U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

HAWAIIAN VOLCANO OBSERVATORY
SUMMARY 87 PART I
SEISMIC DATA, JANUARY TO DECEMBER 1987

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+ Arrived during 1987
* Left during 1987

INTRODUCTION

The Hawaiian Volcano Observatory (HVO) summary presents data gathered during the year, with a narrative highlighting seismic activity and a chronological narrative describing the volcanic events and significant Observatory-related activities. The seismic summary is offered without interpretation as a source of preliminary data. It is complete in the sense that all data for events of M≥1.5 routinely gathered by the Observatory are included. The emphasis in collection of tilt and deformation data has shifted from quarterly measurements at a few water-tube tilt stations ("wet" tilt) to a larger number of continuously recording borehole tiltmeters, repeated measurements at numerous spirit-level tilt stations ("dry" tilt), and surveying of level and trilateration networks. Because of the large quantity of deformation data now gathered and differing schedules of data reduction, the seismic and deformation summaries are published separately.

The HVO summaries have been published in various forms since 1956. Summaries prior to 1974 were issued quarterly, but cost, convenience of preparation and distribution, and the large quantities of data dictated an annual publication beginning with Summary 74 for the year 1974. Summary 74 includes an extensive description of the seismic instrumentation, calibration, and processing used in recent years. The present summary includes enough background information on the seismic network and processing to allow use of the data and to provide an understanding of how they were gathered.

A report tabulating instrumentation, calibration, and recording history of each seismic station in the network by Klein and Koyanagi is available as a USGS Open-File Report [1]. It is designed as a reference for users of seismograms and phase data and includes and augments the information in the station table in this summary.

SEISMIC CHRONOLOGY - 1987

Shallow, short-period microearthquake activity beneath Kilauea's summit was generally low (fig. C-2 and table 3). Only small bursts of events accompanied the minor inflation episodes. Tremor-associated, long-period events at depths ranging from a few to about 15 km were also detected. Shallow, long-period events (LPC-A type, <5 km, 3-5 Hz) occurred sporadically, peaking during swarms of small amplitude events in March and most noticeably in December. In contrast, the intermediate depth, long-period events (LPC-C type, 5-15 km, 1-5 Hz) with larger amplitudes occurred at fairly regular intervals but at low rates.

Low-level tremor accompanied the relatively steady output of lava. Continuous tremor of 2-5 Hz, with amplitude several times the normal background level, was evident on seismic stations located within a few kilometers of the active vents Puu Oo and Kupaianaha. Lava movement and degassing in vents were generally related to the minor variations of tremor intensity. Episodic bursts of microshocks recorded near Kupaianaha were attributed to the crustal adjustments surrounding the eruptive vent. Occasional rockfall signals were also detected from the unstable Puu Oo cone.

Regional seismicity included nearly two thousand located earthquakes with magnitudes ranging from about 1.5 to 5.2 (table 5 and 6). The largest event, M=5.2, located about 50 km south of the Island of Maui and about 70 km west of north Hawaii. The shock was felt moderately on the islands of Maui, Hawaii, Molokai, Lanai and Oahu. The event initiated a series of earthquakes generated in the same area, including a M=4.3 shock felt on Maui Island, that concentrated mostly during February but occurred intermittently throughout the year.

Most of the earthquakes located in 1987 occurred at depths of 5 to 10 km, outlining the south flank of Kilauea and the southeast flank of Mauna Loa (figs. 9-22). Location of deep earthquakes and tremor at about 40-60 km depth broadly shade the south Hawaii region. Isolated deep events were widely distributed beneath the north and west parts of the island.

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[1] Klein, F.W., and Koyanagi, R.Y., 1980, Hawaiian Volcano Observatory seismic network history, 1950-1979: U.S. Geological Survey Open-File Report 80-302, 84 p.

CHRONOLOGICAL SUMMARY - 1987

by

Thomas L. Wright

HVO Staff. George Ulrich left, and Ken Hon arrived, in June, making a smooth transition in the geology staff. George went back to Flagstaff, and hence to Reston, where he assumed a staff position in the Office of Regional Geology. Ken came from the Office of Energy and Marine Geology in Denver. After a year of "muddling through" in our office, we hired two permanent staff. Pauline Tamura, previously with HVO as a Federal Junior Fellow working in the seismic program, came on full-time to take over procurement responsibilities. Irene Tengan, also one of Bob Koyanagi's trainees, filled a permanent part-time position as secretary. Marian Kagimoto shifted her primary responsibility to accounting. As of the end of the year, we once again had a smoothly running office.

HVO Activities. In January we celebrated HVO's 75th anniversary. The festivities began with an exhibit of HVO's work at the Wailoa Center, the largest exhibition space in Hilo. Planned and executed under the direction of our librarian-photo archivist Jane Takahashi, it opened on January 9 and was shown through the end of the month. The exhibit covered research and monitoring in geology, seismology, ground deformation, geoelectricity, and gas geochemistry and was highlighted with spectacular large-format photographs printed in-house by Jim Griggs. The special relationship between HVO and the National Park Service and various aspects of HVO's history were featured in the historical section of the exhibit. Three-dimensional displays included early instruments designed at HVO, rock samples, thin sections to view through a brass microscope, and a light box showing earthquake depth locations.

Special presentations of the exhibit were Maurice Krafft's film on HVO's work (commissioned by the USGS and the Smithsonian Institution), footage showing pillow lava forming off the coast (courtesy of Mike DeGruy), and an Amiga computer programmed to display the HVO seismic net and earthquake signals in real time. When a station is triggered by movement of the ground, the symbol for the station changes color. Isolated station responses are generally microseismic noise or electronic transients. Real earthquakes, even those of M=1.0, will trigger many stations in the order in which the seismic energy is felt; the color remains for as long as each station is recording energy. This represents a breakthrough in digital seismic processing and display at HVO.

The exhibit was supported by funding from the Hawaii Natural History Association and by the materials, equipment, and staff of the University of Hawaii at Hilo Media Services, who allowed Jane to typeset, mount, and laminate all the text and captions in their spacious facility, and by the Wailoa Center staff, who enthusiastically interpreted the exhibit to thousands of visitors and school groups.

Parts of the exhibit were selected for display at the University of Hawaii library in February, at the Hilo and Keahole (Kona) airports in March and April, and at the University of Hawaii student center for the GSA conference in May. After these Big Island exhibits, the materials finally came home to HVO, where they are now displayed on the walls of our new building to interpret our work for the many visitors who come to see us from near and far. Dick Fiske (Smithsonian Institution), who was at the exhibit's opening night festivities, began planning its future as a SITES traveling exhibit to open in July 1989 during the 89th International Congress of Volcanology meeting in Washington, D.C.

Thanks go to George Ulrich, Arnold Okamura, Barry Stokes, Dallas Jackson, Jim Kauahikaua, Bob Koyanagi, Jennifer Nakata, Tom English, and Carl Johnson for collaborating with Jane on writing the text, selecting photos, obtaining instruments, producing figures, and designing the layout to explain their monitoring work.

HVO's new and renovated buildings and the Park Service's new Thomas A. Jaggar museum (renovated from the former HVO library wing) were formally dedicated on January 17. The program was emceed by myself and included speeches by the Directors of the National Park Service and the USGS, Congressman Daniel Akaka, Hawaii County Mayor Dante Carpenter, and spokespersons for the Secretary of the Interior and the Governor of Hawaii. Gordon Eaton, former Scientist-in-Charge (President of Iowa State University), gave the keynote address and Gudmundar Sigvaldason spoke for the world volcanological community. Nalani Kanakaole's halau did a hula Kahiko in honor of Pele followed by a Christian minister's sermon that *negated* Pele! The dedication ceremony culminated in the untying of the maile lei across the threshold by Park Superintendent David Ames and myself and HVO staff's receiving hundreds of guests who streamed into the flower-bededecked facility.

The Volcano Art Center celebrated our Diamond Jubilee in a variety of ways. Opening on the night following the dedication was a one-person play on the life of Thomas A. Jaggar, "The Vision of a Scientific Missionary," by Peter Charlot, which ran the month of January at Kilauea Theater. The play was attended by an enthusiastic audience which included HVO alumni and Jaggar's granddaughter, Sally Hayes, who was impressed by actor Willem Wanrooy's likeness to Jaggar, as well as by his dramatization of Jaggar's speeches and writing. The Art Center sold Diamond Jubilee T-shirts with the logo designed by Ben Servino (Menlo BWTR, Graphics Unit). The design was not only a dynamic symbol of HVO's work, but gave continuity to all Jubilee-related events. The featured show in the gallery for the month was Paul and Rima Greenland's sculpture. The work of Paul, our geochemist, showed his rare talent as a sculptor, and Rima's unique pottery, made with glazes of volcanic ash from all over the world.

The week following the dedication, the international volcanologic meeting "Hawaii Symposium on How Volcanoes Work" was held at the University of Hawaii at Hilo, attended by more than 450 volcanologists and other geoscientists. Alternate days were given to talks and two field trips (one to Kilauea and the other to Mauna Loa, Mauna Kea, and Kohala), and evenings were devoted to poster sessions and other special events. The USGS map exhibit in the lobby of the University theater, where the symposium was convened, was organized by Rick Hazlett, Jane Takahashi, and cartographer Jean Morris, who was responsible for the execution of the geologic map of the Island of Hawaii, with graphics and mounting support from Susan Yugawa (UH Media Services). The meeting ended with a big luau attended by symposium participants and their spouses. Many scientists stayed after the meeting to visit HVO and "talk story" with us. Sergei Fedotov, head of the Volcanological Observatory of Kamchatka, addressed the staff at our Monday morning meeting with a tribute to HVO's place in volcanological research and presented us with a fine model of one of the ships that brought the first settlers to Kamchatka. Thanks go to all who shared in the responsibilities, came to commemorate our founding, and celebrate a new beginning in a new facility with us.

Volcanic activity. Kilauea's eruption continued to create and destroy. By year's end, 67 acres of land had been added to the Big Island, and 16 additional homes were overrun (table C-1; fig. C-1), bringing to 58 the total number of dwellings removed since the beginning of the eruption in January 1983. Coincident with periods of intense monitoring for Hawaii County Civil Defense, we were able to initiate detailed studies on processes associated with the growth of the lava shield and the development of a distributed lava tube system (fig. C-2). Some of the processes observed and quantified were (1) intrusion, accompanied by uplift and eruption, then by collapse, on the shield adjacent to the pond; (2) blockage and inflation of the lava tube system; (3) the relationship between a'a and pahoehoe in channeled flow; and (4) different types of pahoehoe advance. In addition, the Puu Oo vent began enlarging through collapse, presumably to subsidence along deep ring fractures and by occasional phreatic explosions from the interaction of magma in the Puu Oo conduit with the water-saturated Puu Oo edifice during or after periods of exceptionally heavy rainfall.

Deformation studies. Routine monitoring of ground deformation is summarized in greater detail in Part II of this summary. In addition, we initiated a campaign of measurements using the Global Positioning System (GPS) in collaboration with the USGS Branch of Tectonophysics, the National Geodetic Survey, and the NAVSTAR University Consortium. This survey was conducted as the first in what is proposed as an annual experiment until the technique is proven for use in Hawaii. Ultimately, we anticipate replacing much of the routine monitoring at HVO by timely occupation of a GPS network.

Other geophysical studies. The tools of geoelectricity have been found to be uniquely applicable to the study of lava tubes. Both VLF and resistivity instruments detect anomalies related to the presence of molten magma in a background of cooled lava. Electrical profiles crossing the lava field from the current eruption at different elevations run on the same lines as leveling surveys and repeated over time, have been able to trace the growth and breakdown of lava tubes feeding lava from the current eruption to the ocean. The following have been observed: (1) coalescence of many small tubes into a single master tube through time; (2) break-up of a master tube on a steep slope into several smaller tubes when the topography flattens. Work also continued during the year on refining the water table at Kilauea, utilizing both DC soundings and time domain electromagnetic (TDEM) studies.

Geochemistry. The problem of acid rain came to public attention after eruption became continuous in 1986. Tradewinds carry the sulfurous degassing plume from Puu Oo around the south side of Mauna Loa, where it is trapped by an inversion layer on the back side of Mauna Loa, and precipitated as sulfuric acid rain. The problem was exacerbated by continuous entry of lava into the sea, where another source of acid (hydrochloric acid from dissociation of seawater) was also sent around to the Kona side. Reversal of tradewinds produces a temporary acid rain condition on the east side of the island. Since much of the island is on water catchment, the secondary effects, such as leaching of lead from roofing nails, were identified as a significant hazard. Issues are being studied by the State Department of Health. HVO's role has been that of a consultant on the nature of the volcanic gas emissions.

DEPARTURES

Name	Position
George Ulrich	Geologist
Lu Setnicka	Office

ARRIVALS

Name	Position
Ken Hon	Geologist
Pauline Tamura	Office
Irene Tengan	Office

Student appointments in 1987 were as follows:

Minority Program in the Earth Sciences (MPES):
Carl Arakaki - Electronics
Renee Ellorda - Electronics
Lureen Helliangao - Office/Library
Marcie Vicente - Reception/Office
Clayton Ishida - Shop
Allan Kimura - Deformation
Sandy Fujikawa - Deformation

Federal Junior Fellows:
Chad Okinaka - Seismology
Nicole Torres - Deformation

National Association of Geology Teachers:
Kevin Hillesland- Geology

Alu Like (Native American Program):
Hui Kanahele
Ron Hudman

Table C-1.

1987 ERUPTION STATISTICS

Areas

Total area covered by lava, January 1983 through December 1987=53 sq km

Surface area* covered by Puu Oo flows (episodes 1-47) plus the "A vent" flow of episode 48=36 sq km

Surface area covered by Kupaianaha flows through December 1987=17 sq km

*Puu Oo flows originally covered about 42 sq km, but some of this area has been reburied by Kupaianaha flows.

Volumes

Total, 1/83 through 12/87	Approximately 820 million cubic meters
Episodes 1-47	Approximately 560 million cubic meters
Episode 48 (7/86 through 12/87)	Approximately 260 million cubic meters

Other fascinating facts

Kupaianaha pond dimensions: approximately 140 m in diameter
Pond level: 0-14 m below rim
Height of Kupaianaha lava shield: approximately 60 m

Height of Puu Oo cone (7/86): 255 m
Diameter of Puu Oo crater: 150 m
Depth of Puu Oo crater: approximately 100 m
Puu Oo pond status: intermittently active beginning in 12/87

Structures destroyed

Residences destroyed through 12/87		58
Puu Oo:		
Episodes 1-47	Royal Gardens	16
Kupaianaha:		
11-12/86	Kapa'ahu, Keone Dr., Kalapana Gardens	28
5-6/87	Kapa'ahu	4
9-12/87	Royal Gardens, Kapa'ahu	10

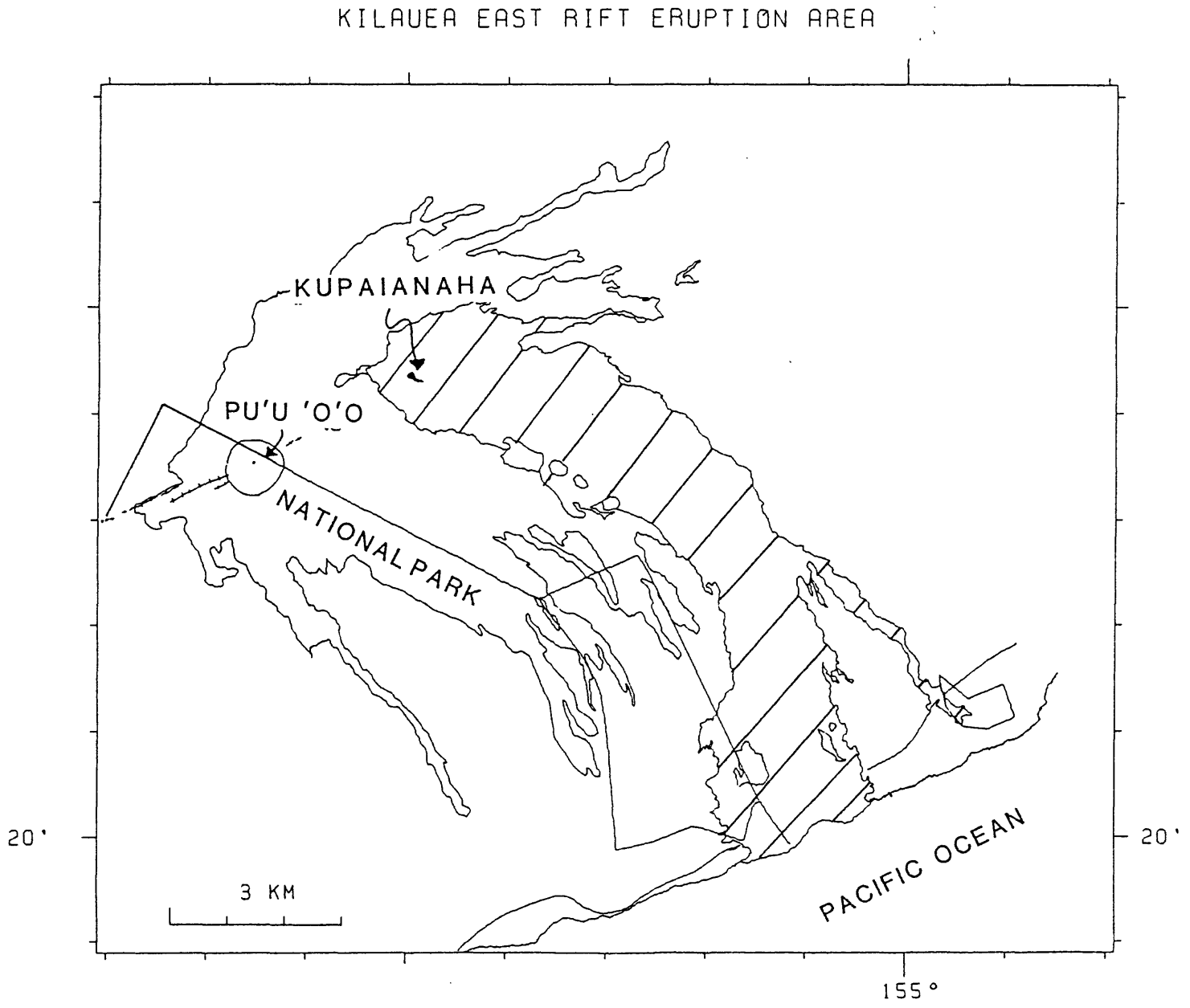

Figure C-1. Map showing area covered by lava from Kilauea's east rift eruption. Blank areas extending outward from Puu Oo are covered by lava erupted from January 1983 through July 1986. Hachured sections are covered by lava erupted from Kupaianaha from July 1986 to the end of 1987.

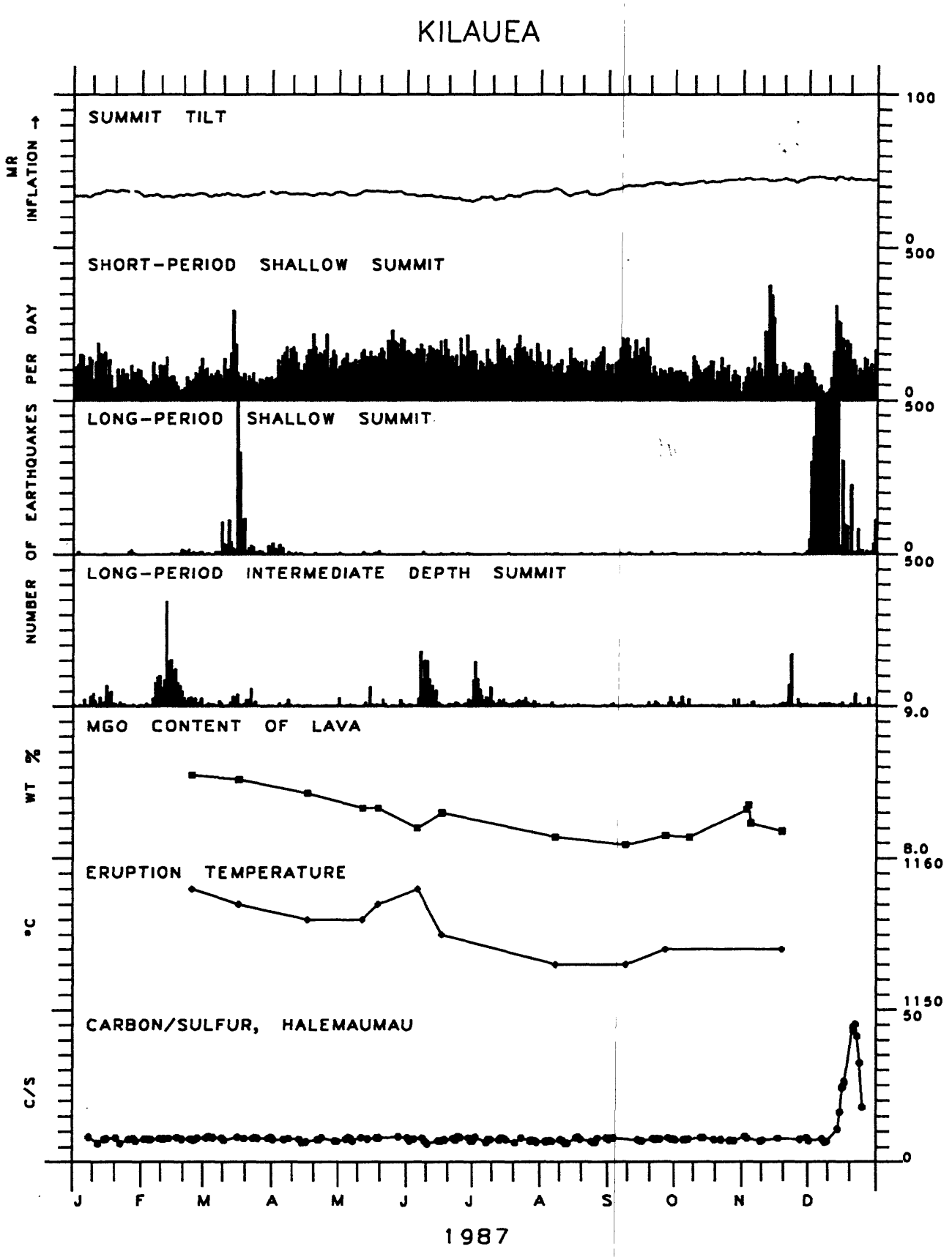

Figure C-2. Selected seismic, geodetic, petrologic and geochemical data for Kilauea, 1987.

SEISMIC INSTRUMENTATION

The network. The Hawaiian Volcano Observatory maintains an extensive telemetered seismic network on the Island of Hawaii. The 1987 network consisted of 51 stations-- 49 digital and 2 low-gain, three-component optical. The 49 digital stations include 12 three-component and 37 vertical-component sites. The coverage is most dense on and around Kilauea Volcano. With the exception of self-contained systems at the Uwekahuna and Hilo stations, all seismic signals from the short-period network are telemetered to the Observatory for recording.

Figure 1 is a map of selected geographic and geologic features, Figure 2 shows the seismic stations operated on the Island of Hawaii during 1987, and Figure 3 indicates the telemetry scheme for the respective seismic stations. Table 1 lists all seismic stations operated by the U.S. Geological Survey field office in Hawaii during 1987. Listed are names, three-and four-letter station codes, coordinates in degrees and minutes, elevation in meters, and other data, as described below, pertaining to each station. In addition to the seismometers listed in Table 1, a long-period, three-component set of Press-Ewing seismometers were operated in the Uwekahuna vault and recorded on photographic paper.

Instrumentation and recording. Each telemetered station has a voltage-controlled oscillator (VCO) for FM multiplex transmission to HVO via either hardwire or radio. These telemetering stations are all of Type 1, the Office of Earthquakes, Volcanoes and Engineering standard system used in USGS seismic networks (see Table 2 for details). After discrimination at the receiver, the analog signals are converted to digital form as part of the routine computer location processing and archiving. Analog signals from 36 selected stations are recorded on two Develocorders using 16-mm microfilm. FM signals from the telemetering network are also recorded directly on one-inch magnetic tape. Selected larger events are copied onto condensed FM library tapes, which are currently archived in Menlo Park. The type(s) of continuous recording used for each station (in addition to magnetic tape for the telemetered stations) is coded in Table 1 as follows: D - Develocorder film, P - photographic paper, H - Helicorder paper, and S - smoke drums.

In addition to the standard stations, optical drum seismographs are maintained at Uwekahuna (HVO), Hilo, Maui, and Oahu (Honolulu station operated by the Pacific Tsunami Warning Center). The less sensitive optical records are used primarily for amplitude measurements for magnitude calculations to supplement readings from the high-gain stations. The paper records, as well as the 16-mm Develocorder microfilms, are archived at HVO.

Seismograph response and calibration. Displacement response curves for the three short-period seismograph types in use are given in Figure 4. Types 2 and 3 are electro-mechanical systems recorded on paper records. The Type 1 curve gives the displacement magnification of the standard OEVE system from ground motion at the seismometer to the seismic trace, as seen on a 20x Develocorder film viewer. The curves plot the unit response, which is multiplied by a constant but known factor (CAL-factors range from about 1 to 7, averaging about 4, Table 1) to get the response for an individual station. Individual CAL factors for Type 1 seismographs are equal to the peak-to-peak amplitude measured in millimeters on the 20x Develocorder viewer of a 100-microvolt 5 to 8-Hz signal introduced to the preamp/VCO in place of the geophone at the field station. The calibration process is normally performed each time a station is visited when other maintenance is required.

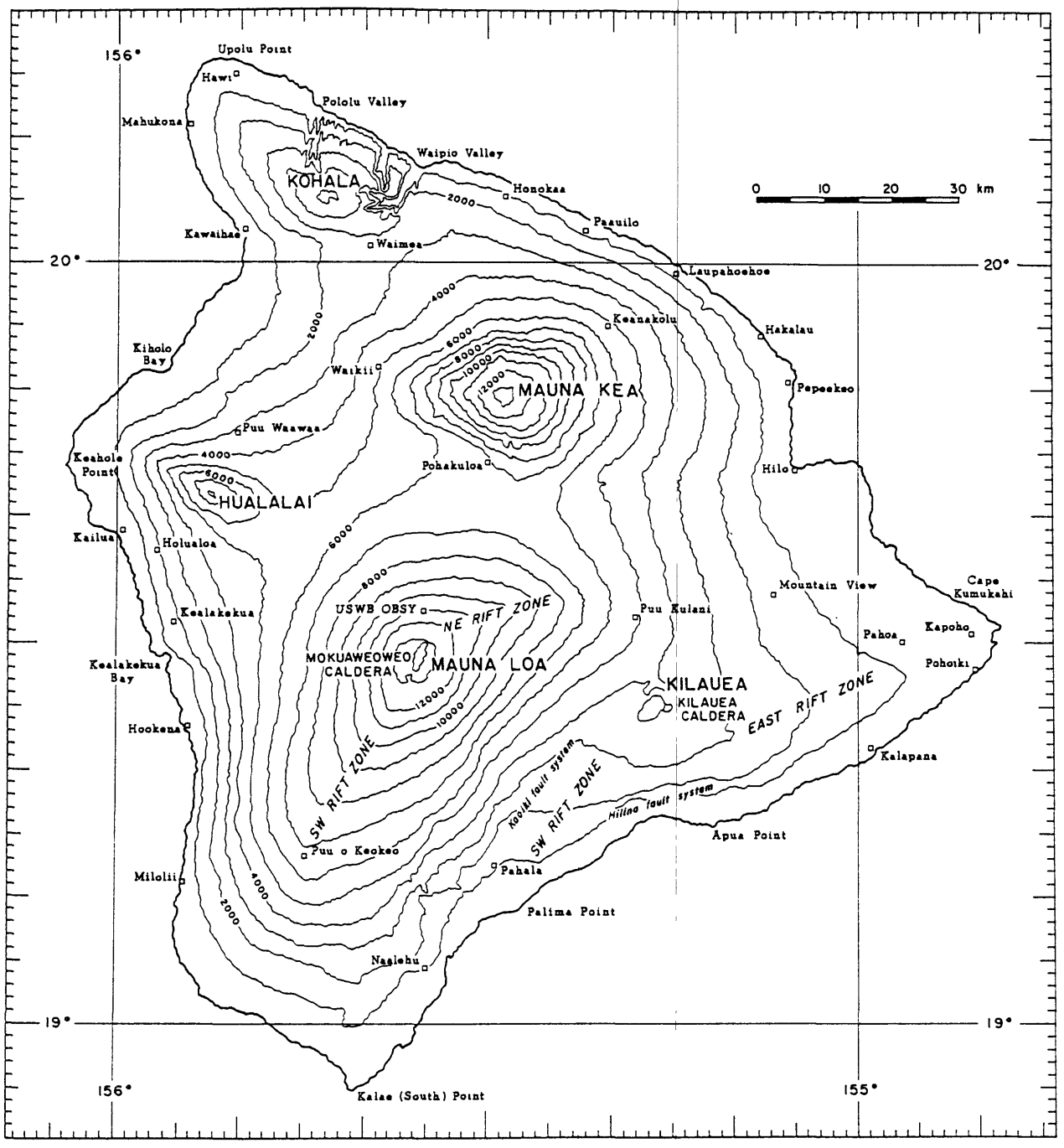

Figure 1. Map of the Island of Hawaii, showing principal settlements and selected geographic and geologic features.

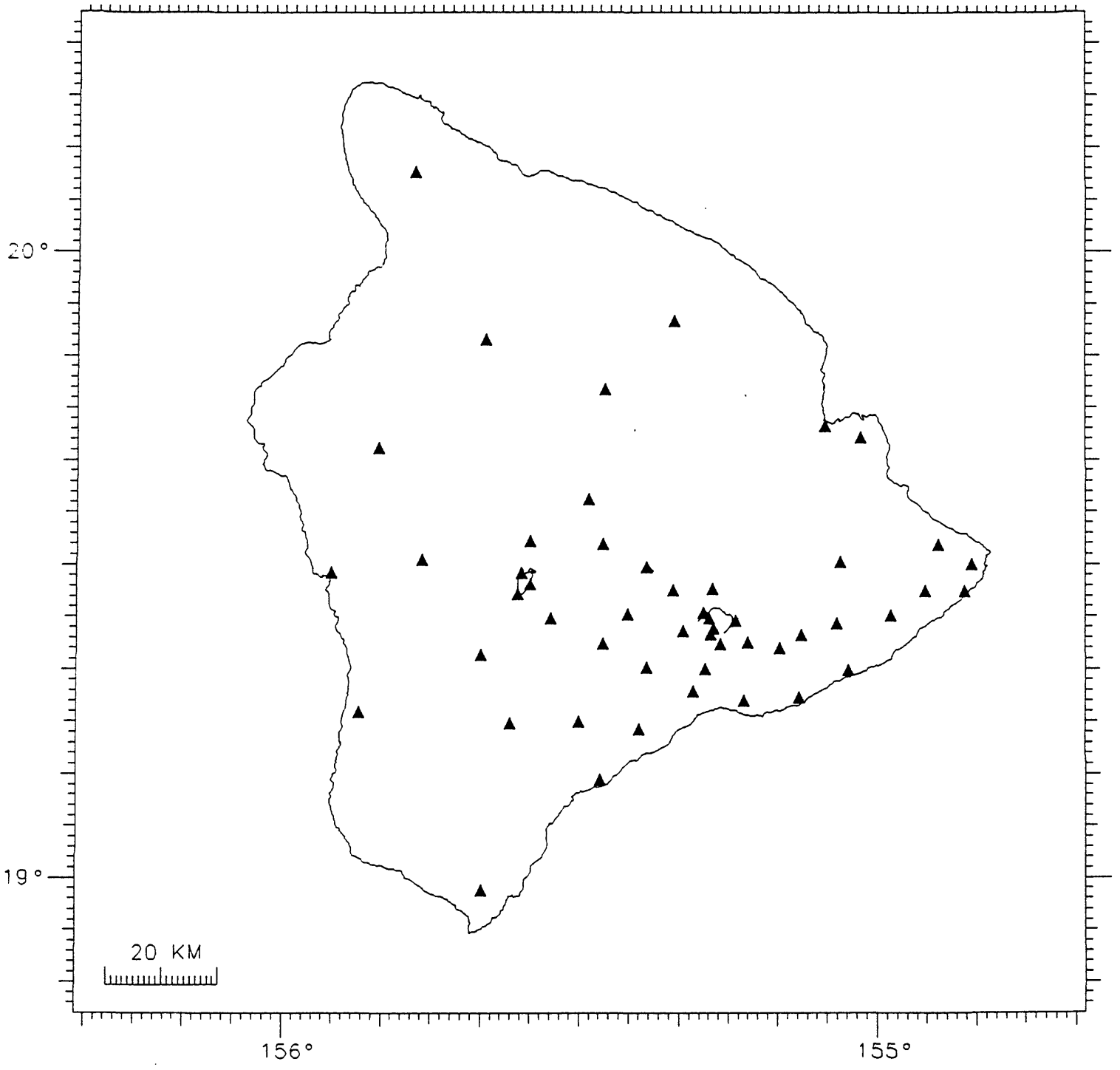

Figure 2. Seismic stations operational during 1987 on the Island of Hawaii.

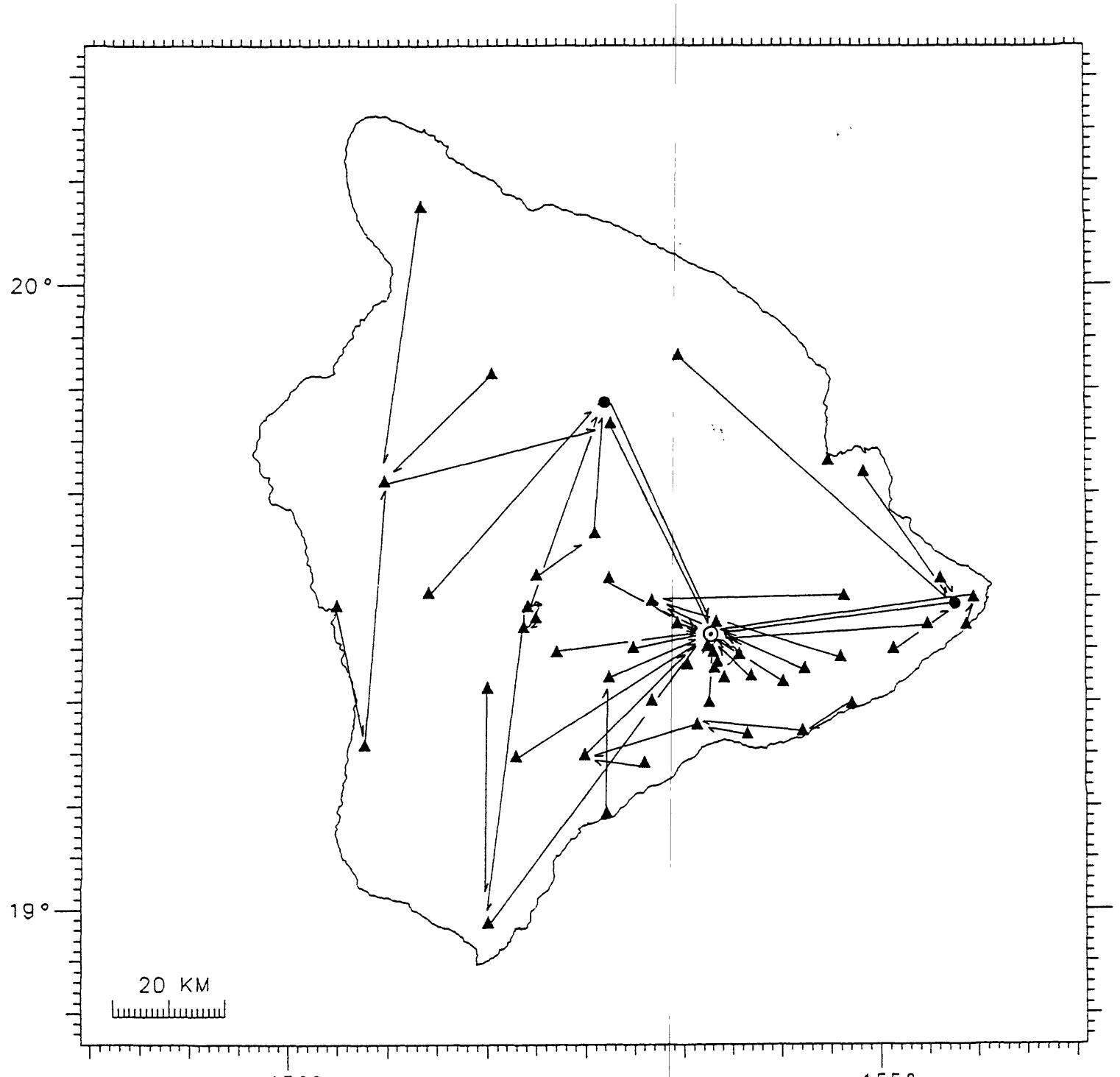

Figure 3. Telemetry scheme for the 1987 Hawaiian Volcano Observatory seismic network.

Legend
▲ Seismometer location
• Repeater station
⊙ HVO

Table 1. Seismic stations in Hawaii operated by the USGS in 1987.

STATION NAME	CODE	--LAT--- D	M	---LON--- D	M	ELEV (M)	DELAY 1	DELAY 2	CAL	SEIS TYPE	OPTIC RECORD
AHUA	AHUV	19	22.40	155	15.90	1070	-0.10	-0.13	2.1	E4	DI
AHUA	AHUE	19	22.40	155	15.90	1070	-0.10	-0.13	3.0	MW	
AHUA	AHUN	19	22.40	155	15.90	1070	-0.10	-0.13	3.0	MW	
AINAPO	AINV	19	22.50	155	27.62	1524	0.13	0.17	5.5	L4	D
AINAPO	AINE	19	22.50	155	27.62	1524	0.13	0.17	3.0	MW	
AINAPO	AINN	19	22.50	155	27.62	1524	0.13	0.17	3.0	MW	
CAPTAIN COOK	CACV	19	29.29	155	55.09	323	0.00	-0.16	1.1	L4	D
CONE PEAK	CPKV	19	23.70	155	19.70	1038	-0.26	-0.07	6.0	L4	
DANDELION	DANV	19	21.42	155	40.04	3003	-0.27	0.03	7.0	L4	D
DESERT	DESV	19	20.20	155	23.30	815	-0.29	-0.13	3.0	L4	DI
ESCAPE ROAD	ESRV	19	24.68	155	14.33	1177	-0.17	-0.19	2.2	L4	D
HAWAIIAN BEACHES	HABV	19	31.89	154	53.89	92	-0.09	-0.24	1.0	L4	
HALEAKALA, MAUI	HAE	20	46.00	156	15.00	2090	0.00	0.00	1.0	W	P
HALEAKALA, MAUI	HAL	20	46.00	156	15.00	2090	0.00	0.00	1.0	H1	P
HALEAKALA, MAUI	HAN	20	46.00	156	15.00	2090	0.00	0.00	1.0	W	P
HILO	HIE	19	43.20	155	5.30	20	0.54	0.30	1.0	W	P
HILO	HIL	19	43.20	155	5.30	20	0.54	0.30	1.0	H1	P
HILO	HIN	19	43.20	155	5.30	20	0.54	0.30	1.0	W	P
HILINA PALI	HLPV	19	17.96	155	18.63	707	0.02	0.07	2.6	L4	D
HONOLULU, OAHU	HON	21	19.30	158	0.50	2	0.00	0.00	0.0	H1	O
HALE POHAKU	HPUV	19	46.85	155	27.50	3396	0.31	0.17	3.3	L4	D
HUMUULA SHEEP ST	HSSV	19	36.31	155	29.13	2445	0.20	0.35	5.3	L4	D
HUMUULA SHEEP ST	HSSE	19	36.31	155	29.13	2445	0.20	0.35	3.0	MW	
HUMUULA SHEEP ST	HSSN	19	36.31	155	29.13	2445	0.20	0.35	3.0	MW	
HOT CAVES	HTCV	19	14.33	155	24.02	381	-0.16	-0.07	0.0	E4	
HUALALAI	HUAV	19	41.25	155	50.32	2189	0.67	0.38	3.0	L4	D
HEIHEIAHULU	HULV	19	25.13	154	58.72	369	-0.17	-0.16	1.6	L4	D
HEIHEIAHULU	HULE	19	25.13	154	58.72	369	-0.17	-0.16	3.0	MW	
HEIHEIAHULU	HULN	19	25.13	154	58.72	369	-0.17	-0.16	3.0	MW	
KAAPUNA	KAAV	19	15.98	155	52.28	524	-0.12	-0.01	3.5	E4	D
KAENA POINT	KAEV	19	17.35	155	7.95	37	-0.01	0.06	1.4	L4	D
KAOIKI FAULTS	KFAV	19	25.25	155	25.18	1579	0.13	0.17	0.0	E3	
KAHUKU	KHUV	19	14.90	155	37.10	1939	0.03	-0.03	2.7	E4	D
KANEKII	KIIV	19	30.56	155	45.90	1841	0.15	0.37	2.9	L4	D
KANEKII	KIIE	19	30.56	155	45.90	1841	0.15	0.37	3.0	MW	
KANEKII	KIIN	19	30.56	155	45.90	1841	0.15	0.37	3.0	MW	
KEANAKOLU	KKUV	19	53.39	155	20.58	1863	0.68	0.24	3.3	L4	D
KALALUA CONE	KLCV	19	24.35	155	4.08	659	-0.25	-0.30	0.0	L4	DH
PUU KALIU	KLUV	19	27.48	154	55.26	271	-0.17	-0.30	2.9	L4	D
KOHALA	KOHV	20	7.69	155	46.77	1166	-0.03	-0.17	1.5	L4	D
KOHALA	KOHE	20	7.69	155	46.77	1166	-0.03	-0.17	3.0	MW	
KOHALA	KOHN	20	7.69	155	46.77	1166	-0.03	-0.17	3.0	MW	
KIPUKA NENE	KPNV	19	20.10	155	17.40	924	-0.11	-0.08	3.5	L4	D
KAPOHO	KPOV	19	30.02	154	50.51	134	-0.09	-0.24	2.5	L4	D
MAUNA LOA	MLOV	19	29.80	155	23.30	2010	0.03	0.08	5.8	L4	D
MAUNA LOA	MLOE	19	29.80	155	23.30	2010	0.03	0.08	3.0	MW	
MAUNA LOA	MLON	19	29.80	155	23.30	2010	0.03	0.08	3.0	MW	
MAUNA LOA X	MLXV	19	27.60	155	20.70	1475	0.06	0.15	3.0	L4	
MOKUAWEOWEO	MOKV	19	29.28	155	35.98	4104	0.15	0.16	5.5	L4	DI
MAKAOPUHI	MPRV	19	22.07	155	9.85	881	-0.17	-0.20	4.2	L4	DI
MOUNTAIN VIEW	MTVV	19	30.25	155	3.75	409	-0.02	0.01	5.0	E4	D
NATIONAL GUARD	NAGV	19	42.12	155	1.72	18	0.54	0.30	3.2	E4	D
NORTH PIT	NPTV	19	24.90	155	17.00	1115	-0.30	-0.18	3.0	E4	DI
NORTH PIT	NPTE	19	24.90	155	17.00	1115	-0.30	-0.18	3.0	MW	
NORTH PIT	NPTN	19	24.90	155	17.00	1115	-0.30	-0.18	3.0	MW	
OUTLET	OTLV	19	23.38	155	16.94	1038	-0.19	-0.18	4.9	L4	
PAUAHI	PAUV	19	22.62	155	13.10	994	-0.21	-0.24	2.4	L4	D
PAUAHI	PAUE	19	22.62	155	13.10	994	-0.21	-0.24	3.0	MW	
PAUAHI	PAUN	19	22.62	155	13.10	994	-0.21	-0.24	3.0	MW	

PUU ULAULA	PLAV	19	32.00	155	27.67	2992	-0.03	0.13	5.4	L4	DI
POHOIKI	POIV	19	27.42	154	51.22	16	-0.09	-0.24	0.0	L4	
POLIOKEAWE PALI	POLV	19	17.02	155	13.47	169	-0.02	0.03	2.8	E4	D
PUU PILI	PPLV	19	9.50	155	27.87	35	-0.15	-0.15	1.7	E4	D
RIM	RIMV	19	23.90	155	16.60	1128	-0.21	-0.13	0.0	L4	
RAINSHED	RSDV	19	27.78	155	16.68	1270	0.06	0.15	0.0	L5	
SOUTHPOINT	SPTV	18	58.91	155	39.92	244	-0.17	-0.22	2.8	L4	D
SOUTH POINT	SPTE	18	58.91	155	39.92	244	-0.17	-0.22	3.0	MW	
SOUTH POINT	SPTN	18	58.91	155	39.92	244	-0.17	-0.22	3.0	MW	
STEAM CRACKS	STCV	19	23.30	155	7.67	765	-0.25	-0.30	2.4	L4	DH
STEAM CRACKS	STCE	19	23.30	155	7.67	765	-0.25	-0.30	3.0	MW	
STEAM CRACKS	STCN	19	23.30	155	7.67	765	-0.25	-0.30	3.0	MW	
SOUTHWEST RIFT	SWRV	19	27.26	155	36.30	4048	0.01	0.04	5.6	E4	D
TRAIL	TRAV	19	24.91	155	32.96	3207	0.00	0.00	0.0	L4	
UWEKAHUNA	UEE	19	25.40	155	17.60	1240	-0.21	0.00	2.5	E	P
UWEKAHUNA	UEN	19	25.40	155	17.60	1240	-0.21	0.00	2.5	E	P
UWEKAHUNA	UEZ	19	25.40	155	17.60	1240	-0.21	0.00	2.5	E	P
WAIKII	WAIV	19	51.58	155	39.60	1433	0.20	0.35	0.0	L4	
WAHAULA	WHAV	19	19.90	155	2.92	29	-0.10	-0.04	1.5	E4	D
WILKES CAMP	WILV	19	28.15	155	35.02	4037	0.22	0.17	2.6	E4	D
WILKES CAMP	WILE	19	28.15	155	35.02	4037	0.22	0.17	3.0	MW	
WILKES CAMP	WILN	19	28.15	155	35.02	4037	0.22	0.17	3.0	MW	
WEATHER OBSERVAT	WOBV	19	32.31	155	35.01	3396	0.00	0.00	0.0	E4	
WOOD VALLEY	WOOV	19	15.08	155	30.12	909	-0.15	-0.06	4.6	E4	

Table 2. Seismic Instrument Types

The codes in parentheses refer to the seismometer types listed in Table 1.

Type 1 (Codes E, L, and 3, 4) consists of:

a) Geophone - Electrotech EV-17 (E), or Mark Products L4C (L) 1.0-sec. period moving-magnet vertical- or horizontal- (E-W and N-S) component seismometer adjusted for an output of 0.5 volts/cm/sec and 0.8, critically damped.

b) Preamp/VCO - USGS/OEVE Model J302 (3), J402 (4) voltage-controlled oscillator. Three db points for bandpass filter at 0.1 Hz and 30 Hz. Signals are transmitted on audio FM carrier over cable or FM radio link to HVO.

Type 2 (Code E) consists of:

a) Electrotech EV-17 1.0-sec. period moving-magnet vertical- or horizontal- (E-W and N-S) component seismometer.

b) 3.5 Hz galvanometer with appropriate shunt resistances for critical damping. System is poorly calibrated. Peak magnification approximately 25,000 at 4 Hz.

Type 3 (Code H1) consists of:

Electrotech EV-17 or Observatory-built 0.8-sec. period moving-coil seismometer, with HVO-built solid-state seismic preamplifier, galvanometer driver, and 2 Hz galvanometer. Peak magnification approximately 40,000 at 4 Hz.

Code (W) is a Wood-Anderson torsion seismograph.

Code (MW) is a horizontal-component seismograph based on a Type 1 system and modified to a Wood-Anderson response.

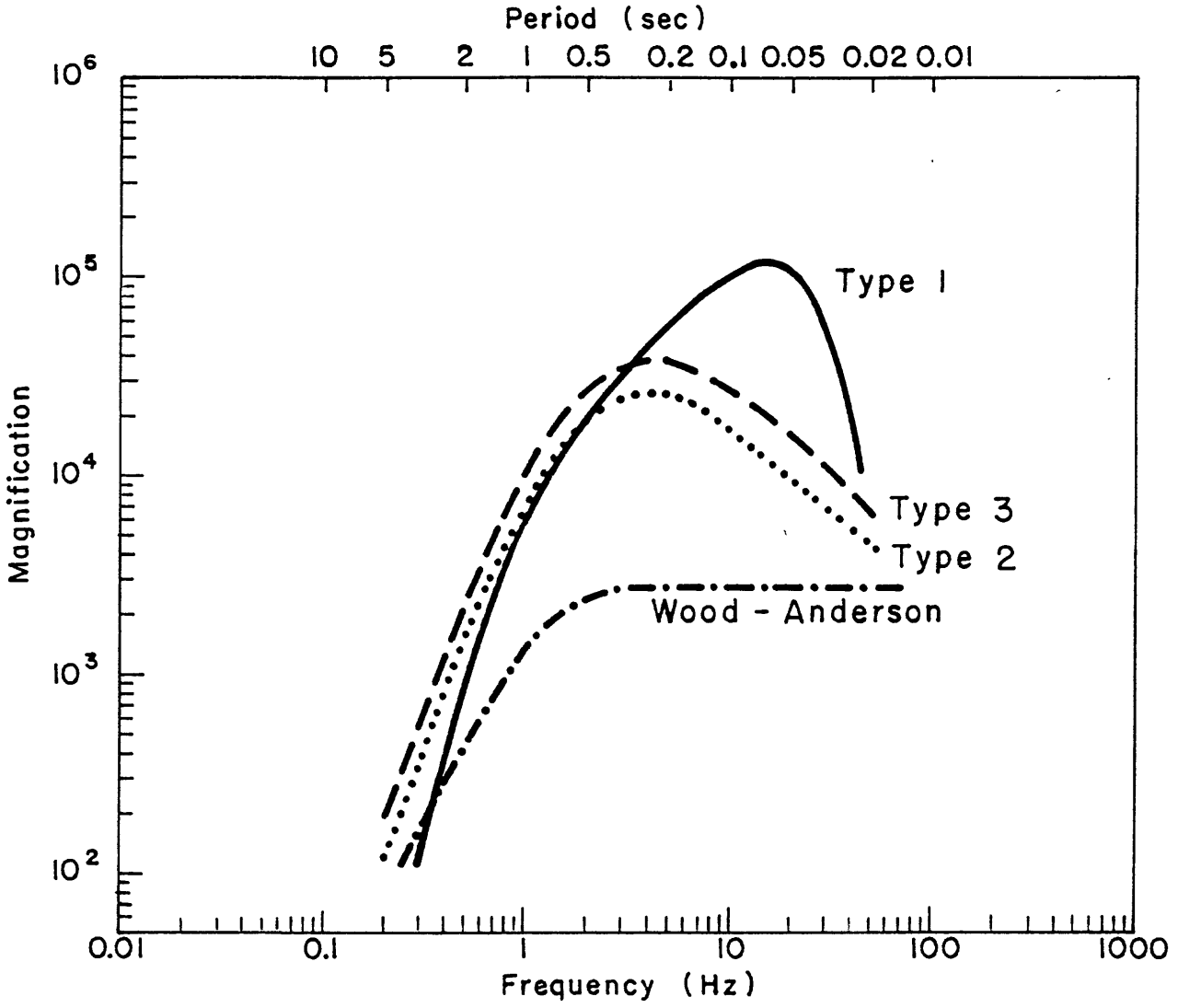

Figure 4. System response curves for the Wood-Anderson torsion seismograph and for the three different types of seismometers used by the Hawaiian Volcano Observatory. Types 2 and 3 are electro-magnetic seismographs recorded optically on photographic paper. Type 1 is the standard OEVE seismometer system recorded on Develocorder film and magnetic tape. The curve for Type 1 includes response of the geophone, all electronics including telemetry, Develocorder galvanometer, and projection of film by a 20x viewer. The curves plot the unit response, which should be multiplied by a constant but known factor (CAL) to get the response for an individual station.

SEISMIC DATA PROCESSING

Develocorder films are scanned on a daily basis for frequency of earthquakes, and coda duration in seconds are measured for magnitude determination. In 1986, HVO acquired a VAX 11-750 computer and adopted the CUSP (California Institute of Technology USGS Seismic Processing) routine. Discriminated analog signals are converted to digital form, and detected events are saved in real time. Detected events are demultiplexed, and P-picks are made by the computer, producing a rough location and coda-amplitude (CD) magnitude. Events are examined by an analyst to refine computer P-picks and to time additional P- and S-phases for a preliminary location. Binary CUSP files are tape-archived and translated into ASCII phase files. Locations are then determined, using the program HYPOINVERSE (Klein, 1989)[2]. Events are reworked and rerun, as needed, to produce a final solution. Magnetic tape copies of all arrival times and output summary data are kept at Menlo Park and at HVO.

The crustal model used is specified by velocities at four depth points. Velocity at any depth is given by linear interpolation between points and uses a homogeneous half-space, as listed below:

VELOCITY (km/sec)	DEPTH (km)
1.9	0.0
6.5	4.6
6.9	15.0
8.3	16.5

Two empirical sets of station delays or corrections were used in the locations and are given in Table 1. The delay models are separated by a circle of radius 34 km, centered at 19°22' N and 155°10' W. Delay model 1 is used for epicenters occurring within a circle of radius 31 km from the center. This region includes Kilauea and its south flank. A combination of the two delay models is used for epicenters that fall in a transition zone that is 6 km wide. Delay model 2 is applied to the rest of the island and offshore earthquakes. (For a detailed description, refer to Klein, 1989.)[2]

Magnitudes for most events are computed using both recorded amplitudes on low gain or Wood-Anderson stations and signal or coda duration on selected short-period vertical stations. Amplitudes read from other than Wood-Anderson instruments are corrected to an equivalent Wood-Anderson amplitude using the curves of Figure 4 and CAL factors listed in Table 1. Amplitude magnitudes larger than 2.5 are generally based on the Wood-Anderson instruments in Hilo or on Type 2 seismographs at Uwekahuna.

Duration magnitudes are determined from the length of signal in seconds read from the Develocorder viewer. This length of time, also called the "F-P time," is measured from the P arrival to the point where the earthquake signal decays nearly to the noise level. A bilinear relation is an appropriate fit to the data sample and is used to compute all duration magnitudes. Duration times are read only from Type 1 seismographs. Because duration magnitudes are relatively insensitive to station response and can be determined using the high-gain, short-period stations, it is felt that duration magnitudes are more accurate and complete at the lower magnitudes (below 2). The equations used in magnitude determination are as follows:

duration < 210 sec $M = -5.2 + 3.89 \log (F-P) + .013 Z - + .0037 D$

duration > 210 sec $M = -.905 + 2.026 \log (F-P) + .013 Z-- + .0037 D$

where Z and D are the depth and epicentral distance in km, respectively.

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[2] Klein, F.W., 1989, User's guide to HYPOINVERSE: U.S. Geological Survey Open-File Report 89-314, 58 p.

SEISMIC SUMMARY

The emphasis in both station coverage and detailed data analysis is on the highly active south half of the Island of Hawaii. Hundreds of earthquakes too small to locate are classified as to type[3] and counted daily. The set of well-recorded earthquakes located in the Hawaii Island region is nearly complete above magnitude 2.0. Many smaller events are located in the densely instrumented Kilauea area. Substantial effort is made to locate earthquakes elsewhere within the Hawaiian Archipelago. Such coverage cannot be as complete as in south Hawaii, but nearly all events above magnitude 4.0 are located with limited precision. Data presented in the seismic summary are in four parts: (1) Table 3 gives duration of harmonic tremor and numbers of earthquakes (most too small to locate) from several source regions around Kilauea and Mauna Loa. The source region is determined visually from signal character and pattern of arrival times at key stations. (2) Maps showing computer-located hypocenters are given in Figures 9-22. The location maps are of different scales and provide hypocenters with magnitude thresholds set at 1.0, 2.0, 3.0, and 3.5, varying according to region. (3) The list of computer locations constitutes the bulk of this summary and is given in Table 5. Each earthquake in the list is assigned a three-letter code based on its general location and depth. Figures 5-8 are maps of the regions used to assign the location codes. The latitude and longitude limits of rectangular regions are listed in Table 4. When the listed coordinates overlap, precedence is given according to Figures 5-8. (4) Table 6 re-lists the events in Table 5 for which either duration or amplitude magnitude is 3.0 or larger. This list includes many of the earthquakes felt in Hawaii.

Table 3. Number of earthquakes and minutes of tremor recorded on seismographs around Kilauea and Mauna Loa.

Earthquake categories are as follows:

1) Kilauea summit, short-period caldera: shallow earthquakes beneath the caldera.
2) Kilauea summit, long-period caldera A: earthquakes characterized by low frequency signatures of 3 to 5 Hz, often originating 0-5 km beneath the summit.
3) Kilauea summit, long-period caldera B: earthquakes characterized by low frequency signatures of 1 to 3 Hz, often originating 0-5 km beneath the summit.
4) Kilauea summit, long-period caldera C: earthquakes characterized by low frequency signatures of 1 to 5 Hz, often originating 5-15 km beneath the summit.
5) Kilauea summit 30 km: earthquakes about 30 km deep beneath the summit region.
6) Kaoiki and southwest rift: earthquakes beneath the southwest rift of Kilauea, western parts of the Koae faults, and adjacent Kaoiki fault system of Mauna Loa.
7) Upper east rift: earthquakes in the upper and middle east rift zones, the adjacent parts of the south flank, and eastern parts of the Koae faults.
8) Lower east rift: earthquakes in the lower east rift zone and adjacent parts of the south flank.
9) Mauna Loa short-period: shallow earthquakes in the Mauna Loa summit region.
10) Mauna Loa long-period: earthquakes characterized by low-frequency signatures near the summit region.
11) Mauna Loa northeast rift: earthquakes beneath the northeast rift zone of Mauna Loa.
12-15) Tremor is separated into four categories: Kilauea--shallow, intermediate, and deep, and Mauna Loa. Depth is inferred on the basis of relative amplitudes on seismographs.

The criteria for Kilauea shallow tremor have been changed to accommodate the ongoing eruption where tremor in the middle east rift zone is continuous. Distinction is made between high-amplitude tremor related to strong eruptive periods and low-amplitude tremor during periods with no lava production. Only minutes of tremor at saturated levels recorded locally at STC and KLC are included in Table 3.

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[3] Koyanagi, R. Y., 1982, Procedure for routine analyses and classification of seismic events at the Hawaiian Volcano Observatory, Part I: U.S. Geological Survey Open-File Report 82-625, 32 p.; figs., 59 p. [unpaginated].

Table 3.

DATE 1987	KILAUEA SUMMIT					KILAUEA FLANK			MAUNA LOA			TREMOR (MINUTES)		
	SHORT PER. CALD.	LONG PERIOD CALDERA A	B	C	30 KM	KAO. & SW RIFT	UP. EAST RIFT	LOW. EAST RIFT	SHORT PER.	LONG PER.	NE RIFT	KILAUEA SHAL.	INT.	DEEP	MAUNA LOA
JAN 1	89			7	1	38	59	8	4		5			3	
2	107	1		1	2	28	70		2		3				
3	116	9				36	58		1	8					
4	149	2		5		55	63	4	1		7			33	
5	145					57	74	3	2		8				
6	106			21		31	101	4	1	2	6				
7	110			3		39	75	4	3	1	4				
8	139	1				39	83	5	2	2	4				
9	130	1		33		33	56	4	2		5				
10	66			40		28	23	2	12		4			45	
11	124			18		34	32		1		2			9	
12	185			7		17	60	3	7		5				
13	152			29		34	35	2	2	3	2				
14	128			11		48	64	2	1		4				
15	156	4		14		32	53		1		6				
16	80			67	1	35	33				2			16	
17	131	1		37		34	62	3	4	1	2			9	
18	79			48	1	22	33								
19	38			10		22	15	8	4		2			8	
20	41			8		33	24	2	3	1	2			28	
21	100					27	37	6	4		7				
22	78			12		43	33	2	2	2	4				
23	100	1		7		27	37	6	1	1	12				
24	71			7		37	55	3	3	1	8				
25	85			2		19	37	4	4	1	4			105	
26	63	10		2		34	26	3	7	1	4				
27	112	15		1		41	58	5	3	2	10			3	
28	88	3		5	1	32	50	11	4	3	5				
29	89					39	78	5			9			31	
30	99	1		1		19	80				1				
31	96	1		5		28	49							15	
FEB 1	71			5		38	56	2			4				
2	64					20	70	1	1	6	2				3
3	51			10		32	58	6	2	4	5			8	
4	49			5		39	45	5		2	3				
5	62			1		34	56	6	1	1	5			10	
6	122			26		34	59	3	1	1	4				
7	81			78		43	65	4	1	1	7			6	
8	64			95		22	65	1	1		5				
9	113			101		31	66	8	1	1	4			8	
10	110			60		44	75	3	3	1	3			3	29
11	111			88		43	97	6	1		8			9	
12	139			342		30	82	6	1	3	4				
13	71			148		31	44		2	4	3				
14	78	4		152		49	69	1			1			20	
15	78			107		39	65			7		13		35	
16	58	2		121		36	40	2			6				
17	44	2		79		18	47	6	2	1	2				
18	28	3		69		30	47	3	2	7	5				
19	35	16		49		41	58	3		1	3				
20	41	13		28		43	55	3	1	11	3				
21	74	9		17		42	49	21		2	5				
22	63	16		26		37	71	2	1	2	5				
23	60	3		29		42	65	4	3	3	4				
24	67	6		19		42	45	1	3	2	7				

	KILAUEA SUMMIT					KILAUEA FLANK			MAUNA LOA			TREMOR (MINUTES)		
DATE 1987	SHORT PER. CALD.	LONG CALDERA A	B	C	30 KM	KAO. & SW RIFT	UP. EAST RIFT	LOW. EAST RIFT	SHORT PER.	LONG PER.	NE RIFT	KILAUEA SHAL.	INT.	DEEP	MAUNA LOA
FEB25	89			27		27	62	3			3				
26	82	5		8		33	58	5		2	2			35	
27	107	6		13		36	54			2	3				3
28	134	6		27		24	48	2		1					
MAR 1	96			2		38	51	1			1				
2	102	3		5		27	52	2							
3	75	3		9	1	25	51								
4	84			7		19	38	1		1			3		
5	77			7		30	44			3			4		
6	87	5	3	4		16	42	5			5				
7	95	7	1	1		33	54	7			2				
8	81	8		17		26	91	9	3	3	4			5	
9	67	104	1	9		20	63	2	7	3	2				
10	134	34				35	53	3	2	2					3
11	98	32		3		25	47	4	1	1	4				2
12	100	111		4		25	66	3	2	2	3				
13	153	40		12		29	58	4		1				32	
14	295	20		33		44	64				1			4	3
15	182	13		8		70	49	6			8				
16	89	628		39		39	52	1	2	2	4				
17	74	331		7		21	52	1	2	2	1				
18	68	91	1		1	43	72	6	4	3	4			5	
19	86	118		8		32	60	1	2		2				
20	59	11		22		23	35	1	2	1	1			3	
21	78	20		21		35	53	7	2	1	5				
22	67	28		57		29	51	4	3	1	3				
23	87	24		6		40	62	4	1		5				
24	56	8		15		19	34	1	1		6		19		
25	49	8				17	31	2	4	3	2				
26	67	11		1		25	56	5	3	2	5				3
27	65	10		1		22	66	4	1		5				
28	61	4		1		21	59	4	2	2	3				3
29	73	2		2		11	63	11	1	1	1				
30	71	28		3		5	41	5	4		2				
31	74	5		2		25	25	6	3		7				
APR 1	64	36		2		23	45	4			4				
2	70	19				38	49	4	3		3			31	
3	130	1		1		56	53		1	4					
4	102	31		9		35	68		1						
5	144	22		2		35	74	5	1		4			5	
6	154			3		47	78	8	3		7				
7	173	1		8		41	42	2	2	1	3				
8	132	6		21		37	70		3		6				
9	167	4		5		36	61	4	1	2	6				8
10	175	1				36	62			1	2				
11	155	5		1		36	71	2			2		3		
12	119			3		26	79	5	2		7				
13	96	4		3		21	64	4	1		2				
14	95	2				26	71	3	8		6				
15	116	1		4		25	51	1	3	1	3				
16	145	1		4		23	43	8			4				
17	163			4		46	60	2	3		8				
18	164			4		35	77	8	1	1	5				
19	216					44	89	7		1	3			3	
20	173	5		2	1	39	60	4	1		6				

	KILAUEA SUMMIT					KILAUEA FLANK			MAUNA LOA			TREMOR (MINUTES)			
	SHORT	LONG	PERIOD		30	KAO.	UP.	LOW.	SHORT	LONG	NE	KILAUEA			MAUNA
DATE	PER.	CALDERA			KM	& SW	EAST	EAST	PER.	PER.	RIFT				LOA
1987	CALD.	A	B	C		RIFT	RIFT	RIFT				SHAL.	INT.	DEEP	
APR21	147			2		26	55	7	3	1	5				
22	153	1				31	92	6	4		6				
23	144			2		35	69		4	1	6				
24	161			2		56	58	1			2				
25	214			3		33	73	2							3
26	101			1		55	71	10	3		6				
27	134			1		34	63		1	1	7				
28	161			1		37	68	5	1		3			18	
29	145	2		2		30	74	5	1	2	13				
30	98	1		3		43	77	4	1	1	6				
MAY 1	108	5		26		59	79	6	2		7				
2	129	1		1		44	77	4	2	1	6				
3	135			2		28	69	7	3	1	6				
4	151	1		4		39	64	5	1	1	10				
5	119			3		25	66	11	1	3	7				8
6	119			6		31	74	6	1	1	10			29	
7	124			3		31	45	2			4			7	
8	131			4		43	52	4		1	1				
9	113	1			1	44	73	2	1		1				
10	130	1		2		38	72	6			2				
11	154	2				49	43	10	2	1	1	2	15		4
12	163	6		3		43	78	3	2	2	4				
13	141	2		13		32	68	6	1		4				
14	139	2		2		47	78	18	1	1	4			4	
15	157			63		34	63	3	4	5	1			6	
16	141			7		51	64	5			4				
17	143	5		3		57	63	11	2	1	2				
18	137	5		6		33	86	6		1	7				
19	152	12		5		39	65	2	3		4				
20	170			3		49	56	6	2		5			44	
21	157	1		21		25	71	5	3	1	2				
22	128			8		39	66	3	2						
23	195				1	36	67								
24	193					48	68	2							
25	227	1		4		28	71	7	4		8				
26	193			4	2	35	68			1					
27	186			1		58	66	4	3	1	2				
28	166			1		34	57								
29	201			20		47	75								
30	195	1		8		37	82	1	2						
31	155			4		53	57	3	2	3	6				3
JUN 1	161			3		42	64	1	1	2	1				
2	153	1		7		46	50	7	3	4	2			3	
3	145			5		50	54	8			7			21	
4	148			1		47	70	4	2		8				5
5	167			3		47	73	8	2	1	8			4	
6	148			26		32	83	3	1	1	8				
7	181		1	179		39	54	2	1		6			28	
8	165	7		88		59	67	5	2	2	9				
9	116			150		42	74	5	3	4	8				34
10	150			149		23	63	5		1	6			20	
11	176			89		28	54	7	2	2	3				2
12	168	1		70		34	62	4			3				
13	146	1		25		25	63	5	4		1				
14	166			52		24	72	10	3	2	6				

	KILAUEA SUMMIT					KILAUEA FLANK			MAUNA LOA			TREMOR (MINUTES)			
DATE 1987	SHORT PER. CALD.	LONG PERIOD CALDERA A	B	C	30 KM	KAO. & SW RIFT	UP. EAST RIFT	LOW. EAST RIFT	SHORT PER.	LONG PER.	NE RIFT	KILAUEA SHAL.	INT.	DEEP	MAUNA LOA
JUN15	159			12		34	49	2	2		4			13	
16	193	4		6		33	58	3	2		1			5	
17	142			3		33	53	4	1	1	6				
18	198					36	58	1						21	
19	166	1		3	1	30	54	4	4		4				
20	137	1		8	1	28	50	6	2	2	4				
21	142	3		7		30	54	7	3	I	3			3	5
22	118	2		2		25	66	4	1		7			26	
23	146	1		13		38	48		8	1				11	
24	106	2		9		39	53	3	2						
25	200	1		4		38	292			1				10	
26	145	1		2	3	49	298	6						12	
27	138			8		42	302	4	1						
28	211	3		9		28	401	6	2	4	6				
29	142	4		23		29	418	6	1	1	3				
30	159	2		19		24	400	5	1		2				
JUL 1	159			88		34	369	4	1		4				
2	149	1		146	1	36	275	8	1	2					
3	94			91		46	283	7		1	1				
4	126	1		55	2	32	283	8		1	1				
5	117			34		22	291	7	4	3	9				
6	105			19		28	278	4	3	2	1				
7	165			29		24	286	7	3		2				
8	131			7		20	289	2	2	1	3				
9	121			62		41	239	6			11			46	
10	113	1		15	2	41	179	3	17						
11	114			6		39	217	4	3	1	2				
12	198			9		31	244	4	2		1				
13	163			20		36	262	8	1		3			32	
14	177			14		44	251	10	5	3	5			2	
15	169			21		33	204	5	4	1	10			34	
16	133			10		34	256	6	3	2	4				
17	142	2	1	5		38	257	8	3	1	1		6	21	
18	128			8		44	201		4	1	4			15	
19	112			10		32	188	9	2	1	4			3	
20	168		1	10		43	186	2	2	1	9				
21	184			15	1	43	185	6	2		11				3
22	210			20		35	141	4	3	4	6			4	3
23	158			16		32	156	5	5		3				
24	171			18		32	194	5	1	1	3				
25	155			28		37	147	5	4		7			28	
26	139			13		51	188	6	5	1	6				
27	163			8		36	165	4	1	2	12				
28	125			8		25	147	4	2		8				
29	109			15		38	134	5	4		5			22	
30	182			6		26	112		4		1			34	
31	154			6		35	91	2	3						2
AUG 1	122				1	28	135	4	1		1				
2	108			4		35	134	6		1	2				5
3	113	2		4		30	132	2	4	1	3				
4	160	1		4		25	135	2	6	3	4				
5	111			2		31	101	5	4		3			26	
6	86	1		12		47	115	3	4		3			4	
7	108	3		2	1	46	86	5		1	7				
8	117	3				30	120	9	6		6				

	KILAUEA SUMMIT					KILAUEA FLANK			MAUNA LOA			TREMOR (MINUTES)		
		LONG PERIOD												
DATE	SHORT PER.	CALDERA			30 KM	KAO. & SW RIFT	UP. EAST RIFT	LOW. EAST RIFT	SHORT PER.	LONG PER.	NE RIFT	KILAUEA		MAUNA LOA
1987	CALD.	A	B	C								SHAL.	INT.	DEEP
AUG 9	114					34	100	1	6		5			
10	130	1		1		40	82	3	7	2	17			
11	85					31	74	2	4	3	9			
12	87			5		29	70	2	4		7			
13	110	1				24	60	4	1					
14	170	1		1		41	69	6	7				3 4	
15	133					37	66	9	2					
16	134			4		35	63	8			4			
17	125			2		44	85	2	1		15			
18	118			6		35	69	7	3		7			
19	124	3				22	68	6	2		8			
20	101			1		19	87	7	3		7		2	2
21	129	1		2	1	27	83	5	2		6			
22	93					45	70	4	9	1	6		59	
23	90					26	96	5			1		54	
24	124	2				25	63	3	1		6			
25	108	1		1		28	43	3	1		1		32	
26	134	1				27	65	3	2		1			
27	141					36	70	5	3		4		8	
28	156	2			2	31	67	3	3	1				
29	172	4		2		36	84	2	2		2			
30	91	3		3		29	77	6	1		6		20	
31	116	1		1		35	63	3	2		5		3	
SEP 1	111		1	1		56	71	6	2		11		2	
2	114	1		6		29	103	8	4		6			
3	83			9		34	74	8	5	3	6		3	
4	123			1	1	25	60	3	2	5	2			
5	129	1				38	55	1	1	4	4		3	3
6	168	3				25	80	2	3	1	12			
7	202			2		31	58	7	2		5			
8	194			1		38	68	1	2		7			
9	200			5		38	65	13	3	1	7			
10	176	1	4	2		22	62	7	11	2	4			
11	131			5		53	39			1				
12	158	1			1	29	63		1	2				
13	195	2			1	44	75	1	1		6		45	
14	142	1		1		25	48	3	3	1	5			4
15	167			2	1	20	49	5	2		8		33	
16	172	1		2	4	29	87	6	1		8			
17	154					39	74	9	3		5		4	
18	201			3		49	77	5	5		7		45	
19	141	1		14		33	81	5	5		9	68		
20	84	6		1		32	53	8	1	2	4			
21	108	1		5		33	61	6	6		4			
22	89			16		46	58	3	2	1	3			
23	75			10		50	63	7	2	3	3		11	
24	99			2		25	94	5	1	1	1		8	
25	92	2		1		33	57	1	2					
26	95	1			1	31	55	4	1	1	1			13
27	83					32	59	6	1	2	9			
28	102			12		33	59	7	4		3			
29	102	2		30	1	50	62	8	3	1	2			
30	86	3		13		31	37	5	1		4			
OCT 1	92	4		1		26	42	1	2		8			2
2	93			3		36	52	1	1	1	8			

	KILAUEA SUMMIT					KILAUEA FLANK			MAUNA LOA			TREMOR (MINUTES)			
DATE 1987	SHORT PER. CALD.	LONG PERIOD CALDERA A	B	C	30 KM	KAO. & SW RIFT	UP. EAST RIFT	LOW. EAST RIFT	SHORT PER.	LONG PER.	NE RIFT	KILAUEA SHAL.	INT.	DEEP	MAUNA LOA
OCT 3	95			13		40	53	8	2	1	4			17	
4	87			32		31	60	2	2	2	7			6	4
5	89			8		39	68	5	3	2	6			15	
6	77			2		44	71	3	2		8				4
7	58			23	1	30	47	2	1	2	7				
8	67	2		1	1	22	49								
9	142			1	3	33	49	7		2	1				
10	126	3		1		49	37	5	1				3		
11	112	1				43	44	2	1	2	1				5
12	96			1		48	68	5	7	1	6				
13	87			3		35	35	3		2	6				3
14	97			1		35	54	3	5	3	7				61
15	102	2		1		37	49	6	2	4	3				
16	108			1		36	57	8	4	7	2			48	
17	126	1				49	63	8	3		4		6		
18	124			4		40	60	3	3	1	9				
19	63	1		1		27	55	4	3	1	7				
20	92			1		25	60	8	4		10				
21	90			5		29	80	12		1	2			9	
22	138			3		38	33	5	2						
23	104	3		2		23	54	2	3	1	1				
24	89	3				25	37	4							
25	111			1		40	47	1	3	1	3				
26	57	1		1		11	40	5	5	1	2				
27	79					17	35	2	4	2	7				
28	94			22		36	56		1	2	5				
29	80			1		38	39	3	1		6			43	
30	74			23	2	14	42	2			1		17	16	
31*	26	1	3			9	10		1	1	3				
NOV 1*	56			1	1	13	24		1		2				
2*	74			1		28	41	4	1	2					
3	104	3		5		14	30	1	1		2			38	
4	87			2		19	62		2		10				
5	101			12		34	63	9	2	1	10				
6	137	2		16	1	36	44	1	1		1				
7	91	1			1	34	62	1	1	1	1				
8	120	4	2	3		43	53	3	3		10			3	
9	101	1	1			31	43		1	2	5				
10	73	1		1		27	62	4	3	1	5				3
11	223					36	66	4			2			12	
12	224			1		29	64	5		1	8				
13	376			1		61	73	1	2		5				
14	343			2		40	53	8						7	
15	268	1		6		34	83	4	1	1	4			31	
16	115			1		40	48	3	3	1	4				
17	74			4		45	66	4	3		8				
18	86			8		32	38	3	3		5				
19	121			11		30	78	4	6	1	5				
20	109	1		10	1	28	52	1			2				
21	75			12		21	24	1	1		1			39	
22	98			71		35	49	4	5		4			10	
23	95	1		170		37	58	2			5		18	3	
24	45	4		4		28	51		2	1	6				
25	75			2		27	30	6	4		3				
26	89			23	1	20	24	1			8				

	KILAUEA SUMMIT				KILAUEA FLANK			MAUNA LOA			TREMOR (MINUTES)		
DATE 1987	SHORT PER. CALD.	LONG PERIOD CALDERA A	B	C	30 KM	KAO. & SW RIFT	UP. EAST RIFT	LOW. EAST RIFT	SHORT PER.	LONG PER.	NE RIFT	KILAUEA SHAL.	INT.	DEEP	MAUNA LOA
NOV27	84			9		24	22	2	1		12				
28	88			7		15	29	6			10				
29	119	3		8		18	47	3			4				4
30	118	11		8		25	49	3	1	2	4			20	
DEC 1	110	50		3		27	62	5	3	1	4		2	18	
2	95	301		5		36	51	7	3		6				
3	73	382		3		36	63	3	4	1	6				
4	53	1080	1	3	1	42	72	2	1		3				
5	41	1103	3		1	31	31		2						2
6	47	2614		10		31	39	5	1		4		7		
7	28	4541		8		30	46	2	4	2	6				
8	21	4429		10		27	72	2	2	2	1				
9	25	2506		8		30	33	12			4				
10	36	2223		10		30	51	5			4				
11	71	1957		6		31	78	7		2	3				4
12	157	3206		7		10	42	3			5				
13	308	1075		3		40	109	5	6		5				
14	258	838		3		42	95	6	12	2	8				
15	251	27		7		35	65	4	14		15				
16	200	305		13		41	62	3	5		10				9
17	158	97		1		36	23	5	2		1			8	
18	195	93		1		13	33		6	3	1				
19	183	6		1		23	46	1	19	1	1				
20	130	225		10		30	61	5	62	1	5			10	
21	132	8				27	58	7	17	1	6			5	
22	111	10		41		34	59	2	2		11		23		
23	76	82		5		27	61	4	6	3	2				
24	103	14		8		40	48	6	11		7				
25	95	13				34	44	1	5	1	3			25	4
26	138	4		1		27	36	7	2		8				
27	131	12		4		44	43	2	7	1	3			6	
28	104	9		28		25	44	1	2		6				
29	116	10		4		31	49	4	3		6				
30	82	35				19	48	3	4	1	4				
31	162	111		5		35	44								

*Data incomplete - station(s) or recorder not in operation.

Table 4. Names and coordinates of regions used for classifying earthquakes.

All earthquakes locate in one of the following groups, identified by a numerical class or three-letter code:

--Shallow:

1 SNC - Shallow north caldera (0-5 km)
2 SSC - Shallow south caldera (0-5 km)
3 SEC - Shallow east caldera (0-5 km)
4 SER - Shallow east rift (0-5 km)
5 SME - Shallow middle east rift (0-5 km)
6 KOA - Koae fault zone (0-5 km)
7 SSF - Shallow south flank (0-5 km)
8 SLE - Shallow lower east rift (0-5 km)

--Intermediate depth:

9 SF1 - Kilauea south flank (5-13 km) (west end)
10 SF2 - Kilauea south flank (5-13 km)
11 SF3 - Kilauea south flank (5-13 km)
12 SF4 - Kilauea south flank (5-13 km)
13 SF5 - Kilauea south flank (5-13 km) (east end)
14 LER - Lower east rift (5-99 km)
15 MLO - Mauna Loa (0-13 km)
16 LSW - Lower southwest rifts of Kilauea and Mauna Loa (0-13 km)
17 GLN - Glenwood (0-13 km)
18 SWR - Southwest rift (0-13 km)
19 INT - Intermediate caldera (5-13 km)
20 KAO - Kaoiki (0-13 km)

--Deep:

21 DEP - Deep Kilauea (>13 km) (below regions 1-13, 17-19)
22 DLS - Deep lower southwest rift (>13 km) (below region 16)
23 DML - Deep Mauna Loa (>13 km) (below regions 15, 20)

--Outer regions, all depths:

24 LOI - Loihi
25 KON - South Kona
26 HUA - Hualalai
27 KOH - Kohala
28 KEA - Mauna Kea
29 HIL - Hilo
30 DIS - Distant, everywhere else

Table 4 (continued). The latitude and longitude limits of the regions are given below. When the coordinates overlap, precedence is given as in the maps.

No.	Code	N. Lat.	S. Lat.	W. Lon.	E. Lon.
1	SNC	19 28.0	19 24.5	155 19.0	155 14.0
2	SSC	19 24.5	19 22.0	155 19.0	155 16.5
3	SEC	19 24.5	19 22.0	155 16.5	155 14.0
4	SER	19 26.0	19 20.5	155 14.0	155 07.2
5	SME	19 26.0	-------	155 07.2	155 00.0
6	KOA	19 22.0	19 20.5	155 17.0	155 14.0
7	SSF	-------	19 10.0	155 17.0	155 00.0
8	SLE	19 32.0	19 16.0	155 00.0	154 40.0
9	SF1	19 22.0	19 10.0	155 17.0	155 14.5
10	SF2	19 26.0	19 10.0	155 14.5	155 12.3
11	SF3	19 26.0	19 10.0	155 12.3	155 09.1
12	SF4	19 26.0	19 10.0	155 09.1	155 05.3
13	SF5	19 26.0	19 10.0	155 05.3	155 00.0
14	LER	19 32.0	19 16.0	155 00.0	154 40.0
15	MLO	19 35.0	19 19.0	155 35.0	155 19.0
16	LSW	19 19.0	18 40.0	155 43.0	155 25.0
17	GLN	19 35.0	19 26.0	155 19.0	155 00.0
18	SWR	19 22.0	19 10.0	155 25.0	155 17.0
19	INT	19 28.0	19 22.0	155 19.0	155 14.0
20	KAO	19 30.0	19 19.0	155 32.0	155 19.0
21	DEP	19 35.0	19 10.0	155 25.0	155 00.0
22	DLS	19 19.0	18 40.0	155 43.0	155 25.0
23	DML	19 35.0	19 19.0	155 35.0	155 19.0
24	LOI	19 10.0	18 40.0	155 25.0	155 00.0
25	KON	19 39.0	19 00.0	156 20.0	155 43.0
26	HUA	19 55.0	19 39.0	156 20.0	155 43.0
27	KOH	20 25.0	19 55.0	156 20.0	155 34.0
28	KEA	20 25.0	19 35.0	155 34.0	154 40.0
29	HIL	19 47.0	19 32.0	155 09.0	154 40.0

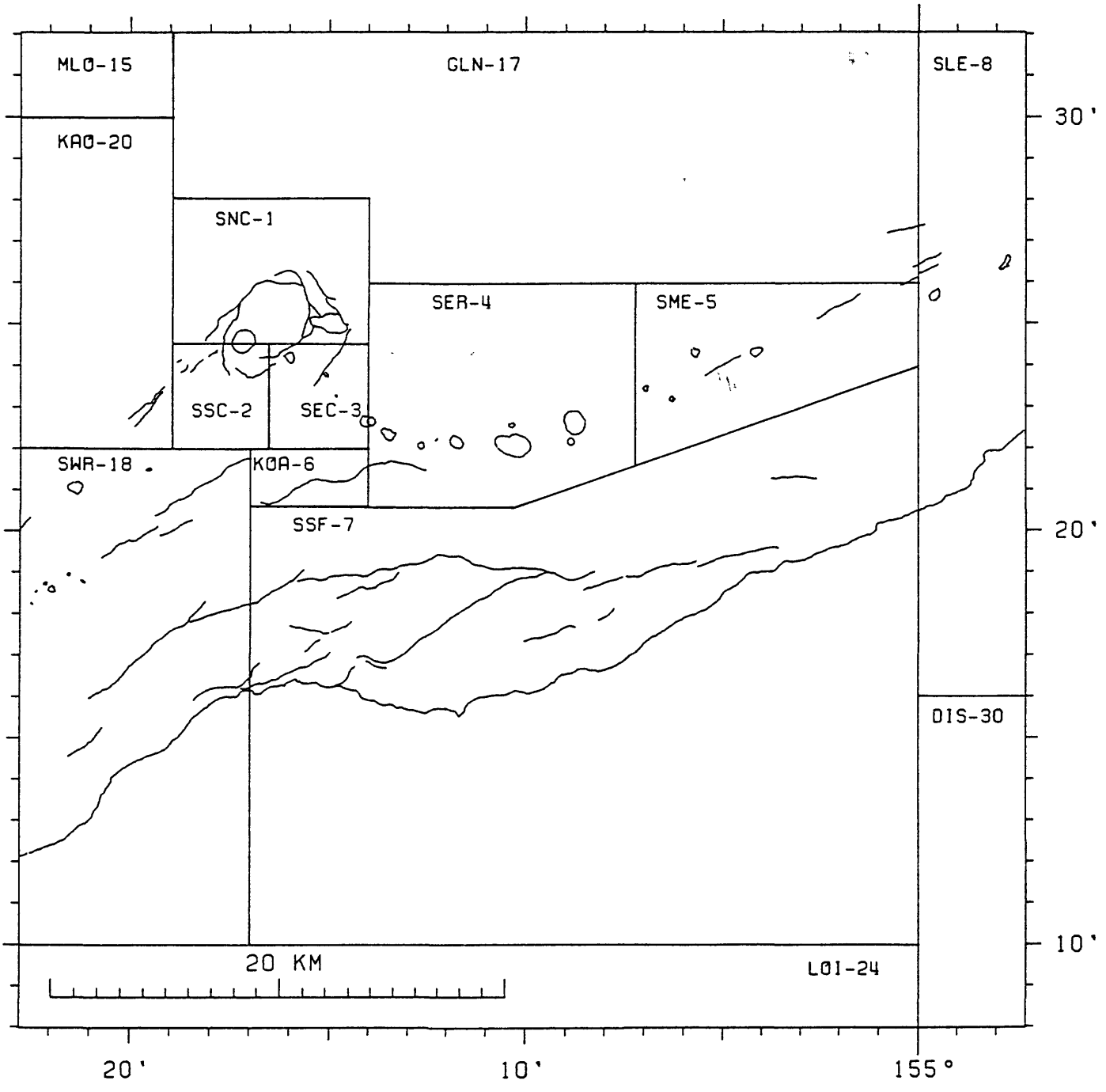


Figure 5. Earthquake classification, shallow (0-5 km deep), for Kilauea and the east flank of Mauna Loa.

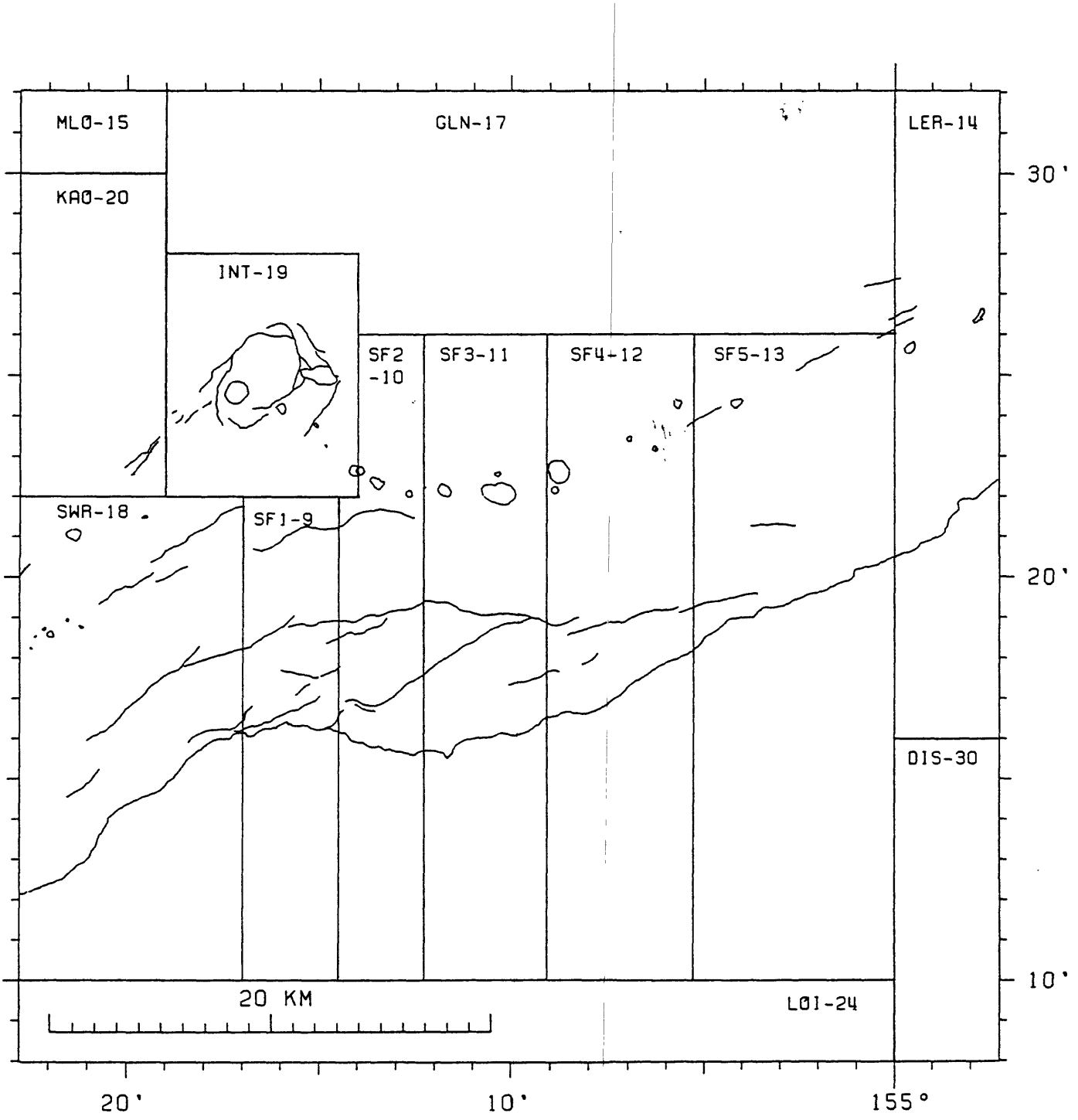


Figure 6. Earthquake classification, intermediate (5.1-13 km deep), for Kilauea and the east flank of Mauna Loa.

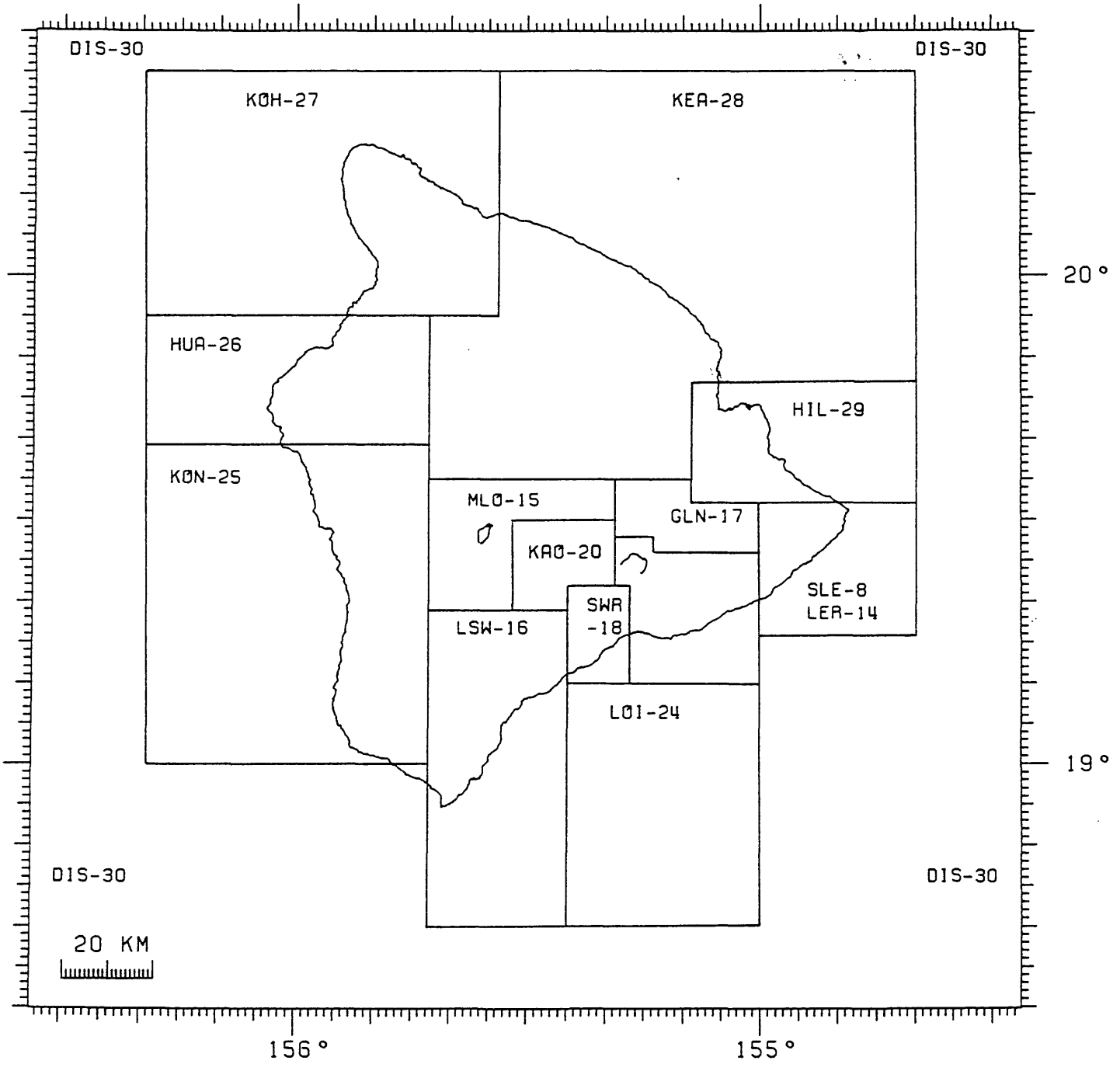


Figure 7. Earthquake classification, crustal (0-13 km deep), for the Island of Hawaii.

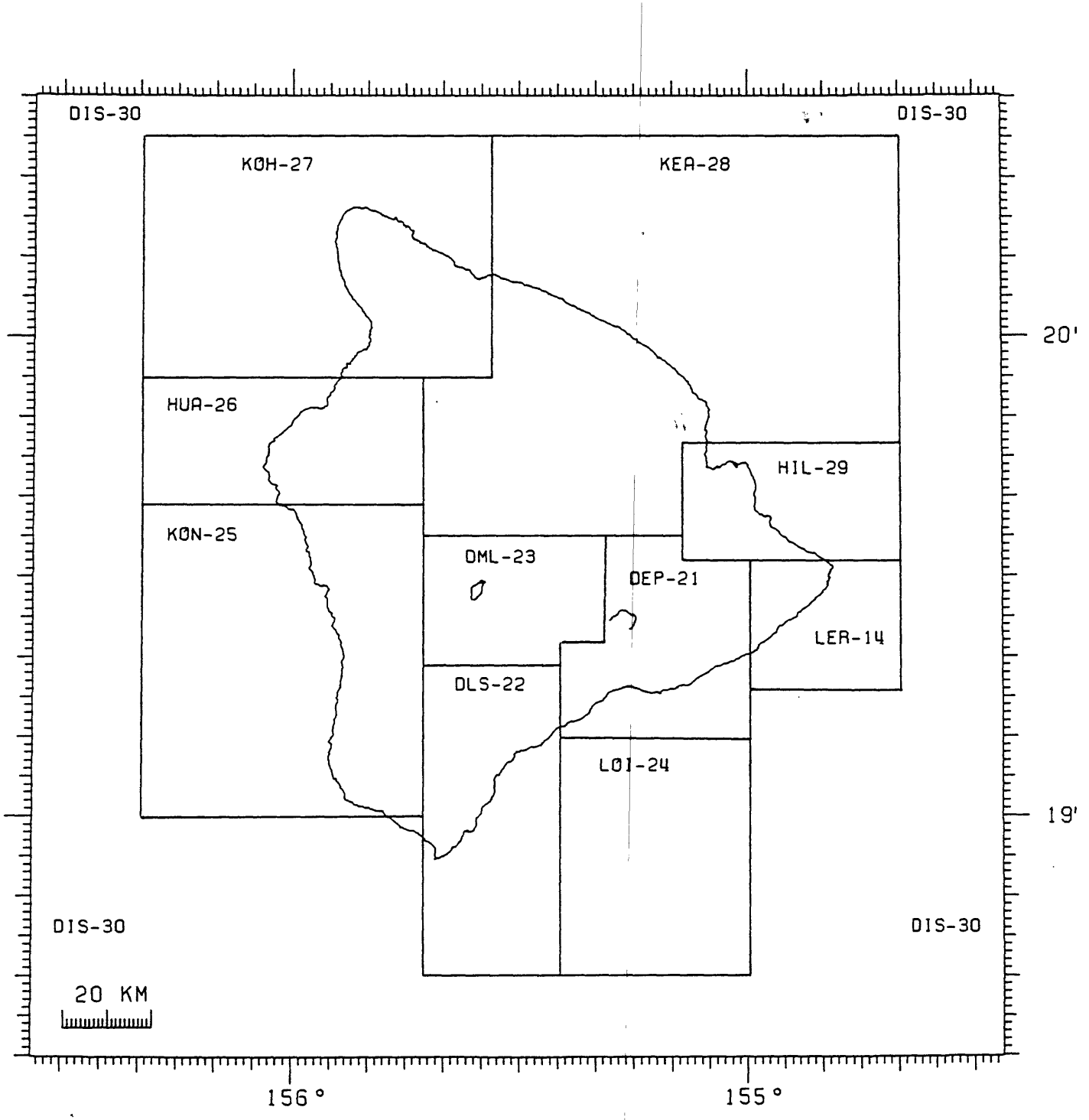
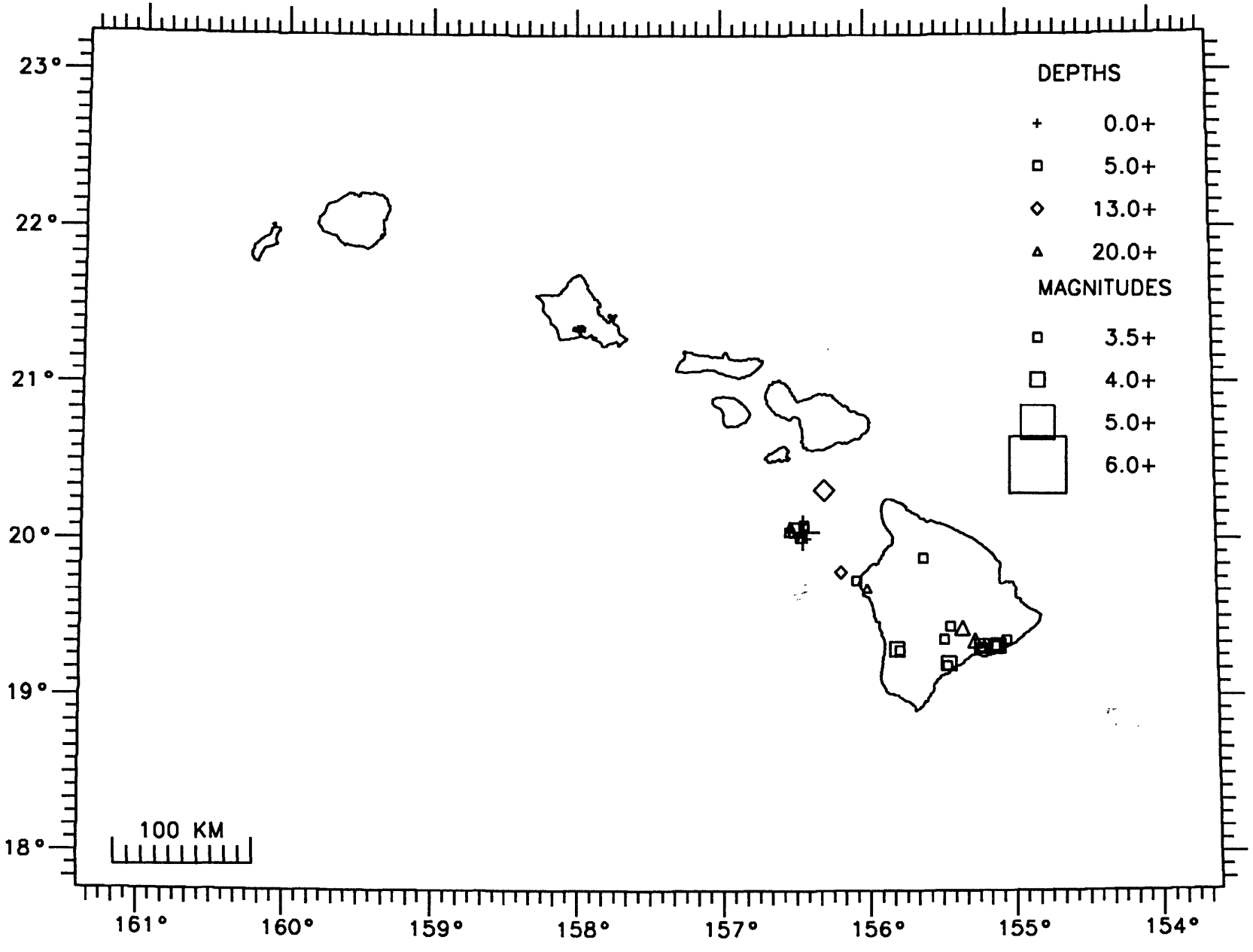


Figure 8. Earthquake classification, deep (greater than 13 km deep), for the Island of Hawaii.

Figure 9. 1987 Earthquake locations, Hawaiian Islands,
0–60 km depth, M>=3.5.



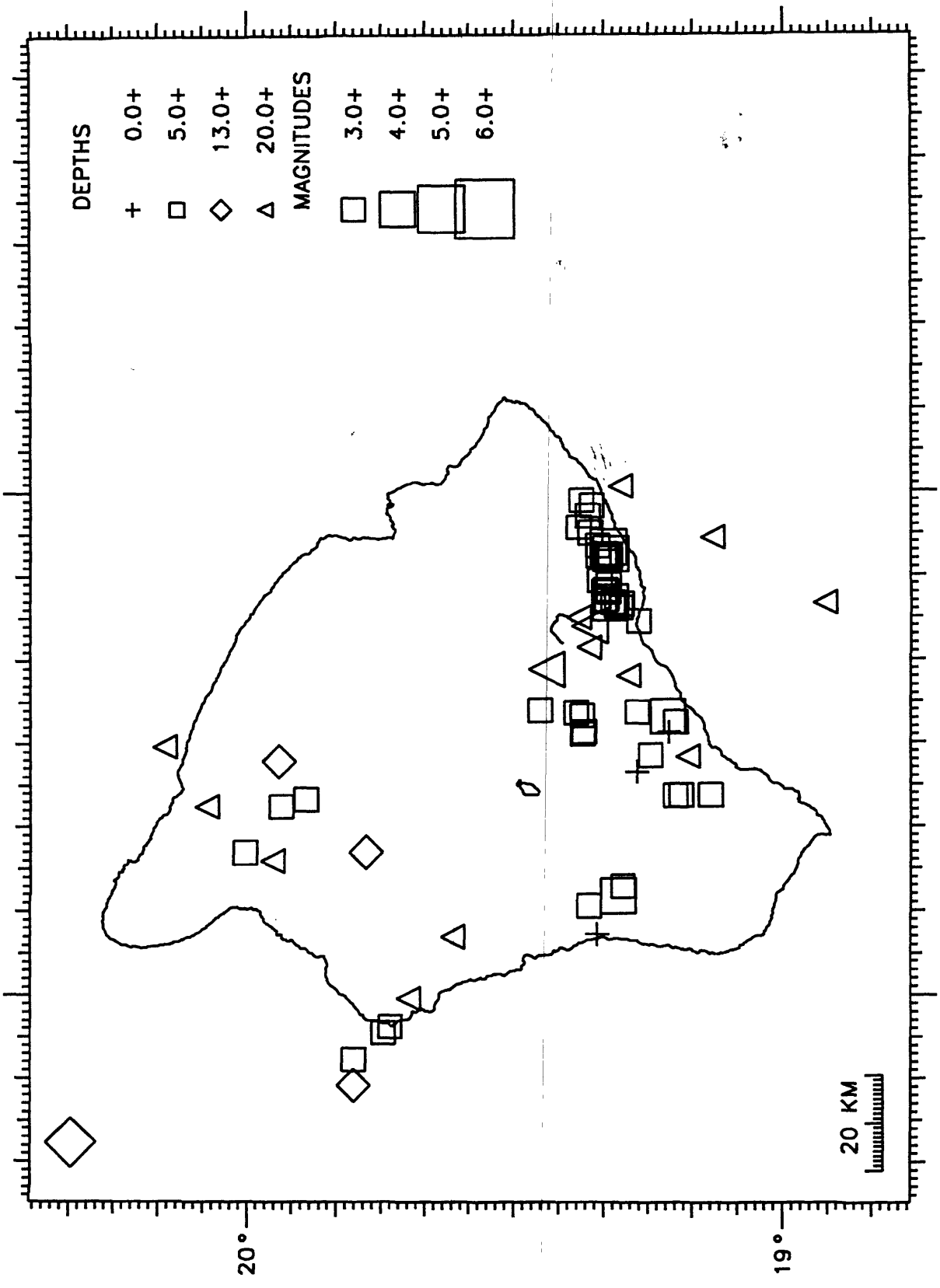


Figure 10. 1987 Earthquake locations, Hawaii Island, 0–60 km depth, M>=3.0.

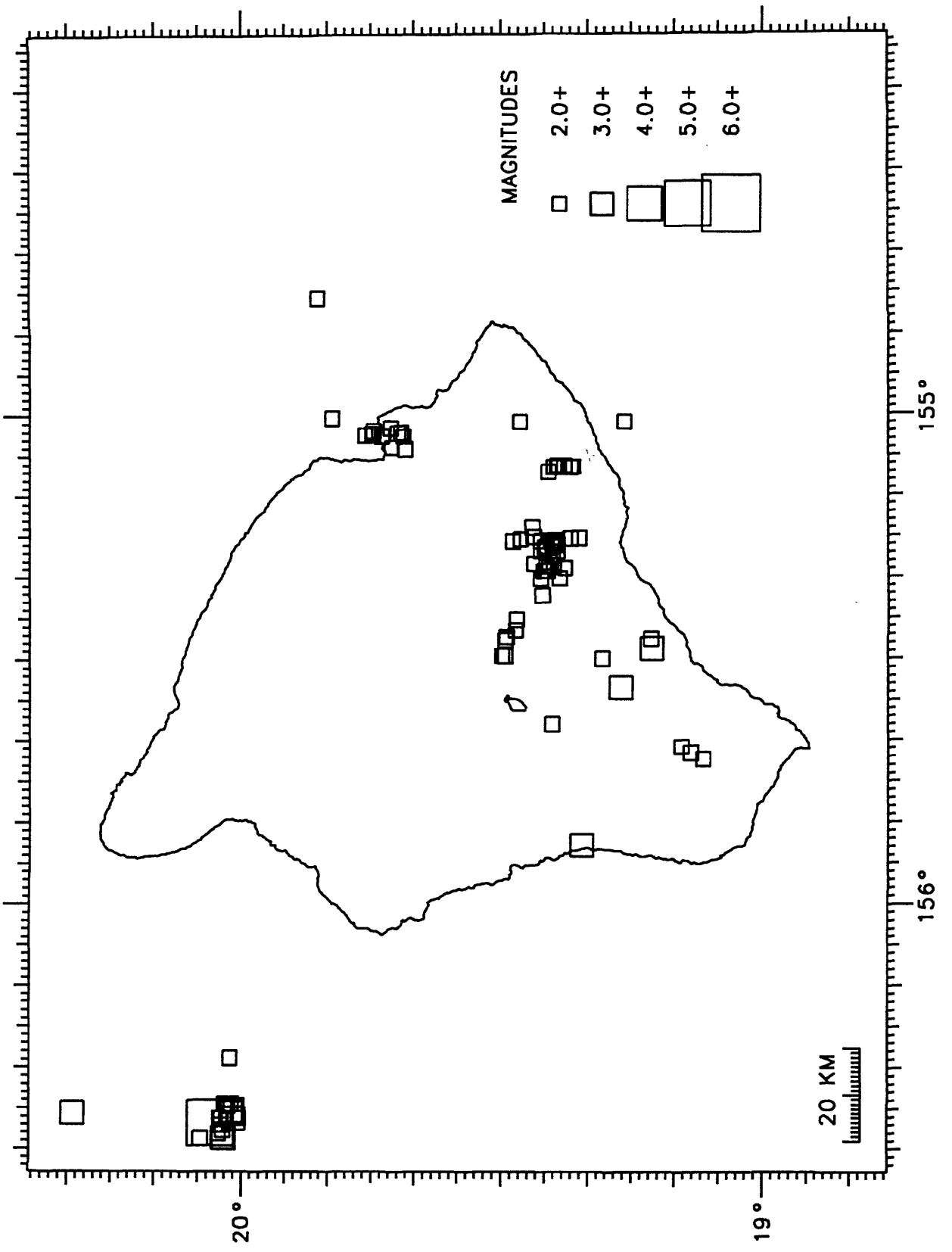


Figure 11. 1987 Earthquake locations, Hawaii Island, shallow (0–5.0 km depth), M>=2.0.

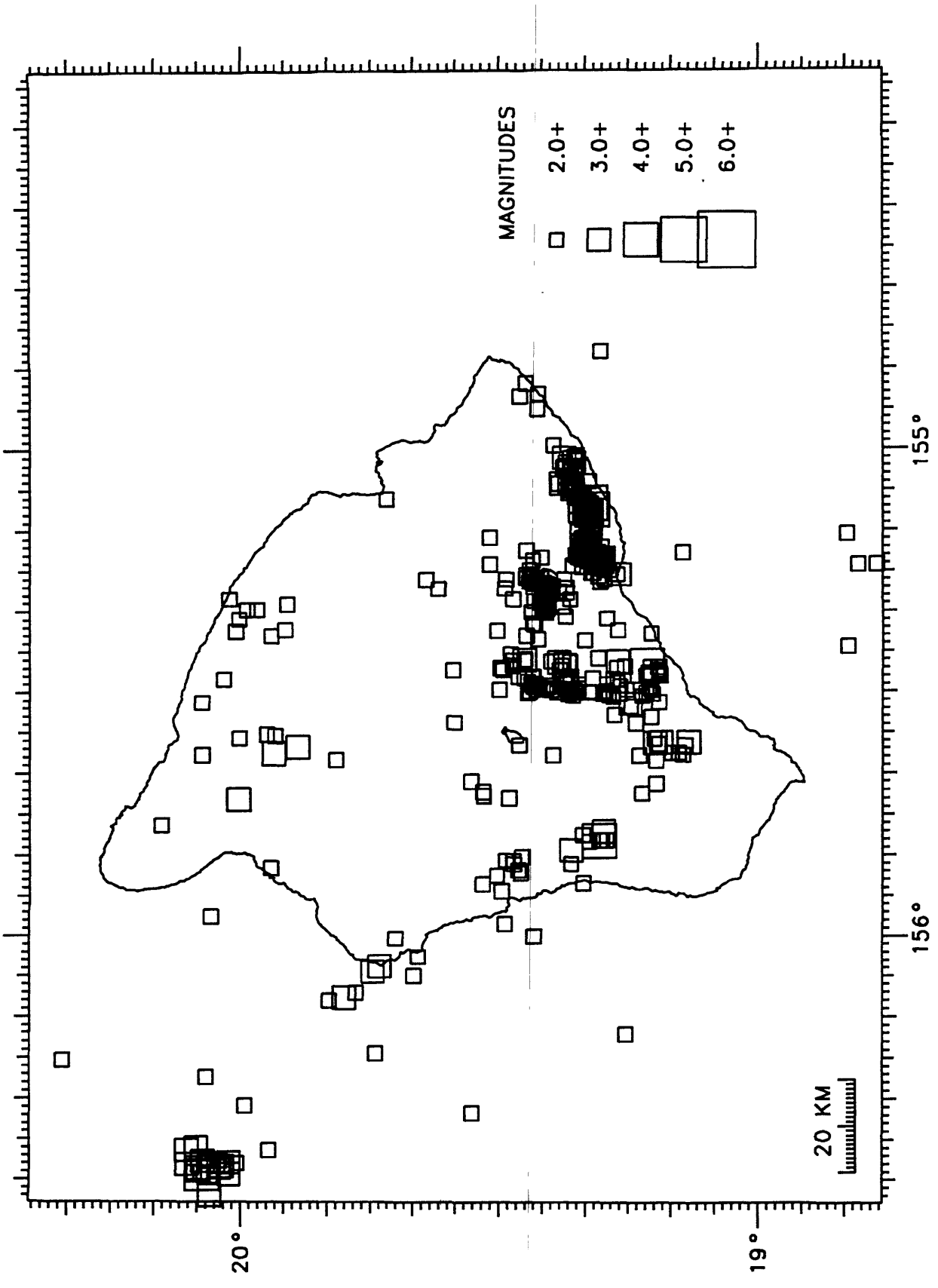


Figure 12. 1987 Earthquake locations, Hawaii Island, intermediate (5.1–13.0 km depth), M>=2.0.

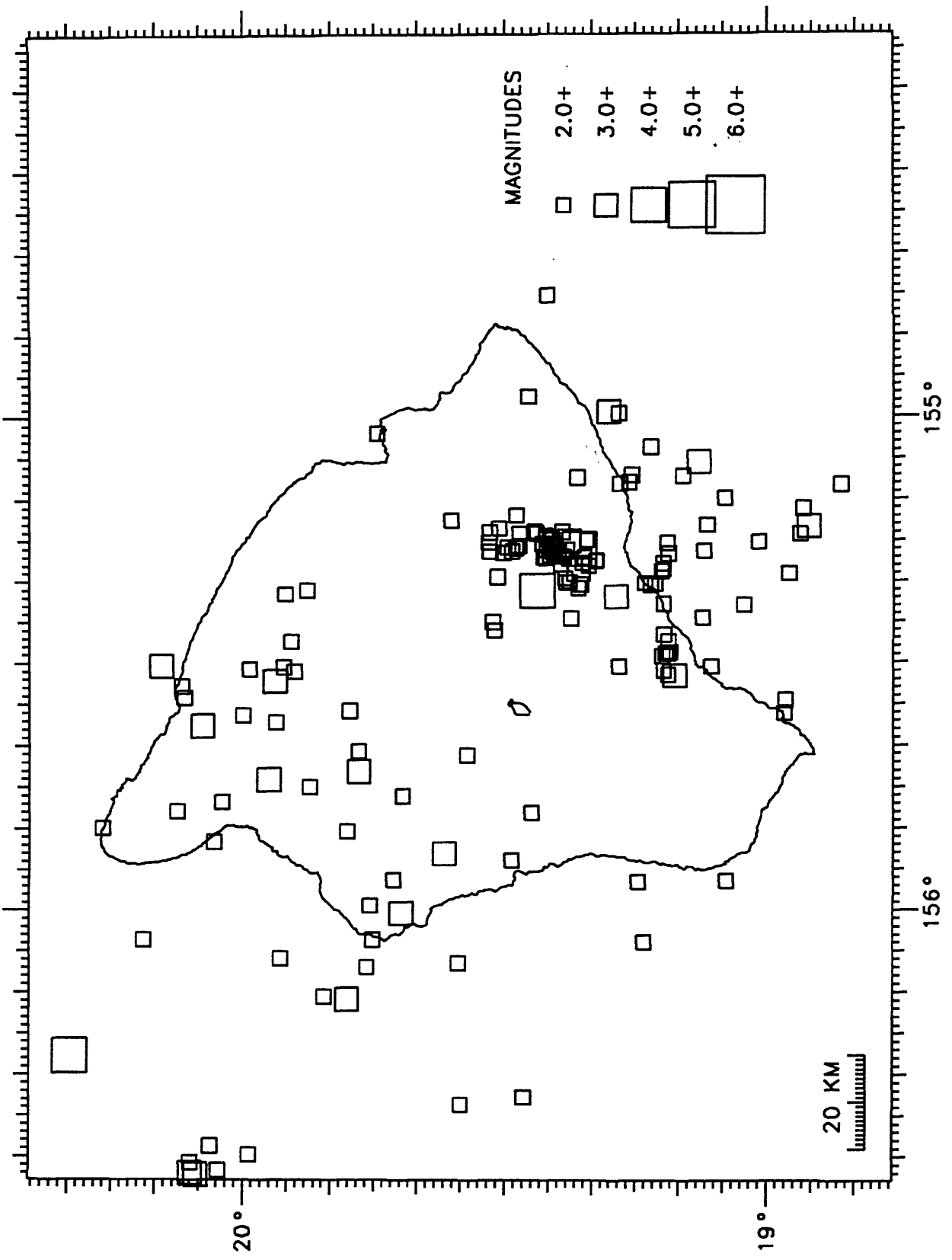


Figure 13. 1987 Earthquake locations, Hawaii Island, deep (13.1-60.0 km depth), M>=2.0.

Figure 14. 1987 Earthquake locations, Kilauea summit, shallow (0–5.0 km depth), M>=1.0.

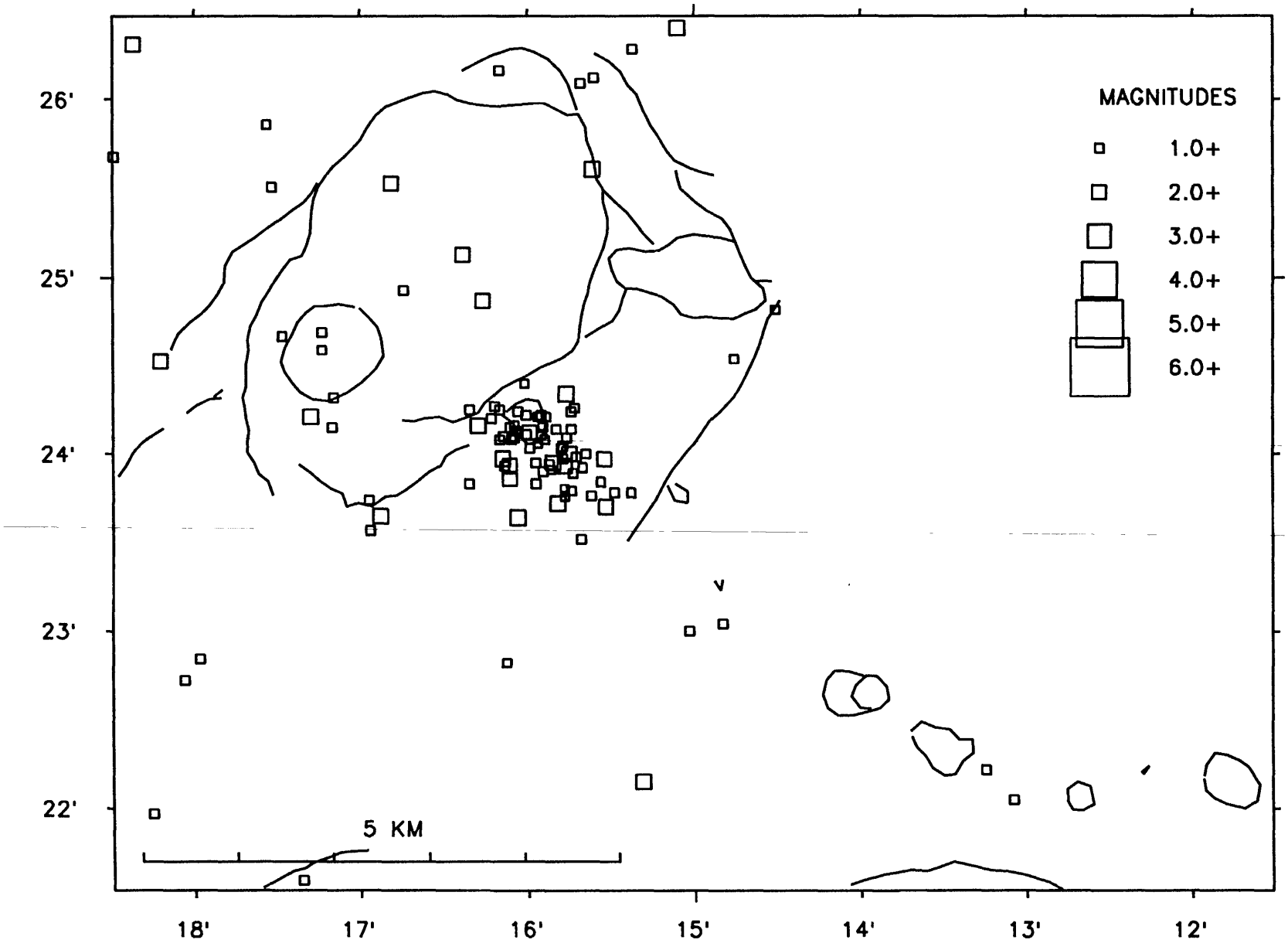


Figure 15. 1987 Earthquake locations, Kilauea summit, intermediate (5.1–13.0 km depth), M>=1.0.

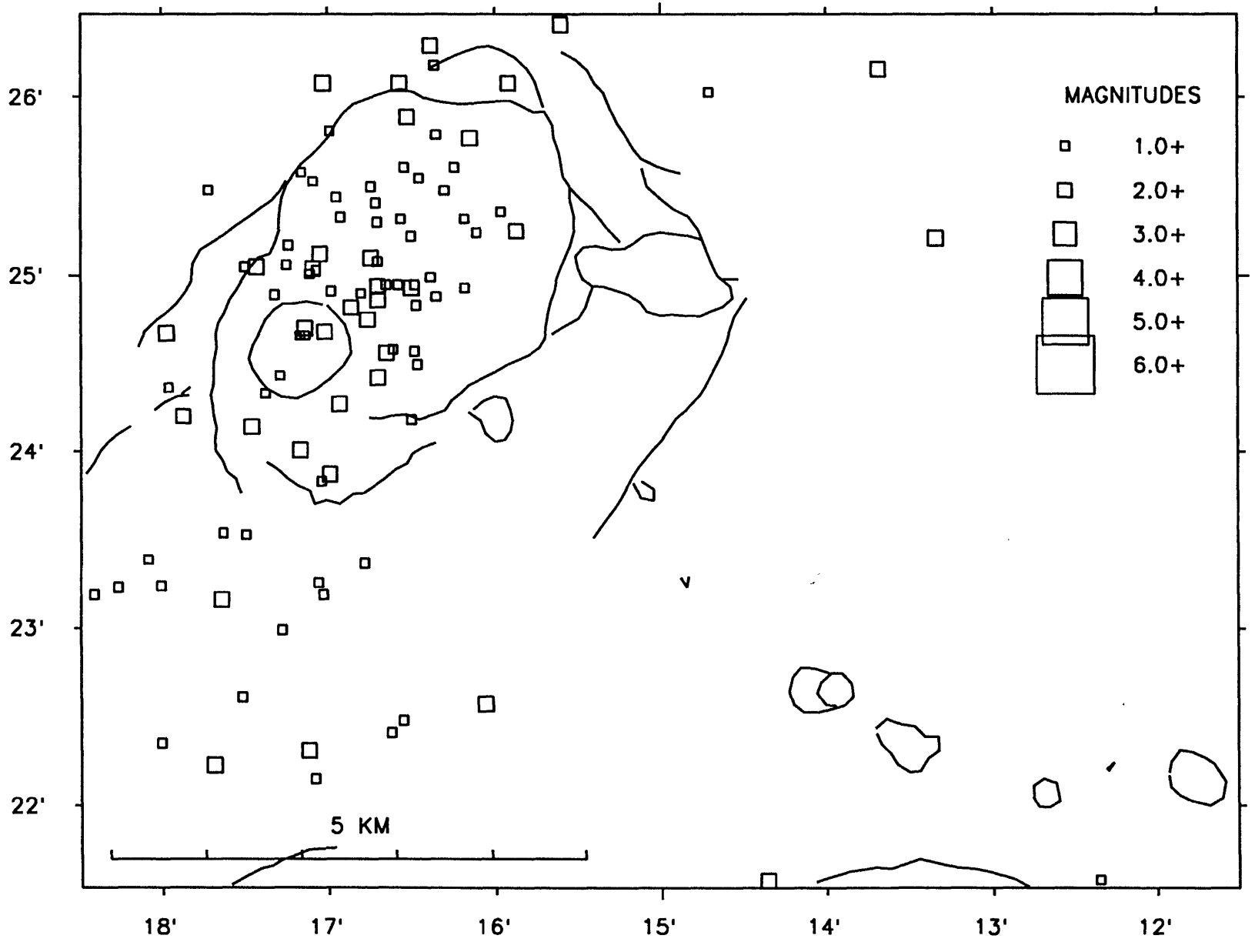


Figure 16. 1987 Earthquake locations, Kilauea summit, deep (13.1–60.0 km depth), M>=1.0.

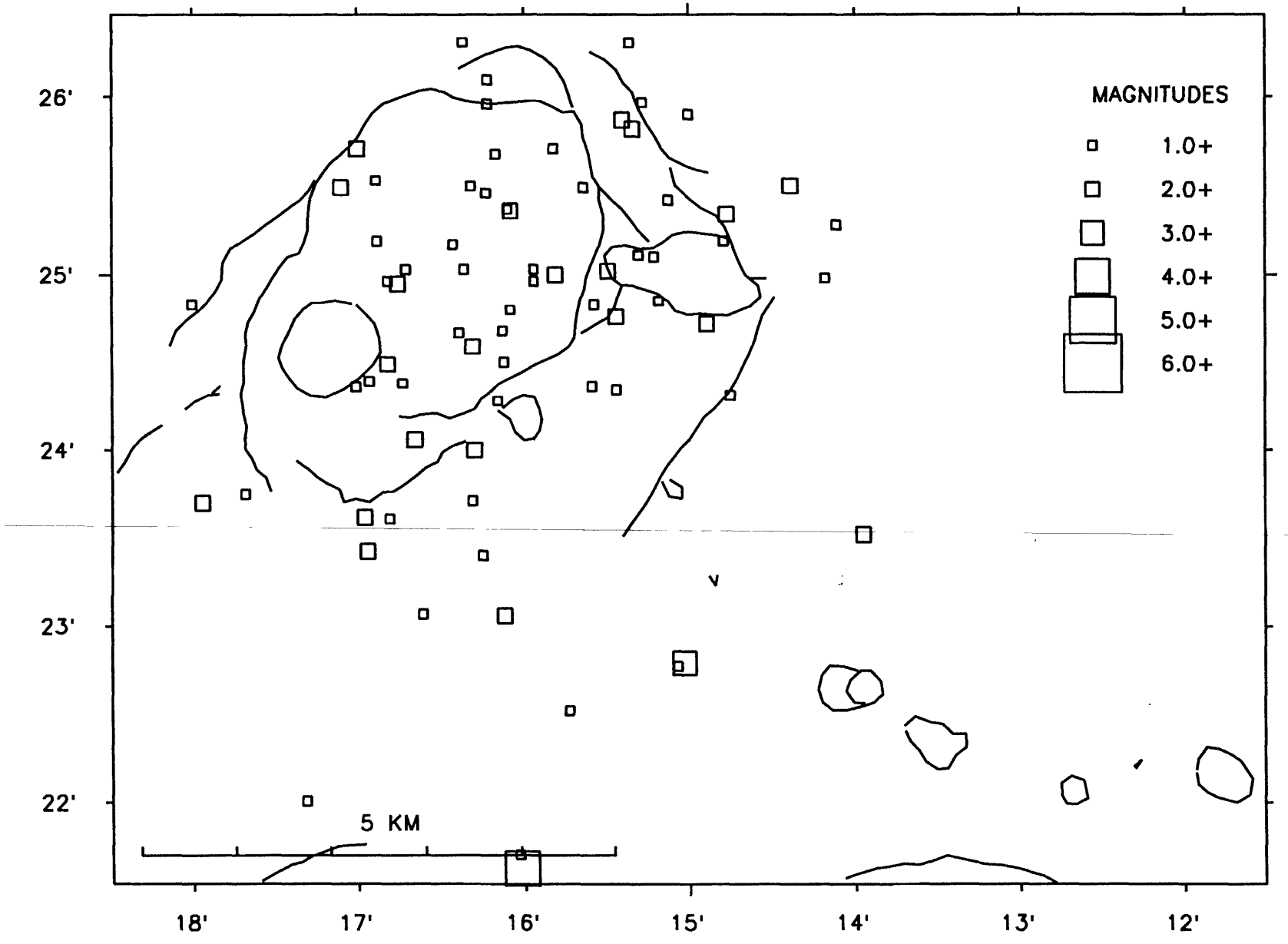


Figure 17. 1987 Earthquake locations, Kilauea south flank, shallow (0–5.0 km depth), M>=2.0.

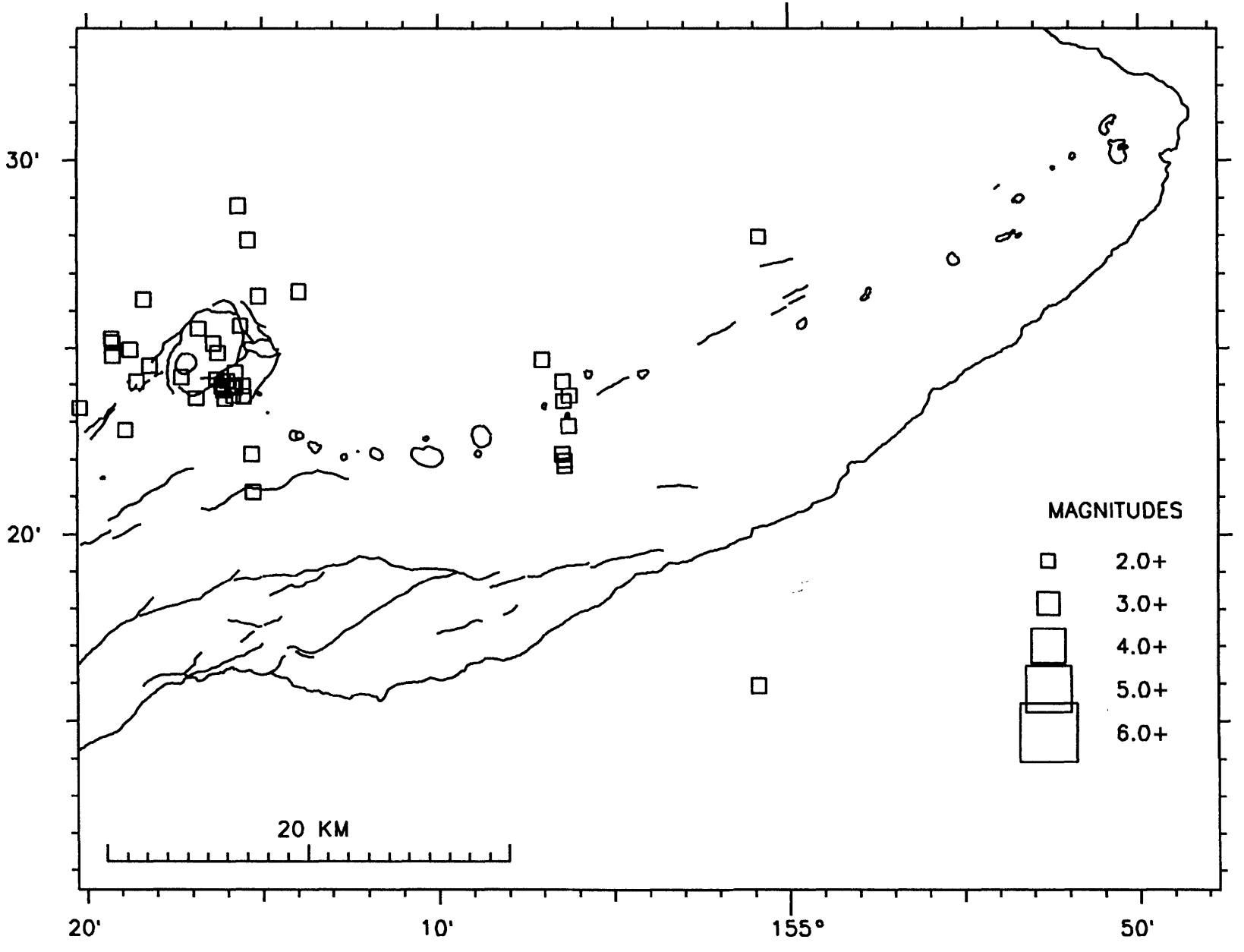
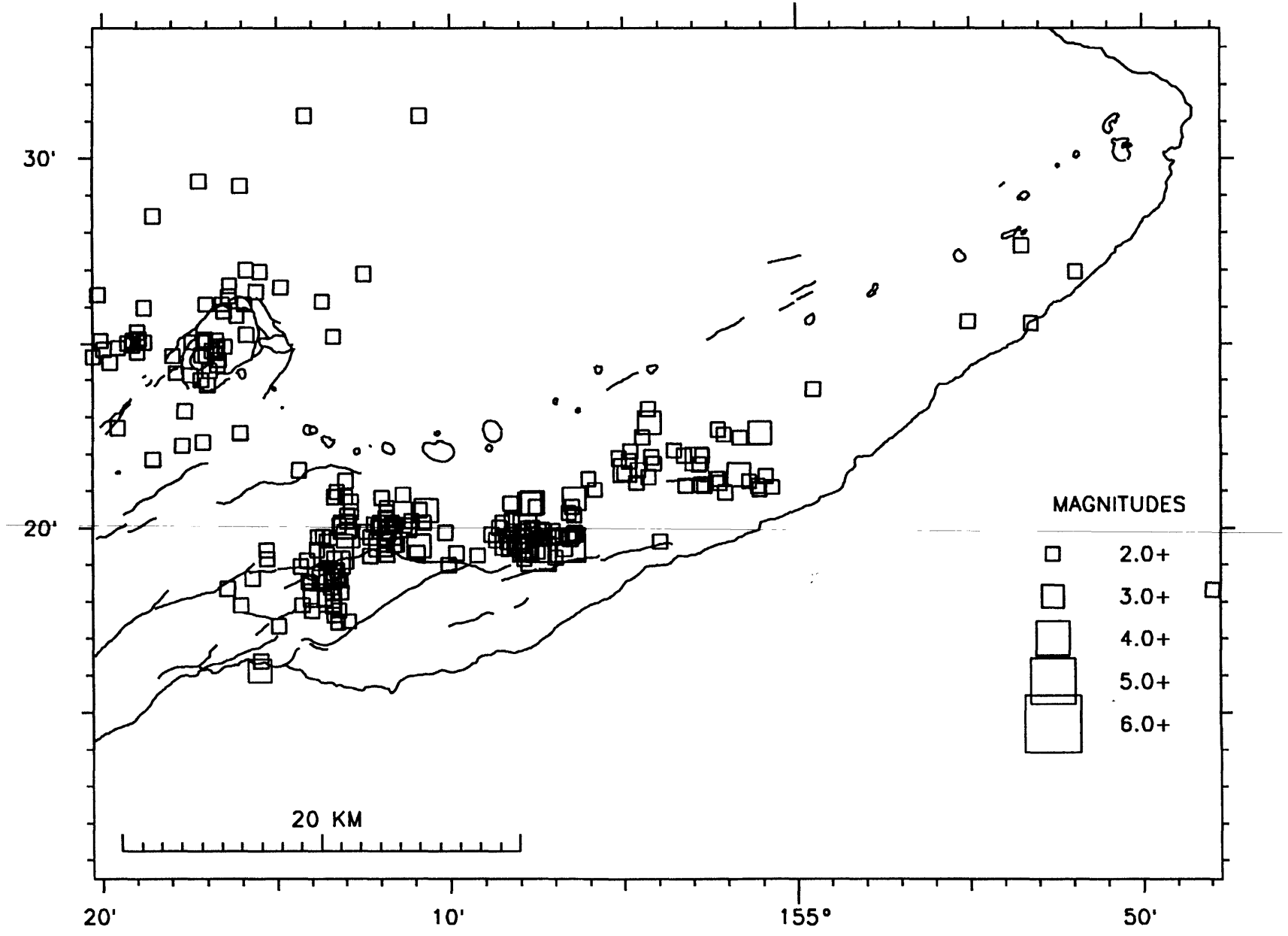


Figure 18. 1987 Earthquake locations, Kilauea south flank, intermediate (5.1–13.0 km depth), M>=2.0.



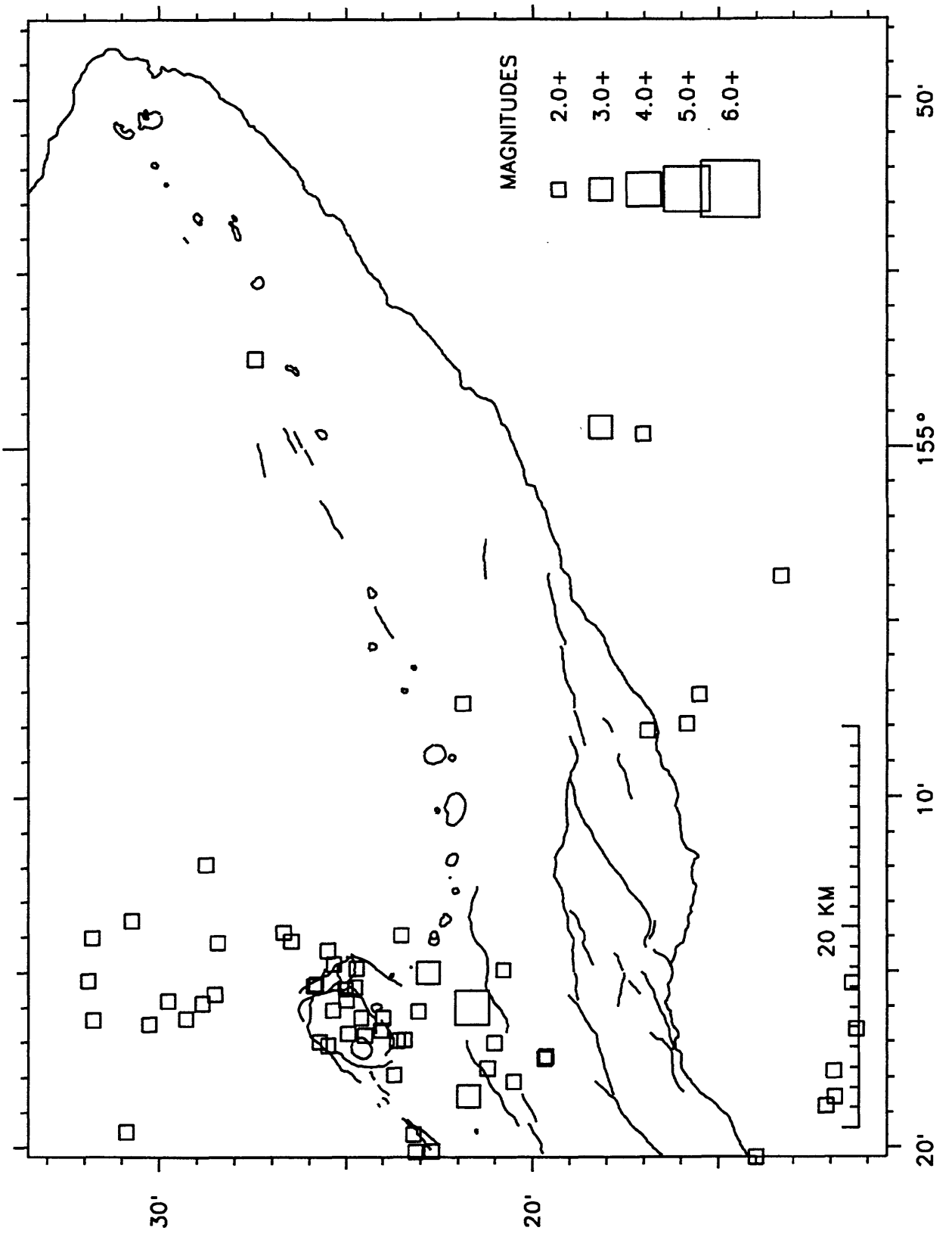
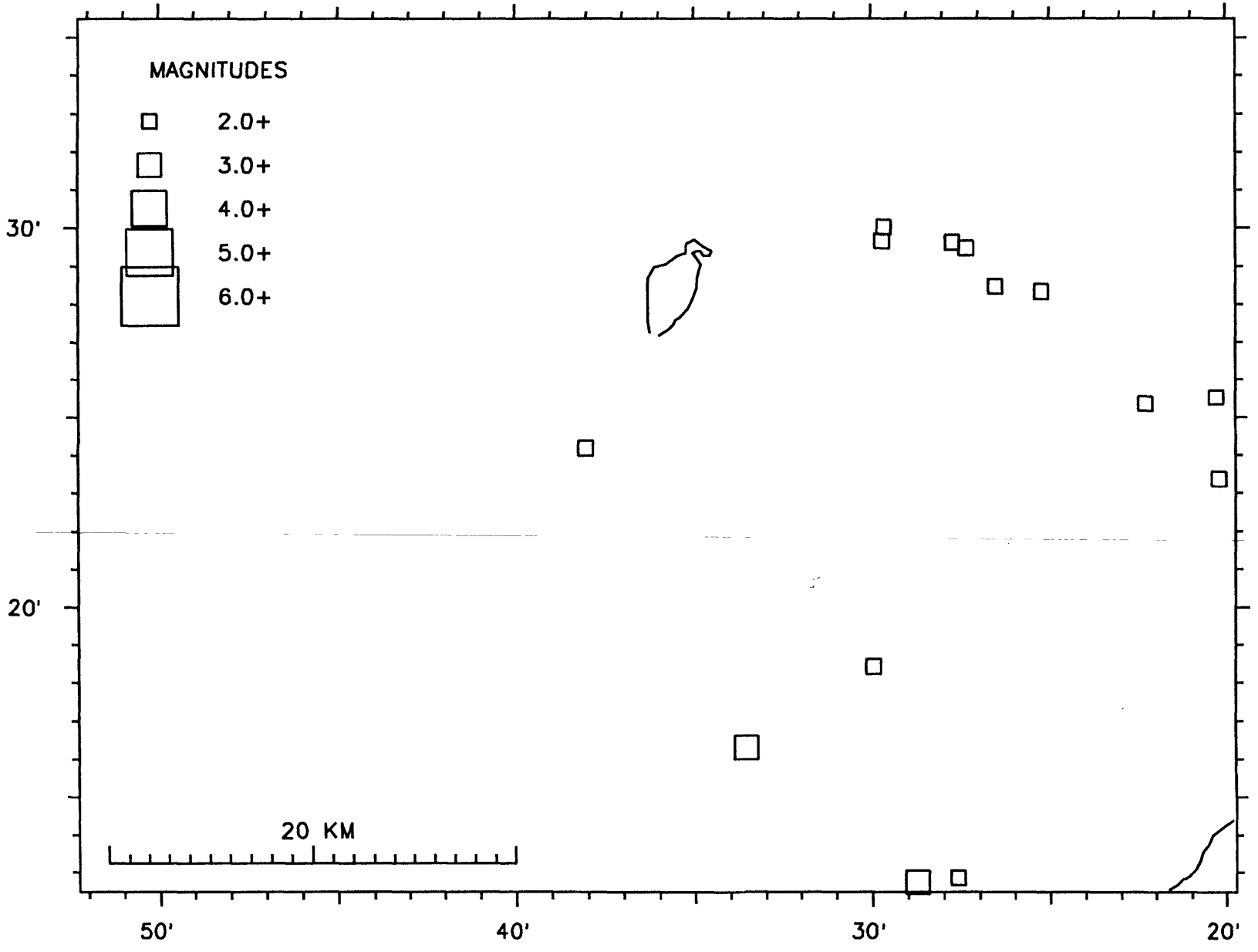


Figure 19. 1987 Earthquake locations, Kilauea south flank, deep (13.1–60.0 km depth), M>=2.0.

Figure 20. 1987 Earthquake locations, Mauna Loa summit, shallow (0–5.0 km depth), M>=2.0.



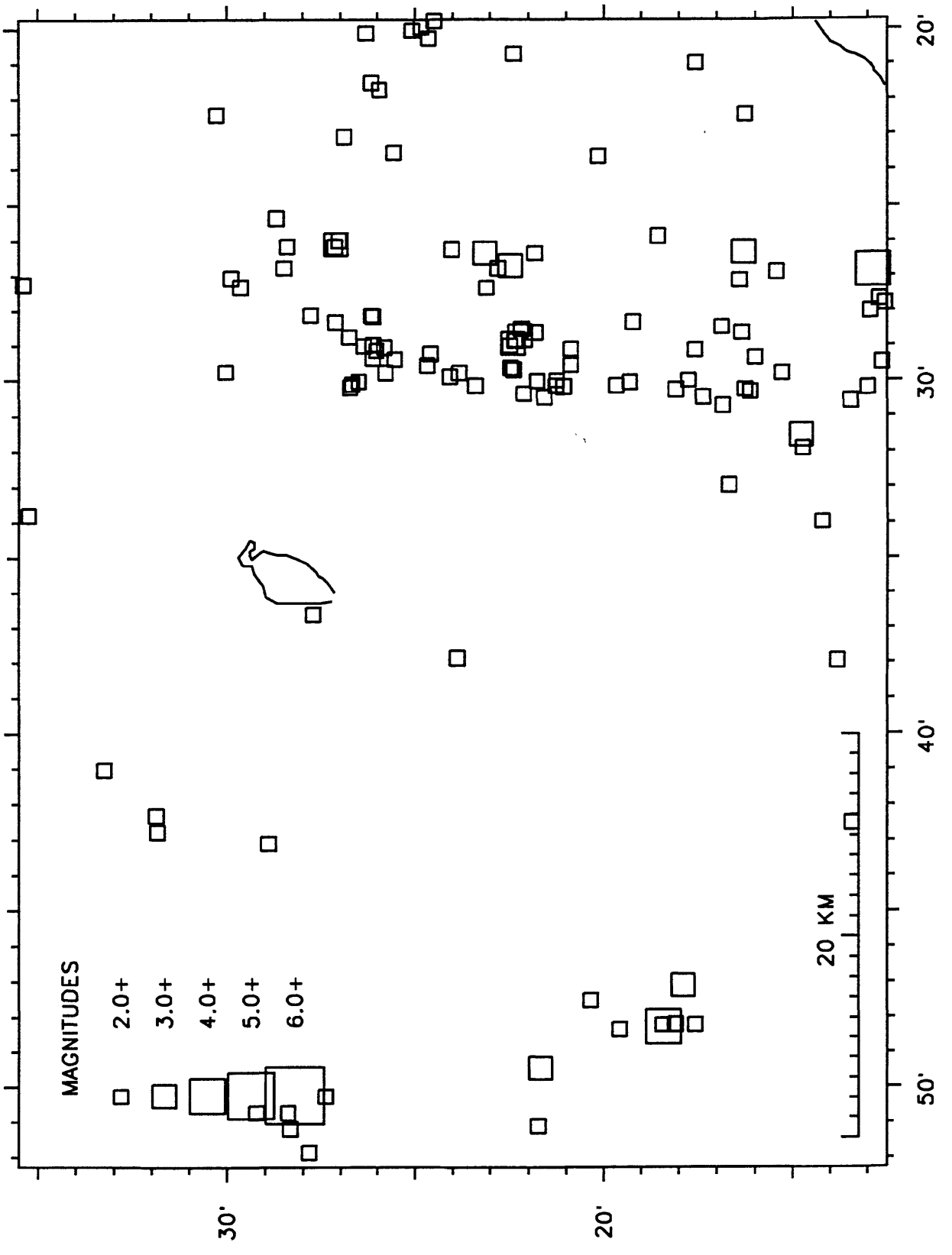


Figure 21. 1987 Earthquake locations, Mauna Loa summit, intermediate (5.1–13.0 km depth), M>=2.0.

Figure 22. 1987 Earthquake locations, Mauna Loa summit, deep (13.1–60.0 km depth), M>=2.0.

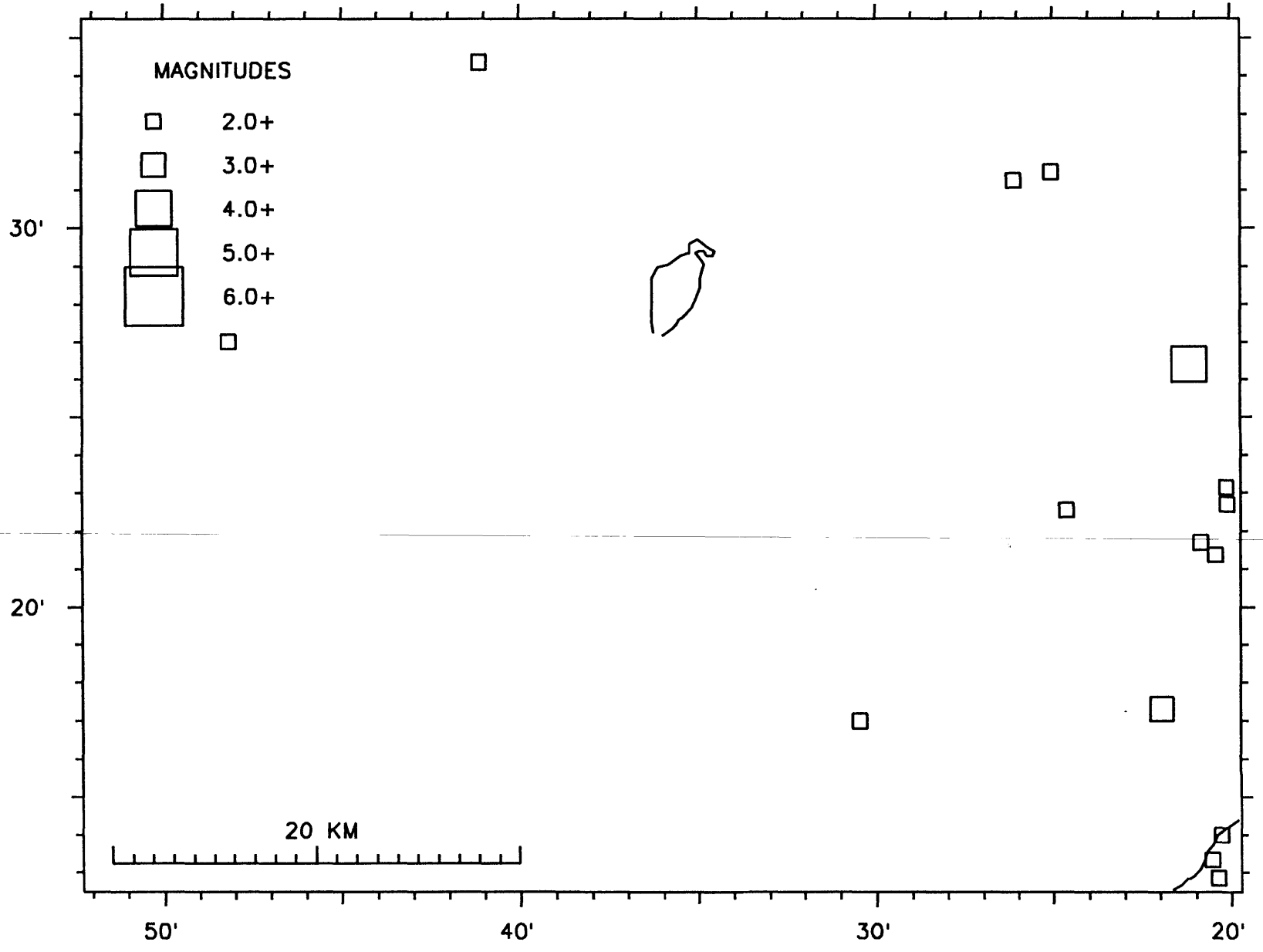


Table 5 is a chronological listing of all events successfully located during 1987. For each event, the following data are presented:

ORIGIN TIME - in Hawaiian Standard Time: date, hour (HR), minute (MN), and second (SEC).

EPICENTER - in degrees and minutes of north latitude (LAT N) and west longitude (LON W).

DEPTH - Depth of focus in kilometers.

AMP MAG - Amplitude magnitude, if determined.

DUR MAG - Duration magnitude, if determined.

NR - Number of arrivals (P and S) used in the solution.

NS - Number of S arrivals used in the solution.

GAP DEG - Largest azimuthal separation in degrees between stations.

RMS SEC - Root mean square error of time residuals, in seconds.

$$RMS = (\Sigma R_i^2/NR)^{1/2}$$

MIN DIS - Epicentral distance, in kilometers, to the third nearest station.

ERH km - Standard error of the epicenter, in kilometers.

ERZ km - Standard error of depth of focus, in kilometers.

REMK - Remarks, three-letter code for geographic location of events. See Figures 5-8 for location of mnemonic code. Additional one-letter codes have the following meanings:

F - felt

L - long-period character

T - associated with harmonic tremor

B - quarry or other blast

* - the location program had a convergence problem, which usually means that the depth may be unreliable.

Table 6 is a list of events of magnitude 3.0 or greater, selected from Table 5.

TABLE 5. 1987 HVO EARTHQUAKE SUMMARY LIST PAGE 1

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	GAP NS	DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1987	JAN	1	039	30.08	19	26.10	155	20.48	4.01	2.0	1.1	17	3	110	.10	3	0.5	1.0	9	KAO
		1	1219	59.63	19	20.06	155	11.67	7.52	1.4	1.2	28	1	83	.11	5	0.6	0.8	24	SF3
		1	1423	42.88	19	16.31	155	26.34	10.25	2.9	3.3	49	7	60	.14	5	0.4	0.5	36	LSW F
		1	2251	49.39	19	20.07	155	13.20	8.61	2.3	2.1	25	0	67	.13	5	0.5	0.8	14	SF2
		2	4	9	25.39	19	21.93	155	8.86	1.73		1.5	8	0	100	.05	2	0.5	0.4	11	SER
		2	424	7.05	19	23.61	155	16.81	30.16		1.5	24	3	44	.15	2	1.0	1.0	15	DEP
		2	1236	14.04	19	26.11	155	29.44	9.56	1.9	1.2	23	2	68	.07	7	0.4	1.0	17	KAO
		2	1529	18.82	19	20.36	155	12.95	8.83		1.2	19	1	67	.07	4	0.5	0.9	13	SF2
		2	1617	11.08	19	20.16	155	10.77	8.56	2.5	3.1	48	6	84	.12	4	0.4	0.4	37	SF3
		3	112	2.04	19	17.44	155	12.95	6.49	1.5	1.2	23	2	139	.09	1	0.5	1.0	15	SF2
		3	413	37.63	19	13.35	155	3.71	45.20	2.5	2.6	44	4	222	.11	10	1.3	1.0	40	DEP
		3	943	22.65	19	28.43	155	24.79	5.09	2.7	2.5	42	7	52	.13	4	0.3	0.7	37	KAO
		3	1125	20.22	19	21.91	155	26.74	10.61		1.2	23	2	74	.09	2	0.5	0.6	14	KAO
		3	1210	46.90	19	22.49	155	52.33	10.59	2.2	1.6	29	4	221	.15	14	0.9	0.5	28	KON
		3	2216	35.96	19	59.34	155	30.81	45.26	2.9		50	8	181	.09	21	0.6	0.8	37	KEA
		4	123	34.39	19	20.41	155	10.96	9.62	0.9	1.3	21	1	78	.05	4	0.6	1.1	18	SF3
		4	427	54.49	19	20.96	155	2.69	3.73		1.2	20	1	151	.27	2	1.2	1.4	12	SSF
		4	552	48.00	19	19.50	155	11.00	9.60	1.5	1.6	23	2	98	.07	5	0.6	1.1	21	SF3
		4	830	37.88	19	18.21	155	16.53	5.85	1.6	1.2	23	0	130	.11	4	0.5	1.1	19	SF1
		4	12	7	4.54	19	19.32	155	9.10	8.15	1.6	1.4	24	1	90	.07	4	0.5	0.8	21	SF4
		4	23	8	22.17	19	23.19	155	19.62	32.16	2.8	2.2	53	12	41	.11	1	0.5	0.6	41	DML
		5	1615	54.17	19	11.40	155	27.76	7.08	2.4	1.9	39	3	112	.14	4	0.5	0.8	22	LSW
		6	812	58.42	19	17.61	155	13.23	6.62	1.8	1.1	21	3	108	.08	1	0.5	1.1	19	SF2
		6	1619	46.13	19	25.64	155	28.35	8.01	2.0	1.4	33	3	61	.10	6	0.4	0.8	26	KAO
		6	2349	31.77	19	15.66	155	28.69	9.65	2.0	1.6	35	6	75	.15	3	0.3	0.5	40	LSW
		7	530	53.22	19	20.31	155	11.71	8.43	1.9	1.6	38	4	78	.11	5	0.4	0.5	28	SF3
		7	623	32.59	19	21.62	155	16.02	33.01	4.1	4.2	53	8	62	.11	1	0.5	0.7	47	DEP F
		7	639	49.27	19	20.90	155	15.91	34.92	2.1	1.4	26	1	73	.08	3	0.9	1.4	21	DEP
		7	8	6	27.69	19	20.18	155	12.98	8.60	2.3	2.1	30	1	69	.12	5	0.4	0.7	26	SF2
		7	1025	17.78	19	20.03	155	12.20	7.63	1.6	1.2	25	1	79	.11	5	0.5	0.8	22	SF3
		7	1142	24.03	19	19.69	155	6.62	8.35	1.9	1.6	26	1	123	.08	5	0.5	0.9	25	SF4
		7	12	6	18.22	19	27.37	155	17.54	0.95	1.9	1.3	10	2	273	.11	4	0.7	0.9	11	SNC
		7	1359	49.20	18	46.36	155	14.23	9.97	2.6	1.9	15	1	306	.08	49	3.8	1.6	7	LOI L
		7	1437	57.16	19	18.00	155	12.76	9.66	2.0	1.6	38	2	142	.11	9	0.4	0.6	27	SF2
		7	1610	9.15	19	19.95	155	10.52	7.70	1.8	1.4	38	2	87	.15	4	0.5	0.7	24	SF3
		7	2237	14.78	19	29.32	155	53.96	13.80	2.6	2.0	27	3	301	.20	14	2.3	0.7	29	KON
		8	550	4.25	18	48.50	155	14.26	11.15	2.7	2.4	28	5	303	.10	46	1.5	1.4	27	LOI
		8	1416	45.00	19	19.91	155	11.99	6.65	1.7	1.1	23	3	83	.10	5	0.4	0.7	17	SF3
		9	1813	1.18	19	29.77	155	15.82	30.02	2.3	1.7	7	2	303	.08	9	3.2	1.7	2	DEP L
		10	1453	54.25	19	19.31	155	9.66	7.96		1.2	15	1	121	.04	5	0.6	0.9	12	SF3
		10	1516	13.84	19	27.83	155	13.49	12.21	2.1	1.0	11	2	286	.11	6	2.9	1.4	1	GLN L
		11	0	4	31.69	19	8.27	155	41.63	2.75	2.4	1.6	21	2	180	.21	15	1.1	2.3	9	LSW
		12	448	2.67	19	19.52	155	7.80	7.42	1.9	1.4	32	6	99	.10	4	0.5	0.8	29	SF4
		12	1255	52.13	19	26.93	155	25.52	10.14	2.3	1.6	38	6	44	.10	3	0.3	0.7	33	KAO
		12	1357	36.72	19	20.00	155	7.48	7.57		1.2	16	3	99	.08	5	0.6	1.0	14	SF4

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	GAP NS	DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1987	JAN	12	2226	2.36	19	19.16	155	15.29	7.93	2.1	2.0	40	4	90	.12	4	0.4	0.5	38	SF1
		13	15	6	29.86	19	26.90	155	12.47	10.51	2.3	1.7	45	7	83	.11	5	0.4	0.6	32	GLN
		13	2023	20.08	19	23.08	155	30.55	10.20	2.0	1.2	26	2	48	.05	5	0.4	0.6	17	KAO
		14	120	36.60	19	25.80	155	30.26	10.20	2.3	1.6	41	5	37	.10	8	0.3	0.6	39	KAO
		14	1412	39.12	19	16.35	155	26.55	6.94	1.6	1.2	15	3	63	.14	6	0.5	1.5	12	LSW
		14	1623	19.33	19	19.36	155	30.62	9.16	2.2	1.4	29	3	61	.09	8	0.3	0.6	19	KAO
		14	2119	26.31	19	24.13	155	16.07	2.19	1.6	1.0	11	2	119	.07	1	0.3	0.4	7	SEC
		15	522	56.82	19	24.96	155	19.13	6.45	2.5	2.3	51	15	71	.15	3	0.3	0.5	41	KAO
		15	940	52.32	19	10.58	155	31.65	31.40	3.2	2.9	62	16	108	.10	7	0.4	0.7	48	DLS
		15	1929	37.67	19	23.91	155	15.86	2.97	1.7	1.3	22	5	109	.08	1	0.3	0.3	10	SEC
		15	1953	35.95	19	21.06	155	7.77	6.77	2.0	1.8	39	4	79	.12	4	0.4	0.7	28	SF4
		16	538	28.58	19	19.06	155	26.33	10.69	1.6	1.2	35	5	56	.14	6	0.4	0.6	32	KAO
		16	1141	11.43	19	16.65	155	2.18	41.79		1.7	33	4	215	.11	6	1.5	1.0	30	DEP
		16	2031	43.02	19	28.38	155	14.14	19.00	2.1	1.6	18	3	172	.15	7	1.6	0.9	18	DEP L
		16	2223	44.09	19	25.61	155	16.54	11.85	1.6	1.2	14	3	177	.08	2	1.4	1.0	6	INT L
		16	2329	0.56	19	19.69	155	14.66	7.75	1.9	1.8	48	5	72	.17	5	0.4	0.5	43	SF1
		17	035	0.42	19	26.10	155	16.22	13.78	1.8	1.3	23	6	183	.14	3	1.2	0.4	16	DEP L
		17	041	13.85	19	24.45	155	21.85	9.98	1.6	1.2	12	3	210	.13	4	1.5	2.4	2	KAO L
		17	230	2.60	19	24.36	155	17.01	13.41	2.0	1.5	23	4	82	.23	1	1.3	0.9	20	DEP L
		17	4	3	26.65	19	25.96	155	16.22	14.37	1.9	1.6	12	1	185	.11	2	1.8	1.2	1	DEP L
		17	519	50.80	19	25.97	155	15.28	14.25	2.0	1.2	14	3	217	.16	3	2.0	1.2	3	DEP L
		17	529	35.53	19	22.15	155	29.86	9.82	1.7	1.3	21	2	45	.06	4	0.4	0.6	14	KAO
		17	614	17.37	19	22.83	155	1.81	5.36	2.0	1.4	40	4	135	.17	5	0.5	1.1	38	SF5
		17	841	16.23	19	24.95	155	16.65	10.44	1.7	1.3	20	2	149	.13	1	0.6	0.6	17	INT L
		17	941	25.49	19	25.46	155	16.23	13.42	1.9	1.4	25	5	169	.21	2	1.2	0.5	20	DEP L
		17	1517	55.88	19	24.24	155	16.06	2.92	1.6	1.2	19	5	124	.10	1	0.4	0.3	10	SEC
		17	1755	56.71	19	23.06	155	25.55	10.22	1.0	1.2	37	3	47	.14	4	0.4	0.5	39	KAO
		17	2139	0.03	19	25.49	155	15.64	14.87	1.9	1.3	15	1	181	.08	3	1.2	0.9	16	DEP L
		18	010	34.63	19	25.17	155	17.24	11.82	1.8	1.6	21	3	123	.13	1	0.8	0.7	13	INT L
		18	025	20.86	19	16.95	155	26.56	6.55		1.3	34	7	53	.15	7	0.3	0.7	29	LSW
		18	126	7.15	19	8.44	155	27.58	28.90		1.4	39	5	173	.11	2	0.8	0.8	34	DLS
		18	223	23.61	19	24.91	155	16.98	11.22	1.6	1.1	22	3	145	.12	0	0.8	0.6	18	INT L
		18	342	48.56	19	25.71	155	15.82	17.08	2.0	1.4	23	7	166	.15	3	1.3	0.6	7	DEP L
		18	7	9	51.24	19	19.48	155	6.99	8.16	1.6	1.5	40	6	121	.12	4	0.3	0.3	40	SF4
		18	8	6	13.56	19	19.56	155	7.20	6.72	0.9	1.2	29	3	113	.10	4	0.4	0.9	29	SF4
		18	9	2	9.62	19	31.38	155	46.51	8.52		1.2	23	6	105	.08	2	0.7	0.4	20	KON
		18	10	9	10.33	19	19.52	155	7.19	8.69	1.6	2.0	35	5	115	.11	4	0.5	0.5	35	SF4
		18	1033	46.57	19	18.75	155	14.61	6.43	0.9	1.4	26	3	96	.12	4	0.5	1.0	24	SF1
		18	1512	31.99	19	24.99	155	16.38	12.06	1.8	1.2	25	5	152	.10	1	0.8	0.6	17	INT L
		18	1742	4.15	19	24.88	155	16.35	12.47	1.8	1.2	18	4	148	.12	1	1.1	0.8	5	INT L
		18	2028	8.78	19	23.86	155	16.11	3.32	2.3	2.6	33	9	66	.12	1	0.3	0.3	26	SEC
		18	2258	8.66	19	17.44	155	23.55	9.27	1.6	1.6	29	5	97	.12	5	0.4	0.7	25	SWR
		18	2358	35.19	19	10.61	155	32.44	9.51	1.9	1.3	17	0	142	.13	11	0.7	2.0	18	LSW
		19	121	46.31	19	20.90	155	9.03	25.45	0.9	1.5	25	4	71	.23	5	1.6	0.9	22	DEP
		19	911	1.60	19	21.87	155	4.51	7.97	2.1	1.6	21	1	199	.10	6	1.1	0.7	13	SF5

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1987	JAN	20	514	17.55	19	26.70	155	22.84	8.20	1.6	1.1	23	6	74	.10	4	0.4	0.8	17	KAO
		20	532	13.99	19	21.56	155	30.17	9.43	2.1	1.4	31	5	46	.07	5	0.3	0.6	29	KAO
		21	132	38.89	19	27.11	155	23.77	6.87	2.0	1.1	21	4	71	.10	4	0.4	1.0	7	KAO
		21	1549	47.26	19	21.23	155	8.08	8.73	1.9	1.7	25	6	128	.09	3	0.5	0.6	21	SF4
		21	1631	31.88	19	20.20	155	11.67	7.94	2.1	1.8	38	4	80	.12	5	0.4	0.5	36	SF3
		21	1843	24.07	19	32.67	156	34.43	6.50	2.7	1.6	28	7	319	.16	69	8.6	11.0	21	DIS *
		22	436	27.83	19	23.92	155	15.67	2.84	2.0	1.5	26	9	109	.08	2	0.2	0.2	17	SEC
		22	8	0 43.10	19	25.83	155	29.06	8.43	2.5	2.0	46	11	37	.11	7	0.3	0.6	36	KAO
		23	1150	24.82	19	30.01	155	27.11	4.28	2.0	1.4	35	7	100	.13	4	0.3	1.5	29	MLO
		24	234	58.39	19	12.04	155	29.30	33.24	2.5	1.8	49	10	141	.09	5	0.7	0.6	39	DLS
		24	1836	48.97	19	26.00	155	29.58	9.66	2.1	1.2	33	5	69	.10	7	0.4	0.7	30	KAO
		24	19	4 8.00	19	14.65	155	4.42	45.83	2.1	1.7	43	3	213	.10	8	1.2	0.9	41	DEP
		24	1933	12.89	19	28.71	155	27.89	8.37	2.3	1.4	37	7	72	.12	6	0.3	0.9	35	KAO
		24	2050	42.86	19	17.58	156	24.08	6.18		1.3	21	4	315	.11	71	7.5	9.8	17	DIS *
		24	2129	6.76	19	25.37	155	24.45	8.52	2.0	1.6	36	5	44	.12	1	0.4	0.8	34	KAO
		25	213	23.59	19	20.78	155	14.94	44.39	2.4	2.4	28	6	111	.12	3	1.8	0.9	8	DEP L*
		25	356	54.51	19	18.74	155	28.42	9.39	2.0	1.4	33	4	40	.15	7	0.4	0.6	33	LSW
		25	553	33.17	19	19.33	155	13.59	6.64	1.7	1.3	34	7	67	.12	4	0.3	0.7	30	SF2
		25	11	3 34.68	19	20.35	155	47.53	11.42	2.6	1.5	34	6	96	.10	12	0.4	0.5	33	KON
		25	1311	10.22	19	19.07	155	10.09	6.31	1.5	1.2	32	6	108	.11	5	0.4	1.1	29	SF3
		25	2210	15.16	19	22.13	155	4.66	7.15	2.0	1.2	25	1	82	.11	4	0.5	0.9	26	SF5
		26	923	10.31	19	19.62	155	6.96	8.50	1.6	1.2	29	2	118	.09	5	0.6	0.9	28	SF4
		26	2110	20.17	19	24.16	155	16.30	1.42	2.4	1.9	25	4	103	.12	1	0.2	0.2	20	SEC
		27	1433	25.84	19	49.65	155	0.40	0.00	2.6	2.4	14	1	284	.18	35	4.9	1.7	10	KEA B*
		27	1632	12.28	19	41.90	156	0.45	33.07	3.4	3.7	57	9	223	.11	25	0.8	1.2	48	HUA F
		27	2334	27.38	19	24.90	155	31.55	11.60	2.1	1.3	34	4	46	.10	8	0.4	0.6	32	KAO
		28	1340	35.33	19	21.20	155	17.76	32.33	2.4	1.9	53	14	32	.11	2	0.6	0.6	39	DEP
		29	028	58.29	19	19.56	155	11.53	7.65	2.4	2.2	49	6	93	.15	5	0.5	0.6	45	SF3
		29	032	51.99	19	19.21	155	12.47	5.14	1.6	1.1	28	3	91	.10	4	0.4	1.4	27	SF2
		29	8	9 10.38	19	49.47	156	6.17	5.23		1.3	22	11	293	.16	42	0.9	0.9	13	HUA
		29	1556	39.35	19	13.54	155	32.49	4.73	2.1	1.2	27	2	82	.19	5	0.6	2.7	14	LSW
		30	451	30.31	19	26.33	155	28.85	8.96	2.1	1.5	37	5	40	.11	7	0.3	0.7	26	KAO
		30	513	39.41	19	18.07	155	15.19	6.05	1.7	1.5	31	0	112	.12	4	0.5	1.1	18	SF1
		30	814	30.78	19	20.06	155	11.59	8.86	2.8	2.8	45	2	83	.12	5	0.3	0.5	40	SF3 F
		30	1251	43.09	19	21.70	155	49.46	12.22	3.0	3.2	45	3	121	.13	12	0.5	0.3	39	KON
		30	1625	3.84	19	19.94	155	20.27	28.88		1.3	20	2	111	.08	5	1.1	1.5	17	DEP
		30	1655	19.53	19	15.48	155	20.95	34.25		1.4	34	2	151	.10	6	0.6	0.9	32	DEP
		30	1836	6.18	19	19.09	155	30.60	10.33	1.7	1.2	37	4	49	.11	7	0.3	0.5	36	KAO
		30	2130	30.47	19	19.22	155	11.34	8.30	1.7	1.5	15	0	138	.05	6	0.7	1.4	15	SF3
		31	011	43.68	19	24.27	155	16.20	3.10	1.7	1.3	10	2	126	.03	1	0.4	0.5	8	SEC
		31	429	56.64	19	24.59	155	17.23	1.56	1.4	1.1	10	3	88	.09	1	0.3	0.3	5	SNC
		31	1221	25.68	19	20.84	155	13.35	9.10	2.5	2.6	26	1	58	.08	3	0.5	0.9	25	SF2
		31	1836	16.21	19	48.15	156	10.84	13.50	3.2	3.8	45	6	294	.14	38	0.7	0.9	45	HUA
		31	2239	42.48	19	19.91	155	9.79	7.10	1.8	1.6	15	0	112	.07	4	0.6	1.4	17	SF3
	FEB	1	426	17.38	19	21.27	155	30.01	9.44	2.2	2.0	42	3	44	.13	5	0.3	0.5	40	KAO

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1987	FEB	1	444	40.76	19	21.27	155	13.00	8.50	1.9	2.4	37	4	57	.12	3	0.4	0.6	34	SF2
		1	7	0 30.39	19	33.19	155	14.07	21.74	1.9	1.3	35	7	81	.12	16	0.5	1.2	28	DEP
		1	752	42.51	19	20.58	155	10.92	7.55	1.5	1.1	31	3	77	.11	3	0.5	0.7	30	SF3
		1	12	4 53.35	19	21.95	155	2.74	6.85	2.1	1.9	33	9	134	.15	4	0.5	0.8	27	SF5
		2	738	9.21	19	22.85	155	4.25	8.82	3.3	3.3	55	13	87	.12	3	0.5	0.3	45	SF5
		2	1236	45.50	19	20.21	155	50.65	13.86	2.5	1.4	22	2	182	.13	19	0.8	0.5	17	KON
		2	2248	59.53	19	19.68	155	8.69	5.78	2.5	2.2	42	8	77	.10	4	0.4	0.8	37	SF4
		2	2249	45.31	19	20.02	155	8.60	6.48	2.3	2.2	38	6	76	.09	4	0.3	0.7	29	SF4
		3	13	5 24.11	19	20.22	155	13.21	7.99	1.4	1.2	24	3	65	.09	4	0.4	0.8	25	SF2
		3	1331	24.97	19	22.92	155	30.46	9.36	2.0	1.4	29	4	48	.06	5	0.4	0.8	26	KAO
		3	1622	33.81	20	3.55	156	26.84	0.38	5.2	5.1	55	5	229	.13	70	1.5	0.4	50	DIS F
		3	1628	45.31	19	59.56	156	20.86	6.50	2.7	2.4	19	2	327	.13	72	9.4	12.3	13	DIS *
		3	1637	15.64	20	4.69	156	28.73	3.50	2.0	2.1	34	6	300	.14	73	5.4	4.5	28	DIS *
		3	1645	9.22	20	4.33	156	27.74	5.26	3.1	3.2	55	10	231	.12	72	1.3	1.5	40	DIS F
		3	1649	16.07	20	2.27	156	26.26	0.09	2.7	2.4	37	7	296	.14	69	10.5	2.7	29	DIS *
		3	1657	44.80	20	0.36	156	26.24	0.56	2.9	2.4	30	6	294	.13	70	7.2	2.2	23	DIS
		3	17	7 16.35	20	3.53	156	32.07	6.83	3.3	3.7	53	10	238	.13	79	1.4	1.8	45	DIS F
		3	1715	57.82	19	58.75	156	22.41	0.02	1.6	2.3	31	5	289	.13	64	2.5	0.5	26	DIS *
		3	1739	9.45	20	2.64	156	28.16	3.50	2.8	2.4	29	6	298	.13	73	6.2	5.3	23	DIS *
		3	1740	45.48	20	4.79	156	28.96	5.77	3.0	3.5	54	7	315	.12	80	4.9	6.4	46	DIS F
		3	1744	44.01	20	4.38	156	29.31	7.41	4.3	4.5	61	13	233	.12	80	1.3	1.6	49	DIS F
		3	1816	35.13	20	2.50	156	26.24	0.45	2.7	2.8	51	11	297	.13	69	7.5	2.1	42	DIS
		3	1921	54.90	20	2.36	156	27.04	0.04	2.0	2.2	40	10	296	.14	71	7.7	2.0	30	DIS *
		3	1949	2.26	20	2.81	156	31.68	34.07	2.8	2.8	38	8	301	.13	79	1.3	2.7	31	DIS
		3	20	6 20.01	20	2.47	156	26.28	1.05	2.7	2.5	41	8	228	.12	69	1.9	0.6	32	DIS
		3	2129	48.22	20	5.26	156	29.15	6.92	2.8	2.3	34	3	321	.10	89	7.5	9.7	33	DIS *
		3	2137	17.06	20	5.10	156	26.16	6.90	3.2	3.8	55	6	228	.12	76	1.2	2.1	46	DIS F
		3	2239	40.16	20	0.08	156	18.28	5.04	3.0	2.7	33	0	286	.10	57	4.0	1.4	28	KOH
		4	0	2 24.70	20	5.85	156	27.85	7.49		1.9	16	1	321	.12	88	9.3	12.4	10	DIS *
		4	252	25.40	20	3.66	156	27.52	7.08	2.9	2.8	31	1	230	.12	71	2.1	8.0	22	DIS
		4	3	8 56.32	20	2.62	156	30.25	6.94		1.6	16	1	320	.10	91	8.1	10.8	8	DIS *
		4	315	36.54	20	1.37	156	29.40	10.69	3.1	2.9	38	5	233	.13	75	2.0	3.1	26	DIS
		4	328	39.89	20	3.07	156	30.13	7.02		1.6	18	1	300	.11	76	8.1	10.6	12	DIS *
		4	351	28.60	20	1.83	156	23.84	6.99		1.4	12	0	294	.11	65	8.3	15.6	8	DIS *
		4	519	59.87	20	0.86	156	26.30	2.24	3.1	3.2	46	6	295	.13	70	5.2	2.9	36	DIS F
		4	525	49.45	19	19.87	155	11.76	6.98	1.9	2.0	38	5	85	.13	5	0.4	0.8	30	SF3
		4	542	35.86	20	2.10	156	28.37	6.94	3.0	3.3	32	6	241	.12	73	1.8	3.0	16	DIS F
		4	739	27.94	19	23.95	155	15.95	3.15	2.1	1.8	26	5	107	.07	1	0.3	0.3	21	SEC
		4	756	42.68	20	0.98	156	25.25	2.83	3.5	3.8	37	6	294	.13	68	7.0	4.8	31	DIS F*
		4	918	37.26	20	5.22	156	33.32	30.80	2.8	2.8	31	6	304	.12	81	1.3	3.2	25	DIS
		4	1054	53.98	20	1.24	156	25.56	1.45	3.3	3.6	54	5	294	.13	69	6.2	2.6	50	DIS F*
		4	1132	21.22	20	0.43	156	28.00	6.84	2.8	1.5	13	2	306	.09	73	7.4	8.6	11	DIS *
		4	1236	28.04	20	5.93	156	31.98	32.57	3.6	4.3	51	7	304	.13	79	1.4	2.3	40	DIS F
		4	1414	57.19	19	19.71	155	7.53	7.94	2.1	2.0	33	3	103	.10	4	0.4	0.6	25	SF4
		4	1638	38.19	19	59.96	156	24.06	4.01		1.6	14	1	292	.09	66	7.3	8.9	8	DIS *

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1987	FEB	4	1710	53.40	20	3.85	156	27.71	6.40	2.8	1.8	22	1	299	.13	72	6.1	9.4	12	DIS	
		4	1839	19.41	20	1.95	156	24.46	3.47	2.7	2.1	16	2	294	.09	66	8.8	6.7	7	DIS	*
		4	1946	32.95	19	22.51	155	29.96	9.88	1.7	1.2	21	2	45	.06	4	0.4	0.8	13	KAO	
		4	2139	1.23	19	31.48	155	25.04	22.53	2.4	1.9	39	5	47	.10	4	0.4	0.7	24	DML	
		4	2241	38.29	19	40.81	155	58.05	26.47	1.4	1.8	14	0	325	.10	28	11.5	4.2	9	HUA	*
		5	110	54.47	20	6.12	156	28.11	5.24	3.1	3.3	40	3	231	.11	77	2.1	1.6	34	DIS	F
		5	2	5	14.51	20	4.53	156	29.18	6.58	2.8	2.9	26	1	321	.10	90	8.1	10.7	22	DIS	*
		5	528	21.31	19	15.93	155	27.24	9.87	1.7		24	2	69	.11	5	0.4	0.7	19	LSW	
		5	528	43.54	19	23.72	155	15.82	2.97	2.4	2.4	18	5	98	.11	1	0.3	0.4	12	SEC	
		5	7	3	28.02	20	3.63	156	29.09	9.72	2.9	3.1	35	2	233	.10	74	1.8	2.0	27	DIS	
		5	721	27.13	19	21.08	155	30.18	9.28	2.2	1.9	32	2	46	.10	5	0.4	0.6	24	KAO	
		5	751	40.89	19	50.76	156	10.49	32.55		2.0	20	0	324	.12	48	11.7	4.4	16	HUA	*
		5	1013	12.23	20	4.52	156	28.35	7.12		1.6	14	2	330	.10	79	8.9	11.6	6	DIS	*
		5	1114	14.65	20	2.09	156	27.70	4.74	3.0	2.9	32	3	231	.12	72	1.9	1.8	29	DIS	
		5	1816	4.15	20	10.64	156	22.51	1.03		1.7	17	2	307	.14	62	15.2	5.4	17	DIS	*
		5	2152	11.76	19	19.65	155	7.94	7.85	2.1	1.9	25	2	94	.08	4	0.5	0.8	24	SF4	
		5	2333	47.40	19	19.64	155	7.40	7.58	1.9	1.9	32	2	107	.12	4	0.5	0.7	26	SF4	
		6	537	46.72	20	3.69	156	28.73	31.69	2.8	3.0	18	2	320	.13	88	2.8	6.5	14	DIS	
		6	9	7	49.16	19	20.22	155	9.96	8.33	1.8	1.7	28	1	81	.08	3	0.5	0.6	22	SF3	
		6	1258	34.69	20	1.38	156	27.88	9.81	3.4	3.8	52	7	231	.12	73	1.2	1.5	41	DIS	F
		6	1357	0.65	19	27.11	155	14.28	14.15	2.0	1.6	13	3	251	.24	5	3.5	1.8	3	DEP	L
		6	1751	28.30	20	1.42	156	29.25	29.87		1.9	18	1	298	.09	75	3.7	3.3	10	DIS	
		6	1847	44.74	20	6.93	156	31.29	6.87		1.9	16	2	323	.09	86	8.1	10.0	8	DIS	*
		6	2128	3.66	19	52.77	155	21.07	14.37	2.4	2.1	40	5	169	.10	1	1.0	0.5	27	KEA	
		6	2322	44.97	19	28.77	155	11.91	23.14	2.2	1.9	9	1	289	.20	11	6.2	2.3	0	DEP	L
		7	2	9	57.06	19	27.49	155	15.66	6.42	1.6	1.5	11	0	225	.14	5	1.8	3.0	1	INT	L
		7	226	7.15	19	22.24	155	29.87	9.59	2.0	1.4	23	1	44	.06	4	0.4	0.7	18	KAO	
		7	4	1	13.07	19	27.17	155	15.89	11.27	1.8	1.8	10	1	215	.09	5	1.8	2.7	1	INT	L
		7	449	58.26	19	36.22	155	12.55	26.03	2.3	1.8	5	0	317	.10	21	12.5	6.2	2	KEA	L*
		7	752	45.77	19	25.22	155	16.50	11.04	2.0	1.9	10	0	163	.13	1	1.8	3.1	1	INT	L
		7	8	1	31.52	20	2.12	156	28.62	3.50	3.5	3.8	60	14	297	.13	74	3.0	2.4	44	DIS	F*
		7	856	21.90	19	25.50	155	14.39	14.12	2.0		14	1	219	.14	2	1.5	1.6	1	DEP	L
		7	859	22.65	19	25.68	155	16.17	13.25	1.8	1.4	9	1	184	.12	2	2.5	2.1	2	DEP	L
		7	11	7	50.42	19	49.72	156	9.58	11.53		1.7	17	1	259	.11	37	5.7	1.4	17	HUA	
		7	1122	50.32	19	17.13	155	27.69	11.23	2.0	1.9	24	2	54	.10	6	0.5	0.9	19	LSW	
		7	15	9	38.47	19	18.85	155	13.59	5.39	1.3	1.5	33	2	71	.13	3	0.4	1.2	29	SF2	
		7	19	5	32.42	19	20.77	155	12.97	7.90	1.7	2.0	39	2	63	.12	3	0.4	0.5	31	SF2	
		7	1926	43.84	19	59.31	156	29.73	38.95		2.0	18	1	244	.09	76	1.7	4.1	21	DIS	
		7	2051	26.35	19	21.99	155	4.82	7.59	1.7	1.7	37	4	74	.10	5	0.4	0.6	36	SF5	
		8	517	18.64	19	21.31	155	15.29	8.88	1.9	1.7	41	8	66	.13	2	0.4	0.3	40	SF1	
		8	745	15.09	19	19.74	155	10.68	6.47	1.5	1.1	22	0	92	.11	5	0.6	1.4	18	SF3	
		8	1457	41.41	19	56.80	156	26.37	7.01	2.7	1.8	15	0	230	.10	86	3.7	15.1	11	DIS	*
		8	1511	37.59	19	20.54	155	11.82	8.98	2.7	2.7	48	7	73	.13	4	0.3	0.4	38	SF3	
		8	2219	50.53	19	19.96	155	12.20	8.73	1.4	1.2	23	1	80	.08	5	0.5	0.8	18	SF3	
		9	334	30.55	20	1.11	156	24.91	6.98		1.6	20	2	312	.09	81	6.9	9.2	10	DIS	*

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1987	FEB	9	551	49.68	19	46.33	155	24.14	27.27	2.0	1.3	19	4	95	.11	14	0.7	1.7	16	KEA	
		9	755	49.19	19	21.48	155	0.77	7.82	2.1	1.8	35	2	177	.14	5	0.7	0.6	22	SF5	
		9	921	6.30	19	24.15	155	15.91	3.04	1.5	1.3	25	8	120	.10	1	0.2	0.2	18	SEC	
		10	4	2	9.54	20	1.65	156	28.23	6.87		2.3	21	7	327	.11	94	8.8	11.6	13	DIS	*
		10	512	43.35	20	2.76	156	25.56	7.25		1.8	24	3	332	.10	91	8.8	11.5	21	DIS	*
		10	1554	7.51	19	21.42	155	30.34	10.37	1.8	1.6	29	2	47	.07	5	0.4	0.7	21	KAO	
		10	2120	48.39	19	17.43	155	13.24	6.70	2.0	2.0	36	2	118	.12	1	0.5	0.9	26	SF2	
		11	046	25.33	19	20.55	155	13.26	8.55	1.4	1.1	25	3	62	.07	4	0.4	0.8	24	SF2	
		11	444	5.83	19	18.69	155	13.80	5.94	1.4	1.1	24	6	92	.10	3	0.4	0.9	19	SF2	
		11	739	1.06	19	19.11	155	9.80	6.10	1.5	1.3	25	3	104	.09	5	0.4	1.0	26	SF3	
		11	10	0	20.62	20	3.98	156	27.56	7.00	2.8	2.0	33	5	299	.13	71	5.4	6.9	31	DIS	
		11	1022	46.32	19	19.55	155	6.63	9.17	4.1	4.1	57	12	126	.11	5	0.4	0.3	49	SF4	F
		11	1028	8.67	19	19.21	155	6.99	7.48	2.1	2.0	44	8	128	.11	4	0.5	0.6	42	SF4	
		11	1037	39.73	19	19.78	155	7.04	8.04	2.8	2.6	55	11	112	.12	5	0.4	0.5	48	SF4	
		11	1111	12.62	19	19.47	155	6.95	7.51	1.6	1.4	39	6	122	.09	4	0.4	0.5	38	SF4	
		11	1122	34.69	20	6.19	156	26.37	7.44	3.6	3.9	52	5	228	.10	76	1.0	1.0	48	DIS	F
		11	1220	58.23	19	15.24	155	22.80	5.98	1.9	1.2	19	2	165	.09	3	0.5	1.5	16	SWR	
		11	1646	59.57	19	25.04	155	18.80	5.89	2.4	2.5	47	8	38	.11	2	0.3	0.5	34	INT	
		11	2315	31.22	19	20.92	155	2.29	5.55	1.7	1.6	29	6	153	.16	2	0.5	0.9	19	SF5	
		12	1717	32.16	20	0.40	155	26.22	9.83	1.2	1.4	22	5	197	.21	16	1.2	0.8	19	KEA	
		12	23	5	47.92	19	21.81	155	4.85	9.16	2.7	2.9	53	14	78	.12	5	0.4	0.4	44	SF5	
		13	352	56.39	20	2.41	156	28.01	26.50		1.8	18	2	314	.11	87	2.3	7.2	18	DIS	
		13	825	15.10	19	26.61	155	30.18	10.09		1.8	40	7	40	.12	9	0.4	0.6	37	KAO	
		13	857	16.88	19	20.25	155	12.80	7.44		1.1	30	5	70	.14	4	0.4	0.7	26	SF2	
		13	1041	37.47	20	8.24	155	46.57	14.04		1.7	31	5	302	.09	33	1.0	0.9	26	KOH	
		13	13	3	49.06	19	17.75	155	30.41	8.50		1.2	23	2	72	.14	5	0.5	1.2	18	LSW	
		13	14	0	36.01	19	23.61	155	24.83	12.90	2.0	1.5	27	1	44	.10	5	0.4	0.6	25	KAO	
		13	2315	40.98	19	13.44	155	42.51	9.04	2.3	2.0	37	8	206	.17	10	0.6	0.8	33	LSW	
		13	2339	3.86	19	22.27	155	0.68	8.08	1.1	1.3	16	1	163	.12	6	1.1	1.1	8	SF5	
		14	047	22.26	19	19.64	155	3.96	5.93	1.7	2.3	39	6	165	.14	2	0.5	0.7	37	SF5	
		14	9	1	42.73	19	27.17	155	23.87	11.64		1.3	26	6	70	.12	4	0.4	0.5	20	KAO	
		14	1227	26.24	19	19.47	155	8.36	7.57		1.4	20	1	84	.06	4	0.5	0.9	15	SF4	
		14	1259	54.21	19	27.05	155	26.00	7.61	2.4	2.4	49	8	59	.16	4	0.3	0.6	42	KAO	
		14	1319	40.82	19	24.12	155	15.99	3.03	2.3	2.4	31	8	76	.13	1	0.2	0.3	24	SEC	
		14	1746	42.83	19	20.43	155	6.20	8.83	1.6	1.9	24	2	110	.08	6	0.5	0.7	21	SF4	
		15	228	9.10	19	11.37	155	28.03	8.02	2.1	1.9	34	5	118	.15	3	0.4	0.6	32	LSW	
		15	255	55.13	19	22.66	155	29.96	9.33	1.6	1.2	33	6	42	.11	4	0.4	0.6	29	KAO	
		15	1224	34.01	19	19.18	155	7.89	8.19	2.1	2.4	48	11	101	.11	3	0.3	0.3	45	SF4	
		15	16	3	15.01	19	19.04	155	8.91	6.66		1.2	35	7	94	.13	4	0.4	0.7	32	SF4	
		15	1615	15.36	19	22.52	155	29.89	9.29	1.6	1.5	46	12	42	.11	4	0.3	0.5	35	KAO	
		16	954	18.27	20	1.75	156	33.87	7.23	1.8	1.5	19	6	330	.14	96	9.8	12.7	17	DIS	*
		16	1218	2.80	19	15.59	155	27.30	11.94	2.0	1.2	28	6	74	.13	5	0.4	0.6	26	LSW	
		16	1225	28.92	19	16.24	155	27.76	11.49	1.7	1.4	29	6	63	.20	5	0.6	0.9	23	LSW	
		16	1258	50.41	20	5.91	156	30.73	46.09	1.8	2.4	26	12	310	.14	77	1.7	2.7	15	DIS	
		16	1632	58.22	20	2.46	156	32.63	7.24		1.7	21	7	330	.12	95	9.3	11.9	14	DIS	*

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1987	FEB	17	4 8	38.56	20	2.38	155	46.82	33.10	2.9	2.3	56	16	171	.12	10	0.6	0.9	43	KOH	
		17	821	36.16	19	15.57	155	16.91	36.12		1.7	10	0	212	.08	8	2.6	7.7	4	DEP	L
		17	822	34.22	19	12.02	155	15.79	46.49		1.6	23	2	201	.09	10	1.8	1.8	21	DEP	L
		17	1839	17.21	20	5.34	156	32.19	30.66	3.1	3.0	22	2	317	.12	93	3.1	5.5	16	DIS	
		17	2127	52.36	19	22.23	155	30.09	9.90	2.0	1.6	32	3	43	.07	4	0.3	0.5	29	KAO	
		17	2254	18.92	19	19.74	155	12.04	7.00	1.4	1.1	45	11	86	.13	6	0.3	0.5	36	SF3	
		18	411	37.29	19	19.80	155	7.04	8.58	2.5	2.5	52	12	112	.13	5	0.3	0.3	42	SF4	
		18	520	57.76	19	22.81	155	1.31	7.28	2.1	1.3	38	6	144	.15	6	0.4	0.4	36	SF5	
		18	1016	12.65	20	2.45	156	28.56	7.19	3.1	3.0	54	13	232	.11	73	1.1	1.6	44	DIS	
		18	1310	47.38	19	24.03	155	15.80	3.21	1.6	1.1	19	9	115	.06	1	0.3	0.4	10	SEC	
		19	1613	23.57	19	15.92	155	27.20	10.79	2.0	1.6	23	2	69	.11	5	0.4	0.9	17	LSW	
		20	122	31.28	19	9.37	155	40.88	1.96	2.5	2.5	29	7	173	.12	12	0.5	0.6	25	LSW	L
		20	124	21.44	19	25.59	155	30.87	9.88	2.1	1.4	30	4	63	.10	8	0.4	0.6	29	KAO	
		20	833	17.76	19	12.62	155	29.48	6.35	2.7	2.5	43	4	77	.17	5	0.4	0.9	36	LSW	F
		20	1039	5.59	19	12.33	155	29.14	4.72	1.8	1.2	17	1	85	.15	5	0.5	2.4	10	LSW	F
		20	1210	13.39	19	17.81	155	30.24	6.95	2.2	1.6	33	2	69	.13	5	0.4	0.9	27	LSW	
		20	1210	55.92	20	5.31	155	29.56	2.57	2.3	1.4	18	3	225	.17	27	1.1	1.7	14	KEA	
		21	049	48.69	19	46.13	156	3.98	14.18		1.5	14	1	243	.11	25	5.0	1.0	12	HUA	
		21	529	21.31	19	22.44	155	29.94	9.75	1.7	1.3	27	2	47	.06	4	0.4	0.8	24	KAO	
		21	822	30.20	19	22.71	155	30.05	9.74	2.0	1.6	27	3	57	.07	4	0.4	0.7	23	KAO	
		21	2257	55.10	19	25.09	155	19.11	5.75	2.3	2.1	33	7	100	.11	3	0.4	0.6	26	KAO	
		21	2324	21.14	20	34.42	155	26.50	0.39	1.4	2.1	27	3	297	.11	61	8.3	2.2	25	DIS	*
		22	615	15.31	19	21.83	155	28.63	10.33	2.1	2.0	33	1	38	.09	2	0.4	0.6	34	KAO	
		22	1034	21.58	19	21.00	155	12.86	8.20		1.2	36	7	61	.12	3	0.4	0.4	35	SF2	
		23	146	44.87	19	21.10	155	4.60	7.19	2.0	1.9	38	6	94	.15	4	0.5	0.7	29	SF5	
		23	513	38.54	19	22.09	155	3.55	7.90	2.2	1.9	39	4	99	.09	4	0.4	0.4	33	SF5	
		23	1628	5.36	19	20.08	155	8.87	5.57	1.5	1.5	26	2	73	.11	4	0.4	1.0	21	SF4	
		23	2152	39.80	19	21.32	155	2.32	7.54	2.4	2.2	38	3	150	.12	3	0.6	0.5	24	SF5	
		23	2157	54.83	19	21.32	155	2.27	8.34	2.7	2.7	47	7	145	.11	3	0.6	0.4	41	SF5	
		23	22 8	50.37	19	16.33	155	33.56	3.77	3.3	3.1	58	13	59	.20	6	0.4	1.5	46	LSW	
		24	1016	41.86	19	18.57	155	25.87	10.93	2.3	2.1	49	10	60	.17	5	0.3	0.5	43	LSW	
		25	039	10.96	19	21.14	155	7.36	7.95	1.6	1.2	23	5	83	.09	4	0.5	0.7	17	SF4	
		25	19 3	31.31	19	19.21	155	15.88	7.90	1.9	1.7	42	6	96	.12	3	0.4	0.5	20	SF1	
		26	458	11.87	19	19.58	155	6.45	6.81	1.6	1.2	32	5	129	.10	5	0.5	0.8	30	SF4	
		27	0 3	14.80	19	17.38	155	30.48	7.13	2.5	2.7	37	1	46	.16	4	0.4	1.1	38	LSW	F
		27	450	8.19	19	26.38	155	29.02	9.97	2.8	2.8	51	9	37	.11	7	0.3	0.4	42	KAO	
		27	2343	38.84	19	19.00	155	10.05	7.29	1.8	2.2	37	5	110	.13	5	0.4	0.6	35	SF3	
		28	012	22.31	19	21.87	155	7.34	19.02	2.0	2.8	6	1	345	.07	10	9.0	2.2	1	DEP	
		28	6 4	10.66	19	19.45	155	7.28	5.61	1.6	1.6	35	8	114	.13	4	0.3	0.8	30	SF4	
		28	1336	21.85	19	20.62	155	5.93	8.53		1.2	22	6	107	.07	5	0.4	0.6	20	SF4	
		28	14 6	41.00	19	19.24	155	6.77	4.97	0.9	1.1	29	6	132	.17	4	0.4	1.4	24	SSF	
		28	1624	3.46	19	25.61	154	55.04	5.38	1.9	2.2	12	3	170	.09	3	0.6	1.2	7	LER	
	MAR	1	118	13.03	19	17.60	155	29.14	6.87	2.3	2.5	39	3	47	.18	5	0.4	0.9	36	LSW	
		2	8 6	32.64	19	19.88	155	7.52	8.16		1.2	14	2	101	.05	5	0.5	0.9	13	SF4	
		2	813	52.42	19	19.66	155	7.29	8.25	1.9	2.0	23	5	110	.11	4	0.4	0.5	25	SF4	

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1987	MAR	2	1433	10.35	19	19.33	155	9.83	5.57	2.1	2.4	25	0	99	.11	5	0.6	2.0	19	SF3	
		2	1816	51.15	19	23.84	155	20.47	10.19	1.6	1.2	15	4	75	.06	1	0.6	1.0	2	KAO	
		3	1 1	1.27	19	54.70	155	19.10	11.33	2.3	2.3	21	2	260	.14	4	1.7	0.6	21	KEA	
		3	249	32.09	19	27.40	155	50.27	9.21	2.7	2.9	41	8	132	.23	9	0.8	0.6	35	KON	
		3	3 2	19.07	19	19.26	155	11.44	3.73	1.4	1.2	20	4	101	.13	5	0.4	1.5	17	SSF	
		3	1052	38.48	19	54.89	155	19.70	10.72	2.1	1.7	12	0	299	.07	3	3.2	1.1	11	KEA	
		3	1616	51.86	19	27.45	154	57.47	39.64	2.3	1.8	24	2	132	.07	4	1.5	1.1	16	LER	
		3	2039	37.14	19	22.64	155	0.64	4.88	2.1	1.6	23	1	158	.17	6	0.7	2.4	6	SSF	
		3	2046	9.27	19	23.78	155	15.48	2.77	1.9	1.7	13	4	100	.05	2	0.3	0.6	8	SEC	
		4	025	33.19	20	25.46	155	30.69	7.00	1.3	1.9	21	5	327	.10	62	7.3	9.9	16	DIS	*
		4	1 8	46.53	19	58.17	155	19.77	11.50	2.6	2.8	30	5	242	.10	9	0.8	0.5	29	KEA	
		4	1054	39.08	19	40.54	155	3.39	1.14	2.2	1.7	20	0	181	.17	28	1.0	12.8	23	HIL	B*
		4	1914	32.35	19	22.22	155	29.47	10.49		1.2	10	1	125	.09	3	0.8	1.0	7	KAO	
		4	2311	5.87	20	1.31	155	18.47	8.78	2.2	1.8	21	3	272	.26	15	1.9	0.9	20	KEA	
		5	722	1.13	19	23.11	155	27.35	6.19	2.1	1.9	35	5	39	.18	1	0.4	0.8	33	KAO	
		6	136	7.48	19	18.65	155	13.45	6.15	2.1	1.5	27	3	132	.12	3	0.5	1.2	21	SF2	
		6	12 2	52.83	19	22.21	155	1.42	7.64	2.1	1.6	30	2	165	.16	5	0.7	0.9	19	SF5	
		7	126	17.71	20	9.13	155	46.28	12.64	2.5	1.9	16	3	304	.08	35	1.4	0.7	11	KOH	
		7	1113	49.76	19	19.46	155	13.51	6.94	1.7	1.5	28	1	68	.12	5	0.5	1.0	25	SF2	
		7	1553	32.95	19	22.02	155	4.91	7.79	2.0	1.7	38	4	74	.10	5	0.4	0.6	36	SF5	
		7	1614	13.77	19	18.40	155	13.44	9.21	2.6	2.6	53	11	81	.14	3	0.4	0.4	45	SF2	
		8	511	13.75	19	48.14	155	50.35	14.88	2.8	2.8	44	14	201	.13	20	0.7	0.8	35	HUA	
		8	512	38.60	19	41.75	155	46.15	31.92	2.2	2.0	22	7	214	.18	21	1.2	1.1	15	HUA	
		8	7 6	20.36	19	23.58	155	6.43	2.00	2.1	2.4	10	3	118	.11	2	0.9	0.5	5	SME	
		8	1226	31.36	19	20.00	155	18.62	3.38	2.0	1.5	26	4	60	.11	2	0.3	0.7	21	SWR	
		8	2328	53.67	19	20.83	155	29.08	5.69	1.6	1.1	19	2	87	.11	4	0.4	0.9	16	KAO	
		9	335	51.27	19	23.76	155	15.62	1.02	1.7	1.1	21	4	101	.13	2	0.3	0.3	9	SEC	
		9	342	45.64	19	23.00	155	2.48	7.17	2.0	1.7	29	4	121	.14	4	0.5	0.8	15	SF5	
		9	447	33.09	19	56.32	155	37.15	14.51	2.2	1.9	27	2	254	.09	10	3.0	1.0	18	KOH	
		9	541	34.55	19	18.32	154	47.97	11.94	2.1	2.4	7	1	347	.13	51	9.7	13.7	1	LER	L*
		9	820	3.44	19	23.17	155	15.26	1.42			24	6	73	.12	2	0.2	0.3	20	SEC	
		9	820	28.41	19	23.04	155	14.83	2.39		1.6	20	5	66	.14	2	0.3	0.3	17	SEC	
		9	956	46.27	19	16.38	155	15.47	10.66	2.2	2.1	51	8	151	.14	4	0.4	0.3	44	SF1	
		9	1010	26.92	19	21.14	155	15.26	2.50	2.1		8	1	223	.11	3	0.9	0.6	2	KOA	L
		9	1122	25.20	19	25.53	155	16.89	25.71	2.2	1.6	11	3	189	.08	1	3.6	1.3	7	DEP	L
		9	1229	31.84	19	43.16	155	6.11	6.97	2.0	2.0	10	2	336	.29	37	5.5	25.6	3	HIL	L*
		9	1254	15.45	19	24.77	155	18.99	12.83	2.2	2.1	15	5	169	.10	2	1.4	0.7	1	INT	L
		10	544	29.27	19	25.10	155	30.42	9.37	2.0	1.2	44	9	43	.10	7	0.3	0.6	36	KAO	
		10	14 6	59.52	20	14.50	156	44.06	27.03	3.0	3.0	23	0	267	.10	77	3.2	5.2	19	DIS	
		10	1414	55.90	19	11.31	155	16.64	50.94	2.4	2.1	25	3	185	.07	12	1.1	1.5	21	DEP	L
		10	1532	34.55	19	23.19	155	18.41	12.42	2.0	1.4	34	2	44	.09	2	0.5	0.6	24	INT	
		10	1654	58.53	19	17.77	155	13.02	6.80	2.1	1.7	34	6	116	.12	2	0.4	0.8	18	SF2	
		10	1851	1.07	19	19.92	155	7.32	6.89	2.1	2.0	45	9	104	.12	5	0.5	0.7	41	SF4	
		11	159	10.08	19	12.87	155	26.83	9.22	4.0	4.0	49	8	125	.11	6	0.3	0.3	46	LSW	F
		11	2122	9.06	19	17.55	155	13.32	6.49	1.8	1.2	38	7	104	.09	1	0.4	0.7	30	SF2	

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	GAP NS	RMS DEG	SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1987	MAR	11	22 0	56.34	19	21.90	155	4.20	9.50	2.7	2.8	52	9	83	.10	4	0.5	0.3	43	SF5 F
		11	2315	15.56	19	39.85	156	14.18	32.45		1.6	27	5	301	.11	39	1.1	1.5	16	HUA
		12	13 0	32.17	19	20.78	155	13.28	7.62	1.7	1.7	45	6	159	.14	3	0.5	0.4	38	SF2
		12	1347	10.36	19	15.95	155	0.90	0.03	2.3	2.5	9	3	305	.29	17	17.9	5.5	3	SSF *
		12	1417	40.60	19	41.17	155	4.19	1.36	2.2	2.1	17	0	181	.13	30	1.5	14.1	13	HIL B*
		12	1445	54.34	19	23.77	154	59.52	7.61	2.4	2.4	37	2	189	.15	3	1.1	0.4	25	LER
		12	1841	0.12	19	21.27	155	1.37	8.15	2.2	1.8	23	1	217	.08	7	1.1	0.7	23	SF5
		13	11 1	40.17	19	30.54	155	26.94	5.51	1.8	1.2	18	5	103	.11	3	0.4	0.9	15	MLO
		13	13 5	54.82	19	21.96	155	3.27	7.91	2.2	2.1	39	7	205	.14	5	0.8	0.5	37	SF5
		13	1638	3.84	19	20.01	155	11.99	9.53	2.7	3.0	54	11	81	.13	5	0.5	0.3	49	SF3
		14	421	10.14	19	47.79	156	11.42	40.01		1.9	36	5	292	.12	39	1.4	1.4	31	HUA
		14	536	15.50	19	15.14	155	30.46	8.74	2.1	1.4	34	3	112	.15	1	0.4	0.8	33	LSW
		14	554	17.97	19	20.19	155	13.02	7.96		1.2	19	1	68	.06	5	0.5	1.0	18	SF2
		14	9 4	38.76	19	24.77	155	19.86	6.26	1.3	2.0	36	8	51	.13	2	0.4	0.6	28	KAO
		14	1355	9.42	19	24.54	155	14.76	4.15	1.6	1.2	30	9	127	.09	1	0.3	0.3	21	SNC
		14	1732	53.66	19	24.84	155	19.95	5.49	2.3	2.1	45	9	37	.15	4	0.3	0.8	38	KAO
		14	2042	21.93	19	25.11	155	19.53	6.26	1.9	1.2	17	3	103	.07	3	0.6	1.2	13	KAO
		16	554	31.32	20	10.97	156	37.58	0.00	3.1	3.2	35	2	310	.15	89	7.0	1.6	28	DIS *
		16	1046	35.70	19	30.58	155	27.22	4.67	1.9	1.2	24	7	117	.11	3	0.4	1.0	17	MLO
		16	1646	15.06	19	19.22	155	9.93	6.48	1.7	1.4	36	4	102	.10	5	0.4	0.8	21	SF3
		17	3 2	31.46	19	19.31	155	11.44	6.98	2.0	1.8	52	9	100	.16	6	0.4	0.5	43	SF3
		17	3 8	20.68	19	11.49	155	27.52	7.81	2.4	2.3	36	5	118	.16	4	0.5	0.9	31	LSW
		17	312	10.29	19	11.96	155	27.50	8.94	3.8	4.0	58	10	115	.17	5	0.4	0.5	49	LSW F
		17	6 6	7.12	19	12.86	155	27.60	0.38	2.7	3.0	54	12	109	.16	6	0.3	0.3	49	LSW F
		17	7 1	49.11	19	22.44	155	1.64	6.65	2.0	2.0	28	6	156	.12	5	0.6	0.9	23	SF5
		17	1420	55.19	19	20.03	155	23.33	10.42	1.8	1.2	28	4	73	.10	0	0.5	0.8	23	SWR
		18	623	36.55	19	19.48	155	12.93	5.28	1.4	1.1	31	5	78	.12	5	0.4	1.1	27	SF2
		18	15 7	9.59	19	45.01	155	2.30	0.00	2.5	2.4	8	0	252	.20	35	3.5	5.4	11	HIL B*
		18	1652	57.32	19	29.93	155	16.17	22.89	2.3	1.3	49	15	107	.11	9	0.5	0.6	35	DEP
		18	1850	12.62	19	20.46	155	2.24	6.21	1.7	1.2	38	9	173	.16	2	0.5	0.5	36	SF5
		18	2053	18.23	19	20.36	155	12.42	8.01	1.7	1.5	49	7	72	.14	4	0.4	0.3	43	SF2
		19	921	4.05	19	22.51	155	1.02	7.83	1.8	1.4	28	4	168	.12	6	0.8	0.5	21	SF5
		19	1442	1.79	19	21.29	155	1.98	15.50	2.1	1.4	18	0	168	.15	3	1.8	0.5	15	DEP
		19	1539	53.13	19	21.90	155	28.65	4.95	1.9		26	1	78	.10	2	0.4	0.6	20	KAO
		19	2324	25.44	19	19.92	155	12.14	8.75	1.4	1.4	25	3	81	.07	5	0.4	0.7	19	SF3
		20	323	27.81	19	29.12	155	24.26	9.54	2.1	1.2	35	6	58	.13	2	0.4	0.6	20	KAO
		20	6 7	38.23	19	24.93	155	16.18	9.87	1.7	1.0	11	2	155	.07	1	1.3	0.9	4	INT L
		20	16 8	44.59	19	19.00	155	15.42	5.72	1.4	0.9	22	2	104	.11	4	0.5	1.3	20	SF1
		20	1819	20.23	20	47.20	155	52.16	16.00	2.9	2.2	27	3	323	.14	105	4.9	15.7	25	DIS *
		21	421	24.60	19	26.13	155	28.99	8.95	2.3	2.3	55	12	36	.14	7	0.3	0.5	45	KAO
		21	945	46.08	19	16.71	155	32.95	6.10	2.1	1.9	39	4	55	.15	6	0.4	1.3	39	LSW
		21	1929	14.20	19	12.13	155	18.82	34.23	2.8	2.6	49	5	174	.10	10	0.6	1.0	45	DEP
		21	2322	8.51	19	27.33	155	25.80	6.49	2.1	1.7	39	7	46	.12	4	0.3	0.8	31	KAO
		22	223	41.81	19	19.69	155	12.90	6.96	1.4	1.1	36	7	76	.11	5	0.3	0.6	26	SF2
		22	430	58.34	19	22.44	155	20.81	10.65	2.0	1.3	35	5	46	.07	3	0.4	0.5	30	KAO

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	GAP NS	RMS DEG	SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1987	MAR	22	618	11.72	19	23.97	155	16.15	2.96	2.3	2.1	32	6	68	.11	1	0.2	0.2	25	SEC
		22	643	47.38	19	15.54	155	7.10	23.31	2.5	2.7	6	2	280	.06	11	1.5	2.6	3	DEP
		22	1053	52.89	19	56.34	156	17.38	7.71	1.6	2.0	27	0	279	.11	55	4.9	3.8	20	KOH
		22	1142	32.80	19	19.62	155	8.40	6.43	1.6	1.2	30	7	83	.10	4	0.4	0.9	24	SF4
		22	1536	32.48	19	21.86	155	3.98	7.75	1.7	1.3	32	4	96	.15	4	0.5	0.6	23	SF5
		23	341	18.36	19	47.88	155	35.82	14.13	2.4	2.0	28	4	111	.07	10	0.5	0.4	23	KEA
		23	8 3	57.29	19	20.98	155	13.26	8.16	2.6	2.4	45	8	58	.12	3	0.4	0.4	39	SF2
		23	1032	46.35	19	57.03	155	35.30	8.44	2.6	2.0	28	2	185	.13	13	0.8	0.8	25	KOH
		23	1334	57.35	19	59.25	155	35.68	13.03	2.6	1.9	24	1	163	.10	16	0.8	0.7	19	KOH
		23	1516	50.30	19	28.34	155	25.23	2.45	2.3	1.7	38	10	75	.13	4	0.3	0.6	23	KAO
		23	1810	12.45	19	31.94	155	53.61	5.89	2.5	1.9	24	3	170	.20	6	0.7	1.0	18	KON
		23	2354	53.94	19	28.48	155	25.62	10.47	2.2	1.6	32	3	63	.12	5	0.4	0.7	27	KAO
		24	2025	23.15	20	0.27	155	43.11	7.92	3.0	3.2	44	4	275	.11	17	1.0	0.5	37	KOH F
		24	2231	29.97	19	20.10	155	11.57	7.73	2.4	2.9	49	8	83	.14	5	0.4	0.6	41	SF3
		24	2250	7.69	19	11.97	155	27.55	5.67	1.8	1.1	29	5	119	.14	5	0.4	1.5	21	LSW
		26	6 8	12.68	19	11.83	155	38.57	9.74	2.7	2.6	42	3	102	.17	6	0.5	0.7	45	LSW
		26	8 8	39.58	19	21.54	155	1.36	8.17	2.1	1.8	32	4	164	.12	4	0.7	0.7	29	SF5
		26	927	56.33	19	22.01	155	4.04	7.28	2.0	1.6	30	1	95	.13	4	0.6	0.8	28	SF5
		27	919	48.35	19	19.70	155	8.05	6.52	1.9	1.7	33	4	90	.09	4	0.4	0.7	25	SF4
		27	1452	16.01	19	19.28	155	11.83	5.10	1.4	1.4	30	5	98	.12	5	0.4	1.5	27	SF3
		28	039	31.44	19	23.78	155	15.38	2.83	2.0	1.5	20	4	98	.07	2	0.3	0.3	12	SEC
		28	1146	17.32	19	20.08	155	11.70	8.84	1.8	2.0	23	0	82	.09	5	0.5	0.7	20	SF3
		29	437	56.30	19	19.66	155	11.87	8.67	2.8	3.0	50	9	88	.11	6	0.4	0.4	45	SF3
		29	440	25.51	19	19.89	155	11.44	7.56	2.0	1.8	40	6	87	.14	5	0.5	0.7	33	SF3
		29	823	2.20	19	18.97	155	12.83	5.00	1.4	1.1	19	3	89	.12	4	0.5	1.7	15	SSF
		29	1151	59.60	19	47.34	155	34.58	13.96	2.1	1.4	17	3	127	.09	12	0.6	0.6	13	KEA
		29	1311	32.48	19	20.08	155	11.31	7.99	2.1	2.0	43	5	84	.15	4	0.5	0.7	38	SF3
		29	1347	5.81	19	23.62	155	16.96	14.79	2.3	2.1	48	10	51	.12	0	0.5	0.3	37	DEP
		29	2116	51.18	19	19.19	155	13.33	9.49	2.9	2.8	53	9	126	.13	6	0.4	0.5	45	SF2
		30	1348	47.98	19	27.51	155	52.28	7.46	2.5	1.8	26	1	123	.21	6	0.9	1.0	12	KON
		30	21 5	58.69	19	56.56	155	51.61	10.30	2.4	2.0	19	1	201	.09	22	1.5	0.9	16	KOH
		31	1957	12.31	19	27.02	155	48.17	14.49	2.9	1.9	45	11	90	.20	8	0.6	0.3	37	KON
APR		1	1815	13.38	19	32.77	155	54.64	12.00		1.4	19	5	253	.09	6	1.1	0.4	11	KON
		2	035	28.12	19	19.96	155	12.84	6.14	1.4	1.1	30	5	73	.12	5	0.4	0.9	26	SF2
		2	040	15.08	19	21.38	155	4.28	7.33	2.1		43	6	83	.12	4	0.4	0.5	37	SF5
		2	9 0	53.56	19	26.52	155	30.04	9.32	2.5	1.8	45	7	40	.12	9	0.3	0.8	29	KAO
		2	1338	41.70	19	20.97	155	23.99	10.81	2.0	1.3	29	4	63	.10	2	0.4	0.7	21	SWR
		2	1855	42.40	20	3.48	155	57.64	7.28	2.9	2.2	29	1	291	.12	38	1.7	1.3	17	KOH
		3	1522	18.13	19	31.89	155	42.32	8.32	2.7	2.4	46	7	109	.13	7	0.4	0.7	30	MLO
		3	18 8	3.93	19	26.40	155	26.73	5.79	1.5	1.2	28	4	53	.13	3	0.3	1.2	26	KAO
		3	2113	27.11	19	22.53	155	28.41	9.13		1.2	15	0	75	.10	1	0.6	1.3	14	KAO
		3	2220	7.27	19	56.23	155	37.61	11.77	3.2	3.4	52	14	136	.15	9	0.4	0.4	48	KOH F
		4	227	0.99	19	19.85	155	6.47	7.84	1.9	2.2	39	2	121	.11	5	0.5	0.6	30	SF4
		4	838	55.61	19	19.59	155	48.37	11.75	2.4	1.6	39	10	101	.12	10	0.4	0.4	33	KON
		4	1113	40.96	19	20.79	155	52.82	1.08	3.4	3.4	48	15	172	.20	9	0.5	0.3	46	KON

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1987	APR	4	1634	51.22	19	21.60	155	2.22	7.39	1.7	1.8	43	8	150	.20	3	0.6	0.5	37	SF5	
		4	19 2	13.07	19	21.78	155	29.65	9.89		1.3	24	1	57	.12	4	0.5	0.8	14	KAO	
		4	2326	50.76	19	20.29	155	53.51	5.66	3.0	2.6	40	4	202	.21	17	0.9	1.1	39	KON	
		5	032	25.84	19	53.40	155	23.99	11.01	1.6	1.4	24	2	187	.08	6	1.0	0.4	23	KEA	
		5	039	13.04	19	20.91	155	51.97	1.46	1.7	1.3	28	6	157	.10	9	0.4	0.5	25	KON	
		5	1046	40.67	19	18.25	155	13.27	5.99	1.8		25	4	89	.10	2	0.4	1.0	19	SF2	
		5	1046	47.17	19	17.86	155	13.37	6.68	2.4	2.2	35	9	92	.11	2	0.4	0.8	25	SF2	
		5	1319	2.93	19	18.26	155	13.39	8.03	2.1	2.0	45	7	84	.10	2	0.4	0.4	35	SF2	
		5	1610	43.24	19	21.29	155	2.47	6.59	2.1	1.7	42	7	138	.14	3	0.4	0.5	40	SF5	
		6	0 3	16.64	19	11.50	155	31.36	8.01	2.9	3.0	61	17	162	.15	7	0.4	0.6	46	LSW	F
		6	8 3	32.34	19	11.52	155	27.34	7.84	2.5	2.1	46	6	122	.14	4	0.4	0.7	37	LSW	
		6	1718	3.88	19	21.81	155	1.90	5.65	1.7	1.2	30	2	155	.20	4	0.9	1.4	14	SF5	
		6	2150	26.16	19	21.83	155	6.41	0.03	2.0	2.1	7	1	158	.19	4	1.3	11.3	2	SSF	*
		6	2224	2.66	19	11.59	155	26.99	8.36	2.7	2.9	46	2	130	.14	4	0.5	0.5	45	LSW	
		7	1522	52.67	19	23.46	155	26.43	5.17	1.8	1.1	32	7	54	.12	3	0.3	0.6	24	KAO	
		7	1532	58.53	19	24.76	155	30.72	10.55	2.0	1.2	43	8	43	.13	7	0.3	0.5	40	KAO	
		7	1714	55.93	20	12.84	155	34.15	37.95	1.6	1.8	25	4	250	.09	24	1.0	0.9	24	KOH	
		7	1942	23.66	18	55.98	155	11.37	12.93	1.3	1.4	45	16	247	.23	38	0.7	1.2	35	LOI	
		8	352	4.10	19	49.10	155	38.34	12.71	2.6	3.0	59	14	99	.14	5	0.3	0.3	46	KEA	
		8	919	56.19	19	22.02	155	28.25	6.22	1.6	1.1	29	5	43	.11	1	0.4	0.7	22	KAO	
		8	1734	52.50	19	18.36	155	16.43	10.05	2.2	2.0	51	12	116	.12	4	0.3	0.4	43	SF1	
		8	20 1	8.57	19	23.52	155	15.68	3.80	1.6	1.0	26	10	89	.13	2	0.3	0.3	16	SEC	
		9	1332	34.38	19	41.36	155	2.62	3.25	2.7	2.8	23	0	240	.16	21	1.8	16.1	26	HIL	B*
		9	1335	20.65	19	20.00	155	6.47	8.22	1.6	1.2	28	5	117	.08	6	0.5	0.7	26	SF4	
		9	2324	7.87	19	19.72	155	11.81	6.28	2.0	2.0	43	3	88	.14	6	0.4	0.9	36	SF3	
		10	950	59.43	19	19.93	155	12.97	8.73	1.4	1.3	32	6	72	.10	5	0.4	0.5	29	SF2	
		10	1410	7.17	19	17.34	155	14.95	7.94	2.1	2.3	51	9	129	.13	3	0.3	0.4	46	SF1	
		10	1451	24.46	19	24.08	155	15.90	3.12	1.5	0.9	19	5	117	.06	1	0.3	0.3	11	SEC	
		10	1624	0.47	19	23.97	155	15.79	3.05	1.5	1.1	18	5	112	.08	1	0.3	0.4	10	SEC	
		10	23 0	42.73	19	22.58	155	26.74	10.46		1.3	31	1	42	.10	2	0.4	0.5	19	KAO	
		11	321	44.34	19	20.86	155	28.46	10.59		1.1	20	2	50	.10	3	0.5	0.9	17	KAO	
		11	15 3	59.26	19	15.31	155	22.88	7.77	1.6	1.8	30	3	159	.12	3	0.5	1.2	22	SWR	
		12	3 0	20.16	19	20.72	155	13.59	9.05		1.0	26	4	109	.11	4	0.5	0.5	24	SF2	
		12	6 4	29.31	19	24.09	155	16.08	3.14	1.4	1.1	17	5	116	.05	1	0.3	0.4	9	SEC	
		12	1436	51.18	19	17.62	155	27.66	10.60	2.0	1.4	34	3	49	.12	6	0.4	0.6	33	LSW	
		12	17 3	38.62	19	20.76	155	13.24	8.61	1.7	0.9	32	5	60	.09	3	0.4	0.6	31	SF2	
		12	2221	6.90	19	23.76	155	15.78	3.00	2.0	1.5	28	6	100	.10	1	0.2	0.2	23	SEC	
		12	2237	36.81	19	19.79	155	11.85	6.90	1.7	1.1	36	6	86	.10	5	0.3	0.7	28	SF3	
		13	1920	53.33	19	46.09	155	59.50	10.70		1.5	17	2	301	.10	18	1.3	0.9	11	HUA	
		13	2025	28.10	19	16.47	155	28.32	9.60	1.7	1.4	36	4	59	.15	4	0.4	0.6	34	LSW	
		14	224	51.70	19	18.28	155	13.06	7.64	1.5	1.1	47	9	98	.17	2	0.4	0.5	40	SF2	
		14	937	58.97	19	22.52	155	29.98	9.27	2.0	1.6	36	2	45	.10	4	0.3	0.7	33	KAO	
		14	1226	41.76	19	21.97	155	6.41	0.01	2.3	3.0	7	3	150	.12	3	0.3	0.4	6	SME	*
		15	1938	41.32	19	45.54	155	59.44	13.27	2.8	2.9	32	2	265	.11	18	1.1	0.4	21	HUA	
		15	2231	27.49	19	21.41	155	1.63	3.54	1.7	1.2	22	4	169	.19	4	1.0	1.4	18	SSF	

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1987	APR	15	2242	12.10	19	23.22	155	4.29	9.95	2.0	2.0	8	6	246	.06	6	1.5	1.1	1	SF5	
		16	9 3	24.50	19	19.99	155	6.38	7.61	1.6	1.3	36	5	119	.13	6	0.5	0.5	34	SF4	
		16	1034	7.77	19	19.15	155	15.34	6.40	1.4	1.1	28	3	100	.11	4	0.4	1.0	24	SF1	
		16	11 4	25.14	19	19.11	155	8.67	7.06	1.6	1.4	31	8	88	.11	4	0.4	0.8	23	SF4	
		17	033	40.35	19	44.47	156	14.46	7.89	2.5	1.5	35	5	264	.14	43	1.0	0.8	29	HUA	
		17	228	43.70	19	26.95	154	51.93	6.99	2.3	2.1	34	1	182	.17	2	1.1	0.6	24	LER	
		17	432	6.56	19	19.84	155	7.63	8.21	2.6	2.6	43	3	98	.11	5	0.4	0.4	35	SF4	
		17	652	58.28	19	24.68	155	29.57	8.82	2.8	2.7	53	9	33	.12	5	0.3	0.6	43	KAO	
		17	1914	45.43	19	26.64	154	53.42	8.00	2.0	1.3	27	2	165	.13	4	0.9	0.6	17	LER	
		18	018	55.12	19	12.05	155	35.89	5.88	2.5	2.5	40	4	89	.17	12	0.4	1.1	35	LSW	
		18	226	23.79	19	18.07	155	13.26	5.95	1.6	1.1	35	4	93	.10	2	0.4	0.8	25	SF2	
		18	932	43.30	19	19.76	155	13.82	6.11	2.4	2.6	54	9	60	.14	5	0.4	0.8	44	SF2	
		18	1116	43.37	19	19.85	155	7.50	8.45	3.2	3.6	57	11	101	.09	5	0.3	0.4	43	SF4	
		18	1523	13.52	19	26.32	155	20.12	7.96	2.3	2.1	30	9	129	.11	3	0.4	0.8	22	KAO	
		18	1936	16.20	19	20.49	155	10.88	8.32	2.3	2.3	44	9	78	.12	3	0.3	0.3	38	SF3	
		18	2325	44.64	19	21.40	155	5.97	8.03	1.1	1.3	27	4	88	.12	5	0.5	0.7	28	SF4	
		19	910	18.85	19	23.85	155	30.50	9.97	1.7	1.1	31	1	47	.07	6	0.3	0.8	25	KAO	
		19	1216	25.04	19	22.47	155	26.45	10.12	1.5	1.2	36	6	42	.12	2	0.3	0.5	33	KAO	
		19	1621	8.92	19	20.55	155	11.48	7.94	1.4	1.0	17	1	78	.05	4	0.5	1.0	13	SF3	
		20	115	30.74	19	18.28	155	15.28	7.94	1.7	1.2	33	4	119	.09	4	0.4	0.7	25	SF1	
		20	848	51.38	19	15.42	155	33.67	8.19	2.0	1.8	45	5	63	.18	6	0.5	0.7	41	LSW	
		20	1216	1.43	19	21.75	155	51.12	9.34	2.6	1.7	43	9	189	.19	11	0.6	0.6	36	KON	
		20	1456	17.30	19	20.23	155	17.17	31.45	2.1	1.7	61	21	80	.12	0	0.4	0.4	41	DEP	
		20	2223	36.43	19	26.39	155	23.01	11.44	1.6	1.4	14	5	81	.12	4	0.7	0.9	9	KAO	
		21	338	49.95	19	19.36	155	12.08	6.42	1.4	1.3	50	12	93	.12	5	0.3	0.5	42	SF3	
		21	425	19.94	19	20.98	155	16.14	27.80	2.2	1.7	52	9	71	.12	3	0.6	0.6	39	DEP	
		21	523	50.55	19	24.06	155	15.94	2.99	1.8	1.6	21	5	116	.06	1	0.3	0.2	13	SEC	
		21	716	2.03	19	22.35	155	30.22	28.40	2.2	1.7	26	3	59	.08	5	0.5	1.1	18	DML	
		21	2252	33.81	19	20.15	155	6.76	7.59	1.2	1.1	34	3	109	.16	6	0.6	0.7	35	SF4	
		21	2258	4.41	19	30.35	156	35.33	7.06		2.0	23	3	322	.14	86	8.8	11.4	22	DIS	*
		22	150	17.56	19	23.16	155	2.60	7.43	1.9	1.6	35	4	125	.14	3	0.5	0.7	28	SF5	
		23	212	40.54	19	24.99	155	19.62	7.04	1.6	1.1	33	10	98	.14	2	0.4	0.6	23	KAO	
		23	534	41.71	19	11.22	155	28.88	33.06	2.5	2.3	64	16	79	.09	4	0.4	0.6	49	DLS	
		23	1132	38.63	19	15.76	155	27.15	9.88	1.7	1.6	25	4	72	.11	5	0.4	0.9	23	LSW	
		23	1139	40.32	19	15.45	155	27.07	9.26	1.7	1.2	19	3	77	.12	5	0.5	1.1	18	LSW	
		23	2021	25.72	19	30.00	155	27.61	5.07	2.1	1.7	48	13	89	.12	4	0.2	0.9	38	KAO	
		24	0 5	59.22	19	11.12	155	28.80	33.20	2.5	2.2	65	16	79	.10	3	0.4	0.6	49	DLS	
		24	427	20.72	19	19.56	155	13.44	8.04	1.9	2.0	46	4	121	.13	6	0.4	0.6	36	SF2	
		24	10 5	11.12	19	19.41	155	11.29	5.83	1.2	1.3	28	6	98	.09	6	0.4	1.3	23	SF3	
		24	1348	42.00	19	20.51	155	4.11	5.42	1.1	1.2	23	4	111	.14	2	0.6	1.4	20	SF5	
		24	2340	52.32	19	21.69	155	5.02	8.08	1.7	1.4	45	8	81	.16	5	0.6	0.5	43	SF5	
		25	2 6	29.98	19	11.74	155	30.85	38.49	2.1	1.8	41	4	86	.08	6	0.6	1.1	37	DLS	
		25	249	27.38	19	22.48	155	26.72	10.42	3.1	3.4	63	16	37	.14	2	0.3	0.4	50	KAO	
		25	524	32.41	19	16.52	155	22.55	9.51	1.6	1.3	37	7	127	.13	5	0.4	0.5	34	SWR	
		25	13 6	53.73	19	20.26	155	13.35	7.48	1.4	1.3	33	7	64	.13	4	0.3	0.4	30	SF2	

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1987	APR	25	1820	9.04	19	44.87	156	8.89	37.35		1.9	31	7	285	.13	33	1.4	0.9	25	HUA	
		25	2152	6.63	19	20.82	155	11.96	7.68	2.1	2.2	58	13	69	.18	4	0.4	0.4	47	SF3	
		26	149	16.75	19	21.01	155	6.21	4.48	1.6	1.3	38	6	96	.14	5	0.4	1.3	35	SSF	
		26	6	5.89	19	11.61	155	28.96	32.79	2.7	3.0	68	19	80	.10	4	0.4	0.6	50	DLS	
		26	841	33.26	19	23.93	155	16.14	2.94	2.1	1.8	26	7	106	.08	1	0.2	0.2	15	SEC	
		26	937	10.85	19	17.32	155	21.95	34.12	2.9	3.2	64	17	122	.11	6	0.5	0.5	48	DEP	
		26	942	47.46	19	24.62	155	0.40	7.04	1.8	1.6	43	10	135	.17	3	0.5	0.4	37	SF5	
		26	1135	27.57	19	22.00	155	28.78	4.72	1.6	1.1	17	4	98	.10	2	0.4	0.6	12	KAO	
		26	1158	39.21	19	24.89	155	20.08	6.45	2.0	1.3	26	7	89	.10	2	0.4	0.9	18	KAO	
		26	1321	16.35	19	20.10	155	8.34	7.40	1.7	1.9	40	4	80	.10	5	0.4	0.5	36	SF4	
		26	14 5	50.44	19	18.24	155	13.20	6.93	1.5	1.2	23	1	92	.10	2	0.5	1.1	18	SF2	
		26	1558	21.32	19	31.80	155	14.01	26.04	2.2	2.0	53	8	51	.11	13	0.4	0.8	38	DEP	
		26	1716	43.38	19	29.73	155	29.71	3.32	2.1	1.7	27	2	66	.12	6	0.3	1.3	15	KAO	
		26	2112	32.45	19	24.20	155	38.04	3.13	2.1	2.1	14	1	96	.16	6	0.7	2.3	7	MLO	*
		27	114	37.02	19	46.06	156	27.68	7.29		1.8	55	15	284	.13	65	2.5	3.1	41	DIS	
		27	654	45.25	19	25.13	155	18.95	6.59	2.6	2.7	55	16	38	.14	3	0.3	0.5	44	INT	
		27	655	48.75	19	25.15	155	19.26	5.00	2.3	2.0	19	2	109	.08	3	0.5	0.8	15	KAO	
		27	659	33.40	19	24.79	155	19.26	4.71	2.3	2.0	26	4	60	.11	2	0.4	0.7	20	KAO	
		27	7 2	10.57	19	25.01	155	19.27	5.12	2.4	1.8	26	5	103	.10	3	0.4	0.8	16	KAO	
		27	1311	0.49	19	11.57	155	29.00	32.08	2.6	2.5	59	16	79	.10	4	0.4	0.6	44	DLS	
		27	1328	27.64	19	12.75	155	28.74	0.02	3.2	3.5	31	2	89	.13	6	0.4	0.7	27	LSW	*
		27	18 8	3.36	19	23.41	155	29.71	9.69	1.9	1.5	41	5	37	.11	4	0.3	0.4	38	KAO	
		27	2353	6.19	19	28.17	155	17.94	11.83	1.5	1.2	40	8	133	.11	5	0.4	0.5	32	GLN	
		28	232	55.89	19	21.30	155	15.08	9.14	1.5	1.2	27	7	79	.11	2	0.5	0.6	25	SF1	
		28	521	55.49	19	20.14	155	12.62	7.40	1.6	1.5	34	5	73	.11	5	0.4	0.6	27	SF2	
		28	1951	45.94	19	23.67	155	38.00	1.76		1.4	18	3	72	.10	5	0.4	1.0	21	MLO	
		29	738	9.38	19	18.85	155	13.57	7.87	0.9	1.5	33	4	83	.10	3	0.3	0.4	33	SF2	
		29	1322	22.75	19	19.89	155	10.14	9.65	2.3	2.6	50	10	88	.13	4	0.4	0.4	47	SF3	
		29	14 2	19.85	19	21.42	155	27.63	4.16	1.8	1.3	30	8	56	.13	2	0.3	0.5	27	KAO	
		29	1416	15.63	19	24.00	155	16.30	16.13	2.3	2.2	65	19	35	.12	1	0.4	0.2	46	DEP	
		29	1713	21.17	19	11.37	155	28.86	32.91	2.8	2.7	62	13	80	.10	4	0.5	0.6	50	DLS	
		29	2050	29.12	19	22.95	155	29.59	9.81	1.8	1.6	44	6	33	.11	4	0.3	0.4	42	KAO	
		29	23 0	34.24	19	20.92	155	13.45	7.84	1.8	1.8	51	9	57	.15	3	0.4	0.4	46	SF2	
		29	2340	28.55	19	19.46	155	8.15	9.19	2.1	2.0	48	10	90	.14	4	0.5	0.4	45	SF4	
		30	359	49.90	19	20.80	155	6.45	8.97	3.1	3.3	65	19	98	.13	5	0.3	0.3	49	SF4	F
		30	12 6	9.08	19	20.27	155	8.88	7.38	1.9	1.8	42	6	71	.12	4	0.4	0.5	28	SF4	
		30	1914	19.21	19	29.04	155	27.78	10.88	2.1	1.2	50	14	64	.13	5	0.3	0.5	37	KAO	
		30	2254	28.43	19	22.20	155	3.45	5.07	1.7	1.2	30	6	110	.15	4	0.5	0.9	29	SF5	
	MAY	1	019	24.41	19	11.26	155	28.89	33.26	2.6	2.5	56	12	83	.09	4	0.4	0.8	43	DLS	
		1	044	41.48	19	27.13	155	26.10	6.08	3.6	3.7	54	8	47	.14	4	0.3	0.8	47	KAO	
		1	2 8	52.57	19	17.25	155	12.62	6.58	1.5	0.9	23	5	166	.08	2	0.6	0.9	16	SF2	
		1	324	58.79	19	11.98	155	30.50	6.68	1.8	1.4	32	2	81	.15	6	0.4	0.9	30	LSW	
		1	825	15.81	19	23.93	155	26.91	9.65		1.2	29	4	35	.11	3	0.4	0.7	25	KAO	
		1	919	56.67	19	33.12	155	36.10	9.11	1.3	1.8	27	3	80	.13	2	0.5	0.8	19	MLO	
		1	944	38.00	19	24.70	155	7.04	0.27		2.3	8	4	206	.08	3	0.4	0.4	7	SME	

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1987	MAY	1	1320	3.32	19	19.69	155	10.31	8.83	1.2	1.9	30	3	93	.09	4	0.5	0.7	22	SF3	
		1	1745	12.97	19	11.88	155	38.70	7.54	1.2	2.3	38	3	102	.19	6	0.5	1.1	19	LSW	
		1	18 3	16.40	19	17.47	155	12.92	10.21	2.6	2.8	51	7	150	.12	9	0.5	0.4	48	SF2	
		1	1911	22.29	19	18.22	155	30.33	9.13	1.1	1.2	37	4	67	.13	6	0.3	0.6	37	LSW	
		2	111	13.01	19	21.98	155	28.41	4.32		1.1	27	5	43	.13	2	0.3	0.5	22	KAO	
		2	220	14.01	19	15.92	155	26.98	9.88	1.1	2.1	43	5	69	.17	6	0.4	0.5	43	LSW	
		2	228	37.47	19	15.59	155	26.97	8.69	1.1	2.1	46	6	74	.13	6	0.3	0.5	43	LSW	
		2	916	17.51	19	19.36	155	11.81	6.89	1.8	1.5	37	3	96	.10	5	0.4	0.8	36	SF3	
		2	1357	21.50	19	25.03	155	15.94	14.78	1.9	1.5	43	6	73	.10	2	0.5	0.3	36	DEP	
		2	1623	6.30	19	21.79	155	4.11	7.43	1.1	1.2	23	1	93	.11	4	0.6	0.7	14	SF5	
		2	1753	38.31	19	21.71	155	2.82	7.66	2.0	2.0	36	1	132	.14	3	0.7	0.5	18	SF5	
		2	23 1	7.21	19	18.46	155	8.59	5.40	1.6	1.3	29	2	112	.11	2	0.5	1.0	17	SF4	
		3	245	41.11	19	21.18	155	1.35	5.24	1.8	1.7	26	1	174	.15	4	0.8	1.2	14	SF5	
		3	16 9	47.05	19	21.15	155	3.21	8.51	2.6	2.9	56	11	106	.13	2	0.5	0.3	48	SF5	
		4	059	52.98	19	19.34	155	10.59	6.04	1.8	1.8	34	6	111	.13	5	0.5	1.0	33	SF3	
		4	113	34.53	19	19.65	155	11.78	7.78	1.9	1.7	34	5	124	.12	6	0.5	0.9	31	SF3	
		4	240	50.15	19	19.13	155	29.87	9.45	1.7	1.2	20	5	55	.11	7	0.4	0.9	14	KAO	
		4	540	15.66	19	21.32	155	6.02	7.47	1.9	2.1	40	5	90	.12	5	0.5	0.6	34	SF4	
		4	6 3	20.60	19	23.93	155	15.78	3.02	2.3	2.4	30	8	106	.08	1	0.2	0.2	22	SEC	F
		4	726	18.66	19	17.76	155	12.92	7.73	1.5	1.2	22	4	157	.09	9	0.8	1.1	16	SF2	
		4	1718	45.05	19	19.41	155	7.85	7.58	1.9	2.1	34	5	100	.10	4	0.5	0.6	27	SF4	
		5	4 1	37.79	19	22.09	155	28.81	9.75	1.6	1.2	40	5	38	.12	2	0.3	0.4	37	KAO	
		5	557	12.44	19	18.89	155	14.95	7.43	1.4	1.2	31	3	181	.12	5	0.6	0.5	30	SF1	
		5	1038	3.40	19	24.25	155	16.35	3.99		1.1	22	8	120	.12	1	0.4	0.3	16	SEC	
		5	1336	34.30	19	11.56	155	40.83	8.14		1.6	31	6	117	.24	9	0.7	1.4	28	LSW	
		5	1337	19.11	19	20.00	155	13.14	7.22	2.2	1.7	37	8	68	.12	5	0.3	0.4	35	SF2	
		5	1928	16.90	19	23.57	155	16.94	2.90		1.8	18	3	46	.07	0	0.3	0.2	14	SSC	
		5	2312	49.56	19	11.41	155	28.92	33.42		2.1	49	7	84	.08	4	0.5	0.8	40	DLS	
		6	1058	57.56	20	45.09	155	27.39	6.93	3.1	2.5	20	2	324	.12	77	8.3	10.8	15	DIS	*
		6	1312	25.89	19	17.90	155	47.10	10.66	3.6	3.7	46	3	89	.10	10	0.4	0.4	38	KON	
		6	1557	31.08	19	11.38	155	31.56	39.22	2.6	2.4	54	11	95	.09	7	0.4	0.6	46	DLS	
		6	2136	28.19	19	55.27	155	21.52	36.50	2.4	1.8	52	12	190	.12	4	0.6	0.7	43	KEA	
		7	3 9	28.07	19	20.21	155	8.24	7.13	2.0	2.0	39	9	81	.09	4	0.3	0.5	33	SF4	
		7	16 6	27.34	19	22.45	155	4.46	7.82	2.3	2.4	42	5	82	.11	4	0.3	0.6	30	SF5	
		8	1431	30.71	19	24.68	155	16.13	15.16	1.4	1.4	37	3	89	.10	2	0.6	0.4	23	DEP	
		9	1326	57.48	19	21.64	155	30.21	9.18		1.4	37	7	46	.13	5	0.3	0.6	32	KAO	
		9	18 8	28.47	19	19.75	155	12.23	6.41	1.4	1.2	40	8	84	.15	6	0.4	0.6	37	SF3	
		9	2257	21.06	19	11.88	155	31.05	38.63	2.5	2.2	49	7	85	.07	6	0.6	0.7	43	DLS	
		10	638	19.03	19	31.26	155	26.09	23.09	2.5	1.7	48	7	51	.10	3	0.4	0.5	41	DML	
		10	850	46.32	19	21.85	155	26.36	10.06	2.2	2.0	40	4	44	.13	3	0.4	0.6	38	KAO	
		10	1048	10.03	19	20.10	155	11.83	8.54	1.4	1.2	20	3	81	.07	5	0.5	1.0	17	SF3	
		10	1425	21.81	19	18.25	155	14.81	6.84	1.4	1.4	29	4	101	.12	3	0.4	0.9	20	SF1	
		10	1944	31.62	18	55.31	155	13.29	25.99	2.9	3.1	55	11	246	.11	37	0.9	2.3	46	LOI	
		10	2045	54.08	19	19.92	155	8.25	8.28	2.4	2.8	49	9	83	.09	5	0.3	0.4	43	SF4	
		11	211	45.49	19	19.00	155	13.38	7.61	0.9	1.1	30	3	76	.10	4	0.4	0.8	27	SF2	

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1987	MAY	11	953	33.21	19	23.65	155	2.06	8.08		1.2	25	3	129	.11	4	0.6	0.8	17	SF5	
		11	1029	52.63	19	16.39	155	28.96	8.65	1.7	1.2	27	6	58	.12	3	0.4	0.8	20	LSW	
		11	1037	37.99	19	23.00	155	29.71	9.59		1.0	22	4	49	.05	4	0.4	0.8	19	KAO	
		11	15	1 3.56	19	23.49	155	27.38	9.82	1.9	1.4	41	5	31	.12	2	0.3	0.4	39	KAO	
		12	1	1 42.55	19	20.74	155	13.00	8.97	1.4	1.3	25	1	65	.06	3	0.5	0.7	21	SF2	
		12	234	44.95	19	28.31	155	46.11	7.87		1.0	25	1	71	.14	4	0.6	1.1	16	KON	
		12	528	45.09	19	29.22	155	50.73	8.21	2.5	1.8	32	2	89	.18	8	0.7	0.5	21	KON	
		12	836	18.02	19	19.97	155	11.18	8.43	2.0	2.0	43	5	87	.11	5	0.4	0.5	26	SF3	
		12	1327	57.64	19	18.10	155	13.62	7.96	2.2	2.3	40	5	74	.11	2	0.4	0.6	29	SF2	
		12	1951	19.14	19	30.28	155	22.46	8.62	2.9	2.8	53	11	67	.14	2	0.3	0.4	37	MLO	
		12	21	4 50.39	19	26.06	155	29.05	10.27	1.6	1.2	27	0	43	.09	7	0.4	1.1	22	KAO	
		13	6	2 43.60	19	18.54	154	59.35	39.00	2.1	1.5	43	4	212	.09	7	1 2	1.1	40	LER	
		13	1452	27.75	19	19.44	155	8.32	7.44	2.1	2.1	37	8	86	.08	4	0.4	0.6	33	SF4	
		13	1530	50.18	19	24.79	155	19.15	5.04	1.6	1.3	28	7	94	.11	2	0.4	0.7	22	KAO	
		13	1629	26.95	19	21.20	155	6.08	7.67	1.8	1.7	22	5	92	.10	5	0.5	0.8	17	SF4	
		14	015	0.67	19	18.18	155	20.69	5.56	1.7	1.4	27	2	119	.11	4	0.4	1.3	21	SWR	
		14	237	5.85	19	23.70	155	15.53	3.00	2.1	1.9	27	6	97	.10	2	0.3	0.3	15	SEC	
		14	445	42.28	19	20.45	155	6.10	6.62	1.6	1.4	37	5	110	.14	6	0.4	0.7	34	SF4	
		14	1153	53.85	19	15.69	155	23.56	7.35	1.6	1.2	21	1	134	.09	3	0.5	1.3	14	SWR	
		14	1552	34.37	19	21.25	155	23.74	10.08	2.0	1.9	44	5	34	.12	2	0.4	0.5	28	SWR	
		14	1853	49.48	19	8.06	155	36.32	9.54	3.4	3.4	54	17	219	.17	13	0.4	0.6	47	LSW	F
		14	2018	21.17	19	21.03	155	5.84	8.27	2.5	2.7	50	8	97	.10	5	0.4	0.5	40	SF4	
		15	1321	6.72	20	1.21	156	24.44	1.11	3.0	2.6	38	8	293	.12	67	8.3	3.1	31	DIS	*
		15	1452	0.02	19	54.64	155	27.39	29.26	2.6	2.0	39	3	155	.10	12	0.6	1.1	38	KEA	
		15	2244	41.43	19	18.97	155	28.89	9.31		1.2	14	2	59	.08	7	0.5	1.2	11	LSW	
		16	017	31.32	19	11.29	155	36.32	9.78	3.4	3.4	51	9	94	.20	7	0.5	0.7	44	LSW	F
		16	224	49.81	19	20.94	155	2.71	7.13	1.7	1.7	36	3	132	.12	2	0.5	0.5	18	SF5	
		16	315	20.78	20	1.96	155	34.22	10.75		1.5	13	2	187	.06	21	1.0	0.6	7	KOH	
		16	5	5 40.97	19	20.99	155	30.03	9.52	1.7	1.4	28	2	47	.12	5	0.4	0.7	17	KAO	
		16	1316	50.16	19	24.49	155	19.77	6.29	2.5	2.7	59	16	37	.13	1	0.3	0.4	48	KAO	
		16	1622	53.88	19	11.92	155	31.11	37.46	2.1	1.6	44	7	85	.10	6	0.6	0.6	40	DLS	
		16	1949	34.35	19	24.56	155	19.68	6.17	1.4	1.2	30	8	67	.10	2	0.3	0.6	23	KAO	
		16	2034	37.64	19	22.76	155	25.67	9.43	2.0	1.7	49	8	31	.15	3	0.3	0.4	43	KAO	
		16	23	4 32.46	19	22.15	155	6.47	1.86	2.1	2.8	17	3	205	.16	3	0.9	1.5	15	SME	
		17	10	7 50.08	19	22.52	155	2.10	7.69	2.1	2.3	37	5	133	.13	5	0.5	0.4	25	SF5	
		17	1547	33.10	19	11.58	155	31.00	38.02	2.1	1.6	32	3	89	.07	7	0.6	1.0	25	DLS	
		17	1813	52.28	19	56.53	155	23.05	11.70	2.4	2.1	31	7	206	.12	7	0.6	0.3	32	KEA	
		17	1927	39.30	19	21.30	155	30.15	9.35	2.1	2.1	47	5	33	.12	5	0.3	0.5	44	KAO	
		18	229	32.97	19	22.24	155	29.93	9.13	1.5		38	4	44	.09	4	0.3	0.5	37	KAO	
		18	746	5.22	19	26.85	155	28.05	7.54	1.9	1.4	26	2	49	.11	8	0.4	1.3	17	KAO	
		18	934	17.12	19	20.28	155	11.83	9.02	1.5	1.2	25	5	78	.06	5	0.4	0.6	25	SF3	
		18	1551	48.67	19	19.92	155	7.92	8.00	1.9	2.1	43	7	91	.12	5	0.4	0.4	41	SF4	
		19	1	5 44.39	19	23.83	155	15.95	3.18	1.5	1.3	24	6	102	.15	1	0.4	0.3	18	SEC	
		19	313	28.89	19	19.16	155	13.70	7.01	1.4	1.4	41	4	70	.13	4	0.4	0.6	39	SF2	
		19	433	26.41	19	18.55	155	14.10	8.30	1.8	2.2	53	7	74	.14	3	0.3	0.3	47	SF2	

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1987	MAY	19	436	16.07	19	18.63	155	14.09	8.37	1.8	2.1	50	10	75	.13	3	0.3	0.3	43	SF2	
		19	437	5.13	19	18.51	155	14.04	8.23	1.9	2.1	52	9	76	.13	3	0.3	0.3	44	SF2	
		19	440	50.89	19	19.12	155	14.13	9.17	1.9	2.6	50	6	128	.12	6	0.5	0.3	47	SF2	
		19	456	51.84	19	22.58	155	1.07	9.66	3.4	3.3	58	11	151	.12	6	0.5	0.3	50	SF5	F
		19	457	8.35	19	18.17	155	13.90	6.57	3.3	3.2	41	5	89	.13	2	0.4	0.6	42	SF2	F
		19	5	2 27.96	19	24.21	155	1.30	8.42	1.1	1.4	37	7	131	.19	5	0.6	0.4	32	SF5	
		19	723	59.76	19	17.76	155	13.99	8.49	2.0	2.2	50	8	87	.13	2	0.3	0.4	46	SF2	
		19	730	14.46	19	18.96	155	14.32	9.48	2.3	2.6	53	9	74	.13	4	0.3	0.3	47	SF2	
		19	2147	43.80	19	18.58	155	13.12	7.47	1.8	1.8	42	6	89	.12	3	0.4	0.7	36	SF2	
		19	2239	56.60	19	24.10	155	16.15	2.94	1.6	1.8	16	4	116	.07	1	0.3	0.3	12	SEC	
		20	128	16.69	19	23.45	155	21.45	11.53	1.8	1.4	22	3	55	.05	3	0.5	0.9	19	KAO	
		20	827	16.36	19	25.08	155	20.04	6.48	2.1	2.0	29	7	45	.11	3	0.4	0.8	22	KAO	
		20	913	27.81	19	56.08	155	35.47	12.37	2.2	2.0	39	9	142	.20	11	0.4	0.4	33	KOH	
		20	1857	50.71	19	25.42	155	19.76	6.42	1.6	1.4	32	11	112	.14	3	0.4	0.7	21	KAO	
		20	1922	41.09	19	20.46	155	10.91	7.11	1.6	2.0	40	3	78	.14	4	0.5	0.6	41	SF3	
		21	333	12.43	19	29.99	155	27.19	5.64	1.7	1.2	26	7	92	.09	4	0.3	0.9	20	KAO	
		21	4	1 26.23	19	21.90	155	1.90	6.15	1.9	1.9	42	7	145	.15	4	0.4	0.6	40	SF5	
		21	2240	3.54	19	17.04	154	59.62	37.22	2.4	1.6	50	9	208	.11	8	1.2	0.5	42	LER	*
		21	2313	41.25	19	18.83	155	12.58	6.73	1.4	1.2	33	5	97	.14	4	0.4	0.6	32	SF2	
		22	142	55.43	19	23.05	154	59.78	6.97	1.8	1.4	37	7	163	.25	4	0.9	0.8	30	LER	
		22	424	53.60	19	19.56	155	11.76	8.46	1.5	1.4	34	7	92	.14	6	0.4	0.7	28	SF3	
		22	955	1.20	19	25.73	155	28.41	9.27	2.0	1.8	37	5	37	.09	6	0.3	0.5	34	KAO	
		22	1646	34.07	19	24.11	155	16.01	2.80	1.5	1.3	21	9	119	.08	1	0.3	0.3	9	SEC	
		22	1652	2.62	19	11.36	155	26.77	6.45		1.2	31	5	145	.14	4	0.5	1.0	28	LSW	
		22	1734	21.23	19	18.40	155	13.47	5.64	1.4	1.4	32	3	80	.10	3	0.4	0.9	29	SF2	
		23	4	3 26.08	19	23.37	155	1.80	8.11	2.0	1.6	47	8	130	.15	4	0.5	0.3	43	SF5	
		23	715	40.32	19	21.97	155	18.25	2.76	1.7	1.1	26	7	67	.10	3	0.3	0.6	18	SWR	
		23	2049	19.83	19	17.71	155	0.49	34.89	2.0	1.4	39	3	225	.09	6	1.4	1.5	36	DEP	
		23	23	9 34.03	19	20.99	155	4.31	8.05	1.1	1.2	37	6	95	.17	3	0.6	0.5	34	SF5	
		24	018	46.41	19	18.19	155	13.89	6.90	0.9	1.2	28	2	101	.09	2	0.5	0.9	19	SF2	
		24	721	1.00	19	21.81	155	4.73	8.24	1.7	1.5	40	5	79	.13	5	0.6	0.5	37	SF5	
		24	1259	17.92	19	10.05	155	35.17	7.04		1.5	39	9	197	.16	10	0.6	0.9	33	LSW	
		24	1348	46.37	18	51.86	156	44.13	6.61		1.2	24	4	328	.14	101	9.4	11.7	21	DIS	*
		25	3	3 37.73	19	56.49	155	32.20	15.23	3.1	3.3	62	19	230	.12	16	0.6	0.5	46	KEA	
		25	1124	52.69	19	23.39	155	30.16	9.19	2.1	1.9	36	4	39	.08	5	0.3	0.6	35	KAO	
		25	1730	29.46	19	20.43	155	6.66	6.60	1.8	1.7	32	5	104	.13	6	0.5	0.8	30	SF4	
		25	1958	0.54	19	26.75	155	30.21	9.37	2.6	2.8	56	13	40	.12	9	0.2	0.4	45	KAO	
		25	2144	56.62	19	11.31	155	28.90	32.80	2.7	2.7	55	11	81	.09	4	0.5	0.8	44	DLS	
		26	1252	2.22	19	20.91	155	11.35	8.32	2.4	2.7	47	8	70	.13	3	0.4	0.6	38	SF3	
		26	1452	24.95	19	9.69	155	7.17	49.82	2.5	2.4	51	12	211	.11	14	1.0	0.7	42	LOI	
		26	2024	18.83	19	10.18	155	16.19	45.61	2.1	1.6	29	4	215	.09	14	1.3	0.6	18	DEP	L
		26	2025	21.86	19	10.32	155	16.30	47.28		1.4	30	2	191	.11	13	1.2	2.5	15	DEP	L
		26	2031	29.43	19	12.23	155	23.21	62.17	2.2	1.8	11	2	301	.10	4	4.2	1.4	2	DEP	L
		26	2213	32.49	19	49.56	155	10.15	28.45	0.7	1.3	12	1	232	.10	20	2.3	5.4	10	KEA	
		26	2218	53.37	19	29.73	155	54.49	9.60	2.6	1.8	31	4	184	.22	1	1.2	0.6	21	KON	

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1987	MAY	26	23 6	28.00	19	29.15	155	53.82	7.91	2.2	1.3	28	3	104	.24	2	0.9	0.9	14	KON	
		27	919	55.61	19	44.77	156	4.50	8.54	3.3	3.7	45	6	238	.12	42	0.7	0.5	35	HUA	
		27	1328	22.06	19	25.59	155	23.53	8.53	2.3	2.4	53	12	39	.13	3	0.3	0.5	44	KAO	
		27	2030	0.07	19	55.93	155	35.76	12.70	1.0	1.4	30	7	141	.21	10	0.8	0.5	26	KOH	
		27	21 9	15.09	19	25.90	155	20.04	2.92	1.5	1.1	24	7	122	.12	3	0.3	0.5	15	KAO	
		27	2119	27.14	19	19.16	155	26.71	9.95	1.6	1.4	28	5	60	.09	6	0.3	0.6	24	KAO	
		27	2142	0.41	19	18.44	155	48.23	8.36	2.4	1.8	33	3	92	.11	8	0.4	0.7	32	KON	
		27	2223	53.73	19	45.88	156	6.99	35.93	2.5	1.7	29	4	246	.13	30	1.8	1.5	23	HUA	
		27	2332	59.91	19	24.67	155	19.32	5.75	1.8	1.2	36	14	88	.12	2	0.3	0.6	22	KAO	
		28	056	46.06	19	19.20	155	9.88	6.55	1.8	1.2	29	1	103	.09	5	0.5	1.0	21	SF3	
		28	1 9	45.81	19	27.49	155	25.34	4.49	1.6	1.1	34	8	49	.12	4	0.3	1.0	27	KAO	
		28	1047	38.56	19	22.30	155	29.21	9.51		1.3	44	7	35	.13	3	0.3	0.5	37	KAO	
		28	1814	11.93	20	16.04	155	49.96	32.10		2.3	44	10	303	.10	49	0.9	1.9	36	KOH	
		29	317	19.69	19	17.98	155	26.45	9.16		1.2	28	7	84	.13	7	0.4	0.7	24	LSW	
		29	635	15.31	19	11.10	155	38.82	5.99	1.6	1.9	44	6	106	.16	8	0.4	1.0	40	LSW	
		29	827	50.00	19	29.63	155	27.72	4.98	2.3	1.8	38	7	86	.13	4	0.3	1.9	34	KAO	
		29	13 7	35.31	19	23.64	155	16.06	3.96	2.0		26	10	92	.13	1	0.3	0.3	16	SEC	
		29	1653	11.36	19	19.62	155	8.18	8.13	2.1		41	4	88	.13	4	0.5	0.4	40	SF4	
		29	19 1	50.99	19	19.71	155	12.24	6.93		1.2	18	1	161	.12	5	0.8	1.4	14	SF3	
		29	1953	30.05	19	17.90	155	14.04	4.55		1.2	18	1	102	.09	2	0.5	1.3	12	SSF	
		29	2058	33.47	19	20.33	155	10.55	8.04	1.8	1.5	38	4	80	.15	3	0.4	0.5	37	SF3	
		29	2135	37.04	19	18.83	155	14.84	6.09		1.2	27	1	99	.11	4	0.4	1.1	20	SF1	
		30	1337	59.48	19	19.53	155	10.90	10.50	3.0	3.4	62	18	97	.14	5	0.4	0.3	46	SF3	
		30	16 7	35.68	19	17.80	155	14.06	9.38	1.8	1.8	40	6	94	.15	2	0.5	0.4	36	SF2	
		30	2320	13.28	19	21.29	155	4.70	6.30	1.7	1.4	26	2	89	.11	4	0.5	0.9	22	SF5	
		31	452	52.53	19	11.19	155	41.10	4.24		1.3	24	3	121	.29	10	1.0	7.5	17	LSW	*
		31	637	32.24	19	18.22	155	0.31	36.34	1.3	1.7	36	2	240	.09	6	1.8	2.1	34	DEP	
		31	1226	11.79	19	21.19	155	29.98	10.14	2.0	1.4	38	5	45	.12	5	0.4	0.6	36	KAO	
		31	1312	1.15	19	17.71	155	20.72	7.65	1.8	1.7	35	5	125	.12	4	0.4	0.6	34	SWR	
		31	2259	37.04	19	19.54	155	3.56	6.19	2.0	1.7	37	9	184	.18	1	0.6	0.6	36	SF5	
	JUN	1	044	19.60	19	27.97	155	0.85	2.68	2.1	2.2	5	0	325	.19	9	19.5	16.7	0	GLN	*
		1	450	1.64	19	20.97	155	29.03	11.38	1.7	1.3	28	6	42	.10	10	0.3	0.7	28	KAO	
		1	640	55.36	19	24.59	155	29.24	9.27	2.3	2.1	46	8	32	.11	5	0.3	0.5	40	KAO	
		1	738	22.18	19	25.86	155	17.56	0.84	0.9	1.3	14	5	164	.13	2	0.4	0.3	13	SNC	
		1	1538	13.44	19	28.47	155	26.51	2.54	2.5	2.1	45	10	47	.13	6	0.3	0.6	35	KAO	
		1	2251	49.44	19	22.22	155	13.25	3.20	1.2	1.0	13	2	150	.05	1	0.6	0.3	11	SER	
		1	2258	6.39	19	20.05	155	7.86	8.73	3.2	3.6	57	14	91	.10	5	0.4	0.3	48	SF4	
		2	218	20.78	19	19.40	155	7.76	7.98	1.9	2.1	39	2	102	.12	4	0.4	0.5	26	SF4	
		2	814	38.68	19	29.39	155	58.56	10.36	2.6	2.6	32	4	242	.17	6	1.1	0.5	15	KON	
		2	857	48.73	19	28.34	155	25.76	7.39	1.8	1.6	34	2	45	.10	5	0.3	0.7	23	KAO	
		2	928	19.31	19	34.37	155	41.13	14.06	2.6	2.6	39	6	131	.13	11	0.7	0.3	25	DML	
		2	1649	25.13	19	13.34	155	33.14	6.83	2.0	1.9	32	2	77	.17	6	0.5	1.4	17	LSW	
		2	1844	0.75	19	11.60	155	32.01	4.70	1.9	1.2	28	1	94	.13	7	0.5	4.6	18	LSW	
		2	2151	57.26	19	26.19	155	28.14	10.13	2.1	1.9	47	8	47	.13	5	0.3	0.4	42	KAO	
		3	443	32.27	19	10.09	155	40.96	4.61	2.0	1.2	43	11	125	.18	11	0.4	2.9	33	LSW	*

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1987	JUN	3	1017	23.26	19	45.88	155	19.29	13.49	1.9	1.3	28	10	163	.27	14	1.0	0.8	19	KEA	
		3	1254	39.35	19	11.80	155	41.31	5.44	2.3	1.9	31	5	118	.20	9	0.8	3.7	27	LSW	
		3	1542	16.80	19	16.21	155	30.01	9.52	1.7	1.2	16	1	73	.11	2	0.5	1.3	12	LSW	
		3	1627	5.90	19	21.45	155	3.05	6.38	1.7	1.2	27	2	128	.14	3	0.8	1.1	17	SF5	
		3	2323	8.43	19	14.22	155	33.97	7.88	2.2	1.9	42	9	75	.22	6	0.4	0.8	34	LSW	
		4	838	4.08	20	2.00	155	28.42	7.18	2.8	2.8	48	11	199	.13	27	0.4	0.6	41	KEA	F
		4	15 6	19.33	19	22.47	155	29.64	9.02	2.4	2.4	47	5	33	.11	4	0.3	0.5	34	KAO	
		4	1758	6.38	19	11.85	155	30.07	6.30		1.1	22	1	144	.16	6	0.6	1.8	10	LSW	
		4	2256	59.66	19	20.16	155	8.51	7.36	2.6	3.0	57	11	77	.13	4	0.4	0.6	45	SF4	
		5	835	56.52	19	19.79	155	8.26	5.87		1.1	19	4	85	.13	5	0.4	1.0	16	SF4	
		5	1516	45.03	19	27.16	155	30.17	10.07	1.7	1.2	19	2	63	.09	9	0.4	1.2	16	KAO	
		5	20 0	58.35	19	20.93	155	5.99	5.93	1.6	1.7	32	7	99	.11	5	0.4	0.8	22	SF4	
		6	1443	46.98	19	21.71	155	18.54	35.29	3.1	3.6	20	10	186	.12	4	3.5	0.9	2	DEP	L
		6	1517	49.34	19	48.11	156	7.74	8.99	3.1	3.6	44	3	250	.13	41	0.9	0.6	30	HUA	
		6	1545	32.50	19	18.42	155	30.87	9.30	1.7	1.2	22	1	72	.12	6	0.5	1.2	12	LSW	
		6	1646	24.08	19	23.79	155	15.74	3.06	1.5	1.1	15	4	103	.10	2	0.4	0.5	9	SEC	
		6	1647	9.36	19	19.84	155	8.28	7.06		1.2	17	0	83	.05	5	0.6	1.4	14	SF4	
		6	17 0	28.73	18	49.80	155	10.42	9.39	2.2	1.8	11	1	276	.10	48	2.5	1.0	3	LOI	
		6	20 5	39.54	19	20.41	155	4.91	6.15	1.7	1.2	23	1	119	.13	4	0.6	1.0	12	SF5	
		6	2330	35.96	19	22.94	155	2.64	6.45	1.7	1.6	34	3	126	.16	4	0.5	0.9	17	SF5	
		7	7 7	30.93	19	55.84	156	5.93	41.14	2.9	2.6	36	3	291	.11	38	1.1	1.2	28	KOH	
		7	1546	13.31	19	21.57	155	14.36	9.48	2.5	2.7	11	3	160	.08	3	0.8	1.2	1	SF2	L
		7	1554	10.44	19	20.63	155	13.22	6.74	1.8	1.8	33	1	61	.12	4	0.4	0.6	23	SF2	
		7	19 5	27.90	19	28.50	155	26.77	6.40	2.5	1.7	41	6	41	.12	7	0.3	0.9	20	KAO	
		7	2026	19.77	19	24.28	155	16.16	14.19	2.0	1.8	11	2	126	.22	1	3.1	2.3	0	DEP	L
		7	2218	11.44	19	31.16	155	10.86	12.19	2.2	2.3	9	4	325	.23	16	4.8	8.6	0	GLN	L
		7	2339	39.77	19	30.33	155	52.61	9.26	2.7	2.4	35	3	124	.18	5	0.7	0.4	17	KON	
		8	0 4	22.58	19	26.54	155	14.89	11.49	2.1	2.4	14	4	223	.16	5	0.9	1.0	1	INT	L
		8	024	34.72	19	9.37	155	31.93	34.49		1.6	30	5	128	.08	7	0.7	1.0	26	DLS	
		8	116	47.62	19	19.75	155	12.04	6.76	1.4	1.3	28	3	86	.10	6	0.5	0.8	22	SF3	
		8	3 8	20.42	19	17.29	155	29.47	7.47	1.7	1.6	32	3	50	.14	4	0.4	1.0	28	LSW	
		8	513	8.63	19	23.43	155	16.94	13.30	2.2		9	1	67	.09	1	0.8	0.9	0	DEP	L
		8	515	20.49	19	24.53	155	18.20	4.19	2.0		7	2	116	.04	2	0.7	0.4	0	SSC	L
		8	516	34.73	19	23.16	155	17.64	12.02	2.6	3.3	7	2	215	.13	1	3.0	1.6	0	INT	L
		8	526	27.94	19	25.81	155	16.99	10.46	1.8	2.1	11	1	176	.08	1	2.1	1.1	2	INT	L
		8	535	59.72	19	26.03	155	14.71	10.58	1.8	1.7	13	6	230	.14	3	1.6	1.0	2	INT	L
		8	536	57.24	19	34.09	155	19.03	7.57	2.0	1.8	8	1	330	.30	16	6.3	20.9	0	MLO	L*
		8	540	8.45	19	27.00	155	15.89	10.57	2.1	2.3	15	2	197	.12	4	1.6	1.2	5	INT	L
		8	546	12.72	19	25.12	155	17.05	9.81	2.1	2.4	16	4	153	.08	0	0.9	0.9	6	INT	L
		8	548	15.06	19	28.42	155	17.84	6.32	1.8	2.0	7	2	301	.06	6	1.1	2.8	2	GLN	L
		8	553	35.07	19	26.08	155	15.92	11.77	2.1	2.4	12	4	204	.33	3	3.5	2.3	3	INT	L
		8	556	27.01	19	25.53	155	17.09	11.22	1.8	1.6	20	12	166	.10	1	1.3	0.7	4	INT	L
		8	556	51.36	19	26.18	155	16.36	11.08	1.9	2.0	14	6	198	.12	3	1.4	0.9	1	INT	L
		8	558	46.41	19	25.61	155	16.24	8.30	1.8	2.0	13	4	181	.11	2	1.3	1.1	3	INT	L
		8	6 3	33.48	19	26.99	155	16.66	8.64	1.8	2.0	9	3	216	.15	3	1.4	1.4	1	INT	L

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	GAP NS	RMS DEG	MIN SEC	ERH DIS	ERZ KM	NO FM	REMK
1987	JUN	8	6 7	48.67	19	29.14	155	14.25	10.84	1.9	1.4	8	2	274	.08	8	3.1	3.5	0 GLN L
		8	610	22.02	19	25.89	155	16.52	9.34	2.1	2.1	15	5	186	.08	2	1.1	0.9	6 INT L
		8	616	7.05	19	24.42	155	16.70	11.81	2.1	2.0	11	3	113	.06	1	2.3	0.8	3 INT L
		8	621	50.06	19	25.30	155	16.70	6.21	1.5	1.7	9	3	211	.10	1	2.1	1.0	0 INT L
		8	628	1.97	19	25.48	155	16.30	10.66	1.9	2.0	15	3	169	.08	2	1.2	0.8	2 INT L
		8	631	15.00	19	25.36	155	15.96	11.93	1.9	2.0	16	6	170	.09	2	0.7	0.7	2 INT L
		8	634	47.68	19	25.05	155	17.50	11.40	1.8	1.8	13	4	112	.06	1	1.3	0.8	1 INT L
		8	639	49.80	19	25.79	155	16.35	9.81	1.8	2.0	14	2	186	.07	2	0.9	0.7	2 INT L
		8	644	51.11	19	25.19	155	16.88	17.27	2.0	1.8	10	1	158	.13	1	2.0	2.1	0 DEP L
		8	649	57.95	19	22.72	155	18.06	3.32	1.5	1.5	8	1	205	.05	2	0.6	0.6	2 SSC L
		8	656	54.00	19	30.27	155	16.49	17.18	2.1	1.9	10	1	312	.10	9	3.9	1.9	3 DEP L
		8	7 2	34.27	19	26.59	155	16.94	12.55	1.6	1.6	14	4	198	.14	2	1.6	1.0	1 INT L
		8	7 6	41.77	19	27.18	155	17.37	13.33	1.9	1.8	12	3	213	.14	3	2.8	1.1	0 DEP L
		8	711	41.77	19	25.24	155	16.11	10.48	1.9	2.0	17	5	164	.10	2	0.9	0.6	6 INT L
		8	716	5.91	19	24.66	155	17.14	11.68	1.9	2.0	13	3	65	.13	1	1.6	0.9	7 INT L
		8	722	9.71	19	26.47	155	15.94	13.66	1.8	1.6	14	4	236	.13	3	1.8	0.9	1 DEP L
		8	742	39.22	19	24.04	155	18.53	10.94	1.7	1.8	11	3	89	.09	2	1.1	0.8	1 INT L
		8	842	32.52	19	24.89	155	17.32	11.56	1.9	1.8	17	5	115	.09	1	1.2	0.7	3 INT L
		8	855	35.21	19	27.03	155	17.17	10.92	1.9	1.8	14	5	269	.15	3	1.4	1.0	2 INT L
		9	141	41.44	18	51.65	155	8.26	13.92	2.5	2.3	44	3	260	.19	48	2.3	5.3	44 LOI
		9	456	8.23	19	19.52	155	7.70	7.27	1.6	2.0	31	1	102	.10	4	0.5	0.8	19 SF4
		9	551	20.77	19	26.76	155	51.40	7.66	2.1	1.5	16	1	122	.19	8	0.9	1.4	18 KON
		9	610	53.72	19	20.61	155	12.79	7.66	1.7	2.0	36	4	66	.12	4	0.4	0.6	34 SF2
		9	946	51.58	19	22.66	155	2.27	6.73	2.4	2.5	43	9	140	.16	4	0.5	0.7	31 SF5
		9	1910	49.54	19	21.87	155	2.89	8.40	3.5	3.9	54	9	118	.12	4	0.4	0.4	39 SF5 F
		9	1922	31.13	19	53.93	155	23.42	8.17	2.1	1.4	18	5	199	.13	5	0.8	0.7	14 KEA
		9	21 4	23.09	19	19.62	155	9.14	5.56	1.5	2.0	20	1	85	.09	5	0.4	1.1	15 SF3
		9	2151	17.17	19	19.21	155	11.88	5.53	1.4	1.5	32	3	99	.10	5	0.4	1.1	30 SF3
		10	441	26.73	19	19.21	155	12.07	5.45	1.4	1.3	29	5	96	.11	5	0.3	1.0	25 SF3
		10	459	59.78	19	21.68	155	0.88	6.65	1.8	1.2	23	2	186	.12	5	0.7	0.7	22 SF5
		10	921	53.14	19	24.33	155	17.38	11.17	1.6	1.4	17	5	73	.12	1	1.0	0.6	1 INT L
		10	1141	12.28	19	22.96	155	26.73	9.75	1.7	1.6	36	6	33	.11	2	0.3	0.6	32 KAO
		10	1148	18.69	19	23.73	155	17.21	13.04	1.8	1.4	12	2	126	.10	1	1.9	1.2	2 DEP L
		10	1252	16.59	19	8.50	155	36.71	8.25	2.1	1.9	27	6	115	.16	12	0.5	1.4	17 LSW
		10	1335	39.32	19	23.24	155	18.00	6.90	1.5	1.4	6	0	173	.03	3	1.5	2.2	0 INT L
		10	1420	35.36	19	22.55	155	18.70	1.10	1.4	1.5	6	1	177	.07	3	0.5	0.7	1 SSC L
		10	1616	53.28	19	22.15	155	17.08	7.15	1.7	1.4	9	0	170	.12	2	1.6	1.9	0 INT L
		10	22 1	3.76	19	26.26	155	51.17	5.38	2.1	1.3	19	1	124	.21	9	0.7	5.2	8 KON
		10	2321	24.58	19	30.14	155	17.76	0.07	1.9	1.9	8	1	273	.18	7	1.9	1.4	1 GLN L*
		11	031	38.51	19	22.41	155	16.62	8.47	1.8	1.4	9	1	158	.05	1	1.3	2.0	1 INT L
		11	139	4.14	19	24.98	155	14.18	16.00	2.2	1.6	17	5	216	.27	1	1.9	1.2	1 DEP L
		11	3 9	26.72	19	21.64	155	4.68	7.63	1.7	1.9	15	1	80	.08	4	0.6	1.3	12 SF5
		11	746	34.81	19	28.63	155	16.02	0.04	1.6	1.9	10	1	258	.17	7	1.2	1.7	2 GLN L*
		11	858	12.37	19	25.55	155	16.45	6.38	0.8	2.0	8	0	169	.11	2	1.3	1.7	2 INT L
		11	1035	52.47	19	25.33	155	16.92	7.67	1.1	1.9	11	0	169	.13	1	1.0	1.2	0 INT L

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	GAP NS	RMS DEG	MIN SEC	ERH DIS	ERZ KM	NO FM	REMK
1987	JUN	11	1312	8.49	19	25.56	155	16.16	13.02	1.8	2.2	12	1	173	.12	2	1.6	1.2	1 DEP L
		11	1446	5.98	19	22.61	155	17.52	8.81	1.8	2.0	12	2	173	.13	2	1.1	1.4	2 INT L
		11	1526	28.02	19	46.83	155	40.66	13.58	2.7	2.9	35	6	106	.13	9	0.3	0.3	26 KEA
		11	16 9	4.12	19	26.94	155	16.51	3.43	1.5	1.7	8	1	223	.09	4	1.3	0.8	2 SNC L
		11	1713	22.61	19	24.50	155	16.12	14.06	1.9	1.4	12	2	134	.12	1	1.9	1.1	0 DEP L
		11	18 3	38.31	19	28.94	155	52.65	6.25	2.2	1.5	17	2	101	.14	4	0.6	1.4	11 KON
		11	1819	48.76	19	25.10	155	16.74	9.71	1.9	2.1	17	2	152	.12	1	0.9	0.7	2 INT L
		11	1927	52.65	19	23.75	155	17.68	13.77	1.8	1.8	21	7	57	.10	1	0.6	0.3	21 DEP L
		11	1934	59.74	19	24.00	155	15.65	2.99	1.4	1.3	14	3	112	.04	2	0.3	0.4	10 SEC L
		11	21 9	11.92	19	22.82	155	16.13	4.96	1.7	1.8	11	2	97	.31	1	1.3	2.1	0 SEC L
		11	2151	24.42	19	12.40	155	22.89	6.99	2.4	2.2	7	1	332	.20	22	4.6	19.8	0 SWR L*
		11	2344	42.87	19	24.83	155	16.47	11.60	1.9	1.8	29	5	117	.21	1	0.8	0.5	25 INT L
		12	033	57.52	19	24.66	155	17.17	10.97	1.7	1.9	36	7	39	.21	1	0.6	0.4	29 INT L
		12	118	29.33	19	24.68	155	17.02	12.02	2.0	2.0	20	4	107	.10	0	0.8	0.5	3 INT L
		12	240	35.43	19	24.82	155	16.86	11.57	2.1	2.0	28	4	138	.12	0	0.7	0.5	26 INT L
		12	324	42.75	19	25.34	155	14.77	14.32	2.1	2.1	18	3	209	.12	1	1.4	0.7	2 DEP L
		12	334	41.73	19	23.39	155	18.08	10.08	2.0	1.9	6	1	167	.12	2	2.2	1.9	1 INT L
		12	416	20.51	19	24.81	155	16.27	13.04	2.1	2.1	21	4	147	.09	1	0.8	0.6	2 DEP L
		12	5 0	7.71	19	24.70	155	17.14	11.24	2.1	2.1	34	7	62	.22	0	0.7	0.6	28 INT L
		12	540	53.39	19	23.26	155	17.06	10.67	1.9	1.9	14	2	138	.10	0	1.2	0.8	2 INT L
		12	6 7	57.03	19	24.95	155	16.48	10.24	1.8	1.9	12	1	166	.12	1	1.8	1.3	4 INT L
		12	634	59.34	19	23.23	155	18.26	8.45	1.8	1.7	15	1	82	.13	2	0.7	1.0	16 INT L
		12	748	5.72	19	27.03	155	15.35	7.83	1.0	1.9	10	0	223	.25	5	2.6	3.7	2 INT L
		12	811	24.90	19	13.05	155	25.28	8.10		1.2	28	3	140	.15	3	0.5	0.8	28 LSW
		12	9 1	7.93	19	24.83	155	15.57	13.38	2.0	1.8	16	3	152	.22	2	1.9	1.2	1 DEP L
		12	951	36.39	19	24.76	155	15.44	14.64	2.1	2.1	10	2	154	.10	2	1.6	2.3	0 DEP
		12	1037	49.59	19	24.01	155	17.17	12.22	2.1	1.9	11	1	78	.05	1	1.1	1.2	3 INT L
		12	1126	59.38	19	24.36	155	15.59	13.11	2.1	1.8	12	2	136	.07	2	1.2	1.3	2 DEP L
		12	1243	2.44	19	25.06	155	17.25	7.99	1.7	1.9	14	0	147	.14	1	0.9	1.4	6 INT L
		12	1348	37.80	19	23.83	155	17.04	11.49	1.8	2.0	12	3	89	.10	1	0.8	0.5	0 INT L
		12	1636	36.26	19	25.37	155	16.10	13.57	2.1	1.8	12	2	174	.09	2	1.8	0.8	1 DEP L
		12	1726	24.54	19	24.86	155	16.70	12.68	2.2	2.3	13	3	148	.10	1	1.9	0.8	0 INT L
		12	18 2	28.15	19	24.95	155	16.58	12.63	1.9	1.8	11	2	161	.07	1	1.7	1.0	1 INT L
		12	1831	6.19	19	23.71	155	16.31	14.46	2.0	1.8	14	3	90	.14	1	1.1	1.4	4 DEP L
		12	19 8	59.24	19	23.06	155	16.12	14.41	2.1	1.9	10	1	119	.10	1	2.0	1.5	0 DEP L
		12	2017	36.71	19	26.63	155	16.03	11.08	1.8	1.9	12	2	205	.22	4	3.3	1.5	2 INT L
		12	2043	24.42	19	20.08	155	11.50	8.25	1.5	1.5	29	3	83	.07	5	0.5	0.6	27 SF3
		12	2115	53.76	19	25.19	155	14.79	13.28	1.7	1.6	16	3	199	.30	1	2.8	1.4	3 DEP L
		12	22 2	3.89	19	24.06	155	16.66	14.90	2.2	2.2	10	2	95	.09	0	2.5	1.5	2 DEP L
		12	2242	3.28	19	23.83	155	16.35	0.85	1.3	1.4	6	1	117	.05	2	0.6	0.9	1 SEC L
		12	2353	55.11	19	19.86	155	11.75	8.49	2.1	2.2	45	3	86	.15	5	0.5	0.6	33 SF3
		13	011	33.50	19	25.21	155	13.34	12.90	2.1	2.0	12	2	284	.08	2	1.7	0.6	2 SF2 L
		13	045	45.15	19	24.34	155	15.44	14.50	1.9	1.4	14	2	124	.16	2	1.7	0.8	0 DEP L
		13	128	51.38	19	18.27	155	13.21	7.38	1.8	1.8	40	2	92	.11	2	0.4	0.6	26 SF2 L
		13	139	57.22	19	25.48	155	17.72	9.76	1.8	2.0	9	1	156	.06	0	1.6	1.2	2 INT L

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	GAP NS	RMS DEG	SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1987	JUN	13	223	24.27	19	22.57	155	16.06	7.01	2.0	2.0	13	1	112	.13	0	0.8	1.2	0	INT	L
		13	3 9	23.99	19	25.50	155	16.74	9.91	1.5	1.2	12	1	164	.13	1	1.6	1.1	5	INT	L
		13	4 1	56.14	19	25.71	155	18.64	3.82	1.5	1.8	8	0	149	.12	3	0.9	1.4	3	SNC	L
		13	521	33.14	19	17.76	155	30.01	9.24	2.2	1.9	33	2	64	.11	5	0.4	0.7	21	LSW	
		13	558	56.72	19	26.69	155	13.87	15.96	2.1	2.0	15	3	274	.19	4	2.3	1.1	3	DEP	L
		13	6 7	47.74	19	24.14	155	15.83	3.16	1.4	1.1	12	3	123	.02	1	0.4	0.5	7	SEC	
		13	652	50.50	19	23.54	155	17.63	8.49	1.8	1.6	14	0	62	.18	1	1.1	1.7	5	INT	L
		13	9 3	18.33	19	26.33	155	15.70	13.09	2.1	1.9	13	3	216	.21	3	3.3	1.4	1	DEP	L
		13	1131	53.19	19	19.20	155	49.46	8.84	2.1	1.5	29	2	113	.15	8	0.6	0.8	28	KON	
		13	1214	54.47	19	20.30	155	11.37	8.10	2.0	1.8	53	13	80	.13	4	0.4	0.4	44	SF3	
		13	1649	3.37	19	27.64	155	14.14	14.54	2.1	1.6	15	4	240	.22	6	1.7	1.2	2	DEP	L
		13	18 5	26.85	19	25.28	155	14.11	21.57	2.2	1.3	11	2	222	.09	5	3.6	1.3	2	DEP	L
		13	19 6	54.92	19	25.90	155	15.00	16.56	2.0	1.7	10	2	224	.12	3	2.8	0.9	4	DEP	L
		13	1921	16.53	19	23.71	155	25.73	8.37	1.8	1.4	36	6	36	.13	3	0.3	0.5	31	KAO	
		13	2015	28.11	19	25.73	155	16.38	13.08	2.0	1.8	14	3	183	.10	2	1.3	0.7	2	DEP	L
		13	2220	18.95	19	25.87	155	15.40	13.75	2.0	2.1	14	3	201	.15	3	1.5	1.0	1	DEP	L
		14	027	56.36	19	24.49	155	16.46	12.53	1.9	1.9	14	2	133	.14	1	1.2	1.0	3	INT	L
		14	545	32.80	19	23.98	155	15.71	3.17	1.5	1.2	17	5	112	.08	2	0.4	0.4	8	SEC	
		14	7 7	50.15	19	18.15	155	13.24	5.57		1.1	14	1	92	.05	2	0.6	1.5	11	SF2	
		14	10 8	38.16	19	25.49	155	17.10	17.79	2.2	1.8	9	1	165	.09	1	3.4	1.3	0	DEP	L
		14	11 8	14.27	19	24.58	155	16.61	7.89	1.7	1.5	15	2	135	.13	1	0.9	0.8	1	INT	L
		14	1133	12.88	19	22.35	155	18.00	5.40	1.7	1.7	12	4	183	.27	3	1.1	3.1	1	INT	L
		14	12 9	13.63	19	25.03	155	17.07	9.92	2.0	1.9	13	2	150	.12	0	1.0	0.9	2	INT	L
		14	1240	13.22	19	24.38	155	16.73	15.57	2.0	1.5	8	2	108	.13	1	4.0	1.3	1	DEP	L
		14	1340	52.19	19	24.91	155	19.80	13.19	2.0	1.9	10	3	168	.30	2	4.0	2.0	0	DML	L
		14	1419	6.49	19	24.95	155	16.76	13.66	2.1	2.1	12	2	147	.08	0	2.4	1.0	3	DEP	L
		14	15 0	11.53	19	21.40	155	15.66	8.62	2.0	1.5	8	0	213	.11	2	2.1	2.2	0	SF1	L
		14	1547	28.25	19	25.32	155	16.18	11.06	1.8	1.7	10	1	170	.15	2	2.5	1.8	2	INT	L
		14	1649	52.67	19	19.29	155	11.81	8.80	2.6	2.7	45	5	97	.10	5	0.4	0.5	38	SF3	
		14	1717	13.02	19	25.32	155	16.56	10.39	1.9	1.9	13	2	166	.10	1	1.4	0.9	6	INT	L
		14	18 0	20.18	19	29.75	155	18.59	21.99	2.1	1.8	8	1	302	.15	8	9.6	2.6	0	DEP	L
		14	1844	56.44	19	24.59	155	16.31	13.77	2.2	2.1	17	3	138	.20	1	1.6	1.1	0	DEP	L
		14	1940	32.67	19	23.40	155	16.25	13.97	2.1	1.8	16	2	84	.13	1	1.4	0.7	1	DEP	L
		14	2058	56.17	19	24.75	155	16.76	9.71	2.0	2.0	19	4	141	.11	1	0.6	0.6	10	INT	L
		14	2210	46.38	19	30.74	155	13.51	23.24	2.4	2.1	11	4	291	.11	11	3.5	3.4	0	DEP	L
		14	2311	5.38	19	25.11	155	15.30	15.26	2.0	1.8	13	2	173	.34	2	4.1	2.0	0	DEP	L
		15	034	56.97	19	25.00	155	15.81	13.11	2.0	2.1	14	2	157	.11	2	1.5	0.8	1	DEP	L
		15	134	9.10	19	25.51	155	17.53	3.64	1.4	1.7	10	0	156	.04	3	0.6	0.8	2	SNC	L
		15	4 2	24.09	19	25.02	155	15.49	15.82	2.1	2.0	13	3	164	.08	2	1.6	0.7	2	DEP	L
		15	537	34.06	19	21.69	155	4.75	6.34	1.7	2.0	43	5	79	.14	5	0.4	0.6	40	SF5	
		15	826	55.29	19	22.20	155	29.02	9.88	1.6	1.6	39	7	38	.13	3	0.3	0.5	34	KAO	
		15	1130	8.52	19	42.00	155	2.24	0.00	2.7	2.9	32	1	178	.25	1	1.7	1.5	36	HIL	B*
		15	1747	5.22	19	21.46	155	18.55	4.80	1.6	1.5	10	2	225	.09	5	1.0	2.0	1	SWR	L
		16	411	28.16	19	23.20	155	1.66	6.64	1.7	1.9	40	6	143	.23	5	0.6	0.6	35	SF5	
		16	1041	45.02	19	21.38	155	20.43	30.20	2.1	2.0	54	12	53	.11	4	0.5	0.5	42	DEP	

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	GAP NS	RMS DEG	SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1987	JUN	16	13 9	21.84	19	25.96	155	21.74	8.96	2.2	1.9	53	15	32	.14	4	0.3	0.5	41	KAO	
		16	2135	31.28	19	23.74	155	27.41	10.61	1.6	1.2	35	6	33	.11	2	0.3	0.4	32	KAO	
		17	5 6	53.63	19	19.64	155	11.79	7.65	1.5	1.2	25	3	90	.08	6	0.4	0.8	15	SF3	
		17	6 6	5.62	19	25.41	155	25.75	5.68	1.9	1.8	38	9	38	.12	1	0.3	0.6	32	KAO	
		17	9 5	9.25	19	19.84	155	6.39	8.29	2.1	2.0	37	3	122	.09	5	0.4	0.5	22	SF4	
		17	938	50.05	19	22.28	155	30.11	9.10		1.2	26	1	46	.08	4	0.4	0.8	18	KAO	
		17	1811	5.94	19	20.19	155	13.07	7.00	1.4	1.1	24	1	67	.11	4	0.5	0.9	23	SF2	
		17	20 4	48.63	19	20.19	155	7.13	7.36	1.7	1.9	38	4	102	.10	5	0.4	0.6	34	SF4	
		17	2334	26.78	19	27.59	155	23.99	4.42		1.1	19	4	108	.11	4	0.4	1.0	12	KAO	
		18	1549	15.24	19	27.08	155	28.76	9.59		1.3	20	1	59	.09	7	0.5	1.1	13	KAO	
		19	040	3.18	19	54.82	155	35.66	20.29	1.0	1.4	13	2	134	.11	9	0.8	1.2	6	KEA	
		19	1 3	21.02	20	0.23	155	20.96	12.92	2.5	2.2	16	1	277	.09	13	2.2	0.6	8	KEA	
		19	3 3	29.06	19	20.15	155	11.66	8.44	2.3	2.5	45	3	81	.11	5	0.4	0.5	40	SF3	
		19	459	27.20	19	26.70	155	29.35	9.57		1.2	22	2	59	.10	7	0.4	1.0	13	KAO	
		19	21 8	53.71	19	12.70	155	27.66	7.64	2.7	2.6	45	4	146	.16	6	0.4	0.8	31	LSW	F
		20	4 4	18.36	19	19.68	155	17.47	32.90	2.3	1.9	56	12	88	.13	1	0.6	0.7	44	DEP	
		20	1344	10.21	19	19.64	155	17.42	32.49	1.8	2.3	54	9	90	.11	1	0.5	0.7	38	DEP	
		20	1723	54.69	19	20.04	155	11.90	9.49	3.2	3.5	47	6	82	.09	5	0.4	0.3	45	SF3	
		20	2013	34.41	19	53.52	155	36.80	12.82	3.3	3.8	53	10	216	.09	6	0.6	0.3	41	KEA	F
		21	8 6	43.61	19	55.33	155	15.20	9.28	0.9	1.8	16	2	294	.14	10	1.3	0.7	10	KEA	
		22	357	27.80	19	18.18	154	59.42	38.63	2.9	3.1	55	7	205	.12	7	1.0	0.5	50	LER	F
		22	1543	59.70	20	1.30	156	18.84	0.26	2.7	2.3	35	4	287	.10	57	2.3	0.6	17	KOH	*
		22	1635	34.06	19	17.07	155	12.96	7.60	1.8	1.4	30	2	177	.10	1	0.5	0.9	19	SF2	
		23	1 1	11.84	19	11.37	155	27.44	56.35	2.6		40	5	127	.23	4	1.7	1.2	36	DLS	T
		23	1 2	18.15	19	17.02	155	30.47	26.07	2.3		33	7	82	.25	4	1.0	1.3	32	DLS	T
		23	655	22.36	19	16.37	155	28.64	8.10	2.0	2.0	30	1	58	.18	4	0.5	1.0	24	LSW	
		23	7 6	59.30	20	2.39	156	27.65	7.31		2.3	31	4	298	.11	72	7.2	9.6	17	DIS	*
		23	857	5.36	19	16.88	155	28.48	9.67	2.4	2.2	50	11	54	.14	4	0.3	0.4	45	LSW	
		23	10 4	4.54	19	41.28	155	59.78	8.83		1.5	15	0	257	.09	40	2.4	1.1	7	HUA	
		23	1125	51.42	19	20.89	155	29.11	6.40	2.6	2.7	50	7	37	.11	4	0.3	0.6	33	KAO	
		23	1354	5.74	19	17.57	155	20.97	8.59	2.1	2.1	43	7	125	.12	4	0.4	0.6	24	SWR	
		23	1357	45.66	19	42.11	156	0.36	9.84		2.7	19	0	261	.12	40	2.5	1.1	12	HUA	
		23	18 2	45.51	19	22.23	155	26.63	9.70	1.7	1.5	38	4	40	.12	2	0.4	0.6	23	KAO	
		24	2 8	44.07	19	19.31	155	11.76	5.89	1.4	1.1	27	2	98	.10	5	0.4	1.2	18	SF3	
		24	720	50.56	19	20.45	155	12.86	8.46	2.3	2.6	48	8	67	.11	4	0.3	0.4	32	SF2	
		24	1057	14.26	19	23.19	155	17.03	8.65	2.1	1.2	9	3	156	.22	0	2.0	3.0	6	INT	L
		24	1325	19.45	19	51.34	154	45.68	0.21	2.8	2.5	6	0	335	.09	50	5.9	6.9	8	KEA	B*
		24	1829	22.74	19	21.06	155	29.65	5.58	1.9	1.4	26	3	51	.10	4	0.4	0.9	16	KAO	
		24	20 8	20.83	19	19.67	155	8.72	6.25	1.6	1.2	26	2	78	.08	5	0.4	0.9	16	SF4	
		24	2355	40.78	19	15.20	155	23.13	8.26		1.2	30	5	163	.10	2	0.4	0.6	31	SWR	
		25	144	25.96	19	20.20	155	7.06	7.27	1.6	1.2	43	10	103	.13	6	0.4	0.5	39	SF4	
		25	915	11.35	19	11.33	155	18.72	28.15		1.6	40	2	180	.09	11	0.8	1.2	35	DEP	
		25	1947	7.26	19	18.70	155	13.44	9.03	2.3	2.4	49	6	132	.11	7	0.4	0.4	30	SF2	
		25	2157	47.87	19	21.51	155	1.36	6.64	1.8	1.3	30	1	173	.14	4	0.8	0.6	24	SF5	
		26	738	31.05	19	20.71	155	6.11	7.40	1.9	1.3	37	2	103	.10	6	0.3	0.6	19	SF4	

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	GAP NS	RMS DEG	SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1987	JUN	26	926	51.41	19	25.54	154	55.72	7.79	1.9	1.3	11	1	184	.08	4	1.0	0.7	9	LER
		26	1555	46.07	19	20.50	155	18.11	28.69	2.3	1.7	56	11	63	.11	1	0.5	0.6	42	DEP
		26	2012	17.69	19	19.83	155	11.91	8.71	1.5	1.1	41	9	85	.11	5	0.4	0.4	37	SF3
		26	21	3 19.80	19	21.98	155	3.56	7.90	1.7	1.2	36	1	107	.12	4	0.5	0.6	26	SF5
		26	2130	53.55	19	11.16	155	27.94	6.43		1.2	29	0	111	.15	3	0.8	1.2	14	LSW
		26	2249	38.94	19	20.70	155	7.64	8.82	3.2	3.1	56	12	85	.09	5	0.3	0.3	41	SF4 F
		27	420	20.08	19	20.01	155	7.65	8.09	2.1	2.2	44	4	96	.09	5	0.3	0.4	30	SF4
		27	835	12.54	19	19.48	155	12.63	6.42	1.9	1.2	33	4	83	.10	5	0.4	0.6	19	SF2
		27	1424	50.58	19	52.52	155	34.22	8.19		1.4	9	0	186	.08	10	1.5	1.6	0	KEA
		27	1919	29.50	19	24.00	155	15.75	2.53	2.4	2.5	40	7	44	.13	1	0.2	0.3	35	SEC F
		28	5	0 37.35	19	4.76	155	56.52	45.05	2.4	2.5	53	8	253	.09	22	1.0	0.8	46	KON
		28	544	0.77	19	19.45	155	6.72	8.37	2.0	2.0	40	6	127	.09	4	0.4	0.5	29	SF4
		28	6	0 39.18	19	27.03	155	51.27	0.77	2.1	1.3	13	1	118	.22	8	0.7	1.4	10	KON
		28	2110	12.37	19	19.00	155	15.73	7.94	1.4	1.2	39	5	129	.12	4	0.4	0.5	35	SF1
		28	2355	41.86	19	21.80	155	4.72	7.42	1.7	1.7	38	2	77	.12	5	0.5	0.7	25	SF5
		29	111	31.21	19	26.13	155	30.09	9.22	2.1	1.4	40	5	39	.12	8	0.3	0.7	36	KAO
		29	158	56.47	19	18.30	155	12.61	5.58	1.8	1.7	62	23	111	.19	3	0.3	0.6	42	SF2
		29	256	8.64	20	48.14	155	28.33	7.12	2.8	2.4	35	10	323	.14	81	8.0	10.4	29	DIS *
		29	955	42.07	19	18.62	155	13.19	6.75		1.5	42	12	86	.13	3	0.4	0.5	33	SF2
		29	1352	32.72	19	20.11	155	11.33	8.39	1.5	1.2	26	3	84	.09	4	0.5	0.8	26	SF3
		29	1430	1.27	19	40.99	155	16.75	7.02	2.4	1.3	5	2	339	.09	32	3.6	14.4	2	KEA L*
		29	1433	4.96	19	8.78	155	12.76	6.80	2.4	1.8	6	1	330	.07	26	2.3	13.1	0	LOI L*
		29	1441	39.11	19	12.38	155	29.88	7.23	2.4	2.4	50	10	134	.15	5	0.4	0.7	42	LSW F
		29	2156	12.11	19	22.99	155	17.28	9.14	1.7	1.2	13	4	85	.09	1	1.2	1.5	1	INT L
		29	2248	51.78	19	19.18	155	16.08	7.56	1.7	1.2	37	6	107	.10	3	0.4	0.6	23	SF1
		30	241	35.30	19	25.08	155	16.70	10.37	1.7	1.4	20	5	152	.11	1	0.7	0.8	9	INT L
		30	936	44.08	19	22.68	155	6.56	1.88	1.6	1.6	7	2	187	.09	2	1.3	0.7	4	SME
		30	1415	30.46	19	26.21	155	20.20	7.20	1.9	1.4	23	5	126	.08	3	0.4	0.9	18	KAO
		30	1547	14.26	19	25.42	155	15.12	15.55	1.9	1.5	14	3	194	.12	2	1.8	1.1	2	DEP L
		30	1553	49.19	19	7.85	155	5.52	49.99	3.2		62	15	221	.10	18	0.8	0.7	47	LOI
	JUL	1	250	10.99	19	24.83	155	18.00	17.24	2.0	1.5	9	1	90	.09	1	3.1	2.3	0	DEP L
		1	610	50.84	19	36.08	155	54.15	22.45		1.6	40	8	206	.12	12	0.8	1.0	33	KON
		1	716	53.10	19	24.43	155	17.29	12.50	1.9	1.6	15	3	76	.13	1	1.0	0.6	16	INT L
		1	717	34.32	19	22.31	155	17.12	12.92	2.5	2.6	29	8	102	.15	2	0.7	0.4	26	INT L
		1	720	2.19	19	31.77	155	16.36	40.22	2.7	2.2	8	1	319	.04	13	8.3	2.4	0	DEP L
		1	739	55.67	19	19.31	155	7.47	10.23	4.0		59	16	111	.13	4	0.4	0.3	48	SF4 F
		1	755	8.15	19	19.39	155	7.52	9.10	3.5	3.5	56	14	109	.12	4	0.3	0.3	47	SF4 F
		1	842	5.15	19	24.90	155	16.80	9.04	1.8	1.6	13	0	148	.18	0	1.3	1.7	1	INT L
		1	9	1 35.08	19	26.09	155	15.68	1.61	1.8	2.0	6	1	232	.09	3	0.9	0.9	0	SNC L
		1	1321	9.87	19	29.66	155	29.68	1.61	3.0	2.9	54	9	39	.14	6	0.3	0.6	50	KAO
		1	1331	46.40	19	30.03	155	29.63	3.30	2.6	2.2	35	5	43	.11	5	0.3	1.0	30	MLO
		1	1739	1.19	20	9.29	155	30.37	27.21	3.0	3.0	63	15	230	.11	29	0.6	1.7	49	KEA F
		1	19	6 40.84	18	39.72	154	48.73	40.09	3.3		7	1	340	.20	95	13.4	14.2	1	DIS L*
		1	2118	57.76	19	22.58	155	18.67	0.02	1.6	1.8	8	3	149	.15	3	0.3	0.6	0	SSC L*
		1	22	9 59.41	19	24.18	155	16.50	11.79	1.8	1.3	19	4	109	.13	1	0.8	0.8	5	INT L

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	GAP NS	RMS DEG	SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1987	JUL	1	2338	15.97	19	25.04	155	21.37	13.32	2.0	1.8	9	3	243	.07	4	1.9	1.1	1	DML L
		2	023	33.77	19	51.28	156	11.57	9.68		1.7	33	7	297	.19	41	1.0	0.7	28	HUA
		2	116	5.26	19	28.88	155	25.73	6.23	2.1	1.6	46	11	57	.14	5	0.3	0.6	38	KAO
		2	329	2.35	19	22.84	155	19.51	19.35	2.1	1.3	9	2	250	.14	2	3.3	1.4	2	DML L
		2	555	38.73	19	22.23	155	17.69	11.36	2.3		8	2	256	.10	3	2.4	2.2	0	INT L
		2	556	28.28	19	19.75	155	7.55	7.19	1.9	1.4	20	0	102	.10	4	0.6	1.4	16	SF4
		2	12	4 45.97	19	28.43	155	18.53	8.96	2.2	2.0	8	2	245	.11	4	2.5	1.2	1	GLN L
		2	1244	43.80	19	20.47	155	21.10	12.05	2.1	1.3	9	3	308	.13	6	2.3	2.9	2	SWR L
		2	16	7 32.30	19	23.93	155	16.11	2.99	2.3	1.9	27	7	101	.07	1	0.2	0.2	15	SEC
		2	18	2 25.46	19	25.44	155	16.95	12.14	1.6	1.2	14	3	165	.12	1	1.3	0.7	10	INT L
		2	1855	44.87	19	25.01	155	17.11	7.71	1.7	1.4	14	0	147	.07	0	0.8	1.0	4	INT L
		2	2111	41.30	19	24.36	155	17.96	7.64	1.7	1.4	11	0	97	.13	2	1.0	1.7	5	INT L
		2	2351	44.40	19	25.03	155	16.71	19.41	2.1	1.4	14	3	153	.13	1	2.7	0.9	3	DEP L
		3	259	43.72	19	24.72	155	14.89	42.36	2.9	1.8	10	1	156	.09	1	5.8	2.6	2	DEP L
		3	515	30.48	19	24.80	155	16.08	15.49	2.1	1.3	16	3	147	.12	2	2.0	0.7	3	DEP L
		3	539	11.86	19	23.53	155	17.49	12.04	1.9	1.3	27	6	51	.26	1	1.1	0.7	24	INT L
		3	622	5.78	19	25.41	155	16.71	7.29	2.1	1.5	29	3	115	.15	1	0.5	0.9	29	INT L
		3	639	40.77	19	24.31	155	14.75	15.98	2.1	1.3	23	6	101	.12	1	0.9	0.7	18	DEP L
		3	652	12.00	19	25.03	155	16.36	13.71	2.0	1.3	30	9	153	.21	1	1.0	0.6	23	DEP L
		3	724	26.21	19	26.31	155	16.37	16.70	2.1	1.3	13	2	202	.10	3	2.5	0.9	5	DEP L
		3	741	25.48	19	26.31	155	15.36	14.17	2.1	1.3	14	4	213	.15	4	2.4	0.8	2	DEP L
		3	810	13.20	19	24.57	155	16.48	12.89	2.0	1.3	34	10	116	.18	1	0.8	0.4	24	INT L
		3	820	51.83	19	49.84	156	8.07	9.55		2.1	31	2	252	.12	35	1.6	0.9	30	HUA
		3	923	1.73	19	21.39	155	17.51	11.40	1.8	1.3	11	3	243	.07	3	2.2	2.3	1	SWR L
		3	944	56.04	19	24.27	155	16.93	10.04	2.1	2.3	27	1	69	.12	1	0.5	0.5	27	INT L
		3	11	8 52.64	19	27.52	155	15.48	8.92	1.8	1.2	14	3	244	.12	5	1.6	1.0	5	INT L
		3	1157	23.36	19	21.59	155	17.35	4.83	2.0	1.3	12	2	113	.13	3	0.7	1.6	5	SWR L
		3	1359	48.45	19	25.56	154	53.23	8.60	2.3	1.9	47	14	264	.13	5	0.6	0.4	40	LER
		3	1654	44.52	19	22.48	155	16.55	10.30	1.9	1.4	15	1	175	.21	1	1.7	1.2	1	INT L
		3	1823	1.80	19	25.10	155	15.21	16.46	2.1	1.3	18	5	180	.16	2	1.9	0.9	3	DEP L
		4	0	6 45.90	19	23.60	155	6.48	1.60		1.4	14	1	102	.09	2	0.6	0.5	8	SME
		4	311	19.55	19	11.00	155	30.48	0.98	2.4	1.5	8	2	335	.08	33	12.2	5.8	1	LSW L*
		4	353	49.52	19	29.30	155	16.00	16.36	2.1	1.3	14	2	268	.19	8	2.7	1.2	3	DEP L
		4	438	38.45	19	23.98	155	11.22	15.61	2.1	1.3	10	3	318	.11	9	4.1	2.3	1	DEP L
		4	622	42.09	19	12.00	155	27.11	6.72	2.6	1.3	10	2	330	.20	25	4.7	18.5	1	LSW L*
		4	1747	15.35	19	18.91	155	13.95	6.80		1.4	25	1	79	.10	4	0.5	1.1	20	SF2
		4	1912	27.32	19	19.63	155	48.06	10.38		1.6	42	11	111	.14	10	0.4	0.5	34	KON
		4	2015	22.02	19	31.55	155	52.50	9.46		1.0	15	1	209	.14	6	1.7	0.7	5	KON
		5	036	33.87	19	25.61	155	15.61	1.32	2.4	2.3	11	1	186	.17	3	0.5	0.6	3	SNC L
		5	353	7.71	19	21.70	155	16.03	18.96	0.9	1.6	18	5	128	.21	1	1.6	2.0	15	DEP L
		5	823	17.42	19	19.24	155	28.33	9.60	2.4	2.9	49	6	42	.14	6	0.3	0.6	33	KAO
		5	1345	11.19	19	24.14	155	17.46	5.60	2.4	2.4	14	0	70	.21	2	1.0	1.5	0	INT L
		5	1433	32.04	20	1.24	155	27.49	6.24	1.4	2.2	26	0	262	.10	19	2.3	0.8	15	KEA
		5	1747	54.27	19	19.37	155	13.28	10.39	3.9	4.2	50	1	120	.12	6	0.5	0.5	47	SF2 F
		5	19	3 52.50	19	19.37	155	7.50	8.15	2.2	2.1	54	12	109	.15	4	0.4	0.5	45	SF4

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	GAP NS	DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1987	JUL	6	638	4.18	19	18.63	155	15.72	8.72	2.3	1.9	30	0	103	.11	4	0.4	0.5	26	SF1
		6	1558	48.40	19	18.19	155	13.19	8.68	1.5	1.2	38	10	94	.12	2	0.4	0.5	32	SF2
		6	1742	59.38	19	24.82	155	14.51	0.12	1.9	2.0	6	2	287	.03	4	0.7	0.5	2	SNC L
		6	2252	12.18	19	21.24	155	15.04	9.64	1.7	1.4	35	9	66	.12	3	0.4	0.4	27	SF1
		7	1418	33.34	19	26.08	155	16.57	10.99	2.2	2.1	13	4	191	.11	2	1.7	0.9	3	INT L
		7	1912	9.79	19	28.33	155	51.20	7.08	2.1	1.9	32	4	100	.16	7	0.6	0.9	30	KON
		7	2313	12.66	19	18.71	155	13.24	8.82	2.3	2.5	50	5	83	.12	3	0.3	0.5	44	SF2
		7	2332	56.67	19	31.16	155	14.19	12.54	2.4	2.5	7	4	318	.16	12	4.2	3.8	0	GLN L
		8	4	8 44.44	19	28.04	155	16.98	5.07	1.7	1.8	4	1	310	.00	5	5.3	4.6	1	GLN L
		8	710	1.71	19	19.98	155	12.45	7.33	1.7	1.3	46	13	78	.12	5	0.3	0.4	38	SF2
		8	917	16.91	19	26.06	156	0.11	11.28	2.8	2.1	35	8	248	.20	11	1.3	0.5	34	KON
		8	1028	36.42	19	23.95	155	6.40	1.32	1.5	1.8	16	2	105	.13	3	0.6	0.5	6	SME
		8	12	4 58.89	19	25.05	155	17.43	12.41	2.3	2.5	12	3	121	.07	1	1.5	0.9	0	INT L
		8	12	8 0.02	20	19.34	156	25.61	0.01	3.0	3.1	25	6	314	.29	71	19.2	4.8	29	DIS *
		8	1345	54.11	19	23.57	155	6.60	1.82	1.5	1.8	7	1	160	.13	2	1.0	0.5	2	SME
		8	2037	19.68	19	28.86	155	15.90	24.50	2.4	1.6	59	16	44	.11	7	0.4	0.4	43	DEP
		9	0	6 33.11	19	24.67	155	17.97	11.86	2.3	2.0	7	2	199	.14	2	6.4	3.7	1	INT L
		9	446	52.37	19	21.49	155	4.97	8.04	2.7	2.8	55	12	86	.11	5	0.4	0.5	48	SF5
		9	535	21.87	19	19.65	155	9.44	6.29	1.5	1.1	34	5	88	.12	5	0.5	0.9	32	SF3
		9	615	51.78	19	19.25	155	12.30	7.95	2.1	2.0	57	12	93	.18	5	0.4	0.5	46	SF3
		9	7	5 42.54	19	22.13	155	30.38	8.45	2.3	2.0	42	3	36	.11	5	0.3	0.6	37	KAO
		9	736	22.61	19	31.86	155	42.79	6.89	2.5	1.5	30	4	107	.12	6	0.5	1.1	27	MLO
		9	1026	52.69	19	27.89	155	15.40	0.00	2.0	2.0	11	3	244	.27	6	1.2	1.6	0	SNC L*
		9	1027	29.07	19	26.95	155	15.49	10.33	2.1	2.1	8	1	214	.20	5	3.7	2.1	1	INT L
		9	14	9 52.08	19	21.86	155	4.65	7.13	1.7	1.2	26	3	81	.12	5	0.6	0.9	20	SF5
		9	1714	6.11	19	25.13	155	16.39	0.37	1.6	2.4	4	0	227	.00	1	1.1	0.5	0	SNC L
		9	1930	32.91	19	39.45	156	2.68	8.59	2.4	2.1	21	2	263	.17	23	2.2	1.0	9	HUA
		9	2035	28.54	19	26.82	155	29.09	9.19	1.8	1.3	40	7	45	.11	7	0.3	0.6	36	KAO
		9	2243	42.39	19	28.79	155	15.68	4.89	2.3	2.5	8	3	309	.07	7	1.8	10.9	0	GLN L*
		10	140	52.92	19	25.47	155	20.04	6.74	2.0	1.7	34	9	107	.13	3	0.3	0.6	25	KAO
		10	248	45.30	19	21.62	155	6.63	8.71	1.1	1.2	37	6	81	.13	4	0.6	0.4	36	SF4
		10	3	4 42.45	19	25.97	155	20.01	6.37	2.1	1.4	34	10	121	.15	3	0.4	0.8	25	KAO
		10	4	4 22.13	19	25.53	155	20.28	4.26	2.4	1.8	42	14	83	.16	4	0.3	0.7	30	KAO
		10	857	18.09	19	21.52	155	30.46	8.86	1.3	2.0	46	10	47	.12	5	0.3	0.6	39	KAO
		10	1130	35.60	19	29.81	155	38.64	7.13	1.9	1.2	24	2	96	.13	5	0.5	1.0	20	MLO
		10	1337	42.14	19	28.42	155	26.17	11.03	2.5	2.1	7	2	343	.07	14	5.0	2.7	4	KAO L
		10	1355	33.98	19	23.90	155	15.91	2.72	2.0	1.7	25	7	107	.11	3	0.3	0.4	14	SEC
		11	0	2 1.47	19	23.36	155	6.62	1.74	1.5	1.8	10	0	114	.10	2	0.8	0.6	13	SME
		11	0	6 47.27	19	19.34	155	10.95	9.59	2.6	2.6	52	11	101	.11	5	0.4	0.3	48	SF3
		11	623	41.26	19	8.07	155	13.33	1.00		1.3	5	0	309	.30	27	19.0	26.8	0	LOI *
		11	7	3 35.35	19	21.85	155	18.55	12.65	2.4	1.8	8	3	194	.10	4	1.6	1.7	1	SWR L
		11	9	3 13.24	19	23.63	155	29.97	9.88	1.6	1.2	33	4	38	.11	5	0.4	0.5	29	KAO
		11	1255	27.88	19	25.93	155	21.71	9.45	1.9	1.5	49	12	46	.14	4	0.3	0.5	38	KAO
		11	1750	35.55	19	20.22	155	11.81	8.24	1.4	1.2	36	7	79	.09	5	0.4	0.5	31	SF3
		11	1752	46.14	19	21.60	155	30.49	9.79	2.3	2.1	38	3	47	.09	5	0.3	0.5	31	KAO

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	GAP NS	DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1987	JUL	11	1917	41.72	19	21.23	155	0.63	8.53	2.1	1.8	48	7	184	.14	5	0.7	0.5	43	SF5
		11	1930	43.72	19	21.40	155	0.90	8.76	2.7	2.6	59	12	176	.11	4	0.5	0.4	48	SF5
		11	23	0 49.17	19	22.36	155	29.81	9.40	1.8	1.5	39	2	41	.10	4	0.3	0.5	28	KAO
		12	426	45.32	19	27.96	155	13.77	0.94	2.3	1.3	6	1	232	.02	13	3.3	0.8	0	GLN L
		12	431	1.33	19	23.37	155	20.19	3.21	2.2	2.0	6	1	251	.09	1	1.5	0.6	0	KAO L
		12	1111	3.65	19	18.34	155	13.13	6.25	2.0	1.8	42	3	93	.14	3	0.4	0.9	29	SF2
		12	1524	1.74	19	14.25	155	34.63	9.59	1.9	1.2	13	1	150	.11	4	0.7	1.5	10	LSW
		12	1926	33.88	19	28.76	155	27.97	10.23	2.2	1.6	47	11	61	.11	6	0.3	0.5	43	KAO
		12	1937	38.38	19	22.90	155	6.28	0.49	1.9	2.3	13	1	134	.13	3	0.6	0.8	1	SME
		13	210	25.86	19	37.35	156	0.95	11.35	2.3	1.4	25	4	255	.14	18	1.4	0.7	24	KON
		13	817	3.09	19	39.99	156	5.03	11.34	2.8	1.7	21	4	271	.14	26	1.6	0.9	17	HUA
		13	1042	12.12	19	25.25	155	19.28	4.34	1.9	2.1	8	3	136	.21	3	1.0	1.3	1	KAO L
		13	1043	6.22	19	23.87	155	16.99	9.96	2.1	1.9	11	3	93	.18	1	1.7	1.3	0	INT L
		13	2019	29.57	19	19.31	155	30.06	9.65	2.2	1.9	40	5	56	.12	7	0.3	0.6	35	KAO
		13	2123	20.02	19	20.17	155	10.80	8.21	1.5	1.4	36	5	83	.12	4	0.5	0.4	32	SF3
		14	159	14.77	19	18.33	155	13.54	6.97	1.4	1.5	30	3	85	.09	2	0.4	0.8	29	SF2
		14	2	9 45.54	19	21.25	155	0.62	8.13	2.1	1.6	37	5	183	.12	5	0.8	0.6	28	SF5
		14	248	47.86	19	15.85	155	7.91	43.71	2.5	2.8	51	5	203	.12	3	0.7	1.1	49	DEP
		14	5	6 47.52	19	29.38	155	17.22	5.91	2.3	2.3	26	4	171	.24	8	0.9	3.6	29	GLN L
		14	610	33.58	19	23.82	155	29.79	9.84	2.8	3.0	51	8	32	.10	5	0.3	0.5	40	KAO
		14	611	15.79	19	18.09	155	30.27	6.90	2.3	2.0	26	2	72	.12	6	0.4	0.9	14	LSW
		14	7	0 14.67	19	18.59	155	13.16	9.01	2.1	1.9	51	8	133	.14	7	0.4	0.4	46	SF2
		14	1459	44.86	19	14.23	155	14.35	7.79	1.6	1.4	34	9	214	.14	5	0.5	0.9	31	SF2
		14	17	3 5.42	19	19.62	155	7.86	9.33	2.2	2.5	48	8	97	.11	4	0.5	0.4	47	SF4
		14	1712	21.83	19	22.89	155	6.29	0.04		1.3	7	1	126	.26	3	0.9	1.7	0	SME *
		14	2054	31.39	19	26.02	155	19.02	7.46	1.8	1.4	28	9	148	.12	3	0.4	0.6	20	INT
		15	357	18.55	19	23.28	155	6.60	0.05	1.5	1.9	9	1	151	.11	2	0.6	1.5	3	SME *
		15	659	49.68	19	23.29	155	5.51	0.01	1.6	1.8	7	1	131	.15	4	0.6	1.0	0	SME *
		15	811	57.09	19	26.31	155	18.36	0.00	2.4	2.4	10	1	170	.13	5	0.5	0.9	0	SNC L*
		16	450	13.89	19	19.63	155	8.35	6.57	2.2	2.1	44	9	84	.11	4	0.4	0.6	35	SF4
		16	1119	5.96	19	4.95	155	9.87	21.93	2.9	2.7	8	5	311	.11	33	1.7	4.8	2	LOI L
		16	1728	38.74	19	21.24	155	24.90	13.74	2.0	1.8	43	8	49	.11	3	0.4	0.5	28	DEP
		17	1231	59.06	19	12.50	155	31.95	6.25		1.2	24	1	82	.16	6	0.5	2.0	10	LSW
		17	13	7 43.62	19	22.79	155	18.89	0.03	2.2	2.1	8	0	171	.16	4	0.8	3.0	0	SSC L*
		17	1316	40.33	19	24.11	155	6.45	0.81	1.8	2.4	10	1	113	.13	3	0.7	0.8	1	SME
		17	2320	40.54	19	15.45	155	26.90	9.83	2.4	2.8	41	1	77	.11	5	0.3	0.5	41	LSW
		18	411	48.65	19	14.18	156	4.00	20.51	2.5	3.4	30	4	262	.10	21	1.2	2.2	21	KON
		18	619	31.24	19	21.63	155	25.18	12.53	1.6	1.2	32	3	51	.10	4	0.5	0.6	29	KAO
		18	927	11.12	19	22.05	155	5.96	0.02	1.6	1.8	14	1	145	.20	4	0.5	1.1	5	SME *
		18	1145	2.59	19	24.56	155	16.65	6.96	2.1	2.7	10	3	72	.10	1	0.6	0.9	1	INT L
		18	1624	2.71	19	13.47	155	30.59	10.98	2.4	2.4	40	5	130	.15	3	0.5	0.8	35	LSW
		18	1624	40.21	19	12.24	155	30.36	9.31	2.4	2.2	28	3	76	.13	5	0.5	1.1	25	LSW F
		18	1950	4.76	19	13.01	155	30.20	10.09	2.6	2.8	52	6	69	.15	4	0.4	0.5	46	LSW F
		19	034	3.85	19	20.26	155	11.41	8.97	1.6	1.6	33	3	81	.10	4	0.5	0.8	33	SF3
		19	1133	7.60	19	22.70	155	19.55	11.40	2.3	2.6	11	2	206	.25	2	1.8	1.5	0	KAO L

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1987	JUL	20	113	39.39	19	23.94	155	15.87	2.67	1.9	1.1	22	5	73	.14	1	0.4	0.3	18	SEC
		20	140	35.31	19	23.15	155	26.36	11.00	3.2	3.3	59	11	30	.13	3	0.3	0.4	49	KAO
		20	634	13.92	19	15.84	155	29.05	9.64	2.0	1.2	45	9	63	.22	2	0.4	0.6	38	LSW
		20	637	47.22	19	25.68	155	18.48	2.49	1.7	2.2	6	0	188	.05	3	0.6	0.9	0	SNC L
		20	851	11.76	19	21.22	155	2.23	7.34	2.8	3.0	52	9	148	.14	3	0.5	0.5	46	SF5
		20	941	46.54	19	20.19	155	3.61	6.58	1.7	1.4	35	7	123	.12	1	0.6	0.8	30	SF5
		20	1343	32.79	19	21.06	155	12.05	7.90	2.0	1.8	55	14	66	.13	3	0.4	0.4	43	SF3
		21	257	46.07	19	20.62	155	12.68	8.34	1.4	1.4	42	9	66	.14	4	0.3	0.4	37	SF2
		21	351	43.85	19	23.32	155	6.21	0.95	1.6	1.8	14	2	141	.12	3	0.6	0.5	4	SME
		21	633	7.86	20	2.01	156	28.67	3.50	3.1	3.3	62	19	297	.13	74	3.0	2.4	44	DIS *
		21	1521	7.07	19	25.61	155	19.59	6.71	2.0	1.5	25	5	78	.11	4	0.5	1.1	20	KAO
		21	1820	32.03	19	24.87	155	16.27	4.31	2.0	2.5	8	0	103	.10	1	0.7	1.0	1	SNC L
		21	1824	15.38	19	35.91	155	11.40	9.62	2.1	1.6	6	0	341	.11	21	15.0	13.3	0	KEA L*
		21	2351	56.65	19	19.96	155	12.24	4.62	2.0	1.9	32	5	80	.14	5	0.4	1.5	29	SSF
		22	032	29.80	19	31.60	155	55.00	35.40		1.5	29	4	201	.09	4	1.9	1.3	25	KON
		22	150	52.94	19	16.27	155	30.26	8.13	2.3	2.3	40	1	53	.17	2	0.4	0.9	30	LSW
		22	640	14.67	19	19.77	155	7.18	8.80	2.5	2.6	50	10	109	.12	5	0.4	0.3	46	SF4
		22	1121	5.18	19	19.16	155	26.62	10.86	1.6	1.4	29	2	54	.10	6	0.4	0.7	16	KAO
		22	13	0 49.70	19	18.74	155	26.30	9.46	1.6	1.6	35	2	55	.15	6	0.4	0.6	15	LSW
		22	1659	4.55	19	22.40	155	20.71	11.22	2.3	2.0	50	8	46	.11	3	0.3	0.4	28	KAO
		22	2238	21.85	19	24.96	155	18.76	3.23	1.7	2.3	21	3	68	.24	3	0.6	0.7	19	SNC L
		23	625	22.01	19	19.34	155	8.04	7.19	1.6	1.7	43	9	94	.11	4	0.4	0.5	37	SF4
		23	16	4 19.64	19	26.52	155	13.95	0.19	2.0	2.2	6	0	202	.17	3	1.3	2.1	1	GLN L*
		23	1644	30.85	19	18.84	155	13.62	8.50	1.4	1.4	35	4	82	.11	3	0.5	0.6	23	SF2
		24	014	12.24	19	54.14	155	32.20	20.89	2.2	1.5	38	8	203	.10	14	0.5	0.8	32	KEA
		24	029	17.02	19	18.99	155	15.36	7.93	1.4	1.2	42	8	95	.15	4	0.4	0.5	36	SF1
		24	1243	19.71	19	26.16	155	13.68	9.64	2.2	1.9	6	3	270	.11	6	1.7	0.9	0	GLN L
		24	1753	49.94	19	23.67	155	6.16	5.09	1.6	2.0	9	2	106	.13	3	1.0	0.8	6	SF4
		24	21	1 15.90	19	22.99	155	6.27	2.29	1.6	2.1	13	1	121	.19	3	0.9	0.5	3	SME
		24	2124	13.15	19	23.40	155	6.25	1.68	1.6	1.9	12	1	111	.16	2	0.9	0.6	4	SME
		25	324	57.93	19	17.77	155	13.20	10.79	2.8	2.9	57	12	146	.13	9	0.5	0.3	50	SF2
		25	331	37.54	19	18.05	155	12.93	10.41	1.9	1.7	44	7	162	.13	8	0.5	0.4	40	SF2
		25	335	14.36	19	18.27	155	13.14	10.52	2.2	2.1	58	13	133	.15	8	0.4	0.3	47	SF2
		25	5	0 41.93	19	16.41	155	25.28	9.28	1.9	2.0	47	7	64	.14	4	0.4	0.5	42	LSW
		25	925	46.18	19	25.25	154	45.11	41.74	2.6	2.1	64	19	291	.12	11	0.9	0.4	48	LER
		25	1032	18.29	19	20.57	155	7.54	8.56	2.4	2.6	55	10	89	.12	5	0.4	0.4	49	SF4
		25	1521	21.56	19	19.79	155	12.94	9.42	3.1	3.4	56	11	74	.11	5	0.3	0.3	50	SF2
		25	1754	22.73	19	19.57	155	9.52	7.20	1.5	1.2	38	11	90	.12	5	0.4	0.6	31	SF3
		25	2230	4.90	19	19.80	155	23.02	8.74	1.8	1.2	23	5	136	.12	1	0.6	1.0	20	SWR
		25	2325	39.60	20	7.18	157	37.11	7.65	3.4	3.1	18	1	223	.11	140	5.7	4.0	4	DIS
		26	1259	22.20	19	59.31	155	19.78	10.23	2.6	2.7	33	3	206	.10	27	0.5	0.5	18	KEA
		26	18	0 29.53	19	24.21	155	17.30	2.08	1.6	2.4	5	0	187	.01	1	1.1	0.3	1	SSC L
		26	1822	38.51	19	11.92	155	27.75	8.58	1.8	1.9	31	0	153	.12	7	0.6	0.8	22	LSW
		27	621	9.14	19	22.68	155	3.69	8.46	2.0	1.7	41	5	103	.11	3	0.4	0.4	34	SF5
		27	1116	21.76	19	21.54	155	4.25	8.18	1.4	1.2	28	5	87	.12	4	0.6	0.7	20	SF5

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1987	JUL	27	1117	14.27	19	19.34	155	12.52	4.88	1.4	1.1	18	4	88	.06	5	0.4	1.5	14	SSF
		27	1432	29.75	19	21.05	155	13.33	7.49	1.7	1.3	38	7	56	.13	3	0.4	0.3	33	SF2
		27	1722	51.55	19	7.21	155	28.71	10.34	1.9	1.3	38	12	181	.16	4	0.4	0.5	29	LSW
		27	1755	38.23	19	19.65	155	12.68	6.97	1.4	1.1	40	8	79	.14	5	0.4	0.6	34	SF2
		27	1836	16.93	19	25.36	155	22.27	0.00	2.0	2.4	7	1	210	.19	5	1.1	0.6	2	KAO L*
		28	755	32.89	19	37.12	155	17.25	8.06	2.4	2.5	8	2	325	.30	22	5.2	24.2	0	KEA L*
		28	1328	58.02	19	21.44	155	1.67	7.80	3.1	3.3	49	6	160	.10	4	0.5	0.4	35	SF5
		28	2039	18.55	19	25.53	155	16.81	2.33	1.5	2.7	10	1	107	.30	1	0.8	0.6	0	SNC L
		29	551	0.02	19	12.85	155	20.37	48.67	2.4	2.7	35	5	167	.11	7	1.1	0.8	31	DEP T
		29	738	45.16	19	26.91	155	23.08	8.63	2.3	1.9	51	14	76	.12	4	0.3	0.5	38	KAO
		29	1255	40.86	19	21.93	155	4.79	6.98	1.7	1.4	33	6	79	.14	5	0.5	0.7	25	SF5
		29	1322	26.27	20	2.64	156	28.44	5.43	2.9	2.5	38	7	232	.13	73	1.3	1.8	32	DIS
		30	120	31.06	19	28.53	155	15.63	23.09	2.3	1.9	19	6	259	.15	2	2.2	0.9	15	DEP L
		30	1127	45.11	19	12.86	155	27.71	4.28		1.5	29	3	107	.17	6	0.4	3.1	27	LSW
		30	1247	23.77	19	24.34	155	15.77	3.02	2.3	2.3	38	12	49	.13	2	0.3	0.2	30	SEC
		30	1648	14.77	19	20.52	155	13.22	6.83	1.4	1.1	33	3	62	.14	4	0.4	0.7	25	SF2
		30	1812	9.13	19	31.17	155	5.36	17.63	2.2	1.4	7	2	320	.19	20	3.3	8.7	1	DEP L
		30	2316	3.51	19	26.28	155	15.37	1.30	1.4	1.1	21	5	167	.14	3	0.4	0.5	16	SNC
		31	428	0.53	19	23.14	155	20.13	22.48	2.2	2.2	18	3	126	.20	1	2.2	1.6	16	DML L
		31	630	5.39	19	19.75	155	13.47	7.87	2.0	2.1	49	4	65	.13	5	0.4	0.6	37	SF2
		31	712	39.86	19	15.37	156	12.17	7.40	2.5	2.1	41	7	280	.11	54	1.1	0.6	28	KON
		31	1741	56.27	19	26.12	155	24.25	7.59	1.7	1.3	29	5	53	.12	2	0.3	0.8	22	KAO
		31	1855	7.68	19	18.68	155	13.77	7.68	2.1	1.9	41	4	87	.11	3	0.4	0.5	29	SF2
		31	2055	21.38	19	26.14	155	29.37	9.49	2.6	3.0	52	8	37	.11	7	0.3	0.5	37	KAO
AUG		1	214	32.42	19	26.67	155	21.59	7.90	1.6	1.1	30	7	69	.10	2	0.3	0.8	23	KAO
		1	419	41.77	19	19.27	155	26.59	9.89		1.3	37	6	66	.15	6	0.4	0.4	32	KAO
		1	1314	23.41	19	14.00	155	20.27	30.32	2.4	1.9	56	10	158	.11	7	0.7	0.8	46	DEP
		2	1659	33.59	19	25.82	155	15.34	13.68	2.1	1.9	12	4	241	.09	3	2.0	1.0	2	DEP L
		2	2219	47.63	19	19.74	155	12.76	7.02	1.6	1.1	42	12	77	.14	5	0.3	0.6	34	SF2
		3	9	0 59.40	19	24.96	155	16.82	14.48	0.8	1.9	11	2	105	.14	0	1.5	1.1	2	DEP L
		3	1445	10.96	19	19.97	155	10.71	5.51	1.5	1.1	24	3	87	.11	4	0.5	1.4	23	SF3
		3	1532	30.26	19	21.17	155	2.76	8.45	2.5	2.8	54	14	127	.12	2	0.4	0.4	46	SF5
		3	1542	50.39	20	7.45	155	47.91	28.17	2.5	1.8	32	5	252	.10	2	1.3	1.0	27	KOH
		3	1745	43.24	19	20.37	155	10.48	7.82	2.0	1.7	46	10	80	.14	3	0.4	0.5	39	SF3
		4	714	17.01	19	19.64	155	7.97	9.30	3.4	3.5	57	14	93	.11	4	0.4	0.3	48	SF4
		4	955	6.49	19	24.79	155	30.49	9.41	1.7	1.2	33	3	42	.08	7	0.4	0.7	22	KAO
		4	11	4 17.67	19	22.01	155	29.01	9.49	1.9	1.7	38	1	41	.11	3	0.3	0.6	25	KAO
		4	1221	29.37	19	22.15	155	15.31	4.30	2.3	2.4	40	5	57	.12	1	0.3	0.4	26	SEC
		4	1233	4.35	19	44.71	155	1.97	44.53	2.5	1.6	25	3	206	.10	6	1.1	1.6	21	HIL
		4	14	4 20.44	19	23.89	155	37.86	10.35	2.6	2.3	42	6	51	.10	6	0.3	0.8	31	MLO
		4	2312	36.88	19	25.25	155	15.87	12.54	2.1	2.3	19	6	127	.11	2	1.2	0.8	5	INT L
		5	3	0 50.34	19	20.97	155	8.01	8.76	1.7	1.9	44	7	77	.09	4	0.5	0.3	42	SF4
		5	939	26.98	19	19.94	155	7.61	7.97	1.6	1.2	31	2	97	.07	5	0.5	0.8	26	SF4
		5	1630	42.39	19	20.09	155	12.22	8.24	1.9	1.8	42	4	77	.12	5	0.4	0.5	29	SF3
		6	429	57.70	19	27.44	155	14.65	3.65	1.9	1.9	22	6	195	.16	4	0.6	1.1	21	SNC L

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	GAP NS	DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1987	AUG	7	1230	20.92	19	29.64	155	27.32	6.04	2.5	2.0	48	10	55	.13	4	0.3	1.0	27	KAO	
		7	1735	7.40	19	19.26	155	29.84	12.54	1.7	1.2	30	4	54	.07	7	0.4	0.6	27	KAO	
		7	1947	45.49	19	38.41	155	11.06	14.16	2.1	1.7	36	9	78	.12	13	0.5	0.6	27	KEA	
		8	755	22.18	19	19.24	155	13.01	7.04		1.2	31	2	81	.12	4	0.5	0.9	19	SF2	
		8	822	29.95	19	19.31	155	7.15	8.56	1.3	1.2	40	11	120	.12	4	0.4	0.4	36	SF4	
		8	2122	58.85	19	21.66	155	3.92	8.01	1.7	1.2	31	5	95	.14	4	0.7	0.6	23	SF5	
		8	2145	58.29	19	19.07	155	13.23	9.84	3.8	4.0	50	6	127	.12	7	0.4	0.4	46	SF2	F
		8	2152	15.02	19	18.07	155	13.34	7.63	1.5	1.5	40	7	89	.12	2	0.4	0.5	35	SF2	
		8	22 4	0.18	19	17.64	155	13.35	5.81	2.0	2.0	49	11	98	.13	1	0.3	0.5	42	SF2	
		8	2211	13.82	19	18.69	155	13.46	9.14	3.5	3.9	54	10	143	.12	7	0.4	0.5	39	SF2	F
		8	2214	31.48	19	18.77	155	12.52	10.65	1.5	1.4	39	12	100	.19	4	0.6	0.6	28	SF2	
		8	2222	29.01	19	17.74	155	13.37	6.33	1.5	1.2	36	12	94	.12	1	0.4	0.9	28	SF2	
		8	2347	18.07	19	17.86	155	13.25	6.79	1.5	1.4	29	2	99	.10	2	0.5	0.8	19	SF2	
		9	138	26.49	19	21.46	155	2.90	6.68	1.7	1.2	37	1	120	.13	3	0.6	0.8	17	SF5	
		9	211	12.91	19	17.68	155	12.99	7.03	1.5	1.4	26	3	122	.09	1	0.5	0.9	13	SF2	
		9	226	48.38	19	20.06	155	8.48	7.37	1.9	1.7	38	3	78	.09	4	0.5	0.7	19	SF4	
		9	236	59.70	19	17.62	155	13.14	6.85	1.5	1.2	30	1	115	.08	1	0.5	0.9	16	SF2	
		9	513	15.19	19	21.63	155	30.14	9.28	1.8	1.4	35	2	46	.10	5	0.4	0.6	22	KAO	
		9	933	11.31	19	12.46	155	32.82	7.11		1.3	32	5	85	.17	7	0.5	1.0	30	LSW	
		9	1123	34.11	19	22.54	155	30.02	9.21	1.8	1.2	43	10	47	.11	4	0.3	0.5	35	KAO	
		9	1546	1.32	19	25.17	155	16.43	15.68	1.9	1.8	60	17	71	.12	1	0.4	0.2	47	DEP	
		9	18 3	30.92	19	33.22	155	36.04	10.39	2.2	1.3	38	12	140	.25	2	0.7	0.8	28	MLO	
		9	1914	37.75	19	20.28	155	10.54	8.66	1.5	1.2	43	9	81	.13	4	0.4	0.4	38	SF3	
		9	2115	25.82	19	23.74	155	16.95	2.98	1.5	1.1	16	6	66	.04	1	0.3	0.2	8	SSC	
		10	432	37.42	19	18.04	155	13.46	10.53	2.8	3.2	57	13	84	.13	2	0.4	0.3	48	SF2	
		10	812	38.65	19	20.40	155	30.02	9.10	2.0	1.4	33	6	49	.10	6	0.3	0.7	27	KAO	
		10	1238	13.99	19	17.34	155	26.14	9.75	1.6	1.4	22	1	55	.10	7	0.5	1.0	19	LSW	
		10	1817	34.50	19	18.99	155	8.59	9.39		1.4	30	5	88	.08	3	0.5	0.6	21	SF4	
		10	19 2	6.68	20	0.24	155	35.71	11.63	2.3	2.3	34	6	169	.12	17	0.5	0.4	33	KOH	
		10	2235	38.65	19	9.40	155	40.78	4.42		1.9	31	12	127	.22	12	0.6	4.5	23	LSW	
		11	417	10.90	19	19.46	155	10.39	9.00	1.2	1.6	43	10	98	.12	5	0.4	0.5	36	SF3	
		11	5 4	51.45	18	10.90	155	33.58	13.86	2.6	2.9	51	6	318	.11	90	6.3	9.1	48	DIS	*
		11	19 2	24.82	19	19.78	155	6.49	8.38	2.3	2.5	47	6	123	.11	5	0.4	0.5	30	SF4	
		12	425	58.68	19	24.98	155	19.01	5.58	1.9	1.4	31	10	69	.11	3	0.3	0.7	22	INT	
		12	643	20.09	19	22.07	155	4.58	7.42	2.0	1.7	51	14	78	.13	4	0.3	0.5	42	SF5	
		12	1217	16.95	20	0.07	155	36.28	13.59	2.3	2.2	16	5	166	.12	17	0.6	0.5	11	KOH	
		12	18 0	38.33	19	16.27	155	30.11	6.89	2.0	1.2	26	1	54	.21	2	0.5	1.3	15	LSW	
		13	422	52.61	19	17.91	155	14.27	8.68	2.1	2.6	58	13	93	.13	2	0.3	0.3	50	SF2	
		13	423	29.02	19	18.09	155	13.65	7.78	1.8	1.4	40	6	74	.13	2	0.4	0.5	36	SF2	
		13	1823	7.07	19	18.93	155	13.32	6.77	1.4	1.2	34	3	78	.11	4	0.4	0.8	24	SF2	
		13	23 4	56.65	19	24.24	155	15.74	3.01	1.4	1.1	19	5	85	.09	2	0.3	0.4	12	SEC	
		14	1232	33.95	19	29.19	155	53.16	6.57		1.1	15	3	158	.14	3	0.9	1.2	7	KON	
		14	1928	43.13	19	22.14	155	4.42	8.46	0.8	1.1	38	5	87	.11	4	0.4	0.4	39	SF5	
		14	21 6	3.91	19	19.81	155	7.83	6.99	0.9	1.2	30	1	95	.10	5	0.5	0.8	13	SF4	
		15	233	15.46	19	8.78	155	37.85	10.89	2.3	2.2	45	10	107	.18	11	0.4	0.6	37	LSW	

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	GAP NS	DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1987	AUG	15	844	36.73	19	21.58	155	12.35	8.87	2.1	1.8	52	10	153	.14	2	0.5	0.4	46	SF2	
		15	1023	26.48	19	24.80	155	19.22	6.25	1.1	2.1	36	5	40	.12	2	0.3	0.7	25	KAO	
		15	1935	40.86	19	19.88	155	6.82	6.71	1.7	1.2	36	2	114	.10	5	0.4	0.7	25	SF4	
		15	1952	31.12	19	13.95	155	37.71	8.01		1.2	27	2	91	.22	2	0.5	1.4	14	LSW	
		15	2321	17.40	19	22.36	155	28.87	10.02	2.3	2.1	48	4	36	.10	2	0.3	0.4	45	KAO	
		15	2344	34.91	19	19.28	155	13.11	7.61	0.9	1.3	51	8	78	.16	4	0.4	0.5	44	SF2	
		16	921	42.90	19	24.03	155	26.25	8.20	2.6	2.6	46	9	36	.13	3	0.3	0.5	44	KAO	
		16	1327	57.44	19	21.68	155	4.04	8.92	1.1	1.2	39	6	93	.17	4	0.7	0.6	35	SF5	
		17	324	58.74	19	27.15	155	17.38	2.47	1.8	2.1	15	3	110	.18	2	0.5	0.6	15	SNC	L
		17	9 7	30.92	19	22.66	154	41.13	44.98	1.5	1.7	41	4	304	.10	20	2.0	1.0	38	LER	
		17	1224	36.19	19	28.70	155	25.36	5.52	2.5	2.4	44	8	44	.12	4	0.3	0.7	35	KAO	
		17	17 7	5.99	19	17.59	155	30.21	10.22	1.1	1.4	27	2	70	.13	5	0.5	0.9	14	LSW	
		17	2149	28.30	19	20.52	155	9.65	7.81		1.1	41	9	73	.11	3	0.3	0.5	35	SF3	
		18	653	52.48	19	21.57	155	4.59	7.19	2.1	1.9	48	10	81	.16	4	0.5	0.6	41	SF5	
		18	1029	17.85	18	50.58	155	21.24	17.32	2.2	1.5	51	9	260	.14	36	0.8	12.1	43	LOI	*
		18	1413	26.10	19	31.90	155	15.24	24.00	2.1	2.1	63	17	52	.13	8	0.4	0.7	45	DEP	
		18	1922	52.12	19	19.95	155	10.53	7.29		1.2	27	1	88	.10	4	0.5	0.8	20	SF3	
		19	0 3	37.20	19	24.64	155	20.26	8.21	2.6	2.6	56	11	45	.17	2	0.3	0.5	46	KAO	
		19	249	40.93	19	20.17	155	6.13	7.36	0.9	1.2	30	4	117	.11	6	0.5	0.8	24	SF4	
		19	526	18.41	19	25.33	155	19.75	6.36	1.8	1.5	27	6	50	.13	3	0.4	1.1	21	KAO	
		19	1534	28.70	20	4.58	155	37.62	27.86	3.0	3.4	57	10	193	.09	17	0.5	1.2	39	KOH	
		19	2048	20.11	19	19.41	155	11.82	6.83	1.5	1.7	34	2	95	.10	5	0.4	0.8	26	SF3	
		19	2322	40.37	19	23.72	155	6.26	0.03	1.9	2.4	13	1	172	.25	3	2.0	2.7	13	SME	*
		20	6 9	40.07	19	53.08	155	20.02	11.47	2.1	1.4	29	6	205	.15	1	0.9	0.4	23	KEA	
		20	630	19.10	19	54.37	155	21.98	12.13	2.1	1.4	24	3	242	.09	3	0.9	0.4	24	KEA	
		20	736	34.03	19	22.05	155	13.08	3.26	1.2	1.1	18	4	96	.06	1	0.5	0.2	15	SER	
		20	749	21.43	19	27.14	155	29.97	10.00	1.9	1.5	38	8	46	.11	7	0.3	0.8	30	KAO	
		20	1432	2.81	19	27.65	154	53.50	8.27	2.7	2.8	35	2	133	.13	3	0.7	0.4	31	LER	
		21	938	39.92	19	19.59	155	12.45	7.38	1.4	1.2	30	5	84	.08	5	0.3	0.7	25	SF2	
		21	1558	36.52	19	24.08	155	16.10	2.84	2.0	1.9	27	9	78	.08	1	0.2	0.2	15	SEC	
		21	1812	11.16	19	20.34	155	12.96	8.05	2.1	2.3	48	7	67	.14	4	0.4	0.5	43	SF2	
		21	1841	14.26	19	19.66	155	8.25	6.60	1.7	1.5	32	6	86	.08	4	0.4	0.7	26	SF4	
		22	442	37.19	19	25.36	155	16.08	15.09	2.6	3.2	59	12	75	.11	2	0.4	0.2	46	DEP	
		22	641	49.48	19	24.15	155	17.17	0.66	1.9	1.3	12	3	82	.09	1	0.3	0.6	9	SSC	
		22	1349	4.62	19	19.41	155	15.31	8.31	2.3	2.4	50	3	125	.14	4	0.4	0.5	35	SF1	
		22	1441	51.32	19	24.11	155	15.92	2.97	1.9	1.9	25	5	119	.08	1	0.3	0.2	11	SEC	
		22	19 6	0.14	19	25.80	155	29.78	9.75	2.1	1.9	39	1	39	.10	7	0.3	0.7	26	KAO	
		22	2314	30.33	19	24.22	155	15.92	3.12	1.9	2.0	26	8	84	.08	1	0.3	0.3	17	SEC	
		23	011	6.14	19	48.75	156	6.47	0.64		1.5	13	2	247	.10	47	5.2	1.1	6	HUA	
		23	920	58.28	19	22.42	155	30.30	9.10	1.8	1.4	35	2	47	.09	5	0.4	0.7	18	KAO	
		23	1047	52.62	19	24.26	155	15.72	3.93	1.6	1.1	22	9	129	.14	2	0.4	0.5	13	SEC	
		23	12 3	43.55	19	27.98	155	13.78	10.23	1.8	1.1	43	12	90	.12	5	0.4	0.6	37	GLN	
		23	1440	8.74	19	23.82	155	26.78	10.30	1.8	1.4	29	3	36	.10	3	0.4	0.8	26	KAO	
		23	1455	41.79	19	20.80	155	29.83	9.84	1.7	1.4	24	5	51	.11	5	0.4	0.7	19	KAO	
		24	316	13.11	19	19.31	155	13.56	7.90	2.3	2.6	52	7	67	.14	4	0.4	0.6	45	SF2	

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1987	AUG	24	343	15.31	19	19.94	155	7.34	6.94	1.6	1.2	35	9	103	.10	5	0.4	0.7	27 SF4	
		24	752	2.17	19	22.01	155	4.98	6.50	1.9	1.9	43	8	75	.12	5	0.4	0.7	38 SF5	
		24	1155	48.88	19	10.03	155	37.63	7.30	2.3	2.0	20	2	102	.12	9	0.5	1.8	21 LSW	
		24	1227	23.04	19	13.74	155	8.47	15.01	2.1	1.8	25	5	211	.17	7	1.1	0.5	21 DEP	
		25	523	0.73	19	20.84	155	6.15	8.59	2.0	1.9	44	11	99	.15	5	0.4	0.4	36 SF4	
		25	1412	22.10	19	41.64	155	2.14	0.00	2.4	2.6	23	0	191	.33	23	1.8	4.1	32 HIL	B*
		25	22	2 42.17	19	29.34	155	26.91	5.99	2.0	1.9	50	16	56	.14	5	0.3	0.9	35 KAO	
		26	2	3 12.24	19	19.93	155	7.07	8.62	1.9	2.1	48	8	108	.11	5	0.4	0.4	43 SF4	
		26	932	6.88	19	26.99	155	28.23	9.48	1.9	1.4	45	15	45	.12	6	0.3	0.6	30 KAO	
		26	1219	13.71	19	20.71	155	12.86	8.28	2.2	2.6	39	5	64	.11	4	0.4	0.5	35 SF2	
		26	1436	13.68	19	19.36	155	11.65	7.21	1.9	1.4	21	0	98	.08	5	0.6	1.1	18 SF3	
		26	2337	36.62	19	19.49	155	8.31	7.48	0.9	1.2	36	7	85	.11	4	0.4	0.6	31 SF4	
		27	1456	57.09	19	18.99	155	13.84	8.19	1.9	2.0	45	6	75	.11	4	0.4	0.5	25 SF2	
		28	1510	37.75	19	29.13	154	53.51	2.52	1.5	1.1	7	1	97	.05	4	0.5	0.8	6 SLE	
		28	1514	3.53	19	29.02	154	53.33	0.02	2.0	1.5	22	1	97	.18	4	0.4	0.8	17 SLE	*
		28	1733	16.20	19	28.44	155	27.15	6.14	1.9	1.3	34	8	61	.14	7	0.3	1.3	28 KAO	
		28	1740	16.21	19	23.80	155	15.78	2.92	1.8	1.4	26	8	103	.09	1	0.2	0.2	20 SEC	
		29	026	51.51	19	17.19	155	14.13	7.74	1.5	1.3	33	6	159	.11	1	0.5	0.5	30 SF2	
		29	1151	23.53	19	20.45	155	12.44	8.88	1.4	1.3	37	9	71	.12	4	0.4	0.4	31 SF2	
		31	139	19.20	19	20.96	155	2.07	8.03	2.2	2.5	49	10	160	.11	2	0 5	0.4	42 SF5	
		31	230	47.46	19	19.11	155	15.42	9.63	1.6	1.7	42	10	102	.14	4	0.4	0.4	36 SF1	
		31	457	27.38	19	24.09	155	15.77	3.07	1.9	2.0	28	8	74	.09	1	0.2	0.3	20 SEC	
		31	524	28.29	19	18.03	154	59.65	38.73	2.1	1.6	48	8	221	.10	7	1.0	0.4	40 LER	
		31	710	6.68	19	18.62	155	12.85	10.36	1.8	1.4	43	9	96	.14	3	0.5	0.4	36 SF2	
		31	720	19.51	19	26.99	155	26.13	3.32		1.2	29	7	60	.11	4	0.3	0.9	22 KAO	
		31	941	28.70	19	24.41	155	29.65	9.24	1.9	1.2	27	4	65	.08	5	0.4	0.6	24 KAO	
		31	10	2 23.37	19	18.71	155	13.36	7.20	1.4	1.2	34	6	80	.12	3	0.4	0.7	29 SF2	
		31	1510	3.54	19	45.78	155	2.47	0.00	2.5	2.5	10	0	289	.48	7	5.2	7.6	4 HIL	B*
	SEP	1	1438	17.88	19	19.76	155	8.20	8.07	1.9	2.0	36	2	86	.10	4	0.4	0.6	28 SF4	
		1	1556	57.75	19	26.15	154	54.76	6.85	0.8	1.2	24	1	162	.12	3	0.9	0.6	15 LER	
		1	2053	8.25	19	19.63	155	11.80	6.66	1.4	1.5	43	7	90	.15	6	0.3	0.6	38 SF3	
		1	2216	27.75	19	19.59	155	12.20	8.00	1.8	1.8	47	12	87	.14	5	0.4	0.5	39 SF3	
		2	234	19.16	18	56.34	155	14.25	15.80	2.5	2.2	62	15	242	.15	34	1.0	2.9	48 LOI	
		2	354	24.00	19	21.77	155	25.31	13.10	1.9	1.5	39	7	41	.11	4	0.4	0.5	30 DML	
		2	11	1 31.99	19	21.40	155	2.08	7.81	1.7	1.3	29	5	157	.14	3	0.7	0.7	23 SF5	
		2	1738	56.08	19	18.91	155	15.02	5.92	1.4	1.3	30	1	100	.11	4	0.5	1.1	20 SF1	
		2	2229	6.52	20	0.35	155	35.64	5.50	2.3	1.6	16	2	170	.13	18	0.8	1.3	5 KOH	
		3	023	26.26	19	22.08	155	4.80	8.73	2.0	2.0	47	10	79	.11	4	0.4	0.3	43 SF5	
		3	3	8 8.01	19	19.65	155	9.95	7.38		1.2	20	5	92	.07	4	0.5	0.9	17 SF3	
		3	832	2.30	19	24.97	155	30.31	10.67	2.1	1.5	31	4	63	.07	5	0.4	0.7	27 KAO	
		3	1618	45.08	19	13.51	155	26.51	7.10	2.0	1.9	31	4	121	.14	5	0.5	1.2	13 LSW	
		3	1848	9.70	19	26.88	155	28.45	8.62	2.1	1.2	41	6	56	.11	6	0.3	0.7	20 KAO	
		4	222	41.46	19	12.54	155	27.78	6.84	2.6	3.0	46	3	107	.19	6	0.6	0.9	26 LSW	
		4	339	31.91	19	19.21	155	13.30	5.72	1.7	1.5	37	2	75	.17	4	0.5	1.4	27 SF2	
		5	4	6 52.24	19	24.51	154	58.99	6.01	2.1	1.7	16	3	151	.12	9	0.7	2.2	12 LER	

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1987	SEP	5	643	18.59	19	20.84	155	13.02	8.05	2.3	2.6	37	5	61	.12	3	0.4	0.7	31 SF2	
		5	1050	53.09	19	20.10	155	13.03	6.42	1.7	1.7	22	3	69	.11	5	0.4	1.0	16 SF2	
		5	1958	0.72	20	41.00	156	5.51	6.97	2.9	3.0	4	1	206	.02	19	8.1	11.8	5 DIS	*
		6	542	47.15	19	22.31	155	28.36	5.22	1.9	1.1	19	5	48	.10	1	0.4	0.5	13 KAO	
		6	751	3.40	19	19.83	155	11.73	6.78	1.4	1.1	26	5	87	.11	5	0.4	1.0	21 SF3	
		6	1035	46.05	19	16.26	155	25.77	10.45	1.7	1.2	17	7	69	.09	5	0.5	1.0	13 LSW	
		6	1432	13.40	19	11.80	155	26.64	44.22	2.4	2.9	26	2	135	.12	5	1.0	1.5	6 DLS	L
		6	1648	7.02	19	24.96	155	15.94	14.88	1.7	1.3	28	4	148	.08	2	0.7	0.5	18 DEP	
		6	1721	50.79	19	19.68	155	30.16	10.16	2.5	1.6	40	3	36	.10	7	0.3	0.5	29 KAO	
		7	029	59.25	19	25.95	155	29.56	9.98	2.0	1.6	27	2	54	.09	7	0.4	1.0	20 KAO	
		7	827	51.07	19	17.79	155	29.90	9.45	1.7	1.5	13	2	64	.08	5	0.6	1.2	6 LSW	
		8	1	8 51.34	19	20.69	155	7.22	7.72	1.6	1.2	41	10	91	.21	5	0.5	0.6	32 SF4	
		8	1	9 34.38	19	29.48	155	27.33	3.52	2.4	2.4	49	11	62	.14	5	0.3	1.0	43 KAO	
		8	1323	23.54	19	1.03	155	15.25	40.11	2.5	1.9	39	9	230	.09	27	1.4	1.1	29 LOI	
		9	140	26.95	19	19.88	155	6.43	9.01	2.5	2.8	53	13	121	.14	5	0.4	0.3	47 SF4	
		9	9	8 13.69	19	20.38	155	11.09	9.46	1.5	1.6	27	5	117	.08	4	0.5	0.7	25 SF3	
		10	1434	3.62	19	20.24	155	11.85	7.64	2.3	2.5	40	5	107	.14	5	0.5	0.7	36 SF3	
		10	1638	55.17	19	19.79	155	12.77	7.23	1.4	1.2	26	2	76	.11	5	0.5	0.9	21 SF2	
		11	1154	30.72	19	1.31	155	25.45	39.28	2.2	1.6	32	2	226	.08	16	1.1	1.7	27 DLS	
		11	1530	29.21	19	25.76	155	19.49	5.92	2.0	1.2	18	3	132	.10	3	0.6	1.0	13 KAO	
		11	2048	1.58	19	22.04	155	26.93	10.62	1.9	1.6	41	11	44	.13	1	0.3	0.4	35 KAO	
		11	2228	47.17	20	7.01	155	32.83	40.54	2.4	1.9	25	7	286	.13	31	1.1	0.8	22 KEA	
		12	4	6 40.40	19	17.92	155	16.42	9.33	2.2	1.7	45	5	123	.15	4	0.4	0.5	42 SF1	
		12	1329	28.42	19	24.71	155	18.92	6.23	2.0	1.5	30	8	91	.12	2	0.4	0.7	22 INT	
		12	1540	53.51	19	23.07	155	16.61	28.13	2.0	1.5	45	14	64	.11	1	0.8	0.5	32 DEP	
		12	1835	1.12	19	21.96	155	29.05	9.98		1.2	26	5	41	.11	3	0.3	0.5	22 KAO	
		12	1910	33.55	19	26.26	155	29.04	8.83	2.0	1.6	32	2	44	.10	7	0.4	0.9	22 KAO	
		13	021	5.56	20	4.05	156	17.37	5.87	2.3	2.0	40	7	289	.14	54	1.9	2.0	37 KOH	
		13	815	32.00	19	16.90	155	8.12	43.03	2.4	1.9	39	2	182	.11	1	1.0	1.0	32 DEP	
		13	1516	35.03	19	19.16	155	15.26	7.12	1.4	1.1	25	2	99	.09	4	0.5	0.9	18 SF1	
		13	2145	49.97	19	12.38	155	27.85	54.13			35	2	106	.22	5	1.4	1.6	33 DLS	
		14	4	3 1.46	19	22.79	155	15.03	30.50	2.9	3.1	56	14	53	.13	2	0.6	0.4	43 DEP	
		15	934	42.03	19	19.00	155	6.74	7.53		1.1	22	6	139	.12	4	0.6	0.9	19 SF4	
		16	2	6 16.05	19	20.20	155	11.11	8.61	2.2	2.0	55	13	82	.15	4	0.4	0.3	47 SF3	
		16	1711	45.65	19	24.39	155	16.93	14.70	1.7	1.3	30	3	61	.09	1	0.6	0.4	24 DEP	
		16	18	4 25.89	19	33.22	156	21.76	8.15	2.6	2.1	36	2	272	.14	57	2.5	3.6	25 DIS	
		17	013	0.65	19	18.63	155	14.72	8.83	1.4	1.2	39	7	101	.18	4	0.4	0.5	33 SF1	
		17	12	8 7.19	19	20.36	155	6.45	8.07	2.2	2.5	43	8	109	.11	6	0.5	0.6	38 SF4	
		18	340	26.08	19	19.78	155	11.21	6.39	1.5	1.5	36	2	90	.13	5	0.5	0.9	20 SF3	
		18	1213	6.00	19	22.34	155	29.87	9.55	1.6	1.4	30	2	45	.11	4	0.4	0.7	18 KAO	
		18	1653	38.16	19	26.05	155	19.00	5.47	2.0	1.2	21	4	93	.10	4	0.5	1.2	17 INT	
		18	1850	14.95	19	6.46	155	30.59	52.67	2.7		29	4	185	.14	7	1.2	1.6	20 DLS	T
		18	1946	5.87	19	17.51	155	16.32	6.60	1.6	1.4	31	0	147	.12	4	0.5	0.9	24 SF1	
		18	2337	7.25	19	18.42	155	48.29	10.59	3.8	4.2	62	17	92	.12	8	0.4	0.3	47 KON	
		19	349	32.90	19	20.04	155	12.06	9.70	2.4	2.7	58	10	80	.16	5	0.4	0.4	48 SF3	

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1987	SEP	19	622	7.59	19	15.31	155	29.80	12.36	2.3	2.6	47	5	62	.12	1	0.4	0.5	43	LSW
		19	15 4	26.83	19	19.87	155	11.74	9.34	3.0	3.4	54	9	85	.12	5	0.3	0.3	41	SF3
		19	1622	27.36	19	57.15	155	44.13	30.01	3.0	3.6	59	10	129	.10	13	0.5	1.0	49	KOH
		19	1649	45.54	19	20.65	155	7.72	8.21	3.2	3.5	52	9	85	.10	5	0.3	0.4	33	SF4
		19	2031	46.13	19	16.42	155	27.13	8.37	2.7	3.2	49	3	61	.14	6	0.4	0.7	30	LSW F
		20	457	41.27	19	19.80	155	6.37	7.29	1.6	1.6	36	10	124	.10	5	0.3	0.5	30	SF4
		20	1841	55.99	19	45.21	156	3.62	13.20	2.4	2.5	37	7	236	.14	33	1.0	0.9	32	HUA
		21	2 6	30.95	19	19.56	155	6.60	7.33	1.6	1.2	40	7	127	.17	5	0.5	0.6	35	SF4
		21	743	49.78	19	18.10	155	48.51	11.81	2.1	1.8	30	2	127	.13	8	0.6	0.4	18	KON
		21	12 0	47.23	19	26.13	155	28.17	9.95	2.4	2.2	33	1	37	.10	7	0.4	0.6	15	KAO
		21	1233	25.87	19	19.38	155	11.76	5.61	1.4	1.1	21	1	96	.07	5	0.5	1.0	21	SF3
		22	849	54.75	19	26.15	155	29.31	9.96	2.1	1.6	39	3	43	.09	7	0.3	0.7	29	KAO
		22	927	11.94	19	26.38	155	28.97	8.71	2.1	1.8	42	6	41	.11	7	0.3	0.7	25	KAO
		22	1043	19.37	19	36.97	155	53.10	31.04	3.1	3.4	65	17	176	.10	15	0.5	0.8	49	KON F
		22	1225	11.05	19	26.16	155	30.29	9.27	2.1	1.6	39	7	39	.11	8	0.3	0.8	29	KAO
		22	15 9	4.74	19	42.70	155	3.98	3.23	2.4	2.7	30	1	213	.15	23	0 9	2.4	35	HIL B
		23	259	31.49	19	25.11	155	18.96	7.22	3.2	2.5	58	17	41	.14	2	0.3	0.4	48	INT
		23	336	57.28	19	21.89	155	5.14	7.71	2.1	2.1	47	8	78	.11	5	0.4	0.6	33	SF5
		23	339	21.86	19	20.85	155	29.89	9.64	1.8	1.7	35	3	46	.10	5	0.4	0.7	33	KAO
		23	514	30.08	19	27.75	155	36.64	12.62	2.0	2.6	20	1	90	.14	1	0.6	1.0	8	MLO
		23	1431	45.64	20	8.79	156	3.98	13.05		2.3	19	4	285	.10	30	2.5	1.7	17	KOH
		23	1612	18.79	19	26.78	155	28.76	9.35	2.2	2.2	45	7	43	.11	7	0.3	0.6	26	KAO
		24	2 1	39.64	19	25.31	155	18.99	6.09	2.2	2.0	38	12	76	.12	2	0.3	0.5	27	INT
		24	250	49.01	19	20.08	155	11.63	9.22	2.0	2.1	52	11	82	.13	5	0.4	0.3	45	SF3
		24	1919	1.67	19	19.98	155	12.60	6.98	1.4	1.3	31	1	76	.10	5	0.4	0.8	24	SF2
		24	20 1	27.83	19	7.48	155	24.61	45.87		2.0	28	1	246	.11	7	1.3	1.6	20	LOI L
		24	2013	43.65	19	26.35	154	54.99	5.97		1.1	24	1	157	.12	2	0.8	0.7	14	LER
		24	2058	16.05	19	23.18	155	27.08	9.89	1.5	1.3	28	1	33	.09	2	0.4	0.9	18	KAO
		25	526	9.89	19	20.89	155	29.57	5.64	2.8	2.9	46	7	36	.11	5	0.3	0.9	32	KAO
		25	532	13.19	19	18.19	155	15.21	5.45		1.2	29	2	121	.12	4	0.4	1.1	18	SF1
		25	840	33.56	19	20.23	155	12.47	7.72	1.4	1.4	32	2	74	.11	5	0.5	0.7	23	SF2
		25	1111	4.28	19	59.21	155	48.80	9.55		1.6	17	2	187	.07	16	1.3	0.8	8	KOH
		25	1113	20.83	19	22.05	155	26.43	10.43		1.2	29	2	41	.11	2	0.5	0.7	21	KAO
		25	1123	47.53	19	22.56	155	24.62	13.17	2.5	2.3	49	9	28	.10	5	0.4	0.4	37	DML
		25	1647	37.78	19	6.84	155	42.42	2.87	2.7	2.7	43	13	152	.18	15	0.4	0.7	37	LSW
		25	1944	42.02	19	28.52	155	27.34	2.51	1.7	1.2	55	19	71	.15	6	0.2	0.6	38	KAO
		25	2017	3.76	19	19.29	155	12.17	6.81	1.6	1.4	48	10	93	.13	5	0.3	0.5	43	SF3
		26	310	34.96	19	19.23	155	13.36	8.06	0.9	1.2	43	12	73	.14	4	0.4	0.6	32	SF2
		26	910	37.44	19	39.24	156	34.41	14.65	2.7	2.1	49	11	297	.17	71	4.1	5.8	40	DIS
		26	1429	2.94	19	21.23	155	4.63	9.11	2.4	2.5	51	14	156	.13	6	0.3	0.3	41	SF5
		26	1655	46.99	19	23.97	155	15.54	3.15	2.5	2.8	47	9	41	.12	2	0.2	0.3	41	SEC
		26	2231	41.76	19	29.89	155	27.06	6.02	2.4	2.4	48	8	87	.12	4	0.3	0.7	43	KAO
		27	013	45.31	19	54.41	156	40.62	33.80		2.4	43	7	305	.12	91	1.3	2.9	39	DIS
		27	13 7	28.62	19	11.18	155	36.04	6.76	1.2	1.2	23	3	130	.14	7	0.5	1.5	23	LSW
		27	1613	35.49	19	24.21	155	15.94	3.46	1.5	1.3	16	4	123	.14	1	0.6	0.4	12	SEC

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1987	SEP	27	1718	15.82	19	21.80	155	28.93	9.88	1.0	1.9	42	7	39	.13	3	0.3	0.4	36	KAO
		27	1919	37.64	19	26.90	155	28.11	10.06		1.3	40	7	53	.12	6	0.3	0.6	35	KAO
		28	5 5	37.39	19	10.99	155	38.92	9.27	1.3	1.8	18	2	107	.12	8	0.5	0.9	11	LSW
		28	1247	54.74	19	18.93	155	10.16	5.81	1.8	1.5	33	4	112	.12	5	0.4	1.0	19	SF3
		28	1349	33.05	19	20.23	155	4.41	4.95	2.0	1.7	31	1	171	.13	8	0.8	2.9	18	SSF
		28	1724	8.15	19	20.17	155	23.64	11.02	2.1		37	7	69	.11	1	0.4	0.6	24	SWR
		28	1846	36.91	19	19.87	155	7.57	7.20	1.7	1.7	31	3	126	.10	5	0.5	0.7	21	SF4
		29	4 7	26.50	19	20.05	155	13.08	6.86	1.4	1.1	39	10	68	.13	5	0.3	0.5	36	SF2
		29	425	4.19	20	1.56	156	24.76	0.98		2.0	43	6	294	.15	67	7.4	2.5	38	DIS
		29	1124	23.56	19	17.58	155	48.22	10.91	2.4	2.0	32	5	144	.10	8	0.6	0.3	29	KON
		29	1358	20.74	19	22.80	155	26.79	9.84	2.1	1.9	40	4	34	.12	2	0.4	0.6	37	KAO
		29	1427	37.59	19	20.51	155	22.53	8.73	1.7	1.2	31	7	69	.10	1	0.4	0.7	25	SWR
		29	16 3	22.08	19	18.78	155	13.18	6.58	1.7	1.1	28	4	83	.12	3	0.4	0.9	16	SF2
		30	3 4	26.67	19	27.33	155	51.62	7.08	2.1	1.5	35	4	117	.12	7	0.4	0.6	33	KON
		30	14 3	44.30	19	23.65	155	16.88	2.89	2.1	2.2	42	11	44	.11	1	0.2	0.2	27	SSC
	OCT	1	050	42.42	19	24.49	155	18.99	7.43	2.0	1.4	28	7	70	.13	2	0.4	0.7	25	INT
		1	15 2	54.58	18	56.00	155	11.14	47.53	2.7	2.2	47	5	268	.10	39	1.2	1.5	42	LOI
		1	1652	38.34	19	19.40	155	7.80	6.71	1.9	1.5	32	3	101	.12	4	0.5	0.9	21	SF4
		1	2120	38.94	19	15.53	155	27.62	9.34	1.7	1.9	30	2	77	.14	4	0.4	0.8	15	LSW
		2	1438	8.90	19	19.42	155	13.85	9.01	2.7	2.8	50	9	63	.14	4	0.4	0.5	39	SF2
		2	1742	53.30	19	24.89	155	19.54	7.32	2.5	2.4	39	10	64	.12	4	0.3	0.7	27	KAO
		2	1823	0.59	19	54.21	155	31.05	23.30	2.2	1.8	27	5	202	.08	15	0.8	1.2	20	KEA
		3	135	36.62	19	22.39	155	29.70	11.21	2.1	1.9	41	5	39	.09	4	0.3	0.5	31	KAO
		3	813	4.19	19	26.17	155	21.54	9.95	2.6	2.8	54	12	43	.12	3	0.3	0.4	45	KAO
		3	935	16.55	20	4.47	155	31.35	9.89	2.6	2.3	42	10	214	.16	27	0.7	0.6	34	KEA
		3	1131	46.96	19	20.36	155	7.46	7.51	1.9	1.7	41	9	93	.12	5	0.5	0.6	36	SF4
		3	1539	6.33	19	24.08	155	29.89	8.58	2.2	2.0	33	2	48	.11	5	0.3	0.9	31	KAO
		3	1558	35.79	19	28.38	155	27.39	2.55	2.0	1.1	35	9	69	.16	7	0.3	0.9	24	KAO
		4	139	16.67	19	24.14	155	15.74	3.38	2.0	1.7	26	9	81	.08	3	0.3	0.3	13	SEC
		4	248	2.99	19	19.53	155	10.55	6.97	1.5	1.3	26	5	97	.10	5	0.4	0.9	21	SF3
		4	432	0.98	19	25.98	155	18.68	6.78	2.2	1.4	23	6	89	.12	2	0.4	0.5	18	INT
		4	1831	15.94	19	21.86	155	3.48	6.97	1.8	1.6	24	1	108	.16	4	0.7	0.9	13	SF5
		4	2149	35.39	19	58.86	155	46.54	12.41	1.2	1.5	21	1	167	.10	16	1.0	1.2	15	KOH
		5	143	20.42	19	22.73	155	1.31	8.09	1.9	1.4	30	1	155	.14	6	0.7	0.6	33	SF5
		5	626	27.45	19	24.69	155	17.23	1.53	1.7	1.5	12	0	65	.11	1	0.3	0.2	12	SNC
		5	7 6	34.89	18	58.01	155	34.63	39.53		2.0	47	9	228	.10	9	0.9	0.6	40	DLS
		5	1118	53.88	19	19.91	155	11.40	6.66	1.8	1.5	37	5	87	.12	5	0.4	0.7	31	SF3
		5	15 2	9.29	19	11.89	155	18.57	53.45	2.6	2.8	28	6	194	.09	11	1.1	0.8	21	DEP L
		5	1937	36.13	19	20.78	155	14.01	8.58	1.8	1.9	45	10	64	.13	4	0.4	0.3	39	SF2
		5	2256	2.75	19	19.61	155	10.38	7.93	1.5	1.4	36	6	95	.11	5	0.5	0.6	31	SF3
		6	0 6	32.58	19	17.74	155	12.31	10.02	1.5	1.3	39	11	142	.16	2	0.5	0.6	31	SF2
		6	4 6	44.13	19	17.75	155	13.02	7.97	1.5	1.3	31	7	117	.11	2	0.5	0.7	26	SF2
		6	1129	47.83	18	48.49	156	52.84	22.82	3.4	3.2	36	2	317	.13	129	2.5	6.0	11	DIS
		6	1225	19.49	19	44.79	155	1.92	0.00	2.4	2.6	24	0	259	.27	7	4.2	3.7	31	HIL B*
		6	1838	50.47	19	20.23	155	7.54	9.37	1.6	1.4	39	8	94	.12	5	0.4	0.4	32	SF4

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	GAP NS	DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1987	OCT	6	19 5	15.16	19	20.09	155	8.74	8.12	1.6	1.2	40	12	73	.13	4	0.4	0.6	32	SF4	
		7	317	38.78	19	19.95	155	7.75	8.48	1.6	1.6	34	5	95	.09	5	0.4	0.6	30	SF4	
		7	12 6	20.10	19	24.04	155	15.79	3.23	1.9	1.6	20	5	77	.10	1	0.4	0.4	13	SEC	
		7	15 6	44.74	19	21.66	155	5.17	5.53	1.9	1.7	34	4	83	.15	5	0.4	1.4	21	SF5	
		8	017	21.84	19	16.62	155	27.47	10.87	1.8	2.0	46	8	59	.22	5	0.4	0.6	40	LSW	
		8	237	59.75	19	21.02	155	17.04	37.18	2.4	2.1	66	22	62	.11	2	0.7	0.4	44	DEP	
		8	521	49.29	19	24.40	155	16.02	3.38	1.7	1.8	24	6	73	.08	1	0.3	0.3	17	SEC	
		8	711	57.07	19	24.03	155	15.99	3.11	1.4	2.5	32	5	70	.12	1	0.3	0.3	28	SEC	
		8	1059	26.37	19	19.88	155	11.78	9.13	2.7	2.6	53	10	86	.13	5	0.3	0.3	48	SF3	
		8	1546	59.91	19	22.77	155	15.07	29.68	1.8	1.4	34	3	60	.10	2	0.9	1.0	21	DEP	
		9	319	53.47	19	54.94	155	22.27	10.89	2.1	1.9	21	0	251	.07	4	1.4	0.5	10	KEA	
		9	339	21.42	19	16.02	155	29.35	10.17	2.0	2.0	37	2	59	.14	2	0.4	0.6	20	LSW	
		9	742	48.25	19	20.13	155	7.07	8.05	1.6	1.6	33	3	104	.10	5	0.5	0.7	21	SF4	
		9	929	12.73	19	19.81	155	7.89	7.22	2.1	2.3	45	5	94	.14	5	0.4	0.7	28	SF4	
		9	13 5	6.55	19	19.49	155	11.19	8.04	2.0	1.9	33	2	98	.12	5	0.4	0.9	26	SF3	
		9	1437	21.44	18	44.65	155	13.56	6.94	2.3	1.4	21	0	301	.20	62	9.9	19.9	24	LOI	*
		9	16 6	43.68	19	49.71	155	35.55	9.31		1.3	24	3	138	.14	8	0.6	0.7	23	KEA	
		10	210	5.97	19	14.26	155	27.67	8.21		1.2	43	8	95	.16	5	0.3	0.6	35	LSW	
		10	1052	56.03	19	6.93	155	13.17	57.29	2.7	2.7	37	4	245	.17	19	2.0	1.1	34	LOI	L
		10	1055	15.73	19	7.30	155	16.38	51.88	3.0	2.5	60	16	201	.25	19	1.5	0.8	47	LOI	L
		10	1056	33.89	19	11.43	155	15.32	41.38	2.5	2.7	32	1	207	.12	11	0.9	1.1	6	DEP	L
		10	11 2	46.21	19	13.34	155	20.53	44.77	2.2	2.6	22	3	205	.21	6	2.2	1.7	1	DEP	L
		11	521	2.35	19	19.40	155	8.79	7.69	0.9	1.3	37	8	84	.11	4	0.4	0.6	34	SF4	
		11	845	45.92	19	12.38	155	26.99	9.37	1.8	1.6	35	2	123	.15	6	0.5	0.7	33	LSW	
		11	2243	33.67	19	26.08	155	26.84	7.44	1.5	1.7	38	7	34	.14	7	0.3	0.8	33	KAO	
		12	143	49.87	19	20.20	155	7.43	8.70	1.4	1.3	43	7	96	.15	5	0.4	0.4	40	SF4	
		12	355	36.81	19	24.32	155	17.16	1.81	1.4	0.9	19	6	68	.15	1	0.4	0.2	13	SSC	
		12	16 6	45.12	19	18.65	155	13.65	9.97	3.8	3.9	66	20	71	.12	3	0.3	0.3	49	SF2	F
		12	1629	21.69	19	18.83	155	13.79	8.09	1.9	2.0	54	9	87	.14	3	0.4	0.4	47	SF2	
		13	1648	42.39	19	15.42	155	25.18	8.25	1.6	1.1	21	7	70	.08	3	0.4	0.9	11	LSW	
		13	2142	45.85	19	20.67	155	8.27	9.00	2.3	2.6	49	12	76	.09	4	0.3	0.4	37	SF4	
		15	0 7	25.91	19	14.80	155	31.55	6.65	2.9	3.2	53	7	114	.17	3	0.4	0.8	49	LSW	F
		15	828	11.58	19	25.03	155	19.84	6.02	1.9	1.2	25	4	64	.10	2	0.4	0.9	19	KAO	
		15	1542	41.79	19	24.22	155	16.01	3.18	1.5	1.1	23	7	83	.08	1	0.3	0.3	12	SEC	
		15	1858	43.42	19	18.27	155	25.31	10.30		1.2	21	2	73	.10	5	0.5	0.9	11	LSW	
		16	433	3.52	19	22.48	155	2.44	9.20	1.7	1.3	23	1	134	.07	4	0.5	0.8	19	SF5	
		16	543	59.37	19	11.67	155	38.66	8.50	2.0	1.5	27	3	103	.17	7	0.5	1.3	6	LSW	
		16	546	50.72	19	27.75	155	50.84	7.72	2.1	1.4	29	3	126	.14	8	0.6	0.6	21	KON	
		16	954	31.13	19	14.79	155	56.61	29.49	2.6	2.0	27	5	264	.08	8	0.9	0.9	15	KON	
		16	1424	32.80	19	19.83	155	8.82	7.36	2.5	2.8	45	7	77	.13	5	0.4	0.7	39	SF4	
		16	1514	50.34	19	16.71	155	14.73	7.43	1.8	1.6	35	6	182	.10	2	0.5	0.9	27	SF1	
		16	1540	53.76	19	20.43	155	11.83	8.81	2.8	3.0	51	11	75	.13	5	0.4	0.4	43	SF3	
		16	1929	56.60	19	17.72	155	22.97	2.90	1.8	1.5	31	5	103	.11	5	0.3	0.8	26	SWR	
		17	140	30.62	19	18.18	155	30.44	50.86	2.1	1.7	33	2	69	.08	6	0.9	1.3	28	DLS	
		17	3 6	50.86	19	20.13	155	50.03	11.69	2.1	1.6	31	4	125	.16	9	0.6	0.5	17	KON	

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	GAP NS	DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1987	OCT	17	454	21.56	19	27.16	155	26.18	6.67	2.4	2.2	41	4	48	.13	7	0.3	1.0	28	KAO	
		17	2016	54.60	19	19.35	155	16.18	6.98	1.5	1.2	38	10	104	.12	3	0.3	0.7	28	SF1	
		18	237	41.70	19	30.83	155	20.48	10.38	2.0	1.7	40	10	134	.10	5	0.3	0.4	34	MLO	
		18	946	59.45	19	12.19	155	37.60	6.75	2.0	1.4	39	6	96	.22	5	0.4	1.2	33	LSW	
		18	13 5	43.73	19	25.36	155	19.24	6.07	1.9	1.2	38	15	75	.16	3	0.3	0.6	22	KAO	
		18	1743	45.33	19	27.80	155	28.14	10.05	2.5	2.5	55	13	39	.12	8	0.3	0.6	45	KAO	
		18	21 7	15.27	19	22.70	155	20.11	31.81	2.4	2.4	64	18	41	.14	2	0.6	0.4	47	DML	
		18	2117	8.37	19	22.81	155	26.80	10.08	1.8	1.9	46	10	34	.15	2	0.3	0.4	38	KAO	
		19	641	39.22	19	25.50	155	16.32	15.38	2.0	1.8	54	17	40	.12	2	0.4	0.2	38	DEP	
		19	1440	37.86	19	24.16	155	16.08	3.15	1.6	1.3	24	6	80	.09	1	0.3	0.3	11	SEC	
		19	16 3	49.49	20	4.45	155	37.81	8.62		2.6	19	1	192	.11	17	1.7	0.9	8	KOH	
		19	1648	19.57	19	21.53	155	2.26	5.81	1.7	1.2	24	1	149	.15	3	0.7	1.4	11	SF5	
		19	1651	29.63	20	0.60	155	22.50	9.06	2.5	2.1	26	2	205	.11	27	1.1	0.8	14	KEA	
		19	1712	8.91	19	53.99	155	20.44	10.71	2.1	1.6	18	1	237	.13	1	1.2	0.5	10	KEA	
		19	2159	33.30	19	19.95	155	6.87	7.85	1.6	1.4	27	5	112	.08	5	0.4	0.7	21	SF4	
		19	2223	8.84	19	20.36	155	12.67	8.48	1.4	1.1	32	4	69	.12	4	0.4	0.4	32	SF2	
		20	10 5	18.58	19	21.75	155	18.99	1.42	1.7	1.3	31	12	64	.14	4	0.2	0.3	22	SWR	
		20	1323	49.85	19	19.27	155	9.22	8.08	2.5	2.7	45	9	93	.10	4	0.4	0.5	37	SF3	
		20	2016	57.60	19	25.62	155	29.42	9.48	1.6	1.2	23	1	50	.08	7	0.4	0.9	15	KAO	
		21	6 3	9.70	19	23.49	155	30.46	9.78	1.7	1.2	37	4	40	.09	5	0.4	0.5	37	KAO	
		21	9 0	20.87	19	20.51	155	12.85	8.61	1.4	1.0	34	8	66	.08	4	0.4	0.3	30	SF2	
		21	1212	18.33	19	23.38	155	20.43	10.70	2.1	1.6	42	10	41	.11	1	0.4	0.5	27	KAO	
		23	522	16.36	19	27.84	155	51.86	9.52	2.9	2.4	40	4	114	.20	6	0.6	0.5	29	KON	
		23	1657	6.18	19	26.41	155	29.19	9.79	1.6	1.2	43	8	44	.13	8	0.3	0.6	36	KAO	
		23	1728	31.05	19	19.05	155	8.64	9.85	1.6	1.7	35	8	88	.14	3	0.5	0.4	32	SF4	
		24	510	40.65	19	20.88	155	3.61	7.03	1.7	1.2	37	9	99	.12	2	0.4	0.6	31	SF5	
		24	1236	5.82	19	19.57	155	8.88	7.18		34	6	82	.08	4	0.4	0.6	29	SF4	
		24	1737	47.41	19	12.72	155	41.63	7.11	2.0	1.4	33	10	115	.24	9	0.5	1.9	25	LSW	
		25	715	2.21	19	22.92	155	56.24	11.04		1.4	36	4	218	.17	12	0.8	0.4	35	KON	
		25	826	49.96	19	27.65	155	28.32	10.14	2.1	1.2	49	13	58	.12	8	0.3	0.6	38	KAO	
		25	14 3	20.75	19	30.92	155	53.20	8.03	2.2	1.5	29	5	146	.19	4	0.5	0.6	25	KON	
		25	1519	5.13	19	23.67	155	25.65	10.24	1.5	1.2	35	7	32	.12	4	0.4	0.6	29	KAO	
		26	952	5.62	19	21.72	155	2.63	7.06	2.0	1.4	35	3	142	.18	3	0.6	0.7	35	SF5	
		26	1047	18.37	19	44.67	156	3.94	10.68	2.4	1.5	19	1	274	.11	32	2.0	0.7	9	HUA	
		26	1635	15.95	19	15.79	155	21.67	32.19	1.9	1.6	33	1	140	.10	5	0.7	1.2	25	DEP	
		26	18 7	48.75	19	19.30	155	15.33	8.37	1.9	1.9	40	5	89	.12	4	0.4	0.6	25	SF1	
		27	940	21.04	20	6.68	155	34.20	33.29	2.5	1.8	46	6	213	.12	22	0.9	1.1	42	KOH	
		27	1217	31.41	19	20.92	155	13.34	6.68	2.0	1.8	53	11	57	.19	3	0.4	0.5	39	SF2	
		28	1237	13.74	19	20.00	155	7.78	7.82	2.1	2.0	39	10	93	.07	5	0.3	0.4	25	SF4	
		28	1723	55.65	19	19.82	155	11.81	7.48	1.9	1.7	47	6	86	.14	5	0.4	0.5	42	SF3	
		28	1839	28.51	19	11.88	155	22.85	50.43	2.1	1.9	26	1	176	.17	5	1.8	2.0	10	DEP	L
		29	413	0.97	19	23.84	155	15.56	3.57	2.1	1.6	28	8	69	.11	2	0.2	0.3	24	SEC	
		29	849	36.64	19	19.78	155	13.67	9.11	2.6	2.7	54	8	119	.14	5	0.3	0.4	37	SF2	
		29	1830	19.42	19	15.55	155	27.23	11.01	1.9	1.8	26	2	75	.11	5	0.4	0.8	15	LSW	
		30	2127	26.96	19	30.88	155	19.53	13.98	2.6	2.4	58	17	49	.12	6	0.2	0.3	44	DML	

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1987	OCT	31	855	28.46	19	13.82	155	37.93	8.13	2.7	2.6	46	10	92	.17	2	0.4	0.9	36	LSW
	NOV	1	227	37.20	20	11.31	156	3.63	27.36	2.9	2.7	38	4	293	.14	30	0.7	1.2	39	KOH
		2	931	14.45	19	25.76	155	18.79	4.84	2.1	1.3	26	5	86	.12	2	0.4	0.6	20	SNC
		2	1453	22.10	19	16.13	155	15.50	12.03	3.0	3.3	18	1	154	.13	13	0.6	0.7	12	SF1 F
		2	1634	59.44	19	18.10	155	48.22	10.41	2.1	1.9	32	1	127	.14	8	0.6	0.5	21	KON
		3	1821	19.43	19	24.15	155	16.11	3.24	1.4	1.3	20	6	80	.05	1	0.3	0.3	14	SEC
		3	1847	48.85	19	20.28	155	11.85	8.91	2.1	2.2	47	6	78	.10	5	0.4	0.4	34	SF3
		3	1917	18.43	19	19.58	155	11.56	8.00		1.2	23	0	93	.09	6	0.6	1.0	18	SF3
		4	23	6	2.41	19	19.33	155	13.03	7.83	2.0	1.7	42	3	79	.14	4	0.4	0.6	40	SF2
		5	017	28.56	19	21.77	155	26.45	10.01	1.8	1.7	38	5	46	.12	2	0.3	0.6	32	KAO
		5	025	16.98	19	19.76	155	12.29	9.11	2.4	2.3	54	10	83	.13	5	0.4	0.3	47	SF3
		5	245	18.80	19	12.21	155	16.04	48.16	2.1	1.7	27	4	182	.12	10	1.3	1.0	23	DEP
		5	248	5.99	19	11.92	155	17.82	46.00	2.1	1.9	32	6	220	.10	11	1.5	1.0	22	DEP
		5	445	27.65	19	19.03	155	13.18	7.62	1.4	1.1	28	5	80	.09	4	0.4	0.8	22	SF2
		5	559	28.43	19	18.89	155	13.83	7.49	1.4	1.4	40	6	76	.12	4	0.4	0.6	31	SF2
		5	1444	21.62	19	22.03	155	26.55	10.67	1.9	1.3	33	6	44	.11	2	0.4	0.6	26	KAO
		5	1741	54.32	18	57.61	155	19.10	38.54	2.2	1.9	46	2	235	.09	32	1.5	1.6	43	LOI
		5	1934	30.79	19	26.48	155	14.12	18.26	2.3	2.5	14	4	226	.27	5	3.4	1.6	1	DEP L
		6	852	36.20	19	44.00	156	3.82	8.93	3.2	3.5	49	5	236	.15	31	0.6	0.5	47	HUA F
		6	1028	21.48	19	44.02	156	3.72	12.99		1.3	20	2	235	.13	40	1.6	2.7	6	HUA
		6	1840	16.11	20	1.25	155	45.44	31.69		1.5	23	5	157	.09	12	0.9	0.6	18	KOH
		6	2111	15.19	19	16.80	155	5.05	43.45	1.1	1.7	44	5	196	.12	5	1.1	0.6	40	DEP
		6	2250	2.96	19	26.19	155	30.17	9.87	1.9	1.3	38	10	41	.12	5	0.3	0.6	31	KAO
		6	2316	29.52	19	24.95	155	19.17	5.06	1.4	1.2	21	3	67	.12	2	0.4	0.9	14	KAO
		7	259	33.57	20	1.99	155	26.54	4.68		1.7	39	7	218	.14	28	0.7	1.1	38	KEA
		7	5	2	16.70	19	18.50	155	28.34	10.68		1.4	32	1	72	.11	7	0.4	0.7	21	LSW
		7	649	18.05	19	55.02	155	22.31	11.10	1.1	1.6	17	0	240	.07	4	1.4	0.5	14	KEA
		7	1919	4.19	19	26.46	155	29.89	9.57	1.6	1.3	44	8	41	.14	6	0.3	0.6	38	KAO
		7	2011	47.47	19	30.04	155	29.75	6.62	2.1	2.2	37	8	48	.13	5	0.3	1.1	35	MLO
		9	153	7.75	19	27.40	155	28.58	9.51	1.8	1.4	48	9	48	.11	9	0.3	0.5	40	KAO
		9	247	30.60	19	17.31	155	27.80	9.40	1.1	1.5	43	5	83	.15	6	0.3	0.5	40	LSW
		9	1215	45.16	19	18.86	155	13.26	8.03	2.1	1.9	42	4	81	.13	3	0.4	0.6	40	SF2
		9	2025	25.79	19	27.14	155	28.34	9.43	2.2	1.9	42	5	45	.10	9	0.3	0.6	27	KAO
		10	1326	29.44	19	23.89	155	15.73	3.08	1.5	0.9	18	6	107	.08	2	0.3	0.3	12	SEC
		11	1025	2.54	19	43.88	155	2.59	0.00	2.6	3.0	26	0	245	.21	5	2.3	3.0	20	HIL B*
		12	1531	18.39	19	20.30	155	13.06	7.29	1.7	1.1	28	1	66	.08	4	0.4	0.8	20	SF2
		12	23	7	17.36	19	21.14	155	2.67	6.21	2.2	2.0	41	7	132	.11	2	0.4	0.6	25	SF5
		14	251	25.47	19	17.90	155	16.03	9.17	2.1	2.0	42	4	151	.12	5	0.4	0.5	24	SF1
		14	538	8.03	19	19.54	155	12.00	9.77	3.3	3.4	52	8	90	.11	5	0.3	0.3	45	SF3 F
		14	626	40.52	19	24.35	155	29.85	9.04	1.9	1.4	34	2	42	.09	5	0.3	0.8	19	KAO
		14	847	0.08	19	21.68	155	4.77	7.00	1.1	1.2	27	0	80	.11	5	0.5	1.0	16	SF5
		15	050	38.51	19	19.81	155	6.90	8.75	1.6	1.4	40	9	114	.14	5	0.4	0.4	33	SF4
		15	826	13.46	19	18.78	155	13.75	8.36	1.8	1.4	33	6	86	.10	3	0.4	0.6	25	SF2
		15	1221	0.79	19	21.77	155	4.31	7.57	1.7	1.4	24	1	87	.11	4	0.6	0.8	19	SF5
		15	1619	17.01	20	3.29	155	51.65	24.24	2.9	3.0	52	7	220	.14	12	0.6	1.0	47	KOH

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1987	NOV	16	218	19.74	19	22.49	155	29.01	9.49	2.4	2.1	45	6	39	.11	2	0.3	0.5	29	KAO
		16	330	15.38	19	16.82	155	14.73	8.28	1.5	1.2	28	3	185	.10	2	0.6	0.7	17	SF1
		16	343	43.68	19	19.58	155	11.31	8.20	1.8	1.2	37	5	94	.14	5	0.4	0.6	33	SF3
		17	245	24.50	19	19.46	155	7.80	9.55	2.9	3.3	60	17	100	.15	4	0.3	0.3	46	SF4
		17	326	41.73	19	24.85	155	15.18	19.82	2.0	1.5	17	4	158	.12	2	1.4	0.7	14	DEP L
		17	345	42.70	19	19.45	155	7.49	8.66	1.6	1.3	44	9	108	.14	4	0.4	0.4	39	SF4
		17	7	6	38.58	19	35.38	155	27.25	12.01	2.5	2.6	50	13	70	.12	4	0.3	0.3	34	KEA
		18	048	31.92	19	16.29	155	22.45	7.37	2.4	2.8	56	15	133	.20	5	0.4	0.7	42	SWR
		18	412	34.35	19	19.98	155	4.82	5.54	1.7	1.4	31	6	137	.11	3	0.4	0.9	18	SF5
		18	1138	2.67	19	23.93	155	18.98	4.70		1.3	10	2	111	.10	1	0.9	0.7	5	SSC L
		19	135	24.39	19	2.77	155	22.99	29.71	2.8	2.4	53	13	209	.11	21	0.6	0.9	39	LOI
		19	914	12.20	18	58.12	155	36.15	43.42	2.6	1.8	29	7	228	.09	7	1.1	0.9	22	DLS
		19	1120	37.31	19	22.88	155	20.69	10.64	1.8	1.4	28	2	56	.09	2	0.5	0.8	26	KAO
		19	1627	49.84	19	11.55	155	36.54	8.19	2.6	2.2	39	5	118	.20	6	0.5	1.1	18	LSW
		19	1824	17.54	19	26.28	155	29.99	8.95	2.2	1.7	38	3	40	.12	8	0.4	0.8	25	KAO
		20	937	30.24	19	26.40	155	15.10	0.01	2.0	2.3	8	3	260	.17	3	1.2	0.5	0	SNC L*
		20	14	0	53.87	19	28.92	155	43.10	9.05	2.7	2.8	53	13	58	.14	6	0.4	0.5	41	KON
		20	1739	19.90	19	22.52	155	15.73	30.01	2.2	1.7	59	18	53	.11	0	0.6	0.4	43	DEP
		20	1955	26.17	19	24.08	155	16.17	2.82	1.5	1.1	23	7	105	.09	1	0.3	0.3	17	SEC
		21	347	23.09	19	29.41	155	28.15	9.81	2.1	1.2	43	7	76	.13	5	0.3	0.7	36	KAO
		21	6	9	34.97	19	24.10	155	18.57	2.87	2.0	2.4	23	6	90	.21	3	0.4	0.7	18	SSC L
		21	712	37.62	19	19.52	155	13.12	7.78	1.4	1.5	34	3	75	.13	5	0.5	0.7	31	SF2
		21	759	43.04	19	18.43	155	29.96	1.23	2.1	1.9	54	16	57	.19	6	0.3	0.5	38	LSW
		21	1521	58.23	19	18.01	155	30.49	7.69		1.2	25	7	71	.13	5	0.4	0.9	24	LSW
		22	428	23.27	19	16.68	155	27.48	8.05	1.7	2.0	38	1	89	.14	5	0.5	0.8	39	LSW
		22	935	56.00	19	25.58	155	17.16	5.24	1.8	1.7	11	3	97	.15	1	1.2	0.7	1	INT L
		22	10	2	4.18	19	19.25	155	11.08	6.95	1.8	1.2	32	10	104	.12	6	0.4	0.6	26	SF3
		22	12	1	22.69	19	26.08	155	17.03	11.01	2.3	2.4	15	3	107	.11	2	1.1	0.9	3	INT L
		22	1230	22.65	19	19.56	155	11.34	7.76	2.0	1.7	38	6	95	.12	5	0.4	0.6	33	SF3
		22	2037	10.26	19	23.52	155	13.95	18.57	2.6	2.5	12	2	241	.19	2	3.3	2.3	0	DEP L
		23	128	55.77	19	12.40	155	33.21	10.03	2.7	3.0	52	12	128	.21	7	0.5	0.8	41	LSW
		23	247	10.64	19	23.37	155	16.78	9.38	2.0	1.7	13	4	89	.11	0	0.9	0.9	0	INT L
		23	423	16.19	19	24.15	155	18.62	13.98	2.1	1.8	9	3	207	.11	3	2.1	1.5	0	DEP L
		23	518	20.58	19	38.55	155	16.07	7.12	2.3	2.2	9	1	328	.10	20	2.9	12.5	0	KEA L*
		23	542	17.68	19	25.77	155	16.15	11.17	2.2	2.4	19	7	135	.13	2	1.1	0.7	3	INT L
		23	644	17.58	19	25.71	155	17.00	14.31	2.2	1.9	15	6	104	.16	1	1.7	1.0	2	DEP L
		23	844	9.78	19	26.70	155	30.11	10.00	2.3	2.0	47	10	41	.10	6	0.3	0.6	31	KAO
		23	1043	38.14	19	24.94	155	16.70	10.44	2.6	2.7	10	4	127	.24	1	1.0	1.1	1	INT L
		23	1049	59.24	19	24.49	155	17.67	13.08	2.5	2.3	21	7	67	.15	1	1.3	0.7	0	DEP L
		23	1216	31.51	19	24.49	155	16.82	17.34	2.6	2.0	10	2	83	.09	1	2.0	1.3	1	DEP L
		23	15	9	32.76	19	22.20	155	4.84	7.15	1.6	1.3	37	5	78	.12	4	0.5	0.7	34	SF5
		23	1536	51.85	19	29.29	155	16.33	16.28	2.2	1.9	10	4	305	.09	8	2.7	1.2	0	DEP L
		23	16	4	50.17	19	21.78	155	30.02	9.72	2.6	2.5	47	8	39	.12	4	0.3	0.5	44	KAO
		23	1659	5.81	19	24.67	155	16.39	15.26	2.1	1.8	13	5	94	.09	1	1.5	0.9	2	DEP L
		23	1847	23.28	19	20.85	155	17.08	2.00	1.6	1.5	25	7	64	.12	2	0.3	0.4	18	SWR

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	GAP NS	DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1987	NOV	23	2224	5.44	19	24.93	155	16.50	8.64	2.3	2.5	15	4	99	.11	1	0.7	0.6	2	INT L	
		23	2341	11.02	19	25.04	155	17.09	7.78	2.0	2.1	15	4	89	.22	0	1.1	0.8	0	INT L	
		23	2352	19.83	19	26.29	155	16.38	12.31	2.1	1.9	22	8	134	.11	3	0.8	0.6	15	INT L	
		24	019	35.12	19	26.58	155	16.36	10.46	2.6	2.8	21	9	140	.12	2	0.9	0.6	15	INT L	
		24	1 1	34.02	19	26.41	155	15.60	12.60	2.4	2.4	15	5	181	.14	3	1.5	0.8	1	INT L	
		24	555	45.46	19	21.56	155	4.95	8.79	3.0	3.3	59	16	84	.12	5	0.4	0.4	46	SF5 F	
		24	646	27.32	19	17.43	155	12.86	6.11	1.8	1.2	30	7	144	.09	1	0.4	0.6	15	SF2	
		24	1755	9.44	19	26.35	155	28.59	9.56	1.6	1.2	26	5	58	.10	7	0.4	1.0	21	KAO	
		25	455	15.25	19	27.26	155	49.62	12.15	2.1	1.6	23	3	114	.16	9	0.8	0.6	13	KON	
		25	1022	8.35	19	26.05	155	29.15	8.53	2.4	1.7	23	2	61	.11	7	0.4	1.3	22	KAO	
		25	1849	22.55	20	19.75	156	17.74	17.72	4.5	4.6	27	6	206	.14	49	0.8	13.3	39	KOH *	
		26	112	44.03	19	17.71	155	12.97	7.36	1.8	1.2	25	9	121	.09	2	0.4	0.8	16	SF2	
		26	1949	56.22	19	22.01	155	17.31	25.51	1.8	1.9	34	3	39	.11	3	0.8	1.0	25	DEP	
		27	031	26.71	19	24.17	155	18.53	3.11	1.6		9	1	122	.18	2	0.8	0.8	1	SSC L	
		27	251	7.33	19	24.20	155	17.87	9.67	2.3		12	3	120	.12	2	1.1	1.1	1	INT L	
		27	649	8.99	19	24.21	155	15.89	3.24	1.9	1.6	20	5	83	.06	1	0.3	0.4	10	SEC	
		27	1050	24.72	19	21.14	155	1.12	7.38	2.2	2.0	29	3	178	.13	4	0.6	0.7	16	SF5	
		27	1343	57.84	19	19.12	155	8.85	5.81	1.9	1.3	20	2	91	.07	4	0.5	1.3	13	SF4	
		27	1424	58.39	19	20.06	155	12.67	6.89	2.1	1.8	31	5	74	.11	5	0.3	0.6	19	SF2	
		27	1548	50.97	19	55.46	155	30.52	33.66	2.5	1.7	31	8	216	.08	17	0.8	0.7	23	KEA	
		28	1758	27.86	19	21.54	155	6.68	8.79	1.6	1.2	24	8	82	.09	4	0.5	0.5	19	SF4	
		28	2137	30.33	19	19.91	155	12.42	7.35	2.1	2.0	45	7	78	.11	5	0.3	0.5	28	SF2	
		29	013	48.62	19	19.79	155	6.61	8.42	2.8	2.7	45	9	120	.12	5	0.4	0.6	23	SF4	
		29	452	25.21	19	18.27	155	12.95	4.05	1.7	1.3	27	4	101	.11	2	0.3	0.8	15	SSF	
		29	7 3	52.48	19	19.83	155	12.38	6.79	1.9	1.7	38	7	81	.12	5	0.4	0.7	28	SF2	
		29	1241	57.32	19	21.96	155	3.61	7.42	2.0	1.4	26	3	106	.11	4	0.5	1.0	19	SF5	
		29	1753	12.51	19	20.18	155	11.76	7.45	1.9	1.7	34	2	80	.13	5	0.5	0.7	25	SF3	
		30	356	35.67	19	16.87	155	30.71	7.76	2.2	1.9	30	4	51	.14	3	0.4	0.9	20	LSW	
		30	1353	5.79	19	23.97	155	26.44	10.03	1.8	1.4	25	2	36	.09	3	0.4	0.8	16	KAO	
		30	16 8	47.56	19	28.69	155	27.37	10.24	2.3	1.4	34	8	59	.09	6	0.3	0.8	18	KAO	
	DEC	1	336	21.08	19	12.94	155	28.02	7.59	2.5	2.7	36	0	143	.17	5	0.8	1.1	28	LSW F	
		1	1152	17.06	19	19.72	155	6.55	7.44	2.2	2.1	42	8	123	.14	5	0.4	0.8	36	SF4	
		1	1348	53.60	19	26.16	155	16.17	1.32	1.7	1.6	18	6	146	.12	3	0.3	0.5	11	SNC	
		1	1454	16.72	19	19.69	155	12.25	7.07	1.7	1.5	29	2	85	.09	5	0.4	0.7	19	SF3	
		1	1658	56.57	19	25.54	155	24.10	7.42	1.7	1.2	16	1	67	.08	7	0.5	1.7	14	KAO	
		1	1828	38.21	20	20.57	156	15.34	11.40	2.9	2.5	32	3	199	.13	47	1.0	1.2	18	KOH	
		1	2221	24.88	19	19.54	155	11.60	6.75	2.5	2.5	51	13	94	.15	6	0.4	0.6	30	SF3	
		1	2321	59.26	19	20.64	155	10.72	8.11	2.0	1.8	34	9	75	.09	3	0.4	0.4	24	SF3	
		2	5 2	50.18	19	24.20	155	16.22	3.07	2.1	1.6	26	8	80	.07	1	0.3	0.3	13	SEC	
		2	832	12.83	19	23.00	155	15.03	2.68	1.7	1.3	21	8	79	.15	2	0.3	0.4	11	SEC	
		3	652	29.56	19	18.02	155	13.13	5.86		1.0	28	3	101	.11	2	0.5	1.1	22	SF2	
		3	10 0	24.96	19	20.73	155	2.81	7.44	1.7	1.6	35	7	137	.10	2	0.6	0.7	22	SF5	
		3	1654	25.67	19	20.63	155	13.31	7.35	1.7	1.2	24	2	61	.10	4	0.5	0.8	14	SF2	
		4	019	2.05	19	27.74	155	28.18	10.33	2.2	1.5	37	7	59	.11	8	0.3	0.7	28	KAO	
		4	1544	20.67	19	23.95	155	15.85	3.32	2.3	2.1	34	9	72	.09	1	0.2	0.2	27	SEC	

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	GAP NS	DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1987	DEC	4	1611	55.66	19	19.12	155	13.07	5.90	0.9	1.2	33	4	81	.13	4	0.4	0.8	29	SF2	
		4	2034	57.27	19	21.31	155	50.21	7.91	2.1	1.4	26	3	182	.16	11	0.7	1.1	12	KON	
		4	2231	38.31	19	35.07	156	23.70	35.57	1.7	2.3	40	6	275	.13	51	1.5	1.9	37	DIS	
		4	2312	0.98	19	22.43	155	29.91	10.78	1.7	1.5	34	2	47	.05	4	0.3	0.5	24	KAO	
		5	1 1	55.00	19	35.41	156	6.50	32.28	2.0	2.1	28	3	272	.11	23	1.2	0.7	13	KON	
		5	355	42.96	19	22.89	155	4.37	9.13	1.1	1.2	23	1	88	.08	3	0.5	0.7	16	SF5	
		5	5 7	9.01	19	16.93	155	24.89	9.79		1.2	18	1	88	.10	5	0.5	0.9	12	SWR	
		5	1725	27.98	19	24.25	155	16.17	3.18	1.3	1.1	15	3	83	.06	1	0.3	0.4	10	SEC	
		6	1439	29.01	19	18.33	155	13.11	6.51	1.8	1.3	29	2	94	.10	3	0.4	0.8	19	SF2	
		7	344	39.69	19	20.92	155	7.02	7.36	1.6	1.1	26	3	90	.11	5	0.5	0.8	20	SF4	
		7	14 3	39.39	19	20.37	155	11.00	8.03	1.5	1.2	25	4	79	.09	4	0.5	0.9	21	SF3	
		8	1555	40.94	20	53.30	154	57.14	10.64	3.2	3.5	37	3	309	.16	118	7.3	9.6	23	DIS	
		8	2016	40.23	19	20.49	155	10.68	9.77	3.6	3.8	52	7	78	.12	3	0.3	0.4	46	SF3 F	
		9	220	18.61	19	19.40	155	7.88	9.01	3.0	3.3	59	15	99	.12	4	0.3	0.3	50	SF4	
		9	5 7	14.65	19	22.22	155	28.72	9.94	3.6	4.0	68	18	36	.12	2	0.2	0.4	51	KAO F	
		9	822	59.49	19	25.07	155	18.81	6.08	2.0	1.7	47	13	71	.13	2	0.3	0.4	38	INT	
		9	9 1	10.03	19	35.25	155	33.80	7.54	2.6	2.3	45	11	92	.14	8	0.3	0.6	40	KEA	
		9	1433	42.06	19	25.55	155	29.40	10.00	2.2	2.0	29	6	39	.09	6	0.4	0.7	22	KAO	
		9	1916	17.32	19	23.70	155	17.94	14.08	2.2	1.9	11	3	105	.12	2	2.1	1.0	1	DEP L	
		10	121	55.30	18	49.67	155	24.47	12.91		2.0	29	6	274	.18	32	1.0	0.9	25	LOI	
		10	139	11.05	19	19.68	155	11.84	7.24	1.8	1.8	52	10	89	.15	6	0.3	0.5	42	SF3	
		10	922	6.66	19	20.42	155	6.60	7.13	2.6	2.4	54	14	105	.11	6	0.3	0.5	47	SF4	
		10	1953	32.16	19	20.16	155	12.70	7.40	1.4	1.2	32	2	72	.12	5	0.5	0.8	27	SF2	
		11	5 9	17.83	19	20.40	155	13.24	7.91	1.4	1.4	33	3	63	.10	4	0.4	0.6	23	SF2	
		11	1121	12.83	19	26.12	155	15.60	1.66	1.3	0.9	17	5	157	.06	3	0.2	0.5	10	SNC F	
		11	1549	56.68	19	24.93	155	16.74	1.91	1.7	1.1	16	4	95	.11	0	0.3	0.2	11	SNC	
		11	18 3	8.56	19	26.76	155	29.33	10.89	1.9	1.3	32	6	45	.09	7	0.4	0.9	24	KAO	
		11	1842	4.55	19	19.45	155	11.88	6.90	1.4	1.3	30	5	93	.10	5	0.4	0.8	24	SF3	
		11	19 9	12.32	19	20.04	155	13.03	9.50	3.3	3.5	55	9	69	.12	5	0.3	0.3	49	SF2	
		11	1923	1.44	19	19.65	155	10.74	7.98	1.5	1.4	26	3	94	.09	5	0.4	0.9	23	SF3	
		11	21 5	6.69	19	13.78	155	21.51	9.02	1.7	1.2	23	4	209	.10	5	0.9	0.7	17	SWR	
		12	423	4.38	19	19.69	155	12.18	6.94	1.7	1.3	31	6	85	.11	5	0.4	0.7	22	SF3	
		12	428	49.78	19	19.30	155	13.40	6.47	1.9	1.1	37	6	72	.13	4	0.4	0.7	29	SF2	
		12	1157	16.53	19	19.60	155	8.38	8.52	3.0	3.2	50	10	83	.11	4	0.3	0.5	27	SF4	
		12	1718	43.90	19	22.84	155	17.97	0.38	2.0	1.9	7	1	167	.12	2	0.7	0.3	2	SSC L	
		12	2143	18.78	19	46.75	156	7.11	8.18	2.9	2.6	26	4	247	.13	39	1.2	0.8	17	HUA	
		13	817	44.72	19	21.38	155	2.43	3.71		1.4	25	8	146	.11	3	0.6	0.8	22	SSF	
		13	1355	58.66	19	11.96	155	36.36	5.82	3.4	3.3	44	14	90	.17	6	0.3	1.0	38	LSW	
		13	1945	28.21	19	15.15	155	22.89	7.53		1.2	14	4	178	.10	2	0.6	1.2	11	SWR	
		15	1054	24.92	19	33.27	155	41.03	9.92	2.9	1.9	42	7	90	.13	10	0.4	0.5	39	MLO	
		15	2144	38.47	19	16.14	155	30.32	10.35	2.8	2.9	53	10	54	.15	2	0.3	0.5	47	LSW F	
		15	2216	4.67	19	19.18	155	12.22	5.04	1.4	1.1	35	7	95	.13	5	0.3	1.0	33	SF3	
		16	3 6	24.37	19	42.78	155	56.35	26.34	2.8	2.3	50	4	205	.11	11	0.8	0.6	46	HUA	
		16	459	13.46	19	28.03	155	23.90	9.46	1.9	1.2	39	8	75	.12	3	0.3	0.5	33	KAO	
		16	724	40.60	19	27.93	156	22.75	33.69	2.6	1.9	22	4	307	.11	48	1.3	2.6	19	DIS	

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	GAP NS	DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1987	DEC	16	725	47.32	19	29.26	155	16.04	7.60	2.1	1.9	17	6	267	.16	8 1.0	2.1	12	GLN	L
		16	1024	25.04	19	9.24	155	37.64	8.17	2.1	1.9	30	5	104	.17	11 0.4	1.4	12	LSW	
		16	1246	38.49	19	42.80	155	1.60	0.00	2.4	2.3	25	0	250	.26	1 1.6	1.4	18	HIL	B*
		16	1331	46.76	19	21.17	155	30.35	9.42	1.7	1.2	32	4	49	.07	5 0.3	0.7	26	KAO	
		16	2047	27.14	19	19.32	155	30.36	9.99	1.7	1.2	40	5	60	.12	8 0.3	0.5	38	KAO	
		17	848	23.20	19	12.37	155	19.87	27.48	2.3	1.5	59	18	169	.13	8 0.4	0.6	42	DEP	
		17	924	17.95	19	22.41	155	28.94	10.12	3.3	3.4	62	17	36	.12	2 0.3	0.4	48	KAO	F
		17	1116	24.84	19	3.32	155	22.73	32.72		1.6	37	5	207	.09	15 1.5	1.1	31	LOI	
		17	1728	32.21	19	45.79	155	22.31	14.93	2.2	1.4	46	12	87	.12	9 0.5	0.5	42	KEA	
		18	1	0 24.78	19	25.33	155	30.48	10.07	2.3	1.6	44	7	43	.10	7 0.3	0.4	39	KAO	
		18	4	0 56.56	19	21.29	155	0.75	6.15	1.8	1.5	28	5	197	.17	5 0.7	0.6	27	SF5	
		18	436	1.37	19	21.05	155	1.08	6.85	2.5	2.4	42	9	182	.17	4 0.4	0.5	39	SF5	
		19	812	29.15	19	21.11	155	0.71	6.68	2.3	2.1	39	5	186	.18	4 0.6	0.6	38	SF5	
		19	2026	43.63	19	28.39	155	50.74	10.82	2.6	2.4	32	1	96	.12	8 0.5	0.5	25	KON	
		20	326	13.78	19	22.35	155	29.06	9.61	2.2	1.3	41	3	35	.13	3 0.3	0.5	38	KAO	
		20	332	37.81	19	21.67	155	6.07	9.81		1.3	14	1	83	.05	4 0.6	0.9	9	SF4	
		20	1424	55.39	19	19.76	155	8.63	7.16	1.6	1.3	34	8	77	.11	5 0.4	0.6	32	SF4	
		20	20	8 14.20	19	19.63	155	12.51	5.73	1.4	1.3	32	4	83	.11	5 0.4	0.9	26	SF2	
		21	14	4 37.49	19	17.29	155	14.12	8.67	2.0	1.9	35	5	151	.11	1 0.5	0.6	32	SF2	
		21	1447	56.08	19	23.04	155	2.60	7.47	1.9	1.2	32	2	126	.14	4 0.5	0.5	21	SF5	
		21	1616	52.18	19	19.75	155	6.89	8.23	2.5	2.6	45	4	160	.10	7 0.5	0.4	36	SF4	
		21	1823	32.36	19	17.84	155	13.02	7.08	2.0	1.5	38	7	113	.11	2 0.4	0.7	19	SF2	
		22	821	49.53	19	20.18	155	12.87	6.44	1.7	1.3	34	9	127	.14	5 0.4	0.7	29	SF2	
		22	2028	6.24	19	18.09	155	12.66	9.36	2.0	1.6	44	13	141	.14	8 0.3	0.6	32	SF2	
		22	2029	37.17	19	17.50	155	12.75	7.72	1.8	1.2	34	7	173	.11	8 0.4	0.8	29	SF2	
		23	012	18.33	19	25.88	155	26.20	7.10	1.8	1.5	31	9	47	.11	7 0.3	0.8	23	KAO	
		23	15	1 59.74	19	21.70	155	20.85	30.92	2.4	2.2	47	7	53	.11	4 0.6	0.7	35	DEP	
		23	1713	6.77	19	52.45	155	44.98	13.19	2.3	2.2	22	2	149	.09	10 0.6	0.6	12	HUA	
		23	1714	43.64	19	51.32	155	44.26	11.97		1.4	12	2	142	.07	8 0.5	0.7	7	HUA	
		24	636	43.45	19	28.46	155	14.16	15.26	2.4	2.0	15	3	228	.13	7 1.4	1.3	14	DEP	L
		24	1547	44.47	19	19.26	155	29.72	8.88	2.1	1.6	41	2	37	.14	7 0.4	0.7	26	KAO	
		25	521	57.14	19	46.76	155	43.07	14.09	2.9	3.5	52	10	138	.11	11 0.5	0.4	36	HUA	
		25	12	6 17.59	19	20.58	155	6.50	7.90	2.2	2.0	44	8	102	.10	5 0.4	0.5	31	SF4	
		25	1419	21.71	19	26.42	155	21.16	37.98	4.0	4.3	68	20	29	.13	2 0.4	0.7	51	DML	
		25	1924	33.40	19	14.76	155	31.92	7.71	2.3	1.9	35	5	123	.17	3 0.5	1.2	26	LSW	F
		25	2135	56.82	19	21.74	155	4.13	6.97	2.1	2.0	31	3	92	.14	4 0.5	0.6	22	SF5	
		26	141	35.39	19	20.10	155	12.19	6.17	2.3	2.1	52	12	78	.13	5 0.3	0.6	37	SF3	
		26	1023	25.13	19	49.65	155	23.19	25.80	2.1	1.5	32	4	115	.09	8 0.9	1.2	27	KEA	
		26	1613	27.46	19	22.00	155	18.98	12.65	1.9	1.8	44	8	37	.10	3 0.4	0.5	36	SWR	
		27	451	14.82	19	22.38	155	28.28	10.12	1.9	1.7	38	2	38	.11	1 0.4	0.5	23	KAO	
		27	1514	50.93	19	25.98	155	18.80	7.27	2.5	1.6	32	7	91	.12	2 0.5	0.7	19	INT	
		28	912	46.83	19	19.66	155	12.76	6.67	1.8	1.3	39	6	79	.13	5 0.4	0.6	35	SF2	
		28	1041	45.43	19	21.04	155	12.95	8.56	1.9	1.5	42	6	59	.14	3 0.4	0.3	38	SF2	
		28	1547	33.23	19	22.19	155	28.52	8.70	2.1	2.0	39	2	37	.11	2 0.3	0.5	29	KAO	
		29	953	6.16	19	21.76	155	4.49	8.94	1.1	1.2	37	9	83	.12	4 0.5	0.4	32	SF5	

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	GAP NS	DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1987	DEC	29	2216	49.49	19	24.67	155	17.47	1.51	1.5	1.3	22	6	50	.13	1 0.3	0.2	16	SNC	
		30	813	51.05	19	19.64	155	6.51	8.51	1.9	1.7	44	10	126	.12	5 0.3	0.3	37	SF4	
		30	17	0 13.39	19	19.78	155	11.69	7.95	1.9	1.8	36	3	88	.11	5 0.4	0.7	24	SF3	
		30	1848	34.16	19	21.96	155	27.53	9.81	1.9	1.6	42	4	41	.12	1 0.3	0.5	24	KAO	

TABLE 6. 1987 HVO EARTHQUAKE SUMMARY LIST M>=3.0 PAGE 1

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1987	JAN	1	1423	42.88	19	16.31	155	26.34	10.25	2.9	3.3	49	7	60	.14	5	0.4	0.5	36	LSW	F
		7	623	32.59	19	21.62	155	16.02	33.01	4.1	4.2	53	8	62	.11	1	0.5	0.7	47	DEP	F
		15	940	52.32	19	10.58	155	31.65	31.40	3.2	2.9	62	16	108	.10	7	0.4	0.7	48	DLS	
		27	1632	12.28	19	41.90	156	0.45	33.07	3.4	3.7	57	9	223	.11	25	0.8	1.2	48	HUA	F
		30	1251	43.09	19	21.70	155	49.46	12.22	3.0	3.2	45	3	121	.13	12	0.5	0.3	39	KON	
		31	1836	16.21	19	48.15	156	10.84	13.50	3.2	3.8	45	6	294	.14	38	0.7	0.9	45	HUA	
	FEB	2	738	9.21	19	22.85	155	4.25	8.82	3.3	3.3	55	13	87	.12	3	0.5	0.3	45	SF5	
		3	1622	33.81	20	3.55	156	26.84	0.38	5.2	5.1	55	5	229	.13	70	1.5	0.4	50	DIS	F
		3	1645	9.22	20	4.33	156	27.74	5.26	3.1	3.2	55	10	231	.12	72	1.3	1.5	40	DIS	F
		3	17 7	16.35	20	3.53	156	32.07	6.83	3.3	3.7	53	10	238	.13	79	1.4	1.8	45	DIS	F
		3	1740	45.48	20	4.79	156	28.96	5.77	3.0	3.5	54	7	315	.12	80	4.9	6.4	46	DIS	F
		3	1744	44.01	20	4.38	156	29.31	7.41	4.3	4.5	61	13	233	.12	80	1.3	1.6	49	DIS	F
		3	2137	17.06	20	5.10	156	26.16	6.90	3.2	3.8	55	6	228	.12	76	1.2	2.1	46	DIS	F
		4	315	36.54	20	1.37	156	29.40	10.69	3.1	2.9	38	5	233	.13	75	2.0	3.1	26	DIS	
		4	519	59.87	20	0.86	156	26.30	2.24	3.1	3.2	46	6	295	.13	70	5.2	2.9	36	DIS	F
		4	542	35.86	20	2.10	156	28.37	6.94	3.0	3.3	32	6	241	.12	73	1.8	3.0	16	DIS	F
		4	756	42.68	20	0.98	156	25.25	2.83	3.5	3.8	37	6	294	.13	68	7.0	4.8	31	DIS	F*
		4	1054	53.98	20	1.24	156	25.56	1.45	3.3	3.6	54	5	294	.13	69	6.2	2.6	50	DIS	F*
		4	1236	28.04	20	5.93	156	31.98	32.57	3.6	4.3	51	7	304	.13	79	1.4	2.3	40	DIS	F
		5	110	54.47	20	6.12	156	28.11	5.24	3.1	3.3	40	3	231	.11	77	2.1	1.6	34	DIS	F
		5	7 3	28.02	20	3.63	156	29.09	9.72	2.9	3.1	35	2	233	.10	74	1.8	2.0	27	DIS	
		6	1258	34.69	20	1.38	156	27.88	9.81	3.4	3.8	52	7	231	.12	73	1.2	1.5	41	DIS	F
		7	8 1	31.52	20	2.12	156	28.62	3.50	3.5	3.8	60	14	297	.13	74	3.0	2.4	44	DIS	F*
		11	1022	46.32	19	19.55	155	6.63	9.17	4.1	4.1	57	12	126	.11	5	0.4	0.3	49	SF4	F
		11	1122	34.69	20	6.19	156	26.37	7.44	3.6	3.9	52	5	228	.10	76	1.0	1.0	48	DIS	F
		17	1839	17.21	20	5.34	156	32.19	30.66	3.1	3.0	22	2	317	.12	93	3.1	5.5	16	DIS	
		18	1016	12.65	20	2.45	156	28.56	7.19	3.1	3.0	54	13	232	.11	73	1.1	1.6	44	DIS	
		23	22 8	50.37	19	16.33	155	33.56	3.77	3.3	3.1	58	13	59	.20	6	0.4	1.5	46	LSW	
	MAR	10	14 6	59.52	20	14.50	156	44.06	27.03	3.0	3.0	23	0	267	.10	77	3.2	5.2	19	DIS	
		11	159	10.08	19	12.87	155	26.83	9.22	4.0	4.0	49	8	125	.11	6	0.3	0.3	46	LSW	F
		16	554	31.32	20	10.97	156	37.58	0.00	3.1	3.2	35	2	310	.15	89	7.0	1.6	28	DIS	*
		17	312	10.29	19	11.96	155	27.50	8.94	3.8	4.0	58	10	115	.17	5	0.4	0.5	49	LSW	F
		24	2025	23.15	20	0.27	155	43.11	7.92	3.0	3.2	44	4	275	.11	17	1.0	0.5	37	KOH	F
	APR	3	2220	7.27	19	56.23	155	37.61	11.77	3.2	3.4	52	14	136	.15	9	0.4	0.4	48	KOH	F
		4	1113	40.96	19	20.79	155	52.82	1.08	3.4	3.4	48	15	172	.20	9	0.5	0.3	46	KON	
		18	1116	43.37	19	19.85	155	7.50	8.45	3.2	3.6	57	11	101	.09	5	0.3	0.4	43	SF4	
		25	249	27.38	19	22.48	155	26.72	10.42	3.1	3.4	63	16	37	.14	2	0.3	0.4	50	KAO	
		26	937	10.85	19	17.32	155	21.95	34.12	2.9	3.2	64	17	122	.11	6	0.5	0.5	48	DEP	
		27	1328	27.64	19	12.75	155	28.74	0.02	3.2	3.5	31	2	89	.13	6	0.4	0.7	27	LSW	*
		30	359	49.90	19	20.80	155	6.45	8.97	3.1	3.3	65	19	98	.13	5	0.3	0.3	49	SF4	F
	MAY	1	044	41.48	19	27.13	155	26.10	6.08	3.6	3.7	54	8	47	.14	4	0.3	0.8	47	KAO	
		6	1312	25.89	19	17.90	155	47.10	10.66	3.6	3.7	46	3	89	.10	10	0.4	0.4	38	KON	
		10	1944	31.62	18	55.31	155	13.29	25.99	2.9	3.1	55	11	246	.11	37	0.9	2.3	46	LOI	
		14	1853	49.48	19	8.06	155	36.32	9.54	3.4	3.4	54	17	219	.17	13	0.4	0.6	47	LSW	F
		16	017	31.32	19	11.29	155	36.32	9.78	3.4	3.4	51	9	94	.20	7	0.5	0.7	44	LSW	F
		19	456	51.84	19	22.58	155	1.07	9.66	3.4	3.3	58	11	151	.12	6	0.5	0.3	50	SF5	F
		19	457	8.35	19	18.17	155	13.90	6.57	3.3	3.2	41	5	89	.13	2	0.4	0.6	42	SF2	F
		25	3 3	37.73	19	56.49	155	32.20	15.23	3.1	3.3	62	19	230	.12	16	0.6	0.5	46	KEA	
		27	919	55.61	19	44.77	156	4.50	8.54	3.3	3.7	45	6	238	.12	42	0.7	0.5	35	HUA	
		30	1337	59.48	19	19.53	155	10.90	10.50	3.0	3.4	62	18	97	.14	5	0.4	0.3	46	SF3	

YEAR	MON	DA	ORIGIN TIME HRMN	SEC	LAT N DEG	MIN	LON W DEG	MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
	JUN	1	2258	6.39	19	20.05	155	7.86	8.73	3.2	3.6	57	14	91	.10	5	0.4	0.3	48	SF4
		6	1443	46.98	19	21.71	155	18.54	35.29	3.1	3.6	20	10	186	.12	4	3.5	0.9	2	DEP L
		6	1517	49.34	19	48.11	156	7.74	8.99	3.1	3.6	44	3	250	.13	41	0.9	0.6	30	HUA
		9	1910	49.54	19	21.87	155	2.89	8.40	3.5	3.9	54	9	118	.12	4	0.4	0.4	39	SF5 F
		20	1723	54.69	19	20.04	155	11.90	9.49	3.2	3.5	47	6	82	.09	5	0.4	0.3	45	SF3
		20	2013	34.41	19	53.52	155	36.80	12.82	3.3	3.8	53	10	216	.09	6	0.6	0.3	41	KEA F
		22	357	27.80	19	18.18	154	59.42	38.63	2.9	3.1	55	7	205	.12	7	1.0	0.5	50	LER F
		26	2249	38.94	19	20.70	155	7.64	8.82	3.2	3.1	56	12	85	.09	5	0.3	0.3	41	SF4 F
		30	1553	49.19	19	7.85	155	5.52	49.99	3.2		62	15	221	.10	18	0.8	0.7	47	LOI
	JUL	1	739	55.67	19	19.31	155	7.47	10.23	4.0		59	16	111	.13	4	0.4	0.3	48	SF4 F
		1	755	8.15	19	19.39	155	7.52	9.10	3.5	3.5	56	14	109	.12	4	0.3	0.3	47	SF4 F
		1	1739	1.19	20	9.29	155	30.37	27.21	3.0	3.0	63	15	230	.11	29	0.6	1.7	49	KEA F
		1	19 6	40.84	18	39.72	154	48.73	40.09	3.3		7	1	340	.20	95	13.4	14.2	1	DIS L*
		5	1747	54.27	19	19.37	155	13.28	10.39	3.9	4.2	50	1	120	.12	6	0.5	0.5	47	SF2 F
		8	12 8	0.02	20	19.34	156	25.61	0.01	3.0	3.1	25	6	314	.29	71	19.2	4.8	29	DIS *
		20	140	35.31	19	23.15	155	26.36	11.00	3.2	3.3	59	11	30	.13	3	0.3	0.4	49	KAO
		21	633	7.86	20	2.01	156	28.67	3.50	3.1	3.3	62	19	297	.13	74	3.0	2.4	44	DIS *
		25	1521	21.56	19	19.79	155	12.94	9.42	3.1	3.4	56	11	74	.11	5	0.3	0.3	50	SF2
		25	2325	39.60	20	7.18	157	37.11	7.65	3.4	3.1	18	1	223	.11	140	5.7	4.0	4	DIS
		28	1328	58.02	19	21.44	155	1.67	7.80	3.1	3.3	49	6	160	.10	4	0.5	0.4	35	SF5
	AUG	4	714	17.01	19	19.64	155	7.97	9.30	3.4	3.5	57	14	93	.11	4	0.4	0.3	48	SF4
		8	2145	58.29	19	19.07	155	13.23	9.84	3.8	4.0	50	6	127	.12	7	0.4	0.4	46	SF2 F
		8	2211	13.82	19	18.69	155	13.46	9.14	3.5	3.9	54	10	143	.12	7	0.4	0.5	39	SF2 F
		10	432	37.42	19	18.04	155	13.46	10.53	2.8	3.2	57	13	84	.13	2	0.4	0.3	48	SF2
		19	1534	28.70	20	4.58	155	37.62	27.86	3.0	3.4	57	10	193	.09	17	0.5	1.2	39	KOH
	SEP	14	4 3	1.46	19	22.79	155	15.03	30.50	2.9	3.1	56	14	53	.13	2	0.6	0.4	43	DEP
		18	2337	7.25	19	18.42	155	48.29	10.59	3.8	4.2	62	17	92	.12	8	0.4	0.3	47	KON
		19	15 4	26.83	19	19.87	155	11.74	9.34	3.0	3.4	54	9	85	.12	5	0.3	0.3	41	SF3
		19	1622	27.36	19	57.15	155	44.13	30.01	3.0	3.6	59	10	129	.10	13	0.5	1.0	49	KOH
		19	1649	45.54	19	20.65	155	7.72	8.21	3.2	3.5	52	9	85	.10	5	0.3	0.4	33	SF4
		22	1043	19.37	19	36.97	155	53.10	31.04	3.1	3.4	65	17	176	.10	15	0.5	0.8	49	KON F
	OCT	6	1129	47.83	18	48.49	156	52.84	22.82	3.4	3.2	36	2	317	.13	129	2.5	6.0	11	DIS
		12	16 6	45.12	19	18.65	155	13.65	9.97	3.8	3.9	66	20	71	.12	3	0.3	0.3	49	SF2 F
		15	0 7	25.91	19	14.80	155	31.55	6.65	2.9	3.2	53	7	114	.17	3	0.4	0.8	49	LSW F
	NOV	2	1453	22.10	19	16.13	155	15.50	12.03	3.0	3.3	18	1	154	.13	13	0.6	0.7	12	SF1 F
		6	852	36.20	19	44.00	156	3.82	8.93	3.2	3.5	49	5	236	.15	31	0.6	0.5	47	HUA F
		14	538	8.03	19	19.54	155	12.00	9.77	3.3	3.4	52	8	90	.11	5	0.3	0.3	45	SF3 F
		17	245	24.50	19	19.46	155	7.80	9.55	2.9	3.3	60	17	100	.15	4	0.3	0.3	46	SF4
		24	555	45.46	19	21.56	155	4.95	8.79	3.0	3.3	59	16	84	.12	5	0.4	0.4	46	SF5 F
		25	1849	22.55	20	19.75	156	17.74	17.72	4.5	4.6	27	6	206	.14	49	0.8	13.3	39	KOH *
1987	DEC	8	1555	40.94	20	53.30	154	57.14	10.64	3.2	3.5	37	3	309	.16	118	7.3	9.6	23	DIS
		8	2016	40.23	19	20.49	155	10.68	9.77	3.6	3.8	52	7	78	.12	3	0.3	0.4	46	SF3 F
		9	220	18.61	19	19.40	155	7.88	9.01	3.0	3.3	59	15	99	.12	4	0.3	0.3	50	SF4
		9	5 7	14.65	19	22.22	155	28.72	9.94	3.6	4.0	68	18	36	.12	2	0.2	0.4	51	KAO F
		11	19 9	12.32	19	20.04	155	13.03	9.50	3.3	3.5	55	9	69	.12	5	0.3	0.3	49	SF2
		12	1157	16.53	19	19.60	155	8.38	8.52	3.0	3.2	50	10	83	.11	4	0.3	0.5	27	SF4
		13	1355	58.66	19	11.96	155	36.36	5.82	3.4	3.3	44	14	90	.17	6	0.3	1.0	38	LSW
		17	924	17.95	19	22.41	155	28.94	10.12	3.3	3.4	62	17	36	.12	2	0.3	0.4	48	KAO F
		25	521	57.14	19	46.76	155	43.07	14.09	2.9	3.5	52	10	138	.11	11	0.5	0.4	36	HUA
		25	1419	21.71	19	26.42	155	21.16	37.98	4.0	4.3	68	20	29	.13	2	0.4	0.7	51	DML