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Hawaiian Volcano Observatory
1984 Annual Administrative Report

Introductory Note By Thomas L. Wright and Jennifer S. Nakata

Compiled By Jennifer S. Nakata

Summary 84
Seismic Data, January to December 1984
By Jennifer S. Nakata, Robert Y. Koyanagi,
Alvin H. Tomori, and Wilfred R. Tanigawa

Chronological Summary
By Thomas L. Wright

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INTRODUCTORY NOTE

The Hawaiian Volcano Observatory Summaries have been published in the current format since 1956. The Quarterly Summaries (1956 through 1973) and the Annual Summaries (1974 through 1985) were originally published as Administrative Reports. These reports have been compiled and published as U.S. Geological Survey Open-File Reports. The quarterly reports have been combined and published as one annual summary. All the summaries from 1956 to the present are now available as .pdf files at http://www.usgs.gov/pubprod.

The earthquake summary data are presented as a listing of origin time, depth, magnitude, and other location parameters. Network instrumentation, field station sites, and location algorithms are described. Tilt and other deformation data are included until Summary 77, January to December 1977. From 1978, the seismic and deformation data are published separately, due to differing schedules of data reduction.

There are eight quarters—from the fourth quarter of 1959 to the third quarter of 1961—that were never published. Two of these (4th quarter 1959, 1st quarter 1960) have now been published, using handwritten notes of Jerry Eaton (HVO seismologist at the time) and his colleagues. The seismic records for the remaining six summaries went back to California in 1961 with Jerry Eaton. Other responsibilities intervened, and the seismic summaries were never prepared.

Chronology

The following Kīlauea eruption chronology covers the two recent reports and the six missing quarters:

Location	Beginning Date	Ending Date	Comment
Kīlauea Iki crater (Kīlauea's summit)	11/14/1959	12/20/1959	19 eruptive episodes
Kapoho (lower east rift zone)	1/13/1960	2/18/1960	4 eruption stages
Halemaumau (Kīlauea's summit)	2/24/1961	2/24/1961	Intermittent activity during uninterrupted inflation following the 1960 eruption
Halemaumau (Kīlauea's summit)	3/22/1961	3/25/1961	Same as above.
Halemaumau (Kīlauea's summit)	7/10/1961	7/17/1961	Same as above.
Heiheiahulu (middle east rift zone)	9/22/1961	9/25/1961	First historical east rift eruption at this location

The 1959-1960 eruptions were among two of the most spectacular Kīlauea eruptions. The HVO staff was kept busy with acquisition of unusually high quantities of instrumental data and observations of the two sequences, which were separated by less than one month. Even with a year's interval before the beginning of the summit-east rift sequence in 1961, the staff never caught up, and the seismic records were set aside for later study.

A total of 1,672 earthquakes—1,106 for 1960 and 566 for 1961—are part of HVO's cataloged database. The annual listings have been appended to the 1st Quarter Report of 1960 and to the 4th Quarter Report for 1961. The number of earthquakes is probably low, biased toward the larger magnitudes. The entire HVO catalog, including 1960 and 1961, is accessible from the ANSS CATALOG SEARCH site at http://www.ncedc.org/anss/catalog-search.

Thomas L. Wright and Jennifer S. Nakata

UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

HAWAIIAN VOLCANO OBSERVATORY
SUMMARY 84
SEISMIC DATA, JANUARY TO DECEMBER 1984

Menlo Park, California
1986

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BY

JENNIFER S. NAKATA, ROBERT Y. KOYANAGI, ALVIN H. TOMORI, WILFRED R. TANIGAWA

CHRONOLOGICAL SUMMARY

BY

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+ Arrived during 1984
* Left during 1984

CONTENTS

INTRODUCTION

The Hawaiian Volcano Observatory (HVO) summary presents data gathered during the year together with 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. The seismic summary is complete in the sense that all data 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 will be published separately.

The HVO summaries have been published in various formats 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 format 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 use the data and understand the essentials of how it was gathered.

A report tabulating the instrumentation, calibration and recording history of each seismic station in the network by Klein and Koyanagi is available as a USGS open file report ("Hawaiian Volcano Observatory Seismic Network History 1950-79," U.S.G.S. open file report 80-302, 1980). It is designed as a reference for users of seismograms and phase data, and so includes and expands the information in the station table in this summary.

Chronological Summary - 1984

Events in 1984 featured a long-awaited eruption of Mauna Loa, continued monthly activity at Kilauea's Pu'u O'o vent, approval and funding, after 8 years, for construction of a new HVO facility, and changes in staff, including the arrival of a new scientist-in-charge.

The Mauna Loa eruption, March 25-April 15, was clearly the high point of the year. A forecast published in 1976 correctly anticipated its location (northeast rift zone between 2800 and 3000 meters altitude) but missed the time by 6 years. Another forecast published in 1983 anticipating an eruption "during the next two years" proved correct. A summary description of the eruption is given by Lockwood and others (1985). Table C-1 summarizes significant data for the eruption and Figure C-1, taken from Lockwood and others (1985), shows the extent of flows. The eruption was notable for its well developed lava channel which delivered lava very efficiently to the lower slopes of the volcano (slightly below 1000 meters elevation) where it posed a threat to the city of Hilo (Fig. C-1). Hilo was spared, however, by a repeated breakdown of the main channel at an altitude of about 2000 m. This process, a natural lava diversion, was observed and documented for the first time during this eruption. It appears that the diversion results from "aging" of the channel whereby an initially smooth channel surface characterized by laminar flow is increasingly disrupted by erosion of the enclosing levees. Pieces of the levee eventually become sufficiently large and/or numerous that channel blockage results, the flow overspills the levee, and the old channel is abandoned (see Lipman and Banks, in press). The chemistry of the Mauna Loa lavas was extremely uniform (Fig. C-2), and similar to that erupted in 1975, both being olivine-poor and slightly fractionated. Evidently the top of a much larger reservoir of magma was tapped. Temperatures of the lava remained constant, consistent with the absence of chemical change, but the crystallinity increased dramatically during the eruption, evidence that the lava was initially undercooled (Lipman and Banks, in press). Increase in viscosity associated with higher crystallinity may also have contributed to the aging of the lava channels (see above).

Deformation data were obtained for the first time to cover a complete deflation of Mauna Loa. A total of over 100 microradians of deflation was recorded at one site, which occurred in response to 63 cm of vertical subsidence measured by leveling surveys. A recording tiltmeter showed 40 microradians of rapid uplift in the hour before the outbreak, reflecting dike emplacement. Horizontal changes are also large but are complicated by a combination of expansion of certain lines in response to dike emplacement and contraction of all lines in response to removal of magma at depth. Modeling of the Mauna Loa inflation and deflation showed a magma storage area located south of the caldera at a depth of about 3 km, very similar to the geometry of the Kilauea summit magma storage reservoir (Decker and others, 1983). This conclusion is consistent with similar sizes of the summit calderas of Kilauea and Mauna Loa, and demonstrates that the magma chambers of the Hawaiian shields move up with the growth of the shield, retaining a constant relationship to the upper surface of the volcano (Ryan, in press).

Kilauea, in contrast to Mauna Loa's single eruption, was in eruption 16 different times from Pu'u O'o on the east rift zone for an aggregate eruption length of 15 days and an aggregate volume of 149 x 10^6 m^3 (Table C-2; Fig. C-3; Fig.

C-4). The average lava production for each volcano was similar, about 10^7 m^3 of lava per day of eruption. The chemical composition (Fig. C-2) was more uniform than that of the first year of eruption, attesting to a more open summit-rift connection. The Pu'u O'o cone grew from a height of 78 m at the end of 1983 to 175 m at the end of 1984. The lavas spread mainly northeast and southeast from Pu'u O'o and threatened, but did not destroy, buildings in the Royal Gardens subdivision, which was hit several times by eruptions from Pu'u O'o in 1983. The longest eruptive episode of 1984, episode 18, lasted 60 hours and sent a flow to within 1 km of the ocean (Fig. C-3). Three isolated dwellings were overrun near the terminus of the flow in the vicinity of Kapaahu. The previous episode (17) took place during the Mauna Loa eruption. Neither eruption had an obvious effect on the eruptive behavior of the other, or on the shallow seismicity and summit tilt patterns associated with the two eruptions. This confirmed the essential independence of the shallow plumbing of the two volcanoes, long inferred from the consistently different chemical composition of lavas from the two volcanoes (Fig. C-2).

Systematic gravity measurements were made on both volcanoes in 1984 (Johnson, in press). A summit monitor at Kilauea, comparing gravity at a stable base station with gravity at a station near the center of inflation-deflation, demonstrates that the gravity signal is dominated by mass changes which exceed the changes expected from uplift or subsidence alone (Johnson, in press). The interpretation suggests that magma filling the summit reservoir is compressed (becomes denser) as the reservoir fills and, conversely, expands (becomes less dense) as pressure is relieved during transport to the east rift zone. Gravity data also helps to reconcile the discrepency between horizontal and vertical changes found in modeling the Kilauea magma reservoir. Cross-caldera horizontal changes are always larger than expected from modeling of vertical changes and gravity data supports the idea that the summit reservoir is slowly expanding in the direction of the mobile south flank of the volcano. Apart from the short term changes in gravity, the long term gravity signature at Kilauea hints at continuing development of a Bouguer anomaly related most probably to solidification of intrusions at depth and accumulation of excess olivine in the lower parts of the storage complex. Gravity measurements at Mauna Loa show a somewhat different story. Gravity changes during the large deflation associated with the Mauna Loa eruption closely tracked the elevation changes. During reinflation, however, the gravity changes are small and opposite in size compared to those expected from the uplift. Hence, a greater volume and/or denser magma is coming into the storage system than would be predicted by the surface deformation measurements.

Gas geochemistry really came into its own at HVO in 1984. The first good measurements of eruptive gases (H_2O, H_2, CO_2, CO, SO_2, H_2S, HCl, HF) at Mauna Loa, combined with continuous monitoring of gas composition at Kilauea summit and near the eruptive site has yielded the following conclusions, documented by Greenland (in press) and by Greenland and others (1985).

(1) volatiles arriving at Kilauea summit are enriched in CO_2, the least soluble component; from measurements of gas composition and emission flux at fumaroles the content of volatiles in equilibrium with mantle-derived magma may be calculated (Table C-3).

2. Much CO_2 is lost during summit storage and therefore magma available for eruption on the rift zone is relatively SO_2- and H_2O-rich (Table C-3).

3. Residual gases left in the lava are dominated by H_2O, the most soluble constituent (Table C-3).

4. H_2O content of analyzed eruptive gases varies widely, partly due to contamination by meteoric water, but also by disequilibrium exsolution accompanying magma transfer (i.e. the exsolution of gases by vesiculation and diffusive transfer is too slow to keep pace with decreasing pressure accompanying rapid rise rates of magma in the eruptive conduit). CO_2 and SO_2 contents, however, maintain equilibrium at rapidly decreasing pressures and H_2O contents can be adjusted consistent with this.

5. Gases associated with the Mauna Loa eruption were depleted in CO_2, much like the Kilauea rift eruption. This is consistent with the magma chemistry which suggests eruption of the top of a large body of stored magma. It remains to be seen whether a CO_2-rich component can be seen during the reinflation of Mauna Loa. Mauna Loa gases differ from Kilauea in their halogen (F;Cl) content and ratio, matching subtle differences in the residual halogen contents of Kilauea and Mauna Loa rocks.

The mass of volatiles released by Kilauea magma is measured by COSPEC and can be correlated with magma supply rates. There was a step increase in total volatile mass at the onset of the present Kilauea eruption which agrees with estimates of increased magma supply relative to earlier periods (eg. 1969-1974 Mauna Ulu eruption).

Plans for a new HVO facility became reality in 1984 when Congress passed a bill that included a supplemental appropriation of $5,000,000 for the National Park Service construction budget. The plans covered by the budget include 3 stages (1) construction of a new HVO building; (2) renovation of the existing geochemistry wing for HVO use, and (3) renovation of the library-office wing for Park Service use as an on-site interpretation facility. When finished in 1986, this will fulfill much of the original vision of Thomas A. Jaggar, including integration of HVO monitoring and Park Service interpretation.

Changes in staff occurred, including the arrival of a new scientist-in-charge. Bob Decker's going away party was noteworthy as Mauna Loa erupted barely an hour after the party. Tom Wright arrived to take his place about a week before the end of the eruption. Other staff changes are summarized below.

Leavings			Arrivings		
Name	Position	Going To	Name	Position	Arrived From
Toni Duggan	Geology	Graduate School	Christina Heliker	Geology	CVO
Ken Yamashita	Deformation	CVO	George Ulrich	Geology	Flagstaff
Ed Wolfe	Geology	Big Island Map Project	John Hoffmann	Geology	NAGT[1] Program
Tina Neal	Geology	Big Island Map Project			

[1]National Association of Geology Teachers Program: one year extension October 1, 1984 - September 30, 1985.

Student help in 1984 included the following:

John Hoffmann]
Jim Hutton] - National Association of Geology Teachers

Teresa Atwill]
Bill Chadwick] - Graduate Students University of California at Santa Barbara

Pauline Tamura]
Joan Yoshioka] - Federal Junior Fellows

Sandra Zane]
Brian Moniz]
Keone Ah Chong]
Kaipo Ah Chong]
Kent Kikuchi]
Charlotte Forbes]
Terry Ignacio] - Minority Program in the Earth Sciences

Shyanne Nelson]
Tom Tioaquin] - Alu Like (Native American Program)

Many of the staff took a technical writing course, offerred by Shipley Associates. As a result, we have more persons helping prepare the monthly reports than before. George Kojima and Bob Koyanagi went to Indonesia in August 1984 to evaluate the radio-telemetered seismic network at Merapi Volcano Observatory. This is part of a long term collaboration between the U. S. Geological Survey and the Indonesian government. They were successful in continuing to train Indonesian volcanologists in the use of modern seismic instrumentation and interpretation of Indonesian seismicity.

All in all, 1984 was a productive year for HVO. The challenge of studying eruptions accessible only by helicopter was met with fiscal help in the form of a supplemental appropriation from Congress and, during the Mauna Loa eruption, with observing and monitoring help from HVO alumni and other visiting USGS scientists.

Table C-1. Summary data, 1984 eruption of Mauna Loa[1]

Duration: March 25, 1984 - April 15, 1984
Area covered: 48 km^2
Volume[2]: .22 km^3
Eruption rate (March 26-April 7): 10 x $10^6 m^3$/day
Channel velocity (April 2-April 7, 8200' elevation): 19 km/hr
Temperature (maximum reliable readings): 1140 $\pm$ 5° C

[1]Data from Lockwood et. al. (1985); Lipman and Banks (in press)
[2]Not corrected for vesicularity.

Table C-2.

EPISODE	SEQ[1] START DATE	SEQ[1] END DATE	EPISODE START M/DA/YR	EPISODE START HOUR	EPISODE END MM/DA/YR	EPISODE END HOUR	DAYS REPOSE PRIOR	EPISODE LENGTH HOURS	DEFLAT LENGTH HOURS	DEFLAT START M/DA/YR	DEFLAT START HOUR	DEFLAT START ID.ASM	DEFLAT END M/DA/YR	DEFLAT END HOUR	DEFLAT END ID.ASM	DEFLAT LENGTH HOURS	TILT RISE PRIOR	TOT.TLT DROP MIC.RAD	UR/HR x 100 DEFLAT
13	383	385	1/20/84	17:24	1/22/84	11:23	50	42	43	1/20/84	21:00	331.50	1/22/84	16:00	320.40	43	16.62	11.10	26
14	393	394	1/30/84	17:45	1/31/84	13:18	8	19	24	1/30/84	19:00	326.56	1/31/84	19:00	316.65	24	6.16	9.91	41
15	408	409	2/14/84	19:40	2/15/84	15:01	14	19	44	2/14/84	01:00	323.70	2/15/84	21:00	312.10	44	7.05	11.60	26
16	426	427	3/03/84	14:50	3/04/84	22:31	17	32	33	3/3/84	16:00	322.57	3/05/84	01:00	307.80	33	10.47	14.77	45
17	453	454	3/30/84	04:48	3/31/84	03:24	26	23	51	3/29/84	04:00	317.32	3/31/84	07:00	306.83	51	9.52	10.49	21
18	472	475	4/18/84	18:00	4/21/84	05:33	18	60	67.5	4/18/84	10:00	321.46	4/21/84	05:36	301.95	67.5	14.63	19.51	29
19	500	502	5/16/84	05:00	5/18/84	00:50	25	44	51	5/15/84	05:00	314.66	5/17/84	08:00	308.92	51	12.71	5.74	11
20	522	523	6/07/84	21:04	6/08/84	06:25	20	9	29	6/07/84	11:00	318.12	6/08/84	16:00	307.80	29	9.20	10.32	36
21	545	545	6/30/84	10:28	6/30/84	18:27	22	8	39	6/29/84	12:00	315.36	7/01/84	03:00	306.01	39	7.56	9.35	24
22	553	554	7/08/84	19:30	7/09/84	10:17	8	15	28	7/08/84	12:00	311.90	7/09/84	16:00	298.83	28	5.89	13.07	47
23	573	574	7/28/84	12:00	7/29/84	05:40	19	18	24	7/28/84	10:30	311.50	7/29/84	10:30	298.57	24	12.67	12.93	54
24	595	596	8/19/84	21:52	8/20/84	17:25	21	20	22	8/19/84	22:00	309.08	8/20/84	20:00	294.80	22	10.51	14.28	65
25	626	627	9/19/84	16:04	9/20/84	05:32	30	13.5	19	9/19/84	14:00	311.30	9/20/84	09:00	296.40	19	16.50	14.90	78
26	670	670	11/2/84	11:40	11/2/84	16:36	42	5	16	11/2/84	11:00	313.12	11/03/84	03:30	305.57	16	16.72	7.55	47
27	688	688	11/20/84	00:05	11/20/84	10:06	18	10	15.5	11/20/84	00:36	313.32	11/20/84	16:00	301.05	15.5	7.75	12.27	79
28	701	702	12/3/84	19:05	12/4/84	09:41	13	14.5	19	12/3/84	19:04	310.70	12/04/84	13:30	294.80	19	9.65	15.90	84

EPISODE	AREA SQ KM	VOLUME MILL. CU.MTRS	RATE 1000 CU MTRS/HR	AVG THICK MTRS	SO_2 EMISS. TONS/HR	RATE 1000 CU MTRS PER MICRORAD	TREMOR START M/DA/YR	TREM START HOUR	TREM END M/DA/YR	TREM END HOUR	TR.ST. SEQ. DATE	TR.END SEQ DATE
13	2.6	10	238	3.00	ND	901	1/20/84	14:00	1/22/84	11:19	383	385
14	2.1	6	316	2.95	>490	605	1/30/84	18:10	1/31/84	13:19	393	394
15	2.2	8	421	3.64	1100	690	2/14/84	19:46	2/15/84	15:01	408	409
16	3.2	12	375	3.72	750	812	3/03/84	14:35	3/04/84	22:29	426	427
17	3.0	10	435	3.20	>380	953	3/30/84	05:10	3/31/84	03:16	453	454
18	6.6	24	400	3.88	ND	1230	4/18/84	14:00	4/21/84	05:35	472	475
19	1.4	2	45	1.63	ND	348	5/16/84	08:16	5/17/84	18:00	500	501
20	1.6	4	444	2.56	ND	388	6/07/84	21:20	6/08/84	06:27	522	523
21	1.92	5.7	713	2.97	1200	610	6/30/84	10:28	6/30/84	18:27	545	545
22	2.69	7.7	513	2.86	ND	589	7/08/84	18:59	7/09/84	10:17	553	554
23	3.28	9.5	528	2.90	ND	735	7/28/84	11:58	7/29/84	05:43	573	574
24	3.73	11.6	580	3.11	ND	812	8/19/84	21:25	8/20/84	17:21	595	596
25	3.33	11.1	822	3.33	ND	745	9/19/84	15:30	9/20/84	05:32	625	626
26	1.64	6.6	1320	4.02	ND	874	11/02/8	11:40	11/02/84	16:34	670	670
27	2.30	8.4	840	3.65	ND	685	11/20/8	00:05	11/20/84	10:08	688	688
28	3.62	12.4	855	3.43	1300	780	12/03/8	19:05	12/04/84	09:41	701	702

[1]Days since January 2, 1983

Table C-3. H_2O-CO_2-S budget in Kilauea magma

	H_2O (wt. %)	CO_2 (wt. %)	S (wt. %)
Magma arriving from mantle	.32	.32	.09
Magma after storage and before eruption	.28	.03	.08
Residual volatiles in erupted magma	.05	<.01	.02

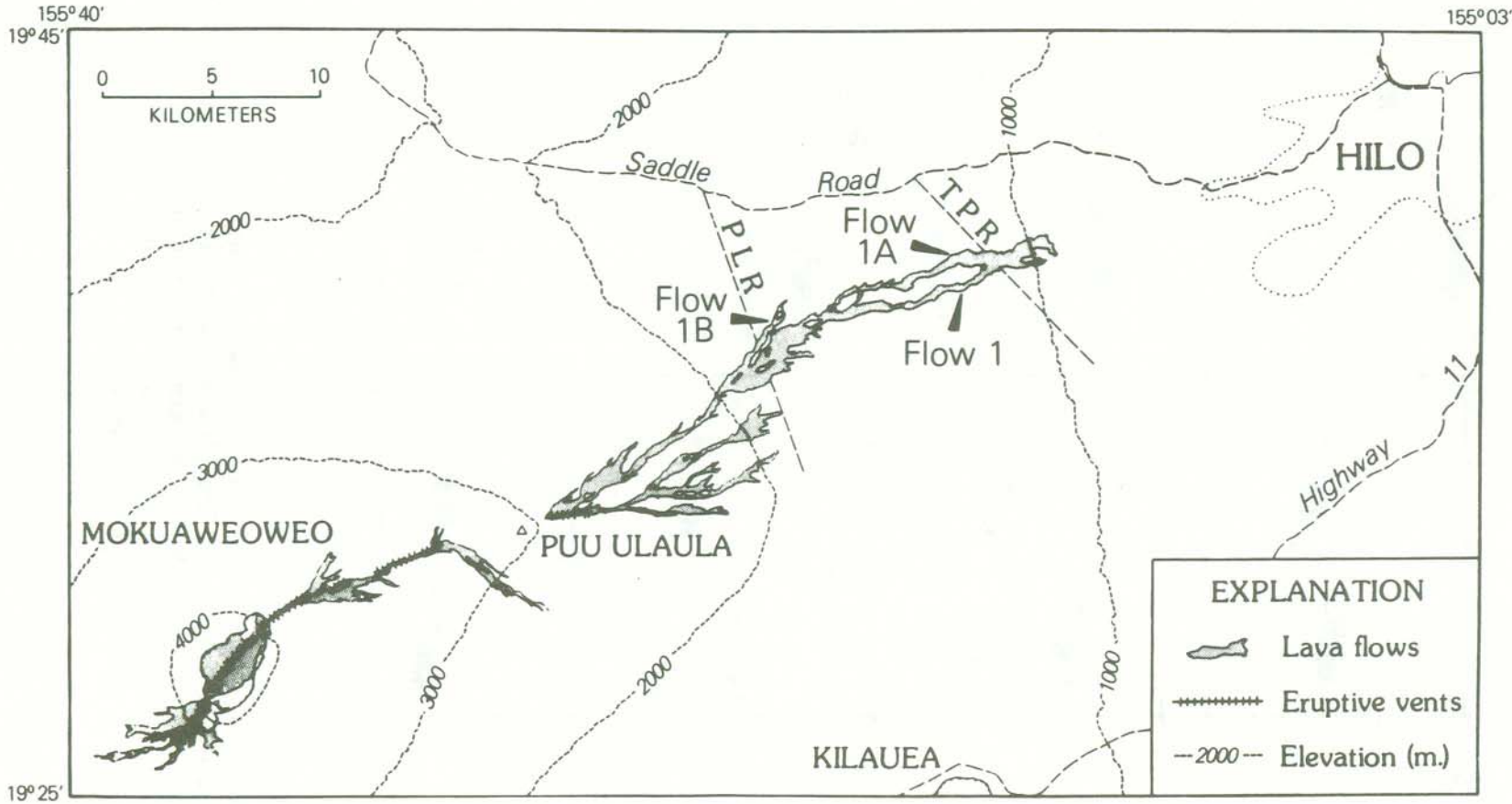

Figure C-1. Distribution of lava flows, 1984 eruption of Mauna Loa volcano (from Lockwood and others, 1985, Fig. 5).

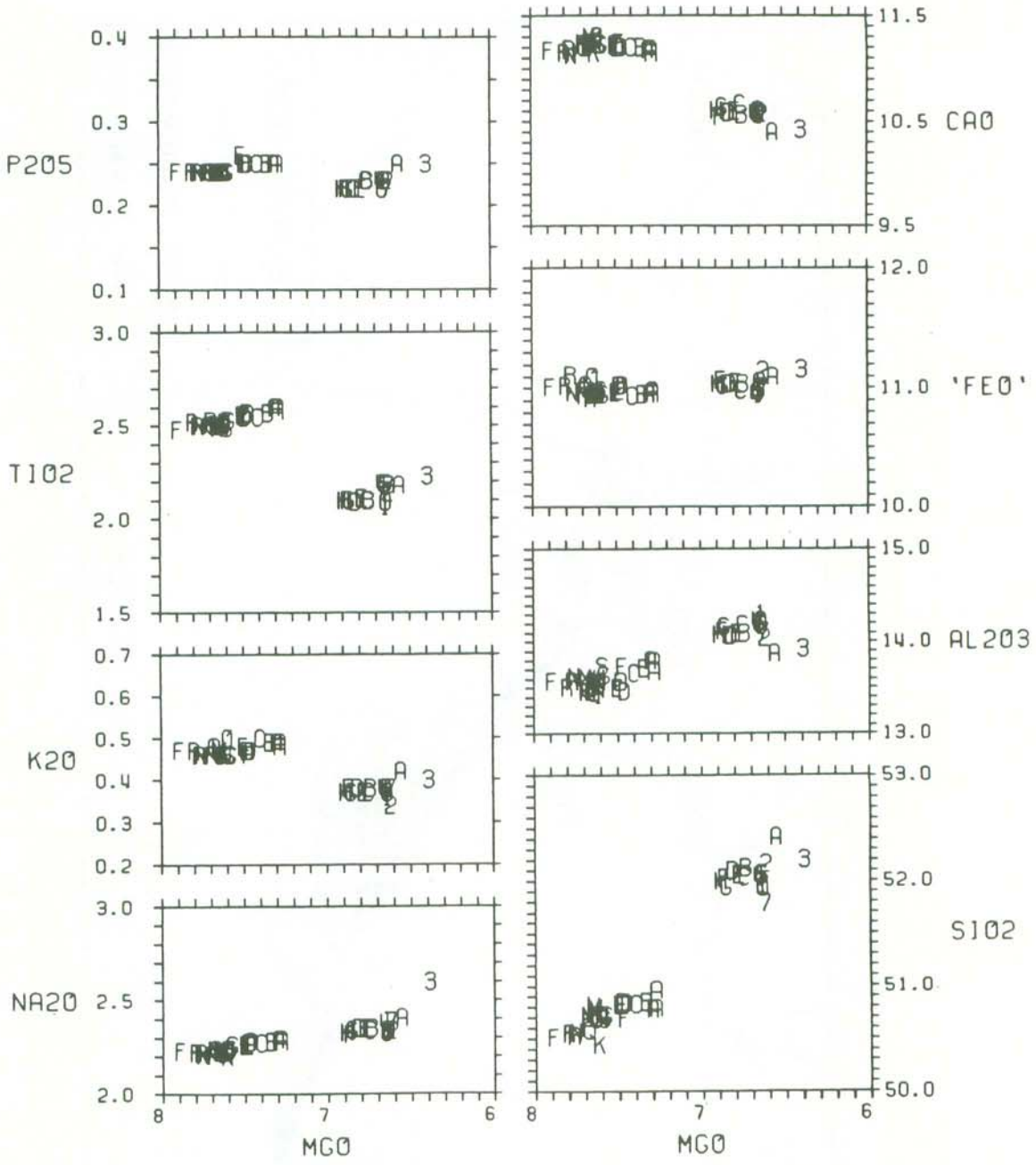

Figure C-2. MgO variation diagrams showing contrasting chemistry of Kilauea (left-hand group) and Mauna Loa (right-hand group) during 1984. Mauna Loa group shows similarity of1984 (letters A-H) and 1975 (numerals 0-7) compositions. The spread of Kilauea data is due principally to differences in olivine content of different eruptive episodes.

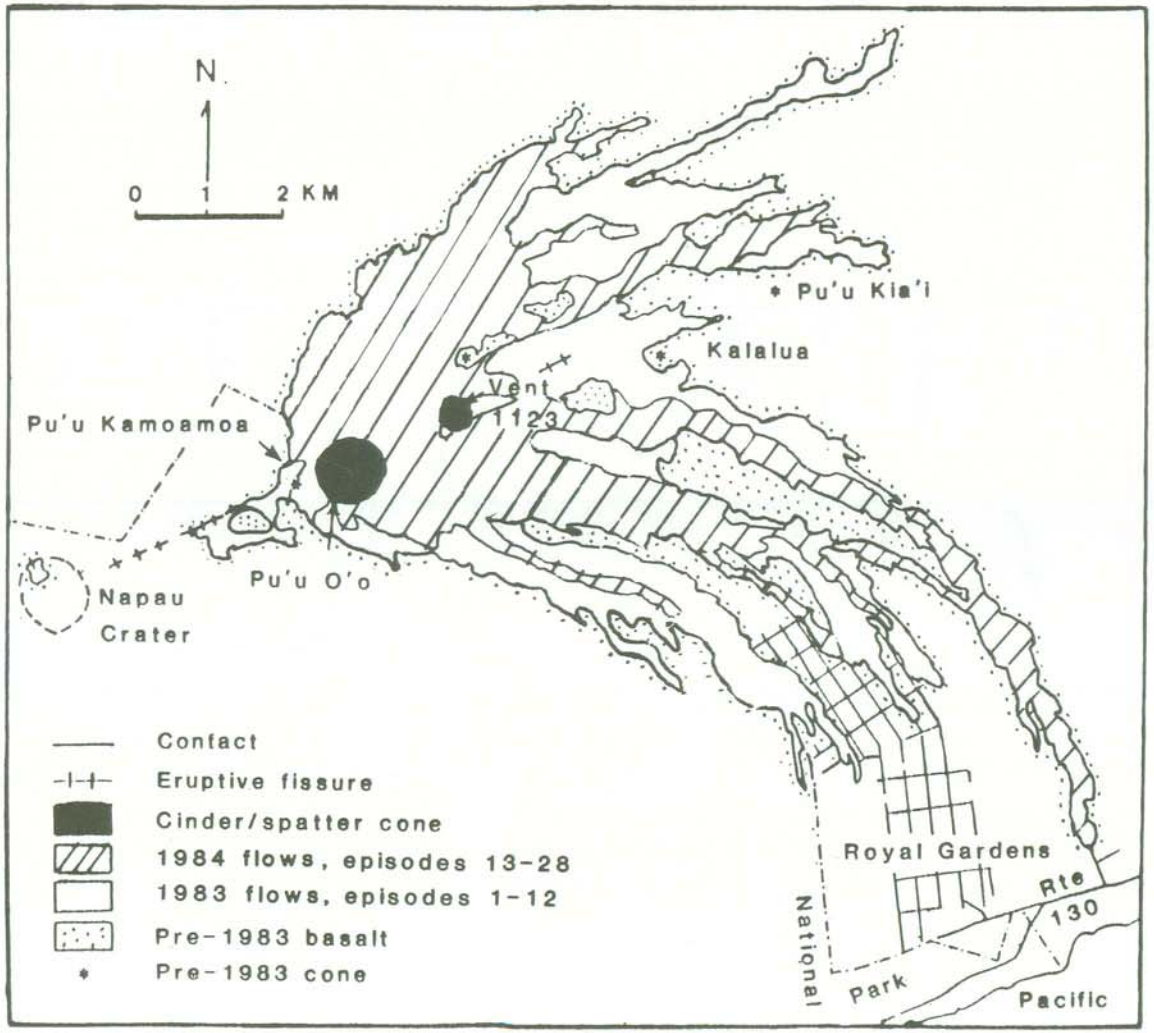

Figure C-3. Distribution of lava flows erupted from Pu'u O'o in 1984.

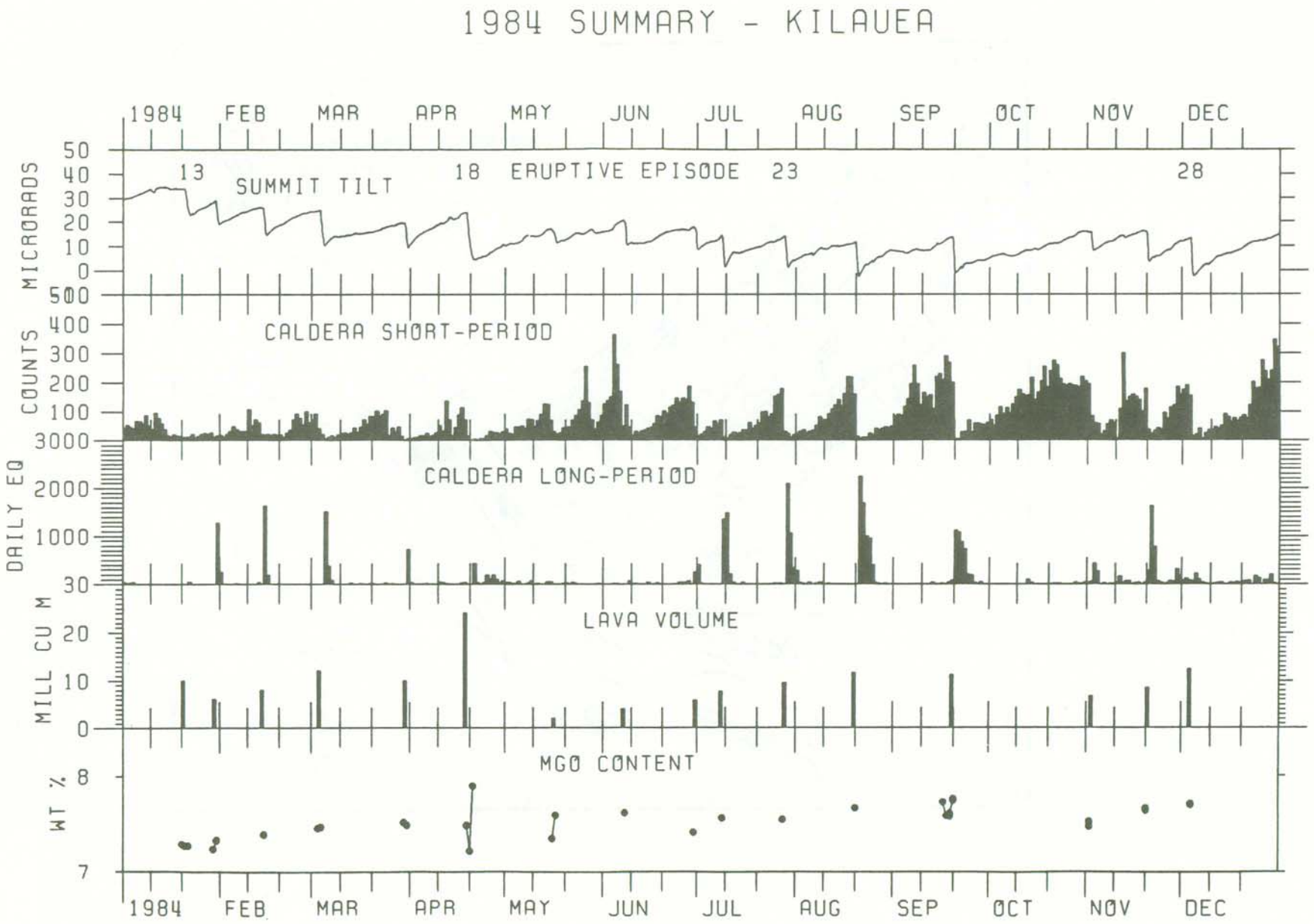

Figure C-4. Summary of selected geologic, geodetic, and seismic data associated with Kilauea eruptive episodes in 1984.

Chronology References

Decker, R.W., Koyanagi, R.Y., Dvorak, J.J., Lockwood, J.P., Okamura, A.T., Yamashita, K.M., and Tanigawa, W.R., 1983, Seismicity and surface deformation of Mauna Loa volcano, Hawaii: EOS, v. 64, p. 545-547.

Greenland, L.P., 1986, Composition of eruptive gases from Mauna Loa volcano, Hawaii: U.S. Geological Survey Professional Paper 1350.

Greenland, L.P., Rose, W.I., and Stokes, J.B., 1985, An estimate of gas emissions and magmatic gas content from Kilauea volcano: Geochimi. et Cosmochim. Acta, v. 49, p. 125-129.

Johnson, D.J., 1986, Elastic and inelastic magma storage in Kilauea volcano, Hawaii: U.S. Geological Survey Professional Paper 1350.

Lipman, P.W., and Banks, N.G., 1986, A'a flow dynamics, Mauna Loa, 1984: U.S. Geological Survey Professional Paper 1350.

Lockwood, J.P., Banks, N.G., English, T.T., Greenland, L.P., Jackson, D.B., Johnson, D.J., Koyanagi, R.Y., Okamura, A.T., and Rhodes, J.M., 1985, The 1984 eruption of Mauna Loa volcano, Hawaii: EOS, v. 66, p. 169-171.

Ryan, M., 1986, The elasticity and expansivity of Hawaiian olivine tholeiite and its role in the stability and structural evolution of intrashield magma reservoirs and rift systems: (I) Emperiments to 1223K; (II) Mixing models for computation; and (III) The pressure dependence of contractancy: U.S. Geological Survey Professional Paper 1350.

SEISMIC INSTRUMENTATION

The network. The Hawaiian Volcano Observatory maintains an extensive telemetering seismometer network on the island of Hawaii. In 1984 the seismometer network consisted of 50 stations; two are low-gain multicomponent stations (optical), twelve are three-component, and 36 are vertical only. The coverage is most complete on and around Kilauea Volcano. With the exception of self-contained systems at Uwekahuna and Hilo stations, all seismometer 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 which were operated on the Island of Hawaii during the year, 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 in Hawaii during 1984. Listed are names, three- and four-letter codes, coordinates in degrees and minutes, elevation in meters, and other data as described below pertaining to each station. In addition to seismometers listed in Table 1, a horizontal seismometer of Type 3 and a long-period, three-component set of Press-Ewing seismometers are operated in the Uwekahuna vault, all 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 now all of Type 1, the OEVE standard system used in USGS seismic networks (see Table 2 for details). After discrimination at the receiver, the analog signals from 36 stations are recorded on two Develocorders using 16mm 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 and archived in digital form at HVO as part of the routine location processing. The type of recording used for each station (in addition to magnetic tape for the telemetered stations) is coded in Table 1 as follows: D - Develocorder film, S - smoked paper drum, P - photographic paper, H - Helicorder paper.

In addition to the standard stations, optical drum seismographs are maintained at Uwekahuna (HVO), Hilo, Maui, and on 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 16mm Develocorder microfilm are archived at HVO.

In late August, 1982, Rex Allen and Jim Ellis from the U.S. Geological Survey's Office of Earthquake Studies came to HVO to install their seismic monitoring system uniquely designed to automate picking of P-phase onset times, measuring coda lengths, and determinining preliminary epicenters for adequately recorded earthquakes. The Hawaii picker is configured to monitor a maximum of 80 stations, but is currently wired to 45 stations. Attached to the picker are a Datasouth Printer and an Apple II microcomputer. The picker output is logged on a disk and printed out on chart paper within three minutes after the earthquake occurs. The data collected on disk is tranferred to the Eclipse, the main computer system, on a daily basis using a second Apple II. The earthquake records are filtered and run through our standard location program (HYPOINVERSE). Summary listings and epicenter plots are prepared on chart

paper, and the phase data are archived on tape. The picker output is routinely compared with readings from our standard format.

Seismograph response and calibration. Displacement response curves for the four short-period seismograph types in use are given in Figure 4. Types three and four 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 should be multiplied by a constant but known factor (CAL, 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 mm on the 20X Develocorder viewer of a 10 microvolt 5 Hz signal introduced to the preamp/VCO in place of the geophone. Calibration is normally done each time a station is visited. CAL factors range from about 1 to 8, averaging about 4. A detailed history of CAL factors and other data is given in F.W. Klein and R.Y. Koyanagi, Hawaiian Volcano Observatory Seismic Network History 1950-79, U.S. Geological Survey Open File Report 80-302, 1980.

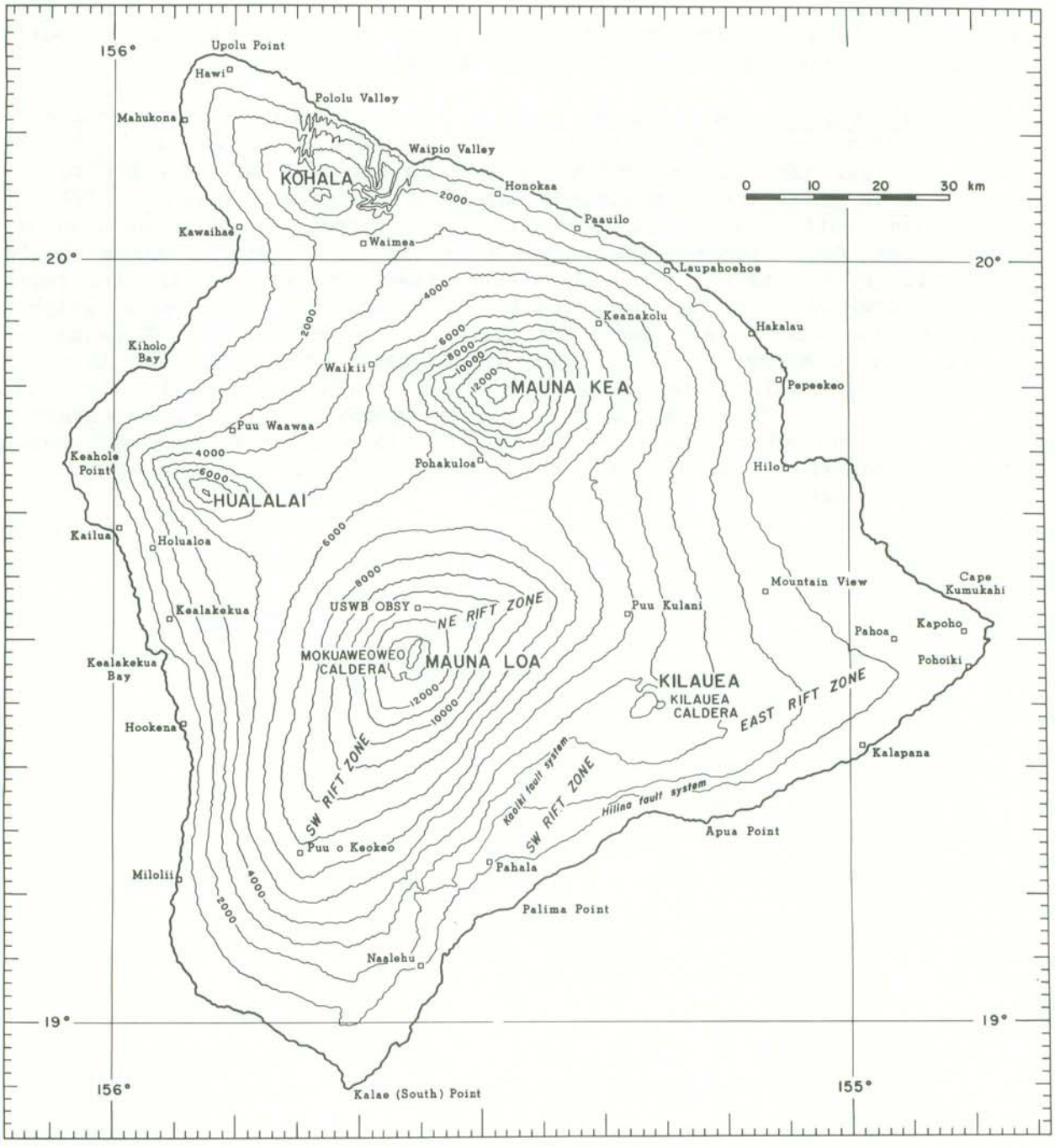

Figure 1. Map of the island of Hawaii showing principal settlements and selected geographic and geologic features.

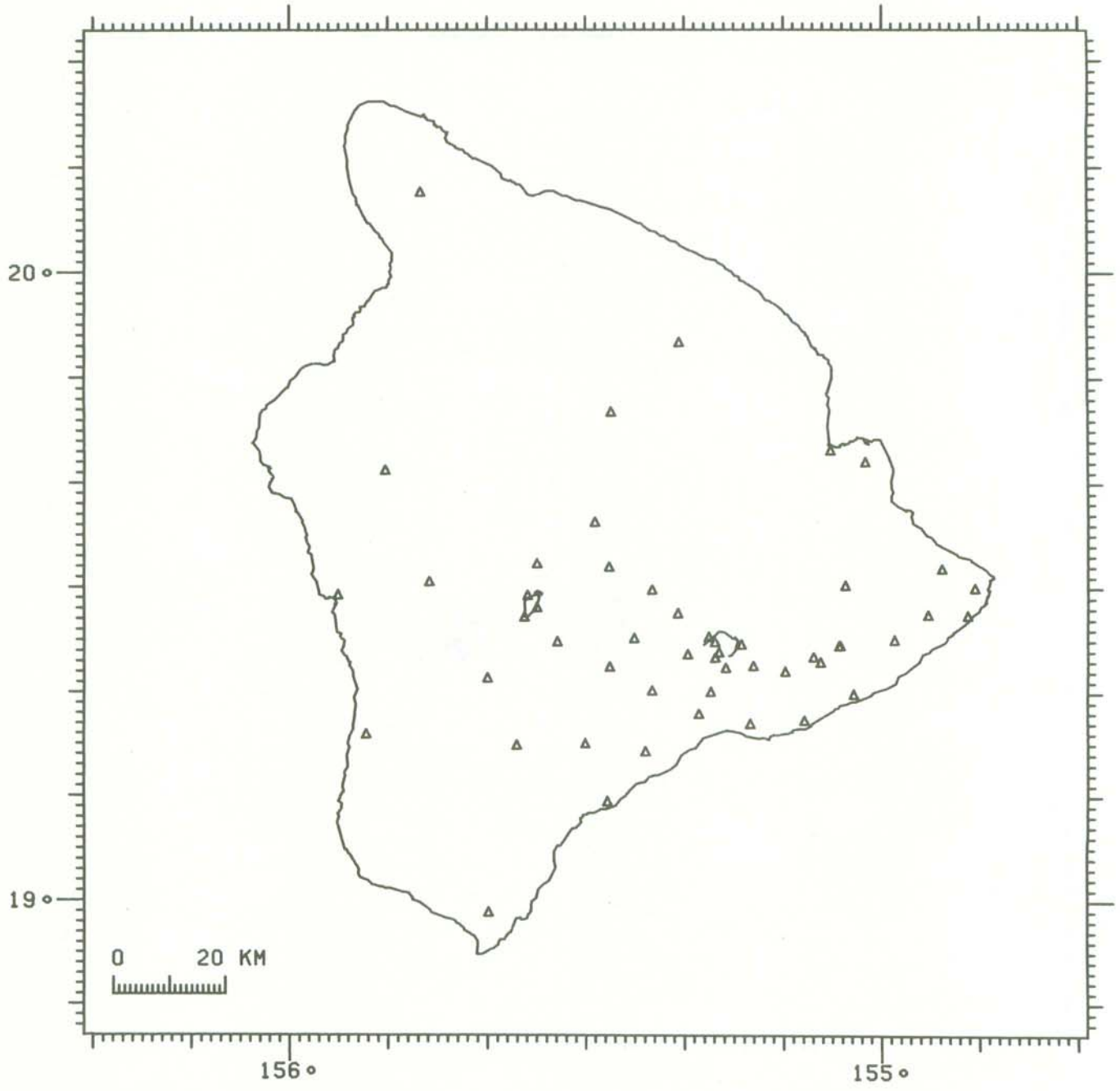

Figure 2. Map of the island of Hawaii showing seismic stations operational during 1984.

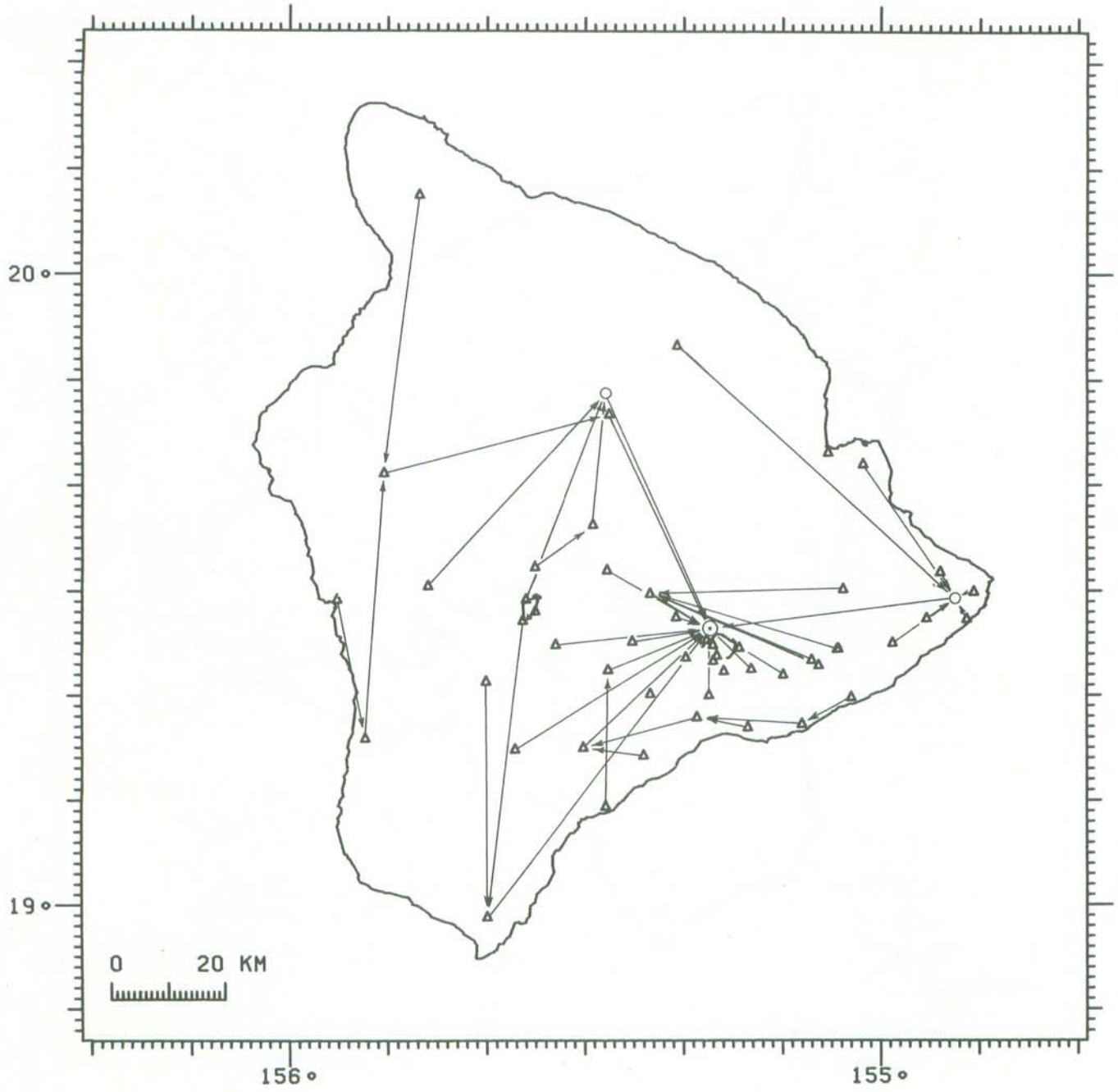

Figure 3. Map of the island of Hawaii showing the telemetry scheme for the Hawaiian Volcano Observatory seismic network.

Legend △ Seismometer location
○ Repeater Station

Table 1. Seismometer stations in Hawaii operated by the U.S. Geological Survey, 1984.

STATION NAME	CODE		--LAT--- D	M	---LON--- D	M	ELEV (M)	DELAY 1	DELAY 2	CAL	SEIS TYPE	OPTIC RECORD
AHUA	AHU	Z	19	22.40	155	15.90	1070	-0.10	-0.13	2.1	E4	SD
AHUA	AHUE	E	19	22.40	155	15.90	1070	-0.10	-0.13	1.0	E4	
AHUA	AHUN	N	19	22.40	155	15.90	1070	-0.10	-0.13	1.0	E4	
AINAPO	AIN	Z	19	22.50	155	27.62	1524	0.13	0.17	5.5	L4	D
AINAPO	AINE	E	19	22.50	155	27.62	1524	0.13	0.17	1.0	L4	
AINAPO	AINN	N	19	22.50	155	27.62	1524	0.13	0.17	1.0	L4	
CAPTAIN COOK	CAC	Z	19	29.29	155	55.09	323	0.00	-0.16	1.1	L4	D
CONE PEAK	CPK	Z	19	23.70	155	19.70	1038	-0.26	-0.07	6.0	L4	
DANDELION	DAN	Z	19	21.42	155	40.04	3003	-0.27	0.03	7.0	L4	D
DESERT	DES	Z	19	20.20	155	23.30	815	-0.29	-0.13	3.0	E4	SD
ESCAPE ROAD	ESR	Z	19	24.68	155	14.33	1177	-0.17	-0.19	2.2	L4	D
HAWAIIAN BEACHES	HAB	Z	19	31.89	154	53.89	92	-0.09	-0.24	1.0	L4	
HALEAKALA, MAUI	HAE	E	20	46.00	156	15.00	2090	0.00	0.00	1.0	W	P
HALEAKALA, MAUI	HAL	Z	20	46.00	156	15.00	2090	0.00	0.00	0.7	H1	P
HALEAKALA, MAUI	HAN	N	20	46.00	156	15.00	2090	0.00	0.00	1.0	W	P
HILO	HIE	E	19	43.20	155	5.30	20	0.54	0.30	1.0	W	P
HILO	HIL	Z	19	43.20	155	5.30	20	0.54	0.30	1.0	H1	P
HILO	HIN	N	19	43.20	155	5.30	20	0.54	0.30	1.0	W	P
HILINA PALI	HLP	Z	19	17.96	155	18.63	707	0.02	0.07	2.6	L4	D
HONOLULU, OAHU	HON	Z	21	19.30	158	0.50	2	0.00	0.00	0.0	H1	P
HALE POHAKU	HPU	Z	19	46.85	155	27.50	3396	0.31	0.17	3.3	L4	D
HUMUULA SHEEP ST	HSS	Z	19	36.31	155	29.13	2445	0.20	0.35	5.3	L4	D
HUMUULA SHEEP STH	HSSE	E	19	36.31	155	29.13	2445	0.20	0.35	1.0	L	
HUMUULA SHEEP STH	HSSN	N	19	36.31	155	29.13	2445	0.20	0.35	1.0	L	
HOT CAVES	HTC	Z	19	14.33	155	24.02	381	-0.16	-0.07	0.0	E4	
HUALALAI	HUA	Z	19	41.25	155	50.32	2189	0.67	0.38	3.0	L4	D
HEIHEIAHULU	HUL	Z	19	25.13	154	58.72	369	-0.17	-0.16	1.6	E4	DS
HEIHEIAHULU	HULE	E	19	25.13	154	58.72	369	-0.17	-0.16	1.0	E4	
HEIHEIAHULU	HULN	N	19	25.13	154	58.72	369	-0.17	-0.16	1.0	L4	
KAAPUNA	KAA	Z	19	15.98	155	52.28	524	-0.12	-0.01	3.5	L4	D
KAENA POINT	KAE	Z	19	17.35	155	7.95	37	-0.01	0.06	1.4	L4	D
KAHAUALEA	KAH	Z	19	24.58	155	4.36	625	-0.25	-0.30	0.0	L4	DH
KAOIKI FAULTS	KFA	Z	19	25.26	155	25.14	1579	0.13	0.17	0.0	E	
KAHUKU	KHU	Z	19	14.90	155	37.10	1939	0.03	-0.03	2.7	E4	D
KANEKII	KII	Z	19	30.56	155	45.90	1841	0.15	0.37	2.9	L4	D
KANEKII	KIIE	E	19	30.56	155	45.90	1841	0.15	0.37	1.0	L	
KANEKII	KIIN	N	19	30.56	155	45.90	1841	0.15	0.37	1.0	L	
KEANAKOLU	KKU	Z	19	53.39	155	20.58	1863	0.68	0.24	3.3	L4	D
PUU KALIU	KLU	Z	19	27.48	154	55.26	271	-0.17	-0.30	2.9	L4	D
KAMOAMOA	KMM	Z	19	23.47	155	6.98	750	-0.25	-0.30	2.4	L4	DH
KAMOAMOA EAST-WE	KMME	E	19	23.47	155	6.98	750	-0.25	-0.30	1.0	L4	
KAMOAMOA NORTH-S	KMMN	N	19	23.47	155	6.98	750	-0.25	-0.30	1.0	L4	
KOHALA	KOH	Z	20	7.69	155	46.77	1166	-0.03	-0.17	1.5	L4	D
KOHALA	KOHE	E	20	7.69	155	46.77	1166	-0.03	-0.17	2.2	L4	
KOHALA	KOHN	N	20	7.69	155	46.77	1166	-0.03	-0.17	2.2	L4	
KIPUKA NENE	KPN	Z	19	20.10	155	17.40	924	-0.11	-0.08	3.5	E4	D
KAPOHO	KPO	Z	19	30.02	154	50.51	134	-0.09	-0.24	2.5	L4	D
MAUNA LOA	MLO	Z	19	29.80	155	23.30	2010	0.03	0.08	5.8	L4	SD
MAUNA LOA	MLOE	E	19	29.80	155	23.30	2010	0.03	0.08	0.0	L4	
MAUNA LOA	MLON	N	19	29.80	155	23.30	2010	0.03	0.08	1.5	L4	
MAUNA LOA X	MLX	Z	19	27.60	155	20.70	1475	0.06	0.15	3.0	L4	
MOKUAWEOWEO	MOK	Z	19	29.28	155	35.98	4104	0.15	0.16	5.5	L4	D
MAKAOPUHI	MPR	Z	19	22.07	155	9.85	881	-0.17	-0.20	4.2	L4	D
MOUNTAIN VIEW	MTV	Z	19	30.25	155	3.75	409	-0.02	0.01	5.0	E4	D
NATIONAL GUARD	NAG	Z	19	42.12	155	1.72	18	0.54	0.30	3.2	E4	D
NORTH PIT	NPT	Z	19	24.90	155	17.00	1115	-0.30	-0.18	3.0	E4	SD
NORTH PIT	NPTE	E	19	24.90	155	17.00	1115	-0.30	-0.18	0.0	E4	
NORTH PIT	NPTN	N	19	24.90	155	17.00	1115	-0.30	-0.18	0.0	E4	
OUTLET	OTL	Z	19	23.38	155	16.94	1038	-0.19	-0.18	4.9	L4	

Table 1 (continued)

PAUAHI	PAU	Z	19 22.62	155 13.10	994	-0.21	-0.24	2.4	L4	SD
PAUAHI	PAUE	E	19 22.62	155 13.10	994	-0.21	-0.24	0.0	L4	
PAUAHI	PAUN	N	19 22.62	155 13.10	994	-0.21	-0.24	0.0	L4	
PUU ULAULA	PLA	Z	19 32.00	155 27.67	2992	-0.03	0.13	5.4	L	D
POHOIKI	POI	Z	19 27.42	154 51.22	16	-0.09	-0.24	0.0	L4	
POLIOKEAWE PALI	POL	Z	19 17.02	155 13.47	169	-0.02	0.03	2.8	E4	D
PUU PILI	PPL	Z	19 9.50	155 27.87	35	-0.15	-0.15	1.7	E4	D
RIM	RIM	Z	19 23.90	155 16.60	1128	-0.21	-0.13	0.0	L4	
SOUTH POINT	SPT	Z	18 58.91	155 39.92	244	-0.17	-0.22	2.8	L4	D
SOUTH POINT	SPTE	E	18 58.91	155 39.92	244	-0.17	-0.22	0.0	L4	
SOUTH POINT	SPTN	N	18 58.91	155 39.92	244	-0.17	-0.22	0.0	L4	
SOUTHWEST RIFT	SWR	Z	19 27.26	155 36.30	4048	0.01	0.04	5.6	E4	D
TRAIL	TRA	Z	19 24.91	155 32.96	3207	0.00	0.00	0.0	L4	
UWEKAHUNA	UEE	E	19 25.40	155 17.60	1240	-0.21	0.00	2.0	E	P
UWEKAHUNA	UEN	N	19 25.40	155 17.60	1240	-0.21	0.00	2.0	E	P
UWEKAHUNA	UEZ	Z	19 25.40	155 17.60	1240	-0.21	0.00	2.0	E	P
WAIKII	WAI	Z	19 51.58	155 39.60	1433	0.20	0.35	0.0	L4	
WAHAULA	WHA	Z	19 19.90	155 2.92	29	-0.10	-0.04	1.5	E4	D
WILKES CAMP	WIL	Z	19 28.15	155 35.02	4037	0.22	0.17	2.6	E4	D
WILKES CAMP EAST	WILE	E	19 28.15	155 35.02	4037	0.22	0.17	0.0	L	
WILKES CAMP NORT	WILN	N	19 28.15	155 35.02	4037	0.22	0.17	0.0	L	
WEATHER OBSERVAT	WOB	Z	19 32.31	155 35.01	3396	0.00	0.00	0.0	E4	
WOOD VALLEY	WOO	Z	19 15.08	155 30.12	909	-0.15	-0.06	4.6	E4	

Table 2. Seismic Instrumentation Types

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

Type 1. (Codes E, L, and 4) Consists of:

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

b) Preamp/VCO - USGS/OEVE Model J302 or 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 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.

Type 4. (Code S) Consists of:
Sprengnether short period vertical and horizontal seismometers (E-W) with 1.5 sec. galvanometers, coupling factor = 0.25, 2X critically damped. Peak magnification approximately 1500X at 2 Hz.

Type 2 instruments have been discontinued.

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

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

Codes (TE) and (S5) are experimental seismometers.

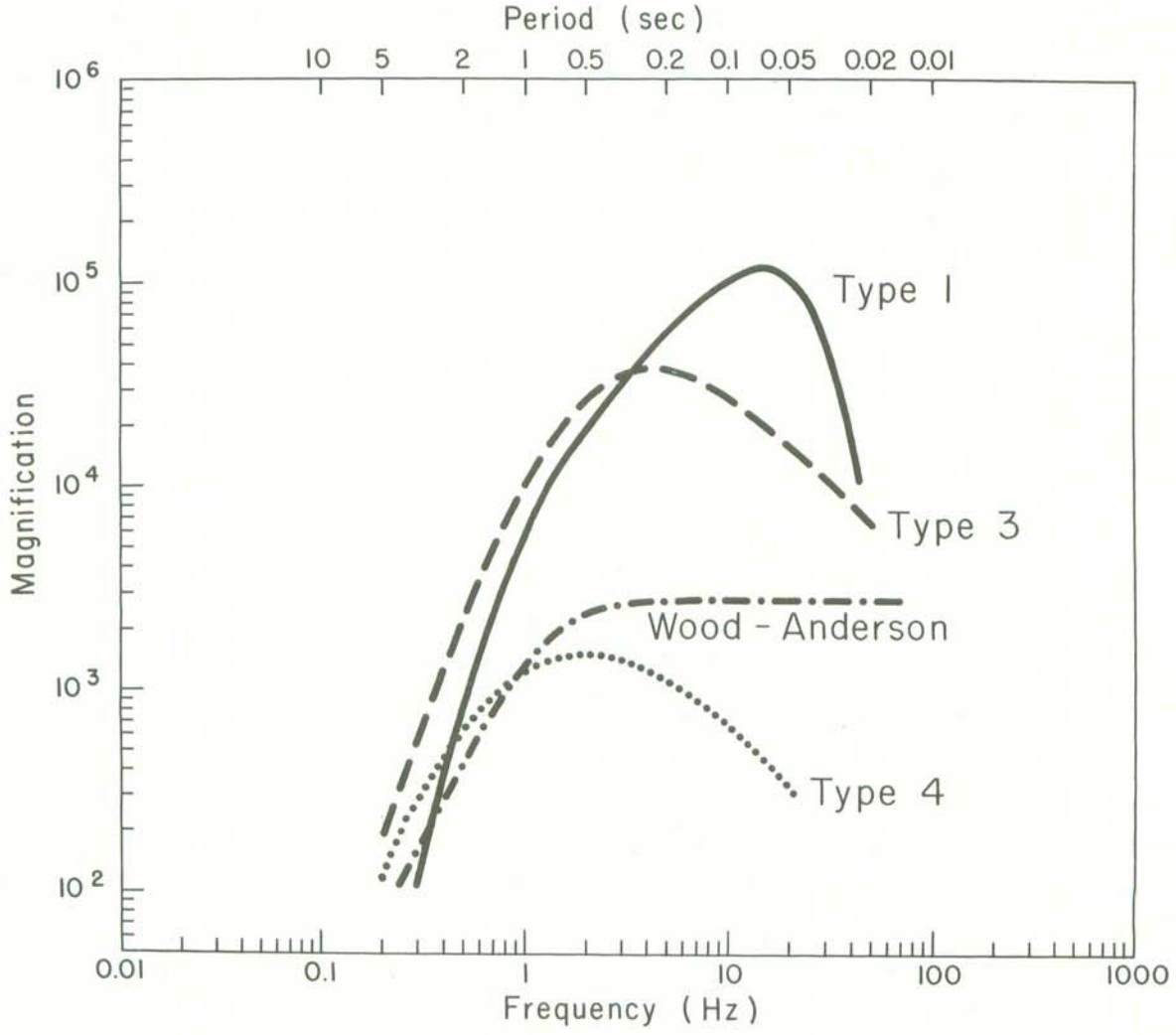

Figure 4. System response curves for the Wood-Anderson torsion seismograph and for the 3 different types of seismometers in use by the Hawaiian Volcano Observatory. Types 3 and 4 are electro-mechanical seismographs recorded optically on photographic paper. Type 1 is the standard OEVE seismometer recorded 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 reponse for an individual station.

SEISMIC DATA PROCESSING

Develocorder films are scanned on a daily basis for earthquakes, and coda durations are measured for magnitude determination. Events are digitized, timed, and located on the Eclipse computer at HVO. Computer locations are made using the program HYPOINVERSE (Klein, F.W., Hypocenter location program HYPOINVERSE, U.S.G.S. Open file report 78-694, 1978), and problem events are reread and rerun. Magnetic tape copies of all arrival time and output summary data are kept in Menlo Park and HVO.

The crustal model used is specified by velocities at 4 depth points. Velocity at any depth is given by linear interpolation between points and uses a homogeneous half-space 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. Delay model 1 is used for events on Kilauea and its south flank, and delay model 2 applies to the rest of the island and offshore earthquakes. The delay models are in fact separated by a circle of radius 34 km centered at 19°22'N and 155°10'W.

Magnitudes for most events were 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 3 and CAL factors. Amplitude magnitudes larger than 2.5 are generally based on the Wood-Anderson instruments in Hilo or Type 4 seismographs at Uwekahuna. Smaller events may occasionally include amplitude readings from stations AHU, OTL, PPL, KHU, or WIL.

Duration magnitudes are determined from the length of signal in seconds read from the Develocorder viewer. This time, also called the "F-P time" is measured from the first P arrival to the point where the earthquake signal has decayed 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 only read 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:

$$\text{duration } <210 \text{ sec} \quad M = -5.2 + 3.89 \log (F-P) + .013\, Z + .0037\, D$$
$$\text{duration } >210 \text{ sec} \quad M = -.905 + 2.026 \log (F-P) + .013\, Z + .0037\, D$$

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

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 generally 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 on the south flank, but nearly all events above magnitude 4.0 are located with limited precision.

Data presented in the seismic summary is in four parts. 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. 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 varied according to region.

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 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 imply an overlap, precedence is given according to Figures 5-8. Table 6 relists 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:

1) Kilauea summit, short period caldera: shallow earthquakes beneath the caldera.
2) Kilauea summit, long period caldera: earthquakes characterized by low frequency signatures, often originating 5-10 km below the caldera.
3) Kilauea summit 30 km: deep earthquakes about 30 km beneath the summit region.
4) Kaoiki and southwest rift: earthquakes beneath the southwest rift of Kilauea, western parts of the Koae faults and adjacent Kaoiki fault system.
5) Upper east rift: earthquakes in the upper and middle east rift zone, the adjacent parts of the south flank, and eastern parts of the Koae faults.
6) Lower east rift: earthquakes in the lower east rift zone and adjacent parts of the south flank.
7) Offshore PPL: earthquakes from offshore areas south of the Puu Pili station, including Loihi seamount.
8) Mauna Loa long period: low frequency events near Mauna Loa summit.
9) Mauna Loa short period: shallow earthquakes in the Mauna Loa caldera region.

Tremor is separated into four categories: shallow, intermediate and deep Kilauea, and Mauna Loa. Depth is inferred on the basis of relative amplitudes on seismographs.

	KILAUEA SUMMIT			KILAUEA FLANK				MAUNA LOA		TREMOR (MINUTES)			
DATE 1984	SHORT PER. CALDERA	LONG PER. CALDERA	30 KM	KAO. & SW RIFT	UP. EAST RIFT	LOW. EAST RIFT	OFF-SHORE PPL'	LONG PER.	SHORT PER.	KILAUEA INT. SHAL.	KILAUEA DEEP	MAUNA LOA	NER
JAN 1	41	31	2	109	298	3		10	10	1440			5
2	53	20		130	370	3		177	12	1440			12
3	46	26	1	210	282	18			23	1440	15		18
4	40	30		114	345	6			8	1440	8		7
5	67	6		161	161	6		1	12	1440			17
6	64	13	2	158	345	3		2	7	1440			13
7	55	11		184	329	7		3	4	1440			
8	86	5	19	180	282	9		2	14	1440	3		13
9	52	10	15	140	245			4	7	1440			14
10	39	4	18	142	269	5		2	8	1440			5
11	94	6	10	173	206	1		13	17	1440			3
12	77	1		145	184	4		6	6	1440	37		1
13	58	1	16	147	238	8		4	3	1440			11
14	38		14	148	209	4		6	5	1440			10
15	18	1	13	165	314	11		11	5	1440			9
16	13		15	160	283	12		4	3	1440			3
17	19		8	161	245	15		4	7	1440			14
18	17		8	147	313	3		1	8	1440			20
19	14	1		104	323	6		5	6	1440			
20	12		8	118	59	5		1	16	1440			10
21	11		5	168	39	2		6	40	1440			9
22	13	46	14	160	153			6	52	1440	3		9
23	21	6	8	125	54			7	36	1440			10
24	8	7	7	118	86	3		3	71	1440	24		5
25	14		1	128	114	5		5	51	1440			1
26	20		2	101	120	7		2	14	1440			1
27	24		9	128	113	6		3	45	1440			8
28	22	1	6	145	113	2		3	44	1440			4
29	25	4		129	85	3		2	50	1440			6
30	11	2		95	15	3		3	9	1440			6
31	17	1264	14	111	140	5		24	9	1440			15
FEB 1	18	243	7	101	129	4		19	16	1440			20
2	13	6		106	153	6		56	29	1440		3	3
3	22	2	13	124	137	5		25	16	1440	42		14
4	31	4	6	120	139	11		27	9	1440			10
5	48	1	26	113	167	7		22	8	1440	20		9
6	38	16	18	135	138			13	8	1440			7
7	31		15	120	111	5		25	19	1440			15
8	31	4		75	104	10		12	6	1440			12
9	32			120	34	9			13	1440			1
10	106	3	30	120	51	7		5	7	1440			5
11	51	1	6	110	74	7		10	29	1440			13
12	70			164	92	8		9	36	1440			15
13	62	30	9	128	85	3		1	62	1440			10
14	21		4	95	24	7			22	1440			4

	KILAUEA SUMMIT			KILAUEA FLANK				MAUNA LOA		TREMOR (MINUTES)			
DATE 1984	SHORT PER. CALDERA	LONG PER.	30 KM	KAO. & SW RIFT	UP. EAST RIFT	LOW. EAST RIFT	OFF-SHORE PPL'	LONG PER.	SHORT PER.	KILAUEA INT. SHAL.	KILAUEA DEEP	MAUNA LOA	NER
FEB15	19	1631		99	290	1		2	36	1440			
16	20	184	7	96	123	3			15	1440			8
17	18	7		94	124	2			7	1440			
18	22	1		97	186	1		4	22	1440	38		3
19	18	2		108	84			4	19	1440			1
20	19	1	5	90	71	3			12	1440			13
21	12		1	91	87	5		1	9	1440			3
22	27	1	6	117	113	8		3	13	1440			6
23	37	5		118	143			2	24	1440			1
24	70	2	7	108	106	5			24	1440			15
25	91	4	3	141	86	2			65	1440			4
26	75	5	4	130	101	14			60	1440			16
27	54	1		89	101	1		1	40	1440			
28	99	8	1	110	88	7			46	1440			12
29	61	5		89	202	1		2	26	1440			
MAR 1	72	1	1	93	97	6			42	1440			
2	92	4	5	85	71	4			16	1440			8
3	40	1	2	99	37	4			26	1440			9
4	22		6	98	130	5			31	1440			4
5	6	1507		74	323	2		2	29	1440		6	
6	12	380		112	210	7		4	39	1440	35		21
7	17	86	3	89	213	3		2	50	1440			19
8	11	3		89	253	11			66	1440			5
9	19	12	1	79	209	3		2	66	1440			11
10	24	3	3	88	218	7			56	1440	18		13
11	27	2		99	276	6			31	1440			1
12	22	14	5	113	135	3			97	1440			6
13	25	26	4	107	113	7		2	134	1440	5		5
14	43	12	7	71	164	8		1	53	1440			11
15	28	5	1	73	176	5		3	21	1440			1
16	46	17		87	194	4		1	145	1440			15
17	70		1	112	264	6		1	136	1440			5
18	57	3		53	137	5		8	65	1440			7
19	83	15		92	82	8		1	44	1440	8		3
20	83	15		85	103	5		2	59	1440			13
21	101	8		97	127	1			64	1440	4		7
22	83	3		71	106	5		2	37	1440			1
23	90	5	1	64	120	8		5	32	1440	5		10
24	103	29		67	119	9			281	1440		510	5
25	18		1	38	195	2		5	533	1440		1440	30
26	43	15		82	5			2	164	1440		1440	
27	29			25	63				196	1440		1440	
28	47			39	80	5			549	1440		1440	
29	14		1	23	60			10	635	1440		1440	
30	3			25	28	3		2	804	1440		1440	

	KILAUEA SUMMIT			KILAUEA FLANK				MAUNA LOA		TREMOR (MINUTES)		
DATE 1984	SHORT PER. CALDERA	LONG PER. CALDERA	30 KM	KAO. & SW RIFT	UP. EAST RIFT	LOW. EAST RIFT	OFF-SHORE PPL'	LONG PER.	SHORT PER.	KILAUEA INT. SHAL.	KILAUEA DEEP	MAUNA LOA
MAR31	5	714		19	82	10		1	595	1440	1440	
APR 1	6	31	1	28	96	3		1	740	1440	1440	
2	9	14		6	55	5		2	870	1440	1440	
3	10		1	23	66	3		2	1097	1440	1440	
4	16			20	57	2		8	1693	1440	1440	
5	16	4	1	90	75	2		15	1595	1440	1440	
6	24	21		30	58	2		7	1731	1440	1440	
7	14	6		38	64	2		13	1510	1440	1440	
8	18	1		73	61			15	844	1440	1440	
9	27	12		29	100	8		1	721	1440	1440	
10	50	49		30	73	3		5	696	1440	1440	
11	33	30		34	113	2		12	651	1440	1440	
12	137	15		37	74	6		21	1514	1440	1440	
13	70	1	1	21	50			28	1104	1440	1440	1
14	18		1	57	41			77	976	1440	1440	2
15	44	9		33	40	3		26	1062	1440	1440	161
16	88	1	1	41	31	2		8	860	1440	1440	284
17	113	26	1	54	66			12	688	1440	1440	233
18	71	32		56	37	2		1	739	1440	1440	202
19	16			34	21	1		16	630	1440		83
20				41	27	8		5	658	1440		173
21	4	432		50	506	1		1	543	1440		240
22	3	37		50	546	1		83	484	1440		162
23	6	12	1	39	364			40	475	1440	6	281
24	7	32		44	527	1		55	353	1440		302
25	15	183		79	418	4		15	441	1440		510
26	31	110	1	63	326	5		1	433	1440		551
27	28	180		83	202	6		2	253	1440		574
28	25	95	1	30	138	3			182	1440	40	649
29	20	23		53	185	1		6	123	1440		793
30	29	73		57	185	9		1	112	1440		878
MAY 1	39	40	1	41	230	5		7	164	1440		1450
2	24	30		25	220				39	1440		945
3	22	17		36	186			96	208	1440	4	873
4	45	19		44	234	4			178	1440		1697
5	44	54		55	275	5			125	1440		1896
6	49	7	1	60	190	1		143	127	1440	2	599
7	41	8	1	58	133			126	38	1440		373
8	73	27		50	164	4		45	98	1440		630
9	70	62	1	45	135	3		45	80	1440		733
10	48	9	2	62	215			59	70	1440		507
11	68	18		55	264	4		27	57	1440	6	580
12	89	7		66	176	12		17	62	1440		685
13	127	10	1	52	168	1		34	37	1440		528
14	124	45		47	100	9		33	60	1440		507

	KILAUEA SUMMIT			KILAUEA FLANK				MAUNA LOA		TREMOR (MINUTES)			
DATE 1984	SHORT PER. CALDERA	LONG PER.	30 KM	KAO. & SW RIFT	UP. EAST RIFT	LOW. EAST RIFT	OFF-SHORE PPL'	LONG PER.	SHORT PER.	KILAUEA INT. SHAL.	KILAUEA INT. DEEP	MAUNA LOA	NER
MAY15	69	49		43	150	1		29	56	1440			480
16	32	8		47	52	4		12	42	1440			518
17	23	3	2	46	161			16	30	1440	30		401
18	27	13		29	47	7		15	30	1440			417
19	43	15		48	62	4		20	23	1440			385
20	47	23		45	81	6		14	40	1440	20		494
21	46	14		37	109	5		3	42	1440			623
22	69	34		38	115	13		93	55	1440	4	8	413
23	86	20		46	190	7		4	9	1440			213
24	105			47	199	1		13	68	1440			504
25	138	6		42	121	3		14	13	1440			456
26	257	8	1	52	191			12	23	1440			498
27	132	6		46	93	2		31	10	1440			442
28	70	8		26	46	6		4	22	1440	5		379
29	39	12	1	47	46	6		21	49	1440			488
30	63	18		55	124	4		44	157	1440			376
31	87	3	2	46	170	1		17	34	1440			30
JUN 1	126	11		44	149	7		38	27	1440			249
2	138	7		38	76	1		94	45	1440			206
3	151	3		64	63	1		15	29	1440			177
4	364	22		50	142	10		57	45	1440			148
5	263	22	2	32	168	8		53	26	1440			142
6	170	9		50	173	7		31	21	1440			100
7	49	12		53	76	4		16	22	1440			98
8	123	4		59	190	10		19	27	1440	7		144
9	47	71	1	65	125	8		10	21	1440			104
10	17	20	1	80	41	2		19	19	1440			114
11	32	22		58	67	5		58	21	1440	7		105
12	27	5		50	70	10		52	27	1440	18		96
13	33	12		43	76	7		25	14	1440			48
14	35	1	2	57	138	1		25	16	1440	15		88
15	42	39		41	164	7		7	21	1440			102
16	44	7		36	129	5		35	23	1440	6		90
17	58	1		53	121			17	22	1440			99
18	84	26	2	54	146	8		36	25	1440			88
19	82	8		46	250	11		10	18	1440	5		74
20	101	11		47	227	18		5	10	1440			88
21	93	3	1	73	106	1		2	24	1440			46
22	114	6		45	126	14		15	20	1440			80
23	121	10		47	177	8		14	34	1440			76
24	147	4	2	50	200	1		8	14	1440			90
25	130	30	2	28	128	8		6	18	1440	21		65
26	146	34		35	170	10		8	20	1440			69
27	141	31	1	53	78	4		2	25	1440			62
28	188	63	2	33	80			6	12	1440			65

	KILAUEA SUMMIT			KILAUEA FLANK				MAUNA LOA		TREMOR (MINUTES)				
DATE 1984	SHORT PER. CALDERA	LONG PER.	30 KM	KAO. & SW RIFT	UP. EAST RIFT	LOW. EAST RIFT	OFF-SHORE PPL'	LONG PER.	SHORT PER.	KILAUEA INT. SHAL.	KILAUEA INT. DEEP	MAUNA LOA		NER
JUN29	132	7		41	114	8		19	12	1440				78
30	45	254		53	128	11		8	16	1440	3	3		62
JUL 1	17	404		39	200	5		10	24	1440				17
2	21	22		61	133	4		12	21	1440				56
3	29	2		48	186	3		15	22	1440				82
4	47		2	45	267	7		9	19	1440				94
5	40	8	3	34	185	1		6	19	1440				85
6	67	5		56	222	10		4	22	1440		4		52
7	57	10		51	96	12		9	10	1440			4	67
8	69	6		37	74	2		4	20	1440				72
9	11	1345	1	49	193	4		10	32	1440				55
10	8	1470		56	207	4		18	17	1440				63
11	19	207		53	134	7		12	8	1440				62
12	28	41	3	53	154	2		3	6	1440				62
13	23	6	1	34	82	5		2	9	1440				66
14	25	6	2	43	149	4		5	13	1440				39
15	35	32		57	159	3		12	14	1440		3		90
16	35	6	1	46	175	11		12	14	1440		7		84
17	62	3		44	210	14		21	12	1440				74
18	42	8	1	41	136	11		7	17	1440				75
19	52			46	240	5		12	23	1440				56
20	59	6	1	51	374	8		3	13	1440				6
21	98	1		48	224	3		2	14	1440				110
22	100	6		35	98			8	14	1440				71
23	82	12		61	130	6		5	9	1440		6		55
24	91	10	1	50	87	11		7	16	1440		30		65
25	153	15		48	137	8		10	12	1440				60
26	159	19	4	59	96	3		6	11	1440				75
27	179	19		56	60	6		6	8	1440		4		47
28	31	2		47	28	2		4	7	1440				38
29	24	2090		50	92	2		4	13	1440				40
30	12	1054		46	123	1		8	9	1440				69
31	19	336	1	49	108	3		12	12	1440				76
AUG 1	24	281		39	101	8		1	7	1440		28		61
2	31	32		40	131	6		8	3	1440				50
3	37	20		59	87	2		6	7	1440		7		43
4	27	7	2	47	54	7		2	3	1440		22		43
5	30	32		40	115			9	5	1440		33		51
6	34	12	2	53	101	6		5	11	1440				45
7	51	22	1	40	205	2		5	7	1440				56
8	80	30	3	45	160	9		3	6	1440				41
9	70	23	2	49	267	1		2	12	1440				65
10	71	2	2	38	180	6		3	7	1440	2			48
11	91	17	1	44	223	8		9	7	1440				44
12	108	5	1	39	186	1		5	13	1440				69

	KILAUEA SUMMIT			KILAUEA FLANK				MAUNA LOA		TREMOR (MINUTES)		
DATE 1984	SHORT PER. CALDERA	LONG PER.	30 KM	KAO. & SW RIFT	UP. EAST RIFT	LOW. EAST RIFT	OFF-SHORE PPL'	LONG PER.	SHORT PER.	KILAUEA INT. SHAL.	KILAUEA DEEP	MAUNA LOA	NER
AUG13	123	4		48	110	9		3	7	1440			46
14	140	8		46	123	9		5	10	1440	33		48
15	119	1		49	113	8		2	11	1440			37
16	163	1		50	138				12	1440			47
17	220	2	2	46	182	5		9	9	1440			76
18	219	7	3	41	205	12		3	18	1440	25		65
19	160	11		38	72	3		3	18	1440			62
20	14		1	36	684	3			4	1440			25
21	8	2238	1	46	478	6		2	12	1440	29		36
22	11	1687		37	150	6		2	7	1440	40		41
23	11	1004		22	219	3		3	9	1440	8		55
24	24	951	1	41	141	6			4	1440			38
25	19	397		58	80	3		6	8	1440			42
26	41	39		40	71	2			6	1440			73
27	35	20	1	37	78	4		1	2	1440	6		42
28	42	7	1	45	94	8		6	10	1440			41
29	47	22		49	76	5		11	6	1440			30
30	43	10		42	92	2		4	6	1440			39
31	49	13		59	89	2		3	11	1440			50
SEP 1	83		1	45	101	3		1	8	1440			74
2	90	6		37	158	2			10	1440			60
3	87	1		70	176	13		2	14	1440			3
4	118	14		42	141	6		1	10	1440			36
5	144	5	1	37	138	4		8	9	1440			38
6	196	10		32	207	3		9	2	1440			47
7	259	3		37	125	4		3	8	1440			34
8	195	1		38	84	8		2	8	1440	60		33
9	124	4	2	44	108	5		3	4	1440			49
10	165	8		33	143	9		1	7	1440			46
11	150	3	1	37	127	3		2	3	1440			23
12	158	4		41	170	4		9	9	1440			28
13	110	39	39	25	236	15		4	13	1440			
14	220	3	1	40	217	5		6	10	1440	5		33
15	230	4		60	214	6		2	3	1440			26
16	209	18		49	210	4		4	6	1440			38
17	292	7	1	63	235	8			9	1440			30
18	269	33		23	231	2			10	1440			42
19	201	79	1	28	148	8		1	11	1440			26
20	6	1116	2	44	511	6		2	6	1440			26
21	7	1076	1	32	450	5			3	1440			45
22	29	882	2	34	356	5			5	1440	7		35
23	31	720	1	54	191	6		1	3	1440			54
24	69	201		21	169	6			8	1440	35		46
25	29	181		53	82	12		5	12	1440	59		17
26	59	30	1	37	132	2			7	1440	3		42

	KILAUEA SUMMIT			KILAUEA FLANK				MAUNA LOA		TREMOR (MINUTES)			
DATE 1984	SHORT PER. CALDERA	LONG PER. CALDERA	30 KM	KAO. & SW RIFT	UP. EAST RIFT	LOW. EAST RIFT	OFF-SHORE PPL'	LONG PER.	SHORT PER.	KILAUEA INT. SHAL.	KILAUEA INT. DEEP	MAUNA LOA SHAL.	MAUNA LOA DEEP	NER
SEP27	59	21	1	40	133	1		1	5	1440				50
28	55	51	1	31	97	6		4	3	1440		4		43
29	54	12		50	113	12		4	6	1440				26
30	61	12		51	126	3		1	9	1440				25
OCT 1	70	3	1	40	124	9		1	13	1440				42
2	51	6	1	35	133	2		4	3	1440				42
3	85	3	1	29	153	2			7	1440				48
4	115	6		36	146	7		4	8	1440				51
5	93	4		39	113			3	4	1440				39
6	113	1	1	34	165	6		10	6	1440				58
7	94	5		37	100	5		1	3	1440				51
8	126	6		44	71	1		1		1440				27
9	150	2		31	82	8		2	2	1440				18
10	176			31	100	2				1440				18
11	160	11		36	180	1		2	5	1440				45
12	156	4		37	156	7			7	1440		33		22
13	158	92	1	18	245	3		3	5	1440	10			23
14	218	43		27	178			5	7	1440				36
15	140	8	2	11	143			3		1440				32
16	168	4		47	113			2	4	1440				17
17	205	5		44	180			2	4	1440				37
18	257	7		36	217	11		8	8	1440				24
19	187	4	1	34	185	11		1		1440				18
20	241	7	2	38	207	18		4	2	1440		7		27
21	277	16		33	177				3	1440				33
22	261	20	1	35	225	3				1440				32
23	214	17		31	195	7		3	5	1440				17
24	197	11		50	165	4		4	5	1440		5		53
25	190	9		42	158	1		2	5	1440		3		57
26	197	6	2	39	172	4			2	1440				68
27	190	4		40	166	8		2	5	1440				72
28	189	34	1	39	155	3		37	9	1440				28
29	184	18	1	48	176	10		4	4	1440		2		72
30	222	21		38	158	7			4	1440				71
31	207	33		41	83	6		1	4	1440				83
NOV 1	197	43		33	71	5		3	6	1440				79
2	84	57		38	1561	4		2	1	1440				70
3	60	421		27	1483	2			3	1440				54
4	58	263		31	298	1			10	1440				1
5	22	8		35	147	3		4	4	1440		37		82
6	33	29		54	136	15	1	3	2	1440				87
7	55	14		39	87	5		6	7	1440				63
8	69	16		49	79	12		6	10	1440				53
9	61	22		43	81	5		1	1	1440				67
10	8	38		47	63	6	19	1	8	1440				66

	KILAUEA SUMMIT			KILAUEA FLANK				MAUNA LOA		TREMOR (MINUTES)		
DATE 1984	SHORT PER. CALDERA	LONG PER.	30 KM	KAO. & SW RIFT	UP. EAST RIFT	LOW. EAST RIFT	OFF-SHORE PPL'	LONG PER.	SHORT PER.	KILAUEA INT. SHAL.	MAUNA LOA DEEP	NER
NOV11	110	163		50	105	10	1	2	4	1440		53
12	301	37	1	52	130	13	1	1	6	1440	4	51
13	135	64		50	135	7		1	2	1440	8	76
14	152	73		28	90	3	1	1	4	1440		61
15	159	7		49	96	8	2	1	4	1440		25
16	153	241	440	39	65	1		6		1440		26
17	142	41		43	81	3				1440		18
18	102	10		18	59			2		1440	16	14
19	179	35	1	39	42	7			3	1440		30
20	38	282		21	991	3		1	2	1440		19
21	24	1622		37	940	4			2	1440	18	36
22	34	775		33	530	2			2	1440		38
23	43	68	2	42	372	5			8	1440		47
24	37	39		47	468	1		1	1	1440		102
25	96	15	1	24	288				3	1440		22
26	77	26		50	555	4			1	1440	31	43
27	114	64		31	375	11		1	10	1440		73
28	123	59	2	37	141	8		5	4	1440		65
29	185	300		45	150	5		6	5	1440		64
30	159	173	1	47	76	5			4	1440		58
DEC 1	175	82		41	83	10	2	1	1	1440		76
2	192	117		55	112	4		3	2	1440		113
3	156	82	1	52	124	4		8	5	1440	4	57
4	15	71		40	86	6			1	1440		23
5	20	210		35	87	6		1	2	1440		34
6	41	102		30	85	9		3	6	1440		78
7	8	40		22	41	9			1	1440	4	59
8	26	19	1	37	42	6		3	4	1440		50
9	37	8		36	51	10		1	9	1440		
10	33	12		44	75	12		2	2	1440		54
11	45	15	1	39	91	10		4	4	1440	6	59
12	42	24	2	62	122	8		1	8	1440	33	70
13	51	31		48	156	11	1	2	5	1440		84
14	91	10		36	134	3		12	12	1440	12	26
15	82	4	1	31	162	4		20	11	1440	3	27
16	63	34		48	159	1		3	6	1440		84
17	77	26		40	83	10		4	3	1440		50
18	65	45		29	68	7		2	6	1440		38
19	78	38		34	49	5		1	5	1440		79
20	85	59		39	101	15		2	5	1440		81
21	75	73	1	29	138	4	1	1	5	1440		121
22	123	80		108	197	9		2		1440		151
23	203			111	244	7			8	1440		16
24	179	171	1	40	169	10	1	1	7	1440		95
25	183	121		46	134	6		2	9	1440		54

	KILAUEA SUMMIT			KILAUEA FLANK				MAUNA LOA		TREMOR (MINUTES)			
DATE 1984	SHORT PER. CALDERA	LONG PER.	30 KM	KAO. & SW RIFT	UP. EAST RIFT	LOW. EAST RIFT	OFF-SHORE PPL'	LONG PER.	SHORT PER.	KILAUEA INT. SHAL.	KILAUEA INT. DEEP	MAUNA LOA	NER
DEC26	276	10		26	91	1		1	4	1440			21
27	239	89		30	108	10		6	3	1440			59
28	209	85		50	105	4		2	8	1440	7 24		42
29	242	198		46	90	6		4	6	1440			40
30	345	25		58	46	4		10	4	1440			3
31	322	11	2	48	86	12		19	3	1440	6		15

Table 4. Coordinates of named earthquake regions.

--All earthquakes are in one of the following groups.
--Identified by a numerical class or 3-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 SW rifts of Kilauea & Mauna Loa (0-13 km)
17 GLN - Glenwood (0-13 km)
18 SWR - SW rift (0-13 km)
19 INT - Intermediate caldera (0-13 km)
20 KAO - Kaoiki (0-13 km)

--Deep:
21 DEP - Deep Kilauea (>13 km) (below regions 1-13, 17-19)
22 DLS - Deep lower SW rift (>13 km) (below region 14)
23 DML - Deep Mauna Loa (>13 km) (below regions 15, 20)

--Outer regions, all depths:
24 LOI - Loihi (all depths)
25 KON - South Kona (all depths)
26 HUA - Hualalai (all depths)
27 KOH - Kohala (all depths)
28 KEA - Mauna Kea (all depths)
29 HIL - Hilo (all depths)
30 DIS - Distant, everywhere else

Table 4 (continued)

--The latitude and longitude limits of the regions are given below.
--When the coordinates imply an overlap, precedence is given as in the maps.

No.	Code	N.Lat.	S.Lat.	W.Lon.	E.Lon.
1	SNC	19 28	19 24.5	155 19	155 14
2	SSC	19 24.5	19 22	155 19	155 16.5
3	SEC	19 24.5	19 22	155 16.5	155 14
4	SER	19 26	19 20.5	155 14	155 07.2
5	SME	19 26	-----	155 07.2	155 00
6	KOA	19 22	19 20.5	155 17	155 14
7	SSF	-----	19 10	155 17	155 00
8	SLE	19 32	19 16	155 00	154 40
9	SF1	19 22	19 10	155 17	155 14.5
10	SF2	19 26	19 10	155 14.5	155 12.3
11	SF3	19 26	19 10	155 12.3	155 09.1
12	SF4	19 26	19 10	155 09.1	155 05.3
13	SF5	19 26	19 10	155 05.3	155 00
14	LER	19 32	19 16	155 00	154 40
15	MLO	19 35	19 19	155 35	155 19
16	LSW	19 19	18 40	155 43	155 25
17	GLN	19 35	19 26	155 19	155 00
18	SWR	19 22	19 10	155 25	155 17
19	INT	19 28	19 22	155 19	155 14
20	KAO	19 30	19 19	155 32	155 19
21	DEP	19 35	19 10	155 25	155 00
22	DLS	19 19	18 40	155 43	155 25
23	DML	19 35	19 19	155 35	155 19
24	LOI	19 10	18 40	155 25	155 00
25	KON	19 39	19 00	156 20	155 43
26	HUA	19 55	19 39	156 20	155 43
27	KOH	20 25	19 55	156 20	155 34
28	KEA	20 25	19 35	155 34	154 40
29	HIL	19 47	19 32	155 09	154 40

Figure 5. Earthquake classification, shallow 0 - 5 km deep Kilauea and east flank Mauna Loa.

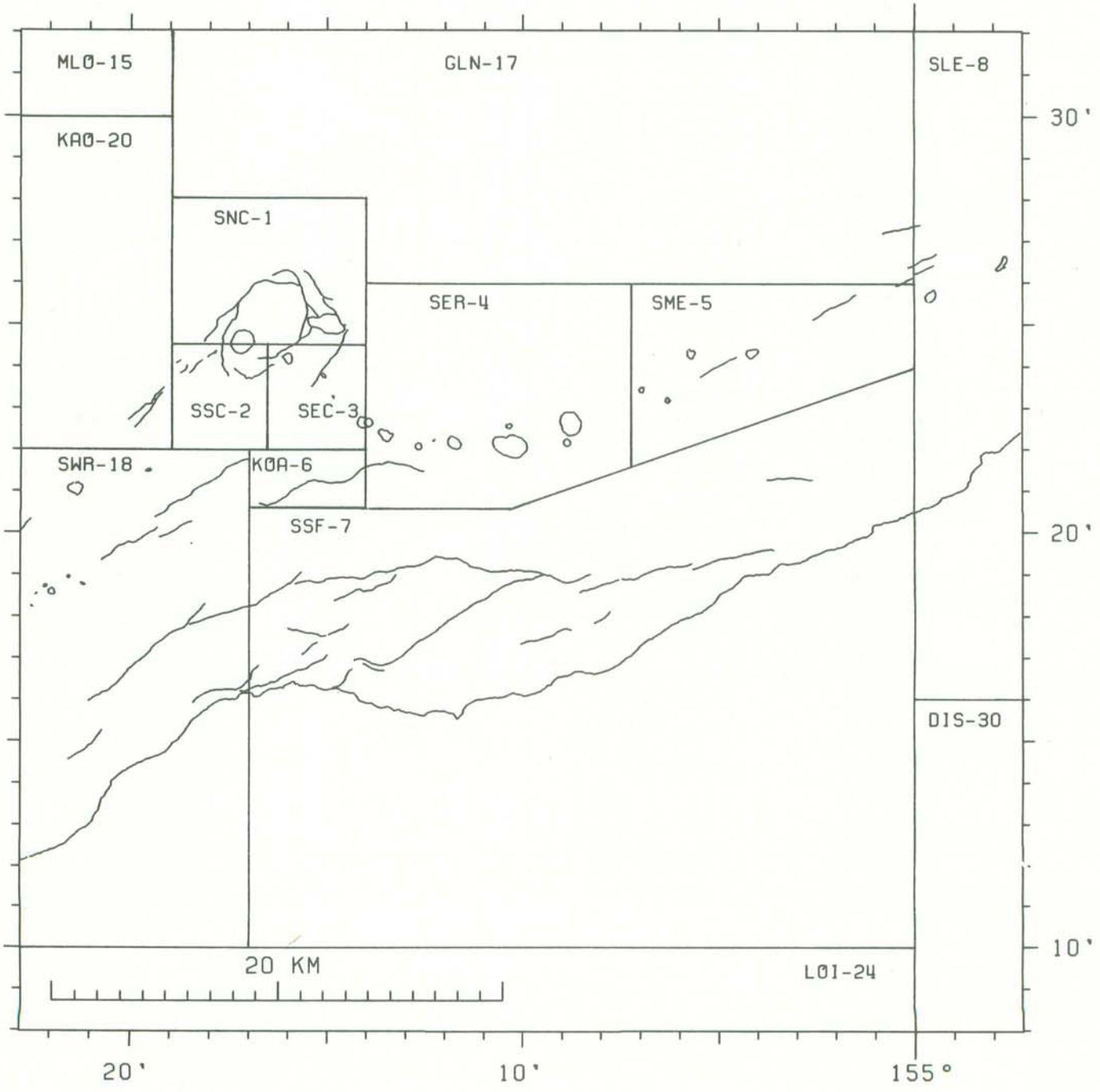

Figure 6. Earthquake classification, intermediate 5 - 13 km deep Kilauea and east flank Mauna Loa.

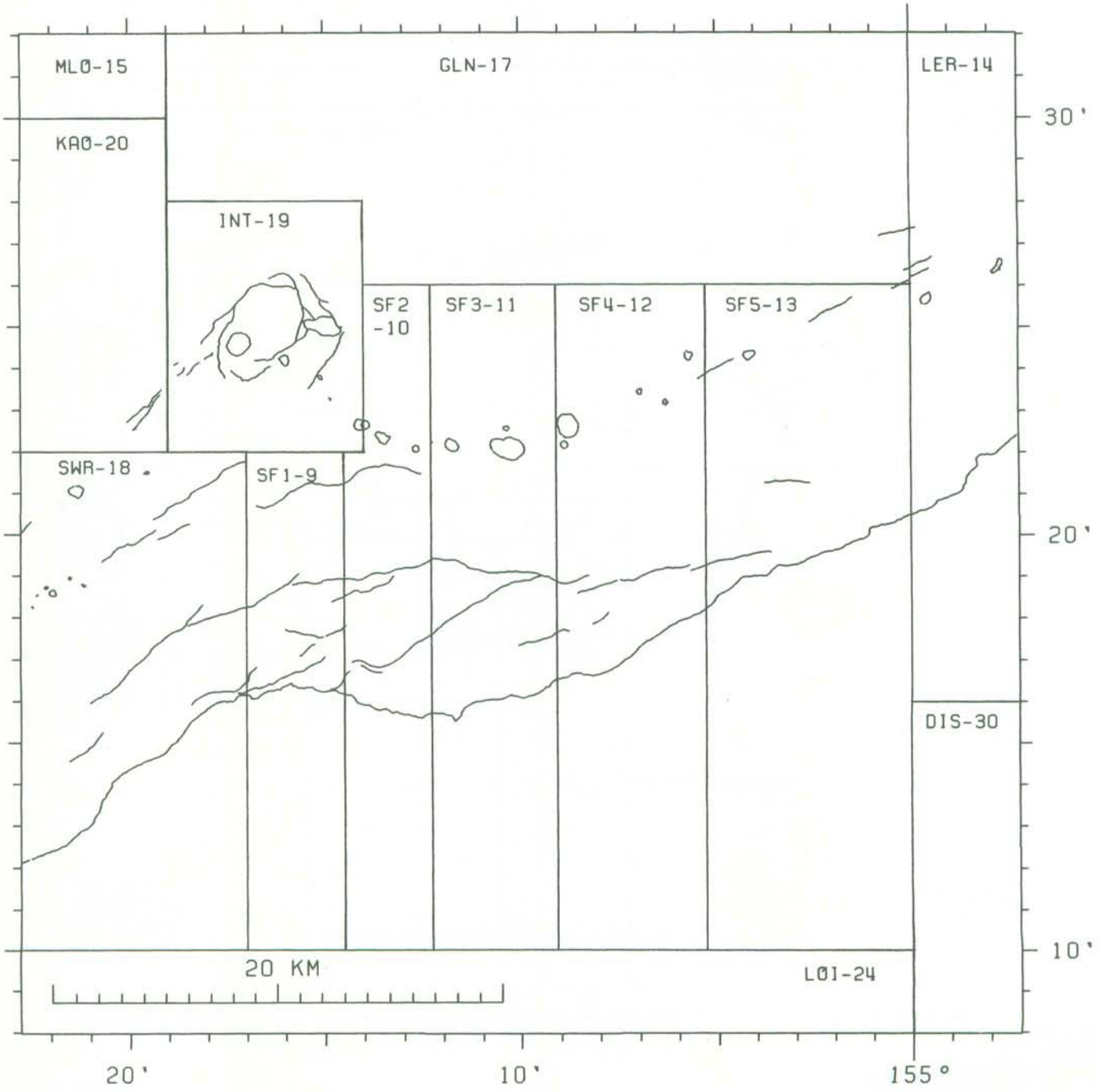

Figure 7. Earthquake classification, crustal 0 - 13 km deep island of Hawaii.

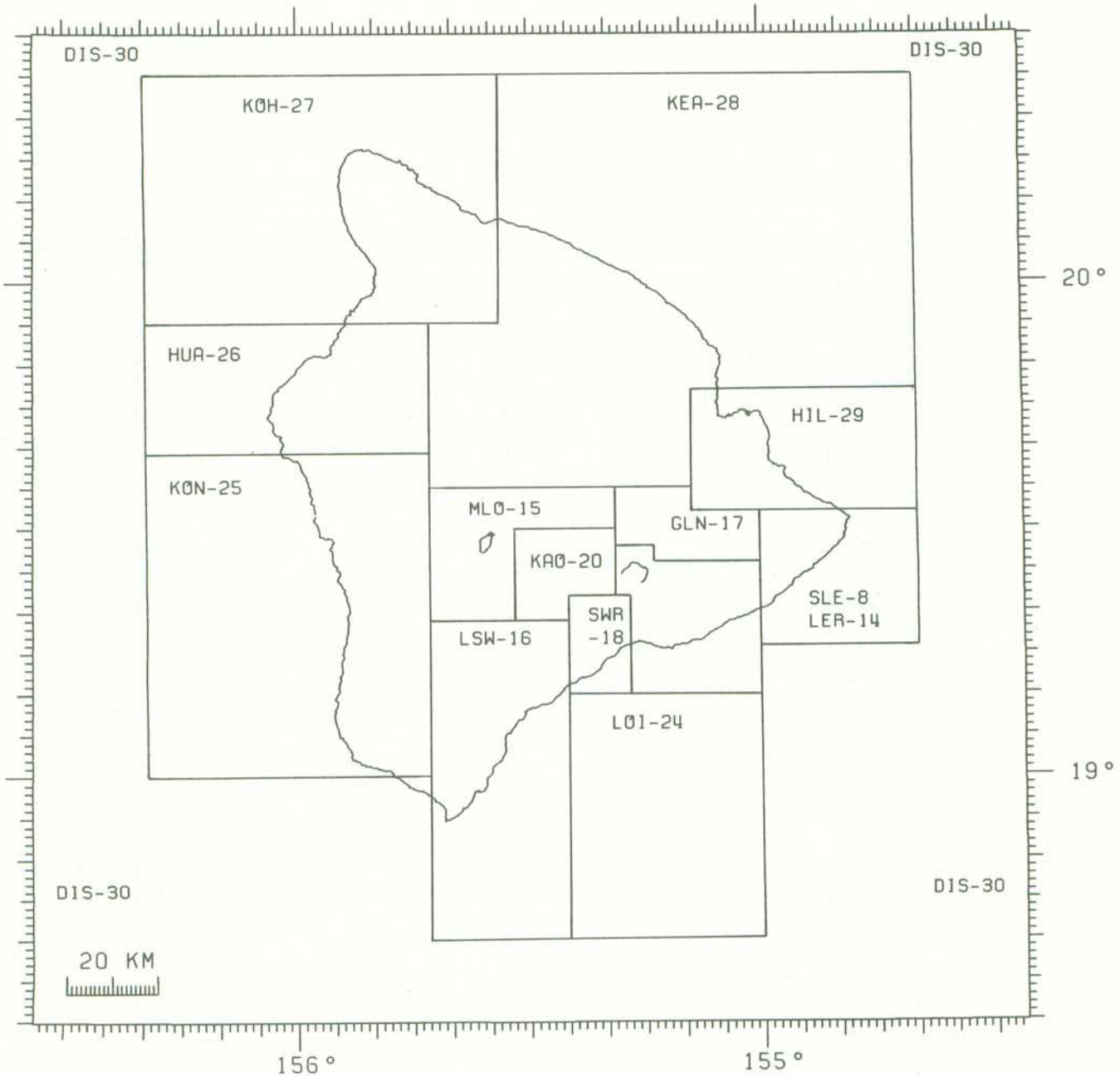

Figure 8. Earthquake classification, mantle greater than 13 km deep island of Hawaii.

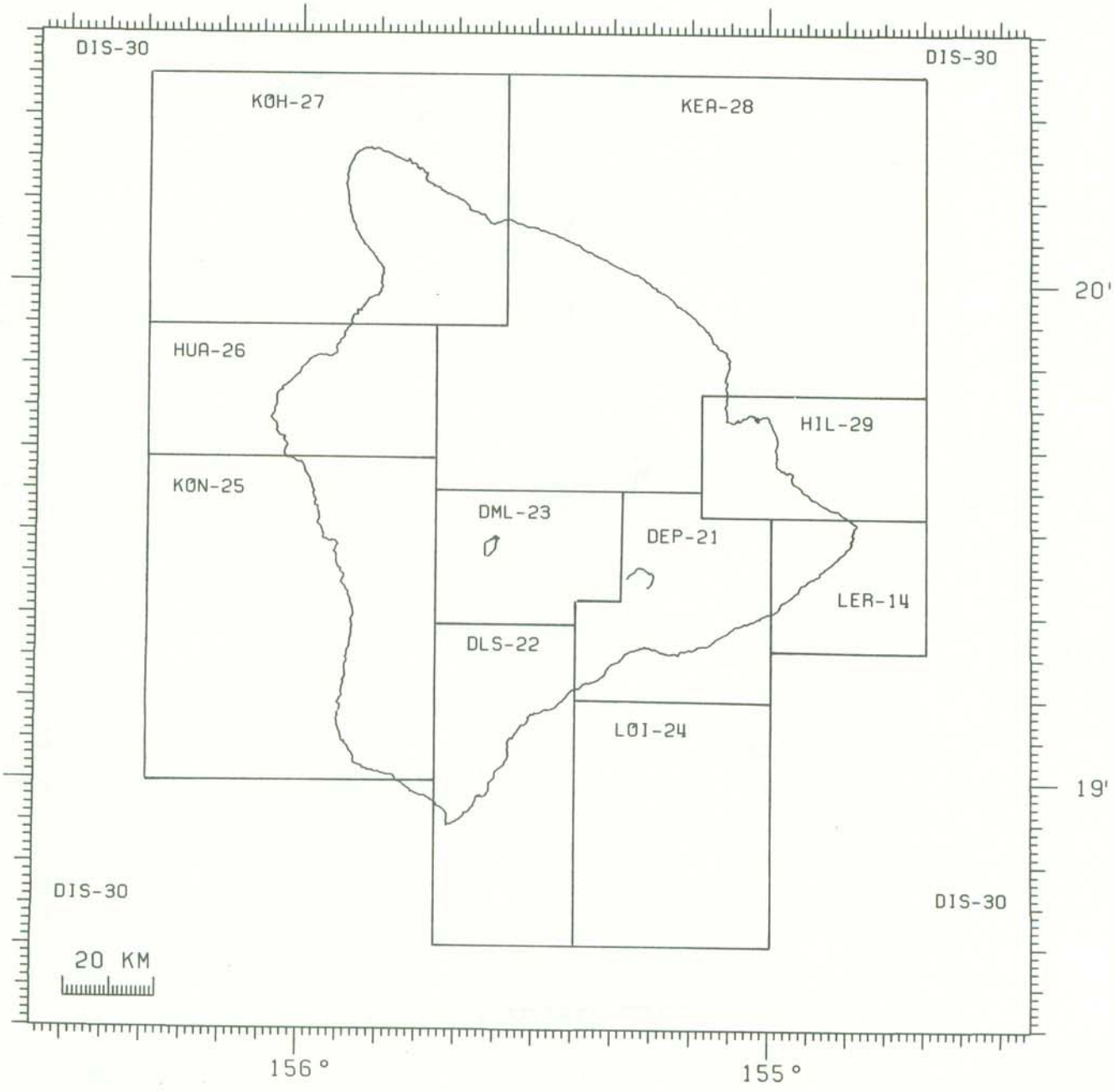

Figure 9

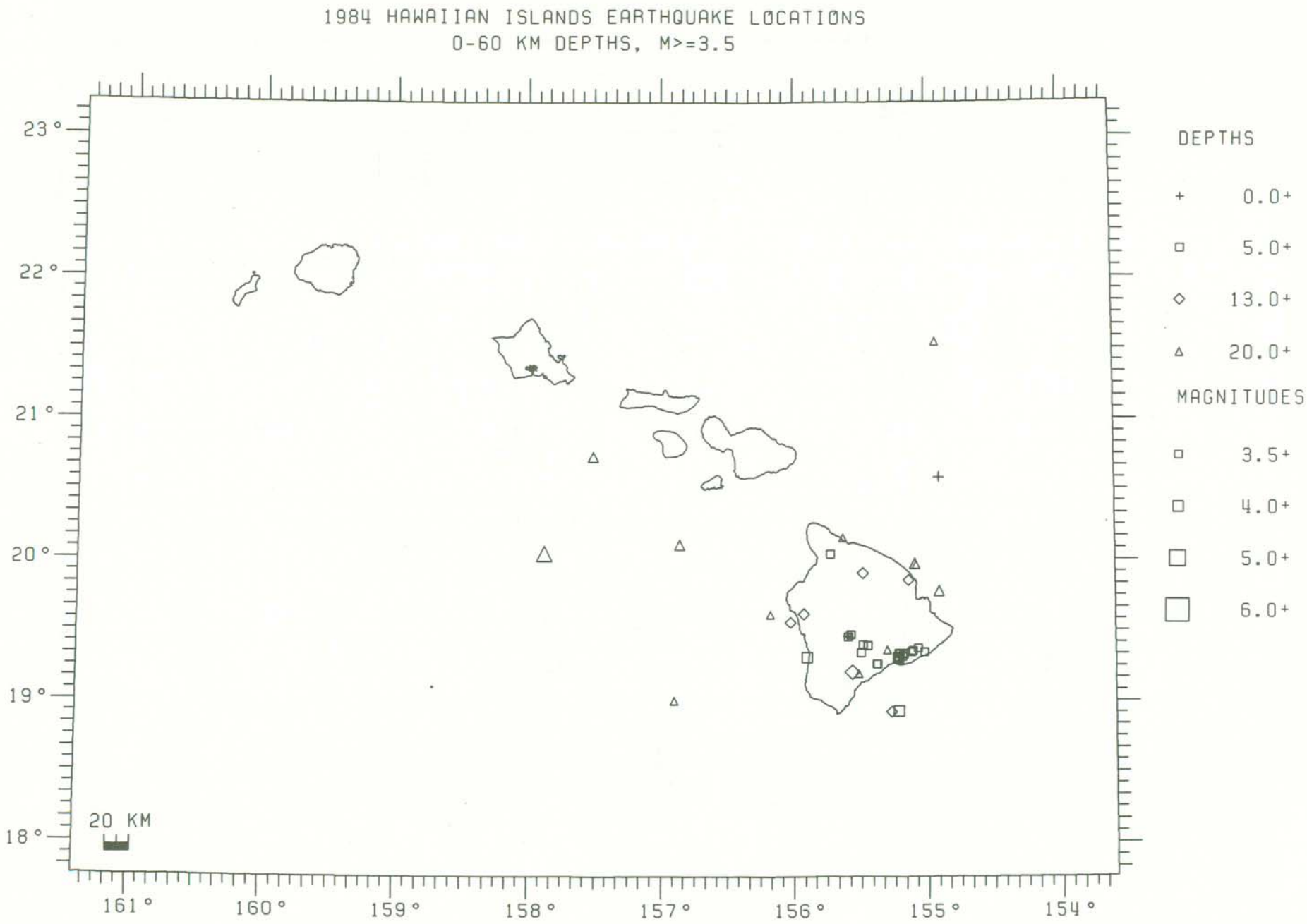
1984 HAWAIIAN ISLANDS EARTHQUAKE LOCATIONS
0-60 KM DEPTHS, M>=3.5
23°
22°
21°
20°
19°
18°
161°
160°
159°
158°
157°
156°
155°
154°
20 KM
DEPTHS
0.0+
5.0+
13.0+
20.0+
MAGNITUDES
3.5+
4.0+
5.0+
6.0+

Figure 10

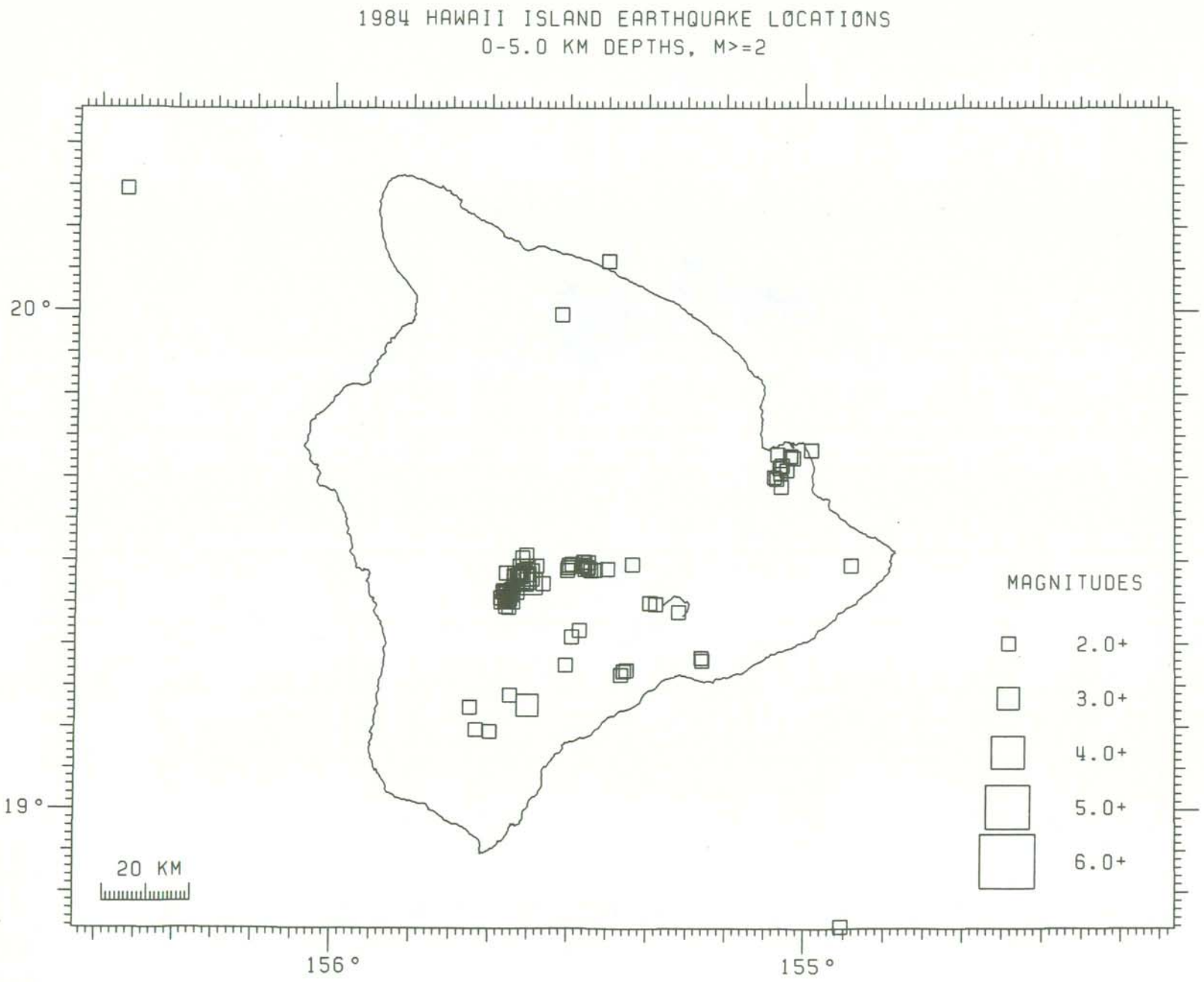
1984 HAWAII ISLAND EARTHQUAKE LOCATIONS
0-5.0 KM DEPTHS, M>=2
20°
19°
156°
155°
20 KM
MAGNITUDES
2.0+
3.0+
4.0+
5.0+
6.0+

Figure 11

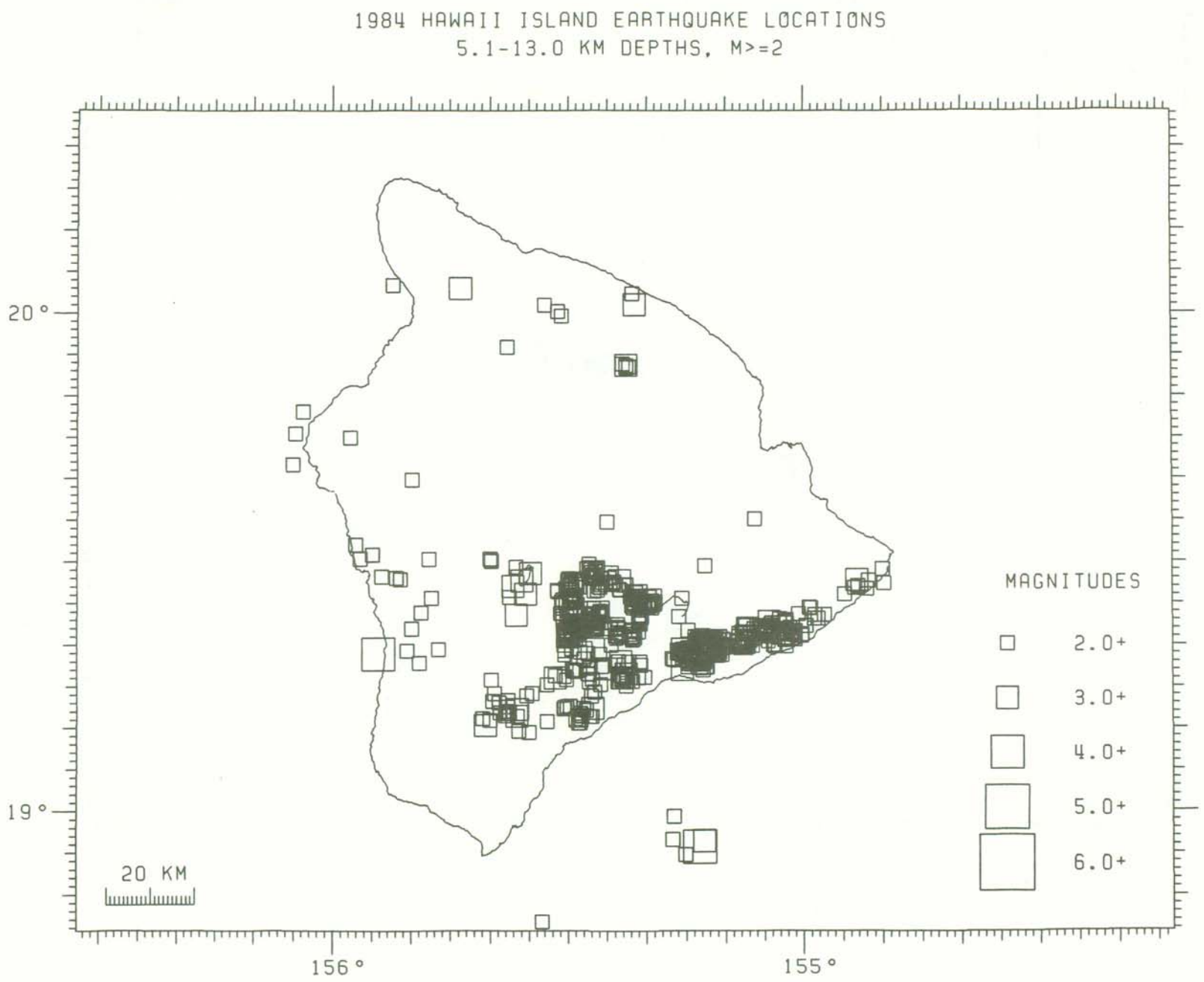
1984 HAWAII ISLAND EARTHQUAKE LOCATIONS
5.1-13.0 KM DEPTHS, M>=2
20 °
19 °
156 °
155 °
20 KM
MAGNITUDES
2.0+
3.0+
4.0+
5.0+
6.0+

Figure 12

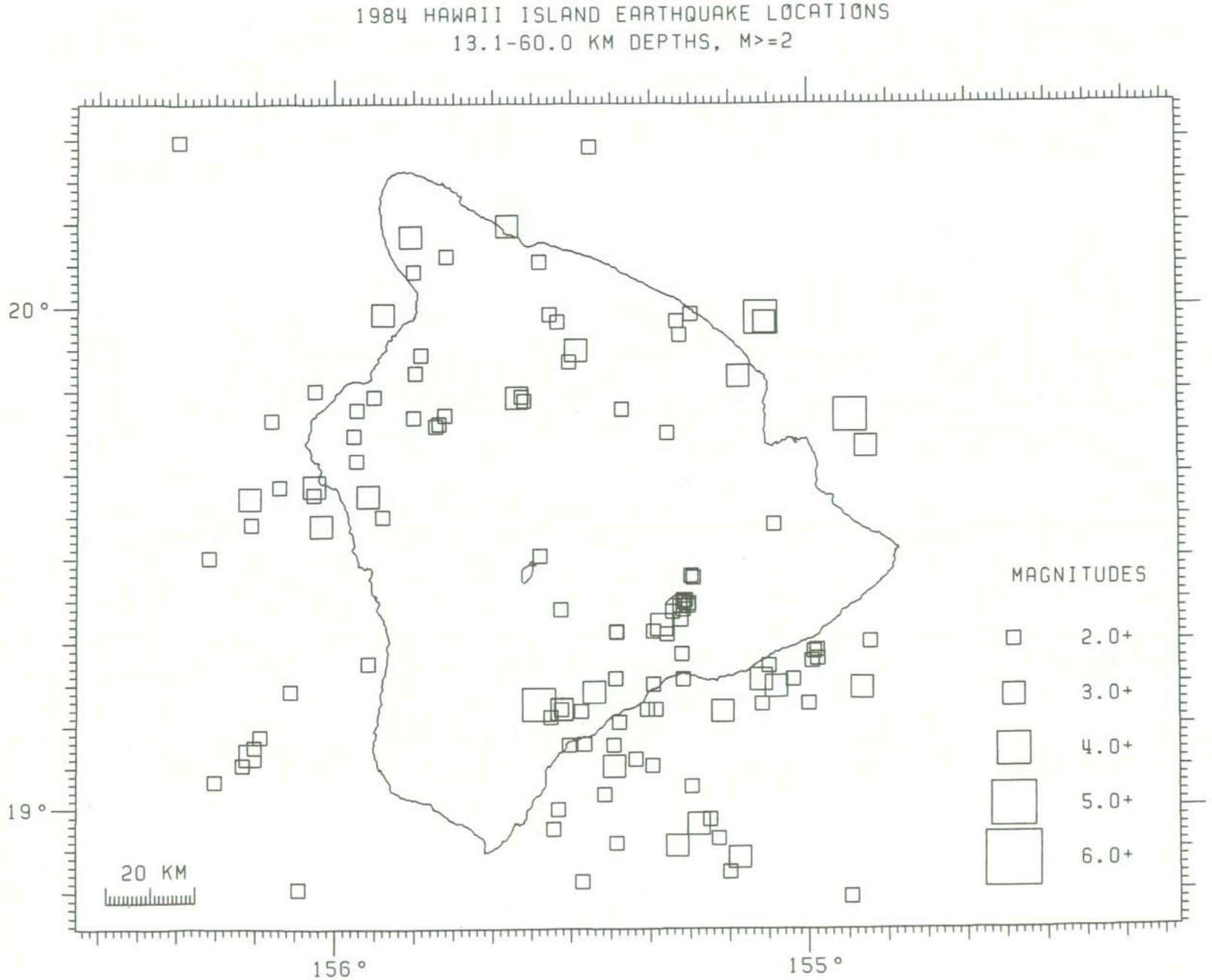
1984 HAWAII ISLAND EARTHQUAKE LOCATIONS
13.1-60.0 KM DEPTHS, M>=2
20°
19°
156°
155°
20 KM
MAGNITUDES
2.0+
3.0+
4.0+
5.0+
6.0+

Figure 13

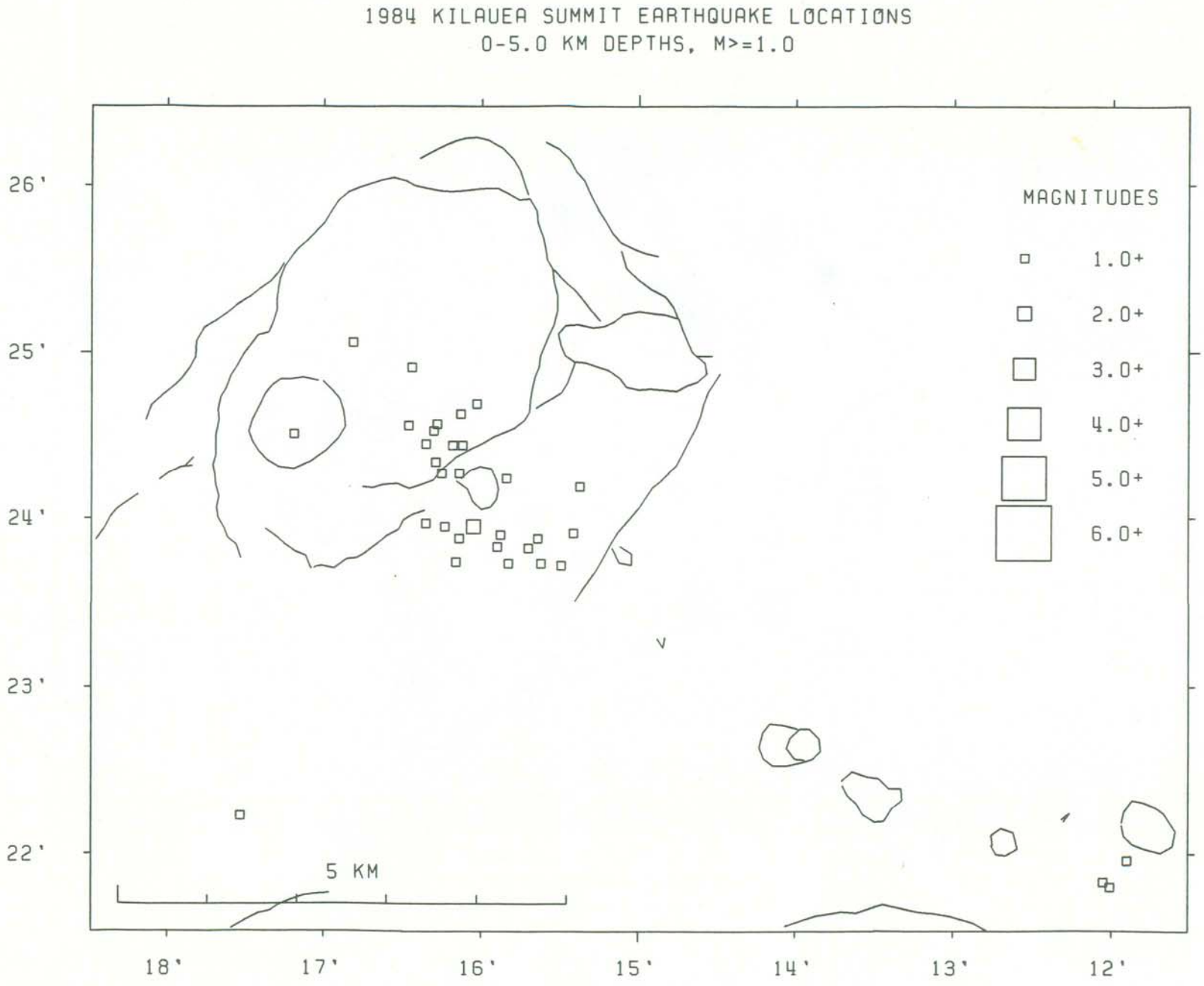
1984 KILAUEA SUMMIT EARTHQUAKE LOCATIONS
0-5.0 KM DEPTHS, M>=1.0
MAGNITUDES
1.0+
2.0+
3.0+
4.0+
5.0+
6.0+
5 KM
26'
25'
24'
23'
22'
18'
17'
16'
15'
14'
13'
12'

Figure 14

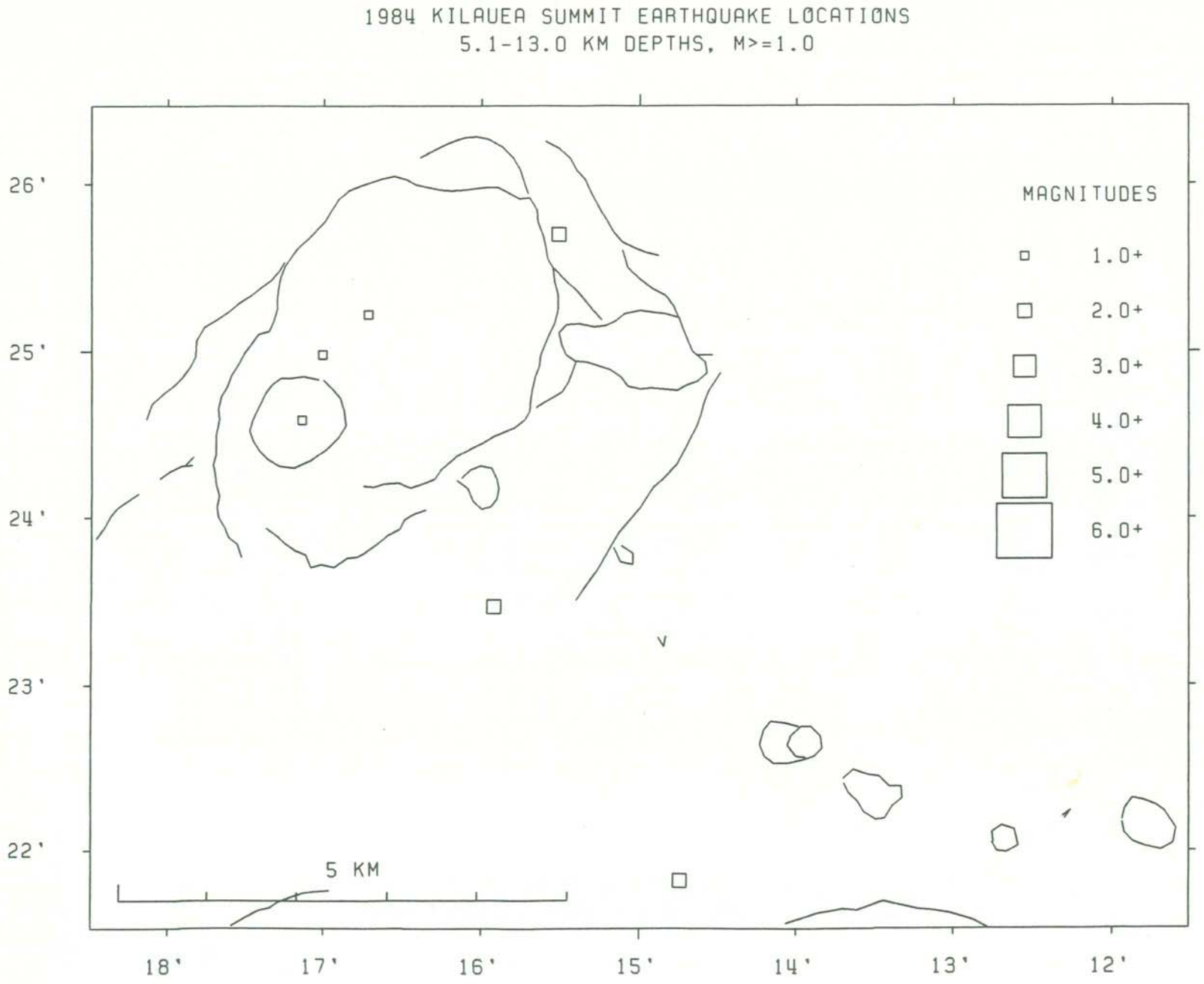
1984 KILAUEA SUMMIT EARTHQUAKE LOCATIONS
5.1-13.0 KM DEPTHS, M>=1.0
MAGNITUDES
1.0+
2.0+
3.0+
4.0+
5.0+
6.0+
5 KM
26'
25'
24'
23'
22'
18'
17'
16'
15'
14'
13'
12'

Figure 15

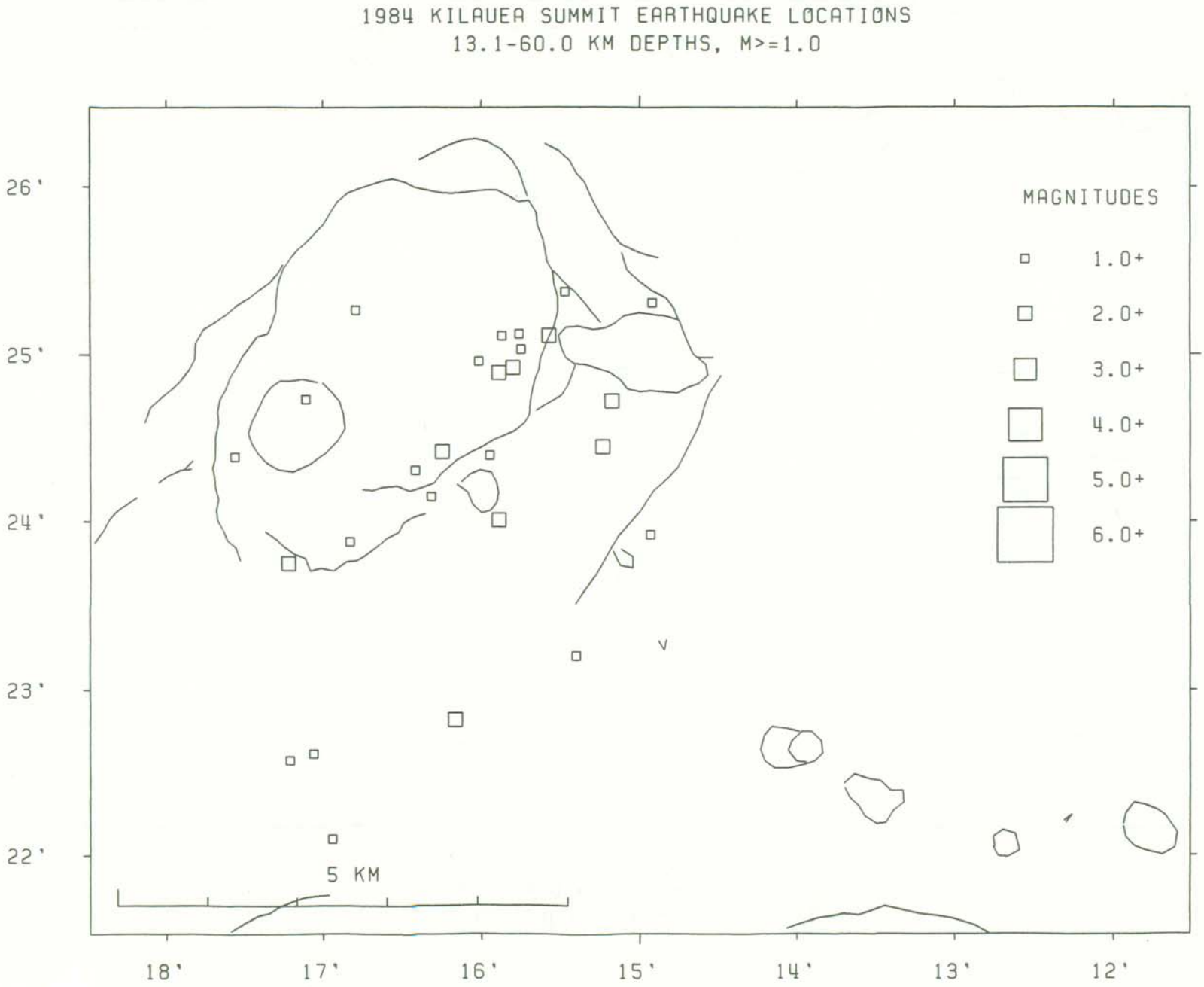
1984 KILAUEA SUMMIT EARTHQUAKE LOCATIONS
13.1-60.0 KM DEPTHS, M>=1.0
MAGNITUDES
1.0+
2.0+
3.0+
4.0+
5.0+
6.0+
5 KM
26'
25'
24'
23'
22'
18'
17'
16'
15'
14'
13'
12'

Figure 16

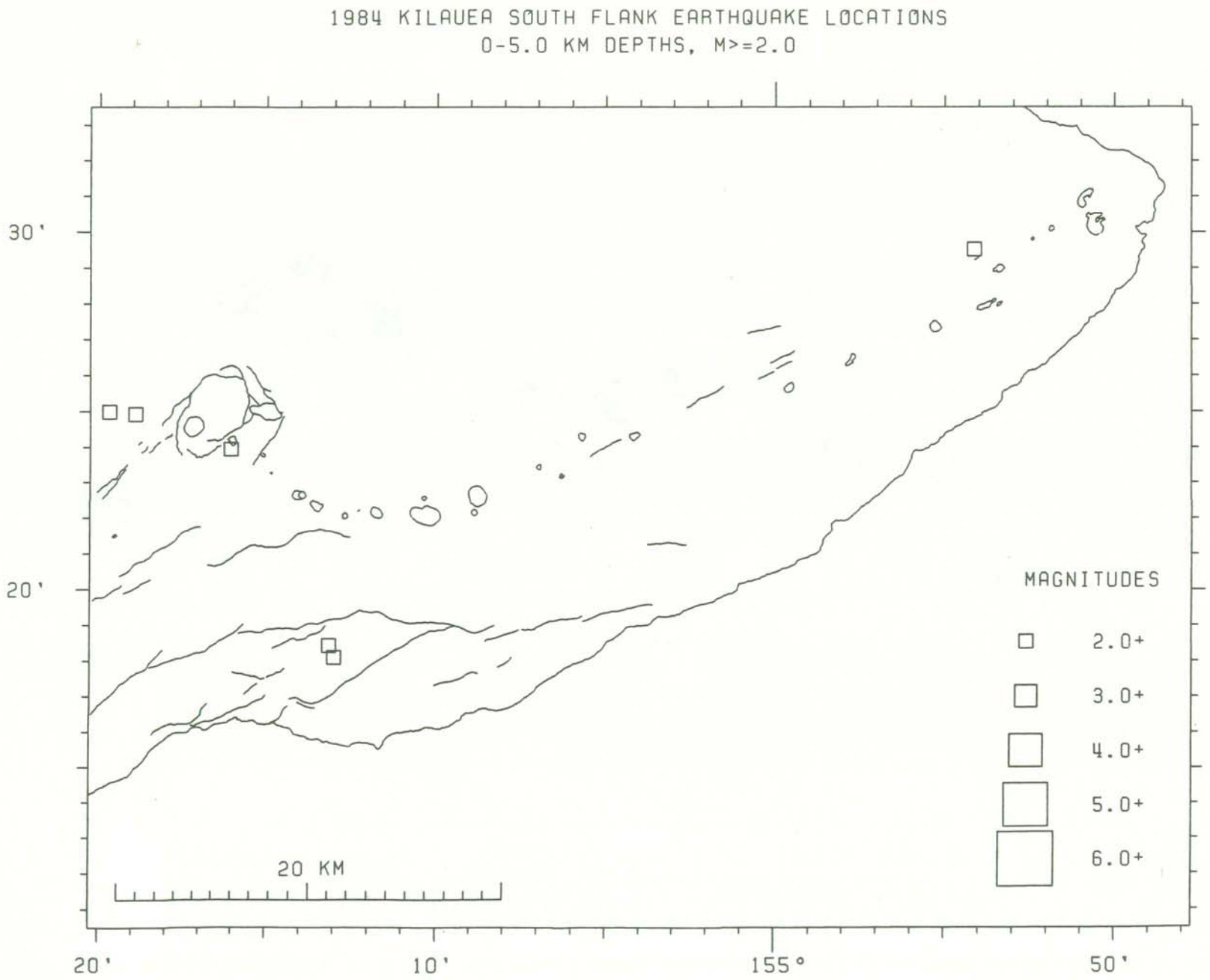
1984 KILAUEA SOUTH FLANK EARTHQUAKE LOCATIONS
0-5.0 KM DEPTHS, M>=2.0
30'
20'
20'
10'
155°
50'
MAGNITUDES
2.0+
3.0+
4.0+
5.0+
6.0+
20 KM

Figure 17

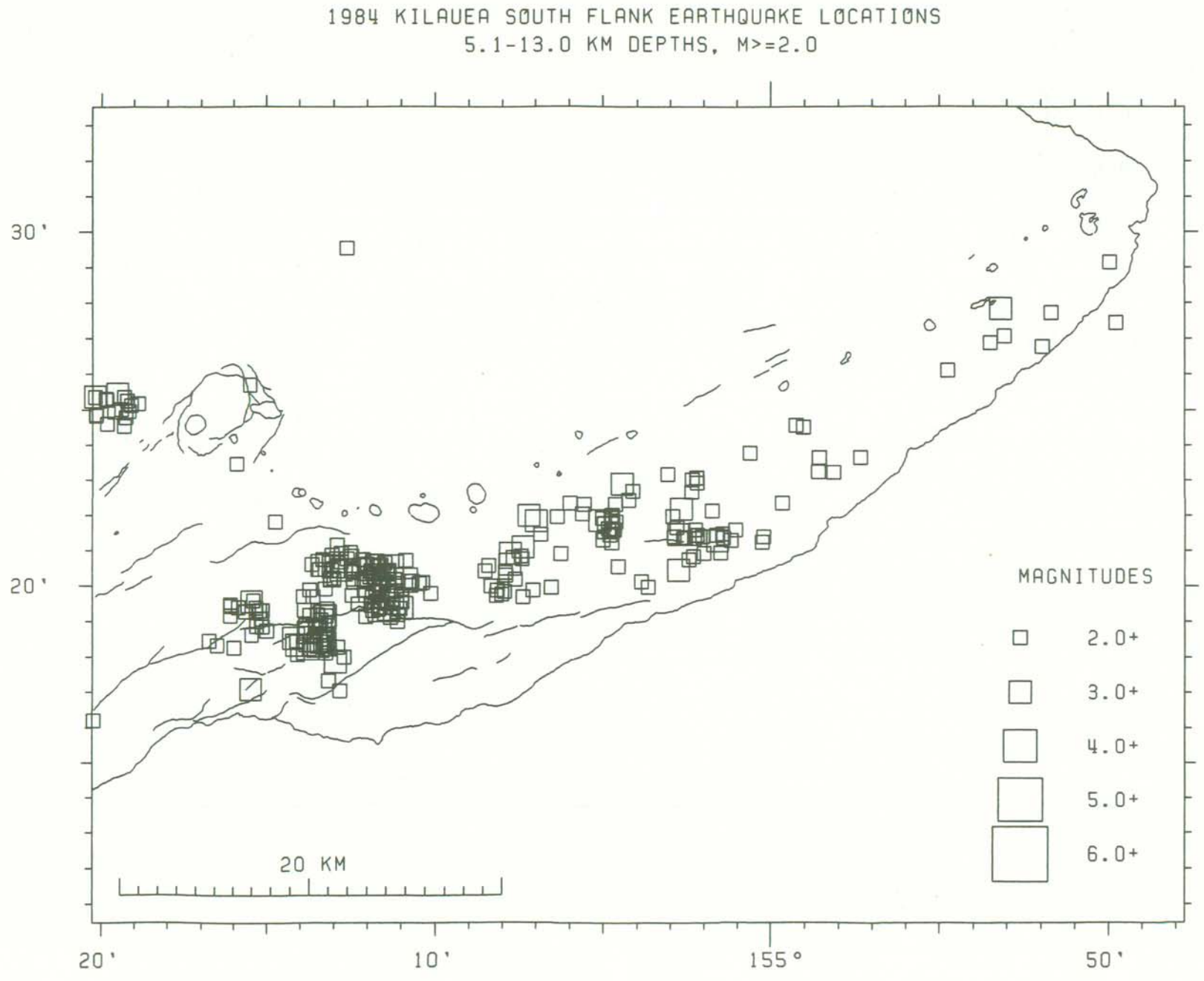
1984 KILAUEA SOUTH FLANK EARTHQUAKE LOCATIONS
5.1-13.0 KM DEPTHS, M>=2.0
30'
20'
20'
10'
155°
50'
20 KM
MAGNITUDES
2.0+
3.0+
4.0+
5.0+
6.0+

Figure 18

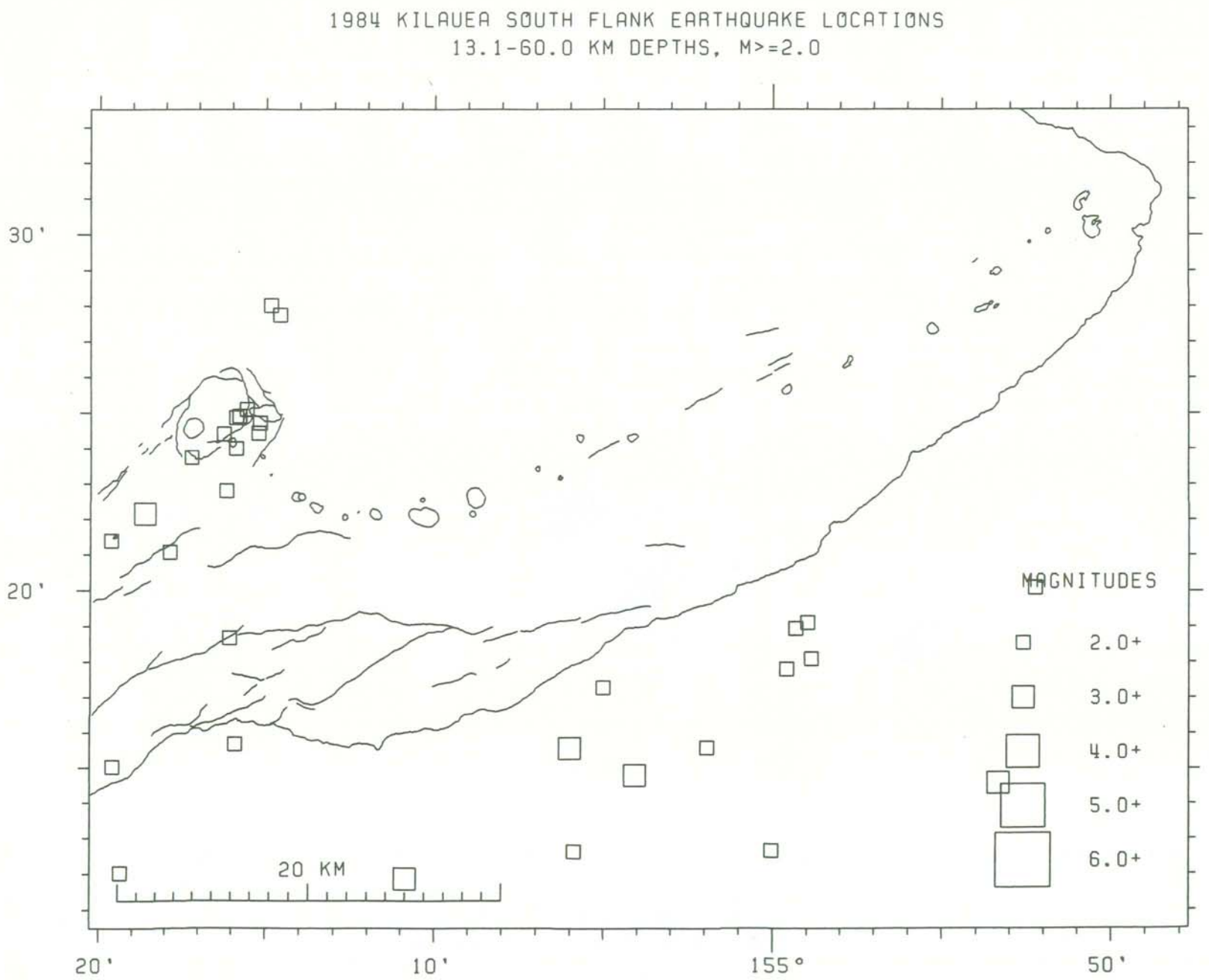
1984 KILAUEA SOUTH FLANK EARTHQUAKE LOCATIONS
13.1-60.0 KM DEPTHS, M>=2.0
30'
20'
20'
10'
155°
50'
MAGNITUDES
2.0+
3.0+
4.0+
5.0+
6.0+
20 KM

Figure 19

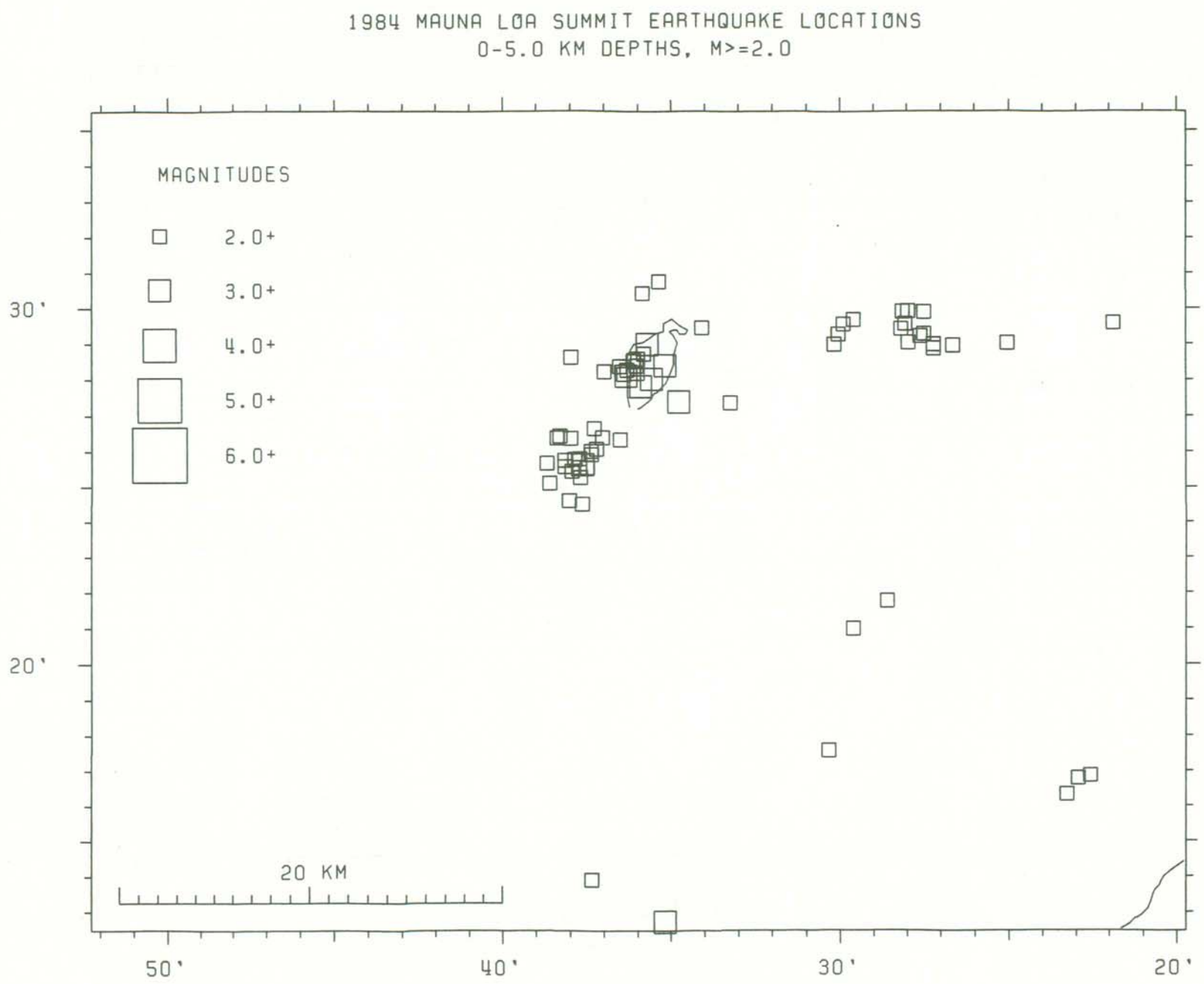
1984 MAUNA LOA SUMMIT EARTHQUAKE LOCATIONS
0-5.0 KM DEPTHS, M>=2.0
MAGNITUDES
2.0+
3.0+
4.0+
5.0+
6.0+
20 KM
30'
20'
50'
40'
30'
20'

Figure 20

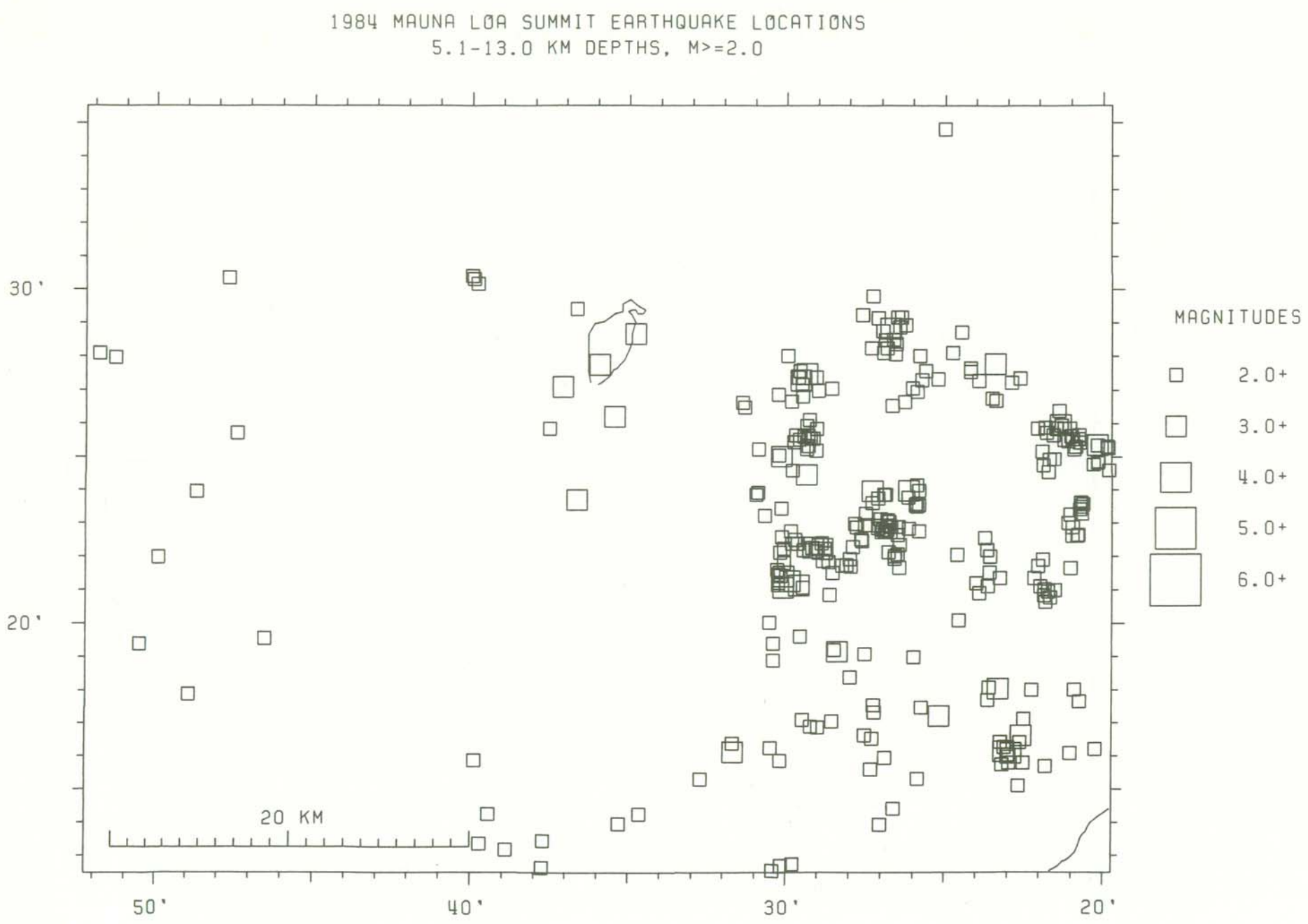
1984 MAUNA LOA SUMMIT EARTHQUAKE LOCATIONS
5.1-13.0 KM DEPTHS, M>=2.0
30'
20'
50'
40'
30'
20'
20 KM
MAGNITUDES
2.0+
3.0+
4.0+
5.0+
6.0+

Figure 21

1984 MAUNA LOA SUMMIT EARTHQUAKE LOCATIONS
13.1-60.0 KM DEPTHS, M>=2.0

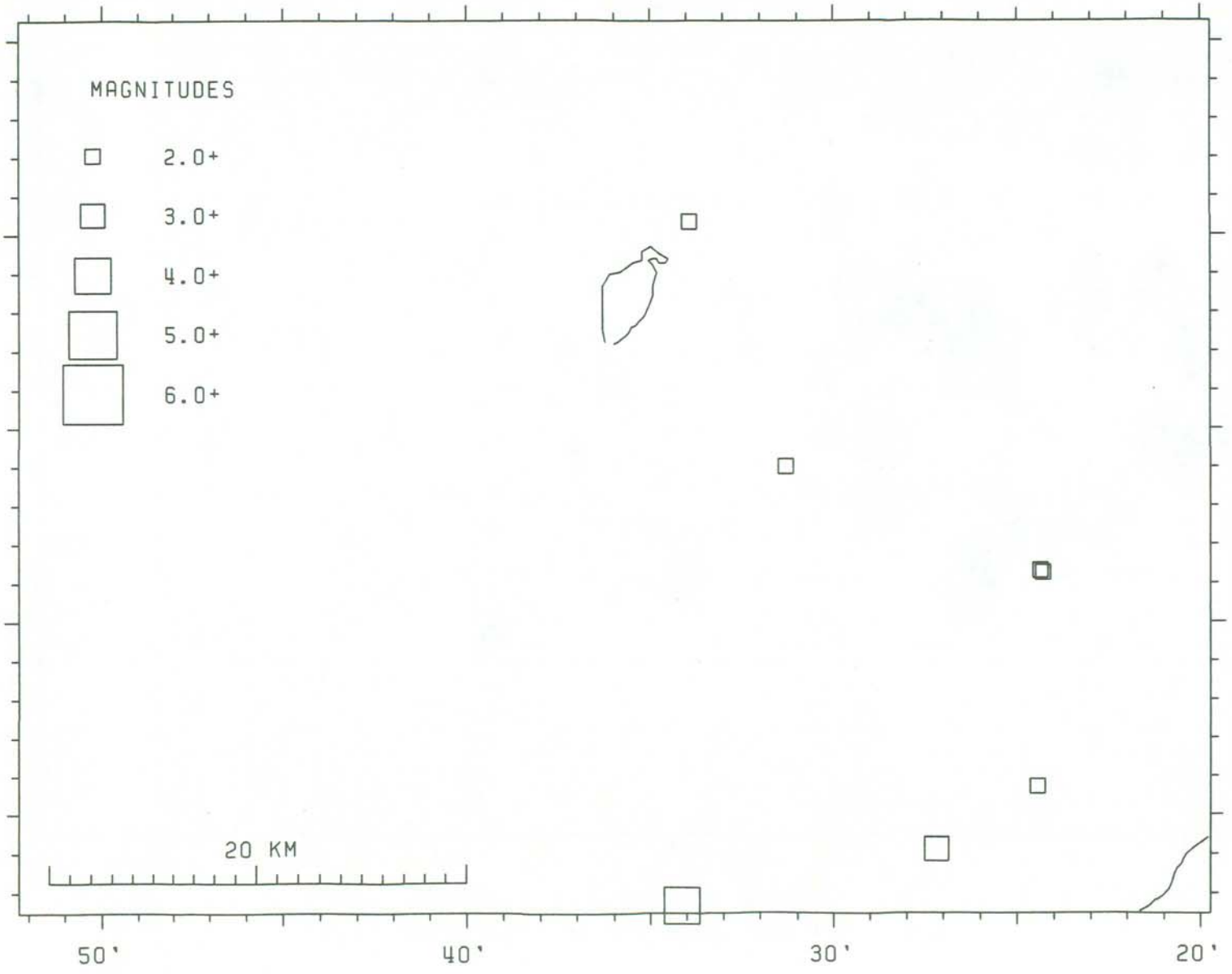

Figure 22

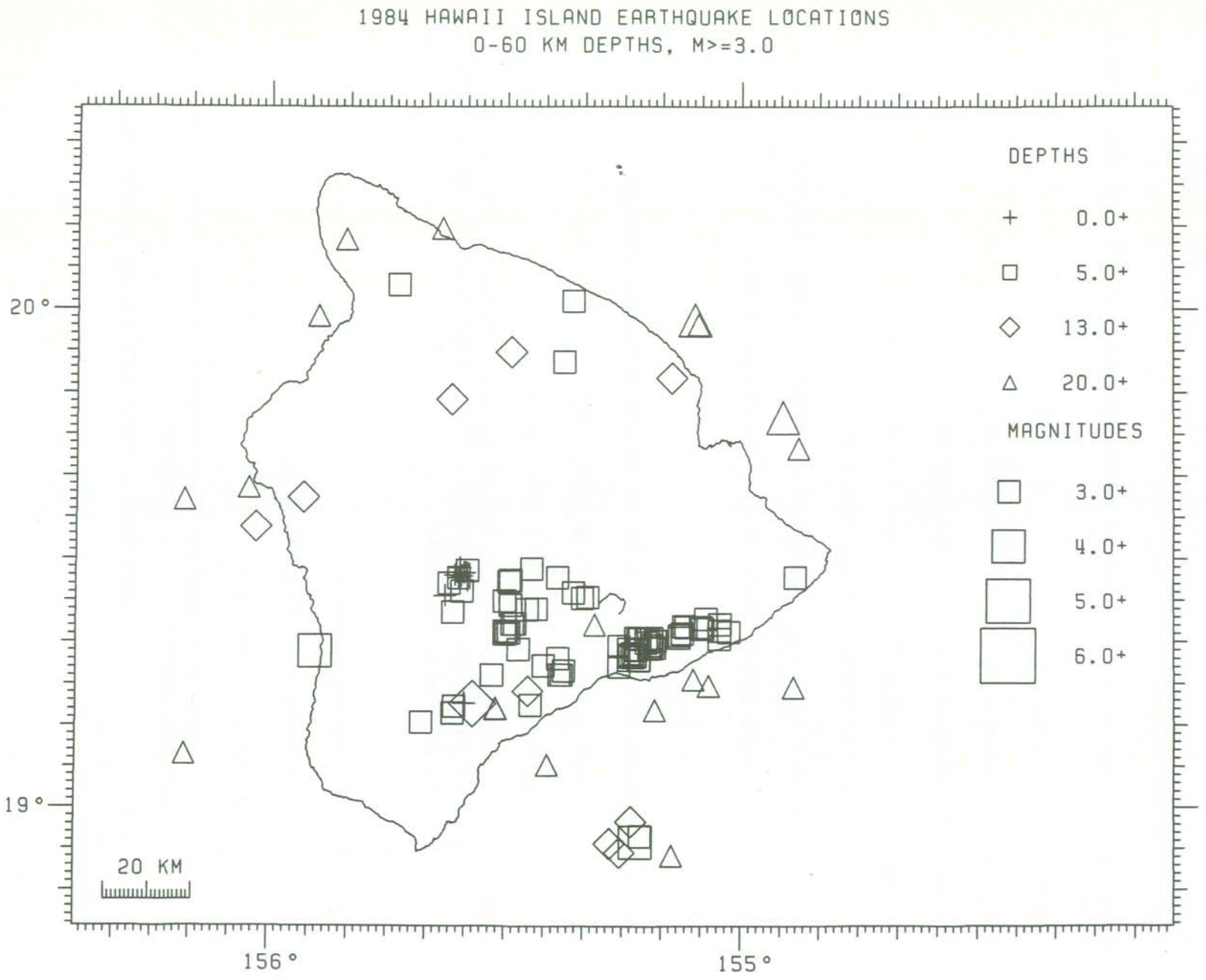
1984 HAWAII ISLAND EARTHQUAKE LOCATIONS
0-60 KM DEPTHS, M>=3.0
DEPTHS
0.0+
5.0+
13.0+
20.0+
MAGNITUDES
3.0+
4.0+
5.0+
6.0+
20 KM
20°
19°
156°
155°

Table 5 is a chronological listing of successfully located earthquakes. 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 km.

AMP MAG - Amplitude magnitude, if determined.

DUR MAG - Duration magnitude, if determined.

NR - Number of arrivals (P or S) used for solution.

NS - Number of S arrivals used for solution.

GAP DEG - Largest azimuthal separation in degrees between stations.

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

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

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

ERH km - Standard error of the epicenter in km.

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

REMK - Remarks, three letter code for geographic location of event. 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 5 lists all events located during 1984. Table 6 lists only events of magnitude 3.0 or larger.

Table 5

1984 HVO EARTHQUAKE SUMMARY LIST

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
1984	JAN	1	012	5.68	19	28.64	155	37.97	3.85	2.5	2.1	37	3	79	.15	4	0.5	0.8	23	MLO
		1	1 9	40.30	19	20.30	155	12.83	6.59	1.4	1.3	39	3	69	.11	4	0.4	0.7	27	SF2
		1	432	8.19	19	26.68	155	23.38	7.67	1.9	2.1	40	4	40	.12	4	0.3	0.8	34	KAO
		1	515	54.22	19	28.72	155	24.46	5.90	2.1	1.9	43	3	39	.14	3	0.3	0.9	33	KAO
		1	534	49.58	19	16.64	155	22.58	8.03	2.7	3.4	49	1	124	.17	5	0.5	0.7	48	SWR
		1	823	7.35	19	25.13	155	21.46	11.91	2.1	1.4	43	4	34	.11	4	0.4	0.5	37	KAO
		1	827	17.72	19	59.24	155	14.83	44.64	2.7	2.5	54	8	215	.13	15	0.9	1.2	45	KEA
		1	957	23.05	19	12.74	155	29.79	8.32	2.2	2.0	40	6	129	.16	4	0.5	0.8	32	LSW
		1	1537	51.11	19	18.57	155	14.96	5.55	1.3	1.1	31	2	107	.12	4	0.5	1.2	28	SF1
		1	1544	28.07	19	22.44	155	28.99	9.83	1.8	1.3	38	1	37	.12	2	0.4	0.8	36	KAO
		1	17 5	34.57	19	21.27	155	24.29	14.17	2.5	2.3	48	6	40	.10	3	0.3	0.4	41	DEP
		1	1732	13.61	19	21.65	155	21.03	11.43	2.6	2.6	51	5	54	.11	4	0.3	0.3	44	SWR
		1	1943	9.01	19	21.77	155	26.28	10.83	1.9	1.5	38	3	46	.13	3	0.4	0.8	34	KAO
		1	2055	57.92	19	25.36	155	20.18	7.76	3.0	3.3	51	6	38	.12	3	0.3	0.6	45	KAO
		1	22 9	35.07	19	26.84	155	30.05	9.52	1.8	1.4	36	4	62	.10	9	0.4	0.9	30	KAO
		2	359	29.74	19	29.55	155	29.90	3.22	2.3	1.8	34	2	66	.12	6	0.3	1.5	30	KAO
		2	623	42.38	19	27.55	155	23.73	4.42	1.8	2.0	24	2	44	.11	4	0.4	1.3	22	KAO
		2	1144	18.67	19	26.25	155	29.00	8.84	2.0	1.2	35	2	43	.09	7	0.4	1.1	29	KAO
		2	1410	20.10	20	35.30	154	54.93	0.03	3.7	4.3	48	4	312	.11	90	9.3	2.4	44	DIS
		2	16 9	34.95	19	22.16	155	21.18	10.68	1.9	1.4	38	6	50	.10	4	0.4	0.6	25	KAO
		2	2253	37.75	19	26.75	155	23.50	10.16	2.3	2.0	48	7	41	.12	4	0.3	0.6	28	KAO
		2	23 0	50.46	19	23.30	155	20.62	9.70	1.7	2.0	36	5	53	.09	2	0.4	0.6	22	KAO
		3	035	8.00	19	21.33	155	24.35	13.95	2.3	2.3	48	5	40	.10	3	0.4	0.4	39	DEP
		3	111	54.21	19	18.96	155	11.72	3.44	1.5	1.1	38	5	107	.15	5	0.4	1.3	27	SSF
		3	1354	45.52	19	28.02	155	25.80	10.11	2.4	1.7	42	6	46	.12	5	0.4	0.6	33	KAO
		3	1826	16.87	19	24.77	155	20.04	5.53	1.7	1.1	38	5	36	.12	2	0.3	0.8	25	KAO
		3	1831	33.32	19	26.40	155	28.74	9.87	2.1	1.7	35	4	43	.10	7	0.4	0.9	28	KAO
		3	21 1	46.63	19	27.38	155	29.63	10.13	2.7	2.4	40	2	34	.10	9	0.4	0.6	38	KAO
		4	128	43.20	19	22.02	155	26.58	10.05	2.1	2.0	42	4	42	.12	2	0.4	0.7	34	KAO
		4	2 0	58.18	19	26.94	155	28.91	9.73	1.8	1.2	35	3	45	.14	7	0.4	0.9	22	KAO
		4	311	45.17	19	17.98	155	14.09	4.51	1.4	1.2	27	1	102	.12	2	0.4	1.1	18	SSF
		4	850	19.57	19	28.08	154	53.99	6.05	1.7	1.4	31	1	122	.16	3	0.7	0.9	23	LER
		4	1258	22.30	19	22.20	155	26.17	9.88	1.8	1.2	28	1	43	.08	3	0.4	0.8	24	KAO
		4	1713	20.97	19	25.30	155	29.69	7.64	1.8	1.6	36	3	39	.12	6	0.4	1.2	25	KAO
		4	1824	10.34	19	20.68	155	13.02	6.91	1.8	1.6	40	5	63	.14	4	0.4	0.7	30	SF2
		4	19 5	35.51	19	22.62	155	20.80	10.69	2.2	1.7	48	6	45	.09	3	0.3	0.4	39	KAO
		4	20 7	37.01	19	21.85	155	21.77	11.10	1.8	1.2	31	5	54	.08	4	0.4	0.6	26	SWR
		4	2027	9.26	19	22.61	155	20.61	11.23	1.8	1.2	36	5	45	.08	3	0.4	0.6	30	KAO
		4	2131	21.79	19	22.09	155	1.67	7.86	2.1	1.7	45	6	148	.12	5	0.5	0.4	40	SF5
		4	2330	21.30	19	23.04	155	26.76	10.08	2.3	1.7	48	5	33	.12	2	0.3	0.5	43	KAO
		5	023	7.89	19	22.37	155	28.74	10.38	2.1	1.8	43	2	36	.11	2	0.3	0.6	40	KAO
		5	032	42.79	19	16.39	155	31.71	6.29	2.4	2.3	44	5	52	.19	4	0.4	1.0	38	LSW
		5	143	42.98	19	21.55	155	1.93	5.40	1.9	1.8	38	2	152	.15	4	0.6	0.9	36	SF5
		5	5 8	49.52	19	18.57	155	15.55	7.07	1.3	1.3	37	4	106	.12	4	0.4	0.8	34	SF1
		5	554	15.36	19	21.49	155	6.63	8.60	1.6	1.7	40	4	83	.11	4	0.4	0.6	36	SF4

1984 HVO EARTHQUAKE SUMMARY LIST

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
1984	JAN	5	6 3	25.68	19	27.02	155	29.31	10.26	2.3	1.3	36	2	58	.11	8	0.4	0.9	33	KAO
		5	741	35.70	19	19.78	155	11.93	7.72	1.7	1.0	34	4	86	.10	6	0.5	0.8	27	SF3
		5	1415	50.28	19	24.54	155	19.22	4.87	1.5	1.5	25	3	84	.10	2	0.4	0.9	19	KAO
		5	1847	8.46	19	18.29	155	14.62	6.32	1.5	1.3	35	2	108	.10	3	0.4	0.9	26	SF1
		5	20 1	53.77	19	25.17	155	20.98	9.41	1.9	1.6	42	5	40	.12	4	0.4	0.5	33	KAO
		5	2118	10.59	19	20.04	155	30.55	5.39	2.4	2.3	38	2	34	.12	9	0.3	1.8	28	KAO
		5	2323	35.79	19	20.98	155	29.16	8.30	1.3	1.0	24	1	46	.11	4	0.4	0.7	15	KAO
		6	1 8	36.78	19	26.96	155	25.88	9.10	2.8	2.6	50	9	44	.12	3	0.3	0.6	34	KAO
		6	535	20.94	19	17.99	155	13.03	6.96	1.6	1.1	35	4	107	.12	2	0.5	0.8	22	SF2
		6	925	49.15	19	20.97	155	5.09	6.97	1.9	1.9	38	4	100	.13	4	0.5	0.8	22	SF5
		6	1133	1.58	19	21.17	155	23.64	10.19	1.9	1.5	35	5	43	.10	2	0.4	0.7	28	SWR
		6	2113	48.62	19	21.39	155	19.65	30.84	2.4	1.8	41	4	47	.11	4	0.6	1.0	32	DEP
		6	2151	1.88	19	26.65	155	29.21	8.84	2.2	1.4	36	4	63	.10	8	0.4	1.0	25	KAO
		6	2216	27.31	19	29.10	155	27.17	4.89	2.0	1.1	29	5	66	.13	5	0.4	2.4	18	KAO
		7	2 6	41.63	19	28.49	155	27.12	8.46	1.9	1.2	26	3	71	.13	7	0.5	1.4	20	KAO
		7	322	36.93	19	29.26	155	24.75	2.37	2.1	1.3	24	4	98	.14	3	0.4	0.7	13	KAO
		7	1050	33.03	19	18.13	155	13.24	8.60	2.2	2.2	31	1	177	.12	8	0.7	1.1	26	SF2
		7	1053	5.55	19	29.23	155	27.61	3.78	2.6	2.2	28	4	56	.11	5	0.4	1.7	23	KAO
		7	11 9	12.22	19	17.82	155	15.61	7.10	1.5	1.3	24	1	222	.10	5	0.9	1.1	14	SF1
		7	1828	17.93	19	20.87	155	21.69	9.92	1.7	1.1	29	5	147	.12	3	0.5	0.6	15	SWR
		7	1848	5.93	19	18.39	155	27.97	8.96	2.1	2.1	34	3	99	.15	8	0.5	0.9	22	LSW
		7	1852	45.71	19	17.64	155	29.86	5.58	2.1	1.5	25	2	88	.16	10	0.5	1.5	16	LSW
		7	2110	30.54	19	26.89	155	24.98	9.00	2.0	1.6	26	3	52	.12	3	0.5	0.9	19	KAO
		7	2116	40.23	19	20.92	155	23.89	10.11	1.9	2.2	34	3	105	.12	2	0.7	0.5	27	SWR
		8	047	54.39	19	21.08	155	21.90	10.20	1.8	1.8	33	4	104	.11	3	0.4	0.5	20	SWR
		8	1 3	41.87	19	27.39	155	29.06	10.46	2.4	2.1	31	3	60	.11	8	0.4	0.6	25	KAO
		8	115	1.94	19	22.88	155	27.77	10.28	2.4	2.5	31	3	68	.10	1	0.4	0.5	27	KAO
		8	3 4	37.41	19	18.42	155	13.72	6.47	1.5	1.3	26	2	206	.09	7	0.8	1.4	15	SF2
		8	342	38.12	19	21.41	155	22.09	9.76	1.9	1.9	29	3	118	.11	3	0.6	0.5	19	SWR
		8	532	20.32	19	24.74	155	21.88	11.62	2.4	2.5	35	4	60	.11	4	0.5	0.3	25	KAO
		8	6 5	48.96	19	24.51	155	17.19	1.60	1.0	1.4	14	2	62	.12	1	0.4	0.3	10	SSC
		8	740	34.91	19	16.20	155	20.24	8.44	2.6	2.6	34	2	162	.12	9	0.6	0.8	28	SWR
		8	928	21.45	19	22.24	155	30.20	7.83	2.1	1.7	37	2	43	.12	5	0.4	0.9	31	KAO
		8	944	3.26	19	19.18	155	13.71	8.90	2.4	2.8	45	4	65	.12	4	0.4	0.5	39	SF2
		8	1114	29.78	19	24.94	155	21.53	10.36	2.0	2.0	42	4	35	.11	4	0.4	0.5	34	KAO
		8	1428	25.03	19	22.40	155	29.36	9.24	1.9	1.8	39	1	39	.11	3	0.4	0.8	36	KAO
		8	16 0	5.62	19	23.26	155	21.01	10.36	2.1	2.4	44	4	42	.13	2	0.4	0.5	35	KAO
		8	16 5	46.95	19	19.09	155	13.58	5.17	1.6	1.1	34	4	69	.13	4	0.5	1.5	26	SF2
		8	2028	25.67	19	22.73	155	26.89	10.81	2.7	3.0	40	1	40	.10	1	0.4	0.6	39	KAO
		8	2132	42.99	19	22.88	155	26.36	9.94	1.8	1.5	37	3	40	.09	2	0.4	0.7	29	KAO
		8	2153	48.91	19	22.24	155	1.83	5.38	1.8	1.3	22	0	152	.13	5	0.6	1.2	22	SF5
		8	2247	25.14	19	15.81	155	22.51	8.10	2.3	2.7	47	3	138	.14	4	0.5	0.5	35	SWR
		8	2257	7.13	19	19.20	155	11.09	7.77	2.0	2.1	41	4	104	.11	6	0.4	0.5	34	SF3
		9	1 8	7.48	19	24.52	154	59.03	6.81	2.0	2.0	34	2	174	.13	1	0.7	0.5	24	LER
		9	626	39.84	19	14.71	155	19.21	7.15	1.8	1.5	29	0	162	.14	6	0.7	1.5	22	SWR

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
1984	JAN	9	1125	49.77	19	25.43	155	30.37	10.20	2.3	1.5	36	2	38	.11	7	0.4	0.8	31	KAO
		9	1452	42.31	19	26.36	155	28.69	7.49	1.9	1.5	34	3	43	.13	7	0.4	1.1	23	KAO
		9	1943	33.28	19	21.04	155	2.79	7.54	1.8	1.5	28	2	129	.10	2	0.5	0.6	16	SF5
		9	2249	5.32	19	20.52	155	13.57	6.77	1.9	1.9	43	4	60	.15	4	0.4	0.8	34	SF2
		9	2313	29.56	19	21.67	155	28.64	5.81	2.0	1.9	34	3	44	.12	2	0.3	0.8	21	KAO
		10	1	5 54.52	19	21.88	155	28.85	5.58	2.3	2.4	46	4	40	.12	2	0.3	0.8	36	KAO
		10	357	54.95	19	19.70	155	13.61	8.16	2.6	3.0	50	4	118	.13	6	0.4	0.6	38	SF2
		10	821	18.43	19	18.87	155	15.31	7.91	2.6	2.7	40	2	106	.11	4	0.4	0.6	38	SF1
		10	858	2.13	19	24.93	155	21.68	10.47	2.4	2.4	47	3	35	.12	4	0.3	0.4	38	KAO F
		10	1236	16.57	19	19.02	155	14.92	5.90	1.4	1.1	28	2	97	.11	5	0.4	0.9	25	SF1
		10	1330	12.81	19	19.80	155	10.14	8.41	2.2	2.4	44	4	90	.13	4	0.4	0.7	35	SF3
		10	1626	3.36	19	20.67	155	21.81	10.70	2.2	2.5	46	5	68	.13	3	0.4	0.5	33	SWR
		10	1839	57.94	19	18.68	155	13.88	8.96	2.5	2.6	47	6	95	.12	3	0.4	0.4	39	SF2
		10	23	7 16.28	19	19.21	155	11.26	5.36	1.5	1.3	29	1	104	.10	6	0.5	1.2	24	SF3
		11	118	45.10	19	17.31	155	13.11	5.93	1.6	1.1	31	4	142	.11	1	0.6	0.7	15	SF2
		11	159	18.76	19	27.67	155	27.87	10.07	1.9	1.4	36	4	52	.10	7	0.4	0.9	25	KAO
		11	228	22.01	19	20.45	155	13.05	7.24	1.8	1.6	38	4	65	.13	4	0.4	0.7	27	SF2
		11	557	38.63	19	23.75	155	27.33	10.65	1.6	1.4	32	1	33	.10	2	0.4	0.7	23	KAO
		11	626	25.10	19	17.66	155	13.09	5.56	1.5	1.5	28	2	117	.10	1	0.5	0.9	18	SF2
		11	759	15.38	19	22.25	155	29.01	10.35	2.4	2.5	42	1	38	.11	3	0.4	0.7	36	KAO
		11	1141	7.15	19	25.39	155	20.99	10.22	1.7	1.2	36	5	40	.11	4	0.4	0.6	31	KAO
		11	1524	34.68	19	23.92	155	26.98	10.35	1.7	1.2	38	2	36	.11	3	0.4	0.7	36	KAO
		11	1551	26.91	19	25.06	155	27.10	3.38	1.9	1.8	28	3	58	.12	3	0.3	0.8	25	KAO
		11	1652	23.32	19	23.61	155	27.29	10.17	2.2	2.3	45	3	55	.13	2	0.4	0.6	41	KAO
		11	1752	27.23	19	2.81	155	14.79	26.66	2.3	1.7	33	5	258	.09	26	1.3	1.8	31	LOI
		11	1947	16.29	19	19.63	155	11.24	8.08	2.6	3.0	47	4	93	.11	5	0.4	0.6	39	SF3
		11	2057	28.51	19	20.02	155	11.10	8.28	2.3	2.7	57	3	86	.14	4	0.4	0.6	54	SF3
		11	2120	0.48	19	23.65	155	30.17	9.74	1.9		31	1	71	.09	5	0.5	1.0	30	KAO
		11	2137	55.52	19	22.93	155	26.78	11.18	2.1	2.2	40	1	39	.11	2	0.4	0.6	39	KAO
		12	019	2.27	19	17.81	154	59.60	38.19	2.2	1.9	40	4	270	.10	7	1.2	1.1	36	LER
		12	327	42.27	19	25.29	155	29.34	8.95	1.7	1.3	35	2	38	.10	6	0.3	0.9	32	KAO
		12	6	9 29.88	19	19.33	155	15.04	6.30	1.4	1.3	31	4	94	.11	4	0.4	0.9	27	SF1
		12	1030	40.37	19	17.92	155	14.14	7.50	1.8	1.9	37	1	95	.12	2	0.5	0.8	35	SF2
		12	1032	27.79	19	18.54	155	14.20	9.48	3.2	3.4	50	5	135	.12	6	0.4	0.5	46	SF2
		12	1249	30.85	19	20.45	155	15.59	6.82	1.4	1.1	36	4	78	.13	3	0.4	0.7	26	SF1
		12	14	3 29.15	19	18.43	155	14.10	9.51	2.2	2.5	40	1	136	.11	7	0.5	0.7	32	SF2
		12	1432	50.37	19	25.40	155	20.83	9.22	1.8	1.3	35	5	44	.09	4	0.4	0.7	26	KAO
		12	1613	32.44	19	18.08	155	14.08	8.81	1.9	2.3	39	3	140	.10	7	0.5	0.7	26	SF2
		12	1748	15.72	19	18.34	155	14.10	10.01	3.4	3.7	48	4	137	.13	7	0.5	0.5	43	SF2
		12	1751	17.14	19	17.75	155	14.21	5.32	2.1	1.1	30	1	115	.10	2	0.5	1.1	18	SF2
		12	2037	38.53	19	28.05	155	26.33	5.11	2.0	1.1	34	6	47	.12	6	0.3	1.8	26	KAO
		13	054	16.85	19	24.98	155	19.69	4.56	2.1	2.0	36	5	37	.12	2	0.3	0.9	25	KAO
		13	210	30.58	19	19.41	155	11.61	6.66	2.0	2.0	47	6	97	.13	5	0.4	0.7	28	SF3
		13	350	11.90	19	25.69	155	21.64	9.36	1.8	1.1	31	4	37	.11	4	0.4	0.8	22	KAO
		13	738	31.99	19	22.58	155	30.15	10.95	2.5	2.3	44	3	35	.09	4	0.3	0.6	35	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
1984	JAN	13	757	4.05	19	19.46	155	11.88	8.84	2.2	2.1	46	6	93	.11	5	0.3	0.4	31	SF3
		13	926	5.91	19	25.64	155	21.43	9.25	2.0	1.5	40	5	33	.11	4	0.4	0.6	30	KAO
		13	1120	45.50	19	21.26	155	1.71	7.47	1.6	1.5	21	2	177	.09	3	0.7	0.8	15	SF5
		13	1222	36.18	19	27.78	155	23.40	11.58	3.3	3.4	47	3	42	.12	4	0.3	0.4	43	KAO
		13	1436	48.62	19	26.27	155	29.17	8.19	2.1	1.7	35	3	42	.11	7	0.4	1.0	25	KAO
		13	1542	10.86	19	27.28	155	23.92	10.84	2.5	2.3	48	5	34	.12	4	0.3	0.5	38	KAO
		13	1948	49.51	19	24.97	155	19.38	5.20	1.7	1.3	27	5	77	.12	2	0.4	0.9	20	KAO
		13	2146	28.80	19	21.12	155	7.43	5.14	1.6	1.3	28	2	83	.18	4	0.7	1.8	21	SF4
		14	050	2.57	19	22.21	155	30.34	8.66	2.1	1.3	32	2	78	.09	5	0.5	1.0	26	KAO
		14	950	13.46	19	21.46	155	30.20	9.94	1.9	1.5	36	2	46	.09	5	0.4	0.8	32	KAO
		14	1238	23.44	19	22.20	155	0.41	6.60	2.1	1.7	32	2	168	.13	6	0.6	0.8	29	SF5
		14	1241	52.73	19	23.95	155	48.68	12.92	2.8	2.9	35	2	108	.11	13	0.6	0.3	33	KON
		14	1926	12.47	19	25.16	155	19.16	6.25	1.7	1.1	21	3	110	.10	3	0.4	0.9	18	KAO
		15	645	51.04	19	19.77	155	12.18	6.44	1.5	1.1	17	0	83	.07	6	0.5	0.9	15	SF3
		15	7	2 43.93	19	20.51	155	12.38	6.58	1.4	1.1	15	0	73	.09	4	0.5	0.9	14	SF2
		15	1256	3.05	19	19.36	155	12.23	6.31	1.6	1.6	26	2	91	.08	5	0.4	1.0	24	SF3
		15	1655	38.06	19	21.67	155	0.52	8.04	1.8	1.4	31	1	177	.11	5	0.6	0.7	28	SF5
		15	2159	42.73	19	19.83	155	11.68	7.23	1.7	1.6	34	3	86	.10	5	0.4	0.7	31	SF3
		15	2315	40.25	19	19.09	155	27.52	9.91	2.2	2.7	41	4	66	.13	8	0.3	0.8	35	KAO
		16	247	13.59	19	23.78	155	30.95	10.49	1.8	1.4	23	0	81	.05	11	0.5	1.6	22	KAO
		16	5	9 16.06	19	15.71	155	21.80	8.94	1.9	2.2	30	4	177	.12	5	0.8	1.0	27	SWR
		16	1239	41.45	19	24.49	155	19.63	7.04	1.8	1.9	32	4	44	.10	1	0.4	0.7	27	KAO
		16	1546	13.19	19	21.80	155	12.01	3.38	1.4	1.4	18	3	79	.10	2	0.4	0.5	15	SER
		16	1928	38.24	19	11.59	155	37.72	8.74	2.2	2.2	33	3	98	.16	6	0.5	1.0	30	LSW
		16	2145	46.79	19	25.35	155	20.18	7.37	2.2	2.4	36	4	38	.11	3	0.3	0.6	30	KAO
		16	2157	38.01	19	23.48	155	27.33	11.01	1.8	1.4	38	2	43	.12	2	0.4	0.7	31	KAO
		16	2329	30.88	18	51.28	155	28.60	35.92	3.0	2.8	49	4	262	.09	24	1.2	1.0	46	DLS
		17	2	1 48.38	19	19.31	155	15.38	6.22	1.4	1.3	25	0	98	.09	4	0.4	1.0	25	SF1
		17	746	4.94	19	19.75	155	11.06	5.54	1.5	1.1	18	0	91	.06	5	0.4	1.4	18	SF3
		17	1021	33.68	19	23.85	155	30.96	11.61	2.5	2.7	42	6	47	.08	6	0.4	0.6	36	KAO
		17	1416	25.64	19	25.87	155	21.42	11.18	1.7	1.4	38	7	46	.11	3	0.4	0.6	32	KAO
		17	1647	14.32	19	16.74	155	22.21	6.43	1.6	1.5	26	2	129	.13	5	0.6	1.5	24	SWR
		17	2018	51.40	19	24.76	155	20.30	8.36	2.1	2.2	44	5	37	.12	2	0.3	0.6	39	KAO
		17	2347	43.14	19	21.16	155	12.89	8.46	2.3	2.6	43	3	59	.12	3	0.4	0.6	40	SF2
		18	045	39.78	19	24.78	155	21.19	11.51	2.0	1.5	37	4	44	.09	3	0.4	0.5	33	KAO
		18	432	50.23	19	22.93	155	26.25	10.05	1.6	1.1	16	1	86	.07	3	0.5	0.9	15	KAO
		18	523	52.28	19	19.96	155	30.39	10.16	2.0	1.8	21	0	55	.10	7	0.5	1.4	21	KAO
		18	526	49.26	19	29.24	155	27.60	7.19	2.4	1.8	27	1	82	.09	5	0.4	1.3	26	KAO
		18	557	47.54	19	21.15	155	21.53	6.49	1.7	1.3	18	1	61	.11	4	0.6	1.4	17	SWR
		18	720	56.36	19	23.86	155	20.74	10.82	1.8	1.9	21	1	62	.06	2	0.5	1.0	20	KAO
		18	1038	16.01	19	24.89	155	19.43	5.86	1.9	1.8	33	5	46	.11	2	0.4	0.7	28	KAO
		18	1532	37.45	19	26.72	155	14.56	30.37	2.1	1.8	33	1	125	.10	4	1.0	1.3	32	DEP
		18	1753	33.46	19	22.66	155	26.85	10.43	1.8	1.3	35	4	41	.11	1	0.4	0.8	30	KAO
		18	2233	23.43	19	19.60	155	11.95	5.52	1.9	1.6	36	4	90	.12	5	0.4	1.3	31	SF3
		19	823	51.55	19	22.90	155	26.48	10.24	2.6	2.4	31	1	44	.11	2	0.4	0.6	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	DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1984	JAN	19	14 9	50.68	19	23.56	155	20.63	11.37	2.1	2.6	34	5	57	.09	2	0.4	0.6	27	KAO
		19	1514	21.52	19	22.06	155	26.57	10.84	1.9	1.5	35	2	42	.12	2	0.4	0.8	33	KAO
		19	2015	57.67	19	19.87	155	11.58	7.88	1.6	1.5	31	3	87	.08	5	0.4	0.7	28	SF3
		19	21 4	48.62	19	22.00	155	7.20	8.73	3.1	3.2	47	5	72	.11	3	0.3	0.4	38	SF4
		20	129	35.02	19	27.35	155	22.61	9.90	2.7	2.7	46	5	49	.12	3	0.4	0.5	39	KAO
		20	152	7.45	19	17.18	155	20.54	9.68	1.7	1.5	31	5	157	.10	4	0.4	0.8	25	SWR
		20	358	31.23	19	22.00	155	23.56	10.26	2.2	2.1	39	1	41	.11	3	0.4	0.6	38	SWR
		20	919	41.99	19	21.47	155	6.85	8.25	2.6	2.8	44	5	83	.10	4	0.4	0.5	35	SF4
		20	18 0	2.10	19	23.78	155	26.16	8.18	1.8	1.5	34	2	37	.11	3	0.3	0.7	29	KAO
		20	1842	29.98	19	26.82	155	29.49	9.20	2.4	2.2	45	5	55	.13	8	0.4	0.7	38	KAO
		20	1944	50.73	19	19.02	155	11.10	8.75	2.2	1.8	40	5	110	.10	6	0.4	0.6	32	SF3
		21	416	29.36	19	27.44	155	29.77	10.36	2.3	1.6	45	5	37	.12	9	0.4	0.6	31	KAO
		21	456	35.18	19	25.14	155	19.42	5.78	1.8	1.5	30	4	72	.11	3	0.4	0.8	21	KAO
		21	647	30.95	19	25.06	155	29.20	9.01	2.0	1.1	29	1	72	.11	6	0.4	0.8	20	KAO
		21	1530	50.04	19	18.96	155	11.42	7.01	1.5	1.1	11	1	305	.13	7	2.2	1.8	7	SF3
		21	1931	28.64	19	20.69	155	23.62	10.02	2.0	1.8	14	2	128	.08	1	0.7	1.3	11	SWR
		21	22 3	46.33	19	9.74	155	41.76	4.76	2.6	2.7	14	1	133	.23	13	0.9	15.3	10	LSW
		22	0 9	43.89	19	15.39	155	13.91	9.14	1.5	1.2	9	0	267	.12	13	4.0	1.4	7	SF2
		22	251	35.37	19	20.45	155	2.75	8.12	2.9	3.1	33	3	196	.11	9	0.9	0.7	24	SF5
		22	5 8	58.71	19	21.42	155	2.27	1.98	1.9	1.5	18	2	221	.14	9	1.4	2.5	14	SSF
		22	6 4	43.31	19	25.20	155	19.39	5.00	1.5	1.1	17	3	109	.10	3	0.5	1.5	13	KAO
		22	1012	44.32	19	25.53	155	20.78	9.16	2.3	2.6	45	5	37	.13	4	0.4	0.5	34	KAO
		22	1014	26.25	19	17.77	155	16.07	8.05	1.7	1.3	30	2	140	.10	4	0.5	0.6	24	SF1
		22	15 9	31.41	19	22.36	155	29.92	8.98	2.0	1.5	34	3	45	.10	4	0.4	0.7	29	KAO
		22	1642	40.52	19	26.97	155	29.09	8.26	2.0	1.1	27	1	58	.10	8	0.4	1.1	26	KAO
		23	014	26.07	19	22.62	155	30.12	8.90	2.1	1.5	27	1	47	.09	4	0.5	1.0	22	KAO
		23	251	34.43	19	11.53	155	27.21	7.76	2.1	1.5	31	1	125	.15	4	0.7	0.9	24	LSW
		23	253	59.14	19	11.63	155	27.13	7.37	2.3	1.5	34	2	126	.16	4	0.7	1.0	23	LSW
		23	1118	45.54	19	18.46	155	13.31	5.04	1.4	1.1	22	2	84	.11	3	0.4	1.3	19	SF2
		23	1134	11.80	19	18.14	155	13.36	6.18	1.4	1.1	25	4	88	.08	2	0.4	0.8	22	SF2
		23	1312	44.11	19	19.62	155	12.28	7.68	1.5	1.1	26	3	86	.11	5	0.5	0.9	24	SF3
		23	1434	22.52	19	20.45	155	11.37	9.27	2.2	2.3	40	5	78	.10	4	0.4	0.5	35	SF3
		23	18 8	3.86	19	21.92	155	28.86	4.25	1.9	1.5	24	1	49	.09	2	0.4	0.7	22	KAO
		23	1859	40.24	19	20.85	155	21.26	10.79	1.6	1.5	27	3	63	.09	4	0.4	0.8	25	SWR
		23	19 9	15.99	19	19.40	155	15.86	8.81	2.1	2.1	40	3	101	.10	3	0.4	0.6	33	SF1
		23	2121	29.20	19	18.68	155	12.97	6.74	1.8	1.8	39	3	91	.13	3	0.4	0.9	33	SF2
		23	2150	35.10	19	25.51	155	21.09	10.05	2.0	1.8	42	6	37	.12	4	0.3	0.6	35	KAO
		23	2153	8.17	19	23.26	155	25.65	10.92	1.7	1.1	27	2	44	.11	4	0.5	1.0	25	KAO
		24	214	37.53	19	21.99	155	2.47	7.25	1.8	1.3	31	3	139	.16	4	0.6	0.8	28	SF5
		24	326	13.68	19	25.68	155	38.68	2.90	2.3	2.5	26	4	109	.10	5	0.5	1.1	23	MLO
		24	342	7.28	19	11.72	155	28.99	10.65	1.9	1.6	25	2	129	.15	5	0.8	1.1	24	LSW
		24	14 4	43.72	19	42.66	155	1.78	0.02	2.5	2.5	29	1	225	.16	1	1.0	0.6	29	HIL B
		24	15 4	42.12	19	22.75	155	29.99	9.58	2.0	1.5	27	2	48	.09	4	0.4	1.0	26	KAO
		24	16 2	51.55	19	21.14	155	22.61	8.44	1.6	1.1	26	3	62	.11	2	0.4	1.0	23	SWR
		24	1632	9.92	19	27.54	155	28.50	10.09	2.0	1.6	37	5	54	.12	7	0.4	0.8	32	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
1984	JAN	24	2214	36.84	19	28.29	155	26.02	9.66	2.1	1.5	35	4	62	.12	6	0.4	0.9	31	KAO
		25	155	31.68	19	26.38	155	38.38	3.44	2.3	2.2	28	4	200	.11	4	0.7	1.0	27	MLO
		25	1718	35.68	19	22.80	155	26.81	9.82	1.6	1.1	31	2	44	.11	2	0.4	0.8	28	KAO
		25	1748	5.53	19	27.10	155	26.15	3.44	1.7	1.2	35	4	61	.13	4	0.4	1.0	24	KAO
		26	033	27.07	19	21.59	155	5.08	8.20	2.1	1.8	40	5	84	.10	5	0.4	0.5	28	SF5
		26	219	9.58	19	25.70	155	28.56	9.46	1.7	1.2	29	2	41	.12	6	0.4	0.9	24	KAO
		26	434	18.26	19	23.50	155	25.88	10.52	2.3	2.2	44	4	29	.11	4	0.3	0.5	36	KAO
		26	523	25.64	19	25.79	155	37.86	3.12	2.5	1.7	21	2	97	.20	4	0.7	1.4	13	MLO
		26	543	42.62	19	17.94	155	24.25	7.88	1.6	1.2	32	3	81	.16	5	0.5	0.8	26	SWR
		26	545	14.26	19	20.39	155	7.91	8.27	2.5	2.6	46	5	86	.12	5	0.4	0.6	38	SF4
		26	716	26.74	19	25.96	155	21.33	9.57	3.0	3.1	47	3	31	.12	3	0.4	0.4	42	KAO
		26	952	22.64	19	26.48	155	30.10	7.85	1.6	1.5	32	2	68	.11	9	0.4	1.2	24	KAO
		26	2037	26.34	19	25.38	155	21.24	9.23	1.7	1.1	33	5	60	.11	4	0.4	0.8	28	KAO
		26	2310	25.21	19	23.42	155	27.21	9.90	1.8	1.1	30	2	58	.11	2	0.4	0.7	24	KAO
		27	013	43.77	19	19.67	155	23.30	10.83		1.1	25	2	78	.10	1	0.5	1.2	17	SWR
		27	443	39.44	19	11.58	155	27.22	8.15	1.8	1.2	21	1	147	.10	4	0.7	0.7	16	LSW
		27	659	18.02	19	27.58	155	29.57	10.58	2.3	1.9	43	3	53	.11	8	0.3	0.6	31	KAO
		27	727	58.88	19	20.63	155	4.17	4.81	1.5	1.1	37	1	107	.19	3	0.7	1.5	26	SSF
		27	11 8	28.00	19	22.61	155	20.96	10.01	2.6	2.7	46	5	46	.12	3	0.3	0.4	34	KAO
		27	1240	30.00	19	22.52	155	27.64	9.67	2.5	2.3	43	4	31	.12	0	0.3	0.5	31	KAO
		27	1751	52.23	19	21.82	155	30.08	8.71	2.1	2.0	34	1	43	.10	5	0.4	0.8	29	KAO
		28	222	7.79	19	37.18	156	10.80	28.80	3.7	4.2	46	2	254	.11	31	1.4	1.9	42	KON F
		28	329	49.80	19	26.44	155	38.29	2.82	2.8	3.1	30	1	159	.10	4	0.6	0.8	24	MLO
		28	632	58.24	19	29.00	155	27.21	4.96	2.5	2.3	39	3	75	.14	6	0.3	1.9	24	KAO
		28	7 0	43.28	19	22.74	155	27.00	9.87	2.3	2.2	46	5	36	.11	1	0.3	0.5	35	KAO
		28	816	52.48	19	22.77	155	29.86	10.76	2.8	2.7	48	5	32	.10	4	0.3	0.5	39	KAO
		28	823	7.57	19	38.66	156	2.59	43.05	3.0	3.2	52	7	231	.09	22	0.7	1.3	45	KON
		28	1456	44.61	19	22.70	155	20.78	10.67	2.1	1.5	41	6	45	.10	3	0.4	0.5	24	KAO
		28	1813	54.54	19	20.87	155	28.62	9.95	2.2	2.1	39	3	40	.11	4	0.4	0.6	28	KAO
		28	20 8	11.87	19	28.18	155	36.01	2.31	2.7	3.2	28	0	77	.11	2	0.4	0.3	27	MLO
		28	2143	22.58	19	24.02	155	31.30	14.33	2.2	2.3	29	1	81	.08	3	0.5	0.6	22	DML
		29	418	4.73	19	25.34	155	29.30	9.64	2.4	2.2	32	1	51	.11	6	0.4	0.8	29	KAO
		29	647	55.07	19	15.59	155	1.93	42.88	2.6	2.6	32	0	221	.10	8	2.0	2.3	25	DEP
		29	713	34.92	19	19.33	155	9.76	6.87	1.6	1.5	21	0	98	.10	5	0.6	1.3	18	SF3
		29	835	48.62	19	30.93	155	27.69	4.58	2.2	1.6	28	4	87	.11	2	0.4	1.0	19	MLO
		29	1133	13.26	19	19.77	155	14.76	8.90	1.7	1.2	34	3	76	.11	5	0.4	0.9	25	SF1
		29	15 2	29.70	19	21.99	155	21.64	10.52	1.8	1.1	29	3	53	.10	4	0.4	0.9	21	SWR
		29	1838	50.09	19	28.90	155	32.32	14.16	2.3	1.4	9	0	165	.11	5	1.3	2.0	8	DML
		30	510	10.17	19	21.60	155	22.12	10.75	1.9	1.2	36	5	57	.11	3	0.4	0.5	23	SWR
		30	1313	59.43	19	20.86	155	21.85	9.34	2.0	2.1	34	6	65	.12	3	0.4	0.7	19	SWR
		30	14 1	8.46	19	20.64	155	21.76	9.35	1.9	1.5	32	4	68	.12	3	0.4	0.8	25	SWR
		30	1931	1.81	19	29.67	155	29.60	2.71	2.5	1.5	43	5	89	.12	6	0.3	1.1	31	KAO
		30	2026	56.47	19	33.93	156	1.70	15.67	3.4	3.7	48	6	229	.10	14	1.0	0.7	39	KON
		30	2238	58.03	19	24.82	155	21.78	10.31	1.9	1.5	37	6	38	.12	4	0.4	0.6	27	KAO
		31	045	30.12	19	23.54	155	25.81	10.40	2.5	2.9	45	5	28	.13	3	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	GAP NS	DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1984	JAN	31	1 3	44.09	19	11.84	155	28.75	33.46	2.8	2.0	48	6	86	.11	5	0.6	1.0	39	DLS
		31	347	27.92	19	28.76	155	27.59	2.65	2.0	1.1	27	4	62	.13	6	0.4	1.3	21	KAO
		31	448	38.33	19	21.52	155	22.13	9.24	2.0	1.3	33	4	58	.11	3	0.4	0.7	19	SWR
		31	646	56.82	19	28.47	155	27.89	6.46	2.2	1.4	34	6	58	.14	7	0.4	1.3	25	KAO
		31	857	56.16	19	20.60	155	21.95	10.16	1.8	1.5	31	4	69	.12	2	0.4	0.7	17	SWR
		31	1134	43.81	19	20.40	155	13.11	8.59	1.8	1.7	33	3	64	.10	4	0.4	0.6	26	SF2
		31	1238	53.53	19	21.01	155	6.32	5.21	1.9		33	3	95	.13	6	0.5	1.6	24	SF4
		31	1251	12.19	19	21.40	155	0.56	3.71	1.9		26	3	182	.16	5	0.8	2.2	18	SSF
		31	1648	14.42	19	21.37	155	22.15	10.61	2.5	2.5	45	4	60	.11	3	0.3	0.3	38	SWR
		31	2222	38.19	19	23.19	155	27.64	9.80	1.6	1.1	36	2	33	.10	1	0.3	0.6	33	KAO
		31	2223	39.02	19	18.44	155	13.30	8.10	2.0	2.3	45	4	85	.12	3	0.4	0.6	40	SF2
		31	2236	6.46	19	20.94	155	22.20	10.83	1.8	1.3	32	4	64	.09	2	0.4	0.7	25	SWR
	FEB	1	314	1.58	19	27.06	155	19.69	8.12	1.4	1.3	25	4	162	.10	2	0.5	0.8	20	KAO
		1	925	54.35	19	21.80	155	23.18	10.82	1.7	1.5	35	4	53	.12	3	0.4	0.7	30	SWR
		1	2220	50.98	19	30.54	155	49.06	7.92	2.2	1.0	26	3	174	.13	6	0.8	0.7	25	KON
		1	23 6	3.74	19	19.25	155	11.95	7.40	1.5	1.3	31	4	97	.09	5	0.4	0.7	26	SF3
		1	2356	41.04	19	22.05	155	28.82	9.89	1.7	1.3	33	2	40	.11	2	0.4	0.8	29	KAO
		2	425	11.91	19	28.44	155	27.12	7.85	2.3	1.5	39	5	71	.13	7	0.4	0.9	33	KAO
		2	933	43.49	19	21.38	155	2.46	6.98	2.1	1.5	38	6	138	.13	3	0.5	0.7	30	SF5
		2	936	17.06	19	18.74	155	15.00	9.40	2.4	2.4	48	6	94	.13	4	0.4	0.5	39	SF1
		2	1112	20.86	19	19.15	155	13.26	10.65	3.5	3.7	52	7	77	.10	4	0.4	0.4	47	SF2
		2	1142	49.34	19	19.30	155	12.92	7.57	1.6	1.3	36	4	81	.12	4	0.4	0.7	34	SF2
		2	1551	22.49	19	23.71	155	36.66	5.52	3.5	3.4	54	10	66	.12	7	0.3	0.7	49	MLO
		2	17 5	50.32	19	25.08	155	30.53	9.34	1.9	1.4	33	1	44	.09	7	0.4	0.9	30	KAO
		2	1957	23.07	19	17.89	155	23.17	9.52	1.7	1.7	34	4	98	.11	4	0.4	0.6	26	SWR
		2	2313	41.40	19	25.63	155	21.00	10.16	2.6	2.5	46	5	39	.12	4	0.3	0.4	38	KAO
		3	213	17.35	19	20.18	155	12.99	8.88	2.0	2.3	43	5	69	.13	5	0.4	0.5	31	SF2
		3	3 3	53.57	19	28.51	155	28.42	9.24	2.0	1.4	39	4	59	.13	7	0.4	0.9	26	KAO
		3	622	25.10	19	18.25	155	13.78	10.13	3.5	3.7	52	6	67	.11	2	0.4	0.4	44	SF2 F
		3	841	31.93	19	19.37	155	11.04	6.36	2.1	2.0	30	2	101	.10	5	0.5	1.1	28	SF3
		3	924	59.44	19	19.76	155	10.99	7.71	2.1	2.3	40	5	92	.11	5	0.4	0.6	29	SF3
		3	1622	4.77	19	23.78	155	26.16	10.54	2.6	2.6	48	4	37	.14	3	0.4	0.4	43	KAO
		3	1945	35.89	19	11.53	155	36.60	9.09	3.3	3.5	52	8	93	.23	6	0.6	0.8	42	LSW
		3	2038	36.02	19	25.65	155	20.75	10.37	2.8	3.1	50	6	37	.11	4	0.3	0.4	40	KAO
		3	2111	41.76	19	18.96	155	13.35	7.45	1.4	1.1	31	3	77	.09	4	0.5	0.9	19	SF2
		3	2224	55.03	19	28.25	155	27.31	8.35	2.7	2.4	47	5	56	.13	7	0.3	0.8	39	KAO
		3	2344	22.96	19	23.85	155	26.86	10.39	2.7	3.0	51	6	36	.13	3	0.3	0.4	42	KAO
		4	429	51.50	19	24.77	155	20.13	4.90	1.6	1.3	29	4	70	.10	2	0.4	0.9	25	KAO
		4	1011	34.12	19	17.21	155	20.50	8.38	1.7	1.3	28	6	139	.09	4	0.4	0.6	18	SWR
		4	1012	5.08	19	26.02	155	30.10	11.54	1.8	1.4	31	2	101	.10	8	0.5	0.8	29	KAO
		4	13 0	38.92	19	16.36	155	21.81	5.53	1.4	1.8	23	3	159	.09	5	0.4	1.3	21	SWR
		4	13 1	56.04	19	21.69	155	6.90	8.53	1.5	1.5	26	3	78	.09	3	0.4	0.7	22	SF4
		4	1635	17.20	19	26.77	155	29.75	9.79	2.0	1.5	34	4	69	.09	9	0.4	0.9	29	KAO
		4	2032	0.84	19	20.18	155	12.30	7.89	1.6	1.6	38	3	76	.12	5	0.5	0.7	34	SF3
		5	857	47.93	19	16.43	155	22.82	7.07	2.2	2.6	49	4	127	.16	5	0.4	0.8	44	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
1984	FEB	5	856	48.18	19	29.04	155	25.03	4.82	2.0	2.1	35	3	50	.15	3	0.4	1.3	32	KAO
		5	1427	9.96	19	27.42	155	29.72	9.92	2.1	1.6	38	4	46	.10	9	0.4	0.8	32	KAO
		5	1714	5.64	19	23.04	155	26.72	10.76	1.7	1.5	38	3	41	.11	2	0.4	0.6	33	KAO
		6	242	40.94	19	25.30	155	14.92	38.76	1.8	1.7	27	2	124	.08	2	1.2	2.1	23	DEP L
		6	421	10.63	19	28.09	155	25.84	9.62	2.0	1.4	39	5	46	.10	5	0.3	0.7	33	KAO
		6	720	59.52	19	27.61	155	29.13	9.58	1.8	1.2	34	3	55	.11	8	0.4	0.9	31	KAO
		6	18 1	46.74	19	17.41	155	20.80	8.85	1.8	1.8	39	6	128	.09	4	0.4	0.7	32	SWR
		6	2052	56.25	19	25.12	155	19.08	6.51	2.7	3.0	46	4	37	.13	3	0.3	0.6	37	KAO
		6	2154	13.11	19	25.17	155	18.87	5.89	2.2	2.4	38	4	73	.12	2	0.4	0.6	25	INT
		7	145	28.53	19	21.78	155	28.58	4.84	2.2	2.4	40	4	44	.11	2	0.3	0.8	28	KAO
		7	340	59.64	19	24.14	155	25.88	10.46	2.5	2.5	49	5	28	.13	2	0.3	0.4	41	KAO
		7	342	33.54	19	22.51	155	20.80	9.87	1.9	1.5	38	7	46	.12	3	0.4	0.6	27	KAO
		7	1759	53.71	19	23.67	155	26.32	3.59	1.9	1.7	28	2	37	.12	3	0.3	0.7	24	KAO
		7	1843	56.97	19	20.56	155	4.55	7.17	2.0	2.3	39	3	114	.12	3	0.4	0.6	24	SF5
		8	215	39.69	19	23.45	155	30.16	8.60	2.3	2.2	41	3	33	.11	5	0.3	0.7	30	KAO
		8	248	34.40	19	19.43	155	11.88	6.79	1.8	1.6	34	2	93	.11	5	0.5	0.7	23	SF3
		8	311	9.29	19	25.33	155	20.49	8.02	1.5	1.1	35	6	46	.11	3	0.4	0.6	25	KAO
		8	332	51.15	19	25.18	155	20.35	6.93	1.4	1.3	33	4	46	.12	3	0.4	0.7	26	KAO
		8	814	39.52	19	59.60	155	31.04	3.04	2.8	2.4	35	2	183	.14	21	0.7	1.7	24	KEA
		8	16 2	21.19	19	29.59	155	21.88	0.00	2.1	2.1	19	4	82	.14	2	0.5	0.4	12	KAO
		8	1618	15.65	19	20.75	155	12.12	7.89	2.3	2.4	42	5	103	.14	4	0.5	0.6	35	SF3
		8	1814	1.74	19	20.97	155	21.73	9.91	2.1	2.3	36	6	64	.13	3	0.4	0.5	29	SWR
		8	19 2	45.06	19	23.54	155	25.92	10.63	2.4	2.3	43	5	38	.13	3	0.3	0.4	33	KAO
		9	536	2.38	19	28.39	155	27.33	5.19	2.1	1.3	40	6	65	.13	7	0.4	1.5	27	KAO
		9	9 7	43.27	19	25.31	155	21.70	9.45	2.1	1.5	39	4	34	.12	5	0.4	0.5	28	KAO
		9	9 9	7.00	20	0.20	155	31.31	6.09	2.9	2.9	43	6	185	.17	22	0.7	0.8	25	KEA
		9	1425	52.69	19	18.60	155	15.01	7.16	1.8	1.3	37	4	108	.12	4	0.4	0.6	28	SF1
		9	1723	32.29	19	28.26	155	24.69	2.78	2.3	1.5	25	5	70	.12	4	0.3	0.7	18	KAO
		10	0 1	34.86	19	23.09	155	25.58	9.71	1.4	1.3	40	4	39	.12	4	0.4	0.6	29	KAO
		10	321	52.07	19	21.65	155	22.92	8.65	1.6	1.1	29	4	57	.11	3	0.4	0.7	21	SWR
		10	954	5.49	19	23.91	155	26.97	9.80	1.7	1.1	34	2	48	.11	3	0.4	0.7	27	KAO
		10	1935	13.47	19	26.85	155	23.59	11.19	1.9	1.2	24	3	69	.09	4	0.5	1.0	19	KAO
		10	1948	10.70	19	21.76	155	2.60	6.26	1.9	1.5	41	5	136	.15	3	0.5	0.8	27	SF5
		10	2127	23.81	19	20.86	155	21.84	8.59	1.5	1.1	34	4	65	.13	3	0.4	0.7	23	SWR
		10	2312	31.53	19	23.77	155	21.10	9.16	1.7	1.3	34	5	58	.12	2	0.4	0.7	21	KAO
		11	053	59.11	19	25.85	155	21.22	8.64	2.3	2.0	37	4	32	.11	3	0.4	0.6	25	KAO
		11	210	57.42	19	25.76	155	21.24	8.30	1.9	1.3	31	5	48	.10	4	0.4	0.7	21	KAO
		11	433	22.79	19	25.85	155	21.78	8.81	2.0	1.5	36	4	36	.12	4	0.4	0.6	27	KAO
		11	559	24.24	19	22.15	155	30.02	7.94	1.6	1.1	35	3	45	.12	4	0.4	0.8	27	KAO
		11	624	12.88	19	25.71	155	21.32	9.39	1.5	1.1	33	4	46	.11	4	0.4	0.6	26	KAO
		11	849	32.48	19	25.64	155	21.55	9.61	1.6	1.1	36	5	32	.10	4	0.4	0.7	25	KAO
		11	856	49.19	19	26.22	155	28.51	9.15	1.9	1.2	33	2	58	.11	6	0.4	0.9	25	KAO
		11	1835	28.15	19	30.15	155	39.81	7.25	2.3	1.4	26	3	52	.13	7	0.5	1.4	17	MLO
		11	1910	52.81	19	29.43	155	39.32	6.49	2.3	1.6	22	2	96	.07	6	0.5	0.9	13	MLO
		11	1925	33.17	19	18.66	155	15.55	7.00	1.9	1.6	43	4	103	.10	4	0.4	0.7	36	SF1

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
1984	FEB	12	114	51.38	19	30.17	155	39.82	8.11	2.7	2.5	34	3	85	.12	7	0.4	0.8	24	MLO
		12	529	43.82	19	18.88	155	13.44	9.26	2.5	2.8	48	6	76	.11	3	0.4	0.4	41	SF2
		12	612	0.06	19	24.80	155	29.56	8.48	1.6	1.1	31	3	39	.10	5	0.4	1.0	21	KAO
		12	1022	1.29	19	25.56	155	37.72	1.33	2.4	1.9	19	1	95	.12	4	0.5	0.9	13	MLO
		12	1035	54.17	19	24.18	155	26.31	9.40	1.9	1.5	35	2	35	.13	3	0.4	0.7	29	KAO
		12	1451	51.97	19	25.45	155	37.94	1.34	2.4	2.3	19	1	98	.13	4	0.6	1.4	12	MLO
		12	1618	11.21	19	16.13	155	31.70	7.93	3.2	3.2	45	4	81	.19	3	0.5	0.9	41	LSW
		12	17	7 30.93	19	21.24	155	24.92	13.30	1.8	1.2	35	4	49	.11	3	0.4	0.7	31	DEP
		12	1753	44.72	19	24.72	155	24.19	9.90	1.9	1.8	34	4	40	.10	2	0.4	0.7	29	KAO
		12	1754	28.19	19	24.69	155	24.47	8.34	1.8	1.5	38	4	38	.12	2	0.3	0.7	33	KAO
		12	18	7 10.16	19	19.27	155	15.65	8.25	1.8	2.2	39	5	102	.09	3	0.4	0.5	36	SF1
		12	1844	15.22	19	24.72	155	24.39	8.51	1.6	1.1	37	5	39	.14	2	0.4	0.8	31	KAO
		12	19	6 19.91	19	29.57	155	28.06	3.33	2.4	2.6	41	5	55	.13	5	0.3	1.3	36	KAO
		12	19	8 50.93	19	29.91	155	28.14	4.58	2.7	3.0	40	4	86	.13	4	0.3	1.4	36	KAO
		12	1952	47.16	19	23.99	155	25.75	11.26	1.7	1.2	35	2	35	.12	3	0.4	0.6	30	KAO
		13	4	5 57.88	19	25.63	155	22.26	10.45	1.8	1.5	20	1	59	.09	5	0.6	1.1	19	KAO
		13	1027	21.80	19	23.98	155	26.14	9.11	3.1	3.0	50	6	28	.16	3	0.4	0.6	39	KAO
		13	1056	4.75	19	30.32	155	39.93	7.26	2.5	2.3	39	3	53	.14	7	0.4	0.8	27	MLO
		13	1650	41.34	19	28.88	155	27.21	1.91	2.5	2.3	40	5	62	.13	6	0.3	0.9	26	KAO
		13	1748	50.80	19	30.40	155	40.00	5.62	2.7	2.6	40	3	53	.15	7	0.4	1.1	22	MLO
		13	1816	10.86	19	25.27	155	19.83	5.57	2.7	3.0	46	5	46	.12	3	0.3	0.8	35	KAO
		*13	2110	12.47	30	58.05	157	35.31	29.58	6.0		45	2	344	.15500		18.0	3.9	17	DIS L*
		14	3	8 22.17	19	19.63	155	11.98	5.70	1.8	1.6	28	0	89	.12	5	0.5	1.4	28	SF3
		14	353	51.24	19	20.82	155	6.05	6.73	1.5	1.1	26	1	101	.11	5	0.5	0.9	18	SF4
		14	355	47.05	19	20.34	155	13.00	6.54	1.8	1.9	39	4	66	.15	4	0.4	0.8	30	SF2
		14	1322	3.73	19	25.72	155	47.41	12.89	2.7	1.8	23	1	283	.13	15	3.0	0.6	20	KON
		14	1753	40.06	19	21.65	155	2.82	7.55	2.6	2.9	43	7	130	.09	3	0.4	0.4	30	SF5
		14	1956	33.62	19	25.23	155	19.26	5.12	1.7	1.5	17	1	113	.09	3	0.5	1.1	16	KAO
		14	2257	29.82	19	25.51	155	21.21	9.10	2.4	2.5	48	7	33	.14	4	0.4	0.5	41	KAO
		15	722	41.10	19	23.96	155	27.28	11.58	3.5	4.0	50	3	28	.13	3	0.3	0.3	45	KAO F
		15	1124	47.34	19	19.47	155	29.64	9.33	1.5	1.2	18	2	52	.09	7	0.4	1.1	17	KAO
		15	16	4 43.71	19	23.88	155	16.14	2.69	1.4	1.2	15	2	103	.10	1	0.3	0.3	11	SEC
		15	2024	26.83	19	14.25	155	39.45	7.06	2.4	1.6	29	2	251	.23	4	1.9	1.1	23	LSW
		15	2211	54.35	19	29.68	155	35.58	2.53	2.2	1.5	15	2	95	.11	1	0.6	0.4	12	MLO
		15	2335	43.38	19	26.94	155	23.86	11.11	2.0	1.2	38	7	67	.11	4	0.4	0.6	24	KAO
		16	652	33.13	19	28.85	155	26.72	11.97	3.2	3.1	54	7	41	.13	6	0.3	0.4	46	KAO
		16	741	52.67	19	19.00	155	15.16	7.09	1.4	1.3	33	2	101	.09	4	0.4	0.8	30	SF1
		17	026	24.84	19	24.91	155	25.37	6.98	1.9	1.6	42	4	40	.13	1	0.3	0.8	32	KAO
		17	245	6.26	19	22.89	155	4.43	8.74	3.3	3.7	50	9	87	.09	3	0.4	0.4	44	SF5
		17	838	42.49	19	22.70	155	30.00	8.49	1.7	1.5	25	0	72	.10	4	0.4	1.2	25	KAO
		17	1028	11.45	19	28.89	155	48.79	8.94	2.2	1.7	30	4	80	.16	6	0.5	0.7	25	KON
		17	2151	54.71	19	18.81	155	13.19	7.11	1.7	1.3	39	6	83	.09	3	0.4	0.6	32	SF2
		18	047	36.51	19	20.98	155	23.49	11.56	1.8	1.4	31	3	42	.10	1	0.4	0.6	26	SWR
		18	2	6 59.16	19	21.63	155	21.57	10.57	1.3	1.1	24	2	56	.09	4	0.4	0.9	20	SWR
		18	5	2 0.98	19	18.65	155	20.82	6.59	1.2	1.1	30	6	108	.09	4	0.3	0.9	24	SWR

*NEIS determination of 4.8 magnitude based on World Wide Seismograph Network Stations.

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
1984	FEB	18	551	4.18	19	22.29	155	27.89	10.42	2.4	2.9	49	6	39	.12	1	0.3	0.6	44	KAO
		18	16	0 52.02	19	24.25	155	26.37	9.45	1.9	1.7	41	4	38	.14	3	0.4	0.7	35	KAO
		19	0	4 20.28	19	29.76	155	39.42	6.95	2.0	1.3	24	4	97	.14	6	0.5	1.3	20	MLO
		19	424	17.18	19	25.30	155	20.85	10.57	2.3	2.3	49	6	43	.11	4	0.4	0.5	42	KAO
		19	1048	56.12	19	23.00	155	2.35	8.22	2.3	2.1	40	3	133	.13	5	0.6	0.4	38	SF5
		19	2130	20.29	19	20.99	155	23.61	10.72	1.3	1.1	24	3	43	.09	2	0.4	0.8	22	SWR
		20	0	9 24.81	19	25.06	155	19.51	6.95	1.4	1.3	24	4	102	.10	3	0.5	0.9	19	KAO
		20	012	22.12	19	11.09	155	28.53	8.42	2.8	2.7	42	4	125	.16	3	0.6	0.6	39	LSW
		20	013	25.91	19	10.67	155	28.47	8.29	2.7	2.7	49	7	131	.16	2	0.5	0.5	37	LSW
		20	2	0 50.01	19	26.51	155	19.37	7.92	1.7	1.1	26	6	125	.11	3	0.5	0.8	19	KAO
		20	344	29.55	19	22.09	155	27.20	10.86	1.6	1.4	37	3	42	.11	1	0.4	0.6	30	KAO
		20	540	31.87	19	27.00	155	29.24	10.54	2.2	1.4	39	5	46	.11	8	0.3	0.7	29	KAO
		20	841	54.42	19	23.59	155	25.90	10.51	2.2	2.0	47	6	27	.12	3	0.3	0.5	34	KAO
		20	1355	53.11	19	25.07	155	30.07	9.03	1.9	1.4	31	3	36	.09	6	0.4	1.0	22	KAO
		20	1853	2.40	19	24.82	155	20.16	5.82	2.0	2.0	40	6	55	.12	2	0.3	0.8	29	KAO
		20	1952	29.35	19	23.92	155	30.90	10.92	2.3	2.2	36	4	39	.09	6	0.3	0.7	28	KAO
		20	2040	41.97	19	28.16	155	24.50	2.91	2.2	1.5	28	6	51	.13	4	0.3	0.7	20	KAO
		20	21	6 38.74	19	21.82	155	21.92	8.75	2.0	1.9	38	6	55	.12	4	0.4	0.7	27	SWR
		20	21	7 47.81	19	11.96	155	38.75	7.15	2.4	2.0	35	3	103	.14	6	0.5	1.0	26	LSW
		20	2212	43.87	19	18.63	155	13.64	8.06	1.7	1.7	35	1	73	.12	3	0.5	0.6	27	SF2
		20	2346	56.45	19	19.31	155	15.36	7.78	1.6	1.8	35	1	98	.10	4	0.4	0.6	27	SF1
		21	450	35.87	19	19.56	155	23.69	9.64	1.9	1.7	32	2	76	.15	1	0.5	1.0	25	SWR
		21	1533	19.56	19	25.85	155	37.54	5.72	2.7	2.4	24	4	92	.14	3	0.5	1.4	20	MLO
		21	16	9 35.25	19	24.57	154	59.24	7.30	2.1	2.0	33	3	185	.12	1	0.6	0.6	29	LER
		21	1729	16.52	19	21.37	155	2.55	6.25	2.0	2.1	31	2	143	.13	3	0.5	1.0	29	SF5
		21	18	8 59.38	19	25.12	155	15.76	15.00	1.5	1.2	36	6	91	.10	2	0.5	0.3	29	DEP
		21	2018	9.63	19	25.83	155	29.20	9.13	1.6	1.2	34	1	40	.11	7	0.4	1.0	25	KAO
		21	2242	47.26	19	24.17	155	25.55	11.36	1.8	1.5	38	5	33	.10	2	0.4	0.5	25	KAO
		22	217	46.11	19	15.97	155	27.50	9.48	1.7	1.3	27	1	68	.13	5	0.4	0.7	18	LSW
		22	850	5.43	19	22.74	155	26.88	9.88	2.0	1.5	42	6	36	.13	1	0.3	0.6	35	KAO
		22	1338	8.18	19	20.87	155	23.77	9.55	1.9	1.3	35	5	62	.12	2	0.4	0.6	25	SWR
		22	1455	3.73	19	23.00	155	26.08	11.18	1.9	1.5	38	5	39	.11	3	0.4	0.7	29	KAO
		22	1919	49.28	19	21.90	155	28.77	8.95	1.9	1.3	42	5	38	.11	2	0.3	0.8	27	KAO
		22	2032	27.65	19	19.25	155	10.13	7.61	1.5	1.5	26	3	103	.06	5	0.4	0.8	22	SF3
		22	23	3 30.04	19	23.60	155	27.11	9.89	1.9	1.5	40	5	49	.11	2	0.4	0.6	30	KAO
		23	118	17.26	19	29.93	155	27.96	4.41	2.8	2.9	41	5	46	.12	4	0.3	1.6	28	KAO
		23	1044	47.83	19	18.53	155	13.13	10.51	2.6	2.9	45	4	157	.11	8	0.5	0.5	39	SF2
		23	1354	52.82	19	19.92	155	13.25	8.53	2.0	2.3	45	5	116	.13	5	0.4	0.6	34	SF2
		23	1511	45.69	19	24.15	155	26.58	9.83	2.0	1.7	40	5	41	.12	3	0.4	0.6	31	KAO
		23	1528	28.43	19	15.62	155	27.32	8.93	2.1	2.3	42	5	73	.18	5	0.4	0.6	30	LSW
		23	2059	9.59	19	25.02	155	30.16	12.00	3.2	3.3	45	4	35	.09	9	0.3	0.4	38	KAO
		24	835	57.13	19	23.97	155	26.59	10.51	1.8	1.2	39	4	38	.11	3	0.4	0.7	28	KAO
		24	1351	2.99	19	19.34	155	10.87	6.82	1.7	1.5	36	4	102	.10	5	0.4	0.7	27	SF3
		24	1725	10.89	19	19.69	155	13.14	6.96	1.3	1.1	34	1	72	.12	5	0.4	0.7	28	SF2
		24	20	7 11.92	19	25.40	155	20.80	10.48	1.9	1.5	44	6	70	.12	4	0.4	0.5	36	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
1984	FEB	24	2059	11.01	19	18.32	155	13.92	7.56	1.4	1.5	32	1	87	.10	3	0.5	0.8	30	SF2
		25	033	44.91	19	19.57	155	11.83	7.07	1.4	1.1	28	1	91	.10	6	0.5	0.9	26	SF3
		25	1 4	58.83	19	18.86	155	11.26	5.62	1.5	1.1	33	2	114	.10	5	0.4	1.1	29	SF3
		25	133	35.17	19	20.35	155	13.62	6.20	1.4	1.1	32	1	62	.12	4	0.4	0.8	29	SF2
		25	5 5	47.29	19	29.81	155	27.28	5.36	2.3	2.3	37	5	57	.12	4	0.3	1.2	32	KAO
		25	6 4	11.76	19	18.59	155	15.22	7.46	1.3	1.1	34	2	111	.10	4	0.4	0.6	27	SF1
		25	6 7	15.76	19	20.47	155	13.25	8.66	2.3	2.6	45	4	63	.12	4	0.4	0.5	37	SF2
		25	643	4.94	19	19.22	155	28.48	8.99	1.9	2.2	38	4	42	.11	8	0.3	0.8	33	KAO
		25	1115	59.68	19	21.34	155	2.29	6.93	2.6	2.9	42	5	153	.11	3	0.4	0.5	33	SF5
		25	12 2	39.66	19	23.43	155	20.57	10.86	1.7	1.7	34	5	55	.09	2	0.4	0.5	22	KAO
		25	1844	19.09	19	25.21	155	19.11	6.98	1.9	1.5	28	5	75	.13	3	0.4	0.8	19	KAO
		25	19 0	22.65	19	17.62	155	12.98	5.85	1.6	1.6	32	1	125	.10	1	0.6	1.0	23	SF2
		25	2325	20.86	19	25.91	155	37.38	1.29	2.5	3.0	33	2	91	.09	3	0.3	0.6	27	MLO
		26	6 0	42.95	19	19.19	155	13.37	7.14	1.7	1.8	40	5	74	.14	4	0.5	0.9	26	SF2
		26	817	41.50	19	24.70	155	20.81	8.57	1.8	1.5	43	5	43	.12	3	0.4	0.5	34	KAO
		26	1040	20.90	19	30.42	155	29.00	3.75	2.0	1.3	38	6	70	.12	4	0.3	1.0	30	MLO
		26	12 6	48.89	19	27.55	155	24.19	11.35	2.2	2.0	47	8	34	.12	4	0.3	0.4	38	KAO
		26	1341	41.06	19	20.07	155	8.16	7.29	1.5	1.5	34	3	85	.09	5	0.4	0.8	23	SF4
		26	14 3	40.61	19	27.31	155	25.74	6.58	2.3	2.3	48	5	45	.13	4	0.3	0.9	36	KAO
		26	1737	59.92	19	27.34	155	25.53	6.20	1.6	1.3	25	2	48	.13	4	0.5	1.3	23	KAO
		26	2012	25.58	19	15.47	155	15.28	6.33	1.5	1.5	30	2	189	.10	4	0.7	1.0	28	SF1
		27	355	44.72	19	25.06	155	30.24	10.66	2.3	2.0	38	3	36	.09	7	0.3	0.7	35	KAO
		27	1222	48.77	19	23.49	155	20.86	11.23	1.9	1.5	35	4	42	.11	2	0.4	0.6	30	KAO
		27	1842	19.77	19	19.23	155	14.89	7.48	1.6	1.1	33	0	93	.10	5	0.4	0.8	32	SF1
		27	1915	15.11	19	23.91	155	26.34	10.01	2.0	1.5	39	5	33	.12	3	0.4	0.6	32	KAO
		27	22 6	25.95	19	21.71	155	23.61	9.98	1.6	1.1	31	4	40	.09	3	0.4	0.7	26	SWR
		28	3 7	9.29	19	22.25	155	20.89	11.03	1.8	1.1	35	5	48	.09	3	0.3	0.6	29	KAO
		28	3 7	43.53	19	11.17	155	29.04	7.83	2.3	1.8	36	3	137	.14	4	0.6	1.1	33	LSW F
		28	343	18.85	19	20.52	155	2.09	7.20	1.9	1.5	31	3	186	.12	2	0.5	0.6	28	SF5
		28	559	37.68	19	27.37	155	37.17	1.80	2.2	1.3	22	2	90	.11	2	0.5	0.3	19	MLO
		28	641	19.39	19	19.46	155	12.24	4.85	1.5	1.1	27	4	89	.12	5	0.4	1.7	25	SSF
		28	1017	31.24	19	21.23	155	30.27	9.50	2.4	2.6	42	2	33	.10	5	0.3	0.8	39	KAO
		28	1232	2.97	19	21.61	155	30.30	10.70	2.0	2.0	33	1	48	.10	5	0.4	1.0	28	KAO
		28	1236	33.49	19	21.17	155	30.27	10.46	2.2	2.0	39	2	48	.08	5	0.3	0.7	36	KAO
		28	14 2	28.74	19	20.38	155	12.98	7.47	1.3	1.1	27	3	66	.12	4	0.5	0.9	25	SF2
		28	1520	8.34	19	20.93	155	7.76	8.55	3.1	3.3	50	6	82	.11	4	0.4	0.4	39	SF4
		28	1815	30.82	19	19.84	155	11.03	7.62	1.5	1.1	26	0	90	.12	5	0.6	1.2	26	SF3
		28	2122	48.54	19	26.52	155	25.89	11.33	1.7	1.4	34	3	39	.13	3	0.4	0.6	30	KAO
		28	2143	45.44	19	21.10	155	29.49	6.71	2.1	1.9	32	2	44	.10	4	0.3	0.8	29	KAO
		29	146	13.29	19	30.60	155	39.40	10.73	2.2	1.4	27	4	52	.15	7	0.5	0.9	14	MLO
		29	215	16.80	19	21.40	155	0.20	5.59	2.2	2.4	36	4	195	.16	6	0.6	0.5	26	SF5
		29	738	41.06	19	28.25	155	26.84	6.44	2.6	2.7	47	8	54	.12	6	0.3	0.9	37	KAO
	MAR	1	017	43.91	19	19.08	155	13.45	7.56	1.5	1.5	43	5	73	.14	4	0.5	0.8	31	SF2
		1	310	30.16	19	22.61	155	30.05	8.79	1.2	1.1	33	3	47	.09	4	0.4	0.8	22	KAO
		1	643	22.91	19	24.19	155	29.24	10.46	1.9	1.2	33	1	52	.09	4	0.4	0.6	30	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
1984	MAR	1	12 3	41.67	19	18.33	155	13.57	6.37	1.7	1.9	42	3	75	.12	2	0.4	0.8	35	SF2
		1	1756	5.92	19	21.66	155	4.59	6.59		1.3	35	3	80	.16	4	0.5	0.9	25	SF5
		1	1929	47.14	19	24.30	155	29.46	8.79	1.6	1.3	39	1	34	.10	5	0.4	0.8	29	KAO
		2	2 8	51.79	19	25.20	155	18.94	5.25	1.6	1.1	22	4	114	.10	2	0.4	0.9	18	INT
		2	444	50.68	19	26.37	155	37.99	2.47	2.4	1.8	14	0	98	.10	3	0.6	0.9	9	MLO
		2	556	49.86	19	19.46	155	12.34	3.80	1.3	1.1	25	3	88	.12	5	0.4	1.4	20	SSF
		2	915	33.88	19	19.17	155	12.19	6.26	1.6	1.3	32	5	96	.12	5	0.5	0.8	25	SF3
		3	013	41.92	19	22.44	155	30.47	9.77	1.7	1.2	31	2	48	.10	5	0.4	1.1	26	KAO
		3	515	36.67	19	26.07	155	37.23	3.04	2.4	2.5	33	4	113	.16	6	0.5	1.4	27	MLO
		3	1455	10.18	19	22.19	155	23.65	12.87	2.9	2.9	54	7	38	.11	4	0.3	0.3	43	KAO
		3	1629	34.94	19	23.88	155	26.07	5.76	1.7	1.3	30	3	36	.12	3	0.4	1.0	20	KAO
		3	1720	23.38	19	20.15	155	12.02	5.24	2.1	2.1	41	7	78	.15	5	0.4	1.0	29	SF3
		3	2021	15.19	19	27.82	155	24.25	11.80	2.1	1.6	34	6	69	.11	4	0.4	0.7	22	KAO
		4	137	50.36	19	25.07	155	19.26	6.19	1.6	1.3	25	5	80	.11	3	0.4	0.9	18	KAO
		4	237	1.51	19	28.50	155	26.89	7.74	2.7	2.8	52	7	41	.14	7	0.3	0.7	41	KAO
		4	914	37.49	19	12.72	155	35.18	1.47	3.3	3.2	53	8	84	.20	10	0.5	0.8	39	LSW
		4	14 4	7.69	19	23.41	155	20.72	10.44	2.4	2.4	49	6	40	.12	2	0.3	0.4	41	KAO
		4	21 3	9.75	19	23.83	155	15.90	2.76	1.7	2.0	25	4	104	.11	1	0.3	0.3	20	SEC
		4	2233	17.79	19	28.58	155	35.98	2.56	2.3	2.5	24	1	152	.09	1	0.5	0.3	19	MLO
		4	2320	27.15	19	19.53	155	11.66	6.79	1.4	1.3	33	4	94	.11	6	0.5	1.0	22	SF3
		5	256	42.74	19	25.76	155	21.37	8.56	1.7	1.3	35	6	80	.13	4	0.4	0.7	24	KAO
		5	410	2.98	19	22.16	155	2.23	7.91	1.8	1.4	36	3	134	.14	4	0.7	0.6	29	SF5
		5	756	46.52	19	6.03	155	21.91	34.38	2.3	1.9	46	4	238	.10	12	1.0	1.2	40	LOI
		5	1443	28.92	19	17.64	155	15.03	6.88	1.5	1.3	33	3	125	.12	3	0.5	0.9	27	SF1
		5	2353	41.12	19	16.78	155	15.33	3.65		1.1	17	0	179	.09	3	0.6	0.9	17	SSF
		6	1 0	40.29	19	26.65	155	26.28	7.14	2.3	2.5	46	5	49	.14	3	0.3	0.8	38	KAO
		6	324	4.64	19	18.98	155	15.38	7.27	1.4	1.3	34	3	105	.10	4	0.4	0.6	22	SF1
		6	736	15.28	19	25.21	155	20.92	9.12	1.8	1.1	37	6	81	.12	4	0.4	0.7	29	KAO
		6	11 7	51.06	19	25.60	155	29.65	8.86	2.0	1.4	38	1	38	.11	7	0.4	1.0	33	KAO
		6	1619	1.26	19	22.44	155	28.95	9.45	1.8	1.7	44	6	37	.10	2	0.3	0.6	37	KAO
		6	1717	42.69	19	18.77	155	20.61	8.44	1.6	1.6	37	7	105	.11	4	0.4	0.7	24	SWR
		6	2012	8.99	19	26.08	155	29.03	8.30	1.8	1.7	44	7	39	.13	7	0.4	1.0	29	KAO
		6	2013	24.21	19	18.70	155	15.92	3.59	1.3	1.4	26	5	116	.13	4	0.4	0.8	19	SSF
		6	2116	20.55	19	21.74	155	23.22	11.14	1.7	1.5	36	5	53	.11	3	0.4	0.5	25	SWR
		6	2319	8.79	19	35.18	155	6.27	6.39	2.0	2.2	43	3	74	.13	10	0.3	1.4	36	HIL
		7	1 0	29.63	19	25.58	155	38.14	0.03	1.8	2.4	24	3	101	.30	5	0.7	0.9	11	MLO *
		7	623	8.65	19	11.51	155	28.52	7.06	2.1	2.4	44	7	120	.14	4	0.5	0.7	32	LSW
		7	625	35.90	19	25.01	155	29.98	11.50	1.9	1.7	39	4	44	.09	6	0.4	0.5	28	KAO
		7	724	52.20	19	22.80	155	2.63	8.14	1.8	1.7	39	4	120	.15	4	0.6	0.6	27	SF5
		7	931	28.55	19	25.66	155	29.71	9.79	2.2	2.6	45	4	38	.11	7	0.3	0.6	37	KAO
		7	1241	47.68	19	22.59	155	30.26	8.39	2.1	1.8	49	7	43	.12	5	0.3	0.6	38	KAO
		7	1550	37.25	19	11.12	155	32.58	34.17	2.3	2.1	48	8	101	.08	9	0.6	1.0	37	DLS
		7	1650	17.02	19	22.00	155	2.67	7.84	1.9	1.5	38	5	132	.14	4	0.7	0.4	27	SF5
		7	1734	34.67	19	21.93	155	27.99	10.12	2.3	2.4	49	5	39	.11	1	0.3	0.5	41	KAO
		7	19 1	56.07	19	13.16	155	16.79	41.88	1.6	1.8	27	2	213	.08	9	1.4	3.0	23	DEP 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	
1984	MAR	7	20 7	26.19	19	1.79	155	25.83	37.67	2.5	1.8	41	5	209	.09	15	0.9	1.4	31	DLS	
		7	2053	2.11	19	25.57	155	29.23	8.37	2.2	1.8	42	5	46	.10	6	0.3	0.8	33	KAO	
		8	135	3.38	19	20.83	155	2.31	6.08	2.6	3.0	39	6	157	.12	2	0.4	0.6	26	SF5	
		8	525	29.63	19	20.33	155	13.18	6.73	1.3	1.1	28	3	64	.10	4	0.5	0.9	22	SF2	
		8	641	31.78	19	28.44	155	23.14	15.60	2.0	1.2	17	0	192	.09	11	1.3	0.9	16	DML	
		8	1058	49.88	19	19.32	155	11.65	8.81	3.5	3.9	46	4	98	.10	5	0.4	0.3	42	SF3	F
		8	1530	6.44	19	24.62	155	38.03	0.01	2.4	2.4	32	2	98	.22	6	0.5	0.8	22	MLO	*
		8	1736	31.22	19	23.88	155	21.05	8.89	1.9	1.4	41	7	60	.14	2	0.4	0.6	31	KAO	
		8	1851	59.06	19	28.94	155	26.25	6.97	2.9	2.8	51	7	57	.14	5	0.3	0.8	43	KAO	
		8	19 0	30.84	19	21.20	155	3.25	6.49	1.8	1.5	33	4	114	.11	2	0.4	0.8	20	SF5	
		8	20 2	54.84	19	12.74	155	31.12	6.05	2.2	1.3	35	5	80	.16	5	0.5	1.5	21	LSW	
		8	2018	48.75	19	19.85	155	11.55	8.91	2.3	2.5	46	6	87	.14	5	0.4	0.6	38	SF3	
		8	2036	18.66	19	12.50	155	31.20	6.97	2.3	1.5	42	6	79	.14	5	0.5	0.8	28	LSW	
		8	22 8	16.04	19	19.86	155	11.81	7.17	1.6	1.8	41	4	85	.12	5	0.4	0.6	33	SF3	
		9	032	39.78	19	22.10	155	24.35	13.74	2.0	1.4	43	7	30	.11	4	0.4	0.6	29	DML	
		9	532	42.07	19	30.72	155	39.36	6.89	2.0	1.6	35	5	51	.13	7	0.4	0.9	27	MLO	
		9	557	43.89	19	25.97	155	30.30	7.80	1.7	1.1	36	3	41	.13	8	0.4	1.2	27	KAO	
		9	1652	50.20	19	19.98	155	11.93	6.63	1.3	1.5	33	3	83	.11	5	0.4	0.7	23	SF3	
		9	2245	54.89	19	28.11	155	26.94	5.25	2.4	2.2	51	7	54	.14	6	0.3	1.2	38	KAO	
		9	2257	51.27	20	2.82	155	36.69	12.21	2.1	1.4	28	3	183	.11	20	1.0	0.5	22	KOH	
		10	026	49.95	19	22.05	155	30.20	8.41	2.1	1.8	42	3	32	.10	5	0.3	0.8	30	KAO	
		10	222	43.77	19	20.16	155	12.37	7.41	1.7	1.9	41	4	76	.13	5	0.4	0.6	29	SF2	
		10	511	13.38	19	20.06	155	10.86	8.06	1.4	1.3	26	2	86	.07	4	0.5	1.0	18	SF3	
		10	627	44.89	19	21.98	155	2.00	3.96	1.8	1.5	33	2	151	.16	4	0.6	1.6	17	SSF	
		10	1345	21.95	19	20.48	155	13.41	7.65	2.0	2.6	48	4	60	.14	4	0.5	0.6	40	SF2	
		10	1954	48.75	19	25.88	155	21.70	9.15	1.8	1.5	41	6	48	.11	4	0.4	0.5	27	KAO	
		10	2152	11.90	19	20.84	155	13.51	7.36	1.5	1.6	37	3	58	.11	3	0.4	0.6	28	SF2	
		10	2158	31.10	19	22.11	155	28.16	9.46	1.9	1.3	40	5	39	.11	1	0.3	0.6	30	KAO	
		10	2249	2.68	19	22.28	155	2.59	8.09	2.1	1.5	34	3	133	.12	4	0.6	0.4	26	SF5	
		11	434	1.84	19	19.06	155	13.39	7.08	2.2	2.4	47	8	74	.13	4	0.4	0.6	32	SF2	
		11	646	46.03	19	49.28	155	36.93	18.50	3.1	3.4	52	7	101	.11	6	0.5	1.5	43	KEA	F
		11	648	35.97	19	22.39	155	29.65	9.21	2.4	2.6	50	5	34	.10	4	0.3	0.5	39	KAO	
		11	1118	19.72	19	25.76	155	38.15	2.32	2.3	2.1	25	0	181	.12	4	0.6	1.0	16	MLO	
		11	1150	18.87	19	18.06	155	23.30	9.95	2.9	3.2	53	7	95	.14	4	0.3	0.4	41	SWR	
		11	1417	0.04	19	18.91	155	11.85	4.40	1.7	1.4	38	6	108	.11	4	0.4	1.3	26	SSF	
		11	2037	59.16	19	25.72	155	36.49	2.70	2.1	1.4	16	3	146	.16	3	0.5	0.8	12	MLO	
		11	23 1	38.39	19	19.57	155	13.53	4.94	2.0	1.9	47	6	66	.15	5	0.4	1.3	39	SSF	
		11	2333	8.48	19	19.21	155	12.96	7.45	1.6	1.8	44	4	82	.11	4	0.4	0.5	33	SF2	
		12	121	37.76	19	22.76	155	27.14	10.15	1.7	1.5	41	4	41	.13	1	0.4	0.6	31	KAO	
		12	5 3	41.94	19	29.26	155	30.04	2.24	2.5	2.3	42	5	63	.14	7	0.4	1.1	35	KAO	
		12	610	19.81	19	16.74	155	22.19	6.79	1.9	2.0	38	3	129	.14	6	0.5	0.9	30	SWR	
		12	713	19.31	19	18.46	155	16.75	8.54	2.6	2.7	49	5	116	.13	3	0.4	0.5	42	SF1	
		12	949	45.75	19	25.25	155	29.35	7.98	2.2	2.1	43	5	35	.13	6	0.3	0.9	35	KAO	
		12	2050	32.90	19	20.98	155	22.25	11.02	1.7	1.3	29	4	64	.09	2	0.4	0.6	20	SWR	
		13	054	35.70	19	26.64	155	28.42	9.74	1.8	1.2	28	3	57	.09	6	0.4	1.0	20	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	
1984	MAR	13	214	12.42	19	21.48	155	30.26	9.02	2.3	2.5	45	3	33	.10	5	0.3	0.6	34	KAO	
		13	1142	15.96	19	15.58	155	6.01	42.66	2.8	3.3	56	9	217	.11	5	0.8	0.8	47	DEP	
		13	1337	40.92	19	26.60	155	36.15	3.04	2.2	1.7	24	2	117	.14	1	0.5	0.5	20	MLO	
		13	1618	23.37	19	26.33	155	36.52	3.60	2.2	2.2	17	2	101	.12	2	0.5	0.5	10	MLO	
		13	1620	29.77	19	22.14	155	26.78	10.20	2.4	2.6	45	6	41	.12	2	0.3	0.5	34	KAO	
		13	2049	49.01	19	21.59	155	30.21	9.24	2.1	1.7	37	3	46	.10	5	0.4	0.8	31	KAO	
		13	2352	2.32	19	20.59	155	12.46	8.30	2.3	2.5	45	4	68	.11	4	0.4	0.5	38	SF2	
		14	3 7	0.94	19	28.78	155	26.43	5.31	2.0	1.3	41	5	59	.13	6	0.3	1.2	24	KAO	
		14	820	40.54	19	23.64	154	57.34	8.91	2.5	2.5	18	1	210	.15	4	1.7	0.8	14	LER	
		14	13 8	56.29	19	25.38	155	20.59	8.35	1.8	1.3	35	7	80	.11	4	0.4	0.6	25	KAO	
		14	1923	27.37	19	24.52	155	37.64	0.03	2.2	2.0	16	1	91	.18	6	0.5	0.9	15	MLO	*
		14	2040	3.72	19	21.10	155	12.41	8.67	1.9	1.9	43	5	63	.12	3	0.4	0.5	34	SF2	
		15	0 3	18.67	19	20.67	155	12.18	7.81	1.6	1.3	36	4	70	.12	4	0.5	0.6	27	SF3	
		15	427	40.40	19	23.81	155	25.67	7.78	1.6	1.1	28	3	36	.12	3	0.4	0.9	21	KAO	
		15	13 3	0.75	19	21.86	155	6.98	8.78	3.4	3.9	55	8	76	.11	3	0.4	0.3	45	SF4	F
		16	051	55.84	19	19.30	155	13.48	7.23	1.9	1.5	46	5	69	.14	4	0.4	0.7	39	SF2	
		16	210	6.83	19	28.22	155	26.86	2.83	2.4	1.3	42	7	51	.16	6	0.3	1.1	32	KAO	
		16	354	5.69	19	23.01	155	25.38	9.40	1.7	1.1	37	4	39	.12	4	0.4	0.6	28	KAO	
		16	1310	6.32	19	18.52	155	14.70	6.22	1.5	1.1	26	2	121	.12	4	0.5	1.1	22	SF1	
		16	1518	21.80	19	22.95	155	26.89	8.90	1.8	1.1	34	4	40	.13	2	0.4	0.7	25	KAO	
		16	1831	50.57	20	6.10	155	45.96	22.00	2.9	2.6	42	3	143	.09	3	0.9	1.4	39	KOH	
		16	2347	15.50	19	19.64	155	8.12	6.18	1.5	1.3	30	4	90	.12	4	0.5	1.0	21	SF4	
		17	614	35.93	19	25.27	155	37.70	2.00	2.7	2.7	27	2	95	.12	4	0.4	1.0	19	MLO	
		17	7 6	8.09	19	29.45	155	34.07	0.04	2.2	2.0	21	3	78	.17	3	0.4	1.0	16	MLO	*
		17	1428	16.57	19	21.95	155	26.60	10.91	2.4	2.9	46	5	44	.12	2	0.4	0.5	38	KAO	
		17	1437	10.22	19	25.13	155	38.59	2.49	2.4	2.3	17	3	184	.10	6	0.6	1.3	13	MLO	
		17	15 3	10.81	19	19.98	155	7.88	8.88	1.6	1.5	24	2	92	.08	5	0.6	1.0	20	SF4	
		17	16 7	32.22	19	19.14	155	13.09	8.41	1.5	1.1	20	1	80	.07	4	0.5	1.0	16	SF2	
		17	1927	35.08	19	20.01	155	11.97	9.41	3.1	3.5	46	3	82	.11	5	0.3	0.4	40	SF3	
		17	2310	13.94	19	19.66	155	12.17	6.10	1.4	1.3	27	2	85	.12	5	0.4	1.0	23	SF3	
		18	353	58.03	19	22.95	155	20.85	10.33	2.0	1.7	36	5	50	.09	2	0.3	0.6	33	KAO	
		18	611	4.50	19	21.62	155	4.61	7.07	1.7	1.7	33	2	80	.14	4	0.5	0.9	27	SF5	
		18	633	56.20	19	26.99	155	28.98	9.37	2.3	2.4	41	5	46	.11	7	0.4	0.7	33	KAO	
		18	1724	53.46	19	20.07	155	11.65	8.66	2.8	2.6	45	3	83	.12	5	0.4	0.5	40	SF3	
		18	1813	56.50	19	18.96	155	13.15	8.84	2.5	2.4	44	4	81	.12	4	0.4	0.5	40	SF2	
		18	2227	59.75	19	29.88	155	35.83	3.33	2.1	1.8	19	2	103	.09	1	0.6	0.4	14	MLO	
		19	039	43.17	19	22.84	155	27.00	10.78	1.7	1.2	31	1	40	.11	1	0.4	0.7	28	KAO	
		19	157	2.79	19	28.54	155	35.19	2.97	2.2	1.6	11	2	96	.10	1	0.8	0.5	10	MLO	
		19	1746	48.27	19	20.13	155	13.19	6.54	1.5	1.1	19	2	66	.10	5	0.5	1.1	17	SF2	
		19	2221	8.47	19	22.15	155	4.80	8.09	2.0	1.7	27	4	79	.13	5	0.6	0.9	21	SF5	
		20	4 7	41.84	19	21.77	155	4.97	8.59	2.1	2.3	41	6	80	.11	5	0.4	0.5	31	SF5	
		20	725	41.22	19	21.62	155	4.18	7.47	1.7	1.5	32	2	89	.13	4	0.5	0.8	29	SF5	
		20	726	41.69	19	28.24	155	36.99	2.35	2.5	2.3	20	3	98	.10	2	0.4	0.3	18	MLO	
		20	910	31.53	19	19.83	155	12.36	7.26	1.8	1.8	42	4	81	.11	5	0.4	0.7	38	SF2	
		20	920	34.16	19	19.57	155	12.33	6.83		1.1	28	4	85	.12	5	0.4	0.9	25	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
1984	MAR	20	1737	2.06	19	20.23	155	11.64	9.68	2.6	3.0	48	4	80	.12	5	0.4	0.4	43	SF3
		20	1912	53.05	19	26.00	155	37.39	1.91	2.6	2.7	28	3	91	.14	3	0.5	0.7	24	MLO
		20	2137	5.87	19	25.80	155	37.73	3.16	2.5	2.7	33	5	95	.12	4	0.4	0.8	29	MLO
		20	2229	36.48	19	18.27	155	16.00	8.84	2.0	2.2	47	3	136	.10	4	0.4	0.5	32	SF1
		21	210	6.82	19	27.06	155	26.03	5.85	2.4	2.4	38	5	47	.12	4	0.3	1.2	29	KAO
		21	835	28.05	19	22.18	155	21.00	10.06	1.8	1.7	37	7	49	.10	4	0.3	0.5	27	KAO
		21	1011	37.29	19	22.80	155	26.95	9.49	2.2	2.1	43	6	35	.13	1	0.4	0.6	33	KAO
		21	1055	27.59	19	28.72	155	35.81	2.50	2.7	2.6	18	2	83	.10	1	0.4	0.3	13	MLO
		21	1345	21.21	19	27.72	154	51.69	8.23	2.3	2.1	35	3	108	.13	1	1.0	0.4	25	LER
		21	1536	19.25	19	19.48	155	12.52	5.92	1.3	1.1	19	2	85	.09	5	0.5	1.3	11	SF2
		21	1537	30.04	19	19.70	155	12.29	4.45	1.3	1.1	25	2	84	.12	5	0.5	2.2	19	SSF
		21	19	6 28.24	19	21.52	155	21.96	10.20	1.8	1.8	39	3	58	.12	3	0.4	0.6	22	SWR
		21	2055	25.63	19	19.62	155	11.00	6.67	1.4	1.6	30	2	94	.10	5	0.5	1.1	21	SF3
		21	2147	16.76	19	25.54	155	37.50	2.31	2.3	2.4	23	2	92	.11	4	0.4	0.9	18	MLO
		21	2228	24.65	19	25.64	155	37.63	2.45	3.2	3.5	42	3	77	.12	4	0.4	0.8	35	MLO
		22	240	11.43	19	20.87	155	12.88	7.67	1.7	1.6	33	4	62	.13	3	0.5	0.7	25	SF2
		22	241	50.52	19	23.27	155	2.11	8.76	1.8	1.4	23	2	134	.11	5	0.6	0.7	15	SF5
		22	323	44.42	19	20.52	155	10.86	7.50	1.9	1.9	44	4	77	.12	3	0.4	0.6	34	SF3
		22	324	31.00	19	20.45	155	13.06	7.89	2.5	2.7	48	5	65	.14	4	0.4	0.6	38	SF2
		22	548	57.30	19	27.90	155	37.34	1.47	2.2	1.5	14	0	164	.13	2	0.7	0.5	11	MLO
		22	1622	9.89	19	20.65	155	12.65	6.32	1.4	1.3	33	5	66	.14	4	0.5	0.8	23	SF2
		23	1	4 30.79	19	18.02	155	20.90	8.18	2.3	2.8	48	7	121	.13	4	0.3	0.6	37	SWR
		23	237	5.46	19	17.05	155	21.79	5.67	1.2	1.3	22	4	128	.12	6	0.5	1.6	20	SWR
		23	1727	2.08	19	21.88	155	6.65	8.54	1.8	1.5	44	5	77	.11	3	0.4	0.6	39	SF4
		23	19	0 44.38	19	23.75	155	26.40	10.89	1.5	1.2	28	1	32	.11	3	0.5	1.0	27	KAO
		23	2344	38.46	19	17.06	155	28.55	9.06	2.2	2.3	46	6	53	.15	5	0.3	0.6	40	LSW
		24	718	40.20	19	20.80	155	5.94	7.66	1.7	1.3	36	5	102	.10	5	0.4	0.7	32	SF4
		24	1210	51.18	19	26.14	155	28.73	6.60	1.9	1.3	19	0	72	.12	7	0.6	2.2	14	KAO
		24	1322	13.59	19	21.91	155	1.90	5.48	1.6	1.4	18	0	155	.14	4	0.7	2.0	16	SF5
		24	1356	0.15	19	26.25	155	21.38	9.63	1.9	1.3	20	1	75	.10	7	0.5	0.8	13	KAO
		24	1439	7.36	19	22.56	155	23.72	11.93	2.3	2.2	25	1	43	.10	4	0.5	0.5	19	KAO
		24	1651	1.88	19	45.10	155	17.92	24.64	2.8	2.4	39	4	115	.11	16	0.5	1.5	31	KEA
		24	2024	42.12	19	19.39	155	9.62	7.40	1.5	1.5	25	0	95	.08	5	0.5	0.8	20	SF3
		24	23	6 39.86	19	24.01	155	15.89	37.24	2.4	2.9	25	1	81	.10	3	1.0	1.8	22	DEP L
		25	012	57.29	19	28.16	155	36.41	1.66	2.2	1.8	15	0	103	.11	2	0.5	0.4	12	MLO
		25	050	52.75	19	28.40	155	35.17	0.08	3.3	3.3	30	0	68	.12	3	0.4	1.1	27	MLO
		25	055	13.58	19	27.80	155	35.90	1.10	3.9	3.8	36	1	43	.21	2	0.4	0.6	22	MLO
		25	1	0 22.15	19	28.02	155	35.58	1.52	3.2	3.3	21	0	68	.18	1	0.6	1.0	12	MLO
		25	1	1 20.34	19	27.38	155	34.77	2.18	3.8	4.0	27	0	45	.14	2	0.5	1.1	10	MLO
		25	1	4 32.16	19	26.21	155	35.46	6.61	3.4	3.4	28	1	69	.16	12	0.6	1.3	18	MLO
		25	1	8 8.54	19	27.10	155	37.11	5.99	3.1	3.0	24	0	91	.15	12	0.5	1.3	14	MLO
		25	126	24.05	19	28.37	155	36.54	1.73	2.4	3.0	26	0	107	.22	3	0.9	1.0	19	MLO
		25	210	24.72	19	28.68	155	34.79	8.35	3.3	4.0	27	0	69	.19	2	0.6	1.2	19	MLO
		25	614	4.51	19	19.50	155	12.27	7.60	2.1	2.2	20	0	88	.09	5	0.4	0.8	18	SF3
		25	639	58.23	19	27.36	155	33.24	2.69	2.3	2.0	26	0	73	.13	3	0.5	1.0	17	MLO

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
1984	MAR	25	847	22.71	19	19.86	155	12.92	7.30	1.8	1.5	19	0	73	.05	5	0.4	0.6	17	SF2
		25	953	58.94	19	23.81	155	20.51	9.38	2.0	1.1	19	0	78	.11	6	0.5	1.1	13	KAO
		25	1023	5.11	19	29.30	155	33.91	1.57		1.1	12	0	194	.15	3	1.0	1.5	9	MLO
		25	1245	15.98	19	28.98	155	30.16	1.34	2.5	1.8	26	0	90	.13	7	0.4	4.6	14	KAO
		25	1346	0.85	19	26.92	155	29.50	8.22	2.3	1.5	32	0	37	.16	9	0.4	1.1	23	KAO
		25	21	5 50.33	19	27.76	155	35.93	5.91	3.3	3.9	29	1	54	.13	14	0.4	1.3	24	MLO F
		26	621	51.85	19	26.53	155	28.90	8.18	1.5	1.1	29	0	52	.12	8	0.5	1.4	23	KAO
		26	930	48.81	19	25.45	155	29.77	9.43	2.3	1.8	43	2	37	.11	7	0.4	0.8	41	KAO
		26	1155	39.44	19	25.26	155	19.45	4.74	1.7	1.6	25	5	70	.12	3	0.4	0.9	20	KAO
		26	1241	27.53	19	26.09	155	21.29	10.48	2.1	1.2	37	6	35	.12	3	0.4	0.7	30	KAO
		27	525	7.20	19	19.66	155	11.62	7.05	2.0	1.9	36	4	91	.11	5	0.4	0.7	32	SF3
		27	9	7 5.93	19	17.86	155	21.15	6.75	1.6	1.6	32	2	122	.14	4	0.5	1.1	22	SWR
		27	914	42.82	19	21.15	155	29.61	6.70	3.1	3.0	40	3	44	.13	4	0.3	0.7	33	KAO
		27	1526	25.33	19	22.80	155	26.82	10.50	2.9	2.9	47	2	35	.13	2	0.4	0.5	44	KAO
		28	811	52.10	19	20.49	155	13.48	9.08	1.7	1.8	17	0	64	.08	4	0.4	0.6	14	SF2
		28	1142	18.72	19	24.92	155	15.80	15.60	2.3	2.3	56	8	36	.11	2	0.4	0.2	45	DEP
		28	1225	0.02	19	25.17	155	21.91	11.20	2.3	1.8	45	6	40	.11	5	0.3	0.3	32	KAO
		29	539	50.10	19	20.49	155	12.76	8.70	1.6	1.8	22	2	68	.08	4	0.5	0.6	17	SF2
		29	624	52.61	19	18.45	155	13.14	2.33	2.5	2.7	45	9	136	.11	8	0.3	0.8	31	SSF
		29	1323	48.88	19	28.51	155	36.13	2.26	2.7	1.9	21	1	88	.11	1	0.4	0.3	16	MLO
		29	2059	0.36	19	22.85	155	27.11	10.51	2.5	2.0	46	3	40	.13	1	0.3	0.4	43	KAO
		30	5	0 32.79	19	21.84	155	2.55	4.13	1.6	1.2	23	2	137	.21	4	0.8	2.0	12	SSF
		30	720	34.89	19	16.54	155	23.01	5.74	1.7	1.1	24	2	118	.11	4	0.5	1.2	23	SWR
		30	940	27.50	19	18.43	155	13.29	5.66	1.8	1.3	33	1	85	.11	3	0.5	1.1	29	SF2
		30	1021	15.12	19	58.21	155	5.45	35.58	3.8	3.9	58	10	229	.12	28	0.9	1.4	48	KEA F
		30	1230	35.46	19	19.19	155	13.48	8.03	2.3	2.4	47	4	70	.14	4	0.5	0.6	42	SF2
		30	2058	8.91	19	20.04	155	12.00	7.75	1.9	1.9	43	3	80	.14	5	0.4	0.6	36	SF3
		30	2247	11.48	19	18.22	155	23.96	8.37	1.9	1.6	37	2	85	.15	4	0.4	0.7	31	SWR
		31	1221	39.57	19	23.12	155	27.02	9.44	2.3	1.8	47	5	33	.13	2	0.3	0.5	35	KAO
		31	1852	42.45	19	21.57	155	4.76	7.85	2.9	2.8	52	7	83	.12	4	0.3	0.5	40	SF5 F
		31	2020	51.10	20	2.31	155	21.81	5.88	2.6	2.4	32	4	213	.14	17	1.2	0.7	24	KEA
	APR	1	222	25.03	19	27.29	155	29.54	10.11	3.2	2.9	55	8	35	.12	9	0.3	0.4	44	KAO
		1	348	38.54	19	28.26	155	36.32	1.04	2.5	2.0	19	1	92	.24	2	0.6	0.5	13	MLO
		1	1455	53.69	19	18.61	155	13.26	6.18	1.7	1.5	34	4	83	.13	3	0.5	0.9	21	SF2
		1	15	4 45.68	19	28.53	155	36.12	2.45	2.7	2.8	33	1	88	.09	1	0.4	0.3	26	MLO
		1	15	8 3.32	19	14.88	155	35.38	7.02	2.3	1.5	42	6	76	.19	3	0.5	0.9	26	LSW
		1	17	6 27.44	19	21.91	155	21.89	10.89	2.4	2.4	45	8	54	.11	4	0.3	0.4	31	SWR
		1	2112	18.12	19	21.56	155	4.88	7.20	1.7	1.5	35	4	84	.12	5	0.5	0.6	25	SF5
		1	2142	54.74	19	12.69	155	0.04	43.35	2.5	2.3	43	4	248	.11	23	1.1	1.4	32	DEP
		2	251	15.06	19	17.69	155	20.84	6.93	1.9	1.1	29	5	125	.09	4	0.4	0.8	21	SWR
		2	517	42.68	19	17.61	155	12.85	5.31	1.3	1.1	18	2	132	.07	2	0.5	1.1	14	SF2
		2	1819	8.58	19	25.69	154	55.90	6.18	2.0	1.4	27	2	162	.13	4	0.8	1.0	20	LER
		3	512	20.21	19	21.46	155	6.72	8.55	1.3	1.1	20	3	83	.08	4	0.5	0.8	14	SF4
		3	1043	40.14	19	7.73	155	24.69	32.68	2.4	2.3	48	5	180	.09	6	0.7	1.2	43	LOI
		3	1058	14.19	19	25.65	155	21.56	9.91	2.4	2.3	47	6	37	.12	4	0.4	0.5	41	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
1984	APR	3	1427	44.06	19	19.29	155	15.49	6.03	1.9	2.0	30	0	100	.11	4	0.4	0.9	29	SF1
		4	4	3 41.45	19	26.39	155	37.05	1.84	2.4	1.9	18	0	87	.07	2	0.4	0.5	16	MLO
		4	9	8 47.70	19	20.06	155	16.69	6.74	2.0	1.5	44	7	88	.13	1	0.4	0.6	31	SF1
		4	1241	14.74	19	18.54	155	13.38	6.83	1.7	1.5	34	2	81	.12	3	0.5	0.8	24	SF2
		4	1423	49.03	19	39.90	155	3.53	0.32	2.5	2.7	28	1	200	.20	27	0.9	1.2	20	HIL B
		4	18	2 51.06	19	28.39	155	36.04	2.47	2.7	2.3	35	4	80	.13	2	0.4	0.2	29	MLO
		4	1845	17.02	19	19.79	155	8.02	8.99	2.7	2.5	50	7	90	.10	5	0.4	0.4	41	SF4
		5	355	58.12	19	18.32	155	13.39	6.89	2.1	2.2	35	1	84	.10	2	0.4	0.8	33	SF2
		5	530	7.68	19	21.76	155	29.23	9.33	2.1	1.7	34	1	55	.12	3	0.5	1.0	33	KAO
		5	710	23.39	19	45.02	155	57.72	8.36	2.9	2.5	25	4	265	.10	15	1.2	0.5	21	HUA
		5	1539	47.90	19	21.43	155	2.20	6.55	2.1	2.4	42	5	145	.15	3	0.4	0.6	38	SF5
		5	1943	59.54	19	26.72	155	28.78	8.74	1.7	1.2	33	5	57	.09	7	0.3	0.9	26	KAO
		5	21	7 29.62	19	16.38	155	28.89	8.79	2.0	1.5	47	6	58	.19	3	0.4	0.7	37	LSW
		5	2123	11.73	19	19.16	155	16.11	8.13	2.3	2.3	48	6	100	.12	3	0.3	0.5	41	SF1
		5	22	4 6.50	19	26.64	155	37.29	2.22	2.5	2.4	21	1	89	.12	2	0.4	0.5	20	MLO
		5	23	7 30.79	19	15.85	155	28.05	9.87	1.3	1.2	26	2	71	.13	4	0.5	0.8	23	LSW
		6	1346	26.58	19	20.63	155	2.98	7.08	1.7	1.7	23	4	119	.09	1	0.5	0.9	17	SF5
		6	1351	1.85	19	24.13	155	26.73	11.09	1.8	1.2	37	2	44	.12	3	0.4	0.7	34	KAO
		6	1526	12.31	19	30.17	156	15.94	36.23	3.0	2.9	40	2	264	.14	37	1.3	1.0	37	KON
		6	1755	25.59	19	28.24	155	38.32	0.94	2.2	1.3	11	3	248	.12	4	0.5	1.0	10	MLO
		6	1839	50.52	19	24.63	155	29.17	9.36	1.8	1.2	31	3	63	.11	5	0.4	0.8	26	KAO
		6	1843	29.04	19	18.71	155	13.75	10.04	3.4	3.6	53	7	91	.12	3	0.5	0.4	47	SF2 F
		6	2218	41.53	19	24.33	154	57.96	6.52	1.6	1.2	21	1	180	.11	2	0.8	1.0	19	LER
		7	852	45.48	19	22.55	155	20.72	10.47	1.7	1.5	44	4	45	.09	3	0.3	0.5	40	KAO
		7	1240	20.84	19	22.73	155	28.15	2.37	1.9	1.9	32	3	37	.11	1	0.3	0.2	25	KAO
		7	18	8 32.69	19	28.92	155	38.35	2.69	2.0	1.5	26	2	133	.13	4	0.6	0.7	23	MLO
		7	1949	39.20	19	24.07	155	29.74	13.17	2.2	1.4	38	3	41	.09	5	0.4	0.4	34	DML
		8	023	20.39	19	12.55	155	30.42	10.10	2.4	2.2	40	4	73	.12	5	0.4	0.6	37	LSW
		8	056	32.52	19	12.42	155	30.57	9.70	2.9		50	8	76	.13	5	0.4	0.6	42	LSW F
		8	057	32.20	19	12.70	155	30.15	9.07	2.7	3.0	47	9	75	.12	4	0.3	0.6	39	LSW F
		8	116	43.32	19	12.50	155	30.45	9.52	2.0	1.4	36	4	74	.14	5	0.5	0.8	32	LSW
		8	132	54.27	19	12.59	155	30.50	9.97	1.8	1.2	33	2	74	.14	5	0.6	0.9	31	LSW
		8	836	18.81	19	21.44	155	2.12	6.91	1.9	1.3	29	5	156	.13	3	0.5	0.7	26	SF5
		8	17	3 24.28	19	27.52	155	29.91	11.15	2.2	1.6	42	5	51	.11	7	0.4	0.7	34	KAO
		8	1728	1.83	19	23.23	155	30.69	10.07	2.2	2.0	39	1	39	.08	6	0.3	0.7	34	KAO
		8	2236	30.33	19	11.45	155	26.95	7.47	2.4	2.3	38	1	134	.15	4	0.5	0.9	36	LSW
		9	7	5 39.16	19	28.10	155	36.34	1.92	3.7	3.9	48	3	78	.14	2	0.3	0.3	46	MLO
		9	1313	39.85	19	18.62	155	13.55	10.49	3.9	4.1	56	10	73	.11	3	0.4	0.3	46	SF2 F
		9	1443	15.28	19	19.11	155	13.43	8.20	1.8	1.8	42	5	73	.09	4	0.4	0.6	36	SF2
		9	23	1 34.48	19	28.61	155	35.72	2.50	2.0	1.7	21	4	140	.12	1	0.6	0.2	18	MLO
		10	1136	49.30	19	28.34	155	24.70	3.96	2.2	1.6	29	4	42	.12	4	0.3	1.0	24	KAO
		10	1137	2.66	19	10.60	156	47.69	28.41	3.4	2.6	36	2	305	.13	98	1.8	3.5	34	DIS
		10	2318	34.50	19	23.33	155	26.60	10.14	1.9	1.3	37	2	31	.09	2	0.4	0.7	33	KAO
		11	259	44.17	19	18.90	155	15.95	7.62	1.3	1.1	31	3	112	.10	3	0.4	0.6	28	SF1
		11	714	9.37	19	24.53	155	21.71	11.48	2.4	2.2	44	4	44	.11	4	0.3	0.4	39	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
1984	APR	11	1724	44.90	19	27.55	155	24.08	9.48	2.0	1.4	38	6	67	.11	4	0.4	0.7	32	KAO
		11	2022	10.51	19	19.37	155	11.00	6.96	2.0	1.9	43	8	101	.11	5	0.4	0.6	31	SF3
		11	2323	11.10	19	25.41	155	21.15	9.01	1.4	1.1	34	6	40	.12	4	0.4	0.7	23	KAO
		11	2347	35.43	20	14.61	156	26.66	0.38	2.8	2.6	39	1	228	.17	62	1.9	0.9	32	DIS
		12	235	48.56	19	19.99	155	12.95	6.40	1.3	1.1	24	2	71	.10	5	0.5	1.1	20	SF2
		12	1013	56.01	19	22.64	155	20.78	11.11	2.4	2.4	53	9	45	.11	3	0.3	0.3	39	KAO
		12	1730	37.98	19	23.04	155	26.49	9.53	1.8	1.3	36	1	40	.11	2	0.4	0.6	33	KAO
		12	1753	40.66	19	21.21	155	22.69	9.59	1.9	1.5	30	6	61	.11	2	0.5	0.7	21	SWR
		12	1850	8.37	19	18.12	155	12.89	5.00	1.8	1.9	39	3	108	.11	2	0.4	1.1	32	SSF
		12	1935	38.22	19	21.58	154	59.58	0.72	1.8	1.6	28	2	189	.27	7	0.9	1.4	15	SLE
		13	316	39.24	19	23.19	155	1.05	8.08	1.8	1.5	35	2	144	.17	5	0.8	0.6	27	SF5
		13	2350	46.72	19	19.13	155	11.31	8.24	1.9	2.2	40	6	106	.11	5	0.4	0.7	34	SF3
		14	142	0.58	19	24.42	155	16.25	14.79	2.3	2.2	52	8	35	.13	1	0.5	0.2	41	DEP
		14	714	57.30	19	30.85	155	43.57	8.64	2.1	1.2	31	4	104	.13	4	0.5	1.0	27	KON
		14	716	11.78	19	19.89	155	11.30	8.04	1.4	1.1	27	1	88	.06	5	0.5	0.8	23	SF3
		14	1555	51.91	19	23.23	155	30.35	9.31	1.5	1.2	16	0	58	.06	5	0.4	1.3	15	KAO
		15	15	1 55.40	19	21.24	155	0.25	7.22	2.6	2.2	35	4	206	.15	5	0.9	0.6	28	SF5
		15	1630	29.39	19	21.43	155	23.26	8.36	1.8	1.3	27	5	78	.10	2	0.5	0.9	20	SWR
		15	2341	56.92	19	23.68	155	30.30	9.88	1.9	1.2	29	3	79	.07	5	0.4	0.7	25	KAO
		16	039	57.85	19	26.79	155	22.03	10.47	2.2	1.5	35	6	65	.11	3	0.4	0.6	25	KAO
		16	2159	59.79	19	16.80	155	22.94	4.52	2.0	2.2	39	4	115	.15	5	0.4	2.0	34	SWR
		17	511	30.97	19	18.87	155	11.16	5.98	1.4	1.1	23	2	114	.10	5	0.5	1.3	15	SF3
		17	1233	49.93	19	15.74	155	24.45	35.33	2.3	1.7	43	7	79	.10	3	0.7	1.1	31	DEP
		17	1413	32.57	19	20.13	155	11.53	9.18	1.4	1.5	25	2	82	.07	5	0.4	0.8	18	SF3
		17	1523	51.35	19	19.82	155	11.74	7.31	2.0	2.2	46	7	87	.13	5	0.4	0.6	35	SF3
		17	2022	49.09	19	24.99	155	28.32	8.30	1.9	1.7	42	7	34	.09	5	0.3	0.8	33	KAO
		18	053	48.65	19	20.40	155	3.83	6.56	1.7	1.5	32	2	114	.14	2	0.6	0.9	25	SF5
		18	058	59.11	19	21.63	155	4.84	8.38	2.4	2.3	43	6	82	.09	5	0.4	0.4	33	SF5
		18	354	29.03	19	17.53	155	12.95	6.61	1.4	1.5	26	3	132	.09	1	0.5	0.9	21	SF2
		18	640	13.00	19	17.88	155	12.95	6.88	3.0	3.0	44	5	114	.12	2	0.4	0.8	39	SF2
		18	757	10.12	19	17.59	155	13.04	7.75	1.5	1.3	29	5	125	.11	1	0.6	0.9	23	SF2
		18	936	11.93	19	19.78	155	23.27	8.77	1.9	1.8	27	4	76	.12	1	0.5	0.9	23	SWR
		18	957	15.65	19	18.01	155	12.70	9.68	2.6	2.8	46	6	142	.13	8	0.5	0.6	37	SF2
		18	1053	49.94	19	20.09	155	11.45	8.52	1.8	2.1	42	4	83	.11	5	0.4	0.5	32	SF3
		18	1329	39.76	19	59.64	155	30.80	10.97	2.5	2.2	35	3	184	.13	21	0.9	0.5	21	KEA
		18	17	0 11.74	19	25.98	155	29.27	8.97	2.0	1.2	40	6	39	.11	7	0.3	0.8	26	KAO
		18	2147	9.18	19	17.48	155	13.01	7.07	2.0	1.9	41	6	133	.12	1	0.5	0.8	32	SF2
		18	2234	55.59	19	22.69	155	4.13	6.96	2.0	2.1	40	5	98	.18	4	0.6	0.9	31	SF5
		18	2246	6.44	19	18.69	155	12.06	4.42	1.4	1.1	26	3	110	.11	4	0.4	1.9	20	SSF
		19	030	28.95	19	26.06	155	30.29	8.26	1.9	1.1	33	4	38	.10	8	0.4	1.0	25	KAO
		19	1355	56.56	19	25.62	154	55.10	8.45	2.0	1.7	34	3	189	.11	3	1.0	0.5	25	LER
		19	1753	30.60	19	26.83	155	25.12	9.55	2.2	1.4	22	1	49	.11	3	0.4	0.9	21	KAO
		19	1832	53.43	19	23.98	155	32.20	8.04		1.3	10	0	67	.09	2	0.5	1.4	10	MLO
		19	1835	28.44	19	39.55	156	0.04	5.30		1.5	18	2	221	.23	17	1.5	2.4	14	HUA
		19	2012	11.74	19	20.34	155	12.84	6.34		1.3	22	0	69	.11	4	0.5	0.9	19	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
1984	APR	19	21 1	57.15	19	29.89	155	26.92	5.25	1.5	1.1	15	0	92	.08	4	0.4	1.7	14	KAO
		20	848	45.84	19	18.63	155	27.69	9.09		1.3	20	0	67	.11	7	0.5	1.3	20	LSW
		20	1717	8.29	19	20.09	155	13.13	6.20		1.1	32	4	67	.13	5	0.5	1.0	27	SF2
		20	2359	39.04	18	57.74	155	32.25	41.68	2.6	1.7	35	4	231	.09	14	1.3	1.4	30	DLS
		21	442	2.65	19	18.79	155	11.99	5.27		1.5	30	3	109	.14	4	0.5	1.5	23	SF3
		21	942	47.39	19	19.38	155	11.65	6.03	1.7	1.1	31	4	97	.09	5	0.4	1.1	19	SF3
		21	1723	24.15	18	49.48	154	54.68	46.41	2.6	2.2	43	1	278	.11	57	2.5	2.9	41	DIS
		21	2115	38.55	19	18.08	155	21.58	6.68	1.2	1.3	32	2	115	.17	5	0.4	0.9	24	SWR
		21	2143	33.23	19	21.66	154	59.89	7.27	1.8	1.5	35	4	193	.20	6	0.9	0.8	22	LER
		21	22 4	33.04	19	22.99	155	26.72	9.61	1.6	1.3	32	2	40	.11	2	0.4	0.7	27	KAO
		21	2240	47.70	19	27.97	155	29.59	11.05	2.2	1.6	42	5	48	.15	8	0.4	0.8	34	KAO
		22	223	29.03	19	18.32	155	13.46	10.56	3.7	3.8	50	6	133	.09	8	0.5	0.4	42	SF2 F
		22	226	53.40	19	18.62	155	13.40	8.06	2.3		45	3	79	.12	3	0.5	0.5	39	SF2 F
		22	227	3.59	19	18.44	155	13.37	8.41	3.8	3.9	53	8	83	.12	3	0.4	0.4	45	SF2 F
		22	240	11.83	19	18.25	155	13.72	8.10	2.0	2.4	39	3	94	.11	2	0.5	0.6	35	SF2
		22	3 9	16.62	19	18.79	155	13.44	4.96	1.3	1.1	27	2	76	.11	3	0.4	1.5	20	SSF
		22	421	31.78	19	17.93	155	13.24	5.34	1.4	1.1	28	3	98	.09	2	0.4	1.0	22	SF2
		22	9 0	37.57	19	17.77	155	13.16	6.01	1.6	1.4	33	3	108	.10	1	0.5	0.9	22	SF2
		22	1331	4.57	19	15.95	155	23.02	6.45	1.5	1.5	32	2	127	.12	3	0.4	1.2	25	SWR
		22	1457	53.82	19	29.66	155	26.75	6.18		1.0	17	4	105	.12	5	0.4	1.5	8	KAO
		22	1626	25.67	19	19.19	155	12.27	6.10	1.9	1.8	37	6	94	.10	5	0.4	0.8	26	SF3
		22	1710	35.09	19	18.90	155	15.06	5.55	1.2	1.1	29	3	102	.11	4	0.5	1.3	22	SF1
		22	1856	12.36	19	22.61	155	29.10	8.32	1.6	1.1	35	3	37	.12	3	0.4	0.7	26	KAO
		22	20 1	42.30	19	16.74	155	26.00	9.60	1.1	1.2	22	2	106	.12	6	0.5	0.7	16	LSW
		22	2359	12.51	19	17.36	155	23.40	9.06	1.2	1.1	26	2	100	.11	5	0.5	1.0	21	SWR
		23	241	52.03	19	28.36	155	37.37	11.97	2.1	1.2	25	2	103	.13	3	0.6	0.7	17	MLO
		23	3 4	33.15	19	18.93	155	48.08	4.76	1.9	1.0	25	5	132	.15	9	0.8	6.9	15	KON
		23	946	14.87	19	22.71	155	20.78	8.85	1.7	1.1	36	7	45	.10	3	0.3	0.6	25	KAO
		23	1750	6.29	19	23.16	155	20.67	8.18	1.2	1.1	27	4	61	.10	2	0.4	0.7	21	KAO
		24	454	0.15	19	21.13	155	6.89	5.92	1.2	1.1	30	3	88	.13	4	0.6	1.0	20	SF4
		24	857	48.86	19	24.91	155	19.53	6.48	1.8	1.4	22	1	97	.08	2	0.5	1.0	21	KAO
		24	1212	27.41	19	19.74	155	13.77	6.41	1.4	1.5	42	6	68	.13	5	0.4	0.7	33	SF2
		24	2049	30.93	19	16.88	155	22.58	4.39	2.2	2.6	48	5	121	.17	5	0.4	1.7	41	SWR F
		25	1011	49.83	19	20.23	155	12.68	8.29	1.4	1.3	37	5	71	.10	5	0.4	0.6	30	SF2
		25	1019	16.87	19	26.01	155	21.61	8.85	1.8	1.5	34	5	71	.12	3	0.4	0.7	24	KAO
		25	1355	30.38	19	26.42	155	20.16	6.89	2.1	1.8	36	4	69	.11	2	0.4	0.8	27	KAO
		25	1640	21.81	19	19.31	155	12.98	5.30	1.3	1.3	33	5	80	.15	4	0.5	1.8	25	SF2
		25	1644	48.70	19	48.09	155	2.17	41.12	2.1	1.2	32	5	212	.12	11	1.0	2.1	24	KEA
		25	22 3	56.38	19	18.02	155	22.24	8.56	2.0	2.2	48	8	109	.15	4	0.4	0.5	34	SWR
		26	4 6	54.25	19	28.51	155	26.63	8.85	2.6	2.2	52	8	55	.13	6	0.3	0.6	42	KAO
		26	447	28.54	19	19.07	155	15.16	9.07	2.1	2.1	46	4	91	.12	4	0.4	0.5	39	SF1
		26	710	31.84	19	21.40	155	2.04	7.16	2.3	2.6	39	5	159	.14	3	0.5	0.5	25	SF5
		26	1319	45.83	19	22.29	155	21.50	9.33	1.7	1.1	40	4	50	.13	4	0.4	0.6	27	KAO
		26	2044	29.93	19	17.56	155	21.06	4.78	1.4	1.3	36	4	125	.13	4	0.4	1.5	29	SWR
		26	2048	56.64	19	25.33	155	18.79	4.73	1.6	1.4	28	4	124	.10	2	0.4	0.7	23	SNC

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
1984	APR	27	333	17.97	19	20.21	155	12.69	6.90	1.3	1.1	33	3	71	.13	5	0.5	0.9	26	SF2
		27	4 7	19.97	19	15.88	155	30.19	7.65	2.2	2.2	41	6	56	.19	1	0.4	0.8	24	LSW
		27	422	30.98	19	23.28	155	20.67	11.24	2.4	2.6	45	8	43	.10	2	0.3	0.4	31	KAO
		27	7 4	53.98	19	21.84	155	5.87	7.69	1.9	1.1	20	3	80	.12	4	0.5	0.8	14	SF4
		27	1052	13.27	19	21.22	155	23.81	9.97	1.8	1.3	37	4	43	.12	2	0.4	0.6	30	SWR
		27	1210	25.62	19	17.58	155	34.35	3.46	2.3	1.6	44	3	54	.19	7	0.4	2.2	33	LSW
		27	2058	26.97	19	20.26	155	9.74	6.76	1.5	1.1	30	4	79	.12	3	0.6	1.1	25	SF3
		27	2344	18.16	19	22.54	155	1.13	4.10	1.8	1.3	30	2	161	.18	6	0.8	2.5	25	SSF
		27	2348	49.48	19	19.18	155	28.38	9.68	3.2	3.4	50	7	41	.12	6	0.3	0.5	41	KAO
		28	559	2.72	19	23.79	155	20.94	11.55	1.5	1.2	20	5	64	.06	2	0.5	1.0	13	KAO
		28	1846	49.76	19	24.78	155	21.98	10.26	1.6	1.3	42	6	37	.12	4	0.4	0.5	34	KAO
		28	2045	34.42	19	10.40	155	40.60	9.05	3.5	3.4	46	3	168	.21	10	0.9	0.7	38	LSW F
		29	447	12.59	19	21.23	155	4.75	8.17	2.1	2.2	37	4	92	.11	4	0.4	0.4	30	SF5
		29	526	34.76	19	20.30	155	9.52	6.56	1.5	1.1	28	4	76	.09	3	0.5	1.0	19	SF3
		29	711	19.87	19	20.86	155	2.60	7.01	1.9	1.5	30	4	149	.13	2	0.5	0.8	17	SF5
		29	1422	26.69	19	22.57	155	17.21	29.45	2.1	1.6	37	7	38	.10	2	0.6	0.9	25	DEP
		29	23 4	27.45	19	25.13	155	18.99	6.48	2.0	1.6	31	6	45	.10	3	0.4	0.7	22	INT
		30	329	43.90	19	18.31	155	15.51	4.26	2.0	1.8	38	2	121	.16	4	0.5	1.1	26	SSF
		30	4 1	54.95	19	20.31	155	12.48	6.91	1.6	1.6	33	3	72	.13	4	0.4	0.7	27	SF2
		30	547	26.97	19	21.03	155	29.40	5.02	2.0	1.8	33	3	51	.12	4	0.3	1.2	28	KAO
		30	619	16.25	19	21.72	155	22.03	10.01	2.2	2.2	44	6	56	.12	4	0.4	0.5	32	SWR
		30	1349	34.24	19	43.42	154	52.79	40.40	3.5	3.0	48	5	234	.12	22	0.9	1.4	42	HIL
		30	1537	31.08	19	19.81	155	7.43	6.45	1.9	1.6	32	2	104	.10	5	0.5	0.9	27	SF4
		30	17 9	52.61	19	18.57	155	12.59	6.20	1.4	1.1	26	2	104	.10	3	0.5	1.1	16	SF2
		30	2132	39.92	19	20.22	155	10.76	6.88	2.0	1.9	44	4	82	.14	4	0.5	0.8	36	SF3
	MAY	1	041	45.24	19	19.97	155	12.25	6.96	1.3	1.1	31	3	80	.10	5	0.5	0.9	22	SF3
		1	127	34.60	19	21.07	155	12.86	7.53	1.5	1.5	31	2	60	.13	3	0.5	0.7	26	SF2
		1	234	34.78	19	20.41	155	13.44	6.93	1.3	1.1	26	3	63	.10	4	0.5	0.9	17	SF2
		1	355	23.08	19	12.67	155	34.14	13.22	4.0	4.1	45	6	123	.15	7	0.5	0.5	39	DLS F
		1	4 1	57.52	19	12.89	155	32.73	7.19	2.1	1.7	29	2	218	.12	6	0.8	1.0	20	LSW
		1	1416	48.20	19	11.81	155	37.52	8.56	2.4	1.7	29	1	209	.18	6	1.0	1.2	21	LSW
		1	2028	32.83	19	19.96	155	11.30	8.89	1.4	1.3	32	4	86	.09	5	0.5	0.8	24	SF3
		2	0 5	33.63	19	18.40	155	14.98	6.81	1.8	1.6	37	4	112	.10	4	0.4	0.7	29	SF1
		2	133	47.88	19	19.14	155	11.10	5.12	1.4	1.1	33	3	107	.10	6	0.4	1.5	24	SF3
		2	251	9.61	19	23.17	155	27.36	10.51	1.7	1.2	28	3	61	.09	1	0.4	0.9	23	KAO
		2	6 6	43.78	19	19.45	155	29.11	9.01	2.0	1.5	34	2	46	.13	6	0.4	0.9	20	KAO
		2	945	2.86	19	19.88	155	8.12	7.25	1.5	1.1	31	3	87	.11	5	0.5	0.8	26	SF4
		2	1059	47.48	19	17.65	155	20.75	7.59	2.0	2.3	40	5	125	.11	4	0.4	0.7	29	SWR
		2	1228	13.03	19	19.88	155	11.65	7.91	1.4	1.4	28	2	86	.09	5	0.5	0.8	24	SF3
		3	1 3	20.88	19	22.65	155	26.50	10.02	2.3	2.2	39	3	36	.13	2	0.4	0.8	29	KAO
		3	151	37.02	19	25.06	155	16.81	3.24	1.5	2.4	10	0	151	.13	0	0.8	0.4	8	SNC L
		3	219	31.39	19	25.37	155	15.47	32.37	1.8	2.0	16	5	171	.07	2	1.6	1.1	6	DEP L
		3	650	2.28	19	25.70	155	15.51	8.31	2.0	2.2	11	0	184	.07	3	0.8	1.3	9	INT L
		3	1047	19.62	19	25.34	155	21.11	8.83	1.9	1.5	42	6	37	.11	4	0.4	0.5	35	KAO
		3	2010	38.15	19	26.09	155	19.63	7.47	1.5	1.1	23	5	142	.09	3	0.5	0.8	17	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
1984	MAY	3	2016	53.97	19	27.80	155	25.89	9.81	1.9	1.2	37	4	47	.12	5	0.4	0.7	24	KAO
		3	23 0	29.14	19	18.52	155	13.07	5.93	1.4	1.2	34	2	92	.11	3	0.4	1.0	28	SF2
		4	039	55.39	19	18.64	155	13.20	8.13	2.3	2.7	43	3	85	.13	3	0.4	0.6	36	SF2
		4	442	2.87	19	26.56	155	17.36	3.36	1.1	2.4	8	0	158	.14	3	0.9	1.1	7	SNC L
		4	5 3	31.92	19	20.48	155	12.55	8.18	1.3	1.2	30	2	69	.11	4	0.5	0.7	24	SF2
		4	822	47.41	19	18.95	155	15.45	7.93		1.9	42	3	106	.13	4	0.5	0.6	33	SF1
		4	15 6	58.77	19	27.04	155	19.91	8.78	2.1	1.7	30	5	66	.11	2	0.5	0.8	22	KAO
		4	1917	54.44	19	21.94	155	27.58	8.83	2.0	1.7	41	3	41	.13	1	0.3	0.6	33	KAO
		4	1935	15.63	19	25.74	155	21.82	8.73	1.6	1.3	35	5	45	.13	4	0.4	0.8	29	KAO
		4	2213	28.36	19	25.37	155	21.14	9.13	1.9	1.7	44	7	36	.12	4	0.3	0.5	32	KAO
		5	642	10.47	19	20.49	155	12.87	7.49	1.5	1.3	31	2	66	.11	4	0.5	0.8	20	SF2
		5	742	45.02	19	19.72	155	8.21	7.02	1.5	1.5	31	2	87	.11	4	0.5	0.9	26	SF4
		5	1526	24.82	19	19.74	155	12.24	6.81	1.3	1.3	27	1	84	.10	5	0.5	1.0	20	SF3
		5	2122	33.43	19	21.37	155	23.24	10.75	2.1	1.9	44	5	55	.11	2	0.3	0.4	29	SWR
		6	253	26.94	19	34.12	155	4.35	24.53	2.3	1.8	45	6	107	.11	7	0.5	1.4	38	HIL
		6	11 8	19.93	19	34.08	156	10.61	41.63	2.8	2.2	44	3	253	.11	29	1.3	1.0	40	KON
		6	20 6	33.88	19	23.28	155	27.07	9.62	1.5	1.1	32	3	38	.11	2	0.4	0.5	17	KAO
		6	2116	15.32	19	20.26	155	9.52	8.04	1.5	1.5	34	4	77	.08	3	0.4	0.6	27	SF3
		6	2212	39.31	19	29.42	155	36.67	12.44	2.2	2.8	16	1	127	.15	1	0.8	1.8	13	MLO L
		6	2319	56.84	19	25.20	155	19.48	4.49	1.3	1.1	24	5	108	.12	3	0.4	0.9	18	KAO
		6	2329	7.57	19	26.78	154	51.96	7.26	2.3	2.5	40	4	215	.13	6	1.1	0.6	33	LER
		7	1845	2.59	19	20.55	155	12.64	7.65	1.5	1.6	37	5	68	.12	4	0.5	0.7	29	SF2
		7	23 2	59.47	19	22.49	155	29.92	9.32	1.6	1.2	35	4	47	.11	4	0.4	0.7	22	KAO
		8	036	34.26	19	21.80	155	23.90	9.37	1.9	1.8	42	6	32	.13	3	0.4	0.6	31	SWR
		8	1121	9.49	19	26.28	155	29.98	6.90	1.8	1.3	32	3	63	.11	8	0.4	1.4	28	KAO
		8	1335	11.46	19	17.96	155	24.17	8.91	1.6	1.3	30	3	82	.13	4	0.4	0.7	21	SWR
		8	1426	57.11	19	30.59	155	24.14	3.26	1.6	1.5	24	6	161	.15	2	0.7	0.5	17	MLO
		8	1429	11.46	19	11.88	155	37.90	8.12	2.4	2.4	41	6	98	.24	6	0.6	1.0	35	LSW
		8	1533	23.85	19	21.01	155	21.51	9.27	1.9	2.1	39	6	62	.10	3	0.3	0.6	22	SWR
		8	1730	39.42	19	16.97	155	15.88	7.88	1.7	1.3	33	1	149	.11	4	0.6	0.8	24	SF1
		8	1917	34.34	19	49.38	155	55.05	39.90	3.1	2.8	54	7	202	.12	17	0.7	1.2	41	HUA
		8	2158	7.78	19	19.07	155	13.85	7.21	1.5	1.5	40	4	75	.11	4	0.4	0.7	29	SF2
		9	350	25.40	19	26.88	155	27.47	6.59	1.5	1.1	32	4	64	.10	5	0.4	1.2	24	KAO
		9	633	10.13	19	21.00	155	29.61	4.74	2.4	2.4	36	3	45	.11	4	0.3	1.7	28	KAO
		9	1414	18.43	19	20.90	155	21.78	9.20	1.8	1.1	31	5	100	.11	3	0.4	0.7	20	SWR
		9	1525	57.95	19	22.23	155	4.81	6.83	1.9	1.8	43	6	79	.16	4	0.5	0.7	32	SF5
		9	1545	10.92	19	22.28	155	29.15	10.22	3.0	3.3	57	11	35	.11	3	0.3	0.4	43	KAO
		9	1638	36.42	19	20.73	155	10.86	8.72	2.0	2.5	46	5	74	.12	3	0.4	0.5	35	SF3
		9	2313	24.72	19	22.86	155	29.61	8.11	1.9	1.3	34	4	43	.11	4	0.4	0.9	28	KAO
		9	2331	25.41	19	20.01	155	12.75	6.36	1.7	1.8	35	4	73	.12	5	0.4	0.9	27	SF2
		10	2 0	31.43	19	25.25	155	19.20	7.05	1.9	2.1	39	6	86	.10	3	0.3	0.6	30	KAO
		10	737	44.35	19	9.74	155	36.34	7.38	2.8	2.7	42	5	139	.20	10	0.5	1.0	29	LSW
		10	926	58.75	19	59.20	155	53.90	22.35	3.0	3.0	18	4	221	.13	20	1.4	3.2	11	KOH
		10	1150	46.12	19	20.25	155	12.06	7.75	2.0	1.9	44	8	77	.10	5	0.4	0.5	32	SF3
		10	1459	44.03	19	20.03	155	10.72	8.01	2.1	2.6	43	6	86	.12	4	0.4	0.6	30	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
1984	MAY	10	1850	16.63	19	22.24	155	28.78	9.68	2.6	2.6	50	7	37	.11	2	0.3	0.5	38	KAO
		11	0 6	19.06	19	12.46	155	25.65	8.65	1.8	1.1	31	1	148	.12	5	0.5	0.7	20	LSW
		11	041	45.67	19	23.77	155	26.88	9.38	1.7	1.1	43	6	36	.11	3	0.3	0.6	29	KAO
		11	536	18.73	19	19.77	155	11.50	6.95	1.4	1.2	35	5	90	.11	5	0.5	1.0	28	SF3
		11	617	9.03	19	20.96	155	29.68	5.51	1.8	1.3	30	3	45	.11	5	0.3	1.2	25	KAO
		11	811	38.56	19	21.12	155	23.63	10.70	2.3	2.4	47	7	36	.11	2	0.4	0.4	35	SWR
		11	1835	32.81	19	19.45	155	10.92	5.99	1.6	1.3	36	5	99	.14	5	0.5	0.9	28	SF3
		11	19 0	26.84	19	18.25	155	13.13	5.09	1.4	1.3	28	3	95	.10	2	0.5	1.3	21	SF2
		11	2147	36.87	19	19.86	155	7.94	6.96	2.6	3.0	46	5	92	.12	5	0.4	0.6	40	SF4
		12	758	36.08	19	21.58	155	2.26	5.96	2.2	2.2	45	8	149	.16	3	0.5	0.9	22	SF5
		12	1624	57.81	19	20.37	155	13.08	7.36	1.7	1.6	36	2	66	.13	4	0.5	0.8	28	SF2
		13	1 5	15.88	19	23.32	155	20.59	10.28	1.6	1.1	38	4	53	.09	2	0.4	0.6	27	KAO
		13	449	33.98	19	20.97	155	12.85	8.75	1.8	2.1	40	4	61	.12	3	0.4	0.5	29	SF2
		14	117	29.62	19	25.43	155	20.72	9.73	2.2	2.2	48	7	46	.11	4	0.3	0.5	37	KAO
		14	149	57.86	19	10.65	155	28.69	8.09	2.4	2.5	42	7	139	.15	3	0.5	0.7	30	LSW F
		14	349	18.56	19	25.23	155	20.91	9.40	2.5	2.6	46	5	41	.13	4	0.4	0.5	39	KAO
		14	1456	10.45	19	40.54	155	3.04	1.73	2.3	2.9	26	0	187	.18	19	1.1	25.2	18	HIL B*
		14	1540	25.17	19	22.92	155	2.19	7.67	1.9	2.1	33	5	138	.17	5	0.7	0.5	20	SF5
		14	19 3	8.34	19	21.52	155	5.93	8.39	1.6	1.1	21	3	86	.08	4	0.4	0.8	14	SF4
		14	23 4	36.64	19	25.03	155	15.75	14.93	1.8	1.9	42	5	74	.10	2	0.5	0.3	34	DEP
		15	154	26.46	19	20.34	155	12.95	6.63	1.3	1.5	31	2	67	.11	4	0.5	0.9	21	SF2
		15	535	57.05	19	16.46	155	26.20	9.44	1.7	1.7	25	2	58	.13	6	0.4	0.8	18	LSW
		15	946	20.71	19	20.05	155	12.91	6.96	1.3	1.1	26	1	71	.12	5	0.6	1.1	20	SF2
		15	1031	18.58	19	18.82	155	13.55	7.40	2.1	2.0	43	3	72	.13	3	0.5	0.7	37	SF2
		15	1740	11.41	19	19.65	155	8.15	8.25	1.6	1.3	30	3	89	.10	4	0.5	0.8	18	SF4
		15	18 5	34.20	19	23.11	155	3.46	8.85	1.6	1.4	25	5	106	.12	3	0.7	0.4	17	SF5
		15	2110	42.06	19	22.61	155	21.03	10.93	1.8	1.7	40	4	46	.13	6	0.4	0.5	29	KAO
		16	1748	9.34	19	20.01	155	11.82	7.29	1.7	1.6	35	4	82	.10	5	0.4	0.7	27	SF3
		16	2118	53.69	19	25.86	155	22.06	9.61	2.1	2.0	40	7	34	.13	4	0.4	0.8	31	KAO
		17	111	19.11	19	29.75	155	27.72	4.62	2.0	1.9	19	5	88	.11	4	0.3	1.6	14	KAO
		17	241	10.52	19	21.46	155	2.75	7.07	2.9	3.1	49	6	134	.12	3	0.4	0.5	42	SF5
		17	334	18.71	19	31.21	155	41.65	3.63	2.3	1.4	33	4	61	.17	8	0.5	3.0	27	MLO
		17	511	23.49	19	17.05	155	12.82	7.84	2.1	2.1	37	5	157	.13	1	0.5	0.8	27	SF2
		17	520	56.84	19	25.11	155	15.87	15.23	1.6	1.4	39	5	73	.09	2	0.5	0.3	31	DEP
		17	553	3.33	19	17.72	155	20.89	8.46	1.8	1.7	31	4	127	.13	4	0.4	0.9	20	SWR
		17	625	26.25	19	16.28	155	23.10	6.81	2.4	2.8	42	4	120	.14	4	0.4	0.9	37	SWR
		17	628	38.09	19	16.44	155	23.23	6.82	1.9	2.2	40	3	114	.16	4	0.5	1.0	33	SWR
		17	633	56.17	19	15.71	155	23.19	8.26	1.6	1.1	29	2	127	.16	3	0.5	1.3	19	SWR
		17	745	30.89	19	30.35	155	33.91	14.03	3.1	2.5	41	4	64	.12	4	0.4	0.3	33	DML
		17	957	15.00	19	20.14	155	10.69	7.08	2.1	2.3	46	8	84	.13	4	0.4	0.7	35	SF3
		17	1140	44.27	19	21.11	155	29.36	5.55	1.6	1.3	23	1	57	.10	4	0.4	1.2	19	KAO
		17	2048	58.35	19	24.36	155	25.23	7.30		1.1	24	2	47	.12	2	0.4	1.1	21	KAO
		17	2241	36.52	19	19.25	155	15.37	7.29	1.6	1.6	33	3	99	.11	4	0.4	0.6	22	SF1
		18	9 1	18.81	19	18.59	155	13.41	4.04	1.3	1.1	27	2	79	.12	3	0.4	1.2	21	SSF
		18	1718	5.09	19	24.98	155	17.01	8.60	1.5	1.1	29	5	112	.09	0	0.4	0.5	18	INT

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
1984	MAY	18	1921	22.94	19	24.01	155	26.74	9.40	1.8	1.5	39	4	35	.12	3	0.4	0.6	28	KAO
		18	21 4	43.10	19	17.49	155	25.75	9.51	2.3	2.7	51	6	60	.19	7	0.5	0.6	40	LSW
		19	5 2	9.01	19	25.34	155	20.67	7.91	1.3	1.1	26	4	92	.10	4	0.4	0.9	20	KAO
		19	7 9	34.73	19	19.83	155	7.29	5.88	1.5	1.3	33	3	107	.11	5	0.5	1.3	26	SF4
		19	825	11.35	19	19.96	155	10.33	7.24	1.4	1.3	33	4	87	.10	4	0.5	0.9	24	SF3
		19	1038	17.55	19	21.59	155	1.05	7.61	2.2	2.4	37	5	178	.12	5	0.6	0.5	25	SF5
		19	1418	1.67	19	19.34	155	11.37	8.85	3.0	3.4	49	4	100	.10	6	0.3	0.4	42	SF3
		19	1841	2.66	19	20.55	155	13.00	9.47	3.3	3.7	51	6	65	.12	4	0.3	0.4	45	SF2
		19	1948	15.35	19	25.53	155	29.59	10.07	2.4	2.2	47	7	36	.11	7	0.3	0.6	34	KAO
		19	2258	33.20	19	20.56	155	22.16	10.98	1.8	1.8	32	4	69	.11	2	0.4	0.6	19	SWR
		20	254	19.96	19	20.05	155	12.66	7.25	1.3	1.1	29	2	74	.09	5	0.5	0.9	22	SF2
		20	3 1	41.53	19	28.99	155	24.96	4.24	1.7	1.3	26	4	70	.15	3	0.4	1.2	21	KAO
		20	328	47.61	19	19.28	155	15.22	7.14	1.6	1.5	33	2	97	.11	4	0.4	0.7	26	SF1
		20	330	49.10	19	19.85	155	11.69	6.77	1.9	1.9	49	9	86	.13	5	0.4	0.6	37	SF3
		20	533	19.45	19	19.68	155	11.25	9.19	2.9	3.4	51	6	93	.12	5	0.3	0.4	39	SF3
		20	1225	10.89	19	48.90	155	36.02	13.89	2.6	2.5	31	4	123	.12	8	0.7	0.5	20	KEA
		20	1644	17.88	19	24.35	155	28.27	5.23	1.9	1.6	34	3	34	.13	4	0.4	1.2	27	KAO
		20	18 3	10.97	19	20.47	155	21.72	9.88	1.6	1.1	33	6	70	.09	3	0.4	0.6	26	SWR
		21	12 6	7.77	19	19.69	155	11.85	6.00	2.1	2.0	40	6	88	.12	6	0.4	0.9	32	SF3
		21	1259	7.53	19	25.47	155	30.28	10.93	2.0	1.2	31	1	36	.08	5	0.4	0.8	20	KAO
		21	2345	11.99	19	19.41	155	49.62	3.81	2.2	1.2	19	2	160	.12	8	0.7	3.7	11	KON
		22	127	23.79	19	20.26	155	11.80	8.95	2.4	2.8	47	6	78	.13	5	0.4	0.4	34	SF3
		22	331	16.69	19	27.40	155	23.62	6.33	2.0	1.8	35	4	73	.12	5	0.4	0.9	23	KAO
		22	2145	1.54	19	20.74	155	2.65	7.32	1.8	1.3	23	2	149	.09	2	0.6	0.6	11	SF5
		23	537	31.58	19	11.03	155	29.01	7.19	2.6	2.6	23	2	139	.13	3	0.7	0.9	19	LSW
		23	549	40.60	19	11.60	155	28.25	7.13	2.3	1.8	21	0	112	.14	4	0.7	1.4	17	LSW
		23	733	57.83	19	19.24	155	13.10	6.51	1.7	1.5	24	0	78	.13	4	0.6	0.9	21	SF2
		23	11 6	6.35	19	24.84	155	19.93	5.52	1.6	1.3	29	4	46	.12	2	0.4	1.0	20	KAO
		23	1516	8.10	19	22.68	155	25.98	11.23	2.1	1.7	37	1	34	.13	3	0.4	0.6	31	KAO
		23	1524	55.30	19	19.86	155	11.31	6.94	1.9	2.3	36	3	88	.14	5	0.5	0.8	31	SF3
		23	2121	41.22	19	21.77	155	22.04	10.77	1.7	1.3	37	4	56	.10	4	0.4	0.5	21	SWR
		23	2338	30.82	19	22.27	155	29.18	9.93	2.5	2.6	46	5	35	.10	3	0.3	0.5	38	KAO
		24	1 4	59.67	19	20.83	155	6.36	7.28	1.6	1.3	23	0	99	.11	5	0.5	1.1	17	SF4
		24	348	47.36	19	9.79	155	42.05	5.08	2.7	2.0	32	3	134	.18	13	0.8	2.1	18	LSW
		24	1030	44.08	20	3.36	155	52.26	9.78	2.5	1.9	18	1	235	.10	12	2.0	0.7	10	KOH
		24	18 9	45.50	19	21.35	155	1.97	5.68	1.9	1.5	36	3	162	.14	3	0.5	0.7	19	SF5
		24	21 4	55.47	19	25.94	155	24.08	8.81	1.7	1.4	40	6	41	.14	2	0.4	0.7	27	KAO
		24	2142	26.38	19	23.42	155	20.61	9.99	1.8	1.5	41	6	43	.11	2	0.3	0.5	24	KAO
		25	021	21.65	19	30.41	155	35.85	2.24	2.5	3.0	10	0	136	.11	2	0.8	0.7	10	MLO
		25	112	15.41	19	27.26	155	29.71	9.21	2.0	1.5	42	6	58	.14	9	0.4	0.9	30	KAO
		25	114	34.22	19	29.73	155	26.01	26.16	2.2	1.5	36	4	73	.12	5	0.6	1.2	28	DML
		25	132	47.56	19	55.03	155	35.69	31.39	2.1	1.8	41	6	135	.11	9	0.6	1.1	36	KOH
		25	220	40.11	19	29.74	155	25.70	25.95	2.1	1.8	45	5	74	.12	4	0.5	0.9	38	DML
		25	833	32.11	19	25.05	155	19.46	4.91	1.8	1.5	31	5	72	.12	3	0.4	0.9	24	KAO
		25	1352	7.02	19	20.21	155	7.61	8.02	2.1	2.3	39	4	94	.11	5	0.4	0.6	29	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
1984	MAY	25	1545	51.75	19	27.45	154	53.95	5.61	1.2	1.0	16	2	178	.13	2	1.0	0.8	13	LER
		25	1851	18.06	19	25.37	155	29.26	9.65	2.2	1.5	41	5	35	.10	6	0.3	0.7	29	KAO
		25	2231	24.36	19	29.99	155	25.96	26.03	1.7	1.4	42	5	50	.13	5	0.5	0.9	35	DML
		25	2332	0.15	19	26.06	155	23.95	9.41	1.5	1.3	37	4	43	.12	3	0.4	0.8	26	KAO
		26	915	56.45	19	17.28	155	26.93	8.98	1.9	1.5	37	3	51	.16	7	0.4	0.7	32	LSW
		26	1022	14.94	19	22.65	155	29.98	8.70	1.8	1.2	37	3	40	.12	4	0.4	0.9	30	KAO
		26	1714	3.80	19	30.75	155	35.36	0.42	2.6	3.2	15	0	200	.18	3	1.3	1.4	15	MLO
		26	1910	3.93	19	15.44	155	26.57	8.87	1.8	2.1	38	4	78	.13	5	0.4	0.7	21	LSW
		26	2218	40.84	19	15.88	155	26.67	8.77	1.7	1.6	34	3	70	.16	5	0.4	0.7	20	LSW
		26	2226	25.50	19	20.51	155	4.00	5.26	1.4	1.2	27	3	110	.11	2	0.5	0.9	19	SF5
		27	055	41.53	19	15.70	155	15.90	31.14	2.8	2.6	47	3	157	.10	5	0.6	0.9	43	DEP
		27	2 5	8.59	19	20.21	155	12.15	7.63	1.8	2.2	40	5	77	.12	5	0.4	0.6	34	SF3
		27	4 1	37.05	19	23.53	155	1.34	6.57	1.4	1.1	20	1	184	.11	5	0.6	0.8	13	SF5
		27	828	30.93	19	20.94	155	21.61	9.72		1.3	36	6	63	.13	3	0.4	0.6	23	SWR
		27	952	46.53	19	17.70	155	15.66	2.91	1.6	1.8	35	5	128	.16	4	0.4	0.8	25	SSF
		27	12 4	40.81	19	22.40	155	29.98	8.81	1.6	1.1	33	3	56	.11	4	0.3	0.9	23	KAO
		28	041	29.33	19	15.34	155	25.85	9.21	1.9	2.1	34	3	79	.10	4	0.3	0.5	23	LSW
		28	3 6	29.93	19	20.71	155	11.80	8.62	2.7	3.0	46	6	72	.11	4	0.3	0.4	38	SF3
		28	18 4	29.17	19	20.23	155	12.99	8.84	2.8	3.0	49	7	67	.11	4	0.3	0.4	41	SF2
		28	1935	26.46	19	19.55	155	10.99	9.14	2.4	2.8	39	2	96	.09	5	0.4	0.4	33	SF3
		28	2211	35.64	19	19.76	155	11.95	9.11	1.4		30	3	86	.09	6	0.4	0.7	24	SF3
		29	1318	47.55	19	43.35	154	59.23	0.03	2.4	2.7	17	0	252	.12	26	2.4	2.4	11	HIL B*
		29	1418	42.42	19	17.11	155	29.49	8.30	2.2	2.1	43	5	50	.17	4	0.4	0.8	27	LSW
		29	2145	34.73	19	26.03	155	29.54	9.59	2.1	1.5	44	7	41	.12	7	0.3	0.7	31	KAO
		29	2149	11.05	19	28.02	155	14.86	32.27	2.2	2.0	47	8	52	.11	6	0.6	0.9	38	DEP
		29	2217	51.68	19	22.40	155	29.82	8.75	2.6	2.9	47	6	33	.11	4	0.3	0.6	37	KAO
		30	646	2.38	19	15.96	155	26.89	8.07	2.1	2.3	37	4	69	.14	6	0.4	0.8	27	LSW
		30	749	21.35	19	22.04	155	26.69	11.34	2.0	1.8	35	4	42	.10	2	0.4	0.6	25	KAO
		30	10 6	15.55	19	26.24	155	24.23	7.54	1.8	1.5	27	3	53	.12	2	0.4	0.9	22	KAO
		30	1111	23.42	19	26.07	155	30.41	10.98	2.0	1.6	35	4	45	.09	8	0.4	0.7	23	KAO
		30	1352	48.82	19	20.58	155	12.46	7.16	2.1	2.4	41	1	68	.14	4	0.5	0.6	36	SF2
		30	18 7	13.60	19	28.98	155	35.70	1.58	3.0	3.5	17	2	71	.21	1	0.6	0.3	9	MLO
		30	1924	42.63	19	19.00	155	25.98	9.06	2.1	1.9	43	3	59	.15	5	0.4	0.5	34	LSW
		30	22 1	27.64	19	20.23	155	12.93	7.28	1.6	1.6	37	3	68	.13	4	0.4	0.7	27	SF2
		31	133	17.92	19	19.63	155	12.95	4.97	1.3	1.3	33	1	76	.12	5	0.4	1.2	24	SSF
		31	526	39.49	19	41.73	155	57.27	13.97	2.9	2.9	40	0	210	.13	12	1.2	0.6	29	HUA F
		31	732	7.98	19	21.06	155	22.32	10.17	1.6	1.7	37	5	63	.12	2	0.4	0.6	23	SWR
		31	739	35.09	19	20.85	155	22.21	10.00	1.7	1.9	36	7	65	.12	2	0.4	0.7	25	SWR
		31	831	21.85	19	22.58	155	29.66	9.62	1.6	1.4	22	1	59	.10	4	0.5	1.2	19	KAO
		31	1710	44.72	19	26.54	155	26.67	7.62	2.7	2.6	47	5	51	.13	8	0.3	0.9	38	KAO
		31	1725	32.28	19	25.05	155	19.24	6.63	1.6	1.1	25	6	104	.09	3	0.4	0.8	19	KAO
		31	1827	15.66	19	32.21	155	43.47	6.54	2.1	1.2	36	6	80	.14	5	0.4	1.2	20	KON
		31	2029	9.62	19	19.61	155	12.11	4.25	1.3	1.2	33	4	88	.14	5	0.4	1.7	28	SSF
		31	2057	37.17	19	25.44	155	19.51	6.98	2.7	3.3	46	6	47	.12	3	0.4	0.6	37	KAO F
		31	2223	51.00	19	19.63	155	29.57	8.86	2.2	1.8	47	7	50	.13	6	0.3	0.7	34	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
1984	MAY	31	2318	37.64	19	12.25	155	27.66	7.98	3.0	2.9	49	5	110	.17	5	0.5	0.6	35	LSW
	JUN	1	1 2	10.14	19	23.77	155	26.45	10.67	1.5	1.4	27	4	68	.10	3	0.5	0.8	20	KAO
		1	750	48.98	19	28.31	155	27.35	4.89	1.4	1.1	40	6	64	.13	7	0.3	2.1	31	KAO
		1	13 8	15.02	19	23.20	155	25.50	9.35	1.8	1.7	39	4	30	.13	4	0.4	0.7	32	KAO
		1	1524	24.87	19	20.12	155	11.42	6.52	1.4	1.5	32	5	82	.12	5	0.4	0.8	18	SF3
		1	1548	35.84	19	17.90	155	13.24	5.81	1.6	1.5	31	3	98	.09	2	0.5	0.9	21	SF2
		1	1934	26.16	19	25.57	155	29.06	8.24	1.8	1.1	35	4	61	.09	6	0.3	0.9	23	KAO
		2	138	0.64	19	23.16	155	28.01	8.38	1.5	1.3	31	3	38	.15	1	0.4	0.9	23	KAO
		2	315	32.01	19	15.31	155	32.72	8.50	2.3	1.7	36	1	124	.17	5	0.5	0.9	25	LSW
		2	1224	57.37	19	19.26	155	12.15	8.65	1.7	1.9	37	5	95	.10	5	0.4	0.5	28	SF3
		2	1235	17.86	19	20.46	155	13.39	7.79	1.5	1.6	35	3	61	.11	4	0.5	0.7	27	SF2
		2	1744	57.58	19	19.13	154	58.97	38.60	2.6	2.0	42	5	223	.11	7	1.1	1.1	35	LER
		2	23 3	46.17	19	22.11	155	37.00	12.66	2.2	1.4	35	2	102	.10	5	0.5	0.5	25	MLO
		3	315	40.13	19	19.13	155	15.25	6.05	1.3	1.1	27	2	99	.13	4	0.5	1.2	24	SF1
		3	412	29.02	19	24.88	155	30.25	9.76	2.0	1.7	35	2	35	.10	6	0.3	0.7	30	KAO
		3	1217	52.45	19	22.02	155	28.79	4.61	1.5	1.2	26	2	76	.12	2	0.5	0.8	18	KAO
		3	2112	7.46	18	54.25	155	8.68	50.20	3.4	3.3	55	8	254	.09	43	0.9	1.5	47	LOI
		4	1213	55.38	19	16.59	155	22.45	3.56	1.4	1.6	28	4	128	.14	5	0.4	1.5	19	SWR
		4	1412	1.78	19	29.17	155	26.50	10.23	2.5	2.0	44	8	63	.12	6	0.4	0.6	29	KAO
		4	1438	34.89	19	21.40	155	7.28	5.53	1.6	1.8	38	6	81	.13	4	0.5	0.9	24	SF4
		4	1528	7.18	19	18.77	155	13.25	8.12	1.4	1.5	27	3	82	.12	3	0.6	0.9	22	SF2
		5	025	31.61	19	22.13	155	30.20	9.26	2.3	2.2	40	3	33	.14	5	0.3	0.8	32	KAO
		5	028	53.26	19	13.94	155	27.03	7.63	2.2	1.8	40	2	139	.16	5	0.6	0.8	31	LSW
		5	1430	26.25	19	18.72	155	13.45	6.74	1.7	1.5	33	4	77	.11	3	0.5	0.9	22	SF2
		5	1638	18.53	19	17.62	154	59.09	36.42	2.2	1.6	34	2	235	.10	8	1.8	1.2	31	LER
		6	010	37.71	19	26.76	155	28.77	8.35	2.0	1.5	35	5	57	.11	7	0.4	0.9	25	KAO
		6	046	15.72	19	22.23	155	17.53	3.00	1.1	1.2	17	2	85	.08	2	0.3	0.5	13	SSC
		6	114	4.85	19	12.06	155	31.27	39.21	2.7	2.5	51	8	84	.08	6	0.6	1.0	41	DLS
		6	227	5.15	19	20.40	155	13.45	6.47	1.7	1.6	35	5	62	.14	4	0.4	0.9	30	SF2
		6	436	18.03	19	25.22	155	16.72	7.34	1.2		23	4	113	.12	1*	0.5	0.7	12	INT L
		6	437	16.57	19	24.59	155	17.14	7.35	1.3	1.3	23	3	50	.11	1	0.5	0.6	9	INT
		6	9 6	12.87	19	20.77	155	23.48	10.05	1.8	1.7	21	0	86	.12	1	0.5	0.7	17	SWR
		6	12 6	52.01	19	27.65	155	24.18	9.12	2.2	1.8	25	1	44	.13	4	0.6	1.0	20	KAO
		6	1249	42.46	19	26.72	155	29.74	8.11	1.9	1.5	20	1	56	.09	9	0.4	1.5	10	KAO
		6	1934	29.00	19	24.84	155	19.23	5.42	1.9	1.8	22	2	45	.08	3	0.4	0.9	21	KAO
		7	840	47.97	19	20.36	155	12.34	7.50	1.6	1.3	25	1	73	.10	4	0.5	0.8	23	SF2
		7	1459	37.85	19	25.61	155	21.26	8.51	1.7	1.5	40	7	66	.11	4	0.4	0.6	32	KAO
		7	1622	24.43	19	21.96	155	11.90	2.28	1.2	1.1	9	1	111	.10	2	0.6	0.6	6	SER
		7	2115	15.62	19	18.62	154	58.95	38.82	2.2	1.6	38	3	228	.08	7	1.4	1.1	33	LER
		8	117	38.61	19	21.45	155	4.81	7.87	2.5	2.8	40	4	86	.11	4	0.4	0.7	31	SF5
		8	214	36.98	19	23.92	155	27.25	9.17	1.5	1.3	38	4	28	.13	3	0.3	0.7	22	KAO
		8	343	27.90	19	24.34	155	16.29	3.49	1.1	1.0	13	3	128	.06	1	0.4	0.4	8	SEC
		8	346	32.55	19	24.53	155	16.30	3.39	1.0	1.0	13	3	139	.08	1	0.4	0.5	7	SEC
		8	544	39.70	19	25.60	155	24.33	8.55	1.3	1.3	38	4	39	.12	2	0.4	0.8	27	KAO
		8	927	50.72	19	12.06	155	31.22	37.56	3.7	3.7	56	10	85	.09	6	0.6	1.0	46	DLS F

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
1984	JUN	8	933	12.30	19	12.10	155	31.20	37.45	3.1	3.3	57	10	83	.10	6	0.6	0.9	47	DLS
		8	1013	24.66	19	20.94	155	1.49	7.94	2.6	2.9	45	6	186	.11	3	0.6	0.5	34	SF5
		8	12 7	59.77	19	22.87	155	20.95	9.49	2.3	2.1	47	6	44	.12	3	0.3	0.5	32	KAO
		8	1552	24.93	19	27.56	155	28.56	7.33	1.9	1.3	37	6	54	.12	7	0.3	1.0	23	KAO
		8	1710	32.73	19	23.47	155	15.92	5.75	1.8	2.4	18	4	86	.15	1	0.6	0.9	10	INT L
		8	1734	10.64	20	3.31	157	52.51	29.55	5.0	5.3	52	5	238	.13	142	1.5	2.5	41	DIS
		8	1822	27.67	19	22.13	155	28.54	6.38	1.6	1.1	19	1	77	.11	2	0.5	0.9	11	KAO
		8	1942	44.30	19	27.58	155	25.61	7.15	2.3	2.3	47	7	49	.13	4	0.3	0.8	35	KAO
		8	2318	58.58	19	24.73	155	17.11	14.80	1.6	1.6	14	1	124	.05	2	0.9	1.0	8	DEP L
		8	2341	13.60	19	19.66	155	23.27	8.45	1.4	1.1	27	3	78	.09	1	0.4	0.7	20	SWR
		9	0 9	5.67	19	19.39	155	13.06	4.67	1.3	1.2	31	1	78	.16	4	0.5	2.0	28	SSF
		9	1215	10.28	19	20.07	155	12.97	7.13		1.1	22	2	70	.09	5	0.5	1.0	16	SF2
		9	1858	59.28	19	40.04	154	52.55	14.04	2.2	1.3	21	0	265	.12	15	5.5	1.2	16	HIL
		9	1921	22.97	19	19.83	155	11.84	7.16	1.4	1.4	33	3	86	.10	5	0.5	0.8	25	SF3
		9	2310	10.47	19	22.78	155	20.84	10.31	1.7	1.3	39	3	66	.10	3	0.4	0.5	29	KAO
		10	223	59.52	19	18.23	154	58.69	39.42	2.2	1.6	35	2	232	.08	8	1.6	1.5	32	LER
		10	323	33.38	19	18.21	155	13.59	7.84	2.1	2.3	41	5	74	.11	2	0.4	0.6	28	SF2
		10	412	44.85	19	26.24	155	30.74	8.45	1.9	1.5	40	5	37	.12	8	0.4	0.9	33	KAO
		10	855	21.51	19	17.34	155	13.15	7.03	2.1	2.1	41	6	136	.13	1	0.5	0.9	29	SF2
		10	947	49.21	19	17.41	155	13.11	6.00	1.4	1.2	24	3	132	.10	1	0.5	0.9	19	SF2
		10	1635	32.28	19	16.09	155	29.84	8.45	1.8	1.2	27	3	65	.20	2	0.5	1.1	18	LSW
		10	18 2	7.70	19	20.92	155	22.27	10.16	1.7	1.2	36	6	65	.13	2	0.4	0.7	19	SWR
		10	1852	46.18	19	21.23	155	23.50	9.25	1.7	1.3	35	5	43	.12	2	0.4	0.8	22	SWR
		10	19 4	56.72	19	22.76	155	26.86	9.35	2.2	2.0	48	6	40	.12	1	0.3	0.5	41	KAO
		11	1 5	51.57	19	17.81	155	21.96	7.82	1.8	1.5	36	4	115	.18	5	0.5	0.8	26	SWR
		11	454	39.43	19	24.87	155	19.97	6.41	1.8	1.5	29	6	102	.09	2	0.4	0.8	20	KAO
		11	8 1	3.41	19	10.52	155	29.40	3.28	1.9	1.2	32	1	97	.13	3	0.5	1.1	23	LSW
		11	8 1	48.99	19	8.37	155	28.75	6.80	1.3	1.5	13	0	235	.11	3	1.6	1.0	9	LSW
		11	937	36.87	19	19.18	155	27.19	9.93	1.8	1.7	38	2	49	.12	6	0.4	0.6	32	KAO
		11	1111	44.46	19	14.08	155	26.76	7.70	1.5	1.7	32	4	109	.13	5	0.4	0.9	22	LSW
		11	1615	8.69	19	25.26	155	16.79	13.81	1.6	1.0	35	3	74	.09	1	0.4	0.4	25	DEP
		11	1850	13.57	19	18.79	155	11.23	6.68	1.4	1.5	30	1	117	.12	5	0.5	0.9	23	SF3
		11	20 7	7.19	19	20.37	155	13.35	7.02	1.6	1.6	43	8	62	.12	4	0.4	0.6	26	SF2
		11	2238	6.23	19	23.43	155	27.42	8.78	1.5	1.1	26	1	61	.11	2	0.5	0.9	15	KAO
		12	230	40.00	19	20.28	155	12.61	7.20	1.5	1.5	36	3	71	.13	4	0.4	0.7	28	SF2
		12	1132	40.50	19	20.96	155	30.00	9.00	2.0	1.3	35	3	46	.13	5	0.4	0.8	24	KAO
		12	1339	0.35	19	37.43	155	55.77	19.99	3.5	3.7	53	6	200	.11	15	0.7	1.9	44	KON F
		12	1537	13.77	19	20.39	155	11.35	8.55	2.8	3.0	47	6	78	.10	4	0.3	0.4	36	SF3
		12	1649	17.22	19	20.34	155	11.41	8.08	2.3	2.6	51	10	79	.13	4	0.4	0.5	36	SF3
		12	17 3	20.10	19	21.09	155	30.11	9.60	3.6	3.7	54	9	34	.11	5	0.3	0.5	43	KAO F
		12	21 4	12.82	19	19.42	155	13.25	7.12	1.9	1.9	45	4	73	.14	4	0.4	0.7	35	SF2
		13	152	31.17	19	20.46	155	12.78	9.23	3.5	3.9	42	5	67	.12	4	0.4	0.5	36	SF2 F
		13	451	50.73	19	22.93	155	25.48	10.41	1.4	1.1	32	2	45	.11	4	0.4	0.7	26	KAO
		13	2051	0.81	19	19.92	155	11.12	6.83	1.4	1.3	35	3	88	.11	5	0.4	0.8	24	SF3
		13	2149	28.67	19	20.26	155	12.63	6.20	1.3	1.3	34	4	71	.13	4	0.5	0.8	26	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
1984	JUN	14	046	27.41	19	25.62	155	21.44	9.63	2.1	1.8	44	6	54	.12	4	0.4	0.5	34	KAO
		14	115	10.77	19	20.50	155	11.78	9.14	1.4	1.1	18	1	146	.06	4	0.7	1.0	12	SF3
		14	122	30.69	19	25.01	155	19.39	5.94	2.2	2.5	40	7	72	.11	3	0.3	0.7	29	KAO
		14	5 7	40.35	19	22.29	155	26.30	10.36	1.8	1.7	38	4	49	.11	2	0.4	0.6	26	KAO
		14	11 1	40.12	19	26.78	155	19.72	7.53	1.5	1.1	25	7	154	.07	2	0.4	0.7	17	KAO
		14	1318	50.30	19	18.96	154	59.33	37.58	2.8	2.8	53	8	215	.10	7	0.7	0.8	44	LER
		14	1729	10.14	19	20.68	155	12.85	7.49	1.6	1.3	40	5	64	.13	4	0.5	0.7	29	SF2
		14	1842	46.54	19	25.86	155	21.06	9.93	2.4	2.5	53	8	37	.13	3	0.3	0.5	39	KAO
		14	2026	53.06	19	23.26	155	20.56	8.23	1.5	1.1	34	4	53	.11	2	0.4	0.7	24	KAO
		14	2038	43.45	19	18.24	155	13.12	8.70	2.1	2.2	47	7	95	.11	2	0.5	0.5	30	SF2
		14	2328	40.04	19	17.17	155	22.02	6.30	1.5	1.1	24	1	124	.10	6	0.4	1.1	18	SWR
		15	310	31.36	19	18.70	155	17.66	12.43	1.9	1.6	50	10	115	.11	2	0.4	0.4	38	SWR
		15	322	47.65	19	21.97	155	2.94	6.56	2.2	2.0	39	6	124	.12	4	0.5	0.9	27	SF5
		15	1455	29.50	19	20.15	155	7.53	6.39	1.6	1.3	27	2	98	.09	5	0.4	1.1	15	SF4
		15	1458	24.56	19	20.01	155	7.88	5.69	1.5	1.5	30	3	91	.12	5	0.5	1.2	19	SF4
		16	0 8	10.31	19	21.88	155	5.21	5.94	1.6	1.3	25	3	78	.14	4	0.5	1.2	19	SF5
		16	822	10.03	20	44.51	157	30.32	34.00	4.0	5.1	38	2	189	.12	83	2.3	1.9	19	DIS F
		16	1617	48.42	19	25.06	155	19.37	6.09	1.7	1.3	27	6	103	.10	3	0.4	0.9	21	KAO
		16	1918	59.03	19	16.10	155	21.03	7.65	2.1	2.7	49	5	141	.12	5	0.4	0.6	37	SWR
		17	029	6.02	19	27.05	155	29.25	10.30	1.9	1.7	35	6	46	.10	8	0.3	0.7	23	KAO
		17	048	43.64	19	22.71	155	26.40	9.44	1.8	1.7	37	5	34	.11	2	0.3	0.5	31	KAO
		17	832	41.12	19	23.06	155	2.14	7.42	1.6	1.1	22	1	137	.14	6	0.7	1.3	19	SF5
		17	11 5	23.53	19	21.42	155	30.10	9.69	3.1	3.4	55	8	33	.10	5	0.3	0.4	44	KAO F
		17	2130	6.81	19	26.75	155	28.31	9.42	1.6	1.2	35	6	56	.11	6	0.4	0.9	23	KAO
		18	348	26.68	19	18.16	155	15.63	6.63	1.1	1.1	24	2	127	.12	4	0.5	1.0	17	SF1
		18	6 6	33.02	19	20.40	155	30.91	8.93	2.0	1.5	32	4	55	.11	7	0.4	1.1	23	KAO
		18	1341	19.14	19	20.94	155	12.77	8.42	2.0	2.3	42	6	62	.13	3	0.4	0.5	29	SF2
		18	19 0	42.41	19	28.39	155	26.54	6.43	2.9	2.2	49	7	47	.12	6	0.3	0.8	39	KAO
		18	1934	34.24	19	20.37	155	7.74	5.54	1.5	1.1	32	2	89	.12	5	0.5	1.3	27	SF4
		18	2343	5.71	19	22.66	155	2.37	7.69	2.3	2.4	40	3	135	.14	5	0.6	0.4	34	SF5
		19	542	46.92	19	21.97	155	6.36	6.91	2.2	2.7	33	5	77	.12	3	0.4	0.6	24	SF4
		19	912	39.55	19	24.72	155	15.17	37.42	2.4	3.0	43	3	72	.11	2	0.8	1.4	26	DEP L
		19	1051	52.95	19	28.02	155	29.96	11.38	2.1	2.0	39	4	46	.12	8	0.4	0.6	32	KAO
		19	1844	9.65	19	20.09	155	13.57	5.67	1.2	1.1	31	4	69	.13	5	0.5	0.9	25	SF2
		19	1853	46.55	19	29.39	156	7.87	20.93		1.7	12	0	307	.11	22	12.6	4.7	12	KON
		20	116	34.01	19	22.12	155	1.76	8.14	2.3	2.4	37	2	154	.10	5	0.7	0.4	29	SF5
		20	235	6.64	19	24.15	155	16.32	14.68	1.9	2.0	49	9	69	.11	1	0.4	0.3	40	DEP
		20	7 1	58.35	19	21.29	155	1.18	6.63	2.2	2.2	36	4	182	.13	4	0.6	0.7	26	SF5
		20	919	36.81	19	21.28	155	29.88	10.84	2.8	3.2	51	6	34	.09	5	0.3	0.4	41	KAO
		20	1459	36.90	19	19.79	155	9.95	6.51	1.7	2.0	44	8	89	.13	4	0.4	0.7	36	SF3
		20	1510	19.60	19	21.22	155	24.00	10.58	2.7	3.1	51	5	36	.13	2	0.3	0.4	45	SWR
		20	1550	10.42	19	18.85	155	12.93	4.77	1.2	1.4	28	2	89	.12	4	0.5	1.8	24	SSF
		20	2050	35.14	19	20.58	155	12.14	7.60	1.8	1.3	42	6	71	.12	4	0.4	0.5	30	SF3
		21	2 1	21.27	19	29.43	155	28.17	2.81	2.1	2.0	41	7	47	.14	5	0.3	1.1	37	KAO
		21	1034	55.11	19	22.21	155	29.46	9.22	2.6	2.6	52	7	34	.12	3	0.3	0.5	43	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
1984	JUN	21	1534	38.49	19	23.49	155	20.67	9.53	2.1	2.4	44	6	43	.12	2	0.4	0.5	31	KAO
		21	1713	18.03	19	25.54	155	20.96	9.74	2.8	3.0	51	6	40	.11	4	0.3	0.5	40	KAO
		21	1756	25.89	19	20.64	155	13.27	6.78	1.2	1.1	29	3	60	.14	4	0.5	0.9	27	SF2
		22	045	47.59	19	11.12	155	41.28	6.76	2.1	1.8	28	2	199	.21	10	1.1	1.9	20	LSW
		22	117	22.65	19	25.39	155	19.74	6.23	1.5	1.3	22	6	110	.10	3	0.4	0.9	16	KAO
		22	224	36.04	19	22.46	155	30.01	8.31	1.6	1.1	35	4	46	.12	4	0.4	0.8	26	KAO
		23	035	30.15	19	19.25	155	9.19	4.49	1.5	1.3	28	3	94	.11	4	0.4	1.7	22	SSF
		23	414	45.99	19	23.65	155	30.19	9.35	1.6	1.2	32	5	40	.06	5	0.4	0.9	27	KAO
		23	433	8.10	19	20.03	155	12.41	6.81	1.5	1.6	35	5	77	.13	5	0.5	0.8	30	SF2
		23	1029	57.15	19	20.36	155	13.60	7.29	1.3	1.1	36	5	67	.11	4	0.5	0.7	29	SF2
		23	1939	8.74	19	20.54	155	13.34	6.26	1.2	1.1	35	2	60	.14	4	0.5	0.9	29	SF2
		23	2026	13.77	19	20.99	155	21.78	9.16	1.8	1.8	43	9	63	.12	3	0.4	0.5	35	SWR
		23	2035	52.72	19	23.58	155	27.35	9.47	1.9	1.8	46	4	30	.11	2	0.3	0.5	38	KAO
		24	120	7.39	19	24.38	155	29.24	8.99	1.8	1.3	32	2	35	.09	5	0.4	0.9	28	KAO
		24	234	55.92	19	22.64	155	4.10	6.99	1.2	1.1	25	1	95	.11	4	0.5	1.0	20	SF5
		24	814	36.24	19	11.72	155	33.67	10.70	1.8	1.2	33	3	173	.18	8	0.7	0.9	22	LSW
		24	1841	44.28	19	19.87	155	11.14	7.35	1.4	1.1	26	1	89	.10	5	0.5	0.9	19	SF3
		24	2123	19.96	19	20.20	155	10.85	9.61	3.5	3.7	49	5	82	.09	4	0.4	0.3	44	SF3 F
		24	22 2	2.76	19	47.20	155	46.12	15.89	2.3	2.0	19	3	145	.12	13	0.7	1.0	10	HUA
		25	326	23.23	19	25.19	155	19.66	5.75	1.6	1.1	23	3	104	.09	3	0.4	0.9	19	KAO
		25	9 8	38.25	19	26.77	155	28.48	8.31	1.5	1.1	30	5	57	.11	6	0.4	1.0	20	KAO
		25	933	19.17	19	17.93	155	25.05	8.51	1.8	1.5	35	2	70	.14	5	0.4	0.7	23	LSW
		25	1057	13.46	19	17.53	155	30.58	7.61	2.0	1.7	34	2	79	.17	5	0.5	1.1	31	LSW
		25	1240	10.39	19	16.33	155	23.76	3.37	1.8	1.7	29	3	103	.14	4	0.4	1.4	26	SWR
		25	1329	43.71	19	14.81	155	4.08	47.57	3.1	3.0	52	5	205	.11	8	0.9	1.2	47	DEP
		25	1353	54.99	19	25.15	155	29.01	9.07	2.0	1.5	38	3	34	.09	6	0.3	0.7	31	KAO
		25	1752	53.25	19	17.52	155	12.85	6.20	1.4	1.8	31	3	140	.10	1	0.6	1.0	22	SF2
		25	1755	6.95	19	17.66	155	12.91	4.78	1.4	1.8	34	3	127	.10	2	0.5	1.1	28	SSF
		25	2332	30.40	19	27.85	155	14.62	34.38	1.4	1.5	42	4	52	.11	6	0.6	1.3	35	DEP
		26	556	16.39	19	24.45	155	15.23	37.69	2.3	2.7	33	1	88	.11	2	1.0	1.8	28	DEP L
		26	1221	40.88	19	18.68	155	12.89	7.37	1.4	1.1	22	3	94	.06	3	0.4	1.0	14	SF2
		26	1914	31.27	20	1.05	155	21.49	8.05	3.3	3.2	51	6	209	.13	28	0.7	0.8	45	KEA
		27	933	55.34	19	29.21	154	45.97	10.41	1.9	1.5	21	2	288	.21	8	3.5	0.8	20	LER
		27	1136	41.37	19	20.17	155	12.82	6.01	1.5	1.5	33	3	70	.13	5	0.5	0.8	28	SF2
		27	22 7	28.60	19	25.77	155	21.70	8.87	1.7	1.5	42	6	32	.13	4	0.4	0.6	31	KAO
		27	2256	22.67	19	21.45	155	4.69	6.86		1.1	37	5	86	.16	4	0.5	0.8	24	SF5
		28	244	36.14	19	25.09	155	19.12	3.99	1.3	1.1	25	5	100	.10	3	0.4	0.6	19	KAO
		28	248	41.25	19	24.91	155	18.93	4.78	2.3	2.3	40	5	46	.10	3	0.3	0.6	30	SNC
		28	537	16.21	19	19.47	155	16.11	7.25	1.9	2.3	41	4	95	.11	3	0.4	0.6	30	SF1
		28	853	35.31	19	22.98	155	27.83	9.44	2.3	2.3	49	5	39	.13	1	0.3	0.5	36	KAO
		28	1122	48.46	19	24.60	155	29.80	9.41	2.5	2.5	47	4	33	.11	5	0.3	0.8	39	KAO
		28	1143	14.94	19	20.61	155	12.86	8.78	1.6	1.1	33	6	64	.09	4	0.4	0.5	25	SF2
		28	12 0	41.46	19	19.89	155	10.32	8.14	1.8	1.5	39	6	89	.11	4	0.4	0.6	29	SF3
		28	1957	25.48	19	25.11	155	19.67	6.26	1.6	1.0	24	4	101	.09	3	0.4	0.9	17	KAO
		29	137	6.53	19	19.79	155	12.09	6.79	1.3	1.1	30	4	85	.12	6	0.5	0.9	18	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
1984	JUN	29	1047	7.80	19	21.03	155	21.83	10.69	2.2	2.1	38	4	63	.11	3	0.4	0.5	30	SWR
		29	1049	32.64	19	21.40	155	21.88	8.72	1.8	1.5	37	6	58	.13	3	0.4	0.6	23	SWR
		29	13 3	44.46	19	21.12	155	21.97	10.52	2.1	2.1	38	5	62	.12	3	0.4	0.6	26	SWR
		29	1837	27.48	19	28.95	155	26.64	2.81	2.1	1.9	35	6	49	.12	6	0.3	0.9	22	KAO
		30	414	45.00	19	20.49	155	11.72	9.06	2.9	3.3	49	6	75	.12	4	0.3	0.4	41	SF3
		30	5 3	32.91	19	19.80	155	12.35	5.67	1.3	1.1	22	1	81	.12	5	0.5	1.5	16	SF2
		30	13 8	21.92	19	20.02	155	12.11	6.71	1.4	1.1	26	1	80	.13	5	0.5	1.2	21	SF3
		30	1652	0.04	19	22.34	155	29.87	8.93	2.1	1.7	38	2	41	.11	4	0.3	0.7	32	KAO
		30	19 6	38.86	19	19.98	155	12.26	7.23	1.3	1.6	36	3	79	.12	5	0.5	0.7	24	SF3
	JUL	1	124	33.88	19	19.32	155	15.49	6.62	1.2	1.5	34	2	99	.12	4	0.4	0.6	28	SF1
		1	1018	21.17	19	22.58	155	26.82	9.86	1.4	1.1	28	2	61	.13	1	0.4	0.7	22	KAO
		2	2 2	35.36	19	13.90	155	37.38	0.02	2.8	2.8	39	5	225	.16	13	1.4	0.4	29	LSW
		2	341	27.77	19	24.21	155	26.27	9.26	1.5	1.1	33	3	35	.12	3	0.4	0.7	27	KAO
		2	628	27.66	19	20.09	155	11.88	8.30	1.3	1.5	26	1	80	.08	5	0.5	0.8	19	SF3
		2	844	16.41	19	23.86	155	26.90	8.71	2.0	2.2	26	1	71	.14	3	0.5	1.0	16	KAO
		2	1913	34.85	19	23.88	155	15.64	3.12	1.2	1.6	17	3	107	.07	2	0.3	0.3	12	SEC
		2	2341	52.28	19	19.12	155	15.42	6.25	1.3	1.5	37	3	93	.13	4	0.4	0.8	27	SF1
		3	150	36.83	19	25.07	155	19.68	4.04	1.7	1.8	32	5	64	.11	3	0.3	0.7	23	KAO
		3	458	37.41	19	25.12	155	19.24	5.47	1.7	1.3	28	5	107	.11	3	0.4	0.9	22	KAO
		3	5 1	29.18	19	25.29	155	19.49	4.91	1.6	1.3	25	4	111	.13	3	0.4	1.0	18	KAO
		3	9 4	10.25	19	20.92	155	6.25	7.44	2.2	2.3	45	6	98	.13	5	0.4	0.6	34	SF4
		3	1434	58.00	19	14.47	155	35.42	7.76	2.2	1.4	39	4	106	.20	3	0.6	1.0	26	LSW
		4	344	49.44	19	20.74	155	13.56	8.13	1.5	1.6	35	3	60	.11	4	0.4	0.7	28	SF2
		4	619	38.92	19	25.89	155	21.81	9.68	2.4	2.4	50	7	45	.13	4	0.3	0.5	40	KAO
		4	928	39.05	19	21.70	155	30.17	8.48	1.6	1.1	33	2	45	.11	5	0.4	0.8	26	KAO
		4	1318	22.76	19	24.39	155	17.56	15.55	1.9	1.2	47	8	46	.10	1	0.4	0.3	35	DEP
		4	1359	23.69	19	29.13	154	49.96	7.66	2.5	2.6	31	4	264	.18	2	1.5	0.5	24	LER
		4	14 2	50.71	19	23.75	155	21.10	9.39	1.5	1.2	28	6	58	.11	2	0.4	0.6	18	KAO
		4	1430	13.23	19	0.48	156	54.19	28.81	3.4	4.1	30	5	323	.12	112	1.9	4.6	23	DIS
		4	1845	20.43	19	20.66	155	11.48	8.58	2.1	2.9	51	8	74	.12	4	0.4	0.5	39	SF3
		4	2316	7.70	19	23.52	155	30.17	8.73	1.5	1.1	34	4	49	.10	5	0.3	0.7	24	KAO
		5	4 4	9.89	19	26.87	154	53.48	7.84	2.5	2.5	38	4	192	.13	3	1.0	0.5	32	LER
		5	914	8.65	19	27.23	155	22.89	8.62	2.9	3.0	52	6	49	.13	4	0.3	0.6	40	KAO
		5	1742	55.51	19	47.22	155	21.43	29.48	2.1	1.7	34	4	98	.10	11	0.7	1.3	27	KEA
		5	2212	21.93	18	41.09	154	56.27	41.12	2.4	1.8	45	0	298	.09	70	6.1	2.9	42	DIS
		6	857	46.12	19	25.56	155	29.15	10.41	2.2	2.3	46	5	36	.10	6	0.3	0.5	31	KAO
		6	1150	41.27	19	20.72	155	11.70	7.65		2.5	47	7	72	.14	4	0.4	0.6	36	SF3
		6	1152	39.28	19	26.38	155	21.38	11.96	2.6	2.5	49	6	30	.11	3	0.3	0.4	36	KAO
		6	1342	18.33	19	19.09	155	12.09	7.15	1.3	1.3	24	3	100	.06	5	0.5	0.8	19	SF3
		6	14 2	35.14	19	22.89	155	2.72	7.96	1.9	2.0	38	3	125	.14	4	0.6	0.5	25	SF5
		6	17 6	59.75	19	37.66	156	2.68	33.30	2.7	2.2	39	4	231	.09	20	0.8	0.9	33	KON
		6	1850	45.38	19	17.57	155	55.79	27.67	2.4	1.9	32	5	248	.10	7	0.9	1.4	21	KON
		6	20 9	16.39	19	26.99	155	28.35	9.17	1.7	1.2	31	4	57	.10	6	0.4	0.9	21	KAO
		6	2348	22.81	19	20.40	155	3.73	5.05	1.6	1.5	17	2	111	.08	2	0.5	1.1	10	SF5
		7	419	31.32	19	26.39	155	27.91	9.32	1.7	1.4	34	4	55	.10	5	0.4	0.8	27	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
1984	JUL	7	1343	49.41	19	19.61	155	10.86	8.03	1.8	2.1	28	0	95	.09	5	0.4	0.8	27	SF3
		7	1456	12.07	19	23.29	155	27.48	8.97	2.0	2.0	30	1	63	.10	2	0.5	0.9	29	KAO
		8	725	57.12	19	21.77	155	6.42	6.97	1.4	1.3	26	2	80	.10	3	0.5	1.0	18	SF4
		8	730	13.30	19	21.61	155	6.50	8.45	1.2	1.1	25	1	82	.09	4	0.5	0.9	20	SF4
		8	958	49.22	19	22.59	155	24.67	12.71	1.8	1.5	44	7	40	.11	5	0.4	0.5	33	KAO
		8	1134	4.28	19	19.16	155	28.99	7.11	1.9	1.5	35	2	60	.12	8	0.4	1.1	28	KAO
		8	1726	33.95	21	33.09	154	56.29	27.30	3.5	3.8	43	8	328	.13	181	1.8	4.4	23	DIS
		8	1757	10.29	19	18.28	155	15.00	6.81	1.0	1.0	26	1	116	.11	4	0.5	1.1	18	SF1
		8	1819	10.02	19	28.48	155	26.61	4.93	2.2	1.3	43	5	46	.13	6	0.3	1.8	27	KAO
		8	1959	35.22	19	25.92	155	21.31	8.36	1.6	1.3	32	5	34	.13	3	0.4	0.7	23	KAO
		9	348	43.64	19	25.25	155	20.93	8.25	1.4	1.1	34	5	42	.12	4	0.4	0.7	25	KAO
		9	655	56.07	19	20.25	155	12.62	6.55		1.1	26	1	71	.13	4	0.5	0.9	23	SF2
		9	10 0	14.40	19	27.05	155	27.62	7.78	2.0	1.3	27	4	53	.11	5	0.4	1.1	21	KAO
		9	1530	1.43	19	13.35	155	39.71	8.01	2.8	3.1	29	0	232	.23	5	2.1	1.3	25	LSW
		9	17 2	49.66	19	12.61	155	27.68	8.35	2.0	1.7	27	0	204	.10	6	0.7	0.9	19	LSW
		9	1842	17.92	19	19.89	155	7.08	6.60	1.8	2.2	32	1	110	.11	5	0.5	1.1	25	SF4
		9	1857	22.66	19	45.47	156	4.75	8.95	2.7	2.7	25	0	296	.11	43	6.2	1.3	19	HUA
		9	19 6	5.44	19	46.55	156	8.07	17.37	2.7	2.2	21	1	306	.14	49	3.3	62.4	18	HUA
		9	1913	25.67	19	21.44	155	1.61	6.95	2.2	2.3	29	4	170	.11	4	0.5	0.6	22	SF5
		9	20 2	48.93	19	21.66	155	1.67	7.51	1.7	1.4	23	1	164	.10	4	0.6	0.6	12	SF5
		9	2220	8.62	19	18.27	155	23.41	8.05	1.4	1.3	27	3	92	.12	4	0.5	0.8	19	SWR
		10	054	53.40	19	19.38	155	12.14	6.04	1.3	1.1	14	0	92	.10	5	0.6	2.0	12	SF3
		10	156	51.35	19	19.29	155	11.91	5.56	1.3	1.3	17	1	98	.09	5	0.5	1.8	14	SF3
		10	650	25.76	19	18.76	155	13.94	5.62	1.5	1.6	21	0	96	.09	3	0.5	1.5	21	SF2
		10	1116	52.40	19	21.75	155	28.24	9.79	2.2	2.2	35	3	44	.11	8	0.4	0.7	30	KAO
		10	14 6	19.11	19	58.36	155	16.67	15.01	2.4	2.4	32	4	210	.10	11	0.9	0.6	25	KEA
		10	1745	42.30	20	18.22	156	50.44	29.64	2.9	2.7	35	4	321	.12	112	2.2	3.4	25	DIS
		10	1936	32.25	19	20.85	155	7.43	8.18	2.6	3.1	47	8	87	.10	5	0.3	0.5	37	SF4
		11	055	3.12	19	22.59	155	29.88	8.93	1.5	1.1	21	2	71	.07	10	0.4	1.5	16	KAO
		11	546	19.71	19	22.55	155	29.91	8.59	1.5	1.1	31	1	71	.09	10	0.4	1.3	20	KAO
		11	1653	43.67	19	19.09	155	16.16	6.74	1.5	1.5	35	5	110	.11	3	0.4	0.6	23	SF1
		11	2155	45.62	19	19.93	155	50.46	8.82	2.2	1.3	18	1	278	.11	21	2.3	1.0	15	KON
		11	2229	49.36	19	20.43	155	11.81	7.38	1.2	1.1	35	2	75	.11	5	0.5	0.7	25	SF3
		11	2239	41.24	19	23.38	155	20.71	9.14	1.3	1.1	27	5	55	.10	2	0.4	0.7	18	KAO
		11	2257	18.29	19	15.71	155	23.17	6.19	1.5	1.6	30	4	130	.12	3	0.4	1.0	24	SWR
		12	254	56.45	19	20.62	155	6.15	5.51	1.4	1.1	19	2	106	.12	5	0.5	1.3	8	SF4
		12	342	51.22	19	19.03	155	13.28	4.40	1.7	1.9	32	5	77	.11	4	0.4	1.5	23	SSF
		12	643	8.03	19	9.53	155	35.02	7.33	2.5	2.2	38	6	114	.15	11	0.5	1.0	30	LSW
		12	645	25.59	19	26.74	155	21.97	8.77	1.8	1.3	31	5	53	.11	3	0.4	0.7	22	KAO
		12	1233	8.17	19	55.92	155	37.86	12.68	2.6	1.8	29	5	133	.15	9	0.6	0.5	18	KOH
		12	1245	2.13	19	17.80	155	20.62	7.14	1.8	1.2	40	9	124	.12	4	0.3	0.6	26	SWR
		12	1315	40.27	19	19.47	155	11.98	7.56	1.3	1.3	32	3	91	.10	5	0.5	0.8	23	SF3
		12	1320	10.92	19	19.32	155	12.00	7.57	1.3	1.4	30	5	95	.09	5	0.4	0.6	19	SF3
		12	1434	45.11	19	38.53	156	7.01	38.33	2.5	1.6	20	7	245	.10	27	1.2	1.6	11	KON
		12	1517	56.29	19	22.31	155	28.76	10.37	1.5	1.2	26	3	64	.11	2	0.5	1.0	21	KAO

YEAR	MON	ORIGIN TIME DA	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
1984	JUL	12	1634	57.52	19	25.51	155	20.59	6.02	1.3	1.1	24	5	92	.10	4	0.4	1.0	17	KAO
		12	17 4	21.22	19	21.30	155	5.01	8.59	1.9	2.2	34	5	91	.10	4	0.5	0.5	26	SF5
		12	2158	16.38	19	21.72	155	27.96	9.87	2.2	2.0	45	4	45	.12	2	0.4	0.6	37	KAO
		12	22 9	22.98	19	21.80	155	27.88	8.97	1.8	1.3	39	5	40	.12	1	0.3	0.7	29	KAO
		13	041	53.40	19	25.68	155	21.71	8.11	1.5	1.0	34	5	37	.13	4	0.4	0.7	24	KAO
		13	045	1.28	19	20.26	155	20.91	29.37	1.9	1.7	43	6	71	.13	4	0.6	0.9	31	DEP
		13	337	48.48	19	24.38	155	29.23	9.21	1.9	1.7	40	3	33	.11	5	0.3	0.8	30	KAO
		13	5 3	41.95	19	22.11	155	28.75	9.38	2.6	2.7	50	6	37	.11	2	0.3	0.5	37	KAO
		13	645	45.14	19	19.30	155	15.13	7.46	2.2	2.4	42	4	86	.13	4	0.4	0.6	36	SF1
		14	149	33.86	19	30.37	155	28.93	4.11	1.8	1.3	35	5	46	.14	4	0.3	1.1	27	MLO
		14	612	48.81	19	20.72	155	11.84	8.29	1.8	2.3	45	8	71	.11	4	0.4	0.5	32	SF3
		14	2229	59.74	19	8.78	156	9.41	36.70	3.0	2.9	51	8	305	.08	33	1.2	1.4	43	KON
		14	2238	7.80	19	17.37	155	26.96	8.72	1.8	1.8	37	3	50	.15	7	0.4	0.9	28	LSW
		14	2348	47.81	19	37.54	155	21.58	12.50	1.6	1.3	24	3	69	.11	13	0.4	0.9	17	KEA
		15	2 4	40.87	19	24.76	155	0.99	7.10	1.7	1.7	38	4	121	.12	4	0.4	0.5	25	SF5
		15	353	7.39	19	16.38	154	55.17	34.75	2.3	1.6	42	3	241	.09	15	1.3	1.3	38	LER
		15	1023	30.80	19	19.38	155	15.32	8.57	2.3	2.4	43	3	88	.12	4	0.4	0.6	38	SF1
		15	1315	44.54	19	22.58	155	25.37	9.89	1.3	1.3	30	2	45	.13	4	0.5	0.9	24	KAO
		15	1210	1.27	19	23.77	155	0.61	8.43	2.5	2.8	43	4	154	.13	4	0.6	0.4	37	SF5 F
		15	2345	36.12	19	22.76	155	25.81	10.60	2.1	2.2	42	5	40	.12	3	0.4	0.6	29	KAO
		15	2348	2.35	19	21.91	155	1.52	7.78	2.0	1.7	34	2	163	.10	4	0.6	0.5	27	SF5
		16	2 8	12.95	19	15.03	155	19.61	34.98	1.8	2.2	19	0	183	.10	8	2.1	3.2	7	DEP L
		16	2 9	46.42	19	11.99	155	20.47	44.67	2.1	2.6	42	2	170	.10	8	0.8	1.4	31	DEP L
		16	733	18.62	19	20.49	155	12.98	6.44	1.2	1.2	27	2	65	.11	4	0.5	0.7	20	SF2
		16	1217	15.80	19	24.18	155	25.91	9.67	1.8	1.8	42	6	28	.13	2	0.4	0.7	34	KAO
		16	1235	52.01	19	25.19	155	19.83	3.59	1.7	1.9	37	6	46	.12	3	0.3	0.6	25	KAO
		16	1247	5.63	19	22.82	155	16.17	28.25	2.3	1.9	51	9	55	.11	1	0.5	0.7	39	DEP
		17	111	26.98	19	33.62	155	36.53	4.56	2.0	1.4	28	4	50	.16	8	0.4	6.9	13	MLO *
		17	213	59.83	19	28.13	155	25.33	7.30	2.1	1.3	41	6	44	.13	5	0.3	0.7	27	KAO
		17	249	12.92	19	23.57	155	20.62	11.28	1.8	1.8	40	5	43	.10	2	0.3	0.4	26	KAO
		17	257	10.43	19	23.32	155	20.88	9.93	1.9	2.0	38	5	41	.12	2	0.4	0.5	30	KAO
		17	842	33.48	19	22.51	155	20.97	7.87	1.6	1.1	12	1	71	.07	6	0.6	2.1	11	KAO
		17	13 0	36.19	19	25.62	155	19.97	1.74	1.2	1.0	19	5	113	.10	4	0.3	0.5	12	KAO
		17	1354	31.60	19	25.65	155	19.71	2.15	1.0	1.1	18	4	122	.10	4	0.3	0.5	11	KAO
		17	2015	17.20	19	21.39	155	2.81	5.84	1.3	1.1	22	2	132	.12	3	0.7	1.2	16	SF5
		17	2142	11.46	19	19.75	155	11.83	4.85	1.2	1.1	24	3	87	.14	6	0.5	2.0	18	SSF
		18	1331	10.96	19	40.09	155	3.84	4.48	2.1	2.8	19	0	227	.13	28	1.3	28.8	12	HIL B*
		18	1528	37.65	19	21.39	155	7.03	5.87	1.4	1.1	29	4	83	.11	4	0.5	1.1	23	SF4
		19	029	11.71	19	19.73	155	12.21	6.29	1.2	1.6	36	2	84	.12	5	0.4	0.8	22	SF3
		19	2 3	41.04	19	19.86	155	12.29	6.28	1.5	1.8	41	6	81	.12	5	0.4	0.7	24	SF3
		19	444	12.92	19	25.73	155	21.77	8.92	2.1	2.0	45	7	33	.13	4	0.3	0.5	36	KAO
		19	450	22.13	19	53.56	155	30.31	27.15	2.7	2.5	50	9	138	.11	13	0.6	1.1	39	KEA
		19	831	46.56	19	18.62	155	15.46	5.63	2.0	2.0	30	1	114	.12	4	0.4	1.1	29	SF1
		19	11 4	28.55	19	25.99	155	21.51	8.80	1.7	1.4	37	6	31	.12	3	0.4	0.6	24	KAO
		19	1451	51.36	19	20.78	155	8.19	8.01	1.2	1.1	21	3	90	.07	4	0.5	0.8	15	SF4

YEAR	MON	ORIGIN TIME DA	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
1984	JUL	19	1926	15.46	19	19.36	155	12.36	5.50	1.0	1.1	26	2	89	.12	5	0.5	1.5	23	SF2
		19	2314	26.69	19	20.68	155	13.10	7.36	1.2	1.1	26	2	64	.12	4	0.5	0.9	23	SF2
		20	520	0.48	19	20.37	155	12.29	7.50	1.9	1.8	44	7	73	.13	4	0.4	0.8	34	SF3
		20	847	47.93	20	2.98	155	43.69	7.41	3.6	3.9	47	4	144	.14	10	0.7	0.8	40	KOH F
		20	1719	42.04	19	25.77	154	56.16	5.47	1.5	0.9	23	2	177	.12	4	0.9	0.9	14	LER
		20	2343	52.27	19	27.18	155	5.44	37.01	1.9	1.6	46	7	51	.12	5	0.6	1.2	36	DEP
		20	2356	36.66	19	19.36	155	13.20	8.95	2.5	2.4	49	7	123	.13	6	0.4	0.5	41	SF2
		21	121	37.42	19	18.34	155	13.26	8.19	1.9	1.9	42	4	88	.11	2	0.4	0.5	33	SF2
		21	654	9.61	19	21.13	155	21.42	11.58	1.8	1.5	41	7	60	.09	4	0.4	0.5	26	SWR
		21	1149	29.94	19	22.31	155	28.20	5.87	1.4	1.1	26	1	42	.10	1	0.4	0.9	18	KAO
		21	1638	45.41	19	24.76	155	29.61	8.52	1.9	1.3	43	5	33	.12	5	0.3	0.8	30	KAO
		21	1821	45.23	19	22.39	155	29.83	8.42	1.6	1.1	34	3	40	.11	4	0.4	1.0	23	KAO
		21	1830	24.20	19	19.52	155	8.38	7.56	1.5	1.8	35	4	84	.10	4	0.4	0.6	29	SF4
		22	12 0	3.69	19	20.73	155	12.90	7.52	1.6	1.8	40	6	64	.13	4	0.4	0.5	23	SF2
		22	1246	58.15	19	22.44	155	30.12	8.32	1.6	1.1	31	3	74	.10	4	0.4	0.8	23	KAO
		22	1729	10.12	19	24.20	155	26.37	9.55	1.9	1.2	38	3	49	.12	3	0.4	0.7	33	KAO
		22	2219	0.80	19	19.57	155	11.88	5.92	1.6	1.6	35	4	91	.12	5	0.4	0.9	24	SF3
		23	017	33.80	19	29.14	155	27.11	5.28	2.3	2.1	40	6	58	.13	5	0.3	1.9	29	KAO
		23	114	4.94	19	21.44	155	14.92	8.21	1.2	1.1	23	3	64	.11	2	0.5	0.6	18	SF1
		23	13 3	15.33	19	10.83	155	32.68	7.21	2.2	2.2	35	5	104	.17	9	0.5	1.1	22	LSW
		23	1435	7.44	19	20.96	155	3.94	4.27	1.3	1.1	29	4	90	.17	3	0.7	1.5	17	SSF
		23	1621	38.97	19	22.49	155	29.17	10.13	1.9	1.7	37	3	39	.10	3	0.3	0.6	29	KAO
		23	1918	12.80	19	25.85	155	29.05	8.62	2.1	2.2	37	5	65	.11	7	0.4	0.9	31	KAO
		23	2037	22.40	19	26.67	155	29.85	9.32	2.4	2.4	47	6	60	.12	6	0.4	0.6	36	KAO
		23	2112	36.13	19	22.76	155	0.88	8.15	1.7	1.4	31	3	162	.17	6	1.0	0.7	24	SF5
		24	0 3	7.48	19	21.48	155	1.44	7.21	2.6	3.0	41	3	173	.12	4	0.6	0.4	36	SF5
		24	955	31.50	19	19.49	155	11.84	6.49	1.6	1.8	36	5	92	.12	5	0.4	0.8	30	SF3
		24	1247	6.16	19	26.65	155	28.76	8.93	2.0	1.5	33	5	66	.09	7	0.4	0.9	26	KAO
		24	1357	18.87	19	16.88	155	28.99	9.20	2.6	2.8	43	5	53	.15	4	0.4	0.6	33	LSW
		24	1815	59.93	19	23.02	155	1.51	6.38	1.4	1.1	27	1	149	.22	6	0.9	1.5	21	SF5
		24	2031	7.30	19	17.56	155	20.17	6.60	1.7	1.3	30	5	129	.12	3	0.4	0.7	23	SWR
		24	2121	46.72	19	7.87	155	28.32	33.00	2.1		19	0	253	.10	3	2.4	2.9	9	DLS L
		24	2221	8.18	19	19.90	155	13.04	5.88		1.1	23	1	71	.13	5	0.6	1.5	21	SF2
		24	2320	53.61	19	21.38	155	17.50	27.71	1.6	1.4	31	2	37	.09	2	0.8	1.2	28	DEP
		25	138	37.86	19	44.77	155	57.64	13.25	2.4	1.8	21	2	213	.11	14	1.6	0.6	16	HUA
		25	2 7	49.82	19	22.94	155	20.90	8.11	1.5	1.1	23	3	64	.10	3	0.4	0.9	16	KAO
		25	316	10.30	19	21.68	155	21.96	10.32	1.6	1.3	35	5	82	.13	4	0.4	0.4	26	SWR
		25	557	25.44	19	19.77	155	10.31	5.06	1.3	1.1	21	1	91	.12	4	0.6	2.0	16	SF3
		25	6 5	56.68	19	20.92	155	2.00	5.42	1.7	2.3	26	2	173	.15	2	0.9	1.1	21	SF5
		25	832	38.15	19	22.16	155	18.63	30.97	3.5	3.9	46	1	35	.11	3	0.6	1.0	44	DEP
		25	9 5	51.16	19	13.16	155	30.44	6.81	1.9	1.3	28	1	200	.13	4	0.7	1.2	19	LSW
		25	1326	47.16	19	18.86	155	15.30	6.55	1.2	1.3	27	1	106	.12	5	0.5	1.1	17	SF1
		25	1430	13.20	19	21.36	155	2.12	6.53	1.4	1.1	19	2	158	.14	3	0.7	1.2	15	SF5
		25	2035	5.56	19	19.68	155	11.05	7.45	1.3	1.3	25	1	93	.11	5	0.5	0.9	20	SF3
		26	123	21.11	19	28.24	155	53.74	7.18	2.3	2.0	26	2	137	.22	3	0.9	1.1	19	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
1984	JUL	26	152	58.22	19	19.57	155	11.58	6.25	2.0	2.1	48	7	94	.16	6	0.4	0.8	32	SF3
		26	321	42.11	19	20.03	155	9.83	5.85	1.3	1.1	23	2	83	.12	4	0.6	1.4	19	SF3
		26	5	6 35.75	19	20.46	155	13.23	7.26	1.6	2.0	37	1	63	.13	4	0.5	0.7	33	SF2
		26	545	11.12	19	21.11	155	7.38	8.27	3.3	3.9	48	5	172	.12	4	0.6	0.5	42	SF4
		26	732	18.70	19	29.67	155	27.60	4.61	2.0	1.5	32	5	62	.13	4	0.3	1.8	25	KAO
		26	846	14.92	19	22.78	155	1.88	8.01		1.2	33	3	145	.14	6	0.6	0.5	22	SF5
		26	1339	1.51	19	19.58	155	15.40	8.06	2.2	2.4	43	4	86	.12	4	0.4	0.6	32	SF1
		26	1348	14.58	19	25.84	155	19.52	5.34	1.9	1.5	25	4	105	.10	4	0.4	1.0	19	KAO
		26	1748	18.84	19	21.28	155	23.27	8.74	1.2	1.1	17	3	55	.08	2	0.5	1.1	13	SWR
		26	1830	37.54	19	19.27	155	10.90	5.42	1.3	1.2	29	1	104	.12	6	0.5	1.6	16	SF3
		26	1958	48.38	19	18.33	155	16.51	8.22	2.1	2.4	45	3	117	.12	4	0.4	0.6	38	SF1
		26	2011	57.26	19	26.70	155	31.30	11.32	2.2	1.7	43	9	35	.10	4	0.3	0.5	32	KAO
		27	2	0 43.39	19	20.75	155	2.44	7.31	2.5	2.9	40	6	160	.11	2	0.6	0.4	30	SF5
		27	318	22.16	19	46.85	156	2.69	8.36	1.8	1.4	17	1	233	.12	24	1.4	0.8	8	HUA
		27	558	8.86	19	22.80	155	26.69	9.56	1.4	1.1	35	4	88	.12	2	0.4	0.6	23	KAO
		27	716	24.48	19	21.53	155	28.53	9.27	2.1	2.4	49	5	39	.11	2	0.3	0.5	36	KAO
		27	1510	2.42	19	13.96	155	35.30	7.05	2.3	2.1	46	7	81	.18	4	0.5	1.0	28	LSW
		27	1622	19.44	19	29.17	155	26.39	5.34	2.2	2.2	44	7	57	.13	6	0.3	1.3	27	KAO
		27	2354	14.91	19	17.89	155	48.94	10.97	2.5	1.8	35	3	118	.13	7	0.6	0.3	27	KON
		28	4	7 36.30	19	18.55	155	13.44	5.45	1.2	1.3	26	2	83	.10	3	0.5	1.0	20	SF2
		28	430	29.08	19	25.76	155	21.47	4.32	1.4	1.5	29	5	47	.11	4	0.3	1.2	20	KAO
		28	9	2 28.97	19	20.11	155	11.36	8.42	2.1	2.4	42	8	83	.11	4	0.4	0.5	28	SF3
		28	2117	1.65	19	23.73	155	15.83	3.01	1.6	2.1	26	4	78	.11	1	0.3	0.3	14	SEC
		29	259	44.41	19	19.33	155	12.40	3.55	1.2	1.1	24	1	89	.15	5	0.5	1.5	17	SSF
		29	321	10.67	19	23.90	155	15.88	2.63	1.3	1.7	20	3	106	.11	1	0.4	0.3	16	SEC
		29	457	46.47	19	12.12	155	37.94	7.93	2.9	2.9	51	8	97	.21	5	0.5	0.9	38	LSW
		29	624	30.57	19	25.98	155	19.73	6.37	1.5	1.6	24	5	133	.11	3	0.5	1.0	15	KAO
		29	10	6 42.54	19	12.41	155	42.53	1.99	2.7	2.4	37	2	123	.22	11	0.9	2.2	32	LSW
		29	1028	50.09	19	21.69	155	2.18	6.64	1.9	1.9	36	5	151	.15	4	0.5	0.7	19	SF5
		29	2211	31.74	19	26.11	154	54.76	8.81	2.6	3.2	44	4	187	.14	3	1.0	0.4	35	LER
		30	310	40.13	19	21.59	155	3.03	7.16	1.6	1.3	34	3	122	.14	3	0.5	0.8	28	SF5
		30	1040	59.76	19	19.53	155	11.45	7.20	1.3		26	0	95	.08	5	0.5	1.1	20	SF3
		31	523	52.44	19	27.76	155	29.13	7.54	1.5	1.1	33	5	51	.13	8	0.4	1.1	25	KAO
		31	1220	34.25	19	24.08	155	21.86	8.83	1.4	1.2	30	4	47	.12	4	0.5	0.8	19	KAO
		31	13	5 37.87	19	18.85	155	13.52	9.20	2.5	2.8	48	5	79	.11	3	0.4	0.4	40	SF2
		31	1459	39.56	19	26.30	155	28.86	9.05	1.9	1.6	34	5	40	.09	7	0.3	0.9	25	KAO
	AUG	1	317	4.68	19	22.07	155	26.29	9.96	2.0	1.4	38	4	44	.12	2	0.4	0.6	26	KAO
		1	1211	35.41	19	19.95	155	12.10	7.20	1.2	1.3	29	2	81	.12	5	0.5	0.8	23	SF3
		1	14	1 21.16	19	24.30	155	26.43	9.49	1.8	1.8	39	5	40	.14	3	0.4	0.7	30	KAO
		1	2025	23.75	19	18.34	155	13.93	4.06	1.2	1.3	28	0	87	.13	3	0.4	1.2	20	SSF
		2	431	37.63	19	22.35	154	59.65	7.87	2.7	2.9	44	6	184	.12	5	0.7	0.5	36	LER
		2	9	6 20.78	19	22.94	155	27.08	9.11	1.0	2.1	40	3	34	.12	1	0.4	0.7	32	KAO
		2	1225	47.85	19	20.01	155	13.32	7.62	1.2	1.1	22	1	66	.10	5	0.6	0.9	18	SF2
		3	343	11.93	19	27.33	155	25.22	11.57	2.3	2.4	45	7	42	.13	4	0.3	0.5	31	KAO
		3	5	8 39.32	19	19.56	155	15.46	9.15	3.1	3.6	40	4	86	.12	5	0.4	0.5	35	SF1

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
1984	AUG	3	630	4.79	19	19.05	155	9.80	7.60	1.7	1.9	34	3	106	.08	5	0.4	0.7	24	SF3
		3	844	12.83	19	22.71	155	1.60	0.86	1.7	1.4	25	2	189	.14	6	0.7	0.9	16	SSF
		3	1211	32.44	19	18.77	155	15.03	6.92	1.8	1.8	38	3	94	.11	4	0.4	0.7	28	SF1
		3	14	4 33.55	19	25.08	155	19.52	4.75	1.3	1.1	20	2	93	.09	3	0.4	0.9	17	KAO
		3	1547	40.02	19	19.70	155	10.93	7.13	1.3	1.3	29	1	93	.10	5	0.6	0.9	24	SF3
		3	1918	56.17	19	22.39	155	3.27	7.02	1.6	1.7	31	3	115	.15	4	0.6	0.9	22	SF5
		3	2125	28.95	19	19.26	155	13.33	6.59	1.5	1.9	42	2	74	.13	4	0.4	0.8	38	SF2
		3	2149	14.96	19	20.84	155	21.58	9.90	1.9	1.8	40	6	65	.10	3	0.3	0.5	30	SWR
		3	2243	0.39	19	20.95	155	21.61	8.24	1.6	1.3	38	6	63	.12	3	0.4	0.6	24	SWR
		3	2334	32.44	19	20.92	155	21.57	9.11	1.7	1.6	36	6	64	.09	3	0.4	0.6	22	SWR
		3	2338	39.27	19	20.56	155	12.85	7.98	1.2	1.1	30	2	66	.10	4	0.5	0.8	25	SF2
		4	329	27.39	19	23.39	155	0.28	7.66	1.7	1.4	23	2	162	.10	4	0.6	0.7	13	SF5
		4	352	56.08	19	21.34	155	1.80	7.70	1.7	1.5	25	4	168	.09	3	0.6	0.8	15	SF5
		4	559	58.74	19	24.75	155	21.71	11.17	1.7	1.8	44	4	43	.11	4	0.3	0.4	31	KAO
		4	6	0 34.39	19	24.63	155	21.92	12.91	1.8	1.6	15	1	61	.04	6	0.8	1.5	14	KAO
		4	15	5 59.18	19	22.06	155	4.41	7.43	1.6	1.3	29	2	86	.15	5	0.6	0.9	18	SF5
		4	1535	45.80	19	26.49	155	31.34	11.22	2.4	2.1	40	8	42	.11	7	0.4	0.5	27	KAO
		4	1912	29.55	19	19.27	155	11.47	6.15	1.3	1.3	29	0	101	.11	5	0.5	1.0	24	SF3
		4	1933	55.79	19	22.84	155	26.15	9.85	2.1	2.0	43	5	40	.11	3	0.3	0.5	32	KAO
		4	2021	29.79	19	15.74	155	4.03	45.51	2.1	1.6	41	3	225	.10	8	1.2	1.3	31	DEP
		5	343	25.81	19	23.82	155	26.99	10.36	2.0	1.8	41	4	36	.12	3	0.4	0.6	32	KAO
		5	1047	57.26	19	18.74	155	15.36	5.04	1.2	1.1	26	1	109	.11	4	0.4	1.3	21	SF1
		5	12	6 30.00	19	30.90	155	54.88	11.81	2.8	2.7	33	4	195	.17	3	0.9	0.5	19	KON
		5	1533	12.14	19	18.43	155	13.07	6.76	1.6	1.6	8	0	142	.08	3	1.0	2.5	3	SF2
		6	036	15.78	19	20.86	155	12.47	7.46	2.0	2.5	42	2	65	.14	3	0.5	0.6	36	SF2
		6	622	25.24	19	22.04	155	5.62	8.02	1.9	2.2	36	6	77	.10	4	0.4	0.6	20	SF4
		6	14	5 2.41	19	23.10	155	26.81	10.39	2.5	2.5	49	5	39	.12	2	0.3	0.4	42	KAO
		6	1610	22.29	19	30.72	155	16.27	7.35	1.8	1.3	33	3	60	.12	10	0.4	1.4	25	GLN
		6	1735	55.53	19	17.44	155	27.80	8.05	1.6	1.7	31	2	50	.18	6	0.5	1.1	25	LSW
		6	1926	22.51	19	25.81	155	21.79	8.37	1.5	1.1	33	5	51	.11	4	0.4	0.7	23	KAO
		6	20	9 34.91	19	16.52	155	22.42	3.87	1.4	1.4	24	3	129	.11	5	0.4	1.6	20	SWR
		6	2046	17.89	19	20.00	155	11.59	7.08	1.6	1.6	39	5	84	.12	5	0.4	0.7	27	SF3
		7	144	20.55	19	20.13	155	12.69	8.47	1.3	1.1	19	1	73	.04	5	0.5	0.9	17	SF2
		7	4	0 33.07	19	23.53	155	27.38	9.27	1.6	1.3	32	3	33	.10	2	0.4	0.6	24	KAO
		7	927	29.86	19	11.91	155	30.98	38.71	1.9	1.6	33	2	85	.07	6	0.8	1.5	31	DLS
		7	941	46.55	19	19.29	155	15.32	8.77	2.3	2.8	44	3	126	.12	4	0.5	0.5	35	SF1
		7	1437	4.33	19	42.40	155	1.48	0.05	2.4	3.1	27	0	203	.15	1	1.3	0.8	14	HIL B*
		7	1733	8.92	19	20.67	155	10.77	7.08	1.8	2.0	42	6	74	.13	3	0.4	0.7	35	SF3
		7	2315	45.19	19	20.18	155	13.20	5.93	1.2	1.1	23	1	66	.11	5	0.5	1.1	20	SF2
		8	1	9 25.87	19	18.54	155	13.49	7.16	1.3	1.1	28	2	86	.09	3	0.5	0.7	21	SF2
		8	332	17.13	19	20.23	155	11.67	7.86	1.9	2.0	44	7	79	.13	5	0.4	0.6	31	SF3
		8	711	37.32	19	23.20	155	1.82	8.16	1.9	2.0	39	4	141	.15	5	0.6	0.5	26	SF5
		8	734	5.92	19	24.94	155	19.60	5.97	2.3	2.4	44	6	37	.11	2	0.3	0.7	31	KAO
		8	9	0 26.10	20	5.45	155	34.04	43.15	2.6	2.1	41	5	206	.10	23	0.8	0.9	33	KOH
		8	930	55.77	20	0.97	155	33.01	10.21	2.5	2.5	27	3	184	.19	21	1.1	0.7	12	KEA

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
1984	AUG	8	10 0	53.61	19	20.14	155	13.00	5.55	1.2	1.1	24	2	68	.10	5	0.4	1.2	19	SF2
		8	1146	1.38	19	18.49	155	15.00	6.24	1.7	2.2	39	0	100	.11	4	0.4	0.8	35	SF1
		8	1150	56.11	19	22.36	155	5.98	7.82	2.0	2.3	44	7	71	.10	3	0.3	0.5	34	SF4
		8	18 6	28.47	19	23.98	155	25.82	8.42	2.6	3.0	50	6	25	.15	3	0.3	0.7	38	KAO
		9	035	52.99	19	24.89	155	15.89	15.40	2.1	2.5	44	7	90	.09	2	0.5	0.3	36	DEP
		9	042	3.98	19	25.51	155	28.97	10.10	1.7	1.2	28	3	61	.12	6	0.4	0.9	21	KAO
		9	536	9.03	19	22.33	155	28.58	9.29	1.5	1.3	28	2	63	.11	2	0.4	0.8	23	KAO
		9	2016	40.06	19	29.77	155	15.50	7.62	1.5	1.4	35	5	109	.13	9	0.5	1.2	24	GLN
		10	417	36.16	19	30.35	155	47.69	9.24	2.7	2.8	39	5	86	.12	3	0.4	0.5	28	KON
		10	9 5	33.24	19	20.23	155	12.82	5.50	1.2	1.3	25	1	69	.12	4	0.5	1.1	20	SF2
		10	11 6	34.29	19	21.29	155	23.65	8.04	1.7	1.3	33	4	48	.12	2	0.4	0.6	25	SWR
		10	1329	13.58	19	21.40	155	5.72	6.64	1.4	1.3	33	2	89	.12	4	0.5	0.9	25	SF4
		10	2053	15.07	19	29.55	155	12.60	10.49	2.4	2.7	51	11	46	.12	10	0.3	0.7	35	GLN
		10	2145	45.26	19	6.65	156	10.73	30.61	2.9	3.1	50	5	276	.10	37	2.1	1.5	46	KON
		11	126	45.21	19	20.04	155	11.58	6.86	1.9	2.3	42	5	83	.13	5	0.5	0.7	35	SF3
		11	345	0.56	19	23.61	155	27.47	9.57	1.8	2.0	44	5	30	.13	2	0.3	0.6	37	KAO
		11	1018	11.98	19	56.71	155	16.35	14.32	2.3	2.3	32	3	205	.10	10	1.0	0.4	24	KEA
		11	1210	19.60	19	11.59	155	38.05	9.30	2.4	2.5	44	6	101	.20	6	0.5	0.8	32	LSW
		11	1313	22.32	19	3.39	156	15.23	33.44	2.3	2.6	36	1	285	.10	47	2.9	2.4	33	KON
		11	14 2	20.37	19	19.15	155	12.04	6.49	1.8	2.2	43	6	99	.12	5	0.4	0.7	33	SF3
		11	2041	40.17	19	20.18	155	13.11	7.32	1.9	2.2	49	8	66	.12	5	0.4	0.6	36	SF2
		11	2043	6.05	19	20.00	155	13.20	7.54	1.2	1.1	23	1	67	.07	5	0.5	0.9	16	SF2
		11	2052	42.19	19	19.73	155	13.06	6.65	1.2	1.1	26	1	72	.12	5	0.5	1.0	19	SF2
		11	2150	56.07	19	19.85	155	12.13	7.06	1.3	1.1	29	2	83	.10	5	0.5	0.7	22	SF3
		11	2316	0.47	19	20.43	155	12.81	8.30	1.2	1.1	27	2	68	.09	4	0.4	0.6	20	SF2
		11	2329	30.15	19	27.49	155	29.36	9.65	3.0	3.1	55	9	36	.12	8	0.3	0.5	46	KAO
		12	929	37.24	19	26.86	155	23.58	6.31	1.6	1.1	36	5	47	.13	4	0.3	0.9	27	KAO
		12	1318	34.40	19	20.93	155	13.42	7.29	1.8	1.5	43	5	57	.13	3	0.4	0.6	34	SF2
		12	1412	21.81	19	19.82	155	12.10	7.12	1.4	1.1	30	1	83	.12	5	0.5	0.8	22	SF3
		12	15 5	28.42	19	20.68	155	21.77	10.96	1.7	1.3	34	7	67	.11	3	0.4	0.5	21	SWR
		12	1513	49.98	19	15.28	155	22.47	6.35	1.2	1.5	23	2	175	.10	3	0.6	1.0	15	SWR
		12	1611	7.49	19	19.12	155	10.98	6.22	1.3	1.2	34	3	108	.14	6	0.5	0.8	22	SF3
		12	1957	46.11	19	20.31	155	12.52	6.99	1.3	1.5	33	1	72	.12	4	0.4	0.7	24	SF2
		13	151	57.63	19	27.78	155	18.96	10.66	1.4	1.2	22	2	83	.13	3	0.7	1.0	17	INT
		13	239	4.95	19	26.56	155	28.25	8.99	1.4	1.2	24	3	79	.10	6	0.5	1.1	18	KAO
		13	346	50.76	19	26.64	155	28.55	7.19	1.4	1.1	35	6	68	.12	7	0.4	1.0	27	KAO
		13	818	15.49	19	26.90	155	28.94	6.90	1.5	1.1	30	4	49	.11	7	0.4	1.2	24	KAO
		13	12 6	1.97	19	17.81	155	13.96	7.87	1.3	1.1	24	0	125	.08	2	0.5	0.7	17	SF2
		13	1436	23.40	19	23.27	155	27.57	9.26	1.4	1.1	34	4	56	.11	1	0.4	0.7	28	KAO
		13	22 3	24.76	19	14.74	155	33.06	6.31	2.0	1.3	39	3	181	.19	5	0.7	1.3	21	LSW
		14	050	2.35	19	23.06	155	2.21	6.86	2.0	2.0	34	3	136	.14	5	0.6	0.9	26	SF5
		14	724	43.46	19	25.94	155	21.59	9.19	1.8	1.7	40	6	32	.12	3	0.4	0.6	32	KAO
		14	1010	2.12	19	47.13	154	54.77	47.71	3.7	4.3	54	10	233	.10	20	0.8	1.1	43	KEA F
		14	1651	31.68	19	16.91	155	29.23	8.87	2.2	2.2	41	5	53	.16	4	0.4	0.8	31	LSW
		14	2241	32.33	19	20.75	155	13.15	8.14	1.2	1.1	25	1	61	.09	3	0.5	0.8	18	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
1984	AUG	15	048	20.42	19	20.33	155	13.03	7.09	1.5	1.5	24	1	66	.10	4	0.5	0.9	21	SF2
		15	230	11.00	19	25.36	155	23.88	5.65	1.6	1.1	23	3	65	.11	2	0.4	1.2	17	KAO
		15	420	55.20	19	21.46	155	23.10	9.35	1.5	1.3	26	4	82	.10	2	0.4	0.6	21	SWR
		15	731	38.70	19	24.95	155	19.15	5.68	2.6	2.9	41	5	37	.12	3	0.3	0.8	36	KAO
		15	930	49.11	19	19.88	155	12.44	6.99	1.4	1.8	37	6	79	.12	5	0.4	0.7	28	SF2
		15	2352	33.87	19	28.73	155	25.59	0.45	1.9	1.6	27	4	82	.14	5	0.3	0.5	17	KAO
		16	923	56.04	19	27.59	155	28.57	9.07	1.5	1.2	30	5	67	.09	7	0.4	1.0	22	KAO
		16	927	28.47	19	19.46	155	11.35	5.49	1.3	1.1	29	3	97	.13	6	0.5	1.2	18	SF3
		16	1216	43.66	19	23.72	155	30.12	8.84	1.5	1.1	35	4	71	.10	5	0.4	0.8	26	KAO
		16	1421	51.48	19	19.25	155	10.24	7.92	1.4	1.4	37	6	103	.10	5	0.4	0.6	23	SF3
		16	1514	26.16	19	27.74	155	23.90	8.29	1.9	1.3	44	5	35	.12	4	0.3	0.6	33	KAO
		16	1834	30.95	19	26.61	155	30.16	8.41	1.9	1.2	39	5	40	.13	9	0.4	1.0	24	KAO
		16	2038	38.52	19	48.24	155	46.88	17.47	1.8	1.5	20	3	219	.13	14	1.0	2.5	12	HUA
		16	2159	24.00	19	19.58	155	10.99	6.61	1.7	1.6	40	4	96	.11	5	0.5	0.8	31	SF3
		16	2234	48.01	19	23.09	155	25.22	10.81	1.3	1.1	30	2	44	.10	4	0.4	0.8	23	KAO
		17	741	11.58	19	25.31	155	28.58	9.67	1.5	1.2	36	5	59	.09	5	0.3	0.7	25	KAO
		17	857	17.68	19	22.17	155	1.65	7.88	1.8	1.8	28	3	156	.10	5	0.6	0.4	21	SF5
		17	959	43.87	19	11.45	155	27.26	7.33	2.2	2.0	35	3	125	.16	4	0.6	1.0	29	LSW
		17	1014	56.38	19	11.62	155	27.38	7.13	2.0	1.5	34	2	121	.15	4	0.6	1.0	28	LSW
		17	1026	34.44	19	11.77	155	27.15	5.40	1.7	1.1	26	0	125	.15	4	0.7	2.4	16	LSW
		17	1040	12.02	19	22.61	155	17.06	30.20	1.9	1.5	45	6	40	.11	1	0.6	0.9	33	DEP
		17	2234	9.69	19	19.08	155	13.49	6.74	1.2	1.1	23	1	71	.09	4	0.4	1.0	16	SF2
		18	010	52.36	19	21.65	155	4.84	7.61	2.8	3.3	48	5	82	.12	5	0.4	0.5	36	SF5
		18	130	37.38	19	20.21	155	12.42	7.14	2.0	2.4	42	3	74	.14	5	0.4	0.6	36	SF2
		18	250	57.74	19	20.31	155	7.37	4.83	1.1	1.0	19	0	96	.14	5	0.6	2.3	18	SSF
		18	4 7	49.02	19	5.40	156	11.65	34.18	2.6	2.3	42	3	278	.09	39	2.0	1.4	36	KON
		18	648	42.46	19	20.99	156	14.96	33.26	2.1	1.7	20	1	286	.11	38	3.8	2.4	18	KON
		18	7 7	13.09	19	24.74	155	19.67	5.92	1.2	1.1	27	6	89	.09	2	0.4	0.9	19	KAO
		18	722	52.48	19	20.06	155	11.77	6.48	1.2	1.2	40	6	82	.12	5	0.4	0.7	26	SF3
		18	8 7	21.21	19	27.17	155	29.50	10.55	2.2	2.0	51	7	41	.11	7	0.3	0.5	37	KAO
		18	855	13.64	19	21.68	155	26.45	10.26	2.3	2.5	46	5	46	.12	3	0.4	0.5	37	KAO
		18	952	19.20	19	19.49	155	30.66	7.69	1.6	1.2	33	3	61	.12	8	0.3	1.0	23	KAO
		18	1522	15.57	19	18.81	155	13.69	7.88	1.3	1.0	21	2	88	.08	3	0.5	0.9	15	SF2
		18	1729	0.62	19	25.66	154	57.52	6.30	1.8	1.6	28	2	166	.15	2	0.8	0.6	22	LER
		18	1941	43.76	19	19.24	155	12.83	6.56	1.2	1.1	37	3	84	.13	4	0.5	0.8	24	SF2
		18	2213	39.72	19	22.22	155	28.15	9.61	1.6	1.3	39	4	38	.11	1	0.4	0.6	31	KAO
		18	2342	47.29	19	26.91	154	55.99	5.83	1.9	1.2	23	0	166	.14	2	1.0	1.0	15	LER
		19	238	27.98	19	24.99	155	19.40	5.05	1.6	1.1	23	5	94	.11	2	0.5	0.9	14	KAO
		19	450	16.82	19	32.08	155	57.05	11.82	2.7	2.4	37	4	230	.13	6	1.1	0.4	26	KON
		19	624	41.92	19	22.10	155	16.94	30.45	1.8	1.2	37	4	46	.10	2	0.8	1.2	31	DEP
		19	7 7	15.91	19	16.86	155	23.49	42.98	2.0	1.6	49	6	104	.12	5	0.7	1.1	38	DEP
		19	1248	45.20	19	25.06	155	19.41	5.87	1.6	1.4	32	6	80	.10	3	0.4	0.8	24	KAO
		20	250	3.53	19	25.87	155	21.48	10.53	2.6	2.4	45	4	38	.11	4	0.3	0.5	39	KAO
		20	3 6	5.92	19	18.84	155	12.88	5.42	1.3	1.1	32	2	90	.13	4	0.4	0.9	22	SF2
		20	6 7	16.53	19	23.95	155	26.60	10.57	1.4	1.1	28	4	45	.10	3	0.4	0.7	22	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
1984	AUG	20	653	40.14	19	17.81	155	12.86	6.76	1.7	1.1	32	2	122	.13	2	0.5	1.0	25	SF2
		20	1133	50.28	19	19.13	155	8.21	7.37	1.5	1.7	36	5	116	.13	3	0.5	1.0	18	SF4
		20	1146	51.97	19	18.74	155	13.22	9.10	1.8	1.8	40	5	132	.12	7	0.4	0.5	32	SF2
		20	1155	4.37	19	21.29	155	12.79	8.12	1.8	2.0	42	3	157	.13	3	0.5	0.4	35	SF2
		21	034	29.58	19	27.27	155	29.79	7.62	1.6	1.3	26	3	88	.13	9	0.4	1.6	21	KAO
		21	253	32.59	19	19.28	155	15.56	5.07	1.1	1.3	23	2	101	.12	6	0.4	1.8	21	SF1
		21	5	3 40.80	19	12.64	155	5.89	49.54	2.3	2.1	34	1	237	.09	9	2.0	2.3	32	DEP
		21	621	39.83	19	21.32	155	28.17	8.44		1.1	18	0	68	.13	2	0.6	1.0	13	KAO
		21	1246	44.30	19	18.88	155	15.30	6.39	1.2	1.3	30	0	106	.10	4	0.5	1.0	22	SF1
		21	21 7	10.31	19	19.38	155	13.92	6.61		1.1	17	0	84	.07	4	0.5	1.1	15	SF2
		22	146	2.91	19	20.18	155	12.87	6.97		1.1	14	0	70	.09	5	0.6	1.3	9	SF2
		22	358	50.41	19	24.69	155	19.49	4.85	1.9	2.0	23	1	46	.11	4	0.4	1.1	18	KAO
		22	820	29.59	19	20.61	155	13.65	8.18	2.4	2.8	33	2	61	.09	4	0.4	0.6	31	SF2
		22	859	56.27	19	15.38	155	13.71	6.79	1.5	1.5	17	0	201	.14	3	1.0	1.0	13	SF2
		22	915	25.58	19	22.95	155	27.51	8.61	2.4	2.2	31	1	70	.14	1	0.5	0.8	15	KAO
		22	1530	52.36	19	28.77	155	15.97	10.20	1.7	1.4	16	1	91	.08	7	0.5	1.4	14	GLN
		22	1823	46.68	19	19.06	155	15.42	7.21	1.6	1.5	18	0	114	.06	4	0.4	0.6	15	SF1
		23	316	49.50	19	27.04	155	28.11	8.22	1.9	1.5	27	1	50	.08	8	0.3	1.1	17	KAO
		23	1323	7.73	19	17.90	155	21.77	7.34	1.3	1.3	25	3	115	.11	5	0.4	0.9	16	SWR
		23	1522	36.43	19	25.28	155	20.58	6.14	1.9	1.5	34	5	42	.14	3	0.4	1.0	26	KAO
		23	1831	33.69	19	10.47	155	24.01	48.81	2.9	3.0	47	5	168	.09	7	0.9	1.2	40	DEP
		23	1952	13.03	19	19.43	155	12.00	7.64	1.1	1.1	17	1	93	.05	5	0.6	1.3	14	SF3
		24	028	32.72	19	22.18	155	2.67	7.28	2.8	3.2	41	6	132	.12	4	0.5	0.6	32	SF5
		24	156	29.60	19	19.72	155	12.71	7.69	1.2	1.3	24	1	78	.09	5	0.5	0.8	17	SF2
		24	345	39.61	19	20.81	155	7.68	7.47	1.9	2.1	42	8	84	.11	4	0.4	0.6	32	SF4
		24	634	41.83	19	17.69	155	12.99	5.26	1.3	1.3	20	3	122	.07	1	0.5	0.9	19	SF2
		24	1019	19.00	19	20.18	155	24.42	13.25	1.9	1.8	36	4	65	.09	2	0.4	0.3	27	DEP
		24	1057	46.59	19	22.66	155	20.77	10.59	1.8	1.7	34	6	69	.09	3	0.4	0.5	26	KAO
		24	1416	43.58	19	23.22	154	58.15	8.26	2.1	2.1	31	3	188	.17	4	1.2	0.6	22	LER
		24	1448	36.21	19	17.45	155	14.65	5.48	1.4	1.8	32	3	151	.12	2	0.5	0.9	23	SF1
		24	1544	24.23	19	21.26	155	2.74	7.03	1.7	1.7	23	1	136	.16	3	1.1	1.3	15	SF5
		24	1559	55.96	19	20.40	155	9.56	8.08	1.4	1.1	24	3	75	.06	3	0.5	1.0	15	SF3
		24	1912	36.82	19	19.45	155	12.32	8.67	1.3	1.5	20	2	88	.06	5	0.6	1.1	14	SF2
		25	320	1.97	19	22.87	155	26.65	10.62	1.8	1.8	33	2	45	.10	2	0.4	0.6	27	KAO
		25	457	5.01	19	23.75	155	27.11	11.40	2.4	2.6	48	5	37	.13	3	0.3	0.4	36	KAO
		25	946	37.37	19	5.27	155	19.75	23.59	2.7	2.7	39	4	243	.09	18	1.2	1.7	35	LOI
		25	1120	1.92	19	20.11	155	24.55	13.00	2.7	2.8	49	8	65	.11	2	0.4	0.3	40	SWR
		25	12 8	12.16	19	22.74	155	26.73	9.99	2.3	2.1	40	5	40	.13	2	0.4	0.6	32	KAO
		25	1238	33.44	19	20.78	155	12.60	8.25	2.1	2.5	43	5	66	.11	4	0.4	0.5	33	SF2
		25	1653	14.79	19	19.69	155	12.96	6.17	1.2	1.1	22	1	75	.09	5	0.5	1.2	16	SF2
		26	441	22.21	19	23.91	155	15.41	3.77	1.1	1.4	14	3	107	.12	2	0.5	0.6	10	SEC
		26	1731	20.86	19	23.42	155	20.72	9.50	1.6	1.3	32	5	56	.10	2	0.4	0.6	19	KAO
		26	19 7	22.99	19	25.52	155	30.31	8.57	1.8	1.5	31	3	67	.13	7	0.5	1.0	24	KAO
		26	1936	43.11	19	19.09	155	10.11	6.17	1.4	1.5	31	4	108	.14	5	0.5	1.1	24	SF3
		26	2148	14.52	19	24.78	155	29.20	9.99	1.5	1.2	30	3	63	.08	5	0.4	0.8	20	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
1984	AUG	27	558	37.89	19	17.86	155	21.19	5.61	1.3	1.1	12	1	122	.10	5	0.6	1.6	7	SWR
		27	1358	3.42	19	40.92	155	2.30	0.13	2.2	2.4	27	0	188	.19	20	1.0	3.6	20	HIL B*
		27	1544	21.94	19	19.33	155	10.99	4.05	1.3	1.3	35	5	102	.21	5	0.6	2.3	18	SSF
		28	154	35.55	19	19.36	155	12.82	6.69	1.4	2.0	35	1	82	.11	4	0.4	0.8	27	SF2
		28	520	57.54	19	25.11	155	15.57	35.06	1.9	2.4	20	0	92	.10	2	1.0	2.8	7	DEP L
		28	728	48.88	19	12.34	155	36.46	9.62	3.2	3.3	46	5	114	.20	5	0.7	0.8	36	LSW
		28	1114	52.34	19	19.60	155	11.57	7.37	1.5	1.5	36	4	92	.11	5	0.4	0.7	28	SF3
		28	1251	40.43	19	24.93	155	19.47	5.04	1.4	1.1	30	5	46	.11	2	0.3	0.8	20	KAO
		28	1539	55.73	19	20.35	155	11.68	7.45	2.2	2.6	48	7	77	.13	5	0.4	0.6	39	SF3
		28	1643	43.25	19	26.76	155	22.03	8.70	2.0	1.3	36	7	54	.11	3	0.4	0.7	25	KAO
		28	2115	0.35	19	23.90	155	30.90	8.90	1.8	1.2	34	2	49	.10	6	0.4	0.8	27	KAO
		28	2230	14.33	19	23.41	155	20.91	9.72	1.6	2.0	38	5	55	.12	2	0.4	0.5	27	KAO
		28	2327	25.56	19	22.31	155	5.56	7.78	2.0	2.1	41	9	71	.13	3	0.4	0.5	28	SF4
		28	2346	8.15	19	14.21	156	5.56	27.13	2.5	1.6	17	0	329	.11	47	28.1	5.9	15	KOH *
		28	2348	55.51	19	20.51	155	6.68	8.17	1.7	2.0	31	4	102	.09	6	0.4	0.7	21	SF4
		29	0 0	12.63	19	25.15	155	19.26	5.73	1.7	1.5	24	3	109	.09	3	0.4	1.0	18	KAO
		29	4 1	41.14	19	19.03	155	11.51	4.07	1.5	1.4	32	4	107	.11	5	0.4	1.6	22	SSF
		29	5 7	58.53	19	23.11	155	30.14	7.81	1.5	1.1	27	1	73	.11	5	0.5	1.0	21	KAO
		29	618	15.36	19	23.86	155	25.80	7.10	1.6	1.3	28	3	47	.11	3	0.4	0.9	23	KAO
		29	8 5	39.26	19	21.81	155	4.63	7.40	2.0	2.4	38	2	80	.14	5	0.5	0.7	32	SF5
		29	1245	34.36	19	23.37	155	28.01	9.76	1.8	1.3	33	3	59	.11	2	0.4	0.6	27	KAO
		29	1632	25.92	19	19.70	155	7.38	8.18	2.2	2.7	47	8	107	.11	4	0.4	0.6	34	SF4
		29	1641	41.55	19	28.17	155	27.01	2.54	2.2	1.5	39	4	47	.12	6	0.3	1.0	28	KAO
		29	20 6	53.37	19	21.13	155	2.61	5.24	1.4	1.1	27	3	148	.15	2	0.6	1.3	19	SF5
		29	2025	50.45	19	25.72	155	29.37	8.59	1.7	1.1	34	3	62	.11	7	0.4	0.9	24	KAO
		29	2324	22.35	19	20.50	155	12.91	7.19	1.4	1.5	34	3	66	.15	4	0.5	0.8	23	SF2
		30	142	46.78	19	23.75	155	27.19	9.73	1.8	1.8	40	4	62	.12	2	0.4	0.6	32	KAO
		30	624	39.83	18	58.89	155	12.45	43.09	2.4	2.1	51	6	262	.09	33	1.1	1.1	41	LOI
		30	847	40.23	19	21.80	155	5.30	6.78	1.2	1.1	23	1	80	.14	4	0.5	1.1	9	SF4
		30	1546	34.82	19	21.36	155	6.27	7.44	1.4	1.1	29	3	88	.13	4	0.5	0.7	15	SF4
		30	1827	47.10	19	21.75	155	28.54	5.62	1.8	1.3	30	3	43	.12	2	0.4	0.9	23	KAO
		30	20 1	32.42	19	20.44	155	30.54	9.86	1.6	1.2	31	1	61	.10	6	0.4	0.7	20	KAO
		30	2144	14.54	19	22.97	155	27.35	8.90	1.5	1.1	38	3	39	.11	1	0.3	0.6	28	KAO
		31	1015	33.95	19	17.71	155	23.63	9.71	2.0	2.1	47	5	94	.14	5	0.4	0.5	33	SWR
		31	1333	31.09	20	8.44	155	50.44	39.07	3.3	3.4	52	8	275	.11	7	0.8	0.9	44	KOH
		31	2040	31.11	19	12.44	155	28.02	8.06	2.3	2.4	41	3	102	.19	5	0.6	0.7	24	LSW F
		31	2120	32.14	19	23.29	155	27.72	9.15	1.4	1.1	31	4	57	.11	1	0.4	0.8	17	KAO
		31	2253	23.50	19	21.85	155	5.10	8.89	2.8	3.3	48	6	78	.10	4	0.4	0.3	39	SF5
SEP		1	544	6.47	19	23.24	155	29.66	8.98	1.5	1.1	25	3	51	.09	4	0.4	0.9	15	KAO
		1	1057	45.08	19	2.96	155	22.57	32.70	2.1	1.8	45	6	209	.23	15	1.4	2.2	39	LOI
		2	1527	0.18	19	21.42	155	2.03	7.28	1.3	1.3	27	2	159	.13	3	0.6	0.6	14	SF5
		2	1643	14.45	19	21.28	155	1.58	6.63	3.2	3.8	46	5	174	.12	3	0.6	0.4	32	SF5
		2	1714	5.12	19	22.08	155	2.02	7.32	1.9	1.4	35	4	149	.14	4	0.6	0.8	27	SF5
		2	2219	34.71	19	21.73	155	6.81	7.77	1.3	1.1	25	2	78	.12	3	0.5	0.7	18	SF4
		3	810	37.27	19	27.07	154	53.07	7.21	2.1	2.0	32	2	194	.17	7	1.1	0.8	23	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
1984	SEP	3	1020	33.40	19	46.14	155	46.93	14.85	2.5	2.5	41	5	147	.11	11	0.5	0.6	29	HUA
		3	1741	51.53	19	28.24	155	26.06	7.37	2.0	1.3	43	7	48	.14	6	0.3	0.8	28	KAO
		3	2010	21.00	19	21.97	155	2.58	6.51	1.3	1.1	26	2	136	.14	4	0.6	1.2	21	SF5
		3	2059	25.72	19	21.67	155	2.77	5.38	1.5	1.3	33	2	132	.17	3	0.6	1.4	22	SF5
		3	2353	33.26	19	45.86	155	47.32	14.80	2.6	2.6	38	4	149	.10	10	0.6	0.6	30	HUA
		4	0	4 0.80	19	25.67	155	19.32	7.06	1.5	1.3	27	5	101	.14	3	0.4	0.9	18	KAO
		4	042	21.85	20	43.33	155	25.58	4.89	2.6	1.8	31	2	305	.12	76	7.4	8.8	27	DIS
		4	138	44.46	19	49.46	155	34.49	16.89	1.9	1.6	28	3	139	.09	10	0.6	1.6	20	KEA
		4	146	29.71	19	12.13	155	27.48	6.77	2.0	1.7	40	7	114	.13	5	0.4	0.9	26	LSW
		4	151	34.36	19	11.72	155	27.72	7.66	2.0	1.3	32	3	111	.16	4	0.5	0.9	21	LSW
		4	214	53.07	19	12.08	155	27.62	3.92	1.7		21	1	112	.13	5	0.7	2.8	19	LSW
		4	321	59.22	19	21.67	155	4.89	8.17	1.7	1.8	33	4	81	.10	5	0.4	0.6	23	SF5
		4	412	29.91	19	19.99	155	24.67	12.43	1.4	1.4	33	2	64	.11	3	0.4	0.5	28	SWR
		4	415	54.61	18	58.73	155	31.88	38.32	2.3	1.6	41	5	222	.09	14	1.0	1.6	30	DLS
		4	517	5.81	19	21.90	155	30.19	9.39	1.9	1.7	36	3	58	.10	5	0.4	0.6	26	KAO
		4	912	48.22	19	20.29	155	12.57	7.52	1.4	1.6	36	4	72	.11	4	0.4	0.7	22	SF2
		4	1253	54.36	19	25.07	155	19.62	4.68	1.8	1.9	25	5	65	.09	3	0.3	0.9	18	KAO
		4	1931	40.78	19	20.30	155	13.50	6.26	1.2	1.1	26	1	66	.12	4	0.5	0.9	20	SF2
		5	414	23.19	19	21.59	155	29.93	9.70	1.8	1.4	35	3	44	.10	4	0.4	0.7	24	KAO
		5	1256	24.13	19	18.38	155	15.73	6.02	1.3	1.6	29	0	111	.11	4	0.4	0.9	22	SF1
		5	19	7 32.66	19	22.41	155	28.89	9.70	2.1	2.1	42	2	38	.10	2	0.3	0.6	37	KAO
		5	2119	35.70	19	30.25	155	25.78	3.09	1.6	1.3	20	6	127	.15	4	0.4	0.9	12	MLO
		5	2244	34.59	19	19.59	155	11.69	6.90	1.8	2.2	40	4	92	.13	6	0.4	0.9	30	SF3
		6	049	11.32	19	21.92	155	5.02	7.98	2.0	2.4	36	3	77	.11	5	0.4	0.6	28	SF5
		6	3	1 46.58	19	29.53	155	27.01	3.36	1.8	1.5	24	3	57	.12	5	0.3	1.3	12	KAO
		6	318	13.49	19	19.75	155	8.17	8.89	2.7	3.2	47	7	87	.11	4	0.4	0.3	40	SF4
		6	537	24.71	19	11.50	155	36.52	5.55	2.4	2.1	40	4	92	.20	13	0.6	1.5	31	LSW
		6	851	43.86	19	12.31	155	41.39	8.39	2.0	1.2	21	0	208	.14	9	1.0	1.3	15	LSW
		6	1550	16.60	19	21.17	155	1.74	6.39	1.5	1.3	28	2	173	.14	3	0.6	1.0	15	SF5
		6	1714	23.44	19	21.40	155	2.90	6.98	2.5	2.5	42	6	129	.13	3	0.5	0.6	31	SF5
		6	1719	24.11	19	29.55	155	26.27	4.20	1.8	1.1	23	4	64	.11	5	0.4	1.5	12	KAO
		6	1721	49.64	19	35.13	155	18.46	9.92	1.6	1.2	31	3	77	.11	13	0.5	1.8	15	KEA
		6	1856	58.54	19	20.10	154	52.25	40.86	3.0	2.8	53	8	244	.11	15	0.8	0.9	44	LER
		7	445	44.36	19	19.38	155	12.07	6.29	1.3	1.2	24	1	93	.10	5	0.5	1.3	17	SF3
		7	1314	56.76	19	30.40	155	56.45	12.28	3.0	2.9	35	3	224	.10	3	1.0	0.4	30	KON
		7	1428	24.38	19	24.73	155	19.48	4.78	1.2	1.3	26	5	90	.10	2	0.4	0.8	19	KAO
		7	22	8 55.96	19	29.32	155	23.80	9.12	1.6	1.4	36	5	38	.13	1	0.4	0.7	28	KAO
		7	2350	0.78	18	45.90	154	55.32	4.61	2.3	2.1	36	4	295	.13	62	1.6	1.2	20	DIS
		8	637	16.20	19	17.29	155	5.02	44.30	2.6	2.8	52	10	194	.11	5	0.7	0.9	41	DEP
		8	16	1 42.31	19	19.40	155	11.26	6.77	2.6	3.0	49	7	99	.14	6	0.4	0.6	40	SF3
		8	1831	14.10	19	19.35	155	11.83	7.03	1.4	1.1	23	1	96	.08	5	0.5	1.1	19	SF3
		8	1857	57.11	19	22.37	155	28.43	9.41	1.5	1.1	23	2	62	.10	1	0.4	0.8	19	KAO
		8	1919	9.93	19	27.05	155	28.57	9.66	2.2	2.1	47	6	56	.12	7	0.3	0.6	37	KAO
		9	17	2 6.51	19	19.51	155	16.16	6.69	1.8	1.6	41	5	94	.13	2	0.4	0.7	33	SF1
		9	21	3 51.24	19	18.82	155	14.75	6.56	1.3	1.2	33	1	89	.12	4	0.5	0.8	23	SF1

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
1984	SEP	9	2221	27.39	19	35.03	155	53.95	33.08	2.6	2.3	33	4	208	.11	11	0.8	1.5	27	KON
		10	949	55.48	19	14.25	155	34.65	8.01	2.7	2.6	47	7	79	.21	4	0.6	0.9	35	LSW
		10	1333	47.72	19	20.75	155	13.54	7.38	1.1	1.3	30	3	62	.13	4	0.5	0.7	22	SF2
		10	1916	6.49	18	55.68	155	16.61	14.62	3.1	4.1	43	0	244	.10	32	1.7	2.0	34	LOI L
		10	1931	48.02	19	20.85	155	12.98	7.72	1.4	1.8	38	2	61	.14	3	0.5	0.7	30	SF2
		10	2351	36.28	19	20.59	155	13.34	9.04	3.4	3.9	46	5	60	.12	4	0.4	0.5	40	SF2 F
		11	2	6 22.76	19	18.12	155	13.13	7.54	1.5	1.6	39	4	99	.12	2	0.4	0.6	28	SF2
		11	216	56.77	19	18.35	155	13.17	7.58	1.8	2.2	41	4	91	.12	3	0.5	0.6	36	SF2
		11	5	4 32.78	19	22.21	155	4.02	6.95	1.6	1.3	31	3	159	.13	4	0.6	0.9	21	SF5
		11	636	50.34	19	25.27	155	20.93	7.90	1.3	1.3	37	6	67	.12	4	0.4	0.7	29	KAO
		11	1313	45.35	19	18.69	155	15.42	6.13	1.7	1.9	34	2	111	.13	4	0.4	0.9	28	SF1
		11	1518	3.07	19	20.44	155	12.42	7.89	2.3	2.8	49	6	71	.13	4	0.4	0.5	38	SF2
		11	1611	23.42	19	26.43	155	29.14	7.99	1.9	1.1	35	5	60	.14	7	0.4	1.1	25	KAO
		11	1739	31.89	19	23.84	155	26.75	10.43	1.9	1.7	38	2	27	.11	3	0.3	0.6	32	KAO
		12	041	10.75	19	24.93	155	30.34	9.30	1.8	1.2	30	4	46	.09	7	0.4	1.0	20	KAO
		12	043	39.58	19	30.18	155	25.88	25.58	1.8	1.6	38	3	74	.11	5	0.6	1.1	31	DHL
		12	1325	40.43	19	15.16	155	27.67	5.38	1.8	1.9	35	4	87	.21	4	0.6	1.6	26	LSW
		12	1558	8.23	19	20.13	155	3.87	7.64	1.9	2.3	38	2	132	.13	2	0.6	0.5	28	SF5
		12	2012	11.53	19	20.04	155	12.47	8.08	1.2	1.5	25	1	76	.08	5	0.5	0.8	19	SF2
		13	142	31.54	19	23.14	155	27.50	9.95	1.4	1.1	25	3	91	.11	1	0.4	0.6	15	KAO
		13	215	48.15	19	21.55	155	1.16	0.00	1.3	1.1	16	2	218	.23	8	1.5	1.0	10	SSF
		13	316	34.34	19	27.30	155	29.36	8.44	1.9	1.4	32	3	104	.11	8	0.4	1.1	26	KAO
		13	336	35.17	19	23.38	155	22.48	9.42	1.4	1.1	27	4	45	.09	5	0.4	0.8	20	KAO
		13	1825	56.14	19	29.70	155	42.45	7.88	1.9	1.1	31	3	55	.14	6	0.5	1.3	22	MLO
		13	2027	59.48	19	27.84	154	53.18	9.01	3.0	3.2	42	5	181	.13	4	0.9	0.3	27	LER
		13	2045	48.48	19	28.53	155	28.10	7.12	2.0	1.8	42	7	53	.10	7	0.3	0.8	28	KAO
		14	028	36.26	19	20.35	155	12.38	7.96	1.7	2.1	46	6	73	.13	4	0.4	0.5	35	SF2
		14	1113	13.41	19	26.06	155	22.12	8.27	1.3	1.1	30	5	42	.09	4	0.3	0.7	19	KAO
		14	1432	45.90	19	23.28	154	57.61	6.47	1.8	1.7	29	2	193	.17	4	1.1	1.0	16	LER
		14	1439	11.95	19	21.57	155	4.14	6.18	1.6	1.1	28	1	89	.19	4	0.7	1.2	21	SF5
		14	2259	3.81	19	21.15	155	2.63	6.93	1.7	1.8	39	5	142	.11	2	0.5	0.5	25	SF5
		15	049	39.91	19	19.85	155	9.68	6.05	1.3	1.3	20	2	86	.11	4	0.6	1.4	16	SF3
		15	431	12.10	19	20.01	155	12.36	7.06	1.2	1.5	38	3	78	.13	5	0.4	0.7	31	SF2
		15	610	36.75	19	31.13	154	40.33	9.87	2.0	1.7	27	4	329	.11	18	1.9	0.6	20	LER
		15	1134	38.86	19	25.33	155	19.97	4.01	1.2	1.1	26	3	104	.10	3	0.4	0.8	16	KAO
		15	1320	22.90	19	20.01	155	24.61	12.89	1.7	1.8	40	3	65	.10	2	0.3	0.4	32	SWR
		15	1620	1.58	19	11.22	155	40.95	5.91	2.3	2.0	36	4	120	.23	10	0.7	2.4	29	LSW
		15	1935	57.91	19	22.11	155	26.50	9.07	1.6	1.5	34	2	56	.14	2	0.4	0.7	28	KAO
		16	5	5 38.13	19	25.53	155	28.34	9.80	1.8	1.4	37	5	58	.10	6	0.3	0.6	30	KAO
		16	1258	11.26	19	20.49	155	10.88	7.11	2.0	1.9	45	5	78	.13	3	0.4	0.7	38	SF3
		16	1926	45.76	19	25.20	155	19.42	3.36	1.4	1.4	32	4	73	.13	3	0.3	0.6	22	KAO
		16	2231	8.71	19	18.09	155	12.92	5.69	1.8	1.8	41	6	108	.13	2	0.4	0.9	31	SF2
		16	2355	46.13	19	18.09	155	13.85	6.04	1.2	1.1	24	1	107	.09	2	0.5	0.9	20	SF2
		17	442	49.84	19	19.98	155	6.54	7.43	2.4	2.4	52	10	118	.11	5	0.4	0.5	39	SF4
		17	514	16.88	19	21.99	155	49.92	11.94	2.6	2.0	37	4	126	.13	12	0.5	0.3	28	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	
1984	SEP	17	1315	17.51	19	29.52	154	54.13	1.83	1.9	2.9	19	1	127	.28	4	0.8	1.4	11	SLE	
		17	20 3	9.59	19	21.08	155	17.88	30.23	2.4	2.7	51	6	39	.11	2	0.5	0.8	45	DEP	
		17	2212	54.68	19	25.01	155	19.41	4.80	1.3	1.5	26	5	68	.10	2	0.4	0.9	18	KAO	
		18	017	22.28	19	18.30	155	12.88	5.81	2.5	3.0	47	8	103	.13	3	0.4	0.8	33	SF2	
		18	143	25.22	19	18.44	155	12.99	5.10	1.8	2.0	33	3	96	.10	3	0.3	0.8	25	SF2	
		18	450	59.68	19	21.59	155	4.67	8.12	2.3	2.6	43	5	82	.11	4	0.4	0.5	36	SF5	
		18	453	50.16	19	21.77	155	1.73	7.08	1.4	1.1	25	3	160	.12	4	0.6	0.8	19	SF5	
		18	511	14.55	19	22.48	155	29.89	8.21	1.3	1.1	28	4	71	.11	4	0.4	0.9	23	KAO	
		19	013	49.59	19	20.61	155	8.21	7.12	1.4	1.5	32	2	78	.13	4	0.5	0.8	26	SF4	
		19	134	51.59	19	19.83	155	11.66	6.67	1.8	2.1	45	5	87	.12	5	0.4	0.8	34	SF3	
		19	630	15.24	19	26.65	155	30.21	9.02	1.9	1.5	40	5	44	.12	9	0.4	0.8	29	KAO	
		19	715	18.14	19	20.96	155	12.51	7.55	2.0	2.5	45	4	63	.13	3	0.4	0.6	37	SF2	
		19	810	23.30	19	19.44	155	12.05	5.87	1.4	1.6	17	0	91	.05	5	0.5	1.6	17	SF3	
		19	1134	10.58	19	22.75	155	30.07	8.27	1.8	1.5	41	4	40	.13	4	0.4	0.8	36	KAO	
		19	1927	52.13	19	27.38	155	14.46	31.48	1.9	1.4	43	4	51	.11	5	0.5	1.1	34	DEP	
		19	22 9	30.06	19	23.95	155	16.05	2.84	1.7	2.3	25	3	104	.09	1	0.3	0.3	18	SEC	
		20	250	37.66	19	18.95	155	15.50	6.89	1.4	1.2	33	4	98	.14	4	0.4	0.8	28	SF1	
		20	536	39.30	19	24.44	155	16.12	1.42	0.8	1.2	10	2	133	.11	1	0.4	0.4	7	SEC	L
		20	632	57.22	19	24.43	155	16.34	1.24	0.6	1.0	12	2	132	.12	1	0.3	0.3	6	SEC	L
		20	728	46.35	19	24.44	155	16.18	1.38	0.6	1.4	11	2	133	.06	1	0.3	0.3	7	SEC	L
		20	833	56.04	19	12.56	155	26.97	5.67	2.1	1.5	12	0	139	.08	6	0.7	1.7	12	LSW	
		20	835	33.90	19	24.56	155	16.46	1.95	1.0	1.1	10	2	136	.05	1	0.4	0.3	9	SNC	L
		20	840	50.04	19	24.69	155	16.03	0.22	1.0	1.1	10	2	143	.10	2	0.4	0.6	8	SNC	L
		20	917	36.78	19	24.57	155	16.28	1.40	0.8	1.2	15	2	137	.12	1	0.4	0.3	10	SNC	
		20	1046	45.56	19	24.66	155	16.60	0.87	0.8	1.1	9	2	140	.15	1	0.4	0.4	7	SNC	L
		20	11 7	2.97	19	23.97	155	16.35	0.43	0.9	2.1	14	3	102	.18	0	0.3	0.3	8	SEC	L
		20	1322	7.87	19	24.45	155	16.35	1.23	1.3	1.6	15	3	133	.10	1	0.2	0.2	9	SEC	
		20	1332	58.10	19	24.63	155	16.13	1.15	1.0	1.4	12	1	140	.10	2	0.3	0.4	8	SNC	L
		20	1641	57.31	19	23.92	155	14.93	28.90	1.8	1.4	40	4	64	.11	2	0.6	1.0	33	DEP	
		20	2247	53.24	19	18.12	155	12.99	4.75	2.4	2.9	39	1	104	.14	2	0.5	1.3	36	SSF	
		21	029	50.91	19	25.53	155	29.30	9.34	1.9	1.6	38	4	37	.09	6	0.3	0.7	31	KAO	
		21	7 1	30.60	19	12.99	155	16.19	44.09	1.9	1.5	35	2	192	.09	9	1.0	1.6	28	DEP	L
		21	1652	36.58	19	19.85	155	12.55	7.23	1.3	1.5	33	4	79	.12	5	0.5	0.7	27	SF2	
		22	0 9	57.47	19	27.25	155	29.79	9.32	2.2	1.5	38	3	47	.13	9	0.4	0.7	30	KAO	
		22	1824	32.18	19	21.70	155	6.13	7.59	1.8	2.1	32	6	82	.10	4	0.4	0.8	21	SF4	
		22	19 2	33.97	19	18.32	155	13.51	6.67	1.4	1.2	29	1	82	.11	2	0.6	1.0	23	SF2	
		22	2040	34.52	19	18.14	155	12.93	5.01	1.9	2.4	39	2	106	.11	2	0.4	1.1	33	SF2	
		22	2047	53.73	19	18.10	155	12.99	4.61	1.9	2.0	36	3	105	.10	2	0.4	0.9	32	SSF	
		23	0 1	49.72	19	21.49	155	4.04	5.66	1.7	1.5	26	2	166	.14	6	0.7	1.7	18	SF5	
		23	016	2.12	19	20.70	155	10.69	7.50	1.3	1.3	22	2	85	.09	3	0.5	0.8	19	SF3	
		23	629	42.90	19	20.67	155	13.29	7.12	1.2	1.1	23	1	60	.10	4	0.5	0.7	18	SF2	
		23	1439	20.58	19	21.86	155	4.74	8.46	2.7	3.0	47	7	78	.11	5	0.4	0.4	39	SF5	
		24	1516	6.38	19	21.45	155	24.10	10.63	1.4	1.1	30	4	43	.10	3	0.4	0.6	25	SWR	
		24	2127	48.20	19	18.97	155	54.17	12.37	4.3	4.3	49	3	208	.11	6	0.9	0.4	44	KON	F
		24	2345	53.73	19	17.75	155	23.12	8.12	1.4	1.1	27	2	101	.11	5	0.4	0.7	21	SWR	

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	
1984	SEP	25	142	57.95	19	25.94	155	29.35	10.19	2.3	2.1	49	6	40	.11	7	0.3	0.5	37	KAO	
		25	353	46.15	19	17.14	155	22.50	5.32	1.8	2.2	43	3	118	.17	6	0.5	1.4	38	SWR	
		25	1028	1.79	19	41.31	155	3.15	0.01	1.8	2.5	19	0	106	.36	3	1.4	4.4	14	HIL	B*
		25	1250	3.14	19	25.09	155	37.92	25.83	2.3	1.6	44	5	55	.08	5	0.5	0.9	35	DML	
		25	1924	13.88	19	20.10	155	10.38	8.07	1.9	2.2	46	7	84	.11	4	0.3	0.5	33	SF3	
		26	1440	30.47	19	18.85	155	13.52	6.80	1.4	1.3	32	3	82	.12	3	0.4	0.7	22	SF2	
		26	1917	41.48	19	21.11	155	21.78	8.66	1.7	1.3	43	8	62	.15	3	0.4	0.7	31	SWR	
		26	2157	31.34	19	25.09	155	19.43	5.77	1.0	1.0	18	2	104	.08	3	0.5	1.1	15	KAO	
		27	342	51.42	19	25.94	155	21.31	10.26	2.9	2.9	49	6	31	.11	3	0.3	0.4	41	KAO	F
		27	7 3	12.74	19	19.40	155	10.99	9.63	3.2	3.7	51	7	100	.10	5	0.5	0.4	43	SF3	F
		27	911	24.54	19	54.77	155	16.64	37.22	1.8	1.7	31	4	200	.09	7	0.9	1.3	28	KEA	
		27	14 2	20.00	19	20.04	155	12.05	5.80	1.6	1.5	36	5	80	.13	5	0.5	0.9	26	SF3	
		27	2240	13.69	19	18.97	155	26.27	8.44	1.5	1.1	31	3	69	.11	6	0.4	0.7	27	LSW	
		28	632	17.56	19	18.17	155	44.88	0.25	2.1	1.4	22	0	230	.18	15	1.9	7.2	16	KON	*
		28	942	8.39	19	26.58	155	28.87	9.24	2.1	1.7	40	6	42	.12	7	0.4	0.8	32	KAO	
		28	1024	52.32	19	21.34	155	2.61	7.25	2.2	2.3	39	4	141	.12	3	0.5	0.6	26	SF5	
		28	1440	7.52	19	20.16	155	18.68	3.20	1.7	2.1	30	3	67	.11	2	0.3	0.7	24	SWR	
		28	1954	55.43	19	19.67	155	12.14	5.56	1.2	1.3	27	1	86	.13	5	0.5	1.2	19	SF3	
		29	8 1	7.01	19	19.30	155	15.21	7.40	1.9	2.1	26	1	105	.09	4	0.4	0.8	18	SF1	
		29	938	46.34	19	27.07	155	29.97	10.46	2.1	1.7	44	5	37	.10	7	0.3	0.6	31	KAO	
		29	1354	57.32	19	13.17	155	38.89	7.63	2.6	2.6	39	5	198	.18	5	0.8	0.9	28	LSW	
		30	1238	24.58	19	18.38	155	51.45	8.72	2.1	1.3	25	5	185	.16	5	0.9	0.6	19	KON	
		30	1827	28.08	19	20.69	155	12.77	8.04	2.0	2.3	46	6	65	.11	4	0.4	0.6	35	SF2	
OCT		1	236	57.92	19	20.29	155	12.75	6.96	1.5	1.3	41	5	69	.14	4	0.4	0.7	30	SF2	
		1	324	21.95	19	19.61	155	12.90	5.74	1.3	1.3	33	2	77	.14	5	0.5	1.1	30	SF2	
		1	547	18.91	19	19.90	155	13.72	6.58	2.0	2.0	52	8	60	.12	5	0.3	0.6	38	SF2	
		1	1240	28.49	19	19.39	155	50.53	7.12	2.6	1.5	33	1	154	.15	7	0.6	0.8	25	KON	
		1	1632	46.92	19	23.59	155	20.26	9.97	1.6	1.1	31	3	59	.10	1	0.4	0.7	21	KAO	
		2	151	25.83	19	21.67	155	6.70	7.93	1.6	1.2	30	2	80	.11	3	0.5	0.8	25	SF4	
		2	2 3	31.27	19	17.88	155	13.17	6.39	1.4	1.5	23	1	103	.08	2	0.5	1.1	22	SF2	
		2	1333	35.90	19	20.07	155	10.47	8.38	2.0	2.2	48	5	85	.11	4	0.4	0.5	39	SF3	
		2	2013	3.72	19	21.74	155	19.30	30.48	1.8	1.5	41	2	42	.12	4	0.6	1.2	35	DEP	
		2	2235	23.99	19	20.37	155	11.87	7.00	1.2	1.2	33	1	76	.13	5	0.5	0.8	26	SF3	
		3	934	11.95	19	14.12	155	27.18	13.70	3.1	3.3	54	8	103	.13	5	0.4	0.4	45	DLS	
		3	1113	26.41	19	48.09	156	3.75	9.78	2.7	2.4	25	2	238	.12	27	1.5	0.9	20	HUA	
		3	1515	49.88	19	20.11	155	12.40	8.64	2.1	2.5	47	4	76	.14	5	0.4	0.5	39	SF2	
		4	10 4	40.63	19	20.09	155	13.09	6.13	1.4	1.1	21	0	68	.12	5	0.6	1.4	21	SF2	
		4	1036	19.66	19	19.75	155	12.04	6.34	2.0	2.2	34	1	86	.12	6	0.4	0.9	33	SF3	
		4	1051	46.38	19	38.96	155	2.98	0.05	2.2	2.2	17	0	233	.19	25	1.9	6.4	10	HIL	B*
		5	126	10.37	19	25.23	154	58.59	7.14	2.6	2.6	45	7	184	.19	4	0.8	0.6	29	LER	
		5	326	7.36	19	28.11	155	24.75	8.38	2.9	2.7	46	5	46	.15	4	0.3	0.6	40	KAO	
		5	358	17.06	19	19.66	155	11.33	6.36		0.6	14	0	93	.09	5	0.7	1.8	9	SF3	
		5	437	10.71	19	27.77	155	28.23	9.80	2.3	1.6	48	7	51	.12	7	0.3	0.7	36	KAO	
		5	523	17.10	19	26.00	155	20.07	6.58	1.7	1.9	35	5	47	.12	3	0.4	0.8	25	KAO	
		5	1219	56.65	19	24.19	155	15.37	3.55	1.1	1.4	19	3	118	.11	2	0.4	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
1984	OCT	5	15 9	59.89	19	21.36	155	1.41	6.28	2.1	2.2	37	3	177	.14	4	0.6	0.6	34	SF5
		5	1538	11.10	19	20.72	155	3.37	6.56	1.8	1.8	31	3	100	.12	2	0.5	0.6	22	SF5
		6	3 5	41.77	19	21.08	155	13.16	8.26	1.7	1.8	36	5	58	.10	3	0.4	0.5	27	SF2
		6	1347	13.42	19	26.59	155	30.03	7.45	1.9	1.4	39	4	63	.12	9	0.4	1.1	29	KAO
		6	1754	56.82	19	11.88	155	10.87	31.70	3.0	3.0	57	9	199	.12	11	0.8	1.0	46	DEP
		6	1950	11.12	19	28.27	155	27.96	2.57	2.0	1.2	35	3	51	.14	7	0.3	1.3	29	KAO
		7	048	43.31	19	23.20	155	15.40	30.17	2.0	1.7	39	5	48	.10	2	0.6	0.9	31	DEP
		7	818	45.51	19	20.41	155	11.85	6.84	1.7	1.8	39	3	76	.15	5	0.5	0.9	33	SF3
		7	1147	16.02	18	50.43	156	4.56	17.35	2.5	1.7	27	2	303	.09	46	2.8	45.3	19	DIS
		7	1227	25.21	20	19.80	156	19.82	29.27	2.4	2.4	37	1	314	.14	62	4.1	2.8	30	KOH
		7	2112	55.32	19	25.35	155	19.65	6.32	1.4	1.2	30	5	89	.12	3	0.4	0.9	24	KAO
		7	2114	53.72	19	25.28	155	19.70	6.32	1.3	1.1	24	4	87	.10	3	0.4	0.9	17	KAO
		8	0 0	25.11	20	7.02	156	51.65	29.58	3.9	4.3	54	7	314	.11	113	1.6	2.5	47	DIS
		8	0 3	43.06	19	17.09	155	15.48	10.10	2.9	3.1	48	5	151	.11	6	0.4	0.4	42	SF1
		8	1618	10.72	19	54.90	155	29.41	17.85	3.7	4.1	56	9	151	.11	15	0.6	1.8	47	KEA F
		8	1711	0.87	19	20.75	155	13.32	7.57	2.0	2.5	46	4	159	.14	4	0.5	0.6	36	SF2
		8	1730	55.81	19	18.25	155	14.81	6.70	1.2	1.1	32	2	113	.12	3	0.5	0.7	19	SF1
		8	1957	13.61	19	26.87	155	30.27	10.22	2.7	2.6	50	7	35	.12	9	0.3	0.6	34	KAO
		8	2232	41.31	19	19.85	155	10.46	8.22	1.4	1.1	27	2	90	.08	4	0.4	0.6	22	SF3
		9	243	52.64	19	16.70	155	22.65	7.16	1.4	1.5	24	3	122	.11	5	0.5	1.1	19	SWR
		9	435	37.78	19	27.97	155	51.33	8.06	2.5	1.5	30	3	106	.15	7	0.6	0.7	21	KON
		9	1242	13.15	19	19.98	155	15.83	6.08	1.3	1.3	28	2	91	.15	3	0.5	0.9	22	SF1
		10	233	49.75	19	17.23	155	25.17	9.84	3.0	3.6	56	9	69	.15	6	0.3	0.5	45	LSW F
		10	516	12.68	19	17.59	155	22.20	7.60	1.4	1.3	32	3	115	.12	5	0.4	0.8	23	SWR
		10	1728	1.39	19	23.48	155	22.58	9.41	1.7	1.7	33	5	44	.11	5	0.4	0.6	26	KAO
		10	1739	30.40	19	29.90	155	27.50	3.23	2.2	2.0	31	3	67	.13	4	0.4	1.2	21	KAO
		10	2145	14.29	19	23.09	155	2.61	6.79	1.5	1.1	31	3	125	.14	4	0.6	1.0	21	SF5
		10	2342	13.07	19	20.69	155	1.06	5.40	1.8	2.1	29	2	197	.18	4	0.8	1.2	19	SF5
		11	036	13.77	19	13.12	155	27.11	6.34	1.9	1.3	25	2	116	.15	6	0.6	1.8	16	LSW
		11	4 9	55.92	19	24.27	155	16.25	3.34	1.0	1.2	15	4	125	.05	1	0.4	0.4	10	SEC
		11	1158	59.20	19	17.57	155	15.16	7.35	1.4		32	3	141	.09	3	0.5	0.9	25	SF1
		11	1546	19.55	19	20.08	155	13.21	7.73	1.6	1.6	38	2	67	.12	5	0.5	0.7	35	SF2
		11	1559	29.72	19	16.25	155	30.50	8.61	2.2	2.2	45	6	52	.16	2	0.4	0.7	35	LSW
		11	1916	9.34	19	28.76	155	26.97	7.61	2.7	2.5	49	7	55	.13	6	0.3	0.8	39	KAO
		11	1955	46.02	19	25.08	155	18.91	5.86	1.9	2.0	31	5	68	.10	2	0.3	0.7	23	INT
		11	2350	29.41	19	19.23	155	29.03	8.82	1.6	1.1	25	2	56	.13	7	0.4	0.7	19	KAO
		12	0 7	32.56	19	28.21	155	24.71	2.79	1.8	1.2	28	4	67	.11	4	0.3	0.8	20	KAO
		12	051	36.46	19	24.63	155	19.73	6.02	1.9	1.9	38	5	45	.11	2	0.3	0.7	32	KAO
		12	153	46.65	19	24.59	155	19.81	6.41	2.3	2.7	41	5	37	.12	2	0.3	0.6	32	KAO
		12	227	4.28	19	20.08	155	10.45	6.52	1.3	1.2	27	1	88	.12	7	0.6	1.2	23	SF3
		12	240	44.91	19	14.82	155	18.51	13.93	1.5	1.2	28	2	165	.11	6	0.7	0.6	21	DEP
		12	242	10.63	19	24.64	155	19.66	5.91	1.7	1.2	29	6	69	.09	2	0.4	0.8	20	KAO
		12	921	17.99	19	18.09	155	23.58	9.05	2.3	2.7	49	6	91	.14	4	0.4	0.5	38	SWR
		12	1914	40.37	19	25.83	155	19.15	5.61	1.2	1.1	21	3	143	.09	3	0.4	1.0	15	KAO
		12	2154	5.39	19	23.19	155	2.28	7.81	1.7	1.4	34	4	131	.18	4	0.5	0.7	19	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
1984	OCT	12	2255	39.31	19	22.38	155	1.83	7.81	1.8	1.5	38	4	150	.14	5	0.6	0.4	30	SF5
		13	616	26.92	19	20.62	155	7.78	8.56	3.0	3.6	56	10	85	.10	5	0.3	0.4	42	SF4
		13	1031	39.37	19	20.16	155	13.27	8.26	1.2	1.1	17	1	65	.04	5	0.5	1.1	15	SF2
		13	1551	10.38	19	21.47	155	5.97	7.31	1.5	1.5	28	2	87	.11	4	0.5	0.8	20	SF4
		13	1811	36.02	19	19.71	155	11.56	7.65	1.6	2.0	38	4	90	.11	5	0.5	0.7	27	SF3
		14	0 3	41.41	19	47.81	155	57.18	13.98	2.4	2.0	28	5	215	.13	17	1.3	0.7	19	HUA
		14	230	24.15	19	20.59	155	12.85	9.41	2.6	3.2	49	6	65	.12	4	0.3	0.4	42	SF2
		14	2354	5.41	19	49.39	155	36.37	17.25	2.3	1.8	46	6	102	.09	7	0.5	1.3	38	KEA
		15	1127	4.63	19	21.65	155	3.11	8.96	2.0	1.8	37	2	120	.12	3	0.6	0.5	34	SF5
		16	4 6	12.89	20	19.17	155	27.69	36.66	2.4	2.1	43	7	266	.09	39	0.9	1.2	35	KEA
		16	534	14.72	18	54.59	155	15.32	13.08	3.0	3.8	42	2	248	.09	35	1.4	1.0	42	LOI
		16	1445	55.79	19	24.47	155	29.36	10.24	3.5	3.8	58	9	32	.10	5	0.3	0.4	49	KAO F
		16	2152	6.76	19	22.46	155	20.77	9.50	1.7	1.3	43	6	46	.11	3	0.3	0.6	30	KAO
		16	2252	50.73	18	58.28	155	16.01	13.04	1.8	1.5	23	2	287	.10	29	2.5	0.7	21	LOI L
		17	1718	27.95	19	21.53	155	6.57	7.97	1.6	1.3	39	6	83	.13	4	0.4	0.6	31	SF4
		18	2 4	41.42	19	14.65	155	28.77	8.40	1.5	0.9	31	6	102	.18	3	0.4	0.8	25	LSW
		18	414	44.52	19	23.33	155	20.72	9.95	1.3	1.1	33	8	59	.11	2	0.4	0.6	26	KAO
		18	445	53.20	19	20.85	155	2.46	38.61	2.2	1.6	51	6	156	.11	2	0.8	1.0	40	DEP
		18	550	21.38	19	21.29	155	29.10	6.16	2.0	1.5	40	2	44	.12	3	0.3	0.8	37	KAO
		18	1234	9.09	19	21.08	155	2.18	7.54	1.7	1.7	29	4	162	.10	3	0.5	0.6	26	SF5
		18	1311	19.57	19	15.75	155	2.93	44.46	2.1	1.6	41	3	217	.12	8	1.3	1.4	36	DEP
		18	1343	55.20	19	19.74	155	7.65	6.11	1.5	1.1	32	2	100	.12	4	0.5	1.1	30	SF4
		19	1 1	10.22	19	21.76	155	28.09	6.39	2.1	2.5	13	1	120	.09	2	0.6	1.0	12	KAO
		19	1059	35.55	19	21.59	155	2.51	7.53	1.9	1.7	35	5	141	.12	3	0.5	0.6	31	SF5
		19	1122	37.25	19	22.43	155	0.61	7.65	1.9	1.5	38	6	171	.13	6	0.5	0.7	33	SF5
		19	1625	52.54	19	23.88	155	16.83	14.33	1.6	1.4	43	5	43	.10	0	0.4	0.3	38	DEP
		19	2112	22.75	19	20.40	155	12.95	7.51	1.3	1.1	33	2	67	.11	4	0.5	0.6	30	SF2
		19	2136	47.43	19	19.81	155	13.03	6.36	1.2	1.1	32	2	72	.13	5	0.4	0.9	28	SF2
		20	153	37.91	19	23.78	155	26.53	11.09	1.9	1.5	42	2	26	.10	3	0.4	0.5	35	KAO
		20	348	34.68	19	20.54	155	17.28	33.18	2.1	1.8	49	7	62	.11	1	0.6	0.9	43	DEP
		20	434	20.16	19	26.11	155	29.28	10.47	2.5	2.1	50	6	40	.11	7	0.3	0.5	45	KAO
		20	623	46.49	19	19.90	155	8.14	6.57	1.4	1.6	34	2	87	.11	5	0.5	0.9	31	SF4
		20	1037	14.14	19	19.70	155	12.61	7.32	1.3	1.3	34	2	79	.10	5	0.5	0.6	33	SF2
		20	1655	24.27	19	19.57	155	12.29	4.79	1.4	1.9	31	2	86	.15	5	0.5	2.0	28	SSF
		20	1857	57.42	19	19.73	155	12.23	7.57	1.5	2.0	38	3	84	.11	5	0.4	0.6	36	SF3
		20	2245	15.65	19	28.41	155	14.84	26.14	1.7	1.4	39	5	112	.10	7	0.6	1.0	34	DEP
		21	052	13.50	19	21.16	155	17.99	31.35	2.0	1.8	42	4	58	.12	4	0.6	0.9	34	DEP
		21	254	34.92	19	22.87	155	29.93	8.49	1.8	1.7	40	3	32	.11	4	0.3	0.8	36	KAO
		21	415	9.93	19	21.84	155	28.66	10.40	2.1	2.1	42	3	38	.09	2	0.3	0.5	39	KAO
		21	1017	47.94	19	22.87	155	26.83	10.71	2.0	1.4	40	2	34	.12	2	0.4	0.7	37	KAO
		21	2030	42.97	19	14.43	155	26.62	9.15	2.4	2.8	49	6	102	.11	5	0.3	0.4	44	LSW
		21	2115	35.82	19	18.89	155	13.71	8.86	1.6	1.5	36	3	73	.09	3	0.4	0.6	32	SF2
		22	150	11.35	19	22.02	155	4.77	7.71	1.6	1.0	22	1	81	.10	5	0.4	0.6	21	SF5
		22	622	18.58	19	27.39	154	53.63	5.91	1.8		31	3	186	.14	3	0.9	0.7	25	LER L
		22	859	57.30	19	19.97	155	3.67	6.14	2.1	2.3	24	1	144	.09	1	0.6	0.8	23	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
1984	OCT	22	2116	5.89	19	20.79	155	7.41	8.03	2.3	2.8	47	6	88	.10	5	0.4	0.5	41	SF4
		23	331	48.64	19	20.47	155	11.97	8.76	3.0	3.6	49	6	74	.11	4	0.3	0.4	44	SF3
		23	643	15.15	19	21.83	155	29.07	9.75	1.6	1.5	38	3	39	.11	3	0.4	0.6	32	KAO
		23	741	30.47	19	20.39	155	12.01	8.73	1.5	1.3	27	1	75	.10	5	0.5	0.7	24	SF3
		23	745	1.95	19	23.82	155	15.70	3.47	1.0	1.0	15	4	104	.09	2	0.4	0.5	11	SEC
		23	1127	38.06	19	23.73	155	15.62	3.13	1.1	1.4	24	7	99	.10	2	0.3	0.4	20	SEC
		23	1823	53.99	19	30.56	155	9.21	24.19	2.1	1.6	55	11	109	.11	10	0.4	1.0	47	DEP
		23	1834	7.15	19	20.04	155	11.62	8.20	2.0	2.4	45	5	84	.12	5	0.4	0.6	37	SF3
		23	2029	42.01	19	20.85	155	2.91	7.25	1.9	1.8	36	3	131	.12	2	0.6	0.5	33	SF5
		24	332	58.75	19	20.70	155	13.18	7.37	1.6	2.0	37	3	61	.12	4	0.4	0.6	34	SF2
		24	654	1.37	19	22.43	155	4.25	8.33	2.0	2.1	40	5	91	.13	4	0.5	0.4	35	SF5
		24	946	19.28	19	22.79	155	25.81	10.32	1.8	2.0	39	3	40	.11	3	0.4	0.6	36	KAO
		24	1415	44.81	19	19.89	155	12.03	7.90	1.6	1.8	35	2	83	.10	5	0.5	0.7	34	SF3
		24	1816	22.27	19	27.87	155	45.14	8.20	1.9	1.2	35	6	69	.13	5	0.4	1.1	30	KON
		25	1559	18.86	19	18.80	155	15.34	5.06	1.1	1.1	21	1	108	.13	4	0.5	1.6	21	SF1
		25	1634	36.36	19	11.06	155	28.34	9.08	2.3	2.4	42	6	120	.15	3	0.4	0.5	38	LSW F
		25	1812	46.80	19	12.63	155	37.73	8.87	2.5	2.4	35	2	202	.16	4	1.0	0.8	35	LSW
		25	1814	29.16	19	27.18	155	28.52	9.68	1.8	1.4	35	4	54	.11	7	0.4	0.9	28	KAO
		25	19 7	1.67	19	21.63	155	6.05	6.61	1.5	1.3	30	2	83	.13	4	0.6	0.9	27	SF4
		25	2050	29.16	19	17.98	155	15.11	8.13	1.6	2.2	35	4	126	.10	3	0.4	0.7	30	SF1
		25	2235	36.03	19	19.71	155	12.78	6.11	1.3	1.3	26	4	77	.10	5	0.4	0.9	23	SF2
		26	344	30.11	19	19.46	155	12.37	6.03	1.3	1.3	24	3	88	.13	5	0.5	1.1	23	SF2
		26	9 0	42.99	19	25.64	155	29.66	7.85	1.4	1.1	27	4	63	.08	7	0.3	0.9	24	KAO
		26	1038	56.81	19	20.21	155	12.69	7.12	1.4	1.5	29	1	71	.11	5	0.5	0.8	27	SF2
		26	1056	41.62	19	20.29	155	12.92	7.09	1.2	1.3	24	1	67	.12	4	0.6	0.9	23	SF2
		26	1234	44.80	19	23.17	155	3.08	7.56	2.4	3.1	42	6	113	.14	3	0.5	0.4	37	SF5
		26	2236	30.13	19	25.52	155	19.35	4.10	1.4	1.5	28	6	76	.11	3	0.3	0.7	24	KAO
		26	2310	3.85	19	20.40	155	12.99	7.75	1.6	1.9	38	2	66	.13	4	0.4	0.7	35	SF2
		26	2317	19.27	19	26.25	155	29.38	8.94	1.8	1.2	41	8	61	.11	7	0.4	0.8	34	KAO
		26	2328	48.51	19	16.51	155	28.08	9.16	1.5	1.5	32	4	59	.14	4	0.4	0.7	30	LSW
		26	2330	54.58	19	25.39	155	19.42	5.35	1.3	1.3	26	7	117	.10	3	0.4	0.8	21	KAO
		27	012	29.21	19	25.24	155	19.34	5.93	2.0	1.9	28	5	46	.11	3	0.4	0.7	24	KAO
		27	153	30.72	19	18.71	155	16.06	33.33	2.5	2.7	54	8	107	.10	4	0.5	0.7	46	DEP
		27	2 3	1.91	19	24.93	155	19.75	5.61	1.5	1.3	33	6	39	.13	2	0.4	0.8	28	KAO
		27	357	44.29	19	19.58	155	46.53	11.10	2.5	2.1	43	5	118	.10	12	0.4	0.3	39	KON
		27	457	6.50	19	21.81	155	1.33	5.15	1.4	1.3	27	1	168	.13	5	0.7	1.6	27	SF5
		27	1352	52.60	19	21.91	155	28.71	5.13	1.9	1.6	31	4	43	.13	2	0.4	1.0	29	KAO
		28	343	35.03	19	20.58	155	8.41	7.89	2.3	2.7	44	4	75	.12	4	0.4	0.5	40	SF4
		28	2118	29.26	19	20.90	155	12.98	7.64	1.8	1.7	43	5	61	.11	3	0.4	0.6	38	SF2
		29	254	43.10	19	21.83	155	12.05	3.25	1.2	1.4	19	2	78	.09	2	0.3	0.5	17	SER
		29	420	38.25	19	14.60	154	53.33	41.41	3.2	3.0	52	6	242	.11	20	1.3	1.0	47	DIS
		29	547	5.85	19	20.01	155	13.49	5.73	1.2	0.8	26	0	69	.13	5	0.6	1.5	25	SF2
		29	2135	53.13	19	20.51	155	12.48	8.56	2.5	3.1	53	10	69	.12	4	0.3	0.4	43	SF2
		29	22 6	7.61	19	20.02	155	8.34	7.14	2.0	2.1	49	7	81	.12	5	0.4	0.6	42	SF4
		29	2225	53.04	19	19.00	155	8.78	5.93	1.4	1.1	30	2	93	.10	3	0.4	1.1	28	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
1984	OCT	29	2311	9.99	19	20.62	155	12.00	9.27	2.7	3.2	51	6	72	.12	4	0.3	0.4	44	SF3
		30	213	42.84	19	21.43	155	30.19	9.06	2.2	2.2	41	3	47	.10	5	0.3	0.7	38	KAO
		30	1017	33.36	19	19.71	155	12.98	6.41	1.4	1.5	33	2	74	.13	5	0.5	0.9	31	SF2
		30	1051	20.64	19	17.93	155	14.10	5.87	1.3	1.1	26	1	105	.09	2	0.5	1.0	25	SF2
		30	1115	38.95	19	18.57	155	14.65	6.89	1.2	1.1	26	0	102	.11	4	0.6	1.0	26	SF1
		30	1636	9.09	19	28.09	155	51.85	6.34	2.6	2.4	50	8	110	.16	6	0.5	0.7	42	KON
		30	1836	15.46	19	23.34	155	20.63	9.37	1.3	1.1	27	3	65	.11	2	0.4	0.7	25	KAO
		30	1921	47.72	19	20.36	155	12.54	8.08	1.7	2.2	44	5	71	.11	4	0.4	0.5	39	SF2
		30	21 6	47.10	19	24.97	155	19.23	6.06	1.4	1.1	26	3	75	.10	3	0.4	0.8	24	KAO
		31	344	48.95	19	21.52	155	29.84	8.99	1.6	1.1	34	2	73	.11	4	0.4	0.7	32	KAO
		31	747	6.46	19	25.98	155	27.71	6.54	1.4	1.1	32	6	55	.12	5	0.4	1.0	29	KAO
		31	1245	14.86	19	41.55	155	2.91	0.05	2.0	2.3	26	0	188	.15	24	0.9	2.6	26	HIL B*
		31	1611	2.80	19	52.22	155	49.87	39.65	2.6	2.2	45	12	177	.08	18	0.6	0.9	40	HUA
		31	1922	22.46	19	12.46	155	26.84	9.32	3.0	3.3	55	8	125	.17	6	0.5	0.4	48	LSW
		31	2114	8.45	19	22.07	155	26.50	10.62	2.0	2.0	41	4	44	.13	2	0.4	0.5	37	KAO
		31	2119	28.54	19	22.78	155	2.16	7.20	1.6	1.1	28	2	141	.13	5	0.5	0.8	26	SF5
		31	2253	45.24	19	19.23	155	8.33	4.00	1.5	1.1	28	4	87	.12	4	0.3	1.0	25	SSF
	NOV	1	1532	41.88	19	20.10	155	12.65	7.42	1.3	1.5	33	1	73	.11	5	0.5	0.7	32	SF2
		1	1627	4.93	19	26.46	155	28.58	10.06	2.1	1.5	39	3	57	.11	6	0.4	0.6	34	KAO
		1	1712	16.84	19	22.86	155	29.91	8.59	1.6	1.1	33	2	70	.12	4	0.4	0.9	26	KAO
		1	1830	29.99	19	13.61	155	29.85	11.59	2.0	1.7	35	5	122	.14	3	0.5	0.6	31	LSW
		2	0 5	7.91	19	20.12	155	12.24	6.73	1.8	2.1	32	1	77	.13	5	0.5	0.9	30	SF3
		2	032	23.82	19	19.32	155	13.88	8.12	1.9	2.2	34	5	84	.08	4	0.3	0.5	30	SF2
		2	1124	34.15	19	24.54	155	19.30	6.63	2.1	2.2	42	6	45	.12	2	0.3	0.5	37	KAO
		2	1513	36.09	19	20.16	155	12.99	7.08	1.2	1.3	21	1	69	.09	5	0.6	1.0	21	SF2
		2	1631	22.40	19	20.39	155	12.39	7.60	2.3	3.0	45	4	71	.12	4	0.4	0.6	40	SF2
		2	17 4	21.95	19	25.30	155	19.86	7.01	2.2	2.2	39	4	46	.12	3	0.4	0.8	35	KAO
		2	1916	13.10	19	21.96	155	5.94	6.75	1.4	1.1	32	2	78	.17	3	0.6	1.0	30	SF4
		2	1956	16.85	19	0.06	155	31.63	44.05	2.6	2.4	49	7	257	.09	19	1.4	1.1	45	DLS
		3	4 9	13.79	19	46.92	155	50.11	14.25	2.3	2.4	32	5	173	.15	11	0.9	0.4	26	HUA
		3	545	13.54	19	25.40	155	27.91	9.67	1.9	1.5	38	5	56	.12	5	0.4	0.8	31	KAO
		3	620	14.68	19	19.82	155	10.04	6.32	1.3	1.1	20	1	89	.10	4	0.6	1.3	19	SF3
		3	826	35.24	19	13.93	155	34.89	8.30	2.2	1.7	36	3	191	.18	4	0.7	0.6	34	LSW
		3	11 2	18.52	19	19.17	155	12.10	6.59	1.3	1.3	31	1	98	.10	5	0.5	0.9	30	SF3
		3	1315	46.50	19	19.74	155	12.62	7.14	1.2	1.3	32	1	79	.12	5	0.5	0.8	32	SF2
		3	1731	37.45	19	21.82	155	14.74	9.20	2.7	3.2	54	11	59	.11	2	0.3	0.4	45	SF1
		3	23 4	14.11	19	21.66	155	1.33	6.40	1.6	1.1	32	3	172	.15	4	0.6	0.8	29	SF5
		3	2325	44.71	19	21.16	155	2.04	6.34	1.8	1.8	32	4	165	.12	3	0.5	0.6	28	SF5
		4	434	41.86	19	19.98	155	7.53	4.09	1.4	1.3	33	4	99	.15	5	0.4	1.3	29	SSF
		4	1149	3.63	19	27.44	154	49.77	10.25	2.9	2.6	43	6	254	.13	3	1.1	0.3	40	LER
		4	1240	39.28	19	22.36	155	26.42	10.68	2.3	2.0	41	4	39	.13	2	0.4	0.6	36	KAO
		5	1023	26.24	19	22.88	155	26.17	10.16	1.6	1.1	25	2	49	.10	3	0.4	0.9	22	KAO
		5	1529	3.83	19	19.77	155	10.68	7.94	1.7	2.1	35	3	91	.11	5	0.5	0.7	33	SF3
		5	1748	58.11	18	56.52	155	11.35	46.03	2.1	2.0	46	6	266	.09	38	1.4	1.2	44	LOI
		5	2212	21.39	19	21.80	155	0.71	5.63	1.6	1.7	28	3	172	.11	5	0.6	0.9	22	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
1984	NOV	5	2344	53.61	19	20.23	155	12.80	6.87	1.8	2.1	41	3	70	.12	4	0.4	0.7	36	SF2
		6	125	4.53	19	22.64	155	20.69	8.72	1.7	1.1	27	2	69	.10	6	0.4	0.9	22	KAO
		6	3	2 16.54	19	20.37	155	12.94	7.74	1.4	1.8	29	2	67	.11	4	0.5	0.7	27	SF2
		6	1058	29.20	19	21.96	155	30.14	8.61	1.5	1.1	26	1	78	.11	5	0.5	1.0	24	KAO
		6	1156	32.58	19	19.64	155	12.33	6.49	1.5	1.5	32	1	85	.10	5	0.5	0.9	30	SF2
		6	1347	52.30	19	20.12	155	12.39	7.61	1.4	1.3	30	0	76	.12	5	0.5	0.8	28	SF2
		6	1354	43.59	18	55.95	155	24.33	35.32	2.3	1.8	42	7	242	.08	26	1.0	1.1	38	LOI
		6	1356	29.84	19	20.68	155	10.75	7.46	1.4	1.3	31	1	75	.11	3	0.5	0.9	30	SF3
		6	1414	38.94	19	19.79	155	12.38	7.39	1.3	1.1	24	0	81	.09	5	0.5	0.9	23	SF2
		6	1746	29.20	19	20.79	155	21.66	9.99	1.9	2.1	35	5	101	.10	3	0.4	0.6	30	SWR
		7	021	7.76	19	14.53	155	34.83	7.64	2.2	1.5	32	6	78	.18	4	0.5	0.8	28	LSW
		7	149	37.51	19	19.49	155	10.52	6.71	1.3	1.3	19	1	218	.11	5	1.4	1.5	18	SF3
		7	753	20.12	19	17.88	155	25.67	8.56	1.7	1.8	36	3	62	.16	6	0.5	0.9	34	LSW
		7	13	6 59.72	19	22.84	155	29.91	9.57	1.7	1.5	34	4	71	.10	4	0.4	0.7	32	KAO
		7	2027	41.97	19	18.91	155	12.84	4.18	1.3	1.3	24	3	204	.12	7	0.8	3.0	22	SSF
		8	1428	41.06	19	26.72	155	28.66	7.50	1.7	1.1	25	2	58	.11	7	0.4	1.2	23	KAO
		8	2047	16.67	19	27.05	155	30.20	9.72	1.9	1.6	31	4	46	.10	9	0.4	0.9	26	KAO
		8	2356	57.48	19	18.65	155	13.01	8.78	1.9	1.9	36	2	171	.13	7	0.6	0.5	32	SF2
		9	424	19.75	19	20.74	155	12.44	7.71	1.4	1.6	29	2	189	.12	4	0.9	0.7	27	SF2
		9	454	48.85	19	32.25	155	36.13	9.30	1.8	1.0	28	3	67	.14	2	0.5	0.7	25	HLO
		9	1633	46.24	19	27.37	155	23.06	9.93	1.9	1.4	38	5	48	.09	4	0.3	0.5	32	KAO
		9	1636	15.34	19	25.04	155	19.01	5.86	1.4	1.3	26	5	105	.09	3	0.4	0.9	21	INT
		9	1811	40.75	19	22.50	155	3.13	7.12	1.5	1.7	26	4	198	.15	4	1.1	0.9	22	SF5
		10	445	4.95	19	21.08	155	13.08	6.77	1.4	1.6	28	2	178	.18	3	1.0	0.8	25	SF2
		10	637	11.93	19	23.84	155	30.01	9.07	1.7	1.3	27	4	61	.08	5	0.4	0.8	24	KAO
		10	19	9 57.42	19	19.30	155	13.73	6.72	1.5	1.5	29	1	192	.12	6	0.6	0.8	28	SF2
		10	1955	46.38	19	25.47	155	21.09	9.84	2.5	2.7	46	7	56	.11	4	0.3	0.4	40	KAO
		10	2229	7.78	18	55.74	155	15.06	11.26	2.0	1.5	20	1	281	.09	34	2.6	1.0	20	LOI
		10	2245	50.34	18	56.73	155	16.73	12.29	2.4	3.3	28	2	262	.12	31	2.0	0.9	26	LOI L
		11	121	9.20	19	20.71	155	21.43	12.20	1.6	1.4	26	5	138	.09	3	0.5	0.5	22	SWR
		11	440	17.47	19	27.46	155	26.59	5.86	1.5	1.1	29	5	53	.11	5	0.3	1.1	26	KAO
		11	534	6.20	18	55.84	155	13.30	8.85	4.0	4.2	47	7	244	.12	36	0.9	0.6	39	LOI F
		11	550	37.04	18	58.30	155	13.87	14.26	2.8	3.6	36	3	236	.11	32	1.3	1.4	33	LOI
		11	651	6.78	18	52.48	155	9.89	24.74	2.5	3.0	22	2	274	.10	45	2.6	6.7	19	LOI
		11	844	59.11	19	18.66	155	11.76	2.85	1.3	1.0	25	1	218	.11	7	1.0	2.2	23	SSF
		11	10	5 13.85	18	56.54	155	12.68	10.30	2.9	3.5	41	7	243	.12	36	0.9	0.6	37	LOI
		11	19	3 19.55	19	20.57	155	11.26	9.06	3.4	3.9	44	4	167	.12	4	0.6	0.5	35	SF3
		11	1923	44.07	19	16.51	155	27.66	10.15	1.8	1.8	29	3	111	.13	5	0.4	0.8	25	LSW
		11	2248	1.58	19	20.44	155	8.52	6.99	2.1	2.5	41	4	174	.13	4	0.7	0.6	35	SF4
		11	2357	0.07	19	19.47	155	11.80	7.23	1.5	1.6	28	1	198	.11	6	1.0	0.7	25	SF3
		12	1	0 42.65	19	7.53	156	10.22	42.53	2.9	2.7	37	3	274	.11	35	2.4	1.5	35	KON
		12	138	44.74	19	22.62	155	1.86	6.28	1.9	1.8	36	4	191	.19	6	1.1	1.2	30	SF5
		12	252	36.97	19	27.36	155	29.62	9.97	1.9	1.2	31	5	49	.12	7	0.4	0.9	26	KAO
		12	656	56.97	19	19.36	155	12.13	5.51	1.3	1.3	21	1	237	.08	6	1.3	1.6	19	SF3
		12	816	39.55	19	18.97	155	15.29	6.57	1.8	1.5	28	0	171	.12	4	0.8	1.0	22	SF1

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
1984	NOV	12	817	57.00	19	26.82	155	14.95	30.86	1.6	1.4	39	6	50	.10	4	0.7	0.9	36	DEP
		12	1328	48.67	19	20.23	155	11.17	6.83	1.4	1.3	22	0	209	.12	4	1.3	1.1	21	SF3
		12	1511	19.54	19	17.79	155	12.87	7.56	1.7	1.9	37	3	122	.11	2	0.4	0.6	35	SF2
		12	1532	40.84	19	46.37	155	3.73	42.41	2.2	1.7	41	8	208	.10	9	0.7	1.1	39	HIL
		12	1557	40.70	19	17.95	155	12.98	6.82	1.3	1.1	25	1	110	.11	2	0.6	1.0	24	SF2
		12	2018	40.50	19	17.67	155	14.04	8.37	1.2	1.1	24	1	136	.08	2	0.6	0.9	24	SF2
		12	2021	14.51	19	17.85	155	13.02	8.34	1.3	1.1	25	1	113	.11	2	0.6	1.0	21	SF2
		12	22	2 28.96	19	18.02	155	14.13	6.34	1.3	1.1	26	1	102	.10	2	0.5	0.9	26	SF2
		12	2217	24.12	18	46.77	155	33.36	12.80	2.5	3.1	41	4	289	.10	25	1.4	0.9	38	LSW
		13	134	17.52	19	21.18	155	6.10	7.73	1.4	1.8	30	2	93	.13	5	0.5	0.7	27	SF4
		13	857	58.93	19	18.89	155	13.16	6.06	1.9	2.5	38	4	82	.11	3	0.4	0.8	33	SF2
		13	1110	36.49	19	19.91	155	29.72	9.29	1.8	1.7	34	2	50	.11	6	0.4	0.8	31	KAO
		13	1610	48.72	19	14.54	155	21.47	7.00	1.4	1.3	23	1	160	.09	4	0.7	1.2	22	SWR
		13	1717	1.59	19	20.21	155	13.09	9.15	1.9	2.1	40	7	67	.09	4	0.4	0.5	34	SF2
		13	1736	11.03	19	19.48	155	12.66	7.94	1.3	1.1	29	2	83	.09	5	0.4	0.8	28	SF2
		13	1752	22.91	19	26.03	155	21.86	10.35	1.4	1.2	31	6	54	.07	4	0.4	0.7	27	KAO
		13	1857	56.22	19	19.78	155	12.60	6.83	1.2	1.5	27	2	79	.11	5	0.4	0.9	27	SF2
		13	1859	1.07	19	19.74	155	12.45	7.62	1.9	2.2	38	5	81	.11	5	0.4	0.7	35	SF2
		13	2131	49.43	19	23.30	155	20.67	11.19	1.6	1.4	30	4	54	.07	2	0.4	0.7	27	KAO
		14	1	5 56.24	19	51.79	155	8.87	15.69	3.8	3.8	53	10	222	.10	21	0.9	1.0	45	KEA F
		14	142	40.78	19	19.81	155	12.13	7.60	1.3	1.5	25	1	84	.08	5	0.4	0.8	25	SF3
		14	327	7.26	19	27.34	155	26.61	7.01	1.6	1.3	30	4	49	.11	5	0.3	0.9	26	KAO
		14	4	0 49.75	19	19.49	155	12.20	7.88	1.4	1.5	34	1	88	.09	5	0.4	0.6	33	SF3
		14	9	5 31.30	18	59.46	155	16.53	10.38	2.2	3.0	19	0	274	.13	27	3.1	1.4	18	LOI L
		14	1048	58.40	19	20.21	155	11.74	8.70	1.5	1.1	25	1	80	.08	5	0.5	0.7	24	SF3
		14	1229	17.35	19	23.01	155	21.08	10.58	1.9	2.1	43	3	43	.09	3	0.3	0.5	36	KAO
		14	1321	39.12	19	14.23	155	21.96	7.24	1.4	1.7	23	1	160	.11	4	0.5	0.9	21	SWR
		14	20	8 56.27	19	20.44	155	11.90	8.03	2.4	3.0	52	7	75	.13	5	0.4	0.6	44	SF3
		15	1056	2.10	19	20.22	155	12.57	6.89	1.5	1.4	33	3	72	.12	5	0.5	0.7	23	SF2
		15	1146	33.29	19	9.51	155	39.94	4.24	2.5	2.7	41	9	121	.19	11	0.5	1.9	29	LSW
		15	1335	1.40	19	19.39	155	9.94	6.18	1.6	1.9	30	1	98	.13	5	0.6	1.3	23	SF3
		15	1656	20.51	19	23.78	155	29.90	8.63	1.5	1.2	26	1	68	.08	5	0.4	0.9	25	KAO
		15	2357	32.08	18	56.05	155	13.05	11.97	2.1	1.7	23	1	278	.09	36	2.4	0.6	17	LOI
		16	1	1 58.02	19	22.25	155	28.86	9.49	3.0	3.3	46	7	43	.11	2	0.3	0.5	31	KAO
		16	726	25.54	19	25.23	155	30.01	6.63	1.9	1.4	34	2	66	.12	7	0.4	1.4	29	KAO
		16	1323	14.74	19	20.27	155	11.93	7.45	1.9	2.1	41	5	78	.13	5	0.4	0.7	33	SF3
		16	1444	13.84	19	17.73	155	14.65	6.70	1.3	1.1	25	3	129	.11	2	0.6	0.9	19	SF1
		16	15	6 4.37	19	19.92	155	13.67	5.32	1.1	1.2	22	1	72	.12	5	0.5	1.5	16	SF2
		16	19	4 24.86	19	23.61	155	20.70	10.26	2.3	2.6	48	6	39	.11	2	0.3	0.4	34	KAO
		16	2051	59.41	19	41.71	156	5.03	5.77	3.0	2.7	29	3	280	.14	26	1.4	0.6	19	HUA
		17	118	36.38	19	19.52	155	12.59	6.09	1.3	1.2	21	0	83	.11	5	0.5	1.4	18	SF2
		17	1039	58.26	19	25.10	155	19.83	4.66	1.0	1.1	16	0	88	.06	3	0.4	1.0	15	KAO
		17	15	8 43.51	19	23.31	155	29.48	8.15	1.7	1.1	29	4	67	.12	4	0.4	0.8	25	KAO
		17	1646	18.79	19	18.09	155	12.80	3.97	1.2	1.1	19	1	112	.08	2	0.5	1.1	14	SSF
		18	1435	9.99	20	9.77	155	36.14	32.36	4.0	3.5	54	8	232	.10	16	0.7	1.4	46	KOH F

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
1984	NOV	18	2019	26.74	19	22.38	155	28.61	9.64	2.1	1.3	41	3	63	.11	2	0.4	0.6	36	KAO
		19	5 2	30.03	19	22.31	155	26.56	9.78	2.0	1.0	36	4	47	.13	2	0.4	0.6	30	KAO
		20	7 1	48.68	19	23.74	155	16.16	2.73	1.4	1.4	15	2	95	.15	1	0.4	0.4	11	SEC
		20	944	55.15	19	26.39	155	29.94	7.58	1.9	1.7	28	3	63	.10	8	0.4	1.1	21	KAO
		20	1224	58.66	19	24.27	155	16.14	3.02	1.0	1.0	10	1	128	.01	1	0.4	0.4	8	SEC
		20	22 7	7.47	19	24.11	155	25.66	6.81	1.7	1.3	33	2	35	.12	2	0.4	0.9	30	KAO
		20	2352	13.00	19	25.34	155	19.92	4.57	1.6	1.3	19	2	105	.10	3	0.4	1.1	16	KAO
		21	019	14.52	19	19.51	155	14.94	4.69	1.2	1.3	16	0	97	.10	4	0.5	1.8	14	SSF
		21	451	22.79	19	19.87	155	8.12	5.96	1.5	1.3	28	2	87	.13	5	0.5	1.2	23	SF4
		21	635	6.17	19	20.21	155	11.54	7.38	1.7	2.3	46	6	80	.14	5	0.4	0.6	35	SF3
		21	636	30.57	19	47.23	155	34.13	14.64	2.1	1.4	24	5	94	.10	12	0.5	0.4	18	KEA
		21	1047	8.97	19	25.20	155	29.06	8.93	2.1	2.0	44	7	34	.11	6	0.3	0.8	36	KAO
		21	1349	1.33	19	21.47	155	1.57	6.90	1.7	1.1	31	3	170	.13	4	0.5	0.7	25	SF5
		21	19 8	39.06	19	20.04	155	13.24	5.56	1.2	1.1	23	2	66	.12	5	0.5	1.4	21	SF2
		22	137	18.05	19	22.61	155	20.80	10.30	2.7	2.6	50	5	45	.12	3	0.4	0.4	39	KAO
		22	533	57.73	19	19.89	155	7.79	5.29	1.4	1.1	28	1	95	.13	5	0.5	1.5	21	SF4
		22	748	52.37	19	20.39	155	11.52	7.33	1.9	2.6	24	1	77	.10	4	0.5	1.1	14	SF3
		22	948	50.50	19	20.24	155	12.20	7.40		0.9	20	1	78	.07	5	0.6	1.0	15	SF3
		22	1328	0.56	19	18.11	154	58.87	38.35	2.7	2.4	49	6	216	.10	8	0.9	0.8	36	LER
		23	136	38.78	19	22.91	155	26.64	9.87	1.7	1.3	36	3	43	.11	2	0.4	0.6	22	KAO
		23	212	45.38	19	20.40	155	12.81	6.84	1.4	1.8	33	3	68	.13	4	0.5	0.9	27	SF2
		23	517	47.38	19	13.44	155	37.71	7.48	2.4	1.9	36	3	169	.25	3	0.9	1.1	31	LSW
		23	610	16.22	19	21.29	155	21.81	8.38	1.7	1.6	38	6	95	.12	3	0.4	0.7	27	SWR
		23	1317	21.69	19	28.05	155	24.45	2.40	1.3	1.3	19	3	65	.11	4	0.3	0.8	14	KAO
		23	1330	56.86	19	21.76	155	1.21	6.99	1.7	1.5	20	2	172	.10	5	0.7	1.2	13	SF5
		23	1426	46.43	19	20.60	155	12.41	7.09	1.6	1.5	31	2	69	.12	4	0.5	0.7	23	SF2
		23	2059	15.18	19	25.73	155	29.12	10.24	1.6	1.4	33	4	37	.12	7	0.4	0.7	21	KAO
		24	243	42.39	19	18.60	155	27.68	8.62	1.5	1.1	29	0	44	.13	7	0.4	1.0	20	LSW
		24	342	13.96	19	20.34	155	9.98	8.10	1.4	1.8	34	3	78	.09	3	0.4	0.6	27	SF3
		24	1525	3.84	19	27.31	155	29.60	9.56	1.9	1.4	39	6	50	.11	7	0.4	0.8	24	KAO
		24	1856	1.21	19	23.26	155	20.32	10.29	1.6	1.1	27	3	60	.09	1	0.5	0.6	22	KAO
		24	1952	14.80	19	19.38	155	15.18	6.93	1.4	1.6	36	1	94	.12	4	0.4	0.7	31	SF1
		24	20 4	24.23	19	19.87	155	12.14	6.77	1.2	1.5	35	3	82	.12	5	0.5	0.7	28	SF3
		25	1815	23.15	19	18.85	155	15.14	8.01	2.2	1.9	43	3	95	.13	4	0.4	0.6	35	SF1
		26	1023	23.15	19	19.90	155	8.15	7.00	1.9	2.2	33	2	86	.11	5	0.5	0.9	22	SF4
		26	1254	20.23	19	27.63	155	19.85	13.49	1.8	1.4	29	3	129	.10	1	0.6	0.6	22	DML
		26	14 2	12.51	19	42.84	155	3.44	0.00	2.0	2.8	24	1	215	.26	3	2.4	1.3	13	HIL B*
		27	212	47.13	19	23.50	155	50.09	11.50	2.2	1.3	21	4	125	.14	14	0.6	0.6	17	KON
		27	231	54.12	19	12.24	155	12.45	42.28	2.1	1.5	31	1	211	.09	9	1.2	2.0	27	DEP
		27	11 2	50.62	19	21.35	155	6.88	6.18	1.4	1.1	32	3	84	.12	4	0.5	0.9	28	SF4
		27	1153	42.55	20	5.97	155	25.00	1.29	2.6	2.6	36	3	273	.15	25	1.5	1.0	28	KEA
		27	18 9	53.36	19	18.42	155	16.61	7.54	2.0	1.9	41	3	117	.11	3	0.4	0.7	34	SF1
		28	215	48.51	19	47.84	155	23.63	24.82	3.1	2.7	53	10	78	.10	7	0.4	1.0	40	KEA
		28	237	47.38	19	18.99	155	14.61	6.74	1.2	1.5	33	2	93	.10	4	0.4	0.7	24	SF1
		28	716	17.52	19	18.47	155	13.36	6.86	1.3	1.5	27	4	82	.09	3	0.5	0.9	21	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
1984	NOV	28	1651	2.44	19	20.57	155	12.81	6.88	1.2	1.5	31	2	65	.12	4	0.5	0.7	27	SF2
		28	20 3	34.43	19	25.54	155	30.51	7.46	1.8	1.3	37	2	35	.12	8	0.4	1.2	28	KAO
		28	2055	5.02	19	30.10	155	16.70	10.42	1.9	1.6	37	3	57	.12	8	0.3	0.9	27	GLN
		28	2257	11.20	19	22.90	155	26.70	10.86	2.4	2.5	44	6	40	.12	2	0.4	0.6	33	KAO
		29	030	2.69	19	16.00	155	22.49	4.81	1.4	1.3	25	2	158	.09	4	0.5	1.9	19	SWR
		29	2 3	39.09	19	28.88	155	26.44	5.27	2.3	2.2	43	6	57	.12	6	0.3	1.2	33	KAO
		29	215	19.16	19	14.47	155	28.09	6.66	1.9	1.3	28	1	97	.19	4	0.6	1.5	19	LSW
		29	1252	29.22	19	20.23	155	11.62	9.43	1.5	1.3	26	2	80	.07	5	0.5	0.8	21	SF3
		29	1339	42.12	19	23.07	155	26.09	10.12	1.7	1.5	38	1	43	.13	3	0.4	0.6	36	KAO
		29	1459	29.14	19	12.56	155	17.64	45.59	1.9	1.8	39	2	191	.09	10	1.0	1.5	35	DEP L
		29	2029	56.39	19	19.43	155	16.09	7.64	2.0	2.1	45	3	96	.12	3	0.4	0.6	36	SF1
		29	21 4	15.61	19	26.12	155	19.94	5.85	1.8	2.0	33	5	48	.12	3	0.4	0.8	28	KAO
		29	2324	58.11	19	21.34	155	5.84	8.08	1.0	1.1	23	3	90	.10	4	0.5	0.8	21	SF4
		30	125	11.72	19	26.78	155	28.74	10.02	1.9	1.5	35	3	58	.09	7	0.4	0.9	29	KAO
		30	5 1	2.82	19	24.56	155	16.91	3.30	0.6	1.1	9	0	101	.14	1	0.8	0.6	8	SNC L
		30	6 2	37.82	19	54.68	155	11.70	39.68	1.9	1.1	36	4	209	.13	16	1.0	1.6	24	KEA
		30	925	50.51	19	50.08	156	2.55	41.61	2.7	2.4	45	8	236	.12	27	0.9	1.2	41	HUA
		30	1248	43.01	19	21.53	155	23.57	10.58	2.5	2.8	54	8	41	.12	3	0.3	0.4	46	SWR
		30	1316	27.08	19	20.09	155	13.12	5.82	1.4	1.1	28	2	68	.13	5	0.5	1.1	27	SF2
		30	1850	12.75	19	29.29	155	27.50	4.94	2.4	2.5	49	8	56	.12	5	0.3	1.5	38	KAO
		30	1917	21.35	19	16.87	155	25.36	7.06	1.2	1.1	17	3	96	.09	5	0.4	1.3	16	LSW
		30	2136	32.02	19	19.69	155	12.13	6.25	1.3	1.1	25	1	86	.09	5	0.5	1.1	24	SF3
		30	23 7	15.90	19	24.40	155	15.95	22.66	1.7	1.5	44	4	71	.11	1	0.6	0.8	40	DEP
DEC		1	10 9	27.82	19	39.88	155	49.84	7.90	2.3	1.8	22	3	157	.17	3	0.9	0.8	20	HUA
		2	131	22.01	19	23.87	155	26.91	10.18	2.7	3.0	53	7	28	.12	3	0.3	0.5	45	KAO
		2	651	23.04	19	19.25	155	11.49	7.38	1.4	1.5	27	1	102	.08	5	0.5	1.0	25	SF3
		2	652	45.55	19	25.66	155	28.85	9.34	1.6	1.4	31	3	60	.10	6	0.4	1.0	23	KAO
		2	924	57.66	19	23.95	155	27.17	9.14	1.5	1.3	35	2	54	.12	3	0.4	0.7	33	KAO
		2	10 6	22.58	19	20.01	155	11.69	8.24	1.5	1.6	33	1	84	.08	5	0.5	0.8	30	SF3
		2	1754	56.75	19	9.17	155	19.55	64.65	2.1	2.6	30	3	246	.10	12	2.5	1.3	27	LOI L
		2	2216	2.45	19	23.20	155	26.78	9.34	1.5	1.3	34	3	33	.11	2	0.4	0.7	30	KAO
		3	111	15.41	19	20.19	155	11.19	8.69	2.3	2.7	41	3	83	.10	4	0.4	0.8	37	SF3
		3	124	51.61	19	23.43	155	20.57	9.84	1.6	1.7	34	4	58	.09	2	0.4	0.6	30	KAO
		3	149	42.67	19	19.87	155	11.14	8.34	1.8	2.3	39	4	89	.10	5	0.4	0.7	32	SF3
		3	233	30.59	19	23.73	155	26.72	10.92	1.8	2.0	36	1	38	.11	3	0.4	0.7	32	KAO
		3	828	22.20	19	27.05	155	28.74	11.21	1.6	1.2	21	0	82	.07	8	0.6	1.7	21	KAO
		3	919	49.84	19	20.73	155	22.99	9.09	1.6	1.6	31	3	66	.11	1	0.4	0.8	27	SWR
		3	1318	54.86	19	20.36	155	13.50	8.96	1.3	1.5	24	0	65	.09	4	0.6	0.9	24	SF2
		3	1333	38.92	19	19.97	155	12.03	9.09	1.7	1.8	33	1	81	.08	5	0.4	0.6	29	SF3
		3	1513	43.37	19	21.85	155	2.35	7.61	1.7	1.3	31	1	144	.13	4	0.6	0.6	27	SF5
		3	2110	40.87	19	21.31	155	28.89	6.36	1.8	1.9	31	2	45	.11	3	0.4	0.9	26	KAO
		3	2118	1.30	19	12.14	155	38.35	8.74	1.9	1.4	30	4	100	.22	6	0.6	1.4	29	LSW
		4	012	50.21	19	17.54	155	27.24	9.23	2.1	2.4	43	4	49	.15	7	0.4	0.7	40	LSW
		4	027	59.19	19	17.32	155	27.22	9.79	2.0	2.3	39	4	51	.15	7	0.4	0.8	36	LSW
		4	210	12.85	19	23.72	155	15.49	3.09	1.7	1.9	26	5	97	.12	2	0.3	0.3	23	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
1984	DEC	4	8 7	52.45	19	24.24	155	15.84	3.71	1.0	1.1	15	4	124	.09	1	0.4	0.3	12	SEC
		4	1053	34.48	19	24.47	155	25.92	10.57	1.7	2.0	38	2	33	.10	2	0.4	0.6	36	KAO
		4	1056	2.50	19	53.02	155	22.21	8.56	1.8	1.3	17	2	190	.12	3	1.0	0.6	16	KEA
		4	1149	10.86	19	23.95	155	16.23	2.95	1.7	2.1	19	4	98	.06	1	0.3	0.2	15	SEC
		4	1255	17.73	19	24.91	155	16.44	0.73	1.0	1.7	11	2	148	.14	1	0.3	0.3	9	SNC
		4	1358	35.93	19	53.50	155	22.58	8.98	2.6	2.5	27	4	208	.13	4	1.0	0.6	25	KEA
		4	14 5	0.98	19	53.89	155	23.08	9.85	2.6	2.5	27	3	200	.11	5	0.9	0.4	24	KEA
		4	1422	21.01	19	11.86	155	28.42	8.13	2.3	2.1	34	2	114	.15	4	0.5	0.7	32	LSW
		4	15 2	37.92	19	53.68	155	22.63	10.07	2.1	2.4	25	3	195	.12	4	0.8	0.4	24	KEA
		4	15 5	13.75	19	25.79	155	21.58	9.38	1.5	1.1	30	3	50	.10	4	0.4	0.7	27	KAO
		4	1623	54.53	19	22.48	155	27.60	9.69	2.3	2.5	42	4	38	.11	0	0.3	0.5	39	KAO
		4	2134	57.59	19	53.73	155	22.63	9.70	3.3	3.5	48	5	215	.11	4	0.8	0.3	39	KEA F
		4	2223	15.48	19	54.15	155	23.27	8.73	2.1	1.5	21	1	205	.18	5	1.1	0.7	20	KEA
		5	3 9	6.24	19	17.72	155	20.50	5.55	1.4	1.3	24	3	126	.09	3	0.4	1.3	22	SWR
		5	1729	52.32	19	16.54	155	27.29	9.12	2.4	3.0	48	4	60	.14	6	0.3	0.5	42	LSW
		5	19 5	43.56	19	53.53	155	22.23	10.05	2.5	2.3	31	2	209	.09	3	0.9	0.4	29	KEA
		6	212	35.36	19	19.66	155	30.05	9.73	1.9	1.5	30	2	54	.10	7	0.4	0.9	28	KAO
		6	345	21.16	18	50.20	156	56.86	31.06	2.3	2.7	34	4	327	.10	123	2.3	3.3	33	DIS
		7	116	19.28	19	5.22	155	24.64	33.74	3.1	3.4	53	7	193	.09	10	0.8	1.1	46	LOI
		7	452	0.13	19	28.32	155	26.78	5.56	1.8	1.1	35	3	77	.10	6	0.3	1.2	32	KAO
		7	1646	8.67	19	19.91	155	11.69	4.79	1.6	1.6	34	2	86	.15	5	0.5	1.8	31	SSF
		8	1235	29.63	19	22.58	155	30.03	9.23	1.7	1.1	25	1	72	.09	4	0.5	0.9	24	KAO
		8	1311	55.39	19	23.86	155	26.00	6.62	2.0	1.9	38	3	36	.13	3	0.4	0.9	34	KAO
		8	1348	44.58	19	18.95	155	12.07	3.85	1.2	1.1	25	2	103	.13	4	0.5	1.7	23	SSF
		8	1628	9.52	19	23.75	155	17.22	13.91	2.2	2.4	49	8	33	.11	1	0.4	0.3	41	DEF
		9	4 0	44.80	19	25.09	155	29.34	8.13	1.8	1.1	26	2	63	.10	6	0.4	1.0	24	KAO
		9	523	37.40	19	19.04	155	9.22	4.26	1.3	1.1	22	2	100	.12	4	0.5	1.6	22	SSF
		9	623	18.55	19	20.56	155	11.63	8.99	1.9	2.1	37	3	75	.11	4	0.5	0.7	34	SF3
		9	940	46.17	19	19.42	155	30.42	9.45	2.3	2.2	42	3	59	.13	8	0.4	0.7	38	KAO
		9	1557	56.07	19	19.17	155	13.43	7.44	1.4	1.6	32	0	72	.11	4	0.5	0.9	31	SF2
		9	1630	8.03	19	20.00	155	11.78	7.49	1.4	1.1	25	0	83	.09	5	0.6	1.0	23	SF3
		10	022	17.22	19	25.60	155	29.17	10.38	1.7	1.4	30	1	46	.12	6	0.4	0.8	28	KAO
		10	115	17.68	19	25.66	155	29.32	9.81	2.2	2.0	44	4	37	.10	7	0.3	0.7	38	KAO
		10	525	14.95	19	19.56	155	8.34	7.90	1.8	1.9	30	2	85	.09	4	0.4	0.7	26	SF4
		10	925	24.44	19	25.35	155	19.31	7.09	1.9	2.1	29	4	100	.10	3	0.4	0.9	24	KAO
		10	1448	34.58	19	22.51	155	29.65	8.78	1.6	1.7	34	1	70	.12	4	0.4	0.8	33	KAO
		10	2056	17.92	19	26.63	155	31.41	12.30	2.2	2.0	39	4	35	.11	7	0.3	0.5	36	KAO
		10	2331	40.94	19	22.93	155	1.25	6.58	1.8	1.7	34	3	144	.13	6	0.5	1.0	31	SF5
		10	2356	2.58	19	58.34	155	31.78	40.50	2.3	2.0	41	4	247	.10	19	1.3	1.0	38	KEA
		11	032	57.51	19	29.01	155	51.59	7.29	2.1	1.3	31	4	140	.16	6	0.6	0.6	26	KON
		11	232	48.42	19	34.81	155	25.01	10.10	2.8	2.6	43	4	80	.12	7	0.4	0.7	36	MLO
		11	515	21.28	19	20.12	155	13.39	6.09	1.3	1.1	26	3	65	.14	5	0.5	1.1	26	SF2
		11	1233	2.42	19	21.26	155	24.05	10.39	1.6	1.1	28	4	115	.09	2	0.5	0.7	25	SWR
		11	15 2	57.22	19	21.37	155	17.36	26.81	1.7	1.4	35	4	43	.07	2	0.7	1.0	31	DEF
		11	19 7	24.42	19	20.67	155	30.48	10.16	1.8	1.4	33	2	52	.09	6	0.4	0.8	31	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
1984	DEC	12	3 9	19.58	19	18.46	155	15.53	6.88	1.3	1.5	38	1	117	.09	4	0.4	0.7	38	SF1
		12	515	15.30	19	19.36	155	11.66	6.30	1.9	2.2	37	2	98	.12	5	0.4	0.9	33	SF3
		12	521	25.99	19	22.24	155	30.08	11.02	2.1	1.9	45	3	33	.09	4	0.3	0.6	41	KAO
		12	651	57.63	19	59.20	155	32.75	32.04	2.5	2.2	54	7	173	.09	18	0.6	1.0	48	KEA
		12	1236	1.75	19	25.69	155	30.02	10.59	1.8	1.2	29	2	65	.08	7	0.4	1.0	27	KAO
		12	1251	47.03	19	26.70	155	14.57	31.48	1.9	1.4	42	4	125	.11	4	0.8	1.0	39	DEF
		12	14 5	50.70	19	25.05	155	19.18	6.56	1.4	1.3	19	3	104	.07	3	0.5	0.9	17	KAO
		13	423	10.15	19	19.66	155	12.88	6.08	1.3	1.3	22	0	76	.12	5	0.6	1.5	21	SF2
		13	734	6.50	19	12.44	155	33.46	8.78	2.1	1.6	35	1	164	.12	8	0.6	0.7	33	LSW
		13	1029	30.18	19	22.42	155	28.91	9.58	1.6	1.5	33	1	65	.10	2	0.4	0.7	30	KAO
		13	2331	51.97	19	21.97	155	2.52	5.19	1.5	1.3	32	3	137	.16	4	0.6	1.5	29	SF5
		13	2346	38.58	19	24.19	155	37.83	0.13	2.0	1.6	19	7	92	.15	6	0.3	0.3	16	MLO
		14	4 8	57.61	19	21.00	155	6.39	6.41	1.4	1.6	28	2	95	.11	5	0.5	1.0	27	SF4
		14	1127	9.22	19	22.06	155	24.59	12.67	2.0	2.0	44	5	30	.12	4	0.4	0.5	38	KAO
		15	052	19.72	19	21.98	155	3.70	6.78	1.4	1.9	29	2	103	.16	4	0.5	1.0	27	SF5
		15	915	6.07	19	17.29	155	16.16	8.18	1.7	2.1	41	3	154	.12	5	0.4	0.6	38	SF1
		15	2020	31.63	19	22.71	155	26.81	9.77	1.6	1.6	35	3	36	.13	1	0.4	0.8	30	KAO
		15	2055	25.04	19	28.17	155	28.73	9.85	1.8	1.3	32	4	77	.10	7	0.4	0.9	28	KAO
		16	048	30.79	19	19.26	155	13.17	6.59	1.2	1.1	19	2	76	.10	4	0.5	1.4	19	SF2
		16	419	25.99	19	18.91	155	26.43	10.06	1.5	1.4	36	2	55	.14	6	0.4	0.7	32	LSW
		16	750	37.04	19	19.17	155	13.25	9.49	2.9	3.3	54	7	127	.13	6	0.4	0.4	43	SF2
		16	753	50.25	19	18.37	155	13.09	4.11	1.4	1.4	35	2	94	.12	3	0.4	1.2	27	SSF
		16	756	43.53	19	18.06	155	13.05	5.67	1.3	1.1	20	0	103	.08	2	0.6	1.4	17	SF2
		16	8 3	3.23	19	18.30	155	13.06	5.77	1.4	1.5	25	0	96	.08	2	0.5	1.2	23	SF2
		16	827	10.07	19	19.20	155	10.87	4.64	1.3	1.3	27	2	106	.13	6	0.5	2.5	18	SSF
		16	923	30.47	19	23.64	154	58.56	7.21	2.1	2.4	39	5	168	.15	3	0.7	0.5	34	LER
		16	950	45.17	19	19.16	155	13.23	8.75	2.2	2.6	44	4	127	.13	6	0.5	0.7	35	SF2
		16	13 4	48.81	19	18.23	155	13.27	6.06	1.5	1.6	32	1	90	.10	2	0.5	1.1	26	SF2
		16	1535	25.05	19	11.03	155	39.98	6.53	2.5	2.6	41	4	115	.21	9	0.6	1.6	28	LSW
		16	19 5	49.07	19	25.19	155	19.83	5.45	1.3	1.5	12	1	102	.07	4	0.8	2.3	11	KAO
		16	2043	6.44	19	21.94	155	24.47	12.15	1.6	1.5	31	2	30	.10	4	0.4	0.7	26	SWR
		16	22 1	47.40	19	26.37	155	29.99	9.28	1.8	1.5	25	2	98	.08	8	0.4	1.0	21	KAO
		16	2325	49.26	19	16.64	155	27.52	8.42	2.2	2.3	39	1	59	.15	7	0.4	0.7	32	LSW
		17	058	58.96	19	22.31	155	28.45	9.15	1.6	1.5	29	2	62	.12	2	0.5	0.9	22	KAO
		17	8 6	13.15	19	20.88	155	13.05	8.01	2.3	3.0	44	5	60	.12	3	0.4	0.5	36	SF2
		17	1052	39.33	19	20.16	155	13.01	4.80	1.0	1.1	21	0	68	.13	5	0.6	2.1	19	SSF
		17	1117	14.48	19	17.59	155	30.34	3.77	2.3	2.6	43	3	45	.21	5	0.4	1.9	38	LSW
		17	1149	50.06	19	30.47	155	46.59	7.47	1.5	1.4	25	4	229	.13	1	1.2	0.8	17	KON
		17	1621	29.13	19	20.32	155	7.90	7.18	1.9	2.1	36	3	88	.11	5	0.4	0.7	21	SF4
		18	438	49.12	19	21.73	155	6.22	5.56	1.6	2.2	40	5	81	.17	6	0.6	1.3	28	SF4
		18	547	25.18	19	29.05	155	27.95	3.52	2.2	2.0	41	5	55	.12	6	0.3	1.5	30	KAO
		18	15 3	51.07	18	50.29	156	49.30	16.06	2.9	2.6	35	7	325	.14	111	19.5	66.9	31	DIS
		18	1539	34.31	19	21.01	155	28.21	9.47	1.5	1.3	26	2	48	.11	3	0.4	0.8	17	KAO
		18	2034	42.06	19	22.31	155	4.64	7.80	2.6	3.0	48	7	78	.15	4	0.4	0.5	39	SF5
		19	120	52.42	19	18.34	155	13.07	6.91	1.5	1.9	32	1	95	.10	3	0.5	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
1984	DEC	19	212	24.16	19	19.85	155	12.32	6.64	1.8	1.9	25	1	80	.12	5	0.5	1.1	22	SF2
		19	255	30.89	19	21.61	155	2.46	8.10	1.7	1.5	27	2	142	.13	3	0.6	0.7	20	SF5
		19	616	10.29	19	20.53	155	10.55	6.65	1.3	1.1	19	3	77	.09	3	0.5	0.8	14	SF3
		19	1422	46.31	19	26.26	155	29.21	9.67	1.6	1.2	28	3	60	.10	7	0.4	1.0	21	KAO
		19	1720	54.69	19	12.03	155	19.37	46.46	2.1	2.0	26	2	249	.10	9	1.5	2.1	14	DEP L
		19	2055	56.52	19	22.17	155	29.07	9.69	2.4	2.4	46	4	35	.10	3	0.3	0.6	39	KAO
		20	12 4	43.40	19	20.11	155	12.82	5.51	1.2	1.3	18	0	72	.13	5	0.7	1.8	15	SF2
		20	14 5	33.48	19	20.09	155	12.84	5.61	1.2	1.1	23	0	71	.13	5	0.6	1.6	19	SF2
		20	1453	16.82	19	24.03	155	26.40	9.55	1.7	1.7	33	2	34	.10	3	0.4	0.7	27	KAO
		20	1755	39.54	19	26.31	155	22.81	8.43	1.8	2.1	39	5	47	.12	4	0.4	0.8	28	KAO
		21	1 7	42.68	19	22.52	155	29.72	6.78	2.2	2.2	33	1	59	.12	12	0.4	1.7	24	KAO
		21	1 9	58.51	19	19.32	155	11.83	8.84	2.6	3.0	35	1	96	.11	5	0.4	0.5	23	SF3
		22	653	40.43	19	24.31	155	16.42	16.57	1.9		46	6	70	.10	1	0.4	0.4	38	DEP
		22	1724	23.31	19	7.80	155	30.23	26.99	2.2	2.0	45	4	161	.09	5	0.7	1.2	39	DLS
		22	18 8	33.84	19	22.79	155	3.53	6.89	1.8	1.5	25	2	106	.16	4	0.7	1.2	18	SF5
		22	2029	19.62	19	21.82	155	4.02	5.68	1.7	1.1	29	3	94	.19	4	0.7	1.4	18	SF5
		22	2341	40.80	19	20.71	155	11.44	7.46	1.6	1.8	39	5	73	.12	4	0.5	0.6	28	SF3
		23	039	50.65	19	20.66	155	3.00	7.00	1.6	1.3	26	1	117	.11	1	0.5	0.9	12	SF5
		23	614	19.24	19	16.11	155	22.88	7.87	3.2	4.0	56	10	128	.14	4	0.4	0.5	46	SWR F
		23	616	12.22	19	15.12	155	22.65	7.89	2.0	2.8	31	2	175	.12	3	0.6	0.8	23	SWR
		23	647	1.84	19	16.05	155	22.96	6.02	1.8	2.8	39	4	127	.13	4	0.4	0.9	29	SWR
		23	647	57.93	19	15.94	155	22.53	6.65	1.6	2.3	35	2	154	.10	4	0.4	0.7	25	SWR
		23	649	56.80	19	16.00	155	23.00	6.03	1.8	2.5	37	3	127	.10	4	0.4	0.9	32	SWR
		23	652	34.24	19	16.63	155	22.91	2.90	1.4	1.2	18	1	118	.10	5	0.4	1.2	14	SWR
		23	712	19.85	19	15.79	155	23.08	5.04	1.8	2.2	38	3	129	.12	3	0.4	1.1	29	SWR
		23	715	45.08	19	15.77	155	23.17	5.86	2.3	2.9	44	3	128	.13	3	0.4	0.8	37	SWR
		23	725	48.23	19	15.81	155	22.96	5.71	1.8	2.3	35	3	152	.12	3	0.5	1.1	30	SWR
		23	742	59.52	19	16.19	155	22.55	3.16	1.4	1.6	25	2	132	.08	4	0.4	1.1	15	SWR
		23	746	18.53	19	16.16	155	23.12	8.01	3.2	3.9	58	8	120	.17	4	0.4	0.5	44	SWR F
		23	751	51.80	19	16.50	155	23.20	5.92	1.4	1.3	21	0	127	.15	7	0.6	1.6	16	SWR
		23	816	46.86	19	16.48	155	22.34	3.63	1.0	1.1	18	1	131	.07	5	0.4	1.5	14	SWR
		23	821	5.92	19	16.34	155	23.28	3.19	1.9	2.4	21	0	115	.11	4	0.5	1.4	19	SWR
		23	856	9.56	19	15.68	155	22.86	6.25	1.7	2.0	28	1	158	.09	3	0.5	1.0	23	SWR
		23	9 0	29.48	19	15.78	155	22.94	5.96	1.5	1.5	27	2	153	.09	3	0.4	1.0	17	SWR
		23	9 9	13.85	19	15.96	155	23.37	4.01	1.2	1.5	19	1	118	.09	3	0.4	1.3	11	SWR
		23	923	36.93	19	16.24	155	23.52	3.61	1.4	1.3	18	0	109	.09	4	0.4	1.3	11	SWR
		23	10 5	3.19	19	16.07	155	22.73	3.39	1.7	2.1	29	2	132	.10	4	0.4	1.1	23	SWR
		23	1049	38.87	19	16.87	155	22.49	2.39	1.4	1.4	24	2	122	.12	5	0.4	1.1	17	SWR
		23	1059	31.46	19	16.61	155	22.88	5.49	1.6	1.8	28	2	126	.10	5	0.4	1.2	22	SWR
		23	1114	49.11	19	16.24	155	23.32	5.04	1.9	2.3	40	1	115	.12	4	0.4	1.2	27	SWR
		23	1226	31.44	19	16.58	155	22.89	2.56	1.4	1.3	22	1	119	.11	5	0.4	1.2	15	SWR
		23	1337	53.49	19	16.01	155	22.87	3.30	1.4	1.2	16	1	150	.07	4	0.5	1.2	15	SWR
		23	1352	2.20	19	28.86	155	27.54	2.99	1.6	1.1	31	4	61	.12	6	0.3	1.4	22	KAO
		23	1511	56.62	19	25.66	155	20.17	6.18	1.0	1.1	16	1	110	.09	4	0.6	1.3	12	KAO
		23	2040	16.04	19	27.17	155	24.22	10.08	1.8	1.2	29	2	64	.11	4	0.5	0.8	23	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
1984	DEC	23	2117	45.16	19	19.59	155	28.31	9.25	1.5	1.3	22	2	60	.12	6	0.5	0.7	13	KAO
		24	419	39.23	19	20.56	155	11.68	7.66	2.1	2.6	49	5	74	.14	4	0.4	0.5	37	SF3
		24	10 8	46.89	19	19.37	155	11.32	4.64	1.3	1.3	30	2	99	.13	6	0.5	2.0	24	SSF
		24	1250	12.87	19	22.77	155	2.83	4.44	1.5	1.3	32	4	124	.16	4	0.5	1.6	20	SSF
		24	1447	15.41	19	21.53	155	20.82	9.18	1.5	1.3	30	5	85	.10	4	0.5	0.7	21	SWR
		24	1639	10.84	19	24.85	155	20.15	7.27	2.0	2.2	37	5	45	.11	2	0.3	0.7	27	KAO
		25	043	12.29	19	27.77	155	14.59	32.49	2.3	2.4	55	6	41	.12	6	0.5	0.9	47	DEP
		25	113	33.63	19	20.23	155	12.82	7.44	1.3	1.5	35	1	69	.11	4	0.5	0.7	26	SF2
		25	641	34.26	18	54.92	155	15.07	12.19	2.3	2.9	26	1	256	.10	35	2.0	0.8	20	LOI L
		25	1722	11.48	19	58.77	155	5.93	34.63	4.3	4.4	55	8	229	.12	27	0.9	1.8	47	KEA F
		25	1738	24.67	19	25.23	155	30.89	10.24	2.1	1.9	37	2	36	.10	8	0.4	0.9	29	KAO
		25	1827	40.23	19	24.33	155	29.67	8.02	1.7	1.3	34	2	42	.10	5	0.4	0.9	24	KAO
		25	1841	41.91	19	19.73	155	8.62	5.51	1.4	1.1	25	0	78	.10	5	0.5	1.5	23	SF4
		25	2243	9.34	19	24.78	155	19.25	5.33	2.0	2.5	38	5	37	.12	2	0.3	0.7	30	KAO
		26	233	57.27	19	22.08	155	26.60	9.62	1.6	1.3	27	2	50	.10	2	0.4	0.7	22	KAO
		26	328	45.56	19	24.78	155	29.22	8.06	1.5	1.1	27	2	63	.10	5	0.4	0.9	22	KAO
		26	659	9.26	19	28.08	155	26.57	10.12	2.3	2.3	41	4	47	.12	6	0.4	0.7	33	KAO
		26	934	28.54	19	19.71	155	13.90	8.10	2.2	2.3	51	8	70	.12	5	0.4	0.5	37	SF2
		26	1151	19.95	19	15.89	155	39.89	6.29	2.6	2.5	32	1	229	.15	5	1.3	0.8	29	LSW
		26	1237	59.71	19	25.44	155	19.52	5.83	1.4	1.2	21	2	117	.11	3	0.5	1.2	19	KAO
		27	138	28.88	19	19.50	155	10.07	5.41	1.6	1.1	29	3	96	.13	5	0.6	1.5	25	SF3
		27	153	3.08	19	15.76	155	5.70	42.25	2.2	1.6	28	2	220	.10	5	1.2	1.9	22	DEP
		27	620	4.58	19	20.89	155	6.22	7.70	2.1	1.5	39	6	98	.11	5	0.4	0.7	31	SF4
		27	923	0.37	19	19.64	155	11.97	4.97		1.3	28	3	88	.12	6	0.5	1.8	20	SSF
		27	1921	47.86	19	17.24	155	15.20	4.00	1.3	1.1	23	1	154	.12	3	0.6	1.0	16	SSF
		27	20 4	58.62	19	27.77	154	53.54	6.40	1.9	1.6	24	2	130	.13	3	0.7	0.8	17	LER
		27	20 5	18.37	19	27.28	154	53.26	6.19	2.0	1.6	18	3	146	.09	4	0.6	0.9	14	LER
		27	23 5	6.61	19	20.21	155	4.04	5.20	1.7	1.3	22	1	128	.10	2	0.5	1.2	16	SF5
		28	1040	2.04	19	21.75	155	46.70	11.90	1.9	1.5	28	1	187	.14	12	1.1	0.6	21	KON
		28	1148	38.05	19	15.74	155	22.78	5.06		1.6	29	3	135	.08	3	0.4	1.2	24	SWR
		28	1342	39.49	20	4.27	155	50.13	23.22	2.3	2.3	37	4	214	.10	9	1.0	1.3	30	KOH
		28	15 0	29.75	19	18.84	155	13.19	5.16	1.3	1.1	30	2	83	.11	3	0.5	1.5	27	SF2
		28	2115	4.77	19	24.85	155	30.50	11.20	1.6	1.2	26	2	70	.10	7	0.4	0.7	17	KAO
		29	9 7	25.56	19	25.62	155	29.43	9.98	2.3	2.8	42	5	38	.11	7	0.3	0.5	32	KAO
		29	12 0	11.51	19	19.75	155	12.05	6.65	1.8	1.6	29	1	86	.13	6	0.5	1.0	21	SF3
		29	1832	58.94	19	24.96	155	16.02	14.66	1.9	1.8	30	3	91	.10	2	0.4	0.4	25	DEP
		30	8 5	37.06	19	24.90	155	30.50	3.63	1.9	1.8	24	2	78	.11	9	0.4	3.1	19	KAO
		30	1048	10.30	19	21.53	155	4.84	6.59	1.6	1.4	16	2	103	.11	4	0.7	1.0	10	SF5
		30	1218	1.69	19	18.91	155	30.42	9.30	2.2	1.9	28	1	48	.10	7	0.4	0.9	22	LSW
		31	841	38.29	19	22.01	155	4.74	7.66	2.1	2.2	33	4	74	.13	5	0.4	0.6	26	SF5
		31	1331	36.67	19	21.99	155	4.77	8.43	2.4	2.6	39	7	79	.13	5	0.4	0.5	29	SF5
		31	1420	3.61	19	17.65	155	28.09	9.14	1.6	1.8	33	4	48	.13	6	0.4	0.8	28	LSW
		31	1428	8.14	19	54.37	155	49.18	37.70	2.8	2.7	45	6	176	.09	18	0.6	1.2	39	HUA

Table 6 1984 HVO EARTHQUAKE SUMMARY LIST M›=3.0

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
1984	JAN	1	534	49.58	19	16.64	155	22.58	8.03	2.7	3.4	49	1	124	.17	5	0.5	0.7	48	SWR
		1	2055	57.92	19	25.36	155	20.18	7.76	3.0	3.3	51	6	38	.12	3	0.3	0.6	45	KAO
		2	1410	20.10	20	35.30	154	54.93	0.03	3.7	4.3	48	4	312	.11	90	9.3	2.4	44	DIS *
		12	1032	27.79	19	18.54	155	14.20	9.48	3.2	3.4	50	5	135	.12	6	0.4	0.5	46	SF2
		12	1748	15.72	19	18.34	155	14.10	10.01	3.4	3.7	48	4	137	.13	7	0.5	0.5	43	SF2
		13	1222	36.18	19	27.78	155	23.40	11.58	3.3	3.4	47	3	42	.12	4	0.3	0.4	43	KAO
		19	21 4	48.62	19	22.00	155	7.20	8.73	3.1	3.2	47	5	72	.11	3	0.3	0.4	38	SF4
		22	251	35.37	19	20.45	155	2.75	8.12	2.9	3.1	33	3	196	.11	9	0.9	0.7	24	SF5
		26	716	26.74	19	25.96	155	21.33	9.57	3.0	3.1	47	3	31	.12	3	0.4	0.4	42	KAO
		28	222	7.79	19	37.18	156	10.80	28.80	3.7	4.2	46	2	254	.11	31	1.4	1.9	42	KON F
		28	823	7.57	19	38.66	156	2.59	43.05	3.0	3.2	52	7	231	.09	22	0.7	1.3	45	KON
		30	2026	56.47	19	33.93	156	1.70	15.67	3.4	3.7	48	6	229	.10	14	1.0	0.7	39	KON
	FEB	2	1112	20.86	19	19.15	155	13.26	10.65	3.5	3.7	52	7	77	.10	4	0.4	0.4	47	SF2
		2	1551	22.49	19	23.71	155	36.66	5.52	3.5	3.4	54	10	66	.12	7	0.3	0.7	49	MLO
		3	622	25.10	19	18.25	155	13.78	10.13	3.5	3.7	52	6	67	.11	2	0.4	0.4	44	SF2 F
		3	1945	35.89	19	11.53	155	36.60	9.09	3.3	3.5	52	8	93	.23	6	0.6	0.8	42	LSW
		12	1618	11.21	19	16.13	155	31.70	7.93	3.2	3.2	45	4	81	.19	3	0.5	0.9	41	LSW
		13	1027	21.80	19	23.98	155	26.14	9.11	3.1	3.0	50	6	28	.16	3	0.4	0.6	39	KAO
		13	2110	12.47	30	58.05	157	35.31	29.58	6.0		45	2	344	.15500		18.0	3.9	17	DIS L*
		15	722	41.10	19	23.96	155	27.28	11.58	3.5	4.0	50	3	28	.13	3	0.3	0.3	45	KAO F
		16	652	33.13	19	28.85	155	26.72	11.97	3.2	3.1	54	7	41	.13	6	0.3	0.4	46	KAO
		17	245	6.26	19	22.89	155	4.43	8.74	3.3	3.7	50	9	87	.09	3	0.4	0.4	44	SF5
		23	2059	9.59	19	25.02	155	30.16	12.00	3.2	3.3	45	4	35	.09	9	0.3	0.4	38	KAO
		28	1520	8.34	19	20.93	155	7.76	8.55	3.1	3.3	50	6	82	.11	4	0.4	0.4	39	SF4
	MAR	4	914	37.49	19	12.72	155	35.18	1.47	3.3	3.2	53	8	84	.20	10	0.5	0.8	39	LSW
		8	1058	49.88	19	19.32	155	11.65	8.81	3.5	3.9	46	4	98	.10	5	0.4	0.3	42	SF3 F
		11	646	46.03	19	49.28	155	36.93	18.50	3.1	3.4	52	7	101	.11	6	0.5	1.5	43	KEA F
		11	1150	18.87	19	18.06	155	23.30	9.95	2.9	3.2	53	7	95	.14	4	0.3	0.4	41	SWR
		13	1142	15.96	19	15.58	155	6.01	42.66	2.8	3.3	56	9	217	.11	5	0.8	0.8	47	DEP
		15	13 3	0.75	19	21.86	155	6.98	8.78	3.4	3.9	55	8	76	.11	3	0.4	0.3	45	SF4 F
		17	1927	35.08	19	20.01	155	11.97	9.41	3.1	3.5	46	3	82	.11	5	0.3	0.4	40	SF3
		21	2228	24.65	19	25.64	155	37.63	2.45	3.2	3.5	42	3	77	.12	4	0.4	0.8	35	MLO
		25	050	52.75	19	28.40	155	35.17	0.08	3.3	3.3	30	0	68	.12	3	0.4	1.1	27	MLO
		25	055	13.58	19	27.80	155	35.90	1.10	3.9	3.8	36	1	43	.21	2	0.4	0.6	22	MLO
		25	1 0	22.15	19	28.02	155	35.58	1.52	3.2	3.3	21	0	68	.18	1	0.6	1.0	12	MLO
		25	1 1	20.34	19	27.38	155	34.77	2.18	3.8	4.0	27	0	45	.14	2	0.5	1.1	10	MLO
		25	1 4	32.16	19	26.21	155	35.46	6.61	3.4	3.4	28	1	69	.16	12	0.6	1.3	18	MLO
		25	1 8	8.54	19	27.10	155	37.11	5.99	3.1	3.0	24	0	91	.15	12	0.5	1.3	14	MLO
		25	210	24.72	19	28.68	155	34.79	8.35	3.3	4.0	27	0	69	.19	2	0.6	1.2	19	MLO
		25	21 5	50.33	19	27.76	155	35.93	5.91	3.3	3.9	29	1	54	.13	14	0.4	1.3	24	MLO F
		27	914	42.82	19	21.15	155	29.61	6.70	3.1	3.0	40	3	44	.13	4	0.3	0.7	33	KAO
		30	1021	15.12	19	58.21	155	5.45	35.58	3.8	3.9	58	10	229	.12	28	0.9	1.4	48	KEA F
	APR	1	222	25.03	19	27.29	155	29.54	10.11	3.2	2.9	55	8	35	.12	9	0.3	0.4	44	KAO
		6	1843	29.04	19	18.71	155	13.75	10.04	3.4	3.6	53	7	91	.12	3	0.5	0.4	47	SF2 F
		9	7 5	39.16	19	28.10	155	36.34	1.92	3.7	3.9	48	3	78	.14	2	0.3	0.3	46	MLO

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
1984	APR	9	1313	39.85	19	18.62	155	13.55	10.49	3.9	4.1	56	10	73	.11	3	0.4	0.3	46	SF2 F
		10	1137	2.66	19	10.60	156	47.69	28.41	3.4	2.6	36	2	305	.13	98	1.8	3.5	34	DIS
		18	640	13.00	19	17.88	155	12.95	6.88	3.0	3.0	44	5	114	.12	2	0.4	0.8	39	SF2
		22	223	29.03	19	18.32	155	13.46	10.56	3.7	3.8	50	6	133	.09	8	0.5	0.4	42	SF2 F
		22	227	3.59	19	18.44	155	13.37	8.41	3.8	3.9	53	8	83	.12	3	0.4	0.4	45	SF2 F
		27	2348	49.48	19	19.18	155	28.38	9.68	3.2	3.4	50	7	41	.12	6	0.3	0.5	41	KAO
		28	2045	34.42	19	10.40	155	40.60	9.05	3.5	3.4	46	3	168	.21	10	0.9	0.7	38	LSW F
		30	1349	34.24	19	43.42	154	52.79	40.40	3.5	3.0	48	5	234	.12	22	0.9	1.4	42	HIL
	MAY	1	355	23.08	19	12.67	155	34.14	13.22	4.0	4.1	45	6	123	.15	7	0.5	0.5	39	DLS F
		9	1545	10.92	19	22.28	155	29.15	10.22	3.0	3.3	57	11	35	.11	3	0.3	0.4	43	KAO
		10	926	58.75	19	59.20	155	53.90	22.35	3.0	3.0	18	4	221	.13	20	1.4	3.2	11	KOH
		17	241	10.52	19	21.46	155	2.75	7.07	2.9	3.1	49	6	134	.12	3	0.4	0.5	42	SF5
		19	1418	1.67	19	19.34	155	11.37	8.85	3.0	3.4	49	4	100	.10	6	0.3	0.4	42	SF3
		19	1841	2.66	19	20.55	155	13.00	9.47	3.3	3.7	51	6	65	.12	4	0.3	0.4	45	SF2
		20	533	19.45	19	19.68	155	11.25	9.19	2.9	3.4	51	6	93	.12	5	0.3	0.4	39	SF3
		30	18 7	13.60	19	28.98	155	35.70	1.58	3.0	3.5	17	2	71	.21	1	0.6	0.3	9	MLO
		31	2057	37.17	19	25.44	155	19.51	6.98	2.7	3.3	46	6	47	.12	3	0.4	0.6	37	KAO F
	JUN	3	2112	7.46	18	54.25	155	8.68	50.20	3.4	3.3	55	8	254	.09	43	0.9	1.5	47	LOI
		8	927	50.72	19	12.06	155	31.22	37.56	3.7	3.7	56	10	85	.09	6	0.6	1.0	46	DLS F
		8	933	12.30	19	12.10	155	31.20	37.45	3.1	3.3	57	10	83	.10	6	0.6	0.9	47	DLS
		8	1734	10.64	20	3.31	157	52.51	29.55	5.0	5.3	52	5	238	.13	142	1.5	2.5	41	DIS
		12	1339	0.35	19	37.43	155	55.77	19.99	3.5	3.7	53	6	200	.11	15	0.7	1.9	44	KON F
		12	17 3	20.10	19	21.09	155	30.11	9.60	3.6	3.7	54	9	34	.11	5	0.3	0.5	43	KAO F
		13	152	31.17	19	20.46	155	12.78	9.23	3.5	3.9	42	5	67	.12	4	0.4	0.5	36	SF2 F
		16	822	10.03	20	44.51	157	30.32	34.00	4.0	5.1	38	2	189	.12	83	2.3	1.9	19	DIS F
		17	11 5	23.53	19	21.42	155	30.10	9.69	3.1	3.4	55	8	33	.10	5	0.3	0.4	44	KAO F
		20	919	36.81	19	21.28	155	29.88	10.84	2.8	3.2	51	6	34	.09	5	0.3	0.4	41	KAO
		24	2123	19.96	19	20.20	155	10.85	9.61	3.5	3.7	49	5	82	.09	4	0.4	0.3	44	SF3 F
		25	1329	43.71	19	14.81	155	4.08	47.57	3.1	3.0	52	5	205	.11	8	0.9	1.2	47	DEP
		26	1914	31.27	20	1.05	155	21.49	8.05	3.3	3.2	51	6	209	.13	28	0.7	0.8	45	KEA
		30	414	45.00	19	20.49	155	11.72	9.06	2.9	3.3	49	6	75	.12	4	0.3	0.4	41	SF3
	JUL	4	1430	13.23	19	0.48	156	54.19	28.81	3.4	4.1	30	5	323	.12	112	1.9	4.6	23	DIS
		8	1726	33.95	21	33.09	154	56.29	27.30	3.5	3.8	43	8	328	.13	181	1.8	4.4	23	DIS
		20	847	47.93	20	2.98	155	43.69	7.41	3.6	3.9	47	4	144	.14	10	0.7	0.8	40	KOH F
		25	832	38.15	19	22.16	155	18.63	30.97	3.5	3.9	46	1	35	.11	3	0.6	1.0	44	DEP
		26	545	11.12	19	21.11	155	7.38	8.27	3.3	3.9	48	5	172	.12	4	0.6	0.5	42	SF4
	AUG	3	5 8	39.32	19	19.56	155	15.46	9.15	3.1	3.6	40	4	86	.12	5	0.4	0.5	35	SF1
		10	2145	45.26	19	6.65	156	10.73	30.61	2.9	3.1	50	5	276	.10	37	2.1	1.5	46	KON
		11	2329	30.15	19	27.49	155	29.36	9.65	3.0	3.1	55	9	36	.12	8	0.3	0.5	46	KAO
		14	1010	2.12	19	47.13	154	54.77	47.71	3.7	4.3	54	10	233	.10	20	0.8	1.1	43	KEA F
		18	010	52.36	19	21.65	155	4.84	7.61	2.8	3.3	48	5	82	.12	5	0.4	0.5	36	SF5
		24	028	32.72	19	22.18	155	2.67	7.28	2.8	3.2	41	6	132	.12	4	0.5	0.6	32	SF5
		28	728	48.88	19	12.34	155	36.46	9.62	3.2	3.3	46	5	114	.20	5	0.7	0.8	36	LSW
		31	1333	31.09	20	8.44	155	50.44	39.07	3.3	3.4	52	8	275	.11	7	0.8	0.9	44	KOH
		31	2253	23.50	19	21.85	155	5.10	8.69	2.8	3.3	48	6	78	.10	4	0.4	0.3	39	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
1984	SEP	2	1643	14.45	19	21.28	155	1.58	6.63	3.2	3.8	46	5	174	.12	3	0.6	0.4	32	SF5
		10	1916	6.49	18	55.68	155	16.61	14.62	3.1	4.1	43	0	244	.10	32	1.7	2.0	34	LOI L
		10	2351	36.28	19	20.59	155	13.34	9.04	3.4	3.9	46	5	60	.12	4	0.4	0.5	40	SF2 F
		13	2027	59.48	19	27.84	154	53.18	9.01	3.0	3.2	42	5	181	.13	4	0.9	0.3	27	LER
		24	2127	48.20	19	18.97	155	54.17	12.37	4.3	4.3	49	3	208	.11	6	0.9	0.4	44	KON F
		27	7 3	12.74	19	19.40	155	10.99	9.63	3.2	3.7	51	7	100	.10	5	0.5	0.4	43	SF3 F
	OCT	3	934	11.95	19	14.12	155	27.18	13.70	3.1	3.3	54	8	103	.13	5	0.4	0.4	45	DLS
		6	1754	56.82	19	11.88	155	10.87	31.70	3.0	3.0	57	9	199	.12	11	0.8	1.0	46	DEP
		8	0 0	25.11	20	7.02	156	51.65	29.58	3.9	4.3	54	7	314	.11	113	1.6	2.5	47	DIS
		8	0 3	43.06	19	17.09	155	15.48	10.10	2.9	3.1	48	5	151	.11	6	0.4	0.4	42	SF1
		8	1618	10.72	19	54.90	155	29.41	17.85	3.7	4.1	56	9	151	.11	15	0.6	1.8	47	KEA F
		10	233	49.75	19	17.23	155	25.17	9.84	3.0	3.6	56	9	69	.15	6	0.3	0.5	45	LSW F
		13	616	26.92	19	20.62	155	7.78	8.56	3.0	3.6	56	10	85	.10	5	0.3	0.4	42	SF4
		16	534	14.72	18	54.59	155	15.32	13.08	3.0	3.8	42	2	248	.09	35	1.4	1.0	42	LOI
		16	1445	55.79	19	24.47	155	29.36	10.24	3.5	3.8	58	9	32	.10	5	0.3	0.4	49	KAO F
		23	331	48.64	19	20.47	155	11.97	8.76	3.0	3.6	49	6	74	.11	4	0.3	0.4	44	SF3
		29	420	38.25	19	14.60	154	53.33	41.41	3.2	3.0	52	6	242	.11	20	1.3	1.0	47	DIS
		31	1922	22.46	19	12.46	155	26.84	9.32	3.0	3.3	55	8	125	.17	6	0.5	0.4	48	LSW
	NOV	11	534	6.20	18	55.84	155	13.30	8.85	4.0	4.2	47	7	244	.12	36	0.9	0.6	39	LOI F
		11	550	37.04	18	58.30	155	13.87	14.26	2.8	3.6	36	3	236	.11	32	1.3	1.4	33	LOI
		11	10 5	13.85	18	56.54	155	12.68	10.30	2.9	3.5	41	7	243	.12	36	0.9	0.6	37	LOI
		11	19 3	19.55	19	20.57	155	11.26	9.06	3.4	3.9	44	4	167	.12	4	0.6	0.5	35	SF3
		14	1 5	56.24	19	51.79	155	8.87	15.69	3.8	3.8	53	10	222	.10	21	0.9	1.0	45	KEA F
		16	1 1	58.02	19	22.25	155	28.86	9.49	3.0	3.3	46	7	43	.11	2	0.3	0.5	31	KAO
		18	1435	9.99	20	9.77	155	38.14	32.38	4.0	3.5	54	8	232	.10	16	0.7	1.4	46	KOH F
	DEC	4	2134	57.59	19	53.73	155	22.63	9.70	3.3	3.5	48	5	215	.11	4	0.8	0.3	39	KEA F
		7	116	19.28	19	5.22	155	24.64	33.74	3.1	3.4	53	7	193	.09	10	0.8	1.1	46	LOI
		16	750	37.04	19	19.17	155	13.25	9.49	2.9	3.3	54	7	127	.13	6	0.4	0.4	43	SF2
		23	614	19.24	19	16.11	155	22.88	7.87	3.2	4.0	56	10	128	.14	4	0.4	0.5	46	SWR F
		23	746	18.53	19	16.16	155	23.12	8.01	3.2	3.9	58	8	120	.17	4	0.4	0.5	44	SWR F
		25	1722	11.48	19	58.77	155	5.93	34.63	4.3	4.4	55	8	229	.12	27	0.9	1.8	47	KEA F

Publication Summary: Hawaiian Volcano Observatory personnel, 1984

Billingsley, G. H., Barnes, C. W., and Ulrich, G. E., (in press), Geologic map of the Coconino Point and Grandview Point quadrangles, Coconino County, Arizona: U.S. Geological Survey Miscellaneous Investigations Map I-____, scale 1:62,500.

Camp, V.A., Hooper, P.R., Swanson, D.A., and Wright, T.L., 1984, Columbia River Basalt in Idaho: Physical and Chemical Characteristics, Flow Distribution, and Tectonic Implications: in Cenezoic Geology of Idaho, Bill Bonnersen and Roy M. Breckinridge (eds.), Bulletin 26, Idaho Department of Lands, Bureau of Mines and Geology, p. 55-75.

Decker, R.W., Koyanagi, R.Y., Dvorak, J.J., Lockwood, J.P., Okamura, A.T., Yamashita, K.M., and Tanigawa, W.R., 1984, Seismicity and ground deformation of Mauna Loa volcano, Hawaii (abs.): 27th International Geology Congress (Moscow) Abstracts, v. 4, Sect. 08, 09, p. 59.

Dieterich, J.H., and Okamura, A.T., 1984, Modeling surface deformation due to coupled interactions between magma bodies and fault slip (abs.): in Programs and Abstracts, Chapman Conference on Vertical Crustal Motion: Measurement and Modeling, Harpers Ferry, WV, October 1984.

Dvorak, J., Okamura, A.T., English, T.T., Koyanagi, R.Y., Nakata, J.S., Sako, M.K., Tanigawa, W.R., and Yamashita, K.M., in press, Mechanical response of the south flank of Kilauea Volcano, Hawaii to intrusive events along the rift zones: Tectonophysics, 52 ms p.

Dvorak, J.J., Okamura, A.T., Johnston, M.J.S., Mortensen, C., Mueller, R.J., and Furukawa, B., 1984, Tiltmeter and magnetometer measurements at Mount St. Helens, Washington: 1980-1981: U.S. Geol. Survey Open-File Report 80-164, 46 p.

Dvorak, J.J. and Okamura, A.T., 1984, Subsidence mechanics of the summit regions of shield volcanoes, Hawaii (abs.): Eos, Trans., Am. Geophys. Union, v. 65, p. 1138.

Dvorak, J.J., and Okamura, A.T., 1984,Vertical ground movement associated with volcanism in Hawaii (abs.): in Programs and Abstracts, Chapman Conference on Vertical Crustal Motion: Measurement and Modeling, Harpers Ferry, WV, October 1984.

Dzurisin, D., Koyanagi, R.Y., English, T.T., 1984, Magma supply and storage at Kilauea volcano, Hawaii, 1956-1983. Journal of Volcanology and Geothermal Research, v. 21, p. 177-206.

Edwards, Kathleen, Sanchez, E. M., and Ulrich, G. E., 1984, Landsat vertical image yields a stereo oblique: Geotimes, v. 29, n. 4, p. 10-11; reprinted in Earth Science, v. 37, n. 4, p. 18-19.

Garcia, M.O., Byers, C.D., Wolfe, E.W., and Rhodes, J.M., 1984, Chemistry and mineralogy of lavas from the continuing eruption of Kilauea volcano, Hawaii (abs.): Eos, Transactions, American Geophysical Union, v. 65, p. 1130.

Greenland, L.P., 1984, Gas composition of the January 1983 eruption of Kilauea volcano, Hawaii: Geochim. Cosmochima Acta, v. 48, p.193-195.

Greenland, L.P., 1984, Eruptive gases from Mauna Loa and Kilauea volcanoes, Hawaii (abs.): 1984 Int. Chem. Congr. Pac. Bas. Soc., Honolulu.

Greenland, L.P., and Aruscavage, P., 1984, Volcanic emission of Se, Te, and As: Dir. App., subm. J. Volcan. Geoth. Res.

Greenland, L.P., Casadevall, T.J., and Stokes, J.B., 1984, Emission rate of CO_2 and SO_2 from Kilauea volcano, Hawaii: Dir. App., subm. Nature.

Greenland, L.P., Okamura, A.T., and Stokes, J.B., in press, Contraints on the mechanics of eruption of Pu'u O'o: U.S. Geological Survey Professional Paper ____.

Heliker, C.C., Johnson, Arthur, and Hodges, S.M., 1984, The Nisqually Glacier, Mount Rainier, Washington, 1857-1979: A summary of the long-term observations and a comprehensive bibliography: U.S. Geological Survey Open-File Report 83-541, 14 p.

Heliker, C. Christina, 1984, Inclusions in the 1980-83 dacite of Mount St. Helens, Washington: Western Washington University, unpublished M.S. thesis, 185 p.

Helz, R.T., Banks, N.G., Casadevall, T.J., Fiske, R.S., and Moore, R.B., 1984, A catalogue of drill core recovered from Kilauea Iki lava lake from 1967 to 1979: U.S. Geol. Survey Open-File Report 84-0484.

Hoffmann, J.P., Ulrich, G.E., and Chadwick, W.W., 1984, Geodetic Measurements on the east rift zone, Kilauea volcano (abs.): EOS, Transactions of American Geophysical Union, v. 65, p. 1131.

Jackson, D.B., Kauahikaua, J., Zablocki, C.J., in press, Resistivity monitoring of an active volcano using the controlled-source electromagnetic technique: Kilauea Hawaii: Journal of Geophysical Research.

Kauahikaua, J., Jackson, D.B., Zablocki, C.J. in press, The subsurface resistivity structure of Kilauea volcano, Hawaii: JHournal of Geophysical Research.

Koyanagi, R.Y., Endo, E.Y., Tanigawa, W.R., Nakata, J.S., Tomori, A.H., Tamura, P.N., 1984. Kaoiki, Hawaii Earthquake of November 16, 1983: A preliminary compilation of seismographic data at the Hawaiian Volcano Observatory. In review of U.S.G.S. Open-file Report 84-798, 35 pages.

Koyanagi, R.Y., and Kojima, G., Evaluation of the radio-telemetered seismic network at Merapi Volcano Observatory, August, 1984. (Administrative report sent to office of International Geology, 1984).

Lipman, P.W., and Banks, N.G. (in press), A'a flow dynamics, Mauna Loa 1984: U.S. Geological Survey Professional Paper 1350.

Lockwood, J.P., 1984, Review of "Cooke-Ravian volume of volcanological papers": American Mineralogist, v. 69, n. 4, p. 819.

Lockwood, J.P., 1984, Geologic map of Mauna Loa volcano, Hawaii -- Kulani Quadrangle: U.S. Geological Survey Open-File Report 84-12, scale 1:24,000.

Lockwood, J.P., Decker, R.W., Jackson, D.B., Koyanagi, R.Y., Okamura, A.T., and Johnson, D.J., 1984, The 1984 eruption of Mauna Loa volcano, Hawaii (abs.): American Geophysical Union Transactions, v. , n. , p. .

Lockwood, J.P., Decker, R.W., Jackson, D.B., Koyanagi, R.Y., Okamura, A.T., and Johnson, D.J., 1984, The 1984 Eruption of Mauna Loa, Hawaii (abs.): Eos, Trans., Am. Geophys. Union, v. 65, p. 1137.

Mangan, M., and Wright, T.L., 1984. Regional correlation of Grande Ronde Basalt Flows, Columbia River Basalt Group (abs.): Eos, v. 65, p. 1153.

McClelland, L., and Wolfe, E.W., 198-, The eruption of Kilauea Volcano, Hawaii, January-July 1983: McGraw-Hill Encyclopedia of Science 1985 Yearbook. (approved fall 1983).

Nakata, J.S., Tomori, A.H., Koyanagi, R.Y., Tanigawa, R.W., 1984. Hawaiian Volcano Observatory Summary 83, Seismic Data January to December 1983.

Okamura, A.T., Dvorak, J.J., Sako, M.K., Hanatani, R.Y., Johnson, D.J., and Yamashita, K.M., 1984, Surface deformation associated with the March 25-April 15, 1984, Mauna Loa eruption (abs.): Eos, Trans., Am. Geophys. Union, v. 64, p. 1137.

Sako, M. and Jackson, D.B., 1984, Deformation report on Pagan Volcano: Report submitted to Pedro Tenorio, Governor, Commonwealth of the Northern Marianas.

Tanaka, K.L., Shoemaker, E.M., Ulrich, G.E., and Wolfe, E.W., Migration of volcanism in the San Francsico volcanic field, Arizona: Geological Society of America Bulletin, in press, 44 ms pg. Branch Chief app. (Astrogeology) August 27, 1984.

Ulrich, G.E., Approved for the Director 12/6/84, SP Mountain cinder cone Crater and lava flow, northern Arizona: Geol. Soc. of Am. Guide to 100 Localities in the Rocky Mountain Area. 6 ms pages.

Ulrich, G.E., and Bailey, N.G., in press, Geologic map of the SP Mountain part of the San Francisco volcanic field, Arizona: U.S. Geological Survey Miscellaneous Investigations Map I-____, scale 1:50,000.

Ulrich, G. E., and Bielski, A. M., 1984, Wet Beaver Roadless Area, Arizona in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., eds., Wilderness Mineral Potential: assessment of mineral-resource potential in U.S. Forest Service Lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 123-125.

Ulrich, G. E., and Bielski, A. M., 1984, West Clear Creek Roadless Area, Arizona in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., eds., Wilderness Mineral Potential: assessment of mineral-resource potential in U.S. Forest Service Lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 120-122.

Ulrich, G.E., Billingsley, G.H., Hereford, R., Wolfe, E.W., Nealey, L.D. and Sutton, R.L. 1984, Geology, structure and uranium deposits of the Flagstaff 1° x 2° quadrangle, Arizona: U.S. Geological Survey Miscellaneous Investigations Map I-1446. (Brief descriptive text.)

Ulrich, G.E., Wolfe, E.W., Hoffmann, J.P., and Neal, C.A., 1984, Continuing eruption of east rift zone, Kilauea volcano, Hawaii (abs.): EOS, Transactions of the American Geophysical Union, v. 65, p. 1130.

Wolfe, E.W., 1984, The volcanic landscape of the San Francisco volcanic field: in Smiley, T.L., Nations, J.D., Pewe, T.L., and Schafer, J.P. (eds.), Landscapes of Arizona -- The Geological Story, University Press of America, Washington, D.C., p. 111-136.

Wolfe, E.W., and Light, T.D., 1984, Strawberry Crater Roadless Areas, Arizona: in Marsh, S.P., Kropschot, S.F., and Dickinson, R.G., editors, Wilderness Mineral Potential - assessment of mineral-resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, vol. 1, p. 110-112.

Wolfe, E.W., and McColly, R.A., 1984, Arnold Mesa Roadless Area, Arizona: in Marsh, S.P., Kropschot, S.J., and Dickinson, R.G., editors, Wilderness Mineral Potential - assessment of mineral-resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, vol. 1, p. 48-51.

Wolfe, E.W., Ulrich, G.E., Holm, R.F., Moore, R.B., and Newhall, C.G., in press, Geologic map of the central part of the San Francisco volcanic field, Arizona: U.S. Geological Survey Miscellaneous Investigations Map I-____, 1:50,000. Branch Chief app. (Central Regional Geology) October 5, 1984. (Comprehensive descriptive text, 69 ms pages plus tables.)

Worner, G., and Wright, T.L., 1984, Evidence for magma mixing within the Leacher See magma chamber (East Eifel, Germany): Journal of Volcanology and Geothermal Research, v. 22, p. 301-328.

Wright, T.L., 1984, Origin of Hawaiian tholeiite: a metasomatic model: Journal of Geophysical Research, v. 89, p.3233-3252.

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