μm)	PER(s)
		PZ 0.12	1.3
	ORV	eP	12 57 23.1
	WDC	eP	12 57 27.8
USGS 12h44m50.9s 32.6S 67.3W			
h=158km mb=5.5			
Mendoza Province, Argentina			
Jan 14	BRK	iPc	13 07 43.0
		iS	13 07 45.7
	BKS	iPc	13 07 43.2
		eS	13 07 45.8
		i	13 07 46.7
	ZSP	iPd	13 07 44.4
	PCC	eP	13 07 46.2
	MHC	eP	13 07 51.0
		eS	13 07 59.9
	SAO	eP	13 08 00.0
	CMB	i	13 08 23.1
BRK 13h07m40.0s 37.8N 122.1W			
h=7km ML=2.2(4) Mo=1.3E20(2)			
Oakland, 12 km NW of Hayward, CA			
Jan 15	PRS	eP	03 35 12.2
	SAO	iPd	03 35 14.6
	GCC	eP	03 35 17.2
	LLA	eP	03 35 19.4
	MHC	eP	03 35 23.4
	PRI	eP	03 35 23.5
	PCC	eP	03 35 25.5
	BKS	eP	03 35 29.4
		eS	03 35 53.4
		i	03 35 55.8
	ZSP	e(P)	03 35 30.9
	BRK	e(P)	03 35 33.7
	FRI	eP	03 35 35.0
	CMB	eP	03 35 39.8
BRK 03h35m04.7s 36.4N 121.9W			
h=7km ML=3.1(4)			
Hurricane Point, 28 km S of Monterey, CA			
Jan 15	BRK	ePc	03 36 23.4
	BKS	e(P)	03 36 23.8
		eS	03 36 31.6
		i	03 36 32.1
	PCC	eP	03 36 28.7
	MHC	e(P)	03 36 34.5
	GCC	e(P)	03 36 39.1
	SAO	eP	03 36 43.0
BRK 03h36m12.3s 38.3N 122.7W			
h=4km ML=2.6(4)			
13 km SE of Santa Rosa, CA			
Jan 15	ZSP	eP	14 52 53.8
	BRK	eP	14 52 54.4
	BKS	iPd	14 52 54.6
		e	14 53 03.1
	PCC	eP	14 52 59.7
	MHC	eP	14 53 07.2
		iS	14 53 26.0
	GCC	eP	14 53 09.0
	ORV	e(P)	14 53 13.5
	SAO	eP	14 53 14.0
	CMB	eP	14 53 14.1

DATE	STA	PHASE	TIME (UTC)
BRK 14h52m43.3s 38.3N 122.6W			
h=2km ML=2.6(4)			
13 km SE of Santa Rosa, CA			
Jan 16	FHC	eP	05 23 22.6
	WDC	ePc	05 23 28.3
	ORV	eP	05 23 35.5
	BRK	e	05 23 40.2
	PRS	e	05 23 43.6
	CMB	eP	05 23 44.2
USGS 05h12m48.5s 42.8N 145.1E			
h=54km mb=5.1 Ms=5.1			
Hokkaido, Japan, Region			
Jan 16	FRI	iPKPc	15 34 50.2
		i	15 34 56.3
	PRI	ePKPc	15 34 51.1
		e	15 34 56.1
		e	15 35 07.1
	LLA	ePKP	15 34 51.3
		e	15 34 56.7
		e	15 35 02.9
		i	15 35 07.4
	PRS	ePKP	15 34 51.3
		e	15 34 57.6
		e	15 35 07.6
	CMB	ePKPc	15 34 51.6
		e	15 34 56.8
	WDC	ePKP	15 34 54.2
		e	15 34 57.6
		i	15 35 21.1
	MHC	e	15 35 00.8
USGS 15h14m59.3s 52.9S 27.4E			
h=10km mb=5.5 Ms=4.9			
South of Africa			
Jan 16	FHC	iPc	20 20 07.7
		iS	20 20 14.2
	WDC	iPc	20 20 20.2
		iS	20 20 35.6
	MIN	iPc	20 20 30.0
		iS	20 20 55.6
	ORV	iPc	20 20 33.3
		iS	20 20 59.8
	ZSP	e(P)	20 20 42.6
	BRK	e(P)	20 20 43.9
	PCC	eP	20 20 46.6
	BKS	eP*	20 20 49.5
		ePg	20 20 55.2
	GCC	ePc	20 20 54.0
	MHC	iPc	20 20 56.2
	CMB	eP	20 20 56.9
	SAO	eP	20 21 00.7
		i	20 21 03.3
	LLA	eP	20 21 05.7
	PRS	ePc	20 21 07.4
	FRI	ePd	20 21 12.3
	PRI	e(P)	20 21 14.8
BRK 20h19m59.8s 40.4N 124.1W			
h=12km ML=3.7(6) Mo=4.7E21(4)			
42 km S of Eureka, CA			
Jan 17	FHC	eP	10 15 02.8
	WDC	ePc	10 15 08.3
	MIN	ePc	10 15 12.3
	ORV	iPc	10 15 15.3
	BRK	eP	10 15 18.9
	PCC	eP	10 15 19.3
	GCC	e(P)	10 15 22.7
	MHC	eP	10 15 23.4
	SAO	eP	10 15 25.3
	CMB	iPc	10 15 25.6

DATE	STA	PHASE	TIME (UTC)
	PRS	ePc	10 15 27.9
	LLA	eP	10 15 28.6
	FRI	ePc	10 15 30.7
	PRI	e	10 15 38.7
USGS 10h04m08.2s 39.8N 141.7E			
h=83km mb=5.0			
Honshu, Japan			
Jan 17	BRK	e(P)	11 34 45.0
	BKS	e(P)	11 34 45.8
		e	11 34 49.5
		e	11 34 51.3
		e	12 03 17
		eLr	12 04 35.6
		e	12 04 38
		e	12 04 47
		e	12 07 30
		e	12 07 32
		AMP(μm)	PER(s)
		PZ 0.092	001.4
		LZ 3.3	20.
		LN 2.6	20.
		LE 3.8	20.
	PRS	e(P)	11 34 46.6
	FRI	ePc	11 34 46.7
	WDC	ePc	11 34 47.9
	LLA	e(P)	11 34 48.6
	PRI	e(P)	11 34 48.9
	MHC	e(P)	11 34 49.0
	ORV	e(P)	11 34 49.7
	FHC	e	11 34 50.6
	CMB	e(P)	11 34 52.1
		e	11 38 15.0
BRK Ms=5.7 Distance=65°			
USGS 11h22m01.6s 10.8S 161.3E			
h=51km mb=4.8 Ms=5.4			
Solomon Islands			
Jan 18	GCC	ePc	18 27 31.7
	PCC	ePc	18 27 31.9
	PRS	ePc	18 27 32.0
	SAO	eP	18 27 32.6
	BRK	ePc	18 27 33.7
	PRI	ePc	18 27 34.0
		epP	18 28 31.7
	LLA	ePc	18 27 34.3
	MHC	ePc	18 27 34.6
		epP	18 28 32.0
	FHC	ePc	18 27 38.2
	FRI	ePc	18 27 39.3
		epP	18 28 37.3
	CMB	iPc	18 27 40.7
		epP	18 28 38.7
	ORV	ePc	18 27 41.7
		epP	18 28 39.9
	WDC	ePc	18 27 42.1
		epP	18 28 39.8
	MIN	ePc	18 27 44.0
		epP	18 28 42.2
Tonga Islands Region			
Jan 19	LLA	iPc	03 49 16.4
		iS	03 49 18.5
	PRS	iPc	03 49 20.2
		iS	03 49 24.2
	SAO	iPc	03 49 20.7
	PRI	ePc	03 49 24.3
		iS	03 49 36.2
	GCC	iPc	03 49 29.35
		i	03 49 31.35
	MHC	ePd	03 49 30.9
	FRI	ePc	03 49 34.2

DATE	STA	PHASE	TIME (UTC)
	PCC	ePc	03 49 37.4
	BRK	e(P)	03 49 40.2
	CMB	ePc	03 49 41.0
	BKS	ePn	03 49 41.0
		ePg	03 49 45.6
		e	03 50 12.7
BRK 03h49m13.6s 36.5N 121.1W			
h=7km ML=2.5(2)			
45 km SE of Hollister, CA			
Jan 19	WDC	eP	06 56 35.1
	MIN	eP	06 56 39.6
	ORV	eP	06 56 44.6
	BRK	e	06 56 51.3
	GCC	eP	06 56 51.7
	MHC	eP	06 56 52.4
	CMB	ePc	06 56 54.1
	PRS	eP	06 56 58.8
	LLA	eP	06 57 00.6
	FRI	ePc	06 57 02.2
	PRI	e	06 57 07.3
USGS 06h47m43.0s 54.7N 163.3E			
h=42km mb=5.4 Ms=5.2			
Off East Coast of Kamchatka			
Jan 19	MHC	iPd	08 09 08.5
	GCC	iPc	08 09 11.9
	SAO	iP	08 09 12.7
	PCC	iPc	08 09 18.1
	LLA	iPc	08 09 18.1
	PRS	iPd	08 09 20.0
	BKS	iPd	08 09 21.1
		iS	08 09 33.9
		e	08 10 49.5
	BRK	eP	08 09 21.4
	ZSP	iPd	08 09 22.5
		iS	08 09 36.5
	PRI	eP	08 09 26.4
		iS	08 09 48.4
	CMB	ePd	08 09 27.2
		iS	08 09 42.5
	FRI	iPc	08 09 31.2
	ORV	ePc	08 09 42.4
	MIN	eP	08 09 55.2
	WDC	eP	08 09 58.1
BRK 08h09m04.4s 37.2N 121.6W			
h=7km ML=4.0(5) Mo=1.3E22(3)			
Anderson Lake, 8 km NE of Morgan Hill, CA			
Jan 19	WDC	eP	11 29 54.3
	MIN	eP	11 29 54.6
	MHC	eP	11 30 25.1
	CMB	eP	11 30 34.2
	SAO	eP	11 30 45.2
	FRI	eP	11 30 47.3
USGS 11h27m03.0s 50.8N 129.6W			
h=10km mb=4.2			
Vancouver Island Region			
Jan 19	FHC	e(P)	21 32 39.0
	WDC	eP	21 32 44.9
	ORV	eP	21 32 54.4
	MHC	eP	21 33 05.7
	CMB	eP	21 33 07.0
	PRS	eP	21 33 12.7
	LLA	eP	21 33 12.8
	FRI	eP	21 33 15.7
	BKS	e	21 39 48
USGS 21h24m01.8s 56.1N 164.4E			
h=33km mb=4.9 Ms=4.9			
Komandorsky Islands Region			

DATE	STA	PHASE	TIME (UTC)
Jan 21	WDC	eP	01 21 17.7
	MIN	eP	01 21 21.5
	ORV	eP	01 21 23.8
	BRK	e(P)	01 21 24.9
	BKS	ePc	01 21 25.3
		AMP(μm)	PER(s)
		PZ 0.028	.7
	PCC	e(P)	01 21 25.4
	MHC	eP	01 21 28.8
	CMB	eP	01 21 32.2
	PRS	eP	01 21 32.4
	LLA	eP	01 21 33.1
	PRI	eP	01 21 35.8
	FRI	eP	01 21 37.1
USGS 01h09m34.3s 26.9N 143.9E			
h=33km mb=5.1			
Bonin Islands Region			
Jan 21	BKS	e(PKP)c	01 36 01.1
	MHC	ePKP	01 36 51.3
	FRI	ePKP	01 36 56.7
	CMB	ePKP	01 36 59.0
	MIN	ePKP	01 37 02.7
	WDC	ePKP	01 37 03.2
USGS 01h17m03.6s 57.9S 25.4W			
h=33km mb=5.4			
South Sandwich Islands Region			
Jan 21	FRI	iPc	11 18 48.1
		iS	11 19 03.3
	CMB	iPc	11 18 57.5
		iS	11 19 19.8
	PRI	eP	11 19 06.0
		eS	11 19 37.3
	LLA	e(P)	11 19 06.5
	SAO	eP	11 19 11.0
	MHC	eP	11 19 12.1
	PRS	eP	11 19 13.2
	BKS	ePn	11 19 18.7
		eP*	11 19 21.3
		ePg	11 19 27.4
		e	11 20 08.2
		e	11 20 13.3
	PCC	eP	11 19 19.5
	ORV	eP	11 19 23.0
BRK 11h18m27.3s 37.5N 118.4W			
h=8km ML=3.6(2)			
Chalfant Valley, 10 km NW of Bishop, CA			
Jan 21	FHC	e(P)	11 38 23.2
	WDC	iPc	11 38 28.6
		epP	11 38 59.3
	MIN	eP	11 38 31.5
	ORV	eP	11 38 33.0
	PCC	eP	11 38 33.2
	BRK	eP	11 38 34.1
	BKS	ePd	11 38 34.2
		epP	11 39 04.6
		e	11 39 11
		epS	11 39 20.4
		e	11 39 33.5
		e	11 39 41.2
		eS	11 48 25.6
		e(Lq)	11 59 00
		eLr	12 02 30
		AMP(μm)	PER(s)
		PZ 0.11	1.0
		LZ 1.1	20.
		LN 0.0	20.
		LE 0.96	20.

DATE	STA	PHASE	TIME (UTC)
	GCC	e(P)	11 38 35.6
	MHC	eP	11 38 37.1
		epP	11 39 08.4
	SAO	e(P)	11 38 39.5
	PRS	eP	11 38 40.5
		epP	11 39 11.1
	CMB	eP	11 38 40.9
		epP	11 39 12.3
	LLA	eP	11 38 41.8
	PRI	eP	11 38 44.0
	FRI	eP	11 38 45.5
BRK mb=5.8 h=127km Distance=79°			
USGS 11h26m36.6s 20.6N 144.9E			
h=118km mb=5.6			
Mariana Islands			
Jan 21	FRI	iPc	11 43 17.9
		iS	11 43 33.0
	CMB	iPc	11 43 27.3
		iS	11 43 49.4
	PRI	eP	11 43 35.9
		iS	11 44 06.9
	LLA	eP	11 43 36.0
	SAO	eP	11 43 40.2
	MHC	eP	11 43 41.8
	PRS	eP	11 43 42.2
	BKS	eP*d	11 43 49.0
		ePg	11 43 56.9
		eS*	11 44 30.3
		e	11 44 38.5
		eSg	11 44 42.8
	PCC	eP	11 43 58.8
BRK 11h42m57.0s 37.5N 118.4W			
h=9km ML=3.7(2)			
Chalfant Valley, 10 km NW of Bishop, CA			
Jan 22	GCC	eP	05 44 30.8
	PRS	eP	05 44 31.0
	PCC	eP	05 44 31.1
	PRI	eP	05 44 33.2
	LLA	eP	05 44 33.2
	BKS	eP	05 44 33.4
		AMP(μm)	PER(s)
		PZ 0.038	1.4
	MHC	eP	05 44 33.7
	FRI	eP	05 44 38.7
	CMB	eP	05 44 39.6
		epP	05 45 44.4
	WDC	eP	05 44 41.3
		epP	05 45 46.1
	MIN	eP	05 44 43.2
USGS 05h33m16.3s 18.8S 175.7W			
h=268km mb=5.2			
Tonga Islands			
Jan 22	WDC	eP	12 26 16.0
		epP	12 26 33.3
	MIN	eP	12 26 20.0
	ORV	eP	12 26 23.5
	BKS	eP	12 26 27.5
		AMP(μm)	PER(s)
		PZ 0.022	0.4
	MHC	eP	12 26 31.9
	CMB	ePc	12 26 34.3
		epP	12 26 51.9
	PRS	eP	12 26 37.0
	LLA	eP	12 26 37.6
	FRI	eP	12 26 40.6
USGS 12h15m44.5s 43.2N 146.8E			
h=65km mb=5.4			
Kuril Islands			

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DATE	STA	PHASE	TIME (UTC)
Jan 22	PRS	eP	14 20 00.7
	PRI	eP	14 20 02.5
	BKS	eP	14 20 03.2
		AMP(μm)	PER(s)
		PZ 0.028	0.7
	MHC	eP	14 20 03.4
	BRK	eP	14 20 03.5
	FRI	eP	14 20 07.0
	CMB	eP	14 20 08.3
	WDC	eP	14 20 11.0
USGS 14h07m57.9s 31.3S 179.9E			
h=398km mb=5.1			
Kermadec Islands Region			
Jan 23	WDC	iPd	21 30 20.0
	MIN	eP	21 30 23.3
	PCC	eP	21 30 24.0
	BRK	eP	21 30 24.3
	BKS	ePd	21 30 24.4
		AMP(μm)	PER(s)
		PZ 0.047	0.8
	ORV	eP	21 30 24.8
	GCC	eP	21 30 26.2
	MHC	eP	21 30 27.6
	PRS	eP	21 30 29.8
	LLA	eP	21 30 31.0
	CMB	ePd	21 30 31.2
	PRI	eP	21 30 33.2
	FRI	eP	21 30 35.0
USGS 21h18m09.4s 13.9N 144.7E			
h=154km mb=5.0			
Mariana Islands			
Jan 24	WDC	eP	08 22 41.7
	MIN	eP	08 22 49.8
	ORV	eP	08 22 50.2
	CMB	eP	08 23 02.0
	FRI	eP	08 23 07.0
USGS 08h09m21.3s 41.5N 79.3E			
h=28km mb=5.9 Ms=5.9			
Kirgiz-Sinkiang Border Region			
Jan 25	FRI	eP	10 40 19.1
	PRI	eP	10 40 21.9
	LLA	eP	10 40 25.3
	PRS	eP	10 40 26.1
	CMB	eP	10 40 27.9
		i	10 40 52.0
	SAO	e	10 40 32.3
	MHC	eP	10 40 32.4
		i	10 40 42.0
	GCC	eP	10 40 33.0
	BRK	eP	10 40 37.1
	BKS	eP	10 40 37.2
		i	10 40 41.3
		i	10 40 46.4
		e	10 48 08
		eLr	10 57 12
		AMP(μm)	PER(s)
		PZ 0.036	1.1
	ORV	eP	10 40 39.9
	MIN	eP	10 40 42.0
	WDC	eP	10 40 47.0
USGS 10h31m22.8s 3.1N 79.3W			
h=12km mb=5.6 Ms=5.2			
South of Panama			
Jan 27	WDC	ePc	01 42 00.2
	MHC	e	01 42 01.5
	CMB	eP	01 42 16.3
USGS 01h30m38.6s 35.5N 140.8E			
h=61km mb=5.1			
Near East Coast of Honshu, Japan			
Jan 27	CMB	ePc	07 19 15.5
	ORV	eP	07 19 24.6
	WDC	e	07 19 41.5
USGS 07h06m52.0s 32.2S 72.1W			
h=34km mb=5.0 Ms=5.4			
Off Coast of Central Chile			
Jan 27	FRI	iPc	17 57 32.5
		iS	17 57 47.4
	CMB	iPc	17 57 39.5
		iS	17 58 00.4
	LLA	iPc	17 57 49.2
	PRI	ePc	17 57 51.0
		iS	17 58 22.5
	MHC	ePc	17 57 54.0
	SAO	iP	17 57 54.5
	PRS	ePc	17 57 56.2
	GCC	eP	17 57 59.3
	ORV	eP	17 58 00.7
	BRK	ePc	17 58 01.0
	BKS	ePc	17 58 01.3
	PCC	eP	17 58 02.0
	ZSP	eP	17 58 02.0
	MIN	e(P)	17 58 10.0
	WDC	eP	17 58 19.4
BRK 17h57m11.2s 37.6N 118.5W			
h=8km ML=3.8(2)			
Chalfant Valley, 28 km NW of Bishop, CA			
Jan 28	WDC	ePd	23 36 20.4
	MIN	eP	23 36 24.1
	BRK	eP	23 36 25.5
	ORV	ePd	23 36 25.8
	PRS	eP	23 36 31.2
	LLA	eP	23 36 32.5
	CMB	ePd	23 36 32.8
		e	23 38 12.4
	PRI	eP	23 36 35.1
	FRI	eP	23 36 37.0
USGS 23h24m26.7s 18.6N 147.7E			
h=59km mb=5.2			
Mariana Islands Region			
Jan 29	MHC	e	02 58 05.4
	CMB	e(P)	02 58 05.5
		ePP	03 02 32.4
		ePKKP	03 13 44.2
	FRI	e(P)	02 58 07.0
		ePP	03 02 27.8
	WDC	ePP	03 02 15.2
		ePKKP	03 13 52.5
USGS 02h43m47.7s 1.3N 126.2E			
h=48km mb=5.8 Ms=5.9			
Molucca Passage			
Jan 29	FRI	eP	17 34 45.3
	PRI	eP	17 34 46.5
	LLA	eP	17 34 48.8
	PRS	eP	17 34 49.0
	CMB	ePd	17 34 52.3
	GCC	eP	17 34 53.5
	MHC	eP	17 34 54.0
	BRK	eP	17 34 57.2
	BKS	ePd	17 34 57.5
		AMP(μm)	PER(s)
		PZ 0.073	0.9
	ORV	eP	17 35 01.5
	WDC	eP	17 35 06.4
USGS 17h22m39.5s 29.8S 71.2W			
h=65km mb=5.4			
Near Coast of Central Chile			
Jan 30	BRK	iPd	01 34 48.4
	BKS	iPd	01 34 48.5
		iS	01 34 51.7
	ZSP	iP	01 34 49.7
	PCC	iP	01 34 50.7
	MHC	iP	01 34 55.4
		eS	01 35 04.58
	GCC	iPd	01 34 57.9
	SAO	iPd	01 35 03.5
	CMB	iPc	01 35 08.7
	PRS	eP	01 35 10.0
	LLA	e(P)	01 35 10.0
	ORV	eP	01 35 14.9
	PRI	eP	01 35 17.2
	FRI	eP	01 35 17.7
	MIN	eP	01 35 27.5
	WDC	eP	01 35 28.1
BRK 01h34m44.9s 37.7N 122.1W			
h=9km ML=3.6(8) Mo=8.1E21(2)			
8 km N of Hayward, CA			
Jan 30	BKS	ePdiff	22 45 19
		ePKP	22 48 36.4
		i	22 48 40.2
		i	22 48 41.5
		ePKP	22 48 43
		e	22 50 22
		ePP	22 51 16
		ePKS	22 52 47
		ePPP	22 53 18
		e	22 54 20
		eSKS1	22 55 52
		iSKS	22 55 54
		e	23 00 19
		ePS	23 01 02
		ePPS	23 02 01
		e	23 02 55
		e	23 04 17
		e	23 05 29
		ePSPS	23 07 40
		eSS	23 07 46
		eScS2	23 10 29
		eSSS	23 11 37
		eG	23 23 24
		eLr	23 29 40
		AMP(μm)	PER(s)
		PKPZ 0.028	0.8
		LZ 37	20.
		LNE 30	20.
		LNW 0.0	20.
		e 00 22 38	
	FRI	ePKP	22 48 33.1
	PRI	ePKP	22 48 33.5
	CMB	ePKP	22 48 35.4
		e	22 50 18.8
	BRK	ePKP	22 48 36.5
	GCC	ePKP	22 48 37.3
	PRS	ePKP	22 48 37.6
	LLA	ePKP	22 48 39.1
	WDC	ePKP	22 48 40.2
		e	22 50 22.5
	MHC	ePKP	22 48 40.2
	ORV	ePKP	22 48 42.4
	MIN	e	22 48 44.3
BRK Ms=6.9 Distance=123°			
USGS 22h29m42.1s 60.1S 26.9W			
h=47km mb=6.2 Ms=7.0			
South Sandwich Islands Region			
Jan 31	PRS	iPd	03 03 02.6
	SAO	iPd	03 03 08.0
	LLA	iPd	03 03 10.7
	PRI	iPd	03 03 13.9
		iS	03 03 24.6
	GCC	iPc	03 03 15.9
	MHC	iPd	03 03 20.0
	PCC	ePc	03 03 23.8
	FRI	eP	03 03 28.0
	BRK	eP	03 03 28.3
	BKS	eP	03 03 28.3
		i	03 03 38.7
		e	03 03 51.9
		e	03 03 52.3
	ZSP	eP	03 03 29.9
	CMB	ePc	03 03 32.8
		iS	03 03 56.1
BRK 03h03m00.8s 36.3N 121.5W			
h=6km ML=3.3(6) Mo=1.4E21(2)			
34 km NW of King City, CA			
Jan 31	GCC	eP	06 37 09.0
	PRS	eP	06 37 09.6
	LLA	eP	06 37 09.7
	SAO	eP	06 37 11.0
	PRI	eP	06 37 11.5
	MHC	eP	06 37 11.7
	FRI	eP	06 37 17.1
	CMB	eP	06 37 17.8
	ORV	eP	06 37 18.2
	WDC	ePc	06 37 18.3
	MIN	eP	06 37 20.4
USGS 06h26m17.7s 18.0S 178.5W			
h=585km mb=5.3			
Fiji Islands Region			
Feb 1	WDC	iPc	04 20 40.6
	MIN	ePc	04 20 45.1
	ORV	ePc	04 20 49.3
	BKS	e	04 20 54.1
	PCC	e	04 20 55.8
	MHC	eP	04 21 00.3
	CMB	ePc	04 21 02.0
	PRS	eP	04 21 06.3
	LLA	eP	04 21 06.8
	FRI	eP	04 21 09.3
USGS 04h11m40.1s 53.0N 158.7E			
h=158km mb=4.8			
Near East Coast of Kamchatka			
Feb 1	PCC	iPc	14 51 56.1
		iS	14 51 59.8
	BRK	iPd	14 51 56.7
		iS	14 52 01.4
	BKS	iPd	14 51 57.2
		iS	14 52 01.1
	ZSP	iPd	14 51 57.8
		iS	14 52 03.5
	MHC	iP	14 52 06.4
		eS	14 52 18.1
	GCC	iPd	14 52 06.6
		iS	14 52 16.7
	SAO	iPc	14 52 12.9
	CMB	ePc	14 52 20.3
		iS	14 52 42.3
BRK 14h51m51.3s 37.7N 122.5W			
h=9km ML=2.8(4) Mo=3.0E20(2)			
Off Coast 12 km SW of San Francisco, CA			
Feb 1	PCC	iPc	17 53 23.7
		iS	17 53 27.0
	BRK	iPd	17 53 24.4
		iS	17 53 28.0
	BKS	iPd	17 53 24.7
		iS	17 53 28.4
	ZSP	iPd	17 53 25.6
		iS	17 53 28.2
	GCC	eP	17 53 33.6
	MHC	iPc	17 53 34.1
		eS	17 53 44.6
	SAO	iP	17 53 40.5
	LLA	eP	17 53 46.4
	CMB	iPc	17 53 48.2
		iS	17 54 10.0
	FRI	eP	17 53 56.6
	PRS	eP	17 53 56.8
BRK 17h53m19.0s 37.7N 122.5W			
h=9km ML=3.4(4) Mo=1.1E21(4)			
Off Coast 12 km SW of San Francisco, CA			
Feb 1	FRI	eP	18 32 40.8
	PRI	eP	18 32 45.4
	CMB	eP	18 32 52.3
		e	18 33 44.0
USGS 18h26m44.3s 17.1N 93.6W			
h=167km mb=4.6			
Chiapas, Mexico			
Feb 2	ARC	eP	01 57 20.5
		iS	01 57 26.2
	FHC	iPd	01 57 20.9
		iS	01 57 26.6
	WDC	iPc	01 57 35.5
		iS	01 57 53.6
	MIN	iPc	01 57 45.7
		iS	01 58 13.2
	ORV	eP	01 57 49.5
	SAO	e	01 58 16.0
BRK 01h57m12.5s 40.6N 124.5W			
h=22km ML=3.8(4) Mo=1.8E21(2)			
Off Coast 32 km SW of Eureka, CA			
Feb 3	WDC	ePKP	10 34 00.0
	MIN	ePKP	10 34 01.7
	ORV	ePKPc	10 34 03.6
	PCC	ePKP	10 34 05.0
	BRK	ePKP	10 34 05.2
	BKS	ePKP	10 34 05.3
	GCC	ePKPc	10 34 07.0
	MHC	iPKPc	10 34 07.6
	CMB	ePKPc	10 34 08.9
	PRS	ePKPc	10 34 09.6
	LLA	ePKPc	10 34 09.9
	FRI	iPKPc	10 34 11.8
	PRI	ePKPc	10 34 11.9
		e	10 34 20.2
	MNA	iPKPc	10 34 13.5
USGS 10h14m26.9s 17.2S 90.0E			
h=10km mb=4.9			
South Indian Ocean			
Feb 3	FRI	e(P)	16 55 19.5
		epP	16 55 30.0
	PRI	eP	16 55 20.1
	PRS	eP	16 55 22.1
		epP	16 55 32.6
	LLA	eP	16 55 22.2
		epP	16 55 32.7
	MNA	eP	16 55 23.2
		epP	16 55 33.4
	CMB	eP	16 55 26.8
	MHC	eP	16 55 27.0
		epP	16 55 37.1
	BKS	eP	16 55 30.7
		e	16 55 40.4
		AMP(μm)	PER(s)
		PZ 0.025	.8
	ORV	eP	16 55 34.7
	GCC	epP	16 55 36.7
USGS 16h42m41.3s 37.8S 72.9W			
h=31km mb=5.8 Ms=5.5			
Central Chile			
Feb 3	SAO	iPd	17 21 57.1
	GCC	eP	17 22 02.0
	PRS	eP	17 22 04.8
		eS	17 22 14.0
	LLA	eP	17 22 05.6
		eS	17 22 15.2
	PCC	eP	17 22 11.7
	PRI	eP	17 22 14.2
	BKS	iPc	17 22 17.1
		e	17 22 17.2
		e	17 22 18.5
		eS	17 22 32.7
		e	17 22 33.6
	BRK	e(P)	17 22 17.2
	FRI	eP	17 22 21.7
	CMB	e(P)	17 22 22.7
BRK 17h21m54.5s 36.8N 121.6W			
h=2km ML=2.5(4)			
17 km W of Hollister, CA			
Feb 4	BRK	eP	02 29 25.5
	BKS	ePd	02 29 25.6
		eS	02 34 18
		eLq	02 34 56
		e	02 36 48
		eLr	02 38 07
		AMP(μm)	PER(s)
		PZ 0.13	.9
	SAO	eP	02 29 26.6
	PRS	eP	02 29 27.0
	MHC	eP	02 29 27.7
	LLA	eP	02 29 30.7
	PRI	eP	02 29 31.0
	WDC	eP	02 29 33.1
	ORV	eP	02 29 35.1
		e	02 29 46.0
	MIN	eP	02 29 37.3
		e	02 29 48.0
	CMB	eP	02 29 38.4
		e	02 29 48.3
	FRI	eP	02 29 38.8
	MNA	eP	02 29 53.7
		e	02 30 03.8
BRK mb=5.8 h=33km Distance=33°			
USGS 02h22m32.8s 20.1N 156.5W			
h=10km mb=5.2 Ms=4.9			
Hawaiian Islands			
Feb 4	FRI	eP	08 02 55.0
	CMB	eP	08 02 56.7
	ORV	eP	08 02 57.8
	WDC	eP	08 02 58.4
	MNA	eP	08 03 06.0
USGS 07h51m27.2s 17.6S 174.0W			
h=115km mb=4.8			
Tonga Islands			
Feb 4	WDC	eP	11 45 39.2
	MIN	eP	11 45 46.0
	ORV	eP	11 45 55.5

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DATE	STA	PHASE	TIME (UTC)
	BKS	e	11 46 11.5
USGS 11h42m54.3s 50.7N 129.7W			
h=10km mb=4.3 Ms=3.8			
Vancouver Island Region			
Feb 4	PRS	eP	16 19 33.8
		epP	16 19 42.4
	PRI	e(P)	16 19 35.5
	MHC	eP	16 19 36.5
		epP	16 19 54.8
	BKS	eP	16 19 36.5
		e	16 19 41
		ePP	16 19 54.5
		AMP(μm)	PER(s)
		PZ 0.011	0.7
	FRI	eP	16 19 40.0
		epP	16 19 57.4
	CMB	eP	16 19 41.5
		epP	16 20 00.1
	WDC	eP	16 19 44.3
		epP	16 20 03.0
USGS 16h06m42.8s 34.7S 179.9W			
h=61km mb=5.2			
South of Kermadec Islands			
Feb 6	WDC	ePc	06 35 00.0
		e	06 35 10.5
	MHC	e(P)	06 35 07.2
	PRS	eP	06 35 09.2
	CMB	ePc	06 35 10.8
	PRI	e(P)	06 35 12.4
	FRI	eP	06 35 14.3
	MNA	ePc	06 35 18.8
USGS 06h22m22.2s 11.6N 143.3E			
h=31km mb=5.0			
South of Mariana Islands			
Feb 6	FHC	eP	12 34 57.4
	WDC	ePc	12 35 03.1
	MIN	eP	12 35 06.8
	ORV	eP	12 35 09.8
	BRK	eP	12 35 12.7
		eS	12 44 38
		eLr	12 57 15
	PCC	eP	12 35 13.2
	BKS	ePd	12 35 13.5
		ePcP	12 35 56.5
		eS	12 44 36
		iScS	12 45 08
		eSSS	12 52 58
		eG	12 53 56
		eLr	12 56 36
		e	13 02 20
		AMP(μm)	PER(s)
		PZ 0.11	1.2
	GCC	eP	12 35 16.0
	MHC	eP	12 35 17.2
	CMB	ePc	12 35 19.6
	SAO	eP	12 35 21.1
		eT	13 26 09
	PRS	eP	12 35 21.4
	LLA	e(P)	12 35 22.2
	PRI	eP	12 35 25.2
	FRI	ePc	12 35 25.3
	MNA	ePc	12 35 27.3
BRK Ms=5.7 Distance=72°			
USGS 12h23m48.0s 37.0N 141.8E			
h=35km mb=5.9 Ms=6.1			
Near East Coast of Honshu, Japan			
Feb 6	FHC	eP	13 27 27.6
	WDC	ePd	13 27 33.2
	MIN	eP	13 27 36.3
	ORV	eP	13 27 40.3
	BKS	eP	13 27 41.5
		ePcP	13 28 31
		iS	13 37 05
		eScS	13 37 40
		eSS	13 41 40
		eSSS	13 45 08
		eLr	13 49 07
		AMP(μm)	PER(s)
		LZ 2.7	20.
		LN 11	20.
		LE 9.3	20.
	PCC	eP	13 27 43.3
	BRK	eP	13 27 43.3
	GCC	eP	13 27 46.3
	MHC	ePd	13 27 47.0
	CMB	eP	13 27 49.0
		i	13 27 54.7
		i	13 28 38.0
	SAO	eP	13 27 51.3
		eT	14 48 07.0
	PRS	ePd	13 27 51.4
	LLA	e	13 27 54.1
	PRI	eP	13 27 55.1
	FRI	eP	13 27 55.4
	MNA	ePd	13 27 56.4
BRK Ms=6.3 Distance=73°			
USGS 13h16m17.9s 37.0N 141.7E			
h=47km mb=6.1 Ms=6.3			
Near East Coast of Honshu, Japan			
Feb 7	WDC	eP	12 10 48.2
	ORV	e	12 10 54.6
	MIN	e	12 10 56.8
	CMB	e	12 10 57.9
	FRI	e	12 11 02.5
	MNA	e	12 11 10.7
	BKS	e	12 22 32
		ePP	12 23 20
		ePPP	12 25 04
		eS	12 28 30
		eLq	12 36 20
		eLr	12 40 16
		AMP(μm)	PER(s)
		LZ 13	20.
		LN 3.6	20.
		LE 8.2	20.
USGS 11h57m33.9s 5.8S 147.7E			
h=27km mb=5.6 Ms=6.1			
Papua New Guinea Region			
Feb 7	WDC	ePKPc	15 43 19.2
	MIN	ePKP	15 43 20.7
	ORV	ePKP	15 43 21.3
	CMB	ePKP	15 43 23.2
	BRK	ePKP	15 43 23.5
	MHC	ePKP	15 43 24.1
	PRS	ePKP	15 43 25.4
	FRI	ePKP	15 43 26.5
	MNA	ePKP	15 43 27.6
	PRI	e(PKP)	15 43 28.1
USGS 15h24m22.4s 4.9S 103.3E			
h=59km mb=5.4			
Southern Sumatra			
Feb 7	WDC	eP	18 18 30.8
	MIN	eP	18 18 35.2
	ORV	eP	18 18 38.6
	CMB	eP	18 18 50.2
	FRI	eP	18 18 56.7
	MNA	eP	18 18 57.4
USGS 18h08m34.0s 46.5N 149.8E			
h=152km mb=5.1			
Kuril Islands			
Feb 7	BRK	eP	20 41 41.0
	GCC	eP	20 41 42.0
	BKS	eP	20 41 42.3
		AMP(μm)	PER(s)
		PZ 0.041	0.8
	PRS	eP	20 41 43.4
	MHC	eP	20 41 43.7
	WDC	eP	20 41 44.5
	PRI	eP	20 41 46.2
	ORV	eP	20 41 46.3
	CMB	eP	20 41 48.7
	FRI	eP	20 41 50.0
	MNA	eP	20 41 52.8
USGS 20h29m08.4s 10.2S 161.0E			
h=74km mb=5.0			
Solomon Islands			
Feb 8	MNA	eP	12 50 43.8
	CMB	eP	12 50 53.0
	BKS	e(P)	12 50 59.4
		e	12 51 15.3
	ORV	eP	12 51 07.0
	MIN	eP	12 51 10.5
	WDC	eP	12 51 14.3
USGS 12h44m00.0s 13.8N 91.0W			
h=69km mb=4.3			
Near Coast of Guatemala			
Feb 8	FHC	e	18 47 07.5
	WDC	eP	18 47 09.0
	BRK	eP	18 47 11.5
	ORV	eP	18 47 12.0
	BKS	eP	18 47 12.6
		ePP	18 51 15
		eSKS	18 57 32
		eSKKS	18 57 48
		eS	18 58 36
		e	18 58 54
		eSP	18 59 42
		eSPP	19 00 28
		e	19 01 18
		eLq	19 12 16
		eLr	19 16 48
		AMP(μm)	PER(s)
		PZ 0.053	1.2
		LZ 180	20.
		LNE 180	20.
		LNW 86	20.
	MHC	eP	18 47 12.7
	MIN	eP	18 47 13.0
	PRS	eP	18 47 14.0
	LLA	e	18 47 16.0
	PRI	eP	18 47 16.4
	CMB	eP	18 47 17.4
	FRI	e	18 47 20.4
	MNA	eP	18 47 26.8
BRK Ms=7.6 Distance=94°			
USGS 18h33m58.4s 6.1S 147.7E			
h=54km Ms=7.4			
Papua New Guinea Region			
Feb 9	WDC	eP	02 24 46.4
	ORV	eP	02 24 47.3
	CMB	eP	02 24 52.9
USGS 02h11m10.3s 6.0S 147.7E			
h=33km mb=5.6 Ms=5.1			
Papua New Guinea Region			
Feb 9	MNA	eP	06 23 28.8
	PRI	e	06 23 31.8
	CMB	eP	06 23 37.8
	ORV	e	06 23 51.3
	MIN	eP	06 23 55.2
	WDC	eP	06 23 59.1
USGS 06h16m46.5s 14.1N 90.5W			
h=93km mb=4.7			
Guatemala			
Feb 9	WDC	ePd	07 01 15.3
	MIN	eP	07 01 17.9
	MHC	e	07 01 18.0
	ORV	eP	07 01 18.3
	PRI	eP	07 01 21.4
	CMB	eP	07 01 21.7
	FRI	eP	07 01 24.0
	MNA	eP	07 01 30.7
	BKS	e(Lr)	07 31 10
		e	07 35 12
		e	07 38 56
USGS 06h48m00.2s 6.1S 147.7E			
h=33km mb=5.6 Ms=5.1			
Papua New Guinea Region			
Feb 9	GCC	iPd	16 09 01.2
	PCC	iPd	16 09 01.3
	BRK	iPd	16 09 02.2
	ZSP	iPc	16 09 02.9
		iS	16 09 13.9
	MHC	eP	16 09 04.3
		iS	16 09 06.2
	SAO	iPc	16 09 05.8
	LLA	iPc	16 09 10.2
	CMB	iPd	16 09 11.5
	PRS	ePc	16 09 12.0
	PRI	ePc	16 09 17.8
	FRI	ePc	16 09 18.9
	ORV	e	16 09 24.0
	MIN	e	16 09 37.0
	WDC	e	16 09 38.2
	MNA	eP	16 09 39.6
BRK 16h08m51.0s 37.5N 121.7W			
h=7km ML=3.5(6) Mo=4.5E21(4)			
Mt. Lewis area, 20 km SE of Livermore, CA			
Feb 9	WDC	eP	18 30 42.4
	ORV	eP	18 30 46.3
	CMB	eP	18 30 48.6
	FRI	e	18 30 52.2
	MNA	eP	18 30 58.6
	BKS	ePS	18 43 16
		eSS	18 48 32
		eS	18 48 41
		eLq	18 56 24
		eLr	19 00 24
		AMP(μm)	PER(s)
		LZ 4.0	20.
		LN 1.3	20.
		LE 3.6	20.
BRK Ms=5.9 Distance=94°			
USGS 18h17m30.6s 6.0S 147.8E			
h=44km mb=5.7 Ms=5.7			
Papua New Guinea Region			
Feb 9	FHC	eP	22 55 16.3
	WDC	ePc	22 55 21.1
	PCC	e	22 55 24.3
	MIN	eP	22 55 24.4
	BRK	eP	22 55 25.1
	ORV	eP	22 55 25.5
	BKS	eP	22 55 26.6
		AMP(μm)	PER(s)
		PZ 0.083	1.0
	GCC	eP	22 55 26.9
	MHC	eP	22 55 28.3
	PRS	eP	22 55 30.4
	SAO	e	22 55 30.8
	CMB	iPc	22 55 32.0
	LLA	e	22 55 32.4
	PRI	eP	22 55 33.8
	FRI	eP	22 55 35.6
	MNA	eP	22 55 40.2
USGS 22h42m59.6s 12.9N 144.1E			
h=105km mb=5.1			
South of Mariana Islands			
Feb 10	PCC	iPd	01 10 40.0
		epP	01 12 09.0
	GCC	iPd	01 10 40.0
		epP	01 12 08.9
	PRS	iPd	01 10 40.3
		epP	01 12 09.2
	SAO	iPd	01 10 41.0
		epP	01 12 10
	BRK	iPd	01 10 41.8
		epP	01 12 10.5
	BKS	iP	01 10 42
		ipP	01 12 08
		i	01 12 11.2
		esP	01 12 48
		iPP	01 13 40
		esPP	01 16 06
		iS	01 20 01
		eSP	01 20 48
		esS	01 22 26
		isSP	01 23 18
		eSS	01 25 06
		esSS	01 27 14
		eSSS	01 28 30
		eG	01 31 15
		AMP(μm)	PER(s)
		PZ 0.90	1.1
	PRI	iPd	01 10 42.4
		epP	01 12 10.7
	LLA	ePd	01 10 42.4
	MHC	iPd	01 10 42.7
		epP	01 12 11.3
	FHC	iPd	01 10 46.2
	FRI	iPd	01 10 47.6
		epP	01 12 17.0
	CMB	iPd	01 10 48.7
		ipP	01 12 17.9
	ORV	iPd	01 10 49.5
		ipP	01 12 18.8
	WDC	iPd	01 10 49.6
		ipP	01 12 18.9
		e	01 20 28.4
	MIN	iPd	01 10 51.3
		epP	01 12 20.9
	MNA	iPd	01 10 57.8
		ipP	01 12 27.0
BRK mb=6.4 h=396km Distance=77°			
USGS 00h59m28.6s 19.5S 177.5W			
h=394km mb=6.2			
Fiji Islands Region			
Feb 10	MHC	e	02 21 40.9
	PRI	e	02 21 42.0
	CMB	ePc	02 21 45.5
	WDC	ePc	02 21 48.3
	MIN	eP	02 21 48.5
	MNA	eP	02 21 53.5
USGS 02h09m17.6s 28.1S 176.6W			
h=46km mb=5.0			
Kermadec Islands Region			
Feb 10	MNA	eP	02 57 52.0
	CMB	eP	02 58 01.7
	PRS	e	02 58 02.4
	MHC	eP	02 58 05.1
	ORV	eP	02 58 13.5
	MIN	eP	02 58 16.5
	WDC	eP	02 58 20.8
USGS 02h48m57.5s 3.1N 79.3W			
h=27km mb=5.1 Ms=5.0			
South of Panama			
Feb 10	MHC	iPc	05 24 27.2
		iS	05 24 30.25
	GCC	iPd	05 24 33.7
	PCC	iPc	05 24 33.8
	BKS	iP	05 24 34.5
		eS	05 24 43.4
	BRK	iPc	05 24 34.6
	ZSP	iPc	05 24 35.7
	SAO	iPd	05 24 38.1
	LLA	iPc	05 24 42.6
	CMB	iPd	05 24 44.1
		iS	05 25 00.7
	PRS	eP	05 24 44.6
	PRI	iPc	05 24 50.8
	FRI	ePc	05 24 51.5
	MIN	e	05 25 10.2
	MNA	e	05 25 10.2
	WDC	e	05 25 10.9
BRK 05h24m23.5s 37.5N 121.7W			
h=7km ML=3.3(6) Mo=1.1E21(2)			
Mt Lewis area, 20 km SE of Livermore, CA			
Feb 10	WDC	eP	06 05 50.7
		e	06 05 59.7
	CMB	eP	06 06 09.9
		e	06 06 18.0
	PRS	eP	06 06 12.9
	MNA	eP	06 06 17.5
		e	06 06 25.9
USGS 05h55m20.1s 42.3N 147.9E			
h=41km mb=5.2 Ms=4.5			
Off Coast of Hokkaido, Japan			
Feb 10	WDC	ePc	16 35 05.3
	ORV	eP	16 35 13.1
	CMB	ePc	16 35 22.7
	PRS	eP	16 35 24.0
	FRI	ePc	16 35 28.3
	MNA	ePc	16 35 30.2
USGS 16h23m50.9s 35.6N 143.0E			
h=37km mb=5.1 Ms=5.2			
Off East Coast of Honshu, Japan			
Feb 10	PRS	eP	23 15 30.7
	MHC	eP	23 15 32.6
	FRI	eP	23 15 37.1
	CMB	eP	23 15 38.2
	WDC	eP	23 15 38.3
	ORV	eP	23 15 38.8
	MNA	eP	23 15 46.
USGS 23h03m01.6s 21.9S 175.2W			
h=10km mb=4.9			
South of Fiji Islands			
Feb 11	BKS	eP	00 05 47.6
		epP	00 06 06.0

International Seismological Centre

DATE	STA	PHASE	TIME (UTC)
		isP	08 09 14
		ePP	08 12 18
		ePPP	08 14 44
		i(SKS)	08 18 14
		iS	08 19 14
		iPS	08 19 46
		ePPS	08 20 24
		i	08 23 23
		e	08 23 24
		iSS	08 24 20
		e	08 25 06
		eSSS	08 28 20
		eLq	08 30 15
		eLr	08 33 52
			AMP(μm) PER(s)
		PZ	0.16 1.2
		LZ	23 20.
		LN	9.3 20.
		LE	16 20.
	PRS	eP	08 08 48.0
		epP	08 09 08.0
	MHC	eP	08 08 49.0
		epP	08 09 08.9
		ePP	08 12 05.0
	PRI	eP	08 08 50.0
		epP	08 09 09.0
	WDC	eP	08 08 51.9
		epP	08 09 11.9
	ORV	eP	08 08 53.1
		epP	08 09 13.2
	MIN	eP	08 08 54.1
		epP	08 09 14.3
		ePP	08 12 20.3
	CMB	eP	08 08 54.3
		epP	08 09 14.5
	FRI	eP	08 08 54.6
		epP	08 09 14.8
		ePP	08 12 17.0
	MNA	eP	08 09 03.2
		epP	08 09 23.4
	PCC	epP	08 09 05.9
	GCC	epP	08 09 06.6
	BRK	epP	08 09 07.3
	FHC	epP	08 09 07.9
	SAO	epP	08 09 08.0

BRK Ms=6.5 Distance=84°
USGS 07h56m12.9s 15.8S 167.4E
h=23km mb=5.9 Ms=6.4
Vanuatu Islands

Feb 11	MNA	iPc	16 45 37.9
		eS	16 46 13.4
	FRI	ePc	16 45 48.5
	CMB	eP	16 45 57.4
		eS	16 46 55.3
	PRI	eP	16 46 01.8
	LLA	eP	16 46 03.5
	PRS	eP	16 46 07.8
	SAO	eP	16 46 08.2
	MHC	eP	16 46 12.2
	ORV	eP	16 46 16.8
	BKS	eP	16 46 29.4

BRK ML=4.2(6)
USGS 16h45m00.0s 37.0N 116.0W
h=0km mb=4.5
Underground Nuclear Explosion, N.T.S.

Feb 11	FHC	eP	17 53 26.5
		ePcP	17 55 13.1
	WDC	eP	17 53 30.9
		ePcP	17 55 18.1
	NIN	eP	17 53 33.9
		ePcP	17 55 22.0
	ORV	eP	17 53 37.0
		ePcP	17 55 25.0
	BRK	eP	17 53 41.6
	PCC	eP	17 53 43.2
	BKS	iP	17 53 45.2
		esPS	18 05 50
		eG	18 13 46
			AMP(μm) PER(s)
		PZ	0.16 1.0
	MHC	eP	17 53 45.8
	CMB	eP	17 53 47.2
		ePcP	17 55 36.2
	SAO	eP	17 53 47.9
	PRS	eP	17 53 50.2
		ePcP	17 55 39.5
	LLA	eP	17 53 50.7
	MNA	eP	17 53 53.0
		ePcP	17 55 42.3
	FRI	eP	17 53 53.0
		ePcP	17 55 42.4
	PRI	eP	17 53 54.0
		ePcP	17 55 43.2
	GCC	ePcP	17 55 34.2

BRK mb=6.1 h=33km Distance=77°
USGS 17h42m51.0s 43.2N 132.3E
h=499km mb=5.5
Near East Coast of Eastern Russia

Feb 11	GCC	eP	20 06 12.0
	PCC	eP	20 06 12.1
	PRS	eP	20 06 12.1
	PRI	eP	20 06 14.0
	MHC	eP	20 06 14.5
	BKS	iP	20 06 14.7
			AMP(μm) PER(s)
		PZ	0.069 1.3
	FRI	eP	20 06 19.0
	CMB	eP	20 06 20.1
	ORV	eP	20 06 21.3
	WDC	eP	20 06 21.7
	NIN	eP	20 06 23.0

USGS 19h54m53.2s 22.9S 179.5W
h=524km mb=5.1
South of Fiji Islands

Feb 12	ZSP	ePc	19 33 22.4
		eS	19 33 35.7
	BRK	ePc	19 33 22.7
	BKS	eP	19 33 23.2
		eS	19 33 37.2
	ORV	eP	19 33 25.4
	PCC	e(P)	19 33 30.4
	MHC	e	19 33 35.2
	CMB	eP	19 33 37.4

BRK 19h33m03.2s 38.8N 122.8W
h=2km ML=2.8(2)
The Geysers area, 22 km S of Clear Lake, CA

Feb 12	ZSP	iPc	19 43 36.2
		iS	19 43 50.4
	BKS	iP	19 43 37.6
		eS	19 43 51.9
	BRK	iPd	19 43 37.8
	ORV	iPc	19 43 40.6
	PCC	ePc	19 43 42.1
	NIN	iPc	19 43 48.5
	MHC	ePd	19 43 48.9
	GCC	e(P)	19 43 49.4
	WDC	iP*c	19 43 50.5
	CMB	iPc	19 43 52.1
	SAO	iPd	19 43 55.3
	PRS	e	19 44 00.8
	FHC	e	19 44 02.5
	FRI	ePc	19 44 07.5
	PRI	e	19 44 09.3

BRK 19h43m18.5s 38.8N 122.8W
h=5km ML=3.1(6)
The Geysers area, 25 km S of Clear Lake, CA

Feb 13	WDC	ePdiffc	07 32 39.0
		i	07 36 51.9
	ORV	ePdiff	07 32 43.3
	CMB	ePdiffc	07 32 48.0
		e	07 37 00.0
		ePKKP	07 48 10.4
		e	07 48 23.4
	FRI	ePdiff	07 32 51.5
		ePKKP	07 48 07.8

USGS 07h18m29.1s 0.7N 126.2E
h=32km mb=6.2 Ms=6.5
Molucca Passage

Feb 13	WDC	ePc	10 12 56.6
		e	10 13 10.6
	ORV	e(P)	10 13 03.4
		e	10 13 17.4
	CMB	ePc	10 13 13.2
		i	10 13 27.2
	PRS	e(P)	10 13 14.6
		e	10 13 29.0
	FRI	ePc	10 13 19.1
		e	10 13 33.2

USGS 10h01m39.3s 36.6N 140.9E
h=63km mb=5.1
Near East Coast of Honshu, Japan

Feb 13	FRI	ePc	23 50 24.7
	PRI	e	23 50 28.5
	CMB	e	23 50 45.2
	ORV	e	23 51 08.9
	WDC	e	23 51 20.0
	BKS	eLq	23 53 44
		eLr	23 55 24
			AMP(μm) PER(s)
		LZ	1.6 20.
		LN	3.4 20.
		LE	5.5 20.

USGS 23h47m21.1s 26.4N 111.2W
h=10km mb=4.4
Gulf of California

Feb 14	PRI	iPd	05 54 20.2
	LLA	ePc	05 54 26.8
	PRS	ePc	05 54 29.7
	FRI	iPd	05 54 30.9
	SAO	eP	05 54 33.4
	GCC	ePc	05 54 40.5
	MHC	iPc	05 54 40.6
	CMB	ePc	05 54 45.1
	PCC	e(P)	05 54 47.9
	BKS	e	05 54 50.2
	BRK	e	05 54 50.4

BRK 05h54m15.0s 36.1N 120.3W
h=13km ML=2.9(2)
Coalinga, CA

Feb 14	PCC	eP	06 46 58.5
	BRK	eP	06 47 00.2
	SAO	eP	06 47 00.5
	PRS	ePc	06 47 00.5
	MHC	eP	06 47 01.5
	GCC	ePc	06 47 02.8
	PRI	ePc	06 47 03.0
	WDC	iPc	06 47 03.8
	ORV	eP	06 47 05.8
	CMB	ePc	06 47 06.6
	FRI	iPc	06 47 07.4

USGS 06h34m38.9s 15.5S 167.6E
h=119km mb=5.5
Vanuatu Islands

Feb 14	PRI	iPd	07 26 57.0
		iS	07 27 01.8
	LLA	iPd	07 27 03.7
	PRS	iPd	07 27 06.4
	FRI	iPd	07 27 07.7
	SAO	iPc	07 27 09.8
	GCC	iPc	07 27 16.7
	MHC	iPc	07 27 17.0
		iS	07 27 38.3
	CMB	iPc	07 27 21.9
	PCC	iPc	07 27 23.9
	BKS	iPc	07 27 26.5
		iPn	07 27 26.6
		ePg	07 27 32.2
		eSn	07 27 52.1
		eSg	07 27 56.7
	BRK	iPc	07 27 26.6
	ZSP	iPc	07 27 27.7
	ORV	iPc	07 27 45.1
	MIN	iPc	07 27 56.5
	WDC	iPc	07 28 01.3
	FHC	iPc	07 28 13.6

BRK 07h26m51.7s 36.1N 120.3W
h=13km ML=5.3(10) Mo=3.2E23(4)
Coalinga, CA

Feb 14	PCC	iPc	13 49 16.0
	GCC	iPc	13 49 16.0
	PRS	iPc	13 49 16.5
	SAO	ePc	13 49 17.1
	BRK	ePc	13 49 17.5
	BKS	iPc	13 49 18.0
			AMP(μm) PER(s)
		PZ	0.41 1.2
	PRI	iPc	13 49 18.5
	MHC	iPc	13 49 18.7
	FHC	iPc	13 49 21.5
	FRI	iPc	13 49 23.9
	CMB	iPc	13 49 24.2
		epP	13 51 25.7
	WDC	iPc	13 49 25.0
		ipP	13 51 26.4
	ORV	iPc	13 49 25.2
	MIN	iPc	13 49 26.9

USGS 13h38m22.8s 17.9S 178.6W
h=566km mb=5.7
Fiji Islands Region

Feb 14	PCC	eP	13 53 08.1
	GCC	ePc	13 53 08.2
	PRS	eP	13 53 08.6
	SAO	eP	13 53 09.2
	BRK	ePc	13 53 09.8
	BKS	iPd	13 53 10.3
			AMP(μm) PER(s)
		PZ	0.10 1.2
	MHC	eP	13 53 10.7
	PRI	eP	13 53 11.1
	FRI	eP	13 53 15.9
	CMB	ePc	13 53 16.7
		e	13 55 18.8
	WDC	iPc	13 53 17.2
		e	13 55 17.4
	ORV	eP	13 53 17.3
	MIN	eP	13 53 18.9

USGS 13h42m15.8s 17.8S 178.7W
h=569km mb=5.2
Fiji Islands Region

Feb 14	FHC	eP	16 51 08.7
	WDC	eP	16 51 14.5
	MIN	eP	16 51 19.9
	ORV	eP	16 51 23.6
	BKS	eP	16 51 30.6
		eLq	17 05 41
		eLr	17 07 00
			AMP(μm) PER(s)
		PZ	0.088 1.2
		LZ	1.5 20.
	MHC	eP	16 51 35.2
	CMB	eP	16 51 37.0
	PRS	eP	16 51 41.7
	FRI	eP	16 51 44.8
	PRI	eP	16 51 46.6

USGS 16h42m18.2s 54.7N 161.7E
h=33km mb=5.7 Ms=5.0
Near East Coast of Kamchatka

Feb 14	FRI	eP	19 31 36.3
	CMB	eP	19 31 37.3
	ORV	eP	19 31 38.0
	WDC	eP	19 31 38.1
	MIN	eP	19 31 40.2

USGS 19h20m35.0s 16.1S 176.2W
h=379km mb=4.6
Fiji Islands Region

Feb 14	MHC	ePc	23 25 47.2
		iS	23 25 48.8
	GCC	eP	23 25 53.1
	PCC	eP	23 25 56.2
	SAO	iPd	23 25 57.1
	BRK	eP	23 25 59.7
		eS	23 26 15.3
	BKS	iPc	23 25 59.8
		eS	23 26 12.0
	ZSP	eP	23 26 01.0
		eS	23 26 13.4
	PRS	eP	23 26 04.3
		eS	23 26 17.7
	CMB	eP	23 26 08.2
		eS	23 26 28.4
	FRI	eP	23 26 13.3

BRK 23h25m45.5s 37.3N 121.7W
h=4km ML=2.5(4) Mo=2.5E19(2)
Halls Valley, 16 km E of San Jose, CA

Feb 14	MHC	iPc	23 27 51.5
	GCC	eP	23 27 57.3
	PCC	eP	23 28 00.5
	SAO	iPd	23 28 01.4
	BRK	eP	23 28 03.9
		eS	23 28 15.2
	BKS	iPc	23 28 04.1
		eS	23 28 16.2
	ZSP	eP	23 28 05.3
		eS	23 28 17.7
	PRS	eP	23 28 08.5
		eS	23 28 22.1
	CMB	eP	23 28 12.8
	FRI	eP	23 28 17.3

BRK 23h27m49.8s 37.3N 121.7W
h=4km ML=2.5(4) Mo=4.2E19(2)
Halls Valley, 16 km E of San Jose, CA

Feb 15	FRI	eP	22 50 25.7
	CMB	eP	22 50 26.2
	ORV	e(P)	22 50 27.5
	WDC	eP	22 50 27.5
	BKS	eLq	23 09 30
		eLr	23 12 26
			AMP(μm) PER(s)
		LZ	3.9 20.
		LN	2.7 20.
		LE	2.7 20.

USGS 22h38m44.9s 15.6S 177.2W
h=33km mb=5.2 Ms=5.5
Fiji Islands Region

Feb 16	MHC	e(P)	02 58 26.1
	FRI	eP	02 58 29.6
	CMB	eP	02 58 30.5
	WDC	eP	02 58 33.9

USGS 02h45m43.2s 32.1S 179.0W
h=58km mb=5.5
South of Kermadec Islands

Feb 17	WDC	e	03 16 11.4
	CMB	eP	03 16 21.2
	FRI	e(P)	03 16 46.5

USGS 03h03m24.2s 33.7N 120.7E
h=10km mb=5.1 Ms=4.5
Eastern China

Feb 17	PCC	eP	04 32 37.2
	GCC	eP	04 32 37.7
	PRS	ePd	04 32 38.3
	BRK	eP	04 32 38.7
	SAO	eP	04 32 38.9
	BKS	ePc	04 32 39.4
		eLq	04 55 20
		eLr	05 00 24
			AMP(μm) PER(s)
		PZ	0.048 1.0
		LZ	2.1 20.
		LN	1.4 20.
		LE	2.3 20.
	MHC	iPd	04 32 39.7
	FHC	eP	04 32 40.4
	PRI	ePd	04 32 40.7
	WDC	ePd	04 32 43.7
	ORV	ePd	04 32 44.3
	FRI	ePd	04 32 44.7
	CMB	ePd	04 32 44.8
	MIN	ePd	04 32 45.8

USGS 04h19m57.7s 19.7S 168.8E
h=33km mb=5.6 Ms=5.6
Vanuatu Islands

Feb 17	PCC	e(P)	06 29 01.9
	PRS	ePc	06 29 02.0
	GCC	eP	06 29 02.4
	SAO	e(P)	06 29 02.5
	PRI	ePc	06 29 03.9
	BRK	eP	06 29 04.1
	MHC	ePc	06 29 04.3
		ePKKP	06 46 [illegible]
	BKS	ePc	06 29 04.8
		e	06 29 39.3
		eLq	06 39 30
		eLr	06 45 24
		eS	06 49 08

IASPEI International Seismological Centre

DATE	STA	PHASE	TIME (UTC)
		eLg	06 52 08
		eLr	06 55 50
		AMP(μm)	PER(s)
	PZ	0.11	1.2
	LZ	19	20.
	LN	14	20.
	LE	13	20.
	FRI	ePc	06 29 08.2
		ePKKP	06 46 47.4
		e(RPKP)	06 55 02
	CMB	iPc	06 29 09.8
		i	06 29 22.3
		i	06 29 29.6
		i	06 29 48.8
		ePKKP	06 46 51.8
	ORV	ePc	06 29 11.6
	WDC	iPc	06 29 12.7
	MIN	eP	06 29 13.5
		ePKKP	06 46 45.0

BRK Ms=6.5 Distance= 86°
USGS 06h16m12.1s 32.8S 179.3W
h=10km mb=5.9 Ms=6.6
South of Kermadec Islands

Feb 17	FRI	ePKPd	13 15 50.4
	PRI	ePKP	13 15 51.2
	PRS	ePKPd	13 15 51.8
	CMB	ePKPd	13 15 52.7
	GCC	ePKPd	13 15 53.0
	MHC	ePKPd	13 15 53.9
	BRK	ePKP	13 15 54.5
	BKS	ePKPd	13 15 54.9
	ORV	ePKP	13 15 56.4
	MIN	ePKP	13 15 56.7
	WDC	iPKPd	13 15 57.7

USGS 12h56m56.0s 58.7S 25.2W
h=33km mb=5.3 Ms=5.1
South Sandwich Islands Region

Feb 18	FHC	e	00 08 20.4
	WDC	ePd	00 08 26.4
		eScP	00 14 13.2
	MIN	eP	00 08 32.2
	ORV	eP	00 08 35.8
	BRK	e	00 08 42.3
	BKS	ePd	00 08 42.9
		e	00 09 30.8
		eS	00 14 58
		e	00 16 00
		eLg	00 18 06
		eLr	00 20 16
		AMP(μm)	PER(s)
		PZ 0.033	0.4
		LZ 8.6	20.
		LN 10	20.
		LE 10	20.
	MHC	e(P)	00 08 46.5
	CMB	eP	00 08 49.5
		eScP	00 14 27.2
	SAO	e(P)	00 08 49.5
	PRS	e(P)	00 08 54.8
		eScP	00 14 28.3
	FRI	eP	00 08 58.0
		eScP	00 14 31.8
	PRI	e	00 08 59.7

BRK Ms=5.8 Distance= 43°
USGS 00h00m52.5s 51.3N 179.3W
h=33km mb=6.2 Ms=5.9
Andreanof Islands, Aleutian Is.

Feb 18	WDC	ePd	05 35 57.8
		eScP	05 41 54.0
	MIN	eP	05 36 03.1
	ORV	e(P)	05 36 07.4
	BRK	e	05 36 15.5
	BKS	e	05 36 18.0
		e	05 36 27.0
		e	05 47 48
		AMP(μm)	PER(s)
		LZ 1.1	20.
		LE 1.4	20.
	CMB	ePd	05 36 21.0
		eScP	05 41 57.5
	FRI	e(P)	05 36 18.9
	PRI	e(P)	05 36 36.5

USGS 05h28m23.3s 51.3N 179.3W
h=33km mb=5.5 Ms=4.7
Andreanof Islands, Aleutian Is.

Feb 18	WDC	eP	08 21 36.3
	ORV	e	08 21 39.6
	CMB	eP	08 22 14.6
	FRI	e(P)	08 22 33.7

USGS 08h20m02.5s 44.3N 129.0W
h=10km mb=4.6 Ms=4.5
Off Coast of Oregon

Feb 18	WDC	eP	10 58 27.8
	ORV	eP	10 58 43.0
	CMB	eP	10 59 05.0
	FRI	eP	10 59 23.3

USGS 10h56m52.7s 44.4N 129.0W
h=10km mb=4.5 Ms=4.4
Off Coast of Oregon

Feb 18	CMB	eP	17 11 07.6
		e	17 11 17.6
	ORV	eP	17 11 16.2
		e	17 11 28.8

USGS 17h00m15.8s 14.2S 75.8W
h=43km mb=5.0
Near Coast of Peru

Feb 19	WDC	eP	09 45 16.8
	CMB	eP	09 45 17.3
	ORV	eP	09 45 18.5
	MNA	eP	09 45 26.5
	BKS	e	10 12 48
		AMP(μm)	PER(s)
		LZ 1.8	20.
		LN 2.0	20.
		LE 1.8	20.

USGS 09h32m45.7s 28.0S 176.2W
h=10km mb=4.9 Ms=5.0
Kermadec Islands Region

Feb 20	GCC	eP	10 41 03.9
	PRS	eP	10 41 04.5
	SAO	eP	10 41 05.2
	PRI	eP	10 41 06.1
	MHC	eP	10 41 06.7
	FRI	eP	10 41 11.4
	CMB	ePc	10 41 12.6
	ORV	eP	10 41 13.1
	WDC	ePc	10 41 13.1
	MNA	ePc	10 41 21.8

USGS 10h30m15.1s 17.6S 178.7W
h=603km mb=4.7
Fiji Islands Region

Feb 21	MHC	iPd	06 06 38.1
	GCC	ePd	06 06 43.5
		iS	06 06 48.5
	SAO	ePd	06 06 46.1
	PCC	iPc	06 06 48.1
		iS	06 06 59.8
	BRK	eP	06 06 51.8
		iS	06 07 05.1
	LLA	ePd	06 06 51.8
		iS	06 07 04.5
	BKS	eP	06 06 51.8
		eS	06 07 4.0
	ZSP	eP	06 06 53.1
	PRS	eP	06 06 53.3
	CMB	eP	06 06 59.0
	PRI	e	06 07 00.4
	FRI	eP	06 07 02.7

BRK 06h06m36.0s 37.2N 121.6W
h=3km ML=2.6(4) Mo=1.2E20(2)
Anderson Lake area, 23 km SE of San Jose, CA

Feb 21	LLA	iPc	13 02 24.3
	SAO	iPd	13 02 24.3
	PRS	iPd	13 02 25.4
	PRI	ePd	13 02 32.0
		i	13 02 38.3
		i	13 02 52.2
	GCC	iP	13 02 33.7
	MHC	iPd	13 02 35.7
		iS	13 02 47.1
	PCC	eP	13 02 42.0
	FRI	iPc	13 02 42.2
		iS	13 03 01.7
	ZSP	eP	13 02 46.8
	CMB	eP	13 02 47.3
		iS	13 03 09.6
	BKS	eP	13 02 47.6
	ORV	e	13 03 06.4
	MNA	eP	13 03 14.4
	MIN	e	13 03 20.2
	BRK	eP	13 03 45.0

BRK 13h02m19.6s 36.6N 121.2W
h=6km ML=3.3(4) Mo=3.5E21(2)
Bear Valley, 35 km SE of Hollister, CA

Feb 22	WDC	eP	01 31 59.7
		i	01 32 08.9
	MIN	eP	01 32 02.3
		e	01 32 11.9
	ORV	eP	01 32 07.4
		e	01 32 17.1
	CMB	eP	01 32 19.9
	FRI	e	01 32 27.8
	PRI	e	01 32 33.5

USGS 01h22m29.6s 78.9N 126.0E
h=10km mb=5.2 Ms=5.1
East of Severnaya Zemlya

Feb 23	FRI	ePKP	03 02 33.8
		i	03 02 47.4
	PRI	ePKP	03 02 34.5
	LLA	ePKP	03 02 35.3
	PRS	ePKP	03 02 35.5
	SAO	ePKP	03 02 35.8
	GCC	ePKP	03 02 36.3
		e	03 02 50.8
	CMB	ePKPc	03 02 36.5
		i	03 02 53.7
		e	03 12 24.5
		e	03 15 34.5
	MHC	ePKP	03 02 37.3
		e	03 02 50.1
	BRK	ePKP	03 02 37.5
	BKS	ePKP	03 02 38.5
		epP	03 02 53.5
		eLg	03 42 52
		eLr	03 49 52
		AMP(μm)	PER(s)
		PKPZ 0.16	1.0
		LZ 1.5	20.
		LN 1.8	20.
		LE 1.6	20.
	ORV	ePKP	03 02 39.5
	MIN	ePKP	03 02 40.7
	WDC	ePKPc	03 02 40.9
		i	03 02 53.6
		e	03 12 23.0

USGS 02h43m39.6s 57.9S 25.4W
h=26km mb=5.9 Ms=5.7
South Sandwich Islands Region

Feb 23	BRK	e	16 02 03.2
	PRS	eP	16 02 03.6
	SAO	e	16 02 04.0
	MHC	eP	16 02 04.8
		i	16 03 04.0
	GCC	eP	16 02 06.3
		i	16 03 06.4
	PRI	eP	16 02 06.5
		i	16 03 06.0
	WDC	ePd	16 02 07.6
	LLA	eP	16 02 08.0
		eP	16 03 08.0
	ORV	eP	16 02 09.1
	CMB	ePd	16 02 09.9
	BKS	eP	16 02 10
		e	16 03 0
		iS	16 12 12
		e	16 13 0
		eSS	16 17 48
		e	16 19 12
		eG	16 24 20
		eLr	16 25 52
		AMP(μm)	PER(s)
		LZ 17	20.
		LN 6.6	20.
		LE 13	20.
	FRI	iPd	16 02 10.6
		i	16 03 10.7
	PCC	i	16 03 06.3

BRK Ms=6.3 Distance=82°
USGS 15h49m54.6s 15.9S 167.9E
h=233km mb=5.9
Vanuatu Islands

Feb 24	MNA	eP	01 47 59.7
		e	01 48 31.0
	BKS	eP	01 48 0
		eS	01 50 28
		eLr	01 52 08
		AMP(μm)	PER(s)
		LZ 3.9	20.
		LN 2.7	20.
		LE 2.3	20.
	LLA	eP	01 48 02.0
		e	01 48 32.8
	CMB	e	01 48 02.2
		e	01 48 35.6
	ORV	ePd	01 48 14.6
		e	01 48 45.9
	WDC	iPd	01 48 19.5
		i	01 48 51.0

USGS 01h36m22.7s 22.0S 68.3W
h=121km mb=5.1
Northern Chile

Feb 24	CMB	iPc	04 41 02.5
	FRI	eP	04 41 17.6

USGS 04h39m11.5s 43.5N 126.8W
h=10km mb=4.5
Off Coast of Oregon

Feb 24	FHC	ePc	07 49 11.7
	WDC	iPc	07 49 18.2
	MIN	ePc	07 49 22.8
	ORV	iPc	07 49 26.8
	BRK	ePc	07 49 32.2
	MHC	eP	07 49 37.5
	CMB	iPc	07 49 39.3
	PRS	iPc	07 49 43.5
	LLA	ePc	07 49 44.0
	FRI	iPc	07 49 46.7
	MNA	iPc	07 49 46.8

USGS 07h40m08.7s 52.6N 157.7E
h=120km mb=5.0
Kamchatka

Feb 25	PRI	e(P)	02 13 41.0
	FRI	eP	02 13 46.0
	CMB	eP	02 13 47.1
	ORV	eP	02 13 48.5
	WDC	eP	02 13 49.8
	MIN	eP	02 13 51.5
	MNA	eP	02 13 55.7

USGS 02h01m21.5s 27.9S 177.1W
h=71km mb=5.0
Kermadec Islands Region

Feb 25	MHC	e(P)	11 40 24.1
	WDC	eP	11 40 25.3
	MIN	eP	11 40 27.7
	ORV	eP	11 40 28.1
	PRS	eP	11 40 28.3
	LLA	eP	11 40 29.7
	CMB	eP	11 40 31.9
		ePP	11 44 28.4
	FRI	eP	11 40 34.1
		ePP	11 44 31.8
	MNA	eP	11 40 40.2
		ePP	11 44 35.4
	BKS	eSS	11 58 24
		eLg	12 08 40
		eLr	12 12 40
		AMP(μm)	PER(s)
		LZ 7.1	20.
		LN 4.5	20.
		LE 6.4	20.

USGS 11h27m13.6s 6.1S 147.6E
h=64km mb=5.6
Papua New Guinea Region

Feb 25	MNA	ePn	12 32 00.4
		ePg	12 32 21.5
		eLr	12 33 35.0
	CMB	ePn	12 32 23.4
		ePg	12 32 48.0
		eLr	12 33 34.0
	FRI	e(Pn)	12 32 26.9
		ePg	12 32 54.3
		eLr	12 33 33.8
	MIN	e	12 32 37.0

USGS 12h30m33.5s 41.8N 112.3W
h=2km mb=3.9
Utah

Feb 25	WDC	e	20 10 08.0
	FRI	e	20 10 11.5
	CMB	e	20 10 16.2
		AMP(μm)	PER(s)
	LZ	1.6	20.
	LN	1.3	20.
	LE	2.7	20.

USGS 19h56m35.5s 38.1N 91.2E
h=25km mb=5.7 Ms=5.7
Tsinghai Province, China

Feb 26	WDC	eP	00 35 43.4
	ORV	eP	00 35 49.6
	MHC	e(P)	00 35 55.3
	CMB	eP	00 35 58.5
	PRS	eP	00 35 59.0
	LLA	eP	00 36 00.0
	PRI	eP	00 36 02.8
	FRI	eP	00 36 03.7
	MNA	eP	00 36 06.2

USGS 00h24m03.5s 30.0N 141.9E
h=33km mb=5.2 Ms=4.8
South of Honshu, Japan

Feb 26	PRS	e	04 43 15.4
	MHC	eP	04 43 16.7
	PRI	e	04 43 17.7
	WDC	eP	04 43 20.7
	CMB	eP	04 43 22.0
	FRI	eP	04 43 22.0
	MNA	eP	04 43 30.5
	BKS	eLr	05 17 04
		AMP(μm)	PER(s)
		LZ 1.6	20.
		LN 1.4	20.
		LE 1.6	20.

USGS 04h30m35.8s 19.7S 168.7E
h=43km mb=5.2
Vanuatu Islands

Feb 26	PRS	eP	04 48 47.7
	PRI	eP	04 48 50.0
	WDC	eP	04 48 53.0
	ORV	eP	04 48 53.8
	FRI	eP	04 48 54.4
	CMB	eP	04 48 54.5
	MNA	eP	04 49 03.0

USGS 04h36m08.4s 19.8S 168.7E
h=49km mb=5.4 Ms=5.2
Vanuatu Islands

Feb 26	FRI	iPc	12 41 25.2
		iS	12 41 36.3
	MNA	iPc	12 41 29.3
		iS	12 41 44.4
	CMB	eP	12 41 33.0
		iS	12 41 49.4
	LLA	eP	12 41 43.1
	PRI	eP	12 41 45.3
	SAO	eP	12 41 47.5
	MHC	eP	12 41 48.8
	PRS	eP	12 41 49.5
	BKS	eP	12 41 51.5
		e	12 42 42.8
	GCC	eP	12 41 53.3
	PCC	eP	12 41 56.0

BRK 12h41m09.6s 37.5N 118.9W
h=7km ML=3.3(4)
Mammoth Lakes area, CA

Feb 26	FRI	iPc	13 02 15.8
		iS	13 02 27.0
	MNA	iPc	13 02 19.9
		iS	13 02 34.8
	CMB	iPc	13 02 23.5

International Seismological Centre

DATE	STA	PHASE	TIME (UTC)
		iS	13 02 39.9
	LLA	eP	13 02 33.7
		eS	13 02 59.0
	PRI	eP	13 02 35.7
	SAO	eP	13 02 38.0
	MHC	eP	13 02 39.5
	PRS	eP	13 02 40.2
	GCC	eP	13 02 43.9
	BRK	eP	13 02 45.8
	PCC	eP	13 02 46.1
	BKS	eP	13 02 46.1
		e	13 03 33.3
	ZSP	eP	13 02 46.4
	ORV	e(P)	13 02 49.1
	MIN	e(P)	13 03 00.6
BRK 13h02m00.2s 37.5N 118.9W			
h=8km ML=3.7(4)			
Mammoth Lakes area, CA			
Feb 27	FRI	eP	01 47 24.2
	MNA	eP	01 47 31.3
	CMB	e(P)	01 47 33.0
	ORV	eP	01 47 50.3
	WDC	eP	01 47 58.2
	BKS	eLr	02 01 16
		AMP(μm)	PER(s)
	LZ	1.1	20.
	LN	1.1	20.
	LE	0.0	20.
USGS 01h39m55.4s 2.4N 98.6W			
h=33km mb=4.8 Ms=4.6			
West of Galapagos Islands			
Feb 27	FHC	iPc	02 46 13.7
		iS	02 46 22.3
	WDC	iPc	02 46 16.5
		iS	02 46 27.3
	MIN	ePc	02 46 27.1
		i	02 46 28.7
	ORV	e	02 46 36.2
BRK 02h46m04.0s 40.9N 123.3W			
h=18km ML=3.1(4) Mo=2.8E20(1)			
63 km E of Eureka, CA			
Feb 27	FRI	eP	07 02 43.8
	CMB	eP	07 02 44.6
	WDC	ePc	07 02 47.0
	MIN	e	07 02 53.0
	MNA	eP	07 02 55.1
USGS 06h50m54.4s 17.2S 177.0W			
h=10km mb=5.2			
Fiji Islands Region			
Feb 27	FHC	eP	08 38 20.4
	WDC	iPd	08 38 28.5
		eScP	08 44 54.4
	MIN	ePd	08 38 34.2
	ORV	ePd	08 38 38.6
	BRK	ePd	08 38 44.5
		ePcP	08 41 20.6
		iS	08 44 19
		iLr	08 47 40
		AMP(μm)	PER(s)
	LZ	64	20.
	PCC	ePd	08 38 44.6
		ePcP	08 41 20.7
	BKS	ePd	08 38 45
		ePP	08 40 06
		iPcP	08 41 21.3
		e	08 42 42
		e	08 43 44
		eS	08 44 22

DATE	STA	PHASE	TIME (UTC)
		eLq	08 46 36
		eLr	08 47 28
		AMP(μm)	PER(s)
		PZ	0.091 0.8
		LZ	150 20.
		LNE	110 20.
		LNW	130 20.
	GCC	eP	08 38 50.2
		ePcP	08 41 22.4
	MHC	ePd	08 38 50.9
		ePcP	08 41 22.0
	CMB	ePd	08 38 53.4
	SAO	eP	08 38 54.7
	PRS	ePd	08 38 57.8
		ePcP	08 41 22.7
	LLA	ePd	08 38 58.6
		ePcP	08 41 24.2
	MNA	eP	08 39 02.0
	FRI	ePd	08 39 02.4
		iPcP	08 41 25.9
	PRI	ePd	08 39 03.0
BRK Ms=6.8 Distance=36°			
USGS 08h31m54.4s 53.5N 167.3W			
h=10km mb=6.2 Ms=6.7			
Fox Islands, Aleutian Islands			
Feb 27	ZSP	ePc	12 30 12.8
		i	12 30 14.3
		iS	12 30 28.6
	BRK	eP	12 30 13.8
		e	12 30 14.5
		eS	12 30 28.9
	BKS	eP	12 30 14.4
		eS	12 30 29.8
	ORV	ePd	12 30 17.0
		i	12 30 23.9
	PCC	eP	12 30 18.8
	WDC	e	12 30 21.5
		e	12 30 31.3
	MHC	eP	12 30 23.9
	MIN	ePc	12 30 25.3
	GCC	eP	12 30 26.3
	CMB	iPc	12 30 29.2
	SAO	eP	12 30 32.4
	LLA	e	12 30 36.9
	PRS	e	12 30 38.0
	FHC	e	12 30 40.5
	FRI	e	12 30 44.2
	MNA	e	12 30 52.7
BRK 12h29m55.1s 38.8N 122.8W			
h=5km ML=2.8(6) Mo=2.2E21(2)			
The Geysers area, 20 km S of Clear Lake, CA			
Feb 27	FRI	iPc	16 25 13.5
	MNA	iPd	16 25 17.4
		iS	16 25 32.4
	CMB	eP	16 25 21.1
		iS	16 25 37.4
	LLA	iPc	16 25 31.3
	PRI	eP	16 25 32.8
	SAO	eP	16 25 35.7
	MHC	eP	16 25 36.4
	PRS	iPc	16 25 37.8
	GCC	e(P)	16 25 41.0
	BRK	ePc	16 25 43.2
	BKS	ePd	16 25 43.4
		eS	16 26 17.1
	PCC	ePc	16 25 43.8
	ZSP	ePd	16 25 43.9
		iS	16 26 17.8
	ORV	e(P)	16 25 45.1

DATE	STA	PHASE	TIME (UTC)
	MIN	e	16 25 45.7
BRK 16h24m57.7s 37.5N 118.9W			
h=8km ML=4.0(6) Mo=9.0E21(2)			
Mammoth Lakes area, CA			
Feb 28	WDC	e(P)	07 03 17.9
	CMB	eP	07 03 34.6
	FRI	eP	07 03 40.0
	MNA	eP	07 03 42.2
USGS 06h52m03.5s 37.0N 141.6E			
h=48km mb=5.3 Ms=5.3			
Near East Coast of Honshu, Japan			
Feb 28	WDC	ePc	07 43 51.9
	MIN	eP	07 43 55.9
	BRK	eP	07 44 01.6
	BKS	eP	07 44 02.4
		AMP(μm)	PER(s)
	PZ	0.0069	0.7
	CMB	iPc	07 44 08.7
	PRS	eP	07 44 10.9
	FRI	eP	07 44 14.5
	MNA	eP	07 44 15.6
USGS 07h32m43.9s 37.9N 141.1E			
h=91km mb=4.8			
Near East Coast of Honshu, Japan			
Feb 28	MHC	iPd	13 42 32.9
	GCC	eP	13 42 39.5
	PCC	eP	13 42 40.6
		iS	13 42 46.2
	BRK	iPc	13 42 42.0
	BKS	iP	13 42 42.2
	ZSP	iP	13 42 43.5
	SAO	iP	13 42 43.9
	LLA	iPc	13 42 48.6
	PRS	ePd	13 42 50.9
	CMB	eP	13 42 51.5
		iS	13 43 07.9
	PRI	eP	13 42 56.8
	FRI	eP	13 42 58.0
		iSg	13 43 19.5
BRK 13h42m30.2s 37.5N 121.7W			
h=6km ML=2.8(4) Mo=1.0E20(2)			
Mt. Lewis area, 22 km NE of San Jose, CA			
Feb 28	MHC	iPc	16 24 30.8
		iS	16 24 33.25
	GCC	iPd	16 24 37.6
	PCC	iPc	16 24 38.6
	BKS	iPc	16 24 40.0
	BRK	iPc	16 24 40.1
	ZSP	iPc	16 24 41.2
	SAO	iPc	16 24 42.2
	LLA	iPc	16 24 46.6
	PRS	eP	16 24 48.5
	CMB	iPd	16 24 49.5
	PRI	iPc	16 24 54.6
	FRI	iPc	16 24 56.0
	ORV	iPc	16 25 03.0
	MIN	ePc	16 25 14.7
	MNA	eP	16 25 16.1
		i	16 25 21.6
	WDC	e	16 25 18.0
	FHC	e	16 25 28.3
BRK 16h24m28.3s 37.5N 121.7W			
h=6km ML=3.9(6) Mo=1.2E23(4)			
Mt. Lewis area, 22 km NE of San Jose, CA			
Feb 28	MHC	iPd	16 34 21.0

DATE	STA	PHASE	TIME (UTC)
	GCC	iPd	16 34 27.9
	PCC	iPc	16 34 28.8
	BKS	iPc	16 34 30.2
	BRK	iPc	16 34 30.3
	ZSP	iPc	16 34 31.4
	SAO	iPc	16 34 32.4
	LLA	iPc	16 34 36.4
	PRS	eP	16 34 39.0
	CMB	iPd	16 34 39.6
		iS	16 34 55.8
	PRI	eP	16 34 44.9
	FRI	iPc	16 34 46.2
	ORV	eP	16 34 53.2
BRK 16h34m18.4s 37.5N 121.7W			
h=6km ML=3.1(4) Mo=6.8E20(4)			
Mt. Lewis area, 22 km NE of San Jose, CA			
Feb 28	PCC	ePc	20 58 55.7
	PRS	ePc	20 58 55.9
	SAO	eP	20 58 56.5
	BRK	eP	20 58 57.6
	PRI	ePc	20 58 57.8
	BKS	eP	20 58 57.9
		AMP(μm)	PER(s)
	PZ	0.016	0.8
	MHC	ePc	20 58 58.2
	FRI	ePc	20 59 03.2
	CMB	ePc	20 59 04.4
	ORV	e(P)	20 59 05.5
	WDC	ePc	20 59 05.9
	MNA	eP	20 59 13.2
USGS 20h47m38.1s 20.5S 176.9W			
h=347km mb=4.3			
Fiji Islands Region			
Mar 1	FHC	iPc	01 38 48.6
		iS	01 38 59.1
	WDC	iPd	01 39 05.0
		i	01 39 29.2
	MIN	iPd	01 39 15.2
	ORV	e(P)	01 39 20.2
BRK 01h38m33.6s 40.9N 125.0W			
h=5kmR ML=3.2(4)			
Off Coast 70 km WNW of Eureka, CA			
Mar 1	FRI	iPc	09 12 05.8
	MNA	iPd	09 12 10.7
	CMB	ePc	09 12 14.4
		iS	09 12 32.0
	LLA	ePc	09 12 23.6
	PRI	ePc	09 12 25.2
	SAO	iPc	09 12 28.5
	MHC	eP	09 12 29.4
	PRS	iPc	09 12 30.1
	GCC	ePd	09 12 32.9
	BRK	e	09 12 36
	PCC	ePd	09 12 36.8
	MIN	e	09 12 54.9
BRK 09h11m50.3s 37.5N 118.9W			
h=6km ML=3.5(4)			
Mammoth Lakes area, CA			
Mar 1	PCC	eP	21 48 20.8
	PRS	eP	21 48 20.8
	SAO	eP	21 48 21.7
	BKS	eP	21 48 22.9
		AMP(μm)	PER(s)
	PZ	0.040	0.9
	MHC	eP	21 48 23.3
	PRI	eP	21 48 23.8
	FRI	eP	21 48 27.8

DATE	STA	PHASE	TIME (UTC)
	CMB	eP	21 48 28.9
	ORV	eP	21 48 30.2
	WDC	eP	21 48 30.5
	MIN	eP	21 48 32.2
	MNA	eP	21 48 38.0
USGS 21h37m00.8s 21.7S 178.0W			
h=412km mb=5.1			
Fiji Islands Region			
Mar 2	PRS	eP	01 55 50.2
	PRI	eP	01 55 51.8
	BKS	eP	01 55 52.0
		eS	02 07 16
		e	02 09 56.8
		eLq	02 21 20.8
		eLr	02 25 08
		AMP(μm)	PER(s)
	PZ	0.022	1.0
	LZ	32	20.
	LN	28	20.
	LE	2.1	20.
	LLA	eP	01 55 52.1
	MHC	eP	01 55 52.8
	FRI	eP	01 55 56.1
	CMB	eP	01 55 57.6
		ePP	01 59 55.7
	WDC	eP	01 56 00.7
	MNA	eP	01 56 05.5
BRK Ms=6.8 Distance=97°			
USGS 01h42m34.1s 38.0S 176.8E			
h=19km mb=5.9 Ms=6.6			
North Island, New Zealand			
Mar 2	PRS	e(P)	02 04 13.5
	PRI	eP	02 04 15.0
	MHC	eP	02 04 16.1
	FRI	eP	02 04 19.0
	CMB	eP	02 04 20.7
	WDC	eP	02 04 23.7
USGS 01h50m58.9s 37.8S 176.9E			
h=18km mb=5.8			
North Island, New Zealand			
Mar 2	ARC	eP	04 27 29.0
		iS	04 27 37.2
	FHC	iPc	04 27 29.1
		iS	04 27 39.7
	WDC	iPc	04 27 41.9
	MIN	eP	04 27 51.6
		eS	04 28 19.7
	ORV	eP	04 27 55.2
		eS	04 28 23.4
	PCC	eP	04 28 05.1
BRK 04h27m16.8s 40.3N 124.6W			
h=21km ML=3.1(4)			
Off Coast 63 km SW of Eureka, CA			
Mar 3	FHC	eP	00 12 51.5
	WDC	iPc	00 12 59.5
		eScP	00 18 46.0
	MIN	eP	00 13 04.9
	ORV	eP	00 13 08.9
	BRK	eP	00 13 14.4
	BKS	ePc	00 13 14.6
		AMP(μm)	PER(s)
	PZ	0.22	0.8
	PCC	eP	00 13 15.2
	GCC	eP	00 13 19.5
	MHC	eP	00 13 20.6
	CMB	iPc	00 13 23.4
		eScP	00 18 57.2
	SAO	eP	00 13 24.0

DATE	STA	PHASE	TIME (UTC)
	PRS	eP	00 13 27.1
	LLA	eP	00 13 28.1
	FRI	eP	00 13 31.9
		eScP	00 19 01.4
	PRI	eP	00 13 32.3
		eScP	00 19 02.2
	MNA	eP	00 13 32.5
		eScP	00 19 02.4
USGS 00h06m03.6s 52.7N 174.6W			
h=162km mb=5.0			
Andreanof Islands, Aleutian Is.			
Mar 3	FHC	e(P)	01 42 00.4
	WDC	eP	01 42 06.7
	MIN	eP	01 42 11.1
	ORV	eP	01 42 14.5
	BRK	eP	01 42 18.8
	BKS	eP	01 42 19.1
		AMP(μm)	PER(s)
	PZ	0.22	0.8
	PCC	eP	01 42 19.4
	GCC	eP	01 42 23.2
	MHC	eP	01 42 23.8
	CMB	eP	01 42 26.1
	SAO	eP	01 42 26.4
	PRS	eP	01 42 28.9
	LLA	eP	01 42 29.7
	FRI	eP	01 42 32.8
	PRI	eP	01 42 33.2
	MNA	eP	01 42 33.8
USGS 01h32m12.3s 46.3N 152.0E			
h=96km mb=5.8			
Kuril Islands			
Mar 3	FRI	e(P)	10 18 40.8
	PRI	eP	10 18 42.9
	LLA	eP	10 18 45.2
	PRS	eP	10 18 45.8
	CMB	eP	10 18 48.2
	MHC	eP	10 18 50.8
	ORV	eP	10 18 58.0
	WDC	eP	10 19 02.9
USGS 10h07m19.6s 19.8S 68.8W			
h=149km mb=4.9			
Chile-Bolivia Border Region			
Mar 3	FRI	ePKP	14 39 27.8
	PRI	ePKP	14 39 28.0
	PRS	ePKP	14 39 28.5
	LLA	ePKP	14 39 28.6
	CMB	ePKP	14 39 29.9
	MHC	ePKP	14 39 30.6
	BRK	ePKP	14 39 31.7
	BKS	ePKP	14 39 31.8
		AMP(μm)	PER(s)
	PKPZ	0.031	0.8
	ORV	e(PKP)	14 39 34.3
	WDC	ePKP	14 39 34.8
USGS 14h20m32.3s 57.9S 25.1W			
h=25km mb=5.4 Ms=5.0			
South Sandwich Islands Region			
Mar 3	WDC	eP	22 44 02.7
	MIN	eP	22 44 07.1
	ORV	eP	22 44 10.5
	GCC	eP	22 44 19.1
	CMB	eP	22 44 21.8
	PRS	eP	22 44 24.8
	FRI	eP	22 44 28.7
	MNA	eP	22 44 29.8
USGS 22h34m02.0s 45.8N 150.7E			
h=109km mb=4.9			

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DATE	STA	PHASE	TIME (UTC)
Kuril Islands			
Mar 4	MIN	iPd	04 19 52.5
		iS	04 20 12.2
	ORV	iPd	04 19 56.0
		iS	04 20 19.2
	WDC	iPd	04 20 02.1
		iS	04 20 33.5
	CMB	eP	04 20 10.2
		i	04 20 12.2
		iS	04 20 48.0
	MNA	ePc	04 20 10.9
	FRI	e(P)	04 20 24.5
	BKS	e	04 20 25.2
	FHC	ePc	04 20 26.8
	BRK	e	04 20 27.4
	PCC	e	04 20 31.6
	LLA	eP	04 20 38.9
	PRS	ePd	04 20 43.3
	MHC	e	04 20 49.4
BRK ML=3.8(6) Mo=9.4E21(2)			
UNR 04h19m27.2s 40.5N 119.7W			
h=.0km ML=3.7			
Western Nevada			
Mar 4	PRI	iPd	09 55 35.9
	LLA	iPc	09 55 43.2
	FRI	iPd	09 55 44.6
	PRS	ePc	09 55 45.8
	SAO	iPc	09 55 49.8
	MHC	eP	09 55 56.4
	GCC	ePc	09 55 57.1
	CMB	iPc	09 56 00.2
		iS	09 56 26.2
	PCC	e	09 56 04.2
		e	09 56 09.1
	BKS	e	09 56 05.9
	BRK	e	09 56 06.1
	MNA	eP	09 56 18.2
BRK 09h55m29.1s 36.1N 120.2W			
h=5km ML=3.3(6)			
13 km E of Coalinga, CA			
Mar 4	MNA	eP	10 16 26.0
	PRI	eP	10 16 26.2
	FRI	e(P)	10 16 26.6
	PRS	eP	10 16 28.4
	LLA	eP	10 16 28.6
	CMB	eP	10 16 31.5
	ORV	eP	10 16 41.1
	WDC	eP	10 16 45.0
USGS 10h04m58.6s 20.0S 68.9W			
h=112km mb=5.2			
Chile-Bolivia Border Region			
Mar 4	SAO	iPc	13 29 18.5
	LLA	eP	13 29 23.2
		iS	13 29 29.4
	GCC	eP	13 29 25.3
		iS	13 29 32.2
	MHC	eP	13 29 25.4
	PRS	e(P)	13 29 26.0
	PCC	eP	13 29 34.3
	PRI	eP	13 29 34.8
	BRK	eP	13 29 37.1
	BKS	eP	13 29 37.1
	FRI	eP	13 29 38.5
		iS	13 29 55.9
	CMB	eP	13 29 39.5
		iS	13 30 00.8
BRK 13h29m15.1s 36.9N 121.3W			
h=4km ML=2.6(4)			

DATE	STA	PHASE	TIME (UTC)
7 km NE of Hollister, CA			
Mar 5	MNA	eP	00 31 07.1
		eS	00 31 52.3
	ORV	e(P)	00 31 27.3
		e	00 31 39.9
	CMB	eP	00 31 39.5
		eS	00 32 35.7
	WDC	e	00 31 47.2
	FRI	e	00 31 51.0
		e	00 32 01.1
	LLA	e	00 32 05.6
		e	00 33 20.0
USGS 00h30m21.1s 40.8N 116.3W			
h=5km			
Nevada			
Mar 5	MNA	eP	00 31 14.5
		eS	00 31 58.8
	CMB	eP	00 31 46.0
		eS	00 32 42.7
USGS 00h30m21.1s 40.8N 116.3W			
h=5km			
Nevada			
Mar 5	LLA	iPc	06 55 29.5
	SAO	eP	06 55 30.3
	PRS	iPd	06 55 30.8
	PRI	eP	06 55 37.4
	GCC	eP	06 55 40.2
	MHC	eP	06 55 41.7
	FRI	eP	06 55 47.7
		eS	06 56 04.2
	PCC	e(P)	06 55 48.5
	CMB	eP	06 55 53.4
		eS	06 56 14.8
BRK 06h55m25.2s 36.6N 121.2W			
h=4km ML=2.7(4)			
Bear Valley, 35 km SE of Hollister, CA			
Mar 5	FRI	eP	09 28 51.2
	PRI	eP	09 28 52.5
	MNA	eP	09 28 54.0
	LLA	eP	09 28 55.1
	PRS	eP	09 28 55.6
	CMB	eP	09 28 58.5
	GCC	e(P)	09 29 00.0
	MHC	eP	09 29 02.5
	BKS	e(P)	09 29 06
		ePP	09 32 19
		e	09 33 19
		ePPP	09 34 24
		e	09 37 57
		eS	09 38 56
		eScS	09 39 00
		eSKS	09 39 08
		eSS	09 44 08
		eSSS	09 48 08
		eLq	09 50 20
		eLr	09 54 00
		AMP(μm)	PER(s)
		LZ 110	20.
		LNE 75	20.
		LNW 90	20.
	ORV	eP	09 29 07.8
	WDC	eP	09 29 13.0
	FHC	e(P)	09 29 22.1
BRK Ms=7.2 Distance=78°			
USGS 09h17m05.3s 24.4S 70.2W			
h=62km mb=6.5 Ms=7.3			
Near Coast of Northern Chile			

DATE	STA	PHASE	TIME (UTC)
Mar 5	PRI	eP	11 07 02.8
	FRI	eP	11 07 03.7
	PRS	eP	11 07 04.8
	LLA	eP	11 07 05.1
	MNA	eP	11 07 05.9
	MHC	e(P)	11 07 11.5
	CMB	e	11 07 16.2
	ORV	eP	11 07 17.3
	MIN	eP	11 07 21.9
	WDC	eP	11 07 23.3
USGS 10h55m12.4s 24.5S 70.7W			
h=34km mb=5.7			
Near Coast of Northern Chile			
Mar 6	FRI	iPc	02 04 11.5
	MNA	iPd	02 04 12.1
	PRI	ePc	02 04 13.8
	LLA	iPc	02 04 17.1
	PRS	iPc	02 04 18.5
	SAO	ePc	02 04 19.9
	CMB	iPc	02 04 20.0
	GCC	ePc	02 04 23.9
	MHC	iPc	02 04 24.3
	PCC	iPc	02 04 28.0
	BKS	ePc	02 04 29.0
		eS	02 12 30
		eSS	02 16 26
		eLq	02 18 44
		eLr	02 22 40
		AMP(μm)	PER(s)
		PZ 0.31	1.1
		LZ 16	20.
		LNE 15	20.
		LNW 11	20.
	BRK	iPc	02 04 29.1
	ORV	ePc	02 04 31.8
	MIN	ePc	02 04 34.3
	WDC	iPc	02 04 38.0
	FHC	iPc	02 04 48.3
BRK Ms=6.2 Distance=60°			
USGS 01h54m50.5s 0.0N 77.7W			
h=14km mb=6.1 Ms=6.1			
Colombia-Ecuador Border Region			
Mar 6	MNA	eP	04 20 02.2
		ePKiKP	04 26 51.0
		eSP	04 29 08.4
	FRI	eP	04 20 02.3
	PRI	eP	04 20 05.3
		ePKiKP	04 26 57.4
		eSP	04 29 10.5
	LLA	ePc	04 20 07.6
		eSP	04 29 13.4
	PRS	ePc	04 20 08.4
		eSP	04 29 14.5
	CMB	ePc	04 20 10.2
		iPKiKP	04 27 03.2
		iSP	04 29 15.8
	SAO	e(P)	04 20 12.2
	MHC	ePc	04 20 14.8
		ePKiKP	04 27 04.5
		eSP	04 29 10.2
	GCC	ePc	04 20 14.8
	PCC	eP	04 20 19.2
	BRK	eP	04 20 19.4
		eSP	04 29 24.7
	BKS	eP	04 20 21.0
		e	04 20 26.5
		ePP	04 22 32
		e	04 27 11.8
		eS	04 28 16

DATE	STA	PHASE	TIME (UTC)
		ePKP	04 29 25.5
		eScS	04 30 12
		eSS	04 32 08
		eLq	04 34 56
		eLr	04 38 32
		AMP(μm)	PER(s)
		PZ 1.2	1.6
		LZ 93	20.
		LNE 67	20.
		LNW 93	20.
	ORV	ePc	04 20 22.7
		ePKiKP	04 27 12.4
		eSP	04 29 28.2
	MIN	eP	04 20 24.9
		eSP	04 29 28.7
	WDC	iPc	04 20 28.5
		ePKiKP	04 27 18.2
		eSP	04 29 34.1
		ePKPPKP	04 50 25.4
	FHC	eP	04 20 38.8
		ePKiKP	04 27 31.3
BRK Ms=7.0 Distance=58°			
USGS 04h10m42.0s 0.2N 77.8W			
h=10km mb=6.5 Ms=6.9			
Colombia-Ecuador Border Region			
Mar 6	MNA	ePc	06 42 26.3
	CMB	eP	06 42 36.8
	ORV	ePc	06 42 47.0
	MIN	eP	06 42 49.0
	WDC	eP	06 42 52.9
USGS 06h33m03.7s 0.1S 77.6W			
h=10km mb=5.2			
Ecuador			
Mar 6	FRI	ePc	07 18 31.6
		ePcP	07 18 44.0
		epP	07 18 50.9
	PRI	ePc	07 18 32.9
		iPcP	07 18 45.3
		epP	07 18 50.3
	MNA	ePd	07 18 33.8
		iPcP	07 18 46.2
	LLA	ePc	07 18 35.6
		iPcP	07 18 47.7
		epP	07 18 52.8
	PRS	ePc	07 18 36.0
		ePcP	07 18 48.1
	SAO	eP	07 18 37.4
		ePcP	07 18 50.3
	CMB	ePc	07 18 38.8
		iPcP	07 18 51.0
	GCC	iPc	07 18 40.3
		ePcP	07 18 52.7
		epP	07 18 58.1
	MHC	ePc	07 18 40.9
		iPcP	07 18 53.3
		ipP	07 19 00.0
	BRK	ePc	07 18 44.3
		ePcP	07 18 56.7
		epP	07 19 01.9
	BKS	ePc	07 18 44.3
		ePcP	07 18 56.7
		epP	07 19 01.9
		AMP(μm)	PER(s)
		PZ 0.042	0.7
	ORV	iPc	07 18 48.4
		iPcP	07 19 00.6
	MIN	ePc	07 18 50.3
		ePcP	07 19 02.5
	WDC	iPc	07 18 53.4
		iPcP	07 19 05.8

DATE	STA	PHASE	TIME (UTC)
		epP	07 19 12.2
	FHC	ePc	07 19 00.7
		ePcP	07 19 13.0
BRK mb=5.5 h=66km Distance=75°			
USGS 07h06m44.0s 24.1S 70.1W			
h=41km mb=5.9 Ms=5.5			
Near Coast of Northern Chile			
Mar 6	FRI	ePc	08 24 09.0
	MNA	eP	08 24 09.3
		i	08 24 39.4
	PRI	eP	08 24 11.4
	LLA	ePc	08 24 14.3
	PRS	ePc	08 24 15.7
	CMB	ePc	08 24 17.4
	SAO	eP	08 24 18.4
	MHC	ePc	08 24 21.2
	GCC	e(P)	08 24 21.4
	BRK	eP	08 24 25.0
	BKS	eP	08 24 27.0
		AMP(μm)	PER(s)
		PZ 0.11	1.4
	PCC	e(P)	08 24 28.7
	ORV	ePc	08 24 29.4
	MIN	eP	08 24 31.6
	WDC	iPc	08 24 35.6
	FHC	eP	08 24 45.6
USGS 08h14m48.1s 0.0N 77.9W			
h=8km mb=5.5 Ms=5.4			
Colombia-Ecuador Border Region			
Mar 6	FRI	ePc	09 51 42.1
		epP	09 51 55.1
	PRI	ePc	09 51 43.4
		epP	09 51 56.4
	MNA	eP	09 51 43.8
		ipP	09 51 58.1
	LLA	ePc	09 51 45.9
		epP	09 51 59.0
	PRS	ePc	09 51 46.3
		epP	09 51 59.5
	SAO	ePc	09 51 47.7
		epP	09 52 00.6
	CMB	ePc	09 51 49.2
		ipP	09 52 02.1
	GCC	ePc	09 51 50.9
		ipP	09 52 04.0
	MHC	ePc	09 51 51.4
		epP	09 52 04.5
	PCC	e(P)	09 51 53.9
		ipP	09 52 06.7
	BRK	eP	09 51 54.8
		epP	09 52 07.8
	BKS	eP	09 51 54.9
		epP	09 52 08.1
		AMP(μm)	PER(s)
		PZ 0.025	0.8
	ORV	ePc	09 51 58.8
		ipP	09 52 12.0
	MIN	eP	09 52 00.6
		epP	09 52 13.9
	WDC	iPc	09 52 03.8
		ipP	09 52 17.0
	FHC	ePc	09 52 11.0
		epP	09 52 24.2
USGS 09h39m54.7s 24.1S 70.1W			
h=45km mb=5.7 Ms=5.7			
Near Coast of Northern Chile			
Mar 6	FRI	eP	10 29 54.3
	MNA	iPc	10 29 56.0
		epP	10 30 12.1

DATE	STA	PHASE	TIME (UTC)
		ePcP	10 32 37.2
		epPcP	10 32 55.7
	PRI	eP	10 29 57.9
		epP	10 30 14.9
	LLA	eP	10 30 00.2
		epP	10 30 18.2
	PRS	eP	10 30 01.3
	CMB	eP	10 30 04.4
		epP	10 30 22.2
		ePcP	10 32 40.5
		epPcP	10 32 58.1
	PCC	eP	10 30 07.1
	MHC	eP	10 30 08.8
		epP	10 30 26.3
	ORV	eP	10 30 18.5
		epP	10 30 35.0
	MIN	eP	10 30 22.6
	WDC	eP	10 30 26.7
		ipP	10 30 47.8
		ePcP	10 32 47.8
		epPcP	10 33 05.3
	FHC	eP	10 30 38.0
USGS 10h23m26.6s 14.6N 92.3W			
h=95km mb=5.1			
Near Coast of Chiapas, Mexico			
Mar 6	FHC	e	13 56 16.0
	WDC	iPc	13 56 18.9
		ipP	13 56 34.1
	MIN	eP	13 56 24.3
		epP	13 56 40.2
	ORV	eP	13 56 28.2
		epP	13 56 44.1
	BRK	eP	13 56 32.6
	PCC	ePc	13 56 33.1
	BKS	eP	13 56 33.6
		AMP(μm)	PER(s)
		PZ 0.028	0.7
	GCC	eP	13 56 38.5
	MHC	iPc	13 56 38.8
	CMB	ePc	13 56 41.9
		epP	13 56 56.9
	PRS	eP	13 56 45.3
	LLA	eP	13 56 46.0
	PRI	eP	13 56 49.8
	FRI	ePc	13 56 50.2
		epP	13 57 06.7
	MNA	iPc	13 56 51.7
		ipP	13 57 06.7
USGS 13h48m41.5s 51.1N 179.6E			
h=54km mb=5.4			
Rat Islands, Aleutian Islands			
Mar 7	PRS	eP	08 09 43.5
	PRI	eP	08 09 45.5
	FRI	eP	08 09 49.7
	CMB	eP	08 09 51.2
	ORV	eP	08 09 52.8
	WDC	eP	08 09 54.2
	MIN	e	08 09 55.5
	MNA	eP	08 09 58.2
USGS 07h57m01.2s 33.2S 179.9W			
h=93km mb=5.0			
South of Kermadec Islands			
Mar 7	PRS	eP	19 54 22.9
	SAO	eP	19 54 24.8
	BKS	eP	19 54 26.0
		eS	19 55 03.56
		e	19 55 04.24
		eLq	19 55 12.32
		eLr	19 55 20.10

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DATE	STA	PHASE	TIME (UTC)	
			AMP(μm)	PER(s)
	PZ		0.029	0.9
	LZ		5.0	20.
	LN		3.2	20.
	LE		3.6	20.
	PRI	eP	19 54 26.3	
	GCC	eP	19 54 26.3	
	LLA	eP	19 54 26.6	
	MHC	eP	19 54 26.7	
	FRI	eP	19 54 32.1	
	CMB	eP	19 54 33.4	
	ORV	eP	19 54 34.1	
	WDC	eP	19 54 34.9	
	MNA	eP	19 54 43.1	
BRK Ms=5.8 Distance=74°				
USGS 19h43m06.5s 16.0S 172.7W				
h=33km mb=5.3 Ms=5.5				
Samoa Islands Region				
Mar 8	PRI	eP	13 03 17.3	
	MNA	eP	13 03 17.8	
	CMB	e	13 03 22.8	
	ORV	eP	13 03 32.5	
	WDC	eP	13 03 37.7	
USGS 12h51m43.3s 20.5S 70.4W				
h=30km mb=5.2				
Near Coast of Northern Chile				
Mar 9	MNA	eP	13 34 36.7	
	FRI	e	13 34 37.0	
	CMB	eP	13 34 44.8	
	WDC	e	13 34 56.8	
	ORV	eP	13 34 57.8	
USGS 13h26m07.0s 5.1N 82.5W				
h=10km mb=5.0 Ms=4.3				
South of Panama				
Mar 10	PRS	ePc	00 10 25.1	
	GCC	ePc	00 10 25.3	
	PCC	ePc	00 10 25.5	
	SAO	eP	00 10 25.9	
	PRI	ePc	00 10 27.1	
	BRK	ePc	00 10 27.2	
	LLA	ePc	00 10 27.3	
	MHC	ePc	00 10 27.7	
	BKS	eP	00 10 27.7	
			AMP(μm)	PER(s)
	PZ		0.078	0.8
	FHC	eP	00 10 31.8	
	FRI	iPc	00 10 31.9	
	CMB	iPc	00 10 33.0	
	ORV	iPc	00 10 34.2	
	WDC	iPc	00 10 34.3	
	MIN	ePc	00 10 35.8	
	MNA	ePd	00 10 40.7	
USGS 23h58m50.4s 25.5S 179.7E				
h=483km mb=4.9				
South of Fiji Islands				
Mar 10	FRI	eP	00 33 50.9	
	PRI	eP	00 33 52.3	
	MNA	eP	00 33 52.4	
	LLA	ePd	00 33 55.3	
	PRS	ePd	00 33 55.8	
	SAO	e(P)	00 33 58.7	
	CMB	ePd	00 33 58.8	
	GCC	e(P)	00 34 00.8	
	MHC	ePd	00 34 01.3	
	PCC	ePd	00 34 03.7	
	BRK	e(P)	00 34 04.8	
	BKS	eP	00 34 05.0	
		iS	00 43 38	
		eSS	00 48 20	
		eL	00 58 32	
			AMP(μm)	PER(s)
	PZ		0.13	1.0
	ORV	eP	00 34 09.1	
	MIN	eP	00 34 11.8	
	WDC	ePd	00 34 14.3	
	FHC	ePd	00 34 21.7	
BRK mb=5.9 h=33km Distance=75°				
USGS 00h22m36.0s 18.4S 72.0W				
h=41km mb=5.7 Ms=5.6				
Off Coast of Northern Chile				
Mar 10	FRI	ePd	02 29 25.2	
	PRI	ePd	02 29 27.1	
	MNA	ePc	02 29 27.6	
	LLA	ePd	02 29 29.7	
	PRS	ePd	02 29 30.0	
	CMB	ePd	02 29 33.0	
	GCC	ePd	02 29 35.1	
	MHC	eP	02 29 35.5	
	BRK	eP	02 29 39.2	
	BKS	iPd	02 29 39.4	
		e	02 29 51.0	
			AMP(μm)	PER(s)
	PZ		0.061	1.0
	ORV	ePd	02 29 43.4	
	MIN	eP	02 29 45.4	
	WDC	ePd	02 29 48.7	
	FHC	ePd	02 29 56.7	
USGS 02h18m09.6s 18.3S 72.0W				
h=36km mb=5.5 Ms=3.9				
Off Coast of Northern Chile				
Mar 10	WDC	ePc	03 35 27.5	
	MIN	ePc	03 35 31.5	
	ORV	eP	03 35 34.6	
	BKS	iPc	03 35 37.2	
			AMP(μm)	PER(s)
	PZ		0.044	0.8
	MHC	ePd	03 35 41.3	
	CMB	ePd	03 35 44.0	
	PRS	ePc	03 35 46.5	
	LLA	ePc	03 35 46.9	
	FRI	ePd	03 35 49.5	
	PRI	ePc	03 35 50.0	
	MNA	ePc	03 35 51.3	
USGS 03h24m12.6s 36.9N 141.7E				
h=47km mb=5.2 Ms=5.5				
Near East Coast of Honshu, Japan				
Mar 10	PRS	ePc	04 34 06.4	
	PCC	ePc	04 34 06.9	
	PRI	ePc	04 34 08.2	
	BRK	eP	04 34 08.5	
	MHC	ePc	04 34 08.9	
	BKS	eP	04 34 09.2	
			AMP(μm)	PER(s)
	PZ		0.043	0.9
	FRI	ePc	04 34 13.1	
	CMB	iPc	04 34 14.4	
	ORV	eP	04 34 15.6	
	WDC	ePc	04 34 16.3	
	MIN	ePc	04 34 17.6	
	MNA	eP	04 34 22.3	
USGS 04h22m23.7s 25.7S 179.0W				
h=366km mb=4.9				
South of Fiji Islands				
Mar 10	PRS	eP	08 08 09.8	
	SAO	eP	08 08 10.0	
	PRI	eP	08 08 11.5	
	MHC	ePc	08 08 11.8	
	BKS	ePc	08 08 11.9	
			AMP(μm)	PER(s)
	PZ		0.017	0.7
	FRI	ePc	08 08 16.4	
	CMB	iPc	08 08 17.4	
	WDC	ePc	08 08 18.8	
	MNA	ePc	08 08 25.9	
USGS 07h56m46.0s 23.6S 180.0W				
h=521km mb=4.6				
South of Fiji Islands				
Mar 10	FHC	ePd	16 25 35.3	
	WDC	iPd	16 25 41.0	
	MIN	ePd	16 25 45.2	
	ORV	iPd	16 25 48.4	
	BRK	eP	16 25 51.8	
	BKS	iPd	16 25 52.0	
			AMP(μm)	PER(s)
	PZ		0.073	0.9
	PCC	eP	16 25 52.3	
	GCC	iPd	16 25 55.7	
	MHC	ePd	16 25 56.3	
	SAO	eP	16 25 58.7	
	CMB	iPd	16 25 58.8	
	PRS	ePd	16 26 00.9	
	LLA	ePd	16 26 01.7	
	PRI	ePd	16 26 04.9	
	FRI	iPd	16 26 05.0	
	MNA	iPc	16 26 06.6	
USGS 16h14m53.2s 40.6N 145.3E				
h=39km mb=5.7 Ms=5.2				
Off East Coast of Honshu, Japan				
Mar 10	FHC	eP	18 35 16.5	
	WDC	ePd	18 35 22.3	
	MIN	eP	18 35 26.4	
	ORV	eP	18 35 29.6	
	BRK	eP	18 35 33.0	
	BKS	ePc	18 35 33.5	
			AMP(μm)	PER(s)
	PZ		0.10	1.0
	GCC	eP	18 35 37.0	
	MHC	eP	18 35 37.7	
	CMB	ePd	18 35 40.0	
	PRS	eP	18 35 42.3	
	LLA	eP	18 35 43.0	
	PRI	eP	18 35 46.2	
	FRI	eP	18 35 46.3	
	MNA	eP	18 35 47.6	
USGS 18h24m34.1s 40.6N 145.2E				
h=37km mb=5.7 Ms=5.0				
Off East Coast of Honshu, Japan				
Mar 11	LLA	iPc	07 49 21.2	
	SAO	iPc	07 49 21.3	
	PRS	iPd	07 49 22.4	
	PRI	ePd	07 49 29.3	
	GCC	eP	07 49 30.7	
	MHC	iPd	07 49 32.7	
		iS	07 49 44.5	
	PCC	ePc	07 49 39.5	
	FRI	iPc	07 49 39.5	
		iS	07 49 56.2	
	BKS	eP	07 49 42.5	
	CMB	eP	07 49 44.1	
	BRK	e	07 49 44.8	
	ZSP	eP	07 49 45.5	
BRK 07h49m16.7s 36.6N 121.2W				
h=5km ML=2.9(4)				
Bear Valley, 32 km SE of Hollister, CA				
Mar 11	LLA	iPc	10 58 27.3	
	SAO	iPc	10 58 27.4	
	PRS	iPd	10 58 28.5	
	PRI	eP	10 58 35.3	
	GCC	eP	10 58 37.0	
	MHC	ePd	10 58 38.9	
		eS	10 58 53.5	
	PCC	eP	10 58 45.3	
	FRI	eP	10 58 45.3	
		eS	10 59 02.1	
	CMB	eP	10 58 50.9	
	BKS	eP	10 58 51.0	
BRK 10h58m22.8s 36.6N 121.2W				
h=5km ML=2.6(4)				
Bear Valley, 33 km SE of Hollister, CA				
Mar 11	WDC	ePKP	17 24 06.6	
	ORV	ePKP	17 24 09.3	
	BKS	ePKP	17 24 10.3	
			AMP(μm)	PER(s)
	PKPZ		0.052	1.0
	MHC	ePKP	17 24 10.9	
	PRS	ePKP	17 24 12.6	
	CMB	ePKP	17 24 12.7	
	LLA	ePKP	17 24 13.4	
	FRI	ePKP	17 24 14.7	
USGS 17h04m14.8s 24.7S 88.2E				
h=10km mb=5.1 Ms=5.5				
South Indian Ocean				
Mar 12	FHC	eP	02 10 09.4	
	WDC	eP	02 10 10.5	
	MIN	eP	02 10 12.4	
	ORV	eP	02 10 15.9	
	BKS	eP	02 10 23.8	
			AMP(μm)	PER(s)
	PZ		0.028	0.7
	CMB	eP	02 10 24.4	
	MNA	eP	02 10 24.7	
	MHC	eP	02 10 27.0	
	FRI	eP	02 10 29.6	
	LLA	eP	02 10 30.9	
	PRS	eP	02 10 31.6	
USGS 01h57m17.2s 49.9N 78.8E				
h=0km mb=5.5 Ms=3.9				
Eastern Kazakh SSR				
Mar 12	PRI	eP	05 57 15.8	
		iS	05 57 24.2	
	LLA	eP	05 57 22.4	
		eS	05 57 36.6	
	FRI	eP	05 57 23.3	
		e(S)	05 57 36.4	
	PRS	eP	05 57 25.6	
	SAO	eP	05 57 28.5	
	MHC	eP	05 57 35.6	
	GCC	eP	05 57 36.5	
	CMB	eP	05 57 39.8	
		eS	05 58 05.3	
BRK 05h57m07.0s 36.0N 120.1W				
h=8km Mag=2.6				
27 km SE of Coalinga, CA				
Mar 12	MNA	eP	06 18 34	
	FRI	eP	06 18 35.6	
	PRS	e(P)	06 18 39.4	
	LLA	eP	06 18 40.0	
	CMB	eP	06 18 43.5	
	ORV	eP	06 18 53.9	
	MIN	eP	06 18 56.0	
USGS 06h07m19.2s 18.5S 72.2W				
h=35km mb=5.1				
Off Coast of Northern Chile				
Mar 12	FRI	eP	12 24 26.0	
	MNA	eP	12 24 27.7	
		eScS	12 34 30.7	
	PRI	eP	12 24 28.4	
	LLA	eP	12 24 31.5	
	PRS	eP	12 24 32.8	
	CMB	eP	12 24 36.2	
		eScS	12 34 37.8	
	MHC	eP	12 24 40.0	
	BKS	eP	12 24 48	
		ePP	12 26 16	
		e	12 30 12	
		eS	12 30 32	
		eLq	12 32 44	
		eLr	12 34 30	
			AMP(μm)	PER(s)
	LZ		21	20.
	LN		6.4	20.
	LE		16	20.
	ORV	eP	12 24 50.8	
	MIN	eP	12 24 54.8	
	WDC	eP	12 24 58.8	
BRK Ms=5.8 Distance=37°				
USGS 12h18m12.0s 15.6N 94.6W				
h=40km mb=5.7 Ms=5.6				
Near Coast of Oaxaca, Mexico				
Mar 13	PRS	ePd	06 44 39.3	
	MHC	ePc	06 44 41.4	
	BKS	e(P)	06 44 42	
	PRI	ePc	06 44 42.8	
	SAO	e	06 44 43.6	
	FRI	eP	06 44 46.1	
	ORV	ePd	06 44 49.6	
	WDC	eP	06 44 49.8	
	MIN	e	06 44 50.8	
	MNA	eP	06 44 57.0	
USGS 06h32m00.8s 31.8S 177.6W				
h=33km mb=4.9 Ms=5.7				
Kermadec Islands Region				
Mar 13	MNA	iPc	07 03 46.3	
		iPcP	07 06 02.5	
	FRI	eP	07 03 46.4	
		ePcP	07 06 02.4	
	PRS	e(P)	07 03 46.8	
		ePcP	07 06 05.9	
	PRI	e(P)	07 03 48.3	
		ePcP	07 06 04.4	
	LLA	eP	07 03 53.0	
		ePcP	07 06 05.4	
	MHC	ePd	07 04 00.4	
		ePcP	07 06 08.3	
	ORV	eP	07 04 09.4	
		ePcP	07 06 10.9	
	MIN	ePd	07 04 12.0	
		ePcP	07 06 12.0	
	WDC	ePd	07 04 16.0	
		iPcP	07 06 13.9	
	FHC	ePd	07 04 27.3	
		ePcP	07 06 19.2	
	BKS	eLq	07 19 45	
		eLr	07 20 20	
USGS 06h56m32.9s 12.3N 87.4W				
h=60km mb=5.1				
Near Coast of Nicaragua				
Mar 13	PRS	ePc	08 33 56.5	
	GCC	ePc	08 33 56.6	
	PCC	ePc	08 33 57.9	
	LLA	e(P)	08 33 58.1	
	SAO	ePc	08 33 58.5	
	PRI	ePc	08 33 58.5	
	MHC	ePc	08 33 59.1	
	BRK	ePc	08 33 59.9	
	BKS	iPd	08 34 00.0	
		i(pP)	08 34 08.2	
		i	08 34 16.3	
		ePPS	08 45 24	
		eLq	08 54 40	
		eLr	08 58 00	
			AMP(μm)	PER(s)
	PZ		0.031	0.8
	FRI	ePc	08 34 03.5	
	WDC	ePc	08 34 06.6	
	ORV	ePc	08 34 07.6	
	MIN	eP	08 34 08.7	
	MNA	ePc	08 34 12.6	
BRK mb=5.4 h=33km Distance=81°				
USGS 08h21m49.1s 23.8S 177.3W				
h=32km mb=5.8 Ms=6.0				
South of Fiji Islands				
Mar 13	FRI	ePc	10 39 05.3	
	PRI	ePc	10 39 07.1	
		e	10 39 32.2	
	MNA	ePd	10 39 07.5	
		e	10 39 25.9	
		e	10 39 31.0	
	LLA	iPc	10 39 09.8	
		e	10 39 27.9	
		e	10 39 34.6	
	PRS	ePc	10 39 10.5	
		e	10 39 35.0	
	MHC	ePc	10 39 16.0	
	BKS	iPc	10 39 20.2	
			AMP(μm)	PER(s)
	PZ		0.087	1.0
	BRK	eP	10 39 20.8	
		e	10 39 44.8	
	ORV	iPc	10 39 24.2	
		i	10 39 42.3	
		e	10 39 49.1	
	MIN	ePc	10 39 26.4	
		e	10 39 51.3	
	WDC	iPc	10 39 29.5	
		e	10 39 47.4	
		e	10 39 55.6	
	GCC	e	10 39 33.7	
		e	10 39 40.4	
		e	10 39 46.6	
	FHC	eP	10 39 38.0	
USGS 10h28m13.8s 15.6S 74.3W				
h=65km mb=5.3				
Near Coast of Peru				
Mar 13	ZSP	iPc	15 08 19.2	
		iS	15 08 35.0	
	BRK	ePd	15 08 19.8	
		iS	15 08 35.5	
	BKS	eP	15 08 20.4	
		e	15 08 35	
		eS	15 08 35.5	
	ORV	ePc	15 08 22.6	
		i	15 08 23.5	
	PCC	ePc	15 08 23.7	
	MHC	eP	15 08 31.2	
	MIN	ePd	15 08 31.7	
	GCC	ePc	15 08 32.5	
	WDC	ePc	15 08 33.6	

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DATE	STA	PHASE	TIME (UTC)
		i	15 08 37.2
	SAO	eP	15 08 37.6
	LLA	e(P)	15 08 42.3
	PRS	e(P)	15 08 42.8
	FHC	eP	15 08 45.0
	FRI	eP	15 08 50.5
	MNA	eP	15 09 06.6
BRK	15h08m01.2s 38.8N 122.7W		
	h=2kmR ML=3.0(6) Mo=4.2E21(2)		
The Geysers area, 22 km S of Clear Lake, CA			
Mar 14	WDC	ePc	05 48 15.7
	MIN	eP	05 48 18.9
	BRK	eP	05 48 19.6
	BKS	eP	05 48 19.9
		AMP(μm)	PER(s)
	PZ	0.11	1.2
	ORV	eP	05 48 20.4
	GCC	eP	05 48 21.6
	MHC	ePc	05 48 23.2
	SAO	e	05 48 24.3
	PRS	eP	05 48 25.9
	LLA	eP	05 48 26.7
	CMB	ePc	05 48 26.8
	PRI	eP	05 48 28.8
	FRI	ePc	05 48 30.5
	MNA	iPc	05 48 35.5
USGS	05h35m58.9s 13.2N 143.8E		
	h=147km mb=5.2		
South of Mariana Islands			
Mar 14	PRI	eP	06 22 10.4
	PRS	eP	06 22 10.4
	SAO	eP	06 22 11.0
	MHC	eP	06 22 12.5
	FRI	eP	06 22 17.4
	CMB	eP	06 22 19.5
	WDC	eP	06 22 20.0
	ORV	eP	06 22 20.2
	MIN	eP	06 22 22.3
	MNA	eP	06 22 28.3
USGS	06h10m05.0s 23.5S 177.5W		
	h=40km mb=5.3 Ms=5.4		
South of Fiji Islands			
Mar 15	FRI	eP	05 17 30.8
	MNA	ePc	05 17 32.0
		e	05 27 56.5
	PRI	eP	05 17 33.5
	LLA	eP	05 17 35.9
	CMB	eP	05 17 41.0
		e	05 28 03.5
	MHC	e	05 17 45.1
	ORV	eP	05 18 05.4
	WDC	e	05 18 13.5
	FHC	eP	05 18 14.8
	MIN	eP	05 18 19.5
	BKS	eS	05 23 34
		eLq	05 27 23
		eLr	05 28 08
		AMP(μm)	PER(s)
	LZ	29	20.
	LN	15	20.
	LE	24	20.
USGS	05h11m17.0s 15.6N 94.6W		
	h=39km mb=5.6 Ms=5.5		
Near Coast of Oaxaca, Mexico			
Mar 15	WDC	eP	08 29 30.3
	MIN	eP	08 29 33.8
	ORV	eP	08 29 35.8
	CMB	eP	08 29 42.6
	FRI	eP	08 29 46.7
	MNA	eP	08 29 50.8
USGS	08h17m31.4s 18.9N 147.0E		
	h=33km mb=4.7 Ms=4.5		
Mariana Islands Region			
Mar 15	WDC	eP	11 47 22.0
	MIN	eP	11 47 25.5
	ORV	eP	11 47 27.4
	MHC	eP	11 47 30.7
	PRS	eP	11 47 33.1
	CMB	eP	11 47 34.3
	LLA	eP	11 47 34.5
	PRI	eP	11 47 36.8
	FRI	eP	11 47 38.5
	MNA	eP	11 47 42.6
USGS	11h35m24.6s 18.8N 146.9E		
	h=52km mb=5.3		
Mariana Islands			
Mar 15	WDC	iPd	21 55 13.9
	ORV	eP	21 55 15.8
	CMB	iP	21 55 20.7
	FRI	eP	21 55 22.6
	MNA	ePd	21 55 28.8
USGS	21h42m17.2s 5.3S 151.5E		
	h=62km mb=5.7		
New Britain Region			
Mar 16	WDC	eP	03 57 03.0
	MIN	eP	03 57 07.2
	CMB	eP	03 57 20.8
	FRI	eP	03 57 27.0
	MNA	eP	03 57 27.8
USGS	03h46m14.7s 40.6N 145.3E		
	h=36km mb=5.3 Ms=5.0		
Off East Coast of Honshu, Japan			
Mar 16	FRI	eP	04 01 43.6
	CMB	eP	04 01 44.5
	WDC	eP	04 01 45.9
	MNA	eP	04 01 53.8
USGS	03h50m16.4s 16.3S 172.6W		
	h=33km mb=5.0 Ms=4.8		
Samoa Islands Region			
Mar 16	WDC	ePd	17 27 19.0
	MIN	ePd	17 27 24.4
	ORV	e(P)	17 27 28.8
	CMB	ePd	17 27 43.8
	LLA	ePd	17 27 49.0
	FRI	eP	17 27 52.4
	MNA	ePc	17 27 53.0
USGS	17h20m44.6s 53.4N 167.2W		
	h=10km mb=5.1 Ms=5.0		
Fox Islands, Aleutian Islands			
Mar 18	FHC	eP	03 48 33.7
		epP	03 48 52.7
	WDC	iPd	03 48 38.2
	MIN	ePd	03 48 41.7
	ORV	eP	03 48 44.2
	BRK	eP	03 48 47.1
	BKS	eP	03 48 47.1
		ePP	03 51 57
		eS	03 59 03
		eScS	03 59 41
		ePS	04 00 08
		eSS	04 04 18
		e	04 08 12
		eLq	04 10 49
		eLr	04 14 16
		AMP(μm)	PER(s)
	PZ	0.83	1.2
	LZ	51	20.
	LN	11	20.
	LE	35	20.
	PCC	eP	03 48 47.6
	GCC	eP	03 48 50.0
	MHC	eP	03 48 51.0
	SAO	e(P)	03 48 52.7
	CMB	iPd	03 48 52.9
	PRS	eP	03 48 54.8
		epP	03 49 13.8
	LLA	eP	03 48 55.6
		epP	03 49 14.7
	FRI	eP	03 48 58.0
	PRI	eP	03 48 58.3
	MNA	eP	03 48 59.7
BRK	Ms=6.7 Distance= 81°		
USGS	03h36m30.3s 32.0N 131.8E		
	h=54km mb=6.4		
Kyushu, Japan			
Mar 18	GCC	e	09 05 21.9
	MHC	e(P)	09 05 24.2
	FRI	eP	09 05 28.0
	CMB	eP	09 05 29.5
	ORV	e(P)	09 05 31.4
	WDC	eP	09 05 32.2
	MIN	e(P)	09 05 33.4
	MNA	eP	09 05 37.3
USGS	08h52m48.4s 30.2S 177.6W		
	h=27km mb=5.3 Ms=5.0		
Kermadec Islands			
Mar 18	PRI	iPd	16 59 53.4
	LLA	eP	16 59 59.4
	PRS	eP	17 00 03.0
		eS	17 00 15.2
	FRI	ePd	17 00 03.7
	SAO	eP	17 00 06.7
	GCC	e	17 00 15.6
	MHC	e(P)	17 00 16.7
	CMB	eP	17 00 18.0
BRK	16h59m48.3s 36.2N 120.3W		
	h=11km ML=2.8(2)		
5 km N of Coalinga, CA			
Mar 18	LLA	iPc	18 18 01.0
	SAO	iPc	18 18 01.6
	PRS	eP	18 18 02.3
	PRI	eP	18 18 09.3
	FRI	eP	18 18 11.3
	GCC	eP	18 18 11.4
		e	18 18 24.3
	MHC	eP	18 18 13.3
		eS	18 18 25.13
BRK	18h17m56.8s 36.6N 121.2W		
	h=5km ML=1.9(2)		
Bear Valley, 35 km SE of Hollister, CA			
Mar 18	MNA	iPc	18 28 34.1
	FRI	iPnc	18 28 46.5
		iP*	18 28 51.2
		iSg	18 29 29.4
	CMB	iPnc	18 28 54.8
		iP*	18 29 02.4
		iSg	18 29 50.0
	PRI	iPc	18 29 00.5
	LLA	eP	18 29 02.3
	SAO	ePc	18 29 06.0
	PRS	eP	18 29 06.0
	MHC	eP	18 29 08.2
	ORV	e(P)	18 29 13.8
	BKS	eP	18 29 25.1
BRK	ML=4.3(4)		
USGS	18h28m00.0s 37.2N 116.2W		
	h=0km mb=4.3 Ms=4.1		
Underground Nuclear Explosion, N.T.S.			
Mar 19	MNA	eP	01 37 42.0
	FRI	eP	01 37 44.0
	PRI	e(P)	01 37 48.5
	LLA	eP	01 37 50.0
	PRS	eP	01 37 51.8
	CMB	eP	01 37 53.2
	MHC	eP	01 37 57.5
	BRK	e(P)	01 38 03.4
	ORV	eP	01 38 03.6
	WDC	eP	01 38 09.4
	FHC	e(P)	01 38 20.5
USGS	01h28m52.2s 6.8N 76.5W		
	h=10km mb=5.7 Ms=4.2		
Northern Colombia			
Mar 19	PRS	e(P)	17 26 58.6
	PCC	e	17 27 03.5
	ORV	eP	17 27 03.5
	WDC	eP	17 27 03.5
	CMB	eP	17 27 04.7
	FRI	eP	17 27 05.2
	MNA	eP	17 27 13.3
USGS	17h14m41.3s 14.9S 167.2E		
	h=149km mb=5.5		
Vanuatu Islands			
Mar 19	FHC	eP	21 38 50.8
	WDC	ePc	21 38 55.6
	ORV	ePc	21 39 01.3
	PCC	eP	21 39 03.5
	BRK	eP	21 39 03.7
	BKS	iPd	21 39 04.2
		AMP(μm)	PER(s)
	PZ	0.16	0.8
	GCC	ePc	21 39 06.4
	MHC	ePc	21 39 07.4
	CMB	iPc	21 39 09.9
		e	21 39 16.5
	PRS	ePc	21 39 10.9
	SAO	ePc	21 39 12.2
	LLA	e(P)	21 39 13.2
	PRI	eP	21 39 14.4
	FRI	iPc	21 39 14.6
	MNA	eP	21 39 16.8
USGS	21h27m50.1s 29.2N 137.9E		
	h=536km mb=5.3		
South of Honshu, Japan			
Mar 19	PRS	ePd	23 03 07.7
		epP	23 03 58.0
	GCC	eP	23 03 07.9
		epP	23 03 57.7
	PCC	eP	23 03 08.0
	SAO	eP	23 03 08.7
	BKS	eP	23 03 10.0
		ipP	23 03 59.5
		iS	23 12 43
		eSP	23 13 48
		e	23 16 11
		e	23 17 35
		eSS	23 23 35
		e	23 24 17
		e	23 26 16
		AMP(μm)	PER(s)
	PZ	0.075	0.8
	BRK	eP	23 03 10.2
	PRI	eP	23 03 10.2
		e	23 03 23.0
	MHC	eP	23 03 10.4
		epP	23 04 00.3
	LLA	eP	23 03 10.5
	FRI	eP	23 03 15.5
	CMB	ePd	23 03 16.5
		e	23 03 28.2
		epP	23 04 07.0
		eS	23 12 59
		e(PKP)	23 30 21.2
	ORV	eP	23 03 17.7
		epP	23 04 07.4
	WDC	iPd	23 03 17.9
		epP	23 04 07.5
		eS	23 13 58.3
		e(RPKP)	23 30 23.0
	MIN	eP	23 03 20.0
		epP	23 04 10.1
BRK	mb=5.5 h=205km Distance= 77°		
USGS	22h51m39.3s 20.4S 176.1W		
	h=213km mb=5.9		
Fiji Islands Region			
Mar 20	ZSP	iPc	08 36 32.0
		iS	08 36 46.3
	BRK	ePc	08 36 32.6
		eS	08 36 47.9
	BKS	eP	08 36 33.1
	ORV	e(P)	08 36 37.3
		e	08 36 42.2
	PCC	ePc	08 36 39.0
	MHC	e	08 36 43.1
	MIN	e(P)	08 36 43.8
	CMB	eP	08 36 47.3
	WDC	e	08 36 50.4
	FRI	e	08 37 02.8
BRK	08h36m12.7s 38.8N 122.8W		
	h=3km ML=3.0(2)		
The Geysers area, 21 km S of Clear Lake, CA			
Mar 20	FRI	eP	13 05 33.7
	CMB	ePc	13 05 35.5
	WDC	ePc	13 05 37.9
	ORV	e(P)	13 05 39.0
	MIN	eP	13 05 39.6
	MNA	eP	13 05 43.9
USGS	12h53m29.6s 23.5S 174.7W		
	h=33km mb=5.1 Ms=4.1		
Tonga Islands Region			
Mar 20	CMB	iPc	15 45 26.2
		iS	15 45 36.7
	MNA	iPd	15 45 29.5
		iS	15 45 42.5
	FRI	ePc	15 45 37.0
		i	15 45 38.3
	ORV	ePc	15 45 45.4
	MHC	iPd	15 45 47.2
	LLA	ePd	15 45 48.8
	BKS	eP	15 45 50.3
	SAO	iPd	15 45 50.5
	BRK	eP	15 45 50.5
	ZSP	eP	15 45 51.0
		i	15 45 51.0
		iS	15 46 19.5
	PCC	e(P)c	15 45 53.6
	PRS	e(P)	15 45 54.1
	GCC	e(P)	15 45 54.2
	MIN	e(P)c	15 45 54.6
	PRI	ePd	15 45 55.9
	WDC	e	15 46 06.7
BRK	15h45m11.0s 38.4N 119.4W		
	h=10km ML=3.7(6)		
26 km NW of Bridgeport, CA			
Mar 21	FHC	eP	10 48 46.2
		eScP	10 54 35.8
	WDC	iPd	10 48 54.1
		epP	10 49 16.4
		iPcP	10 51 04.5
		iScP	10 54 40.3
		isS	10 55 26.0
		eScS	10 58 52.0
	MIN	ePd	10 48 59.4
		eScP	10 54 41.5
		eScS	10 58 56.0
	ORV	eP	10 49 03.4
		ePcP	10 51 08.7
		iScP	10 54 44.7
		eScS	10 58 58.2
	BRK	eP	10 49 08.4
		eScP	10 54 47.7
	BKS	iPc	10 49 09.1
		e(sP)	10 49 42
		ePcP	10 51 09.0
		eScP	10 54 49.0
		iS	10 55 15
		isS	10 55 50
		iG	10 58 27
		iScS	10 59 02
		AMP(μm)	PER(s)
	PZ	0.46	1.2
	PCC	eP	10 49 10.0
	GCC	eP	10 49 13.8
		eScP	10 54 50.2
	MHC	eP	10 49 15.4
		epP	10 49 36.7
		i	10 49 49.6
		eScP	10 54 48.8
	CMB	ePd	10 49 17.4
		ipP	10 49 40.7
		i	10 49 48.2
		iPcP	10 51 12.3
		iScP	10 54 50.6
		isS	10 55 34.4
		eScS	10 59 13.7
	SAO	eP	10 49 18.8
		eScP	10 54 51.8
	PRS	eP	10 49 21.0
		eScP	10 54 53.3
	LLA	eP	10 49 22.0
		eScP	10 54 54.2
	FRI	ePd	10 49 25.7
		epP	10 49 43.4
		ePcP	10 51 16.6
		eScP	10 54 55.0
	PRI	eP	10 49 26.0
		eScP	10 54 56.5
	MNA	eP	10 49 26.4
		ipP	10 49 59.7
		i	10 49 59.4
		iPcP	10 51 17.5
		eScP	10 54 56.0
		i	10 55 12.1
		esS	10 55 42.7
		eScS	10 59 20.1
BRK	mb=6.2 h=96km Distance=41°		
USGS	10h41m36.0s 52.1N 177.3W		

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DATE	STA	PHASE	TIME (UTC)
		h=93km mb=6.0	
		Andreanof Islands, Aleutian Is.	
Mar 21	FRI	eP	12 17 00.6
	MNA	eP	12 17 00.8
	LLA	eP	12 17 06.4
	CMB	eP	12 17 09.5
	ORV	eP	12 17 22.1
		USGS 12h08m58.9s 8.8N 83.4W	
		h=24km mb=5.3 Ms=5.3	
		Costa Rica	
Mar 21	WDC	eP	15 39 09.4
		e	15 41 17.5
	MIN	eP	15 39 14.9
	ORV	eP	15 39 18.9
		e	15 41 21
	BKS	iPc	15 39 24.3
	CMB	eP	15 39 32.8
		e	15 41 27.0
	PRS	e	15 39 36.5
	LLA	e	15 39 37.3
	FRI	eP	15 39 41.1
		e	15 41 30.5
	PRI	eP	15 39 41.3
	MNA	eP	15 39 41.8
		USGS 15h31m52.0s 52.1N 177.6W	
		h=102km mb=4.8	
		Andreanof Islands, Aleutian Is.	
Mar 22	FHC	eP	02 56 14.9
	WDC	eP	02 56 20.7
		i	02 56 26.0
		i	02 59 03.7
		e	03 02 28.9
	MIN	eP	02 56 26.3
		e	03 02 31.2
	ORV	eP	02 56 32.0
	BRK	eP	02 56 36.7
	BKS	ePc	02 56 38.9
		ipP	02 56 52.9
		iS	03 02 32
		iLq	03 05 30
		eLr	03 07 30
		AMP(μm)	PER(s)
		PZ 0.12	1.0
		LZ 33	20.
		LN 16	20.
		LE 31	20.
	JAS	eP	02 56 43.9
		e	03 02 38.0
	LLA	eP	02 56 49.5
	PRS	eP	02 56 49.8
	SAO	e	02 56 50.6
	GCC	e	02 56 51.0
	FRI	eP	02 56 52.9
	PRI	eP	02 56 53.1
	MNA	eP	02 56 54.3
		e	03 02 43.8
		BRK Ms=6.2 Distance=41°	
		USGS 02h49m15.9s 51.6N 173.6W	
		h=19km mb=5.9 Ms=6.0	
		Andreanof Islands, Aleutian Is.	
Mar 22	FRI	eP	03 35 44.8
		e	03 35 57.2
	PRI	eP	03 35 47.1
	MNA	eP	03 35 47.3
		e	03 35 59.7
	LLA	eP	03 35 48.6
	PRS	eP	03 35 50.1
	CMB	eP	03 35 51.0

DATE	STA	PHASE	TIME (UTC)
	ORV	iPd	03 36 02.5
		i	03 36 13.6
	SAO	e	03 36 02.6
	MIN	eP	03 36 03.3
	GCC	e	03 36 04.5
	WDC	iPd	03 36 07.5
	FHC	i	03 36 27.7
		USGS 03h23m57.6s 24.1S 70.1W	
		h=40km mb=5.8 Ms=5.8	
		Near Coast of Northern Chile	
Mar 22	WDC	eP	17 51 57.1
	MIN	e	17 52 03.5
	ORV	eP	17 52 07.0
	BKS	e(P)	17 52 13.2
		e	18 02 24
	MHC	eP	17 52 18.5
	CMB	eP	17 52 21.8
	PRS	eP	17 52 25.5
	LLA	eP	17 52 25.6
	FRI	eP	17 52 30.0
	PRI	e	17 52 30.4
	MNA	eP	17 52 30.7
		USGS 17h45m04.6s 52.1N 171.5W	
		h=33km mb=5.3 Ms=4.9	
		Fox Islands, Aleutian Islands	
Mar 23	WDC	ePd	05 10 27.7
	ORV	eP	05 10 33.4
	BRK	e	05 10 36.8
	CMB	ePd	05 10 42.4
	PRS	eP	05 10 44.0
	LLA	eP	05 10 44.8
	FRI	eP	05 10 47.5
	PRI	eP	05 10 47.8
	MNA	eP	05 10 48.7
		USGS 04h58m19.3s 32.0N 131.9E	
		h=50km mb=5.2 Ms=5.1	
		Kyushu, Japan	
Mar 23	FHC	iPc	11 01 24.3
		iS	11 01 33.2
	ARC	iPc	11 01 25.1
		iS	11 01 34.1
	WDC	iPc	11 01 27.2
		iS	11 01 37.0
	MIN	eP	11 01 37.4
		eS	11 01 57.6
	ORV	e(P)	11 01 45.4
	BRK	11h01m14.4s 40.9N 123.3W	
		h=12km ML=3.2(4)	
		70 km E of Eureka, CA	
Mar 23	PRI	iPc	15 22 54.8
	FRI	iPd	15 23 01.2
	LLA	iPc	15 23 01.3
	PRS	iPd	15 23 04.1
		iS	15 23 20.2
	SAO	iPc	15 23 07.4
	MHC	eP	15 23 14.8
	GCC	eP	15 23 15.0
	CMB	ePd	15 23 17.6
		iS	15 23 43.1
	PCC	e	15 23 21.0
	MNA	eP	15 23 32.9
	BKS	e(P)	15 23 36.9
	ORV	eP	15 23 42.5
	BRK	15h22m45.1s 36.0N 120.0W	
		h=6km ML=3.7(3)	
		30 km SE of Coalinga, CA	
Mar 24	FHC	eP	13 01 12.2

DATE	STA	PHASE	TIME (UTC)
	WDC	iPc	13 01 17.3
		e	13 01 24.6
	MIN	iPc	13 01 21.3
	BKS	iPd	13 01 23.4
		epP	13 01 35.5
	ORV	ePc	13 01 24.2
	BRK	eP	13 01 27.6
		e	13 01 34.8
	GCC	eP	13 01 31.2
	MHC	e(P)	13 01 31.7
	SAO	e(P)	13 01 34
	CMB	iPc	13 01 34.0
	PRS	ePc	13 01 36.1
		e	13 01 43.3
	LLA	ePc	13 01 36.9
	FRI	iPc	13 01 39.7
		e	13 01 46.9
	PRI	ePc	13 01 39.8
	MNA	iPc	13 01 41.0
		USGS 12h49m47.0s 37.4N 137.9E	
		h=23km mb=5.7 Ms=5.1	
		Near West Coast of Honshu, Japan	
Mar 24	WDC	eP	21 50 03.6
	ORV	eP	21 50 07.5
	CMB	eP	21 50 15.1
	FRI	eP	21 50 19.5
	MNA	eP	21 50 23.2
		USGS 21h38m11.3s 22.1N 143.8E	
		h=122km mb=4.9	
		Volcano Islands Region	
Mar 25	MNA	iPc	15 49 10.4
	CMB	iPd	15 49 27.0
		i	15 49 34.3
		iS	15 50 14.6
	ORV	e(P)d	15 49 28.3
	MIN	i	15 49 34.7
	FRI	ePc	15 49 35.6
		i	15 49 43.9
	WDC	iPc	15 49 38.8
		i c	15 49 46.4
	MHC	ePc	15 49 44.6
	LLA	e(P)	15 49 47.5
	SAO	i	15 49 48.5
	BKS	iPc	15 49 55.2
		i	15 50 00.8
		i(S)	15 51 05.3
	ZSP	e	15 49 56.0
	BRK	e	15 49 57.3
	FHC	i	15 50 09.3
		BRK ML=4.2(6)	
		USGS 15h48m39.5s 40.1N 117.7	
		h=5km mb=4.2	
		Central Nevada	
Mar 25	MNA	iPc	16 02 03.5
		iS	16 02 29.1
	CMB	iPd	16 02 20.2
		i	16 02 27.5
		iS	16 03 06.0
	ORV	e(P)	16 02 20.8
		i	16 02 27.7
		iS	16 03 02.8
	MIN	i	16 02 27.8
	FRI	ePc	16 02 28.6
		e	16 02 36.1
		i	16 02 39.6
	WDC	ePc	16 02 32.0
		i	16 02 39.4
	MHC	ePc	16 02 37.6
	BRK	e	16 02 38.2

DATE	STA	PHASE	TIME (UTC)
	LLA	e(P)	16 02 40.1
	ZSP	e	16 02 47.2
	PRS	e(P)	16 02 47.9
	BKS	iP	16 02 48.3
		i	16 02 54.0
		BRK ML=4.3(6)	
		USGS 16h01m32.2s 40.1 117.7	
		h=5km mb=3.9	
		Central Nevada	
Mar 25	MNA	iPc	16 11 32.5
		i	16 11 35.4
		iS	16 11 58.1
	CMB	iPd	16 11 49.1
		i	16 11 56.2
		iS	16 12 35.9
	ORV	e(P)	16 11 49.5
		i	16 11 55.8
	FRI	ePc	16 11 57.5
		e	16 12 05.5
	MHC	eP	16 12 06.6
	WDC	i	16 12 08.3
	LLA	e(P)	16 12 09.4
	BRK	e	16 12 15.2
	BKS	eP	16 12 23.5
	ZSP	e	16 13 17.8
		BRK ML=4.0(4)	
		USGS 16h11m02.1s 40.1N 117.7W	
		h=10km	
		Central Nevada	
Mar 26	WDC	eP	02 38 34.3
	MIN	eP	02 38 41.5
	ORV	eP	02 38 51.0
	CMB	e	02 39 21.0
	MNA	eP	02 39 21.0
	LLA	e	02 39 33.9
	FRI	e	02 39 34.2
	PRI	e	02 39 39.2
		USGS 02h35m47.4s 50.8N 130.0W	
		h=10km mb=4.6	
		Vancouver Island Region	
Mar 26	PRS	eP	06 58 58.5
		epP	06 59 04.8
	MHC	eP	06 59 01.5
		epP	06 59 07.8
	BKS	iPc	06 59 02.0
		e(Lr)	07 32 58
	FRI	eP	06 59 06.0
		epP	06 59 12.6
	SAO	e	06 59 06.1
	CMB	eP	06 59 07.5
		epP	06 59 14.1
	WDC	eP	06 59 10.0
		epP	06 59 16.3
	MIN	eP	06 59 11.7
		epP	06 59 18.0
	FHC	epP	06 59 13.7
	MNA	eP	06 59 16.8
		epP	06 59 23.2
		USGS 06h47m10.6s 21.5S 173.8W	
		h=20km mb=5.4 Ms=5.3	
		Tonga Islands	
Mar 26	GCC	e(P)	16 29 45.6
		e	16 30 33.2
	PRS	eP	16 29 47.0
		e	16 30 34.6
	BKS	eP	16 29 47.5
		e	16 30 34
		i(SKS)	16 39 54

DATE	STA	PHASE	TIME (UTC)
		eP	16 41 27
		ePP	16 41 52
		eLq	16 52 25
		eLr	16 52 40
		AMP(μm)	PER(s)
		PZ 0.057	1.0
		LZ 2.3	20.
		LN 1.4	20.
		LE 1.8	20.
	MHC	eP	16 29 48.8
	PRI	eP	16 29 49.4
		e	16 30 36.8
	WDC	eP	16 29 50.5
		e	16 30 38.1
	ORV	eP	16 29 52.0
		e	16 30 39.3
	CMB	eP	16 29 53.2
		e	16 30 40.5
	FRI	eP	16 29 53.9
		e	16 30 39.3
	MNA	eP	16 30 02.0
		e	16 30 40.0
		BRK Ms=5.6 Distance=87°	
		USGS 16h17m38.2s 13.7S 167.2E	
		h=191km mb=5.5	
		Vanuatu Islands	
Mar 26	PRS	eP	18 44 06.4
	GCC	e	18 44 06.5
	FRI	e	18 44 06.9
	PRI	eP	18 44 07.0
	SAO	e	18 44 08.8
	MHC	eP	18 44 09.0
	LLA	eP	18 44 09.0
	BRK	eP	18 44 09.4
	BKS	ePc	18 44 09.8
		i	18 44 30.6
		i	18 44 31
		iS	18 54 04
		eLq	19 03 45
		eLr	19 07 10
		AMP(μm)	PER(s)
		PZ 0.090	1.1
		LZ 7.3	20.
		LN 5.0	20.
		LE 5.4	20.
	CMB	ePc	18 44 15.3
	WDC	eP	18 44 17.5
	ORV	eP	18 44 17.7
		BRK Ms=6.0 Distance=77°	
		USGS 18h32m26.0s 21.4S 174.5W	
		h=81km mb=5.4	
		Tonga Islands	
Mar 26	PRS	eP	22 43 13.2
	MHC	eP	22 43 15.6
	FRI	eP	22 43 20.2
	CMB	eP	22 43 22.6
	ORV	eP	22 43 23.5
	WDC	eP	22 43 24.6
	MNA	eP	22 43 31.8
		USGS 22h31m24.8s 21.8S 174.3W	
		h=33km mb=4.8	
		Tonga Islands	
Mar 27	CMB	eP	09 27 23.4
	FRI	eP	09 27 24.0
	WDC	e	09 27 26.3
	MNA	eP	09 27 34.4
		USGS 09h15m28.1s 21.2S 174.7W	
		h=33km mb=5.0 Ms=4.6	
		Tonga Islands	

DATE	STA	PHASE	TIME (UTC)
Mar 27	FRI	eP	11 55 23.7
	CMB	eP	11 55 24.4
	WDC	eP	11 55 24.5
	ORV	eP	11 55 24.7
		USGS 11h42m39.5s 22.3S 172.1E	
		h=33km mb=4.8	
		Loyalty Islands Region	
Mar 28	FRI	ePKP	05 23 04.2
	PRI	ePKP	05 23 05.2
	MNA	ePKP	05 23 05.4
	PRS	ePKP	05 23 05.7
	LLA	ePKP	05 23 05.9
	SAO	ePKP	05 23 06.0
	CMB	ePKPd	05 23 06.9
	GCC	ePKP	05 23 07.1
	PCC	ePKP	05 23 07.3
	MHC	ePKP	05 23 07.8
	BKS	ePKP	05 23 08.5
	BRK	ePKP	05 23 08.7
	ORV	ePKP	05 23 10.5
	MIN	ePKP	05 23 11.0
	WDC	ePKP	05 23 11.7
		USGS 05h04m10.9s 57.9S 25.4W	
		h=33km mb=5.5	
		South Sandwich Islands Region	
Mar 28	WDC	eP	11 38 54.4
	ORV	eP	11 38 59.5
	CMB	eP	11 39 08.7
	PRS	eP	11 39 10.4
	FRI	eP	11 39 12.7
	MNA	eP	11 39 15.5
		USGS 11h26m38.5s 30.7N 131.3E	
		h=40km mb=5.1 Ms=5.8	
		Kyushu, Japan	
Mar 28	MHC	iPd	21 12 22.1
	GCC	iPd	21 12 29.1
	PCC	iPc	21 12 29.2
		iS	21 12 37.1
	BKS	iP	21 12 29.3
	BRK	iPc	21 12 29.3
	ZSP	iPc	21 12 30.2
		iS	21 12 39.8
	SAO	eP	21 12 35.0
	CMB	eP	21 12 38.0
		iS	21 12 55.5
	LLA	iPd	21 12 38.0
	PRS	eP	21 12 40.1
	FRI	eP	21 12 46.3
		iS	21 13 07.6
	PRI	e	21 12 48.0
		BRK 21h12m17.9s 37.5N 121.6W	
		h=4km ML=2.8(3) Mo=4.0E20(1)	
		Mt. Lewis area, 20 km SE of Livermore, CA	
Mar 28	FHC	e	23 44 49.0
	WDC	ePc	23 44 51.3
	ORV	eP	23 44 53.8
	MIN	eP	23 44 53.9
	PRS	eP	23 44 54.0
	PRI	eP	23 44 56.8
	CMB	eP	23 44 57.5
	GCC	e	23 44 58.5
	FRI	eP	23 45 00.0
	MNA	iPc	23 45 07.2
	BKS	eLr	00 13 24
		AMP(μm)	PER(s)
		LZ 2.1	20.

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DATE	STA	PHASE	TIME (UTC)
		LN	0.36 20.
		LE	1.8 20.
USGS 23h31m58.3s 5.3S 152.6E			
h=54km mb=5.8 Ms=5.2			
New Britain Region			
Mar 29	WDC	eP	01 37 57.1
	MIN	eP	01 38 03.4
	ORV	eP	01 38 06.8
	MHC	eP	01 38 17.3
	CMB	eP	01 38 21.0
	FRI	eP	01 38 29.5
	MNA	eP	01 38 31.0
USGS 01h30m55.5s 51.6N 173.2W			
h=33km mb=5.0			
Andreanof Islands, Aleutian Is.			
Mar 29	BRK	eP	09 30 11.6
	PRS	eP	09 30 12.3
	PRI	eP	09 30 14.6
	WDC	eP	09 30 16.5
	ORV	eP	09 30 17.6
	MIN	eP	09 30 18.2
	CMB	eP	09 30 18.6
	FRI	eP	09 30 18.8
	BKS	e	09 30 22.6
		eLr	09 56 52.0
			AMP(μm) PER(s)
		PZ	0.014 0.8
		LZ	2.1 20.
		LN	1.6 20.
		LE	2.0 20.
	MNA	eP	09 30 28.0
USGS 09h17m34.9s 17.2S 167.9E			
h=21km mb=5.3 Ms=5.4			
Vanuatu Islands			
Mar 29	WDC	eP	21 26 23.4
		e	21 26 35.7
	CMB	ePc	21 26 43.4
		i	21 26 55.5
	MNA	eP	21 26 51.3
USGS 21h16m42.2s 47.3N 156.3E			
h=27km mb=4.9			
Kuril Islands Region			
Mar 30	FHC	eP	03 20 28.4
		i	03 20 40.3
	WDC	iPd	03 20 29.6
		i	03 20 41.5
		i	03 21 06.5
	MNA	eP	03 20 51.4
		i	03 21 02.7
	CMB	ePd	03 20 52.4
		i	03 21 03.8
		i	03 21 37.0
	BKS	ePd	03 20 54.0
		e	03 21 05.5
		e	03 21 25.8
			AMP(μm) PER(s)
		PZ	0.033 0.9
	PRI	eP	03 21 09.9
		i	03 21 22.3
USGS 03h13m41.0s 74.6N 130.6W			
h=10km mb=5.5 Ms=4.6			
Beaufort Sea			
Mar 30	WDC	eP	09 24 42.2
	CMB	eP	09 24 44.3
USGS 09h12m24.1s 18.9S 169.1E			
h=238km mb=4.6			
Vanuatu Islands			

DATE	STA	PHASE	TIME (UTC)
Mar 30	PRS	ePc	20 39 12.3
		e	20 39 22.2
	GCC	eP	20 39 12.5
	PRI	ePc	20 39 14.4
	MHC	ePc	20 39 15.3
		e	20 39 25.3
	LLA	e(P)	20 39 15.7
	FRI	ePc	20 39 20.1
		e	20 39 30.1
	CMB	ePc	20 39 21.5
		e	20 39 31.4
		e	20 39 39.0
	WDC	ePc	20 39 23.5
		e	20 39 33.6
	MNA	iPc	20 39 30.8
		e	20 39 40.7
USGS 20h27m26.5s 21.3S 174.2W			
h=32km mb=5.0 Ms=5.0			
Tonga Islands			
Mar 31	FHC	ePc	01 27 38.5
		eScP	01 32 13.0
	WDC	iPc	01 27 44.7
		epP	01 28 25.3
		eScP	01 32 16.3
	MIN	ePc	01 27 49.2
	ORV	ePc	01 27 53.2
		epP	01 27 53.2
		epP	01 28 33.4
		eScP	01 32 21.4
	BRK	eP	01 27 58.6
	BKS	ePc	01 27 58.9
			AMP(μm) PER(s)
		PZ	0.043 1.0
	PCC	ePc	01 27 59.6
	GCC	ePc	01 28 03.6
	MHC	eP	01 28 04.0
	CMB	iPc	01 28 05.5
		epP	01 28 45.8
		eScP	01 32 29.6
	SAO	e(P)	01 28 06.8
	PRS	ePc	01 28 09.8
	LLA	ePc	01 28 10.2
		e	01 32 32.7
	FRI	ePc	01 28 12.8
		eScP	01 32 34.3
	MNA	iPc	01 28 12.8
		epP	01 28 52.5
	PRI	ePc	01 28 14.1
		eScP	01 32 35.4
USGS 01h18m36.9s 53.2N 156.5E			
h=174km mb=5.2			
Kamchatka			
Mar 31	FRI	e(P)	09 28 01.9
	PRI	eP	09 28 02.2
	LLA	eP	09 28 04.5
	PRS	eP	09 28 04.8
	GCC	e(P)	09 28 08.2
	CMB	eP	09 28 08.2
	MHC	eP	09 28 09.8
	WDC	ePd	09 28 22.1
USGS 09h15m52.2s 29.7S 71.5W			
h=27km mb=4.8			
Near Coast of Central Chile			
Mar 31	ARC	eP	09 58 22.2
		iS	09 58 31.0
	FHC	iPc	09 58 22.6
		iS	09 58 30.5
	WDC	iPc	09 58 36.4

DATE	STA	PHASE	TIME (UTC)
	MIN	iPc	09 58 46.4
		i	09 58 48.4
	ORV	iPc	09 58 50.3
	PCC	e(P)	09 59 01.0
	GCC	e(P)	09 59 08.4
	CMB	e	09 59 12.0
	SAO	eP	09 59 14.5
BRK 09h58m10.3s 40.5N 124.7W			
h=17km ML=3.6(4) Mo=2.9E20(2)			
Off Coast 60 km SW of Eureka, CA			
Mar 31	FHC	eP	21 18 38.8
	WDC	eP	21 18 43.7
	ORV	eP	21 18 49.7
	BRK	eP	21 18 51.9
	PCC	eP	21 18 52.2
	MHC	eP	21 18 55.9
	CMB	eP	21 18 58.4
	PRS	eP	21 18 59.5
	LLA	e(P)	21 19 00.2
	PRI	eP	21 19 02.8
	FRI	eP	21 19 03.2
USGS 21h07m35.6s 30.5N 138.3E			
h=446km mb=4.8			
South of Honshu, Japan			
Apr 1	FRI	eP	01 59 39.7
		iPcP	01 59 54.4
	PRI	eP	01 59 41.2
	MNA	iPd	01 59 41.3
		e(S)	02 09 43.2
	LLA	eP	01 59 44.0
	PRS	eP	01 59 44.4
	SAO	eP	01 59 45.7
		iPcP	01 59 59.5
	CMB	iPd	01 59 46.5
		ipP	02 00 58.7
		e(S)	02 09 33.8
	GCC	eP	01 59 48.7
		ipP	02 01 00.0
	MHC	eP	01 59 49.0
		i(pP)	02 01 00.2
	PCC	eP	01 59 51.1
		iPcP	02 00 05.1
	BRK	eP	01 59 52.3
	BKS	iPd	01 59 52.5
		epP	02 00 58.5
		eS	02 09 39
		esS	02 11 18
		eSS	02 15 14
		esSS	02 16 40
		e	02 20 34
		e(Lr)	02 28 00
			AMP(μm) PER(s)
		PZ	0.51 1.0
	ORV	eP	01 59 55.4
	MIN	eP	01 59 57.2
	WDC	iPd	02 00 00.5
		eS	02 09 58.9
	FHC	eP	02 00 07.7
BRK mb=6.3 h=280km Distance=80°			
USGS 01h48m08.5s 22.8S 66.2W			
h=248km mb=6.1			
Juyjuy Province, Argentina			
Apr 1	PRS	eP	13 57 04.0
	SAO	eP	13 57 04.7
	PRI	eP	13 57 06.1
	MHC	eP	13 57 06.2
	FRI	eP	13 57 11.3
	CMB	ePc	13 57 12.1
	ORV	eP	13 57 12.4

DATE	STA	PHASE	TIME (UTC)
	WDC	ePc	13 57 12.5
	MNA	eP	13 57 21.2
USGS 13h46m13.1s 17.9S 178.6W			
h=596km mb=4.9			
Fiji Islands Region			
Apr 2	CMB	ePc	19 32 41.8
	MIN	e	19 32 45.8
	FRI	eP	19 32 46.6
USGS 19h21m14.1s 29.9N 139.1E			
h=387km mb=4.4			
South of Honshu, Japan			
Apr 3	FHC	ePc	01 30 00.2
	WDC	iPc	01 30 01.1
		ePP	01 33 30.4
	MIN	iPc	01 30 03.0
	ORV	iPc	01 30 06.4
	BRK	ePc	01 30 14.5
	BKS	eP	01 30 14.7
			AMP(μm) PER(s)
		PZ	0.17 0.9
	CMB	iPc	01 30 15.0
	MNA	iPc	01 30 15.5
	PCC	eP	01 30 15.8
	MHC	iPc	01 30 17.7
	GCC	eP	01 30 18.3
	SAO	eP	01 30 20.3
	LLA	eP	01 30 21.7
	PRS	eP	01 30 22.3
	FRI	iPc	01 30 23.0
	PRI	ePc	01 30 24.0
BRK mb=6.3 h=33km Distance=84°			
USGS 01h17m08.1s 49.9N 78.8E			
h=0km mb=6.2 Ms=4.7			
Eastern Kazakh SSR			
Apr 4	FRI	eP	00 27 49.0
	MNA	eP	00 27 49.7
	PRI	ePd	00 27 51.0
	LLA	eP	00 27 53.8
	PRS	eP	00 27 54.6
	CMB	ePd	00 27 56.6
	MHC	eP	00 27 58.8
	BKS	eP	00 28 04.1
			AMP(μm) PER(s)
		PZ	0.022 0.7
	MIN	e	00 28 07.0
	ORV	eP	00 28 07.1
	WDC	ePd	00 28 12.3
	FHC	e	00 28 20.8
USGS 00h17m03.3s 14.5S 70.8W			
h=185km mb=5.1			
Peru			
Apr 4	BKS	iPc	03 11 38.5
	BRK	iPc	03 11 38.6
		iS	03 11 42.3
	ZSP	iPc	03 11 40.2
		iS	03 11 45.4
	PCC	iPc	03 11 40.5
	MHC	iPd	03 11 44.4
	GCC	iPd	03 11 47.2
		iS	03 11 58.2
	SAO	iPd	03 11 53.5
	CMB	eP	03 11 59.8
	PRS	eP	03 12 00.4
	FRI	eP	03 12 08.5
	LLA	eP	03 12 09.0
BRK 03h11m34.3s 37.7N 122.1W			
h=4km ML=2.5(4) Mo=3.7E20(2)			
6 km N of Hayward, CA			

DATE	STA	PHASE	TIME (UTC)
Apr 4	FHC	eP	06 17 29.4
	WDC	eP	06 17 45.6
	MIN	eP	06 17 55.7
	ORV	eP	06 18 01.9
	PCC	eP	06 18 03.2
	GCC	eP	06 18 10.4
	MHC	eP	06 18 11.2
	CMB	eP	06 18 22.0
	SAO	iPc	06 18 27.4
	FRI	eP	06 18 33.4
USGS 06h00m55.9s 5.9S 148.2E			
h=235km mb=4.5			
New Britain Region			
Apr 4	SAO	e	10 03 00.2
	PRI	eP	10 03 01.5
		e	10 03 11.0
	MHC	e	10 03 02.0
		e	10 03 11.3
	FRI	eP	10 03 07.3
		e	10 03 17.8
	CMB	ePd	10 03 08.5
		i	10 03 19.1
	ORV	eP	10 03 08.9
	WDC	eP	10 03 10.0
		i	10 03 20.9
	MIN	eP	10 03 12.1
	MNA	ePd	10 03 18.1
		i	10 03 28.8
USGS 09h51m38.3s 16.8S 172.7W			
h=33km mb=5.4			
Samoa Islands Region			
Apr 6	MIN	e	00 31 18.0
	WDC	e	00 31 22.5
	ORV	e	00 31 26.5
	CMB	e	00 31 37.5
	FRI	e	00 31 47.3
USGS 00h24m09.7s 51.8N 173.5W			
h=33km mb=4.7 Ms=4.6			
Andreanof Islands, Aleutian Is.			
Apr 6	SAO	iPc	04 11 30.5
	PRS	iPd	04 11 35.4
		iS	04 11 40.0
	GCC	ePc	04 11 40.1
	MHC	iPd	04 11 42.1
	PRI	ePd	04 11 43.3
	PCC	iPd	04 11 49.2
	FRI	eP	04 11 52.3
		iS	04 12 09.6
	CMB	eP	04 11 55.5
		iS	04 12 15.0
BRK 04h11m28.3s 36.7N 121.4W			
h=6km ML=2.6(4)			
20 km S of Hollister, CA			
Apr 6	ORV	iPd	04 46 28.4
		iS	04 46 40.9
	CMB	eP	04 46 32.7
		iS	04 46 47.6
	MIN	iPc	04 46 38.7
		iS	04 46 57.4
	MNA	ePc	04 46 47.2
		iS	04 47 15.5
	MHC	eP	04 46 48.4
		eS	04 47 15.2
	WDC	iPc	04 46 49.2
	FRI	eP	04 46 50.5
		iS	04 47 20.3
BRK 04h46m11.9s 39.2N 120.4W			

DATE	STA	PHASE	TIME (UTC)
h=14km ML=3.1(6)			
23 km SW of Truckee, CA			
Apr 6	LLA	e	09 38 27.8
	WDC	e	09 38 32.7
	PRS	e	09 38 32.8
	CMB	eP	09 38 35.7
	ORV	eP	09 38 36.0
	FRI	eP	09 38 39.0
	MNA	eP	09 38 46.5
USGS 09h25m40.2s 8.1S 156.4E			
h=29km mb=5.2 Ms=4.3			
Solomon Islands			
Apr 6	WDC	eP	10 30 28.3
		e	10 32 40.8
	MIN	eP	10 30 33.9
	ORV	eP	10 30 38.2
		e	10 32 45.2
	CMB	eP	10 30 51.8
		e	10 32 51.1
	FRI	eP	10 31 00.5
		e	10 32 54.4
	PRI	eP	10 31 00.7
	MNA	eP	10 31 01.5
		e	10 32 55.6
USGS 10h23m14.2s 51.9N 176.3W			
h=65km mb=5.1			
Andreanof Islands, Aleutian Is.			
Apr 6	WDC	eP	19 04 41.0
	ORV	eP	19 04 44.2
	CMB	eP	19 04 47.6
	FRI	eP	19 04 49.6
	MNA	ePd	19 04 56.6
USGS 18h51m38.4s 6.0S 151.0E			
h=39km mb=5.2			
New Britain Region			
Apr 7	FHC	e	00 51 52.0
	WDC	ePc	00 51 58.6
		e	00 56 20.0
	MIN	eP	00 52 02.4
	ORV	ePc	00 52 05.0
	BRK	eP	00 52 08.7
	BKS	eP	00 52 08.7
		e	00 52 24.1
		e	00 53 22.8
		eS	01 01 34
		e	01 04 30
		eLq	01 09 40
		eLr	01 13 42
			AMP(μm) PER(s)
		PZ	0.44 1.6
		LZ	13 20.
		LN	7.1 20.
		LE	16 20.
	MHC	eP	00 52 11.3
	PCC	e	00 52 12.1
	GCC	eP	00 52 12.2
	CMB	ePc	00 52 15.1
	SAO	eP	00 52 16.4
	PRS	eP	00 52 17.3
	PRI	eP	00 52 21.0
	FRI	eP	00 52 21.1
	MNA	eP	00 52 22.8
BRK Ms=6.2 Distance=72°			
USGS 00h40m43.4s 37.4N 141.8E			
h=29km mb=6.0 Ms=6.0			
Near East Coast of Honshu, Japan			
Apr 7	FRI	eP	03 03 13.1

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DATE	STA	PHASE	TIME (UTC)
	MNA	ePd	01 03 14.5
		e	01 06 17.1
	PRI	eP	01 03 14.8
	LLA	iPd	01 03 17.4
	PRS	iPd	01 03 17.8
	SAO	eP	01 03 19.2
	CMB	iPd	01 03 20.0
	GCC	ePd	01 03 22.0
	MHC	eP	01 03 22.4
	PCC	eP	01 03 24.8
	BKS	ePd	01 03 25.6
			AMP(μm) PER(s)
		PZ	0.20 0.6
	BRK	eP	01 03 25.7
	ORV	iPd	01 03 28.9
	MIN	e	01 03 30.8
	WDC	iPd	01 03 33.8
	FHC	eP	01 03 41.1
USGS 00h51m36.7s 22.8S 66.1W			
h=205km mb=5.5			
Juyjuy Province, Argentina			
Apr 8	FRI	eP	09 02 47.7
	CMB	eP	09 02 48.5
	WDC	eP	09 02 50.0
	MIN	eP	09 02 51.7
	MNA	eP	09 02 57.1
USGS 08h51m33.0s 22.1S 179.8W			
h=633km mb=4.7			
South of Fiji Islands			
Apr 8	BKS	e	10 02 29.0
	WDC	eP	10 02 31.5
	CMB	eP	10 02 37.0
	FRI	eP	10 02 38.5
	MNA	eP	10 02 46.0
USGS 09h49m38.2s 5.4S 152.9E			
h=50km mb=5.4 Ms=5.2			
New Britain Region			
Apr 8	MNA	eP	15 52 33.3
	FRI	eP	15 52 34.6
	CMB	e	15 52 57.1
	ORV	e	15 52 57.6
	MIN	e	15 53 05.2
USGS 15h45m13.3s 11.7N 87.3W			
h=41km mb=4.8 Ms=4.4			
Near Coast of Nicaragua			
Apr 8	MNA	eP	17 50 00.7
		ePcP	17 52 11.3
		eS	17 56 23.4
	FRI	eP	17 50 01.5
		ePcP	17 52 11.9
	PRI	e(P)	17 50 05.1
	LLA	eP	17 50 05.6
		ePcP	17 52 13.6
	PRS	eP	17 50 08.9
		ePcP	17 52 13.8
	CMB	eP	17 50 09.5
		e	17 50 30.3
		ePcP	17 52 14.3
		eS	17 56 27.0
	MHC	eP	17 50 15.7
	GCC	eP	17 50 15.7
	BKS	eP	17 50 22.4
		ePcP	17 52 12
		eS	17 56 52
		eLq	18 00 00
		eLr	18 01 36
			AMP(μm) PER(s)
		PZ	0.033 0.6

DATE	STA	PHASE	TIME (UTC)
		LZ	28 20.
		LN	30 20.
		LE	45 20.
	ORV	eP	17 50 22.8
		ePcP	17 52 19.0
	MIN	eP	17 50 26.0
	WDC	e(P)	17 50 29.5
		ePcP	17 52 22.1
		eS	17 56 32.8
	FHC	eP	17 50 40.7
BRK Ms=6.3 Distance=42°			
USGS 17h42m37.3s 11.7N 86.4W			
h=55km mb=5.3 Ms=6.4			
Near Coast of Nicaragua			
Apr 8	PRS	eP	22 55 17.5
	BKS	eP	22 55 19.2
			AMP(μm) PER(s)
		PZ	0.025 0.8
	MHC	eP	22 55 20.1
	FRI	eP	22 55 24.2
	CMB	eP	22 55 25.2
	ORV	eP	22 55 26.5
	WDC	eP	22 55 26.9
	MNA	eP	22 55 33.6
USGS 22h43m46.1s 25.1S 179.7E			
h=505km mb=5.0			
South of Fiji Islands			
Apr 9	FHC	iPd	20 34 17.4
	ARC	iPd	20 34 17.6
		iP	20 34 17.8
		iS	20 34 24.6
	WDC	iPd	20 34 23.4
		iS	20 34 34.3
	MIN	eP	20 34 33.5
	ORV	eP	20 34 39.6
		i	20 34 41.5
	BRK	e(P)	20 34 59.0
	ZSP	e	20 35 00.7
	PCC	e(P)	20 35 00.9
	MHC	eP	20 35 06.9
	GCC	eP	20 35 08.7
	SAO	iPc	20 35 14.5
	LLA	ePc	20 35 18.6
	MNA	ePnc	20 35 19.5
		eP*	20 35 34.8
		iPgd	20 35 44.4
		i	20 36 00.5
		i	20 36 38.9
		iSgc	20 36 49.5
	PRS	ePc	20 35 20.7
	FRI	e	20 35 23.7
	PRI	ePc	20 35 29.4
BRK 20h34m09.1s 41.0N 123.5W			
h=22km ML=4.1(6) Mo=6.6E22(3)			
60 km NE of Eureka, CA			
Apr 9	FHC	eP	23 06 21.4
	WDC	iPc	23 06 31.2
	MIN	ePc	23 06 36.8
	ORV	ePc	23 06 41.2
	BKS	e	23 06 48.0
	MHC	ePc	23 06 53.0
	PRS	ePc	23 07 00.1
	LLA	ePc	23 07 00.9
	FRI	ePc	23 07 04.6
	MNA	eP	23 07 05.0
	BRK	eS	23 12 24
		iLr	23 16 22
			AMP(μm) PER(s)
		LZ	2.5 20.

DATE	STA	PHASE	TIME (UTC)
BRK Ms=5.0 Distance=37°			
USGS 22h59m54.8s 52.8N 168.3W			
h=33km mb=5.3 Ms=5.1			
Fox Islands, Aleutian Islands			
Apr 10	MHC	iPc	04 51 40.46
		iS	04 51 42.29
	GCC	iPd	04 51 46.5
		iS	04 51 52.6
	PCC	ePc	04 51 48.9
	SAO	iPc	04 51 50.3
		i	04 51 51.0
	BRK	eP	04 51 51.4
	BKS	eP	04 51 51.5
	ZSP	eP	04 51 53.2
	LLA	ePd	04 51 56.0
	PRS	ePd	04 51 58.2
	CMB	iPc	04 52 01.55
	FRI	ePc	04 52 06.8
BRK 04h51m38.6s 37.3N 121.8W			
h=5km ML=2.8(1) Mo=1.4E19(1)			
11 km E of San Jose, CA			
Apr 10	MHC	iPc	04 51 51.02
		iS	04 51 54.8
	PCC	iPd	04 51 57.1
	BRK	iPc	04 51 57.2
	GCC	iPd	04 51 57.5
	ZSP	iPc	04 51 58.0
	SAO	iPd	04 52 02.6
	CMB	iPd	04 52 06.4
	LLA	iPd	04 52 06.4
	PRS	iPc	04 52 09.0
	PRI	ePc	04 52 14.2
	FRI	iPc	04 52 14.8
	ORV	eP	04 52 18.4
	MIN	ePd	04 52 30.2
	WDC	eP	04 52 33.1
	MNA	eP	04 52 35.8
	BKS	iPc	04 52 57.0
BRK 04h51m46.4s 37.6N 121.7W			
h=8km ML=3.4(5) Mo=4.5E21(3)			
Mt. Lewis area, 15 km SE of Livermore, CA			
Apr 10	MHC	iPd	05 00 47.6
		iS	05 00 49.4
	GCC	iPd	05 00 53.7
		iS	05 01 00.7
	PCC	iPc	05 00 56.1
	SAO	iPd	05 00 58.2
	BRK	ePc	05 00 58.75
		eS	05 01 08.7
	BKS	eP	05 00 58.8
	ZSP	eP	05 01 00.2
		i	05 01 00.9
		iS	05 01 12.7
	LLA	ePc	05 01 03.1
	PRS	iPc	05 01 05.2
		iS	05 01 19.2
	CMB	iPc	05 01 08.8
	PRI	ePc	05 01 11.8
	FRI	iPc	05 01 14.1
		iS	05 01 44.3
BRK 05h00m45.8s 37.3N 121.7W			
h=4km ML=2.7(1) Mo=5.7E19(1)			
Halls Valley, 11 km E of San Jose, CA			
Apr 10	FHC	eP	11 10 59.0
	WDC	ePc	11 11 03.4
	MIN	eP	11 11 07.1

DATE	STA	PHASE	TIME (UTC)
	ORV	eP	11 11 10.0
	BRK	eP	11 11 12.6
	BKS	eP	11 11 12.6
			AMP(μm) PER(s)
		PZ	0.026 1.0
	MHC	eP	11 11 17.2
	CMB	ePc	11 11 19.9
	PRS	eP	11 11 21.2
	FRI	ePc	11 11 25.4
	MNA	eP	11 11 26.0
	PRI	eP	11 11 27.4
USGS 10h59m40.5s 36.1N 139.7E			
h=69km mb=5.1			
Honshu, Japan			
Apr 10	FRI	e	22 21 17.4
	CMB	ePc	22 21 18.8
	WDC	e	22 21 20.3
	MNA	e	22 21 28.2
USGS 22h10m00.8s 16.8S 174.3W			
h=196km mb=5.0			
Tonga Islands			
Apr 11	BKS	eP	14 37 05.4
			AMP(μm) PER(s)
		PZ	0.020 0.6
	PRS	eP	14 37 06.3
	MHC	eP	14 37 07.7
	WDC	eP	14 37 09.1
	ORV	eP	14 37 10.7
	MIN	eP	14 37 11.4
	CMB	eP	14 37 12.3
	FRI	eP	14 37 13.4
	MNA	eP	14 37 21.9
USGS 14h25m00.4s 11.8S 166.6E			
h=184km mb=5.1			
Santa Cruz Islands			
Apr 11	WDC	eP	16 28 40.1
	MIN	eP	16 28 46.0
	ORV	eP	16 28 50.0
	BKS	eP	16 28 54.9
	BRK	e	16 28 56.1
	CMB	eP	16 29 04.5
	MNA	eP	16 29 14.5
	FRI	eP	16 29 16.6
USGS 16h22m09.4s 53.4N 167.2W			
h=33km mb=5.1 Ms=4.4			
Fox Islands, Aleutian Islands			
Apr 11	WDC	eP	18 26 33.8
	MIN	eP	18 26 36.9
	ORV	eP	18 26 39.2
	BKS	eP	18 26 41.1
			AMP(μm) PER(s)
		PZ	0.018 0.6
		PZ	0.018 0.6
	CMB	eP	18 26 46.6
	FRI	eP	18 26 50.9
USGS 18h13m28.3s 24.0N 122.0E			
h=55km mb=5.6			
Taiwan Region			
Apr 13	WDC	eP	02 25 56.5
	MIN	eP	02 26 01.0
	ORV	eP	02 26 05.0
	CMB	eP	02 26 18.1
	MNA	eP	02 26 26.0
	FRI	eP	02 26 26.2
USGS 02h16m59.9s 54.7N 161.9E			
h=33km mb=5.0			
Near East Coast of Kamchatka			

DATE	STA	PHASE	TIME (UTC)
Apr 13	GCC	eP	09 21 56.3
	PCC	eP	09 21 56.3
	PRS	eP	09 21 56.8
	SAO	eP	09 21 57.2
	BRK	e	09 21 57.8
	LLA	eP	09 21 58.3
	MHC	eP	09 21 59.0
	PRI	eP	09 21 59.2
	FRI	eP	09 22 04.2
	CMB	iPd	09 22 04.8
	WDC	ePd	09 22 05.0
	ORV	eP	09 22 05.3
	MIN	eP	09 22 07.3
	MNA	iPd	09 22 14.3
USGS 09h11m00.4s 16.9S 179.3W			
h=514km mb=5.0			
Fiji Islands Region			
Apr 13	SAO	iP	09 47 03.0
	LLA	iPc	09 47 09.8
	GCC	iPd	09 47 10.2
	PRS	iPd	09 47 10.9
	MHC	iPd	09 47 11.2
		eS	09 47 19.6
	PCC	eP	09 47 19.3
	PRI	iPd	09 47 19.6
	BRK	eP	09 47 22.5
	BKS	iPc	09 47 23.8
		e	09 47 38.3
		eS	09 47 41.1
		e	09 47 47.7
	FRI	iPc	09 47 25.6
	CMB	eP	09 47 26.2
	ORV	e	09 47 45.2
BRK 09h47m00.9s 36.9N 121.4W			
h=3km ML=2.6(4)			
3 km NW Hollister, CA			
Apr 13	MHC	iPd	11 23 48.60
		eS	11 23 50.4
	GCC	iPd	11 23 54.2
	SAO	iPd	11 23 57.4
	PCC	iPc	11 23 58.75
	BRK	iPc	11 24 01.8
	BKS	iPd	11 24 02.0
		eS	11 24 13.8
		e	11 24 14.5
	LLA	ePd	11 24 03.4
	PRS	eP	11 24 04.6
	CMB	eP	11 24 09.8
BRK 11h23m47.0s 37.3N 121.7W			
h=5km ML=3.3(6) Mo=6.1E20(2)			
Halls Valley, 20 km SE of San Jose, CA			
Apr 14	FHC	e(P)	02 20 08.9
	WDC	ePd	02 20 14.3
		e	02 20 20.9
	MIN	eP	02 20 17.7
		e	02 20 24.4
	BRK	eP	02 20 19.1
	PCC	eP	02 20 19.2
	ORV	eP	02 20 19.3
	BKS	iPc	02 20 20
		ipP	02 20 25
		eS	02 30 19.5
		eSS	02 35 36
		e	02 35 39
		eLq	02 40 30
		eLr	02 43 50
			AMP(μm) PER(s)

DATE	STA	PHASE	TIME (UTC)
		PZ	0.12 1.1
		LZ	5.0 20.
		LN	2.5 20.
		LE	3.2 20.
	GCC	eP	02 20 21.3
	MHC	eP	02 20 23.0
	PRS	eP	02 20 25.4
	LLA	eP	02 20 26.5
	CMB	ePd	02 20 26.6
		e	02 20 33.3
	PRI	eP	02 20 29.1
	FRI	eP	02 20 30.7
		e	02 20 37.3
	MNA	ePd	02 20 35.2
		e	02 20 41.8
BRK Ms=5.8 Distance=80°			
USGS 02h08m13.7s 18.8N 147.0E			
h=22km mb=5.7 Ms=6.1			
Mariana Islands			
Apr 14	WDC	e(P)	03 16 11.5
	MIN	eP	03 16 14.7
	ORV	eP	03 16 16.3
	CMB	eP	03 16 22.8
	FRI	eP	03 16 26.8
	MNA	eP	03 16 31.8
USGS 03h04m12.4s 18.8N 146.9E			
h=47km mb=4.9			
Mariana Islands			
Apr 14	WDC	eP	03 23 19.6
		e	03 23 33.2
	MIN	eP	03 23 23.0
	ORV	eP	03 23 25.0
	MHC	e(P)	03 23 27.7
	PRS	e(P)	03 23 30.7
	CMB	ePc	03 23 32.0
		e	03 23 45.4
	LLA	e(P)	03 23 32.1
	FRI	eP	03 23 36.0
	MNA	eP	03 23 40.6
	BKS	eLq	03 46 00
		eLr	03 50 00
			AMP(μm) PER(s)
		LZ	1.4 20.
		LN	0.71 20.
		LE	1.3 20.
USGS 03h11m20.9s 18.8N 146.9E			
h=38km mb=5.0 Ms=5.0			
Mariana Islands			
Apr 14	CMB	eP	04 06 09.5
	MNA	eP	04 06 17.4
	FRI	e	04 06 18.1
USGS 03h53m58.0s 18.8N 146.9E			
h=33km mb=5.1			
Mariana Islands			
Apr 14	BKS	eP	05 33 8
		ePP	05 36 40
		e	05 41 20
	WDC	eP	05 33 04.3
	CMB	eP	05 33 15.6
	FRI	eP	05 33 19.5
	MNA	eP	05 33 23.6
USGS 05h21m05.4s 18.8N 146.9E			
h=52km mb=5.1			
Mariana Islands			
Apr 14	WDC	eP	06 22 49.3
	MIN	e(P)	06 22 53.7
	ORV	eP	06 22 55.0

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DATE	STA	PHASE	TIME (UTC)
	MHC	eP	06 22 58.6
	BKS	eP	06 23 9
		e	06 36 24
		eLq	06 46 40
		eLr	06 50 40
		AMP(μm)	PER(s)
	LZ	2.3	20.
	LN	1.1	20.
	LE	2.3	20.
	CMB	eP	06 23 01.8
		e	06 23 08.3
	PRI	eP	06 23 03.4
	FRI	eP	06 23 05.9
	MNA	eP	06 23 10.0
BRK Ms=5.6 Distance=86°			
USGS 06h10m50.5s 18.8N 147.0E			
h=36km mb=5.2 Ms=5.2			
Mariana Islands			
Apr 14	PRI	iPc	06 42 34.65
		eS	06 42 42.5
	PRS	ePc	06 42 38.2
		i	06 42 39.5
		e(S)	06 42 50.4
	LLA	iPc	06 42 42.5
	SAO	iP	06 42 44.8
	GCC	eP	06 42 50.8
	FRI	iPc	06 42 52.4
		eS	06 43 14.2
	MHC	iPd	06 42 54.0
		eS	06 43 23.0
	PCC	e(P)	06 42 59.2
	BKS	eP	06 43 02.5
		e	06 43 43.5
	CMB	iPd	06 43 03.6
BRK 06h42m23.8s 35.7N 121.0W			
h=6km ML=3.1(2)			
24 km W of Paso Robles, CA			
Apr 14	FRI	ePKP	17 39 33.5
	PRI	ePKP	17 39 34.2
	PRS	ePKP	17 39 34.7
	LLA	ePKP	17 39 34.8
	MNA	ePKP	17 39 35.0
	CMB	ePKPc	17 39 36.2
	MHC	ePKP	17 39 37.4
	BKS	iPKPc	17 39 37.7
		epP	17 39 50.2
		e	17 54 42.0
	BRK	ePKP	17 39 37.8
	ORV	e(PKP)	17 39 38.7
	WDC	ePKP	17 39 41.0
		e	17 39 54.5
USGS 17h20m40.0s 58.3S 25.4W			
h=33km mb=5.5 Ms=5.1			
South Sandwich Islands Region			
Apr 15	PRI	eP	02 00 11.5
	FRI	eP	02 00 12.7
	PRS	eP	02 00 14.4
	CMB	e(P)	02 00 23.1
	MHC	eP	02 00 23.8
Apr 16	FHC	eP	01 18 57.8
	WDC	iPc	01 19 04.3
	MIN	iPc	01 19 09.0
	ORV	iPc	01 19 13.0
	MHC	eP	01 19 24.7
	CMB	iPc	01 19 25.7
	PRS	eP	01 19 30.2
	LLA	e	01 19 30.7
	MNA	iPc	01 19 32.7
	FRI	eP	01 19 33.3
USGS 01h10m20.6s 55.0N 158.0E			
h=309km mb=5.0			
Kamchatka			
Apr 16	ARC	ePc	04 52 42.3
		iS	04 52 50.1
	FHC	iPc	04 52 42.8
		e(S)	04 52 48.8
	WDC	iPc	04 52 56.3
		iS*	04 53 18.5
		eSg	04 53 26.0
	MIN	iPc	04 53 06.1
	ORV	iPc	04 53 09.0
		eS	04 53 39.35
	BRK	iPd	04 53 17.2
	ZSP	iPc	04 53 17.4
		eS	04 53 52.6
	BKS	iPc	04 53 17.6
		eS	04 53 52.1
		eLr	04 54 20
	PCC	iPd	04 53 20.0
	MHC	ePd	04 53 27.6
		eS	04 54 09.9
	GCC	ePc	04 53 27.8
	SAO	iPc	04 53 34.0
	LLA	eP	04 53 39.6
	PRS	eP	04 53 39.9
	FRI	eP	04 53 47.5
	PRI	eP	04 53 47.9
	MNA	eP	04 53 50.3
BRK 04h52m32.8s 40.4N 124.4W			
h=22km ML=4.2(8) Mo=1.9E22(4)			
Cape Mendocino, 44 km SW of Eureka, CA			
Apr 16	FHC	iPc	04 57 40.4
		iS	04 57 49.1
	WDC	iPc	04 57 54.0
		iS	04 58 12.4
	MIN	eP	04 58 03.6
	ORV	eP	04 58 07.0
	SAO	eP	04 58 32.0
BRK 04h57m29.7s 40.4N 124.5W			
h=22km ML=3.2(2)			
Off Coast 51 km SW of Eureka, CA			
Apr 16	WDC	e	06 50 34.5
	MIN	eP	06 50 37.9
	ORV	eP	06 50 39.8
	CMB	eP	06 50 46.8
	FRI	eP	06 50 51.0
	MNA	eP	06 50 54.7
USGS 06h38m33.7s 20.0N 145.8E			
h=33km mb=4.9			
Mariana Islands			
Apr 16	GCC	e	13 36 17.6
	PRS	e	13 36 18.4
	SAO	e	13 36 20.8
	MHC	eP	13 36 20.8
	BRK	e	13 36 21.0
	LLA	e	13 36 21.0
	PRI	eP	13 36 21.3
	BKS	eP	13 36 21.3
		eS	13 47 00
		eSS	13 51 45
		eLq	13 59 18
		eLr	14 03 14
		AMP(μm)	PER(s)
		LZ	6.8 20.
		LN	4.6 20.
		LE	4.6 20.
	FRI	eP	13 36 25.1
	WDC	ePc	13 36 25.2
	ORV	eP	13 36 25.5
	CMB	ePc	13 36 25.5
	MIN	e	13 36 27.0
	MNA	eP	13 36 34.0
BRK Ms=6.0 Distance=85°			
USGS 13h23m40.1s 22.3S 171.8E			
h=33km mb=5.6 Ms=5.7			
Loyalty Islands Region			
Apr 16	WDC	ePc	19 34 38.8
		i	19 34 49.0
	MIN	eP	19 34 43.8
	ORV	eP	19 34 46.7
	BKS	eP	19 34 50.5
		e	19 35 14.5
	MHC	e	19 34 54.0
	CMB	ePc	19 34 56.4
		i	19 35 05.8
	PRS	e	19 34 59.5
	LLA	e	19 35 00.1
	FRI	eP	19 35 02.4
	MNA	eP	19 35 04.0
		i	19 35 13.1
	PRI	eP	19 35 04.0
USGS 19h23m25.9s 37.1N 141.5E			
h=54km mb=5.7			
Near East Coast of Honshu, Japan			
Apr 16	CMB	eP	22 15 18.5
	FRI	eP	22 15 23.0
	MNA	eP	22 15 26.8
USGS 22h03m13.0s 22.1N 144.2E			
h=89km mb=5.1			
Volcano Islands Region			
Apr 17	BKS	e	00 45 49.0
	WDC	eP	00 45 56.4
	MIN	eP	00 45 59.8
	ORV	eP	00 46 01.2
	MHC	eP	00 46 04.0
	PRS	eP	00 46 06.2
	LLA	eP	00 46 07.5
	CMB	eP	00 46 07.9
	PRI	eP	00 46 10.2
	FRI	eP	00 46 11.6
	MNA	eP	00 46 16.2
USGS 00h33m48.6s 15.3N 145.8E			
h=102km mb=5.3			
Mariana Islands			
Apr 17	FHC	eP	01 15 57.0
	WDC	iPc	01 15 58.2
	MIN	ePc	01 16 00.1
	ORV	iPc	01 16 03.7
	BKS	e	01 16 10.8
	BRK	eP	01 16 11.8
	CMB	iPc	01 16 12.0
	MNA	iPc	01 16 12.5
	MHC	eP	01 16 14.6
	GCC	eP	01 16 15.7
	SAO	eP	01 16 17.0
	FRI	ePc	01 16 17.2
	LLA	eP	01 16 18.4
	PRS	eP	01 16 19.4
	PRI	eP	01 16 21.5
USGS 01h03m04.8s 49.9N 78.7E			
h=0km mb=6.0 Ms=4.3			
Eastern Kazakh SSR			
Apr 17	PRS	eP	05 26 08.4
	SAO	eP	05 26 09.4
	BKS	eP	05 26 10.5
	PRI	eP	05 26 10.5
	MHC	eP	05 26 11.3
	FRI	eP	05 26 16.1
	CMB	ePc	05 26 17.5
	ORV	eP	05 26 18.6
	WDC	ePc	05 26 19.1
	MIN	eP	05 26 21.1
	MNA	iP	05 26 27.1
USGS 05h14m31.7s 20.2S 174.4W			
h=76km mb=5.1			
Tonga Islands			
Apr 17	MHC	eP	08 45 03.0
	FRI	eP	08 45 09.4
	CMB	eP	08 45 10.5
	ORV	eP	08 45 11.4
	WDC	eP	08 45 12.2
	MIN	eP	08 45 14.0
	BKS	e	08 45 14.0
	MNA	eP	08 45 20.6
USGS 08h33m36.5s 17.1S 173.4W			
h=33km mb=5.3 Ms=4.7			
Tonga Islands			
Apr 18	FHC	eP	02 07 10.8
	WDC	e	02 07 13.7
		iPd	02 07 16.9
		iPcP	02 10 54.6
		eScP	02 14 07.7
	MIN	iPd	02 07 21.4
	ORV	iPd	02 07 27.2
		ePcP	02 10 57.6
		eScPe	02 14 12.4
	BKS	eP	02 07 38.3
		AMP(μm)	PER(s)
		PZ	0.29 1.0
	BRK	iPd	02 07 38.7
		e	02 07 57.0
	PCC	eP	02 07 40.5
	CMB	iPd	02 07 43.3
		iPcP	02 11 02.4
		eScP	02 14 18.4
	MHC	iPd	02 07 44.8
		ePcP	02 11 03.0
	MNA	iPd	02 07 48.5
		iPcP	02 11 04.8
		eScP	02 14 20.5
	SAO	iPd	02 07 49.5
	LLA	ePd	02 07 53.0
	PRS	eP	02 07 53.5
		ePcP	02 11 05.4
	FRI	iPd	02 07 53.7
		iPcP	02 11 05.4
		eScP	02 14 22.3
	PRI	eP	02 07 58.2
		ePcP	02 11 07.3
		eScP	02 14 24.6
USGS 02h01m38.9s 61.4N 150.7W			
h=68km mb=5.7			
Southern Alaska			
Apr 18	WDC	eP	04 05 44.5
	FRI	eP	04 05 45.0
	CMB	eP	04 05 45.7
	MNA	eP	04 05 54.5
USGS 03h53m32.2s 19.0S 169.6E			
h=284km mb=4.5			
Vanuatu Islands			
Apr 18	MNA	iP	13 40 32.0
	FRI	iPc	13 40 43.5
	CMB	iPc	13 40 51.6
	PRI	iPc	13 40 56.6
	LLA	iPc	13 40 57.2
	SAO	iPc	13 41 02.7
	PRS	iPc	13 41 03.1
	MHC	iPc	13 41 05.1
	GCC	i	13 41 09.2
	ORV	iPc	13 41 11.06
	BRK	iPc	13 41 11.7
	ZSP	eP	13 41 12.1
	PCC	ePc	13 41 12.4
	MIN	iPc	13 41 18.1
	WDC	iPc	13 41 27.6
	FHC	e	13 41 43.6
BRK ML=5.5(6)			
USGS 13h40m00.6s 37.2N 116.5W			
h=km mb=5.5			
Underground Nuclear Explosion, N.T.S.			
Apr 18	LLA	iPd	14 14 14.4
	SAO	iPc	14 14 17.5
	PRS	iPd	14 14 17.8
		iS	14 14 21.4
	PRI	iPc	14 14 22.8
		iS	14 14 30.1
	GCC	iP	14 14 26.2
	MHC	eP	14 14 27.5
		iS	14 14 42.1
	FRI	ePd	14 14 32.3
		iS	14 14 43.4
	PCC	eP	14 14 34.4
	BRK	eP	14 14 36.6
	BKS	iPd	14 14 37.25
	CMB	eP	14 14 38.4
	ZSP	eP	14 14 39.2
BRK 14h14m11.3s 36.6N 121.1W			
h=10km ML=2.8(2)			
Bear Valley area, 38 km SE of Hollister, CA			
Apr 18	PRI	iPc	16 32 01.2
		iS	16 32 03.3
	LLA	iPd	16 32 04.7
		iS	16 32 10.8
	PRS	iPd	16 32 05.2
		iS	16 32 11.4
	SAO	iPd	16 32 09.8
	FRI	iPd	16 32 17.8
		iS	16 32 39.6
	GCC	eP	16 32 18.3
		iS	16 32 45.6
	MHC	e	16 32 20.2
		i	16 32 23.5
	CMB	eP	16 32 27.6
	BKS	eP	16 32 28.6
BRK 16h31m57.0s 36.2N 120.9W			
h=8km ML=2.8(2)			
24 km E of King City, CA			
Apr 18	PRI	iPc	17 05 08.0
		iS	17 05 11.7
	LLA	iPd	17 05 11.4
		iS	17 05 17.4
	PRS	iPd	17 05 11.9
		iS	17 05 19.2
	SAO	iPc	17 05 16.6
	FRI	iPd	17 05 24.5
		iS	17 05 40.2
	GCC	eP	17 05 25.1
	CMB	e	17 05 34.0
BRK 17h05m03.9s 36.2N 120.9W			
h=9km ML=2.8(2)			
25 km E of King City, CA			
Apr 18	PRI	iPc	18 02 11.6
		iS	18 02 15.3
	LLA	iPd	18 02 15.2
		iS	18 02 21.2
	PRS	iPd	18 02 15.6
	SAO	iPc	18 02 20.4
	FRI	iPd	18 02 28.2
		iS	18 02 43.5
	GCC	eP	18 02 29.2
	CMB	e	18 02 38.5
BRK 18h02m07.4s 36.2N 120.9W			
h=10km ML=2.9(2)			
24 km E of King City, CA			
Apr 18	WDC	eP	21 06 00.3
	ORV	eP	21 06 06.0
	CMB	eP	21 06 11.0
	FRI	eP	21 06 14.8
	MNA	eP	21 06 20.0
USGS 20h53m41.9s 13.4N 146.0E			
h=56km mb=5.1 Ms=5.0			
Mariana Islands			
Apr 19	MHC	iPd	18 02 49.8
	GCC	iPc	18 02 52.7
	SAO	iPc	18 02 52.8
	LLA	iPc	18 02 58.1
		iS	18 03 09.3
	PCC	iPd	18 02 59.5
		iS	18 03 12.2
	PRS	eP	18 03 00.2
	BRK	iPc	18 03 02.9
		iS	18 03 17.0
	ZSP	iPc	18 03 03.6
	BKS	eP	18 03 06.5
	PRI	eP	18 03 07.9
	CMB	eP	18 03 08.2
	FRI	iPd	18 03 11.7
BRK 18h02m45.1s 37.1N 121.6W			
h=5km ML=2.6(4) Mo=2.9E20(2)			
12 km N of Gilroy, CA			
Apr 20	GCC	iPc	09 42 47.1
	PCC	eP	09 42 47.2
	PRS	ePc	09 42 47.3
	SAO	eP	09 42 47.8
	BRK	eP	09 42 48.8
	BKS	iPc	09 42 49.1
		AMP(μm)	PER(s)
		PZ	0.081 0.8
	PRI	ePc	09 42 49.2
	LLA	eP	09 42 49.3
	MHC	ePc	09 42 49.7
	FHC	eP	09 42 53.5
	FRI	ePc	09 42 54.0
	CMB	ePc	09 42 55.3
	ORV	iPc	09 42 56.5
	WDC	ePc	09 42 57.4
	MIN	ePc	09 42 58.4
	MNA	iPc	09 43 04.0
		e	09 45 23.5
USGS 09h31m37.9s 21.7S 179.1W			
h=570km mb=5.4			
Fiji Islands Region			
Apr 21	GCC	e(P)	03 30 08.6
	PRS	eP	03 30 10.1

International Seismological Centre

DATE	STA	PHASE	TIME (UTC)
	WDC	e(P)	03 50 10.2
	MHC	eP	03 50 10.3
	LLA	eP	03 50 12.1
	PRI	eP	03 50 12.9
	CMB	ePd	03 50 15.6
	FRI	eP	03 50 16.8
	MNA	eP	03 50 24.5
	BKS	iPc	03 50 48.3
		AMP(μm)	PER(s)
	PZ	0.071	0.6

USGS 03h37m37.3s 10.2S 161.1E
h=92km mb=5.0
Solomon Islands

Apr 21	BKS	eP	15 41 29.15
		AMP(μm)	PER(s)
	PZ	0.050	0.8
	MHC	eP	15 41 30.5
	PRI	eP	15 41 30.6
	CMB	eP	15 41 34.2
		e	15 41 48.7
	WDC	eP	15 41 34.8
	MNA	eP	15 41 43.7
		e	15 41 57.1

USGS 15h28m39.8s 22.7S 170.3E
h=14km mb=6.0 Ms=6.0
Loyalty Islands Region

Apr 21	MHC	iPd	15 47 18.9
		iS	15 47 21.7
	BKS	iPd	15 47 25.9
		iS	15 47 35.0
	ZSP	iPd	15 47 27.5
	SAO	iPd	15 47 29.8
	PRI	eP	15 47 43.6
	MNA	eP	15 48 12.0
		iS	15 48 55.0

BRK 15h47m15.5s 37.4N 121.8W
h=7km ML=3.2(6) Mo=2.8E21(4)
Calaveras Reservoir, 14 km NE of San Jose, CA

Apr 22	CMB	eP	00 02 14.6
	FRI	eP	00 02 19.8
	MNA	eP	00 02 29.3

USGS 23h50m46.4s 15.1S 174.4W
h=33km mb=4.6
Tonga Islands

Apr 22	CMB	eP	16 12 08.0
	WDC	eP	16 12 10.8
	MNA	eP	16 12 16.6

USGS 16h00m10.1s 25.7S 178.1W
h=272km mb=4.6
South of Fiji Islands

Apr 22	WDC	eP	16 13 37.4
	MHC	eP	16 14 07.1
	CMB	eP	16 14 10.5
	PRS	eP	16 14 14.0
	LLA	eP	16 14 15.1
	PRI	eP	16 14 19.3
	FRI	eP	16 14 19.5
	MNA	eP	16 14 20.9

USGS 16h06m48.4s 50.5N 172.5W
h=33km mb=5.0
Andreanof Islands, Aleutian Is.

Apr 22	FHC	eP	20 24 34.2
		e	20 24 50.5
	WDC	e(P)	20 24 39.7
		e	20 24 56.0
	MIN	eP	20 24 43.5
		e	20 25 00.0
	ORV	e(P)	20 24 46.1
		e	20 25 02.7
	BRK	e(P)	20 24 49.2
		e	20 25 06.0
	PCC	eP	20 24 50.1
		e	20 25 07.0
	BKS	eP	20 24 51.1
		eS	20 34 16.0
		eSS	20 39 02.0
		eSSS	20 42 12.0
		eLq	20 43 24.0
		eLr	20 46 16.0
		AMP(μm)	PER(s)
	PZ	0.16	0.8
	LZ	21	20.
	LN	11	20.
	LE	18	20.
	GCC	e(P)	20 24 54.0
		e	20 25 14.6
	MHC	eP	20 24 54.2
		e	20 25 10.2
	CMB	eP	20 24 56.4
		e	20 25 12.7
	PRS	eP	20 24 58.0
		e	20 25 14.6
	LLA	e(P)	20 24 59.6
	PRI	eP	20 25 02.0
		e	20 25 18.3
	FRI	eP	20 25 02.0
		e	20 25 17.9
	MNA	eP	20 25 03.5
		e	20 25 19.1

BRK Ms=6.4 Distance= 73°
USGS 20h13m23.2s 37.2N 141.6E
h=30km mb=6.1 Ms=6.6
Near East Coast of Honshu, Japan

Apr 22	MNA	iPc	22 00 38.6
		i(S)	22 01 22.2
	FRI	eP	22 00 49.1
		e	22 00 55.4
		e(S)	22 01 38.4
	CMB	ePc	22 00 58.1
		e	22 01 06.7
		eS	22 02 04.9
	MHC	e(P)	22 01 04.6
	LLA	e(P)	22 01 04.7
	PRS	e(P)	22 01 08.1

BRK ML=4.2(4)
USGS 22h00m00.0s 37.0N 116.0W
h=0km mb=4.2
Underground Nuclear Explosion, N.T.S.

Apr 22	MNA	eP	23 43 36.8
	CMB	eP	23 44 08.4
	ORV	eP	23 44 09.5
	WDC	eP	23 44 10.0

USGS 23h32m32.5s 25.4S 179.4E
h=560km mb=4.5
South of Fiji Islands

Apr 23	FRI	eP	01 22 43.0
	MNA	eP	01 22 43.2
		e(PcP)	01 25 10.7
	PRS	eP	01 22 50.0
	CMB	ePc	01 22 52.3
		e(PcP)	01 25 14.1
	MHC	eP	01 22 56.8
	ORV	eP	01 23 06.0
	MIN	e(P)	01 23 09.5
	WDC	eP	01 23 13.3
		e(PcP)	01 25 21.6
	PRI	e(PcP)	01 25 12.4

USGS 01h15m45.1s 13.4N 89.4W
h=33km mb=4.6
El Salvador

Apr 23	MHC	iPc	12 01 29.25
		iS	12 01 30.73
	GCC	iPd	12 01 35.3
	PCC	iPc	12 01 38.4
	SAO	iPd	12 01 39.4
	BKS	eP	12 01 41.0
	BRK	eP	12 01 41.2
	ZSP	iPc	12 01 42.7
		iS	12 01 55.2
	LLA	iPd	12 01 44.6
	PRS	ePd	12 01 46.4
	CMB	iPc	12 01 50.0
	PRI	eP	12 01 52.9
	FRI	eP	12 01 55.3
	ORV	e(P)	12 02 03.8

BRK 12h01m27.6s 37.3N 121.7W
h=6km ML=3.1(4) Mo=3.1E20(3)
Halls Valley, 15 km E of San Jose, CA

Apr 23	PRS	e(P)	12 35 20.8
	FRI	eP	12 35 23.7
	MHC	eP	12 35 28.3
	CMB	eP	12 35 31.8
	MNA	eP	12 35 34.2
	ORV	e(P)	12 35 42.5
	WDC	eP	12 35 49.2

USGS 12h25m13.2s 23.3S 115.1W
h=10km mb=4.9 Ms=4.5
Easter Island Cordillera

Apr 23	GCC	iPc	17 01 38.3
		epP	17 02 06.7
	PCC	iPc	17 01 38.4
		epP	17 02 07.0
	PRS	iPc	17 01 38.4
	SAO	eP	17 01 38.7
	BKS	eP	17 01 40.1
		AMP(μm)	PER(s)
	PZ	0.21	1.0
	BRK	ePc	17 01 40.2
		epP	17 02 08.6
	PRI	iPc	17 01 40.2
		epP	17 02 08.7
	LLA	eP	17 01 40.3
	MHC	iPc	17 01 40.8
		epP	17 02 09.3
	FRI	iPc	17 01 44.9
		epP	17 02 13.1
	ORV	iPc	17 01 47.2
		epP	17 02 15.5
	WDC	iPc	17 01 47.6
		ipP	17 02 16.2
	MIN	eP	17 01 49.4
	MNA	iPc	17 01 54.4
		ipP	17 02 22.6
		epP	17 02 46.2
		ePP	17 03 46.2
		epPP	17 04 16.6

USGS 16h50m03.5s 25.5S 179.5E
h=494km mb=5.4
South of Fiji Islands

Apr 23	FRI	ePd	19 38 32.8
	CMB	eP	19 38 34.7
		e	19 38 46.8
	WDC	eP	19 38 36.7
	PRI	eP	19 38 39.4
	LLA	e	19 38 40.5
	MNA	eP	19 38 44.4
		e	19 38 56.8

USGS 19h26m39.8s 21.5S 174.0W
h=39km mb=4.9
Tonga Islands

Apr 24	MHC	ePKP	12 58 52.4
	PRS	ePKPd	12 58 53.0
	CMB	ePKPd	12 58 53.5
	LLA	e	12 58 53.6
	PRI	ePKP	12 58 54.8
	FRI	ePKPd	12 58 55.1
	MNA	ePKPd	12 58 58.0
		e	12 59 09.5
	WDC	e	12 58 59.0

USGS 12h41m03.2s 5.8S 127.6E
h=375km mb=5.4
Banda Sea

Apr 24	PRI	eP	15 10 01.6
	CMB	ePc	15 10 25.9

USGS 14h59m29.8s 17.9S 178.6W
h=634km mb=4.4
Fiji Islands Region

Apr 25	MHC	eP	04 36 05.6
	FRI	eP	04 36 06.7
	CMB	ePc	04 36 07.5
	WDC	ePc	04 36 08.4
	MIN	eP	04 36 10.0
	MNA	ePc	04 36 17.5

USGS 04h24m20.0s 16.9S 177.1W
h=33km mb=5.1 Ms=4.8
Fiji Islands Region

Apr 25	FHC	eP	12 30 17.4
	WDC	eP	12 30 21.4
	MIN	ePc	12 30 24.2
	ORV	eP	12 30 26.3
	PCC	eP	12 30 27.2
	BRK	eP	12 30 28.2
	BKS	iPd	12 30 28.8
		e	12 30 33.5
		e	12 30 43.0
		ipP	12 31 00.0
		e	12 33 10
		ePP	12 34 26
		epPP	12 34 59.8
		isPP	12 35 23
		iPPP	12 37 16
		eSKS	12 40 56
		iSKKS	12 41 29
		iPS	12 43 20
		e	12 44 20
		ePKKP	12 46 44
		iSS	12 49 00
		isSS	12 49 39
		eSSS	12 53 24
		eG	12 56 24
		e	12 58 46
		eLr	12 59 20
		e	13 00 00
		e	13 03 05
		iL	13 03 16
		e	13 34 16
		eG2	14 05 36
		AMP(μm)	PER(s)
	PZ	0.19	1.2
	PPZ	0.24	2.0
	LZ	7.5	20.
	LN	2.9	20.
	LE	7.9	20.
	GCC	eP	12 30 31.0
	MHC	eP	12 30 31.7
	CMB	eP	12 30 34.0
		e	12 34 05.0
	SAO	e	12 30 34.1
	PRS	eP	12 30 34.9
	LLA	eP	12 30 35.7
	FRI	eP	12 30 38.0
	PRI	eP	12 30 38.0
	MNA	eP	12 30 40.0
		e	12 34 17.0
		e	12 41 14.5

BRK Ms=6.3 Distance=102°
USGS 12h16m52.4s 16.1N 120.3E
h=107km mb=6.3
Luzon, Philippine Islands

Apr 25	GCC	eP	19 21 51.8
	BRK	eP	19 21 52.5
	PRS	eP	19 21 52.5
	SAO	eP	19 21 52.8
	BKS	iPc	19 21 53.0
		e	19 21 56.3
		AMP(μm)	PER(s)
	PZ	0.078	1.0
	MHC	eP	19 21 53.4
	LLA	eP	19 21 54.3
	FHC	eP	19 21 54.5
	PRI	ePc	19 21 54.7
	WDC	eP	19 21 57.7
	ORV	ePd	19 21 58.8
	CMB	ePc	19 21 59.2
	FRI	ePc	19 21 59.2
	MNA	eP	19 22 07.6

USGS 19h09m41.2s 19.2S 169.4E
h=253km mb=4.7
Vanuatu Islands

Apr 25	WDC	ePKP	19 41 06.5
	MIN	ePKP	19 41 08.8
	ORV	ePKP	19 41 09.0
	BKS	ePKPd	19 41 11.3
		eS	19 51 30
		eSS	19 59 40
		ePSPS	20 00 08
		ePKPPKP	20 01 48
		eSSS	20 04 20
		eLq	20 11 05
		e	20 13 42
		e	20 13 48
		e	20 14 12
		i	20 14 20
		e	20 16 00
		AMP(μm)	PER(s)
	PKPZ	0.12	1.7
	CMB	ePKP	19 41 12.8
	MHC	ePKP	19 41 13.4
	PRS	ePKP	19 41 14.3
	LLA	ePKP	19 41 14.5
	FRI	ePKP	19 41 15.0
	PRI	e	19 41 15.3
	MNA	ePKP	19 41 16.0

USGS 19h22m07.2s 2.2N 98.9E
h=11km mb=5.9 Ms=6.6
Northern Sumatra

Apr 26	GCC	eP	08 01 57.8
	PCC	ePd	08 01 58.1
	PRS	eP	08 01 58.4
	SAO	eP	08 01 59.2
	BKS	ePd	08 02 00
		e	08 02 11.8
		e	08 11 04
		e	08 11 10
		eG	08 21 30
		e	08 31 00
		AMP(μm)	PER(s)
	PZ	0.078	0.8
	LZ	0.36	20.
	LN	0.27	20.
	LE	0.27	20.
	BRK	eP	08 02 00.1
	LLA	eP	08 02 00.6
	FHC	e	08 02 04.8
	PRI	e	08 02 06.5
	CMB	ePd	08 02 07.0
	FRI	ePd	08 02 08.2
	ORV	ePd	08 02 08.3
	WDC	ePd	08 02 08.4
	MIN	eP	08 02 10.2
	MNA	ePd	08 02 16.7

BRK Ms=5.0 Distance=75°
USGS 07h50m54.0s 17.3S 174.9W
h=279km mb=5.4
Tonga Islands

Apr 26	ORV	ePd	09 55 20.3
		eS	09 55 32.2
	BRK	eP	09 55 21.3
	ZSP	eP	09 55 21.9
		e	09 55 40.0
	PCC	ePc	09 55 23.0
	WDC	eP	09 55 27.0
	MIN	eP	09 55 27.1
		eS	09 55 47.2
	CMB	eP	09 55 34.9
	FHC	e	09 55 40.5

BRK 09h54m58.7s 39.0N 122.9W
h=2km ML=2.2(2)
Kelseyville, 5 km S of Clear Lake, CA

Apr 26	SAO	iP	10 27 37.7
	LLA	iPc	10 27 42.5
	PRS	ePd	10 27 43.8
	GCC	iPc	10 27 44.6
		iS	10 27 52.1
	MHC	ePc	10 27 46.25
		eS	10 27 55.3
	PRI	eP	10 27 51.4
		iS	10 28 06.8
	PCC	eP	10 27 53.2
	BKS	iPc	10 27 56.6
		eS	10 28 17.5
	BRK	e	10 27 58.1
	FRI	eP	10 27 58.5
		eS	10 28 13.0
	CMB	eP	10 27 59.8

BRK 10h27m35.0s 36.8N 121.4W
h=13km ML=2.5(4)
7 km S of Hollister, CA

Apr 26	FHC	ePc	20 13 37.8
	WDC	iPc	20 13 37.1
	MIN	ePc	20 13 40.6
	ORV	iPc	20 13 43.2
	BRK	iPc	20 13 45.7
	BKS	iPc	20 13 45.9
		e	20 13 50.4

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DATE	STA	PHASE	TIME (UTC)
		e	20 14 21.7
		AMP(μm)	PER(s)
		PZ 0.20	0.8
	PCC	ePc	20 13 46.5
	GCC	eP	20 13 48.8
	SAO	eP	20 13 51.4
	CMB	ePc	20 13 52.3
		i	20 14 30.3
	PRS	eP	20 13 53.4
	LLA	ePc	20 13 54.0
	PRI	ePc	20 13 57.2
	FRI	iPc	20 13 57.4
		e	20 14 35.4
	MNA	ePc	20 13 59.6
USGS 20h02m08.0s 31.9N 139.5E			
h=154km mb=5.2			
South of Honshu, Japan			
Apr 27	PRS	eP	16 35 25.0
	PRI	eP	16 35 27.2
	MHC	ePc	16 35 27.3
	LLA	e(P)	16 35 28.2
	FRI	eP	16 35 32.3
	CMB	ePc	16 35 33.3
	ORV	ePc	16 35 34.1
	WDC	ePc	16 35 34.5
	MNA	ePc	16 35 42.1
USGS 16h24m20.1s 20.7S 177.8W			
h=526km mb=4.8			
Fiji Islands Region			
Apr 27	WDC	e	17 10 09.0
	CMB	eP	17 10 24.5
USGS 16h59m01.0s 37.8N 142.6E			
h=48km mb=5.1 Ms=5.1			
Off East Coast of Honshu, Japan			
Apr 27	BKS	iPc	20 02 52.9
		eS	20 02 56.3
		eL	20 02 58.7
	ZSP	iPc	20 02 53.3
	BRK	iPc	20 02 54.3
		iS	20 02 59.5
	PCC	eP	20 03 00.3
	MHC	iPd	20 03 03.2
		eS	20 03 16.4
	GCC	ePc	20 03 07.9
	SAO	e(P)	20 03 11.8
	CMB	e(P)	20 03 15.0
		iS	20 03 32.8
BRK 20h02m49.8s 37.9N 122.1W			
h=5kmR ML=1.4(2)			
Walnut Creek, 19 km E of Berkeley, CA			
Apr 27	ZSP	iPc	21 00 00.1
	BRK	eP	21 00 00.2
		iS	21 00 03.7
	BKS	eP	21 00 00.5
	MHC	eP	21 00 09.3
BRK 20h59m56.5s 37.9N 122.0W			
h=6km ML=1.0(2)			
Walnut Creek, 18 km E of Berkeley, CA			
Apr 27	PRS	ePc	21 59 13.9
		e	21 59 19.6
	LLA	eP	21 59 16.3
		e	21 59 21.9
	PRI	e(P)	21 59 16.5
		e	21 59 22.1
	BKS	e(P)	21 59 21.4

DATE	STA	PHASE	TIME (UTC)
		eS	22 09 10
		eLq	22 17 40
		eLr	22 20 40
		AMP(μm)	PER(s)
		PZ 0.022	0.8
		LZ 0.54	20.
		LN 0.54	20.
		LE 0.36	20.
	FRI	ePc	21 59 22.8
	CMB	ePc	21 59 22.9
		e	21 59 28.9
	WDC	eP	21 59 23.9
	MNA	ePc	21 59 32.7
		e	21 59 38.7
BRK Ms=5.0 Distance=74°			
USGS 21h47m46.6s 15.9S 174.8W			
h=19km mb=4.8 Ms=4.7			
Tonga Islands			
Apr 28	FRI	ePKP	00 21 27.7
	WDC	ePKP	00 21 28.0
	CMB	ePKP	00 21 28.1
USGS 00h01m17.8s 38.7S 47.4E			
h=10km mb=5.1 Ms=4.4			
Atlantic-Indian Rise			
Apr 28	ORV	ePKP	02 30 43.6
	MNA	ePKP	02 30 48.8
	CMB	ePKPd	02 30 49.5
	FRI	e(PKP)	02 30 51.8
	MHC	e(PKP)	02 30 52.8
	PRI	ePKP	02 30 55.1
USGS 02h11m04.9s 5.5S 68.7E			
h=10km mb=4.9 Ms=4.7			
Chagos Archipelago Region			
Apr 28	BKS	iPc	05 35 00.7
		iS	05 35 03.6
		eL	05 35 06.0
	BRK	iPc	05 35 01.1
	ZSP	iPc	05 35 01.1
	PCC	ePc	05 35 07.2
	MHC	iPc	05 35 10.23
		eS	05 35 20.56
	GCC	eP	05 35 14.1
	SAO	e(P)	05 35 19.6
	CMB	e(P)	05 35 22.1
	PRS	eP	05 35 25.8
BRK 05h34m57.5s 37.9N 122.0W			
h=1km ML=2.2(4) Mo=3.4E20(2)			
Walnut Creek, 20 km E of Berkeley, CA			
Apr 28	WDC	ePKPc	15 51 28.2
	ORV	ePKPc	15 51 30.7
	BRK	ePKP	15 51 34.1
	MHC	ePKPc	15 51 34.1
	CMB	ePKPd	15 51 34.1
	PRS	ePKP	15 51 35.4
	FRI	ePKPd	15 51 36.3
	MNA	ePKPc	15 51 37.3
	PRI	ePKPc	15 51 37.4
USGS 15h32m30.6s 2.1N 99.1E			
h=19km mb=5.6 Ms=5.6			
Northern Sumatra			
Apr 28	PRI	e(P)	22 03 29.2
	CMB	eP	22 03 35.5
	ORV	eP	22 03 36.6
	WDC	eP	22 03 37.0
	MNA	eP	22 03 44.2
USGS 21h51m58.9s 22.5S 178.6W			

DATE	STA	PHASE	TIME (UTC)
h=379km mb=4.7			
South of Fiji Islands			
Apr 29	MNA	eP	02 04 05.5
	CMB	eP	02 04 06.6
	FRI	eP	02 04 08.1
	PRS	e(P)	02 04 10.0
	PRI	eP	02 04 11.6
	BKS	e	02 16 12
		e	02 38 08
		eL	02 40 44
USGS 01h45m22.6s 27.4N 56.1E			
h=8km mb=5.9 Ms=5.3			
Southern Iran			
Apr 29	PCC	eP	14 38 45.7
		epP	14 40 13.7
	BKS	iPc	14 38 46
		epP	14 40 14
		e	14 40 19.9
		esP	14 41 47.5
		iS	14 48 07
		e	14 48 10
		e	14 48 28
		eSP	14 48 48
		esS	14 50 11
		e	14 50 36
		esPS	14 50 47
		e	14 51 10
		e	14 51 18
		e	14 51 34
		eSS	14 53 04
		esSS	14 55 12
		eG	14 59 36
		ePKPPKP	15 05 58
		eSKPPKP	15 08 48
		AMP(μm)	PER(s)
		PZ 0.63	1.2
	PRS	eP	14 38 46.1
		epP	14 40 12.6
	GCC	e(P)	14 38 46.1
	SAO	eP	14 38 46.8
		epP	14 40 14.5
	BRK	eP	14 38 47.6
		epP	14 40 15.3
	PRI	eP	14 38 48.0
		epP	14 40 16.1
	LLA	eP	14 38 48.1
		e(pP)	14 40 16.2
	FHC	eP	14 38 51.8
		epP	14 40 19.0
	FRI	eP	14 38 53.3
		epP	14 40 21.4
		eSKPPKP	15 08 41.5
	CMB	eP	14 38 54.3
		ipP	14 40 21.8
		eSKPPKP	15 08 32.2
	ORV	eP	14 38 55.2
		epP	14 40 24.4
		eSKPPKP	15 08 33.3
	WDC	eP	14 38 55.3
		epP	14 40 22.6
	MIN	eP	14 38 57.3
		epP	14 40 25.9
	MNA	eP	14 39 03.6
		ipP	14 40 32.6
		eSKPPKP	15 08 37.5
BRK mb=6.2 h=380km Distance=78°			
USGS 14h27m35.7s 19.0S 177.7W			
h=384km mb=5.9			
Fiji Islands Region			

DATE	STA	PHASE	TIME (UTC)
Apr 30	WDC	eP	01 23 03.9
	MIN	eP	01 23 07.2
	ORV	eP	01 23 09.8
	PCC	e(P)	01 23 12.5
	CMB	eP	01 23 17.9
	PRS	eP	01 23 19.5
	FRI	eP	01 23 22.7
	MNA	eP	01 23 24.4
USGS 01h10m33.8s 28.6N 129.3E			
h=34km mb=5.0			
Ryukyu Islands			
Apr 30	MNA	iPc	13 30 32.7
	FRI	iPc	13 30 44.3
	CMB	iPc	13 30 52.5
	PRI	iPc	13 30 57.4
	LLA	iPc	13 30 58.7
	SAO	iPc	13 31 03.5
	PRS	iPc	13 31 04.0
	GCC	e(P)	13 31 10.0
	ORV	iPc	13 31 11.6
	BKS	iPnc	13 31 12.3
		ePg	13 31 22.4
	BRK	iPc	13 31 12.5
	ZSP	e(P)	13 31 13.1
	PCC	iPc	13 31 13.2
	MIN	ePc	13 31 18.9
	WDC	iPc	13 31 28.0
	FHC	e(P)	13 31 43.7
BRK ML=5.4(8)			
USGS 13h30m00.0s 37.2N 116.4W			
h=0km mb=5.5 Ms=4.4			
Underground Nuclear Explosion, N.T.S.			
Apr 30	SAO	iPd	19 24 25.7
	LLA	iPc	19 24 29.0
	PRS	iPd	19 24 32.0
	GCC	iPc	19 24 33.4
	MHC	eP	19 24 33.52
		eS	19 24 43.75
	PRI	iPc	19 24 38.6
	PCC	iPc	19 24 41.3
	BRK	iPc	19 24 44.2
	BKS	iPnc	19 24 44.3
		iPg	19 24 46.3
		e(S)	19 25 06.6
	FRI	iPd	19 24 44.8
	ZSP	iPnc	19 24 45.5
		iP*	19 24 47.8
		iPg	19 24 51.4
	CMB	iPd	19 24 46.7
	ORV	eP	19 25 05.2
	MNA	iPd	19 25 10.7
		i	19 25 14.2
	WDC	eP	19 25 19.0
	FHC	e	19 25 20.8
BRK 19h24m22.2s 36.8N 121.3W			
h=7km ML=4.1(6) Mo=2.1E22(4)			
10 km E of Hollister, CA			
Apr 30	SAO	iPd	22 51 16.5
	LLA	iPc	22 51 19.8
	PRS	iPc	22 51 22.7
	GCC	iPc	22 51 24.2
	MHC	iPd	22 51 24.3
	PRI	iPc	22 51 29.3
	PCC	eP	22 51 32.1
		i	22 51 33.6
	BKS	ePnc	22 51 35.1
		ePg	22 51 37.0
	BRK	e(P)	22 51 35.4

DATE	STA	PHASE	TIME (UTC)
	FRI	iPd	22 51 35.5
		iS	22 51 50.6
	ZSP	iPc	22 51 36.9
	CMB	iPd	22 51 37.5
		iS	22 51 55.9
	ORV	e	22 51 54.7
		e	22 51 57.1
	MNA	iPd	22 52 05.5
BRK 22h51m13.0s 36.8N 121.3W			
h=8km ML=2.8(4)			
10 km E of Hollister, CA			
May 1	MNA	e	00 56 38.2
		ePc	01 00 13.5
	FRI	eP	01 00 12.0
	CMB	ePc	01 00 20.9
	MHC	eP	01 00 23.8
USGS 00h54m09.0s 15.1N 97.5W			
h=33km mb=4.7 Ms=3.5			
Near Coast of Oaxaca, Mexico			
May 1	FRI	e(P)	06 54 03.3
	PRI	e(P)	06 54 04.0
	MNA	eP	06 54 05.6
	CMB	ePd	06 54 14.9
	WDC	e	06 54 15.0
USGS 06h48m15.7s 16.6N 98.5W			
h=23km mb=4.9 Ms=4.1			
Near Coast of Guerrero, Mexico			
May 1	CMB	e(P)	06 58 10.8
		e	06 58 21.0
	FRI	eP	06 58 11.0
		e	06 58 20.7
	WDC	eP	06 58 12.5
		e	06 58 22.9
	MNA	eP	06 58 13.2
		e	06 58 21.5
USGS 06h46m37.1s 15.3S 173.4W			
h=33km mb=5.3 Ms=4.9			
Tonga Islands			
May 1	PRS	ePc	13 42 05.0
	SAO	e(P)	13 42 06.2
	BRK	eP	13 42 06.7
	BKS	eP	13 42 07.2
		AMP(μm)	PER(s)
		PZ 0.014	0.7
	MHC	ePc	13 42 07.4
	LLA	e(P)	13 42 08.2
	FRI	ePc	13 42 11.7
	CMB	ePc	13 42 12.7
	WDC	eP	13 42 14.1
	MIN	e(P)	13 42 16.6
	MNA	eP	13 42 21.3
USGS 13h30m45.2s 24.0S 179.1E			
h=602km mb=4.7			
South of Fiji Islands			
May 1	WDC	iPc	22 22 51.6
		eS	22 22 59.0
	FHC	ePd	22 22 55.8
		i	22 23 13.9
		i	22 23 20.7
	ORV	iPc	22 22 57.2
	MIN	iPc	22 22 57.6
	ARC	eP	22 22 59.1
		iS	22 23 15.3
	BKS	ePg	22 23 13.9
	CMB	eP	22 23 19.4
		eS	22 23 59.0
	FRI	iPd	22 23 33.3

DATE	STA	PHASE	TIME (UTC)
BRK 22h22m34.8s 39.8N 123.2W			
h=7km ML=3.8(8) Mo=2.0E22(4)			
Near Covelo, 50 km NE of Willits, CA			
May 1	WDC	eP	23 17 37.0
	ORV	eP	23 17 43.6
	CMB	eP	23 17 46.6
	FRI	eP	23 17 59.7
	MNA	eP	23 18 01.4
USGS 23h06m17.2s 37.1N 141.8E			
h=47km mb=5.0 Ms=5.0			
Near East Coast of Honshu, Japan			
May 2	WDC	eP	19 27 27.1
	ORV	eP	19 27 36.9
	CMB	eP	19 27 54.4
	FRI	eP	19 28 02.0
	MNA	eP	19 28 51.0
	BKS	eLr	19 35 48
		AMP(μm)	PER(s)
		LZ 2.7	20.
		LN 0.0	20.
		LE 1.8	20.
USGS 19h21m29.7s 54.8N 160.1W			
h=33km mb=5.1 Ms=4.6			
Alaska Peninsula			
May 3	FRI	eP	11 15 10.5
		e	11 15 27.5
	CMB	eP	11 15 11.3
		e	11 15 29.6
	ORV	eP	11 15 14.0
	WDC	eP	11 15 15.1
	MIN	e	11 15 16.5
	MNA	eP	11 15 20.6
		e	11 15 37.7
USGS 11h02m43.9s 28.1S 177.4W			
h=62km mb=4.8			
Kermadec Islands Region			
May 3	FRI	eP	11 46 53.3
	CMB	iPc	11 46 54.2
	ORV	eP	11 46 55.4
	WDC	iPc	11 46 55.7
	MIN	eP	11 46 57.1
	MNA	eP	11 47 02.2
USGS 11h35m16.6s 25.2S 178.4E			
h=576km mb=5.4			
South of Fiji Islands			
May 3	BRK	eP	16 57 17.4
	MHC	eP	16 57 17.7
	FRI	eP	16 57 22.8
	CMB	ePd	16 57 23.5
	ORV	eP	16 57 24.8
	WDC	iPd	16 57 24.9
	MNA	eP	16 57 32.3
USGS 16h46m10.6s 20.8S 178.6W			
h=569km mb=5.4			
Fiji Islands Region			
May 3	WDC	ePd	17 07 13.4
	BRK	eP	17 07 18.1
	ORV	ePd	17 07 18.6
	MHC	eP	17 07 21.3
	PRS	eP	17 07 23.7
	LLA	eP	17 07 25.1
	CMB	ePd	17 07 25.2
	FRI	eP	17 07 29.1
	MNA	eP	17 07 33.4
USGS 16h55m18.4s 16.9N 145.6E			
h=174km mb=5.0			

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DATE	STA	PHASE	TIME (UTC)
Mariana Islands			
May 3	FHC	eP	17 33 34.0
	WDC	eP	17 33 38.5
	ORV	ePd	17 33 44.2
	BRK	e	17 33 46.9
	PCC	eP	17 33 47.1
	BKS	e	17 33 47.2
	MHC	eP	17 33 50.3
	CMB	eP	17 33 52.2
	PRS	eP	17 33 53.9
	LLA	eP	17 33 54.5
	FRI	eP	17 33 56.9
	PRI	eP	17 33 57.1
	MNA	eP	17 33 58.2
USGS 17h21m23.5s 28.4N 127.6E			
h=217km mb=5.3			
East China Sea			
May 4	FRI	e(P)	17 50 06.0
	CMB	iPd	17 50 06.7
	ORV	e(P)	17 50 09.2
	WDC	iPd	17 50 10.4
	MIN	e(P)	17 50 10.7
	MNA	ePd	17 50 14.7
	BKS	eLr	18 18 00
		AMP(μm)	PER(s)
	LZ	2.3	20.
	LN	2.7	20.
	LE	1.8	20.
USGS 17h37m43.1s 28.3S 176.4W			
h=80km mb=4.9			
Kermadec Islands Region			
May 4	MNA	eP	23 27 54.9
	CMB	eP	23 28 05.2
	FRI	eP	23 28 07.4
	MHC	eP	23 28 13.5
	LLA	eP	23 28 14.8
	PRI	eP	23 28 18.6
	BRK	e	23 28 21.3
	BKS	eLr	23 49 00
		AMP(μm)	PER(s)
	LZ	1.3	20.
	LN	2.1	20.
	LE	1.6	20.
USGS 23h17m21.5s 47.0N 27.4W			
h=10km mb=4.9 Ms=5.2			
North Atlantic Ridge			
May 4	MNA	eP	23 59 18.8
	CMB	eP	23 59 30.6
	FRI	e(P)	23 59 33.5
	ORV	eP	23 59 33.8
	WDC	e(P)	23 59 35.0
	PRI	eP	23 59 36.6
	MHC	eP	23 59 37.3
	BKS	eLr	24 20 44
		AMP(μm)	PER(s)
	LZ	1.6	20.
	LN	2.3	20.
	LE	1.8	20.
USGS 23h48m34.3s 37.6N 31.9W			
h=10km mb=5.1 Ms=5.1			
Azores Islands Region			
May 5	MHC	e(P)	00 43 40.4
	FRI	ePc	00 43 45.2
	CMB	iPc	00 43 47.0
	ORV	eP	00 43 48.3
	WDC	iPc	00 43 49.9
	MNA	ePc	00 43 54.5

DATE	STA	PHASE	TIME (UTC)
	BKS	eLr	01 14 40
		AMP(μm)	PER(s)
	LZ	1.8	20.
	LN	0.0	20.
	LE	0.0	20.
USGS 00h31m17.6s 28.2S 176.4W			
h=33km mb=5.0			
Kermadec Islands Region			
May 5	CMB	eP	05 31 11.0
	FRI	eP	05 31 16.7
	MNA	eP	05 31 17.9
USGS 05h19m43.9s 37.2N 141.3E			
h=89km mb=4.7			
Near East Coast of Honshu, Japan			
May 5	FHC	ePdifd	15 54 22.9
	WDC	ePdifd	15 54 23.1
		ePP	15 58 40.2
		PKKP	16 10 21.5
	MIN	ePdifd	15 54 24.7
	ORV	ePdif	15 54 28.0
		ePKKP	16 10 19.4
	MNA	ePdifd	15 54 35.7
		ePKP	15 58 16.3
		ePP	15 59 00.8
		ePKKP	16 10 17.7
	BRK	ePdif	15 54 36.0
	CMB	ePdifd	15 54 36.4
		ePKP	15 58 17.5
		ePP	15 59 00.9
		ePKKP	16 10 14.5
	MHC	ePdif	15 54 39.1
		ePP	15 59 03.5
	FRI	ePdifd	15 54 41.3
		ePKKP	16 10 13.0
	PRS	ePdif	15 54 45.7
	PRI	ePdif	15 54 49.5
		ePP	15 59 15.4
		ePKKP	16 10 11.6
	BKS	ePKP	15 59 00
		epPP	16 00 08
		e	16 05 00
		eSKS	16 05 20
		eS	16 06 32
		e	16 08 08
		e	16 09 16
		e	16 09 36
		e	16 10 04
		eSS	16 13 52
		e	16 21 56
		e	16 22 24
		e	16 24 04
		e	16 25 08
USGS 15h40m47.5s 36.5N 70.7E			
h=202km mb=5.8			
Hindu Kush Region			
May 6	PRI	eP	03 48 16.7
	MNA	eP	03 48 17.0
	LLA	eP	03 48 19.5
	PRS	eP	03 48 20.3
	CMB	eP	03 48 23.2
	BKS	eP	03 48 30.3
		AMP(μm)	PER(s)
	PZ	0.043	1.0
	ORV	eP	03 48 34.6
	WDC	eP	03 48 40.4
USGS 03h38m01.1s 11.0S 76.7W			
h=111km mb=4.8			
Peru			

DATE	STA	PHASE	TIME (UTC)
May 6	BKS	ePc	04 13 06
		eS	04 20 28
		eLq	04 23 22
		eLr	04 25 56
		AMP(μm)	PER(s)
	PZ	0.033	1.0
	LZ	52	20.
	LNE	49	20.
	LNW	34	20.
	FHC	e(P)	04 13 48.7
	WDC	ePc	04 13 52.7
		e(ScS)	04 19 41.0
		e(Lr)	04 26 05.5
	MIN	eP	04 13 57.8
	BRK	e(P)	04 14 06.3
	PCC	e(P)	04 14 09.7
	MHC	e(P)	04 14 13.5
		e(ScS)	04 19 51.6
	CMB	ePc	04 14 15.6
		eScS	04 19 54.8
		e(Lr)	04 26 29.1
	SAO	e(P)	04 14 17.6
	PRS	eP	04 14 18.9
	LLA	eP	04 14 19.1
	FRI	e(P)	04 14 23.2
		eScS	04 19 54.8
		e(Lr)	04 26 34.3
	MNA	eP	04 14 24.9
	PRI	eP	04 14 25.5
		eScP	04 20 05.3
BRK Ms=6.5 Distance=43°			
USGS 04h06m14.2s 51.3N 179.9W			
h=20km mb=6.3 Ms=6.4			
Andreanof Islands, Aleutian Is.			
May 6	WDC	e(P)	12 52 51.0
	PRS	eP	12 52 51.9
	BKS	eP	12 52 52
		eS	13 03 20
		eScS	13 03 48
		ePPS	13 04 44
		e	13 06 14
		eSS	13 09 12
		eSSS	13 12 56
		eLq	13 16 32
		eLr	13 19 44
		AMP(μm)	PER(s)
	LZ	14	20.
	LN	4.6	20.
	LE	12	20.
	MIN	e(P)	12 52 53.4
	PRI	eP	12 52 53.6
	CMB	eP	12 52 55.0
	FRI	eP	12 52 56.8
	MNA	eP	12 53 03.2
BRK Ms=6.3 Distance=86°			
USGS 12h39m49.1s 5.7S 152.7E			
h=20km mb=5.9 Ms=6.2			
New Britain Region			
May 6	PCC	ePc	13 05 00.5
	SAO	eP	13 05 01.5
	PRS	e(P)	13 05 01.5
	PRI	eP	13 05 03.3
	FRI	ePc	13 05 08.5
	CMB	iPc	13 05 09.4
	WDC	iPc	13 05 10.0
	MNA	eP	13 05 18.5
BRK Ms=5.9 Distance=77°			
USGS 12h54m14.8s 17.9S 178.8W			
h=656km mb=4.7			
Fiji Islands Region			

DATE	STA	PHASE	TIME (UTC)
May 7	CMB	eP	02 05 08.5
	PRI	e	02 05 21.3
USGS 01h51m59.0s 6.3S 152.3E			
h=10km mb=5.3			
New Britain Region			
May 7	FRI	iPc	03 15 10.1
		iS	03 15 21.1
	MNA	iPc	03 15 13.9
		i	03 15 17.0
		eS	03 15 27.6
	CMB	iPd	03 15 15.8
		iS	03 15 31.1
	LLA	iPc	03 15 27.5
		eSn	03 15 50.3
		iS*	03 15 52.0
		iSg	03 15 53.5
	PRI	ePc	03 15 29.5
	SAO	iPd	03 15 31.8
	MHC	eP	03 15 32.2
		iS*	03 16 00.3
	PRS	eP	03 15 34.0
	BRK	e	03 15 38.1
	BKS	ePn	03 15 38.5
	PCC	ePc	03 15 40.2
	ORV	ePc	03 15 43.1
	MIN	eP	03 15 55.1
BRK 03h14m54.4s 37.6N 119.0W			
h=4km ML=4.2(3)			
Mammoth Lakes area, CA			
May 7	FHC	iPc	03 15 52.6
	WDC	iPc	03 15 57.7
		iPcP	03 16 23.0
		ipP	03 17 37.4
		isP	03 18 23.8
		iPP	03 18 39.4
		epRPKP	03 46 03.7
		eP4KP	03 52 45.5
		e(P7KP)	04 14 13.6
	MIN	iPc	03 16 01.6
	ORV	iPc	03 16 04.9
	BKS	iPc	03 16 10
		iPcP	03 16 14
		epP	03 17 45
		esP	03 18 32
		ePP	03 19 24
		ePPP	03 21 00
		eS	03 24 20
		eScS	03 25 04
		esS	03 27 30
		eSS	03 29 22
		esSS	03 31 40
		eSSS	03 32 26
		eG	03 34 40
		eLr	03 39 40
		AMP(μm)	PER(s)
	PZ	1.4	0.8
	BRK	iPc	03 16 10.0
		i	03 16 17
		ipP	03 17 49
		isP	03 18 30
		esS	03 27 30
		eG	03 34 48
		AMP(μm)	PER(s)
	PZ	0.85	1.0
	PCC	iPc	03 16 10.8
		AMP(μm)	PER(s)
	PZ	0.86	0.9
	MHC	iPc	03 16 14.7
		iPcP	03 16 39.9

DATE	STA	PHASE	TIME (UTC)
		ipP	03 17 54.2
		isP	03 18 38.4
		ePP	03 19 03
		isPcP	03 19 04.1
		eS	03 24 48
		e	03 26 44
		esS	03 27 35
		esPS	03 28 38
		eSS	03 29 35
	CMB	iPc	03 16 15.9
		ipP	03 17 55.0
		isP	03 18 41.2
		eS	03 24 51.2
		ePKPPKP	03 44 23.5
		epRPKP	03 46 09.2
		eSKPPKP	03 47 13.2
		eP4KP	03 52 59.0
	SAO	iPc	03 16 17.6
	PRS	iPc	03 16 19.5
		ePKPPKP	03 44 13.1
	LLA	iPc	03 16 20.2
	FRI	iPc	03 16 21.7
	MNA	iPc	03 16 22.2
	PRI	iPc	03 16 23.5
		ePKPPKP	03 44 07.9
		eP4KP	03 53 04.1
BRK mb=6.6 h=434km Distance=70°			
USGS 03h05m49.2s 46.7N 139.2E			
h=430km mb=6.0			
Near East Coast of Eastern Russia			
May 7	PRS	eP	08 13 34.2
	FRI	eP	08 13 41.3
	CMB	eP	08 13 42.2
	WDC	eP	08 13 43.3
USGS 08h02m34.8s 20.3S 179.3W			
h=634km mb=4.4			
Fiji Islands Region			
May 7	ARC	eP	10 26 53.8
		iS	10 27 02.9
	FHC	iPc	10 26 54.0
	WDC	iPc	10 27 06.9
	MIN	eP	10 27 16.6
		iS	10 27 46.4
	ORV	eP	10 27 19.5
		eS	10 27 50.0
	PCC	eP	10 27 31.9
	MHC	eP	10 27 38.5
	CMB	eP	10 27 42.7
	SAO	e(P)	10 27 46.6
	PRS	eP	10 27 52.2
	FRI	eP	10 27 58.2
BRK 10h26m43.5s 40.3N 124.3W			
h=4km ML=3.7(6) Mo=2.5E21(2)			
52 km SW of Eureka, CA			
May 7	ZSP	ePd	17 25 46.5
		eS	17 26 00.7
	BKS	eP	17 25 47.5
		eS	17 26 02.5
	BRK	iPd	17 25 47.9
		iS	17 26 02.5
	ORV	eP	17 25 49.8
		i	17 25 56.0
	PCC	eP	17 25 53.6
	MIN	eP	17 25 56.4
	CMB	iPc	17 26 02.0
		eS	17 26 29.7
	SAO	e(P)	17 26 04.9
	LLA	eP	17 26 09.6
	PRS	eP	17 26 11.1

DATE	STA	PHASE	TIME (UTC)
	FHC	eP	17 26 13.8
	FRI	e	17 26 17.3
	MNA	e	17 26 32.8
BRK 17h25m27.9s 38.8N 122.8W			
h=4km ML=3.5(3) Mo=2.1E21(2)			
The Geysers area, 20 km S of Clear Lake, CA			
May 8	WDC	eP	03 22 57.6
	LLA	e	03 23 02.8
	CMB	eP	03 23 03.9
	FRI	e	03 23 06.5
	MIN	e	03 23 09.9
	MNA	e	03 23 13.0
USGS 03h09m39.7s 5.6S 146.1E			
h=58km mb=5.0			
Papua New Guinea Region			
May 8	CMB	ePc	11 39 43.8
	MNA	ePc	11 39 53.9
USGS 11h28m15.6s 15.1S 173.9W			
h=33km mb=4.7			
Tonga Islands			
May 8	FHC	e(P)	13 02 20.2
	WDC	ePc	13 02 23.0
		e	13 02 36.6
		ePP	13 05 59
	ORV	ePc	13 02 26.5
	MIN	eP	13 02 26.9
	CMB	ePc	13 02 30.6
		ePP	13 06 04.0
	FRI	ePc	13 02 32.0
		ePP	13 06 08.2
	MNA	ePc	13 02 39.0
USGS 12h49m42.3s 4.3S 152.6E			
h=124km mb=5.2			
New Britain Region			
May 8	ZSP	ePd	14 28 35.4
		iS	14 28 50.6
	BRK	ePd	14 28 36.3
		iS	14 28 51.8
	BKS	eP	14 28 36.5
	PCC	ePc	14 28 42.5
	ORV	eP	14 28 44.0
	MIN	ePc	14 28 46.7
	CMB	ePc	14 28 50.7
	WDC	e	14 28 52.0
	SAO	e	14 28 55.6
	FHC	e	14 29 03.5
BRK 14h28m16.5s 38.9N 122.8W			
h=2km ML=3.0(2)			
The Geysers area, 20 km S of Clear Lake, CA			
May 9	FHC	e	04 06 20.2
	WDC	ePc	04 06 25.0
	MIN	eP	04 06 28.5
	ORV	eP	04 06 31.6
	BKS	eP	04 06 35
		AMP(μm)	PER(s)
	PZ	0.24	.75
	CMB	ePc	04 06 40.7
	SAO	e	04 06 45.0
	FRI	eP	04 06 45.9
	PRI	eP	04 06 47.0
	MNA	eP	04 06 48.0
USGS 03h54m32.3s 34.2N 135.4			
h=10km mb=5.[illegible] Ms=4.7			
Near South Coast of Southern Honshu			

International Seismological Centre

DATE	STA	PHASE	TIME (UTC)
May 9	BRK	e	06 44 07.5
	FHC	eP	06 44 56.7
	BKS	iPc	06 44 57.7
		e	06 45 10.5
		e	06 45 13.4
		e	06 45 16.5
		e	06 45 24.3
		eLr	07 10 32
			AMP(μm) PER(s)
		PZ	0.081 1.2
		LZ	11 20.
		LN	8.6 20.
		LE	10 20.
	PRS	eP	06 44 58.5
	LLA	eP	06 45 00.5
	WDC	ePc	06 45 00.7
	PRI	eP	06 45 02.3
	ORV	eP	06 45 02.7
	MIN	eP	06 45 03.5
	CMB	eP	06 45 04.4
	FRI	eP	06 45 05.4
	MNA	eP	06 45 13.8

BRK Ms=6.3 Distance= 83°
USGS 06h32m34.9s 11.3S 165.7E
h=46km mb=5.5 Ms=5.3
Santa Cruz Islands

May 9	FHC	eP	08 17 23.8
	WDC	iPd	08 17 29.0
	MIN	eP	08 17 32.5
	PCC	eP	08 17 33.8
	BRK	e	08 17 34.0
	ORV	ePd	08 17 34.2
	BKS	iPd	08 17 34.2
		e	08 17 39.5
			AMP(μm) PER(s)
		PZ	0.18 1.4
	SAO	e	08 17 39.0
	PRS	eP	08 17 40.2
	CMB	iPd	08 17 41.3
	LLA	eP	08 17 41.5
	PRI	eP	08 17 43.8
	FRI	eP	08 17 45.4
	MNA	ePd	08 17 48.6

USGS 08h05m38.3s 19.2N 145.5E
h=149km mb=5.3
Mariana Islands

May 9	WDC	eP	17 02 40.2
		i	17 02 50.7
	MIN	eP	17 02 45.1
	ORV	eP	17 02 47.1
		i	17 02 57.4
	CMB	eP	17 02 57.0
		i	17 03 07.3
	FRI	eP	17 03 04.4
	PRI	e	17 03 13.8
	MNA	e	17 03 14.5

USGS 16h51m23.8s 36.2N 141.8E
h=45km mb=5.2 Ms=5.0
Near East Coast of Honshu, Japan

May 10	WDC	eP	09 46 44.0
	MIN	eP	09 46 49.2
	ORV	eP	09 46 53.3
	CMB	eP	09 47 07.0
	MNA	eP	09 47 15.7
	FRI	eP	09 47 16.4

USGS 09h39m06.6s 51.4N 179.8W
h=33km mb=5.0
Andreanof Islands, Aleutian Is.

DATE	STA	PHASE	TIME (UTC)
May 10	FRI	eP	15 28 35.7
	PRI	eP	15 28 36.8
	MNA	eP	15 28 37.3
	PRS	eP	15 28 39.2
	LLA	eP	15 28 39.2
	SAO	eP	15 28 40.9
	CMB	ePd	15 28 42.3
	PCC	e	15 28 45.8
	BRK	eP	15 28 47.2
	BKS	eP	15 28 47.2
		e	15 28 56.0
			AMP(μm) PER(s)
		PZ	0.050 0.7
	ORV	eP	15 28 50.3
	MIN	eP	15 28 52.2
	WDC	iPd	15 28 54.9
	FHC	eP	15 29 01.5

USGS 15h16m22.4s 30.9S 65.5W
h=178km mb=5.4
Cordoba Province, Argentina

May 11	PRS	eP	02 48 47.3
	SAO	eP	02 48 47.8
	FRI	eP	02 48 54.3
	CMB	eP	02 48 55.2
	ORV	eP	02 48 56.0
	WDC	ePd	02 48 56.1
	MIN	eP	02 48 58.3
	MNA	eP	02 49 03.8

USGS 02h37m43.8s 20.5S 178.4W
h=566km mb=5.3
Fiji Islands Region

May 11	BKS	iPc	06 45 49.25
		iS	06 45 51.05
		i	06 45 55.6
		e	06 46 44.15
		e	06 47 00.0
	BRK	iPc	06 45 49.3
		iS	06 45 52.9
	ZSP	iPd	06 45 51.0
	PCC	iPd	06 45 54.3
		iS	06 45 59.4
	SAO	iPc	06 46 08.2
	CMB	ePc	06 46 12.5
	LLA	i(P)	06 46 14.0
	ORV	e	06 46 17.3
	PRI	iPc	06 46 22.1
	FRI	ePc	06 46 22.2
	MIN	e	06 46 26.1
	WDC	e	06 46 32.1
	MNA	e	06 46 41.6

BRK 06h45m47.5s 37.8N 122.2W
h=4km ML=4.0(3) Mo=4.1E21(3)
Oakland, CA

May 11	BRK	iPc	08 42 59.8
	BKS	iPd	08 42 59.8
		iS	08 43 00.9
		e	08 43 04.9
		e	08 43 09.8
	ZSP	iPd	08 43 01.7
		iS	08 43 03.8
	PCC	iPd	08 43 05.0
		iS	08 43 10.2
	SAO	iPc	08 43 18.9
	CMB	e(P)	08 43 23.3

BRK 08h42m58.1s 37.8N 122.2W
h=2km ML=2.6(3) Mo=3.0E20(2)
Oakland, CA

May 11	FHC	ePdiff	10 13 15.2
	WDC	ePdiff	10 13 19.5
		ePP	10 17 31.0
		ePKPPKP	10 29 46.9
		epRPKP	10 30 11.4
	MIN	ePdiff	10 13 22.4
	BKS	ePdiff	10 13 25
		e	10 17 38
		e	10 23 56
		e	10 26 32
		eS	10 27 14
		eLq	10 42 01
		eLr	10 46 26
			AMP(μm) PER(s)
		LZ	3.3 20.
		LN	1.1 20.
		LE	2.4 20.
	CMB	e(P)	10 13 27.0
		e	10 16 24.4
		e	10 16 49.6
		iPP	10 17 46.3
		isPP	10 18 25.2
		ePKPPKP	10 29 35.7
		epRPKP	10 30 04.0
	FRI	ePdiff	10 13 33.9
	MNA	ePdiff	10 13 36.5
		iPP	10 18 01.5

BRK Ms=5.7 Distance=100°
USGS 09h59m34.1s 4.5N 127.7E
h=94km mb=5.9
Talaud Islands

May 11	PRI	ePnd	15 11 06.3
		iP*	15 11 13.9
	FRI	ePn	15 11 06.4
		iP*	15 11 13.3
		eS*	15 11 58.4
	LLA	ePn	15 11 10.9
	PRS	ePn	15 11 12.2
	MNA	ePn	15 11 15.8
		i	15 11 29.5
		iS*	15 12 25.7
	SAO	e(Pn)	15 11 17.0
	CMB	ePn	15 11 21.5
		e	15 12 30.7
		iSg	15 12 33.4
	BKS	ePnc	15 11 32.8
		iPg	15 11 34.6
		e	15 11 59.1
	PCC	ePn	15 11 33.0
	BRK	e(Pn)	15 11 34.5
	ZSP	ePnc	15 11 35.7
	ORV	eP*	15 11 57.1

BRK ML=4.1(1)
PAS 15h10m10.2s 34.3N 116.9W
h=km ML=3.9
Southern California

May 11	FHC	e(P)	21 02 46.1
	WDC	ePc	21 02 49.4
		epP	21 03 04.6
		esP	21 03 08.0
	ORV	e(P)	21 02 56.3
		epP	21 03 11.5
		esP	21 03 15.1
	PCC	e(P)	21 02 59.9
		esP	21 03 19.1
	BRK	e(P)	21 03 02.5
	CMB	ePc	21 03 06.6
		epP	21 03 21.5
		esP	21 03 25.2
	PRS	e(P)	21 03 08.4
		epP	21 03 23.2
		esP	21 03 27.0
	LLA	eP	21 03 09.2
		epP	21 03 24.0
		esP	21 03 28.0
	FRI	eP	21 03 12.6
		epP	21 03 26.2
		esP	21 03 31.2
	PRI	e(P)	21 03 13.9
	MNA	ePc	21 03 14.2
		epP	21 03 28.7
		esP	21 03 33.1
	BKS	e(sP)	21 03 18.8
		eS	21 12 16
		e	21 12 40
		eLq	21 21 37
		eLr	21 24 13
			AMP(μm) PER(s)
		LZ	1.1 20.
		LN	1.1 20.
		LE	1.5 20.

BRK Ms=5.4 Distance=72°
USGS 20h51m43.7s 38.9N 142.0E
h=52km mb=5.6
Near East Coast of Honshu, Japan

May 12	FHC	ePdiff	01 44 09.3
		epPdiff	01 44 19.2
		ePKKP2	02 00 57.8
	WDC	ePdiffc	01 44 13.8
		epPdiff	01 44 23.0
		isP	01 44 44.0
		eP400P	01 47 20.2
		iPP	01 48 20.2
		e	01 54 48.4
		ePKKP1	02 00 26.3
		ePKKP2	02 00 49.2
	MIN	ePdiff	01 44 16.3
		epPdiff	01 44 26.2
		ePKKP1	02 00 25.0
		ePKKP2	02 00 47.8
	ORV	ePdiff	01 44 17.7
		epPdiff	01 44 27.7
		ePKKP2	02 00 48.6
	BKS	ePdiffc	01 44 18.5
		e	01 44 26
		e	01 48 38
		e	01 54 55.2
		e(S)	01 56 47.6
		e	02 02 34.4
		e	02 08 33
		e	02 11 04
		eLq	02 12 34
		eLr	02 16 41
			AMP(μm) PER(s)
		LZ	17 20.
		LN	5.4 20.
		LE	14 20.
	BRK	ePdiff	01 44 20
		epPdiff	01 44 31
		iLr	02 17 18
			AMP(μm) PER(s)
		LZ	12 22.
	MHC	e(P)	01 44 21.3
		ePP	01 48 41.2
		e	01 59 42.8
		ePKKP2	02 00 44.2
	PRS	ePdiff	01 44 24.2
		epPdiff	01 44 33.8
		ePKKP2	02 00 40.9
	CMB	ePdiffc	01 44 24.4
		epPdiff	01 44 34.1
		eP400P	01 47 26.6
		iPP	01 48 38.6
		e	01 57 44.0
		ePKKP1	02 00 18.2
		iPKKP2	02 00 40.1
	FRI	ePdiffc	01 44 28.2
		epPdiff	01 44 37.7
		ePKKP2	02 00 35.6
	MNA	ePdiffc	01 44 31.5
		epPdiff	01 44 41.2
		ePP	01 48 42.2
		ePKKP2	02 00 33.5
	PRI	ePP	01 48 43.7
		ePKKP2	02 00 38.3
	LLA	ePKKP2	02 00 39.9

BRK Ms=6.5 Distance= 99°
USGS 01h30m25.0s 7.1N 126.7E
h=24km mb=6.2 Ms=6.4
Mindanao, Philippine Islands

May 12	PCC	iPd	02 29 22.6
		iS	02 29 29.4
	SAO	iPc	02 29 27.4
	BRK	iPc	02 29 29.3
		iS	02 29 40.35
	BKS	iPc	02 29 29.4
		eS	02 29 40.8
		i	02 29 41.1
	PRS	e(P)	02 29 32.5
	CMB	eP	02 29 43.8

BRK 02h29m14.3s 37.1N 122.2W
h=10km ML=2.6(2)
Near Coast 22 km NW of Santa Cruz, CA

May 12	FHC	eP	04 13 23.2
	WDC	iPc	04 13 29.7
	MIN	eP	04 13 34.3
	ORV	ePc	04 13 37.9
	CMB	ePc	04 13 50.2
	PRS	ePc	04 13 53.6
	FRI	ePc	04 13 57.1
	MNA	e(P)	04 13 57.6

USGS 04h03m59.0s 50.0N 156.3E
h=46km mb=5.3
Kuril Islands

May 12	PCC	e(P)	04 29 20.9
	PRS	eP	04 29 21.4
	FRI	ePc	04 29 28.1
	CMB	iPc	04 29 29.8
	ORV	ePc	04 29 31.6
	WDC	iPc	04 29 32.7
	MIN	ePc	04 29 33.7
	MNA	iPc	04 29 38.0

USGS 04h17m16.6s 28.1S 177.3W
h=193km mb=4.5
Kermadec Islands Region

May 12	BKS	e(P)d	14 09 16.5
		e	14 09 21.4
		e	14 09 42.5
		e	14 09 43
		ePP	14 12 53
		iS	14 19 44.0
		e	14 21 20
		eSS	14 26 13
		e	14 26 17
		eLq	14 33 00
		eLr	14 37 36
		e	14 37 42
			AMP(μm) PER(s)
		PZ	0.056 1.1
		LZ	2.4 20.
		LN	0.82 20.
		LE	1.9 20.
	FHC	e(P)	14 09 19.0
		epP	14 09 45.0
	WDC	ePc	14 09 21.0
		ipP	14 09 43.3
		esP	14 09 52.8
		e	14 10 03.3
		epPP	14 13 12.5
	PRS	e(P)	14 09 23.5
		epP	14 09 46.0
	ORV	ePc	14 09 23.8
		ipP	14 09 46.5
	MIN	eP	14 09 23.8
		ipP	14 09 46.3
	LLA	e(P)	14 09 25.8
		epP	14 09 47.7
	CMB	ePc	14 09 26.8
		ipP	14 09 50.2
		ePP	14 13 04.5
		epPP	14 13 27.1
		e	14 19 36.0
		i	14 19 59.6
	PRI	ePc	14 09 28.1
		epP	14 09 49.3
		e	14 09 54.9
	FRI	eP	14 09 28.9
		ipP	14 09 52.3
		esP	14 09 59.0
	MNA	eP	14 09 35.9
		ipP	14 09 59.0

BRK Ms=5.6 Distance=91°
USGS 13h56m26.2s 5.3S 151.3E
h=84km mb=5.8
New Britain Region

May 12	FRI	eP	16 24 16.4
	PRI	ePd	16 24 18.3
	MNA	iPc	16 24 18.4
	LLA	ePd	16 24 20.6
	PRS	ePd	16 24 21.3
	SAO	eP	16 24 23
	CMB	ePd	16 24 23.7
	PCC	ePd	16 24 28.6
	BRK	ePd	16 24 29.6
	BKS	e(P)d	16 24 29.6
		e	16 24 31.0
	ORV	iPd	16 24 33.3
	MIN	eP	16 24 35.4
	WDC	iPd	16 24 38.3
	FHC	ePd	16 24 45.6

USGS 16h12m37.6s 21.7S 68.2W
h=77km mb=5.5
Chile-Bolivia Border Region

May 13	MNA	iPc	10 10 50.9
		iS	10 10 55.9
	CMB	iPc	10 11 07.5
		iS	10 11 27.7
	FRI	iPc	10 11 10.5
		iS	10 11 30.5
	ORV	ePd	10 11 [illegible]
		iS	10 12 00.5
	LLA	iPd	10 11 26.0
		iS	10 11 56.5
	SAO	ePc	10 11 [illegible].7
	PRI	iPd	10 11 [illegible].7
	BKS	ePn	10 11 [illegible].8
		ePg	10 11 [illegible].9
	BRK	eP	10 11 [illegible].0
	PRS	eP	10 11 [illegible].5

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DATE	STA	PHASE	TIME (UTC)
	PCC	iPc	10 11 33.6
	MIN	ePn	10 11 33.9
		iP*	10 11 39.9
	WDC	ePnc	10 11 42.0
		iP*	10 11 50.4
BRK ML=3.6(2)			
30 km S of Hawthorne, Nevada			
May 14	PRI	ePd	16 09 52.0
	MNA	e(P)	16 09 54.0
	LLA	ePd	16 09 54.4
	PRS	eP	16 09 54.4
	CMB	eP	16 09 58.1
	ORV	ePd	16 10 07.1
	WDC	ePd	16 10 11.0
USGS 15h57m27.1s 33.7S 72.2W			
h=31km mb=5.3 Ms=5.8			
Off Coast of Central Chile			
May 14	FRI	e(P)	16 14 01.3
		e	16 14 08.5
		ePKPPKP	16 44 17.0
	MNA	ePc	16 14 02.4
		i	16 14 10.6
		ePKPPKP	16 44 17
	PRI	ePc	16 14 02.5
		ePcP	16 14 10.6
	LLA	ePc	16 14 04.7
	PRS	ePc	16 14 05.7
		e	16 14 14.4
	SAO	e(P)	16 14 09
		ePcP	16 14 16.0
	CMB	ePc	16 14 09.5
		e	16 14 17.3
		ePKPPKP	16 44 14.3
	BRK	ePc	16 14 17.0
		ePcP	16 14 25.3
	BKS	e	16 14 20
	ORV	iPc	16 14 21.3
		ePcP	16 14 29.8
	MIN	ePc	16 14 24.9
		ePcP	16 14 32.5
	WDC	eP	16 14 27.9
		ePcP	16 14 36.1
		ePKPPKP	16 44 09.5
	FHC	ePc	16 14 36.9
		ePcP	16 14 45.4
USGS 16h04m26.4s 5.6S 81.4W			
h=28km mb=5.7 Ms=5.7			
Near Coast of Northern Peru			
May 14	MHC	iPc	22 48 48.3
		eS	22 48 50.9
	GCC	iPc	22 48 53.6
	PCC	ePc	22 48 53.8
		iS	22 49 00.4
	BRK	eP	22 48 55.3
	BKS	iPd	22 48 55.7
		eS	22 49 04.1
		i	22 49 05.0
	ZSP	ePc	22 48 56.8
	SAO	iPd	22 48 59.3
	LLA	iPc	22 49 03.9
	PRS	eP	22 49 05.3
	CMB	ePc	22 49 07.4
		e	22 49 23.2
		iS	22 49 24.5
	PRI	ePc	22 49 12.3
	FRI	ePd	22 49 13.2
	MNA	ePc	22 49 40.0
	ORV	eP	22 49 40.0
BRK 22h48m44.9s 37.4N 121.8W			

DATE	STA	PHASE	TIME (UTC)
h=6km ML=2.5(5)			
Calaveras Reservoir, 15 km NE of San Jose, CA			
May 15	PRI	iPd	08 38 58.1
		iS	08 39 05.1
	LLA	iPd	08 39 05.0
	FRI	iPd	08 39 07.3
		iS	08 39 19.8
	PRS	iPc	08 39 07.9
	SAO	iPd	08 39 11.2
		i	08 39 12.0
	GCC	eP	08 39 18.3
	CMB	eP	08 39 22.3
		eS	08 39 46.1
	MNA	eP	08 39 38.4
BRK Mag=2.6			
20 km E of Coalinga, CA			
May 15	FHC	eP	08 49 23.0
	WDC	ePd	08 49 30.8
	MIN	ePd	08 49 36.3
	ORV	eP	08 49 41.5
	BRK	e	08 49 53.0
	CMB	ePd	08 49 57.4
	PRS	ePd	08 50 04.7
	MNA	ePd	08 50 05.2
	FRI	ePd	08 50 07.7
	PRI	eP	08 50 10.0
USGS 08h44m04.1s 56.4N 153.1W			
h=33km mb=4.8 Ms=4.5			
Kodiak Island Region			
May 15	PRI	ePd	14 01 55.9
	PRS	ePd	14 01 56.5
	FRI	eP	14 01 58.8
	BRK	eP	14 02 03.8
	CMB	ePd	14 02 04.2
	MNA	ePd	14 02 06.3
	ORV	eP	14 02 11.4
	MIN	eP	14 02 14.5
	WDC	iPd	14 02 15.9
	FHC	eP	14 02 18.1
	BKS	e	14 19 00
		e	14 30 26
USGS 13h49m13.9s 50.1S 115.1W			
h=10km mb=5.5 Ms=4.8			
Easter Island Cordillera			
May 16	WDC	eP	16 15 48.1
	MIN	e	16 15 57.2
	ORV	e	16 16 00.6
	CMB	e	16 16 15.8
	FRI	e	16 16 17.5
	MNA	e	16 16 24.5
USGS 16h08m29.4s 51.5N 175.9W			
h=33km mb=5.1			
Andreanof Islands, Aleutian Is.			
May 17	GCC	eP	05 24 20.8
		i	05 25 05.7
	BRK	eP	05 24 21.8
	PRS	eP	05 24 22.2
		i	05 25 07.1
	BKS	ePd	05 24 22.2
		i	05 25 06.5
	SAO	eP	05 24 23.1
	PRI	eP	05 24 24.7
	WDC	ePc	05 24 25.7
		i	05 25 10.3
	ORV	eP	05 24 27.2
	MIN	eP	05 24 27.8

DATE	STA	PHASE	TIME (UTC)
		i	05 25 13.0
	CMB	ePc	05 24 28.5
		i	05 25 13.4
	FRI	eP	05 24 29.0
		i	05 25 14.1
	MNA	ePc	05 24 37.6
		i	05 25 22.7
USGS 05h12m12.0s 13.6S 167.2E			
h=176km mb=5.6			
Vanuatu Islands			
May 17	PCC	e	11 58 57.7
	SAO	eP	11 58 58.1
	GCC	iP	11 58 58.2
	PRS	eP	11 58 58.6
	BRK	eP	11 58 58.8
	BKS	eP	11 58 59.2
	PRI	eP	11 58 59.9
	LLA	eP	11 58 59.9
	FRI	eP	11 59 05.0
	CMB	iP	11 59 05.9
	WDC	iPc	11 59 05.9
	ORV	eP	11 59 06.3
	MIN	ePc	11 59 08.7
	MNA	iPc	11 59 15.3
USGS 11h48m07.7s 18.0S 178.5W			
h=611km mb=5.3			
Fiji Islands Region			
May 17	PRS	ePc	16 12 54.2
	BRK	e(P)	16 12 54.2
	SAO	eP	16 12 55.7
	FRI	ePc	16 13 02.2
	ORV	ePc	16 13 04.4
	WDC	ePc	16 13 04.5
	MIN	ePc	16 13 06.3
	MNA	eP	16 13 11.3
USGS 16h01m43.9s 22.2S 179.6W			
h=584km mb=4.7			
South of Fiji Islands			
May 18	MIN	eP	02 12 23.5
	WDC	eP	02 12 26.7
	MNA	e(P)	02 12 41.8
	BKS	e	02 22 05
		e	02 42 13
		e	02 43 56
		e	02 45 14
		e	02 47 13
		e	02 49 48
USGS 01h53m51.0s 25.3N 94.2E			
h=49km mb=5.7 Ms=5.9			
Burma-India Border Region			
May 18	FHC	iPc	03 16 48.2
		eP	03 17 46.4
		iPcP	03 17 52.7
	WDC	iPc	03 16 53.7
		iPcP	03 16 57.1
		e	03 17 36.2
	MIN	iPc	03 16 58.0
		iPcP	03 17 02.3
		eS	03 24 47.0
	ORV	iPc	03 17 01.6
		eS	03 24 50.7
	BRK	iPc	03 17 06.2
	BKS	ePd	03 17 06.9
		i	03 17 09.1
		i	03 17 23.6
		e	03 17 26.2
		e(PcP)	03 17 34.4
		e	03 17 53.4

DATE	STA	PHASE	TIME (UTC)
		epP	03 18 55
		e	03 24 50
		eS	03 24 52.8
		esS	03 28 06
		e	03 28 08
		e	03 28 11
		esS	03 31 56
		AMP(μm)	PER(s)
		PZ 0.41	.8
	PCC	eP	03 17 07.4
	GCC	iPc	03 17 10.7
		iPcP	03 17 15.7
		epP	03 19 06.0
	CMB	iPc	03 17 12.9
		ePcP	03 17 17.1
		e	03 17 48.2
		eS	03 25 17.5
		ePKPPKP	03 45 57.7
		epRPKP	03 47 50.5
	SAO	iPc	03 17 13.8
	PRS	eP	03 17 16.3
		epP	03 19 12.6
	LLA	eP	03 17 16.7
		epP	03 19 13.2
	FRI	iPc	03 17 19.5
		iPcP	03 17 24.1
		epP	03 19 14.5
		ePKPPKP	03 45 45.2
	MNA	eP	03 17 19.7
		e	03 18 01.2
		eS	03 25 22.2
		ePKPPKP	03 45 57.5
		epRPKP	03 47 53
	PRI	iPc	03 17 20.2
		ePKPPKP	03 45 56.1
BRK mb=6.0 h=540km Distance=62°			
USGS 03h07m34.1s 49.3N 147.7E			
h=542km mb=6.1			
Sea of Okhotsk			
May 18	WDC	eP	07 28 22.7
	MIN	eP	07 28 26.7
	ORV	eP	07 28 30.4
	GCC	eP	07 28 38.4
	CMB	eP	07 28 41.2
	PRS	eP	07 28 44.0
	LLA	eP	07 28 45.0
	FRI	eP	07 28 47.7
	MNA	eP	07 28 49.0
	BKS	e	07 58 52
		e	07 59 58
		e	08 09 28
		e	08 12 07
		e	08 26 57
		e	08 38 04
USGS 07h18m03.3s 44.4N 147.1E			
h=110km mb=5.3			
Kuril Islands			
May 18	GCC	eP	17 01 41.5
	PRS	eP	17 01 42.7
	PRI	eP	17 01 44.8
	LLA	e(P)	17 01 47.7
	FRI	eP	17 01 50.2
	CMB	eP	17 01 50.7
	ORV	e(P)	17 01 51.3
	MNA	eP	17 02 00.1
USGS 16h50m48.2s 17.7S 179.0W			
h=553km mb=5.0			
Fiji Islands Region			
May 18	GCC	e(P)	18 40 19.5

DATE	STA	PHASE	TIME (UTC)
	PRS	eP	18 40 19.8
	PRI	eP	18 40 22.3
	FRI	eP	18 40 27.1
	ORV	eP	18 40 27.5
	CMB	eP	18 40 27.8
	MNA	eP	18 40 38.0
USGS 18h27m25.2s 16.3S 178.3E			
h=20km mb=5.0			
Fiji Islands			
May 18	GCC	eP	18 45 11.9
	PRS	eP	18 45 12.0
	BKS	eP	18 45 13.8
		e	19 02 55
		e	19 05 35
		e	19 08 58
		e	19 09 02
	PRI	eP	18 45 15.2
	FHC	eP	18 45 19.8
	FRI	eP	18 45 20.3
	WDC	ePc	18 45 20.6
	ORV	eP	18 45 20.9
	CMB	iPc	18 45 20.9
	MNA	ePc	18 45 30.5
USGS 18h33m19.7s 16.2S 178.3E			
h=33km mb=5.4 Ms=5.2			
Fiji Islands			
May 19	FHC	ePc	00 25 38.2
	WDC	iPc	00 25 43.7
	MIN	ePc	00 25 47.0
	ORV	ePc	00 25 49.4
	PCC	ePc	00 25 51.5
	BRK	ePc	00 25 51.5
	GCC	ePc	00 25 54.3
	SAO	ePc	00 25 57.0
	CMB	iPc	00 25 58.0
		epP	00 26 17.7
	PRS	ePc	00 25 59.0
	LLA	ePc	00 25 59.7
	PRI	ePc	00 26 02.5
	FRI	ePc	00 26 03.0
		epP	00 26 20.7
	MNA	ePc	00 26 05.2
		epP	00 26 26.6
USGS 00h14m33.2s 29.9N 139.1E			
h=417km mb=5.5			
South of Honshu, Japan			
May 19	FRI	iPc	03 54 19.3
	MNA	eP	03 54 24.7
		i	03 54 27.6
		iS	03 54 54.9
	PRI	eP	03 54 30.0
		iS	03 55 01.3
	LLA	e(P)	03 54 33.1
	CMB	ePc	03 54 35.7
		iS	03 55 07.9
	SAO	eP	03 54 36.3
	PRS	eP	03 54 38.8
	MHC	ePc	03 54 42.85
		eS	03 55 25.5
	GCC	eP	03 54 46.1
	PCC	e(P)	03 54 50.6
	BKS	ePd	03 54 51.4
		e	03 55 04.8
		e	03 55 47.4
		e	03 56 05.4
BRK ML=4.4(7)			
PAS 03h53m50.3s 36.4N 117.8W			
h=10km ML=4.1			
Owens Lake, 30 km SE of Lone Pine,			

DATE	STA	PHASE	TIME (UTC)
CA			
May 19	FRI	eP	13 08 36.6
		epP	13 08 46.8
	PRI	eP	13 08 38.0
		epP	13 08 48.0
	MNA	ePc	13 08 39.7
		epP	13 08 50.5
	PRS	eP	13 08 40.5
		epP	13 08 50.5
	CMB	ePc	13 08 44.0
		epP	13 08 54.0
	GCC	eP	13 08 44.8
		epP	13 08 54.8
	ORV	eP	13 08 53.0
		epP	13 09 03.0
	MIN	eP	13 08 54.7
	WDC	e(P)	13 08 57.0
	BKS	e	13 19 12
		e	13 20 35
		e	13 24 30
		e	13 25 00
		e	13 28 25
		e	13 30 47
		e	13 31 28
		e	13 32 14
		e	13 35 34
		e	13 36 14.8
		e	13 38 02
USGS 12h56m25.3s 30.3S 71.5W			
h=36km mb=5.6 Ms=6.0			
Near Coast of Central Chile			
May 19	PRS	ePc	17 10 04.5
	PRI	eP	17 10 06.6
	FRI	ePc	17 10 12.1
	CMB	iPc	17 10 13.7
	ORV	ePc	17 10 15.0
	WDC	eP	17 10 15.9
	MIN	eP	17 10 17.6
	MNA	eP	17 10 22.9
	BKS	e	17 34 52
		e	17 37 21
		e	17 38 56
USGS 16h58m18.7s 21.2S 174.3W			
h=33km mb=5.5 Ms=5.2			
Tonga Islands			
May 19	WDC	ePc	17 49 41.5
	ORV	iPc	17 49 45.8
	GCC	ePc	17 49 50.8
	PRS	iPc	17 49 52.7
	CMB	iPc	17 49 53.3
	FRI	iPc	17 49 57.7
	MNA	iPc	17 50 00.9
USGS 17h37m47.0s 22.1N 144.2E			
h=84km mb=5.5			
Volcano Islands Region			
May 20	WDC	iPd	05 45 45.4
	MIN	iPd	05 45 50.9
	ORV	ePd	05 45 56.0
	BKS	eP	05 46 05.2
		eLr	05 53 22
		e	05 53 34
		e	05 53 39
	CMB	iPd	05 46 12.3
	MNA	iPd	05 46 20.3
	FRI	ePd	05 46 22.3
	PRI	ePd	05 46 25.0
BRK mb=5.2 h=33km Distance=			
USGS 05h40m19.5s 56.6N 152.8W			

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DATE	STA	PHASE	TIME (UTC)
h=33km mb=5.1 Ms=4.8			
Kodiak Island Region			
May 20	WDC	iPd	06 04 43.9
	MIN	ePd	06 04 48.6
	ORV	ePd	06 04 56.6
	CMB	eP	06 05 10.5
BRK mb=4.9 h=33km Distance=°			
USGS 05h59m18.2s 56.6N 152.8W			
h=33km mb=4.8 Ms=4.7			
Kodiak Island Region			
May 20	WDC	iPd	06 14 47.4
	MIN	iPd	06 14 53.0
	CMB	eP	06 15 14.4
BRK mb=5.0 h=33km Distance=°			
USGS 06h09m22.1s 56.6N 152.7W			
h=33km mb=4.8 Ms=4.4			
Kodiak Island Region			
May 20	PRS	ePc	17 15 11.6
	PRI	eP	17 15 12.0
	SAO	eP	17 15 13.9
	LLA	eP	17 15 14.3
	GCC	ePc	17 15 14.9
	PCC	eP	17 15 17.0
	BRK	e(P)	17 15 18.2
	FRI	ePc	17 15 18.5
	BKS	e(P)c	17 15 20.0
		AMP(μm)	PER(s)
	PZ	0.055	0.9
	CMB	ePc	17 15 23.9
	MNA	ePc	17 15 30.7
	ORV	eP	17 15 31.1
	WDC	iPc	17 15 36.0
	MIN	ePc	17 15 36.2
BRK mb=5.8 h=0km Distance=62°			
USGS 17h04m58.3s 21.9S 139.0W			
h=0km mb=5.6			
Tuamotu Archipelago Region			
May 20	CMB	e(P)	23 58 28.6
	WDC	eP	23 58 32.1
	MNA	eP	23 58 38.9
May 21	WDC	ePc	12 38 33.8
	CMB	ePc	12 38 44.4
	MNA	eP	12 38 49.5
	FRI	e	12 39 00.8
USGS 12h25m27.0s 24.2N 125.2E			
h=41km mb=5.0 Ms=5.1			
Southwestern Ryukyu Islands			
May 23	PRI	eP	05 12 38.9
	MNA	eP	05 12 39.6
	LLA	e	05 12 40.3
	PRS	e	05 12 41.8
	CMB	eP	05 12 44.5
	ORV	eP	05 12 54.5
	WDC	e	05 12 58.8
USGS 05h01m07.7s 20.2S 70.7W			
h=36km mb=5.3 Ms=5.0			
Near Coast of Northern Chile			
May 25	WDC	iPc	11 42 01.6
	MIN	iPc	11 42 01.8
	MNA	ePc	11 42 04.2
	ORV	ePc	11 42 05.6
	FHC	ePc	11 42 06.0
	CMB	iPc	11 42 12.3
		i	11 42 19.0
	FRI	iPc	11 42 17.1
	BKS	iP	11 42 18
		e	11 42 29.0
		ePcP	11 42 56.5
		e	11 43 34
		ePP	11 44 32
		ePPP	11 46 08.5
		e	11 49 53
		eS	11 50 40
		eSS	11 54 44
		e	11 57 09
		eLq	11 57 28
		eLr	12 02 10
		AMP(μm)	PER(s)
	PZ	0.44	1.6
	LN	43	20.
	LE	38	20.
	BRK	iPc	11 42 19.1
	MHC	iPc	11 42 20.8
	PCC	eP	11 42 21.0
	GCC	eP	11 42 21.5
	SAO	eP	11 42 22.8
	LLA	iPc	11 42 23.3
	PRS	ePc	11 42 25.5
	PRI	ePc	11 42 25.6
BRK Ms=6.7 Distance=63°			
USGS 11h31m54.3s 63.9N 19.7W			
h=7km mb=5.8 Ms=5.8			
Iceland			
May 25	FHC	e	11 46 00.2
	WDC	iPc	11 46 07.9
	MIN	e	11 46 13.5
	BKS	e	11 46 29
		e	11 46 31
	MNA	e	11 46 42.3
USGS 11h40m43.0s 56.4N 152.7W			
h=33km mb=5.0			
Kodiak Island Region			
May 25	BKS	e	23 50 42
		e	23 50 45.5
	FRI	eP	23 50 48.0
	MNA	eP	23 50 48.9
	PRI	eP	23 50 50.0
	PRS	eP	23 50 51.9
	CMB	eP	23 50 54.3
	GCC	eP	23 50 56.3
	ORV	eP	23 51 04.0
	WDC	eP	23 51 09.2
USGS 23h39m18.3s 20.0S 69.5W			
h=72km mb=5.3			
Northern Chile			
May 26	WDC	e(P)	02 01 29.5
	ORV	eP	02 01 33.3
	CMB	eP	02 01 42.2
	FRI	eP	02 01 47.0
USGS 01h49m52.2s 29.9N 142.2E			
h=68km mb=4.7			
South of Honshu, Japan			
May 26	BRK	iPc	07 01 15.3
		iS	07 01 17.9
	BKS	iP	07 01 15.3
		eS	07 01 18.0
	ZSP	iPd	07 01 16.9
		iS	07 01 20.2
	PCC	iPd	07 01 18.6
	MHC	iPd	07 01 23.4
		S	07 01 32.26
	GCC	iPd	07 01 26.1
	SAO	iPd	07 01 32.0
	CMB	iP	07 01 37.1
	LLA	iPc	07 01 37.6
	PRS	iPd	07 01 38.6
	ORV	eP	07 01 43.5
	PRI	eP	07 01 45.5
	FRI	eP	07 01 46.3
	MIN	eP	07 01 54.5
BRK 07h01m12.2s 37.8N 122.1W			
h=4km ML=3.4(5) Mo=7.6E21(3)			
San Leandro, 17 km SE of Berkeley, CA			
May 26	WDC	eP	07 45 23.6
	ORV	eP	07 45 33.9
	BKS	eP	07 45 40.0
	CMB	eP	07 45 49.5
	PRS	eP	07 45 53.5
	LLA	e(P)	07 45 55.0
	FRI	eP	07 45 57.8
USGS 07h38m54.0s 53.9N 167.0W			
h=33km mb=4.7 Ms=4.1			
Fox Islands, Aleutian Islands			
May 26	BKS	iP	07 59 43.3
		iS	07 59 45.9
	BRK	iPd	07 59 43.6
		iS	07 59 46.3
	ZSP	iPd	07 59 45.2
	PCC	iPd	07 59 46.7
	MHC	iPd	07 59 51.6
		iS	08 00 03.5
	GCC	iPd	07 59 54.3
	SAO	ePd	08 00 00.1
	CMB	eP	08 00 05.3
	LLA	eP	08 00 06.1
	PRS	eP	08 00 06.3
	ORV	eP	08 00 11.8
	PRI	eP	08 00 13.8
	FRI	eP	08 00 15.1
BRK 07h59m40.4s 37.8N 122.1W			
h=3km ML=3.0(3) Mo=1.8E21(3)			
San Leandro, 17 km SE of Berkeley, CA			
May 26	BKS	iPd	08 20 10.1
		eS	08 20 12.8
	BRK	iPd	08 20 10.3
		iS	08 20 13.3
	ZSP	iPd	08 20 11.8
	PCC	iPd	08 20 13.6
	MHC	ePc	08 20 18.7
	GCC	iPd	08 20 21.1
	SAO	iP	08 20 27.6
BRK 08h20m07.2s 37.8N 122.1W			
h=4km ML=2.1(2) Mo=8.2E19(2)			
San Leandro, 16 km SE of Berkeley, CA			
May 26	BKS	iPc	09 49 19.2
		eS	09 49 21.7
	BRK	iPc	09 49 19.3
		iS	09 49 21.8
	ZSP	eP	09 49 20.8
	PCC	iPd	09 49 22.4
	MHC	iPc	09 49 27.5
	GCC	iP	09 49 30.0
	SAO	eP	09 49 36.6
	CMB	ePc	09 49 41.6
	PRS	e(P)	09 49 42.7
BRK 09h49m16.2s 37.8N 122.1W			
h=4km ML=2.0(2) Mo=6.7E19(2)			
San Leandro, 16 km SE of Berkeley, CA			
May 26	SAO	eP	11 07 02.0
	BKS	e	11 07 03.8
	MHC	eP	11 07 03.9
	FRI	eP	11 07 08.5
	CMB	eP	11 07 09.1
	ORV	eP	11 07 10.6
	WDC	eP	11 07 10.8
	MIN	eP	11 07 12.3
	MNA	eP	11 07 17.9
USGS 10h55m32.5s 23.9S 180.0W			
h=468km mb=4.9			
South of Fiji Islands			
May 26	WDC	iPc	12 19 01.2
		e	12 19 12.3
	ORV	ePc	12 19 08.3
		e	12 19 19.3
	BKS	eP	12 19 11.8
		e	12 19 31.4
		e	12 19 33
		e(S)	12 29 22
		eLq	12 40 22
		AMP(μm)	PER(s)
	LN	0.25	20.
	LE	0.25	20.
	CMB	iPc	12 19 18.4
		e	12 19 29.4
	FRI	ePc	12 19 24.1
		e	12 19 35.3
	MNA	iPc	12 19 25.7
		e	12 19 36.7
BRK Ms=5.1 Distance=80°			
USGS 12h07m52.6s 38.2N 142.3E			
h=36km mb=5.3 Ms=5.2			
Near East Coast of Honshu, Japan			
May 26	BKS	iP	20 29 53.9
		iS	20 29 56.7
	BRK	iPc	20 29 54.0
		iS	20 29 57.1
	ZSP	iPd	20 29 55.6
		iS	20 29 59.8
	PCC	iPc	20 29 57.2
	MHC	ePd	20 30 01.95
	GCC	iPc	20 30 04.8
	SAO	iPd	20 30 11.2
	CMB	iS	20 30 35.3
BRK 20h29m50.9s 37.8N 122.1W			
h=4km ML=2.3(2) Mo=1.3E20(2)			
San Leandro, 17 km SE of Berkeley, CA			
May 26	BKS	e	22 19 42.0
	PRS	iPc	22 19 42.2
	SAO	iPc	22 19 43.6
	MHC	ePc	22 19 44.4
	PRI	iPc	22 19 44.6
	FRI	e(P)	22 19 49.5
	CMB	iPc	22 19 50.6
	ORV	ePc	22 19 51.0
	WDC	iPc	22 19 51.1
	MNA	iPc	22 19 59.8
USGS 22h08m50.7s 17.7S 178.8W			
h=584km mb=4.7			
Fiji Islands Region			
May 28	ZSP	iPc	08 38 16.7
		iS	08 38 31.7
	BKS	iP	08 38 17.4
		iS	08 38 31.8
	BRK	eP	08 38 17.5
		iS	08 38 31.9
	ORV	eP	08 38 21.1
		i	08 38 27.4
	PCC	ePc	08 38 21.7
		i	08 38 24.9
		iS	08 38 41.7
	MHC	eP	08 38 27.7
	WDC	e(P)	08 38 28.8
	GCC	eP	08 38 28.8
	MIN	ePd	08 38 29.3
	CMB	iPc	08 38 32.6
	SAO	eP	08 38 35.2
	PRS	eP	08 38 41.0
	FHC	e	08 38 44.7
	FRI	eP	08 38 47.5
	MNA	i	08 39 04.1
BRK 08h37m58.8s 38.8N 122.8W			
h=4km ML=3.3(2) Mo=1.3E21(2)			
The Geysers area, 25 km S of Clear Lake, CA			
May 28	BKS	iP	14 12 24.5
		iS	14 12 26.8
	BRK	iPc	14 12 24.6
	ZSP	iPc	14 12 26.5
	PCC	iPd	14 12 27.7
	MHC	ePd	14 12 32.9
	GCC	eP	14 12 35.1
	SAO	eP	14 12 42.4
BRK 14h12m21.4s 37.7N 122.1W			
h=2km ML=2.3(2) Mo=2.0E20(2)			
San Leandro, 17 km SE of Berkeley, CA			
May 29	WDC	eP	17 49 29.1
		e	17 50 06.0
	ORV	eP	17 49 34.6
	PRS	eP	17 49 42.0
	CMB	iPd	17 49 42.5
		e	17 50 12.6
	PRI	e	17 49 45.5
	FRI	eP	17 49 46.8
	MNA	eP	17 49 50.3
USGS 17h37m37.3s 22.5N 143.3E			
h=118km mb=5.2			
Volcano Islands Region			
May 29	MIN	iPc	19 27 45.4
		iS	19 27 50.7
	ORV	iPc	19 27 51.7
	WDC	iPc	19 27 57.7
		iS	19 28 12.0
	FHC	eP	19 28 16.7
	CMB	eP	19 28 17.7
	ZSP	eP	19 28 20.6
	BKS	eP	19 28 21.4
	MNA	eP	19 28 26.8
	MHC	eP	19 28 27.8
	FRI	e	19 28 33.8
BRK ML=3.4(6) Mo=1.3E22(1)			
45 km NW of Quincy, CA			
May 30	ZSP	eP	00 54 59.8
		iS	00 55 14.6
	BRK	eP	00 55 00.4
		iS	00 55 15.6
	BKS	eP	00 55 00.5
		eS	00 55 15.8
	ORV	eP	00 55 02.3
		i	00 55 08.9
	PCC	eP	00 55 05.3
		i	00 55 07.9
		iS	00 55 24.4
	MHC	eP	00 55 10.8
	CMB	eP	00 55 14.4
	WDC	e	00 55 17.1
BRK 00h54m40.4s 38.9N 122.8W			
h=1km ML=3.3(2) Mo=4.2E20(1)			
The Geysers area, 20 km S of Clear Lake, CA			
May 30	MHC	eP	03 10 54.4
		e	03 11 00.3
	PRS	e	03 10 57
	GCC	e	03 10 57.5
	PRI	e	03 11 00.0
	FRI	eP	03 11 01.4
		e	03 11 05.8
	CMB	eP	03 11 03.0
		i	03 11 07.0
	ORV	eP	03 11 04.0
	WDC	eP	03 11 04.2
	MIN	eP	03 11 06.5
	BKS	eP	03 11 10
		eS	03 20 16
		eLr	03 31 52
		AMP(μm)	PER(s)
	LZ	4.3	20.
	LN	2.1	20.
	LE	2.9	20.
	MNA	eP	03 11 12.8
		i	03 11 17.2
BRK Ms=5.6 Distance=71°			
USGS 02h59m36.6s 15.3S 173.6W			
h=33km mb=5.2 Ms=5.6			
Tonga Islands			
May 31	BRK	iPc	03 34 53.5
	BKS	iP	03 34 53.6
		iS	03 34 56.2
	ZSP	iPd	03 34 55.7
		e(S)	03 34 59.7
	PCC	iPd	03 34 56.4
	MHC	iPd	03 35 01.1
	GCC	iPd	03 35 03.8
	SAO	iPd	03 35 09.9
	CMB	iPc	03 35 15.1
	LLA	eP	03 35 16.1
	PRS	ePd	03 35 16.4
BRK 03h34m50.2s 37.7N 122.1W			
h=3km ML=3.2(2) Mo=2.5E21(2)			
San Leandro, 19 km SE of Berkeley, CA			
May 31	BKS	eP	05 16 27.7
		iS	05 16 30.5
	ZSP	iPd	05 16 29.2
	MHC	eP	05 16 35.9
	SAO	iPc	05 16 44.2
	CMB	eP	05 16 50.1
		iS	05 17 08.3
BRK 05h16m24.5s 37.7N 122.1W			
h=3km ML=2.4(2) Mo=3.8E20(2)			
San Leandro, 17 km SE of Berkeley, CA			
May 31	ORV	e	22 45 20.5
	CMB	eP	22 45 31.6
	MNA	eP	22 45 38.9
	FRI	eP	22 45 39.4
USGS 22h35m19.4s 47.4N 145.7E			
h=311km mb=4.5			
Sea of Okhotsk			

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DATE	STA	PHASE	TIME (UTC)
Jun 1	WDC	ePc	00 22 38.9
		e	00 28 37.4
		e	00 28 44.2
	ORV	ePc	00 22 48.3
		e	00 28 41.7
		e	00 28 48.4
	BRK	ePc	00 22 53.7
	PCC	e(P)	00 22 54.7
	BKS	eP	00 22 56.2
		eLq	00 32 32
		eLr	00 34 12
		AMP(μm)	PER(s)
		PZ 0.13	0.9
		LZ 1.4	20.
		LN 1.4	20.
		LE 2.0	20.
	GCC	eP	00 22 59.4
	MHC	e(P)	00 22 59.5
	CMB	ePc	00 23 02.3
		e	00 28 47.5
		e	00 28 54.5
	SAO	e(P)	00 23 03.2
	PRS	ePc	00 23 06.4
	LLA	ePc	00 23 07.3
	PRI	ePc	00 23 11.4
	MNA	iPc	00 23 11.6
	FRI	ePc	00 23 11.9
BRK Ms=5.1 Distance=42°			
USGS 00h15m14.3s 51.5N 177.5W			
h=33km mb=5.3 Ms=4.9			
Andreanof Islands, Aleutian Is.			
Jun 1	PRI	ePd	02 01 55.2
		epP	02 02 21.8
	MNA	ePd	02 01 55.3
		ipP	02 02 22.3
	FRI	e(P)	02 01 56.0
	LLA	ePd	02 01 57.6
		epP	02 02 24.5
	PRS	eP	02 01 58.2
	CMB	ePc	02 02 00.7
		epP	02 02 27.6
	GCC	eP	02 02 02.7
	ORV	ePd	02 02 10.2
		ipP	02 02 36.9
	MIN	e(P)	02 02 12.2
	WDC	iPd	02 02 15.2
		epP	02 02 42.2
	FHC	ePd	02 02 22.4
USGS 01h50m16.1s 22.3S 68.5W			
h=103km mb=5.4			
Northern Chile			
Jun 1	MNA	ePc	03 05 27.0
	CMB	ePc	03 05 36.6
	LLA	eP	03 05 39.5
	ORV	eP	03 05 40.4
	MIN	eP	03 05 40.9
	PRS	e	03 05 46.4
USGS 02h53m29.4s 8.1N 38.0W			
h=10km mb=4.9 Ms=4.9			
Central Mid-Atlantic Ridge			
Jun 1	MNA	eP	03 49 59.5
	FRI	eP	03 50 05.7
	CMB	eP	03 50 11.2
	LLA	eP	03 50 13.0
	PRS	e(P)	03 50 15.1
	MHC	eP	03 50 18.3
	ORV	eP	03 50 19.6
	MIN	eP	03 50 20.4
	WDC	eP	03 50 23.5
	FHC	eP	03 50 34.3
USGS 03h40m32.7s 12.0N 62.0W			
h=142km mb=5.0			
Windward Islands			
Jun 1	PRS	ePc	11 06 56.9
	BRK	ePc	11 06 58.3
	FRI	ePc	11 07 04.0
	CMB	ePc	11 07 04.9
	ORV	ePc	11 07 05.8
	WDC	iPc	11 07 06.2
	MIN	ePc	11 07 08.0
	MNA	iPc	11 07 13.9
Fiji Islands Region			
Jun 1	WDC	ePd	11 46 23.2
		e	11 48 36.5
	ORV	eP	11 46 32.7
		e	11 48 40.1
	CMB	eP	11 46 46.5
		e	11 48 45.9
	FRI	e(P)	11 46 54.5
	MNA	ePd	11 46 56.1
		e	11 48 50.6
USGS 11h39m08.1s 51.7N 176.2W			
h=57km mb=4.9			
Andreanof Islands, Aleutian Is.			
Jun 2	MNA	e	03 19 35.0
	FRI	e(P)	03 19 48.5
	CMB	e(P)	03 19 55.7
	ORV	e	03 20 19.2
	BKS	e(Lq)	03 32 54
		e(Lr)	03 36 28
USGS 03h11m51.2s 9.1N 83.9W			
h=40km mb=4.9 Ms=4.9			
Costa Rica			
Jun 2	FHC	ePc	16 57 29.7
	WDC	iPc	16 57 34.2
	BKS	eP	16 57 35.0
		AMP(μm)	PER(s)
		PZ 0.033	0.7
	GCC	ePc	16 57 35.1
	ORV	iPc	16 57 37.1
	PRS	ePc	16 57 38.0
	CMB	iPc	16 57 40.5
	PRI	ePc	16 57 41.6
	FRI	iPc	16 57 42.5
	MNA	iPc	16 57 49.4
New Britain Region			
Jun 2	BKS	iP	19 20 06.7
		eS	19 20 09.5
	BRK	iPd	19 20 06.8
		iS	19 20 10.1
	ZSP	iPd	19 20 08.5
	PCC	iPc	19 20 10.0
	MHC	eP	19 20 15.7
	GCC	eP	19 20 17.5
	SAO	eP	19 20 23.7
	PRS	e(P)	19 20 30.0
	CMB	e(P)	19 20 30.1
BRK 19h20m03.7s 37.8N 122.1W			
h=3kmR ML=2.1(3) Mo=1.3E20(2)			
San Leandro, 16 km SE of Berkeley, CA			
Jun 2	PRI	iPd	23 53 47.1
	LLA	eP	23 53 51.6
	PRS	ePd	23 53 55.7
	FRI	ePc	23 53 57.0
	SAO	eP	23 53 58.7
	GCC	eP	23 54 07.0
	CMB	ePc	23 54 10.8
		eS	23 54 32.8
	PCC	eP	23 54 14.2
	BKS	eP	23 54 20.7
BRK 23h53m42.2s 36.3N 120.4W			
h=6km ML=3.0(2)			
20 km NW of Coalinga, CA			
Jun 4	GCC	ePd	23 59 07.7
	PCC	ePd	23 59 07.8
	PRS	ePd	23 59 07.9
	SAO	eP	23 59 08.6
	BRK	ePd	23 59 09.1
	PRI	ePd	23 59 09.8
	BKS	iP	23 59 09.8
	MHC	ePd	23 59 10.2
	FRI	ePd	23 59 15.0
	CMB	iPd	23 59 16.1
	WDC	iPd	23 59 16.9
	ORV	iPd	23 59 17.0
	MNA	iPd	23 59 25.0
USGS 23h48m11.4s 20.0S 178.3W			
h=619km mb=5.2			
Fiji Islands Region			
Jun 5	WDC	ePKP	00 04 44.1
	PCC	e(PKP)	00 04 48.5
	MHC	ePKP	00 04 50.3
	CMB	ePKP	00 04 50.8
	PRS	ePKP	00 04 51.7
	FRI	ePKP	00 04 52.9
	PRI	ePKP	00 04 53.6
	MNA	ePKP	00 04 54.2
	BKS	e	00 47 52
USGS 23h45m41.9s 4.6S 102.0E			
h=42km mb=5.5 Ms=5.8			
Southern Sumatra			
Jun 5	WDC	eP	02 55 16.7
	MIN	eP	02 55 21.0
	ORV	eP	02 55 24.6
	CMB	eP	02 55 36.5
	MNA	eP	02 55 43.1
	FRI	eP	02 55 43.8
USGS 02h46m02.1s 50.9N 151.0E			
h=395km mb=4.4			
Northwest of Kuril Islands			
Jun 5	MHC	iPd	04 15 16.8
	GCC	eP	04 15 22.2
		iS	04 15 28.2
	SAO	iPc	04 15 25.3
	PCC	iPc	04 15 26.7
		iS	04 15 38.0
	BRK	eP	04 15 29.8
	BKS	iP	04 15 30.1
		eS	04 15 41.8
	ZSP	eP	04 15 31.2
	PRS	ePd	04 15 32.5
	CMB	eP	04 15 37.7
		iS	04 15 54.9
	PRI	eP	04 15 39.6
	FRI	ePc	04 15 41.8
	ORV	eP	04 15 53.2
BRK 04h15m14.8s 37.3N 121.7W			
h=5km ML=2.6(3) Mo=2.1E20(1)			
San Felipe Valley, 20 km SE of San Jose, CA			
Jun 5	FHC	ePc	05 13 15.3
	WDC	iPc	05 13 17.2
		e	05 30 22.3
	MIN	iPc	05 13 19.5
	ORV	ePc	05 13 22.6
	BRK	eP	05 13 29.6
	BKS	eP	05 13 29.8
		AMP(μm)	PER(s)
		PZ 0.076	0.9
	PCC	ePc	05 13 30.5
	CMB	iPc	05 13 31.0
		e	05 30 14.9
		ePKKP	05 30 46.9
	MNA	iPc	05 13 32.4
		e	05 30 14.8
		ePKKP	05 30 45.9
	MHC	ePc	05 13 32.7
		e	05 30 15.4
		ePKKP	05 30 45.5
	GCC	eP	05 13 33.2
	SAO	ePc	05 13 34.9
	FRI	ePc	05 13 36.3
		e	05 30 12.7
		ePKKP	05 30 41.1
	PRS	ePc	05 13 37.0
		e	05 30 11.9
		ePKKP	05 30 41.0
	PRI	ePc	05 13 39.7
		ePKKP	05 30 39.8
BRK mb=6.2 h=0km Distance=96°			
USGS 04h59m58.4s 41.6N 88.7E			
h=0km mb=6.2 Ms=4.4			
Southern Sinkiang Province, China			
Jun 5	BKS	eP	16 36 5
		e	16 45 00
		e	16 49 07
		e	16 53 26
		e	16 57 16
		eLr	17 10 54
		AMP(μm)	PER(s)
		LZ 0.86	20.
		LN 0.43	20.
		LE 0.54	20.
	WDC	eP	16 36 00.1
	ORV	eP	16 36 05.5
	MHC	eP	16 36 08.4
	PRS	eP	16 36 10.3
	PRI	e(P)	16 36 11.4
	CMB	eP	16 36 11.9
	FRI	eP	16 36 15.5
	MNA	eP	16 36 19.5
BRK Ms=5.0 Distance=94°			
USGS 16h23m16.9s 11.6N 141.6E			
h=33km mb=5.3 Ms=5.1			
West Caroline Islands			
Jun 5	PRS	eP	21 39 06.3
	CMB	eP	21 39 14.5
		e	21 42 52.0
		e	21 43 46.3
		e	21 44 47.1
	FRI	e	21 39 29.0
		e	21 43 41.1
	BKS	eP	21 39 43
		e	21 40 25.5
		eScS	21 49 50
		e	21 56 00
		ePKKP	21 58 07
		eLq	22 07 29
		eLr	22 12 00
		AMP(μm)	PER(s)
		LZ 2.9	20.
		LN 1.1	20.
		LE 2.5	20.
	WDC	e	21 43 20.4
BRK Ms=5.7 Distance=92°			
USGS 21h25m11.2s 5.4N 127.5E			
h=45km mb=5.5 Ms=5.7			
Philippine Islands Region			
Jun 5	CMB	e(Pdif)	22 14 13.5
		e	22 17 40.8
		ePP	22 18 35.3
	WDC	ePP	22 18 24.4
	FRI	e(PP)	22 18 26.0
	MNA	e(PP)	22 18 44.8
USGS 22h00m03.1s 5.3N 127.5E			
h=47km mb=5.4 Ms=5.4			
Philippine Islands Region			
Jun 6	BKS	e	08 51 50
	WDC	ePd	08 51 55.5
	MIN	ePd	08 51 58.8
	ORV	ePd	08 52 00.3
	MHC	ePd	08 52 03.2
	PRS	eP	08 52 05.6
	CMB	iPd	08 52 07.2
	FRI	ePd	08 52 11.0
	MNA	ePd	08 52 15.7
USGS 08h39m47.7s 15.9N 147.2E			
h=40km mb=5.3 Ms=4.6			
Mariana Islands Region			
Jun 6	WDC	ePdif	18 54 11.4
		ePP	18 58 31.2
	ORV	ePdif	18 54 16.2
	BKS	ePdif	18 54 19
		ePP	18 58 21
		e	19 01 07
		e(PKS)	19 04 30
		ePS	19 07 14
		eSS	19 12 00
		eLr	19 26 06
		AMP(μm)	PER(s)
		LZ 8.8	20.
		LN 3.0	20.
		LE 7.7	20.
	CMB	ePdif	18 54 21.6
		e(PP)	18 58 38.7
	FRI	ePdif	18 54 25.6
	MNA	ePdif	18 54 31.6
		ePP	18 58 39.5
BRK Ms=6.2 Distance= 98°			
USGS 18h40m27.5s 10.7N 126.1E			
h=14km mb=5.7 Ms=6.3			
Philippine Islands Region			
Jun 7	PCC	ePc	04 55 57.1
	PRS	ePc	04 55 57.5
	SAO	ePc	04 55 58.2
	BKS	eP	04 55 58.5
		e	05 01 26.0
	BRK	ePc	04 55 59.1
	MHC	ePc	04 55 59.8
	FRI	ePc	04 56 05.1
	CMB	ePc	04 56 06.0
	ORV	ePc	04 56 06.7
	WDC	ePc	04 56 06.7
	MIN	eP	04 56 08.6
	MNA	ePc	04 56 15.7
USGS 04h45m01.6s 16.6S 177.4W			
h=427km mb=4.7			
Fiji Islands Region			
Jun 7	WDC	ePdif	06 03 07.3
		e(PP)	06 07 17.7
	MIN	ePdif	06 03 10.0
		ePP	06 07 14.5
	ORV	ePdif	06 03 12.2
	BKS	eP	06 03 14
		ePdif	06 03 14
		eSKS	06 13 49
		eLq	06 30 30
		AMP(μm)	PER(s)
		LZ 4.5	20.
		LN 2.3	20.
		LE 3.6	20.
	CMB	ePdif	06 03 19.7
		e(PP)	06 07 30.2
	FRI	ePdif	06 03 24.3
		ePP	06 07 42.6
	MNA	ePdif	06 03 25.7
BRK Ms=6.0 Distance=102°			
USGS 05h49m43.6s 20.4N 121.4E			
h=14km mb=5.8 Ms=6.1			
Philippine Islands Region			
Jun 7	WDC	eP	08 57 58.9
	MIN	eP	08 58 05.5
	ORV	eP	08 58 14.9
USGS 08h55m36.0s 49.8N 127.1W			
h=38km mb=4.0			
Vancouver Island Region			
Jun 7	FRI	ePc	13 35 58.3
		ePcP	13 39 17.6
	MNA	iPc	13 36 01.5
		ePcP	13 39 17.9
		e	13 44 43.0
	CMB	ePc	13 36 09.1
		ePcP	13 39 20.0
		e	13 45 32.5
	MHC	ePc	13 36 12.4
	BKS	eP	13 36 20
		eS	13 41 24
		eLq	13 42 18
		eLr	13 44 27
		AMP(μm)	PER(s)
		LZ 1.6	20.
		LN 0.64	20.
		LE 3.2	20.
	ORV	ePc	13 36 24.5
	MIN	eP	13 36 29.4
	WDC	ePc	13 36 33.1
		ePcP	13 39 26.7
BRK Ms=5.0 Distance=32°			
USGS 13h30m15.9s 16.8N 98.7W			
h=40km mb=5.5 Ms=4.8			
Near Coast of Guerrero, Mexico			
Jun 7	ZSP	eP	21 24 36.3
		eS	21 24 55.0
	BKS	ePc	21 24 36.7
		e	21 24 50.5
		e	21 24 52.5
		eS	21 24 55.3
	BRK	eP	21 24 38.2
		eSn	21 24 53.4
		iSg	21 24 55.7
	ORV	eP	21 24 40.0
	PCC	eP	21 24 43.5
	MHC	e(P)	21 24 47.3
	WDC	e	21 24 48.4
	MIN	eP	21 24 49.1
	GCC	eP	21 24 51.2

International Seismological Centre

DATE	STA	PHASE	TIME (UTC)
	CMB	eP	21 24 51.9
	SAO	eP	21 24 54.5
	PRS	e	21 25 00.8
	FRI	eP	21 25 05.9
	MNA	e	21 25 19.8

BRK 21h24m16.9s 38.8N 122.8W
h=2kmR ML=3.0(5) Mo=5.9E21(2)
The Geysers area, 23 km S of Clear Lake, CA

Jun 8	PRS	eP	03 24 19.5
	FRI	ePd	03 24 25.8
	CMB	ePd	03 24 27.3
	WDC	ePd	03 24 29.8
	MIN	eP	03 24 31.5
	MNA	eP	03 24 34.5

USGS 03h11m35.8s 32.6S 178.8W
h=33km
South of Kermadec Islands

Jun 8	ORV	eP	06 21 26.8
	CMB	ePc	06 21 26.8
	WDC	ePc	06 21 28.0
	MIN	ePc	06 21 29.8
	MNA	ePc	06 21 36.5

USGS 06h10m24.2s 15.8S 174.9W
h=322km mb=4.4
Tonga Islands

Jun 9	MHC	iPd	03 40 26.8
		iS	03 40 29.2
	GCC	eP	03 40 32.3
	SAO	iPd	03 40 35.4
	PCC	iPc	03 40 36.6
		iS	03 40 47.8
	BRK	ePc	03 40 39.7
	BKS	e	03 40 39.9
		eP	03 40 40.0
		eS	03 40 51.3
	ZSP	ePc	03 40 41.1
		eS	03 40 53.8
	PRS	iPc	03 40 42.6
	CMB	iPc	03 40 47.8
		iS	03 41 04.8
	FRI	ePc	03 40 51.8
	ORV	eP*d	03 41 04.3

BRK 03h40m24.9s 37.3N 121.7W
h=5km ML=2.7(3) Mo=8.6E19(1)
Halls Valley, 20 km SE of San Jose, CA

Jun 9	BKS	eP	06 32 33	
		eSKS	06 42 22	
		e	06 43 18	
		eS	06 43 50	
		ePS	06 45 30	
		eLq	06 57 34	
			AMP(μm)	PER(s)
		LZ	15	20.
		LN	2.9	20.
		LE	11	20.
	WDC	e(P)	06 32 33.0	
	ORV	e	06 32 37.6	
	MIN	eP	06 32 38.9	
	CMB	eP	06 32 40.2	
	BRK	e	06 32 42.1	
	FRI	e(P)	06 32 43	
	MNA	eP	06 32 50.8	

BRK Ms=6.3 Distance=95°
USGS 06h19m25.4s 6.4S 148.8E
h=54km mb=5.3 Ms=6.2

DATE	STA	PHASE	TIME (UTC)

New Britain Region

Jun 9	BKS	eP	18 51 22.5	
		e	19 09 31.0	
		eLr	19 15 55	
			AMP(μm)	PER(s)
		LZ	0.89	20.
		LN	0.71	20.
		LE	0.89	20.
	WDC	ePc	18 51 50.7	

BRK Ms=5.2 Distance=80°
USGS 18h42m37.2s 12.8S 76.1W
h=87km mb=5.1
Near Coast of Peru

Jun 9	PRI	ePc	22 57 39.2	
	PRS	e	22 57 40.2	
	LLA	e	22 57 41.7	
	FRI	iPc	22 57 41.8	
	CMB	iPc	22 57 49.4	
	MNA	iPc	22 57 51.3	
	WDC	iPc	22 58 04.8	
	BKS	eLr	23 22 08	
			AMP(μm)	PER(s)
		LZ	0.79	20.
		LN	0.82	20.
		LE	0.79	20.

BRK Ms=5.2 Distance=74°
USGS 22h46m11.6s 35.3S 106.7W
h=10km mb=5.4 Ms=5.1
Easter Island Cordillera

Jun 10	WDC	iPKPc	16 22 50.0
	ORV	ePKPc	16 22 52.4
	BKS	eP	16 22 53.5
	CMB	ePKPc	16 22 56.3
		e	16 23 13.6
	PRS	ePKPc	16 22 57.9
	LLA	ePKPc	16 22 58.2
	FRI	ePKPc	16 22 58.5
	MNA	ePKPc	16 22 58.9
		e	16 23 16.5
	PRI	ePKPc	16 22 59.4

USGS 16h03m55.1s 4.1N 94.8E
h=52km mb=5.4 Ms=5.3
Off West Coast of Northern Sumatra

Jun 10	MNA	ePc	23 54 05.5
	FRI	eP	23 54 18.0
	CMB	ePc	23 54 20.5
		eS	24 02 22.0
	ORV	e(P)	23 54 25.4
	LLA	ePc	23 54 28.0
	WDC	eP	23 54 28.8
	MHC	ePc	23 54 31.2
	SAO	eP	23 54 31.3
	PRS	e(P)c	23 54 31.4
	BKS	eP	23 54 32.0
		eS	23 58 40.0
		e	24 01 20
		eLr	24 05 04
			AMP(μm) PER(s)
		LZ	1.4 14.

BRK Ms=4.6 Distance=25°
USGS 23h48m54.9s 38.7N 88.0W
h=9km mb=4.9 Ms=4.4
Southern Indiana

Jun 11	FRI	e(P)	05 20 24.0
	MNA	e(P)	05 20 26.7
	PRI	eP	05 20 26.7
	CMB	eP	05 20 32.8
	ORV	eP	05 20 41.0
	WDC	eP	05 20 42.6

USGS 05h08m53.3s 20.6S 70.9W
h=33km mb=5.1 Ms=4.3
Near Coast of Northern Chile

Jun 11	BKS	e	23 53 35
		e	23 54 13.5
	FRI	eP	23 54 22.2
		epP	23 54 38.4
	MNA	iPd	23 54 23.2
		ipP	23 54 39.7
		isP	23 54 48.4
	PRI	ePd	23 54 24.9
		epP	23 54 40.6
		esP	23 54 48.6
	CMB	ePd	23 54 32.0
		epP	23 54 48.0
	BRK	e	23 54 37.8
	MIN	ePc	23 54 49.2
	ORV	e	23 54 49.2

USGS 23h47m43.6s 14.2N 91.4W
h=65km mb=4.5
Guatemala

Jun 12	PRS	ePc	00 43 02.9
	PCC	ePc	00 43 03.2
	FRI	ePc	00 43 10.1
	CMB	ePc	00 43 10.7
	WDC	ePc	00 43 12.3
	MNA	ePc	00 43 20.5

USGS 23h48m33.3s 1.5N 126.1E
h=45km mb=5.2
Molucca Passage

Jun 12	SAO	iPd	04 06 14.3
	GCC	iPc	04 06 18.7
		iS	04 06 24.5
	PRS	iPd	04 06 21.9
	MHC	iPd	04 06 22.0
		iS	04 06 29.8
	LLA	iPc	04 06 22.9
		iS	04 06 31.5
	PCC	ePc	04 06 28.1
		eS	04 06 42.5
	PRI	eP	04 06 31.3
	BRK	eP	04 06 31.9
		eS	04 06 49.0
	BKS	eP	04 06 32.1
		eS	04 06 49.5
	ZSP	iPgc	04 06 35.3
		iSg	04 06 53.1
	FRI	eP	04 06 38.5
		eS	04 06 57.4
	CMB	eP	04 06 39.0
		eS	04 06 58.8
	ORV	eP*d	04 06 58.8

BRK 04h06m11.6s 36.8N 121.6W
h=3km ML=2.6(3)
18 km W of Hollister, CA

Jun 12	MHC	iPd	05 43 33.8
	GCC	iPd	05 43 34.9
	PCC	iPc	05 43 37.6
	SAO	eP	05 43 41.0
	BRK	ePd	05 43 41.4
		iS	05 43 50.9
	BKS	iPd	05 43 41.4
		eS	05 43 50.5
	ZSP	iPc	05 43 43.2
		iS	05 43 54.0
	LLA	eP	05 43 47.2
	PRS	iPd	05 43 48.0
		eS	05 44 02.2
	CMB	ePc	05 43 53.3
		iS	05 44 11.6
	PRI	eP	05 43 54.8
	FRI	ePc	05 43 58.0
		iS	05 44 19.7
	ORV	eP	05 44 04.5
	MIN	e	05 44 17.4
	MNA	e	05 44 24.0

BRK 05h43m29.2s 37.3N 121.9W
h=10km ML=3.1(3) Mo=1.4E21(3)
San Jose, CA

Jun 12	PRS	ePc	08 02 21.2
	FRI	ePc	08 02 29.4
	CMB	ePc	08 02 30.5
	ORV	ePc	08 02 31.3
	WDC	ePc	08 02 31.8
	BKS	eP	08 02 32
		e	08 04 22
		eS	08 12 20
		eLq	08 23 24
			AMP(μm) PER(s)
		LZ	0.61 20.
		LN	0.54 20.
		LE	0.54 20.
	MIN	ePc	08 02 33.8
	MNA	iPc	08 02 40.5

BRK Ms=5.0 Distance=77°
USGS 07h51m03.4s 15.1S 173.8W
h=33km mb=5.0 Ms=4.9
Tonga Islands

Jun 12	WDC	iPd	10 03 37.0
		i	10 03 44.4
	MIN	ePc	10 03 40.0
		e	10 03 48.2
	ORV	iPd	10 03 42.3
	BKS	e	10 03 44.5
	BRK	ePd	10 03 44.6
	PCC	ePd	10 03 45.2
	GCC	eP	10 03 47.5
	MHC	iPd	10 03 48.3
	SAO	eP	10 03 49.8
	CMB	iPd	10 03 50.0
	PRS	ePd	10 03 51.6
	LLA	iPd	10 03 52.0
	FRI	ePd	10 03 54.5
	PRI	ePd	10 03 54.8
	MNA	iPd	10 03 55.6

USGS 09h51m01.6s 25.5N 122.2E
h=272km mb=5.4
Taiwan Region

Jun 12	WDC	e(PKP)	10 18 31.8
	MIN	ePKP	10 18 33.5
	ORV	ePKP	10 18 35.6
	BKS	eP	10 18 40
	CMB	ePKPd	10 18 41.5
	MHC	e(PKP)	10 18 41.8
	MNA	iPKPd	10 18 43.3
	PRS	ePKP	10 18 44.2
	FRI	ePKPd	10 18 45.0
	PRI	ePKP	10 18 47.1

USGS 09h58m56.9s 6.7S 71.8E
h=10km mb=5.0
Chagos Archipelago Region

Jun 12	WDC	eP	18 14 15.3
	ORV	eP	18 14 18.5
	CMB	eP	18 14 21.6
	FRI	eP	18 14 24.0

USGS 18h01m33.7s 5.4S 150.3E
h=216km mb=5.2
New Britain Region

Jun 13	PCC	ePc	10 51 27.7	
	GCC	ePc	10 51 27.9	
	PRS	ePc	10 51 28.3	
	SAO	ePc	10 51 28.7	
	LLA	eP	10 51 29.1	
	BKS	ePc	10 51 29.7	
			AMP(μm)	PER(s)
		PZ	0.13	1.1
	BRK	eP	10 51 29.8	
	MHC	ePc	10 51 30.3	
	PRI	ePc	10 51 30.3	
	FRI	ePc	10 51 35.4	
	CMB	iPc	10 51 36.3	
	WDC	iPc	10 51 36.9	
	ORV	iPc	10 51 37.0	
	MIN	ePc	10 51 38.7	
	MNA	iPc	10 51 45.4	

USGS 10h40m16.9s 19.7S 179.8W
h=488km mb=5.3
Fiji Islands Region

Jun 13	WDC	eP	14 10 54.0
		i	14 11 08.0
		e	14 13 14.7
	MIN	eP	14 10 56.6
		i	14 11 12.2
	ORV	eP	14 11 01.5
		e	14 11 15.5
	CMB	eP	14 11 10.8
		e	14 13 33.7
	PRS	eP	14 11 15.5
	FRI	eP	14 11 17.8
	MNA	eP	14 11 18.1
		i	14 11 34.3
		e	14 13 42.3
	PRI	eP	14 11 18.2
	GCC	e	14 11 23.8

USGS 14h00m39.3s 44.7N 150.4E
h=42km mb=5.8 Ms=5.8
Kuril Islands Region

Jun 13	WDC	eP	15 51 23.2
		i	15 51 39.4
	MIN	eP	15 51 29.5
		e	15 51 41.0
	ORV	eP	15 51 29.9
	CMB	eP	15 51 41.2
		i	15 51 58.4
	MNA	eP	15 51 49.4

USGS 15h41m10.9s 44.6N 150.4E
h=44km mb=5.6 Ms=5.4
Kuril Islands Region

Jun 15	PRI	eP	06 33 38.3
	MNA	eP	06 33 39.1
		e	06 33 51.8
	FRI	eP	06 33 39.3
	LLA	eP	06 33 41.3
		e	06 33 54.5
	PRS	eP	06 33 41.9
		e	06 33 55.2
	CMB	ePd	06 33 45.3
		e	06 33 58.2
		e	06 34 07.7
	MHC	eP	06 33 47.7
	ORV	ePd	06 33 56.0
		e	06 34 09.7
		e	06 34 18.8
	MIN	eP	06 33 59.2
		e	06 34 10.8
	WDC	e	06 34 02.0
		e	06 34 15.3

USGS 06h23m09.8s 12.5S 76.7W
h=51km mb=5.5 Ms=4.5
Near Coast of Peru

Jun 15	MNA	iPd	21 16 03.9	
	FRI	ePd	21 16 04.8	
	PRI	eP	21 16 05.0	
	LLA	iPd	21 16 07.4	
	PRS	ePd	21 16 08.1	
	CMB	ePd	21 16 09.7	
	SAO	eP	21 16 11.2	
	GCC	ePd	21 16 12.2	
	MHC	ePd	21 16 12.4	
	PCC	eP	21 16 14.8	
	BRK	eP	21 16 15.6	
	BKS	ePd	21 16 15.7	
			AMP(μm)	PER(s)
		PZ	0.074	1.0
	ORV	ePd	21 16 18.0	
	MIN	ePd	21 16 19.8	
	WDC	iPd	21 16 23.0	

USGS 21h05m11.3s 19.1S 63.9W
h=590km mb=5.4
Southern Bolivia

Jun 16	WDC	e(P)	08 01 02.3
	MIN	e(P)	08 01 05.9
	CMB	eP	08 01 19.0
	PRS	eP	08 01 20.9
	FRI	eP	08 01 24.5
	MNA	eP	08 01 26.2

USGS 07h49m41.7s 37.5N 140.1E
h=37km mb=4.8
Honshu, Japan

Jun 16	FRI	e(P)	19 26 57.9
	PRI	eP	19 26 59.6
		e	19 27 17.5
	MNA	ePd	19 26 59.9
		e	19 27 18.0
	LLA	ePd	19 27 02.3
		e	19 27 20.4
	PRS	eP	19 27 02.7
	CMB	e(P)	19 27 05.1
	MHC	e(P)	19 27 06.5
	ORV	eP	19 27 15.2
		i	19 27 33.2
	WDC	ePd	19 27 20.2
		e	19 27 38.2

USGS 19h15m34.2s 19.9S 69.9W
h=93km mb=5.0
Northern Chile

Jun 16	GCC	eP	20 28 50.3
	PRS	eP	20 28 50.4
	PRI	eP	20 28 51.0
	SAO	eP	20 28 51.0
	LLA	eP	20 28 52.5
	MHC	eP	20 28 53.5
	BKS	eP	20 28 53.5
			AMP(μm) PER(s)
		PZ	0.033 0.9
	FRI	ePc	20 28 57.5
	CMB	ePc	20 28 59.0
		ePc	20 28 59.0
	ORV	eP	20 29 00.3
	WDC	ePc	20 29 00.9

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DATE	STA	PHASE	TIME (UTC)
	MIN	eP	20 29 02.7
	MNA	ePc	20 29 08.1
USGS 20h17m02.4s 22.9S 176.7W			
h=146km mb=5.3			
South of Fiji Islands			
Jun 17	WDC	iPdifc	01 47 02.6
		ePKP	01 51 10.5
		ePKKP	02 02 32.0
	PCC	ePdifc	01 47 04.4
	BRK	ePdifc	01 47 04.7
		ePKKP	02 02 33.2
	MIN	idifc	01 47 05.2
		ePKP	01 51 15.0
	BKS	ePdiff	01 47 05.5
		ePKP	01 51 24.2
		ePP	01 51 30
		eSKS	01 57 37
		ePS	02 00 35
		ePPS	02 02 12
		eSS	02 06 41
		eSSS	02 10 36
		eSSSS	02 13 42
		eG	02 16 26
		AMP(μm)	PER(s)
		LZ 27	20.
		LN 8.2	20.
		LE 21	20.
		LNE 28	20.
		LNW 19	20.
	ORV	iPdifc	01 47 05.9
		ePKP	01 51 15.0
		ePKKP	02 02 32.8
	MHC	iPdifc	01 47 07.6
		ePKP	01 51 17.3
	GCC	ePdif	01 47 07.9
	PRS	ePdifc	01 47 09.0
		ePKP	01 51 16.4
		ePKKP	02 02 31.6
	SAO	ePdifc	01 47 09.2
		ePKKP	02 02 33
	LLA	ePdifc	01 47 10.5
	CMB	iPdifc	01 47 11.3
		ePKP	01 51 18.5
		ePKKP	02 02 29.6
		ePKPPKP	02 13 34.1
	PRI	ePdifc	01 47 12.0
		ePKP	01 51 14.5
		ePKKP	02 02 29
		ePKPPKP	02 13 22.4
	FRI	ePdifc	01 47 14.2
		ePKP	01 51 16.9
		ePKKP	02 02 26.7
		ePKPPKP	02 13 11.8
	MNA	ePdifc	01 47 18.2
		ePKP	01 51 22.2
		ePKKP	02 02 23.7
		ePKPPKP	02 13 19.5
BRK Ms=6.8 Distance=105°			
USGS 01h32m53.7s 5.6S 130.8E			
h=67km mb=6.6			
Banda Sea			
Jun 17	WDC	iPc	03 31 03.6
		e	03 31 23.1
	MIN	eP	03 31 13.4
	ORV	ePd	03 31 16.6
		e(S)	03 31 47.0
	PCC	eP	03 31 26.2
	MHC	ePc	03 31 33.4
	GCC	eP	03 31 33.7
	SAO	iPd	03 31 39.7
	PRS	ePc	03 31 45.8
	FRI	ePc	03 31 53.9
BRK 03h30m36.6s 40.4N 124.8W			
h=21km ML=3.1(4)			
Off Coast 66 km SW of Eureka, CA			
Jun 17	PRI	eP	04 09 41.7
	CMB	ePd	04 09 42.3
	ORV	eP	04 09 44
	WDC	ePd	04 09 44.6
	MIN	eP	04 09 46.2
	MNA	ePd	04 09 50.9
USGS 03h57m18.9s 26.6S 177.4W			
h=58km mb=4.8			
South of Fiji Islands			
Jun 17	WDC	iPd	19 09 41.0
	ORV	iPd	19 09 50.6
	BKS	eP	19 09 56.0
		AMP(μm)	PER(s)
		PZ 0.028	0.6
	CMB	iPd	19 10 04.3
	PRS	ePd	19 10 08.0
	LLA	ePd	19 10 08.9
	FRI	iPd	19 10 12.8
	MNA	iPd	19 10 13.6
USGS 19h02m23.7s 52.0N 177.5W			
h=98km mb=4.5			
Andreanof Islands, Aleutian Is.			
Jun 18	MIN	iPd	04 50 44.2
		i	04 50 47.0
		iS	04 51 11.1
	WDC	iPc	04 50 48.9
		i	04 50 52.0
		iS	04 51 26.9
	ORV	iPc	04 50 52.8
		i	04 52 56.7
	MNA	iPc	04 51 07.6
		i	04 51 14.2
		iS	04 52 04.0
	CMB	iPc	04 51 10.7
		i	04 51 18.1
		iS	04 52 10.7
	FRI	iPc	04 51 25.8
		i	04 51 37.9
		iS	04 52 31.6
	BRK	e	04 51 28.2
	ZSP	e	04 51 28.9
	PCC	e c	04 51 31.4
		e	04 51 36.7
	PRS	ePc	04 51 38.2
	PRI	e	04 51 53.3
BRK 04h50m07.3s 42.1N 119.8W			
h=15km ML=4.4(5)			
85 km NE of Alturas, CA			
Jun 18	PCC	eP	14 15 44.0
		ipP	14 16 05.4
	BRK	eP	14 15 45.5
		ipP	14 16 07.9
	BKS	eP	14 15 46.1
		epP	14 16 08.0
		eS	14 26 10.0
		esS	14 26 42.5
		eSS	14 32 20
		eSSS	14 38 12
		AMP(μm)	PER(s)
		PZ 0.55	1.3
		LZ 2.1	20.
		LN 1.6	20.
		LE 2.1	20.
	PRS	ePd	14 15 46.8
		ipP	14 16 09.5
	SAO	eP	14 15 47.1
		epP	14 16 09.2
	WDC	iPd	14 15 48.5
		ipP	14 16 10.7
	LLA	eP	14 15 48.7
		ipP	14 16 11.4
	PRI	iPd	14 15 49.7
		ipP	14 16 12.1
	ORV	iPd	14 15 50.3
		ipP	14 16 12.5
	MIN	iPd	14 15 51.0
		ipP	14 16 14.4
	CMB	iPd	14 15 52.7
		ipP	14 16 14.9
	FRI	ePd	14 15 53.7
		ipP	14 16 15.8
	MNA	iPd	14 16 01.5
		ipP	14 16 24.0
BRK Ms=5.6 Distance=86°			
USGS 14h03m15.2s 10.7S 162.3E			
h=73km mb=6.0			
Solomon Islands			
Jun 18	MNA	iPc	15 20 36.3
		eS	15 21 02
	FRI	iPc	15 20 48.4
		i	15 20 54.6
	CMB	iPc	15 20 56.9
		eSg	15 21 51
	PRI	iPc	15 21 02.4
		eSg	15 22 06
	PRS	e	15 21 08.6
	ORV	iPc	15 21 15.9
	BRK	e	15 21 21.0
	MIN	ePc	15 21 23.4
	PCC	e	15 21 24.7
	BKS	e	15 21 27.8
BRK ML=4.4(3)			
USGS 15h20m00.0s 37.2N 116.0W			
h=0km			
Underground Nuclear Explosion, N.T.S.			
Jun 19	WDC	ePc	00 23 05.6
		ePcP	00 23 12.3
	ORV	eP	00 23 11.0
		ePcP	00 23 17.4
	CMB	ePc	00 23 17.5
		ePcP	00 23 24.5
	FRI	eP	00 23 21.7
		ePcP	00 23 28.5
	MNA	ePc	00 23 26.0
		ePcP	00 23 32.6
USGS 01h10m16.9s 17.8N 144.9E			
h=37km mb=5.1 Ms=4.9			
Mariana Islands Region			
Jun 19	WDC	ePc	00 32 31.3
		ePcP	00 32 37.3
	ORV	eP	00 32 36.4
		ePcP	00 32 42.4
	CMB	ePc	00 32 43.3
		ePcP	00 32 49.3
	PRS	ePc	00 32 44.9
		ePcP	00 32 51.0
	FRI	eP	00 32 47.4
		ePcP	00 32 53.3
	MNA	eP	00 32 51.0
		ePcP	00 32 57.0
USGS 00h20m20.2s 17.7N 144.9E			
h=33km mb=4.5			
Mariana Islands Region			
Jun 19	WDC	iPd	01 22 27.4
		ePcP	01 22 33.4
	MIN	eP	01 22 30.9
		ePcP	01 22 36.5
		epP	01 22 42.2
	PCC	eP	01 22 31.9
		ePcP	01 22 37.9
	BRK	eP	01 22 32
		ePcP	01 22 38.3
	ORV	ePd	01 22 32.5
		ePcP	01 22 38.3
		epP	01 22 44.0
	PRS	ePd	01 22 38.3
		ePcP	01 22 44.3
	CMB	ePd	01 22 39.5
		iPcP	01 22 45.2
		epP	01 22 51.2
	LLA	eP	01 22 40.3
		ePcP	01 22 46.7
		epP	01 22 51.6
	PRI	ePd	01 22 41.9
	FRI	iPd	01 22 43.6
		ePcP	01 22 49.5
	MNA	ePd	01 22 47.8
		iPcP	01 22 54.1
		epP	01 22 59.2
		AMP(μm)	PER(s)
		LZ 1.4	20.
		LN 0.36	20.
		LE 1.1	20.
BRK Ms=5.2 Distance=81°			
USGS 01h10m16.9s 17.8N 144.9E			
h=37km mb=5.1 Ms=4.9			
Mariana Islands Region			
Jun 19	FHC	e(P)	01 35 05.2
	CMB	eP	01 35 22.4
		ePcP	01 35 27.8
		epP	01 35 34.1
	FRI	ePd	01 35 26.5
		ePcP	01 35 32.6
		epP	01 35 38.2
	MNA	ePd	01 35 30.7
		ePcP	01 35 35.7
Mariana Islands Region			
Jun 19	WDC	eP	01 38 08.1
	ORV	eP	01 38 14.0
		ePcP	01 38 20.6
	CMB	ePc	01 38 20.9
		ePcP	01 38 37.5
	FRI	ePc	01 38 24.9
	MNA	ePc	01 38 29.2
Mariana Islands Region			
Jun 19	WDC	ePc	01 38 38.4
	ORV	eP	01 38 43.2
		ePcP	01 38 47.8
	PRS	eP	01 38 49.0
		ePcP	01 38 53.5
	CMB	ePc	01 38 50.2
		ePcP	01 38 54.6
	FRI	eP	01 38 53.8
		ePcP	01 38 58.5
	MNA	ePc	01 38 59.0
		ePcP	01 39 03.1
Mariana Islands Region			
Jun 19	FHC	eP	01 39 36.8
	WDC	eP	01 39 44.5
	CMB	ePc	01 39 56.3
	FRI	eP	01 40 00.4
	MNA	eP	01 40 04.8
Mariana Islands Region			
Jun 19	WDC	eP	01 41 10.0
		ePcP	01 41 16.5
	ORV	eP	01 41 16.3
		ePcP	01 41 22.6
	CMB	e(P)	01 41 23.3
		ePcP	01 41 29.3
		epP	01 41 35.1
	FRI	ePc	01 41 27.1
		ePcP	01 41 33.3
		epP	01 41 38.8
	MNA	ePc	01 41 31.3
		ePcP	01 41 38.1
Mariana Islands Region			
Jun 19	FHC	ePc	01 48 50.2
	WDC	ePc	01 48 56.2
		ePcP	01 49 02.6
	MIN	eP	01 49 00.0
		ePcP	01 49 07.0
	ORV	ePc	01 49 02.7
		ePcP	01 49 08.1
	BRK	ePcP	01 49 07.7
	CMB	ePc	01 49 08.5
		ePcP	01 49 15.0
	PRS	e(P)	01 49 09
	FRI	ePc	01 49 12.4
		ePcP	01 49 18.7
	MNA	ePc	01 49 16.7
		ePcP	01 49 23.0
USGS 01h36m45.8s 17.8N 144.9E			
h=33km mb=5.0			
Mariana Islands Region			
Jun 19	WDC	eP	01 50 06.1
	MIN	eP	01 50 10.4
	ORV	eP	01 50 12.0
	BRK	e(P)	01 50 13.7
	CMB	ePc	01 50 19.1
		epP	01 50 30.2
	FRI	ePc	01 50 23.0
	MNA	ePc	01 50 27.5
USGS 01h38m43.1s 17.7N 144.9E			
h=37km mb=5.4 Ms=5.1			
Mariana Islands Region			
Jun 19	FHC	eP	01 50 48.1
		ePcP	01 50 54.8
	WDC	iPc	01 50 53.4
		ePcP	01 50 59.7
		epP	01 51 05.6
	ORV	ePc	01 50 58.6
		ePcP	01 51 04.9
		epP	01 51 10.9
	MIN	ePcP	01 50 58.7
	BRK	e(P)	01 51 00.5
		ePcP	01 51 04.7
		epP	01 51 10.2
	PRS	eP	01 51 04.0
		ePcP	01 51 10.5
	BKS	ePcP	01 51 05.0
		epP	01 51 10.2
	CMB	ePc	01 51 05.5
		iPcP	01 51 11.9
		epP	01 51 17.4
	LLA	e(P)	01 51 07
		ePcP	01 51 11.9
	PRI	ePc	01 51 07.7
		ePcP	01 51 13.9
		epP	01 51 20.0
	FRI	ePc	01 51 09.5
		ePcP	01 51 15.8
		epP	01 51 20.4
	MNA	ePc	01 51 13.8
		ePcP	01 51 20.4
		epP	01 51 25.6
USGS 01h38m43.1s 17.7N 144.9E			
h=37km mb=5.4 Ms=5.1			
Mariana Islands Region			
Jun 19	WDC	ePc	02 05 19.6
		ePcP	02 05 26.5
		epP	02 05 30.5
	ORV	eP	02 05 25.1
		ePcP	02 05 31.5
		epP	02 05 37.5
	MIN	ePcP	02 05 26.0
	PRS	ePc	02 05 31.0
		ePcP	02 05 37.4
	CMB	ePc	02 05 32.2
		ePcP	02 05 38.7
	FRI	eP	02 05 36.0
		ePcP	02 05 42.7
	MNA	eP	02 05 41.2
		ePcP	02 05 47.7
USGS 01h53m11.6s 18.1N 144.9E			
h=38km mb=4.8			
Mariana Islands			
Jun 19	WDC	eP	02 14 40.2
	MIN	eP	02 14 43.5
	ORV	ePc	02 14 45.3
		ePcP	02 14 51.5
	CMB	ePc	02 14 52.2
		ePcP	02 14 58.5
	FRI	ePc	02 14 56.3
		ePcP	02 15 03.3
	MNA	eP	02 15 00.0
		ePcP	02 15 07.0
USGS 02h02m29.3s 17.8N 145.0E			
h=33km mb=4.5			
Mariana Islands Region			
Jun 19	WDC	ePc	02 21 09.3
		ePcP	02 21 14.3
		epP	02 21 19.5
	MIN	e(P)	02 21 12.9
	ORV	ePc	02 21 14.5
		ePcP	02 21 19.1
		epP	02 21 24.7
	CMB	ePc	02 21 21.5
		ePcP	02 21 26.1
		epP	02 21 31.5
	FRI	ePc	02 21 23.8
		ePcP	02 21 30.0
		epP	02 21 35.5
	MNA	ePc	02 21 29.6
		ePcP	02 21 34.1
		epP	02 21 39.8
USGS 02h08m57.0s 17.7N 144.8E			
h=33km mb=4.9			
Mariana Islands Region			
Jun 19	FHC	eP	02 28 24.7
	WDC	e(P)	02 28 29.5
	CMB	e(P)	02 28 41.7
		ePcP	02 28 48.0
	FRI	ePc	02 28 45.0
		ePcP	02 28 52.0

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DATE	STA	PHASE	TIME (UTC)
	MNA	e(P)	02 28 49.0
		ePcP	02 28 56.1
Mariana Islands Region			
Jun 19	WDC	iPc	02 29 39.6
		ePcP	02 29 44.2
	ORV	ePc	02 29 44.6
	CMB	ePc	02 29 51.8
	FRI	ePc	02 29 56.7
	MNA	iPc	02 30 00.4
Mariana Islands Region			
Jun 19	WDC	e(P)	02 33 55.9
	ORV	e(P)	02 34 00.5
		ePcP	02 34 06.9
	CMB	ePc	02 34 07.5
		ePcP	02 34 14.0
	FRI	eP	02 34 11.7
		ePcP	02 34 18.1
	MNA	ePc	02 34 15.7
		e(PcP)	02 34 22.7
Mariana Islands Region			
Jun 19	WDC	iPc	02 46 25.5
		iPcP	02 46 31.6
		ipP	02 46 37.3
	MIN	ePc	02 46 28.7
		ePcP	02 46 34.8
		epP	02 46 40.7
	ORV	ePc	02 46 30.5
		ePcP	02 46 36.4
		epP	02 46 42.4
	CMB	iPc	02 46 37.5
		ePcP	02 46 43.3
		epP	02 46 49.3
	PRS	ePc	02 46 37.9
		ePcP	02 46 43.5
	FRI	iPc	02 46 41.6
		ePcP	02 46 47.7
		epP	02 46 53.2
	MNA	iPc	02 46 45.7
		ePcP	02 46 51.5
		epP	02 46 58.0
USGS 02h34m14.6s 17.6N 144.9E			
h=39km mb=4.9 Ms=4.5			
Mariana Islands Region			
Jun 19	WDC	ePc	02 50 29.2
		iPcP	02 50 35.2
		epP	02 50 41.3
	ORV	ePc	02 50 33.9
		ePcP	02 50 41.3
	MIN	ePcP	02 50 38.5
	CMB	iPc	02 50 41.0
		iPcP	02 50 47.3
		epP	02 50 53.3
	PRS	e(P)	02 50 41.9
		ePcP	02 50 46.4
	FRI	iPc	02 50 44.9
		ePcP	02 50 51.3
	MNA	iPc	02 50 49.3
		ePcP	02 50 56.5
USGS 02h38m18.3s 17.7N 144.9E			
h=40km mb=4.9			
Mariana Islands Region			
Jun 19	CMB	epP	04 10 13.2
		iPc	04 10 40.6
	WDC	e(P)c	04 10 28.5
		ePcP	04 10 35.4
		e	04 10 43.4
	MIN	ePc	04 10 32.0
	ORV	ePc	04 10 33.6
	FRI	iPc	04 10 45.6
	MNA	eP	04 10 48.5
		ePcP	04 10 56.6
USGS 03h58m16.0s 17.4N 144.8E			
h=33km mb=4.8			
Mariana Islands Region			
Jun 19	WDC	ePc	07 14 07.5
		ePcP	07 14 14.8
	MIN	ePc	07 14 10.9
	ORV	ePc	07 14 12.6
		ePcP	07 14 19.7
	CMB	ePc	07 14 19.5
		ePcP	07 14 26.5
	FRI	iPc	07 14 23.7
		ePcP	07 14 31.0
	MNA	iPc	07 14 27.8
		ePcP	07 14 35.0
USGS 07h01m57.1s 18.0N 145.0E			
h=33km mb=4.9			
Mariana Islands Region			
Jun 19	ZSP	iPc	11 56 37.1
	BRK	ePn	11 56 37.6
		eP*	11 56 38.8
	BKS	ePn	11 56 37.7
	ORV	ePnd	11 56 40.4
		ePg	11 56 45.8
	PCC	ePnd	11 56 42.4
		eP*	11 56 44.0
	GCC	ePn	11 56 49.0
		ePg	11 56 54.9
	CMB	ePnc	11 56 52.5
		eP*	11 56 55.5
		ePg	11 56 58.3
		eSn	11 57 14.8
		eS*	11 57 19.0
		eSg	11 57 23.2
	WDC	e	11 56 54.9
	SAO	eP	11 56 55.3
	FRI	eP	11 57 08.7
		e	11 57 11.4
BRK 11h56m18.4s 38.8N 122.8W			
h=5km ML=2.6(2)			
The Geysers area, 23 km S of Clear Lake, CA			
Jun 19	MNA	ePd	13 05 08.7
		i	13 05 10.7
	FRI	ePc	13 05 11.1
	PRI	e	13 05 11.5
	GCC	i	13 05 20.4
	CMB	eP	13 05 23.4
		e	13 05 27.0
	ORV	ePc	13 05 27.8
		i	13 05 32.9
	MIN	ePc	13 05 35.0
	WDC	e	13 05 38.0
	FHC	e	13 05 50.4
USGS 12h56m51.9s 7.5N 82.2W			
h=10km mb=4.8 Ms=4.7			
South of Panama			
Jun 19	FRI	eP	19 11 41.0
	MNA	ePd	19 11 42.1
	PRI	eP	19 11 42.4
	LLA	eP	19 11 44.8
	PRS	eP	19 11 45.3
	SAO	eP	19 11 46.5
	CMB	ePd	19 11 48.3
		i	19 11 55.2
	MHC	eP	19 11 50.5
	GCC	eP	19 11 50.5
	PCC	eP	19 11 53.2
	BRK	eP	19 11 54.3
	BKS	iPc	19 11 54.5
			AMP(μm) PER(s)
		PZ	0.13 1.0
	ORV	ePd	19 11 57.2
	MIN	eP	19 11 58.8
	WDC	iPd	19 12 02.4
		i	19 12 11.0
	FHC	eP	19 12 10.4
USGS 19h00m05.1s 21.2S 68.4W			
h=86km mb=5.6			
Chile-Bolivia Border Region			
Jun 19	MNA	eP	21 11 34.3
	PRI	eP	21 11 35.1
	LLA	eP	21 11 37.3
	CMB	eP	21 11 40.3
	GCC	eP	21 11 42.8
	MHC	eP	21 11 43.3
	ORV	eP	21 11 50.4
	WDC	iPd	21 11 55.5
USGS 21h00m20.8s 17.9S 69.4W			
h=133km mb=4.9			
Peru-Bolivia Border Region			
Jun 20	BKS	ePc	01 05 11.4
			AMP(μm) PER(s)
		PZ	0.092 0.7
	FHC	ePc	01 05 56.8
	WDC	iPc	01 05 57.8
	MIN	eP	01 05 59.7
	ORV	iPc	01 06 03.3
	BRK	eP	01 06 11.2
	CMB	iPc	01 06 11.8
	MNA	iPc	01 06 12.0
	PCC	ePc	01 06 12.5
	MHC	iPc	01 06 14.4
	GCC	eP	01 06 14.8
	SAO	eP	01 06 16.8
	FRI	ePc	01 06 17.0
	LLA	eP	01 06 18.2
	PRS	eP	01 06 18.9
	PRI	ePc	01 06 21.0
BRK mb=6.1 h=0km Distance=87°			
USGS 00h53m04.8s 49.9N 78.7E			
h=0km mb=6.1 Ms=4.2			
Eastern Kazakh SSR			
Jun 20	WDC	eP	01 57 30.6
	ORV	eP	01 57 35.5
	CMB	eP	01 57 42.5
	LLA	eP	01 57 42.5
	FRI	eP	01 57 46.5
	MNA	eP	01 57 50.6
USGS 01h45m19.1s 18.0N 144.7E			
h=33km mb=4.6			
Mariana Islands Region			
Jun 20	CMB	eP	06 59 33.8
	ORV	eP	06 59 36.0
	MIN	eP	06 59 37.8
	MNA	eP	06 59 43.8
USGS 06h48m04.6s 16.5S 173.3W			
h=50km mb=4.9			
Tonga Islands			
Jun 20	WDC	eP	10 09 02.8
	MIN	eP	10 09 06.2
		e	10 09 14.5
	ORV	eP	10 09 07.8
	CMB	ePc	10 09 14.8
		e	10 09 23.0
	FRI	eP	10 09 19.3
		e	10 09 27.1
	MNA	eP	10 09 23.3
		e	10 09 31.6
	BKS	e	11 05 52
		e	11 06 10
		e	11 06 46
		e	11 09 16
			AMP(μm) PER(s)
		LZ	6.8 20.
		LN	5.2 20.
		LE	9.7 20.
USGS 09h56m51.3s 18.0N 144.9E			
h=26km mb=5.1 Ms=4.4			
Mariana Islands Region			
Jun 20	FRI	eP	11 02 45.8
		e	11 06 14.8
	MNA	eP	11 02 48.5
		e	11 06 14.5
	CMB	eP	11 02 56.2
USGS 11h00m18.9s 29.3N 112.9W			
h=10km mb=4.5			
Gulf of California			
Jun 20	WDC	eP	17 56 11.9
	MIN	eP	17 56 14.5
		ePcP	17 56 19.8
	ORV	eP	17 56 16.1
		ePcP	17 56 21.6
	CMB	eP	17 56 22.2
		ePcP	17 56 28.7
	FRI	eP	17 56 25.0
		ePcP	17 56 32.6
USGS 17h43m58.8s 17.9N 144.8E			
h=33km mb=4.7			
Mariana Islands Region			
Jun 20	PRI	eP	21 58 34.9
	MHC	eP	21 58 35.2
	WDC	eP	21 58 38.2
	ORV	eP	21 58 39.5
	CMB	e	21 58 39.5
	FRI	eP	21 58 39.7
	MIN	eP	21 58 40.2
USGS 21h45m29.1s 21.4S 170.3E			
h=180km mb=5.4			
Loyalty Islands Region			
Jun 20	WDC	eP	23 01 12.8
	ORV	eP	23 01 21.7
	CMB	eP	23 01 28.5
	MNA	e	23 01 36.5
USGS 22h49m04.8s 17.8N 145.0E			
h=33km mb=4.5			
Mariana Islands			
Jun 21	WDC	eP	02 02 24.3
	ORV	eP	02 02 29.1
	CMB	eP	02 02 36.4
	FRI	eP	02 02 41.5
	MNA	eP	02 02 43.0
USGS 01h49m12.6s 22.2N 123.8E			
h=14km mb=4.9 Ms=4.8			
Southeast of Taiwan			
Jun 21	FHC	ePc	05 52 09.8
	WDC	ePc	05 52 18.2
		iPcP	05 55 27.8
	MIN	ePc	05 52 23.9
	ORV	ePc	05 52 28.4
	BKS	iPc	05 52 32
		ePP	05 53 30
		eS	05 57 52
		eLq	05 59 50
		eLr	06 00 50
			AMP(μm) PER(s)
		LZ	40 18.
		LN	19 18.
		LE	36 18.
	BRK	eP	05 52 35.0
		e	05 53 14
		ePP	05 53 41
		e	05 54 22
		ePcP	05 55 26
		eS	05 57 46
		eLr	06 01 00
			AMP(μm) PER(s)
		LZ	41 20.
	PCC	eP	05 52 35.4
	GCC	eP	05 52 41.2
	CMB	ePc	05 52 43.9
		i	05 53 01.5
		iPcP	05 55 28.0
	SAO	eP	05 52 45.6
	PRS	eP	05 52 48.1
	LLA	eP	05 52 49.7
	FRI	eP	05 52 52.1
		i	05 53 11.7
	MNA	eP	05 52 52.6
	PRI	ePc	05 52 54.1
BRK Ms=6.1 Distance=33°			
USGS 05h46m10.0s 54.2N 162.6W			
h=33km mb=6.2 Ms=6.2			
Alaska Peninsula			
Jun 21	FHC	eP	06 01 28.2
	WDC	eP	06 01 34.1
		i	06 01 45.2
	MIN	eP	06 01 40.2
	ORV	eP	06 01 44.9
	BRK	eP	06 01 51.7
	CMB	eP	06 02 00.1
	MNA	eP	06 02 08.6
	FRI	eP	06 02 09.4
USGS 05h55m26.9s 54.3N 162.6W			
h=33km mb=5.5			
Alaska Peninsula			
Jun 21	FRI	iP*c	06 16 44.1
		iS*	06 16 56.9
		iSn	06 18 01.5
	MNA	iPd	06 16 46.2
		iSn	06 17 02.0
	CMB	iPc	06 16 51.6
		iSg	06 17 12.6
	LLA	iPc	06 17 02.0
		iS	06 17 29.0
	PRI	iPd	06 17 04.2
	SAO	iPc	06 17 05.5
	PRS	iPc	06 17 08.4
	GCC	eP	06 17 10.8
	PCC	eP	06 17 14.4
BRK 06h16m27.2s 37.5N 118.8W			
h=2km ML=3.6(3)			
Mammoth Lakes area, CA			
Jun 21	CMB	eP	12 40 33.0
	FRI	eP	12 40 34.0
	MNA	eP	12 40 42.8
USGS 12h28m50.8s 20.9S 174.3W			
h=119km mb=4.4			
Tonga Islands			
Jun 21	FHC	eP	16 30 18.5
		e	16 30 21.3
	WDC	e(P)	16 30 25.4
	MIN	e(P)	16 30 27
	ORV	eP	16 30 28.6
		i	16 30 31.8
	BRK	e	16 30 31.3
	PRS	e(P)	16 30 34.7
	MHC	e c	16 30 34.9
	CMB	ePc	16 30 35.6
		i	16 30 38.6
	PRI	ePc	16 30 38.0
	LLA	e	16 30 38.6
	FRI	ePc	16 30 39.8
	MNA	ePc	16 30 43.8
USGS 16h18m14.3s 18.0N 144.8E			
h=33km mb=5.0 Ms=4.6			
Mariana Islands			
Jun 21	PRS	eP	18 05 10.2
	PRI	eP	18 05 11.3
	GCC	eP	18 05 14.2
	MHC	ePc	18 05 17.7
	FRI	ePc	18 05 18.2
	CMB	ePc	18 05 23.8
	MNA	ePc	18 05 30.8
	ORV	eP	18 05 31.2
	WDC	e(P)	18 05 36.8
USGS 17h54m57.9s 22.0S 138.7W			
h=0km mb=5.1			
Tuamotu Archipelago Region			
Jun 22	PRI	iPc	02 36 51.6
	PRS	ePc	02 37 01.6
	SAO	iPd	02 37 05.4
	FRI	iPc	02 37 05.8
	MHC	ePc	02 37 13.5
	CMB	ePc	02 37 18.3
		iS	02 37 45.2
	PCC	eP	02 37 22.1
	ORV	e	02 37 41.8
BRK 02h36m48.0s 36.2N 120.5W			
h=2km ML=3.2(1)			
12 km NW of Coalinga, CA			
Jun 22	PRS	ePd	05 28 29.7
		epP	05 29 39.0
	PRI	ePd	05 28 31.9
		epP	05 29 41.2
	LLA	eP	05 28 32.0
	MHC	ePd	05 28 32.4
		epP	05 29 42.2
	FRI	ePd	05 28 36.8
		epP	05 29 46.2
	CMB	ePd	05 28 37.8
		epP	05 29 47.6
		e	05 30 21.0
		e	05 30 47.1
	ORV	eP	05 28 39.5
		epP	05 29 48.8
	WDC	eP	05 28 40.1
		ipP	05 29 50.0
	MIN	eP	05 28 41.3
		e	05 29 51.4
	MNA	eP	05 28 45.6
		epP	05 29 55.8
		e	05 30 18.2
		e	05 30 45.0
USGS 05h16m33.8s 27.6S 178.5W			

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DATE	STA	PHASE	TIME (UTC)
	h=291km mb=5.3		
Kermadec Islands Region			
Jun 22	MNA	ePd	19 31 50.8
		i	19 32 07.1
	FRI	ePd	19 31 51.5
	PRI	ePd	19 31 54.2
	LLA	ePd	19 31 56.6
	PRS	e(P)	19 31 57.8
	CMB	iPd	19 32 00.0
	GCC	ePd	19 32 04.2
	MHC	iPd	19 32 04.7
	PCC	e(P)	19 32 07.2
	BKS	iPc	19 32 09.3
		i	19 32 13.0
		iS	19 39 09
		iLq	19 45 20
		iLr	19 49 04
		AMP(μm)	PER(s)
		PZ 0.29	1.5
		LZ 1.8	20.
		LN 0.89	20.
		LE 1.6	20.
	BRK	eP	19 32 09.8
	ORV	iPd	19 32 12.2
	MIN	ePd	19 32 15.4
		e	19 32 31.8
	WDC	eP	19 32 18.5
BRK Ms=5.1 Distance=49°			
USGS 19h23m34.8s 7.4N 82.2W			
h=19km mb=5.3 Ms=5.0			
South of Panama			
Jun 24	LLA	iPc	03 42 59.2
	MHC	ePc	03 42 59.6
	BRK	ePc	03 43 00.5
		AMP(μm)	PER(s)
		LZ 28	20.
	BKS	ePc	03 43 00.6
		ePP	03 46 14
		eS	03 53 32
		ePS	03 54 26
		eSS	03 59 28
		eLq	04 05 24
		eLr	04 08 52
		AMP(μm)	PER(s)
		PZ 0.048	1.0
		LZ 50	20.
		LN 34	20.
		LE 37	20.
	PRI	iPc	03 43 01.3
	FRI	iPc	03 43 06.1
	WDC	iPc	03 43 06.3
		e	03 43 44
		e	03 44 08
	CMB	iPc	03 43 06.6
		e	03 43 46
		e	03 44 34
		eSKS	03 53 49
		Lq	04 06 10
		Lr	04 10 30
	ORV	iPc	03 43 06.7
	MIN	iPc	03 43 08.2
	MNA	iPc	03 43 15.1
		e	03 43 56
		e	03 44 44
BRK Ms=6.7 Distance=85°			
USGS 03h30m30.7s 21.2S 173.6E			
h=33km mb=5.7 Ms=6.4			
Vanuatu Islands Region			
Jun 24	WDC	iPc	10 54 57.8
	CMB	iPc	10 54 58.2
	MNA	iPc	10 55 07.5
USGS 10h42m25.2s 21.2S 173.6E			
h=33km mb=5.1 Ms=5.6			
Vanuatu Islands Region			
Jun 24	MNA	eP	20 02 58.1
	FRI	eP	20 03 00.4
	PRI	eP	20 03 03.8
	LLA	eP	20 03 06.0
	PRS	eP	20 03 08.5
	CMB	eP	20 03 08.5
	SAO	eP	20 03 11.5
	MHC	eP	20 03 13.0
	GCC	eP	20 03 14.5
	PCC	eP	20 03 18.1
	BRK	eP	20 03 19.0
	BKS	iPd	20 03 19.3
		AMP(μm)	PER(s)
		PZ 0.053	0.6
	ORV	eP	20 03 19.7
	MIN	eP	20 03 22.0
	WDC	eP	20 03 25.3
	FHC	eP	20 03 36.6
USGS 19h54m10.5s 6.9N 76.4W			
h=22km mb=5.4 Ms=4.4			
Northern Colombia			
Jun 24	MNA	eP	20 13 54.4
	FRI	eP	20 13 55.9
	CMB	eP	20 14 04.1
	ORV	eP	20 14 15.6
USGS 20h05m08.6s 6.9N 76.3W			
h=41km mb=4.7			
Northern Colombia			
Jun 24	PRS	eP	20 19 03.0
	SAO	eP	20 19 04.1
	MHC	eP	20 19 04.5
	WDC	ePc	20 19 08.2
	ORV	eP	20 19 09.1
	FRI	eP	20 19 09.6
	CMB	ePc	20 19 09.7
	MNA	eP	20 19 18.4
USGS 10h16m32.6s 21.1S 173.3E			
h=33km mb=4.7 Ms=5.4			
Vanuatu Islands			
Jun 25	MNA	iPd	03 00 13.5
	MIN	iPd	03 00 16.4
	WDC	iPd	03 00 17.2
	ORV	e(P)	03 00 20.8
	CMB	iPd	03 00 22.2
		eS	03 09 08
	FHC	ePd	03 00 24.0
	FRI	iPd	03 00 24.2
	BRK	eP	03 00 30
		e	03 09 40
		eG	03 16 40
		eLR	03 21 30
	MHC	iPd	03 00 30.8
	LLA	iPd	03 00 31.3
	BKS	ePd	03 00 32.0
		ePcP	03 01 11.2
		ePKP	03 08 26
		eS	03 09 18
		eScS	03 10 24
		e	03 13 44
		eLq	03 17 08
		eLr	03 22 32
		AMP(μm)	PER(s)
		PZ 0.082	1.1
		LZ 3.6	20.
		LN 5.7	20.
		LE 3.6	20.
	SAO	ePd	03 00 32.1
	PRI	iPd	03 00 32.3
	PCC	ePd	03 00 33
	PRS	ePd	03 00 33.5
BRK Ms=5.9 Distance=66°			
USGS 02h49m39.7s 47.3N 27.5W			
h=10km mb=5.5 Ms=5.4			
North Atlantic Ridge			
Jun 25	WDC	eP	03 37 59.1
	MIN	e	03 38 03.5
	ORV	eP	03 38 06.0
	CMB	e	03 38 17.0
	PRS	eP	03 38 19.5
	LLA	eP	03 38 20.1
	FRI	eP	03 38 23.1
	MNA	ePd	03 38 24.3
USGS 03h27m07.5s 41.5N 143.6E			
h=37km mb=5.4 Ms=4.7			
Hokkaido, Japan, Region			
Jun 25	CMB	eP	18 26 15.9
	WDC	ePc	18 26 18.4
	MNA	e(P)	18 26 24.1
USGS 18h13m57.3s 28.4S 176.9W			
h=143km mb=4.7			
Kermadec Islands Region			
Jun 26	FHC	eP	07 23 05.0
		ipP	07 23 10.2
		ePcP	07 23 19.0
	WDC	iPc	07 23 15.7
		ipP	07 23 21.0
		isP	07 23 24.8
		ePcP	07 23 28.3
		i	07 24 45.6
	MIN	iPc	07 23 19.7
	ORV	ePc	07 23 22.6
		isP	07 23 31.4
		iPcP	07 23 52.2
	BKS	iPc	07 23 25.3
		AMP(μm)	PER(s)
		PZ 0.053	0.8
	BRK	ePc	07 23 25.6
		epP	07 23 31.1
	GCC	ePc	07 23 29.3
	MHC	ePc	07 23 29.4
	SAO	e(P)	07 23 31.8
	CMB	iPc	07 23 32.4
		ipP	07 23 38.2
		iPcP	07 23 43.8
		i	07 25 02.2
	PRS	ePc	07 23 34.3
		epP	07 23 39.9
		ePcP	07 23 44.7
		e	07 25 04.1
	LLA	iPc	07 23 35.1
		ePcP	07 23 46.4
	PRI	ePc	07 23 38.3
		epP	07 23 43.7
	FRI	ePc	07 23 38.3
		ipP	07 23 43.8
		e	07 25 08.3
	MNA	ePc	07 23 39.8
		epP	07 23 45.0
USGS 07h11m59.7s 37.1N 142.1E			
h=20km mb=5.4 Ms=5.2			
Off East Coast of Honshu, Japan			
Jun 26	GCC	eP	08 39 56.1
	PRS	ePc	08 39 57.8
	MHC	ePc	08 39 58.0
	BRK	eP	08 39 58.4
	WDC	eP	08 39 59.0
		e	08 40 04.7
	LLA	e(P)	08 40 00.0
	BKS	ePc	08 40 00.0
		AMP(μm)	PER(s)
		PZ 0.028	0.7
	PRI	eP	08 40 02.8
	CMB	ePc	08 40 03.1
		e	08 40 07.8
	MIN	eP	08 40 03.8
	FRI	eP	08 40 04.3
	MNA	iPc	08 40 12.2
		e	08 40 16.5
USGS 08h27m22.6s 10.5S 161.1E			
h=81km mb=5.4			
Solomon Islands			
Jun 26	MHC	iPd	13 23 11.7
		iS	13 23 15.2
	GCC	eP	13 23 15.0
		i	13 23 21.3
		i	13 23 24.2
	SAO	iPd	13 23 16.2
	LLA	iPd	13 23 21.7
		iS	13 23 33.5
	PRS	ePc	13 23 23.7
	BRK	iPd	13 23 25.2
		eS	13 23 38.0
	CMB	ePd	13 23 30.9
		iS	13 23 48.7
	PRI	ePd	13 23 31.4
	FRI	ePc	13 23 33.5
		iS	13 23 53.7
BRK 13h23m07.7s 37.2N 121.6W			
h=3km ML=2.6(2)			
Anderson Lake, 16 km N of Gilroy, CA			
Jun 26	SAO	e(P)	23 18 32.2
	PRS	eP	23 18 33.1
	BRK	eP	23 18 33.5
	MHC	eP	23 18 34.8
	BKS	eP	23 18 35
		ePP	23 22 20
		eSKS	23 29 12
		ePS	23 30 20
		eLq	23 41 30
		eLr	23 46 00
		AMP(μm)	PER(s)
		LZ 4.6	20.
		LN 3.6	20.
		LE 3.2	20.
	PRI	eP	23 18 35.8
	WDC	eP	23 18 39.0
	FRI	eP	23 18 39.8
	ORV	eP	23 18 39.8
	CMB	eP	23 18 39.8
	MIN	eP	23 18 40.1
	MNA	eP	23 18 48.5
BRK Ms=5.9 Distance=88°			
USGS 23h05m48.3s 21.3S 169.2E			
h=23km mb=5.1 Ms=5.8			
Loyalty Islands Region			
Jun 27	WDC	iPd	00 30 44.6
	BKS	eP	00 30 46.0
		iS	00 42 14
		iLq	00 57 12
		iLr	01 01 44
		AMP(μm)	PER(s)
		PZ 0.063	1.2
		LZ 15	20.
		LN 3.0	20.
		LE 15	20.
	BRK	eP	00 30 46.9
	MHC	eP	00 30 48.0
	ORV	eP	00 30 49.1
	PRS	eP	00 30 50.4
	LLA	eP	00 30 52.2
	CMB	ePd	00 30 52.3
	FRI	eP	00 30 52.8
	PRI	e	00 30 53.4
	MNA	eP	00 31 00.6
BRK Ms=6.5 Distance=99°			
USGS 00h17m04.6s 2.2S 138.2E			
h=20km mb=5.7 Ms=6.5			
West Irian			
Jun 27	FHC	eP	06 02 32.8
	WDC	eP	06 02 43.9
	MIN	eP	06 02 45.2
		e	06 02 58.5
	ORV	eP	06 03 04.7
		i	06 03 07.8
	BRK	eP	06 03 15.9
	ZSP	eP	06 03 15.9
	BKS	eP	06 03 16.4
		iS	06 04 32.0
		iLr	06 04 45.0
	PCC	eP	06 03 19.0
	GCC	eP	06 03 25.8
	MHC	eP	06 03 26.2
	CMB	iPd	06 03 29.8
	SAO	eP	06 03 34.5
	PRS	eP	06 03 38.0
	LLA	eP	06 03 39.0
		i	06 03 44.9
	MNA	eP	06 03 42.8
	FRI	eP	06 03 44.9
	PRI	eP	06 03 48.7
BRK ML=4.8(6)			
USGS 06h01m36.7s 43.5N 127.1W			
h=10km mb=4.6			
Off Coast of Oregon			
Jun 27	WDC	eP	07 52 05.2
	ORV	eP	07 52 11.7
	MIN	eP	07 52 15.7
	MHC	eP	07 52 18.0
	CMB	eP	07 52 18.6
	FRI	eP	07 52 23.4
	PRI	eP	07 52 25.3
USGS 07h38m56.8s 24.3N 121.6E			
h=27km mb=5.2 Ms=4.9			
Taiwan			
Jun 27	FHC	eP	09 14 06.6
	WDC	ePc	09 14 11.7
	MIN	eP	09 14 15.0
	ORV	ePc	09 14 17.7
	BRK	eP	09 14 19.8
	PCC	eP	09 14 19.9
	BKS	eP	09 14 20.0
		e	09 33 24
		AMP(μm)	PER(s)
		PZ 0.056	0.8
	MHC	eP	09 14 23.7
	SAO	eP	09 14 25.6
	CMB	ePc	09 14 26.2
	PRS	eP	09 14 27.2
	PRI	eP	09 14 30.7
	FRI	eP	09 14 31.1
	MNA	eP	09 14 33.4
USGS 09h03m02.9s 30.0N 138.8E			
h=435km mb=4.9			
South of Honshu, Japan			
Jun 27	FRI	eP	09 19 43.1
	PRI	ePd	09 19 44.9
	MNA	ePd	09 19 45.3
	LLA	eP	09 19 47.6
	PRS	eP	09 19 48.2
	SAO	eP	09 19 49.8
	CMB	iPd	09 19 51.4
	GCC	eP	09 19 53.5
	MHC	eP	09 19 53.9
		i	09 20 10.9
	BRK	eP	09 19 57.7
	BKS	eP	09 19 58
		eLr	09 42 48
		AMP(μm)	PER(s)
		PZ 0.078	0.8
		LZ 1.1	20.
		LN 1.1	20.
		LE 1.1	20.
	ORV	iPd	09 20 02.5
	MIN	eP	09 20 04.7
	WDC	iPd	09 20 08.0
	FHC	eP	09 20 16.1
BRK Ms=5.2 Distance=66°			
USGS 09h09m05.9s 14.1S 76.0W			
h=61km mb=5.9			
Near Coast of Peru			
Jun 27	PRI	eP	14 45 28.8
	BKS	eP	14 45 29.0
		eLq	15 05 28.0
	MHC	iPc	14 45 29.7
		i	14 45 40.1
	CMB	iPc	14 45 36.0
		i	14 45 47.6
	WDC	iPc	14 45 38.4
		i	14 45 48.9
	MNA	iPc	14 45 45.5
		i	14 45 55.6
USGS 14h33m40.4s 21.3S 174.3W			
h=36km mb=5.3 Ms=5.3			
Tonga Islands			
Jun 27	MHC	eP	22 18 4.8
		e	22 18 15.8
	BKS	eP	22 18 03
		e	22 18 19
		ePP	22 21 09
		eLq	22 42 06
		eLr	22 45 18
		AMP(μm)	PER(s)
		LZ 1.8	20.
		LN 1.3	20.
		LE 1.3	20.
	PRS	eP	22 18 03.5
	PCC	eP	22 18 03.9
	BRK	eP	22 18 04.0
	PRI	eP	22 18 05.8
		e	22 18 16.7
	WDC	ePc	22 18 08.9
		e	22 18 [illegible]
	ORV	eP	22 18 [illegible].0
	CMB	eP	22 18 10.2
	FRI	eP	22 18 10.2
		e	22 18 21.1
	MNA	eP	22 18 18.7
		e	22 18 29.6

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DATE	STA	PHASE	TIME (UTC)
BRK Ms=5.5 Distance=88°			
USGS 22h05m20.0s 21.1S 169.2E			
h=31km mb=5.2 Ms=5.3			
Loyalty Islands Region			
Jun 27	WDC	eP	23 34 33.6
	ORV	eP	23 34 40.8
	CMB	eP	23 34 51.2
	MNA	eP	23 34 58.7
USGS 23h23m39.6s 41.3N 142.5E			
h=59km mb=5.0			
Hokkaido, Japan, Region			
Jun 28	WDC	eP	22 50 58.6
	CMB	eP	22 51 09.9
USGS 22h38m03.1s 24.7N 122.5E			
h=122km mb=4.8			
Taiwan Region			
Jun 29	PRI	eP	04 23 35.6
	CMB	iPd	04 23 42.5
	WDC	ePd	04 23 45.1
	MNA	eP	04 23 51.6
	BKS	e	04 23 54
		eLr	04 28 07
USGS 04h11m27.2s 25.5S 175.1W			
h=33km mb=5.1			
South of Tonga Islands			
Jun 30	FHC	ePc	09 28 23.9
	WDC	ePc	09 28 29.5
		e	09 28 43.3
	MIN	ePc	09 28 33.2
	BKS	eP	09 28 34
	ORV	ePc	09 28 36.2
		e	09 29 00.3
	BRK	eP	09 28 38.9
	SAO	e(P)	09 28 45.0
	CMB	ePc	09 28 45.9
		e	09 29 01.0
	PRS	eP	09 28 47.7
	LLA	ePc	09 28 48.3
	FRI	ePc	09 28 51.4
	PRI	e(P)	09 28 51.4
	MNA	iPc	09 28 53.1
		e	09 29 08.2
USGS 09h17m07.9s 36.2N 140.0E			
h=69km mb=5.0			
Honshu, Japan			
Jun 30	FHC	e	12 42 33.8
	WDC	eP	12 42 43.8
		e(S)	12 43 49.0
	MIN	e(P)	12 42 53.2
	ORV	e(P)	12 43 05.2
	CMB	ePc	12 43 30.7
	FRI	ePc	12 43 45.7
BRK ML=4.1(2)			
USGS 12h41m44.1s 43.3N 126.5			
h=10km mb=4.0			
Off Coast of Oregon			
Jun 30	MNA	iPc	16 05 38.2
		i	16 05 47.1
		iS	16 06 11.5
	FRI	iPc	16 05 48.8
		i	16 05 58.2
		iS	16 06 36.2
	CMB	iPc	16 05 57.7
		i	16 06 08.9
	PRI	iPc	16 06 01.5
		i	16 06 12.6
		iS	16 06 50.6
	LLA	iPc	16 06 02.9
		i	16 06 04.3
	PRS	e	16 06 07.7
		i	16 06 18
	SAO	iPc	16 06 08.4
	MHC	ePc	16 06 10.5
		i	16 06 19.7
		i	16 06 23.0
	BKS	eP	16 06 17.6
		e	16 06 29.7
		e	16 06 38.5
	ORV	iPc	16 06 17.7
	GCC	e	16 06 21.5
	PCC	e	16 06 22
	WDC	ePc	16 06 33.8
BRK ML=4.4(4)			
USGS 16h05m00.1s 37.0N 116.0W			
h=0km mb=4.6			
Underground Nuclear Explosion, N.T.S.			
Jun 30	FRI	ePd	21 44 21.9
	BKS	e	21 44 28.3
	MNA	ePd	21 44 29.5
	CMB	ePd	21 44 34.2
USGS 21h39m35.3s 18.6N 107.8W			
h=10km mb=4.3			
Off Coast of Jalisco, Mexico			

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DATE	STA	PHASE	TIME (UTC)
Jul 1	BKS	eP	10 55 46.5
		eLr	11 26 35.0
			AMP(μm) PER(s)
		LZ	1.1 20.
		LN	0.36 20.
		LE	0.71 20.
	CMB	iPc	11 26 46.0
	WDC	iPc	11 26 49.0
BRK Ms=5.3 Distance=96°			
USGS 10h42m17.8s 3.7S 141.8E			
h=41km mb=5.2 Ms=4.8			
Papua New Guinea Region			
Jul 2	BKS	ePd	11 03 29.7
		iS	11 03 32.7
	BRK	iPc	11 03 30.4
		iS	11 04 32.8
	ZSP	iPc	11 03 30.4
	PCC	iPd	11 03 36.3
		iS	11 03 42.6
	MHC	iPc	11 03 39.5
	GCC	ePc	11 03 43.2
		eS	11 03 55.8
	SAO	eP	11 03 48.2
	CMB	iPc	11 03 49.2
		iS	11 04 05.7
	ORV	ePc	11 03 54.2
		i	11 03 58.3
	PRS	ePd	11 03 54.8
	LLA	i	11 03 56.8
	FRI	eP	11 04 00.6
	PRI	ePc	11 04 05.3
	MIN	iPd	11 04 06.3
	WDC	e	11 04 06.8
BRK 11h03m26.5s 37.9N 122.0W			
h=7km ML=3.3(4) Mo=3.1E21(2)			
Walnut Creek area, 18 km NE of Berkeley, CA			
Jul 2	CMB	ePc	11 50 23.4
	MNA	ePc	11 50 37.0
USGS 11h38m56.9s 37.3N 141.8E			
h=64km mb=4.6			
Near East Coast of Honshu, Japan			
Jul 2	WDC	ePd	13 21 09.1
		e	13 21 15.2
		e	13 21 19.5
	FHC	e	13 21 14.4
	ORV	e	13 21 22.3
		e	13 21 29.1
	MIN	e	13 21 25.5
	CMB	ePd	13 21 27.6
		e	13 21 33.6
		e	13 21 38.4
	FRI	e(P)	13 21 36.6
		e	13 21 40.4
		e	13 21 45.7
	BKS	e	13 38 37
		e	13 45 23
USGS 13h10m41.0s 43.4N 148.1E			
h=31km mb=5.3 Ms=5.3			
Kuril Islands Region			
Jul 3	PRI	e(P)	09 56 42.8
		i	09 56 46.4
		i	09 56 52.2
	FRI	iPd	09 56 44.0
		i	09 56 47.3
		i	09 56 53.6
	LLA	e(P)	09 56 47.8
		i	09 56 51.4
		i	09 56 57.4
	PRS	e(P)	09 56 48.3
		e	09 56 51.8
		e	09 56 57.7
		e	09 57 05.9
	MNA	iPd	09 56 51.0
		e	09 56 54.3
		e	09 56 59.9
		i	09 57 06.5
	SAO	ePd	09 56 55.0
	CMB	e(P)	09 56 57.0
	GCC	eP	09 56 58.5
		e	09 57 02.0
		e	09 57 07.8
	MHC	ePd	09 56 59.0
	BRK	e(P)	09 57 05.8
		e	09 57 09.4
		e	09 57 15.0
	BKS	eP	09 57 08.8
		eS	10 00 36
		eLq	10 01 00
		eLr	10 02 00
			AMP(μm) PER(s)
		PZ	0.10 1.0
		LZ	6.4 20.
		LN	3.2 20.
		LE	11 18.
	ORV	eP	09 57 16.6
		i	09 57 20.0
		i	09 57 26.0
		i	09 57 32.5
	MIN	e(P)	09 57 24.0
		i	09 57 27.6
		e	09 57 33.5
	WDC	e(P)	09 57 28.9
		i	09 57 32.4
		i	09 57 38.5
		i	09 57 44.7
	FHC	e(P)	09 57 40.0
		i	09 57 43.5
		i	09 57 49.6
BRK Ms=5.2 Distance= 20°			
USGS 09h52m57.4s 24.1N 108.8W			
h=10km mb=5.1 Ms=4.7			
Gulf of California			
Jul 3	FHC	ePd	10 22 41.6
	WDC	iPd	10 22 46.2
		epP	10 23 26.4
	MIN	iPd	10 22 49.4
		epP	10 23 29.9
		eSP	10 34 48.1
	ORV	iPd	10 22 52.0
		epP	10 23 32.4
	BKS	eP	10 22 53.3
			AMP(μm) PER(s)
		PZ	0.10 0.7
	BRK	ePd	10 22 54.8
	PCC	eP	10 22 55.1
	MHC	eP	10 22 58.2
	SAO	ePd	10 23 00.3
	CMB	iPd	10 23 00.8
		epP	10 23 41.0
		ePP	10 26 52.3
		eSP	10 34 55.5
	LLA	ePd	10 23 01.4
	PRS	ePd	10 23 02.4
	PRI	eP	10 23 05.1
	FRI	ePd	10 23 05.5
		ipP	10 23 45.9
	MNA	iPd	10 23 07.0
		ipP	10 23 47.6
BRK mb=6.1 h=33km Distance= 84°			
USGS 10h10m43.8s 31.2N 130.3E			
h=168km mb=5.8			
Kyushu, Japan			
Jul 3	FRI	ePc	12 59 24.2
		i	12 59 30.5
	PRS	e(P)	12 59 28.3
		e	12 59 34.6
	PRI	e	12 59 28.8
	MNA	ePc	12 59 30.7
		e	12 59 36.8
	CMB	eP	12 59 36.8
	ORV	e	13 00 02.9
	MIN	e	13 00 05.0
USGS 12h55m31.7s 23.8N 108.8W			
h=10km mb=3.9			
Gulf of California			
Jul 3	GCC	e	14 26 46.0
	PRS	e	14 26 47.5
	MHC	e	14 26 48.1
	ORV	e(P)	14 26 59.3
	WDC	ePc	14 26 59.8
	MIN	e(P)	14 27 02.0
	CMB	ePc	14 27 03.5
	FRI	eP	14 27 04.5
	MNA	ePc	14 27 13.2
USGS 14h14m53.7s 10.8S 166.1E			
h=194km mb=4.9			
Santa Cruz Islands			
Jul 3	PRI	e(P)	15 09 18.4
	FRI	eP	15 09 20.5
	PRS	eP	15 09 24.7
	MNA	ePd	15 09 27.7
	CMB	ePd	15 09 34.6
	GCC	e(P)	15 09 35.0
	MHC	e(P)	15 09 35.6
	BKS	ePd	15 09 46
		eS	15 13 12
		eLq	15 13 36
		eLr	15 14 32
			AMP(μm) PER(s)
		PZ	0.056 1.5
		LZ	8.5 20.
	ORV	ePd	15 09 56.4
	MIN	ePd	15 10 04.2
	WDC	ePd	15 10 08.8
	FHC	eP	15 10 19.9
BRK Ms=5.1 Distance= 20°			
USGS 15h05m34.1s 24.0N 108.8W			
h=10km mb=5.0 Ms=5.0			
Gulf of California			
Jul 3	WDC	ePKP	18 23 29.3
		i	18 23 31.9
	FHC	e	18 23 31
	MIN	ePKP	18 23 31.0
	ORV	e(PKP)	18 23 33.2
		i	18 23 36.2
	PCC	e(PKP)	18 23 38.3
		i	18 23 41.3
	CMB	ePKP	18 23 39.2
		e	18 23 42.0
	BKS	ePKP	18 23 39.4
			AMP(μm) PER(s)
		PKPZ	0.055 0.9
	MHC	e(PKP)	18 23 40.0
		i	18 23 43.0
	MNA	e(PKP)	18 23 40.6
		i	18 23 43.6
		i	18 23 51.9
	FRI	ePKPd	18 23 42.4
		i	18 23 45.4
		i	18 23 53.8
	PRS	ePKPd	18 23 42.6
		e	18 23 45.6
	LLA	e(PKP)	18 23 42.8
		e	18 23 45.8
	PRI	PKP	18 23 44.4
		i	18 23 47.5
USGS 18h03m59.7s 6.8S 72.2E			
h=26km mb=5.3 Ms=5.4			
Chagos Archipelago Region			
Jul 4	ARC	eP	01 25 25.2
		iS	01 25 45.2
	FHC	iPc	01 25 40.4
		iS	01 26 00.9
	WDC	iPc	01 25 55.8
		i	01 25 57.2
		i	01 26 24.3
		iS	01 26 29.2
	MIN	ePc	01 26 06.4
		i	01 26 07.4
		iS	01 26 47.1
	ORV	ePc	01 26 12.4
		i	01 26 59.4
	PCC	ePc	01 26 26.4
	MHC	eP	01 26 32.7
	PRS	eP	01 26 33.8
	CMB	eP	01 26 37.1
	SAO	iP	01 26 40.0
BRK 01h25m11.0s 41.8N 125.9W			
h=5kmR ML=4.1(4) Mo=1.2E21(2)			
Off Coast 142 km W of Crescent City, CA			
Jul 4	WDC	e(P)	15 45 13.3
		i	15 45 22.4
	ORV	e	15 45 21.7
		i	15 45 30.5
	MIN	e	15 45 26.5
	CMB	eP	15 45 31.9
		e	15 45 40.9
	MNA	eP	15 45 39.9
		i	15 45 48.9
USGS 15h31m41.5s 43.5N 147.9E			
h=47km mb=4.9 Ms=5.4			
Kuril Islands			
Jul 5	FHC	eP	00 13 13.0
		e	00 13 25.5
	WDC	ePc	00 13 20.2
		e	00 13 33.7
	ORV	e	00 13 30.5
	CMB	eP	00 13 44.8
		e	00 13 57.6
		e	00 14 05.9
	PRS	eP	00 13 49.0
		e	00 14 02.2
	FRI	eP	00 13 51.7
		e	00 14 06.0
	MNA	eP	00 13 53.8
		e	00 14 07.1
	BKS	eLr	00 24 04
			AMP(μm) PER(s)
		LZ	1.1 20.
		LN	0.54 20.
		LE	1.3 20.
BRK Ms=4.9 Distance= 47°			
USGS 00h06m10.9s 51.5N 174.7W			
h=33km mb=5.1 Ms=4.9			
Andreanof Islands, Aleutian Is.			
Jul 5	GCC	e	02 07 44.9
	FRI	eP	02 07 47.6
	CMB	ePd	02 07 48.1
	ORV	e(P)	02 07 49.3
	WDC	ePd	02 07 50.4
	MNA	ePd	02 07 57.1
USGS 01h56m26.4s 22.6S 179.8W			
h=572km mb=4.3			
South of Fiji Islands			
Jul 5	FHC	e(P)	02 54 26.2
	WDC	ePc	02 54 32.0
	ORV	eP	02 54 37.3
	CMB	ePc	02 54 45.5
	FRI	eP	02 54 50.4
	MNA	e	02 54 53.3
USGS 02h42m14.3s 30.1N 131.0E			
h=50km mb=4.8			
Kyushu, Japan			
Jul 5	FHC	eP	09 30 02.1
		e	09 30 06.1
	WDC	eP	09 30 10.4
		i	09 30 14.4
		i	09 30 25.5
		eScP	09 36 12.6
	MIN	eP	09 30 15.9
		i	09 30 19.9
		e	09 30 31.0
		eScP	09 36 14.9
	ORV	e	09 30 24.0
		eScP	09 36 17.0
	BRK	e	09 30 28.1
	CMB	e(P)	09 30 32.9
		e	09 30 47.8
		eScP	09 36 23.7
	PRS	eP	09 30 34.3
	SAO	e	09 30 42.8
	FRI	eP	09 30 43.0
		e	09 30 56.5
		eScP	09 36 27.8
	MNA	ePc	09 30 44.5
		eScP	09 36 28.0
	BKS	eS	09 36 22
		e	09 37 16
		eLq	09 39 16
		eLr	09 40 54
			AMP(μm) PER(s)
		LZ	3.4 20.
		LN	1.1 20.
		LE	2.7 20.
	PRI	eScP	09 36 28.2
BRK Ms=5.1 Distance=40°			
USGS 09h23m00.1s 51.5N 174.7W			
h=33km mb=5.5 Ms=5.2			
Andreanof Islands, Aleutian Is.			
Jul 5	FRI	e(P)	18 24 40.2
	MNA	eP	18 24 43.3
	CMB	eP	18 24 50.9
	ORV	eP	18 25 06.6
	BKS	eLq	18 33 44
			AMP(μm) PER(s)
		LZ	0.71 20.
		LN	0.0 20.
		LE	0.71 20.
USGS 18h18m55.3s 16.7N 98.5W			
h=33km mb=4.6			
Near Coast of Guerrero, Mexico			
Jul 6	FHC	e(P)	00 30 27.0
		epP	00 30 41.2
		eScP	00 36 34.6
		epScP	00 36 53.7
	WDC	ePd	00 30 35.7
		epP	00 30 49.4
		eScP	00 36 37.9
		epScP	00 36 56.6
	ORV	ePd	00 30 45.2
		epP	00 30 58.8
		eScP	00 36 42.4
		epScP	00 37 00.7
	BKS	eP	00 30 54.4
		i	00 31 04.4
		eS	00 36 48
		esS	00 37 36
		eLq	00 39 44
		eLr	00 41 20
			AMP(μm) PER(s)
		PZ	0.074 1.0
		LZ	9.9 20.
		LN	4.6 20.
		LE	9.9 20.
	MHC	eP	00 30 55.9
		epP	00 31 10.0
		eScP	00 36 48.2
		epScP	00 37 07.0
	CMB	ePd	00 30 59.5
		epP	00 31 13.4
		eScP	00 36 49.0
		epScP	00 37 07.9
	PRS	e(P)	00 31 02.9
		epP	00 31 16.4
		eScP	00 36 50.7
		epScP	00 37 09.8
	FRI	ePd	00 31 07.8
		epP	00 31 21.5
		eScP	00 36 53.1
		epScP	00 37 12.0
	MNA	ePd	00 31 09.2
		eScP	00 36 54.0
		epScP	00 37 12.6
	PRI	ePd	00 31 13.6
		epP	00 31 27.6
		eScP	00 36 53.4
		epScP	00 37 12.5
	LLA	epP	00 31 17.3
BRK Ms=5.7 Distance= 39°			
USGS 00h23m25.7s 51.5N 174.7W			
h=33km mb=5.8 Ms=5.5			
Andreanof Islands, Aleutian Is.			
Jul 6	PRI	e(P)	01 16 42.7
	PRS	e(P)	01 16 44.5
	LLA	e(P)	01 16 45.8
	FRI	ePd	01 16 45.9
		i	01 17 00.0
		ePKPPKP	01 45 34.2
	GCC	e(P)	01 16 48.9
	SAO	e	01 16 49
	MHC	eP	01 16 51.4
	CMB	ePd	01 16 54.2
		i	01 17 09.90
		ePKPPKP	01 45 37.3
	MNA	iPd	01 16 55.4
		ePKPPKP	01 45 37.4
	BKS	eP	01 16 56.2
		ePP	01 19 35
		iS	01 [illegible] 48
		iSS	01 29 54
		LQ	01 33 28
		LR	01 37 08

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DATE	STA	PHASE	TIME (UTC)
		AMP(μm)	PER(s)
	PZ	0.53	1.6
	LZ	40	20.
	LN	7.3	20.
	LE	16	20.
	ORV	eP	01 17 04.9
	MIN	ePd	01 17 09.0
	WDC	ePd	01 17 11.5
		ePKPPKP	01 45 27.7
	FHC	eP	01 17 15.5
BRK Ms=6.3 Distance=70°			
USGS 01h06m07.7s 27.0S 108.3W			
h=10km mb=6.2 Ms=6.3			
Easter Island Region			
Jul 6	PCC	e(P)c	03 02 04.9
	GCC	ePc	03 02 05.7
	MHC	iPc	03 02 06.8
	FHC	ePc	03 02 06.9
	PRS	ePc	03 02 07.0
	BKS	eP	03 02 07.4
		e	03 03 00
		ePP	03 05 24
		eS	03 12 36
		eLq	03 23 44
		eLr	03 27 00
		AMP(μm)	PER(s)
	PZ	0.33	1.2
	LZ	3.6	20.
	LN	3.9	20.
	LE	1.1	20.
	SAO	ePc	03 02 07.7
	BRK	ePc	03 02 08.0
	PRI	iPc	03 02 09.5
	LLA	ePc	03 02 09.8
	WDC	iPc	03 02 11.0
	ORV	iPc	03 02 12.2
	MIN	iPc	03 02 13.0
	CMB	iPc	03 02 13.3
		ipP	03 02 26.5
	FRI	ePc	03 02 13.9
		ipP	03 02 27.8
	MNA	iPc	03 02 22.5
		ipP	03 02 34.5
BRK Ms=7.1 Distance= 81°			
USGS 02h49m42.8s 14.1S 167.8E			
h=47km mb=5.9 Ms=6.6			
Vanuatu Islands			
Jul 6	GCC	e(P)	03 17 23.4
		epP	03 17 29.5
	FHC	eP	03 17 24.5
		epP	03 17 30.4
	PRS	eP	03 17 24.8
		epP	03 17 30.8
	SAO	eP	03 17 25.1
		epP	03 17 30.9
	BKS	eP	03 17 25.5
		AMP(μm)	PER(s)
	PZ	0.34	1.2
	MHC	eP	03 17 25.9
		epP	03 17 31.5
	LLA	epP	03 17 26.5
		epP	03 17 32.7
	PRI	ePc	03 17 27.2
		epP	03 17 33.3
	PCC	epP	03 17 28.7
	WDC	e(P)	03 17 29.0
		e(pP)	03 17 34.6
	ORV	eP	03 17 29.7
		epP	03 17 35.5
	MIN	eP	03 17 30.8
		epP	03 17 36.7
	CMB	ePc	03 17 31.3
		epP	03 17 37.0
	FRI	eP	03 17 32.0
		epP	03 17 37.8
	MNA	ePc	03 17 40.7
		epP	03 17 46.2
USGS 03h05m00.3s 14.0S 167.8E			
h=46km mb=5.7			
Vanuatu Islands			
Jul 6	MHC	eP	05 48 41.9
	WDC	eP	05 48 44.7
	ORV	eP	05 48 46.2
	MIN	eP	05 48 47.2
	CMB	eP	05 48 47.3
	FRI	eP	05 48 48.0
	MNA	ePd	05 48 56.8
USGS 05h36m14.8s 13.9S 167.7E			
h=33km mb=5.4			
Vanuatu Islands			
Jul 6	WDC	eP	13 08 48.1
	ORV	eP	13 08 49.1
	FRI	eP	13 08 49.1
	CMB	eP	13 08 50.5
	MNA	e(P)	13 09 00.0
USGS 12h56m17.6s 14.0S 167.8E			
h=33km mb=4.9			
Vanuatu Islands			
Jul 6	WDC	eP	15 49 39.8
	ORV	eP	15 49 40.0
	CMB	ePd	15 49 42.5
	FRI	eP	15 49 42.6
	MNA	ePd	15 49 51.6
USGS 15h37m09.4s 14.0S 167.9E			
h=33km mb=4.4			
Vanuatu Islands			
Jul 6	BKS	eP	16 34 33.1
		AMP(μm)	PER(s)
	PZ	0.041	0.8
	PRS	eP	16 34 40.3
	LLA	eP	16 34 42.4
	PRI	eP	16 34 43.1
	WDC	eP	16 34 44.3
	ORV	eP	16 34 45.7
	CMB	eP	16 34 46.9
	FRI	eP	16 34 47.2
	MNA	eP	16 34 56.1
BRK mb=5.6 h=33km Distance= 86°			
USGS 16h22m18.1s 13.9S 167.7E			
h=62km mb=4.8			
Vanuatu Islands			
Jul 6	PRI	e(P)	18 20 38.2
	WDC	eP	18 20 38.5
	ORV	eP	18 20 40.1
	CMB	eP	18 20 41.0
	FRI	eP	18 20 41.5
	MNA	eP	18 20 50.8
USGS 18h08m08.4s 14.1S 167.8E			
h=33km mb=4.4			
Vanuatu Islands			
Jul 6	GCC	ePc	21 53 19.1
	PCC	ePc	21 53 19.2
	PRS	ePc	21 53 19.7
	SAO	e(P)	21 53 20.4
	PRI	ePc	21 53 21.9
	MHC	ePc	21 53 21.9
	LLA	e(P)	21 53 21.9
	FRI	ePc	21 53 27.0
	CMB	ePc	21 53 27.8
	ORV	ePc	21 53 28.4
	WDC	ePc	21 53 28.8
	MNA	ePc	21 53 37.2
USGS 21h42m26.8s 17.8S 178.6W			
h=572km mb=5.0			
Fiji Islands Region			
Jul 6	WDC	iPc	23 31 07.9
		epP	23 31 42.8
	MIN	eP	23 31 12.7
	ORV	iPc	23 31 16.7
		epP	23 31 51.6
	PCC	eP	23 31 23.4
	GCC	eP	23 31 27.4
	MHC	ePc	23 31 27.6
	CMB	iPc	23 31 29.4
		epP	23 32 04.5
	PRS	ePc	23 31 33.5
	LLA	ePc	23 31 34.1
	MNA	ePc	23 31 36.7
		epP	23 32 12.0
	FRI	eP	23 31 36.7
USGS 23h22m06.2s 53.4N 158.3E			
h=148km mb=5.3			
Near East Coast of Kamchatka			
Jul 7	ORV	e(P)	10 54 21.3
	CMB	e(P)	10 54 21.5
	MNA	e(P)	10 54 26.2
	BKS	eLr	11 24 24
		AMP(μm)	PER(s)
	LZ	0.89	20.
	LN	0.0	20.
	LE	1.1	20.
USGS 10h36m03.7s 4.4N 125.0E			
h=70km mb=5.6			
Talaud Islands			
Jul 7	WDC	ePd	17 18 37.1
	ORV	eP	17 18 44.0
	CMB	ePd	17 18 55.6
	MNA	eP	17 18 59.1
	PRS	eP	17 19 01.8
	FRI	eP	17 19 02.3
	PRI	eP	17 19 05.0
USGS 17h07m30.9s 56.7N 120.9E			
h=33km mb=5.0 Ms=4.6			
Eastern Russia			
Jul 7	GCC	eP	18 24 19.4
	PCC	ePd	18 24 19.5
	PRS	eP	18 24 19.5
	SAO	eP	18 24 20.0
	BRK	eP	18 24 21.2
	PRI	eP	18 24 21.4
	LLA	ePd	18 24 21.4
	MHC	ePd	18 24 21.7
	BKS	eP	18 24 22.5
		AMP(μm)	PER(s)
	PZ	0.24	1.0
	FHC	eP	18 24 25.7
	FRI	ePd	18 24 25.9
	CMB	iPd	18 24 27.0
	ORV	eP	18 24 28.0
	WDC	iPd	18 24 28.0
	MIN	eP	18 24 30.1
	MNA	iPd	18 24 35.0
BRK mb=6.5 h=33km Distance= 95°			
USGS 18h12m53.4s 25.8S 178.2E			
h=648km mb=5.3			
South of Fiji Islands			
Jul 7	MHC	iPd	18 30 27.0
	GCC	iPd	18 30 32.3
	SAO	iPc	18 30 35.5
	PCC	iPc	18 30 36.9
	BKS	iP	18 30 38.0
		eS	18 30 50.3
	BRK	iPc	18 30 40.1
		iS	18 30 52.3
	LLA	iPc	18 30 40.8
	ZSP	iPd	18 30 41.1
		iS	18 30 54.9
	PRS	iPd	18 30 42.6
	CMB	iPc	18 30 47.8
		iS	18 31 04.5
	PRI	iPd	18 30 49.4
		i	18 31 09
	FRI	iPc	18 30 51.5
	ORV	eP	18 31 02.6
	MNA	ePc	18 31 13.8
		i	18 32 03.5
	MIN	iPc	18 31 16.4
	WDC	eP	18 31 17.7
BRK 18h30m25.0s 37.3N 121.7W			
h=5km ML=3.6(6) Mo=1.2E21(2)			
San Felipe Valley, 20 km SE of San Jose, CA			
Jul 7	FHC	iPd	20 40 47.8
		iS	20 40 55.7
	EKR	iP	20 40 49.4
		iS	20 40 57.7
	FOX	iP	20 40 52.4
		iS	20 41 02.1
	WDC	iPc	20 41 02.4
		eS	20 41 23.8
		e	20 41 30.5
	MIN	e	20 41 17.6
	ORV	ePc	20 41 20.7
BRK 20h40m38.0s 41.3N 124.2W			
h=16km ML=4.1(2) Mo=4.3E21(1)			
53 km S of Crescent City, CA			
Jul 8	PRI	iPc	12 00 50.7
	PRS	iPc	12 00 52.4
	LLA	ePc	12 00 53.8
	FRI	iPc	12 00 54.0
	SAO	eP	12 00 55
		eS	12 09 54
		eLr	12 21 00
	MHC	iPc	12 00 59.5
	MNA	ePc	12 01 01.8
	CMB	iPc	12 01 02.2
		ePP	12 03 44
		eS	12 09 56
		eSS	12 14 08
		eSSS	12 17 57
		eLr	12 21 32
		ePKPPKP	12 29 43.5
	BRK	iPd	12 01 04
		AMP(μm)	PER(s)
	LZ	3.0	20.
	BKS	eP	12 01 04.2
		iS	12 09 55
		i	12 10 24
		e	12 11 08
		e	12 13 12
		eSS	12 14 00
		eLq	12 18 20
		eLr	12 21 14
		ePKPPKP	12 29 49.5
		AMP(μm)	PER(s)
	PZ	0.24	1.4
	ORV	ePc	12 01 11.5
	MIN	ePc	12 01 17.0
	WDC	iPc	12 01 19.3
		ePKPPKP	12 29 33.5
BRK mb=6.2 h=33km Distance=69°			
USGS 11h50m14.8s 27.0S 108.2W			
h=10km mb=6.1 Ms=5.9			
Easter Island Region			
Jul 8	PRS	e(P)	20 36 47.5
	WDC	ePd	20 36 53.1
	ORV	eP	20 36 54.3
	CMB	eP	20 36 54.3
	FRI	ePd	20 36 56.1
	MNA	ePd	20 37 04.9
	BKS	eLr	21 02 00
		AMP(μm)	PER(s)
	LZ	0.89	20.
	LN	0.0	20.
	LE	0.89	20.
USGS 20h24m25.5s 14.1S 167.8E			
h=57km mb=5.2			
Vanuatu Islands			
Jul 8	WDC	e	21 57 09.2
	CMB	eP	21 57 24.6
	GCC	e	21 57 31.8
USGS 21h42m47.2s 11.9N 143.6E			
h=33km mb=4.9			
South of Mariana Islands			
Jul 8	WDC	ePc	23 06 01.4
		i	23 06 36.9
	MIN	ePc	23 06 05.9
	ORV	ePc	23 06 08.4
		e	23 06 44.7
	MHC	e(P)	23 06 18.5
	GCC	ePc	23 06 18.9
		e	23 06 53.5
	CMB	ePc	23 06 20.3
		e	23 06 54.5
	PRS	iPc	23 06 24.6
		e	23 06 59.3
	LLA	ePc	23 06 25.4
		e	23 07 00.3
	FRI	eP	23 06 26.9
	MNA	ePc	23 06 27.9
		e	23 07 04.1
USGS 22h56m02.8s 46.4N 149.6E			
h=151km mb=5.4			
Kuril Islands			
Jul 9	MNA	ePc	04 19 10.0
		epP	04 19 34.8
	PRI	e(P)	04 19 10.0
		epP	04 19 35.0
	FRI	eP	04 19 11.4
	LLA	iPc	04 19 12.4
		ipP	04 19 37.4
	PRS	iPc	04 19 12.9
		ipP	04 19 38.1
	CMB	ePc	04 19 15.5
		ipP	04 19 40.4
	MHC	ePc	04 19 17.9
		epP	04 19 43.0
	ORV	iPc	04 19 24.5
		epP	04 19 49.9
	MIN	eP	04 19 28.5
		epP	04 19 53.5
	WDC	iPd	04 19 30.3
USGS 04h07m34.7s 20.5S 68.8W			
h=68km mb=5.3			
Chile-Bolivia Border Region			
Jul 9	FRI	ePKPd	07 46 26.9
	PRI	ePKP	07 46 27.9
	MNA	ePKPd	07 46 28.0
	PRS	e(PKP)	07 46 28.5
	LLA	e(PKP)d	07 46 28.7
	SAO	ePKP	07 46 29.0
	CMB	ePKPd	07 46 29.2
	MHC	ePKPd	07 46 30.0
	BRK	ePKP	07 46 31.5
	BKS	ePKP	07 46 31.8
		AMP(μm)	PER(s)
	PKPZ	0.070	1.0
	LZ	1.6	20.
	LN	1.3	20.
	LE	1.4	20.
	ORV	ePKPd	07 46 32.5
	MIN	ePKPd	07 46 33.0
	WDC	iPKPd	07 46 34.2
USGS 07h27m34.3s 56.4S 25.6W			
h=33km mb=5.6 Ms=5.7			
South Sandwich Islands Region			
Jul 9	FRI	eP	16 45 59.4
		eS	16 46 15.6
	PRI	eP	16 46 09.7
		eS	16 46 34.5
	LLA	eP	16 46 12.2
		eS	16 46 39.1
	MNA	eP	16 46 16.1
	CMB	eP	16 46 17.2
		eS	16 46 48.5
	PRS	eP	16 46 17.3
	SAO	eP	16 46 18.8
	MHC	eP	16 46 23.3
		i	16 46 31.7
		eS	16 47 05.0
	BKS	ePnc	16 46 32.9
		eS*	16 47 22.6
BRK 16h45m36.3s 36.3N 118.4W			
h=4km ML=3.5(4)			
52 km SW of Lone Pine, CA			
Jul 9	CMB	eP	22 31 17.6
		epP	22 31 46.1
	FRI	eP	22 31 18.3
		epP	22 31 47.7
	MNA	eP	22 31 27.2
		epP	22 31 56.3
	BKS	ePc	22 31 40.9
		e	22 31 44.7
		e	22 31 54.1
		eLr	22 56 33
		AMP(μm)	PER(s)
	LZ	0.71	20.
	MHC	e(pP)	22 31 41.8
	WDC	e(pP)	22 31 44.5
	ORV	epP	22 31 45.2
	PRI	e(pP)	22 31 45.5
USGS 22h18m57.3s 12.1S 166.6E			
h=120km mb=5.6			
Santa Cruz Islands			
Jul 10	MNA	ePd	01 38 00.5
	FRI	ePd	01 38 50.3
	CMB	ePd	01 38 52.2
	ORV	eP	01 38 53.7
	WDC	eP	01 38 54.8

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DATE	STA	PHASE	TIME (UTC)
	MIN	eP	01 38 58.6
USGS 01h25m28.1s 26.9S 176.5W			
h=42km mb=4.9			
South of Fiji Islands			
Jul 10	PRS	e(P)	10 56 12.7
	FRI	eP	10 56 20.0
	CMB	eP	10 56 21.0
	WDC	e(P)	10 56 23.0
	MNA	eP	10 56 30.5
USGS 10h45m25.8s 18.3S 178.3W			
h=643km mb=4.9			
Fiji Islands Region			
Jul 10	WDC	ePc	16 48 22.7
	MHC	eP	16 48 30.0
	PRS	ePc	16 48 31.8
	LLA	ePc	16 48 33.0
	CMB	ePd	16 48 33.8
	FRI	ePc	16 48 37.0
	MNA	iPd	16 48 41.7
USGS 16h36m05.1s 14.9N 145.8E			
h=33km mb=4.3			
Mariana Islands			
Jul 10	FHC	eP	18 58 26.4
		epP	18 58 43.5
	WDC	iPc	18 58 33.1
		ipP	18 58 49.7
		isP	18 59 09.1
		iPcP	18 59 59.1
	MIN	iPc	18 58 37.8
	ORV	ePc	18 58 42.1
	BRK	iPc	18 58 48
		iS	19 06 25
		i	19 08 06
		iScS	19 09 42
		eLr	19 13 40
		AMP(μm)	PER(s)
		LZ	10 20.
BKS		ePd	18 58 48.9
		iS	19 06 03.2
		eSS	19 09 40.8
		eLq	19 10 40.0
		eLr	19 13 38.0
		AMP(μm)	PER(s)
		PZ	1.3 2.0
		LZ	15 20.
		LN	10 20.
		LE	17 20.
PCC		iPc	18 58 49.5
GCC		ePc	18 58 53.8
MHC		iPc	18 58 54.3
		ipP	18 59 11.4
		e	19 22 32.1
CMB		ePc	18 58 55.8
		iPc	18 58 57
		ipP	18 59 12
		isP	18 59 35
		iPP	19 00 48
		iPPP	19 01 58
		i	19 03 07
		i	19 04 05.7
		i	19 04 19.8
		i	19 04 45.7
		iS	19 06 16
		iS	19 06 17.1
		i	19 06 31.2
		i	19 10 07
		eLr	19 13 16
		i	19 15 36
SAO		iPc	18 58 57

DATE	STA	PHASE	TIME (UTC)
		ipP	18 59 16
		isP	18 59 39
		i	19 03 00
		iS	19 06 20
		i	19 10 00
		i	19 12 07
		eLr	19 14 34
	PRS	ePc	18 59 00.6
	LLA	iPc	18 59 01.2
	MNA	iPc	18 59 03.3
		ipP	18 59 20.5
		iPP	19 01 20.0
		iPPP	19 02 22.5
		ipPPP	19 02 34.8
		iS	19 06 30.0
		e	19 29 32.8
	FRI	ePc	18 59 03.8
BRK Ms=6.1 Distance=51°			
USGS 18h49m53.9s 55.1N 165.5E			
h=33km mb=6.1 Ms=6.3			
Komandorsky Islands Region			
Jul 11	MNA	ePc	00 31 12.0
		e	00 31 26.3
	FRI	e(P)	00 31 12.8
	PRS	eP	00 31 14.3
		e	00 31 28.8
	GCC	eP	00 31 18.9
	CMB	ePc	00 31 22.0
	ORV	ePc	00 31 26.4
		i	00 31 41.9
	WDC	eP	00 31 31.8
		e	00 31 46.8
USGS 00h19m30.5s 22.2S 69.8W			
h=52km mb=5.1			
Northern Chile			
Jul 11	FHC	ePc	05 22 35.6
		epP	05 22 56.4
	WDC	iPc	05 22 42.2
		epP	05 23 03.0
	MIN	iPc	05 22 46.8
		epP	05 23 07.7
	ORV	iPc	05 22 50.4
		ipP	05 23 11.3
	BRK	ePc	05 22 55.1
		epP	05 23 16.3
	PCC	ePc	05 22 56.0
	GCC	eP	05 23 00.0
	MHC	ePc	05 23 00.6
	CMB	ePc	05 23 02.6
		epP	05 23 23.5
	SAO	ePc	05 23 03.4
	PRS	iPc	05 23 06.1
		epP	05 23 27.3
	LLA	ePc	05 23 06.8
		epP	05 23 27.6
	FRI	iPc	05 23 09.7
		epP	05 23 29.9
	MNA	iPc	05 23 10.3
		epP	05 23 31.2
	PRI	eP	05 23 10.6
		epP	05 23 31.5
USGS 05h13m15.2s 50.2N 156.3E			
h=75km mb=5.4			
Kuril Islands			
Jul 11	WDC	ePd	06 25 01.9
	FHC	eP	06 25 02.2
	MIN	ePd	06 25 03.6
	ORV	eP	06 25 08.5
	MNA	ePd	06 25 14.3

DATE	STA	PHASE	TIME (UTC)
		i	06 25 17.5
		i	06 44 11.9
	CMB	ePd	06 25 18.7
		e	06 44 27
	BKS	eP	06 25 22.3
		eS	06 33 22.8
		e	06 36 56.8
		eLq	06 40 59.0
		eLr	06 44 56.0
		AMP(μm)	PER(s)
		PZ	0.11 1.2
		LZ	3.0 20.
		LN	3.4 20.
		LE	8.7 20.
	MHC	ePd	06 25 25.6
	FRI	iPd	06 25 26.3
	GCC	eP	06 25 27.7
	SAO	eP	06 25 29.2
	LLA	iPd	06 25 30.6
	PRS	ePd	06 25 32.4
	PRI	ePd	06 25 33.9
BRK Ms=5.9 Distance=55°			
USGS 06h15m51.0s 82.2N 17.6W			
h=10km mb=5.5 Ms=5.0			
Near North Coast of Greenland			
Jul 11	WDC	ePc	10 11 30.7
	MIN	ePc	10 11 32.1
	FHC	e(P)	10 11 32.3
	ORV	eP	10 11 39.0
	MNA	iPc	10 11 42.8
	CMB	ePc	10 11 47.3
	BRK	e(P)	10 11 51.1
	MHC	ePc	10 11 54.5
	FRI	ePc	10 11 54.7
	SAO	eP	10 11 58.0
	LLA	eP	10 11 59.0
	PRS	ePc	10 12 01.1
	PRI	eP	10 12 02.2
USGS 10h02m19.7s 82.2N 17.8W			
h=10km mb=4.9 Ms=4.3			
Near North Coast of Greenland			
Jul 11	BKS	e	13 42 3.6
		e	13 52 29.2
		eLq	14 01 55.0
		eLr	14 05 41.0
		AMP(μm)	PER(s)
		LZ	0.96 20.
		LN	1.5 20.
		LE	1.3 20.
	FHC	ePd	13 42 50.9
	WDC	eP	13 42 56.0
	MIN	eP	13 43 00.8
	ORV	ePd	13 43 02.8
	BRK	e(P)	13 43 07.6
	CMB	ePd	13 43 12.7
	PRS	e(P)	13 43 14.4
	FRI	eP	13 43 19.3
	MNA	ePd	13 43 19.9
USGS 13h31m44.5s 37.0N 142.7E			
h=38km mb=5.3 Ms=5.5			
Off East Coast of Honshu, Japan			
Jul 11	FHC	eP	15 01 00.9
	WDC	epP	15 01 06
		iPc	15 01 07.6
		isP	15 01 45.6
		ipPcP	15 02 44.5
	MIN	iPc	15 01 12.5
		ePcP	15 02 35.3
	ORV	ePc	15 01 16.6

DATE	STA	PHASE	TIME (UTC)
		ePcP	15 02 39.5
	BRK	eP	15 01 22.4
	PCC	ePc	15 01 24.0
	GCC	ePc	15 01 28.3
	MHC	ePc	15 01 28.5
	CMB	iPc	15 01 30.2
		iPcP	15 02 44.5
		epPcP	15 02 55.3
		esPcP	15 03 03.4
	SAO	eP	15 01 32.0
	PRS	ePc	15 01 35.1
		ePcP	15 02 46.9
	LLA	ePc	15 01 35.4
	MNA	iPc	15 01 37.9
		ePcP	15 02 49.9
		esPcP	15 03 06.6
	FRI	iPc	15 01 38.3
		ePcP	15 02 48.6
		epPcP	15 03 00.3
	PRI	ePc	15 01 39.2
		ePcP	15 02 48.9
USGS 14h52m27.6s 55.1N 165.5E			
h=33km mb=5.3			
Komandorsky Islands Region			
Jul 12	WDC	e	03 42 55.6
	CMB	ePc	03 43 01.9
	MNA	ePc	03 43 12.2
USGS 03h31m26.7s 15.4S 174.7W			
h=33km mb=4.6			
Tonga Islands			
Jul 12	WDC	eP	04 42 51.4
	MIN	eP	04 42 56.0
	ORV	eP	04 42 58.8
	BRK	ePc	04 43 04.1
	CMB	ePc	04 43 08.4
	MNA	eP	04 43 09.5
	PRS	eP	04 43 10.1
	FRI	ePc	04 43 15.2
USGS 04h31m30.2s 36.1N 140.0E			
h=66km mb=4.8			
Honshu, Japan			
Jul 12	WDC	eP	09 16 54.2
	CMB	eP	09 17 04.7
	MNA	ePc	09 17 07.3
USGS 09h06m44.3s 23.8S 115.6W			
h=10km mb=4.9			
Easter Island Cordillera			
Jul 13	PRS	eP	01 58 01.1
	MHC	e(P)	01 58 03.8
	FRI	eP	01 58 08.1
	CMB	eP	01 58 09.5
	ORV	e(P)	01 58 11.0
	WDC	eP	01 58 11.8
	MNA	eP	01 58 17.6
USGS 01h45m54.1s 26.0S 177.3W			
h=107km mb=5.3			
South of Fiji Islands			
Jul 13	FRI	ePc	19 25 44.2
	MNA	iPc	19 25 45.5
	PRI	iPc	19 25 46.1
	LLA	iPc	19 25 48.9
	PRS	iPc	19 25 49.8
	CMB	iPc	19 25 51.8
	GCC	ePc	19 25 54.6
	MHC	iPc	19 25 54.8
		iS	19 34 54.38
	PCC	ePc	19 25 57.5

DATE	STA	PHASE	TIME (UTC)
	BKS	eP	19 25 58.4
		iS	19 35 04.4
		AMP(μm)	PER(s)
		PZ	0.10 0.8
	BRK	iPc	19 25 58.6
	ORV	iPc	19 26 02.0
	MIN	ePc	19 26 03.8
	WDC	iPc	19 26 07.3
	FHC	iPc	19 26 15.5
BRK mb=6.0 h=33km Distance=71°			
USGS 19h14m57.9s 15.3S 70.1W			
h=241km mb=5.1			
Southern Peru			
Jul 13	CMB	ePc	21 06 09.5
	FRI	eP	21 06 24.7
	MNA	eP	21 06 24.9
USGS 21h03m52.8s 44.4N 129.2W			
h=10km mb=4.2			
Off Coast of Oregon			
Jul 14	GCC	ePc	12 18 43.5
	BKS	eP	12 18 44.6
	PCC	eP	12 18 44.9
		eS	12 18 58.1
	BRK	eP	12 18 45.0
		eS	12 18 58.1
	SAO	iPd	12 18 45.1
	ZSP	eP	12 18 45.9
		e(S)	12 19 00.0
	CMB	iPd	12 18 46.8
	LLA	eP	12 18 47.7
	PRS	eP	12 18 51.5
		e(S)	12 19 07.2
	FRI	eP	12 18 54.3
		iS	12 19 12.8
	PRI	e(P)	12 18 58.2
	ORV	eP	12 19 03.4
	MNA	eP	12 19 18.9
BRK 12h18m29.7s 37.6N 121.3W			
h=4km ML=2.9(3) Mo=5.0E20(1)			
31 km SW of Modesto, CA			
Jul 14	FHC	iPc	23 55 13.6
	WDC	iPc	23 55 19.2
		iPcP	23 55 56.6
		ipP	23 57 14.0
		isP	23 59 01.6
		e	00 02 52.5
	MIN	iPc	23 55 23.4
	ORV	iPc	23 55 26.8
		iPcP	23 56 01.5
		ipP	23 57 23.4
		isP	23 59 06.7
		e	00 03 06
	BRK	iPc	23 55 31.8
	BKS	eP	23 55 31.8
		epP	23 57 24.8
		esP	23 58 26.0
		AMP(μm)	PER(s)
		PZ	0.51 0.8
		eS	00 03 10.0
		e	00 04 25.6
		esS	00 06 41.6
	PCC	iPc	23 55 32.5
	GCC	iPc	23 55 36.2
	MHC	iPc	23 55 36.5
	CMB	iPc	23 55 38.2
		epP	23 57 34.5
		esP	23 59 14.7
		e	00 03 28.4
	SAO	iPc	23 55 39.2

DATE	STA	PHASE	TIME (UTC)
	PRS	iPc	23 55 41.8
	LLA	iPc	23 55 42.4
	FRI	iPc	23 55 44.8
	MNA	iPc	23 55 45.0
		ipP	23 57 39.6
	PRI	iPc	23 55 45.6
BRK mb=6.0 h=560km Distance=63°			
USGS 23h46m03.5s 49.6N 147.8E			
h=576km mb=5.7			
Sea of Okhotsk			
Jul 15	PRS	ePd	00 56 42.6
	GCC	eP	00 56 42.8
	PCC	ePd	00 56 43.1
	PRI	eP	00 56 44.6
	MHC	ePd	00 56 45.5
	FRI	ePd	00 56 50.4
	CMB	ePd	00 56 51.7
	ORV	ePd	00 56 53.4
	WDC	ePd	00 56 54.0
	MIN	eP	00 56 55.7
	MNA	ePd	00 57 01.5
USGS 00h44m53.2s 21.9S 174.5W			
h=33km mb=5.1			
Tonga Islands			
Jul 15	WDC	ePc	04 25 58.4
	ORV	eP	04 26 04.1
	SAO	eP	04 26 12.1
	CMB	iPc	04 26 12.7
	PRS	eP	04 26 14.0
	LLA	eP	04 26 14.7
	PRI	eP	04 26 15.2
	FRI	ePc	04 26 17.5
	MNA	eP	04 26 18.7
USGS 04h13m37.6s 29.3N 130.6E			
h=51km mb=5.3 Ms=5.8			
Ryukyu Islands			
Jul 15	FRI	ePd	07 21 57.5
		ePcP	07 25 13.4
	MNA	iPc	07 21 59.4
		ePcP	07 25 13.7
		epPcP	07 25 32.6
	PRI	ePd	07 21 59.6
		ePcP	07 25 14.6
	LLA	iPd	07 22 03.1
		ePcP	07 25 15.8
	PRS	eP	07 22 04.1
		ePcP	07 25 15.2
	CMB	iPd	07 22 04.8
		ePcP	07 25 15.9
		epPcP	07 25 34.7
	SAO	e(P)	07 22 06.0
	GCC	eP	07 22 11.3
		ePcP	07 25 17.0
	PCC	iPd	07 22 16.6
	BRK	eP	07 22 17.8
		ePcP	07 25 18.8
		epPcP	07 25 32.2
	BKS	iPd	07 22 17.9
		e	07 23 45.0
		e	07 23 58.0
		e	07 24 18.8
		eS	07 27 16.0
		eLr	07 31 12.0
		eLq	07 31 38.0
		AMP(μm)	PER(s)
		PZ	2.2 2.4
		LZ	20.
		LN	20.
		LE	6.2 20.

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DATE	STA	PHASE	TIME (UTC)
	ORV	iPd	07 22 23.0
		ePcP	07 25 20.7
	MIN	iPd	07 22 27.4
	WDC	iPd	07 22 31.4
		ePcP	07 25 22.6
		epPcP	07 25 41.7
	FHC	ePd	07 22 42.9

BRK mb=6.5 h=76km Distance=30°
USGS 07h16m13.6s 17.5N 97.2W
h=67km mb=5.9
Oaxaca, Mexico

Jul 15	PCC	ePc	18 02 57.5
	PRS	eP	18 02 58.9
	SAO	eP	18 02 59.9
	MHC	ePc	18 03 00.2
	LLA	eP	18 03 00.8
	PRI	e(P)	18 03 03.8
	WDC	eP	18 03 04.3
	ORV	eP	18 03 05.1
	FRI	eP	18 03 05.5
	CMB	ePc	18 03 05.5
	MIN	e(P)	18 03 10.3
	MNA	ePc	18 03 13.9

USGS 17h50m33.1s 19.5S 169.2E
h=140km mb=4.8
Vanuatu Islands

Jul 16	WDC	ePc	01 42 01.2
		e	01 42 11.7
	MIN	ePc	01 42 04.5
	ORV	ePc	01 42 06.9
	MHC	e(P)	01 42 13.3
	CMB	iPc	01 42 15.4
		e	01 42 26.9
	PRS	ePc	01 42 16.8
	PRI	e(P)	01 42 20.2
	FRI	ePc	01 42 20.3
	MNA	e(P)	01 42 21.9

USGS 01h29m39.3s 29.4N 130.5E
h=48km mb=5.0 Ms=4.5
Ryukyu Islands

Jul 16	FHC	iPc	05 57 38.2
	WDC	iPc	05 57 43.2
		iPcP	05 58 02.9
		epP	05 58 51.6
		ePP	06 00 36.1
	MIN	iPc	05 57 46.7
	ORV	iPc	05 57 49.4
		ePP	06 00 45.7
	BRK	iPc	05 57 52.0
	PCC	iPc	05 57 52.2
	BKS	iPc	05 57 52.3
		AMP(μm)	PER(s)
		PZ 0.53	0.8
	GCC	iPc	05 57 55.2
	MHC	iPc	05 57 55.9
	SAO	iPc	05 57 57.9
	CMB	iPc	05 57 58.4
		iPcP	05 58 17.7
		ipP	05 59 08.4
		ipPcP	05 59 27.1
		iPP	06 00 59.9
	PRS	iPc	05 57 59.9
	LLA	iPc	05 58 00.6
	FRI	iPc	05 58 03.5
		iPP	06 01 07.9
	PRI	iPc	05 58 03.5
	MNA	iPc	05 58 05.5
		epP	05 58 15.7
		iPcP	05 59 27.1

		epPcP	05 59 36.3
		ePP	06 01 08.0

BRK mb=6.2 h=300km Distance=79°
USGS 05h46m29.6s 33.1N 138.1E
h=310km mb=5.3
South of Honshu, Japan

Jul 16	MNA	iPc	19 00 37.1
	FRI	iPc	19 00 48.7
	CMB	iPc	19 00 57.4
		i	19 01 08.1
		eS	19 01 50.8
	PRI	ePc	19 01 01.4
	LLA	iPc	19 01 03.1
	PRS	eP	19 01 08.1
	SAO	eP	19 01 08.5
		i	19 01 19.3
	MHC	ePc	19 01 10.4
	GCC	e(P)	19 01 15.5
	ORV	ePc	19 01 16.0
	BKS	eP	19 01 16.3
	ZSP	e(P)	19 01 18.0
	PCC	eP	19 01 18.3
	BRK	eP	19 01 18.8
	MIN	e(P)	19 01 24.0
	WDC	i	19 01 54.7
		e(S)	19 03 15.5

BRK ML=5.0(6)
USGS 19h00m00.0s 37.1N 116.0W
h=0km mb=4.9
Underground Nuclear Explosion,
N.T.S.

Jul 17	FRI	ePKP	01 22 18.6
		epPKP	01 22 46.0
		eSKP	01 25 42.9
	PRI	ePKP	01 22 19.2
		epPKP	01 22 46.3
		eSKP	01 25 55.8
	MNA	ePKPc	01 22 19.7
		epPKP	01 22 46.8
		eSKP	01 25 44.1
	PRS	ePKP	01 22 20.1
		eSKP	01 25 45.8
	CMB	ePKPc	01 22 21.1
		epPKP	01 22 48.1
		eSKP	01 25 45.3
	GCC	e(PKP)	01 22 21.3
	MHC	epPKP	01 22 22.0
		e(SKP)	01 25 46.2
	PCC	ePKPc	01 22 23.0
	BRK	ePKP	01 22 23.1
	ORV	ePKPc	01 22 25.4
		epPKP	01 22 52.8
		eSKP	01 25 49.7
	WDC	ePKPc	01 22 26.0
		epPKP	01 22 52.9
		eSKP	01 25 51.3

USGS 01h03m37.7s 55.9S 27.7W
h=102km mb=5.8
South Sandwich Islands Region

Jul 17	WDC	ePc	01 30 01.3
		e	01 32 09.8
	MIN	eP	01 30 03.0
	ORV	eP	01 30 06.7
	BKS	eP	01 30 14.4
		AMP(μm)	PER(s)
		PZ 0.061	0.7
	BRK	eP	01 30 14.8
	CMB	ePc	01 30 15.3
		e	01 32 19.8

	MNA	eP	01 30 15.6
	MHC	eP	01 30 17.7
	SAO	e(P)	01 30 20.0
	FRI	eP	01 30 20.2
		e	01 32 24.0
	PRS	eP	01 30 22.5
	PRI	eP	01 30 24.6

USGS 01h17m07.0s 49.8N 78.1E
h=0km mb=5.8 Ms=4.6
Eastern Kazakh SSR

Jul 17	FRI	eP	02 06 15.7
	MNA	eP	02 06 16.0
	PRI	eP	02 06 17.7
	LLA	eP	02 06 20.4
	PRS	eP	02 06 21.8
	CMB	eP	02 06 23.2
	MHC	e(P)	02 06 28.5
	ORV	eP	02 06 36.3
	BKS	eP	02 06 41.6
		ePP	02 08 39.6
		iS	02 13 52.8
		e	02 17 28.4
		eLq	02 21 36.0
		eLr	02 22 08.0
		AMP(μm)	PER(s)
		LZ 10	20.
		LN 4.0	20.
		LE 11	20.
	WDC	eP	02 06 45.2

BRK Ms=5.9 Distance=52°
USGS 01h57m38.6s 1.5N 85.3W
h=10km mb=5.4 Ms=5.5
Off Coast of Ecuador

Jul 17	PRI	eP	13 54 00.4
	FRI	eP	13 54 05.6
	CMB	eP	13 54 06.9
	ORV	eP	13 54 08.5
	WDC	ePc	13 54 08.8
	MIN	eP	13 54 10.7
	MNA	eP	13 54 16.0

USGS 13h42m01.9s 22.3S 176.0W
h=33km mb=5.1 Ms=4.4
Tonga Islands Region

Jul 17	GCC	ePc	17 33 22.4
	PCC	iPc	17 33 22.7
	PRS	ePc	17 33 23.1
	SAO	ePc	17 33 23.6
	BRK	ePc	17 33 24.3
	BKS	eP	17 33 24.7
		AMP(μm)	PER(s)
		PZ 0.31	1.3
	MHC	ePc	17 33 24.9
	LLA	ePc	17 33 25.2
	PRI	ePc	17 33 25.3
	FRI	iPc	17 33 30.5
	CMB	iPc	17 33 31.2
		e	17 33 37.8
	ORV	ePc	17 33 31.7
	WDC	iPc	17 33 31.7
		i	17 33 38.7
	MIN	eP	17 33 33.6
	MNA	iPc	17 33 40.6

USGS 17h22m29.7s 17.8S 178.7W
h=560km mb=5.3
Fiji Islands Region

Jul 17	FRI	iPc	19 54 01.0
	PRI	ePc	19 54 01.2
	PRS	ePc	19 54 04.0

	MNA	iPc	19 54 09.4
	SAO	e	19 54 11.8
	CMB	iPc	19 54 13.4
	MHC	ePc	19 54 13.8
	ORV	eP	19 54 31.1
	MIN	iPc	19 54 40.6
	WDC	eP	19 54 42.5

USGS 19h49m22.5s 19.1N 108.4W
h=10km mb=4.5
Revfila Gigedo Islands Region

Jul 17	FRI	e(P)	21 13 02.3
		ePcP	21 13 12.1
	MNA	ePd	21 13 04.4
		ePcP	21 13 13.6
	PRI	iPd	21 13 04.5
	LLA	e(P)	21 13 07.0
		ipP	21 13 28.8
	PRS	eP	21 13 07.5
	CMB	ePd	21 13 10.6
		ePcP	21 13 19.8
	MHC	eP	21 13 11.3
	GCC	e(P)	21 13 12.5
	SAO	e	21 13 15.4
	ORV	iPd	21 13 21.3
		ipP	21 13 41.9
	MIN	eP	21 13 22.3
	WDC	eP	21 13 25.9
		ipP	21 13 46.7
	FHC	eP	21 13 34.9

USGS 21h02m12.8s 15.5S 74.1W
h=79km mb=5.3
Near Coast of Peru

Jul 17	WDC	e	23 19 29.9
	CMB	ePc	23 19 48.6
		e	23 19 56.4
	MNA	eP	23 19 58.5
		e	23 20 06.0

USGS 23h07m41.1s 16.8S 177.3E
h=33km mb=4.7 Ms=4.1
Fiji Islands

Jul 18	WDC	ePc	12 26 37.4
	MIN	ePc	12 26 40.5
	BRK	e(P)	12 26 41.0
	BKS	ePc	12 26 41.5
		AMP(μm)	PER(s)
		PZ 0.033	1.1
	ORV	eP	12 26 42.0
	MHC	ePc	12 26 44.6
	GCC	e(P)	12 26 45.5
	PCC	e	12 26 46.4
	PRS	ePc	12 26 46.8
	CMB	ePc	12 26 48.2
	FRI	iPc	12 26 51.9
	PRI	eP	12 26 52.4
	MNA	iPc	12 26 56.4

USGS 12h14m13.4s 12.7N 143.4E
h=113km mb=5.3
South of Mariana Islands

Jul 18	WDC	ePc	17 13 04.0
	MIN	ePc	17 13 07.8
	ORV	ePc	17 13 11.0
	BRK	e(P)	17 13 18.7
	CMB	ePc	17 13 21.4
	PRS	eP	17 13 23.6
	LLA	ePc	17 13 24.5
	FRI	ePc	17 13 27.4
	MNA	ePc	17 13 28.5

USGS 17h02m06.1s 40.4N 141.3E
h=96km mb=4.7
Near East Coast of Honshu, Japan

Jul 19	CMB	ePd	10 35 04.0
		e	10 35 15.2
	ORV	e	10 35 06.9
	FRI	eP	10 35 09.0
		e	10 35 20.0

USGS 10h22m27.0s 29.3N 130.7E
h=33km mb=4.5
Ryukyu Islands

Jul 19	MNA	e(P)	14 11 34.4
		e	14 12 03.3
	PRI	eP	14 11 34.4
		e	14 12 08.9
	LLA	ePd	14 11 37.0
		i	14 12 03.8
		e	14 12 17.6
	PRS	ePd	14 11 37.7
	CMB	eP	14 11 40.3
		e	14 12 18.6
	GCC	eP	14 11 42.5
	ORV	ePd	14 11 50.2
		e	14 12 17.0
		e	14 12 29.5
	WDC	eP	14 11 55.4

USGS 14h00m23.5s 17.2S 70.3W
h=106km mb=5.2
Near Coast of Peru

Jul 19	MNA	ePc	20 09 47.3
	FRI	e(P)	20 09 48.5
		e	20 09 59.2
	CMB	ePc	20 09 55.4
	ORV	eP	20 10 08.3

USGS 20h01m16.9s 4.8N 82.6W
h=10km mb=4.8
South of Panama

Jul 20	ZSP	iPc	06 02 44.7
		iS	06 02 49.7
	BKS	iPd	06 02 44.8
		iS	06 02 49.7
	BRK	iPd	06 02 45.1
		iS	06 02 50.4
	PCC	iPd	06 02 50.2
		iS	06 02 59.3
	MHC	iPd	06 02 50.5
	GCC	ePd	06 02 54.7
	CMB	ePc	06 02 57.8
	ORV	ePd	06 03 03.3
		iS	06 03 22.5
	LLA	iPc	06 03 03.6
	PRS	ePd	06 03 06.0
	FRI	e(P)	06 03 10.2
	MIN	e(P)	06 03 15.0
	PRI	e	06 03 22.9

BRK 06h02m38.0s 38.0N 121.9W
h=15km ML=2.6(5) Mo=2.4E20(2)
38 km NE of Berkeley, CA

Jul 20	WDC	eP	08 24 19.8
	CMB	eP	08 24 38.6

USGS 08h13m52.7s 43.9N 146.9E
h=69km mb=5.1
Kuril Islands

Jul 20	WDC	eP	22 07 26.2
	BKS	eP	22 07 26.5
		eLr	22 36 32
		AMP(μm)	PER(s)

		PZ	0.043 0.9
		LZ	0.89 20.
		LN	0.0 20.
		LE	0.89 20.
	MIN	e(P)	22 07 27.7
	MHC	eP	22 07 28.0
	PRS	eP	22 07 28.6
	ORV	eP	22 07 29.3
	LLA	eP	22 07 30.4
	PRI	eP	22 07 31.4
	CMB	ePc	22 07 32.5
	FRI	eP	22 07 34.8
	MNA	ePc	22 07 41.5

BRK Ms=5.2 Distance=94°
USGS 21h54m37.7s 6.4S 154.9E
h=54km mb=5.6 Ms=5.0
Solomon Islands

Jul 21	WDC	eP	04 04 44.9
	MIN	eP	04 04 48.3
	BRK	e(P)	04 04 49.0
	BKS	eP	04 04 49.3
		AMP(μm)	PER(s)
		PZ 0.019	0.7
	ORV	eP	04 04 49.9
	MHC	e(P)	04 04 52.3
	PRS	eP	04 04 54.8
	CMB	ePd	04 04 56.6
	PRI	eP	04 04 58.4
	FRI	eP	04 05 00.3
	MNA	ePd	04 05 05.1

USGS 03h52m36.5s 15.8N 147.3E
h=33km mb=5.3 Ms=4.5
Mariana Islands Region

Jul 21	MIN	e(P)	08 05 48.5
	CMB	eP	08 06 05.1

USGS 07h53m19.2s 4.0N 31.6W
h=10km mb=4.9 Ms=4.8
Central Mid-Atlantic Ridge

Jul 21	PRS	e(P)	12 25 38.3
	PRI	eP	12 25 39.8
	MHC	eP	12 25 40.6
	FRI	eP	12 25 45.1
	CMB	eP	12 25 46.1
	ORV	eP	12 25 47.0
	WDC	eP	12 25 47.4
	MIN	e(P)	12 25 49.3
	MNA	eP	12 25 54.5

USGS 12h14m19.5s 23.4S 179.9W
h=563km mb=4.7
South of Fiji Islands

Jul 21	PRI	eP	13 38 58.2
	PRS	eP	13 39 00.9
	MHC	eP	13 39 06.2
	MNA	eP	13 39 06.8
	CMB	eP	13 39 07.5
	BKS	eP	13 39 09.5
		i	13 39 20.5
		eS	13 48 52
		e	13 49 12
		eLq	13 59 48
		eLr	14 03 16
		AMP(μm)	PER(s)
		PZ 0.055	0.9
		LZ 0.5	20.
		LN 0.1	20.
		LE 0.7	20.
	WDC	eP	13 39 22.8

BRK Ms=5.6 Distance=81°

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DATE	STA	PHASE	TIME (UTC)
USGS 13h27m13.0s 36.3S 97.3W			
h=10km mb=5.4 Ms=5.5			
West Chile Rise			
Jul 21	LLA	ePKPd	16 40 27.8
	GCC	e(PKP)	16 40 28.1
	WDC	ePKPd	16 40 33.5
	ORV	ePKPd	16 40 34.2
	CMB	ePKPd	16 40 34.7
	FRI	ePKPd	16 40 34.7
	MNA	ePKPd	16 40 43.3
USGS 16h28m15.5s 19.1S 169.2E			
h=246km mb=4.4			
Vanuatu Islands			
Jul 22	CMB	iPKPd	01 37 05.1
	MNA	ePKPd	01 37 05.4
	FRI	iPKPd	01 37 08.6
	PRI	ePKPd	01 37 10.8
USGS 01h17m21.5s 5.3S 68.6E			
h=10km mb=4.8			
Chagos Archipelago Region			
Jul 22	FHC	ePc	01 48 18.8
	WDC	iPc	01 48 21.5
	ORV	ePc	01 48 23.8
	CMB	iPc	01 48 27.8
	PRI	ePc	01 48 28.8
	FRI	ePc	01 48 29.6
	MNA	iPc	01 48 35.6
	BKS	eLr	02 17 30
		AMP(μm)	PER(s)
		LZ 0.71	20.
		LN 0.0	20.
		LE 0.71	20.
USGS 01h35m21.0s 5.6S 151.8E			
h=39km mb=5.2 Ms=4.5			
New Britain Region			
Jul 22	CMB	ePKPc	02 14 00.6
	MNA	ePKPc	02 14 02.9
	FRI	ePKPc	02 14 03.7
	PRI	ePKPc	02 14 06.2
	BKS	ePKP	02 14 06.4
		e	02 14 17.4
		AMP(μm)	PER(s)
		PKPZ 0.038	1.2
USGS 01h54m18.0s 4.9S 68.2E			
h=10km mb=4.6			
Chagos Archipelago Region			
Jul 22	BKS	e(P)	04 30 10
		e	04 43 10
		eL	04 59 30
		AMP(μm)	PER(s)
		LZ 1.6	20.
		LN 0.36	20.
		LE 1.3	20.
	WDC	ePc	04 30 57.3
	CMB	ePc	04 31 03.7
BRK Ms=5.4 Distance=92°			
USGS 04h17m57.5s 5.6S 151.8E			
h=40km mb=5.1 Ms=5.0			
New Britain Region			
Jul 22	MIN	iPd	08 05 56.5
	WDC	iPc	08 05 59.2
	ORV	iPc	08 06 10.3
		iS	08 06 31.2
	FHC	eP	08 06 16.8
	CMB	eP	08 06 34.8
		eS	08 07 21
	MNA	ePd	08 06 44.3
BRK 08h05m45.9s 40.9N 121.7W			
h=12km ML=3.7(2) Mo=5.3E21(2)			
6 km N of Burney, CA			
Jul 22	PRS	ePd	08 16 33.1
	BKS	eP	08 16 33.8
		e	08 16 52.3
		AMP(μm)	PER(s)
		PZ 0.022	0.8
	LLA	ePd	08 16 35.3
	PRI	ePd	08 16 35.5
		epP	08 16 54.0
	WDC	iPd	08 16 39.0
		epP	08 16 58.0
	ORV	iPd	08 16 39.8
		epP	08 16 58.5
	CMB	iPd	08 16 39.9
		epP	08 16 58.8
	FRI	ePd	08 16 39.9
		epP	08 16 58.6
	MNA	ePd	08 16 48.9
		epP	08 17 06.8
BRK mb=5.5 h=67km Distance=88°			
USGS 08h03m55.2s 21.2S 169.8E			
h=65km mb=5.4			
Loyalty Islands Region			
Jul 22	MNA	iPc	08 29 18.5
		i	08 29 51.5
	LLA	e	08 29 24.7
	CMB	iPc	08 29 27.7
		e	08 29 33.1
		e	08 29 47.7
	PRI	e	08 29 39.7
	BKS	eLr	08 51 10
		AMP(μm)	PER(s)
		LZ 0.71	20.
		LN 0.0	20.
		LE 0.54	20.
USGS 08h23m04.4s 15.8N 93.4W			
h=105km mb=5.1			
Near Coast of Chiapas, Mexico			
Jul 22	ZSP	ePc	22 05 39.9
		iS	22 05 54.6
	BRK	iPd	22 05 41.7
		iS	22 05 55.8
	BKS	iPd	22 05 41.7
		iS	22 05 55.3
	ORV	e(P)	22 05 44.8
		i	22 05 50.7
	PCC	iPd	22 05 48.0
	MHC	ePd	22 05 52.0
	MIN	eP	22 05 55.5
	CMB	ePc	22 05 56.7
	WDC	e	22 05 58.5
	GCC	e	22 05 59.7
	FRI	e	22 06 11.6
	FHC	e	22 06 11.9
	MNA	e	22 06 28.4
BRK 22h05m22.7s 38.8N 122.8W			
h=5km ML=3.1(4)			
The Geysers area, 23 km S of Clear Lake, CA			
Jul 23	PRS	e	12 33 50.8
	PCC	e(P)	12 33 51.0
	MHC	eP	12 33 51.6
	WDC	ePc	12 33 57.0
	CMB	ePc	12 33 57.3
	FRI	e(P)	12 33 57.6
	ORV	e	12 33 57.9
	MNA	ePc	12 34 06.5
	BKS	eLr	12 59 30
		AMP(μm)	PER(s)
		LZ 0.36	20.
		LN 0.0	20.
		LE 0.18	20.
USGS 12h21m26.2s 14.0S 167.8E			
h=33km mb=4.5			
Vanuatu Islands			
Jul 23	WDC	e(P)	19 37 58.7
	CMB	eP	19 38 15.4
USGS 19h28m01.7s 46.4N 153.5E			
h=33km mb=5.3 Ms=4.6			
Kuril Islands			
Jul 24	FHC	e(P)	02 11 02.0
	WDC	eP	02 11 05.2
	MIN	eP	02 11 08.1
	ORV	eP	02 11 12.3
	CMB	eP	02 11 23.7
	MNA	eP	02 11 26.2
	PRS	eP	02 11 31.2
	FRI	eP	02 11 31.6
	PRI	eP	02 11 34.5
USGS 01h59m56.8s 61.5N 112.8E			
h=0km mb=5.1			
Central Siberia			
Jul 24	FHC	e(P)	05 30 31.3
	WDC	iPd	05 30 39.1
	MIN	ePd	05 30 44.5
	ORV	ePd	05 30 49.7
	BRK	ePd	05 30 58.2
		eLq	05 36 00
		eLr	05 37 42
	BKS	eP	05 30 58.4
		e	05 31 13.4
		e	05 32 00
		e	05 34 11.8
		iS	05 35 46
		eLq	05 37 18
		eLr	05 38 00
		AMP(μm)	PER(s)
		PZ 0.075	2.0
		LZ 5.0	20.
		LN 5.4	20.
		LE 4.6	20.
	MHC	eP	05 31 04.5
		eLq	05 36 05
	CMB	ePd	05 31 05.8
	PRS	e(P)	05 31 13.0
	LLA	eP	05 31 13.3
	MNA	ePd	05 31 13.7
	FRI	ePd	05 31 16.0
	PRI	ePd	05 31 18.1
BRK Ms=5.9 Distance=29°			
USGS 05h25m10.6s 56.2N 153.7W			
h=33km mb=5.5 Ms=5.3			
Kodiak Island Region			
Jul 24	MHC	iPc	20 47 31.3
		iS	20 47 35.1
	PCC	ePc	20 47 37.1
	BRK	iPc	20 47 37.6
	BKS	iPc	20 47 37.7
		e	20 47 42.7
		e	20 47 43.4
		eS	20 47 45.7
		e	20 47 57.5
	GCC	ePd	20 47 37.8
	ZSP	iPc	20 47 38.4
		iS	20 47 50.4
	SAO	iP	20 47 42.7
	LLA	ePc	20 47 46.7
	CMB	ePc	20 47 47.2
		iS	20 48 01.3
	PRS	ePd	20 47 49.2
	FRI	ePc	20 47 55.4
		iS	20 48 17.7
	ORV	e	20 48 01.7
BRK 20h47m26.6s 37.6N 121.7W			
h=4km ML=2.5(4) Mo=2.2E20(2)			
Mt. Lewis area, 16 km SE of Livermore, CA			
Jul 24	ZSP	eP	22 32 08.1
		iS	22 32 23.2
	BRK	ePc	22 32 09.8
		eS	22 32 23.6
	BKS	ePd	22 32 09.8
		e	22 32 20.1
		eS	22 32 23.8
		e	22 32 24.5
		e	22 32 33.0
	PCC	ePc	22 32 16.1
	ORV	iP*c	22 32 18.6
	MHC	eP	22 32 20.5
	CMB	ePc	22 32 24.6
	WDC	e	22 32 24.9
	GCC	e(P)	22 32 27.8
BRK 22h31m50.7s 38.8N 122.8W			
h=2kmR ML=2.8(2)			
The Geysers area, 24 km S of Clear Lake, CA			
Jul 25	FHC	eP	01 17 15.5
		epP	01 17 49.4
		ePcP	01 20 33.5
		iScP	01 23 57.2
	WDC	ePd	01 17 22.1
		ipP	01 17 56.3
		ePcP	01 20 34.0
		iScP	01 23 58.7
	MIN	iPd	01 17 27.1
		iScP	01 24 00.4
	ORV	eP	01 17 32.4
		ePcP	01 20 36.3
		iScP	01 24 02.3
	BKS	ePd	01 17 43
		epP	01 18 11
		e	01 18 16
		esP	01 18 17.8
		e(PP)	01 19 06
		eS	01 22 30
		esS	01 23 33.6
		eScP	01 23 47
		eG	01 24 29
		e	01 24 33
		e	01 24 45.6
		e	01 26 38
		e	01 27 40
		AMP(μm)	PER(s)
		PZ 0.039	1.0
	BRK	e(P)	01 17 43.0
		eScP	01 24 05.0
	CMB	iPd	01 17 48.7
		epP	01 18 23.2
		ePcP	01 20 41.9
		iScP	01 24 08.2
	MHC	ePd	01 17 49.1
		epP	01 18 23.9
		eScP	01 24 09.0
	MNA	iPd	01 17 54.9
		epP	01 18 29.4
		ePcP	01 20 44.5
		iScP	01 24 11.4
	LLA	iPd	01 17 57.5
		epP	01 18 32.4
		iScP	01 24 11.9
	PRS	ePd	01 17 57.9
		eScP	01 24 12.1
	FRI	iPd	01 17 59.0
		epP	01 18 59.0
		ePcP	01 20 45.0
		eScP	01 24 12.2
	PRI	iPd	01 18 02.9
		ipP	01 18 37.8
BRK mb=5.1 h=128km Distance=30°			
USGS 01h11m48.9s 60.2N 153.8W			
h=166km mb=5.0			
Southern Alaska			
Jul 25	FHC	iPd	14 51 16.9
		iS	14 51 26.1
	WDC	iPc	14 51 29.8
		i	14 51 36.2
		iS	14 51 55.0
		i	14 51 57.7
	MIN	eP	14 51 39.6
	ORV	ePc	14 51 42.5
		i	14 52 10.2
	PCC	e(P)	14 51 55.8
	MHC	e(P)	14 52 01.5
	CMB	ePc	14 52 05.5
	SAO	iP	14 52 10.9
	FRI	ePd	14 52 21.0
BRK ML=3.6(4) Mo=1.5E21(2)			
Off Coast 66 km SW of Eureka, CA			
Jul 25	FRI	e(P)	16 27 35.4
	LLA	e(P)	16 27 35.5
	MNA	ePc	16 27 35.7
		ePcP	16 27 37.8
		epP	16 27 43.1
		esP	16 27 47.3
		e	16 27 54.8
	PRS	ePc	16 27 35.7
		e	16 27 54.7
	CMB	ePc	16 27 39.3
		ePcP	16 27 41.8
	GCC	eP	16 27 39.9
	MHC	ePc	16 27 40.5
		epP	16 27 48.3
		esP	16 27 52.9
		e	16 28 00.2
	BRK	ePc	16 27 44.1
	ORV	ePc	16 27 48.4
	WDC	iPc	16 27 53.5
		epP	16 28 00.7
	FHC	eP	16 27 59.9
USGS 16h15m19.2s 31.3S 72.7W			
h=24km mb=5.6			
Off Coast of Central Chile			
Jul 25	GCC	e(P)	18 24 32.8
	PRS	ePd	18 24 33.4
	BRK	e(P)	18 24 33.6
	MHC	ePd	18 24 34.6
		e	18 25 00.3
	PRI	e(P)	18 24 35.9
	WDC	ePd	18 24 38.6
		e	18 25 04.0
	ORV	eP	18 24 39.7
	CMB	ePd	18 24 40.2
		e	18 25 05.8
	FRI	ePd	18 24 40.3
		e	18 25 05.9
	MNA	ePd	18 24 48.8
		e	18 25 15.6
	BKS	e	18 25 .7
USGS 18h12m05.9s 18.4S 168.6E			
h=112km mb=4.9			
Vanuatu Islands			
Jul 26	FRI	iPc	00 27 51.0
		e	00 28 00.6
		ipP	00 28 07.7
		isP	00 28 13.0
	PRI	ePc	00 27 51.0
		e	00 28 03.7
		ipP	00 28 06.9
	MNA	iPc	00 27 53.3
		ipP	00 28 10.3
		esP	00 28 18.8
		i	00 28 22.1
	PRS	ePc	00 27 56.6
	CMB	ePc	00 28 00.6
		e	00 28 04.8
		epP	00 28 17.5
	MHC	ePc	00 28 03.4
		epP	00 28 20.3
	ORV	ePc	00 28 16.6
	FHC	ePc	00 28 36.3
USGS 00h22m40.1s 18.9N 101.4W			
h=73km mb=5.0			
Guerrero, Mexico			
Jul 27	WDC	ePc	09 12 14.0
	ORV	ePc	09 12 20.4
	CMB	ePc	09 12 29.6
	PRS	e(P)	09 12 30.8
	FRI	ePc	09 12 35.0
	MNA	e(P)	09 12 36.3
USGS 09h00m48.2s 32.7N 139.7E			
h=148km mb=5.2			
South of Honshu, Japan			
Jul 27	ORV	e(P)	13 56 57.0
	CMB	eP	13 57 03.1
	MNA	eP	13 57 13.8
USGS 13h45m08.6s 29.0N 142.3E			
h=33km mb=4.3			
South of Honshu, Japan			
Jul 28	WDC	eP	11 42 17.1
		e	11 42 28.0
	CMB	eP	11 42 28.6
		e	11 42 40.7
	ORV	eP	11 42 29.7
	FRI	eP	11 42 31.6
		e	11 42 43.2
	MNA	eP	11 42 38.2
USGS 11h29m48.6s 18.9S 168.4E			
h=68km mb=4.5			
Vanuatu Islands			
Jul 28	MNA	iPc	18 55 14.0
		iS	18 55 15.4
	CMB	iPc	18 55 42.5
		iS	18 56 04.9
	FRI	iPd	18 55 44.3
		iS	18 56 14.3
	ORV	iPc	18 55 58.3
	MHC	ePd	18 56 00.0
		iS	18 56 18.3
	LLA	iPc	18 56 02.1

International Seismological Centre

DATE	STA	PHASE	TIME (UTC)
	PRI	e(P)	18 56 02.8
	BKS	ePn	18 56 03.5
		ePg	18 56 10.4
		e	18 56 12.7
		e	18 56 15.6
		e	18 56 29.6
		eS	18 56 39.4
		e	18 56 41.0
		eLq	18 56 56.0
		e	18 56 58.5
		eLr	18 57 16.8
	MIN	iPd	18 56 06.0
	SAO	iPd	18 56 06.0
	WDC	iPc	18 56 15.0
BRK 18h55m11.5s 38.4N 118.2W			
h=13km ML=4.6(8)			
6 km S of Mina, Nevada			
Jul 29	WDC	iPc	00 47 53.9
		ipP	00 48 42.8
	ORV	iPc	00 47 59.1
		ipP	00 48 48.0
	CMB	iPc	00 48 06.1
		ipP	00 48 55.3
	FRI	iPc	00 48 10.3
		ipP	00 48 59.4
	MNA	iP	00 48 14.3
		ipP	00 49 37
	PCC	ipP	00 48 47.5
	MHC	ipPc	00 48 51.4
USGS 00h36m07.1s 18.5N 145.7E			
h=200km mb=4.9			
Mariana Islands			
Jul 29	MNA	iPc	03 52 34.7
		iS	03 52 36.6
	CMB	iPc	03 53 03.7
		iS	03 53 24.5
	FRI	iPd	03 53 04.8
	ORV	iPc	03 53 19.1
	LLA	iPc	03 53 22.8
	MHC	eP	03 53 23.76
		eS	03 54 06.49
	PRI	iPc	03 53 23.8
	BKS	ePn	03 53 24.8
		ePg	03 53 31.2
		e	03 53 39.7
		e	03 53 47.0
		e	03 53 50.6
		eL	03 54 14.1
		eLq	03 54 17.0
		eL	03 54 37.2
	MIN	iPc	03 53 26.3
	WDC	ePc	03 53 35.6
BRK 03h52m32.1s 38.4N 118.1W			
h=14km ML=4.5(8)			
6 km S of Mina, Nevada			
Jul 29	BKS	e(P)	10 13 44
		eS	10 24 18
		eLq	10 36 14
		e	10 39 9
		e	10 39 19
		eLr	10 40 40
		AMP(μm)	PER(s)
		LZ	4.4 20.
		LN	3.9 20.
		LE	3.0 20.
	CMB	ePd	10 13 52.4
	ORV	e(P)	10 13 54.2
	WDC	eP	10 13 55.4
BRK Ms=5.9 Distance=087°			

DATE	STA	PHASE	TIME (UTC)
USGS 10h01m11.2s 30.2S 177.0W			
h=10km mb=5.0 Ms=5.6			
Kermadec Islands			
Jul 29	FRI	e(P)d	15 34 37.7
		epP	15 35 13.6
	PRI	ePd	15 34 39.2
		epP	15 35 15.1
	MNA	ePd	15 34 39.6
		ePcP	15 34 49.8
		ipP	15 35 16.3
		e	15 35 33.2
	LLA	e(P)	15 34 41.3
	PRS	ePd	15 34 41.8
		epP	15 35 17.9
	CMB	ePd	15 34 44.2
		ipP	15 35 20.5
	GCC	ePd	15 34 45.7
		epP	15 35 22.1
	MHC	ePd	15 34 46.3
		epP	15 35 22.4
	PCC	ePd	15 34 48.4
		epP	15 35 34.9
	BRK	e(P)	15 34 49.6
		epP	15 35 25.8
	ORV	ePd	15 34 53.0
		ipP	15 35 29.4
	WDC	iPd	15 34 58.0
		ePcP	15 35 06.6
		ipP	15 35 34.1
		e	15 35 45.2
	FHC	eP	15 35 04.3
		eP	15 35 04.3
		ipP	15 35 40.8
USGS 15h22m33.1s 28.9S 67.2W			
h=141km mb=5.4			
La Rioja Province, Argentina			
Jul 29	BKS	eP	20 48 3.7
		e	20 57 02
	GCC	ePc	20 48 01.9
		epP	20 51 48.6
	PRS	ePc	20 48 02.0
		epP	20 50 11.0
		ePP	20 51 49.1
	BRK	ePc	20 48 03.6
	PRI	ePc	20 48 04.0
		epP	20 50 12.8
		ePP	20 51 50.9
	MHC	iPc	20 48 04.3
		epP	20 50 13.1
		ePP	20 51 51.6
	FHC	eP	20 48 07.7
	FRI	ePc	20 48 09.4
		epP	20 50 18.7
		ePP	20 51 51.3
	CMB	iPc	20 48 10.2
		epP	20 50 19.8
		ePP	20 51 57.2
	WDC	iPc	20 48 11.0
		epP	20 50 20.7
		ePP	20 51 57.7
	ORV	ePc	20 48 11.1
		epP	20 50 20.4
		ePP	20 51 57.8
	MNA	iPc	20 48 19.5
		epP	20 50 29.4
		ePP	20 52 05.9
USGS 20h37m13.5s 18.2S 178.2W			
h=624km mb=5.1			
Fiji Islands Region			

DATE	STA	PHASE	TIME (UTC)
Jul 29	GCC	ePd	21 43 18.9
	PRS	ePd	21 43 19.5
		ipP	21 45 28.4
	BRK	eP	21 43 21.2
	MHC	eP	21 43 21.6
		epP	21 45 30.8
	PRI	ePd	21 43 21.9
		epP	21 45 30.6
	FHC	eP	21 43 26.2
	FRI	ePd	21 43 27.0
		epP	21 45 36.5
	CMB	ePd	21 43 27.5
		epP	21 45 37.2
	ORV	ePd	21 43 28.6
	WDC	ePd	21 43 28.7
		epP	21 45 38.3
	MNA	ePd	21 43 37.1
		ipP	21 45 47.3
	BKS	e	21 52 20
USGS 21h32m31.8s 18.3S 178.1W			
h=636km mb=5.2			
Fiji Islands Region			
Jul 30	MHC	iPc	00 14 03.14
		iS	00 14 05.15
	GCC	iPd	00 14 09.0
		iS	00 14 15.6
	PCC	iPc	00 14 10.6
		iS	00 14 18.7
	BRK	ePc	00 14 13.0
		iS	00 14 24.0
	BKS	iPd	00 14 13.1
		e	00 14 19.4
		eS	00 14 22.4
		e	00 14 22.9
		e	00 14 24.6
		eL	00 14 35.9
	SAO	iPd	00 14 14.2
	ZSP	e(P)c	00 14 14.4
	LLA	ePd	00 14 19.8
		eS	00 14 33.0
	PRS	iPc	00 14 21.1
		eS	00 14 34.6
	CMB	eP	00 14 23.7
		iS	00 14 39.7
	PRI	e(P)d	00 14 29.0
	FRI	iPd	00 14 30.0
		iS	00 14 51.0
BRK 00h14m01.0s 37.4N 121.8W			
h=4km ML=2.7(4) Mo=3.0E20(2)			
13 km NE of San Jose, CA			
Jul 30	CMB	ePc	11 14 48.7
	FRI	ePc	11 14 53.0
USGS 11h02m34.8s 21.4N 144.4E			
h=33km mb=4.3			
Mariana Islands Region			
Jul 30	WDC	ePd	19 49 52.7
	ORV	eP	19 49 58.1
	PRS	e(P)	19 50 04.8
	CMB	ePd	19 50 05.7
	LLA	eP	19 50 06.2
	FRI	eP	19 50 10.0
	MNA	eP	19 50 13.9
	BKS	e	20 15 33
USGS 19h37m52.3s 21.7N 144.1E			
h=33km mb=5.0 Ms=4.4			
Mariana Islands Region			
Jul 30	CMB	eP	22 22 22.2
	MNA	eP	22 22 30.2

DATE	STA	PHASE	TIME (UTC)
USGS 22h10m06.8s 21.2N 144.2E			
h=33km mb=4.5			
Mariana Islands Region			
Jul 31	FOX	iP	01 18 48.7
	EKR	iP	01 18 49.1
		eS	01 18 55.4
	FHC	iPd	01 18 51.1
		iS	01 18 58.5
	ARC	eP	01 18 52.0
		iS	01 18 59.9
	WDC	iPc	01 19 03.2
		i	01 19 10.6
		iS	01 19 21.0
	MIN	iPc	01 19 12.7
		eS	01 19 37.0
	ORV	eP	01 19 15.5
		eS	01 19 43.9
	PCC	eP	01 19 27.7
	GCC	eP	01 19 35.5
BRK 01h18m40.5s 40.3N 124.5W			
h=20km ML=3.2(2) Mo=3.8E20(1)			
Cape Mendocino Sequence			
Jul 31	WDC	e(P)	07 21 04.5
	ORV	eP	07 21 22.5
	CMB	eP	07 21 45.8
	BKS	e	07 24 40
USGS 07h19m52.6s 43.6N 127.2W			
h=10km mb=4.1			
Off Coast of Oregon			
Jul 31	MNA	ePc	19 15 00.0
	LLA	ePc	19 15 03.5
	CMB	ePc	19 15 07.6
	ORV	ePc	19 15 19.2
USGS 19h05m46.5s 1.3S 80.6W			
h=33km mb=4.8 Ms=4.3			
Near Coast of Ecuador			
Jul 31	FOX	iP	23 57 05.3
	EKR	iP	23 57 05.4
	FHC	iPd	23 57 07.8
	ARC	iPc	23 57 08.5
	WDC	iPc	23 57 20.9
	MIN	iPc	23 57 30.8
	ORV	iPc	23 57 33.9
	ZSP	iPd	23 57 43.2
		i	23 58 05.8
		iS	23 58 18.4
	BRK	ePd	23 57 43.4
		i	23 57 44.4
	BKS	iPn	23 57 43.8
		iS	23 58 18.5
	PCC	ePd	23 57 46.2
		i	23 57 47.2
	MHC	eP	23 57 53.7
		i	23 57 54.8
		eS	23 58 36.64
	GCC	iPc	23 57 54.4
		i	23 57 55.5
	CMB	ePc	23 57 56.5
		iS	23 59 00.2
	SAO	iPc	23 58 00.3
	PRS	iPc	23 58 06.2
		i	23 58 07.6
	LLA	iPd	23 58 06.3
		i	23 58 07.6
	FRI	iPc	23 58 11.9
	PRI	ePd	23 58 13.4
		i	23 58 24.2
	MNA	iPc	23 58 14.7

DATE	STA	PHASE	TIME (UTC)
BRK 23h56m58.3s 40.4N 124.4W			
h=16km ML=5.6(4) Mo=2.5E24(2)			
Cape Mendocino Mainshock			
Aug 1	EKR	iPc	00 01 32.9
		iS	00 01 39.2
	FOX	iPc	00 01 33.4
		iS	00 01 40.0
	FHC	iPc	00 01 35.4
		iS	00 01 44.5
	ARC	e(P)	00 01 35.8
		iS	00 01 45.3
	WDC	e(P)	00 01 48.3
	MIN	iPc	00 01 59.3
BRK 00h01m22.6s 40.3N 124.6W			
h=4km ML=3.2(2)			
Cape Mendocino Sequence			
Aug 1	FHC	iPc	00 02 26.8
		iS	00 02 34.8
	ARC	e(S)	00 02 34.5
	WDC	e(P)	00 02 40.1
	MIN	iPd	00 02 50.2
BRK 00h02m16.0s 40.4N 124.5W			
h=20km ML=3.1(2)			
Cape Mendocino Sequence			
Aug 1	ARC	eP	00 04 55.8
		iS	00 05 08.6
	FOX	iPd	00 04 56.2
		iS	00 05 03.6
	EKR	iPd	00 04 56.3
		iS	00 05 03.0
	FHC	iPc	00 04 58.7
		iS	00 05 07.6
	WDC	i(P)d	00 05 12.8
	MIN	iPd	00 05 22.7
	ORV	e(P)	00 05 25.8
BRK 00h04m46.1s 40.4N 124.6W			
h=6km ML=3.3(2)			
Cape Mendocino Sequence			
Aug 1	EKR	iPd	00 06 10.0
		iS	00 06 16.0
	FOX	iPc	00 06 10.3
		iS	00 06 16.9
	FHC	iPd	00 06 12.4
		iS	00 06 20.0
	ARC	iPc	00 06 13.2
		iS	00 06 20.1
	WDC	iPc	00 06 25.5
		iS	00 06 42.8
	MIN	i(P)d	00 06 35.5
	ORV	iPd	00 06 38.8
	PCC	iPd	00 06 53.2
	GCC	iPd	00 07 01.0
	SAO	iPd	00 07 07.9
BRK 00h06m02.5s 40.4N 124.5W			
h=16km ML=3.1(2)			
Cape Mendocino Sequence			
Aug 1	FOX	iPc	00 10 34.2
	FHC	iPd	00 10 36.4
		iS	00 10 45.2
	EKR	eS	00 10 40.6
	ARC	e(S)	00 10 44.8
	WDC	i(P)c	00 10 48.5
	MIN	e	00 11 01.8
BRK 00h10m24.0s 40.4N 124.6W			
h=12km ML=3.0(2)			
Cape Mendocino Sequence			

DATE	STA	PHASE	TIME (UTC)
Aug 1	EKR	iPc	00 17 17.8
		iS	00 17 23.8
	FOX	iPc	00 17 18.0
		iS	00 17 25.0
	FHC	iPc	00 17 20.2
		i	00 17 24.9
		iS	00 17 28.3
	ARC	eP	00 17 22.0
		e(S)	00 17 30.3
	WDC	iPd	00 17 33.6
	MIN	iPc	00 17 43.2
	ORV	iPc	00 17 47.7
		iS	00 18 14.8
		iSg	00 18 17.0
BRK 00h17m08.6s 40.4N 124.6W			
h=15km ML=3.2(2) Mo=2.4E21(2)			
Cape Mendocino Sequence			
Aug 1	EKR	iPc	00 18 47.5
	FOX	iPc	00 18 47.8
		iS	00 18 54.9
	FHC	iPc	00 18 49.4
		i	00 18 55.4
		iS	00 18 57.7
	ARC	iPc	00 18 50.0
		iS	00 18 55.0
	WDC	iPc	00 19 02.6
	MIN	iPc	00 19 12.3
	ORV	iPd	00 19 15.3
		iS	00 19 43.0
	ZSP	iPc	00 19 23.6
		iS	00 19 57.6
	BRK	iPc	00 19 23.9
	BKS	iPc	00 19 24.2
	PCC	iPc	00 19 26.7
	MHC	iPc	00 19 34.2
	SAO	iPc	00 19 34.3
	GCC	iPc	00 19 34.5
		i	00 19 36.0
	CMB	e(P)d	00 19 38.3
	PRS	e(P)	00 19 46.1
		i	00 19 48.4
	LLA	iPc	00 19 46.2
	FRI	iPd	00 19 53.6
		i	00 19 55.0
BRK 00h18m38.0s 40.4N 124.6W			
h=24km ML=3.8(6) Mo=3.3E21(2)			
Cape Mendocino Sequence			
Aug 1	EKR	iPc	00 25 12.2
		iS	00 25 18.9
	FOX	iPd	00 25 12.3
		iS	00 25 19.1
	FHC	iPd	00 25 14.8
		i	00 25 19.4
		iS	00 25 22.8
	ARC	iPc	00 25 15.30
		e(S)	00 25 22.8
	WDC	iPd	00 25 28.2
		i	00 25 37.7
	MIN	e(P)	00 25 38.6
	ORV	ePc	00 25 41.1
		i	00 25 42.8
		iS	00 26 09.2
	SAO	iP	00 26 08.1
BRK 00h25m03.2s 40.4N 124.6W			
h=18km ML=3.0(2)			
Cape Mendocino Sequence			
Aug 1	EKR	iPd	00 26 29.6
		iS	00 26 35.4
	FOX	iPc	00 26 29.7

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DATE	STA	PHASE	TIME (UTC)
		iS	00 26 36.0
	FHC	iPc	00 26 32.4
	ARC	e(P)	00 26 33.0
		iS	00 26 40.9
	WDC	iPd	00 26 45.8
	MIN	e(P)	00 26 57.2
BRK	00h26m22.1s 40.4N 124.5W		
	h=19km ML=3.0(2)		
Cape Mendocino Sequence			
Aug 1	EKR	iPc	00 29 34.7
		iS	00 29 40.3
	FOX	iPc	00 29 34.8
		iS	00 29 40.8
	FHC	iPc	00 29 36.8
		i	00 29 41.3
		iS	00 29 45.3
	ARC	iS	00 29 45.1
	WDC	iPd	00 29 50.3
	MIN	iPc	00 30 02.3
	ORV	e(P)	00 30 04.2
		iS	00 30 33.2
BRK	00h29m25.5s 40.4N 124.5W		
	h=16km ML=3.1(2)		
Cape Mendocino Sequence			
Aug 1	EKR	e(P)	00 33 42.7
		iS	00 33 50.4
	FOX	iPc	00 33 44.2
		iS	00 33 50.2
	FHC	iPc	00 33 46.7
		iS	00 33 55.3
	ARC	e(S)	00 33 54.7
	WDC	iPd	00 34 00.0
	MIN	e(P)	00 34 10.2
	ORV	ePc	00 34 14.0
BRK	ML=3.0(2)		
Cape Mendocino Sequence			
Aug 1	EKR	iPd	00 46 09.5
		iS	00 46 15.1
	FOX	iPc	00 46 09.7
		iS	00 46 16.6
	FHC	iPd	00 46 11.9
	ARC	iPc	00 46 12.5
		i	00 46 16.1
		i	00 46 16.9
		i	00 46 20.1
		i	00 46 21.1
	WDC	iPc	00 46 25.1
		i	00 46 32.0
	MIN	iPc	00 46 34.9
		i	00 46 36.8
		i	00 47 03.8
	ORV	e(P)	00 46 38.2
		i	00 47 08.2
	ZSP	ePd	00 46 47.0
		eS	00 47 21.4
	BRK	e(P)	00 46 47.3
	BKS	ePc	00 46 47.6
	PCC	ePd	00 46 50.4
	MHC	eP	00 46 57.4
	GCC	ePd	00 46 57.9
		i	00 46 59.4
	CMB	ePd	00 47 01.7
	SAO	iPd	00 47 03.8
	LLA	e	00 47 06.9
	PRS	e	00 47 10.5
	PRI	e	00 47 12.9
	FRI	ePd	00 47 16.4
BRK	00h46m00.5s 40.4N 124.6W		
	h=18km ML=3.7(4) Mo=5.0E21(2)		

DATE	STA	PHASE	TIME (UTC)
Cape Mendocino Sequence			
Aug 1	FOX	iPd	00 57 33.3
		iS	00 57 39.8
	EKR	iPd	00 57 33.3
		iS	00 57 38.2
	FHC	iPd	00 57 35.2
		iS	00 57 43.2
	ARC	iPc	00 57 35.8
		i	00 57 43.1
		iS	00 57 45.0
	WDC	ePc	00 57 48.2
		i	00 57 57.2
		iS	00 58 06.7
	MIN	iPd	00 57 58.3
	ORV	ePc	00 58 01.2
	PCC	ePc	00 58 13.8
	MHC	iPd	00 58 21.3
	GCC	ePc	00 58 21.4
	CMB	e(P)	00 58 24.4
	SAO	iPd	00 58 27.5
	PRS	e	00 58 35.0
	FRI	iPc	00 58 40.1
BRK	00h57m24.5s 40.4N 124.5W		
	h=23km ML=3.5(4) Mo=1.3E21(2)		
Cape Mendocino Sequence			
Aug 1	EKR	iPc	01 04 50.7
		iS	01 04 57.3
	FOX	iPc	01 04 51.0
		iS	01 04 58.7
	FHC	iPc	01 04 53.0
		i	01 04 57.6
		iS	01 05 02.2
	ARC	eS	01 05 01.6
	WDC	iPd	01 05 06.4
		i	01 05 13.2
	MIN	iPc	01 05 16.5
	ORV	iPd	01 05 19.2
		eS	01 05 48.7
	PCC	eP	01 05 32.8
	SAO	e	01 05 46.4
BRK	01h04m40.6s 40.4N 124.7W		
	h=11km ML=3.2(2)		
Cape Mendocino Sequence			
Aug 1	FOX	iPc	01 22 30.2
		iS	01 22 37.3
	EKR	iPd	01 22 30.2
		iS	01 22 37.0
	FHC	iPd	01 22 32.6
		i	01 22 39.5
		iS	01 22 41.9
	ARC	e	01 22 41.1
		eS	01 22 42.5
	WDC	iPd	01 22 46.0
	MIN	iPc	01 22 55.9
	ORV	e(P)	01 22 59.5
		iS	01 23 29.4
	SAO	e(P)	01 23 26.8
BRK	01h22m20.6s 40.4N 124.6W		
	h=12km ML=3.0(2)		
Cape Mendocino Sequence			
Aug 1	PRS	ePd	02 33 31.9
	SAO	ePd	02 33 32.5
	PRI	ePd	02 33 34.2
	BRK	e	02 33 37.8
	FRI	ePd	02 33 39.4
	CMB	iPd	02 33 40.4
	ORV	ePd	02 33 41.4
	WDC	ePd	02 33 41.7

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	MIN	ePd	02 33 43.4
	MNA	ePd	02 33 49.6
USGS	02h22m27.4s 20.4S 177.6W		
	h=504km mb=4.4		
Fiji Islands Region			
Aug 1	CMB	e(P)	02 50 38.8
	MNA	ePd	02 50 51.6
USGS	02h43m16.4s 51.7N 173.1W		
	h=33km mb=4.7		
Andreanof Islands, Aleutian Is.			
Aug 1	ARC	ePc	04 46 36.5
		iS	04 46 44.6
	FHC	iPc	04 46 36.9
		iS	04 46 49.0
	EKR	iPc	04 46 38.6
		iS	04 46 49.5
	FOX	iPc	04 46 41.3
		iS	04 46 57.4
	WDC	iPc	04 46 46.5
		iS	04 47 04.5
	MIN	e(P)	04 46 55.5
		iPc	04 46 56.0
		i	04 47 02.0
		eS	04 47 20.8
		iS	04 47 21.6
	ORV	eP	04 47 05.0
	PCC	e(P)	04 47 26.0
	CMB	e(P)	04 47 38.6
	SAO	e(P)	04 47 39.3
BRK	04h46m24.6s 41.5N 123.9W		
	h=20km ML=4.0(3) Mo=1.6E22(1)		
41 km SE of Crescent City, CA			
Aug 1	EKR	iPc	04 57 23.2
		iS	04 57 29.6
	FOX	iPc	04 57 23.5
		iS	04 57 31.3
	FHC	iPc	04 57 25.7
		i	04 57 30.0
		iS	04 57 34.4
	ARC	eS	04 57 34.2
	WDC	iPc	04 57 39.1
	MIN	ePd	04 57 49.0
		i	04 58 14.9
	ORV	e(P)	04 57 52.8
	SAO	e(P)	04 58 20.5
BRK	04h57m13.1s 40.4N 124.7W		
	h=11km ML=3.2(4)		
Cape Mendocino Sequence			
Aug 1	EKR	iPd	05 07 45.7
		iS	05 07 48.6
	FOX	iPc	05 07 45.8
		iS	05 07 51.5
	FHC	iPc	05 07 47.9
	ARC	iPc	05 07 49.3
		eS	05 07 55.6
	WDC	iPc	05 08 01.3
	MIN	iPc	05 08 11.2
		iS	05 08 37.2
	ORV	iPd	05 08 14.7
		iS	05 08 42.1
	PCC	eP	05 08 27.5
	MHC	eP	05 08 34.8
	GCC	ePc	05 08 35.0
		i	05 08 36.9
	SAO	iPd	05 08 41.0
		i	05 08 44.1
	PRS	iPd	05 08 48.6
BRK	05h07m37.5s 40.4N 124.5W		

DATE	STA	PHASE	TIME (UTC)
	h=18km ML=3.8(4) Mo=6.1E21(2)		
Cape Mendocino Sequence			
Aug 1	EKR	iPd	06 23 03.7
		iS	06 23 08.7
	FOX	ePc	06 23 03.9
		iS	06 23 10.3
	FHC	iPd	06 23 06.2
		i	06 23 11.9
		iS	06 23 14.3
	ARC	iPc	06 23 06.7
		iS	06 23 14.4
	WDC	iPc	06 23 19.3
	MIN	iPc	06 23 29.2
	ORV	eP	06 23 32.9
		i	06 23 33.8
		eS	06 24 00.4
	PCC	e(P)	06 23 46.2
	GCC	ePd	06 23 53.8
	CMB	eP	06 23 55.9
	SAO	e	06 24 02.2
	MHC	iPd	06 24 08.3
BRK	06h22m55.1s 40.4N 124.5W		
	h=14km ML=3.3(4) Mo=1.9E21(2)		
Cape Mendocino Sequence			
Aug 1	FOX	iPc	08 54 11.0
		iS	08 54 16.9
	EKR	iPd	08 54 11.1
		iS	08 54 17.8
	FHC	iPd	08 54 13.7
		i	08 54 20.5
		iS	08 54 21.7
	ARC	iPc	08 54 14.2
		iS	08 54 21.8
	WDC	iPd	08 54 27.2
		i	08 54 33.6
	MIN	ePc	08 54 37.3
	ORV	ePc	08 54 41.4
BRK	08h54m03.6s 40.4N 124.5W		
	h=16km ML=3.1(2)		
Cape Mendocino Sequence			
Aug 1	EKR	iPd	09 52 25.7
		iS	09 52 31.2
	FOX	iPc	09 52 25.8
		iS	09 52 32.4
	FHC	iPd	09 52 28.2
		iS	09 52 36.1
	ARC	eP	09 52 28.5
		iS	09 52 36.3
	WDC	iPc	09 52 41.3
	MIN	ePc	09 52 51.2
	ORV	eP	09 52 54.1
	PCC	e(P)	09 53 08.0
	GCC	eP	09 53 15.5
	CMB	e(P)	09 53 17.0
	SAO	e(P)	09 53 23.5
BRK	09h52m17.0s 40.4N 124.5W		
	h=17km ML=3.2(4) Mo=1.0E21(2)		
Cape Mendocino Sequence			
Aug 1	FOX	iPc	11 29 00.7
		iS	11 29 06.3
	EKR	iPd	11 29 00.7
		iS	11 29 04.7
	ARC	iPc	11 29 02.6
		iS	11 29 10.8
	FHC	iPd	11 29 03.0
		iS	11 29 11.3
	WDC	iPc	11 29 16.0
	MIN	ePc	11 29 25.9

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	ORV	ePd	11 29 28.8
		iS	11 29 56.7
	PCC	e(P)	11 29 42.0
		i	11 29 43.0
	GCC	e(P)	11 29 49.0
		e	11 29 50.7
	MHC	ePd	11 29 49.2
	CMB	eP	11 29 52.2
	SAO	e(P)	11 29 55.0
		i	11 29 57.5
	PRS	ePd	11 30 02.4
	LLA	ePc	11 30 42.8
BRK	11h28m52.4s 40.4N 124.5W		
	h=18km ML=3.7(3) Mo=4.4E21(1)		
Cape Mendocino Sequence			
Aug 1	EKR	iPd	20 48 28.7
		iS	20 48 34.4
	FOX	iPc	20 48 28.8
		iS	20 48 34.7
	FHC	iPd	20 48 31.2
		iS	20 48 39.0
	ARC	iPc	20 48 32.1
		iS	20 48 39.4
	WDC	ePc	20 48 44.4
	MIN	eP	20 48 55.5
	ORV	eP	20 48 58.5
		i(S)	20 49 27.1
BRK	20h48m21.1s 40.4N 124.5W		
	h=19km ML=3.2(3) Mo=1.0E21(2)		
Cape Mendocino Sequence			
Aug 2	FHC	eP	01 10 59.0
	WDC	iPc	01 11 00.2
	MIN	iPc	01 11 02.0
	ORV	ePc	01 11 05.5
	BRK	eP	01 11 13.5
	CMB	ePc	01 11 13.9
	BKS	iPd	01 11 14.0
		AMP(μm)	PER(s)
		PZ 0.072	0.8
	MNA	iPc	01 11 14.4
	PCC	eP	01 11 14.8
	MHC	eP	01 11 16.6
	GCC	eP	01 11 17.4
	FRI	eP	01 11 19.4
	LLA	eP	01 11 20.5
	PRS	eP	01 11 21.2
	PRI	ePc	01 11 23.3
USGS	00h58m06.8s 49.9N 78.9E		
	h=0km mb=5.9 Ms=3.8		
Eastern Kazakh SSR			
Aug 2	WDC	ePc	02 10 51.4
		ePKPPKP	02 39 26.9
	MIN	ePc	02 10 53.2
	ORV	eP	02 10 57.2
		ePKPPKP	02 39 22.9
	MNA	eP	02 11 05.3
		ePKPPKP	02 39 19.7
	CMB	ePc	02 11 07.8
		ePKPPKP	02 39 20.0
	PCC	eP	02 11 11.3
	MHC	eP	02 11 12.8
	FRI	eP	02 11 14.3
	SAO	eP	02 11 16.0
	LLA	ePc	02 11 17.4
	PRS	eP	02 11 19.0
	PRI	eP	02 11 20.6
		ePKPPKP	02 39 15.3
USGS	01h59m59.8s 73.3N 54.6E		
	h=0km mb=5.8 Ms=3.4		

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Novaya Zemlya			
Aug 2	BKS	eP	02 11 10.0
	WDC	eP	02 24 37.7
	ORV	eP	02 24 44.0
	CMB	eP	02 24 53.0
USGS	02h12m31.6s 32.4N 131.8E		
	h=54km mb=4.7		
Kyushu, Japan			
Aug 2	EKR	iPd	03 00 45.9
		iS	03 00 51.8
	FOX	iPc	03 00 46.0
		iS	03 00 53.2
	FHC	iPd	03 00 48.2
		i(S)	03 00 56.8
	ARC	eP	03 00 48.7
		eS	03 00 57.0
	WDC	ePc	03 01 01.2
	MIN	eP	03 01 10.0
	CMB	eP	03 01 37.1
BRK	03h00m35.7s 40.3N 124.6W		
	h=15km ML=3.2(2) Mo=1.3E21(1)		
Cape Mendocino Sequence			
Aug 2	FHC	iPc	03 13 53.2
		e(S)	03 14 00.7
	ARC	eP	03 13 54.5
		eS	03 14 02.2
	WDC	ePc	03 14 06.8
		e	03 14 13.6
	MIN	ePc	03 14 16.6
		eS	03 14 45.4
	ORV	ePc	03 14 21.2
		eS	03 14 47.6
BRK	03h13m43.1s 40.4N 124.5W		
	h=17km ML=3.1(2)		
Cape Mendocino Sequence			
Aug 2	MIN	e(P)	04 12 24.2
	ORV	eP	04 12 27.8
	MHC	eP	04 12 31.9
	PRS	eP	04 12 35.0
	CMB	ePd	04 12 35.5
	FRI	eP	04 12 39.7
	MNA	eP	04 12 43.5
USGS	04h00m36.8s 22.3N 143.1E		
	h=182km mb=4.8		
Volcano Islands Region			
Aug 2	FHC	iPd	04 40 00.3
		i(S)	04 40 10.4
	ARC	eS	04 40 11.9
	WDC	eP	04 40 12.8
	MIN	eP	04 40 22.7
	ORV	eP	04 40 25.9
		eS	04 40 53.1
	PCC	eP	04 40 37.8
	MHC	e(P)	04 40 44.3
	GCC	e(P)	04 40 45.8
	SAO	e(P)	04 40 51.0
	CMB	e(P)	04 40 54.3
	PRS	e(P)	04 40 57.2
BRK	04h39m49.2s 40.3N 124.5W		
	h=19km ML=3.4(2)		
Cape Mendocino Sequence			
Aug 2	FHC	iPd	04 43 35.7
		i(S)	04 43 42.0
	ARC	iPc	04 43 35.6
		iS	04 43 43.1
	WDC	ePc	04 43 47.9

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DATE	STA	PHASE	TIME (UTC)
	MIN	eP	04 43 57.7
		e(S)	04 44 23.2
	ORV	ePd	04 44 01.3
		eS	04 44 28.1
BRK 04h43m23.9s 40.4N 124.5W			
h=17km ML=3.2(2)			
Cape Mendocino Sequence			
Aug 2	WDC	ePc	14 59 32.9
	MIN	eP	14 59 36.2
	ORV	ePc	14 59 38.2
	PRS	eP	14 59 45.1
	CMB	iPc	14 59 45.7
	PRI	eP	14 59 48.7
	FRI	eP	14 59 50.0
	MNA	eP	14 59 53.8
USGS 14h47m30.7s 21.4N 144.1E			
h=33km mb=4.8			
Mariana Islands Region			
Aug 2	ORV	ePc	18 38 54.4
		epP	18 39 06.9
	CMB	ePc	18 39 02.1
		epP	18 39 13.0
	PRI	ePc	18 39 05.6
		epP	18 39 17.3
	FRI	ePc	18 39 06.4
		epP	18 39 17.4
	MNA	ePc	18 39 10.7
		epP	18 39 20.5
USGS 18h26m48.2s 21.6N 144.1E			
h=33km mb=4.9 Ms=4.4			
Mariana Islands Region			
Aug 2	BKS	eP	19 05 04.3
		eLr	19 30 14
			AMP(μm) PER(s)
		PZ	0.056 1.2
		LZ	0.82 20.
		LE	0.79 20.
	WDC	iPc	19 05 57.4
		i	19 05 59.3
	MIN	iPc	19 06 00.8
	ORV	iPc	19 06 02.7
	CMB	iPc	19 06 09.5
		i	19 06 12.3
	PRI	ePc	19 06 12.2
	FRI	iPc	19 06 13.9
		i	19 06 17.5
	MNA	iPc	19 06 17.6
		i	19 06 20.4
BRK Ms=5.1 Distance=80°			
USGS 18h53m53.9s 21.3N 144.1E			
h=33km mb=5.2 Ms=5.2			
Mariana Islands Region			
Aug 2	ORV	eP	19 59 59.3
	CMB	ePc	20 00 05.5
	FRI	ePc	20 00 09.3
	MNA	ePc	20 00 14.0
USGS 19h47m43.2s 14.7N 146.7E			
h=63km mb=5.0			
Mariana Islands			
Aug 2	WDC	eP	20 09 13.8
	MIN	ePc	20 09 17.9
	ORV	eP	20 09 18.9
	CMB	ePc	20 09 26.6
	FRI	ePc	20 09 30.8
	MNA	ePc	20 09 34.5
	BKS	eLr	20 33 34
			AMP(μm) PER(s)

DATE	STA	PHASE	TIME (UTC)
		LZ	0.61 20.
		LE	0.75 20.
USGS 19h57m11.7s 21.3N 144.2E			
h=33km mb=5.0			
Mariana Islands Region			
Aug 2	FRI	ePd	21 42 05.4
	CMB	ePd	21 42 21.1
		e	21 42 29.5
	MNA	ePd	21 42 29.2
USGS 21h30m07.7s 21.8N 144.1E			
h=33km mb=4.8			
Mariana Islands Region			
Aug 3	BRK	eP	02 35 34.0
	PRS	ePc	02 35 34.9
	MHC	ePc	02 35 35.6
	GCC	e	02 35 35.9
	PRI	eP	02 35 37.9
	WDC	ePc	02 35 38.2
	ORV	ePc	02 35 39.8
	CMB	ePc	02 35 41.4
	FRI	ePc	02 35 42.1
	MIN	e(P)	02 35 43.5
	MNA	ePc	02 35 50.8
USGS 02h22m46.2s 12.5S 166.8E			
h=115km mb=5.1			
Santa Cruz Islands			
Aug 3	WDC	ePc	05 33 25.5
		epP	05 34 16.9
	MIN	ePc	05 33 28.9
	PCC	e(P)	05 33 29.1
	BRK	e(P)	05 33 29.6
	ORV	eP	05 33 30.1
		epP	05 34 20.1
	MHC	ePc	05 33 33.2
		epP	05 34 22.6
	PRS	eP	05 33 35.2
	LLA	e(P)	05 33 35.7
	CMB	eP	05 33 36.7
		ipP	05 34 26.6
	PRI	e(P)	05 33 37.8
	FRI	eP	05 33 39.9
		epP	05 34 30.4
	MNA	ePc	05 33 44.9
		epP	05 34 35.1
USGS 05h21m10.0s 13.6N 144.5E			
h=122km mb=5.3			
Mariana Islands			
Aug 3	FHC	ePd	07 46 56.2
	WDC	ePd	07 46 56.7
		e	07 48 12.5
	MIN	ePd	07 46 58.9
		e	07 48 06.7
	ORV	e(P)	07 47 03.9
	MNA	ePd	07 47 13.3
	CMB	iPd	07 47 15.5
		e	07 48 16.3
	BRK	e(P)	07 47 16.9
	MHC	ePc	07 47 21.1
	FRI	ePd	07 47 23.0
	LLA	iPd	07 47 26.5
	PRS	ePd	07 47 28.0
	PRI	eP	07 47 30.3
USGS 07h37m40.7s 86.9N 63.1E			
h=10km mb=5.0 Ms=4.5			
North of Franz Josef Land			
Aug 3	MNA	iPc	09 48 06.9
		eS	09 48 08.6

DATE	STA	PHASE	TIME (UTC)
	CMB	iPd	09 48 35.7
		i	09 48 37.3
		iS	09 48 59.9
	FRI	iPd	09 48 36.9
		i	09 48 38.3
		iS	09 49 00.0
	LLA	e(P)c	09 48 50.7
		i	09 48 55.0
	ORV	iPc	09 48 51.3
	MHC	ePd	09 48 52.5
		i	09 48 56.3
	PRI	ePc	09 48 53.9
	SAO	ePd	09 48 54.9
		i	09 48 58.4
	PRS	e(P)	09 48 56.9
		e	09 49 00.9
	BRK	ePd	09 48 57.1
	GCC	e(P)	09 48 57.3
		e	09 49 01.1
	BKS	ePn	09 48 57.5
		e	09 49 05.1
		ePg	09 49 09.5
		e	09 49 21.4
		e	09 49 23.5
		e	09 49 29.0
	MIN	iPd	09 48 58.8
	PCC	e(P)	09 48 59.2
		i	09 49 03.1
	ZSP	e(P)	09 49 00.0
		i	09 49 03.0
BRK 09h48m04.5s 38.3N 118.2W			
h=11km ML=4.4(5)			
10 km S of Mina, Nevada			
Aug 3	FOX	iP	09 48 21.5
	EKR	iP	09 48 21.5
		iS	09 48 27.8
	FHC	iPd	09 48 24.1
		i	09 48 32.5
		iS	09 48 33.9
	ARC	eP	09 48 24.7
		eS	09 48 32.6
	WDC	iPc	09 48 37.2
	MIN	ePc	09 48 46.9
	ORV	ePc	09 48 50.8
BRK 09h48m12.9s 40.4N 124.5W			
h=15km ML=3.2(2) Mo=1.1E21(1)			
Cape Mendocino Sequence			
Aug 3	WDC	iPc	15 07 31.6
	MIN	ePc	15 07 34.8
	BRK	ePc	15 07 35.6
	ORV	ePc	15 07 36.2
	BKS	eP	15 07 36.4
			AMP(μm) PER(s)
		PZ	0.064 0.7
	GCC	ePc	15 07 37.3
	MHC	ePc	15 07 38.9
	PRS	ePc	15 07 41.0
	LLA	eP	15 07 42.4
	CMB	ePc	15 07 42.6
	PRI	ePc	15 07 44.1
	FRI	ePc	15 07 46.3
	MNA	ePc	15 07 50.8
USGS 14h55m16.8s 13.6N 144.5E			
h=131km mb=5.2			
Mariana Islands			
Aug 3	WDC	ePc	15 54 10.2
	ORV	ePc	15 54 14.9
	BRK	e	15 54 18.3
	PRS	ePc	15 54 20.2

DATE	STA	PHASE	TIME (UTC)
	CMB	ePc	15 54 21.9
	PRI	eP	15 54 23.1
	PCC	e	15 54 25.2
	FRI	ePc	15 54 25.7
	MNA	ePc	15 54 30.3
USGS 15h42m05.5s 16.3N 147.0E			
h=63km mb=4.7			
Mariana Islands			
Aug 3	WDC	e	16 44 55.6
	CMB	eP	16 45 00.4
	FRI	ePc	16 45 04.7
	MNA	eP	16 45 08.3
USGS 16h32m45.5s 21.3N 144.2E			
h=33km mb=5.2			
Mariana Islands Region			
Aug 3	ORV	e(P)	22 49 25.2
	CMB	iPc	22 49 32.8
	FRI	ePc	22 49 37.1
	MNA	ePc	22 49 40.9
USGS 22h37m17.5s 21.2N 144.1E			
h=33km mb=4.9			
Mariana Islands Region			
Aug 3	FRI	ePKPc	23 40 20.2
	MNA	ePKPc	23 40 21.3
	CMB	e(PKP)c	23 40 23.5
USGS 23h20m30.3s 53.0S 22.5E			
h=10km mb=4.6 Ms=4.6			
South of Africa			
Aug 4	FRI	eP	15 17 27.4
	PRI	eP	15 17 28.0
	PRS	eP	15 17 30.1
	LLA	eP	15 17 30.2
	SAO	e(P)	15 17 30.9
	MNA	ePc	15 17 31.3
	GCC	ePc	15 17 33.9
	CMB	iPc	15 17 33.9
	MHC	ePc	15 17 34.7
	PCC	ePc	15 17 36.2
	BRK	ePc	15 17 37.6
	BKS	ePc	15 17 37.8
			AMP(μm) PER(s)
		PZ	0.13 1.0
	ORV	ePc	15 17 42.0
	MIN	ePc	15 17 44.0
	WDC	iPc	15 17 46.8
	FHC	ePc	15 17 52.4
USGS 15h04m40.1s 40.5S 73.2W			
h=38km mb=5.9 Ms=4.9			
Near Coast of Central Chile			
Aug 4	PCC	ePc	22 28 06.4
	MHC	ePc	22 28 07.5
	BKS	eP	22 28 08.6
		e(Lr)	22 28 55.00
			AMP(μm) PER(s)
		PZ	0.047 1.1
		LZ	1.9 20.
		LN	1.8 20.
		LE	1.1 20.
	FRI	ePc	22 28 11.5
	CMB	ePc	22 28 13.2
		e	22 28 16.8
	ORV	ePc	22 28 16.0
	WDC	iPc	22 28 16.1
	MIN	ePc	22 28 18.5
	MNA	ePc	22 28 21.6
USGS 22h15m40.5s 29.3S 176.2W			
h=33km mb=5.5 Ms=5.2			

DATE	STA	PHASE	TIME (UTC)
Kermadec Islands Region			
Aug 5	PRI	iPd	07 34 27.6
		iS	07 34 33.4
	LLA	iPc	07 34 33.8
	FRI	iPd	07 34 37.4
	PRS	iPc	07 34 37.5
		iS	07 34 50.8
	SAO	iP	07 34 40.7
	CMB	iPd	07 34 51.9
BRK 07h34m22.0s 36.2N 120.3W			
h=9km ML=2.8(2)			
7 km NE of Coalinga, CA			
Aug 5	MHC	iPd	13 44 15.8
		iS	13 44 19.7
	GCC	iPc	13 44 18.6
	SAO	iPd	13 44 18.7
	LLA	ePc	13 44 23.9
	PCC	iPc	13 44 25.1
		iS	13 44 37.8
	PRS	eP	13 44 26.5
	BKS	iPc	13 44 28.4
		eS	13 44 41.6
	BRK	ePc	13 44 28.7
	CMB	ePc	13 44 34.3
	FRI	iPd	13 44 36.5
		iS	13 44 55.9
BRK 13h44m11.1s 37.1N 121.5W			
h=7km ML=2.5(4) Mo=9.9E19(2)			
14 km NNE of Gilroy, CA			
Aug 5	FHC	eP	15 58 26.9
	WDC	iPc	15 58 32.1
	MIN	iPc	15 58 35.4
	ORV	ePc	15 58 37.4
	PCC	ePc	15 58 37.8
	BRK	ePc	15 58 37.8
	BKS	eP	15 58 38.3
			AMP(μm) PER(s)
		PZ	0.047 0.8
	GCC	ePc	15 58 39.9
	MHC	ePc	15 58 41.5
	SAO	e(P)	15 58 42.6
	PRS	iPc	15 58 44.4
	CMB	ePc	15 58 44.7
	LLA	ePc	15 58 45.4
	PRI	ePc	15 58 47.8
	FRI	ePc	15 58 49.2
	MNA	ePc	15 58 52.7
USGS 15h46m57.8s 21.7N 143.0E			
h=314km mb=4.9			
Mariana Islands Region			
Aug 6	EKR	ePd	01 42 22.3
	FOX	iPc	01 42 22.7
	FHC	iPc	01 42 24.9
		i	01 42 30.5
		iS	01 42 32.9
	ARC	iPc	01 42 25.5
		i	01 42 30.0
		eS	01 42 33.3
	WDC	iPc	01 42 38.0
	MIN	iPd	01 42 47.9
	ORV	eP	01 42 51.7
		i	01 43 21.6
	PCC	eP	01 43 02.8
	GCC	e(P)	01 43 10.7
BRK 01h42m13.5s 40.4N 124.5W			
h=12km ML=3.5(4) Mo=1.3E21(2)			
Cape Mendocino Sequence			

DATE	STA	PHASE	TIME (UTC)
Aug 6	EKR	iPd	06 54 40.9
		iS	06 54 46.5
	FOX	iPc	06 54 41.0
	FHC	iPd	06 54 43.2
		iS	06 54 50.0
	ARC	ePc	06 54 43.9
		e(S)	06 54 50.8
		i	06 54 51.5
	WDC	iPc	06 54 56.3
		i	06 55 02.8
		i	06 55 16.8
	MIN	iPc	06 55 06.3
	ORV	iPc	06 55 10.2
		i	06 55 39.3
	PCC	e(P)	06 55 23.7
	GCC	e(P)c	06 55 31.8
	SAO	e(P)	06 55 37.4
		i	06 55 39.8
BRK 06h54m33.8s 40.4N 124.4W			
h=18km ML=3.3(3) Mo=1.3E21(1)			
Cape Mendocino Sequence			
Aug 6	FRI	iPd	07 54 17.2
		iS	07 54 38.4
	PRI	iPc	07 54 22.8
		iS	07 54 48.0
	LLA	eP	07 54 27.4
	PRS	eP	07 54 30.5
	SAO	iPc	07 54 33.8
	CMB	iPc	07 54 36.6
		iS	07 55 13.8
	MNA	iPc	07 54 39.6
	MHC	e(P)	07 54 40.6
BRK 07h53m47.6s 35.8N 118.3W			
h=3km ML=3.3(2)			
16 km N of Lake Isabella, CA			
Aug 6	GCC	eP	10 03 21.6
	BKS	eP	10 03 22.8
			AMP(μm) PER(s)
		PZ	0.044 0.8
	PRS	eP	10 03 22.9
	SAO	eP	10 03 23.3
	MHC	eP	10 03 23.9
	PRI	eP	10 03 25.6
	LLA	eP	10 03 25.9
	WDC	eP	10 03 26.9
	ORV	eP	10 03 28.2
	MIN	eP	10 03 29.2
	CMB	eP	10 03 29.4
	FRI	eP	10 03 30.0
	MNA	eP	10 03 38.5
USGS 09h52m10.1s 13.0S 169.4E			
h=659km mb=4.9			
Santa Cruz Islands Region			
Aug 6	PRI	eP	15 23 44.3
	FRI	eP	15 23 46.9
		ePcP	15 25 32.2
	GCC	eP	15 23 47.0
	PRS	eP	15 23 48.0
	MHC	eP	15 23 55.5
	MNA	eP	15 23 55.7
	CMB	ePd	15 23 57.0
		ePcP	15 25 31.0
	ORV	eP	15 24 10.8
		ePcP	15 25 16.8
	MIN	eP	15 24 12.0
	WDC	eP	15 24 18.9
		ePcP	15 25 44.9
USGS 15h15m34.7s 5.4S 105.0W			
h=10km mb=5.6 Ms=5.5			

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DATE	STA	PHASE	TIME (UTC)
Northern Easter I. Cordillera			
Aug 6	EKR	iPd	15 42 13.0
		i	15 42 17.5
		iS	15 42 19.1
	FOX	iPd	15 42 13.2
	FHC	iPd	15 42 15.4
		i	15 42 22.3
		iS	15 42 24.6
	ARC	eP	15 42 16.3
		eS	15 42 23.9
	WDC	iPd	15 42 28.7
	MIN	ePc	15 42 39.1
	ORV	ePc	15 42 42.2
		eS	15 43 09.2
		i	15 43 12.4
	PCC	e(P)	15 42 53.1
	GCC	e(P)	15 43 00.4
	SAO	e(P)	15 43 07.4
		i	15 43 10.0
BRK 15h42m04.4s 40.4N 124.5W			
h=13km ML=3.1(4) Mo=5.7E20(2)			
Cape Mendocino Sequence			
Aug 6	PRS	eP	18 50 53.1
	PRI	eP	18 50 55.3
	BKS	eP	18 50 56.3
		eLr	19 19 30.0
		AMP(μm)	PER(s)
		PZ	0.050 0.8
		LZ	1.1 20.
		LN	1.1 20.
	MHC	eP	18 50 56.5
	FRI	e(P)	18 51 00.8
	CMB	eP	18 51 02.6
	ORV	eP	18 51 04.1
	WDC	eP	18 51 04.7
	MNA	eP	18 51 11.6
USGS 18h39m02.7s 22.3S 174.4W			
h=33km mb=5.1 Ms=4.9			
Tonga Islands Region			
Aug 7	MHC	eP	04 51 10.0
	FRI	eP	04 51 14.6
	CMB	eP	04 51 16.2
	WDC	e(P)	04 51 19.4
		e	04 51 37.5
	MIN	eP	04 51 19.6
	MNA	eP	04 51 25.4
USGS 04h39m18.3s 22.0S 174.3W			
h=33km mb=5.3 Ms=4.9			
Tonga Islands			
Aug 7	CMB	eP	12 28 44.7
	FRI	eP	12 28 44.8
	PRI	e	12 28 51.8
USGS 12h15m56.6s 20.6S 169.2E			
h=33km mb=5.3			
Vanuatu Islands			
Aug 8	PRS	eP	08 01 07.6
	PRI	eP	08 01 09.2
	MNA	eP	08 01 09.4
	MHC	eP	08 01 10.2
	FRI	eP	08 01 13.6
	CMB	eP	08 01 15.2
	WDC	eP	08 01 18.2
	MIN	eP	08 01 19.0
USGS 07h48m02.3s 37.0S 178.9E			
h=32km mb=5.3 Ms=5.6			
Off East Coast of North Island, New Zealand			
Aug 8	PRI	e(P)	09 14 05.8
	FRI	ePd	09 14 08.2
	PRS	e(P)	09 14 14.4
	MNA	eP	09 14 15.2
	CMB	eP	09 14 23.3
	SAO	e(P)	09 14 23.8
	MHC	eP	09 14 25.2
	BKS	e(P)	09 14 34.1
		e	09 14 38.0
		AMP(μm)	PER(s)
		PZ	0.022 1.0
	ORV	e(P)	09 14 46.9
	MIN	eP	09 14 55.4
	WDC	eP	09 15 01.7
USGS 09h10m47.8s 25.8N 109.9W			
h=10km mb=4.7 Ms=4.9			
Gulf of California			
Aug 8	LLA	iPd	16 00 23.1
	PRS	iPd	16 00 23.7
	SAO	iPd	16 00 25.1
	CMB	iPd	16 00 26.2
	GCC	iPd	16 00 28.6
	MHC	iPd	16 00 28.7
		iPcP	16 00 33.6
		ipP	16 00 47.8
	PCC	iPd	16 00 31.5
	BKS	iPd	16 00 32.2
		e(pP)	16 00 50.5
		ePP	16 03 32
		eS	16 10 10
		eSS	16 15 15
		eSSS	16 18 42
		e(G)	16 21 10
		e	16 24 40
		e	16 25 36
		AMP(μm)	PER(s)
		PZ	0.24 0.9
	BRK	iPd	16 00 32.4
	ORV	iPd	16 00 36.1
	MIN	iPd	16 00 38.0
	WDC	iPd	16 00 41.3
	FHC	iPd	16 00 48.9
		ipP	16 01 18.9
BRK mb=6.3 h=68km Distance=77°			
USGS 15h48m56.8s 19.0S 70.0W			
h=69km mb=6.4 Ms=6.9			
Northern Chile			
Aug 9	FHC	eP	23 21 45.7
	WDC	ePd	23 21 50.9
	ORV	ePd	23 21 57.2
	MHC	eP	23 22 04.2
	CMB	ePd	23 22 06.5
	PRS	e(P)	23 22 08.2
	PRI	eP	23 22 11.7
	FRI	eP	23 22 11.9
	MNA	e(P)	23 22 11.9
USGS 23h10m42.5s 35.6N 135.7E			
h=352km mb=4.3			
Southern Honshu, Japan			
Aug 10	PRS	eP	00 32 07.9
	PRI	eP	00 32 09.7
	MHC	eP	00 32 10.7
	FRI	eP	00 32 15.7
	CMB	ePc	00 32 16.6
	ORV	e(P)	00 32 17.9
	WDC	ePc	00 32 18.0
	MIN	e(P)	00 32 21.1
	MNA	ePc	00 32 26.4
USGS 00h20m52.3s 17.7S 175.1W			
h=195km mb=4.9			
Tonga Islands			
Aug 10	FRI	iPc	01 08 24.3
		iS	01 08 37.2
	MNA	iPc	01 08 25.5
		iS	01 08 38.9
	CMB	iPc	01 08 33.3
		iS	01 08 53.1
	LLA	iPc	01 08 41.5
	PRI	ePc	01 08 42.5
	SAO	ePc	01 08 46.2
	MHC	ePd	01 08 47.2
	GCC	e(P)c	01 08 51.0
	PCC	e(P)	01 08 53.9
	PRS	eP	01 08 57.8
	ORV	e(P)	01 09 01.0
BRK 01h08m06.3s 37.5N 118.6W			
h=11km ML=3.2(2)			
23 km NW of Bishop, CA			
Aug 10	FHC	iPc	04 45 14.7
		i	04 45 18.0
		iS	04 45 22.5
	ARC	iPc	04 45 15.4
		iS	04 45 22.6
	WDC	iPc	04 45 27.9
	MIN	ePc	04 45 38.0
	ORV	ePc	04 45 41.7
		iS	04 46 10.6
	PCC	e(P)	04 45 53.6
	GCC	e(P)	04 46 03.0
	SAO	eP	04 46 07.3
	PRS	e	04 46 14.8
BRK 04h45m04.8s 40.4N 124.5W			
h=17km ML=3.4(4) Mo=1.7E21(2)			
Cape Mendocino Sequence			
Aug 10	PRS	eP	04 46 26.8
	PRI	e(P)	04 46 27.5
	FRI	eP	04 46 32.6
	CMB	eP	04 46 36.1
	MNA	ePd	04 46 43.5
USGS 04h34m45.3s 15.9S 178.7W			
h=33km mb=5.1 Ms=5.3			
Fiji Islands Region			
Aug 10	PRS	eP	05 06 25.8
	PRI	ePc	05 06 27.8
	FRI	eP	05 06 32.0
	CMB	eP	05 06 33.3
USGS 04h53m20.9s 37.1S 178.9E			
h=33km mb=5.2 Ms=5.1			
Off East Coast of North Island, New Zealand			
Aug 10	FHC	eP	09 27 43.1
	WDC	iPd	09 27 48.8
	MIN	iPd	09 27 52.0
	PCC	ePd	09 27 52.5
	BRK	iPd	09 27 52.7
	BKS	eP	09 27 53.2
		AMP(μm)	PER(s)
		PZ	0.15 1.0
	ORV	ePd	09 27 53.6
	GCC	ePd	09 27 54.9
	SAO	eP	09 27 57.3
	PRS	iPd	09 27 58.8
	LLA	ePd	09 28 00.2
	CMB	iPd	09 28 00.3
	PRI	iPd	09 28 02.2
	FRI	iPd	09 28 04.3
	MNA	iPd	09 28 08.7
BRK mb=6.0 h=33km Distance=81°			
USGS 09h15m40.4s 16.1N 146.9E			
h=40km mb=5.7 Ms=5.6			
Mariana Islands			
Aug 10	GCC	eP	09 49 07.5
	PRS	ePc	09 49 07.6
	PCC	eP	09 49 07.8
	SAO	ePc	09 49 09.0
	BRK	ePc	09 49 09.2
	BKS	e(P)	09 49 09.6
		AMP(μm)	PER(s)
		PZ	0.025 0.9
	PRI	eP	09 49 09.8
	FRI	ePc	09 49 14.4
	CMB	ePc	09 49 15.6
	ORV	ePc	09 49 16.6
	WDC	iPc	09 49 17.0
	MIN	eP	09 49 18.6
	MNA	ePc	09 49 23.8
BRK mb=5.5 h=33km Distance=85°			
USGS 09h37m43.4s 23.8S 179.8W			
h=512km mb=5.2			
South of Fiji Islands			
Aug 10	MIN	ePKPc	11 10 34.8
	MNA	ePKPc	11 10 38.8
		ePKKP	11 21 40.2
	FRI	ePKPc	11 10 40.7
		e	11 21 33.1
	ORV	e	11 11 05.9
	PRI	e	11 21 23.6
	CMB	ePKKP	11 21 28.8
		e	11 21 38.4
	PRS	e	11 21 32.0
	WDC	ePKKP	11 21 49.4
USGS 10h52m19.9s 29.9N 63.8E			
h=164km mb=5.6			
Western Pakistan			
Aug 10	WDC	ePc	12 25 11.3
	MIN	ePc	12 25 18.1
	ORV	eP	12 25 20.9
	CMB	ePc	12 25 29.9
	MNA	e(P)	12 25 35.7
USGS 12h12m14.1s 38.1N 106.4E			
h=10km mb=5.4			
Northern China			
Aug 10	PRI	e(P)	15 38 20.0
	MNA	iPd	15 38 20.7
	LLA	e(P)	15 38 23.0
	PRS	eP	15 38 23.6
	CMB	eP	15 38 26.6
	MHC	eP	15 38 30.2
	ORV	ePd	15 38 38.6
	WDC	eP	15 38 44.3
USGS 15h28m16.6s 9.1S 79.3W			
h=33km mb=5.2			
Off Coast of Northern Peru			
Aug 10	WDC	e	18 08 10.1
	ORV	e	18 08 16.6
	CMB	eP	18 08 28.3
	MNA	ePd	18 08 35.9
USGS 17h57m43.9s 43.6N 147.7E			
h=53km mb=5.2 Ms=4.0			
Kuril Islands			
Aug 10	WDC	iPKPd	18 34 44.7
	ORV	ePKPd	18 34 46.7
	PCC	ePKPd	18 34 47.5
	MHC	ePKP	18 34 49.5
	CMB	ePKPd	18 34 49.8
	PRS	ePKP	18 34 50.6
	LLA	ePKP	18 34 51.1
	FRI	ePKP	18 34 51.8
	PRI	ePKPd	18 34 51.8
	MNA	ePKPd	18 34 53.3
USGS 18h15m44.4s 6.2S 104.9E			
h=33km mb=5.4 Ms=4.4			
Sunda Strait			
Aug 11	MNA	iPKPc	02 33 53.7
	CMB	ePKP	02 33 56
	WDC	iPKPc	02 34 02.5
USGS 02h14m06.8s 52.7S 20.2E			
h=10km mb=4.8			
South of Africa			
Aug 11	PCC	iPc	04 45 49.3
	GCC	iPc	04 45 49.3
	PRS	iPc	04 45 49.7
	SAO	iPc	04 45 50.4
	BRK	iPc	04 45 51.0
	BKS	eP	04 45 51.3
		AMP(μm)	PER(s)
		PZ	0.24 1.0
	ZSP	iPc	04 45 51.4
	LLA	iPc	04 45 51.8
	PRI	iPc	04 45 51.9
	FHC	iPc	04 45 55.0
	FRI	iPc	04 45 57.1
		i	04 46 04.5
	CMB	iPc	04 45 57.9
		i	04 48 03
	WDC	iPc	04 45 58.4
	ORV	iPc	04 45 58.5
	MIN	iPc	04 46 00.3
	MNA	iPc	04 46 07.2
		i	04 47 13
		i	04 48 15
BRK mb=6.2 h=33km Distance=81°			
USGS 04h34m58.9s 18.1S 178.5W			
h=601km mb=5.4			
Fiji Islands Region			
Aug 11	CMB	iPc	08 27 24.8
	MNA	iPc	08 27 33.8
USGS 08h14m31.5s 9.1S 157.8E			
h=42km mb=4.7			
Solomon Islands			
Aug 11	WDC	iPc	10 45 04.6
	MIN	iPc	10 45 07.0
	ORV	iPc	10 45 07.5
	CMB	iPc	10 45 11.2
	FRI	iPc	10 45 13.4
	MNA	iPc	10 45 20.8
USGS 10h32m09.5s 5.5S 147.2E			
h=213km mb=4.9			
Papua New Guinea Region			
Aug 12	PCC	ePd	00 18 42.2
	GCC	ePd	00 18 42.9
	FHC	eP	00 18 43.4
	BRK	eP	00 18 43.5
	ZSP	eP	00 18 44
	BKS	eP	00 18 44.2
		AMP(μm)	PER(s)
		PZ	0.096 1.0
		LZ	1.6 20.
		LN	0.61 20.
		LE	1.1 20.
	PRS	ePd	00 18 44.4
	SAO	eP	00 18 45.3
	MHC	iPd	00 18 46.2
		AMP(μm)	PER(s)
		PZ	0.090 1.6
	LLA	ePd	00 18 46.3
	PRI	ePd	00 18 47.1
	WDC	iPd	00 18 47.5
		i	00 18 48.5
		e	00 18 59
		i	00 19 18.2
		e	00 19 28
		e	00 20 20
	ORV	eP	00 18 49.2
		i	00 19 19.8
	CMB	iPd	00 18 50.7
		i	00 18 51.6
		e	00 19 03
		i	00 19 21.3
		e	00 19 32.5
		e	00 19 43
	FRI	iPd	00 18 51.3
		i	00 18 52.3
		i	00 19 22.0
	MNA	iPd	00 18 59.8
		i	00 19 00.8
		e	00 19 12
		i	00 19 30.7
BRK Ms=5.4 Distance=87°			
USGS 00h06m29.3s 12.3S 166.6E			
h=113km mb=5.4			
Santa Cruz Islands			
Aug 12	MNA	iPc	03 19 44.3
		ipP	03 19 58.8
		i	03 20 15.5
	FRI	iPc	03 19 50.2
		ipP	03 20 05.0
	CMB	iPc	03 19 55.8
		ipP	03 20 10.2
	PRI	iPc	03 19 56.3
		epP	03 20 11.0
	LLA	ePc	03 19 57.6
	PRS	ePc	03 19 59.9
	SAO	eP	03 20 00.4
	ORV	iPc	03 20 02.9
		ipP	03 20 17.3
	MHC	iPc	03 20 03.0
		ipP	03 20 17.3
		AMP(μm)	PER(s)
		PZ	0.18 1.68
	MIN	iPc	03 20 03.5
		ipP	03 20 17.3
	GCC	ePc	03 20 04.1
	BKS	ePc	03 20 06.0
		AMP(μm)	PER(s)
		PZ	0.073 0.9
		LZ	1.7 20.
		LN	1.4 20.
		LE	2.5 20.
	BRK	ePc	03 20 06.1
	ZSP	iPc	03 20 06.1
	PCC	iPc	03 20 06.7
		ipP	03 20 21.5
	WDC	iPc	03 20 16.9
		ipP	03 20 [illegible]
		e	03 20 [illegible]
	FHC	iPc	03 20 17.2
		ipP	03 20 31.7
BRK Ms=5.3 Distance=53°			

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DATE	STA	PHASE	TIME (UTC)
USGS 03h09m59.5s 14.1N 59.3W			
h=52km mb=5.7 Ms=5.3			
Windward Islands			
Aug 12	FHC	ePd	04 43 14.6
	WDC	iPd	04 43 21.2
	MIN	iPd	04 43 25.9
	ORV	iPd	04 43 30.0
	MHC	iPd	04 43 41.8
		ipP	04 43 59.1
		isP	04 44 06.3
		iPcP	04 44 33.2
		AMP(μm)	PER(s)
		PZ	0.12 1.96
	CMB	iPd	04 43 43.5
	PRS	iPd	04 43 48.3
	LLA	iPd	04 43 48.8
	MNA	iPd	04 43 51.0
	FRI	iPd	04 43 51.5
	PRI	iPd	04 43 52.8
BRK mb=5.5 h=26km Distance=52°			
USGS 04h34m31.1s 54.9N 162.9E			
h=43km mb=5.1 Ms=4.7			
Near East Coast of Kamchatka			
Aug 12	CMB	iPd	06 13 39.0
	WDC	iPd	06 13 39.4
	MNA	ePd	06 13 47.8
USGS 06h01m08.8s 19.5S 173.4E			
h=33km mb=4.9 Ms=4.7			
Vanuatu Islands Region			
Aug 12	CMB	ePc	11 29 10.8
	WDC	ePc	11 29 11.7
	MNA	ePc	11 29 21
USGS 11h16m40.7s 19.6S 173.5E			
h=33km mb=4.9			
Vanuatu Islands Region			
Aug 13	MIN	eP	08 33 22.5
	ORV	ePc	08 33 24.3
	CMB	ePc	08 33 32.0
		e	08 33 41.2
	FRI	e(P)	08 33 34.3
		e	08 33 44.8
	MNA	eP	08 33 40.2
		e	08 33 49.4
USGS 08h21m16.9s 21.3N 144.2E			
h=33km mb=4.7 Ms=4.0			
Mariana Islands Region			
Aug 13	WDC	e(P)	08 56 35.7
		e	08 57 52.5
	MHC	e(P)	08 56 38.6
		e	08 56 55.0
	PRS	e(P)	08 56 42.0
		e	08 56 57.2
	FRI	e(P)	08 56 47.4
		e	08 57 03.6
	CMB	eP	08 56 48.6
		e	08 57 05.1
	MNA	ePc	08 56 56.5
		e	08 57 12.8
USGS 08h44m07.8s 30.9S 178.0W			
h=55km mb=5.3			
Kermadec Islands			
Aug 13	EKR	iPd	09 06 03.6
		iS	09 06 09.6
	FOX	iPd	09 06 03.8
	FHC	iPd	09 06 06.0
		i	09 06 11.1
		iS	09 06 14.9
	ARC	eP	09 06 06.5
		eS	09 06 14.1
	WDC	iPd	09 06 19.4
	MIN	ePc	09 06 28.9
	ORV	ePc	09 06 32.4
		iS	09 07 00.6
	PCC	e(P)	09 06 44.4
	GCC	e(P)	09 06 53.2
	SAO	e(P)	09 06 58.0
BRK 09h05m55.3s 40.4N 124.5W			
h=16km ML=3.1(3)			
Cape Mendocino Sequence			
Aug 13	FRI	eP	09 28 04.0
		ePcP	09 30 40.3
	MNA	iPd	09 28 04.7
		iPcP	09 30 40.1
	PRI	ePd	09 28 06.3
		epP	09 28 21.8
		ePcP	09 30 41.4
	PRS	ePd	09 28 10.9
		ePcP	09 30 42.6
	CMB	ePd	09 28 13.2
		epP	09 28 28.6
		ePcP	09 30 43.0
	SAO	e(P)	09 28 16.7
	MHC	ePd	09 28 17.2
		epP	09 28 32.6
	BKS	ePd	09 28 25.0
		ePcP	09 30 46.5
		AMP(μm)	PER(s)
		PZ	0.022 0.7
	ORV	eP	09 28 27.5
		ePcP	09 30 48.8
	MIN	ePd	09 28 31.1
	WDC	ePd	09 28 35.0
		epP	09 28 50.9
		ePcP	09 30 50.7
	FHC	ePd	09 28 46.7
		epP	09 29 01.4
		ePcP	09 30 55.6
	BRK	ePcP	09 30 46.6
BRK mb=5.1 h=60km Distance=36°			
USGS 09h21m22.8s 14.0N 91.2W			
h=61km mb=4.9			
Guatemala			
Aug 13	MNA	iPc	14 00 37.4
		eS	14 00 57.4
	FRI	iPc	14 00 48.4
	CMB	iPc	14 00 57.2
	PRI	iPc	14 01 01.0
	LLA	iPc	14 01 02.2
	SAO	iPc	14 01 07.7
		Lr	14 02 18
	PRS	iPc	14 01 07.8
	MHC	iPc	14 01 10.2
		Lr	14 02 24
	GCC	eP	14 01 13
	ORV	iPc	14 01 16.3
	BKS	ePc	14 01 16.8
		eS	14 02 40.8
	BRK	iPc	14 01 17.0
		iS	14 02 05
	ZSP	ePnc	14 01 17.5
		eP*	14 01 18.4
	PCC	iPc	14 01 17.6
	MIN	iPc	14 01 23.6
	WDC	iPc	14 01 33.0
	FHC	e(P)	14 01 48
BRK ML=5.6(8)			
USGS 14h00m00.1s 37.1N 116.0W			
h=0.km			
Underground Nuclear Explosion, N.T.S.			
Aug 13	SAO	iPd	15 14 11.5
	GCC	iPd	15 14 12.8
		iS	15 14 19.2
	PRS	iPc	15 14 13.7
		iS	15 14 19.9
	LLA	eP	15 14 18.6
	MHC	eP	15 14 19.2
		iS	15 14 31.6
	PCC	eP	15 14 22.6
	PRI	eP	15 14 24.6
	ZSP	e(P)	15 14 30.0
	CMB	eP	15 14 36.8
		eS	15 14 58.5
BRK 15h14m04.3s 36.6N 121.9W			
h=3km ML=2.8(2)			
Monterey area, CA			
Aug 13	FRI	eP	15 34 24.1
	MNA	eP	15 34 25.2
	PRI	eP	15 34 26.5
	PRS	e(P)	15 34 28.7
	LLA	eP	15 34 29.8
	CMB	eP	15 34 31.6
	GCC	eP	15 34 34.7
	MHC	eP	15 34 35.5
	BRK	eP	15 34 38.3
	PCC	eP	15 34 38.5
	BKS	eP	15 34 39.1
		epP	15 34 43.2
		eS	15 44 10.0
		eSS	15 49 04
		eLr	15 53 14
		e	15 59 48
		AMP(μm)	PER(s)
		PZ	0.019 0.8
		LZ	12 20.
		LN	8.6 20.
		LE	12 20.
	ORV	eP	15 34 41.2
	MIN	e(P)	15 34 41.5
	WDC	eP	15 34 47.8
	FHC	e	15 34 56.2
BRK Ms=6.2 Distance=75°			
USGS 15h23m06.9s 17.9S 70.9W			
h=36km mb=6.1 Ms=6.4			
Near Coast of Peru			
Aug 13	GCC	e	20 45 14.3
	BKS	eP	20 45 15.0
		AMP(μm)	PER(s)
		PZ	0.033 0.9
	LLA	eP	20 45 15.8
	MHC	eP	20 45 16.6
	WDC	eP	20 45 18.2
	PRI	eP	20 45 18.8
	ORV	eP	20 45 19.8
	CMB	eP	20 45 21.8
	FRI	eP	20 45 23.0
	MNA	eP	20 45 31.1
	MIN	eP	20 45 38.1
BRK mb=5.6 h=33km Distance=89°			
USGS 20h32m47.9s 11.3S 165.4E			
h=22km mb=5.4			
Santa Cruz Islands			
Aug 13	PRS	ePc	21 59 21.5
	MHC	ePc	21 59 22.5
	PRI	eP	21 59 24.0
	WDC	ePc	21 59 25.2
	ORV	ePc	21 59 26.5
	CMB	ePc	21 59 27.9
	FRI	eP	21 59 28.5
	MNA	ePc	21 59 37.0
USGS 21h46m53.3s 14.8S 168.0E			
h=33km mb=5.6 Ms=5.2			
Vanuatu Islands			
Aug 14	CMB	eP	02 42 07.3
	FRI	eP	02 42 11.7
USGS 02h29m52.4s 21.3N 144.2E			
h=33km mb=4.7			
Mariana Islands Region			
Aug 14	GCC	e(PKP)	06 11 30.7
	BKS	ePKP	06 11 31.4
	BRK	ePKP	06 11 32.0
	PRS	e(PKP)	06 11 32.2
	SAO	ePKP	06 11 33.0
	PRI	e(PKP)	06 11 33.1
	WDC	e(PKP)	06 11 33.5
		ePP	06 15 07.0
	MIN	ePKP	06 11 35.8
	ORV	ePKP	06 11 36.0
	CMB	ePKP	06 11 36.5
	FRI	ePKP	06 11 37.2
	MNA	ePKP	06 11 45.8
		ePP	06 15 23.1
USGS 05h59m04.2s 12.6S 166.6E			
h=29km mb=5.6 Ms=5.8			
Santa Cruz Islands			
Aug 14	SAO	eP	08 36 13.5
	GCC	eP	08 36 14.6
	PRI	eP	08 36 14.7
	LLA	e(P)	08 36 15.1
	MHC	e(P)	08 36 15.6
	FRI	eP	08 36 20.7
	CMB	eP	08 36 22.2
	ORV	e(P)	08 36 23.4
	WDC	eP	08 36 23.9
	MIN	eP	08 36 26.0
USGS 08h24m53.7s 16.6S 172.4W			
h=33km mb=5.2 Ms=5.3			
Samoa Islands Region			
Aug 14	WDC	iPc	15 34 22.9
	FHC	iPc	15 34 23.0
		iS	15 34 33.8
	ARC	e(P)	15 34 23.5
		iS	15 34 33.4
	EKR	iPc	15 34 24.3
		iS	15 34 35.6
		i	15 34 38.2
	FOX	iPd	15 34 24.8
		iS	15 34 36.2
	MIN	eP	15 34 33.4
	ORV	eP	15 34 41.9
		iS	15 35 06.3
	CMB	e(P)	15 35 13.4
BRK 15h34m11.3s 41.0N 123.2W			
h=20km ML=3.6(4) Mo=5.7E21(4)			
34 km NW of Weaverville, CA			
Aug 14	FHC	eP	17 45 56.1
		eScP	17 52 12.0
	WDC	eP	17 46 04.3
		eScP	17 52 14.8
	MIN	eP	17 46 09.7
		ePcP	17 47 11.2
		eScP	17 52 17.0
	ORV	eP	17 46 14.3
		ePcP	17 49 12.7
		eScP	17 52 18.8
	BRK	eP	17 46 21.2
		eScP	17 52 21.7
	BKS	eP	17 46 21.2
		epP	17 46 40
		eS	17 51 52
		eLq	17 54 30
		AMP(μm)	PER(s)
		PZ	0.10 1.0
		LZ	2.5 20.
	MHC	eP	17 46 26.5
		eScP	17 52 24.5
	CMB	eP	17 46 29.0
		ePPP	17 48 49.2
		ePcP	17 49 17.9
		eScP	17 52 25.5
	PRS	eP	17 46 33.3
		ePcP	17 49 19.7
		eScP	17 52 27.4
	LLA	eP	17 46 34.0
		ePcP	17 49 20.1
		eScP	17 52 28.0
	FRI	eP	17 46 38.0
		ePPP	17 48 52.4
		ePcP	17 49 21.3
		eScP	17 52 29.3
	MNA	eP	17 46 38.2
		ePcP	17 49 22.0
		eScP	17 52 23.0
	PRI	e(P)	17 46 48.5
		e(PcP)	17 49 22.0
		eScP	17 52 30.0
BRK mb=5.6 h=33km Distance=36°			
USGS 17h39m32.2s 53.4N 169.1W			
h=117km mb=5.7			
Fox Islands, Aleutian Islands			
Aug 14	GCC	ePd	20 41 47.9
		iS	20 41 52.5
	SAO	eP	20 41 48.5
	MHC	eP	20 41 50.0
		iS	20 41 55.5
	PRS	eP	20 41 55.7
	LLA	eP	20 41 55.8
	PCC	eP	20 41 57.0
	BKS	eP	20 42 02
		e(S)	20 42 17
	BRK	eP	20 42 04.2
	PRI	eP	20 42 05.0
	CMB	eP	20 42 09.4
	FRI	eP	20 42 10.8
BRK 20h41m42.8s 37.0N 121.7W			
h=8km ML=2.6(4)			
8 km W of Gilroy, CA			
Aug 14	MNA	ePd	22 31 34.0
	PRI	ePd	22 31 35.3
	LLA	ePd	22 31 37.7
	PRS	ePd	22 31 38.5
	CMB	ePd	22 31 40.0
	MHC	ePd	22 31 42.8
	GCC	e(P)	22 31 42.8
	BRK	eP	22 31 46.1
	ORV	ePd	22 31 48.6
	WDC	ePd	22 31 53.5
USGS 22h20m42.1s 19.1S 63.9W			
h=597km mb=5.3			
Southern Bolivia			
Aug 14	MIN	e(P)	23 33 54.3
	WDC	ePd	23 33 56.5
	ORV	eP	23 34 03.6
	CMB	ePd	23 34 13.5
	PRS	eP	23 34 15.2
	FRI	ePd	23 34 19.2
	MNA	ePd	23 34 20.8
USGS 23h22m42.6s 36.9N 141.6E			
h=52km mb=4.9			
Near East Coast of Honshu, Japan			
Aug 15	WDC	iPd	00 40 41.7
	MIN	ePd	00 40 45.9
	ORV	ePd	00 40 49.7
	MHC	ePd	00 41 00.0
	CMB	ePd	00 41 01.7
	PRS	ePd	00 41 05.7
	LLA	ePd	00 41 06.5
	MNA	iPd	00 41 08.3
	FRI	eP	00 41 08.7
USGS 00h31m49.6s 52.7N 152.6E			
h=526km mb=4.9			
Northwest of Kuril Islands			
Aug 15	PRI	eP	09 46 30.2
		e	09 46 56.3
	PRS	e(P)	09 46 33.0
	LLA	eP	09 46 33.3
		e	09 46 59.0
	CMB	eP	09 46 36.5
		e	09 47 05.6
	ORV	eP	09 46 45.8
		e	09 47 11.6
	MIN	eP	09 46 46.5
	WDC	eP	09 46 50.0
		e	09 47 06.5
USGS 09h34m47.5s 23.1S 68.6W			
h=101km mb=5.1			
Northern Chile			
Aug 15	FRI	eP	18 16 25.5
		epP	18 16 42.0
	PRI	eP	18 16 26.4
		i	18 16 30.2
		epP	18 16 43.0
	MNA	eP	18 16 28.7
		i	18 16 32.0
		ipP	18 16 44.9
	LLA	eP	18 16 28.8
		i	18 16 32.7
	PRS	eP	18 16 29.2
		i	18 16 33.0
		epP	18 16 46.0
	CMB	ePc	18 16 32.6
		i	18 16 36.1
		ipP	18 16 48.7
	GCC	eP	18 16 33.6
		epP	18 16 50.0
	BKS	eP	18 16 36
		epP	18 16 41
		eS	18 26 50
		eSS	18 32
		eLr	18 34 30.6
		eSSS	18 35 32
		eLq	18 39
		AMP(μm)	PER(s)
		PZ	0.36 1.6
		LZ	4.5 20.
		LN	2.2 20.
		LE	20.
	PCC	eP	18 16 36.6
		epP	18 16 53.0

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DATE	STA	PHASE	TIME (UTC)
	BRK	eP	18 16 37.1
		epP	18 16 54.2
	ORV	eP	18 16 41.8
		i	18 16 45.4
		ipP	18 16 58.5
	MIN	eP	18 16 43.8
		epP	18 17 00.5
	WDC	eP	18 16 47.1
		i	18 16 50.3
		iP	18 17 03.4
	FHC	eP	18 16 53.5
		epP	18 17 10.4

BRK Ms=5.9 Distance=82°
USGS 18h04m23.1s 28.1S 70.9W
h=37km mb=6.0 Ms=6.1
Central Chile

Aug 16	FRI	e(P)	01 09 48.8
		ePcP	01 12 12.0
	MNA	eP	01 09 48.9
		ePcP	01 12 12.2
	PRI	eP	01 09 52.8
	LLA	eP	01 09 55.0
		ePcP	01 12 15.1
	CMB	eP	01 09 58.0
		ePcP	01 12 15.7
	WDC	e(P)	01 10 08.7
		ePcP	01 12 23.3
	ORV	eP	01 10 11.8
		ePcP	01 12 20.0

USGS 01h02m48.5s 13.0N 88.8W
h=72km mb=4.9
Off Coast of Central America

Aug 16	EKR	iPc	19 10 33.7
		iS	19 10 37.7
	FOX	iPc	19 10 34.0
	FHC	iPc	19 10 35.7
		i	19 10 40.9
		iS	19 10 42.6
	ARC	ePd	19 10 36.5
		e(S)	19 10 44.7
	WDC	iPc	19 10 49.0
		eS	19 11 09.0
	MIN	eP	19 10 58.6
		eS	19 11 27.5
	ORV	eP	19 11 02.0
		iS	19 11 32.2
	ZSP	e(P)	19 11 02.0
	BKS	e(P)	19 11 10.3
	PCC	eP	19 11 13.2
	GCC	eP	19 11 20.7
	CMB	eP	19 11 24.7
	SAO	eP	19 11 26.7
	PRS	eP	19 11 33.0
	FRI	eP	19 11 40.1

BRK 19h10m23.7s 40.3N 124.6W
h=18km ML=3.8(6) Mo=7.7E21(3)
Cape Mendocino Sequence

Aug 16	WDC	eP	20 19 10.2
	ORV	eP	20 19 16.7
	CMB	eP	20 19 25.6
	PRS	eP	20 19 27.2
	FRI	eP	20 19 30.3
	PRI	eP	20 19 30.6

USGS 20h07m59.4s 33.1N 137.7E
h=344km mb=4.4
Near South Coast of Honshu, Japan

Aug 16	PRI	eP	21 51 40.5
	PRS	eP	21 51 41.0

DATE	STA	PHASE	TIME (UTC)
	BKS	eP	21 51 42
		eS	22 02 10
		eSS	22 08 30
		eLq	22 15 20
		eLr	22 19 44
			AMP(μm) PER(s)
		PZ	0.038 .8
		LZ	10 20.
		LN	7.1 20.
		LE	5.6 20.
	GCC	eP	21 51 42.0
	LLA	eP	21 51 42.0
	MHC	eP	21 51 43.5
	FRI	eP	21 51 46.5
	CMB	eP	21 51 47.5
	ORV	eP	21 51 49.3
	WDC	eP	21 51 50.3
	MNA	eP	21 51 54.8

BRK Ms=6.2 Distance=90°
USGS 21h38m48.1s 35.0S 179.7E
h=73km mb=5.5
South of Kermadec Islands

Aug 16	ORV	eP	22 54 04.5
	CMB	eP	22 54 11.8
	FRI	eP	22 54 16.2
	MNA	eP	22 54 20.0

USGS 22h41m56.9s 21.2N 144.3E
h=33km mb=4.9
Mariana Islands Region

Aug 17	MNA	e	03 46 04.7
		e	03 46 31.5
	MIN	e	03 46 07.3
	ORV	e	03 46 08.7
	WDC	e	03 46 10.3
	CMB	e	03 46 21.8
	FRI	e	03 46 42.5

USGS 03h44m20.0s 44.0N 114.7W
h=5km mb=4.0
Western Idaho

Aug 17	LLA	iPc	14 28 11.2
	PRS	iPd	14 28 13.2
		iS	14 28 17.1
	SAO	iPd	14 28 13.5
	PRI	eP	14 28 18.9
		iS	14 28 31.5
	GCC	eP	14 28 23.0
	MHC	eP	14 28 24.4
	FRI	ePc	14 28 29.3
		iS	14 28 45.8
	CMB	eP	14 28 35.7
	BKS	eP	14 28 37.3

BRK 14h28m07.4s 36.6N 121.2W
h=8km ML=2.8(4)
Bear Valley, 39 km SE of Hollister, CA

Aug 17	PRI	eP	20 42 42.6
	FRI	eP	20 42 44.7
	MNA	eP	20 42 48.0
	CMB	eP	20 42 58.2
	ORV	eP	20 43 17.0
	WDC	eP	20 43 30.6
	BKS	e(P)	20 44 40.5
		e(S)	20 47 48
			AMP(μm) PER(s)
		PZ	0.050 .8
		LZ	0.71 20.
		LN	0.89 20.
		LE	0.79 20.

DATE	STA	PHASE	TIME (UTC)

BRK Ms=4.2 Distance=15°
USGS 20h38m33.7s 22.6N 107.6W
h=10km mb=4.6 Ms=3.8
Off Coast of Central Mexico

Aug 18	BKS	eP	02 31 48.8
		eS	02 42 30
		eLr	03 00 10
			AMP(μm) PER(s)
		PZ	0.048 1.0
		LZ	11 20.
		LN	1.6 20.
		LE	8.6 20.
	WDC	eP	02 31 49.7
	MHC	eP	02 31 51.3
	PRS	eP	02 31 51.8
	MIN	eP	02 31 52.0
	ORV	eP	02 31 52.1
	PRI	eP	02 31 53.8
	CMB	ePc	02 31 54.7
	FRI	eP	02 31 56.6
	MNA	ePc	02 32 03.4

BRK Ms=6.2 Distance=90°
USGS 02h18m50.6s 5.6S 151.7E
h=50km mb=5.6 Ms=5.8
New Britain Region

Aug 19	FRI	iPd	08 04 29.2
	PRI	iPd	08 04 30.7
	MNA	iPd	08 04 31.1
	LLA	iPd	08 04 33.1
	PRS	iPd	08 04 33.6
	SAO	ePd	08 04 34.6
	CMB	iPd	08 04 36.0
	GCC	ePd	08 04 37.8
	MHC	iPd	08 04 38.3
	PCC	ePd	08 04 40.4
	BRK	ePd	08 04 41.4
	BKS	eP	08 04 42.0
			AMP(μm) PER(s)
		PZ	0.047 .8
	ORV	iPd	08 04 45.1
	MIN	iPd	08 04 46.7
	WDC	iPd	08 04 49.9
	FHC	ePd	08 04 56.8

BRK mb=5.5 h=33km Distance=°
USGS 07h52m44.2s 24.1S 66.9W
h=152km mb=5.4
Salta Province, Argentina

Aug 19	EKR	iPc	13 47 48.8
		iS	13 47 53.5
	FHC	iPc	13 47 49.0
		iS	13 47 52.9
	FOX	iPd	13 47 49.0
	ARC	iPd	13 47 50.3
		i	13 49 55.2
	WDC	iPc	13 48 01.0
		i	13 48 10.6
		iS	13 48 15.8
	MIN	iPd	13 48 12.1
		eS	13 48 33.9
	ORV	eP	13 48 16.0

BRK 13h47m43.0s 40.6N 123.9W
h=33km ML=3.1(4) Mo=2.3E20(2)
24 km SE of Eureka, CA

Aug 19	PRS	eP	15 11 44.4
	BRK	eP	15 11 46.0
	CMB	iPd	15 11 52.6
	ORV	iPd	15 11 53.7
	WDC	iPd	15 11 53.9
	MIN	eP	15 11 55.7
	MNA	ePd	15 12 01.3

USGS 15h00m21.5s 20.2S 178.5W
h=343km mb=4.7
Fiji Islands Region

Aug 20	GCC	eP	05 52 20.0
	PRS	eP	05 52 20.4
	PCC	ePc	05 52 20.6
	SAO	eP	05 52 21.1
	BRK	eP	05 52 22.1
	PRI	ePc	05 52 22.5
	BKS	eP	05 52 22.6
			AMP(μm) PER(s)
		PZ	0.10 1.0
	MHC	ePc	05 52 23.0
	FHC	eP	05 52 26.5
	FRI	ePc	05 52 27.3
	CMB	iPc	05 52 28.3
	ORV	ePc	05 52 29.3
	WDC	iPc	05 52 29.6
	MIN	ePc	05 52 31.1
	MNA	ePc	05 52 36.6

BRK mb=6.0 h=33km Distance=°
USGS 05h40m52.6s 24.2S 179.2E
h=527km mb=5.2
South of Fiji Islands

Aug 20	MNA	eP	21 26 06.8
	CMB	eP	21 26 58.7
	FRI	eP	21 27 03.2

USGS 21h14m56.4s 22.1N 144.2E
h=116km mb=4.7
Volcano Islands Region

Aug 21	CMB	eP	05 05 31.2
	FRI	eP	05 05 32.2
	MNA	eP	05 05 40.4

USGS 04h52m56.4s 13.3S 166.7E
h=33km mb=5.1 Ms=4.3
Vanuatu Islands

Aug 21	BKS	iPd	05 40 26.5
		iS	05 40 29.7
	BRK	iPd	05 40 26.6
	PCC	iPc	05 40 29.2
	MHC	iPd	05 40 33.8
	GCC	iPd	05 40 36.5
		iS	05 40 47.5
	SAO	iPc	05 40 42.4
	CMB	iPc	05 40 47.0
		iS	05 41 05
	ORV	iPc	05 40 53.1
		iS	05 41 15.6

BRK 05h40m23.0s 37.7N 122.1W
h=7km ML=3.1(8)
San Leandro Hills, 20 km SE of Berkeley, CA

Aug 21	EKR	eP	07 55 20.4
		iS	07 55 33.1
	FHC	eP	07 55 21.2
		iS	07 55 33.7
		i	07 55 47.3
	FOX	iPc	07 55 24.0
		e	07 55 36.5
		iS	07 55 39.1
	ARC	eS	07 55 31.4
	WDC	eP	07 55 36.3
		iS	07 56 01.8
	MIN	eP	07 55 46.4
	ORV	eP	07 55 53.0

DATE	STA	PHASE	TIME (UTC)

BRK 07h55m02.4s 41.5N 125.2W
h=20km ML=3.6(4) Mo=1.2E21(2)
Off Coast 88 km SW of Crescent City, CA

Aug 21	FOX	iPc	12 12 41.1
	EKR	ePd	12 12 41.1
		eS	12 12 46.9
	FHC	iPd	12 12 43.3
		iS	12 12 51.1
	ARC	iPc	12 12 43.9
		eS	12 12 51.4
	WDC	eP	12 12 56.5
	MIN	ePc	12 13 07.8
	ORV	eP	12 13 10.5

BRK 12h12m32.8s 40.4N 124.5W
h=16km ML=3.2(4) Mo=4.7E20(2)
Cape Mendocino Sequence

Aug 21	WDC	ePc	18 33 07.8
	ORV	e(P)	18 33 09.8
	CMB	ePc	18 33 13.7
	FRI	eP	18 33 16.2
	MNA	ePc	18 33 22.9

USGS 18h20m10.0s 5.5S 151.9E
h=45km mb=5.1
New Britain Region

Aug 21	WDC	ePc	18 35 36.1
	MHC	eP	18 35 38.1
	PRS	e(P)	18 35 39.0
	MIN	e(P)	18 35 39.1
	ORV	eP	18 35 39.2
	PRI	eP	18 35 42.0
	CMB	ePc	18 35 42.7
	FRI	eP	18 35 44.9
	MNA	ePc	18 35 51.6
	BKS	e	18 47 43.2
		eLq	19 03 44.0
		eLr	19 04 33.0
			AMP(μm) PER(s)
		LZ	4.4 20.
		LN	0.82 20.
		LE	3.6 20.

USGS 18h22m37.5s 5.5S 151.7E
h=36km mb=5.7 Ms=5.7
New Britain Region

Aug 21	GCC	e(P)	19 57 07.5
	WDC	eP	19 57 08.2
		e	19 57 19.8
	MHC	e(P)	19 57 08.7
	PRS	eP	19 57 09.3
	ORV	eP	19 57 09.8
	LLA	e(P)	19 57 11.2
	PRI	e(P)	19 57 12.0
	CMB	eP	19 57 13.3
	FRI	eP	19 57 15.3
		e	19 57 28.0
	MNA	ePc	19 57 22.0
		e	19 57 34.5

USGS 19h44m19.0s 6.5S 154.9E
h=62km mb=5.6
Solomon Islands

Aug 21	PRS	e(PKP)	21 58 42.9
	WDC	ePKP	21 58 46.3
	ORV	e(PKP)	21 58 46.6
	CMB	ePKP	21 58 46.7
		ePKKP	22 12 28.4
		e	22 12 51.0
	FRI	ePKP	21 58 48.3
		e(PKKP)	22 12 33.1
	MNA	ePKP	21 58 52.0
		ePKKP	22 12 13.4

USGS 21h38m56.7s 47.6S 99.9E
h=10km mb=5.3 Ms=5.5
Southeast Indian Rise

Aug 21	PRS	eP	22 41 10.6
	GCC	eP	22 41 10.9
	PRI	eP	22 41 12.4
	MHC	eP	22 41 13.2
	FRI	ePc	22 41 17.1
	CMB	ePc	22 41 18.8
	WDC	ePc	22 41 20.6
	MNA	ePc	22 41 26.1

USGS 22h29m24.0s 28.0S 179.8W
h=437km mb=4.5
Kermadec Islands Region

Aug 21	PRI	e(P)	23 04 39.1
	FRI	eP	23 04 41.3
		epP	23 04 52.4
		ePcP	23 10 35.8
		epPcP	23 10 41.8
	LLA	e(P)	23 04 45.2
	PRS	eP	23 04 45.3
	MNA	eP	23 04 48.2
		epP	23 04 59.7
		ePcP	23 10 40.2
		epPcP	23 10 48.1
	CMB	eP	23 04 55.5
		epP	23 05 06.1
		ePcP	23 10 31.1
	MHC	e(P)	23 04 56.5
	BKS	eP	23 05 06.4
		eS	23 08 38.8
		eLq	23 09 18.8
		eLr	23 10 22.0
			AMP(μm) PER(s)
		PZ	0.14 1.4
		LZ	3.7 20.
		LN	5.0 20.
		LE	13 20.
	ORV	eP	23 05 16.6
	WDC	eP	23 05 31.1

BRK Ms=5.3 Distance=20°
USGS 23h00m52.8s 23.9N 108.7W
h=10km mb=5.3 Ms=5.2
Gulf of California

Aug 22	WDC	eP	05 17 20.8
	MIN	eP	05 17 28.6
	ORV	e(P)	05 17 37.7
	CMB	e(P)	05 17 43.1
	FRI	eP	05 17 52.5
	PRS	eP	05 17 56.2

USGS 05h09m14.4s 52.2N 174.1E
h=33km mb=5.5 Ms=4.8
Near Islands, Aleutian Islands

Aug 22	WDC	ePd	10 45 12.0
	MIN	eP	10 45 19.2
	ORV	eP	10 45 29.1
	CMB	e(P)	10 45 51.6
	MNA	e	10 45 53.9
	FRI	eP	10 46 07.0

USGS 10h42m41.6s 49.4N 129.7E
h=10km mb=4.3
Vancouver Island Region

Aug 22	WDC	eP	15 24 00.3
	MIN	eP	15 24 04.7

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DATE	STA	PHASE	TIME (UTC)
	ORV	eP	15 24 08.1
	GCC	eP	15 24 17.0
	MHC	e(P)	15 24 17.8
	PRS	eP	15 24 22.7
	LLA	e(P)	15 24 23.5
	FRI	e(P)	15 24 26.5
	MNA	eP	15 24 27.3
USGS 15h14m02.1s 46.8N 151.9E			
h=56km mb=4.8			
Kuril Islands			
Aug 22	ORV	eP	21 56 43.4
	CMB	eP	21 56 53.7
	FRI	e(P)	21 57 00.5
USGS 21h45m35.2s 39.6N 141.5E			
h=90km mb=4.6			
Honshu, Japan			
Aug 23	WDC	ePKP	12 10 41.8
	ORV	ePKP	12 10 47.0
	CMB	ePKP	12 10 48.8
	MNA	ePKP	12 10 50.0
USGS 11h50m51.2s 10.8S 66.7E			
h=10km mb=4.8 Ms=4.6			
Mid-Indian Rise			
Aug 24	WDC	eP	04 09 43.2
	MIN	eP	04 09 46.3
	ORV	eP	04 09 48.5
	CMB	eP	04 09 55.7
	FRI	e	04 10 00.7
	MNA	eP	04 10 04.3
USGS 03h57m40.7s 21.2N 144.2E			
h=33km mb=5.0 Ms=4.4			
Mariana Islands Region			
Aug 24	WDC	eP	04 18 54.3
	CMB	eP	04 19 12.9
	MNA	eP	04 19 17.5
	FRI	eP	04 19 18.8
USGS 04h06m59.1s 21.1N 144.4E			
h=33km mb=5.0			
Mariana Islands Region			
Aug 24	PRI	eP	06 21 14.5
	MNA	eP	06 21 15.0
	LLA	eP	06 21 17.7
	PRS	eP	06 21 18.0
	CMB	eP	06 21 20.1
	GCC	eP	06 21 20.5
	MHC	eP	06 21 22.1
	ORV	eP	06 21 30.6
	WDC	eP	06 21 34.2
USGS 06h09m43.6s 20.1S 70.6W			
h=33km mb=5.2 Ms=4.5			
Near Coast of Northern Chile			
Aug 25	PRI	eP	18 10 52
	FRI	eP	18 10 52
	MNA	iPd	18 10 58.1
	CMB	ePd	18 11 04.0
	ORV	ePd	18 11 20.5
	WDC	ePd	18 11 29.8
USGS 18h05m51.8s 18.8N 104.2W			
h=33km mb=4.4			
Near Coast of Jalisco, Mexico			
Aug 25	FRI	ePc	18 13 25.4
	PRI	iPc	18 13 25.5
	LLA	ePc	18 13 29.5
	MNA	iPc	18 13 30.5
	PRS	ePc	18 13 30.5

DATE	STA	PHASE	TIME (UTC)
	CMB	iPc	18 13 36.4
	MHC	iPc	18 13 38.4
	ORV	iPc	18 13 53.0
	MIN	eP	18 13 58.6
	WDC	ePc	18 14 02.1
USGS 18h08m25.5s 18.8N 104.3W			
h=33km mb=5.0			
Near Coast of Jalisco, Mexico			
Aug 26	GCC	ePc	07 07 50.0
	PCC	iPc	07 07 50.2
	PRS	iPc	07 07 50.3
	SAO	iPc	07 07 50.9
	BRK	iPc	07 07 51.8
	PRI	iPc	07 07 52.2
	LLA	ePc	07 07 52.3
	MHC	iPc	07 07 52.5
	BKS	eP	07 07 52.6
		eS	07 17 06.4
		e	07 20 41.2
			AMP(μm) PER(s)
		PZ	0.12 0.7
	FRI	iPc	07 07 57.3
	ORV	iPc	07 07 59.5
	CMB	iPc	07 07 59.5
		epP	07 10 02.8
	WDC	iPc	07 07 59.7
		epP	07 10 04.2
	MIN	iPc	07 08 02.3
	MNA	iPc	07 08 07.2
		epP	07 10 13.4
USGS 06h56m46.3s 20.7S 178.5W			
h=569km mb=5.7			
Fiji Islands Region			
Aug 26	CMB	iPc	08 51 37.2
	MNA	iPc	08 51 40.3
	FRI	iPc	08 51 45.1
		iS	08 52 01.3
	MHC	iPc	08 51 57.3
	LLA	iPc	08 51 58.1
		iS	08 52 25.0
	ORV	ePc	08 51 58.4
	SAO	iPc	08 51 59.9
	BRK	ePc	08 52 01.4
	BKS	eP	08 52 01.8
	PRI	ePc	08 52 02.5
	GCC	ePc	08 52 02.5
	PCC	ePc	08 52 03.5
	PRS	iPc	08 52 03.9
	MIN	ePc	08 52 11.7
BRK 08h51m22.3s 38.2N 119.4W			
h=10km ML=3.6(4)			
14 km W of Bridgeport, CA			
Aug 26	CMB	iPc	09 10 36.2
	MNA	iPc	09 10 39.3
		iS	09 10 53.1
	FRI	iPc	09 10 44.1
		iS	09 11 00.5
	MHC	eP	09 10 56.5
	LLA	ePd	09 10 57.0
	ORV	iPd	09 10 58.9
	SAO	iPc	09 10 58.9
	BKS	eP	09 11 0.8
BRK 09h10m21.4s 38.2N 119.4W			
h=6km ML=3.5(4)			
14 km W of Bridgeport, CA			
Aug 26	MHC	iPc	09 49 55.3
		iS	09 50 02.3
	SAO	iPd	09 49 56.0

DATE	STA	PHASE	TIME (UTC)
	LLA	iPd	09 49 57.5
	GCC	iPc	09 50 00.0
	PRS	iPd	09 50 02.6
	CMB	iPd	09 50 06.3
	PRI	iPd	09 50 07.3
	BKS	iPc	09 50 07.3
		eS	09 50 25.2
		e	09 50 37.0
		e	09 50 55.4
	FRI	iPc	09 50 07.5
BRK 09h49m46.6s 37.1N 121.1W			
h=3km ML=3.8(6) Mo=5.7E21(4)			
5 km N of San Luis Reservoir, CA			
Aug 26	MNA	iPc	13 13 25.5
	CMB	ePc	13 13 26.3
	WDC	iPc	13 13 41.5
USGS 13h01m23.0s 37.3S 95.3W			
h=10km mb=5.1			
Southern Pacific Ocean			
Aug 26	FRI	eP	17 08 47.3
	CMB	eP	17 08 48.7
	PRS	e	17 08 54.2
	MNA	eP	17 08 56.5
USGS 16h56m10.5s 29.9S 177.4W			
h=33km mb=5.0			
Kermadec Islands			
Aug 26	MNA	e(P)	21 17 46.0
	PRI	e(P)	21 17 46.6
	LLA	eP	21 17 49.0
	PRS	e(P)	21 17 50.0
	CMB	eP	21 17 51.8
	ORV	eP	21 18 01.2
USGS 21h06m27.5s 19.9S 66.7W			
h=255km mb=4.7			
Southern Bolivia			
Aug 26	MNA	eP	22 28 50.9
	CMB	eP	22 29 00.0
	ORV	e(P)	22 29 06.0
USGS 22h21m56.4s 13.2N 90.3W			
h=42km mb=4.4 Ms=4.1			
Near Coast of Guatemala			
Aug 27	MNA	e(P)	10 17 38.2
	MIN	eP	10 17 38.8
	CMB	e(P)	10 17 46.0
	FRI	e(P)	10 17 51.5
USGS 10h06m58.7s 46.1N 27.6W			
h=10km mb=4.8 Ms=5.0			
North Atlantic Ridge			
Aug 28	BRK	iPd	05 16 35.4
	ZSP	iPc	05 16 35.5
	BKS	iPd	05 16 35.7
		iS	05 16 37.2
	PCC	iPd	05 16 42.1
	MHC	eP	05 16 48.7
	GCC	eP	05 16 50.2
	SAO	iP	05 16 56.2
	CMB	eP	05 16 59.4
BRK 05h16m33.8s 37.9N 122.3W			
h=8km ML=3.4(4) Mo=6.9E20(4)			
San Pablo Ridge, 7 km N of Berkeley, CA			
Aug 28	ZSP	iPc	05 48 32.7
	BRK	iPd	05 48 32.8
	BKS	iPd	05 48 33.1
	PCC	iPd	05 48 39.7

DATE	STA	PHASE	TIME (UTC)
	MHC	iPd	05 48 46.5
	GCC	eP	05 48 47.8
	SAO	ePc	05 48 53.7
	CMB	eP	05 48 56.8
BRK 05h48m31.3s 37.9N 122.3W			
h=7km ML=2.9(4) Mo=1.7E20(2)			
San Pablo Ridge, 7 km N of Berkeley, CA			
Aug 28	PRS	eP	13 13 53.0
	MHC	eP	13 13 53.5
	LLA	eP	13 13 53.7
	WDC	eP	13 13 54.4
	PRI	eP	13 13 56.0
	ORV	eP	13 13 56.5
	CMB	ePc	13 13 58.5
	FRI	eP	13 13 59.8
	MIN	eP	13 14 06.8
	MNA	ePc	13 14 07.5
USGS 13h01m12.5s 11.2S 161.6E			
h=34km mb=5.0			
Solomon Islands			
Aug 28	FHC	iPc	13 34 44.0
		eS	13 35 13.4
	WDC	eP	13 35 00.7
	MIN	eP	13 35 11.1
	ORV	eP	13 35 14.5
	BKS	e(P)	13 35 15.9
	PCC	eP	13 35 17.9
	MHC	eP	13 35 25.5
	GCC	eP	13 35 25.8
	SAO	eP	13 35 32.2
	CMB	eP	13 35 34.5
BRK 13h34m12.4s 40.5N 126.6W			
h=5kmR ML=3.5(4)			
215 km SW of Eureka, CA			
Aug 29	PRS	iPc	00 06 30.9
		i	00 06 33.8
	SAO	iPc	00 06 35.2
	LLA	iPd	00 06 38.8
		iS	00 06 48.9
	GCC	iPc	00 06 39.6
	PRI	iPc	00 06 41.3
		iS	00 06 54.7
	MHC	ePn	00 06 45.2
		iPc	00 06 45.95
		iS	00 06 59.7
	PCC	ePn	00 06 48.1
		ePg	00 06 49.7
	ZSP	eP	00 06 53.2
	BKS	ePn	00 06 54.3
		ePg	00 06 55.9
		eS	00 07 16.6
	BRK	e	00 06 55.5
	FRI	eP	00 06 56.5
	CMB	e	00 06 59.2
BRK 00h06m24.5s 36.3N 121.7W			
h=3km ML=3.2(4)			
43 km SE of Monterey, CA			
Aug 29	CMB	eP	03 59 48.3
	MNA	iPc	03 59 52.1
		iS	04 00 06.0
	SAO	iPc	04 00 10.8
	BKS	iPc	04 00 12.4
		eS	04 00 42.4
	ZSP	eP	04 00 13.7
	PRI	iPd	04 00 14.7
	WDC	e	04 00 37.8
BRK 03h59m33.7s 38.2N 119.4W			

DATE	STA	PHASE	TIME (UTC)
h=5kmR ML=3.6(6)			
14 km W of Bridgeport, CA			
Aug 30	MHC	eP	12 28 10.3
		e	12 28 25.8
	FRI	eP	12 28 13.3
		e	12 28 29.3
	CMB	eP	12 28 14.4
		e	12 28 30.6
	ORV	eP	12 28 16.6
	WDC	eP	12 28 16.7
		e	12 28 33.3
	MNA	eP	12 28 22.3
		e	12 28 38.5
USGS 12h15m35.5s 30.3S 178.0W			
h=56km mb=5.4			
Kermadec Islands			
Aug 30	FHC	eP	22 18 41.0
	WDC	iPd	22 18 50.3
	MIN	eP	22 18 54.8
	ORV	eP	22 18 59.5
	BRK	eP	22 19 05.8
	MHC	eP	22 19 12.0
	FRI	e(P)	22 19 13.8
	CMB	eP	22 19 14.8
		e	22 21 36.8
	SAO	eP	22 19 15.8
	PRS	eP	22 19 19.0
	LLA	eP	22 19 19.9
	PRI	eP	22 19 24.2
	MNA	eP	22 19 24.3
USGS 22h12m11.3s 52.8N 168.9W			
h=33km mb=5.2 Ms=4.7			
Fox Islands, Aleutian Islands			
Aug 31	EKR	iPc	06 40 53.1
		iS	06 41 01.0
	FOX	iPc	06 40 55.0
		iS	06 41 05.4
	FHC	iPc	06 40 55.2
		iS	06 41 03.5
	ARC	eP	06 40 55.4
		eS	06 41 03.5
	WDC	iPc	06 41 10.3
	MIN	iPc	06 41 20.4
	ORV	ePc	06 41 23.9
	SAO	eP	06 41 49.4
BRK 06h40m42.7s 40.6N 124.8W			
h=21km ML=3.2(4) Mo=1.6E20(2)			
Cape Mendocino Sequence			
Aug 31	PRS	eP	07 04 44.2
	PCC	eP	07 04 44.8
	GCC	eP	07 04 45.0
	SAO	eP	07 04 45.5
	PRI	eP	07 04 46.3
	BRK	eP	07 04 46.8
	MHC	eP	07 04 47.1
	FRI	eP	07 04 51.1
	CMB	ePd	07 04 52.3
	ORV	eP	07 04 54.0
	WDC	ePd	07 04 54.7
	MIN	eP	07 04 56.3
	MNA	eP	07 05 00.2
USGS 06h52m52.1s 27.1S 178.4W			
h=308km mb=5.0			
Kermadec Islands Region			
Sep 1	WDC	eP	00 20 50.5
	MIN	eP	00 20 56.0
	BKS	eP	00 21 06.8

DATE	STA	PHASE	TIME (UTC)
			AMP(μm) PER(s)
	PZ	0.057	1.0
	MHC	eP	00 21 12.7
	CMB	eP	00 21 15.5
	PRS	eP	00 21 20.0
	FRI	eP	00 21 24.5
	PRI	eP	00 21 25.2
USGS 00h14m19.9s 53.8N 167.2W			
h=33km mb=5.0			
Fox Islands, Aleutian Islands			
Sep 1	FHC	eP	04 22 02.0
	WDC	ePc	04 22 09.3
	MIN	eP	04 22 15.0
	BRK	e(P)	04 22 25.7
	BKS	eP	04 22 26.2
		eLr	04 31 20
			AMP(μm) PER(s)
	PZ	0.038	0.8
	LZ	1.1	20.
	LN	0.71	20.
	LE	0.89	20.
	MHC	eP	04 22 31.8
	CMB	ePc	04 22 34.6
		ePcP	04 25 02.8
	PRS	eP	04 22 39.3
	LLA	eP	04 22 39.5
	MNA	e(P)	04 22 43.6
		ePcP	04 25 06.7
	FRI	eP	04 22 43.6
		ePcP	04 25 06.0
	PRI	eP	04 22 44.3
BRK Ms=4.6 Distance=34°			
USGS 04h15m39.3s 53.7N 167.1W			
h=33km mb=4.9 Ms=4.6			
Fox Islands, Aleutian Islands			
Sep 1	FRI	iPd	04 37 44.0
	MNA	iPd	04 37 45.8
		ePP	04 41 50.5
	PRI	iPd	04 37 45.8
		ePcP	04 37 52.3
		epP	04 38 52.0
			AMP(μm) PER(s)
	PZ	0.79	1.1
	LLA	iPd	04 37 48.1
	PRS	iPd	04 37 48.7
	SAO	iPd	04 37 50.1
		epP	04 38 47.6
		ePP	04 40 48.4
	CMB	iPd	04 37 51.0
		ipP	04 38 55.8
		ePS	04 47 48
		eSS	04 54 50
		ePKPPKP	05 08 54.3
			AMP(μm) PER(s)
	PZ	0.30	1.3
	GCC	iPd	04 37 53.1
	MHC	iPd	04 37 53.4
		epP	04 38 49.2
		ePP	04 41 55.4
		eSP	04 47 49.0
	PCC	iPd	04 37 55.7
	BRK	iPd	04 37 56.7
	BKS	iPd	04 37 56.7
		i	04 38 03.4
		epP	04 38 43.3
		i	04 38 53
		i	04 39 20
		ePP	04 41 04.7
		epPP	04 41 50
		eS	04 47 42

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DATE	STA	PHASE	TIME (UTC)
		e	04 47 44
		e(SKS)	04 47 59
		epS	04 48 51
		e	04 48 56
		eSSS	04 54 45
		eG	04 59 46
		eLr	05 05 26
		AMP(μm)	PER(s)
		PZ 0.83	1.3
	ZSP	iPd	04 37 57.0
	ORV	iPd	04 38 00.0
	MIN	iPd	04 38 01.8
	WDC	iPd	04 38 04.9
		ePcP	04 38 13.0
		eSP	04 48 59.7
		ePKPPKP	05 08 44.8
	FHC	iPd	04 38 12.1
		epP	04 39 17.2
		AMP(μm)	PER(s)
		PZ 0.46	.9
BRK mb=6.3 h=190km Distance=82°			
USGS 04h26m07.5s 23.1S 66.5W			
h=199km mb=6.0			
Juyjuy Province, Argentina			
Sep 1	FRI	eP	13 57 23.1
		epP	13 57 33.2
	MNA	eP	13 57 25.2
		epP	13 57 35.7
	PRI	eP	13 57 25.3
		epP	13 57 35.9
	LLA	eP	13 57 28.7
		epP	13 57 39.1
	PRS	eP	13 57 29.5
	CMB	eP	13 57 33.5
		epP	13 57 44.2
	MHC	eP	13 57 37.2
		epP	13 57 47.9
	ORV	eP	13 57 48.5
		epP	13 57 59.0
	MIN	e(P)	13 57 52.6
	WDC	eP	13 57 56.5
		epP	13 58 07.5
	BKS	eLr	14 06 30
		AMP(μm)	PER(s)
		LZ 1.6	20.
		LN 1.4	20.
		LE 0.0	20.
USGS 13h51m20.7s 16.2N 95.9W			
h=37km mb=5.1			
Oaxaca, Mexico			
Sep 1	BKS	iPc	22 57 02.0
		AMP(μm)	PER(s)
		PZ 0.033	0.7
	GCC	eP	22 57 59.8
	PCC	eP	22 58 00.0
	PRS	eP	22 58 00.0
	LLA	e(P)	22 58 01.8
	PRI	ePc	22 58 01.9
	MHC	ePc	22 58 03.2
	FHC	eP	22 58 06.1
	FRI	ePc	22 58 07.0
	CMB	iPc	22 58 08.0
		e	23 00 14.4
	ORV	ePc	22 58 08.9
	WDC	iPc	22 58 09.3
	MNA	ePc	22 58 16.5
		e	23 00 24.0
USGS 22h46m50.8s 21.9S 179.5W			
h=592km mb=5.5			
Fiji Islands Region			

DATE	STA	PHASE	TIME (UTC)
Sep 2	WDC	eP	00 50 11.6
	ORV	e(P)	00 50 19.6
	CMB	eP	00 50 24.5
	FRI	eP	00 50 28.9
USGS 00h37m13.7s 24.5N 123.3E			
h=79km mb=5.0			
Southwestern Ryukyu Islands			
Sep 3	MNA	iPc	00 13 03.1
	FRI	ePc	00 13 09.2
	CMB	iPc	00 13 15.7
	LLA	eP	00 13 16.7
	PRI	eP	00 13 17.7
	PRS	eP	00 13 19.4
	SAO	eP	00 13 20.6
	MHC	ePc	00 13 23.3
	ORV	ePc	00 13 24.1
	MIN	ePc	00 13 25.1
	BKS	ePc	00 13 26.9
		e	00 24 40
		eL	00 28 30
		AMP(μm)	PER(s)
		PZ 0.083	1.3
	WDC	ePc	00 13 29.2
	FHC	eP	00 13 40.8
USGS 00h04m53.5s 19.7N 71.5W			
h=34km mb=5.0 Ms=5.0			
Dominican Republic Region			
Sep 3	PRS	eP	01 01 32.3
	FRI	eP	01 01 40.4
	CMB	eP	01 01 41.6
	ORV	eP	01 01 42.5
	WDC	eP	01 01 42.6
	MNA	eP	01 01 50.6
USGS 00h50m25.0s 19.5S 177.8W			
h=439km mb=4.3			
Fiji Islands Region			
Sep 3	BKS	ePdifc	06 55 19
		ePKP	06 59 02.4
		ePP	07 00 15.5
		ePKP	07 00 16
		e	07 01 02
		i	07 01 13
		eSdif	07 08 07
		iPS	07 10 06
		eSS	07 15 50
		iPKPPKP	07 20 20
		i(SSS)	07 20 36
		i	07 24 00
		e	07 25 06
		iLq	07 27 15
		iG1	07 28 36
		i	07 30 24
		iLr	07 33 40
		i3S	07 48 06
		e	07 50 00
		e4S	07 54 44
		e5S	07 59 06
		e6S	08 02 45
		e7S	08 06 40
		i8S	08 11 00
		e9S	08 14 10
		e	08 17 50
		eLq2	08 18 28
		iG2	08 22 20
		eR2	08 35 00
		i	08 49 16
		e	08 55 24
		e	08 57 30

DATE	STA	PHASE	TIME (UTC)
		eG3	10 00 00
		e	10 03 00
		eR3	10 38 00
		e	10 52 00
		AMP(μm)	PER(s)
		LNE 75	19.
		LNW 22	19.
	BRK	ePdif	06 55 26
	CMB	e	06 58 55.5
		ePP	07 00 23.7
		AMP(μm)	PER(s)
		LNE 40	19.
		LNW 18	19.
	FRI	e	06 58 56.1
	ORV	e	06 58 58.4
	MNA	e	06 59 01.0
		ePP	07 00 26.7
	MIN	e	06 59 04.7
	MHC	ePP	07 00 12
		eSP	07 10 17
		eLr	07 33 43
		AMP(μm)	PER(s)
		LNE 73	19.
		LNW 6.0	19.
	WDC	ePP	07 00 31.1
	SAO	eT	09 05 21
BRK Ms=7.3 Distance=117°			
USGS 06h40m13.9s 58.9S 158.5E			
h=33km mb=5.9 Ms=7.3			
Macquarie Island Region			
Sep 3	PRS	ePKP	08 20 17.1
	FRI	ePKP	08 20 18.2
	MHC	ePKP	08 20 20.0
	CMB	ePKP	08 20 20.7
		e	08 21 33.2
	MNA	e(PKP)	08 20 21.6
		e	08 21 42.5
	BKS	ePKP	08 20 21.6
		e	08 21 20.5
		AMP(μm)	PER(s)
		PZ 0.52	1.0
	WDC	e(PKP)	08 20 21.9
		e	08 21 28.4
	ORV	ePKP	08 20 22.1
		e	08 21 46.7
	MIN	e(PKP)	08 20 27.5
USGS 08h01m36.2s 59.5S 159.0E			
h=33km mb=6.1 Ms=6.8			
Macquarie Island Region			
Sep 3	CMB	eP	09 43 31.6
	FRI	eP	09 43 36.5
	MNA	eP	09 43 38.0
USGS 09h31m03.5s 30.9N 131.6E			
h=51km mb=5.1			
Kyushu, Japan			
Sep 4	WDC	iPc	04 36 42.5
	ORV	eP	04 36 50.7
	MHC	eP	04 37 02
		eS	04 45 04
		eLr	04 55 58
	BKS	eP	04 37 02
		i	04 37 14
		e	04 37 19.5
		iPcP	04 37 56
		iS	04 44 55
		eSS	04 48 40
		eG	04 51 00
		e	04 51 16
		eLr	04 53 30

DATE	STA	PHASE	TIME (UTC)
		eL	04 54 22
		AMP(μm)	PER(s)
		PZ 0.13	1.2
		LZ 10	20.
		LN 3.6	20.
		LE 8.6	20.
	CMB	eP	04 37 02.8
	PRS	e(P)	04 37 05.8
	FRI	eP	04 37 10.0
	PRI	eP	04 37 10.2
	MNA	ePc	04 37 10.5
BRK Ms=5.9 Distance=58°			
USGS 04h27m08.9s 49.3N 156.4E			
h=33km mb=5.9 Ms=6.2			
Kuril Islands			
Sep 4	FRI	eP	11 35 25.9
	PRI	eP	11 35 27.8
	MNA	eP	11 35 28.0
	PRS	eP	11 35 30.5
	CMB	eP	11 35 33.0
	ORV	eP	11 35 41.8
	WDC	eP	11 35 46.6
USGS 11h23m46.2s 24.0S 66.8W			
h=202km mb=4.8			
Juyjuy Province, Argentina			
Sep 5	BKS	e(P)	16 11 08.9
		AMP(μm)	PER(s)
		PZ 0.10	1.4
	BRK	e	16 11 09.8
	MHC	eP	16 11 11.5
	PRS	eP	16 11 11.5
	WDC	eP	16 11 12.9
	LLA	eP	16 11 13.5
	PRI	eP	16 11 14.0
	ORV	eP	16 11 14.7
	MIN	eP	16 11 15.2
	CMB	eP	16 11 16.7
	FRI	eP	16 11 18.1
	MNA	eP	16 11 25.8
USGS 15h58m41.5s 10.6S 161.6E			
h=108km mb=5.0			
Solomon Islands			
Sep 5	EKR	iPd	17 01 22.5
		iS	17 01 28.7
	FOX	iPc	17 01 22.6
		iS	17 01 28.4
	FHC	iPc	17 01 25.2
		eS	17 01 33.0
	WDC	iPc	17 01 38.1
	MIN	eP	17 01 48.4
	ORV	eP	17 01 50.9
BRK 17h01m14.0s 40.4N 124.5W			
h=17km ML=3.1(2)			
Cape Mendocino Sequence			
Sep 6	FHC	iPc	14 31 35.9
		iS	14 31 49.5
	WDC	iPc	14 31 52.0
		iS	14 32 18.0
	MIN	iPd	14 32 02.6
	ORV	eP	14 32 07.9
BRK ML=3.5(2) Mo=2.8E20(2)			
Off Coast 106 km NW of Eureka, CA			
Sep 6	BKS	eP	15 36 21.7
		e	15 45 04.8
		e	15 51 42.8
		eLr	15 53 32.0
		AMP(μm)	PER(s)

DATE	STA	PHASE	TIME (UTC)
		PZ 0.077	1.4
		LZ 1.9	20.
		LN 0.61	20.
		LE 2.0	20.
	FHC	eP	15 36 51.7
	WDC	ePc	15 36 55.0
		i	15 37 09.0
	ORV	eP	15 37 03.7
		e	15 37 16.7
	MHC	e	15 37 14.1
	CMB	eP	15 37 15.8
		i	15 37 39.2
	PRS	eP	15 37 19.0
		e	15 37 32.3
	LLA	eP	15 37 20.1
		e	15 37 33.2
	BRK	e	15 37 21.5
	MNA	eP	15 37 23.7
		i	15 37 36.8
	FRI	eP	15 37 23.8
		e	15 37 36.2
	SAO	e	15 37 29.5
	PRI	e	15 37 37.0
USGS 15h27m22.4s 49.3N 156.3E			
h=42km mb=5.7 Ms=5.5			
Kuril Islands			
Sep 6	FHC	e	22 03 29.3
	WDC	eP	22 03 35.6
	ORV	eP	22 03 43.4
		e	22 03 50.5
	MHC	eP	22 03 52.5
	CMB	eP	22 03 56.0
	PRS	eP	22 03 59.2
	FRI	eP	22 04 03.1
	MNA	eP	22 04 03.7
	PRI	eP	22 04 04.1
	BKS	e	22 11 48.8
		e	22 18 16.8
		eLq	22 20 54.0
		eLr	22 22 00.0
		AMP(μm)	PER(s)
		LZ 1.3	20.
		LN 0.75	20.
		LE 1.2	20.
USGS 21h54m01.0s 49.2N 156.2E			
h=33km mb=5.3 Ms=5.6			
Kuril Islands			
Sep 7	MHC	eP	00 12 27.0
	FRI	eP	00 12 31.3
	CMB	eP	00 12 32.6
	ORV	eP	00 12 33.6
	WDC	eP	00 12 33.6
USGS 00h01m01.2s 23.8S 179.9E			
h=533km mb=5.0			
South of Fiji Islands			
Sep 7	PRS	eP	12 09 45.8
	PRI	eP	12 09 46.0
	PCC	eP	12 09 46.9
	MHC	eP	12 09 47.1
	GCC	eP	12 09 47.4
	SAO	eP	12 09 47.8
	BKS	eP	12 09 48.3
		eS	12 20 16.0
		eLq	12 32 12.0
		eLr	12 36 08.0
		AMP(μm)	PER(s)
		PZ 0.27	1.2
		LZ 29	20.
		LN 27	20.

DATE	STA	PHASE	TIME (UTC)
		LE 20	20.
	BRK	eP	12 09 48.4
	LLA	eP	12 09 50.3
	FRI	eP	12 09 51.4
	CMB	eP	12 09 52.2
	WDC	eP	12 09 55.0
		e	12 13 21.5
		e	12 13 25.1
	FHC	eP	12 09 55.4
	ORV	eP	12 09 55.9
	MIN	eP	12 09 57.8
	MNA	eP	12 10 01.4
BRK Ms=6.7 Distance=86°			
USGS 11h57m09.4s 31.1S 178.0W			
h=33km mb=5.8 Ms=6.7			
Kermadec Islands Region			
Sep 7	PRS	eP	17 56 15.5
	GCC	e(P)	17 56 16.0
	PRI	eP	17 56 17.2
	LLA	eP	17 56 17.7
	BRK	eP	17 56 18.2
	BKS	eP	17 56 18.4
		e	18 07 05.6
		eLr	18 22 54.0
		AMP(μm)	PER(s)
		PZ 0.070	1.0
		LZ 3.0	20.
		LN 2.4	20.
		LE 1.8	20.
	MHC	eP	17 56 18.5
	FRI	ePd	17 56 22.0
		e	17 59 43.0
	CMB	ePd	17 56 23.6
		e	17 59 46.7
	ORV	eP	17 56 25.3
	WDC	ePd	17 56 26.4
	MIN	eP	17 56 31.1
USGS 17h43m39.6s 31.2S 177.8W			
h=39km mb=5.5 Ms=5.5			
Kermadec Islands Region			
Sep 7	FRI	e(P)	20 46 21.7
	CMB	eP	20 46 21.8
USGS 20h33m37.8s 31.2S 177.8W			
h=33km mb=5.1			
Kermadec Islands Region			
Sep 8	FRI	eP	03 07 10.8
	MNA	ePc	03 07 11.2
	PRS	eP	03 07 16.4
	CMB	eP	03 07 19.6
	MHC	eP	03 07 23.7
	BKS	eP	03 07 27.4
		ePP	03 09 25.0
		eS	03 14 29.2
		eSS	03 18 11.0
		eLq	03 20 36.0
		eLr	03 22 48.0
		AMP(μm)	PER(s)
		PZ 0.065	1.0
		LZ 2.9	20.
		LN 1.6	20.
		LE 4.4	20.
	ORV	eP	03 07 32.3
	WDC	e(P)	03 07 39.4
	FHC	e(P)	03 07 50.7
BRK Ms=5.5 Distance=49°			
USGS 02h58m50.5s 6.5N 82.6W			
h=10km mb=5.4 Ms=5.6			
South of Panama			

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REGISTRATION OF EARTHQUAKES 1987

DATE	STA	PHASE	TIME (UTC)
Sep 8	MNA	eP	03 16 28.0
	FRI	eP	03 16 30.2
	PRS	eP	03 16 36.1
	CMB	e(P)	03 16 38.1
	MHC	e(P)	03 16 40.0
	ORV	eP	03 16 49.2
	WDC	eP	03 16 58.2
USGS 03h08m07.4s 6.5N 82.5W			
h=10km mb=5.4 Ms=5.8			
South of Panama			
Sep 8	FHC	ePd	13 44 37.0
	WDC	ePd	13 44 43.5
	MIN	eP	13 44 47.8
	ORV	eP	13 44 51.5
	BKS	eP	13 44 57.1
		AMP(μm)	PER(s)
	PZ	0.11	1.2
	MHC	eP	13 45 01.5
	CMB	ePd	13 45 03.8
		e	13 45 24.8
	LLA	eP	13 45 07.0
	PRS	eP	13 45 07.9
	FRI	eP	13 45 10.8
	PRI	eP	13 45 11.2
	MNA	ePd	13 45 11.5
USGS 13h35m16.2s 49.6N 156.4E			
h=83km mb=5.6			
Kuril Islands			
Sep 8	PRS	eP	16 44 24.6
	CMB	eP	16 44 32.2
	WDC	eP	16 44 35.6
	FRI	e(P)	16 44 36.5
	MNA	eP	16 44 40.2
USGS 16h31m47.0s 31.6S 177.7W			
h=33km mb=4.9 Ms=4.7			
Kermadec Islands Region			
Sep 8	PRS	eP	21 49 37.3
	MHC	eP	21 49 40.3
	LLA	eP	21 49 40.3
	FRI	eP	21 49 44.0
	CMB	ePd	21 49 45.5
	WDC	ePd	21 49 48.2
	MNA	eP	21 49 53.1
	BKS	eLr	22 18 06.0
		AMP(μm)	PER(s)
	LZ	1.4	20.
	LN	1.1	20.
	LE	1.0	20.
USGS 21h37m00.0s 31.4S 177.8W			
h=33km mb=5.2 Ms=5.1			
Kermadec Islands Region			
Sep 9	PRS	eP	03 20 32.2
	SAO	eP	03 20 32.9
	PRI	eP	03 20 34.0
	MHC	eP	03 20 34.2
	LLA	eP	03 20 34.5
	PCC	e	03 20 37.7
	FRI	eP	03 20 39.8
	CMB	eP	03 20 40.5
	ORV	eP	03 20 40.8
	WDC	eP	03 20 40.8
	MIN	e	03 20 42.9
	MNA	eP	03 20 49.8
USGS 03h09m37.7s 17.4S 178.9W			
h=541km mb=4.4			
Fiji Islands Region			
Sep 9	PRS	eP	05 17 20.9
	SAO	eP	05 17 21.3
	PRI	eP	05 17 22.9
	MHC	eP	05 17 22.9
	FRI	eP	05 17 28.2
	CMB	ePc	05 17 28.9
	ORV	eP	05 17 29.4
	WDC	ePc	05 17 29.4
	MIN	eP	05 17 31.8
	MNA	eP	05 17 38.3
USGS 05h06m27.5s 18.0S 178.5W			
h=567km mb=4.9			
Fiji Islands Region			
Sep 9	FRI	iPc	08 57 46.9
	PRI	iPc	08 57 56.0
		iS	08 58 25.0
	LLA	iPd	08 57 59.0
	MNA	iPd	08 58 02.3
	PRS	iPc	08 58 03.7
	CMB	iPc	08 58 04.4
		iS	08 58 37.3
	SAO	eP	08 58 05.2
	MHC	i	08 58 10.4
	GCC	eP	08 58 11.8
	PCC	eP	08 58 17.4
	BRK	eP	08 58 18.6
	BKS	eP	08 58 18.6
	ZSP	eP	08 58 19.6
	MIN	e	08 58 39.3
BRK 08h57m20.8s 36.1N 118.3W			
h=2km ML=4.3(6)			
55 km SW of Lone Pine, CA			
Sep 9	PRS	e	11 32 25.7
	CMB	eP	11 32 30.2
		e	11 32 37.1
	WDC	eP	11 32 30.3
	FRI	e	11 32 30.5
	MHC	e	11 32 30.6
	PRI	e	11 32 30.8
	ORV	e	11 32 34.3
	MIN	e	11 32 36.5
	MNA	e	11 32 39.0
USGS 11h20m40.9s 15.8S 179.1W			
h=33km mb=4.6 Ms=4.7			
Fiji Islands Region			
Sep 10	ORV	ePKP	02 43 06.2
	WDC	ePKP	02 43 54.7
		e	02 44 52.4
	MIN	ePKP	02 43 56.0
	PCC	ePKP	02 43 56.4
	LLA	ePKP	02 43 56.9
	MHC	ePKP	02 43 57.7
	PRS	ePKP	02 43 58.7
	CMB	ePKP	02 43 59.2
	PRI	ePKP	02 44 00.5
	FRI	ePKP	02 44 00.8
	MNA	ePKP	02 44 03.0
USGS 02h26m23.5s 7.1S 123.3E			
h=603km mb=5.4			
Banda Sea			
Sep 10	WDC	eP	03 56 00.0
		i	03 56 13.0
		e	03 58 13.8
	MIN	eP	03 56 05.1
		e	03 56 18.6
	ORV	e	03 56 13.4
	CMB	eP	03 56 22.7
		e	03 58 23.0
	FRI	eP	03 56 32.7
		e	03 58 26.4
	MNA	e	03 56 40.2
USGS 03h48m44.8s 51.9N 176.0W			
h=49km mb=5.1			
Andreanof Islands, Aleutian Is.			
Sep 10	CMB	eP	20 43 53.0
	WDC	eP	20 43 55.7
	MNA	eP	20 44 02.0
USGS 20h31m42.6s 24.0S 175.4W			
h=33km mb=4.8			
South of Tonga Islands			
Sep 11	FRI	ePd	00 46 27.3
		e	00 51 10.5
	PRI	ePd	00 46 28.9
	MNA	ePd	00 46 29.2
		e	00 51 21.0
	LLA	ePd	00 46 31.5
	PRS	ePd	00 46 31.9
	CMB	iPd	00 46 34.3
		e	00 51 05.1
		e	00 51 11.9
	GCC	ePd	00 46 36.3
	MHC	ePd	00 46 36.7
	BKS	e	00 46 40.8
	ORV	iPd	00 46 43.8
	MIN	ePd	00 46 45.9
	WDC	iPd	00 46 48.8
		e	00 51 07.3
		e	00 51 13.3
	FHC	eP	00 46 56.0
USGS 00h34m52.1s 22.3S 68.4W			
h=129km mb=5.4			
Northern Chile			
Sep 11	FRI	eP	01 42 37.2
	CMB	eP	01 42 38.9
	WDC	eP	01 42 41.6
USGS 01h29m53.1s 31.4S 177.7W			
h=33km mb=5.1			
Kermadec Islands Region			
Sep 11	FRI	eP	04 14 13.5
	MNA	ePc	04 14 16.4
		ePcP	04 14 39.5
	LLA	eP	04 14 17.0
		ePcP	04 14 41.7
	PRS	eP	04 14 17.1
		ePcP	04 14 41.8
	CMB	ePc	04 14 20.3
		ePcP	04 14 43.5
	ORV	eP	04 14 29.3
		ePcP	04 14 52.4
	WDC	ePc	04 14 34.3
		ePcP	04 14 57.5
USGS 04h02m02.7s 31.4S 70.8W			
h=89km mb=5.2			
Chile-Argentina Border Region			
Sep 12	ORV	e	11 49 33.5
	WDC	eP	11 49 33.5
	MIN	eP	11 49 34.0
	CMB	eP	11 49 34.4
	FRI	eP	11 49 35.5
	MNA	eP	11 49 44.1
USGS 11h36m43.1s 20.7S 169.0E			
h=19km mb=4.8 Ms=4.4			
Vanuatu Islands			
Sep 12	GCC	iPd	18 54 24.2
		iS	18 54 32.0
	SAO	iPc	18 54 27.8
	PCC	iPc	18 54 28.1
		iS	18 54 37.8
	BRK	iPc	18 54 30.8
		iS	18 54 43.3
	BKS	iPc	18 54 31.0
		eS	18 54 42.0
	ZSP	iPc	18 54 32.1
		iS	18 54 45.7
	LLA	iPc	18 54 33.0
		iS	18 54 46.4
	PRS	eP	18 54 34.6
		i	18 54 35.1
	CMB	eP	18 54 39.0
	PRI	eP	18 54 40.9
	FRI	eP	18 54 43.3
		iS	18 55 04.6
BRK 18h54m16.8s 37.3N 121.7W			
h=8km ML=3.3(4) Mo=4.7E20(2)			
Halls Valley, 18 km ESE of San Jose, CA			
Sep 13	FRI	ePc	11 27 33.1
		ePcP	11 30 03.1
	MNA	iPc	11 27 33.4
		epP	11 28 03.5
		esP	11 28 24.0
		iPcP	11 30 04.4
		eScP	11 33 38.3
	PRI	ePc	11 27 35.8
		iPcP	11 30 05.6
	LLA	eP	11 27 38.7
	PRS	eP	11 27 40.5
		iPcP	11 30 07.1
	SAO	eP	11 27 42.4
	CMB	iPc	11 27 42.5
		epP	11 28 15.4
		esP	11 28 33.3
		iPcP	11 30 07.3
		eScP	11 33 42.6
	GCC	eP	11 27 47.3
	PCC	eP	11 27 51.9
	BRK	eP	11 27 52.9
		ePcP	11 30 11.3
	BKS	ePc	11 27 53.0
		ePcP	11 30 11.2
		eS	11 33 28
		AMP(μm)	PER(s)
	PZ	0.079	0.75
	LZ	1.1	20.
	LN	1.3	20.
	LE	1.8	20.
	ORV	ePc	11 27 56.1
		eScP	11 33 50.0
	MIN	eP	11 27 59.6
		eScP	11 33 49.4
	WDC	iPc	11 28 03.6
		iPcP	11 30 15.3
		eScP	11 33 51.7
	FHC	eP	11 28 15.0
BRK mb=5.6 h=144km Distance= 36°			
USGS 11h20m52.2s 14.3N 90.0W			
h=123km mb=5.1			
Guatemala			
Sep 13	WDC	ePc	14 18 38.6
	MIN	eP	14 18 42.4
	ORV	eP	14 18 45.6
	BRK	eP	14 18 49.0
	BKS	ePd	14 18 49.5
		eS	14 28 24
		eLq	14 36 12
		eLr	14 38 40
		AMP(μm)	PER(s)
	PZ	0.084	0.9
	LZ	0.71	20.
	LN	0.71	20.
	LE	0.0	20.
	GCC	eP	14 18 52.6
	CMB	ePc	14 18 56.0
	SAO	eP	14 18 56.4
	LLA	eP	14 18 57.2
	PRS	eP	14 18 58.1
	FRI	eP	14 19 02.0
	PRI	eP	14 19 02.2
	MNA	eP	14 19 03.7
BRK Ms=5.0 Distance= 75°			
USGS 14h07m43.6s 39.4N 144.7E			
h=33km mb=5.6 Ms=4.9			
Off East Coast of Honshu, Japan			
Sep 13	FRI	eP	20 21 26.3
	PRI	eP	20 21 27.3
	MNA	eP	20 21 29.2
	LLA	eP	20 21 29.5
	PRS	eP	20 21 29.8
	CMB	eP	20 21 32.4
	SAO	eP	20 21 32.5
	GCC	eP	20 21 33.8
	PCC	e	20 21 37.4
	BKS	eP	20 21 38.7
		eS	20 32 18
		e	20 34 24
		eSS	20 38 12
		eLq	20 45 40
		eLr	20 50 56
		AMP(μm)	PER(s)
	PZ	0.14	1.3
	LZ	1.8	20.
	LN	1.8	20.
	LE	2.3	20.
	BRK	eP	20 21 41.0
	WDC	e	20 21 41.2
	ORV	eP	20 21 41.4
	FHC	eP	20 21 52.0
BRK Ms=5.7 Distance= 87°			
USGS 20h08m51.7s 34.3S 70.0W			
h=10km mb=5.8 Ms=5.6			
Chile-Argentina Border Region			
Sep 14	PRS	eP	05 04 41.8
	SAO	eP	05 04 42.4
	PRI	eP	05 04 44.0
	CMB	eP	05 04 49.9
	WDC	eP	05 04 50.5
	ORV	eP	05 04 50.7
	MIN	eP	05 04 52.4
	FRI	e(P)	05 04 59.1
	MNA	eP	05 04 59.5
USGS 04h53m50.8s 17.5S 178.9W			
h=579km mb=4.9			
Fiji Islands Region			
Sep 14	ORV	iPc	07 26 03.2
	WDC	iPd	07 26 05.1
		iS	07 26 23.1
	MIN	eP	07 26 07.2
		eP	07 26 09.2
		e	07 26 19.7
		eS	07 26 24.5
	FHC	eP	07 26 14.4
		i	07 26 17.7
	CMB	eP	07 26 23.5
	FRI	eP	07 26 40.8
	PRI	iPd	07 26 49.3
	MNA	eP	07 26 51.1
BRK 07h25m43.7s 39.5N 122.9W			
h=11km ML=3.0(6)			
35 km E of Willits, CA			
Sep 14	FHC	iPc	10 28 41.4
		ipP	10 29 23.0
	WDC	iPc	10 28 46.6
		ipP	10 29 28.3
	MIN	iPc	10 28 50.2
		ipP	10 29 31.9
	ORV	iPc	10 28 52.8
		ipP	10 29 34.5
	PCC	ePc	10 28 54.8
		ipP	10 29 36.7
	BRK	iPc	10 28 54.8
		ipP	10 29 36.6
	ZSP	iPc	10 28 54.8
		ipP	10 29 36.6
	BKS	ePc	10 28 55.0
		ipP	10 29 37
		AMP(μm)	PER(s)
	PZ	0.14	1.0
	GCC	ePc	10 28 57.8
		epP	10 29 39.7
	SAO	ePc	10 29 00.4
		epP	10 29 42.4
	CMB	iPc	10 29 01.5
		ipP	10 29 43.4
	PRS	iPc	10 29 02.5
		ipP	10 29 44.3
	LLA	ePc	10 29 03.3
		ipP	10 29 45.3
	PRI	iPc	10 29 06.0
		ipP	10 29 48.0
	FRI	iPc	10 29 06.5
		ipP	10 29 48.7
	MNA	iPc	10 29 08.8
		ipP	10 29 50.9
BRK mb=5.7 h=172km Distance=77°			
USGS 10h17m15.0s 30.5N 139.7E			
h=170km mb=5.7			
South of Honshu, Japan			
Sep 15	PRI	iPc	02 06 54.3
		iS	02 07 02.4
	FRI	iPd	02 06 58.3
		iS	02 07 09.6
	LLA	iPc	02 06 59.2
		iS	02 07 11.8
	PRS	iPc	02 07 02.7
		i	02 07 19.3
	SAO	iP	02 07 05.4
	GCC	eP	02 07 11.9
	MHC	iPd	02 07 12.0
	CMB	iPd	02 07 14.9
		iS	02 07 39.5
	PCC	e(P)	02 07 19.2
	BRK	ePd	02 07 21.9
	MNA	eP	02 07 26.3
BRK 02h06m43.2s 36.1N 119.9W			
h=27km ML=3.4(4)			
37 km E of Coalinga, CA			
Sep 16	FHC	iPc	00 07 44.7
		i	00 07 51.7
	ARC	iPd	00 07 47.1
		i	00 07 51.6
		e	00 07 53.2
		iS	00 07 56.5
	WDC	iPc	00 08 00.1

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DATE	STA	PHASE	TIME (UTC)
	MIN	iP	00 08 10.2
		iS	00 08 41.2
	ORV	iP	00 08 13.2
		iS	00 08 42.2

BRK 00h07m33.2s 40.3N 124.7W
h=12km ML=3.4(4) Mo=3.7E21(2)
Cape Mendocino Sequence

Sep 16	WDC	ePc	21 45 48.8
	MIN	eP	21 45 57.1
	ORV	e(P)	21 46 07.8
	CMB	e(P)	21 46 28.6
	MNA	ePc	21 46 38.1
	LLA	ePc	21 46 49.1
	PRS	e(P)	21 46 49.6
	FRI	ePc	21 46 49.7
	PRI	eP	21 46 51.7

USGS 21h43m01.3s 50.9N 130.0W
h=10km mb=4.5
Vancouver Island Region

Sep 17	MHC	eP	05 00 40.9
	CMB	eP	05 00 41.8
	FRI	ePc	05 00 43.9
	ORV	eP	05 00 44.0
	WDC	e(P)	05 00 46.8
	BKS	eS	05 13 00
		eSS	05 18 20
		eLq	05 25 32
		eLr	05 29 56
		AMP(μm)	PER(s)
		LZ 11	20.
		LN 2.5	20.
		LE 8.9	20.

BRK Ms=6.2 Distance= 90°
USGS 04h47m13.3s 4.1S 145.7E
h=15km mb=5.4 Ms=6.1
Near North Coast of New Guinea

Sep 17	MNA	eP	08 32 19.7
		e(S)	08 33 36.4
	CMB	eP	08 33 03.0
	FRI	e	08 33 22.8
	ORV	e	08 33 27.3
	MIN	eS	08 33 35.8
	PRI	e	08 33 50.7

USGS 08h31m26.5s 41.2N 113.1W
h=6km mb=4.1
Utah

Sep 17	PRI	ePd	11 06 32.4
	MNA	eP	11 06 33.2
	LLA	ePd	11 06 34.7
	PRS	ePd	11 06 34.8
	CMB	ePd	11 06 38.2
	ORV	ePd	11 06 47.3
	WDC	ePd	11 06 50.2

USGS 10h54m22.2s 30.6S 71.4W
h=69km mb=5.1
Near Coast of Central Chile

Sep 17	WDC	eP	17 46 15.2
	CMB	eP	17 46 58.1
	MNA	eP	17 47 04.0
	FRI	eP	17 47 10.7
	PRI	e(P)	17 47 22.3

USGS 17h43m25.8s 50.9N 129.6W
h=10km mb=4.5
Vancouver Island Region

Sep 17	WDC	eP	18 07 45.0
	ORV	eP	18 07 58.3
	GCC	eP	18 08 27.2
	CMB	e	18 08 28.3
	MNA	eP	18 08 28.7
	LLA	eP	18 08 40.9
	FRI	eP	18 08 41.1
	PRI	eP	18 08 47.6

USGS 18h04m53.7s 50.9N 129.9W
h=10km mb=4.8 Ms=4.8
Vancouver Island Region

Sep 17	LLA	iPd	18 48 49.7
		iS	18 48 52.6
	PRS	eP	18 48 56.8
	MHC	eP	18 48 58.2
		iS	18 49 09.4
	GCC	eP	18 49 00.2
	PRI	iPc	18 49 00.5
	FRI	eP	18 49 02.3
		eS	18 49 15.2
	CMB	ePd	18 49 06.5
		iS	18 49 23.3

BRK 18h48m44.3s 36.9N 120.9W
h=6km ML=2.6(3)
22 km SW of Los Banos, CA

Sep 17	FHC	e(P)	19 49 12.1
	WDC	eP	19 49 19.0
	MIN	eP	19 49 23.2
	ORV	eP	19 49 40.0
	CMB	eP	19 50 00.7
	MHC	e(P)	19 50 05.1
	MNA	eP	19 50 07.5
	LLA	eP	19 50 15.2
	FRI	eP	19 50 15.5
	PRI	eP	19 50 21.9

USGS 19h46m27.4s 50.9N 130.0W
h=10km mb=4.6 Ms=4.7
Vancouver Island Region

Sep 17	CMB	e(P)	21 21 26.0
	MNA	eP	21 21 31.8
	FRI	eP	21 21 39.2
	PRI	eP	21 21 45.2

USGS 21h17m49.3s 50.9N 130.2W
h=10km mb=4.4
Vancouver Island Region

Sep 17	PRS	eP	21 36 04.7
	PRI	eP	21 36 07.7
	MHC	eP	21 36 08.0
	FRI	eP	21 36 13.1
	CMB	eP	21 36 14.2
	WDC	eP	21 36 15.6
	MNA	eP	21 36 23.9

USGS 21h24m52.2s 18.4S 175.2W
h=252km mb=5.2
Tonga Islands

Sep 18	FHC	iPd	03 40 24.7
		iS	03 40 30.8
	ARC	iPc	03 40 26.9
		iS	03 40 32.3
	WDC	iPc	03 40 38.4
		eS	03 40 55.2
	MIN	ePc	03 40 48.3
	ORV	eP	03 40 52.8
	PCC	eP	03 41 05.8
	GCC	eP	03 41 15.0

BRK 03h40m16.2s 40.5N 124.4W
h=20km ML=3.4(4) Mo=2.2E21(2)
Cape Mendocino Sequence

DATE	STA	PHASE	TIME (UTC)
Sep 18	FRI	eP	08 55 14.0
	PRI	eP	08 55 15.5
	MNA	eP	08 55 16.1
	LLA	eP	08 55 18.0
	PRS	eP	08 55 18.4
	SAO	eP	08 55 20.0
	CMB	eP	08 55 21.3
	GCC	eP	08 55 23.0
	MHC	eP	08 55 23.4
	PCC	eP	08 55 25.7
	BRK	eP	08 55 26.7
	BKS	ePc	08 55 27.4
		AMP(μm)	PER(s)
		PZ 0.072	0.8
	ORV	eP	08 55 30.5
	MIN	eP	08 55 32.3
	WDC	eP	08 55 35.5
	FHC	eP	08 55 42.4

USGS 08h43m29.4s 24.3S 69.1W
h=96km mb=5.5
Northern Chile

Sep 18	PRI	iPd	09 40 57.0
	LLA	eP	09 41 02.9
	PRS	eP	09 41 06.2
	FRI	iPd	09 41 06.5
		iS	09 41 19.8
	SAO	iPd	09 41 09.3
	GCC	eP	09 41 16.1
	MHC	eP	09 41 16.1
	CMB	iPc	09 41 21.0
		iS	09 41 43.0
	PCC	eP	09 41 23.6
	MNA	e(P)	09 41 36.7

BRK 09h40m51.7s 36.2N 120.4W
h=9km ML=2.7(4)
12 km N of Coalinga, CA

Sep 18	WDC	eP	11 19 23.2
	ORV	e(P)	11 19 33.3
	CMB	eP	11 19 42.6

USGS 11h12m46.8s 53.5N 167.4W
h=33km mb=4.7
Fox Islands, Aleutian Islands

Sep 18	WDC	ePc	21 09 05.1
	ORV	e	21 09 22
	CMB	eP	21 09 41.8
	MHC	e(P)	21 09 44.0
	MNA	ePc	21 09 46.3
	FRI	e(P)	21 09 54.4
	LLA	e(P)	21 09 54.7
	PRS	e	21 10 00.0
	PRI	eP	21 10 01.0

USGS 21h06m11.6s 51.0N 129.7W
h=10km mb=4.4
Vancouver Island Region

Sep 18	WDC	eP	22 11 31.7
	ORV	eP	22 11 37.2
	CMB	eP	22 11 46.3
	MNA	eP	22 11 47.6
	FRI	eP	22 11 51.6
	LLA	eP	22 11 52.3
	PRI	eP	22 11 56.1

USGS 21h58m41.5s 47.0N 89.7E
h=33km mb=5.3 Ms=4.8
Northern Sinkiang Province, China

Sep 19	PRS	eP	05 57 36.8
	PRI	ePc	05 57 38.8
	WDC	ePc	05 57 43.2
	FRI	eP	05 57 43.3
	ORV	eP	05 57 43.4
	CMB	ePc	05 57 43.8
	MIN	eP	05 57 45.0
	MNA	ePc	05 57 52.1

USGS 05h45m07.2s 22.2S 171.5E
h=112km mb=4.9
Loyalty Islands Region

Sep 19	PRI	ePc	09 32 30.0
	MNA	ePc	09 32 30.5
		e	09 32 37.6
	FRI	eP	09 32 31.7
	LLA	ePc	09 32 32.8
	PRS	ePc	09 32 33.4
	CMB	ePc	09 32 36.4
		e	09 32 43.6
	GCC	e	09 32 38.7
	ORV	iPc	09 32 47.5
		e	09 32 49.4
		e	09 32 54.5
	MIN	e(P)	09 32 49.7
	WDC	iPc	09 32 53.1

USGS 09h21m40.9s 15.0S 75.7W
h=28km mb=5.1 Ms=5.1
Near Coast of Peru

Sep 19	WDC	ePKPc	12 02 16.9
		e	12 02 20.3
	ORV	ePKP	12 02 17.1
		e	12 02 20.8
	CMB	ePKPc	12 02 17.1
		e	12 02 20.6
	FRI	ePKP	12 02 17.3
	MIN	ePKP	12 02 18.0
		e	12 02 22
	MNA	ePKPc	12 02 23.5
		e	12 02 27.2

USGS 11h42m40.7s 48.5S 107.0E
h=10km mb=4.9 Ms=5.0
Southeast Indian Rise

Sep 19	WDC	ePc	16 49 00.9
		i	16 49 21.0
	MIN	e(P)	16 49 04.7
	ORV	eP	16 49 09.0
		e	16 49 28.0
	CMB	ePc	16 49 19.4
		e	16 49 38.6

USGS 16h38m07.6s 41.5N 142.0E
h=74km mb=4.9
Hokkaido, Japan, Region

Sep 19	BRK	iPc	18 34 05.0
		iS	18 34 08.9
	BKS	iP	18 34 05.4
		iS	18 34 09.6
	PCC	iPc	18 34 05.6
		iS	18 34 10.1
	ZSP	iPc	18 34 05.9
		iS	18 34 09.7
	GCC	iPc	18 34 14.9
		eS	18 34 28.2
	MHC	iPd	18 34 15.4
		iS	18 34 27.3
	SAO	iPc	18 34 21.5
	PRS	e(P)	18 34 25.4
		e(P)	18 34 25.4
	LLA	e(P)	18 34 28.0
	CMB	iPc	18 34 28.6
		iS	18 34 49.9
	ORV	e	18 34 31.1
	PRI	e	18 34 36.6
	FRI	ePd	18 34 37.5

BRK 18h33m59.3s 37.8N 122.6W
h=12km ML=3.3(4) Mo=1.8E21(2)
Off Coast 14 km W of San Francisco, CA

Sep 19	MNA	ePc	19 42 49.1
	LLA	ePc	19 42 51.1
	PRS	e(P)	19 42 52.6
	CMB	ePc	19 42 55.2
	BRK	eP	19 43 03.4
	ORV	eP	19 43 08.2
	WDC	e(P)	19 43 14.6

USGS 19h33m30.2s 4.1S 83.2W
h=33km mb=4.8
Off Coast of Northern Peru

Sep 19	BRK	iPc	19 59 27.2
		iS	19 59 28.6
	BKS	iPc	19 59 27.3
		iS	19 59 28.7
	ZSP	iPc	19 59 28.1
		iS	19 59 30.2
	PCC	iPd	19 59 33.1
	MHC	iPc	19 59 39.0
		iS	19 59 49.9
	GCC	iPd	19 59 41.0
		iS	19 59 52.9
	SAO	iPd	19 59 46.7
	CMB	iPc	19 59 50.7
		iS	20 00 09.2
	LLA	ePc	19 59 52.8
	PRS	iPc	19 59 53.4
	ORV	eP	19 59 54.1
		iS	20 00 15.5
	FRI	eP	20 00 00.8
	PRI	iPc	20 00 05.9

BRK 19h59m25.6s 37.9N 122.2W
h=10km ML=3.0(6) Mo=7.8E20(2)
Berkeley, CA

Sep 19	FRI	eP	21 28 24.4
	PRI	ePd	21 28 26.2
		ePcP	21 29 13.1
	MNA	ePd	21 28 26.8
		esP	21 28 44.2
		ePcP	21 29 12.5
		ePKPPKP	21 58 03.2
	LLA	ePd	21 28 29.0
	PRS	ePd	21 28 29.8
	CMB	ePd	21 28 32.9
		ipP	21 28 43.7
		iPcP	21 29 16.7
		e	21 31 04.5
		iPKPPKP	21 58 00.0
	GCC	eP	21 28 35.3
	MHC	ePd	21 28 35.7
	PCC	eP	21 28 39.0
	BRK	eP	21 28 40.0
	BKS	eP	21 28 40.1
		e	21 28 41.5
		AMP(μm)	PER(s)
		PZ 0.061	1.0
	ORV	ePd	21 28 44.9
	WDC	ePd	21 28 50.9
		esP	21 29 08.8
		ePcP	21 29 27.8
		ePKPPKP	21 57 51.3
	FHC	ePd	21 28 59.9

USGS 21h18m25.8s 9.2S 79.1W
h=67km mb=5.7

Off Coast of Northern Peru

Sep 19	FHC	ePd	22 07 21.6
	WDC	iPd	22 07 28.3
		i	22 07 50.2
	MIN	e(P)d	22 07 32.9
	ORV	iPd	22 07 36.4
	BRK	ePd	22 07 41.1
	BKS	eP	22 07 41.1
		AMP(μm)	PER(s)
		PZ 0.040	0.9
	GCC	eP	22 07 45.8
	MHC	ePd	22 07 46.3
		e	22 08 08.5
	CMB	ePd	22 07 48.5
		e	22 08 10.5
	PRS	ePd	22 07 51.8
		e	22 08 14.1
	LLA	ePd	22 07 52.4
		e	22 08 15
	FRI	ePd	22 07 55.2
		e	22 08 18
	PRI	ePd	22 07 56.1
		e	22 08 03.8
	MNA	iPd	22 07 56.3
		e	22 08 04.4

USGS 21h58m00.8s 49.6N 156.3E
h=84km mb=5.4
Kuril Islands

Sep 20	EKR	iPd	06 36 41.8
	FOX	iPc	06 36 43.5
		iS	06 36 50.9
	FHC	iPc	06 36 46.0
		iS	06 36 56.2
	ARC	eP	06 36 47.0
		iS	06 36 57.2
	WDC	iPc	06 36 57.6
		iS	06 37 20.2
	MIN	iPc	06 37 07.2
	ORV	e(P)	06 37 10.7
	PCC	eP	06 37 22.0
	GCC	eP	06 37 29.3
	MHC	ePc	06 37 32.8
		e	06 37 36.0
	CMB	e	06 37 35.0
	SAO	eP	06 37 35.3
		i	06 37 38.2
	PRS	ePc	06 37 42.5
	PRI	e(P)	06 37 51.0

BRK 06h36m32.1s 40.2N 124.6W
h=12km ML=3.7(2) Mo=1.3E21(2)
Off Coast 66 km NW of Garberville, CA

Sep 20	ZSP	ePc	18 23 42.4
		iS	18 23 58.1
	BRK	eP	18 23 43.3
		iS	18 23 58.1
	BKS	ePd	18 23 43.4
		eS	18 23 58
	ORV	ePd	18 23 46.0
	PCC	eP	18 23 47.9
		eS	18 24 08.8
	MHC	eP	18 23 52.8
	MIN	eP	18 23 [illegible]
	WDC	eP	18 23 [illegible]
	GCC	eP	18 23 55.4
	CMB	iPc	18 23 58.2
	SAO	eP	18 24 01.5
	LLA	eP	18 [illegible] 06.0
	PRS	eP	18 [illegible] 07.1

International Seismological Centre

DATE	STA	PHASE	TIME (UTC)
	FHC	e(P)	18 24 09.2
	FRI	eP	18 24 12.7
	MNA	eP	18 24 21.3

BRK 18h23m24.1s 38.8N 122.8W
h=2km ML=3.4(10)
The Geysers area, 20 km S of Clear Lake, CA

Sep 22	FRI	ePc	13 53 02.5
	MNA	ePc	13 53 03.5
		ipP	13 53 14.1
		isP	13 53 19.2
		i	13 53 55.9
		e	13 54 25.0
		ePPP	13 56 23.9
	PRI	eP	13 53 05.1
		ePcP	13 54 08.8
	LLA	eP	13 53 08.0
	PRS	ePc	13 53 09.1
	SAO	e(P)	13 53 10.8
		eS	14 01 14
		i	14 11 11
	CMB	ePc	13 53 12.3
		ipP	13 53 24.1
		iPcP	13 54 08.6
	MHC	eP	13 53 15.0
	GCC	eP	13 53 15.0
	PCC	e(P)	13 53 18.9
	BRK	eP	13 53 19.7
		eS	14 01 14
		e	14 06 05
		eLq	14 07 27
		e	14 08 56
		i	14 11 54

	AMP(μm)	PER(s)
LZ	7.0	20.

	BKS	eP	13 53 21.2
		e	13 53 49
		ePcP	13 54 30
		eS	14 01 20.5
		eSS	14 05 04.8
		e	14 06 02
		eLq	14 07 26
		eG	14 07 38
		e	14 08 56
		eLr	14 11 16

	AMP(μm)	PER(s)
PZ	0.60	2.0
LZ	15	20.
LN	10	20.
LE	16	20.

	ORV	ePc	13 53 23.3
	MIN	e(P)c	13 53 25.7
	WDC	ePc	13 53 29.1
		ePcP	13 54 15.0
	FHC	eP	13 53 39.1

BRK Ms=6.1 Distance=57°
USGS 13h43m37.7s 1.0S 78.1W
h=10km mb=6.1 Ms=6.2
Ecuador

Sep 22	MNA	iPc	16 31 01.4
	FRI	iPc	16 31 03.0
	PRI	ePc	16 31 03.0
	LLA	ePc	16 31 06.2
	PRS	ePc	16 31 07.3
	MHC	iPc	16 31 12.9
	GCC	e(P)c	16 31 15.1
	PCC	e(P)c	16 31 17.0
	BRK	ePc	16 31 17.7
	BKS	ePc	16 31 20.3

	AMP(μm)	PER(s)

DATE	STA	PHASE	TIME (UTC)
		PZ	0.12 1.5
	ORV	iPc	16 31 21.1
	MIN	ePc	16 31 23.2
	WDC	iPc	16 31 27.4

USGS 16h21m35.1s 1.1S 78.1W
h=10km mb=5.9 Ms=5.6
Ecuador

Sep 22	FHC	iPd	22 14 37.9
		e	22 14 42.0
	WDC	iPd	22 14 41.0
		e	22 14 44.8
	MIN	iPd	22 14 44.2
		e	22 14 48.2
	ORV	iPd	22 14 49.2
	BRK	i(P)d	22 15 00.7
	BKS	ePd	22 15 00.7

	AMP(μm)	PER(s)
PZ	0.26	1.2

	PCC	e(P)d	22 15 02.5
		e	22 15 06.5
	GCC	e(P)d	22 15 03.2
	MNA	iPd	22 15 03.7
		e	22 15 07.6
	MHC	iPd	22 15 05.3
	FRI	iPd	22 15 10.4
	LLA	iPd	22 15 11.7
	PRS	ePd	22 15 12.5
		e	22 15 16.7
	PRI	iPd	22 15 15.9
		e	22 15 20.1

USGS 22h05m15.8s 76.4N 134.3E
h=14km mb=5.6 Ms=5.1
Laptev Sea

Sep 23	FHC	ePd	07 25 39.5
	WDC	iPd	07 25 45.5
		e	07 26 17.3
	MIN	iPd	07 25 49.7
		e	07 26 21.4
	ORV	iPd	07 25 53.2
		e	07 26 24.8
	BRK	ePd	07 25 57.4
	BKS	eP	07 25 57.9

	AMP(μm)	PER(s)
PZ	0.16	1.1

	PCC	iPd	07 25 58.0
	MHC	iPd	07 26 02.2
	GCC	eP	07 26 02.8
	CMB	iPd	07 26 04.5
		e	07 26 34.8
	SAO	eP	07 26 04.8
	PRS	iPd	07 26 07.4
		e	07 26 40.4
	LLA	eP	07 26 08.2
	FRI	iPd	07 26 11.0
		e	07 26 43.0
	PRI	iPd	07 26 11.4
	MNA	iPd	07 26 12.1
		e	07 26 43.8

USGS 07h15m43.3s 46.0N 149.5E
h=130km mb=5.9
Kuril Islands

Sep 23	BRK	ePKP	15 33 53.4
	LLA	e(PKP)	15 33 54.0
	MHC	e(PKP)	15 33 54.1
	BKS	ePKP	15 33 54.1

	AMP(μm)	PER(s)
LZ	4.8	20.
LN	3.2	20.
LE	3.2	20.

DATE	STA	PHASE	TIME (UTC)
	FRI	ePKPc	15 33 55.5
	CMB	ePKPc	15 33 55.6
		e	15 47 29
	ORV	ePKPc	15 33 56.3
	WDC	iPKPc	15 33 56.3
		e	15 47 17
	MIN	ePKPc	15 33 56.7
	MNA	ePKPc	15 33 59.9
		e	15 47 18

USGS 15h14m56.3s 50.7S 139.3E
h=10km mb=5.8 Ms=6.1
South of Australia

Sep 23	FRI	ePKP	15 41 46.4
	WDC	ePKPc	15 41 47.1
	CMB	e(PKP)	15 41 47.3
	MNA	ePKP	15 41 49.5

USGS 15h22m46.2s 50.5S 139.5E
h=10km mb=5.5 Ms=5.9
South of Australia

Sep 23	GCC	eP	22 47 14.1
	PCC	eP	22 47 14.2
	PRS	ePc	22 47 14.2
	BRK	eP	22 47 15.2
	PRI	ePc	22 47 16.2
	LLA	ePc	22 47 16.3
	MHC	eP	22 47 16.6
	FRI	ePc	22 47 21.0
	CMB	ePc	22 47 22.2
	ORV	ePc	22 47 23.4
	WDC	iPc	22 47 23.7
	MNA	ePc	22 47 30.2

USGS 22h35m49.4s 23.8S 180.0W
h=507km mb=4.6
South of Fiji Islands

Sep 24	GCC	eP	03 46 23.5
	PCC	ePc	03 46 23.7
	PRS	ePc	03 46 24.1
	SAO	eP	03 46 24.8
	BRK	e(P)	03 46 25.2
	MHC	ePc	03 46 26.2
	PRI	ePc	03 46 26.2
	LLA	ePc	03 46 26.2
	FHC	ePc	03 46 29.3
	FRI	ePc	03 46 31.5
	CMB	ePc	03 46 32.3
	WDC	iPc	03 46 32.5
	ORV	ePc	03 46 32.6
	MIN	eP	03 46 34.6
	MNA	e(P)	03 46 40.0

USGS 03h35m33.6s 17.9S 178.6W
h=600km mb=5.0
Fiji Islands Region

Sep 24	FHC	eP	05 06 34.0
	WDC	ePd	05 06 39.3
		i	05 06 50.3
	MIN	ePd	05 06 43.2
	ORV	ePd	05 06 46.1
		e	05 06 56.9
	BRK	eP	05 06 49.0
	PCC	eP	05 06 49.4
	BKS	eP	05 06 49.7
		e	05 07 02

	AMP(μm)	PER(s)
PZ	0.044	0.8

	MHC	eP	05 06 53.3
		e	05 07 04.3
	CMB	ePc	05 06 55.9
		i	05 07 07.0

DATE	STA	PHASE	TIME (UTC)
	SAO	eP	05 06 56.5
	PRS	ePd	05 06 57.8
		e	05 07 08.6
	LLA	eP	05 06 58.5
	PRI	eP	05 07 01.6
	FRI	ePd	05 07 01.8
		e	05 07 12.9
	MNA	ePd	05 07 03.2
		e	05 07 14.3

USGS 04h55m21.3s 36.6N 141.3E
h=42km mb=5.5 Ms=5.8
Near East Coast of Honshu, Japan

Sep 24	GCC	eP	06 14 28.6
	PCC	eP	06 14 28.8
	PRS	ePc	06 14 29.0
		e	06 16 33.9
	SAO	eP	06 14 29.5
	BRK	ePc	06 14 30.5
	PRI	ePc	06 14 30.8
	BKS	eP	06 14 30.8

	AMP(μm)	PER(s)
PZ	0.074	1.0

	MHC	ePc	06 14 31.3
	FHC	ePc	06 14 35.1
	FRI	ePc	06 14 35.9
		e	06 16 42.3
	CMB	ePc	06 14 36.8
		e	06 16 43.0
	ORV	iPc	06 14 38.0
	WDC	iPc	06 14 38.2
		e	06 16 43.2
	MIN	ePc	06 14 39.8
	MNA	iPc	06 14 45.4
		i	06 16 52.9

USGS 06h03m19.8s 21.8S 179.5W
h=593km mb=5.5
Fiji Islands Region

Sep 24	MNA	iPc	15 00 33.0
	FRI	iPc	15 00 44.8
	CMB	iPc	15 00 53.1
		iPg	15 00 55.5
	PRI	iPc	15 00 57.9
		iPg	15 01 01.0
	LLA	e(P)	15 00 58.7
	SAO	ePc	15 01 04.0
		iPg	15 01 14
	PRS	iPc	15 01 04.4
	MHC	iPc	15 01 06.4
		iPg	15 01 17
		iSg	15 02 14
	GCC	e(P)	15 01 09.2
	ORV	iPc	15 01 12.0
	BRK	ePc	15 01 12.9
	BKS	eP	15 01 12.9
	ZSP	e(P)	15 01 13.5
		iPg	15 01 24.2
	PCC	iPc	15 01 13.8
	MIN	iPc	15 01 19.4
	WDC	iPc	15 01 28.7
	FHC	e(P)	15 01 44.0

BRK ML=5.5(7)
USGS 15h00m00.1s 37.2N 116.4W
h=0km mb=5.8 Ms=4.2
Underground Nuclear Explosion, N.T.S.

Sep 24	WDC	eP	17 34 14.8
	ORV	eP	17 34 15.5
	CMB	eP	17 34 16.0

USGS 17h21m26.8s 18.7S 167.1E
h=33km mb=4.2 Ms=3.9
Vanuatu Islands

Sep 24	FRI	ePKP	21 35 27.9
	PRI	ePKP	21 35 28.6
	PRS	ePKP	21 35 29.1
	MNA	ePKP	21 35 29.2
	CMB	ePKP	21 35 30.4
	MHC	ePKP	21 35 31.2
	BRK	ePKP	21 35 32.1
	BKS	eP	21 35 32.1

	AMP(μm)	PER(s)
PZ	0.065	1.0

	ORV	ePKP	21 35 33.9
	WDC	ePKP	21 35 35.2

USGS 21h16m33.8s 58.8S 25.2W
h=33km mb=5.2
South Sandwich Islands Region

Sep 25	MNA	ePn	04 29 11.3
		i(P*)	04 29 20.0
		iPg	04 29 26.6
		eSg	04 30 28.5
		iSn	04 30 29.0
	CMB	ePn	04 29 34.0
		iPg	04 29 58.0
		iSg	04 31 19.0
	ORV	ePn	04 29 35.4
		ePg	04 30 00.0
	MIN	ePn	04 29 35.7
		ePg	04 29 58.3
		e(Sn)	04 31 24.3
	FRI	ePn	04 29 40.0
		iPg	04 30 02.4
		iSg	04 31 25.0
	WDC	ePn	04 29 44.0
		iPg	04 30 14.0
		iSg	04 31 53.0
	MHC	ePn	04 29 51.7
		i(Sg)	04 31 57.0
	LLA	e(Pn)	04 29 54.4
		ePg	04 30 16.4
		eSg	04 31 55.5
	BKS	e(P)	04 29 54.6
		eS	04 31 54
		eSg	04 32 01.8
		e(S)	04 32 02.1
	PRI	ePn	04 29 57.5
		ePg	04 30 23.6
		iSg	04 32 04.8
	SAO	e(Pn)	04 29 58.0
		iPg	04 30 26.0
		iSg	04 32 05.5
	FHC	e(Pn)	04 30 01.3
		ePg	04 30 32.5
		eSg	04 32 24.2
	ZSP	ePg	04 30 24
		eSg	04 32 04.1
	PRS	e(Sg)	04 32 07.1

BRK ML=5.5(7)
USGS 04h27m58.2s 41.2N 113.2W
h=1km mb=4.7
West of Great Salt Lake, Utah

Sep 25	MNA	ePn	05 19 26.7
		ePg	05 19 43.5
		eSn	05 20 24.3
		eSg	05 20 44.6
	CMB	ePn	05 19 50.7
		ePg	05 20 13.5
		eSg	05 21 34.3
	MIN	ePg	05 20 12.3

DATE	STA	PHASE	TIME (UTC)
		eSg	05 21 42.7
	ORV	ePg	05 20 16.2
	FRI	ePg	05 20 17.5
		eSg	05 21 39.7
	MHC	iSg	05 22 16.1
	PRI	eSg	05 22 19.7

BRK Mag=4.2
USGS 05h18m13.6s 41.2N 113.2W
h=km mb=4.4
West of Great Salt Lake, Utah

Sep 26	PRI	eP	00 35 54.0
	MNA	ePd	00 35 54.3
	LLA	eP	00 35 56.3
	FRI	e	00 35 57.4
	CMB	e(P)	00 36 01.3
	MHC	ePd	00 36 02.1
	ORV	ePd	00 36 09.6
	WDC	eP	00 36 14.6

USGS 00h24m18.6s 21.5S 70.8W
h=45km mb=5.1 Ms=5.3
Near Coast of Northern Chile

Sep 26	FHC	e(P)	05 39 13.5
	WDC	ePc	05 39 19.0
		e	05 39 29.8
	MIN	ePc	05 39 23.9
	ORV	ePc	05 39 28.1
	BRK	eP	05 39 34.4
	PCC	e(P)	05 39 37.2
	MHC	ePc	05 39 40.2
	CMB	iPc	05 39 41.5
	PRS	ePc	05 39 46.5
	LLA	ePc	05 39 47.2
	MNA	ePc	05 39 49.2
		e	05 40 00.2
	FRI	ePc	05 39 49.7
	PRI	eP	05 39 51.1
	BKS	e	05 47 00
		eLr	05 57 32

	AMP(μm)	PER(s)
LZ	2.8	20.
LE	2.3	20.

USGS 05h30m36.4s 55.5N 164.5E
h=35km mb=5.1 Ms=5.1
Komandorsky Islands Region

Sep 26	GCC	iPd	05 53 56.7
		iS	05 54 00.9
	MHC	iPd	05 54 01.2
	PCC	iPc	05 54 02.7
		iS	05 54 09.8
	SAO	iPc	05 54 03.7
	BRK	iPc	05 54 08.1
		iS	05 54 18.4
	BKS	iPd	05 54 08.4
		eS	05 54 18.5
	ZSP	ePc	05 54 09.4
		iS	05 54 21.5
	PRS	iPc	05 54 10.8
		iS	05 54 23.5
	LLA	iPc	05 54 11.8
	PRI	iPc	05 54 19.3
	CMB	ePd	05 54 19.5
		i	05 54 22.2
	FRI	eP	05 54 22.9

BRK 05h53m53.8s 37.1N 121.0W
h=14km ML=3.0(4) Mc=2.9E+00(2)
Santa Cruz Mtns., 20 km NNE of Santa Cruz, CA

Sep 26	FOX	iPd	16 11 05.1

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REGISTRATION OF EARTHQUAKES 1987

DATE	STA	PHASE	TIME (UTC)
		iS	16 41 11.3
	EKR	iPc	16 41 05.3
		iS	16 41 10.2
	FHC	iPd	16 41 07.7
		i	16 41 12.5
		iS	16 41 15.7
	ARC	eP	16 41 08.3
		i	16 41 16.2
		i	16 41 16.4
		i	16 41 16.9
	WDC	iPc	16 41 20.8
	MIN	eP	16 41 30.9
		i	16 41 32.4
		eS	16 41 58.1
	ORV	ePc	16 41 35.3

BRK 16h40m56.8s 40.4N 124.5W
h=11km ML=3.0(2)
Cape Mendocino Sequence

Sep 26	WDC	eP	21 32 37.7
	ORV	e(P)	21 32 46.7
	CMB	e(P)	21 32 57.8
	MNA	e(P)	21 33 07.5

USGS 21h22m53.9s 48.2N 154.8E
h=33km mb=5.2 Ms=4.9
Kuril Islands

Sep 27	FRI	ePc	08 35 07.8
	PRI	eP	08 35 07.9
	LLA	eP	08 35 11.9
	PRS	eP	08 35 12.6
	MNA	iPc	08 35 12.8
	CMB	ePc	08 35 18.9
	SAO	e	08 35 19.6
	MHC	eP	08 35 21.0
	PCC	eP	08 35 27.6
	BRK	e(P)	08 35 29.2
	BKS	eP	08 35 32
		e(Lq)	08 40 00
	ORV	ePc	08 35 35.3
	MIN	ePc	08 35 40.6
	WDC	e(P)	08 35 45.9

USGS 08h30m00.8s 18.2N 103.8W
h=33km mb=5.0 Ms=4.7
Near Coast of Michoacan, Mexico

Sep 27	FOX	iPd	15 34 51.4
		iS	15 34 57.6
	EKR	iPc	15 34 51.6
	FHC	iPd	15 34 53.9
		i	15 34 59.3
		iS	15 35 02.0
	ARC	eP	15 34 55.1
		eS	15 35 02.5
	WDC	ePc	15 35 06.8
		i	15 35 13.9
	MIN	ePc	15 35 16.9
		eS	15 35 44.0
	ORV	eP	15 35 20.6
		e	15 35 48.0

BRK 15h34m43.7s 40.4N 124.4W
h=14km ML=3.3(2)
Cape Mendocino Sequence

Sep 27	FRI	eP	21 26 34.4
	MNA	ePc	21 26 36.5
	LLA	ePc	21 26 40.5
	CMB	ePc	21 26 44.3
	MHC	ePc	21 26 51.7
	ORV	eP	21 26 57.6
	FHC	eP	21 27 14.8
	BKS	eS	21 33 19

DATE	STA	PHASE	TIME (UTC)
		eScS	21 37 09
		eLq	21 39 00
		wLr	21 41 50
		AMP(μm)	PER(s)
		LZ	0.99 20.
		LN	0.88 20.
		LE	1.5 20.

USGS 21h19m05.1s 10.8N 86.3W
h=40km mb=4.9 Ms=5.1
Off Coast of Costa Rica

Sep 27	BRK	ePc	21 35 17.6
	PRS	ePc	21 35 19.5
	MHC	ePc	21 35 20.2
	PRI	ePc	21 35 21.1
	FRI	ePc	21 35 24.8
	ORV	ePc	21 35 24.8
	CMB	ePc	21 35 25.0
	WDC	iPc	21 35 25.6
	MIN	e	21 35 30.2
	MNA	ePc	21 35 33.2

USGS 21h22m35.5s 21.5S 169.8E
h=33km mb=5.3 Ms=5.6
Loyalty Islands Region

Sep 27	FRI	e	22 00 17.8
	MNA	eP	22 00 18.2
	CMB	ePc	22 00 27.1
	ORV	eP	22 00 40.2
	WDC	e	22 00 45.4

USGS 21h52m46.1s 10.8N 86.4W
h=33km mb=4.7
Off Coast of Costa Rica

Sep 27	FRI	e(P)	22 38 02.7
	MNA	eP	22 38 03.0
	CMB	eP	22 38 08.5
	ORV	eP	22 38 21.6

USGS 22h30m27.7s 10.7N 86.4W
h=26km mb=4.3 Ms=4.3
Off Coast of Costa Rica

Sep 27	FOX	iPd	23 02 19.0
		iS	23 02 24.0
	EKR	iPc	23 02 19.3
	FHC	iPd	23 02 21.8
		i	23 02 26.8
		iS	23 02 28.7
	WDC	iPc	23 02 35.3
	MIN	iPc	23 02 45.5
	ORV	eP	23 02 48.6

BRK 23h02m11.7s 40.4N 124.4W
h=13km ML=3.1(2) Mo=3.0E20(1)
Cape Mendocino Sequence

Sep 28	MNA	ePn	06 08 05.1
		i	06 08 21.3
		iSn	06 09 02.2
		iSg	06 09 22.0
	CMB	ePn	06 08 28.8
		iPg	06 08 51.6
		i	06 09 06.0
		iSn	06 09 43.2
		iSg	06 10 12.7
	MIN	ePg	06 08 52.2
		eSg	06 10 11
	ORV	ePg	06 08 54.5
		eSg	06 10 17.0
	FRI	iPg	06 08 56.3
		iSg	06 10 18.8

BRK Mag=4.2
USGS 06h06m52.3s 41.2N 113.2W

DATE	STA	PHASE	TIME (UTC)

h=km mb=4.1
West of Great Salt Lake, Utah

Sep 28	PRS	ePc	07 28 16.2
	PCC	ePc	07 28 16.6
	BKS	ePd	07 28 16.8
		eS	07 38 54
		e(PS)	07 40 07
		e(SSS)	07 48 31
		eLq	07 50 54
		eLr	07 54 53
		AMP(μm)	PER(s)
		PZ	0.044 0.9
		LZ	4.4 20.
		LN	3.2 20.
		LE	3.4 20.
	BRK	ePc	07 28 17.2
	SAO	ePc	07 28 17.2
	PRI	ePc	07 28 18.7
	WDC	iPc	07 28 21.0
	ORV	ePc	07 28 22.2
	CMB	ePc	07 28 22.8
	FRI	ePc	07 28 22.9
	MIN	ePc	07 28 23.3
	MNA	ePc	07 28 31.5

BRK Ms=5.9 Distance=88°
USGS 07h15m38.2s 18.4S 168.3E
h=31km mb=5.4 Ms=5.9
Vanuatu Islands

Sep 28	GCC	ePd	08 48 06.1
	PCC	iPd	08 48 06.3
	PRS	ePd	08 48 06.3
	SAO	iPd	08 48 07.7
	BRK	ePd	08 48 07.9
	PRI	ePd	08 48 08.3
	BKS	ePc	08 48 08.5
		AMP(μm)	PER(s)
		PZ	0.025 0.6
	FRI	ePd	08 48 13.4
	CMB	iPd	08 48 14.4
	ORV	iPd	08 48 15.4
	WDC	iPd	08 48 15.7
	MIN	ePd	08 48 17.6
	MNA	iPd	08 48 23.4

USGS 08h36m59.6s 20.8S 178.6W
h=542km mb=4.9
Fiji Islands Region

Sep 28	PCC	ePd	10 23 48.1
	PRS	ePd	10 23 48.1
	BKS	eP	10 23 50.3
		AMP(μm)	PER(s)
		PZ	0.025 0.7
	FRI	eP	10 23 55.3
	CMB	iPd	10 23 56.2
	ORV	iPd	10 23 57.3
	WDC	iPd	10 23 57.5
	MNA	iPd	10 24 04.9

USGS 10h12m37.4s 21.5S 179.0W
h=537km mb=5.0
Fiji Islands Region

Sep 28	PCC	e(P)	11 59 44.5
	GCC	e(P)	11 59 44.7
	BRK	e(P)	11 59 46.0
	SAO	e(P)	11 59 46.0
	PRS	e(P)	11 59 46.1
	FHC	e(P)	11 59 47.0
	LLA	e(P)	11 59 48.2
	PRI	e(P)	11 59 48.6
	BKS	eP	11 59 49

DATE	STA	PHASE	TIME (UTC)
		e	12 03 12
		e(PPP)	12 04 30
		e	12 07 32
		eS	12 10 26
		e(PPS)	12 11 32
		eSS	12 15 44
		eSSS	12 19 46
		eLq	12 22 16
		eLr	12 26 07
		AMP(μm)	PER(s)
		PZ	0.15 1.0
		LZ	20 20.
		LN	23 20.
		LE	18 20.
	WDC	iPc	11 59 51.3
	ORV	e(P)	11 59 51.8
	CMB	iPc	11 59 52.8
	FRI	ePc	11 59 52.8
	MIN	ePc	11 59 53.5
	MNA	ePc	12 00 01.6

BRK Ms=6.7 Distance=86°
USGS 11h47m08.6s 18.4S 168.1E
h=30km mb=5.7 Ms=6.8
Vanuatu Islands

Sep 28	PCC	e(P)	12 29 29.5
	GCC	e(P)	12 29 29.9
	BRK	e(P)	12 29 30.9
	PRS	ePc	12 29 31.0
	FHC	e(P)	12 29 31.3
	SAO	e(P)	12 29 31.8
	LLA	e(P)	12 29 33.1
	PRI	e(P)	12 29 33.4
	WDC	iPc	12 29 35.9
	BKS	e(P)	12 29 36.8
		AMP(μm)	PER(s)
		PZ	0.050 0.8
	ORV	iPc	12 29 37.0
	CMB	iPc	12 29 37.5
	FRI	ePc	12 29 37.8
	MIN	ePc	12 29 38.1
	MNA	ePc	12 29 46.1

USGS 12h16m52.0s 18.4S 168.1E
h=31km mb=5.3
Vanuatu Islands

Sep 28	ORV	ePc	12 53 50.6
	WDC	ePc	12 53 50.7
	CMB	iPc	12 53 51.0
	FRI	ePc	12 53 51.3

USGS 12h41m05.5s 18.1S 167.7E
h=33km mb=4.6
Vanuatu Islands

Sep 28	PCC	ePc	13 58 52.8
	GCC	e(P)	13 58 53.2
	BRK	eP	13 58 54.2
	SAO	e(P)	13 58 54.3
	PRS	ePc	13 58 54.6
	BKS	eP	13 58 54.6
		eS	14 09 36
		e(PS)	14 10 52
		e	14 13 44
		eLq	14 21 30
		eLr	14 25 26
		AMP(μm)	PER(s)
		PZ	0.26 1.3
	FHC	ePc	13 58 55.6
	LLA	e(P)	13 58 56.5
	PRI	ePc	13 58 56.8
	WDC	iPc	13 58 59.3
	ORV	iPc	13 59 00.4

DATE	STA	PHASE	TIME (UTC)
	CMB	iPc	13 59 01.0
	FRI	ePc	13 59 01.0
	MIN	iPc	13 59 01.4
	MNA	iPc	13 59 09.5

BRK mb=6.3 h=33km Distance=87°
USGS 13h46m14.0s 18.5S 168.2E
h=25km mb=5.8 Ms=6.5
Vanuatu Islands

Sep 28	PRS	eP	15 13 37.0
	WDC	eP	15 13 42.2
	ORV	eP	15 13 43.2
	CMB	eP	15 13 43.7
	FRI	eP	15 13 43.8
	MNA	e(P)	15 13 51.6

USGS 15h01m02.2s 18.1S 168.0E
h=54km mb=5.0
Vanuatu Islands

Sep 28	PRS	e(P)	23 22 14.8
	MHC	e(P)	23 22 16.2
	WDC	eP	23 22 20.0
	ORV	eP	23 22 20.8
	CMB	ePc	23 22 21.7
	FRI	eP	23 22 21.8
	MNA	eP	23 22 30.2

USGS 23h09m37.1s 18.3S 168.1E
h=31km mb=5.2 Ms=4.9
Vanuatu Islands

Sep 29	ZSP	eP	07 04 28.2
		iS	07 04 43.2
	BKS	eP	07 04 28.3
		e	07 04 33.0
		eS	07 04 43.3
		e	07 04 44.9
	BRK	ePd	07 04 29.4
		eS	07 04 43.4
	PCC	eP	07 04 33.2
		eS	07 04 53.6
	ORV	e(P)	07 04 34.8
	MHC	e(P)	07 04 39.0
	MIN	eP	07 04 42.6
	CMB	ePd	07 04 44.5
		e(S)	07 05 11.0

BRK 07h04m10.2s 38.8N 122.8W
h=1km ML=3.0(2)
The Geysers area, 23 km S of Clear Lake, CA

Sep 29	BKS	e	07 05 04.1
		e	07 05 07.9
		e	07 05 09.4
		eS	07 05 23.6
	ZSP	eP	07 05 08.3
		iS	07 05 23.2
	BRK	e(P)	07 05 10.4
		eS	07 05 23.4
	ORV	e(P)	07 05 14.8
	CMB	eP	07 05 24.5
		e(S)	07 05 51.8
	PCC	eS	07 05 33.1

BRK 07h04m50.0s 38.8N 122.8W
h=1kmR ML=3.2(2)
The Geysers area, 23 km S of Clear Lake, CA

Sep 30	PCC	eP	01 52 02.2
	GCC	eP	01 52 02.7
	BRK	eP	01 52 03.8
		eS	02 02 40
		ePPS	02 04 08

DATE	STA	PHASE	TIME (UTC)
		eSSS	02 12 06
		e(Lq)	02 15 32
		iLr	02 18 36
		AMP(μm)	PER(s)
		LZ	9.5 20.
	SAO	eP	01 52 03.9
		eLr	02 19 09
	PRS	eP	01 52 03.9
	BKS	ePc	01 52 04
		e(pP)	01 52 15.8
		e	01 53 12
		ePP	01 55 28
		eS	02 02 40
		ePS	02 03 42
		e	02 06 58
		eSS	02 08 32
		eSSS	02 12 06
		eLq	02 14 48
		eLr	02 18 34
		AMP(μm)	PER(s)
		PZ	0.12 1.2
		LZ	5.7 20.
		LN	2.1 20.
		LE	5.7 20.
	FHC	eP	01 52 04.9
	MHC	ePc	01 52 05.2
		eS	02 03 48.0
		eLr	02 18 56
	LLA	eP	01 52 06.0
	PRI	ePc	01 52 06.3
	WDC	eP	01 52 08.9
	ORV	eP	01 52 09.7
	CMB	ePc	01 52 10.3
		ePP	01 55 35.2
		iS	02 02 43
		eScS	02 03 06
		iSKS	02 03 57
		eLr	02 19 42
	FRI	ePc	01 52 10.7
	MIN	ePc	01 52 11.0
	MNA	ePc	01 52 19.3

BRK Ms=6.0 Distance=86°
USGS 01h39m28.1s 18.2S 167.9E
h=51km mb=5.4 Ms=6.3
Vanuatu Islands

Sep 30	CMB	e(P)	06 33 03.2
	MNA	eP	06 33 06.2
	WDC	eP	06 33 22.5
	FRI	e(P)	06 33 56.0

USGS 06h22m44.2s 23.4S 113.0W
h=10km mb=4.4
Easter Island Region

Sep 30	MNA	ePKP	07 57 28.0
	FRI	ePKP	07 57 30.9
	MIN	ePKP	07 57 31.7
	CMB	ePKP	07 57 31.8
	WDC	ePKP	07 57 32.5
	ORV	ePKP	07 57 33.5
	LLA	ePKP	07 57 34.0
	PRI	ePKP	07 57 34.1

USGS 07h37m36.3s 26.8S 26.7E
h=5km mb=4.9
Republic of South Africa

Sep 30	CMB	eP	08 01 03.4
	FRI	e	08 01 06.1
	MNA	e(P)	08 01 13.4

USGS 07h49m27.1s 16.4S 174.6W
h=33km mb=4.3
Tonga Islands

International Seismological Centre

DATE	STA	PHASE	TIME (UTC)
Sep 30	WDC	e(P)	12 29 01.1
	ORV	e(P)	12 29 19.4
	CMB	eP	12 29 42.7
	FRI	eP	12 29 57.8
USGS 12h27m51.9s 43.6N 126.9W			
h=10km			
Off Coast of Oregon			
Sep 30	GCC	ePd	14 05 37.4
	PCC	iPc	14 05 37.7
		iS	14 05 44.5
	BRK	eP	14 05 39.0
	BKS	iPc	14 05 39.1
		e(S)	14 05 48.0
	ZSP	eP	14 05 40.5
	SAO	iPd	14 05 42.8
	LLA	e(P)	14 05 47.2
	PRS	eP	14 05 49.1
		iS	14 06 06.0
	CMB	eP	14 05 49.7
		iS	14 06 06.4
	PRI	e(P)	14 05 56.2
	FRI	eP	14 05 57.4
BRK 14h05m28.1s 37.5N 121.7W			
h=5km ML=2.5(4) Mo=1.2E20(2)			
Calaveras Reservoir, 20 km NE of San Jose, CA			
Oct 1	WDC	ePc	03 26 01.6
	MIN	eP	03 26 06.0
	ORV	ePc	03 26 09.7
	CMB	ePc	03 26 22.0
	MNA	ePc	03 26 29.7
USGS 03h16m28.8s 49.7N 156.0E			
h=47km mb=5.0 Ms=4.3			
Kuril Islands			
Oct 1	FHC	eP	03 33 41.6
	WDC	ePc	03 33 47.5
		e	03 34 04.4
	MIN	ePc	03 33 52.4
	ORV	ePc	03 33 56.5
	CMB	ePc	03 34 09.8
	PRS	ePc	03 34 14.3
	LLA	ePc	03 34 14.8
	MNA	eP	03 34 17.3
	FRI	ePc	03 34 17.7
USGS 03h24m52.5s 54.5N 162.2E			
h=33km mb=4.8			
Near East Coast of Kamchatka			
Oct 1	PRS	ePc	07 41 43.1
	BKS	eP	07 41 43.5
		e(PPS)	07 53 13
		eLQ	08 03 36
		eLR	08 07 06
		AMP(μm)	PER(s)
		PZ 0.023	0.6
		LZ 2.5	20.
		LN 1.3	20.
		LE 2.3	20.
	MHC	ePc	07 41 44.3
	LLA	ePc	07 41 45.8
	WDC	ePc	07 41 46.2
	PRI	eP	07 41 46.4
	ORV	ePc	07 41 47.8
	MIN	eP	07 41 48.5
	CMB	ePc	07 41 49.3
	FRI	ePc	07 41 50.2
	MNA	ePc	07 41 58.6
BRK Ms=5.6 Distance=84°			

DATE	STA	PHASE	TIME (UTC)
USGS 07h29m25.0s 11.4S 166.1E			
h=76km mb=5.5			
Santa Cruz Islands			
Oct 1	PRI	iPc	14 43 05.7
	FRI	iPc	14 43 09.1
	LLA	iPc	14 43 12.1
	PRS	iPc	14 43 12.2
	SAO	iPc	14 43 16.5
	GCC	iPc	14 43 23.2
	MHC	iPc	14 43 24.2
		e(S)	14 44 16.6
	CMB	iPc	14 43 26.0
	MNA	iPc	14 43 27.2
	PCC	iPc	14 43 30.7
	BRK	ePc	14 43 33.8
	BKS	iPnc	14 43 34.5
		eP*	14 43 41.3
		ePg	14 44 00.6
		e	14 44 25.2
		eSn	14 44 38
		e(Sg)	14 45 23
	ZSP	ePc	14 43 35.1
	ORV	ePc	14 43 49.7
	MIN	ePc	14 44 00.9
	WDC	iPc	14 44 06.6
	FHC	ePc	14 44 19.4
BRK ML=6.1(8)			
PAS 14h42m20.0s 34.1N 118.1W			
h=km ML=5.9			
Los Angeles area, CA			
Oct 1	FRI	iPc	14 46 31.7
	LLA	iPc	14 46 34.7
	SAO	iPc	14 46 40.2
	GCC	iPc	14 46 45.7
	PCC	i(P)	14 46 53.2
	BRK	ePc	14 46 57.1
BRK Mag=4.3			
PAS 14h45m41.5s 34.0N 118.1W			
h=km ML=4.7			
Los Angeles area, CA			
Oct 1	PRI	iP	14 49 52.3
	LLA	iP	14 49 58.5
	PRS	eP	14 49 58.6
	SAO	iPc	14 50 03.6
	GCC	ePc	14 50 10.3
	MHC	iPc	14 50 11.6
	CMB	i(P)	14 50 12.0
		iSn	14 51 21.8
		iSg	14 51 21.8
	BKS	e(P)	14 50 16.7
	PCC	eP	14 50 17.7
	BRK	ePc	14 50 19.0
	ZSP	iP	14 50 22.5
	ORV	iPc	14 50 37.0
	FHC	e	14 51 10.2
BRK ML=4.9(2)			
PAS 14h49m05.9s 34.1N 118.1W			
h=km ML=4.7			
Los Angeles area, CA			
Oct 1	PRI	iPc	15 13 17.6
		iS	15 13 56.7
	FRI	iPc	15 13 21.1
	LLA	ePc	15 13 24.1
		iS	15 14 07.4
	PRS	iPc	15 13 24.3
	SAO	eP	15 13 29.5
	GCC	eP	15 13 35.1
	MHC	iPc	15 13 36.5

DATE	STA	PHASE	TIME (UTC)
		eS	15 14 30.0
	CMB	iPc	15 13 38.0
		i	15 14 42.2
	MNA	ePc	15 13 39.3
		i	15 13 53.0
		i	15 14 49.1
	PCC	e(P)	15 13 42.6
	BRK	e(P)	15 13 46.7
	BKS	iPc	15 13 47.3
	ZSP	iPc	15 13 48.2
	ORV	ePc	15 14 02.2
	MIN	e	15 14 14.3
	WDC	e(P)	15 14 19.4
		i	15 15 08.9
	FHC	e	15 14 32.7
BRK ML=4.8(4)			
PAS 15h12m31.8s 34.5N 118.1W			
h=km ML=4.7			
Los Angeles area, CA			
Oct 2	FHC	iPd	07 49 33.8
	WDC	iPd	07 49 38.9
		e	07 51 17.1
	MIN	iPd	07 49 42.4
	ORV	iPd	07 49 44.5
		e	07 51 23.2
	PCC	eP	07 49 46.1
	BRK	iPd	07 49 46.3
	BKS	ePd	07 49 46.6
		e	07 50 22.9
		e	07 51 34.0
		e	07 51 53.9
		eS	07 59 04
		AMP(μm)	PER(s)
		PZ 0.52	0.8
	GCC	ePd	07 49 48.9
	MHC	iPc	07 49 50.0
	SAO	ePd	07 49 51.4
	CMB	ePd	07 49 52.5
		e	07 50 38.8
		e	07 51 26.3
	PRS	ePd	07 49 53.3
	LLA	ePd	07 49 54.2
	PRI	ePd	07 49 56.8
	FRI	ePd	07 49 57.4
		e	07 50 44.1
	MNA	ePd	07 50 00.1
		e	07 50 40.7
BRK mb=6.0 h=33km Distance=79°			
USGS 07h38m27.9s 27.3N 139.9E			
h=463km mb=5.5			
Bonin Islands Region			
Oct 2	PRS	eP	20 27 05.5
	MHC	eP	20 27 07.8
	BKS	eP	20 27 08.1
		AMP(μm)	PER(s)
		PZ 0.028	0.7
	FRI	eP	20 27 13.8
	CMB	eP	20 27 14.8
	ORV	eP	20 27 15.8
	WDC	ePd	20 27 16.2
	MNA	ePd	20 27 24.9
USGS 20h15m48.2s 15.2S 173.5W			
h=33km mb=5.0 Ms=4.2			
Tonga Islands			
Oct 2	WDC	eP	22 24 15.0
	MNA	eP	22 24 50.0
		e	22 24 54.5
	LLA	e	22 24 56.8
	CMB	e(P)	22 24 57.8

DATE	STA	PHASE	TIME (UTC)
		e	22 25 15.3
	PRS	e	22 24 58.0
	ORV	eP	22 25 08.8
		e	22 25 12.9
USGS 22h14m47.6s 8.1S 77.9W			
h=33km mb=5.2			
Peru			
Oct 2	MNA	eP	22 38 00.6
	PRI	eP	22 38 00.9
	LLA	eP	22 38 03.2
	PRS	eP	22 38 04.0
	CMB	eP	22 38 07.0
	MHC	e(P)	22 38 10.0
	BKS	e(P)	22 38 15
		e	22 46 43
		e	22 55 00
		e	22 58 55
	ORV	eP	22 38 18.7
	MIN	e(P)	22 38 21.0
	WDC	eP	22 38 24.6
	FHC	eP	22 38 34.0
USGS 22h27m55.9s 8.1S 78.0W			
h=19km mb=5.4 Ms=5.1			
Peru			
Oct 3	FRI	eP	03 46 22.2
	MNA	eP	03 46 23.9
	PRI	eP	03 46 24.2
	LLA	eP	03 46 26.6
	PRS	eP	03 46 27.2
	SAO	eP	03 46 28.6
	CMB	eP	03 46 29.5
		e	03 46 39.6
	GCC	eP	03 46 32.0
	MHC	eP	03 46 32.3
	PCC	eP	03 46 34.8
	BRK	eP	03 46 36.0
	BKS	ePd	03 46 36.2
		eS	03 56 04
		eSS	04 01 37
		eLQ	04 07 14
		AMP(μm)	PER(s)
		PZ 0.078	0.8
	ORV	eP	03 46 39.5
	MIN	eP	03 46 41.7
	WDC	eP	03 46 44.7
		e	03 46 52.7
	FHC	eP	03 46 52.5
BRK mb=5.9 h=33km Distance=76°			
USGS 03h35m10.7s 18.0S 69.2W			
h=148km mb=5.8			
Peru-Bolivia Border Region			
Oct 3	MNA	eP	09 25 14.4
	WDC	eP	09 25 25.8
USGS 09h15m43.9s 12.2N 88.4W			
h=41km mb=4.9			
Off Coast of Central America			
Oct 3	FHC	ePc	10 30 28.4
	WDC	iPc	10 30 32.8
		e	10 30 50.4
		iPKiKP	10 34 44.1
		iPKKP1	10 46 06.4
		iPKKP2	10 46 22.2
	BRK	ePc	10 30 34.7
	MIN	ePc	10 30 35.3
		ePKiKP	10 34 45.1
		iPKKP1	10 46 04.7
		iPKKP2	10 46 19.8
	PCC	ePc	10 30 35.5

DATE	STA	PHASE	TIME (UTC)
	ORV	iPc	10 30 36.4
		iPKiKP	10 34 45.7
		iPKKP1	10 46 04.5
		iPKKP2	10 46 19.4
	GCC	eP	10 30 36.5
	BKS	eP	10 30 37.4
		ePKiKP	10 34 48.5
		eS	10 42 36
		ePS	10 44 02
		ePKKP1	10 46 06.5
		eSS	10 50 20
		eLQ	11 00 24
		eLR	11 05 00
		AMP(μm)	PER(s)
		PZ 0.10	1.3
		LZ 4.3	20.
		LN 1.8	20.
		LE 3.2	20.
	MHC	ePc	10 30 37.6
	PRS	e(P)	10 30 39.3
		ePKiKP	10 34 47.4
	SAO	e(P)c	10 30 39.6
	PRI	e(P)	10 30 40
		iPKiKP	10 34 49.0
	CMB	ePc	10 30 40.2
		e	10 31 08.2
		iPKiKP	10 34 48.0
		iPKKP1	10 46 01.5
		iPKKP2	10 46 15.0
	LLA	e(P)c	10 30 40.5
		iPKiKP	10 34 48.0
		iPKKP1	10 46 03.0
		iPKKP2	10 46 16.4
	FRI	eP	10 30 44.4
		e	10 31 10.6
		iPKiKP	10 34 49.4
		iPKKP1	10 45 59.0
		ePKKP2	10 46 10.8
	MNA	iPc	10 30 49.4
		e	10 31 07.4
		e	10 31 16.0
		ePKiKP	10 34 52.0
		iPKKP1	10 45 56.6
		iPKKP2	10 46 07.8
BRK Ms=5.9 Distance=107°			
USGS 10h16m26.3s 5.4S 131.0E			
h=73km mb=6.4			
Banda Sea			
Oct 3	FHC	iPc	19 25 44.6
		iS	19 25 49.8
	ARC	ePd	19 25 46.0
		e(S)	19 25 49.9
	WDC	iPc	19 25 56.6
		iS	19 26 10
	MIN	iPc	19 26 06.9
	ORV	eP	19 26 12.4
	PCC	eP	19 26 32.0
	BKS	e	19 26 32.5
	CMB	eP	19 26 37.6
BRK 19h25m39.8s 40.8N 123.7W			
h=11km ML=3.9(4) Mo=2.6E22(4)			
40 km E of Eureka, CA			
Oct 4	MNA	iPc	08 22 50.7
		iPcP	08 24 57.9
	FRI	iPc	08 22 51.1
		iPcP	08 25 00.0
	PRI	iPc	08 22 53.9
	LLA	iPc	08 22 56.8
	PRS	iPc	08 22 58.3
	CMB	iPc	08 23 00.4

DATE	STA	PHASE	TIME (UTC)
		iPcP	08 25 00.5
	SAO	iPc	08 23 01.3
	MHC	iPc	08 23 03.7
		iPcP	08 25 05.1
	GCC	iPc	08 23 05.0
	PCC	iPc	08 23 09.1
	BKS	iP	08 23 10
		i	08 25 05.2
		iS	08 29 34
		eScS	08 33 04
		e(Lq)	08 34 36
		e	08 36 12
		e(Lr)	08 36 42
		e	08 37 54
		AMP(μm)	PER(s)
		PZ 0.55	1.2
		LZ 17	20.
		LN 17	20.
		LE 23	20.
	BRK	iPc	08 23 10.2
	ORV	iPc	08 23 13.7
		iPcP	08 25 07.7
	MIN	iPc	08 23 16.5
	WDC	iPc	08 23 20.1
		iPcP	08 25 10.9
	FHC	iPc	08 23 31.4
BRK Ms=6.2 Distance=43°			
USGS 08h15m18.8s 10.8N 85.9W			
h=47km mb=5.5 Ms=6.0			
Costa Rica			
Oct 4	WDC	iPc	10 38 34.6
	MIN	ePc	10 38 38.5
	ORV	iPc	10 38 41.3
	BKS	iP	10 38 45.8
		AMP(μm)	PER(s)
		PZ 0.040	0.9
	CMB	iPc	10 38 51.4
	PRS	ePc	10 38 53.1
	MNA	ePc	10 38 58.6
	FRI	ePc	10 38 59.1
USGS 10h27m20.3s 37.3N 141.6E			
h=43km mb=5.8 Ms=5.0			
Near East Coast of Honshu, Japan			
Oct 4	PRI	iPd	11 00 23.9
	FRI	iPd	11 00 27.5
	LLA	ePd	11 00 30.4
	PRS	ePd	11 00 30.5
	SAO	iPc	11 00 35.5
	GCC	ePc	11 00 41.7
	MHC	ePd	11 00 43.0
	CMB	iPd	11 00 44.3
	MNA	iPd	11 00 45.5
	PCC	ePc	11 00 49.2
	BRK	e(P)	11 00 52.4
	BKS	iP	11 00 53.2
		eS	11 01 50.2
	ZSP	ePd	11 00 54.5
	ORV	ePd	11 01 08.2
	MIN	iPd	11 01 20.2
	WDC	ePd	11 01 27.6
	FHC	ePc	11 01 39.1
BRK ML=5.6(8)			
PAS 10h59m38.2s 34.1N 118.1W			
h=km ML=5.3			
Los Angeles area, CA			
Oct 4	WDC	e(P)	11 01 32.7
	CMB	eP	11 01 34.7
	FRI	eP	11 01 35.1
USGS 16h55m46.0s 18.4S 167.4E			

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DATE	STA	PHASE	TIME (UTC)
h=33km mb=4.4 Ms=3.5			
Vanuatu Islands			
Oct 4	FHC	ePc	18 43 08.7
	WDC	iPc	18 43 15.2
	MIN	iPc	18 43 20.0
	ORV	iPc	18 43 24.2
	BKS	iP	18 43 30
		iS	18 50 56
		i	18 51 36
		e	18 51 38
		iSS	18 55 08
		eLq	18 56 58
		eLr	18 58 56
		AMP(μm)	PER(s)
		PZ 0.83	1.6
		LZ 2.5	20.
		LN 1.4	20.
		LE 2.3	20.
	BRK	ePc	18 43 30.3
	PCC	ePc	18 43 31.7
	GCC	ePc	18 43 36.0
	MHC	iPc	18 43 36.2
	CMB	iPc	18 43 37.2
		ePKKP	19 06 26.1
	SAO	ePc	18 43 39.6
	PRS	iPc	18 43 42.5
	LLA	iPc	18 43 43.1
	FRI	iPc	18 43 45.0
		e(PKKP)	19 06 26.5
	PRI	iPc	18 43 47.0
BRK Ms=5.3 Distance=55°			
USGS 18h34m22.6s 55.6N 161.6E			
h=53km mb=6.0 Ms=5.4			
Near East Coast of Kamchatka			
Oct 5	WDC	e(PKP)	19 15 59.6
	CMB	ePKP	19 16 34.4
	MNA	ePKP	19 16 37.0
USGS 18h58m00.1s 0.1S 129.9E			
h=33km mb=5.4 Ms=4.9			
Halmahera			
Oct 6	WDC	iPc	01 02 08.6
		e	01 04 05.6
	MIN	iPc	01 02 11.9
		e	01 02 29.0
	PCC	ePc	01 02 13.2
	BRK	ePc	01 02 13.4
		e	01 02 33.9
	BKS	eP	01 02 13.4
		AMP(μm)	PER(s)
		PZ 0.047	0.9
	ORV	iPc	01 02 13.5
		e	01 04 09.6
	GCC	ePc	01 02 15.5
	MHC	ePc	01 02 17.0
	PRS	ePc	01 02 19.5
		e	01 02 36.3
	CMB	iPc	01 02 20.6
		e	01 02 36.0
		e	01 04 10.5
		e	01 04 18.6
	PRI	ePc	01 02 22.9
	FRI	ePc	01 02 24.5
		e	01 02 41.7
		e	01 04 14.0
		e	01 04 21.8
	MNA	ePc	01 02 28.7
		e	01 02 45.7
		e	01 04 20.3
		e	01 04 28.1

DATE	STA	PHASE	TIME (UTC)
USGS 00h50m51.9s 18.7N 145.0E			
h=514km mb=5.2			
Mariana Islands			
Oct 6	GCC	eP	04 30 31.7
	PRS	ePd	04 30 32.0
	PCC	eP	04 30 32.2
	SAO	eP	04 30 32.7
		i	04 31 09
		iS	04 40 08
		iSS	04 44 56
		iLq	04 52 22
	PRI	ePd	04 30 34.0
		i	04 31 15.3
	BRK	ePd	04 30 34.2
		iS	04 40 04
		i	04 40 44
		iLq	04 52 28
		AMP(μm)	PER(s)
		LZ 62	20.
	LLA	ePd	04 30 34.5
	MHC	ePd	04 30 34.7
		i	04 31 05
		i	04 32 27
		iS	04 39 56
		iScS	04 40 42
		iSS	04 44 36
		i	04 50 09
		e	04 54 20
	BKS	eP	04 30 34.7
		eS	04 40 05
		ePPS	04 40 42
		eSS	04 44 24
		eSSS	04 48 02
		eG	04 49 09
		eLr	04 52 14
		AMP(μm)	PER(s)
		PZ 0.67	1.0
		LZ 6.4	20.
		LN 1.3	20.
		LE 7.0	20.
	FHC	eP	04 30 39.9
	FRI	ePd	04 30 40.0
		ePKPPKP	04 58 07.2
	CMB	ePd	04 30 41.4
		i	04 31 11
		e	04 32 30.7
		i	04 51 47
		ePKPPKP	04 58 09.3
		e	05 01 19
	ORV	ePd	04 30 42.8
	WDC	iPd	04 30 43.3
		i	04 31 24.5
		ePKPPKP	04 58 08.7
	MIN	ePd	04 30 45.0
	MNA	iPd	04 30 51.0
BRK Ms=7.3 Distance=74°			
USGS 04h19m06.1s 17.9S 172.2W			
h=16km mb=6.7 Ms=7.3			
Tonga Islands Region			
Oct 6	WDC	e(P)	06 09 09.8
	CMB	ePd	06 09 18.5
	MNA	eP	06 09 28.5
USGS 05h57m38.5s 17.1S 172.0W			
h=33km			
Tonga Islands Region			
Oct 6	PRI	ePc	14 51 31.3
	PRS	eP	14 51 33.0
	LLA	eP	14 51 34.0
	FRI	eP	14 51 34.8

DATE	STA	PHASE	TIME (UTC)
	MHC	ePc	14 51 39.1
	MNA	ePc	14 51 40.9
	CMB	ePc	14 51 40.9
	PCC	e(P)	14 51 42.4
	BRK	ePc	14 51 45.4
	BKS	eP	14 51 45.5
		AMP(μm)	PER(s)
		PZ 0.038	0.8
	ORV	eP	14 51 52.0
	MIN	ePc	14 51 55.4
	WDC	ePc	14 51 56.3
USGS 14h39m53.1s 36.1S 101.2W			
h=10km mb=5.2			
Southern Pacific Ocean			
Oct 6	PRI	eP	16 05 11.6
	FRI	eP	16 05 13.0
	PRS	e(P)	16 05 13.9
	LLA	eP	16 05 14.0
	MNA	eP	16 05 15.3
	CMB	ePd	16 05 18.0
	BKS	iP	16 05 22.1
		eLq	16 40 18
		eLr	16 48 58
		AMP(μm)	PER(s)
		PZ 0.022	0.8
		LZ 2.3	20.
		LN 0.36	20.
		LE 1.8	20.
	ORV	e(P)	16 05 26.2
	WDC	ePd	16 05 31.2
BRK Ms=5.5 Distance=92°			
USGS 15h52m24.7s 41.2S 74.8W			
h=33km mb=5.1 Ms=4.5			
Off Coast of Southern Chile			
Oct 6	ZSP	eP	16 30 44.5
		iS	16 30 59.9
	BRK	e(P)	16 30 45.2
	BKS	iP	16 30 45.5
		eS	16 31 00.8
	ORV	eP	16 30 48.0
	PCC	e(P)	16 30 51.3
	MIN	eP	16 30 56.2
	GCC	e(P)	16 30 57.0
	CMB	ePd	16 31 00.5
		eS	16 31 27.6
	WDC	e(P)	16 31 02.4
	LLA	eP	16 31 08.6
BRK 16h30m25.9s 38.8N 122.8W			
h=1km ML=3.1(2)			
The Geysers area, 20 km S of Clear Lake, CA			
Oct 6	FHC	ePc	20 20 36.6
	WDC	iPc	20 20 43.3
	MIN	ePc	20 20 48.3
	ORV	iPc	20 20 52.0
	BRK	ePc	20 20 57.8
	BKS	eP	20 21 00
		iS	20 28 34
		eScS	20 30 44
		eSS	20 32 16
		eG	20 34 32
		eLr	20 36 55
		AMP(μm)	PER(s)
		PZ 0.13	1.5
		LZ 8.6	20.
		LN 4.1	20.
		LE 7.5	20.
	GCC	e(P)	20 21 03.3
	CMB	iPc	20 21 05.1

DATE	STA	PHASE	TIME (UTC)
	SAO	e(P)	20 21 07.5
	PRS	iPc	20 21 09.2
	LLA	iPc	20 21 09.9
	FRI	iPc	20 21 12.7
	MNA	iPc	20 21 12.7
	PRI	ePc	20 21 13.3
BRK Ms=5.8 Distance=56°			
USGS 20h11m35.1s 53.0N 160.0E			
h=33km mb=6.1 Ms=6.3			
Off East Coast of Kamchatka			
Oct 7	FRI	ePd	01 03 18.2
	PRI	ePd	01 03 19.3
		ePcP	01 04 07.4
	MNA	ePd	01 03 19.5
		ePcP	01 04 07.6
	LLA	eP	01 03 22.4
		ePcP	01 04 09.3
	PRS	eP	01 03 22.8
		ePcP	01 04 10.0
	SAO	eP	01 03 24.0
	CMB	iPd	01 03 25.2
		ePcP	01 04 12.2
	GCC	eP	01 03 27.3
		ePcP	01 04 14.8
	MHC	ePd	01 03 27.6
		ePcP	01 04 14.7
	PCC	ePd	01 03 30.0
	BRK	eP	01 03 31.1
	BKS	iP	01 03 31.2
		AMP(μm)	PER(s)
		PZ 0.29	1.5
	ORV	iPd	01 03 34.7
		ePcP	01 04 22.3
	MIN	ePd	01 03 36.5
	WDC	iPd	01 03 39.6
		ePcP	01 04 24.7
	FHC	eP	01 03 46.8
USGS 00h51m36.7s 22.8S 68.0W			
h=106km mb=5.6			
Northern Chile			
Oct 7	WDC	eP	06 29 10.0
	CMB	eP	06 29 29.0
	MNA	eP	06 29 37.1
USGS 06h18m58.7s 44.6N 150.3E			
h=54km mb=5.5			
Kuril Islands Region			
Oct 7	CMB	eP	19 32 45.7
	WDC	eP	19 32 47.5
	MNA	eP	19 32 55.6
USGS 19h21m14.5s 17.4S 172.1W			
h=33km mb=5.3			
Tonga Islands Region			
Oct 8	FHC	eP	02 41 11.6
	WDC	iPc	02 41 17.0
		e	02 42 00.9
	MIN	iPc	02 41 21.0
	ORV	ePc	02 41 24.2
	MNA	e	02 41 24.8
		iPc	02 41 42.0
	BRK	eP	02 41 28.5
	PCC	eP	02 41 28.8
	BKS	iP	02 41 29.1
		AMP(μm)	PER(s)
		PZ 0.058	0.9
	GCC	ePc	02 41 32.6
	MHC	eP	02 41 33.0
		e	02 42 16.7
	CMB	iPc	02 41 35.0

DATE	STA	PHASE	TIME (UTC)
		e	02 42 17.6
	SAO	e(P)	02 41 35.5
	PRS	ePc	02 41 37.8
	LLA	eP	02 41 38.4
	FRI	eP	02 41 41.3
	PRI	e(P)	02 41 51.6
USGS 02h30m42.8s 43.4N 142.2E			
h=182km mb=5.3			
Hokkaido, Japan, Region			
Oct 8	PRS	eP	03 32 19.0
	GCC	eP	03 32 19.1
	PCC	eP	03 32 19.5
	SAO	e(P)	03 32 20.0
	PRI	ePc	03 32 21.2
	BRK	eP	03 32 21.2
	BKS	iP	03 32 21.6
		eS	03 41 58
		ePPS	03 43 05
		eLq	03 50 40
		eLr	03 54 22
		AMP(μm)	PER(s)
		PZ 0.21	1.1
		LZ 5.9	20.
		LN 4.3	20.
		LE 4.6	20.
	MHC	eP	03 32 22.0
		e	03 32 34.9
	FRI	ePc	03 32 26.8
		e	03 32 30.0
	FHC	eP	03 32 27.0
	CMB	ePc	03 32 28.4
	ORV	ePc	03 32 29.6
	WDC	ePc	03 32 30.6
		e	03 32 43.3
	MIN	ePc	03 32 32.0
	MNA	iPc	03 32 37.9
BRK Ms=5.9 Distance=76°			
USGS 03h20m45.8s 19.6S 173.1W			
h=40km mb=6.2 Ms=6.1			
Tonga Islands			
Oct 8	FHC	eP	13 34 40.9
	WDC	ePd	13 34 48.7
	MIN	eP	13 34 54.6
	ORV	eP	13 34 59.3
	CMB	ePd	13 35 15.0
	MNA	ePd	13 35 23.8
	FRI	e(P)	13 35 24.5
USGS 13h28m47.6s 55.0N 161.4W			
h=46km mb=5.0			
Alaska Peninsula			
Oct 8	BKS	iP	16 20 24.2
		eS	16 20 25.3
	BRK	iPc	16 20 24.5
	ZSP	iPd	16 20 25.9
	PCC	iPd	16 20 30.8
	GCC	eP	16 20 39.1
		iS	16 20 51.7
	SAO	i(P)	16 20 46.5
	MHC	eS	16 20 47.5
	CMB	ePc	16 20 48.8
		eS	16 21 08.9
	LLA	eP	16 20 51.2
	PRS	eP	16 20 51.4
	ORV	eP	16 20 52.9
		eS	16 21 14.4
BRK 16h20m23.6s 37.8N 122.2W			
h=4km ML=3.0(4)			
Lake Temescal area, 3 km SE of Berkeley, CA			

DATE	STA	PHASE	TIME (UTC)
Oct 8	WDC	e	21 16 05.6
	CMB	ePc	21 16 11.8
	MNA	ePc	21 16 21.8
USGS 21h08m39.0s 50.8N 174.7W			
h=33km mb=4.7			
Andreanof Islands, Aleutian Is.			
Oct 9	WDC	ePKPc	10 36 40.9
		eSKP	10 38 37.3
	FHC	ePKPc	10 36 41.1
	MIN	ePKPc	10 36 42.3
	ORV	e(PKP)c	10 36 44.8
	CMB	ePKPc	10 36 47.8
		eSKP	10 38 53.3
		e	10 40 07.0
	PRS	ePKPc	10 36 48.2
	FRI	ePKPc	10 36 49.7
		e	10 40 10.7
	MNA	ePKPc	10 36 51.3
		e	10 40 13.1
	PRI	e	10 40 10.2
USGS 10h17m39.0s 7.9S 105.3E			
h=30km mb=5.5 Ms=5.3			
Java			
Oct 9	FRI	iPd	14 09 36.6
		iS	14 09 43.8
	CMB	iPc	14 09 43.4
		iS	14 09 56.0
	MNA	eP	14 09 50.9
	LLA	eP	14 09 53.1
		iS	14 10 11.2
	PRI	eP	14 09 56.1
	SAO	eP	14 09 57.5
	MHC	eP	14 09 57.8
		iS	14 10 22.0
	PRS	eP	14 10 00.0
		iS	14 10 25.8
	GCC	e(P)	14 10 02.5
	PCC	eP	14 10 05.2
	BRK	eP	14 10 05.7
	BKS	eP	14 10 06.5
		eS	14 10 31.0
	ORV	eP	14 10 10.3
		eS	14 10 43.5
BRK 14h09m26.1s 37.5N 119.4W			
h=14km ML=3.3(4)			
33 km SE of Yosemite Village, CA			
Oct 10	MNA	e(P)	03 58 09.0
	ORV	eP	03 58 27.6
	WDC	eP	03 58 33.1
USGS 03h48m03.1s 8.5S 74.2W			
h=159km mb=4.6			
Peru-Brazil Border Region			
Oct 10	FHC	ePKP	14 44 22.5
	WDC	ePKP	14 44 23.5
		i	14 47 06.0
		ePKKP	14 54 35.4
	MIN	ePKP	14 44 25.2
		ePKKP	14 54 33.1
	ORV	ePKP	14 44 25.7
		e	14 47 08.0
	PCC	ePKPd	14 44 26.2
		e	14 47 08.0
	BRK	ePKP	14 44 28.4
	BKS	ePKPd	14 44 27.0
		AMP(μm)	PER(s)
		PKP 0.030	0.8
	GCC	ePKP	14 44 27.1

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DATE	STA	PHASE	TIME (UTC)
	MHC	ePKP	14 44 28.0
		epPKP	14 46 41.5
		e	14 47 10.0
	PRS	ePKP	14 44 28.9
		epPKP	14 46 42.5
		e	14 47 11.0
		ePKKP	14 54 29.5
	LLA	ePKPd	14 44 29.5
		epPKP	14 46 42.8
		ePKKP	14 54 28.9
	FRI	ePKP	14 44 30.5
		epPKP	14 46 43.9
		e	14 47 13.0
		ePKKP	14 54 35.5
	PRI	ePKP	14 44 30.7
		epPKP	14 46 44.0
		e	14 47 13.2
		ePKKP	14 54 27.6
	MNA	ePKPd	14 44 32.5
		epPKP	14 46 45.1
		e	14 47 14.9
		ePKKP	14 54 22.9
USGS 14h26m37.0s 6.1S 113.2E			
h=573km mb=5.9			
Java			
Oct 10	MHC	iPc	17 32 03.0
	GCC	eP	17 32 10.0
	PCC	iPc	17 32 10.3
	BRK	iPc	17 32 12.9
		eS	17 32 24.7
	BKS	iPc	17 32 12.9
		e	17 32 14.5
		eS	17 32 22.0
		e	17 32 23.9
		e	17 32 37.5
		e	17 32 41.1
	ZSP	ePc	17 32 14.0
		iS	17 32 25.5
	SAO	iPc	17 32 14.4
	LLA	ePc	17 32 19.0
	PRS	ePd	17 32 21.3
		i	17 32 36.6
	PRI	ePc	17 32 27.5
	FRI	e(P)c	17 32 27.6
	ORV	e	17 32 38.4
	MNA	e	17 32 56.5
BRK 17h32m00.7s 37.4N 121.7W			
h=5km ML=2.6(4) Mo=1.3E20(2)			
Mt. Lewis area, 21 km NE of San Jose, CA			
Oct 11	FHC	e(P)	09 13 12.9
	BRK	eP	09 13 13.2
	BKS	ePc	09 13 13.7
			AMP(μm) PER(s)
		PZ	0.022 0.9
	PRS	eP	09 13 14.3
	MHC	eP	09 13 15.1
	LLA	eP	09 13 16.2
		e	09 15 02.6
	WDC	ePc	09 13 17.3
	ORV	ePc	09 13 19.0
	MIN	eP	09 13 20.0
	FRI	ePc	09 13 21.2
		e	09 15 02.9
	MNA	eP	09 13 29.6
USGS 09h00m43.9s 12.9S 165.7E			
h=32km mb=5.1			
Santa Cruz Islands			
Oct 11	PRI	e(P)	09 51 43.6
	PRS	e(P)	09 51 44.5
	FRI	eP	09 51 46.4
		e	09 52 08.9
	MNA	eP	09 51 51.5
	MHC	eP	09 51 54.5
	ORV	e(P)	09 52 03.5
	WDC	eP	09 52 05.8
		e	09 52 40.8
	BKS	eS	10 01 32
		eSS	10 06 25
		eLq	10 11 49.6
		eLr	10 15 19
USGS 09h40m16.8s 34.9S 107.7W			
h=10km mb=4.9 Ms=4.9			
Easter Island Cordillera			
Oct 11	PRS	eP	18 15 46.8
	GCC	eP	18 15 47.3
	PRI	e(P)	18 15 48.3
	BKS	ePd	18 15 49.1
		eLr	18 44 07
			AMP(μm) PER(s)
		PZ	0.034 1.3
		LZ	1.5 20.
		LN	1.4 20.
		LE	1.3 20.
	MHC	eP	18 15 49.3
	BRK	eP	18 15 49.5
	FRI	eP	18 15 52.8
	ORV	eP	18 15 56.0
	WDC	eP	18 15 57.1
	MIN	e(P)	18 15 58.1
BRK Ms=5.5 Distance=91°			
USGS 18h02m50.8s 35.0S 179.7E			
h=33km mb=5.5 Ms=5.4			
Off East Coast of North Island, New Zealand			
Oct 11	FRI	eP	19 01 49.2
	LLA	eP	19 01 49.8
	PRS	eP	19 01 50.0
	MNA	eP	19 01 50.7
	MHC	e(P)	19 01 56.6
	ORV	eP	19 02 02.5
	WDC	eP	19 02 07.0
USGS 18h49m13.9s 36.4S 73.0W			
h=23km mb=5.3 Ms=4.4			
Near Coast of Central Chile			
Oct 12	FHC	e(P)	14 09 47.0
	BRK	eP	14 10 00.3
		eSP	14 21 56
		eSS	14 26 54
		eSSS	14 30 40
		iLr	14 37 38
			AMP(μm) PER(s)
		LZ	21 20.
	BKS	iP	14 10 00.8
		ePP	14 13 34
		eSKS	14 20 47.2
		e	14 21 49.6
		ePS	14 22 00
		ePPS	14 22 22
		eLq	14 33 48
		eLr	14 37 32
			AMP(μm) PER(s)
		PZ	0.35 0.9
		LZ	41 20.
		LN	33 20.
		LE	21 20.
	GCC	eP	14 10 01.0
	WDC	ePd	14 10 01.4
		ePP	14 13 40.4
	PCC	e(P)	14 10 02.0
	MHC	ePd	14 10 02.5
	PRS	ePd	14 10 03.0
		eSP	14 22 47.5
	MIN	ePd	14 10 04.0
		e(SP)	14 22 48.3
	ORV	eP	14 10 04.0
	LLA	ePd	14 10 05.0
	PRI	ePd	14 10 06.0
		ePP	14 13 45
		eSP	14 22 50.5
	FRI	ePd	14 10 09.0
		eSP	14 22 53.6
	MNA	iPd	14 10 16.0
		ePP	14 14 04.1
		eSP	14 23 00.6
BRK Ms=6.8 Distance=89°			
USGS 13h57m04.8s 7.3S 154.4E			
h=24km mb=6.3 Ms=6.8			
Solomon Islands			
Oct 12	BRK	eP	14 33 56.9
	BKS	eP	14 33 57.4
		e	14 34 07.4
		e(Lr)	15 05 37
	GCC	eP	14 33 57.8
	WDC	eP	14 33 58.2
	MHC	e(P)	14 33 59.7
	PRS	eP	14 34 00.0
	MIN	eP	14 34 00.7
	ORV	eP	14 34 00.7
	LLA	e(P)	14 34 01.7
	PRI	eP	14 34 02.8
	FRI	eP	14 34 05.7
	MNA	ePd	14 34 13.0
USGS 14h21m01.5s 7.2S 154.3E			
h=23km mb=5.3			
Solomon Islands			
Oct 12	WDC	eP	15 02 19.5
	FRI	e	15 02 27.4
	MNA	eP	15 02 33.1
USGS 14h49m21.3s 7.0S 154.1E			
h=22km mb=4.8			
Solomon Islands			
Oct 12	WDC	eP	21 52 49.6
	MIN	eP	21 52 53.2
	CMB	eP	21 53 06.9
	MNA	eP	21 53 13.6
USGS 21h41m37.5s 41.4N 139.1E			
h=21km mb=5.1			
Hokkaido, Japan, Region			
Oct 12	WDC	eP	22 20 58.2
	ORV	eP	22 21 04.3
	BKS	ePc	22 21 07.0
			AMP(μm) PER(s)
		PZ	0.031 0.7
	MHC	eP	22 21 10.8
	CMB	eP	22 21 13.3
	PRS	eP	22 21 14.5
	LLA	eP	22 21 15.3
	PRI	eP	22 21 18.2
	FRI	eP	22 21 18.3
	MNA	eP	22 21 20.2
USGS 22h09m46.9s 32.5N 137.8E			
h=361km mb=4.8			
South of Honshu, Japan			
Oct 12	WDC	e	22 35 11.4
	CMB	eP	22 35 31.2
	MNA	eP	22 35 40.2
USGS 22h22m26.7s 7.2S 154.3E			
h=12km mb=4.7 Ms=4.0			
Solomon Islands			
Oct 13	FRI	eP	02 54 38.6
	CMB	eP	02 54 38.7
	WDC	eP	02 54 40.0
USGS 02h43m27.7s 21.1S 179.2W			
h=627km mb=4.5			
Fiji Islands Region			
Oct 13	WDC	eP	05 49 10.0
	MIN	e(P)	05 49 11.5
	CMB	eP	05 49 11.7
	FRI	eP	05 49 11.8
	MNA	e(P)	05 49 19.5
USGS 05h36m22.8s 18.4S 167.0E			
h=33km mb=4.7 Ms=4.0			
Vanuatu Islands			
Oct 13	WDC	eP	06 51 22.1
	CMB	eP	06 51 40.3
USGS 06h41m10.1s 45.3N 150.0E			
h=50km mb=5.0 Ms=4.4			
Kuril Islands			
Oct 13	FRI	ePKP	12 10 33.5
	MNA	ePKP	12 10 34.7
	PRS	ePKP	12 10 34.7
	CMB	ePKP	12 10 36.0
	MHC	ePKP	12 10 36.9
	BRK	ePKP	12 10 37.8
	BKS	ePd	12 10 38.2
		e	12 10 52.0
			AMP(μm) PER(s)
		PZ	0.022 0.7
	WDC	e	12 10 50.8
USGS 11h51m36.9s 57.7S 25.2W			
h=10km mb=4.9			
South Sandwich Islands Region			
Oct 13	BKS	eP	14 07 34.8
		e c	14 07 40.3
		e	14 07 55.3
		eS	14 18 30
		eLq	14 35 15
		e	14 35 20
			AMP(μm) PER(s)
		PZ	0.35 0.7
		LZ	0.39 20.
	WDC	eP	14 07 40.3
	GCC	e(P)	14 07 40.3
	MHC	eP	14 07 42.1
	PRS	eP	14 07 42.5
	MIN	eP	14 07 43.2
	ORV	eP	14 07 43.6
	LLA	eP	14 07 44.4
	PRI	e(P)	14 07 45.5
	CMB	eP	14 07 46.6
	FRI	eP	14 07 48.2
	MNA	eP	14 07 55.2
BRK mb=6.1 h=33km Distance=100°			
USGS 13h54m42.6s 7.2S 154.3E			
h=14km mb=5.7 Ms=5.2			
Solomon Islands			
Oct 13	MHC	iPd	14 14 32.2
	GCC	eP	14 14 37.6
	SAO	iPd	14 14 40.7
	PCC	iPc	14 14 42.2
	BRK	eP	14 14 45.4
	BKS	iPc	14 14 45.5
		eS	14 14 57.0
		e	14 14 57.1
		e	14 15 10.3
	LLA	iPd	14 14 46.2
	ZSP	eP	14 14 46.8
		iS	14 15 01.3
	PRS	ePd	14 14 47.8
	CMB	eP	14 14 53.4
		iS	14 15 10.5
	FRI	eP	14 14 57.1
		iS	14 15 17.6
BRK 14h14m30.2s 37.2N 121.7W			
h=3km ML=2.7(4) Mo=1.0E20(2)			
San Felipe Valley, 21 km SE of San Jose, CA			
Oct 14	WDC	iPc	07 50 36.1
	MIN	iPc	07 50 39.0
	ORV	iPc	07 50 41.2
	PCC	ePc	07 50 43.7
	CMB	iPc	07 50 49.0
	FRI	ePc	07 50 53.3
	MNA	ePc	07 50 54.7
BRK mb=4.9 h=33 Nkm Distance=89°			
USGS 07h37m27.8s 21.3N 121.8E			
h=110km mb=5.2			
Taiwan Region			
Oct 14	FRI	ePc	19 12 52.6
		epP	19 13 04.8
		ePcP	19 15 21.4
		epPcP	19 15 33.2
	PRI	eP	19 12 55.3
		ePcP	19 15 23.0
		ipPcP	19 15 34.4
	LLA	ePc	19 12 58.1
		ePcP	19 15 22.9
		epPcP	19 15 34.7
	PRS	ePc	19 12 59.8
		ePcP	19 15 23.3
	CMB	ePc	19 13 02.1
		ePcP	19 15 22.5
		epPcP	19 15 33.4
		eScP	19 19 10.9
	SAO	ePc	19 13 02.5
	GCC	ePc	19 13 06.8
	PCC	ePc	19 13 11.0
		ePcP	19 15 29.0
	BRK	e(P)	19 13 12.1
	BKS	ePd	19 13 12.7
		e(PcP)	19 15 27.3
		eS	19 18 30
		eLq	19 25 21
		e	19 26 34.0
			AMP(μm) PER(s)
		PZ	0.11 0.9
		LZ	4.1 20.
		LN	3.6 20.
		LE	4.0 20.
	ORV	ePc	19 13 15.8
		ePcP	19 15 25.5
	MIN	eP	19 13 19.2
		epP	19 13 31.5
	WDC	ePc	19 13 23.2
		iPcP	19 15 31.4
		ipPcP	19 15 42.8
		eScP	19 19 20.2
	FHC	ePc	19 13 34.7
BRK Ms=5.3 Distance=34°			
USGS 19h06m00.0s 13.4N 89.6W			
h=75km mb=5.2			
El Salvador			
Oct 15	PRI	e(P)	05 14 18.8
	FRI	ePc	05 14 19.1
	PRS	e(P)	05 14 25.0
	LLA	ePc	05 14 25.5
	MNA	ePc	05 14 26.9
	CMB	ePc	05 14 36.9
		eLr	05 18 34
	MHC	e(P)	05 14 39.4
		eLr	05 19 20
	BKS	e(P)	05 14 48
		eS	05 17 26
		eLr	05 18 08
			AMP(μm) PER(s)
		LZ	1.7 20.
		LN	6.4 20.
		LE	14 20.
	ORV	eP	05 15 07.1
	MIN	e(P)	05 15 10.5
	WDC	e(P)c	05 15 14.3
	SAO	e	05 17 45
	BRK	e	05 18 42
USGS 05h11m32.5s 27.9N 111.3W			
h=10km mb=4.8 Ms=4.4			
Gulf of California			
Oct 15	PCC	eP	06 18 26.8
	PRS	ePd	06 18 27.0
		e	06 19 37.3
	PRI	e(P)	06 18 27.9
	BRK	e(P)	06 18 28.0
	FRI	ePd	06 18 35.0
		e	06 19 45.3
	CMB	ePd	06 18 35.7
		e	06 19 46.2
	WDC	ePd	06 18 36.3
		e	06 19 47.3
	ORV	eP	06 18 36.5
	MIN	e(P)	06 18 39.1
	MNA	ePd	06 18 45.8
		e	06 19 56.7
USGS 06h07m34.1s 15.2S 175.5W			
h=322km mb=5.1			
Tonga Islands			
Oct 15	WDC	e(P)	07 34 13.0
	ORV	e(P)	07 34 26.8
	BRK	ePc	07 34 32.0
	BKS	ePc	07 34 32.1
		eLr	07 45 10
			AMP(μm) PER(s)
		PZ	0.025 0.8
		LZ	0.79 20.
	MHC	ePc	07 34 37.4
	CMB	ePc	07 34 38.4
	PRS	e(P)	07 34 41.7
	MNA	e(P)	07 34 43.2
	LLA	eP	07 34 45.3
	FRI	eP	07 34 45.4
	PRI	ePc	07 34 47.2
USGS 07h27m01.7s 51.8N 175.4W			
h=63km mb=5.1			
Andreanof Islands, Aleutian Is.			
Oct 15	FHC	iPc	20 16 34.1
		iS	20 16 39.5
	WDC	iPc	20 16 49.9
	MIN	iPc	20 17 00.3
		iS	20 17 27.5
	ORV	iPd	20 17 05.2

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DATE	STA	PHASE	TIME (UTC)
	PCC	e(P)	20 17 17.4
	MHC	eP	20 17 26.1
	GCC	e	20 17 27.2
	CMB	ePd	20 17 28.8
	LLA	e	20 17 38.5
	PRS	e	20 17 40.3
	FRI	eP	20 17 44.0
BRK 20h16m25.8s 40.6N 124.4W			
h=6km ML=3.9(4) Mo=3.8E21(4)			
Off Coast 34 km SW of Eureka, CA			
Oct 15	CMB	eP	22 16 08.9
	WDC	e(P)	22 16 10.2
	ORV	eP	22 16 10.6
USGS 22h05m38.2s 29.0N 43.5W			
h=10km mb=4.8			
North Atlantic Ridge			
Oct 16	PRI	eP	07 04 48.5
	MNA	eP	07 04 48.6
	LLA	eP	07 04 50.7
	PRS	eP	07 04 51.3
	CMB	ePd	07 04 53.8
	GCC	eP	07 04 55.8
	MHC	eP	07 04 56.3
	ORV	eP	07 05 03.6
	WDC	eP	07 05 08.5
USGS 06h53m13.6s 21.7S 69.3W			
h=101km mb=4.9			
Northern Chile			
Oct 16	CMB	eP	10 37 38.9
	WDC	eP	10 37 41.2
	MNA	eP	10 37 49.5
USGS 10h25m43.6s 21.6S 174.1W			
h=33km mb=4.8			
Tonga Islands			
Oct 16	GCC	ePc	20 32 22.4
	PRS	ePc	20 32 22.4
	PCC	eP	20 32 22.5
	BKS	iPc	20 32 24.2
		AMP(μm)	PER(s)
	PZ	0.031	0.8
	PRI	ePc	20 32 24.6
	LLA	ePc	20 32 24.7
	MHC	ePc	20 32 24.9
	FHC	ePc	20 32 28.8
	FRI	eP	20 32 29.2
	CMB	ePc	20 32 30.3
	ORV	ePc	20 32 31.4
	WDC	ePc	20 32 31.8
	MNA	ePc	20 32 38.5
USGS 20h20m54.4s 24.3S 179.2E			
h=525km mb=5.0			
South of Fiji Islands			
Oct 16	FHC	e(P)	21 01 08.0
	WDC	ePd	21 01 10.9
		eS	21 11 50.8
		ePKKP	21 18 30.3
	SAO	eP	21 01 11
		e	21 04 00
		eSP	21 13 21
		iLr	21 30 26
	GCC	e(P)	21 01 11.1
	BRK	iPc	21 01 12
		i	21 03 20
		i	21 03 40
		iS	21 12 08
		iSP	21 13 28
		iSS	21 18 28
		iSSS	21 22 20
		iG	21 27 25
		iLr	21 30 12
		AMP(μm)	PER(s)
	LZ	81	20.
	BKS	iPc	21 01 12.4
		iPcP	21 01 17.2
		i	21 03 15
		ePP	21 04 53
		i	21 10 51
		iS	21 12 15
		eScS	21 12 25
		ePS	21 13 21
		e	21 14 17
		eSS	21 18 01
		ePSPS	21 18 48
		e	21 20 54
		iSSS	21 22 19
		eLq	21 24 46
		iG	21 25 57
		e	21 27 33
		eLr	21 29 31
		e	22 12 46
		eG2	22 38 26
		e	22 55 25
		e	22 58 47
		e	23 49 47
		eG3	23 58 25
		AMP(μm)	PER(s)
	LZ	180	20.
	LNE	190	20.
	LNW	140	20.
		e	00 42 00
		e	01 10 40
	MHC	eP	21 01 12.9
		i	21 03 48
		iS	21 12 59
		i	21 14 09
		ePKKP	21 18 27.8
		iLr	21 30 45
	MIN	e(P)	21 01 13.4
	PRS	eP	21 01 13.4
	ORV	ePd	21 01 13.8
	LLA	ePd	21 01 15.2
	CMB	ePd	21 01 17.4
		i	21 03 32
		iPP	21 05 10
		iS	21 12 32
		iPS	21 14 06
		ePKKP	21 18 28.5
		ePKPPKP	21 26 31
	PRI	ePd	21 01 18.0
	FRI	ePd	21 01 19.3
	MNA	iPd	21 01 25.9
		ePP	21 05 32.7
		eS	21 12 10.0
		ePKPPKP	21 26 29
BRK Ms=7.7 Distance=92°			
USGS 20h48m01.6s 6.3S 149.1E			
h=47km mb=5.9 Ms=7.4			
New Britain Region			
Oct 17	PRI	ePKPc	06 56 12.4
	FRI	ePKPc	06 56 12.5
	MNA	ePKPc	06 56 12.7
	PRS	ePKPc	06 56 13.0
	LLA	ePKP	06 56 13.5
	CMB	ePKPc	06 56 14.0
	MHC	ePKPc	06 56 15.0
	BKS	ePKP	06 56 16.0
		AMP(μm)	PER(s)
	PKPZ	0.013	0.6
	BRK	ePKP	06 56 16.1
	MIN	ePKP	06 56 18.2
	ORV	ePKPc	06 56 18.5
	WDC	ePKPc	06 56 18.7
USGS 06h37m29.9s 56.1S 27.2W			
h=94km mb=5.6			
South Sandwich Islands Region			
Oct 17	FHC	ePc	08 13 14.2
		e	08 13 54.0
	WDC	ePc	08 13 24.4
		i	08 14 08.2
	MIN	ePc	08 13 36.1
	ORV	ePd	08 13 44.7
	ZSP	ePc	08 13 55.2
	BRK	ePc	08 13 56.1
		e	08 15 22
	BKS	iPc	08 13 56.3
		e	08 15 04
		e	08 15 20
		e	08 16 54
	PCC	ePc	08 14 00.2
	MHC	ePc	08 14 05.4
		e	08 15 38.4
	GCC	ePc	08 14 07.9
	CMB	ePd	08 14 10.3
	SAO	e(P)	08 14 14.2
	PRS	eP	08 14 18.5
	LLA	eP	08 14 19.4
	MNA	eP	08 14 22.2
	FRI	ePd	08 14 25.7
	PRI	ePc	08 14 27.9
BRK ML=4.4(8)			
USGS 08h12m21.2s 43.3N 126.7W			
h=10km mb=5.0			
Off Coast of Oregon			
Oct 17	WDC	ePc	18 52 40.1
	ORV	e(P)	18 52 44.5
	CMB	ePc	18 52 56.2
	PRS	ePc	18 52 57.7
	LLA	ePc	18 52 59.2
	FRI	eP	18 53 01.6
	MNA	eP	18 53 03.3
USGS 18h41m10.4s 35.4N 139.1E			
h=53km mb=5.1			
Near South Coast of Honshu, Japan			
Oct 18	FRI	eP	02 55 50.2
	MNA	ePc	02 55 50.8
	PRI	eP	02 55 53.0
	LLA	eP	02 55 55.9
	PRS	eP	02 55 57.4
	CMB	ePc	02 56 00.0
	SAO	eP	02 56 01.2
	MHC	eP	02 56 04.1
	GCC	ePc	02 56 05.0
	ORV	ePc	02 56 14.7
	MIN	ePc	02 56 17.0
	WDC	ePc	02 56 20.8
	FHC	eP	02 56 32.2
USGS 02h48m56.2s 13.5N 89.5W			
h=55km mb=4.6 Ms=4.0			
El Salvador			
Oct 18	WDC	e(P)	07 36 22.2
		e	07 40 46.0
	CMB	ePc	07 37 04.0
		e	07 41 06.5
	FRI	e	07 41 14.8
USGS 07h35m16.3s 43.3N 126.8W			
h=10km			
Off Coast of Oregon			
Oct 18	WDC	eP	10 47 01.4
	MIN	eP	10 47 04.8
	ORV	eP	10 47 13.0
	MHC	ePc	10 47 34.2
	CMB	ePc	10 47 36.4
	FRI	ePc	10 47 51.4
USGS 10h45m46.9s 43.4N 126.9W			
h=10km			
Off Coast of Oregon			
Oct 18	WDC	eP	13 09 33.3
	MIN	eP	13 09 40.1
	ORV	e(P)	13 09 50.2
	CMB	e(P)	13 10 13.8
	MNA	eP	13 10 17.8
	LLA	eP	13 10 32.6
	FRI	eP	13 10 32.8
	BKS	e	13 12 40
USGS 13h06m49.2s 50.7N 129.6W			
h=10km mb=4.4			
Vancouver Island Region			
Oct 18	MHC	iPc	13 58 49.7
		iS	13 58 53.22
	PCC	iPd	13 58 56.3
	GCC	ePd	13 58 56.5
		eS	13 59 05.0
	BKS	iPc	13 58 56.6
		eS	13 59 04.9
	BRK	iPc	13 58 56.7
		iS	13 59 08.4
	ZSP	eP	13 58 57.5
		e(S)	13 59 00.2
	SAO	ePd	13 59 00.8
	LLA	iPc	13 59 05.2
	CMB	iPd	13 59 05.9
		iS	13 59 22.4
	PRS	iPd	13 59 07.5
	ORV	e(P)	13 59 13.0
	FRI	eP	13 59 14.0
		iS	13 59 35.7
BRK 13h58m45.6s 37.5N 121.7W			
h=6km ML=2.9(4) Mo=5.3E20(2)			
Mt. Lewis area, 18 km SE of Livermore, CA			
Oct 18	LLA	iPc	14 45 40.8
	PRS	ePd	14 45 42.2
		e(S)	14 45 45.0
	SAO	iPc	14 45 42.8
	PRI	eP	14 45 47.7
	GCC	ePd	14 45 52.0
	MHC	eP	14 45 53.8
		e(S)	14 46 12.4
	FRI	ePd	14 45 58.8
		iS	14 46 14.6
	PCC	eP	14 46 00.6
	CMB	e(P)	14 46 04.6
		eS	14 46 25.9
	BKS	ePn	14 46 04.7
BRK 14h45m36.8s 36.5N 121.2W			
h=8km ML=2.5(4)			
Bear Valley area, 41 km SE of Hollister, CA			
Oct 18	WDC	e(P)	22 30 37.4
	CMB	eP	22 31 11.2
	MNA	e(P)	22 31 21.5
USGS 22h23m50.0s 52.3N 169.4W			
h=33km mb=5.1			
Fox Islands, Aleutian Islands			
Oct 19	MNA	eP	07 18 50.0
	FRI	e	07 19 25.9
	CMB	e(P)	07 19 28.1
USGS 07h17m09.7s 39.7N 111.4W			
h=0km			
Utah			
Oct 19	WDC	eP	08 24 42.9
	MIN	eP	08 24 47.1
	ORV	eP	08 24 51.6
	CMB	eP	08 25 05.3
	PRS	e(P)	08 25 10.0
	MNA	eP	08 25 12.6
	FRI	eP	08 25 13.1
USGS 08h15m52.7s 55.4N 163.0E			
h=34km mb=4.8 Ms=4.4			
Near East Coast of Kamchatka			
Oct 20	WDC	eP	09 31 49.7
		e(PcP)	09 34 51.3
		eS	09 37 22.3
	MIN	eP	09 31 54.5
	ORV	e(P)	09 31 58.0
	BKS	e(P)	09 32 07
		e	09 32 17.5
		eS	09 38 50
		e	09 39 10
		e	09 39 12
		e	09 39 38
		eSS	09 41 50
		iScS	09 41 56
		eLr	09 44 42
		AMP(μm)	PER(s)
	LZ	5.4	20.
	LN	0.71	20.
	LE	4.3	20.
	BRK	e(P)	09 32 07.7
	GCC	e(P)	09 32 08.1
	MHC	eP	09 32 09.4
		e(pP)	09 32 30.7
	CMB	eP	09 32 12.3
		e(pP)	09 32 34.2
		ePcP	09 35 22.3
		eS	09 37 34.5
		eScP	09 39 10
	PRS	eP	09 32 16.0
	LLA	eP	09 32 18.1
	FRI	eP	09 32 20.3
		e(pP)	09 32 41.7
		eS	09 37 38.8
	MNA	eP	09 32 20.9
	PRI	eP	09 32 22.3
BRK Ms=5.4 Distance=46°			
USGS 09h23m36.3s 52.6N 172.3E			
h=33km mb=5.5 Ms=5.6			
Near Islands, Aleutian Islands			
Oct 20	WDC	e	14 30 51.4
	ORV	e(P)	14 30 57.2
	CMB	eP	14 31 01.5
	MNA	eP	14 31 03.4
	MHC	e	14 31 03.9
	PRS	e	14 31 06.2
	FRI	eP	14 31 06.7
	LLA	e	14 31 07.2
USGS 14h18m52.1s 27.6N 140.7E			
h=41km mb=5.0			
Bonin Islands Region			
Oct 20	PRI	eP	21 19 33.0
	MNA	eP	21 19 34.3
	LLA	eP	21 19 36.0
	PRS	eP	21 19 37.1
	MHC	eP	21 19 44.0
	BKS	e(P)	21 19 49.9
		eS	21 27 08
		eL	21 32 30
		eLr	21 35 26
		AMP(μm)	PER(s)
	LZ	2.1	20.
	LN	0.71	20.
	LE	1.1	20.
	ORV	eP	21 19 54.1
	WDC	e(P)	21 20 01.0
BRK Ms=5.0 Distance=53°			
USGS 21h11m00.1s 0.9N 87.1W			
h=10km mb=5.3 Ms=5.1			
Galapagos Islands Region			
Oct 21	GCC	e(P)	03 04 35.0
	PRS	e(P)	03 04 35.9
	BKS	eP	03 04 36.5
		i	03 04 48.8
		AMP(μm)	PER(s)
	PZ	0.016	0.8
	MHC	eP	03 04 37.2
	LLA	e(P)	03 04 38.0
	PRI	e(P)	03 04 38.7
	WDC	eP	03 04 41.1
	ORV	eP	03 04 42.2
	CMB	eP	03 04 42.5
	FRI	eP	03 04 42.6
	MNA	eP	03 04 51.4
USGS 02h52m07.1s 18.9S 168.8E			
h=105km mb=4.8			
Vanuatu Islands			
Oct 21	PRI	eP	06 21 38.0
	PRS	eP	06 21 39.4
	LLA	e(P)	06 21 41.0
	FRI	eP	06 21 42.2
	MHC	eP	06 21 47.0
	PCC	eP	06 21 47.7
	CMB	ePc	06 21 50.4
	BKS	eP	06 21 51.2
		e	06 22 33.0
		eLq	06 37 28
		eLr	06 40 20
		AMP(μm)	PER(s)
	PZ	0.088	1.7
	LZ	0.89	20.
	LN	1.1	20.
	LE	0.0	20.
	MNA	eP	06 21 52.6
	MIN	e(P)	06 22 04.5
	WDC	ePc	06 22 08.1
BRK Ms=5.0 Distance=65°			
USGS 06h11m34.0s 23.0S 114.4W			
h=10km mb=5.4 Ms=4.9			
Easter Island Region			
Oct 21	WDC	ePKP	07 43 34.0
	PRS	ePKP	07 43 37.5
	CMB	ePKP	07 43 38.1
	PRI	ePKP	07 43 39.2
	FRI	ePKP	07 43 40.0
	MNA	ePKP	07 43 42.5
USGS 07h25m18.2s 7.3S 128.7E			
h=128km mb=5.5			
Banda Sea			
Oct 21	WDC	eP	11 15 50.9

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DATE	STA	PHASE	TIME (UTC)
	MIN	eP	10 15 54.3
	ORV	eP	10 15 55.7
	MHC	eP	10 15 58.6
	CMB	eP	10 16 02.4
	PRI	eP	10 16 04.6
	FRI	eP	10 16 06.3
	MNA	eP	10 16 10.7
USGS 10h04m21.3s 16.8N 145.3E			
h=428km mb=4.5			
Mariana Islands			
Oct 21	FHC	ePc	17 54 55.8
	WDC	iPc	17 55 03.6
		ePcP	17 57 02.0
		eScP	18 00 40.9
	MIN	eP	17 55 08.8
		ePcP	17 57 04.0
		eScP	18 00 43.2
	ORV	ePc	17 55 12.9
		ePcP	17 57 05.7
		eScP	18 00 45.1
	BRK	eP	17 55 18.0
	BKS	iPc	17 55 18.0
		i	17 55 20.5
		i	17 55 22.5
		e	17 55 56.0
		ePcP	17 57 08.1
		e	18 00 48.9
		AMP(μm)	PER(s)
		PZ 0.13	0.8
	PCC	ePc	17 55 18.7
	GCC	ePc	17 55 23.3
	MHC	iPc	17 55 23.9
	CMB	iPc	17 55 26.9
		ePcP	17 57 11.7
		eScP	18 00 52.5
	SAO	e(P)	17 55 27.2
	PRS	ePc	17 55 30.3
		ePcP	17 57 13.4
		eScP	18 00 54.5
	LLA	eP	17 55 31.2
		ePcP	17 57 13.9
		eScP	18 00 55.0
	FRI	iPc	17 55 35.0
		ePcP	17 57 15.1
		eScP	18 00 56.6
	PRI	ePc	17 55 35.2
		ePcP	17 57 15.9
		eScP	18 00 57.6
	MNA	iPc	17 55 35.8
		ePcP	17 57 16.1
USGS 17h47m30.2s 51.9N 179.4E			
h=94km mb=5.2			
Rat Islands, Aleutian Islands			
Oct 21	FRI	eP	23 37 23.4
		epP	23 37 43.9
	PRI	eP	23 37 25.6
		epP	23 37 45.7
		esP	23 37 54.4
	MNA	eP	23 37 25.7
		epP	23 37 45.7
		esP	23 37 54.7
	LLA	eP	23 37 27.9
		e	23 37 32.3
		epP	23 37 48.0
		esP	23 37 56.9
	PRS	eP	23 37 28.2
		esP	23 37 48.7
	GCC	eP	23 37 28.7
		epP	23 37 53.2
	CMB	eP	23 37 30.8
		epP	23 37 50.9
	MHC	eP	23 37 33.1
		e	23 37 38.0
		epP	23 37 53.5
		esP	23 38 02.3
	ORV	eP	23 37 40.7
		epP	23 38 01.0
		esP	23 38 09.9
	WDC	eP	23 37 45.8
		e	23 37 50.2
		epP	23 38 06.0
		esP	23 38 14.7
	FHC	eP	23 37 53.1
		epP	23 38 13.7
		esP	23 38 22.3
	PCC	epP	23 37 56.2
USGS 23h25m51.8s 21.0S 69.9W			
h=74km mb=5.3			
Northern Chile			
Oct 22	CMB	e(PKP)	00 25 38.0
	FRI	ePKP	00 25 41.9
USGS 00h04m33.4s 26.0S 71.2E			
h=10km mb=4.9 Ms=5.4			
Mid-Indian Rise			
Oct 22	WDC	eP	00 34 30.2
		ePcP	00 40 22.2
		eSKKP	01 01 05.5
	MIN	eP	00 34 37.1
		eSKKP	01 01 06.7
	ORV	eP	00 34 46.8
		e(PcP)	00 40 24.2
		eSKKP	01 01 07.6
	MHC	eP	00 35 15.9
		ePcP	00 40 27.0
		eSKKP	01 01 10.7
	MNA	eP	00 35 18.3
		ePcP	00 40 31.2
		eSKKP	01 01 14.1
	FRI	e(P)	00 35 28.5
		ePcP	00 40 29.3
		eSKKP	01 01 12.6
	PRI	eP	00 35 35.4
		ePcP	00 40 30.5
		eSKKP	01 01 13.2
	FHC	ePcP	00 40 19.5
	CMB	ePcP	00 40 27.5
		eSKKP	01 01 10.5
	PRS	ePcP	00 40 28.5
		eSKKP	01 01 11.3
	LLA	eSKKP	01 01 12.8
USGS 00h32m05.4s 49.4N 128.9W			
h=10km mb=4.6			
Vancouver Island Region			
Oct 22	BKS	iPc	03 48 08.3
		iS	03 48 15.0
		i	03 48 15.2
		eS	03 48 15.5
	BRK	iPc	03 48 08.4
	ZSP	iPc	03 48 08.9
	MHC	ePc	03 48 09.8
		eS	03 48 17.1
	PCC	iPc	03 48 11.5
	GCC	iPd	03 48 14.8
	SAO	ePd	03 48 18.9
	CMB	iPc	03 48 19.7
	LLA	ePd	03 48 23.3
	PRS	iPd	03 48 25.1
	ORV	e(P)	03 48 29.3
	FRI	iPc	03 48 30.0
	PRI	eP	03 48 31.2
	MIN	ePc	03 48 40.4
	WDC	eP	03 48 44.3
	MNA	eP	03 48 46.3
BRK 03h48m00.3s 37.8N 121.7W			
h=7km ML=4.4(8) Mo=1.2E23(4)			
14 km NNE of Livermore, CA			
Oct 22	WDC	eP	05 11 17.6
	ORV	e(P)	05 11 28.4
	CMB	ePc	05 11 31.8
	FRI	ePc	05 11 36.5
	PRI	eP	05 11 37.9
	MNA	eP	05 11 38.1
USGS 04h58m53.9s 29.7N 130.7E			
h=22km mb=5.1 Ms=5.3			
Ryukyu Islands			
Oct 22	PRS	eP	12 24 23.5
	GCC	eP	12 24 23.8
	PCC	eP	12 24 23.9
	PRI	eP	12 24 25.4
	LLA	eP	12 24 25.7
	MHC	eP	12 24 26.2
	BKS	iPd	12 24 26.7
		ePPS	12 35 34
		eLr	12 48 55
		AMP(μm)	PER(s)
		PZ 0.046	1.1
		LZ 0.71	20.
		LN 0.36	20.
		LE 0.0	20.
	FRI	e(P)	12 24 30.9
	CMB	ePd	12 24 32.3
		e	12 24 42.8
	ORV	eP	12 24 34.3
	WDC	ePd	12 24 35.1
		e	12 24 45.8
	MIN	eP	12 24 36.2
	MNA	eP	12 24 40.8
BRK Ms=4.7 Distance=81°			
USGS 12h12m13.5s 26.4S 175.4W			
h=34km mb=5.4 Ms=5.0			
South of Tonga Islands			
Oct 22	PRS	ePc	13 22 12.0
	PCC	eP	13 22 12.5
	SAO	e(P)	13 22 13.0
	PRI	e(P)	13 22 14.2
	BKS	eP	13 22 14.2
		AMP(μm)	PER(s)
		PZ 0.017	1.0
	MHC	ePc	13 22 14.9
	FRI	ePc	13 22 19.7
	CMB	ePc	13 22 21.1
	WDC	ePc	13 22 23.2
	MIN	ePc	13 22 24.9
	MNA	ePc	13 22 30.7
USGS 13h10m33.5s 20.1S 173.6W			
h=33km mb=5.2 Ms=4.7			
Tonga Islands			
Oct 22	FHC	ePc	14 29 50.5
	WDC	iPc	14 29 56.7
	MIN	ePc	14 30 01.4
	ORV	ePc	14 30 05.0
	PRS	ePc	14 30 20.7
	LLA	ePc	14 30 21.6
	FRI	ePc	14 30 24.2
	MNA	iPc	14 30 24.6
USGS 14h20m31.6s 50.5N 155.4E			
h=122km mb=4.6			
Kuril Islands			
Oct 22	PCC	e(P)	16 56 57.6
	GCC	ePc	16 56 57.8
	PRS	ePc	16 56 58.7
	BRK	eP	16 56 59.1
	BKS	iPc	16 56 59.1
		AMP(μm)	PER(s)
		PZ 0.031	0.8
	SAO	eP	16 56 59.3
	MHC	ePc	16 57 00.1
	FHC	eP	16 57 00.4
	LLA	eP	16 57 00.7
	PRI	ePc	16 57 01.2
	WDC	ePc	16 57 04.2
	ORV	ePc	16 57 04.9
	CMB	ePc	16 57 05.4
	FRI	ePc	16 57 05.6
	MIN	eP	16 57 06.2
	MNA	ePc	16 57 14.0
USGS 16h44m35.5s 19.2S 169.1E			
h=158km mb=5.2			
Vanuatu Islands			
Oct 23	FRI	e(P)d	13 47 11.5
		e	13 47 41.9
	PRI	ePd	13 47 13.5
		e	13 47 42.5
	MNA	ePd	13 47 13.8
		e	13 47 42.7
	PRS	ePd	13 47 16.3
		i	13 47 45.2
	LLA	ePd	13 47 17.0
		e	13 47 45.7
	SAO	ePd	13 47 18.3
	CMB	ePd	13 47 19.2
		e	13 47 48.3
	GCC	ePd	13 47 21.5
		e	13 47 50.4
	MHC	ePd	13 47 21.8
		e	13 47 50.6
	BRK	eP	13 47 25.2
		e	13 47 54.3
	BKS	ePd	13 47 25.5
		e	13 47 39.4
		e	13 47 54.1
		AMP(μm)	PER(s)
		PZ 0.020	0.6
	ORV	ePd	13 47 29.0
		i	13 47 58.1
	WDC	iPd	13 47 33.9
		i	13 48 03.2
	FHC	ePd	13 47 41.6
		e	13 48 11.7
USGS 13h35m45.2s 20.4S 68.9W			
h=114km mb=5.1			
Chile-Bolivia Border Region			
Oct 23	MNA	iPc	16 00 36.2
	FRI	iPc	16 00 48.0
		i	16 00 53.1
	PRI	ePc	16 01 00.9
	LLA	e(P)	16 01 02.4
		e	16 01 11.9
	SAO	eP	16 01 07.5
	PRS	ePc	16 01 07.6
	MHC	ePc	16 01 09.8
		e	16 01 18.6
	ORV	ePc	16 01 15.3
	BRK	e(P)	16 01 16.1
	BKS	ePnd	16 01 16.5
		ePg	16 01 24
		e	16 01 30.6
		e	16 01 34.5
		e	16 02 36.6
	MIN	e(P)	16 01 22.5
	WDC	eP	16 01 32.1
BRK ML=5.2(8)			
USGS 16h00m00.1s 37.1N 116.1W			
h=0km			
Underground Nuclear Explosion, N.T.S.			
Oct 23	PRS	eP	17 00 11.8
	PRI	eP	17 00 12.2
	SAO	eP	17 00 13.9
	LLA	eP	17 00 14.3
	GCC	eP	17 00 15.0
	PCC	eP	17 00 17.2
	MHC	eP	17 00 18.1
	FRI	eP	17 00 18.5
	BKS	ePc	17 00 20.0
		AMP(μm)	PER(s)
		PZ 0.047	0.9
	CMB	eP	17 00 24.0
	MNA	eP	17 00 31.1
	ORV	eP	17 00 31.3
	MIN	eP	17 00 35.7
	WDC	eP	17 00 36.1
USGS 16h49m58.8s 21.8S 139.0W			
h=0km mb=5.5			
Tuamotu Archipelago Region			
Oct 24	FRI	iPd	12 22 54.7
		iS	12 23 01.3
	CMB	eP	12 23 08.5
	LLA	eP	12 23 09.0
	PRI	eP	12 23 10.2
	MNA	ePd	12 23 12.8
	SAO	eP	12 23 14.3
	PRS	eP	12 23 15.2
BRK 12h22m45.7s 37.1N 119.3W			
h=44km ML=3.0(2)			
Lake Shaver area, 59 km NE of Fresno, CA			
Oct 24	PCC	eP	14 49 20.3
	GCC	eP	14 49 21.2
	FHC	eP	14 49 21.5
	BRK	eP	14 49 21.9
	BKS	ePc	14 49 22.0
		AMP(μm)	PER(s)
		PZ 0.15	0.9
	SAO	eP	14 49 22.9
	PRS	eP	14 49 23.0
	MHC	eP	14 49 23.7
	LLA	eP	14 49 25.1
	WDC	ePc	14 49 25.7
		e	14 50 08.2
	PRI	ePc	14 49 25.9
	ORV	ePc	14 49 27.4
	MIN	ePc	14 49 27.9
	CMB	ePc	14 49 29.1
		e	14 50 11.7
	FRI	ePc	14 49 29.8
		e	14 50 12.5
	MNA	ePc	14 49 38.3
		e	14 50 21.2
USGS 14h37m16.5s 10.9S 166.2E			
h=170km mb=5.5			
Santa Cruz Islands			
Oct 24	PRI	eP	20 57 09.8
		epP	20 57 20.3
	WDC	eP	20 57 12.2
		epP	20 57 22.8
	ORV	eP	20 57 12.8
		epP	20 57 23.9
	CMB	eP	20 57 13.7
		epP	20 57 24.6
	FRI	eP	20 57 14.0
		epP	20 57 24.7
	MNA	eP	20 57 22.3
		epP	20 57 33.2
USGS 20h44m24.9s 18.8S 167.5E			
h=33km mb=4.8 Ms=3.9			
Vanuatu Islands			
Oct 25	ORV	e(PKP)	17 05 23.6
	WDC	ePKP	17 05 23.7
	FRI	e(PKP)	17 05 24.7
	MIN	ePKP	17 05 25.5
	CMB	ePKP	17 05 25.8
	MNA	ePKP	17 05 26.8
	BKS	e(P)d	17 05 33.4
USGS 16h57m59.0s 5.1N 37.2E			
h=10km mb=4.7			
Ethiopia			
Oct 25	FHC	eP	17 07 37.4
	WDC	eP	17 07 43.1
		e	17 11 31.8
		ePP	17 11 46.3
	BRK	eP	17 07 44.0
	MIN	eP	17 07 45.7
	BKS	ePd	17 07 45.8
		e	17 08 50.4
		ePP	17 11 46
		e(PPS)	17 12 12
		eS	17 18 27.2
		ePS	17 20 38
		e(SS)	17 25 16.8
		e	17 29 56
		eLq	17 34 12
		eLr	17 38 40
		AMP(μm)	PER(s)
		PZ 0.092	0.5
		LN 15	20.
		LE 19	20.
		LZ 15	20.
	ORV	eP	17 07 46.1
		e	17 11 32.1
	GCC	eP	17 07 46.8
	MHC	eP	17 07 47.2
	PRS	eP	17 07 47.9
	SAO	eP	17 07 48.6
	LLA	eP	17 07 50.0
	CMB	eP	17 07 50.9
		ePP	17 11 52.3
	PRI	eP	17 07 51.1
	FRI	eP	17 07 52.1
	MNA	eP	17 07 59.7
		ePKKP	17 24 27.3
BRK Ms=6.7 Distance=98°			
USGS 16h54m05.7s 2.3S 138.4E			
h=33km mb=6.2 Ms=7.0			
West Irian			
Oct 25	WDC	eP	20 01 58.1
	CMB	eP	20 02 04.3
	FRI	eP	20 02 09.2
	MNA	eP	20 02 14.1
USGS 19h49m18.2s 12.3S 166.2E			
h=10km mb=5.1			
South of Mariana Islands			

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DATE	STA	PHASE	TIME (UTC)
Oct 26	MNA	ePn	04 17 14.3
		ePg	04 17 30.5
		eSg	04 18 31.5
	CMB	ePn	04 17 36.9
		e	04 17 45.0
		ePg	04 18 00.3
		eSg	04 19 22.8
	MIN	ePn	04 17 41.0
		ePg	04 18 01.1
	FRI	e(Pn)	04 17 41.1
		ePg	04 18 04.0
		eSg	04 19 27.0
	ORV	eSg	04 19 26.3
	LLA	eSg	04 19 57.8
BRK ML=4.6(2)			
USGS 04h16m01.0s 41.2N 113.2W			
h=9km mb=4.8			
West of Great Salt Lake, Utah			
Oct 26	FHC	e(P)	19 08 12.0
	WDC	iPd	19 08 17.4
	PCC	eP	19 08 22.2
	BRK	e(P)	19 08 22.3
	ORV	ePd	19 08 22.7
	BKS	e(P)	19 08 22.8
		AMP(μm)	PER(s)
		PZ 0.034	0.8
	GCC	eP	19 08 24.5
	MHC	ePd	19 08 26.0
	PRS	ePd	19 08 28.6
	LLA	eP	19 08 29.9
	CMB	iPd	19 08 30.0
	PRI	eP	19 08 32.1
	FRI	ePd	19 08 33.9
	MNA	iPd	19 08 38.3
USGS 18h56m26.5s 19.0N 145.6E			
h=145km mb=5.0			
Mariana Islands			
Oct 27	PRI	e(P)	00 56 31.8
	PRS	e(P)	00 56 37.5
	FRI	eP	00 56 38.7
	LLA	e(P)	00 56 40.3
	SAO	e(P)	00 56 42.7
	MNA	e(P)	00 56 54.0
	CMB	e(P)	00 56 59.5
USGS 00h54m58.2s 30.9N 116.9W			
h=6km mb=4.5			
Baja California			
Oct 27	WDC	ePc	10 35 17.2
		e	10 35 32.2
		e	10 36 08.5
	MIN	ePc	10 35 20.4
	BKS	ePc	10 35 20.8
		e(S)	10 45 50
		e	11 04 10
		e(Lr)	11 18 38
		AMP(μm)	PER(s)
		PZ 0.026	1.0
	ORV	ePc	10 35 21.8
		e	10 35 36.6
	MHC	eP	10 35 24.3
		e	10 35 39.2
	PRS	ePc	10 35 26.3
	FHC	e	10 35 27.3
	LLA	eP	10 35 27.5
		e	10 35 42.0
	CMB	ePc	10 35 28.1
		i	10 35 43.0
	PRI	ePc	10 35 29.9
		e	10 35 44.7

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	FRI	ePc	10 35 31.5
		i	10 35 46.6
	MNA	ePc	10 35 36.0
		i	10 35 51.3
USGS 10h22m45.0s 12.2N 144.1E			
h=39km mb=5.4 Ms=5.1			
South of Mariana Islands			
Oct 27	PCC	iPd	13 09 09.6
	GCC	iPd	13 09 09.6
	PRS	iPd	13 09 09.7
	SAO	iPd	13 09 10.4
	BKS	iPd	13 09 11.3
		epP	13 11 10.2
		esP	13 12 9
		AMP(μm)	PER(s)
		PZ 0.14	.6
	BRK	iPd	13 09 11.4
	PRI	iPd	13 09 11.7
	LLA	iPd	13 09 11.9
	MHC	iPd	13 09 12.1
		i	13 11 07.2
	FHC	iPd	13 09 15.9
	FRI	iPd	13 09 16.7
	CMB	iPd	13 09 17.9
		e	13 11 12.7
	ORV	iPd	13 09 18.9
		i	13 11 13.6
	WDC	iPd	13 09 19.2
	MIN	iPd	13 09 21.1
	MNA	iPd	13 09 26.7
		i	13 11 22.8
USGS 12h57m59.4s 21.4S 178.8W			
h=533km mb=5.5			
Fiji Islands Region			
Oct 27	FRI	iPc	22 09 46.3
		i	22 12 57.4
		ePKPPKP	22 38 28.0
	PRI	iPc	22 09 48.0
		i	22 11 59.0
		ePKPPKP	22 38 28.8
	MNA	iPc	22 09 48.1
		i	22 11 59.2
	LLA	iPc	22 09 50.2
		i	22 12 01.1
	PRS	iPc	22 09 50.6
		i	22 12 01.6
	SAO	iPc	22 09 51.8
	CMB	iPc	22 09 52.6
		i	22 12 04.1
		ePKPPKP	22 38 22
	GCC	iPc	22 09 54.2
	MHC	iPc	22 09 54.6
		i	22 12 05.9
	PCC	iPc	22 09 56.7
	BKS	iPc	22 09 57.6
		iPcP	22 10 00
		epP	22 12 9.0
		esP	22 13 11
		eSKS	22 19 26.8
		eS	22 19 46
		ePS	22 20 16
		esPS	22 23 34.8
		e	22 30 9
		e	22 34 8
		e	22 39 31
		AMP(μm)	PER(s)
		PZ 0.76	.9
	BRK	iPc	22 09 57.8
	ORV	iPc	22 10 00.7
		i	22 12 12.5

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	MIN	iPc	22 10 02.1
		i	22 12 14.5
	WDC	iPc	22 10 05.2
		i	22 12 17.4
		ePKPPKP	22 38 13.5
	FHC	iPc	22 10 11.8
		i	22 12 24.3
BRK mb=6.6 h=630km Distance= 80°			
USGS 21h58m17.0s 28.7S 62.9W			
h=604km mb=6.0			
Santiago Del Estero Province, Argentina			
Oct 28	WDC	iPc	06 42 59.0
	MIN	ePc	06 43 04.6
	ORV	ePc	06 43 08.7
	CMB	iPc	06 43 23.3
	LLA	ePc	06 43 28.0
	FRI	ePc	06 43 32.0
	PRI	ePc	06 43 32.3
	MNA	ePc	06 43 32.9
USGS 06h36m10.4s 52.4N 170.7W			
h=33km mb=5.2			
Fox Islands, Aleutian Islands			
Oct 28	WDC	iPc	08 15 06.9
	MIN	iPc	08 15 11.1
	ORV	iPc	08 15 14.4
		e	08 15 28.3
	GCC	e(P)c	08 15 22.2
	CMB	iPc	08 15 25.3
		e	08 15 39.4
	MHC	e(P)c	08 15 26.7
	PRS	ePc	08 15 27.6
	LLA	ePc	08 15 28.4
	MNA	iPc	08 15 32.7
	FRI	ePc	08 15 32.9
USGS 08h04m33.9s 43.2N 146.6E			
h=45km mb=4.6			
Kuril Islands			
Oct 28	WDC	ePKPc	09 17 41.3
	MIN	ePKPc	09 17 41.5
	MNA	ePKPc	09 17 43.3
	ORV	ePKPc	09 17 45.0
	CMB	ePKPc	09 17 45.0
	FRI	ePKPc	09 17 46.5
	MHC	ePKPc	09 17 48.0
	BKS	e	09 20 8.0
		e	09 54 44
		e	10 11 52
		e	10 13 16
		e	10 23 47
USGS 08h58m29.2s 5.7N 36.7E			
h=10km mb=5.4 Ms=5.6			
Ethiopia			
Oct 28	SAO	iPc	14 42 38.4
	LLA	iPc	14 42 42.8
	PRS	iPd	14 42 43.0
	GCC	ePc	14 42 47.8
	PRI	iPd	14 42 50.8
	PCC	iPd	14 42 57.1
	BKS	ePd	14 43 0.2
		eS	14 43 22.6
		e	14 43 23.9
	FRI	iPd	14 43 00.3
		iS	14 43 18.6
	CMB	iPd	14 43 03.4
BRK 14h42m36.1s 36.7N 121.3W			
h=2km ML=2.9(4)			
20 km S of Hollister, CA			

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Oct 28	MNA	ePc	17 55 01.2
		e	17 55 10.5
	LLA	eP	17 55 03.2
		e	17 55 11.9
	PRS	eP	17 55 04.0
		e	17 55 12.5
	CMB	eP	17 55 07.1
		e	17 55 15.9
	GCC	e(P)	17 55 09.0
		e	17 55 17.8
	PRI	e	17 55 09.3
	MHC	eP	17 55 10.2
		e	17 55 18.8
	ORV	ePc	17 55 18.5
		i	17 55 27.2
	WDC	eP	17 55 32.9
		e	17 55 41.5
USGS 17h44m28.4s 13.2S 77.0W			
h=49km mb=5.0			
Off Coast of Peru			
Oct 28	PRS	eP	18 33 51.7
	GCC	eP	18 33 52.0
	PRI	eP	18 33 53.5
	LLA	eP	18 33 53.8
	BRK	eP	18 33 54.3
	MHC	ePd	18 33 54.7
	BKS	ePd	18 33 54.7
		eS	18 44 6
		eLq	18 56 33
		eLr	19 00 22.0
		AMP(μm)	PER(s)
		PZ 0.041	1.1
		LZ 1.5	20.
		LN 1.4	20.
		LE 1.1	20.
	FRI	ePd	18 33 58.7
	CMB	eP	18 34 00.2
	ORV	eP	18 34 00.8
	WDC	ePd	18 34 02.0
	MNA	iPd	18 34 08.2
BRK Ms=5.5 Distance= 86°			
USGS 18h21m29.3s 28.3S 176.7W			
h=34km mb=5.4 Ms=5.4			
Kermadec Islands Region			
Oct 28	PRI	ePc	18 35 41.2
	PRS	ePc	18 35 42.9
	FRI	ePc	18 35 43.4
	LLA	eP	18 35 43.7
	GCC	ePc	18 35 47.3
	MHC	ePc	18 35 48.9
	CMB	eP	18 35 50.7
	MNA	ePc	18 35 50.8
	BRK	eP	18 35 52.1
	BKS	eP	18 35 53.0
		e	18 36 4.0
		AMP(μm)	PER(s)
		PZ 0.051	1.1
	ORV	eP	18 36 00.4
	MIN	eP	18 36 03.9
	WDC	ePc	18 36 06.2
USGS 18h24m02.0s 36.1S 100.8W			
h=10km mb=5.4 Ms=5.1			
Southern Pacific Ocean			
Oct 28	SAO	iPc	19 52 34.1
	LLA	iPc	19 52 34.2
	PRS	iPd	19 52 35.1
	PRI	iPd	19 52 41.7
	GCC	iPc	19 52 43.1

DATE	STA	PHASE	TIME (UTC)
	MHC	ePd	19 52 45.5
	PCC	ePd	19 52 51.5
	FRI	ePnc	19 52 51.9
		i	19 52 56.2
		e	19 53 05.3
		iS*	19 53 08.4
	BKS	ePn	19 52 54.8
		ePg	19 52 58.4
		eS	19 53 19.4
	BRK	e(P)	19 52 55.3
	ZSP	ePnd	19 52 56.0
		ePg	19 53 00.0
		iSg	19 53 24.2
	CMB	ePnc	19 52 57.1
		iS*	19 53 19.4
	ORV	e(Pn)	19 53 16.2
	MNA	ePn	19 53 24.0
BRK 19h52m29.3s 36.6N 121.2W			
h=9km ML=3.3(4)			
Bear Valley, 35 km SE of Hollister, CA			
Oct 29	FHC	ePKP	20 37 14.0
	WDC	ePKPc	20 37 18.4
		e(SKP)	20 41 44.2
	MIN	e(PKP)	20 37 20.7
	ORV	ePKP	20 37 22.4
		e	20 41 27.2
	PCC	ePKP	20 37 22.5
	BKS	eP	20 37 22.5
		epP	20 37 33.3
		ePP	20 41 36.8
		eSKS	20 47 52.8
		ePS	20 50 31
		e(SP)	20 50 32
		e(PPS)	20 51 42
		eSS	20 55 52
		eLq	21 04 16
		eG	21 05 57
		eLr	21 09 37.6
		e	21 09 56.8
		e	21 10 57
		AMP(μm)	PER(s)
		PZ 0.086	1.5
		LZ 5.9	20.
		LN 1.4	20.
		LE 4.5	20.
	BRK	e(PKP)	20 37 22.7
	MHC	ePKP	20 37 25.8
	GCC	ePKP	20 37 29.0
	PRS	ePKP	20 37 29.0
	LLA	ePKP	20 37 29.1
	PRI	ePKP	20 37 31.0
	FRI	ePKP	20 37 32.5
		e	20 37 36.8
		eSKP	20 41 49.3
	MNA	ePKP	20 37 36.2
		eSKP	20 41 52.4
BRK Ms=6.0 Distance=102°			
USGS 20h23m41.0s 4.8N 127.7E			
h=152km mb=6.1			
Talaud Islands			
Oct 30	PRS	e(P)	15 07 03.1
	MHC	e(P)	15 07 04.8
	FRI	eP	15 07 11.2
	WDC	eP	15 07 12.8
	ORV	e(P)	15 07 13.6
	MIN	eP	15 07 14.4
	MNA	eP	15 07 21.2
	BKS	e	15 25 2
		e	15 28 52

DATE	STA	PHASE	TIME (UTC)
USGS 14h55m44.2s 15.6S 173.3W			
h=33km mb=5.3 Ms=5.4			
Tonga Islands			
Oct 30	BRK	iPd	23 10 43.8
	ZSP	ePd	23 10 43.9
		iS	23 10 46.0
	BKS	iPd	23 10 44.1
		iS	23 10 45.4
	PCC	iPd	23 10 50.9
	MHC	eP	23 10 57.7
		iS	23 11 10.2
	GCC	eP	23 10 59.4
		iSg	23 11 14.0
	SAO	eP	23 11 05.3
	LLA	e	23 11 06.8
	PRS	e	23 11 08.6
	ORV	eP	23 11 11.3
	FRI	e	23 11 17.6
	PRI	ePc	23 11 19.0
BRK 23h10m42.7s 37.9N 122.3W			
h=5km ML=3.2(4) Mo=3.1E20(2)			
Berkeley Hills, CA			
Oct 31	WDC	ePc	01 33 29.7
	MIN	ePc	01 33 34.4
	ORV	e(P)	01 33 39.5
	BRK	e(P)	01 33 51.3
	BKS	eP	01 33 51.7
		AMP(μm)	PER(s)
		PZ 0.025	0.7
	MHC	ePc	01 33 57.7
	MNA	ePc	01 34 02.0
	LLA	ePc	01 34 05.9
	PRS	ePc	01 34 06.3
	FRI	ePc	01 34 06.7
	PRI	eP	01 34 11.0
USGS 01h27m59.5s 60.3N 149.9W			
h=58km mb=4.8			
Kenai Peninsula, Alaska			
Oct 31	FRI	ePd	05 23 10.4
	PRI	eP	05 23 11.8
	MNA	ePd	05 23 12.7
	LLA	ePd	05 23 14.2
	PRS	ePd	05 23 14.5
	GCC	eP	05 23 19.0
	MHC	eP	05 23 19.5
	BRK	eP	05 23 22.9
	ORV	iPd	05 23 26.9
	MIN	eP	05 23 29.0
	WDC	iPd	05 23 31.9
	FHC	eP	05 23 38.8
USGS 05h11m18.0s 25.8S 69.8W			
h=69km mb=5.1			
Northern Chile			
Oct 31	FRI	e(P)	09 02 15.7
	PRI	ePd	09 02 16.8
	MNA	iPd	09 02 17.4
	LLA	ePd	09 02 19.5
	PRS	e(P)d	09 02 20.5
	MHC	eP	09 02 26.5
	SAO	e	09 02 35.0
	ORV	iPd	09 02 35.8
	BKS	eP	09 02 [illegible]
		eS	09 [illegible]
		eLr	09 [illegible]
		AMP(μm)	PER(s)
		LZ 2.5	20.
		LN 1.[illegible]	20.
		LE 2.[illegible]	20.

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DATE	STA	PHASE	TIME (UTC)
	MIN	e(P)	09 02 39.3
	WDC	ePd	09 02 41.9
	FHC	iPd	09 02 51.9
BRK Ms=5.4 Distance= 59°			
USGS 08h52m30.9s 6.9S 80.5W			
h=33km mb=5.4 Ms=5.3			
Near Coast of Northern Peru			
Oct 31	MHC	iPc	10 36 13.5
		iS	10 36 15.7
	GCC	iPd	10 36 19.5
		iS	10 36 26.0
	PCC	ePc	10 36 22.0
		iS	10 36 31.9
	SAO	iPd	10 36 23.9
	BRK	ePd	10 36 24.9
	BKS	eP	10 36 25.0
		eS	10 36 38
	LLA	ePd	10 36 28.9
	PRS	ePc	10 36 30.8
	PRI	ePc	10 36 37.5
	FRI	ePc	10 36 38.8
	ORV	ePc	10 36 50.3
BRK 10h36m11.7s 37.3N 121.7W			
h=6km ML=2.6(2)			
Halls Valley, 13 km E of San Jose, CA			
Oct 31	FHC	iPc	14 08 18.2
		iS	14 08 32.5
	ARC	iPd	14 08 18.2
		iS	14 08 31.3
	WDC	iPc	14 08 32.9
		iS	14 08 58.7
	MIN	iPc	14 08 43.0
		iS	14 09 17.7
	ORV	ePc	14 08 46.2
	ZSP	e(P)	14 08 51.2
		e	14 09 31.3
	BKS	eP	14 08 51.2
	BRK	eP	14 08 51.3
	PCC	eP	14 08 52.7
	GCC	e(P)	14 09 00.8
	MHC	e(P)	14 09 01.0
	SAO	iPd	14 09 07.8
	LLA	e(P)	14 09 11.4
	PRS	e(P)	14 09 11.5
	FRI	e(P)	14 09 20.6
	PRI	e(P)c	14 09 22.7
BRK 14h07m58.1s 40.4N 125.5W			
h=15kmR ML=4.4(2)			
Off Coast 120 km WSW of Eureka, CA			
Nov 1	ZSP	eP	01 43 10.4
		eS	01 43 23.3
	BKS	ePd	01 43 11.3
		eS	01 43 25.5
	BRK	ePc	01 43 11.4
		eS	01 43 26.7
	ORV	ePd	01 43 14.3
	PCC	eP	01 43 16.1
	MHC	e(P)	01 43 21.4
	MIN	ePc	01 43 22.3
	WDC	e(P)	01 43 23.8
	GCC	ePc	01 43 23.8
	SAO	eP	01 43 29.3
	LLA	ePc	01 43 33.1
	PRS	eP	01 43 35.3
	FHC	e	01 43 36.7
	FRI	ePc	01 43 41.5
	MNA	e	01 43 57.7
BRK 01h42m53.7s 38.8N 122.7W			

DATE	STA	PHASE	TIME (UTC)
h=13km ML=3.1(2)			
The Geysers area, 24 km S of Clear Lake, CA			
Nov 1	PRS	eP	08 54 28.8
		epP	08 54 32.1
	GCC	eP	08 54 29.3
		epP	08 54 32.4
	PCC	e(P)	08 54 29.6
		epP	08 54 32.8
	SAO	eP	08 54 30.4
		epP	08 54 32.9
	PRI	eP	08 54 30.7
		epP	08 54 33.8
	BRK	eP	08 54 31.1
		epP	08 54 34.7
	LLA	e(P)	08 54 31.2
	MHC	eP	08 54 31.8
	BKS	eP	08 54 31.9
		eS	09 04 56
		eSS	09 10 20
		eLq	09 16 12
		eLr	09 19 52
		AMP(μm)	PER(s)
		PZ 0.21	0.9
		LZ 7.1	20.
		LN 5.9	20.
		LE 4.8	20.
	FRI	eP	08 54 35.6
		epP	08 54 38.8
	FHC	eP	08 54 37.0
		epP	08 54 40.3
	ORV	eP	08 54 38.9
		epP	08 54 42.0
	WDC	eP	08 54 39.8
		epP	08 54 42.9
	MIN	eP	08 54 41.0
		epP	08 54 44.2
	MNA	eP	08 54 45.0
		epP	08 54 48.2
BRK Ms=6.0 Distance= 83°			
USGS 08h42m06.5s 28.7S 177.6W			
h=59km mb=6.1			
Kermadec Islands Region			
Nov 1	MHC	iPd	22 11 15.0
		iS	22 11 16.55
	GCC	iPd	22 11 20.9
	PCC	iPc	22 11 24.7
	SAO	iP	22 11 24.7
	BKS	ePc	22 11 27.3
		eS	22 11 38.7
	BRK	ePc	22 11 27.7
	ZSP	eP	22 11 29.0
		iS	22 11 42.1
	LLA	iPc	22 11 30.0
	PRS	ePd	22 11 31.5
	PRI	e(P)	22 11 38.2
	FRI	iPc	22 11 40.9
	ORV	eP	22 11 50.0
BRK 22h11m13.4s 37.3N 121.7W			
h=7km ML=3.2(3) Mo=5.9E20(1)			
Halls Valley, 18 km ESE of San Jose, CA			
Nov 1	MHC	eP	23 18 20.0
		epP	23 18 24.4
	PR1	epP	23 18 24.3
	FRI	eP	23 18 24.6
		epP	23 18 29.8
	ORV	eP	23 18 25.9
		epP	23 18 31.1

DATE	STA	PHASE	TIME (UTC)
	WDC	eP	23 18 26.0
		epP	23 18 31.2
	MIN	epP	23 18 33.3
	MNA	eP	23 18 35.3
		epP	23 18 40.6
	BKS	eS	23 28 00
		eLq	23 37 12
		AMP(μm)	PER(s)
		LZ 2.7	20.
		LN 5.2	20.
		LE 3.9	20.
BRK Ms=5.9 Distance= 75°			
USGS 23h06m40.3s 16.4S 177.5W			
h=33km mb=5.5 Ms=5.7			
Fiji Islands Region			
Nov 2	SAO	iPd	22 21 54.7
		iS	22 21 56.4
	LLA	iPc	22 22 00.1
	PRS	iPd	22 22 01.1
	GCC	iPc	22 22 03.4
	MHC	eP	22 22 04.8
	PRI	eP	22 22 09.3
	PCC	eP	22 22 12.1
	FRI	eP	22 22 16.3
		iS	22 22 33.8
BRK 22h21m52.9s 36.8N 121.4W			
h=8km ML=2.8(4)			
9 km S of Hollister, CA			
Nov 2	ZSP	eP	23 21 55.0
	BRK	ePc	23 21 55.2
		iS	23 22 09.7
	BKS	eP	23 21 56.4
		eS	23 22 10.2
	ORV	ePc	23 21 57.8
	PCC	ePc	23 22 00.2
	WDC	e	23 22 05.3
	MHC	eP	23 22 06.5
	MIN	ePc	23 22 06.7
	GCC	ePd	23 22 07.5
	FHC	e	23 22 22.8
BRK 23h21m36.6s 38.8N 122.8W			
h=3km ML=3.2(6) Mo=6.2E21(2)			
The Geysers area, 23 km S of Clear Lake, CA			
Nov 3	PCC	eP	08 26 20.3
		ePcP	08 26 52.7
	SAO	eP	08 26 20.4
	GCC	eP	08 26 20.4
	PRS	eP	08 26 20.6
		ePcP	08 26 51.1
	PRI	eP	08 26 22.9
		ePcP	08 26 53.3
	BKS	eP	08 26 23.0
		eS	08 35 43.90
		e	08 35 47.8
		eS	08 35 48
		e	08 36 14.47
		e	08 36 20
		eSP	08 36 25.18
		eLr	08 48 00
		AMP(μm)	PER(s)
		PZ 0.066	0.8
		LZ 2.5	20.
		LN 0.0	20.
		LE 2.7	20.
	MHC	eP	08 26 23.3
		ePcP	08 26 55.5
		epPcP	08 27 00.72
		eSP	08 36 25.01

DATE	STA	PHASE	TIME (UTC)
		e	08 36 26.88
		eSKS	08 36 29.07
		eS	08 36 39.07
		e	08 36 45.63
		e	08 36 49.69
	FRI	eP	08 26 28.5
		ePcP	08 26 56.4
	ORV	eP	08 26 30.8
		ePcP	08 27 03.2
	WDC	ePd	08 26 31.1
		ePcP	08 26 57.8
	MIN	eP	08 26 33.2
		ePcP	08 26 59.7
	MNA	eP	08 26 38.5
		ePcP	08 27 06.1
BRK Ms=5.5 Distance= 74°			
USGS 08h15m00.4s 17.2S 173.8W			
h=88km mb=6.1			
Tonga Islands			
Nov 3	MNA	eP	10 21 14.5
	FRI	eP	10 21 20.7
	PRI	e(P)	10 21 26.8
	LLA	eP	10 21 28.2
	ORV	e(P)	10 21 35.1
	MIN	e(P)	10 21 36.3
USGS 10h12m51.7s 18.4N 70.3W			
h=37km mb=4.9			
Dominican Republic Region			
Nov 3	GCC	ePc	23 22 01.9
	PRS	ePc	23 22 03.8
	MHC	iPc	23 22 03.9
	WDC	iPc	23 22 05.4
	LLA	ePc	23 22 05.6
	ORV	ePc	23 22 06.5
	PRI	iPc	23 22 06.6
	MIN	iPc	23 22 07.0
	FRI	iPc	23 22 10.4
	MNA	iPc	23 22 18.0
USGS 23h09m32.2s 8.8S 160.4E			
h=87km mb=5.3			
Solomon Islands			
Nov 4	SAO	iPd	20 24 27.5
	LLA	iPc	20 24 32.0
		iS	20 24 38.3
	MHC	iPd	20 24 34.1
		iS	20 24 42.4
	GCC	iPc	20 24 34.2
	PRS	iPd	20 24 34.5
	PRI	ePc	20 24 42.1
	PCC	iP	20 24 42.8
	BRK	ePd	20 24 44.4
	BKS	eP	20 24 47.0
	FRI	iPc	20 24 47.1
		iS	20 25 04.3
	ZSP	eP	20 24 48.2
		eS	20 25 06.1
	ORV	e	20 25 07.5
BRK 20h24m23.9s 36.9N 121.3W			
h=6km ML=2.5(4)			
7 km NE of Hollister, CA			
Nov 5	PRS	eP	17 40 11.4
	PRI	eP	17 40 11.8
	LLA	eP	17 40 14.0
	GCC	eP	17 40 14.6
	MHC	eP	17 40 17.6
	FRI	eP	17 40 18.2
	BKS	eP	17 40 20.2
		AMP(μm)	PER(s)

DATE	STA	PHASE	TIME (UTC)
		PZ 0.044	0.9
	MNA	eP	17 40 30.7
	ORV	eP	17 40 35.8
	WDC	ePc	17 40 35.8
USGS 17h29m58.6s 21.8S 139.0W			
h=0km mb=5.7			
Tuamotu Archipelago Region			
Nov 5	WDC	eP	19 11 18.8
	MNA	eP	19 11 28.0
USGS 18h59m40.6s 17.2S 178.0W			
h=153km mb=4.6			
Fiji Islands Region			
Nov 5	PCC	e(P)	19 14 17.9
	BRK	e(P)	19 14 18.6
	WDC	eP	19 14 19.1
	MIN	eP	19 14 21.9
	ORV	eP	19 14 22.1
	MHC	e(P)	19 14 22.8
	LLA	e(P)	19 14 23.3
	PRI	eP	19 14 24.7
	FRI	eP	19 14 27.9
	MNA	ePc	19 14 34.5
	BKS	eLr	19 43 00
		AMP(μm)	PER(s)
		LZ 2.3	20.
		LN 0.0	20.
		LE 2.3	20.
BRK Ms=5.6 Distance= 92°			
USGS 19h01m22.0s 5.4S 151.7E			
h=52km mb=5.5 Ms=5.3			
New Britain Region			
Nov 6	FRI	eP	18 45 35.2
	MNA	iPd	18 45 36.3
		e	18 47 38.0
	PRI	iPd	18 45 36.8
		e	18 47 32.1
	LLA	ePc	18 45 38.7
		e	18 47 36.0
	PRS	eP	18 45 39.2
		e	18 47 36.3
	MHC	eP	18 45 43.7
	GCC	eP	18 45 43.9
	BRK	ePd	18 45 47.2
	BKS	ePd	18 45 47.2
		AMP(μm)	PER(s)
		PZ 0.031	1.1
	ORV	iPd	18 45 50.2
		e	18 47 47.8
	MIN	eP	18 45 51.6
	WDC	iPd	18 45 54.6
		e	18 47 52.4
	FHC	ePd	18 46 01.8
USGS 18h34m23.0s 22.8S 63.6W			
h=534km mb=5.2			
Salta Province, Argentina			
Nov 6	FRI	iPc	18 58 46.6
		epP	19 00 46.4
		e	19 28 12.9
	MNA	iPc	18 58 47.9
		epP	19 00 44.2
		ePKPPKP	19 27 58.3
	PRI	iPc	18 58 48.6
		epP	19 00 45.5
		ePKPPKP	19 28 16.7
	LLA	ePc	18 58 50.8
		epP	19 00 47.3
	PRS	ePc	18 58 51.8
		epP	19 00 48.1

DATE	STA	PHASE	TIME (UTC)
	GCC	ePc	18 58 55.4
	MHC	iPc	18 58 55.5
		epP	19 00 52.5
		e	19 28 06.1
	PCC	iPc	18 58 57.9
		epP	19 00 55.4
	BKS	iPc	18 58 58.7
		e	19 00 05.7
		epP	19 00 56.9
		iS	19 08 27
		isS	19 12 06
		ePKPPKP	19 17 06
		AMP(μm)	PER(s)
		PZ 0.22	1.1
	BRK	iPc	18 58 58.8
		epP	19 00 56.1
	ORV	ePc	18 59 01.6
		epP	19 00 58.9
		ePKPPKP	19 28 01.6
	MIN	ePc	18 59 03.3
		epP	19 01 03.3
		e	19 27 58.8
	WDC	iPc	18 59 06.2
		ipP	19 01 04.3
		eS	19 08 41.8
		ePKPPKP	19 27 57.8
	FHC	ePc	18 59 13.4
		epP	19 01 09.9
BRK mb=5.5 h=544km Distance=81°			
USGS 18h47m35.1s 22.8S 63.6W			
h=538km mb=5.8			
Salta Province, Argentina			
Nov 7	MHC	iPd	04 00 22.53
		iS	04 00 24.34
	GCC	ePd	04 00 30.0
		iS	04 00 37.8
	PCC	iPc	04 00 31.4
	BRK	ePd	04 00 33.5
		i	04 00 45.1
	BKS	iPd	04 00 33.5
		iS	04 00 44.5
		e	04 00 44.6
		e	04 00 47.8
	SAO	iPd	04 00 34.3
		eS	04 00 44.4
	ZSP	iPd	04 00 34.7
		i	04 00 45.7
	LLA	iPc	04 00 39.0
	PRS	eP	04 00 41.1
	PRI	eP	04 00 47.3
	FRI	ePc	04 00 48.5
	ORV	ePc	04 00 57.2
	MIN	e	04 01 09.5
BRK 04h00m20.5s 37.4N 121.7W			
h=2km ML=2.5(4) Mo=1.4E20(2)			
Mt. Lewis area, 30 km SE of Livermore, CA			
Nov 7	LLA	iPc	15 06 05.8
	SAO	iPc	15 06 06.1
	PRS	iPd	15 06 06.9
	PRI	iPd	15 06 13.3
	GCC	iPc	15 06 15.0
	MHC	iPc	15 06 17.2
	FRI	iPc	15 06 23.4
	PCC	iPd	15 06 23.55
	BRK	ePc	15 06 26.3
	BKS	eP	15 06 26.3
	ZSP	ePc	15 06 27.8
	ORV	iPc	15 06 47.5
		i	15 06 48.85

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DATE	STA	PHASE	TIME (UTC)
	MNA	ePc	15 06 55.1
	MIN	ePc	15 07 00.1
	WDC	ePc	15 07 03.2
	FHC	e	15 07 12.4
BRK 15h06m01.2s 36.6N 121.2W			
h=8km ML=4.0(6) Mo=2.3E22(4)			
Bear Valley, 34 km SE of Hollister, CA			
Nov 7	FHC	eP	16 37 40.0
	WDC	iPd	16 37 42.7
		i	16 42 02.5
		e	16 42 43.2
	MIN	ePd	16 37 45.6
		e	16 42 07.2
	ORV	ePd	16 37 46.9
		e	16 41 47
		e	16 42 08.9
	MHC	ePd	16 37 50.4
		e	16 42 09.8
	PRS	eP	16 37 52.6
		e	16 42 10.8
	PRI	eP	16 37 55.7
		e	16 42 12.3
	FRI	ePd	16 37 57.1
		e	16 42 12.4
	MNA	ePd	16 38 00.6
		e	16 42 01.5
		i	16 42 19.4
	LLA	e	16 42 11.2
	BKS	eLq	17 05 51
		iLr	17 11 04
		AMP(μm)	PER(s)
		LZ 2.0	20.
		LN 0.0	20.
		LE 2.2	20.
USGS 16h23m55.9s 5.6N 126.6E			
h=80km mb=6.2			
Mindanao, Philippine Islands			
Nov 7	ZSP	ePc	23 15 16.2
		iS	23 15 31.2
	BKS	ePc	23 15 16.6
		eS	23 15 32.8
	BRK	iPd	23 15 17.7
	ORV	ePc	23 15 20.1
	PCC	ePc	23 15 21.2
	MHC	ePd	23 15 27.3
	WDC	e	23 15 28.2
	MIN	iPd	23 15 28.3
	GCC	ePd	23 15 29.3
	SAO	eP	23 15 34.8
	LLA	eP	23 15 39.9
	PRS	e(P)	23 15 41.3
	FHC	e	23 15 42.3
	FRI	ePd	23 15 47.3
	PRI	e	23 15 49.7
	MNA	ePc	23 15 56.3
BRK 23h14m57.6s 38.8N 122.8W			
h=2km ML=3.0(6) Mo=4.1E21(2)			
The Geysers area, 20 km S of Clear Lake, CA			
Nov 8	PRS	eP	04 51 19.2
	PRI	eP	04 51 21.0
	BKS	ePc	04 51 21.7
		e	04 51 37.7
		AMP(μm)	PER(s)
		PZ 0.016	0.8
	MHC	eP	04 51 22.1
	FRI	eP	04 51 26.0
	ORV	eP	04 51 29.1

DATE	STA	PHASE	TIME (UTC)
	WDC	ePc	04 51 30.2
	MIN	e(P)	04 51 31.0
	MNA	eP	04 51 35.4
USGS 04h38m57.9s 28.8S 177.4W			
h=71km mb=5.0			
Kermadec Islands Region			
Nov 8	PRS	e(P)	06 18 44.5
	BKS	ePc	06 18 44.8
		AMP(μm)	PER(s)
		PZ 0.038	1.2
	PRI	e(P)	06 18 47.8
	WDC	eP	06 18 50.7
	MNA	eP	06 19 01.1
USGS 06h06m04.7s 18.4S 167.9E			
h=23km mb=5.3			
Vanuatu Islands			
Nov 9	MIN	e	02 50 04.1
	FHC	iPn	02 50 52.8
		iPgc	02 50 56.2
		iS	02 51 17.0
	ARC	eP	02 50 54.6
		eS	02 51 14.2
	WDC	iPc	02 50 56.0
		iS	02 51 15.8
	ORV	e(P)	02 51 00.9
	PCC	eP	02 51 02.8
	ZSP	e(S)	02 51 13.6
	MHC	eP	02 51 16.9
		iS	02 51 36.1
	GCC	e(P)	02 51 20.8
	SAO	e(P)	02 51 22.3
	FRI	eP	02 51 36.4
	BKS	e	02 51 45.8
		e	02 51 52.3
BRK 02h50m32.8s 39.6N 123.8W			
h=4km ML=3.0(6)			
15 km NNE of Fort Bragg, CA			
Nov 9	PRS	eP	03 27 10.0
	MHC	eP	03 27 10.6
	LLA	eP	03 27 12.1
	PRI	eP	03 27 13.1
	WDC	eP	03 27 13.4
	ORV	eP	03 27 15.4
	FRI	eP	03 27 16.9
	MNA	eP	03 27 25.2
USGS 03h14m39.4s 10.7S 163.8E			
h=33km mb=4.8 Ms=4.3			
Solomon Islands			
Nov 9	PRI	ePd	17 58 00.7
		epP	17 58 19.5
		esP	17 58 26.9
	MNA	ePd	17 58 01.2
		ipP	17 58 18.3
	FRI	iPd	17 58 02.4
		epP	17 58 19.5
	LLA	ePd	17 58 03.0
		epP	17 58 20.3
	PRS	ePd	17 58 03.6
		epP	17 58 20.7
	GCC	eP	17 58 08.1
	MHC	ePd	17 58 08.6
	PCC	ePd	17 58 10.9
	BKS	iP	17 58 12.6
		epP	17 58 29.5
		AMP(μm)	PER(s)
		PZ 0.057	1.0
	ORV	ePd	17 58 15.8
		ipP	17 58 33.4

DATE	STA	PHASE	TIME (UTC)
	MIN	eP	17 58 17.9
		epP	17 58 37.0
	WDC	ePd	17 58 20.9
		ipP	17 58 38.4
		isP	17 58 45.8
	FHC	eP	17 58 28.3
		epP	17 58 45.9
USGS 17h46m18.8s 22.1S 69.6W			
h=43km mb=5.4 Ms=4.8			
Northern Chile			
Nov 10	WDC	e(P)	03 33 34.7
	MIN	e(P)	03 33 37.2
	ORV	e(P)	03 33 41.8
	PRS	eP	03 33 43.4
	PRI	e(P)	03 33 45.0
	LLA	eP	03 33 45.3
	FRI	eP	03 33 48.5
	MNA	eP	03 33 52.9
USGS 03h21m01.4s 12.6N 144.1E			
h=23km mb=5.0 Ms=4.4			
South of Mariana Islands			
Nov 10	WDC	iPc	04 46 15.8
	MIN	ePc	04 46 18.7
	ORV	eP	04 46 19.8
	BRK	eP	04 46 23.5
	PRS	eP	04 46 30.4
	PRI	ePc	04 46 30.8
	LLA	e(P)	04 46 31.2
	FRI	ePc	04 46 32.5
	MNA	ePc	04 46 39.5
USGS 04h27m26.1s 52.7N 172.2E			
h=33km mb=5.0			
Near Islands, Aleutian Islands			
Nov 11	GCC	ePc	01 08 49.7
	PRS	ePc	01 08 49.9
	BKS	ePc	01 08 51.8
		AMP(μm)	PER(s)
		PZ 0.058	0.7
	PRI	iPc	01 08 51.9
	LLA	ePc	01 08 51.9
	MHC	iPc	01 08 52.3
	FRI	iPc	01 08 56.7
	ORV	iPc	01 08 58.9
	WDC	iPc	01 08 59.3
	MIN	ePc	01 09 02.0
	MNA	iPc	01 09 06.0
USGS 00h57m24.4s 24.0S 179.9W			
h=511km mb=5.0			
South of Fiji Islands			
Nov 11	MNA	iPc	15 13 40.5
		i	15 16 05.9
	FRI	ePc	15 13 42.8
	PRI	ePc	15 13 45.0
	LLA	iPc	15 13 47.5
	PRS	ePc	15 13 48.0
	GCC	e(P)c	15 13 49.2
	MHC	iPc	15 13 54.6
	BKS	ePc	15 13 59.4
		e	15 30 16
		i	15 33 19
		iLq	15 35 39
		iLr	15 37 26
		AMP(μm)	PER(s)
		PZ 0.096	1.0
	ORV	iPc	15 14 01.0
	MIN	iPc	15 14 03.3
	WDC	ePc	15 14 07.5
		i	15 16 30.6

DATE	STA	PHASE	TIME (UTC)
	FHC	iPc	15 14 17.9
USGS 15h04m52.1s 6.8N 76.3W			
h=30km mb=5.4 Ms=5.1			
Northern Colombia			
Nov 11	FRI	ePd	15 37 06.7
	PRI	ePd	15 37 09.4
	LLA	ePd	15 37 10.8
	MNA	iPd	15 37 11.7
	PRS	ePd	15 37 11.7
	MHC	iPd	15 37 20.3
	BKS	ePd	15 37 27.2
		iS	15 41 59
		iLr	15 45 00
		AMP(μm)	PER(s)
		PZ 0.10	1.4
		LZ 4.5	20.
		LN 2.8	20.
		LE 2.0	20.
	ORV	ePd	15 37 35.2
	MIN	ePd	15 37 41.2
	WDC	ePd	15 37 43.8
BRK Ms=4.9 Distance=26°			
USGS 15h32m14.7s 19.0N 104.6W			
h=78km mb=4.9			
Near Coast of Jalisco, Mexico			
Nov 11	MNA	ePc	16 18 36.2
	FRI	e(P)	16 18 38.0
	PRI	e(P)	16 18 42.7
	LLA	ePc	16 18 43.5
	MHC	ePc	16 18 51.2
	ORV	ePc	16 18 56.9
	MIN	eP	16 18 59.4
	WDC	eP	16 19 01.5
	FHC	ePc	16 19 14.3
USGS 16h09m49.5s 6.9N 76.4W			
h=33km mb=4.9 Ms=4.1			
Northern Colombia			
Nov 12	GCC	ePd	00 35 41.4
	PCC	ePd	00 35 41.5
	PRS	ePd	00 35 41.7
		epP	00 37 09.8
	SAO	ePd	00 35 42.4
	BRK	ePd	00 35 43.1
		epP	00 37 11
	BKS	iPd	00 35 43.4
		e	00 35 54.5
		e	00 36 00.5
		AMP(μm)	PER(s)
		PZ 0.20	1.0
	MHC	ePd	00 35 44.0
		epP	00 37 12.0
	LLA	ePd	00 35 44.0
	PRI	ePd	00 35 44.1
		epP	00 37 12.0
	FHC	ePd	00 35 47.4
	FRI	iPd	00 35 49.3
		e(P)	00 37 17.8
	WDC	iPd	00 35 50.8
		epP	00 37 19.4
	ORV	ePd	00 35 50.9
		epP	00 37 19.3
	MIN	iPd	00 35 53.0
		epP	00 37 21.6
	MNA	iPd	00 35 59.8
		epP	00 37 28.8
USGS 00h24m40.0s 17.2S 177.3W			
h=393km mb=5.5			
Fiji Islands Region			

DATE	STA	PHASE	TIME (UTC)
Nov 12	EKR	iPc	08 46 43.3
		iS	08 46 52.1
	FHC	iPc	08 46 45.3
		i	08 46 54.1
		i	08 46 55.7
	FOX	iPc	08 46 45.3
		i(S)	08 46 55.0
	WDC	iPd	08 47 00.9
		iS	08 47 23.2
	MIN	iPc	08 47 10.8
		i	08 47 12.5
		eS	08 47 40.8
		i	08 47 42.8
	ORV	ePc	08 47 14.2
		i	08 47 46.5
	PCC	e	08 47 25.7
	GCC	e	08 47 34.4
BRK 08h46m31.0s 40.6N 124.9W			
h=7km ML=3.4(2)			
Off Coast 69 km SW of Eureka, CA			
Nov 12	FHC	e(P)	13 02 43.0
	WDC	ePc	13 02 45.7
	ORV	e(P)	13 02 51.4
	MIN	eP	13 02 53.3
	PRS	e(P)	13 03 05.2
	LLA	e(P)	13 03 07
	FRI	eP	13 03 10.9
	PRI	e(P)	13 03 11.0
	MNA	ePc	13 03 11.1
USGS 12h52m28.3s 44.5N 149.5E			
h=45km mb=5.5 Ms=4.6			
Kuril Islands			
Nov 12	ZSP	ePd	13 28 32.5
		iS	13 28 48.5
	BRK	ePc	13 28 33.7
		eS	13 28 48.3
	BKS	iPc	13 28 33.9
		eS	13 28 48.3
	ORV	eP	13 28 35.9
	PCC	eP	13 28 38.4
	MIN	eP	13 28 44.9
	GCC	ePc	13 28 46.1
	WDC	e	13 28 46.5
	SAO	eP	13 28 51.3
	LLA	eP	13 28 56.0
	PRS	eP	13 28 58.4
	FHC	eP	13 29 01.2
	FRI	ePc	13 29 04.0
	MNA	e	13 29 14
BRK 13h28m14.2s 38.8N 122.8W			
h=1km ML=3.0(4)			
The Geysers area, 18 km S of Clear Lake, CA			
Nov 13	EKR	iPc	10 25 26.2
		iS	10 25 32.3
	FHC	iPc	10 25 27.1
		iS	10 25 33.9
	FOX	iPc	10 25 29.6
		i(S)	10 25 38.8
	WDC	iPd	10 25 43.4
		iS	10 26 02.2
	MIN	eP	10 25 54.2
		iS	10 26 21.2
	ORV	eP	10 25 59.3
		eS	10 26 32.1
BRK 10h25m17.6s 40.9N 124.6W			
h=20km ML=3.8(3)			
41 km NW of Eureka, CA			

DATE	STA	PHASE	TIME (UTC)
Nov 14	WDC	ePd	15 53 04.7
	MIN	eP	15 53 10.8
	ORV	e(P)	15 53 17.4
	MNA	ePd	15 53 41.9
	FRI	e(P)	15 53 46.7
USGS 15h48m30.0s 59.0N 135.2W			
h=5km mb=5.3 Ms=4.5			
Southeastern Alaska			
Nov 14	PRI	ePc	22 20 33.1
	FRI	iPc	22 20 34.7
	PRS	ePc	22 20 37.1
	LLA	ePc	22 20 39.2
	SAO	ePc	22 20 41.9
	MNA	ePc	22 20 43.3
	GCC	eP	22 20 46.2
	MHC	ePc	22 20 47.1
	PCC	ePc	22 20 53.1
	BRK	eP	22 20 55.3
	BKS	iPd	22 20 55.9
		ePP	22 21 26
		eS	22 25 04
		e(Lr)	22 26 40
		AMP(μm)	PER(s)
		PZ 0.32	1.1
		LZ 21	20.
		LN 22	20.
		LE 15	20.
	ORV	ePc	22 21 06.7
	MIN	eP	22 21 13.6
	WDC	ePc	22 21 17.2
	FHC	ePc	22 21 28.7
BRK Ms=5.7 Distance=23°			
USGS 22h16m07.8s 19.7N 109.0W			
h=33km mb=5.4 Ms=5.5			
Revilla Gigedo Islands Region			
Nov 14	PRI	eP	22 27 25.8
	FRI	ePc	22 27 26.7
	PRS	eP	22 27 29.3
	LLA	ePc	22 27 30.5
	MNA	ePc	22 27 35.3
	SAO	ePc	22 27 37.5
	GCC	ePc	22 27 40.4
	MHC	ePc	22 27 41.0
	PCC	e(P)	22 27 45.3
	BRK	ePc	22 27 48.6
	BKS	iPd	22 27 50.1
		eS	22 31 42
		eLr	22 33 32
		AMP(μm)	PER(s)
		PZ 1.7	1.8
		LZ 37	20.
		LNE 46	20.
		LNW 46	20.
	ORV	ePc	22 27 58.7
	MIN	ePc	22 28 07.7
	WDC	iPc	22 28 11.5
	FHC	ePc	22 28 22.3
BRK Ms=6.1 Distance=23°			
USGS 22h23m00.1s 19.6N 109.0W			
h=33km mb=5.4 Ms=6.0			
Revilla Gigedo Islands Region			
Nov 15	PRI	ePc	01 51 26.7
	FRI	iPc	01 51 27.3
	PRS	ePc	01 51 30.2
	MNA	iPc	01 51 35.8
	GCC	e(P)	01 51 38.9
	MHC	ePc	01 51 40.2
	BRK	e(P)	01 51 47.9
	ORV	ePc	01 51 59.5

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DATE	STA	PHASE	TIME (UTC)
	MIN	ePc	01 52 06.5
	WDC	ePc	01 52 09.7
USGS 01h47m00.2s 19.8N 109.0W			
h=33km mb=4.6			
Revilla Gigedo Islands Region			
Nov 15	FHC	ePc	03 43 59.0
	WDC	iPc	03 44 00.0
	MIN	iPc	03 44 02.1
	ORV	iPc	03 44 05.4
	BRK	eP	03 44 13.7
	BKS	iPd	03 44 14
		AMP(μm)	PER(s)
	PZ	0.094	0.7
	PCC	ePc	03 44 14.2
	MNA	iPc	03 44 14.4
	MHC	ePc	03 44 16.5
	GCC	ePc	03 44 17.3
	SAO	eP	03 44 19.1
	FRI	ePc	03 44 19.3
	LLA	ePc	03 44 20.7
	PRS	ePc	03 44 21.3
	PRI	iPc	03 44 23.3
USGS 03h31m06.7s 49.9N 78.8E			
h=0km mb=6.0 Ms=4.8			
Eastern Kazakh SSR			
Nov 15	PRI	ePc	06 19 21.2
	FRI	ePc	06 19 21.9
	PRS	ePc	06 19 24.7
	LLA	e(P)	06 19 27.0
	MNA	iPc	06 19 30.5
	MHC	eP	06 19 34.9
	WDC	ePc	06 20 04.7
USGS 06h14m52.0s 19.5N 109.0W			
h=33km mb=4.6			
Revilla Gigedo Islands Region			
Nov 15	PRI	ePc	09 06 00.5
	FRI	eP	09 06 01.6
	PRS	ePc	09 06 04.3
	LLA	ePc	09 06 06.1
	MNA	ePc	09 06 10.2
	ORV	ePc	09 06 33.5
USGS 09h01m33.1s 19.9N 108.4W			
h=33km mb=4.6			
Revilla Gigedo Islands Region			
Nov 15	PRI	ePd	09 32 46.0
	FRI	ePd	09 32 47.5
	LLA	eP	09 32 51.8
	MNA	ePd	09 32 56.2
	GCC	ePd	09 32 59.8
	MHC	eP	09 33 03.7
	BKS	eP	09 33 07.5
		AMP(μm)	PER(s)
	PZ	0.048	1.0
	BRK	eP	09 33 08.1
	ORV	eP	09 33 19.5
USGS 09h28m20.7s 19.7N 109.0W			
h=33km mb=4.8			
Revilla Gigedo Islands Region			
Nov 15	PRS	iPc	18 07 35.5
	SAO	iPd	18 07 42.4
	LLA	iPd	18 07 43.4
	PRI	eP	18 07 46.1
		i	18 07 47.3
		iS	18 07 55.7
	GCC	eP	18 07 50.3
	MHC	eP	18 07 53.7
		iS	18 08 07.5

DATE	STA	PHASE	TIME (UTC)
	PCC	eP	18 08 00.2
	FRI	eP	18 08 00.7
		eS	18 08 20.3
BRK 18h07m34.1s 36.3N 121.4W			
h=7km ML=2.5(2)			
26 km NW of King City, CA			
Nov 15	FRI	eP	22 11 07.6
	MNA	eP	22 11 08.5
	PRI	eP	22 11 08.6
	LLA	eP	22 11 11.7
	PRS	eP	22 11 12.5
	GCC	e(P)	22 11 18.0
	MHC	eP	22 11 18.3
	BRK	e(P)	22 11 22.8
	BKS	iPd	22 11 23.2
		AMP(μm)	PER(s)
	PZ	0.050	0.8
	ORV	eP	22 11 26.6
	MIN	eP	22 11 28.8
	WDC	eP	22 11 32.4
	FHC	e(P)	22 11 41.4
USGS 22h00m49.6s 9.4S 75.7W			
h=32km mb=5.4 Ms=4.4			
Peru			
Nov 16	MNA	e	05 55 33.9
		eP	05 55 55.8
	PRI	e	05 55 35.3
	FRI	eP	05 55 44.3
	BKS	e(Lq)	05 57 16
USGS 05h52m43.4s 30.0N 114.4W			
h=10km mb=4.4			
Gulf of California			
Nov 16	FRI	e(PKP)	06 21 53.1
	MNA	e(PKP)	06 22 06.0
		e	06 24 41.0
		AMP(μm)	PER(s)
	LN	1.6	20.
	LE	4.1	20.
USGS 05h59m50.2s 6.8N 126.2E			
h=67km mb=5.5			
Mindanao, Philippine Islands			
Nov 16	FRI	ePKP	12 04 18.8
	MNA	ePKPd	12 04 19.0
		e	12 04 37.4
	PRI	ePKP	12 04 20.0
	ORV	e(PKP)	12 04 22.4
	MIN	e(PKP)	12 04 24.7
USGS 11h44m23.3s 49.3S 30.4E			
h=10km mb=5.5 Ms=4.3			
South of Africa			
Nov 17	MNA	ePc	03 47 21.7
		ePcP	03 49 35.3
		eScP	03 53 16.8
		e(ScS)	03 57 39.5
	FRI	iPc	03 47 22.1
		ePcP	03 49 35.7
	PRI	ePc	03 47 24.7
		ePcP	03 49 38.1
		eScP	03 53 19.5
	LLA	ePc	03 47 27.9
		ePcP	03 49 39.0
		eScP	03 53 20.7
	PRS	ePc	03 47 29.5
		ePcP	03 49 39.4
		eScP	03 53 24.1
	SAO	e(P)	03 47 31.2
	MHC	iPc	03 47 36.0

DATE	STA	PHASE	TIME (UTC)
	GCC	ePc	03 47 36.2
		e(PcP)	03 49 41.5
		eScP	03 53 16.9
	PCC	ePc	03 47 40.5
		ePcP	03 49 43.6
		eScP	03 53 26.0
	BRK	ePc	03 47 41.5
		ePcP	03 49 43.7
		eScP	03 53 26.5
		AMP(μm)	PER(s)
	LZ	8.0	20.
	BKS	iPc	03 47 41.5
		ePcP	03 49 44.5
		e(ScP)	03 53 26.5
		e(S)	03 53 48
		eLq	03 57 00
		AMP(μm)	PER(s)
	PZ	0.34	1.0
	LN	17	20.
	LE	9.8	20.
	ORV	ePcP	03 47 44.2
		ePc	03 47 44.4
		ePcP	03 49 38.1
		eScP	03 53 27.3
	MIN	ePc	03 47 47.2
		eScP	03 53 28.5
	WDC	iPc	03 47 51.3
		ePcP	03 49 47.4
		eScP	03 53 31.0
	FHC	eP	03 48 02.8
		eScP	03 53 37.1
BRK Ms=5.9 Distance=40°			
USGS 03h40m09.0s 12.5N 87.0W			
h=76km mb=5.8			
Near Coast of Nicaragua			
Nov 17	PRI	iPc	08 17 55.9
	PRS	iPd	08 17 57.0
	LLA	iPd	08 18 01.9
	SAO	eP	08 18 04.3
	GCC	ePd	08 18 10.7
	MHC	eP	08 18 13.5
	FRI	iPc	08 18 13.9
		iS	08 18 34.6
	PCC	ePc	08 18 18.3
	BKS	eP	08 18 22.8
BRK 08h17m46.4s 35.8N 121.1W			
h=4km ML=3.0(2)			
23 km NE of San Simeon, CA			
Nov 17	FHC	iPc	08 51 44.1
	WDC	iPc	08 51 51.2
	MIN	iPc	08 51 56.7
	ORV	ePc	08 52 03.1
	BRK	ePc	08 52 15.5
	BKS	iPc	08 52 15.6
		epP	08 52 23.7
		e(Lq)	08 55 10
		e(Lr)	08 56 44
		AMP(μm)	PER(s)
	PZ	2.6	1.4
	PCC	ePc	08 52 17.3
	MHC	eP	08 52 21.8
	GCC	eP	08 52 22.5
	MNA	ePc	08 52 25.2
	SAO	e(P)	08 52 26.5
	LLA	ePc	08 52 30.0
	FRI	ePc	08 52 30.5
	PRS	ePc	08 52 30.8
	PRI	ePc	08 52 35.4
BRK Ms=7.0 Distance=27°			
USGS 08h46m53.3s 58.6N 143.3W			

DATE	STA	PHASE	TIME (UTC)
h=10km mb=6.6 Ms=6.9			
Gulf of Alaska			
Nov 17	FHC	ePc	09 43 02.0
	WDC	ePc	09 43 08.9
	MIN	iPc	09 43 14.7
	ORV	ePc	09 43 21.2
	BRK	eP	09 43 33.4
	BKS	eP	09 43 33.8
		AMP(μm)	PER(s)
	PZ	0.070	1.0
	MHC	eP	09 43 39.8
	MNA	ePc	09 43 43.0
	LLA	eP	09 43 48.1
	FRI	ePc	09 43 48.5
	PRS	eP	09 43 48.9
USGS 09h38m12.3s 58.6N 143.1W			
h=10km mb=5.5			
Gulf of Alaska			
Nov 17	FHC	eP	13 30 33.5
	WDC	eP	13 30 49.5
	MIN	eP	13 30 54.0
	ORV	eP	13 31 01.2
	MNA	eP	13 31 23.8
	FRI	e(P)	13 31 30.8
USGS 13h26m12.5s 59.0N 135.1W			
h=12km mb=4.9			
Southeastern Alaska			
Nov 18	WDC	ePd	06 23 52.0
	MIN	ePd	06 23 57.5
	MNA	ePd	06 24 25.8
	BKS	e(Lq)	06 29 00
		e(Lr)	06 30 32
USGS 06h18m52.6s 58.6N 143.8W			
h=10km mb=5.0 Ms=4.9			
Gulf of Alaska			
Nov 18	FHC	iPc	07 18 13.9
	WDC	iPc	07 18 21.3
	MIN	iPc	07 18 26.5
	BKS	e(P)	07 18 45.6
		e(Lr)	07 25 04
	MNA	iPc	07 18 57.3
USGS 07h13m23.1s 58.7N 143.4W			
h=10km mb=4.7			
Gulf of Alaska			
Nov 18	FRI	iPd	12 58 40.6
	PRI	iPd	12 58 41.8
	MNA	iPd	12 58 43.2
	LLA	iPd	12 58 44.4
	PRS	iPd	12 58 44.8
	SAO	ePd	12 58 45.8
	GCC	ePd	12 58 49.2
	MHC	iPd	12 58 49.7
	BRK	ePd	12 58 53.1
	BKS	eP	12 58 53.8
		AMP(μm)	PER(s)
	PZ	0.039	0.7
	ORV	iPd	12 58 57.3
	MIN	iPd	12 58 59.3
	WDC	iPd	12 59 02.3
	FHC	ePd	12 59 09.3
USGS 12h46m44.8s 26.3S 70.5W			
h=40km mb=5.7 Ms=6.4			
Near Coast of Northern Chile			
Nov 18	WDC	iPd	13 06 54.0
	FHC	ePd	13 06 57.1
	MIN	ePd	13 06 59.3

DATE	STA	PHASE	TIME (UTC)
	ORV	ePd	13 07 06.0
	BKS	eP	13 07 16.0
		eS	13 11 42
		eLr	13 13 20
		AMP(μm)	PER(s)
	PZ	0.11	1.2
	LZ	16	20.
	LN	15	20.
	LE	29	20.
	MNA	ePd	13 07 28.0
	FRI	eP	13 07 32.9
	PRI	eP	13 07 38.0
BRK Ms=5.9 Distance=26°			
USGS 13h01m55.2s 58.6N 143.2W			
h=10km mb=5.2 Ms=5.6			
Gulf of Alaska			
Nov 18	MNA	e(P)	16 40 07.9
		ePP	16 44 59.7
	WDC	ePd	16 40 47.0
		ePP	16 44 51.4
	MIN	ePd	16 40 48.3
		ePP	16 44 54
	ORV	eP	16 40 48.6
	GCC	eP	16 40 49.3
	FRI	e(P)	16 41 05.0
	BKS	e(S)	16 51 24
		e(SS)	16 53 46
		e(PPS)	16 59 13
		e(Lr)	17 12 14
		AMP(μm)	PER(s)
	LZ	11	20.
	LNE	6.0	20.
	LNW	9.7	20.
USGS 16h27m05.3s 12.8N 124.8E			
h=22km mb=5.9 Ms=6.3			
Samar, Philippine Islands			
Nov 18	EKR	iPd	16 42 44.5
		eS	16 42 50.4
	FOX	iPd	16 42 44.7
	FHC	iPd	16 42 47.0
		iS	16 42 55.9
	WDC	iPd	16 43 00.5
		e	16 43 17.3
		iS	16 43 22.7
	MIN	ePd	16 43 10.6
		e	16 43 36.8
	ORV	ePc	16 43 15.2
		e(S)	16 43 40.2
BRK 16h42m36.3s 40.4N 124.5W			
h=17km ML=3.2(2)			
Cape Mendocino Sequence			
Nov 19	FHC	e	16 27 31.4
	WDC	eP	16 27 31.7
	MIN	ePc	16 27 35.4
	ORV	ePc	16 27 37.4
	BRK	ePc	16 27 38.2
	PCC	e(P)	16 27 38.3
	BKS	ePc	16 27 38.6
		eS	16 37 36
		eLr	16 51 32
		AMP(μm)	PER(s)
	PZ	0.051	0.9
	LN	0.89	20.
	LE	1.1	20.
	MHC	ePc	16 27 42.0
	SAO	eP	16 27 43.5
	PRS	ePc	16 27 45.2
	LLA	eP	16 27 46.2
	PRI	ePc	16 27 48.8

DATE	STA	PHASE	TIME (UTC)
	FRI	ePc	16 27 50.2
	MNA	ePc	16 27 53.3
BRK Ms=5.3 Distance=80°			
USGS 16h15m34.8s 24.2N 142.6E			
h=40km mb=5.7 Ms=5.5			
Volcano Islands Region			
Nov 19	PRS	eP	16 41 11.7
	PRI	eP	16 41 12.1
	SAO	eP	16 41 13.9
	LLA	eP	16 41 14.3
	GCC	eP	16 41 14.8
	PCC	eP	16 41 17.0
	MHC	eP	16 41 17.9
	FRI	eP	16 41 18.3
	BRK	e(P)	16 41 18.7
	BKS	eP	16 41 20.4
		AMP(μm)	PER(s)
	PZ	0.072	0.8
	MNA	eP	16 41 31.0
	ORV	eP	16 41 31.2
	MIN	eP	16 41 35.2
	WDC	eP	16 41 36.0
BRK mb=5.9 h=0km Distance=63°			
USGS 16h30m58.4s 21.9S 139.0W			
h=0km mb=5.9 Ms=5.7			
Tuamotu Archipelago Region			
Nov 20	MNA	ePKPd	21 38 38.3
	PRS	e(PKP)	21 38 38.7
	LLA	e(PKP)	21 38 39.0
	GCC	e(PKP)	21 38 39.2
	CMB	ePKPd	21 38 39.7
	MHC	ePKPd	21 38 40.5
	ORV	ePKP	21 38 43.2
	WDC	ePKPd	21 38 44.7
USGS 21h19m47.7s 55.5S 28.0W			
h=29km mb=5.5			
South Sandwich Islands Region			
Nov 21	WDC	iPc	13 59 34.6
	MIN	ePc	13 59 38.4
	ORV	eP	13 59 41.4
	CMB	ePc	13 59 51.6
	LLA	ePc	13 59 55.2
	FRI	ePc	13 59 57.2
	MNA	ePc	13 59 57.2
	PRI	ePc	13 59 58.4
USGS 13h48m57.4s 43.1N 131.1E			
h=560km mb=4.6			
East Russia-Northeast China Border Region			
Nov 22	WDC	eP	03 46 50.0
	MIN	ePc	03 46 57.6
	ORV	e	03 47 00.3
	CMB	e(P)	03 47 12.2
	MNA	eP	03 47 19.9
	FRI	ePc	03 47 21.8
	PRI	e	03 47 24.7
USGS 03h36m57.0s 46.4N 153.5E			
h=34km mb=5.4 Ms=5.3			
Kuril Islands			
Nov 22	EKR	iPd	04 12 [illegible]
	FOX	iPc	04 12 [illegible]
	FHC	iPd	04 12 [illegible]
		i	04 12 [illegible]
	WDC	iPc	04 12 15.5
	MIN	iPc	04 12 25.2
	ORV	ePc	04 12 28.2
	BRK	ePc	04 12 37.3

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DATE	STA	PHASE	TIME (UTC)
	ZSP	ePc	04 12 37.4
	BKS	iPc	04 12 37.9
	PCC	eP	04 12 40.5
	MHC	ePc	04 12 47.6
	GCC	ePd	04 12 48.2
	CMB	ePc	04 12 51.4
	SAO	eP	04 12 53.9
	LLA	eP	04 12 59.7
	PRS	eP	04 13 00.4
	FRI	e(P)	04 13 06.4
	PRI	ePd	04 13 10.9
BRK 04h11m52.5s 40.4N 124.4W			
h=22km ML=3.8(5) Mo=1.2E22(3)			
Cape Mendocino Sequence			
Nov 22	WDC	iPd	09 32 27.3
		iS	09 32 34.5
	MIN	iPc	09 32 34.8
		eP	09 32 36.4
		iS	09 32 49.8
		eS	09 32 51.7
	ORV	iPd	09 32 37.2
		eS	09 32 53.6
	FHC	e(P)d	09 32 39.9
		iS	09 32 58.5
	ARC	e(P)	09 32 41.5
		eS	09 33 01.1
	CMB	ePc	09 33 03.2
BRK 09h32m18.1s 40.2N 122.8W			
h=22km ML=3.0(3)			
58 km SW of Redding, CA			
Nov 22	FHC	ePc	12 10 07.9
	WDC	eP	12 10 12.7
	MIN	ePc	12 10 16.6
	ORV	ePc	12 10 18.1
	MHC	ePc	12 10 20.5
	CMB	ePc	12 10 24.5
	PRS	ePc	12 10 24.8
	LLA	ePc	12 10 26.2
	FRI	ePc	12 10 28.2
	MNA	ePc	12 10 32.9
USGS 11h58m00.3s 14.3N 146.6E			
h=59km mb=5.0 Ms=4.6			
Mariana Islands			
Nov 22	PRS	eP	12 35 43.0
	CMB	e	12 35 56.5
	MNA	ePd	12 36 05.2
USGS 12h30m30.1s 16.9N 101.2W			
h=33km mb=4.1			
Near Coast of Guerrero, Mexico			
Nov 22	WDC	e(P)	19 49 39.7
	CMB	ePc	19 49 46.0
	MNA	e(P)	19 49 52.8
USGS 19h38m30.2s 42.2N 138.8E			
h=120km mb=4.6			
Eastern Sea of Japan			
Nov 23	WDC	ePc	00 30 03.5
	ORV	ePc	00 30 06.6
	PRS	eP	00 30 13.4
	CMB	ePc	00 30 13.9
	LLA	eP	00 30 15.1
	FRI	ePc	00 30 18.1
USGS 00h18m26.2s 21.8N 143.0E			
h=300km mb=4.5			
Mariana Islands Region			
Nov 23	FHC	ePc	07 23 32.4
		e	07 27 17.0

DATE	STA	PHASE	TIME (UTC)
	WDC	iPc	07 23 38.0
	MIN	iPc	07 23 42.1
	ORV	iPc	07 23 48.2
		i	07 27 24.6
	BRK	ePc	07 24 01.4
	BKS	iP	07 24 02
		iS	07 28 52
		e	07 30 05
		e	07 31 32
		eLq	07 34 32
		eLr	07 35 14
		i	07 37 10
			AMP(μm) PER(s)
		PZ	0.070 1.0
		LZ	0.63 20.
		LN	2.2 20.
		LE	4.6 20.
	CMB	ePc	07 24 04.3
		e	07 27 24.6
	MHC	iPc	07 24 07.7
		eS	07 28 48
		e	07 31 56
		eLq	07 34 15
	MNA	iPc	07 24 08.2
		i	07 27 29.8
		e	07 33 43.8
	GCC	ePc	07 24 09.0
	SAO	eP	07 24 12.2
	FRI	iPc	07 24 14.9
		e	07 24 26.5
		e	07 24 43.3
		e	07 27 27.2
	LLA	ePc	07 24 15.4
		e	07 24 28.2
	PRS	ePc	07 24 16.5
		e	07 24 28.9
		e	07 27 28.0
	PRI	ePc	07 24 20.8
BRK Ms=5.1 Distance=29°			
USGS 07h18m20.5s 61.6N 141.3W			
h=5km mb=5.7 Ms=5.0			
Southern Alaska			
Nov 24	PRI	iPc	01 55 29.5
		iPg	01 55 52.0
	FRI	iPd	01 55 34.0
	PRS	eP	01 55 36.4
	LLA	eP	01 55 36.6
	MNA	iPc	01 55 38.6
		iPg	01 56 05
	CMB	ePd	01 55 48.0
		iPg	01 56 08
		eS	01 57 24
	MHC	iP	01 55 48.6
		iPg	01 56 16.2
		eS	01 57 37
		iSg	01 57 45.7
	SAO	iPd	01 55 49
		iPg	01 56 16.8
		eS	01 57 16
	GCC	eP	01 55 54.8
	PCC	eP	01 55 57.8
	ZSP	eP	01 55 58.7
		ePg	01 56 17.3
	BRK	eP	01 55 59
		eSg	01 58 06
	BKS	eP	01 56 00.9
		i	01 56 10.1
		eS	01 58 06.8
	ORV	eP	01 56 11
	MIN	eP	01 56 23
	WDC	eP	01 56 35

DATE	STA	PHASE	TIME (UTC)
		ePg	01 57 07
		eSg	01 59 06
	FHC	e(P)	01 56 46
		iSg	01 59 43
BRK ML=6.6(8)			
PAS 01h54m14.5s 33.1N 115.8W			
h=km ML=5.8			
Imperial Valley area, CA			
BRK ML=4.7(4)			
PAS 02h15m23.2s 33.0N 115.8W			
h=km ML=4.8			
Imperial Valley area, CA			
Nov 24	FRI	e(P)	02 54 21.5
		eS	02 55 05
		iSg	02 55 37.6
	LLA	e(P)c	02 54 28.5
	PRS	e(P)	02 54 28.8
	PRI	ePd	02 54 30.0
		e	02 54 39.3
	MNA	ePc	02 54 31.8
	MHC	e(P)	02 54 32
	CMB	ePc	02 54 33.5
	SAO	e(P)	02 54 39.5
BRK ML=4.8(4)			
PAS 02h53m00.7s 33.0N 115.8W			
h=km ML=4.7			
Imperial Valley area, CA			
Nov 24	FRI	ePKPc	07 58 41.3
	CMB	iPKPc	07 58 43.7
	PRS	ePKPc	07 58 44.8
	BRK	ePKPc	07 58 46.5
	MIN	ePKPc	07 58 47.6
	WDC	iPKPc	07 58 48.8
USGS 07h39m58.3s 56.1S 27.5W			
h=90km mb=5.6			
South Sandwich Islands Region			
Nov 24	GCC	iPc	08 50 01.2
	PCC	iPc	08 50 01.3
	PRS	iPc	08 50 01.8
	SAO	iPc	08 50 02.2
	BRK	iPc	08 50 02.9
	BKS	iP	08 50 03.0
			AMP(μm) PER(s)
		PZ	0.18 1.2
	ZSP	iPc	08 50 03.2
	PRI	iPc	08 50 04.0
	LLA	iPc	08 50 04.0
	FHC	iPc	08 50 06.8
	FRI	iPc	08 50 09.1
	CMB	iPc	08 50 09.9
		i	08 52 08.5
	WDC	iPc	08 50 10.3
		i	08 52 08.6
	ORV	iPc	08 50 10.4
	MIN	iPc	08 50 12.0
	MNA	iPc	08 50 19.2
		i	08 52 18.5
USGS 08h39m08.2s 17.7S 178.6W			
h=554km mb=5.5			
Fiji Islands Region			
Nov 24	WDC	iPc	09 37 05.3
	ORV	iPc	09 37 07.8
	CMB	iPc	09 37 11.5
	FRI	iPc	09 37 13.9
	MNA	ePc	09 37 20.3
USGS 09h24m10.4s 5.6S 149.4E			
h=142km mb=5.5			

DATE	STA	PHASE	TIME (UTC)
New Britain Region			
Nov 24	GCC	ePc	12 50 29.3
	PCC	ePc	12 50 29.5
	PRS	ePc	12 50 29.5
	SAO	ePc	12 50 30.8
	BRK	ePc	12 50 31.1
	PRI	iPc	12 50 31.4
	LLA	ePc	12 50 31.4
	BKS	iP	12 50 31.8
			AMP(μm) PER(s)
		PZ	0.051 0.9
	FRI	iPc	12 50 36.3
	CMB	iPc	12 50 37.3
	ORV	iPc	12 50 38.6
	WDC	iPc	12 50 38.7
	MIN	iPc	12 50 40.3
	MNA	ePc	12 50 45.6
USGS 12h39m03.6s 23.9S 179.8W			
h=501km mb=5.1			
South of Fiji Islands			
Nov 24	FRI	iPd	13 17 11.9
	PRI	iPc	13 17 12.7
		iPg	13 17 34.5
	LLA	eP	13 17 18.3
	PRS	ePd	13 17 18.6
	MNA	iPd	13 17 21.8
	SAO	iPd	13 17 23.4
		iPg	13 17 40
		iSg	13 19 20
	CMB	iPd	13 17 28.3
		iPg	13 17 55
		iSg	13 19 17
	GCC	ePd	13 17 31.7
	PCC	ePd	13 17 39.5
	ZSP	eP	13 17 40
		eS	13 19 50
	BRK	eP	13 17 40.3
		eS	13 19 22
	BKS	eP	13 17 42.0
		eS	13 19 52.2
	ORV	eP	13 17 54.9
	MIN	ePd	13 18 05.1
	WDC	iPd	13 18 19.7
		ePg	13 18 56
		eS	13 20 34
	FHC	e(P)	13 18 30
		eSg	13 21 29
BRK ML=6.8(8)			
PAS 13h15m56.5s 33.0N 115.8W			
h=km ML=6.0			
Imperial Valley area, CA			
Nov 24	GCC	ePc	15 17 22.9
	PRS	iPc	15 17 23.2
	SAO	ePc	15 17 23.8
	BRK	ePc	15 17 25.0
	BKS	iP	15 17 25.2
			AMP(μm) PER(s)
		PZ	0.10 1.3
	PRI	iPc	15 17 25.6
	ZSP	ePc	15 17 25.6
	LLA	ePc	15 17 25.7
	MHC	iPc	15 17 26.1
	FRI	iPc	15 17 31.2
	CMB	iPc	15 17 32.4
		e	15 18 07
		e	15 18 16
	FHC	ePc	15 17 32.4
	WDC	iPc	15 17 33.9
		e	15 18 08

DATE	STA	PHASE	TIME (UTC)
		e	15 18 18
	ORV	iPc	15 17 34.5
	MIN	iPc	15 17 35.8
	MNA	iPc	15 17 42.3
		e	15 18 16
		e	15 18 28
USGS 15h06m09.2s 17.0S 174.0W			
h=143km mb=5.6			
Tonga Islands			
Nov 25	FRI	iPc	09 43 25.6
		iS	09 43 37.8
	MNA	iPd	09 43 28.1
		iS	09 43 43.6
	CMB	iPc	09 43 35.0
		iS	09 43 54.0
	LLA	iPc	09 43 43.1
	PRI	iPc	09 43 44.5
		iS	09 44 13.3
	SAO	iPc	09 43 48.0
	PRS	ePc	09 43 49.3
	MHC	iPd	09 43 49.7
	PCC	ePd	09 43 56.8
BRK 09h43m07.8s 37.4N 118.7W			
h=8km ML=3.5(4)			
26 km WNW of Bishop, CA			
Nov 25	MNA	ePd	16 21 45.2
		e	16 25 43.3
	CMB	ePd	16 21 46.8
USGS 16h08m35.6s 5.6S 149.4E			
h=140km mb=5.7			
New Britain Region			
Nov 26	BRK	ePKP	02 01 44
		ePPP	02 07 44
		eSKS	02 12 15
		i	02 13 44
		iSP	02 14 21
		eSS	02 19 03
		eSSS	02 22 53
		e	02 35 24
		i	02 46 23
			AMP(μm) PER(s)
		LZ	8.0 20.
	BKS	ePKP	02 01 44
		ePS	02 12 18
		ePPS	02 13 28
		eSS	02 18 56
		ePKPPKP	02 22 20
		eLq	02 30 10
		eLr	02 34 56
			AMP(μm) PER(s)
		LZ	6.6 20.
		LN	6.4 20.
		LE	5.4 20.
	FRI	e	02 01 55.7
	WDC	e	02 01 59.0
	CMB	e	02 02 00.0
	ORV	e	02 02 00.8
	MNA	e	02 02 07.0
BRK Ms=6.3 Distance=115°			
USGS 01h43m14.1s 8.2S 124.2E			
h=33km mb=5.8 Ms=6.5			
Timor			
Nov 26	FRI	e(P)	17 40 19.4
		i	17 40 22.8
	PRI	eP	17 40 20.3
	PRS	e(P)	17 40 25.4
	LLA	e(P)	17 40 26.0
	CMB	e(P)	17 40 35.8

DATE	STA	PHASE	TIME (UTC)
		iS	17 41 33.8
	MHC	e	17 40 41.9
	ORV	e	17 41 08.9
BRK ML=4.6(4)			
PAS 17h39m02.0s 33.0N 115.9W			
h=km ML=4.3			
Imperial Valley area, CA			
Nov 26	PRS	ePc	17 59 57.4
	PRI	eP	18 00 04.0
	LLA	ePc	18 00 04.0
	WDC	ePc	18 00 05.6
	FRI	ePc	18 00 06.6
	ORV	eP	18 00 06.7
	CMB	ePc	18 00 07.5
USGS 17h47m26.9s 16.6S 167.9E			
h=33km mb=4.3			
Vanuatu Islands			
Nov 27	PRI	e	00 16 50.9
		ePKPc	00 20 31.2
	FRI	e	00 16 57.0
		ePKP	00 20 39.3
		ePKPPKP	00 31 41.5
	ORV	iPdiffc	00 17 02.8
		ePKP	00 20 36.3
		e	00 21 04.2
	CMB	e	00 17 25.0
		ePKP	00 20 39.1
		e	00 21 11.6
		ePKPPKP	00 31 54.1
	WDC	ePKP	00 20 33.3
		e	00 21 04.5
		ePKPPKP	00 32 04.3
	LLA	ePKPPKP	00 31 56.6
USGS 00h02m08.1s 0.2S 125.1E			
h=33km mb=5.8 Ms=5.7			
Molucca Sea			
Nov 27	GCC	eP	04 29 51.5
	PCC	ePd	04 29 51.9
	PRS	ePd	04 29 52.0
	SAO	eP	04 29 52.7
	BRK	eP	04 29 53.5
	MHC	ePd	04 29 54.1
	PRI	ePd	04 29 54.1
	LLA	e(P)	04 29 54.2
	BKS	iP	04 29 54.2
			AMP(μm) PER(s)
		PZ	0.036 0.9
	FRI	ePd	04 29 59.1
	CMB	ePd	04 30 00.2
	ORV	eP	04 30 01.0
	WDC	iPd	04 30 01.2
	MIN	eP	04 30 03.0
USGS 04h18m56.6s 19.8S 178.2W			
h=613km mb=4.8			
Fiji Islands Region			
Nov 27	PRI	ePd	05 07 26.8
	FRI	iPd	05 07 28.3
		i	05 07 36.7
	LLA	eP	05 07 31.3
	PRS	ePd	05 07 31.8
		i	05 07 39.9
	SAO	eP	05 07 36.2
	GCC	e(P)	05 07 40.0
	CMB	ePd	05 07 41.5
	MHC	ePd	05 07 41.3
	PCC	e(P)	05 07 46
	BRK	eP	05 07 48.8
	BKS	iPd	05 07 49.5

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DATE	STA	PHASE	TIME (UTC)
		eS	05 12 10
		eLr	05 14 08
			AMP(μm) PER(s)
		PZ	0.074 1.0
		LZ	3.0 20.
		LN	3.9 20.
		LE	1.8 20.
	ORV	iPd	05 07 58.7
	MIN	eP	05 08 04.9
	WDC	ePd	05 08 08.5
	FHC	e(P)	05 08 18.0
BRK Ms=5.0 Distance=25°			
USGS 05h02m42.3s 18.7N 107.0W			
h=33km mb=5.0 Ms=4.7			
Off Coast of Jalisco, Mexico			
Nov 27	PRI	eP	06 24 50.9
	FRI	ePd	06 24 52.4
	PRS	ePd	06 24 55.9
	CMB	eP	06 25 05.1
	ORV	e(P)	06 25 24.1
	MIN	e(P)	06 25 29.2
USGS 06h20m01.1s 18.0N 107.1W			
h=33km mb=4.0			
Off Coast of Jalisco, Mexico			
Nov 27	FRI	eP	06 26 23.8
	CMB	eP	06 26 27.7
	LLA	eP	06 26 30.8
	PRI	e(P)	06 26 31.7
	ORV	eP	06 26 31.8
	MIN	eP	06 26 32.1
	WDC	eP	06 26 34.1
	MHC	e(P)	06 26 34.2
	FHC	e(P)	06 26 43.0
USGS 06h14m31.4s 8.8N 39.8W			
h=10km mb=5.2 Ms=4.6			
Central Mid-Atlantic Ridge			
Nov 27	PRI	iPd	06 39 29.0
		iS	06 39 35.2
	LLA	eP	06 39 34.7
	PRS	eP	06 39 38.5
	FRI	iPd	06 39 38.9
		iS	06 39 53.4
	SAO	eP	06 39 41.8
	CMB	eP	06 39 53.5
BRK 06h39m23.6s 36.2N 120.3W			
h=9km ML=2.6(2)			
9 km N of Coalinga, CA			
Nov 27	WDC	iPd	12 34 08.9
		epP	12 34 22.7
	MIN	eP	12 34 13.1
	ORV	eP	12 34 18.3
	BRK	e(P)	12 34 23.0
	MHC	eP	12 34 29.0
	CMB	eP	12 34 32.5
		epP	12 34 46.4
	SAO	e(P)	12 34 32.8
	PRS	eP	12 34 36.0
	LLA	eP	12 34 37.1
	PRI	e(P)	12 34 41.0
	FRI	eP	12 34 41.2
		epP	12 34 55.1
USGS 12h27m05.4s 51.6N 173.5W			
h=33km mb=5.0			
Andreanof Islands, Aleutian Is.			
Nov 27	BRK	e(P)	13 18 24.2
	PRS	eP	13 18 24.4
	BKS	eP	13 18 25.3

DATE	STA	PHASE	TIME (UTC)
		eLr	13 44 42
			AMP(μm) PER(s)
		PZ	0.11 1.2
	MHC	eP	13 18 25.8
	SAO	e(P)	13 18 26.0
	LLA	eP	13 18 26.7
	PRI	eP	13 18 27.1
	WDC	iPc	13 18 28.3
	ORV	e(P)	13 18 29.7
	CMB	iPc	13 18 31.0
	MIN	eP	13 18 31.1
	FRI	eP	13 18 31.5
USGS 13h05m52.6s 16.3S 168.1E			
h=32km mb=5.5 Ms=5.5			
Vanuatu Islands			
Nov 27	WDC	eP	13 23 59.7
	ORV	eP	13 24 01.0
	MIN	e(P)	13 24 01.8
	CMB	eP	13 24 02.0
	FRI	eP	13 24 02.2
USGS 13h11m22.6s 16.3S 168.1E			
h=28km mb=4.9 Ms=5.3			
Vanuatu Islands			
Nov 27	BKS	eP	13 45 50
		ePP	13 49 02
		ePPP	13 50 36
		eS	13 56 22
		ePS	13 57 24
		iSS	14 01 14
		eLq	14 07 48
		iG	14 08 54
		eLr	14 11 48
			AMP(μm) PER(s)
		PZ	0.20 1.2
		LZ	16 20.
		LN	7.1 20.
		LE	12 20.
	BRK	e(P)	13 45 50.2
	PRS	eP	13 45 50.4
	FHC	e(P)	13 45 51.2
	MHC	eP	13 45 51.6
	LLA	eP	13 45 52.9
	PRI	eP	13 45 53.5
	WDC	eP	13 45 55.2
	ORV	eP	13 45 56.0
	MIN	eP	13 45 57.0
	CMB	eP	13 45 57.0
	FRI	eP	13 45 57.8
BRK Ms=6.3 Distance=85°			
USGS 13h33m18.1s 16.4S 168.1E			
h=28km mb=5.4 Ms=6.4			
Vanuatu Islands			
Nov 27	MHC	e(P)	14 14 08.7
	WDC	e	14 14 11.8
	ORV	eP	14 14 13.1
	CMB	eP	14 14 14.0
	FRI	eP	14 14 14.3
USGS 14h01m35.5s 16.3S 168.2E			
h=33km mb=4.8			
Vanuatu Islands			
Nov 27	FRI	eP	14 44 18.5
	PRI	eP	14 44 21.4
	LLA	eP	14 44 24.0
	PRS	eP	14 44 24.6
	CMB	eP	14 44 26.9
	MHC	eP	14 44 29.7
	ORV	eP	14 44 36.7
	MIN	eP	14 44 38.9

DATE	STA	PHASE	TIME (UTC)
	WDC	eP	14 44 51.9
USGS 14h33m09.8s 17.7S 69.3W			
h=154km mb=4.8			
Peru-Bolivia Border Region			
Nov 27	WDC	e(P)	17 16 48.5
	PRS	eP	17 17 06.5
	LLA	eP	17 17 07.2
	PRI	eP	17 17 08.8
	FRI	eP	17 17 10.2
	CMB	e	17 17 14.9
USGS 17h05m19.6s 35.1N 139.7E			
h=51km mb=4.8 Ms=4.3			
Near South Coast of Honshu, Japan			
Nov 27	BRK	e(P)	17 43 26.8
	MHC	e(P)	17 43 28.4
	PRI	eP	17 43 29.8
	WDC	ePd	17 43 31.6
	ORV	eP	17 43 32.8
	MIN	eP	17 43 33.4
	CMB	ePd	17 43 33.8
	FRI	eP	17 43 33.9
USGS 17h30m53.9s 16.2S 168.1E			
h=24km mb=4.9 Ms=4.1			
Vanuatu Islands			
Nov 27	PRS	e(P)	17 48 08.2
	MHC	eP	17 48 09.0
	PRI	e(P)	17 48 12.5
	BRK	e(P)	17 48 12.6
	WDC	ePd	17 48 12.8
	ORV	eP	17 48 13.9
	CMB	iPd	17 48 14.9
	FRI	eP	17 48 15.3
	MIN	eP	17 48 16.5
USGS 17h35m36.0s 16.2S 168.2E			
h=30km mb=5.0			
Vanuatu Islands			
Nov 28	CMB	ePKP	04 18 05.0
		ePKPPKP	04 33 32.3
	FRI	ePKP	04 18 18.1
		ePKPPKP	04 33 20
USGS 04h03m45.3s 0.3S 124.9E			
h=33km mb=5.9 Ms=5.8			
Molucca Sea			
Nov 28	WDC	eP	04 56 37.2
	MIN	e(P)	04 56 39.7
	CMB	eP	04 56 39.7
	FRI	eP	04 56 40.0
USGS 04h44m01.7s 16.5S 168.4E			
h=33km mb=4.2			
Vanuatu Islands			
Nov 28	FRI	eP	05 17 42.5
	CMB	eP	05 17 43.8
	WDC	eP	05 17 45.5
	MIN	eP	05 17 47.3
USGS 05h06m26.5s 17.1S 174.2W			
h=210km mb=4.4			
Tonga Islands			
Nov 28	WDC	eP	05 43 27.7
	MIN	eP	05 43 32.5
	ORV	eP	05 43 36.7
	MHC	eP	05 43 48.4
	CMB	eP	05 43 50.0
	PRS	eP	05 43 54.5
	LLA	eP	05 43 55.0
	FRI	eP	05 43 57.4

DATE	STA	PHASE	TIME (UTC)
USGS 05h34m21.6s 54.7N 159.5E			
h=33km mb=4.6			
Near East Coast of Kamchatka			
Nov 28	WDC	eP	15 37 37.2
	MIN	eP	15 37 42.8
	ORV	e(P)	15 37 46.0
	CMB	eP	15 38 02.4
	PRS	eP	15 38 06.2
	LLA	eP	15 38 06.9
	FRI	eP	15 38 10.7
USGS 15h31m16.7s 53.7N 165.0W			
h=33km mb=4.9			
Fox Islands, Aleutian Islands			
Nov 29	FHC	iPd	01 43 21.8
		iS	01 43 27.3
	ARC	eP	01 43 22.7
		iS	01 43 30.6
	WDC	iPc	01 43 34.7
	MIN	eP	01 43 44.4
		eS	01 44 13.8
	ORV	eP	01 43 48.4
		eS	01 44 17.8
	CMB	eP	01 44 10.8
	FRI	eP	01 44 26.0
BRK 01h43m11.4s 40.4N 124.4W			
h=15km ML=3.2(4) Mo=1.8E21(2)			
Cape Mendocino Sequence			
Nov 29	PRI	eP	08 10 26.1
	PRS	eP	08 10 27.8
	LLA	eP	08 10 28.2
	CMB	eP	08 10 33.4
USGS 07h57m21.7s 45.7S 76.5W			
h=21km mb=5.6 Ms=5.0			
Off Coast of Southern Chile			
Nov 29	GCC	eP	15 04 18.3
	BKS	eP	15 04 28.7
			AMP(μm) PER(s)
		PZ	0.077 1.4
	PRS	eP	15 04 30.2
	WDC	eP	15 04 31.4
	LLA	eP	15 04 32.1
	ORV	e(P)	15 04 33.5
	MIN	e(P)	15 04 33.9
	CMB	eP	15 04 35.7
	FRI	eP	15 04 36.8
USGS 14h51m59.1s 10.5S 161.4E			
h=103km mb=4.5			
Solomon Islands			
Nov 29	WDC	ePKP	20 09 50.4
	MIN	ePKP	20 09 53.2
	ORV	ePKPc	20 09 55.1
	BRK	e(PKP)	20 09 56.8
	CMB	ePKPc	20 10 01.5
	FRI	e(PKP)	20 10 05.3
USGS 19h49m22.5s 28.4S 81.0E			
h=10km mb=5.3 Ms=3.9			
South Indian Ocean			
Nov 30	BRK	e(P)	01 31 45.5
	PRS	e(P)	01 31 46.3
	ORV	ePc	01 31 49.9
	WDC	ePc	01 31 50.7
	FRI	eP	01 31 53.5
	CMB	ePc	01 31 54.1
USGS 01h19m31.5s 19.6S 175.9E			
h=33km mb=4.9			
South of Fiji Islands			

DATE	STA	PHASE	TIME (UTC)
Nov 30	PRS	ePc	01 39 40.2
	SAO	e(P)	01 39 41.0
	FRI	ePc	01 39 48.3
	CMB	ePc	01 39 49.6
	WDC	ePc	01 39 51.4
	MIN	eP	01 39 52.3
USGS 01h28m19.9s 16.3S 173.0W			
h=33km mb=4.9			
Tonga Islands			
Nov 30	MHC	iPc	02 37 15.0
		iS	02 37 18.8
	PCC	iPc	02 37 21.5
	BRK	iPc	02 37 21.6
	BKS	iP	02 37 21.6
	GCC	ePd	02 37 21.8
	SAO	iPc	02 37 26.5
	CMB	iPd	02 37 30.5
		iS	02 37 45.7
	LLA	iPc	02 37 30.7
	PRS	e(P)	02 37 33
	FRI	ePd	02 37 39.5
		iS	02 38 00.7
BRK 02h37m10.3s 37.6N 121.7W			
h=2km ML=2.7(3) Mo=4.9E20(1)			
Mt. Lewis, 16 km SE of Livermore, CA			
Nov 30	FHC	iPd	14 11 51.2
		iS	14 11 57.8
	ARC	eP	14 11 51.7
		iS	14 11 59.6
	WDC	iPd	14 12 01.5
	MIN	eP	14 12 14.5
		eS	14 12 43.5
	ORV	eP	14 12 17.2
		eS	14 12 46.5
BRK 14h11m39.6s 40.4N 124.5W			
h=15km ML=3.2(4) Mo=1.7E21(2)			
Cape Mendocino Sequence			
Nov 30	MHC	iPc	15 49 07.9
		iS	15 49 11.3
	PCC	iPd	15 49 14.7
		iS	15 49 21.8
	GCC	iPd	15 49 14.8
		iS	15 49 22.8
	BKS	iP	15 49 14.8
		iS	15 49 23.6
	BRK	iPc	15 49 15.0
		iS	15 49 23.8
	ZSP	iPc	15 49 15.9
		iS	15 49 26.3
	SAO	iPc	15 49 19.1
	LLA	iPc	15 49 23.6
		iS	15 49 32.0
	CMB	iPd	15 49 24.0
	PRS	iPd	15 49 25.4
	PRI	ePc	15 49 31.3
	FRI	iPc	15 49 32.1
		iS	15 49 54
BRK 15h49m03.8s 37.5N 121.7W			
h=6km ML=3.3(3) Mo=1.3E21(1)			
Mt. Lewis, 18 km SE of Livermore, CA			
Nov 30	GCC	ePd	19 20 50.3
	SAO	ePd	19 20 51.2
	PRS	ePd	19 20 51.2
	MHC	ePd	19 20 51.9
	LLA	ePd	19 20 53.4
	PRI	ePd	19 20 54.3
		e	19 21 05.3

DATE	STA	PHASE	TIME (UTC)
	WDC	iPd	19 20 55.0
		i	19 21 06.0
	ORV	eP	19 20 55.4
		e	19 21 06.5
	CMB	ePd	19 20 57.3
		e	19 21 08.5
	FRI	ePd	19 20 58.3
		e	19 21 09.3
	MNA	iPd	19 21 06.8
		i	19 21 16.6
USGS 19h08m26.8s 10.6S 165.1E			
h=36km mb=5.3			
Santa Cruz Islands			
Nov 30	FHC	ePc	19 28 06.2
		iPcP	19 32 21.2
	WDC	iPc	19 28 12.4
	MIN	iPc	19 28 18.8
	ORV	eP	19 28 25.6
	ZSP	eP	19 28 37.4
		ePcP	19 32 22
	BRK	e(P)	19 28 38.0
		iS	19 33 20
	BKS	eP	19 28 38.6
		eLq	19 33 37.5
		eLr	19 34 53.2
		e	19 36 33.0
			AMP(μm) PER(s)
		LZ	2.0 20.
		LNE	0.25 18.
		LNW	1.3 21.
	PCC	e(P)	19 28 40.5
	CMB	ePc	19 28 42.3
	MHC	e(P)	19 28 44.0
		eS	19 33 20.59
		eLq	19 34 35.73
		e	19 34 54.10
		eLr	19 35 28.62
			AMP(μm) PER(s)
		LZ	0.63 18.
		LN	0.0 20.
		LE	1.1 20.
	GCC	e(P)	19 28 45.2
	MNA	iPc	19 28 47.4
	SAO	e(P)	19 28 48.8
	LLA	eP	19 28 52.3
	FRI	iPc	19 28 52.8
	PRS	eP	19 28 53.0
	PRI	eP	19 28 58.0
BRK Ms=7.4 Distance=25°			
USGS 19h23m19.6s 58.7N 142.8W			
h=10km mb=6.7 Ms=7.6			
Gulf of Alaska			
Nov 30	FHC	iPc	19 53 10.0
	WDC	iPc	19 53 16.9
	MIN	iPc	19 53 22.6
	ORV	ePc	19 53 29.6
	ZSP	ePc	19 53 41.3
	BRK	iPc	19 53 42.0
	PCC	e(P)	19 53 44.4
	CMB	iPc	19 53 46.5
	MHC	iPc	19 53 48.5
	GCC	ePc	19 53 49.5
	SAO	ePc	19 53 53.1
	LLA	iPc	19 53 56.9
	FRI	iPc	19 53 57.2
	PRS	ePc	19 53 58.6
	PRI	iPc	19 54 00.3
USGS 19h48m26.1s 58.2N 1[illegible]			
h=10km mb=5.9			
Gulf of Alaska			

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DATE	STA	PHASE	TIME (UTC)
Nov 30	WDC	eP	20 20 16.5
	MIN	e(P)	20 20 22.0
	CMB	e(P)	20 20 44.8
	PRI	e(P)	20 21 01.1
USGS 20h15m20.3s 58.9N 142.9W			
h=10km mb=4.9			
Gulf of Alaska			
Nov 30	FHC	e(P)	20 45 57.3
	WDC	iPc	20 46 03.4
	MIN	ePc	20 46 10.0
	CMB	ePc	20 46 32.4
	MHC	ePc	20 46 34.1
	LLA	ePc	20 46 43.4
	FRI	ePc	20 46 44.0
	PRS	e(P)	20 46 44.0
	PRI	ePc	20 46 47.5
USGS 20h41m11.3s 58.1N 142.6W			
h=10km mb=4.8			
Gulf of Alaska			
Nov 30	WDC	ePc	23 31 13.4
	MNA	ePc	23 31 48.1
	PRI	ePc	23 31 57.4
USGS 23h26m16.7s 58.6N 142.7W			
h=10km mb=4.2			
Gulf of Alaska			
Nov 30	FHC	ePc	23 53 06.0
	WDC	iPc	23 53 13.2
	MIN	ePc	23 53 19.0
	ORV	eP	23 53 26.0
	BRK	eP	23 53 37.6
	CMB	ePc	23 53 42.5
	MHC	eP	23 53 44.2
	MNA	ePc	23 53 47.8
	FRI	eP	23 53 53.2
	LLA	eP	23 53 53.2
	PRS	eP	23 53 53.8
	PRI	ePc	23 53 58.3
USGS 23h48m19.1s 58.1N 142.9W			
h=10km mb=4.9 Ms=5.3			
Gulf of Alaska			
Dec 1	WDC	iPd	01 18 13.8
	ORV	e	01 18 25.4
	MNA	iPd	01 18 49.7
	PRI	ePd	01 18 55.9
USGS 01h13m13.3s 58.6N 142.3W			
h=10km mb=4.6			
Gulf of Alaska			
Dec 1	WDC	eP	04 05 55.7
	CMB	ePd	04 06 25.3
	MNA	eP	04 06 31.5
	FRI	e(P)	04 06 35.3
	PRI	ePd	04 06 40.9
USGS 03h59m10.1s 51.8N 170.5W			
h=33km mb=5.1 Ms=5.0			
Fox Islands, Aleutian Islands			
Dec 1	FHC	e(P)	04 30 07.4
	WDC	ePc	04 30 14.3
	MIN	iPc	04 30 20.4
	ORV	eP	04 30 27.6
	CMB	e(P)	04 30 43.7
	MNA	eP	04 30 48.7
	FRI	e(P)	04 30 53.5
	PRI	e(P)	04 30 59.3
USGS 04h25m16.0s 58.7N 142.6W			
h=10km mb=4.9 Ms=4.9			

DATE	STA	PHASE	TIME (UTC)
Gulf of Alaska			
Dec 1	FRI	ePc	09 06 42.3
	MNA	ePc	09 06 48.4
	CMB	ePc	09 06 54.7
	ORV	ePc	09 07 13.8
USGS 09h01m55.7s 18.6N 107.0W			
h=33km mb=3.8			
Off Coast of Jalisco, Mexico			
Dec 1	WDC	iPc	11 15 37.2
		eS	11 15 49.3
	MIN	iPc	11 15 44.8
		eP	11 15 45.8
		iS	11 15 58.5
		i	11 16 00.6
	ORV	iPd	11 15 47.2
	FHC	iPc	11 15 49.6
		eS	11 16 05.2
	ARC	eP	11 15 52.8
		iS	11 16 09.8
	BRK	e	11 16 06.6
	CMB	eP	11 16 12.2
		iSg	11 16 50.8
BRK 11h15m27.3s 40.1N 122.8W			
h=3km ML=3.4(4) Mo=4.2E21(2)			
61 km SW of Redding, CA			
Dec 1	WDC	iPc	11 35 22.2
	MNA	eP	11 35 58.0
USGS 11h30m07.1s 58.5N 142.7W			
h=10km			
Gulf of Alaska			
Dec 1	FHC	iPc	12 08 41.0
	WDC	iPc	12 08 48.2
	MIN	iPc	12 08 54.3
	ORV	ePc	12 09 01.0
	ZSP	ePc	12 09 13.0
	BRK	ePc	12 09 13.7
	BKS	ePc	12 09 13.8
		eS	12 13 27
		eLr	12 15 20
			AMP(μm) PER(s)
		PZ	0.11 0.8
	PCC	ePc	12 09 16.0
	CMB	ePc	12 09 18.1
	MHC	iPc	12 09 20.4
	GCC	ePc	12 09 21.6
	MNA	ePc	12 09 23.0
	SAO	e(P)	12 09 25.5
	LLA	ePc	12 09 28.7
	PRS	ePc	12 09 29.1
	FRI	ePc	12 09 29.2
		ipP	12 09 32.6
		i	12 09 39.2
	PRI	ePc	12 09 34.0
BRK mb=5.4 h=33km Distance= 24°			
USGS 12h03m59.8s 58.0N 142.6W			
h=10km mb=5.4 Ms=5.7			
Gulf of Alaska			
Dec 1	FHC	e(P)	12 35 50.5
	WDC	ePc	12 35 56.8
	MIN	ePc	12 36 01.9
	CMB	ePc	12 36 27.1
	MNA	ePc	12 36 32.4
	FRI	ePc	12 36 37.7
	PRI	e(P)	12 36 43.4
USGS 12h30m24.4s 58.8N 142.7W			
h=10km			
Gulf of Alaska			

DATE	STA	PHASE	TIME (UTC)
Dec 1	WDC	iPc	14 53 38.4
		eS	14 53 46.6
		iS	14 53 46.7
	MIN	iPc	14 53 45.9
		eP	14 53 47.5
		iS	14 54 01.1
	ORV	iPc	14 53 48.0
		eS	14 54 02.5
	FHC	iPc	14 53 50.8
		iS	14 54 08.0
	ARC	eP	14 53 53.8
		eS	14 54 12.8
	BRK	e	14 54 06.2
	ZSP	e	14 54 12.8
	PCC	e	14 54 12.9
	CMB	ePc	14 54 13.7
		iS	14 54 51.1
	MHC	e	14 54 16.4
	BKS	eP	14 54 19.4
	FRI	e(P)	14 54 27.3
	LLA	e(P)	14 54 27.6
BRK 14h53m28.5s 40.1N 122.7W			
h=7km ML=3.7(6) Mo=8.9E21(4)			
62 km SW of Redding, CA			
Dec 1	SAO	iPc	17 20 36.1
	LLA	iPc	17 20 38.5
	PRS	iPd	17 20 39.1
	GCC	iPc	17 20 45.5
	PRI	iPc	17 20 46.5
	PCC	ePd	17 20 54.2
	FRI	iPc	17 20 55.9
		i	17 21 00.2
	BRK	ePc	17 20 59.3
	CMB	iPc	17 21 00.5
		iS	17 21 21.1
BRK 17h20m32.7s 36.6N 121.3W			
h=5km ML=2.8(2)			
Stone Canyon area, 25 km SE of Hollister, CA			
Dec 1	GCC	eP	18 34 57.0
	PCC	eP	18 34 57.1
	PRS	ePc	18 34 57.1
	SAO	eP	18 34 57.7
	PRI	ePc	18 34 59.0
	LLA	eP	18 34 59.3
	MHC	eP	18 34 59.6
		e(pP)	18 36 27.4
	FRI	eP	18 35 04.1
		e(pP)	18 36 32.3
	CMB	ePc	18 35 05.3
		epP	18 36 33.6
	ORV	ePc	18 35 06.6
	WDC	ePc	18 35 06.9
		epP	18 36 35.5
	MIN	eP	18 35 08.5
	MNA	ePc	18 35 14.2
		epP	18 36 43.3
USGS 18h23m32.8s 22.1S 178.1W			
h=388km mb=5.4			
South of Fiji Islands			
Dec 1	FHC	ePd	20 46 03.0
	WDC	iPd	20 46 10.1
	CMB	ePc	20 46 38.4
	MNA	ePd	20 46 43.3
USGS 20h41m12.1s 58.7N 143.1W			
h=10km mb=4.6			
Gulf of Alaska			

DATE	STA	PHASE	TIME (UTC)
Dec 2	FHC	ePc	01 58 20.6
	WDC	ePc	01 58 26.8
	CMB	ePc	01 58 55.5
	MHC	ePc	01 58 59.3
	MNA	ePc	01 59 00.6
	FRI	ePc	01 59 06.0
USGS 01h53m29.6s 58.9N 142.9W			
h=10km mb=5.1 Ms=5.0			
Gulf of Alaska			
Dec 2	FRI	eP	04 04 11.8
		i	04 04 39.0
	PRI	eP	04 04 27.2
	MHC	e(P)	04 04 37.6
	PRS	e(P)	04 04 38.0
	CMB	e(P)	04 04 40.2
	BKS	ePc	04 05 02.7
BRK ML=4.5(2)			
PAS 04h03m12.4s 33.0N 115.8W			
h=km ML=4.0			
Imperial Valley area, CA			
Dec 2	MNA	eP	07 15 04.6
	WDC	e(P)	07 15 40.8
	ORV	e(P)	07 15 56.4
USGS 07h12m57.5s 46.7N 120.7W			
h=18km mb=3.9			
Washington			
Dec 2	WDC	eP	09 04 00.5
	ORV	e(P)	09 04 14.7
	MNA	e(P)	09 04 30.8
	CMB	e(P)	09 04 34.1
USGS 09h02m24.3s 46.7N 120.7W			
h=17km			
Washington			
Dec 2	SAO	iPd	11 15 01.7
	MHC	iPd	11 15 02.66
		iS	11 15 08.20
	GCC	iPc	11 15 04.0
	LLA	iPc	11 15 07.0
	PRS	ePd	11 15 09.1
	PCC	ePc	11 15 11.7
	BRK	ePc	11 15 14.8
	BKS	iPc	11 15 14.9
		iS	11 15 30.5
	PRI	eP	11 15 16.2
	CMB	iPd	11 15 19.5
	FRI	iPc	11 15 20.2
	ORV	e(P)	11 15 37.1
	MNA	e(P)	11 15 47.6
	WDC	eP	11 15 52.9
BRK 11h14m55.8s 37.0N 121.4W			
h=7km ML=3.7(6) Mo=4.8E21(4)			
11 km ENE of Gilroy, CA			
Dec 2	FRI	eP	14 35 11.1
	CMB	eP	14 35 12.7
	WDC	eP	14 35 15.6
USGS 14h22m43.8s 28.7S 177.0W			
h=65km mb=4.9			
Kermadec Islands Region			
Dec 2	MNA	iPc	16 30 37.4
		iS	16 31 06.2
	FRI	iPc	16 30 47.1
	CMB	iPc	16 30 55.2
		i	16 31 03.1
	PRI	ePc	16 31 01.1
	LLA	eP	16 31 02.7
	MHC	e(P)	16 31 09.1

DATE	STA	PHASE	TIME (UTC)
	ORV	ePc	16 31 14.5
	PRS	eP	16 31 16.8
	BKS	e(P)c	16 31 26.1
BRK ML=4.0(4)			
USGS 16h30m00.0s 37.0N 116.0W			
h=0km			
Underground Nuclear Explosion, N.T.S.			
Dec 2	PRI	eP	20 34 40.7
	FRI	eP	20 34 42.2
	LLA	e(P)	20 34 44.7
	PRS	eP	20 34 45.9
	MNA	eP	20 34 50.9
	CMB	eP	20 34 54.9
	ORV	eP	20 35 15.4
USGS 20h30m12.6s 19.7N 109.3W			
h=10km mb=4.5 Ms=4.4			
Revilla Gigedo Islands Region			
Dec 2	WDC	iPd	21 55 05.0
	MIN	ePd	21 55 10.7
	ORV	e(P)	21 55 15.9
	CMB	eP	21 55 32.8
	MNA	ePd	21 55 37.9
	LLA	e(P)	21 55 43.0
	FRI	e(P)	21 55 46.5
USGS 21h50m06.2s 59.0N 142.8W			
h=10km mb=4.5			
Gulf of Alaska			
Dec 2	WDC	iPc	23 56 12.7
	MIN	iPc	23 56 20.2
		e(S)	23 56 33.9
	ORV	ePd	23 56 22.5
	FHC	eP	23 56 25.0
	CMB	eP	23 56 48.2
	MHC	e(P)	23 56 51.9
BRK 23h56m02.7s 40.1N 122.8W			
h=4km ML=3.2(2) Mo=3.8E21(1)			
62 km SW of Redding, CA			
Dec 3	WDC	iPc	00 00 53.8
	MIN	iPc	00 01 01.4
		e(S)	00 01 15.1
	ORV	iPc	00 01 03.4
	FHC	iPc	00 01 06.3
	BKS	ePd	00 01 24.0
		eS	00 01 52.1
		e	00 01 54.3
	ZSP	e(P)	00 01 26.5
		eS	00 01 42.7
	CMB	eP	00 01 29.0
	PCC	e	00 01 31
	MHC	e(P)	00 01 31.5
	GCC	e(P)	00 01 40.0
	LLA	e(P)	00 01 42.5
	FRI	eP	00 01 49.5
BRK 00h00m43.8s 40.1N 122.8W			
h=3km ML=3.9(6) Mo=2.4E22(4)			
62 km SW of Redding, CA			
Dec 3	WDC	iPc	00 19 02.0
		iS	00 19 08.5
	MIN	iPc	00 19 09.6
		e(S)	00 19 23.3
	ORV	iPc	00 19 11.5
		eS	00 19 25.8
	FHC	iPc	00 19 14.3
		i	00 19 16.7
		iS	00 19 33.3
	ZSP	e(P)	00 19 31.2

DATE	STA	PHASE	TIME (UTC)
	CMB	ePc	00 19 37.0
		iS	00 20 15.1
	BKS	e(P)	00 19 38.0
	MHC	e	00 19 41.4
	FRI	e	00 19 54.1
	MNA	iPc	00 20 11.5
BRK 00h18m51.7s 40.1N 122.8W			
h=2km ML=3.4(8) Mo=3.5E21(3)			
63 km SW of Redding, CA			
Dec 3	FHC	eP	04 07 04.8
	WDC	iPc	04 07 12.1
	MIN	iPc	04 07 17.9
	ORV	iPc	04 07 22.0
	BRK	ePc	04 07 27.5
	GCC	ePc	04 07 33.0
	MHC	iPc	04 07 33.5
	CMB	ePc	04 07 36.2
	PRS	ePc	04 07 40.2
	SAO	e c	04 07 40.3
	LLA	ePc	04 07 41.1
	FRI	iPc	04 07 44.7
	PRI	iPc	04 07 45.0
	MNA	iPc	04 07 45.2
USGS 04h00m20.9s 52.9N 175.0W			
h=231km mb=4.7			
Andreanof Islands, Aleutian Is.			
Dec 3	FRI	ePd	11 16 11.6
	PRI	ePd	11 16 13.3
		i	11 16 42.7
	MNA	iPd	11 16 13.4
		i	11 16 23.1
		e	11 16 42.8
	LLA	ePd	11 16 15.7
		i	11 16 45.0
	PRS	ePd	11 16 16.3
	SAO	eP	11 16 17.2
	CMB	ePd	11 16 18.7
	GCC	ePd	11 16 20.5
	MHC	iPd	11 16 21.0
	BRK	eP	11 16 23.0
	ORV	iPd	11 16 28.3
		i	11 16 57.8
	MIN	iPd	11 16 29.9
	WDC	iPd	11 16 33.2
		i	11 16 41.8
	FHC	eP	11 16 40.5
		e	11 16 49.0
USGS 11h04m38.7s 21.4S 68.2W			
h=117km mb=5.5			
Chile-Bolivia Border Region			
Dec 3	CMB	e	18 07 41.8
	MNA	eP	18 07 45.3
USGS 18h04m35.1s 49.2N 128.8W			
h=10km mb=4.7			
Vancouver Island Region			
Dec 4	WDC	ePd	20 04 12.5
	BRK	e(P)	20 04 12.7
	BKS	eP	20 04 12.7
		iPS	20 15 48
		iPPS	20 16 28
		iLq	20 28 26
		iLr	20 32 00
			AMP(μm) PER(s)
		PZ	0.42 1
		LZ	7.9 20.
		LN	0.6 20.
		LE	1. 20.
	GCC	eP	20 [illegible] 13.2

International Seismological Centre

DATE	STA	PHASE	TIME (UTC)
	MHC	eP	20 04 14.7
	PRS	eP	20 04 15.6
	ORV	eP	20 04 16.1
	LLA	eP	20 04 17.1
	PRI	eP	20 04 18.6
	CMB	ePd	20 04 19.6
	FRI	ePd	20 04 21.4
	MNA	ePd	20 04 27.7

BRK Ms=6.1 Distance=90°
USGS 19h51m35.8s 5.8S 154.6E
h=144km mb=5.9
Solomon Islands

Dec 5	MNA	eP	08 46 11.4
	CMB	eP	08 46 20.3

USGS 08h38m41.9s 51.1N 178.4E
h=33km mb=4.9
Rat Islands, Aleutian Islands

Dec 5	EKR	iPd	10 37 59.5
		eS	10 38 05.2
	FOX	iPc	10 37 59.5
	WDC	iPd	10 38 14.9
		i	10 38 24.0
	ORV	eP	10 38 27.6
		iS	10 38 55.0
	PCC	eP	10 38 40.3
	CMB	eP	10 38 50.2

BRK 10h37m52.0s 40.4N 124.4W
h=22km Mag=3.1
Cape Mendocino Sequence

Dec 6	WDC	iPc	18 25 33.3
	ORV	ePc	18 25 41.1
	CMB	ePc	18 25 54.3
	MNA	ePc	18 26 02.1
	FRI	ePc	18 26 02.3
	PRI	eP	18 26 03.5

USGS 18h16m34.5s 54.6N 161.4E
h=34km mb=5.4 Ms=4.2
Near East Coast of Kamchatka

Dec 7	GCC	e(P)	00 11 32.0
	BRK	e(P)	00 11 34.2
	SAO	ePd	00 11 37.2
	PRI	ePd	00 11 37.6
	MHC	ePd	00 11 38.0
	LLA	ePd	00 11 38.5
	FRI	ePd	00 11 43.2
	CMB	ePd	00 11 44.6
	WDC	ePd	00 11 44.8
	ORV	eP	00 11 46.1
	MNA	iPd	00 11 54.4

USGS 00h00m15.0s 16.6S 172.6W
h=33km mb=5.3 Ms=5.3
Samoa Islands Region

Dec 7	WDC	iPc	05 56 18.8
	MIN	iPc	05 56 25.5
	ORV	ePc	05 56 35.4
	CMB	e(P)	05 56 58.0
	MHC	ePc	05 57 05.5
	MNA	ePc	05 57 05.8
	GCC	e	05 57 13.6
	FRI	ePc	05 57 15.5
	PRI	ePc	05 57 17.4

USGS 05h53m58.7s 49.4N 127.7W
h=10km mb=4.7
Vancouver Island Region

Dec 7	EKR	iPd	08 02 25.9
		eS	08 02 32.6
	FQX	iPc	08 02 25.9
	FHC	ePd	08 02 28.4
		i	08 02 34.2
		iS	08 02 37.6
	ARC	eP	08 02 29.0
		eS	08 02 36.8
	WDC	ePc	08 02 41.3
		e	08 03 12.0
	MIN	ePc	08 02 51.3
		i	08 02 53.6
		eS	08 03 19.1
	ORV	ePc	08 02 54.5
		e	08 03 23.5
	SAO	eP	08 03 20.8

BRK 08h02m16.9s 40.3N 124.5W
h=15km ML=3.3(2) Mo=3.8E20(1)
Cape Mendocino Sequence

Dec 7	BRK	e(P)	12 38 35.3	
		iLr	13 03 40	
			AMP(μm)	PER(s)
		LZ	18	20.
	GCC	e	12 38 35.9	
	MHC	eP	12 38 36.3	
	LLA	e	12 38 36.8	
	SAO	e(P)	12 38 36.9	
	BKS	eP	12 38 38	
		iS	12 49 04	
		iPS	12 49 42	
		e	12 49 56	
		eSS	12 53 50	
		eLq	13 00 00	
		eLr	13 03 36	
			AMP(μm)	PER(s)
		PZ	0.17	1.0
		LZ	34	20.
		LNW	11	20.
		LNE	37	20.
	PRI	eP	12 38 38.1	
	WDC	eP	12 38 39.2	
	MIN	ePc	12 38 40.7	
	ORV	ePc	12 38 40.9	
	CMB	ePc	12 38 41.7	
	FRI	ePc	12 38 43.0	
	MNA	iPc	12 38 50.8	

BRK Ms=6.7 Distance=81°
USGS 12h26m11.8s 13.6S 167.4E
h=48km mb=5.7 Ms=6.2
Vanuatu Islands

Dec 7	BRK	ePc	13 02 19.8
	SAO	e(P)	13 02 21.5
		e	13 02 26.5
	MHC	ePc	13 02 21.5
		e	13 02 26.1
	PRI	e(P)	13 02 23.5
		e	13 02 28.5
	WDC	ePc	13 02 24.4
		i	13 02 29.4
	ORV	eP	13 02 25.8
		e	13 02 30.8
	CMB	ePc	13 02 27.1
		i	13 02 32.2
	FRI	ePc	13 02 27.7
		e	13 02 32.7
	MNA	ePc	13 02 36.2
		i	13 02 41.3

USGS 12h49m55.4s 13.4S 167.4E
h=33km mb=4.8
Vanuatu Islands

Dec 7	PCC	e(P)	13 26 58.7
	FHC	e(P)	13 26 58.8
	GCC	iPc	13 26 59.0
	BRK	eP	13 26 59.9
		iLr	13 52 00
			AMP(μm) PER(s)
		LZ	18 20.
	BKS	eP	13 27 00
		eS	13 37 28
		ePS	13 38 10
		e	13 38 22
		eSS	13 42 16
		eLq	13 49 10
		eLr	13 51 46
			AMP(μm) PER(s)
		PZ	0.18 0.9
		LZ	34 20.
		LNE	37 20.
		LNW	7.5 20.
	SAO	e(P)	13 27 00.8
	MHC	eP	13 27 01.7
	LLA	e(P)	13 27 01.9
	PRI	ePc	13 27 03.0
	WDC	ePc	13 27 04.2
		ePP	13 30 23.0
	ORV	ePc	13 27 05.8
	CMB	ePc	13 27 06.6
		ePP	13 30 33.9
	FRI	ePc	13 27 07.8
	MNA	ePc	13 27 16.4
		ePP	13 30 38.3

BRK Ms=6.7 Distance=81°
USGS 13h14m35.0s 13.6S 167.5E
h=33km mb=5.8 Ms=6.3
Vanuatu Islands

Dec 7	FHC	ePd	17 49 13.0
	WDC	ePd	17 49 25.7
	MIN	iPd	17 49 38.6
	ORV	iPd	17 49 44.5
	BRK	e(P)	17 49 53.3
	BKS	eP	17 49 56.0
		e	17 51 30
	MHC	eP	17 50 06.4
	CMB	iPd	17 50 10.0
	SAO	e(P)	17 50 13.2
	LLA	e(P)	17 50 18.0
	FRI	ePd	17 50 24.7
	PRI	ePd	17 50 27.6

USGS 17h48m15.7s 43.5N 127.3W
h=10km mb=5.0 Ms=4.6
Off Coast of Oregon

Dec 7	BRK	e(P)	19 32 49.7
	GCC	ePc	19 32 50.2
	SAO	e(P)	19 32 50.6
	MHC	ePc	19 32 51.3
	BKS	ePd	19 32 51.5
		eLr	19 58 20
			AMP(μm) PER(s)
		PZ	0.11 1.0
		LZ	3.7 20.
		LNE	1.5 20.
		LNW	0.0 20.
	LLA	e(P)	19 32 52.2
	PRI	ePc	19 32 53.4
	WDC	iPc	19 32 54.1
	ORV	iPc	19 32 55.4
	MIN	eP	19 32 56.3
	CMB	ePc	19 32 56.9
	FRI	ePc	19 32 57.6
	MNA	iPc	19 33 06.1

BRK Ms=5.4 Distance=81°
USGS 19h20m25.0s 13.5S 167.4E
h=33km mb=5.3 Ms=5.1
Vanuatu Islands

Dec 8	WDC	iPc	05 17 30.8
	MIN	eP	05 17 36.2
	MNA	eP	05 18 04.5
	FRI	e(P)	05 18 12.9

USGS 05h12m34.6s 58.6N 142.9W
h=10km mb=4.8
Gulf of Alaska

Dec 8	PRI	eP	14 59 06.8
	LLA	eP	14 59 09.2
	FRI	eP	14 59 09.8
	PCC	e(P)	14 59 14.3
	GCC	e(P)	14 59 16.8
	CMB	iP	14 59 17.4
	ORV	ePc	14 59 27.1
	WDC	iPc	14 59 33.3
	FHC	e(P)	14 59 36.2

USGS 14h47m59.1s 32.6S 112.0W
h=10km mb=5.5 Ms=4.7
Easter Island Cordillera

Dec 8	ZSP	eP	15 32 33.8
		iS	15 32 48.8
	BRK	eP	15 32 34.3
	BKS	eP	15 32 35.5
		iS	15 32 49.0
	ORV	eP	15 32 37.3
	PCC	ePc	15 32 39.2
	MHC	eP	15 32 45.0
	GCC	eP	15 32 46.2
	WDC	eP	15 32 48.4
	CMB	iPc	15 32 50.2
	SAO	eP	15 32 52.1
	LLA	eP	15 32 57.3
	FRI	eP	15 33 04.0
	FHC	e(P)	15 33 04.7

BRK 15h32m16.1s 38.8N 122.7W
h=4km ML=3.2(5) Mo=3.0E21(2)
The Geysers area, 25 km S of Clear Lake, CA

Dec 8	LLA	eP	19 23 20.5
	PRI	eP	19 23 21.5
	WDC	ePc	19 23 22.5
	ORV	eP	19 23 24.0

USGS 19h10m53.6s 13.4S 167.4E
h=33km mb=5.2
Vanuatu Islands

Dec 9	MHC	iPd	04 31 55.8
	GCC	ePd	04 32 01.1
		eS	04 32 06.4
	SAO	iPc	04 32 03.8
	PCC	ePc	04 32 05.7
	BRK	eP	04 32 09.0
	BKS	eP	04 32 09.1
		eS	04 32 20.5
	LLA	eP	04 32 09.3
	ZSP	eP	04 32 10.7
	CMB	ePd	04 32 16.5
		eS	04 32 33.9
	FRI	eP	04 32 20.3

BRK 04h31m53.6s 37.2N 121.7W
h=4km ML=2.8(4) Mo=1.2E20(2)
Halls Valley, 25 km SE of San Jose, CA

Dec 9	MNA	ePc	07 39 33.8
	FRI	eP	07 39 45.1
	CMB	eP	07 39 47.5
	WDC	e(P)	07 39 53.1
	LLA	eP	07 39 53.8
	PRI	e(P)	07 39 55.7
	MHC	eP	07 39 57.7

USGS 07h31m10.3s 34.0N 61.0W
h=10km mb=5.2 Ms=4.9
North Atlantic Ocean

Dec 10	FRI	eP	09 36 21.4
	CMB	e(P)	09 36 22.3
	MNA	e(P)	09 36 26.8

USGS 09h24m46.4s 15.5S 173.2W
h=33km mb=5.3 Ms=5.2
Tonga Islands

Dec 11	PRI	iPd	02 15 03.0	
	SAO	ePd	02 15 03.3	
	BRK	ePd	02 15 03.6	
		e(ScS)	02 25 23	
		eSS	02 29 55	
		eSSS	02 33 18	
		eG	02 35 26	
		e	02 36 56	
		e(Lr)	02 39 07	
		e	02 39 30	
			AMP(μm)	PER(s)
		LZ	2.0	20.
	MHC	ePd	02 15 03.9	
	LLA	ePd	02 15 04.0	
	BKS	ePd	02 15 04.5	
		eS	02 25	
		ePPS	02 25 48	
		eLq	02 34 40	
		eLr	02 38 40	
			AMP(μm)	PER(s)
		PZ	0.14	1.3
		LZ	6.8	20.
		LN	4.6	20.
		LE	5.0	20.
	FRI	iPd	02 15 08.5	
		e	02 15 24.4	
	CMB	iPd	02 15 10.0	
		i	02 15 25.8	
	ORV	ePd	02 15 11.4	
	WDC	iPd	02 15 12.3	
	MIN	ePd	02 15 13.8	
	MNA	iPd	02 15 19.2	

BRK Ms=6.0 Distance=79°
USGS 02h03m09.7s 22.2S 174.8W
h=36km mb=5.6 Ms=5.8
Tonga Islands Region

Dec 12	FHC	iPd	05 03 18.9	
	WDC	iPd	05 03 24.1	
		ipP	05 04 08.8	
	MIN	e(P)	05 03 27.8	
	ORV	ePd	05 03 30.2	
		ipP	05 04 14.9	
	BRK	ePd	05 03 32.1	
		epP	05 04 16.7	
	PCC	ePd	05 03 32.3	
		epP	05 04 16.7	
	BKS	iPd	05 03 32.6	
		ipP	05 04 17.9	
		iS	05 13 12	
			AMP(μm)	PER(s)
		PZ	0.48	0.7
	GCC	ePd	05 03 35.4	
		epP	05 04 20.0	
	MHC	iPd	05 03 36.0	
	SAO	ePd	05 03 37.9	
		epP	05 04 22.6	
	CMB	iPd	05 03 39.0	
		ipP	05 04 22.6	
	LLA	ePd	05 03 40.4	
		epP	05 04 25.3	
	PRI	ePd	05 03 43.4	
		epP	05 04 27.5	
	FRI	iPd	05 03 43.9	
		ipP	05 04 28.9	
	MNA	ePd	05 03 46.3	
		ipP	05 04 29.6	

BRK mb=6.3 h=187km Distance=76°
USGS 04h51m50.5s 29.7N 140.0E
h=164km mb=6.3
South of Honshu, Japan

Dec 12	PRI	eP	19 34 33.5
	FRI	ePc	19 34 38.6
	CMB	ePc	19 34 39.5
	ORV	eP	19 34 40.4
	WDC	ePc	19 34 40.5

USGS 19h23m37.3s 19.5S 177.7W
h=587km mb=4.7
Fiji Islands Region

Dec 13	FHC	eP	03 00 13.4
	CMB	epP	03 00 15.2
		iPc	03 00 32.9
	GCC	epP	03 00 16.2
		e(P)	03 00 29.5
	LLA	epP	03 00 17.2
		eP	03 00 34.7
	WDC	iPc	03 00 18.3
	FRI	epP	03 00 19.3
		iPc	03 00 37.7
	ORV	e(P)	03 00 24.3
	PCC	ePc	03 00 26.5
	BRK	ePc	03 00 26.5
	BKS	eP	03 00 26.9
			AMP(μm) PER(s)
		PZ	0.14 0.8
	PRI	eP	03 00 37.4

USGS 02h49m10.5s 30.4N 138.1E
h=459km mb=5.2
South of Honshu, Japan

Dec 13	BKS	eP	03 33 11.5	
			AMP(μm)	PER(s)
		PZ	0.11	0.7
	FHC	ePc	03 33 56.8	
	WDC	iPc	03 33 57.7	
	MIN	iPc	03 34 00.0	
	ORV	iPc	03 34 03.2	
	BRK	eP	03 34 11.2	
	CMB	iPc	03 34 11.8	
	PCC	ePc	03 34 12.6	
	GCC	eP	03 34 15.2	
	SAO	e(P)	03 34 16.7	
	FRI	eP	03 34 16.9	
	LLA	eP	03 34 18.4	
	PRI	eP	03 34 21.2	

USGS 03h21m04.9s 50.0N 78.8E
h=0km mb=6.1 Ms=4.5
Eastern Kazakh SSR

Dec 13	FRI	e(P)	04 58 21.4
	PRI	eP	04 58 23.8
	LLA	eP	04 58 27.1
	ORV	eP	04 58 45.8
	MIN	eP	04 58 49.2
	WDC	eP	04 58 53.5

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DATE	STA	PHASE	TIME (UTC)
	FHC	e(P)	04 59 05.1
USGS 04h52m03.4s 15.5N 93.0W			
h=101km mb=5.2			
Near Coast of Chiapas, Mexico			
Dec 13	PCC	eP	12 54 33.5
	GCC	ePc	12 54 33.5
	SAO	eP	12 54 34.6
	LLA	eP	12 54 36.0
	PRI	eP	12 54 36.1
	FRI	ePc	12 54 41.2
	CMB	iPc	12 54 42.2
	ORV	eP	12 54 42.6
	WDC	eP	12 54 42.7
USGS 12h43m40.7s 17.9S 178.7W			
h=568km mb=5.3			
Fiji Islands Region			
Dec 13	MIN	eP	21 12 11.1
		e	21 12 19.7
	WDC	e(P)	21 12 11.5
		e	21 12 17.3
	CMB	e(P)	21 12 19.3
		e	21 12 36.2
	FRI	eP	21 12 36.4
		e	21 12 44.6
	MHC	eP	21 12 36.9
		e	21 12 44.8
	LLA	e(P)	21 12 41.1
		e	21 12 49.7
	BRK	e	21 12 41.4
	PRI	e	21 12 47.3
		AMP(μm)	PER(s)
	LZ	5.9	20.
	LN	4.3	20.
	LE	2.9	20.
USGS 21h05m03.1s 74.4N 93.7W			
h=10km mb=5.4 Ms=5.1			
Queen Elizabeth Islands			
Dec 14	WDC	eP	00 46 31.2
	MIN	eP	00 46 35.3
	ORV	eP	00 46 38.8
	CMB	eP	00 46 50.0
USGS 00h36m11.8s 44.5N 148.1E			
h=72km mb=5.2			
Kuril Islands			
Dec 15	PRI	eP	00 37 51.3
		e	00 38 01.8
		i(S)	00 38 04.6
	LLA	eP	00 38 00.1
		eS	00 38 18.9
	SAO	eP	00 38 00.5
	GCC	eP	00 38 07.7
	FRI	eP	00 38 08.2
		eS	00 38 32.5
BRK 00h37m35.8s 35.3N 120.8W			
h=5kmR Mag=2.5			
14 km NW of San Luis Obispo, CA			
Dec 15	WDC	eP	15 09 39.5
	MIN	eP	15 09 43.2
	ORV	eP	15 09 45.2
	BRK	e(P)	15 09 45.7
	BKS	eP	15 09 46.3
		eS	15 19 40
		e	15 20 12
		eLr	15 33 48
		AMP(μm)	PER(s)
	PZ	0.096	1.0
	LN	3.4	20.

DATE	STA	PHASE	TIME (UTC)
		LE	7.7 20.
	MHC	eP	15 09 49.6
	CMB	eP	15 09 53.0
	PRI	eP	15 09 56.3
	FRI	eP	15 09 57.3
	MNA	eP	15 10 00.9
BRK Ms=6.1 Distance= 79°			
USGS 14h57m40.2s 23.4N 142.9E			
h=39km mb=5.8 Ms=5.7			
Volcano Islands Region			
Dec 15	WDC	ePc	15 16 03.6
	MIN	eP	15 16 09.0
	ORV	eP	15 16 15.0
	CMB	eP	15 16 31.7
	MHC	eP	15 16 33.7
	MNA	eP	15 16 36.8
	FRI	eP	15 16 42.3
USGS 15h11m06.1s 59.0N 142.8W			
h=10km mb=5.1 Ms=5.1			
Gulf of Alaska			
Dec 15	PRI	iPd	18 24 14.8
		eS	18 24 37.0
	FRI	ePc	18 24 16.1
		i	18 24 17.1
	LLA	eP	18 24 20.8
	SAO	eP	18 24 27.2
	MHC	ePd	18 24 33.2
		iS	18 25 11.6
	CMB	iPd	18 24 35.2
		eS	18 25 12.0
	MNA	iPc	18 24 42.6
		eS	18 25 23.2
	BKS	eP	18 24 43.5
BRK ML=3.9(4)			
PAS 18h23m46.1s 35.4N 118.8W			
h=km ML=4.1			
Southern California			
Dec 17	FHC	ePd	02 19 38.2
		ipP	02 19 55.3
	WDC	iPd	02 19 43.1
		ipP	02 20 00.8
	MIN	iPd	02 19 47.6
		ipP	02 20 04.6
	ORV	iPd	02 19 50.3
		ipP	02 20 07.3
	BRK	ePd	02 19 52.7
		ipP	02 20 10.2
	BKS	ePd	02 19 53
		ipP	02 20 10.7
		eS	02 29 47
		i(sS)	02 30 10
		eSS	02 34 30
		iSSS	02 38 11
		iLr	02 42 40
		AMP(μm)	PER(s)
	PZ	0.68	1.3
	LZ	19	20.
	LNE	13	20.
	LNW	16	20.
	PCC	eP	02 19 53.7
	GCC	e(P)	02 19 56.5
	MHC	iPd	02 19 57.2
		ipP	02 20 14.3
		iS	02 29 33
		e	02 33 52
		ePKKP	02 37 58
		iLq	02 39 02
		iLr	02 42 56
		AMP(μm)	PER(s)

DATE	STA	PHASE	TIME (UTC)
	LZ		18 20.
	LN		15 20.
	LE		22 20.
	SAO	e(P)	02 19 58.9
	CMB	iPd	02 20 00.0
	PRS	iPd	02 20 01.5
		epP	02 20 18.4
	LLA	ePd	02 20 02.3
		epP	02 20 19.5
	MNA	eP	02 20 03.0
	PRI	iPd	02 20 05.4
	FRI	iPd	02 20 05.5
		ipP	02 20 22.9
BRK Ms=6.4 Distance=77°			
USGS 02h08m19.9s 35.4N 140.2E			
h=62km mb=6.0			
Near East Coast of Honshu, Japan			
Dec 17	CMB	iPc	04 36 00.9
		iS	04 36 12.5
	MNA	iPc	04 36 07.5
		iS	04 36 26.3
	ORV	iPc	04 36 12.8
	FRI	iPd	04 36 16.1
		iS	04 36 39.2
	MHC	ePc	04 36 21.0
	BKS	eP	04 36 21.5
	BRK	ePd	04 36 21.9
	ZSP	e(P)	04 36 21.9
		e	04 36 51.3
	MIN	iPd	04 36 23.1
		e(S)	04 36 51.1
		i	04 36 54.2
	LLA	eP	04 36 24.3
	SAO	eP	04 36 25.3
	PCC	e(P)	04 36 25.6
	PRS	e(P)	04 36 29.5
	GCC	eP	04 36 29.7
	PRI	e	04 36 31
	WDC	e	04 36 31
BRK 04h35m45.4s 38.7N 119.8W			
h=9km ML=3.1(6)			
6 km N of Markleeville, CA			
Dec 17	WDC	ePKPc	20 41 47.5
	MIN	ePKP	20 41 48.8
	ORV	ePKP	20 41 49.5
	CMB	ePKP	20 41 52.2
	PRS	ePKP	20 41 52.2
	LLA	ePKP	20 41 52.6
	PRI	ePKP	20 41 53.8
	FRI	ePKP	20 41 54.0
	MNA	ePKPc	20 41 56.1
USGS 20h22m58.4s 9.2S 114.6E			
h=46km mb=5.7 Ms=5.5			
South of Bali Island			
Dec 18	FRI	eP	05 10 33.2
	MNA	iPd	05 10 34.0
	PRI	eP	05 10 35.6
	LLA	ePd	05 10 38.5
	PRS	eP	05 10 39.9
	SAO	eP	05 10 41.5
	CMB	ePd	05 10 41.7
	MHC	eP	05 10 45.7
	GCC	eP	05 10 46.9
	BRK	eP	05 10 50.1
	BKS	eP	05 10 50.4
		AMP(μm)	PER(s)
	PZ	0.11	0.9
	ORV	eP	05 10 53.6
	MIN	eP	05 10 55.9

DATE	STA	PHASE	TIME (UTC)
	WDC	iPd	05 10 59.7
	FHC	eP	05 11 09.3
USGS 05h01m23.1s 1.4S 77.8W			
h=177km mb=5.4			
Ecuador			
Dec 18	MHC	iPc	17 48 43.1
		iS	17 48 47.5
	BKS	iPc	17 48 47.3
		iS	17 48 55.5
	BRK	iPc	17 48 47.4
		iS	17 48 55.4
	PCC	iPc	17 48 48.4
		iS	17 48 56.7
	ZSP	iPc	17 48 48.5
	GCC	iPc	17 48 49.1
		iS	17 49 00.2
	SAO	iPd	17 48 54.0
	LLA	ePd	17 48 58.3
	CMB	eP	17 48 58.3
	PRI	e	17 49
	PRS	ePd	17 49 00.5
	ORV	e	17 49 10.3
BRK 17h48m37.4s 37.6N 121.7W			
h=1km ML=2.5(4)			
11 km SE of Livermore, CA			
Dec 18	SAO	iPc	19 32 25.0
	PRS	iPd	19 32 31.6
		iS	19 32 38.2
	LLA	iPd	19 32 31.8
		iS	19 32 38.3
	GCC	eP	19 32 34.5
	MHC	ePd	19 32 36.9
		iS	19 32 46.9
	PRI	iPc	19 32 40.0
		iS	19 32 53.7
		iSg	19 32 57.1
	PCC	ePd	19 32 43.9
	FRI	iPd	19 32 49.1
		iS	19 33 06.4
	BKS	e(P)	19 32 49.1
	BRK	ePc	19 32 49.3
	CMB	eP	19 32 51.2
	ZSP	eP	19 32 51.3
BRK 19h32m24.0s 36.7N 121.4W			
h=4km ML=2.5(4)			
12 km S of Hollister, CA			
Dec 19	FRI	ePc	03 31 38.8
	PRI	ePc	03 31 38.8
	PRS	e(P)	03 31 42.3
	MNA	ePc	03 31 45.4
	CMB	ePc	03 31 50.5
	MHC	ePc	03 31 51.8
	ORV	e(P)	03 32 08.3
	MIN	ePc	03 32 12.8
USGS 03h26m38.9s 17.8N 105.8W			
h=33km mb=4.6			
Off Coast of Jalisco, Mexico			
Dec 19	SAO	e(P)c	11 25 46.2
	PRS	e(P)	11 25 49.2
	FRI	ePc	11 25 52.7
	CMB	ePc	11 25 53.8
	ORV	ePc	11 25 54.8
	WDC	ePc	11 25 55.1
	MIN	e(P)	11 25 56.7
	MNA	ePc	11 26 02.2
USGS 11h14m34.8s 22.2S 179.7W			
h=593km mb=4.6			
South of Fiji Islands			

DATE	STA	PHASE	TIME (UTC)
Dec 20	FRI	eP	02 17 10.4
	WDC	ePc	02 17 12.4
	CMB	ePc	02 17 12.6
	MIN	eP	02 17 16.4
	MNA	ePc	02 17 21.1
USGS 02h05m20.1s 20.9S 173.8W			
h=33km mb=4.9 Ms=4.5			
Tonga Islands			
Dec 20	SAO	e(P)	12 55 49.2
	PRS	ePc	12 55 49.4
	BRK	eP	12 55 51.2
	PRI	ePc	12 55 51.5
	BKS	ePc	12 55 51.6
		AMP(μm)	PER(s)
	PZ	0.031	0.8
	MHC	ePc	12 55 52.0
	FRI	ePc	12 55 56.2
	CMB	ePc	12 55 57.2
	ORV	ePc	12 55 58.3
	WDC	iPc	12 55 59.0
	MIN	eP	12 56 00.6
	MNA	ePc	12 56 05.3
USGS 12h44m23.7s 25.5S 179.0E			
h=601km mb=4.6			
South of Fiji Islands			
Dec 21	WDC	e(P)	02 39 33.5
	CMB	ePc	02 39 42.2
	FRI	eP	02 39 46.8
USGS 02h27m30.5s 24.2N 142.7E			
h=33km mb=4.8			
Volcano Islands Region			
Dec 21	FHC	ePd	03 45 24.7
	WDC	iPd	03 45 33.7
		e	03 45 42.0
	MIN	ePd	03 45 39.4
		e	03 45 47.5
	ORV	eP	03 45 43
		e	03 45 50.8
	MHC	eP	03 45 47.2
	PRS	eP	03 46 06.0
		e	03 46 14.4
	FRI	eP	03 46 16.0
		e	03 46 24.2
USGS 03h40m44.1s 57.7N 143.0W			
h=10km			
Gulf of Alaska			
Dec 21	MNA	ePc	08 06 11.7
		e	08 06 40.3
	PRI	ePc	08 06 13.4
		e	08 06 30.2
		e	08 06 42.0
	LLA	ePc	08 06 15.9
	PRS	eP	08 06 16.5
	CMB	ePc	08 06 19.3
		e	08 06 47.4
	MHC	eP	08 06 22.6
	GCC	eP	08 06 22.7
	ORV	iPc	08 06 31.0
		i	08 07 00.2
	WDC	ePc	08 06 36.7
		e	08 07 04.9
	FRI	e	08 06 38.5
USGS 07h56m43.6s 2.7S 77.0W			
h=124km mb=4.7			
Peru-Ecuador Border Region			
Dec 21	PRS	eP	14 06 50.0

DATE	STA	PHASE	TIME (UTC)
	PRI	eP	14 06 51.8
	LLA	e(P)	14 06 52.1
	MHC	eP	14 06 52.5
	BKS	eP	14 06 52.5
		AMP(μm)	PER(s)
	PZ	0.019	0.7
	FRI	eP	14 06 57.1
	CMB	eP	14 06 58.2
	ORV	eP	14 07 00.1
	WDC	ePc	14 07 00.2
	MNA	eP	14 07 07.1
USGS 13h55m00.5s 23.6S 177.3W			
h=174km mb=4.9			
South of Fiji Islands			
Dec 21	GCC	eP	14 45 48.3
	PCC	eP	14 45 48.4
	PRS	ePc	14 45 48.8
	SAO	eP	14 45 49.4
	BRK	eP	14 45 50.1
	BKS	ePc	14 45 50.5
		AMP(μm)	PER(s)
	PZ	0.059	0.8
	MHC	ePc	14 45 51.1
	PRI	eP	14 45 51.2
	LLA	eP	14 45 51.2
	FRI	eP	14 45 56.5
	CMB	iPc	14 45 57.4
		i	14 47 29.0
	WDC	ePc	14 45 58.0
	ORV	eP	14 45 58.1
	MIN	e(P)	14 45 59.9
	MNA	eP	14 46 07.2
USGS 14h34m54.2s 16.2S 176.6W			
h=394km mb=5.1			
Fiji Islands Region			
Dec 21	CMB	eP	17 39 54.8
	WDC	eP	17 39 56.0
	MNA	eP	17 40 03.7
USGS 17h28m34.7s 20.6S 178.0W			
h=451km mb=4.7			
Fiji Islands Region			
Dec 22	WDC	ePc	00 29 54.1
		epP	00 30 01.7
	MIN	eP	00 29 56.7
		epP	00 30 03.6
	ORV	eP	00 29 59.1
		epP	00 30 06.5
	BKS	e(P)c	00 30 6.3
		e	00 30 13.0
		AMP(μm)	PER(s)
	PZ	0.029	0.9
	CMB	eP	00 30 07.9
		epP	00 30 15.1
		e	00 30 26.7
	MHC	e(pP)	00 30 09.5
	FRI	eP	00 30 13.1
		epP	00 30 20.6
	LLA	eP	00 30 13.6
		epP	00 30 20.9
	PRS	e(P)	00 30 13.8
		epP	00 30 21.1
	MNA	eP	00 30 16.7
		epP	00 30 22.8
		e	00 30 29.7
USGS 00h16m39.0s 41.4N 89.6E			
h=20km mb=5.9 Ms=5.2			
Southern Sinkiang Province, China			
Dec 22	CMB	eP	05 49 07.8

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DATE	STA	PHASE	TIME (UTC)
	FRI	eP	05 49 07.9
USGS 05h36m20.9s 18.2S 168.0E			
h=17km mb=4.3			
Vanuatu Islands			
Dec 22	GCC	eP	07 52 38.0
	PRS	eP	07 52 38.1
	PRI	eP	07 52 40.2
	MHC	eP	07 52 40.6
	FRI	ePd	07 52 45.6
	CMB	ePd	07 52 46.8
	ORV	eP	07 52 47.9
	WDC	ePd	07 52 48.4
	MNA	ePd	07 52 55.8
USGS 07h41m09.0s 21.1S 176.5W			
h=245km mb=4.4			
Fiji Islands Region			
Dec 22	FRI	e(PKP)	11 37 07.0
	WDC	e(PKP)	11 37 14.5
USGS 11h17m56.3s 51.6S 11.4W			
h=10km mb=5.5 Ms=5.2			
Southwestern Atlantic Ocean			
Dec 22	LLA	iPd	14 36 07.0
	SAO	iPd	14 36 14.7
	PRI	iPd	14 36 14.8
	PRS	iPd	14 36 15.4
	FRI	iPd	14 36 18.4
	MHC	iPc	14 36 21.2
		iS	14 36 36.1
	GCC	ePd	14 36 22.0
	CMB	iPc	14 36 26.6
		iS	14 36 44.2
	PCC	ePc	14 36 28.5
	BRK	ePc	14 36 30.7
	BKS	ePc	14 36 30.8
	ORV	ePd	14 36 48.8
		iPd	14 36 49.5
BRK 14h36m02.2s 36.7N 120.7W			
h=1km ML=3.8(6) Mo=1.3E22(2)			
Panoche Mtn., 41 km SE of Los Banos, CA			
Dec 22	LLA	iPd	14 48 03.7
	SAO	iPd	14 48 11.2
	PRI	iPc	14 48 11.8
		eS	14 48 20.2
	PRS	eP	14 48 12.0
	FRI	iPc	14 48 14.5
		iS	14 48 26.5
	MHC	ePc	14 48 17.8
		eS	14 48 31.1
	GCC	eP	14 48 19.4
	CMB	eP	14 48 23.4
		eS	14 48 39.9
	PCC	eP	14 48 26.0
BRK 14h47m58.7s 36.7N 120.7W			
h=2km ML=2.5(2)			
Panoche Mtn., 40 km SE of Los Banos, CA			
Dec 22	LLA	iPd	14 51 03.8
	SAO	iPd	14 51 11.5
	PRI	iPc	14 51 12.0
		iS	14 51 20.5
	PRS	iPd	14 51 12.2
	FRI	ePc	14 51 15.2
	MHC	eP	14 51 18.0
		eS	14 51 32.2
	GCC	eP	14 51 19.3
	CMB	iPd	14 51 23.5

DATE	STA	PHASE	TIME (UTC)
	BKS	e(P)	14 51 27.5
BRK 14h50m59.0s 36.7N 120.7W			
h=0km ML=2.6(2)			
Panoche Mtn., 40 km SE of Los Banos, CA			
Dec 23	FRI	eP	09 13 05.5
	CMB	eP	09 13 06.6
	ORV	eP	09 13 07.0
	WDC	eP	09 13 07.2
	MNA	eP	09 13 16.4
USGS 09h01m29.2s 14.9S 176.5W			
h=33km mb=5.0 Ms=5.2			
Fiji Islands Region			
Dec 23	BKS	eP	20 44 53.0
	WDC	eP	20 45 51.6
	ORV	eP	20 45 56.6
	CMB	eP	20 46 01.7
	MHC	eP	20 46 01.8
		e	20 46 12.3
	FRI	eP	20 46 07.7
	MNA	eP	20 46 07.9
USGS 20h33m48.7s 17.7N 146.7E			
h=90km mb=5.1			
Mariana Islands			
Dec 24	WDC	eP	07 45 34.2
	ORV	eP	07 45 40.5
	CMB	eP	07 45 49.8
	PRS	eP	07 45 51.0
	LLA	e(P)	07 45 52.0
	FRI	eP	07 45 55.2
USGS 07h34m24.1s 35.4N 135.7E			
h=343km mb=4.2			
Southern Honshu, Japan			
Dec 25	PRS	ePd	00 45 15.6
		e	00 45 23.9
	PRI	ePd	00 45 18.6
		e	00 45 25.9
	FRI	eP	00 45 23.5
		e	00 45 31.8
	CMB	ePd	00 45 24.7
		e	00 45 33.3
	ORV	eP	00 45 25.9
		e	00 45 34.4
	WDC	ePd	00 45 26.8
		e	00 45 35.0
	MNA	ePd	00 45 34.7
		i	00 45 43.1
USGS 00h33m53.6s 16.8S 172.6W			
h=25km mb=5.1 Ms=5.0			
Samoa Islands Region			
Dec 25	MNA	e(P)	01 45 28.3
		e	01 46 09.6
	CMB	ePd	01 45 43.4
		e	01 46 14.6
	ORV	ePd	01 45 53.0
		e	01 46 24.6
	WDC	iPd	01 45 58.1
		e	01 46 29.6
USGS 01h34m00.8s 22.2S 68.5W			
h=125km mb=4.8			
Northern Chile			
Dec 25	PCC	eP	23 08 15.5
	PRS	eP	23 08 15.5
	SAO	eP	23 08 16.1
	PRI	eP	23 08 17.7
	MHC	eP	23 08 17.8

DATE	STA	PHASE	TIME (UTC)
	BKS	ePc	23 08 17.8
		AMP(μm)	PER(s)
	PZ	0.11	1.1
	LLA	e(P)	23 08 18.5
		e	23 09 04.1
	FRI	eP	23 08 23.0
		e	23 09 11.9
	CMB	ePd	23 08 24.2
	ORV	eP	23 08 25.5
	WDC	ePd	23 08 25.7
		e	23 09 14.5
	MIN	e(P)	23 08 29.2
	MNA	ePd	23 08 33.7
USGS 22h56m49.0s 19.8S 175.7W			
h=196km mb=5.7			
Tonga Islands			
Dec 26	WDC	ePc	00 06 26.6
	MIN	eP	00 06 31.9
	BRK	eP	00 06 51.0
	BKS	ePc	00 06 51.2
		AMP(μm)	PER(s)
	PZ	0.022	0.8
	CMB	eP	00 06 56.0
	MHC	eP	00 06 56.7
	MNA	eP	00 07 01.2
	LLA	eP	00 07 05.8
	PRS	eP	00 07 06.5
	FRI	eP	00 07 06.5
USGS 00h01m32.6s 58.1N 143.3W			
h=10km mb=4.8			
Gulf of Alaska			
Dec 26	WDC	ePKP	12 08 22.1
	MIN	ePKP	12 08 24.1
	ORV	ePKP	12 08 38.5
	CMB	ePKP	12 08 44.5
USGS 11h48m25.7s 21.6S 81.6E			
h=10km mb=5.3			
South Indian Ocean			
Dec 26	PRS	eP	12 36 32.0
	CMB	eP	12 36 40.2
	ORV	eP	12 36 41.1
	WDC	eP	12 36 41.8
	MNA	eP	12 36 49.4
USGS 12h25m36.7s 18.5S 177.7W			
h=533km mb=4.3			
Fiji Islands Region			
Dec 26	PRS	ePKP	19 29 39.0
	MHC	ePKP	19 29 41.1
	FRI	ePKPd	19 29 46.3
	CMB	ePKPd	19 29 47.3
	ORV	e(PKP)d	19 29 48.3
	WDC	e	19 29 48.3
	MNA	ePKPd	19 29 56.6
USGS 19h10m06.1s 2.7N 127.0E			
h=33km mb=4.5			
Molucca Passage			
Dec 26	PRS	ePc	20 02 27.8
	SAO	eP	20 02 28.7
	MHC	eP	20 02 30.1
	PRI	ePc	20 02 30.1
	LLA	ePc	20 02 30.1
	FRI	ePc	20 02 35.2
	CMB	ePc	20 02 36.1
	ORV	ePc	20 02 36.5
	WDC	eP	20 02 36.5
	MNA	eP	20 02 45.3
USGS 19h51m39.1s 18.0S 178.6W			

DATE	STA	PHASE	TIME (UTC)
h=624km mb=4.6			
Fiji Islands Region			
Dec 26	FRI	eP	20 23 43.8
		e	20 23 50.2
	PRI	eP	20 23 46.0
		e	20 23 51.9
	MNA	ePc	20 23 47.4
		e	20 23 53.6
	LLA	eP	20 23 49.2
		e	20 23 55.2
	CMB	ePc	20 23 54.7
		e	20 24 00.9
	MHC	e(P)	20 23 58.4
		e	20 24 04.1
	ORV	eP	20 24 10.2
		e	20 24 16.6
	WDC	ePc	20 24 18.8
		e	20 24 25.1
USGS 20h17m52.8s 16.1N 98.4W			
h=21km mb=5.2			
Near Coast of Guerrero, Mexico			
Dec 26	SAO	iPc	23 53 35.2
		iS	23 53 45.0
	PRI	iPc	23 53 36.2
	MHC	eP	23 53 42.6
	CMB	ePc	23 53 47.5
		eS	23 54 04.9
	BKS	e(P)	23 53 50.0
	MNA	eP	23 54 12.1
		e	23 54 17.7
BRK 23h53m23.7s 36.7N 120.7W			
h=1km ML=2.5(3)			
Panoche Mtn., 37 km SE of Los Banos, CA			
Dec 27	FHC	iPc	03 17 57.3
	WDC	iPc	03 17 58.6
		e	03 21 28.8
		e	03 21 40.5
	ZSP	ePc	03 18 11.5
	BKS	ePc	03 18 11.6
		AMP(μm)	PER(s)
	PZ	0.10	0.8
	CMB	iPc	03 18 12.3
		e	03 18 19.1
		e	03 21 53.0
	MNA	iPc	03 18 12.7
	SAO	eP	03 18 17.3
		e	03 18 24.1
	PRI	eP	03 18 21.8
USGS 03h05m04.8s 49.9N 78.8E			
h=0km mb=6.1 Ms=4.5			
Eastern Kazakh SSR			
Dec 28	FRI	ePc	08 28 23.1
		epP	08 28 37.8
	PRI	ePc	08 28 24.1
		epP	08 28 39.1
	MNA	iPc	08 28 25.7
		epP	08 28 40.7
	LLA	ePc	08 28 26.7
		epP	08 28 41.4
	PRS	ePc	08 28 27.1
		epP	08 28 41.7
	CMB	iPc	08 28 30.2
		epP	08 28 45.0
	MHC	e(P)	08 28 31.0
		epP	08 28 46.4
		e	08 28 53.2
	GCC	eP	08 28 31.1

DATE	STA	PHASE	TIME (UTC)
		epP	08 28 46.2
	PCC	ePc	08 28 34.0
		epP	08 28 48.8
	BRK	eP	08 28 35.4
		epP	08 28 50.0
	ORV	iPc	08 28 39.5
		epP	08 28 54.1
	MIN	eP	08 28 41.5
		epP	08 28 56.2
	SAO	epP	08 28 43.0
	WDC	iPc	08 28 44.5
	FHC	eP	08 28 51.2
		epP	08 29 06.0
USGS 08h16m21.4s 28.1S 70.6W			
h=51km mb=6.1			
Central Chile			
Dec 29	ZSP	ePd	20 35 12.0
		iS	20 35 25.6
	BKS	eP	20 35 12.6
		iS	20 35 28.2
	BRK	eP	20 35 13.0
		iS	20 35 27.1
	ORV	ePc	20 35 15.8
		i	20 35 22.1
	PCC	ePc	20 35 19.3
	MHC	eP	20 35 22.7
	MIN	ePc	20 35 24.3
	CMB	ePc	20 35 27.4
	SAO	e	20 35 31.2
	FHC	e	20 35 39.1
BRK 20h34m53.5s 38.8N 122.8W			
h=0km ML=2.9(4)			
The Geysers area, 21 km S of Clear Lake, CA			
Dec 30	WDC	ePd	00 44 52.5
	ORV	ePd	00 45 00.2
	CMB	eP	00 45 23.7
	FRI	e(P)	00 45 39.0
USGS 00h43m18.3s 44.0N 128.4W			
h=10km mb=4.6			
Off Coast of Oregon			
Dec 30	BRK	iPc	01 09 16.5
	BKS	iPc	01 09 16.85
		iS	01 09 20.9
	PCC	iPc	01 09 17.1
	ZSP	iPc	01 09 17.3
	MHC	eP	01 09 26.8
		iS	01 09 38.75
	GCC	eP	01 09 26.9
		iS	01 09 40.1
	SAO	eP	01 09 33.0
	CMB	eP	01 09 40.2
		iS	01 10 02.0
	PRS	e(P)	01 09 42.0
	LLA	e(P)	01 09 42.2
	FRI	eP	01 09 49.6
BRK 01h09m10.9s 37.8N 122.6W			
h=11km ML=3.2(3) Mo=1.3E21(3)			
Off Coast 14 km W of San Francisco, CA			
Dec 30	BKS	iPc	06 43 26.7
		iS	06 43 33.1
	BRK	iPc	06 43 26.9
	ZSP	iPc	06 43 27.4
		iS	06 43 34.5
	MHC	iPc	06 43 28.30
		iS	06 43 35.90
	PCC	iPc	06 43 30.0

DATE	STA	PHASE	TIME (UTC)
	GCC	ePd	06 43 33.4
	SAO	ePc	06 43 37.5
	CMB	iPc	06 43 38.2
	LLA	ePc	06 43 42.0
	PRS	eP	06 43 44.5
	ORV	e(P)	06 43 47.0
	FRI	iPc	06 43 48.5
	WDC	eP	06 44 03.0
BRK 06h43m18.7s 37.8N 121.7W			
h=7km ML=3.6(5) Mo=3.2E21(4)			
14 km NNE of Livermore, CA			
Dec 30	CMB	eP	11 14 26.7
	FRI	eP	11 14 32.2
USGS 11h02m43.6s 33.5N 140.7E			
h=78km mb=4.9			
South of Honshu, Japan			
Dec 30	FRI	ePd	12 08 44.9
	PRI	eP	12 08 45.7
	LLA	ePd	12 08 47.9
	PRS	ePd	12 08 48.1
	MNA	ePd	12 08 48.2
	SAO	e(P)	12 08 49.4
	CMB	ePd	12 08 51.3
	GCC	eP	12 08 52.2
	PCC	e(P)	12 08 55.5
	BRK	eP	12 08 55.7
	BKS	ePd	12 08 56.0
		e	12 09 20.5
		AMP(μm)	PER(s)
	PZ	0.14	1.0
	ORV	ePd	12 09 00.0
	MIN	eP	12 09 02.2
	WDC	iPd	12 09 04.8
USGS 11h56m19.2s 35.1S 70.8W			
h=89km mb=5.7			
Chile-Argentina Border Region			
Dec 30	WDC	eP	16 24 35.7
	MIN	eP	16 24 41.2
	ORV	eP	16 24 45.7
	BKS	ePd	16 24 52.3
		AMP(μm)	PER(s)
	PZ	0.025	0.8
	CMB	eP	16 25 01.0
	GCC	e(P)	16 25 05.9
	LLA	eP	16 25 06.4
	FRI	eP	16 25 10.0
	PRI	eP	16 25 11.2
USGS 16h18m12.6s 53.9N 165.8W			
h=33km mb=4.8			
Fox Islands, Aleutian Islands			
Dec 30	FRI	eP	20 31 43.1
	CMB	eP	20 31 44.4
	ORV	eP	20 31 46.0
	WDC	eP	20 31 46.7
USGS 20h19m25.7s 26.8S 177.3W			
h=104km mb=5.1			
South of Fiji Islands			
Dec 30	MNA	iPc	22 51 10.7
	FRI	ePc	22 51 33.4
		i	22 51 48.9
		eS*	22 52 19.2
		iSg	22 52 24.0
	CMB	eP	22 51 38.1
		e	22 51 43.2
	ORV	iPd	22 51 49.2
	PRI	eP	22 51 50.5
	MHC	e	22 51 53.9

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DATE	STA	PHASE	TIME (UTC)
	MIN	i	22 51 54.6
	LLA	e	22 51 59.6
	PRS	e	22 52 06.5
	BKS	e(P)	22 52 12.2

BRK ML=4.2(5)
UNR 22h50m44.3s 38.4N 116.2W
h=.0km ML=4.2
Central Nevada

Dec 30	FRI	iPc	23 39 59.2
		iS	23 40 09.5
	MNA	iPd	23 40 03.4
		iS	23 40 17.1
	CMB	iPc	23 40 07.3
		iS	23 40 24.2
	LLA	iPc	23 40 16.8
	PRI	ePc	23 40 18.3
	SAO	iPc	23 40 21.3
	PRS	iPc	23 40 23.2
	GCC	ePc	23 40 25.8
	BRK	ePc	23 40 28.5
	BKS	ePd	23 40 29.4
	PCC	iPd	23 40 29.5
	ORV	eP	23 40 32.8

BRK 23h39m43.3s 37.5N 118.8W
h=9km ML=3.4(5)
Mammoth Lakes area, CA

Dec 31	FRI	ePKP	06 48 29.6
	MNA	ePKP	06 48 30.4
	PRS	ePKP	06 48 30.7
	CMB	ePKP	06 48 32.1
	MHC	ePKP	06 48 32.8
	WDC	ePKP	06 48 38.5

USGS 06h29m33.6s 60.1S 26.5W
h=14km mb=5.3 Ms=5.5
South Sandwich Islands Region

International Seismological Centre

International Seismological Centre

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 ad 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.