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Catalog Of First Motion Focal Mechanisms

1984 - 1985

Volume 1

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by

Russell E. Needham
U.S. Geological Survey
Denver, Colorado

VOLUME 1

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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 for earthquakes that had a 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 were reported in the *Catalog of First Motion Focal Mechanisms, 1981-1983 (Needham, 1986)*. A total of 227 focal mechanisms computed for the years of 1984 and 1985 are presented in this catalog.

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, East-central Pacific Ocean, Middle America, South America, Atlantic Ocean, and Southeastern Europe. 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 20 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 8 of these geographic subdivisions. Volume 2 is divided into 6 of these subdivisions and volume 3 into 6.

The contents of each volume of this catalog are 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 Mollweide map projection of the world in which the geographic subdivisions of the areas covered by each volume are outlined.

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

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

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

(6) An equal area projection map for each of the geographic subdivisions with lower hemisphere focal sphere projections associated to each event by event number.

(7) A table of focal mechanism parameters, listed by event number, for each of the geographic subdivisions.
(8) 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.
(9) Individual seismograph station data used to compute the focal mechanism for each event.

INTRODUCTION (VOLUME 1):

This is the first of a 3 volume set that presents the first motion focal mechanisms computed by the U.S. Geological Survey for earthquakes occurring in the time period of 1 January 1984 through 31 December 1985. The geographic area encompassed by this volume includes North America, East Central Pacific Ocean, South America , Atlantic Ocean, and Southeastern Europe (Figure 1). This geographic area of volume 1 was divided into 8 smaller subdivisions: (1) Alaska, (2) Canada, (3) Western U.S-East-central Pacific Ocean, (4) Middle America, (5) South America, (6) Mid-Atlantic Ridge, (7) South Atlantic Ocean, (8) Southerastern Europe. 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 figure 2 and azimuthal equidistant projections, as figures 3, 6, 8, 10, 13, 20, 22,and 25 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 (301-700km). Table 1 shows the map name, latitude and longitude of the map center, and the radius for each azimuthal equidistant projection.

Table 1. Azimuthal equidistant projections coordinates and map radius for Volume 1.

MAP NAME	LATITUDE OF CENTER (DEGREES)	LONGITUDE OF CENTER (DEGREES)	RADIUS OF MAP (DEGREES)
ALASKA	60.0 N	170.0 W	15
CANADA	60.0 N	120.0 W	10
W. US.-E.CEN. PAC. OCEAN	32.0 N	120.0 W	15
MIDDLE AMERICA	25.0 N	81.0 W	25
SOUTH AMERICA	25.0 S	70.0 W	40
MID-ATLANTIC RIDGE	10.0 N	30.0 W	25
SOUTH ATLANTIC OCEAN	40.0 S	35.0 W	25
SOUTHEASTERN EUROPE	40.0 N	30.0 E	11

The Flinn-Engdahl region numbers, *Flinn and Engdahl (1965)*, associated to the earthquakes within the confines of these azimuthal equidistant projections are shown on table 2.

Table 2. Flinn-Engdahl region numbers for earthquakes within Volume 1 geographic subdivisions.

GEOGRAPHIC SUBDIVISION	REGION NUMBER
ALASKA	1, 4, 7, 9, 17
CANADA	679
W. US- E.CEN. PACIFIC	30, 34, 39, 693
MIDDLE AMERICA	57, 58, 75, 79, 88, 92
SOUTH AMERICA	109, 115, 117, 118, 129, 130 132, 134, 136, 135, 139, 685
CEN. MID-ATLANTIC RIDGE	403, 406
SOUTH ATLANTIC OCEAN	153, 370, 410
SOUTHEASTERN EUROPE	156

EARTHQUAKE SELECTION:

The selection of earthquakes for which focal mechanisms were routinely computed was based on the magnitudes and depths reported on the USGS PDE listing. Between 1 January 1984 and 31 December 1985, the criterion for earthquake selection was either m_b equal to or greater than 5.8, or m_b equal to or greater than 5.7 if the depth was greater than 70 km.

Table 3 lists the hypocenter parameters for the earthquakes in this volume chronologically and by event number for each geographic subdivision. This listing contains a total of 52 earthquakes for which focal mechanisms were computed. Some of the earthquakes of this listing have smaller magnitudes than the above values because the selection criteria were applied to events listed in the USGS PDE listing rather than to events in the PDE Monthly Listing where focal mechanism parameters are published.

Twelve 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 on Table 4. One of these unreported events had magnitudes less than the selection criteria on the PDE and was therefore not selected. Reliable first motion data could not be obtained for three of these events whose arrivals occured in the coda of a major earthquake. The other eight events were not reported because 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 6, 13, 16, 21, 29, 52, 57, and 64 shows the focal mechanism parameters for each of the geographic subdivisions of volume 1. The focal angles which are listed in this catalog and plotted on lower hemisphere focal sphere projections

in figures 4-5, 7, 9, 11-12, 14-19, 21, 23-24, and 26 were derived from the earth model of *Jeffreys and Bullen* (1958). The figures, ordered by event number (table 3), show the nodal plane configuration; the P, T, and B axes of the focal mechanism; and 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 reported by station analysts to the National Earthquake Information Center (NEIC); (2)the first motions determined by USGS personnel from seismograms of the World-Wide Standardized Seismograph Network (WWSSN); and (3) the first motions obtained from the waveform data of the Global Digital Seismograph Network (GDSN) and other digital seismograph networks that send digital waveform data to the USGS.

Individual station data, ordered by distance from the event, are shown as tables 7-12, 14-15, 17-20, 22-28, 30-51, 53-56, 58-63, and 65. The codes and locations for stations used in these tables and listed in the abbreviation table (table 5) were obtained from *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.

ACKNOWLEDGMENT:

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.

Needham, R. E., 1986, *Catalog of first Motion Focal Mechanisms, 1981-1983:* U.S.G.S. Open-file Report 86-285a, 285b, and 285c.

Figure 1. Mollweide projection showing geographic regions for volumes 1, 2, and 3.

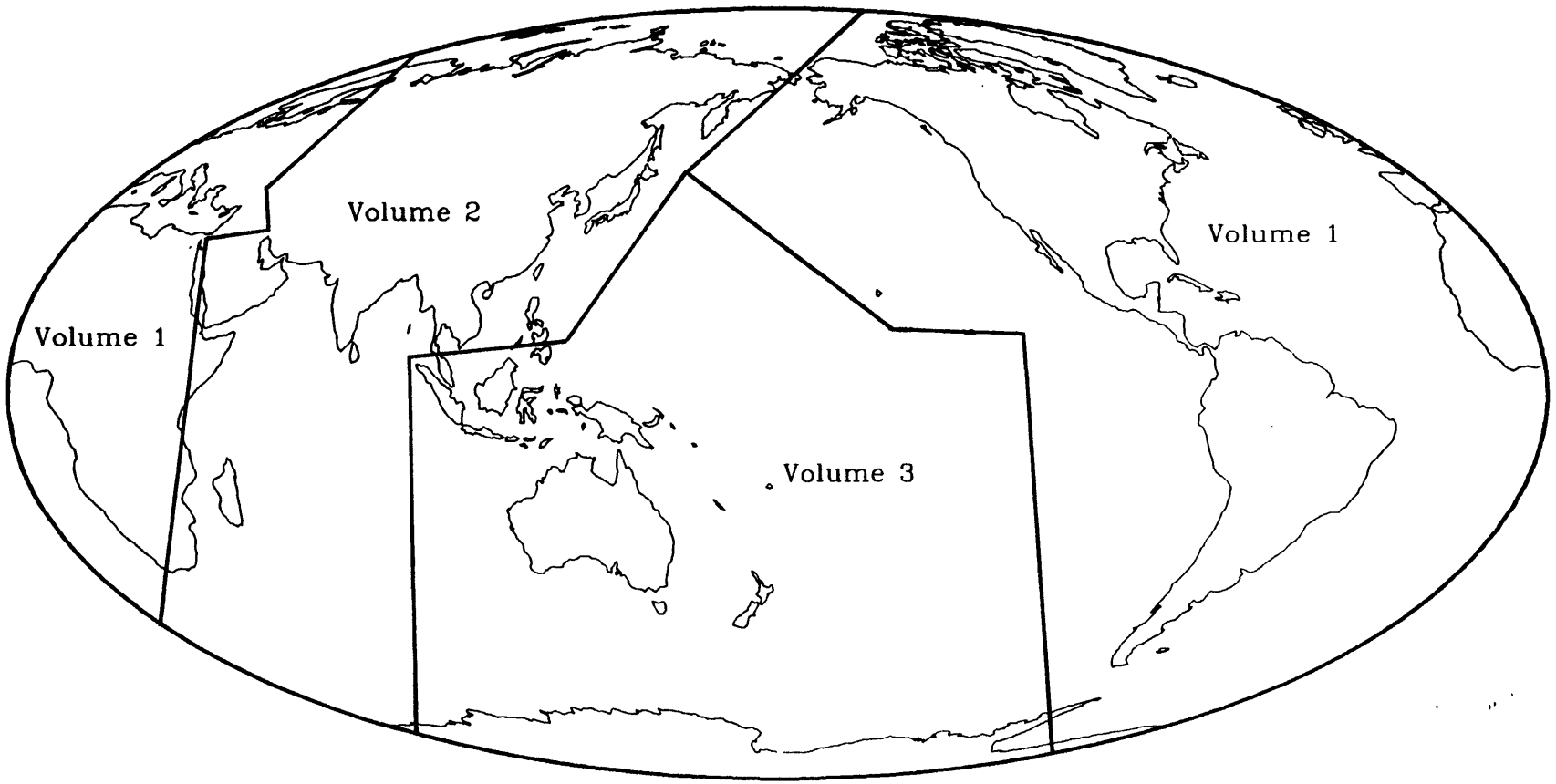


Figure 2. Mollweide projection showing geographic subdivisions for Volume 1.

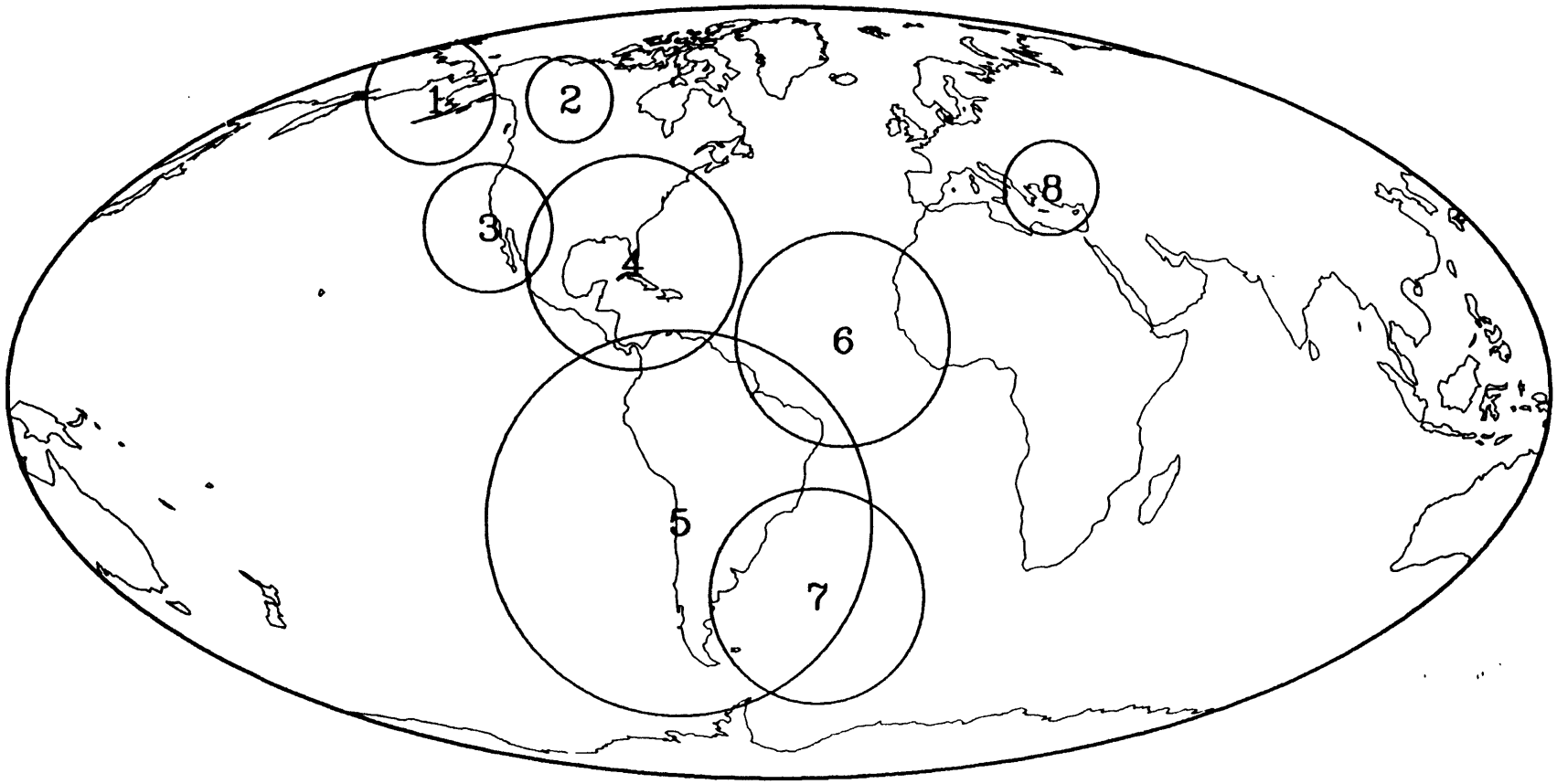


Table 3. Hypocenter parameters for events in volume 1 with focal mechanisms computed.

EVT. NO.	DATE UTC	ORIGIN TIME UTC HR MN SEC	GEOGRAPHIC COORDINATES LAT.	LONG.	DEPTH km.	MAG mb	MS	SD	NO. STA.	REGION
ALASKA										
061	07/02/84	15 57 51.3	50.317 N	176.868 W	33N	5.8	5.0	1.1	297	ANDREANOF ISLANDS, ALEUTIAN ISLANDS
128	03/09/85	14 08 04.3	66.239 N	150.029 W	12D	5.9	6.0	0.9	279	ALASKA
161	05/24/85	22 04 43.4	51.422 N	178.430 W	34D	5.8	5.8	1.0	399	ANDREANOF ISLANDS, ALEUTIAN ISLANDS
181	08/11/85	09 59 44.1	54.139 N	168.731 E	50D	5.9	5.8	1.0	382	KOMANDORSKY ISLANDS REGION
202	10/09/85	09 33 32.4	54.765 N	159.613 W	30D	6.2	6.6	1.0	424	SOUTH OF ALASKA
210	10/31/85	19 33 06.5	53.249 N	166.936 W	30G	5.8	5.7	1.0	329	FOX ISLANDS, ALEUTIAN ISLANDS
CANADA										
199	10/05/85	15 24 02.2	62.237 N	124.266 W	10G	6.5	6.6	1.0	425	NORTHWEST TERRITORIES, CANADA
223	12/23/85	05 16 03.3	62.222 N	124.239 W	6G	6.4	6.9	0.9	381	NORTHWEST TERRITORIES, CANADA
WESTERN UNITED STATES AND EAST CENTRAL PACIFIC OCEAN										
037	04/24/84	21 15 19.0	37.320 N	121.698 W	8G	5.7	6.1		273	CENTRAL CALIFORNIA
070	09/10/84	03 14 10.1	40.503 N	126.831 W	10G	6.1	6.7	1.0	267	OFF COAST OF NORTHERN CALIFORNIA
104	12/02/84	06 09 44.0	20.357 N	115.765 W	10G	6.0	6.2	1.2	264	EAST CENTRAL PACIFIC OCEAN
129	03/13/85	19 34 57.6	43.510 N	127.561 W	10G	6.1	6.3	1.1	300	OFF COAST OF OREGON
MIDDLE AMERICA										
050	06/24/84	11 17 11.9	17.984 N	69.338 W	24	6.0	6.7	1.0	331	DOMINICAN REPUBLIC
052	07/02/84	04 50 44.1	16.804 N	98.441 W	47	5.6	6.0	1.0	231	NEAR COAST OF GUERRERO, MEXICO
110	01/05/85	11 11 31.1	10.177 N	80.027 W	33	6.1	5.7	0.9	313	NORTH OF PANAMA
130	03/16/85	14 54 00.7	17.013 N	62.448 W	13	6.3	6.3	1.0	400	LEEWARD ISLANDS
192	09/19/85	13 17 47.3	18.190 N	102.533 W	28	6.8	8.1	1.3	311	MICHOACAN, MEXICO
193	09/21/85	01 37 13.4	17.802 N	101.647 W	31	6.3	7.6	1.2	344	NEAR COAST OF GUERRERO, MEXICO
220	12/16/85	02 44 36.0	11.725 N	85.838 W	22	5.9	6.0	1.0	259	NICARAGUA
SOUTH AMERICA										
004	01/16/84	12 27 14.0	29.982 S	112.320 W	10G	6.0	6.2	1.0	177	EASTER ISLAND REGION
007	01/17/84	16 19 03.3	3.904 S	81.425 W	18	5.9	4.9	0.8	195	NEAR COAST OF NORTHERN PERU
019	02/26/84	08 18 19.8	17.316 S	70.526 W	113D	5.8		1.0	295	NEAR COAST OF PERU
045	06/11/84	02 05 34.0	30.707 S	71.179 W	46D	6.3	5.8	1.0	270	NEAR COAST OF CENTRAL CHILE
047	06/18/84	11 20 17.9	15.705 S	72.491 W	117D	5.8		1.0	240	SOUTHERN PERU
077	09/28/84	10 40 24.2	31.576 S	110.841 W	10G	5.9	5.9	1.2	210	EASTER ISLAND REGION
083	10/20/84	17 59 17.0	24.072 S	66.832 W	192	6.0		1.0	219	SALTA PROVINCE, ARGENTINA
101	11/23/84	18 40 14.4	8.191 S	76.130 W	122	5.9		0.8	250	PERU
114	01/18/85	15 00 09.0	29.374 S	70.793 W	83D	5.7		1.2	224	CENTRAL CHILE
117	01/26/85	03 06 57.8	33.053 S	68.467 W	5G	6.0	5.9	1.0	225	MENDOZA PROVINCE, ARGENTINA
124	03/03/85	22 47 07.2	33.135 S	71.871 W	33N	6.7	7.8	1.0	146	NEAR COAST OF CENTRAL CHILE
125	03/04/85	15 01 07.0	33.842 S	71.249 W	40D	6.0	6.0	1.0	259	NEAR COAST OF CENTRAL CHILE
131	03/17/85	10 41 38.4	32.633 S	71.551 W	33N	5.9	6.6	1.2	267	NEAR COAST OF CENTRAL CHILE
133	03/19/85	04 01 08.0	33.198 S	71.653 W	42	5.9	6.6	1.2	235	NEAR COAST OF CENTRAL CHILE
135	03/25/85	05 14 35.1	34.254 S	72.185 W	45	6.0	6.4	1.1	253	NEAR COAST OF CENTRAL CHILE
139	04/03/85	13 06 20.2	32.584 S	71.656 W	33N	5.8	6.1	1.0	198	NEAR COAST OF CENTRAL CHILE
141	04/09/85	01 56 59.4	34.131 S	71.618 W	38D	6.3	7.2	1.1	356	NEAR COAST OF CENTRAL CHILE
150	04/28/85	08 30 29.0	39.728 S	75.664 W	10G	6.1	5.5	1.1	215	OFF COAST CENTRAL OF CHILE
152	05/01/85	13 27 56.1	9.196 S	71.230 W	600D	6.1		0.9	376	PERU–BRAZIL BORDER REGION
160	05/19/85	18 09 15.6	30.253 S	71.329 W	39D	5.9	6.0	1.0	286	NEAR COAST OF CENTRAL CHILE
165	06/10/85	15 37 00.9	27.958 S	66.995 W	151	5.8		1.1	281	CATAMARCO PROVINCE, CHILE
211	10/31/85	21 49 20.2	28.692 S	63.171 W	596D	5.8		0.9	296	SANTIAGO DEL ESTERO, ARGENTINA
MID–ATLANTIC RIDGE										
034	04/22/84	06 14 21.5	0.541 S	19.857 W	10G	5.8	5.7	0.9	232	CENTRAL MID–ATLANTIC RIDGE
087	11/01/84	04 48 50.2	8.185 N	38.794 W	10G	6.5	7.1	1.0	373	CENTRAL MID–ATLANTIC RIDGE
111	01/10/85	17 47 56.0	10.797 N	43.446 W	10G	5.8	5.8	1.2	291	NORTH ATLANTIC RIDGE
164	06/06/85	02 40 12.9	0.932 N	28.432 W	10G	6.3	6.5	1.1	316	CENTRAL MID–ATLANTIC RIDGE

Table 3. Hypocenter parameters for events in volume 1 with focal mechanisms computed .... continued.

EVT. NO.	DATE UTC	ORIGIN TIME UTC HR MN SEC	GEOGRAPHIC COORDINATES LAT.	LONG.	DEPTH km.	MAG mb	MS	SD	NO. STA.	REGION
SOUTH ATLANTIC OCEAN										
049	06/22/84	15 55 28.4	58.318 S	15.786 W	10G	6.2	6.1	1.2	132	SW ATALANTIC OCEAN
057	07/17/84	14 14 17.3	56.392 S	27.388 W	129D	5.9		0.9	156	SOUTH SANDWICH ISLANDS REGION
097	11/22/84	00 50 43.4	30.958 S	13.485 W	10G	5.9	5.7	1.0	227	SOUTH ATLANTIC RIDGE
158	05/15/85	20 12 45.8	56.637 S	25.339 W	33N	5.8	6.3	1.1	196	SOUTH SANDWICH ISLANDS REGION
173	07/28/85	22 59 54.5	60.241 S	26.883 W	33N	5.6	6.4	1.3	91	SOUTH SANDWICH ISLANDS REGION
212	11/06/85	08 15 39.6	58.716 S	26.223 W	132G	5.7		0.8	158	SOUTH SANDWICH ISLANDS REGION
SOUTHEASTERN EUROPE										
048	06/21/84	10 43 42.1	35.360 N	23.238 E	39	5.8	5.9	1.2	286	CRETE

Table 4. Hypocenter parameters for events in volume 1 that met magnitude 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
MIDDLE AMERICA										
	03/30/84	07 59 52.9	17.362 N	59.633 W	103	5.8		0.9	226	LEEWARD ISLANDS
	09/15/85	07 57 53.5	17.974 N	97.158 W	65	5.9		1.0	317	OAXACA, MEXICO
SOUTH AMERICA										
	01/13/84	02 29 00.9	3.863 S	78.494 W	103	5.8		0.9	226	PERU-ECUADOR BORDER REGION
	06/05/84	04 15 24.3	7.819 S	76.708 W	33N	5.8	5.1	0.9	243	NORTHERN PERU
	12/11/84	23 22 19.3	22.407 S	68.599 W	92	5.7		1.1	245	NORTHERN CHILE
	03/03/85	23 38 31.4	32.738 S	71.215 W	33N	6.3	6.4	1.3	127	NEAR COAST OF CENTRAL CHILE
	03/04/85	00 32 21.8	33.207 S	71.663 W	33N	6.0	6.7	1.0	111	NEAR COAST OF CENTRAL CHILE
	03/04/85	03 17 54.4	34.115 S	71.905 W	33N	5.8	6.2	1.1	119	NEAR COAST OF CENTRAL CHILE
	10/24/85	01 48 55.9	31.386 S	68.605 W	110	5.7		1.1	208	SAN JUAN PROV., ARGENTINA
	10/31/85	21 49 20.2	28.692 S	63.171 W	596D	5.8		0.9	296	SAN DIEGO DEL ESTERO, ARGENTINAQ
MID ATLANTIC RIDGE										
	12/07/84	10 19 10.7	1.423 S	15.055 W	10G	5.9	5.7	1.2	223	N. OF ASCENSION ISLANDS
SOUTH ATLANTIC OCEAN										
	08/24/84	16 53 07.1	58.917 S	16.521 W	10G	5.8	5.5	1.2	62	SW ATLANTIC OCEAN

TABLE 5

Code	Station Name and Geographic Region
AAI	Ambon, Maluku, Indonesia
AAS	Arctowski Station, South Shetland Islands, Antarctica
ABJ	Abashiri, Hokkaido, Japan
ACM	Allegan, Michigan, U.S.A.
ACO	Alabaster Cavern State Park, Oklahoma, U.S.A.
ACX	Acapulco, Guerrero, Mexico
ADE	Adelaide (Mount Bonython), South Australia, Australia
ADH	Angra do Heroismo, Azores, Portugal
ADK	Adak, Alaska, U.S.A.
AFC	Alfacar, Spain
AFI	Afiamalu, Samoa Islands
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	Antofagasta, Antofagasta, Chile
ANTO	Ankara, Turkey
AQU	L'Aquila, Abruzzo, Italy
AR6	Chiripo, Costa Rica
ARE	Arequipo (Characato), Peru
ARN	Arnold Ranch, California, U.S.A.
ARO	Arta Observatory, Djibouti
ASA	Asahikawa, Hokkaido, Japan
ASPA	Alice Springs, Northern Territory, Australia
ATA	Atar, Djibouti
ATB	Altamira, Para, Brazil
ATH	Athens Observatory, Greece
ATO	Altona, Oklahoma, U.S.A.
AVE	Averroes, Morocco
AVF	Avril sur Loire, Nivernois, France
AVY	Angavokely, Madagascar
BAA	Buenos Aires, Buenos Aires, Argentina
BACH	La Barnechea, Santiago, Chile
BAF	Belacker, Alsace, France
BAG	Baguio City, Luzon, Philippines
BAL	Ballidu, Western Australia, Australia
BAO	Brasilia Array, Distrito Federal, Brazil
BAR	Barrett, California, U.S.A.
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, Kalimantan, 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	Bottle 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
BNT	Bandirma, Turkey
BOCO	Bogota, Colombia
BOG	Bogota, Colombia
BOH	Bohocortia, Beorn, France
BOM	Bomboy (Colaba), Maharashtra, India
BPA	Boggy Peak, Antigua, Antigua and Barbuda
BPI	Bernard Price Institute, Johannesburg Transvaal, South Africa
BQA	Mbengga, 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
BRS	Brisbane, Queensland, Australia
BRT	Bari-Costellana, Puglia, Italy
BRY	Bratogos, Yugoslavia
BSF	Ballon de Servance, Franche Comte, France
BSI	Bando Aceh, Sumatera, Indonesia
BTO	Baotou (Paotou), Inner Mongolia, China (Mainland)
BTO	Baotou (Paotou), Inner Mongolia, China (Mainland)
BUC	Bucharest, Romania
BUC1	Bucharest, Romania
BUD	Budapest, Hungary
BUH	Buehlerhoehe, Baden-Wurttemberg, Fed. Rep. of Germany
BUL	Bulawayo, Zimbabwe
BUS	Bueno Visto, Costa Rica
BUT	Butte, Montana, U.S.A.
CAF	Colvioc, Auvergne, France
CAI	Caico, Rio Grande do Norte, Brazil
CAN	Canberra, Australian Cap. Terr., Australia
CAR	Carocas, Venezuela
CAW	Cannon Point, North Island, New Zealand
CBI	Chichi-shima (Chichijima), Bonin Islands, Japan
CBX	Cerro Bola, Baja California, Mexico
CBZ	Campbell Island, Campbell Island, New Zealand
CCH	Cochabamba, Bolivia
CCMT	Clark Canyon Reservoir, Montana, U.S.A.
CCP	Cebu City (Lahug), Cebu, Philippines
CD2	Chengdu (Chengtu), Sichuan, China (Mainland)
CDF	Chomp du Feu, Alsace, France
CDM	Cerro de la Muerte, Costa Rica
CDR	Cadoroche, 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	Corcaliu, Romania
CGN	Calugareni, Romania
CGP	Cagayan de Oro, Mindanao, Philippines
CHCH	Chadas Angostura, Santiago, Chile
CHG	Chiang Mai, Thailand
CHO	Choshi, Honshu, Japan
CHTO	Chiang Mai, Thailand
CIN	Cine, Turkey
CIR	Chiredzi, Zimbabwe
CLC	Chino Lake, California, U.S.A.
CLI	Calanesti, Romania
CLK	Chileka, Malawi
CLL	Collmberg, German Dem. Rep.
CLO	Closani, Romania
CLX	Calx Mountain, Montana, U.S.A.
CMP	Campulung, Romania
CMS	Cobar Meteorology Station, New South Wales, Australia
CN2	Changchun, Jilin, China (Mainland)
CNG	Changalane, Mozambique
CNP	Catarman, Samar, Philippines
COI	Caimbra, Portugal
COL	College Outpost, Alaska, U.S.A.
COM	Camitan, Chiapas, Mexico
CON	Concepcion, Concepcion, Chile
COO	Cooney (Armidale), New South Wales, Australia
COP	Copenhagen, Denmark
COR	Corvallis, Oregon, U.S.A.
COZ	Cozia, Romania

TABLE 5

Code	Station Name and Geographic Region
CPK	Cone Peak, Hawaii, U.S.A
CRM	Caravelle, Martinique
CRT	Cartuja (Granada), Spain
CRX	Cerrillo, Mexico, Mexico
CSIL	Creal Springs, Illinois, U.S.A.
CSN	Chicoosen, Chiapas, Mexico
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	Covasna, Romania
CVP	Callao Caves, Luzon, Philippines
CWC	Cottonwood Creek, California, U.S.A
CYA	Chaya, Santiago del Estero, Argentina
DAF	Dafare, Djibouti
DAG	Donmarkshavn, Greenland
DAV	Davao, Mindanao, Philippines
DBN	De Bilt, Netherlands
DCI	Dry Creek, Idoho, U.S.A.
DCN	Craghan, Eire
DDK	Dunsink Observatory, Eire
DDR	Dodaira, Honshu, Japan
DES	Desert, Hawaii, U.S.A.
DEV	Deva, Romania
DIM	Dimitravgrad, Bulgaria
DIX	Grand Dixence, Switzerland
DKM	Kilmoshogue, Eire
DL2	Dalian (Luda), Liaoning, China (Mainland)
DLE	Lyons Estate, Eire
DMK	Demirkay, Turkey
DMN	Daman, Nepal
DMU	Kingscourt, Eire
DON	Dongola, Missouri, U.S.A.
DOU	Dourbes, Belgium
DRV	Dumont d'Urville (Pointe Geologie, Adelie) Greater Antarctica, Antarctica
DSH	Dushonbe (Stalinabad), Tojik S.S.R., U.S.S.R.
DST	Dursunbey, Turkey
DUG	Dugway, Utah, U.S.A.
DUI	Duronio, Molise, Italy
DZM	Mont Dzumac, New Caledonia
EAB	Aberfoyle, Scotland, United Kingdom
EAU	Auchinoon, Scotland, United Kingdom
EBH	Black Hill, Scotland, United Kingdom
EBL	Broadlaw, Scotland, United Kingdom
ECA	El Cojon, California, U.S.A.
ECB	Carrickbyrne Hill, Eire
ECH	Echery (Ste.-Marie-aux-Mines), Larroine, France
ECK	Cauldkine 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
EHOR	Hornachuelos, Spain
EKA	Eskdalemuir Array, Scotland, United Kingdom
ELL	Elmali, Turkey
ELO	Logieolmond, Scotland, United Kingdom
ELT	Yeltsovka, R.S.F.S.R., U.S.S.R.
EMS	Emosson-Mur, Switzerland
ENIJ	N jar, Spain
ENN	Epen, Netherlands
ENX	Ensenada, Baja California, Mexico
EPA	Esparzo, Costa Rica
EPF	Esporras, Gascagne, France
EPLA	Plasencia, Spain
EPT	El Paso, Texas, U.S.A.
ERC	Erice, Sicily, Italy
ESA	Esa Ala, D'Entrecasteaux Islands, Papua New Guinea
ESCF	Escat, Bearn, France
ESK	Eskdalemuir, Scotland, United Kingdom
ESR	Escape Road, Hawaii, U.S.A.
ESY	Stoneypath, Scotland, United Kingdom
ETA	Toro, Eire
EUR	Eureka, Nevada, U.S.A.
EVA	Evander, Transvaal, South Africa
EVAL	Valverde del Camino, Spain
EZN	Ezine, Turkey
FBA	Fairbanks, Alaska, U.S.A.
FBAL	Fairbanks--Long Period, Alaska, U.S.A.
FBAS	Fairbanks--Short Period, Alaska, U.S.A.
FCC	Fort Churchill, Manitoba, Canada
FCH	Farellones, 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 Faliniere, Normandie, France
FOC	Focsani, Romania
FRB	Frobisher, Northwest Territories, Canada
FRF	La Foret Royale, Provence, France
FRI	Friant, California, U.S.A.
FSA	Cafayete, Salta, Argentina
FUK	Fukui, Honshu, Japan
FUR	Fuerstenfeldbruck, Bayern, Fed. Rep. of Germany
FVM	French Village, Missouri, U.S.A.
GAC	Glen Almand, Quebec, Canada
GAP	Garmisch-Partenkirchen, Bayern, Fed. Rep. of Germany
GBA	Gouribidanur Array, Karnataka, India
GBO	Fort Gibson, Oklahoma, U.S.A.
GCC	Granite Creek, California, U.S.A.
GDH	Godhavn, Greenland
GEO	Georgetown, District of Columbia, U.S.A.
GIB	Gibilmanna, Sicily, Italy
GIE	Galopogos Islands, Galapogos Islands, Ecuador
GLA	Glamis, California, U.S.A.
GLD	Golden, Colorado, U.S.A.
GNZ	Gisborne, North Island, New Zealand
GOL	Golden (Bergen Park), Colorado, U.S.A.
GPA	Golpazari, Turkey
GRB1	Graefenberg Array (Bruennthal) Bayern, Fed. Rep. of Germany
GRC	Garchy, 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	Griva, Greece
GRM	Grahamstown, Cape Province, South Africa
GRR	Garron, Normandie, France
GRS	Goris, Armenian S.S.R., U.S.S.R.
GSC	Goldstone, California, U.S.A.
GSH	Grosshau, Nordrhein-Westfalen, Fed. Rep. of Germany
GTA	Gaotai, Gansu, China (Mainland)
GUA	Guam (Santa Rasa), Guam, Mariana Islands
GUD	Guadarrama, Spain
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	Gura Zlata, Romania
HAC	Hachinahe, Honshu, Japan
HAM	Hamburg, Hamburg, Fed. Rep. of Germany
HAU	Haudompre, Franche Comte, France
HCY	Herceg Novi, Yugoslavia
HDC	Heredia, Costa Rica
HFS	Hagfors, Sweden
HHC	Hohhot, Inner Mangolia, China (Mainland)
HIM	Himeji, Honshu, Japan
HIR	Hirashima, Honshu, Japan
HJJ	Hachijo-jimo (Hatidyazima), Bonin Islands, Japan
HKC	Hong Kong, Hong Kong
HLD	Halaksitan, Djibouti
HLP	Hilino Pali, Hawaii, U.S.A.
HLW	Helwan, Egypt
HMM	Hamamatsu (Hamomatu), Honshu, Japan
HNM	Heniu Mare, Romania
HNR	Honiora, Solomon Islands
HDF	Hof, Bayern, Fed. Rep. of Germany
HON	Honalulu, Hawaii, U.S.A.
HPU	Hole Pohaku, Hawaii, U.S.A.
HRT	Hereke, Turkey
HRY	Holter Research Foundation--York Bridge Montana, U.S.A.
HUA	Huancoya, Peru
HVD	Hendrik Verwoerd Dam, Cape Province, South Africa

TABLE 5

Code	Station Name and Geographic Region
HYB	Hyderabad--Not. Geophysical Research Inst. Andhra Pradesh, India
ICR	Volcan Irazu, Costa Rica
IFR	Ifrone, Moracco
IIC	Santa Rita Cayotepec, Mexico, Mexico
IID	Iida, Honshu, Japan
IIG	Iguala--Cerra de Tuxpan, Guerrera, Mexico
IIM	Instituto de Inginieria, UNAM Distrita Federal, Mexico
IIP	El Pino, Mexico, Mexico
IIT	Tanantzintla, Puebla, Mexico
ILT	Iultin, R.S.F.S.R., U.S.S.R.
IMA	Indion Mountain, Alasko, 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, Canado
INY	Ithaca, New York, U.S.A.
IPM	Ipoh, Peninsular Maloysia, Malaysia
IR2	Iran Long-Period Arroy, Iran
IR4	Iran Long-Period Array, Iran
IR5	Iran Long-Period Array, Iran
IR7	Iron Long-Period Array, Iran
IRZ	Volcan Irazu, Costa Rica
ISA	Isabella, California, U.S.A.
ISI	Ishigaki-shima, Ryukyu Islands, Japan
ISK	Istanbul--Kandilli, Turkey
ISN	Ishinomaki, Honshu, Japan
ISQ	Mount Isa, Queensland, Australio
ISR	Istrita, Ramania
ISSF	Issarbe, Bearn, France
IST	Istanbul, Turkey
ITR	Itaparica, Pernambuco, Brazil
IZM	Izmir, Turkey
IZU	Izuhara, Kyushu, Japan
JACH	Jahuel, Aconcagua, Chile
JAS	Jamestown, Califarnia, U.S.A.
JAS1	Jamestown, Califarnia, U.S.A.
JAU	Jaaut, Bearn, France
JAY	Jayapura, Irian Jaya, Indonesia
JCK	Jackerath, Nordrhein-Westfalen, Fed. Rep. of Germany
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
KAE	Kaena, Hawaii, U.S.A.
KAG	Kagoshima, Kyushu, Japan
KAS	Kastamonu, Turkey
KBA	Barrage Kaeinbrein, Austria
KBL	Kabul, Afghanistan
KBS	Kingsbay, Svalbard, Norway
KCT	Karacabey, Turkey
KDC	Kodiak, Alasko, U.S.A.
KDS	Kedougou, Senegal
KDZ	Kurdzhali, Bulgario
KEV	Kevo, Finlond
KGM	Kluang, Peninsular Malaysia, Malaysia
KGT	Karabiga, Turkey
KHC	Kasperske Hory, Czechoslovakia
KHE	Kheis, R.S.F.S.R., U.S.S.R.
KHT	Khao Laem Dam, Thailand
KHU	Kahuku, Hawaii, U.S.A.
KIC	Kasan Boka, Ivory Coast
KIP	Kipapa, Hawaii, U.S.A.
KIS	Kishinev, Maldavion S.S.R., U.S.S.R.
KJF	Kajaani, Finland
KKM	Kota Kinabalu, Sabah, Malaysia
KKN	Kakani, Nepal
KLB	Kellerberrin, Western Australia, Australia
KLG	Kalgoarlie, Western Australia, Australia
KLL	Kalltalsperre Nordrhein-Westfalen, Fed. Rep. af Germany
KMG	Kumagaya, Honshu, Japan
KMI	Kunming, Yunnan, China (Mainland)
KMR	Kremsmuenster, Austria
KNA	Kununurra, Western Australio, Australio
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	Krakaw, Poland
KRI	Karoi, Zimbabwe
KRO	Koro, Fiji
KRP	Karapiro, North Island, New Zealand
KSH	Kashi (Kashgar), Xinjiang, Chino (Mainland)
KSP	Ksiaz, Poland
KSR	Koster, Transvaal, South Africa
KSU	Kousour, Djibouti
KTG	Kap Tabin, Greenland
KUM	Kumamato, Kyushu, Japan
KUS	Kushiro, Hokkaido, Japan
KVG	Kavieng, New Ireland, Papua New Guinea
KVT	Kavak, Turkey
KYS	Kiyosumi, Honshu, Japan
KZN	Kozani, Greece
LAC	Landers, California, U.S.A.
LAT	Lae, New Guinea, Papua New Guinea
LAV	Laguna Verde, Volparaiso, Chile
LBF	Les Buteaux, Nivernais, France
LCCM	Lewis and Clark Caverns, Montana, U.S.A.
LCI	Lecce, Puglia, Italy
LCR	La Lucho, Costa Rica
LDF	La Druitiere, Normandie, France
LDM	Libby Dam, Montana, U.S.A.
LEM	Lembang, Jawa, Indanesia
LFF	La Frestal, Guyenne, France
LGBM	Gray Butte, California, U.S.A.
LGN	Lagunillas, Venezuela
LGR	Logrono, Spain
LHC	Lakehead University (Thunder Bay), Ontario, Canada
LHD	Little Hoodo Mountoin, Montono, U.S.A.
LHE	Lhers, Bearn, France
LIS	Lisbon, Portugal
LIT	Litokhoron, Greece
LJU	Ljubljana (Laiboch), Yugoslavia
LLA	Llanada, California, U.S.A.
LLS	Linthal--Limmern, Switzerland
LM2	Lima (Magdalena), Peru
LMG	Lamington, New Guinea, Papua New Guinea
LMR	La Mourre, Provence, France
LNV	Langovilo, Valparaiso, Chile
LOE	Loei, Thailand
LON	Langmire, Washington, U.S.A.
LOR	Lormes (Somee), Nivernais, France
LPA	La Plata, Buenas Aires, Argentino
LPB	La Paz, Bolivia
LPF	Le Pertre, Orleonois, France
LPG	La Plagne, Savoie, France
LPO	Le Pauchau, Guyenne, France
LPS	La Palma, El Salvador
LQT	Las Queltehues, 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.
LSZ	Lusoka, Zambia
LTX	Lajitas, Texas, U.S.A.
LWI	Lwiro, Zaire
LZH	Lanzhau (Lanchou), Gansu, China (Mainland)
MADF	Madeleine, Bearn, France
MAJO	Matsushiro, Honshu, Japan
MAL	Malaga, Spain
MAN	Manila (Diliman), Luzan, Philippines
MAP	Mactan, Cebu, Philippines
MAT	Matsushiro, Honshu, Japan
MAW	Mawsan, Greater Antarctica, Antarctica
MBC	Mould Bay, Northwest Territories, Canada
MBL	Marble Bar, Western Australia, Australia
MBO	Mbour, Senegal
MBU	Mbua, Fiji

TABLE 5

Code	Station Name and Geographic Region
MCQ	Macquarie Island, Macquarie Island, Australia
MCW	Mount Constitution, Washington, U.S.A.
MDJ	Mudanjiang, Heilongjiang, China (Mainland)
MDN	Morne Daniel, Dominica
MDZ	Mendoza, Mendoza, Argentina
MEI	Melilli, Basilicata, Italy
MEK	Meekatharra, Western Australia, Australia
MEM	Membach, Belgium
MEX	Mexico City, Distrito Federal, Mexico
MFF	Saint Martin du Fauilloux, Poitau, 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	Milo, Maine, U.S.A.
MIN	Mineral, California, U.S.A.
MIS	Mishima, Honshu, Japan
MIT	Mito, Honshu, Japan
MIY	Miyoka, Honshu, Japan
MKA	Mokaapuhi, 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	Musomishta, Bulgaria
MMK	Mattmark, Switzerland
MMN	Mormanno, Calabria, Italy
MNA	Mina, Nevada, U.S.A.
MNG	Mangahao, 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	Marmol, Guatemala
MRT	Murotomisaki, Shikoku, Japan
MRWA	Morawa, Western Australia, Australia
MSI	Messina I.N.G., Sicily, Italy
MSL	Mosul, Iraq
MSO	Missoula, Montana, U.S.A.
MSZ	Milford Sound, South Island, New Zealand
MSZ	Milford Sound, South Island, New Zealand
MTD	Mount Darwin, Zimbabwe
MTE	Manteigas, Portugal
MTH	Mantachique, Portugal
MTN	Manton, Northern Territory, Australia
MTS	Matsue, Honshu, Japan
MTY	Matsuyama (Matuyama), Shikoku, Japan
MUD	Mansted 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	Mokuaweaweo, Hawaii, U.S.A.
MYK	Miyako-jima, Ryukyu Islands, Japan
MZF	Mazirat, Bourbannais, France
MZX	Mazatlan, Sinaloa, Mexico
NAG	Nagoya, Honshu, Japan
NAH	Naha, Ryukyu Islands, Japan
NAI	Nairabi, Kenya
NAU	Nanutarra, Western Australia, Australia
NAV	Narraws, Virginia, U.S.A.
NC3	Narsar 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
NII	Niigata, Honshu, Japan
NJ2	Nanjing, Jiangsu, China (Mainland)
NKI	Nikolski, Alaska, U.S.A.
NNA	Nana, Peru
NNT	Nong Plab, Thailand
NOP	Napah Range, California, U.S.A.
NOU	Noumea, New Caledonia
NPA	Nampula, Mozambique
NPH	North Pit, Hawaii, U.S.A.
NRA0	NORESS Array Site A0, Norway
NRN	Naryn, Kirghiz S.S.R., U.S.S.R.
NST	Nakhan Sawon, 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	Ofunoto, Honshu, Japan
OGA	Obergurgl, Austria
OGE	Ogeu, Bearn, France
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, Banin 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
OXM	Oxtatitlan, Mexico, Mexico
OYM	Oyama, Honshu, Japan
OZB	Mount Ozzard, British Columbia, Canada
OZC	Ocazacuautla, 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.
PBJ	Presa Benita Juarez, Oaxaca, Mexico
PBX	Punta Banda, Baja California, Mexico
PCA	Pinnacle, Alaska, U.S.A.
PCC	Pilarcitas Creek, California, U.S.A.
PCH	Pirque, Santiago, Chile
PCO	Ponca City, Oklahoma, U.S.A.
PCR	La Plaine des Cafres, Reunian
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, Mindaro, Philippines
PHAM	Harlan Ranch, California, U.S.A.
PHC	Port Hardy, British Columbia, Canada
PIM	Presa del Infiernillo, Michaacan, Mexico
PIO	Pinotepa Nacional, Oaxaca, Mexico
PIP	Pasuquin, Luzan, Philippines
PJG	Potts Junction, Guam, Mariano Islands
PKI	Phulchaki, Nepal
PKR	P.K. Le Roux Dam, Orange Free State, South Africa
PLD	Plovdiv, Bulgaria
PLDF	La Plantade, Auvergne, France
PLM	Palomar, California, U.S.A.
PLP	Pala, Leyte, Philippines
PME	Palmer East, Alasko, U.S.A.
PMG	Port Maresby, New Guinea, Papua New Guinea
PMP	Pompeii, Campanio, Italy
PMR	Palmer, Alaska, U.S.A.
PMS	Palmer South (Arctic Valley), Alaska, U.S.A.
PNL	Peninsula, Alaska, U.S.A.
PNT	Penticton, British Columbia, Canada
PNY	Plattsburgh, New York, U.S.A.
POI	Palina, Lazio, Italy

TABLE 5

Code	Station Name and Geographic Region
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	Rooch Canyon, California, U.S.A.
PRE	Pretoria, Transvaal, South Africa
PRI	Priest, California, U.S.A.
PRK	Paraskevi (Lesbas), Greece
PRM	Parsons Mountain, South Carolina, U.S.A.
PRNI	Paran, Israel
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	Quilmano, Peru
PT03	Guadalupe, Peru
PT06	Pisco, Peru
PTCR	Potenciano, Costa Rica
PTO	Porto (Serro do Pilar), Portugal
PUH	Pauahi, Hawaii, U.S.A.
PUL	Pulkavo, R.S.F.S.R., U.S.S.R.
PV06	Parodox Valley (Cool Canyon), Colorado, U.S.A.
PV07	Paradox Valley (Long Meso), Colorado, U.S.A.
PV10	Paradox Valley (South Lo Sal), Colorado, U.S.A.
PVC	Port Vila, Vanuatu Islands
PVL	Povlikeni, Bulgaria
PWA	Palmer West (Houston), Alaska, U.S.A.
PWH	Poliakeawe Poli, 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.
PYM	Petit Puy de Manson, Auvergne, France
QIZ	Qiongzhong, Guangdong, China (Mainland)
QPS	Quepos, Costa Rica
QUE	Quetta, Pakistan
QUR	Rumipambo, Ecuador
QZG	Quezaltepeque, Guatemala
QZH	Quanzhou, Fujian, China (Mainland)
QZO	Quartz Mountain State Park, Oklahoma, U.S.A.
RAB	Rabaul, New Britain, Papua New Guinea
RAR	Rarotonga, Cook Islands
RBA	Robat, Morocco
RBL	Raibl, Friuli-Venezia Giulia, Italy
RDJ	Rio de Janeiro, Rio de Janeiro, Brazil
RDP	Racco di Papa, Lazio, Italy
RES	Resolute, Northwest Territories, Canada
REY	Reykjavik, Iceland
RFA	San Rafael, Mendaza, Argentina
RHP	Rhaboro Hills, South Island, New Zealand
RIM	Rim, Hawaii, U.S.A.
RIV	Riverview, New South Wales, Australia
RJF	Les Rejaudaux, 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 Parzio Catone), Lazio, Italy
RMQ	Roma, Queensland, Australia
RMT	Round Mountain, California, U.S.A.
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	Adirondock, New York, U.S.A.
RSON	Red Lake, Ontario, Canada
RSSD	Black Hills, South Dakota, U.S.A.
RTB	Rutbah, Iraq
RTCB	Cerro Blanco, San Juan, Argentina
RTLL	Cerro Villicun, San Juan, Argentina
RVR	Riverside, California, U.S.A.
RXF	Rexford, Montana, U.S.A.
SAG	Sago, Kyushu, Japan
SAL	Salo, 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
SFS	San Fernando, Spain
SGH	Sud-Ghoubbet, Djibouti
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 (Siamisoki), Honshu, Japan
SHK	Shiraki, Honshu, Japan
SHL	Shillong, Meghalaya, India
SHN	Shimonaseki 3 (Shimanoseki), 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
SKLY	Ski Hill Lift, New York, U.S.A.
SKO	Skopje, Yugoslavia
SKR	Severo-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	Songkhla, Thailand
SNY	Shenyang, Liaoning, China (Mainland)
SNZO	South Karori, North Island, New Zealand
SOB1	Sabradinho (Serra), Bahia, Brazil
SOD	Sodankylo, Finland
SOF	Sofia, Bulgaria
SOH	Sokhos, Greece
SOP	Sopran, Hungary
SOR	Sarao, Cuba
SPA	South Pole, Greater Antarctica, Antarctica
SPC	Skalnate-Pleso, Czechoslavakia
SRA	San Ramon, Costa Rica
SRO	Srobarava, Czechoslovakia
SRS	Serrai, Greece
SRY	Shirayama, Honshu, Japan
SSB	Saint Sauveur en Rue, Languedac, France
SSC	Saint Sauveur de Carauges, Normandie, France
SSE	Sheshan, Shanghai, China (Mainland)
SSF	Saint Saulge, Nivernais, France
SSR	Susara, Ramania
SSS	San Salvador, El Salvador
STB	Steinbach, Nordrhein-Westfalen, Fed. Rep. of Germany
STE	Stepanavan, Armenian S.S.R., U.S.S.R.
STJ	Saint John's, Newfaundland, Canada
STK	Stephens Creek, New South Wales, Australia
STR	Strasbourg, Alsace, France
STS	Santiaga 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, Solaman Islands

TABLE 5

Code	Station Name and Geographic Region
SVW	Sparrevohn, Alaska, U.S.A.
SWZ	Schweizer-Reneke, Transvaal, South Africa
SXM	Sixmile, Montana, U.S.A.
SYP	Santa Ynez Peak, California, U.S.A.
SZP	Santa, Luzan, 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	Tabale, New Guinea, Papua New Guinea
TBY	Torsby, Sweden
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
TEF	Tecpan, Guatemala
TER	Terranova, Guatemala
TET	Tete, Mozambique
TGI	Taghi Ghambar, Iran
THE	Thessaloniki, Greece
TIA	Taian, Shandong, China (Mainland)
TIK	Tiksi, R.S.F.S.R., U.S.S.R.
TIM	Timisoara, Romania
TIO	Tiouine, Morocco
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 Tacuyo, Venezuela
TP2	Tecpan 2, Guatemala
TPM	Tepoztlan, Morelos, Mexico
TPT	Tiputa, Tuamotu Archipelago, French Polynesia
TPZ	Tupiza, Bolivia
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
TTK	Takmak, Turkey
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-lang, China (Taiwan)
TWK	Hsin-ying, China (Taiwan)
TWM1	Shou Shan, China (Taiwan)
TWO	Mei-shan, China (Taiwan)
TWQ	Tung-shih, China (Taiwan)
TWZ	Nei-hu (Neifu), China (Taiwan)
TYS	Tysan Valley, Missouri, U.S.A.
TZZ	Tabubil, New Guinea, Papua New Guinea
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
VAI	Varese, Lombardia, Italy
VAL	Valentia, Eire
VAO	Valinhos, Sao Paulo, Brazil
VAY	Valandovo, Yugoslavia
VBA	Sierro de la Ventana, Buenos Aires, Argentina
VCA	Vinchina, La Pampa, Argentina
VDL	Val di Lei, Switzerland
VDM	Villiers-Adam, Ile de France, France
VDW	Vunindawa Fiji
VGI	Voghera, Lombardia, Italy
VHO	Visto Hermosa, Oaxaca, Mexico
VIE	Vienna--Hohe Warte (Wien--Hohe Warte), Austria
VIR	Virginia, Orange Free State, South Africa
VIS	Vishakhapatnam (Andhra, Waltair) Andhra Pradesh, India
VKA	Vienna--Kabenzl (Wien--Kobenzl), Austria
VLR	Valeo Ierii, Romania
VLS	Valsamata (Kephallenia), Greece
VLZ	Valdez, Alaska, U.S.A.
VOY	Vojsko, Yugoslavia
VRI	Vrincioaia, Romania
VTS	Vitasha, Bulgaria
VUN	Vunikawai, Fiji
VVO	Vivian, Oklahoma, U.S.A.
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	Wahaula, Hawaii, U.S.A.
WHN	Wuhan, Hubei, China (Mainland)
WIN	Windhoek, Namibia
WIT	Witteveen, Netherlands
WKY	Wakayama, Honshu, Japan
WLF	Wolferdange, Luxembourg
WLO	Wilsan, Oklahoma, U.S.A.
WMQ	Urumqi (Wulumuchi), Xinjiang, China (Mainland)
WMQ	Urumqi (Wulumuchi), Xinjiang, China (Mainland)
WRA	Warramunga Array, Northern Territory, Australia
WTS	Winterswijk, Netherlands
WWW	Wewak, New Guinea, Papua New Guinea
XAN	Xian (Hsian), Shaanxi, China (Mainland)
XDE	Dent Fell, England, United Kingdom
YAK	Yakutsk, R.S.F.S.R., U.S.S.R.
YAM	Yamagata, Honshu, Japan
YBT	Youssef Ben Tachfine, Moracco
YER	Yerkesik, Turkey
YJA	Yavi, Jujuy, Argentina
YKA	Yellowknife Array, Northwest Territories, Canada
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.
ZAG	Zagreb (Agram), Yugoslavia
ZAK	Zakamensk, R.S.F.S.R., U.S.S.R.
ZIH	Zihuatanejo, Guerrero, Mexico
ZOBO	Zonga (La Paz), Bolivia
ZON	Zanda, San Juan, Argentina
ZST	Bratislava--Zelezna Studnicka, Czechoslovakia
ZUL	Zurich--Lageren, Switzerland

Figure 3. Azimuthal equidistant map for geographic subdivision, Alaska

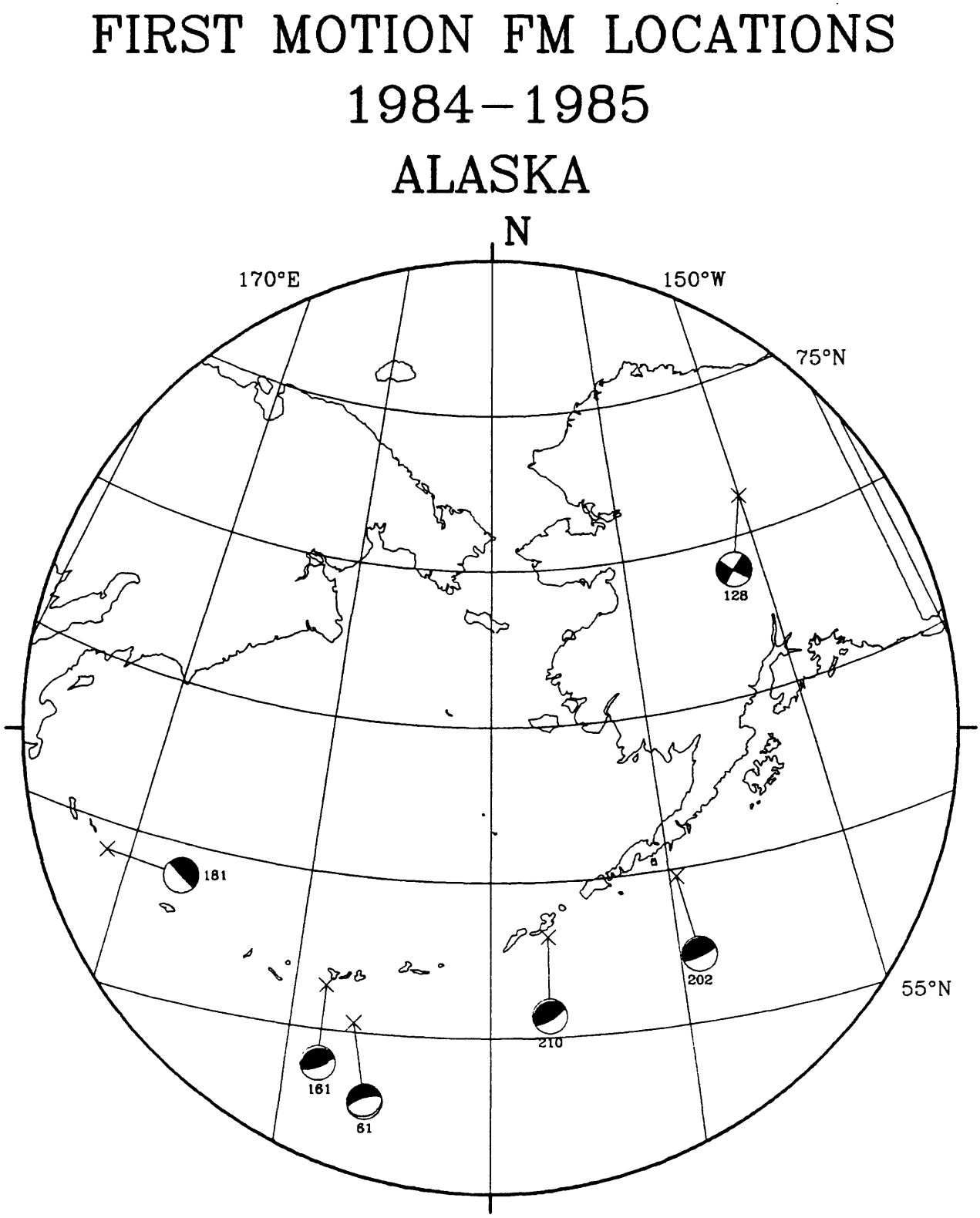


Table 6. Focal mechanism parameters for subdivision, Alaska

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
61	253	72	-90	73	18	-90	27	343	63	163	0	73
128	210	86	5	120	85	176	6	75	1	345	84	249
161	70	70	90	250	20	90	65	340	25	160	0	70
181	65	78	90	245	12	90	57	335	33	155	0	65
202	59	73	90	239	17	90	62	329	28	149	0	138
210	138	88	90	318	2	90	47	48	43	228	0	138

Figure 4. Lower hemisphere focal sphere projection for events 61, 128, 161, and 181.

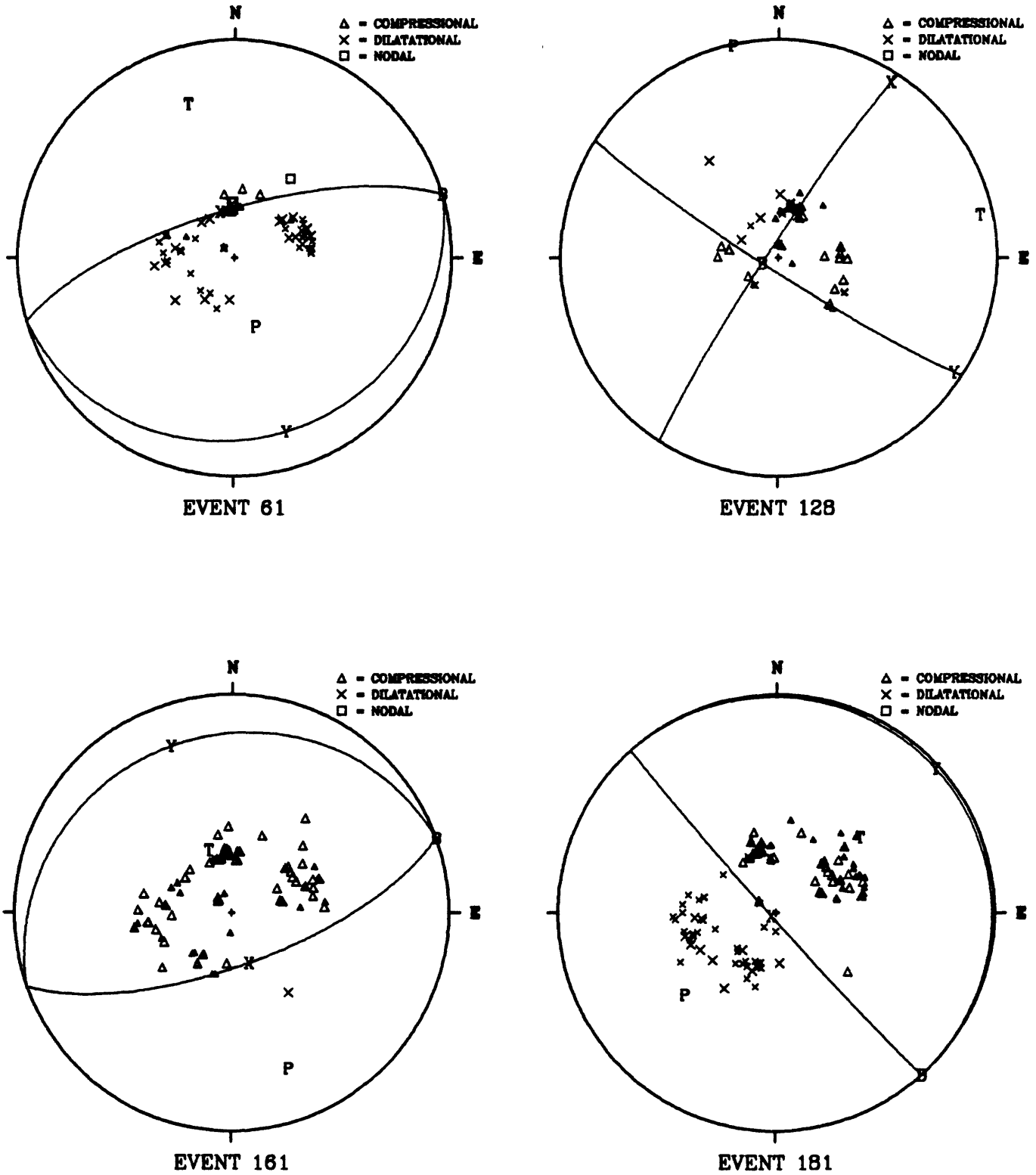


Figure 5. Lower hemisphere focal sphere projection for events 202 and 210.

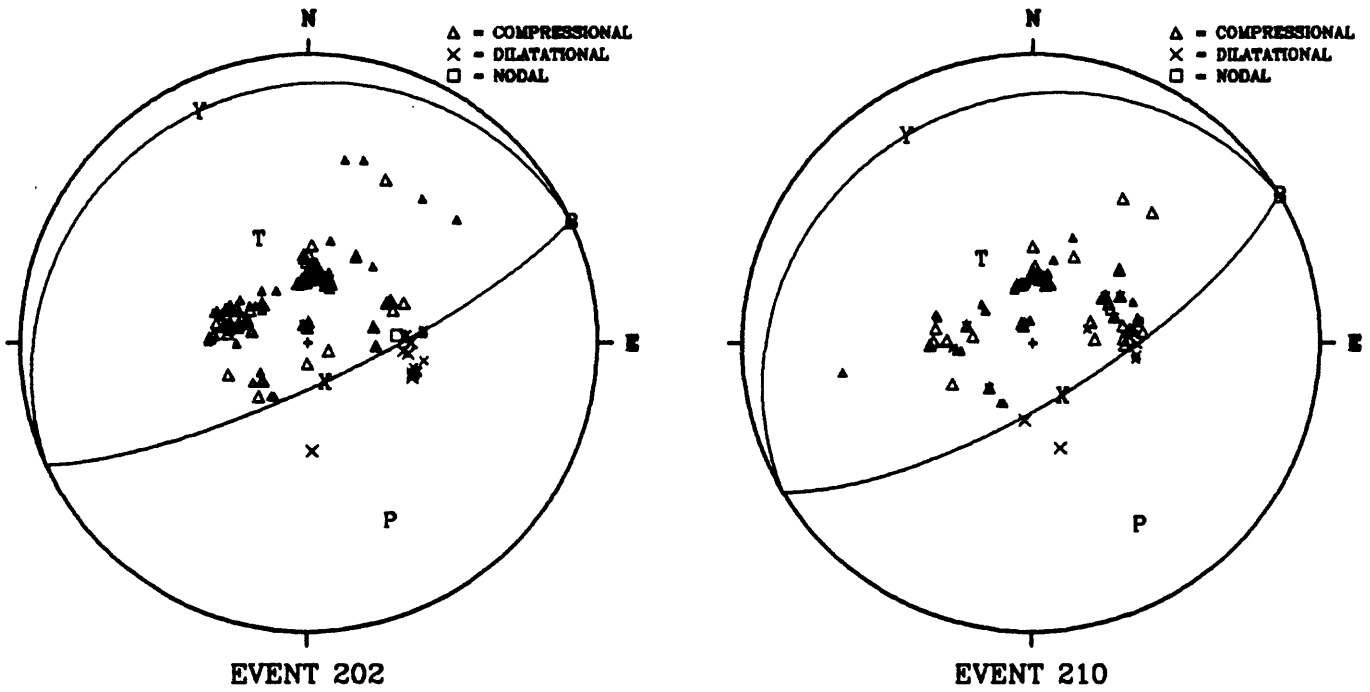


Table 7. Station data for event 61.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
COL	21.072	35.21	10.17	36.70	E	N	LP	P
MAT	34.864	264.22	8.56	30.20	I	D	SP	P
MAJO	34.864	264.22	8.56	30.20	E	D	LP	P
LON	35.935	73.85	8.50	29.96	E	D	LP	P
COR	36.008	77.94	8.50	29.96	I	D	SP	P
EDM	38.273	60.34	8.35	29.38	I	D	SP	P
WDC	38.555	83.13	8.35	29.38	I	D	SP	P
YKM	38.693	67.73	8.35	29.38	I	D	LP	P
LHD	39.053	68.52	8.32	29.27	I	D	LP	P
BKS	40.286	86.42	8.24	28.96	I	D	SP	P
SES	40.741	63.48	8.24	28.96	I	D	SP	P
SNY	41.179	281.86	8.21	28.84	I	D	SP	P
JAS	41.394	85.05	8.18	28.73	I	D	SP	P
MNA	42.563	82.88	8.13	28.54	I	D	SP	P
BDW	45.458	72.38	7.96	27.89	I	D	SP	P
RSSD	48.036	67.75	7.81	27.32	I	D	SP	P
RSSD	48.036	67.75	7.81	27.32	E	D	LP	P
GUMO	48.040	234.08	7.81	27.32	E	D	LP	P
HHC	49.175	287.98	7.74	27.05	I	D	SP	P
GOL	49.820	73.27	7.66	26.75	I	D	SP	P
RSON	50.065	55.16	7.66	26.75	I	D	SP	P
RSON	50.065	55.16	7.66	26.75	E	D	LP	P
NJ2	50.093	274.17	7.66	26.75	I	D	SP	P
BTO	50.266	288.64	7.62	26.60	I	C	SP	P
ANMO	52.111	78.73	7.50	26.15	E	D	LP	P
DAG	52.429	6.22	7.46	26.00	E	C	LP	P
TATO	53.233	265.59	7.42	25.85	I	D	LP	P
GDH	53.741	21.67	7.38	25.70	E	C	LP	P
LHC	53.832	55.55	7.34	25.55	I	C	SP	P
QZH	55.109	267.86	7.26	25.25	I	D	SP	P
MOT	56.471	80.99	7.14	24.81	I	D	SP	P
TUL	58.074	70.90	7.03	24.40	I	D	LP	P
KEV	58.983	350.54	6.96	24.14	E	C	LP	P
GAC	62.698	50.64	6.68	23.11	E	D	LP	P
RSNY	63.992	51.01	6.56	22.67	E	D	LP	P
KMI	65.103	279.81	6.47	22.34	E	D	LP	P
BLA	66.135	60.17	6.39	22.05	I	D	SP	P
SHA	66.295	70.15	6.35	21.91	E	D	LP	P
WES	67.167	50.76	6.31	21.76	E	D	LP	P
BER	69.647	358.84	6.10	21.00	E	N	LP	P
KONO	70.275	356.52	6.03	20.75	E	N	LP	P
CHG	72.094	277.97	5.92	20.36	I	D	SP	P
KOU	72.501	198.51	5.89	20.25	I	D	SP	P
BDT	73.217	276.83	5.85	20.11	I	D	SP	P
MUD	73.482	356.51	5.82	20.00	I	D	SP	P
KKN	73.844	293.97	5.78	19.85	I	C	SP	P
DMN	74.081	293.97	5.78	19.85	I	C	SP	P
COP	74.094	354.54	5.78	19.85	I	C	SP	P
COP	74.094	354.54	5.78	19.85	E	C	LP	P
DMU	75.824	6.11	5.64	19.35	I	C	SP	P

Table 7. Station data for event 61 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
DCN	76.351	6.40	5.61	19.25	I	C	SP	P
DDK	76.372	5.82	5.61	19.25	I	C	SP	P
DLE	76.458	5.96	5.61	19.25	I	C	SP	P
ETA	77.069	5.82	5.58	19.14	I	C	SP	P
CTA	77.286	215.33	5.55	19.03	I	D	LP	P
CTAO	77.286	215.33	5.55	19.03	E	D	LP	P
ECB	77.358	6.21	5.55	19.03	I	C	SP	P
ECP	77.572	5.97	5.55	19.03	I	C	SP	P
BRG	78.776	353.04	5.45	18.68	I	C	SP	P
MOX	79.165	354.51	5.45	18.68	I	C	SP	P
TNS	79.745	356.53	5.41	18.54	I	C	SP	P
GRFO	80.140	354.68	5.36	18.36	E	C	LP	P
MHI	80.482	317.00	5.31	18.18	I	D	LP	P
GRC1	80.815	354.41	5.26	18.00	I	C	SP	P
HNM	81.023	345.30	5.26	18.00	I	C	SP	P
CEA	81.111	344.41	5.26	18.00	I	C	SP	P
KMR	81.560	352.56	5.22	17.86	I	D	LP	P
FUR	81.658	354.50	5.22	17.86	I	C	SP	P
VRI	82.044	343.60	5.18	17.72	I	C	SP	P
WB2	82.109	225.59	5.18	17.72	I	D	SP	P
SLE	82.199	356.35	5.18	17.72	E	C	LP	P
ZUL	82.488	356.40	5.14	17.58	E	C	LP	P
MLR	82.550	344.03	5.14	17.58	I	C	SP	P
KBA	82.596	352.98	5.14	17.58	I	D	SP	P
SAX	82.676	355.74	5.14	17.58	E	C	LP	P
GRC	82.779	0.04	5.11	17.47	I	C	SP	P
CMP	82.923	344.60	5.11	17.47	I	C	SP	P
OGA	82.967	354.55	5.11	17.47	I	C	SP	P
LLS	83.073	355.95	5.11	17.47	E	C	LP	P
OSS	83.198	355.14	5.11	17.47	E	C	LP	P
VDL	83.433	355.60	5.08	17.37	E	C	LP	P
CLO	83.475	346.11	5.08	17.37	I	D	SP	P
TRT	83.687	250.04	5.08	17.37	I	D	SP	P
TMA	83.840	355.99	5.05	17.26	E	C	LP	P
TAB	84.134	327.10	5.05	17.26	I	D	LP	P
POO	87.619	296.32	4.80	16.38	I	D	SP	P
STK	89.715	214.35	4.71	16.07	I	D	SP	P
SNZO	91.536	186.34	4.68	15.96	E	D	LP	P
BUL	143.755	316.87	1.70	5.75	I	C	SP	PKP
EVA	149.007	310.41	1.59	5.35	I	D	SP	PKP
BPI	149.233	312.30	1.59	5.35	I	D	SP	PKP
KSR	149.498	314.33	1.59	5.35	I	D	SP	PKP
BFS	150.432	313.44	1.56	5.26	I	D	SP	PKP
SEK	151.229	310.59	1.53	5.15	I	D	SP	PKP
BLF	152.576	311.92	1.46	4.93	I	D	SP	PKP

Table 8. Station data for event 128.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
COL	1.635	144.32	14.27	134.26	I	D	SP	P
COL	1.635	144.32	14.27	134.26	I	D	LP	P
YKM	24.837	117.57	9.49	28.44	I	D	SP	P
LHD	25.401	118.13	9.43	28.25	I	D	SP	P
CLX	25.595	117.64	9.43	28.25	I	D	SP	P
COR	26.082	133.03	9.39	28.12	I	C	SP	P
MIN	30.471	134.15	8.87	26.43	I	C	SP	P
RSON	31.841	90.85	8.76	26.08	I	C	LP	P
JAS1	33.055	134.24	8.69	25.86	I	C	SP	P
GDH	33.090	40.44	8.69	25.86	I	C	SP	P
RSSD	33.179	108.80	8.69	25.86	E	C	LP	P
MNA	33.263	130.88	8.66	25.76	I	C	SP	P
DAG	34.101	17.99	8.62	25.63	I	C	SP	P
ANMO	40.320	118.94	8.24	24.43	E	C	LP	P
GAC	43.300	80.06	8.08	23.92	I	C	LP	P
MNT	44.204	78.67	8.05	23.83	I	C	SP	P
KEV	44.265	1.48	8.02	23.73	E	D	LP	P
RSNY	44.632	80.20	8.02	23.73	I	C	LP	P
SCP	46.435	85.95	7.91	23.39	I	C	LP	P
BLA	48.456	90.79	7.79	23.01	I	C	LP	P
MAJO	49.906	270.73	7.66	22.61	I	C	LP	P
SEO	53.546	281.29	7.38	21.74	E	C	LP	P
EDI	55.627	21.90	7.22	21.24	I	C	SP	P
EAU	55.662	22.11	7.22	21.24	I	C	SP	P
MUD	56.629	13.66	7.15	21.03	I	D	SP	P
DCN	57.443	25.51	7.08	20.81	I	C	SP	P
COP	57.688	11.65	7.08	20.81	E	D	LP	P
COP	57.688	11.65	7.08	20.81	I	C	SP	P
ENN	61.893	17.06	6.73	19.74	I	D	SP	P
CLL	62.075	11.97	6.73	19.74	I	D	SP	P
HOF	62.965	12.92	6.64	19.47	I	C	SP	P
FLN	62.986	22.12	6.64	19.47	I	C	SP	P
LDF	63.205	21.90	6.64	19.47	I	C	SP	P
GRR	63.292	22.49	6.60	19.34	I	C	SP	P
GRFO	63.519	13.49	6.60	19.34	E	D	LP	P
LPF	63.611	22.71	6.60	19.34	I	C	SP	P
WET	64.212	12.38	6.56	19.22	I	D	SP	P
CDF	64.370	16.57	6.52	19.10	I	C	SP	P
HAU	64.661	17.32	6.52	19.10	I	C	SP	P
BSF	64.885	17.03	6.48	18.98	I	C	SP	P
LOR	65.069	19.30	6.48	18.98	I	C	SP	P
SLE	65.145	15.80	6.48	18.98	E	C	SP	P
MFF	65.142	22.42	6.48	18.98	I	C	SP	P
SSF	65.224	19.61	6.48	18.98	I	C	SP	P
VKA	65.357	9.99	6.44	18.86	I	C	SP	P
LBF	65.363	19.28	6.44	18.86	I	C	SP	P
AVF	65.469	19.78	6.44	18.86	I	C	SP	P
BHG	65.625	12.59	6.44	18.86	I	C	SP	P
SMF	65.677	19.45	6.44	18.86	I	C	SP	P
LSF	65.739	21.26	6.44	18.86	I	C	SP	P

Table 8. Station data for event 128 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
TCF	65.800	20.74	6.40	18.74	I	C	SP	P
MZF	65.925	20.48	6.40	18.74	I	C	SP	P
KBA	66.304	12.33	6.36	18.61	I	D	SP	P
PLDF	66.310	19.76	6.36	18.61	I	D	SP	P
ANP	66.627	279.35	6.36	18.61	E	C	LP	P
TATO	66.824	279.28	6.31	18.46	I	C	LP	P
LFF	66.901	22.15	6.31	18.46	I	C	SP	P
CAF	67.112	21.16	6.31	18.46	I	C	SP	P
LPO	67.219	21.88	6.31	18.46	I	C	SP	P
PTO	68.915	30.32	6.15	17.98	E	C	LP	P
PSN	70.414	1.38	6.04	17.65	I	C	SP	P
PVL	70.895	3.72	6.00	17.52	I	C	SP	P
SJG	71.124	88.03	6.00	17.52	E	C	LP	P
JMB	71.606	2.64	5.96	17.40	I	C	SP	P
DIM	72.005	3.44	5.93	17.31	I	C	SP	P
MMB	72.406	4.91	5.89	17.19	I	D	SP	P
KDZ	72.403	3.63	5.89	17.19	I	D	SP	P
ALI	73.129	24.61	5.86	17.10	E	D	LP	P
MAL	74.005	28.16	5.79	16.89	I	C	LP	P
MHI	75.291	335.70	5.68	16.56	I	D	LP	P
ATH	76.014	5.09	5.65	16.47	I	D	SP	P
NDI	78.771	318.87	5.45	15.87	I	D	SP	P
CHTO	81.068	296.49	5.26	15.31	E	D	LP	P
CHTO	81.068	296.49	5.26	15.31	I	D	SP	P
PRNI	83.657	355.63	5.09	14.80	I	C	SP	P
KOU	93.088	222.18	4.65	13.50	I	C	SP	P
NOU	94.179	219.75	4.61	13.38	I	D	SP	P
CTAO	98.246	238.38	4.51	13.08	E	C	LP	P
TLL	113.043	112.40	1.89	5.43	I	C	SP	PKP
LSZ	129.070	2.22	1.86	5.34	I	D	SP	PKP
BUL	133.915	1.77	1.83	5.27	I	D	SP	PKP
BUL	133.915	1.77	1.83	5.27	E	C	LP	PKP
SUR	145.662	13.82	1.66	4.79	I	C	LP	PKP
GRM	146.976	5.22	1.64	4.72	I	C	SP	PKP

Table 9. Station data for event 161.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
COL	20.771	37.81	10.17	45.47	I	C	LP	P
HON	34.007	144.43	8.62	37.18	E	D	LP	P
MAT	34.023	261.23	8.62	37.18	I	C	SP	P
MAJO	34.023	261.23	8.62	37.18	I	C	LP	P
RSNT	35.047	46.56	8.56	36.87	I	C	LP	P
EDM	38.593	60.96	8.35	35.83	I	C	SP	P
NEW	38.657	69.80	8.35	35.83	I	C	SP	P
SHK	38.756	263.59	8.32	35.68	I	C	SP	P
YKM	39.196	68.25	8.32	35.68	I	C	SP	P
WDC	39.409	83.42	8.29	35.53	I	C	SP	P
RXF	39.536	67.96	8.29	35.53	I	C	SP	P
LHD	39.575	69.01	8.29	35.53	I	C	SP	P
LDM	39.621	68.62	8.29	35.53	I	C	SP	P
CLX	39.847	68.86	8.26	35.38	I	C	SP	P
SEO	40.401	271.88	8.24	35.28	I	C	LP	P
BKS	41.207	86.56	8.21	35.14	E	C	LP	P
BJI	45.595	282.28	7.96	33.92	E	C	LP	P
GUMO	47.920	231.54	7.81	33.19	I	C	LP	P
GUA	47.940	231.45	7.81	33.19	E	C	LP	P
RSSD	48.534	67.78	7.78	33.05	I	C	LP	P
KBS	49.781	357.39	7.66	32.48	I	C	LP	P
RSON	50.246	55.18	7.66	32.48	I	C	LP	P
GOL	50.449	73.18	7.62	32.29	I	C	LP	P
ANP	52.184	263.63	7.50	31.72	I	C	LP	P
TATO	52.353	263.47	7.46	31.53	I	C	LP	P
ANMO	52.863	78.51	7.42	31.34	I	C	LP	P
GDH	53.076	21.45	7.42	31.34	I	C	LP	P
KEV	57.723	349.81	7.07	29.71	I	C	LP	P
TUL	58.644	70.54	7.00	29.39	I	C	LP	P
RLO	58.920	69.82	6.96	29.20	I	C	SP	P
BAG	59.313	257.43	6.92	29.02	E	C	LP	P
MAP	62.027	250.16	6.72	28.10	I	C	SP	P
DAV	63.697	246.60	6.60	27.56	I	C	LP	P
KMI	63.953	278.16	6.56	27.38	E	C	LP	P
RSNY	64.059	50.53	6.56	27.38	I	C	LP	P
RSCP	64.757	64.15	6.47	26.97	I	C	LP	P
SCP	65.153	55.34	6.47	26.97	I	C	LP	P
BLA	66.436	59.60	6.35	26.43	I	C	LP	P
WES	67.226	50.18	6.31	26.25	I	C	LP	P
IIC	68.108	85.52	6.22	25.85	I	C	SP	P
CHTO	70.973	276.43	5.99	24.83	I	C	LP	P
CHG	70.973	276.43	5.99	24.83	I	C	SP	P
MUD	72.310	355.58	5.89	24.39	I	C	SP	P
KKN	72.497	292.57	5.89	24.39	I	C	SP	P
PKI	72.588	292.33	5.89	24.39	I	C	SP	P
DMN	72.735	292.57	5.89	24.39	I	C	SP	P
COP	72.892	353.59	5.85	24.21	I	C	LP	P
KOU	73.254	196.91	5.82	24.08	I	C	SP	P
NOU	74.597	194.51	5.75	23.77	I	C	SP	P
DCN	75.352	5.47	5.68	23.46	I	C	SP	P

Table 9. Station data for event 161 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
NDI	76.360	298.84	5.61	23.16	I	C	SP	P
VAL	76.540	7.49	5.61	23.16	E	C	LP	P
DBN	76.816	357.72	5.58	23.03	I	C	LP	P
CTAO	77.636	213.80	5.55	22.90	I	C	LP	P
CTA	77.636	213.80	5.55	22.90	I	C	SP	P
MOX	77.961	353.48	5.52	22.77	E	C	LP	P
SNG	78.788	267.43	5.45	22.46	I	C	LP	P
DOU	78.837	358.02	5.45	22.46	E	C	LP	P
GRFO	78.939	353.63	5.45	22.46	I	C	LP	P
GRF	78.939	353.63	5.45	22.46	I	C	SP	P
MHI	78.998	315.78	5.45	22.46	I	C	LP	P
KHC	79.312	352.01	5.41	22.29	I	C	SP	P
WET	79.356	352.47	5.41	22.29	I	C	SP	P
VKA	79.901	350.05	5.36	22.07	I	C	SP	P
STU	79.982	354.89	5.36	22.07	E	C	LP	P
QUE	80.553	307.06	5.31	21.85	I	C	LP	P
KBA	81.368	351.89	5.22	21.46	I	C	SP	P
GRC	81.664	358.97	5.22	21.46	I	C	SP	P
CLO	82.156	344.99	5.17	21.25	I	C	SP	P
WB2	82.194	224.18	5.17	21.25	I	C	SP	P
WB2	82.194	224.18	5.17	21.25	I	C	SP	P
BUC1	82.296	342.55	5.14	21.12	I	D	SP	P
PSN	82.512	340.86	5.14	21.12	I	C	SP	P
TRI	82.688	351.42	5.14	21.12	I	C	SP	P
PLDF	82.983	358.56	5.11	20.99	I	C	SP	P
PVL	83.615	342.85	5.08	20.86	I	C	SP	P
DMK	84.385	340.64	5.02	20.60	I	C	SP	P
HYB	84.420	290.83	5.02	20.60	I	C	SP	P
VTS	84.497	344.13	5.02	20.60	I	C	SP	P
KDZ	85.038	342.34	4.99	20.48	I	C	SP	P
ANTO	85.091	336.39	4.99	20.48	I	C	LP	P
MMB	85.386	343.51	4.96	20.35	I	C	SP	P
SKO	85.399	345.27	4.96	20.35	I	C	SP	P
ASPA	85.670	222.83	4.96	20.35	I	C	SP	P
VAY	85.848	344.30	4.90	20.09	I	C	SP	P
DUI	86.628	350.36	4.86	19.92	I	C	SP	P
BRT	87.081	348.19	4.83	19.79	I	C	SP	P
LCI	87.518	347.54	4.80	19.66	I	C	SP	P
MTE	88.217	6.95	4.77	19.53	I	C	SP	P
UPA	88.554	77.51	4.75	19.45	I	C	LP	P
TOL	88.952	4.32	4.73	19.36	I	C	LP	P
SJG	89.137	61.66	4.73	19.36	I	C	LP	P
MTH	89.575	8.38	4.71	19.28	I	C	SP	P
STK	90.085	213.14	4.71	19.28	I	C	SP	P
SNZO	92.537	185.17	4.66	19.07	I	C	LP	P
ADE	93.885	214.05	4.61	18.85	E	C	LP	P
BOG	95.305	75.88	4.56	18.64	E	C	LP	P
NAI	121.910	317.20	1.87	7.54	I	C	LP	PKP
BNG	122.498	339.81	1.87	7.54	I	C	SP	PKP
SBA	129.323	184.02	1.86	7.47	I	C	SP	PKP

Table 9. Station data for event 161 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BUL	142.271	315.72	1.74	7.00	E	C	LP	PKP
JOZ	146.812	304.49	1.64	6.60	I	C	SP	PKP
SLR	147.266	311.43	1.64	6.60	I	C	LP	PKP
SEK	149.759	309.74	1.56	6.28	I	C	SP	PKP
BLF	151.102	311.03	1.53	6.15	I	C	SP	PKP

Table 10. Station data for event 181.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
COL	24.017	46.15	9.58	42.62	I	C	LP	P
COL	24.017	46.15	9.58	42.62	I	C	SP	P
MAT	27.436	242.59	9.22	40.67	I	D	SP	P
CN2	29.794	267.65	8.89	38.93	I	D	SP	P
INK	29.853	39.18	8.89	38.93	I	C	SP	P
SNY	32.080	266.20	8.74	38.15	I	D	SP	P
PHC	37.909	68.27	8.37	36.27	I	C	SP	P
RSNT	38.834	46.13	8.32	36.02	I	C	LP	P
YKC	38.885	46.10	8.32	36.02	I	C	SP	P
BTO	40.820	275.41	8.20	35.42	I	D	SP	P
SSE	40.867	255.32	8.20	35.42	I	D	LP	P
ALE	41.154	8.93	8.20	35.42	I	C	SP	P
TIY	41.286	270.23	8.18	35.32	I	D	SP	P
HON	41.320	129.24	8.18	35.32	E	C	LP	P
NJ2	41.497	258.53	8.18	35.32	I	D	SP	P
PNT	42.900	65.86	8.10	34.93	I	C	SP	P
LON	43.199	70.18	8.10	34.93	I	C	LP	P
COR	43.670	73.61	8.07	34.78	I	C	SP	P
EDM	43.942	57.93	8.04	34.63	I	C	SP	P
GUMO	44.601	214.07	8.01	34.48	E	D	LP	P
NEW	44.856	65.70	7.99	34.39	I	C	SP	P
TATO	45.409	249.35	7.96	34.24	E	D	LP	P
WDC	46.649	77.46	7.90	33.94	I	C	SP	P
SES	46.755	59.99	7.87	33.80	I	C	SP	P
QZH	47.044	252.20	7.87	33.80	I	D	SP	P
MIN	47.340	77.06	7.84	33.65	I	C	SP	P
GTA	47.531	281.47	7.84	33.65	I	D	SP	P
ORV	47.925	77.78	7.81	33.51	I	C	SP	P
FFC	48.489	50.78	7.77	33.31	I	C	SP	P
LRM	48.874	65.62	7.73	33.12	I	C	SP	P
JAS	49.623	78.61	7.69	32.93	I	C	LP	P
JAS1	49.647	78.62	7.69	32.93	I	C	SP	P
FRI	50.700	78.99	7.61	32.54	I	C	SP	P
GZH	51.463	255.68	7.53	32.16	I	D	SP	P
HKC	51.607	254.29	7.53	32.16	I	D	SP	P
BAG	52.857	243.75	7.41	31.58	E	D	LP	P
GDH	53.117	17.44	7.41	31.58	I	C	LP	P
KEV	53.337	344.40	7.37	31.39	E	C	LP	P
FRB	54.364	27.42	7.29	31.02	I	C	SP	P
RSSD	54.457	62.15	7.29	31.02	I	C	LP	P
RSON	54.814	50.25	7.25	30.83	I	C	LP	P
KMI	56.056	266.56	7.17	30.45	E	D	LP	P
QIZ	56.656	255.83	7.14	30.31	I	D	SP	P
DAV	58.322	232.91	6.99	29.61	E	D	LP	P
LSA	59.428	279.27	6.91	29.24	I	D	SP	P
ANMO	59.689	71.39	6.91	29.24	I	C	LP	P
SUF	59.858	341.11	6.87	29.05	I	C	SP	P
PAA	61.230	195.05	6.79	28.68	I	D	SP	P
NUR	62.177	340.84	6.71	28.31	I	C	SP	P
NUR	62.177	340.84	6.71	28.31	E	C	LP	P

Table 10. Station data for event 181 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
CHTO	63.145	265.11	6.63	27.95	E	D	LP	P
CHG	63.145	265.11	6.63	27.95	I	D	SP	P
KKN	64.254	282.25	6.51	27.40	I	D	SP	P
BDT	64.340	263.99	6.51	27.40	I	D	SP	P
PKI	64.346	282.00	6.51	27.40	I	D	SP	P
DMN	64.491	282.26	6.51	27.40	I	D	SP	P
TUL	64.757	63.31	6.47	27.21	I	C	SP	P
TUL	64.757	63.31	6.47	27.21	I	C	LP	P
RLO	64.963	62.61	6.47	27.21	I	C	SP	P
KONO	65.343	348.52	6.43	27.03	I	C	LP	P
PMG	65.878	203.43	6.38	26.81	I	D	SP	P
BHO	66.413	63.75	6.34	26.62	I	C	SP	P
GAC	66.591	43.44	6.34	26.62	I	C	LP	P
JCT	66.734	69.96	6.34	26.62	I	C	SP	P
OTT	66.748	43.79	6.34	26.62	I	C	SP	P
RSNY	67.923	43.56	6.22	26.08	I	C	LP	P
MUD	68.510	347.97	6.18	25.90	I	C	SP	P
COP	68.832	345.87	6.14	25.72	E	C	LP	P
SCP	69.594	48.03	6.10	25.54	I	C	LP	P
EBH	69.800	355.39	6.06	25.36	I	C	SP	P
EAB	69.898	355.88	6.06	25.36	I	C	SP	P
ESY	70.085	354.83	6.06	25.36	I	C	SP	P
RSCP	70.193	56.51	6.06	25.36	I	C	LP	P
WES	71.016	42.76	5.99	25.05	I	C	LP	P
BLA	71.362	51.95	5.95	24.87	E	C	LP	P
SHA	72.814	61.42	5.85	24.42	I	C	LP	P
KSP	72.877	342.12	5.85	24.42	I	C	SP	P
KRA	72.924	339.55	5.85	24.42	I	C	SP	P
CLL	72.985	344.34	5.85	24.42	I	C	SP	P
KHI	73.502	305.67	5.81	24.25	I	D	SP	P
MTN	73.971	218.25	5.78	24.11	I	D	SP	P
HOF	74.129	344.81	5.78	24.11	I	C	SP	P
BNS	74.143	347.99	5.78	24.11	I	C	SP	P
JOS	74.278	338.64	5.74	23.94	I	C	SP	P
GRFO	74.834	345.09	5.71	23.80	I	C	LP	P
GRF	74.833	345.08	5.71	23.80	I	C	SP	P
KHC	75.001	343.40	5.71	23.80	I	C	SP	P
WET	75.103	343.86	5.71	23.80	I	C	SP	P
ZST	75.264	340.81	5.67	23.63	I	C	SP	P
VKA	75.348	341.35	5.67	23.63	I	C	SP	P
VIE	75.356	341.31	5.67	23.63	I	C	LP	P
IIC	75.385	76.58	5.67	23.63	I	C	SP	P
SRO	75.391	339.89	5.67	23.63	I	C	SP	P
OXM	75.510	77.21	5.67	23.63	I	C	SP	P
BUD	75.559	339.31	5.67	23.63	I	C	SP	P
IIM	75.777	76.80	5.64	23.49	I	C	SP	P
MLR	75.822	333.97	5.64	23.49	I	D	SP	P
SOP	75.861	341.02	5.64	23.49	I	C	SP	P
KMR	75.945	342.74	5.64	23.49	I	C	LP	P
STU	76.027	346.21	5.64	23.49	E	C	LP	P

Table 10. Station data for event 181 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PSI	76.074	254.99	5.64	23.49	I	D	SP	P
TPM	76.117	76.92	5.64	23.49	I	C	SP	P
FUR	76.311	344.68	5.61	23.36	I	C	SP	P
III	76.365	77.61	5.61	23.36	I	C	SP	P
CTA	76.403	201.70	5.61	23.36	I	D	SP	P
CTAO	76.403	201.70	5.61	23.36	E	D	LP	P
BHG	76.484	343.49	5.61	23.36	I	C	SP	P
IIT	76.519	76.31	5.61	23.36	I	C	SP	P
PSN	76.897	331.75	5.58	23.23	I	C	SP	P
GAP	77.015	344.66	5.58	23.23	I	C	SP	P
KBA	77.028	343.01	5.58	23.23	I	C	SP	P
OGA	77.614	344.54	5.55	23.10	I	C	SP	P
VOY	77.945	342.37	5.51	22.92	I	C	SP	P
PVL	78.208	333.63	5.51	22.92	I	C	SP	P
TRI	78.280	342.37	5.48	22.79	I	C	SP	P
ISQ	78.654	207.74	5.48	22.79	I	D	SP	P
ANTO	79.007	326.96	5.44	22.61	E	C	LP	P
VTS	79.225	334.82	5.44	22.61	I	C	SP	P
WRA	79.470	212.72	5.41	22.48	I	D	SP	P
KDZ	79.566	332.96	5.41	22.48	I	C	SP	P
MMB	80.040	334.10	5.35	22.22	I	C	SP	P
SKO	80.249	335.86	5.35	22.22	I	C	SP	P
RMQ	82.122	198.00	5.17	21.43	I	D	SP	P
BRS	82.348	194.28	5.14	21.30	I	D	SP	P
ASPA	83.094	211.84	5.11	21.17	I	D	SP	P
LGR	83.495	353.48	5.08	21.04	I	D	SP	P
PTO	85.079	357.98	4.99	20.65	I	C	LP	P
MBL	85.928	224.84	4.90	20.26	I	D	SP	P
TOL	86.156	354.44	4.90	20.26	I	C	SP	P
TOL	86.156	354.44	4.90	20.26	E	C	LP	P
CMS	87.537	199.44	4.80	19.83	I	D	SP	P
STK	88.818	202.84	4.73	19.53	I	D	SP	P
NAU	88.997	227.79	4.73	19.53	I	D	SP	P
MAL	89.317	354.49	4.71	19.45	I	C	SP	P
YOU	89.788	196.74	4.71	19.45	I	D	SP	P
SJG	94.140	51.26	4.61	19.02	E	C	LP	P
UPA	95.159	67.13	4.58	18.89	E	C	LP	P
UPA	95.159	67.13	4.58	18.89	E	C	LP	P
SNZO	95.204	175.48	4.58	18.89	E	D	LP	P
NWAO	97.424	221.59	4.52	18.63	E	D	LP	P
BOG	101.738	64.89	4.45	18.33	E	C	LP	P
NAI	114.266	305.32	1.88	7.65	E	C	LP	PKP
SWZ	142.020	300.35	1.74	7.06	I	D	SP	PKP
MAW	143.941	218.78	1.70	6.92	I	D	SP	PKP
SPA	143.951	180.00	1.70	6.92	I	D	SP	PKP

Table 11. Station data for event 202.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KDC	4.949	50.26	14.15	56.21	I	C	SP	P
SVW	6.682	16.82	14.05	55.61	I	C	SP	P
TTA	8.376	11.33	13.87	54.55	I	C	SP	P
TOA	10.147	38.31	13.70	53.57	I	C	SP	P
COL	11.725	25.43	13.51	52.51	I	C	LP	P
COR	25.332	98.64	9.42	33.59	I	D	SP	P
YKM	27.402	84.14	9.24	32.87	I	C	SP	P
RXF	27.739	83.73	9.24	32.87	I	D	SP	P
LHD	27.791	85.17	9.19	32.67	I	C	SP	P
LDM	27.832	84.63	9.19	32.67	I	D	SP	P
CLX	28.061	84.95	9.19	32.67	I	C	SP	P
WDC	28.326	104.67	9.11	32.35	I	D	SP	P
MIN	29.010	104.02	9.04	32.07	I	D	SP	P
ORV	29.608	105.09	8.97	31.79	I	D	SP	P
BRK	30.370	108.31	8.86	31.36	I	D	SP	P
BKS	30.382	108.28	8.86	31.36	I	D	LP	P
BKS	30.382	108.28	8.86	31.36	I	D	SP	P
MHC	31.093	108.33	8.82	31.20	I	D	SP	P
JAS	31.326	106.20	8.79	31.08	I	D	LP	P
JAS1	31.350	106.21	8.79	31.08	I	D	SP	P
MNA	32.263	103.14	8.72	30.81	I	D	SP	P
FRI	32.414	106.67	8.72	30.81	I	D	SP	P
HON	33.434	177.31	8.65	30.53	I	D	LP	P
ALE	37.016	12.50	8.44	29.72	I	C	SP	P
RSON	38.700	67.72	8.35	29.37	I	C	LP	P
GOL	38.755	89.92	8.32	29.25	I	D	LP	P
ALQ	41.393	96.21	8.18	28.71	I	D	SP	P
ALQ	41.393	96.21	8.18	28.71	I	D	LP	P
ANMO	41.391	96.20	8.18	28.71	E	D	LP	P
FRB	43.503	40.24	8.08	28.33	I	C	SP	P
TSK	44.638	271.14	8.02	28.10	I	C	SP	P
MDJ	45.049	287.61	7.99	27.99	I	C	SP	P
GDH	45.214	28.86	7.99	27.99	I	C	SP	P
GDH	45.214	28.86	7.99	27.99	I	C	LP	P
MAJO	45.509	272.98	7.96	27.87	I	C	LP	P
MAT	45.509	272.98	7.96	27.87	I	C	SP	P
KBS	46.460	2.26	7.91	27.68	I	C	LP	P
TUL	46.880	86.38	7.88	27.57	I	D	LP	P
TUL	46.880	86.38	7.88	27.57	I	C	SP	P
RLO	47.144	85.53	7.88	27.57	I	C	SP	P
CN2	47.851	289.40	7.82	27.34	I	C	SP	P
JCT	48.475	94.73	7.78	27.19	I	D	LP	P
BHO	48.496	87.11	7.78	27.19	I	C	SP	P
SHK	50.119	275.36	7.66	26.74	I	C	LP	P
SHK	50.119	275.36	7.66	26.74	I	C	SP	P
SNY	50.193	288.67	7.66	26.74	I	C	SP	P
SEO	51.241	282.36	7.58	26.44	I	C	LP	P
GAC	51.461	63.04	7.54	26.29	I	C	LP	P
MNT	52.552	62.10	7.46	25.99	I	C	SP	P
RSNY	52.740	63.52	7.46	25.99	I	C	LP	P

Table 11. Station data for event 202 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
DL2	53.288	287.31	7.38	25.69	I	C	SP	P
SCP	53.579	69.03	7.38	25.69	I	C	LP	P
SHA	55.062	85.04	7.26	25.24	E	N	LP	P
BJI	55.459	291.97	7.22	25.09	I	C	SP	P
BJI	55.459	291.97	7.22	25.09	I	C	LP	P
KEV	55.680	357.22	7.22	25.09	I	C	LP	P
KEV	55.680	357.22	7.22	25.09	I	C	SP	P
TRO	55.892	0.62	7.18	24.94	I	C	LP	P
WES	55.921	63.40	7.18	24.94	I	C	LP	P
HHC	57.320	295.69	7.07	24.53	I	C	SP	P
BTO	58.307	296.50	7.00	24.28	I	C	SP	P
TIY	59.153	292.60	6.96	24.13	I	C	SP	P
SSE	59.214	281.20	6.96	24.13	I	C	SP	P
SSE	59.214	281.20	6.96	24.13	I	C	LP	P
GUMO	59.403	248.65	6.92	23.98	I	C	LP	P
GUA	59.419	248.58	6.92	23.98	E	C	LP	P
NJ2	59.819	283.66	6.88	23.83	I	C	SP	P
KJF	61.221	356.36	6.80	23.54	I	C	SP	P
WHN	63.479	285.86	6.60	22.81	I	C	SP	P
ANP	63.509	276.59	6.60	22.81	I	C	LP	P
TATO	63.685	276.47	6.60	22.81	I	C	LP	P
XAN	63.789	292.29	6.56	22.66	I	C	SP	P
GTA	64.348	302.35	6.52	22.52	I	C	SP	P
LZH	64.890	297.28	6.47	22.33	I	C	SP	P
NUR	65.011	357.68	6.47	22.33	I	C	SP	P
HFS	65.312	3.69	6.43	22.19	I	C	SP	P
QZH	65.373	278.70	6.43	22.19	I	C	SP	P
KONO	65.596	6.00	6.43	22.19	I	C	LP	P
UPP	65.692	1.54	6.43	22.19	I	C	SP	P
MUD	68.744	6.66	6.18	21.28	I	C	SP	P
CD2	68.962	293.83	6.14	21.14	I	C	SP	P
COP	69.707	4.80	6.10	20.99	I	C	SP	P
GZH	69.810	281.51	6.07	20.89	I	C	SP	P
ETA	70.641	16.80	6.03	20.74	I	C	SP	P
ECB	70.861	17.25	5.99	20.60	I	C	SP	P
ECP	71.111	17.05	5.99	20.60	I	C	SP	P
WIT	72.173	8.71	5.92	20.35	I	C	SP	P
HNR	72.410	222.19	5.89	20.24	E	C	LP	P
DBN	72.739	9.77	5.89	20.24	I	C	LP	P
WTS	72.996	8.74	5.85	20.10	I	C	SP	P
PGP	73.008	269.35	5.85	20.10	I	C	SP	P
BRN	73.005	4.60	5.85	20.10	I	C	SP	P
WAR	73.348	359.60	5.82	19.99	E	C	LP	P
UCC	73.943	10.52	5.78	19.84	E	C	LP	P
BNS	74.051	8.66	5.78	19.84	I	C	SP	P
KMI	74.092	290.90	5.78	19.84	I	C	LP	P
KMI	74.092	290.90	5.78	19.84	I	C	SP	P
CLL	74.103	4.82	5.78	19.84	I	C	SP	P
ENN	74.132	9.50	5.78	19.84	I	C	SP	P
GSH	74.204	9.21	5.78	19.84	I	C	SP	P

Table 11. Station data for event 202 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MEM	74.296	9.47	5.75	19.74	I	C	SP	P
STB	74.387	8.93	5.75	19.74	I	C	SP	P
BRG	74.581	4.24	5.75	19.74	I	C	SP	P
DOU	74.662	10.48	5.75	19.74	E	C	LP	P
MOX	74.691	5.79	5.75	19.74	I	C	SP	P
KSP	74.694	2.70	5.75	19.74	I	C	SP	P
MOX	74.691	5.79	5.75	19.74	I	C	LP	P
KSH	74.792	318.56	5.71	19.59	I	C	SP	P
BGG	74.817	8.66	5.71	19.59	I	C	SP	P
TNS	74.892	7.92	5.71	19.59	I	C	SP	P
QIZ	75.002	281.66	5.71	19.59	I	C	SP	P
HOF	75.037	5.65	5.71	19.59	I	C	SP	P
FLN	75.347	14.11	5.68	19.49	I	C	SP	P
PRU	75.491	3.90	5.68	19.49	I	C	SP	P
KRA	75.538	0.31	5.68	19.49	I	C	SP	P
LDF	75.562	13.91	5.68	19.49	I	C	SP	P
GRFO	75.617	6.15	5.68	19.49	I	C	LP	P
GRR	75.659	14.45	5.68	19.49	I	C	SP	P
LPF	75.980	14.65	5.64	19.34	I	C	SP	P
WET	76.257	5.08	5.61	19.24	I	C	SP	P
KHC	76.306	4.61	5.61	19.24	I	C	SP	P
LSA	76.375	302.30	5.61	19.24	I	C	SP	P
STU	76.393	7.60	5.61	19.24	I	C	LP	P
BUH	76.412	8.27	5.61	19.24	I	C	SP	P
CDF	76.591	8.95	5.61	19.24	I	C	SP	P
HAU	76.907	9.64	5.58	19.13	I	C	SP	P
UPA	76.988	92.89	5.58	19.13	I	C	SP	P
UPA	76.988	92.89	5.58	19.13	I	C	LP	P
BSF	77.121	9.36	5.58	19.13	I	C	SP	P
FUR	77.142	6.25	5.58	19.13	I	C	SP	P
GRC	77.252	12.00	5.55	19.02	I	C	SP	P
VKA	77.274	2.80	5.55	19.02	I	C	SP	P
SJG	77.367	76.63	5.55	19.02	I	C	SP	P
SJG	77.367	76.63	5.55	19.02	I	C	LP	P
ZST	77.362	2.26	5.55	19.02	I	C	SP	P
LOR	77.371	11.46	5.55	19.02	I	C	SP	P
KMR	77.403	4.31	5.55	19.02	I	C	LP	P
MFF	77.508	14.35	5.55	19.02	I	C	SP	P
SSF	77.534	11.74	5.55	19.02	I	C	SP	P
LBF	77.665	11.43	5.55	19.02	I	C	SP	P
BHG	77.678	5.19	5.55	19.02	I	C	SP	P
AVF	77.783	11.90	5.52	18.92	I	C	SP	P
SOP	77.862	2.66	5.52	18.92	I	C	SP	P
PMG	77.899	233.96	5.52	18.92	I	C	SP	P
BGF	77.951	12.29	5.52	18.92	I	C	SP	P
SMF	77.984	11.58	5.52	18.92	I	C	SP	P
KBA	78.343	4.92	5.49	18.81	I	C	SP	P
OGA	78.419	6.55	5.49	18.81	I	C	SP	P
PLDF	78.624	11.85	5.49	18.81	I	C	SP	P
PYM	78.765	12.32	5.45	18.67	I	C	SP	P

Table 11. Station data for event 202 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
RJF	79.011	13.46	5.45	18.67	I	C	SP	P
LFF	79.262	14.08	5.41	18.53	I	C	SP	P
SSB	79.412	11.32	5.41	18.53	I	C	SP	P
VOY	79.414	4.61	5.41	18.53	I	C	SP	P
SHIO	79.420	299.39	5.41	18.53	I	C	LP	P
LPG	79.430	9.72	5.41	18.53	I	C	SP	P
LJU	79.431	4.16	5.41	18.53	I	C	SP	P
CAF	79.456	13.14	5.41	18.53	I	C	SP	P
VRI	79.584	355.51	5.41	18.53	I	C	SP	P
ZAG	79.711	3.14	5.41	18.53	I	C	SP	P
TRI	79.730	4.72	5.41	18.53	I	C	SP	P
CEY	79.730	4.25	5.41	18.53	I	C	SP	P
MLR	79.995	356.05	5.36	18.35	I	C	SP	P
COZ	80.221	357.18	5.36	18.35	I	D	SP	P
CMP	80.251	356.68	5.31	18.17	I	C	SP	P
CLO	80.503	358.28	5.31	18.17	I	C	SP	P
KKN	80.788	305.64	5.26	17.99	I	C	SP	P
TLB	80.796	354.48	5.26	17.99	I	C	SP	P
PKI	80.912	305.43	5.26	17.99	I	C	SP	P
DMN	81.023	305.68	5.26	17.99	I	C	SP	P
EPF	81.074	14.75	5.26	17.99	I	C	SP	P
BUC1	81.135	355.92	5.26	17.99	I	C	SP	P
KOU	81.146	213.99	5.26	17.99	I	C	SP	P
LGR	81.183	16.95	5.26	17.99	I	C	SP	P
CHG	81.243	290.06	5.26	17.99	I	C	SP	P
CHG	81.243	290.06	5.26	17.99	I	C	LP	P
MLS	81.253	14.23	5.22	17.85	I	C	SP	P
PTO	81.288	21.75	5.22	17.85	I	C	LP	P
PTO	81.288	21.75	5.22	17.85	I	C	SP	P
FRF	81.337	10.07	5.22	17.85	I	C	SP	P
LRG	81.413	10.30	5.22	17.85	I	C	SP	P
LMR	81.547	10.20	5.22	17.85	I	C	SP	P
PSN	81.691	354.30	5.22	17.85	I	C	SP	P
DZM	81.882	211.56	5.18	17.71	I	C	SP	P
NOU	82.104	211.48	5.18	17.71	I	C	SP	P
PVL	82.366	356.48	5.14	17.57	I	C	SP	P
BDT	82.490	289.11	5.14	17.57	I	C	SP	P
CVF	82.530	8.57	5.14	17.57	I	C	SP	P
GUD	82.654	18.60	5.14	17.57	I	C	SP	P
EPLA	82.841	20.18	5.11	17.46	I	C	SP	P
VTS	82.967	357.92	5.11	17.46	I	C	SP	P
JMB	82.986	355.40	5.11	17.46	I	D	SP	P
NST	83.148	287.31	5.11	17.46	I	C	SP	P
TTG	83.162	0.85	5.11	17.46	I	C	SP	P
PCT	83.245	285.73	5.11	17.46	I	D	SP	P
TOL	83.412	18.70	5.08	17.36	I	C	SP	P
DIM	83.449	356.12	5.08	17.36	I	C	SP	P
NDI	83.653	312.28	5.08	17.36	I	C	SP	P
KDZ	83.862	356.27	5.05	17.25	I	C	SP	P
MMB	83.965	357.49	5.05	17.25	I	C	SP	P

Table 11. Station data for event 202 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
VAY	84.257	358.36	5.02	17.15	I	C	SP	P
HRT	84.443	352.95	5.02	17.15	I	C	SP	P
GPA	84.926	352.41	4.99	17.04	I	D	SP	P
KGT	84.959	354.72	4.99	17.04	I	C	SP	P
BNT	85.020	354.24	4.99	17.04	I	C	SP	P
EVAL	85.096	21.34	4.99	17.04	I	C	SP	P
ANTO	85.128	350.46	4.99	17.04	I	C	LP	P
EHOR	85.177	20.12	4.99	17.04	I	C	SP	P
KZN	85.281	358.95	4.96	16.94	I	C	SP	P
ALI	85.518	16.33	4.96	16.94	I	C	LP	P
KHI	85.529	329.01	4.96	16.94	I	C	SP	P
TTK	85.601	354.10	4.96	16.94	I	C	SP	P
AFC	86.053	18.94	4.90	16.73	I	C	SP	P
CRT	86.105	19.00	4.90	16.73	I	C	SP	P
PRK	86.212	355.44	4.90	16.73	I	C	SP	P
SFS	86.290	21.21	4.86	16.59	I	C	SP	P
MAL	86.397	19.75	4.86	16.59	I	C	SP	P
ENIJ	86.572	17.97	4.86	16.59	I	C	SP	P
IZM	87.007	354.61	4.83	16.48	I	C	SP	P
VLS	87.414	359.85	4.80	16.37	I	C	SP	P
ATH	87.575	357.38	4.80	16.37	I	C	SP	P
CTA	87.672	229.68	4.80	16.37	I	C	LP	P
CTAO	87.672	229.68	4.80	16.37	I	C	LP	P
CTA	87.672	229.68	4.80	16.37	I	C	SP	P
BCK	87.713	351.90	4.80	16.37	I	D	SP	P
YER	88.205	353.71	4.77	16.27	I	C	SP	P
ELL	88.475	352.37	4.75	16.20	I	C	SP	P
AVE	89.070	23.01	4.73	16.15	I	C	SP	P
IFR	89.357	21.11	4.71	16.06	I	C	SP	P
SNG	89.803	282.09	4.71	16.06	I	C	SP	P
SNG	89.803	282.09	4.71	16.06	I	C	LP	P
HYB	92.831	305.71	4.64	15.81	I	C	SP	P
POO	94.005	310.18	4.61	15.71	I	C	SP	P
ASPA	96.519	237.82	4.54	15.46	I	C	SP	P
PEL	115.739	111.37	1.88	6.34	E	C	LP	PKP
BNG	120.975	2.16	1.87	6.31	I	C	SP	PKP
SPA	144.600	180.00	1.68	5.68	E	C	LP	PKP
WIN	147.731	5.73	1.62	5.44	I	C	SP	PKP
SLR	150.403	345.50	1.56	5.26	I	C	LP	PKP
SLR	150.403	345.50	1.56	5.26	I	C	SP	PKP
KSR	150.715	347.98	1.53	5.15	I	D	SP	PKP
SUR	157.599	359.09	1.26	4.25	I	C	LP	PKP

Table 12. Station data for event 210.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ADK	6.132	260.95	14.08	55.83	I	C	SP	P
PMS	12.296	42.56	13.36	51.72	E	C	LP	P
COL	15.161	32.25	12.95	49.55	I	C	LP	P
RSNT	28.529	50.32	9.11	32.36	I	C	SP	P
RSNT	28.529	50.32	9.11	32.36	I	C	LP	P
MBC	29.163	21.24	9.04	32.09	I	C	SP	P
LON	29.294	84.36	8.97	31.81	I	C	LP	P
NEW	31.350	78.70	8.79	31.10	E	N	SP	P
EDM	31.416	68.10	8.79	31.10	I	C	SP	P
YKM	31.896	76.85	8.75	30.94	I	C	SP	P
LDM	32.319	77.30	8.72	30.82	I	C	SP	P
CLX	32.544	77.59	8.72	30.82	I	C	SP	P
HON	32.601	164.51	8.72	30.82	E	D	LP	P
ARN	34.981	98.50	8.56	30.20	E	D	SP	P
JAS1	35.263	96.73	8.53	30.08	I	D	SP	P
BMN	35.588	90.67	8.53	30.08	I	D	SP	P
BDW	38.762	81.85	8.32	29.27	I	D	SP	P
MAJO	41.232	268.78	8.21	28.84	I	C	LP	P
GOL	43.146	82.60	8.10	28.42	I	D	SP	P
GOL	43.146	82.60	8.10	28.42	I	C	LP	P
RSON	43.244	62.33	8.10	28.42	I	D	SP	P
RSON	43.244	62.33	8.10	28.42	I	C	LP	P
CN2	44.223	286.19	8.05	28.23	I	C	SP	P
ANMO	45.625	88.52	7.96	27.89	I	C	LP	P
ALQ	45.627	88.52	7.96	27.89	I	C	LP	P
SHK	45.911	271.07	7.94	27.81	I	C	LP	P
SNY	46.523	285.20	7.91	27.70	I	C	SP	P
SEO	47.286	278.44	7.85	27.47	E	C	LP	P
KBS	48.087	0.31	7.81	27.32	I	C	LP	P
GDH	48.551	25.89	7.78	27.20	E	C	LP	P
LTX	51.248	91.59	7.58	26.45	I	C	LP	P
TUL	51.335	79.63	7.54	26.30	I	C	LP	P
JCT	52.745	87.52	7.46	26.00	E	C	LP	P
GUA	54.872	242.44	7.26	25.25	E	C	LP	P
MNT	57.033	56.82	7.11	24.69	I	C	SP	P
RSNY	57.241	58.17	7.11	24.69	I	D	SP	P
RSNY	57.241	58.17	7.11	24.69	E	C	LP	P
RSCP	57.503	72.78	7.07	24.55	I	C	LP	P
RSCP	57.503	72.78	7.07	24.55	I	D	SP	P
SCP	58.131	63.37	7.03	24.40	I	C	LP	P
AKU	59.015	14.50	6.96	24.14	I	C	SP	P
BLA	59.278	67.97	6.92	23.99	E	N	SP	P
ANP	59.330	271.70	6.92	23.99	E	C	LP	P
TATO	59.502	271.57	6.92	23.99	I	C	LP	P
WES	60.420	57.99	6.84	23.70	E	C	LP	P
CVP	64.831	266.02	6.47	22.34	I	D	SP	P
AFI	67.018	185.16	6.31	21.76	E	D	LP	P
KONO	67.420	1.93	6.26	21.58	I	C	LP	P
PGP	68.625	263.91	6.18	21.29	I	C	SP	P
COP	71.432	0.41	5.96	20.50	E	C	LP	P

Table 12. Station data for event 210 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PPR	72.886	263.34	5.85	20.11	I	C	SP	P
ETA	73.198	12.15	5.85	20.11	I	C	SP	P
ECB	73.447	12.57	5.82	20.00	I	C	SP	P
ECP	73.683	12.36	5.82	20.00	I	C	SP	P
DBN	74.811	5.06	5.71	19.60	E	C	LP	P
UCC	76.065	5.71	5.64	19.35	E	C	LP	P
ENN	76.182	4.70	5.64	19.35	I	C	SP	P
KSP	76.248	357.92	5.64	19.35	I	C	SP	P
MOX	76.472	0.98	5.61	19.25	E	C	LP	P
GRFO	77.422	1.26	5.55	19.03	I	C	LP	P
CHTO	77.595	284.69	5.55	19.03	I	C	LP	P
CHG	77.595	284.69	5.55	19.03	I	D	SP	P
KOU	77.631	207.56	5.55	19.03	I	C	SP	P
FLN	77.713	9.16	5.55	19.03	I	C	SP	P
LDF	77.914	8.94	5.52	18.93	I	C	SP	P
WET	77.982	0.16	5.52	18.93	I	C	SP	P
GRR	78.047	9.47	5.52	18.93	I	C	SP	P
LPF	78.382	9.65	5.48	18.78	I	C	SP	P
DZM	78.493	205.14	5.48	18.78	I	C	SP	P
VKA	78.827	357.82	5.45	18.68	I	C	SP	P
FUR	78.951	1.25	5.45	18.68	I	C	SP	P
KMR	79.068	359.30	5.45	18.68	I	C	LP	P
SSF	79.732	6.66	5.41	18.54	I	C	SP	P
LBF	79.841	6.34	5.36	18.36	I	C	SP	P
MFF	79.885	9.24	5.36	18.36	I	C	SP	P
AVF	79.991	6.79	5.36	18.36	I	C	SP	P
KBA	80.051	359.84	5.36	18.36	I	C	SP	P
SMF	80.170	6.47	5.36	18.36	I	C	SP	P
BGF	80.186	7.17	5.36	18.36	I	C	SP	P
LSF	80.386	8.13	5.31	18.18	I	C	SP	P
TCF	80.405	7.65	5.31	18.18	I	C	SP	P
UPA	81.294	86.71	5.22	17.86	E	C	LP	P
NDI	81.313	306.91	5.22	17.86	I	C	SP	P
TRI	81.419	359.54	5.22	17.86	I	C	SP	P
LFF	81.617	8.85	5.22	17.86	I	C	SP	P
CAF	81.746	7.91	5.22	17.86	I	C	SP	P
LPO	81.912	8.56	5.18	17.72	I	C	SP	P
SJG	81.924	70.70	5.18	17.72	E	C	LP	P
CDR	83.248	5.36	5.11	17.47	I	C	SP	P
PVL	83.423	351.15	5.08	17.37	I	C	SP	P
EPF	83.470	9.39	5.08	17.37	I	C	SP	P
CTA	83.494	223.65	5.08	17.37	I	D	SP	P
CTAO	83.494	223.65	5.08	17.37	I	C	LP	P
JMB	83.958	350.02	5.05	17.26	I	C	SP	P
PTO	84.137	16.32	5.05	17.26	I	C	SP	P
VTS	84.134	352.53	5.05	17.26	I	D	SP	P
PTO	84.137	16.32	5.05	17.26	I	C	LP	P
SKO	84.885	353.78	4.99	17.05	I	C	SP	P
MMB	85.096	352.03	4.99	17.05	I	C	SP	P
ANTO	85.707	344.93	4.96	16.94	I	C	LP	P

Table 12. Station data for event 210 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SNG	85.801	276.28	4.90	16.73	I	C	LP	P
BNT	85.895	348.71	4.90	16.73	I	C	SP	P
TOL	86.063	13.16	4.90	16.73	I	C	SP	P
TOL	86.063	13.16	4.90	16.73	I	C	LP	P
KZN	86.520	353.38	4.86	16.59	I	C	SP	P
CAR	87.559	75.82	4.80	16.38	I	D	SP	P
ATH	88.687	351.64	4.75	16.21	I	C	SP	P
YER	89.029	347.93	4.73	16.14	I	D	SP	P
POO	91.500	304.11	4.68	15.96	I	C	SP	P
JER	93.179	341.29	4.64	15.82	I	C	SP	P
BNG	122.345	353.58	1.87	6.31	I	C	SP	PKP
NAI	124.593	330.79	1.87	6.29	E	C	LP	PKP
LWI	127.521	340.08	1.86	6.27	I	C	SP	PKP
BUL	144.849	334.14	1.68	5.68	I	C	SP	PKP
SLR	150.254	331.60	1.56	5.26	E	C	LP	PKP
SLR	150.254	331.60	1.56	5.26	I	C	SP	PKP
BPI	150.741	331.75	1.53	5.15	I	C	SP	PKP
EVA	150.744	329.71	1.53	5.15	I	C	SP	PKP

Figure 6. Azimuthal equidistant map for geographic subdivision, Northwest Territories, Canada

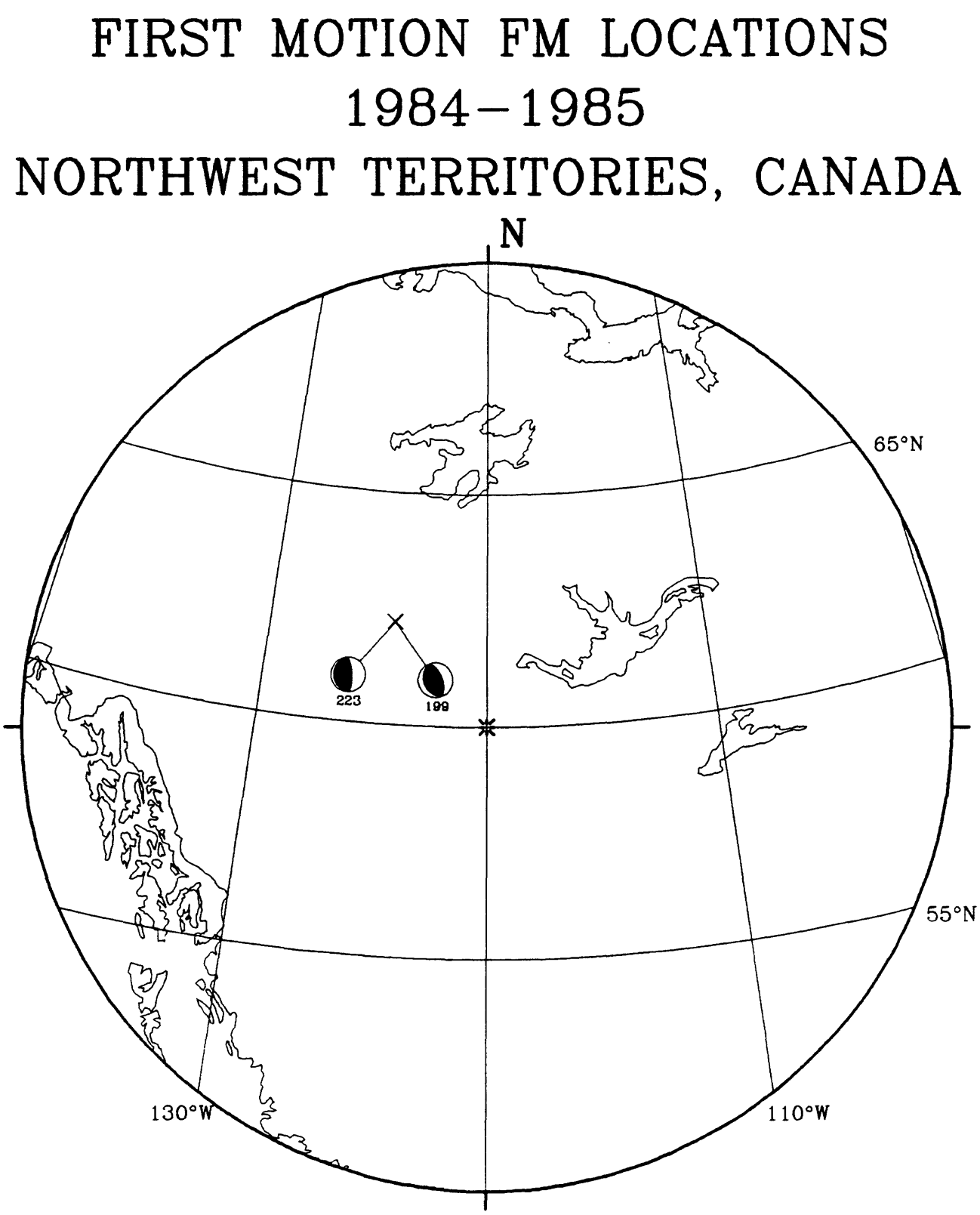


Table 13. Focal mechanism parameters for subdivision, Northwest Territories, Canada

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
199	340	58	90	163	32	90	77	250	13	70	0	160
223	358	72	90	178	18	90	63	268	27	88	0	178

Figure 7. Lower hemisphere focal sphere projection for events 199 and 223.

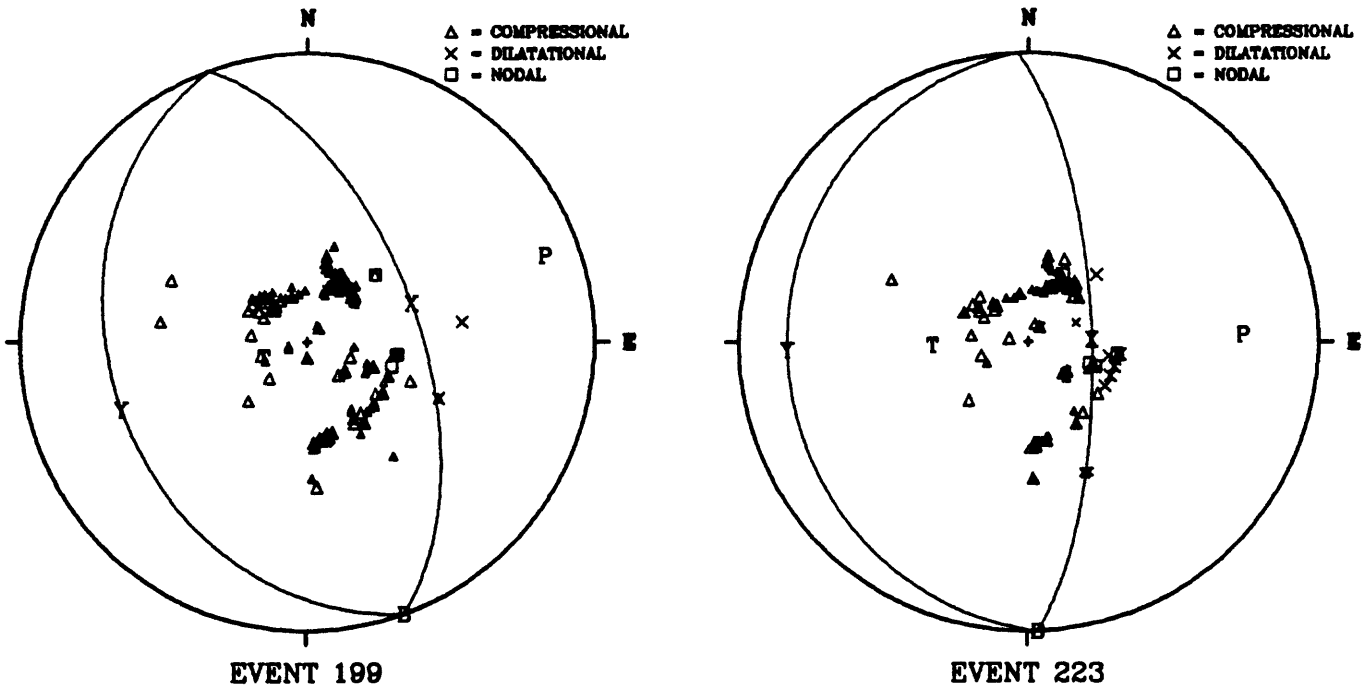


Table 14. Station data for event 199.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
YKA	4.522	82.63	14.19	45.39	I	D	LP	P
YKC	4.583	82.80	14.18	45.35	I	D	LP	P
COL	10.776	294.55	13.61	43.06	I	C	LP	P
PMR	11.698	277.81	13.54	42.79	I	C	LP	P
MCW	13.628	175.87	13.25	41.66	I	C	LP	P
FFC	13.835	112.87	13.16	41.32	I	C	SP	P
FFC	13.835	112.87	13.16	41.32	I	D	LP	P
SES	13.933	142.44	13.16	41.32	I	C	SP	P
COR	17.708	177.66	12.52	38.91	I	C	SP	P
RSON	20.135	110.41	10.48	31.72	I	C	LP	P
BDW	21.367	149.08	10.08	30.38	I	C	SP	P
WDC	21.728	176.38	10.08	30.38	I	C	SP	P
MIN	21.997	174.50	9.97	30.01	I	C	SP	P
ORV	22.789	174.41	9.78	29.38	I	C	SP	P
MNA	24.144	168.15	9.62	28.86	I	C	SP	P
BKS	24.435	176.05	9.55	28.63	I	C	LP	P
BKS	24.435	176.05	9.55	28.63	I	C	SP	P
JAS1	24.469	172.58	9.55	28.63	I	C	SP	P
ARN	24.987	174.78	9.49	28.43	I	C	SP	P
MHC	24.990	174.98	9.49	28.43	I	C	SP	P
ALE	25.188	15.81	9.49	28.43	I	C	SP	P
GCC	25.287	175.69	9.43	28.24	I	C	SP	P
GLD	25.331	143.92	9.43	28.24	I	C	LP	P
GLD	25.331	143.92	9.43	28.24	I	C	SP	P
GOL	25.336	144.21	9.43	28.24	I	C	SP	P
GOL	25.336	144.21	9.43	28.24	I	C	LP	P
FRI	25.446	171.42	9.43	28.24	I	C	SP	P
LLA	25.744	173.78	9.43	28.24	I	C	SP	P
CWC	26.128	168.56	9.39	28.11	I	C	SP	P
PRI	26.232	173.34	9.39	28.11	I	C	SP	P
CLC	26.790	167.85	9.29	27.78	I	C	LP	P
ISA	26.861	169.46	9.29	27.78	I	C	LP	P
GSC	27.382	166.59	9.25	27.65	I	C	SP	P
GSC	27.382	166.59	9.25	27.65	I	C	LP	P
SYP	27.879	172.36	9.20	27.49	I	C	LP	P
SBB	27.886	168.54	9.20	27.49	I	C	LP	P
GDH	28.286	45.25	9.14	27.29	I	C	LP	P
PAS	28.390	169.27	9.14	27.29	I	C	LP	P
PLM	29.303	167.21	8.98	26.78	I	C	LP	P
ALQ	29.555	149.32	8.98	26.78	I	C	LP	P
ANMO	29.551	149.31	8.98	26.78	I	C	LP	P
GLA	29.838	163.87	8.92	26.58	I	C	SP	P
GLA	29.838	163.87	8.92	26.58	I	C	LP	P
BAR	29.989	167.06	8.92	26.58	I	C	LP	P
CBX	30.352	167.14	8.87	26.42	I	C	SP	P
ENX	30.778	167.24	8.83	26.30	I	C	SP	P
PBX	30.919	167.35	8.83	26.30	I	C	SP	P
SLM	31.444	122.76	8.79	26.17	I	C	LP	P
QZO	31.565	138.44	8.79	26.17	I	C	SP	P
OCO	31.582	135.34	8.79	26.17	I	C	SP	P

Table 14. Station data for event 199 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
TUL	31.797	132.67	8.76	26.07	I	C	LP	P
RLO	31.833	131.39	8.76	26.07	I	C	SP	P
FVM	31.934	123.63	8.76	26.07	I	C	LP	P
FVM	31.934	123.63	8.76	26.07	I	C	SP	P
GAC	32.183	97.97	8.76	26.07	E	N	LP	P
GAC	32.183	97.97	8.76	26.07	I	D	LP	P
VVO	32.335	133.04	8.72	25.94	I	C	SP	P
RSNY	33.496	98.43	8.66	25.75	E	N	LP	P
RSNY	33.496	98.43	8.66	25.75	I	D	LP	P
BHO	33.501	132.58	8.66	25.75	I	C	SP	P
SKLY	34.066	98.85	8.63	25.66	I	D	SP	P
SCP	34.912	106.00	8.56	25.43	E	N	LP	P
JCT	35.541	141.99	8.53	25.34	I	C	LP	P
LTX	35.590	148.08	8.53	25.34	I	C	LP	P
LTX	35.590	148.08	8.53	25.34	I	C	SP	P
WES	36.650	97.69	8.48	25.18	I	C	LP	P
BLA	36.729	112.28	8.48	25.18	I	C	LP	P
KBS	36.722	12.94	8.48	25.18	I	C	SP	P
BLA	36.729	112.28	8.48	25.18	I	C	SP	P
KBS	36.722	12.94	8.48	25.18	I	C	LP	P
BLA	36.729	112.28	8.48	25.18	I	C	SP	P
PRM	38.565	117.15	8.36	24.80	I	C	SP	P
SHA	39.251	126.56	8.30	24.61	I	C	LP	P
OXM	46.193	146.97	7.94	23.48	I	C	SP	P
TPM	46.655	146.30	7.91	23.38	I	C	SP	P
KEV	46.732	13.27	7.91	23.38	I	C	LP	P
HON	46.963	225.07	7.88	23.29	I	C	LP	P
PIO	49.374	146.10	7.71	22.76	I	C	SP	P
KJF	52.151	15.08	7.50	22.10	I	C	SP	P
KJF	52.151	15.08	7.50	22.10	I	C	LP	P
NRA0	52.803	25.45	7.42	21.86	I	C	SP	P
KONO	53.392	27.12	7.38	21.73	I	C	LP	P
UPP	54.772	22.40	7.26	21.36	I	C	SP	P
NUR	55.292	18.09	7.22	21.24	I	C	SP	P
NUR	55.292	18.09	7.22	21.24	I	C	LP	P
ETA	55.463	40.68	7.22	21.24	I	C	SP	P
ECB	55.574	41.25	7.22	21.24	I	C	SP	P
ECP	55.862	41.10	7.19	21.14	I	C	SP	P
MUD	56.208	29.00	7.19	21.14	I	C	SP	P
COP	57.645	27.36	7.08	20.81	I	C	LP	P
COP	57.645	27.36	7.08	20.81	I	C	SP	P
DBN	59.211	33.66	6.97	20.47	I	C	LP	P
SJG	59.472	110.30	6.93	20.35	I	C	LP	P
SJG	59.472	110.30	6.93	20.35	I	C	SP	P
WTS	59.726	32.65	6.93	20.35	I	C	SP	P
UCC	60.180	34.84	6.89	20.22	E	C	LP	P
CN2	60.523	308.71	6.85	20.10	I	C	SP	P
ENN	60.621	33.81	6.85	20.10	I	C	SP	P
FLN	60.654	39.11	6.85	20.10	I	C	SP	P
BNS	60.763	32.89	6.81	19.98	I	C	SP	P

Table 14. Station data for event 199 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
GSH	60.766	33.53	6.81	19.98	I	C	SP	P
MEM	60.787	33.83	6.81	19.98	I	C	SP	P
BRN	60.852	28.28	6.81	19.98	I	C	SP	P
GRR	60.877	39.55	6.81	19.98	I	C	SP	P
DOU	60.881	35.02	6.81	19.98	E	C	LP	P
LDF	60.911	38.95	6.81	19.98	I	C	SP	P
STB	61.015	33.28	6.81	19.98	I	C	SP	P
LPF	61.142	39.86	6.81	19.98	I	C	SP	P
BGG	61.500	33.13	6.77	19.86	I	C	SP	P
TNS	61.765	32.38	6.73	19.73	I	C	SP	P
CLL	61.843	28.87	6.73	19.73	I	C	SP	P
MOX	62.143	30.07	6.73	19.73	I	C	SP	P
MOX	62.143	30.07	6.73	19.73	I	C	LP	P
BRG	62.463	28.42	6.69	19.61	I	C	SP	P
HOF	62.514	30.03	6.69	19.61	I	C	SP	P
WAR	62.609	23.21	6.69	19.61	E	C	LP	P
MFF	62.694	39.96	6.69	19.61	I	C	SP	P
SNY	62.918	308.95	6.64	19.46	I	C	SP	P
GRF	62.937	30.73	6.64	19.46	I	C	SP	P
GRC	63.008	37.38	6.64	19.46	I	C	SP	P
KSP	63.001	26.86	6.64	19.46	I	C	SP	P
BUH	63.138	33.20	6.64	19.46	I	C	SP	P
CDF	63.134	33.97	6.64	19.46	I	C	SP	P
LOR	63.255	36.85	6.60	19.34	I	C	SP	P
HAU	63.262	34.79	6.60	19.34	I	C	SP	P
STU	63.294	32.50	6.60	19.34	I	C	SP	P
STU	63.294	32.50	6.60	19.34	I	C	LP	P
SSF	63.344	37.19	6.60	19.34	I	C	SP	P
PRU	63.426	28.36	6.60	19.34	I	C	SP	P
LSF	63.510	38.95	6.60	19.34	I	C	SP	P
AVF	63.547	37.42	6.60	19.34	I	C	SP	P
BSF	63.540	34.56	6.60	19.34	I	C	SP	P
LBF	63.547	36.90	6.60	19.34	I	C	SP	P
BGF	63.614	37.89	6.60	19.34	I	C	SP	P
TCF	63.675	38.46	6.60	19.34	I	C	SP	P
SMF	63.818	37.15	6.56	19.22	I	C	SP	P
WET	63.839	29.82	6.56	19.22	I	C	SP	P
MZF	63.849	38.23	6.56	19.22	I	C	SP	P
KHC	64.014	29.35	6.56	19.22	I	C	SP	P
RJF	64.363	39.41	6.52	19.09	I	C	SP	P
FUR	64.372	31.32	6.52	19.09	I	C	SP	P
PLDF	64.372	37.61	6.52	19.09	I	C	SP	P
PYM	64.395	38.14	6.52	19.09	I	C	SP	P
LFF	64.462	40.13	6.52	19.09	I	C	SP	P
KRA	64.490	24.67	6.52	19.09	I	C	SP	P
PTO	64.803	48.79	6.48	18.97	I	C	SP	P
LPO	64.829	39.93	6.48	18.97	I	C	SP	P
CAF	64.870	39.19	6.48	18.97	I	C	SP	P
KMR	65.150	29.38	6.48	18.97	I	C	LP	P
BHG	65.172	30.38	6.48	18.97	I	C	SP	P

Table 14. Station data for event 199 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
TOV	65.347	118.00	6.44	18.85	I	C	SP	P
SEO	65.360	304.11	6.44	18.85	E	C	LP	P
VKA	65.443	27.79	6.44	18.85	I	C	SP	P
OGA	65.521	32.01	6.44	18.85	I	C	SP	P
ZST	65.678	27.27	6.44	18.85	I	C	SP	P
LPG	65.679	35.60	6.44	18.85	I	C	SP	P
LGR	65.687	43.65	6.44	18.85	I	C	SP	P
SHK	65.703	298.05	6.44	18.85	I	C	LP	P
VAI	65.877	34.01	6.40	18.73	I	C	SP	P
KBA	65.885	30.30	6.40	18.73	I	C	SP	P
ORO	65.892	34.67	6.40	18.73	I	C	SP	P
CAR	65.901	114.86	6.40	18.73	I	C	SP	P
EPF	66.069	41.31	6.40	18.73	I	C	SP	P
DL2	66.193	308.86	6.40	18.73	I	C	SP	P
MLS	66.363	40.80	6.36	18.61	I	C	SP	P
CTI	66.441	31.89	6.36	18.61	I	C	SP	P
RBL	66.536	30.38	6.36	18.61	I	C	SP	P
SAL	66.571	32.87	6.36	18.61	I	C	SP	P
EPLA	66.634	47.45	6.36	18.61	I	C	SP	P
GUD	66.773	45.74	6.31	18.46	I	C	SP	P
VOY	66.999	30.30	6.31	18.46	I	C	SP	P
CDR	67.085	37.08	6.31	18.46	I	C	SP	P
BJI	67.105	313.52	6.31	18.46	I	C	LP	P
BJI	67.105	313.52	6.31	18.46	I	C	SP	P
LJU	67.138	29.84	6.31	18.46	I	C	SP	P
TRI	67.272	30.52	6.27	18.33	I	C	SP	P
FRF	67.437	36.49	6.27	18.33	I	C	SP	P
LRG	67.455	36.74	6.27	18.33	I	C	SP	P
TOL	67.492	46.02	6.27	18.33	I	C	LP	P
TOL	67.492	46.02	6.27	18.33	I	C	SP	P
LMR	67.608	36.68	6.27	18.33	I	C	SP	P
ZAG	67.685	28.89	6.27	18.33	I	C	SP	P
TRN	68.170	109.50	6.23	18.21	I	C	SP	P
BTO	68.604	318.37	6.19	18.09	I	C	SP	P
EVAL	68.618	49.15	6.19	18.09	I	C	SP	P
EHOR	68.933	47.90	6.15	17.97	I	C	SP	P
CVF	68.967	35.26	6.15	17.97	I	C	SP	P
GZR	69.509	24.14	6.11	17.85	I	C	SP	P
VRI	69.759	21.15	6.07	17.73	I	C	SP	P
SFS	69.814	49.27	6.07	17.73	I	C	SP	P
CLO	69.821	24.21	6.07	17.73	I	C	SP	P
MLR	69.992	21.81	6.07	17.73	I	C	SP	P
AFC	70.028	46.86	6.07	17.73	I	C	SP	P
CMP	70.049	22.53	6.07	17.73	I	C	SP	P
ALI	70.050	44.03	6.07	17.73	I	C	LP	P
CRT	70.067	46.93	6.07	17.73	I	C	SP	P
MNS	70.131	32.51	6.07	17.73	I	C	SP	P
MAL	70.204	47.76	6.07	17.73	I	C	SP	P
AQU	70.342	31.99	6.04	17.64	I	C	SP	P
TIY	70.456	315.28	6.04	17.64	I	C	SP	P

Table 14. Station data for event 199 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
RDP	70.731	32.71	6.04	17.64	I	C	SP	P
ENIJ	70.734	45.96	6.04	17.64	I	C	SP	P
TLB	71.222	20.52	6.00	17.52	I	C	SP	P
PVL	72.126	23.00	5.93	17.31	I	C	SP	P
PSN	72.130	20.62	5.93	17.31	I	C	SP	P
AVE	72.213	51.68	5.93	17.31	I	C	SP	P
SGO	72.506	31.18	5.89	17.19	I	C	SP	P
GTA	72.645	325.60	5.89	17.19	I	C	SP	P
BRT	72.651	29.64	5.89	17.19	I	C	SP	P
IFR	72.845	49.77	5.86	17.10	I	C	SP	P
DIM	73.267	22.97	5.82	16.98	I	C	SP	P
ORI	73.261	30.48	5.82	16.98	I	C	SP	P
LCI	73.342	29.24	5.82	16.98	I	C	SP	P
MMB	73.359	24.50	5.82	16.98	I	C	SP	P
KDZ	73.616	23.25	5.82	16.98	I	C	SP	P
LZH	74.628	321.26	5.75	16.77	I	C	SP	P
GIB	74.620	33.03	5.75	16.77	I	C	SP	P
XAN	74.958	316.47	5.72	16.68	I	C	SP	P
KGT	75.122	22.06	5.72	16.68	I	C	SP	P
HRT	75.160	20.16	5.72	16.68	I	C	SP	P
EDC	75.322	21.65	5.68	16.56	I	C	SP	P
BNT	75.323	21.61	5.68	16.56	I	C	SP	P
YLV	75.361	20.44	5.68	16.56	I	C	SP	P
KCT	75.502	21.30	5.68	16.56	I	C	SP	P
TTK	75.919	21.65	5.65	16.47	I	C	SP	P
WHN	76.312	310.68	5.62	16.38	I	C	SP	P
ATH	76.848	25.46	5.59	16.29	I	C	SP	P
IZM	77.111	22.58	5.59	16.29	I	C	SP	P
KSH	77.336	344.04	5.56	16.20	I	C	SP	P
ANP	78.457	302.48	5.49	15.99	I	C	LP	P
GUA	78.508	277.08	5.49	15.99	I	C	LP	P
YER	78.521	22.06	5.49	15.99	I	C	SP	P
BCK	78.592	20.15	5.49	15.99	I	D	SP	P
TATO	78.654	302.41	5.49	15.99	I	C	LP	P
ELL	79.177	20.85	5.45	15.87	I	C	SP	P
CD2	79.475	319.44	5.42	15.78	I	C	SP	P
KHI	83.924	357.55	5.06	14.71	I	C	SP	P
LSA	84.047	329.51	5.06	14.71	I	C	SP	P
AFI	84.480	225.98	5.03	14.62	I	C	LP	P
JER	84.866	17.43	4.99	14.50	I	C	SP	P
KMI	85.191	318.26	4.99	14.50	I	C	SP	P
HLW	86.148	21.05	4.91	14.26	I	C	SP	P
BAG	86.714	299.49	4.87	14.14	I	C	LP	P
KKN	87.188	334.03	4.83	14.02	I	C	SP	P
PKI	87.374	333.87	4.80	13.93	I	C	SP	P
DMN	87.399	334.14	4.80	13.93	I	C	SP	P
QUE	87.450	350.27	4.80	13.93	I	C	SP	P
NDI	87.754	341.19	4.78	13.88	I	C	SP	P
SHIO	87.827	327.75	4.78	13.88	I	C	LP	P
QIZ	88.458	309.91	4.75	13.79	I	C	SP	P

Table 14. Station data for event 199 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ARE	88.698	130.13	4.75	13.79	I	C	SP	P
LPB	90.004	127.15	4.71	13.67	I	C	SP	P
LPB	90.004	127.15	4.71	13.67	I	C	LP	P
CCH	91.517	125.76	4.69	13.61	I	C	SP	P
HNR	91.730	253.09	4.69	13.61	I	C	LP	P
CHG	92.282	319.50	4.66	13.52	I	C	LP	P
CHG	92.282	319.50	4.66	13.52	I	C	SP	P
LOE	92.731	316.53	4.66	13.52	I	C	SP	P
CAI	94.399	95.55	4.60	13.34	I	C	SP	P
TPZ	95.400	127.02	4.56	13.23	I	C	SP	P
BDF	97.526	109.19	4.52	13.11	I	C	LP	P
POO	98.218	342.63	4.51	13.08	I	C	SP	P
KOU	99.713	244.31	4.47	12.96	I	C	SP	P
SNG	102.668	314.10	4.45	12.90	I	C	LP	P
PEL	104.346	135.80	4.45	12.90	E	C	LP	P
BRS	110.676	250.59	1.89	5.44	I	C	SP	PKP
ADE	123.428	257.64	1.87	5.38	I	C	SP	PKP
KRI	131.063	33.96	1.85	5.32	I	C	SP	PKP
MTD	131.514	31.52	1.84	5.30	I	C	SP	PKP
BUL	133.953	36.46	1.83	5.26	I	C	SP	PKP
SLR	139.144	39.42	1.78	5.13	I	C	SP	PKP
SLR	139.144	39.42	1.78	5.13	E	C	LP	PKP
SPA	152.087	180.00	1.50	4.31	I	C	LP	PKP
SPA	152.087	180.00	1.50	4.31	I	C	SP	PKP

Table 15. Station data for event 223.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
COL	10.796	294.74	13.61	43.06	I	C	LP	P
YKM	14.213	156.34	13.16	41.32	I	D	SP	P
RXF	14.324	154.83	13.08	41.01	I	D	SP	P
LDM	14.679	155.81	13.08	41.01	I	D	SP	P
LHD	14.822	156.63	12.99	40.67	I	D	SP	P
CLX	14.950	155.62	12.99	40.67	I	D	SP	P
COR	17.668	177.67	12.52	38.91	I	C	LP	P
COR	17.668	177.67	12.52	38.91	I	C	SP	P
FHC	21.441	179.36	10.08	30.38	I	C	SP	P
WDC	21.688	176.39	10.08	30.38	I	C	SP	P
MIN	21.957	174.50	9.97	30.01	I	C	SP	P
ORV	22.749	174.41	9.88	29.72	I	C	SP	P
MNA	24.104	168.14	9.62	28.86	I	C	SP	P
BRK	24.397	176.11	9.55	28.63	I	C	SP	P
BRK	24.397	176.11	9.55	28.63	I	C	LP	P
JAS1	24.429	172.58	9.55	28.63	I	C	SP	P
PCC	24.766	176.37	9.49	28.43	I	C	SP	P
MHC	24.950	174.99	9.49	28.43	I	C	SP	P
GCC	25.247	175.69	9.49	28.43	I	C	SP	P
FRI	25.406	171.42	9.43	28.24	I	C	SP	P
SAO	25.533	174.69	9.43	28.24	I	C	SP	P
LLA	25.704	173.78	9.43	28.24	I	C	SP	P
PRS	25.968	174.61	9.39	28.11	I	C	SP	P
PRI	26.192	173.34	9.39	28.11	I	C	SP	P
ISA	26.821	169.46	9.29	27.78	I	C	SP	P
MWC	28.285	169.05	9.14	27.29	I	C	SP	P
GDH	28.312	45.20	9.14	27.29	I	D	LP	P
RVR	28.578	167.93	9.14	27.29	I	C	SP	P
ANMO	29.515	149.29	8.98	26.78	E	C	LP	P
ALQ	29.519	149.29	8.98	26.78	I	C	SP	P
ALQ	29.519	149.29	8.98	26.78	I	C	LP	P
GAC	32.174	97.91	8.76	26.07	I	D	LP	P
MNT	33.188	96.35	8.69	25.85	I	C	SP	P
RSNY	33.486	98.37	8.66	25.75	I	D	LP	P
DAG	33.832	23.50	8.63	25.66	I	C	LP	P
INY	34.215	102.74	8.63	25.66	I	D	SP	P
SCP	34.898	105.95	8.56	25.43	I	D	LP	P
JCT	35.507	141.96	8.53	25.34	I	C	LP	P
RSCP	35.905	119.66	8.51	25.27	I	D	LP	P
WES	36.642	97.64	8.48	25.18	E	N	LP	P
BLA	36.710	112.23	8.48	25.18	I	D	LP	P
KBS	36.760	12.93	8.45	25.08	I	C	LP	P
KBS	36.760	12.93	8.45	25.08	I	C	SP	P
SHA	39.225	126.53	8.33	24.70	I	C	LP	P
TPM	46.620	146.29	7.91	23.38	I	C	SP	P
KEV	46.770	13.27	7.88	23.29	I	C	SP	P
KEV	46.770	13.27	7.88	23.29	E	C	LP	P
HON	46.937	225.11	7.88	23.29	E	C	LP	P
BEC	47.827	99.97	7.82	23.10	E	D	LP	P
KJF	52.189	15.07	7.50	22.10	I	C	SP	P

Table 15. Station data for event 223 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ELO	52.956	36.77	7.42	21.86	I	C	SP	P
EAB	53.022	37.33	7.42	21.86	I	C	SP	P
EDU	53.084	36.31	7.42	21.86	I	C	SP	P
EBH	53.206	36.79	7.42	21.86	I	C	SP	P
SUF	53.415	16.45	7.38	21.73	I	C	SP	P
KONO	53.426	27.12	7.38	21.73	E	N	LP	P
EAU	53.571	37.01	7.38	21.73	I	C	SP	P
EBL	53.748	36.81	7.38	21.73	I	C	SP	P
ESY	53.742	36.46	7.38	21.73	I	C	SP	P
UPP	54.808	22.39	7.26	21.36	I	C	SP	P
NUR	55.329	18.08	7.22	21.24	I	C	SP	P
ETA	55.492	40.67	7.22	21.24	I	C	SP	P
ECB	55.602	41.24	7.22	21.24	I	C	SP	P
ECP	55.890	41.09	7.19	21.14	I	C	SP	P
COP	57.680	27.35	7.08	20.81	I	C	SP	P
COP	57.680	27.35	7.08	20.81	I	C	LP	P
DBN	59.243	33.65	6.97	20.47	I	C	LP	P
SJG	59.455	110.29	6.93	20.35	E	N	LP	P
SJG	59.455	110.29	6.93	20.35	I	C	SP	P
JCK	60.539	33.34	6.85	20.10	I	C	SP	P
FLN	60.683	39.10	6.85	20.10	I	C	SP	P
GSH	60.798	33.52	6.81	19.98	I	C	SP	P
BNS	60.795	32.88	6.81	19.98	I	C	SP	P
MEM	60.819	33.82	6.81	19.98	I	C	SP	P
KLL	60.864	33.60	6.81	19.98	I	C	SP	P
GRR	60.906	39.54	6.81	19.98	I	C	SP	P
LDF	60.940	38.94	6.81	19.98	I	C	SP	P
LPF	61.170	39.85	6.81	19.98	I	C	SP	P
BGG	61.532	33.12	6.77	19.86	I	C	SP	P
MAT	61.685	294.90	6.77	19.86	I	C	LP	P
MAJO	61.685	294.90	6.77	19.86	I	C	LP	P
MAT	61.685	294.90	6.77	19.86	I	C	SP	P
CLL	61.876	28.86	6.73	19.73	I	C	SP	P
MOX	62.176	30.06	6.73	19.73	I	C	SP	P
BRG	62.496	28.41	6.69	19.61	I	C	SP	P
HOF	62.547	30.03	6.69	19.61	I	C	SP	P
GRFO	62.968	30.73	6.64	19.46	E	C	LP	P
GRF	62.970	30.73	6.64	19.46	I	C	SP	P
GRC	63.038	37.37	6.64	19.46	I	C	SP	P
CDF	63.165	33.97	6.64	19.46	I	C	SP	P
LOR	63.285	36.84	6.60	19.34	I	C	SP	P
HAU	63.293	34.78	6.60	19.34	I	C	SP	P
STU	63.326	32.49	6.60	19.34	I	C	LP	P
SSF	63.374	37.18	6.60	19.34	I	C	SP	P
PRU	63.460	28.36	6.60	19.34	I	C	SP	P
LSF	63.539	38.95	6.60	19.34	I	C	SP	P
LBF	63.577	36.89	6.60	19.34	I	C	SP	P
AVF	63.577	37.42	6.60	19.34	I	C	SP	P
BSF	63.571	34.56	6.60	19.34	I	C	SP	P
BGF	63.644	37.88	6.60	19.34	I	C	SP	P

Table 15. Station data for event 223 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
TCF	63.704	38.45	6.60	19.34	I	C	SP	P
SMF	63.848	37.14	6.56	19.22	I	C	SP	P
MZF	63.879	38.22	6.56	19.22	I	C	SP	P
WET	63.872	29.82	6.56	19.22	I	C	SP	P
RJF	64.392	39.40	6.52	19.09	I	C	SP	P
FUR	64.405	31.31	6.52	19.09	I	C	SP	P
LFF	64.490	40.12	6.52	19.09	I	C	SP	P
KRA	64.525	24.67	6.52	19.09	I	C	SP	P
PTO	64.827	48.78	6.48	18.97	E	C	LP	P
PTO	64.827	48.78	6.48	18.97	I	C	SP	P
LPO	64.857	39.92	6.48	18.97	I	C	SP	P
CAF	64.899	39.19	6.48	18.97	I	C	SP	P
SEO	65.385	304.13	6.44	18.85	I	C	LP	P
VKA	65.477	27.78	6.44	18.85	I	C	SP	P
OGA	65.553	32.01	6.44	18.85	I	C	SP	P
LPG	65.709	35.59	6.44	18.85	I	C	SP	P
ZST	65.712	27.26	6.44	18.85	I	C	SP	P
CAR	65.882	114.85	6.40	18.73	I	C	SP	P
KBA	65.918	30.30	6.40	18.73	I	C	SP	P
SOP	66.080	27.82	6.40	18.73	I	C	SP	P
EPF	66.097	41.30	6.40	18.73	I	C	SP	P
SRO	66.332	26.55	6.36	18.61	I	C	SP	P
PSZ	66.556	25.41	6.36	18.61	I	C	SP	P
BJI	67.135	313.53	6.31	18.46	I	C	LP	P
FRF	67.467	36.48	6.27	18.33	I	C	SP	P
LRG	67.485	36.74	6.27	18.33	I	C	SP	P
TOL	67.518	46.01	6.27	18.33	E	N	LP	P
LMR	67.638	36.68	6.27	18.33	I	C	SP	P
TRN	68.153	109.49	6.23	18.21	E	N	LP	P
CVF	68.998	35.26	6.15	17.97	I	C	SP	P
CLO	69.856	24.21	6.07	17.73	I	C	SP	P
MLR	70.028	21.81	6.07	17.73	I	C	SP	P
ALI	70.077	44.02	6.07	17.73	I	C	LP	P
CMP	70.085	22.53	6.07	17.73	I	C	SP	P
PVL	72.161	23.00	5.93	17.31	I	C	SP	P
VTS	72.316	24.62	5.89	17.19	I	C	SP	P
SKO	72.567	26.11	5.89	17.19	I	C	SP	P
JMB	73.074	22.12	5.86	17.10	I	D	SP	P
SSE	73.322	305.44	5.82	16.98	I	C	LP	P
MMB	73.394	24.50	5.82	16.98	I	C	SP	P
VAY	73.423	25.45	5.82	16.98	I	C	SP	P
IST	74.869	20.62	5.72	16.68	I	C	LP	P
EZN	75.590	22.96	5.68	16.56	I	C	SP	P
ANTO	76.608	17.94	5.62	16.38	I	C	LP	P
ATH	76.883	25.46	5.59	16.29	I	C	SP	P
GUA	78.516	277.09	5.49	15.99	I	C	LP	P
TATO	78.679	302.42	5.49	15.99	I	C	LP	P
IR2	82.400	3.95	5.15	14.97	I	C	SP	P
NNA	82.651	133.38	5.15	14.97	I	C	SP	P
RTB	84.291	12.96	5.03	14.62	I	C	SP	P

Table 15. Station data for event 223 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BHD	84.420	9.51	5.03	14.62	I	C	SP	P
JER	84.904	17.44	4.99	14.50	I	C	SP	P
KMI	85.223	318.27	4.99	14.50	I	C	LP	P
KMI	85.223	318.27	4.99	14.50	I	C	SP	P
MBO	85.252	68.16	4.96	14.41	I	D	SP	P
BAG	86.737	299.50	4.87	14.14	E	C	LP	P
KKN	87.226	334.04	4.83	14.02	I	C	SP	P
PKI	87.411	333.88	4.80	13.93	I	C	SP	P
DMN	87.437	334.15	4.80	13.93	I	C	SP	P
QUE	87.490	350.27	4.80	13.93	I	C	SP	P
QUE	87.490	350.27	4.80	13.93	I	C	LP	P
ZOBO	89.726	127.08	4.72	13.70	I	D	SP	P
ZOBO	89.726	127.08	4.72	13.70	I	C	LP	P
HNR	91.721	253.09	4.69	13.61	I	C	LP	P
CHG	92.315	319.50	4.66	13.52	I	C	SP	P
CHTO	92.315	319.50	4.66	13.52	I	C	LP	P
CHG	92.315	319.50	4.66	13.52	I	C	LP	P
ANT	95.725	131.92	4.56	13.23	E	C	LP	P
POO	98.257	342.63	4.50	13.05	I	C	SP	P
NOU	100.347	241.69	4.45	12.90	I	C	SP	P
SNG	102.698	314.10	4.45	12.90	I	C	LP	P
BNG	107.735	39.22	1.89	5.44	I	D	SP	PKP
NAI	117.572	21.43	1.88	5.40	I	C	LP	PKP
MUN	131.427	279.42	1.85	5.32	E	C	LP	PKP
BUL	133.983	36.50	1.83	5.26	I	D	SP	PKP
BUL	133.983	36.50	1.83	5.26	E	C	LP	PKP

Figure 8. Azimuthal equidistant map for geographic subdivision, W. USA– East Central Pacific Ocean

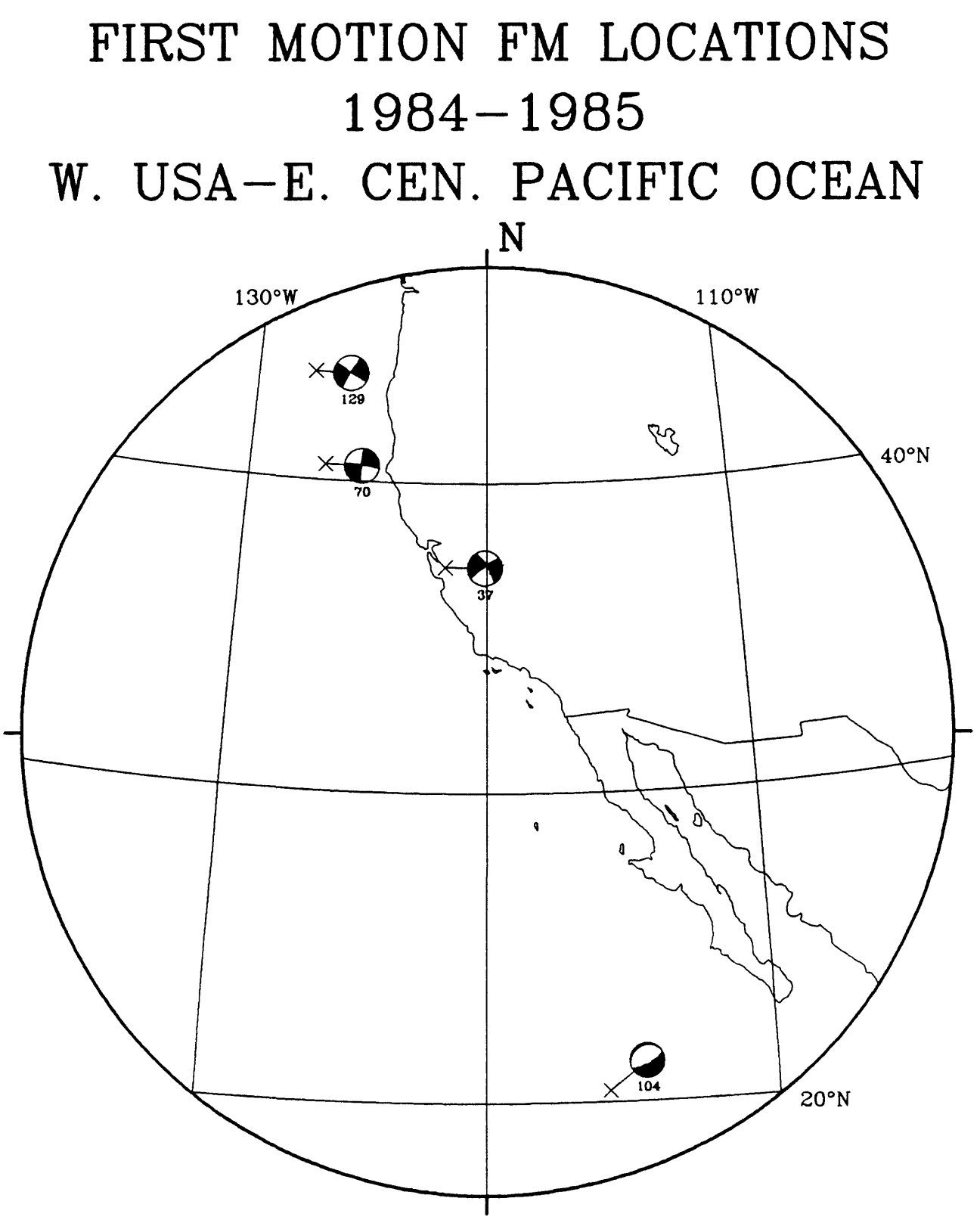
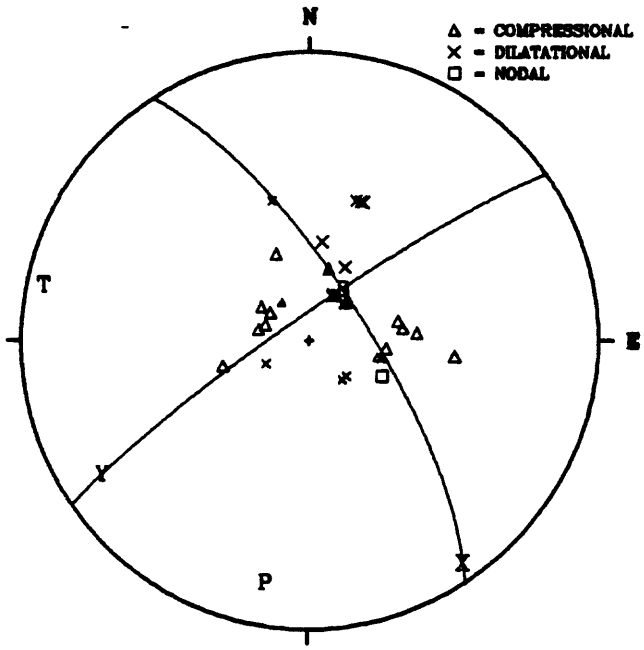


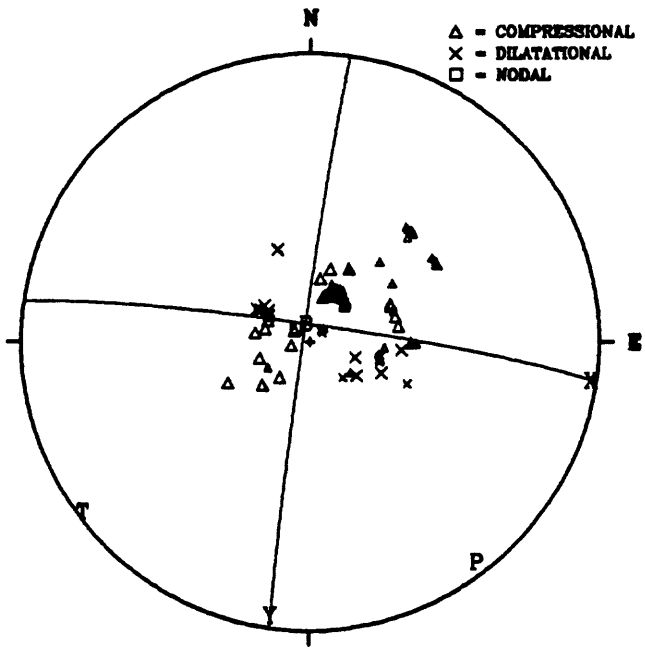
Table 16. Focal mechanism parameters for subdivision, Western United States-East Central Pacific Ocean

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
37	327	74	-173	235	83	-16	6	282	16	190	73	33
70	278	85	-178	188	88	-5	2	233	5	143	85	346
104	60	77	-90	240	13	-90	32	150	58	330	0	60
129	302	90	-174	212	84	0	4	77	4	167	84	302

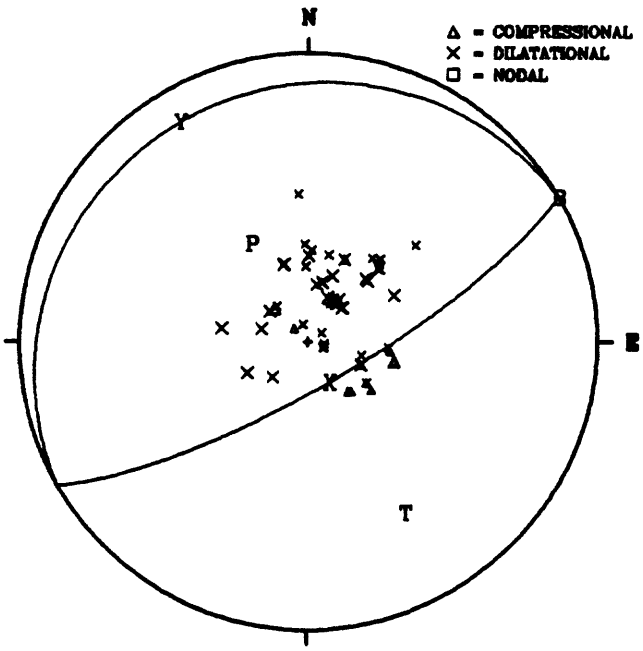
Figure 9. Lower hemisphere focal sphere projection for events 37, 70, 104, and 129.



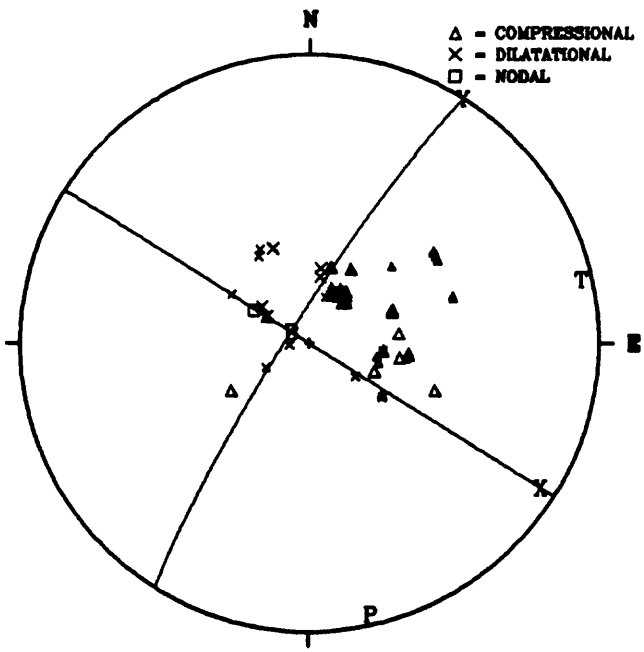
EVENT 37



EVENT 70



EVENT 104



EVENT 129

Table 17. Station data for event 37.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
CLX	11.897	21.78	13.47	42.50	I	D	LP	P
LDM	12.065	20.73	13.47	42.50	I	D	LP	P
YKM	12.332	18.81	13.40	42.23	I	D	LP	P
RXF	12.492	20.46	13.40	42.23	I	C	SP	P
ALQ	12.550	96.33	13.40	42.23	E	C	LP	P
PHC	13.997	344.77	13.17	41.34	I	D	SP	P
TUL	20.827	86.02	10.21	30.80	I	C	LP	P
RSNT	25.568	7.65	9.43	28.23	I	D	LP	P
RSCP	28.990	82.34	9.05	26.99	I	C	LP	P
COL	31.637	339.04	8.80	26.19	I	C	LP	P
BLA	32.666	77.39	8.72	25.94	E	C	LP	P
HON	35.195	253.33	8.56	25.42	E	C	LP	P
UPA	47.358	115.65	7.85	23.19	E	N	LP	P
GDH	47.959	26.46	7.82	23.09	I	D	LP	P
SJG	52.016	95.71	7.51	22.13	I	C	LP	P
CAR	55.831	103.85	7.19	21.14	I	D	SP	P
DAG	56.887	15.55	7.11	20.89	E	C	LP	P
DAG	56.887	15.55	7.11	20.89	I	C	SP	P
GUV	60.460	103.56	6.85	20.09	I	C	SP	P
MAJO	75.802	305.12	5.65	16.46	I	C	LP	P
PTO	80.833	44.73	5.27	15.33	E	C	LP	P
LIS	82.139	46.84	5.18	15.06	I	C	SP	P
CLL	83.233	26.70	5.12	14.88	I	C	SP	P
CYA	83.822	132.82	5.06	14.70	I	D	SP	P
STU	83.841	30.20	5.06	14.70	E	C	LP	P
GRFO	83.893	28.58	5.06	14.70	E	D	LP	P
GRF	83.895	28.58	5.06	14.70	I	C	SP	P
TOL	84.218	43.25	5.06	14.70	I	D	LP	P
JACH	84.385	138.73	5.03	14.61	I	D	SP	P
GUA	84.576	282.78	5.03	14.61	E	C	LP	P
GUMO	84.582	282.84	5.03	14.61	I	C	LP	P
PEL	84.696	139.08	5.03	14.61	I	D	SP	P
FCH	85.046	138.94	4.99	14.49	I	D	SP	P
KMR	86.337	27.93	4.87	14.14	E	D	LP	P
CRT	86.368	44.90	4.87	14.14	I	D	SP	P
ALM	87.246	44.49	4.83	14.02	I	D	SP	P
NOU	89.875	241.64	4.71	13.66	I	D	SP	P
ANP	94.022	305.82	4.62	13.40	E	C	LP	P
TATO	94.186	305.69	4.62	13.40	I	C	LP	P
LZH	95.647	324.48	4.56	13.22	I	C	SP	P
DAV	103.399	289.78	4.45	12.90	E	C	LP	P

Table 18. Station data for event 70.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
LHD	11.179	42.36	13.61	43.06	I	C	SP	P
CLX	11.369	43.48	13.54	42.79	I	C	SP	P
LDM	11.428	42.12	13.54	42.79	I	C	SP	P
YKM	11.500	39.71	13.54	42.79	I	C	SP	P
LRM	11.766	58.40	13.47	42.52	I	C	SP	P
BUT	11.766	57.39	13.47	42.52	I	C	SP	P
RXF	11.792	40.97	13.47	42.52	I	C	SP	P
LCCM	12.145	59.04	13.47	42.52	I	C	SP	P
HRY	12.510	55.31	13.40	42.24	I	C	SP	P
SXM	12.692	58.45	13.40	42.24	I	C	SP	P
SES	14.825	42.90	12.99	40.67	I	C	SP	P
FFC	21.822	40.99	9.97	30.01	I	C	SP	P
ACO	21.931	91.03	9.97	30.01	I	C	SP	P
LTX	21.957	113.27	9.97	30.01	I	D	SP	P
TUL	24.748	90.65	9.55	28.63	I	C	LP	P
RSON	25.159	54.57	9.49	28.43	I	C	SP	P
GBO	25.232	90.38	9.49	28.43	I	C	SP	P
FBAS	26.937	341.07	9.29	27.78	I	D	SP	P
COL	27.269	340.54	9.25	27.65	I	D	LP	P
HON	32.633	243.52	8.72	25.94	E	C	LP	P
SHA	32.723	95.06	8.72	25.94	I	D	LP	P
BLA	35.972	79.90	8.51	25.27	I	C	LP	P
SCP	36.765	73.12	8.45	25.08	I	C	LP	P
GAC	37.324	64.52	8.42	24.99	I	C	LP	P
INY	37.331	70.03	8.42	24.99	I	C	SP	P
RSNY	38.217	66.14	8.39	24.89	I	C	LP	P
GDH	46.959	27.85	7.88	23.29	I	C	SP	P
GDH	46.959	27.85	7.88	23.29	I	C	LP	P
UPA	52.321	113.47	7.46	21.98	E	D	LP	P
DAG	54.898	15.53	7.26	21.36	I	C	LP	P
SJG	56.290	94.53	7.15	21.02	I	C	SP	P
SDV	58.770	106.20	6.97	20.47	I	D	SP	P
TOV	58.790	104.78	6.97	20.47	I	C	SP	P
CAR	60.445	102.00	6.85	20.10	I	D	SP	P
CUM	62.537	100.04	6.69	19.61	I	C	SP	P
AFI	68.308	227.59	6.19	18.09	I	C	LP	P
KEV	68.399	9.50	6.19	18.09	I	C	LP	P
MAJO	70.710	301.78	6.04	17.64	I	D	LP	P
MAT	70.710	301.78	6.04	17.64	I	C	SP	P
DMU	72.765	32.49	5.86	17.10	I	C	SP	P
EKA	73.187	29.79	5.86	17.10	I	C	SP	P
DLE	73.360	32.76	5.82	16.98	I	C	SP	P
DDK	73.372	32.60	5.82	16.98	I	C	SP	P
KONO	73.941	21.36	5.79	16.89	I	C	LP	P
SHK	75.502	303.02	5.68	16.56	I	D	LP	P
ARE	76.468	125.73	5.62	16.38	I	D	SP	P
ARE	76.468	125.73	5.62	16.38	I	D	LP	P
MUD	76.497	23.37	5.62	16.38	I	D	SP	P
SEO	77.080	308.47	5.59	16.29	I	D	LP	P
COP	78.123	22.19	5.52	16.08	E	C	LP	P

Table 18. Station data for event 70 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
LDF	79.568	32.77	5.42	15.78	I	C	SP	P
GUA	80.037	279.24	5.37	15.63	E	C	LP	P
GUMO	80.040	279.31	5.37	15.63	I	C	LP	P
DOU	80.221	29.35	5.37	15.63	E	C	LP	P
WLF	81.153	28.76	5.27	15.33	E	C	LP	P
PTO	81.289	42.32	5.22	15.18	I	C	SP	P
LOR	82.240	31.41	5.18	15.06	I	C	SP	P
SSF	82.266	31.73	5.15	14.97	I	C	SP	P
LIS	82.776	44.29	5.12	14.88	I	C	SP	P
GRFO	82.904	25.95	5.12	14.88	I	C	LP	P
STU	82.995	27.57	5.12	14.88	E	C	LP	P
LGR	83.294	37.98	5.09	14.80	I	D	SP	P
KSP	83.486	22.52	5.09	14.80	I	D	SP	P
HNR	83.576	251.92	5.09	14.80	E	C	LP	P
WET	83.925	25.28	5.06	14.71	I	C	SP	P
EPF	84.150	35.97	5.06	14.71	I	C	SP	P
KHC	84.163	24.89	5.06	14.71	I	D	SP	P
TOL	84.528	40.54	5.03	14.62	I	D	SP	P
SSE	84.979	307.01	4.99	14.50	E	D	LP	P
KRA	85.220	20.76	4.99	14.50	I	D	SP	P
KMR	85.282	25.09	4.96	14.41	I	C	LP	P
SLA	86.355	126.91	4.87	14.14	I	C	SP	P
FRF	86.405	31.91	4.87	14.14	I	C	SP	P
LMR	86.538	32.12	4.87	14.14	I	C	SP	P
MAL	86.753	42.79	4.83	14.02	I	C	LP	P
CRT	86.817	41.99	4.83	14.02	I	C	SP	P
BUD	87.295	22.41	4.80	13.93	I	D	SP	P
CEY	87.413	26.03	4.80	13.93	I	C	SP	P
NOU	87.994	238.34	4.78	13.88	I	C	SP	P
ANP	88.925	302.62	4.73	13.73	E	D	LP	P
TATO	89.089	302.49	4.73	13.73	I	D	LP	P
LNV	89.990	136.81	4.71	13.67	I	D	SP	P
VRI	90.822	18.13	4.70	13.64	I	C	SP	P
BDF	91.860	108.93	4.67	13.55	E	D	LP	P
BAG	95.713	297.05	4.56	13.23	E	C	LP	P
SNZO	97.174	220.33	4.53	13.14	E	C	LP	P
ANTO	97.888	15.70	4.51	13.08	I	C	LP	P
DAV	98.598	286.91	4.50	13.05	E	C	LP	P
CHG	107.247	314.70	1.89	5.44	E	N	LP	PKP
SNG	115.560	305.88	1.88	5.41	E	C	LP	PKP
BNG	125.170	43.87	1.87	5.37	I	C	SP	PKP
MUN	129.400	258.61	1.86	5.34	E	C	LP	PKP
KRI	148.826	47.68	1.59	4.57	I	D	SP	PKP
MTD	149.868	44.59	1.56	4.49	I	D	SP	PKP
BUL	150.825	53.23	1.53	4.40	I	D	SP	PKP

Table 19. Station data for event 104.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
CBX	11.934	356.32	13.47	42.52	I	D	SP	P
LTX	14.149	48.48	13.16	41.32	I	D	SP	P
QZO	20.515	41.65	10.35	31.28	I	D	SP	P
ACO	21.814	38.22	9.97	30.01	I	D	SP	P
OCO	22.065	42.96	9.97	30.01	I	D	SP	P
TUL	23.388	44.31	9.70	29.12	I	D	LP	P
GBO	23.756	45.15	9.62	28.86	I	D	SP	P
RLO	24.042	44.70	9.62	28.86	I	D	SP	P
SHA	26.902	61.97	9.29	27.78	I	D	LP	P
NEW	27.860	358.06	9.20	27.49	I	D	SP	P
EDM	32.856	2.68	8.69	25.85	I	D	SP	P
RSON	35.051	24.49	8.56	25.43	I	C	SP	P
RSON	35.051	24.49	8.56	25.43	I	D	LP	P
FFC	35.873	13.65	8.51	25.27	I	D	SP	P
UPA	36.741	102.55	8.48	25.18	I	C	SP	P
UPA	36.741	102.55	8.48	25.18	E	C	LP	P
HON	39.408	279.11	8.30	24.61	E	D	LP	P
GAC	41.559	43.09	8.19	24.26	I	D	LP	P
RSNY	41.731	45.08	8.19	24.26	I	D	LP	P
RSNT	42.097	0.81	8.16	24.17	I	D	LP	P
YKC	42.097	0.90	8.16	24.17	I	D	SP	P
MNT	42.681	44.12	8.13	24.07	I	D	SP	P
TOV	45.480	96.31	7.97	23.57	I	C	SP	P
CAR	47.932	94.16	7.82	23.10	I	D	SP	P
FBAS	48.951	342.92	7.75	22.88	I	D	SP	P
FBAL	49.212	342.79	7.75	22.88	I	D	LP	P
COL	49.301	342.64	7.71	22.76	I	D	SP	P
COL	49.301	342.64	7.71	22.76	I	D	LP	P
NNA	49.987	126.62	7.67	22.63	I	C	SP	P
MBC	55.952	358.96	7.19	21.14	I	D	SP	P
ZOBO	59.271	124.35	6.93	20.35	I	C	SP	P
LPB	59.446	124.57	6.93	20.35	I	D	SP	P
GDH	61.388	21.05	6.77	19.86	E	D	LP	P
AFI	64.737	242.91	6.52	19.09	E	D	LP	P
TLL	66.286	138.06	6.36	18.61	I	C	SP	P
ROCH	68.106	140.37	6.23	18.21	I	C	SP	P
SAN	68.651	140.51	6.19	18.09	I	C	SP	P
DAG	71.932	13.92	5.93	17.31	I	D	SP	P
DAG	71.932	13.92	5.93	17.31	E	D	LP	P
BAO	75.559	112.93	5.68	16.56	I	C	SP	P
BDF	75.648	112.92	5.68	16.56	I	D	LP	P
KBS	76.808	9.05	5.59	16.29	I	D	LP	P
SOB1	79.232	104.04	5.45	15.87	I	D	SP	P
VAL	83.335	36.91	5.09	14.80	I	D	LP	P
DMU	84.306	34.26	5.03	14.62	I	C	SP	P
DLE	84.779	34.70	4.99	14.50	I	C	SP	P
DDK	84.842	34.56	4.99	14.50	I	C	SP	P
KONO	88.738	24.47	4.75	13.79	I	D	LP	P
SNZO	88.862	224.91	4.73	13.73	I	D	LP	P
PTO	89.001	46.21	4.73	13.73	E	D	LP	P

Table 19. Station data for event 104 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MAT	90.211	309.28	4.71	13.67	I	D	SP	P
MAJO	90.211	309.28	4.71	13.67	I	D	LP	P
FLN	90.342	36.75	4.70	13.64	I	D	SP	P
DBN	91.461	31.96	4.69	13.61	I	D	LP	P
MFF	91.682	38.47	4.69	13.61	I	D	SP	P
COP	92.506	26.46	4.66	13.52	E	C	LP	P
ENN	92.634	32.75	4.66	13.52	I	D	SP	P
TOL	92.658	45.70	4.66	13.52	E	D	LP	P
LSF	92.847	38.13	4.65	13.49	I	D	SP	P
GRC	93.143	36.67	4.65	13.49	I	D	SP	P
SSF	93.518	36.70	4.63	13.43	I	D	SP	P
AVF	93.587	36.98	4.63	13.43	I	D	SP	P
LOR	93.597	36.39	4.63	13.43	I	D	LP	P
LBF	93.827	36.57	4.62	13.40	I	D	SP	P
GUA	93.866	285.86	4.62	13.40	E	D	LP	P
GUMO	93.889	285.92	4.62	13.40	I	D	LP	P
SMF	93.946	36.90	4.62	13.40	I	D	SP	P
GWF	94.598	33.50	4.60	13.34	I	C	SP	P
GRFO	95.952	31.44	4.55	13.20	E	D	LP	P
FUR	96.986	32.58	4.53	13.14	I	C	SP	P
WET	97.127	31.13	4.53	13.14	I	C	SP	P
SNY	97.349	319.59	4.52	13.11	I	D	SP	P
FRF	97.368	38.23	4.52	13.11	I	D	SP	P
KHC	97.474	30.82	4.52	13.11	I	D	SP	P
SEO	97.570	314.56	4.52	13.11	E	C	LP	P
OGA	97.706	33.68	4.52	13.11	I	C	SP	P
KBA	98.754	32.45	4.48	12.99	I	D	SP	P
BDT	129.401	315.15	1.86	5.34	I	C	SP	PKP
POO	140.224	345.66	1.77	5.09	I	D	SP	PKP
BLF	144.486	111.81	1.70	4.90	I	D	SP	PKP
BFS	145.168	108.06	1.68	4.85	I	D	SP	PKP
KSR	145.303	106.26	1.68	4.85	I	D	SP	PKP
BUL	146.618	95.95	1.64	4.72	I	D	SP	PKP
NAI	147.167	58.15	1.64	4.72	I	D	SP	PKP
EVA	147.236	107.54	1.64	4.72	I	D	SP	PKP

Table 20. Station data for event 129.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
NEW	8.695	53.24	13.89	44.18	I	C	SP	P
LHD	9.621	56.27	13.79	43.78	I	C	SP	P
LDM	9.850	55.63	13.73	43.54	I	C	SP	P
CLX	9.859	57.23	13.73	43.54	I	C	SP	P
RXF	10.147	53.83	13.73	43.54	I	C	SP	P
BUT	10.957	71.61	13.61	43.06	I	C	SP	P
LRM	11.010	72.66	13.61	43.06	I	C	SP	P
ALQ	18.418	110.56	12.32	38.18	I	C	LP	P
FFC	20.035	46.99	10.48	31.72	I	C	SP	P
PMR	22.170	332.23	9.97	30.01	I	D	SP	P
COL	24.262	338.96	9.55	28.63	I	D	SP	P
COL	24.262	338.96	9.55	28.63	I	D	LP	P
TUL	25.480	96.49	9.43	28.24	I	C	LP	P
TTA	25.487	329.56	9.43	28.24	I	D	SP	P
RLO	25.920	95.32	9.39	28.11	I	C	SP	P
BHO	26.871	98.72	9.29	27.78	I	C	SP	P
ADK	33.545	301.98	8.66	25.75	I	D	SP	P
HON	33.612	238.60	8.66	25.75	I	C	LP	P
SHA	33.633	99.04	8.66	25.75	I	C	LP	P
TPM	34.220	126.59	8.63	25.66	I	D	SP	P
IIT	34.634	125.56	8.59	25.53	I	C	SP	P
BLA	36.080	83.61	8.51	25.27	I	C	LP	P
GAC	36.612	67.98	8.48	25.18	I	C	LP	P
VHO	36.956	125.45	8.45	25.08	I	C	SP	P
RSNY	37.587	69.50	8.42	24.99	I	C	LP	P
MNT	37.918	67.70	8.39	24.89	I	C	SP	P
GDH	44.579	29.22	8.03	23.76	I	C	SP	P
GDH	44.579	29.22	8.03	23.76	I	C	LP	P
DAG	52.154	16.03	7.50	22.10	E	C	LP	P
KBS	55.530	8.77	7.22	21.24	E	D	LP	P
SJG	57.107	95.98	7.11	20.90	I	D	SP	P
SJG	57.107	95.98	7.11	20.90	I	C	LP	P
TOV	60.111	105.92	6.89	20.22	I	C	SP	P
BOG	60.898	113.51	6.81	19.98	I	C	LP	P
CUM	63.620	101.00	6.60	19.34	I	C	SP	P
KEV	65.525	9.45	6.44	18.85	I	D	LP	P
MAJO	68.692	300.44	6.19	18.09	E	N	LP	P
VAL	70.613	35.67	6.04	17.64	E	C	LP	P
DCN	70.797	33.25	6.00	17.52	I	C	SP	P
ESK	70.848	29.97	6.00	17.52	E	C	LP	P
DLE	71.131	32.94	6.00	17.52	I	C	SP	P
SEO	74.802	307.47	5.72	16.68	E	D	LP	P
COP	75.544	22.09	5.68	16.56	E	C	LP	P
COP	75.544	22.09	5.68	16.56	I	C	SP	P
WTS	77.029	26.97	5.59	16.29	I	C	SP	P
UCC	77.198	28.97	5.59	16.29	E	C	LP	P
GRR	77.208	33.24	5.59	16.29	I	C	SP	P
LDF	77.335	32.71	5.56	16.20	I	C	SP	P
LPF	77.421	33.55	5.56	16.20	I	C	SP	P
BNS	78.026	27.34	5.52	16.08	I	C	SP	P

Table 20. Station data for event 129 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ARE	78.665	125.71	5.49	15.99	I	D	SP	P
PTO	79.432	42.25	5.42	15.78	I	C	SP	P
GWF	79.870	28.15	5.37	15.63	I	C	SP	P
LSF	79.894	33.17	5.37	15.63	I	C	SP	P
SSF	79.994	31.56	5.37	15.63	I	C	SP	P
TCF	80.132	32.76	5.37	15.63	I	C	SP	P
CDF	80.233	28.65	5.37	15.63	I	C	SP	P
MZF	80.338	32.58	5.31	15.45	I	C	SP	P
GRFO	80.436	25.72	5.31	15.45	I	C	LP	P
GRF	80.438	25.72	5.31	15.45	E	C	LP	P
SMF	80.468	31.60	5.31	15.45	I	C	SP	P
STU	80.579	27.35	5.31	15.45	E	C	LP	P
RJF	80.663	33.73	5.31	15.45	I	C	SP	P
LIS	81.002	44.16	5.27	15.33	I	D	SP	P
LGR	81.257	37.80	5.22	15.18	I	C	SP	P
KHC	81.662	24.62	5.22	15.18	I	C	SP	P
TOL	82.594	40.32	5.15	14.97	I	C	LP	P
KMR	82.787	24.79	5.12	14.88	I	C	LP	P
KBA	83.412	25.71	5.09	14.80	I	C	SP	P
FRF	84.137	31.59	5.06	14.71	I	C	SP	P
MAL	84.910	42.48	4.99	14.50	I	D	SP	P
CRT	84.941	41.68	4.99	14.50	I	D	SP	P
ALI	85.470	39.00	4.96	14.41	E	C	LP	P
ANP	86.858	302.05	4.83	14.02	E	C	LP	P
TATO	87.027	301.93	4.83	14.02	E	D	LP	P
KOU	89.186	240.45	4.73	13.73	I	D	SP	P
PVL	90.345	19.59	4.70	13.64	I	D	SP	P
MEK	124.712	264.74	1.87	5.37	I	D	SP	PKP

Figure 10. Azimuthal equidistant map for geographic subdivision, Middle America

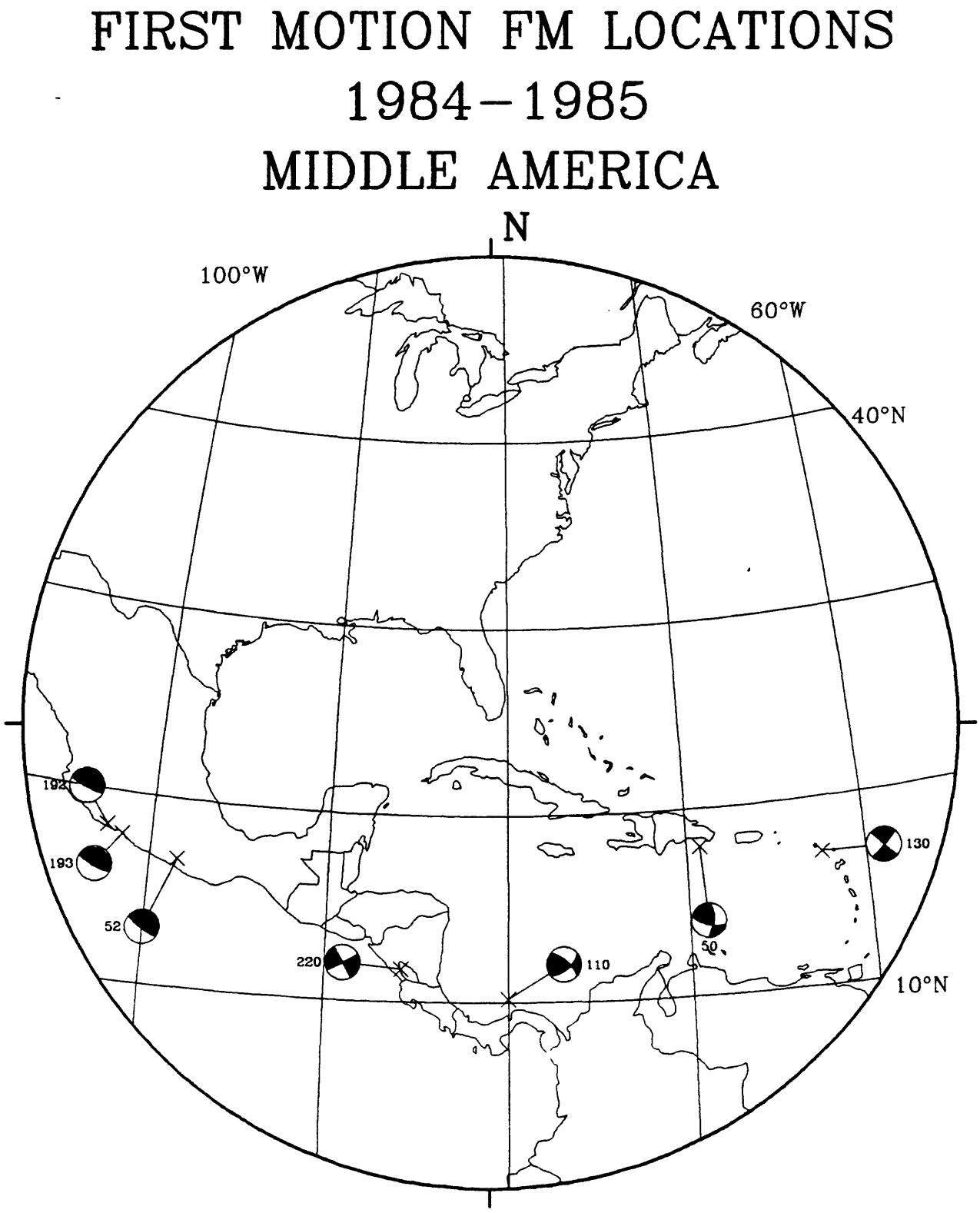
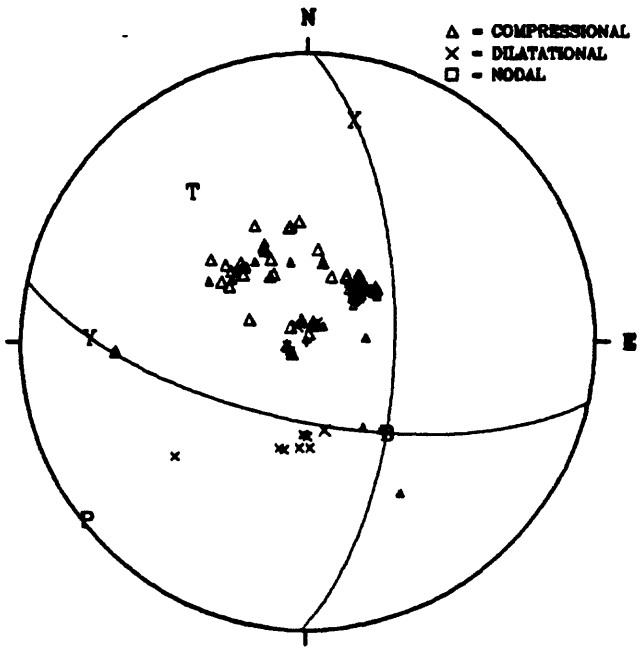


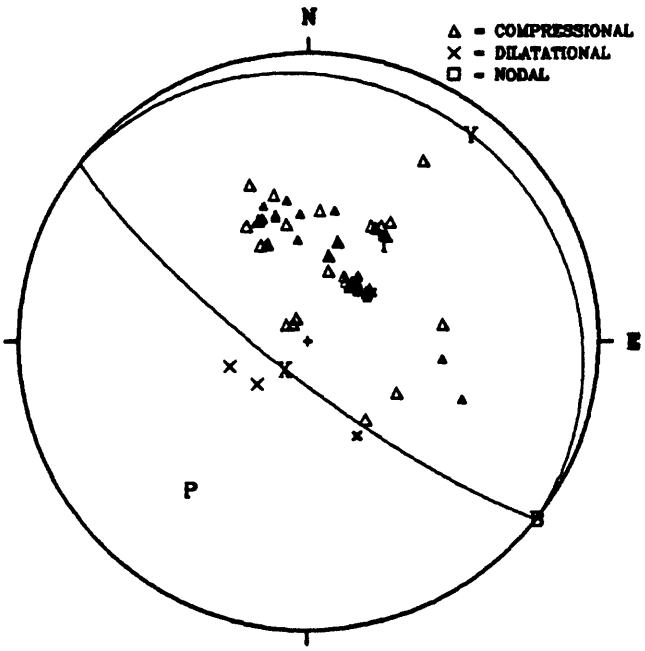
Table 21. Focal mechanism parameters for subdivision, Middle America

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
50	1	65	155	102	67	27	35	322	2	231	55	139
52	128	80	90	308	10	90	55	38	35	218	0	128
110	310	70	150	51	62	23	35	268	5	2	54	99
130	40	86	179	130	89	5	4	355	3	265	85	141
192	118	79	90	298	11	90	56	28	34	208	0	118
193	120	77	90	300	13	30	58	30	32	210	0	120
220	62	87	2	332	88	177	4	287	1	17	86	118

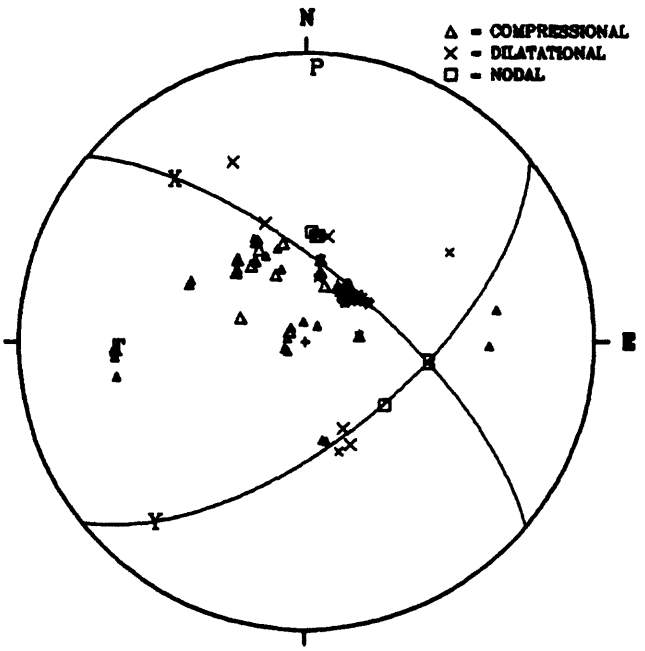
Figure 11. Lower hemisphere focal sphere projection for events 50, 52, 110, and 130.



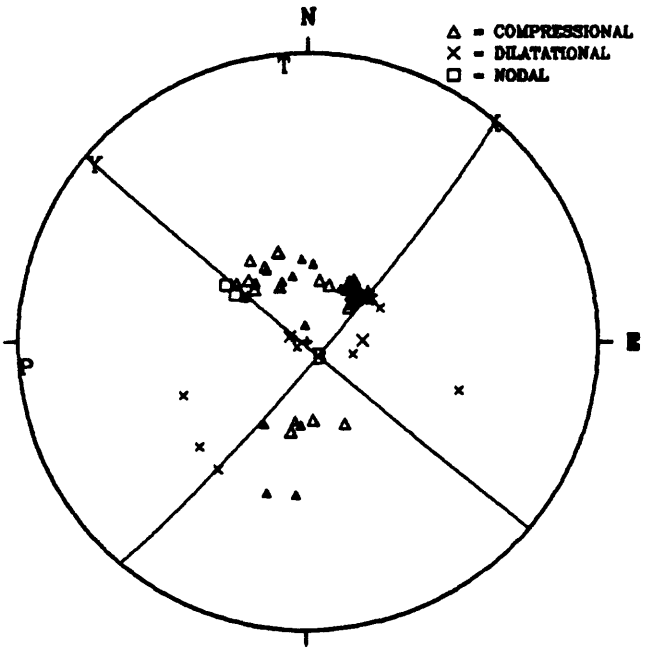
EVENT 50



EVENT 52

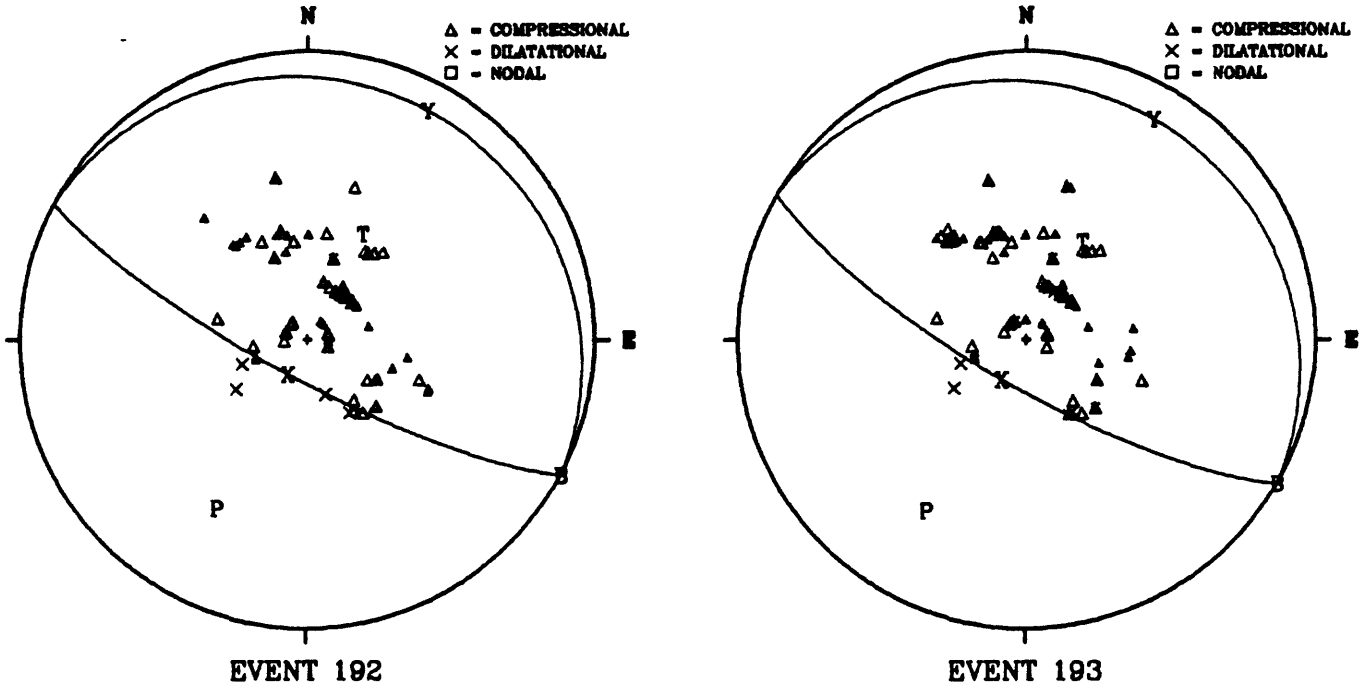


EVENt 110



EVENT 130

Figure 12. Lower hemisphere focal sphere projection for events 192, 193, and 220.



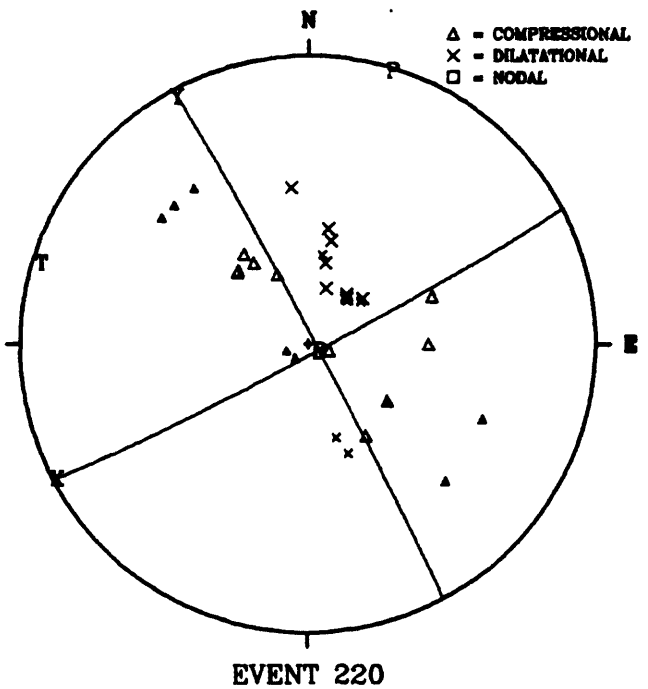


Table 22. Station data for event 50.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SJG	3.036	87.11	14.24	123.33	I	C	LP	P
GUV	11.798	148.21	13.45	52.11	I	C	SP	P
UPA	13.349	229.24	13.22	50.87	I	D	SP	P
SHA	21.259	310.02	10.06	36.18	I	C	LP	P
BLA	21.491	335.23	10.06	36.18	I	C	LP	P
WES	24.378	356.44	9.54	34.04	I	C	LP	P
RSNY	26.839	351.76	9.29	33.03	E	C	LP	P
HKT	26.912	301.18	9.29	33.03	I	C	SP	P
ATB	27.042	139.75	9.29	33.03	I	C	SP	P
GAC	28.106	350.84	9.19	32.63	I	C	LP	P
TUL	29.433	312.61	8.97	31.76	I	C	LP	P
HUA	30.406	191.63	8.86	31.32	I	D	SP	P
NNA	30.683	194.50	8.86	31.32	I	D	SP	P
ARE	34.289	183.67	8.59	30.27	I	D	SP	P
LPB	34.315	177.89	8.59	30.27	I	D	SP	P
LHC	34.415	336.31	8.59	30.27	I	C	SP	P
ALQ	37.020	304.57	8.45	29.72	I	C	LP	P
ANMO	37.020	304.57	8.45	29.72	I	C	LP	P
GOL	37.904	312.37	8.38	29.45	I	C	LP	P
RSON	38.106	334.93	8.38	29.45	I	C	SP	P
RSON	38.106	334.93	8.38	29.45	I	C	LP	P
RSSD	39.062	319.41	8.32	29.22	I	C	LP	P
BAO	39.472	146.52	8.30	29.14	I	C	SP	P
BDW	42.042	314.75	8.16	28.61	I	C	SP	P
FFC	44.366	333.42	8.02	28.07	I	C	SP	P
LRM	45.152	317.61	7.99	27.96	I	C	SP	P
BMN	46.729	308.95	7.91	27.65	I	C	SP	P
LDM	47.988	319.88	7.82	27.31	I	C	SP	P
RXF	48.032	320.46	7.82	27.31	I	C	SP	P
YKM	48.388	320.25	7.79	27.20	I	C	SP	P
JAS	48.669	304.97	7.79	27.20	I	C	LP	P
EDM	48.945	326.35	7.74	27.01	I	C	SP	P
NEW	49.032	319.05	7.74	27.01	I	C	SP	P
ZON	49.242	179.26	7.74	27.01	I	D	SP	P
SAN	51.155	181.42	7.58	26.41	I	D	SP	P
LON	51.577	315.88	7.54	26.26	I	C	LP	P
LNV	51.678	182.20	7.54	26.26	I	D	SP	P
GDH	52.187	7.06	7.50	26.11	I	C	LP	P
LPA	53.698	168.36	7.38	25.66	I	D	LP	P
LPA	53.698	168.36	7.38	25.66	I	D	LP	P
RSNT	54.340	336.04	7.30	25.36	I	C	LP	P
LIS	55.855	55.11	7.18	24.92	I	C	SP	P
PTO	56.461	52.24	7.15	24.81	I	C	SP	P
PTO	56.461	52.24	7.15	24.81	I	C	LP	P
DCN	59.140	38.11	6.96	24.10	I	C	SP	P
ECB	59.246	39.29	6.96	24.10	I	C	SP	P
DMU	59.465	37.53	6.92	23.96	I	C	SP	P
ECP	59.461	39.56	6.92	23.96	I	C	SP	P
DLE	59.560	38.27	6.92	23.96	I	C	SP	P
ETA	59.649	38.99	6.92	23.96	I	C	SP	P

Table 22. Station data for event 50 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
DDK	59.699	38.19	6.92	23.96	I	C	SP	P
TOL	59.860	53.94	6.88	23.81	I	C	LP	P
LGR	61.090	51.01	6.80	23.52	I	C	SP	P
ALM	61.118	57.41	6.80	23.52	I	C	SP	P
LPF	62.375	44.74	6.68	23.08	I	C	SP	P
GRR	62.519	44.35	6.68	23.08	I	C	SP	P
MFF	62.912	46.39	6.64	22.93	I	C	SP	P
LDF	63.020	44.15	6.64	22.93	I	C	SP	P
EPF	63.192	50.40	6.64	22.93	I	C	SP	P
LFF	63.492	48.27	6.60	22.78	I	C	SP	P
MBC	63.622	348.18	6.60	22.78	I	C	SP	P
LPO	63.808	48.55	6.56	22.64	I	C	SP	P
DAG	64.034	11.41	6.56	22.64	I	C	LP	P
DAG	64.034	11.41	6.56	22.64	I	C	SP	P
RJF	64.044	47.86	6.56	22.64	I	C	SP	P
LSF	64.062	46.81	6.56	22.64	I	C	SP	P
CAF	64.432	48.28	6.52	22.49	I	C	SP	P
TCF	64.534	46.77	6.52	22.49	I	C	SP	P
AVF	65.323	46.22	6.44	22.20	I	C	SP	P
SSF	65.427	45.92	6.44	22.20	I	C	SP	P
LOR	65.666	45.69	6.44	22.20	I	C	SP	P
SMF	65.661	46.38	6.44	22.20	I	C	SP	P
LBF	65.750	46.00	6.44	22.20	I	C	SP	P
UCC	66.004	41.82	6.39	22.02	I	C	LP	P
DBN	66.531	40.40	6.35	21.88	I	C	LP	P
BER	66.962	31.37	6.31	21.73	I	C	LP	P
CDR	67.130	49.56	6.31	21.73	I	C	SP	P
WLF	67.159	43.05	6.31	21.73	E	C	LP	P
HAU	67.334	44.85	6.27	21.59	I	C	SP	P
BSF	67.639	45.02	6.27	21.59	I	C	SP	P
CDF	67.938	44.38	6.23	21.44	I	C	SP	P
COL	68.976	333.40	6.15	21.15	I	C	LP	P
KONO	69.080	32.25	6.15	21.15	I	C	LP	P
STU	69.191	43.92	6.15	21.15	I	C	LP	P
PMR	69.505	329.83	6.11	21.01	E	C	LP	P
GRFO	70.442	42.84	6.03	20.72	I	C	LP	P
OGA	70.578	45.83	6.03	20.72	I	C	SP	P
MOX	70.618	41.80	6.03	20.72	I	C	LP	P
COP	70.730	36.43	6.03	20.72	I	C	LP	P
CTI	71.095	46.65	6.00	20.61	I	D	SP	P
CLL	71.430	41.02	5.96	20.47	I	D	SP	P
WET	71.578	43.30	5.96	20.47	I	C	SP	P
KHC	72.035	43.26	5.92	20.33	I	D	SP	P
BRG	72.067	41.41	5.92	20.33	I	C	LP	P
MNS	72.303	50.37	5.89	20.22	I	D	SP	P
KMR	72.534	44.33	5.89	20.22	E	C	LP	P
TRI	72.603	46.81	5.89	20.22	I	C	SP	P
AQU	72.838	50.32	5.85	20.08	I	D	SP	P
VKA	73.953	43.90	5.78	19.83	I	C	SP	P
KEV	75.462	20.94	5.68	19.47	I	C	LP	P

Table 22. Station data for event 50 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BRT	75.904	51.30	5.65	19.36	I	D	SP	P
WAR	76.217	39.29	5.65	19.36	E	C	LP	P
SKO	78.768	49.49	5.45	18.65	I	C	SP	P
VTS	79.876	48.54	5.36	18.33	I	C	SP	P
THE	80.218	50.51	5.36	18.33	I	C	SP	P
CMP	80.448	45.57	5.31	18.15	I	C	SP	P
MMB	80.521	49.42	5.31	18.15	I	C	SP	P
MLR	81.000	45.17	5.26	17.98	I	C	SP	P
PVL	81.125	47.61	5.26	17.98	I	C	SP	P
KDZ	81.676	49.03	5.22	17.84	I	C	SP	P
JMB	82.315	47.96	5.14	17.55	I	D	SP	P
HON	82.444	289.90	5.14	17.55	E	C	LP	P
EZN	82.913	50.56	5.12	17.48	I	D	SP	P
PSN	83.065	46.44	5.12	17.48	I	C	SP	P
ELL	86.565	52.58	4.86	16.57	I	C	SP	P
BNG	86.641	86.45	4.86	16.57	I	C	SP	P
SEO	122.661	344.63	1.87	6.30	I	C	LP	PKP
NOU	127.687	255.40	1.86	6.26	I	C	SP	PKP
DMN	128.358	29.22	1.86	6.26	I	D	SP	PKP
POO	128.759	46.81	1.86	6.25	I	C	SP	PKP
KOU	129.504	257.90	1.85	6.24	I	C	SP	PKP
GUA	133.931	310.53	1.83	6.16	E	C	LP	PKP
ANP	135.817	345.83	1.81	6.11	I	C	LP	PKP
CHG	141.668	18.07	1.74	5.86	I	C	LP	PKP
TOO	143.813	230.23	1.70	5.74	I	C	SP	PKP
NST	144.989	17.87	1.68	5.67	I	C	SP	PKP
CMS	145.506	240.33	1.66	5.60	I	D	SP	PKP
CTA	146.326	260.62	1.66	5.60	I	D	SP	PKP
CTA	146.326	260.62	1.66	5.60	I	C	LP	PKP
STK	148.852	237.72	1.59	5.35	I	D	SP	PKP
ADE	149.876	230.31	1.56	5.25	E	C	LP	PKP
DAV	151.065	328.14	1.53	5.15	E	D	LP	PKP
PPR	151.293	343.26	1.53	5.15	I	D	SP	PKP
SNG	153.108	22.50	1.46	4.92	E	C	LP	PKP
LEM	168.521	15.37	0.68	2.29	E	C	LP	PKP

Table 23. Station data for event 52.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SHA	16.718	32.37	12.63	63.08	I	C	LP	P
ALQ	19.433	339.86	10.54	48.08	I	C	LP	P
UPA	19.990	110.54	10.40	47.24	I	C	SP	P
GLD	23.611	346.86	9.66	43.00	E	C	LP	P
BLA	25.813	34.56	9.37	41.41	I	C	LP	P
BDW	27.573	342.12	9.22	40.61	I	C	SP	P
RSSD	27.637	351.29	9.22	40.61	I	C	SP	P
SCP	29.793	32.48	8.90	38.92	I	C	LP	P
SJG	30.812	82.72	8.82	38.51	I	C	LP	P
CAR	31.228	97.46	8.82	38.51	I	C	SP	P
LHC	32.409	11.43	8.71	37.94	I	C	SP	P
CLX	34.177	340.00	8.61	37.43	I	C	SP	P
RSON	34.182	5.35	8.61	37.43	I	C	LP	P
RSNY	34.211	31.03	8.61	37.43	I	C	LP	P
LDM	34.452	340.02	8.58	37.28	I	C	SP	P
WES	34.451	36.66	8.58	37.28	I	C	LP	P
GAC	34.611	28.77	8.58	37.28	I	C	LP	P
NEW	34.906	338.04	8.55	37.13	E	C	LP	P
YKM	34.936	339.98	8.55	37.13	I	C	SP	P
SES	35.010	345.91	8.55	37.13	I	C	SP	P
LON	35.587	332.05	8.52	36.98	I	C	LP	P
PNT	36.702	336.70	8.47	36.72	I	C	SP	P
FFC	37.942	356.66	8.37	36.22	I	C	SP	P
EDM	38.172	345.50	8.37	36.22	I	C	SP	P
RSNT	47.014	349.82	7.87	33.75	I	C	LP	P
PEL	56.297	151.99	7.14	30.27	I	D	SP	P
LNV	56.664	153.12	7.14	30.27	I	D	SP	P
PMR	57.145	333.86	7.10	30.08	E	C	LP	P
COL	58.264	337.63	6.99	29.57	I	C	SP	P
COL	58.264	337.63	6.99	29.57	I	C	LP	P
GDH	59.322	17.01	6.91	29.20	I	C	SP	P
GDH	59.322	17.01	6.91	29.20	I	C	LP	P
BDF	59.376	120.20	6.91	29.20	I	C	LP	P
MBC	60.456	354.36	6.83	28.83	I	C	SP	P
LPA	64.219	143.64	6.55	27.54	I	C	LP	P
DAG	71.391	13.84	5.95	24.84	I	C	SP	P
DAG	71.391	13.84	5.95	24.84	I	C	LP	P
DCN	77.396	37.90	5.55	23.07	I	C	SP	P
DMU	77.502	37.30	5.55	23.07	I	C	SP	P
DLE	77.838	37.87	5.51	22.89	I	C	SP	P
DDK	77.938	37.75	5.51	22.89	I	C	SP	P
AFI	78.574	251.64	5.48	22.76	E	D	LP	P
PTO	79.030	50.30	5.45	22.63	I	C	LP	P
LIS	79.153	52.80	5.45	22.63	I	D	SP	P
LPF	82.524	42.17	5.14	21.28	I	C	SP	P
GRR	82.538	41.79	5.14	21.28	I	C	SP	P
FLN	82.669	41.36	5.14	21.28	I	C	SP	P
TOL	82.704	50.67	5.14	21.28	I	C	LP	P
LDF	82.946	41.45	5.11	21.15	I	C	SP	P
KONO	84.444	29.03	5.02	20.76	I	C	LP	P

Table 23. Station data for event 52 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ALM	84.752	53.24	4.99	20.63	I	C	SP	P
UCC	84.991	38.41	4.99	20.63	E	C	LP	P
DBN	85.010	37.00	4.99	20.63	E	C	LP	P
MZF	85.440	43.14	4.96	20.50	I	C	SP	P
KEV	85.647	16.52	4.96	20.50	I	C	LP	P
ENN	85.929	38.08	4.90	20.24	I	C	SP	P
WTS	85.988	36.73	4.90	20.24	I	D	SP	P
COP	87.511	31.99	4.80	19.81	E	C	LP	P
GWF	87.624	39.33	4.80	19.81	I	C	SP	P
LMR	89.077	44.84	4.73	19.51	I	C	SP	P
MOX	89.292	36.74	4.71	19.42	E	C	LP	P
GRFO	89.475	37.71	4.71	19.42	I	C	LP	P
CLL	89.782	35.75	4.71	19.42	I	C	SP	P
BRG	90.511	35.87	4.70	19.38	I	C	SP	P
WET	90.692	37.72	4.70	19.38	I	C	SP	P
KBA	91.908	39.42	4.67	19.25	I	C	SP	P
SNZO	98.586	229.53	4.49	18.48	E	D	LP	P
BAG	129.316	308.64	1.86	7.52	E	C	LP	PKP
CHG	140.696	333.46	1.75	7.11	I	C	LP	PKP
SNG	149.622	320.16	1.56	6.32	I	C	LP	PKP

Table 24. Station data for event 110.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
UPA	1.283	157.70	14.27	123.02	I	D	LP	P
CDM	3.736	260.80	14.21	123.39	I	C	SP	P
IRZ	3.786	267.29	14.21	56.61	I	C	SP	P
SJS	3.973	266.94	14.20	56.55	I	C	SP	P
HDC	4.028	267.87	14.20	56.55	I	C	SP	P
QPS	4.119	259.59	14.19	56.49	I	C	SP	P
PTCR	4.350	265.30	14.18	56.43	I	C	SP	P
EPA	4.504	268.01	14.17	56.37	I	C	SP	P
TOV	10.089	91.31	13.70	53.61	I	C	SP	P
SJG	15.589	58.08	12.86	49.08	I	D	SP	P
TPM	20.378	297.59	10.31	37.29	I	C	SP	P
III	20.512	295.57	10.31	37.29	I	C	SP	P
SHA	21.765	340.85	9.95	35.78	I	D	LP	P
BHO	27.655	332.84	9.23	32.84	I	C	SP	P
ARE	27.778	162.21	9.18	32.64	I	D	SP	P
LPB	29.040	155.89	9.04	32.09	I	D	LP	P
RLO	29.233	334.61	9.04	32.09	I	C	SP	P
TUL	29.348	333.25	8.97	31.81	I	C	LP	P
SCP	30.551	3.23	8.86	31.37	E	N	LP	P
WES	32.975	11.89	8.68	30.67	E	D	LP	P
ALQ	34.478	319.76	8.59	30.31	I	C	SP	P
ANMO	34.480	319.77	8.59	30.31	I	C	LP	P
RSNY	34.570	6.93	8.59	30.31	E	N	LP	P
GAC	35.611	5.48	8.53	30.08	E	N	LP	P
RSSD	39.691	332.68	8.29	29.15	I	C	LP	P
BDF	40.878	128.49	8.21	28.84	E	N	LP	P
TLL	41.075	167.80	8.21	28.84	I	C	SP	P
RSON	42.092	347.08	8.16	28.65	I	C	LP	P
MNA	44.203	315.93	8.05	28.23	I	C	SP	P
LNV	44.639	169.79	8.02	28.12	I	C	SP	P
JAS	45.564	314.12	7.96	27.89	I	C	LP	P
BKS	46.813	313.18	7.88	27.58	I	C	SP	P
FFC	47.724	342.96	7.85	27.47	I	C	SP	P
NEW	49.055	327.75	7.74	27.05	I	C	SP	P
LPA	49.477	156.00	7.70	26.90	E	D	LP	P
EDM	50.585	334.68	7.62	26.60	I	C	SP	P
LON	50.783	323.74	7.58	26.45	I	C	LP	P
PNT	51.007	327.55	7.58	26.45	I	C	SP	P
GDH	61.443	10.43	6.76	23.40	I	C	LP	P
GDH	61.443	10.43	6.76	23.40	I	D	SP	P
INK	67.622	341.14	6.26	21.58	I	C	SP	P
AVE	69.984	58.29	6.07	20.90	I	D	SP	P
TIO	70.098	60.80	6.07	20.90	I	D	SP	P
COL	71.479	335.39	5.96	20.50	I	C	LP	P
DCN	71.608	37.12	5.96	20.50	I	C	SP	P
ECB	71.780	38.19	5.92	20.36	I	C	SP	P
DLE	72.037	37.24	5.92	20.36	I	C	SP	P
ETA	72.166	37.89	5.92	20.36	I	C	SP	P
MAL	72.483	54.70	5.89	20.25	I	C	SP	P
TOL	72.804	51.40	5.85	20.11	I	C	LP	P

Table 24. Station data for event 110 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
CRT	73.135	54.22	5.85	20.11	I	C	SP	P
DAG	73.749	12.14	5.82	20.00	I	C	SP	P
DAG	73.749	12.14	5.82	20.00	I	C	LP	P
LGR	74.012	48.74	5.78	19.85	I	D	SP	P
TAF	74.127	56.67	5.78	19.85	I	D	SP	P
ESK	74.198	35.35	5.78	19.85	I	C	SP	P
HON	75.252	289.43	5.68	19.50	I	C	LP	P
GRR	75.277	42.61	5.68	19.50	I	C	SP	P
ISSF	75.273	48.15	5.68	19.50	I	C	SP	P
LHE	75.401	48.27	5.68	19.50	I	C	SP	P
ESCF	75.435	48.10	5.68	19.50	I	C	SP	P
OGE	75.508	48.01	5.68	19.50	I	C	SP	P
FLN	75.534	42.23	5.68	19.50	I	C	SP	P
JAU	75.585	48.14	5.68	19.50	I	C	SP	P
ALI	75.583	52.97	5.68	19.50	I	D	LP	P
MFF	75.737	44.46	5.68	19.50	I	C	SP	P
EPF	76.106	48.14	5.64	19.35	I	C	SP	P
LFF	76.365	46.17	5.61	19.25	I	C	SP	P
MLS	76.652	48.20	5.61	19.25	I	C	SP	P
LPO	76.687	46.43	5.61	19.25	I	C	SP	P
LSF	76.898	44.82	5.58	19.14	I	C	SP	P
RJF	76.908	45.79	5.58	19.14	I	C	SP	P
CAF	77.306	46.16	5.55	19.03	I	C	SP	P
TCF	77.369	44.77	5.55	19.03	I	C	SP	P
MZF	77.631	44.83	5.55	19.03	I	C	SP	P
BGF	77.801	44.48	5.52	18.93	I	C	SP	P
PYM	77.942	45.30	5.52	18.93	I	C	SP	P
AVF	78.141	44.23	5.52	18.93	I	C	SP	P
SSF	78.235	43.94	5.52	18.93	I	C	SP	P
LOR	78.467	43.72	5.48	18.78	I	C	SP	P
SMF	78.483	44.36	5.48	18.78	I	C	SP	P
LBF	78.561	44.01	5.48	18.78	I	C	SP	P
UCC	78.653	40.11	5.48	18.78	E	C	LP	P
SSB	79.043	45.72	5.45	18.68	I	C	SP	P
HAU	80.105	42.87	5.36	18.36	I	C	SP	P
WTS	80.124	38.81	5.36	18.36	I	C	SP	P
BSF	80.416	43.03	5.31	18.18	I	C	SP	P
BNS	80.425	39.84	5.31	18.18	I	C	SP	P
KBS	80.462	11.31	5.31	18.18	I	D	SP	P
BGG	80.586	40.60	5.31	18.18	I	C	SP	P
LMR	80.595	47.59	5.31	18.18	I	C	SP	P
FRF	80.675	47.35	5.31	18.18	I	C	SP	P
CDF	80.692	42.41	5.31	18.18	I	C	SP	P
KONO	81.115	30.93	5.26	18.00	I	C	LP	P
STU	81.926	41.93	5.18	17.72	I	C	SP	P
CVF	82.398	48.18	5.14	17.58	I	C	SP	P
COP	83.067	34.76	5.11	17.47	I	C	SP	P
COP	83.067	34.76	5.11	17.47	E	C	LP	P
GRFO	83.131	40.85	5.11	17.47	I	C	LP	P
GRF	83.136	40.85	5.11	17.47	I	C	SP	P

Table 24. Station data for event 110 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MOX	83.260	39.86	5.08	17.37	I	C	SP	P
FUR	83.375	42.37	5.08	17.37	I	C	SP	P
OGA	83.381	43.68	5.08	17.37	I	C	SP	P
CTI	83.923	44.44	5.05	17.26	I	D	SP	P
CLL	84.033	39.07	5.05	17.26	I	C	SP	P
WET	84.286	41.24	5.02	17.16	I	C	SP	P
BRG	84.689	39.41	5.02	17.16	I	C	SP	P
KHC	84.741	41.18	5.02	17.16	I	C	SP	P
KBA	84.921	43.24	4.99	17.05	I	C	SP	P
UPP	85.105	30.14	4.99	17.05	I	C	SP	P
KMR	85.283	42.18	4.96	16.94	I	D	LP	P
KSP	86.158	39.17	4.90	16.73	I	C	SP	P
KEV	86.323	19.48	4.86	16.59	I	C	LP	P
VKA	86.683	41.70	4.86	16.59	I	C	SP	P
ZST	87.210	41.66	4.83	16.49	I	C	SP	P
SRO	88.087	41.86	4.77	16.28	I	C	SP	P
KRA	88.606	39.43	4.75	16.21	I	C	SP	P
BUD	88.630	42.07	4.75	16.21	I	C	SP	P
SPC	89.011	40.22	4.73	16.14	I	C	SP	P
JOS	89.373	40.84	4.71	16.07	I	C	SP	P
VLR	91.704	42.11	4.68	15.96	I	D	SP	P
HNM	92.423	41.23	4.66	15.89	I	D	SP	P
VTS	92.750	46.03	4.64	15.82	I	C	SP	P
MMB	93.414	46.88	4.63	15.79	I	D	SP	P
BCAO	97.624	84.11	4.52	15.40	I	C	LP	P
BNG	97.635	84.11	4.52	15.40	I	D	SP	P
CTA	134.381	251.90	1.83	6.17	I	C	SP	PKP
KMI	144.816	355.64	1.68	5.68	I	C	SP	PKP
ASPA	144.988	243.12	1.68	5.68	I	C	SP	PKP
HYB	145.365	37.84	1.68	5.68	I	C	SP	PKP
WB2	145.476	249.61	1.68	5.68	I	C	SP	PKP
LGP	146.930	314.00	1.64	5.53	I	C	SP	PKP
DAV	149.274	302.93	1.59	5.35	E	C	LP	PKP
AAI	151.269	280.97	1.53	5.15	I	C	SP	PKP

Table 25. Station data for event 130.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SJG	3.697	287.74	14.22	134.46	I	D	SP	P
CUM	6.719	194.63	14.06	44.89	I	C	SP	P
CAR	7.794	214.50	13.94	44.40	I	D	SP	P
GUV	9.169	184.04	13.84	44.00	I	C	SP	P
SDV	11.348	225.64	13.54	42.81	I	D	SP	P
UPA	18.451	246.50	12.31	38.16	I	D	SP	P
BLA	25.617	325.26	9.43	28.25	I	C	LP	P
BLA	25.617	325.26	9.43	28.25	E	C	LP	P
SHA	27.079	304.86	9.29	27.79	I	N	LP	P
RSNY	29.276	342.18	8.98	26.79	I	C	LP	P
GAC	30.606	341.92	8.87	26.44	I	C	LP	P
NNA	32.131	207.22	8.76	26.08	I	C	SP	P
ZOBO	33.536	189.90	8.66	25.77	I	C	LP	P
LPB	33.790	189.78	8.62	25.64	E	C	LP	P
TUL	35.049	309.01	8.56	25.45	I	C	LP	P
BDF	35.493	155.37	8.53	25.35	I	C	LP	P
RSON	41.984	330.55	8.16	24.18	I	C	LP	P
ANMO	43.019	303.22	8.11	24.02	E	N	LP	P
RSSD	44.182	316.69	8.05	23.83	I	C	LP	P
CYA	45.298	184.15	7.97	23.58	I	C	SP	P
FRB	46.876	356.29	7.88	23.30	I	C	SP	P
FFC	48.321	330.37	7.79	23.02	I	C	SP	P
YBT	49.848	65.13	7.66	22.61	I	D	SP	P
PCH	50.927	188.67	7.58	22.36	I	C	SP	P
LPA	51.804	175.28	7.50	22.11	E	C	LP	P
PTO	51.909	50.80	7.50	22.11	E	C	LP	P
PTO	51.909	50.80	7.50	22.11	I	C	SP	P
GDH	52.514	3.99	7.46	21.99	I	C	SP	P
CLX	52.835	318.11	7.42	21.87	I	C	SP	P
MNA	52.890	305.54	7.42	21.87	I	C	SP	P
RXF	53.027	318.90	7.42	21.87	I	C	SP	P
SFS	53.083	56.97	7.42	21.87	I	D	SP	P
VAL	53.746	37.35	7.38	21.74	I	C	LP	P
NEW	54.124	317.71	7.34	21.62	I	C	SP	P
MAL	54.546	56.80	7.30	21.49	I	D	SP	P
JAS1	54.603	304.66	7.30	21.49	I	C	SP	P
TOL	55.146	53.01	7.26	21.37	I	D	LP	P
TOL	55.146	53.01	7.26	21.37	I	C	LP	P
CRT	55.233	56.31	7.26	21.37	I	C	SP	P
ORV	55.610	306.53	7.22	21.25	I	C	SP	P
DCN	55.919	36.46	7.18	21.12	I	C	SP	P
DLE	56.320	36.69	7.15	21.03	I	C	SP	P
WDC	56.511	307.66	7.15	21.03	I	C	SP	P
LGR	56.621	50.10	7.15	21.03	I	D	SP	P
LON	56.880	315.05	7.11	20.91	I	C	LP	P
ALI	57.772	55.12	7.04	20.69	E	D	LP	P
EAB	58.420	33.87	7.00	20.57	I	C	SP	P
EPF	58.767	49.70	6.96	20.45	I	C	SP	P
ESK	58.783	35.06	6.96	20.45	I	C	LP	P
FLN	58.965	42.98	6.96	20.45	I	C	SP	P

Table 25. Station data for event 130 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
LFF	59.256	47.53	6.93	20.36	I	C	SP	P
LPO	59.544	47.86	6.93	20.36	I	C	SP	P
RJF	59.842	47.18	6.89	20.23	I	C	SP	P
CAF	60.190	47.66	6.89	20.23	I	C	SP	P
TCF	60.430	46.11	6.85	20.11	I	C	SP	P
MZF	60.681	46.22	6.85	20.11	I	C	SP	P
BGF	60.896	45.85	6.81	19.99	I	C	SP	P
PYM	60.930	46.78	6.81	19.99	I	C	SP	P
AVF	61.266	45.63	6.77	19.87	I	C	SP	P
PLDF	61.376	46.58	6.77	19.87	I	C	SP	P
SSF	61.397	45.33	6.77	19.87	I	C	SP	P
SMF	61.588	45.83	6.77	19.87	I	C	SP	P
LOR	61.657	45.12	6.77	19.87	I	C	SP	P
LBF	61.711	45.45	6.77	19.87	I	C	SP	P
UCC	62.365	41.19	6.68	19.59	I	C	LP	P
DOU	62.433	41.99	6.68	19.59	E	C	LP	P
DBN	63.030	39.80	6.64	19.47	I	C	LP	P
LRG	63.183	49.54	6.64	19.47	I	C	SP	P
LMR	63.289	49.68	6.60	19.35	I	C	SP	P
ENN	63.349	41.34	6.60	19.35	I	C	SP	P
FRF	63.395	49.43	6.60	19.35	I	C	SP	P
WLF	63.394	42.59	6.60	19.35	I	C	SP	P
HAU	63.395	44.45	6.60	19.35	I	C	SP	P
BSF	63.682	44.67	6.60	19.35	I	C	SP	P
EMS	63.685	46.63	6.60	19.35	I	C	LP	P
WTS	64.022	40.04	6.56	19.22	I	C	SP	P
CDF	64.041	44.04	6.56	19.22	I	C	SP	P
GWF	64.303	43.43	6.52	19.10	I	C	SP	P
CVF	65.016	50.55	6.48	18.98	I	C	SP	P
STU	65.331	43.71	6.44	18.86	E	C	LP	P
MUD	65.837	35.27	6.40	18.74	I	C	SP	P
MBC	65.963	347.31	6.40	18.74	I	C	SP	P
SAL	66.188	47.20	6.40	18.74	I	D	SP	P
GRFO	66.680	42.74	6.36	18.62	I	C	LP	P
GRF	66.684	42.74	6.36	18.62	I	C	SP	P
INK	67.337	337.59	6.27	18.34	I	C	SP	P
COP	67.607	36.26	6.27	18.34	I	C	LP	P
COP	67.607	36.26	6.27	18.34	I	C	LP	P
WET	67.765	43.34	6.23	18.22	I	C	SP	P
CLL	67.840	41.00	6.23	18.22	I	C	SP	P
RMP	67.888	51.26	6.23	18.22	I	C	SP	P
KBA	68.116	45.57	6.23	18.22	I	C	SP	P
KHC	68.223	43.35	6.23	18.22	I	C	SP	P
AQU	68.376	50.65	6.19	18.10	I	C	SP	P
BRG	68.435	41.47	6.19	18.10	I	C	SP	P
KMR	68.618	44.50	6.19	18.10	I	C	LP	P
SOP	70.268	44.81	6.04	17.65	I	C	SP	P
KBS	70.420	11.41	6.04	17.65	E	C	LP	P
UPP	70.474	31.84	6.04	17.65	I	C	SP	P
BUD	71.948	44.88	5.93	17.32	I	C	SP	P

Table 25. Station data for event 130 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SPC	72.587	43.01	5.89	17.20	I	C	SP	P
COL	72.777	333.57	5.86	17.11	I	C	SP	P
COL	72.777	333.57	5.86	17.11	I	C	LP	P
JOS	72.855	43.71	5.86	17.11	I	C	SP	P
KEV	73.995	21.23	5.78	16.87	I	C	LP	P
KZN	74.869	52.02	5.72	16.69	I	C	SP	P
GRG	75.233	51.27	5.72	16.69	I	C	SP	P
VTS	75.542	49.50	5.68	16.57	I	C	SP	P
KNT	75.568	51.00	5.68	16.57	I	C	SP	P
SOH	75.968	51.28	5.65	16.48	I	C	SP	P
MMB	76.107	50.45	5.65	16.48	I	C	SP	P
PVL	76.868	48.67	5.59	16.30	I	C	SP	P
JMB	78.022	49.14	5.52	16.09	I	C	SP	P
DMK	79.014	49.59	5.45	15.88	I	C	SP	P
BCAO	80.106	88.37	5.37	15.64	I	D	LP	P
BNG	80.116	88.37	5.37	15.64	I	D	SP	P
ISK	80.141	50.11	5.37	15.64	I	D	SP	P
ANTO	83.204	50.52	5.12	14.89	I	C	LP	P
LSZ	94.955	104.38	4.58	13.29	I	D	SP	P
RAB	143.749	286.63	1.70	4.91	I	D	LP	PKP
PGP	149.499	353.47	1.59	4.57	I	C	SP	PKP
ASPA	163.307	243.97	1.02	2.93	I	D	SP	PKP

Table 26. Station data for event 192.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ALQ	17.046	348.94	12.59	47.66	I	C	SP	P
ALQ	17.046	348.94	12.59	47.66	I	C	LP	P
PBX	18.604	319.14	12.28	46.14	I	C	SP	P
TUL	18.632	17.35	12.28	46.14	I	C	LP	P
ENX	18.675	319.56	12.28	46.14	I	C	SP	P
ICR	19.876	111.71	10.45	37.85	I	C	SP	P
BUS	20.130	112.72	10.45	37.85	I	C	SP	P
PRI	24.009	321.74	9.61	34.35	I	C	SP	P
UPA	24.131	109.24	9.61	34.35	E	C	LP	P
MNA	24.342	329.12	9.54	34.06	I	C	SP	P
JAS1	25.129	325.11	9.48	33.82	I	C	SP	P
MHC	25.402	322.54	9.42	33.58	I	C	SP	P
BLA	27.128	41.23	9.28	33.02	E	C	LP	P
LCCM	28.640	346.30	9.11	32.34	I	C	SP	P
LRM	28.758	345.50	9.04	32.06	I	C	SP	P
SCP	30.926	38.07	8.82	31.19	I	C	LP	P
CLX	31.653	343.85	8.79	31.07	I	C	SP	P
LHD	31.812	343.40	8.75	30.91	I	C	SP	P
LON	32.613	335.09	8.72	30.80	I	C	LP	P
RSON	33.344	10.20	8.65	30.52	I	C	LP	P
RSNY	35.207	35.62	8.56	30.17	I	C	LP	P
GAC	35.448	33.34	8.53	30.05	I	C	LP	P
EDM	35.962	348.92	8.50	29.94	I	C	SP	P
FFC	36.468	0.54	8.47	29.82	I	C	SP	P
GUV	39.702	99.84	8.29	29.13	I	C	SP	P
RSNT	45.039	352.12	7.99	27.98	I	C	LP	P
ZOBO	48.167	133.24	7.82	27.33	I	C	LP	P
ZOBO	48.167	133.24	7.82	27.33	I	C	SP	P
LPB	48.367	133.47	7.78	27.18	I	C	LP	P
HON	52.084	283.16	7.50	26.13	I	C	LP	P
ANT	52.117	141.87	7.50	26.13	I	C	LP	P
INK	53.770	346.27	7.34	25.53	I	C	SP	P
ATB	53.950	108.16	7.34	25.53	I	C	SP	P
COL	55.525	338.43	7.22	25.08	I	C	LP	P
COL	55.525	338.43	7.22	25.08	I	C	SP	P
PPT	58.335	235.11	7.00	24.27	I	D	LP	P
GDH	59.192	18.25	6.96	24.12	I	C	LP	P
GDH	59.192	18.25	6.96	24.12	I	D	SP	P
PEL	59.419	149.05	6.92	23.97	E	D	LP	P
CFA	59.444	146.06	6.92	23.97	I	C	LP	P
BDF	63.455	118.59	6.60	22.80	I	C	LP	P
BDF	63.455	118.59	6.60	22.80	I	C	SP	P
LPA	67.689	141.40	6.27	21.60	I	C	LP	P
RDJ	70.885	122.93	5.99	20.59	I	C	LP	P
AFI	75.341	249.82	5.68	19.48	I	D	LP	P
ELO	79.796	33.87	5.36	18.34	I	C	SP	P
EAU	80.122	34.43	5.36	18.34	I	C	SP	P
EDI	80.242	34.31	5.36	18.34	I	C	SP	P
EBL	80.365	34.43	5.31	18.17	I	C	SP	
MBO	81.511	77.65	5.22	17.85	I	C	SP	P

Table 26. Station data for event 192 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
GRR	84.088	41.02	5.05	17.25	I	C	SP	P
LPF	84.099	41.40	5.05	17.25	I	C	SP	P
FLN	84.190	40.58	5.05	17.25	I	C	SP	P
RBA	84.586	56.13	5.02	17.14	I	C	SP	
TOL	84.827	49.84	4.99	17.04	I	C	SP	P
TOL	84.827	49.84	4.99	17.04	I	C	LP	P
LGR	85.061	47.01	4.99	17.04	I	C	SP	P
KEV	85.404	15.63	4.96	16.93	I	C	SP	P
KEV	85.404	15.63	4.96	16.93	I	C	LP	P
MAL	85.596	52.92	4.96	16.93	I	C	SP	P
CRT	86.056	52.26	4.91	16.76	I	C	SP	P
IFR	86.095	56.14	4.91	16.76	I	C	SP	P
DBN	86.229	36.08	4.91	16.76	I	C	LP	P
UCC	86.307	37.48	4.86	16.58	E	C	LP	P
LSF	86.385	42.42	4.86	16.58	I	C	SP	P
DOU	86.734	38.06	4.86	16.58	E	C	LP	P
TCF	86.806	42.20	4.83	16.47	I	C	SP	P
GRC	86.954	41.04	4.83	16.47	I	D	SP	P
SSF	87.318	41.14	4.80	16.37	I	C	SP	P
AAS	87.318	160.92	4.80	16.37	E	D	LP	P
BNS	87.848	36.57	4.77	16.26	I	C	SP	P
ALI	87.954	50.30	4.77	16.26	I	C	LP	P
HAM	88.195	33.57	4.77	16.26	I	C	SP	P
COP	88.374	30.91	4.75	16.19	I	C	SP	P
EMS	89.878	41.03	4.71	16.05	E	C	LP	P
SLE	90.066	39.03	4.71	16.05	E	C	LP	P
ZUL	90.136	39.32	4.71	16.05	E	C	LP	P
DIX	90.173	40.87	4.71	16.05	E	C	LP	P
GRFO	90.732	36.48	4.70	16.02	I	C	LP	P
LLS	90.786	39.67	4.70	16.02	E	C	LP	P
NUR	90.845	23.22	4.70	16.02	I	C	LP	P
OSS	91.567	39.46	4.68	15.95	E	C	LP	P
KMR	93.222	36.91	4.64	15.81	I	C	SP	P
KBA	93.277	38.02	4.63	15.77	I	C	SP	P
TRI	94.234	39.05	4.61	15.70	I	D	SP	P
VKA	94.344	35.94	4.60	15.67	I	C	SP	P
WAR	94.504	30.94	4.60	15.67	E	C	LP	P
DZM	97.563	249.33	4.52	15.39	I	C	SP	P
NOU	97.625	249.10	4.52	15.39	I	C	SP	P
KOU	99.080	251.35	4.48	15.25	I	C	SP	P
HNR	99.977	263.31	4.47	15.22	I	C	LP	P
SKO	100.923	39.04	4.45	15.15	I	C	SP	P
BUC	102.065	34.93	4.45	15.15	I	C	SP	P
BUC1	102.072	35.01	4.45	15.15	I	C	SP	P
PVL	102.368	36.36	4.45	15.15	I	C	SP	P
MMB	102.515	38.29	4.45	15.15	I	D	SP	P
CFR	102.651	33.34	4.45	15.15	I	D	SP	P
KDZ	103.429	37.46	4.45	15.15	I	C	SP	P
JMB	103.600	36.21	4.45	15.15	I	C	SP	P
ATH	104.728	41.23	4.45	15.15	I	C	SP	P

Table 26. Station data for event 192 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ISK	105.916	36.02	1.89	6.37	I	C	SP	PKP
GUA	106.410	290.56	1.89	6.37	I	C	LP	PKP
SEO	107.597	320.66	1.89	6.37	E	C	LP	PKP
PMG	112.087	267.02	1.89	6.37	E	C	LP	PKP
HLW	114.756	43.60	1.88	6.34	I	C	SP	PKP
SSE	115.468	318.95	1.88	6.34	E	C	LP	PKP
BNG	117.742	74.76	1.88	6.32	I	C	SP	PKP
ANP	119.199	313.81	1.88	6.32	I	C	LP	PKP
ASW	119.544	47.51	1.87	6.32	I	C	SP	PKP
LWI	129.748	77.39	1.85	6.24	I	C	LP	PKP
SLR	133.980	108.44	1.83	6.16	I	C	LP	PKP
SLR	133.980	108.44	1.83	6.16	I	D	SP	PKP
MTD	136.299	95.47	1.81	6.11	I	C	SP	PKP
NAI	136.702	71.79	1.80	6.08	I	C	LP	PKP
MKS	137.019	282.17	1.80	6.08	I	C	SP	PKP

Table 27. Station data for event 193.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ALQ	17.600	346.83	12.48	47.15	I	C	SP	P
ALQ	17.600	346.83	12.48	47.15	I	C	LP	P
TUL	18.768	14.92	12.17	45.63	I	C	LP	P
TUL	18.768	14.92	12.17	45.63	I	C	SP	P
RLO	19.208	16.48	12.17	45.63	I	C	SP	P
GLA	19.264	324.52	10.59	38.47	I	C	LP	P
PBX	19.450	318.31	10.59	38.47	I	C	SP	P
ENX	19.518	318.72	10.59	38.47	I	C	SP	P
BAR	20.066	320.42	10.44	37.83	I	C	LP	P
PAS	21.986	320.94	9.95	35.77	I	C	LP	P
GSC	22.031	325.24	9.95	35.77	I	C	LP	P
SBB	22.158	322.50	9.95	35.77	I	C	LP	P
CLC	22.845	324.88	9.76	34.98	I	C	LP	P
UPA	23.207	109.31	9.76	34.98	E	C	LP	P
ISA	23.224	323.29	9.76	34.98	I	C	LP	P
MNA	25.110	328.27	9.47	33.80	I	C	SP	P
BLA	26.874	39.75	9.28	33.03	E	C	LP	P
CCMT	28.620	343.21	9.11	32.35	I	C	SP	P
LCCM	29.221	345.26	9.04	32.07	I	C	SP	P
LRM	29.349	344.49	8.97	31.80	I	C	SP	P
SXM	29.358	346.38	8.97	31.80	I	C	SP	P
BUT	29.556	344.48	8.97	31.80	I	C	SP	P
HRY	30.031	345.93	8.91	31.56	I	C	SP	P
SCP	30.720	36.83	8.86	31.36	I	C	LP	P
LHC	32.159	15.57	8.75	30.93	I	C	SP	P
CLX	32.263	343.01	8.72	30.81	I	C	SP	P
LDM	32.538	342.99	8.72	30.81	I	C	SP	P
RXF	32.859	343.52	8.68	30.66	I	C	SP	P
YKM	33.018	342.87	8.68	30.66	I	C	SP	P
LON	33.321	334.44	8.65	30.54	I	C	LP	P
RSON	33.583	9.11	8.65	30.54	I	C	LP	P
SJG	33.739	83.89	8.65	30.54	I	C	SP	P
PNT	34.631	339.19	8.59	30.30	I	C	SP	P
RSNY	35.038	34.59	8.56	30.19	I	C	LP	P
MCW	35.282	335.50	8.53	30.07	I	C	LP	P
GAC	35.315	32.32	8.53	30.07	I	C	LP	P
EDM	36.508	348.17	8.47	29.84	I	C	SP	P
FFC	36.852	359.68	8.44	29.72	I	C	SP	P
CUM	37.014	96.22	8.44	29.72	I	C	SP	P
GUV	38.805	99.82	8.32	29.26	I	C	SP	P
RSNT	45.540	351.62	7.96	27.88	I	C	LP	P
ZOBO	47.290	133.79	7.85	27.46	I	D	SP	P
ZOBO	47.290	133.79	7.85	27.46	I	C	LP	P
LPB	47.491	134.02	7.85	27.46	I	C	LP	P
ANT	51.295	142.48	7.54	26.29	I	C	LP	P
HON	52.994	283.57	7.42	25.84	I	C	LP	P
INK	54.346	346.02	7.30	25.39	I	C	SP	P
COL	56.195	338.27	7.18	24.95	I	C	LP	P
PEL	58.657	149.64	7.00	24.28	I	C	LP	P
CFA	58.655	146.63	7.00	24.28	I	D	LP	P

Table 27. Station data for event 193 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PEL	58.657	149.64	7.00	24.28	I	C	SP	P
PPT	58.812	235.87	6.96	24.13	E	D	LP	P
LNV	58.981	150.76	6.96	24.13	I	D	SP	P
GDH	59.297	17.98	6.92	23.98	I	C	LP	P
GDH	59.297	17.98	6.92	23.98	I	D	SP	P
BAO	62.442	118.91	6.68	23.10	I	C	SP	P
BDF	62.530	118.89	6.68	23.10	I	C	LP	P
LPA	66.863	141.85	6.31	21.76	I	C	LP	P
ITR	67.771	107.57	6.22	21.43	I	C	SP	P
AFI	76.002	250.25	5.64	19.35	I	D	LP	P
EAB	79.389	34.35	5.41	18.53	I	C	SP	P
EBH	79.818	34.16	5.36	18.35	I	C	SP	P
EAU	79.963	34.54	5.36	18.35	I	C	SP	P
EDU	79.994	33.79	5.36	18.35	I	C	SP	P
EDI	80.085	34.42	5.36	18.35	I	C	SP	P
ESY	80.394	34.33	5.31	18.17	I	C	SP	P
MBO	80.768	77.83	5.26	18.00	I	C	SP	P
TOL	84.430	50.03	5.02	17.15	I	C	LP	P
MAL	85.155	53.12	4.99	17.04	I	C	SP	P
KEV	85.547	15.82	4.96	16.94	I	C	LP	P
IFR	85.608	56.36	4.96	16.94	I	C	SP	P
DBN	86.043	36.29	4.90	16.73	I	C	LP	P
UCC	86.098	37.70	4.90	16.73	E	C	LP	P
MUD	86.289	31.33	4.86	16.59	I	D	SP	P
DOU	86.516	38.28	4.86	16.59	E	C	LP	P
GRC	86.689	41.26	4.86	16.59	I	C	SP	P
ENN	87.018	37.32	4.83	16.48	I	D	SP	P
ALI	87.550	50.54	4.80	16.38	I	C	LP	P
BNS	87.654	36.81	4.80	16.38	I	C	SP	P
HAM	88.048	33.81	4.77	16.27	I	C	SP	P
SSB	88.420	42.72	4.75	16.20	I	C	SP	P
KJF	89.501	19.78	4.71	16.06	E	C	LP	P
SLE	89.833	39.30	4.71	16.06	E	C	LP	P
ZUL	89.898	39.59	4.71	16.06	E	C	LP	P
DIX	89.911	41.15	4.71	16.06	E	C	LP	P
MMK	90.270	41.00	4.70	16.03	E	C	LP	P
GRFO	90.538	36.76	4.70	16.03	I	C	LP	P
LLS	90.543	39.95	4.70	16.03	E	C	LP	P
TMA	90.812	40.67	4.70	16.03	E	C	LP	P
VAI	90.856	40.92	4.70	16.03	I	D	SP	P
NUR	90.865	23.51	4.70	16.03	I	C	LP	P
CKI	91.190	42.36	4.70	16.03	I	D	SP	P
KHC	92.158	36.49	4.67	15.92	I	C	SP	P
KMR	93.022	37.23	4.64	15.82	I	C	SP	P
TRI	94.000	39.38	4.61	15.71	I	C	SP	P
WAR	94.399	31.28	4.60	15.68	E	D	LP	P
DZM	98.217	249.51	4.51	15.36	I	D	SP	P
NOU	98.276	249.27	4.49	15.29	I	C	SP	P
KOU	99.756	251.52	4.47	15.22	I	C	SP	P
HNR	100.770	263.50	4.45	15.15	I	C	LP	P

Table 27. Station data for event 193 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PVL	102.176	36.83	4.45	15.15	I	C	SP	P
GUA	107.335	290.81	1.89	6.37	I	C	LP	PKP
SEO	108.428	321.06	1.89	6.37	I	C	LP	PKP
HLW	114.449	44.27	1.88	6.35	I	C	SP	PKP
BNG	117.027	75.34	1.88	6.33	I	C	SP	PKP
ASW	119.178	48.26	1.88	6.32	I	C	SP	PKP
ANP	120.073	314.25	1.87	6.32	I	C	SP	PKP
ANP	120.073	314.25	1.87	6.32	I	C	LP	PKP
LWI	129.006	78.12	1.86	6.26	I	C	LP	PKP
KMI	131.174	330.18	1.85	6.23	E	C	LP	PKP
SLR	133.058	108.80	1.84	6.19	I	C	LP	PKP
NAI	136.017	72.72	1.81	6.11	I	C	LP	PKP
NAI	136.017	72.72	1.81	6.11	I	C	SP	PKP
CHG	138.369	329.90	1.79	6.05	I	D	SP	PKP
HYB	145.008	359.67	1.68	5.68	I	C	SP	PKP
SNG	146.845	316.58	1.64	5.53	I	D	SP	PKP

Table 28. Station data for event 220.

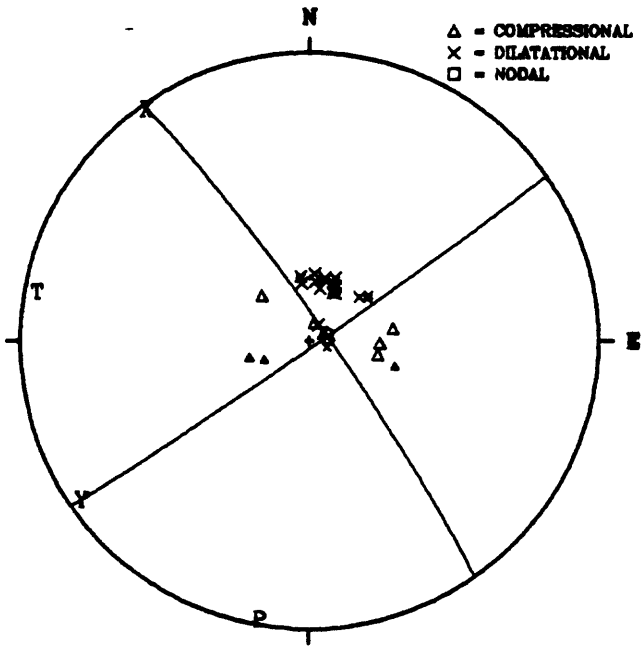
Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
AR6	1.567	143.60	14.27	123.17	I	C	SP	P
SJS	2.497	134.67	14.25	56.71	I	C	SP	P
ICR	2.630	130.63	14.25	123.29	I	C	SP	P
BUS	2.972	135.86	14.24	123.35	I	C	SP	P
UPA	6.785	112.97	14.02	55.32	I	C	SP	P
SHA	19.007	353.94	12.19	45.65	I	D	LP	P
SJG	20.068	69.16	10.46	37.85	I	C	LP	P
TRN	24.011	90.09	9.61	34.31	I	C	LP	P
BLA	25.854	9.99	9.38	33.38	E	D	LP	P
PT06	27.071	159.32	9.29	33.02	I	D	SP	P
ANMO	29.753	324.37	8.91	31.51	E	C	LP	P
ZOBO	32.868	147.38	8.69	30.65	E	C	LP	P
GAC	35.010	12.71	8.56	30.14	E	D	LP	P
JAS	40.445	316.23	8.24	28.90	E	C	LP	P
BRK	41.656	315.04	8.19	28.71	E	C	LP	P
LON	46.241	326.01	7.94	27.76	E	C	LP	P
BAO	46.290	125.10	7.91	27.64	I	C	SP	P
BDF	46.376	125.07	7.91	27.64	E	C	LP	P
ROCH	46.631	162.77	7.91	27.64	I	D	SP	P
FRB	53.379	9.49	7.38	25.65	I	D	SP	P
GDH	61.092	12.57	6.80	23.51	E	D	LP	P
COL	67.732	336.00	6.27	21.58	E	C	LP	P
PTO	72.820	50.46	5.85	20.07	E	D	LP	P
TOL	76.339	51.62	5.61	19.21	I	D	SP	P
DBN	81.500	38.58	5.22	17.83	I	D	LP	P
GRFO	85.698	40.27	4.96	16.91	E	D	LP	P
MOX	85.735	39.28	4.96	16.91	I	D	SP	P
GRB1	86.045	40.50	4.91	16.74	I	D	SP	P
KEV	86.759	18.74	4.83	16.46	E	D	LP	P
BRG	87.115	38.70	4.83	16.46	I	D	SP	P
KBA	87.700	42.47	4.80	16.35	I	D	SP	P
BUL	116.757	106.71	1.88	6.32	E	C	LP	PKP
CTA	129.363	253.62	1.86	6.25	I	C	SP	PKP
MUN	151.368	221.78	1.53	5.15	I	C	SP	PKP

Figure 13. Azimuthal equidistant map for geographic subdivision, South America

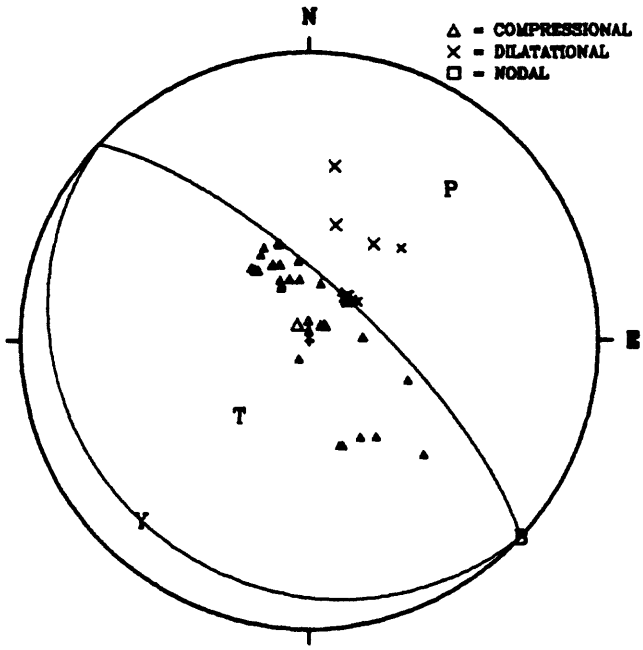
Table 29. Focal mechanism parameters for subdivision, South America

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	325	85	178	55	88	5	5	280	2	190	85	77
7	313	74	90	133	16	90	61	223	29	43	0	133
19	328	82	-90	148	8	-90	37	58	53	238	0	148
45	190	60	135	307	52	39	52	154	5	250	38	343
47	317	70	-90	137	20	-90	25	47	65	227	0	137
77	228	88	15	137	75	178	12	94	9	2	75	235
83	345	72	-90	165	18	-90	27	75	63	255	0	165
101	140	70	-32	242	60	-157	6	193	36	98	53	291
114	223	75	154	320	65	17	29	180	7	273	60	15
117	319	62	90	139	28	90	73	229	17	49	0	139
124	156	75	90	336	15	90	60	66	30	246	0	156
125	156	69	90	336	21	90	66	66	24	246	156	131
133	172	78	90	352	12	90	57	82	33	262	0	172
135	165	83	90	345	7	90	52	75	38	255	0	165
139	163	73	90	343	17	90	62	73	28	253	0	163
141	163	67	90	343	23	90	68	73	22	253	0	163
150	355	64	-90	175	26	-90	19	85	71	265	0	175
152	8	33	-68	162	60	-104	14	262	72	40	12	169
160	173	72	82	17	20	113	62	71	27	269	8	175
165	325	75	-90	145	15	-90	30	55	60	235	0	145
211	140	85	-135	45	45	-7	26	264	34	13	45	145

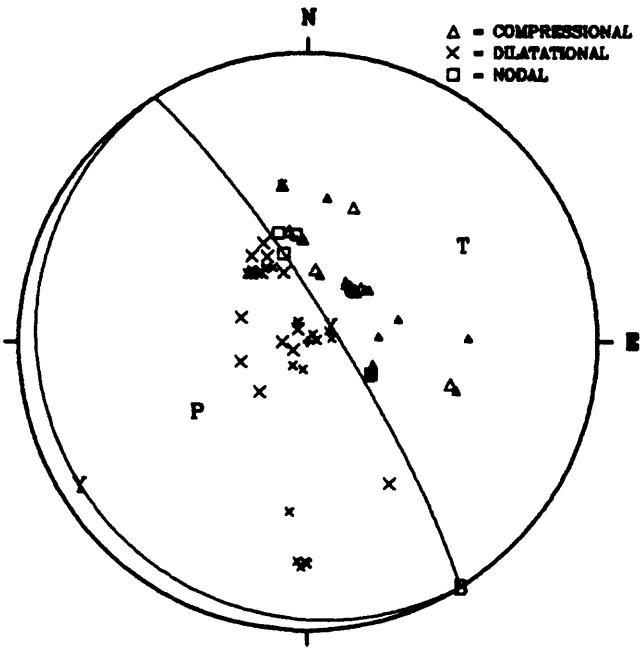
Figure 14. Lower hemisphere focal sphere projection for events 4, 7, 19, and 45.



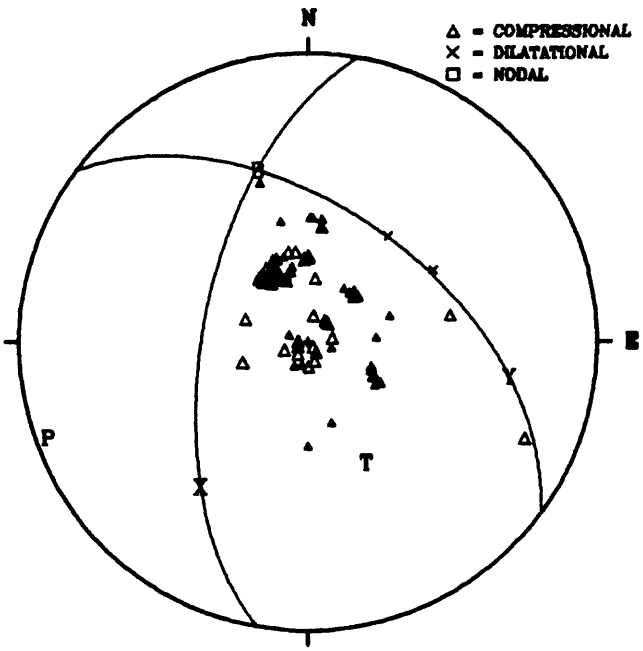
EVENT 4



EVENT 7

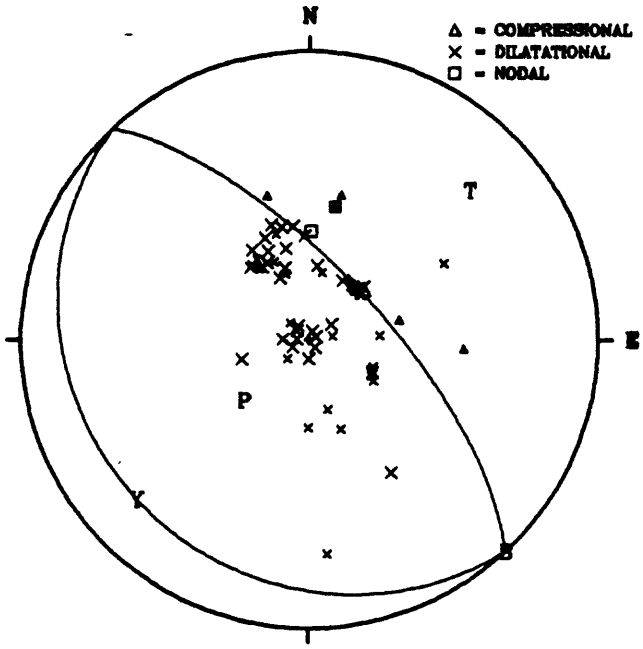


EVENT 19

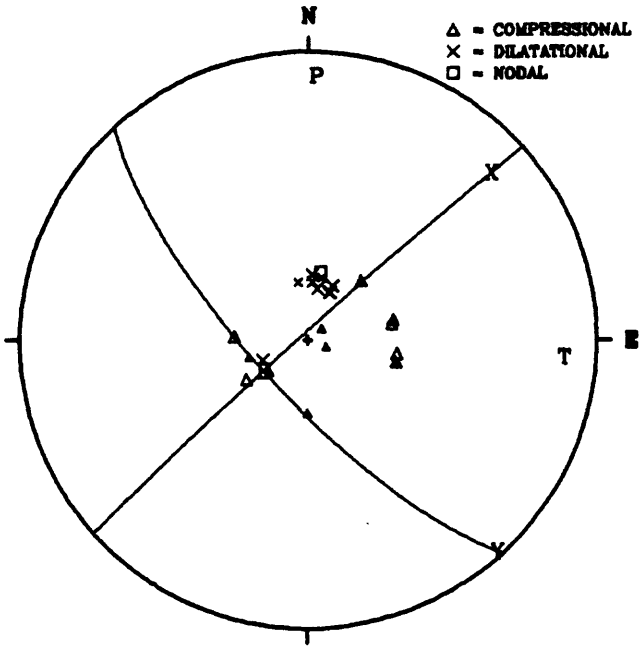


EVENT 45

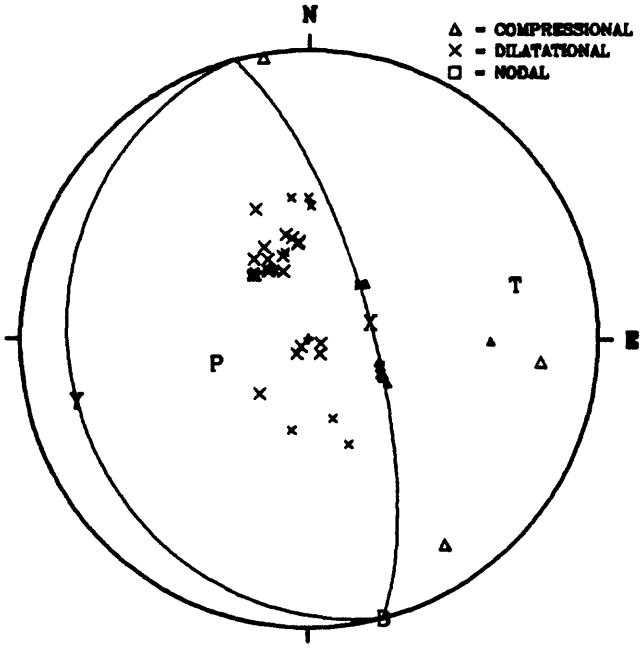
Figure 15. Lower hemisphere focal sphere projection for events 47, 77, 83, and 101.



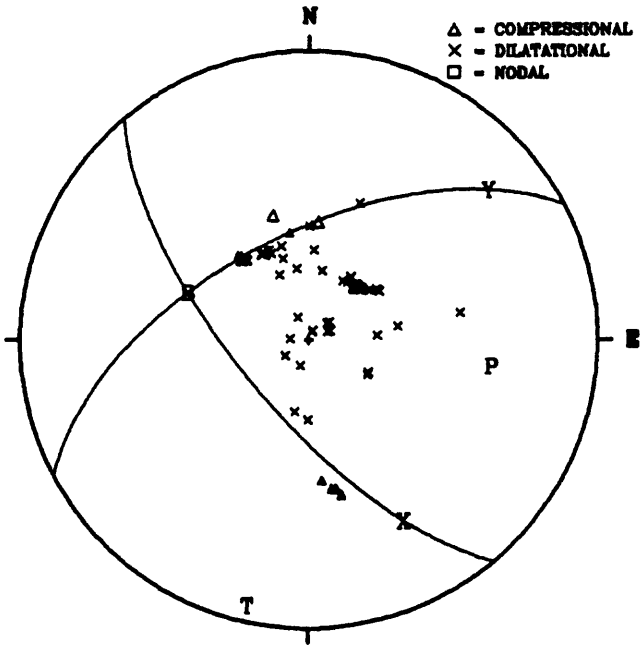
EVENT 47



EVENT 77

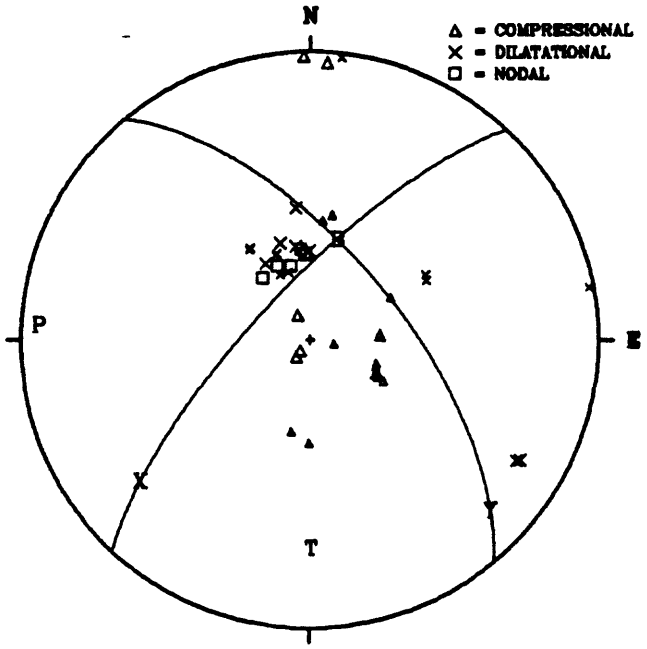


EVENT 83

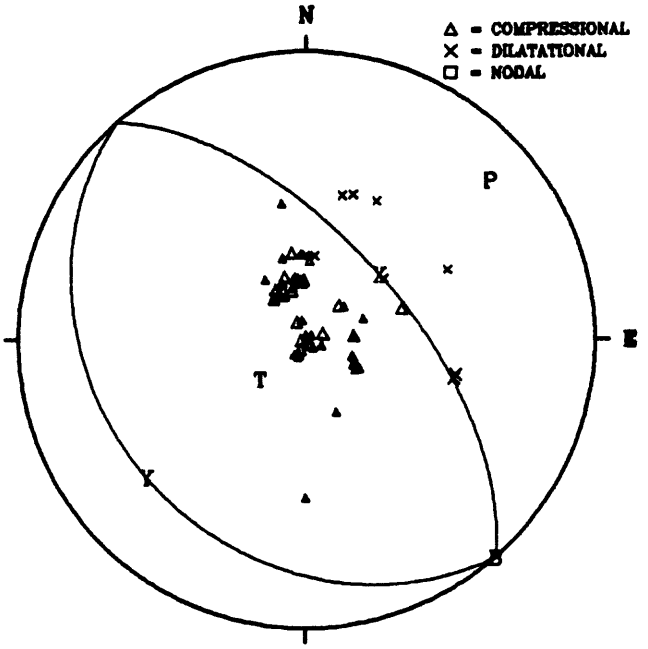


EVENT 101

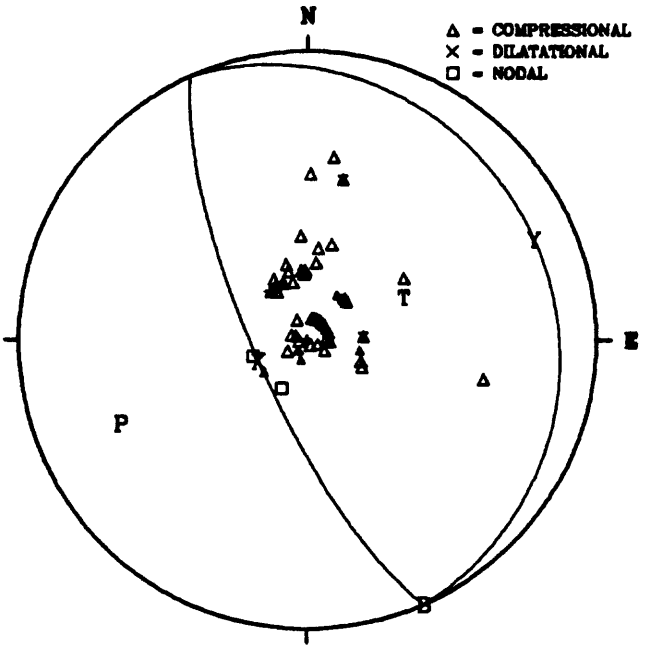
Figure 16. Lower hemisphere focal sphere projection for events 114, 117, 124, and 125.



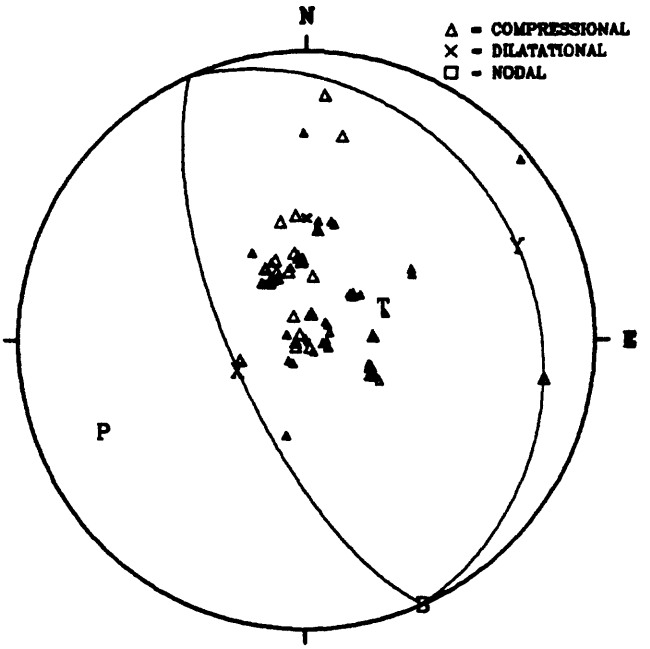
EVENT 114



EVENT 117

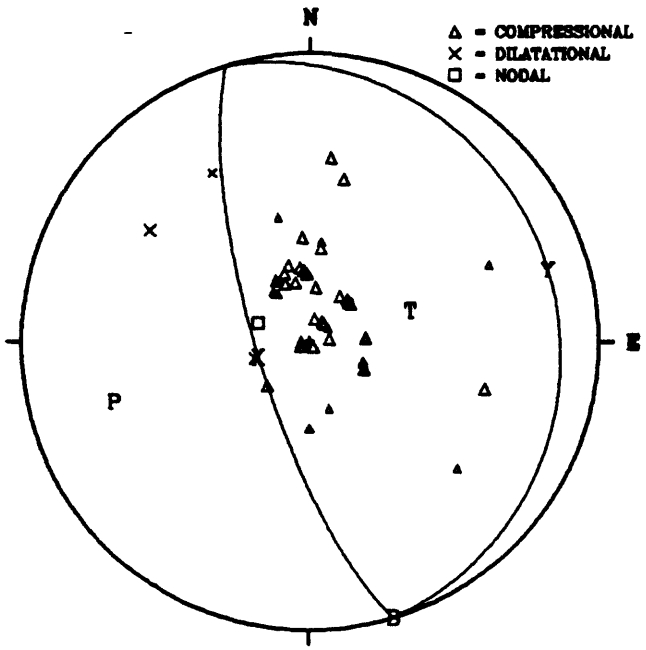


EVENT 124

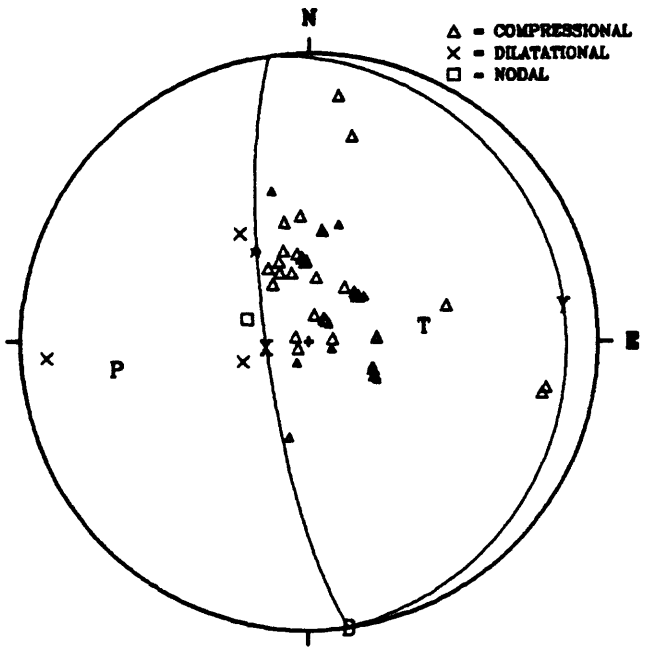


EVENT 125

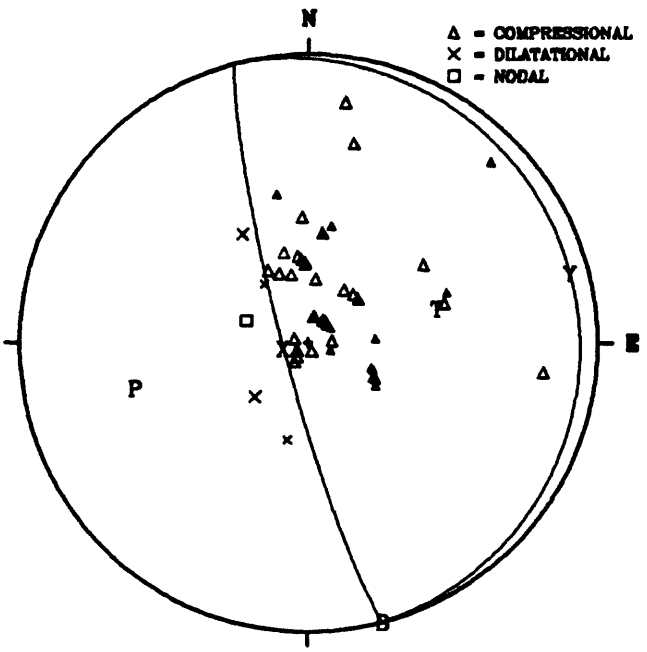
Figure 17. Lower hemisphere focal sphere projection for events 131, 133, 135, and 139.



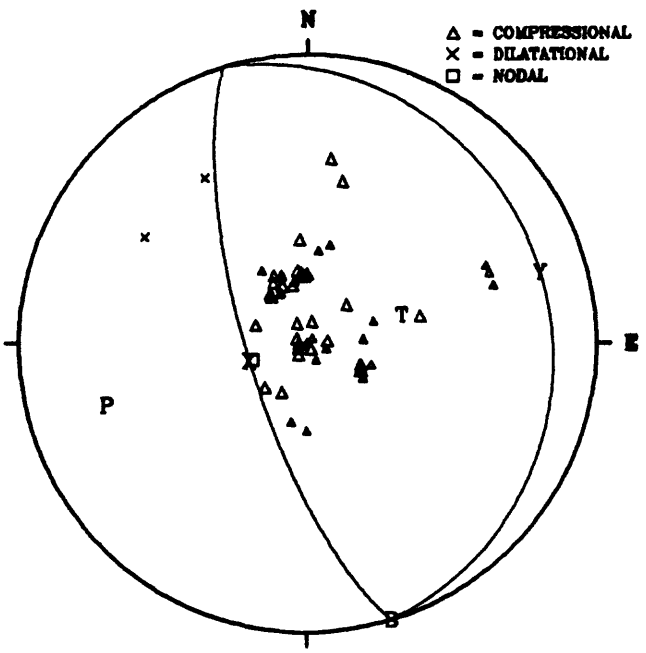
EVENT 131



EVENT 133

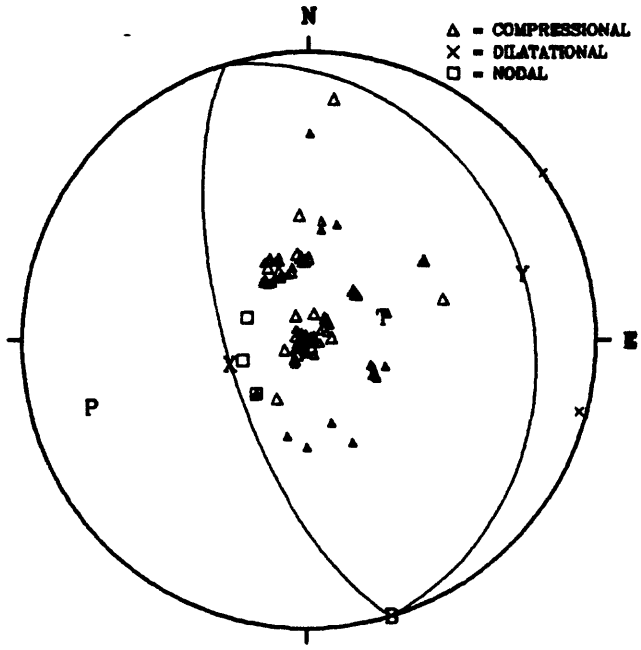


EVENT 135

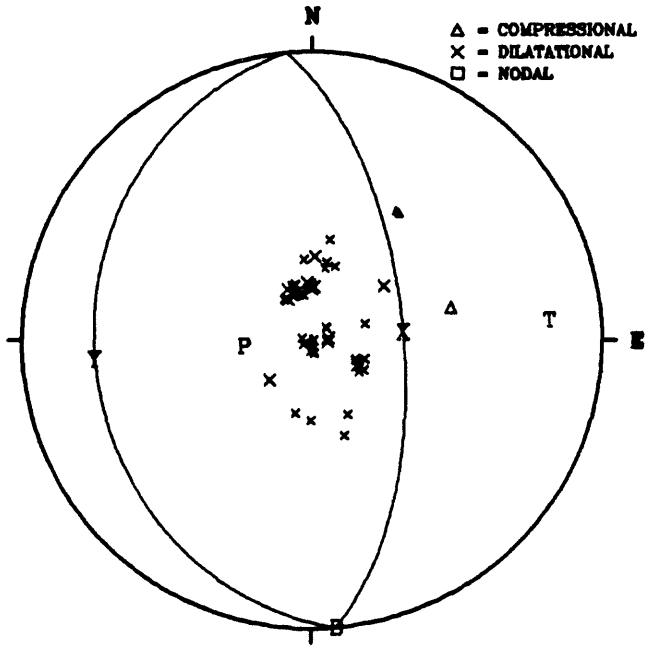


EVENT 139

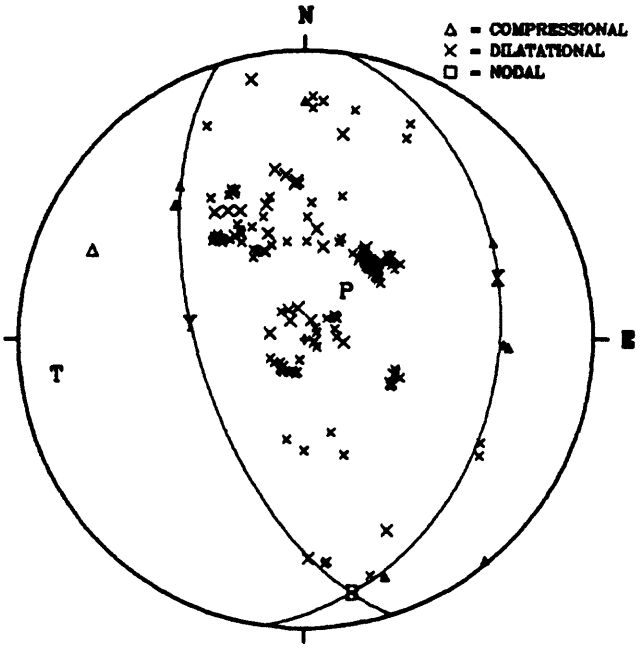
Figure 18. Lower hemisphere focal sphere projection for events 141, 150, 152, and 160.



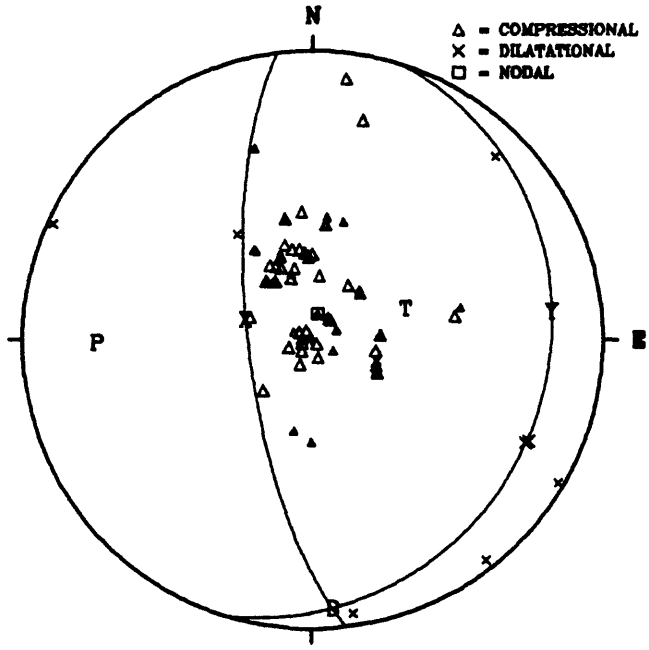
EVENT 141



EVENT 150



EVENT 152



EVENT 160

Figure 19. Lower hemisphere focal sphere projection for events 165 and 211.

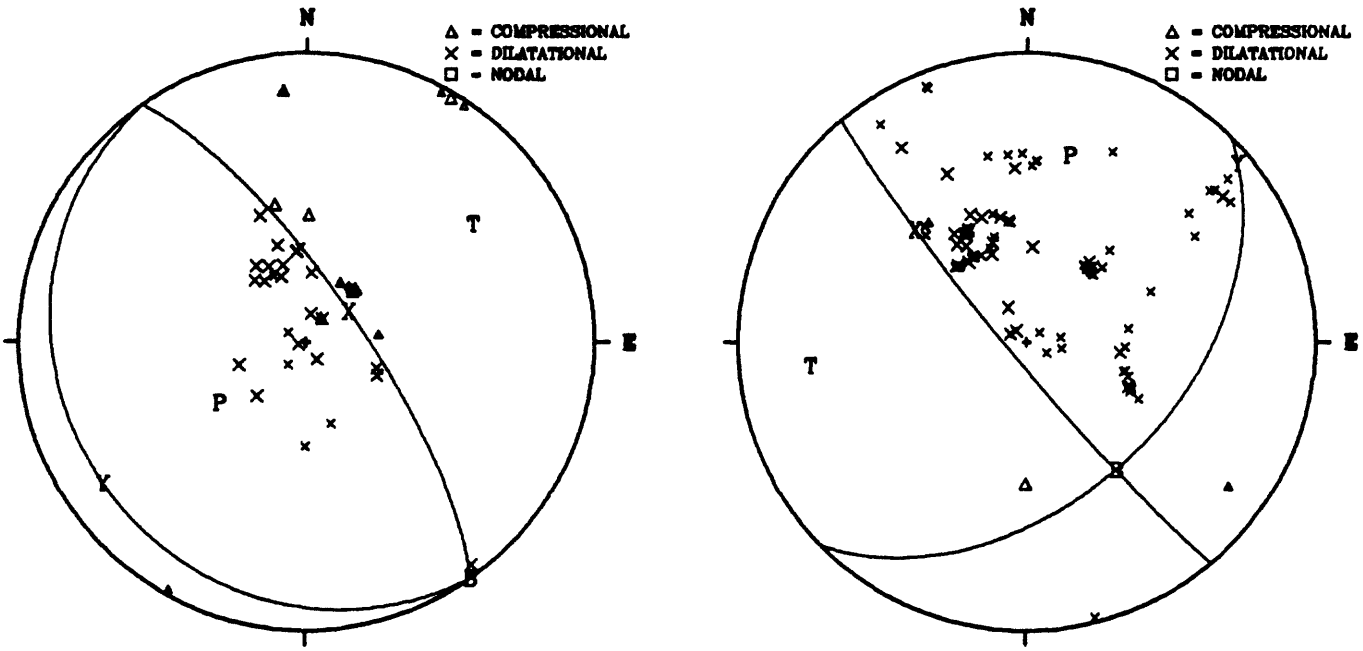


Table 30. Station data for event 4.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PEL	35.453	106.05	8.53	25.34	I	C	SP	P
LPB	42.523	81.80	8.13	24.07	E	C	LP	P
SDV	55.666	52.74	7.22	21.24	I	D	SP	P
CAR	59.390	54.44	6.93	20.35	I	D	SP	P
BDF	60.376	91.71	6.85	20.10	E	C	LP	P
RDJ	61.461	101.29	6.77	19.86	I	C	LP	P
SHA	64.570	23.00	6.52	19.09	I	D	LP	P
ANMO	64.808	5.32	6.48	18.97	I	D	LP	P
SJG	65.298	49.04	6.44	18.85	E	D	LP	P
HON	67.327	313.69	6.27	18.33	E	C	LP	P
TUL	67.353	14.49	6.27	18.33	I	D	LP	P
JAS	67.991	353.08	6.23	18.21	E	D	LP	P
ORV	69.698	352.44	6.11	17.85	I	D	SP	P
RSCP	69.911	22.98	6.07	17.73	I	D	LP	P
NOU	71.933	254.30	5.93	17.31	I	C	SP	P
BLA	73.213	26.15	5.86	17.10	I	D	LP	P
RSSD	74.122	6.19	5.79	16.89	E	D	LP	P
LON	76.844	353.31	5.59	16.29	E	D	LP	P
SCP	77.308	26.12	5.56	16.20	I	D	LP	P
WES	81.294	29.46	5.22	15.18	I	D	LP	P
RSNY	81.790	26.28	5.18	15.06	I	D	LP	P
RSON	82.144	11.79	5.18	15.06	E	D	LP	P
MNT	82.941	26.30	5.12	14.88	I	C	SP	P
CTA	89.532	247.12	4.72	13.70	I	C	SP	P
DAG	119.745	15.36	1.87	5.39	E	C	LP	PKP
BNG	127.173	108.87	1.86	5.36	I	D	SP	PKP
NUR	138.235	30.46	1.79	5.16	E	D	LP	PKP
PVL	143.795	56.86	1.70	4.90	I	C	SP	PKP
MLR	143.979	52.78	1.70	4.90	I	D	SP	PKP
KDZ	144.085	59.38	1.70	4.90	I	D	SP	PKP
JMB	144.910	57.79	1.68	4.85	I	C	SP	PKP
IST	146.877	59.91	1.64	4.72	I	C	LP	PKP

Table 31. Station data for event 7.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
UPA	12.936	8.37	13.31	51.28	I	D	LP	P
LPB	18.131	134.73	12.41	46.68	I	C	SP	P
CAR	20.328	45.13	10.33	37.27	I	D	SP	P
RCC	24.403	13.13	9.55	34.04	I	D	LP	P
SLA	25.764	144.95	9.38	33.36	I	C	SP	P
SJG	26.556	34.09	9.34	33.20	I	D	SP	P
SJG	26.556	34.09	9.34	33.20	E	D	LP	P
PEL	30.769	162.20	8.83	31.17	I	C	SP	P
LNV	31.317	163.85	8.79	31.02	I	C	SP	P
TCA	31.554	151.73	8.79	31.02	I	C	SP	P
BAO	34.884	111.84	8.56	30.12	I	C	SP	P
JCT	38.435	334.03	8.35	29.31	I	C	SP	P
BHO	40.128	342.64	8.27	29.00	I	C	SP	P
GBO	41.592	343.08	8.19	28.69	I	C	SP	P
TUL	41.825	342.42	8.16	28.58	I	C	SP	P
RLO	41.839	343.42	8.16	28.58	I	C	SP	P
ALQ	45.239	330.69	8.00	27.97	I	C	SP	P
SBB	51.429	321.28	7.54	26.23	I	C	SP	P
ISA	52.466	321.78	7.46	25.93	I	C	SP	P
JAS	55.144	322.66	7.26	25.19	I	C	SP	P
BKS	56.201	321.51	7.18	24.89	I	C	SP	P
WDC	58.079	323.83	7.04	24.37	I	C	SP	P
LDM	59.938	334.60	6.89	23.82	I	C	SP	P
NEW	60.582	333.41	6.84	23.64	I	C	SP	P
EDM	62.921	339.07	6.64	22.91	I	C	SP	P
FCC	63.277	352.65	6.60	22.76	I	C	SP	P
PCA	78.448	334.05	5.49	18.77	I	C	SP	P
INK	80.494	342.69	5.31	18.14	I	C	SP	P
CRT	82.685	51.91	5.15	17.57	I	D	SP	P
TOL	82.841	49.19	5.12	17.47	I	C	SP	P
MBC	82.951	351.47	5.12	17.47	I	C	SP	P
PME	82.982	333.57	5.12	17.47	I	C	SP	P
SVW	85.821	332.06	4.91	16.73	I	C	SP	P
LPF	86.460	41.54	4.86	16.55	I	C	SP	P
ESK	86.505	34.10	4.86	16.55	I	C	SP	P
EPF	86.628	46.64	4.86	16.55	I	C	SP	P
GRR	86.640	41.21	4.86	16.55	I	C	SP	P
MFF	86.828	43.05	4.83	16.45	I	C	SP	P
FLN	86.948	40.88	4.83	16.45	I	C	SP	P
LDF	87.157	41.08	4.83	16.45	I	C	SP	P
LFF	87.191	44.79	4.83	16.45	I	C	SP	P
LPO	87.470	45.09	4.80	16.34	I	C	SP	P
DAG	87.720	11.82	4.80	16.34	I	C	SP	P
RJF	87.786	44.50	4.77	16.24	I	C	SP	P
LSF	87.923	43.57	4.77	16.24	I	C	SP	P
CAF	88.121	44.93	4.77	16.24	I	C	SP	P
TCF	88.396	43.59	4.75	16.17	I	C	SP	P
MZF	88.644	43.70	4.75	16.17	I	C	SP	P
AVF	89.239	43.19	4.73	16.10	I	C	SP	P
SSF	89.374	42.93	4.71	16.03	I	C	SP	P

Table 31. Station data for event 7 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SMF	89.557	43.37	4.71	16.03	I	C	SP	P
LOR	89.636	42.75	4.71	16.03	I	C	SP	P
LRG	91.046	46.71	4.70	15.99	I	C	SP	P
FRF	91.262	46.62	4.69	15.96	I	C	SP	P
DIX	91.973	44.14	4.67	15.89	E	C	LP	P
MMK	92.357	44.19	4.66	15.85	E	C	LP	P
ZUL	92.723	42.78	4.66	15.85	E	C	LP	P
SLE	92.806	42.49	4.65	15.82	E	C	LP	P
TMA	92.991	44.17	4.65	15.82	E	C	LP	P
LLS	93.109	43.41	4.65	15.82	E	C	LP	P
SAX	93.361	43.03	4.63	15.75	E	C	LP	P
VDL	93.419	43.80	4.63	15.75	E	C	LP	P
OSS	93.890	43.62	4.61	15.68	E	C	LP	P
GRF	94.665	40.61	4.60	15.64	I	C	SP	P
MOX	94.924	39.66	4.58	15.57	I	C	SP	P
CLL	95.796	38.98	4.55	15.47	I	C	SP	P
KBA	96.088	43.24	4.55	15.47	I	C	SP	P
KHC	96.208	41.17	4.55	15.47	I	C	SP	P
BRG	96.401	39.41	4.54	15.43	I	C	SP	P
BNG	100.221	86.22	4.45	15.12	I	C	SP	Pdf
IR7	125.664	48.08	1.86	6.27	I	C	SP	PKP
MHI	131.723	43.03	1.84	6.20	I	C	SP	PKP
MEK	144.038	211.38	1.70	5.73	I	C	SP	PKP
GTA	144.643	358.34	1.68	5.67	I	C	SP	PKP
SSE	145.575	324.31	1.66	5.59	I	C	LP	PKP
NDI	148.075	37.24	1.62	5.43	I	C	SP	PKP
CHG	165.179	358.63	0.91	3.06	I	C	SP	PKP
BDT	166.738	358.22	0.80	2.68	I	C	SP	PKP

Table 32. Station data for event 19.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ROCH	15.594	181.52	12.56	66.72	I	D	SP	P
PCH	16.235	179.96	12.44	65.51	I	D	SP	P
CHCH	16.547	180.37	12.38	64.92	I	D	SP	P
LNV	16.588	182.58	12.38	64.85	I	D	SP	P
CON	19.562	186.05	10.34	49.15	I	D	SP	P
LPA	20.816	149.72	10.03	47.20	I	D	LP	P
BAO	21.674	88.85	9.87	46.20	I	C	SP	P
BOCO	22.035	350.62	9.80	45.80	I	D	SP	P
BOG	22.074	350.58	9.80	45.76	I	C	LP	P
VAO	22.814	108.23	9.68	45.05	I	C	SP	P
RDJ	26.211	106.72	9.30	42.85	I	C	LP	P
CAR	27.868	7.59	9.11	41.80	I	C	SP	P
TRN	29.207	18.63	8.93	40.76	I	C	LP	P
RSCP	54.521	344.93	7.26	32.09	E	N	LP	P
BLA	55.022	350.36	7.22	31.89	I	C	LP	P
TUL	58.086	335.91	7.00	30.79	E	D	LP	P
SCP	58.205	353.45	6.99	30.74	E	N	LP	P
RSNY	61.663	356.75	6.71	29.40	E	C	LP	P
ALQ	62.169	326.96	6.67	29.20	I	D	SP	P
ANMO	62.171	326.97	6.67	29.20	I	D	LP	P
OTT	62.578	355.88	6.64	29.05	I	D	SP	P
MNT	62.572	357.55	6.64	29.05	I	C	SP	P
RSSD	68.376	334.67	6.16	26.80	I	D	LP	P
KIC	69.091	76.02	6.11	26.53	I	C	SP	P
RSON	70.861	344.69	5.97	25.91	E	N	LP	P
MNA	71.183	322.19	5.95	25.80	I	D	SP	P
PRI	71.219	318.98	5.95	25.79	I	D	SP	P
JAS	72.226	320.56	5.88	25.46	I	D	SP	P
MHC	72.582	319.44	5.86	25.37	I	D	SP	P
BKS	73.284	319.57	5.81	25.14	I	D	SP	P
WDC	75.155	321.60	5.68	24.54	I	D	SP	P
FHC	76.155	321.08	5.62	24.25	I	D	SP	P
CLX	76.401	331.10	5.60	24.18	I	D	SP	P
LHD	76.634	330.92	5.59	24.12	I	D	SP	P
LDM	76.664	331.18	5.58	24.11	I	D	SP	P
NEW	77.371	330.16	5.54	23.90	I	D	SP	P
COR	78.109	324.44	5.49	23.66	I	D	SP	P
LON	78.688	326.82	5.45	23.49	E	D	LP	P
EDM	79.337	335.42	5.40	23.26	I	D	SP	P
IFR	80.229	50.43	5.30	22.81	I	C	SP	P
MAL	82.260	47.85	5.14	22.07	I	C	SP	P
CRT	83.052	47.75	5.09	21.86	I	C	SP	P
TOL	84.001	45.19	5.03	21.60	E	C	LP	P
YKC	86.697	341.16	4.83	20.69	I	D	SP	P
RSNT	86.734	341.12	4.83	20.68	E	D	LP	P
GDH	87.176	5.99	4.80	20.55	E	C	LP	P
BLF	87.398	119.54	4.79	20.50	I	C	SP	P
BFS	88.595	117.62	4.74	20.27	I	C	SP	P
DCN	88.788	32.38	4.73	20.23	I	C	SP	P
SEK	88.844	119.20	4.73	20.22	I	C	SP	P

Table 32. Station data for event 19 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KSR	89.019	116.67	4.72	20.19	I	C	SP	P
DLE	89.136	32.66	4.72	20.18	I	C	SP	P
DMU	89.264	32.02	4.71	20.17	I	C	SP	P
DDK	89.292	32.64	4.71	20.17	I	C	SP	P
SLR	90.242	116.96	4.70	20.10	E	N	LP	P
SLR	90.242	116.96	4.70	20.10	I	C	SP	P
BNG	90.418	85.52	4.70	20.11	I	C	SP	P
EVA	90.661	117.92	4.70	20.09	I	C	SP	P
GRC	91.894	40.80	4.67	19.96	I	C	SP	P
BUL	92.369	111.80	4.65	19.90	I	C	SP	P
HON	93.886	290.99	4.61	19.69	E	D	LP	P
EMS	93.891	42.94	4.61	19.69	E	C	LP	P
UCC	94.042	37.90	4.60	19.67	E	C	LP	P
DIX	94.207	43.05	4.60	19.65	E	C	LP	P
KRI	94.358	109.00	4.60	19.64	I	C	SP	P
MMK	94.559	43.21	4.59	19.61	E	C	LP	P
ENN	94.952	38.30	4.57	19.53	I	C	SP	P
TMA	95.172	43.37	4.56	19.49	E	C	LP	P
ZUL	95.321	41.96	4.56	19.46	E	C	LP	P
GWF	95.348	40.37	4.56	19.46	I	C	SP	P
SLE	95.483	41.71	4.55	19.44	E	C	LP	P
LLS	95.507	42.68	4.55	19.44	E	C	LP	P
VDL	95.689	43.15	4.55	19.41	E	C	LP	P
SAX	95.857	42.39	4.54	19.40	E	C	LP	P
WTS	95.909	37.34	4.54	19.40	I	C	SP	P
SNZO	96.145	223.48	4.54	19.38	E	D	LP	P
OSS	96.193	43.11	4.54	19.37	E	C	LP	P
AFI	96.335	253.39	4.53	19.36	E	D	LP	P
OGA	96.825	43.13	4.52	19.32	I	C	SP	P
CTI	96.987	44.04	4.52	19.30	I	D	SP	P
GRFO	97.804	40.45	4.50	19.23	E	C	LP	P
WET	98.686	41.30	4.48	19.15	I	C	SP	P
MUD	98.693	33.54	4.48	19.15	I	C	SP	P
DAG	98.720	10.55	4.48	19.14	I	C	SP	P
STK	122.201	212.31	1.87	7.86	I	D	SP	PKP
KLB	130.733	189.34	1.85	7.76	I	D	SP	PKP
GUA	145.664	268.76	1.67	7.01	E	D	LP	PKP
GUMO	145.716	268.83	1.67	7.00	E	D	LP	PKP
POO	146.115	82.41	1.66	6.97	I	D	SP	PKP
NDI	148.323	63.26	1.60	6.74	I	D	SP	PKP
SNY	152.743	336.57	1.47	6.17	I	D	SP	PKP
DAV	161.284	239.06	1.10	4.62	E	D	LP	PKP
SSE	162.634	324.31	1.03	4.33	E	D	LP	PKP
CHG	169.874	79.94	0.63	2.63	I	D	SP	PKP
CHTO	169.874	79.94	0.63	2.63	I	D	SP	PKP
KMI	170.014	37.81	0.62	2.59	I	D	SP	PKP

Table 33. Station data for event 45.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
LPA	11.905	114.08	13.39	70.89	I	C	LP	P
NNA	19.350	343.06	10.55	48.11	I	C	SP	P
BAO	25.988	59.97	9.37	41.39	I	D	SP	P
RDJ	26.089	79.43	9.37	41.39	I	C	LP	P
ATB	32.622	36.98	8.71	37.92	I	D	SP	P
SDV	39.363	0.85	8.29	35.80	I	C	SP	P
UPA	40.262	347.17	8.23	35.50	I	C	SP	P
TOV	40.277	2.11	8.23	35.50	I	C	SP	P
CAR	41.173	6.36	8.21	35.40	I	C	SP	P
SJG	48.769	6.36	7.73	33.06	I	C	LP	P
SJG	48.769	6.36	7.73	33.06	I	C	SP	P
SPA	59.466	180.00	6.91	29.18	I	C	SP	P
RSCP	67.324	347.31	6.26	26.21	I	C	LP	P
BLA	68.107	352.06	6.22	26.03	I	C	LP	P
WLO	68.996	336.89	6.14	25.68	I	C	SP	P
GBO	69.938	339.40	6.06	25.32	I	C	SP	P
TUL	70.177	338.93	6.06	25.32	I	C	LP	P
RLO	70.181	339.65	6.06	25.32	I	C	SP	P
RRO	70.597	336.71	6.03	25.18	I	C	SP	P
FVM	70.653	343.97	6.03	25.18	I	C	SP	P
ACO	71.989	336.65	5.92	24.69	I	C	SP	P
WES	72.721	359.89	5.88	24.51	I	C	LP	P
ALQ	73.258	330.30	5.81	24.20	I	C	SP	P
ANMO	73.261	330.30	5.81	24.20	I	C	LP	P
KIC	73.362	71.97	5.81	24.20	I	C	SP	P
RSNY	74.947	357.52	5.71	23.76	I	C	LP	P
MIM	75.604	1.56	5.67	23.58	I	C	SP	P
SUR	75.794	119.27	5.64	23.45	I	C	SP	P
OTT	75.842	356.70	5.64	23.45	I	C	SP	P
MNT	75.871	358.23	5.64	23.45	I	C	SP	P
GAC	76.139	356.90	5.64	23.45	I	C	LP	P
MAW	76.130	163.52	5.64	23.45	I	C	SP	P
GLD	76.895	333.69	5.58	23.19	I	C	LP	P
GOL	76.908	333.57	5.58	23.19	I	C	SP	P
PAS	78.262	321.72	5.48	22.75	I	C	SP	P
SBB	78.492	322.30	5.48	22.75	I	C	LP	P
SYP	79.522	320.82	5.41	22.44	I	C	SP	P
ISA	79.579	322.52	5.41	22.44	I	C	LP	P
GRM	79.608	122.48	5.41	22.44	I	C	SP	P
CWC	79.967	323.27	5.35	22.18	I	C	LP	P
RSSD	80.286	336.64	5.30	21.96	I	C	SP	P
RSSD	80.286	336.64	5.30	21.96	I	C	LP	P
LHC	80.406	347.89	5.30	21.96	I	C	SP	P
BDW	81.177	332.44	5.25	21.74	I	C	SP	P
FRI	81.235	322.62	5.25	21.74	I	C	SP	P
MNA	81.540	324.51	5.21	21.57	I	C	SP	P
JAS	82.335	322.81	5.14	21.27	I	C	LP	P
JAS	82.335	322.81	5.14	21.27	I	C	SP	P
BMN	82.632	326.35	5.14	21.27	I	C	SP	P
SEK	82.905	118.60	5.11	21.14	I	C	SP	P

Table 33. Station data for event 45 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BFS	82.992	116.99	5.11	21.14	I	C	SP	P
BKS	83.230	321.70	5.11	21.14	I	C	SP	P
RSON	83.606	345.86	5.08	21.01	I	C	LP	P
RSON	83.606	345.86	5.08	21.01	I	C	SP	P
BPI	84.319	116.94	5.02	20.75	I	C	SP	P
PRE	84.661	116.66	5.02	20.75	I	C	SP	P
SLR	84.741	116.69	5.02	20.75	I	C	LP	P
LRM	84.859	332.41	4.99	20.62	I	C	SP	P
EVA	84.948	117.72	4.99	20.62	I	C	SP	P
WDC	85.383	323.35	4.96	20.49	I	C	SP	P
CLX	87.868	332.31	4.77	19.67	I	C	SP	P
BUL	87.923	112.10	4.77	19.67	I	C	SP	P
LHD	88.079	332.11	4.77	19.67	I	C	SP	P
SES	88.117	335.76	4.77	19.67	I	C	SP	P
LDM	88.139	332.36	4.77	19.67	I	C	SP	P
RXF	88.391	332.71	4.75	19.58	I	C	SP	P
YKM	88.622	332.40	4.75	19.58	I	C	SP	P
COR	88.710	325.65	4.75	19.58	I	C	SP	P
NEW	88.721	331.29	4.75	19.58	I	C	SP	P
FFC	89.116	342.72	4.73	19.50	I	C	SP	P
LON	89.606	327.88	4.71	19.41	I	C	LP	P
CIR	89.808	114.32	4.71	19.41	I	C	SP	P
LIS	90.022	43.71	4.71	19.41	I	C	SP	P
SFS	90.390	46.93	4.70	19.37	I	C	SP	P
PNT	90.581	330.68	4.70	19.37	I	C	SP	P
EDM	91.261	336.18	4.68	19.28	I	C	SP	P
AFI	91.862	252.75	4.67	19.24	I	C	LP	P
PTO	91.907	42.13	4.67	19.24	I	C	LP	P
PTO	91.907	42.13	4.67	19.24	I	C	SP	P
BNG	92.000	86.07	4.67	19.24	I	C	SP	P
MTD	92.094	110.78	4.67	19.24	I	C	SP	P
ALM	93.015	48.46	4.64	19.11	I	C	SP	P
TOL	93.832	45.29	4.61	18.98	I	C	LP	P
TOL	93.832	45.29	4.61	18.98	I	C	SP	P
TET	94.040	111.30	4.61	18.98	I	C	SP	P
HON	98.002	289.93	4.51	18.56	E	C	LP	P
EPF	98.348	44.67	4.49	18.47	I	C	SP	P
RSNT	99.161	341.13	4.48	18.43	I	C	SP	P
RSNT	99.161	341.13	4.48	18.43	I	C	LP	P
LFF	99.657	43.23	4.47	18.39	I	C	SP	P
MFF	100.073	41.48	4.45	18.30	I	C	SP	Pdf
RJF	100.316	43.23	4.45	18.30	I	C	SP	Pdf
LPF	100.377	39.93	4.45	18.30	I	C	SP	Pdf
CAF	100.434	43.77	4.45	18.30	I	C	SP	Pdf
GDH	100.493	6.31	4.45	18.30	I	C	LP	Pdf
DLE	100.644	33.51	4.45	18.30	I	C	SP	Pdf
GRR	100.680	39.70	4.45	18.30	I	C	SP	Pdf
LSF	100.842	42.43	4.45	18.30	I	C	SP	Pdf
FLN	101.097	39.53	4.45	18.30	I	C	SP	Pdf
LDF	101.201	39.81	4.45	18.30	I	C	SP	Pdf

Table 33. Station data for event 45 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
TCF	101.259	42.66	4.45	18.30	I	C	SP	Pdf
MZF	101.439	42.86	4.45	18.30	I	C	SP	Pdf
CDR	102.028	46.28	4.45	18.30	I	C	SP	Pdf
AVF	102.194	42.65	4.45	18.30	I	C	SP	Pdf
LRG	102.286	46.70	4.45	18.30	I	C	SP	Pdf
LMR	102.318	46.87	4.45	18.30	I	C	SP	Pdf
SMF	102.404	42.96	4.45	18.30	I	C	SP	Pdf
SSF	102.427	42.48	4.45	18.30	I	C	SP	Pdf
FRF	102.520	46.72	4.45	18.30	I	C	SP	Pdf
LBF	102.661	42.72	4.45	18.30	I	C	SP	Pdf
LOR	102.740	42.42	4.45	18.30	I	C	SP	Pdf
EMS	103.952	44.59	4.45	18.30	E	C	LP	Pdf
DIX	104.248	44.75	4.45	18.30	I	C	LP	Pdf
MMK	104.570	44.97	4.45	18.30	I	C	LP	Pdf
TMA	105.150	45.24	1.89	7.66	E	C	LP	Pdf
ZUL	105.515	43.82	1.89	7.66	E	C	LP	Pdf
LLS	105.588	44.58	1.89	7.66	E	C	LP	Pdf
SAX	105.978	44.35	1.89	7.66	E	C	LP	Pdf
OSS	106.200	45.13	1.89	7.66	E	C	LP	Pdf
STU	106.598	42.90	1.89	7.66	E	C	LP	Pdf
GRF	108.199	42.66	1.89	7.66	I	C	SP	Pdf
COP	111.371	37.19	1.89	7.66	E	C	LP	Pdf
DAG	111.922	11.35	1.89	7.66	E	C	LP	Pdf
PVL	114.576	53.12	1.88	7.63	I	C	SP	PKP
WB2	123.983	209.27	1.87	7.57	I	C	SP	PKP
GUA	142.665	250.85	1.72	6.98	E	C	LP	PKP
LEM	142.669	178.03	1.72	6.98	E	C	LP	PKP
QUE	144.049	79.87	1.70	6.91	I	C	LP	PKP
POO	146.115	102.74	1.66	6.74	I	C	SP	PKP
BKB	147.298	195.10	1.64	6.65	I	C	SP	PKP
MAT	154.901	291.29	1.39	5.62	I	C	SP	PKP
SNG	155.363	160.14	1.39	5.62	E	C	LP	PKP
BAG	162.170	219.70	1.07	4.32	I	C	LP	PKP
CHG	165.157	140.63	0.91	3.68	I	C	SP	PKP
CHG	165.157	140.63	0.91	3.68	I	C	LP	PKP
ANP	167.504	246.97	0.74	2.99	I	C	LP	PKP
SSE	169.369	275.25	0.68	2.75	E	C	LP	PKP
KMI	172.264	134.49	0.50	2.02	I	C	LP	PKP

Table 34. Station data for event 47.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PEL	17.437	174.94	12.19	63.36	I	D	SP	P
LPA	23.160	148.31	9.62	44.84	I	D	LP	P
ATB	23.454	60.33	9.58	44.59	I	D	SP	P
BAO	23.588	93.17	9.56	44.48	I	C	SP	P
UPA	25.496	343.66	9.36	43.31	I	C	SP	P
CAR	26.615	12.29	9.25	42.72	I	C	SP	P
SJG	34.173	10.78	8.57	38.94	I	C	SP	P
SJG	34.173	10.78	8.57	38.94	E	N	LP	P
SHA	48.521	341.93	7.73	34.54	I	D	LP	P
RSCP	52.504	346.54	7.41	32.93	E	D	LP	P
BLA	53.151	352.09	7.36	32.67	I	D	LP	P
TUL	55.866	337.17	7.15	31.63	I	D	LP	P
FVM	55.991	342.93	7.14	31.58	I	D	SP	P
WES	57.800	1.02	7.02	30.96	E	N	LP	P
ANMO	59.807	327.92	6.86	30.19	I	D	LP	P
GAC	61.168	357.61	6.75	29.66	E	D	LP	P
RSSD	66.131	335.66	6.35	27.75	I	D	LP	P
DUG	67.068	327.44	6.27	27.35	I	D	SP	P
SNA	68.667	159.99	6.14	26.75	I	D	SP	P
MNA	68.765	322.94	6.13	26.71	I	D	SP	P
RSON	68.831	345.76	6.13	26.69	I	D	LP	P
JAS	69.795	321.28	6.06	26.36	I	D	LP	P
JAS	69.795	321.28	6.06	26.36	I	D	SP	P
KIC	70.556	77.31	6.00	26.09	I	C	SP	P
CLX	74.094	331.89	5.75	24.91	I	D	LP	P
LHD	74.324	331.71	5.73	24.86	I	D	LP	P
LDM	74.358	331.97	5.73	24.85	I	D	LP	P
SPA	74.398	180.00	5.73	24.84	I	D	SP	P
RXF	74.573	332.35	5.72	24.79	I	D	LP	P
YKM	74.835	332.06	5.70	24.71	I	D	LP	P
COR	75.714	325.14	5.64	24.42	I	D	SP	P
LON	76.321	327.54	5.60	24.26	I	D	LP	P
EDM	77.104	336.20	5.56	24.04	I	D	SP	P
TOL	84.227	46.00	5.02	21.59	I	C	SP	P
TOL	84.227	46.00	5.02	21.59	I	D	LP	P
SUR	84.470	121.93	5.01	21.53	I	D	SP	P
RSNT	84.616	341.77	5.00	21.48	I	D	LP	P
GDH	85.791	6.67	4.90	21.06	I	D	LP	P
ALI	86.114	48.55	4.87	20.92	I	C	LP	P
LGR	86.384	44.17	4.85	20.83	I	D	SP	P
ECB	88.251	34.00	4.75	20.38	I	C	SP	P
ECP	88.385	34.29	4.75	20.36	I	C	SP	P
DCN	88.459	33.00	4.74	20.35	I	C	SP	P
EPF	88.531	44.50	4.74	20.33	I	C	SP	P
ETA	88.715	33.88	4.73	20.30	I	C	SP	P
DMU	88.918	32.62	4.72	20.26	I	C	SP	P
LFF	89.539	42.85	4.71	20.20	I	C	SP	P
MFF	89.620	41.08	4.71	20.19	I	C	SP	P
LPF	89.637	39.52	4.71	20.19	I	C	SP	P
LPO	89.734	43.21	4.71	20.18	I	C	SP	P

Table 34. Station data for event 47 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BLF	89.830	120.11	4.70	20.16	I	C	SP	P
GRR	89.894	39.25	4.70	20.16	I	C	SP	P
RJF	90.186	42.72	4.70	20.15	I	C	SP	P
FLN	90.274	39.01	4.70	20.16	I	C	SP	P
CAF	90.404	43.22	4.70	20.16	I	C	SP	P
LDF	90.425	39.26	4.70	20.16	I	C	SP	P
LSF	90.552	41.85	4.70	20.15	I	C	SP	P
VIR	90.711	119.31	4.70	20.14	I	D	SP	P
MAW	90.816	164.38	4.69	20.13	I	D	SP	P
BFS	91.011	118.17	4.69	20.11	I	D	SP	P
MZF	91.218	42.16	4.69	20.09	I	C	SP	P
SEK	91.273	119.76	4.69	20.09	I	C	SP	P
KSR	91.425	117.23	4.68	20.08	I	D	SP	P
AVF	91.921	41.81	4.66	20.00	I	C	SP	P
SMF	92.184	42.07	4.66	19.96	I	C	SP	P
BNG	92.180	86.03	4.66	19.96	I	D	SP	P
BPI	92.296	117.84	4.65	19.95	I	D	SP	P
LOR	92.414	41.49	4.65	19.94	I	C	SP	P
CDR	92.455	45.33	4.65	19.94	I	C	SP	P
SLR	92.651	117.50	4.65	19.92	I	D	LP	P
SLR	92.651	117.50	4.65	19.92	I	C	SP	P
UCC	93.944	38.28	4.60	19.72	E	C	LP	P
EMS	94.011	43.32	4.60	19.72	E	C	LP	P
DIX	94.332	43.42	4.60	19.69	E	C	LP	P
INK	94.370	340.96	4.59	19.69	I	D	SP	P
MMK	94.690	43.56	4.58	19.64	E	C	LP	P
BUL	94.717	112.31	4.58	19.63	I	D	SP	P
ENN	94.871	38.64	4.58	19.60	I	D	SP	P
AFI	94.973	254.15	4.57	19.58	I	D	LP	P
TMA	95.310	43.70	4.56	19.51	E	C	LP	P
GWF	95.356	40.69	4.55	19.51	I	C	SP	P
ZUL	95.397	42.28	4.55	19.50	E	C	LP	P
SLE	95.548	42.03	4.55	19.48	E	C	LP	P
LLS	95.614	42.99	4.55	19.47	E	C	LP	P
SAX	95.951	42.69	4.54	19.44	E	C	LP	P
OSS	96.318	43.39	4.53	19.41	E	C	LP	P
CIR	97.061	114.05	4.52	19.35	I	D	SP	P
DAG	97.495	10.80	4.51	19.31	I	D	SP	P
BER	97.612	29.33	4.51	19.30	E	D	LP	P
COL	97.990	335.37	4.50	19.26	E	D	LP	P
KBA	98.541	43.58	4.49	19.22	I	D	SP	P
WET	98.730	41.47	4.48	19.19	I	C	SP	P
KHC	99.173	41.59	4.47	19.11	I	C	SP	P
CLL	99.315	39.36	4.46	19.10	I	D	SP	P
BRG	99.796	39.92	4.45	19.04	I	D	SP	P
CTA	127.897	228.20	1.86	7.83	I	D	SP	PKP
MHI	132.767	54.88	1.84	7.74	I	D	LP	PKP
GUA	143.773	271.57	1.71	7.19	E	D	LP	PKP
MAT	145.733	313.09	1.67	7.02	I	D	SP	PKP
POO	147.735	80.09	1.62	6.82	I	D	SP	PKP

Table 34. Station data for event 47 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
LEM	157.618	180.28	1.28	5.36	I	D	LP	PKP
SSE	160.227	323.16	1.15	4.85	E	D	LP	PKP
DAV	160.344	246.20	1.15	4.83	I	D	LP	PKP
ANP	163.850	307.96	0.97	4.07	E	D	LP	PKP
BAG	167.415	274.99	0.77	3.24	I	D	LP	PKP
SNG	169.166	140.69	0.67	2.81	I	D	LP	PKP
KMI	169.621	24.73	0.64	2.70	E	D	LP	PKP
CHG	171.253	68.08	0.54	2.29	I	D	LP	PKP

Table 35. Station data for event 77.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
LNV	33.107	104.85	8.69	25.85	I	C	SP	P
TACH	33.536	104.40	8.66	25.75	I	C	SP	P
SAN	33.791	104.10	8.63	25.66	I	C	SP	P
PEL	33.816	103.54	8.63	25.66	I	C	LP	P
BACH	33.946	103.95	8.63	25.66	I	C	SP	P
TLL	34.264	98.30	8.59	25.53	I	C	LP	P
ARE	38.735	76.48	8.36	24.80	E	C	LP	P
LPB	41.531	79.07	8.19	24.26	E	C	LP	P
UPA	50.234	41.90	7.67	22.63	I	C	LP	P
AFI	58.192	272.83	7.04	20.68	E	C	LP	P
SPA	58.600	180.00	7.00	20.56	I	C	SP	P
SNZO	59.007	237.86	6.97	20.47	E	C	LP	P
JCT	62.590	10.73	6.69	19.61	E	N	LP	P
ANMO	66.289	3.93	6.36	18.61	E	D	LP	P
TUL	68.593	13.09	6.19	18.09	I	D	SP	P
NOU	72.726	254.15	5.89	17.19	I	C	SP	P
BLA	74.099	24.86	5.79	16.89	E	D	LP	P
RSSD	75.579	5.06	5.68	16.56	E	D	LP	P
COR	76.636	350.88	5.62	16.38	I	D	SP	P
RSNY	82.668	25.27	5.15	14.97	E	D	LP	P
GAC	83.327	24.10	5.09	14.80	E	D	LP	P
RSON	83.452	10.84	5.09	14.80	E	D	LP	P
ADE	87.004	230.41	4.83	14.02	I	C	SP	P
CTA	90.075	246.37	4.71	13.67	I	D	LP	P
BNG	125.454	108.92	1.87	5.37	I	C	SP	PKP
GWF	131.296	50.45	1.85	5.32	I	C	SP	PKP
GRF	133.665	49.54	1.83	5.26	I	C	SP	PKP

Table 36. Station data for event 83.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ANT	3.300	275.63	12.27	110.45	I	C	LP	P
LPB	7.593	350.77	13.09	88.64	I	C	LP	P
LPA	13.283	146.40	12.60	74.22	I	C	LP	P
VAO	18.248	90.67	10.44	52.87	I	C	SP	P
SDV	32.961	353.08	8.61	41.07	I	D	SP	P
CAR	34.361	359.83	8.52	40.60	I	D	SP	P
UPA	35.111	337.81	8.49	40.39	I	D	SP	P
UPA	35.111	337.81	8.49	40.39	I	D	LP	P
SJG	41.925	0.97	8.10	38.19	I	D	SP	P
SNA	59.011	159.09	6.89	31.75	I	D	SP	P
BLA	62.276	347.77	6.63	30.42	I	D	LP	P
SCP	65.336	350.80	6.39	29.19	I	D	LP	P
TUL	65.637	334.44	6.36	29.06	I	D	LP	P
RSNY	68.638	354.10	6.11	27.82	I	D	LP	P
ANMO	69.684	326.03	6.04	27.46	I	D	LP	P
ALQ	69.682	326.03	6.04	27.46	I	D	SP	P
GAC	69.875	353.56	6.02	27.37	I	D	LP	P
SBA	73.657	190.23	5.76	26.09	I	D	SP	P
LHC	74.899	344.73	5.67	25.65	I	D	SP	P
SUR	75.646	119.22	5.62	25.43	I	C	SP	P
RSSD	75.932	333.32	5.61	25.35	I	D	LP	P
RSON	78.278	342.99	5.46	24.62	I	D	LP	P
PRI	78.547	318.18	5.44	24.53	I	D	SP	P
MNA	78.602	321.28	5.43	24.51	I	D	SP	P
JAS1	79.577	319.67	5.33	24.04	I	D	SP	P
JAS	79.601	319.68	5.33	24.02	I	D	LP	P
BKS	80.629	318.68	5.24	23.59	I	D	SP	P
LRM	80.953	329.59	5.21	23.42	I	D	SP	P
BLF	81.135	117.81	5.19	23.35	I	C	SP	P
SWZ	81.165	115.72	5.19	23.34	I	C	SP	P
MAW	81.328	162.65	5.18	23.30	I	D	SP	P
MIN	81.864	320.90	5.15	23.15	I	D	SP	P
BFS	82.475	115.97	5.11	22.98	I	C	SP	P
WDC	82.558	320.61	5.11	22.95	I	D	SP	P
SEK	82.603	117.58	5.10	22.94	I	D	SP	P
PRY	83.028	116.24	5.08	22.82	I	C	SP	P
BPI	83.784	115.75	5.03	22.57	I	D	SP	P
CLX	83.953	329.85	5.02	22.51	I	D	LP	P
SLR	84.168	115.44	5.00	22.45	I	D	SP	P
LHD	84.184	329.68	5.00	22.44	I	D	LP	P
LDM	84.216	329.93	5.00	22.43	I	D	LP	P
MAL	84.343	45.70	4.99	22.40	I	C	SP	P
RXF	84.427	330.31	4.99	22.38	I	D	LP	P
EVA	84.511	116.43	4.98	22.35	I	D	SP	P
YKM	84.692	330.02	4.97	22.30	I	D	LP	P
TOL	86.403	43.29	4.83	21.63	I	D	SP	P
BUL	86.715	110.46	4.81	21.54	I	D	SP	P
EDM	86.890	334.09	4.80	21.49	I	D	SP	P
LGR	88.835	41.85	4.71	21.10	I	C	SP	P
KRI	88.947	107.86	4.71	21.08	I	C	SP	P

Table 36. Station data for event 83 ... continued.

	Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
	MTD	90.677	108.61	4.69	20.97	I	C	SP	P
	EPF	90.897	42.53	4.68	20.95	I	D	SP	P
	MLS	91.319	42.88	4.67	20.91	I	D	SP	P
	TET	92.674	108.87	4.64	20.74	I	C	SP	P
	SNZO	93.529	221.57	4.61	20.60	I	D	LP	P
-	RSNT	94.223	339.83	4.59	20.50	I	D	LP	P
	SNG	159.335	142.34	1.19	5.23	I	D	LP	PKP
	DAV	159.342	217.19	1.19	5.23	E	D	LP	PKP
	CHG	165.763	108.84	0.86	3.77	I	D	LP	PKP
	BAG	169.684	223.74	0.64	2.78	E	D	LP	PKP

Table 37. Station data for event 101.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
TLL	22.423	167.83	9.73	45.62	I	C	SP	P
ATB	24.271	79.80	9.47	44.08	I	D	SP	P
ROCH	25.108	169.82	9.39	43.64	I	C	SP	P
PEL	25.334	169.28	9.37	43.50	I	C	SP	P
SAN	25.639	169.39	9.34	43.34	I	C	SP	P
LNV	26.004	171.03	9.31	43.17	I	C	SP	P
SJG	27.927	20.61	9.09	41.93	I	D	SP	P
TMU	30.572	174.57	8.81	40.32	I	C	SP	P
SHA	40.339	343.92	8.21	37.10	I	C	LP	P
WES	50.515	4.62	7.57	33.80	E	C	LP	P
RSNY	52.506	1.44	7.41	33.00	I	C	SP	P
GAC	53.644	0.57	7.32	32.54	I	D	SP	P
LHC	57.535	349.66	7.03	31.09	I	C	SP	P
MNA	60.661	322.90	6.79	29.92	I	D	SP	P
LLA	61.248	319.70	6.74	29.69	I	D	SP	P
PRS	61.351	319.20	6.73	29.65	I	D	SP	P
JAS1	61.719	321.16	6.70	29.51	I	D	SP	P
MHC	62.131	319.97	6.67	29.35	I	D	SP	P
GCC	62.172	319.49	6.67	29.33	I	D	SP	P
PCC	62.697	319.71	6.63	29.13	I	D	SP	P
BKS	62.828	320.13	6.61	29.08	I	D	SP	P
BRK	62.842	320.12	6.61	29.08	I	D	SP	P
ORV	63.388	322.02	6.57	28.87	I	D	SP	P
MIN	63.938	322.65	6.53	28.65	I	D	SP	P
WDC	64.645	322.37	6.47	28.38	I	D	SP	P
SES	65.739	336.31	6.38	27.97	I	D	SP	P
CLX	65.829	332.52	6.38	27.94	I	D	LP	P
LHD	66.060	332.33	6.36	27.84	I	D	LP	P
LDM	66.093	332.60	6.35	27.83	I	D	LP	P
RXF	66.306	333.01	6.33	27.72	I	D	LP	P
FFC	66.322	343.97	6.33	27.71	I	D	SP	P
YKM	66.569	332.70	6.31	27.60	I	D	LP	P
NEW	66.792	331.52	6.29	27.52	I	D	SP	P
EDM	68.838	337.04	6.12	26.74	I	D	SP	P
FRB	71.957	3.54	5.89	25.66	I	D	SP	P
KIC	72.636	80.73	5.85	25.46	I	D	SP	P
YKC	76.384	342.75	5.60	24.29	I	D	SP	P
TIO	76.447	55.54	5.59	24.27	I	D	SP	P
AVE	77.077	53.20	5.56	24.10	I	D	SP	P
CRT	81.248	50.42	5.21	22.51	I	D	SP	P
SPA	81.865	180.00	5.16	22.28	I	D	SP	P
ALM	82.023	51.02	5.15	22.23	I	D	SP	P
DCN	84.208	34.20	5.02	21.64	I	D	SP	P
DLE	84.597	34.42	5.00	21.53	I	D	SP	P
DMU	84.617	33.77	4.99	21.53	I	D	SP	P
EPF	85.778	45.64	4.90	21.11	I	D	SP	P
LPF	86.210	40.55	4.86	20.93	I	D	SP	P
MFF	86.397	42.09	4.85	20.87	I	D	SP	P
LFF	86.554	43.87	4.84	20.82	I	D	SP	P
FLN	86.773	39.95	4.82	20.76	I	D	SP	P

Table 37. Station data for event 101 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
LPO	86.795	44.20	4.82	20.76	I	D	SP	P
LDF	86.956	40.18	4.81	20.71	I	D	SP	P
RJF	87.178	43.65	4.80	20.65	I	D	SP	P
LSF	87.424	42.74	4.78	20.58	I	D	SP	P
CAF	87.461	44.12	4.78	20.57	I	D	SP	P
SBA	87.552	190.88	4.78	20.55	I	D	SP	P
TCF	87.891	42.82	4.76	20.49	I	D	SP	P
MBC	87.979	350.56	4.76	20.48	I	D	SP	P
MZF	88.125	42.95	4.76	20.45	I	D	SP	P
GRC	88.707	41.98	4.73	20.35	I	D	SP	P
AVF	88.776	42.52	4.73	20.33	I	D	SP	P
SSF	88.940	42.28	4.72	20.30	I	D	SP	P
SMF	89.071	42.73	4.72	20.28	I	D	SP	P
LOR	89.221	42.13	4.71	20.27	I	D	SP	P
LBF	89.237	42.42	4.71	20.27	I	D	SP	P
FBAS	89.312	336.13	4.71	20.26	I	D	SP	P
COL	89.721	336.11	4.71	20.23	I	D	SP	P
LRG	90.158	46.22	4.70	20.20	I	D	SP	P
LMR	90.241	46.36	4.70	20.20	I	D	SP	P
FRF	90.382	46.16	4.70	20.21	I	D	SP	P
DAG	90.843	11.19	4.69	20.17	I	D	SP	P
CDF	91.706	41.47	4.67	20.08	I	D	SP	P
WTS	92.062	37.88	4.66	20.02	I	D	SP	P
MUD	94.167	33.69	4.60	19.74	I	D	SP	P
BNG	95.241	86.29	4.56	19.58	I	D	SP	P
CLL	95.783	39.11	4.54	19.51	I	D	SP	P
BRG	96.333	39.61	4.53	19.46	I	D	SP	P
TBY	96.513	30.30	4.53	19.44	I	D	SP	P
PRU	96.636	40.53	4.53	19.43	I	D	SP	P
BLF	96.681	120.59	4.53	19.43	I	D	SP	P
SLL	96.789	29.92	4.52	19.42	I	D	SP	P
HFS	96.950	30.28	4.52	19.40	I	D	SP	P
APO	97.094	29.88	4.52	19.39	I	D	SP	P
BFS	97.697	118.55	4.51	19.34	I	D	SP	P
ZST	98.193	42.45	4.50	19.29	I	D	SP	P
KRA	100.117	40.63	4.44	19.04	I	C	SP	Pdf
CTA	129.715	235.46	1.85	7.82	I	D	SP	PKP
MHI	130.922	48.40	1.85	7.80	I	D	SP	PKP
KLB	138.275	197.93	1.79	7.55	I	D	SP	PKP
DL2	145.501	335.15	1.67	7.06	I	D	SP	PKP
NDI	147.668	47.48	1.62	6.84	I	D	SP	PKP
POO	149.087	67.52	1.58	6.68	I	D	SP	PKP
HYB	153.695	67.12	1.43	6.05	I	D	SP	PKP
CGP	159.393	272.23	1.19	5.03	I	D	SP	PKP
CHG	168.409	23.88	0.71	3.00	I	D	SP	PKP
BDT	169.829	27.33	0.63	2.65	I	D	SP	PKP

Table 38. Station data for event 114.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PEL	3.759	178.62	13.89	91.99	I	C	LP	P
CYA	4.480	79.28	13.90	88.32	I	D	SP	P
LNV	4.598	186.42	13.90	91.67	I	D	SP	P
ANT	5.656	3.52	13.87	85.84	I	C	LP	P
BAA	11.671	119.60	13.29	72.99	I	D	LP	P
LPA	12.213	120.14	13.22	71.96	I	D	LP	P
BOG	33.942	354.15	8.60	38.21	E	D	LP	P
SOB1	34.447	60.46	8.57	38.06	I	D	SP	P
ITR	36.623	62.52	8.44	37.39	I	D	SP	P
CUM	40.112	10.14	8.24	36.35	I	C	SP	P
SJG	47.413	6.00	7.83	34.29	I	C	SP	P
TPM	55.267	326.95	7.22	31.26	I	D	SP	P
OXM	55.837	326.52	7.17	31.04	I	D	SP	P
SPA	60.795	180.00	6.79	29.25	I	C	SP	P
SHA	61.971	343.08	6.70	28.81	E	D	LP	P
BLA	66.839	351.65	6.30	26.94	I	D	LP	P
SBA	67.813	191.13	6.22	26.58	I	C	SP	P
RLO	69.055	339.17	6.12	26.13	I	D	SP	P
TUL	69.062	338.45	6.12	26.13	I	D	SP	P
SCP	70.112	354.29	6.04	25.76	E	N	LP	P
KDS	70.198	62.32	6.04	25.73	I	C	SP	P
WES	71.395	359.59	5.95	25.32	I	D	LP	P
ANMO	72.277	329.81	5.89	25.04	E	D	LP	P
RSNY	73.635	357.22	5.79	24.61	E	N	LP	P
GAC	74.832	356.60	5.71	24.24	E	N	LP	P
SUR	76.153	119.41	5.62	23.84	I	C	SP	P
RSSD	79.202	336.30	5.42	22.96	E	N	LP	P
JAS	81.482	322.47	5.20	21.97	E	N	LP	P
BLF	81.763	118.64	5.18	21.86	I	C	SP	P
RSON	82.401	345.59	5.13	21.67	E	N	LP	P
SEK	83.246	118.57	5.09	21.48	I	C	SP	P
BFS	83.296	116.96	5.08	21.45	I	C	SP	P
KSR	83.890	116.10	5.05	21.28	I	C	SP	P
BPI	84.622	116.88	5.00	21.08	I	C	SP	P
SLR	85.038	116.61	4.97	20.97	I	C	LP	P
SES	87.044	335.54	4.82	20.26	I	D	SP	P
FFC	87.948	342.51	4.77	20.07	I	D	SP	P
BUL	88.111	111.96	4.76	20.03	I	C	SP	P
KRI	90.610	109.61	4.70	19.75	I	C	SP	P
BCAO	91.562	85.83	4.68	19.67	E	C	LP	P
BNG	91.573	85.83	4.68	19.67	I	C	SP	P
COL	110.950	333.57	1.89	7.81	E	C	LP	Pdf
POO	146.055	100.51	1.66	6.86	I	C	SP	PKP
DAV	152.998	218.02	1.46	6.03	I	C	LP	PKP
BAG	163.397	221.48	0.99	4.10	E	C	LP	PKP

Table 39. Station data for event 117.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
RTLL	1.718	359.93	14.27	134.33	I	C	SP	P
TCA	3.704	63.56	14.22	45.47	I	D	SP	P
CYA	5.137	27.30	14.16	45.22	I	D	SP	P
BAA	8.449	103.20	13.90	44.17	E	D	LP	P
SLA	8.693	18.18	13.90	44.17	I	D	SP	P
LPA	8.944	104.84	13.85	43.97	E	D	LP	P
YJA	11.153	14.35	13.61	43.02	I	D	SP	P
ARE	16.742	349.88	12.73	39.66	I	C	SP	P
RDJ	24.428	71.99	9.56	28.64	I	C	LP	P
BAO	25.387	51.82	9.43	28.21	I	D	SP	P
BOG	37.838	350.88	8.39	24.87	I	C	LP	P
SDV	41.749	356.78	8.19	24.24	I	C	SP	P
TOV	42.612	358.07	8.14	24.08	I	C	SP	P
UPA	43.103	343.89	8.11	23.99	I	C	SP	P
CAR	43.333	2.21	8.08	23.89	I	C	SP	P
CUM	43.461	6.15	8.08	23.89	I	D	SP	P
SJG	50.916	2.84	7.59	22.36	I	C	SP	P
SNA	51.261	156.59	7.55	22.24	I	C	SP	P
OXM	59.991	325.57	6.89	20.21	I	C	SP	P
SHA	66.070	341.50	6.40	18.71	I	C	LP	P
BLA	70.778	349.91	6.00	17.50	I	C	LP	P
BHO	71.508	337.18	5.96	17.38	I	C	SP	P
KIC	71.952	69.61	5.93	17.29	I	C	SP	P
SUR	72.651	117.57	5.89	17.17	I	C	SP	P
RLO	73.197	337.79	5.86	17.08	I	C	SP	P
TUL	73.210	337.09	5.86	17.08	I	C	SP	P
OCO	73.425	335.62	5.82	16.96	I	C	SP	P
SCP	73.983	352.59	5.79	16.87	I	C	LP	P
WES	75.106	357.81	5.72	16.66	I	C	LP	P
GRM	76.416	120.89	5.62	16.36	I	C	SP	P
ALQ	76.444	328.65	5.62	16.36	I	C	SP	P
ANMO	76.447	328.66	5.62	16.36	I	C	LP	P
RSNY	77.420	355.56	5.56	16.18	I	C	LP	P
BLF	78.287	117.03	5.49	15.98	I	C	SP	P
VIR	79.329	116.45	5.42	15.77	I	C	SP	P
SEK	79.773	117.02	5.37	15.62	I	C	SP	P
BFS	79.889	115.40	5.37	15.62	I	C	SP	P
BPI	81.217	115.38	5.27	15.32	I	C	SP	P
SLR	81.644	115.13	5.22	15.17	I	C	SP	P
SLR	81.644	115.13	5.22	15.17	I	C	LP	P
EVA	81.832	116.17	5.18	15.05	I	C	SP	P
LHC	83.202	346.22	5.12	14.87	I	C	SP	P
RSSD	83.364	335.05	5.09	14.78	I	C	LP	P
PRI	84.373	320.01	5.03	14.61	I	C	SP	P
MNA	84.790	323.03	4.99	14.49	I	C	SP	P
LLA	84.876	320.16	4.99	14.49	I	C	SP	P
PRS	84.896	319.71	4.99	14.49	I	C	SP	P
BUL	84.922	110.59	4.99	14.49	I	C	SP	P
JAS1	85.573	321.34	4.96	14.40	I	C	SP	P
GCC	85.750	319.81	4.91	14.25	I	C	SP	P

Table 39. Station data for event 117 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
TIO	85.979	49.02	4.91	14.25	I	C	SP	P
RSON	86.460	344.29	4.87	14.13	I	C	LP	P
ORV	87.348	321.80	4.80	13.92	I	C	SP	P
KRI	87.532	108.36	4.80	13.92	I	C	SP	P
WDC	88.641	321.90	4.75	13.78	I	C	SP	P
MTD	89.124	109.37	4.73	13.72	I	C	SP	P
BCAO	89.878	84.68	4.71	13.66	I	C	LP	P
BNG	89.889	84.68	4.71	13.66	I	C	SP	P
CLX	91.023	330.88	4.70	13.63	I	C	SP	P
LHD	91.236	330.68	4.70	13.63	I	C	SP	P
LDM	91.292	330.93	4.69	13.60	I	C	SP	P
RXF	91.539	331.28	4.69	13.60	I	C	SP	P
YKM	91.775	330.98	4.67	13.54	I	C	SP	P
TOL	93.872	44.08	4.62	13.39	E	C	LP	P
EDM	94.346	334.81	4.60	13.33	I	C	SP	P
MBC	113.589	348.31	1.88	5.42	I	C	SP	PKP
COL	115.121	332.42	1.88	5.41	E	C	LP	PKP
CTA	117.617	217.17	1.88	5.40	I	C	SP	PKP
WB2	122.976	205.78	1.87	5.38	I	C	SP	PKP
MHI	137.499	70.52	1.80	5.19	I	C	LP	PKP
HYB	146.522	109.58	1.64	4.72	I	C	SP	PKP
DAV	151.064	209.85	1.53	4.40	E	C	LP	PKP
BAG	161.523	208.44	1.07	3.07	I	C	LP	PKP
CHG	161.880	138.41	1.07	3.07	I	C	SP	PKP
GTA	168.612	52.84	0.68	1.96	I	C	SP	PKP
KMI	168.980	133.54	0.68	1.96	I	C	LP	PKP
SSE	171.578	259.19	0.50	1.44	E	C	LP	PKP
HHC	172.219	359.83	0.50	1.44	I	C	SP	PKP
XAN	177.607	65.01	0.13	0.36	I	C	SP	PKP

Table 40. Station data for event 124.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ANT	9.481	8.13	13.76	53.95	I	C	LP	P
LPA	11.702	102.54	13.51	52.55	N	C	LP	P
ARE	16.603	1.28	12.68	48.17	I	C	LP	P
LPB	16.877	12.56	12.58	47.66	I	C	LP	P
LPB	16.877	12.56	12.58	47.66	I	D	SP	P
BDF	27.800	57.04	9.18	32.64	I	C	LP	P
BOG	37.603	356.41	8.41	29.62	I	C	LP	P
TRN	44.661	14.72	8.02	28.12	E	C	LP	P
SJG	51.242	6.98	7.58	26.45	N	C	LP	P
SHA	65.315	344.59	6.43	22.20	E	C	LP	P
BEC	65.507	6.68	6.43	22.20	E	C	LP	P
FVM	72.826	344.74	5.85	20.11	I	C	LP	P
SCP	73.761	355.26	5.78	19.85	I	C	LP	P
PAL	73.786	358.39	5.78	19.85	I	C	LP	P
ANMO	75.085	331.14	5.71	19.60	I	C	LP	P
RSNY	77.343	358.05	5.55	19.03	I	C	LP	P
GAC	78.528	357.42	5.48	18.78	I	C	LP	P
DUG	82.190	329.56	5.18	17.72	I	C	LP	P
RSSD	82.283	337.23	5.14	17.58	I	C	LP	P
RSSD	82.283	337.23	5.14	17.58	I	C	SP	P
JAS	83.918	323.41	5.05	17.26	I	C	SP	P
JAS	83.918	323.41	5.05	17.26	I	C	LP	P
SLR	84.177	116.82	5.05	17.26	I	C	LP	P
BMN	84.330	326.92	5.02	17.16	I	C	SP	P
RSON	85.814	346.33	4.90	16.73	I	C	LP	P
WDC	86.982	323.84	4.83	16.49	I	C	SP	P
BUL	87.551	112.37	4.80	16.38	I	C	LP	P
AFI	90.588	253.06	4.70	16.03	E	N	LP	P
LON	91.349	328.23	4.68	15.96	I	C	LP	P
BCAO	92.734	86.52	4.66	15.89	I	C	LP	P
BNG	92.744	86.53	4.66	15.89	I	D	SP	P
PTO	94.092	42.56	4.61	15.72	E	C	LP	P
TOL	95.948	45.76	4.55	15.51	E	C	LP	P
TAU	96.250	207.85	4.55	15.51	E	N	LP	P
EPF	100.476	45.24	4.45	15.16	I	C	SP	Pdf
NOU	101.700	233.59	4.45	15.16	I	C	SP	Pdf
LFF	101.817	43.83	4.45	15.16	I	C	SP	Pdf
LPO	101.930	44.23	4.45	15.16	I	C	SP	Pdf
MFF	102.270	42.07	4.45	15.16	I	C	SP	Pdf
RJF	102.477	43.84	4.45	15.16	I	C	SP	Pdf
CAF	102.583	44.39	4.45	15.16	I	C	SP	Pdf
LPF	102.605	40.52	4.45	15.16	I	C	SP	Pdf
DLE	102.983	34.05	4.45	15.16	I	C	SP	Pdf
LSF	103.019	43.05	4.45	15.16	I	C	SP	Pdf
DMU	103.194	33.42	4.45	15.16	I	C	SP	Pdf
FLN	103.333	40.13	4.45	15.16	I	C	SP	Pdf
LDF	103.431	40.41	4.45	15.16	I	C	SP	Pdf
TCF	103.431	43.29	4.45	15.16	I	C	SP	Pdf
MZF	103.606	43.50	4.45	15.16	I	C	SP	Pdf
BGF	103.947	43.31	4.45	15.16	I	C	SP	Pdf

Table 40. Station data for event 124 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
LRG	104.367	47.39	4.45	15.16	I	C	SP	Pdf
LMR	104.395	47.56	4.45	15.16	I	C	SP	Pdf
SMF	104.569	43.62	4.45	15.16	I	C	SP	Pdf
SSF	104.602	43.13	4.45	15.16	I	C	SP	Pdf
FRF	104.600	47.41	4.45	15.16	I	C	SP	Pdf
LBF	104.832	43.38	4.45	15.16	I	C	SP	Pdf
NAI	104.868	101.50	4.45	15.16	I	C	SP	Pdf
ESK	105.770	33.60	1.89	6.38	I	C	LP	Pdf
HAU	106.736	43.36	1.89	6.38	I	C	SP	Pdf
AKU	106.843	20.42	1.89	6.38	I	C	LP	Pdf
BSF	106.904	43.67	1.89	6.38	I	C	SP	Pdf
CDF	107.478	43.32	1.89	6.38	I	C	SP	Pdf
BNS	108.695	40.96	1.89	6.38	I	C	SP	Pdf
TRI	110.078	48.07	1.89	6.38	I	C	LP	Pdf
AAE	112.143	93.63	1.89	6.38	I	C	LP	Pdf
ATH	113.443	59.02	1.89	6.37	I	C	LP	Pdf
COP	113.648	37.97	1.88	6.36	E	C	LP	Pdf
COL	113.886	333.09	1.88	6.36	I	C	LP	Pdf
DAG	114.411	11.67	1.88	6.36	I	C	LP	Pdf
HNR	115.039	238.87	1.88	6.35	E	C	LP	Pdf
HLW	115.851	70.01	1.88	6.34	I	C	LP	Pdf
HLW	115.851	70.01	1.88	6.34	I	C	SP	Pdf
KBS	121.073	12.98	1.87	6.32	I	C	LP	PKP
NUR	121.323	35.14	1.87	6.32	I	C	LP	PKP
KEV	123.712	24.43	1.87	6.30	I	C	LP	PKP
MKS	140.374	197.88	1.77	5.96	I	C	SP	PKP
KOD	143.751	121.90	1.70	5.75	I	C	LP	PKP
QUE	144.982	83.47	1.68	5.68	I	C	LP	PKP
MAT	155.125	286.33	1.39	4.67	I	C	LP	PKP
MAJO	155.125	286.33	1.39	4.67	I	C	LP	PKP
SZP	160.927	218.55	1.12	3.77	I	C	SP	PKP
PIP	161.477	220.29	1.12	3.77	I	C	SP	PKP
SHL	163.964	113.83	0.96	3.25	I	C	LP	PKP
SEO	164.010	291.34	0.96	3.25	E	C	LP	PKP
SSE	168.742	263.11	0.68	2.29	E	C	LP	PKP
KMI	170.733	148.08	0.56	1.89	I	C	LP	PKP

Table 41. Station data for event 125.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
RTCV	3.019	49.87	14.20	86.62	I	C	SP	P
ANT	10.126	4.35	13.67	73.95	E	C	LP	P
LPA	11.059	99.25	13.55	72.28	I	C	LP	P
ARE	17.306	359.22	12.46	61.16	I	C	SP	P
LPB	17.466	10.12	12.46	61.16	I	C	LP	P
SOB1	37.135	55.74	8.44	36.39	I	C	SP	P
BOG	38.343	355.47	8.35	35.94	I	C	LP	P
ITR	39.173	58.03	8.32	35.80	I	C	SP	P
GUV	42.131	12.09	8.15	34.96	I	C	SP	P
UAV	42.211	0.15	8.15	34.96	I	D	SP	P
SDV	42.489	0.90	8.13	34.86	I	D	SP	P
UPA	43.302	348.02	8.07	34.56	I	C	LP	P
CAR	44.286	6.09	8.02	34.32	I	C	SP	P
TRN	45.217	13.70	7.99	34.17	I	C	SP	P
SJG	51.883	6.17	7.49	31.77	I	C	SP	P
SJG	51.883	6.17	7.49	31.77	I	C	LP	P
OXM	59.385	328.49	6.92	29.11	I	C	SP	P
SBA	63.369	191.60	6.59	27.60	I	C	SP	P
BLA	71.195	352.27	5.99	24.90	I	C	LP	P
TUL	73.077	339.36	5.85	24.28	I	C	LP	P
QZO	73.258	336.19	5.81	24.11	I	C	SP	P
SUR	74.334	118.57	5.74	23.80	I	C	SP	P
KIC	74.408	71.15	5.74	23.80	I	C	SP	P
SCP	74.509	354.79	5.74	23.80	I	C	LP	P
ALQ	75.950	330.77	5.64	23.36	I	C	SP	P
ANMO	75.953	330.77	5.64	23.36	I	C	LP	P
RSNY	78.067	357.60	5.52	22.83	I	C	LP	P
MNT	78.993	358.30	5.45	22.53	I	C	SP	P
GAC	79.257	356.98	5.41	22.35	I	C	LP	P
BLF	79.984	118.21	5.36	22.14	I	C	SP	P
SWZ	80.391	116.16	5.30	21.88	I	C	SP	P
VIR	81.043	117.68	5.26	21.70	I	C	SP	P
SEK	81.468	118.26	5.21	21.49	I	C	SP	P
BFS	81.635	116.64	5.21	21.49	I	C	SP	P
PRY	82.129	117.01	5.17	21.31	I	C	SP	P
BPI	82.962	116.67	5.11	21.05	I	C	SP	P
RSSD	83.135	336.87	5.11	21.05	I	C	LP	P
SLR	83.396	116.43	5.08	20.92	I	C	LP	P
LHC	83.450	348.03	5.08	20.92	I	C	SP	P
EVA	83.553	117.47	5.08	20.92	I	C	SP	P
JAS1	84.769	323.06	4.99	20.54	I	C	SP	P
JOZ	85.208	119.79	4.99	20.54	I	C	SP	P
BKS	85.651	321.93	4.96	20.41	I	C	SP	P
YBT	86.107	50.10	4.90	20.15	I	C	SP	P
RSON	86.623	345.97	4.86	19.98	I	C	LP	P
BUL	86.804	112.00	4.83	19.85	I	C	LP	P
BUL	86.804	112.00	4.83	19.85	I	C	SP	P
WDC	87.858	323.50	4.77	19.59	I	C	SP	P
CLX	90.610	332.37	4.70	19.29	I	C	SP	P
LHD	90.815	332.17	4.69	19.25	I	C	SP	P

Table 41. Station data for event 125 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
AFI	90.877	252.71	4.69	19.25	E	C	LP	P
LDM	90.881	332.41	4.69	19.25	I	C	SP	P
SES	90.943	335.81	4.69	19.25	I	C	SP	P
MTD	91.037	110.90	4.69	19.25	I	C	SP	P
RXF	91.143	332.75	4.69	19.25	I	C	SP	P
COR	91.258	325.69	4.68	19.21	I	C	SP	P
YKM	91.365	332.44	4.68	19.21	I	C	SP	P
LON	92.222	327.89	4.67	19.17	E	C	LP	P
BCAO	92.260	86.21	4.66	19.12	I	C	LP	P
BNG	92.270	86.22	4.66	19.12	I	C	SP	P
EDM	94.097	336.16	4.61	18.91	I	C	SP	P
TOL	96.069	45.51	4.55	18.65	E	C	LP	P
TOL	96.069	45.51	4.55	18.65	I	C	SP	P
LFF	101.967	43.67	4.45	18.23	I	C	SP	Pdf
LPO	102.074	44.07	4.45	18.23	I	C	SP	Pdf
RJF	102.626	43.69	4.45	18.23	I	C	SP	Pdf
GDH	103.606	6.41	4.45	18.23	E	C	LP	Pdf
BGF	104.105	43.18	4.45	18.23	I	C	SP	Pdf
FRF	104.695	47.30	4.45	18.23	I	C	SP	Pdf
SMF	104.722	43.51	4.45	18.23	I	C	SP	Pdf
LBF	104.988	43.27	4.45	18.23	I	C	SP	Pdf
SOP	112.770	47.08	1.89	7.62	I	C	SP	PKP
COL	114.750	332.82	1.88	7.60	E	C	LP	PKP
DAG	114.997	11.63	1.88	7.60	I	C	SP	PKP
DAG	114.997	11.63	1.88	7.60	E	C	LP	PKP
CTA	115.559	219.37	1.88	7.59	I	C	SP	PKP
PVL	116.473	54.35	1.88	7.59	I	C	SP	PKP
WB2	121.216	208.38	1.87	7.56	I	C	SP	PKP
KBS	121.643	13.04	1.87	7.56	E	C	LP	PKP
MHI	139.954	72.05	1.77	7.14	I	C	SP	PKP
POO	145.363	107.23	1.68	6.80	I	C	SP	PKP
NDI	152.620	92.21	1.46	5.90	I	C	SP	PKP
MAT	155.815	284.81	1.35	5.43	I	C	SP	PKP
DMN	158.767	100.65	1.22	4.90	I	C	SP	PKP
KKN	158.979	100.35	1.22	4.90	I	C	SP	PKP
PKI	159.000	101.04	1.22	4.90	I	C	SP	PKP
CHTO	162.661	147.22	1.02	4.10	I	C	SP	PKP
ANP	165.940	235.50	0.85	3.44	E	C	LP	PKP
SSE	169.144	258.79	0.68	2.74	E	C	LP	PKP
KMI	169.859	147.37	0.62	2.50	I	C	LP	PKP
BJI	171.424	318.30	0.56	2.26	E	C	LP	PKP

Table 42. Station data for event 131.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PEL	0.889	125.19	14.28	122.96	I	D	LP	P
CHCH	1.499	150.11	14.27	123.02	I	D	SP	P
ZON	2.668	66.80	14.25	56.86	I	C	SP	P
RFA	3.341	130.50	14.23	56.74	I	C	SP	P
ANT	8.950	6.71	13.81	54.24	I	C	LP	P
LPA	11.560	105.04	13.51	52.55	I	C	LP	P
LPB	16.331	11.86	12.68	48.17	I	C	LP	P
NNA	21.113	345.49	10.17	36.70	I	C	SP	P
BOG	37.122	355.85	8.44	29.73	I	C	LP	P
CAR	43.116	6.66	8.10	28.42	I	C	SP	P
SJG	50.713	6.64	7.62	26.60	I	C	LP	P
SPA	57.546	180.00	7.07	24.55	I	C	SP	P
SHA	64.905	344.24	6.47	22.34	I	C	LP	P
BLA	69.967	352.47	6.07	20.90	I	C	LP	P
TUL	71.860	339.47	5.92	20.36	E	C	LP	P
SCP	73.286	355.00	5.82	20.00	I	C	LP	P
MAW	74.379	163.49	5.75	19.75	I	C	SP	P
ALQ	74.775	330.84	5.71	19.60	I	C	SP	P
ANMO	74.777	330.84	5.71	19.60	I	C	LP	P
RSNY	76.852	357.81	5.58	19.14	I	C	LP	P
MNT	77.781	358.51	5.52	18.93	I	C	SP	P
GAC	78.040	357.19	5.52	18.93	I	C	LP	P
VIR	81.829	117.98	5.18	17.72	I	C	SP	P
RSSD	81.926	337.00	5.18	17.72	I	C	LP	P
SEK	82.265	118.56	5.14	17.58	I	C	SP	P
JAS1	83.653	323.18	5.08	17.37	I	C	SP	P
SLR	84.162	116.70	5.05	17.26	I	C	LP	P
SNZO	84.441	223.86	5.02	17.16	I	C	LP	P
RSON	85.392	346.13	4.96	16.94	I	C	LP	P
WDC	86.737	323.64	4.86	16.59	I	C	SP	P
BUL	87.492	112.22	4.80	16.38	I	C	SP	P
COR	90.118	325.86	4.71	16.07	I	C	SP	P
KRI	90.121	110.02	4.71	16.07	I	C	SP	P
AFI	90.992	252.90	4.70	16.03	E	D	LP	P
MTD	91.705	111.04	4.68	15.96	I	C	SP	P
SFS	91.931	47.15	4.67	15.93	I	C	SP	P
BCAO	92.434	86.33	4.66	15.89	I	C	LP	P
BNG	92.444	86.33	4.66	15.89	I	C	SP	P
MAL	93.216	47.86	4.64	15.82	I	C	LP	P
PTO	93.541	42.38	4.63	15.79	I	C	SP	P
PTO	93.541	42.38	4.63	15.79	I	C	LP	P
TOL	95.405	45.57	4.56	15.54	I	C	LP	P
HON	98.356	289.85	4.49	15.30	E	N	LP	P
VAL	99.821	33.45	4.47	15.23	I	C	LP	P
GDH	102.436	6.48	4.45	15.16	I	C	LP	Pdf
ESK	105.204	33.41	1.89	6.38	I	C	LP	Pdf
DOU	106.280	40.65	1.89	6.38	E	C	LP	Pdf
COP	113.088	37.76	1.89	6.37	I	C	LP	Pdf
PVL	115.972	53.96	1.88	6.34	I	C	SP	PKP
KBS	120.525	12.90	1.87	6.32	I	C	LP	PKP

Table 42. Station data for event 131 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
QUE	144.654	82.64	1.68	5.68	I	C	LP	PKP
ANP	166.366	240.36	0.85	2.88	I	C	LP	PKP
SSE	169.060	265.34	0.68	2.29	I	C	LP	PKP
KMI	171.001	144.79	0.56	1.89	E	C	LP	PKP

Table 43. Station data for event 133.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PEL	0.814	86.44	14.00	99.85	I	D	LP	P
ANT	9.520	6.88	13.72	74.92	E	C	LP	P
BAA	11.035	100.87	13.54	72.34	I	C	LP	P
LPA	11.510	102.31	13.47	71.44	I	C	LP	P
LPB	16.900	11.80	12.55	62.03	I	C	LP	P
NNA	21.638	346.11	10.03	44.90	I	C	SP	P
RDJ	27.033	75.01	9.28	40.77	I	C	LP	P
GIE	36.740	327.69	8.47	36.59	I	D	LP	P
BOG	37.678	356.06	8.41	36.29	I	C	LP	P
UPA	42.604	348.46	8.13	34.90	E	C	LP	P
TRN	44.676	14.41	8.02	34.36	I	C	SP	P
SJG	51.282	6.71	7.53	32.00	I	C	SP	P
SJG	51.282	6.71	7.53	32.00	I	C	LP	P
VHO	55.574	330.59	7.21	30.49	I	C	SP	P
TPM	58.112	329.13	7.03	29.65	I	D	SP	P
SBA	63.931	191.59	6.55	27.45	I	C	SP	P
SHA	65.424	344.40	6.43	26.91	I	C	LP	P
BLA	70.514	352.58	6.03	25.11	I	C	LP	P
TUL	72.358	339.61	5.88	24.44	I	C	LP	P
SCP	73.839	355.09	5.78	24.00	I	C	LP	P
ANMO	75.228	330.99	5.71	23.69	I	C	LP	P
RSNY	77.412	357.89	5.55	22.99	I	C	LP	P
GAC	78.599	357.27	5.48	22.68	I	C	LP	P
BLF	80.586	118.51	5.30	21.90	I	C	SP	P
VIR	81.641	117.96	5.21	21.51	I	D	SP	P
SEK	82.071	118.54	5.17	21.34	I	C	SP	P
BFS	82.225	116.93	5.17	21.34	I	C	SP	P
RSSD	82.412	337.10	5.14	21.21	I	C	LP	P
BPI	83.553	116.94	5.08	20.95	I	C	SP	P
SLR	83.985	116.70	5.05	20.82	I	C	LP	P
RSON	85.919	346.20	4.90	20.17	I	C	LP	P
YBT	85.956	50.37	4.90	20.17	I	C	SP	P
BUL	87.358	112.25	4.80	19.74	I	C	LP	P
BUL	87.358	112.25	4.80	19.74	I	C	SP	P
AFI	90.745	252.94	4.70	19.32	E	D	LP	P
LON	91.498	328.12	4.68	19.23	I	C	LP	P
MTD	91.582	111.11	4.68	19.23	I	C	SP	P
BCAO	92.555	86.41	4.66	19.14	I	C	LP	P
BNG	92.565	86.41	4.66	19.14	I	C	SP	P
MAL	93.657	47.94	4.63	19.02	I	C	LP	P
PTO	94.015	42.45	4.61	18.93	I	C	LP	P
TOL	95.861	45.66	4.55	18.68	I	C	LP	P
HON	98.467	289.82	4.49	18.42	E	N	LP	P
VAL	100.338	33.55	4.45	18.25	I	C	LP	P
GDH	103.006	6.53	4.45	18.25	I	C	LP	Pdf
ESK	105.722	33.53	1.89	7.64	E	C	LP	Pdf
DOU	106.763	40.80	1.89	7.64	E	C	LP	Pdf
TRI	109.984	48.01	1.89	7.64	I	C	SP	Pdf
COP	113.585	37.93	1.88	7.62	E	C	LP	Pdf
DAG	114.436	11.64	1.88	7.62	I	C	LP	Pdf

Table 43. Station data for event 133 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality. Direction, and Source of Earth Motion			
KBS	121.094	12.98	1.87	7.57	E	C	LP	PKP
QUE	144.808	83.47	1.68	6.81	E	C	LP	PKP
MNI	144.824	209.51	1.68	6.81	I	C	SP	PKP
BOM	145.229	105.25	1.68	6.81	I	C	SP	PKP
POO	145.873	106.70	1.66	6.72	I	C	SP	PKP
SEO	164.203	291.25	0.96	3.89	I	C	LP	PKP
ANP	166.006	238.61	0.85	3.44	I	C	LP	PKP

Table 44. Station data for event 135.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
CYA	7.961	45.06	13.87	77.98	I	C	SP	P
ANT	10.624	8.83	13.59	73.40	I	C	LP	P
LPA	11.769	97.20	13.39	70.78	I	C	LP	P
LPB	18.023	12.76	12.34	60.48	I	C	LP	P
NNA	22.566	348.05	9.83	43.88	I	C	SP	P
VAO	24.745	69.70	9.52	42.17	I	C	SP	P
RDJ	27.745	73.58	9.22	40.55	I	C	LP	P
BDF	28.636	55.75	9.09	39.87	I	C	LP	P
GIE	37.406	329.22	8.41	36.37	I	D	LP	P
BOG	38.702	357.00	8.35	36.07	I	C	LP	P
CUM	45.112	11.16	7.99	34.29	I	C	SP	P
SJG	52.382	7.25	7.45	31.69	I	C	SP	P
SJG	52.382	7.25	7.45	31.69	I	C	LP	P
SBA	62.810	191.77	6.63	27.87	I	D	SP	P
SHA	66.323	345.01	6.34	26.56	I	C	LP	P
BLA	71.504	353.07	5.95	24.81	I	C	LP	P
SCP	74.853	355.53	5.71	23.74	I	C	LP	P
ANMO	75.938	331.52	5.64	23.44	I	C	LP	P
GRM	78.430	122.35	5.48	22.73	I	C	SP	P
RSNY	78.450	358.29	5.48	22.73	I	C	LP	P
GAC	79.631	357.65	5.41	22.43	I	C	LP	P
BLF	80.472	118.61	5.30	21.95	I	C	SP	P
SEK	81.956	118.67	5.17	21.38	I	C	SP	P
SNZO	82.911	224.29	5.11	21.12	E	D	LP	P
RSSD	83.212	337.49	5.11	21.12	I	C	LP	P
SLR	83.906	116.87	5.05	20.86	I	C	LP	P
JAS1	84.635	323.67	5.02	20.73	I	D	SP	P
RSON	86.838	346.54	4.83	19.91	I	C	LP	P
BUL	87.368	112.49	4.80	19.78	I	C	SP	P
MTD	91.613	111.44	4.68	19.27	I	C	SP	P
BNG	93.071	86.76	4.64	19.10	I	C	SP	P
SFS	93.416	47.54	4.63	19.06	I	C	SP	P
MAL	94.690	48.27	4.60	18.93	I	C	LP	P
PTO	95.090	42.78	4.58	18.84	I	C	LP	P
HON	98.408	289.94	4.49	18.46	E	N	LP	P
VAL	101.460	33.88	4.45	18.29	I	C	LP	Pdf
GDH	104.103	6.75	4.45	18.29	E	C	LP	Pdf
LPG	106.642	46.10	1.89	7.66	I	C	LP	Pdf
ESK	106.844	33.89	1.89	7.66	E	C	LP	Pdf
COP	114.688	38.36	1.88	7.63	E	C	LP	Pdf
DAG	115.557	11.83	1.88	7.61	I	C	SP	PKP
DAG	115.557	11.83	1.88	7.61	E	C	LP	PKP
MMB	115.749	55.94	1.88	7.61	I	C	SP	PKP
KBS	122.220	13.15	1.87	7.58	I	C	LP	PKP
QUE	145.353	85.20	1.68	6.82	I	C	LP	PKP
POO	145.976	108.68	1.66	6.73	I	C	SP	PKP
DAV	148.385	215.27	1.62	6.54	E	C	LP	PKP
BAG	158.853	216.00	1.22	4.92	I	C	LP	PKP
SEO	164.134	287.52	0.96	3.89	I	C	LP	PKP
ANP	165.066	236.39	0.91	3.68	I	C	LP	PKP

Table 44. Station data for event 135 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KMI	169.890	152.82	0.62	2.51	I	C	LP	PKP

Table 45. Station data for event 139.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
FCH	1.367	123.23	14.27	123.02	I	D	SP	P
CHCH	1.587	148.27	14.27	123.02	I	D	SP	P
ZON	2.732	68.53	14.25	56.86	I	C	SP	P
RTLL	2.983	66.07	14.24	56.80	I	C	SP	P
CFA	3.059	72.34	14.23	56.74	I	C	SP	P
ANT	8.912	7.36	13.81	54.24	I	C	LP	P
LPB	16.301	12.24	12.68	48.17	E	C	LP	P
RDJ	26.883	76.18	9.28	33.04	I	C	LP	P
BOG	37.067	356.01	8.44	29.73	I	C	LP	P
GUV	40.981	12.99	8.21	28.84	I	C	SP	P
SJG	50.675	6.77	7.62	26.60	I	C	SP	P
SPA	57.595	180.00	7.07	24.55	I	C	SP	P
OXM	58.137	328.49	7.03	24.40	I	C	SP	P
SBA	64.530	191.53	6.51	22.49	I	C	SP	P
JCT	68.144	333.97	6.22	21.44	E	C	LP	P
BLA	69.907	352.56	6.07	20.90	I	C	LP	P
BHO	70.086	339.71	6.07	20.90	I	C	SP	P
TUL	71.783	339.54	5.92	20.36	I	C	SP	P
RLO	71.799	340.25	5.92	20.36	I	C	SP	P
SCP	73.229	355.08	5.85	20.11	I	C	LP	P
KIC	74.332	71.74	5.75	19.75	I	C	SP	P
WES	74.593	0.26	5.75	19.75	E	C	LP	P
ANMO	74.692	330.91	5.75	19.75	E	C	LP	P
RSNY	76.800	357.89	5.58	19.14	I	C	LP	P
WIN	77.209	108.62	5.58	19.14	I	C	SP	P
GRM	78.948	122.39	5.45	18.68	I	C	SP	P
RSSD	81.847	337.07	5.18	17.72	I	C	LP	P
LHC	82.153	348.26	5.18	17.72	I	C	SP	P
PRI	82.319	321.94	5.14	17.58	I	C	SP	P
SEK	82.366	118.61	5.14	17.58	I	C	SP	P
JAS	83.585	323.24	5.08	17.37	I	C	LP	P
BPI	83.833	117.00	5.05	17.26	I	C	SP	P
SLR	84.263	116.76	5.02	17.16	I	C	LP	P
SNZO	84.415	223.91	5.02	17.16	I	C	LP	P
EVA	84.437	117.80	5.02	17.16	I	C	SP	P
RSON	85.323	346.19	4.96	16.94	I	C	LP	P
GAS	86.037	322.99	4.90	16.73	I	C	LP	P
JOZ	86.130	120.08	4.90	16.73	I	C	SP	P
BUL	87.593	112.28	4.80	16.38	I	C	LP	P
LHD	89.545	332.39	4.71	16.07	I	C	SP	P
RXF	89.871	332.98	4.71	16.07	I	C	SP	P
YKM	90.095	332.66	4.71	16.07	I	C	SP	P
AFI	90.922	252.95	4.70	16.03	E	N	LP	P
MTD	91.805	111.10	4.67	15.93	I	C	SP	P
PNT	92.016	330.90	4.67	15.93	I	C	SP	P
BNG	92.530	86.39	4.66	15.89	I	C	SP	P
TOL	95.435	45.62	4.56	15.54	I	C	LP	P
TAU	96.820	207.74	4.53	15.44	E	C	LP	P
HON	98.257	289.91	4.49	15.30	E	C	LP	P
COL	113.477	333.16	1.89	6.37	E	C	LP	Pdf

Table 45. Station data for event 139 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KBS	120.497	12.90	1.87	6.32	E	C	LP	PKP
QUE	144.736	82.61	1.68	5.68	I	C	LP	PKP
POO	146.047	105.83	1.66	5.61	I	C	SP	PKP
BSI	150.427	152.91	1.56	5.26	I	C	SP	PKP
BAG	160.453	217.44	1.17	3.94	E	C	LP	PKP
SEO	163.969	293.23	0.96	3.25	I	C	LP	PKP
ANP	166.313	240.77	0.85	2.88	E	C	LP	PKP
SSE	168.976	265.68	0.68	2.29	E	C	LP	PKP
GTA	170.301	43.01	0.62	2.09	I	C	SP	PKP
KMI	171.092	145.13	0.56	1.89	E	C	LP	PKP

Table 46. Station data for event 141.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
FCH	1.366	54.45	14.24	90.00	I	D	SP	P
RFA	2.682	104.65	14.22	87.23	I	D	SP	P
ANT	10.441	6.09	13.62	73.08	I	C	LP	P
ARE	17.593	0.40	12.46	61.07	I	C	SP	P
RDJ	27.259	73.23	9.23	40.42	I	C	LP	P
BAO	28.140	54.96	9.18	40.15	I	C	SP	P
BDF	28.180	55.13	9.18	40.15	I	C	LP	P
BOG	38.608	356.09	8.35	35.91	I	C	LP	P
CAR	44.607	6.58	8.02	34.29	I	C	SP	P
TRN	45.570	14.13	7.96	34.00	I	C	SP	P
SNA	51.333	156.04	7.53	31.93	I	C	SP	P
SJG	52.203	6.59	7.49	31.74	I	C	SP	P
SPA	56.053	180.00	7.18	30.29	I	C	SP	P
SBA	63.025	191.68	6.64	27.80	I	C	SP	P
JCT	69.545	334.20	6.10	25.37	I	C	LP	P
JCT	69.545	334.20	6.10	25.37	I	C	SP	P
LTX	70.011	330.46	6.07	25.24	I	C	SP	P
BLA	71.441	352.59	5.96	24.75	I	C	LP	P
BHO	71.545	339.87	5.96	24.75	I	C	SP	P
MAW	72.963	163.38	5.85	24.26	I	C	SP	P
TUL	73.240	339.68	5.85	24.26	I	C	LP	P
SCP	74.769	355.09	5.71	23.65	I	C	LP	P
KIC	74.791	71.31	5.71	23.65	I	C	SP	P
ALQ	76.053	331.08	5.64	23.34	I	C	LP	P
ANMO	76.056	331.08	5.64	23.34	I	C	LP	P
WES	76.136	0.23	5.64	23.34	I	C	LP	P
WIN	76.691	108.26	5.61	23.21	I	C	SP	P
RSNY	78.343	357.87	5.48	22.64	I	C	LP	P
MNT	79.273	358.56	5.41	22.33	I	C	SP	P
GAC	79.530	357.25	5.41	22.33	I	C	LP	P
BLF	80.117	118.35	5.36	22.12	I	C	SP	P
VIR	81.180	117.82	5.26	21.68	I	C	SP	P
SEK	81.602	118.40	5.21	21.47	I	C	SP	P
BFS	81.779	116.79	5.17	21.29	I	C	SP	P
RSSD	83.280	337.12	5.08	20.91	I	C	LP	P
WEL	83.305	224.05	5.08	20.91	I	C	SP	P
SNZO	83.326	224.00	5.08	20.91	E	N	LP	P
SLR	83.542	116.59	5.08	20.91	I	C	LP	P
SLR	83.542	116.59	5.08	20.91	I	C	SP	P
PRI	83.554	322.03	5.08	20.91	I	C	SP	P
LHC	83.670	348.27	5.08	20.91	I	C	SP	P
EVA	83.691	117.64	5.08	20.91	I	C	SP	P
MNA	84.115	325.03	5.05	20.78	I	C	SP	P
JAS1	84.816	323.31	4.99	20.52	I	C	SP	P
JAS	84.841	323.31	4.99	20.52	I	C	LP	P
MHC	84.977	322.18	4.99	20.52	I	C	SP	P
BRK	85.700	322.15	4.96	20.39	I	C	SP	P
ORV	86.611	323.68	4.86	19.96	I	C	SP	P
RSON	86.829	346.19	4.83	19.83	I	C	LP	P
BUL	86.980	112.19	4.83	19.83	I	C	SP	P

Table 46. Station data for event 141 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
WDC	87.908	323.72	4.77	19.58	I	C	SP	P
AFI	90.499	252.92	4.70	19.28	E	N	LP	P
SES	91.081	336.01	4.69	19.23	I	C	SP	P
MTD	91.220	111.11	4.69	19.23	I	C	SP	P
COR	91.323	325.89	4.68	19.19	I	C	SP	P
FFC	92.268	342.93	4.66	19.11	I	C	SP	P
LON	92.304	328.08	4.66	19.11	I	C	SP	P
TET	93.133	111.74	4.64	19.02	I	C	SP	P
COI	94.161	43.27	4.61	18.89	I	C	SP	P
EDM	94.237	336.33	4.61	18.89	I	C	SP	P
MAL	94.258	47.97	4.60	18.85	I	C	SP	P
PTO	94.682	42.48	4.60	18.85	I	C	SP	P
PTO	94.682	42.48	4.60	18.85	I	C	LP	P
TAU	95.469	207.64	4.56	18.68	I	C	LP	P
ALM	95.549	48.87	4.56	18.68	I	C	SP	P
TOL	96.490	45.72	4.54	18.60	I	C	LP	P
HON	98.809	289.67	4.48	18.34	E	N	LP	P
GRC	105.068	42.84	1.89	7.63	I	C	SP	Pdf
UCC	107.697	40.27	1.89	7.63	E	C	LP	Pdf
STU	109.336	43.80	1.89	7.63	I	C	LP	Pdf
KMR	111.890	46.14	1.89	7.63	I	C	LP	Pdf
COP	114.300	38.18	1.88	7.60	I	C	SP	Pdf
COP	114.300	38.18	1.88	7.60	I	C	LP	Pdf
COL	114.866	332.83	1.88	7.60	I	C	LP	Pdf
KRA	116.196	45.90	1.88	7.59	E	C	LP	Pdf
PVL	116.890	54.58	1.88	7.58	I	C	SP	PKP
WB2	120.816	208.67	1.87	7.56	I	C	SP	PKP
KBS	121.993	13.10	1.87	7.55	I	C	LP	PKP
GUA	141.094	247.19	1.75	7.08	I	C	LP	PKP
MNI	144.026	208.82	1.70	6.87	I	C	SP	PKP
QUE	144.874	84.77	1.68	6.79	I	C	LP	PKP
DAV	148.754	214.44	1.59	6.40	I	C	LP	PKP
KSH	153.599	68.92	1.43	5.75	I	C	SP	PKP
BAG	159.226	214.87	1.22	4.90	E	C	LP	PKP
NST	160.175	155.95	1.17	4.71	I	C	SP	PKP
MDJ	160.598	308.93	1.12	4.51	I	C	SP	PKP
WMQ	161.272	52.79	1.12	4.51	I	C	SP	PKP
CN2	163.613	311.12	0.96	3.88	I	C	SP	PKP
SEO	164.544	288.13	0.91	3.66	I	C	LP	PKP
LSA	164.716	102.09	0.91	3.66	I	C	SP	PKP
QIZ	164.904	185.32	0.91	3.66	I	C	SP	PKP
ANP	165.524	235.45	0.85	3.43	I	C	LP	PKP
SNY	165.776	307.12	0.85	3.43	I	C	SP	PKP
QZH	167.248	226.80	0.80	3.21	I	C	SP	PKP
GZH	168.168	202.86	0.74	2.98	I	C	SP	PKP
SSE	168.786	257.86	0.68	2.74	I	C	LP	PKP
KMI	169.773	149.87	0.62	2.50	E	C	LP	PKP
NJ2	170.972	259.62	0.56	2.26	I	C	SP	PKP
GTA	171.341	50.05	0.56	2.26	I	C	SP	PKP
BJI	171.426	315.71	0.56	2.26	I	C	LP	PKP

Table 46. Station data for event 141 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
HHC	172.833	340.27	0.44	1.77	I	C	SP	PKP
WHN	173.812	236.32	0.38	1.52	I	C	SP	PKP
CD2	174.944	128.16	0.31	1.27	I	C	SP	PKP
TIY	175.144	318.55	0.31	1.27	I	C	SP	PKP
LZH	175.800	61.04	0.25	1.01	E	C	LP	PKP

Table 47. Station data for event 150.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SAN	7.442	34.25	13.98	44.54	I	C	SP	P
PEL	7.697	32.93	13.98	44.54	I	C	SP	P
LPA	14.903	76.74	12.99	40.67	E	C	LP	P
ARE	23.463	10.10	9.70	29.12	I	D	SP	P
AAS	24.779	160.65	9.49	28.43	I	D	SP	P
BDF	34.083	53.20	8.63	25.66	E	D	LP	P
BOG	44.150	2.29	8.05	23.82	I	D	LP	P
SNA	47.639	153.93	7.85	23.19	I	D	SP	P
UPA	48.587	354.90	7.79	23.01	I	D	SP	P
SPA	50.466	180.00	7.63	22.51	I	D	SP	P
CAR	50.625	11.14	7.63	22.51	I	D	SP	P
TRN	51.833	17.94	7.50	22.10	I	D	SP	P
SBA	56.877	192.96	7.11	20.90	I	D	SP	P
SJG	58.211	10.66	7.04	20.68	I	D	SP	P
CER	72.988	119.31	5.86	17.10	I	D	SP	P
BHO	75.838	343.71	5.65	16.47	I	D	SP	P
BLA	76.679	356.10	5.62	16.38	I	D	LP	P
SNZO	77.095	226.72	5.59	16.29	E	D	LP	P
QZO	77.398	340.26	5.56	16.20	I	D	SP	P
SIO	77.469	342.91	5.56	16.20	I	D	SP	P
TUL	77.511	343.37	5.56	16.20	I	D	SP	P
RLO	77.592	344.06	5.56	16.20	I	D	SP	P
GRM	77.818	123.15	5.52	16.08	I	D	SP	P
WIN	77.968	109.26	5.52	16.08	I	D	SP	P
ANMO	79.550	334.68	5.42	15.78	E	D	LP	P
KIC	79.601	72.75	5.42	15.78	I	D	SP	P
SCP	80.158	358.30	5.37	15.63	I	D	LP	P
BLF	80.247	119.65	5.37	15.63	I	D	SP	P
SWZ	80.896	117.67	5.27	15.33	I	D	SP	P
WES	81.816	3.25	5.18	15.06	E	D	LP	P
BFS	82.073	118.30	5.18	15.06	I	D	SP	P
BPI	83.388	118.48	5.09	14.80	I	D	SP	P
SLR	83.847	118.30	5.06	14.71	E	D	LP	P
SLR	83.847	118.30	5.06	14.71	I	D	SP	P
EVA	83.878	119.36	5.06	14.71	I	D	SP	P
RSNY	83.890	0.82	5.06	14.71	E	D	LP	P
OTT	84.730	359.96	5.03	14.62	I	D	SP	P
MNT	84.858	1.44	4.99	14.50	I	D	SP	P
GAC	85.039	0.13	4.99	14.50	I	D	LP	P
RSSD	87.293	339.96	4.80	13.93	E	D	LP	P
BUL	87.756	114.32	4.78	13.88	I	D	SP	P
ORV	89.326	326.31	4.72	13.70	I	D	SP	P
WDC	90.621	326.22	4.70	13.64	I	D	SP	P
KRI	90.660	112.49	4.70	13.64	I	D	SP	P
RSON	91.576	348.68	4.69	13.61	E	D	LP	P
MTD	92.089	113.72	4.67	13.55	I	D	SP	P
LON	95.432	330.12	4.56	13.23	E	D	LP	P
FFC	96.741	344.99	4.54	13.17	I	D	SP	P
EDM	98.136	338.20	4.51	13.08	I	D	SP	P
KHC	118.244	48.21	1.88	5.40	I	D	SP	PKP

Table 47. Station data for event 150 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
JOS	122.052	51.29	1.87	5.39	I	D	SP	PKP
MHI	144.780	81.03	1.68	4.85	I	D	LP	PKP
QUE	148.108	95.66	1.62	4.65	I	D	LP	PKP
BDT	157.124	166.79	1.31	3.76	I	D	SP	PKP
CHG	158.645	165.85	1.22	3.50	I	D	SP	PKP
SNY	165.268	284.39	0.91	2.62	I	D	SP	PKP
KMI	165.376	174.26	0.91	2.62	E	D	LP	PKP
NJ2	165.968	241.41	0.85	2.46	I	D	SP	PKP
CD2	171.190	176.75	0.56	1.62	I	D	SP	PKP
GTA	176.491	93.75	0.25	0.73	I	D	SP	PKP

Table 48. Station data for event 152.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
NNA	6.175	242.82	8.71	117.63	I	C	SP	P
ARE	7.226	181.99	9.20	110.65	I	D	SP	P
QUR	11.539	320.57	9.83	91.32	I	C	SP	P
BOG	14.013	348.25	9.72	81.28	I	D	LP	P
SLA	16.384	161.20	9.53	75.73	I	C	SP	P
FSA	17.509	164.23	9.44	73.74	I	D	SP	P
SDV	17.970	1.91	9.41	73.18	I	D	SP	P
GUV	18.732	25.88	9.35	72.00	I	D	SP	P
TOV	18.909	4.38	9.34	71.72	I	D	SP	P
LGN	19.211	359.88	9.32	71.35	I	C	SP	P
UPA	19.858	335.16	9.27	70.55	I	D	SP	P
CAR	20.033	12.44	9.26	70.31	I	D	SP	P
GIE	20.759	292.82	9.20	69.34	I	C	LP	P
TRN	22.002	26.60	9.07	67.28	I	D	SP	P
RTCB	22.292	174.52	9.04	66.85	I	D	SP	P
RTCV	22.688	174.05	9.00	66.27	I	D	SP	P
PEL	23.834	178.87	8.88	64.63	I	D	LP	P
VAO	26.990	123.46	8.68	61.99	I	D	SP	P
SJG	27.589	10.48	8.65	61.56	I	D	LP	P
SJG	27.589	10.48	8.65	61.56	I	D	SP	P
LPA	28.339	156.53	8.61	61.12	I	D	LP	P
SOB1	29.941	92.49	8.52	60.09	I	C	SP	P
RDJ	30.088	120.26	8.52	60.00	I	D	SP	P
ITR	32.402	91.87	8.39	58.52	I	C	SP	P
COM	32.665	320.59	8.37	58.35	I	C	SP	P
TPM	39.204	315.66	8.04	54.84	I	C	SP	P
IIP	39.353	316.22	8.03	54.74	I	C	SP	P
IIC	39.874	316.34	8.00	54.42	I	C	SP	P
BLA	46.953	349.95	7.54	50.10	I	D	LP	P
JCT	48.050	326.28	7.47	49.41	I	D	SP	P
BHO	48.784	333.84	7.41	48.88	I	D	SP	P
SCP	50.109	353.43	7.31	48.04	I	D	LP	P
RLO	50.372	334.92	7.29	47.85	I	D	SP	P
TUL	50.481	334.06	7.28	47.78	I	D	LP	P
OCO	50.907	332.30	7.25	47.48	I	D	SP	P
RSNY	53.568	357.07	7.07	45.94	I	D	LP	P
MNT	54.481	357.93	7.00	45.40	I	D	SP	P
OTT	54.480	356.12	7.00	45.40	I	D	SP	P
GAC	54.773	356.36	6.98	45.27	I	D	LP	P
ANMO	55.104	324.71	6.96	45.08	I	D	LP	P
ALQ	55.102	324.70	6.96	45.08	I	D	SP	P
GOL	58.028	329.31	6.74	43.26	I	D	LP	P
STJ	58.850	14.54	6.68	42.79	I	D	SP	P
LHC	59.528	346.15	6.63	42.38	I	D	SP	P
RSSD	60.817	333.45	6.52	41.57	I	D	LP	P
RSON	62.902	344.21	6.37	40.36	I	D	LP	P
SCH	63.874	2.87	6.29	39.77	I	D	SP	P
MNA	64.448	320.51	6.24	39.42	I	D	SP	P
LLA	65.202	317.46	6.18	38.97	I	D	SP	P
PRS	65.331	316.99	6.17	38.89	I	D	SP	P

Table 48. Station data for event 152 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction. and Source of Earth Motion			
JAS1	65.597	318.91	6.15	38.73	I	D	SP	P
JAS	65.620	318.91	6.15	38.72	I	D	LP	P
LRM	66.052	329.72	6.12	38.47	I	D	SP	P
BUT	66.242	329.81	6.10	38.38	I	D	SP	P
ORV	67.217	319.84	6.04	37.87	I	D	SP	P
MIN	67.732	320.49	6.00	37.62	I	D	SP	P
WDC	68.453	320.27	5.95	37.26	I	D	SP	P
FFC	68.716	341.44	5.94	37.14	I	D	SP	P
FHC	69.492	319.81	5.88	36.73	I	D	SP	P
NEW	70.053	329.31	5.85	36.48	I	D	SP	P
COR	71.178	323.45	5.77	35.93	I	D	SP	P
LON	71.585	325.95	5.74	35.75	I	D	LP	P
EDM	71.725	334.86	5.74	35.69	I	D	SP	P
PNT	71.995	329.04	5.72	35.58	I	D	SP	P
FRB	72.752	1.25	5.66	35.18	I	D	SP	P
AVE	73.850	51.49	5.60	34.71	I	D	SP	P
SNA	74.349	160.83	5.57	34.50	I	D	SP	P
MTH	74.810	45.58	5.54	34.30	I	D	SP	P
SFS	75.985	48.87	5.47	33.81	I	C	SP	P
PTO	76.180	43.69	5.46	33.71	I	D	SP	P
PRL	76.279	45.81	5.45	33.65	I	D	SP	P
MTE	76.604	44.73	5.42	33.46	I	D	SP	P
PHC	76.895	327.14	5.40	33.31	I	D	SP	P
CRT	78.197	48.98	5.27	32.43	I	D	SP	P
TAF	78.266	51.59	5.27	32.40	I	D	SP	P
YKC	78.838	341.07	5.22	32.09	I	D	SP	P
TOL	78.855	46.30	5.22	32.08	I	D	SP	P
RSNT	78.877	341.03	5.22	32.06	I	D	LP	P
GDH	79.225	6.33	5.19	31.87	I	D	SP	P
GDH	79.225	6.33	5.19	31.87	I	D	LP	P
VAL	80.106	33.34	5.13	31.47	I	D	LP	P
SPA	80.866	180.00	5.09	31.16	I	D	SP	P
LGR	80.888	44.30	5.09	31.15	I	D	SP	P
REY	81.974	19.63	5.02	30.71	I	D	SP	P
ECB	82.197	33.95	5.01	30.62	I	D	SP	P
EC[illegible]	82.344	34.23	5.00	30.56	I	D	SP	P
DCN	82.360	32.93	5.00	30.55	I	D	SP	P
DMU	82.803	32.52	4.97	30.39	I	D	SP	P
EPF	83.051	44.50	4.96	30.27	I	D	SP	P
LPF	83.860	39.43	4.88	29.76	I	D	SP	P
MFF	83.930	41.00	4.88	29.73	I	D	SP	P
LFF	83.955	42.78	4.87	29.71	I	D	SP	P
GRR	84.101	39.14	4.86	29.63	I	D	SP	P
SIT	84.101	330.39	4.86	29.63	I	D	SP	P
LPO	84.171	43.13	4.86	29.60	I	D	SP	P
AKU	84.212	19.45	4.85	29.58	I	D	SP	P
FLN	84.467	38.88	4.83	29.43	I	D	SP	P
RJF	84.593	42.61	4.82	29.39	I	D	SP	P
LDF	84.632	39.12	4.82	29.37	I	D	SP	P
CAF	84.841	43.10	4.82	29.34	I	D	SP	P

Table 48. Station data for event 152 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
LSF	84.906	41.72	4.81	29.32	I	D	SP	P
WIN	85.000	111.95	4.81	29.29	I	D	SP	P
TCF	85.365	41.83	4.79	29.13	I	D	SP	P
MZF	85.589	41.98	4.78	29.06	I	D	SP	P
PYM	85.728	42.52	4.77	29.02	I	D	SP	P
BGF	85.868	41.71	4.77	28.99	I	D	SP	P
GRC	86.241	41.05	4.75	28.89	I	D	SP	P
SSF	86.452	41.37	4.74	28.83	I	D	SP	P
LBF	86.737	41.54	4.73	28.76	I	D	SP	P
LOR	86.743	41.24	4.73	28.76	I	D	SP	P
PNL	87.156	331.85	4.72	28.66	I	D	SP	P
LRG	87.378	45.40	4.71	28.64	I	D	SP	P
LMR	87.451	45.54	4.71	28.63	I	D	SP	P
SBA	87.464	190.36	4.71	28.63	I	D	SP	P
FRF	87.607	45.35	4.71	28.61	I	D	SP	P
DOU	88.034	38.67	4.70	28.55	I	D	LP	P
UCC	88.093	37.96	4.70	28.55	E	D	LP	P
HAU	88.566	41.00	4.70	28.55	I	D	SP	P
INK	88.662	340.77	4.70	28.54	I	D	SP	P
BSF	88.809	41.25	4.69	28.51	I	D	SP	P
WLF	88.882	39.37	4.69	28.50	I	D	SP	P
DBN	88.956	36.85	4.69	28.49	I	D	LP	P
ENN	89.037	38.26	4.69	28.48	I	D	SP	P
MEM	89.046	38.43	4.69	28.48	I	D	SP	P
ECH	89.145	40.94	4.69	28.47	I	D	SP	P
CDF	89.271	40.77	4.69	28.46	I	D	SP	P
MBC	89.792	349.73	4.67	28.34	I	D	SP	P
BNS	89.855	38.28	4.66	28.32	I	D	SP	P
WTS	89.899	37.22	4.66	28.31	I	D	SP	P
WIT	90.028	36.41	4.66	28.28	I	D	SP	P
TNS	90.459	39.20	4.65	28.23	I	D	SP	P
STU	90.594	40.73	4.65	28.21	I	D	LP	P
BER	91.361	28.90	4.62	28.06	I	D	SP	P
OGA	91.385	42.85	4.62	28.05	I	D	SP	P
CTI	91.643	43.75	4.62	28.00	I	D	SP	P
MNS	91.662	47.48	4.62	28.00	I	D	SP	P
ALE	91.675	1.16	4.62	28.00	I	D	SP	P
FUR	91.816	41.62	4.61	27.99	I	D	SP	P
GRFO	92.086	40.11	4.61	27.94	I	D	LP	P
GRF	92.090	40.11	4.61	27.94	I	D	SP	P
MUD	92.328	33.22	4.60	27.87	I	D	SP	P
MOX	92.528	39.23	4.59	27.82	I	D	LP	P
COL	92.619	335.46	4.59	27.80	I	D	SP	P
COL	92.619	335.46	4.59	27.80	I	D	LP	P
FBA	92.619	335.46	4.59	27.80	I	D	SP	P
BHG	92.789	42.26	4.58	27.75	I	D	SP	P
VIR	92.780	118.85	4.58	27.75	I	D	SP	P
DUI	92.837	48.43	4.58	27.74	I	D	SP	P
BFS	92.953	117.68	4.57	27.71	I	D	SP	P
TRI	93.031	44.35	4.57	27.69	I	D	SP	P

Table 48. Station data for event 152 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
WET	93.048	40.86	4.57	27.68	I	D	SP	P
KDC	93.069	327.94	4.57	27.68	I	D	SP	P
KSR	93.261	116.70	4.56	27.62	I	D	SP	P
SGO	93.290	49.63	4.56	27.61	I	D	SP	P
KHC	93.497	40.95	4.55	27.57	I	D	SP	P
CLL	93.514	38.74	4.55	27.56	I	D	SP	P
LJU	93.617	44.11	4.55	27.54	I	D	SP	P
KMR	93.678	42.08	4.55	27.53	I	D	LP	P
BRN	93.831	37.66	4.54	27.52	I	D	SP	P
COP	93.962	34.35	4.54	27.50	I	D	LP	P
COP	93.962	34.35	4.54	27.50	I	D	SP	P
BPI	94.194	117.21	4.54	27.47	I	D	SP	P
PRU	94.258	40.21	4.53	27.46	I	D	SP	P
SLR	94.509	116.83	4.53	27.43	I	C	SP	P
SLR	94.509	116.83	4.53	27.43	I	D	LP	P
EVA	95.040	117.74	4.52	27.36	I	D	SP	P
VKA	95.156	42.09	4.52	27.35	I	D	SP	P
SOP	95.236	42.69	4.52	27.34	I	D	SP	P
IMA	95.278	336.04	4.51	27.33	I	D	SP	P
KSP	95.492	39.52	4.51	27.30	I	D	SP	P
ZST	95.667	42.23	4.51	27.28	I	D	SP	P
BUL	95.984	111.43	4.50	27.24	E	D	LP	P
BUL	95.984	111.43	4.50	27.24	I	D	SP	P
MAW	96.703	163.91	4.49	27.14	I	D	SP	P
BUD	96.869	43.10	4.48	27.13	I	D	SP	P
KRI	97.599	108.39	4.46	26.96	I	D	SP	P
KBS	97.641	11.18	4.46	26.95	I	D	SP	P
KBS	97.641	11.18	4.46	26.95	I	D	LP	P
KRA	97.721	40.57	4.45	26.94	I	D	SP	P
JOS	97.978	42.18	4.45	26.91	I	D	SP	P
SKO	98.051	48.80	4.45	26.90	I	D	SP	P
KZN	98.152	50.49	4.45	26.89	I	D	SP	P
CLO	99.276	45.75	4.44	26.84	I	D	SP	P
VTS	99.402	48.27	4.44	26.84	I	D	SP	P
ATH	99.470	52.97	4.44	26.84	I	D	SP	P
MMB	99.728	49.31	4.44	26.84	I	D	SP	P
CMP	100.866	45.63	4.44	26.84	I	D	SP	Pdf
PVL	100.879	47.79	4.44	26.84	I	D	SP	Pdf
NAI	107.582	94.27	1.89	11.08	I	D	LP	Pdf
KSA	109.263	57.44	1.89	11.08	I	D	SP	Pdf
NOU	115.399	240.04	1.88	11.02	I	D	SP	PKP
WAM	121.166	217.53	1.87	10.97	I	D	SP	PKP
IR2	121.313	53.83	1.87	10.97	I	D	SP	PKP
CAN	121.675	218.36	1.87	10.97	I	D	SP	PKP
TOO	122.174	214.15	1.87	10.96	I	D	SP	PKP
BFD	124.060	212.41	1.87	10.94	I	D	SP	PKP
CMS	126.204	219.65	1.86	10.91	I	D	SP	PKP
MHI	127.875	50.86	1.86	10.88	I	D	SP	PKP
STK	128.496	216.10	1.85	10.87	I	D	SP	PKP
CTA	133.016	231.47	1.83	10.73	I	D	SP	PKP

Table 48. Station data for event 152 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
WBN	140.846	205.81	1.74	10.22	I	D	SP	PKP
MAT	141.868	320.13	1.73	10.12	I	D	SP	PKP
MEK	143.167	194.69	1.70	9.99	I	D	SP	PKP
GUA	144.329	280.37	1.68	9.85	E	D	LP	PKP
SEO	147.322	332.64	1.61	9.45	I	D	LP	PKP
NAU	147.779	191.72	1.60	9.38	I	D	SP	PKP
MBL	147.940	199.72	1.60	9.35	I	D	SP	PKP
KNA	148.277	218.77	1.59	9.30	I	D	SP	PKP
BJI	148.586	349.06	1.58	9.25	I	D	LP	PKP
MTN	148.811	225.76	1.57	9.21	I	D	SP	PKP
KOD	149.134	85.45	1.56	9.15	I	D	SP	PKP
HYB	149.516	71.29	1.55	9.09	I	D	SP	PKP
DMN	151.126	47.53	1.50	8.79	I	D	SP	PKP
KKN	151.148	47.04	1.50	8.79	I	D	SP	PKP
PKI	151.367	47.27	1.49	8.75	I	D	SP	PKP
ANP	160.002	324.23	1.14	6.67	I	D	LP	PKP
TRT	162.779	193.04	1.00	5.86	I	D	SP	PKP
KMI	163.154	19.18	0.99	5.75	E	D	LP	PKP
CHTO	166.506	43.85	0.80	4.69	I	D	SP	PKP
PSI	168.274	122.81	0.70	4.11	I	D	SP	PKP
KHT	168.602	59.87	0.69	4.00	I	D	SP	PKP
SNG	171.684	103.35	0.51	2.95	I	D	SP	PKP
SNG	171.684	103.35	0.51	2.95	I	D	LP	PKP

Table 49. Station data for event 160.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
RTCB	2.498	120.12	14.22	87.78	I	D	SP	P
RTLL	2.685	114.29	14.22	92.22	I	D	SP	P
MDZ	3.369	141.73	14.20	86.24	I	D	SP	P
CHCH	3.714	171.28	14.18	85.16	I	D	SP	P
ANT	6.572	7.34	14.02	80.13	I	C	LP	P
SLA	7.557	44.67	13.94	78.40	I	D	SP	P
BAA	11.683	115.06	13.48	71.31	E	D	LP	P
LPA	12.214	115.82	13.41	70.45	E	D	LP	P
LPB	13.973	12.94	13.10	67.01	I	C	LP	P
NNA	18.880	343.11	12.15	58.63	I	C	SP	P
VAO	22.917	77.45	9.75	43.25	I	C	SP	P
RDJ	26.138	80.46	9.37	41.18	I	C	LP	P
GIE	34.450	324.93	8.58	37.08	I	D	SP	P
BOG	34.771	355.21	8.55	36.93	I	C	LP	P
UPA	39.792	347.27	8.26	35.48	I	C	LP	P
UPA	39.792	347.27	8.26	35.48	I	C	SP	P
CAR	40.738	6.64	8.24	35.38	I	C	SP	P
TRN	41.765	14.74	8.15	34.94	I	C	SP	P
SJG	48.334	6.60	7.78	33.14	I	C	LP	P
SJG	48.334	6.60	7.78	33.14	I	C	SP	P
III	55.417	327.04	7.21	30.44	I	C	SP	P
TPM	55.754	327.81	7.18	30.30	I	C	SP	P
OXM	56.317	327.37	7.14	30.11	I	C	SP	P
SPA	59.919	180.00	6.88	28.91	I	C	SP	P
SHA	62.677	343.71	6.68	28.00	I	C	LP	P
RSCP	66.854	347.39	6.30	26.28	I	C	LP	P
SBA	66.863	191.28	6.30	26.28	I	C	SP	P
BLA	67.641	352.16	6.26	26.10	I	C	LP	P
BHO	68.009	339.13	6.22	25.92	I	C	SP	P
TUL	69.709	339.00	6.10	25.38	I	C	LP	P
RLO	69.712	339.71	6.10	25.38	I	C	SP	P
SCP	70.940	354.75	5.99	24.89	I	C	LP	P
WES	72.269	0.01	5.88	24.41	I	C	LP	P
ANMO	72.804	330.34	5.85	24.27	I	C	LP	P
RSNY	74.489	357.63	5.74	23.79	I	C	LP	P
GAC	75.681	357.00	5.68	23.52	I	C	LP	P
GOL	76.446	333.62	5.61	23.22	E	C	LP	P
RSSD	79.819	336.71	5.36	22.13	I	C	LP	P
JAS1	81.872	322.86	5.17	21.30	I	C	SP	P
VIR	82.779	118.16	5.11	21.04	I	C	SP	P
BKS	82.795	321.75	5.11	21.04	I	C	LP	P
RSON	83.135	345.94	5.11	21.04	I	C	LP	P
BFS	83.313	117.10	5.08	20.91	I	C	SP	P
SLR	85.060	116.79	4.99	20.53	I	C	LP	P
SLR	85.060	116.79	4.99	20.53	I	C	SP	P
EVA	85.274	117.82	4.96	20.40	I	C	SP	P
SNZO	86.286	223.62	4.86	19.97	I	C	LP	P
BUL	88.213	112.19	4.77	19.58	I	C	LP	P
BUL	88.213	112.19	4.77	19.58	I	C	SP	P
COR	88.263	325.72	4.75	19.50	I	C	SP	P

Table 49. Station data for event 160 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality. Direction, and Source of Earth Motion			
FFC	88.645	342.79	4.75	19.50	I	C	SP	P
LON	89.154	327.96	4.73	19.41	I	C	LP	P
MTH	89.874	43.62	4.71	19.33	I	C	SP	P
LSZ	90.394	107.85	4.70	19.29	I	D	SP	P
KRI	90.752	109.88	4.69	19.24	I	C	SP	P
PRL	91.238	44.21	4.69	19.24	I	C	SP	P
BCAO	92.088	86.12	4.67	19.16	I	C	LP	P
BNG	92.099	86.12	4.67	19.16	I	C	SP	P
MTD	92.375	110.84	4.66	19.11	I	C	SP	P
TOL	93.606	45.34	4.63	18.99	I	C	LP	P
HON	97.725	290.06	4.52	18.52	E	C	LP	P
VAL	97.733	33.16	4.52	18.52	E	C	LP	P
RSNT	98.691	341.21	4.49	18.39	I	C	LP	P
GDH	100.057	6.35	4.45	18.22	E	C	LP	P
NAI	104.962	100.44	4.45	18.22	E	C	LP	P
STU	106.354	42.85	1.89	7.63	E	C	LP	Pdf
TRI	107.800	47.16	1.89	7.63	I	C	SP	Pdf
ADE	109.229	205.81	1.89	7.63	E	C	LP	Pdf
COP	111.089	37.12	1.89	7.63	E	C	LP	Pdf
DAG	111.504	11.34	1.89	7.63	I	C	SP	Pdf
KBS	118.169	12.59	1.88	7.58	E	N	LP	PKP
IR5	131.471	68.08	1.85	7.46	I	C	SP	PKP
MHI	138.799	68.14	1.78	7.19	I	C	SP	PKP
GUA	142.688	251.54	1.72	6.95	E	C	LP	PKP
KOD	144.782	117.84	1.68	6.80	I	C	SP	PKP
MAT	154.614	292.16	1.39	5.59	I	C	SP	PKP
SNG	155.833	160.15	1.35	5.43	I	C	LP	PKP
BAG	162.431	221.01	1.07	4.30	E	C	LP	PKP
SEO	163.166	300.53	1.02	4.10	E	C	LP	PKP
ANP	167.553	249.17	0.74	2.98	I	C	LP	PKP
BJI	168.471	329.89	0.74	2.98	E	C	LP	PKP
SSE	169.189	277.62	0.68	2.74	E	C	LP	PKP
KMI	172.670	132.76	0.44	1.77	E	C	LP	PKP

Table 50. Station data for event 165.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ANT	5.237	323.19	13.37	94.05	I	D	LP	P
PEL	6.069	210.72	13.39	92.16	E	C	LP	P
ROCH	6.081	213.76	13.39	92.14	I	C	SP	P
BACH	6.163	208.40	13.39	92.08	I	C	SP	P
SAN	6.321	209.06	13.39	87.95	I	C	SP	P
LPB	11.415	354.65	13.03	76.38	E	C	LP	P
ZOBO	11.678	354.63	12.99	75.82	E	C	SP	P
BOG	33.096	347.02	8.62	40.05	E	C	LP	P
UPA	38.669	339.92	8.29	38.22	E	D	LP	P
SJG	45.797	1.12	7.90	36.13	E	C	LP	P
SPA	62.206	180.00	6.65	29.76	I	D	SP	P
RSCP	65.598	343.42	6.38	28.43	I	D	LP	P
WES	70.096	356.59	6.02	26.70	I	D	SP	P
RSNY	72.473	354.36	5.85	25.89	I	D	LP	P
ANMO	72.829	326.87	5.83	25.79	I	D	LP	P
GAC	73.705	353.82	5.77	25.48	I	D	LP	P
MAW	77.680	162.48	5.51	24.27	I	D	SP	P
RSSD	79.331	333.80	5.39	23.70	I	D	LP	P
RSON	81.938	343.28	5.15	22.61	I	D	LP	P
JAS	82.468	320.16	5.12	22.47	I	D	LP	P
SLR	82.648	115.10	5.11	22.42	E	D	LP	P
SLR	82.648	115.10	5.11	22.42	I	D	SP	P
BUL	85.505	110.28	4.92	21.53	I	D	LP	P
BNG	88.123	84.02	4.74	20.73	I	C	SP	P
LON	89.312	325.80	4.71	20.59	I	D	LP	P
TOL	89.321	43.27	4.71	20.59	E	C	LP	P
EDM	90.309	334.20	4.70	20.53	I	D	SP	P
SNZO	90.536	221.56	4.70	20.53	I	D	LP	P
RJF	95.833	41.31	4.54	19.82	I	C	SP	P
CAF	95.943	41.84	4.54	19.81	I	C	SP	P
LPF	95.950	38.05	4.54	19.80	I	C	SP	P
AFI	96.189	250.81	4.54	19.78	E	D	LP	P
GRR	96.257	37.83	4.53	19.78	I	C	SP	P
LSF	96.371	40.53	4.53	19.77	I	C	SP	P
FLN	96.678	37.67	4.53	19.74	I	C	SP	P
LDF	96.776	37.94	4.52	19.73	I	C	SP	P
TCF	96.784	40.76	4.52	19.73	I	C	SP	P
MZF	96.960	40.97	4.52	19.71	I	C	SP	P
BGF	97.300	40.78	4.51	19.68	I	C	SP	P
GDH	97.413	4.80	4.51	19.67	E	D	LP	P
AVF	97.719	40.77	4.51	19.64	I	C	SP	P
LRG	97.759	44.77	4.51	19.65	I	C	SP	P
LMR	97.789	44.93	4.51	19.64	I	C	SP	P
RSNT	97.804	339.74	4.51	19.64	I	D	LP	P
SMF	97.924	41.08	4.50	19.63	I	C	SP	P
SSF	97.954	40.60	4.50	19.62	I	C	SP	P
FRF	97.992	44.78	4.50	19.62	I	C	SP	P
LBF	98.185	40.84	4.49	19.59	I	C	SP	P
LOR	98.269	40.55	4.49	19.56	I	C	SP	P
LPG	99.049	43.14	4.47	19.48	I	C	SP	P

Table 50. Station data for event 165 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality. Direction, and Source of Earth Motion			
EMS	99.449	42.71	4.46	19.44	E	C	LP	P
EBH	99.580	30.44	4.46	19.42	I	C	SP	P
ELO	99.622	30.19	4.46	19.42	I	C	SP	P
ESY	99.788	31.01	4.45	19.39	I	C	SP	Pdf
EDU	99.979	30.36	4.44	19.35	I	C	SP	Pdf
HAU	100.089	40.81	4.44	19.35	I	C	SP	Pdf
BSF	100.259	41.11	4.44	19.35	I	C	SP	Pdf
COP	106.999	35.61	1.89	8.11	E	D	LP	Pdf
DAG	108.542	10.44	1.89	8.11	E	D	LP	Pdf
NUR	114.694	32.99	1.88	8.07	E	C	LP	PKP
CTA	122.424	217.63	1.87	8.02	I	D	SP	PKP
SNG	156.236	148.11	1.33	5.71	I	D	LP	PKP
MAT	157.078	298.29	1.30	5.56	I	D	SP	PKP
ANP	171.894	252.01	0.50	2.16	I	D	LP	PKP

Table 51. Station data for event 211.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
ZON	5.563	237.88	8.38	121.89	I	D	SP	P
BAA	7.106	147.06	9.20	111.15	I	D	LP	P
FCH	7.668	231.16	9.40	107.67	I	D	SP	P
PEL	7.841	233.65	9.45	106.70	I	D	SP	P
PEL	7.841	233.65	9.45	106.70	I	D	LP	P
ROCH	7.985	235.75	9.49	105.87	I	D	SP	P
ANT	8.190	305.65	9.54	104.71	I	C	SP	P
LNV	8.793	231.29	9.67	101.52	I	D	SP	P
CCH	11.583	345.67	9.86	91.86	I	D	SP	P
LPB	12.926	338.34	9.82	84.38	I	D	SP	P
ZOBO	13.181	338.62	9.81	83.60	I	D	SP	P
ARE	14.388	325.98	9.71	79.75	I	D	SP	P
BDF	19.146	50.62	9.33	71.02	I	D	SP	P
ATB	27.319	24.37	8.66	61.41	I	D	SP	P
SOB1	28.517	51.59	8.60	60.68	I	D	SP	P
SDV	38.041	347.96	8.10	55.18	I	D	SP	P
CUM	38.930	358.42	8.06	54.73	I	D	SP	P
CAR	39.129	354.12	8.05	54.62	I	D	SP	P
UPA	40.647	334.69	7.97	53.83	I	D	SP	P
UPA	40.647	334.69	7.97	53.83	I	D	LP	P
BIM	42.992	2.97	7.83	52.55	I	D	SP	P
MVM	43.038	3.21	7.83	52.53	I	D	SP	P
FDF	43.204	2.84	7.82	52.43	I	D	SP	P
CRM	43.235	3.17	7.82	52.41	I	D	SP	P
BPA	45.477	1.75	7.66	50.88	I	D	SP	P
SJG	46.609	356.09	7.58	50.15	I	D	SP	P
SJG	46.609	356.09	7.58	50.15	I	D	LP	P
VHO	56.014	320.41	6.89	44.31	I	C	SP	P
PIO	56.138	318.51	6.88	44.24	I	D	SP	P
PIM	59.831	316.57	6.61	42.04	I	D	SP	P
SPA	61.476	180.00	6.47	41.01	E	C	LP	P
SHA	63.669	336.05	6.31	39.74	I	D	LP	P
KIC	66.121	67.82	6.11	38.29	I	D	SP	P
RSCP	67.343	340.31	6.03	37.69	I	D	LP	P
BLA	67.518	345.14	6.02	37.60	I	D	SP	P
JCT	68.428	326.35	5.96	37.13	E	D	LP	P
BHO	69.521	332.35	5.88	36.58	I	D	SP	P
SCP	70.457	348.20	5.82	36.11	E	D	LP	P
SUR	70.576	116.84	5.81	36.05	I	D	SP	P
RLO	71.136	333.16	5.77	35.81	I	D	SP	P
TUL	71.222	332.46	5.77	35.77	I	D	LP	P
TUL	71.222	332.46	5.77	35.77	I	D	SP	P
SIO	71.291	331.99	5.76	35.74	I	D	SP	P
OCO	71.590	331.01	5.75	35.62	I	D	SP	P
QZO	71.868	329.33	5.73	35.51	I	D	SP	P
RRO	71.914	330.33	5.73	35.49	I	D	SP	P
PCO	72.382	332.00	5.69	35.22	I	D	SP	P
TEN	72.418	42.42	5.69	35.20	I	D	SP	P
ACO	73.302	330.46	5.63	34.81	I	D	SP	P
RSNY	73.612	351.55	5.62	34.68	I	D	LP	P

Table 51. Station data for event 211 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MNT	74.440	352.38	5.57	34.33	I	D	SP	P
OTT	74.602	350.86	5.56	34.26	I	D	SP	P
ANMO	75.339	324.38	5.51	33.95	E	D	LP	P
BFS	77.549	113.85	5.34	32.75	I	D	SP	P
SEK	77.600	115.50	5.33	32.71	I	D	SP	P
KSR	78.090	112.95	5.28	32.38	I	D	SP	P
GOL	78.561	328.07	5.25	32.13	E	D	LP	P
BPI	78.868	113.70	5.22	31.96	I	D	SP	P
SLR	79.266	113.40	5.19	31.73	E	D	LP	P
SLR	79.266	113.40	5.19	31.73	I	D	SP	P
EVA	79.560	114.42	5.17	31.58	I	D	SP	P
LHC	80.237	342.69	5.13	31.31	I	D	SP	P
BUL	82.074	108.52	5.02	30.56	I	D	SP	P
IFR	82.748	45.60	4.98	30.29	I	D	SP	P
RSON	83.667	341.09	4.90	29.76	I	D	LP	P
PRI	84.161	316.66	4.86	29.50	I	D	SP	P
KRI	84.454	106.03	4.83	29.33	I	D	SP	P
LLA	84.645	316.87	4.82	29.26	I	D	SP	P
PRS	84.713	316.42	4.82	29.24	I	D	SP	P
BNG	84.854	82.14	4.82	29.22	I	D	SP	P
JAS1	85.207	318.12	4.80	29.10	I	D	SP	P
JAS	85.232	318.13	4.80	29.10	E	D	LP	P
MHC	85.543	317.04	4.78	28.97	I	D	SP	P
PTO	85.875	38.10	4.77	28.88	E	D	LP	P
PTO	85.875	38.10	4.77	28.88	I	D	SP	P
CCMT	86.117	327.09	4.76	28.81	I	D	SP	P
MTD	86.136	106.89	4.76	28.81	I	D	SP	P
SXM	86.264	328.79	4.75	28.78	I	D	SP	P
LCCM	86.337	328.23	4.75	28.76	I	D	SP	P
LRM	86.592	327.92	4.74	28.69	I	D	SP	P
ORV	86.921	318.77	4.72	28.59	I	D	SP	P
TOL	87.583	41.38	4.71	28.50	I	D	SP	P
TOL	87.583	41.38	4.71	28.50	E	D	LP	P
WDC	88.196	319.02	4.70	28.44	I	D	SP	P
FFC	89.529	338.67	4.68	28.31	I	D	SP	P
CLX	89.590	328.20	4.68	28.30	I	D	SP	P
LHD	89.823	328.03	4.67	28.23	I	D	SP	P
LDM	89.852	328.28	4.67	28.22	I	D	SP	P
RXF	90.060	328.66	4.66	28.18	I	D	SP	P
YKM	90.328	328.38	4.65	28.14	I	D	SP	P
LWI	90.659	92.89	4.65	28.09	I	D	SP	P
BOH	91.400	40.38	4.62	27.95	I	D	SP	P
ISSF	91.476	40.54	4.62	27.93	I	D	SP	P
MADF	91.531	40.44	4.62	27.92	I	D	SP	P
ESCF	91.634	40.60	4.62	27.90	I	D	SP	P
JAU	91.726	40.72	4.62	27.89	I	D	SP	P
OGE	91.748	40.57	4.61	27.88	I	D	SP	P
LON	91.853	324.01	4.61	27.88	E	D	LP	P
EPF	92.130	41.05	4.61	27.83	I	D	SP	P
EDM	92.478	332.46	4.59	27.73	I	D	SP	P

Table 51. Station data for event 211 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MLS	92.515	41.44	4.59	27.72	I	D	SP	P
LFF	93.531	39.72	4.55	27.46	I	D	SP	P
LPO	93.626	40.12	4.55	27.44	I	D	SP	P
MFF	94.066	38.03	4.54	27.38	I	D	SP	P
RJF	94.189	39.77	4.54	27.37	I	D	SP	P
CAF	94.270	40.31	4.53	27.36	I	D	SP	P
LPF	94.482	36.52	4.53	27.33	I	D	SP	P
LSF	94.768	39.02	4.53	27.30	I	D	SP	P
GRR	94.800	36.32	4.52	27.29	I	D	SP	P
TCF	95.168	39.27	4.52	27.25	I	D	SP	P
FLN	95.229	36.18	4.52	27.24	I	D	SP	P
LDF	95.312	36.47	4.51	27.23	I	D	SP	P
BGF	95.682	39.32	4.51	27.18	I	D	SP	P
CDR	95.700	42.88	4.51	27.18	I	D	SP	P
LRG	95.932	43.31	4.50	27.15	I	D	SP	P
LMR	95.954	43.47	4.50	27.14	I	D	SP	P
AVF	96.101	39.33	4.50	27.12	I	D	SP	P
FRF	96.164	43.34	4.50	27.12	I	D	SP	P
SMF	96.289	39.65	4.49	27.09	I	D	SP	P
SSF	96.345	39.17	4.49	27.09	I	D	SP	P
LBF	96.563	39.43	4.49	27.06	I	D	SP	P
LOR	96.661	39.15	4.49	27.04	I	D	SP	P
CVF	96.981	45.07	4.48	27.01	I	D	SP	P
LPG	97.305	41.76	4.47	26.92	I	D	SP	P
GDH	97.897	3.45	4.45	26.82	E	D	LP	P
NAI	98.131	95.91	4.45	26.79	E	D	LP	P
HAU	98.466	39.50	4.44	26.74	I	D	SP	P
BSF	98.619	39.81	4.44	26.73	I	D	SP	P
CDF	99.208	39.50	4.44	26.74	I	D	SP	P
RSNT	99.694	338.38	4.44	26.74	E	D	LP	P
TRI	101.616	44.18	4.44	26.74	I	D	SP	P
COL	113.380	332.44	1.88	11.00	I	D	LP	Pdf
HYB	143.175	99.27	1.70	9.95	I	D	SP	PKP
NDI	145.349	80.25	1.66	9.69	I	D	SP	PKP
CHG	160.917	117.08	1.10	6.39	I	D	SP	PKP
SHK	165.308	297.33	0.87	5.06	I	D	LP	PKP
LZH	166.780	52.80	0.79	4.59	I	D	SP	PKP
SEO	167.745	318.83	0.73	4.27	E	D	LP	PKP

Figure 20. Azimuthal equidistant map for geographic subdivision, Mid-Atlantic Ridge

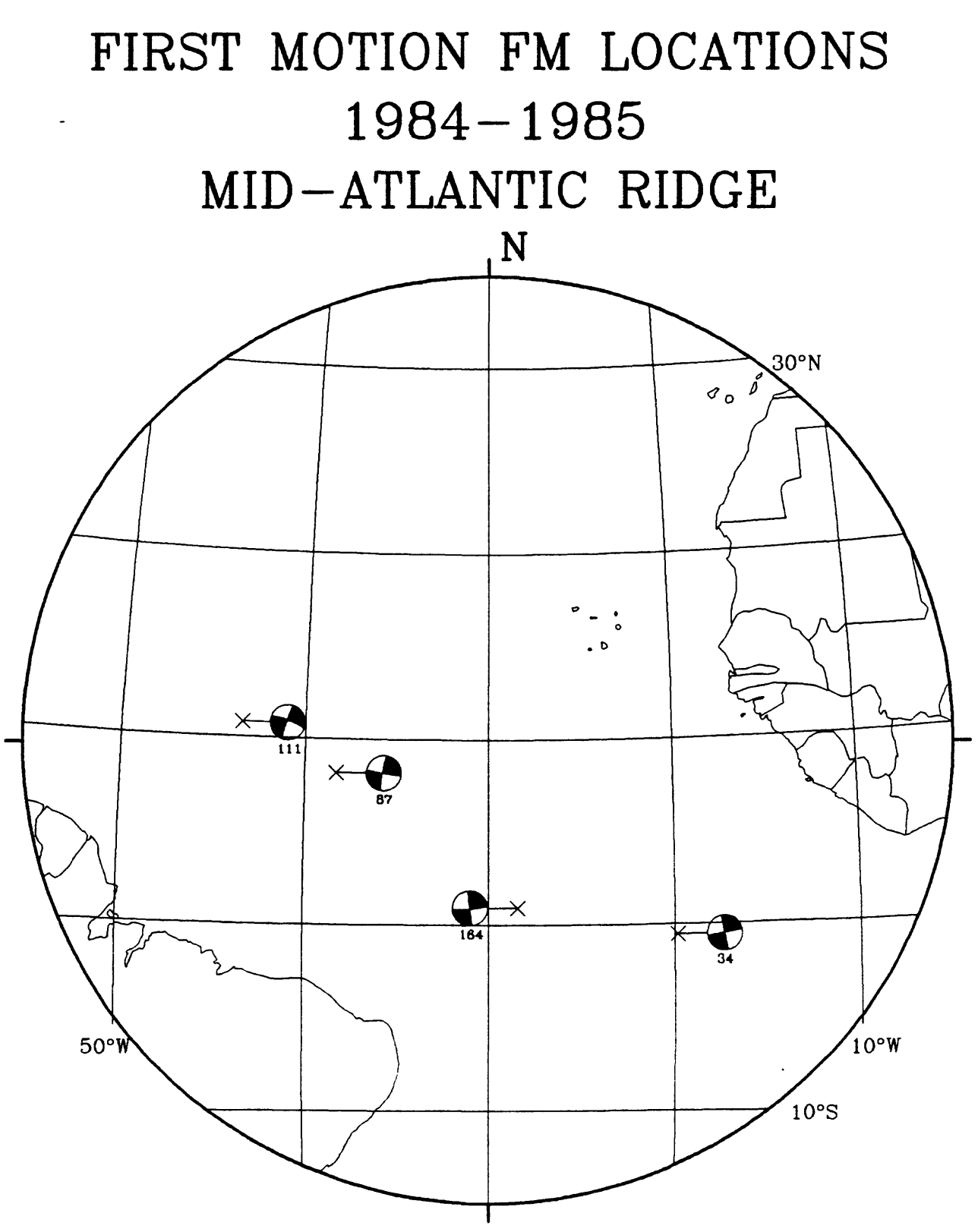
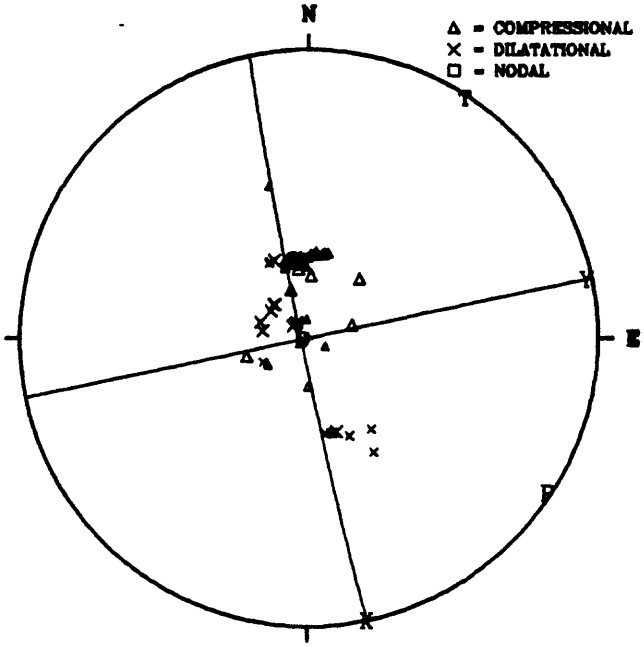


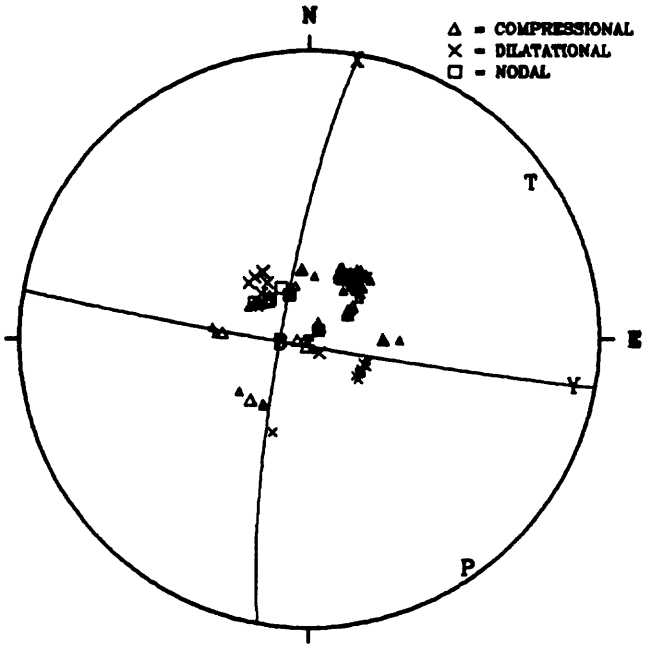
Table 52. Focal mechanism parameters for subdivision, Mid-Atlantic Ridge

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	168	88	0	258	90	-178	1	33	1	123	88	258
87	190	82	2	100	88	172	7	55	4	145	82	266
111	200	85	-10	291	80	-175	3	246	11	155	79	354
164	83	85	177	173	87	5	6	38	1	308	84	204

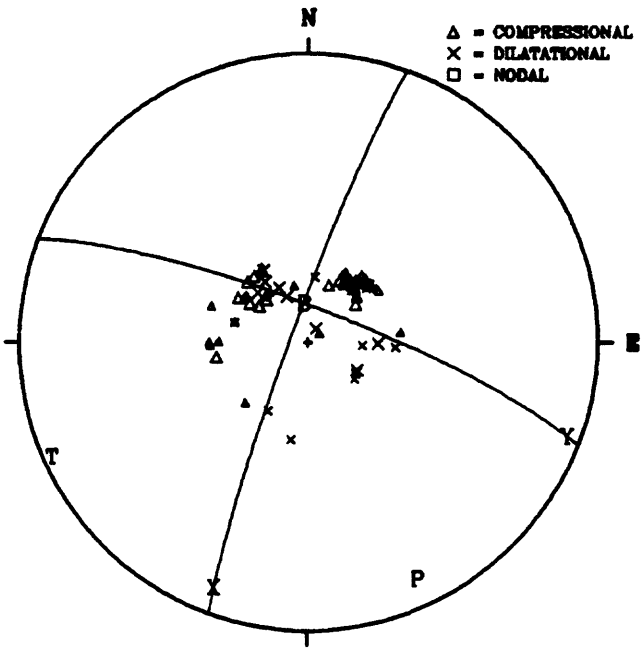
Figure 21. Lower hemisphere focal sphere projection for events 34, 87, 111, and 164.



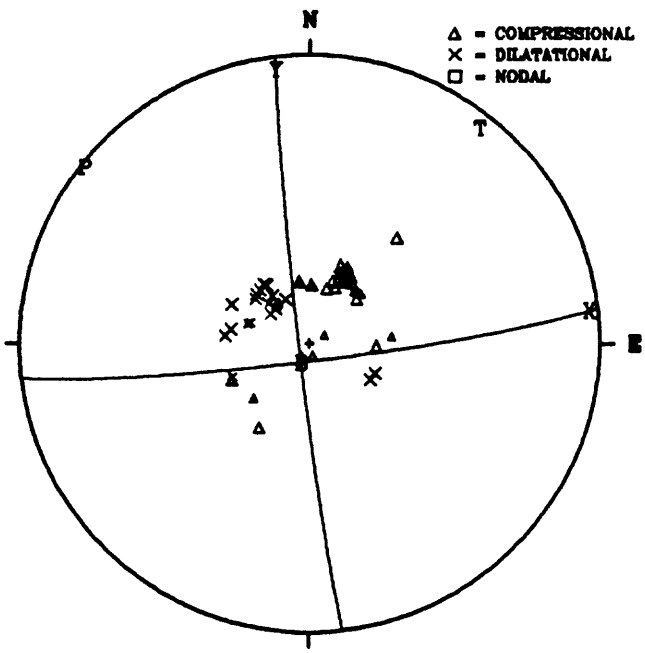
EVENT 34



EVENT 87



EVENT 111



EVENT 164

Table 53. Station data for event 34.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BNG	5.112	345.17	14.16	45.27	I	C	SP	P
KRI	18.822	149.79	12.21	37.78	I	D	SP	P
MTD	19.843	145.00	10.48	31.72	I	D	SP	P
BUL	21.280	156.79	10.08	30.38	I	D	SP	P
KSR	26.073	165.45	9.39	28.11	I	D	SP	P
SLR	26.330	162.67	9.34	27.94	I	D	SP	P
SLR	26.330	162.67	9.34	27.94	I	D	LP	P
BPI	26.671	163.46	9.34	27.94	I	D	SP	P
SWZ	27.000	169.22	9.29	27.78	I	D	SP	P
BFS	27.036	166.29	9.29	27.78	I	D	SP	P
PRY	27.235	165.01	9.29	27.78	I	D	SP	P
ELL	38.252	13.09	8.36	24.80	I	C	SP	P
YER	38.287	10.89	8.36	24.80	I	C	SP	P
ATH	38.483	4.90	8.36	24.80	I	C	SP	P
BCK	39.090	13.59	8.33	24.70	I	C	SP	P
MMB	42.076	4.33	8.16	24.17	I	C	SP	P
IST	42.212	10.30	8.16	24.17	I	C	LP	P
SKO	42.337	1.75	8.13	24.07	I	C	SP	P
ALM	42.570	333.24	8.13	24.07	I	D	SP	P
ALI	42.997	336.37	8.11	24.01	I	D	LP	P
VTS	43.046	3.62	8.11	24.01	I	C	SP	P
CRT	43.367	332.42	8.08	23.91	I	D	SP	P
PVL	43.748	5.63	8.08	23.91	I	C	SP	P
CVF	44.036	348.31	8.05	23.82	I	C	SP	P
PSN	44.649	8.60	8.03	23.76	I	C	SP	P
LRG	45.435	346.20	7.97	23.57	I	C	SP	P
FRF	45.468	346.52	7.97	23.57	I	C	SP	P
MLR	46.147	5.94	7.94	23.48	I	C	SP	P
CEY	46.328	354.74	7.91	23.38	I	C	SP	P
TRI	46.363	354.10	7.91	23.38	I	C	SP	P
LJU	46.620	354.90	7.91	23.38	I	C	SP	P
TMA	47.445	349.63	7.85	23.19	E	C	LP	P
MMK	47.563	348.79	7.85	23.19	E	C	LP	P
VDL	47.709	350.30	7.85	23.19	E	C	LP	P
DIX	47.700	348.30	7.85	23.19	E	C	LP	P
KBA	47.761	353.99	7.82	23.10	I	C	SP	P
EMS	47.789	347.86	7.82	23.10	E	C	LP	P
OSS	47.795	350.98	7.82	23.10	E	C	LP	P
BUD	47.829	359.24	7.82	23.10	I	C	SP	P
LLS	48.161	350.01	7.82	23.10	E	C	LP	P
GAP	48.430	352.03	7.79	23.01	I	C	SP	P
BHG	48.446	353.71	7.79	23.01	I	C	SP	P
SAX	48.472	350.44	7.79	23.01	E	C	LP	P
ZST	48.596	357.54	7.79	23.01	I	C	SP	P
VKA	48.703	356.85	7.79	23.01	I	C	SP	P
JOS	48.840	0.60	7.75	22.88	I	C	SP	P
ZUL	48.860	349.68	7.75	22.88	E	C	LP	P
MZF	48.979	344.14	7.75	22.88	I	C	SP	P
SMF	49.046	345.42	7.75	22.88	I	C	SP	P
FUR	49.077	352.40	7.75	22.88	I	C	SP	P

Table 53. Station data for event 34 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SLE	49.117	349.87	7.75	22.88	E	C	LP	P
TCF	49.148	343.86	7.75	22.88	I	C	SP	P
LSF	49.306	343.27	7.71	22.76	I	C	SP	P
LBF	49.329	345.70	7.71	22.76	I	C	SP	P
BSF	49.500	348.44	7.71	22.76	I	C	SP	P
SPC	49.531	0.33	7.71	22.76	I	C	SP	P
LOR	49.623	345.73	7.71	22.76	I	C	SP	P
HAU	49.756	348.14	7.67	22.63	I	C	SP	P
KHC	49.769	354.60	7.67	22.63	I	C	SP	P
GRC	49.846	345.10	7.67	22.63	I	C	SP	P
WET	49.852	354.01	7.67	22.63	I	C	SP	P
CDF	49.961	349.07	7.67	22.63	I	C	SP	P
STU	49.973	350.80	7.67	22.63	I	C	SP	P
BUH	50.041	349.96	7.67	22.63	I	C	SP	P
MFF	50.123	342.10	7.67	22.63	I	C	SP	P
PRU	50.537	355.56	7.63	22.51	I	C	SP	P
GRFO	50.583	352.74	7.63	22.51	I	C	LP	P
GRF	50.582	352.75	7.63	22.51	I	C	SP	P
HOF	51.115	353.43	7.59	22.38	I	C	SP	P
KSP	51.277	357.10	7.55	22.26	I	C	SP	P
BRG	51.465	355.21	7.55	22.26	I	C	SP	P
MOX	51.472	353.30	7.55	22.26	I	C	LP	P
LPF	51.674	342.23	7.55	22.26	I	C	SP	P
VDM	51.706	345.30	7.55	22.26	E	C	LP	P
LDF	51.905	343.25	7.50	22.10	I	C	SP	P
MHI	51.933	40.89	7.50	22.10	I	C	LP	P
GRR	51.937	342.57	7.50	22.10	I	C	SP	P
CLL	51.981	354.54	7.50	22.10	I	C	SP	P
FLN	52.162	343.07	7.50	22.10	I	C	SP	P
BNS	52.431	349.91	7.46	21.98	I	C	SP	P
ENN	52.473	348.88	7.46	21.98	I	C	SP	P
UCC	52.820	347.71	7.42	21.86	E	C	LP	P
DBN	53.889	348.84	7.34	21.61	I	C	LP	P
WIT	54.298	350.18	7.30	21.48	I	C	SP	P
HAM	54.447	352.72	7.30	21.48	I	C	SP	P
COP	56.363	354.96	7.15	21.02	I	C	LP	P
ECP	56.974	341.06	7.11	20.90	I	C	SP	P
ECB	57.266	340.92	7.08	20.81	I	C	SP	P
ETA	57.363	341.48	7.08	20.81	I	C	SP	P
MUD	57.472	352.99	7.08	20.81	I	C	SP	P
DLE	57.974	341.64	7.04	20.68	I	C	SP	P
DDK	57.995	341.83	7.04	20.68	I	C	SP	P
DCN	58.255	341.24	7.00	20.56	I	C	SP	P
DMU	58.610	341.80	7.00	20.56	I	C	SP	P
UPP	60.249	358.70	6.89	20.22	I	C	SP	P
BER	61.792	351.87	6.73	19.73	I	C	LP	P
BDF	68.463	253.46	6.19	18.09	I	C	LP	P
KEV	70.329	2.64	6.04	17.64	E	C	LP	P
GDH	84.657	339.94	5.03	14.62	E	C	LP	P
GDH	84.657	339.94	5.03	14.62	I	C	SP	P

Table 53. Station data for event 34 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
CYA	85.916	241.68	4.91	14.26	I	D	SP	P
SJG	86.369	288.07	4.87	14.14	E	D	LP	P
SPA	89.463	180.00	4.72	13.70	I	C	SP	P
FCH	89.830	236.85	4.71	13.67	I	C	SP	P
CHCH	90.125	236.25	4.71	13.67	I	C	SP	P
PEL	90.163	237.03	4.71	13.67	I	C	SP	P
TACH	90.367	236.52	4.70	13.64	I	C	SP	P
RSNY	93.512	314.41	4.63	13.43	E	D	LP	P
GAC	94.120	315.60	4.62	13.40	E	D	LP	P
UPA	99.360	278.95	4.47	12.96	I	D	LP	P
BAG	100.440	73.52	4.45	12.90	E	C	LP	P
RSCP	102.852	306.32	4.45	12.90	E	D	LP	P
RSON	105.105	323.00	1.89	5.44	E	D	LP	Pdf
RLO	110.242	308.52	1.89	5.44	I	D	SP	Pdf
GBO	110.447	308.23	1.89	5.44	I	D	SP	Pdf
TUL	110.909	308.42	1.89	5.44	E	D	LP	Pdf
RSSD	114.088	319.09	1.88	5.42	E	D	LP	PKP
EDM	114.784	331.13	1.88	5.42	E	D	SP	PKP
ANMO	119.462	310.51	1.88	5.40	E	D	LP	PKP
KDC	122.643	355.14	1.87	5.38	I	C	SP	PKP
CTA	123.677	114.61	1.87	5.38	I	C	SP	PKP

Table 54. Station data for event 87.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BAO	25.356	201.08	9.43	28.24	I	D	SP	P
CAR	27.851	276.97	9.20	27.49	I	C	SP	P
SDV	31.490	273.64	8.79	26.17	I	C	SP	P
KIC	33.822	90.77	8.63	25.66	I	C	SP	P
UPA	40.278	274.23	8.24	24.42	I	C	LP	P
LIS	40.431	36.63	8.24	24.42	I	C	SP	P
ARE	40.575	232.84	8.24	24.42	I	C	SP	P
SFS	40.877	41.57	8.22	24.36	I	C	SP	P
MAL	42.217	42.47	8.16	24.17	I	C	SP	P
PTO	42.353	34.32	8.13	24.07	I	C	SP	P
TAF	42.593	46.15	8.13	24.07	I	C	SP	P
CRT	43.015	42.44	8.11	24.01	I	C	SP	P
ALM	43.602	43.56	8.08	23.91	I	D	SP	P
TOL	44.252	38.94	8.03	23.76	I	C	LP	P
TOL	44.252	38.94	8.03	23.76	I	C	SP	P
ANT	44.259	223.52	8.03	23.76	I	C	LP	P
GUD	44.639	38.00	8.03	23.76	I	C	SP	P
ALI	45.721	42.90	7.97	23.57	I	D	LP	P
BLA	47.472	313.97	7.85	23.19	I	D	LP	P
SCP	47.501	319.53	7.85	23.19	I	D	LP	P
RSNY	47.665	325.60	7.85	23.19	I	D	LP	P
ZON	48.758	214.46	7.75	22.88	I	C	SP	P
EPF	48.757	37.99	7.75	22.88	I	C	SP	P
GAC	48.909	326.25	7.75	22.88	I	D	LP	P
MDZ	49.863	213.45	7.67	22.63	I	C	SP	P
LFF	50.071	36.13	7.67	22.63	I	C	SP	P
LPO	50.188	36.64	7.67	22.63	I	C	SP	P
MFF	50.540	33.90	7.63	22.51	I	C	SP	P
RJF	50.730	36.14	7.63	22.51	I	C	SP	P
CAF	50.843	36.83	7.59	22.38	I	C	SP	P
LPF	50.933	31.96	7.59	22.38	I	C	SP	P
FCH	50.992	214.26	7.59	22.38	I	C	SP	P
PEL	51.077	214.73	7.59	22.38	I	C	SP	P
BACH	51.123	214.40	7.59	22.38	I	C	SP	P
ROCH	51.135	215.14	7.59	22.38	I	C	SP	P
ECB	51.210	24.65	7.59	22.38	I	C	SP	P
ECP	51.244	25.05	7.59	22.38	I	C	SP	P
GRR	51.252	31.70	7.55	22.26	I	C	SP	P
LSF	51.274	35.15	7.55	22.26	I	C	SP	P
SAN	51.292	214.45	7.55	22.26	I	C	SP	P
ETA	51.689	24.69	7.55	22.26	I	C	SP	P
TCF	51.684	35.45	7.55	22.26	I	C	SP	P
FLN	51.681	31.53	7.55	22.26	I	C	SP	P
DCN	51.740	23.53	7.55	22.26	I	C	SP	P
LDF	51.763	31.88	7.50	22.10	I	C	SP	P
MZF	51.859	35.71	7.50	22.10	I	C	SP	P
PYM	51.851	36.41	7.50	22.10	I	C	SP	P
DLE	51.990	24.00	7.50	22.10	I	C	SP	P
DDK	52.147	24.03	7.50	22.10	I	C	SP	P
DMU	52.302	23.27	7.46	21.98	I	C	SP	P

Table 54. Station data for event 87 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
PLDF	52.330	36.47	7.46	21.98	I	C	SP	P
SSB	52.515	37.64	7.46	21.98	I	C	SP	P
AVF	52.619	35.47	7.46	21.98	I	C	SP	P
LRG	52.747	40.44	7.46	21.98	I	C	SP	P
GRC	52.740	34.81	7.46	21.98	I	C	SP	P
LMR	52.786	40.64	7.42	21.86	I	C	SP	P
SMF	52.822	35.85	7.42	21.86	I	C	SP	P
SSF	52.856	35.26	7.42	21.86	I	C	SP	P
FRF	52.981	40.45	7.42	21.86	I	C	SP	P
LBF	53.084	35.56	7.42	21.86	I	C	SP	P
LOR	53.171	35.21	7.42	21.86	I	C	LP	P
CVF	53.994	42.46	7.34	21.61	I	C	SP	P
EMS	54.361	37.84	7.30	21.48	E	C	LP	P
DIX	54.658	38.02	7.30	21.48	E	C	LP	P
EKA	54.842	24.03	7.26	21.36	I	C	SP	P
MMK	54.983	38.28	7.26	21.36	E	C	LP	P
HAU	54.989	35.54	7.26	21.36	I	C	SP	P
ROF	55.144	36.11	7.26	21.36	I	C	SP	P
BSF	55.157	35.91	7.26	21.36	I	C	SP	P
UCC	55.415	31.82	7.22	21.24	E	C	LP	P
TMA	55.567	38.58	7.22	21.24	E	C	LP	P
CDF	55.731	35.50	7.22	21.24	I	C	SP	P
WLF	55.750	33.74	7.19	21.14	E	C	LP	P
ZUL	55.923	36.93	7.19	21.14	E	C	LP	P
LLS	55.997	37.81	7.19	21.14	E	C	LP	P
SLE	56.121	36.66	7.19	21.14	E	C	LP	P
ENN	56.222	32.52	7.19	21.14	I	C	SP	P
RMP	56.311	44.68	7.15	21.02	I	C	LP	P
SAX	56.385	37.54	7.15	21.02	E	C	LP	P
MNS	56.507	44.03	7.15	21.02	I	C	SP	P
DBN	56.577	30.88	7.15	21.02	I	C	LP	P
OSS	56.615	38.44	7.15	21.02	E	C	LP	P
STB	56.620	33.07	7.15	21.02	I	C	SP	P
BNS	56.997	32.83	7.11	20.90	I	C	SP	P
STU	57.017	35.88	7.11	20.90	I	C	LP	P
BCAO	57.067	90.01	7.11	20.90	I	C	LP	P
BNG	57.078	90.00	7.11	20.90	I	C	SP	P
WTS	57.357	31.65	7.08	20.81	I	C	SP	P
GAP	57.530	37.93	7.08	20.81	I	C	SP	P
FUR	57.964	37.28	7.04	20.68	I	C	SP	P
GRFO	58.619	35.65	7.00	20.56	I	C	LP	P
GRF	58.622	35.66	7.00	20.56	I	C	SP	P
GRA1	58.622	35.66	7.00	20.56	I	C	SP	P
BHG	58.744	38.29	7.00	20.56	I	D	SP	P
KBA	58.767	39.13	6.97	20.47	I	C	SP	P
HOF	59.283	35.23	6.93	20.35	I	C	SP	P
MOX	59.287	34.80	6.93	20.35	I	C	SP	P
WET	59.349	36.79	6.93	20.35	I	C	SP	P
KMR	59.651	38.34	6.93	20.35	I	C	LP	P
HAM	59.742	31.35	6.93	20.35	I	C	SP	P

Table 54. Station data for event 87 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
KHC	59.758	37.03	6.89	20.22	I	C	SP	P
CLL	60.370	34.58	6.85	20.10	I	C	SP	P
PRU	60.686	36.43	6.85	20.10	I	C	SP	P
BRG	60.714	35.33	6.85	20.10	I	C	SP	P
MUD	60.947	28.14	6.81	19.98	I	C	SP	P
BRN	60.979	33.50	6.81	19.98	I	C	SP	P
VKA	61.081	38.77	6.81	19.98	I	C	SP	P
ZST	61.543	39.07	6.77	19.86	I	C	SP	P
BER	61.593	23.15	6.77	19.86	I	C	SP	P
GDH	61.747	354.09	6.77	19.86	I	C	LP	P
GDH	61.747	354.09	6.77	19.86	I	C	SP	P
RSON	61.959	324.01	6.73	19.73	I	D	LP	P
RSON	61.959	324.01	6.73	19.73	I	D	SP	P
KSP	62.057	36.06	6.73	19.73	I	C	SP	P
COP	62.116	29.97	6.73	19.73	E	C	LP	P
SRO	62.170	39.80	6.73	19.73	I	C	SP	P
BUD	62.512	40.33	6.69	19.61	I	C	SP	P
KONO	62.891	25.25	6.64	19.46	I	C	LP	P
PSZ	63.210	40.08	6.64	19.46	I	C	SP	P
THE	63.369	48.60	6.60	19.34	I	C	SP	P
JOS	63.802	39.62	6.56	19.22	I	C	SP	P
KRA	63.939	37.83	6.56	19.22	I	C	SP	P
VTS	63.985	46.51	6.56	19.22	I	C	SP	P
MMB	64.140	47.70	6.56	19.22	I	C	SP	P
LTX	64.152	298.54	6.56	19.22	I	C	SP	P
CLO	64.312	43.76	6.52	19.09	I	C	SP	P
DEV	64.591	42.92	6.52	19.09	I	C	SP	P
HFS	64.903	26.01	6.48	18.97	I	C	SP	P
SLL	64.913	25.57	6.48	18.97	I	C	SP	P
COZ	65.428	43.80	6.44	18.85	I	C	SP	P
DIM	65.592	47.52	6.44	18.85	I	D	SP	P
UPP	66.520	27.29	6.36	18.61	I	C	SP	P
RSSD	66.628	314.56	6.36	18.61	I	D	LP	P
RSSD	66.628	314.56	6.36	18.61	I	D	SP	P
ANMO	67.063	304.40	6.31	18.46	I	N	LP	P
ALQ	67.063	304.39	6.31	18.46	I	C	SP	P
DST	67.453	50.57	6.27	18.33	I	C	SP	P
DAG	69.398	4.83	6.11	17.85	I	C	SP	P
SUR	69.607	128.86	6.11	17.85	I	D	SP	P
SWZ	71.295	122.20	5.96	17.40	I	D	SP	P
BUL	72.004	114.20	5.93	17.31	I	D	LP	P
KRI	72.049	110.60	5.93	17.31	I	C	SP	P
BFS	72.429	121.46	5.89	17.19	I	C	SP	P
BLF	72.666	123.83	5.89	17.19	I	D	SP	P
VIR	72.881	122.61	5.86	17.10	I	D	SP	P
PRY	73.020	121.29	5.86	17.10	I	D	SP	P
SLR	73.337	119.87	5.82	16.98	I	D	SP	P
GRM	74.441	127.80	5.75	16.77	I	D	SP	P
RXF	74.889	318.34	5.72	16.68	I	C	SP	P
LDM	74.982	317.91	5.72	16.68	I	C	SP	P

Table 54. Station data for event 87 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
OBN	74.986	35.09	5.72	16.68	I	C	SP	P
LAC	75.223	303.34	5.72	16.68	I	D	SP	P
RSNT	76.228	332.37	5.65	16.47	I	N	LP	P
MNA	76.641	307.50	5.62	16.38	I	C	SP	P
LON	79.313	316.00	5.42	15.78	E	N	LP	P
MBC	79.855	346.12	5.37	15.63	I	C	SP	P
COR	80.409	313.83	5.31	15.45	E	C	LP	P
TAB	81.183	52.74	5.27	15.33	I	C	LP	P
IR2	85.043	54.83	4.99	14.50	I	C	SP	P
FBAS	90.230	335.95	4.71	13.67	I	C	SP	P
FBAL	90.407	336.17	4.70	13.64	E	C	LP	P
COL	90.550	336.21	4.70	13.64	E	N	LP	P
MHI	91.831	53.12	4.67	13.55	I	C	LP	P
QUE	99.314	57.62	4.47	12.96	I	C	LP	P
ANP	141.693	29.50	1.74	5.01	I	C	LP	PKP
NWAO	146.855	141.32	1.64	4.72	E	D	LP	PKP
BAG	148.161	39.86	1.62	4.65	E	C	LP	PKP
DAV	158.252	46.20	1.26	3.63	E	C	LP	PKP
HNR	161.438	264.77	1.12	3.22	I	C	LP	PKP
ASPA	163.090	156.37	1.02	2.92	I	C	SP	PKP
CTA	167.199	201.92	0.80	2.29	I	C	LP	PKP
CTAO	167.199	201.92	0.80	2.29	I	C	LP	PKP
PMG	173.997	257.87	0.38	1.09	I	C	LP	PKP

Table 55. Station data for event 111.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SJG	23.140	290.91	9.78	29.38	I	C	SP	P
TOV	25.940	270.20	9.39	28.11	I	C	SP	P
BAO	26.640	189.80	9.34	27.94	I	D	SP	P
SDV	26.851	268.37	9.29	27.78	I	C	SP	P
KDS	30.630	83.57	8.87	26.42	I	C	SP	P
BOG	30.938	260.94	8.83	26.30	I	C	LP	P
UPA	35.585	270.37	8.53	25.34	I	C	SP	P
KIC	38.504	93.34	8.36	24.80	I	D	SP	P
ARE	38.769	226.09	8.33	24.70	I	C	SP	P
TIO	39.044	53.65	8.33	24.70	I	C	SP	P
WES	39.781	327.22	8.27	24.51	I	C	LP	P
LIS	41.329	41.88	8.19	24.26	I	C	SP	P
BLA	42.375	314.56	8.13	24.07	I	C	LP	P
SCP	42.565	320.62	8.13	24.07	I	C	LP	P
RSNY	42.964	327.20	8.11	24.01	E	C	LP	P
PTO	43.025	39.24	8.11	24.01	I	C	LP	P
MAL	43.615	47.18	8.08	23.91	I	C	LP	P
GAC	44.234	327.80	8.05	23.82	I	D	LP	P
TAF	44.306	50.66	8.03	23.76	I	D	SP	P
CRT	44.403	47.00	8.03	23.76	I	C	SP	P
ALM	45.085	47.98	8.00	23.66	I	C	SP	P
TOL	45.322	43.38	7.97	23.57	E	C	LP	P
TOL	45.322	43.38	7.97	23.57	I	C	SP	P
SHA	45.881	302.43	7.94	23.48	E	C	LP	P
ALI	47.129	46.98	7.88	23.29	I	D	LP	P
EPF	49.708	41.70	7.71	22.76	I	C	SP	P
MLS	50.163	42.11	7.67	22.63	I	C	SP	P
ROCH	50.845	210.11	7.59	22.38	I	D	SP	P
ECB	50.927	28.14	7.59	22.38	I	C	SP	P
ECP	50.998	28.54	7.59	22.38	I	C	SP	P
LPO	51.007	40.16	7.59	22.38	I	C	SP	P
MFF	51.109	37.42	7.59	22.38	I	C	SP	P
ETA	51.407	28.11	7.55	22.26	I	C	SP	P
RJF	51.501	39.59	7.55	22.26	I	C	SP	P
CAF	51.674	40.24	7.55	22.26	I	C	SP	P
LSF	51.950	38.53	7.50	22.10	I	C	SP	P
BHO	52.312	305.21	7.46	21.98	I	C	SP	P
TCF	52.386	38.76	7.46	21.98	I	C	SP	P
MZF	52.583	39.00	7.46	21.98	I	C	SP	P
PYM	52.638	39.69	7.46	21.98	I	C	SP	P
BGF	52.901	38.72	7.42	21.86	I	C	SP	P
PLDF	53.119	39.68	7.42	21.86	I	C	SP	P
AVF	53.317	38.65	7.38	21.73	I	C	SP	P
SSB	53.409	40.80	7.38	21.73	I	C	SP	P
TUL	53.421	306.83	7.38	21.73	I	C	SP	P
SSF	53.533	38.41	7.38	21.73	I	C	SP	P
SMF	53.553	39.00	7.38	21.73	I	C	SP	P
LBF	53.787	38.68	7.34	21.61	I	C	SP	P
XDE	53.811	27.65	7.34	21.61	I	C	SP	P
LOR	53.841	38.32	7.34	21.61	I	C	SP	P

Table 55. Station data for event 111 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
TPM	54.180	285.61	7.34	21.61	I	C	SP	P
ECK	54.397	27.16	7.30	21.48	I	C	SP	P
III	54.566	284.87	7.30	21.48	I	D	SP	P
UCC	55.762	34.66	7.19	21.14	E	C	LP	P
BSF	55.878	38.73	7.19	21.14	I	C	SP	P
ENN	56.628	35.25	7.15	21.02	I	C	SP	P
RSON	57.173	324.55	7.11	20.90	E	D	LP	P
GRFO	59.296	38.04	6.93	20.35	I	C	LP	P
HAM	60.021	33.64	6.89	20.22	I	C	SP	P
WET	60.125	39.07	6.89	20.22	I	C	SP	P
KMR	60.565	40.56	6.85	20.10	I	C	LP	P
MUD	60.925	30.31	6.81	19.98	I	C	SP	P
CLL	60.940	36.76	6.81	19.98	I	C	SP	P
RSSD	61.536	314.46	6.77	19.86	E	D	LP	P
BCAO	61.675	90.76	6.77	19.86	I	D	LP	P
BNG	61.685	90.76	6.77	19.86	I	D	SP	P
ANMO	61.809	303.84	6.73	19.73	E	C	LP	P
VKA	62.027	40.82	6.73	19.73	I	D	SP	P
COP	62.255	31.99	6.69	19.61	I	C	LP	P
COP	62.255	31.99	6.69	19.61	I	C	SP	P
KONO	62.593	27.20	6.69	19.61	I	C	LP	P
KRA	64.786	39.57	6.48	18.97	I	C	SP	P
VTS	65.601	48.11	6.44	18.85	I	C	SP	P
PVL	67.108	47.72	6.31	18.46	I	C	SP	P
DAG	67.247	5.99	6.31	18.46	I	D	SP	P
BUC	67.920	46.44	6.23	18.21	I	C	SP	P
EDM	69.409	322.89	6.11	17.85	I	C	SP	P
CLX	69.828	317.42	6.07	17.73	I	C	SP	P
LDM	69.977	317.67	6.07	17.73	I	C	SP	P
LHD	70.116	317.44	6.07	17.73	I	C	SP	P
YKM	70.282	318.07	6.04	17.64	I	C	SP	P
NEW	71.155	317.34	6.00	17.52	I	C	SP	P
RSNT	71.802	332.43	5.93	17.31	E	D	LP	P
ANTO	72.622	51.57	5.89	17.19	I	C	LP	P
KEV	73.208	20.04	5.86	17.10	E	C	LP	P
JAS	73.215	306.43	5.86	17.10	E	C	LP	P
LON	74.254	315.59	5.75	16.77	E	C	LP	P
SUR	74.815	127.84	5.72	16.68	I	D	SP	P
MBC	76.236	346.17	5.65	16.47	I	C	SP	P
KSR	77.463	119.63	5.56	16.20	I	D	SP	P
BLF	77.925	122.97	5.52	16.08	I	D	SP	P
SLR	78.609	119.11	5.49	15.99	I	D	LP	P
NAI	80.663	93.09	5.31	15.45	I	D	SP	P
COL	86.306	335.53	4.87	14.14	E	D	LP	P
BAG	148.690	30.55	1.59	4.57	I	D	LP	PKP
KKM	153.735	51.37	1.43	4.10	I	C	SP	PKP

Table 56. Station data for event 164.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
MBO	17.537	39.78	12.52	38.91	I	C	LP	P
RDJ	27.717	210.41	9.25	27.65	I	C	LP	P
SJG	40.779	297.02	8.22	24.36	I	D	LP	P
ZOBO	42.737	244.68	8.13	24.07	I	C	LP	P
LPB	42.803	244.30	8.11	24.01	I	C	SP	P
PTO	43.857	21.71	8.05	23.82	I	C	LP	P
TOL	44.673	26.86	8.03	23.76	I	C	LP	P
BOG	45.716	275.51	7.97	23.57	E	D	LP	P
ARE	45.858	245.91	7.94	23.48	I	D	SP	P
BNG	47.046	84.84	7.88	23.29	I	C	SP	P
LGR	47.439	26.06	7.85	23.19	I	C	SP	P
EPF	49.179	27.80	7.75	22.88	I	C	SP	P
LFF	50.840	26.52	7.59	22.38	I	C	SP	P
CAF	51.431	27.46	7.55	22.26	I	C	SP	P
UPA	51.482	280.68	7.55	22.26	I	D	LP	P
MFF	51.768	24.58	7.50	22.10	I	C	SP	P
LSF	52.207	26.01	7.50	22.10	I	C	SP	P
PEL	52.254	225.52	7.46	21.98	I	C	SP	P
SAN	52.400	225.17	7.46	21.98	I	C	SP	P
LRG	52.477	31.60	7.46	21.98	I	C	SP	P
LMR	52.472	31.80	7.46	21.98	I	C	SP	P
PYM	52.490	27.42	7.46	21.98	I	C	SP	P
TCF	52.537	26.44	7.46	21.98	I	C	SP	P
LPF	52.562	22.89	7.46	21.98	I	C	SP	P
MZF	52.649	26.75	7.46	21.98	I	C	SP	P
SSB	52.863	28.82	7.42	21.86	I	C	SP	P
GRR	52.923	22.75	7.42	21.86	I	C	SP	P
LNV	53.195	225.05	7.42	21.86	I	C	SP	P
CVF	53.238	33.98	7.42	21.86	I	C	SP	P
FLN	53.373	22.74	7.38	21.73	I	D	SP	P
LDF	53.377	23.10	7.38	21.73	I	C	SP	P
SMF	53.544	27.22	7.38	21.73	I	C	SP	P
GRC	53.690	26.20	7.38	21.73	I	C	SP	P
SSF	53.705	26.66	7.38	21.73	I	C	SP	P
LBF	53.860	27.03	7.34	21.61	I	C	SP	P
LOR	54.019	26.72	7.34	21.61	I	C	SP	P
HAU	55.700	27.63	7.22	21.24	I	C	SP	P
BSF	55.783	28.04	7.19	21.14	I	C	SP	P
WES	56.383	322.73	7.15	21.02	I	D	LP	P
CDF	56.425	27.83	7.15	21.02	I	C	SP	P
STU	57.584	28.59	7.08	20.81	I	C	LP	P
STU	57.584	28.59	7.08	20.81	I	C	LP	P
DBN	58.236	23.68	7.04	20.68	I	D	LP	P
KBA	58.570	32.25	7.00	20.56	I	C	SP	P
GRF	59.185	28.86	6.97	20.47	I	C	SP	P
GRFO	59.182	28.85	6.97	20.47	I	C	LP	P
RSNY	59.530	323.29	6.93	20.35	I	D	LP	P
KMR	59.597	31.75	6.93	20.35	I	C	SP	P
BUL	59.634	113.97	6.93	20.35	I	D	LP	P
WET	59.642	30.16	6.93	20.35	I	C	SP	P

Table 56. Station data for event 164 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SCP	59.719	318.09	6.93	20.35	I	D	LP	P
HOF	59.915	28.64	6.89	20.22	I	C	SP	P
BLA	59.912	313.36	6.89	20.22	I	D	LP	P
KHC	59.985	30.51	6.89	20.22	I	C	SP	P
MOX	60.013	28.23	6.89	20.22	I	C	LP	P
ATH	60.343	45.90	6.85	20.10	I	C	SP	P
SKO	60.571	40.90	6.85	20.10	I	C	SP	P
SOP	60.675	33.23	6.85	20.10	I	C	SP	P
GAC	60.724	323.98	6.85	20.10	I	D	LP	P
SLR	60.792	120.25	6.81	19.98	I	D	LP	P
SLR	60.792	120.25	6.81	19.98	I	D	LP	P
VKA	60.887	32.58	6.81	19.98	I	C	SP	P
VAY	61.014	42.01	6.81	19.98	I	C	SP	P
PRU	61.014	30.20	6.81	19.98	I	C	SP	P
CLL	61.110	28.32	6.81	19.98	I	C	SP	P
ZST	61.271	33.00	6.77	19.86	I	C	SP	P
SRO	61.720	33.88	6.77	19.86	I	C	SP	P
MMB	61.911	42.19	6.73	19.73	I	C	SP	P
VTS	62.019	40.96	6.73	19.73	I	C	SP	P
KDZ	63.029	42.73	6.64	19.46	I	C	SP	P
RSCP	63.170	309.89	6.64	19.46	I	D	LP	P
COP	63.793	24.40	6.56	19.22	I	C	LP	P
BUC	64.715	40.21	6.52	19.09	I	C	SP	P
NAI	65.268	91.82	6.44	18.85	I	C	LP	P
KONO	65.548	20.10	6.44	18.85	I	C	LP	P
ANTO	67.619	46.85	6.27	18.33	I	C	LP	P
VHO	69.019	288.01	6.15	17.97	I	D	SP	P
GDH	70.256	350.76	6.04	17.64	I	C	LP	P
GDH	70.256	350.76	6.04	17.64	I	C	SP	P
TPM	71.395	289.62	5.96	17.40	I	D	SP	P
NUR	71.866	24.60	5.93	17.31	I	C	LP	P
RSON	73.881	323.18	5.79	16.89	I	D	LP	P
DAG	75.949	2.28	5.65	16.47	I	C	SP	P
DAG	75.949	2.28	5.65	16.47	I	C	LP	P
KEV	77.724	17.06	5.56	16.20	I	C	LP	P
RSSD	79.032	314.71	5.45	15.87	I	D	LP	P
EDM	86.206	323.11	4.91	14.26	I	C	SP	P
CLX	87.106	318.03	4.83	14.02	I	C	SP	P
RXF	87.121	318.69	4.83	14.02	I	C	SP	P
LDM	87.236	318.27	4.83	14.02	I	C	SP	P
LHD	87.391	318.07	4.80	13.93	I	C	SP	P
RSNT	87.397	332.35	4.80	13.93	I	D	LP	P
YKM	87.509	318.67	4.80	13.93	I	C	SP	P
JAS	91.019	307.79	4.70	13.64	I	D	LP	P
LON	91.650	316.62	4.69	13.61	I	D	LP	P
BAG	144.901	59.25	1.68	4.85	I	C	SP	PKP
NOU	154.286	213.24	1.43	4.10	I	C	SP	PKP
CTA	160.267	165.06	1.17	3.36	I	C	SP	PKP

Figure 22. Azimuthal equidistant map for geographic subdivision, South Atlantic Ocean

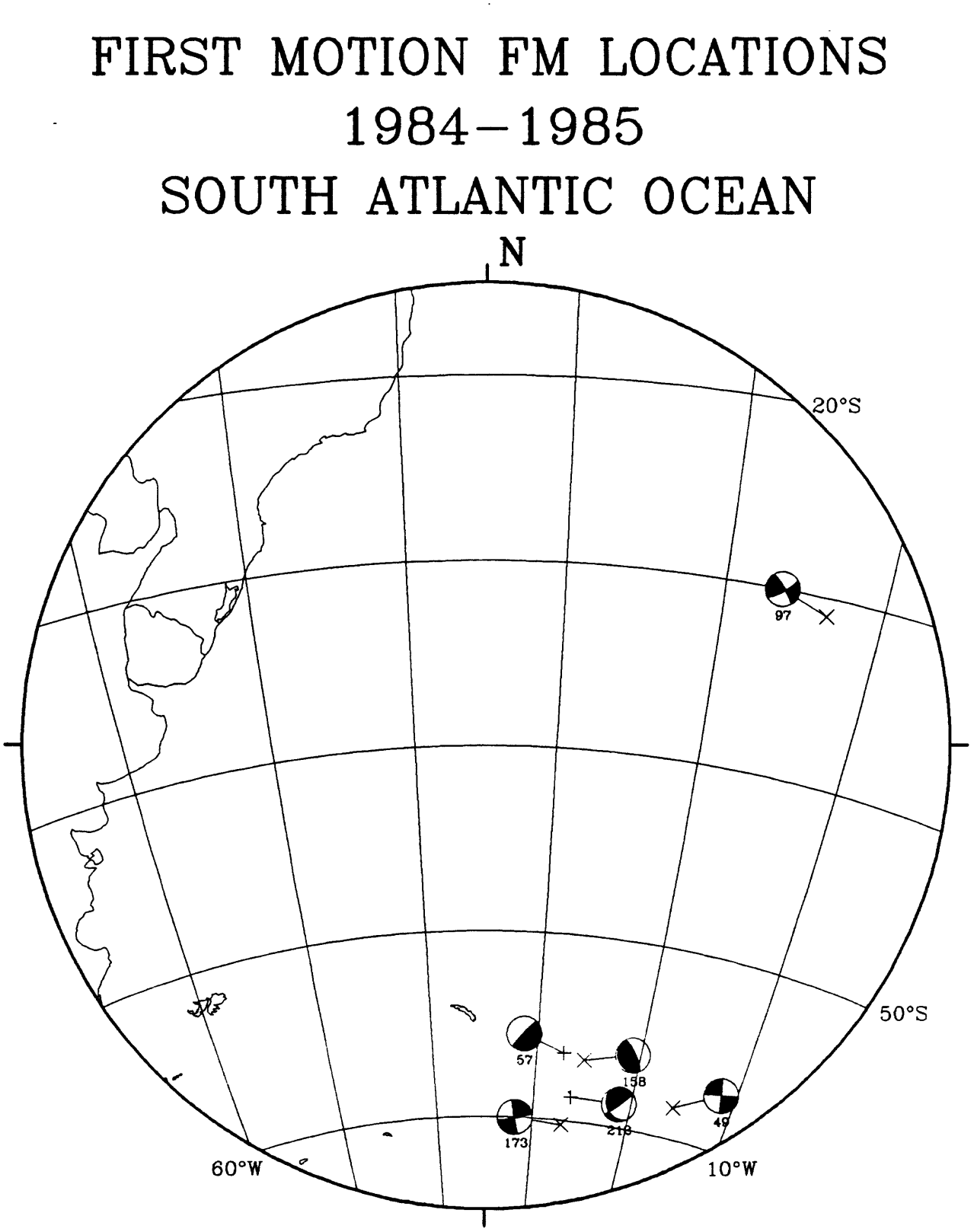
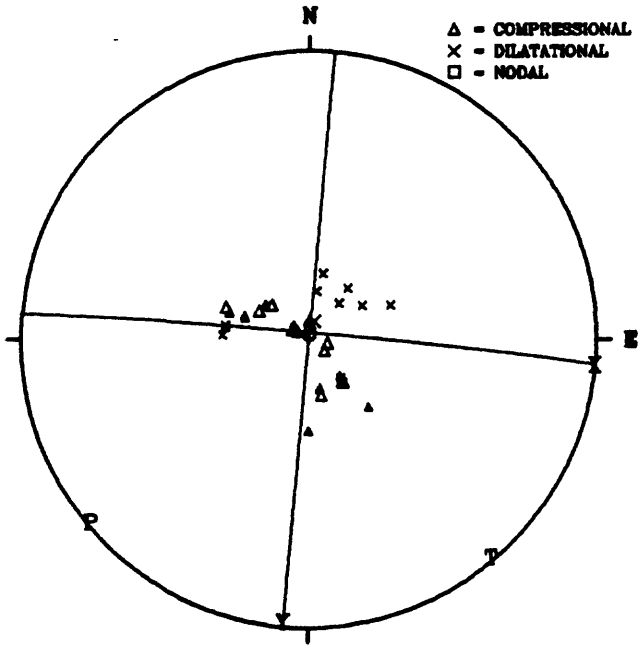


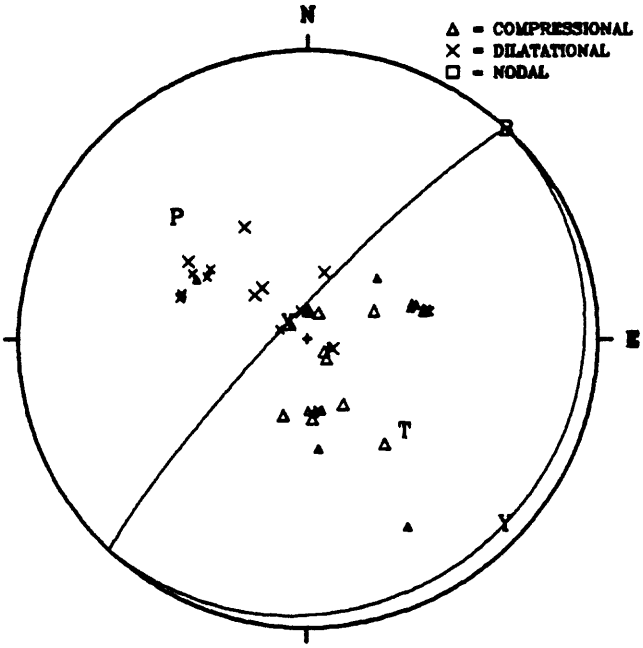
Table 57. Focal mechanism parameters for subdivision, South Atlantic Ocean

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
49	275	90	-2	5	88	-180	1	320	1	230	88	95
57	223	83	90	43	7	90	52	133	38	313	0	43
97	330	80	167	62	77	10	16	296	2	16	74	113
158	335	75	90	155	15	90	60	245	30	65	0	155
173	170	86	6	80	84	176	7	35	1	305	83	204
212	55	85	120	154	30	10	42	354	33	120	30	232

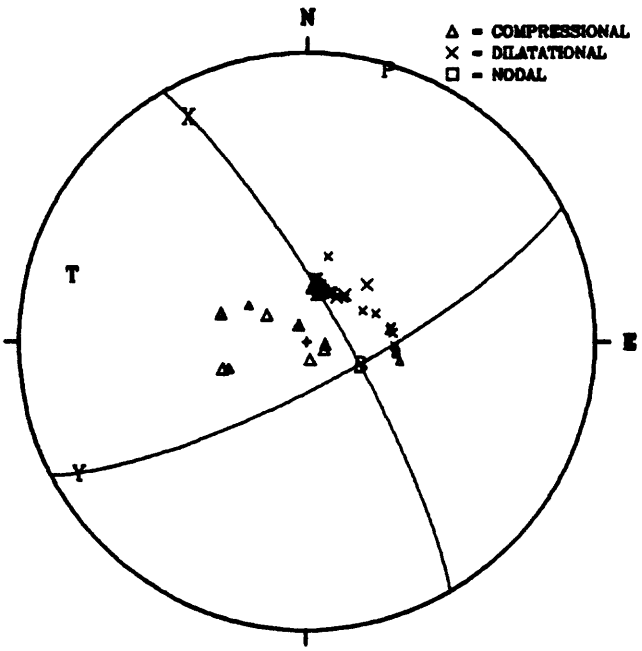
Figure 23. Lower hemisphere focal sphere projection for events 49, 57, 97, and 158.



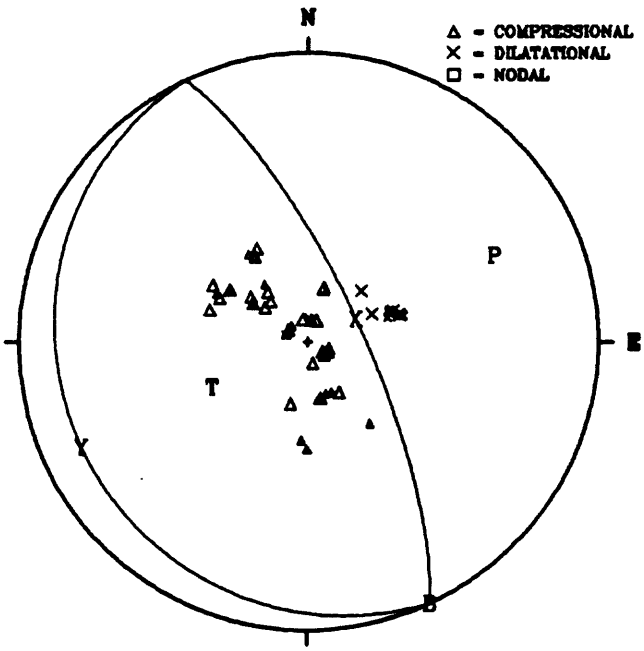
EVENT 49



EVENT 57



EVENT 97



EVENT 158

Figure 24. Lower hemisphere focal sphere projection for events 173 and 212.

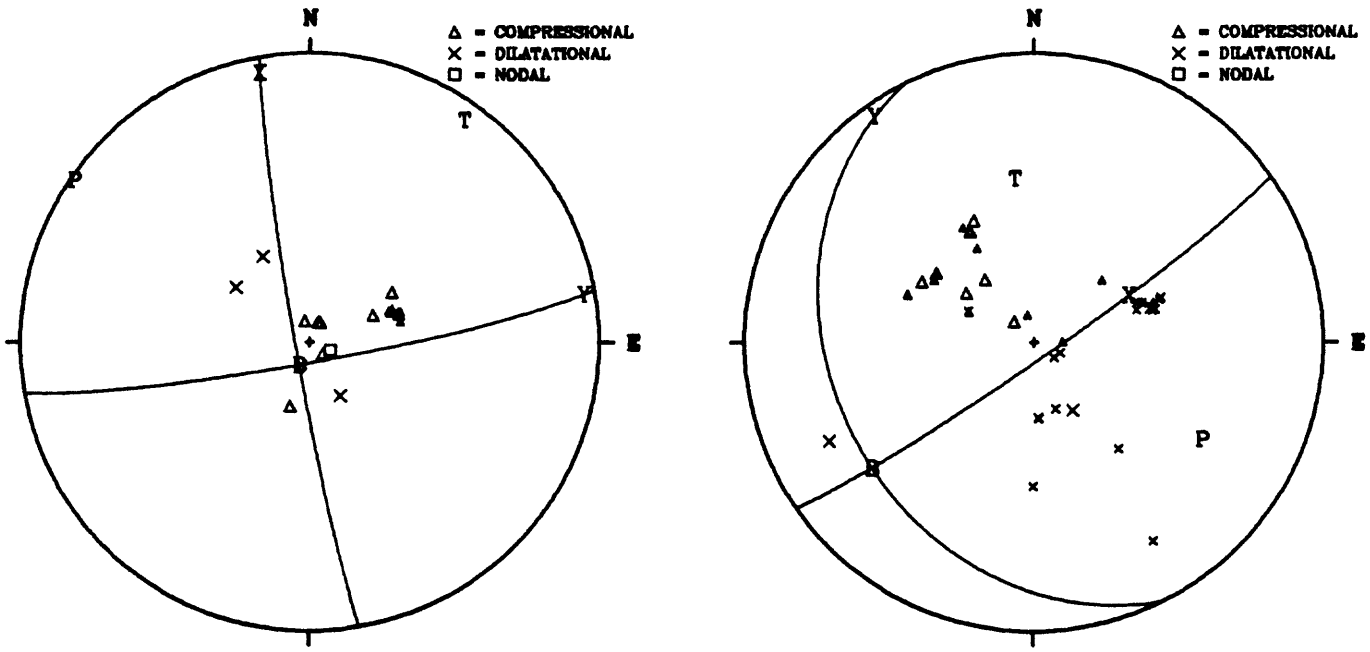


Table 58. Station data for event 49.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SPA	31.859	180.00	8.76	26.07	I	C	SP	P
MAW	34.484	138.42	8.59	25.53	I	C	SP	P
LPA	36.345	291.47	8.48	25.18	I	C	LP	P
GRM	37.735	67.21	8.42	24.99	I	D	SP	P
TMU	40.958	273.04	8.22	24.36	I	D	SP	P
PCH	43.749	279.86	8.08	23.91	I	D	SP	P
TACH	43.944	279.43	8.05	23.82	I	D	SP	P
LNV	43.956	278.72	8.05	23.82	I	D	SP	P
ROCH	44.515	279.97	8.03	23.76	I	D	SP	P
CYA	45.482	288.87	7.97	23.57	I	C	SP	P
HUA	64.038	290.30	6.56	19.22	I	C	SP	P
NNA	64.837	288.91	6.48	18.97	I	C	SP	P
KIC	65.074	12.12	6.48	18.97	I	D	SP	P
BNG	68.324	37.24	6.19	18.09	I	D	SP	P
NAI	70.163	57.59	6.07	17.73	I	D	SP	P
BOCO	77.915	299.89	5.52	16.08	I	C	LP	P
TAU	78.168	167.40	5.52	16.08	E	C	LP	P
CAR	80.105	308.98	5.37	15.63	I	C	SP	P
NWAO	80.993	141.49	5.27	15.33	I	C	LP	P
NWAO	80.993	141.49	5.27	15.33	I	D	SP	P
MUN	81.521	140.31	5.22	15.18	I	C	SP	P
MUN	81.521	140.31	5.22	15.18	E	C	LP	P
BAL	82.946	140.16	5.12	14.88	I	C	SP	P
CAN	85.856	167.57	4.91	14.26	I	C	SP	P
SJG	86.684	312.81	4.87	14.14	E	C	LP	P
YOU	86.814	166.92	4.83	14.02	I	C	SP	P
MEK	87.240	140.12	4.83	14.02	I	D	SP	P
IFR	91.912	8.89	4.67	13.55	I	D	SP	P
MBL	92.715	139.19	4.66	13.52	I	C	SP	P
HLW	96.239	39.83	4.55	13.20	I	D	SP	P
SHA	107.069	300.82	1.89	5.44	I	C	LP	Pdf
BLA	109.321	310.14	1.89	5.44	E	C	LP	Pdf
COP	115.882	17.32	1.88	5.41	I	D	LP	PKP
CHG	118.776	101.01	1.88	5.40	E	C	LP	PKP
BAG	127.236	123.71	1.86	5.36	E	C	LP	PKP
DAG	134.836	359.03	1.82	5.24	I	C	SP	PKP
COL	156.762	306.54	1.31	3.76	I	C	LP	PKP

Table 59. Station data for event 57.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SNA	17.705	151.83	12.07	62.93	I	C	SP	P
LPA	29.879	303.02	8.85	40.73	E	D	LP	P
FCH	37.296	289.84	8.38	38.18	I	D	SP	P
TACH	37.383	288.81	8.38	38.15	I	D	SP	P
LNV	37.399	287.99	8.37	38.15	I	D	SP	P
CYA	38.964	299.54	8.29	37.70	I	D	SP	P
MAW	39.946	143.35	8.23	37.39	I	C	LP	P
SUR	40.838	74.72	8.19	37.14	I	D	SP	P
BDF	43.552	330.66	8.04	36.35	E	D	LP	P
BAO	43.604	330.55	8.03	36.33	I	C	SP	P
ANT	45.181	298.14	7.95	35.89	I	C	SP	P
BLF	46.279	76.99	7.88	35.55	I	D	SP	P
VIR	47.452	76.77	7.81	35.18	I	C	SP	P
BFS	48.344	75.73	7.74	34.83	I	D	SP	P
CNCB	49.959	305.51	7.61	34.15	I	C	SP	P
SLR	50.077	76.23	7.60	34.10	I	C	SP	P
SLR	50.077	76.23	7.60	34.10	I	C	LP	P
ZOBO	50.498	305.68	7.57	33.93	I	D	SP	P
ARE	51.886	301.92	7.46	33.37	I	D	SP	P
BUL	54.784	72.45	7.24	32.26	I	C	SP	P
DRV	56.906	174.04	7.08	31.46	I	C	SP	P
KRI	58.050	71.20	6.99	31.06	I	C	SP	P
MTD	59.133	73.01	6.91	30.63	I	C	SP	P
BCAO	71.220	49.16	5.94	26.01	I	C	SP	P
CAR	74.260	319.42	5.73	25.02	I	C	SP	P
UPA	77.978	307.11	5.49	23.89	I	C	SP	P
SNZO	80.895	196.68	5.24	22.72	I	C	LP	P
TAU	80.977	176.07	5.23	22.69	E	C	LP	P
NWAO	86.092	150.78	4.87	21.06	E	C	LP	P
TOO	86.215	174.33	4.86	21.01	I	C	SP	P
ADE	88.242	168.61	4.75	20.51	I	C	SP	P
ARO	88.892	67.30	4.72	20.39	I	C	LP	P
MRWA	89.238	148.57	4.71	20.35	I	D	SP	P
RIV	90.136	178.79	4.70	20.28	I	C	SP	P
STK	91.586	170.64	4.68	20.18	I	D	SP	P
WBN	94.882	156.67	4.57	19.72	I	D	SP	P
PTO	98.446	14.24	4.49	19.34	E	D	LP	P
SHA	100.836	310.07	4.44	19.12	E	D	LP	P
WB2	102.422	162.43	4.44	19.12	I	D	SP	Pdf
BLA	103.495	319.00	4.44	19.12	E	D	LP	Pdf
COP	116.292	23.87	1.88	7.97	E	C	LP	PKP
NDI	121.332	84.53	1.87	7.94	I	D	SP	PKP
ARN	122.278	289.92	1.87	7.93	I	D	SP	PKP
CHG	125.344	110.69	1.87	7.91	I	D	SP	PKP
GDH	126.765	348.69	1.86	7.89	E	D	LP	PKP
KMI	132.515	109.89	1.84	7.79	I	D	LP	PKP
DAG	133.004	2.71	1.83	7.78	I	C	SP	PKP
DAG	133.004	2.71	1.83	7.78	E	C	LP	PKP
BAG	133.301	135.61	1.83	7.77	I	C	LP	PKP
TIY	147.480	107.86	1.63	6.89	I	C	SP	PKP

Table 59. Station data for event 57 .. continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
COL	150.661	311.33	1.54	6.51	E	C	LP	PKP
SEO	154.545	126.85	1.40	5.93	E	C	LP	PKP

Table 60. Station data for event 97.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SUR	29.156	101.85	9.05	27.00	I	C	SP	P
BLF	34.276	97.24	8.59	25.53	I	C	SP	P
BDF	34.913	287.94	8.56	25.43	I	C	LP	P
BAO	35.000	287.90	8.56	25.43	I	C	SP	P
VIR	35.098	95.74	8.56	25.43	I	C	SP	P
BFS	35.345	93.75	8.53	25.34	I	C	SP	P
BPI	36.621	93.12	8.48	25.18	I	C	SP	P
SLR	36.970	92.54	8.45	25.08	I	D	SP	P
LPA	37.286	251.82	8.42	24.99	I	C	LP	P
BAA	37.776	252.24	8.39	24.89	E	C	LP	P
KIC	38.034	14.20	8.39	24.89	I	D	SP	P
BUL	39.274	84.31	8.30	24.61	I	D	SP	P
KRI	41.582	80.40	8.19	24.26	I	D	SP	P
MTD	43.275	81.63	8.08	23.91	I	D	SP	P
TET	45.262	82.10	7.97	23.57	I	C	SP	P
BCAO	46.610	46.68	7.91	23.38	E	D	LP	P
BNG	46.618	46.69	7.91	23.38	I	D	SP	P
FCH	47.651	251.45	7.85	23.19	I	C	SP	P
BACH	47.809	251.36	7.82	23.10	I	C	SP	P
SAN	47.924	251.19	7.82	23.10	I	C	SP	P
PEL	48.015	251.58	7.82	23.10	I	C	SP	P
LNV	48.416	250.34	7.79	23.01	I	C	SP	P
NAI	55.940	68.18	7.19	21.14	I	D	SP	P
CUM	63.702	301.92	6.60	19.34	I	C	SP	P
MAL	67.857	7.86	6.23	18.21	I	D	SP	P
ALM	68.233	9.51	6.23	18.21	I	D	SP	P
ARO	68.581	61.19	6.19	18.09	I	D	SP	P
TOL	71.013	7.67	6.00	17.52	E	D	LP	P
TOL	71.013	7.67	6.00	17.52	I	D	SP	P
GUD	71.754	7.46	5.93	17.31	I	D	SP	P
LGR	73.741	8.44	5.82	16.98	I	D	SP	P
HLW	73.987	39.58	5.79	16.89	I	D	LP	P
LHE	74.444	9.78	5.75	16.77	I	D	SP	P
BOH	74.574	9.45	5.75	16.77	I	D	SP	P
ATE	74.602	9.68	5.75	16.77	I	D	SP	P
JAU	74.603	9.94	5.75	16.77	I	D	SP	P
EPF	74.704	10.47	5.75	16.77	I	D	SP	P
LRG	76.244	14.75	5.65	16.47	I	D	SP	P
FRF	76.408	14.92	5.62	16.38	I	D	SP	P
LPO	76.450	10.71	5.62	16.38	I	D	SP	P
LFF	76.630	10.34	5.62	16.38	I	D	SP	P
CAF	76.830	11.28	5.59	16.29	I	D	SP	P
JER	77.585	40.92	5.56	16.20	I	D	SP	P
LSF	78.031	10.59	5.52	16.08	I	D	SP	P
MFF	78.126	9.36	5.52	16.08	I	D	SP	P
MZF	78.170	11.33	5.52	16.08	I	D	SP	P
TCF	78.178	11.05	5.52	16.08	I	D	SP	P
SMF	78.805	12.07	5.45	15.87	I	D	SP	P
THE	78.813	27.45	5.45	15.87	I	D	SP	P
AVF	78.859	11.70	5.45	15.87	I	D	SP	P

Table 60. Station data for event 97 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SSF	79.148	11.74	5.45	15.87	I	D	SP	P
SKO	79.377	25.75	5.42	15.78	I	D	SP	P
LPF	79.409	8.46	5.42	15.78	I	D	SP	P
LOR	79.410	11.92	5.42	15.78	I	D	LP	P
GRR	79.783	8.52	5.37	15.63	I	D	SP	P
LDF	80.080	8.96	5.37	15.63	I	D	SP	P
TRI	80.206	19.00	5.37	15.63	I	D	SP	P
BSF	80.510	13.70	5.31	15.45	I	D	SP	P
HAU	80.586	13.35	5.31	15.45	I	D	SP	P
KDZ	80.626	28.45	5.31	15.45	I	D	SP	P
CDF	81.162	13.83	5.27	15.33	I	D	SP	P
BHG	81.818	17.64	5.18	15.06	I	D	SP	P
STU	81.912	14.93	5.18	15.06	I	D	SP	P
ANTO	82.515	34.13	5.15	14.97	I	D	LP	P
UCC	82.905	11.30	5.12	14.88	I	C	LP	P
WET	83.134	17.08	5.12	14.88	I	D	SP	P
ENN	83.150	12.27	5.12	14.88	I	D	SP	P
ECB	83.166	4.13	5.12	14.88	I	C	SP	P
GRFO	83.237	15.86	5.12	14.88	I	D	LP	P
GRF	83.238	15.87	5.12	14.88	I	D	SP	P
VKA	83.257	19.54	5.09	14.80	I	D	SP	P
KHC	83.299	17.51	5.09	14.80	I	D	SP	P
BUD	83.373	21.53	5.09	14.80	I	D	SP	P
ETA	83.531	4.45	5.09	14.80	I	C	SP	P
HOF	83.972	16.03	5.06	14.71	I	D	SP	P
MLR	84.084	26.69	5.06	14.71	I	D	SP	P
DLE	84.099	4.18	5.06	14.71	I	C	SP	P
DCN	84.112	3.74	5.06	14.71	I	C	SP	P
DDK	84.211	4.30	5.06	14.71	I	C	SP	P
PRU	84.337	17.75	5.03	14.62	I	D	SP	P
DMU	84.686	3.90	5.03	14.62	I	C	SP	P
JOS	84.748	21.95	5.03	14.62	I	D	SP	P
KRA	85.931	20.85	4.91	14.26	I	D	SP	P
COP	89.089	14.34	4.73	13.73	E	C	LP	P
MUD	89.171	12.35	4.73	13.73	I	C	SP	P
KONO	92.262	11.50	4.66	13.52	E	D	LP	P
SHA	93.676	303.65	4.63	13.43	E	C	LP	P
DAV	134.975	113.18	1.82	5.24	E	C	LP	PKP
BAG	135.818	98.29	1.81	5.22	E	C	LP	PKP
FBAL	135.828	333.86	1.81	5.22	I	C	LP	PKP
COL	135.964	333.95	1.81	5.22	I	C	SP	PKP
HNR	139.356	170.02	1.78	5.13	E	C	LP	P

Table 61. Station data for event 158.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
LPA	30.978	300.64	8.82	31.22	I	C	LP	P
SPA	33.545	180.00	8.65	30.55	I	C	SP	P
RDJ	36.168	331.31	8.50	29.96	I	C	LP	P
VAO	37.147	325.76	8.44	29.73	I	C	SP	P
PEL	38.805	287.72	8.32	29.27	E	C	LP	P
MAW	39.062	142.56	8.32	29.27	I	C	SP	P
CYA	40.084	297.43	8.27	29.07	I	C	SP	P
BDF	44.345	328.06	8.02	28.12	I	C	LP	P
BAO	44.398	327.96	8.02	28.12	I	C	SP	P
BLF	45.232	74.77	7.99	28.00	I	D	SP	P
SBA	45.569	183.56	7.96	27.89	I	C	SP	P
ANT	46.309	296.14	7.91	27.70	I	C	LP	P
VIR	46.408	74.57	7.91	27.70	I	D	SP	P
BFS	47.309	73.53	7.85	27.47	I	D	SP	P
KSR	48.199	72.81	7.81	27.32	I	D	SP	P
BPI	48.550	74.16	7.78	27.20	I	D	SP	P
SLR	49.038	74.06	7.74	27.05	I	D	LP	P
LPB	51.334	303.47	7.54	26.30	I	C	LP	P
LPB	51.334	303.47	7.54	26.30	I	C	SP	P
ZOBO	51.576	303.60	7.54	26.30	I	C	LP	P
BUL	53.781	70.31	7.34	25.55	I	D	LP	P
BUL	53.781	70.31	7.34	25.55	I	D	SP	P
KRI	57.061	69.09	7.11	24.69	I	D	SP	P
MTD	58.124	70.94	7.03	24.40	I	D	SP	P
CLK	60.824	73.41	6.80	23.55	I	D	SP	P
BCAO	70.534	47.12	6.03	20.75	I	D	LP	P
BOG	72.748	308.32	5.89	20.25	I	C	LP	P
TRN	73.377	322.84	5.82	20.00	I	C	SP	P
NAI	73.941	66.88	5.78	19.85	I	D	LP	P
UPA	79.044	305.30	5.45	18.68	I	C	SP	P
UPA	79.044	305.30	5.45	18.68	I	C	LP	P
SNZO	80.972	195.15	5.26	18.00	I	C	LP	P
SJG	81.938	321.10	5.18	17.72	I	C	LP	P
MUN	85.902	148.00	4.90	16.73	I	C	LP	P
BFD	85.994	170.32	4.90	16.73	I	C	SP	P
ADE	87.761	166.94	4.77	16.28	I	C	LP	P
ADE	87.761	166.94	4.77	16.28	I	C	SP	P
WBN	94.190	154.89	4.61	15.72	I	C	SP	P
MAL	94.674	16.73	4.60	15.68	I	C	LP	P
TOL	97.816	16.38	4.51	15.37	I	C	LP	P
ASPA	98.113	160.83	4.51	15.37	I	C	SP	P
SHA	101.875	308.46	4.45	15.16	I	C	LP	Pdf
BLA	104.438	317.46	4.45	15.16	I	C	LP	Pdf
STU	108.889	23.35	1.89	6.38	E	C	LP	PKP
SNG	115.170	117.43	1.88	6.35	E	C	LP	PKP
COP	116.067	22.72	1.88	6.34	E	C	LP	PKP
GOL	117.160	301.34	1.88	6.34	E	C	LP	PKP
JAS1	123.288	289.55	1.87	6.31	I	C	SP	PKP
BKS	124.200	288.21	1.87	6.30	I	D	SP	PKP
WDC	126.358	290.22	1.86	6.29	I	C	SP	PKP

Table 61. Station data for event 158 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
FFC	127.216	314.86	1.86	6.28	I	C	SP	PKP
GDH	127.238	347.78	1.86	6.28	E	C	LP	PKP
EDM	130.876	307.36	1.85	6.23	I	C	SP	PKP
KMI	131.357	108.05	1.85	6.23	I	C	LP	PKP
GUA	136.344	166.18	1.81	6.12	E	C	LP	PKP
KBS	137.104	9.91	1.80	6.08	E	C	LP	PKP
ANP	140.518	128.80	1.75	5.92	E	C	LP	PKP
SSE	145.453	123.43	1.68	5.68	I	C	LP	PKP
SEO	153.473	124.19	1.46	4.93	I	C	LP	PKP

Table 62. Station data for event 173.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BDF	47.065	331.84	7.88	27.58	I	D	LP	P
WIN	48.510	58.98	7.78	27.20	I	C	LP	P
BFS	49.162	71.98	7.74	27.05	I	C	SP	P
SLR	50.856	72.67	7.58	26.45	I	C	LP	P
JOZ	51.251	77.53	7.54	26.30	I	C	SP	P
ZOBO	53.015	307.57	7.42	25.85	I	D	LP	P
BUL	55.792	69.44	7.18	24.95	I	C	LP	P
BUL	55.792	69.44	7.18	24.95	I	C	SP	P
KRI	59.130	68.50	6.96	24.14	I	C	SP	P
NAI	76.098	67.40	5.64	19.35	I	C	LP	P
SNZO	77.272	196.51	5.55	19.03	I	C	LP	P
NWAO	82.601	150.19	5.14	17.58	E	D	LP	P
CHG	123.670	112.66	1.87	6.30	E	N	LP	PKP
NUR	126.833	28.95	1.86	6.28	E	C	LP	PKP
GDH	130.599	347.84	1.85	6.23	E	C	LP	PKP
KEV	135.238	23.54	1.82	6.14	E	C	LP	PKP
SEO	151.884	132.00	1.50	5.05	E	C	LP	PKP

Table 63. Station data for event 212.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
SNA	15.392	148.82	12.38	69.01		D	SP	P
AAS	16.175	243.97	12.24	67.38	E	D	LP	P
SPA	31.479	180.00	8.71	41.07	I	D	SP	P
MAW	37.740	141.24	8.34	38.95	I	D	SP	P
RDJ	37.776	333.92	8.34	38.94	I	C	LP	P
VAO	38.616	328.51	8.29	38.67	I	C	SP	P
SAN	38.765	290.85	8.28	38.65	I	C	SP	P
PEL	39.028	291.11	8.27	38.58	I	C	SP	P
CER	39.390	70.28	8.25	38.46	I	D	SP	P
SUR	40.931	70.99	8.17	38.00	I	D	SP	P
BDF	45.867	330.31	7.89	36.51	I	C	SP	P
BDF	45.867	330.31	7.89	36.51	I	C	LP	P
ANT	46.826	298.86	7.83	36.20	E	C	LP	P
SWZ	47.422	71.39	7.80	36.01	I	C	SP	P
SEK	47.631	74.54	7.78	35.93	I	D	SP	P
BPI	49.601	73.33	7.62	35.09	I	D	SP	P
EVA	49.854	74.59	7.60	34.98	I	D	SP	P
SLR	50.092	73.26	7.59	34.88	I	D	LP	P
SLR	50.092	73.26	7.59	34.88	I	D	SP	P
LPB	52.104	305.81	7.42	34.04	I	C	SP	P
LPB	52.104	305.81	7.42	34.04	E	C	LP	P
ARE	53.635	302.20	7.30	33.40	I	C	SP	P
BUL	54.948	69.81	7.20	32.87	I	D	SP	P
KRI	58.263	68.76	6.96	31.66	I	D	SP	P
ATB	58.853	329.27	6.91	31.42	I	C	SP	P
TET	60.795	72.14	6.76	30.64	I	D	SP	P
BNG	72.303	47.51	5.86	26.21	I	C	SP	P
UPA	79.855	306.43	5.32	23.63	I	C	LP	P
SJG	83.251	322.09	5.07	22.46	E	C	LP	P
NWAO	83.779	149.77	5.04	22.31	I	D	LP	P
WAM	85.387	176.05	4.91	21.75	I	D	SP	P
CAN	86.260	176.10	4.85	21.43	I	D	SP	P
PBJ	93.527	296.03	4.61	20.34	I	D	SP	P
VHO	94.843	295.31	4.57	20.14	I	C	SP	P
ASPA	96.314	161.74	4.53	19.99	I	D	SP	P
BLA	105.633	317.76	1.89	8.19	E	C	LP	Pdf
POO	110.870	88.58	1.89	8.19	I	C	SP	Pdf
CHG	123.944	111.07	1.87	8.10	I	D	SP	PKP
GDH	129.154	347.84	1.85	8.03	I	C	SP	PKP
SSE	144.663	127.02	1.69	7.31	I	D	SP	PKP

Figure 25. Azimuthal equidistant map for geographic subdivision, Southeastern Europe

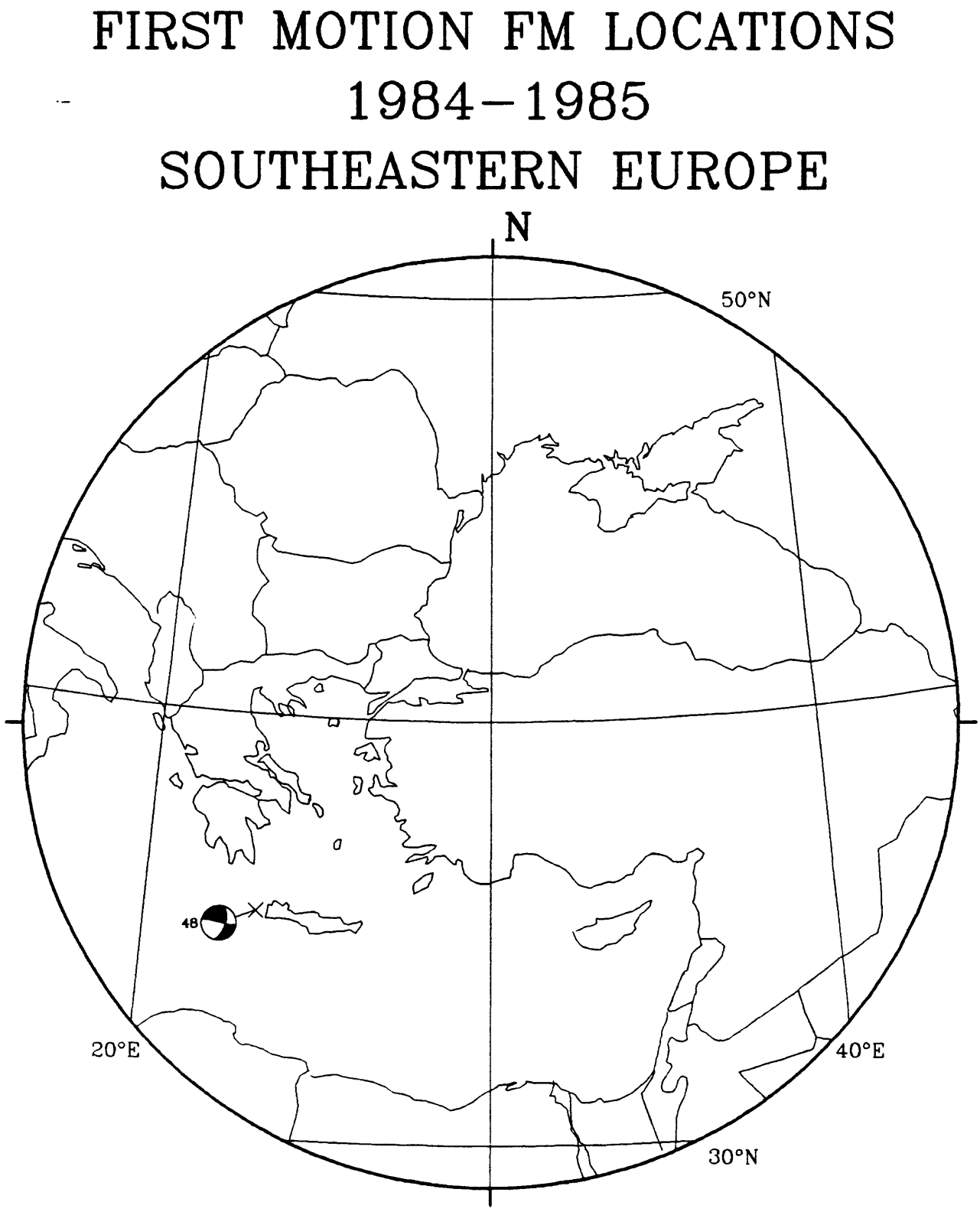
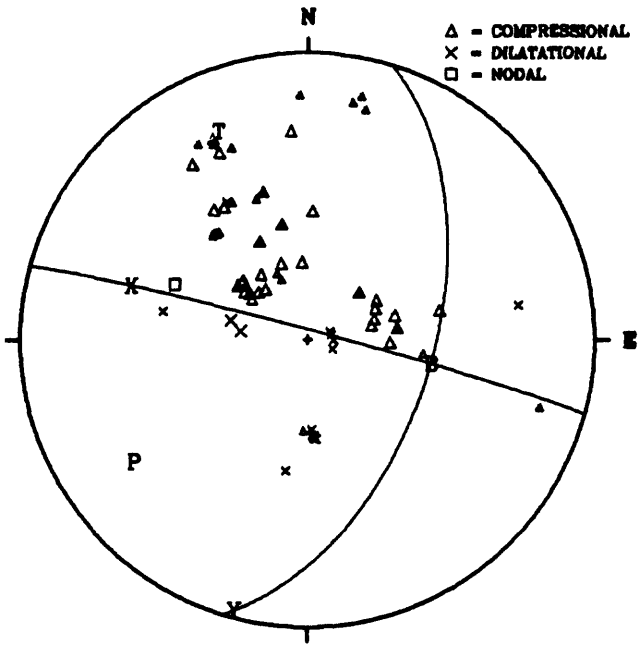


Table 64. Focal mechanism parameters for subdivision, Southeastern Europe

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
48	285	87	-33	17	57	-176	20	336	25	236	57	100

Figure 26. Lower hemisphere focal sphere projection for events 48.



EVENT 48

Table 65. Station data for event 48.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
BUC1	9.228	12.59	13.79	75.70	I	C	SP	P
GZR	10.028	358.13	13.68	74.01	I	C	SP	P
MLR	10.327	10.67	13.61	73.02	I	C	SP	P
JER	10.599	106.35	13.61	73.02	I	C	SP	P
CLI	11.587	14.03	13.48	71.31	I	C	SP	P
KBA	13.859	330.64	13.10	67.01	I	C	SP	P
KMR	14.379	334.68	13.02	66.19	I	C	LP	P
WET	15.743	334.20	12.84	64.46	I	C	SP	P
MSL	16.176	80.58	12.75	63.63	I	D	SP	P
STU	16.941	326.57	12.56	61.96	I	C	LP	P
WAR	16.950	355.33	12.56	61.96	E	C	LP	P
MOX	17.449	334.67	12.46	61.11	I	C	LP	P
CLL	17.566	338.31	12.46	61.11	I	C	SP	P
WTS	20.358	329.82	10.29	46.31	I	D	SP	P
UCC	20.602	324.30	10.29	46.31	E	C	LP	P
WIT	21.032	331.16	10.16	45.56	I	C	SP	P
DBN	21.126	327.95	10.16	45.56	I	C	LP	P
COP	21.639	343.26	10.04	44.87	I	C	SP	P
COP	21.639	343.26	10.04	44.87	I	C	LP	P
MUD	23.173	339.94	9.75	43.25	I	C	SP	P
SFS	23.837	281.30	9.60	42.42	I	D	SP	P
PTO	25.575	292.61	9.42	41.45	E	N	LP	P
ECP	26.935	317.80	9.28	40.70	I	C	SP	P
ETA	27.087	318.91	9.28	40.70	I	C	SP	P
ECB	27.245	317.92	9.28	40.70	I	C	SP	P
DDK	27.487	320.16	9.23	40.44	I	C	SP	P
DLE	27.546	319.84	9.23	40.44	I	C	SP	P
DCN	27.960	319.50	9.18	40.17	I	C	SP	P
DMU	28.033	320.77	9.18	40.17	I	C	SP	P
MHI	29.308	77.44	8.96	39.02	I	C	LP	P
BNG	31.073	189.09	8.82	38.30	I	D	SP	P
KEV	34.515	2.31	8.58	37.08	I	C	LP	P
DAG	45.535	347.52	7.96	34.01	I	C	SP	P
DAG	45.535	347.52	7.96	34.01	I	C	LP	P
POO	47.615	96.89	7.84	33.43	I	C	SP	P
GDH	52.779	334.17	7.41	31.38	I	C	SP	P
GDH	52.779	334.17	7.41	31.38	I	C	LP	P
SLR	60.942	174.79	6.80	28.54	I	D	SP	P
KSR	60.982	176.23	6.80	28.54	I	D	SP	P
BFS	62.003	176.41	6.72	28.18	I	C	SP	P
VIR	63.182	176.41	6.64	27.81	I	D	SP	P
SEK	63.467	175.68	6.59	27.59	I	D	SP	P
BLF	64.175	177.13	6.55	27.40	I	D	SP	P
SUR	67.413	182.22	6.26	26.10	I	C	SP	P
KMI	67.778	74.34	6.22	25.92	E	C	LP	P
CHTO	67.926	82.11	6.22	25.92	I	C	LP	P
CHG	67.926	82.11	6.22	25.92	I	C	SP	P
CHG	67.926	82.11	6.22	25.92	I	C	LP	P
GRM	68.377	177.00	6.18	25.74	I	D	SP	P
WES	70.202	308.28	6.07	25.25	I	C	LP	P

Table 65. Station data for event 48 ... continued.

Station	Distance (°)	Azimuth (°)	dt/dΔ (sec/°)	JB Focal Angle (°)	Quality, Direction, and Source of Earth Motion			
GAC	71.089	312.92	5.99	24.89	I	C	LP	P
RSNY	71.114	311.51	5.99	24.89	I	C	LP	P
SNG	75.599	91.39	5.68	23.52	I	C	LP	P
RSNT	76.782	341.31	5.58	23.09	I	C	LP	P
RSON	77.830	324.69	5.52	22.82	I	C	LP	P
SSE	78.519	60.11	5.48	22.65	E	C	LP	P
BLA	78.888	307.75	5.45	22.52	E	C	LP	P
SJG	79.265	284.54	5.41	22.34	E	D	LP	P
COL	79.831	356.13	5.36	22.13	I	C	LP	P
ANP	82.120	64.85	5.17	21.30	I	C	LP	P
TATO	82.219	65.03	5.17	21.30	I	C	LP	P
RSCP	83.174	309.02	5.11	21.04	I	C	LP	P
EDM	84.079	335.45	5.05	20.79	I	C	SP	P
MAT	86.357	47.02	4.86	19.97	I	C	SP	P
MAJO	86.357	47.02	4.86	19.97	I	C	LP	P
BAG	86.476	72.50	4.86	19.97	I	C	LP	P
SHA	87.946	306.61	4.77	19.58	E	C	LP	P
TUL	89.181	314.77	4.73	19.41	E	C	LP	P
BOCO	93.297	277.93	4.63	18.99	E	D	LP	P
COR	94.840	336.71	4.58	18.77	I	C	SP	P
ANMO	95.766	320.55	4.55	18.65	I	C	LP	P
DAV	95.896	77.08	4.55	18.65	E	C	LP	P
CTA	127.973	88.84	1.86	7.50	I	D	SP	PKP
ADE	128.122	109.52	1.86	7.50	I	D	SP	PKP
KOU	142.821	77.15	1.72	6.95	I	D	SP	PKP
PVC	144.405	69.63	1.70	6.88	I	D	SP	PKP
NOU	145.449	77.91	1.68	6.80	I	D	SP	PKP