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Catalog Of First Motion Focal Mechanisms

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Volume 2

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by

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VOLUME 2

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ABSTRACT :

Beginning 1 January 1981, first motion focal mechanisms for large earthquakes were computed on a routine basis and reported in the *U.S.G.S Preliminary Determination of Epicenters Monthly Listing* (PDE Monthly Listing).

Between 1 January 1981 and 1 August 1982, an attempt was made to compute these first motion focal mechanisms routinely, with the criterion of selection being magnitude equal to or greater than 6.5.

After 1 August 1982, the magnitude criterion was lowered to m_b magnitude equal to or greater than 5.8. However for earthquakes with a depth greater than 70 km. the magnitude criterion was m_b equal to or greater than 5.7.

The magnitudes and depths used to select the earthquakes are taken from the *U.S.G.S Preliminary Determination of Epicenters listing* (PDE)

A total of 241 focal mechanisms computed for the time period of 1981 through 1983 are reported in this catalog. Of these 241 focal mechanisms, 58 were computed for earthquakes meeting the criterion that the magnitude be equal to or greater than 6.5; 181 focal mechanisms were for earthquakes which met the criterion that the mb magnitude be equal to or greater than 5.8; and two were computed for events of special interest for which the seismological community requested focal mechanisms even though the magnitudes of these events were below the threshold of the selection criteria.

To simplify the use of this catalog, it is being presented in three volumes. These volumes are divided into broad geographic areas to equalize the size of each volume and without particular regard for any tectonic regionalization. Volume 1 encompasses the geographic areas of North America, South America, Hawaii, Atlantic Ocean, Europe,Turkey and western Africa. Volume 2 presents data for the geographic areas of continental Asia, Indian Ocean and the eastern Asian islands from the Northern Philippine Islands to Kamchatka. Volume 3 encompasses the islands of the south and southwestern Pacific Ocean including Indonesia and the southern Philippine islands.

The geographic areas for volumes 1, 2, and 3 are divided into 23 geographic subdivisions.The boundaries of these subdivisions are determined by the earthquake locations which could be coherently presented on a map rather than by any particular tectonic boundaries. Volume 1 is divided into 10 of these geographic subdivisions. Volume 2 is divided into 7 of these subdivisions and volume 3 into 6.

The contents of each volume of this catalog is presented in the following order:

(1) A Mollweide map projection of the world in which the areas encompassed by each volume is outlined.

(2) A chronological listing, for each of the geographic sub- divisions, of hypocenter parameters for earthquakes reported in this catalog including event numbers that will be used throughout this catalog.

(3) A chronological listing, for each of the geographic sub- divisions, of hypocenter parameters of earthquakes which met the magnitude criteria on the Monthly Listing but are not reported in this catalog.

(4) A table showing the station code abbreviations and locations of the seismograph stations used in this catalog.

(5) An equal area projection map for each of the geographic subdivisions with lower hemisphere focal sphere projections associated to each event by event number.
(6) A table of focal mechanism parameters, listed by event number, for each of the geographic subdivisions.
(7) Lower hemisphere focal sphere projections for each event including the first motions used for the focal mechanism to compute the focal mechanism for each event.
(8) Individual seismograph station data used to compute the focal mechanism for each event.

INTRODUCTION (VOLUME 2):

This is the second of a set of 3 volumes that present the first motion focal mechanisms routinely computed by the U.S. Geological Survry for earth- quakes occurring in the time period of 1 January 1981 through 31 December 1983. The geographic area encompassed by this volume includes Continental Asia, Indian ocean, eastern Asian islands from the northern Philippine Islands to Kamchatka (figure 34) This geographic area for this volume was divided into 7 smaller subdivisions. The boundaries of these subdivisions are determined by the earthquake locations which could be coherently presented on a map rather than by any tectonic boundaries. These subdivisions are presented on azimuthal equadistant projections, as figures 35, 40, 46, 50, 55, 58 and 62 with the earthquake hypocenters and focal mechanisms plotted. The symbol $\times$ denotes hypocenters with shallow depths (0-70 km.), + intermediate depths (71-300 km.), and $\diamond$ deep depths (301-700 km.). Table 87 shows the map name, latitude and longitude of the center and the radius for each azimuthal equadistant projection.

Table 88. Azimuthal equidistant projections coordinates and map radii for Volume 2

MAP NAME	LATITUDE OF CENTER (DEGREES)	LONGITUDE OF CENTER (DEGREES)	RADIUS OF MAP (DEGREES)
KURIL ISLANDS-KAMCHATKA	50.0 N	166.0 E	10
JAPAN-N.E. CHINA	38.0 N	135.o E	10
BONIN-MARIANA-CAROLINE ISLES.	25.0 N	140.0 E	25
P.I.-TAIWAN-RYUKYU ISLES.	23.0 N	128.0 E	15
SOUTHEAST ASIA	7.0 N	105.0 E	15
CENTRAL ASIA	30.0 N	70.0 E	35
SOUTH INDIAN OCEAN	25.0 S	55.0 E	15

The Flinn-Engdahl region numbers, Flinn and Engdahl (1965), associated to the earthquakes within the confines of these azimuthal equa- distant projections are shown on table 88.

Table 89. Flinn-Engdahl region numbers for earthquakes within Volume 2 geographic subdivisions

GEOGRAPHIC SUBDIVISION	REGION NUMBER
KURILISLANDS-KAMCHATKA	218,219,221,222
JAPAN-NORTHEASTERN CHINA	211,224,226,228,230,657
BONIN-MARIANA-CAROLINE ISLANDS	209,210,211,212,216,240
P.I.-TAIWAN-RYUKYU ISLANDS	235,238,243,246,248,249
SOUTHEAST ASIA	273,299,703,706
CENTRAL ASIA	306,307,348,353,417,555,717,718
SOUTH INDIAN OCEAN	428

EARTHQUAKE SELECTION:

The selection of earthquakes for which focal mechanisms were routinely computed were based on the magnitudes and depths reported on the USGS PDE listing. Between 1 January 1981 and 1 August 1983, the criterion for earthquake selection was magnitude greater than or equal to 6.5. After 1 August the criteria was lowered to either m_b greater than or equal to 5.8 or 5.7 with depths greater than 70 km. Events of special interest ,for which the seismological community requests focal mechanisms, may be included even though the selection criteria were not met.

Table 89 lists the hypocenter parameters for the earthquakes in this volume chronologicallly and by event number for each geographic subdivision. It contains 73 earthquakes for which focal mechanisms were computed. Of these, 18 were selected using the criterion of magnitude greater than or equal to 6.5, 55 using the criteria of m_b greater than equal to 5.8 or 5.7 with depths greater than 70 km. Some of the earthquakes of this listing have smaller magnitudes than the above values because selection criteria were applied to events in the USGS PDE listing rather than to events in the PDE Monthly Listing where focal mechanism parameters are published.

Nine earthquakes appearing in the Monthly Listing have magnitudes that exceed the magnitude selection criteria but are not reported in this volume. These events are listed in table 90. Two of these unreported events had magnitudes less than the selection criteria on the PDE and were therefore not selected. The seven other events were not reported

because the either the quality and/or quantity of first motions was not sufficient to control the nodal planes of the focal mechanism.

COMPUTATIONS:

The focal mechanism solutions for this catalog were computed interactively rather than by a program that produces automatic solutions.

Tables 91, 107, 125, 135, 150, 157 and 169shows the focal mechanism parameters for each of the geographic subdivisions of volume 2. The focal angles which are listed in this catalog and plotted on lower hemisphere focal sphere projections in figures 36-39, 41-45, 47-49, 51, 54, 56, 57, 59,and 61 were derived from the Earth model of Jeffreys and Bullen (1958). Figures 36-39, 41-45, 47, 49, 51-54, 56-57, and 59,61 , ordered by event number (table 91), show the nodal plane configuration; the P, T, and B axes of the focal mechanism; and the the station data used. The size of the symbols on these focal sphere solutions depend on the source of the first motions. The large symbols denote long-period P phase first motions and the small symbols denote the short-period P phase first motions.

DATA SOURCES:

The first motion data were obtained from the following three sources: (1) The first motions determined by the on-site station analysts that are reported to the National Earthquake Information Center (NEIC) ; (2) first motions determined by U.S. Gelogical Syrvey personnel from seismograms of the World-Wide Standardized Seismograph Network (WWSSN); (3) first motions obtained from the Global Digital Seismograph Network (GDSN).

Individual station data, ordered by distance from the event, are shown as tables 92-106, 108-124, 126-134, 136-148, 149-156, 158-168 and 170. . The codes and locations for the stations used in these tables are listed in the abbreviation table (table 92), Presgrave,needham and Minsch (1985). These station data tables also show: distance in degrees; azimuth in degrees from the event to the station; $dt/d\Delta$ in seconds/degree; focal angles in degrees; and the quality,direction and source of the first motions.

AKNOWLEDGEMENT:

The author is grateful to Madeleine Zirbes for her computer programming assistance in compiling this catalog.

REFERENCES:

Jeffreys, H., and Bullen, K. E., 1958, Seismological tables: British Association for Advancement of Science, Gray Milne Trust, London.

Flinn, E. A., and Engdahl, E. R., 1965, A proposed basis for geographic and seismic regionalization: Revised Geophysics, v. 3, p. 123-149.

Presgrave, B. W., Needham, R.E. and Minsch, J. H., 1985, Seismograph station codes and coordinates, 1985 edition: U.S.G.S. Open-file Report 85-714.

Figure 34. Mollweide projection showing geographic area for Volume 2

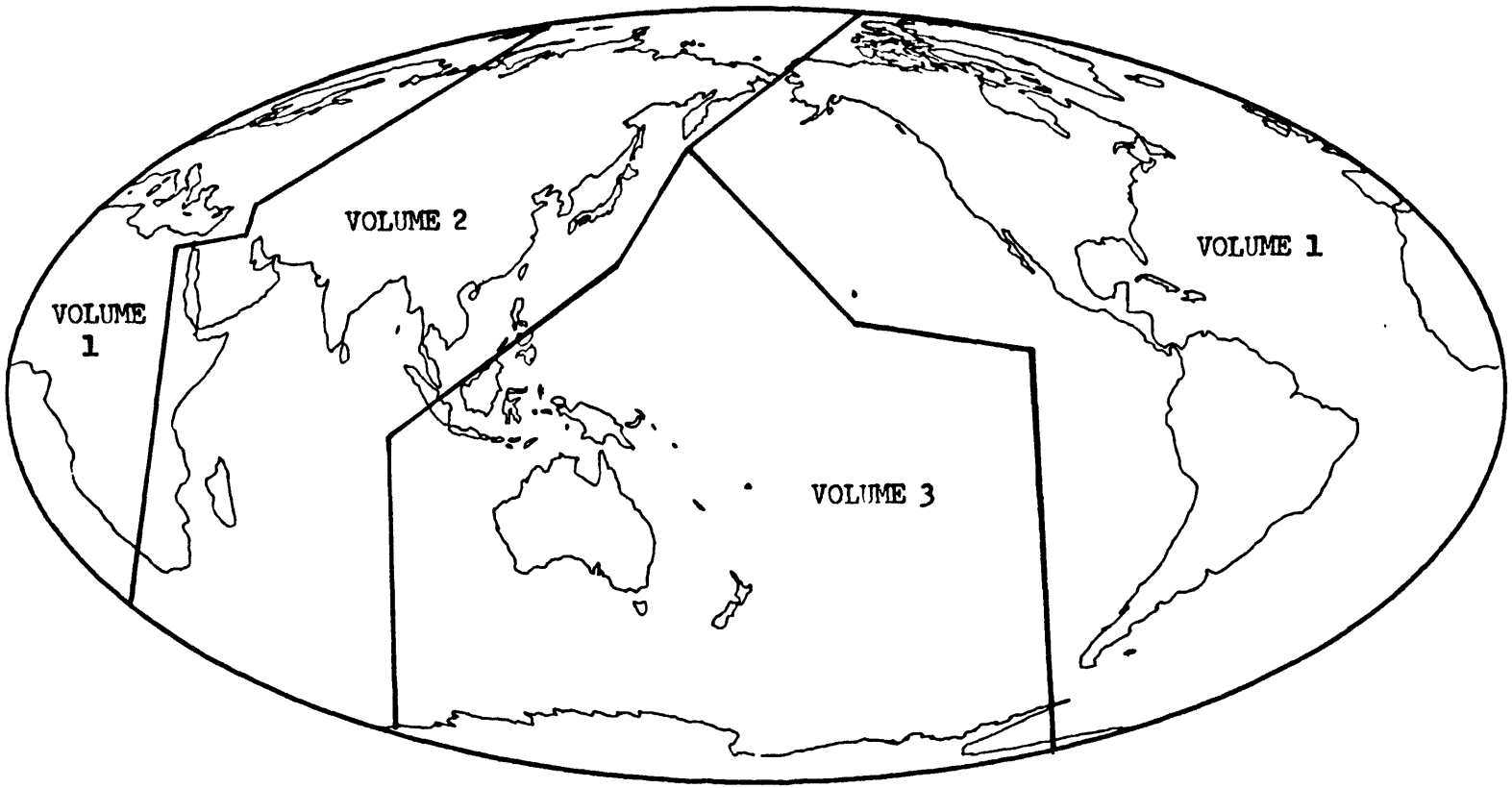

Table 90. Hypocenter parameters for events in volume 2 with focal mechanisms computed

EVT. NO.	DATE UTC.	ORIGIN TIME UTC. HR MN SEC	GEOGRAPHIC COORDINATES LAT.	LONG.	DEPTH km.	MAG. MB	MS	SD	NO. STA.	REGION
KURIL ISLANDS - KAMCHATKA										
020	09/03/81	05 35 44.8	43.621 N	147.031 E	45D	6.6	6.6	0.8	324	KURIL ISLANDS
057	06/30/82	01 57 34.1	44.679 N	151.143 E	33N	6.6	6.9	0.8	336	KURIL ISLANDS REGION
071	09/03/82	01 32 00.2	43.913 N	148.478 E	33N	6.0	5.9	1.1	300	KURIL ISLANDS REGION
082	11/14/82	08 29 20.3	52.986 N	158.669 E	92D	5.7		0.9	247	NEAR EAST COAST OF KAMCHATKA
115	02/26/83	07 10 59.1	49.243 N	155.601 E	56	6.0		0.9	327	KURIL ISLANDS
117	02/28/83	05 44 24.4	44.161 N	148.058 E	42D	5.8	5.9	1.0	247	KURIL ISLANDS
119	03/10/83	00 27 48.3	43.813 N	147.397 E	33N	6.2	5.8	1.0	334	KURIL ISLKANDS
131	04/04/83	19 04 20.6	52.931 N	159.858 E	38D	6.0	5.6	0.9	287	OFF EAST COAST OF KAMCHATKA
132	04/04/83	23 12 47.1	49.408 N	155.602 E	51D	6.1	6.5	0.9	335	KURIL ISLANDS
135	04/11/83	15 34 55.4	44.290 N	147.751 E	97D	5.7		1.0	247	KURIL ISLANDS
144	05/01/83	18 10 40.3	46.353 N	153.453 E	24D	6.1	6.0	1.0	323	KURIL ISLANDS
155	05/29/83	04 45 41.0	49.246 N	155.366 E	46D	5.8	5.2	0.8	250	KURIL ISLANDS
175	07/24/83	23 07 30.9	53.930 N	158.372 E	180D	6.1		1.0	330	NEAR EAST COAST OF KAMCHATKA
183	08/17/83	10 55 54.1	55.867 N	161.287 E	63	6.6		1.2	413	NEAR EAST COAST OF KAMCHATKA
220	11/20/83	00 44 43.5	43.706 N	148.444 E	29	5.9	6.1	1.0	299	KURIL ISLANDS REGION
JAPAN - NORTHEASTERN CHINA										
001	01/18/81	18 17 24.4	38.640 N	142.750 E	33N	6.1	6.9	1.1	220	NEAR EAST COAST OF HONSHU, JAPAN
043	02/20/82	19 18 20.2	33.579 N	140.999 E	18D	6.2	6.5	0.9	306	SOUTH OF HONSHU, JAPAN
045	03/21/82	02 32 07.7	42.158 N	142.361 E	44D	6.4	6.7	1.1	353	HOKKAIDO, JAPAN REGION
060	07/23/82	14 23 53.5	36.194 N	141.702 E	37	6.2	6.8	1.1	271	NEAR EAST COAST OF HONSHU, JAPAN
069	08/23/82	16 40 19.4	36.354 N	141.484 E	36D	5.8	5.6	1.0	273	NEAR EAST COAST OF HONSHU, JAPAN
093	12/28/82	06 37 42.5	33.826 N	139.434 E	22D	5.9	6.1	1.0	291	SOUTH OF HONSHU, JAPAN
116	02/27/83	12 14 20.7	35.869 N	139.916 E	78	5.9		0.9	297	NEAR S. COAST OF HONSHU, JAPAN
143	04/30/83	14 03 49.2	41.473 N	143.764 E	30	6.5	6.3	1.0	465	HOKKAIDO, JAPAN REGION
153	05/26/83	02 59 59.6	40.462 N	139.102 E	24	6.8	7.7	1.1	481	NEAR WEST COAST OF HONSHU, JAPAN
154	05.26/83	03 56 58.7	40.826 N	139.326 E	29	5.8		0.9	232	NEAR WEST COAST OF HONSHU, JAPAN
158	06/09/83	12 49 03.8	40.237 N	139.023 E	31D	6.3	5.6	0.9	443	NEAR WEST COAST OF HONSHU, JAPAN
160	06/21/83	06 25 27.3	41.346 N	139.099 E	10	6.7	6.9	1.1	468	HOKKAIDO, JAPAN REGION
180	08/08/83	03 47 57.1	35.498 N	139.069 E	25D	5.9	5.3	1.2	337	NEAR S. COAST OF HONSHU, JAPAN
196	10/03/83	13 33 35.0	33.941 N	139.513 E	12	5.8	6.0	1.0	286	SOUTH OF HONSHU, JAPAN
198	10/08/83	07 45 26.6	44.229 N	130.741 E	558	5.7		1.0	333	E. USSR-N.E. CHINA BORDER REGION
226	11/29/83	20 59 50.8	32.598 N	140.003 E	137	5.6		1.1	242	SOUTH OF HONSHU, JAPAN
228	11/30/83	02 56 47.2	41.790 N	142.772 E	57	5.8		1.0	352	HOKKAIDO, JAPAN REGION
BONIN - MARIANA - CAROLINE ISLANDS										
034	01/01/82	18 51 01.5	26.823 N	142.557 E	22	6.4	6.7	0.9	290	BONIN ISLANDS REGION
051	05/31/82	15 18 55.7	7.776 N	135.777 E	33N	6.0	6.4	1.3	172	WEST CAROLINE ISLANDS
058	07/04/82	01 20 06.8	27.929 N	136.967 E	536D	6.3		1.0	314	EAST OF RYUKYU ISLANDS
061	08/03/82	06 04 39.6	13.741 N	146.340 E	47	5.8	5.9	1.0	189	SOUTH OF MARIANA ISLANDS
074	09/06/82	01 47 02.7	29.325 N	140.360 E	176	6.5		1.1	413	SOUTH OF HONSHU, JAPAN
108	02/14/83	00 23 19.4	10.504 N	140.924 E	39D	5.8	5.7	1.2	189	WEST CAROLINE ISLANDS
184	08/20/83	13 08 32.5	27.904 N	141.793 E	41	5.7	5.5	1.0	270	BONIN ISLANDS
191	09/14/83	11 25 00.9	18.104 N	145.770 E	159D	6.0		1.2	268	MARIANA ISLANDS
232	12/11/83	09 13 49.2	8.137 N	137.239 E	24D	6.2	6.3	1.2	238	WEST CAROLINE ISLANDS
PHILIPPINE ISLANDS - TAIWAN - RYUKYU ISLANDS										
027	11/22/81	15 05 20.5	18.752 N	120.839 E	24D	6.2	6.5	1.0	298	LUZON, PHILIPPINE ISLANDS
029	12/12/81	04 52 37.1	23.932 N	125.856 E	10G	6.1	6.3	1.1	253	SOUTHWESTERN RYUKYU ISLANDS
038	01/11/82	06 10 06.4	13.752 N	124.358 E	46	6.0	7.1	1.1	205	LUZON, PHILIPPINE ISLANDS
041	01/24/82	06 08 56.6	14.085 N	124.347 E	37	5.6	6.4	1.2	177	LUZON, PHILIPPINE ISLANDS
090	12/17/82	02 43 03.6	24.595 N	122.547 E	87	6.1		1.2	298	TAIWAN REGION
094	12/28/82	13 49 29.0	19.945 N	121.397 E	34D	6.0	5.9	0.9	271	PHILIPPINE ISLANDS REGION
161	06/21/83	14 48 07.3	24.199 N	122.422 E	37	5.8	6.3	1.0	260	TAIWAN REGION
162	06/21/83	17 06 51.4	29.718 N	129.395 E	158	5.9		1.0	347	RYUKYU ISLANDS
164	06/24/83	09 06 45.8	24.176 N	122.402 E	44	6.1	6.7	1.0	311	TAIWAN REGION
167	07/03/83	02 49 27.9	20.161 N	122.379 E	220	6.1		1.0	336	PHILIPPINE ISLANDS REGION
177	08/02/83	02 17 41.0	20.435 N	122.101 E	158D	6.1		1.1	391	PHILIPPINE ISLANDS REGION
186	08/25/83	20 33 33.3	33.509 N	131.484 E	126	6.1		1.1	478	KYUSHU, JAPAN
195	09/21/83	19 20 42.4	24.095 N	122.148 E	28D	6.0	6.4	1.1	315	TAIWAN REGION
SOUTHEAST ASIA										
081	11/11/82	00 43 45.5	6.650 S	101.630 E	33N	6.1	6.0	1.0	275	SOUTHWEST OF SUMATERA
103	01/24/83	23 09 21.4	12.942 N	93.582 E	78D	6.1		1.3	379	ANDAMAN ISLANDS REGION
130	04/04/83	02 51 34.3	5.723 N	94.722 E	79	6.6		1.0	426	NORTHERN SUMATERA
141	04/22/83	00 37 37.0	14.926 N	99.023 E	10G	5.9	5.9	1.0	273	SOUTHEAST ASIA

Table 90. Hypocenter parameters for events in volume 2 with focal mechanisms computed....continued

163	06/24/83	07 18 22.1	21.721 N	103.282 E	18D	6.1	6.6	1.2	308	SOUTHEAST ASIA
166	07/02/83	09 34 04.9	5.747 N	94.715 E	93	5.7		1.0	298	NORTHERN SUMATERA
193	09/17/83	05 56 56.6	4.750 N	95.039 E	66	5.8		1.1	278	NORTHERN SUMATERA
CENTRAL ASIA										
003	01/23/81	21 13 51.7	30.927 N	101.098 E	33N	5.7	6.8	1.1	188	SICHUAN-PROVINCE, CHINA
014	06/11/81	07 24 25.2	29.913 N	57.715 E	33N	6.1	6.7	1.0	241	SOUTHERN IRAN
018	07/28/81	17 22 24.6	30.013 N	57.794 E	33N	5.7	7.1	1.0	205	IRAN
040	01/23/82	17 37 30.2	31.696 N	82.246 E	33N	6.0	6.5	1.1	217	TIBET
088	12/13/82	09 12 48.0	14.701 N	44.379 E	5G	6.0	6.0		303	WESTERN ARABIAN PENINSULA
089	12/16/82	00 40 48.7	36.148 N	69.011 E	36D	6.2	6.6	1.1	296	HINDU KUSH REGION
133	04/08/83	02 28 25.5	11.429 N	57.520 E	10G	5.9	6.3	1.1	236	ARABIAN SEA
140	04/18/83	10 58 51.2	27.793 N	62.054 E	64	6.5		1.2	369	SOUTHERN IRAN
171	07/12/83	11 34 17.5	27.606 N	56.381 E	25D	5.9	5.8	0.9	233	SOUTHERN IRAN
190	09/12/83	15 42 08.5	36.502 N	71.082 E	209D	6.1		1.0	380	AFGHANISTAN-USSR BORDER REGION
241	12/30/83	23 52 39.9	36.372 N	70.738 E	215D	6.6		1.0	485	HINDU KUSH REGION
SOUTH INDIAN OCEAN										
004	01/23/81	21 54 41.6	29.682 S	60.839 E	10G	6.1	6.8	1.0	229	ATLANTIC-INDIAN RISE

Table 91. Hypocenter parameters for events in volume 2 that met criteria but are not in this catalog

EVT. NO.	DATE UTC.	ORIGIN TIME UTC. HR MN SEC	GEOGRAPHIC COORDINATES LAT.	LONG	DEPTH km.	MAG. MB	MS	SD	NO. STA.	REGION
KURIL ISLANDS - KAMCHATKA										
	09/03/82	03 40 11.8	43.815 N	148.420 E	33N	5.8	5.8	1.1	260	KURIL ISLANDS REGION
	04/15/83	14 51 59.1	53.386 N	160.311 E	65D	5.8		1.0	280	NEAR EAST COAST OF KAMCHATKA
JAPAN - NORTHEASTERN CHINA										
	06/09/83	13 04 00.5	40.268 N	139.023 E	28D	6.3	5.6	1.4	402	NEAR WEST COAST OF HONSHU, JAPAN
BONIN - MARIANA - CAROLINE ISLANDS										
	02/13/83	06 35 30.0	13.837 NH	144.935 E	105	5.7		1.2	205	MARIANA ISLANDS
PHILIPPINE ISLANDS - TAIWAN - RYUKYU ISLANDS										
	04/26/83	15 26 40.3	24.647 N	122.589 E	116D	5.7		0.9	243	TAIWAN REGION
	08/17/83	12 17 56.0	18.231 N	120.860 E	29D	6.2	6.5	1.1	330	LUZON, PHILIPPINE ISLANDS
SOUTH INDIAN OCEAN										
	11/30/83	17 46 00.6	6.852 S	72.110 E	10G	6.6	7.6	1.2	402	CHAGOS ARCHIPELAGO REGION
	12/01/83	05 45 34.4	6.653 S	71.423 E	10G	5.8	5.6	1.0	239	CHAGOS ARCHIPELAGO REGION
	12/13/83	17 43 14.8	6.463 S	71.417 E	10G	6.3	6.3	1.1	332	CHAGOS ARCHIPELAGO REGION

Table 92. Station code abbreviations and locations

Code	Station Name and Geographic Region
AAE	Addis Ababa, Ethiopia
AAI	Ambon, Moluku, Indonesia
AAM	Ann Arbor, Michigan, U.S.A.
ABJ	Abashiri, Hokkaido, Japan
ACM	Allegan, Michigan, U.S.A.
ACO	Alabaster Covern State Park, Oklahoma, U.S.A.
ACX	Acapulco, Guerrero, Mexico
ADE	Adelaide (Mount Bonython), South Australia, Australia
ADH	Angra do Heraismo, Azores, Portugal
ADK	Adak, Alaska, U.S.A.
AFI	Afiamalu, Samoa Islands
AHA	Ahua, Hawaii, U.S.A.
AIN	Ainapo, Hawaii, U.S.A.
AJI	Ajiro, Honshu, Japan
AKU	Akureyri, Iceland
ALE	Alert, Northwest Territories, Canada
ALI	Alicante, Spain
ALM	Almeria, Spain
ALP	Ascoli Piceno, Marche, Italy
ALQ	Albuquerque, New Mexico, U.S.A.
ALT	Altintas, Turkey
AMM	Anaconda, Montana, U.S.A.
AN10	Anna, Ohio, U.S.A.
AN11	Anna, Ohio, U.S.A.
AN12	Anna, Ohio, U.S.A.
AN3	Anna, Ohio, U.S.A.
AN4	Anna, Ohio, U.S.A.
AN7	Anna, Ohio, U.S.A.
AN8	Anna, Ohio, U.S.A.
AN9	Anna, Ohio, U.S.A.
ANM	Nome—Anvil Mountain, Alaska, U.S.A.
ANMO	Albuquerque, New Mexico, U.S.A.
ANP	Anpu, China (Taiwan)
ANR	Andizhan, Uzbek S.S.R., U.S.S.R.
ANT	Antofagosto, Antofagosto, Chile
ANTO	Ankara, Turkey
AQU	L'Aquila, Abruzzo, Italy
ARE	Arequipo (Characato), Peru
ARN	Arnold Ranch, California, U.S.A.
ARO	Arta Observatory, Djibouti
ARU	Arti, R.S.F.S.R., U.S.S.R.
ASA	Asahikawa, Hokkaido, Japan
ASP	Alice Springs, Northern Territory, Australia
ASPA	Alice Springs, Northern Territory, Australia
ATA	Ator, Djibouti
ATH	Athens Observatory, Greece
ATO	Altona, Oklahoma, U.S.A.
ATX	Austin, Texas, U.S.A.
AVE	Averroes, Morocco
AVF	Avril sur Loire, Nivernois, France
AVY	Angavokely, Madagascar
BAA	Buenos Aires, Buenos Aires, Argentina
BAF	Belacker, Alsace, France
BAG	Baguio City, Luzon, Philippines
BAL	Ballidu, Western Australia, Australia
BBI	Big Bend, Idaho, U.S.A.
BCAO	Bangui, Central African Republic
BCK	Bucak, Turkey
BDF	Brasilia, Distrito Federal, Brazil
BDT	Bhumibol Dam, Thailand
BDW	Boulder, Wyoming, U.S.A.
BEC	Bermuda—Columbia, Bermuda
BER	Bergen, Norway
BFD	Bellfield, Victoria, Australia
BFS	Buffelsfontein, Transvaal, South Africa
BGF	Bois d'Agland, Bourbonnais, France
BGG	Burg Eltz, Rheinland-Pfalz, Fed. Rep. of Germany
BHD	Baghdad, Iraq
BHG	Bad Reichenhall, Bayern, Fed. Rep. of Germany
BHO	Bethel, Oklahoma, U.S.A.
BIM	Bigot, Martinique
BJI	Beijing (Peking), Beijing, China (Mainland)
BKB	Balikpapan, Kalimanton, Indonesia
BKR	Bakuriani, Georgian S.S.R., U.S.S.R.
BKS	Berkeley—Byerly, California, U.S.A.
BLA	Blacksburg, Virginia, U.S.A.
BLF	Bloemfontein, Orange Free State, South Africa
BMA	Barra Manso, Rio de Janeiro, Brazil
BMN	Battle Mountain, Nevada, U.S.A.
BMR	Baia Mare, Romania
BNG	Bangui, Central African Republic
BNH	Berlin, New Hampshire, U.S.A.
BNS	Bensberg, Nordrhein-Westfalen, Fed. Rep. of Germany
BOCO	Bogota, Colombia
BOG	Bogota, Colombia
BPI	Bernard Price Institute, Johannesburg Transvaal, South Africa
BPIL	Belle Prairie, Illinois, U.S.A.
BQA	Mbenggo, Fiji
BRG	Berggiesshubel, German Dem. Rep.
BRK	Berkeley—Haviland, California, U.S.A.
BRL	Berlin—Free University Berlin (West), Fed. Rep. of Germany
BRN	Berlin, Berlin (West), Fed. Rep. of Germany
BRT	Bari-Castellano, Puglio, Italy
BRY	Bratogos, Yugoslavia
BSF	Ballon de Servence, Franche Comte, France
BSI	Bando Aceh, Sumatera, Indonesia
BTO	Baotou (Paotou), Inner Mongolia, China (Mainland)
BUC	Bucharest, Romania
BUC1	Bucharest, Romania
BUD	Budapest, Hungary
BUH	Buehlerhoehe, Boden-Wurttemberg, Fed. Rep. of Germany
BUL	Bulawayo, Zimbabwe
BUT	Butte, Montana, U.S.A.
CAF	Colviac, Auvergne, France
CAI	Caico, Rio Grande do Norte, Brazil
CAN	Canberra, Australian Cap. Terr., Australia
CAR	Caracas, Venezuela
CAW	Cannon Point, North Island, New Zealand
CBI	Chichi-shima (Chichijima), Bonin Islands, Japan
CBZ	Campbell Island, Campbell Island, New Zealand
CC4	Carocol Dam No. 4, Guerrero, Mexico
CCP	Cebu City (Lahug), Cebu, Philippines
CD2	Chengdu (Chengtu), Sichuan, China (Mainland)
CDF	Champ du Feu, Alsace, France
CDR	Cadorache, Provence, France
CDY	Cape Dorby, Alaska, U.S.A.
CEA	Ceahlau, Romania
CEN	Cerro Negro, San Juan, Argentina
CER	Ceres, Cape Province, South Africa
CEY	Cerknica, Yugoslavia
CFA	Coronel Fontana, San Juan, Argentina
CFI	College Fiord, Alaska, U.S.A.
CFR	Carcoliu, Romania
CGN	Calugareni, Romania
CGP	Cagayan de Oro, Mindanao, Philippines
CHCH	Chadas Angostura, Santiago, Chile
CHG	Chiang Mai, Thailand
CHO	Chashi, Honshu, Japan
CHTO	Chiang Mai, Thailand
CIN	Cine, Turkey
CIR	Chiredzi, Zimbabwe
CLI	Colonesti, Romania
CLK	Chileko, Malawi
CLL	Collmberg, German Dem. Rep.
CLO	Closani, Romania
CLX	Colx Mountain, Montana, U.S.A.
CMP	Campulung, Romania
CMS	Cobar Meteorology Station, New South Wales, Australia
CN2	Changchun, Jilin, China (Mainland)
CNG	Changolane, Mozambique
CNP	Catarman, Samar, Philippines
COI	Coimbra, Portugal
COL	College Outpost, Alaska, U.S.A.
CON	Concepcion, Concepcion, Chile
COO	Cooney (Armidale), New South Wales, Australia
COP	Copenhagen, Denmark
COR	Corvallis, Oregon, U.S.A.
COZ	Cozia, Romania
CPK	Cone Peak, Hawaii, U.S.A.
CR1	Chicoasen Reservoir No. 1, Chiapas, Mexico
CR4	Chicoasen Reservoir No. 4, Chiapas, Mexico
CR5	Chicoasen Reservoir No. 5, Chiapas, Mexico
CR6	Chicoasen Reservoir No. 6, Chiapas, Mexico
CRM	Caravelle, Martinique
CRT	Cartuja (Granada), Spain
CRX	Cerrillo, Mexico, Mexico
CSIL	Creal Springs, Illinois, U.S.A.
CSN	Chicoasen, Chiapas, Mexico

Table 92. Station code abbreviations and locations....continued

Code	Station Name and Geographic Region
CTA	Charters Towers, Queensland, Australia
CTAO	Charters Towers, Queensland, Australia
CTI	Costello Tesino, Trentino-Alto Adige, Italy
CTT	Catalca, Turkey
CUM	Cumana, Venezuela
CVF	Calvi, Corsica, France
CVO	Cavosna, Romania
CVP	Callao Caves, Luzan, Philippines
CYA	Chayo, Santiago del Estero, Argentina
DAF	Dafare, Djibouti
DAG	Danmarkshavn, Greenland
DAV	Davao, Mindanao, Philippines
DBN	De Bilt, Netherlands
DCI	Dry Creek, Idaho, U.S.A.
DCN	Craghan, Eire
DDK	Dunsink Observatory, Eire
DDR	Dodoira, Honshu, Japan
DES	Desert, Hawaii, U.S.A.
DEV	Deva, Romania
DIM	Dimitravgrad, Bulgaria
DIX	Grand Dixence, Switzerland
DKM	Kilmashogue, Eire
DL2	Dalian (Ludo), Liaoning, China (Mainland)
DLE	Lyons Estate, Eire
DMK	Demirkoy, Turkey
DMN	Damon, Nepal
DMU	Kingscourt, Eire
DON	Dongola, Missouri, U.S.A.
DOU	Dourbes, Belgium
DRV	Dumont d'Urville (Pointe Geologie, Adelie) Greater Antarctica, Antarctica
DSH	Dushanbe (Stalinabod), Tojik S.S.R., U.S.S.R.
DST	Dursunbey, Turkey
DUG	Dugway, Utah, U.S.A.
DUI	Duronia, Molise, Italy
EAB	Aberfoyle, Scotland, United Kingdom
EAU	Auchinoon, Scotland, United Kingdom
EBH	Black Hill, Scotland, United Kingdom
EBL	Broadlaw, Scotland, United Kingdom
ECA	El Cajon, California, U.S.A.
ECB	Carrickbyrne Hill, Eire
ECH	Echery (Ste.-Marie-aux-Mines), Larraine, France
ECK	Couldkine Hill, Scotland, United Kingdom
ECP	Carnsore Point, Eire
EDC	Edincik, Turkey
EDI	Edinburgh, Scotland, United Kingdom
EDM	Edmonton, Alberta, Canada
EDU	Dundee, Scotland, United Kingdom
ELL	Elmali, Turkey
ELO	Logiealmond, Scotland, United Kingdom
ELT	Yeltsovka, R.S.F.S.R., U.S.S.R.
ENN	Epen, Netherlands
EPF	Esparros, Gascogne, France
EPT	El Paso, Texas, U.S.A.
ERC	Erice, Sicily, Italy
ESA	Eso Alo, D'Entrecasteaux Islands, Papua New Guinea
ESK	Eskdalemuir, Scotland, United Kingdom
ESR	Escape Road, Hawaii, U.S.A.
ESY	Stoneypath, Scotland, United Kingdom
ETA	Tara, Eire
EUR	Eureka, Nevada, U.S.A.
EVA	Evander, Transvaal, South Africa
EZN	Ezine, Turkey
FBA	Fairbanks, Alaska, U.S.A.
FCC	Fort Churchill, Manitoba, Canada
FCH	Farellanes, Santiago, Chile
FDF	Fort de France (Morne des Cadets), Martinique
FFC	Flin Flan, Manitoba, Canada
FHC	Fickle Hill, California, U.S.A.
FIR	Firenze Ximeniano (Florence), Toscana, Italy
FKJ	Fukue, Kyushu, Japan
FKK	Fukuoka, Kyushu, Japan
FKS	Fukushima, Honshu, Japan
FLN	La Foliniere, Normandie, France
FOC	Focsani, Romania
FRB	Frobisher, Northwest Territories, Canada
FRF	La Foret Royale, Provence, France
FRI	Friant, California, U.S.A.
FUK	Fukui, Honshu, Japan
FUR	Fuerstenfeldbruck, Bayern, Fed. Rep. of Germany
FVM	French Village, Missouri, U.S.A.

Code	Station Name and Geographic Region
GAC	Glen Almond, Quebec, Canada
GAP	Garmisch-Partenkirchen, Bayern, Fed. Rep. of Germany
GBA	Gauribidanur Array, Karnataka, India
GBO	Fort Gibson, Oklahoma, U.S.A.
GBR	Grand-Bara, Djibouti
GCC	Granite Creek, California, U.S.A.
GDH	Godhavn, Greenland
GEO	Georgetown, District of Columbia, U.S.A.
GIB	Gibilmanna, Sicily, Italy
GLA	Glamis, California, U.S.A.
GLD	Golden, Colorado, U.S.A.
GMTN	Garret Mountain, New Jersey, U.S.A.
GNZ	Gisborne, North Island, New Zealand
GOL	Golden (Bergen Park), Colorado, U.S.A.
GPA	Golpozari, Turkey
GRB1	Graefenberg Array (Bruennthal) Bayern, Fed. Rep. of Germany
GRC	Gorchy, Nivernais, France
GRC1	Graefenberg Array (Eglofsdorf) Bayern, Fed. Rep. of Germany
GRF	Grafenberg Array (Erlangen) Bayern, Fed. Rep. of Germany
GRFO	Graefenberg, Bayern, Fed. Rep. of Germany
GRG	Grivo, Greece
GRM	Grahamstown, Cape Province, South Africa
GRR	Gorron, Normandie, France
GRS	Goris, Armenian S.S.R., U.S.S.R.
GSC	Goldstone, California, U.S.A.
GTA	Gaotai, Gansu, China (Mainland)
GUA	Guam (Santa Rosa), Guam, Mariana Islands
GUMO	Guam, Guam, Mariana Islands
GUV	Guri, Venezuela
GWF	Grand Wintersberg, Alsace, France
GYA	Guiyang (Kweiyang), Guizhou, China (Mainland)
GZH	Guangzhou (Canton), Guangdong, China (Mainland)
GZR	Guro Zlato, Romania
HAC	Hachinahe, Honshu, Japan
HAM	Hamburg, Hamburg, Fed. Rep. of Germany
HAU	Haudompre, Franche Comte, France
HCY	Herceg Novi, Yugoslavia
HHC	Hohhot, Inner Mongolia, China (Mainland)
HIM	Himeji, Honshu, Japan
HIR	Hirashima, Honshu, Japan
HJJ	Hachijo-jima (Hatidyozima), Bonin Islands, Japan
HKC	Hong Kong, Hong Kong
HKT	Hockley, Texas, U.S.A.
HLD	Halaksitan, Djibouti
HLP	Hilino Poli, Hawaii, U.S.A.
HLW	Helwan, Egypt
HMM	Hamamatsu (Hamamatu), Honshu, Japan
HNR	Honiara, Solomon Islands
HOF	Hof, Bayern, Fed. Rep. of Germany
HON	Honolulu, Hawaii, U.S.A.
HPU	Hale Pohoku, Hawaii, U.S.A.
HRT	Hereke, Turkey
HRY	Holter Research Foundation—York Bridge Montana, U.S.A.
HUA	Huancayo, Peru
HVD	Hendrik Verwoerd Dam, Cape Province, South Africa
HYB	Hyderabad—Nat. Geophysical Research Inst. Andhra Pradesh, India
IFR	Ifrane, Morocco
IIC	Santa Rita Coyatepec, Mexico, Mexico
IID	Iida, Honshu, Japan
III	Iguala—Cerro de Tuxpan, Guerrero, Mexico
IIM	Instituto de Ingimieria, UNAM Distrito Federal, Mexico
IIP	El Pino, Mexico, Mexico
IIT	Tenantzintla, Puebla, Mexico
ILT	Iultin, R.S.F.S.R., U.S.S.R.
IMA	Indian Mountain, Alaska, U.S.A.
IN1	Indiana Array, Indiana, U.S.A.
IN2	Indiana Array, Indiana, U.S.A.
IN3	Indiana Array, Indiana, U.S.A.
IN4	Indiana Array, Indiana, U.S.A.
INK	Inuvik, Northwest Territories, Canada
INY	Ithaca, New York, U.S.A.
IPM	Ipoh, Peninsular Malaysia, Malaysia
IR2	Iran Long-Period Array, Iran
IR4	Iran Long-Period Array, Iran
IR7	Iran Long-Period Array, Iran

Table 92. Station code abbreviations and locations....continued

Code	Station Name and Geographic Region
ISA	Isabella, California, U.S.A.
ISI	Ishigaki-shima, Ryukyu Islands, Japan
ISN	Ishinomaki, Honshu, Japan
ISQ	Mount Isa, Queensland, Australia
ISR	Istrita, Romania
ISSF	Issarbe, Bearn, France
IST	Istanbul, Turkey
IZM	Izmir, Turkey
IZU	Izuhara, Kyushu, Japan
JACH	Jahuel, Aconcagua, Chile
JAS	Jamestown, California, U.S.A.
JAU	Jaaut, Bearn, France
JAY	Jayapura, Irian Joya, Indonesia
JCT	Junction, Texas, U.S.A.
JER	Jerusalem, Israel
JHP	Judd Hill Plantation, Arkansas, U.S.A.
JMB	Yambol, Bulgaria
JOS	Josvafo, Hungary
JOZ	Jozini, Natal, South Africa
KAAO	Kabul, Afghanistan
KAE	Kaena, Hawaii, U.S.A.
KAG	Kagoshima, Kyushu, Japan
KAS	Kastamonu, Turkey
KBA	Barrage Koelnbrein, Austria
KBL	Kabul, Afghanistan
KBS	Kingsbay, Svalbard, Norway
KDC	Kodiak, Alaska, U.S.A.
KDZ	Kurdzhali, Bulgaria
KEV	Kevo, Finland
KGM	Kluang, Peninsular Malaysia, Malaysia
KHC	Kasperske Hary, Czechoslovakia
KHE	Kheis, R.S.F.S.R., U.S.S.R.
KHI	Kokhk, Iran
KHU	Kohuku, Hawaii, U.S.A.
KIC	Kason Boka, Ivory Coast
KIP	Kipapa, Hawaii, U.S.A.
KIS	Kishinev, Moldovian S.S.R., U.S.S.R.
KJF	Kajaani, Finland
KKM	Kota Kinabalu, Sabah, Malaysia
KKN	Kokani, Nepal
KLB	Kellerberrin, Western Australia, Australia
KLG	Kalgoorlie, Western Australia, Australia
KLL	Kalltalsperre Nordrhein-Westfalen, Fed. Rep. of Germany
KMG	Kumagaya, Honshu, Japan
KMI	Kunming, Yunnan, China (Mainland)
KMR	Kremsmuenster, Austria
KNA	Kununurra, Western Australia, Australia
KNH	Kipuka Nene, Hawaii, U.S.A.
KNK	Knik Glacier, Alaska, U.S.A.
KNT	Kendrikon, Greece
KOB	Kobe, Honshu, Japan
KOC	Kochi, Shikoku, Japan
KOD	Kodaikanal, Tamil Nadu, India
KOF	Kofu, Honshu, Japan
KON	Kongsberg, Norway
KONO	Kongsberg, Norway
KOU	Koumac, New Caledonia
KRA	Krakow, Poland
KRI	Karoi, Zimbabwe
KRO	Koro, Fiji
KRP	Karapiro, North Island, New Zealand
KSH	Kashi (Kashgar), Xinjiang, China (Mainland)
KSP	Ksiaz, Poland
KSR	Koster, Transvaal, South Africa
KSU	Kousour, Djibouti
KUM	Kumamoto, Kyushu, Japan
KUS	Kushiro, Hokkaido, Japan
KVG	Kavieng, New Ireland, Papua New Guinea
KVT	Kavak, Turkey
KYS	Kiyosumi, Honshu, Japan
KZN	Kozani, Greece
LAT	Lae, New Guinea, Papua New Guinea
LAV	Laguna Verde, Valparaiso, Chile
LBF	Les Buteaux, Nivernais, France
LCCM	Lewis and Clark Caverns, Montana, U.S.A.
LCI	Lecce, Puglia, Italy
LCR	La Lucha, Costa Rica
LD3	LASA D Ring, Montana, U.S.A.
LDF	La Druitiere, Normandie, France
LDM	Libby Dam, Montana, U.S.A.
LEM	Lembang, Java, Indonesia
LFF	La Frestal, Guyenne, France
LGBM	Gray Butte, California, U.S.A.
LGN	Laguillos, Venezuela
LGR	Logrono, Spain
LHC	Lakehead University (Thunder Bay), Ontario, Canada
LHD	Little Haaa Mountain, Montana, U.S.A.
LIS	Lisbon, Portugal
LIT	Litokhoron, Greece
LJU	Ljubljana (Laibach), Yugoslavia
LLA	Llanada, California, U.S.A.
LLS	Linthal—Limmern, Switzerland
LM2	Lima (Magdalena), Peru
LMG	Lamington, New Guinea, Papua New Guinea
LMR	La Maurre, Provence, France
LNV	Longavila, Valparaiso, Chile
LON	Longmire, Washington, U.S.A.
LOR	Larmes (Somme), Nivernais, France
LPA	La Plata, Buenos Aires, Argentina
LPB	La Paz, Bolivia
LPF	La Pertre, Orleanais, France
LPO	La Pouchou, Guyenne, France
LPS	La Palma, El Salvador
LQT	Los Qualtahues, Santiago, Chile
LRG	Lorgues, Provence, France
LRM	Limekiln Ridge, Montana, U.S.A.
LSA	Lhasa, Tibet, China (Mainland)
LSF	La Souterraine, Marche, France
LST	Lone Star, Missouri, U.S.A.
LZH	Lanzhou (Lanchou), Gansu, China (Mainland)
MAJO	Matsushiro, Honshu, Japan
MAL	Malaga, Spain
MAN	Manila (Diliman), Luzon, Philippines
MAT	Matsushiro, Honshu, Japan
MAW	Mawson, Greater Antarctica, Antarctica
MBC	Mould Bay, Northwest Territaries, Canada
MBL	Marble Bar, Western Australia, Australia
MBO	Mbour, Senegal
MBU	Mbua, Fiji
MCQ	Macquarie Island, Macquarie Island, Australia
MDJ	Mudanjiang, Heilongjiang, China (Mainland)
MDN	Marne Daniel, Dominica
MEI	Melilli, Basilicata, Italy
MEK	Meekathorra, Western Australia, Australia
MEM	Memboch, Belgium
MEX	Mexico City, Distrito Federal, Mexico
MFF	Saint Martin du Fouillaux, Poitou, France
MGD	Magadan 1, R.S.F.S.R., U.S.S.R.
MHC	Mount Hamilton (Lick Observatory), California, U.S.A.
MHI	Mashhad, Iran
MIM	Mila, Maine, U.S.A.
MIN	Minaral, California, U.S.A.
MIS	Mishima, Honshu, Japan
MIT	Mito, Honshu, Japan
MIY	Miyako, Honshu, Japan
MKA	Makaopuhi, Hawaii, U.S.A.
MKL	Maskali, Djibouti
MKS	Ujungpandang (Makassar), Sulawesi, Indonesia
MLH	Mauna Loa, Hawaii, U.S.A.
MLR	Muntele Rosu, Romania
MLS	Moulis, Gascogne, France
MLX	Mauna Loa 2, Hawaii, U.S.A.
MMB	Musamishita, Bulgaria
MMK	Mattmark, Switzerland
MMN	Marmanno, Calabria, Italy
MNA	Mina, Nevada, U.S.A.
MNG	Mangahaa, North Island, New Zealand
MNI	Manado, Sulawesi, Indonesia
MNS	Mont Asola, Lazio, Italy
MNT	Montreal, Quebec, Canada
MNV	Mina, Nevada, U.S.A.
MOM	Momote, Admiralty Islands, Papua New Guinea
MOT	McDonald Observatory, Texas, U.S.A.
MOX	Moxa, German Dem. Rep.
MRG	Morgantown, West Virginia, U.S.A.
MRK	Morioka, Honshu, Japan
MRL	Marmal, Guatemala
MRT	Murotamisaki, Shikoku, Japan
MSI	Messina I.N.G., Sicily, Italy

Table 92. Station code abbreviations and locations....continued

Code	Station Name and Geographic Region
MSL	Mosul, Iraq
MSO	Missoula, Montana, U.S.A.
MSZ	Milford Sound, South Island, New Zealand
MTD	Mount Darwin, Zimbabwe
MTN	Manton, Northern Territory, Australia
MTS	Matsue, Honshu, Japan
MTY	Matsuyama (Matuyama), Shikoku, Japan
MUD	Mønsted Underground, Denmark
MUN	Mundaring, Western Australia, Australia
MVH	Mountain View, Hawaii, U.S.A.
MVI	Minami-daito-jima, Ryukyu Islands, Japan
MVM	Montagne du Vauclin, Martinique
MWC	Mount Wilson, California, U.S.A.
MWH	Makuaweowea, Hawaii, U.S.A.
MYK	Miyako-jima, Ryukyu Islands, Japan
MZF	Mazirot, Marche, France
MZX	Mazatlan, Sinaloa, Mexico
NAG	Nagoya, Honshu, Japan
NAH	Naha, Ryukyu Islands, Japan
NAI	Nairobi, Kenya
NAU	Nanutarra, Western Australia, Australia
NAV	Narrows, Virginia, U.S.A.
NC3	Norsar Array Site 03C00, Norway
NDI	New Delhi (Delhi), Delhi, India
NED	Newark, Delaware, U.S.A.
NEM	Nemuro, Hokkaido, Japan
NEW	Newport, Washington, U.S.A.
NGN	Nagano, Honshu, Japan
NGO	Nago, Ryukyu Islands, Japan
NGS	Nagasaki, Kyushu, Japan
NHIL	New Haven, Illinois, U.S.A.
NII	Niigata, Honshu, Japan
NJ2	Nanjing, Jiangsu, China (Mainland)
NKI	Nikolski, Alaska, U.S.A.
NNA	Nana, Peru
NNT	Nang Plab, Thailand
NOP	Napoh Range, California, U.S.A.
NOU	Noumea, New Caledonia
NPA	Nampula, Mozambique
NPH	North Pit, Hawaii, U.S.A.
NRN	Naryn, Kirghiz S.S.R., U.S.S.R.
NST	Nakhon Sawan, Thailand
NUR	Nurmijarvi, Finland
NWAO	Narrogin, Western Australia, Australia
OBN	Obninsk, R.S.F.S.R., U.S.S.R.
OBO	Obock, Djibouti
OCN	Over Castle Rock, New York, U.S.A.
OCO	Oklahoma City, Oklahoma, U.S.A.
OFU	Ofunato, Honshu, Japan
OGA	Obergurgl, Austria
OHR	Ohrid, Yugoslavia
OIT	Oita, Kyushu, Japan
OKA	Okayama, Honshu, Japan
ONA	Onahama, Honshu, Japan
ORI	Oriolo, Calabria, Italy
ORO	Oropa, Piemonte, Italy
ORT	Oak Ridge, Tennessee, U.S.A.
ORV	Oroville, California, U.S.A.
OSA	Osaka, Honshu, Japan
OSH	Oshima, Bonin Islands, Japan
OSK	Osaka (Takayasuyama), Honshu, Japan
OSS	Ovo Spin, Switzerland
OTT	Ottawa, Ontario, Canada
OUR	Ouranopolis, Greece
OUT	Outlet, Hawaii, U.S.A.
OWA	Owase, Honshu, Japan
OYM	Oyama, Honshu, Japan
OZB	Mount Ozzard, British Columbia, Canada
OZC	Ocozocuautla, Chiapas, Mexico
PAA	Panguna, Bougainville Island, Papua New Guinea
PAD	Padova, Veneto, Italy
PAL	Palisades, New York, U.S.A.
PAP	Pandan, Panay, Philippines
PARM	Anticline Ridge, California, U.S.A.
PAS	Pasadena, California, U.S.A.
PCA	Pinnacle, Alaska, U.S.A.
PCH	Pirque, Santiago, Chile
PCO	Ponca City, Oklahoma, U.S.A.
PCR	La Plaine des Cafres, Reunion
PCRM	Curry Mountain, California, U.S.A.
PCT	Pak Chong, Thailand
PDA	Ponta Delgada, Azores, Portugal
PDI	Porto d'Ischia, Campania, Italy
PEL	Peldehue, Santiago, Chile
PET	Petropavlovsk-Kamchatskiy, R.S.F.S.R., U.S.S.R.
PGC	Pacific Geoscience Centre, Sidney British Columbia, Canada
PGP	Puerto Galera, Mindoro, Philippines
PHAM	Harlan Ranch, California, U.S.A.
PHC	Port Hardy, British Columbia, Canada
PIP	Pasuquin, Luzon, Philippines
PJG	Potts Junction, Guam, Mariana Islands
PKI	Phulchoki, Nepal
PKR	P.K. Le Roux Dam, Orange Free State, South Africa
PLD	Plovdiv, Bulgaria
PLM	Palomar, California, U.S.A.
PLP	Palo, Leyte, Philippines
PME	Palmer East, Alaska, U.S.A.
PMG	Port Moresby, New Guinea, Papua New Guinea
PMP	Pompeii, Campania, Italy
PMR	Palmer, Alaska, U.S.A.
PMS	Palmer South (Arctic Valley), Alaska, U.S.A.
PNT	Penticton, British Columbia, Canada
PNY	Plattsburgh, New York, U.S.A.
POI	Palino, Lazio, Italy
POO	Poona, Maharashtra, India
PPE	Popeni, Romania
PPI	Padangpanjang, Sumatera, Indonesia
PPL	Puu Pili, Hawaii, U.S.A.
PPR	Puerto Princesa, Palawan, Philippines
PPT	Papeete (Pamitai), Society Islands, French Polynesia
PRCM	Roach Canyon, California, U.S.A.
PRE	Pretoria, Transvaal, South Africa
PRI	Priest, California, U.S.A.
PRM	Parsons Mountain, South Carolina, U.S.A.
PRS	Paraiso, California, U.S.A.
PRU	Pruhonice, Czechoslovakia
PRY	Parys, Orange Free State, South Africa
PSI	Prapat, Sumatera, Indonesia
PSN	Preselentsi, Bulgaria
PSZ	Piszkesteto, Hungary
PT02	Quilmana, Peru
PT03	Guadalupe, Peru
PT06	Pisco, Peru
PTO	Porto (Serro do Pilar), Portugal
PUH	Pauahi, Hawaii, U.S.A.
PUL	Pulkovo, R.S.F.S.R., U.S.S.R.
PV06	Paradox Valley (Cool Canyon), Colorado, U.S.A.
PV07	Paradox Valley (Long Mesa), Colorado, U.S.A.
PV10	Paradox Valley (South La Sal), Colorado, U.S.A.
PVC	Port Vila, Vanuatu Islands
PVL	Pavlikeni, Bulgaria
PWA	Palmer West (Houston), Alaska, U.S.A.
PWH	Paliokeowe Pali, Hawaii, U.S.A.
PWL	Port Wells, Alaska, U.S.A.
PWLA	Pickwick Lake, Alabama, U.S.A.
PYA	Pyatigorsk, R.S.F.S.R., U.S.S.R.
QUE	Quetta, Pakistan
QZG	Quezaltepeque, Guatemala
QZH	Quanzhou, Fujian, China (Mainland)
QZD	Quartz Mountain State Park, Oklahoma, U.S.A.
RAB	Rabaul, New Britain, Papua New Guinea
RAR	Rarotanga, Cook Islands
RBL	Raibl, Friuli-Venezia Giulia, Italy
RCD	Rapid City, South Dakota, U.S.A.
RDJ	Rio de Janeiro, Rio de Janeiro, Brazil
RDP	Rocca di Papa, Lazio, Italy
RES	Resolute, Northwest Territories, Canada
REY	Reykjavik, Iceland
RFA	San Rafael, Mendoza, Argentina
RHP	Rhaboro Hills, South Island, New Zealand
RIM	Rim, Hawaii, U.S.A.
RIV	Riverview, New South Wales, Australia
RJF	Les Rejaudoux, Limousin, France
RKG	Rocky Gully, Western Australia, Australia
RKT	Rikitea, Tuamotu Archipelago, French Polynesia
RLO	Rose Lookout Tower, Oklahoma, U.S.A.
RMJ	Rumoi, Hokkaido, Japan
RMP	Rome (Monte Porzio Catone), Lazio, Italy
RMT	Round Mountain, California, U.S.A.

Table 92. Station code abbreviations and locations....continued

Code	Station Name and Geographic Region
RMU	Rainbow Monument, Utah, U.S.A.
ROCH	El Roble, Santiago, Chile
ROF	Roppe, Alsace, France
ROG	Rognes, Provence, France
RRO	Red Rock Canyon, Oklahoma, U.S.A.
RSCP	Cumberland Plateau, Tennessee, U.S.A.
RSNT	Yellowknife, Northwest Territories, Canada
RSNY	Adirondack, New York, U.S.A.
RSSD	Black Hills, South Dakota, U.S.A.
RVR	Riverside, California, U.S.A.
RXF	Rexford, Montana, U.S.A.
SAG	Saga, Kyushu, Japan
SAL	Sala, Lombardia, Italy
SAM	Samarkand, Uzbek S.S.R., U.S.S.R.
SAN	Santiago, Santiago, Chile
SAO	San Andreas Geological Observatory California, U.S.A.
SAP	Sapporo, Hokkaido, Japan
SAX	Saentis, Switzerland
SBA	Scott Base, Greater Antarctica, Antarctica
SBB	Saddle Back Butte, California, U.S.A.
SCE	Schlegeis, Austria
SCH	Schefferville, Quebec, Canada
SCM	Sheep Creek Mountain, Alaska, U.S.A.
SCP	State College, Pennsylvania, U.S.A.
SDN	Sand Point, Alaska, U.S.A.
SDV	Santo Domingo, Venezuela
SDW	Sidewinder Mine, California, U.S.A.
SEK	Senekal, Orange Free State, South Africa
SEM	Semipalatinsk, Kazakh S.S.R., U.S.S.R.
SEN	Sendai (Mukaiyama), Honshu, Japan
SEO	Seoul (Keizyo), South Korea
SES	Suffield, Alberta, Canada
SEY	Seymchan, R.S.F.S.R., U.S.S.R.
SFS	San Fernando, Spain
SGH	Sud-Ghoubbet, Djibouti
SGO	Sicignano, Campania, Italy
SHA	Spring Hill, Alabama, U.S.A.
SHE	Shemakha, Azerbaijan S.S.R., U.S.S.R.
SHI	Shiraz, Iran
SHIO	Shillong, Meghalaya, India
SHJ	Shionomisaki (Siomisaki), Honshu, Japan
SHK	Shiraki, Honshu, Japan
SHL	Shillong, Meghalaya, India
SHN	Shimonoseki 3 (Shimonoseki), Honshu, Japan
SHZ	Shizuoka, Honshu, Japan
SIO	Slick, Oklahoma, U.S.A.
SIT	Sitka, Alaska, U.S.A.
SJG	San Juan, Puerto Rico
SJS	San Jose, Costa Rica
SKO	Skopje, Yugoslavia
SKR	Severa-Kurilsk, R.S.F.S.R., U.S.S.R.
SLA	San Lorenzo, Salta, Argentina
SLE	Schleitheim, Switzerland
SLM	Saint Louis, Missouri, U.S.A.
SLR	Silverton, Transvaal, South Africa
SMF	Signal de Mont, Bourbonnais, France
SMY	Shemya, Alaska, U.S.A.
SNA	Sanae, Greater Antarctica, Antarctica
SNG	Sangkhla, Thailand
SNY	Shenyang, Liaoning, China (Mainland)
SNZO	South Karori, North Island, New Zealand
SOB1	Sobradinho (Serra), Bahia, Brazil
SOD	Sodankyla, Finland
SOF	Sofia, Bulgaria
SOH	Sokhos, Greece
SOP	Sopron, Hungary
SOR	Soroa, Cuba
SPA	South Pole, Greater Antarctica, Antarctica
SPC	Skalnate-Pleso, Czechoslovakia
SRA	San Ramon, Costa Rica
SRO	Srabarova, Czechoslovakia
SRS	Serrai, Greece
SRY	Shirayama, Honshu, Japan
SSB	Saint Sauveur en Rue, Languedoc, France
SSC	Saint Sauveur de Carouges, Normandie, France
SSE	Sheshan, Shanghai, China (Mainland)
SSF	Saint Saulge, Nivernois, France
SSR	Susara, Romania
SSS	San Salvador, El Salvador
STB	Steinboch, Nordrhein-Westfalen, Fed. Rep. of Germany
STE	Stepanavan, Armenian S.S.R., U.S.S.R.
STJ	Saint John's, Newfoundland, Canada
STK	Stephens Creek, New South Wales, Australia
STR	Strasbourg, Alsace, France
STS	Santiago de Compostela, Spain
STU	Stuttgart, Baden-Wurttemberg, Fed. Rep. of Germany
SUF	Sumiainen, Finland
SUR	Sutherland, Cape Province, South Africa
SUT	Suttsu, Hokkaido, Japan
SVA	Suva, Fiji
SVO	Savo, Solomon Islands
SVW	Sparrevohn, Alaska, U.S.A.
SWZ	Schweizer-Reneke, Transvaal, South Africa
SZP	Santa, Luzon, Philippines
TAB	Tabriz, Iran
TACH	Talagante, Santiago, Chile
TAT	Tateyama, Honshu, Japan
TATO	Taipei, China (Taiwan)
TAU	Tasmania University, Tasmania, Australia
TBI	Tubuai, Tubuai Islands, French Polynesia
TBL	Tabele, New Guinea, Papua New Guinea
TCA	Tanti, Cordoba, Argentina
TCF	Toulx Ste. Croix, Marche, France
TCW	Tory Channel, South Island, New Zealand
TCX	Tecpatan, Chiapas, Mexico
TDD	Tadjoura, Djibouti
TEH	Tehran, Iran
TEN	Tenerife, Canary Islands, Spain
TEP	Tecpan, Guatemala
TER	Terranova, Guatemala
TET	Tete, Mozambique
TGI	Taghi Ghamber, Iran
THE	Thessaloniki, Greece
TIA	Taian, Shandong, China (Mainland)
TIK	Tiksi, R.S.F.S.R., U.S.S.R.
TIM	Timisoara, Romania
TIY	Taiyuan, Shanxi, China (Mainland)
TKL	Tuckaleechee Caverns, Tennessee, U.S.A.
TKS	Tokushima, Shikoku, Japan
TLB	Tapalu, Romania
TLL	Tololo Astronomical Observatory, Coquimbo, Chile
TLO	Toledo, Spain
TLX	Tulancingo, Hidalgo, Mexico
TMA	Tamaro, Switzerland
TMU	Temuco, Cautin, Chile
TNS	Taunus, Hessen, Fed. Rep. of Germany
TOA	Talsona, Alaska, U.S.A.
TOL	Toledo, Spain
TOO	Taolangi, Victoria, Australia
TOT	Tottori, Honshu, Japan
TOV	El Tocuyo, Venezuela
TP2	Tecpan 2, Guatemala
TPT	Tiputa, Tuamotu Archipelago, French Polynesia
TRI	Trieste (Grotta Gigante) Friuli-Venezia Giulia, Italy
TRN	Trinidad (Saint Augustine) Trinidad, Trinidad and Tobago
TRO	Tromso, Norway
TRT	Tretes, Jawa, Indonesia
TSI	Tuntungan, Sumatera, Indonesia
TSK	Tsukuba, Honshu, Japan
TTA	Tatalina, Alaska, U.S.A.
TTG	Titograd, Yugoslavia
TUC	Tucson, Arizona, U.S.A.
TUH	Tulbagh, Cape Province, South Africa
TUL	Tulsa (Oklahoma Geophysical Observatory) Oklahoma, U.S.A.
TVI	Taveuni, Fiji
TWC	Su-ao, China (Taiwan)
TWD	Chia-wan, China (Taiwan)
TWF1	Yu-li, China (Taiwan)
TWG	Pin-long, China (Taiwan)
TWK	Hsin-ying, China (Taiwan)
TWM1	Shau Shan, China (Taiwan)
TWO	Mei-shan, China (Taiwan)
TWO	Tung-shih, China (Taiwan)
TWZ	Mei-hu (Meifu), China (Taiwan)
TYS	Tyson Valley, Missouri, U.S.A.
TZZ	Tabubil, New Guinea, Papua New Guinea

Table 92. Station code abbreviations and locations....continued

Code	Station Name and Geographic Region	Code	Station Name and Geographic Region
UAV	Universidad de los Andes (Merida), Venezuela		
UCC	Uccle, Belgium		
UDU	Undu Point, Fiji		
ULC	Ulcinj, Yugoslavia		
UPA	Universidad de Panama, Panama		
UPP	Uppsala, Sweden		
UTO	University of Toledo, Ohio, U.S.A.		
UTS	Utsunomiya, Honshu, Japan		
VAL	Valentia, Eire		
VAO	Valinhos, Sao Paulo, Brazil		
VAY	Valandavo, Yugoslavia		
VBA	Sierra de lo Ventona, Buenos Aires, Argentina		
VCA	Vinchina, La Pampa, Argentina		
VDL	Val di Lei, Switzerland		
VDM	Villiers-Adam, Ile de France, France		
VDW	Vunindawa, Fiji		
VG1	Voghera, Lombardia, Italy		
VIE	Vienna—Hohe Warte (Wien—Hohe Warte), Austria		
VIR	Virginia, Orange Free State, South Africa		
VIS	Vishakhapatnam (Andhra, Waltair) Andhra Pradesh, India		
VKA	Vienna—Kobenzl (Wien—Kobenzl), Austria		
VLS	Valsamata (Kephallenia), Greece		
VLZ	Valdez, Alaska, U.S.A.		
VRI	Vrincioaia, Romania		
VTS	Vitosha, Bulgaria		
VUN	Vunikawai, Fiji		
WAB	Wabag, New Guinea, Papua New Guinea		
WAJ	Wajima (Wazima), Honshu, Japan		
WAM	Wambrook, New South Wales, Australia		
WAR	Warsaw (Warszawa), Poland		
WB2	Warramunga Array, Northern Territory, Australia		
WBN	Warburton, Western Australia, Australia		
WDC	Whiskeytown Dam, California, U.S.A.		
WEL	Wellington, North Island, New Zealand		
WES	Weston, Massachusetts, U.S.A.		
WET	Wettzell, Bayern, Fed. Rep. of Germany		
WHA	Wahoula, Hawaii, U.S.A.		
WHN	Wuhan, Hubei, China (Mainland)		
WIN	Windhoek, Namibia		
WIT	Witteveen, Netherlands		
WKY	Wakayama, Honshu, Japan		
WLF	Wolferdange, Luxembourg		
WLO	Wilson, Oklahoma, U.S.A.		
WMO	Urumqi (Wulumuchi), Xinjiang, China (Mainland)		
WRA	Warramunga Array, Northern Territory, Australia		
WSIL	West Salem, Illinois, U.S.A.		
WTS	Winterswijk, Netherlands		
WWW	Wewak, New Guinea, Papua New Guinea		
XAN	Xian (Hsian), Shaanxi, China (Mainland)		
YAK	Yakutsk, R.S.F.S.R., U.S.S.R.		
YAM	Yamagata, Honshu, Japan		
YER	Yerkesik, Turkey		
YJA	Yavi, Jujuy, Argentina		
YKC	Yellowknife, Northwest Territories, Canada		
YKM	Yaak, Montana, U.S.A.		
YLV	Yalova, Turkey		
YOK	Yokohama, Honshu, Japan		
YOU	Young, New South Wales, Australia		
YSS	Yuzhno-Sakhalinsk, R.S.F.S.R., U.S.S.R.		
ZAK	Zakamensk, R.S.F.S.R., U.S.S.R.		
ZIH	Zihuatanejo, Guerrero, Mexico		
ZOBO	Zongo (La Paz), Bolivia		
ZST	Bratislava—Zelezna Studnicka, Czechoslovakia		
ZUL	Zurich—Lageren, Switzerland		

Figure 35. Azimuthal equidistant map for geographic subdivision, Kuril Islands - Kamchatka

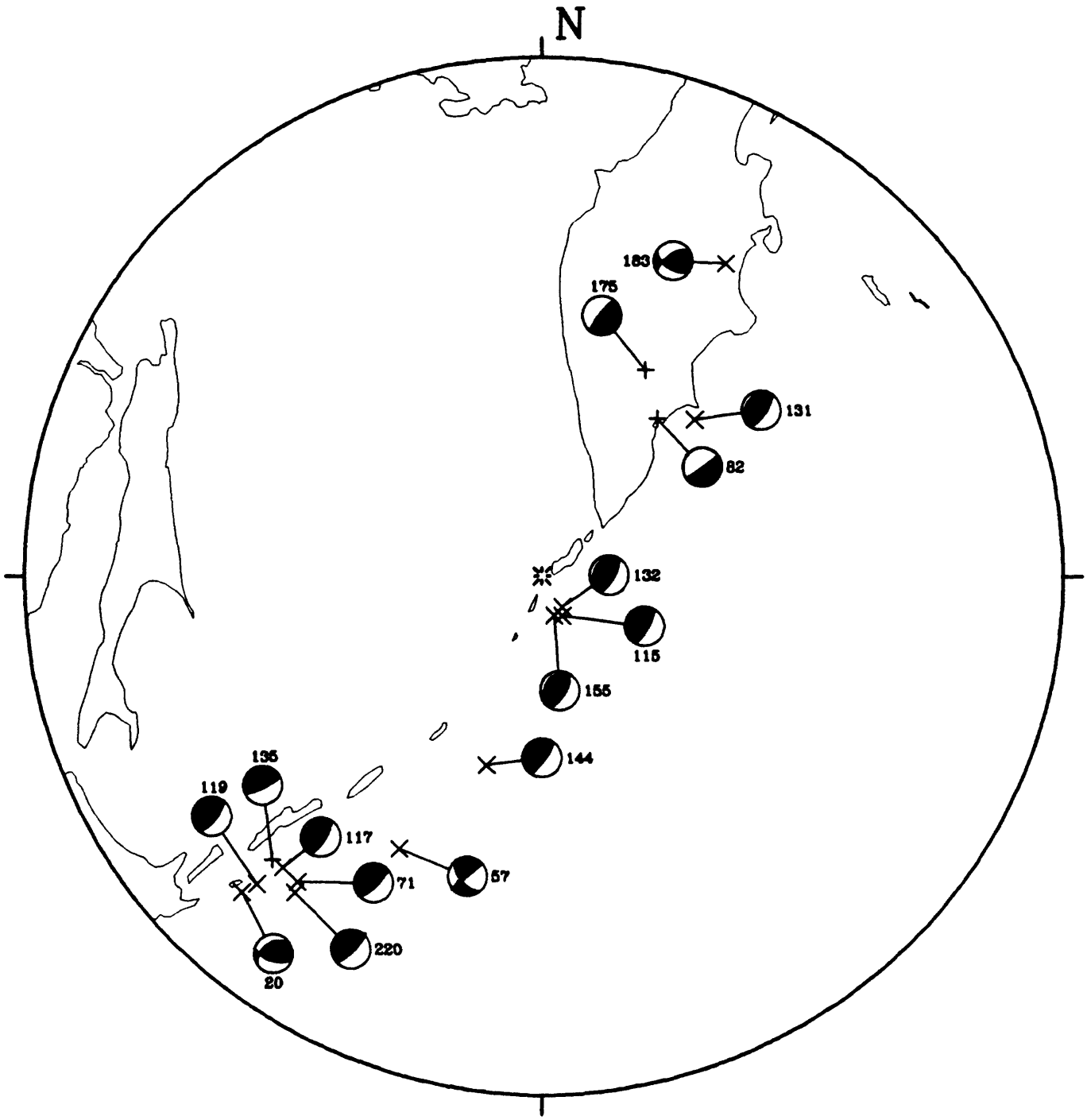

Table 93. Focal mechanism parameters for subdivision, Kuril Islands - Kamchatka

EVENT#	NODAL PLANE 1 (DEG.)			NODAL PLANE 2 (DEG.)			T AXIS (DEG.)		P AXIS (DEG.)		B AXIS (DEG.)	
	ϑ	δ	λ	ϑ	δ	λ	PLG	AZM	PLG	AZM	PLG	AZM
20	108	59	122	237	43	49	61	70	9	176	27	270
57	140	58	-360	230	90	-148	22	0	22	100	58	230
71	45	72	90	225	18	90	63	315	27	135	0	45
82	53	88	-90	233	2	-90	43	143	47	323	0	53
115	30	73	90	210	17	90	62	300	28	120	0	30
117	32	70	90	212	20	90	65	302	25	122	0	32
119	40	70	90	220	20	90	65	310	25	130	0	40
131	35	67	90	215	23	90	68	305	22	125	0	35
132	30	67	90	210	23	90	68	300	22	120	0	30
135	65	78	90	245	12	90	57	335	33	155	0	65
144	36	75	90	216	15	90	60	306	30	125	0	36
155	30	65	90	210	25	90	70	300	20	120	0	30
175	218	80	90	38	10	90	55	128	35	308	0	38
183	235	63	40	124	55	146	47	93	5	358	43	263
220	47	77	90	227	13	90	58	317	32	137	0	47

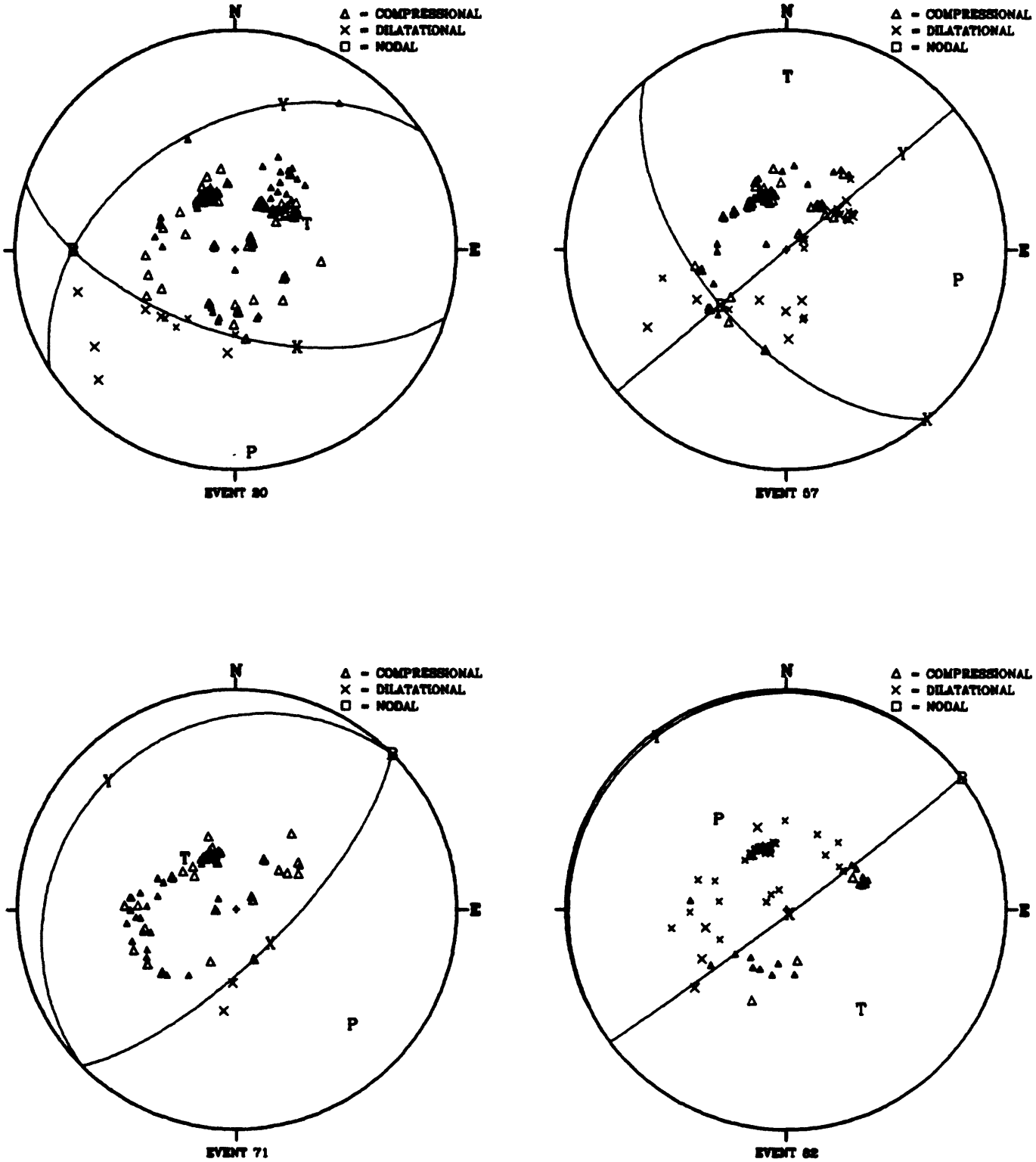

Figure 36. Lower hemisphere focal sphere projections for events 20, 57, 71, and 82

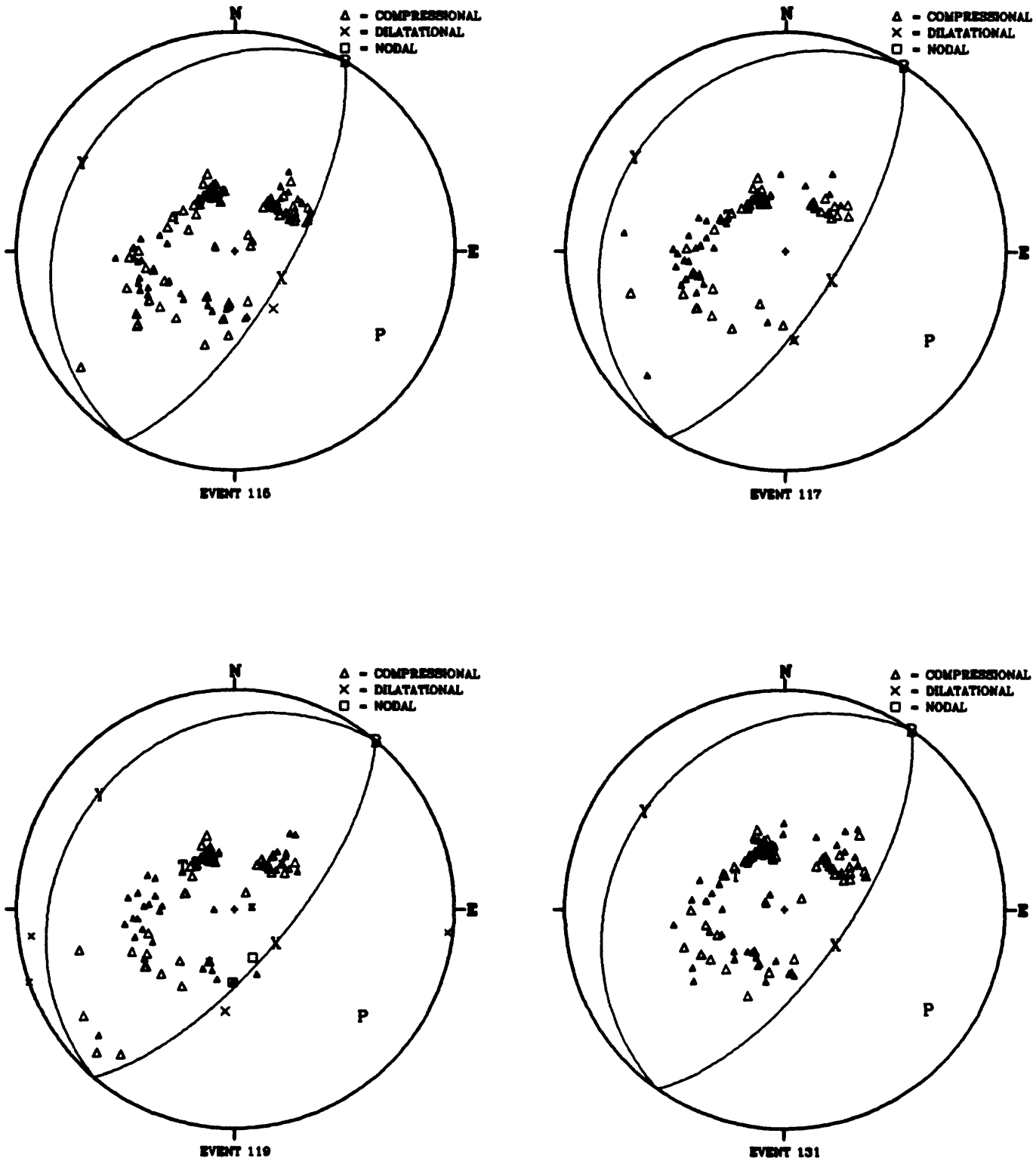

Figure 37. Lower hemisphere focal sphere projections for events 115, 117, 119, and 131

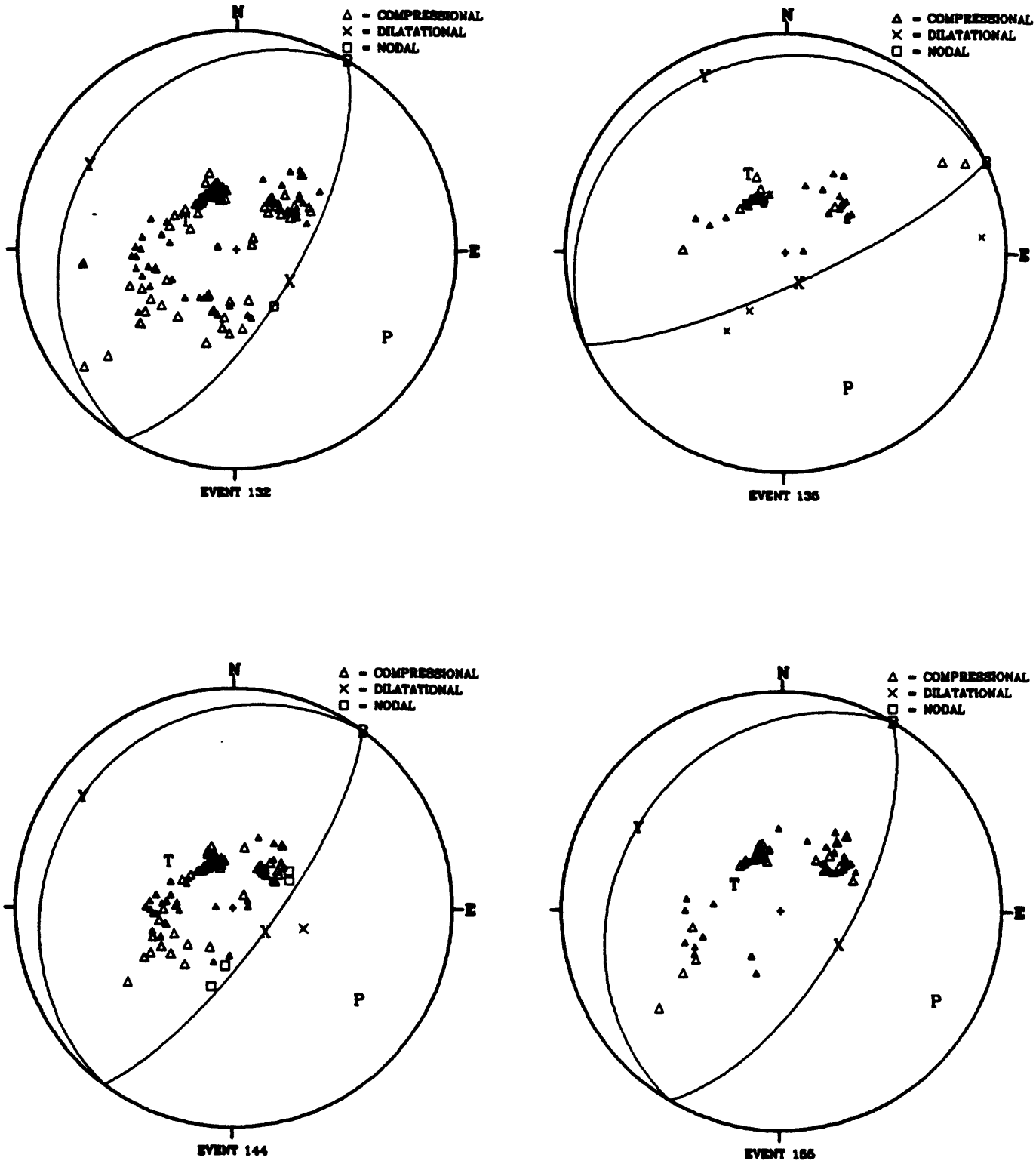

Figure 38. Lower hemisphere focal sphere projections for events 132, 135, 144, and 155

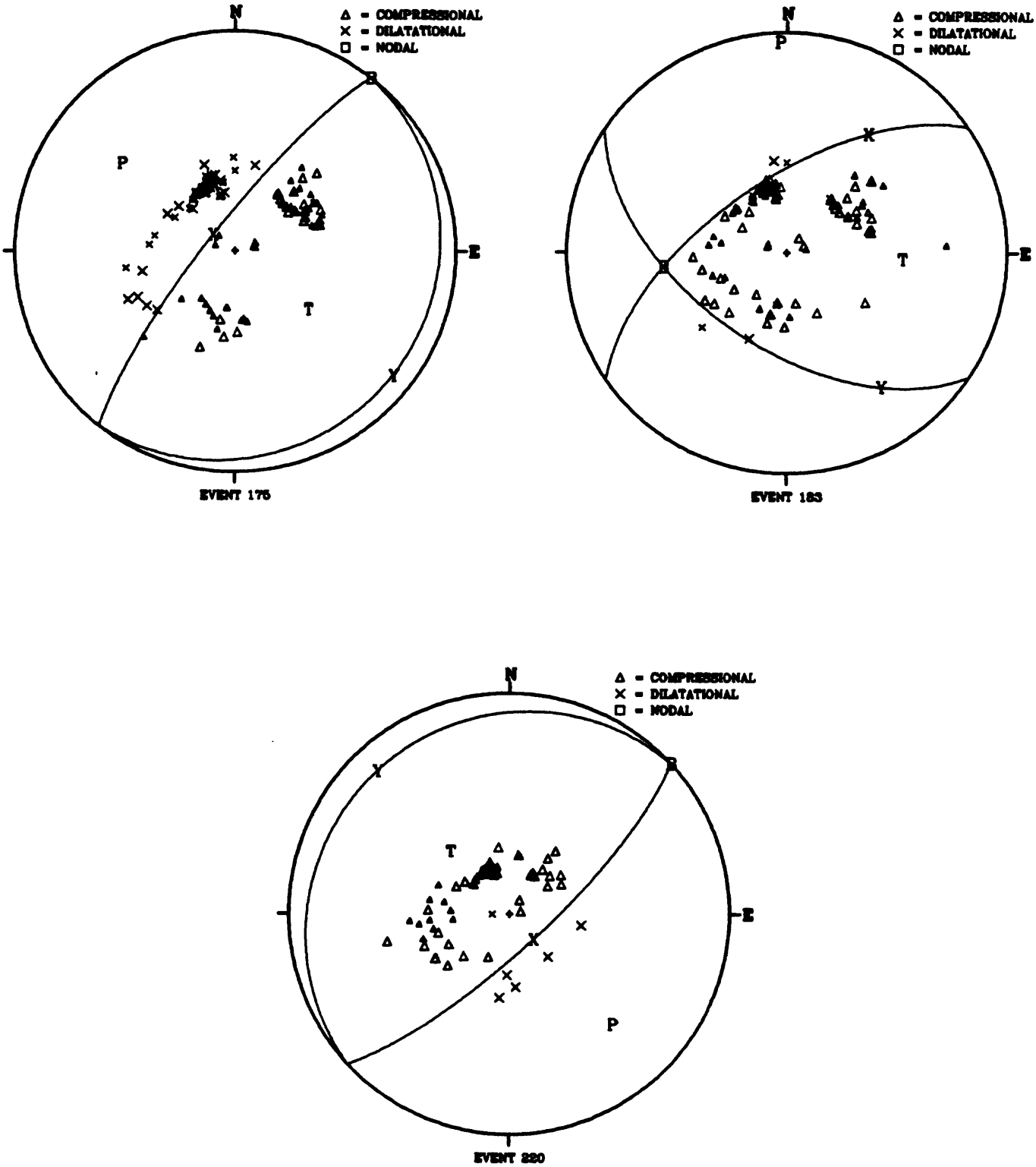

Figure 39. Lower hemisphere focal sphere projections for event 175, 183, and 220

Table 94. Station data for event 20

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MAT	9.778	226.66	13.65	74.27	I	D	LP	P
PET	12.158	35.30	13.39	70.78	I	C	SP	P
SHK	14.359	235.62	13.00	66.45	I	D	LP	P
SEO	16.382	255.17	12.64	63.04	I	D	LP	P
YAK	21.062	337.00	10.14	45.65	I	C	SP	P
TATO	27.951	236.61	9.17	40.29	I	D	LP	P
GUMO	29.984	184.21	8.90	38.87	E	D	LP	P
ILT	30.298	24.99	8.85	38.61	I	C	SP	P
ANM	33.747	35.04	8.64	37.54	I	C	SP	P
HKC	34.478	242.58	8.58	37.23	E	C	LP	P
BAG	35.206	227.86	8.55	37.08	E	D	LP	P
MAN	36.398	225.55	8.47	36.68	I	D	SP	P
PLP	37.551	217.19	8.41	36.37	I	D	SP	P
IMA	38.840	34.01	8.32	35.92	I	C	SP	P
KDC	39.456	47.25	8.29	35.77	I	C	SP	P
PMR	40.815	41.06	8.21	35.38	I	C	SP	P
COL	41.255	35.96	8.18	35.23	I	C	LP	P
FBA	41.255	35.96	8.18	35.23	I	C	SP	P
COL	41.255	35.96	8.18	35.23	I	C	SP	P
INK	46.574	30.25	7.90	33.85	I	C	SP	P
CHG	47.165	254.00	7.87	33.71	I	C	LP	P
CHTO	47.165	254.00	7.87	33.71	I	C	LP	P
RAB	47.812	173.08	7.81	33.42	I	C	LP	P
SHIO	47.943	266.67	7.81	33.42	I	C	LP	P
MBC	48.970	18.46	7.73	33.03	I	C	SP	P
KIP	50.344	97.77	7.61	32.46	E	C	LP	P
PMG	52.769	179.85	7.41	31.50	I	D	SP	P
SNG	54.397	242.13	7.29	30.94	I	C	LP	P
MKS	54.609	214.42	7.29	30.94	I	D	SP	P
KBS	54.912	350.39	7.25	30.75	I	C	LP	P
YKC	56.024	33.65	7.17	30.37	I	C	SP	P
NDI	56.744	279.52	7.14	30.23	I	C	SP	P
DSH	57.142	293.96	7.10	30.04	I	C	SP	P
KEV	58.811	339.37	6.95	29.35	I	C	LP	P
KBL	59.156	289.87	6.95	29.35	I	C	LP	P
KAAO	59.156	289.87	6.95	29.35	E	C	LP	P
KBL	59.156	289.87	6.95	29.35	I	C	SP	P
LON	60.729	52.02	6.84	28.84	I	C	LP	P
EDM	61.561	42.40	6.75	28.42	I	C	SP	P
NEW	62.490	48.55	6.67	28.06	I	C	SP	P
QUE	63.115	287.00	6.63	27.87	I	C	LP	P
CTAO	63.388	180.82	6.59	27.69	E	C	LP	P
CTA	63.388	180.82	6.59	27.69	I	C	LP	P
WDC	63.818	58.08	6.55	27.51	I	C	SP	P
WRA	64.307	193.26	6.51	27.33	I	C	SP	P
WB2	64.305	193.25	6.51	27.33	I	C	SP	P
POO	65.384	272.57	6.43	26.96	I	C	SP	P
BKS	65.616	60.32	6.43	26.96	E	C	LP	P
BKS	65.616	60.32	6.43	26.96	I	C	SP	P
KOU	65.794	162.26	6.39	26.78	I	C	SP	P

Table 94. Station data for event 20....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
FFC	65.862	36.41	6.39	26.78	I	C	SP	P
NUR	66.119	332.80	6.39	26.78	I	C	LP	P
FCC	66.185	29.92	6.39	26.78	I	C	SP	P
ARN	66.379	60.41	6.34	26.56	I	C	SP	P
JAS	66.702	59.32	6.34	26.56	I	C	SP	P
BMN	67.140	55.52	6.30	26.38	I	C	SP	P
NOU	67.980	160.60	6.22	26.02	I	C	SP	P
ASP	68.042	192.98	6.22	26.02	I	C	SP	P
DCI	68.441	49.46	6.18	25.84	I	C	SP	P
AFI	68.496	136.58	6.18	25.84	E	C	LP	P
BDW	70.054	49.64	6.06	25.30	I	C	SP	P
AKU	70.428	353.53	6.03	25.16	I	C	SP	P
AKU	70.428	353.53	6.03	25.16	I	C	LP	P
PAS	70.509	61.25	6.03	25.16	I	C	LP	P
KONO	71.310	338.73	5.95	24.81	I	C	LP	P
KON	71.310	338.73	5.95	24.81	I	C	LP	P
TAB	71.607	305.18	5.95	24.81	I	C	LP	P
WBN	71.907	199.30	5.92	24.67	I	C	SP	P
REY	72.238	354.93	5.92	24.67	I	C	SP	P
RCD	72.576	45.32	5.88	24.50	I	C	LP	P
GLA	73.340	60.21	5.81	24.19	I	C	SP	P
WAR	73.772	328.79	5.78	24.05	E	C	LP	P
COP	73.881	335.18	5.78	24.05	I	C	LP	P
COP	73.881	335.18	5.78	24.05	I	C	SP	P
GOL	74.463	49.76	5.74	23.88	I	C	LP	P
GOL	74.463	49.76	5.74	23.88	I	C	SP	P
LHC	75.873	34.86	5.64	23.44	I	C	SP	P
KRA	75.929	327.99	5.64	23.44	I	C	SP	P
TUC	76.364	58.40	5.61	23.30	I	C	SP	P
VRI	76.371	321.63	5.61	23.30	I	C	SP	P
SPC	76.506	327.29	5.61	23.30	I	C	SP	P
KSP	76.643	330.41	5.61	23.30	I	C	SP	P
JOS	76.945	326.70	5.58	23.17	I	C	SP	P
MLR	77.013	321.81	5.58	23.17	I	C	SP	P
ANMO	77.155	53.89	5.58	23.17	I	C	LP	P
ALQ	77.157	53.89	5.58	23.17	E	C	LP	P
RIV	77.162	176.48	5.58	23.17	I	C	LP	P
CLL	77.396	332.45	5.55	23.04	I	C	SP	P
BRG	77.443	331.70	5.55	23.04	I	C	SP	P
YOU	77.528	178.85	5.55	23.04	I	C	SP	P
KLG	77.652	202.35	5.55	23.04	I	C	SP	P
PRU	77.978	330.88	5.52	22.91	I	C	SP	P
ESK	78.257	343.15	5.48	22.73	I	C	LP	P
MOX	78.424	332.86	5.48	22.73	I	C	SP	P
GZR	78.485	323.53	5.48	22.73	I	C	SP	P
CAN	78.578	178.36	5.48	22.73	I	C	SP	P
HOF	78.621	332.53	5.48	22.73	I	C	SP	P
VKA	78.767	328.91	5.45	22.60	I	C	SP	P
KHC	79.040	330.94	5.45	22.60	I	C	SP	P
DBN	79.127	337.17	5.45	22.60	I	C	LP	P

Table 94. Station data for event 20....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PVL	79.179	320.73	5.45	22.60	I	C	SP	P
WET	79.272	331.34	5.41	22.43	I	C	SP	P
GRFO	79.374	332.58	5.41	22.43	I	C	LP	P
GRF	79.372	332.57	5.41	22.43	I	C	SP	P
WAM	79.446	178.48	5.41	22.43	I	C	SP	P
BNS	79.552	335.50	5.41	22.43	I	C	SP	P
KMR	79.748	330.03	5.41	22.43	I	C	LP	P
KDZ	80.267	319.67	5.30	21.95	I	C	SP	P
MUN	80.337	206.21	5.30	21.95	I	C	LP	P
DMU	80.335	344.71	5.30	21.95	I	C	SP	P
BHG	80.482	330.58	5.30	21.95	I	C	SP	P
UCC	80.523	337.03	5.30	21.95	I	C	SP	P
FUR	80.664	331.74	5.30	21.95	I	C	SP	P
DDK	80.709	344.21	5.30	21.95	I	C	SP	P
DKM	80.819	344.12	5.26	21.77	I	C	SP	P
STU	80.838	333.27	5.26	21.77	I	C	LP	P
DLE	80.844	344.30	5.26	21.77	I	C	SP	P
NWAO	80.893	205.04	5.26	21.77	I	C	SP	P
DCN	80.932	344.74	5.26	21.77	I	C	SP	P
WLF	81.009	335.47	5.26	21.77	I	C	LP	P
DOU	81.084	336.58	5.26	21.77	I	C	LP	P
DOU	81.084	336.58	5.26	21.77	I	C	SP	P
BUH	81.235	333.78	5.26	21.77	I	C	SP	P
LJU	81.293	328.70	5.21	21.56	I	C	SP	P
GAP	81.329	331.51	5.21	21.56	I	C	SP	P
CDF	81.769	334.22	5.17	21.38	I	C	SP	P
OGA	81.867	331.22	5.17	21.38	I	C	SP	P
TRI	81.864	328.97	5.17	21.38	I	C	LP	P
BAF	82.367	334.11	5.14	21.25	I	C	SP	P
TUL	82.413	46.77	5.14	21.25	I	C	LP	P
HAU	82.420	334.58	5.14	21.25	I	C	SP	P
BSF	82.434	334.23	5.14	21.25	I	C	SP	P
RLO	82.622	46.12	5.14	21.25	I	C	SP	P
TPT	83.329	117.83	5.08	20.99	I	C	LP	P
FVM	83.541	42.10	5.08	20.99	I	C	SP	P
OTT	83.577	28.77	5.08	20.99	I	C	SP	P
FLN	83.689	339.05	5.08	20.99	I	C	SP	P
LOR	83.838	335.76	5.05	20.86	I	C	LP	P
ATH	83.925	318.38	5.05	20.86	I	C	SP	P
PPT	84.024	120.95	5.05	20.86	I	C	LP	P
MNT	84.198	27.42	5.05	20.86	I	C	SP	P
JCT	84.250	52.91	5.05	20.86	I	C	LP	P
AQU	84.844	327.40	4.99	20.60	I	C	SP	P
SSB	85.415	334.45	4.96	20.47	I	C	SP	P
RMP	85.580	327.56	4.96	20.47	I	C	SP	P
TAU	86.136	179.79	4.90	20.21	E	C	LP	P
SCP	86.751	32.46	4.83	19.91	I	C	LP	P
WES	87.730	27.40	4.80	19.78	I	C	LP	P
SNZO	88.132	159.51	4.77	19.66	E	C	LP	P
MLS	88.574	335.72	4.75	19.57	I	C	SP	P

Table 94. Station data for event 20....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
GEO	88.692	32.90	4.75	19.57	I	C	LP	P
BLA	88.753	36.04	4.73	19.48	I	C	LP	P
SHA	90.471	45.01	4.70	19.36	I	C	LP	P
ARO	92.175	288.03	4.67	19.23	I	C	LP	P
PTO	92.826	341.82	4.64	19.10	E	C	LP	P
TOL	92.881	338.12	4.64	19.10	I	C	SP	P
BEC	99.005	26.77	4.48	18.42	I	C	LP	P
LPS	102.895	55.73	4.45	18.29	E	C	LP	Pdf
NAI	105.440	283.29	1.89	7.66	E	C	LP	Pdf
BOG	119.377	48.76	1.88	7.60	E	C	LP	PKP
BUL	124.059	274.07	1.87	7.57	I	C	SP	PKP
SPA	133.423	180.00	1.84	7.43	I	C	SP	PKP
ZOBO	139.614	58.60	1.77	7.16	E	C	LP	PKP
LPB	139.829	58.83	1.77	7.16	I	C	LP	PKP
ANT	143.447	69.36	1.72	6.97	E	C	LP	PKP
ANT	143.447	69.36	1.72	6.97	I	C	SP	PKP
PEL	148.876	83.22	1.59	6.43	I	C	SP	PKP
CFA	149.816	78.51	1.56	6.31	I	C	SP	PKP
LPA	158.864	74.15	1.22	4.92	I	C	LP	PKP

Table 95. Station data for event 57

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SHK	17.432	240.80	12.48	61.03	I	D	LP	P
SEO	19.509	257.05	10.58	47.87	I	D	SP	P
TATO	31.029	240.59	8.82	38.19	E	D	LP	P
GUMO	31.443	191.76	8.79	38.04	I	C	LP	P
GUA	31.485	191.66	8.79	38.04	E	C	LP	P
TTA	34.891	39.60	8.56	36.87	I	C	SP	P
IMA	36.300	34.45	8.47	36.42	I	C	SP	P
SZP	37.312	233.44	8.41	36.12	E	C	SP	P
PMR	38.060	42.07	8.38	35.98	I	D	SP	P
BAG	38.154	232.18	8.38	35.98	I	C	LP	P
COL	38.649	36.71	8.35	35.83	I	C	LP	P
PAP	41.189	226.19	8.21	35.14	I	C	SP	P
KMI	43.515	259.92	8.07	34.45	I	C	LP	P
DAV	43.562	218.43	8.07	34.45	I	C	LP	P
INK	44.154	31.12	8.05	34.35	I	C	SP	P
RAB	48.652	178.64	7.78	33.05	I	D	LP	P
CHG	50.296	256.61	7.62	32.29	I	C	LP	P
CHG	50.296	256.61	7.62	32.29	I	C	SP	P
CHTO	50.296	256.61	7.62	32.29	I	C	LP	P
ALE	51.957	5.30	7.50	31.72	I	C	SP	P
KBS	54.346	351.05	7.30	30.78	I	C	LP	P
BKB	54.998	223.47	7.26	30.59	I	D	SP	P
SNG	57.519	245.23	7.07	29.71	I	C	SP	P
DAG	58.667	357.29	7.00	29.39	I	C	SP	P
NEW	59.549	50.79	6.92	29.02	I	D	LP	P
SOD	60.685	338.55	6.84	28.65	I	C	SP	P
WDC	60.733	60.62	6.84	28.65	I	D	SP	P
BKS	62.509	62.94	6.68	27.92	I	D	LP	P
KJF	62.744	335.74	6.68	27.92	I	C	LP	P
JAS	63.604	61.92	6.60	27.56	I	D	SP	P
BMN	64.084	58.04	6.56	27.38	I	D	SP	P
LEM	64.470	229.28	6.51	27.15	E	C	LP	P
KOU	66.016	166.52	6.39	26.61	I	D	SP	P
NUR	66.491	334.29	6.35	26.43	I	C	LP	P
MHI	66.649	298.41	6.35	26.43	I	C	LP	P
PAS	67.395	63.94	6.26	26.03	I	D	LP	P
FRB	67.460	17.91	6.26	26.03	I	C	SP	P
NOU	68.108	164.72	6.22	25.85	I	D	SP	P
POO	68.270	274.89	6.18	25.67	I	C	SP	P
KHI	68.557	297.09	6.18	25.67	I	C	SP	P
GBA	69.000	268.50	6.14	25.49	I	C	SP	P
AKU	69.664	355.27	6.10	25.32	I	C	LP	P
GLA	70.234	62.91	6.07	25.18	I	D	SP	P
KON	71.349	340.53	5.96	24.70	I	C	LP	P
GOL	71.497	52.30	5.96	24.70	E	D	LP	P
GLD	71.547	52.17	5.96	24.70	I	D	SP	P
TAB	73.372	307.21	5.82	24.08	I	C	LP	P
COP	74.111	337.13	5.78	23.90	I	C	SP	P
ANMO	74.120	56.53	5.78	23.90	E	D	LP	P
ALQ	74.122	56.54	5.78	23.90	E	D	LP	P

Table 95. Station data for event 57....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KER	75.503	304.00	5.68	23.46	I	C	SP	P
BRN	76.740	335.07	5.61	23.16	I	C	SP	P
EDU	76.838	345.64	5.58	23.03	I	C	SP	P
ELO	77.034	346.00	5.58	23.03	I	C	SP	P
EBH	77.210	345.81	5.58	23.03	I	C	SP	P
VRI	77.324	323.78	5.55	22.90	I	C	SP	P
EAB	77.411	346.25	5.55	22.90	I	C	SP	P
EDI	77.462	345.53	5.55	22.90	I	C	SP	P
EBL	77.579	345.41	5.55	22.90	I	C	SP	P
EAU	77.585	345.65	5.55	22.90	I	C	SP	P
JOS	77.629	328.86	5.55	22.90	I	C	SP	P
CLL	77.769	334.62	5.52	22.77	I	C	SP	P
TLB	77.780	322.23	5.52	22.77	I	C	SP	P
BRG	77.857	333.87	5.52	22.77	I	C	LP	P
MLR	77.955	324.00	5.52	22.77	I	C	SP	P
ESK	78.043	345.35	5.52	22.77	I	C	LP	P
ESK	78.043	345.35	5.52	22.77	I	C	SP	P
RIV	78.128	179.99	5.52	22.77	I	D	LP	P
PRU	78.436	333.08	5.48	22.59	I	C	SP	P
MOX	78.773	335.08	5.45	22.46	I	C	LP	P
WTS	78.917	338.44	5.45	22.46	I	C	SP	P
HOF	78.987	334.77	5.45	22.46	I	C	SP	P
BUD	79.034	329.17	5.45	22.46	I	C	SP	P
ZST	79.116	330.67	5.45	22.46	I	D	SP	P
DBN	79.239	339.42	5.45	22.46	I	C	LP	P
KHC	79.492	333.20	5.41	22.29	I	C	SP	P
TUL	79.504	49.43	5.41	22.29	I	D	LP	P
WET	79.703	333.62	5.41	22.29	I	C	SP	P
GRF	79.735	334.85	5.41	22.29	I	C	SP	P
GRFO	79.737	334.86	5.41	22.29	I	C	LP	P
HRT	80.010	318.91	5.36	22.07	I	C	SP	P
DMU	80.033	347.02	5.36	22.07	I	C	SP	P
TNS	80.072	336.72	5.36	22.07	I	C	SP	P
PVL	80.174	323.04	5.36	22.07	I	C	SP	P
KMR	80.248	332.34	5.36	22.07	I	C	LP	P
ENN	80.267	338.43	5.31	21.85	I	C	SP	P
CTT	80.328	319.86	5.31	21.85	I	C	SP	P
DDK	80.433	346.55	5.31	21.85	I	C	SP	P
AAM	80.524	37.93	5.31	21.85	I	C	LP	P
DKM	80.547	346.47	5.31	21.85	I	C	SP	P
DCN	80.627	347.08	5.31	21.85	I	C	SP	P
UCC	80.640	339.37	5.31	21.85	I	C	LP	P
DIM	80.886	322.14	5.26	21.64	I	C	SP	P
UTO	81.075	38.26	5.26	21.64	I	C	SP	P
FUR	81.070	334.10	5.26	21.64	I	C	SP	P
STU	81.161	335.62	5.26	21.64	I	C	LP	P
ALT	81.186	317.53	5.26	21.64	I	C	SP	P
DOU	81.226	338.95	5.26	21.64	I	C	LP	P
JCT	81.229	55.66	5.26	21.64	I	C	LP	P
KDZ	81.316	322.04	5.22	21.46	I	C	SP	P

Table 95. Station data for event 57....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SOF	81.331	323.89	5.22	21.46	I	C	SP	P
GWF	81.430	336.66	5.22	21.46	I	C	SP	P
CDF	82.039	336.63	5.17	21.25	I	C	SP	P
OGA	82.300	333.64	5.14	21.12	I	C	SP	P
VAL	82.438	348.50	5.14	21.12	I	C	LP	P
HAU	82.669	337.02	5.14	21.12	I	C	SP	P
BSF	82.702	336.68	5.14	21.12	I	C	SP	P
SKO	82.710	324.66	5.14	21.12	I	C	SP	P
VDM	82.762	339.98	5.11	20.99	E	C	LP	P
VAY	82.777	323.58	5.11	20.99	I	C	SP	P
IZM	83.061	318.91	5.11	20.99	I	C	SP	P
NWAO	83.165	208.20	5.11	20.99	I	D	LP	P
THE	83.177	322.94	5.11	20.99	I	C	SP	P
INY	83.389	33.40	5.08	20.86	I	C	SP	P
YER	83.585	317.50	5.08	20.86	I	C	SP	P
FLN	83.691	341.55	5.08	20.86	I	C	SP	P
SSC	83.774	341.26	5.05	20.73	I	C	SP	P
LOR	84.020	338.28	5.05	20.73	I	C	SP	P
GRR	84.128	341.66	5.05	20.73	I	C	SP	P
SCP	84.225	35.17	5.05	20.73	I	C	LP	P
LBF	84.251	338.09	5.02	20.60	I	C	SP	P
SSF	84.304	338.42	5.02	20.60	I	C	SP	P
LPF	84.505	341.66	5.02	20.60	I	C	SP	P
AVF	84.595	338.41	5.02	20.60	I	C	SP	P
SMF	84.600	338.05	5.02	20.60	I	C	SP	P
ATH	85.035	320.95	4.99	20.48	I	C	SP	P
MZF	85.328	338.69	4.96	20.35	I	C	SP	P
TCF	85.357	338.96	4.96	20.35	I	C	SP	P
MFF	85.644	340.60	4.96	20.35	I	C	SP	P
BLA	86.115	38.82	4.90	20.09	I	C	SP	P
RJF	86.450	339.05	4.86	19.92	I	C	SP	P
FRF	86.628	334.98	4.86	19.92	I	C	SP	P
CAF	86.661	338.55	4.86	19.92	I	C	SP	P
LRG	86.810	335.13	4.83	19.79	I	C	SP	P
LMR	86.875	334.98	4.83	19.79	I	C	SP	P
LFF	86.991	339.44	4.83	19.79	I	C	SP	P
LPO	87.114	339.04	4.83	19.79	I	C	SP	P
SHA	87.598	47.84	4.80	19.66	I	C	LP	P
SNZO	88.167	162.46	4.77	19.53	I	D	LP	P
EPF	88.875	339.03	4.73	19.36	I	C	SP	P
PTO	92.663	344.82	4.66	19.07	I	C	LP	P
TOL	92.920	341.14	4.64	18.98	I	C	LP	P
TLO	92.933	341.11	4.64	18.98	I	C	LP	P
MAL	96.011	340.47	4.55	18.60	I	C	LP	P
BEC	96.669	29.91	4.54	18.56	I	C	LP	P
NAI	108.026	286.68	1.89	7.61	I	C	SP	PKP
SJG	108.867	37.52	1.89	7.61	E	C	LP	PKP
BOCO	116.463	52.18	1.88	7.57	E	D	LP	PKP
ZOBO	136.518	62.06	1.80	7.26	E	D	LP	PKP
PEL	145.822	84.91	1.66	6.69	I	D	SP	PKP

Table 96. Station data for event 71

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BJI	24.240	272.04	9.60	42.30	I	C	LP	P
SSE	25.021	248.43	9.47	41.59	I	C	LP	P
TIA	25.091	262.92	9.47	41.59	I	C	SP	P
NJ2	26.040	252.98	9.38	41.11	I	C	SP	P
HHC	27.296	276.47	9.23	40.32	I	C	SP	P
TIY	27.819	269.64	9.18	40.05	I	C	SP	P
BTO	28.488	276.79	9.11	39.69	I	C	SP	P
ANP	28.822	238.44	9.03	39.27	I	C	LP	P
TATO	28.992	238.19	9.03	39.27	I	C	LP	P
GUMO	30.376	186.96	8.86	38.40	E	D	LP	P
QZH	30.830	241.97	8.82	38.19	I	C	SP	P
XAN	32.029	265.70	8.75	37.83	I	C	SP	P
CVP	34.452	229.11	8.59	37.02	I	C	SP	P
LZH	34.729	272.56	8.59	37.02	I	C	LP	P
GZH	35.537	245.75	8.53	36.72	I	C	SP	P
BAG	36.186	229.52	8.50	36.57	E	C	LP	P
GTA	36.216	280.07	8.50	36.57	I	C	SP	P
CD2	37.380	265.02	8.41	36.12	I	C	SP	P
GYA	37.895	256.68	8.38	35.98	I	C	SP	P
PGP	38.391	226.37	8.35	35.83	I	C	SP	P
COL	40.402	36.17	8.24	35.28	I	C	LP	P
KMI	41.492	258.50	8.18	34.99	I	C	LP	P
LSA	47.148	272.47	7.88	33.53	I	C	SP	P
CHG	48.253	254.99	7.78	33.05	I	C	SP	P
KSH	52.724	291.88	7.46	31.53	I	C	SP	P
MKS	55.451	215.90	7.22	30.41	I	C	SP	P
NDI	57.727	280.22	7.07	29.71	I	C	SP	P
KEV	58.904	339.71	6.96	29.20	I	C	LP	P
LON	59.720	52.78	6.92	29.02	I	C	LP	P
KBL	60.039	290.49	6.88	28.84	I	C	SP	P
COR	60.035	55.54	6.88	28.84	I	C	SP	P
CTAO	63.709	182.33	6.60	27.56	E	D	LP	P
CTA	63.709	182.33	6.60	27.56	I	D	SP	P
MHI	65.314	297.25	6.43	26.79	I	C	LP	P
JAS	65.649	60.19	6.43	26.79	E	C	LP	P
KHI	67.185	295.86	6.31	26.25	I	C	SP	P
KONO	71.412	339.37	5.96	24.70	I	C	LP	P
TAB	72.290	305.90	5.89	24.39	I	C	LP	P
COP	74.050	335.86	5.78	23.90	E	C	LP	P
ANMO	76.133	54.80	5.64	23.29	I	C	LP	P
KRA	76.230	328.72	5.64	23.29	I	C	SP	P
KSP	76.900	331.16	5.58	23.03	I	C	SP	P
JOS	77.270	327.46	5.55	22.90	I	C	SP	P
CLL	77.615	333.21	5.55	22.90	I	C	SP	P
BRG	77.676	332.46	5.55	22.90	I	C	LP	P
EDI	77.700	344.13	5.55	22.90	I	C	SP	P
PRU	78.227	331.65	5.52	22.77	I	C	SP	P
DEV	78.421	324.55	5.48	22.59	I	C	SP	P
ANTO	78.458	314.93	5.48	22.59	I	C	LP	P
SRO	78.685	328.31	5.48	22.59	I	C	SP	P

Table 96. Station data for event 71....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
HOF	78.838	333.32	5.45	22.46	I	C	SP	P
VIE	79.049	329.67	5.45	22.46	I	C	LP	P
KHC	79.287	331.73	5.41	22.29	I	C	SP	P
SOP	79.450	329.24	5.41	22.29	I	C	SP	P
GRF	79.589	333.37	5.41	22.29	I	C	SP	P
KMR	80.011	330.84	5.36	22.07	E	C	LP	P
ENN	80.249	336.93	5.36	22.07	I	C	SP	P
DMU	80.322	345.52	5.31	21.85	I	C	SP	P
UCC	80.655	337.85	5.31	21.85	E	C	LP	P
DDK	80.705	345.03	5.31	21.85	I	C	SP	P
DCN	80.919	345.56	5.26	21.64	I	C	SP	P
TUL	81.445	47.70	5.22	21.46	E	C	LP	P
NWAO	81.609	206.17	5.22	21.46	I	C	LP	P
ECB	81.761	344.97	5.17	21.25	I	C	SP	P
OGA	82.108	332.07	5.17	21.25	I	C	SP	P
TRI	82.146	329.82	5.17	21.25	I	C	SP	P
SKO	82.200	323.07	5.17	21.25	I	C	SP	P
GAC	82.628	29.37	5.14	21.12	I	C	LP	P
MNT	83.450	28.34	5.08	20.86	I	C	SP	P
FLN	83.783	339.93	5.05	20.73	I	C	SP	P
SSC	83.854	339.63	5.05	20.73	I	C	SP	P
LOR	83.994	336.64	5.05	20.73	I	C	SP	P
LBF	84.217	336.44	5.05	20.73	I	C	SP	P
GRR	84.223	340.02	5.05	20.73	I	C	SP	P
SMF	84.564	336.39	5.02	20.60	I	C	SP	P
HLW	86.797	309.26	4.83	19.79	I	C	LP	P
LFF	87.004	337.69	4.83	19.79	I	C	SP	P
SNZO	88.048	160.54	4.77	19.53	E	C	LP	P
TOL	92.991	339.18	4.64	18.98	I	C	SP	P
ALM	95.402	336.96	4.56	18.64	I	C	SP	P
MAL	96.055	338.40	4.55	18.60	I	C	LP	P
BNG	114.173	303.07	1.88	7.59	I	C	SP	PKP
BOCO	118.434	50.01	1.88	7.56	E	C	LP	PKP
SLR	128.777	270.10	1.86	7.47	I	C	SP	PKP
SLR	128.777	270.10	1.86	7.47	E	C	LP	PKP
ZOBO	138.563	59.92	1.78	7.17	E	C	LP	PKP
CER	139.501	267.34	1.77	7.12	I	C	SP	PKP

Table 97. Station data for event 82

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MAT	21.816	229.25	9.88	45.56	I	D	SP	P
MAJO	21.816	229.25	9.88	45.56	I	D	LP	P
CN2	23.709	260.63	9.57	43.78	I	D	SP	P
TATO	39.499	239.58	8.27	36.73	E	D	LP	P
GUMO	40.810	200.79	8.20	36.36	E	C	LP	P
LZH	41.480	268.52	8.16	36.17	I	D	SP	P
GTA	41.766	275.44	8.15	36.08	I	C	SP	P
CVP	45.416	233.38	7.95	35.07	I	C	SP	P
WMQ	46.196	288.52	7.90	34.83	I	D	SP	P
DAG	50.512	359.24	7.59	33.29	I	D	SP	P
KEV	52.647	340.90	7.42	32.45	I	D	LP	P
WDC	52.729	69.87	7.42	32.42	I	C	SP	P
FCC	54.104	37.91	7.31	31.88	I	D	SP	P
ARN	55.497	72.14	7.19	31.33	I	C	SP	P
JAS	55.712	70.89	7.18	31.25	I	C	SP	P
BMN	55.816	66.63	7.17	31.20	I	C	SP	P
CHTO	57.041	257.15	7.08	30.78	E	D	LP	P
CHG	57.041	257.15	7.08	30.78	I	D	SP	P
FRB	57.949	22.65	7.02	30.48	I	D	SP	P
BDW	58.318	59.87	6.99	30.34	I	C	SP	P
PAS	59.688	72.53	6.88	29.82	I	C	SP	P
SDW	59.988	71.41	6.85	29.70	I	C	SP	P
RSSD	60.184	55.43	6.84	29.63	I	C	SP	P
GLA	62.402	71.08	6.66	28.78	I	C	SP	P
KBL	63.080	292.20	6.61	28.53	I	D	SP	P
ANMO	65.675	63.94	6.40	27.55	E	C	LP	P
IPM	67.310	245.88	6.26	26.90	I	D	SP	P
TUL	70.517	56.07	6.01	25.76	I	D	SP	P
RLO	70.698	55.38	6.00	25.69	I	D	SP	P
ESK	71.037	349.16	5.97	25.57	I	D	SP	P
FVM	71.483	51.13	5.94	25.44	I	D	SP	P
KRA	71.583	333.37	5.94	25.41	I	D	SP	P
KSP	71.805	335.95	5.92	25.32	I	D	SP	P
TRT	71.942	228.62	5.91	25.28	I	C	SP	P
CLL	72.147	338.16	5.89	25.21	I	D	SP	P
MNT	72.178	35.77	5.89	25.20	I	D	SP	P
SPC	72.287	332.80	5.89	25.18	I	D	SP	P
POO	72.338	277.40	5.88	25.16	I	D	SP	P
BRG	72.339	337.42	5.88	25.16	I	D	SP	P
WTS	72.767	342.22	5.85	25.02	I	D	SP	P
DMU	72.819	351.12	5.85	25.00	I	D	SP	P
JOS	72.834	332.31	5.85	24.99	I	D	SP	P
PRU	73.023	336.70	5.83	24.93	I	D	SP	P
MOX	73.077	338.78	5.83	24.92	I	D	SP	P
KNA	73.147	210.11	5.82	24.89	I	C	SP	P
DDK	73.271	350.69	5.82	24.86	I	D	SP	P
HOF	73.332	338.50	5.81	24.85	I	D	SP	P
DLE	73.389	350.80	5.81	24.83	I	D	SP	P
DKM	73.394	350.62	5.81	24.83	I	D	SP	P
DCN	73.402	351.26	5.81	24.82	I	D	SP	P

Table 97. Station data for event 82....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
CVO	73.522	327.47	5.80	24.79	I	D	SP	P
CTA	73.552	192.16	5.80	24.78	I	C	SP	P
CTAO	73.552	192.16	5.80	24.78	I	C	SP	P
KHC	74.051	336.98	5.76	24.60	I	D	SP	P
GRFO	74.063	338.69	5.76	24.60	I	D	SP	P
GRF	74.062	338.69	5.76	24.60	I	D	SP	P
ENN	74.106	342.40	5.76	24.59	I	D	SP	P
TNS	74.141	340.63	5.75	24.58	I	D	SP	P
BUD	74.178	332.84	5.75	24.57	I	D	SP	P
UCC	74.355	343.40	5.74	24.52	I	D	LP	P
COZ	74.556	328.42	5.73	24.46	I	D	SP	P
NOU	75.273	172.55	5.68	24.23	I	C	SP	P
FUR	75.488	338.12	5.66	24.17	I	D	SP	P
BHG	75.535	336.92	5.66	24.16	I	D	SP	P
WB2	75.620	203.57	5.66	24.13	I	C	SP	P
WRA	75.623	203.58	5.66	24.13	I	C	SP	P
BUH	75.660	340.27	5.65	24.12	E	D	SP	P
KBA	76.025	336.38	5.63	24.01	I	D	SP	P
CDF	76.102	340.81	5.62	23.99	I	D	SP	P
PVL	76.229	326.86	5.62	23.96	I	D	SP	P
ANTO	76.364	320.08	5.61	23.92	I	D	SP	P
HAU	76.674	341.30	5.59	23.84	I	D	SP	P
BSF	76.753	340.95	5.59	23.82	I	D	SP	P
OGA	76.769	337.84	5.59	23.82	I	D	SP	P
ZUL	76.763	339.79	5.59	23.82	I	D	SP	P
FLN	77.103	346.02	5.56	23.72	I	D	SP	P
LDF	77.214	345.74	5.56	23.68	I	D	SP	P
VTS	77.361	327.95	5.54	23.62	I	D	SP	P
KDZ	77.512	326.04	5.53	23.57	I	D	SP	P
GRR	77.523	346.18	5.53	23.57	I	D	SP	P
LOR	77.847	342.75	5.51	23.48	I	D	SP	P
LPF	77.898	346.23	5.51	23.47	I	D	SP	P
LBF	78.100	342.59	5.50	23.41	I	D	SP	P
SSF	78.110	342.93	5.50	23.41	I	D	SP	P
DIX	78.302	340.01	5.48	23.36	I	D	SP	P
AVF	78.399	342.97	5.48	23.33	I	D	SP	P
SMF	78.452	342.60	5.47	23.31	I	D	SP	P
SKO	78.486	328.88	5.47	23.30	I	D	SP	P
VAY	78.717	327.82	5.46	23.23	I	D	SP	P
TCF	79.084	343.61	5.43	23.10	I	D	SP	P
MZF	79.090	343.34	5.43	23.09	I	D	SP	P
MFF	79.160	345.30	5.42	23.07	I	D	SP	P
LSF	79.235	344.07	5.41	23.04	I	D	SP	P
RJF	80.156	343.85	5.32	22.60	I	D	SP	P
CAF	80.430	343.38	5.29	22.48	I	D	SP	P
LFF	80.643	344.31	5.27	22.40	I	D	SP	P
LPO	80.815	343.93	5.26	22.34	I	D	SP	P
FRF	80.871	339.79	5.25	22.32	I	D	SP	P
LRG	81.032	339.96	5.24	22.26	I	D	SP	P
LMR	81.117	339.82	5.23	22.23	I	D	SP	P

Table 97. Station data for event 82....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MBL	81.150	216.33	5.23	22.22	I	C	SP	P
EPF	82.563	344.15	5.13	21.76	I	D	SP	P
YOU	87.352	188.51	4.80	20.29	I	C	SP	P
SNZO	94.928	167.94	4.57	19.30	E	C	LP	P
BNG	113.671	315.73	1.88	7.83	I	D	SP	PKP
KIC	119.231	341.02	1.87	7.79	I	D	SP	PKP
MTD	125.295	290.56	1.87	7.75	I	D	SP	PKP
KRI	126.442	292.41	1.86	7.74	I	D	SP	PKP

Table 98. Station data for event 115

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
NEM	9.110	233.28	13.75	76.99	E	C	LP	P
OSK	20.739	232.60	10.26	46.64	E	C	LP	P
OSA	20.759	232.97	10.13	45.87	E	C	LP	P
CN2	21.366	266.72	10.02	45.24	I	C	SP	P
SHK	22.402	237.55	9.82	44.09	I	C	SP	P
SHK	22.402	237.55	9.82	44.09	I	C	LP	P
SEO	23.706	251.30	9.66	43.20	I	C	LP	P
BJI	29.235	266.72	9.02	39.73	E	C	LP	P
SSE	31.575	247.82	8.78	38.47	I	C	SP	P
HHC	31.842	271.64	8.74	38.27	I	C	SP	P
NJ2	32.348	251.72	8.71	38.11	I	C	SP	P
TIY	32.950	266.03	8.67	37.90	I	C	SP	P
BTO	32.982	272.35	8.67	37.90	I	C	SP	P
ANP	35.766	240.32	8.49	36.98	I	C	LP	P
TATO	35.943	240.13	8.49	36.98	I	C	LP	P
WHN	36.196	254.43	8.49	36.98	I	C	SP	P
GUMO	36.634	197.67	8.46	36.83	I	C	LP	P
GUA	36.673	197.58	8.46	36.83	E	C	LP	P
XAN	37.421	263.85	8.40	36.53	I	C	SP	P
QZH	37.641	243.48	8.40	36.53	I	C	SP	P
INK	38.664	34.25	8.34	36.23	I	C	SP	P
LZH	39.512	270.51	8.29	35.97	I	C	LP	P
GTA	40.267	277.59	8.23	35.67	I	C	SP	P
GZH	42.170	247.28	8.15	35.27	I	C	SP	P
CD2	42.773	264.42	8.10	35.03	I	C	SP	P
BAG	43.348	233.36	8.07	34.88	I	C	LP	P
KMI	47.346	259.29	7.84	33.75	I	C	LP	P
RSNT	47.947	38.73	7.81	33.60	I	C	LP	P
DAV	49.023	221.13	7.73	33.21	I	C	LP	P
LON	52.666	59.06	7.45	31.86	I	C	LP	P
COR	53.072	62.03	7.41	31.67	I	C	SP	P
RAB	53.294	184.27	7.37	31.48	I	C	LP	P
CHG	54.315	256.97	7.29	31.10	I	C	SP	P
CHG	54.315	256.97	7.29	31.10	I	C	LP	P
RXF	55.068	53.66	7.25	30.91	I	C	SP	P
LHD	55.204	54.46	7.25	30.91	I	C	SP	P
LDM	55.214	54.15	7.25	30.91	I	C	SP	P
CLX	55.460	54.30	7.21	30.72	I	C	SP	P
KEV	55.552	340.73	7.21	30.72	I	C	LP	P
WDC	55.942	65.53	7.17	30.53	I	C	SP	P
SES	56.242	50.23	7.17	30.53	I	C	SP	P
FFC	57.767	42.05	7.03	29.88	I	C	SP	P
FCC	58.267	35.08	6.99	29.69	I	C	SP	P
JAS	58.872	66.71	6.95	29.50	I	C	SP	P
JAS	58.872	66.71	6.95	29.50	I	C	LP	P
NDI	61.541	281.77	6.75	28.57	I	C	SP	P
SNG	62.167	246.78	6.71	28.39	I	C	LP	P
PAS	62.760	68.56	6.63	28.02	I	C	SP	P
NUR	63.659	335.35	6.59	27.84	I	C	LP	P
RSSD	63.961	52.05	6.55	27.65	I	C	LP	P

Table 98. Station data for event 115....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
IPM	63.985	244.67	6.55	27.65	I	C	SP	P
RSON	64.067	41.25	6.55	27.65	I	C	LP	P
GOL	66.353	56.29	6.34	26.70	E	C	LP	P
PSI	66.737	245.30	6.34	26.70	I	C	SP	P
QUE	66.972	289.85	6.30	26.51	I	C	LP	P
MHI	67.121	299.32	6.30	26.51	I	C	LP	P
LHC	67.807	40.65	6.22	26.15	I	C	SP	P
TRT	67.989	226.77	6.22	26.15	I	C	SP	P
KONO	68.001	342.16	6.22	26.15	I	C	LP	P
KON	68.001	342.16	6.22	26.15	I	C	LP	P
BER	68.114	344.61	6.22	26.15	I	C	LP	P
ANMO	69.133	60.55	6.14	25.79	I	C	LP	P
AFI	69.164	145.94	6.14	25.79	E	D	LP	P
CTAO	69.509	189.38	6.10	25.61	I	C	LP	P
CTA	69.509	189.38	6.10	25.61	I	C	SP	P
LEM	69.728	231.86	6.10	25.61	I	C	SP	P
KOU	69.909	171.34	6.06	25.43	I	C	SP	P
POO	70.865	276.33	5.99	25.12	I	C	SP	P
COP	71.018	338.96	5.99	25.12	I	C	LP	P
EPT	71.397	62.90	5.95	24.94	E	C	LP	P
NOU	71.874	169.43	5.92	24.80	I	C	SP	P
TAB	72.968	308.81	5.85	24.49	I	C	LP	P
HAM	73.640	339.43	5.81	24.31	I	C	SP	P
BRN	73.805	337.10	5.78	24.18	I	C	SP	P
KRA	74.027	332.05	5.78	24.18	I	C	SP	P
TUL	74.265	53.07	5.74	24.00	I	C	LP	P
KSP	74.400	334.58	5.74	24.00	I	C	SP	P
RLO	74.470	52.40	5.74	24.00	I	C	SP	P
CLI	74.573	325.82	5.74	24.00	I	C	SP	P
GBO	74.628	52.72	5.74	24.00	I	C	SP	P
SPC	74.695	331.44	5.74	24.00	I	C	SP	P
CLL	74.867	336.73	5.71	23.87	I	C	SP	P
BRG	75.016	335.99	5.71	23.87	I	C	SP	P
AAM	75.062	41.30	5.71	23.87	I	C	SP	P
ASPA	75.110	200.54	5.71	23.87	I	C	SP	P
JOS	75.212	330.92	5.71	23.87	I	C	SP	P
VRI	75.356	325.79	5.67	23.69	I	C	SP	P
GAC	75.514	34.28	5.67	23.69	I	C	LP	P
OTT	75.689	34.59	5.67	23.69	I	C	SP	P
WTS	75.706	340.69	5.67	23.69	I	C	SP	P
MOX	75.830	337.29	5.64	23.56	I	C	LP	P
PSZ	75.924	331.03	5.64	23.56	I	C	SP	P
DBN	75.951	341.71	5.64	23.56	I	C	LP	P
MLR	75.965	326.07	5.64	23.56	I	C	SP	P
HOF	76.069	336.99	5.64	23.56	I	C	SP	P
DMU	76.187	349.45	5.64	23.56	I	C	SP	P
JCT	76.201	59.35	5.64	23.56	I	C	LP	P
JCT	76.201	59.35	5.64	23.56	I	C	SP	P
SRO	76.513	331.95	5.61	23.42	I	C	SP	P
BUD	76.585	331.36	5.61	23.42	I	C	SP	P

Table 98. Station data for event 115....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BNS	76.593	340.10	5.61	23.42	I	C	SP	P
DDK	76.619	348.99	5.61	23.42	I	C	SP	P
VKA	76.709	333.39	5.61	23.42	I	C	SP	P
VIE	76.711	333.36	5.61	23.42	E	C	LP	P
DLE	76.742	349.10	5.61	23.42	I	C	SP	P
DCN	76.775	349.55	5.58	23.29	I	C	SP	P
GRF	76.808	337.14	5.58	23.29	I	C	SP	P
GRFO	76.809	337.14	5.58	23.29	I	C	LP	P
RSNY	76.849	34.31	5.58	23.29	I	C	LP	P
WET	76.876	335.89	5.58	23.29	I	C	SP	P
TNS	76.993	339.05	5.58	23.29	I	C	SP	P
STB	77.013	340.17	5.58	23.29	I	C	SP	P
ENN	77.052	340.79	5.58	23.29	I	C	SP	P
KLL	77.082	340.51	5.58	23.29	I	C	SP	P
BGG	77.266	339.72	5.55	23.16	I	C	SP	P
ETA	77.280	348.77	5.55	23.16	I	C	SP	P
CLO	77.449	327.81	5.55	23.16	I	C	SP	P
KMR	77.525	334.66	5.55	23.16	I	C	LP	P
ECP	77.805	348.75	5.51	22.98	I	C	SP	P
ANTO	77.946	318.59	5.51	22.98	I	C	LP	P
DOU	77.968	341.38	5.51	22.98	E	C	LP	P
WLF	78.040	340.27	5.51	22.98	E	C	LP	P
STU	78.166	338.04	5.51	22.98	I	C	LP	P
BHG	78.178	335.30	5.51	22.98	I	C	SP	P
FUR	78.200	336.49	5.51	22.98	I	C	SP	P
PVL	78.260	325.31	5.48	22.85	I	C	SP	P
GWF	78.351	339.10	5.48	22.85	I	C	SP	P
VAL	78.486	351.11	5.48	22.85	E	C	LP	P
BUH	78.490	338.61	5.48	22.85	I	C	SP	P
KBA	78.637	334.74	5.48	22.85	I	C	SP	P
SCP	78.742	38.47	5.48	22.85	I	C	LP	P
GAP	78.890	336.35	5.44	22.67	I	C	SP	P
CDF	78.961	339.12	5.44	22.67	I	C	SP	P
WBN	79.379	206.34	5.41	22.54	I	C	SP	P
VTS	79.459	326.31	5.41	22.54	I	C	SP	P
OGA	79.462	336.14	5.41	22.54	I	C	SP	P
KDZ	79.488	324.42	5.41	22.54	I	C	SP	P
CEY	79.547	333.48	5.41	22.54	I	C	SP	P
HAU	79.557	339.57	5.41	22.54	I	C	SP	P
ZUL	79.565	338.07	5.41	22.54	I	C	LP	P
RSCP	79.619	46.55	5.41	22.54	I	C	LP	P
BSF	79.618	339.22	5.41	22.54	I	C	SP	P
WES	79.892	33.35	5.35	22.28	E	C	LP	P
FLN	80.228	344.20	5.35	22.28	I	C	SP	P
LDF	80.326	343.92	5.30	22.06	I	C	SP	P
GRR	80.655	344.35	5.30	22.06	I	C	SP	P
BLA	80.661	42.14	5.30	22.06	E	C	LP	P
BLA	80.661	42.14	5.30	22.06	I	C	SP	P
GEO	80.671	38.96	5.30	22.06	E	C	LP	P
LOR	80.806	340.93	5.25	21.84	I	C	SP	P

Table 98. Station data for event 115....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
CMS	80.830	188.45	5.25	21.84	I	C	SP	P
LPF	81.032	344.37	5.25	21.84	I	C	SP	P
LBF	81.050	340.77	5.25	21.84	I	C	SP	P
SSF	81.078	341.10	5.25	21.84	I	C	SP	P
DIX	81.114	338.20	5.25	21.84	I	C	LP	P
AVF	81.368	341.12	5.21	21.66	I	C	SP	P
SMF	81.401	340.75	5.21	21.66	I	C	SP	P
TCF	82.086	341.72	5.17	21.49	I	C	SP	P
MFF	82.247	343.39	5.17	21.49	I	C	SP	P
FIR	82.250	334.78	5.14	21.36	I	C	SP	P
LSF	82.260	342.17	5.14	21.36	I	C	SP	P
SHA	82.312	51.22	5.14	21.36	E	C	LP	P
RJF	83.168	341.90	5.11	21.23	I	C	SP	P
ATH	83.290	323.67	5.08	21.10	I	C	SP	P
YOU	83.390	186.01	5.08	21.10	I	C	SP	P
CAF	83.417	341.42	5.08	21.10	I	C	SP	P
LFF	83.678	342.33	5.08	21.10	I	C	SP	P
LPO	83.831	341.95	5.05	20.97	I	C	SP	P
CAN	84.386	185.42	5.02	20.84	I	C	SP	P
WAM	85.261	185.45	4.96	20.58	I	C	SP	P
EPF	85.588	342.07	4.96	20.58	I	C	SP	P
LGR	86.685	343.95	4.86	20.14	I	C	SP	P
TOO	86.892	188.03	4.82	19.97	I	C	SP	P
HLW	86.932	314.02	4.82	19.97	I	C	LP	P
KLB	87.245	211.61	4.82	19.97	I	C	SP	P
NWAO	88.643	211.48	4.75	19.67	I	C	LP	P
TOL	89.462	344.48	4.71	19.50	I	C	SP	P
BEC	91.183	33.18	4.69	19.41	E	C	LP	P
SNZO	91.720	165.72	4.68	19.37	I	C	LP	P
TAU	92.048	186.08	4.67	19.32	I	C	LP	P
MAL	92.594	344.04	4.66	19.28	I	C	LP	P
ARO	95.654	294.74	4.56	18.85	I	C	LP	P
TRN	112.081	39.68	1.89	7.70	E	C	LP	PKP
MTD	124.606	285.27	1.87	7.60	I	C	SP	PKP
BUL	128.978	285.11	1.86	7.55	I	C	SP	PKP
LPB	131.919	62.95	1.84	7.50	I	C	SP	PKP
SLR	133.197	280.27	1.84	7.47	I	C	SP	PKP
CER	144.094	279.65	1.70	6.94	I	C	SP	PKP
LPA	151.553	72.39	1.50	6.09	E	C	LP	PKP

Table 99. Station data for event 117

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MAT	10.689	227.96	13.60	73.16	I	C	SP	P
CN2	16.276	276.63	12.65	62.91	I	C	SP	P
SEO	17.239	254.79	12.55	62.03	I	C	LP	P
BJI	23.930	271.22	9.59	42.45	I	C	SP	P
TIA	24.823	262.02	9.46	41.74	I	C	SP	P
SSE	24.834	247.40	9.46	41.74	E	C	LP	P
NJ2	25.825	252.02	9.37	41.26	I	C	SP	P
TIY	27.520	268.87	9.23	40.51	I	C	SP	P
ANP	28.697	237.48	9.10	39.82	I	C	LP	P
TATO	28.868	237.23	9.03	39.46	I	C	LP	P
WHN	29.821	254.33	8.90	38.78	I	C	SP	P
XAN	31.748	264.97	8.78	38.16	I	C	SP	P
LZH	34.416	271.93	8.58	37.14	I	C	LP	P
GZH	35.365	244.97	8.52	36.84	I	C	SP	P
GTA	35.876	279.52	8.50	36.74	I	C	SP	P
BAG	36.120	228.70	8.50	36.74	I	C	LP	P
CD2	37.101	264.37	8.44	36.44	I	C	SP	P
GYA	37.659	255.99	8.41	36.29	I	C	SP	P
KMI	41.246	257.86	8.21	35.29	I	C	SP	P
DAV	41.829	214.69	8.15	35.00	E	C	LP	P
WMQ	42.558	291.52	8.13	34.90	I	C	SP	P
INK	45.732	30.60	7.96	34.07	I	C	SP	P
LSA	46.835	271.96	7.87	33.63	I	C	SP	P
CHG	48.026	254.42	7.81	33.34	I	C	SP	P
CHG	48.026	254.42	7.81	33.34	I	C	LP	P
RAB	48.268	174.50	7.78	33.20	I	D	LP	P
RAB	48.268	174.50	7.78	33.20	I	C	SP	P
PCT	49.231	248.31	7.73	32.96	I	C	SP	P
KKN	52.148	273.81	7.49	31.81	I	C	SP	P
PKI	52.183	273.50	7.49	31.81	I	C	SP	P
KSH	52.351	291.50	7.45	31.62	I	C	SP	P
DMN	52.378	273.74	7.45	31.62	I	C	SP	P
SNG	55.305	242.74	7.21	30.49	I	C	LP	P
NDI	57.385	279.81	7.07	29.84	I	C	SP	P
KEV	58.566	339.54	6.99	29.47	E	C	LP	P
DAG	59.064	356.49	6.95	29.28	I	C	SP	P
LON	59.811	52.71	6.88	28.96	I	C	LP	P
QUE	63.666	287.34	6.59	27.63	I	C	LP	P
CTAO	63.946	181.89	6.55	27.45	I	C	LP	P
MHI	64.931	296.92	6.47	27.09	I	C	LP	P
FFC	64.985	36.99	6.47	27.09	I	C	SP	P
WB2	65.006	194.24	6.47	27.09	I	C	SP	P
LRM	65.595	49.24	6.43	26.91	I	C	SP	P
JAS	65.788	60.07	6.39	26.72	I	C	LP	P
NUR	65.976	333.11	6.39	26.72	E	C	LP	P
POO	66.100	273.02	6.39	26.72	I	C	SP	P
KHI	66.805	295.53	6.30	26.32	I	C	SP	P
FRB	68.609	16.55	6.18	25.78	I	C	SP	P
IR7	70.894	301.34	5.99	24.93	I	C	SP	P
KONO	71.073	339.14	5.99	24.93	I	C	LP	P

Table 99. Station data for event 117....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KON	71.073	339.14	5.99	24.93	E	C	LP	P
RSSD	71.207	46.38	5.99	24.93	E	C	LP	P
RSON	71.273	36.13	5.95	24.75	E	C	LP	P
TAB	71.900	305.60	5.92	24.62	I	C	LP	P
SHI	73.670	295.45	5.81	24.13	I	C	SP	P
COP	73.699	335.62	5.81	24.13	E	C	LP	P
KRA	75.861	328.47	5.64	23.39	I	C	SP	P
ANMO	76.236	54.60	5.64	23.39	E	C	LP	P
KSP	76.537	330.90	5.61	23.25	I	C	SP	P
JOS	76.898	327.20	5.58	23.12	I	C	SP	P
MLR	77.044	322.31	5.58	23.12	I	C	SP	P
CLL	77.257	332.96	5.55	22.99	I	C	SP	P
BRG	77.316	332.20	5.55	22.99	I	C	SP	P
PSZ	77.618	327.21	5.55	22.99	I	C	SP	P
ANTO	78.068	314.65	5.52	22.86	E	C	LP	P
MOX	78.278	333.38	5.48	22.68	I	C	SP	P
BUD	78.313	327.45	5.48	22.68	I	C	SP	P
HOF	78.480	333.06	5.48	22.68	I	C	SP	P
GZR	78.488	324.05	5.48	22.68	I	C	SP	P
WTS	78.553	336.74	5.48	22.68	I	C	SP	P
VIE	78.682	329.40	5.48	22.68	E	C	LP	P
VKA	78.684	329.44	5.48	22.68	I	C	SP	P
WET	79.151	331.88	5.45	22.55	I	C	SP	P
PVL	79.227	321.27	5.45	22.55	I	C	SP	P
GRFO	79.233	333.11	5.45	22.55	E	C	LP	P
BNS	79.365	336.05	5.41	22.38	I	C	SP	P
STB	79.791	336.07	5.35	22.12	I	C	SP	P
ENN	79.902	336.67	5.35	22.12	I	C	SP	P
DMU	80.006	345.27	5.35	22.12	I	C	SP	P
UCC	80.311	337.59	5.30	21.90	E	C	LP	P
KDZ	80.332	320.22	5.30	21.90	I	C	SP	P
BHG	80.372	331.13	5.30	21.90	I	C	SP	P
FUR	80.536	332.30	5.30	21.90	I	C	SP	P
DCN	80.602	345.31	5.30	21.90	I	C	SP	P
KBA	80.760	330.52	5.26	21.73	I	C	SP	P
DOU	80.880	337.15	5.26	21.73	E	C	LP	P
GWF	80.994	334.85	5.26	21.73	I	C	SP	P
ETA	81.020	344.48	5.26	21.73	I	C	SP	P
TUL	81.502	47.46	5.21	21.51	I	C	LP	P
ECP	81.541	344.41	5.21	21.51	I	C	SP	P
CDF	81.602	334.79	5.21	21.51	I	C	SP	P
NWAO	81.699	205.82	5.21	21.51	E	C	LP	P
RLO	81.712	46.82	5.21	21.51	I	C	SP	P
OGA	81.746	331.80	5.21	21.51	I	C	SP	P
SKO	81.819	322.79	5.17	21.34	I	C	SP	P
VAY	81.847	321.71	5.17	21.34	I	C	SP	P
ZUL	82.078	333.69	5.17	21.34	E	C	LP	P
HAU	82.246	335.17	5.17	21.34	I	C	SP	P
BSF	82.266	334.82	5.14	21.21	I	C	SP	P
GAC	82.560	29.13	5.14	21.21	E	C	LP	P

Table 99. Station data for event 117....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
JCT	83.332	53.62	5.08	20.95	E	C	LP	P
FLN	83.445	339.66	5.08	20.95	I	C	SP	P
LDF	83.511	339.37	5.08	20.95	I	C	SP	P
DIX	83.631	333.63	5.08	20.95	E	C	LP	P
LOR	83.646	336.37	5.08	20.95	I	C	SP	P
LBF	83.868	336.17	5.05	20.82	I	C	SP	P
GRR	83.886	339.75	5.05	20.82	I	C	SP	P
RSNY	83.896	29.12	5.05	20.82	E	C	LP	P
SSF	83.935	336.50	5.05	20.82	I	C	SP	P
ATH	84.009	318.99	5.05	20.82	I	C	SP	P
SMF	84.215	336.11	5.05	20.82	I	C	SP	P
AVF	84.225	336.48	5.05	20.82	I	C	SP	P
LPF	84.263	339.73	5.02	20.69	I	C	SP	P
MZF	84.968	336.73	4.99	20.56	I	C	SP	P
TCF	85.008	336.99	4.99	20.56	I	C	SP	P
LSF	85.232	337.41	4.99	20.56	I	C	SP	P
SSB	85.243	335.08	4.99	20.56	I	C	SP	P
MFF	85.359	338.62	4.96	20.43	I	C	SP	P
SCP	85.895	33.15	4.90	20.17	E	C	LP	P
FRF	86.123	332.97	4.90	20.17	I	C	SP	P
CVF	86.253	331.06	4.86	20.00	I	C	SP	P
CAF	86.295	336.54	4.86	20.00	I	C	SP	P
LRG	86.311	333.11	4.86	20.00	I	C	SP	P
LMR	86.370	332.95	4.86	20.00	I	C	SP	P
RSCP	86.875	41.10	4.83	19.87	E	C	LP	P
WES	86.907	28.09	4.83	19.87	E	C	LP	P
GEO	87.834	33.60	4.77	19.61	E	C	LP	P
TOL	92.651	338.88	4.66	19.14	E	C	LP	P
MAL	95.713	338.08	4.56	18.72	I	C	SP	P

Table 100. Station data for event 119

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
NEM	1.402	250.41	14.27	90.00	I	D	SP	P
ABJ	2.259	276.24	14.25	92.65	I	D	SP	P
SAP	4.482	262.40	14.17	83.37	I	D	SP	P
OFU	6.382	223.88	14.04	79.80	I	C	LP	P
MAT	10.103	227.15	13.69	73.67	I	C	SP	P
WAJ	10.237	234.76	13.69	73.67	I	C	LP	P
YOK	10.272	218.09	13.63	72.84	E	C	LP	P
SEO	16.687	255.02	12.67	62.64	I	C	LP	P
SSE	24.259	247.25	9.53	41.92	I	C	LP	P
TIA	24.302	262.17	9.53	41.92	I	C	SP	P
BTO	27.723	276.40	9.23	40.32	I	C	SP	P
ANP	28.107	237.08	9.18	40.05	I	C	LP	P
TATO	28.279	236.83	9.11	39.69	I	C	LP	P
WHN	29.267	254.23	8.97	38.96	I	C	SP	P
QZH	30.096	240.73	8.91	38.65	I	C	SP	P
GUMO	30.196	184.90	8.91	38.65	I	D	LP	P
XAN	31.242	265.01	8.82	38.19	I	C	SP	P
HKC	34.802	242.76	8.56	36.87	I	C	LP	P
GTA	35.463	279.65	8.53	36.72	I	C	SP	P
BAG	35.532	228.17	8.53	36.72	I	C	LP	P
CD2	36.592	264.31	8.47	36.42	I	C	SP	P
TTA	37.268	39.10	8.41	36.12	I	C	SP	P
KMI	40.706	257.68	8.24	35.28	I	C	SP	P
FBA	40.944	36.09	8.21	35.14	I	C	SP	P
DAV	41.273	214.01	8.18	34.99	I	C	LP	P
WMQ	42.242	291.61	8.16	34.89	I	C	SP	P
LSA	46.370	271.85	7.91	33.68	I	C	SP	P
CHG	47.473	254.15	7.85	33.39	I	C	LP	P
PCT	48.659	247.97	7.78	33.05	I	C	SP	P
PKI	51.727	273.34	7.54	31.91	I	C	SP	P
KSH	52.034	291.42	7.50	31.72	I	C	SP	P
NDI	56.974	279.62	7.11	29.90	I	C	SP	P
KEV	58.725	339.43	7.00	29.39	I	C	LP	P
LON	60.402	52.26	6.84	28.65	I	C	LP	P
EDM	61.241	42.61	6.80	28.47	I	C	SP	P
LEM	61.896	226.08	6.72	28.10	I	C	LP	P
HYB	62.958	268.56	6.64	27.74	I	C	SP	P
CTA	63.585	181.20	6.60	27.56	I	C	SP	P
CTAO	63.585	181.20	6.60	27.56	E	N	LP	P
RMT	63.801	59.00	6.56	27.38	I	C	SP	P
SES	64.081	44.21	6.56	27.38	I	C	SP	P
WB2	64.554	193.60	6.51	27.15	I	C	SP	P
FFC	65.550	36.62	6.43	26.79	I	C	SP	P
POO	65.641	272.73	6.43	26.79	I	C	SP	P
NUR	66.069	332.91	6.39	26.61	I	C	LP	P
NOU	68.074	160.98	6.22	25.85	I	C	SP	P
MBL	69.417	207.48	6.10	25.32	I	C	SP	P
DUG	69.568	53.67	6.10	25.32	I	C	SP	P
KONO	71.227	338.88	5.99	24.83	I	C	LP	P
RSSD	71.792	45.95	5.92	24.52	I	C	LP	P

Table 100. Station data for event 119....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
RSSD	71.792	45.95	5.92	24.52	I	D	SP	P
RSON	71.835	35.73	5.92	24.52	I	C	LP	P
WBN	72.176	199.61	5.92	24.52	I	C	SP	P
COP	73.818	335.34	5.78	23.90	I	C	LP	P
COP	73.818	335.34	5.78	23.90	I	D	SP	P
MUD	74.099	337.38	5.78	23.90	I	D	SP	P
MSL	74.720	305.82	5.75	23.77	I	C	SP	P
LHC	75.563	35.09	5.68	23.46	I	C	SP	P
CLI	75.615	321.95	5.68	23.46	I	C	SP	P
PPE	75.720	321.54	5.68	23.46	I	C	SP	P
KRA	75.906	328.16	5.64	23.29	I	C	SP	P
CFR	76.260	320.56	5.61	23.16	I	C	SP	P
BRN	76.342	333.13	5.61	23.16	I	C	SP	P
VRI	76.385	321.80	5.61	23.16	I	C	SP	P
SPC	76.487	327.46	5.61	23.16	I	C	SP	P
CVO	76.668	322.08	5.61	23.16	I	D	SP	P
TLB	76.769	320.23	5.58	23.03	I	D	SP	P
ANMO	76.827	54.14	5.58	23.03	I	C	LP	P
JOS	76.930	326.88	5.58	23.03	I	C	SP	P
MLR	77.026	321.99	5.58	23.03	I	C	SP	P
ISR	77.029	321.42	5.58	23.03	I	D	SP	P
CLL	77.348	332.63	5.55	22.90	I	C	SP	P
BRG	77.400	331.88	5.55	22.90	I	C	SP	P
PSZ	77.650	326.88	5.55	22.90	I	C	SP	P
COZ	77.867	322.78	5.52	22.77	I	C	SP	P
ANTO	77.972	314.31	5.52	22.77	I	C	LP	P
WIT	78.000	336.87	5.52	22.77	I	C	SP	P
BUD	78.347	327.11	5.48	22.59	I	C	SP	P
SRO	78.355	327.71	5.48	22.59	I	C	SP	P
MOX	78.373	333.04	5.48	22.59	I	C	SP	P
GZR	78.488	323.71	5.48	22.59	I	C	SP	P
HOF	78.572	332.72	5.48	22.59	I	C	SP	P
VKA	78.739	329.10	5.48	22.59	I	C	SP	P
VIE	78.737	329.06	5.48	22.59	E	C	LP	P
CLO	78.731	323.50	5.48	22.59	I	C	SP	P
TIM	78.871	324.81	5.45	22.46	I	C	SP	P
KHC	79.000	331.13	5.45	22.46	I	C	SP	P
DBN	79.053	337.36	5.45	22.46	I	C	LP	P
PVL	79.198	320.92	5.45	22.46	I	C	SP	P
WET	79.231	331.53	5.45	22.46	I	C	SP	P
GRFO	79.325	332.77	5.41	22.29	I	C	LP	P
GRF	79.324	332.76	5.41	22.29	I	C	SP	P
BNS	79.487	335.70	5.41	22.29	I	C	SP	P
KMR	79.713	330.23	5.41	22.29	I	C	LP	P
DIM	79.867	319.98	5.36	22.07	I	C	SP	P
DMU	80.220	344.91	5.36	22.07	I	C	SP	P
KDZ	80.292	319.86	5.31	21.85	I	C	SP	P
BHG	80.444	330.77	5.31	21.85	I	C	SP	P
UCC	80.449	337.23	5.31	21.85	E	C	LP	P
DDK	80.596	344.41	5.31	21.85	I	C	SP	P

Table 100. Station data for event 119....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
FUR	80.620	331.94	5.31	21.85	I	C	SP	P
DLE	80.730	344.50	5.31	21.85	I	C	SP	P
STU	80.785	333.46	5.26	21.64	E	C	LP	P
KBA	80.826	330.16	5.26	21.64	I	C	SP	P
WLF	80.944	335.67	5.26	21.64	E	C	LP	P
GWF	81.104	334.49	5.26	21.64	I	C	SP	P
NWAO	81.180	205.32	5.26	21.64	I	D	SP	P
NWAO	81.180	205.32	5.26	21.64	I	C	LP	P
ETA	81.225	344.11	5.26	21.64	I	C	SP	P
LJU	81.266	328.90	5.22	21.46	I	C	SP	P
GAP	81.286	331.71	5.22	21.46	I	C	SP	P
CDF	81.711	334.42	5.22	21.46	I	C	SP	P
ECP	81.746	344.03	5.22	21.46	I	C	SP	P
OGA	81.826	331.42	5.17	21.25	I	C	SP	P
ECH	81.922	334.40	5.17	21.25	I	C	SP	P
TUL	82.088	47.02	5.17	21.25	I	C	SP	P
ZUL	82.176	333.31	5.17	21.25	E	C	LP	P
THE	82.193	320.68	5.17	21.25	I	C	SP	P
RLO	82.298	46.37	5.14	21.12	I	C	SP	P
BAF	82.310	334.32	5.14	21.12	I	C	SP	P
HAU	82.360	334.79	5.14	21.12	I	C	SP	P
BSF	82.376	334.44	5.14	21.12	I	C	SP	P
GBO	82.453	46.68	5.14	21.12	I	C	SP	P
VDM	82.598	337.74	5.14	21.12	I	C	LP	P
GAC	83.095	28.71	5.11	20.99	I	C	LP	P
IN1	83.295	37.97	5.08	20.86	I	C	SP	P
FLN	83.604	339.26	5.08	20.86	I	C	SP	P
LDF	83.667	338.98	5.08	20.86	I	C	SP	P
DIX	83.729	333.24	5.08	20.86	E	C	LP	P
LOR	83.771	335.97	5.05	20.73	I	C	SP	P
ATH	83.957	318.60	5.05	20.73	I	C	SP	P
LBF	83.992	335.78	5.05	20.73	I	C	SP	P
GRR	84.046	339.35	5.05	20.73	I	C	SP	P
SSF	84.061	336.10	5.05	20.73	I	C	SP	P
AVF	84.351	336.08	5.02	20.60	I	C	SP	P
IN3	84.379	38.65	5.02	20.60	I	C	SP	P
FIR	84.412	329.71	5.02	20.60	I	C	SP	P
LPF	84.422	339.33	5.02	20.60	I	C	SP	P
RSNY	84.431	28.69	5.02	20.60	I	C	LP	P
IN4	84.527	37.91	5.02	20.60	I	C	SP	P
MZF	85.097	336.32	4.99	20.48	I	C	SP	P
TCF	85.139	336.59	4.99	20.48	I	C	SP	P
SSB	85.355	334.67	4.96	20.35	I	C	SP	P
LSF	85.368	337.00	4.96	20.35	I	C	SP	P
MFF	85.507	338.21	4.96	20.35	I	C	SP	P
FRF	86.214	332.55	4.90	20.09	I	C	SP	P
RJF	86.236	336.63	4.90	20.09	I	C	SP	P
HLW	86.251	308.54	4.86	19.92	I	C	LP	P
CVF	86.325	330.64	4.86	19.92	I	C	SP	P
LRG	86.403	332.69	4.86	19.92	I	C	SP	P

Table 100. Station data for event 119....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
CDR	86.402	333.17	4.86	19.92	I	C	SP	P
CAF	86.422	336.11	4.86	19.92	I	C	SP	P
SCP	86.446	32.71	4.86	19.92	I	C	LP	P
LMR	86.461	332.53	4.86	19.92	I	C	SP	P
MRG	86.595	34.68	4.86	19.92	I	D	SP	P
LFF	86.795	336.98	4.83	19.79	I	C	SP	P
LPO	86.899	336.59	4.83	19.79	I	C	SP	P
RSCP	87.451	40.65	4.80	19.66	I	C	LP	P
SNZO	88.220	159.77	4.77	19.53	I	N	LP	P
GEO	88.387	33.15	4.75	19.45	E	C	LP	P
BLA	88.442	36.29	4.75	19.45	I	C	SP	P
MLS	88.508	335.96	4.75	19.45	I	C	SP	P
EPF	88.658	336.49	4.75	19.45	I	C	SP	P
LGR	89.981	338.21	4.71	19.28	I	C	SP	P
SHA	90.147	45.26	4.71	19.28	E	C	LP	P
ATA	92.170	287.99	4.67	19.11	I	C	LP	P
ARO	92.368	288.29	4.66	19.07	I	C	LP	P
SGH	92.577	288.38	4.66	19.07	I	C	LP	P
TOL	92.801	338.39	4.64	18.98	I	C	LP	P
TOL	92.801	338.39	4.64	18.98	I	C	SP	P
GBR	92.898	288.30	4.64	18.98	I	C	LP	P
ALM	95.183	336.14	4.58	18.73	I	D	SP	P
BEC	98.714	27.04	4.49	18.35	E	C	LP	P
TRN	119.805	33.08	1.87	7.55	E	C	LP	PKP
KSR	129.074	270.10	1.86	7.47	I	C	SP	PKP
ROCH	148.267	83.20	1.62	6.50	I	D	SP	PKP
PEL	148.590	83.21	1.59	6.39	I	C	SP	PKP
TACH	148.667	84.25	1.59	6.39	I	C	SP	PKP
PCH	148.956	83.85	1.59	6.39	I	C	SP	PKP

Table 101. Station data for event 131

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MAT	22.335	231.43	9.84	43.72	I	C	SP	P
CN2	24.412	261.94	9.53	42.02	I	C	SP	P
IMA	26.261	41.95	9.33	40.95	I	C	SP	P
SHK	26.656	237.21	9.33	40.95	I	C	SP	P
SEO	27.484	249.24	9.23	40.42	E	C	LP	P
COL	28.644	44.80	9.10	39.73	E	C	LP	P
INK	34.099	37.54	8.62	37.26	I	C	SP	P
ANP	39.914	241.16	8.26	35.46	I	C	LP	P
TATO	40.097	241.01	8.26	35.46	I	C	LP	P
GUMO	41.024	202.53	8.21	35.22	I	C	LP	P
GUA	41.061	202.45	8.21	35.22	E	C	LP	P
LZH	42.198	269.54	8.15	34.92	I	C	LP	P
GTA	42.487	276.36	8.13	34.82	I	C	SP	P
WMQ	46.894	289.29	7.87	33.56	I	C	SP	P
BAG	47.683	235.26	7.84	33.41	I	C	LP	P
LON	48.545	63.97	7.78	33.13	E	C	LP	P
EDM	48.984	52.73	7.74	32.93	I	C	SP	P
COR	49.061	67.10	7.74	32.93	I	C	SP	P
COR	49.061	67.10	7.74	32.93	E	C	LP	P
DAG	50.575	359.59	7.62	32.36	I	C	SP	P
RXF	50.775	58.13	7.58	32.17	I	C	SP	P
LDM	50.934	58.65	7.58	32.17	I	C	SP	P
LHD	50.933	58.98	7.58	32.17	I	C	SP	P
CLX	51.184	58.80	7.58	32.17	I	C	SP	P
KEV	52.932	341.35	7.41	31.37	I	C	LP	P
FFC	53.246	45.79	7.41	31.37	I	C	SP	P
DAV	53.558	224.02	7.37	31.18	I	C	LP	P
FCC	53.703	38.42	7.37	31.18	I	C	SP	P
FRB	57.720	23.17	7.07	29.78	I	C	SP	P
CHG	57.732	258.23	7.07	29.78	I	C	LP	P
SUF	59.099	337.15	6.96	29.27	I	C	SP	P
KKN	59.222	276.23	6.96	29.27	I	C	SP	P
PKI	59.304	275.96	6.92	29.08	I	C	SP	P
DMN	59.459	276.22	6.92	29.08	I	C	SP	P
RSON	59.537	44.85	6.92	29.08	I	C	LP	P
PCT	59.535	253.10	6.92	29.08	I	C	SP	P
RSSD	59.621	56.12	6.92	29.08	I	C	LP	P
NUR	61.380	336.60	6.76	28.35	I	C	SP	P
AKU	61.711	359.04	6.76	28.35	I	C	SP	P
GOL	62.130	60.43	6.72	28.17	E	C	LP	P
PMG	63.030	194.09	6.64	27.80	I	C	SP	P
NDI	63.377	282.89	6.59	27.57	I	C	SP	P
UPP	63.543	339.80	6.59	27.57	I	C	SP	P
ANMO	65.051	64.72	6.47	27.03	I	C	LP	P
BER	65.212	346.39	6.47	27.03	E	C	LP	P
KON	65.253	343.89	6.43	26.85	E	C	LP	P
KONO	65.253	343.89	6.43	26.85	I	C	LP	P
SNG	66.046	248.92	6.39	26.67	I	C	LP	P
MKS	67.209	224.42	6.30	26.26	I	C	SP	P
MHI	67.599	300.73	6.26	26.09	I	C	LP	P

Table 101. Station data for event 131....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
QUE	68.188	291.34	6.22	25.91	I	C	SP	P
COP	68.473	340.86	6.18	25.73	I	C	SP	P
COP	68.473	340.86	6.18	25.73	I	C	LP	P
KHI	69.701	299.83	6.10	25.37	I	C	LP	P
TUL	69.947	56.85	6.07	25.24	I	C	LP	P
RLO	70.135	56.17	6.07	25.24	I	C	SP	P
GBO	70.300	56.48	6.03	25.06	I	C	SP	P
PSI	70.672	247.71	6.03	25.06	I	C	SP	P
PVC	70.747	171.46	6.03	25.06	I	C	SP	P
GAC	70.949	37.58	5.99	24.88	I	C	LP	P
ESK	71.222	349.87	5.99	24.88	I	C	SP	P
BRL	71.310	339.16	5.96	24.75	I	C	SP	P
BRN	71.378	339.19	5.96	24.75	I	C	SP	P
MNT	71.798	36.51	5.92	24.57	I	C	SP	P
KRA	71.950	334.12	5.92	24.57	I	C	SP	P
JCT	72.072	63.21	5.92	24.57	E	C	LP	P
KSP	72.145	336.69	5.92	24.57	I	C	SP	P
WIT	72.275	343.29	5.88	24.39	I	C	SP	P
RSNY	72.285	37.61	5.88	24.39	I	C	LP	P
TRT	72.450	229.73	5.88	24.39	I	C	SP	P
CLL	72.462	338.90	5.88	24.39	I	C	SP	P
SPC	72.661	333.55	5.88	24.39	I	C	SP	P
BRG	72.662	338.16	5.88	24.39	I	C	SP	P
TAB	72.672	310.70	5.88	24.39	E	C	LP	P
CLI	72.950	327.88	5.85	24.26	I	C	SP	P
WTS	73.035	342.96	5.85	24.26	I	C	SP	P
JOS	73.213	333.07	5.85	24.26	I	C	SP	P
KOU	73.274	175.67	5.81	24.09	I	C	SP	P
PRU	73.354	337.45	5.81	24.09	I	C	SP	P
MOX	73.385	339.53	5.81	24.09	I	C	LP	P
HOF	73.643	339.25	5.81	24.09	I	C	SP	P
CTA	73.657	193.32	5.81	24.09	I	C	LP	P
CTAO	73.657	193.32	5.81	24.09	I	C	LP	P
PSZ	73.916	333.23	5.78	23.95	I	C	SP	P
CVO	73.952	328.25	5.78	23.95	I	C	SP	P
BNS	73.959	342.42	5.78	23.95	I	C	SP	P
ETA	74.110	351.24	5.78	23.95	I	C	SP	P
SCP	74.189	41.85	5.78	23.95	E	C	LP	P
MLR	74.320	328.24	5.74	23.78	I	C	SP	P
KHC	74.378	337.75	5.74	23.78	I	C	SP	P
ENN	74.372	343.16	5.74	23.78	I	C	SP	P
GRFO	74.372	339.45	5.74	23.78	I	C	SP	P
GRFO	74.372	339.45	5.74	23.78	E	C	LP	P
TNS	74.428	341.39	5.74	23.78	I	C	SP	P
ECB	74.488	351.54	5.74	23.78	I	C	SP	P
WET	74.524	338.20	5.74	23.78	I	C	SP	P
VKA	74.531	335.67	5.74	23.78	I	C	SP	P
BUD	74.551	333.61	5.74	23.78	I	C	SP	P
UCC	74.608	344.16	5.74	23.78	I	C	LP	P
ECP	74.635	351.25	5.74	23.78	I	C	SP	P

Table 101. Station data for event 131....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
DEV	74.907	330.40	5.71	23.65	I	C	SP	P
COZ	74.976	329.21	5.71	23.65	I	C	SP	P
NOU	75.132	173.68	5.71	23.65	I	C	SP	P
RSCP	75.159	50.07	5.71	23.65	I	C	LP	P
DOU	75.248	343.82	5.71	23.65	I	C	LP	P
KMR	75.257	337.00	5.68	23.51	E	C	LP	P
BUC1	75.313	327.65	5.68	23.51	I	C	SP	P
WES	75.328	36.64	5.68	23.51	E	C	LP	P
TIM	75.535	331.44	5.68	23.51	I	C	SP	P
STU	75.665	340.45	5.68	23.51	E	C	LP	P
CLO	75.670	330.11	5.68	23.51	I	C	SP	P
FUR	75.803	338.90	5.64	23.34	I	C	SP	P
WB2	75.864	204.69	5.64	23.34	I	C	SP	P
BHG	75.863	337.70	5.64	23.34	I	C	SP	P
BUH	75.950	341.05	5.64	23.34	I	C	SP	P
BLA	76.139	45.58	5.64	23.34	E	C	LP	P
BLA	76.139	45.58	5.64	23.34	I	C	SP	P
KBA	76.360	337.17	5.61	23.21	I	C	SP	P
CDF	76.386	341.60	5.61	23.21	I	C	SP	P
GAP	76.501	338.81	5.61	23.21	I	C	SP	P
PVL	76.664	327.67	5.61	23.21	I	C	SP	P
SLE	76.766	340.60	5.58	23.08	I	C	LP	P
ANTO	76.864	320.90	5.58	23.08	I	C	LP	P
ANTO	76.864	320.90	5.58	23.08	I	C	SP	P
HAU	76.952	342.09	5.58	23.08	I	C	SP	P
BSF	77.035	341.75	5.58	23.08	I	C	SP	P
LJU	77.044	336.00	5.58	23.08	I	C	SP	P
ZUL	77.059	340.58	5.58	23.08	I	C	LP	P
OGA	77.087	338.63	5.58	23.08	I	C	SP	P
KOD	77.329	270.18	5.55	22.94	I	C	SP	P
FLN	77.325	346.81	5.55	22.94	I	C	SP	P
CEY	77.355	335.97	5.55	22.94	I	C	SP	P
GPA	77.426	322.82	5.55	22.94	I	C	SP	P
LDF	77.440	346.53	5.55	22.94	I	C	SP	P
LLS	77.519	339.99	5.55	22.94	I	C	LP	P
TRI	77.545	336.40	5.55	22.94	I	C	SP	P
GRR	77.743	346.98	5.55	22.94	I	C	SP	P
VTS	77.785	328.76	5.52	22.81	I	C	SP	P
SHA	77.946	54.76	5.52	22.81	E	C	LP	P
KDZ	77.956	326.87	5.52	22.81	I	C	SP	P
LOR	78.108	343.55	5.52	22.81	I	C	SP	P
LPF	78.118	347.03	5.52	22.81	I	C	SP	P
TMA	78.273	339.84	5.48	22.64	I	C	LP	P
LBF	78.363	343.40	5.48	22.64	I	C	SP	P
SSF	78.369	343.74	5.48	22.64	I	C	SP	P
MMK	78.512	340.44	5.48	22.64	I	C	LP	P
ALT	78.583	322.35	5.48	22.64	I	C	SP	P
DIX	78.595	340.82	5.48	22.64	I	C	LP	P
AVF	78.658	343.78	5.48	22.64	I	C	SP	P
SMF	78.715	343.41	5.48	22.64	I	C	SP	P

Table 101. Station data for event 131....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SKO	78.901	329.71	5.45	22.51	I	C	SP	P
VAY	79.142	328.65	5.45	22.51	I	C	SP	P
EZN	79.251	325.37	5.41	22.33	I	C	SP	P
TCF	79.335	344.43	5.41	22.33	I	C	SP	P
MZF	79.344	344.16	5.41	22.33	I	C	SP	P
MFF	79.391	346.12	5.41	22.33	I	C	SP	P
LSF	79.481	344.89	5.41	22.33	I	C	SP	P
ASPA	79.544	204.09	5.41	22.33	I	C	SP	P
FIR	79.961	337.46	5.36	22.12	I	C	SP	P
RJF	80.404	344.68	5.30	21.86	I	C	SP	P
ELL	80.688	321.39	5.30	21.86	I	C	SP	P
CAF	80.684	344.21	5.30	21.86	I	C	SP	P
LFF	80.886	345.14	5.26	21.68	I	C	SP	P
YER	80.951	322.74	5.26	21.68	I	C	SP	P
LPO	81.062	344.77	5.26	21.68	I	C	SP	P
FRF	81.166	340.63	5.26	21.68	I	C	SP	P
LRG	81.325	340.81	5.21	21.47	I	C	SP	P
LMR	81.412	340.67	5.21	21.47	I	C	SP	P
CVF	81.651	338.77	5.21	21.47	I	C	SP	P
EPF	82.808	345.01	5.11	21.03	I	C	SP	P
LGR	83.786	346.96	5.05	20.78	I	C	SP	P
WBN	83.899	209.74	5.05	20.78	I	C	SP	P
NAU	84.442	220.50	5.02	20.65	I	C	SP	P
PTO	85.786	351.29	4.90	20.13	I	C	LP	P
TOL	86.525	347.66	4.86	19.96	I	C	LP	P
BEC	86.619	36.48	4.86	19.96	E	C	LP	P
MEK	86.987	216.29	4.83	19.83	I	C	SP	P
CAN	88.383	188.87	4.75	19.49	I	C	SP	P
WAM	89.258	188.86	4.71	19.32	I	C	SP	P
MAL	89.678	347.42	4.71	19.32	I	C	LP	P
NWAO	93.201	214.78	4.64	19.02	E	C	LP	P
SNZO	94.730	168.83	4.60	18.85	E	C	LP	P
BOG	106.958	57.38	1.89	7.63	I	C	LP	PKP
BNG	114.208	316.90	1.88	7.60	I	C	SP	PKP
MTD	125.986	291.66	1.86	7.52	I	C	SP	PKP
KRI	127.126	293.53	1.86	7.51	I	C	SP	PKP
BLF	138.676	286.54	1.78	7.19	I	C	SP	PKP
CER	145.785	289.01	1.66	6.71	I	C	SP	PKP
TUH	145.820	289.24	1.66	6.71	I	C	SP	PKP

Table 102. Station data for event 132

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
NEM	9.210	232.46	13.75	76.48	E	C	LP	P
YAM	15.634	230.23	12.81	64.93	E	C	LP	P
MDJ	18.333	264.75	12.22	59.78	I	C	LP	P
MDJ	18.333	264.75	12.22	59.78	I	C	SP	P
OSK	20.840	232.26	10.13	45.75	E	C	LP	P
OSA	20.860	232.63	10.13	45.75	E	C	LP	P
SHK	22.492	237.21	9.82	43.98	I	C	SP	P
SEO	23.760	250.95	9.58	42.64	I	C	LP	P
KAG	25.894	235.85	9.36	41.44	E	C	LP	P
BJI	29.246	266.42	9.02	39.63	I	C	SP	P
IMA	30.684	38.23	8.85	38.74	I	C	SP	P
TIA	30.808	259.29	8.81	38.53	I	C	SP	P
KDC	31.219	54.52	8.81	38.53	I	C	SP	P
SSE	31.638	247.57	8.78	38.38	E	C	LP	P
HHC	31.839	271.38	8.74	38.17	I	C	SP	P
TIY	32.962	265.77	8.67	37.81	I	C	SP	P
COL	33.052	40.77	8.67	37.81	I	C	SP	P
COL	33.052	40.77	8.67	37.81	I	C	LP	P
FBA	33.052	40.77	8.67	37.81	I	C	SP	P
ANP	35.848	240.12	8.49	36.89	I	C	LP	P
TATO	36.026	239.93	8.49	36.89	I	C	LP	P
WHN	36.241	254.21	8.49	36.89	I	C	SP	P
GUMO	36.792	197.60	8.44	36.64	I	C	LP	P
GUA	36.831	197.52	8.44	36.64	I	C	LP	P
INK	38.527	34.37	8.34	36.14	I	C	SP	P
LZH	39.511	270.31	8.29	35.89	I	C	SP	P
GTA	40.246	277.40	8.26	35.74	I	C	SP	P
GZH	42.235	247.12	8.15	35.19	I	C	SP	P
BAG	43.447	233.22	8.07	34.80	I	C	LP	P
WMQ	45.556	290.03	7.96	34.25	I	C	SP	P
KMI	47.377	259.14	7.84	33.67	I	C	SP	P
DAV	49.148	221.04	7.73	33.13	I	C	LP	P
LON	52.581	59.16	7.45	31.79	I	C	LP	P
COR	52.994	62.14	7.41	31.60	I	C	LP	P
EDM	53.292	48.59	7.37	31.41	I	C	SP	P
RAB	53.458	184.26	7.37	31.41	I	C	LP	P
CHG	54.353	256.85	7.29	31.03	I	C	LP	P
RXF	54.970	53.75	7.25	30.84	I	C	SP	P
LHD	55.107	54.55	7.25	30.84	I	C	SP	P
CLX	55.363	54.39	7.21	30.65	I	C	SP	P
KEV	55.396	340.70	7.21	30.65	I	C	LP	P
BDT	55.480	255.53	7.21	30.65	I	C	SP	P
SES	56.136	50.31	7.17	30.46	I	C	SP	P
FCC	58.132	35.14	7.03	29.81	I	C	SP	P
HNR	58.705	174.98	6.99	29.62	I	C	LP	P
PMG	59.026	189.73	6.95	29.44	E	C	LP	P
NDI	61.508	281.68	6.75	28.51	I	C	SP	P
FRB	61.990	20.54	6.71	28.33	I	C	SP	P
SNG	62.233	246.70	6.71	28.33	I	C	LP	P
KBL	62.635	291.89	6.67	28.14	I	C	SP	P

Table 102. Station data for event 132....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PAS	62.699	68.64	6.67	28.14	I	C	SP	P
NUR	63.509	335.32	6.59	27.77	I	C	LP	P
RSSD	63.859	52.12	6.55	27.59	I	C	LP	P
RSON	63.942	41.30	6.55	27.59	I	C	LP	P
GOL	66.261	56.35	6.34	26.64	I	C	LP	P
PSI	66.807	245.24	6.30	26.45	I	C	SP	P
QUE	66.917	289.78	6.30	26.45	I	C	LP	P
MHI	67.041	299.26	6.30	26.45	I	C	LP	P
PVC	67.785	166.91	6.22	26.09	I	C	SP	P
KON	67.844	342.14	6.22	26.09	I	C	LP	P
KONO	67.844	342.14	6.22	26.09	I	C	LP	P
BER	67.955	344.59	6.22	26.09	I	C	LP	P
TRT	68.102	226.72	6.22	26.09	I	C	SP	P
ANMO	69.051	60.60	6.14	25.73	I	C	SP	P
ANMO	69.051	60.60	6.14	25.73	I	C	LP	P
AFI	69.301	145.97	6.10	25.55	I	N	LP	P
CTA	69.672	189.37	6.10	25.55	I	C	LP	P
CTAO	69.672	189.37	6.10	25.55	I	C	LP	P
POO	70.847	276.28	5.99	25.06	I	C	SP	P
COP	70.865	338.94	5.99	25.06	I	C	SP	P
COP	70.865	338.94	5.99	25.06	I	C	LP	P
ISQ	71.245	195.86	5.99	25.06	I	C	SP	P
WB2	71.573	201.06	5.95	24.88	I	C	SP	P
NOU	72.036	169.44	5.92	24.75	I	C	SP	P
IR7	72.405	304.43	5.88	24.57	I	C	SP	P
TAB	72.865	308.77	5.85	24.44	I	C	LP	P
HAM	73.486	339.41	5.81	24.26	I	C	SP	P
BRN	73.653	337.08	5.81	24.26	I	C	SP	P
KRA	73.882	332.03	5.78	24.12	I	C	SP	P
ESK	74.157	347.59	5.78	24.12	I	C	LP	P
TUL	74.166	53.11	5.78	24.12	I	C	LP	P
KSP	74.252	334.56	5.74	23.95	I	C	SP	P
RLO	74.368	52.44	5.74	23.95	I	C	SP	P
CLI	74.437	325.80	5.74	23.95	I	C	SP	P
GBO	74.527	52.75	5.74	23.95	I	C	SP	P
SPC	74.551	331.42	5.74	23.95	I	C	SP	P
CLL	74.715	336.72	5.74	23.95	I	C	SP	P
BRG	74.866	335.97	5.71	23.81	I	C	SP	P
JOS	75.068	330.90	5.71	23.81	I	C	SP	P
ASPA	75.265	200.52	5.67	23.64	I	C	SP	P
GAC	75.377	34.30	5.67	23.64	I	C	LP	P
CVO	75.462	326.08	5.67	23.64	I	C	SP	P
UTO	75.492	41.66	5.67	23.64	I	C	SP	P
PRU	75.509	335.22	5.67	23.64	I	C	SP	P
MOX	75.678	337.27	5.67	23.64	I	C	LP	P
PSZ	75.780	331.01	5.64	23.50	I	C	SP	P
DBN	75.794	341.69	5.64	23.50	I	C	LP	P
MLR	75.828	326.04	5.64	23.50	I	C	SP	P
HOF	75.917	336.98	5.64	23.50	I	C	SP	P
JCT	76.116	59.39	5.64	23.50	I	C	LP	P

Table 102. Station data for event 132....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MNT	76.223	33.26	5.64	23.50	I	C	SP	P
SRO	76.368	331.93	5.61	23.37	I	C	SP	P
BNS	76.437	340.08	5.61	23.37	I	C	SP	P
BUD	76.440	331.34	5.61	23.37	I	C	SP	P
COZ	76.553	326.95	5.61	23.37	I	C	SP	P
KHC	76.551	335.44	5.61	23.37	I	C	SP	P
VKA	76.562	333.37	5.61	23.37	I	C	SP	P
DEV	76.570	328.14	5.61	23.37	I	C	SP	P
GRFO	76.657	337.13	5.61	23.37	I	C	LP	P
RSNY	76.713	34.33	5.61	23.37	I	C	LP	P
WET	76.726	335.88	5.61	23.37	I	C	SP	P
BUC1	76.776	325.38	5.58	23.24	I	C	SP	P
TNS	76.839	339.03	5.58	23.24	I	C	SP	P
ETA	77.118	348.76	5.58	23.24	I	C	SP	P
UCC	77.195	341.75	5.58	23.24	E	C	LP	P
CLO	77.309	327.79	5.55	23.11	I	C	SP	P
KMR	77.376	334.64	5.55	23.11	I	C	LP	P
ECB	77.513	349.04	5.55	23.11	I	C	SP	P
ECP	77.643	348.75	5.55	23.11	I	C	SP	P
INY	77.767	36.70	5.51	22.93	I	C	SP	P
DOU	77.812	341.37	5.51	22.93	I	C	LP	P
ANTO	77.823	318.56	5.51	22.93	I	C	SP	P
ANTO	77.823	318.56	5.51	22.93	I	C	LP	P
SSR	77.859	328.36	5.51	22.93	I	C	SP	P
WLF	77.885	340.25	5.51	22.93	E	C	LP	P
STU	78.013	338.02	5.51	22.93	I	C	LP	P
BHG	78.029	335.29	5.51	22.93	I	C	SP	P
FUR	78.049	336.48	5.51	22.93	I	C	SP	P
PVL	78.125	325.30	5.51	22.93	I	C	SP	P
GWF	78.197	339.09	5.51	22.93	I	C	SP	P
VAL	78.323	351.11	5.48	22.80	I	C	LP	P
BUH	78.336	338.60	5.48	22.80	I	C	SP	P
GPA	78.527	320.42	5.48	22.80	I	C	SP	P
SCP	78.612	38.49	5.48	22.80	I	C	LP	P
CDF	78.807	339.10	5.44	22.62	I	C	SP	P
ECH	79.018	339.11	5.44	22.62	I	C	SP	P
SLE	79.121	338.09	5.44	22.62	I	C	LP	P
OGA	79.312	336.12	5.41	22.49	I	C	SP	P
VTS	79.322	326.30	5.41	22.49	I	C	SP	P
KDZ	79.354	324.40	5.41	22.49	I	C	SP	P
CEY	79.400	333.47	5.41	22.49	I	C	SP	P
HAU	79.403	339.56	5.41	22.49	I	C	SP	P
ZUL	79.412	338.05	5.41	22.49	I	C	LP	P
BAF	79.414	339.08	5.41	22.49	I	C	SP	P
BSF	79.464	339.21	5.41	22.49	I	C	SP	P
RSCP	79.505	46.57	5.41	22.49	I	C	LP	P
TRI	79.619	333.88	5.41	22.49	I	C	SP	P
WES	79.753	33.37	5.35	22.23	I	C	LP	P
LLS	79.833	337.44	5.35	22.23	I	C	LP	P
NAU	80.015	217.21	5.35	22.23	I	C	SP	P

Table 102. Station data for event 132....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
FLN	80.069	344.20	5.35	22.23	I	C	SP	P
LDF	80.167	343.92	5.35	22.23	I	C	SP	P
GRR	80.497	344.34	5.30	22.01	I	C	SP	P
SKO	80.503	327.15	5.30	22.01	I	C	SP	P
BLA	80.538	42.16	5.30	22.01	I	C	LP	P
EZN	80.536	322.81	5.30	22.01	I	C	SP	P
TMA	80.575	337.24	5.30	22.01	I	C	LP	P
LOR	80.650	340.93	5.30	22.01	I	C	SP	P
VAY	80.667	326.08	5.30	22.01	I	C	SP	P
MMK	80.852	337.81	5.25	21.79	I	C	LP	P
LPF	80.873	344.36	5.25	21.79	I	C	SP	P
LBF	80.894	340.76	5.25	21.79	I	C	SP	P
SSF	80.922	341.09	5.25	21.79	I	C	SP	P
DIX	80.961	338.19	5.25	21.79	I	C	LP	P
AVF	81.212	341.11	5.25	21.79	I	C	SP	P
SMF	81.246	340.74	5.25	21.79	I	C	SP	P
IZM	81.382	321.44	5.21	21.62	I	C	SP	P
OHR	81.488	327.17	5.21	21.62	I	C	SP	P
ELL	81.672	318.75	5.21	21.62	I	C	SP	P
TCF	81.929	341.72	5.17	21.44	I	C	SP	P
MZF	81.921	341.44	5.17	21.44	I	C	LP	P
YER	82.036	320.08	5.17	21.44	I	C	SP	P
MFF	82.089	343.38	5.17	21.44	I	C	SP	P
LSF	82.103	342.16	5.17	21.44	I	C	SP	P
FIR	82.101	334.77	5.17	21.44	I	C	SP	P
SHA	82.208	51.24	5.17	21.44	I	C	LP	P
MEK	82.563	212.96	5.14	21.31	I	C	SP	P
RJF	83.012	341.90	5.11	21.18	I	C	SP	P
ATH	83.158	323.66	5.11	21.18	I	C	SP	P
CAF	83.261	341.41	5.08	21.05	I	C	SP	P
FRF	83.514	337.83	5.08	21.05	I	C	SP	P
LFF	83.521	342.32	5.08	21.05	I	C	SP	P
YOU	83.554	186.01	5.08	21.05	I	C	SP	P
LPO	83.674	341.94	5.08	21.05	I	C	SP	P
LRG	83.684	337.99	5.08	21.05	I	C	SP	P
LMR	83.761	337.85	5.05	20.92	I	C	SP	P
CVF	83.874	335.95	5.05	20.92	I	C	SP	P
KLG	85.424	208.99	4.96	20.53	I	C	SP	P
HLW	86.818	314.02	4.82	19.93	I	C	LP	P
KLB	87.386	211.61	4.80	19.84	I	C	SP	P
PTO	88.777	348.13	4.73	19.54	I	C	LP	P
NWAO	88.784	211.48	4.73	19.54	I	C	LP	P
TOL	89.303	344.48	4.71	19.45	I	C	LP	P
ALI	90.098	341.42	4.71	19.45	I	D	LP	P
BEC	91.044	33.18	4.69	19.37	I	C	LP	P
SNZO	91.880	165.72	4.67	19.28	I	C	LP	P
TAU	92.212	186.08	4.67	19.28	E	C	LP	P
ARO	95.585	294.75	4.56	18.81	I	C	LP	P
SJG	103.274	40.60	4.45	18.34	I	C	LP	Pdf
BOG	111.152	54.56	1.89	7.68	E	C	LP	PKP

Table 102. Station data for event 132....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SUR	142.458	279.76	1.74	7.06	I	C	SP	PKP
CER	144.066	279.88	1.70	6.92	I	C	SP	PKP
LPA	151.502	72.10	1.50	6.07	I	C	LP	PKP

Table 103. Station data for event 135

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
NEM	1.838	239.22	13.10	108.39	I	C	LP	P
ABJ	2.511	264.96	13.53	101.46	I	D	SP	P
KUS	2.767	242.88	13.62	99.41	I	C	LP	P
LZH	34.192	271.53	8.58	38.44	I	C	LP	P
COL	40.408	36.43	8.22	36.53	I	C	SP	P
CGP	40.942	216.25	8.19	36.42	I	D	SP	P
WMQ	42.305	291.26	8.12	36.04	I	C	SP	P
INK	45.734	30.64	7.93	35.05	I	C	SP	P
KEV	58.368	339.43	6.98	30.39	E	C	LP	P
KBL	59.418	289.89	6.90	29.98	I	C	SP	P
PNT	59.701	49.22	6.88	29.88	I	C	SP	P
EDM	60.717	42.94	6.79	29.49	I	C	SP	P
RXF	62.377	47.70	6.66	28.86	I	C	SP	P
LHD	62.506	48.44	6.65	28.81	I	C	SP	P
LDM	62.518	48.16	6.65	28.80	I	C	SP	P
CLX	62.763	48.30	6.63	28.71	I	C	SP	P
WDC	63.025	58.73	6.61	28.61	I	C	SP	P
FCC	65.346	30.37	6.42	27.74	I	C	SP	P
LRM	65.678	49.14	6.40	27.61	I	C	SP	P
MNA	67.019	58.32	6.28	27.06	I	C	SP	P
FRB	68.548	16.43	6.16	26.50	I	C	SP	P
BDW	69.225	50.21	6.10	26.24	I	C	SP	P
SBB	69.605	61.23	6.07	26.11	I	C	SP	P
IR7	70.638	301.12	6.00	25.77	I	C	SP	P
KONO	70.874	338.98	5.98	25.68	E	C	LP	P
RSSD	71.277	46.25	5.96	25.56	E	C	LP	P
NAU	72.761	211.10	5.85	25.07	I	D	SP	P
COP	73.490	335.45	5.80	24.85	I	C	SP	P
KRA	75.635	328.28	5.65	24.18	I	C	SP	P
BRN	76.031	333.27	5.63	24.07	I	C	SP	P
VRI	76.168	321.93	5.62	24.03	I	C	SP	P
KSP	76.317	330.72	5.61	23.99	I	C	SP	P
CVO	76.448	322.20	5.60	23.95	I	D	SP	P
JOS	76.669	327.01	5.59	23.89	I	C	SP	P
CLL	77.041	332.78	5.57	23.79	I	C	SP	P
BRG	77.099	332.02	5.56	23.77	I	C	SP	P
CMP	77.379	322.49	5.54	23.66	I	C	SP	P
PRU	77.645	331.21	5.52	23.58	I	C	SP	P
COZ	77.641	322.92	5.52	23.58	I	D	SP	P
ANTO	77.821	314.45	5.51	23.54	E	C	LP	P
GZR	78.254	323.86	5.49	23.42	I	C	SP	P
HOF	78.265	332.87	5.49	23.42	I	C	SP	P
WET	78.933	331.69	5.44	23.20	I	C	SP	P
PVL	78.988	321.07	5.43	23.18	I	C	SP	P
GRF	79.016	332.92	5.43	23.17	I	C	SP	P
KMR	79.426	330.39	5.40	23.03	I	C	LP	P
STB	79.583	335.88	5.38	22.95	I	D	SP	P
DMU	79.825	345.09	5.35	22.81	I	C	SP	P
DDK	80.204	344.60	5.31	22.62	I	C	SP	P
VTS	80.303	321.90	5.30	22.58	I	C	SP	P

Table 103. Station data for event 135....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
FUR	80.319	332.11	5.30	22.57	I	C	SP	P
DLE	80.338	344.68	5.30	22.57	I	C	SP	P
DCN	80.421	345.12	5.29	22.53	I	D	SP	P
OGA	81.528	331.60	5.20	22.13	I	C	SP	P
TUL	81.577	47.29	5.19	22.11	I	C	SP	P
SKO	81.583	322.59	5.19	22.11	I	C	SP	P
ECH	81.601	334.58	5.19	22.10	I	C	SP	P
RLO	81.785	46.64	5.18	22.03	I	C	SP	P
GBO	81.941	46.94	5.16	21.98	I	C	SP	P
BAF	81.990	334.50	5.16	21.96	I	C	SP	P
LOR	83.439	336.17	5.07	21.57	I	C	SP	P
LBF	83.661	335.97	5.06	21.51	I	C	SP	P
GRR	83.689	339.55	5.06	21.50	I	C	SP	P
SSF	83.728	336.30	5.06	21.49	I	C	SP	P
SMF	84.008	335.91	5.04	21.42	I	C	SP	P
AVF	84.018	336.28	5.04	21.42	I	C	SP	P
LPF	84.065	339.53	5.04	21.40	I	C	SP	P
MZF	84.762	336.53	4.99	21.19	I	C	SP	P
TCF	84.803	336.79	4.99	21.17	I	C	SP	P
LSF	85.028	337.21	4.97	21.10	I	C	SP	P
MFF	85.158	338.42	4.96	21.06	I	C	SP	P
EPF	88.321	336.72	4.75	20.12	I	C	SP	P
ROCH	147.955	82.73	1.61	6.72	I	C	SP	PKP
PEL	148.278	82.73	1.61	6.68	I	C	SP	PKP

Table 104. Station data for event 144

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MAT	15.035	234.72	12.97	49.56	I	C	LP	P
SHK	19.669	240.47	10.61	38.50	I	C	LP	P
NGS	22.604	241.33	9.86	35.35	E	C	LP	P
BJI	27.713	270.40	9.24	32.83	I	C	SP	P
SSE	29.180	249.94	9.04	32.04	E	C	LP	P
NJ2	30.110	253.99	8.91	31.52	I	C	SP	P
HHC	30.561	274.96	8.86	31.32	I	C	SP	P
TIY	31.374	268.93	8.79	31.05	I	C	SP	P
ANP	33.091	241.39	8.68	30.62	I	C	LP	P
TATO	33.263	241.17	8.65	30.50	I	C	LP	P
GUMO	33.451	195.27	8.65	30.50	I	N	LP	P
XAN	35.721	265.97	8.53	30.03	I	C	SP	P
COL	36.333	37.99	8.47	29.80	I	C	LP	P
FBA	36.333	37.99	8.47	29.80	I	C	SP	P
GTA	39.269	279.70	8.30	29.14	I	C	SP	P
GZH	39.732	248.15	8.30	29.14	I	C	SP	P
BAG	40.460	233.40	8.24	28.91	I	C	LP	P
CD2	41.085	265.90	8.21	28.80	I	C	SP	P
INK	41.876	32.22	8.16	28.61	I	C	SP	P
MBC	44.896	19.80	7.99	27.96	I	C	SP	P
KMI	45.404	260.17	7.97	27.88	I	C	LP	P
DAV	45.886	220.27	7.94	27.77	I	C	LP	P
HON	46.503	105.58	7.91	27.65	E	D	LP	P
LSA	50.534	273.69	7.62	26.56	I	C	SP	P
CHG	52.257	257.24	7.46	25.96	I	C	SP	P
SHL	52.599	269.07	7.46	25.96	I	C	LP	P
BDT	53.321	255.81	7.38	25.66	I	C	SP	P
KSH	55.057	292.77	7.26	25.21	I	C	SP	P
LON	55.437	56.26	7.22	25.06	E	N	LP	P
KKN	55.762	275.81	7.18	24.92	I	C	SP	P
PKI	55.811	275.51	7.18	24.92	I	C	SP	P
DMN	55.996	275.75	7.18	24.92	I	C	SP	P
EDM	56.427	46.11	7.15	24.81	I	C	SP	P
KEV	57.803	340.67	7.04	24.40	I	C	LP	P
RXF	57.980	51.14	7.04	24.40	I	C	SP	P
LDM	58.114	51.62	7.04	24.40	I	C	SP	P
CLX	58.356	51.77	7.00	24.25	I	C	SP	P
SNG	59.687	246.35	6.92	23.96	I	C	LP	P
NDI	60.716	281.91	6.84	23.66	I	C	SP	P
FFC	60.899	39.99	6.80	23.52	I	C	SP	P
JAS	61.395	63.96	6.76	23.37	E	N	LP	P
KJF	61.876	336.24	6.72	23.22	I	C	LP	P
GDH	63.010	10.46	6.64	22.93	I	C	LP	P
NUR	65.675	334.96	6.44	22.20	I	C	LP	P
CTAO	66.438	187.38	6.35	21.88	E	N	LP	P
LEM	66.790	230.81	6.31	21.73	E	C	LP	P
RSSD	66.907	49.86	6.31	21.73	I	C	LP	P
RSON	67.209	39.32	6.31	21.73	I	C	LP	P
HYB	67.244	271.66	6.31	21.73	I	C	SP	P
MHI	67.268	299.09	6.27	21.59	I	C	LP	P

Table 104. Station data for event 144....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
WB2	68.205	199.36	6.23	21.44	I	C	SP	P
GOL	69.193	54.07	6.15	21.15	I	C	LP	P
POO	69.731	275.83	6.11	21.01	I	C	SP	P
KONO	70.296	341.45	6.03	20.72	I	C	LP	P
IR2	72.786	303.68	5.85	20.08	I	C	SP	P
KOD	72.999	267.02	5.85	20.08	I	C	SP	P
COP	73.180	338.15	5.85	20.08	I	C	LP	P
TAB	73.634	308.17	5.82	19.97	I	C	LP	P
HAM	75.819	338.49	5.65	19.36	I	C	SP	P
SHI	76.081	298.28	5.65	19.36	I	C	SP	P
KSP	76.370	333.66	5.61	19.22	I	C	SP	P
KVT	76.644	316.38	5.61	19.22	I	C	SP	P
ESK	76.813	346.55	5.58	19.11	I	C	LP	P
VRI	76.911	324.90	5.58	19.11	I	C	SP	P
CLL	76.931	335.77	5.58	19.11	I	C	SP	P
JOS	77.014	330.00	5.58	19.11	I	C	SP	P
BRG	77.047	335.03	5.58	19.11	I	C	SP	P
CVO	77.169	325.20	5.58	19.11	I	C	SP	P
MDB	77.602	326.45	5.55	19.01	I	C	SP	P
PSZ	77.730	330.07	5.55	19.01	I	C	SP	P
MOX	77.916	336.27	5.52	18.90	I	C	LP	P
WTS	77.935	339.65	5.52	18.90	I	C	SP	P
HOF	78.142	335.97	5.52	18.90	I	C	SP	P
AAM	78.202	39.53	5.52	18.90	E	C	LP	P
DBN	78.221	340.65	5.52	18.90	I	C	LP	P
COZ	78.302	326.01	5.49	18.79	I	C	SP	P
SRO	78.361	330.96	5.49	18.79	I	C	SP	P
GAC	78.725	32.60	5.49	18.79	I	C	LP	P
DMU	78.745	348.30	5.49	18.79	I	C	SP	P
WET	78.901	334.85	5.45	18.65	I	C	SP	P
JCT	78.951	57.39	5.45	18.65	E	C	LP	P
ANTO	79.131	317.61	5.45	18.65	I	C	LP	P
ENN	79.284	339.70	5.41	18.51	I	C	SP	P
DLE	79.287	347.93	5.41	18.51	I	C	SP	P
KMR	79.495	333.59	5.41	18.51	I	C	LP	P
UCC	79.623	340.65	5.41	18.51	I	C	LP	P
PVL	79.788	324.28	5.36	18.33	I	C	SP	P
ETA	79.813	347.59	5.36	18.33	I	C	SP	P
RSNY	80.060	32.64	5.36	18.33	I	C	LP	P
ATX	80.195	56.24	5.36	18.33	I	C	SP	P
ECB	80.218	347.85	5.36	18.33	I	C	SP	P
DOU	80.223	340.24	5.36	18.33	E	C	LP	P
FUR	80.250	335.38	5.36	18.33	I	C	SP	P
STU	80.282	336.91	5.31	18.15	I	C	LP	P
ECP	80.338	347.56	5.31	18.15	I	C	SP	P
YOU	80.380	184.26	5.31	18.15	I	C	SP	P
KDZ	80.970	323.33	5.26	17.98	I	C	SP	P
VTS	81.035	325.21	5.26	17.98	I	C	SP	P
VAL	81.099	349.87	5.26	17.98	I	C	LP	P
RBL	81.108	333.19	5.26	17.98	I	C	SP	P

Table 104. Station data for event 144....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
CDF	81.122	337.95	5.26	17.98	I	C	SP	P
CAN	81.389	183.68	5.22	17.84	I	C	SP	P
SLE	81.392	336.93	5.22	17.84	E	C	LP	P
HKT	81.631	55.14	5.22	17.84	I	C	SP	P
ZUL	81.681	336.88	5.22	17.84	E	C	LP	P
HAU	81.737	338.37	5.22	17.84	I	C	SP	P
BSF	81.783	338.03	5.18	17.69	I	C	SP	P
SCP	81.916	36.77	5.18	17.69	I	C	LP	P
EZN	82.067	321.69	5.18	17.69	I	C	SP	P
LLS	82.075	336.25	5.18	17.69	E	C	LP	P
SKO	82.257	326.00	5.14	17.55	I	C	SP	P
VAY	82.367	324.93	5.14	17.55	I	C	SP	P
RSCP	82.676	44.80	5.14	17.55	I	C	LP	P
LDF	82.679	342.67	5.14	17.55	I	C	SP	P
TMA	82.807	336.02	5.12	17.48	E	C	LP	P
GRR	83.025	343.07	5.12	17.48	I	C	SP	P
LOR	83.040	339.68	5.12	17.48	I	C	SP	P
LOR	83.040	339.68	5.12	17.48	I	C	LP	P
WES	83.108	31.71	5.12	17.48	I	C	LP	P
SSF	83.319	339.83	5.09	17.38	I	C	SP	P
LPF	83.402	343.08	5.09	17.38	I	C	SP	P
AVF	83.609	339.84	5.09	17.38	I	C	SP	P
SMF	83.628	339.47	5.09	17.38	I	C	SP	P
BLA	83.789	40.44	5.05	17.24	I	C	LP	P
BGF	83.948	340.09	5.05	17.24	I	C	SP	P
TCF	84.351	340.41	5.02	17.13	I	C	SP	P
LSF	84.543	340.85	5.02	17.13	I	C	SP	P
ATH	84.729	322.38	5.02	17.13	I	C	SP	P
LCI	84.996	327.46	4.99	17.03	I	C	SP	P
NWAO	85.417	209.90	4.96	16.92	I	C	LP	P
CAF	85.669	340.05	4.96	16.92	I	C	SP	P
SGO	85.759	329.35	4.91	16.74	I	C	SP	P
FRF	85.769	336.48	4.91	16.74	I	C	SP	P
LRG	85.946	336.63	4.91	16.74	I	C	SP	P
LMR	86.017	336.48	4.91	16.74	I	C	SP	P
CVF	86.045	334.59	4.91	16.74	I	C	SP	P
PTO	91.443	346.54	4.68	15.94	I	C	SP	P
MAL	94.943	342.31	4.58	15.59	I	C	LP	P
SLR	132.168	275.86	1.84	6.20	I	C	SP	PKP
LPB	134.521	63.17	1.82	6.13	I	C	SP	PKP
PEL	144.048	84.39	1.70	5.74	I	C	SP	PKP
TACH	144.162	85.31	1.70	5.74	I	C	SP	PKP

Table 105. Station data for event 155

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MAJO	17.814	230.95	12.33	60.47	I	C	LP	P
SHK	22.274	237.16	9.83	43.92	I	C	LP	P
NJ2	32.203	251.46	8.74	38.08	I	C	SP	P
COL	33.276	40.61	8.64	37.57	I	C	LP	P
COL	33.276	40.61	8.64	37.57	I	C	SP	P
FBA	33.276	40.61	8.64	37.57	I	C	SP	P
TATO	35.811	239.84	8.49	36.81	I	C	LP	P
QZH	37.505	243.21	8.41	36.40	I	C	SP	P
INK	38.748	34.23	8.35	36.10	I	C	SP	P
LZH	39.357	270.33	8.29	35.80	I	C	SP	P
GTA	40.114	277.43	8.26	35.65	I	C	SP	P
GZH	42.029	247.04	8.15	35.11	I	C	SP	P
KMI	47.195	259.09	7.87	33.73	E	C	LP	P
RSNT	48.041	38.66	7.81	33.44	I	C	LP	P
YKC	48.090	38.63	7.81	33.44	I	C	SP	P
PNT	52.532	55.23	7.45	31.72	I	C	SP	P
COR	53.207	61.91	7.41	31.53	I	C	SP	P
EDM	53.515	48.40	7.37	31.34	I	C	SP	P
DAG	54.212	358.34	7.33	31.15	I	C	SP	P
NEW	54.488	55.10	7.29	30.96	I	C	SP	P
RXF	55.191	53.54	7.25	30.77	I	C	SP	P
CLX	55.583	54.18	7.21	30.58	I	C	SP	P
PCT	55.708	251.29	7.21	30.58	I	C	SP	P
SES	56.358	50.12	7.14	30.25	I	C	SP	P
FFC	57.868	41.95	7.03	29.74	I	C	SP	P
FCC	58.353	34.98	6.99	29.55	I	C	SP	P
LRM	58.507	55.04	6.99	29.55	I	C	SP	P
JAS	59.012	66.57	6.95	29.37	I	C	LP	P
BDW	62.068	56.12	6.71	28.26	I	C	SP	P
FRB	62.196	20.41	6.71	28.26	I	C	SP	P
RSSD	64.080	51.92	6.55	27.53	I	C	LP	P
RSON	64.166	41.13	6.55	27.53	I	C	LP	P
GOL	66.479	56.15	6.34	26.58	I	C	SP	P
KONO	67.950	342.05	6.22	26.03	I	C	LP	P
BER	68.070	344.49	6.22	26.03	I	C	LP	P
POO	70.711	276.16	6.03	25.18	I	C	SP	P
WB2	71.367	200.86	5.95	24.83	I	C	SP	P
ACO	72.020	54.52	5.92	24.69	I	C	SP	P
ACM	73.922	42.30	5.78	24.07	I	C	SP	P
SIO	74.242	53.36	5.78	24.07	I	C	SP	P
TUL	74.387	52.92	5.74	23.89	I	C	SP	P
RLO	74.590	52.25	5.74	23.89	I	C	SP	P
AAM	75.161	41.15	5.71	23.76	I	C	SP	P
FVM	75.495	48.11	5.67	23.58	I	C	SP	P
MLR	75.876	325.92	5.64	23.45	I	C	SP	P
ISR	75.955	325.36	5.64	23.45	I	C	SP	P
HOF	76.006	336.85	5.64	23.45	I	C	SP	P
DMU	76.155	349.31	5.64	23.45	I	C	SP	P
BNS	76.537	339.95	5.61	23.32	I	C	SP	P
DDK	76.586	348.85	5.61	23.32	I	C	SP	P

Table 105. Station data for event 155....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KHC	76.634	335.31	5.61	23.32	I	C	SP	P
DLE	76.710	348.95	5.61	23.32	I	C	SP	P
GRFO	76.746	337.00	5.61	23.32	I	C	LP	P
GRF	76.745	336.99	5.61	23.32	I	C	SP	P
DCN	76.744	349.41	5.61	23.32	I	C	SP	P
WET	76.810	335.75	5.58	23.19	I	C	SP	P
RSNY	76.934	34.16	5.58	23.19	I	C	LP	P
ETA	77.246	348.62	5.58	23.19	I	C	SP	P
UCC	77.300	341.62	5.55	23.06	E	C	LP	P
ECB	77.642	348.90	5.55	23.06	I	C	SP	P
ECP	77.772	348.61	5.51	22.88	I	C	SP	P
ANTO	77.842	318.43	5.51	22.88	I	C	LP	P
STU	78.105	337.89	5.51	22.88	I	C	SP	P
FUR	78.135	336.34	5.51	22.88	I	C	SP	P
PVL	78.170	325.16	5.51	22.88	I	C	SP	P
GWF	78.293	338.95	5.48	22.75	I	C	SP	P
DMK	78.304	322.79	5.48	22.75	I	C	SP	P
BUH	78.430	338.46	5.48	22.75	I	C	SP	P
KBA	78.568	334.59	5.48	22.75	I	C	SP	P
CDF	78.903	338.97	5.45	22.62	I	C	SP	P
ECH	79.115	338.97	5.45	22.62	I	C	SP	P
SLE	79.214	337.95	5.45	22.62	E	C	LP	P
VTS	79.371	326.16	5.41	22.44	I	C	SP	P
KDZ	79.396	324.26	5.41	22.44	I	C	SP	P
OGA	79.397	335.98	5.41	22.44	I	C	SP	P
CEY	79.476	333.33	5.41	22.44	I	C	SP	P
ZUL	79.504	337.91	5.41	22.44	E	C	LP	P
HAU	79.501	339.41	5.41	22.44	I	C	SP	P
EDC	79.511	321.93	5.41	22.44	I	C	SP	P
BSF	79.560	339.07	5.41	22.44	I	C	SP	P
TRI	79.696	333.74	5.41	22.44	I	C	SP	P
RSCP	79.729	46.39	5.41	22.44	I	C	SP	P
RSCP	79.729	46.39	5.41	22.44	I	C	LP	P
LLS	79.923	337.29	5.35	22.18	E	C	LP	P
CTI	79.982	335.25	5.35	22.18	I	C	SP	P
FLN	80.183	344.05	5.35	22.18	I	C	SP	P
LDF	80.280	343.77	5.30	21.96	I	C	SP	P
SKO	80.555	327.01	5.30	21.96	I	C	SP	P
EZN	80.571	322.67	5.30	21.96	I	C	SP	P
GRR	80.611	344.19	5.30	21.96	I	C	SP	P
TMA	80.664	337.09	5.30	21.96	E	C	LP	P
LOR	80.752	340.78	5.25	21.74	I	C	SP	P
MMK	80.944	337.67	5.25	21.74	E	C	LP	P
SSF	81.025	340.95	5.25	21.74	I	C	SP	P
DIX	81.054	338.04	5.25	21.74	E	C	LP	P
AVF	81.315	340.96	5.21	21.57	I	C	SP	P
ORO	81.339	337.50	5.21	21.57	I	C	SP	P
SMF	81.348	340.59	5.21	21.57	I	C	SP	P
BGF	81.644	341.22	5.21	21.57	I	C	SP	P
MZF	82.025	341.29	5.17	21.40	I	C	SP	P

Table 105. Station data for event 155....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
TCF	82.034	341.57	5.17	21.40	I	C	SP	P
MFF	82.200	343.23	5.17	21.40	I	C	SP	P
LSF	82.210	342.01	5.17	21.40	I	C	SP	P
STV	82.795	337.45	5.11	21.14	I	C	SP	P
AQU	82.862	332.59	5.11	21.14	I	D	SP	P
MNS	83.048	333.10	5.11	21.14	I	C	SP	P
RJF	83.117	341.74	5.11	21.14	I	C	SP	P
CAF	83.365	341.26	5.08	21.01	I	C	SP	P
FRF	83.605	337.68	5.08	21.01	I	C	SP	P
LFF	83.628	342.17	5.08	21.01	I	C	SP	P
LRG	83.776	337.84	5.05	20.88	I	C	SP	P
LPO	83.780	341.79	5.05	20.88	I	C	SP	P
LMR	83.853	337.69	5.05	20.88	I	C	SP	P
CVF	83.959	335.79	5.05	20.88	I	C	SP	P
EPF	85.537	341.91	4.96	20.49	I	C	SP	P
BAL	86.635	212.65	4.86	20.06	I	C	SP	P
TOL	89.418	344.30	4.71	19.41	I	C	LP	P

Table 106. Station data for event 175

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MAT	22.316	226.98	9.65	47.05	I	C	SP	P
SEO	27.048	245.59	9.16	44.00	E	D	LP	P
COL	28.575	46.06	8.94	42.67	I	C	LP	P
BJI	31.455	261.21	8.71	41.35	I	D	SP	P
INK	33.856	38.30	8.56	40.51	I	C	SP	P
SSE	35.058	244.51	8.49	40.11	I	D	LP	P
TATO	39.836	238.25	8.22	38.56	I	D	LP	P
GUMO	41.634	199.99	8.12	38.02	I	C	LP	P
RSNT	43.259	42.61	8.03	37.53	I	C	LP	P
BAG	47.550	232.85	7.78	36.19	E	D	LP	P
PNT	48.435	60.02	7.71	35.80	I	C	SP	P
LON	48.904	63.92	7.67	35.60	I	C	LP	P
EDM	49.085	52.70	7.66	35.52	I	C	SP	P
COR	49.490	67.00	7.63	35.36	I	C	SP	P
DAG	49.564	359.14	7.62	35.32	I	D	SP	P
KMI	49.979	257.71	7.59	35.15	I	D	LP	P
YKM	50.707	58.34	7.53	34.84	I	D	SP	P
RXF	51.000	58.02	7.51	34.71	I	C	SP	P
LHD	51.178	58.85	7.49	34.64	I	C	SP	P
KEV	51.695	340.55	7.45	34.42	I	D	LP	P
WDC	52.575	70.36	7.38	34.05	I	C	SP	P
FFC	53.183	45.60	7.33	33.80	I	C	SP	P
FCC	53.469	38.21	7.31	33.68	I	C	SP	P
BKS	54.613	72.58	7.22	33.20	I	C	LP	P
GDH	54.940	13.31	7.19	33.06	I	D	LP	P
JAS	55.574	71.30	7.15	32.86	I	C	SP	P
JAS	55.574	71.30	7.15	32.86	I	C	LP	P
BDW	57.999	60.20	6.98	31.96	I	C	SP	P
RAB	58.137	187.29	6.97	31.91	I	C	LP	P
PKI	58.330	274.21	6.95	31.82	I	D	SP	P
DMN	58.480	274.48	6.94	31.76	I	D	SP	P
RSON	59.450	44.45	6.86	31.36	I	C	LP	P
RSON	59.450	44.45	6.86	31.36	I	C	SP	P
PAS	59.576	72.85	6.85	31.31	I	C	SP	P
RSSD	59.796	55.70	6.83	31.22	I	C	LP	P
GLA	62.265	71.34	6.64	30.23	I	C	SP	P
REY	62.275	0.14	6.64	30.22	I	D	SP	P
UPP	62.293	338.85	6.63	30.21	I	D	SP	P
NDI	62.298	281.30	6.63	30.21	I	D	SP	P
GOL	62.404	59.93	6.63	30.17	I	C	LP	P
GOL	62.404	59.93	6.63	30.17	I	C	SP	P
HNR	63.124	178.26	6.57	29.88	I	C	LP	P
PMG	63.801	192.35	6.51	29.61	I	C	SP	P
BER	64.025	345.50	6.50	29.52	I	D	LP	P
KONO	64.040	342.97	6.49	29.51	I	D	LP	P
KON	64.040	342.97	6.49	29.51	I	D	LP	P
ANMO	65.421	64.12	6.38	28.97	I	C	LP	P
ALQ	65.423	64.12	6.38	28.97	I	C	SP	P
MHI	66.328	299.36	6.30	28.55	I	D	LP	P
MUD	67.130	342.03	6.24	28.24	I	D	SP	P

Table 106. Station data for event 175....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
COP	67.232	339.88	6.23	28.20	I	D	LP	P
EPT	67.822	66.37	6.18	27.96	I	C	LP	P
HAM	69.822	340.53	6.03	27.23	I	D	LP	P
ESK	70.075	348.92	6.01	27.13	E	D	LP	P
BRN	70.122	338.16	6.01	27.11	I	D	LP	P
TUL	70.136	56.14	6.01	27.11	I	C	LP	P
RLO	70.308	55.45	5.99	27.04	I	C	SP	P
KRA	70.658	333.04	5.97	26.92	I	D	SP	P
GAC	70.690	36.84	5.97	26.91	I	C	LP	P
KSP	70.870	335.64	5.96	26.86	I	D	SP	P
FVM	71.028	51.18	5.95	26.81	I	C	SP	P
WIT	71.056	342.29	5.94	26.80	I	D	SP	P
CLL	71.204	337.86	5.93	26.74	I	D	SP	P
TAB	71.347	309.45	5.92	26.68	I	D	LP	P
SPC	71.365	332.47	5.92	26.67	I	D	SP	P
BRG	71.398	337.11	5.92	26.66	I	D	SP	P
MNT	71.514	35.76	5.91	26.62	I	C	SP	P
CLI	71.628	326.76	5.90	26.58	I	D	SP	P
BMR	71.806	329.72	5.89	26.54	I	C	SP	P
PPE	71.813	326.38	5.89	26.54	I	D	SP	P
WTS	71.813	341.94	5.89	26.54	I	D	SP	P
PVC	71.878	170.03	5.89	26.52	I	C	SP	P
JOS	71.914	331.98	5.88	26.51	I	D	SP	P
DBN	72.002	342.99	5.88	26.48	I	D	LP	P
RSNY	72.026	36.84	5.88	26.47	I	C	LP	P
PRU	72.084	336.40	5.87	26.45	I	D	SP	P
MOX	72.132	338.48	5.87	26.43	I	D	LP	P
DDK	72.309	350.46	5.85	26.35	I	C	SP	P
HOF	72.388	338.20	5.85	26.32	I	D	SP	P
VRI	72.410	326.79	5.84	26.31	I	D	SP	P
TRT	72.437	228.11	5.84	26.31	I	C	SP	P
PSZ	72.618	332.14	5.83	26.24	I	D	SP	P
ETA	72.979	350.26	5.81	26.15	I	D	SP	P
MLR	72.998	327.11	5.81	26.14	I	D	SP	P
GRF	73.117	338.40	5.80	26.10	I	D	SP	P
GRFO	73.118	338.40	5.80	26.10	I	D	LP	P
KHC	73.111	336.68	5.80	26.10	I	D	SP	P
ENN	73.151	342.13	5.80	26.09	I	D	SP	P
BUD	73.256	332.52	5.79	26.04	I	D	SP	P
WET	73.260	337.14	5.79	26.04	I	D	SP	P
UCC	73.398	343.13	5.78	25.99	E	D	LP	P
CMP	73.486	327.60	5.77	25.96	I	D	SP	P
ECP	73.505	350.27	5.77	25.95	I	D	SP	P
BUC	73.908	326.50	5.74	25.83	I	D	SP	P
KMR	73.984	335.93	5.74	25.80	E	D	LP	P
SCP	74.027	41.04	5.74	25.79	I	C	LP	P
DOU	74.034	342.78	5.74	25.79	E	D	LP	P
KOU	74.349	174.25	5.72	25.71	I	C	SP	P
CLO	74.356	328.99	5.72	25.71	I	D	SP	P
STU	74.419	339.39	5.71	25.69	I	D	LP	P

Table 106. Station data for event 175....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
CTAO	74.441	191.82	5.71	25.68	I	C	LP	P
CTA	74.441	191.82	5.71	25.68	I	C	LP	P
FUR	74.545	337.83	5.71	25.64	I	D	SP	P
BHG	74.596	336.62	5.70	25.63	I	D	SP	P
SHI	75.157	299.96	5.66	25.41	I	D	SP	P
RSCP	75.189	49.24	5.66	25.40	I	C	LP	P
GAP	75.242	337.73	5.65	25.39	I	D	SP	P
OGA	75.826	337.55	5.62	25.23	I	D	SP	P
BLA	76.063	44.72	5.61	25.16	I	C	SP	P
BLA	76.063	44.72	5.61	25.16	E	C	LP	P
CEY	76.075	334.87	5.60	25.16	I	D	SP	P
ISQ	76.080	198.13	5.60	25.15	I	C	SP	P
GPA	76.090	321.65	5.60	25.15	I	C	SP	P
NOU	76.234	172.30	5.59	25.11	I	C	SP	P
TRI	76.268	335.30	5.59	25.10	I	D	SP	P
VTS	76.466	327.63	5.58	25.04	I	D	SP	P
KDZ	76.629	325.72	5.57	25.00	I	D	SP	P
ALT	77.246	321.18	5.53	24.80	I	D	SP	P
SHA	78.084	53.85	5.47	24.52	I	C	LP	P
IZM	78.864	322.88	5.42	24.27	I	D	SP	P
AQU	79.503	334.36	5.35	23.93	I	D	SP	P
DUI	79.876	333.36	5.31	23.75	I	D	SP	P
ASPA	80.110	202.68	5.29	23.65	I	C	SP	P
JER	81.558	313.88	5.17	23.07	I	D	SP	P
WBN	84.342	208.42	5.00	22.28	I	C	SP	P
PTO	84.655	350.15	4.98	22.19	I	D	LP	P
HLW	84.840	315.87	4.97	22.15	I	D	LP	P
TOL	85.351	346.51	4.91	21.88	I	D	LP	P
MEK	87.282	215.03	4.78	21.26	I	C	SP	P
ALM	88.088	344.72	4.75	21.10	I	D	SP	P
YOU	88.262	188.26	4.74	21.07	I	C	SP	P
MAL	88.500	346.24	4.73	21.02	I	D	SP	P
CAN	89.246	187.65	4.71	20.92	I	C	SP	P
BNG	112.870	315.73	1.89	8.23	I	C	SP	PKP
ARE	126.361	65.64	1.86	8.12	I	C	SP	PKP
PEL	139.810	79.14	1.77	7.71	I	D	SP	PKP
RFA	142.260	78.85	1.73	7.55	I	C	SP	PKP
SUR	143.038	288.26	1.72	7.49	I	C	SP	PKP
VBA	148.296	76.56	1.60	6.98	I	C	SP	PKP

Table 107. Station data for event 183

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
NKI	17.559	87.11	12.37	61.65	I	C	SP	P
TTA	22.481	54.23	9.80	44.23	I	C	SP	P
MAT	24.867	228.66	9.46	42.29	I	D	SP	P
COL	26.023	49.01	9.35	41.69	I	C	SP	P
FBA	26.023	49.01	9.35	41.69	I	C	SP	P
COL	26.023	49.01	9.35	41.69	I	C	LP	P
INK	31.287	40.58	8.78	38.68	I	C	SP	P
RSNT	40.693	45.14	8.21	35.77	I	C	LP	P
ANP	42.091	239.85	8.14	35.39	I	C	LP	P
TATO	42.279	239.72	8.13	35.32	I	C	LP	P
LZH	43.109	267.53	8.09	35.14	I	C	LP	P
GUA	44.097	203.21	8.03	34.85	E	D	LP	P
KBS	44.237	351.87	8.02	34.81	I	D	LP	P
HON	45.813	122.00	7.94	34.38	I	C	LP	P
LON	46.569	67.27	7.89	34.16	I	C	LP	P
EDM	46.583	55.61	7.89	34.15	I	C	SP	P
DAG	47.635	0.02	7.83	33.84	I	D	SP	P
NEW	47.971	62.87	7.81	33.75	I	C	SP	P
SES	49.517	57.23	7.68	33.14	I	C	SP	P
BAG	50.055	234.73	7.64	32.93	E	C	LP	P
WDC	50.375	73.80	7.61	32.81	I	C	SP	P
MIN	51.046	73.36	7.56	32.55	I	C	SP	P
KMI	52.022	258.83	7.48	32.17	I	C	LP	P
BKS	52.466	76.00	7.45	32.00	I	C	LP	P
JAS	53.395	74.65	7.37	31.64	I	C	LP	P
DAV	56.253	224.16	7.15	30.59	E	C	LP	P
RSON	56.889	46.96	7.10	30.36	I	C	LP	P
RSSD	57.328	58.52	7.07	30.19	I	C	LP	P
KKN	59.750	275.61	6.88	29.33	I	C	SP	P
PKI	59.846	275.35	6.88	29.30	I	C	SP	P
DMN	59.987	275.62	6.87	29.24	I	C	SP	P
GOL	59.996	62.80	6.87	29.24	I	C	SP	P
PCT	61.197	252.79	6.77	28.79	I	C	SP	P
BER	62.543	346.82	6.66	28.29	I	C	LP	P
KONO	62.653	344.27	6.65	28.25	I	C	LP	P
KON	62.653	344.27	6.65	28.25	I	C	LP	P
ANMO	63.085	67.02	6.62	28.09	I	C	LP	P
ALQ	63.087	67.02	6.62	28.09	I	C	LP	P
NDI	63.545	282.53	6.58	27.92	I	C	SP	P
HNR	65.061	181.46	6.46	27.37	I	C	LP	P
MUD	65.776	343.46	6.40	27.10	I	C	SP	P
COP	65.961	341.29	6.38	27.02	I	C	LP	P
PMG	66.088	195.28	6.37	26.97	E	C	LP	P
MHI	66.816	300.65	6.31	26.68	I	C	LP	P
TUL	67.673	58.81	6.24	26.36	I	C	LP	P
EAB	67.702	351.37	6.24	26.35	I	C	SP	P
RLO	67.836	58.10	6.23	26.31	I	C	SP	P
SNG	67.883	249.03	6.22	26.29	I	C	LP	P
GAC	68.124	39.18	6.20	26.20	I	C	LP	P
UTO	68.442	46.84	6.18	26.08	I	C	SP	P

Table 107. Station data for event 183....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ESK	68.465	350.54	6.18	26.08	I	C	SP	P
ESK	68.465	350.54	6.18	26.08	I	C	LP	P
HAM	68.523	342.06	6.17	26.06	I	C	SP	P
ECK	68.592	350.47	6.17	26.03	I	C	SP	P
BRN	68.916	339.69	6.14	25.91	I	C	SP	P
MNT	68.951	38.07	6.14	25.90	I	D	SP	P
RSNY	69.460	39.18	6.10	25.72	I	C	LP	P
KRA	69.660	334.57	6.08	25.64	I	C	SP	P
CLL	70.009	339.44	6.05	25.51	I	C	SP	P
BRG	70.233	338.69	6.04	25.44	I	C	SP	P
DBN	70.607	344.64	6.01	25.34	I	C	LP	P
MOX	70.911	340.11	5.99	25.24	I	C	LP	P
PRU	70.947	338.01	5.99	25.22	I	C	SP	P
TAB	71.380	310.96	5.95	25.06	I	C	LP	P
SCP	71.458	43.44	5.95	25.03	I	C	LP	P
IR7	71.472	306.57	5.95	25.03	I	C	SP	P
ENN	71.789	343.82	5.93	24.95	I	C	SP	P
TNS	71.896	342.03	5.92	24.92	I	C	SP	P
GRFO	71.900	340.07	5.92	24.92	I	C	LP	P
KHC	71.962	338.34	5.92	24.90	I	C	SP	P
UCC	71.996	344.84	5.92	24.89	E	C	LP	P
WET	72.092	338.80	5.91	24.86	I	C	SP	P
GRB1	72.102	339.69	5.91	24.86	I	C	SP	P
BGG	72.103	342.75	5.91	24.86	I	C	SP	P
VAL	72.341	354.51	5.89	24.76	I	C	LP	P
PSI	72.554	248.06	5.87	24.69	I	C	SP	P
RSCP	72.655	51.74	5.86	24.66	I	C	LP	P
CMP	72.715	329.24	5.86	24.64	I	D	SP	P
COZ	72.866	329.73	5.85	24.62	I	D	SP	P
AFI	73.094	152.63	5.84	24.55	I	C	LP	P
STU	73.161	341.12	5.83	24.52	E	C	LP	P
BUC1	73.264	328.17	5.82	24.47	I	C	SP	P
POO	73.452	278.58	5.81	24.41	I	C	SP	P
BLA	73.504	47.16	5.80	24.39	I	C	LP	P
MSL	74.149	312.29	5.76	24.21	I	C	SP	P
FLN	74.641	347.60	5.72	24.04	I	C	SP	P
OGA	74.640	339.33	5.72	24.04	I	C	SP	P
GRR	75.054	347.79	5.70	23.93	I	C	SP	P
TRI	75.172	337.09	5.69	23.90	I	C	SP	P
LPF	75.427	347.85	5.68	23.82	I	C	SP	P
LOR	75.512	344.33	5.67	23.80	I	C	SP	P
PLD	75.706	328.14	5.66	23.73	I	C	SP	P
SSF	75.767	344.53	5.65	23.71	I	C	SP	P
KDZ	75.936	327.49	5.64	23.65	I	D	SP	P
SMF	76.122	344.20	5.63	23.60	I	C	SP	P
KOU	76.158	177.11	5.62	23.59	I	C	SP	P
LEM	76.458	235.37	5.61	23.51	I	C	LP	P
CTAO	76.714	194.51	5.59	23.44	I	C	LP	P
TCF	76.713	345.26	5.59	23.44	I	C	SP	P
CTA	76.714	194.51	5.59	23.44	I	C	SP	P

Table 107. Station data for event 183....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MZF	76.730	344.98	5.59	23.44	I	C	SP	P
EZN	77.291	326.04	5.56	23.29	I	C	SP	P
RJF	77.775	345.54	5.53	23.16	I	C	SP	P
WB2	78.882	205.74	5.45	22.81	I	C	SP	P
CVF	79.197	339.62	5.43	22.72	I	C	SP	P
ATH	79.799	327.19	5.37	22.45	I	C	SP	P
PTO	82.993	352.32	5.11	21.33	I	C	SP	P
TOL	83.816	348.70	5.05	21.08	I	C	LP	P
HLW	84.572	318.01	5.01	20.88	I	C	LP	P
CRT	86.424	347.96	4.86	20.23	I	C	SP	P
ALM	86.617	347.00	4.85	20.17	I	C	SP	P
SFS	87.426	349.93	4.80	19.96	I	C	SP	P
YOU	90.453	190.66	4.70	19.54	I	D	SP	P
ARO	95.691	299.99	4.56	18.91	E	C	LP	P
NWAO	96.084	216.02	4.54	18.85	I	C	LP	P
SNZO	97.467	169.84	4.52	18.77	I	C	LP	P
TAU	99.106	190.35	4.48	18.58	E	C	LP	P
BUL	129.923	295.74	1.85	7.57	I	C	SP	PKP
JOZ	134.054	286.62	1.83	7.47	I	C	SP	PKP
SLR	134.705	291.86	1.82	7.45	I	C	SP	PKP
BPI	135.193	291.77	1.82	7.44	I	C	SP	PKP
SEK	137.132	290.36	1.80	7.37	I	C	SP	PKP
VIR	137.339	291.37	1.80	7.36	I	C	SP	PKP
PCH	138.249	80.01	1.79	7.31	I	C	SP	PKP
BLF	138.516	291.16	1.79	7.30	I	C	SP	PKP
RDJ	142.419	38.85	1.73	7.08	I	C	LP	PKP
LPA	146.042	68.49	1.66	6.79	I	C	LP	PKP

Table 108. Station data for event 220

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SEO	17.397	256.69	12.49	47.18	I	C	LP	P
DL2	20.668	265.80	10.31	37.26	I	C	SP	P
SSE	24.923	248.81	9.47	33.79	E	C	LP	P
TIA	25.042	263.33	9.47	33.79	I	C	SP	P
NJ2	25.956	253.35	9.38	33.42	I	C	SP	P
ANP	28.693	238.72	9.11	32.34	I	C	LP	P
TATO	28.862	238.46	9.04	32.06	I	C	LP	P
GUMO	30.168	186.94	8.91	31.55	E	D	LP	P
LZH	34.714	272.84	8.59	30.29	I	C	LP	P
BAG	36.034	229.69	8.50	29.94	E	C	LP	P
GTA	36.229	280.33	8.50	29.94	I	C	SP	P
CD2	37.338	265.27	8.41	29.59	I	C	SP	P
COL	40.584	36.03	8.24	28.94	I	C	LP	P
KMI	41.427	258.70	8.18	28.71	I	C	SP	P
WMQ	42.986	292.13	8.10	28.40	I	C	SP	P
RAB	47.789	174.98	7.82	27.34	I	D	LP	P
CHG	48.176	255.14	7.82	27.34	I	C	LP	P
HON	49.411	99.04	7.70	26.88	E	D	LP	P
KBS	54.997	350.64	7.26	25.23	I	C	LP	P
RSNT	55.333	34.10	7.22	25.09	I	C	LP	P
SNG	55.348	243.38	7.22	25.09	I	C	LP	P
NDI	57.739	280.33	7.07	24.53	I	C	SP	P
LON	59.865	52.67	6.88	23.83	E	C	LP	P
LEM	62.374	227.12	6.68	23.10	E	C	LP	P
CTAO	63.501	182.30	6.60	22.80	I	D	LP	P
CTA	63.501	182.30	6.60	22.80	I	D	SP	P
MHI	65.387	297.32	6.43	22.18	I	C	LP	P
JAS	65.773	60.09	6.39	22.04	E	C	LP	P
GDH	66.202	8.38	6.39	22.04	I	C	LP	P
GDH	66.202	8.38	6.39	22.04	I	C	SP	P
POO	66.404	273.48	6.35	21.89	I	C	SP	P
AFI	67.862	137.87	6.22	21.42	E	D	LP	P
KOD	69.257	264.30	6.10	20.99	I	C	SP	P
RSSD	71.318	46.47	5.96	20.49	E	C	LP	P
RSON	71.476	36.23	5.96	20.49	E	C	LP	P
KONO	71.597	339.37	5.96	20.49	I	C	LP	P
TAB	72.392	305.93	5.89	20.24	I	C	LP	P
COP	74.228	335.87	5.78	19.84	I	C	SP	P
KRA	76.394	328.73	5.61	19.23	I	C	SP	P
HAM	76.885	336.00	5.58	19.13	I	C	SP	P
KSP	77.070	331.16	5.58	19.13	I	C	SP	P
JOS	77.431	327.47	5.55	19.02	I	C	SP	P
CLL	77.789	333.21	5.52	18.91	I	C	SP	P
BRG	77.848	332.46	5.52	18.91	I	C	SP	P
PRU	78.397	331.65	5.49	18.81	I	C	SP	P
MOX	78.809	333.64	5.45	18.67	I	C	LP	P
HOF	79.012	333.32	5.45	18.67	I	C	SP	P
DBN	79.440	337.96	5.41	18.52	I	C	LP	P
KHC	79.457	331.73	5.41	18.52	I	C	SP	P
WET	79.683	332.14	5.41	18.52	I	C	SP	P

Table 108. Station data for event 220....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
GRF	79.763	333.37	5.36	18.35	I	C	SP	P
GRFO	79.764	333.37	5.36	18.35	I	C	LP	P
DMU	80.517	345.51	5.31	18.17	I	C	SP	P
ALT	80.564	315.99	5.31	18.17	I	C	SP	P
BHG	80.905	331.39	5.26	17.99	I	C	SP	P
DLE	81.032	345.11	5.26	17.99	I	C	SP	P
FUR	81.068	332.56	5.26	17.99	I	C	SP	P
VTS	81.071	322.38	5.26	17.99	I	C	SP	P
STU	81.216	334.09	5.26	17.99	E	C	LP	P
WLF	81.350	336.29	5.22	17.85	E	C	LP	P
NWAO	81.413	206.15	5.22	17.85	I	C	LP	P
GWF	81.524	335.11	5.22	17.85	I	C	SP	P
ETA	81.532	344.73	5.22	17.85	I	C	SP	P
MMB	81.642	321.44	5.22	17.85	I	D	SP	P
RBL	81.758	330.32	5.18	17.71	I	D	SP	P
ECB	81.954	344.96	5.18	17.71	I	C	SP	P
ECP	82.053	344.66	5.18	17.71	I	C	SP	P
CDF	82.132	335.05	5.18	17.71	I	C	SP	P
SLE	82.325	334.02	5.14	17.57	E	D	LP	P
ECH	82.342	335.03	5.14	17.57	I	C	SP	P
SKO	82.350	323.07	5.14	17.57	I	C	SP	P
SAX	82.504	333.26	5.14	17.57	E	C	LP	P
ZUL	82.609	333.95	5.14	17.57	E	C	LP	P
OSS	82.734	332.50	5.14	17.57	E	C	LP	P
HAU	82.776	335.42	5.11	17.46	I	C	SP	P
BSF	82.796	335.08	5.11	17.46	I	C	SP	P
GAC	82.821	29.34	5.11	17.46	E	C	LP	P
LLS	82.953	333.29	5.11	17.46	E	C	LP	P
YER	82.960	315.87	5.11	17.46	I	C	SP	P
VDL	83.134	332.82	5.11	17.46	E	C	LP	P
JER	83.289	308.00	5.08	17.36	I	C	SP	P
JCT	83.376	53.83	5.08	17.36	E	C	LP	P
TMA	83.666	333.00	5.08	17.36	E	C	LP	P
MMK	84.010	333.53	5.05	17.25	E	C	LP	P
RSNY	84.157	29.34	5.05	17.25	E	C	LP	P
DIX	84.163	333.89	5.05	17.25	E	C	LP	P
GRC	84.373	337.13	5.02	17.14	I	C	SP	P
LBF	84.397	336.43	5.02	17.14	I	C	SP	P
SSF	84.463	336.76	5.02	17.14	I	C	SP	P
SMF	84.744	336.37	5.02	17.14	I	C	SP	P
AVF	84.753	336.74	4.99	17.04	I	C	SP	P
TCF	85.535	337.25	4.96	16.93	I	C	SP	P
RMP	86.051	328.47	4.91	16.76	I	C	SP	P
SCP	86.122	33.39	4.91	16.76	E	C	LP	P
HLW	86.909	309.24	4.83	16.48	I	C	SP	P
WES	87.176	28.33	4.83	16.48	E	C	LP	P
PTO	93.056	342.84	4.64	15.81	E	C	LP	P
MAL	96.238	338.36	4.55	15.50	I	C	LP	P
SJG	110.802	35.28	1.89	6.37	E	C	LP	PKP
SLR	128.752	269.92	1.86	6.25	I	D	SP	PKP

Table 108. Station data for event 220....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
LPA	157.852	75.59	1.26	4.25	E	C	LP	PKP

Figure 40. Azimuthal equidistant map for geographic subdivision, Japan - Northeastern China

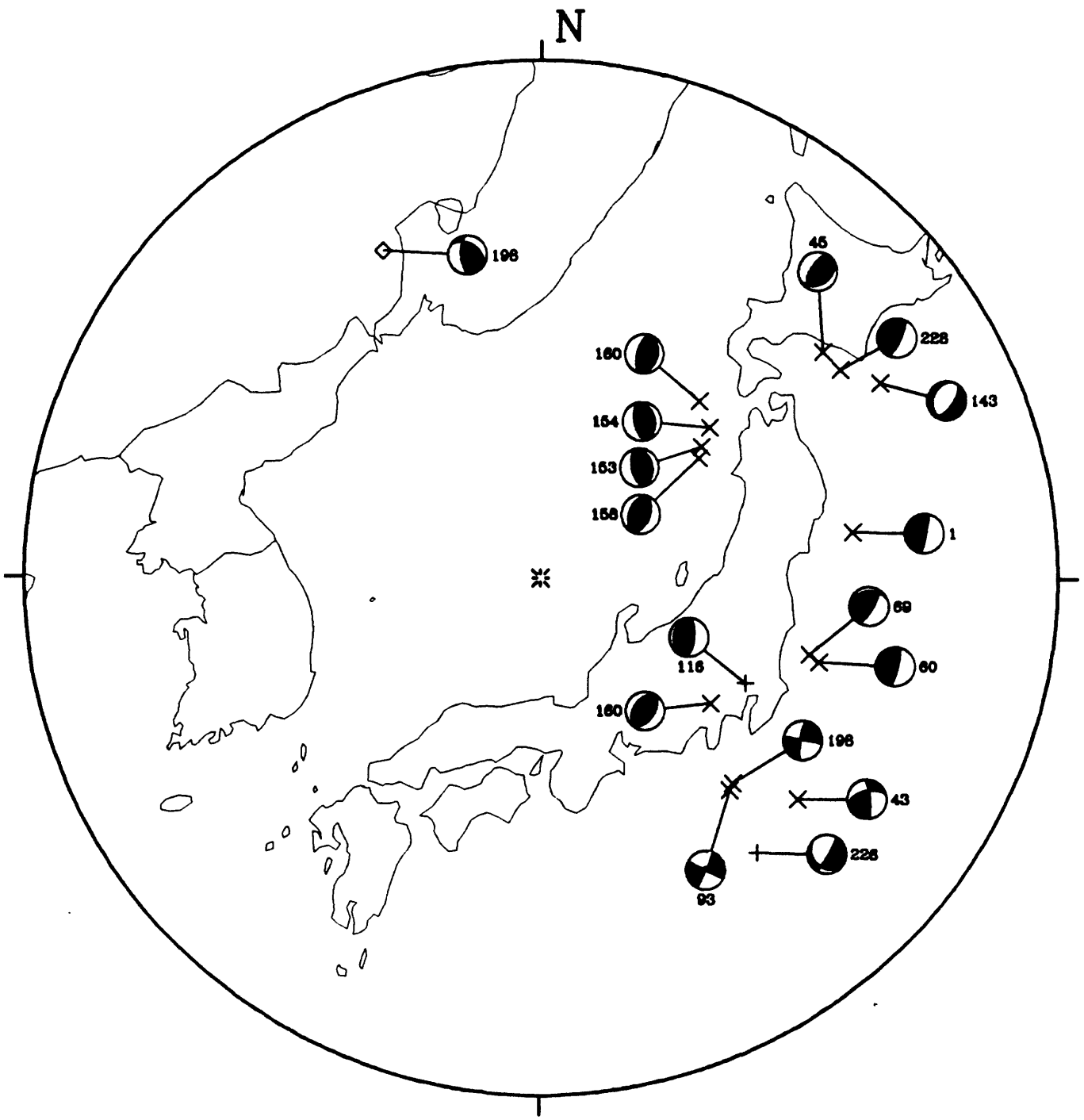

Table 109. Focal mechanism parameters for subdivision, Japan - Northeast china

EVENT#	NODAL PLANE 1 (DEG.)			NODAL PLANE 2 (DEG.)			T AXIS (DEG.)		P AXIS (DEG.)		B AXIS (DEG.)	
	ϑ	δ	λ	ϑ	δ	λ	PLG	AZM	PLG	AZM	PLG	AZM
1	10	82	90	190	8	90	53	280	37	100	0	10
43	354	76	35	245	56	163	34	219	13	120	53	13
45	210	60	75	58	33	114	71	86	14	311	13	218
60	14	78	90	194	12	90	57	284	33	104	0	14
69	30	73	75	253	23	130	59	279	27	132	14	34
93	295	90	180	205	90	0	0	70	0	160	90	0
116	5	67	90	185	23	90	68	275	22	95	0	5
143	33	62	-80	192	30	-108	16	116	71	325	9	208
153	168	58	90	348	32	90	77	78	13	258	0	168
154	168	58	90	348	32	90	77	78	13	258	0	168
158	200	40	90	20	50	90	85	290	5	110	0	20
160	16	30	90	196	60	90	75	106	15	286	0	16
180	35	50	90	215	40	90	85	305	5	125	0	35
196	189	80	-2	279	88	-170	6	54	8	145	80	290
198	175	62	122	302	42	45	59	133	11	243	28	339
226	30	83	-60	132	31	-166	31	96	44	329	30	206
228	25	74	90	205	16	90	61	295	29	115	0	25

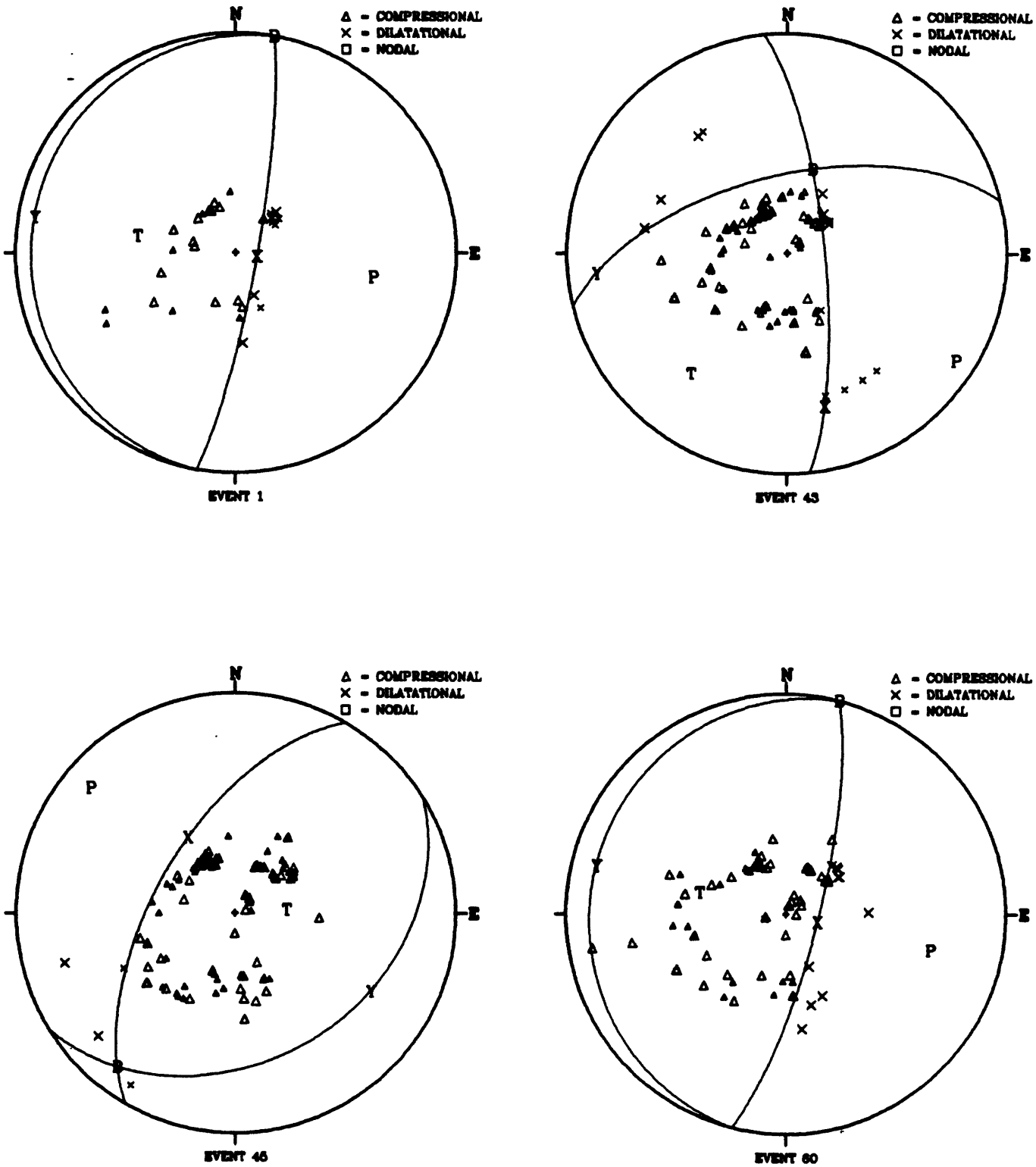

Figure 41. Lower hemisphere focal sphere projections for events 1, 43, 45, and 60

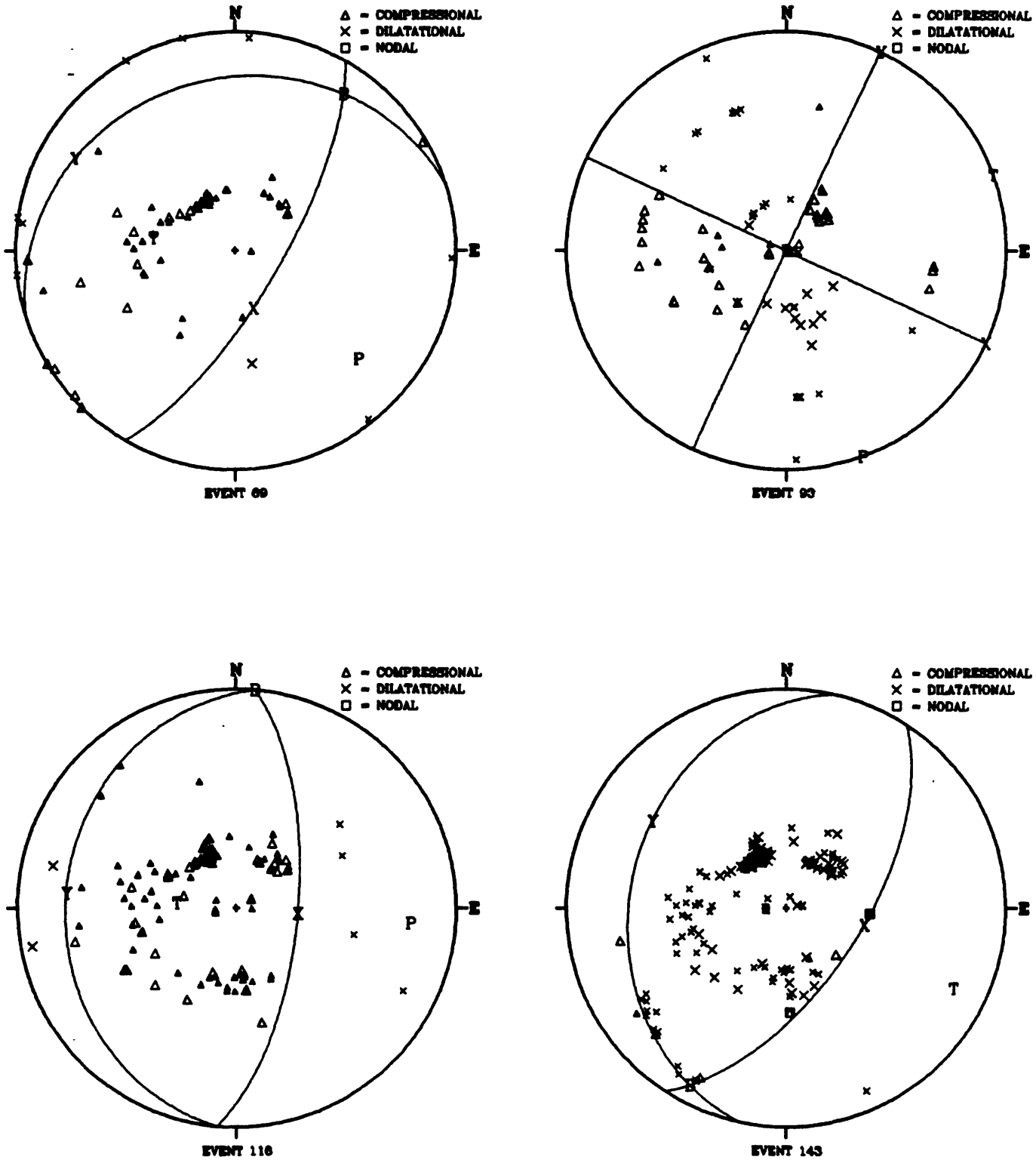

Figure 42. Lower hemisphere focal sphere projections for events 69, 93, 116, and 143

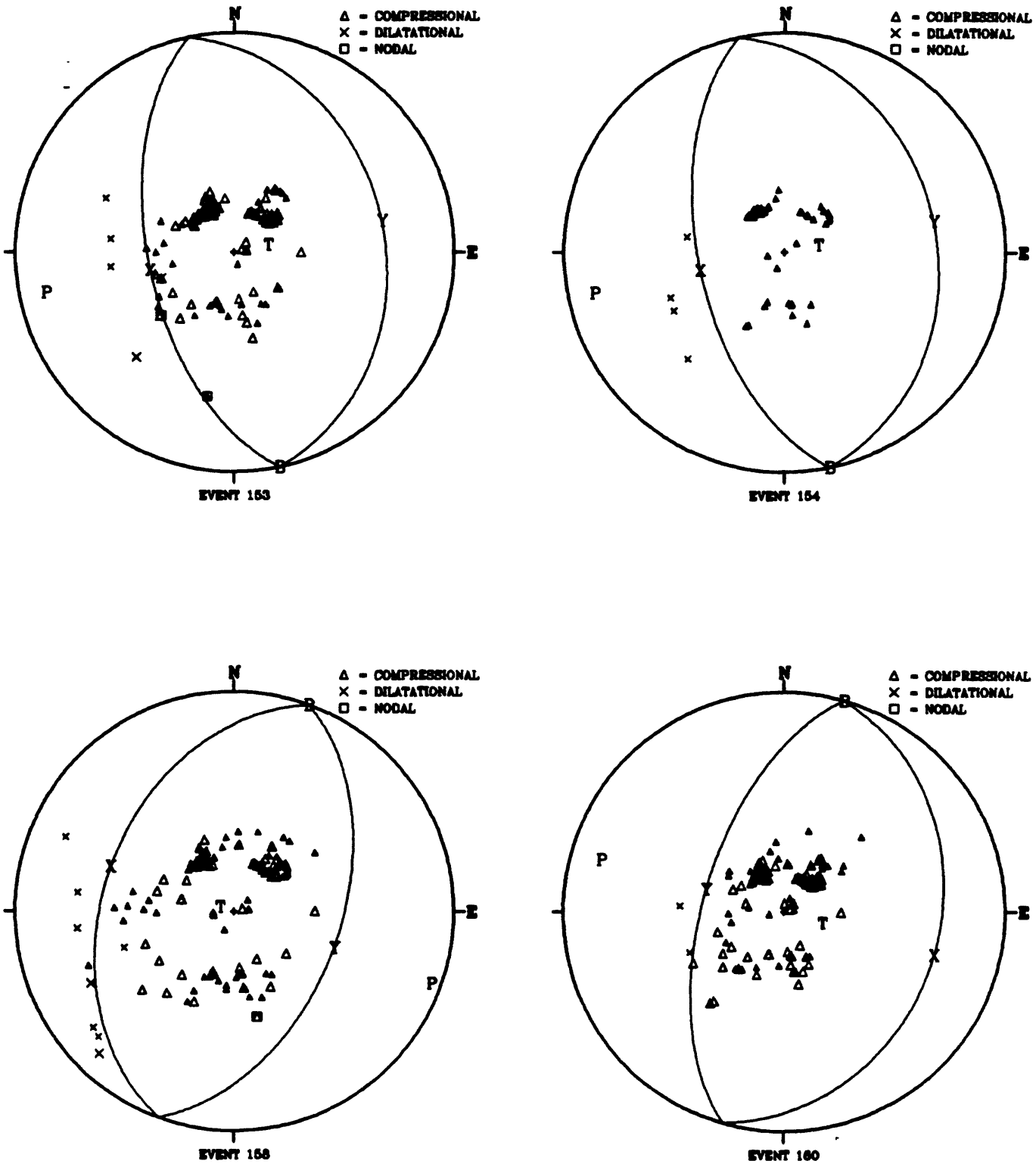

Figure 43. Lower hemisphere focal sphere projections for events 153, 154, 158, and 160

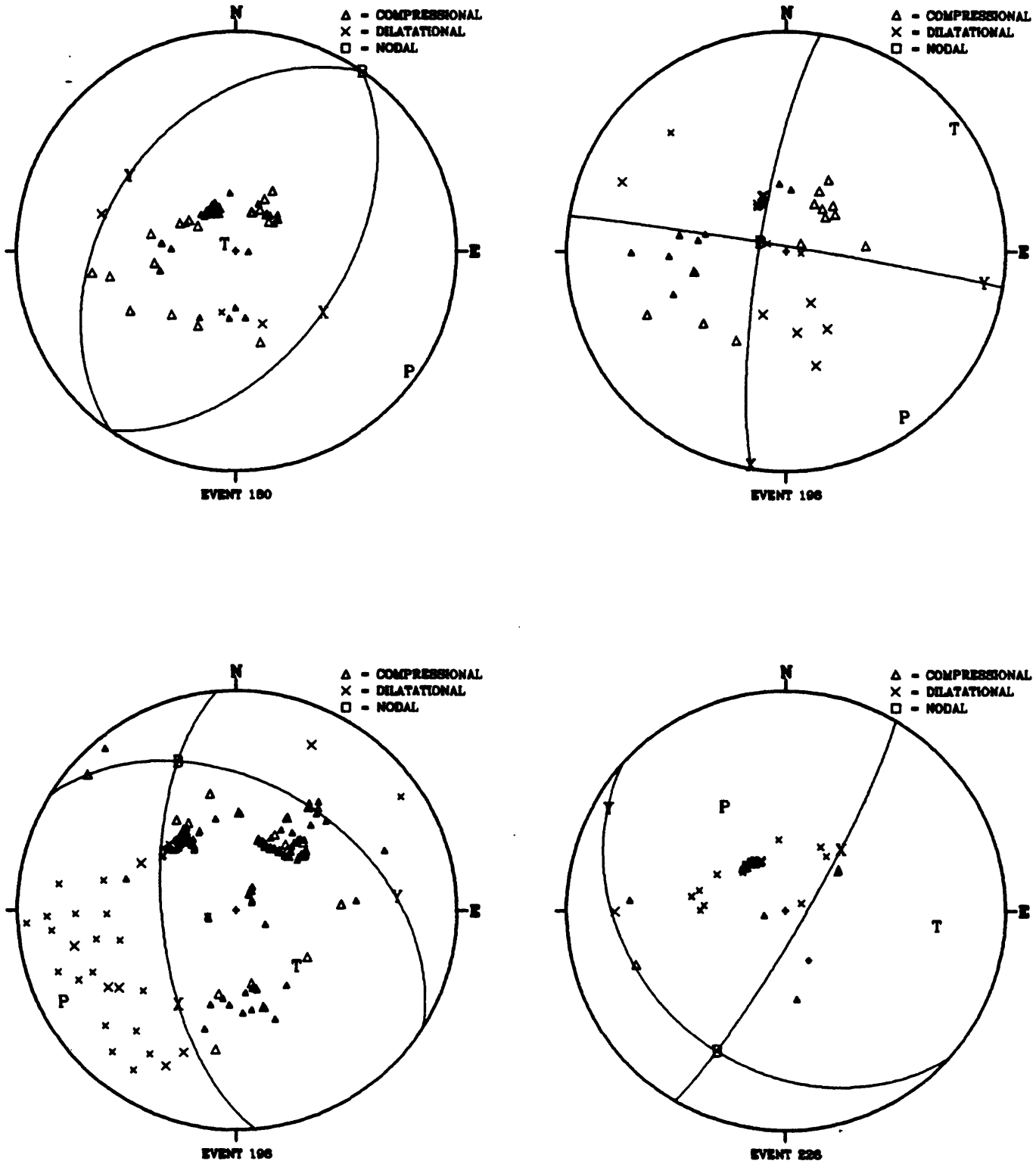

Figure 44. Lower hemisphere focal sphere projections for events 180, 196, 198, and 226

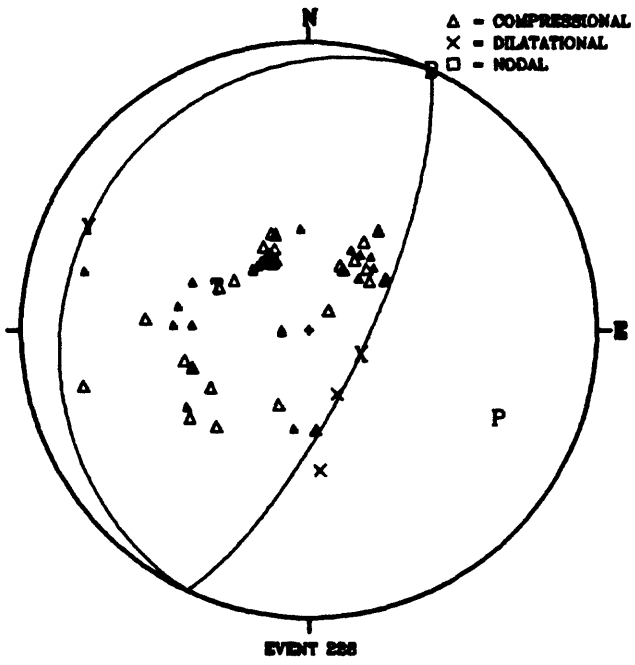

Figure 45. Lower hemisphere focal sphere projection for event 228

Table 110. Station data for event 1

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MAT	4.171	241.25	14.19	56.49	E	C	SP	P
SHK	9.078	246.24	13.81	54.24	E	C	SP	P
TATO	22.559	239.08	9.85	35.37	I	C	LP	P
GUMO	25.020	175.13	9.47	33.81	I	D	LP	P
BAG	29.463	227.42	8.97	31.81	I	C	SP	P
CHTO	42.719	255.13	8.13	28.54	I	C	LP	P
KAAO	57.840	290.61	7.03	24.40	I	C	LP	P
CTA	58.501	176.14	7.00	24.29	I	C	SP	P
POO	62.359	272.27	6.68	23.11	I	C	SP	P
DAG	64.281	355.35	6.51	22.49	I	C	SP	P
NOU	64.567	155.66	6.51	22.49	I	D	SP	P
NEW	68.253	45.09	6.18	21.29	I	D	LP	P
RIV	72.515	172.67	5.89	20.25	I	C	LP	P
BMN	72.691	51.94	5.89	20.25	I	D	SP	P
KONO	74.718	337.41	5.75	19.75	I	C	LP	P
LD3	75.035	41.91	5.71	19.60	I	D	SP	P
NWAO	75.041	202.03	5.71	19.60	I	C	LP	P
MLR	78.845	320.21	5.45	18.68	I	C	SP	P
ANTO	78.976	312.52	5.45	18.68	I	C	LP	P
KSP	79.296	328.73	5.41	18.54	I	C	SP	P
GOL	80.190	46.60	5.36	18.36	I	D	LP	P
BRG	80.210	329.93	5.36	18.36	I	C	SP	P
CLL	80.231	330.68	5.36	18.36	I	C	SP	P
TAU	81.266	176.60	5.22	17.86	I	C	LP	P
HOF	81.458	330.64	5.22	17.86	I	C	SP	P
TUC	81.796	55.13	5.18	17.72	I	D	SP	P
ESK	82.001	341.14	5.18	17.72	I	C	LP	P
GRFO	82.212	330.61	5.18	17.72	I	C	LP	P
ALQ	82.758	50.74	5.11	17.47	I	D	SP	P
SNZO	84.734	156.40	5.02	17.16	I	D	LP	P
FVM	89.422	39.24	4.71	16.07	I	C	LP	P
ARO	90.491	285.09	4.70	16.03	I	C	LP	P
NAI	103.229	279.07	4.45	15.16	I	C	LP	Pdf

Table 111. Station data for event 43

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KYS	1.761	336.69	14.27	123.22	I	D	SP	P
OYM	2.340	322.19	14.26	123.29	I	D	SP	P
SRY	2.474	325.38	14.26	56.71	I	D	SP	P
TSK	2.725	344.69	14.25	123.35	I	D	SP	P
DDR	2.834	328.88	14.25	123.35	I	D	SP	P
MAT	3.738	323.03	14.22	56.47	I	D	LP	P
SHK	6.972	280.14	14.02	55.27	I	D	LP	P
SEO	12.098	293.16	13.46	52.10	I	D	LP	P
SSE	16.928	267.00	12.61	47.66	E	C	LP	P
ANP	18.907	248.85	12.20	45.66	I	C	LP	P
TATO	19.035	248.34	12.20	45.66	I	C	LP	P
GUMO	20.208	169.06	10.47	37.86	I	C	LP	P
GUA	20.264	168.95	10.33	37.27	I	C	LP	P
BAG	25.112	232.09	9.48	33.76	I	C	LP	P
BAG	25.112	232.09	9.48	33.76	I	C	SP	P
HKC	26.152	251.49	9.38	33.36	E	C	LP	P
DAV	29.980	211.89	8.92	31.53	E	C	LP	P
LZH	30.485	285.33	8.86	31.29	E	C	LP	P
CHTO	40.215	259.33	8.27	29.00	I	C	LP	P
CHG	40.215	259.33	8.27	29.00	I	C	LP	P
BDT	40.967	257.22	8.21	28.77	I	C	SP	P
SNG	45.626	244.08	7.97	27.85	I	C	LP	P
HNR	46.409	153.75	7.91	27.63	I	C	LP	P
IPM	47.044	241.05	7.88	27.51	I	C	SP	P
MTN	47.108	193.19	7.88	27.51	I	C	SP	P
PSI	49.855	241.12	7.66	26.68	I	C	SP	P
COL	52.224	30.73	7.50	26.08	I	D	LP	P
CTA	53.593	173.86	7.38	25.63	I	C	LP	P
WB2	53.591	187.78	7.38	25.63	I	C	SP	P
CTAO	53.593	173.86	7.38	25.63	I	C	SP	P
NDI	54.064	283.20	7.34	25.49	I	C	SP	P
PVC	57.295	148.69	7.08	24.52	I	D	SP	P
HYB	57.829	270.35	7.04	24.37	I	C	SP	P
MBL	58.048	203.40	7.04	24.37	I	C	SP	P
KOU	58.232	154.17	7.04	24.37	I	C	SP	P
KAAO	58.391	292.83	7.00	24.23	I	C	LP	P
KBL	58.391	292.83	7.00	24.23	I	C	LP	P
KAAO	58.391	292.83	7.00	24.23	I	C	SP	P
ARU	58.741	319.85	7.00	24.23	I	C	LP	P
MBC	59.936	15.82	6.89	23.82	I	C	SP	P
NOU	60.634	152.83	6.84	23.64	I	C	SP	P
NAU	60.864	207.11	6.80	23.49	I	C	SP	P
POO	61.217	273.99	6.80	23.49	I	C	SP	P
MEK	63.540	202.46	6.60	22.76	I	C	SP	P
ALE	63.594	3.35	6.60	22.76	I	C	SP	P
MHI	64.910	298.08	6.48	22.33	I	C	LP	P
RES	66.032	13.94	6.40	22.04	I	C	SP	P
KHI	66.448	296.26	6.35	21.85	I	C	SP	P
KEV	66.558	339.72	6.35	21.85	E	C	LP	P
YOU	67.846	173.40	6.23	21.42	I	C	SP	P

Table 111. Station data for event 43....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ADE	68.212	182.03	6.23	21.42	I	C	SP	P
KLB	68.422	201.23	6.19	21.28	I	D	SP	P
CAN	68.940	172.99	6.15	21.13	I	C	SP	P
DAG	69.196	355.11	6.15	21.13	I	C	SP	P
DAG	69.196	355.11	6.15	21.13	E	C	LP	P
MUN	69.262	202.40	6.11	20.99	E	C	LP	P
MUN	69.262	202.40	6.11	20.99	I	C	SP	P
KJF	69.484	334.58	6.11	20.99	I	C	SP	P
WAM	69.792	173.21	6.07	20.84	I	C	SP	P
NWAO	69.824	201.17	6.07	20.84	I	C	LP	P
NWAO	69.824	201.17	6.07	20.84	I	C	SP	P
TOO	70.901	176.22	6.00	20.59	I	C	SP	P
SUF	70.924	333.74	6.00	20.59	I	C	SP	P
EDM	72.282	37.44	5.89	20.20	I	C	SP	P
NUR	72.846	332.35	5.85	20.06	E	C	LP	P
NUR	72.846	332.35	5.85	20.06	I	C	SP	P
NEW	72.865	43.18	5.85	20.06	E	D	LP	P
NEW	72.865	43.18	5.85	20.06	I	D	SP	P
SHI	73.130	294.58	5.85	20.06	I	C	SP	P
WDC	73.437	52.15	5.82	19.95	I	D	SP	P
TAB	73.485	304.86	5.82	19.95	I	C	LP	P
MIN	74.171	51.99	5.78	19.81	I	C	SP	P
UPP	75.914	334.24	5.65	19.34	I	C	SP	P
JAS	76.188	53.62	5.65	19.34	I	D	SP	P
LRM	76.873	43.50	5.58	19.09	I	D	SP	P
BMN	76.971	50.09	5.58	19.09	I	D	SP	P
PRI	76.986	55.29	5.58	19.09	I	D	SP	P
KON	78.829	337.15	5.45	18.63	E	C	LP	P
BDW	80.334	44.78	5.31	18.14	I	D	SP	P
SNZO	80.717	154.94	5.31	18.14	E	C	LP	P
COP	80.862	333.35	5.26	17.96	E	C	LP	P
COP	80.862	333.35	5.26	17.96	I	C	SP	P
ANTO	81.335	312.30	5.22	17.82	E	C	LP	P
ANTO	81.335	312.30	5.22	17.82	I	C	SP	P
SPC	82.227	325.31	5.18	17.68	I	C	SP	P
JOS	82.564	324.67	5.15	17.57	I	C	SP	P
BRN	83.011	330.81	5.12	17.47	I	C	SP	P
PVL	83.753	318.49	5.06	17.25	I	C	SP	P
BRG	83.854	329.43	5.06	17.25	I	C	SP	P
CLL	83.924	330.17	5.06	17.25	I	C	SP	P
BUD	84.000	324.65	5.06	17.25	I	C	SP	P
PRU	84.254	328.54	5.02	17.11	I	C	SP	P
KDZ	84.638	317.26	5.02	17.11	I	C	SP	P
VIE	84.711	326.47	5.02	17.11	E	C	LP	P
GLD	84.780	45.11	4.99	17.01	I	D	SP	P
MOX	85.001	330.39	4.99	17.01	I	C	LP	P
HOF	85.146	330.05	4.99	17.01	I	C	SP	P
KHC	85.311	328.43	4.96	16.90	I	C	SP	P
WET	85.604	328.79	4.96	16.90	I	C	SP	P
WTS	85.829	333.60	4.91	16.73	I	C	SP	P

Table 111. Station data for event 43....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
GRFO	85.896	329.97	4.91	16.73	I	C	SP	P
GRF	85.894	329.97	4.91	16.73	I	C	SP	P
GRFO	85.896	329.97	4.91	16.73	E	C	LP	P
ESK	86.303	340.42	4.86	16.55	E	C	LP	P
SKO	86.586	319.47	4.86	16.55	I	C	SP	P
BHG	86.677	327.85	4.86	16.55	I	C	SP	P
FUR	87.041	328.96	4.83	16.45	I	C	SP	P
ANMO	87.085	49.44	4.83	16.45	E	C	LP	P
ENN	87.148	333.32	4.83	16.45	I	C	SP	P
MEM	87.244	333.18	4.83	16.45	I	C	SP	P
STU	87.448	330.42	4.80	16.34	E	C	LP	P
OGA	88.146	328.26	4.77	16.24	I	C	SP	P
HLW	88.359	305.07	4.75	16.17	I	C	LP	P
CTI	88.496	327.40	4.75	16.17	I	C	SP	P
CDF	88.514	331.20	4.75	16.17	I	C	SP	P
DMU	88.566	341.67	4.75	16.17	I	C	SP	P
ECH	88.718	331.15	4.75	16.17	I	C	SP	P
DLE	89.017	341.20	4.73	16.10	I	C	SP	P
BAF	89.088	331.01	4.73	16.10	I	C	SP	P
BSF	89.173	331.11	4.73	16.10	I	C	SP	P
HAU	89.211	331.46	4.73	16.10	I	C	SP	P
ARO	90.387	284.02	4.70	15.99	I	C	LP	P
FIR	90.413	326.15	4.70	15.99	I	C	SP	P
LOR	90.790	332.40	4.70	15.99	I	C	SP	P
SSF	91.097	332.48	4.70	15.99	I	C	SP	P
FLN	91.122	335.66	4.70	15.99	I	C	SP	P
SSC	91.145	335.35	4.70	15.99	I	C	SP	P
SMF	91.310	332.05	4.69	15.96	I	C	SP	P
AVF	91.380	332.41	4.69	15.96	I	C	SP	P
GRR	91.572	335.68	4.69	15.96	I	C	SP	P
LPF	91.941	335.60	4.67	15.89	I	C	SP	P
MZF	92.154	332.53	4.67	15.89	I	C	SP	P
TCF	92.237	332.79	4.67	15.89	I	C	SP	P
CVF	92.454	326.74	4.66	15.85	I	C	SP	P
LSF	92.527	333.16	4.66	15.85	I	C	SP	P
FRF	92.658	328.64	4.66	15.85	I	C	SP	P
MFF	92.847	334.33	4.65	15.82	I	C	SP	P
TUL	92.857	42.85	4.65	15.82	I	C	LP	P
LRG	92.867	328.74	4.65	15.82	I	C	SP	P
LMR	92.900	328.58	4.65	15.82	I	C	SP	P
RJF	93.326	332.66	4.63	15.75	I	C	SP	P
CAF	93.431	332.12	4.63	15.75	I	C	SP	P
JCT	94.236	49.09	4.61	15.68	I	C	SP	P
JCT	94.236	49.09	4.61	15.68	E	C	LP	P
EPF	95.697	332.15	4.56	15.50	I	C	SP	P
MRG	97.892	30.73	4.51	15.33	I	C	SP	P
WES	98.807	23.63	4.48	15.23	E	C	LP	P
BLA	99.697	32.40	4.47	15.19	E	C	LP	P
SHA	101.008	41.59	4.45	15.12	E	C	LP	Pdf
SLR	121.903	258.53	1.87	6.30	I	C	SP	PKP

Table 111. Station data for event 43....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SJG	122.446	30.95	1.87	6.30	E	C	LP	PKP
BOG	129.576	47.98	1.85	6.23	E	C	LP	PKP
BOCO	129.618	47.99	1.85	6.23	E	C	LP	PKP
LPB	148.802	64.22	1.59	5.34	I	C	SP	PKP

Table 112. Station data for event 45

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MAT	6.465	211.19	14.00	80.61	I	D	SP	P
SHK	10.754	228.10	13.53	72.45	I	D	LP	P
SEO	12.683	253.90	13.32	69.83	I	D	LP	P
SSE	20.211	243.76	10.41	47.19	I	D	SP	P
ANP	24.138	232.04	9.59	42.52	I	C	LP	P
TATO	24.313	231.76	9.52	42.14	I	C	LP	P
GUMO	28.546	174.90	9.10	39.89	I	C	LP	P
GUA	28.599	174.81	9.10	39.89	I	C	LP	P
PIP	30.113	224.54	8.90	38.84	I	C	SP	P
HKC	30.770	238.77	8.82	38.43	I	C	LP	P
BAG	31.740	222.61	8.78	38.22	I	C	LP	P
LGP	33.114	214.72	8.68	37.71	I	C	SP	P
PLP	34.411	211.25	8.58	37.20	I	C	SP	P
PAP	35.081	216.14	8.55	37.05	I	C	SP	P
KMI	36.726	255.18	8.47	36.65	I	C	LP	P
DAV	37.956	207.78	8.38	36.20	I	C	LP	P
CHG	43.453	251.19	8.07	34.66	I	C	SP	P
CHTO	43.453	251.19	8.07	34.66	E	C	LP	P
CHTO	43.453	251.19	8.07	34.66	I	C	SP	P
FBA	44.436	34.89	8.02	34.41	I	C	SP	P
COL	44.436	34.89	8.02	34.41	I	C	LP	P
RAB	46.979	166.56	7.87	33.68	I	C	LP	P
BKB	49.007	214.81	7.73	33.01	I	C	SP	P
INK	49.543	29.11	7.69	32.81	I	C	SP	P
SNG	50.692	238.63	7.61	32.43	I	C	LP	P
PMG	51.495	173.95	7.53	32.05	I	C	LP	P
NDI	53.569	277.72	7.37	31.29	I	C	SP	P
KIP	53.621	93.21	7.37	31.29	E	C	LP	P
HNR	53.804	158.32	7.33	31.10	I	C	LP	P
PSI	55.209	236.75	7.25	30.72	I	C	SP	P
MTN	55.691	193.29	7.21	30.54	I	C	SP	P
DAG	60.755	355.10	6.80	28.63	I	C	SP	P
POO	61.988	270.16	6.71	28.22	I	C	SP	P
CTA	62.027	175.86	6.71	28.22	I	C	LP	P
WB2	62.222	188.52	6.71	28.22	I	C	SP	P
KHI	63.834	293.28	6.55	27.49	I	C	SP	P
PVC	64.229	152.41	6.55	27.49	I	C	SP	P
COR	64.689	52.02	6.51	27.31	I	C	LP	P
KOU	65.605	157.41	6.43	26.94	I	C	SP	P
FHC	66.472	55.73	6.34	26.54	E	C	SP	P
WDC	67.488	55.21	6.26	26.18	E	C	SP	P
SES	67.806	41.49	6.22	26.00	I	C	SP	P
NOU	67.894	155.92	6.22	26.00	I	C	SP	P
MSO	68.584	45.78	6.18	25.82	I	C	SP	P
FCC	69.120	27.70	6.14	25.64	I	C	SP	P
BKS	69.309	57.37	6.10	25.46	E	C	LP	P
WBN	69.495	195.13	6.10	25.46	I	C	SP	P
TAB	69.586	303.12	6.10	25.46	I	C	LP	P
JAS	70.385	56.38	6.03	25.15	I	C	SP	P
SHI	70.679	292.70	6.03	25.15	I	C	SP	P

Table 112. Station data for event 45....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BMN	70.777	52.67	5.99	24.97	I	C	SP	P
KON	71.365	336.83	5.95	24.79	I	C	LP	P
BDW	73.587	46.87	5.81	24.17	I	C	SP	P
COP	73.698	333.09	5.81	24.17	I	C	LP	P
COP	73.698	333.09	5.81	24.17	I	C	SP	P
BHD	73.821	300.24	5.78	24.04	I	C	SP	P
PAS	74.210	58.23	5.78	24.04	I	C	LP	P
KLG	75.084	198.53	5.71	23.73	I	C	SP	P
RIV	76.038	172.46	5.64	23.42	I	C	LP	P
BRN	76.060	330.70	5.64	23.42	I	C	SP	P
JOS	76.209	324.41	5.64	23.42	I	C	SP	P
YOU	76.256	174.87	5.61	23.29	I	C	SP	P
HAM	76.356	332.99	5.61	23.29	I	C	SP	P
CLL	77.029	330.13	5.58	23.16	I	C	SP	P
BRG	77.027	329.37	5.58	23.16	I	C	LP	P
CAN	77.335	174.44	5.55	23.02	I	C	SP	P
PRU	77.508	328.51	5.55	23.02	I	C	SP	P
TIM	78.002	322.20	5.52	22.89	I	C	SP	P
MOX	78.080	330.46	5.52	22.89	I	C	LP	P
VIE	78.163	326.46	5.52	22.89	E	C	LP	P
NWAO	78.196	201.40	5.52	22.89	I	C	SP	P
NWAO	78.196	201.40	5.52	22.89	I	C	LP	P
SOP	78.528	326.00	5.48	22.72	I	C	SP	P
KHC	78.571	328.50	5.48	22.72	I	C	SP	P
WET	78.829	328.89	5.45	22.59	I	C	SP	P
DBN	79.062	334.72	5.45	22.59	I	C	LP	P
KDZ	79.081	317.15	5.45	22.59	I	C	SP	P
KMR	79.219	327.55	5.45	22.59	I	C	LP	P
BNS	79.379	333.03	5.41	22.41	I	C	SP	P
GRC1	79.468	329.54	5.41	22.41	I	C	SP	P
MEM	80.072	333.48	5.35	22.15	I	C	SP	P
UCC	80.446	334.49	5.30	21.93	E	C	LP	P
STU	80.515	330.71	5.30	21.93	I	C	LP	P
ANMO	80.765	50.90	5.26	21.76	I	C	LP	P
ALQ	80.768	50.91	5.26	21.76	E	C	LP	P
WLF	80.830	332.90	5.26	21.76	E	C	LP	P
DOU	80.977	334.00	5.26	21.76	E	C	LP	P
THE	81.032	317.83	5.26	21.76	I	C	SP	P
OGA	81.410	328.60	5.21	21.54	I	C	SP	P
ETA	81.705	341.29	5.21	21.54	I	C	SP	P
BAF	82.097	331.45	5.17	21.37	I	C	SP	P
ECB	82.145	341.49	5.17	21.37	I	C	SP	P
VDM	82.625	334.84	5.14	21.24	E	C	LP	P
ATH	82.652	315.62	5.14	21.24	I	C	SP	P
VAL	83.321	343.33	5.08	20.98	I	C	LP	P
LOR	83.671	333.00	5.08	20.98	I	C	LP	P
FIR	83.870	326.70	5.05	20.85	I	C	SP	P
GRC	83.910	333.48	5.05	20.85	I	C	SP	P
HLW	84.293	305.42	5.02	20.72	E	C	LP	P
RMP	84.880	324.70	4.99	20.59	I	C	SP	P

Table 112. Station data for event 45....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SSB	85.160	331.59	4.99	20.59	I	C	SP	P
TUL	85.880	43.74	4.90	20.20	I	C	LP	P
RLO	86.073	43.10	4.90	20.20	I	C	SP	P
GBO	86.236	43.40	4.90	20.20	I	C	SP	P
AAM	86.264	32.34	4.86	20.03	I	C	LP	P
UTO	86.835	32.63	4.83	19.90	I	C	SP	P
JCT	87.843	49.82	4.77	19.64	E	C	LP	P
SNZO	88.072	156.22	4.77	19.64	E	C	LP	P
ATX	89.058	48.65	4.73	19.47	I	C	SP	P
ARO	89.296	284.83	4.71	19.39	I	C	LP	P
SCP	89.768	29.36	4.71	19.39	I	C	LP	P
HKT	90.463	47.53	4.70	19.34	I	C	SP	P
WES	90.541	24.26	4.70	19.34	E	C	LP	P
PTO	93.034	338.46	4.64	19.09	E	C	LP	P
ALM	95.066	332.36	4.58	18.83	I	C	SP	P
LIS	95.443	337.98	4.56	18.74	I	C	SP	P
MAL	95.837	333.73	4.55	18.70	I	C	SP	P
SFS	96.658	334.96	4.54	18.66	I	C	SP	P
BEC	101.778	23.14	4.45	18.28	I	C	LP	Pdf
SJG	114.513	29.93	1.88	7.62	E	C	LP	PKP
CAR	121.111	34.19	1.87	7.58	I	C	SP	PKP
BOCO	122.921	44.81	1.87	7.57	I	C	LP	PKP
SPA	131.961	180.00	1.84	7.45	I	C	LP	PKP
ZOBO	143.284	54.59	1.72	6.97	E	C	SP	PKP
LPB	143.502	54.83	1.70	6.90	I	C	SP	PKP
PEL	152.469	81.83	1.50	6.05	I	C	SP	PKP
LPA	162.573	72.14	1.02	4.11	I	C	LP	PKP

Table 113. Station data for event 60

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SHK	7.557	259.96	13.95	78.37	I	C	LP	P
SSE	17.815	259.33	12.36	60.21	I	C	LP	P
BJI	20.426	288.55	10.30	46.32	I	C	LP	P
ANP	20.496	243.24	10.30	46.32	I	C	LP	P
TATO	20.643	242.82	10.30	46.32	I	C	LP	P
GUMO	22.687	172.00	9.84	43.70	I	D	LP	P
WHN	23.489	264.03	9.67	42.76	I	C	SP	P
HHC	23.972	290.36	9.60	42.38	I	C	SP	P
XAN	26.835	275.11	9.28	40.66	I	C	SP	P
BAG	27.215	229.14	9.28	40.66	I	C	LP	P
CCP	30.384	216.48	8.86	38.47	I	C	SP	P
LZH	30.449	281.19	8.86	38.47	I	C	LP	P
DAV	32.509	210.86	8.71	37.70	E	C	LP	P
KMI	35.076	262.72	8.56	36.94	I	C	SP	P
CHG	41.319	256.91	8.18	35.05	I	C	SP	P
CHTO	41.319	256.91	8.18	35.05	E	C	LP	P
CHG	41.319	256.91	8.18	35.05	I	C	LP	P
RAB	41.347	164.08	8.18	35.05	I	D	LP	P
SNG	47.315	242.51	7.84	33.40	I	C	LP	P
HNR	48.521	155.65	7.78	33.11	E	D	LP	P
COL	49.695	31.83	7.70	32.73	I	C	LP	P
TRT	51.501	217.97	7.54	31.96	I	C	SP	P
LEM	53.423	223.87	7.37	31.16	E	C	LP	P
KIP	54.049	88.43	7.33	30.97	E	D	LP	P
CTAO	56.132	174.85	7.18	30.27	E	C	LP	P
CTA	56.132	174.85	7.18	30.27	I	C	SP	P
WRA	56.257	188.33	7.14	30.09	I	C	SP	P
KAAO	57.940	291.59	7.03	29.58	I	C	LP	P
KBS	61.537	350.26	6.76	28.34	I	C	LP	P
TGI	65.985	294.14	6.39	26.66	I	C	SP	P
LON	68.658	47.19	6.18	25.72	I	D	LP	P
COR	68.845	49.76	6.14	25.54	E	D	LP	P
SUF	68.844	333.52	6.14	25.54	I	C	SP	P
YOU	70.377	174.13	6.03	25.05	I	C	SP	P
ADE	70.842	182.60	5.99	24.87	I	C	SP	P
LHD	71.454	43.44	5.96	24.74	I	D	LP	P
NWAO	72.465	201.43	5.88	24.38	I	C	LP	P
TAB	72.476	304.50	5.88	24.38	E	C	LP	P
BKS	73.037	55.36	5.85	24.25	E	D	LP	P
JAS	74.188	54.49	5.78	23.94	E	D	LP	P
KONO	76.649	337.21	5.61	23.20	I	C	LP	P
COP	78.788	333.45	5.45	22.50	I	C	LP	P
TAU	78.885	175.80	5.45	22.50	E	C	LP	P
CFR	79.222	318.70	5.45	22.50	I	C	SP	P
CLL	81.946	330.34	5.17	21.28	I	C	SP	P
PVL	82.180	318.62	5.17	21.28	I	C	SP	P
SNZO	82.844	155.57	5.11	21.03	E	D	LP	P
VIE	82.852	326.66	5.11	21.03	E	C	LP	P
MOX	83.015	330.61	5.11	21.03	I	C	LP	P
VTS	83.606	319.23	5.08	20.90	I	C	SP	P

Table 113. Station data for event 60....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
GRFO	83.923	330.21	5.05	20.77	I	C	LP	P
BHG	84.772	328.11	4.99	20.51	I	C	SP	P
ALQ	84.958	49.96	4.99	20.51	E	C	LP	P
ANMO	84.956	49.95	4.99	20.51	I	C	LP	P
SKO	84.974	319.71	4.99	20.51	I	C	SP	P
STU	85.460	330.71	4.96	20.38	I	C	LP	P
EPT	87.009	52.37	4.83	19.82	E	C	LP	P
BAF	87.082	331.35	4.83	19.82	I	C	SP	P
LOR	88.740	332.79	4.75	19.48	I	C	LP	P
VAL	88.875	343.07	4.73	19.40	I	C	LP	P
TUL	90.555	43.21	4.70	19.27	E	C	LP	P
GAC	91.855	25.07	4.67	19.14	E	C	LP	P
JCT	92.095	49.40	4.67	19.14	E	C	LP	P
SCP	95.217	29.06	4.58	18.76	I	C	LP	P
WES	96.187	23.96	4.55	18.63	I	C	LP	P
GEO	97.157	29.50	4.53	18.55	E	C	LP	P
TOL	98.000	334.06	4.51	18.46	I	C	SP	P
PTO	98.371	337.78	4.49	18.38	I	C	LP	P
BEC	107.456	23.21	1.89	7.63	E	C	LP	PKP
BUL	119.953	266.01	1.87	7.56	I	C	SP	PKP
SLR	122.946	260.50	1.87	7.54	E	C	LP	PKP
SPA	126.006	180.00	1.86	7.52	E	C	LP	PKP
BOCO	127.431	47.17	1.86	7.51	E	C	LP	PKP
ZOBO	146.899	61.01	1.64	6.61	I	C	LP	PKP
BDF	157.833	25.22	1.26	5.08	I	C	LP	PKP
LPA	163.965	91.19	0.96	3.88	I	C	LP	PKP
RDJ	166.076	19.21	0.85	3.43	I	C	LP	PKP

Table 114. Station data for event 69

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ONA	0.751	321.96	14.24	91.98	I	D	SP	P
MIT	0.817	272.00	14.24	91.98	I	D	SP	P
UTS	1.314	278.75	14.26	90.00	I	D	SP	P
FKS	1.616	330.33	14.25	90.00	I	D	SP	P
KMG	1.709	263.67	14.25	90.00	I	D	SP	P
YOK	1.745	238.89	14.25	90.00	I	C	LP	P
TAT	1.898	224.36	14.25	90.00	I	C	LP	P
SEN	1.959	346.42	14.25	90.00	I	D	SP	P
OSH	2.339	227.84	14.24	88.02	E	C	LP	P
AJI	2.342	236.76	14.24	88.02	E	C	LP	P
MIS	2.420	239.93	14.24	91.98	E	C	LP	P
NGN	2.666	277.55	14.23	87.08	I	D	SP	P
OFU	2.709	3.86	14.23	87.08	I	D	SP	P
FUK	4.262	267.51	14.17	83.98	E	C	LP	P
SHK	7.414	258.39	13.95	78.25	I	C	SP	P
CN2	14.341	306.14	13.03	66.13	I	C	SP	P
SSE	17.672	258.61	12.47	61.07	I	C	LP	P
BJI	20.208	288.16	10.43	47.05	I	C	LP	P
TATO	20.560	242.09	10.30	46.29	E	C	LP	P
GUMO	22.870	171.51	9.75	43.18	E	D	LP	P
XAN	26.645	274.70	9.33	40.90	I	C	SP	P
LZH	30.245	280.85	8.90	38.65	I	C	LP	P
CGP	31.702	212.94	8.78	38.04	I	C	SP	P
CD2	31.740	271.24	8.78	38.04	I	C	SP	P
KMI	34.922	262.33	8.56	36.92	I	C	LP	P
CHG	41.184	256.55	8.21	35.18	I	C	SP	P
CHTO	41.184	256.55	8.21	35.18	I	C	SP	P
WMQ	41.203	297.54	8.21	35.18	I	C	SP	P
BDT	42.028	254.57	8.15	34.89	I	C	SP	P
LSA	42.334	275.98	8.13	34.79	I	C	SP	P
TRT	51.519	217.65	7.54	31.95	I	C	SP	P
NDI	53.863	281.45	7.33	30.96	I	C	SP	P
INK	54.981	26.91	7.26	30.63	I	C	SP	P
KBL	57.717	291.41	7.07	29.75	I	C	SP	P
KOD	63.110	262.79	6.64	27.78	I	C	SP	P
MHI	63.980	297.10	6.55	27.37	I	C	LP	P
TGI	65.759	293.98	6.39	26.65	I	C	SP	P
LON	68.679	47.15	6.18	25.70	E	C	LP	P
YOU	70.554	173.95	6.03	25.04	I	C	SP	P
TAB	72.241	304.36	5.92	24.55	E	C	LP	P
UPP	73.596	334.09	5.81	24.06	I	C	SP	P
JAS	74.239	54.43	5.78	23.93	E	C	LP	P
FFC	74.253	32.63	5.75	23.80	I	C	SP	P
HRY	74.416	43.19	5.75	23.80	I	C	SP	P
FCC	74.591	26.48	5.75	23.80	I	C	SP	P
BBI	76.168	45.10	5.64	23.32	I	C	SP	P
ISA	76.830	55.44	5.58	23.06	I	C	SP	P
AKU	77.066	351.48	5.58	23.06	I	C	SP	P
COP	78.566	333.33	5.48	22.62	I	C	SP	P
REY	78.990	352.66	5.45	22.49	I	C	SP	P

Table 114. Station data for event 69....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MUD	79.100	335.29	5.45	22.49	I	C	SP	P
VRI	79.287	319.78	5.41	22.31	I	C	SP	P
KRA	79.696	326.06	5.41	22.31	I	C	SP	P
ANTO	79.769	312.19	5.36	22.10	E	C	LP	P
MLR	79.947	319.86	5.36	22.10	I	C	SP	P
JOS	80.535	324.66	5.31	21.88	I	C	SP	P
KSP	80.716	328.33	5.31	21.88	I	C	SP	P
KSA	81.591	305.85	5.21	21.45	I	C	SP	P
BRG	81.672	329.48	5.21	21.45	I	C	LP	P
CLL	81.720	330.23	5.21	21.45	I	C	SP	P
PVL	81.944	318.50	5.17	21.28	I	C	SP	P
BUD	81.971	324.69	5.17	21.28	I	C	SP	P
MOX	82.789	330.49	5.11	21.02	I	C	SP	P
KDZ	82.875	317.30	5.11	21.02	I	C	SP	P
HOF	82.944	330.15	5.11	21.02	I	C	SP	P
SOP	82.955	326.06	5.11	21.02	I	C	SP	P
KHC	83.159	328.53	5.11	21.02	I	C	SP	P
VTS	83.370	319.11	5.08	20.89	I	C	SP	P
WET	83.441	328.90	5.08	20.89	I	C	SP	P
GRF	83.695	330.09	5.08	20.89	I	C	SP	P
ESK	83.827	340.59	5.05	20.76	I	C	SP	P
BNS	84.234	332.94	5.05	20.76	I	C	SP	P
TNS	84.358	331.85	5.02	20.63	I	C	SP	P
BHG	84.543	327.99	5.02	20.63	I	C	SP	P
SKO	84.738	319.59	5.02	20.63	I	C	SP	P
ENN	84.851	333.48	4.99	20.50	I	C	SP	P
FUR	84.872	329.11	4.99	20.50	I	C	SP	P
LJU	85.105	326.03	4.99	20.50	I	C	SP	P
OHR	85.689	319.33	4.96	20.37	I	C	SP	P
GWF	85.683	331.55	4.96	20.37	I	C	SP	P
BUH	85.693	331.04	4.96	20.37	I	C	SP	P
SSB	89.922	331.18	4.71	19.30	I	C	SP	P
PEL	153.438	92.58	1.46	5.89	I	C	SP	PKP

Table 115. Station data for event 93

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
HJJ	0.781	157.61	16.96	95.82	I	D	SP	P
OSH	0.934	357.19	16.98	95.12	I	D	SP	P
AJI	1.246	347.16	14.28	123.11	I	D	SP	P
MIS	1.348	342.15	14.28	56.89	I	D	SP	P
SHZ	1.425	323.70	14.27	56.83	I	D	SP	P
OYM	1.598	354.40	14.27	123.17	I	D	SP	P
HMM	1.668	302.32	14.27	123.17	I	D	SP	P
SRY	1.783	355.81	14.27	123.17	I	D	SP	P
KOF	1.971	338.79	14.27	56.83	I	D	SP	P
IID	2.135	322.33	14.26	56.77	I	D	SP	P
DDR	2.176	354.85	14.26	123.23	I	D	SP	P
NAG	2.435	303.95	14.26	56.77	I	D	SP	P
TSK	2.443	12.93	14.26	56.77	I	C	SP	P
OWA	2.703	275.99	14.25	123.29	I	C	LP	P
MAJO	2.889	340.02	14.24	56.65	I	D	LP	P
MAT	2.889	340.02	14.24	56.65	I	D	SP	P
SHJ	3.085	264.00	14.24	56.65	E	C	LP	P
WKY	3.566	277.62	14.22	123.48	I	C	LP	P
KOB	3.627	284.90	14.22	123.48	E	C	LP	P
HIM	4.044	285.76	14.20	56.40	E	C	LP	P
OKA	4.650	282.11	14.17	56.22	E	C	LP	P
SHK	5.645	279.05	14.12	55.92	I	C	LP	P
SHN	7.064	273.39	14.02	55.32	E	C	LP	P
SEO	10.803	293.75	13.59	52.86	I	C	LP	P
SSE	15.644	264.98	12.88	49.07	I	C	SP	P
ANP	17.798	245.78	12.40	46.67	I	C	LP	P
TATO	17.933	245.26	12.40	46.67	I	C	LP	P
GUA	20.800	164.84	10.19	36.71	I	D	LP	P
BAG	24.261	229.01	9.54	34.03	I	C	LP	P
LZH	29.161	284.64	9.04	32.02	I	C	LP	P
DAV	29.533	208.83	8.98	31.79	I	C	LP	P
KMI	32.963	264.60	8.69	30.65	I	C	LP	P
CHG	38.985	257.86	8.32	29.21	E	C	LP	P
RAB	39.676	159.86	8.30	29.13	I	D	LP	P
BDT	39.756	255.72	8.27	29.02	I	D	SP	P
PMG	43.611	168.92	8.08	28.29	E	D	LP	P
SNG	44.571	242.41	8.02	28.06	I	C	LP	P
HNR	47.224	151.90	7.88	27.53	I	D	LP	P
IMA	50.272	29.20	7.62	26.55	I	C	SP	P
LEM	50.427	222.78	7.62	26.55	E	C	LP	P
FBA	52.680	30.82	7.46	25.95	I	C	SP	P
COL	52.680	30.82	7.46	25.95	I	C	LP	P
NDI	52.738	282.37	7.46	25.95	I	C	SP	P
CTA	53.997	172.07	7.34	25.50	I	D	LP	P
CTAO	53.997	172.07	7.34	25.50	I	D	LP	P
POO	59.900	273.03	6.88	23.80	I	C	SP	P
AFI	66.403	127.14	6.35	21.87	I	D	LP	P
RSNT	67.408	28.93	6.27	21.58	E	C	LP	P
YOU	68.256	172.03	6.19	21.29	I	D	SP	P
ADE	68.428	180.64	6.19	21.29	E	D	LP	P

Table 115. Station data for event 93....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
CAN	69.358	171.65	6.11	21.00	I	D	SP	P
NWAO	69.598	199.82	6.11	21.00	E	D	LP	P
LON	71.635	45.74	5.96	20.46	E	C	LP	P
COR	71.800	48.26	5.92	20.32	E	C	LP	P
WDC	74.311	51.58	5.75	19.71	I	C	SP	P
BKS	75.923	53.83	5.65	19.35	E	C	LP	P
GDH	76.793	4.71	5.58	19.11	I	D	SP	P
KON	78.089	336.51	5.52	18.89	I	D	SP	P
COP	80.050	332.66	5.36	18.33	I	D	SP	P
VRI	80.111	319.13	5.36	18.33	I	D	SP	P
MLR	80.774	319.18	5.26	17.97	I	D	SP	P
SNZO	81.502	153.90	5.22	17.83	I	D	LP	P
DMK	82.059	315.46	5.18	17.69	I	D	SP	P
RSSD	83.311	40.45	5.09	17.37	E	C	LP	P
RSON	83.573	30.69	5.09	17.37	E	C	LP	P
GOL	85.468	44.45	4.96	16.91	E	C	LP	P
HLW	87.146	304.23	4.83	16.46	I	D	LP	P
ANMO	87.908	48.62	4.77	16.25	E	C	LP	P
BNG	112.554	292.10	1.89	6.35	I	C	SP	PKP
BUL	117.883	263.51	1.88	6.32	E	C	LP	PKP
SLR	120.675	257.98	1.87	6.30	E	C	LP	PKP
ZOBO	149.667	61.63	1.56	5.25	E	C	LP	PKP
PEL	154.907	96.89	1.39	4.67	I	D	SP	PKP
LPA	165.611	99.17	0.85	2.87	E	C	LP	PKP

Table 116. Station data for event 116

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
TSK	0.376	24.66	7.26	148.62	I	C	SP	P
SRY	0.583	243.71	9.78	135.44	I	D	SP	P
DDR	0.601	282.62	9.95	134.50	I	D	SP	P
KYS	0.696	164.14	10.73	129.66	I	C	SP	P
OYM	0.708	230.94	10.82	129.11	I	D	SP	P
MAT	1.535	296.43	13.36	106.56	I	D	SP	P
SHK	6.075	259.42	13.87	84.17	I	D	LP	P
SHK	6.075	259.42	13.87	84.17	I	D	SP	P
SEO	10.534	283.07	13.45	74.79	I	D	LP	P
MDJ	11.762	321.10	13.30	72.57	I	C	SP	P
CN2	13.638	309.89	13.02	69.01	I	C	SP	P
SSE	16.332	258.41	12.55	64.20	I	C	LP	P
NJ2	17.878	263.77	12.26	61.59	I	C	SP	P
TIA	18.434	277.78	12.14	60.54	I	C	SP	P
ANP	19.065	241.11	10.43	48.46	E	C	LP	P
BJI	19.164	289.67	10.34	47.89	I	C	SP	P
TATO	19.214	240.67	10.32	47.74	E	C	LP	P
TIY	22.061	282.97	9.85	44.97	I	C	SP	P
GUA	22.683	167.31	9.75	44.34	E	C	LP	P
XAN	25.421	274.99	9.39	42.36	I	C	SP	P
BAG	25.924	226.63	9.35	42.09	E	C	LP	P
GZH	26.313	248.32	9.31	41.92	I	C	SP	P
LZH	29.091	281.19	8.98	40.07	I	C	LP	P
GYA	29.842	261.06	8.88	39.58	I	C	SP	P
CD2	30.480	271.17	8.84	39.35	I	C	SP	P
DAV	31.514	208.05	8.76	38.91	E	C	LP	P
GTA	31.772	288.59	8.74	38.84	I	C	SP	P
KMI	33.598	261.86	8.62	38.21	I	C	LP	P
CHG	39.835	255.83	8.26	36.32	I	C	LP	P
CHG	39.835	255.83	8.26	36.32	I	C	SP	P
WMQ	40.304	297.81	8.23	36.17	I	C	SP	P
SNG	45.886	241.09	7.93	34.64	E	C	LP	P
PKI	46.593	275.79	7.88	34.43	I	C	SP	P
KKN	46.608	276.13	7.88	34.43	I	C	SP	P
DMN	46.822	275.99	7.87	34.36	I	C	SP	P
KSH	49.800	294.41	7.65	33.30	I	C	SP	P
LEM	52.198	222.18	7.46	32.36	I	C	SP	P
NDI	52.712	281.07	7.42	32.16	I	C	SP	P
WB2	55.749	186.34	7.18	30.99	I	C	SP	P
CTAO	55.966	172.81	7.16	30.91	E	C	LP	P
CTA	55.966	172.81	7.16	30.91	I	C	SP	P
INK	55.985	26.62	7.16	30.90	I	C	SP	P
ISQ	56.267	180.41	7.14	30.82	I	C	SP	P
ASPA	59.476	186.40	6.90	29.67	I	C	SP	P
POO	60.205	272.12	6.84	29.39	I	C	SP	P
KOU	60.676	153.68	6.80	29.21	I	C	SP	P
KOD	61.788	262.03	6.72	28.80	I	C	SP	P
WBN	62.940	193.47	6.62	28.36	I	C	SP	P
MHI	63.067	296.68	6.61	28.32	I	C	LP	P
NOU	63.072	152.35	6.61	28.32	I	C	SP	P

Table 116. Station data for event 116....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BRS	64.071	167.29	6.53	27.94	I	C	SP	P
KEV	64.106	339.12	6.53	27.93	I	C	SP	P
KEV	64.106	339.12	6.53	27.93	I	C	LP	P
KHI	64.657	294.89	6.49	27.72	E	C	LP	P
MEK	65.331	201.04	6.43	27.47	I	C	SP	P
RSNT	65.436	29.49	6.42	27.44	E	C	LP	P
SOD	65.573	337.02	6.41	27.39	I	C	SP	P
DAG	66.842	354.77	6.30	26.87	I	C	SP	P
KJF	67.039	333.89	6.29	26.80	I	C	SP	P
CMS	67.222	174.52	6.27	26.73	I	C	SP	P
SUF	68.482	333.04	6.17	26.27	I	C	SP	P
KLG	68.523	197.03	6.17	26.25	I	C	SP	P
IR7	69.706	299.80	6.07	25.82	I	C	SP	P
LON	69.936	46.43	6.05	25.74	E	C	LP	P
YOU	70.223	172.56	6.03	25.65	I	C	SP	P
NUR	70.410	331.64	6.03	25.61	E	C	LP	P
NUR	70.410	331.64	6.03	25.61	I	C	SP	P
ADE	70.472	181.05	6.02	25.59	I	C	SP	P
EDM	71.012	37.52	5.98	25.39	I	C	SP	P
NWAO	71.649	199.98	5.93	25.17	E	C	LP	P
WAM	72.170	172.39	5.90	25.02	I	C	SP	P
WDC	72.742	52.25	5.85	24.83	I	C	SP	P
TOO	73.244	175.38	5.82	24.68	I	C	SP	P
UPP	73.470	333.57	5.80	24.59	I	C	SP	P
SES	73.830	39.05	5.78	24.49	I	C	SP	P
JAS	75.551	53.60	5.67	23.98	E	C	LP	P
JAS	75.551	53.60	5.67	23.98	I	C	SP	P
LRM	75.828	43.43	5.64	23.87	I	C	SP	P
KONO	76.378	336.52	5.61	23.71	I	C	LP	P
BER	77.116	338.72	5.56	23.51	I	C	LP	P
CLI	78.094	319.38	5.50	23.25	I	C	SP	P
ISA	78.148	54.59	5.50	23.23	I	C	SP	P
FRB	78.184	12.51	5.50	23.22	I	C	SP	P
COP	78.421	332.69	5.48	23.12	I	C	SP	P
TAU	78.685	174.46	5.46	23.04	I	C	LP	P
VRI	78.829	319.10	5.45	23.01	I	C	SP	P
ANTO	79.146	311.50	5.43	22.92	I	C	LP	P
KRA	79.381	325.38	5.41	22.83	I	C	SP	P
MLR	79.491	319.17	5.40	22.79	I	C	SP	P
SPC	79.844	324.61	5.36	22.59	I	C	SP	P
JOS	80.188	323.96	5.32	22.43	I	C	SP	P
COZ	80.449	319.80	5.29	22.31	I	C	SP	P
KSP	80.453	327.63	5.29	22.31	I	C	SP	P
BRL	80.508	330.14	5.29	22.29	I	C	SP	P
BRN	80.583	330.15	5.28	22.26	I	C	SP	P
PSZ	80.899	323.85	5.26	22.16	I	C	SP	P
HAM	81.063	332.37	5.24	22.09	I	C	SP	P
GZR	81.214	320.61	5.23	22.03	I	C	SP	P
BRG	81.436	328.76	5.21	21.92	I	C	SP	P
PVL	81.457	317.76	5.20	21.91	I	C	SP	P

Table 116. Station data for event 116....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
CLL	81.501	329.50	5.20	21.90	I	C	SP	P
RSSD	81.506	40.87	5.20	21.89	E	C	LP	P
VIE	82.317	325.80	5.14	21.63	E	C	LP	P
KDZ	82.361	316.54	5.14	21.62	I	C	SP	P
MOX	82.576	329.74	5.13	21.57	I	C	SP	P
HOF	82.723	329.40	5.12	21.54	I	C	SP	P
VTS	82.896	318.34	5.12	21.52	I	C	SP	P
WET	83.191	328.13	5.10	21.44	I	C	SP	P
WTS	83.387	332.97	5.08	21.36	I	C	SP	P
GRF	83.472	329.32	5.07	21.33	I	C	SP	P
GRFO	83.474	329.32	5.07	21.33	E	C	LP	P
BNS	84.078	332.16	5.03	21.17	I	C	SP	P
BHG	84.271	327.20	5.02	21.12	I	C	SP	P
STB	84.501	332.11	5.01	21.06	I	C	SP	P
KBA	84.551	326.53	5.01	21.04	I	C	SP	P
FUR	84.626	328.31	5.00	21.02	I	C	SP	P
BGG	84.623	331.62	5.00	21.02	I	C	SP	P
KLL	84.660	332.41	5.00	21.01	I	C	SP	P
LJU	84.788	325.23	4.99	20.98	I	C	SP	P
STU	85.023	329.78	4.98	20.92	I	C	SP	P
CEY	85.065	325.08	4.97	20.91	I	C	SP	P
LHC	85.342	30.39	4.96	20.85	I	C	SP	P
GWF	85.494	330.73	4.95	20.79	I	C	SP	P
OGA	85.737	327.62	4.92	20.68	I	C	SP	P
CDF	86.084	330.57	4.88	20.49	I	C	SP	P
DMU	86.116	341.06	4.88	20.48	I	C	SP	P
ANMO	86.267	48.96	4.87	20.43	E	C	LP	P
HLW	86.324	304.39	4.86	20.41	I	C	SP	P
ZUL	86.374	329.41	4.86	20.39	E	C	LP	P
DDK	86.422	340.52	4.86	20.38	I	C	SP	P
DLE	86.566	340.59	4.84	20.33	I	C	SP	P
DCN	86.711	341.01	4.84	20.29	I	C	SP	P
BSF	86.743	330.49	4.83	20.29	I	C	SP	P
HAU	86.780	330.83	4.83	20.28	I	C	SP	P
DIX	87.897	329.10	4.77	20.03	E	C	LP	P
LOR	88.354	331.78	4.75	19.91	I	C	SP	P
FLN	88.674	335.04	4.73	19.84	I	C	SP	P
LDF	88.695	334.75	4.73	19.83	I	C	SP	P
SMF	88.875	331.44	4.72	19.80	I	C	SP	P
AVF	88.944	331.80	4.72	19.79	I	C	SP	P
ARO	88.979	283.39	4.72	19.79	I	C	LP	P
GRR	89.124	335.06	4.72	19.77	I	C	SP	P
MZF	89.717	331.92	4.71	19.74	I	C	SP	P
TCF	89.799	332.18	4.71	19.75	I	C	SP	P
LSF	90.087	332.56	4.71	19.74	I	C	SP	P
FRF	90.245	328.04	4.71	19.73	I	C	SP	P
MFF	90.403	333.72	4.70	19.71	I	C	SP	P
LRG	90.454	328.14	4.70	19.70	I	C	SP	P
LMR	90.487	327.98	4.70	19.70	I	C	SP	P
RJF	90.888	332.05	4.69	19.67	I	C	SP	P

Table 116. Station data for event 116....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
CAF	90.996	331.52	4.69	19.66	I	C	SP	P
LFF	91.495	332.32	4.68	19.61	I	C	SP	P
LPO	91.538	331.92	4.68	19.61	I	C	SP	P
TUL	91.775	42.15	4.68	19.60	I	C	LP	P
RLO	92.001	41.51	4.67	19.57	I	C	SP	P
GAC	92.751	23.98	4.64	19.46	E	C	LP	P
EPF	93.262	331.56	4.64	19.42	I	C	SP	P
SCP	96.193	27.90	4.53	18.98	E	C	LP	P
TOL	97.643	332.82	4.51	18.89	E	C	LP	P
BNG	112.135	293.21	1.89	7.79	I	C	SP	PKP
MTD	114.335	266.40	1.88	7.76	I	C	SP	PKP
SLR	121.464	259.41	1.87	7.71	I	C	SP	PKP
VIR	123.651	257.62	1.87	7.70	I	C	SP	PKP
ARE	146.043	63.53	1.66	6.84	I	C	SP	PKP
ZOBO	148.316	59.28	1.61	6.61	I	C	LP	PKP
ZOBO	148.316	59.28	1.61	6.61	I	C	SP	PKP
PEL	154.684	92.78	1.40	5.76	I	C	SP	PKP

Table 117. Station data for event 143

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ASA	2.515	336.37	14.25	99.93	I	D	SP	P
ISN	3.584	212.65	14.22	79.40	I	D	SP	P
ONA	5.036	207.06	14.15	77.99	I	D	SP	P
MIT	5.698	207.83	14.12	77.43	I	D	SP	P
KMG	6.322	214.14	14.05	76.21	I	D	SP	P
TAT	7.167	206.56	14.01	75.56	E	C	LP	P
OSK	9.365	225.61	13.76	72.01	I	D	SP	P
TOT	9.582	234.70	13.76	72.01	I	C	SP	P
WKY	9.922	225.96	13.70	71.26	I	C	LP	P
TKS	10.366	227.45	13.64	70.53	I	D	SP	P
MRT	11.199	225.93	13.58	69.83	I	D	SP	P
MTY	11.561	232.31	13.51	69.04	I	D	SP	P
OIT	12.676	233.45	13.37	67.54	I	D	SP	P
FKK	13.215	237.71	13.29	66.73	I	D	SP	P
SEO	13.541	258.75	13.21	65.94	I	C	LP	P
NGS	14.095	236.22	13.13	65.17	I	D	SP	P
KAG	14.489	231.23	13.05	64.43	I	D	SP	P
FKJ	14.772	238.44	12.96	63.62	I	D	SP	P
SSE	20.885	247.51	10.17	44.67	I	D	SP	P
BJI	20.920	275.24	10.17	44.67	I	D	SP	P
TIA	21.366	264.50	10.06	44.06	I	D	SP	P
NJ2	21.998	252.72	9.95	43.45	I	D	SP	P
TIY	24.364	271.50	9.54	41.26	I	D	SP	P
ANP	24.580	235.56	9.54	41.26	I	D	LP	P
WHN	26.057	254.71	9.38	40.42	I	D	SP	P
GUMO	27.796	177.70	9.19	39.44	I	C	LP	P
GUA	27.846	177.61	9.19	39.44	E	N	LP	P
XAN	28.389	266.27	9.11	39.03	I	D	SP	P
GZH	31.353	243.66	8.79	37.42	I	D	SP	P
LZH	31.382	273.39	8.79	37.42	I	D	SP	P
BAG	31.977	225.52	8.75	37.22	I	D	LP	P
GTA	33.249	281.27	8.68	36.87	I	D	SP	P
CD2	33.700	264.81	8.65	36.72	I	D	SP	P
GYA	33.936	255.61	8.62	36.57	I	D	SP	P
KMI	37.582	257.32	8.41	35.54	I	D	SP	P
DAV	37.866	210.31	8.38	35.40	I	D	LP	P
WMQ	40.641	292.76	8.24	34.72	I	D	SP	P
LSA	43.764	271.81	8.05	33.81	I	D	SP	P
CHG	44.242	253.14	8.05	33.81	I	D	LP	P
COL	44.401	34.55	8.02	33.67	I	D	SP	P
COL	44.401	34.55	8.02	33.67	I	D	LP	P
PCT	45.283	246.57	7.96	33.38	I	D	SP	P
RAB	46.083	168.32	7.94	33.29	I	D	LP	P
MDG	46.527	177.23	7.91	33.15	I	D	SP	P
KKN	49.158	273.26	7.74	32.34	I	D	SP	P
PKI	49.178	272.93	7.74	32.34	I	D	SP	P
DMN	49.385	273.16	7.70	32.16	I	D	SP	P
INK	49.633	28.98	7.70	32.16	I	D	SP	P
KSH	50.394	291.51	7.62	31.78	I	D	SP	P
PMG	50.718	175.68	7.62	31.78	E	D	LP	P

Table 117. Station data for event 143....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SNG	51.249	240.47	7.58	31.60	I	D	LP	P
HON	52.598	93.77	7.46	31.04	E	N	LP	P
HNR	52.790	159.80	7.42	30.86	E	D	LP	P
ALE	55.590	4.04	7.22	29.94	I	D	SP	P
TRT	56.650	217.83	7.14	29.57	I	D	SP	P
KEV	59.958	338.95	6.88	28.40	I	D	LP	P
HYB	60.194	267.32	6.88	28.40	I	D	SP	P
CTA	61.281	177.33	6.76	27.86	I	D	LP	P
CTAO	61.281	177.33	6.76	27.86	I	D	LP	P
SOD	61.600	336.95	6.76	27.86	I	D	SP	P
WB2	61.716	190.06	6.76	27.86	I	D	SP	P
POO	63.046	271.44	6.64	27.32	I	D	SP	P
PVC	63.143	153.65	6.64	27.32	I	D	SP	P
MHI	63.294	295.86	6.60	27.14	I	D	LP	P
KJF	63.340	333.90	6.60	27.14	I	D	LP	P
LON	63.956	49.74	6.56	26.97	I	D	LP	P
COR	64.279	52.39	6.52	26.79	I	D	SP	P
COR	64.279	52.39	6.52	26.79	I	D	LP	P
EDM	64.768	40.40	6.47	26.57	I	D	SP	P
SUF	64.854	333.18	6.47	26.57	I	D	SP	P
ASPA	65.442	189.94	6.43	26.39	I	D	SP	P
NEW	65.720	46.37	6.43	26.39	I	D	SP	P
NOU	66.849	157.14	6.31	25.86	I	D	SP	P
NUR	66.901	331.96	6.31	25.86	I	D	LP	P
SES	67.619	41.92	6.27	25.68	I	D	SP	P
AFI	68.695	133.11	6.18	25.29	I	C	LP	P
GDH	68.862	6.52	6.14	25.11	I	D	SP	P
NAU	68.867	207.99	6.14	25.11	I	D	SP	P
GDH	68.862	6.52	6.14	25.11	I	D	LP	P
FFC	69.011	34.51	6.14	25.11	I	D	SP	P
IR7	69.539	299.84	6.10	24.94	I	D	SP	P
UPP	69.769	334.25	6.07	24.81	I	D	SP	P
JAS	69.885	56.90	6.07	24.81	I	D	LP	P
JAS	69.885	56.90	6.07	24.81	I	D	SP	P
TAB	70.838	304.04	5.99	24.46	I	D	LP	P
KONO	72.402	337.53	5.89	24.03	I	D	LP	P
KON	72.402	337.53	5.89	24.03	I	D	LP	P
STK	73.009	181.93	5.85	23.85	I	D	SP	P
PAS	73.673	58.84	5.82	23.72	I	D	SP	P
COP	74.779	333.85	5.71	23.25	I	D	SP	P
COP	74.779	333.85	5.71	23.25	I	D	LP	P
KLG	74.782	199.79	5.71	23.25	I	D	SP	P
RSON	75.282	33.54	5.68	23.12	I	D	LP	P
RSSD	75.339	43.58	5.68	23.12	I	D	LP	P
YOU	75.491	176.05	5.68	23.12	I	D	SP	P
CEA	76.078	321.39	5.64	22.95	I	C	SP	P
ADE	76.200	184.27	5.64	22.95	I	D	SP	P
KRA	76.429	326.57	5.61	22.82	I	D	SP	P
VRI	76.515	320.21	5.61	22.82	I	D	SP	P
CAN	76.562	175.60	5.61	22.82	I	D	SP	P

Table 117. Station data for event 143....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
CVO	76.814	320.46	5.58	22.69	I	C	SP	P
SPC	76.967	325.84	5.58	22.69	I	D	SP	P
BRL	77.092	331.48	5.58	22.69	I	D	SP	P
BRN	77.166	331.49	5.58	22.69	I	D	SP	P
MLR	77.166	320.35	5.58	22.69	I	D	SP	P
KSP	77.277	328.94	5.55	22.56	I	D	SP	P
JOS	77.372	325.23	5.55	22.56	I	D	SP	P
HAM	77.438	333.78	5.55	22.56	I	D	SP	P
ANTO	77.634	312.63	5.55	22.56	I	D	LP	P
GOL	77.693	47.55	5.55	22.56	I	D	LP	P
NWAO	77.955	202.59	5.52	22.43	I	D	LP	P
NWAO	77.955	202.59	5.52	22.43	I	D	SP	P
PSZ	78.091	325.19	5.52	22.43	I	D	SP	P
CLL	78.141	330.93	5.52	22.43	I	D	SP	P
BRG	78.146	330.18	5.52	22.43	I	D	SP	P
EDU	78.403	341.95	5.49	22.30	I	D	SP	P
ELO	78.635	342.28	5.49	22.30	I	D	SP	P
PRU	78.636	329.33	5.49	22.30	I	D	SP	P
TOO	78.673	178.60	5.49	22.30	I	D	SP	P
GPA	78.694	314.30	5.49	22.30	I	D	SP	P
EBH	78.791	342.08	5.45	22.13	I	D	SP	P
BUD	78.801	325.37	5.45	22.13	I	D	SP	P
ESY	78.881	341.47	5.45	22.13	I	D	SP	P
DMK	78.938	316.80	5.45	22.13	I	D	SP	P
EDI	79.012	341.77	5.45	22.13	I	D	SP	P
EAB	79.036	342.49	5.45	22.13	I	D	SP	P
EBL	79.115	341.64	5.45	22.13	I	D	SP	P
EAU	79.147	341.88	5.45	22.13	I	D	SP	P
PVL	79.267	319.15	5.41	21.96	I	D	SP	P
VKA	79.314	327.32	5.41	21.96	I	D	SP	P
HOF	79.368	330.94	5.41	21.96	I	D	SP	P
ESK	79.569	341.53	5.41	21.96	I	D	LP	P
ESK	79.569	341.53	5.41	21.96	I	D	SP	P
ECK	79.674	341.43	5.41	21.96	I	D	SP	P
ALT	79.680	313.53	5.41	21.96	I	D	SP	P
WTS	79.698	334.60	5.41	21.96	I	D	SP	P
EDC	79.952	315.71	5.36	21.75	I	D	SP	P
WET	79.953	329.72	5.36	21.75	I	D	SP	P
DBN	80.125	335.53	5.36	21.75	I	D	LP	P
GRF	80.120	330.94	5.36	21.75	I	D	SP	P
GRFO	80.122	330.94	5.36	21.75	I	D	LP	P
KDZ	80.294	318.02	5.31	21.53	I	D	SP	P
KMR	80.355	328.39	5.31	21.53	I	D	LP	P
ANMO	80.375	51.64	5.31	21.53	I	D	LP	P
TNS	80.659	332.75	5.31	21.53	I	C	SP	P
STB	80.886	333.84	5.26	21.32	I	D	SP	P
ENN	81.039	334.43	5.26	21.32	I	D	SP	P
BGG	81.052	333.36	5.26	21.32	I	D	SP	P
EZN	81.137	316.23	5.26	21.32	I	D	SP	P
FUR	81.365	330.04	5.22	21.15	I	D	SP	P

Table 117. Station data for event 143....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ELL	81.442	312.02	5.22	21.15	I	D	SP	P
PRK	81.592	315.86	5.22	21.15	I	D	SP	P
STU	81.621	331.55	5.22	21.15	I	D	LP	P
IZM	81.692	314.71	5.22	21.15	I	D	SP	P
DMU	81.725	342.97	5.22	21.15	I	D	SP	P
LJU	81.824	326.97	5.18	20.98	I	D	SP	P
VAY	81.913	319.40	5.18	20.98	I	D	SP	P
SKO	81.963	320.47	5.18	20.98	I	D	SP	P
GWF	82.001	332.55	5.18	20.98	I	D	SP	P
GAP	82.016	329.77	5.18	20.98	I	D	SP	P
BUH	82.046	332.04	5.18	20.98	I	D	SP	P
DOU	82.047	334.84	5.18	20.98	E	D	LP	P
CEY	82.114	326.85	5.18	20.98	I	D	SP	P
DLE	82.211	342.53	5.18	20.98	I	D	SP	P
DCN	82.322	342.96	5.14	20.81	I	D	SP	P
TRI	82.409	327.21	5.14	20.81	I	D	SP	P
OGA	82.537	329.45	5.14	20.81	I	D	SP	P
EPT	82.558	53.96	5.14	20.81	I	D	LP	P
CDF	82.603	332.44	5.14	20.81	I	D	SP	P
ETA	82.684	342.12	5.14	20.81	I	D	SP	P
ECH	82.812	332.41	5.11	20.68	I	D	SP	P
OHR	82.932	320.29	5.11	20.68	I	D	SP	P
CTI	82.975	328.63	5.11	20.68	I	D	SP	P
KZN	83.079	319.20	5.11	20.68	I	D	SP	P
ECB	83.121	342.32	5.11	20.68	I	D	SP	P
ECP	83.199	342.01	5.11	20.68	I	D	SP	P
BSF	83.268	332.42	5.08	20.56	I	D	SP	P
HAU	83.273	332.77	5.08	20.56	I	D	SP	P
SAL	83.778	329.04	5.05	20.43	I	D	SP	P
ATH	83.873	316.52	5.05	20.43	I	D	SP	P
KRP	84.171	155.25	5.05	20.43	I	C	SP	P
VAL	84.271	344.18	5.02	20.30	I	D	LP	P
ORO	84.726	330.56	5.02	20.30	I	C	SP	P
LOR	84.752	333.86	4.99	20.18	I	D	SP	P
FLN	84.779	337.15	4.99	20.18	I	D	SP	P
LDF	84.825	336.86	4.99	20.18	I	C	SP	P
LCI	84.888	321.51	4.99	20.18	I	D	SP	P
NPS	84.898	313.58	4.99	20.18	I	D	SP	P
FIR	85.014	327.58	4.99	20.18	I	D	SP	P
SSF	85.050	333.97	4.99	20.18	I	D	SP	P
GRR	85.226	337.21	4.99	20.18	I	D	SP	P
AQU	85.298	325.47	4.96	20.05	I	D	SP	P
VLS	85.302	318.55	4.96	20.05	I	D	SP	P
SMF	85.303	333.57	4.96	20.05	I	D	SP	P
DUI	85.407	324.43	4.96	20.05	I	D	SP	P
LPF	85.600	337.17	4.96	20.05	I	D	SP	P
TUL	85.640	44.58	4.96	20.05	I	D	LP	P
BGF	85.709	334.13	4.96	20.05	I	D	SP	P
ORI	85.811	322.25	4.90	19.80	I	D	SP	P
SGO	85.922	323.26	4.90	19.80	I	D	SP	P

Table 117. Station data for event 143....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MZF	86.097	334.13	4.90	19.80	I	D	SP	P
TCF	86.155	334.39	4.90	19.80	I	D	SP	P
LSF	86.408	334.79	4.86	19.63	I	D	SP	P
GAC	86.408	26.37	4.86	19.63	I	D	LP	P
UTO	86.836	33.50	4.83	19.50	I	D	SP	P
CVF	86.979	328.39	4.83	19.50	I	D	SP	P
FRF	86.985	330.30	4.83	19.50	I	D	SP	P
SNZO	87.028	157.18	4.83	19.50	I	D	LP	P
LRG	87.182	330.43	4.83	19.50	I	D	SP	P
MNT	87.193	25.31	4.83	19.50	I	D	SP	P
LMR	87.231	330.27	4.83	19.50	I	D	SP	P
RJF	87.251	334.37	4.80	19.38	I	D	SP	P
CAF	87.407	333.85	4.80	19.38	I	D	SP	P
RSNY	87.743	26.33	4.80	19.38	I	D	LP	P
LFF	87.831	334.69	4.77	19.25	I	D	SP	P
LPO	87.911	334.29	4.77	19.25	I	D	SP	P
MEI	88.731	321.38	4.75	19.17	I	D	SP	P
INY	88.916	28.58	4.73	19.08	I	D	SP	P
EPF	89.661	334.09	4.71	19.00	I	D	SP	P
SCP	89.840	30.29	4.71	19.00	I	D	LP	P
MRG	90.024	32.26	4.71	19.00	I	C	SP	P
ARO	90.489	285.76	4.70	18.96	I	D	SP	P
WES	90.724	25.21	4.70	18.96	I	D	LP	P
RSCP	90.959	38.20	4.70	18.96	I	D	LP	P
LGR	91.083	335.73	4.70	18.96	I	D	SP	P
GEO	91.789	30.69	4.67	18.83	I	D	LP	P
PTO	94.050	339.44	4.61	18.58	E	D	LP	P
ALM	96.153	333.35	4.55	18.33	I	C	SP	P
BEC	101.983	24.33	4.45	17.91	I	D	LP	P
BNG	112.423	298.21	1.89	7.51	I	D	SP	PKP
MTD	117.455	271.48	1.88	7.46	I	D	SP	PKP
KRI	118.964	272.77	1.88	7.45	I	C	SP	PKP
BUL	121.729	270.42	1.87	7.43	I	D	SP	PKP
CNG	122.595	262.27	1.87	7.42	I	D	SP	PKP
EVA	125.034	263.93	1.87	7.41	I	C	SP	PKP
KSR	126.313	265.91	1.86	7.40	I	C	SP	PKP
SEK	127.101	262.91	1.86	7.39	I	D	SP	PKP
SWZ	128.210	265.51	1.86	7.38	I	D	SP	PKP
BLF	128.586	262.91	1.86	7.37	I	D	SP	PKP
TLL	149.970	79.09	1.56	6.19	I	D	SP	PKP
JACH	151.368	83.35	1.53	6.07	I	D	SP	PKP
RDJ	160.570	19.71	1.12	4.44	I	D	SP	PKP
LPA	161.752	76.01	1.07	4.24	E	D	LP	PKP

Table 118. Station data for event 153

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MAJO	3.976	190.43	14.20	56.43	E	N	LP	P
MAT	3.976	190.43	14.20	56.43	I	C	SP	P
SHK	7.815	222.80	13.93	54.82	I	D	LP	P
CN2	10.676	292.68	13.65	53.22	I	D	SP	P
BJI	17.505	276.08	12.50	47.18	I	D	SP	P
TIA	17.747	263.22	12.50	47.18	I	D	SP	P
ANP	21.165	229.31	10.18	36.68	I	C	LP	P
TATO	21.341	229.00	10.06	36.18	E	N	LP	P
QZH	23.098	234.18	9.77	34.98	I	C	SP	P
GUMO	27.242	167.68	9.29	33.03	E	C	LP	P
GUA	27.298	167.60	9.24	32.83	E	C	LP	P
GZH	27.770	239.20	9.19	32.63	I	C	SP	P
LZH	27.906	272.43	9.19	32.63	I	C	SP	P
BAG	28.852	219.19	9.04	32.04	I	C	LP	P
KMI	33.912	254.44	8.62	30.38	E	C	LP	P
WMQ	37.770	292.52	8.38	29.45	I	C	SP	P
LSA	40.250	269.95	8.27	29.03	I	C	SP	P
CHG	40.574	249.91	8.24	28.91	I	C	LP	P
CHTO	40.574	249.91	8.24	28.91	E	D	LP	P
TTA	43.701	36.84	8.08	28.30	I	C	SP	P
SVW	43.946	39.48	8.05	28.19	I	C	SP	P
IMA	44.712	32.32	8.02	28.07	I	C	SP	P
KDC	45.882	43.99	7.94	27.77	I	C	SP	P
RAB	46.020	161.74	7.94	27.77	I	C	SP	P
BKB	46.244	211.64	7.94	27.77	I	C	SP	P
FBA	47.220	33.79	7.88	27.54	I	C	SP	P
COL	47.220	33.79	7.88	27.54	I	C	SP	P
COL	47.220	33.79	7.88	27.54	I	C	LP	P
SNG	47.711	236.59	7.85	27.43	I	C	LP	P
PMG	50.168	169.63	7.66	26.71	E	C	LP	P
NDI	51.352	277.11	7.54	26.26	I	C	SP	P
INK	52.206	28.06	7.50	26.11	I	C	SP	P
LEM	55.260	219.13	7.22	25.06	I	C	LP	P
HON	56.094	89.92	7.18	24.92	I	C	LP	P
KEV	59.603	338.04	6.92	23.96	I	C	LP	P
WB2	60.247	185.15	6.88	23.81	I	C	SP	P
MHI	60.519	294.10	6.84	23.66	E	C	LP	P
CTAO	60.595	172.28	6.84	23.66	I	C	LP	P
CTA	60.595	172.28	6.84	23.66	I	C	LP	P
RSNT	61.782	30.40	6.72	23.22	I	C	LP	P
KOD	61.908	259.05	6.72	23.22	I	C	SP	P
KJF	62.654	332.69	6.68	23.08	I	C	LP	P
PVC	63.957	148.82	6.56	22.64	I	C	SP	P
NUR	66.086	330.48	6.39	22.02	I	C	LP	P
NAU	66.416	203.82	6.35	21.88	I	C	SP	P
IR7	66.933	297.82	6.31	21.73	I	C	SP	P
WBN	67.268	192.20	6.27	21.59	I	C	SP	P
LON	67.271	47.41	6.27	21.59	I	C	LP	P
NOU	67.435	152.57	6.27	21.59	I	C	SP	P
COR	67.663	49.98	6.27	21.59	I	C	SP	P

Table 118. Station data for event 153....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
COR	67.663	49.98	6.27	21.59	I	C	LP	P
TAB	68.429	302.03	6.18	21.26	I	C	LP	P
MEK	69.409	199.62	6.11	21.01	I	D	SP	P
LGBM	70.223	52.28	6.07	20.87	I	C	SP	P
AFI	70.697	128.93	6.03	20.72	I	C	LP	P
AFI	70.697	128.93	6.03	20.72	I	C	SP	P
ORV	71.725	53.45	5.96	20.47	I	C	SP	P
FCC	71.741	26.07	5.96	20.47	I	C	SP	P
KONO	71.926	335.66	5.92	20.33	E	C	LP	P
BER	72.618	337.92	5.89	20.22	I	C	LP	P
AKU	72.721	350.33	5.89	20.22	I	C	LP	P
LRM	72.954	43.94	5.85	20.08	I	C	SP	P
JAS	73.368	54.24	5.82	19.97	I	C	SP	P
JAS	73.368	54.24	5.82	19.97	I	C	LP	P
COP	74.064	331.80	5.78	19.83	I	C	LP	P
MNA	74.462	52.67	5.75	19.72	I	C	SP	P
MUD	74.593	333.80	5.75	19.72	I	C	SP	P
YOU	74.853	172.05	5.71	19.58	I	C	SP	P
VRI	74.967	318.01	5.71	19.58	I	C	SP	P
MUN	75.119	200.00	5.71	19.58	I	C	LP	P
KRA	75.260	324.40	5.68	19.47	I	C	SP	P
MLR	75.625	318.11	5.68	19.47	I	C	SP	P
ANTO	75.657	310.32	5.68	19.47	E	C	LP	P
SPC	75.752	323.64	5.65	19.36	I	C	SP	P
NWAO	75.761	198.86	5.65	19.36	I	C	LP	P
CAN	75.950	171.67	5.65	19.36	I	C	SP	P
JOS	76.120	323.00	5.65	19.36	I	C	SP	P
BRL	76.225	329.28	5.65	19.36	I	C	SP	P
KSP	76.252	326.73	5.61	19.22	I	C	SP	P
BRN	76.299	329.29	5.61	19.22	I	C	SP	P
BDW	76.529	44.85	5.61	19.22	I	C	SP	P
HAM	76.713	331.56	5.61	19.22	I	C	SP	P
PSZ	76.836	322.91	5.58	19.11	I	C	SP	P
BRG	77.196	327.91	5.58	19.11	I	C	SP	P
CLL	77.237	328.66	5.58	19.11	I	C	SP	P
PRU	77.631	327.03	5.55	19.01	I	C	SP	P
PVL	77.652	316.77	5.55	19.01	I	C	SP	P
ALT	77.749	311.11	5.55	19.01	I	C	SP	P
RSON	78.022	31.07	5.52	18.90	I	C	LP	P
RSON	78.022	31.07	5.52	18.90	I	C	SP	P
EDC	78.141	313.28	5.52	18.90	I	C	SP	P
DST	78.221	312.32	5.52	18.90	I	C	SP	P
MOX	78.304	328.94	5.49	18.79	I	C	SP	P
RSSD	78.461	40.98	5.49	18.79	I	C	LP	P
HOF	78.462	328.59	5.49	18.79	I	C	SP	P
BCK	78.545	309.65	5.49	18.79	I	C	SP	P
KHC	78.693	326.96	5.49	18.79	I	C	SP	P
GRFO	79.215	328.55	5.45	18.65	I	C	LP	P
KMR	79.290	325.97	5.41	18.51	I	C	LP	P
ESK	79.332	339.16	5.41	18.51	I	C	SP	P

Table 118. Station data for event 153....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ESK	79.332	339.16	5.41	18.51	I	C	LP	P
EZN	79.353	313.73	5.41	18.51	I	C	SP	P
ELL	79.427	309.49	5.41	18.51	I	C	SP	P
JER	79.488	302.76	5.41	18.51	I	C	SP	P
BNS	79.734	331.43	5.41	18.51	I	C	SP	P
IZM	79.823	312.18	5.36	18.33	I	C	SP	P
GLA	80.015	55.03	5.36	18.33	I	C	SP	P
BHG	80.082	326.43	5.36	18.33	I	C	SP	P
YER	80.111	310.69	5.36	18.33	I	C	SP	P
VAY	80.308	316.87	5.31	18.15	I	C	SP	P
SKO	80.420	317.94	5.31	18.15	I	C	SP	P
LJU	80.669	324.46	5.31	18.15	I	C	SP	P
STU	80.749	329.05	5.31	18.15	I	C	LP	P
UCC	80.875	332.83	5.26	17.98	E	C	LP	P
GOL	80.940	44.83	5.26	17.98	I	C	LP	P
GOL	80.940	44.83	5.26	17.98	I	C	SP	P
CEY	80.951	324.32	5.26	17.98	I	C	SP	P
GAP	81.032	327.25	5.26	17.98	I	C	SP	P
OHR	81.377	317.71	5.22	17.84	I	C	SP	P
DOU	81.380	332.32	5.22	17.84	E	C	LP	P
OGA	81.532	326.90	5.22	17.84	I	C	SP	P
DMU	81.575	340.46	5.22	17.84	I	C	SP	P
SLE	81.838	328.84	5.18	17.69	E	C	LP	P
DDK	81.890	339.92	5.18	17.69	I	C	SP	P
CTI	81.919	326.05	5.18	17.69	I	C	SP	P
DLE	82.033	339.99	5.18	17.69	I	C	SP	P
ATH	82.101	313.87	5.18	17.69	I	C	SP	P
ZUL	82.110	328.73	5.18	17.69	E	C	LP	P
DCN	82.171	340.42	5.18	17.69	I	C	SP	P
LLS	82.364	328.03	5.14	17.55	E	C	LP	P
ETA	82.478	339.55	5.14	17.55	I	C	SP	P
ECB	82.927	339.72	5.12	17.48	I	C	SP	P
NPS	82.962	310.86	5.12	17.48	I	C	SP	P
ECP	82.985	339.41	5.12	17.48	I	C	SP	P
TMA	83.031	327.64	5.12	17.48	E	C	LP	P
HLW	83.228	303.58	5.12	17.48	I	C	LP	P
TAU	83.312	173.93	5.09	17.38	I	C	LP	P
MMK	83.444	328.13	5.09	17.38	E	C	LP	P
DIX	83.643	328.46	5.09	17.38	E	C	LP	P
ANMO	83.734	48.80	5.09	17.38	I	C	LP	P
ALQ	83.736	48.80	5.09	17.38	E	C	LP	P
ORO	83.786	327.87	5.05	17.24	I	C	SP	P
FIR	83.890	324.88	5.05	17.24	I	C	SP	P
LOR	84.018	331.17	5.05	17.24	I	C	LP	P
AQU	84.046	322.75	5.05	17.24	I	C	SP	P
VAL	84.194	341.50	5.05	17.24	I	C	LP	P
MNS	84.352	323.19	5.02	17.13	I	C	SP	P
SGO	84.536	320.50	5.02	17.13	I	C	SP	P
RDP	84.830	322.78	4.99	17.03	I	C	SP	P
EPT	85.974	51.05	4.91	16.74	I	C	LP	P

Table 118. Station data for event 153....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SNZO	87.570	153.96	4.80	16.36	I	C	LP	P
ERC	87.821	320.57	4.77	16.25	I	C	SP	P
TUL	88.789	41.63	4.73	16.11	I	C	LP	P
GAC	88.811	23.44	4.73	16.11	I	C	LP	P
RLO	88.975	40.98	4.73	16.11	I	C	SP	P
AAM	88.987	30.25	4.73	16.11	I	C	LP	P
GBO	89.142	41.28	4.73	16.11	I	C	SP	P
UTO	89.564	30.53	4.71	16.04	I	C	SP	P
RSNY	90.142	23.33	4.71	16.04	I	C	LP	P
LGR	90.454	332.63	4.70	16.01	I	C	SP	P
JCT	90.806	47.68	4.70	16.01	I	C	LP	P
SCP	92.423	27.19	4.66	15.87	I	C	LP	P
WES	93.065	22.07	4.65	15.83	I	C	LP	P
PTO	93.650	336.15	4.63	15.76	I	C	SP	P
RSCP	93.876	35.06	4.61	15.69	I	C	SP	P
BLA	94.633	30.65	4.60	15.66	I	C	LP	P
ALM	95.365	329.94	4.56	15.52	I	C	SP	P
MAL	96.206	331.28	4.55	15.48	I	C	LP	P
SFS	97.089	332.46	4.53	15.41	I	C	SP	P
BEC	104.265	20.62	4.45	15.14	I	C	LP	Pdf
LPB	146.483	52.56	1.66	5.60	E	C	LP	PKP
OHC	154.970	161.83	1.39	4.67	I	C	SP	PKP
JACH	155.002	81.36	1.39	4.67	I	C	SP	PKP
PEL	155.135	82.42	1.39	4.67	I	C	LP	PKP
SAN	155.285	83.06	1.39	4.67	E	C	LP	PKP
CHCH	155.491	84.10	1.39	4.67	I	C	SP	PKP
FCH	155.512	82.47	1.35	4.53	I	C	SP	PKP
LPA	165.423	73.07	0.91	3.06	I	C	LP	PKP

Table 119. Station data for event 154

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SHK	8.198	222.09	13.92	54.83	I	D	SP	P
SSE	17.576	242.19	12.49	47.18	I	D	SP	P
NJ2	18.623	248.45	12.28	46.15	I	D	SP	P
HHC	20.977	279.21	10.18	36.71	I	D	SP	P
PLP	32.137	207.20	8.75	30.92	I	C	SP	P
CGP	34.761	206.00	8.56	30.18	I	C	SP	P
RAB	46.313	162.15	7.91	27.68	I	C	SP	P
CTA	60.933	172.55	6.80	23.54	I	C	SP	P
DAG	61.871	354.41	6.72	23.24	I	C	SP	P
LON	66.900	47.62	6.31	21.75	I	C	SP	P
COR	67.299	50.20	6.27	21.60	I	C	SP	P
EDM	67.396	38.45	6.27	21.60	I	C	SP	P
NOU	67.680	152.84	6.27	21.60	I	C	SP	P
RXF	69.230	42.88	6.14	21.13	I	C	SP	P
LHD	69.383	43.58	6.10	20.99	I	C	SP	P
LDM	69.387	43.31	6.10	20.99	I	C	SP	P
CLX	69.636	43.43	6.10	20.99	I	C	SP	P
MEK	69.808	199.78	6.07	20.88	I	C	SP	P
WDC	70.116	53.31	6.07	20.88	I	C	SP	P
AKU	72.391	350.40	5.89	20.24	I	C	SP	P
JAS	73.017	54.44	5.85	20.09	I	C	SP	P
KRA	75.063	324.46	5.71	19.59	I	C	SP	P
YOU	75.190	172.25	5.71	19.59	I	C	SP	P
NWAO	76.160	199.01	5.64	19.34	I	C	SP	P
CAN	76.286	171.87	5.61	19.23	I	C	SP	P
PSZ	76.648	322.97	5.61	19.23	I	C	SP	P
BRG	76.978	327.98	5.58	19.13	I	C	SP	P
CLL	77.015	328.73	5.58	19.13	I	C	SP	P
PRU	77.419	327.10	5.55	19.02	I	C	SP	P
PVL	77.504	316.84	5.55	19.02	I	C	SP	P
EDC	78.016	313.35	5.52	18.91	I	C	SP	P
MOX	78.080	329.01	5.52	18.91	I	C	SP	P
TOO	78.215	175.00	5.52	18.91	I	C	SP	P
KDZ	78.472	315.65	5.49	18.81	I	C	SP	P
WTS	78.778	332.31	5.45	18.67	I	C	SP	P
GLA	79.667	55.21	5.41	18.52	I	C	SP	P
ENN	80.107	332.07	5.36	18.35	I	C	SP	P
SKO	80.264	318.03	5.31	18.17	I	C	SP	P
GWF	80.960	330.12	5.26	17.99	I	C	SP	P
DMU	81.289	340.56	5.22	17.85	I	C	SP	P
CDF	81.555	329.99	5.22	17.85	I	C	SP	P
DDK	81.606	340.03	5.22	17.85	I	C	SP	P
SLE	81.615	328.94	5.22	17.85	E	C	LP	P
DLE	81.749	340.10	5.22	17.85	I	C	SP	P
ECH	81.762	329.94	5.18	17.71	I	C	SP	P
DCN	81.885	340.52	5.18	17.71	I	C	SP	P
ZUL	81.888	328.83	5.18	17.71	E	C	LP	P
BAF	82.138	329.81	5.18	17.71	I	C	SP	P
LLS	82.145	328.13	5.18	17.71	E	C	LP	P
ETA	82.197	339.65	5.18	17.71	I	C	SP	P

Table 119. Station data for event 154....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BSF	82.218	329.92	5.18	17.71	I	C	SP	P
HAU	82.242	330.27	5.18	17.71	I	C	SP	P
ECB	82.645	339.83	5.14	17.57	I	C	SP	P
ECP	82.705	339.52	5.14	17.57	I	C	SP	P
TMA	82.815	327.75	5.11	17.46	E	C	LP	P
MMK	83.225	328.24	5.11	17.46	E	C	LP	P
DIX	83.422	328.57	5.08	17.36	E	C	LP	P
VG1	83.681	326.93	5.08	17.36	I	D	SP	P
LOR	83.781	331.28	5.05	17.25	I	C	SP	P
FLN	83.998	334.57	5.05	17.25	I	C	SP	P
LDF	84.027	334.28	5.05	17.25	I	C	SP	P
SSF	84.085	331.38	5.05	17.25	I	C	SP	P
ORI	84.200	319.61	5.05	17.25	I	C	SP	P
SMF	84.315	330.96	5.02	17.14	I	C	SP	P
AVF	84.370	331.32	5.02	17.14	I	C	SP	P
GRR	84.447	334.60	5.02	17.14	I	C	SP	P
BGF	84.752	331.50	4.99	17.04	I	C	SP	P
LPF	84.818	334.54	4.99	17.04	I	C	SP	P
MZF	85.139	331.47	4.99	17.04	I	C	SP	P
TCF	85.212	331.73	4.99	17.04	I	C	SP	P
LSF	85.488	332.12	4.96	16.93	I	C	SP	P
MFF	85.766	333.30	4.91	16.76	I	C	SP	P
FRF	85.809	327.59	4.91	16.76	I	C	SP	P
LRG	86.013	327.71	4.91	16.76	I	C	SP	P
LMR	86.053	327.55	4.91	16.76	I	C	SP	P
TUL	88.405	41.78	4.75	16.20	I	C	SP	P
RLO	88.589	41.13	4.75	16.20	I	C	SP	P
GBO	88.756	41.43	4.73	16.13	I	C	SP	P
IN1	89.189	32.75	4.73	16.13	I	C	SP	P
IN2	89.325	33.65	4.71	16.06	I	C	SP	P
AN12	89.558	31.45	4.71	16.06	I	C	SP	P
AN11	89.663	31.96	4.71	16.06	I	C	SP	P
RSNY	89.740	23.48	4.71	16.06	I	C	SP	P
AN1	89.955	31.65	4.71	16.06	I	C	SP	P
IN3	90.309	33.37	4.70	16.02	I	C	SP	P
IN4	90.416	32.63	4.70	16.02	I	C	SP	P
BNH	90.649	21.32	4.70	16.02	I	C	SP	P
CNG	119.183	259.30	1.88	6.32	I	C	SP	PKP
MAW	122.231	206.13	1.87	6.31	I	C	SP	PKP
LPB	146.127	52.43	1.66	5.60	I	C	SP	PKP

Table 120. Station data for event 158

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SHK	7.610	223.56	13.96	78.13	I	D	LP	P
NGS	10.501	227.36	13.63	72.84	I	D	SP	P
CN2	10.710	293.85	13.63	72.84	I	D	SP	P
FKJ	11.123	230.64	13.57	72.04	I	D	SP	P
SSE	17.101	243.33	12.58	61.87	I	D	LP	P
BJI	17.470	276.76	12.48	61.03	I	D	SP	P
TIA	17.662	263.84	12.48	61.03	I	D	SP	P
NJ2	18.197	249.65	12.37	60.13	I	C	SP	P
TIY	20.801	271.61	10.17	45.47	I	C	SP	P
ANP	20.973	229.60	10.17	45.47	I	C	LP	P
WHN	22.258	251.96	9.85	43.67	I	D	SP	P
XAN	24.710	265.10	9.53	41.92	I	C	SP	P
GUMO	27.036	167.42	9.28	40.58	E	N	LP	P
GUA	27.092	167.34	9.28	40.58	I	C	LP	P
LZH	27.856	272.81	9.18	40.05	I	C	SP	P
BAG	28.639	219.31	9.11	39.69	E	C	LP	P
GTA	29.963	281.29	8.91	38.65	I	C	SP	P
PLP	31.508	207.11	8.79	38.04	I	C	SP	P
ADK	32.380	53.93	8.71	37.63	I	C	SP	P
DAV	35.134	203.65	8.56	36.87	I	C	LP	P
CHG	40.440	250.09	8.24	35.28	I	C	LP	P
PKI	45.627	271.09	7.96	33.92	I	C	SP	P
RAB	45.826	161.56	7.93	33.77	I	C	SP	P
DMN	45.839	271.33	7.93	33.77	I	C	SP	P
PMR	47.228	38.25	7.88	33.53	I	C	SP	P
COL	47.441	33.67	7.85	33.39	I	C	SP	P
SNG	47.537	236.68	7.85	33.39	I	C	LP	P
MKS	48.672	206.35	7.78	33.05	I	C	SP	P
PMG	49.958	169.50	7.66	32.48	I	C	SP	P
NDI	51.321	277.24	7.54	31.91	I	C	SP	P
HNR	53.071	153.85	7.42	31.34	I	C	LP	P
MBC	54.003	16.85	7.34	30.97	I	C	SP	P
LEM	55.047	219.15	7.26	30.59	E	C	LP	P
HON	56.156	89.72	7.18	30.22	I	C	LP	P
ALE	57.052	3.29	7.11	29.90	I	C	SP	P
QUE	58.273	284.40	7.00	29.39	I	C	LP	P
POO	59.455	269.04	6.92	29.02	I	C	SP	P
KEV	59.789	338.07	6.88	28.84	E	C	LP	P
WB2	60.018	185.07	6.88	28.84	I	C	SP	P
CTA	60.381	172.18	6.84	28.65	I	C	SP	P
CTAO	60.381	172.18	6.84	28.65	I	C	LP	P
MHI	60.556	294.18	6.84	28.65	I	C	LP	P
RSNT	62.006	30.32	6.72	28.10	I	C	LP	P
YKC	62.053	30.28	6.72	28.10	I	C	SP	P
DAG	62.434	354.36	6.68	27.92	I	C	SP	P
ASPA	63.743	185.24	6.60	27.56	I	C	SP	P
PVC	63.797	148.69	6.56	27.38	I	C	SP	P
SUF	64.290	331.88	6.51	27.15	I	C	SP	P
NAU	66.186	203.79	6.39	26.61	I	C	SP	P
NUR	66.252	330.50	6.35	26.43	I	C	SP	P

Table 120. Station data for event 158....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
WBN	67.036	192.15	6.31	26.25	I	C	SP	P
NOU	67.264	152.45	6.26	26.03	I	C	SP	P
LON	67.468	47.31	6.26	26.03	I	C	LP	P
LON	67.468	47.31	6.26	26.03	I	C	SP	P
COR	67.854	49.87	6.22	25.85	I	C	LP	P
COR	67.854	49.87	6.22	25.85	I	C	SP	P
EDM	68.000	38.18	6.22	25.85	I	C	SP	P
MEK	69.177	199.58	6.14	25.49	I	C	SP	P
UPP	69.263	332.57	6.10	25.32	I	C	SP	P
RXF	69.819	42.60	6.07	25.18	I	C	SP	P
LHD	69.969	43.30	6.07	25.18	I	C	SP	P
LDM	69.974	43.03	6.07	25.18	I	C	SP	P
CLX	70.223	43.15	6.07	25.18	I	C	SP	P
GDH	70.443	4.72	6.03	25.01	I	C	LP	P
GDH	70.443	4.72	6.03	25.01	I	C	SP	P
AFI	70.603	128.80	6.03	25.01	I	C	LP	P
WDC	70.654	52.99	6.03	25.01	I	C	SP	P
STK	71.786	177.70	5.92	24.52	I	C	SP	P
ORV	71.907	53.35	5.92	24.52	I	C	SP	P
FFC	72.020	32.24	5.92	24.52	I	C	SP	P
KONO	72.106	335.65	5.92	24.52	I	C	LP	P
KON	72.106	335.65	5.92	24.52	I	C	LP	P
BKS	72.470	55.11	5.89	24.39	I	C	SP	P
KLG	72.507	195.80	5.89	24.39	I	C	SP	P
AKU	72.932	350.31	5.85	24.21	I	C	SP	P
LRM	73.158	43.85	5.85	24.21	I	C	SP	P
BAL	73.455	199.97	5.82	24.08	I	C	SP	P
JAS	73.548	54.14	5.82	24.08	I	C	SP	P
JAS	73.548	54.14	5.82	24.08	I	C	LP	P
KLB	74.126	198.77	5.78	23.90	I	C	SP	P
COP	74.234	331.80	5.78	23.90	I	C	LP	P
CLI	74.347	318.25	5.75	23.77	I	C	SP	P
FRI	74.597	54.54	5.75	23.77	I	C	SP	P
YOU	74.638	171.97	5.75	23.77	I	C	SP	P
MUD	74.768	333.79	5.71	23.60	I	C	SP	P
PHAM	74.886	55.83	5.71	23.60	I	C	SP	P
VRI	75.093	318.01	5.71	23.60	I	C	SP	P
KRA	75.408	324.40	5.68	23.46	I	C	SP	P
NWAO	75.529	198.81	5.68	23.46	I	C	LP	P
NWAO	75.529	198.81	5.68	23.46	I	C	SP	P
CAN	75.737	171.59	5.68	23.46	I	C	SP	P
MLR	75.752	318.11	5.64	23.29	I	C	SP	P
SPC	75.897	323.63	5.64	23.29	I	C	SP	P
KSP	76.406	326.72	5.61	23.16	I	C	SP	P
BRN	76.462	329.28	5.61	23.16	I	C	SP	P
BUC1	76.495	317.21	5.61	23.16	I	C	SP	P
WAM	76.586	171.81	5.61	23.16	I	C	SP	P
COZ	76.683	318.79	5.61	23.16	I	C	SP	P
BDW	76.731	44.78	5.61	23.16	I	C	SP	P
HAM	76.882	331.54	5.58	23.03	I	C	SP	P

Table 120. Station data for event 158....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PSZ	76.979	322.90	5.58	23.03	I	C	SP	P
BRG	77.354	327.90	5.55	22.90	I	C	LP	P
PAS	77.367	55.98	5.55	22.90	I	C	SP	P
CLL	77.397	328.65	5.55	22.90	I	C	SP	P
TOO	77.649	174.74	5.55	22.90	I	C	SP	P
SRO	77.780	323.63	5.52	22.77	I	C	SP	P
RSON	78.246	31.01	5.52	22.77	I	C	LP	P
DST	78.327	312.31	5.48	22.59	I	C	SP	P
VKA	78.334	324.96	5.48	22.59	I	C	SP	P
MOX	78.465	328.92	5.48	22.59	I	C	SP	P
WIT	78.572	332.76	5.48	22.59	I	C	SP	P
HOF	78.622	328.58	5.48	22.59	I	C	SP	P
RSSD	78.671	40.91	5.48	22.59	I	C	LP	P
KHC	78.848	326.94	5.45	22.46	I	C	SP	P
WET	79.127	327.31	5.45	22.46	I	C	SP	P
WTS	79.191	332.21	5.45	22.46	I	C	SP	P
GRF	79.373	328.52	5.41	22.29	I	C	SP	P
GRFO	79.375	328.53	5.41	22.29	I	C	LP	P
KMR	79.442	325.96	5.41	22.29	I	C	LP	P
DBN	79.678	333.11	5.41	22.29	I	C	LP	P
BNS	79.902	331.41	5.36	22.07	I	C	SP	P
GLA	80.193	54.96	5.36	22.07	I	C	SP	P
BHG	80.236	326.40	5.36	22.07	I	C	SP	P
VAY	80.431	316.85	5.31	21.85	I	C	SP	P
BGG	80.461	330.88	5.31	21.85	I	C	SP	P
ENN	80.518	331.96	5.31	21.85	I	C	SP	P
KBA	80.537	325.74	5.31	21.85	I	C	SP	P
SKO	80.547	317.93	5.31	21.85	I	C	SP	P
FUR	80.556	327.54	5.31	21.85	I	C	SP	P
STU	80.910	329.03	5.26	21.64	I	C	LP	P
CEY	81.098	324.30	5.26	21.64	I	C	SP	P
GOL	81.142	44.76	5.26	21.64	I	C	LP	P
GOL	81.142	44.76	5.26	21.64	I	C	SP	P
GAP	81.189	327.23	5.26	21.64	I	C	SP	P
WLF	81.344	331.20	5.22	21.46	E	C	LP	P
GWF	81.355	330.00	5.22	21.46	I	C	SP	P
BUH	81.366	329.50	5.22	21.46	I	C	SP	P
DOU	81.551	332.29	5.22	21.46	E	C	LP	P
OGA	81.687	326.87	5.22	21.46	I	C	SP	P
DMU	81.767	340.43	5.17	21.25	I	C	SP	P
LHC	81.931	30.16	5.17	21.25	I	C	SP	P
DDK	82.080	339.89	5.17	21.25	I	C	SP	P
ECH	82.155	329.81	5.17	21.25	I	C	SP	P
DLE	82.223	339.96	5.17	21.25	I	C	SP	P
ZUL	82.271	328.70	5.14	21.12	I	C	LP	P
DCN	82.363	340.38	5.14	21.12	I	C	SP	P
BAF	82.530	329.68	5.14	21.12	I	C	SP	P
BSF	82.610	329.79	5.14	21.12	I	C	SP	P
HAU	82.638	330.14	5.14	21.12	I	C	SP	P
ETA	82.667	339.51	5.14	21.12	I	C	SP	P

Table 120. Station data for event 158....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SAL	82.900	326.38	5.11	20.99	I	C	SP	P
TAU	83.095	173.87	5.11	20.99	I	C	LP	P
ECB	83.117	339.69	5.11	20.99	I	C	SP	P
ECP	83.174	339.37	5.11	20.99	I	C	SP	P
TMA	83.189	327.61	5.11	20.99	I	C	LP	P
HLW	83.302	303.55	5.08	20.86	I	C	LP	P
MMK	83.603	328.10	5.08	20.86	I	C	LP	P
DIX	83.803	328.43	5.05	20.73	I	C	LP	P
ANMO	83.928	48.73	5.05	20.73	I	C	LP	P
LOR	84.186	331.14	5.05	20.73	I	C	SP	P
FLN	84.430	334.42	5.02	20.60	I	C	SP	P
LDF	84.456	334.13	5.02	20.60	I	C	SP	P
SSF	84.490	331.23	5.02	20.60	I	C	SP	P
SGO	84.671	320.46	5.02	20.60	I	C	SP	P
SMF	84.716	330.81	5.02	20.60	I	C	SP	P
AVF	84.775	331.17	4.99	20.48	I	C	SP	P
GRR	84.879	334.45	4.99	20.48	I	C	SP	P
RMP	84.937	322.79	4.99	20.48	I	C	SP	P
BGF	85.158	331.34	4.99	20.48	I	C	SP	P
LPF	85.250	334.38	4.99	20.48	I	C	SP	P
MZF	85.545	331.31	4.96	20.35	I	C	SP	P
TCF	85.620	331.57	4.96	20.35	I	C	SP	P
LSF	85.899	331.96	4.90	20.09	I	C	SP	P
CVF	86.053	325.53	4.90	20.09	I	C	SP	P
EPT	86.162	50.99	4.90	20.09	I	C	LP	P
MFF	86.187	333.14	4.90	20.09	I	C	SP	P
FRF	86.181	327.43	4.90	20.09	I	C	SP	P
LRG	86.386	327.55	4.86	19.92	I	C	SP	P
LMR	86.425	327.39	4.86	19.92	I	C	SP	P
ACO	86.662	43.16	4.86	19.92	I	C	SP	P
RJF	86.713	331.47	4.86	19.92	I	C	SP	P
CAF	86.834	330.95	4.83	19.79	I	C	SP	P
TDD	87.084	282.89	4.83	19.79	I	C	LP	P
ARO	87.306	282.71	4.80	19.66	I	C	LP	P
LFF	87.312	331.76	4.80	19.66	I	C	SP	P
LPO	87.365	331.35	4.80	19.66	I	C	SP	P
SNZO	87.394	153.90	4.80	19.66	I	C	LP	P
DAF	87.492	282.98	4.80	19.66	I	C	LP	P
HLD	87.572	283.03	4.80	19.66	I	C	LP	P
OCO	88.431	42.88	4.75	19.45	I	C	SP	P
SIO	88.863	42.01	4.73	19.36	I	C	SP	P
TUL	88.998	41.58	4.73	19.36	I	C	LP	P
GAC	89.041	23.39	4.73	19.36	I	C	LP	P
EPF	89.099	331.04	4.73	19.36	I	C	SP	P
RLO	89.185	40.93	4.73	19.36	I	C	SP	P
AAM	89.212	30.20	4.73	19.36	I	C	LP	P
MNT	89.774	22.30	4.71	19.28	I	C	SP	P
UTO	89.788	30.48	4.71	19.28	I	C	SP	P
FVM	89.947	36.90	4.71	19.28	I	C	SP	P
RSNY	90.372	23.28	4.70	19.24	I	C	LP	P

Table 120. Station data for event 158....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
LGR	90.626	332.58	4.70	19.24	I	C	SP	P
JCT	91.002	47.63	4.69	19.19	I	C	SP	P
JCT	91.002	47.63	4.69	19.19	I	C	LP	P
SCP	92.651	27.15	4.66	19.07	I	C	LP	P
WES	93.296	22.02	4.63	18.94	I	C	LP	P
TOL	93.447	332.41	4.63	18.94	I	C	LP	P
PTO	93.831	336.09	4.61	18.85	I	C	LP	P
RSCP	94.094	35.02	4.61	18.85	I	C	LP	P
SHA	96.987	39.53	4.53	18.52	E	C	LP	P
BUL	118.103	266.67	1.88	7.56	I	C	SP	PKP
SLR	121.489	261.57	1.87	7.54	I	C	SP	PKP
MAW	121.601	205.91	1.87	7.54	I	C	SP	PKP
PRY	122.740	260.85	1.87	7.53	I	C	SP	PKP
SWZ	124.499	261.81	1.87	7.52	I	C	SP	PKP
SUR	130.472	258.58	1.85	7.46	I	C	SP	PKP
ZOBO	146.450	52.46	1.66	6.69	I	C	SP	PKP
JACH	155.094	81.76	1.39	5.58	I	C	SP	PKP
PEL	155.223	82.83	1.39	5.58	I	C	SP	PKP
PCH	155.552	83.73	1.35	5.42	I	C	SP	PKP
CHCH	155.573	84.53	1.35	5.42	I	C	SP	PKP
LPA	165.545	73.78	0.85	3.43	I	C	LP	PKP

Table 121. Station data for event 160

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SHK	8.483	218.75	13.89	44.18	I	C	LP	P
KAG	11.927	217.86	13.47	42.52	E	C	LP	P
SKR	15.017	45.91	12.99	40.67	I	C	SP	P
BJI	17.430	273.28	12.52	38.91	I	D	SP	P
SSE	17.675	240.35	12.52	38.91	I	C	LP	P
NJ2	18.662	246.68	12.32	38.18	I	D	SP	P
MGD	20.128	17.18	10.48	31.72	I	C	SP	P
ANP	21.749	227.62	10.08	30.38	I	C	LP	P
SMY	26.173	52.28	9.39	28.11	I	C	SP	P
PIP	27.869	220.10	9.20	27.49	I	C	SP	P
GUMO	28.106	168.03	9.20	27.49	E	C	LP	P
GUA	28.162	167.95	9.20	27.49	I	C	LP	P
HKC	28.280	235.47	9.14	27.29	I	C	LP	P
BAG	29.539	218.19	8.98	26.78	I	C	LP	P
TIK	30.792	353.68	8.83	26.30	I	C	SP	P
MAN	30.851	215.73	8.83	26.30	I	C	SP	P
ADK	31.692	55.37	8.79	26.17	I	C	SP	P
KMI	34.156	253.18	8.63	25.66	E	C	LP	P
DAV	36.173	203.16	8.51	25.27	I	C	LP	P
ELT	36.933	307.16	8.45	25.08	I	C	SP	P
ANM	38.962	34.49	8.33	24.70	I	C	SP	P
SEM	40.982	303.38	8.22	24.36	I	C	SP	P
PCT	42.066	242.02	8.16	24.17	I	C	SP	P
TTA	42.998	37.41	8.11	24.01	I	C	SP	P
IMA	43.969	32.81	8.05	23.82	I	C	SP	P
KDC	45.251	44.60	7.97	23.57	I	C	SP	P
PMR	46.326	38.91	7.91	23.38	I	C	SP	P
FBA	46.489	34.25	7.91	23.38	I	C	SP	P
COL	46.489	34.25	7.91	23.38	I	C	LP	P
RAB	46.860	161.99	7.88	23.29	I	C	LP	P
KHE	48.061	347.41	7.82	23.10	I	C	SP	P
SNG	48.200	235.92	7.82	23.10	I	C	LP	P
MKS	49.692	206.02	7.71	22.76	I	C	SP	P
LMG	50.687	168.41	7.63	22.51	I	C	SP	P
PCA	50.892	39.59	7.59	22.38	I	C	SP	P
PMG	51.038	169.76	7.59	22.38	E	C	LP	P
HNR	54.042	154.29	7.34	21.61	E	C	LP	P
SIT	54.350	42.10	7.30	21.48	I	C	SP	P
LEM	55.945	218.75	7.19	21.14	I	C	LP	P
HON	56.100	90.51	7.19	21.14	I	C	LP	P
APA	58.065	334.18	7.04	20.68	I	C	SP	P
KEV	58.784	337.84	6.97	20.47	I	C	LP	P
POO	59.537	268.44	6.93	20.35	I	C	SP	P
MHI	60.160	293.64	6.89	20.22	I	C	LP	P
RSNT	61.022	30.64	6.81	19.98	I	C	SP	P
RSNT	61.022	30.64	6.81	19.98	E	C	LP	P
WB2	61.127	185.10	6.81	19.98	I	C	SP	P
DAG	61.337	354.32	6.77	19.86	I	C	SP	P
CTA	61.471	172.34	6.77	19.86	I	C	LP	P
CTAO	61.471	172.34	6.77	19.86	I	C	LP	P

Table 121. Station data for event 160....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KJF	61.869	332.47	6.73	19.73	I	C	LP	P
KOD	62.078	258.59	6.73	19.73	I	C	SP	P
OBN	63.552	321.26	6.60	19.34	I	C	SP	P
PVC	64.715	149.04	6.52	19.09	I	C	SP	P
NUR	65.317	330.28	6.44	18.85	I	C	LP	P
KOU	65.868	154.09	6.40	18.73	I	C	SP	P
PNT	66.353	44.48	6.36	18.61	I	C	SP	P
LON	66.677	47.69	6.36	18.61	I	C	LP	P
COR	67.098	50.26	6.31	18.46	I	C	SP	P
COR	67.098	50.26	6.31	18.46	I	C	LP	P
TAB	67.960	301.73	6.23	18.21	I	C	LP	P
NOU	68.221	152.73	6.23	18.21	I	C	SP	P
LDM	69.127	43.34	6.15	17.97	I	C	SP	P
GDH	69.334	4.78	6.11	17.85	I	C	LP	P
GDH	69.334	4.78	6.11	17.85	I	C	SP	P
WDC	69.944	53.35	6.07	17.73	I	C	SP	P
MIN	70.651	53.08	6.04	17.64	I	C	SP	P
KON	71.121	335.53	6.00	17.52	I	C	LP	P
KONO	71.121	335.53	6.00	17.52	I	C	LP	P
ORV	71.202	53.68	6.00	17.52	I	C	SP	P
BER	71.799	337.82	5.93	17.31	I	C	LP	P
AKU	71.850	350.28	5.93	17.31	I	C	LP	P
JAS	72.855	54.45	5.86	17.10	I	C	LP	P
JAS	72.855	54.45	5.86	17.10	I	C	SP	P
COP	73.285	331.68	5.82	16.98	I	C	LP	P
COP	73.285	331.68	5.82	16.98	I	C	SP	P
KLG	73.589	195.78	5.82	16.98	I	C	SP	P
MUD	73.800	333.68	5.79	16.89	I	C	SP	P
VRI	74.309	317.84	5.75	16.77	I	C	SP	P
TLB	74.519	316.22	5.75	16.77	I	C	SP	P
KRA	74.541	324.26	5.75	16.77	I	C	SP	P
SPC	75.040	323.50	5.72	16.68	I	C	SP	P
KLB	75.194	198.74	5.72	16.68	I	C	SP	P
MDB	75.289	319.23	5.68	16.56	I	C	SP	P
JOS	75.414	322.86	5.68	16.56	I	C	SP	P
BRL	75.465	329.17	5.68	16.56	I	C	SP	P
BRN	75.539	329.17	5.68	16.56	I	C	SP	P
RIV	75.616	169.66	5.68	16.56	I	C	LP	P
YOU	75.728	172.08	5.68	16.56	I	C	SP	P
BDW	75.905	45.01	5.65	16.47	I	C	SP	P
HAM	75.936	331.45	5.65	16.47	I	C	SP	P
MUN	75.948	199.92	5.65	16.47	I	C	LP	P
PSZ	76.130	322.78	5.65	16.47	I	C	SP	P
BRG	76.447	327.80	5.62	16.38	I	C	LP	P
NWAO	76.596	198.78	5.62	16.38	I	C	LP	P
PAS	76.702	56.23	5.62	16.38	I	C	SP	P
CAN	76.824	171.70	5.59	16.29	I	C	SP	P
BUD	76.849	322.93	5.59	16.29	I	C	SP	P
SRO	76.923	323.52	5.59	16.29	I	C	SP	P
PVL	77.008	316.64	5.59	16.29	I	C	SP	P

Table 121. Station data for event 160....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
RSON	77.268	31.17	5.56	16.20	I	C	LP	P
MOX	77.547	328.84	5.56	16.20	I	C	LP	P
HOF	77.707	328.50	5.56	16.20	I	C	SP	P
RSSD	77.797	41.10	5.52	16.08	I	C	LP	P
KHC	77.951	326.86	5.52	16.08	I	C	SP	P
KDZ	77.981	315.45	5.52	16.08	I	C	SP	P
WET	78.226	327.23	5.52	16.08	I	C	SP	P
WTS	78.238	332.14	5.52	16.08	I	C	SP	P
VTS	78.412	317.31	5.49	15.99	I	C	SP	P
GRF	78.459	328.45	5.49	15.99	I	C	SP	P
GRFO	78.461	328.45	5.49	15.99	E	C	LP	P
DBN	78.716	333.06	5.49	15.99	I	C	LP	P
EZN	78.741	313.61	5.49	15.99	I	C	SP	P
ELL	78.864	309.36	5.45	15.87	I	C	SP	P
BNS	78.957	331.35	5.45	15.87	I	C	SP	P
IZM	79.229	312.06	5.45	15.87	I	C	SP	P
BHG	79.345	326.33	5.42	15.78	I	C	SP	P
GLA	79.511	55.16	5.42	15.78	I	C	SP	P
YER	79.535	310.56	5.42	15.78	I	C	SP	P
ENN	79.568	331.91	5.42	15.78	I	C	SP	P
FUR	79.653	327.48	5.42	15.78	I	C	SP	P
STU	79.990	328.98	5.37	15.63	I	C	LP	P
UCC	80.089	332.76	5.37	15.63	E	C	LP	P
GAP	80.289	327.17	5.31	15.45	I	C	SP	P
GOL	80.316	44.93	5.31	15.45	I	C	LP	P
GOL	80.316	44.93	5.31	15.45	I	C	SP	P
WLF	80.401	331.15	5.31	15.45	E	C	LP	P
TRI	80.546	324.58	5.31	15.45	I	C	SP	P
DOU	80.597	332.25	5.31	15.45	I	C	LP	P
STR	80.692	329.65	5.31	15.45	I	C	SP	P
DMU	80.742	340.41	5.31	15.45	I	C	SP	P
OGA	80.792	326.82	5.27	15.33	I	C	SP	P
LHC	80.945	30.28	5.27	15.33	I	C	SP	P
CDF	81.020	329.82	5.27	15.33	I	C	SP	P
SLE	81.082	328.77	5.27	15.33	I	C	LP	P
DLE	81.202	339.95	5.27	15.33	I	C	SP	P
ECH	81.226	329.77	5.27	15.33	I	C	SP	P
DCN	81.338	340.37	5.22	15.18	I	C	SP	P
ZUL	81.354	328.66	5.22	15.18	I	C	LP	P
ATH	81.488	313.78	5.22	15.18	I	C	SP	P
BAF	81.603	329.65	5.22	15.18	I	C	SP	P
LLS	81.614	327.96	5.22	15.18	E	C	LP	P
BSF	81.682	329.76	5.22	15.18	I	C	SP	P
HAU	81.706	330.11	5.22	15.18	I	C	SP	P
SAL	82.009	326.34	5.18	15.06	I	C	SP	P
TMA	82.285	327.58	5.15	14.97	E	C	LP	P
MMK	82.693	328.07	5.15	14.97	E	C	LP	P
DIX	82.889	328.41	5.12	14.88	I	C	LP	P
ANMO	83.155	48.87	5.12	14.88	I	C	LP	P
LOR	83.244	331.12	5.12	14.88	I	C	SP	P

Table 121. Station data for event 160....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
AQU	83.342	322.69	5.09	14.80	I	C	SP	P
FLN	83.455	334.41	5.09	14.80	I	C	SP	P
LDF	83.485	334.12	5.09	14.80	I	C	SP	P
SSF	83.547	331.22	5.09	14.80	I	C	SP	P
SMF	83.777	330.80	5.06	14.71	I	C	SP	P
AVF	83.833	331.16	5.06	14.71	I	C	SP	P
SGO	83.854	320.44	5.06	14.71	I	C	SP	P
GRR	83.904	334.45	5.06	14.71	I	C	SP	P
RMP	84.090	322.77	5.06	14.71	I	C	SP	P
TAU	84.190	173.94	5.06	14.71	I	C	LP	P
BGF	84.214	331.34	5.06	14.71	I	C	SP	P
LPF	84.276	334.38	5.03	14.62	I	C	SP	P
MZF	84.601	331.31	5.03	14.62	I	C	SP	P
TCF	84.673	331.57	5.03	14.62	I	C	SP	P
LSF	84.948	331.96	4.99	14.50	I	C	SP	P
CVF	85.172	325.52	4.99	14.50	I	C	SP	P
MFF	85.225	333.15	4.99	14.50	I	C	SP	P
FRF	85.279	327.44	4.96	14.41	I	C	SP	P
EPT	85.421	51.10	4.96	14.41	I	C	LP	P
LRG	85.483	327.55	4.96	14.41	I	C	SP	P
LMR	85.523	327.39	4.96	14.41	I	C	SP	P
RJF	85.767	331.49	4.91	14.26	I	C	SP	P
CAF	85.893	330.96	4.91	14.26	I	C	SP	P
LFF	86.363	331.78	4.87	14.14	I	C	SP	P
LPO	86.421	331.37	4.87	14.14	I	C	SP	P
ARO	87.119	282.71	4.83	14.02	E	C	LP	P
OCO	87.581	42.96	4.80	13.93	I	C	SP	P
GAC	88.001	23.45	4.78	13.88	I	C	LP	P
SIO	88.001	42.07	4.78	13.88	I	C	SP	P
TUL	88.131	41.64	4.78	13.88	I	C	SP	P
EPF	88.157	331.07	4.78	13.88	I	C	SP	P
AAM	88.225	30.26	4.78	13.88	I	C	LP	P
AAM	88.225	30.26	4.78	13.88	I	C	SP	P
SNZO	88.364	153.97	4.75	13.79	I	C	LP	P
GBO	88.480	41.29	4.75	13.79	I	C	SP	P
MNT	88.728	22.35	4.75	13.79	I	C	SP	P
UTO	88.804	30.53	4.73	13.73	I	C	SP	P
RSNY	89.332	23.33	4.72	13.70	I	C	LP	P
LGR	89.669	332.63	4.72	13.70	I	C	SP	P
JCT	90.213	47.67	4.71	13.67	I	C	LP	P
INY	90.625	25.52	4.70	13.64	I	C	SP	P
SCP	91.639	27.18	4.69	13.61	I	C	LP	P
TOL	92.491	332.49	4.66	13.52	I	C	LP	P
HKT	92.790	45.34	4.65	13.49	I	C	SP	P
PTO	92.841	336.16	4.65	13.49	I	C	LP	P
PTO	92.841	336.16	4.65	13.49	I	C	SP	P
RSCP	93.154	35.03	4.65	13.49	I	C	LP	P
RSCP	93.154	35.03	4.65	13.49	I	C	SP	P
BLA	93.874	30.61	4.62	13.40	I	C	LP	P
LIS	95.226	335.58	4.58	13.28	I	C	SP	P

Table 121. Station data for event 160....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MAL	95.430	331.32	4.56	13.23	I	C	LP	P
SHA	96.096	39.50	4.55	13.20	I	C	LP	P
NAI	100.069	277.20	4.45	12.90	I	C	SP	Pdf
BEC	103.440	20.54	4.45	12.90	I	C	LP	Pdf
SJG	116.388	26.93	1.88	5.41	I	C	SP	PKP
SLR	121.702	262.29	1.87	5.39	I	C	SP	PKP
PRY	122.966	261.60	1.87	5.38	I	C	SP	PKP
SWZ	124.707	262.61	1.87	5.37	I	C	SP	PKP
BLF	125.097	260.13	1.87	5.37	I	C	SP	PKP
SUR	130.739	259.55	1.85	5.32	I	C	SP	PKP
CER	132.328	259.21	1.84	5.30	I	C	SP	PKP
ZOBO	145.720	51.27	1.66	4.79	I	C	SP	PKP
LPB	145.942	51.52	1.66	4.79	I	C	LP	PKP
PEL	155.006	80.54	1.39	3.99	I	C	SP	PKP
RDJ	161.500	6.76	1.07	3.07	I	C	LP	PKP
LPA	165.145	69.88	0.91	2.62	I	C	LP	PKP

Table 122. Station data for event 180

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SHK	5.333	261.43	14.12	55.96	I	C	LP	P
SEO	9.957	285.51	13.71	53.57	I	D	LP	P
SSE	15.582	258.71	12.88	49.10	I	C	LP	P
ANP	18.282	240.58	12.29	46.16	I	C	LP	P
GUA	22.488	165.00	9.86	35.36	E	C	LP	P
BAG	25.170	225.70	9.48	33.80	I	C	LP	P
LZH	28.489	281.61	9.12	32.36	I	C	LP	P
DAV	30.868	206.83	8.83	31.21	E	C	LP	P
KMI	32.862	261.77	8.68	30.62	I	C	LP	P
CHG	39.076	255.57	8.32	29.23	I	C	SP	P
RAB	41.346	159.99	8.19	28.73	I	D	LP	P
MKS	44.488	208.47	8.02	28.08	I	C	SP	P
PKI	45.944	275.72	7.94	27.77	I	C	SP	P
KKN	45.961	276.06	7.94	27.77	I	C	SP	P
DMN	46.175	275.92	7.94	27.77	I	C	SP	P
COL	51.409	31.49	7.54	26.26	I	C	LP	P
WB2	55.310	185.40	7.22	25.07	I	C	SP	P
CTA	55.691	171.82	7.22	25.07	I	C	SP	P
POO	59.528	271.86	6.92	23.96	I	C	SP	P
WBN	62.423	192.67	6.68	23.08	I	D	SP	P
MHI	62.616	296.52	6.68	23.08	I	C	LP	P
RSNT	66.096	29.19	6.39	22.02	E	C	LP	P
DAG	67.147	354.59	6.31	21.73	I	C	SP	P
IR7	69.290	299.56	6.11	21.01	I	C	SP	P
ADE	70.093	180.31	6.07	20.87	I	C	SP	P
COR	70.918	48.55	6.00	20.62	I	C	SP	P
TAB	71.092	303.55	6.00	20.62	E	C	LP	P
BKS	75.184	54.02	5.71	19.58	I	C	SP	P
FCC	76.217	25.43	5.65	19.36	I	C	SP	P
JAS	76.325	53.14	5.61	19.22	I	C	SP	P
KONO	76.441	336.21	5.61	19.22	I	C	LP	P
KON	76.441	336.21	5.61	19.22	E	C	LP	P
COP	78.432	332.36	5.49	18.80	I	C	LP	P
MUD	79.038	334.29	5.45	18.65	I	C	SP	P
PSN	79.240	316.37	5.45	18.65	I	C	SP	P
KRA	79.291	325.03	5.41	18.51	I	C	SP	P
BDW	80.084	44.12	5.36	18.33	I	C	SP	P
KSP	80.394	327.27	5.31	18.16	I	C	SP	P
CLL	81.467	329.13	5.22	17.84	I	C	SP	P
RSSD	82.236	40.41	5.18	17.70	I	C	SP	P
RSSD	82.236	40.41	5.18	17.70	E	C	LP	P
RSON	82.291	30.62	5.14	17.56	I	C	LP	P
KHC	82.843	327.38	5.12	17.49	I	C	SP	P
GLA	82.899	54.41	5.12	17.49	I	C	SP	P
GRFO	83.438	328.92	5.08	17.34	I	C	LP	P
ESK	83.958	339.40	5.05	17.24	E	C	LP	P
SKO	84.096	318.38	5.05	17.24	I	C	SP	P
BHG	84.206	326.78	5.05	17.24	I	C	SP	P
FUR	84.576	327.90	5.02	17.13	I	C	SP	P
UCC	85.278	333.09	4.96	16.92	E	C	LP	P

Table 122. Station data for event 180....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
OGA	85.677	327.18	4.96	16.92	I	C	SP	P
HLW	85.962	303.95	4.91	16.75	I	C	LP	P
SLE	86.072	329.09	4.91	16.75	E	C	LP	P
SAX	86.113	328.32	4.91	16.75	E	C	LP	P
ZUL	86.338	328.97	4.86	16.57	E	C	LP	P
LLS	86.560	328.26	4.86	16.57	E	C	LP	P
DKM	86.634	339.98	4.86	16.57	I	C	SP	P
VDL	86.653	327.77	4.86	16.57	E	C	LP	P
DLE	86.683	340.14	4.86	16.57	I	C	SP	P
DCN	86.834	340.56	4.83	16.47	I	C	SP	P
ANMO	87.030	48.48	4.83	16.47	E	C	LP	P
ETA	87.115	339.69	4.83	16.47	I	C	SP	P
TMA	87.209	327.85	4.83	16.47	E	C	LP	P
ECP	87.617	339.53	4.80	16.36	I	C	SP	P
MMK	87.644	328.31	4.80	16.36	E	C	LP	P
DIX	87.857	328.64	4.77	16.26	E	C	LP	P
VG1	88.030	326.99	4.77	16.26	I	C	SP	P
RSNY	94.702	23.39	4.60	15.66	E	C	LP	P
WES	97.665	22.22	4.52	15.38	E	C	LP	P
PTO	98.168	335.91	4.51	15.35	E	C	LP	P
PEL	155.353	93.16	1.39	4.67	I	C	SP	PKP

Table 123. Station data for event 196

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SEO	10.817	293.10	13.60	69.62	E	D	LP	P
CN2	14.710	316.13	13.08	64.37	I	D	SP	P
NJ2	17.434	269.52	12.52	59.65	I	C	SP	P
ANP	17.905	245.58	12.42	58.88	I	C	LP	P
QZH	20.278	249.29	10.34	45.46	I	C	SP	P
GUMO	20.836	165.22	10.20	44.67	E	D	LP	P
GUA	20.893	165.13	10.20	44.67	I	D	LP	P
WHN	21.537	267.88	10.08	44.01	I	C	SP	P
BAG	24.386	228.96	9.55	41.17	I	C	LP	P
XAN	25.324	278.87	9.43	40.54	I	C	SP	P
DAV	29.665	208.88	8.98	38.24	E	C	LP	P
CHG	39.074	257.78	8.33	35.04	I	C	SP	P
CHG	39.074	257.78	8.33	35.04	I	C	LP	P
PKI	46.485	277.41	7.91	33.04	I	C	SP	P
KKN	46.511	277.74	7.91	33.04	I	C	SP	P
DMN	46.721	277.59	7.91	33.04	I	C	SP	P
HNR	47.295	152.05	7.85	32.76	E	D	LP	P
COL	52.548	30.87	7.46	30.94	I	C	LP	P
NDI	52.777	282.32	7.42	30.76	I	C	SP	P
CTAO	54.102	172.17	7.34	30.39	I	D	LP	P
HON	56.011	85.78	7.19	29.71	E	C	LP	P
RSNT	67.276	28.97	6.27	25.61	E	C	LP	P
DAG	68.727	354.75	6.19	25.26	I	C	SP	P
NWAO	69.728	199.87	6.11	24.91	E	D	LP	P
LON	71.508	45.79	5.96	24.26	E	C	LP	P
GDH	76.674	4.74	5.62	22.79	I	C	SP	P
JAS	76.965	53.04	5.59	22.66	E	C	LP	P
KONO	78.010	336.53	5.52	22.36	I	D	LP	P
BER	78.788	338.71	5.45	22.06	E	D	LP	P
SNZO	81.576	153.96	5.22	21.09	E	D	LP	P
RSSD	83.181	40.50	5.12	20.67	E	C	LP	P
RSON	83.440	30.73	5.09	20.54	E	C	LP	P
GRFO	84.959	329.22	4.99	20.12	E	D	LP	P
KBA	85.972	326.42	4.91	19.78	I	D	SP	P
FUR	86.087	328.19	4.91	19.78	I	D	SP	P
UCC	86.829	333.37	4.83	19.45	E	D	LP	P
OGA	87.182	327.47	4.83	19.45	I	D	SP	P
ANMO	87.783	48.67	4.78	19.24	E	C	LP	P
BNG	112.572	292.20	1.89	7.47	I	D	SP	PKP
LPB	149.742	61.92	1.56	6.17	E	C	LP	PKP
PEL	154.855	96.68	1.39	5.49	I	D	SP	PKP

Table 124. Station data for event 198

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MDJ	0.910	295.59	2.12	167.95	I	C	SP	P
CN2	3.842	265.45	7.24	134.44	I	C	SP	P
SNY	5.773	247.91	8.93	118.17	I	C	SP	P
SUT	7.056	98.47	9.56	109.29	I	D	SP	P
SEO	7.242	204.52	9.63	108.10	E	D	LP	P
RMJ	7.849	88.25	9.81	104.46	I	D	SP	P
DL2	8.654	235.21	9.98	99.95	I	D	SP	P
NII	8.898	132.34	10.02	98.77	E	C	LP	P
MAT	9.557	140.91	10.09	95.53	I	C	SP	P
ABJ	9.745	86.53	10.10	94.64	I	D	SP	P
SSE	15.121	213.08	9.81	75.37	I	D	SP	P
TIY	15.271	251.06	9.79	74.94	I	D	SP	P
NJ2	15.317	221.47	9.78	74.83	I	D	SP	P
BTO	15.725	263.85	9.74	73.92	I	D	SP	P
WHN	18.826	228.98	9.43	68.51	I	D	SP	P
XAN	19.695	246.33	9.37	67.62	I	D	SP	P
ANP	20.431	204.59	9.31	66.75	I	D	LP	P
QZH	21.638	211.21	9.21	65.40	I	D	SP	P
LZH	22.037	257.60	9.18	64.96	I	D	LP	P
GTA	23.469	268.94	9.01	62.72	I	D	SP	P
CD2	25.052	247.08	8.86	60.91	I	D	SP	P
GZH	25.478	219.80	8.83	60.65	I	D	SP	P
BAG	29.032	200.42	8.61	58.17	I	D	LP	P
KMI	29.671	239.29	8.57	57.78	I	D	LP	P
LSA	34.447	258.61	8.31	55.05	I	D	SP	P
CHG	36.717	236.60	8.19	53.94	I	D	LP	P
DAV	37.267	188.49	8.17	53.68	E	C	LP	P
ANM	40.222	36.91	8.01	52.25	I	C	SP	P
KSH	40.442	282.87	8.00	52.12	I	D	SP	P
TTA	44.529	38.67	7.76	49.99	I	C	SP	P
IMA	44.959	34.00	7.73	49.68	I	C	SP	P
NDI	44.977	268.39	7.73	49.67	I	D	SP	P
KDC	47.553	45.03	7.54	48.08	I	C	SP	P
COL	47.612	34.83	7.54	48.04	I	C	SP	P
FBA	47.612	34.83	7.54	48.04	I	C	SP	P
COL	47.612	34.83	7.54	48.04	I	C	LP	P
PMR	47.983	39.36	7.50	47.78	I	C	SP	P
BSI	49.506	229.35	7.38	46.77	I	D	SP	P
MKS	50.250	194.67	7.33	46.36	I	C	SP	P
HYB	51.129	255.65	7.27	45.80	I	D	SP	P
KBS	52.059	347.59	7.20	45.27	I	C	LP	P
KHI	55.141	285.87	6.98	43.55	I	C	SP	P
PMG	55.414	160.21	6.96	43.39	I	C	SP	P
SIT	56.280	40.95	6.90	42.92	I	C	SP	P
NUR	59.644	326.56	6.64	40.97	E	C	LP	P
TAB	61.186	296.28	6.53	40.13	E	D	LP	P
RSNT	61.570	28.69	6.50	39.89	I	C	LP	P
YKC	61.611	28.65	6.50	39.87	I	C	SP	P
HON	62.181	86.66	6.45	39.53	I	C	LP	P
WB2	63.935	176.22	6.31	38.51	I	C	SP	P

Table 124. Station data for event 198....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ISQ	65.118	170.90	6.22	37.85	I	C	SP	P
CTAO	65.552	163.97	6.18	37.59	I	C	LP	P
CTA	65.552	163.97	6.18	37.59	I	C	SP	P
KONO	65.803	331.54	6.16	37.44	E	C	LP	P
GDH	66.806	1.66	6.09	36.95	I	C	SP	P
GDH	66.806	1.66	6.09	36.95	E	C	LP	P
PGC	67.027	43.88	6.07	36.83	I	C	SP	P
COP	67.686	327.38	6.03	36.53	I	C	SP	P
NAU	67.889	195.21	6.01	36.41	I	C	SP	P
MUD	68.338	329.41	5.99	36.20	I	C	SP	P
PNT	68.447	41.51	5.98	36.15	I	C	SP	P
EDM	68.506	35.55	5.97	36.12	I	C	SP	P
PSN	68.599	310.48	5.97	36.08	I	D	SP	P
LON	69.124	44.60	5.93	35.80	I	C	LP	P
BRN	69.770	324.63	5.88	35.49	I	C	SP	P
REY	69.848	347.60	5.88	35.45	I	C	SP	P
WBN	70.119	183.98	5.86	35.32	I	C	SP	P
GZR	70.313	314.61	5.85	35.26	I	D	SP	P
NEW	70.367	41.09	5.85	35.23	I	C	SP	P
BRG	70.590	323.15	5.83	35.12	I	C	SP	P
SRO	70.822	318.72	5.81	34.98	I	C	SP	P
ZST	71.118	319.62	5.79	34.83	I	C	SP	P
FFC	71.732	29.09	5.75	34.59	I	C	SP	P
HOF	71.891	323.79	5.74	34.53	I	C	SP	P
FHC	72.026	50.35	5.74	34.47	I	C	SP	P
WIT	72.073	328.10	5.73	34.45	I	C	SP	P
WET	72.332	322.46	5.72	34.34	I	C	SP	P
MMB	72.436	311.20	5.71	34.29	I	D	SP	P
GRFO	72.640	323.69	5.69	34.19	E	C	LP	P
WTS	72.658	327.49	5.69	34.18	I	C	SP	P
IZM	72.651	306.81	5.69	34.19	I	D	SP	P
CIN	72.714	305.74	5.69	34.15	I	D	SP	P
WDC	72.975	49.72	5.67	34.01	I	C	SP	P
TNS	73.386	325.48	5.64	33.84	I	C	SP	P
BHG	73.396	321.47	5.64	33.84	I	C	SP	P
SKO	73.392	312.74	5.64	33.84	I	C	SP	P
MIN	73.650	49.38	5.63	33.74	I	C	SP	P
NOU	73.840	145.75	5.62	33.66	I	C	SP	P
LJU	73.889	319.42	5.61	33.64	I	C	SP	P
ENN	73.968	327.15	5.61	33.61	I	C	SP	P
RBL	74.040	320.21	5.60	33.58	I	D	SP	P
STU	74.199	324.13	5.59	33.51	I	C	SP	P
LRM	74.334	40.41	5.59	33.46	I	C	SP	P
GAP	74.387	322.26	5.58	33.44	I	C	SP	P
TRI	74.497	319.60	5.58	33.39	I	C	SP	P
OGA	74.868	321.88	5.55	33.24	I	C	SP	P
BKS	75.030	51.56	5.55	33.17	I	C	SP	P
KLG	75.122	188.26	5.54	33.14	I	C	SP	P
CTI	75.212	320.99	5.53	33.10	I	C	SP	P
SLE	75.275	323.84	5.53	33.07	I	C	LP	P

Table 124. Station data for event 198....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SAX	75.310	323.04	5.53	33.06	I	C	LP	P
OSS	75.397	322.24	5.52	33.03	I	C	LP	P
ZUL	75.540	323.71	5.51	32.97	I	C	LP	P
MHC	75.740	51.61	5.50	32.89	I	C	SP	P
LLS	75.757	322.98	5.50	32.89	I	C	LP	P
DMU	75.774	335.71	5.50	32.88	I	C	SP	P
VDL	75.847	322.47	5.50	32.85	I	C	LP	P
JAS	75.984	50.47	5.49	32.79	I	C	LP	P
JAS	75.984	50.47	5.49	32.79	I	C	SP	P
SAL	76.056	321.31	5.48	32.76	I	C	SP	P
SAO	76.259	51.91	5.46	32.63	I	C	SP	P
DCN	76.365	335.62	5.46	32.58	I	C	SP	P
BRT	76.388	314.33	5.45	32.57	I	D	SP	P
LCI	76.398	313.52	5.45	32.56	I	C	SP	P
TMA	76.403	322.56	5.45	32.56	I	C	LP	P
ETA	76.606	334.71	5.44	32.47	I	C	SP	P
MMK	76.841	323.03	5.43	32.39	I	C	LP	P
MNA	76.885	48.80	5.42	32.37	I	C	SP	P
ECP	77.101	334.53	5.41	32.26	I	C	SP	P
FIR	77.126	319.70	5.41	32.25	I	C	SP	P
PRI	77.144	51.90	5.41	32.24	I	C	SP	P
ORO	77.169	322.75	5.40	32.22	I	C	SP	P
AQU	77.189	317.52	5.40	32.21	I	C	SP	P
DUI	77.193	316.45	5.40	32.21	I	C	SP	P
POI	77.246	317.93	5.40	32.18	I	C	SP	P
MNS	77.514	317.96	5.37	32.01	I	C	SP	P
LOR	77.583	326.09	5.36	31.96	I	C	SP	P
SGO	77.592	315.20	5.36	31.95	I	C	SP	P
RSON	77.747	27.01	5.35	31.84	I	C	LP	P
NWAO	77.760	191.60	5.34	31.81	E	C	LP	P
LBF	77.765	325.86	5.34	31.81	I	C	SP	P
GRC	77.874	326.55	5.33	31.72	I	C	SP	P
SSF	77.892	326.17	5.33	31.71	I	C	SP	P
AFI	77.918	123.14	5.32	31.69	E	C	LP	P
RMP	77.941	317.56	5.32	31.67	I	C	SP	P
RDP	77.974	317.52	5.32	31.65	I	C	SP	P
BDW	77.992	40.84	5.32	31.64	I	C	SP	P
AVF	78.173	326.09	5.30	31.51	I	C	SP	P
LPF	78.836	329.32	5.24	31.13	I	C	SP	P
SSB	78.910	324.50	5.23	31.10	I	C	SP	P
TCF	79.040	326.45	5.22	31.03	I	C	SP	P
ADE	79.145	173.34	5.22	30.97	I	C	SP	P
LSF	79.340	326.83	5.20	30.87	I	C	SP	P
RSSD	79.428	36.77	5.19	30.82	I	C	LP	P
NOP	79.659	49.20	5.17	30.71	I	C	SP	P
YOU	79.760	165.23	5.17	30.64	I	C	SP	P
CAN	80.888	164.96	5.10	30.24	I	C	SP	P
LHC	81.292	25.68	5.08	30.08	I	C	SP	P
PV10	81.649	43.35	5.06	29.94	I	C	SP	P
WAM	81.714	165.25	5.05	29.92	I	C	SP	P

Table 124. Station data for event 198....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PV07	81.794	43.07	5.05	29.88	I	C	SP	P
PV06	81.969	43.02	5.04	29.82	I	C	SP	P
MLS	82.241	325.22	5.02	29.71	I	C	SP	P
GOL	82.365	40.26	5.01	29.66	I	C	LP	P
TOO	82.501	168.23	5.01	29.61	I	C	SP	P
GLA	82.676	50.44	5.00	29.54	I	C	SP	P
LGR	84.095	327.18	4.88	28.77	I	C	SP	P
ANMO	85.624	43.83	4.78	28.16	I	C	LP	P
ALQ	85.627	43.84	4.78	28.16	I	C	SP	P
TOL	86.901	326.84	4.73	27.84	I	C	SP	P
GAC	87.492	18.06	4.71	27.69	E	C	LP	P
OTT	87.732	18.31	4.71	27.68	I	C	SP	P
TAU	88.004	167.89	4.71	27.70	E	C	LP	P
RSNY	88.799	17.78	4.69	27.59	E	C	LP	P
CRT	89.027	325.16	4.69	27.56	I	C	SP	P
SIO	89.675	36.54	4.68	27.48	I	C	SP	P
MAL	89.756	325.48	4.67	27.47	I	C	SP	P
TUL	89.755	36.10	4.67	27.47	I	C	LP	P
RLO	89.859	35.44	4.67	27.46	I	C	SP	P
GBO	90.061	35.71	4.67	27.43	I	C	SP	P
FVM	90.102	31.34	4.67	27.43	I	C	SP	P
BHO	91.453	36.24	4.63	27.20	I	C	SP	P
SCP	91.544	21.33	4.63	27.18	I	C	LP	P
JCT	92.505	41.85	4.60	26.98	I	C	SP	P
RSCP	93.975	28.94	4.55	26.67	E	C	LP	P
BLA	94.170	24.47	4.54	26.64	E	C	LP	P
BLA	94.170	24.47	4.54	26.64	I	C	SP	P
EVA	116.023	257.59	1.88	10.68	I	D	SP	PKP
BPI	116.555	258.53	1.88	10.68	I	C	SP	PKP
VIR	118.541	257.56	1.87	10.66	I	C	SP	PKP
BLF	119.633	257.03	1.87	10.65	I	C	SP	PKP
UPA	120.372	35.26	1.87	10.65	I	C	SP	PKP
GRM	121.820	252.85	1.87	10.64	I	C	SP	PKP
SUR	125.293	257.07	1.86	10.60	I	C	SP	PKP
ARE	146.543	41.19	1.63	9.28	I	C	SP	PKP
ZOBO	147.880	35.74	1.60	9.09	I	C	SP	PKP
LPB	148.126	35.91	1.59	9.05	I	C	SP	PKP
SLA	156.469	39.55	1.31	7.40	I	C	SP	PKP
TLL	157.916	57.78	1.24	7.04	I	C	SP	PKP
ROCH	159.683	63.80	1.16	6.58	I	C	SP	PKP
PEL	160.003	63.67	1.15	6.49	I	C	SP	PKP

Table 125. Station data for event 226

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SSE	16.063	269.68	12.38	66.58	E	D	LP	P
ANP	17.781	250.19	11.86	61.49	E	C	LP	P
NJ2	17.885	273.95	11.73	60.33	I	C	SP	P
PKI	47.081	278.87	7.83	35.46	I	D	SP	P
DMN	47.321	279.04	7.82	35.39	I	D	SP	P
CTA	52.720	172.61	7.39	33.18	I	C	SP	P
NDI	53.477	283.50	7.33	32.88	I	D	SP	P
HYB	57.000	270.44	7.07	31.57	I	D	SP	P
POO	60.451	274.02	6.80	30.25	I	D	SP	P
MHI	64.633	298.14	6.46	28.62	I	D	SP	P
YKC	68.299	28.80	6.16	27.16	I	D	SP	P
DAG	70.098	354.91	6.03	26.53	I	D	SP	P
EDM	73.567	36.92	5.78	25.36	I	D	SP	P
WDC	74.699	51.54	5.70	25.00	I	C	SP	P
BKS	76.261	53.83	5.60	24.51	I	C	SP	P
JAS	77.443	53.01	5.53	24.19	I	C	SP	P
FRI	78.438	53.53	5.46	23.86	I	C	SP	P
VRI	81.350	319.51	5.20	22.65	I	D	SP	P
MLR	82.014	319.56	5.15	22.42	I	D	SP	P
KRA	82.112	325.72	5.14	22.39	I	D	SP	P
GPA	82.666	313.43	5.11	22.24	I	C	SP	P
JOS	82.874	324.29	5.10	22.19	I	D	SP	P
COZ	82.995	320.15	5.09	22.15	I	C	SP	P
KSP	83.252	327.92	5.07	22.08	I	D	SP	P
JMB	83.551	316.89	5.06	22.00	I	C	SP	P
GZR	83.787	320.93	5.04	21.94	I	D	SP	P
PVL	83.927	318.08	5.03	21.90	I	D	SP	P
DST	84.108	313.67	5.02	21.84	I	D	SP	P
EDC	84.115	314.62	5.02	21.84	I	C	SP	P
BRG	84.266	329.01	5.01	21.79	I	D	SP	P
CLL	84.352	329.75	5.00	21.77	I	D	SP	P
PRU	84.647	328.12	4.99	21.68	I	C	SP	P
KDZ	84.785	316.83	4.98	21.66	I	D	SP	P
MOX	85.433	329.96	4.93	21.43	I	D	SP	P
HOF	85.571	329.61	4.92	21.37	I	D	SP	P
KHC	85.702	327.99	4.91	21.32	I	D	SP	P
MMB	85.748	317.58	4.90	21.30	I	C	SP	P
YER	85.840	311.89	4.89	21.25	I	D	SP	P
SKO	86.781	319.00	4.82	20.92	I	D	SP	P
BHG	87.056	327.38	4.80	20.85	I	D	SP	P
RBL	87.679	326.16	4.77	20.70	I	C	SP	P
TRI	88.123	325.56	4.75	20.61	I	C	SP	P
UCC	88.211	333.65	4.75	20.60	I	D	LP	P
GWF	88.377	330.86	4.74	20.57	I	D	SP	P
OGA	88.533	327.75	4.74	20.54	I	D	SP	P
CTI	88.864	326.88	4.72	20.49	I	D	SP	P
CDF	88.963	330.69	4.72	20.48	I	D	SP	P
ECH	89.166	330.63	4.72	20.45	I	D	SP	P
BAF	89.533	330.48	4.71	20.42	I	D	SP	P
HAU	89.666	330.93	4.71	20.41	I	D	SP	P

Table 125. Station data for event 226....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ROF	89.694	330.43	4.71	20.41	I	D	SP	P
LOR	91.264	331.84	4.68	20.31	I	D	SP	P
LBF	91.446	331.60	4.68	20.28	I	D	SP	P
GRC	91.552	332.29	4.67	20.27	I	D	SP	P
SSF	91.572	331.91	4.67	20.26	I	D	SP	P
FLN	91.663	335.09	4.67	20.25	I	D	SP	P
LDF	91.677	334.80	4.67	20.25	I	D	SP	P
SMF	91.776	331.48	4.67	20.22	I	D	SP	P
AVF	91.854	331.84	4.66	20.21	I	D	SP	P
GRR	92.113	335.10	4.66	20.18	I	D	SP	P
LPF	92.481	335.01	4.65	20.16	I	D	SP	P
LPF	92.481	335.01	4.65	159.84	I	R	SP	P
MZF	92.630	331.94	4.65	20.14	I	D	SP	P
TCF	92.718	332.20	4.64	20.13	I	D	SP	P
LSF	93.016	332.57	4.64	20.09	I	D	SP	P
FRF	93.052	328.04	4.63	20.09	I	D	SP	P
LRG	93.263	328.14	4.63	20.06	I	D	SP	P
LMR	93.292	327.98	4.63	20.05	I	D	SP	P
MFF	93.361	333.73	4.63	20.04	I	D	SP	P
RJF	93.804	332.04	4.61	19.96	I	D	SP	P
CAF	93.898	331.51	4.60	19.94	I	D	SP	P
LFF	94.417	332.30	4.59	19.88	I	D	SP	P
LPO	94.450	331.89	4.59	19.87	I	D	SP	P
SLR	120.882	257.51	1.87	7.97	I	C	SP	PKP
SWZ	123.886	257.19	1.87	7.96	I	C	SP	PKP
LPB	149.979	64.56	1.56	6.63	I	D	SP	PKP

Table 126. Station data for event 228

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SEO	12.884	256.09	13.22	69.62	I	C	LP	P
CN2	12.885	284.78	13.22	69.62	I	C	SP	P
BJI	20.154	273.90	10.39	47.45	E	C	LP	P
ANP	24.159	233.38	9.58	42.79	E	C	LP	P
QZH	26.137	237.58	9.36	41.58	I	C	SP	P
GUMO	28.155	175.68	9.17	40.56	E	D	LP	P
LZH	30.623	272.27	8.85	38.87	I	C	SP	P
BAG	31.681	223.65	8.78	38.50	E	C	LP	P
GTA	32.459	280.35	8.71	38.14	I	C	SP	P
KMI	36.931	256.03	8.44	36.76	I	C	LP	P
WMQ	39.833	292.09	8.26	35.85	I	C	SP	P
CHG	43.627	251.94	8.07	34.90	I	C	SP	P
CHG	43.627	251.94	8.07	34.90	I	C	LP	P
COL	44.563	34.70	8.01	34.61	E	C	LP	P
COL	44.563	34.70	8.01	34.61	I	C	SP	P
FBA	44.563	34.70	8.01	34.61	I	C	SP	P
KKN	48.400	272.35	7.77	33.43	I	C	SP	P
PKI	48.421	272.03	7.77	33.43	I	C	SP	P
DMN	48.627	272.26	7.77	33.43	I	C	SP	P
SNG	50.765	239.29	7.57	32.46	E	C	LP	P
RSNT	59.213	31.85	6.95	29.52	E	C	LP	P
KEV	59.394	338.64	6.91	29.34	I	C	LP	P
DAG	61.147	355.22	6.79	28.78	I	C	SP	P
TRO	61.578	340.69	6.75	28.60	I	C	LP	P
CTAO	61.639	176.28	6.75	28.60	E	C	LP	P
CTA	61.639	176.28	6.75	28.60	I	C	SP	P
WB2	61.905	188.98	6.71	28.41	I	C	SP	P
MHI	62.486	295.23	6.67	28.23	I	C	LP	P
EDM	65.007	40.10	6.47	27.31	I	C	SP	P
NUR	66.270	331.53	6.34	26.71	I	C	LP	P
WDC	67.446	55.29	6.26	26.35	I	C	SP	P
MIN	68.159	55.04	6.22	26.17	I	C	SP	P
FFC	69.169	34.15	6.14	25.81	I	C	SP	P
FCC	69.303	27.81	6.10	25.63	I	C	SP	P
TAB	70.044	303.44	6.06	25.45	I	C	LP	P
LRM	70.057	46.00	6.06	25.45	I	C	SP	P
JAS	70.333	56.48	6.02	25.27	I	C	SP	P
FRI	71.379	56.90	5.95	24.95	I	C	SP	P
KONO	71.823	337.05	5.92	24.82	E	C	LP	P
COP	74.165	333.33	5.78	24.19	I	C	SP	P
RSON	75.426	33.09	5.67	23.71	E	C	LP	P
RSSD	75.619	43.12	5.67	23.71	E	C	LP	P
KRA	75.753	326.02	5.64	23.57	I	C	SP	P
BRN	76.531	330.95	5.61	23.44	I	C	SP	P
KSP	76.620	328.39	5.61	23.44	I	C	SP	P
PSN	76.641	317.30	5.61	23.44	I	C	SP	P
JOS	76.686	324.67	5.61	23.44	I	C	SP	P
BRG	77.499	329.63	5.55	23.17	I	C	SP	P
CLL	77.500	330.38	5.55	23.17	I	C	SP	P
NWAO	77.967	201.76	5.51	23.00	E	C	LP	P

Table 126. Station data for event 228....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PRU	77.981	328.77	5.51	23.00	I	C	SP	P
GZR	78.022	321.40	5.51	23.00	I	C	SP	P
DMK	78.196	316.21	5.51	23.00	I	C	SP	P
MOX	78.551	330.72	5.48	22.87	I	C	LP	P
HOF	78.727	330.38	5.48	22.87	I	C	SP	P
WTS	79.090	334.04	5.44	22.69	I	C	SP	P
GRFO	79.482	330.38	5.41	22.56	I	C	LP	P
GRF	79.480	330.37	5.41	22.56	I	C	SP	P
KMR	79.694	327.81	5.41	22.56	I	C	LP	P
BHG	80.461	328.31	5.30	22.07	I	C	SP	P
ANMO	80.759	51.10	5.25	21.85	E	C	LP	P
UCC	80.910	334.75	5.25	21.85	E	C	LP	P
GWF	81.375	331.96	5.21	21.68	I	C	SP	P
SLE	82.085	330.81	5.17	21.51	E	C	LP	P
LBF	84.344	333.05	5.02	20.85	I	C	SP	P
AVF	84.724	333.33	5.02	20.85	I	C	SP	P
GBO	86.292	43.64	4.86	20.16	I	C	SP	P
GAC	86.450	25.77	4.86	20.16	E	C	LP	P
SNZO	87.612	156.49	4.80	19.90	E	D	LP	P
SCP	89.937	29.64	4.71	19.51	E	C	LP	P
BUL	120.985	269.95	1.87	7.63	I	C	SP	PKP
BOG	122.922	45.39	1.87	7.62	I	C	LP	PKP
SLR	124.490	264.80	1.87	7.61	I	C	SP	PKP

Figure 46. Azimuthal equidistant map for geographic subdivision, Bonin - Mariana - Caroline Islands

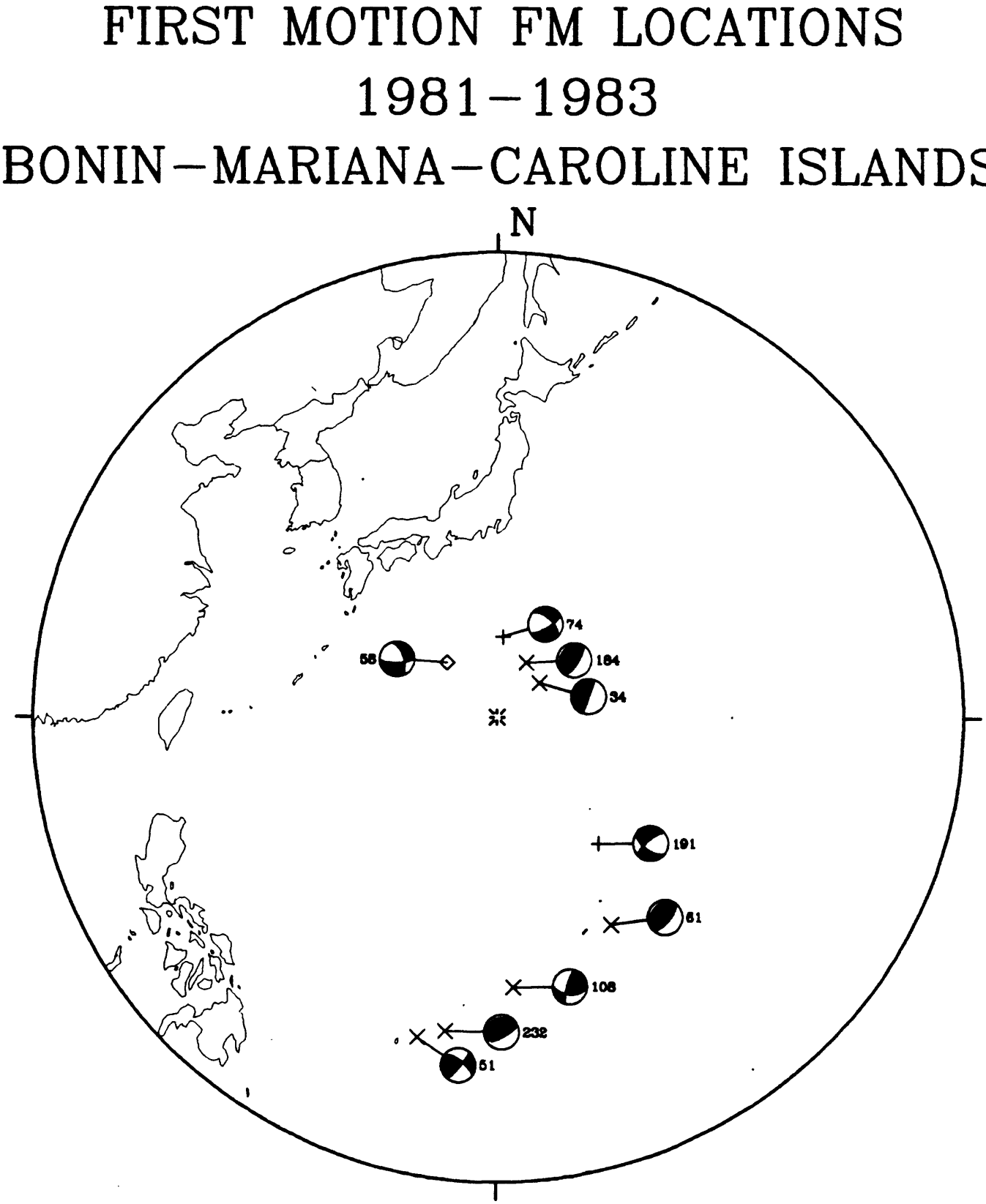

Table 127. Focal mechanism parameters for subdivision, Bonin - Mariana - Caroline Islands

EVENT#	NODAL PLANE 1 (DEG.)			NODAL PLANE 2 (DEG.)			T AXIS (DEG.)		P AXIS (DEG.)		B AXIS (DEG.)	
	ϑ	δ	λ	ϑ	δ	λ	PLG	AZM	PLG	AZM	PLG	AZM
34	20	87	90	200	3	90	48	290	42	110	0	20
51	307	66	170	41	81	24	24	266	10	172	64	60
58	87	70	-145	344	57	-34	8	213	39	309	50	113
61	40	67	90	220	23	90	68	310	22	130	0	40
74	58	70	-145	315	57	-34	8	184	39	280	50	84
108	195	76	38	94	53	162	36	61	15	320	50	212
184	33	68	90	213	22	90	67	303	23	123	0	33
191	127	57	-20	228	73	215	11	354	36	92	52	251
232	65	69	90	245	21	90	66	335	24	155	0	65

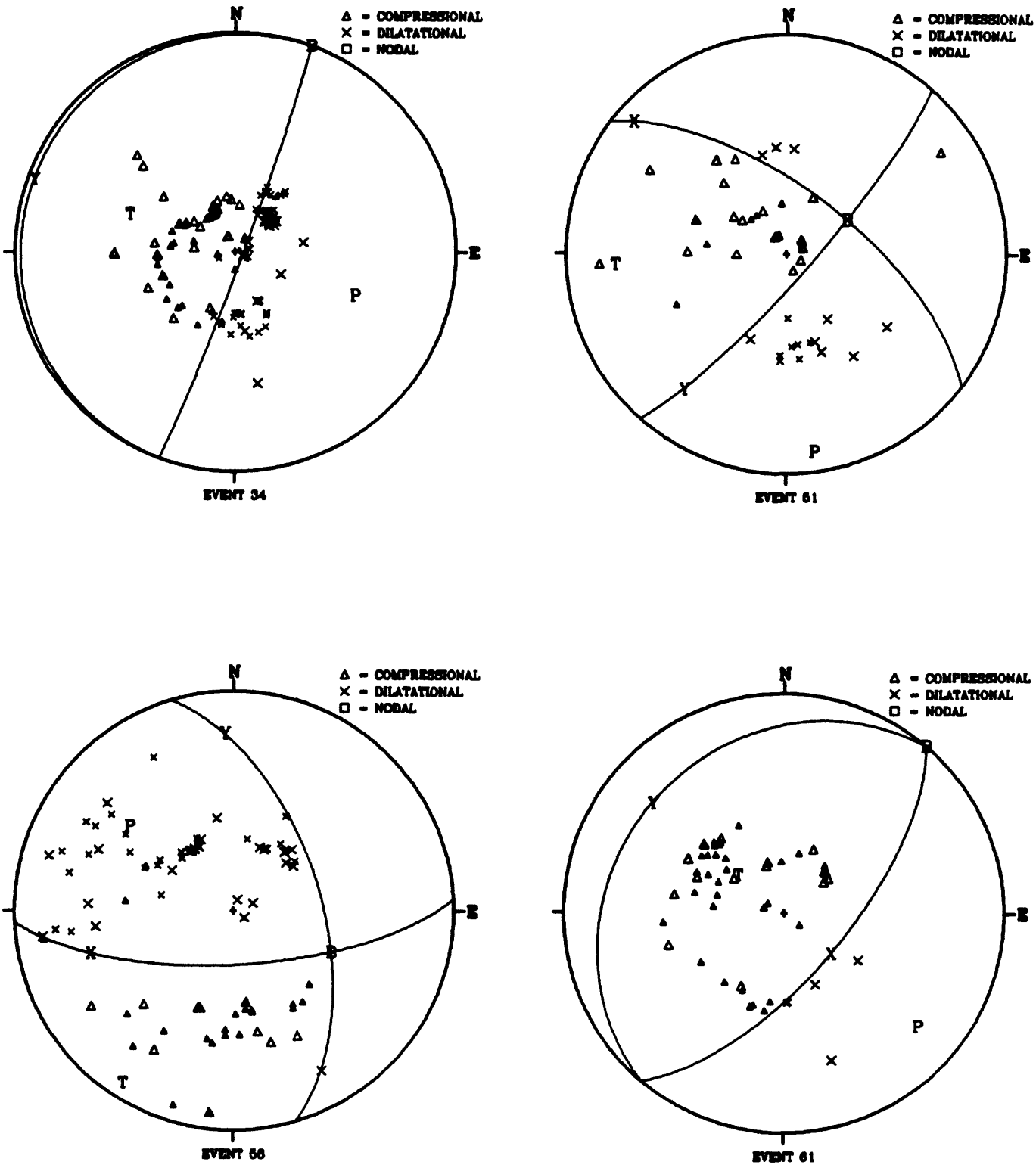

Figure 47. Lower hemisphere focal sphere projections for events 34, 51, 58, and 61

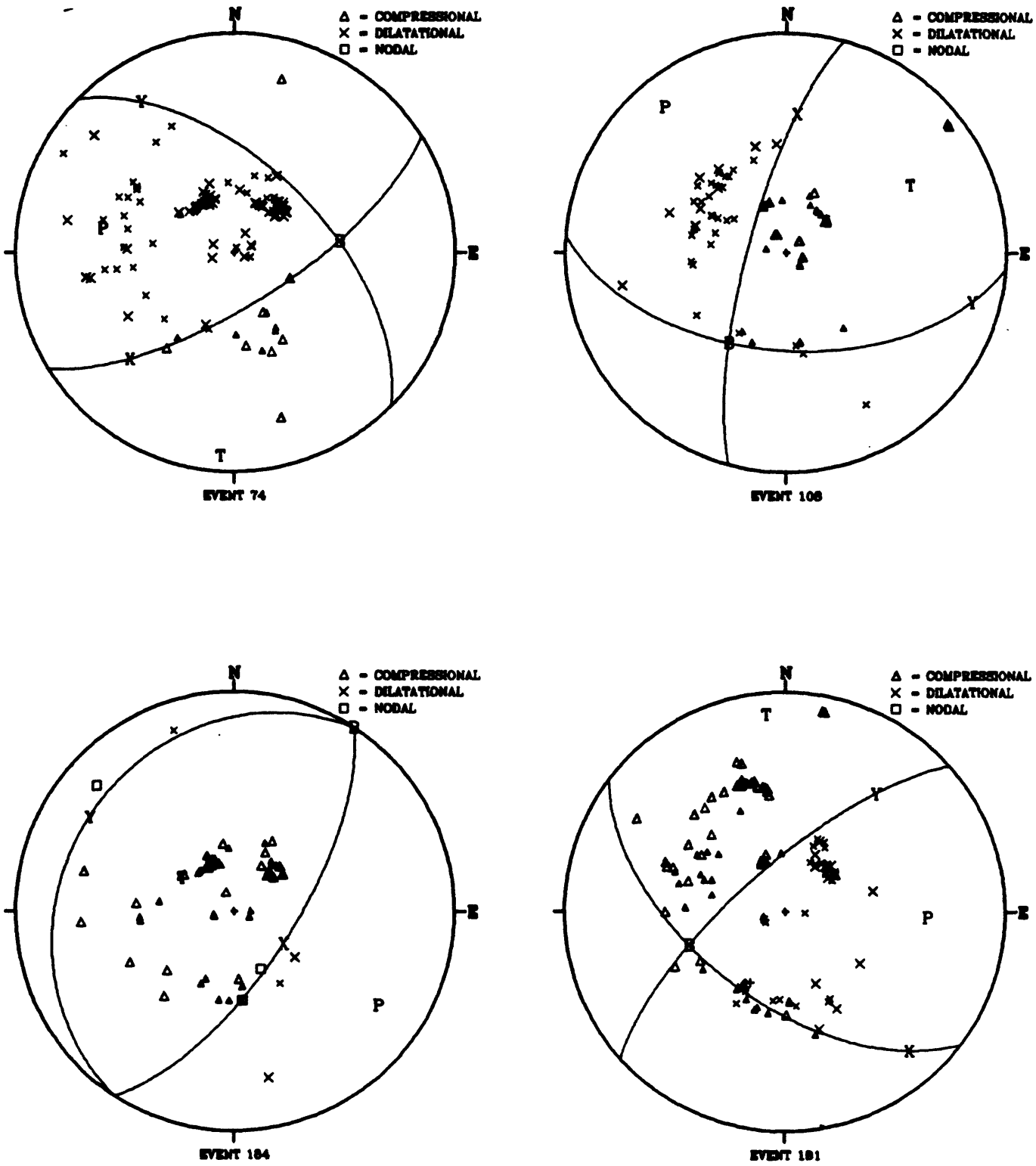

Figure 48. Lower hemisphere focal sphere projections for events 74, 108, 184, and 191

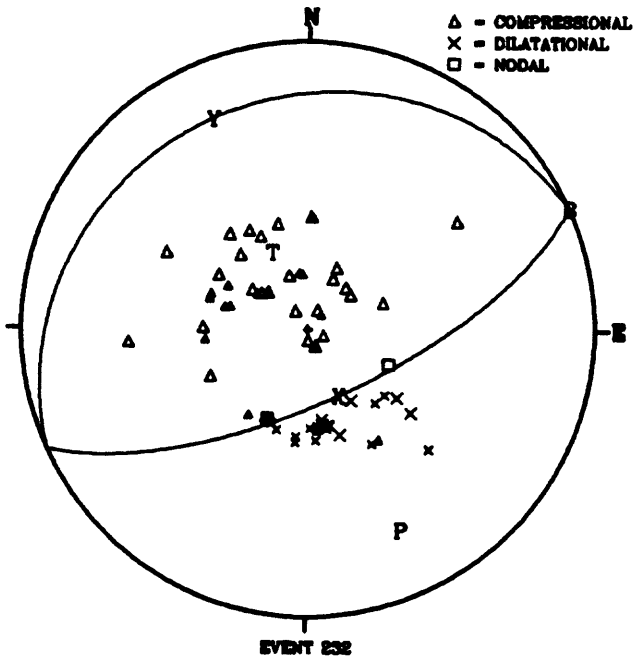

Figure 49. Lower hemisphere focal sphere projection for event 232

Table 128. Station data for event 34

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SHK	11.455	314.50	13.52	52.47	I	C	LP	P
GUMO	13.343	170.22	13.23	50.90	E	D	LP	P
GUA	13.398	170.07	13.23	50.90	E	D	LP	P
SEO	16.972	312.97	12.60	47.65	I	C	LP	P
ANP	18.984	269.76	12.19	45.65	I	C	LP	P
TATO	19.045	269.14	12.19	45.65	I	C	LP	P
BAG	22.873	247.53	9.77	34.97	I	C	LP	P
DAV	25.413	222.49	9.43	33.58	I	C	LP	P
BJI	25.552	307.73	9.43	33.58	E	C	LP	P
MOM	29.070	170.00	9.04	32.02	I	D	SP	P
KVG	30.282	163.51	8.86	31.31	I	D	SP	P
TZZ	31.922	182.52	8.75	30.88	I	D	SP	P
KKM	32.500	235.22	8.72	30.76	I	C	SP	P
AAI	33.353	206.76	8.65	30.49	I	C	SP	P
PAA	35.227	157.31	8.56	30.14	I	D	SP	P
KMI	35.738	276.37	8.53	30.02	E	C	LP	P
PMG	36.285	172.32	8.47	29.79	I	D	LP	P
BKB	37.353	225.66	8.41	29.56	I	C	SP	P
ADK	39.489	39.53	8.30	29.13	I	D	SP	P
PCT	40.158	260.90	8.27	29.02	I	C	SP	P
CHTO	40.824	268.13	8.21	28.79	E	C	LP	P
CHG	40.824	268.13	8.21	28.79	I	C	SP	P
BDT	41.313	265.87	8.19	28.71	I	C	SP	P
SNG	44.334	251.62	8.02	28.06	I	C	LP	P
SNG	44.334	251.62	8.02	28.06	I	C	SP	P
NKI	44.355	40.49	8.02	28.06	I	D	SP	P
TRT	44.937	224.42	7.99	27.95	I	C	SP	P
CTAO	46.763	175.23	7.88	27.53	I	D	SP	P
CTA	46.763	175.23	7.88	27.53	I	D	SP	P
WRA	47.160	190.57	7.88	27.53	I	D	SP	P
PPI	48.786	243.15	7.74	27.00	I	C	SP	P
SDN	49.700	38.89	7.70	26.85	I	D	SP	P
ANM	50.059	26.38	7.66	26.70	I	D	SP	P
ASP	50.895	190.25	7.58	26.40	I	C	SP	P
KOU	51.589	153.73	7.54	26.25	I	D	SP	P
NOU	54.034	152.39	7.34	25.50	I	D	SP	P
KIP	54.095	82.07	7.34	25.50	E	D	LP	P
KDC	54.431	36.68	7.30	25.35	I	C	SP	P
WBN	54.853	197.62	7.26	25.21	I	D	SP	P
IMA	55.188	26.47	7.26	25.21	I	D	SP	P
PMR	56.492	32.21	7.15	24.80	I	D	SP	P
NDI	57.189	288.17	7.11	24.65	I	C	SP	P
COL	57.422	28.34	7.07	24.50	I	D	SP	P
FBA	57.422	28.34	7.07	24.50	I	D	SP	P
COL	57.422	28.34	7.07	24.50	E	D	LP	P
STK	58.376	180.96	7.00	24.24	I	D	SP	P
HYB	59.506	275.20	6.92	23.95	I	C	SP	P
KLG	60.721	200.81	6.84	23.65	I	C	SP	P
YOU	61.009	174.49	6.80	23.51	I	D	SP	P
CAN	62.098	174.04	6.72	23.22	I	D	SP	P

Table 128. Station data for event 34....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KBL	62.444	296.76	6.68	23.07	I	C	LP	P
KAAO	62.444	296.76	6.68	23.07	I	C	SP	P
WAM	62.952	174.26	6.64	22.92	I	D	SP	P
INK	63.152	24.50	6.64	22.92	I	D	SP	P
POO	63.278	278.22	6.60	22.78	I	C	SP	P
BFD	63.650	180.01	6.60	22.78	I	D	SP	P
NWAO	64.109	203.57	6.56	22.63	I	C	LP	P
TOO	64.104	177.41	6.56	22.63	I	D	SP	P
MHI	69.410	301.05	6.11	21.00	I	C	LP	P
PHC	69.744	42.67	6.11	21.00	I	D	SP	P
TGI	70.743	297.80	6.03	20.71	I	C	SP	P
KBS	70.873	351.06	6.00	20.61	I	C	LP	P
KRP	71.444	152.99	5.96	20.46	I	D	SP	P
KEV	73.352	340.86	5.82	19.96	I	C	LP	P
MNG	73.736	154.47	5.82	19.96	I	D	SP	P
WEL	74.043	155.30	5.78	19.82	I	D	SP	P
SNZO	74.040	155.36	5.78	19.82	I	D	LP	P
COR	74.466	47.71	5.75	19.71	I	D	SP	P
PNT	74.950	42.18	5.71	19.57	I	D	SP	P
DAG	76.015	355.64	5.65	19.35	E	C	LP	P
WDC	76.551	51.29	5.61	19.21	I	D	SP	P
EDM	76.839	36.80	5.58	19.11	I	D	SP	P
NEW	76.890	42.46	5.58	19.11	I	D	SP	P
YKM	77.470	41.49	5.55	19.00	I	D	LP	P
SUF	77.579	335.00	5.55	19.00	I	C	SP	P
BKS	77.869	53.72	5.52	18.89	I	D	LP	P
BKS	77.869	53.72	5.52	18.89	I	D	SP	P
LDM	77.886	41.74	5.52	18.89	I	D	LP	P
TAB	78.524	306.80	5.49	18.79	I	C	LP	P
MHC	78.521	54.01	5.49	18.79	I	D	SP	P
JAS	79.129	53.04	5.45	18.64	I	D	SP	P
PPT	79.247	115.91	5.45	18.64	I	D	LP	P
SES	79.440	38.65	5.41	18.50	I	D	SP	P
NUR	79.456	333.59	5.41	18.50	I	C	SP	P
NUR	79.456	333.59	5.41	18.50	I	C	LP	P
PRI	79.741	54.78	5.41	18.50	I	D	SP	P
FRI	80.065	53.66	5.36	18.33	I	D	SP	P
AMM	80.409	43.11	5.31	18.15	I	D	SP	P
MNV	80.534	51.80	5.31	18.15	I	D	SP	P
BUT	80.685	43.05	5.31	18.15	I	D	SP	P
FFC	81.802	31.95	5.18	17.69	I	D	SP	P
PAS	82.455	55.66	5.14	17.55	I	D	LP	P
UPP	82.580	335.34	5.14	17.55	I	C	SP	P
FCC	82.711	26.03	5.14	17.55	I	D	SP	P
GDH	83.498	5.71	5.09	17.37	I	C	LP	P
KON	85.569	338.11	4.96	16.91	I	C	LP	P
MLR	87.861	321.00	4.77	16.25	I	C	SP	P
BUC	88.421	320.07	4.75	16.18	I	C	SP	P
GOL	88.488	45.66	4.75	16.18	E	D	LP	P
SPC	88.555	326.31	4.75	16.18	I	C	SP	P

Table 128. Station data for event 34....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
JOS	88.862	325.66	4.73	16.11	I	C	SP	P
PVL	89.720	319.46	4.71	16.04	I	C	SP	P
ANMO	90.406	50.09	4.70	16.00	I	D	LP	P
KDZ	90.530	318.19	4.70	16.00	I	C	SP	P
PRU	90.720	329.43	4.70	16.00	I	C	SP	P
VIE	91.089	327.35	4.70	16.00	I	C	LP	P
MOX	91.537	331.24	4.68	15.93	I	C	LP	P
HOF	91.670	330.89	4.68	15.93	I	C	SP	P
KHC	91.772	329.28	4.67	15.90	I	C	SP	P
LHC	91.913	31.60	4.67	15.90	I	D	SP	P
WET	92.079	329.62	4.67	15.90	I	C	SP	P
EPT	92.115	52.76	4.67	15.90	E	D	LP	P
KMR	92.286	328.26	4.66	15.86	I	C	LP	P
VAY	92.367	319.23	4.66	15.86	I	C	SP	P
GRFO	92.417	330.79	4.66	15.86	I	C	LP	P
SKO	92.605	320.27	4.66	15.86	I	C	SP	P
BHG	93.113	328.63	4.65	15.83	I	C	SP	P
BNS	93.134	333.58	4.65	15.83	I	C	SP	P
TNS	93.191	332.49	4.65	15.83	I	C	SP	P
ARO	93.361	284.60	4.63	15.76	I	C	SP	P
HLW	93.364	305.78	4.63	15.76	E	C	LP	P
FUR	93.521	329.73	4.63	15.76	I	C	SP	P
LJU	93.526	326.65	4.63	15.76	I	C	SP	P
ENN	93.782	334.08	4.61	15.69	I	C	SP	P
STU	93.984	331.17	4.61	15.69	I	C	SP	P
UCC	94.359	334.90	4.60	15.65	I	C	SP	P
OGA	94.597	328.98	4.60	15.65	I	C	SP	P
CTI	94.911	328.11	4.58	15.58	I	C	SP	P
CDF	95.077	331.92	4.58	15.58	I	C	SP	P
ECH	95.279	331.86	4.56	15.51	I	C	SP	P
BSF	95.733	331.81	4.56	15.51	I	C	SP	P
HAU	95.783	332.15	4.55	15.48	I	C	SP	P
TUL	96.817	44.11	4.53	15.41	E	D	LP	P
MNS	97.073	325.04	4.53	15.41	I	C	SP	P
RLO	97.126	43.51	4.53	15.41	I	D	SP	P
LOR	97.393	333.04	4.52	15.37	I	C	SP	P
JCT	97.555	50.49	4.52	15.37	I	D	SP	P
SSF	97.702	333.12	4.52	15.37	I	C	SP	P
SMF	97.901	332.68	4.51	15.34	I	C	SP	P
AVF	97.983	333.04	4.51	15.34	I	C	SP	P
LMR	99.360	329.12	4.47	15.20	I	D	SP	P
NAI	104.624	276.06	4.45	15.13	E	C	LP	Pdf
PTO	107.292	337.57	1.89	6.37	E	C	LP	PKP
ALM	108.625	330.97	1.89	6.37	I	C	SP	PKP
MTD	115.796	263.46	1.88	6.33	I	C	SP	PKP
SPA	116.664	180.00	1.88	6.32	I	C	SP	PKP
BUL	119.628	261.08	1.87	6.31	I	C	SP	PKP
SJG	127.361	35.08	1.86	6.27	E	C	LP	PKP
SUR	129.569	248.99	1.85	6.23	I	D	SP	PKP
TOV	131.939	45.15	1.84	6.20	I	C	SP	PKP

Table 129. Station data for event 51

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
DAV	10.141	266.80	13.69	73.67	E	C	LP	P
GUMO	10.634	56.35	13.63	72.84	I	C	LP	P
BAG	17.148	301.42	12.58	61.87	I	C	LP	P
RAB	20.218	125.46	10.44	47.04	I	D	LP	P
PMG	20.489	146.21	10.30	46.22	I	D	LP	P
BKB	20.927	245.32	10.17	45.47	I	C	SP	P
TATO	21.880	323.05	9.94	44.17	I	C	LP	P
ANP	22.020	323.47	9.94	44.17	I	C	LP	P
SHK	26.777	354.31	9.28	40.58	I	D	LP	P
SSE	26.908	331.48	9.28	40.58	E	C	LP	P
WB2	27.577	182.90	9.23	40.32	I	D	SP	P
ISQ	28.550	172.59	9.11	39.69	I	D	SP	P
MAT	28.715	4.08	9.11	39.69	I	D	LP	P
CTA	29.542	159.72	8.97	38.96	I	D	LP	P
CTAO	29.542	159.72	8.97	38.96	I	D	SP	P
SEO	30.711	346.21	8.86	38.40	E	D	LP	P
ASPA	31.299	183.31	8.79	38.04	I	D	SP	P
SNG	34.861	271.40	8.56	36.87	I	C	LP	P
CHTO	37.405	290.80	8.41	36.12	I	C	SP	P
CHG	37.405	290.80	8.41	36.12	E	C	LP	P
CHG	37.405	290.80	8.41	36.12	I	C	SP	P
LZH	40.533	318.76	8.24	35.28	I	C	LP	P
ADE	42.595	176.44	8.13	34.74	I	D	SP	P
RIV	43.870	161.42	8.05	34.35	I	D	SP	P
RIV	43.870	161.42	8.05	34.35	E	D	LP	P
NWAO	44.153	202.58	8.05	34.35	I	D	LP	P
NWAO	44.153	202.58	8.05	34.35	I	D	SP	P
CAN	44.638	164.56	8.02	34.21	I	D	SP	P
BFD	45.156	172.37	7.99	34.06	I	D	SP	P
KOD	57.582	277.17	7.07	29.71	I	C	SP	P
SNZO	60.500	147.05	6.84	28.65	E	D	LP	P
DRV	74.308	178.25	5.75	23.77	I	D	SP	P
MHI	74.393	305.43	5.75	23.77	I	C	LP	P
COL	77.248	25.16	5.58	23.03	E	C	LP	P
TAB	84.836	307.58	4.99	20.48	I	C	LP	P
DAG	94.321	354.30	4.60	18.81	I	C	SP	P
NAI	99.061	269.95	4.48	18.30	E	C	LP	P
KDZ	99.805	314.53	4.47	18.26	I	C	SP	P
JOS	100.412	322.28	4.45	18.18	I	C	SP	Pdf
COP	101.406	331.14	4.45	18.18	I	C	LP	Pdf
GRFO	105.244	326.33	1.89	7.61	I	C	LP	PKP
GOL	106.466	44.80	1.89	7.61	E	C	LP	PKP
STU	106.856	326.28	1.89	7.61	E	C	LP	PKP
ANMO	107.616	49.70	1.89	7.61	E	C	LP	PKP
LOR	110.640	327.21	1.89	7.61	I	C	SP	PKP
LBF	110.750	326.92	1.89	7.61	I	C	SP	PKP
SMF	111.032	326.69	1.89	7.61	I	C	SP	PKP
AVF	111.207	327.04	1.89	7.61	I	C	SP	PKP
TCF	112.137	327.15	1.89	7.61	I	C	SP	PKP
VAL	113.780	337.78	1.88	7.59	E	C	LP	PKP

Table 129. Station data for event 51....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PTO	121.359	328.99	1.87	7.54	E	C	LP	PKP
BOG	147.781	68.49	1.62	6.50	I	C	LP	PKP
BOCO	147.815	68.53	1.62	6.50	E	C	LP	PKP
SDV	148.912	58.35	1.59	6.39	I	C	SP	PKP
LPA	150.204	156.92	1.56	6.28	E	C	LP	PKP
ZOBO	155.169	112.08	1.39	5.58	E	C	LP	PKP

Table 130. Station data for event 58

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MAJO	8.651	6.66	10.19	98.45	I	C	LP	P
MAT	8.651	6.66	10.19	98.45	I	C	SP	P
TSK	8.676	17.09	10.19	98.32	I	C	SP	P
ANP	14.096	262.34	10.02	76.58	I	D	LP	P
SSE	14.099	286.72	10.02	76.57	I	D	LP	P
TATO	14.175	261.55	10.01	76.36	I	C	SP	P
GUMO	16.056	151.11	9.78	71.83	I	D	SP	P
GUMO	16.056	151.11	9.78	71.83	I	D	LP	P
NJ2	16.220	289.07	9.76	71.49	I	D	SP	P
QZH	16.725	263.95	9.70	70.44	I	D	SP	P
CN2	18.354	332.66	9.53	67.71	I	D	SP	P
TIA	18.712	301.16	9.49	67.20	I	D	SP	P
BAG	18.993	236.31	9.47	66.81	I	C	LP	P
WHN	19.905	282.96	9.39	65.76	I	D	SP	P
PLP	20.114	216.35	9.37	65.54	I	C	SP	P
BJI	20.995	310.48	9.30	64.61	I	D	LP	P
GZH	21.847	262.57	9.24	63.75	I	D	SP	P
TIY	22.753	301.63	9.15	62.69	I	D	SP	P
DAV	23.367	209.62	9.07	61.75	I	C	LP	P
HHC	24.509	308.32	8.94	60.25	I	D	SP	P
XAN	24.760	291.21	8.92	59.97	I	D	SP	P
LZH	29.136	294.61	8.62	56.87	I	D	LP	P
KKM	29.351	225.97	8.61	56.73	I	C	SP	P
KMI	30.695	272.74	8.53	55.96	I	D	LP	P
RAB	35.132	152.97	8.29	53.60	I	C	LP	P
CHTO	35.943	263.74	8.24	53.19	I	D	LP	P
MKS	37.023	209.82	8.19	52.69	I	C	SP	P
PMG	38.399	163.68	8.12	52.05	I	C	LP	P
MTN	40.920	188.71	7.99	50.88	I	C	SP	P
WMQ	42.325	305.44	7.91	50.20	I	D	SP	P
KNA	44.134	191.38	7.81	49.29	I	C	SP	P
LEM	44.692	223.79	7.77	48.96	I	C	LP	P
WRA	47.651	183.34	7.55	47.16	I	C	SP	P
WB2	47.651	183.33	7.55	47.16	I	C	SP	P
ISQ	48.415	176.76	7.49	46.65	I	C	SP	P
CTA	48.565	168.33	7.48	46.55	I	C	LP	P
CTAO	48.565	168.33	7.48	46.55	I	C	LP	P
KSH	51.163	299.63	7.28	44.98	I	D	SP	P
ASPA	51.373	183.60	7.26	44.86	I	C	SP	P
PVC	54.607	142.54	7.04	43.11	I	C	SP	P
KOU	54.963	148.32	7.02	42.94	I	C	SP	P
NOU	57.486	147.28	6.82	41.49	I	C	SP	P
POO	58.212	275.38	6.77	41.09	I	C	SP	P
COL	58.835	28.82	6.72	40.77	I	D	SP	P
SVA	60.894	133.85	6.56	39.59	I	C	SP	P
ADE	62.569	178.39	6.43	38.63	I	C	SP	P
MUN	62.760	199.80	6.41	38.52	E	C	LP	P
YOU	62.798	169.38	6.41	38.49	I	C	SP	P
NWAO	63.350	198.53	6.37	38.24	I	C	LP	P
CAN	63.918	169.06	6.32	37.87	I	C	SP	P

Table 130. Station data for event 58....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
TOO	65.635	172.57	6.19	36.97	I	C	SP	P
TGI	65.809	295.74	6.18	36.86	I	D	SP	P
KHI	65.874	297.12	6.17	36.83	I	C	SP	P
KBS	68.978	350.23	5.95	35.28	I	D	LP	P
TAU	71.120	171.98	5.80	34.31	I	C	SP	P
TAU	71.120	171.98	5.80	34.31	I	C	LP	P
TAB	73.847	304.74	5.62	33.11	I	D	SP	P
KER	74.728	300.94	5.57	32.76	I	D	SP	P
LON	77.304	43.74	5.40	31.65	I	D	LP	P
EDM	78.874	35.25	5.25	30.63	I	D	SP	P
NEW	79.372	40.83	5.21	30.37	I	D	SP	P
UPP	79.437	333.41	5.20	30.33	I	D	SP	P
MSO	81.958	40.95	5.05	29.36	I	D	SP	P
JAS	82.375	51.12	5.02	29.20	I	D	SP	P
PPE	82.437	318.63	5.02	29.17	I	D	SP	P
KONO	82.616	335.98	5.01	29.11	I	D	LP	P
AMM	82.931	41.20	4.99	28.99	I	D	SP	P
VRI	83.147	318.68	4.98	28.91	I	D	SP	P
BUT	83.201	41.12	4.97	28.89	I	D	LP	P
COP	84.273	332.03	4.87	28.24	I	D	SP	P
PAS	85.869	53.49	4.78	27.67	I	D	LP	P
KDZ	86.331	315.71	4.76	27.52	I	D	SP	P
FRB	86.444	11.07	4.75	27.48	I	D	SP	P
SRO	86.670	323.66	4.74	27.41	I	D	SP	P
HAM	86.867	331.44	4.73	27.36	I	D	SP	P
CLL	87.001	328.58	4.73	27.34	I	D	SP	P
VIE	87.402	324.84	4.72	27.27	I	D	LP	P
VKA	87.413	324.87	4.72	27.27	I	D	SP	P
MOX	88.095	328.69	4.71	27.21	I	D	LP	P
ARO	88.271	282.04	4.70	27.18	I	D	SP	P
THE	88.384	315.93	4.70	27.17	I	D	SP	P
HLW	88.643	303.19	4.70	27.15	I	D	LP	P
KMR	88.652	325.67	4.70	27.15	I	D	LP	P
KBA	89.705	325.31	4.68	27.03	I	D	SP	P
DBN	89.835	332.62	4.67	26.99	I	D	LP	P
STU	90.532	328.47	4.66	26.90	I	D	LP	P
UCC	91.156	332.15	4.64	26.79	I	D	LP	P
ANMO	93.418	47.40	4.57	26.34	E	D	LP	P
LHC	93.464	28.82	4.57	26.33	I	D	SP	P
GAC	101.014	22.52	4.44	25.54	I	D	LP	Pdf
SCP	104.378	26.60	4.44	25.54	I	D	LP	Pdf
ZOBO	154.075	68.69	1.40	7.83	I	D	LP	PKP
LPA	165.509	122.38	0.86	4.81	I	D	LP	PKP
BDF	166.988	21.30	0.78	4.35	I	D	LP	PKP

Table 131. Station data for event 61

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
RAB	18.729	161.61	12.23	59.70	I	D	LP	P
PLP	21.014	265.40	10.14	45.71	I	C	SP	P
DAV	21.455	254.15	10.02	45.02	I	C	LP	P
BAG	25.009	279.37	9.46	41.90	I	C	LP	P
TATO	25.925	299.25	9.37	41.41	I	C	LP	P
ANP	25.975	299.71	9.37	41.41	I	C	LP	P
SSE	28.853	310.92	9.02	39.55	I	C	LP	P
NJ2	31.052	310.55	8.82	38.51	I	C	SP	P
WHN	33.860	304.88	8.61	37.43	I	C	SP	P
TIA	34.437	315.73	8.58	37.28	I	C	SP	P
ISQ	34.878	191.15	8.55	37.13	I	C	SP	P
CN2	34.899	333.17	8.55	37.13	I	C	SP	P
WB2	35.486	199.67	8.52	36.98	I	C	SP	P
BJI	37.226	320.38	8.44	36.57	I	C	LP	P
TIY	38.427	314.61	8.35	36.12	I	C	SP	P
ASPA	39.112	198.24	8.32	35.97	I	C	SP	P
GYA	39.189	295.07	8.32	35.97	I	C	SP	P
XAN	39.431	307.39	8.29	35.82	I	C	SP	P
TRT	39.665	239.50	8.29	35.82	I	C	SP	P
HHC	40.598	318.32	8.23	35.52	I	C	SP	P
BTO	41.481	317.08	8.18	35.27	I	C	SP	P
KMI	42.476	292.22	8.12	34.98	I	C	LP	P
CHG	45.673	282.93	7.96	34.19	I	C	SP	P
NAU	47.045	220.36	7.87	33.75	I	C	SP	P
YOU	47.784	177.72	7.81	33.46	I	D	SP	P
GTA	48.148	310.99	7.81	33.46	I	C	SP	P
CAN	48.849	177.11	7.73	33.07	I	D	SP	P
ADE	48.970	188.31	7.73	33.07	I	C	SP	P
AFI	49.745	121.85	7.69	32.88	E	D	LP	P
KLG	50.316	208.07	7.61	32.50	I	C	SP	P
LSA	53.203	296.86	7.41	31.54	I	C	SP	P
NWAO	54.094	210.34	7.33	31.16	I	C	LP	P
WMQ	58.073	313.25	7.03	29.75	I	C	SP	P
SNZO	60.722	155.77	6.83	28.83	E	D	LP	P
NDI	65.358	295.41	6.43	27.00	I	C	SP	P
KSH	66.282	307.20	6.34	26.59	I	C	SP	P
KOD	67.269	275.46	6.26	26.23	I	C	SP	P
COL	67.484	24.93	6.26	26.23	E	C	LP	P
POO	69.393	284.83	6.10	25.51	I	C	SP	P
PHC	77.128	40.61	5.58	23.20	E	C	SP	P
MBC	77.779	14.14	5.51	22.89	I	C	SP	P
MHI	79.497	304.88	5.41	22.45	I	C	LP	P
COR	80.749	46.39	5.30	21.97	I	C	SP	P
LON	81.387	44.04	5.21	21.58	E	C	LP	P
JAS	84.185	52.51	5.05	20.89	E	C	LP	P
KEV	86.819	342.30	4.82	19.89	E	C	LP	P
DAG	89.238	356.61	4.73	19.51	I	C	SP	P
ANMO	95.830	52.08	4.55	18.74	E	C	LP	P
KONO	98.984	339.37	4.48	18.44	E	C	LP	P
BNG	125.143	285.52	1.87	7.57	I	C	SP	PKP

Table 131. Station data for event 61....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
FCH	141.441	126.73	1.75	7.11	I	C	SP	PKP
KIC	145.030	303.01	1.68	6.83	I	C	SP	PKP

Table 132. Station data for event 74

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
IZU	10.597	300.12	13.00	79.46	I	D	SP	P
SEO	13.867	309.82	12.59	72.21	I	D	LP	P
NEM	14.590	15.30	12.48	70.79	I	C	LP	P
GUMO	16.207	164.11	12.21	67.47	E	C	LP	P
GUA	16.265	164.00	12.20	67.38	E	C	LP	P
SSE	16.671	280.84	12.12	66.48	I	D	LP	P
ANP	17.254	260.63	11.21	57.96	I	D	LP	P
TATO	17.343	260.00	10.98	56.20	I	D	SP	P
TATO	17.343	260.00	10.98	56.20	I	D	LP	P
MDJ	17.494	333.65	10.70	54.05	I	D	SP	P
NJ2	18.694	283.76	10.38	51.74	I	D	SP	P
CN2	18.723	324.51	10.37	51.69	I	D	SP	P
QZH	19.853	262.46	10.10	49.83	I	D	SP	P
TIA	20.685	295.40	9.93	48.72	I	D	SP	P
BAG	22.257	239.04	9.66	46.99	I	D	LP	P
BAG	22.257	239.04	9.66	46.99	I	D	SP	P
BJI	22.512	304.76	9.63	46.74	I	D	SP	P
TIY	24.673	297.15	9.38	45.23	I	D	SP	P
GZH	24.991	261.94	9.36	45.08	I	D	SP	P
HHC	26.103	303.84	9.25	44.41	I	D	SP	P
DAV	26.140	215.09	9.25	44.39	I	C	LP	P
XAN	27.105	288.07	9.15	43.84	I	D	SP	P
BTO	27.163	302.58	9.15	43.78	I	D	SP	P
GYA	29.862	272.71	8.83	41.91	I	D	SP	P
CD2	31.615	282.13	8.70	41.18	I	D	SP	P
KMI	33.620	271.95	8.57	40.44	I	D	LP	P
GTA	34.698	297.78	8.52	40.12	I	D	SP	P
RAB	35.196	159.26	8.49	39.95	I	C	LP	P
BDT	39.652	261.69	8.23	38.51	I	D	SP	P
MKS	39.776	213.71	8.22	38.47	I	C	SP	P
ESA	40.117	163.88	8.20	38.36	I	C	SP	P
HNR	42.905	150.93	8.06	37.55	E	C	LP	P
IPM	44.605	244.13	7.96	37.05	I	D	SP	P
LEM	47.787	226.48	7.77	35.98	I	D	SP	P
CTA	49.445	172.70	7.63	35.28	I	C	LP	P
CTAO	49.445	172.70	7.63	35.28	I	C	LP	P
KOU	54.692	152.25	7.21	33.08	I	C	SP	P
COL	56.171	29.21	7.11	32.53	I	D	SP	P
COL	56.171	29.21	7.11	32.53	I	D	LP	P
NOU	57.149	151.00	7.04	32.17	I	C	SP	P
STK	60.872	178.80	6.75	30.71	I	C	SP	P
POO	61.043	276.01	6.74	30.64	I	D	SP	P
INK	61.700	24.94	6.68	30.37	I	D	SP	P
KLG	62.419	198.33	6.63	30.09	I	D	SP	P
MBC	64.169	15.17	6.49	29.39	I	D	SP	P
NWAO	65.673	201.26	6.36	28.78	I	D	LP	P
KEV	70.354	340.16	5.99	26.95	I	D	LP	P
DAG	73.374	355.09	5.78	25.93	I	D	SP	P
LON	74.223	45.07	5.73	25.67	E	D	LP	P
COR	74.222	47.57	5.73	25.67	I	D	SP	P

Table 132. Station data for event 74....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PNT	74.402	42.00	5.72	25.62	I	D	SP	P
KRP	74.552	151.79	5.71	25.57	I	C	SP	P
TAB	75.485	305.58	5.64	25.26	I	D	LP	P
EDM	75.999	36.51	5.61	25.11	I	D	SP	P
NEW	76.354	42.17	5.59	25.01	I	D	SP	P
NUR	76.356	332.69	5.59	25.01	I	D	LP	P
WDC	76.500	51.02	5.58	24.97	I	D	SP	P
SNZO	77.122	154.15	5.54	24.78	E	C	LP	P
RXF	77.216	40.96	5.53	24.75	I	D	LP	P
LHD	77.268	41.65	5.53	24.72	I	D	LP	P
LDM	77.310	41.39	5.52	24.70	I	D	LP	P
CLX	77.539	41.55	5.51	24.62	I	D	LP	P
BKS	77.950	53.37	5.48	24.51	E	D	LP	P
MSL	78.509	305.21	5.44	24.30	I	C	SP	P
SES	78.695	38.22	5.43	24.24	I	D	SP	P
JAS	79.170	52.62	5.39	24.08	E	D	LP	P
JAS	79.170	52.62	5.39	24.08	I	D	SP	P
UPP	79.500	334.42	5.35	23.87	I	D	SP	P
BUT	80.175	42.54	5.28	23.57	I	D	SP	P
LRM	80.343	42.67	5.27	23.51	I	D	SP	P
FFC	80.700	31.38	5.24	23.36	I	D	SP	P
GDH	81.197	4.97	5.19	23.13	I	D	LP	P
PPT	82.073	115.12	5.14	22.86	I	C	LP	P
KONO	82.526	337.17	5.11	22.73	I	D	LP	P
PAS	82.636	55.04	5.10	22.70	I	D	LP	P
DUG	83.136	47.61	5.07	22.56	I	D	LP	P
CLI	83.323	320.26	5.06	22.51	I	D	SP	P
ANTO	83.790	312.43	5.03	22.38	E	D	LP	P
VRI	84.038	319.94	5.02	22.31	I	D	SP	P
TLB	84.045	318.35	5.02	22.31	I	D	SP	P
COP	84.407	333.32	5.00	22.20	I	D	SP	P
COP	84.407	333.32	5.00	22.20	I	D	LP	P
FRB	84.474	12.48	4.99	22.19	I	D	SP	P
MLR	84.703	319.96	4.98	22.12	I	D	SP	P
KRA	84.986	326.08	4.96	22.04	I	D	SP	P
SPC	85.403	325.29	4.91	21.80	I	D	SP	P
JOS	85.707	324.64	4.88	21.67	I	D	SP	P
DEV	86.141	321.59	4.85	21.53	I	D	SP	P
KSP	86.183	328.24	4.85	21.51	I	D	SP	P
BRN	86.445	330.72	4.83	21.45	I	D	SP	P
PVL	86.566	318.43	4.83	21.41	I	D	SP	P
HAM	87.030	332.89	4.80	21.28	I	D	SP	P
BRG	87.225	329.30	4.79	21.23	I	D	LP	P
SRO	87.277	325.11	4.78	21.21	I	D	SP	P
CLL	87.328	330.03	4.78	21.20	I	D	SP	P
KDZ	87.380	317.15	4.78	21.18	I	D	SP	P
PRU	87.583	328.40	4.77	21.13	I	D	SP	P
VIE	87.941	326.32	4.75	21.07	I	D	LP	P
VKA	87.950	326.35	4.75	21.07	I	D	SP	P
VTS	88.042	318.90	4.75	21.05	I	D	SP	P

Table 132. Station data for event 74....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
GOL	88.110	44.73	4.75	21.04	E	D	LP	P
SOP	88.234	325.82	4.74	21.02	I	D	SP	P
MOX	88.414	330.21	4.73	20.98	I	D	LP	P
HOF	88.543	329.86	4.73	20.96	I	D	SP	P
KHC	88.635	328.25	4.72	20.94	I	D	SP	P
WIT	88.800	333.96	4.72	20.90	I	D	SP	P
WET	88.944	328.58	4.71	20.88	I	D	SP	P
EDU	89.001	340.70	4.71	20.87	I	D	SP	P
KMR	89.142	327.23	4.71	20.86	I	D	LP	P
ELO	89.267	340.99	4.71	20.88	I	D	SP	P
GRF	89.288	329.75	4.71	20.88	I	D	SP	P
WTS	89.380	333.37	4.71	20.88	I	D	SP	P
EBH	89.401	340.78	4.71	20.88	I	D	SP	P
THE	89.418	317.48	4.71	20.88	I	D	SP	P
ESY	89.423	340.18	4.71	20.88	I	D	SP	P
SKO	89.449	319.25	4.71	20.88	I	D	SP	P
EDI	89.586	340.46	4.71	20.87	I	D	SP	P
EBL	89.673	340.31	4.71	20.86	I	D	SP	P
EAU	89.732	340.55	4.71	20.86	I	D	SP	P
BHG	89.972	327.60	4.70	20.83	I	D	SP	P
BNS	90.033	332.54	4.70	20.83	I	D	SP	P
TNS	90.078	331.44	4.70	20.83	I	D	SP	P
ESK	90.111	340.15	4.70	20.82	E	D	LP	P
ESK	90.111	340.15	4.70	20.82	I	D	SP	P
KBA	90.214	326.92	4.70	20.82	I	D	SP	P
ANMO	90.267	49.04	4.70	20.84	E	D	LP	P
FUR	90.387	328.69	4.70	20.84	I	D	SP	P
ATH	90.633	315.05	4.70	20.81	I	D	SP	P
ENN	90.686	333.03	4.69	20.80	I	D	SP	P
STU	90.860	330.12	4.68	20.76	I	D	LP	P
GAP	90.991	328.32	4.68	20.74	I	D	SP	P
UCC	91.272	333.83	4.67	20.71	I	D	LP	P
GWF	91.378	331.05	4.67	20.70	I	D	SP	P
OGA	91.458	327.93	4.67	20.69	I	D	SP	P
DOU	91.739	333.29	4.67	20.67	E	D	LP	P
CTI	91.767	327.06	4.66	20.66	I	D	SP	P
CDF	91.960	330.86	4.66	20.65	I	D	SP	P
DMU	92.414	341.32	4.65	20.61	I	D	SP	P
BSF	92.614	330.74	4.65	20.58	I	D	SP	P
BSF	92.614	330.74	4.65	20.58	I	D	SP	P
HAU	92.668	331.08	4.64	20.57	I	D	SP	P
DDK	92.703	340.78	4.64	20.56	I	D	SP	P
DKM	92.797	340.67	4.64	20.54	I	D	SP	P
DLE	92.849	340.84	4.64	20.53	I	D	SP	P
DCN	93.007	341.25	4.63	20.50	I	D	SP	P
LOR	94.286	331.96	4.59	20.31	I	D	SP	P
LBF	94.464	331.72	4.58	20.28	I	D	SP	P
SSF	94.596	332.03	4.58	20.26	I	D	SP	P
FLN	94.752	335.21	4.57	20.22	I	D	SP	P
SSC	94.763	334.90	4.57	20.22	I	D	SP	P

Table 132. Station data for event 74....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SMF	94.790	331.59	4.57	20.21	I	D	SP	P
AVF	94.876	331.95	4.56	20.20	I	D	SP	P
GRR	95.203	335.21	4.55	20.16	I	D	SP	P
LPF	95.568	335.12	4.55	20.13	I	D	SP	P
SSB	95.579	330.37	4.55	20.13	I	D	SP	P
MZF	95.654	332.03	4.55	20.12	I	D	SP	P
CVF	95.688	326.21	4.55	20.12	I	D	SP	P
TCF	95.748	332.29	4.55	20.11	I	D	SP	P
FRF	95.983	328.10	4.54	20.09	I	D	SP	P
LSF	96.054	332.65	4.54	20.08	I	D	SP	P
LRG	96.197	328.20	4.54	20.07	I	D	SP	P
LMR	96.222	328.04	4.54	20.07	I	D	SP	P
MFF	96.423	333.81	4.53	20.05	I	D	SP	P
RJF	96.830	332.11	4.52	20.01	I	D	SP	P
CAF	96.912	331.57	4.52	20.00	I	D	SP	P
JCT	97.427	49.05	4.51	19.96	I	D	LP	P
LPO	97.473	331.94	4.51	19.95	I	D	SP	P
GAC	98.548	24.52	4.48	19.81	I	D	LP	P
EPF	99.178	331.49	4.46	19.74	I	D	SP	P
INY	100.941	26.88	4.44	19.63	I	D	SP	Pdf
SCP	101.762	28.68	4.44	19.63	E	D	LP	Pdf
WES	102.912	23.53	4.44	19.63	E	D	LP	Pdf
BLA	103.569	32.44	4.44	19.63	E	D	LP	Pdf
TOL	103.614	332.56	4.44	19.63	I	D	LP	Pdf
PTO	104.238	336.31	4.44	19.63	I	D	LP	Pdf
SHA	104.539	41.80	4.44	19.63	E	D	LP	Pdf
BCAO	114.945	290.88	1.88	8.18	E	D	LP	PKP
SLR	120.426	255.77	1.87	8.14	E	D	LP	PKP
SJG	126.351	31.81	1.86	8.10	E	D	LP	PKP
ARE	148.099	73.38	1.61	6.99	I	D	SP	PKP
ZOBO	150.793	69.84	1.53	6.65	I	D	LP	PKP
ROCH	152.957	105.73	1.46	6.33	I	D	SP	PKP
PEL	153.232	106.11	1.45	6.29	I	D	SP	PKP
PCH	153.373	107.17	1.44	6.27	I	D	SP	PKP
BACH	153.394	106.57	1.44	6.27	I	D	SP	PKP
FCH	153.563	106.52	1.44	6.24	I	D	SP	PKP
LPA	163.539	114.44	0.98	4.27	E	D	LP	PKP
RDJ	172.834	27.52	0.45	1.94	I	D	SP	PKP

Table 133. Station data for event 108

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
GUMO	4.925	51.14	14.13	83.18	I	C	LP	P
GUA	4.930	51.90	14.13	83.18	I	C	LP	P
MOM	14.030	152.29	13.10	67.01	I	D	SP	P
DAV	15.543	258.64	12.84	64.46	I	D	LP	P
BAG	20.630	288.73	10.29	46.31	I	D	LP	P
ANP	23.496	310.96	9.67	42.81	I	D	LP	P
SHK	25.075	343.77	9.47	41.72	I	D	LP	P
QZH	25.605	307.04	9.42	41.45	I	D	SP	P
MAJO	26.036	355.01	9.37	41.18	E	D	LP	P
MKS	26.463	234.83	9.32	40.91	I	D	SP	P
SSE	27.479	321.11	9.23	40.44	I	D	LP	P
GZH	29.151	298.92	9.03	39.39	I	D	SP	P
NJ2	29.588	319.74	8.96	39.02	I	D	SP	P
CTA	30.844	170.19	8.82	38.30	I	D	SP	P
WHN	31.742	312.81	8.78	38.10	I	D	SP	P
CN2	35.784	340.70	8.50	36.68	I	D	SP	P
GYA	36.010	300.86	8.50	36.68	I	D	SP	P
BJI	36.702	327.47	8.47	36.53	I	D	SP	P
TIY	37.265	321.33	8.41	36.23	I	D	SP	P
XAN	37.488	313.69	8.41	36.23	I	D	SP	P
PCT	38.751	280.35	8.32	35.78	I	D	SP	P
KMI	38.993	297.05	8.32	35.78	I	D	LP	P
WBN	39.000	200.73	8.32	35.78	I	C	SP	P
IPM	39.961	264.59	8.26	35.48	E	D	SP	P
CD2	39.988	306.10	8.26	35.48	I	D	SP	P
BTO	40.540	323.00	8.24	35.38	I	D	SP	P
NOU	41.105	142.63	8.21	35.23	I	C	SP	P
BDT	41.180	284.15	8.21	35.23	I	D	SP	P
CHG	41.360	286.50	8.18	35.09	I	D	SP	P
CHG	41.360	286.50	8.18	35.09	I	D	LP	P
CMS	42.008	173.73	8.15	34.94	I	D	SP	P
LZH	42.118	313.26	8.15	34.94	I	D	LP	P
PSI	42.395	262.46	8.13	34.84	I	D	SP	P
MEK	42.820	210.10	8.10	34.69	I	D	SP	P
YOU	45.088	171.27	7.99	34.16	I	C	SP	P
CAN	46.204	170.84	7.93	33.87	I	C	SP	P
GTA	46.481	315.37	7.90	33.72	I	D	SP	P
BAL	47.030	208.90	7.87	33.58	I	C	SP	P
WAM	47.041	171.20	7.87	33.58	I	C	SP	P
PKI	54.712	296.30	7.29	30.82	I	D	SP	P
KKN	54.851	296.55	7.25	30.63	I	D	SP	P
DMN	54.984	296.31	7.25	30.63	I	D	SP	P
NDI	62.015	296.86	6.72	28.18	I	D	SP	P
KOD	62.320	276.09	6.68	28.00	I	D	SP	P
POO	65.122	285.58	6.47	27.04	I	D	SP	P
QUE	70.993	298.33	5.99	24.89	I	D	SP	P
COL	72.637	25.05	5.88	24.41	I	C	LP	P
KHI	77.836	302.78	5.52	22.82	I	D	SP	P
INK	78.678	22.23	5.48	22.65	I	C	SP	P
YKC	87.411	26.75	4.80	19.71	I	C	SP	P

Table 133. Station data for event 108....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
WDC	88.163	49.21	4.77	19.58	I	C	SP	P
KEV	88.226	341.43	4.77	19.58	E	C	LP	P
SOD	89.406	339.34	4.71	19.33	I	C	SP	P
MHC	89.545	52.22	4.71	19.33	I	C	SP	P
KJF	90.390	336.28	4.70	19.29	I	C	SP	P
WCN	90.534	49.97	4.70	19.29	I	D	SP	P
EDM	90.895	35.38	4.69	19.24	I	C	SP	P
FRI	91.128	52.20	4.69	19.24	I	C	SP	P
DAG	92.078	355.41	4.67	19.16	I	C	SP	P
SBB	93.184	54.05	4.64	19.03	I	C	SP	P
SES	93.196	37.56	4.64	19.03	I	C	SP	P
NUR	93.329	333.61	4.63	18.99	E	C	LP	P
NUR	93.329	333.61	4.63	18.99	I	C	SP	P
AMM	93.443	42.05	4.63	18.99	I	C	SP	P
LRM	93.861	42.19	4.61	18.90	I	C	SP	P
GLA	96.029	54.94	4.55	18.65	I	C	SP	P
ANMO	101.976	50.83	4.45	18.22	E	C	LP	Pdf
STU	107.297	328.86	1.89	7.63	E	C	LP	PKP
BNG	120.742	281.56	1.87	7.56	I	C	SP	PKP
PTO	121.439	333.32	1.87	7.56	E	C	LP	PKP
ROCH	143.101	132.22	1.72	6.95	I	C	SP	PKP
PEL	143.251	132.69	1.72	6.95	I	C	SP	PKP
CAR	145.321	53.85	1.68	6.80	I	C	SP	PKP
ARE	147.954	104.21	1.62	6.52	I	C	SP	PKP
CYA	149.251	129.25	1.59	6.41	I	C	SP	PKP
TRN	149.434	47.25	1.59	6.41	E	C	LP	PKP
LPB	151.173	105.17	1.53	6.17	I	C	SP	PKP
ZOBO	151.186	104.63	1.53	6.17	E	C	LP	PKP

Table 134. Station data for event 184

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MAT	9.130	341.50	13.78	75.73	I	D	SP	P
SHK	10.221	312.51	13.67	74.03	I	N	LP	P
GUMO	14.528	168.01	13.01	66.20	I	D	LP	P
SSE	18.216	285.02	12.35	60.29	I	C	LP	P
ANP	18.343	266.15	12.25	59.49	I	C	LP	P
BAG	22.693	244.18	9.84	43.79	I	C	LP	P
DAV	25.779	219.60	9.37	41.22	I	C	LP	P
KMI	34.959	274.60	8.55	36.96	E	C	LP	P
CHG	40.196	266.48	8.26	35.52	I	C	SP	P
BDT	40.729	264.22	8.23	35.37	I	C	SP	P
LEM	47.766	228.88	7.81	33.32	I	C	LP	P
CTAO	47.897	174.34	7.81	33.32	E	N	LP	P
CTA	47.897	174.34	7.81	33.32	I	D	SP	P
WB2	48.101	189.42	7.81	33.32	I	C	SP	P
ISQ	48.374	182.81	7.78	33.17	I	C	SP	P
PVC	52.133	147.38	7.49	31.79	I	D	SP	P
COL	56.800	28.71	7.10	29.96	I	C	LP	P
MEK	58.622	204.45	6.99	29.45	I	C	SP	P
AFI	61.236	126.62	6.80	28.57	E	D	LP	P
YOU	62.149	173.83	6.72	28.20	I	C	SP	P
INK	62.456	24.70	6.68	28.02	I	C	SP	P
POO	62.459	277.37	6.68	28.02	I	C	SP	P
CAN	63.242	173.40	6.63	27.79	I	C	SP	P
NWAO	64.832	202.72	6.47	27.07	I	C	SP	P
KBS	69.703	350.89	6.10	25.40	I	C	LP	P
TAU	70.637	175.70	6.03	25.09	I	C	LP	P
RSNT	71.615	28.41	5.96	24.78	I	C	LP	P
COR	74.244	47.71	5.78	23.99	I	C	SP	P
LON	74.329	45.22	5.74	23.81	I	C	LP	P
DAG	74.889	355.45	5.71	23.68	I	C	SP	P
IR7	75.196	302.68	5.71	23.68	I	C	SP	P
SNZO	75.302	154.96	5.68	23.54	I	N	LP	P
SUF	76.315	334.68	5.61	23.24	I	C	SP	P
EDM	76.383	36.73	5.61	23.24	I	C	SP	P
WDC	76.408	51.25	5.61	23.24	I	C	SP	P
NEW	76.553	42.40	5.61	23.24	I	C	SP	P
TAB	77.337	306.36	5.55	22.97	E	C	LP	P
BKS	77.779	53.64	5.52	22.84	E	C	LP	P
NUR	78.190	333.26	5.52	22.84	I	C	SP	P
SES	79.023	38.53	5.45	22.54	I	C	SP	P
JAS	79.023	52.94	5.45	22.54	I	C	SP	P
JAS	79.023	52.94	5.45	22.54	I	C	LP	P
UPP	81.318	335.01	5.21	21.49	I	C	SP	P
KONO	84.316	337.78	5.02	20.67	I	C	LP	P
KON	84.316	337.78	5.02	20.67	E	C	LP	P
BER	85.109	339.92	4.99	20.54	I	C	LP	P
COP	86.235	333.97	4.90	20.16	I	C	LP	P
RSSD	86.453	41.18	4.86	19.99	I	C	LP	P
MUD	86.881	335.85	4.83	19.86	I	C	SP	P
RSON	87.580	31.52	4.80	19.73	I	C	LP	P

Table 134. Station data for event 184....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KSP	88.048	328.90	4.77	19.60	I	C	SP	P
GOL	88.218	45.35	4.77	19.60	I	C	LP	P
PVL	88.461	319.11	4.75	19.52	I	C	SP	P
CLO	88.599	321.68	4.75	19.52	I	C	SP	P
HAM	88.862	333.55	4.73	19.43	I	C	SP	P
BRG	89.083	329.97	4.73	19.43	I	C	SP	P
CLL	89.182	330.70	4.73	19.43	I	C	SP	P
KDZ	89.275	317.84	4.71	19.34	I	C	SP	P
EZN	89.783	315.95	4.71	19.34	I	C	SP	P
ANMO	90.232	49.73	4.71	19.34	E	C	LP	P
MMB	90.264	318.55	4.70	19.30	I	C	SP	P
HOF	90.398	330.54	4.70	19.30	I	C	SP	P
KHC	90.500	328.93	4.70	19.30	I	C	SP	P
EDU	90.750	341.38	4.70	19.30	I	C	SP	P
WET	90.807	329.27	4.69	19.26	I	C	SP	P
KMR	91.013	327.91	4.69	19.26	I	C	LP	P
GRF	91.143	330.43	4.69	19.26	I	C	SP	P
WTS	91.207	334.06	4.69	19.26	I	C	SP	P
BHG	91.840	328.28	4.67	19.17	I	C	SP	P
FUR	92.249	329.38	4.67	19.17	I	C	SP	P
ENN	92.516	333.73	4.66	19.13	I	C	SP	P
CEY	92.521	326.14	4.66	19.13	I	C	SP	P
UCC	93.095	334.54	4.64	19.05	E	C	LP	P
GWF	93.224	331.75	4.64	19.05	I	C	SP	P
OGA	93.324	328.63	4.63	19.00	I	C	SP	P
DOU	93.567	333.99	4.63	19.00	E	C	LP	P
SLE	93.783	330.52	4.61	18.92	E	C	LP	P
SAX	93.799	329.75	4.61	18.92	E	C	LP	P
CDF	93.807	331.56	4.61	18.92	I	C	SP	P
ZUL	94.046	330.39	4.61	18.92	E	C	LP	P
LLS	94.244	329.68	4.61	18.92	E	C	LP	P
VDL	94.321	329.18	4.60	18.88	E	C	LP	P
HAU	94.514	331.79	4.60	18.88	I	C	SP	P
TMA	94.879	329.24	4.58	18.79	E	C	LP	P
MMK	95.329	329.69	4.56	18.71	E	C	LP	P
DIX	95.553	330.01	4.56	18.71	E	C	LP	P
LOR	96.125	332.68	4.55	18.66	I	C	SP	P
SMF	96.632	332.32	4.54	18.62	I	C	SP	P
AVF	96.715	332.68	4.54	18.62	I	C	SP	P
VAL	96.804	343.00	4.53	18.58	E	C	LP	P
SHA	104.735	42.98	4.45	18.24	E	C	LP	Pdf
PTO	106.036	337.15	1.89	7.64	E	C	LP	PKP
BUL	119.121	261.39	1.88	7.58	I	C	SP	PKP
SLR	121.295	255.45	1.87	7.57	I	C	SP	PKP
KSR	122.523	255.76	1.87	7.55	I	C	SP	PKP
ANT	150.750	89.15	1.53	6.17	I	C	SP	PKP
TACH	151.376	109.70	1.53	6.17	I	C	SP	PKP
CHCH	151.598	110.31	1.50	6.04	I	C	SP	PKP
PEL	151.607	108.65	1.50	6.04	I	C	SP	PKP
SAN	151.615	109.30	1.50	6.04	I	C	SP	PKP

Table 135. Station data for event 191

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
GUMO	4.573	191.09	13.21	98.03	I	C	LP	P
GUA	4.613	190.44	13.22	97.87	I	C	LP	P
MVI	15.511	302.24	12.40	68.37	E	C	LP	P
OSH	17.540	342.29	11.66	60.92	I	C	LP	P
TAT	17.612	343.80	11.52	59.72	E	C	LP	P
AJI	17.885	341.91	10.65	52.97	E	C	LP	P
MIS	17.998	341.58	10.48	51.74	E	C	LP	P
CHO	18.086	346.99	10.38	51.11	E	C	LP	P
YOK	18.096	343.74	10.38	51.05	E	C	LP	P
OYM	18.194	342.70	10.33	50.71	I	C	SP	P
MRT	18.321	327.61	10.49	51.86	E	C	LP	P
SRY	18.361	342.98	10.49	51.85	I	C	SP	P
KOF	18.623	341.33	10.46	51.64	E	C	LP	P
TSK	18.717	345.61	10.44	51.51	I	C	SP	P
IID	18.712	339.45	10.44	51.52	E	C	LP	P
OSK	18.749	333.23	10.44	51.45	E	C	LP	P
DDR	18.750	343.20	10.43	51.45	I	C	SP	P
MIT	18.794	346.63	10.41	51.25	E	C	LP	P
KAG	19.218	317.11	10.30	50.54	E	C	LP	P
MAT	19.540	341.53	10.22	50.03	I	C	SP	P
OIT	19.702	322.58	10.18	49.76	E	C	LP	P
FKS	20.121	347.72	10.08	49.07	E	C	LP	P
MYK	20.182	292.76	10.07	48.98	I	C	LP	P
ISN	20.617	350.00	9.98	48.41	E	C	LP	P
YAM	20.625	347.81	9.98	48.40	E	C	LP	P
ISI	21.059	290.82	9.90	47.91	E	C	LP	P
KVG	21.130	165.95	9.89	47.83	I	C	SP	P
OFU	21.176	351.24	9.88	47.77	E	C	LP	P
MIY	21.715	352.05	9.78	47.13	E	C	LP	P
DAV	22.517	243.47	9.65	46.34	I	C	LP	P
HAC	22.640	351.57	9.64	46.23	I	C	LP	P
RAB	23.032	163.49	9.58	45.92	I	D	LP	P
ANP	23.596	291.60	9.51	45.44	I	C	LP	P
BAG	24.111	269.83	9.45	45.09	I	C	LP	P
SAP	25.157	352.33	9.36	44.54	E	C	LP	P
SSE	25.754	304.78	9.30	44.20	I	C	LP	P
QZH	26.153	289.82	9.27	43.99	I	C	SP	P
MDJ	29.707	336.32	8.85	41.53	I	C	SP	P
GZH	30.717	284.83	8.77	41.10	I	C	SP	P
HNR	30.730	151.78	8.77	41.09	E	D	LP	P
BJI	33.608	316.76	8.59	40.06	I	C	LP	P
XAN	36.477	303.10	8.42	39.12	I	C	SP	P
KNA	37.575	207.50	8.35	38.75	I	D	SP	P
CTA	37.951	179.26	8.33	38.63	I	C	LP	P
CTAO	37.951	179.26	8.33	38.63	I	C	LP	P
ISQ	39.051	189.26	8.27	38.32	I	C	SP	P
WB2	39.431	197.05	8.25	38.20	I	C	SP	P
KMI	40.479	287.66	8.19	37.85	I	C	LP	P
LZH	41.035	304.47	8.16	37.73	I	C	LP	P
TRT	41.561	234.75	8.13	37.56	I	C	SP	P

Table 135. Station data for event 191....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KOU	42.492	153.87	8.09	37.31	I	D	SP	P
PCT	42.619	272.19	8.08	37.27	I	C	SP	P
ASPA	43.096	196.02	8.05	37.11	I	C	SP	P
GTA	44.964	308.00	7.95	36.56	I	C	SP	P
NOU	44.968	152.43	7.95	36.56	I	D	SP	P
LEM	45.069	240.05	7.94	36.53	I	C	LP	P
WBN	47.765	203.52	7.77	35.64	I	C	SP	P
COO	48.750	172.97	7.70	35.23	I	D	SP	P
LSA	50.849	293.82	7.53	34.35	I	C	SP	P
MEK	51.711	211.45	7.46	33.99	I	C	SP	P
YOU	52.141	177.26	7.43	33.81	I	C	SP	P
AFI	52.576	124.38	7.39	33.63	I	D	LP	P
HON	52.795	76.67	7.37	33.54	I	D	LP	P
ADE	53.194	187.24	7.34	33.38	I	D	SP	P
CAN	53.210	176.70	7.34	33.37	I	C	SP	P
KLG	53.932	206.00	7.28	33.08	I	D	SP	P
WAM	54.072	176.89	7.27	33.02	I	C	SP	P
WMQ	54.750	311.21	7.22	32.76	I	C	SP	P
BFD	55.057	183.14	7.20	32.66	I	D	SP	P
BAL	55.917	210.38	7.13	32.31	I	D	SP	P
PKI	55.964	291.39	7.13	32.30	I	C	SP	P
KKN	56.063	291.66	7.12	32.26	I	C	SP	P
DMN	56.229	291.46	7.11	32.21	I	C	SP	P
KLB	56.244	208.82	7.11	32.20	I	C	SP	P
MUN	57.290	209.89	7.03	31.81	I	C	SP	P
NWAO	57.606	208.41	7.01	31.69	I	C	LP	P
RKG	58.668	207.88	6.93	31.31	I	C	SP	P
IMA	61.789	23.78	6.68	30.06	I	D	SP	P
PMR	62.436	29.30	6.63	29.80	I	D	SP	P
NDI	63.063	293.46	6.58	29.56	I	C	SP	P
COL	63.800	25.84	6.52	150.74	I	C	LP	AP
COL	63.800	25.84	6.52	29.26	I	D	LP	P
FBA	63.800	25.84	6.52	29.26	I	D	SP	P
SNZO	64.908	156.27	6.43	28.83	I	D	LP	P
PCA	66.495	31.68	6.30	28.16	I	D	SP	P
POO	67.814	283.08	6.19	27.65	I	C	SP	P
INK	69.901	23.02	6.03	26.89	I	D	SP	P
RSNT	78.493	27.87	5.45	24.09	I	D	LP	P
YKC	78.546	27.85	5.44	24.08	I	D	SP	P
LON	78.663	44.49	5.44	24.04	I	D	LP	P
PNT	79.431	41.58	5.37	23.74	I	D	SP	P
WDC	79.705	50.70	5.34	23.60	I	D	SP	P
MIN	80.455	50.74	5.26	23.23	I	D	SP	P
BKS	80.643	53.28	5.25	23.15	I	D	SP	P
BKS	80.643	53.28	5.25	23.15	E	C	LP	P
MHC	81.242	53.67	5.20	22.92	I	D	SP	P
NEW	81.312	42.13	5.19	22.89	I	D	SP	P
JAS	81.990	52.81	5.15	22.70	I	D	LP	P
JAS	81.990	52.81	5.15	22.70	I	D	SP	P
EDM	82.024	36.61	5.15	22.69	I	D	SP	P

Table 135. Station data for event 191....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
LHD	82.307	41.81	5.13	22.61	I	D	LP	P
PRI	82.332	54.61	5.13	22.60	I	D	SP	P
RXF	82.387	41.14	5.12	22.59	I	D	LP	P
LDM	82.397	41.57	5.12	22.58	I	D	LP	P
KEV	82.521	342.07	5.12	22.55	I	C	LP	P
CLX	82.592	41.77	5.11	22.53	I	D	LP	P
FRI	82.822	53.56	5.10	22.46	I	D	SP	P
DAG	84.875	356.47	4.97	21.86	I	C	SP	P
LRM	85.127	43.40	4.95	21.77	I	D	SP	P
FFC	87.560	32.51	4.77	20.97	I	D	SP	P
GLA	87.874	56.01	4.76	20.88	I	D	SP	P
BDW	88.185	45.46	4.74	20.81	I	D	SP	P
NUR	88.562	334.93	4.73	20.75	E	C	LP	P
FCC	89.163	26.79	4.71	20.69	I	D	SP	P
GOL	92.336	46.95	4.65	20.42	I	D	SP	P
ANMO	93.581	51.62	4.62	20.24	I	D	LP	P
RSON	93.864	33.18	4.61	20.19	I	D	LP	P
KON	94.731	339.33	4.57	20.04	E	C	LP	P
KONO	94.731	339.33	4.57	20.04	I	D	LP	P
CLL	99.499	332.14	4.46	19.52	I	C	SP	P
BUL	120.904	256.99	1.87	8.07	I	C	SP	PKP
SLR	121.959	250.58	1.87	8.06	I	D	SP	PKP
BPI	122.229	250.09	1.87	8.06	I	C	SP	PKP
GRM	123.870	241.69	1.87	8.05	I	D	SP	PKP
SWZ	124.725	249.14	1.87	8.04	I	C	SP	PKP
ARE	144.420	93.15	1.69	7.29	I	D	SP	PKP

Table 136. Station data for event 232

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
GUA	9.250	53.88	13.77	53.90	I	C	LP	P
DAV	11.609	265.64	13.52	52.50	I	C	LP	P
MOM	14.315	134.51	13.06	50.02	I	D	SP	P
BAG	18.225	298.38	12.39	46.64	I	C	LP	P
RAB	19.281	128.90	10.61	38.50	I	D	LP	P
PMG	20.031	150.26	10.46	37.86	I	D	SP	P
LMG	20.119	147.06	10.46	37.86	I	C	SP	P
ANP	22.632	320.35	9.86	35.35	I	C	LP	P
SSE	27.317	328.87	9.24	32.83	I	C	LP	P
WB2	28.044	185.78	9.19	32.63	I	D	SP	P
MAT	28.285	1.65	9.12	32.35	I	C	SP	P
MAJO	28.285	1.65	9.12	32.35	I	C	LP	P
HNR	28.567	127.20	9.12	32.35	I	D	LP	P
ISQ	28.756	175.49	9.04	32.04	I	D	SP	P
CTAO	29.413	162.55	8.97	31.76	I	D	LP	P
CTA	29.413	162.55	8.97	31.76	I	D	SP	P
SEO	30.738	343.90	8.86	31.32	I	C	LP	P
ASPA	31.771	185.82	8.75	30.89	I	D	SP	P
LEM	33.064	244.11	8.68	30.62	I	C	LP	P
WBN	35.606	196.60	8.53	30.03	I	D	SP	P
SNG	36.301	271.05	8.47	29.80	I	C	LP	P
BJI	36.924	332.66	8.45	29.72	I	C	LP	P
KMI	36.963	301.36	8.45	29.72	I	C	LP	P
NAU	37.188	214.51	8.45	29.72	I	C	SP	P
BDT	38.319	287.47	8.35	29.34	I	C	SP	P
PSI	38.506	264.10	8.35	29.34	I	C	SP	P
CHG	38.638	289.93	8.35	29.34	I	C	SP	P
STK	40.003	174.24	8.27	29.03	I	C	SP	P
PVC	40.037	130.12	8.27	29.03	I	D	SP	P
CMS	40.241	168.61	8.27	29.03	I	D	SP	P
LZH	41.233	317.43	8.21	28.80	I	C	LP	P
KLG	41.548	200.67	8.19	28.72	I	D	SP	P
NOU	41.651	137.15	8.19	28.72	I	D	SP	P
ADE	42.886	178.23	8.10	28.38	I	D	SP	P
BAL	43.263	206.18	8.08	28.30	I	C	SP	P
YOU	43.479	166.55	8.08	28.30	I	D	SP	P
KLB	43.673	204.34	8.08	28.30	I	C	SP	P
CAN	44.620	166.27	8.02	28.07	I	D	SP	P
NWAO	45.055	203.99	7.99	27.96	I	D	SP	P
NWAO	45.055	203.99	7.99	27.96	E	N	LP	P
BFD	45.341	174.04	7.97	27.88	I	D	SP	P
WAM	45.428	166.75	7.97	27.88	I	D	SP	P
TOO	46.113	170.90	7.94	27.77	I	D	LP	P
TAU	51.620	170.56	7.54	26.26	I	D	LP	P
PKI	52.563	298.48	7.46	25.96	I	C	SP	P
KKN	52.718	298.72	7.46	25.96	I	C	SP	P
DMN	52.834	298.46	7.42	25.81	I	C	SP	P
AFI	55.133	113.14	7.26	25.21	E	N	LP	P
HYB	57.785	285.40	7.04	24.40	I	C	SP	P
SNZO	60.026	148.06	6.88	23.81	E	D	LP	P

Table 136. Station data for event 232....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
POO	62.278	286.61	6.68	23.08	I	C	SP	P
HON	63.605	70.30	6.60	22.78	E	C	LP	P
MHI	75.366	305.32	5.68	19.47	I	C	LP	P
COL	76.308	25.09	5.61	19.22	I	C	LP	P
IR7	82.586	304.98	5.14	17.55	I	C	SP	P
TAB	85.764	307.68	4.91	16.74	I	C	LP	P
KBS	88.443	350.91	4.75	16.18	I	C	SP	P
KEV	89.279	340.93	4.71	16.04	I	C	LP	P
RSNT	91.085	26.20	4.70	16.01	I	C	LP	P
LON	91.563	42.49	4.68	15.94	I	C	LP	P
DAG	94.104	354.61	4.61	15.69	I	C	SP	P
JAS	94.645	50.80	4.60	15.66	I	C	LP	P
KAS	94.650	312.74	4.60	15.66	I	C	SP	P
IST	98.192	313.46	4.51	15.35	I	C	LP	P
LGR	117.687	327.31	1.88	6.32	I	C	LP	PKP
BEC	134.612	26.34	1.82	6.13	I	C	LP	PKP
SJG	145.168	41.38	1.68	5.67	I	C	SP	PKP
VBA	145.527	152.67	1.66	5.60	I	C	SP	PKP
LPA	149.936	154.57	1.56	5.25	I	C	LP	PKP
LPB	153.905	111.06	1.43	4.80	I	C	LP	PKP
RDJ	165.322	178.32	0.91	3.06	I	C	LP	PKP

Figure 50. Azimuthal equidistant map for geographic subdivision,
P.I. - Taiwan - Ryukyu Islands

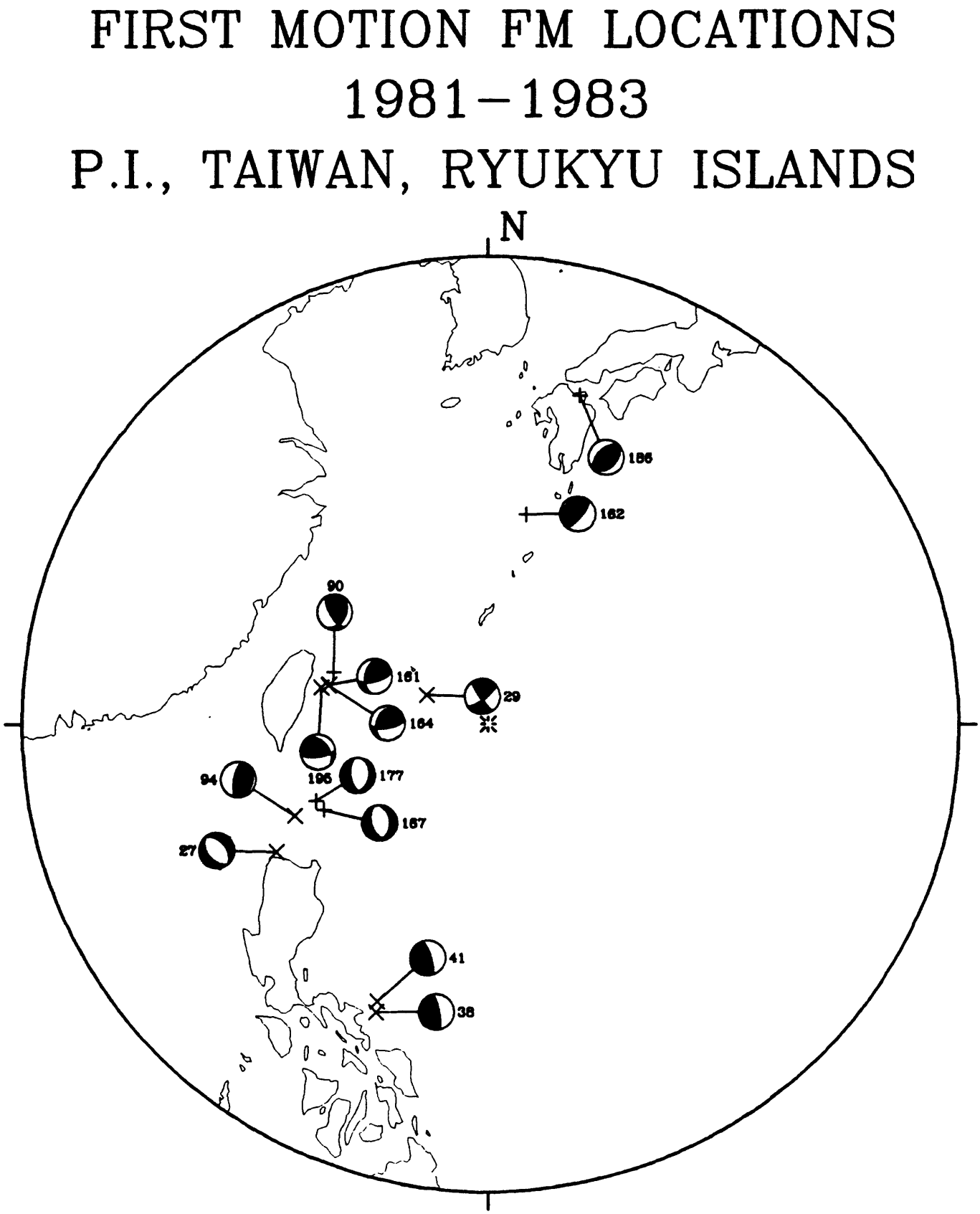

Table 137. Focal mechanism parameters for subdivision, P.I. - Taiwan - Ryukyu Islands

EVENT#	NODAL PLANE 1 (DEG.)			NODAL PLANE 2 (DEG.)			T AXIS (DEG.)		P AXIS (DEG.)		B AXIS (DEG.)	
	ϑ	δ	λ	ϑ	δ	λ	PLG	AZM	PLG	AZM	PLG	AZM
27	140	45	-90	320	45	-90	0	50	90	0	0	140
29	146	80	15	53	75	170	18	10	3	279	72	179
38	349	76	90	169	14	90	59	259	31	79	0	169
41	342	75	90	162	15	90	60	252	30	72	0	162
90	150	68	60	27	37	141	56	20	18	262	28	162
94	190	70	90	10	20	90	65	100	25	280	0	10
161	75	66	130	191	46	35	51	32	12	137	36	236
162	40	70	90	220	20	90	65	310	25	130	0	40
164	80	67	122	202	39	39	56	32	16	147	29	246
167	0	42	-75	160	50	-103	4	259	79	11	10	169
177	170	58	-103	14	34	-70	12	269	74	46	11	117
186	45	40	90	225	50	90	85	135	5	315	0	45
195	83	67	59	320	38	141	57	312	16	195	28	96

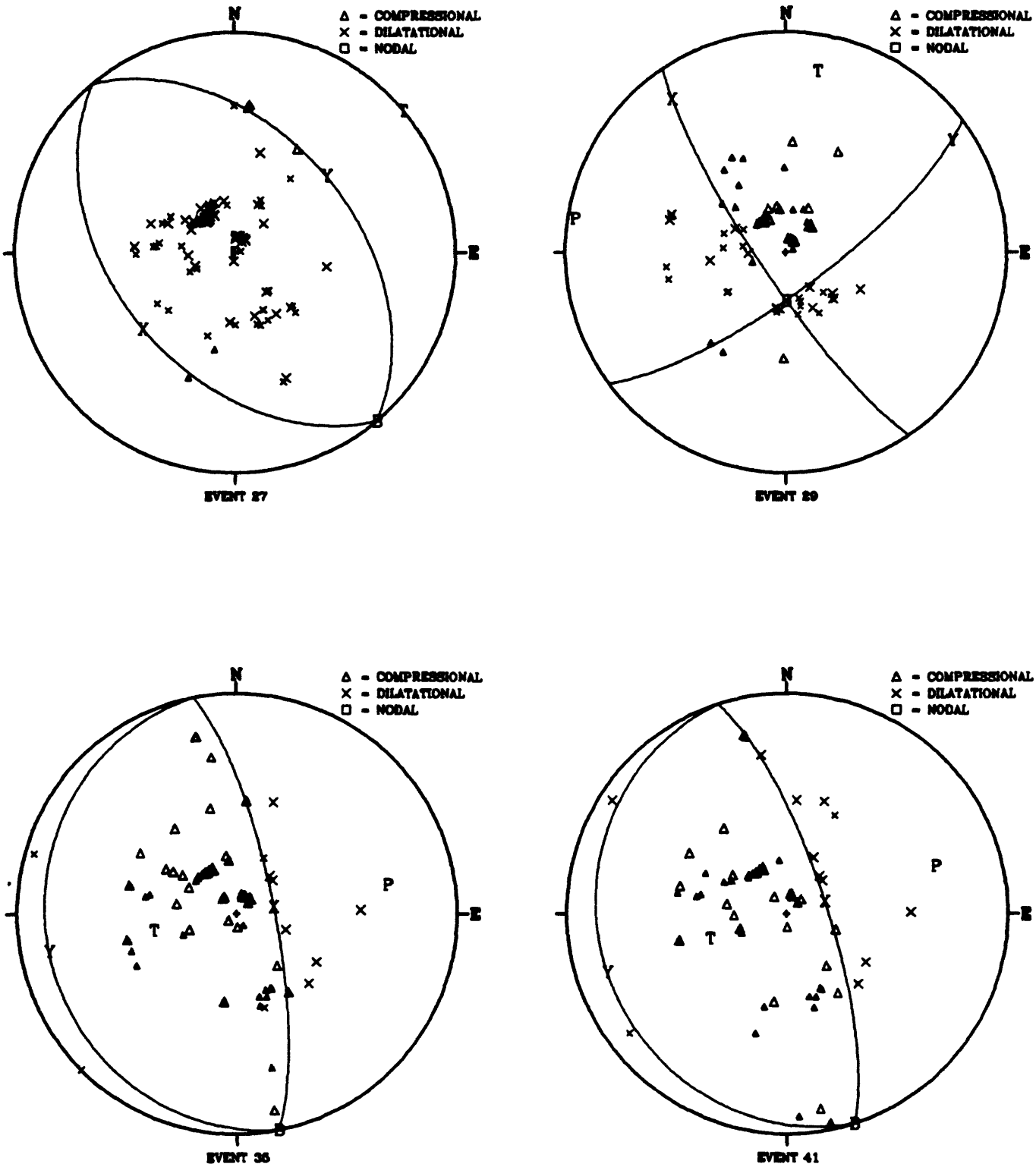

Figure 51. Lower hemisphere focal sphere projections for events 27, 29, 38, and 41

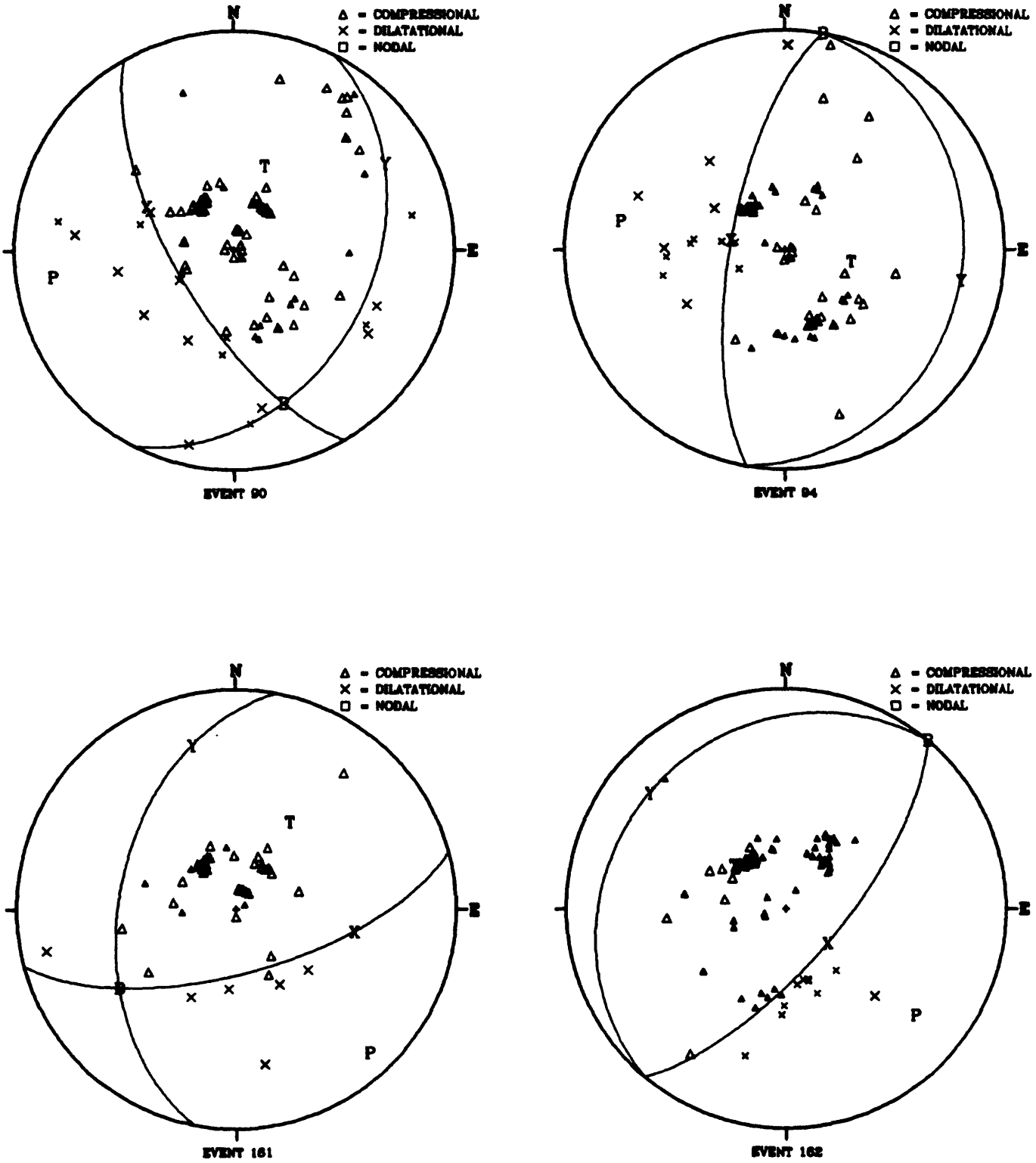

Figure 52. Lower hemispher focal sphere projections for events 90, 94, 161, and 162

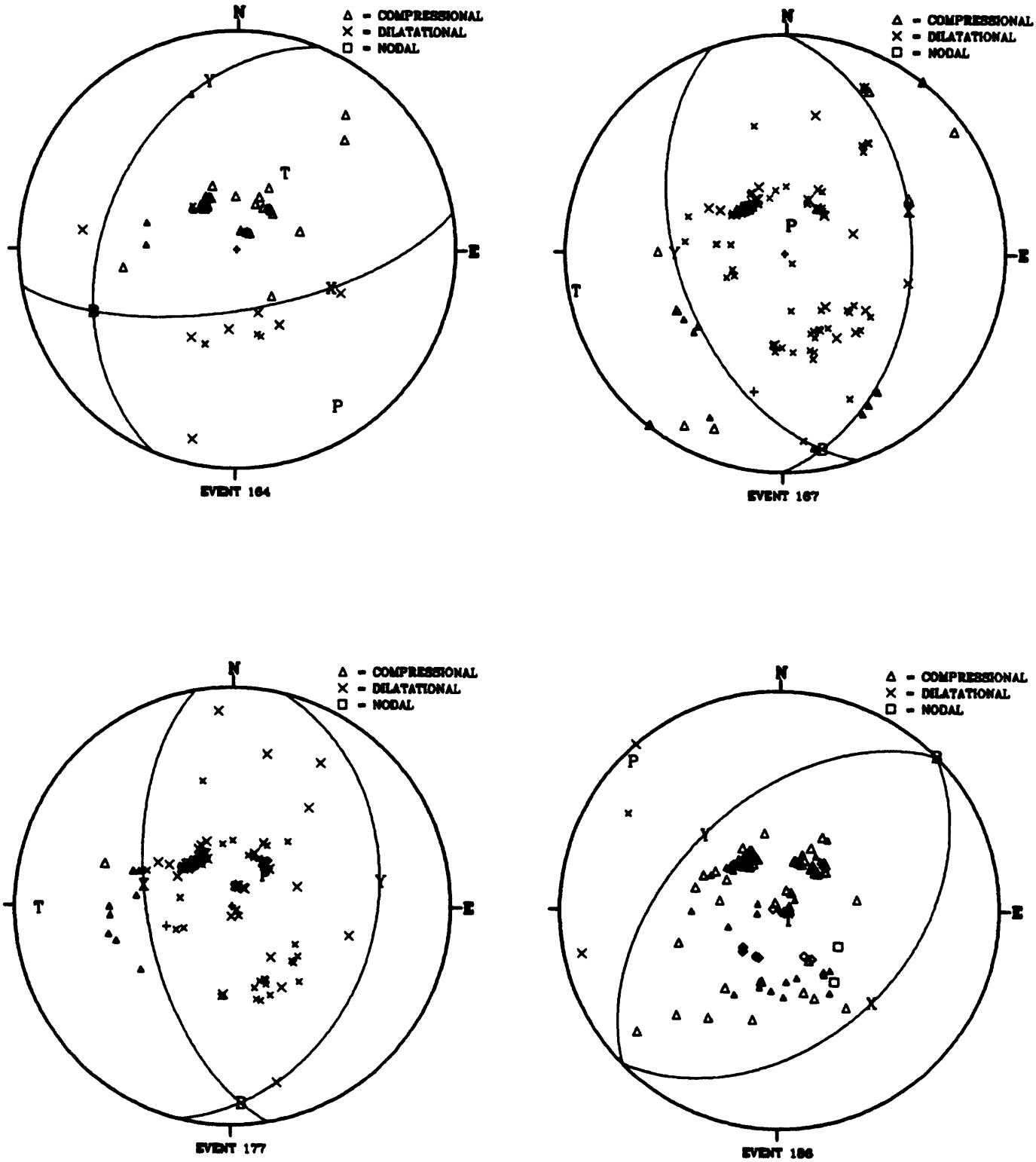

Figure 53. Lower hemisphere focal sphere projections for events 164, 167, 177, and 186

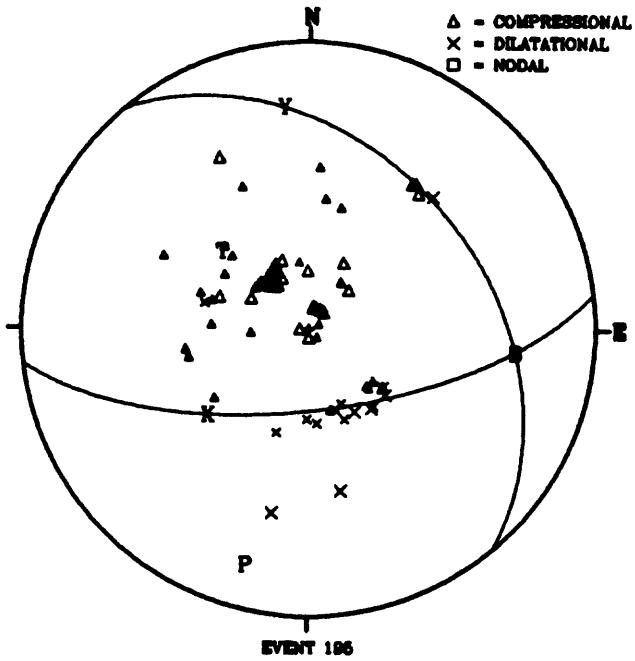

Figure 54. Lower hemispherefocal; sphere projection for event 195

Table 138. Station data for event 27

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BAG	2.341	186.10	14.26	123.20	I	C	LP	P
TWQ	5.495	359.97	14.12	55.95	I	D	SP	P
TATO	6.222	5.44	14.09	55.77	I	C	LP	P
ANP	6.430	5.49	14.05	55.53	I	C	LP	P
CGP	10.897	159.40	13.59	52.88	I	D	SP	P
DAV	12.475	157.71	13.38	51.73	E	D	LP	P
KKM	13.409	200.23	13.22	50.87	I	C	SP	P
SHK	18.919	31.49	12.18	45.62	I	C	LP	P
SEO	19.496	14.72	10.61	38.50	I	D	LP	P
BKB	20.292	191.62	10.32	37.27	I	C	SP	P
CHG	20.730	273.71	10.32	37.27	I	D	SP	P
CHTO	20.730	273.71	10.32	37.27	I	D	LP	P
CHG	20.730	273.71	10.32	37.27	I	D	LP	P
CHTO	20.730	273.71	10.32	37.27	I	D	SP	P
BDT	20.822	269.31	10.18	36.68	I	D	SP	P
MAT	23.401	37.26	9.69	34.65	I	D	SP	P
GUMO	23.631	98.98	9.69	34.65	I	D	SP	P
GUA	23.686	99.07	9.69	34.65	E	D	LP	P
IPM	23.933	236.40	9.61	34.32	I	D	SP	P
TRT	27.501	197.83	9.24	32.83	I	D	SP	P
SHIO	27.624	289.42	9.24	32.83	I	D	LP	P
PPI	27.704	228.70	9.24	32.83	I	D	SP	P
JAY	28.785	135.17	9.04	32.04	I	D	SP	P
VIS	35.628	274.44	8.53	30.03	I	D	SP	P
PMG	38.165	134.94	8.38	29.45	I	D	LP	P
LMG	38.482	133.23	8.35	29.34	I	C	SP	P
HYB	40.153	275.00	8.27	29.03	I	D	SP	P
WB2	40.670	160.29	8.24	28.91	I	D	SP	P
NDI	40.951	292.35	8.21	28.80	I	D	SP	P
ISQ	43.292	154.02	8.08	28.30	I	D	SP	P
ASP	44.053	162.67	8.05	28.19	I	D	SP	P
POO	44.421	277.60	8.02	28.07	I	D	SP	P
CTA	45.941	145.85	7.94	27.77	I	D	LP	P
CTAO	45.941	145.85	7.94	27.77	I	D	LP	P
KAAO	48.386	299.81	7.79	27.20	I	D	SP	P
KLG	49.245	179.30	7.74	27.01	I	D	SP	P
QUE	49.955	293.97	7.66	26.71	I	D	LP	P
NWAO	51.494	183.88	7.54	26.26	I	D	LP	P
ADE	56.048	162.31	7.18	24.92	I	D	LP	P
ADE	56.048	162.31	7.18	24.92	I	D	SP	P
YOU	58.890	153.43	6.96	24.10	I	D	SP	P
CAN	60.043	153.55	6.88	23.81	I	D	SP	P
ANM	66.271	26.94	6.35	21.88	E	D	SP	P
TAB	66.679	304.07	6.35	21.88	I	D	LP	P
OBN	71.565	323.00	5.96	20.47	I	D	LP	P
PMR	73.720	29.89	5.82	19.97	I	D	SP	P
COL	73.781	26.37	5.78	19.83	I	D	LP	P
COL	73.781	26.37	5.78	19.83	I	D	SP	P
KEV	73.892	338.80	5.78	19.83	I	D	LP	P
SOD	74.475	336.38	5.75	19.72	I	D	SP	P

Table 138. Station data for event 27....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KJF	74.654	333.05	5.75	19.72	I	D	LP	P
ARO	75.129	277.31	5.71	19.58	I	D	SP	P
KBS	75.285	349.09	5.68	19.47	I	D	LP	P
KRP	76.258	138.36	5.61	19.22	I	D	SP	P
ANTO	76.771	307.80	5.58	19.11	I	D	LP	P
NUR	76.875	329.66	5.58	19.11	I	D	LP	P
SNZO	77.825	141.50	5.52	18.90	I	D	LP	P
WEL	77.847	141.45	5.52	18.90	I	D	SP	P
ALT	78.984	307.51	5.45	18.65	I	D	SP	P
ELL	79.750	305.30	5.36	18.33	I	D	SP	P
MLR	80.202	314.66	5.36	18.33	I	D	SP	P
UPP	80.416	330.11	5.31	18.15	I	D	SP	P
BUC1	80.472	313.53	5.31	18.15	I	D	SP	P
HLW	80.476	298.26	5.31	18.15	I	D	LP	P
AVY	80.927	246.53	5.26	17.98	I	D	SP	P
PVL	81.420	312.56	5.22	17.84	I	D	SP	P
DAG	81.684	351.32	5.22	17.84	I	D	SP	P
KDZ	81.748	311.07	5.22	17.84	I	D	SP	P
KRA	82.603	320.33	5.14	17.55	I	D	SP	P
SPC	82.716	319.44	5.14	17.55	I	D	SP	P
JOS	82.771	318.72	5.12	17.48	I	D	SP	P
VTS	82.968	312.49	5.12	17.48	I	D	SP	P
ATH	84.096	307.96	5.05	17.24	I	D	SP	P
KONO	84.212	331.59	5.05	17.24	I	D	LP	P
KON	84.212	331.59	5.05	17.24	I	D	LP	P
SKO	84.409	312.33	5.02	17.13	I	D	SP	P
COP	84.616	327.33	5.02	17.13	E	D	LP	P
NAI	84.756	266.88	4.99	17.03	I	D	LP	P
VIE	85.454	319.51	4.96	16.92	I	D	LP	P
SOP	85.553	318.94	4.96	16.92	I	D	SP	P
BRN	85.602	324.16	4.96	16.92	I	D	SP	P
BRG	85.832	322.56	4.91	16.74	I	D	LP	P
PRU	85.852	321.59	4.91	16.74	I	D	SP	P
CLL	86.187	323.21	4.91	16.74	I	D	SP	P
KHC	86.780	321.07	4.83	16.46	I	D	SP	P
KMR	86.897	319.94	4.83	16.46	I	D	LP	P
WET	87.188	321.28	4.83	16.46	I	D	SP	P
HOF	87.264	322.62	4.80	16.36	I	D	SP	P
MOX	87.266	322.99	4.80	16.36	I	D	SP	P
MOX	87.266	322.99	4.80	16.36	I	D	LP	P
GRFO	87.923	322.25	4.77	16.25	I	D	LP	P
GRF	87.920	322.25	4.77	16.25	I	D	SP	P
TRI	88.112	317.91	4.77	16.25	I	D	SP	P
FUR	88.575	320.87	4.75	16.18	I	D	SP	P
CTI	89.295	318.86	4.71	16.04	I	D	SP	P
OGA	89.313	319.79	4.71	16.04	I	D	SP	P
STU	89.524	322.05	4.71	16.04	I	D	LP	P
BNS	89.602	324.60	4.71	16.04	I	D	SP	P
PMP	89.703	313.19	4.71	16.04	I	D	SP	P
DBN	90.098	326.22	4.71	16.04	I	D	LP	P

Table 138. Station data for event 27....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SAL	90.196	318.82	4.71	16.04	I	D	SP	P
MNS	90.243	315.25	4.71	16.04	I	D	SP	P
GWF	90.334	322.73	4.70	16.01	I	D	SP	P
RMP	90.479	314.72	4.70	16.01	I	D	SP	P
FIR	90.563	316.96	4.70	16.01	I	D	SP	P
WLF	90.823	323.81	4.70	16.01	I	D	LP	P
ECH	90.978	322.22	4.70	16.01	I	D	SP	P
UCC	91.218	325.37	4.70	16.01	I	D	LP	P
DOU	91.462	324.70	4.68	15.94	I	D	SP	P
ESK	92.359	331.70	4.66	15.87	E	D	LP	P
VAL	97.739	331.90	4.52	15.38	E	D	LP	P
BUL	98.275	251.58	4.49	15.28	I	D	LP	P
BKS	98.296	45.48	4.49	15.28	E	D	LP	P
KSR	101.379	246.48	4.45	15.14	I	D	SP	Pdf
TLO	102.294	319.72	4.45	15.14	E	D	LP	Pdf
TOL	102.302	319.75	4.45	15.14	I	D	LP	Pdf
PTO	104.203	323.00	4.45	15.14	E	D	LP	Pdf
MAL	104.430	317.35	4.45	15.14	I	D	LP	Pdf
ANMO	110.232	40.05	1.89	6.37	E	D	LP	PKP
GBO	115.873	32.08	1.88	6.33	I	D	SP	PKP
JCT	117.358	39.28	1.88	6.33	I	D	SP	PKP
WES	118.152	10.20	1.88	6.32	E	D	LP	PKP
GEO	120.255	16.13	1.87	6.31	E	D	LP	PKP
BLA	120.845	19.71	1.87	6.31	E	D	LP	PKP
SHA	123.492	30.03	1.87	6.30	E	D	LP	PKP
BEC	128.893	6.00	1.86	6.25	E	D	LP	PKP
LPS	135.824	44.08	1.81	6.11	I	D	LP	PKP
SJG	142.735	11.02	1.72	5.80	E	D	LP	PKP
TRN	150.708	4.51	1.53	5.15	I	D	LP	PKP
BOG	152.523	33.76	1.46	4.92	I	D	LP	PKP
BOCO	152.565	33.76	1.46	4.92	I	D	LP	PKP
LPA	163.871	183.64	0.96	3.24	E	D	LP	PKP
ARE	168.025	80.94	0.74	2.49	I	D	SP	PKP

Table 139. Station data for event 29

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
TWZ	4.065	287.45	14.21	45.47	I	D	SP	P
TATO	4.114	285.52	14.21	45.47	I	D	LP	P
ANP	4.143	288.39	14.21	45.47	I	D	LP	P
TWF1	4.220	263.05	14.20	45.43	I	D	SP	P
TWG	4.533	256.83	14.19	45.39	I	D	SP	P
CVP	7.253	212.09	13.98	44.54	I	C	SP	P
SZP	8.112	219.52	13.94	44.38	I	C	SP	P
SHK	12.120	27.84	13.47	42.52	I	C	LP	P
SEO	13.623	3.75	13.25	41.66	I	C	LP	P
TIA	14.373	330.36	13.08	41.01	I	C	SP	P
DAV	16.748	180.97	12.72	39.66	I	C	LP	P
TIY	17.903	323.21	12.42	38.54	I	C	SP	P
BJI	18.016	335.33	12.42	38.54	I	C	SP	P
CN2	19.821	359.13	10.48	31.72	I	C	SP	P
GUMO	20.708	116.40	10.35	31.28	I	D	LP	P
BTO	21.285	325.08	10.08	30.38	I	C	SP	P
LZH	22.526	307.58	9.88	29.72	I	C	SP	P
CHG	25.553	263.69	9.43	28.24	I	D	SP	P
CHTO	25.553	263.69	9.43	28.24	I	D	LP	P
CHG	25.553	263.69	9.43	28.24	I	D	LP	P
IPM	30.702	235.07	8.87	26.42	I	D	SP	P
TZZ	32.659	150.73	8.72	25.94	I	D	SP	P
PSI	33.513	235.03	8.66	25.75	I	D	SP	P
KVG	35.812	133.95	8.51	25.27	I	D	SP	P
WMQ	36.957	311.93	8.45	25.08	I	C	SP	P
RAB	37.926	134.00	8.39	24.89	E	D	LP	P
NDI	43.626	287.08	8.08	23.91	I	D	SP	P
WRA	44.381	168.55	8.03	23.76	I	D	SP	P
HNR	46.996	130.87	7.88	23.29	E	D	LP	P
CTAO	48.051	153.87	7.82	23.10	I	D	LP	P
CTA	48.051	153.87	7.82	23.10	I	D	LP	P
POO	48.559	274.09	7.79	23.01	I	D	SP	P
MEK	50.735	188.46	7.63	22.51	I	D	SP	P
KLG	54.559	184.65	7.30	21.48	I	D	SP	P
MUN	56.347	189.85	7.15	21.02	I	D	SP	P
NWAO	57.128	188.63	7.11	20.90	I	D	LP	P
STK	57.495	164.12	7.08	20.81	I	D	SP	P
KOU	57.928	136.58	7.04	20.68	I	D	SP	P
TGI	58.457	295.07	7.00	20.56	E	D	LP	P
TOO	63.896	162.70	6.56	19.22	I	D	SP	P
COL	67.069	27.53	6.31	18.46	I	C	LP	P
TAU	69.381	163.31	6.11	17.85	I	D	SP	P
BHD	70.493	298.48	6.04	17.64	I	D	SP	P
KEV	70.787	338.64	6.00	17.52	E	C	LP	P
KBS	71.103	349.23	6.00	17.52	I	C	LP	P
INK	71.852	22.63	5.93	17.31	I	C	SP	P
DAG	77.256	352.14	5.56	16.20	I	C	LP	P
DAG	77.256	352.14	5.56	16.20	I	C	SP	P
RES	78.196	10.21	5.52	16.08	I	C	SP	P
UPP	78.247	330.68	5.52	16.08	I	C	SP	P

Table 139. Station data for event 29....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ARO	79.092	277.82	5.45	15.87	I	D	SP	P
SNZO	79.137	144.72	5.45	15.87	I	D	LP	P
DEV	81.646	316.52	5.22	15.18	I	C	SP	P
JOS	81.933	319.61	5.18	15.06	I	C	SP	P
COP	82.742	328.40	5.15	14.97	I	C	LP	P
SRO	83.570	319.70	5.09	14.80	I	C	SP	P
VAY	83.866	312.49	5.06	14.71	I	C	SP	P
SKO	84.330	313.46	5.03	14.62	I	C	SP	P
VIE	84.500	320.72	5.03	14.62	E	C	LP	P
CLL	84.786	324.49	4.99	14.50	I	C	SP	P
KHC	85.630	322.44	4.96	14.41	I	C	SP	P
KMR	85.882	321.32	4.91	14.26	I	C	LP	P
HOF	85.926	324.03	4.91	14.26	I	C	SP	P
GRFO	86.624	323.75	4.87	14.14	E	C	LP	P
COR	87.164	41.97	4.83	14.02	E	C	LP	P
STU	88.238	323.73	4.78	13.88	I	C	LP	P
OGA	88.298	321.46	4.75	13.79	I	C	SP	P
YKM	89.135	35.51	4.73	13.73	I	C	SP	P
NAI	89.643	268.46	4.72	13.70	E	D	LP	P
DOU	89.849	326.59	4.71	13.67	I	C	SP	P
ESK	89.928	333.65	4.71	13.67	E	C	LP	P
BKS	91.355	47.26	4.69	13.61	E	C	LP	P
BKS	91.355	47.26	4.69	13.61	I	C	SP	P
LOR	92.002	324.69	4.67	13.55	E	C	LP	P
VAL	95.250	334.46	4.56	13.23	E	C	LP	P
ANMO	103.276	41.91	4.45	12.90	E	C	LP	Pdf
BUL	104.267	254.10	4.45	12.90	I	C	SP	Pdf
JCT	110.404	41.21	1.89	5.44	E	C	LP	PKP
SCP	111.939	19.23	1.89	5.44	E	C	LP	PKP
BLA	114.347	22.83	1.88	5.42	E	C	LP	PKP
SHA	116.660	32.62	1.88	5.41	E	C	LP	PKP
BEC	123.116	10.65	1.87	5.38	E	C	LP	PKP
BOCO	145.657	36.97	1.66	4.79	E	C	LP	PKP
ARE	162.113	68.67	1.07	3.07	I	C	SP	PKP

Table 140. Station data for event 38

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
LGP	0.811	224.92	14.27	90.00	I	D	SP	P
MAN	3.278	286.68	14.22	85.43	I	D	SP	P
DAV	6.718	169.31	14.04	79.80	E	C	LP	P
TATO	11.495	346.99	13.50	71.15	I	C	LP	P
ANP	11.690	347.36	13.50	71.15	I	C	LP	P
SSE	17.516	351.03	12.48	61.03	I	C	LP	P
AAI	17.727	167.21	12.48	61.03	I	C	SP	P
GUMO	19.965	87.98	10.44	47.04	I	D	SP	P
GUA	20.012	88.12	10.44	47.04	I	D	LP	P
SHK	22.043	18.64	9.94	44.17	I	D	SP	P
SHK	22.043	18.64	9.94	44.17	I	D	LP	P
KMI	23.255	302.38	9.68	42.73	I	C	LP	P
KGM	23.808	242.54	9.60	42.30	I	C	SP	P
SEO	23.848	5.20	9.60	42.30	I	C	LP	P
SNG	24.192	256.78	9.60	42.30	I	C	LP	P
SNG	24.192	256.78	9.60	42.30	I	C	SP	P
IPM	24.709	250.59	9.53	41.92	I	C	SP	P
CHG	24.866	285.11	9.47	41.59	I	C	LP	P
CHTO	24.866	285.11	9.47	41.59	I	C	SP	P
CHG	24.866	285.11	9.47	41.59	I	C	SP	P
CHTO	24.866	285.11	9.47	41.59	I	C	LP	P
BJI	27.162	346.21	9.28	40.58	E	C	LP	P
LZH	28.864	324.05	9.03	39.27	I	C	LP	P
PMG	32.280	134.20	8.71	37.63	E	D	LP	P
WRA	34.884	163.37	8.56	36.87	I	D	SP	P
ASP	38.343	165.77	8.35	35.83	I	C	SP	P
CTAO	39.936	146.84	8.26	35.38	I	C	SP	P
CTA	39.936	146.84	8.26	35.38	I	C	LP	P
HNR	42.186	121.15	8.16	34.89	I	D	LP	P
HYB	44.164	280.92	8.05	34.35	I	C	SP	P
NWAO	46.883	188.17	7.88	33.53	I	C	SP	P
NWAO	46.883	188.17	7.88	33.53	I	C	LP	P
STK	48.278	160.22	7.78	33.05	I	C	SP	P
POO	48.598	282.67	7.78	33.05	I	C	SP	P
ADE	50.315	164.62	7.62	32.29	I	C	SP	P
YOU	52.944	154.97	7.42	31.34	I	C	SP	P
KAAO	53.838	302.81	7.34	30.97	I	C	LP	P
KBL	53.838	302.81	7.34	30.97	E	C	LP	P
CAN	54.098	155.07	7.34	30.97	I	C	SP	P
TOO	54.768	159.43	7.26	30.59	I	C	SP	P
WAM	54.806	155.70	7.26	30.59	I	C	SP	P
MHI	61.774	303.92	6.72	28.10	I	C	LP	P
SNZO	71.836	142.35	5.92	24.52	I	C	LP	P
TAB	72.280	305.85	5.89	24.39	I	C	LP	P
COL	76.782	25.97	5.58	23.03	I	D	SP	P
ARO	79.163	279.30	5.45	22.46	I	C	LP	P
KBS	80.806	349.56	5.26	21.64	I	C	LP	P
AVY	82.107	248.38	5.17	21.25	I	C	SP	P
HLW	85.817	299.56	4.90	20.09	I	C	LP	P
DAG	87.103	352.04	4.83	19.79	E	C	LP	P

Table 140. Station data for event 38....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
DAG	87.103	352.04	4.83	19.79	I	C	SP	P
PVL	87.271	313.66	4.80	19.66	I	C	SP	P
KDZ	87.562	312.18	4.80	19.66	I	C	SP	P
JOS	88.733	319.74	4.75	19.45	I	C	SP	P
TIM	89.193	316.98	4.73	19.36	I	D	SP	P
ATH	89.819	309.03	4.71	19.28	I	C	SP	P
KON	90.185	332.53	4.71	19.28	I	C	LP	P
SKO	90.253	313.36	4.70	19.24	I	C	SP	P
SRO	90.368	319.61	4.70	19.24	I	C	SP	P
PPT	90.444	107.87	4.70	19.24	I	D	LP	P
COP	90.619	328.29	4.70	19.24	I	C	LP	P
VIE	91.425	320.50	4.68	19.15	E	C	LP	P
BRG	91.829	323.54	4.67	19.11	I	C	LP	P
WET	93.176	322.25	4.64	18.98	I	C	SP	P
GRFO	93.918	323.22	4.61	18.85	I	C	LP	P
GRF	93.915	323.21	4.61	18.85	I	C	SP	P
STU	95.517	323.00	4.56	18.64	I	C	LP	P
COR	95.702	41.61	4.56	18.64	I	D	LP	P
DBN	96.103	327.19	4.55	18.60	I	C	LP	P
WLF	96.825	324.76	4.53	18.52	E	C	LP	P
UCC	97.224	326.34	4.53	18.52	E	C	LP	P
BKS	99.309	47.37	4.47	18.26	I	D	LP	P
BUL	99.879	251.62	4.47	18.26	I	C	LP	P
VAL	103.707	333.00	4.45	18.18	I	C	LP	Pdf
TOL	108.275	320.55	1.89	7.61	I	C	LP	PKP
GOL	109.570	38.64	1.89	7.61	E	C	LP	PKP
PTO	110.202	323.89	1.89	7.61	E	C	LP	PKP
MAL	110.371	318.04	1.89	7.61	I	C	LP	PKP
ANMO	111.736	43.25	1.89	7.61	E	C	LP	PKP
EPT	113.532	46.07	1.88	7.59	E	C	LP	PKP
WES	122.341	13.68	1.87	7.54	E	C	LP	PKP
BLA	124.237	23.84	1.87	7.52	I	C	LP	PKP
SJG	146.717	18.36	1.64	6.60	E	C	LP	PKP
BOG	154.201	46.26	1.43	5.74	I	C	LP	PKP
CFA	158.805	149.12	1.22	4.89	I	C	SP	PKP
LPA	158.822	174.87	1.22	4.89	I	C	LP	PKP
RDJ	165.083	230.59	0.91	3.65	I	C	LP	PKP

Table 141. Station data for event 41

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PLP	2.967	167.93	14.23	85.97	I	C	SP	P
BAG	4.309	302.93	14.18	83.73	I	D	LP	P
CGP	5.605	176.48	14.11	81.54	I	C	SP	P
PPR	6.966	232.69	14.00	78.93	I	D	SP	P
DAV	7.056	170.03	14.00	78.93	I	C	LP	P
TATO	11.162	346.48	13.57	72.04	I	C	LP	P
ANP	11.356	346.87	13.50	71.15	I	C	LP	P
SSE	17.176	350.78	12.58	61.87	I	D	LP	P
MKS	19.775	194.49	10.44	47.04	I	C	SP	P
GUMO	19.932	88.94	10.44	47.04	I	D	LP	P
GUA	19.979	89.08	10.44	47.04	I	D	LP	P
SHK	21.705	18.87	10.05	44.79	I	D	LP	P
KMI	23.091	301.66	9.76	43.17	I	C	LP	P
SEO	23.500	5.23	9.68	42.73	E	D	LP	P
SNG	24.297	256.05	9.53	41.92	I	C	SP	P
SNG	24.297	256.05	9.53	41.92	I	C	LP	P
BDT	24.598	280.66	9.53	41.92	I	C	SP	P
CHTO	24.801	284.37	9.47	41.59	I	C	LP	P
CHG	24.801	284.37	9.47	41.59	I	C	LP	P
MAT	25.572	26.55	9.42	41.33	I	D	SP	P
LZH	28.598	323.65	9.11	39.69	I	C	LP	P
PMG	32.506	134.62	8.71	37.63	E	D	LP	P
WB2	35.214	163.53	8.56	36.87	I	C	SP	P
WRA	35.210	163.55	8.56	36.87	I	C	SP	P
NAU	37.415	193.53	8.41	36.12	I	C	SP	P
CTA	40.214	147.10	8.26	35.38	I	C	LP	P
HNR	42.346	121.50	8.13	34.74	I	D	LP	P
HYB	44.123	280.57	8.05	34.35	I	C	SP	P
NDI	45.934	296.33	7.93	33.77	I	C	SP	P
NWAO	47.231	188.16	7.88	33.53	I	C	LP	P
POO	48.546	282.37	7.78	33.05	I	C	SP	P
STK	48.597	160.35	7.78	33.05	I	C	SP	P
ADE	50.644	164.72	7.62	32.29	I	C	SP	P
YOU	53.249	155.11	7.42	31.34	I	C	SP	P
CAN	54.404	155.20	7.30	30.78	I	C	SP	P
WAM	55.113	155.82	7.26	30.59	I	C	SP	P
SHI	67.510	296.47	6.26	26.03	I	C	SP	P
TAB	72.096	305.76	5.92	24.52	I	C	LP	P
SNZO	72.096	142.43	5.92	24.52	I	C	LP	P
BHD	74.114	300.94	5.78	23.90	I	C	SP	P
COL	76.459	26.01	5.61	23.16	E	D	LP	P
ARO	79.131	279.24	5.45	22.46	I	C	LP	P
MLR	85.866	315.75	4.90	20.09	I	C	SP	P
DAG	86.762	352.04	4.83	19.79	I	C	SP	P
PVL	87.049	313.65	4.83	19.79	I	C	SP	P
NAI	87.923	268.18	4.77	19.53	E	C	LP	P
JOS	88.483	319.74	4.75	19.45	I	C	SP	P
KON	89.888	332.53	4.71	19.28	E	C	LP	P
SKO	90.032	313.37	4.71	19.28	I	C	SP	P
COP	90.336	328.30	4.70	19.24	E	C	LP	P

Table 141. Station data for event 41....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PPT	90.527	107.87	4.70	19.24	I	C	LP	P
GRFO	93.654	323.24	4.63	18.94	E	C	LP	P
STU	95.254	323.03	4.56	18.64	E	C	LP	P
COR	95.425	41.60	4.56	18.64	E	D	LP	P
CIR	97.466	250.26	4.52	18.47	I	C	SP	P
BKS	99.055	47.34	4.48	18.30	E	D	LP	P
BUL	100.011	251.69	4.45	18.18	I	C	LP	Pdf
SLR	101.354	246.18	4.45	18.18	I	C	SP	Pdf
VAL	103.408	333.05	4.45	18.18	E	C	LP	Pdf
PTO	109.935	323.98	1.89	7.61	E	C	LP	PKP
EPT	113.273	45.98	1.89	7.60	E	C	LP	PKP
WES	121.997	13.65	1.87	7.54	E	C	LP	PKP
BEC	133.005	10.46	1.84	7.39	E	C	LP	PKP
SJG	146.380	18.24	1.66	6.69	E	C	LP	PKP
BOG	153.942	45.78	1.43	5.74	E	C	LP	PKP
BOCO	153.983	45.80	1.43	5.74	E	C	LP	PKP
LPA	159.167	174.73	1.22	4.89	E	C	LP	PKP

Table 142. Station data for event 90

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
TWC	0.636	271.41	9.54	136.55	I	C	SP	P
TWD	1.008	239.63	11.82	121.63	I	C	SP	P
TWZ	1.012	299.81	11.83	121.52	I	D	SP	P
TATO	1.034	291.69	11.92	120.82	I	D	SP	P
TATO	1.034	291.69	11.92	120.82	E	D	LP	P
ANP	1.104	302.26	12.16	118.83	I	D	SP	P
ANP	1.104	302.26	12.16	118.83	I	D	LP	P
ISI	1.499	99.67	13.02	110.24	I	D	SP	P
TWQ	1.592	258.80	13.14	108.74	I	D	SP	P
TWG	2.224	217.74	13.60	101.36	I	C	SP	P
BAG	8.347	193.12	13.65	79.68	I	D	LP	P
NGS	10.343	36.75	13.44	75.61	E	C	LP	P
IZU	11.233	30.00	13.33	73.92	E	C	LP	P
FKK	11.267	35.62	13.33	73.86	I	C	LP	P
SHK	13.249	39.32	13.04	70.06	I	C	LP	P
SEO	13.470	15.24	13.01	69.65	I	C	LP	P
CCP	14.243	174.56	12.89	68.25	I	D	SP	P
BJI	16.306	342.33	12.52	64.50	I	C	SP	P
DAV	17.646	170.04	12.27	62.15	I	D	LP	P
OSH	17.768	51.37	12.30	62.46	E	C	LP	P
MAT	17.962	44.83	12.22	61.74	I	C	SP	P
MAJO	17.962	44.83	12.22	61.74	E	C	LP	P
KMI	17.985	275.83	12.21	61.61	E	D	LP	P
LZH	19.755	309.78	10.36	48.30	E	C	LP	P
CHTO	22.657	259.92	9.74	44.56	I	D	SP	P
CHG	22.657	259.92	9.74	44.56	I	D	SP	P
CHG	22.657	259.92	9.74	44.56	I	D	LP	P
GUMO	23.726	113.40	9.57	43.62	I	C	LP	P
GUA	23.789	113.44	9.57	43.58	I	C	LP	P
SNG	27.214	234.13	9.22	41.63	I	D	LP	P
MKS	29.779	186.18	8.89	39.82	I	D	SP	P
LEM	34.450	206.89	8.57	38.13	E	D	LP	P
NDI	40.543	285.98	8.21	36.29	I	D	SP	P
PMG	41.453	141.64	8.17	36.06	I	C	LP	P
WB2	45.731	164.41	7.93	34.86	I	C	SP	P
KBL	47.115	295.08	7.85	34.44	E	D	LP	P
ASPA	49.215	166.21	7.70	33.69	I	C	SP	P
HNR	49.745	128.26	7.66	33.48	I	C	LP	P
CTA	50.045	150.46	7.63	33.37	I	C	SP	P
CTAO	50.045	150.46	7.63	33.37	I	C	LP	P
MEK	51.047	184.61	7.55	32.97	I	D	SP	P
NWAO	57.416	185.30	7.05	30.54	I	C	LP	P
STK	59.027	161.11	6.93	29.98	I	C	SP	P
KOU	60.519	134.23	6.81	29.41	I	C	SP	P
ADE	61.178	164.87	6.76	29.16	I	C	LP	P
PVC	61.318	128.89	6.75	29.11	I	C	SP	P
RIV	64.150	153.71	6.52	28.04	E	C	LP	P
TAB	64.835	302.11	6.47	27.78	I	C	LP	P
COL	67.877	27.42	6.22	26.61	I	C	LP	P
KEV	69.063	338.22	6.12	26.17	I	C	LP	P

Table 142. Station data for event 90....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KBS	69.882	348.88	6.06	25.88	I	C	LP	P
ANTO	74.501	306.99	5.73	24.38	I	C	LP	P
AFI	74.616	113.40	5.72	24.35	I	C	LP	P
DAG	76.173	351.47	5.62	23.88	I	C	SP	P
KRA	79.148	320.17	5.43	23.01	I	C	SP	P
PCR	79.419	240.89	5.40	22.92	E	D	LP	P
KONO	79.851	331.63	5.35	22.69	I	C	LP	P
KON	79.851	331.63	5.35	22.69	I	C	LP	P
COP	80.577	327.37	5.28	22.36	E	C	LP	P
BER	81.239	333.45	5.22	22.12	I	C	LP	P
SNZO	81.451	143.01	5.20	22.02	I	C	LP	P
SKO	81.668	312.30	5.18	21.94	I	C	SP	P
RSNT	82.127	23.20	5.15	21.79	I	C	LP	P
GRFO	84.285	322.55	5.02	21.22	I	C	LP	P
BHG	84.357	320.28	5.02	21.20	I	C	SP	P
CEY	84.430	318.02	5.01	21.18	I	C	SP	P
AVY	84.700	246.57	5.00	21.10	I	C	SP	P
FUR	85.051	321.23	4.97	21.00	I	C	SP	P
OGA	85.879	320.21	4.90	20.67	I	C	SP	P
STU	85.897	322.48	4.90	20.66	I	C	LP	P
ZUL	87.058	321.70	4.81	20.29	E	C	LP	P
ESK	87.969	332.34	4.77	20.10	I	C	SP	P
LON	88.309	38.33	4.75	20.01	I	C	LP	P
DIX	88.401	320.92	4.74	19.99	E	C	LP	P
EDM	88.643	29.87	4.73	19.94	I	C	SP	P
LOR	89.693	323.31	4.71	19.83	I	C	SP	P
NEW	89.964	35.22	4.71	19.83	I	C	SP	P
SMF	90.078	322.82	4.71	19.82	I	C	SP	P
FRF	90.284	319.16	4.70	19.81	I	C	SP	P
LRG	90.515	319.19	4.70	19.80	I	C	SP	P
RXF	90.617	33.92	4.70	19.79	I	C	SP	P
LHD	90.781	34.58	4.69	19.77	I	C	SP	P
LDM	90.781	34.32	4.69	19.77	I	C	SP	P
MZF	91.029	323.01	4.69	19.75	I	C	SP	P
CLX	91.032	34.43	4.69	19.75	I	C	SP	P
ETA	91.063	331.66	4.69	19.75	I	C	SP	P
ECP	91.497	331.36	4.68	19.71	I	C	SP	P
ECB	91.544	331.67	4.68	19.71	I	C	SP	P
SES	91.601	31.02	4.68	19.70	I	C	SP	P
FFC	92.262	24.03	4.66	19.61	I	C	SP	P
LFF	92.842	322.82	4.64	19.55	I	C	SP	P
JAS	94.218	44.93	4.60	19.37	I	C	SP	P
JAS	94.218	44.93	4.60	19.37	E	C	LP	P
PPT	95.277	106.79	4.56	19.20	E	C	LP	P
LGR	96.236	322.45	4.53	19.07	I	C	SP	P
RSON	98.353	22.26	4.49	18.89	I	C	LP	P
TOL	98.823	321.30	4.48	18.84	E	C	LP	P
RSSD	99.416	32.03	4.46	18.76	E	C	LP	P
PTO	100.446	324.66	4.45	18.70	E	C	LP	Pdf
BNG	100.825	279.95	4.45	18.70	I	C	SP	Pdf

Table 142. Station data for event 90....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BCAO	100.836	279.95	4.45	18.70	E	C	LP	Pdf
BUL	101.556	253.09	4.45	18.70	I	C	LP	Pdf
GOL	101.975	35.83	4.45	18.70	E	C	LP	Pdf
SLR	103.872	247.90	4.45	18.70	E	C	LP	Pdf
ANMO	104.755	39.88	4.45	18.70	E	C	LP	Pdf
JCT	111.840	38.80	1.89	7.83	E	C	LP	PKP
WES	112.145	11.06	1.89	7.83	I	C	LP	PKP
GEO	114.230	16.69	1.88	7.80	E	C	LP	PKP
BEC	122.935	7.29	1.87	7.74	E	C	LP	PKP
SJG	136.721	12.11	1.81	7.48	E	C	LP	PKP
PCH	165.479	131.23	0.88	3.64	I	C	SP	PKP
ROCH	165.485	128.16	0.88	3.64	I	C	SP	PKP
PEL	165.625	129.32	0.87	3.60	I	C	SP	PKP
PEL	165.625	129.32	0.87	3.60	E	C	LP	PKP
RDJ	166.857	274.49	0.80	3.32	I	C	LP	PKP
ZOBO	167.020	52.36	0.79	3.28	E	C	LP	PKP
LPB	167.210	53.17	0.78	3.24	E	C	LP	PKP
BDF	167.382	312.98	0.77	3.20	I	C	LP	PKP
ANT	168.130	88.39	0.73	3.02	I	C	LP	PKP
LPA	169.714	177.79	0.64	2.63	I	C	LP	PKP

Table 143. Station data for event 94

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BAG	3.599	192.60	14.21	95.04	I	C	LP	P
TATO	5.006	0.95	14.14	82.40	E	D	LP	P
ANP	5.214	1.19	14.14	82.40	I	D	LP	P
DAV	13.406	161.83	13.20	67.72	I	C	LP	P
SHK	17.633	32.22	12.48	61.03	I	C	LP	P
KMI	17.984	290.07	12.37	60.13	I	D	LP	P
SEO	18.216	14.28	12.37	60.13	E	C	LP	P
PCT	19.780	257.81	10.44	47.04	I	D	SP	P
CHG	21.210	270.75	10.17	45.47	I	D	LP	P
BDT	21.393	266.48	10.05	44.79	I	D	SP	P
MAJO	22.140	38.18	9.94	44.17	I	C	LP	P
LZH	22.272	319.87	9.85	43.67	I	D	LP	P
GUMO	23.329	102.07	9.68	42.73	E	C	LP	P
GUA	23.387	102.15	9.68	42.73	E	C	LP	P
SNG	23.816	240.67	9.60	42.30	I	D	LP	P
TRT	28.792	198.27	9.03	39.27	I	C	SP	P
LEM	29.856	208.37	8.91	38.65	I	C	LP	P
RAB	38.595	125.11	8.35	35.83	I	C	LP	P
PMG	38.648	136.64	8.35	35.83	E	C	LP	P
HYB	40.588	273.74	8.24	35.28	I	D	SP	P
WB2	41.619	161.48	8.18	34.99	I	C	SP	P
POO	44.798	276.52	7.99	34.06	I	D	SP	P
ASPA	45.022	163.70	7.99	34.06	I	C	SP	P
WBN	46.078	173.53	7.93	33.77	I	C	SP	P
CTAO	46.639	147.08	7.91	33.68	I	C	LP	P
CTA	46.639	147.08	7.91	33.68	I	C	SP	P
HNR	47.876	124.00	7.81	33.19	E	C	LP	P
KLG	50.428	179.93	7.62	32.29	I	C	SP	P
KLB	51.353	183.97	7.54	31.91	I	C	SP	P
MUN	51.858	185.61	7.50	31.72	I	C	SP	P
NWAO	52.716	184.40	7.46	31.53	I	C	SP	P
STK	55.040	159.00	7.26	30.59	I	C	SP	P
MHI	56.098	300.84	7.18	30.22	I	D	LP	P
CMS	56.248	154.85	7.18	30.22	I	C	SP	P
ADE	57.024	163.06	7.11	29.90	I	C	SP	P
ADE	57.024	163.06	7.11	29.90	I	C	LP	P
KOU	58.156	131.35	7.03	29.53	I	C	SP	P
PVC	59.350	125.99	6.92	29.02	I	C	SP	P
YOU	59.722	154.21	6.92	29.02	I	C	SP	P
RIV	60.527	151.66	6.84	28.65	E	C	LP	P
NOU	60.823	131.35	6.80	28.47	I	C	SP	P
CAN	60.877	154.29	6.80	28.47	I	C	SP	P
TOO	61.536	158.35	6.76	28.29	I	C	SP	P
WAM	61.586	154.88	6.76	28.29	I	C	SP	P
ANM	64.975	27.15	6.47	26.97	I	C	SP	P
TAU	66.939	159.57	6.31	26.25	I	C	LP	P
TTA	69.081	29.06	6.14	25.49	I	C	SP	P
IMA	69.910	25.64	6.07	25.18	I	C	SP	P
KDC	71.314	34.39	5.96	24.70	I	C	SP	P
AFI	73.827	111.64	5.78	23.90	E	C	LP	P

Table 143. Station data for event 94....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KBS	74.220	349.07	5.78	23.90	I	C	SP	P
TDD	75.363	277.42	5.68	23.46	I	D	SP	P
DAF	75.774	277.34	5.64	23.29	I	D	SP	P
NUR	76.117	329.59	5.64	23.29	I	C	SP	P
SNZO	78.430	141.93	5.48	22.59	I	C	LP	P
VRI	79.106	314.83	5.45	22.46	I	C	SP	P
MLR	79.743	314.63	5.41	22.29	I	C	SP	P
DAG	80.590	351.40	5.31	21.85	I	C	SP	P
COZ	80.867	314.83	5.26	21.64	I	C	SP	P
PVL	81.006	312.55	5.26	21.64	I	C	SP	P
CLO	81.976	314.96	5.17	21.25	I	C	SP	P
KRA	82.026	320.36	5.17	21.25	I	C	SP	P
JOS	82.227	318.75	5.17	21.25	I	C	SP	P
VAY	83.440	311.47	5.08	20.86	I	C	SP	P
KSP	83.872	322.00	5.05	20.73	I	C	SP	P
VIE	84.893	319.60	4.99	20.48	E	C	LP	P
MUD	85.157	328.95	4.99	20.48	I	C	SP	P
PRU	85.248	321.69	4.99	20.48	I	C	SP	P
CLL	85.551	323.31	4.96	20.35	I	C	SP	P
KMR	86.327	320.06	4.86	19.92	I	C	LP	P
WET	86.591	321.40	4.86	19.92	I	C	SP	P
HOF	86.639	322.74	4.86	19.92	I	C	SP	P
RSNT	86.804	22.69	4.83	19.79	E	C	LP	P
BHG	87.232	320.13	4.83	19.79	I	C	SP	P
GRFO	87.306	322.39	4.80	19.66	E	C	LP	P
GRF	87.303	322.39	4.80	19.66	I	C	SP	P
FUR	87.985	321.02	4.77	19.53	I	C	SP	P
WTS	88.602	325.77	4.75	19.45	I	C	SP	P
OGA	88.745	319.95	4.75	19.45	I	C	SP	P
ENN	89.718	325.02	4.71	19.28	I	C	SP	P
ZUL	90.019	321.36	4.71	19.28	E	C	LP	P
BAF	90.651	322.15	4.70	19.24	I	C	SP	P
DIX	91.308	320.49	4.68	19.15	E	C	LP	P
CVF	92.167	316.93	4.67	19.11	I	C	SP	P
LON	92.607	37.92	4.66	19.07	E	C	LP	P
LOR	92.751	322.80	4.64	18.98	I	D	LP	P
LOR	92.751	322.80	4.64	18.98	I	C	SP	P
LBF	92.840	322.52	4.64	18.98	I	C	SP	P
SSF	93.066	322.76	4.64	18.98	I	C	SP	P
MZF	94.066	322.41	4.61	18.85	I	C	SP	P
TCF	94.239	322.62	4.61	18.85	I	C	SP	P
ETA	94.615	331.07	4.60	18.81	I	C	SP	P
LSF	94.648	322.86	4.60	18.81	I	C	SP	P
ECP	95.031	330.74	4.58	18.73	I	C	SP	P
ECB	95.095	331.05	4.58	18.73	I	C	SP	P
RJF	95.199	322.08	4.58	18.73	I	C	SP	P
BNG	100.520	278.62	4.45	18.18	I	D	SP	Pdf
SLR	101.099	246.61	4.45	18.18	I	D	SP	Pdf
TOL	101.732	320.19	4.45	18.18	E	C	LP	Pdf
KSR	102.333	246.84	4.45	18.18	I	D	SP	Pdf

Table 143. Station data for event 94....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KIC	120.939	290.63	1.87	7.54	I	C	SP	PKP
ROCH	162.941	141.99	1.02	4.09	I	C	SP	PKP
PEL	163.002	143.08	1.02	4.09	I	C	SP	PKP
LPA	165.083	182.14	0.91	3.65	I	C	LP	PKP
ARE	167.273	76.29	0.80	3.20	I	C	SP	PKP
TCA	167.440	155.76	0.80	3.20	I	C	SP	PKP
ANT	168.409	110.95	0.74	2.97	E	C	LP	PKP
BDF	168.957	290.97	0.68	2.74	E	C	LP	PKP
ZOBO	170.237	69.54	0.62	2.50	I	C	LP	PKP
LPB	170.361	70.92	0.62	2.50	I	C	SP	PKP

Table 144. Station data for event 161

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
HKC	7.818	257.68	13.90	77.41	I	D	LP	P
SHK	13.627	38.60	13.19	67.83	E	C	LP	P
DAV	17.279	169.41	12.47	61.11	I	D	LP	P
CHG	22.478	260.76	9.84	43.70	E	C	LP	P
SNG	26.892	234.58	9.28	40.66	I	C	LP	P
LEM	34.047	206.95	8.62	37.25	E	D	LP	P
RAB	40.433	130.27	8.24	35.35	I	D	LP	P
NDI	40.543	286.41	8.24	35.35	I	C	SP	P
CTAO	49.759	150.16	7.66	32.54	I	D	LP	P
CTA	49.759	150.16	7.66	32.54	I	D	SP	P
NWAO	57.013	185.20	7.11	29.95	I	D	LP	P
RIV	63.848	153.52	6.55	27.38	E	C	LP	P
COL	68.280	27.34	6.18	25.72	I	C	LP	P
KEV	69.387	338.27	6.10	25.36	I	C	LP	P
HON	72.455	74.10	5.88	24.38	E	C	LP	P
ARO	75.945	276.45	5.64	23.33	E	C	LP	P
DAG	76.546	351.46	5.61	23.20	I	C	SP	P
PVL	78.853	312.26	5.45	22.50	I	C	SP	P
HLW	79.228	297.85	5.45	22.50	I	C	LP	P
KRA	79.378	320.18	5.41	22.32	I	C	SP	P
KONO	80.144	331.63	5.36	22.11	I	C	LP	P
KON	80.144	331.63	5.36	22.11	I	C	LP	P
COP	80.848	327.37	5.26	21.67	I	C	LP	P
SNZO	81.205	142.91	5.26	21.67	E	C	LP	P
SRO	81.316	318.60	5.21	21.46	I	C	SP	P
BER	81.540	333.44	5.21	21.46	I	C	LP	P
VKA	82.303	319.62	5.14	21.15	I	C	SP	P
BRG	82.420	322.68	5.14	21.15	I	C	LP	P
RSNT	82.534	23.14	5.14	21.15	I	C	LP	P
CLL	82.723	323.36	5.14	21.15	I	C	SP	P
KMR	83.689	320.14	5.08	20.90	I	C	LP	P
MOX	83.815	323.22	5.05	20.77	E	C	LP	P
HOF	83.842	322.85	5.05	20.77	I	C	SP	P
WET	83.872	321.50	5.05	20.77	I	C	SP	P
GRFO	84.529	322.53	5.02	20.64	I	C	LP	P
GRF	84.525	322.53	5.02	20.64	I	C	SP	P
BNS	86.022	325.01	4.90	20.12	I	C	SP	P
OGA	86.109	320.18	4.90	20.12	I	C	SP	P
STU	86.140	322.45	4.90	20.12	I	C	LP	P
DBN	86.396	326.66	4.86	19.95	I	C	LP	P
NAI	86.517	267.05	4.86	19.95	I	C	SP	P
ENN	86.787	325.30	4.83	19.82	I	C	SP	P
GDH	86.784	358.56	4.83	19.82	E	C	LP	P
GWF	86.895	323.20	4.83	19.82	I	C	SP	P
ZUL	87.296	321.67	4.80	19.70	E	C	LP	P
TMA	87.773	320.33	4.77	19.57	E	C	LP	P
MMK	88.331	320.63	4.75	19.48	E	C	LP	P
DIX	88.635	320.87	4.75	19.48	E	C	LP	P
LON	88.689	38.28	4.75	19.48	I	C	LP	P
COR	89.037	40.66	4.73	19.40	I	C	LP	P

Table 144. Station data for event 161....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
EDM	89.042	29.82	4.73	19.40	I	C	SP	P
JAS	94.577	44.90	4.60	18.84	I	C	LP	P
RSON	98.761	22.22	4.48	18.33	I	C	LP	P
RSSD	99.811	32.00	4.47	18.29	I	C	LP	P
PTO	100.701	324.55	4.45	18.21	E	C	LP	Pdf
MAL	101.374	319.01	4.45	18.21	I	C	LP	Pdf
GOL	102.361	35.81	4.45	18.21	E	C	LP	Pdf
AAM	109.591	20.25	1.89	7.63	E	C	LP	PKP
JCT	112.219	38.81	1.89	7.63	I	C	LP	PKP
WES	112.554	10.99	1.89	7.61	E	C	LP	PKP
SCP	112.651	16.57	1.89	7.61	E	C	LP	PKP
BLA	115.247	20.04	1.88	7.59	E	C	LP	PKP
SHA	118.058	29.76	1.88	7.57	E	C	LP	PKP
BEC	123.340	7.20	1.87	7.54	E	C	LP	PKP
SJG	137.130	12.03	1.80	7.27	E	C	LP	PKP
TOV	144.182	20.88	1.70	6.87	I	C	SP	PKP
ARE	164.858	62.04	0.91	3.66	I	C	SP	PKP
LPA	169.324	178.43	0.68	2.74	E	C	LP	PKP

Table 145. Station data for event 162

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BJI	14.941	317.08	12.50	69.44	I	C	SP	P
BAG	15.519	213.35	12.41	68.34	I	C	LP	P
CNP	17.676	195.39	11.43	58.88	I	D	SP	P
GUA	21.574	134.96	9.80	47.26	E	D	LP	P
KMI	24.077	265.46	9.45	45.10	E	C	LP	P
AAI	33.230	182.19	8.61	40.17	I	D	SP	P
MKS	36.013	196.97	8.45	39.25	I	C	SP	P
IPM	36.663	232.49	8.41	39.04	I	C	SP	P
PKI	38.493	277.89	8.30	38.43	I	C	SP	P
KKN	38.552	278.28	8.29	38.42	I	C	SP	P
DMN	38.745	278.06	8.29	38.37	I	C	SP	P
TRT	40.544	206.08	8.18	37.82	I	C	SP	P
KNA	45.199	180.85	7.93	36.47	I	D	SP	P
ADK	45.207	44.91	7.93	36.47	I	C	SP	P
MBL	51.407	191.44	7.48	34.10	I	C	SP	P
CTA	52.107	159.79	7.43	33.81	I	D	SP	P
NAU	53.645	196.00	7.31	33.18	I	C	SP	P
WBN	55.597	183.07	7.16	32.44	I	C	SP	P
SVW	57.279	33.89	7.03	31.80	I	C	SP	P
MHI	57.848	296.35	7.00	31.61	I	C	LP	P
IMA	57.959	27.96	6.99	31.58	I	C	SP	P
KDC	59.181	37.67	6.89	31.09	I	C	SP	P
PMR	60.345	32.98	6.80	30.62	I	C	SP	P
COL	60.497	29.10	6.79	30.56	I	C	SP	P
FBA	60.497	29.10	6.79	30.56	I	C	SP	P
KLG	60.631	187.84	6.78	30.51	I	C	SP	P
NOU	62.818	141.15	6.60	29.64	I	D	SP	P
PCA	64.906	33.60	6.43	28.82	I	C	SP	P
ADE	64.927	171.56	6.43	28.81	I	D	SP	P
INK	65.310	23.98	6.40	28.67	I	C	SP	P
YOU	66.123	162.86	6.33	28.29	I	D	SP	P
KEV	66.589	338.25	6.29	28.11	I	C	SP	P
CAN	67.269	162.69	6.24	27.85	I	D	SP	P
TAB	67.316	301.87	6.23	27.83	I	C	LP	P
WAM	68.066	163.09	6.17	27.54	I	D	SP	P
SIT	68.330	35.84	6.15	27.44	I	C	SP	P
TOO	68.606	166.31	6.13	27.33	I	D	SP	P
NUR	71.399	329.67	5.92	26.35	I	C	LP	P
DAG	71.963	352.66	5.89	26.19	I	C	SP	P
YKC	75.008	25.58	5.68	25.17	I	C	SP	P
PHC	75.255	39.81	5.66	25.11	I	C	SP	P
TLB	77.143	314.06	5.54	24.52	I	C	SP	P
VRI	77.323	315.67	5.53	24.46	I	C	SP	P
MLR	77.987	315.61	5.49	24.28	I	C	SP	P
ALT	78.455	308.34	5.45	24.10	I	C	SP	P
KRA	79.034	321.75	5.42	23.93	I	C	SP	P
EDC	79.335	310.35	5.38	23.78	I	C	SP	P
SPC	79.345	320.90	5.38	23.78	I	C	SP	P
COP	79.455	329.10	5.37	23.72	I	C	LP	P
JOS	79.562	320.20	5.36	23.67	I	C	SP	P

Table 145. station data for event 162....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PVL	79.656	313.84	5.35	23.62	I	C	SP	P
ELL	79.713	306.37	5.34	23.58	I	C	SP	P
CLO	80.101	316.42	5.30	23.38	I	C	SP	P
PSZ	80.240	319.95	5.28	23.31	I	C	SP	P
PNT	80.274	38.31	5.28	23.30	I	C	SP	P
KDZ	80.319	312.46	5.28	23.28	I	C	SP	P
MUD	80.384	330.89	5.27	23.25	I	C	SP	P
KSP	80.508	323.75	5.26	23.20	I	C	SP	P
EZN	80.616	310.50	5.25	23.15	I	C	SP	P
YER	80.654	307.36	5.25	23.14	I	C	SP	P
IZM	80.716	308.88	5.24	23.11	I	C	SP	P
COR	80.789	43.73	5.23	23.09	I	C	SP	P
BUD	80.971	319.92	5.22	23.02	I	C	SP	P
BRL	81.031	326.21	5.21	22.99	I	C	SP	P
BRN	81.106	326.20	5.21	22.97	I	C	SP	P
EDM	81.116	32.76	5.21	22.96	I	C	SP	P
VTS	81.177	314.14	5.20	22.94	I	C	SP	P
ARO	81.417	278.35	5.18	22.85	I	C	LP	P
AKU	81.659	347.01	5.17	22.77	I	C	SP	P
BRG	81.684	324.67	5.16	22.76	I	C	LP	P
CLL	81.886	325.39	5.15	22.72	I	C	SP	P
PRU	81.918	323.73	5.15	22.71	I	C	SP	P
HAM	81.990	328.28	5.15	22.69	I	C	SP	P
VKA	82.009	321.63	5.15	22.68	I	C	SP	P
HLW	82.047	299.71	5.15	22.67	I	C	LP	P
NEW	82.230	38.21	5.13	22.62	I	C	SP	P
YKM	82.620	37.16	5.11	22.51	I	C	SP	P
RXF	82.926	36.92	5.09	22.43	I	C	SP	P
MOX	82.986	325.42	5.09	22.41	I	C	SP	P
LHD	83.068	37.59	5.08	22.39	I	C	SP	P
HOF	83.066	325.05	5.08	22.39	I	C	SP	P
LDM	83.076	37.33	5.08	22.39	I	C	SP	P
WET	83.290	323.72	5.07	22.33	I	C	SP	P
KMR	83.306	322.34	5.07	22.32	I	C	LP	P
CLX	83.324	37.45	5.07	22.32	I	C	SP	P
WDC	83.452	46.80	5.06	22.28	I	C	SP	P
REY	83.773	347.77	5.04	22.20	I	C	SP	P
GRF	83.788	324.84	5.04	22.19	I	C	SP	P
WIT	83.894	329.10	5.04	22.16	I	C	SP	P
BHG	84.177	322.60	5.02	22.07	I	C	SP	P
KBA	84.328	321.90	5.00	22.01	I	C	SP	P
WTS	84.384	328.43	5.00	21.99	I	C	SP	P
ORV	84.686	47.20	4.98	21.89	I	C	SP	P
FCC	84.729	21.11	4.97	21.88	I	C	SP	P
FUR	84.733	323.63	4.97	21.88	I	C	SP	P
TNS	84.804	326.41	4.97	21.87	I	C	SP	P
TRI	84.946	320.63	4.96	21.83	I	C	SP	P
FFC	85.031	27.06	4.96	21.80	I	C	SP	P
DBN	85.047	329.20	4.96	21.79	I	C	LP	P
ENN	85.629	327.91	4.90	21.55	I	C	SP	P

Table 145. Station data for event 162....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
OGA	85.694	322.74	4.90	21.52	I	C	SP	P
GWF	86.037	325.84	4.86	21.37	I	C	SP	P
STR	86.230	325.48	4.85	21.30	I	C	SP	P
LRM	86.249	38.17	4.85	21.29	I	C	SP	P
JAS	86.283	48.05	4.84	21.28	I	C	SP	P
SLE	86.414	324.55	4.83	21.24	E	C	LP	P
CDF	86.587	325.57	4.82	21.18	I	C	SP	P
ZUL	86.655	324.38	4.82	21.16	E	C	LP	P
DOU	86.708	328.01	4.82	21.15	E	C	LP	P
ECH	86.778	325.48	4.81	21.13	I	C	SP	P
BAF	87.117	325.27	4.79	21.04	I	C	SP	P
SGO	87.200	315.86	4.79	21.03	I	C	SP	P
HAU	87.319	325.70	4.79	21.01	I	C	SP	P
TMA	87.319	323.13	4.79	21.01	I	C	LP	P
MMK	87.827	323.51	4.76	20.88	I	C	LP	P
DIX	88.093	323.79	4.74	20.82	E	C	LP	P
DMU	88.555	335.86	4.73	20.74	I	C	SP	P
DDK	88.758	335.28	4.72	20.72	I	C	SP	P
DLE	88.912	335.31	4.72	20.71	I	C	SP	P
LOR	89.043	326.34	4.72	20.70	I	C	SP	P
DCN	89.131	335.70	4.72	20.69	I	C	SP	P
SSF	89.359	326.36	4.71	20.67	I	C	SP	P
SMF	89.492	325.90	4.71	20.66	I	C	SP	P
AVF	89.626	326.24	4.71	20.65	I	C	SP	P
CVF	89.662	320.47	4.71	20.65	I	C	SP	P
BDW	89.805	39.12	4.70	20.63	I	C	SP	P
SBB	89.899	49.45	4.70	20.62	I	C	SP	P
LDF	89.930	329.19	4.70	20.62	I	C	SP	P
FLN	89.964	329.48	4.70	20.62	I	C	SP	P
BGF	90.036	326.33	4.70	20.62	I	C	SP	P
MZF	90.408	326.22	4.70	20.62	I	C	SP	P
GRR	90.410	329.42	4.70	20.62	I	C	SP	P
LRG	90.426	322.37	4.70	20.62	I	C	SP	P
TCF	90.536	326.46	4.70	20.61	I	C	SP	P
LPF	90.758	329.27	4.69	20.59	I	C	SP	P
LSF	90.890	326.77	4.69	20.58	I	C	SP	P
MFF	91.418	327.86	4.67	20.49	I	C	SP	P
RJF	91.583	326.13	4.67	20.46	I	C	SP	P
CAF	91.590	325.59	4.67	20.46	I	C	SP	P
LPO	92.196	325.87	4.66	20.42	I	C	SP	P
LFF	92.229	326.28	4.66	20.41	I	C	SP	P
AVY	92.265	249.62	4.66	20.42	I	C	SP	P
GLA	92.871	49.22	4.63	20.31	I	C	SP	P
LGR	95.642	326.39	4.55	19.91	I	C	SP	P
NPA	97.448	256.96	4.51	19.75	I	C	SP	P
TOL	98.362	325.62	4.48	19.63	I	C	SP	P
CNG	108.373	249.80	1.89	8.14	I	C	SP	PKP
BUL	108.766	257.12	1.89	8.14	I	C	SP	PKP
JOZ	108.937	248.74	1.89	8.14	I	C	SP	PKP
KIC	123.220	301.50	1.87	8.05	I	C	SP	PKP

Table 145. Station data for event 162....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
TOV	136.598	28.13	1.81	7.77	I	C	SP	PKP

Table 146. Station data for event 164

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BAG	7.911	192.81	13.87	77.80	I	D	LP	P
SHK	13.656	38.60	13.17	68.14	I	C	LP	P
BJI	16.665	343.12	12.64	62.97	I	C	SP	P
KMI	17.901	277.10	12.34	60.41	I	D	LP	P
MAT	18.352	44.17	12.24	59.61	E	C	LP	P
CHG	22.457	260.80	9.83	43.85	E	C	LP	P
GUA	23.748	112.40	9.66	42.90	I	D	LP	P
TRT	33.084	197.94	8.68	37.71	I	D	SP	P
LEM	34.018	206.93	8.61	37.35	I	D	LP	P
NDI	40.532	286.44	8.23	35.45	I	C	SP	P
WB2	45.366	164.11	7.96	34.12	I	D	SP	P
POO	45.392	272.64	7.96	34.12	I	C	SP	P
ASPA	48.842	165.95	7.73	33.01	I	D	SP	P
CTA	49.748	150.13	7.69	32.81	I	D	SP	P
CTAO	49.748	150.13	7.69	32.81	E	D	LP	P
NWAO	56.989	185.18	7.10	30.02	I	D	SP	P
NWAO	56.989	185.18	7.10	30.02	E	D	LP	P
COL	68.309	27.33	6.18	25.82	I	C	LP	P
KEV	69.401	338.27	6.10	25.46	I	C	LP	P
TAU	70.585	160.84	6.03	25.15	E	D	LP	P
HON	72.479	74.08	5.88	24.48	E	C	LP	P
UPP	76.470	329.87	5.61	23.29	I	C	SP	P
MLR	77.459	314.27	5.55	23.02	I	D	SP	P
BUC1	77.826	313.16	5.52	22.89	I	C	SP	P
PVL	78.855	312.26	5.45	22.59	I	C	SP	P
KON	80.156	331.63	5.35	22.15	I	C	LP	P
KONO	80.156	331.63	5.35	22.15	E	C	LP	P
VTS	80.402	312.33	5.30	21.93	I	C	SP	P
COP	80.857	327.37	5.26	21.76	I	C	SP	P
COP	80.857	327.37	5.26	21.76	I	C	LP	P
KSP	81.130	321.94	5.26	21.76	I	C	SP	P
SNZO	81.198	142.90	5.26	21.76	I	C	LP	P
BER	81.553	333.44	5.21	21.54	I	C	LP	P
BRG	82.427	322.67	5.14	21.24	I	C	LP	P
PRU	82.522	321.71	5.14	21.24	I	C	SP	P
RSNT	82.563	23.14	5.14	21.24	I	C	LP	P
CLL	82.730	323.35	5.14	21.24	I	C	SP	P
HAM	83.248	326.19	5.11	21.11	I	C	SP	P
KMR	83.695	320.13	5.08	20.98	E	C	LP	P
GRF	84.532	322.53	5.02	20.72	I	C	SP	P
GRFO	84.536	322.53	5.02	20.72	I	C	LP	P
BNS	86.030	325.01	4.90	20.20	I	C	SP	P
OGA	86.115	320.17	4.90	20.20	I	C	SP	P
STU	86.147	322.45	4.90	20.20	I	C	LP	P
DBN	86.405	326.66	4.86	20.03	I	C	LP	P
GDH	86.806	358.55	4.83	19.90	I	C	LP	P
GWF	86.902	323.19	4.83	19.90	I	C	SP	P
SLE	87.088	321.86	4.83	19.90	I	C	LP	P
LLS	87.292	320.92	4.80	19.77	I	C	LP	P
ZUL	87.303	321.66	4.80	19.77	I	C	LP	P

Table 146. Station data for event 164....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
TMA	87.779	320.32	4.77	19.64	I	C	LP	P
MMK	88.337	320.63	4.75	19.56	I	C	LP	P
DIX	88.641	320.87	4.75	19.56	I	C	LP	P
LON	88.718	38.27	4.75	19.56	I	C	LP	P
COR	89.066	40.65	4.73	19.47	I	C	LP	P
VDM	89.721	325.35	4.71	19.39	E	C	LP	P
NEW	90.381	35.17	4.70	19.34	I	C	SP	P
JAS	94.606	44.89	4.60	18.91	E	C	LP	P
LGR	96.486	322.35	4.54	18.66	I	D	SP	P
RSON	98.789	22.21	4.48	18.40	E	C	LP	P
RSSD	99.840	31.99	4.47	18.36	E	C	LP	P
JCT	112.248	38.80	1.89	7.65	E	C	LP	PKP
SHA	118.087	29.75	1.88	7.60	E	C	LP	PKP
SJG	137.156	12.00	1.80	7.30	I	C	LP	PKP
CAR	144.350	15.88	1.70	6.90	I	D	SP	PKP

Table 147. Station data for event 167

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
TWG	2.913	335.53	11.38	118.08	I	D	SP	P
TWM1	3.216	325.87	11.70	114.88	I	C	SP	P
TWK	3.555	330.70	11.97	111.80	I	C	SP	P
TWO	3.799	333.76	12.14	109.73	I	C	SP	P
BAG	4.102	204.91	12.30	107.42	E	C	LP	P
BAG	4.102	204.91	12.30	107.42	E	D	LP	P
TWC	4.453	353.77	12.45	105.13	I	D	SP	P
ISI	4.470	21.42	12.45	105.03	I	C	LP	P
ANP	5.061	351.11	12.64	101.32	I	C	SP	P
MYK	5.326	29.75	12.70	100.01	I	C	LP	P
NAH	7.753	38.00	12.90	90.00	E	C	LP	P
NGO	8.209	37.69	12.89	90.68	E	C	LP	P
MVI	9.915	53.69	12.82	84.05	I	C	LP	P
SAG	14.821	26.86	12.26	71.93	E	C	LP	P
KKM	15.255	203.95	12.19	70.99	I	C	SP	P
SEO	17.796	12.00	10.47	54.27	E	D	LP	P
SEO	17.796	12.00	10.47	125.73	E	C	LP	AP
OSA	18.551	36.09	10.29	52.96	I	D	SP	P
OSK	18.579	36.49	10.29	52.92	I	D	SP	P
CBI	19.397	65.42	10.09	51.52	I	C	LP	P
FUK	19.959	34.63	9.98	50.71	I	D	SP	P
BJI	20.514	346.30	9.88	50.00	I	D	SP	P
MAT	21.406	37.01	9.73	49.01	I	D	SP	P
CHG	22.131	270.51	9.62	48.25	I	C	LP	P
GUMO	22.476	103.38	9.58	47.98	E	D	LP	P
SNG	24.729	241.58	9.34	46.43	I	C	SP	P
SNG	24.729	241.58	9.34	46.43	I	C	LP	P
KGM	25.919	228.30	9.23	45.72	I	C	SP	P
IPM	25.920	236.14	9.23	45.72	I	C	SP	P
PPI	29.721	229.02	8.81	43.09	I	C	SP	P
MTN	33.906	164.57	8.54	41.46	I	D	SP	P
LAT	36.003	135.25	8.42	40.78	I	D	SP	P
RAB	37.971	126.35	8.30	40.09	I	D	SP	P
PMG	38.180	138.01	8.29	40.02	I	D	LP	P
WB2	41.541	162.88	8.11	38.97	I	D	SP	P
NDI	41.788	290.77	8.09	38.88	I	D	SP	P
ASPA	44.980	164.98	7.92	37.91	I	D	SP	P
POO	45.691	276.54	7.88	37.67	I	D	SP	P
WBN	46.197	174.77	7.85	37.50	I	D	SP	P
CTAO	46.327	148.27	7.84	37.46	I	D	LP	P
CTA	46.327	148.27	7.84	37.46	I	D	SP	P
MEK	46.636	184.72	7.82	37.36	I	D	SP	P
HNR	47.236	124.98	7.78	37.14	E	D	LP	P
KLG	50.651	181.03	7.51	35.63	I	D	SP	P
MUN	52.171	186.64	7.39	34.97	I	D	SP	P
NWAO	53.009	185.42	7.33	34.66	I	D	SP	P
NWAO	53.009	185.42	7.33	34.66	E	D	LP	P
STK	54.918	159.99	7.18	33.83	I	D	SP	P
MHI	56.782	300.74	7.05	33.13	I	D	LP	P
KOU	57.611	132.17	6.98	32.79	I	D	SP	P

Table 147. Station data for event 167....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
COO	57.875	149.89	6.96	32.68	I	D	SP	P
PVC	58.734	126.76	6.90	32.38	I	D	SP	P
YOU	59.521	155.09	6.84	32.04	I	D	SP	P
BFD	60.109	161.48	6.79	31.79	I	D	SP	P
NOU	60.277	132.12	6.78	31.72	I	D	SP	P
CAN	60.677	155.15	6.75	31.56	I	D	SP	P
WAM	61.395	155.72	6.69	31.26	I	D	SP	P
TOO	61.402	159.19	6.69	31.25	I	D	SP	P
TAB	67.104	303.74	6.22	28.86	I	D	LP	P
PMR	71.779	30.22	5.88	27.12	I	D	SP	P
COL	71.878	26.67	5.87	27.08	I	D	SP	P
COL	71.878	26.67	5.87	27.08	I	D	LP	P
KEV	73.111	338.76	5.78	26.65	I	D	LP	P
HON	73.635	72.91	5.75	26.49	E	D	LP	P
SUF	75.105	331.70	5.65	26.00	I	D	SP	P
ARO	76.391	277.42	5.57	25.58	I	D	SP	P
NUR	76.399	329.70	5.57	25.58	I	D	SP	P
DAF	76.662	277.60	5.55	25.50	I	D	SP	P
HLD	76.755	277.62	5.55	25.48	I	D	SP	P
GBR	76.865	277.18	5.54	25.45	I	D	SP	P
RHP	77.409	146.90	5.51	25.29	I	D	SP	P
ALE	77.510	0.64	5.50	25.26	I	D	SP	P
SNZO	78.034	142.44	5.46	25.05	I	D	LP	P
ALT	79.282	307.64	5.36	24.55	I	D	SP	P
ELL	80.124	305.45	5.27	24.13	I	D	SP	P
DAG	80.514	351.58	5.24	23.98	I	D	SP	P
CMP	80.923	314.82	5.21	23.82	I	D	SP	P
BMR	81.117	317.48	5.19	23.74	I	C	SP	P
COZ	81.369	315.04	5.17	23.64	I	D	SP	P
PVL	81.539	312.76	5.16	23.59	I	D	SP	P
KDZ	81.919	311.29	5.14	23.48	I	D	SP	P
DEV	82.122	315.92	5.12	23.42	I	C	SP	P
KRA	82.448	320.58	5.11	23.32	I	D	SP	P
CLO	82.476	315.18	5.10	23.32	I	D	SP	P
SPC	82.592	319.69	5.10	23.28	I	D	SP	P
JOS	82.673	318.97	5.09	23.26	I	D	SP	P
AVY	82.815	246.94	5.08	23.22	I	D	SP	P
VTS	83.088	312.75	5.07	23.14	I	D	SP	P
PSZ	83.290	318.60	5.05	23.08	I	D	SP	P
KONO	83.666	331.89	5.03	22.97	I	D	LP	P
THE	83.960	310.97	5.01	22.88	I	D	SP	P
BUD	84.002	318.42	5.01	22.87	I	D	SP	P
COP	84.216	327.64	5.00	22.80	I	D	SP	P
KSP	84.270	322.24	4.99	22.79	I	D	SP	P
SRO	84.311	318.92	4.99	22.78	I	D	SP	P
ATH	84.374	308.27	4.99	22.76	I	D	SP	P
ZST	84.897	319.60	4.96	22.62	I	D	SP	P
BER	85.120	333.64	4.94	22.53	I	D	LP	P
BRN	85.310	324.52	4.91	22.39	I	D	SP	P
VKA	85.345	319.89	4.91	22.38	I	D	SP	P

Table 147. Station data for event 167....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BRG	85.596	322.92	4.88	22.25	I	D	SP	P
PRU	85.650	321.95	4.88	22.23	I	D	SP	P
CLL	85.928	323.58	4.86	22.13	I	D	SP	P
RSNT	86.247	22.98	4.84	22.03	I	D	LP	P
RSNT	86.247	22.98	4.84	22.03	I	C	SP	P
HAM	86.560	326.38	4.82	21.94	I	D	SP	P
KHC	86.596	321.47	4.81	21.93	I	D	SP	P
KMR	86.753	320.34	4.80	21.88	I	D	LP	P
MOX	87.014	323.40	4.79	21.81	I	D	LP	P
HOF	87.025	323.03	4.79	21.81	I	D	SP	P
LJU	87.408	318.41	4.78	21.74	I	D	SP	P
DRV	87.563	173.06	4.77	21.70	I	D	SP	P
GRFO	87.697	322.69	4.76	21.66	I	D	LP	P
BRT	87.891	312.91	4.75	21.60	I	D	SP	P
TRI	88.039	318.36	4.74	21.56	I	D	SP	P
FUR	88.397	321.33	4.72	21.49	I	D	SP	P
WTS	88.941	326.09	4.71	21.43	I	D	SP	P
OGA	89.172	320.27	4.71	21.42	I	D	SP	P
AKU	89.330	344.72	4.71	21.43	I	D	SP	P
AQU	89.802	315.49	4.70	21.40	I	D	SP	P
ENN	90.069	325.35	4.70	21.37	I	D	SP	P
SAL	90.089	319.34	4.70	21.37	I	D	SP	P
GWF	90.090	323.25	4.70	21.37	I	D	SP	P
MNS	90.262	315.77	4.69	21.35	I	D	SP	P
CDF	90.581	322.88	4.69	21.32	I	D	SP	P
UCC	90.881	325.92	4.68	21.29	E	D	LP	P
DOU	91.148	325.25	4.68	21.27	E	D	LP	P
BSF	91.163	322.56	4.68	21.27	I	D	SP	P
VG1	91.302	319.25	4.68	21.26	I	C	SP	P
HAU	91.323	322.87	4.67	21.26	I	D	SP	P
LON	91.868	38.27	4.66	21.16	I	D	LP	P
COR	92.111	40.67	4.65	21.13	I	D	SP	P
CVF	92.637	317.30	4.64	21.07	I	D	SP	P
LOR	93.135	323.18	4.62	20.98	I	D	SP	P
LBF	93.228	322.90	4.62	20.97	I	D	SP	P
SSF	93.451	323.14	4.61	20.96	I	D	SP	P
SMF	93.496	322.67	4.61	20.95	I	D	SP	P
FRF	93.516	318.99	4.61	20.95	I	D	SP	P
NEW	93.659	35.24	4.60	20.92	I	D	SP	P
AVF	93.691	322.98	4.60	20.92	I	D	SP	P
LMR	93.722	318.85	4.60	20.91	I	D	SP	P
LRG	93.749	319.01	4.60	20.91	I	D	SP	P
YKM	94.057	34.20	4.59	20.84	I	D	LP	P
DMU	94.358	332.65	4.58	20.79	I	D	SP	P
RXF	94.365	33.96	4.58	20.78	I	D	LP	P
DDK	94.459	332.04	4.57	20.77	I	D	SP	P
MZF	94.456	322.81	4.57	20.77	I	D	SP	P
LHD	94.502	34.62	4.57	20.76	I	D	LP	P
DKM	94.515	331.91	4.57	20.76	I	D	SP	P
LDM	94.512	34.37	4.57	20.76	I	D	LP	P

Table 147. Station data for event 167....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
LDF	94.532	325.82	4.57	20.76	I	D	SP	P
DLE	94.617	332.05	4.57	20.75	I	D	SP	P
WDC	94.669	43.80	4.57	20.74	I	D	SP	P
CLX	94.759	34.49	4.57	20.74	I	D	LP	P
DCN	94.899	332.40	4.56	20.73	I	D	SP	P
GRR	95.045	325.96	4.56	20.71	I	D	SP	P
LPF	95.361	325.75	4.55	20.64	I	D	SP	P
CAF	95.499	321.96	4.54	20.62	I	D	SP	P
RJF	95.593	322.50	4.54	20.61	I	D	SP	P
ORV	95.886	44.26	4.53	20.58	I	D	SP	P
LFF	96.257	322.53	4.53	20.58	I	D	SP	P
FFC	96.355	24.09	4.53	20.58	I	D	SP	P
JAS	97.445	45.18	4.50	20.44	I	D	SP	P
JAS	97.445	45.18	4.50	20.44	E	D	LP	P
EPF	97.619	321.16	4.50	20.42	I	D	SP	P
CNG	98.842	245.31	4.47	20.27	I	D	SP	P
BUL	100.092	252.23	4.44	20.14	I	D	SP	Pdf
BDW	101.223	36.24	4.44	20.14	I	D	SP	Pdf
BNG	101.399	279.03	4.44	20.14	I	D	SP	Pdf
CHCH	162.057	142.51	1.06	4.71	I	D	SP	PKP

Table 148. Station data for event 177

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SSE	10.647	355.75	13.08	78.57	E	D	LP	P
DAV	13.687	165.28	12.69	71.93	I	D	LP	P
SHK	16.870	31.48	12.19	65.95	I	D	LP	P
SEO	17.586	12.89	11.62	60.51	I	D	LP	P
KMI	18.449	288.26	10.49	51.81	I	C	LP	P
BJI	20.188	346.72	10.07	48.96	I	D	SP	P
PCT	20.531	257.14	10.00	48.50	I	C	SP	P
MAT	21.349	37.87	9.84	47.52	I	D	LP	P
CHG	21.870	269.75	9.76	46.97	I	C	SP	P
BDT	22.086	265.61	9.72	46.76	I	C	SP	P
GUMO	22.794	103.78	9.62	46.10	E	D	LP	P
NNT	22.800	253.47	9.62	46.10	I	C	SP	P
GUA	22.852	103.86	9.61	46.05	I	D	LP	P
PSI	28.666	235.04	8.95	42.11	I	C	SP	P
PKI	34.172	289.20	8.56	39.87	I	C	SP	P
KKN	34.301	289.57	8.55	39.83	I	C	SP	P
DMN	34.443	289.23	8.54	39.78	I	C	SP	P
PMG	38.557	137.90	8.29	38.42	I	D	SP	P
NDI	41.448	290.49	8.14	37.58	I	C	SP	P
WB2	41.879	162.60	8.11	37.43	I	D	SP	P
ISQ	44.312	156.30	7.99	36.76	I	D	SP	P
ASPA	45.311	164.71	7.93	36.44	I	D	SP	P
POO	45.401	276.21	7.92	36.41	I	C	SP	P
CTA	46.696	148.10	7.85	36.00	I	D	LP	P
QUE	50.385	292.71	7.57	34.53	I	D	SP	P
BAL	51.004	185.99	7.52	34.27	I	D	SP	P
KLB	51.889	184.71	7.45	33.90	I	C	SP	P
NWAO	53.256	185.11	7.34	33.34	I	D	LP	P
MHI	56.418	300.57	7.10	32.15	I	D	LP	P
CMS	56.414	155.63	7.10	32.15	I	D	SP	P
ADK	56.478	40.67	7.10	32.13	I	D	SP	P
ADE	57.303	163.80	7.03	31.79	I	D	SP	P
KOU	57.987	132.09	6.99	31.57	I	D	SP	P
PVC	59.106	126.70	6.90	31.12	I	D	SP	P
YOU	59.878	154.92	6.84	30.81	I	D	SP	P
NOU	60.653	132.04	6.77	30.50	I	D	SP	P
CAN	61.034	154.98	6.74	30.35	I	D	SP	P
TOO	61.750	159.02	6.69	30.06	I	D	SP	P
WAM	61.751	155.56	6.69	30.06	I	D	SP	P
TAB	66.735	303.61	6.28	28.06	I	D	LP	P
VUN	67.184	120.73	6.24	27.88	I	D	SP	P
PMR	71.675	30.25	5.91	26.26	I	D	SP	P
COL	71.752	26.69	5.90	26.25	I	D	LP	P
COL	71.752	26.69	5.90	26.25	I	D	SP	P
KEV	72.763	338.71	5.83	25.91	I	D	LP	P
KJF	73.702	332.96	5.76	25.58	I	D	LP	P
HON	73.804	72.91	5.76	25.57	I	D	LP	P
HON	73.804	72.91	5.76	154.43	I	C	LP	AP
NUR	76.032	329.63	5.61	24.84	I	D	LP	P
ALE	77.240	0.61	5.53	24.49	I	D	SP	P

Table 148. Station data for event 177....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SNZO	78.409	142.34	5.45	24.11	I	D	LP	P
ALT	78.909	307.53	5.42	23.98	I	D	SP	P
PSN	78.911	312.47	5.42	23.98	I	D	SP	P
YLV	79.002	309.17	5.42	23.95	I	D	SP	P
UPP	79.556	330.20	5.36	23.67	I	D	SP	P
ELL	79.753	305.35	5.33	23.55	I	D	SP	P
MLR	79.870	314.73	5.32	23.49	I	D	SP	P
BUC1	80.180	313.60	5.29	23.34	I	D	SP	P
DAG	80.206	351.52	5.29	23.33	I	D	SP	P
HLW	80.731	298.34	5.24	23.11	I	D	LP	P
YER	80.870	306.13	5.23	23.06	I	D	SP	P
PVL	81.163	312.66	5.20	22.94	I	D	SP	P
IZM	81.230	307.60	5.20	22.92	I	D	SP	P
KDZ	81.544	311.19	5.17	22.81	I	D	SP	P
KRA	82.071	320.49	5.14	22.67	I	D	SP	P
SPC	82.215	319.60	5.14	22.63	I	D	SP	P
AVY	82.682	246.80	5.11	22.49	I	D	SP	P
VTS	82.712	312.65	5.11	22.49	I	D	SP	P
KON	83.302	331.81	5.07	22.32	I	D	LP	P
KONO	83.302	331.81	5.07	22.32	I	D	LP	P
VAY	83.612	311.62	5.05	22.24	I	D	SP	P
BUD	83.625	318.33	5.05	22.23	I	D	SP	P
COP	83.846	327.56	5.04	22.18	I	D	SP	P
COP	83.846	327.56	5.04	22.18	I	D	LP	P
SRO	83.934	318.83	5.03	22.15	I	D	SP	P
ATH	84.000	308.17	5.03	22.13	I	D	SP	P
SKO	84.157	312.55	5.02	22.08	I	D	SP	P
BER	84.760	333.56	4.98	21.88	I	D	LP	P
OHR	84.929	311.93	4.96	21.83	I	D	SP	P
BRN	84.937	324.42	4.96	21.83	I	D	SP	P
MUD	85.079	329.12	4.95	21.78	I	D	SP	P
BRG	85.222	322.83	4.94	21.73	I	D	SP	P
PRU	85.274	321.86	4.94	21.70	I	D	SP	P
CLL	85.554	323.49	4.91	21.58	I	D	SP	P
RSNT	86.098	22.90	4.86	21.35	I	D	LP	P
YKC	86.142	22.87	4.86	21.33	I	D	SP	P
HAM	86.188	326.29	4.85	21.31	I	D	SP	P
KMR	86.377	320.25	4.84	21.25	I	D	LP	P
PHC	86.601	36.64	4.82	21.18	I	D	SP	P
WET	86.621	321.60	4.82	21.17	I	D	SP	P
MOX	86.640	323.31	4.82	21.17	I	D	SP	P
HOF	86.650	322.94	4.82	21.16	I	D	SP	P
CEY	87.234	318.08	4.79	21.02	I	D	SP	P
BHG	87.280	320.33	4.79	21.02	I	D	SP	P
GRC1	87.480	321.88	4.78	20.98	I	D	SP	P
FUR	88.021	321.23	4.75	20.84	I	D	SP	P
WTS	88.569	325.99	4.73	20.74	I	D	SP	P
TNS	88.610	323.94	4.73	20.73	I	D	SP	P
STU	88.929	322.44	4.72	20.71	I	D	LP	P
SGO	88.952	313.15	4.72	20.70	I	D	SP	P

Table 148. Station data for event 177....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
DUI	89.038	314.42	4.72	20.70	I	D	SP	P
DBN	89.361	326.63	4.71	20.67	I	D	LP	P
AQU	89.425	315.39	4.71	20.67	I	D	SP	P
BUH	89.529	322.68	4.71	20.66	I	D	SP	P
MNS	89.885	315.67	4.70	20.62	I	D	SP	P
FIR	90.144	317.39	4.70	20.61	I	D	SP	P
UCC	90.509	325.82	4.70	20.62	E	D	LP	P
MEI	90.564	310.18	4.70	20.61	I	D	SP	P
DOU	90.776	325.16	4.69	20.59	E	D	LP	P
ESK	91.441	332.18	4.67	20.48	E	C	LP	P
LON	91.816	38.17	4.66	20.45	I	D	LP	P
COR	92.074	40.56	4.66	20.43	E	D	LP	P
COR	92.074	40.56	4.66	20.43	I	D	SP	P
CVF	92.260	317.20	4.66	20.42	I	D	SP	P
EDM	92.441	29.72	4.65	20.40	I	D	SP	P
LOR	92.761	323.08	4.64	20.33	I	D	SP	P
LBF	92.853	322.80	4.63	20.31	I	D	SP	P
SSF	93.076	323.04	4.63	20.28	I	D	SP	P
SMF	93.121	322.57	4.63	20.27	I	D	SP	P
FRF	93.139	318.90	4.62	20.27	I	D	SP	P
LMR	93.345	318.76	4.62	20.26	I	D	SP	P
LRG	93.372	318.92	4.62	20.26	I	D	SP	P
NEW	93.586	35.12	4.62	20.23	I	D	SP	P
YKM	93.978	34.08	4.60	20.16	I	D	LP	P
MZF	94.081	322.71	4.60	20.14	I	D	SP	P
DDK	94.096	331.94	4.60	20.14	I	D	SP	P
TCF	94.251	322.92	4.59	20.10	I	D	SP	P
DLE	94.253	331.95	4.59	20.10	I	D	SP	P
RXF	94.284	33.84	4.59	20.10	I	D	LP	P
LHD	94.426	34.50	4.58	20.07	I	D	LP	P
DCN	94.536	332.29	4.58	20.06	I	D	SP	P
LSF	94.657	323.17	4.57	20.04	I	D	SP	P
CAF	95.123	321.87	4.56	19.99	I	D	SP	P
RJF	95.218	322.40	4.56	19.98	I	D	SP	P
FCC	95.645	18.01	4.55	19.91	I	D	SP	P
LPO	95.772	322.03	4.54	19.91	I	D	SP	P
LFF	95.881	322.43	4.54	19.90	I	D	SP	P
FFC	96.212	23.95	4.54	19.87	I	D	SP	P
VAL	96.812	332.56	4.52	19.81	I	D	LP	P
JAS	97.438	45.03	4.51	19.75	I	D	LP	P
CNG	98.718	245.27	4.47	19.58	I	D	SP	P
BNG	101.099	278.98	4.44	19.43	I	D	SP	Pdf
BDW	101.157	36.07	4.44	19.43	I	D	SP	Pdf
PTO	103.567	323.91	4.44	19.43	I	D	LP	Pdf
PTO	103.567	323.91	4.44	19.43	I	D	SP	Pdf
GOL	105.566	36.17	1.89	8.14	E	D	LP	PKP
WES	116.287	11.06	1.88	8.09	E	C	LP	PKP
SCP	116.325	16.81	1.88	8.09	E	D	LP	PKP
BLA	118.864	20.44	1.88	8.08	E	C	LP	PKP
SHA	121.446	30.57	1.87	8.06	E	D	LP	PKP

Table 148. Station data for event 177....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SJG	140.853	12.49	1.75	7.55	E	D	LP	PKP
FDF	144.912	5.48	1.68	7.25	I	D	SP	PKP
BIM	145.133	5.38	1.68	7.23	I	D	SP	PKP
CAR	148.000	16.93	1.61	6.93	I	D	SP	PKP
CHCH	162.432	142.55	1.04	4.48	I	D	SP	PKP
LPA	165.582	179.89	0.87	3.75	I	D	LP	PKP
SLA	171.785	122.73	0.51	2.19	I	D	SP	PKP

Table 149. Station data for event 186

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SHK	1.423	43.84	11.32	123.52	I	C	LP	P
SEO	5.473	318.98	13.58	90.00	I	D	LP	P
SSE	9.042	257.36	13.40	80.85	E	D	LP	P
ANP	12.010	228.91	13.06	74.25	I	C	LP	P
BJI	13.887	302.37	12.79	70.49	I	D	SP	P
BAG	19.660	212.66	10.28	49.26	I	C	LP	P
GUMO	23.271	145.27	9.59	44.95	E	C	LP	P
GUA	23.336	145.24	9.58	44.90	I	C	LP	P
DAV	26.852	193.07	9.22	42.81	I	C	LP	P
CHG	32.508	251.45	8.67	39.69	I	C	LP	P
RAB	42.291	148.43	8.11	36.68	I	C	SP	P
TRT	44.721	207.07	7.98	36.00	I	C	SP	P
PMG	45.203	157.94	7.95	35.84	E	C	LP	P
LEM	46.061	213.92	7.90	35.57	I	C	LP	P
HNR	50.557	142.49	7.56	33.87	I	N	LP	P
WB2	53.215	176.63	7.35	32.80	I	C	SP	P
POO	53.277	268.92	7.35	32.77	I	C	SP	P
QUE	54.131	285.27	7.28	32.44	I	C	LP	P
CTAO	55.121	163.02	7.21	32.08	I	C	LP	P
CTA	55.121	163.02	7.21	32.08	I	C	LP	P
PMR	56.212	34.45	7.13	31.67	I	C	SP	P
PME	56.254	34.39	7.13	31.67	I	C	SP	P
COL	56.332	30.39	7.12	31.64	I	C	LP	P
MHI	57.825	294.81	7.01	31.10	I	C	LP	P
WBN	59.494	185.12	6.88	30.46	I	C	SP	P
MEK	61.033	193.25	6.76	29.85	I	C	SP	P
PVC	61.898	139.64	6.69	29.52	I	C	SP	P
KOU	62.201	144.98	6.66	29.40	I	C	SP	P
KBS	62.660	349.08	6.63	29.22	I	C	LP	P
HON	62.707	81.52	6.62	29.20	I	C	LP	P
IR7	64.721	297.28	6.46	28.43	I	C	SP	P
NOU	64.738	144.07	6.46	28.42	I	C	SP	P
MUN	66.703	194.11	6.29	27.62	I	C	SP	P
TAB	66.859	301.20	6.28	27.56	I	C	LP	P
NWAO	67.422	192.96	6.24	27.35	I	C	LP	P
ADE	68.444	173.62	6.15	26.96	I	C	SP	P
NUR	69.041	329.52	6.11	26.73	I	C	LP	P
CAN	70.400	164.86	6.01	26.27	I	C	SP	P
RSNT	70.785	26.73	5.98	26.12	I	C	LP	P
AFI	71.713	121.22	5.91	25.83	E	N	LP	P
KAS	73.903	309.08	5.76	25.09	I	C	SP	P
KON	75.575	333.56	5.64	24.57	I	C	LP	P
KONO	75.575	333.56	5.64	24.57	I	C	LP	P
PSN	76.195	313.36	5.61	24.40	I	C	SP	P
LON	76.485	42.64	5.59	24.32	I	C	LP	P
MLR	76.526	315.82	5.59	24.31	I	C	SP	P
BER	76.587	335.65	5.58	24.29	I	C	LP	P
COR	76.842	45.09	5.57	24.22	I	C	LP	P
COR	76.842	45.09	5.57	24.22	I	C	SP	P
EDM	76.980	33.96	5.56	24.18	I	C	SP	P

Table 149. Station data for event 186....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BUC1	77.119	314.81	5.55	24.15	I	C	SP	P
COP	77.116	329.47	5.55	24.15	I	C	SP	P
COP	77.116	329.47	5.55	24.15	I	C	LP	P
KRA	77.160	322.05	5.55	24.13	I	C	SP	P
CMP	77.178	316.00	5.55	24.13	I	C	SP	P
SPC	77.526	321.22	5.53	24.03	I	C	SP	P
COZ	77.551	316.33	5.53	24.02	I	C	SP	P
DST	78.160	309.68	5.48	23.81	I	C	SP	P
NEW	78.169	39.47	5.48	23.80	I	C	SP	P
PVL	78.313	314.16	5.47	23.77	I	C	SP	P
BRL	78.867	326.66	5.43	23.58	I	C	SP	P
BRN	78.942	326.66	5.42	23.55	I	C	SP	P
PLD	79.196	313.50	5.40	23.46	I	C	SP	P
BRG	79.615	325.16	5.37	23.29	I	C	SP	P
HAM	79.696	328.81	5.36	23.25	I	C	SP	P
VTS	79.809	314.57	5.34	23.17	I	C	SP	P
MIN	80.300	47.89	5.29	22.93	I	D	SP	P
FCC	80.560	22.17	5.26	22.82	I	C	SP	P
MOX	80.868	326.00	5.24	22.71	I	C	LP	P
WET	81.279	324.32	5.21	22.56	I	C	SP	P
BKS	81.344	50.21	5.20	22.53	I	C	LP	P
KMR	81.383	322.93	5.20	22.52	I	C	LP	P
HLW	81.704	300.21	5.17	22.40	I	C	LP	P
ATH	82.237	310.57	5.13	22.23	I	C	SP	P
BHG	82.236	323.25	5.13	22.23	I	C	SP	P
EDU	82.353	336.51	5.13	22.20	I	C	SP	P
KBA	82.432	322.55	5.12	22.18	I	C	SP	P
JAS	82.449	49.30	5.12	22.17	I	C	LP	P
ARO	82.614	278.88	5.11	22.13	I	C	LP	P
BNS	82.661	328.22	5.11	22.12	I	C	SP	P
DBN	82.692	329.92	5.11	22.11	I	C	LP	P
EBL	82.984	336.05	5.09	22.03	I	C	SP	P
EAU	83.065	336.28	5.09	22.00	I	C	SP	P
STB	83.075	328.11	5.09	22.00	I	C	SP	P
TRI	83.132	321.33	5.08	21.99	I	C	SP	P
STU	83.301	325.73	5.07	158.06	I	D	LP	AP
STU	83.301	325.73	5.07	21.94	I	C	LP	P
ESK	83.405	335.85	5.07	21.91	I	C	LP	P
UCC	84.001	329.41	5.03	21.75	E	C	LP	P
WLF	84.055	327.79	5.03	21.73	E	C	LP	P
SAX	84.299	324.57	5.01	21.67	E	C	LP	P
SLE	84.344	325.34	5.01	21.66	E	C	LP	P
SNZO	84.407	148.77	5.01	21.64	I	C	LP	P
DOU	84.421	328.83	5.00	21.63	E	C	LP	P
ZUL	84.595	325.19	4.99	21.59	E	C	LP	P
LLS	84.737	324.46	4.99	21.55	E	C	LP	P
VDL	84.776	323.96	4.98	21.54	E	C	LP	P
TMA	85.338	323.98	4.94	21.36	E	C	LP	P
FIR	85.754	321.12	4.90	21.17	I	C	SP	P
MMK	85.820	324.39	4.90	21.15	E	C	LP	P

Table 149. Station data for event 186....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
DDK	86.045	336.22	4.88	21.05	I	C	SP	P
DIX	86.068	324.69	4.87	21.04	E	C	LP	P
DKM	86.128	336.11	4.87	21.02	I	C	SP	P
DLE	86.196	336.27	4.86	20.99	I	C	SP	P
RMP	86.324	318.96	4.85	20.95	I	C	SP	P
ETA	86.573	335.77	4.83	20.87	I	C	SP	P
RSON	87.038	26.76	4.81	20.74	I	C	LP	P
ECP	87.055	335.56	4.81	20.74	I	C	SP	P
RSSD	87.683	36.46	4.77	20.58	I	C	LP	P
VAL	88.549	337.44	4.74	20.43	I	C	LP	P
GOL	90.170	40.24	4.70	159.75	I	D	LP	AP
GOL	90.170	40.24	4.70	20.25	I	C	LP	P
ANMO	92.930	44.20	4.64	20.00	I	C	LP	P
EPT	95.129	46.48	4.56	19.65	I	C	LP	P
AVY	95.220	250.90	4.56	19.64	I	C	SP	P
ACO	95.689	38.64	4.55	19.56	I	C	SP	P
TOL	96.201	327.16	4.54	19.52	I	C	LP	P
PTO	97.126	330.76	4.52	160.56	I	D	LP	AP
PTO	97.126	330.76	4.52	19.44	I	C	LP	P
TUL	98.016	37.03	4.50	19.36	I	C	LP	P
RLO	98.197	36.38	4.50	19.34	I	C	SP	P
GBO	98.366	36.68	4.49	19.33	I	C	SP	P
RSNY	98.794	18.50	4.48	19.26	I	C	LP	P
MAL	98.915	325.53	4.47	19.24	I	C	LP	P
SFS	99.968	326.56	4.44	19.10	I	C	SP	Pdf
JCT	100.015	43.16	4.44	160.91	I	D	LP	AP
JCT	100.015	43.16	4.44	19.09	I	C	LP	Pdf
SCP	101.271	22.30	4.44	160.91	I	D	LP	AP
SCP	101.271	22.30	4.44	19.09	I	C	LP	Pdf
WES	101.638	17.05	4.44	19.09	I	C	LP	Pdf
BLA	103.622	25.73	4.44	19.09	I	C	LP	Pdf
BLA	103.622	25.73	4.44	160.91	I	D	LP	AP
TET	105.206	260.56	1.89	8.00	I	C	SP	PKP
SHA	105.983	34.86	1.89	8.00	I	C	LP	PKP
BNG	106.408	286.82	1.89	8.00	I	C	SP	PKP
SJG	125.987	20.86	1.86	7.89	E	C	LP	PKP
NNA	146.412	57.06	1.65	6.99	I	C	SP	PKP
CHCH	161.580	97.47	1.09	4.59	I	C	SP	PKP
VCA	162.492	79.53	1.04	4.39	I	C	SP	PKP
SLA	162.794	63.86	1.02	4.33	I	C	SP	PKP
VBA	168.168	116.34	0.73	3.07	I	C	SP	PKP
RDJ	168.446	334.87	0.71	3.00	I	C	LP	PKP
LPA	172.075	102.76	0.49	177.91	I	D	LP	AP
LPA	172.075	102.76	0.49	2.09	I	C	LP	PKP

Table 150. Station data for event 195

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ANP	1.226	332.19	14.28	56.97	I	C	LP	P
BAG	7.784	191.18	13.92	54.81	I	D	LP	P
KAG	10.523	43.09	13.64	53.21	E	D	LP	P
NGS	10.960	36.56	13.58	52.88	E	C	LP	P
FKK	11.884	35.48	13.44	52.10	E	C	LP	P
HIR	13.605	38.91	13.22	50.91	I	C	LP	P
DAV	17.225	168.44	12.59	47.66	I	D	LP	P
CD2	17.660	296.64	12.49	47.17	I	C	SP	P
SNY	17.723	3.51	12.49	47.17	I	C	SP	P
HHC	18.916	334.54	12.18	45.65	I	C	SP	P
CN2	19.842	7.05	10.45	37.85	I	C	SP	P
MDJ	21.354	14.72	10.06	36.20	I	C	SP	P
CHG	22.215	260.80	9.95	35.75	I	C	SP	P
BDT	22.685	256.89	9.85	35.33	I	C	SP	P
GTA	24.274	314.26	9.54	34.06	I	C	SP	P
SNG	26.628	234.34	9.33	33.22	I	C	SP	P
LSA	28.153	288.24	9.19	32.65	I	C	SP	P
TRT	32.936	197.53	8.68	30.64	I	D	SP	P
PKI	33.173	283.95	8.68	30.64	I	D	SP	P
WMQ	34.354	313.47	8.59	30.29	I	C	SP	P
NDI	40.333	286.50	8.24	28.93	I	C	SP	P
RAB	40.558	129.87	8.24	28.93	I	D	LP	P
PMG	41.293	140.80	8.18	28.70	E	D	LP	P
LMG	41.479	139.15	8.18	28.70	I	D	SP	P
KSH	41.674	302.86	8.18	28.70	I	C	SP	P
POO	45.164	272.63	7.99	27.98	I	C	SP	P
ISQ	47.648	157.73	7.85	27.45	I	D	SP	P
QUE	49.103	289.84	7.74	27.03	I	C	LP	P
HNR	49.726	127.57	7.70	26.88	I	D	LP	P
CTA	49.795	149.82	7.66	26.73	I	D	LP	P
WBN	50.115	174.81	7.66	26.73	I	D	SP	P
KLG	54.562	180.73	7.30	25.38	I	D	SP	P
STK	58.676	160.64	7.00	24.27	I	D	SP	P
KOU	60.435	133.72	6.84	23.68	I	C	SP	P
ADE	60.794	164.44	6.80	23.53	I	C	SP	P
PVC	61.291	128.39	6.76	23.38	I	C	SP	P
NOU	63.095	133.51	6.64	22.95	I	C	SP	P
YOU	63.170	155.78	6.64	22.95	I	D	SP	P
COL	68.487	27.29	6.18	21.28	I	C	LP	P
KEV	69.390	338.26	6.10	20.99	I	C	LP	P
KJF	70.486	332.42	6.03	20.73	I	C	LP	P
SUF	71.565	331.11	5.96	20.48	I	C	SP	P
NUR	72.920	329.12	5.85	20.09	I	C	LP	P
CLI	76.101	314.89	5.64	19.34	I	C	SP	P
GPA	76.173	308.06	5.64	19.34	I	C	SP	P
PSN	76.498	311.89	5.61	19.23	I	C	SP	P
DAG	76.611	351.41	5.61	19.23	I	C	SP	P
VRI	76.702	314.37	5.61	19.23	I	C	SP	P
ALT	76.739	306.92	5.61	19.23	I	C	SP	P
MLR	77.349	314.21	5.55	19.02	I	C	SP	P

Table 150. Station data for event 195....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
DST	77.623	307.86	5.55	19.02	I	C	SP	P
BUC1	77.711	313.10	5.55	19.02	I	C	SP	P
WAR	77.782	321.87	5.52	18.91	E	C	LP	P
PVL	78.737	312.20	5.49	18.80	I	C	SP	P
HLW	79.055	297.78	5.45	18.66	I	C	LP	P
KDZ	79.189	310.73	5.45	18.66	I	C	SP	P
KRA	79.297	320.12	5.41	18.52	I	C	SP	P
GZR	79.448	314.99	5.41	18.52	I	D	SP	P
PLD	79.456	311.36	5.41	18.52	I	C	SP	P
KON	80.116	331.57	5.36	18.34	I	C	LP	P
MMB	80.329	311.17	5.31	18.17	I	C	SP	P
COP	80.800	327.30	5.26	17.99	I	C	LP	P
KSP	81.050	321.87	5.26	17.99	I	C	SP	P
SKO	81.734	312.23	5.22	17.85	I	C	SP	P
BRN	82.004	324.19	5.18	17.71	I	C	SP	P
VKA	82.219	319.54	5.18	17.71	I	C	SP	P
BRG	82.350	322.60	5.14	17.57	I	C	LP	P
CLL	82.656	323.28	5.14	17.57	I	C	SP	P
HAM	83.186	326.12	5.12	17.49	I	C	SP	P
KHC	83.405	321.18	5.08	17.35	I	C	SP	P
KMR	83.608	320.06	5.08	17.35	I	C	LP	P
MOX	83.748	323.14	5.08	17.35	I	C	LP	P
HOF	83.773	322.77	5.05	17.25	I	C	SP	P
WET	83.797	321.42	5.05	17.25	I	C	SP	P
GRF	84.455	322.45	5.02	17.14	I	C	SP	P
BHG	84.507	320.18	5.02	17.14	I	C	SP	P
KBA	84.552	319.46	5.02	17.14	I	C	SP	P
TRI	84.975	318.12	4.99	17.04	I	C	SP	P
FUR	85.211	321.11	4.99	17.04	I	C	SP	P
TNS	85.693	323.85	4.96	16.93	I	C	SP	P
BNS	85.963	324.92	4.91	16.76	I	C	SP	P
OGA	86.028	320.09	4.91	16.76	I	C	SP	P
STU	86.069	322.36	4.91	16.76	I	C	LP	P
NAI	86.262	266.95	4.86	16.58	I	C	SP	P
BGG	86.299	324.23	4.86	16.58	I	C	SP	P
DBN	86.345	326.57	4.86	16.58	E	C	LP	P
OSS	86.639	320.25	4.86	16.58	E	C	LP	P
SAX	86.802	321.02	4.83	16.47	E	C	LP	P
GDH	86.880	358.46	4.83	16.47	I	C	LP	P
SLE	87.008	321.77	4.83	16.47	E	C	LP	P
VDL	87.139	320.33	4.83	16.47	E	C	LP	P
LLS	87.208	320.83	4.83	16.47	E	C	LP	P
ZUL	87.222	321.57	4.83	16.47	E	C	LP	P
WLF	87.237	324.21	4.83	16.47	E	C	LP	P
CDF	87.332	322.76	4.80	16.37	I	C	SP	P
RMP	87.587	315.12	4.80	16.37	I	C	SP	P
TMA	87.693	320.23	4.80	16.37	E	C	LP	P
DOU	87.811	325.15	4.77	16.26	E	C	LP	P
HAU	88.075	322.77	4.77	16.26	I	C	SP	P
ESK	88.240	332.19	4.77	16.26	E	C	LP	P

Table 150. Station data for event 195....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MMK	88.252	320.53	4.75	16.19	E	C	LP	P
DIX	88.557	320.77	4.75	16.19	E	C	LP	P
CVF	89.616	317.26	4.71	16.05	I	C	SP	P
LBF	89.977	322.87	4.71	16.05	I	C	SP	P
SMF	90.253	322.65	4.70	16.02	I	C	SP	P
GRC	90.286	323.49	4.70	16.02	I	C	SP	P
NEW	90.581	35.06	4.70	16.02	I	C	SP	P
LRG	90.653	319.02	4.70	16.02	I	C	SP	P
SSB	90.665	321.26	4.70	16.02	I	C	SP	P
MZF	91.207	322.83	4.70	16.02	I	C	SP	P
RXF	91.233	33.76	4.70	16.02	I	C	SP	P
LHD	91.398	34.41	4.68	15.95	I	C	SP	P
LDM	91.397	34.16	4.68	15.95	I	C	SP	P
CLX	91.648	34.27	4.68	15.95	I	C	SP	P
CAF	92.282	322.03	4.66	15.88	I	C	SP	P
RJF	92.356	322.57	4.66	15.88	I	C	SP	P
BKS	93.702	45.65	4.63	15.77	I	C	LP	P
TOL	98.982	321.04	4.48	15.25	I	C	LP	P
PTO	100.640	324.39	4.45	15.15	I	C	LP	Pdf
EPT	107.553	42.12	1.89	6.37	I	C	LP	PKP
JCT	112.456	38.64	1.89	6.37	E	C	LP	PKP
WES	112.702	10.78	1.89	6.36	I	C	LP	PKP
SCP	112.822	16.37	1.89	6.36	I	C	LP	PKP
SHA	118.272	29.56	1.88	6.32	I	C	LP	PKP
SJG	137.283	11.67	1.80	6.08	I	C	LP	PKP
ARE	165.128	61.83	0.91	3.06	I	C	SP	PKP
PCH	165.413	133.43	0.91	3.06	I	C	SP	PKP
RDJ	166.523	272.14	0.80	2.68	I	C	LP	PKP
LPA	169.224	179.65	0.68	2.29	I	C	LP	PKP

Figure 55. Azimuthal equidistant map for geographic subdivision, Southeast Asia

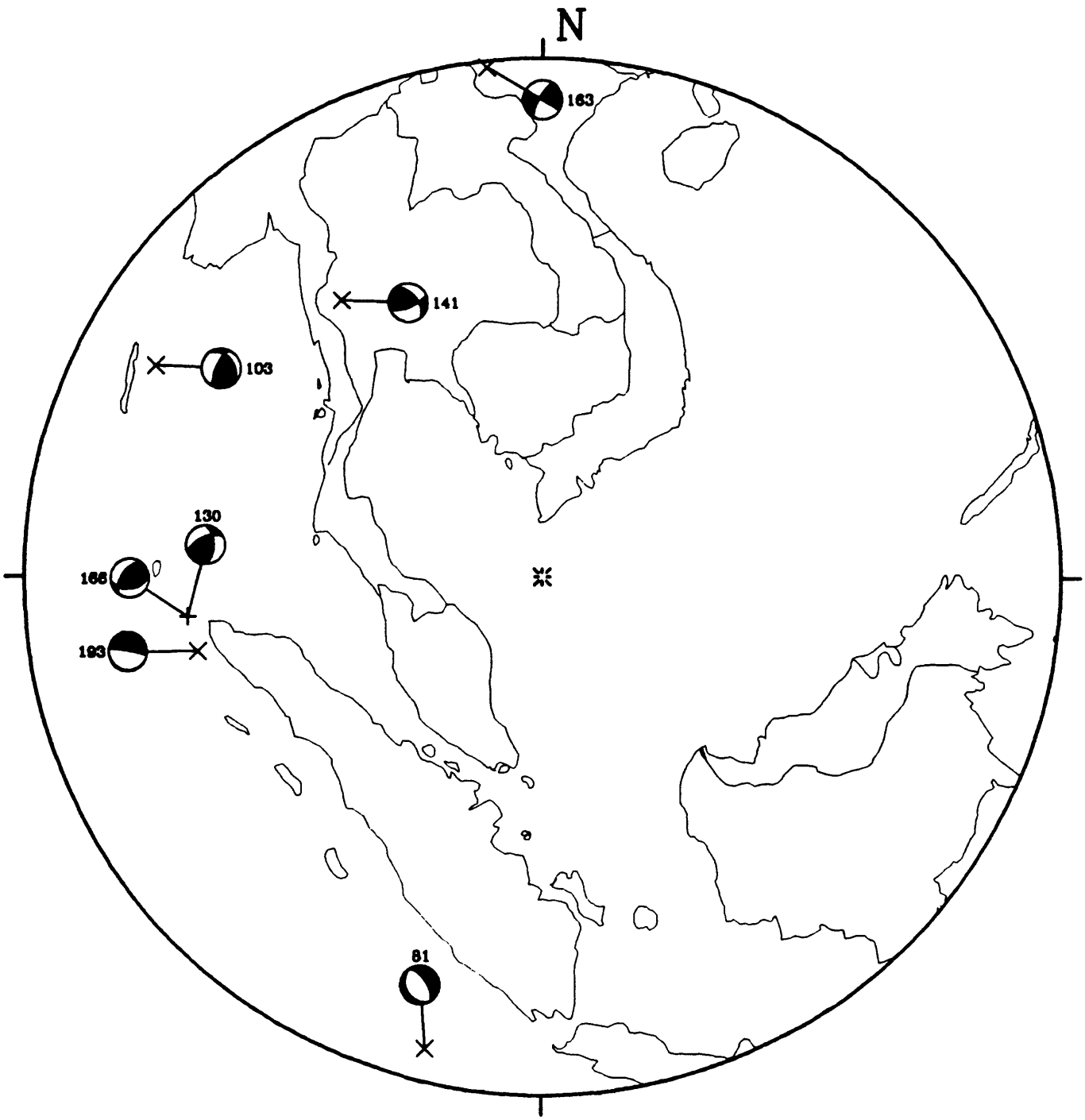

Table 151. Focal mechanism parameters for subdivision, Southeast Asia

EVENT#	NODAL PLANE 1 (DEG.)			NODAL PLANE 2 (DEG.)			T AXIS (DEG.)		P AXIS (DEG.)		B AXIS (DEG.)	
	ϑ	δ	λ	ϑ	δ	λ	PLG	AZM	PLG	AZM	PLG	AZM
81	329	62	-90	149	28	-90	17	59	73	239	0	149
103	0	55	40	326	34	38	56	149	20	272	26	13
130	0	55	40	244	58	138	51	210	2	303	39	34
141	320	52	155	66	71	41	42	290	12	189	46	87
163	120	89	165	210	75	1	11	74	10	166	75	296
166	217	55	60	82	45	126	65	70	6	328	24	235
193	280	85	-90	100	5	-90	40	10	50	190	0	100

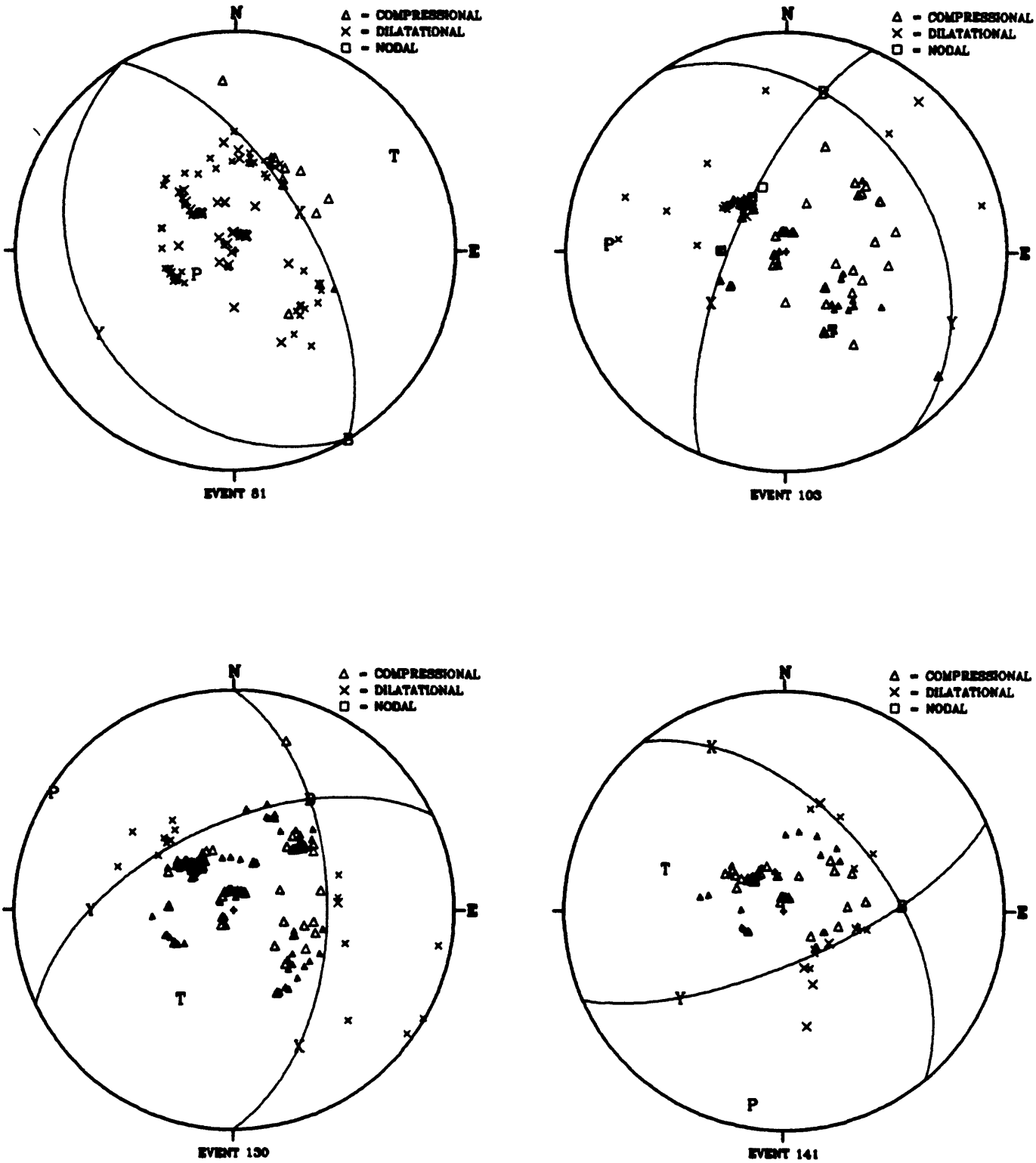

Figure 56. Lower hemisphere focal sphere projections for events 81, 103, 130, and 141

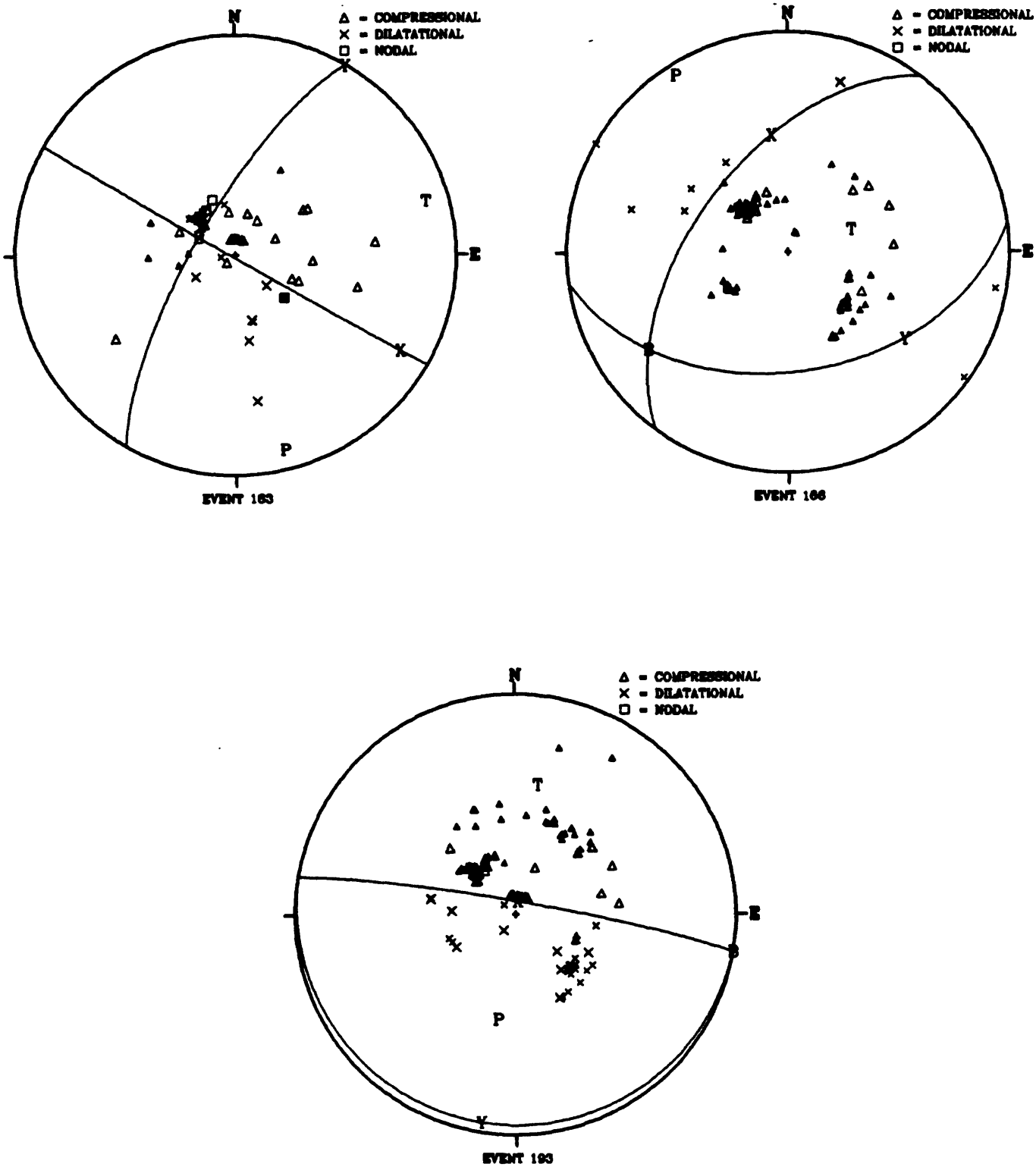

Figure 57. Lower hemisphere focal sphere projections for events 163, 166, and 193

Table 152. Station data for event 81

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SNG	13.770	355.77	13.12	66.88	I	C	LP	P
NAU	20.700	141.17	10.30	46.22	I	D	SP	P
PCT	21.190	359.41	10.17	45.47	I	D	SP	P
CHTO	25.436	354.07	9.42	41.33	I	D	LP	P
CHG	25.436	354.07	9.42	41.33	I	D	LP	P
CHG	25.436	354.07	9.42	41.33	I	D	SP	P
DAV	27.510	60.70	9.23	40.32	I	C	LP	P
KNA	28.082	111.09	9.18	40.05	I	C	SP	P
BAG	29.605	39.12	8.97	38.96	I	C	LP	P
NWAO	29.898	153.01	8.91	38.65	I	D	LP	P
KLG	30.365	144.72	8.86	38.40	I	D	SP	P
HKC	31.283	22.79	8.79	38.04	I	C	LP	P
KMI	31.595	1.92	8.79	38.04	I	D	LP	P
GZH	31.692	20.85	8.79	38.04	I	C	SP	P
HYB	33.039	316.66	8.68	37.48	I	D	SP	P
GYA	33.266	8.24	8.65	37.33	I	D	SP	P
ASPA	35.311	122.11	8.53	36.72	I	D	SP	P
QZH	35.477	27.15	8.53	36.72	I	D	SP	P
TATO	36.901	30.90	8.44	36.27	E	C	LP	P
ANP	37.087	30.74	8.44	36.27	I	C	LP	P
POO	37.104	312.86	8.44	36.27	I	D	SP	P
LSA	37.513	344.94	8.41	36.12	I	D	SP	P
WHN	38.935	17.60	8.32	35.68	I	D	SP	P
ISQ	39.285	114.67	8.29	35.53	I	D	SP	P
XAN	41.046	9.24	8.21	35.14	I	D	SP	P
NJ2	41.840	22.15	8.16	34.89	I	D	SP	P
SSE	41.934	25.45	8.16	34.89	I	D	LP	P
NDI	42.278	327.33	8.13	34.74	I	D	SP	P
LZH	42.554	2.65	8.13	34.74	E	D	LP	P
ADE	44.231	134.77	8.05	34.35	I	D	SP	P
STK	44.910	129.29	7.99	34.06	I	D	SP	P
CTAO	45.268	111.66	7.96	33.92	I	D	SP	P
CTA	45.268	111.66	7.96	33.92	I	D	LP	P
CTAO	45.268	111.66	7.96	33.92	E	C	LP	P
TIY	45.264	12.08	7.96	33.92	I	D	SP	P
GTA	45.852	358.04	7.93	33.77	I	D	SP	P
GUMO	47.401	64.81	7.85	33.39	I	C	LP	P
GUA	47.423	64.89	7.85	33.39	E	C	LP	P
BTO	47.638	8.65	7.85	33.39	I	D	SP	P
HHC	48.134	10.12	7.81	33.19	I	D	SP	P
TOO	50.285	134.29	7.62	32.29	I	D	SP	P
SHK	50.375	33.56	7.62	32.29	E	C	LP	P
YOU	51.090	129.18	7.58	32.10	I	D	SP	P
KSH	51.644	334.70	7.54	31.91	I	D	SP	P
WMQ	51.788	347.18	7.50	31.72	I	D	SP	P
CAN	51.946	130.17	7.50	31.72	I	D	SP	P
TAU	53.994	139.46	7.34	30.97	I	C	LP	P
CN2	54.639	21.01	7.30	30.78	I	D	SP	P
MAT	54.950	35.89	7.26	30.59	I	D	SP	P
MAJO	54.950	35.89	7.26	30.59	I	C	LP	P

Table 152. Station data for event 81....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
TGI	56.352	317.04	7.14	30.03	E	D	LP	P
MDJ	56.895	23.57	7.11	29.90	I	D	SP	P
KHI	57.422	317.84	7.07	29.71	I	D	SP	P
MHI	58.175	320.37	7.03	29.53	I	D	LP	P
ATA	60.839	286.98	6.80	28.47	I	D	SP	P
OBO	60.890	287.59	6.80	28.47	I	D	SP	P
MKL	60.958	287.25	6.80	28.47	I	D	SP	P
ARO	61.200	286.96	6.80	28.47	I	D	SP	P
TDD	61.211	287.28	6.80	28.47	I	D	SP	P
SGH	61.378	286.80	6.76	28.29	I	D	SP	P
DAF	61.521	286.96	6.76	28.29	I	D	SP	P
KSU	61.578	286.84	6.76	28.29	I	D	SP	P
TEH	63.257	315.54	6.60	27.56	I	D	SP	P
NAI	64.851	271.71	6.47	26.97	I	D	SP	P
CLK	65.789	255.86	6.39	26.61	I	D	SP	P
PVC	65.822	106.39	6.39	26.61	I	D	SP	P
TAB	67.931	315.55	6.22	25.85	I	D	LP	P
JOZ	68.829	243.26	6.14	25.49	I	D	SP	P
MTD	69.039	254.64	6.14	25.49	I	D	SP	P
CIR	69.043	250.13	6.14	25.49	I	D	SP	P
MSL	69.441	312.71	6.10	25.32	I	D	SP	P
KRI	70.923	254.55	5.99	24.83	I	D	SP	P
EVA	71.462	244.38	5.96	24.70	I	D	SP	P
BUL	71.820	251.06	5.92	24.52	I	D	SP	P
SLR	72.157	245.21	5.92	24.52	I	D	SP	P
BPI	72.392	244.75	5.89	24.39	I	D	SP	P
PRY	72.906	243.98	5.85	24.21	I	D	SP	P
VIR	73.472	242.79	5.82	24.08	I	D	SP	P
SWZ	74.825	243.74	5.71	23.60	I	D	SP	P
ANTO	78.311	312.86	5.48	22.59	I	D	LP	P
CER	79.990	237.38	5.36	22.07	I	D	SP	P
TUH	80.112	237.45	5.36	22.07	I	D	SP	P
WIN	82.449	248.16	5.14	21.12	I	D	SP	P
SPA	83.395	180.00	5.08	20.86	I	D	LP	P
BNG	83.659	275.20	5.08	20.86	I	D	SP	P
BCAO	83.670	275.20	5.08	20.86	I	D	LP	P
KDZ	84.233	312.95	5.05	20.73	I	D	SP	P
ATH	84.610	309.08	5.02	20.60	I	D	SP	P
AFI	85.136	103.38	4.99	20.48	I	D	LP	P
VAY	86.195	312.16	4.90	20.09	I	D	SP	P
DEV	86.941	316.68	4.83	19.79	I	D	SP	P
SKO	87.158	312.63	4.83	19.79	I	D	SP	P
JOS	89.056	318.91	4.73	19.36	I	D	SP	P
SPC	89.379	319.55	4.71	19.28	I	D	SP	P
KRA	89.735	320.37	4.71	19.28	I	D	SP	P
BUD	89.874	317.72	4.71	19.28	I	D	SP	P
SRO	90.403	317.97	4.70	19.24	I	D	SP	P
KEV	90.924	340.38	4.69	19.19	I	D	LP	P
VIE	91.763	318.20	4.67	19.11	E	D	LP	P
KSP	92.162	320.77	4.67	19.11	I	D	SP	P

Table 152. Station data for event 81....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
LJU	92.721	315.85	4.66	19.07	I	D	SP	P
PRU	93.168	319.78	4.64	18.98	I	D	SP	P
KMR	93.221	317.83	4.64	18.98	E	D	LP	P
WET	94.158	318.83	4.61	18.85	I	D	SP	P
CLL	94.278	321.00	4.60	18.81	I	D	SP	P
HOF	94.905	319.94	4.58	18.73	I	D	SP	P
FUR	95.137	317.76	4.58	18.73	I	C	SP	P
GRFO	95.286	319.29	4.56	18.64	E	D	LP	P
GRF	95.282	319.29	4.56	18.64	I	D	SP	P
KBS	96.422	348.77	4.54	18.56	E	D	LP	P
STU	96.556	318.29	4.54	18.56	E	D	LP	P
GWF	97.601	318.46	4.52	18.47	I	D	SP	P
DAG	103.163	348.23	4.45	18.18	I	D	SP	Pdf
COL	104.653	24.38	4.45	18.18	E	D	LP	Pdf
COL	104.653	24.38	4.45	18.18	I	D	SP	Pdf
TOL	106.262	309.48	1.89	7.61	I	D	LP	PKP
EDM	125.546	25.07	1.86	7.51	I	D	SP	PKP
BDW	134.708	32.46	1.82	7.33	I	D	SP	PKP
GOL	139.118	32.36	1.78	7.17	E	D	LP	PKP
GAC	141.018	356.78	1.75	7.06	I	D	LP	PKP
ANMO	141.773	38.69	1.74	7.00	I	D	LP	PKP
ANMO	141.773	38.69	1.74	7.00	I	C	SP	PKP
BDF	142.557	233.46	1.72	6.93	I	D	LP	PKP
WES	143.873	351.13	1.70	6.86	I	D	LP	PKP
UTO	144.833	6.78	1.68	6.78	I	D	SP	PKP
SLA	146.388	201.47	1.66	6.69	I	D	SP	PKP
TUL	146.785	26.34	1.64	6.60	I	D	LP	PKP
FVM	146.947	17.62	1.64	6.60	I	D	SP	PKP
JCT	148.909	37.65	1.59	6.39	I	D	LP	PKP
SHA	154.385	19.77	1.43	5.74	I	D	LP	PKP
LPB	154.828	203.71	1.39	5.58	E	D	LP	PKP
ZOBO	155.076	203.92	1.39	5.58	I	D	LP	PKP
FDF	161.282	296.80	1.12	4.50	I	D	SP	PKP
SJG	163.516	314.81	0.96	3.87	E	D	LP	PKP
BOCO	175.231	244.77	0.31	1.27	E	D	LP	PKP

Table 153. Station data for event 103

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PCT	7.799	76.29	13.74	80.31	I	D	SP	P
CHG	7.790	40.78	13.74	80.33	I	D	SP	P
CHG	7.790	40.78	13.74	80.33	I	D	LP	P
SNG	8.986	128.92	13.63	77.82	I	C	LP	P
SNG	8.986	128.92	13.63	77.82	I	C	SP	P
HYB	15.171	288.91	12.76	66.24	I	D	SP	P
GBA	15.731	274.23	12.67	65.32	I	D	SP	P
LSA	16.826	352.67	12.46	63.36	I	D	SP	P
GYA	18.211	40.49	12.16	60.71	I	D	SP	P
POO	19.783	288.83	10.38	48.11	I	D	SP	P
NDI	21.849	318.30	9.89	45.20	I	D	SP	P
LEM	24.084	143.83	9.54	43.16	I	C	LP	P
LZH	24.827	20.10	9.45	42.65	E	C	LP	P
BAG	26.335	79.16	9.31	41.91	I	C	LP	P
BKB	27.054	119.80	9.24	41.52	I	C	SP	P
TATO	28.911	61.48	9.00	40.20	I	C	LP	P
ANP	29.005	61.09	8.99	40.13	I	C	LP	P
NJ2	29.983	46.51	8.87	39.51	I	C	SP	P
SSE	31.185	50.15	8.78	39.05	E	C	LP	P
DAV	32.017	97.35	8.73	38.75	I	C	LP	P
SEO	38.558	44.55	8.33	36.67	I	C	LP	P
SHK	41.389	51.95	8.18	35.90	I	C	LP	P
MEK	46.197	148.43	7.91	34.55	I	C	SP	P
MAJO	46.314	51.48	7.90	34.52	I	C	LP	P
ARO	49.539	274.19	7.68	33.40	I	D	SP	P
MUN	49.642	154.59	7.67	33.36	I	C	LP	P
GUMO	49.844	83.07	7.65	33.28	I	C	LP	P
GUA	49.893	83.13	7.65	33.26	I	C	LP	P
NWAO	50.894	154.23	7.57	32.87	I	C	LP	P
NWAO	50.894	154.23	7.57	32.87	I	C	SP	P
KLG	51.066	148.85	7.55	32.80	I	C	SP	P
WB2	51.743	128.52	7.50	32.54	I	C	SP	P
ASPA	53.646	132.55	7.35	31.80	I	C	SP	P
ISQ	56.213	125.92	7.14	30.83	I	C	SP	P
PMG	57.648	109.98	7.04	30.32	E	C	LP	P
ELL	61.326	304.86	6.75	28.97	I	D	SP	P
CTAO	61.334	121.59	6.75	28.97	I	C	LP	P
CTA	61.334	121.59	6.75	28.97	I	C	LP	P
ALT	61.401	307.49	6.75	28.94	I	D	SP	P
IZM	63.557	306.51	6.57	28.13	I	C	SP	P
STK	64.026	135.30	6.54	27.96	I	C	SP	P
ADE	64.021	139.65	6.54	27.96	I	C	SP	P
EZN	64.392	308.03	6.51	27.82	I	C	SP	P
CLI	64.438	315.53	6.50	27.81	I	C	SP	P
VRI	64.728	314.72	6.48	27.70	I	C	SP	P
MLR	65.225	314.23	6.44	27.51	I	C	SP	P
KDZ	65.273	309.97	6.44	27.50	I	C	SP	P
PVL	65.532	311.60	6.42	27.40	I	C	SP	P
ATH	66.324	305.88	6.35	27.07	I	D	SP	P
MTD	67.997	245.82	6.21	26.45	I	C	SP	P

Table 153. Station data for event 103....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
HNR	69.548	105.27	6.09	25.88	I	C	LP	P
KRA	69.690	318.73	6.07	25.83	I	D	SP	P
KEV	69.909	340.11	6.06	25.74	E	N	LP	P
TOO	69.949	138.26	6.05	25.73	I	C	SP	P
KSP	72.057	319.45	5.90	25.06	I	C	SP	P
LJU	73.223	314.41	5.82	24.68	I	C	SP	P
TAU	74.171	141.99	5.76	24.39	I	C	LP	P
SLR	74.253	238.36	5.75	24.35	I	C	LP	P
BHG	74.308	316.20	5.74	24.33	I	C	SP	P
COP	74.435	324.48	5.73	24.29	E	D	LP	P
BNG	74.449	271.05	5.73	24.28	I	D	SP	P
BCAO	74.461	271.05	5.73	24.28	E	N	LP	P
BPI	74.633	238.04	5.72	24.22	I	C	SP	P
GRFO	75.328	318.28	5.68	24.04	E	N	LP	P
GAP	75.546	316.00	5.67	23.98	I	C	SP	P
OGA	75.610	315.38	5.66	23.96	I	C	SP	P
KONO	75.903	328.62	5.64	23.85	E	N	LP	P
KON	75.903	328.62	5.64	23.85	E	C	LP	P
MUD	76.245	325.33	5.61	23.74	I	C	SP	P
STU	76.707	317.42	5.59	23.62	E	C	LP	P
SWZ	77.253	238.03	5.55	23.47	I	C	SP	P
BGG	77.789	319.00	5.52	23.34	I	D	SP	P
ECH	78.107	316.98	5.50	23.24	I	D	SP	P
BAF	78.257	316.61	5.49	23.18	I	D	SP	P
NOU	79.515	115.84	5.40	22.78	I	C	SP	P
PVC	79.785	110.90	5.36	22.62	I	C	SP	P
SSB	80.265	314.25	5.31	22.39	I	D	SP	P
ESK	83.299	325.14	5.08	21.39	E	D	LP	P
ALI	85.234	308.09	4.96	20.86	I	C	LP	P
ETA	85.664	323.02	4.93	20.72	I	C	SP	P
DLE	85.698	323.65	4.93	20.70	I	D	SP	P
DCN	86.106	323.82	4.88	20.48	I	D	SP	P
VAL	88.254	323.02	4.75	19.93	E	C	LP	P
COL	89.886	21.99	4.71	19.75	I	C	LP	P
PTO	90.551	312.41	4.70	19.70	I	D	LP	P
SNZO	91.889	131.86	4.67	19.58	I	C	LP	P
WEL	91.928	131.82	4.67	19.58	I	C	SP	P
AFI	97.454	102.54	4.52	18.92	I	C	LP	P
SPA	102.856	180.00	4.45	18.61	I	C	LP	Pdf
RXF	113.431	20.23	1.89	7.77	I	C	LP	PKP
LDM	113.719	20.58	1.88	7.77	I	C	SP	PKP
LHD	113.804	20.84	1.88	7.77	I	C	SP	PKP
LHC	118.871	2.17	1.88	7.73	I	C	SP	PKP
RSNY	121.780	350.02	1.87	7.71	E	C	LP	PKP
WES	123.232	346.66	1.87	7.70	E	C	LP	PKP
GOL	124.743	17.76	1.87	7.69	E	C	LP	PKP
SCP	125.960	351.98	1.86	7.68	E	C	LP	PKP
BLA	129.805	353.77	1.85	7.63	I	C	SP	PKP
BLA	129.805	353.77	1.85	7.63	E	C	LP	PKP
RSCP	131.725	359.09	1.84	7.59	E	C	LP	PKP

Table 153. Station data for event 103....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
JCT	134.955	16.40	1.82	7.51	E	C	LP	PKP
SHA	136.591	2.16	1.81	7.45	E	C	LP	PKP
SJG	143.234	326.60	1.72	7.07	E	C	LP	PKP
LPA	146.205	224.81	1.66	6.83	I	C	LP	PKP
LQT	154.518	212.69	1.40	5.78	I	C	SP	PKP
CHCH	154.655	211.85	1.40	5.76	I	C	SP	PKP
PEL	155.286	212.97	1.37	5.66	I	C	LP	PKP
ANT	161.436	232.54	1.10	4.51	I	C	LP	PKP
LPB	161.928	256.38	1.07	4.40	I	C	LP	PKP
ZOBO	161.991	257.20	1.07	4.39	I	C	LP	PKP
ARE	165.143	254.57	0.90	3.70	I	C	SP	PKP
NNA	170.600	274.75	0.58	2.40	I	C	SP	PKP

Table 154. Station data for event 130

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BSI	0.632	110.49	10.14	133.28	I	D	SP	P
TSI	4.420	119.79	13.93	89.35	I	D	SP	P
PSI	5.158	125.50	13.91	86.78	I	D	SP	P
IPM	6.380	99.96	13.85	83.66	I	D	SP	P
CHG	13.646	17.20	13.01	69.05	I	C	LP	P
LEM	17.915	133.91	12.25	61.57	I	D	SP	P
HYB	19.623	307.66	10.42	48.43	I	D	SP	P
BKB	23.152	106.83	9.67	43.96	I	D	SP	P
GZH	24.907	44.28	9.44	42.63	I	C	SP	P
CD2	26.452	17.64	9.30	41.88	I	C	SP	P
PGP	26.971	71.43	9.25	41.60	I	D	SP	P
NDI	28.219	326.02	9.11	40.83	I	D	SP	P
QZH	29.815	47.63	8.89	39.63	I	C	SP	P
CGP	29.862	83.03	8.88	39.60	I	D	SP	P
DAV	30.687	85.78	8.82	39.30	I	D	LP	P
XAN	31.098	23.23	8.79	39.12	I	C	SP	P
TATO	32.011	50.45	8.73	38.79	I	C	LP	P
ANP	32.144	50.15	8.72	38.73	I	C	LP	P
GTA	33.847	7.09	8.61	38.16	I	C	SP	P
NJ2	34.565	37.73	8.56	37.93	I	C	SP	P
SSE	35.403	41.29	8.51	37.67	I	C	SP	P
TIY	35.695	24.43	8.50	37.58	I	C	SP	P
QUE	35.716	316.28	8.50	37.57	I	D	SP	P
KBL	37.227	323.75	8.41	37.14	I	D	SP	P
BTO	37.334	19.34	8.40	37.08	I	C	SP	P
NAH	37.482	53.44	8.39	37.02	E	C	LP	P
HHC	38.087	20.87	8.35	36.84	I	C	SP	P
MEK	39.569	145.41	8.27	36.43	I	C	SP	P
MTN	40.607	117.20	8.21	36.12	I	C	SP	P
FKJ	41.588	45.43	8.16	35.87	E	C	LP	P
KAG	42.249	48.00	8.12	35.67	E	C	LP	P
NGS	42.344	46.09	8.12	35.64	E	C	LP	P
MUN	42.714	152.68	8.10	35.54	I	C	SP	P
KUM	42.989	46.53	8.09	35.49	E	C	LP	P
KLB	43.126	150.75	8.08	35.45	I	C	SP	P
SEO	43.203	38.27	8.08	35.43	I	C	LP	P
KHI	43.750	315.06	8.04	35.26	I	D	SP	P
NWAO	43.980	152.37	8.03	35.19	I	C	LP	P
WBN	44.244	137.16	8.02	35.13	I	C	SP	P
MHI	44.353	318.19	8.02	35.12	I	D	SP	P
KLG	44.403	146.40	8.01	35.11	I	C	SP	P
SHK	45.277	45.62	7.96	34.85	I	C	SP	P
KOC	45.413	47.31	7.95	34.81	E	C	LP	P
MRT	45.741	48.04	7.93	34.71	E	C	LP	P
MTS	46.026	44.74	7.92	34.63	E	C	LP	P
OKA	46.236	46.15	7.90	34.56	E	C	LP	P
SHI	46.328	306.06	7.90	34.54	I	D	SP	P
CN2	46.550	30.64	7.89	34.47	I	C	SP	P
WB2	46.574	124.29	7.88	34.46	I	C	SP	P
TZZ	47.694	102.39	7.82	34.13	I	C	SP	P

Table 154. Station data for event 130....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ASPA	48.107	128.91	7.79	34.00	I	C	SP	P
GUMO	49.969	77.13	7.64	33.26	I	C	LP	P
GUA	50.009	77.20	7.64	33.24	E	C	LP	P
MAJO	50.196	46.18	7.62	33.17	I	C	LP	P
MAT	50.196	46.18	7.62	33.17	I	C	SP	P
YAM	52.486	45.20	7.44	32.27	E	C	LP	P
MIY	54.229	44.33	7.30	31.60	E	C	LP	P
PMG	54.368	105.79	7.29	31.54	I	C	LP	P
ASA	56.364	40.03	7.14	30.82	E	C	LP	P
CTA	56.769	118.38	7.11	30.67	I	C	LP	P
CTAO	56.769	118.38	7.11	30.67	I	C	LP	P
ADE	57.890	137.67	7.03	30.28	I	C	SP	P
RAB	58.209	98.48	7.00	30.17	I	C	LP	P
STK	58.215	133.08	7.00	30.17	I	C	SP	P
NAI	58.251	264.97	7.00	30.15	I	C	SP	P
JER	61.200	303.10	6.76	29.04	I	C	SP	P
TOO	63.898	136.73	6.55	28.03	I	C	LP	P
HLW	64.126	300.32	6.53	27.94	I	C	LP	P
ANTO	64.935	311.43	6.46	27.64	I	C	LP	P
CAN	65.282	133.04	6.44	27.51	I	C	SP	P
COO	65.470	127.19	6.42	27.44	I	C	SP	P
BCK	66.080	308.43	6.37	27.21	I	C	SP	P
MTD	66.278	248.98	6.35	27.11	I	C	SP	P
ELL	66.475	307.55	6.33	27.02	I	C	SP	P
HNR	66.715	102.76	6.31	26.93	I	C	LP	P
ALT	66.774	310.05	6.31	26.91	I	C	SP	P
YER	67.826	307.71	6.22	26.53	I	C	SP	P
KRI	68.121	249.42	6.20	26.42	I	C	SP	P
IZM	68.838	308.90	6.14	26.15	I	C	SP	P
DMK	69.093	312.58	6.12	26.06	I	D	SP	P
CFR	69.520	316.15	6.09	25.90	I	C	SP	P
BUL	69.832	246.23	6.06	25.79	I	C	SP	P
CLI	70.416	317.43	6.02	25.62	I	C	SP	P
VRI	70.649	316.63	6.01	25.54	I	C	SP	P
KDZ	70.832	312.04	5.99	25.47	I	C	SP	P
CVO	71.016	316.50	5.98	25.40	I	C	SP	P
MLR	71.108	316.12	5.97	25.37	I	C	SP	P
EVA	71.109	239.64	5.97	25.37	I	C	SP	P
PVL	71.219	313.58	5.96	25.33	I	D	SP	P
ATH	71.539	308.01	5.94	25.22	I	C	SP	P
SLR	71.579	240.63	5.93	25.21	I	C	LP	P
CMP	71.692	315.76	5.93	25.17	I	C	SP	P
COZ	72.185	315.73	5.89	25.03	I	C	SP	P
KSR	72.817	240.85	5.85	24.83	I	C	SP	P
VAY	72.850	311.38	5.85	24.82	I	C	SP	P
SEK	72.861	238.20	5.85	24.82	I	C	SP	P
KOU	73.077	113.39	5.83	24.75	I	C	SP	P
CLO	73.219	315.28	5.82	24.70	I	C	SP	P
DEV	73.275	316.13	5.82	24.67	I	C	SP	P
VIR	73.439	238.64	5.80	24.62	I	C	SP	P

Table 154: Station data for event 130....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SKO	73.773	311.94	5.78	24.53	I	C	SP	P
OHR	74.151	310.99	5.76	24.41	I	C	SP	P
BLF	74.291	237.78	5.74	24.35	I	C	SP	P
KJF	74.979	335.34	5.70	24.15	I	C	LP	P
JOS	75.263	318.56	5.68	24.08	I	C	SP	P
NUR	75.291	331.25	5.68	24.07	I	C	LP	P
NOU	75.432	114.69	5.67	24.03	I	C	SP	P
PSZ	75.612	317.91	5.66	23.97	I	C	SP	P
BNG	75.837	273.12	5.64	23.88	I	C	SP	P
BCAO	75.848	273.12	5.64	23.88	I	C	SP	P
BCAO	75.848	273.12	5.64	23.88	I	C	LP	P
KRA	75.872	320.10	5.64	23.87	I	C	SP	P
BUD	76.142	317.39	5.62	23.79	I	C	SP	P
PVC	76.235	109.73	5.61	23.76	I	C	SP	P
SRO	76.657	317.67	5.59	23.65	I	C	SP	P
KEV	77.043	340.70	5.57	23.55	I	C	LP	P
ZST	77.505	317.98	5.54	23.42	I	D	SP	P
VKA	78.033	318.00	5.51	23.28	I	C	SP	P
KSP	78.279	320.62	5.49	23.19	I	C	SP	P
UPP	78.599	329.87	5.46	23.08	I	C	SP	P
LJU	79.095	315.65	5.43	22.95	I	C	SP	P
CEY	79.154	315.34	5.43	22.93	I	C	SP	P
PRU	79.328	319.66	5.41	22.87	I	C	SP	P
KMR	79.479	317.68	5.40	22.81	I	C	LP	P
TRI	79.616	315.28	5.39	22.74	I	D	SP	P
BRG	79.765	320.54	5.37	22.65	I	C	SP	P
KHC	79.903	318.75	5.35	22.58	I	C	SP	P
KBA	79.964	316.66	5.34	22.55	I	C	SP	P
BRL	80.268	322.13	5.31	22.40	I	C	SP	P
BHG	80.306	317.30	5.31	22.39	I	C	SP	P
BRN	80.318	322.08	5.31	22.38	I	C	SP	P
CLL	80.383	320.95	5.30	22.35	I	C	SP	P
COP	80.953	325.36	5.25	22.15	I	C	LP	P
COP	80.953	325.36	5.25	22.15	I	D	SP	P
HOF	81.056	319.91	5.24	22.11	I	C	SP	P
TUH	81.167	235.17	5.23	22.06	I	C	SP	P
MOX	81.233	320.24	5.23	22.04	I	C	LP	P
FIR	81.355	313.28	5.21	21.97	I	C	SP	P
FUR	81.395	317.72	5.21	21.95	I	C	SP	P
GRFO	81.466	319.27	5.20	21.92	I	C	SP	P
GRFO	81.466	319.27	5.20	21.92	I	C	LP	P
OGA	81.546	316.41	5.20	21.89	I	C	SP	P
HAM	82.337	323.07	5.14	21.64	I	C	SP	P
KONO	82.630	329.32	5.12	21.57	I	C	LP	P
KON	82.630	329.32	5.12	21.57	I	C	LP	P
STU	82.784	318.33	5.12	21.56	I	C	LP	P
LLS	82.938	316.41	5.11	21.53	E	C	LP	P
TMA	83.036	315.64	5.11	21.50	I	C	LP	P
CVF	83.113	312.08	5.10	21.48	I	C	SP	P
TNS	83.255	319.80	5.09	21.42	I	C	SP	P

Table 154. Station data for event 130....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SLE	83.266	317.32	5.09	21.41	E	C	LP	P
ZUL	83.341	317.03	5.08	21.39	E	C	LP	P
BUH	83.425	318.24	5.07	21.36	I	C	SP	P
MMK	83.669	315.60	5.06	21.29	E	C	LP	P
GWF	83.819	318.55	5.05	21.25	I	C	SP	P
BNS	84.050	320.56	5.04	21.19	I	C	SP	P
DIX	84.054	315.64	5.04	21.19	I	C	LP	P
CDF	84.065	317.99	5.04	21.19	I	C	SP	P
ECH	84.150	317.80	5.03	21.16	I	C	SP	P
WTS	84.246	321.60	5.02	21.14	I	C	SP	P
BAF	84.274	317.42	5.02	21.13	I	C	SP	P
BSF	84.411	317.42	5.01	21.10	I	C	SP	P
FRF	84.704	313.14	5.00	21.02	I	C	SP	P
HAU	84.702	317.61	5.00	21.02	I	C	SP	P
WLF	84.755	319.28	4.99	21.00	E	C	LP	P
BER	84.769	330.08	4.99	21.00	I	C	LP	P
LMR	84.815	312.91	4.99	20.99	I	C	SP	P
LRG	84.918	313.04	4.98	20.96	I	C	SP	P
DBN	85.249	321.76	4.96	20.87	I	C	LP	P
DOU	85.737	319.77	4.92	20.69	E	C	LP	P
UCC	85.840	320.48	4.91	20.61	E	C	LP	P
SSB	86.105	314.95	4.88	20.50	I	C	SP	P
SNZO	86.257	131.97	4.87	20.45	I	C	LP	P
LBF	86.369	316.68	4.86	20.41	I	C	SP	P
LOR	86.428	316.97	4.85	20.39	I	C	SP	P
SMF	86.489	316.35	4.85	20.37	I	C	SP	P
SSF	86.685	316.79	4.84	20.31	I	C	SP	P
AVF	86.812	316.52	4.83	20.29	I	C	SP	P
MZF	87.393	316.00	4.79	20.13	I	C	SP	P
TCF	87.644	316.10	4.78	20.08	I	C	SP	P
CAF	87.884	314.75	4.77	20.04	I	C	SP	P
LSF	88.118	316.11	4.76	19.99	I	C	SP	P
RJF	88.230	315.17	4.76	19.96	I	C	SP	P
LPO	88.532	314.58	4.74	19.88	I	C	SP	P
LFF	88.821	314.87	4.73	19.82	I	C	SP	P
LDF	88.953	318.57	4.72	19.81	I	C	SP	P
MFF	89.226	316.60	4.71	19.77	I	C	SP	P
EPF	89.337	313.01	4.71	19.77	I	C	SP	P
GRR	89.466	318.43	4.71	19.76	I	C	SP	P
LPF	89.637	318.10	4.71	19.75	I	C	SP	P
DAG	89.714	347.80	4.71	19.75	I	C	SP	P
ESK	89.839	325.51	4.71	19.76	I	C	LP	P
ALE	91.293	357.06	4.68	19.65	I	C	SP	P
LGR	91.491	312.74	4.68	19.63	I	C	SP	P
ETA	92.080	323.27	4.67	19.57	I	C	SP	P
ECP	92.284	322.79	4.66	19.53	I	C	SP	P
ALM	92.330	307.20	4.66	19.52	I	C	SP	P
ECB	92.491	323.02	4.65	19.49	I	C	SP	P
TOL	93.068	310.39	4.64	19.45	I	C	LP	P
TOL	93.068	310.39	4.64	19.45	I	C	SP	P

Table 154. Station data for event 130....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
IMA	93.384	22.33	4.63	19.42	I	C	SP	P
TTA	93.560	25.65	4.63	19.40	I	C	SP	P
MAL	93.896	307.33	4.61	19.34	I	C	SP	P
VAL	94.665	323.12	4.58	19.21	I	C	LP	P
AFI	94.741	103.45	4.58	19.19	I	C	LP	P
SFS	95.364	307.34	4.56	19.12	I	C	SP	P
MBC	95.804	7.75	4.55	19.04	I	C	SP	P
COL	96.104	22.37	4.54	19.00	I	C	LP	P
FBA	96.104	22.37	4.54	19.00	I	C	SP	P
HON	103.866	66.50	4.45	18.63	I	C	LP	Pdf
COR	119.399	30.35	1.87	7.73	E	C	LP	PKP
COR	119.399	30.35	1.87	7.73	I	C	SP	PKP
BKS	124.662	35.34	1.87	7.70	E	C	LP	PKP
MNT	127.955	349.62	1.86	7.66	I	C	SP	PKP
WES	130.469	346.41	1.85	7.63	I	C	LP	PKP
GOL	131.150	20.61	1.85	7.61	E	C	LP	PKP
SCP	133.218	352.27	1.83	7.56	E	C	LP	PKP
BLA	137.055	354.31	1.80	7.43	E	C	LP	PKP
BEC	137.343	333.94	1.80	7.42	E	C	LP	PKP
TUL	137.432	12.65	1.80	7.42	E	C	LP	PKP
JCT	141.413	20.31	1.75	7.20	I	C	LP	PKP
LPA	141.526	217.36	1.75	7.20	I	C	LP	PKP
SHA	143.691	4.17	1.71	7.04	I	C	LP	PKP
LNV	149.105	202.83	1.58	6.53	I	C	SP	PKP
FCH	149.201	205.02	1.58	6.52	I	C	SP	PKP
PEL	149.525	204.63	1.57	6.48	I	C	SP	PKP
SJG	149.718	321.83	1.57	6.46	I	C	LP	PKP
TRN	151.199	304.33	1.52	6.27	I	C	SP	PKP
GUV	154.112	301.04	1.42	5.85	I	C	SP	PKP
LPS	159.748	10.94	1.18	4.85	I	C	SP	PKP
LPB	160.034	236.07	1.17	4.80	E	C	LP	PKP
ZOBO	160.187	236.70	1.16	4.77	I	C	SP	PKP
ARE	162.784	230.59	1.03	4.22	I	C	SP	PKP

Table 155. Station data for event 141

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SNG	7.857	168.35	13.94	44.38	I	D	LP	P
KMI	10.727	18.41	13.67	43.30	I	D	LP	P
GYA	13.512	30.68	13.25	41.66	I	D	SP	P
GZH	15.779	56.90	12.81	39.99	I	D	SP	P
CD2	16.490	14.47	12.72	39.66	I	D	SP	P
HYB	19.816	279.96	10.48	31.72	I	C	SP	P
PPR	19.915	102.62	10.48	31.72	I	D	SP	P
BAG	20.809	83.06	10.21	30.81	E	C	LP	P
QZH	20.897	58.48	10.21	30.81	I	D	SP	P
WHN	20.971	39.59	10.21	30.81	I	C	SP	P
XAN	21.028	23.44	10.21	30.81	I	C	SP	P
LZH	21.508	10.70	10.08	30.38	I	C	SP	P
LEM	23.227	157.90	9.78	29.38	I	D	LP	P
ANP	23.430	60.67	9.70	29.12	I	C	LP	P
POO	24.365	281.98	9.55	28.63	I	C	SP	P
GTA	24.399	1.48	9.55	28.63	I	C	SP	P
SSE	25.903	47.80	9.39	28.11	I	C	SP	P
CGP	25.932	101.48	9.39	28.11	I	C	SP	P
DAV	27.179	103.77	9.29	27.78	I	D	LP	P
QUE	33.143	302.76	8.69	25.85	I	C	LP	P
KBL	33.311	311.31	8.66	25.75	I	C	SP	P
SEO	33.489	42.45	8.66	25.75	E	C	LP	P
CN2	36.547	32.76	8.48	25.18	I	C	SP	P
MAT	40.961	50.92	8.22	24.36	E	C	LP	P
MAJO	40.961	50.92	8.22	24.36	E	C	LP	P
MHI	41.132	308.59	8.22	24.36	I	C	LP	P
GUMO	44.393	85.71	8.03	23.76	I	C	LP	P
MEK	45.435	155.17	7.97	23.57	I	D	SP	P
NWAO	50.661	160.13	7.63	22.51	I	D	LP	P
TAB	51.716	306.88	7.55	22.26	E	C	LP	P
RAB	55.966	105.63	7.19	21.14	I	C	LP	P
CTA	58.020	125.56	7.04	20.68	I	D	SP	P
CTAO	58.020	125.56	7.04	20.68	I	D	LP	P
ADE	62.288	143.67	6.69	19.61	I	D	SP	P
ANTO	62.400	307.36	6.69	19.61	I	C	LP	P
HLW	63.534	296.14	6.60	19.34	I	C	LP	P
VRI	67.141	313.75	6.31	18.46	I	C	SP	P
MLR	67.678	313.32	6.27	18.33	I	C	SP	P
TOO	68.055	141.60	6.23	18.21	I	D	SP	P
KJF	68.550	333.55	6.19	18.09	I	C	SP	P
CAN	68.829	137.81	6.15	17.97	I	C	SP	P
SUF	69.003	331.85	6.15	17.97	I	C	SP	P
WAM	69.286	138.61	6.11	17.85	I	C	SP	P
NUR	69.436	329.40	6.11	17.85	I	C	SP	P
KEV	69.891	339.35	6.07	17.73	I	C	LP	P
VAY	70.191	308.89	6.07	17.73	I	C	SP	P
TIM	70.990	313.61	6.00	17.52	I	C	SP	P
SKO	71.004	309.62	6.00	17.52	I	C	SP	P
JOS	71.369	316.54	5.96	17.40	I	C	SP	P
KRA	71.720	318.19	5.96	17.40	I	C	SP	P

Table 155. Station data for event 141....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KOU	73.154	117.22	5.86	17.10	I	C	SP	P
KSP	74.010	319.14	5.79	16.89	I	C	SP	P
KRI	75.404	247.89	5.68	16.56	I	C	SP	P
BRG	75.490	319.30	5.68	16.56	I	C	SP	P
KMR	75.669	316.39	5.68	16.56	E	C	LP	P
NOU	75.697	118.06	5.68	16.56	I	C	SP	P
CEY	75.734	313.99	5.68	16.56	I	C	SP	P
BRL	75.733	320.99	5.68	16.56	I	C	SP	P
BRN	75.792	320.94	5.65	16.47	I	C	SP	P
COP	75.908	324.34	5.65	16.47	E	C	LP	P
KHC	75.914	317.53	5.65	16.47	I	C	SP	P
CLL	76.035	319.81	5.65	16.47	I	C	SP	P
WET	76.367	317.61	5.62	16.38	I	C	SP	P
HOF	76.865	318.88	5.59	16.29	I	C	SP	P
KONO	76.975	328.58	5.59	16.29	I	C	LP	P
MOX	76.986	319.24	5.59	16.29	I	C	LP	P
POI	77.215	310.91	5.59	16.29	I	D	SP	P
GRF	77.369	318.31	5.56	16.20	I	C	SP	P
GRFO	77.373	318.31	5.56	16.20	I	C	LP	P
BUL	77.470	245.07	5.56	16.20	I	C	SP	P
MUD	77.630	325.36	5.56	16.20	I	D	SP	P
OGA	77.917	315.47	5.52	16.08	I	C	SP	P
STU	78.825	317.59	5.45	15.87	E	C	LP	P
LLS	79.289	315.71	5.42	15.78	E	C	LP	P
EVA	79.428	238.91	5.42	15.78	I	D	SP	P
SLE	79.464	316.67	5.42	15.78	E	C	LP	P
TMA	79.511	314.96	5.42	15.78	E	C	LP	P
ZUL	79.584	316.39	5.42	15.78	E	C	LP	P
BNG	79.681	271.87	5.42	15.78	I	C	SP	P
SLR	79.799	239.90	5.37	15.63	I	C	SP	P
GWF	79.809	317.99	5.37	15.63	I	D	SP	P
MMK	80.142	315.02	5.37	15.63	E	C	LP	P
CDF	80.143	317.47	5.37	15.63	I	C	SP	P
BPI	80.173	239.58	5.37	15.63	I	C	SP	P
BAF	80.442	316.93	5.31	15.45	I	C	SP	P
DIX	80.515	315.13	5.31	15.45	E	C	LP	P
BSF	80.576	316.96	5.31	15.45	I	C	SP	P
HAU	80.833	317.19	5.27	15.33	I	C	SP	P
KSR	81.007	240.25	5.27	15.33	I	C	SP	P
SEK	81.309	237.70	5.22	15.18	I	C	SP	P
DAG	81.651	348.11	5.22	15.18	I	C	SP	P
LBF	82.629	316.55	5.15	14.97	I	C	SP	P
LOR	82.639	316.85	5.15	14.97	I	C	SP	P
SWZ	82.792	239.52	5.12	14.88	I	C	SP	P
SMF	82.801	316.24	5.12	14.88	I	C	SP	P
SSF	82.923	316.70	5.12	14.88	I	C	SP	P
AVF	83.091	316.46	5.12	14.88	I	C	SP	P
MZF	83.750	316.04	5.06	14.71	I	C	SP	P
TCF	83.982	316.18	5.06	14.71	I	C	SP	P
LSF	84.447	316.27	5.03	14.62	I	C	SP	P

Table 155. Station data for event 141....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
COL	86.037	23.15	4.91	14.26	I	C	LP	P
SNZO	89.322	133.11	4.72	13.70	I	C	LP	P
GDH	93.824	350.52	4.62	13.40	E	C	LP	P
GDH	93.824	350.52	4.62	13.40	I	D	SP	P
GOL	121.096	21.85	1.87	5.39	E	C	LP	PKP
WES	122.294	351.55	1.87	5.39	E	C	LP	PKP
BLA	128.149	359.44	1.86	5.35	E	C	LP	PKP
JCT	131.361	21.79	1.85	5.32	E	C	LP	PKP
SHA	134.130	8.61	1.83	5.26	E	C	LP	PKP
BOG	159.408	340.06	1.22	3.50	E	C	LP	PKP

Table 156. Station data for event 163

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KMI	3.423	351.74	14.23	123.47	I	D	LP	P
CHG	4.994	235.38	14.16	56.11	I	C	LP	P
HKC	10.120	84.69	13.72	53.54	I	C	LP	P
BAG	17.178	104.93	12.61	47.66	I	C	LP	P
BJI	21.307	28.13	10.07	36.18	I	C	SP	P
NDI	24.551	291.69	9.55	34.04	I	C	SP	P
POO	27.797	268.74	9.19	32.60	I	C	SP	P
LEM	28.682	171.00	9.13	32.36	I	D	LP	P
SHK	28.783	57.32	9.05	32.04	I	C	LP	P
MAT	33.687	56.24	8.65	30.47	I	C	LP	P
MAJO	33.687	56.24	8.65	30.47	I	C	LP	P
GUA	40.400	94.53	8.24	28.88	E	C	LP	P
BAL	53.595	165.60	7.38	25.63	I	D	SP	P
RAB	54.331	112.34	7.30	25.34	E	C	LP	P
NWAO	55.943	165.83	7.18	24.89	I	D	LP	P
CTAO	59.076	131.68	6.96	24.08	E	N	LP	P
CTA	59.076	131.68	6.96	24.08	I	C	SP	P
HNR	63.622	113.05	6.60	22.76	I	C	LP	P
HLW	64.365	293.64	6.52	22.47	I	C	LP	P
KEV	65.059	338.10	6.48	22.33	E	N	LP	P
PVL	66.990	308.91	6.31	21.71	I	D	SP	P
CLO	68.374	311.25	6.19	21.28	I	D	SP	P
NAI	68.722	259.66	6.19	21.28	I	C	SP	P
COP	72.820	323.64	5.85	20.06	I	C	LP	P
COP	72.820	323.64	5.85	20.06	I	D	SP	P
BRG	73.056	318.52	5.85	20.06	I	C	SP	P
KON	73.348	328.06	5.82	19.95	E	N	LP	P
KONO	73.348	328.06	5.82	19.95	E	N	LP	P
KBA	74.382	314.79	5.75	19.70	I	D	SP	P
HAM	74.793	321.79	5.72	19.59	I	C	SP	P
GRF	75.048	317.79	5.72	19.59	I	C	SP	P
GRFO	75.052	317.79	5.72	19.59	E	N	LP	P
BER	75.205	329.42	5.72	19.59	I	C	LP	P
DAG	75.859	348.38	5.65	19.34	I	D	SP	P
OGA	75.967	315.03	5.65	19.34	I	C	SP	P
STU	76.585	317.28	5.61	19.20	E	C	LP	P
LLS	77.295	315.46	5.55	18.99	I	C	LP	P
SLE	77.340	316.44	5.55	18.99	I	C	LP	P
ZUL	77.496	316.19	5.55	18.99	I	C	LP	P
TMA	77.615	314.74	5.55	18.99	I	C	LP	P
MMK	78.231	314.90	5.52	18.88	I	C	LP	P
DIX	78.586	315.05	5.49	18.77	I	C	LP	P
VDM	80.798	319.17	5.26	17.96	E	C	LP	P
BNG	83.493	272.18	5.09	17.36	I	C	SP	P
SLR	86.662	240.78	4.86	16.55	E	D	SP	P
SLR	86.662	240.78	4.86	16.55	E	D	LP	P
ALI	86.945	310.12	4.83	16.45	I	D	LP	P
GDH	87.762	351.93	4.77	16.24	E	C	LP	P
HON	89.904	67.17	4.71	16.03	E	C	LP	P
RSNT	90.872	16.57	4.70	15.99	I	C	LP	P

Table 156. Station data for event 163....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SNZO	91.073	134.42	4.70	15.99	I	D	LP	P
PTO	91.188	315.49	4.70	15.99	E	C	LP	P
COR	101.499	31.99	4.45	15.12	E	C	LP	Pdf
AAM	115.989	5.72	1.88	6.33	E	C	LP	PKP
WES	116.032	355.55	1.88	6.33	I	C	LP	PKP
SCP	117.806	0.98	1.88	6.31	E	C	LP	PKP
EPT	119.647	29.14	1.87	6.31	E	C	LP	PKP
JCT	123.564	23.97	1.87	6.29	E	C	LP	PKP
BEC	124.995	347.56	1.87	6.28	E	C	LP	PKP
SHA	126.750	12.30	1.86	6.26	E	C	LP	PKP
SJG	139.089	344.55	1.78	5.99	E	C	LP	PKP
BMA	149.866	261.95	1.56	5.25	I	D	SP	PKP
LPA	158.925	227.40	1.22	4.09	E	C	LP	PKP

Table 157. Station data for event 166

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BSI	0.647	112.25	9.21	138.25	I	D	SP	P
TSI	4.438	120.01	13.83	90.50	I	D	SP	P
PSI	5.177	125.66	13.82	87.59	I	D	SP	P
IPM	6.391	100.16	13.77	84.63	I	D	SP	P
CHG	13.625	17.25	12.97	69.67	I	D	SP	P
CHTO	13.625	17.25	12.97	69.67	I	D	SP	P
CHTO	13.625	17.25	12.97	69.67	I	D	LP	P
KOD	17.649	285.71	12.25	62.32	I	D	SP	P
POO	23.993	303.79	9.54	43.61	I	D	SP	P
MKS	27.010	113.33	9.23	41.90	I	C	SP	P
BAG	27.467	65.20	9.19	41.65	E	C	LP	P
NDI	28.195	326.00	9.09	41.10	I	D	SP	P
DAV	30.692	85.82	8.81	39.59	E	C	LP	P
TATO	32.001	50.49	8.72	39.11	E	C	LP	P
SSE	35.390	41.32	8.51	37.98	I	C	SP	P
BJI	39.220	26.37	8.29	36.84	I	C	SP	P
BAL	41.829	151.04	8.14	36.07	I	C	SP	P
MUN	42.739	152.69	8.10	35.85	I	C	SP	P
NWAO	44.004	152.38	8.02	35.46	E	C	LP	P
NWAO	44.004	152.38	8.02	35.46	I	C	SP	P
WBN	44.266	137.17	8.01	35.42	I	C	SP	P
MHI	44.330	318.18	8.01	35.40	I	C	SP	P
KLG	44.427	146.41	8.01	35.38	I	C	SP	P
WB2	46.593	124.30	7.88	34.73	I	C	SP	P
ASPA	48.127	128.92	7.78	34.26	I	C	SP	P
MAJO	50.184	46.19	7.62	33.43	E	C	LP	P
MAT	50.184	46.19	7.62	33.43	I	C	LP	P
AVY	52.370	240.92	7.44	32.57	I	C	SP	P
PMG	54.382	105.80	7.28	31.78	I	C	SP	P
CTA	56.786	118.39	7.10	30.89	I	C	LP	P
CTAO	56.786	118.39	7.10	30.89	I	C	LP	P
STK	58.237	133.08	7.00	30.39	I	C	SP	P
CMS	61.183	130.62	6.76	29.26	I	C	SP	P
BFD	61.721	137.76	6.72	29.05	I	C	SP	P
TOO	63.920	136.74	6.54	28.22	I	C	SP	P
YOU	64.376	132.28	6.50	28.05	I	C	SP	P
CAN	65.304	133.04	6.43	27.70	I	C	SP	P
COO	65.490	127.20	6.41	27.63	I	C	SP	P
WAM	65.621	133.94	6.40	27.58	I	C	SP	P
CIN	68.040	308.17	6.20	26.64	I	C	SP	P
CNG	68.389	238.95	6.17	26.51	I	D	SP	P
JOZ	68.846	237.82	6.14	26.34	I	C	SP	P
BUL	69.835	246.22	6.06	26.00	I	C	SP	P
VRI	70.627	316.63	6.00	25.73	I	C	SP	P
DIM	70.708	312.49	6.00	25.70	I	C	SP	P
KDZ	70.811	312.03	5.99	25.66	I	C	SP	P
MLR	71.086	316.12	5.97	25.56	I	C	SP	P
EVA	71.115	239.63	5.96	25.55	I	D	SP	P
PVL	71.197	313.58	5.96	25.53	I	C	SP	P
SLR	71.585	240.62	5.93	25.42	E	C	LP	P

Table 157. Station data for event 166....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SLR	71.585	240.62	5.93	25.42	I	C	SP	P
BPI	71.924	240.24	5.91	25.29	I	C	SP	P
VTS	72.541	312.76	5.87	25.11	I	D	SP	P
KOU	73.093	113.39	5.83	24.92	I	C	SP	P
CLO	73.197	315.28	5.82	24.89	I	C	SP	P
GRM	75.174	233.51	5.68	24.25	I	C	SP	P
NUR	75.267	331.25	5.68	24.24	I	C	SP	P
NUR	75.267	331.25	5.68	24.24	E	C	LP	P
NOU	75.448	114.69	5.67	24.19	I	C	SP	P
BNG	75.829	273.12	5.64	24.08	I	C	SP	P
KRA	75.849	320.10	5.64	24.07	I	C	SP	P
PVC	76.250	109.74	5.62	23.96	I	C	SP	P
BRT	76.820	310.50	5.58	23.81	I	C	SP	P
KEV	77.019	340.70	5.57	23.75	E	C	LP	P
VKA	78.011	318.00	5.50	23.45	I	C	SP	P
KSP	78.256	320.62	5.49	23.38	I	C	SP	P
UPP	78.575	329.87	5.47	23.28	I	C	SP	P
GIB	79.162	307.44	5.42	23.08	I	C	SP	P
PRU	79.305	319.66	5.41	23.03	I	C	SP	P
SUR	79.604	235.75	5.38	22.91	I	C	SP	P
BRG	79.742	320.54	5.37	22.83	I	C	SP	P
KHC	79.881	318.75	5.35	22.74	I	C	SP	P
KBA	79.942	316.66	5.34	22.71	I	C	SP	P
WET	80.339	318.74	5.30	22.53	I	C	SP	P
CLL	80.360	320.94	5.30	22.52	I	C	SP	P
COP	80.929	325.36	5.25	22.31	E	C	LP	P
HOF	81.033	319.90	5.24	22.27	I	C	SP	P
FUR	81.373	317.72	5.21	22.14	I	C	SP	P
GRF	81.439	319.26	5.21	22.12	I	C	SP	P
GAP	81.505	317.02	5.20	22.09	I	C	SP	P
OGA	81.524	316.40	5.20	22.08	I	C	SP	P
KONO	82.606	329.32	5.12	21.75	I	C	LP	P
CVF	83.092	312.08	5.10	21.63	I	C	SP	P
GWF	83.796	318.55	5.05	21.43	I	C	SP	P
WTS	84.223	321.60	5.03	21.32	I	C	SP	P
HAU	84.679	317.60	5.00	21.19	I	C	SP	P
FRF	84.683	313.14	5.00	21.19	I	C	SP	P
LMR	84.794	312.91	4.99	21.14	I	C	SP	P
LRG	84.896	313.04	4.98	21.10	I	C	SP	P
LBF	86.347	316.68	4.86	20.58	I	C	SP	P
LOR	86.406	316.97	4.86	20.57	I	C	SP	P
SMF	86.467	316.35	4.85	20.55	I	C	SP	P
SSF	86.662	316.78	4.84	20.48	I	C	SP	P
AVF	86.790	316.52	4.83	20.43	I	C	SP	P
MZF	87.371	316.00	4.80	20.30	I	C	SP	P
TCF	87.622	316.10	4.78	20.24	I	C	SP	P
LSF	88.096	316.11	4.76	20.12	I	C	SP	P
LPO	88.510	314.58	4.74	20.04	I	C	SP	P
LDF	88.931	318.57	4.72	19.97	I	C	SP	P
FLN	89.145	318.77	4.72	19.94	I	C	SP	P

Table 157. Station data for event 166....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MFF	89.204	316.60	4.71	19.93	I	C	SP	P
LPF	89.614	318.09	4.71	19.91	I	C	SP	P
DAG	89.689	347.80	4.71	19.90	I	C	SP	P
ALE	91.269	357.06	4.68	19.80	I	C	SP	P
LGR	91.470	312.74	4.68	19.78	I	C	SP	P
DMU	92.207	324.54	4.66	19.71	I	C	SP	P
TOL	93.047	310.39	4.64	19.60	E	C	LP	P
AKU	93.973	337.51	4.61	19.48	I	C	SP	P
VAL	94.642	323.12	4.58	19.36	E	C	LP	P
EDM	116.652	18.46	1.88	7.81	I	C	SP	PKP
YKM	119.472	22.59	1.87	7.79	I	C	SP	PKP
BDW	126.911	22.26	1.86	7.74	I	C	SP	PKP

Table 158. Station data for event 193

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PCT	11.692	32.01	13.36	72.12	I	C	SP	P
CHG	14.487	14.95	12.92	67.04	I	C	SP	P
PKI	24.477	339.00	9.50	42.62	I	C	SP	P
DMN	24.621	338.44	9.49	42.52	I	C	SP	P
KKN	24.723	338.96	9.47	42.45	I	C	SP	P
LSA	25.084	352.00	9.43	42.21	I	C	SP	P
GZH	25.393	42.41	9.41	42.08	I	C	SP	P
CD2	27.283	16.51	9.23	41.11	I	C	SP	P
BAG	27.607	63.25	9.20	40.94	I	C	LP	P
NDI	29.198	326.54	8.97	39.74	I	C	SP	P
QZH	30.246	46.07	8.86	39.12	I	C	SP	P
DAV	30.458	84.13	8.85	39.08	I	C	LP	P
WHN	31.455	33.15	8.77	38.66	I	C	SP	P
XAN	31.868	22.17	8.74	38.53	I	C	SP	P
TATO	32.395	48.99	8.70	38.32	I	C	LP	P
ANP	32.532	48.69	8.69	38.27	I	C	LP	P
GTA	34.769	6.49	8.56	37.57	I	C	SP	P
NJ2	35.145	36.56	8.53	37.45	I	C	SP	P
TIY	36.450	23.52	8.45	37.04	I	C	SP	P
BTO	38.146	18.58	8.35	36.53	I	C	SP	P
KSH	38.612	336.10	8.33	36.39	I	C	SP	P
HHC	38.882	20.11	8.32	36.35	I	C	SP	P
WMQ	39.443	351.63	8.29	36.19	I	C	SP	P
DL2	41.683	31.68	8.16	35.56	I	C	SP	P
MUN	41.711	152.53	8.16	35.55	I	D	SP	P
KLB	42.128	150.57	8.14	35.42	I	C	SP	P
NWAO	42.977	152.22	8.09	35.22	I	D	SP	P
NWAO	42.977	152.22	8.09	35.22	I	D	LP	P
WBN	43.322	136.74	8.07	35.12	I	D	SP	P
KLG	43.424	146.15	8.07	35.09	I	D	SP	P
KHI	44.659	315.56	8.00	34.76	I	C	LP	P
SNY	44.844	30.42	7.99	34.71	I	C	SP	P
SHK	45.734	44.75	7.94	34.45	I	C	SP	P
WB2	45.772	123.72	7.94	34.44	I	D	SP	P
CN2	47.226	29.96	7.85	34.01	I	C	SP	P
ASPA	47.257	128.43	7.85	34.00	I	D	SP	P
GUA	49.923	76.38	7.65	33.02	E	C	LP	P
MDJ	49.923	31.97	7.65	33.02	I	C	SP	P
MAT	50.643	45.45	7.59	32.74	I	C	SP	P
MAJO	50.643	45.45	7.59	32.74	I	C	LP	P
TDD	51.997	281.20	7.48	32.22	I	D	SP	P
ARO	52.041	280.85	7.48	32.20	I	D	SP	P
SGH	52.242	280.72	7.46	32.13	E	D	LP	P
CTAO	56.035	117.94	7.16	30.68	I	D	LP	P
CTA	56.035	117.94	7.16	30.68	I	D	LP	P
ADE	56.964	137.43	7.10	30.37	I	D	SP	P
STK	57.326	132.80	7.07	30.23	I	D	SP	P
RAB	57.759	97.94	7.04	30.10	I	D	SP	P
CMS	60.295	130.35	6.84	29.16	I	D	SP	P
BFD	60.772	137.55	6.80	28.99	I	D	SP	P

Table 158. Station data for event 193....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
TOO	62.979	136.54	6.63	28.16	I	D	SP	P
CAN	64.393	132.84	6.51	27.64	I	D	SP	P
COO	64.636	126.95	6.49	27.55	I	D	SP	P
WAM	64.703	133.74	6.49	27.53	I	D	SP	P
TAU	66.908	140.81	6.30	26.67	I	D	LP	P
ELL	67.316	307.83	6.27	26.52	I	C	SP	P
ALT	67.639	310.30	6.24	26.41	I	C	SP	P
KRI	68.081	249.86	6.21	26.25	I	D	SP	P
DST	68.879	310.62	6.14	25.96	I	C	SP	P
EDC	69.603	311.27	6.09	25.69	I	D	SP	P
BUL	69.735	246.64	6.07	25.64	I	D	SP	P
SLR	71.384	240.99	5.95	25.09	I	D	LP	P
VRI	71.569	316.81	5.94	25.03	I	C	SP	P
KDZ	71.715	312.24	5.93	24.98	I	C	SP	P
MLR	72.025	316.30	5.91	24.91	I	D	SP	P
PVL	72.114	313.77	5.91	24.88	I	C	SP	P
KOU	72.405	113.18	5.88	24.76	I	D	SP	P
VTS	73.451	312.95	5.81	24.43	I	C	SP	P
NOU	74.742	114.52	5.72	24.04	I	C	SP	P
PVC	75.613	109.56	5.66	23.79	I	C	SP	P
KJF	75.989	335.40	5.63	23.66	I	C	SP	P
JOS	76.197	318.69	5.62	23.60	I	C	SP	P
BNG	76.207	273.39	5.62	23.60	I	D	SP	P
SUF	76.207	333.72	5.62	23.60	I	C	SP	P
BCAO	76.219	273.39	5.62	23.59	I	D	LP	P
NUR	76.290	331.33	5.62	23.58	I	C	LP	P
KRA	76.816	320.22	5.58	23.44	I	C	SP	P
KEV	78.060	340.73	5.51	23.10	E	C	LP	P
KEV	78.060	340.73	5.51	23.10	I	C	SP	P
VKA	78.963	318.11	5.44	22.82	I	C	SP	P
KSP	79.227	320.73	5.42	22.74	I	C	SP	P
UPP	79.594	329.94	5.39	22.60	I	C	SP	P
PRU	80.269	319.76	5.32	22.25	I	C	SP	P
BRG	80.712	320.63	5.27	22.07	I	C	SP	P
KHC	80.838	318.85	5.27	22.03	I	C	SP	P
KBA	80.884	316.76	5.26	22.02	I	D	SP	P
MNS	81.175	312.00	5.23	21.90	I	C	SP	P
BHG	81.231	317.40	5.23	21.87	I	C	SP	P
WET	81.297	318.84	5.22	21.84	I	C	SP	P
CLL	81.332	321.03	5.22	21.82	I	C	SP	P
COP	81.927	325.44	5.17	21.60	I	C	LP	P
GRF	82.401	319.35	5.14	21.47	I	C	SP	P
OGA	82.464	316.50	5.13	21.46	I	C	SP	P
OSS	83.068	316.31	5.11	21.34	E	C	LP	P
VDL	83.532	316.10	5.07	21.18	E	C	LP	P
KONO	83.622	329.37	5.06	21.15	I	C	LP	P
KON	83.622	329.37	5.06	21.15	E	C	LP	P
LLS	83.856	316.49	5.05	21.09	E	C	LP	P
TMA	83.948	315.72	5.05	21.07	E	C	LP	P
CVF	83.995	312.16	5.04	21.06	I	C	SP	P

Table 158. Station data for event 193....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SLE	84.191	317.39	5.03	21.00	E	C	LP	P
ZUL	84.264	317.11	5.03	20.98	E	C	LP	P
MMK	84.581	315.68	5.01	20.90	E	C	LP	P
GWF	84.753	318.62	5.00	20.86	I	C	SP	P
DIX	84.966	315.72	4.99	20.81	E	C	LP	P
CDF	84.995	318.06	4.98	20.80	I	C	SP	P
BAF	85.199	317.48	4.97	20.75	I	C	SP	P
SNZO	85.376	131.96	4.96	20.71	I	D	LP	P
FRF	85.595	313.21	4.94	20.63	I	C	SP	P
HAU	85.628	317.67	4.94	20.61	I	C	SP	P
BER	85.764	330.13	4.92	20.52	I	C	LP	P
LRG	85.808	313.11	4.91	20.49	I	C	SP	P
LBF	87.289	316.74	4.80	20.01	I	C	SP	P
LOR	87.350	317.03	4.80	20.00	I	C	SP	P
SMF	87.407	316.40	4.80	19.99	I	C	SP	P
SSF	87.605	316.84	4.79	19.94	I	C	SP	P
AVF	87.731	316.57	4.78	19.92	I	C	SP	P
MZF	88.308	316.04	4.75	19.79	I	C	SP	P
CAF	88.789	314.79	4.73	19.69	I	C	SP	P
LPO	89.435	314.61	4.71	19.61	I	C	SP	P
LDF	89.887	318.60	4.71	19.62	I	C	SP	P
FLN	90.103	318.80	4.71	19.61	I	C	SP	P
MFF	90.146	316.63	4.71	19.60	I	C	SP	P
LPF	90.567	318.12	4.70	19.56	I	C	SP	P
DAG	90.725	347.83	4.70	19.54	I	C	SP	P
ESK	90.815	325.54	4.69	19.54	E	C	LP	P
LGR	92.379	312.75	4.66	19.37	I	C	SP	P
TOL	93.934	310.39	4.61	19.19	I	C	LP	P
COL	96.877	22.48	4.53	18.84	I	C	LP	P
PTO	97.103	312.29	4.53	18.83	E	C	LP	P
BKS	125.263	35.94	1.87	7.64	E	C	LP	PKP
WES	131.482	346.51	1.84	7.55	E	C	LP	PKP
SCP	134.218	352.48	1.83	7.48	E	C	LP	PKP
EPT	138.287	28.04	1.79	7.32	E	C	LP	PKP
BHO	139.978	12.78	1.77	7.23	I	C	SP	PKP
LPA	140.942	216.35	1.75	7.18	E	D	LP	PKP
JCT	142.205	21.15	1.73	7.10	E	C	LP	PKP
SHA	144.630	4.74	1.69	6.92	I	C	LP	PKP
CAR	156.503	310.22	1.33	5.42	I	D	SP	PKP

Figure 58. Azimuthal equidistant map for geographic subdivision, Central Asia

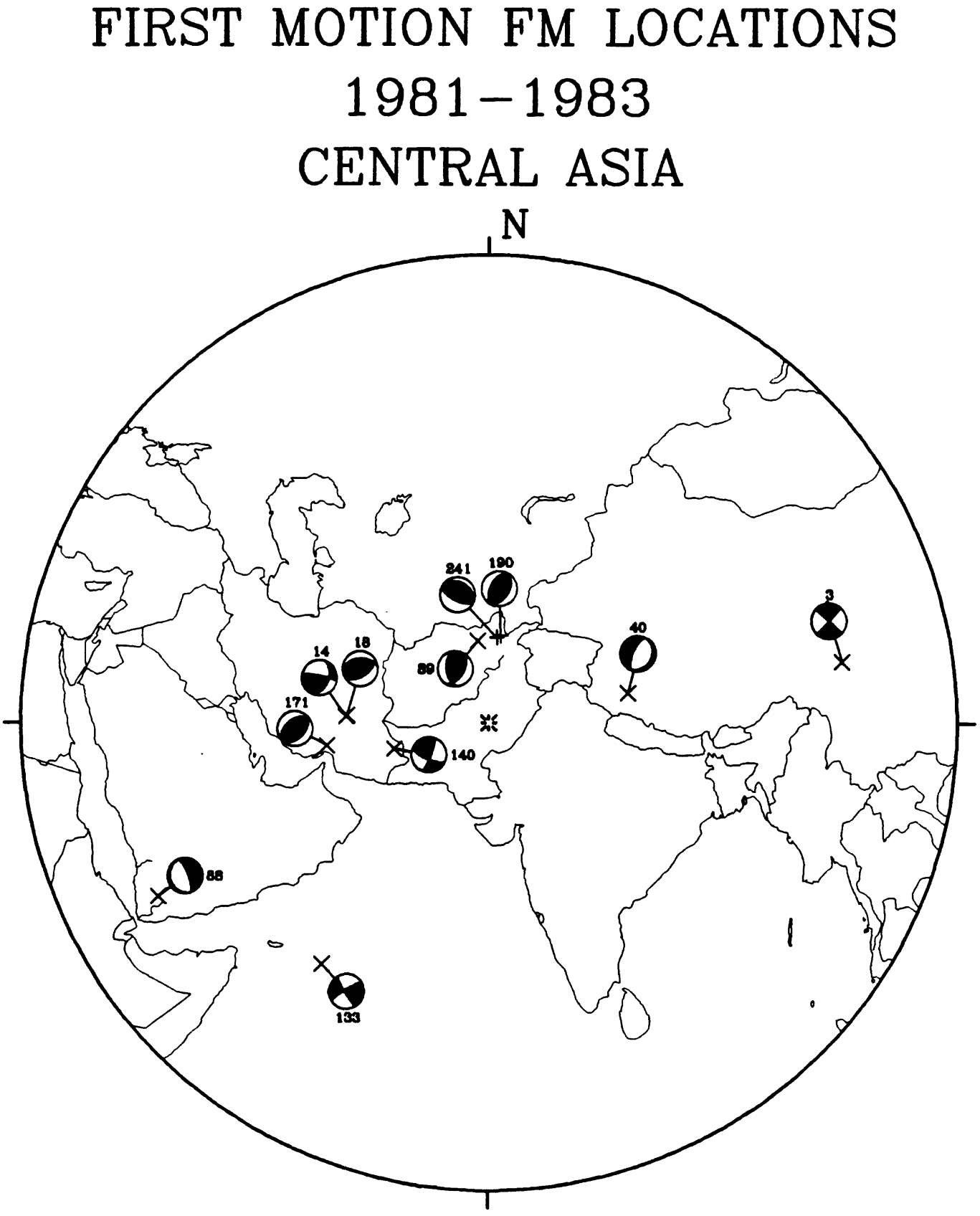

Table 159. Focal mechanism parameters for subdivision, Central Asia

EVENT#	NODAL PLANE 1 (DEG.)			NODAL PLANE 2 (DEG.)			T AXIS (DEG.)		P AXIS (DEG.)		B AXIS (DEG.)	
	ϑ	δ	λ	ϑ	δ	λ	PLG	AZM	PLG	AZM	PLG	AZM
3	42	88	180	312	90	-2	1	357	1	267	88	132
14	20	46	14	280	80	135	38	230	22	338	44	90
18	57	53	72	265	41	112	74	273	6	160	14	168
40	23	23	-90	203	67	-90	22	293	68	113	0	23
88	340	75	-90	160	15	-90	30	70	60	250	0	160
89	173	49	63	31	48	118	70	14	1	282	20	191
133	240	81	8	149	82	171	12	104	1	194	78	288
140	20	80	158	114	68	11	23	235	6	69	66	177
171	230	48	95	43	42	84	85	189	3	316	4	47
190	208	48	90	28	42	90	87	118	3	298	0	28
241	117	62	90	297	28	90	17	207	73	27	0	117

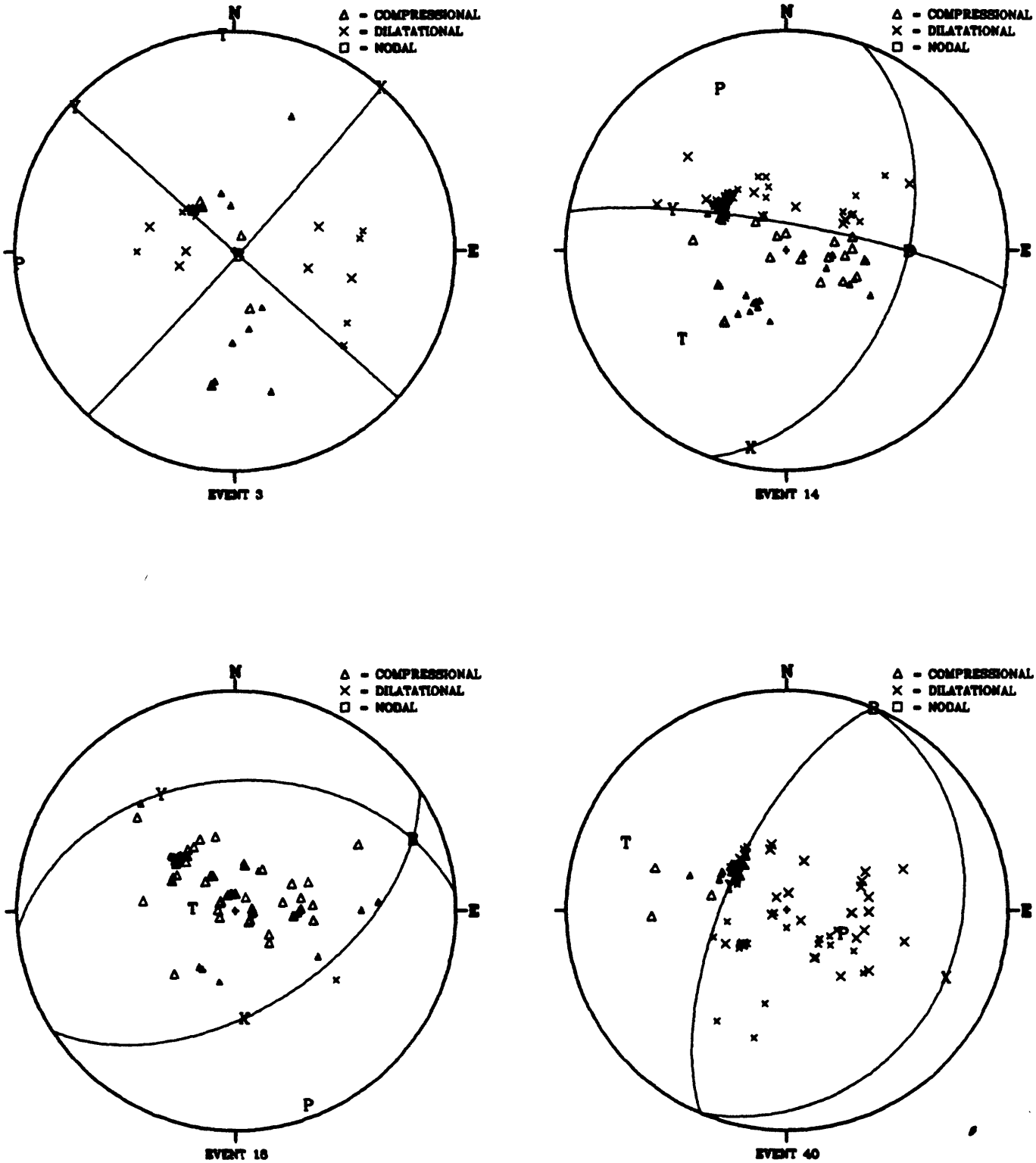

Figure 59. Lower hemisphere focal sphere projections for events 3, 14, 18, and 40

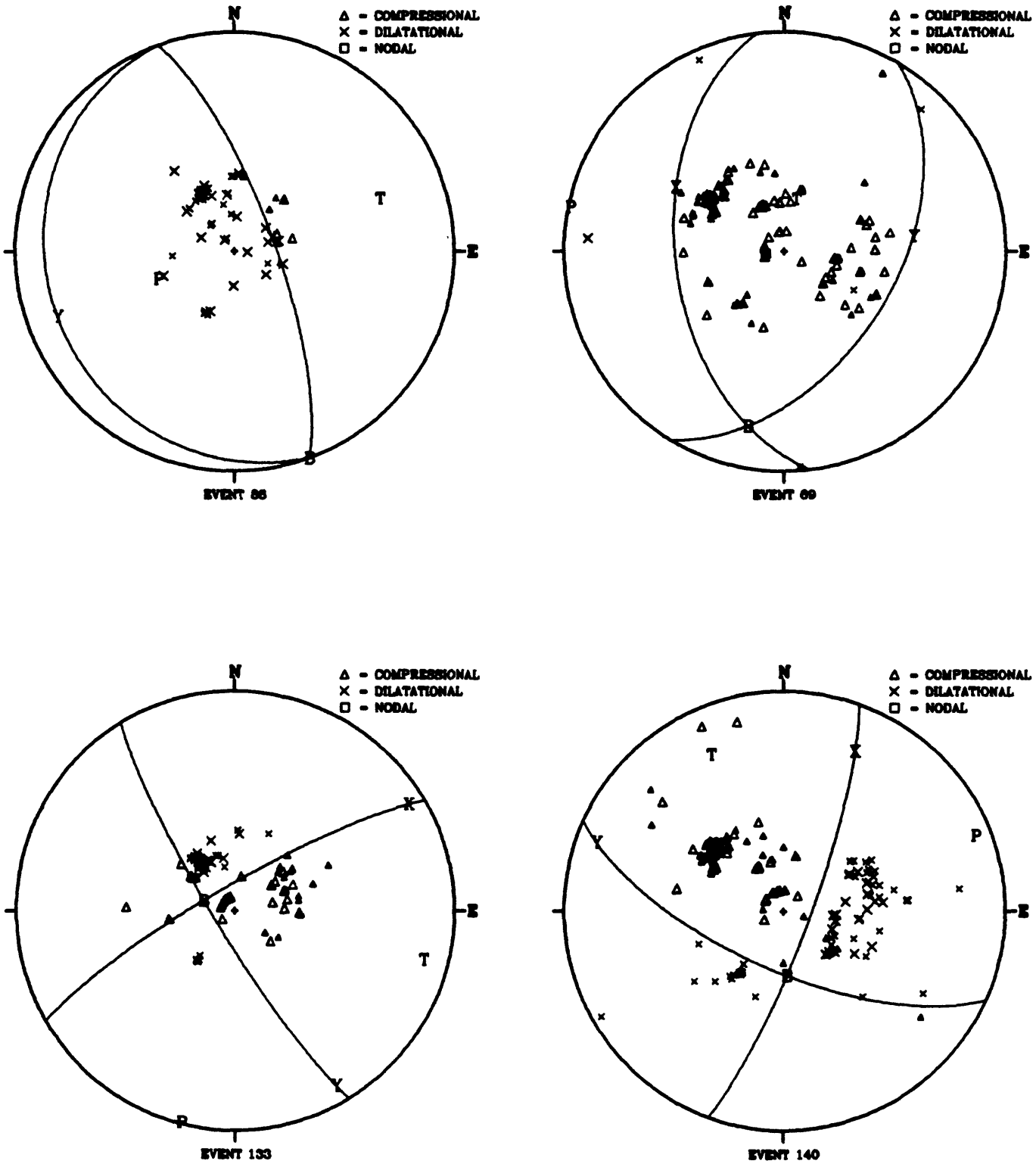

Figure 60. Lower hemisphere focal sphere projections for events 88, 89, 133, and 140

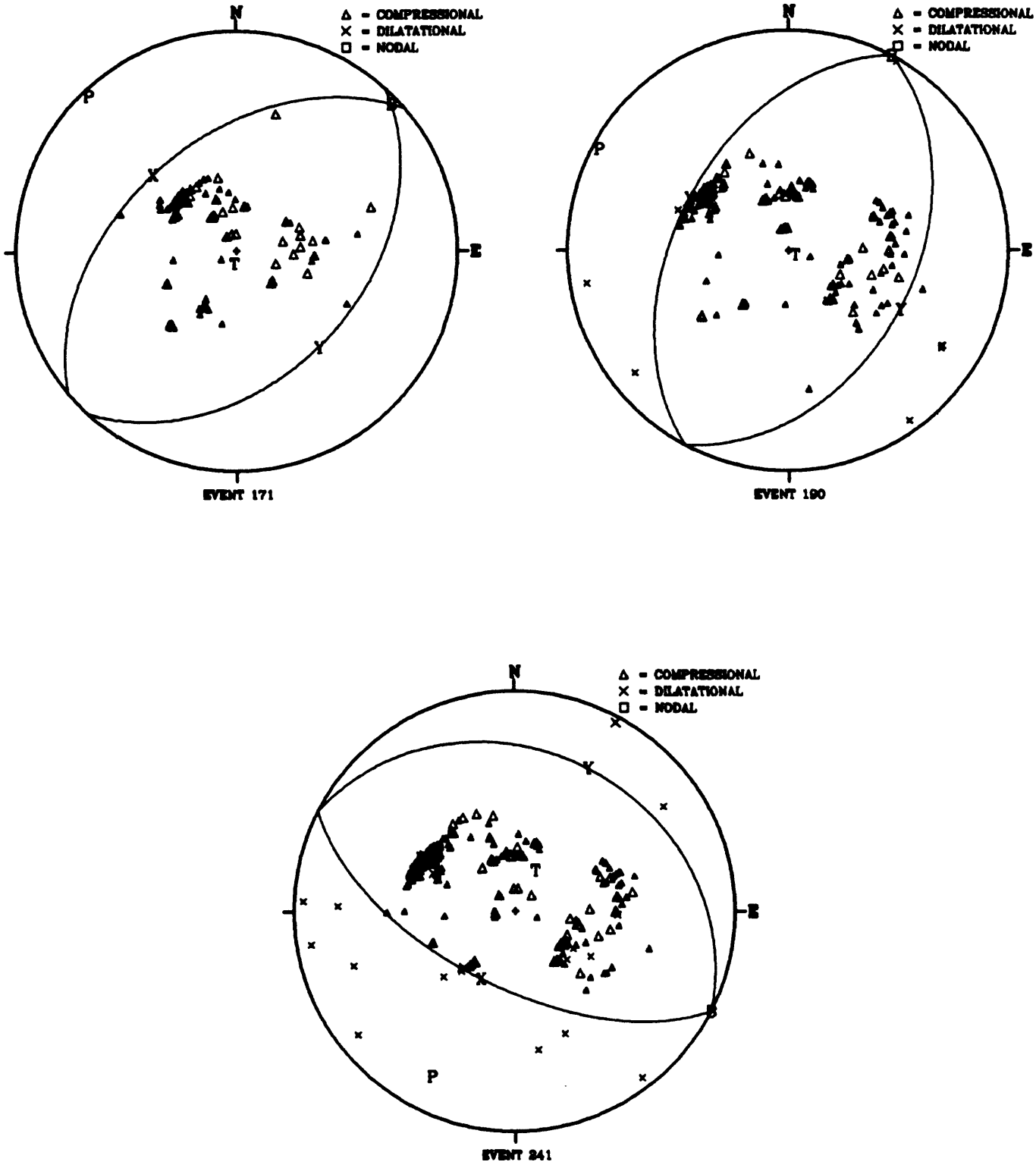

Figure 61. Lower hemisphere focal sphere projections for events 171, 190, and 241

Table 160. Station data for event 3

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
LZH	5.633	23.29	14.11	56.01	I	C	SP	P
KMI	5.960	165.51	14.08	55.83	I	C	SP	P
GYA	6.611	130.95	14.04	55.59	I	D	SP	P
CHTO	12.216	189.68	13.43	52.11	I	C	LP	P
CHG	12.216	189.68	13.43	52.11	I	C	SP	P
GZH	13.414	122.65	13.21	50.92	I	D	SP	P
BDT	13.753	188.45	13.13	50.49	I	C	SP	P
NJ2	15.194	81.17	12.95	49.55	I	D	SP	P
SSE	17.226	84.26	12.58	47.66	I	D	SP	P
TATO	18.954	103.21	12.17	45.65	I	D	LP	P
NDI	20.838	269.91	10.17	36.70	I	D	SP	P
SNG	23.629	181.19	9.68	34.67	I	C	SP	P
SHK	26.752	73.85	9.28	33.04	I	D	LP	P
KAAO	27.144	286.19	9.28	33.04	I	D	LP	P
LEM	38.049	169.46	8.38	29.50	I	C	SP	P
GUMO	43.714	103.26	8.07	28.31	I	D	LP	P
MLR	58.781	307.33	6.96	24.14	I	D	SP	P
KRA	61.572	313.59	6.76	23.40	I	C	SP	P
WBN	61.748	153.96	6.76	23.40	I	C	SP	P
KONO	64.593	325.80	6.51	22.49	I	C	LP	P
BRG	64.999	315.71	6.47	22.34	I	C	SP	P
NWAO	65.309	165.09	6.43	22.20	I	C	LP	P
CLL	65.419	316.38	6.43	22.20	I	C	SP	P
WET	66.224	314.17	6.39	22.05	I	C	SP	P
DAG	66.485	347.42	6.35	21.91	I	C	SP	P
BHG	66.723	312.71	6.35	21.91	I	C	SP	P
GRFO	67.049	315.14	6.31	21.76	I	C	LP	P
GRF	67.045	315.14	6.31	21.76	I	C	SP	P
FUR	67.567	313.59	6.26	21.58	I	C	SP	P
OGA	68.210	312.35	6.22	21.44	I	C	SP	P
WTS	68.769	318.58	6.14	21.15	I	C	SP	P
NAI	68.815	255.04	6.14	21.15	I	D	LP	P
ESK	72.653	324.52	5.89	20.25	I	C	LP	P
DDK	75.217	323.77	5.71	19.60	I	C	SP	P
DMU	75.232	324.40	5.71	19.60	I	C	SP	P
DKM	75.249	323.62	5.71	19.60	I	C	SP	P
DCN	75.715	324.04	5.68	19.50	I	C	SP	P
MLS	76.265	311.90	5.61	19.25	I	D	SP	P
BCAO	81.363	270.00	5.22	17.86	I	D	LP	P
FRB	85.300	355.40	4.96	16.94	I	C	SP	P
ANMO	109.536	23.78	1.89	6.38	I	C	LP	PKP

Table 161. Station data for event 14

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KBL	10.644	61.40	13.64	53.27	I	D	LP	P
KAAO	10.644	61.40	13.64	53.27	I	D	LP	P
BHD	11.848	289.83	13.43	52.11	E	D	LP	P
TAB	12.460	313.75	13.36	51.72	I	D	LP	P
NDI	17.059	89.29	12.58	47.66	I	C	SP	P
KSH	17.757	52.72	12.38	46.67	I	D	SP	P
OBO	22.307	219.95	9.85	35.37	I	C	LP	P
ANTO	22.663	302.68	9.85	35.37	I	D	LP	P
TDD	22.672	220.49	9.85	35.37	I	C	LP	P
HYB	22.734	118.50	9.85	35.37	I	C	SP	P
HLW	22.855	276.49	9.76	34.99	I	C	LP	P
ARO	22.930	220.20	9.76	34.99	I	C	LP	P
DAF	23.045	220.97	9.76	34.99	I	C	LP	P
KSU	23.165	221.01	9.76	34.99	I	C	LP	P
WMQ	27.539	51.48	9.23	32.84	I	D	SP	P
KDZ	28.585	303.00	9.11	32.36	I	D	SP	P
PVL	29.101	305.94	9.04	32.09	I	D	SP	P
ATH	29.207	295.08	9.04	32.09	I	C	SP	P
VAY	30.560	301.48	8.86	31.37	I	D	SP	P
SKO	31.512	302.42	8.79	31.10	I	D	SP	P
SPC	34.255	314.83	8.59	30.31	I	D	SP	P
BUD	34.490	311.51	8.59	30.31	I	D	SP	P
KRA	34.747	316.15	8.59	30.31	I	C	SP	P
SRO	35.045	311.83	8.56	30.20	I	D	SP	P
ZST	35.932	312.08	8.50	29.96	I	D	SP	P
VIE	36.423	311.94	8.47	29.85	I	D	LP	P
VKA	36.456	311.96	8.47	29.85	I	D	SP	P
DUI	36.644	300.64	8.47	29.85	I	D	SP	P
NAI	36.877	216.49	8.44	29.73	I	C	SP	P
LJU	37.158	307.89	8.44	29.73	I	D	SP	P
KSP	37.208	316.08	8.44	29.73	I	C	SP	P
AQU	37.484	301.68	8.41	29.62	I	D	SP	P
TRI	37.631	307.20	8.41	29.62	E	D	LP	P
MNS	38.020	301.67	8.38	29.50	I	D	SP	P
PRU	38.033	314.20	8.38	29.50	I	D	SP	P
KHC	38.428	312.61	8.35	29.38	I	C	SP	P
BHG	38.585	310.23	8.35	29.38	I	C	SP	P
BRG	38.639	315.41	8.35	29.38	I	D	SP	P
LZH	38.892	68.45	8.32	29.27	I	D	SP	P
CHTO	38.963	96.86	8.32	29.27	E	C	LP	P
CHG	38.963	96.86	8.32	29.27	I	C	SP	P
FIR	39.169	303.76	8.32	29.27	I	D	SP	P
KJF	39.180	339.73	8.32	29.27	I	D	SP	P
CLL	39.330	315.83	8.29	29.15	I	D	SP	P
BRN	39.520	317.56	8.29	29.15	I	D	SP	P
OGA	39.686	308.56	8.29	29.15	I	D	SP	P
FUR	39.726	310.61	8.29	29.15	I	D	SP	P
HOF	39.775	314.03	8.27	29.07	I	C	SP	P
SAL	39.867	306.54	8.27	29.07	I	D	SP	P
MOX	40.014	314.48	8.27	29.07	I	D	SP	P

Table 161. Station data for event 14....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
GRFO	40.057	312.94	8.27	29.07	E	D	LP	P
GRF	40.053	312.94	8.27	29.07	I	D	SP	P
COP	40.984	322.14	8.21	28.84	I	D	SP	P
STU	41.193	311.18	8.21	28.84	I	D	LP	P
ECH	42.459	310.08	8.13	28.54	I	D	SP	P
BNS	42.838	314.10	8.10	28.42	I	D	SP	P
BTO	43.460	61.16	8.07	28.31	I	D	SP	P
KEV	43.535	345.04	8.07	28.31	I	D	SP	P
DBN	44.255	315.44	8.02	28.12	I	D	LP	P
LBF	44.504	308.03	8.02	28.12	I	C	SP	P
LOR	44.599	308.43	8.02	28.12	I	C	SP	P
BNG	44.824	243.29	7.99	28.00	I	C	SP	P
SSF	44.829	308.12	7.99	28.00	I	C	SP	P
BCAO	44.834	243.30	7.99	28.00	I	C	LP	P
GRC	45.134	308.44	7.99	28.00	I	C	SP	P
TCF	45.699	307.00	7.96	27.89	I	C	SP	P
SNG	46.158	110.52	7.94	27.81	I	C	LP	P
LSF	46.170	306.94	7.94	27.81	I	C	SP	P
RJF	46.182	305.63	7.94	27.81	I	C	SP	P
LPO	46.427	304.77	7.91	27.70	I	D	LP	P
LPO	46.427	304.77	7.91	27.70	I	C	SP	P
LFF	46.742	305.13	7.91	27.70	I	C	SP	P
IPM	47.999	113.05	7.81	27.32	I	C	SP	P
BJI	48.197	61.38	7.81	27.32	I	D	SP	P
ALI	48.221	296.35	7.81	27.32	I	C	LP	P
LGR	49.247	302.01	7.74	27.05	I	C	SP	P
AVY	49.486	192.47	7.70	26.90	I	C	SP	P
PPI	50.629	118.73	7.62	26.60	E	C	SP	P
GUD	50.700	299.86	7.62	26.60	I	D	SP	P
TOL	50.734	298.87	7.62	26.60	I	D	SP	P
TET	51.361	210.21	7.54	26.30	I	C	SP	P
MAL	51.573	294.96	7.54	26.30	I	C	SP	P
SFS	53.041	295.01	7.42	25.85	I	C	SP	P
PTO	53.947	301.17	7.34	25.55	I	D	SP	P
CN2	54.523	55.38	7.30	25.40	I	D	SP	P
LIS	54.838	298.36	7.26	25.25	I	D	SP	P
ANP	56.136	78.26	7.18	24.95	E	C	LP	P
TATO	56.183	78.51	7.18	24.95	I	C	LP	P
SEO	56.935	62.47	7.11	24.69	E	D	LP	P
AKU	57.341	331.52	7.07	24.55	I	D	LP	P
DAG	58.028	344.69	7.03	24.40	I	D	SP	P
BAG	58.711	88.22	7.00	24.29	E	C	LP	P
LEM	60.214	118.93	6.88	23.85	E	C	LP	P
CNG	60.995	206.25	6.80	23.55	I	C	SP	P
SHK	62.232	64.31	6.72	23.26	I	D	LP	P
KSR	62.830	211.26	6.64	22.96	I	C	SP	P
WIN	65.166	221.53	6.47	22.34	I	C	SP	P
BLF	65.945	210.07	6.39	22.05	I	C	SP	P
DAV	67.321	94.92	6.26	21.58	I	C	LP	P
GDH	69.430	339.22	6.10	21.00	I	D	SP	P

Table 161. Station data for event 14....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
GRM	69.441	207.55	6.10	21.00	I	C	SP	P
GUMO	80.924	79.57	5.26	18.00	I	C	LP	P
NWAO	84.141	133.23	5.05	17.26	I	C	LP	P
JAY	85.167	95.66	4.99	17.05	E	C	SP	P
PMR	86.264	12.50	4.86	16.59	E	D	LP	P
WB2	88.820	113.72	4.73	16.14	I	C	SP	P
PMG	94.139	98.41	4.61	15.72	I	C	LP	P
BEC	97.428	313.90	4.52	15.40	E	C	LP	P
GEO	99.616	325.82	4.47	15.23	E	D	LP	P
BLA	102.566	326.91	4.45	15.16	E	C	LP	Pdf
ORT	105.425	328.78	1.89	6.38	E	C	LP	PKP
BKS	112.573	359.96	1.89	6.37	E	C	LP	PKP
KOU	113.902	100.75	1.88	6.36	I	C	SP	PKP
NOU	116.454	101.60	1.88	6.34	I	C	SP	PKP
LPA	126.261	246.77	1.86	6.29	E	C	LP	PKP
SNZO	128.542	120.87	1.86	6.26	E	C	LP	PKP

Table 162. Station data for event 18

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
TEH	7.849	318.32	13.91	54.82	I	C	SP	P
QUE	7.935	86.45	13.91	54.82	I	C	SP	P
KBL	10.536	61.73	13.64	53.27	E	C	LP	P
TAB	12.441	313.24	13.36	51.72	E	C	LP	P
NDI	16.989	89.65	12.58	47.66	I	C	SP	P
POO	18.545	124.40	12.27	46.14	I	D	SP	P
HYB	22.722	118.83	9.85	35.37	I	C	SP	P
HLW	22.912	276.28	9.76	34.99	I	C	LP	P
AAE	27.433	224.35	9.23	32.84	I	C	LP	P
CMP	29.833	309.82	8.91	31.57	E	C	SP	P
DEV	31.451	310.02	8.79	31.10	I	C	SP	P
BUD	34.476	311.37	8.59	30.31	E	C	SP	P
NUR	37.644	333.71	8.41	29.62	E	C	LP	P
KHC	38.411	312.50	8.35	29.38	I	C	SP	P
LZH	38.792	68.58	8.32	29.27	I	C	LP	P
WET	38.861	312.35	8.32	29.27	I	C	SP	P
CHG	38.907	97.03	8.32	29.27	E	C	LP	P
CHTO	38.907	97.03	8.32	29.27	E	C	LP	P
CLL	39.306	315.72	8.29	29.15	I	C	SP	P
OGA	39.677	308.46	8.29	29.15	I	C	SP	P
FUR	39.713	310.51	8.29	29.15	I	C	SP	P
KMI	39.950	85.81	8.27	29.07	I	C	LP	P
GRFO	40.039	312.84	8.27	29.07	E	C	LP	P
COP	40.948	322.05	8.21	28.84	E	C	LP	P
STU	41.179	311.08	8.21	28.84	E	C	LP	P
STU	41.179	311.08	8.21	28.84	E	C	SP	P
KEV	43.456	344.98	8.07	28.31	E	C	LP	P
KONO	43.754	326.81	8.05	28.23	E	C	LP	P
DOU	44.331	312.43	8.02	28.12	I	C	SP	P
LOR	44.591	308.35	8.02	28.12	I	C	LP	P
GRC	45.126	308.35	7.99	28.00	I	C	SP	P
EKA	49.532	318.95	7.70	26.90	I	C	SP	P
ESK	49.557	318.93	7.70	26.90	E	C	LP	P
AVY	49.598	192.55	7.70	26.90	I	C	SP	P
TOL	50.746	298.81	7.62	26.60	I	C	SP	P
MAL	51.594	294.90	7.54	26.30	I	C	SP	P
MAL	51.594	294.90	7.54	26.30	I	C	LP	P
VAL	53.729	314.58	7.38	25.70	I	C	LP	P
PTO	53.954	301.12	7.34	25.55	I	C	LP	P
TATO	56.096	78.60	7.18	24.95	I	C	LP	P
CIR	56.652	209.61	7.14	24.81	I	C	SP	P
BUL	57.231	213.01	7.11	24.69	I	C	SP	P
SZP	58.050	87.17	7.03	24.40	E	C	SP	P
BAG	58.639	88.32	7.00	24.29	I	C	LP	P
MAN	59.831	89.89	6.88	23.85	I	C	SP	P
PAP	62.053	92.33	6.72	23.26	I	C	SP	P
SHK	62.127	64.38	6.72	23.26	E	C	LP	P
CGP	65.837	94.18	6.39	22.05	E	C	SP	P
DAV	67.262	95.00	6.26	21.58	I	C	LP	P
SMY	80.725	33.53	5.31	18.18	E	C	LP	P

Table 162. Station data for event 18....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
GUMO	80.838	79.63	5.26	18.00	I	C	LP	P
COL	83.321	10.69	5.08	17.37	I	C	LP	P
NWAO	84.159	133.28	5.05	17.26	E	C	LP	P
ADK	85.523	30.40	4.96	16.94	I	C	SP	P
PMR	86.152	12.54	4.90	16.73	I	C	SP	P
WES	94.089	324.81	4.61	15.72	I	C	LP	P
BEC	97.408	313.96	4.52	15.40	I	C	LP	P
SCP	98.465	327.55	4.49	15.30	E	C	LP	P
ADE	99.867	124.59	4.47	15.23	E	C	LP	P
HNR	105.140	92.25	1.89	6.38	E	C	LP	PKP
COR	105.763	0.81	1.89	6.38	E	C	LP	PKP
FVM	106.126	334.33	1.89	6.38	E	C	LP	PKP
SJG	107.874	304.00	1.89	6.38	E	C	LP	PKP
GOL	108.906	346.34	1.89	6.38	E	C	LP	PKP
TAU	109.407	128.83	1.89	6.38	E	C	LP	PKP
BKS	112.473	0.02	1.89	6.38	I	C	LP	PKP
ALQ	113.716	345.90	1.88	6.36	E	C	LP	PKP
ANMO	113.712	345.90	1.88	6.36	E	C	LP	PKP
KOU	113.853	100.74	1.88	6.36	I	C	SP	PKP
NOU	116.407	101.59	1.88	6.34	I	C	SP	PKP
TUC	117.086	349.14	1.88	6.34	E	C	LP	PKP
KIP	118.344	38.27	1.88	6.33	E	C	LP	PKP
BOG	122.488	298.34	1.87	6.31	E	C	LP	PKP
LPA	126.363	246.85	1.86	6.29	E	C	LP	PKP
SNZO	128.534	120.81	1.86	6.26	E	C	LP	PKP
ZOBO	128.848	272.86	1.86	6.26	E	C	LP	PKP
AFI	131.688	81.82	1.84	6.21	I	C	LP	PKP

Table 163. Station data for event 40

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KAAO	11.428	287.90	13.51	52.55	I	C	LP	P
KBL	11.428	287.90	13.51	52.55	E	C	LP	P
QUE	13.218	267.45	13.29	51.34	I	C	LP	P
HYB	14.604	194.12	13.04	50.02	I	D	SP	P
POO	15.141	212.03	12.95	49.55	I	D	SP	P
LZH	18.451	70.41	12.27	46.14	I	D	LP	P
KMI	19.167	104.83	12.17	45.65	I	D	LP	P
MHI	19.403	289.87	10.59	38.48	I	C	SP	P
CHG	19.781	126.46	10.44	37.84	I	D	LP	P
CHTO	19.781	126.46	10.44	37.84	I	D	SP	P
CHTO	19.781	126.46	10.44	37.84	I	D	LP	P
BDT	20.925	129.52	10.17	36.70	I	D	SP	P
KOD	21.809	192.75	9.95	35.78	I	D	SP	P
BJI	28.596	63.56	9.11	32.36	E	D	LP	P
SNG	29.815	141.03	8.91	31.57	I	D	LP	P
SSE	33.129	80.61	8.68	30.67	I	D	LP	P
ANP	34.999	90.60	8.56	30.20	I	D	LP	P
TATO	35.045	90.96	8.56	30.20	I	D	LP	P
SEO	36.994	68.32	8.44	29.73	I	D	LP	P
BAG	37.949	104.53	8.38	29.50	I	D	LP	P
KKM	40.731	121.61	8.24	28.96	I	D	SP	P
ARO	41.460	249.98	8.18	28.73	I	D	SP	P
SHK	41.987	72.06	8.16	28.65	I	D	LP	P
HLW	43.453	281.39	8.07	28.31	E	C	LP	P
PVL	45.944	301.25	7.94	27.81	I	C	SP	P
KDZ	45.970	299.15	7.94	27.81	I	C	SP	P
SUF	46.913	328.42	7.88	27.58	I	D	SP	P
NUR	47.128	325.24	7.88	27.58	I	D	SP	P
DAV	47.195	111.84	7.88	27.58	I	D	LP	P
ATH	47.777	294.45	7.81	27.32	I	C	SP	P
SOP	51.499	308.10	7.54	26.30	I	D	SP	P
VIE	51.564	308.84	7.54	26.30	E	C	LP	P
BRG	52.832	312.37	7.42	25.85	I	D	SP	P
KMR	53.069	308.84	7.42	25.85	I	C	LP	P
COP	53.311	318.47	7.38	25.70	I	D	SP	P
COP	53.311	318.47	7.38	25.70	E	D	LP	P
NAI	54.096	241.58	7.34	25.55	I	D	LP	P
HOF	54.210	311.88	7.34	25.55	I	D	SP	P
KON	54.587	323.50	7.30	25.40	E	C	LP	P
KONO	54.587	323.50	7.30	25.40	E	D	LP	P
GRFO	54.726	311.21	7.30	25.40	E	C	LP	P
GRF	54.722	311.20	7.30	25.40	I	D	SP	P
FUR	54.941	309.35	7.26	25.25	I	D	SP	P
GAP	55.206	308.56	7.26	25.25	I	D	SP	P
OGA	55.348	307.84	7.22	25.10	I	D	SP	P
KBS	55.358	347.20	7.22	25.10	E	D	LP	P
FIR	55.837	304.13	7.18	24.95	I	C	SP	P
STU	56.191	310.39	7.18	24.95	E	D	LP	P
WTS	57.084	314.53	7.11	24.69	I	C	SP	P
GWF	57.168	310.88	7.11	24.69	I	C	SP	P

Table 163. Station data for event 40....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ECH	57.632	310.07	7.07	24.55	I	D	SP	P
BAF	57.824	309.66	7.03	24.40	I	D	SP	P
BSF	57.958	309.69	7.03	24.40	I	D	SP	P
WLF	57.961	311.91	7.03	24.40	E	C	LP	P
DBN	58.053	314.88	7.03	24.40	I	C	LP	P
UCC	58.833	313.51	6.96	24.14	I	C	SP	P
GUMO	59.786	92.31	6.88	23.85	I	D	LP	P
GUA	59.849	92.33	6.88	23.85	I	D	LP	P
LOR	60.023	309.63	6.88	23.85	I	D	SP	P
LBF	60.020	309.29	6.88	23.85	I	D	LP	P
SMF	60.202	308.94	6.88	23.85	I	D	SP	P
SSF	60.310	309.47	6.84	23.70	I	D	SP	P
AVF	60.485	309.21	6.84	23.70	I	D	SP	P
MZF	61.157	308.75	6.80	23.55	I	D	SP	P
TCF	61.384	308.91	6.76	23.40	I	D	SP	P
LSF	61.847	309.03	6.72	23.26	I	D	SP	P
DAG	61.888	345.15	6.72	23.26	I	D	SP	P
DAG	61.888	345.15	6.72	23.26	E	D	LP	P
SSC	62.213	311.93	6.72	23.26	I	D	SP	P
MFF	62.842	309.81	6.64	22.96	I	D	SP	P
ECB	65.051	317.45	6.47	22.34	I	C	SP	P
CLK	65.367	231.12	6.43	22.20	I	D	SP	P
BNG	65.371	259.51	6.43	22.20	I	D	SP	P
LGR	65.838	306.12	6.39	22.05	I	C	SP	P
ALM	67.960	300.49	6.22	21.44	I	C	SP	P
MTD	68.428	232.82	6.18	21.29	I	D	SP	P
MAL	69.440	301.06	6.10	21.00	I	D	SP	P
KRI	69.811	234.19	6.07	20.90	I	D	SP	P
PTO	70.546	306.77	6.03	20.75	I	C	SP	P
IFR	71.341	298.25	5.96	20.50	I	D	SP	P
KLB	71.358	148.45	5.96	20.50	I	D	SP	P
CIR	71.428	229.67	5.96	20.50	I	D	SP	P
WRA	71.611	128.53	5.96	20.50	I	D	SP	P
WB2	71.619	128.53	5.96	20.50	I	D	SP	P
NWAO	72.265	149.58	5.89	20.25	I	D	SP	P
NWAO	72.265	149.58	5.89	20.25	I	D	LP	P
BUL	72.782	232.38	5.85	20.11	I	D	LP	P
PMG	74.228	111.79	5.78	19.85	I	D	SP	P
COL	76.157	19.68	5.64	19.35	E	D	LP	P
COL	76.157	19.68	5.64	19.35	I	D	SP	P
KSR	77.883	229.30	5.52	18.93	I	D	SP	P
CTA	80.057	120.94	5.36	18.36	I	D	SP	P
CTAO	80.057	120.94	5.36	18.36	I	D	SP	P
ADE	84.917	136.58	4.99	17.05	I	D	SP	P
YOU	90.427	130.77	4.70	16.03	I	D	SP	P
CAN	91.472	131.27	4.68	15.96	I	D	SP	P
GOL	108.623	6.20	1.89	6.38	E	D	LP	PKP
SNZO	111.797	125.84	1.89	6.38	I	D	LP	PKP
SPA	121.519	180.00	1.87	6.31	I	D	SP	PKP
BOG	137.416	323.71	1.80	6.08	E	D	LP	PKP

Table 163. Station data for event 40....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BOCO	137.436	323.66	1.80	6.08	E	D	LP	PKP
LPA	146.711	253.54	1.64	5.53	I	D	LP	PKP
PEL	157.122	259.14	1.30	4.40	I	D	SP	PKP

Table 164. Station data for event 88

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
HLW	19.287	323.61	12.11	37.38	I	D	LP	P
TAB	23.335	3.88	9.70	29.10	I	D	LP	P
GRS	24.761	3.61	9.49	28.41	I	D	SP	P
SHE	26.099	7.37	9.39	28.08	I	C	SP	P
STE	26.200	0.01	9.39	28.08	I	D	SP	P
BKR	26.943	358.58	9.30	27.79	I	D	SP	P
BNG	27.404	250.72	9.25	27.63	I	D	SP	P
BCAO	27.415	250.73	9.25	27.63	E	D	LP	P
IST	29.462	335.92	8.99	26.79	I	D	LP	P
KBL	29.740	43.98	8.99	26.79	I	C	LP	P
KBL	29.740	43.98	8.99	26.79	I	C	SP	P
KDZ	31.501	332.11	8.80	26.18	I	D	SP	P
PVL	32.789	333.60	8.69	25.83	I	D	SP	P
VTS	33.246	330.88	8.69	25.83	I	D	SP	P
SKO	33.636	328.35	8.66	25.73	I	D	SP	P
MTD	33.730	202.46	8.66	25.73	I	D	SP	P
KRI	34.549	205.49	8.60	25.54	I	D	SP	P
CMP	34.577	335.66	8.60	25.54	I	D	SP	P
COZ	34.901	335.01	8.57	25.44	I	D	SP	P
CLO	35.354	333.23	8.54	25.35	I	D	SP	P
ANR	35.591	37.77	8.54	25.35	I	C	SP	P
CEA	35.664	338.20	8.54	25.35	I	D	SP	P
BUL	37.933	204.54	8.39	24.87	E	D	LP	P
BUL	37.933	204.54	8.39	24.87	I	D	SP	P
PSZ	38.831	333.60	8.33	24.68	I	D	SP	P
JOS	39.006	334.71	8.33	24.68	I	D	SP	P
BHG	42.001	328.18	8.16	24.15	I	D	SP	P
OGA	42.433	326.00	8.14	24.08	I	D	SP	P
KHC	42.597	330.20	8.14	24.08	I	D	SP	P
PRU	42.740	331.75	8.14	24.08	I	D	SP	P
WET	42.945	329.76	8.11	23.99	I	D	SP	P
FUR	43.111	327.65	8.11	23.99	I	D	SP	P
SLR	43.135	201.46	8.11	23.99	I	D	LP	P
BRG	43.635	332.28	8.08	23.89	I	D	SP	P
GRF	44.120	329.32	8.05	23.80	I	D	SP	P
GRFO	44.123	329.31	8.05	23.80	E	D	LP	P
MOX	44.557	330.59	8.03	23.74	I	D	SP	P
LOR	46.714	322.56	7.91	23.36	I	D	SP	P
ENN	47.466	327.59	7.85	23.17	I	D	SP	P
WTS	47.744	329.38	7.85	23.17	I	D	SP	P
UCC	48.303	326.87	7.79	22.99	I	D	SP	P
DBN	48.620	328.69	7.79	22.99	I	D	LP	P
LGR	48.771	314.08	7.75	22.86	I	D	SP	P
KIC	48.911	265.62	7.75	22.86	I	D	SP	P
TOL	49.068	310.36	7.75	22.86	E	D	LP	P
KONO	51.620	338.31	7.55	22.24	E	D	LP	P
CHTO	52.248	77.46	7.51	22.12	I	C	LP	P
APA	53.300	354.73	7.38	21.71	I	D	SP	P
KEV	56.090	352.80	7.19	21.13	E	D	LP	P
ZAK	59.091	39.72	6.97	20.45	I	C	SP	P

Table 164. Station data for event 88....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
LEM	66.239	104.36	6.40	18.71	E	D	LP	P
DAG	69.754	347.35	6.07	17.72	I	D	SP	P
TRT	71.233	103.52	6.00	17.50	I	C	SP	P
TATO	72.434	68.12	5.89	17.17	I	C	LP	P
ANP	72.430	67.91	5.89	17.17	E	C	LP	P
BAG	73.003	77.07	5.86	17.08	E	D	LP	P
PGP	73.916	79.96	5.79	16.87	E	C	SP	P
NWAO	84.057	126.10	5.06	14.69	I	D	LP	P
MAJO	84.411	53.85	5.03	14.61	E	D	LP	P
MBC	88.715	356.16	4.75	13.78	I	D	SP	P
WB2	94.880	109.23	4.58	13.27	I	D	SP	P
GUMO	96.455	74.20	4.54	13.16	I	D	LP	P
GAC	99.078	322.01	4.48	12.98	E	D	SP	P
COL	100.108	5.24	4.45	12.89	E	D	LP	Pdf
SCP	103.175	318.73	4.45	12.89	E	D	SP	Pdf
SJG	104.173	293.27	4.45	12.89	E	D	LP	Pdf
SPA	104.604	180.00	4.45	12.89	E	D	LP	Pdf
JCT	123.381	322.77	1.87	5.38	E	D	LP	PKP
ANMO	123.398	331.34	1.87	5.38	I	D	SP	PKP
AFI	144.978	93.34	1.68	4.85	E	D	LP	PKP

Table 165. Station data for event 89

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
DSH	2.413	355.60	14.24	91.98	I	D	SP	P
SAM	3.865	336.18	14.19	84.81	I	D	SP	P
ANR	5.297	28.73	14.10	81.72	I	C	SP	P
NRN	7.590	43.85	13.95	78.25	I	D	SP	P
MHI	7.694	273.93	13.95	78.25	I	D	LP	P
PYA	21.301	299.66	10.05	44.86	I	C	SP	P
LZH	28.053	79.69	9.18	40.11	I	C	LP	P
ZAK	28.437	49.21	9.10	39.69	I	C	SP	P
ANTO	28.655	288.49	9.10	39.69	I	C	LP	P
KMI	30.890	101.35	8.82	38.24	E	C	LP	P
CHG	31.498	115.22	8.78	38.04	I	C	SP	P
CHG	31.498	115.22	8.78	38.04	I	C	LP	P
KIS	31.613	302.68	8.78	38.04	I	C	SP	P
HLW	32.066	269.69	8.75	37.89	I	C	LP	P
MLR	33.557	299.65	8.65	37.38	I	C	SP	P
ARO	34.044	230.53	8.62	37.23	I	C	LP	P
KDZ	34.145	292.78	8.62	37.23	I	C	SP	P
PUL	34.290	325.83	8.59	37.08	I	C	SP	P
ATH	35.925	286.78	8.50	36.62	I	C	SP	P
PCT	35.976	118.02	8.50	36.62	I	C	SP	P
THE	36.052	291.41	8.50	36.62	I	C	SP	P
UZH	36.139	305.03	8.50	36.62	I	C	SP	P
VAY	36.257	292.63	8.47	36.47	I	C	SP	P
NUR	37.188	325.08	8.44	36.32	I	C	LP	P
SUF	37.385	328.92	8.41	36.17	I	C	SP	P
KRA	37.744	307.28	8.41	36.17	I	C	SP	P
KEV	40.546	339.00	8.24	35.33	I	C	LP	P
SNG	40.807	127.28	8.21	35.18	I	C	LP	P
PRU	41.225	307.14	8.21	35.18	I	C	SP	P
LJU	41.504	301.18	8.18	35.04	I	C	SP	P
BRG	41.584	308.49	8.18	35.04	I	C	SP	P
KBA	42.211	302.85	8.15	34.89	I	C	SP	P
COP	42.569	315.66	8.13	34.79	I	C	LP	P
HOF	42.923	307.74	8.10	34.64	I	C	SP	P
MOX	43.071	308.24	8.10	34.64	I	C	SP	P
PSI	43.260	133.37	8.07	34.50	I	C	SP	P
SSE	43.317	81.03	8.07	34.50	E	C	LP	P
GRF	43.387	306.87	8.07	34.50	I	C	SP	P
GRFO	43.391	306.87	8.07	34.50	I	C	LP	P
FUR	43.491	304.65	8.07	34.50	I	C	SP	P
OGA	43.813	302.81	8.05	34.40	I	C	SP	P
KON	44.354	321.29	8.02	34.25	I	C	LP	P
KONO	44.354	321.29	8.02	34.25	I	C	LP	P
MUD	44.424	316.70	8.02	34.25	I	C	SP	P
STU	44.800	305.74	7.99	34.11	I	C	LP	P
ZUL	45.507	304.04	7.96	33.96	E	C	LP	P
SEO	45.754	70.11	7.93	33.82	E	C	LP	P
GWF	45.804	306.21	7.93	33.82	I	C	SP	P
BNS	45.854	309.01	7.93	33.82	I	C	SP	P
ANP	45.983	88.52	7.93	33.82	I	C	LP	P

Table 165. Station data for event 89....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
TATO	46.053	88.79	7.93	33.82	I	C	LP	P
DIX	46.404	302.27	7.91	33.72	E	C	LP	P
BSF	46.520	304.75	7.91	33.72	I	C	SP	P
BER	46.537	322.16	7.91	33.72	I	C	LP	P
WLF	46.664	307.34	7.91	33.72	E	C	LP	P
HAU	46.787	305.06	7.88	33.58	I	C	SP	P
UCC	47.645	309.09	7.84	33.38	E	C	LP	P
LBF	48.555	304.10	7.78	33.09	I	C	SP	P
LOR	48.577	304.49	7.78	33.09	I	C	LP	P
LOR	48.577	304.49	7.78	33.09	I	C	SP	P
KBS	48.607	347.49	7.78	33.09	I	C	LP	P
SMF	48.717	303.68	7.78	33.09	I	C	SP	P
SSF	48.855	304.29	7.74	32.90	I	C	SP	P
AVF	49.014	303.96	7.74	32.90	I	C	SP	P
MZF	49.660	303.38	7.70	32.71	I	C	SP	P
TCF	49.895	303.55	7.66	32.52	I	C	SP	P
LSF	50.363	303.65	7.62	32.33	I	C	SP	P
RJF	50.605	302.46	7.62	32.33	I	C	SP	P
LDF	50.911	306.93	7.58	32.14	I	C	SP	P
LPO	50.991	301.76	7.58	32.14	I	C	SP	P
FLN	51.105	307.21	7.58	32.14	I	C	SP	P
SHK	51.115	71.92	7.58	32.14	I	C	LP	P
LFF	51.233	302.19	7.58	32.14	I	C	SP	P
MFF	51.400	304.45	7.54	31.95	I	C	SP	P
ESK	51.455	315.89	7.54	31.95	I	C	SP	P
ESK	51.455	315.89	7.54	31.95	E	C	LP	P
LPF	51.638	306.42	7.54	31.95	I	C	SP	P
DDK	53.642	313.97	7.37	31.15	I	C	SP	P
ETA	53.731	313.11	7.37	31.15	I	C	SP	P
DLE	53.785	313.89	7.33	30.96	I	C	SP	P
DMU	53.853	314.69	7.33	30.96	I	C	SP	P
ECP	53.951	312.52	7.33	30.96	I	C	SP	P
ECB	54.150	312.82	7.33	30.96	I	C	SP	P
DCN	54.198	314.09	7.33	30.96	I	C	SP	P
LGR	54.208	300.08	7.33	30.96	I	C	SP	P
MAJO	54.578	67.50	7.29	30.77	E	C	LP	P
MAT	54.578	67.50	7.29	30.77	I	C	SP	P
DAG	54.645	343.61	7.29	30.77	I	C	SP	P
BNG	56.025	248.01	7.18	30.26	I	C	SP	P
LEM	56.028	131.66	7.18	30.26	I	C	LP	P
BCAO	56.035	248.02	7.18	30.26	E	C	LP	P
TOL	56.187	297.62	7.18	30.26	I	C	LP	P
TOL	56.187	297.62	7.18	30.26	I	C	SP	P
VAL	56.319	313.03	7.14	30.07	E	C	LP	P
CGP	57.507	104.37	7.07	29.75	I	C	SP	P
MAL	57.645	294.27	7.07	29.75	I	C	SP	P
BKB	57.976	119.09	7.03	29.56	I	D	SP	P
AVY	58.347	203.80	6.99	29.38	I	C	SP	P
PCR	58.423	194.74	6.99	29.38	E	C	LP	P
PTO	58.938	300.54	6.96	29.24	I	C	LP	P

Table 165. Station data for event 89....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PTO	58.938	300.54	6.96	29.24	I	C	SP	P
DAV	59.029	105.00	6.96	29.24	I	C	LP	P
ALE	59.230	353.40	6.96	29.24	I	C	SP	P
KRI	64.525	222.32	6.51	27.19	I	C	SP	P
BUL	67.777	221.13	6.22	25.88	I	C	LP	P
BUL	67.777	221.13	6.22	25.88	I	C	SP	P
GUMO	70.768	87.00	5.99	24.86	I	C	LP	P
GUA	70.832	87.02	5.99	24.86	I	C	LP	P
SLR	72.560	218.09	5.88	24.37	I	C	LP	P
SLR	72.560	218.09	5.88	24.37	I	C	SP	P
IMA	72.939	16.82	5.85	24.24	I	C	SP	P
BPI	73.050	218.03	5.85	24.24	I	C	SP	P
COL	75.249	15.32	5.71	23.62	I	C	LP	P
COL	75.249	15.32	5.71	23.62	I	C	SP	P
RSNT	81.680	1.69	5.21	21.45	I	C	LP	P
NWAO	82.188	140.72	5.17	21.28	E	C	LP	P
WB2	83.188	120.56	5.11	21.02	I	C	SP	P
CER	83.302	220.01	5.08	20.89	I	C	SP	P
KVG	84.872	96.91	4.99	20.50	I	C	SP	P
PMG	86.058	104.54	4.90	20.11	E	C	LP	P
RAB	86.931	97.39	4.83	19.81	I	C	LP	P
CTAO	91.861	113.48	4.67	19.13	E	C	LP	P
RSON	92.046	349.14	4.67	19.13	E	C	LP	P
GAC	92.459	335.95	4.66	19.09	I	C	LP	P
RSNY	93.155	334.81	4.64	19.00	E	C	LP	P
WES	93.860	331.70	4.61	18.88	I	C	LP	P
ADE	95.987	129.24	4.55	18.62	I	C	SP	P
ADE	95.987	129.24	4.55	18.62	I	C	LP	P
HNR	96.237	97.07	4.55	18.62	E	C	LP	P
LON	96.916	7.47	4.53	18.54	E	C	LP	P
SCP	97.618	335.25	4.52	18.50	E	C	LP	P
GEO	99.029	333.84	4.48	18.33	E	C	LP	P
BEC	99.219	321.69	4.48	18.33	I	C	LP	P
RSSD	99.868	354.92	4.47	18.28	E	C	LP	P
RIV	103.491	122.00	4.45	18.20	E	C	LP	Pdf
GOL	104.357	355.53	4.45	18.20	E	C	LP	Pdf
RSCP	104.811	338.80	4.45	18.20	E	C	LP	Pdf
JAS	105.768	7.75	1.89	7.62	E	C	LP	PKP
SJG	111.375	313.93	1.89	7.62	E	C	LP	PKP
JCT	112.905	349.52	1.89	7.61	E	C	LP	PKP
SNZO	123.441	119.63	1.87	7.54	E	C	LP	PKP
IIP	123.646	346.28	1.87	7.53	E	C	LP	PKP
ZOBO	137.163	286.06	1.80	7.27	E	C	LP	PKP
LPA	137.251	255.41	1.80	7.27	E	C	LP	PKP
LPB	137.296	285.72	1.80	7.27	E	C	LP	PKP
BAA	137.587	256.06	1.79	7.23	E	D	LP	PKP
ANT	142.966	278.14	1.72	6.94	I	C	LP	PKP
TLL	146.009	268.35	1.66	6.70	I	C	SP	PKP
BACH	146.773	262.76	1.64	6.61	I	D	SP	PKP
PEL	146.869	263.20	1.64	6.61	C	I	LP	PKP

Table 166. Station data for event 133

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ARO	14.382	271.85	13.08	41.01	I	C	LP	P
POO	17.276	63.94	12.52	38.91	I	C	SP	P
QUE	20.620	23.76	10.35	31.28	I	D	SP	P
HYB	21.213	71.27	10.21	30.81	I	C	SP	P
KHI	22.631	2.42	9.88	29.72	I	D	SP	P
MHI	24.823	3.80	9.49	28.43	I	D	LP	P
NDI	25.169	44.13	9.49	28.43	I	C	SP	P
TAB	28.354	341.18	9.14	27.29	I	D	LP	P
DMN	30.470	54.14	8.87	26.42	I	C	SP	P
HLW	30.473	310.91	8.87	26.42	I	C	LP	P
KKN	30.689	53.95	8.87	26.42	I	C	SP	P
PKI	30.695	54.44	8.87	26.42	I	C	SP	P
ELL	35.404	320.01	8.53	25.34	I	D	SP	P
ANTO	35.796	326.60	8.51	25.27	I	D	LP	P
LSA	36.165	54.74	8.51	25.27	I	C	SP	P
YER	36.672	319.19	8.48	25.18	I	D	SP	P
ALT	36.752	323.20	8.45	25.08	I	D	SP	P
GPA	37.458	324.89	8.42	24.99	I	C	SP	P
DST	37.984	322.66	8.39	24.89	I	D	SP	P
BNG	39.186	262.97	8.33	24.70	I	C	SP	P
BCAO	39.198	262.98	8.33	24.70	I	C	LP	P
DMK	39.918	324.67	8.27	24.51	I	C	SP	P
BDT	40.546	76.85	8.24	24.42	I	C	SP	P
PVL	42.236	324.36	8.16	24.17	I	D	SP	P
SNG	42.709	91.77	8.13	24.07	I	C	SP	P
SNG	42.709	91.77	8.13	24.07	I	C	LP	P
VAY	42.709	320.49	8.13	24.07	I	D	SP	P
PCT	42.831	80.72	8.11	24.01	I	C	SP	P
VTS	43.057	322.42	8.11	24.01	I	D	SP	P
CVO	43.424	328.04	8.08	23.91	I	C	SP	P
SKO	43.775	320.59	8.05	23.82	I	D	SP	P
COZ	44.069	326.28	8.05	23.82	I	C	SP	P
SRE	44.290	324.82	8.03	23.76	I	D	SP	P
KMI	44.834	65.87	8.00	23.66	I	C	LP	P
SLR	46.633	217.30	7.91	23.38	I	D	SP	P
GTA	46.660	45.80	7.91	23.38	I	C	SP	P
EVA	46.751	215.87	7.88	23.29	I	D	SP	P
KSR	47.563	218.45	7.85	23.19	I	D	SP	P
PSZ	48.085	326.50	7.82	23.10	I	D	SP	P
LZH	48.404	51.58	7.79	23.01	E	C	LP	P
SPC	48.666	328.05	7.79	23.01	I	D	SP	P
LJU	50.147	321.78	7.67	22.63	I	D	SP	P
BLF	50.385	216.21	7.63	22.51	I	D	SP	P
TRI	50.455	321.06	7.63	22.51	I	D	SP	P
KMR	51.390	323.86	7.55	22.26	I	D	LP	P
KSP	51.701	327.83	7.55	22.26	I	D	SP	P
XAN	51.859	55.61	7.50	22.10	I	C	SP	P
KHC	52.254	324.80	7.46	21.98	I	D	SP	P
OGA	52.675	321.25	7.46	21.98	I	D	SP	P
BRG	52.960	326.83	7.42	21.86	I	D	SP	P

Table 166. Station data for event 133....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
FUR	53.116	322.80	7.42	21.86	I	D	SP	P
CLL	53.696	326.90	7.38	21.73	I	D	SP	P
HOF	53.803	325.38	7.34	21.61	I	D	SP	P
GRF	53.869	324.45	7.34	21.61	I	D	SP	P
GRFO	53.873	324.45	7.34	21.61	I	D	LP	P
BRN	54.177	328.15	7.34	21.61	I	D	SP	P
BTO	54.401	47.99	7.30	21.48	I	C	SP	P
NUR	54.650	340.78	7.30	21.48	I	D	SP	P
ECH	55.620	321.38	7.22	21.24	I	D	SP	P
SUF	55.911	343.16	7.19	21.14	I	D	SP	P
SUR	55.930	217.63	7.19	21.14	I	D	SP	P
COP	56.337	331.19	7.15	21.02	E	D	LP	P
LBF	57.155	319.04	7.11	20.90	I	D	SP	P
LOR	57.329	319.33	7.08	20.81	I	D	SP	P
SSF	57.484	319.00	7.08	20.81	I	D	SP	P
DOU	57.908	322.66	7.04	20.68	E	C	LP	P
ALI	57.991	308.15	7.04	20.68	I	C	LP	P
DBN	58.370	325.00	7.00	20.56	E	D	LP	P
QZH	59.131	67.77	6.97	20.47	I	C	SP	P
ALM	59.269	306.10	6.93	20.35	I	D	SP	P
KON	59.784	334.14	6.89	20.22	E	D	LP	P
KONO	59.784	334.14	6.89	20.22	I	D	LP	P
MAL	60.801	305.69	6.81	19.98	I	C	SP	P
BAG	61.210	77.50	6.81	19.98	I	C	LP	P
KEV	61.407	348.39	6.77	19.86	I	D	LP	P
TATO	61.760	67.78	6.73	19.73	I	C	LP	P
ANP	61.786	67.54	6.73	19.73	I	C	LP	P
BER	62.007	333.61	6.73	19.73	I	D	LP	P
ESK	64.177	326.36	6.56	19.22	E	D	LP	P
PTO	64.610	310.13	6.52	19.09	E	C	LP	P
PTO	64.610	310.13	6.52	19.09	I	D	SP	P
LIS	64.762	307.42	6.48	18.97	I	D	SP	P
ECB	65.404	322.57	6.44	18.85	I	C	SP	P
NAU	66.073	120.96	6.40	18.73	I	C	SP	P
SEO	66.857	54.02	6.31	18.46	I	C	LP	P
DAV	67.184	87.07	6.31	18.46	I	C	LP	P
VAL	67.401	321.63	6.27	18.33	E	D	LP	P
NWAO	71.977	130.20	5.93	17.31	I	C	LP	P
DAG	75.814	346.65	5.65	16.47	I	D	SP	P
MAJO	75.851	55.05	5.65	16.47	I	C	LP	P
MAT	75.851	55.05	5.65	16.47	I	C	SP	P
GUMO	84.832	77.24	4.99	14.50	I	C	LP	P
GUA	84.884	77.28	4.99	14.50	E	C	LP	P
ADE	89.366	125.74	4.72	13.70	I	C	SP	P
COL	101.541	10.73	4.45	12.90	E	C	LP	Pdf
WES	108.870	322.42	1.89	5.44	E	C	LP	PKP
BEC	109.707	310.49	1.89	5.44	E	C	LP	PKP
SCP	113.692	324.38	1.88	5.42	E	C	LP	PKP
SJG	117.140	297.19	1.88	5.41	E	C	LP	PKP
LPA	117.286	236.62	1.88	5.41	E	C	LP	PKP

Table 166. Station data for event 133....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BLA	117.560	322.89	1.88	5.40	E	C	LP	PKP
SHA	126.687	322.70	1.86	5.36	E	C	LP	PLP
GOL	126.710	343.55	1.86	5.36	I	C	LP	PKP
BOG	129.264	285.64	1.86	5.34	E	C	LP	PKP
JCT	132.974	332.94	1.84	5.29	E	C	LP	PKP
EPT	134.406	340.85	1.83	5.26	E	C	LP	PKP

Table 167. Station data for event 140

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
QUE	4.908	59.75	14.01	94.47	I	D	SP	P
KHI	6.974	336.01	13.88	81.03	I	C	LP	P
MHI	8.754	346.29	13.71	77.47	I	C	LP	P
IR2	12.311	312.35	13.28	70.95	I	C	SP	P
NDI	13.399	82.65	13.11	68.93	I	D	SP	P
POO	14.224	127.88	12.97	67.44	I	C	SP	P
TAB	16.690	311.84	12.53	63.15	I	C	LP	P
MSL	18.143	302.89	12.28	60.93	I	C	SP	P
HYB	18.382	120.70	12.45	62.38	I	D	SP	P
DMN	20.411	85.12	10.25	46.85	I	D	SP	P
KKN	20.547	84.56	10.21	46.65	I	D	SP	P
PKI	20.683	85.15	10.18	46.44	I	D	SP	P
KOD	22.701	137.32	9.76	44.02	I	D	SP	P
ARO	24.208	231.84	9.54	42.75	I	D	SP	P
LSA	25.555	78.76	9.39	41.97	I	D	SP	P
HLW	26.950	281.77	9.26	41.26	I	C	LP	P
ANTO	27.003	304.05	9.26	41.23	I	C	LP	P
TLB	31.880	310.80	8.74	38.49	I	C	SP	P
PPE	32.742	313.44	8.68	38.17	I	C	SP	P
ISR	33.062	311.09	8.66	38.06	I	C	SP	P
CLI	33.081	313.85	8.66	38.05	I	C	SP	P
BUC1	33.158	309.51	8.65	38.03	I	C	SP	P
VRI	33.194	312.43	8.65	38.02	I	C	SP	P
GTA	33.293	59.80	8.65	37.99	I	D	SP	P
CVO	33.539	312.11	8.63	37.91	I	C	SP	P
MLR	33.580	311.45	8.63	37.90	I	C	SP	P
CEA	34.090	313.95	8.60	37.74	I	C	SP	P
CMP	34.113	310.70	8.60	37.74	I	C	SP	P
COZ	34.597	310.52	8.57	37.59	I	C	SP	P
VAY	34.905	303.17	8.55	37.49	I	C	SP	P
SKO	35.853	304.02	8.49	37.20	I	C	SP	P
LZH	36.194	66.09	8.47	37.09	I	D	SP	P
CD2	36.336	74.82	8.46	37.04	I	D	SP	P
KMI	36.409	84.66	8.46	37.02	I	D	LP	P
NAI	37.733	224.18	8.38	36.62	I	D	SP	P
JOS	38.041	314.31	8.36	36.53	I	C	SP	P
SPC	38.439	315.28	8.34	36.41	I	C	SP	P
BUD	38.734	312.29	8.32	36.34	I	C	SP	P
PCT	38.764	101.42	8.33	36.34	I	D	SP	P
KRA	38.903	316.50	8.32	36.31	I	C	SP	P
GYA	39.564	81.28	8.28	36.12	I	D	SP	P
SGO	40.277	300.86	8.24	35.90	I	C	SP	P
XAN	40.414	69.19	8.23	35.86	I	D	SP	P
VKA	40.691	312.78	8.21	35.79	I	C	SP	P
DUI	40.993	302.48	8.20	35.72	I	C	SP	P
BTO	41.206	59.15	8.19	35.67	I	D	SP	P
KSP	41.364	316.57	8.18	35.62	I	C	SP	P
LJU	41.452	309.10	8.18	35.60	I	C	SP	P
CEY	41.478	308.63	8.18	35.59	I	C	SP	P
SNG	41.845	112.00	8.15	35.48	I	D	LP	P

Table 167. Station data for event 140....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SNG	41.845	112.00	8.15	35.48	I	D	LP	P
TRI	41.932	308.48	8.15	35.45	I	C	SP	P
KMR	42.078	312.00	8.14	35.41	I	C	LP	P
PRU	42.227	314.90	8.13	35.36	I	C	SP	P
KHC	42.651	313.46	8.11	35.24	I	C	SP	P
BRG	42.808	316.04	8.10	35.23	I	C	SP	P
BHG	42.847	311.29	8.10	35.22	I	C	SP	P
TIY	43.068	63.47	8.09	35.17	I	D	SP	P
WET	43.104	313.34	8.09	35.16	I	C	SP	P
PSI	43.143	118.78	8.09	35.15	I	D	SP	P
CLL	43.490	316.46	8.07	35.04	I	C	SP	P
FIR	43.501	305.36	8.06	35.03	I	D	SP	P
BRN	43.642	318.06	8.06	34.99	I	C	SP	P
UPP	43.970	329.41	8.04	34.89	I	C	SP	P
HOF	43.971	314.82	8.04	34.89	I	C	SP	P
OGA	43.970	309.79	8.04	34.89	I	C	SP	P
FUR	43.982	311.68	8.04	34.89	I	C	SP	P
GAP	44.024	310.66	8.03	34.88	I	C	SP	P
MOX	44.201	315.24	8.02	34.83	I	C	LP	P
GRFO	44.274	313.83	8.02	34.82	I	C	LP	P
GRFO	44.274	313.83	8.02	34.82	I	C	SP	P
GRF	44.270	313.83	8.02	34.83	I	C	SP	P
COP	44.984	322.38	7.99	34.64	I	C	SP	P
COP	44.984	322.38	7.99	34.64	I	C	LP	P
LLS	45.353	309.57	7.96	34.53	E	C	LP	P
TMA	45.370	308.49	7.96	34.53	E	C	LP	P
WHN	45.416	73.42	7.96	34.51	I	D	SP	P
STU	45.439	312.25	7.96	34.51	I	C	LP	P
SLE	45.785	310.77	7.94	34.40	E	C	LP	P
HAM	45.818	318.84	7.94	34.39	I	C	SP	P
ZUL	45.825	310.37	7.93	34.39	E	C	LP	P
MMK	45.996	308.35	7.92	34.34	E	C	LP	P
BUH	46.062	312.00	7.92	34.32	I	C	SP	P
TNS	46.123	314.16	7.92	34.30	I	C	SP	P
GZH	46.289	83.78	7.91	34.25	I	D	SP	P
DIX	46.383	308.35	7.90	34.23	E	C	LP	P
GWF	46.495	312.36	7.89	34.19	I	C	SP	P
KEV	46.586	344.03	7.89	34.17	I	C	LP	P
CDF	46.663	311.55	7.88	34.14	I	C	SP	P
ECH	46.723	311.27	7.88	34.13	I	C	SP	P
BAF	46.797	310.73	7.88	34.10	I	C	SP	P
BGG	46.828	314.00	7.87	34.09	I	C	SP	P
TIA	46.920	65.21	7.87	34.07	I	D	SP	P
BSF	46.933	310.71	7.87	34.06	I	C	SP	P
MUD	46.958	322.72	7.87	34.06	I	C	SP	P
BNS	47.032	315.01	7.86	34.03	I	C	SP	P
LRG	47.042	304.71	7.86	34.03	I	C	SP	P
STB	47.194	314.48	7.85	33.99	I	C	SP	P
WTS	47.407	316.36	7.84	33.92	I	C	SP	P
BNG	47.445	248.72	7.84	33.91	I	D	SP	P

Table 167. Station data for event 140....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
WLF	47.526	313.15	7.83	33.89	E	C	LP	P
KON	47.647	326.98	7.83	33.85	I	C	LP	P
KONO	47.647	326.98	7.83	33.85	I	C	LP	P
ENN	47.794	314.61	7.82	33.82	I	C	SP	P
DBN	48.421	316.32	7.77	33.58	I	C	LP	P
AVY	48.457	198.23	7.77	33.57	I	D	SP	P
DOU	48.571	313.60	7.76	33.53	I	C	LP	P
UCC	48.784	314.51	7.74	33.44	I	C	LP	P
LBF	48.794	309.42	7.74	33.44	I	C	SP	P
SMF	48.878	308.97	7.73	33.41	I	C	SP	P
LOR	48.884	309.80	7.73	33.40	I	C	SP	P
NJ2	48.940	70.46	7.73	33.38	I	D	SP	P
SSF	49.118	309.51	7.71	33.31	I	C	SP	P
AVF	49.217	309.15	7.71	33.27	I	C	SP	P
MZF	49.741	308.39	7.67	33.07	I	C	SP	P
TCF	50.001	308.48	7.64	32.97	I	C	SP	P
VDM	50.040	312.12	7.64	32.95	I	C	LP	P
CAF	50.120	306.71	7.63	32.92	I	C	SP	P
QZH	50.361	79.57	7.62	32.83	I	D	SP	P
LSF	50.473	308.44	7.61	32.78	I	C	SP	P
RJF	50.499	307.21	7.60	32.77	I	C	SP	P
LPO	50.751	306.42	7.58	32.68	I	C	SP	P
LFF	51.063	306.76	7.56	32.56	I	C	SP	P
SSE	51.079	71.17	7.56	32.55	E	D	LP	P
EPF	51.452	304.34	7.53	32.40	I	C	SP	P
LDF	51.585	311.46	7.52	32.35	I	C	SP	P
MFF	51.626	308.92	7.51	32.34	I	C	SP	P
FLN	51.824	311.67	7.50	32.26	I	C	SP	P
GRR	52.076	311.20	7.48	32.16	I	C	SP	P
LPF	52.203	310.75	7.47	32.12	I	C	SP	P
CN2	52.616	54.57	7.44	31.96	I	D	SP	P
ANP	52.836	78.32	7.42	31.87	I	D	LP	P
TATO	52.871	78.58	7.41	31.86	I	D	LP	P
MTD	53.240	217.33	7.39	31.72	I	D	SP	P
LGR	53.589	303.86	7.36	31.58	I	C	SP	P
ESK	53.667	319.87	7.35	31.55	I	C	LP	P
KRI	54.361	219.21	7.30	31.29	I	D	SP	P
SEO	54.547	62.07	7.28	31.22	I	D	LP	P
BAG	54.959	88.86	7.25	31.06	I	D	LP	P
TOL	55.086	300.91	7.24	31.01	I	C	SP	P
TOL	55.086	300.91	7.24	31.01	I	C	LP	P
DKM	55.432	317.30	7.21	30.88	I	C	SP	P
MDJ	55.503	53.21	7.20	30.85	I	D	SP	P
DLE	55.599	317.35	7.20	30.82	I	C	SP	P
DMU	55.804	318.10	7.18	30.73	I	C	SP	P
LEM	55.862	121.06	7.17	30.71	I	D	LP	P
MAL	55.920	297.21	7.17	30.69	I	C	SP	P
DCN	56.037	317.43	7.16	30.65	I	C	SP	P
SFS	57.388	297.25	7.06	30.18	I	C	SP	P
BUL	57.595	217.83	7.05	30.11	I	D	SP	P

Table 167. Station data for event 140....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
VAL	57.929	315.89	7.03	30.03	E	C	LP	P
PTO	58.293	303.10	7.00	29.89	I	C	LP	P
PTO	58.293	303.10	7.00	29.89	I	C	SP	P
LIS	59.191	300.42	6.93	29.55	I	C	SP	P
SHK	59.712	64.42	6.89	29.36	I	D	SP	P
AKU	60.999	332.19	6.78	28.88	I	C	SP	P
DAG	61.064	344.94	6.78	28.85	I	C	SP	P
CGP	61.931	95.30	6.71	28.53	I	D	SP	P
SLR	62.353	214.47	6.68	28.38	I	C	SP	P
EVA	62.601	213.33	6.66	28.28	I	D	SP	P
BPI	62.843	214.41	6.64	28.19	I	D	SP	P
KSR	63.164	215.55	6.61	28.07	I	D	SP	P
DAV	63.328	96.21	6.60	28.01	I	D	LP	P
MAJO	63.535	60.87	6.58	27.94	I	D	LP	P
MAT	63.535	60.87	6.58	27.94	I	D	SP	P
PRY	63.744	214.40	6.56	27.86	I	D	SP	P
MKS	64.324	111.39	6.52	27.65	I	D	SP	P
DDR	64.452	61.20	6.51	27.60	I	D	SP	P
SEK	64.823	213.42	6.48	27.46	I	D	SP	P
VIR	64.997	214.19	6.46	27.40	I	D	SP	P
SWZ	65.048	215.99	6.46	27.38	I	C	SP	P
TSK	65.100	60.74	6.46	27.36	I	D	SP	P
BLF	66.178	214.09	6.36	26.94	I	C	SP	P
NAU	71.876	128.61	5.92	24.94	I	D	SP	P
TUH	73.131	216.57	5.83	24.54	I	D	SP	P
MBL	74.067	124.79	5.77	24.25	I	C	SP	P
MBC	76.216	0.35	5.62	23.58	I	C	SP	P
MEK	76.627	129.89	5.60	23.47	I	C	SP	P
GUMO	77.524	81.14	5.54	23.24	I	D	LP	P
GUA	77.585	81.17	5.54	23.22	I	D	LP	P
BAL	78.052	134.04	5.51	23.08	I	C	SP	P
MUN	78.665	135.36	5.46	22.88	I	D	SP	P
NWAO	79.943	135.47	5.35	22.39	I	D	SP	P
NWAO	79.943	135.47	5.35	22.39	I	D	LP	P
FRB	80.857	340.00	5.26	22.01	I	C	SP	P
KLG	81.260	131.45	5.23	21.84	I	D	SP	P
WBN	81.988	124.96	5.16	21.57	I	D	SP	P
WB2	84.480	115.79	5.01	20.91	I	D	SP	P
COL	84.743	12.31	5.00	20.85	I	C	LP	P
COL	84.743	12.31	5.00	20.85	I	C	SP	P
ASPA	86.101	119.16	4.88	20.35	I	D	SP	P
PMG	90.036	100.54	4.71	19.59	E	D	LP	P
FCC	91.520	347.82	4.68	19.46	I	C	SP	P
RAB	92.032	93.64	4.67	19.41	I	D	LP	P
CTAO	94.254	110.33	4.60	19.11	I	D	LP	P
CTA	94.254	110.33	4.60	19.11	I	D	LP	P
MAW	95.096	179.69	4.57	18.99	I	C	SP	P
MNT	96.669	330.35	4.53	18.82	I	C	SP	P
GAC	97.309	331.51	4.53	18.80	E	C	LP	P
RSNY	97.816	330.26	4.51	18.72	E	C	LP	P

Table 167. Station data for event 140....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
WES	98.013	327.05	4.50	18.69	E	C	LP	P
RSON	98.821	344.73	4.49	18.62	E	C	LP	P
HNR	101.276	94.76	4.45	18.47	E	D	LP	Pdf
YOU	102.297	122.24	4.45	18.47	I	C	SP	Pdf
SCP	102.292	329.98	4.45	18.47	E	C	LP	Pdf
GEO	103.458	328.32	4.45	18.47	E	C	LP	Pdf
BLA	106.366	329.55	1.89	7.73	E	C	LP	PKP
COR	107.815	4.02	1.89	7.73	I	C	LP	PKP
COR	107.815	4.02	1.89	7.73	I	C	SP	PKP
GOL	111.848	349.57	1.89	7.73	I	C	LP	PKP
SJG	112.201	306.17	1.89	7.73	E	C	LP	PKP
NOU	112.272	104.24	1.89	7.73	I	C	SP	PKP
SHA	115.261	331.74	1.88	7.69	E	C	LP	PKP
HON	117.685	42.66	1.88	7.68	E	C	LP	PKP
JCT	119.526	342.00	1.87	7.67	E	C	LP	PKP
EPT	119.780	348.78	1.87	7.66	E	C	LP	PKP
BOG	126.828	300.32	1.86	7.61	E	C	LP	PKP
LPA	128.910	246.19	1.86	7.59	E	C	LP	PKP
ARE	135.746	274.69	1.81	7.42	I	C	SP	PKP

Table 168. Station data for event 171

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MHI	9.061	16.18	13.82	54.20	I	C	LP	P
QUE	9.614	71.98	13.77	53.91	I	C	LP	P
NDI	18.408	81.77	12.29	46.16	I	C	SP	P
POO	18.419	115.65	12.29	46.16	I	C	SP	P
JER	18.863	287.82	12.18	45.63	I	C	SP	P
ATA	20.271	220.15	10.32	37.27	E	C	LP	P
ARO	20.423	221.10	10.32	37.27	I	C	LP	P
DAF	20.547	221.94	10.32	37.27	E	C	LP	P
SGH	20.618	221.41	10.32	37.27	E	C	LP	P
GBR	20.948	221.32	10.18	36.69	E	C	LP	P
ALT	24.655	304.29	9.54	34.05	I	C	SP	P
DMN	25.434	83.26	9.43	33.60	I	C	SP	P
KKN	25.567	82.81	9.43	33.60	I	C	SP	P
PKI	25.706	83.28	9.43	33.60	I	C	SP	P
IZM	26.584	301.30	9.33	33.20	I	C	SP	P
ATH	29.210	299.06	9.04	32.04	I	C	SP	P
KRA	35.653	318.93	8.53	30.04	I	C	SP	P
SGO	36.074	301.77	8.50	29.92	I	C	SP	P
LJU	37.704	310.55	8.41	29.57	I	C	SP	P
CEY	37.702	310.03	8.41	29.57	I	C	SP	P
AQU	37.754	304.37	8.38	29.46	I	C	SP	P
KSP	38.104	318.57	8.38	29.46	I	C	SP	P
TRI	38.145	309.81	8.38	29.46	I	C	SP	P
MNS	38.289	304.30	8.35	29.34	I	C	SP	P
KMR	38.509	313.57	8.35	29.34	I	C	LP	P
KHC	39.175	315.04	8.32	29.23	I	C	SP	P
BHG	39.230	312.69	8.32	29.23	I	C	SP	P
NUR	39.283	335.73	8.30	29.15	I	C	SP	P
BRG	39.504	317.77	8.30	29.15	I	C	SP	P
WET	39.618	314.85	8.30	29.15	I	C	SP	P
CHG	39.926	93.31	8.27	29.03	I	C	SP	P
CHG	39.926	93.31	8.27	29.03	I	C	LP	P
CLL	40.210	318.10	8.27	29.03	I	C	SP	P
OGA	40.255	310.93	8.24	28.92	I	C	SP	P
SUF	40.325	338.99	8.24	28.92	I	C	SP	P
FUR	40.384	312.94	8.24	28.92	I	C	SP	P
HOF	40.579	316.30	8.24	28.92	I	C	SP	P
GRF	40.810	315.20	8.21	28.80	I	C	SP	P
GRFO	40.814	315.20	8.21	28.80	I	C	LP	P
MOX	40.836	316.71	8.21	28.80	I	C	SP	P
KMI	41.428	82.50	8.19	28.73	I	C	LP	P
SAX	41.458	311.14	8.19	28.73	I	C	LP	P
TMA	41.571	309.36	8.19	28.73	I	C	LP	P
LLS	41.619	310.51	8.19	28.73	I	C	LP	P
UPP	41.653	331.62	8.19	28.73	I	C	SP	P
COP	42.121	324.12	8.16	28.61	I	C	SP	P
SLE	42.124	311.74	8.16	28.61	E	C	LP	P
COP	42.121	324.12	8.16	28.61	I	C	LP	P
ZUL	42.139	311.30	8.16	28.61	E	C	LP	P
DIX	42.573	309.08	8.13	28.50	I	C	LP	P

Table 168. Station data for event 171....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
HAM	42.694	320.27	8.13	28.50	I	C	SP	P
BNG	42.758	244.27	8.10	28.38	I	C	SP	P
BCAO	42.768	244.27	8.10	28.38	I	C	LP	P
CDF	43.047	312.45	8.10	28.38	I	C	SP	P
BSF	43.264	311.53	8.08	28.31	I	C	SP	P
HAU	43.587	311.71	8.08	28.31	I	C	SP	P
PCT	43.694	97.63	8.08	28.31	I	C	SP	P
WLF	44.008	314.03	8.05	28.19	E	C	LP	P
WTS	44.103	317.44	8.05	28.19	I	C	SP	P
ENN	44.371	315.55	8.02	28.08	I	C	SP	P
LBF	45.039	309.94	7.99	27.96	I	C	SP	P
DOU	45.078	314.38	7.99	27.96	E	C	LP	P
SMF	45.096	309.45	7.99	27.96	I	C	SP	P
DBN	45.110	317.26	7.99	27.96	I	C	LP	P
KONO	45.117	328.51	7.99	27.96	I	C	LP	P
LOR	45.152	310.33	7.99	27.96	I	C	SP	P
SSF	45.368	310.00	7.97	27.89	I	C	SP	P
AVF	45.445	309.61	7.97	27.89	I	C	SP	P
KEV	45.470	346.14	7.97	27.89	I	C	LP	P
MZF	45.922	308.74	7.94	27.77	I	C	SP	P
TCF	46.187	308.81	7.94	27.77	I	C	SP	P
CAF	46.202	306.92	7.94	27.77	I	C	SP	P
SNG	46.518	107.45	7.91	27.66	I	C	LP	P
RJF	46.609	307.41	7.91	27.66	I	C	SP	P
LPO	46.816	306.55	7.88	27.55	I	C	SP	P
AVY	46.996	191.23	7.88	27.55	I	C	SP	P
LFF	47.145	306.88	7.88	27.55	I	C	SP	P
MFF	47.832	309.10	7.82	27.32	I	C	SP	P
LDF	47.946	311.78	7.82	27.32	I	C	SP	P
FLN	48.198	311.98	7.82	27.32	I	C	SP	P
GRR	48.419	311.46	7.78	27.17	I	C	SP	P
LPF	48.518	310.97	7.78	27.17	I	C	SP	P
TET	48.785	209.68	7.74	27.02	I	C	SP	P
LGR	49.507	303.57	7.70	26.86	I	C	SP	P
ESK	50.581	320.34	7.62	26.56	I	C	LP	P
CRT	50.804	296.84	7.58	26.41	I	C	SP	P
TOL	50.851	300.34	7.58	26.41	I	C	SP	P
MAL	51.513	296.37	7.54	26.26	I	C	SP	P
ETA	52.096	316.78	7.50	26.11	I	C	SP	P
ECP	52.167	316.12	7.50	26.11	I	C	SP	P
PTO	54.162	302.40	7.34	25.52	I	C	SP	P
PTO	54.162	302.40	7.34	25.52	I	C	LP	P
BUL	54.543	212.51	7.30	25.37	I	C	SP	P
VAL	54.555	315.77	7.30	25.37	I	C	LP	P
LIS	54.925	299.53	7.26	25.22	I	C	SP	P
SSE	55.881	69.66	7.18	24.92	E	C	LP	P
ANP	57.784	76.33	7.04	24.40	I	C	LP	P
TATO	57.823	76.57	7.04	24.40	I	C	LP	P
AKU	58.816	332.20	6.96	24.11	I	C	SP	P
JOZ	59.498	205.12	6.92	23.96	I	C	SP	P

Table 168. Station data for event 171....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SLR	59.528	209.53	6.92	23.96	I	C	SP	P
SLR	59.528	209.53	6.92	23.96	I	C	LP	P
DAG	59.942	345.09	6.88	23.81	I	C	SP	P
BAG	59.992	86.25	6.88	23.81	I	C	LP	P
BPI	60.020	209.52	6.88	23.81	I	C	SP	P
KSR	60.257	210.71	6.84	23.67	I	C	SP	P
KIC	61.530	261.92	6.76	23.37	I	C	SP	P
SEK	62.067	208.69	6.72	23.23	I	C	SP	P
SWZ	62.103	211.33	6.72	23.23	I	C	SP	P
VIR	62.184	209.49	6.72	23.23	I	C	SP	P
SHK	64.303	62.89	6.52	22.50	I	C	SP	P
ALE	66.385	352.76	6.35	21.88	I	C	SP	P
MAJO	67.989	59.30	6.23	21.45	I	C	LP	P
MAT	67.989	59.30	6.23	21.45	I	C	SP	P
DAV	68.325	93.31	6.18	21.26	I	C	LP	P
SUR	68.578	211.92	6.18	21.26	I	C	SP	P
TUH	70.121	212.61	6.07	20.87	I	C	SP	P
GDH	71.164	339.26	6.00	20.62	I	C	LP	P
GDH	71.164	339.26	6.00	20.62	I	C	SP	P
MBC	76.372	358.95	5.61	19.22	I	C	SP	P
BAL	81.642	130.78	5.22	17.84	I	C	SP	P
GUA	82.570	78.66	5.14	17.56	I	C	LP	P
NWAO	83.440	132.32	5.08	17.34	I	C	SP	P
NWAO	83.440	132.32	5.08	17.34	I	C	LP	P
IMA	83.835	11.86	5.05	17.24	I	C	SP	P
KLG	84.998	128.42	4.99	17.03	I	C	SP	P
COL	85.903	10.09	4.91	16.75	I	C	LP	P
FBA	85.903	10.09	4.91	16.75	I	C	SP	P
COL	85.903	10.09	4.91	16.75	I	C	SP	P
TTA	86.161	14.23	4.91	16.75	I	C	SP	P
RSNT	89.946	355.82	4.71	16.05	I	C	LP	P
GAC	94.950	328.40	4.58	15.59	I	C	LP	P
WES	95.315	323.93	4.56	15.52	E	C	LP	P
RSNY	95.360	327.13	4.56	15.52	I	C	LP	P
RSON	97.533	341.40	4.52	15.38	I	C	LP	P
CTAO	98.945	107.92	4.48	15.24	I	C	LP	P
SCP	99.801	326.50	4.47	15.21	E	C	LP	P
BLA	103.830	325.75	4.45	15.14	I	C	LP	Pdf
COR	108.168	359.76	1.89	6.37	E	C	LP	PKP
GOL	110.922	345.01	1.89	6.37	E	C	LP	PKP
SHA	112.862	327.14	1.89	6.36	E	C	LP	PKP
VBA	127.999	241.84	1.86	6.26	I	C	SP	PKP

Table 169. Station data for event 190

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KSH	4.864	51.22	12.71	101.69	I	D	SP	P
QUE	7.182	209.94	12.97	91.57	I	D	SP	P
NDI	9.354	144.71	12.92	84.40	I	D	SP	P
KHI	10.434	260.62	12.84	81.56	I	D	SP	P
DMN	14.819	122.78	12.31	71.48	I	D	SP	P
KKN	14.822	121.85	12.31	71.48	I	D	SP	P
PKI	15.050	122.22	12.27	71.02	I	D	SP	P
POO	18.064	171.50	10.44	53.51	I	C	SP	P
LSA	18.115	106.22	10.42	53.42	I	C	SP	P
GTA	22.802	73.95	9.54	47.34	I	C	SP	P
LZH	26.345	81.04	9.20	45.13	I	C	SP	P
KVT	27.572	290.33	9.03	44.07	I	D	SP	P
CD2	27.668	92.05	9.02	43.99	I	C	SP	P
KMI	29.334	103.79	8.84	42.96	I	C	LP	P
CHG	30.163	118.23	8.78	42.59	I	C	SP	P
HHC	31.702	69.59	8.68	41.96	I	C	SP	P
GPA	31.981	289.40	8.66	41.83	I	C	SP	P
ALT	32.295	287.14	8.64	41.72	I	C	SP	P
TIY	32.815	75.22	8.61	41.54	I	C	SP	P
ELL	32.866	282.98	8.60	41.52	I	C	SP	P
PSN	33.299	295.89	8.58	41.37	I	C	SP	P
DST	33.351	288.45	8.58	41.35	I	C	SP	P
TLB	33.378	297.55	8.57	41.34	I	C	SP	P
PPE	33.669	300.50	8.56	41.24	I	C	SP	P
DMK	33.741	292.57	8.55	41.21	I	D	SP	P
EDC	33.830	289.92	8.55	41.18	I	D	SP	P
CLI	33.907	301.09	8.54	41.15	I	C	SP	P
VRI	34.288	299.87	8.52	41.01	I	C	SP	P
JMB	34.551	293.86	8.50	40.93	I	C	SP	P
IZM	34.601	286.64	8.50	40.91	I	C	SP	P
PCT	34.693	120.84	8.50	40.89	I	C	SP	P
MLR	34.841	299.21	8.49	40.87	I	C	SP	P
OBO	34.945	232.79	8.49	40.85	I	C	LP	P
NNT	35.057	125.42	8.48	40.81	I	C	SP	P
MKL	35.241	232.67	8.47	40.75	E	C	LP	P
BJI	35.295	70.24	8.47	40.73	I	C	LP	P
DIM	35.331	293.26	8.47	40.72	I	D	SP	P
TDD	35.330	233.08	8.47	40.72	I	C	LP	P
ATA	35.397	232.30	8.46	40.69	I	C	LP	P
PVL	35.524	295.20	8.45	40.65	I	C	SP	P
KDZ	35.552	292.61	8.45	40.64	I	D	SP	P
ARO	35.575	232.85	8.45	40.63	I	C	LP	P
DAF	35.720	233.34	8.44	40.58	I	C	SP	P
COZ	35.974	298.98	8.43	40.49	I	D	SP	P
PLD	35.976	293.49	8.43	40.49	I	C	SP	P
WHN	36.329	86.58	8.41	40.37	I	C	SP	P
MMB	36.765	292.79	8.38	40.22	I	C	SP	P
TIA	36.808	76.35	8.38	40.20	I	C	SP	P
VTS	37.023	294.54	8.37	40.13	I	C	SP	P
ATH	37.423	286.90	8.34	39.99	I	C	SP	P

Table 169. Station data for event 190....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
NUR	37.867	324.26	8.31	39.83	I	C	LP	P
NUR	37.867	324.26	8.31	39.83	I	C	SP	P
BSI	38.018	138.44	8.31	39.78	I	C	SP	P
TIM	38.140	299.89	8.30	39.74	I	C	SP	P
GZH	38.737	98.22	8.27	39.56	I	C	SP	P
KRA	38.866	306.87	8.26	39.54	I	C	SP	P
PSZ	38.929	303.47	8.26	39.52	I	C	SP	P
NJ2	39.412	82.08	8.23	39.36	I	C	SP	P
DL2	39.654	70.76	8.22	39.28	I	C	SP	P
SNY	40.528	65.85	8.17	38.98	I	C	SP	P
KEV	40.827	338.26	8.15	38.92	I	C	LP	P
KSP	41.190	308.13	8.14	38.82	I	C	SP	P
VKA	41.303	304.22	8.13	38.77	I	C	SP	P
CN2	41.551	62.54	8.11	38.69	I	C	SP	P
SSE	41.611	82.37	8.11	38.67	I	C	LP	P
QZH	42.060	92.16	8.08	38.52	I	C	SP	P
PRU	42.348	306.92	8.07	38.46	I	C	SP	P
BRG	42.676	308.26	8.06	38.37	I	C	LP	P
KMR	42.780	304.10	8.05	38.33	I	C	LP	P
KHC	43.040	305.73	8.03	38.24	I	C	SP	P
BRN	43.069	310.56	8.03	38.23	I	C	SP	P
SGO	43.209	293.05	8.02	38.18	I	C	SP	P
CLL	43.244	308.95	8.02	38.17	I	C	SP	P
TRI	43.333	300.74	8.02	38.14	I	C	SP	P
KBA	43.426	302.77	8.01	38.11	I	C	SP	P
COP	43.489	315.34	8.01	38.09	I	C	LP	P
BHG	43.656	303.76	8.00	38.05	I	C	SP	P
HOF	44.031	307.59	7.98	37.97	I	C	SP	P
MOX	44.168	308.08	7.98	37.92	I	C	LP	P
MEI	44.220	288.39	7.97	37.91	I	C	SP	P
ANP	44.306	90.07	7.97	37.87	I	C	LP	P
MDJ	44.348	60.61	7.97	37.86	I	C	SP	P
TATO	44.378	90.35	7.96	37.85	I	C	LP	P
GRF	44.515	306.76	7.96	37.80	I	C	SP	P
FUR	44.667	304.59	7.95	37.75	I	C	SP	P
MNS	44.722	296.25	7.94	37.73	I	C	SP	P
OGA	45.028	302.81	7.92	37.63	I	C	SP	P
KON	45.129	320.97	7.92	37.60	I	C	LP	P
KONO	45.129	320.97	7.92	37.60	I	C	LP	P
MUD	45.318	316.46	7.91	37.53	I	C	SP	P
SAL	45.588	301.15	7.89	37.44	I	C	SP	P
OSS	45.655	302.70	7.89	37.42	E	C	LP	P
PPI	45.742	136.87	7.88	37.39	I	C	SP	P
STU	45.951	305.72	7.87	37.32	E	C	LP	P
SAX	46.097	303.61	7.86	37.27	E	C	LP	P
VDL	46.148	302.54	7.86	37.26	I	C	LP	P
LLS	46.399	303.14	7.84	37.17	E	C	LP	P
SLE	46.576	304.45	7.83	37.11	E	C	LP	P
TMA	46.627	302.13	7.83	37.10	E	C	LP	P
ZUL	46.695	304.08	7.82	37.07	E	C	LP	P

Table 169. Station data for event 190....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
VG1	46.713	300.50	7.82	37.07	I	C	SP	P
BNS	46.932	308.97	7.81	37.00	I	C	SP	P
GWF	46.945	306.22	7.81	36.99	I	C	SP	P
WIT	47.012	311.54	7.81	36.97	I	C	SP	P
WTS	47.023	310.41	7.80	36.97	I	C	SP	P
STB	47.195	308.51	7.79	36.90	I	C	SP	P
MMK	47.257	302.23	7.79	36.89	E	C	LP	P
CDF	47.267	305.51	7.79	36.89	I	C	SP	P
ECH	47.380	305.27	7.78	36.85	I	C	SP	P
CVF	47.419	297.42	7.78	36.83	I	C	SP	P
KLL	47.520	308.65	7.77	36.78	I	C	SP	P
BAF	47.557	304.79	7.77	36.77	I	C	SP	P
DIX	47.628	302.38	7.76	36.73	I	C	LP	P
BSF	47.692	304.82	7.76	36.70	I	C	SP	P
ENN	47.746	308.86	7.75	36.67	I	C	SP	P
HAU	47.952	305.13	7.73	36.55	I	C	SP	P
BAG	48.045	101.08	7.72	36.50	I	C	LP	P
DOU	48.696	308.17	7.67	36.22	E	C	LP	P
UCC	48.720	309.12	7.67	36.21	E	C	LP	P
FRF	48.745	299.26	7.67	36.20	I	C	SP	P
LMR	48.900	299.01	7.65	36.13	I	C	SP	P
LRG	48.973	299.20	7.65	36.10	I	C	SP	P
NAI	49.262	228.00	7.63	36.00	I	C	SP	P
SHK	49.413	73.00	7.62	35.95	I	C	SP	P
LBF	49.740	304.25	7.60	35.82	I	C	SP	P
LOR	49.754	304.64	7.59	35.81	I	C	SP	P
SSB	49.770	301.96	7.59	35.80	I	C	SP	P
SMF	49.911	303.85	7.58	35.74	I	C	SP	P
PGP	50.018	103.92	7.57	35.69	I	C	SP	P
SSF	50.036	304.45	7.57	35.68	I	C	SP	P
AVF	50.203	304.14	7.56	35.61	I	C	SP	P
GRC	50.267	304.84	7.55	35.58	I	C	SP	P
MZF	50.860	303.59	7.51	35.33	I	C	SP	P
KKM	51.151	115.17	7.48	35.20	I	C	SP	P
CAF	51.556	302.12	7.45	35.03	I	C	SP	P
RJF	51.824	302.72	7.43	34.91	I	C	SP	P
LDF	52.033	307.13	7.41	34.82	I	C	SP	P
FLN	52.221	307.41	7.40	34.74	I	C	SP	P
LPO	52.224	302.05	7.40	34.74	I	C	SP	P
ESK	52.365	315.98	7.38	34.68	E	C	LP	P
LFF	52.458	302.47	7.38	34.64	I	C	SP	P
GRR	52.559	307.04	7.37	34.59	I	C	SP	P
MFF	52.577	304.71	7.37	34.59	I	C	SP	P
LPF	52.772	306.64	7.35	34.51	I	C	SP	P
MLS	52.813	300.00	7.35	34.49	I	C	SP	P
MAJO	52.895	68.50	7.34	34.46	I	C	LP	P
MAT	52.895	68.50	7.34	34.46	I	C	LP	P
EPF	53.308	300.30	7.31	34.29	I	C	SP	P
DDR	53.835	68.76	7.27	34.06	I	C	SP	P
SRY	54.044	69.18	7.25	33.97	I	C	SP	P

Table 169. Station data for event 190....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
TSK	54.442	68.17	7.22	33.80	I	C	SP	P
ETA	54.708	313.32	7.20	33.69	I	C	SP	P
DLE	54.743	314.09	7.20	33.68	I	C	SP	P
DAG	54.778	343.62	7.19	33.65	I	C	SP	P
KYS	54.861	69.30	7.19	33.62	I	C	SP	P
ECP	54.942	312.75	7.18	33.59	I	C	SP	P
LEM	55.040	133.84	7.17	33.55	I	C	LP	P
ECB	55.134	313.05	7.17	33.52	I	C	SP	P
DCN	55.151	314.30	7.17	33.51	I	C	SP	P
LGR	55.474	300.49	7.15	33.42	I	C	SP	P
TOL	57.500	298.13	7.00	32.62	I	C	LP	P
DAV	57.516	106.71	7.00	32.61	I	C	LP	P
ALM	57.539	294.25	6.99	32.60	I	C	SP	P
BNG	57.712	249.41	6.98	32.54	I	C	SP	P
TRT	58.749	129.74	6.91	32.15	I	C	SP	P
MAL	59.020	294.87	6.88	32.04	I	C	SP	P
ALE	59.069	353.60	6.88	32.01	I	C	SP	P
PTO	60.194	301.08	6.79	31.55	I	C	LP	P
PTO	60.194	301.08	6.79	31.55	I	C	SP	P
IFR	60.928	291.82	6.73	31.24	I	C	SP	P
LIS	61.588	298.77	6.68	30.97	I	C	SP	P
GUMO	69.082	88.33	6.07	27.90	I	C	LP	P
GUA	69.146	88.34	6.07	27.88	I	C	LP	P
IMA	72.107	17.57	5.86	26.83	I	C	SP	P
SLR	73.884	219.64	5.73	26.22	I	C	LP	P
SLR	73.884	219.64	5.73	26.22	I	C	SP	P
INK	73.918	9.27	5.73	26.21	I	C	SP	P
TTA	74.003	20.41	5.73	26.18	I	C	SP	P
EVA	74.113	218.57	5.72	26.14	I	C	SP	P
BPI	74.373	219.57	5.70	26.07	I	C	SP	P
COL	74.456	16.14	5.70	26.05	I	C	LP	P
FBA	74.456	16.14	5.70	26.05	I	C	SP	P
MTN	74.837	118.89	5.67	25.91	I	C	SP	P
KIC	74.852	266.70	5.67	25.90	I	C	SP	P
FRB	75.089	342.65	5.65	25.82	I	C	SP	P
SEK	76.336	218.61	5.58	25.44	I	C	SP	P
SWZ	76.598	221.00	5.56	25.37	I	C	SP	P
PME	76.947	18.42	5.54	25.26	I	C	SP	P
PMR	76.953	18.48	5.54	25.26	I	C	SP	P
MEK	77.061	137.40	5.53	25.23	I	C	SP	P
BLF	77.703	219.21	5.49	25.03	I	C	SP	P
KDC	79.236	22.10	5.37	24.44	I	C	SP	P
BAL	79.285	141.15	5.36	24.40	I	C	SP	P
MUN	80.148	142.32	5.27	23.97	I	C	SP	P
PCA	80.353	15.33	5.26	23.90	I	C	SP	P
RSNT	81.263	2.66	5.18	23.53	I	C	LP	P
YKC	81.269	2.61	5.18	23.53	I	C	SP	P
WBN	81.323	131.46	5.18	23.51	I	C	SP	P
NWAO	81.422	142.16	5.17	23.48	I	D	SP	P
KLG	81.909	137.97	5.14	23.34	I	C	SP	P

Table 169. Station data for event 190....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
WB2	81.941	121.94	5.14	23.33	I	C	SP	P
RKG	82.236	142.99	5.12	23.25	I	C	SP	P
KVG	83.260	98.20	5.06	22.96	I	C	SP	P
ASPA	84.194	124.93	5.00	22.64	I	C	SP	P
FCC	84.296	352.29	4.99	22.61	I	C	SP	P
RAB	85.324	98.66	4.91	22.25	I	C	LP	P
FFC	88.953	355.98	4.71	21.28	I	C	SP	P
CTAO	90.478	114.68	4.69	21.18	I	C	LP	P
CTA	90.478	114.68	4.69	21.18	I	C	LP	P
EDM	90.572	2.66	4.69	21.17	I	C	SP	P
RSON	91.995	350.42	4.66	21.03	I	C	LP	P
BNH	92.380	334.09	4.64	20.96	I	C	SP	P
GAC	92.799	337.25	4.63	20.91	I	C	LP	P
RSNY	93.528	336.13	4.61	20.80	I	C	LP	P
PNT	94.039	7.00	4.59	20.70	I	C	SP	P
WES	94.322	333.04	4.58	20.67	E	C	LP	P
STK	94.732	126.41	4.57	20.62	I	C	SP	P
RXF	94.839	4.11	4.57	20.59	I	C	SP	P
ADE	94.928	130.33	4.56	20.58	I	C	SP	P
LDM	95.237	4.27	4.55	20.54	I	C	SP	P
NEW	95.303	5.49	4.55	20.53	I	C	SP	P
LHD	95.418	4.45	4.55	20.52	I	C	SP	P
CLX	95.493	4.17	4.55	20.51	I	C	SP	P
LON	96.329	8.88	4.53	20.44	I	C	LP	P
SCP	97.976	336.70	4.49	20.24	I	C	LP	P
BLA	102.055	337.08	4.44	20.00	I	C	SP	Pdf
FVM	103.945	345.03	4.44	20.00	I	C	SP	Pdf
MAW	103.964	183.23	4.44	20.00	I	C	SP	Pdf
GOL	104.111	357.18	4.44	20.00	I	C	LP	Pdf
KOU	104.411	104.98	4.44	20.00	I	C	SP	Pdf
BKS	104.982	10.88	4.44	20.00	I	C	LP	Pdf
TUL	106.938	348.89	1.89	8.37	E	C	LP	PKP
NOU	107.056	105.33	1.89	8.37	I	C	SP	PKP
SHA	110.381	340.98	1.89	8.37	E	C	LP	PKP
EPT	112.055	357.78	1.89	8.37	E	C	LP	PKP
JCT	112.833	351.47	1.89	8.36	E	C	LP	PKP

Table 170. Station data for event 241

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KSH	5.162	51.83	12.72	100.42	I	D	SP	P
QUE	6.934	208.29	12.92	93.06	I	D	LP	P
MHI	9.074	272.87	12.90	85.61	I	D	SP	P
NDI	9.414	142.69	12.88	84.82	I	D	SP	P
KHI	10.139	260.87	12.84	82.89	I	D	SP	P
WMQ	14.944	54.96	12.26	71.43	I	D	SP	P
IR4	16.137	271.84	12.09	69.19	I	D	SP	P
SHI	16.674	251.49	11.82	66.03	I	D	SP	P
POO	17.980	170.39	10.44	53.78	I	D	SP	P
LSA	18.347	105.40	10.35	53.17	I	C	SP	P
HYB	20.108	157.81	9.96	50.36	I	D	SP	P
BHD	21.832	269.61	9.67	48.38	I	C	SP	P
GTA	23.105	73.64	9.50	47.25	I	C	SP	P
LZH	26.640	80.67	9.16	45.09	I	C	LP	P
BTO	30.861	70.03	8.73	42.47	I	C	SP	P
XAN	31.156	82.86	8.71	42.35	I	C	SP	P
BDT	31.432	119.80	8.69	42.22	I	C	SP	P
GPA	31.763	289.54	8.67	42.08	I	C	SP	P
HHC	32.008	69.35	8.65	41.99	I	C	SP	P
ELL	32.625	283.07	8.62	41.77	I	C	SP	P
ISK	32.630	291.17	8.62	41.76	I	C	SP	P
IST	32.680	291.14	8.61	41.75	I	C	LP	P
KHT	32.862	123.60	8.60	41.68	I	C	SP	P
PSN	33.106	296.05	8.59	41.60	I	C	SP	P
TIY	33.116	74.94	8.59	41.59	I	C	SP	P
DST	33.130	288.57	8.59	41.59	I	C	SP	P
HLW	33.462	270.35	8.57	41.47	I	C	SP	P
PPE	33.497	300.67	8.56	41.46	I	D	SP	P
DMK	33.535	292.71	8.56	41.44	I	D	SP	P
EDC	33.614	290.05	8.56	41.42	I	D	SP	P
CLI	33.737	301.27	8.55	41.37	I	C	SP	P
YER	33.821	284.25	8.54	41.34	I	C	SP	P
VRI	34.113	300.03	8.53	41.24	I	C	SP	P
ISR	34.243	298.73	8.52	41.19	I	C	SP	P
JMB	34.350	294.00	8.51	41.15	I	D	SP	P
IZM	34.373	286.73	8.51	41.14	I	C	SP	P
CVO	34.498	299.95	8.50	41.10	I	C	SP	P
BUC1	34.633	297.35	8.50	41.07	I	C	SP	P
CGN	34.663	297.04	8.50	41.06	I	C	SP	P
MLR	34.662	299.37	8.50	41.06	I	C	SP	P
EZN	34.855	289.42	8.49	41.03	I	D	SP	P
DIM	35.128	293.38	8.48	40.95	I	C	SP	P
NNT	35.209	124.83	8.47	40.92	I	C	SP	P
PVL	35.329	295.33	8.46	40.87	I	C	SP	P
BJI	35.600	70.00	8.45	40.77	I	C	SP	P
COZ	35.794	299.12	8.44	40.71	I	C	SP	P
OUR	36.552	290.76	8.39	40.45	I	C	SP	P
WHN	36.614	86.22	8.39	40.43	I	C	SP	P
SRS	36.726	292.13	8.38	40.38	I	C	SP	P
TIA	37.109	76.06	8.36	40.25	I	C	SP	P

Table 170. Station data for event 241....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ATH	37.196	286.96	8.35	40.22	I	C	SP	P
KNT	37.238	292.33	8.35	40.20	I	C	SP	P
THE	37.270	291.46	8.35	40.19	I	C	SP	P
VAY	37.459	292.65	8.34	40.12	I	C	SP	P
GRG	37.641	292.10	8.33	40.06	I	C	SP	P
NUR	37.811	324.44	8.32	40.00	I	C	LP	P
KJF	37.900	330.91	8.31	39.97	I	C	LP	P
SUF	37.922	328.24	8.31	39.96	I	C	SP	P
BSI	38.107	137.86	8.30	39.90	I	C	SP	P
SKO	38.201	293.91	8.29	39.87	I	C	SP	P
KZN	38.223	291.19	8.29	39.86	I	C	SP	P
JOS	38.326	304.50	8.28	39.82	I	C	SP	P
KRA	38.722	307.00	8.26	39.71	I	C	SP	P
PSZ	38.770	303.59	8.27	39.71	I	C	SP	P
OHR	38.811	292.66	8.26	39.70	I	C	SP	P
GZH	38.993	97.81	8.26	39.66	I	C	SP	P
BUD	39.376	302.94	8.23	39.52	I	C	SP	P
NJ2	39.704	81.77	8.21	39.40	I	C	SP	P
TTG	39.734	295.01	8.21	39.39	I	C	SP	P
ULC	39.816	294.29	8.21	39.37	I	C	SP	P
SRO	39.838	303.49	8.20	39.36	I	C	SP	P
DL2	39.959	70.52	8.20	39.32	I	C	SP	P
BRY	40.184	295.86	8.18	39.24	I	C	SP	P
HCY	40.288	295.18	8.18	39.20	I	C	SP	P
SNY	40.834	65.64	8.15	39.06	I	C	SP	P
KEV	40.845	338.41	8.15	39.06	I	C	LP	P
UPP	41.045	322.07	8.14	39.01	I	C	SP	P
KSP	41.052	308.24	8.14	39.00	I	C	SP	P
VIE	41.119	304.28	8.14	38.98	I	C	LP	P
VKA	41.147	304.31	8.14	38.97	I	C	SP	P
BRT	41.529	293.09	8.11	38.84	I	C	SP	P
CN2	41.857	62.35	8.09	38.72	I	C	SP	P
SSE	41.903	82.06	8.09	38.71	I	C	LP	P
PRU	42.204	307.01	8.07	38.62	I	C	SP	P
QZH	42.333	91.80	8.07	38.61	I	D	SP	P
BRG	42.538	308.36	8.06	38.55	I	C	LP	P
LJU	42.582	301.18	8.06	38.54	I	C	SP	P
KMR	42.623	304.18	8.06	38.53	I	C	LP	P
CEY	42.697	300.75	8.05	38.50	I	C	SP	P
KHC	42.891	305.81	8.04	38.43	I	C	SP	P
BRN	42.942	310.66	8.04	38.41	I	C	SP	P
SGO	43.004	293.09	8.03	38.39	I	C	SP	P
CLL	43.110	309.04	8.03	38.36	I	C	SP	P
TRI	43.161	300.80	8.02	38.34	I	C	SP	P
RBL	43.193	301.89	8.02	38.33	I	C	SP	P
WET	43.346	305.89	8.01	38.27	I	C	SP	P
COP	43.387	315.44	8.01	38.26	I	C	SP	P
MSI	43.393	289.69	8.01	38.26	I	C	SP	P
BHG	43.498	303.83	8.00	38.23	I	C	SP	P
ALP	43.801	296.65	7.99	38.16	I	C	SP	P

Table 170. Station data for event 241....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
HOF	43.891	307.66	7.99	38.14	I	C	SP	P
AQU	44.014	296.08	7.98	38.11	I	C	SP	P
MOX	44.030	308.16	7.98	38.10	I	C	SP	P
POI	44.301	296.50	7.97	38.01	I	C	SP	P
SEO	44.363	70.87	7.96	37.99	I	C	LP	P
GRFO	44.374	306.83	7.96	37.99	I	C	LP	P
SCE	44.375	303.01	7.96	37.99	I	C	SP	P
GRF	44.370	306.83	7.96	37.99	I	C	SP	P
FUR	44.512	304.66	7.95	37.94	I	C	SP	P
MNS	44.530	296.29	7.95	37.93	I	C	SP	P
CTI	44.568	301.62	7.95	37.92	I	C	SP	P
ANP	44.584	89.73	7.95	37.92	I	C	LP	P
GIB	44.622	289.86	7.95	37.90	I	C	SP	P
RDP	44.642	295.41	7.95	37.90	I	C	SP	P
RMP	44.641	295.49	7.95	37.90	I	C	SP	P
MDJ	44.653	60.43	7.94	37.89	I	C	SP	P
TATO	44.655	90.01	7.94	37.89	I	C	LP	P
GAP	44.748	303.71	7.94	37.86	I	C	SP	P
OGA	44.865	302.86	7.93	37.82	I	C	SP	P
HAM	44.882	312.29	7.93	37.81	I	C	SP	P
KONO	45.055	321.06	7.92	37.76	I	C	LP	P
MUD	45.221	316.54	7.91	37.70	I	C	SP	P
FIR	45.259	298.53	7.91	37.69	I	C	SP	P
SAL	45.418	301.19	7.90	37.63	I	C	SP	P
OSS	45.492	302.75	7.89	37.61	E	C	LP	P
KGM	45.547	131.07	7.89	37.59	I	C	SP	P
ERC	45.689	290.38	7.88	37.54	I	C	SP	P
STU	45.802	305.77	7.88	37.51	I	C	LP	P
SAX	45.938	303.65	7.87	37.46	E	C	LP	P
TNS	46.088	307.87	7.86	37.41	I	C	SP	P
LLS	46.237	303.19	7.85	37.36	E	C	LP	P
SLE	46.421	304.49	7.84	37.30	E	C	LP	P
TMA	46.461	302.17	7.84	37.29	E	C	LP	P
ZUL	46.538	304.12	7.83	37.26	E	C	LP	P
WIT	46.890	311.60	7.81	37.15	I	C	SP	P
WTS	46.896	310.47	7.81	37.14	I	C	SP	P
CDF	47.117	305.56	7.80	37.06	I	C	SP	P
BER	47.218	322.02	7.79	37.02	I	C	LP	P
CVF	47.233	297.44	7.79	37.01	I	C	SP	P
DIX	47.464	302.41	7.77	36.92	E	C	LP	P
BSF	47.539	304.86	7.76	36.88	I	C	SP	P
ENN	47.611	308.91	7.76	36.85	I	C	SP	P
HAU	47.800	305.16	7.74	36.76	I	C	SP	P
DBN	47.883	310.79	7.73	36.72	I	C	SP	P
BAG	48.293	100.72	7.70	36.53	I	C	LP	P
FRF	48.566	299.28	7.68	36.41	I	C	SP	P
UCC	48.587	309.16	7.68	36.40	I	C	SP	P
KBS	48.694	347.27	7.67	36.36	I	C	LP	P
LMR	48.720	299.02	7.67	36.35	I	C	SP	P
LRG	48.795	299.21	7.66	36.31	I	C	SP	P

Table 170. Station data for event 241....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
NAI	48.969	227.72	7.65	36.24	I	D	SP	P
LBF	49.584	304.27	7.60	35.98	I	C	SP	P
LOR	49.599	304.66	7.60	35.98	I	C	SP	P
SHK	49.717	72.76	7.59	35.93	I	C	SP	P
SMF	49.753	303.87	7.59	35.91	I	C	SP	P
SSF	49.881	304.47	7.58	35.85	I	C	SP	P
AVF	50.046	304.16	7.56	35.78	I	C	SP	P
MZF	50.701	303.60	7.51	35.49	I	C	SP	P
TCF	50.933	303.77	7.49	35.39	I	C	SP	P
TKS	51.350	72.58	7.46	35.21	I	C	SP	P
CAF	51.390	302.12	7.46	35.19	I	C	SP	P
LSF	51.400	303.88	7.45	35.19	I	C	SP	P
DUR	51.452	315.09	7.45	35.17	I	C	SP	P
RJF	51.660	302.72	7.43	35.08	I	C	SP	P
WKY	51.744	72.15	7.43	35.04	I	C	SP	P
LDF	51.890	307.14	7.42	34.98	I	C	SP	P
LPO	52.058	302.04	7.40	34.91	I	C	SP	P
FLN	52.080	307.42	7.40	34.90	I	C	SP	P
LFF	52.293	302.47	7.38	34.80	I	C	SP	P
GRR	52.416	307.04	7.37	34.75	I	C	SP	P
MFF	52.423	304.71	7.37	34.75	I	C	SP	P
SHJ	52.499	72.82	7.37	34.72	I	C	SP	P
LPF	52.627	306.65	7.36	34.67	I	C	SP	P
EPF	53.134	300.29	7.33	34.49	I	C	SP	P
MAT	53.201	68.29	7.32	34.46	I	C	LP	P
HAC	54.229	62.53	7.24	34.02	I	C	SP	P
MRK	54.258	63.60	7.23	34.00	I	C	SP	P
DLE	54.634	314.09	7.20	33.84	I	C	SP	P
DMU	54.687	314.88	7.20	33.81	I	C	SP	P
DAG	54.824	343.63	7.19	33.75	I	C	SP	P
LEM	55.151	133.43	7.16	33.63	I	C	LP	P
LGR	55.301	300.46	7.16	33.59	I	C	SP	P
ALI	55.317	295.14	7.16	33.59	I	D	LP	P
BKB	56.877	120.67	7.04	32.99	I	D	SP	P
TOL	57.317	298.08	7.01	32.80	I	C	SP	P
BNG	57.407	249.22	7.00	32.77	I	C	SP	P
BCAO	57.416	249.23	7.00	32.76	I	C	LP	P
DAV	57.745	106.38	6.98	32.63	I	C	LP	P
CRT	58.040	294.99	6.95	32.52	I	C	SP	P
MAL	58.822	294.81	6.90	32.23	I	C	SP	P
REY	59.055	329.28	6.88	32.13	I	C	SP	P
PTO	60.023	301.02	6.80	31.72	I	C	SP	P
SFS	60.245	295.23	6.78	31.63	I	C	SP	P
IFR	60.718	291.74	6.75	31.44	I	C	SP	P
LIS	61.407	298.70	6.69	31.15	I	C	SP	P
AVE	62.526	292.49	6.60	30.69	I	C	SP	P
MTD	64.519	222.07	6.44	29.87	I	D	SP	P
KRI	65.641	223.74	6.34	29.37	I	D	SP	P
AAI	66.697	113.65	6.26	28.93	I	C	SP	P
GDH	67.071	341.35	6.23	28.78	I	C	LP	P

Table 170. Station data for event 241....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
GDH	67.071	341.35	6.23	28.78	I	C	SP	P
MBC	67.481	2.60	6.20	28.62	I	C	SP	P
BUL	68.875	222.50	6.09	28.08	I	D	LP	P
GUMO	69.364	88.08	6.05	27.91	I	C	LP	P
GUA	69.428	88.09	6.05	27.88	I	C	LP	P
TEN	71.502	292.00	5.90	27.14	I	C	SP	P
NAU	72.253	136.88	5.85	26.88	I	C	SP	P
IMA	72.315	17.44	5.84	26.86	I	C	SP	P
SLR	73.608	219.39	5.76	26.42	I	C	SP	P
MBL	73.651	132.68	5.75	26.41	I	D	SP	P
EVA	73.839	218.33	5.73	26.32	I	C	SP	P
INK	74.090	9.14	5.72	26.23	I	C	SP	P
BPI	74.097	219.33	5.72	26.22	I	C	SP	P
TTA	74.221	20.27	5.71	26.19	I	C	SP	P
KSR	74.430	220.38	5.70	26.14	I	C	SP	P
KIC	74.567	266.53	5.69	26.09	I	C	SP	P
COL	74.657	16.00	5.68	26.07	I	C	LP	P
FBA	74.657	16.00	5.68	26.07	I	C	SP	P
COL	74.657	16.00	5.68	26.07	I	C	SP	P
MTN	75.018	118.62	5.66	25.95	I	C	SP	P
FRB	75.130	342.53	5.65	25.91	I	C	SP	P
BFS	75.327	219.85	5.64	25.83	I	C	SP	P
KNA	75.386	122.41	5.63	25.80	I	D	SP	P
JAY	75.493	104.18	5.62	25.77	I	C	SP	P
SEK	76.062	218.38	5.59	25.60	I	C	SP	P
SWZ	76.318	220.77	5.57	25.52	I	C	SP	P
MEK	77.154	137.13	5.52	25.28	I	C	SP	P
PMR	77.163	18.33	5.52	25.28	I	C	SP	P
BLF	77.427	218.98	5.51	25.21	I	C	SP	P
BAL	79.359	140.89	5.35	24.43	I	C	SP	P
KDC	79.461	21.94	5.34	24.37	I	C	SP	P
MUN	80.215	142.06	5.27	24.02	I	D	SP	P
MOM	80.493	99.61	5.24	23.92	I	C	SP	P
GRM	80.667	216.25	5.23	23.85	I	C	SP	P
KLB	80.686	140.75	5.23	23.84	I	C	SP	P
RSNT	81.406	2.50	5.17	23.56	I	C	LP	P
WBN	81.446	131.22	5.17	23.55	I	C	SP	P
NWAO	81.490	141.91	5.16	23.53	I	C	SP	P
NWAO	81.490	141.91	5.16	23.53	I	C	LP	P
KLG	81.999	137.72	5.13	23.38	I	C	SP	P
WB2	82.108	121.70	5.13	23.35	I	C	SP	P
SUR	82.815	220.74	5.09	23.15	I	C	SP	P
LAT	82.965	103.53	5.08	23.10	I	C	SP	P
KVG	83.517	97.97	5.04	22.94	I	C	SP	P
ASPA	84.348	124.70	4.99	22.69	I	C	SP	P
FCC	84.387	352.12	4.99	22.68	I	C	SP	P
ISQ	86.245	118.98	4.84	21.96	I	C	SP	P
FFC	89.062	355.78	4.71	21.35	I	C	SP	P
CTA	90.676	114.48	4.69	21.24	I	C	LP	P
CTAO	90.676	114.48	4.69	21.24	I	C	LP	P

Table 170. Station data for event 241....continued

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
RSON	92.076	350.20	4.65	21.07	I	C	LP	P
RSON	92.076	350.20	4.65	21.07	I	C	SP	P
RSNY	93.533	335.91	4.61	20.87	I	C	LP	P
SES	93.601	1.14	4.61	20.86	I	C	SP	P
LHC	93.733	346.80	4.60	20.84	I	C	SP	P
PNT	94.201	6.77	4.58	20.75	I	C	SP	P
STK	94.878	126.23	4.56	20.66	I	C	SP	P
HNR	94.882	98.04	4.56	20.66	I	C	LP	P
ADE	95.056	130.15	4.56	20.64	I	C	SP	P
NEW	95.458	5.27	4.54	20.57	I	C	SP	P
LON	96.499	8.65	4.53	20.50	I	C	LP	P
CMS	97.434	123.63	4.50	20.38	I	C	SP	P
BUT	97.947	2.32	4.49	20.32	I	C	SP	P
SCP	97.985	336.46	4.49	20.31	I	C	LP	P
LRM	98.142	2.25	4.49	20.30	I	C	SP	P
UTO	98.866	340.81	4.47	20.20	I	C	SP	P
RSSD	99.754	356.18	4.44	20.10	I	C	LP	P
BEC	99.896	322.92	4.44	20.08	I	C	LP	P
BDW	101.237	0.23	4.44	20.07	I	C	SP	Pdf
BLA	102.065	336.81	4.44	20.07	I	C	LP	Pdf
HON	106.431	46.96	1.89	8.40	I	C	LP	PKP
NOU	107.289	105.19	1.89	8.40	I	C	SP	PKP
ALQ	109.012	357.56	1.89	8.40	I	C	LP	PKP
PAS	109.361	7.83	1.89	8.40	I	C	LP	PKP
SJG	112.211	315.40	1.89	8.39	I	C	LP	PKP
SDV	122.174	313.21	1.87	8.32	I	C	SP	PKP
VBA	142.617	252.83	1.72	7.66	I	C	SP	PKP
VCA	144.769	270.48	1.68	7.48	I	C	SP	PKP
FCH	148.017	263.82	1.61	7.15	I	C	SP	PKP
PEL	148.281	264.33	1.60	7.12	I	C	LP	PKP
LNV	149.088	263.16	1.58	7.02	I	C	SP	PKP

Figure 62. Azimuthal equidistant map for geographical subdivision, South Indian Ocean

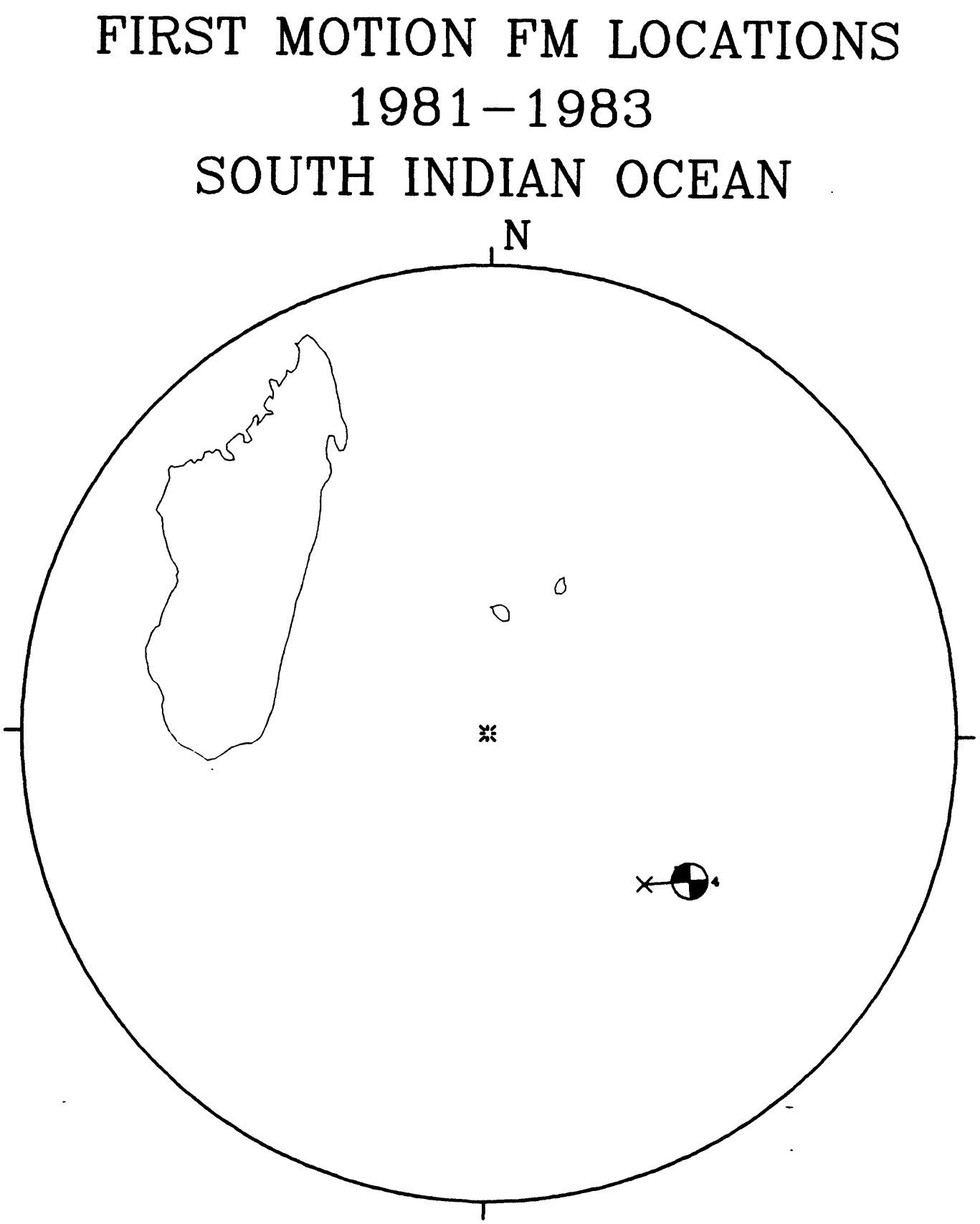

Table 171. Focal mechanism parameters for subdivision, South Indian Ocean

EVENT#	NODAL PLANE 1 (DEG.)			NODAL PLANE 2 (DEG.)			T AXIS (DEG.)		P AXIS (DEG.)		B AXIS (DEG.)	
	ϑ	δ	λ	ϑ	δ	λ	PLG	AZM	PLG	AZM	PLG	AZM
4	356	90	180	266	90	360	0	311	0	221	90	86

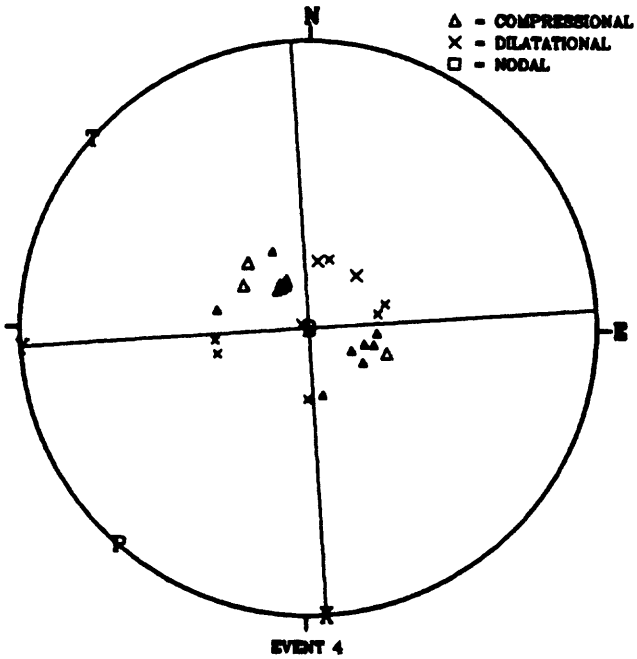

Figure 63. Lower hemisphere focal sphere projection for event 4

Table 172. Station data for event 4

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
GRM	29.364	254.05	8.98	26.78	I	D	SP	P
BLF	30.132	262.39	8.92	26.58	I	D	SP	P
BUL	30.646	280.59	8.87	26.42	I	C	SP	P
NAI	36.343	316.60	8.48	25.18	I	C	LP	P
ARO	44.486	334.40	8.03	23.76	I	C	SP	P
MUN	47.164	107.51	7.88	23.29	I	C	LP	P
LEM	49.462	72.21	7.71	22.76	I	D	SP	P
BCAO	52.850	302.65	7.42	21.86	I	C	LP	P
NDI	60.102	16.61	6.89	20.22	I	D	SP	P
MKS	60.287	78.26	6.85	20.10	I	D	SP	P
SPA	60.488	180.00	6.85	20.10	I	D	SP	P
CHTO	60.609	42.14	6.85	20.10	I	D	LP	P
KNA	63.400	93.62	6.60	19.34	I	C	SP	P
KAAO	64.337	7.51	6.52	19.09	I	D	LP	P
SBA	64.478	166.95	6.52	19.09	I	C	SP	P
ASP	64.582	103.83	6.52	19.09	I	C	SP	P
TOO	68.683	121.87	6.19	18.09	I	C	SP	P
CTA	76.494	105.51	5.62	16.38	I	C	SP	P
CMP	81.389	335.30	5.22	15.18	I	C	SP	P
DUI	82.894	326.86	5.12	14.88	I	C	SP	P
MNS	84.302	326.31	5.03	14.62	I	C	SP	P
KRA	87.280	335.00	4.80	13.93	I	C	SP	P
KMR	87.987	330.75	4.78	13.88	I	C	SP	P
OGA	88.453	328.37	4.75	13.79	I	C	SP	P
GAP	88.890	328.80	4.73	13.73	I	C	SP	P
KHC	89.051	331.15	4.73	13.73	I	C	SP	P
FUR	89.311	329.36	4.72	13.70	I	C	SP	P
WET	89.356	330.81	4.72	13.70	I	C	SP	P
BRG	90.244	332.44	4.71	13.67	I	C	SP	P
SSB	90.450	324.02	4.70	13.64	I	C	SP	P
GRF	90.479	330.35	4.70	13.64	I	C	SP	P
GRFO	90.482	330.34	4.70	13.64	I	C	LP	P
HOF	90.668	331.07	4.70	13.64	I	C	SP	P
MLS	90.724	320.63	4.70	13.64	I	C	SP	P
NOU	91.775	116.83	4.67	13.55	I	C	SP	P
LOR	92.160	325.15	4.67	13.55	I	C	LP	P
LGR	92.425	318.55	4.66	13.52	I	C	SP	P
ANMO	168.043	299.30	0.74	2.13	I	D	LP	PKP