GEOLOGICAL SURVEY CIRCULAR 766–A

Earthquakes in the United States, January–March 1976

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By R. B. Simon, C. W. Stover,
W. J. Person, and J. H. Minsch

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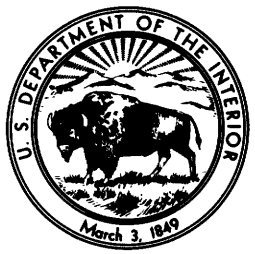

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United States Department of the Interior

CECIL D. ANDRUS, *Secretary*

Geological Survey

V. E. McKelvey, *Director*

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INTRODUCTION

The earthquake information in this publication supplements that published in the NEIS (National Earthquake Information Service) publications, PDE ("Preliminary Determination of Epicenters") and "Preliminary Determination of Epicenters, Monthly Listing," to the extent of providing detailed felt and intensity data, as well as isoseismal maps for U.S. earthquakes. The purpose is to provide a complete listing of macroseismic effects of earthquakes, which can be used in risk studies, nuclear power plant site evaluations, seismicity studies, and answering inquiries by the public.

This publication contains two major sections. The first (table 1) is a tabular listing of earthquakes in chronological order by State, consisting of the following basic information: date, origin time, hypocenter, magnitude, maximum intensity, and computational source of the hypocenter. The second section consists of five maps and table 2, which lists detailed intensity information. The list of earthquakes in table 1 was compiled from those located in the United States or off the coasts that were published in the PDE; from hypocenters in California above magnitude 3.0, supplied by California Institute of Technology, Pasadena, the University of California, Berkeley, and other offices of the U.S. Geological Survey; from hypocenters in Hawaii supplied by the Hawaiian Volcano Observatory; and from any others that were felt or that caused damage, regardless of magnitude or availability of a hypocenter. Known or suspected explosions are also listed.

The intensities and macroseismic data were compiled from information obtained through questionnaires, from newspaper articles, and with the cooperation of other government agencies, State institutions, local organizations, and individuals. (See "Acknowledgments" for a list of collaborators.) The questionnaire (fig. 1A, B) is the latest revision of this form; it was not in use for earthquake-intensity evaluations for the years 1975-76. An interim version of the form and an earlier version that had been in use since the 1930's were the basis for intensity evaluations throughout 1976. Anyone wishing to submit felt or damage information on earthquakes for inclusion in future reports should send it to the National Earthquake Information Service, Stop 967, Box 25046, Denver Federal Center, Denver, Colo. 80225. Copies of the current "Earthquake Report" questionnaire can be obtained at this address.

The primary method used by the NEIS to collect macroseismic information is a questionnaire canvass using the "Earthquake Report" forms, which are mailed to postmasters in the area affected by the earthquake. The postmasters complete the forms and return them to the NEIS, where they are evaluated and an intensity value is assigned. The intensity observations are mapped and contoured by isoseismals. Isoseismal contours present a generalization of intensity data and an extrapolation of these data to regions from which there are no observations; they do not necessarily account for every individual observation.

The data in table 2 will be included in the "Earthquake Description" section of "United States Earthquakes," an annual publication, to which later data from other sources may be added for the purpose of updating and completeness. "United States Earthquakes" is published jointly by the U.S. Geological Survey, Department of the Interior, and the Environmental Data Service, NOAA, Department of Commerce.

DISCUSSION OF TABLES

The parameters for the earthquakes in table 1 and table 2 include the date, origin time, hypocenter (epicenter and focal depth), magnitude, intensity, and hypocenter source. The origin time and date are listed in Universal Coordinated Time (UTC) and local standard time based on the time-zone maps in figures 2 and 3. The epicenters, which were taken from those published in the PDE, or from other sources as noted, are listed here to two decimals. The accuracy of the epicenters is that claimed by the institution supplying the hypocenter and is not necessarily the accuracy indicated by the number of decimals listed. The epicenters located by the NEIS have a varying degree of accuracy, usually two-tenths of a degree or less, depending on their continental

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EARTHQUAKE REPORT

Form Approved
OMB No. 42-R1700

Please answer this questionnaire carefully and return as soon as possible.

1. Was an earthquake felt by anyone in your town or zip code area recently?
   - ☐ Not felt: Please refold and tape for return mail.
   - ☐ Felt: Date_____ Time_____ ☐ AM ☐ PM ☐ Standard time ☐ Daylight time

Name of person filling out form _____

Address_____

City_____ County_____

State_____ Zip code_____

If you felt the earthquake, complete the following section. If others felt the earthquake but you did not, skip the personal report and complete the community report.

PERSONAL REPORT

2a. Did you personally feel the earthquake? 1☐ Yes ☐ No
b. Were you awakened by the earthquake? 2☐ Yes ☐ No
c. Were you frightened by the earthquake? 3☐ Yes ☐ No
d. Were you at 4☐ Home 5☐ Work 6☐ Other?
e. Town and zip code of your location at time of earthquake _____

f. Check your activity when the earthquake occurred:
7☐ Walking 8☐ Sleeping 9☐ Lying down 10☐ Standing
11☐ Driving (car in motion) 12☐ Sitting 13☐ Other
g. Were you 14☐ Inside or 15☐ Outside?
h. If inside, on what floor were you? 16☐☐
Continue on to next section which should include personal as well as reported observations.

COMMUNITY REPORT

Check one box for each question that is applicable.

3a. The earthquake was felt by	☐ No one	17☐ Few	18☐ Several	19☐ Many	20☐ All?
b. This earthquake awakened	☐ No one	21☐ Few	22☐ Several	23☐ Many	24☐ All?
c. This earthquake frightened	☐ No one	25☐ Few	26☐ Several	27☐ Many	28☐ All?

4. What outdoor physical effects were noted in your community?

Parapets or cornices fallen	29☐ Yes	☐ No	
Trees and bushes shaken	30☐ Slightly	31☐ Moderately	32☐ Strongly
Standing vehicles rocked	33☐ Slightly	34☐ Moderately	35☐ Strongly
Moving vehicles rocked	36☐ Slightly	37☐ Moderately	38☐ Strongly
Ground cracks	39☐ Wet ground	40☐ Steep slopes	41☐ Dry and level ground
Landslides	42☐ Small	43☐ Large	
Underground pipes	44☐ Broken	45☐ Out of service	
Water splashed onto sides of lakes, ponds, swimming pools	46☐ Yes	☐ No	
Elevated water tanks	47☐ Cracked	48☐ Twisted	49☐ Fallen (thrown down)
Air coolers	50☐ Displaced	51☐ Rotated	52☐ Fallen
Railroad tracks bent	53☐ Slightly	54☐ Greatly	
Stone or brick fences	55☐ Cracked	56☐ Fallen	57☐ Destroyed
Tombstones	58☐ Displaced 61☐ Fallen	59☐ Cracked	60☐ Rotated
Chimneys	62☐ Cracked	63☐ Twisted	64☐ Fallen
	65☐ Broken at roof line		66☐ Bricks fallen
Highways or streets	67☐ Cracked slightly	68☐ Large cracks	69☐ Displaced
Sidewalks	70☐ Cracked slightly	71☐ Large cracks	72☐ Displaced

Continued on the reverse side

FIGURE 1.--Example of the "Earthquake Report" form

5. What indoor physical effects were noted in your community?

Windows, doors, dishes rattled	73 ☐ Yes	☐ No		
Buildings creaked	74 ☐ Yes	☐ No		
Building trembled (shook)	75 ☐ Yes	☐ No		
Hanging pictures	76 ☐ Swung	77 ☐ Out of place	78 ☐ Fallen	
Water in small containers	79 ☐ Spilled	80 ☐ Slightly disturbed		
Windows	81 ☐ Few cracked	82 ☐ Some broken	83 ☐ Many broken	

6a. Did hanging objects, doors swing? ☐ No 84 ☐ Slightly 85 ☐ Moderately 86 ☐ Violently

b. Can you estimate direction? ☐ No 87 ☐ North/South 88 ☐ East/West 89 ☐ Other

7a. Were small objects (dishes, knick-knacks, pictures) ☐ Unmoved 90 ☐ Shifted 91 ☐ Overturned 92 ☐ Fallen, not broken 93 ☐ Broken?

b. Was light furniture ☐ Unmoved 94 ☐ Shifted 95 ☐ Overturned 96 ☐ Fallen, not broken 97 ☐ Broken?

c. Were heavy furniture or appliances ☐ Unmoved 98 ☐ Overturned 99 ☐ Shifted 100 ☐ Broken?

8. Indicate effects of the following types to interior walls if any:

Plaster	101 ☐ Cracked	102 ☐ Fell
Dry wall	103 ☐ Cracked	104 ☐ Fell
Ceiling tiles	105 ☐ Cracked	106 ☐ Fell

9a. Check below any damage to buildings or structures.

Foundation	107 ☐ Cracked	108 ☐ Destroyed		
Interior walls	109 ☐ Split	110 ☐ Fallen	111 ☐ Separated from ceiling or floor	
Exterior walls	112 ☐ Hairline cracks	113 ☐ Large cracks	114 ☐ Bulged outward	
	115 ☐ Partial collapse	116 ☐ Total collapse		
Building	117 ☐ Moved on foundation	118 ☐ Shifted off foundation		

b. What type of construction was the building that showed this damage?

119 ☐ Wood 120 ☐ Stone 121 ☐ Brick veneer 122 ☐ Other
123 ☐ Brick 124 ☐ Cinderblock 125 ☐ Reinforced concrete

c. What was the type of ground under the building?

126 ☐ Don't know 127 ☐ Sandy soil 128 ☐ Marshy 129 ☐ Fill
130 ☐ Hard rock 131 ☐ Clay soil 132 ☐ Sandstone, limestone, shale

d. Was the ground: 133 ☐ Level 134 ☐ Sloping 135 ☐ Steep?

e. Check the approximate age of the building:

136 ☐ Built before 1935 137 ☐ Built 1935-65 138 ☐ Built after 1965

10a. What percentage of buildings were damaged?

Within 2 city blocks of your location ☐ None 139 ☐ Few (about 5%) 140 ☐ Many(about 50%) 141 ☐ Most (about 75%)

b. In area covered by your zip code ☐ None 142 ☐ Few (about 5%) 143 ☐ Many (about 50%) 144 ☐ Most (about 75%)

11a. Were springs or well water disturbed? 145 ☐ Level changed 146 ☐ Flow disturbed 147 ☐ Muddied ☐ Don't know

b. Were rivers or lakes changed? 148 ☐ Yes ☐ No ☐ Don't know

12a. Was there earth noise? ☐ No 149 ☐ Faint 150 ☐ Moderate 151 ☐ Loud

b. Direction of noise 152 ☐ North 153 ☐ South 154 ☐ East 155 ☐ West

c. Estimated duration of shaking 156 ☐ Sudden, sharp (less than 10 secs) 157 ☐ Long (30-60 secs) 158 ☐ Short (10-30 secs) 159 ☐ Other

13. What is the approximate population of your city/town? Or are you in a

160 ☐ Less than 1,000 161 ☐ 10,000 to 100,000 164 ☐ Rural area?
162 ☐ 1,000 to 10,000 163 ☐ Over 100,000

This community report is associated with what town or zip code? _____

Thank you for your time and information. Refold this card and tape for return mail.

used for evaluating the intensities of earthquakes.

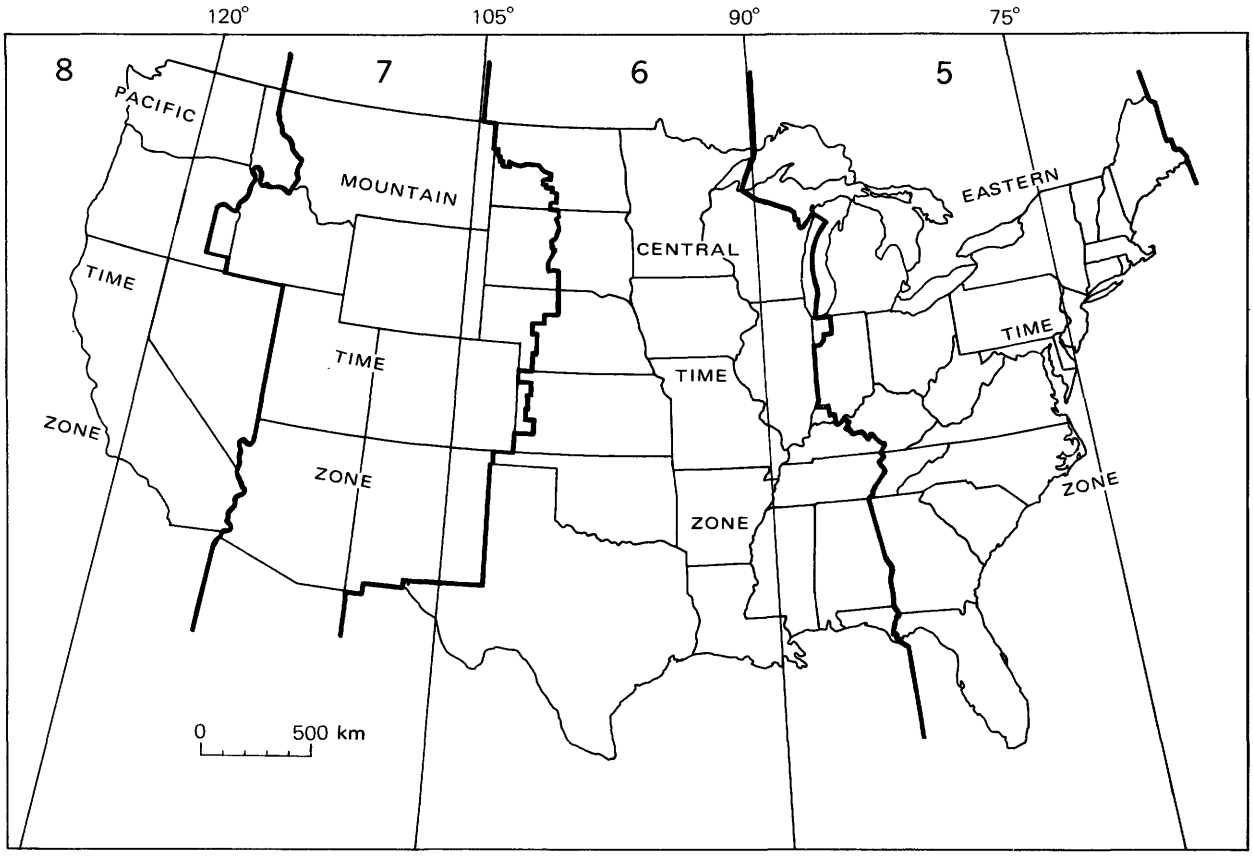

FIGURE 2.--Standard time zones of the conterminous United States. The number in each zone shows the number of hours to be subtracted from Universal Coordinated Time to convert to local standard time. (Subtract 1 hour less for local daylight-saving time.)

or oceanic location. The oceanic hypocenters are less accurate than those on the continent, even though both are listed to two decimals. Depths are listed to the nearest whole kilometer.

Figures 4-6 are maps summarizing the earthquake activity for the conterminous United States, Alaska, and Hawaii for the period January-March 1976. The magnitudes plotted in these figures are based on ML or mbLg; if neither was computed, then on MS; and finally on mb, when it was the only magnitude computed.

The magnitude values listed in tables 1 and 2 were furnished by cooperating institutions or determined by the NEIS. The computational sources are labeled according to the assigned letter codes shown in headnotes to tables 1 and 2; the letter follows the value listed under the column heading "Magnitude." In table 1 the absence of a letter code indicates that the NEIS is the source. In table 2 the magnitude source is the same as the location source unless indicated otherwise, by an alphabetic character to the right of the magnitude value. The magnitude values calculated by the NEIS are based on the following formulas:

$$MS=\log(A/T)+1.66\log D+3.3, \quad (1)$$

as adopted by the International Association of Seismology and Physics of the Earth's Interior (IASPEI; Bath, 1966, p. 153), where A is the maximum horizontal surface-wave ground amplitude, in micrometers; T is the period, in seconds, and $18 \leq T \leq 22$; and D is the distance, in geocentric degrees (station to epicenter), and $20^\circ \leq D \leq 160^\circ$. No depth correction is made for depths less than 50 km.

$$mb=\log(A/T)+Q(D,h), \quad (2)$$

as defined by Gutenberg and Richter (1956), except that T, the period in seconds, is restricted to $0.1 \leq T \leq 3.0$, and A, the ground amplitude in micrometers, is not necessarily the maximum of the P-wave group. Q is a function of distance D and depth h, where $D \geq 5^\circ$.

$$ML=\log A-\log A_o, \quad (3)$$

as defined by Richter (1958, p. 340), where A is the maximum trace amplitude in millimeters, written by a Wood-Anderson torsion seismometer, and log A_o is a standard value as a function of distance, where the distance is ≤ 600 km. ML values are also calculated from other seismometers by conversion of recorded ground motion to the

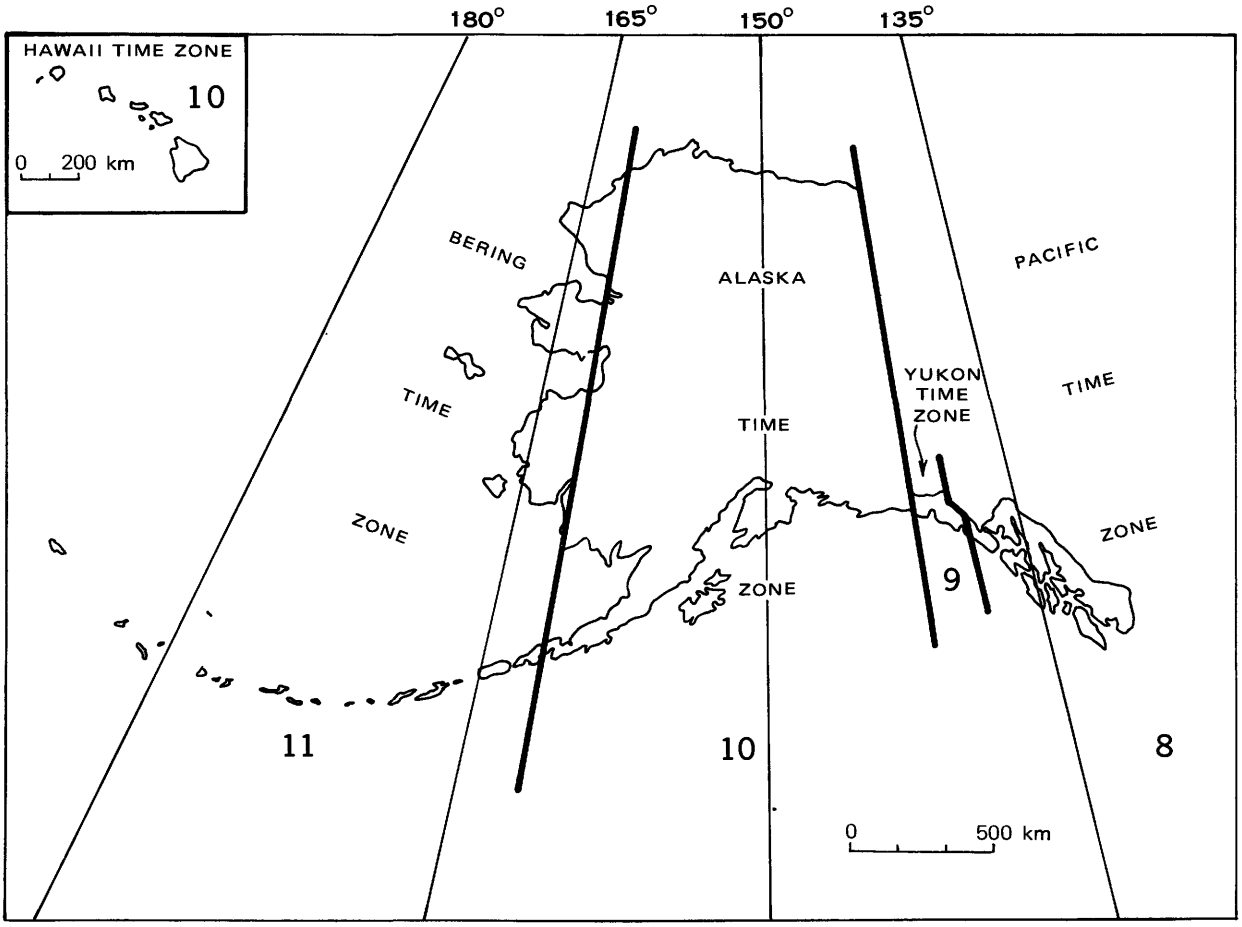

FIGURE 3.--Standard time zones of Alaska and Hawaii. The number in each zone shows the number of hours to be subtracted from Universal Coordinated Time to convert to local standard time. (Subtract 1 hour less for local daylight-saving time.

expected response of the torsion seismometer.

$$mbLg=3.75+0.90(\log D)+\log(A/T) \quad (4)$$
$$0.5^\circ \leq D \leq 4^\circ,$$

$$mbLg=3.30+1.66(\log D)+\log(A/T)$$
$$4^\circ \leq D \leq 30^\circ,$$

as proposed by Nuttli (1973), where A/T is expressed in micrometers per second, calculated from the vertical-component 1-second Lg waves, and D is the distance in geocentric degrees.

All of the intensity values (indicated by Roman numerals) listed in this summary were derived, using the Modified Mercalli Intensity Scale of 1931 (Wood and Neumann, 1931) shown below, from the evaluation of "Earthquake Report" forms; from field reports by U.S. Geological Survey personnel, engineering firms, or universities; and from detailed macroseismic data communicated to the NEIS by people in the area affected by the earthquake. All earthquake reports received which contain minimal information are assigned an Intensity II. These reports are filed in the offices of the NEIS or in government archives and are available for detailed study.

MODIFIED MERCALLI INTENSITY SCALE OF 1931

Adapted from Sieberg's Mercalli-Cancani scale, modified and condensed.

I. Not felt - or, except rarely under especially favorable circumstances. Under certain conditions, at and outside the boundary of the area in which a great shock is felt: sometimes birds, animals, reported uneasy or disturbed; sometimes dizziness or nausea experienced; sometimes trees, structures, liquids, bodies of water, may sway--doors may swing, very slowly.

II. Felt indoors by few, especially on upper floors, or by sensitive, or nervous persons. Also, as in grade I, but often more noticeably: sometimes hanging objects may swing, especially when delicately

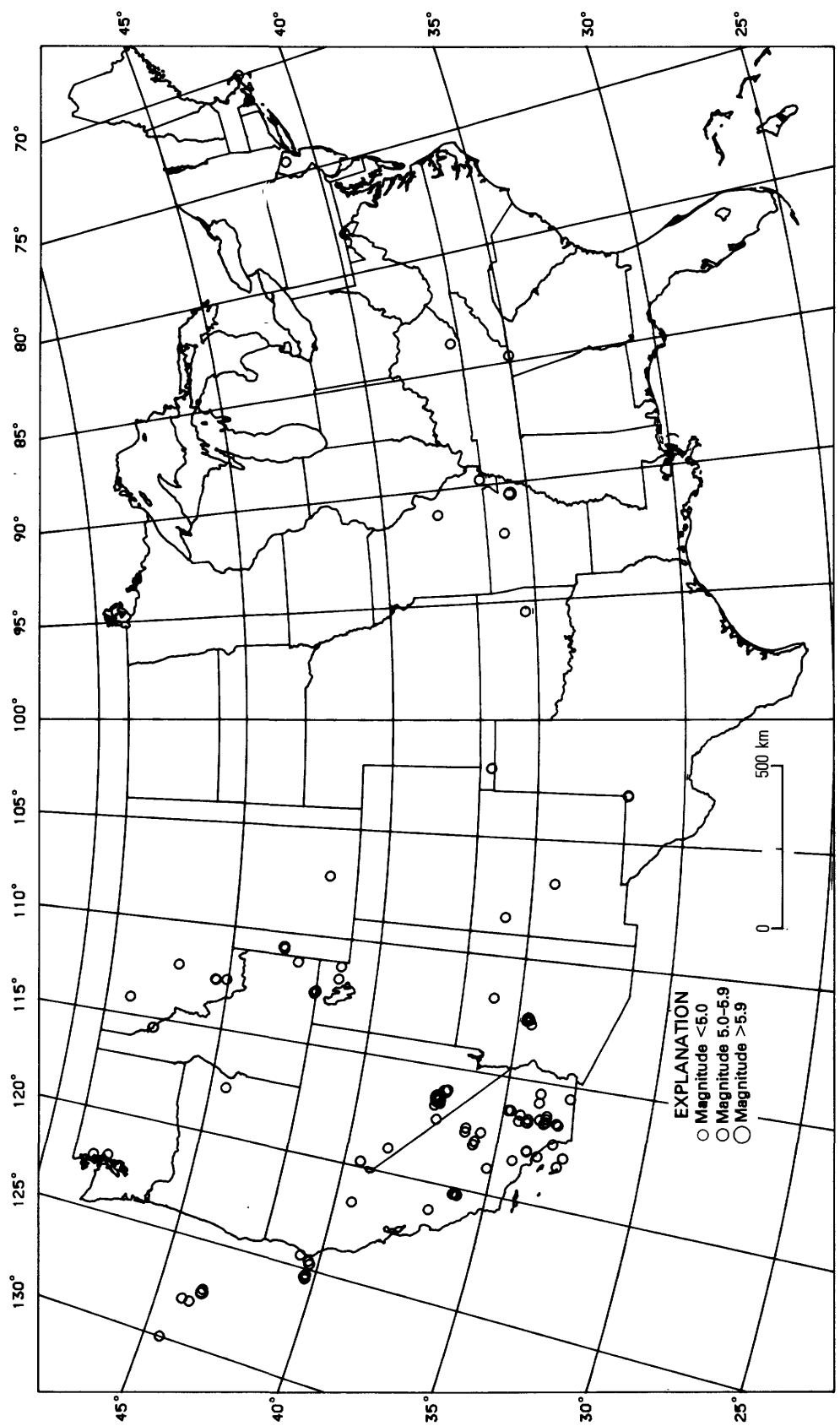

FIGURE 4.--Earthquake epicenters in the conterminous United States for January-March 1976, plotted from table 1.

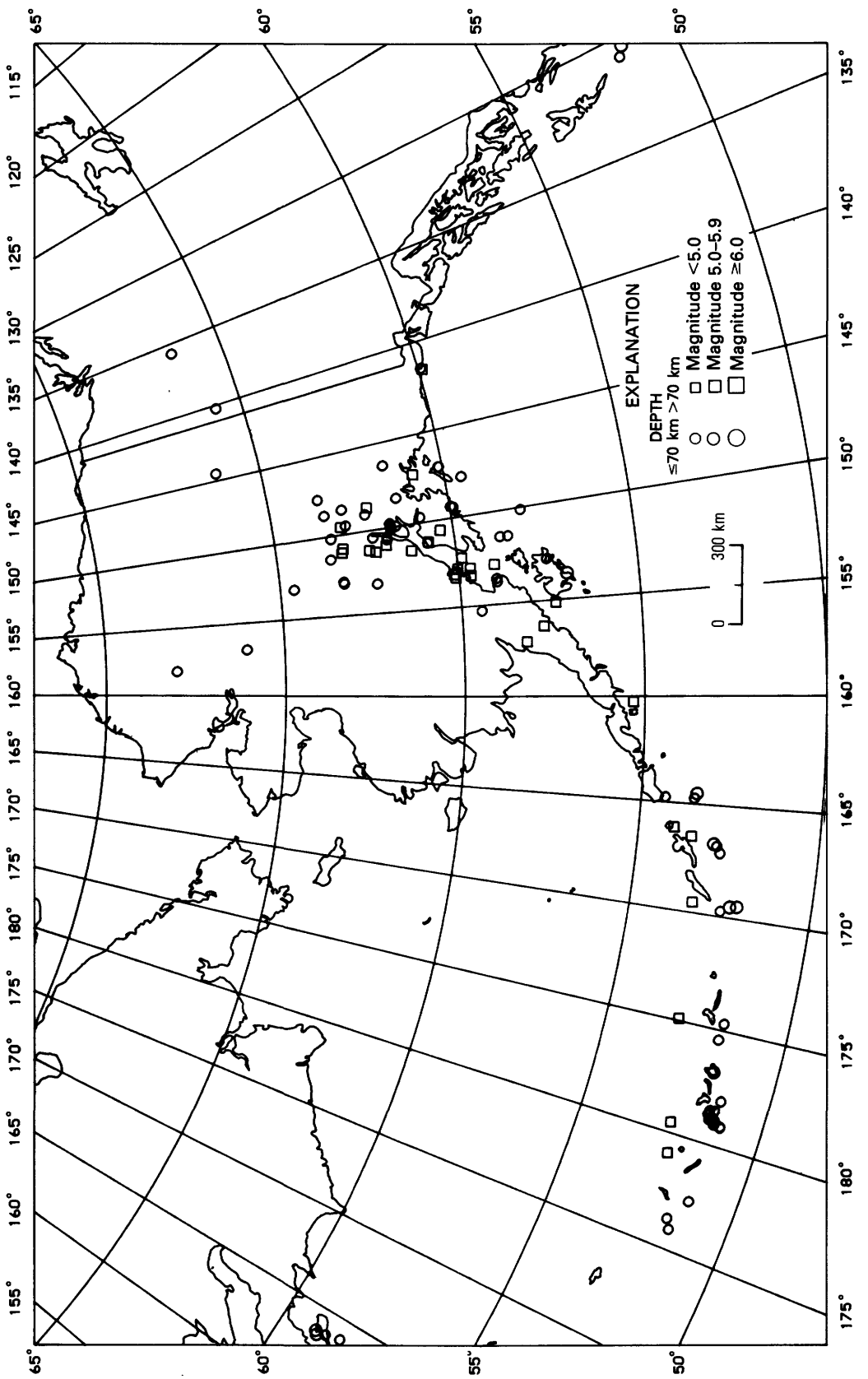

FIGURE 5.--Earthquake epicenters in Alaska for January-March 1976, plotted from table 1.

suspended; sometimes trees, structures, liquids, bodies of water, may sway, doors may swing, very slowly; sometimes birds, animals, reported uneasy or disturbed; sometimes dizziness or nausea experienced.

III. Felt indoors by several, motion usually rapid vibration. Sometimes not recognized to be an earthquake at first. Duration estimated in some cases. Vibration like that due to passing of light, or lightly loaded trucks, or heavy trucks some distance away. Hanging objects may swing slightly. Movements may be appreciable on upper levels of tall structures. Rocked standing motor cars slightly.

IV. Felt indoors by many, outdoors by few. Awakened few, especially light sleepers. Frightened no one, unless apprehensive from previous experience. Vibration like that due to passing of heavy or heavily loaded trucks. Sensation like heavy body striking building or falling of heavy objects inside. Rattling of dishes, windows, doors; glassware and crockery clink and clash. Creaking of walls, frame, especially in the upper range of this grade. Hanging objects swung, in numerous instances. Disturbed liquids in open vessels slightly. Rocked standing motor cars noticeably.

V. Felt indoors by practically all, outdoors by many or most: outdoors direction estimated. Awakened many, or most. Frightened few--slight excitement, a few ran outdoors. Buildings trembled throughout. Broke dishes, glassware, to some extent. Cracked windows--in some cases, but not generally. Overturned vases, small or unstable objects, in many instances, with occasional fall. Hanging objects, doors, swing generally or considerably. Knocked pictures against walls, or swung them out of place. Opened, or closed, doors, shutters, abruptly. Pendulum clocks stopped, started or ran fast, or slow. Moved small objects, furnishings, the latter to slight extent. Spilled liquids in small amounts from well-filled open containers. Trees, bushes, shaken slightly.

VI. Felt by all, indoors and outdoors. Frightened many, excitement general, some alarm, many ran outdoors. Awakened all. Persons made to move unsteadily. Trees, bushes, shaken slightly to moderately. Liquid set in strong motion. Small bells rang--church, chapel, school, etc. Damage slight in poorly built buildings. Fall of plaster in small amount. Cracked plaster somewhat, especially fine cracks chimneys in some instances. Broke dishes, glassware, in considerable quantity, also some windows. Fall of knick-knacks, books, pictures. Overturned furniture in many instances. Moved furnishings of moderately heavy kind.

VII. Frightened all--general alarm, all ran outdoors. Some, or many, found it difficult to stand. Noticed by persons driving motor cars. Trees and bushes shaken moderately to strongly. Waves on ponds, lakes, and running water. Water turbid from mud stirred up. Incaving to some extent of sand or gravel stream banks. Rang large church bells, etc. Suspended objects made to quiver. Damage negligible in buildings of good design and construction, slight to moderate in well-built ordinary buildings, considerable in poorly built or badly designed buildings, adobe houses, old .walls (especially where laid up without mortar), spires, etc. Cracked chimneys to considerable extent, walls to some extent. Fall of plaster in considerable to large amount, also some stucco. Broke numerous windows, furniture to some extent. Shook down loosened brickwork and tiles. Broke weak chimneys at the roof-line (sometimes damaging roofs). Fall of cornices from towers and high buildings. Dislodged bricks and stones. Overturned heavy furniture, with damage from breaking. Damage considerable to concrete irrigation ditches.

VIII. Fright general--alarm approaches panic. Disturbed persons driving motor cars. Trees shaken strongly--branches, trunks, broken off, especially palm trees. Ejected sand and mud in small amounts. Changes: temporary, permanent; in flow of springs and wells; dry wells renewed flow; in temperature of spring and well waters. Damage slight in structures (brick) built especially to withstand earthquakes. Considerable in ordinary substantial buildings, partial collapse: racked, tumbled down, wooden houses in some cases; threw out panel walls in frame structures, broke off decayed piling. Fall of walls. Cracked, broke, solid stone walls seriously. Wet ground to some extent, also ground on steep slopes. Twisting, fall, of chimneys, columns, monuments, also factory stacks, towers. Moved conspicuously, overturned, very heavy furniture.

IX. Panic general. Cracked ground conspicuously. Damage considerable in (masonry) structures built especially to withstand earthquakes: Threw out of plumb some wood-frame houses built especially to withstand earthquakes; great in substantial (masonry) buildings, some collapse in large part; or wholly shifted frame buildings off foundations, racked frames; serious to reservoirs; underground pipes sometimes broken.

X. Cracked ground, especially when loose and wet, up to widths of several inches; fissures up to a yard in width ran parallel to canal and stream banks. Landslides considerable from river banks and steep

coasts. Shifted sand and mud horizontally on beaches and flat land. Changed level of water in wells. Threw water on banks of canals, lakes, rivers, etc. Damage serious to dams, dikes, embankments. Severe to well-built wooden structures and bridges, some destroyed. Developed dangerous cracks in excellent brick walls. Destroyed most masonry and frame structures, also their foundations. Bent railroad rails slightly. Tore apart, or crushed endwise, pipe lines buried in earth. Open cracks and broad wavy folds in cement pavements and asphalt road surfaces.

XI. Disturbances in ground many and widespread, varying with ground material. Broad fissures, earth slumps, and land slips in soft, wet ground. Ejected water in large amounts charged with sand and mud. Caused sea-waves ("tidal" waves) of significant magnitude. Damage severe to wood-frame structures, especially near shock centers. Great to dams, dikes, embankments often for long distances. Few, if any (masonry) structures remained standing. Destroyed large well-built bridges by the wrecking of supporting piers, or pillars. Affected yielding wooden bridges less. Bent railroad rails greatly, and thrust them endwise. Put pipe lines buried in earth completely out of service.

XII. Damage total--practically all works of construction damaged greatly or destroyed. Disturbances in ground great and varied, numerous shearing cracks. Landslides, falls of rock of significant character, slumping of river banks, etc., numerous and extensive. Wrenched loose, tore off, large rock masses. Fault slips in firm rock, with notable horizontal and vertical offset displacements. Water channels, surface and underground, disturbed and modified greatly. Dammed lakes, produced waterfalls, deflected rivers, etc. Waves seen on ground surfaces (actually seen, probably, in some cases). Distorted lines of sight and level. Threw objects upward into the air.

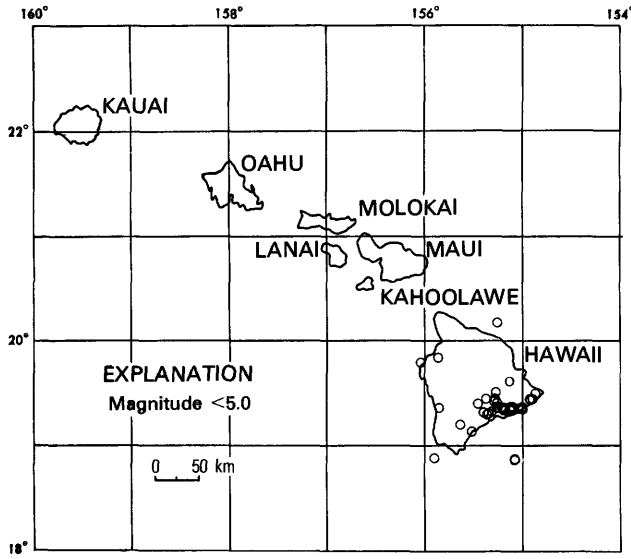

FIGURE 6.--Earthquake epicenters in Hawaii for January-March 1976, plotted from table 1.

Table 1.—*Summary of U.S. earthquakes for January-March 1976*

[Sources of the hypocenter and magnitudes: (A) U.S. Energy Research and Development Administration; (B) University of California, Berkeley; (C) University of Connecticut, Groton; (D) University of Montana, Missoula; (F) USGS Open-File Report 77-181 (Fuis and others, 1977); (G) U.S. Geological Survey, National Earthquake Information Service; (H) U.S. Geological Survey, Hawaiian Volcano Observatory; (L) Lamont-Doherty Geological Observatory, Palisades, New York; (M) NOAA, Alaska Tsunami Warning Center, Palmer; (P) California Institute of Technology, Pasadena; (S) St. Louis University, St. Louis, Missouri; (T) University of Oklahoma, Leonard; (U) University of Utah, Salt Lake City; (V) Virginia Polytechnic Institute and State University, Blacksburg; (W) University of Washington, Seattle. N, Normal depth; UTC, Universal Coordinated Time. For names of local time zones, see figures 2 and 3. Leaders (...) indicate no information available]

Date (1976)	Origin time (UTC) hr	min	s	Lat	Long	Depth (km)	Magnitude mb	MS	ML or mbLg	Maximum intensity	Hypocenter source	Local time Date	Hour
ALASKA													
JAN. 1	20	55	02.5	51.84 N.	175.43 W.	43	4.1	...	...	...	G	JAN. 1	09 A.M. BST
JAN. 2	18	06	59.2	60.36 N.	150.56 W.	188	...	...	...	...	G	JAN. 2	08 A.M. AST
JAN. 3	14	58	42.7	58.08 N.	150.13 W.	33N	...	...	...	...	G	JAN. 3	04 A.M. AST
JAN. 4	08	44	11.2	52.89 N.	166.76 W.	40	5.2	5.2	...	...	G	JAN. 3	09 P.M. BST
JAN. 4	23	28	56.0	58.98 N.	153.63 W.	29	4.8	...	4.4M	...	G	JAN. 4	01 P.M. AST
JAN. 6	02	06	59.0	58.95 N.	153.80 W.	33N	...	...	4.0M	...	G	JAN. 5	04 P.M. AST
JAN. 7	17	18	46.7	61.86 N.	150.67 W.	44	...	...	...	III	G	JAN. 7	07 A.M. AST
JAN. 7	22	00	44.0	61.86 N.	150.65 W.	53	...	...	...	...	G	JAN. 7	12 P.M. AST
JAN. 8	11	55	33.3	51.36 N.	178.91 W.	61	4.3	...	...	...	G	JAN. 8	12 A.M. BST
JAN. 8	13	26	44.8	57.54 N.	152.84 W.	55	4.5	...	...	...	G	JAN. 8	03 A.M. AST
JAN. 9	07	56	07.0	51.40 N.	178.94 W.	52	4.5	...	...	...	G	JAN. 8	08 P.M. BST
JAN. 13	23	48	22.6	51.79 N.	174.70 W.	33N	3.9	...	...	II	G	JAN. 13	12 P.M. BST
JAN. 15	02	17	20.4	61.74 N.	149.77 W.	30	...	...	...	II	G	JAN. 14	04 P.M. AST
JAN. 15	04	15	50.8	58.52 N.	151.40 W.	47	...	...	...	...	G	JAN. 14	06 P.M. AST
JAN. 15	13	12	31.2	62.26 N.	150.46 W.	33N	...	...	3.3M	IV	G	JAN. 15	03 A.M. AST
JAN. 15	15	53	41.1	66.06 N.	156.83 W.	65	...	...	...	...	G	JAN. 15	05 A.M. AST
JAN. 15	19	13	16.9	63.18 N.	151.10 W.	136	...	...	...	...	G	JAN. 15	09 A.M. AST
JAN. 15	22	27	42.0	57.38 N.	155.13 W.	107	...	...	...	...	G	JAN. 15	12 P.M. AST
JAN. 16	23	07	42.9	60.76 N.	151.21 W.	67	...	...	...	...	G	JAN. 16	01 P.M. AST
JAN. 17	09	09	51.4	61.44 N.	148.38 W.	28	...	...	2.6M	II	G	JAN. 16	11 P.M. AST

Table 1.—*Summary of U.S. earthquakes for January-March 1976*—Continued

Date (1976)	Origin time (UTC) hr	min	s	Lat	Long	Depth (km)	Magnitude mb	MS	ML or mbLg	Maximum intensity	Hypocenter source	Local time Date	Hour
ALASKA--Continued													
JAN. 20	04	35	37.2	59.45 N.	155.32 W.	33N	...	...	3.5M	...	G	JAN. 19	06 P.M. AST
JAN. 22	07	59	20.0	61.57 N.	149.96 W.	59	...	...	...	II	G	JAN. 21	09 P.M. AST
JAN. 23	13	03	04.7	53.52 N.	166.49 W.	104	3.7	...	...	IV	G	JAN. 23	02 A.M. BST
JAN. 23	19	13	49.3	60.01 N.	152.88 W.	125	4.1	...	...	...	G	JAN. 23	09 A.M. AST
JAN. 23	23	14	16.8	58.99 N.	152.82 W.	89	...	...	...	...	G	JAN. 23	01 P.M. AST
JAN. 25	00	44	29.1	59.87 N.	152.26 W.	114	...	...	...	...	G	JAN. 24	02 P.M. AST
JAN. 25	12	20	36.8	63.21 N.	153.01 W.	48	...	...	...	...	G	JAN. 25	02 A.M. AST
JAN. 25	18	52	40.9	59.89 N.	141.55 W.	91	4.5	...	...	...	G	JAN. 25	08 A.M. AST
JAN. 26	01	41	34.6	60.13 N.	153.17 W.	148	4.6	...	...	...	G	JAN. 25	03 P.M. AST
JAN. 27	05	27	17.6	64.62 N.	153.06 W.	33	3.9	...	4.2M	...	G	JAN. 26	07 P.M. AST
JAN. 28	13	26	10.7	62.30 N.	153.22 W.	42	...	...	3.0M	...	G	JAN. 28	03 A.M. AST
JAN. 29	08	18	53.2	60.86 N.	147.19 W.	71	...	...	3.5M	...	G	JAN. 28	10 P.M. AST
FEB. 2	00	04	45.9	57.76 N.	156.32 W.	150	...	...	...	...	G	FEB. 1	02 P.M. AST
FEB. 2	09	55	37.8	61.22 N.	151.50 W.	101	...	...	...	...	G	FEB. 1	11 P.M. AST
FEB. 4	16	22	27.0	58.74 N.	151.40 W.	55	4.3	...	...	...	G	FEB. 4	06 A.M. AST
FEB. 5	09	36	36.5	59.99 N.	149.35 W.	35	5.2	3.9	4.8M	V	G	FEB. 4	11 P.M. AST
FEB. 7	10	34	54.3	55.33 N.	160.28 W.	75	4.7	...	...	...	G	FEB. 7	12 A.M. AST
FEB. 9	01	39	25.8	59.92 N.	149.44 W.	53	...	...	...	...	G	FEB. 8	03 P.M. AST
FEB. 9	08	07	58.6	63.01 N.	148.50 W.	67	...	...	...	...	G	FEB. 8	10 P.M. AST
FEB. 9	21	08	53.4	60.73 N.	151.15 W.	79	...	...	...	...	G	FEB. 9	11 A.M. AST
FEB. 10	07	37	11.1	59.92 N.	141.51 W.	33N	...	...	3.8M	...	G	FEB. 9	09 P.M. AST
FEB. 14	13	29	59.5	51.70 N.	176.33 E.	25	4.4	3.8	...	...	G	FEB. 14	02 A.M. BST
FEB. 15	01	56	51.0	52.49 N.	169.75 W.	61	4.5	...	...	...	G	FEB. 14	02 P.M. BST
FEB. 15	12	05	44.8	51.56 N.	175.89 E.	50	4.1	...	...	...	G	FEB. 15	01 A.M. BST
FEB. 17	04	39	51.1	54.33 N.	164.76 W.	60	4.3	...	...	...	G	FEB. 16	05 P.M. BST
FEB. 17	15	29	08.4	63.50 N.	151.43 W.	33N	...	...	...	...	G	FEB. 17	05 A.M. AST
FEB. 18	08	00	58.6	51.57 N.	178.68 W.	39	4.9	4.3	...	IV	G	FEB. 17	09 P.M. BST
FEB. 19	06	30	13.3	63.11 N.	149.56 W.	112	...	...	...	...	G	FEB. 18	08 P.M. AST
FEB. 19	07	49	31.8	62.21 N.	151.34 W.	85	3.9	...	...	...	G	FEB. 18	09 P.M. AST
FEB. 19	10	28	33.5	52.49 N.	179.52 W.	212	4.9	...	...	II	G	FEB. 18	11 P.M. BST
FEB. 19	22	01	27.1	53.47 N.	164.50 W.	33N	5.0	...	...	...	G	FEB. 19	11 A.M. BST
FEB. 19	23	19	16.2	53.53 N.	164.74 W.	44	4.7	...	...	...	G	FEB. 19	12 P.M. BST
FEB. 20	13	54	03.0	63.49 N.	151.44 W.	65	...	...	...	...	G	FEB. 20	03 A.M. AST
FEB. 21	07	48	03.6	61.72 N.	150.12 W.	33N	...	...	...	...	G	FEB. 20	09 P.M. AST
FEB. 22	05	58	27.7	52.24 N.	169.51 W.	44	5.3	5.0	...	...	G	FEB. 21	06 P.M. BST
FEB. 22	07	21	25.8	51.73 N.	176.87 W.	58	5.0	...	...	IV	G	FEB. 21	08 P.M. BST
FEB. 22	22	43	37.7	59.54 N.	147.83 W.	62	...	...	...	...	G	FEB. 22	12 P.M. AST
FEB. 23	03	08	59.7	52.05 N.	169.48 W.	26	5.0	...	...	...	G	FEB. 22	04 P.M. BST
FEB. 25	20	25	48.7	51.28 N.	177.35 E.	45	4.3	...	...	...	G	FEB. 25	09 A.M. BST
FEB. 27	05	38	12.6	52.30 N.	179.11 E.	184	4.4	...	...	...	G	FEB. 26	06 P.M. BST
FEB. 27	17	46	10.2	63.22 N.	152.92 W.	33N	...	...	2.7M	...	G	FEB. 27	07 A.M. AST
FEB. 28	09	43	58.0	51.56 N.	178.54 W.	32	4.8	...	...	II	G	FEB. 27	10 P.M. BST
FEB. 28	12	56	36.3	51.42 N.	178.52 W.	30	4.3	4.0	...	...	G	FEB. 28	01 A.M. BST
FEB. 28	18	27	42.1	59.66 N.	152.92 W.	129	...	...	...	...	G	FEB. 28	08 A.M. AST
FEB. 28	20	10	44.6	62.97 N.	149.48 W.	9	...	...	3.1M	...	G	FEB. 28	10 A.M. AST
FEB. 29	13	15	58.4	61.63 N.	146.38 W.	38	...	...	3.0M	...	G	FEB. 29	03 A.M. AST
MAR. 6	12	21	56.9	58.24 N.	157.10 W.	155	4.5	...	...	...	G	MAR. 6	02 A.M. AST
MAR. 8	02	28	47.7	51.34 N.	178.03 W.	54	4.7	4.1	...	III	G	MAR. 7	03 P.M. BST
MAR. 10	06	30	01.5	51.14 N.	179.10 W.	58	4.8	...	...	...	G	MAR. 9	07 P.M. BST
MAR. 10	08	57	37.1	51.51 N.	178.92 W.	64	4.3	...	...	...	G	MAR. 9	09 P.M. BST
MAR. 11	13	46	31.4	51.34 N.	179.09 W.	64	4.3	...	...	...	G	MAR. 11	02 A.M. BST
MAR. 12	04	24	24.1	63.13 N.	150.85 W.	134	...	...	...	...	G	MAR. 11	06 P.M. AST
MAR. 12	05	50	16.9	51.14 N.	179.14 W.	63	4.1	...	...	...	G	MAR. 11	06 P.M. BST
MAR. 13	14	33	42.5	63.50 N.	148.67 W.	22	3.9	...	4.2M	V	G	MAR. 13	04 A.M. AST
MAR. 13	15	18	57.8	63.51 N.	148.70 W.	45	...	...	3.3M	III	G	MAR. 13	05 A.M. AST
MAR. 13	23	10	38.4	68.03 N.	158.22 W.	53	4.5	...	...	...	G	MAR. 13	01 P.M. AST
MAR. 14	03	31	46.7	60.10 N.	153.35 W.	146	4.1	...	...	...	G	MAR. 13	05 P.M. AST
MAR. 14	06	45	21.4	53.04 N.	174.90 W.	222	4.6	...	...	...	G	MAR. 13	07 P.M. BST
MAR. 16	13	56	25.6	63.43 N.	150.17 W.	33N	...	...	3.1M	...	G	MAR. 16	03 A.M. AST
MAR. 17	22	38	55.1	62.37 N.	149.01 W.	31	...	...	3.0M	...	G	MAR. 17	12 P.M. AST
MAR. 17	23	37	04.4	66.22 N.	144.50 W.	33N	...	...	...	...	G	MAR. 17	01 P.M. AST
MAR. 21	17	20	27.9	60.87 N.	149.69 W.	59	...	...	...	III	G	MAR. 21	07 A.M. AST
MAR. 21	17	33	28.0	52.80 N.	166.84 W.	33	4.8	...	...	...	G	MAR. 21	06 A.M. BST
MAR. 22	05	09	08.0	54.03 N.	166.14 W.	79	4.8	...	...	...	G	MAR. 21	06 P.M. BST
MAR. 22	11	59	53.9	62.29 N.	148.61 W.	88	...	...	...	...	G	MAR. 22	01 A.M. AST
MAR. 24	14	28	35.9	62.40 N.	151.18 W.	103	...	...	...	...	G	MAR. 24	04 A.M. AST
MAR. 24	15	44	59.9	53.27 N.	169.50 W.	110	4.9	...	...	...	G	MAR. 24	04 A.M. BST
MAR. 25	07	49	33.6	57.01 N.	153.70 W.	28	5.0	...	...	III	G	MAR. 24	09 P.M. AST
MAR. 25	09	37	03.5	59.66 N.	153.29 W.	123	...	...	...	...	G	MAR. 24	11 P.M. AST
MAR. 25	16	08	09.5	61.90 N.	150.99 W.	83	...	...	...	...	G	MAR. 25	06 A.M. AST
MAR. 25	20	32	53.8	61.71 N.	149.91 W.	53	...	...	3.0M	...	G	MAR. 25	10 A.M. AST
MAR. 26	14	40	14.2	63.60 N.	147.65 W.	33N	4.1	...	4.2M	IV	G	MAR. 26	04 A.M. AST
MAR. 28	06	55	15.2	52.70 N.	167.15 W.	36	5.2	4.8	...	...	G	MAR. 27	07 P.M. BST
MAR. 29	20	06	16.8	60.12 N.	147.04 W.	33N	...	...	3.4M	...	G	MAR. 29	10 A.M. AST
MAR. 29	20	36	47.3	60.11 N.	147.07 W.	33N	...	...	3.0M	...	G	MAR. 29	10 A.M. AST

Table 1.—*Summary of U.S. earthquakes for January-March 1976*—Continued

Date (1976)	Origin time (UTC) hr	min	s	Lat	Long	Depth (km)	Magnitude mb	MS	ML or mbLg	Maximum intensity	Hypocenter source	Local time Date	Hour
ARIZONA													
FEB. 4	00	04	58.1	34.66 N.	112.50 W.	12	4.9	...	5.1G	VI	G	FEB. 3	05 P.M. MST
FEB. 5	21	02	40.1	34.70 N.	112.57 W.	10	...	...	2.9G	...	G	FEB. 5	02 P.M. MST
FEB. 9	03	07	22.0	34.61 N.	112.53 W.	10	4.6	...	3.3G	...	G	FEB. 8	08 P.M. MST
FEB. 21	03	36	34.8	34.52 N.	112.70 W.	10	...	...	2.8G	...	G	FEB. 20	08 P.M. MST
FEB. 23	14	09	54.4	34.68 N.	112.43 W.	10	...	...	3.5G	IV	G	FEB. 23	07 A.M. MST
FEB. 28	20	53	58.5	35.91 N.	111.79 W.	5	...	...	3.0G	...	G	FEB. 28	01 P.M. MST
ARKANSAS													
JAN. 16	19	42	57.0	35.92 N.	92.12 W.	14	...	...	3.2S	IV	G	JAN. 16	01 P.M. CST
MAR. 25	00	41	20.5	35.59 N.	90.48 W.	15	4.9	...	5.0S	VI	S	MAR. 24	06 P.M. CST
MAR. 25	01	00	11.9	35.61 N.	90.48 W.	15	4.1	...	4.5S	...	S	MAR. 24	07 P.M. CST
CALIFORNIA													
JAN. 1	01	47	54.9	33.52 N.	116.59 W.	8	...	...	3.3P	...	P	DEC. 31	05 P.M. PST
JAN. 1	17	20	12.9	33.97 N.	117.89 W.	6	4.6	...	4.2P	VI	P	JAN. 1	09 A.M. PST
JAN. 1	20	07	02.0	33.96 N.	117.88 W.	13	...	...	3.4P	...	P	JAN. 1	12 P.M. PST
JAN. 8	20	26	51.1	33.84 N.	115.79 W.	3	...	...	3.2P	...	P	JAN. 8	12 P.M. PST
JAN. 14	11	01	07.0	36.06 N.	120.13 W.	8	...	...	3.1P	...	P	JAN. 14	03 A.M. PST
JAN. 14	20	26	24.5	33.09 N.	116.65 W.	13	...	...	3.4P	III	P	JAN. 14	12 P.M. PST
JAN. 14	21	43	46.7	36.11 N.	120.16 W.	5	...	...	3.0B	...	B	JAN. 14	01 P.M. PST
JAN. 14	21	43	59.3	36.11 N.	120.16 W.	5	5.1	...	4.9B	VI	B	JAN. 14	01 P.M. PST
JAN. 14	23	40	17.6	36.14 N.	120.21 W.	2	...	...	3.4B	II	B	JAN. 14	03 P.M. PST
JAN. 15	00	09	37.4	36.15 N.	120.25 W.	7	...	...	3.5B	II	B	JAN. 14	04 P.M. PST
JAN. 15	03	12	06.5	33.89 N.	117.89 W.	5	...	...	3.0P	...	P	JAN. 14	07 P.M. PST
JAN. 18	01	00	23.0	40.64 N.	124.35 W.	23	4.0	...	3.7B	IV	B	JAN. 17	05 P.M. PST
JAN. 18	07	38	25.2	39.06 N.	122.96 W.	7	...	...	2.6B	III	B	JAN. 17	11 P.M. PST
JAN. 19	19	19	49.2	32.80 N.	115.44 W.	14	...	...	3.0F	..	F	JAN. 19	11 A.M. PST
JAN. 24	05	03	47.0	35.64 N.	117.50 W.	7	...	...	3.2P	...	P	JAN. 23	09 P.M. PST
JAN. 24	12	26	02.3	40.30 N.	124.74 W.	33N	...	...	3.4B	...	G	JAN. 24	04 A.M. PST
JAN. 26	19	40	00.0	39.43 N.	121.57 W.	10	...	...	3.3B	...	G	JAN. 26	11 A.M. PST
JAN. 28	04	52	54.4	35.80 N.	117.90 W.	8	...	...	3.1P	...	P	JAN. 27	08 P.M. PST
JAN. 28	06	17	37.4	38.64 N.	118.93 W.	4	...	...	3.2B	...	G	JAN. 27	10 P.M. PST
FEB. 1	02	57	39.7	37.93 N.	122.31 W.	4	...	...	2.6B	II	B	JAN. 31	06 P.M. PST
FEB. 11	08	51	20.1	34.41 N.	116.81 W.	4	...	...	3.0P	...	P	FEB. 11	12 A.M. PST
FEB. 11	23	00	12.2	33.89 N.	115.54 W.	0	...	...	3.3F	...	F	FEB. 11	03 A.M. PST
FEB. 17	16	41	25.1	33.13 N.	116.44 W.	16	...	...	3.2P	...	P	FEB. 17	08 A.M. PST
FEB. 18	23	17	45.4	33.88 N.	115.51 W.	1	...	...	3.0F	...	F	FEB. 18	03 P.M. PST
FEB. 19	09	14	58.0	34.85 N.	116.32 W.	5	...	...	3.0P	...	P	FEB. 19	01 A.M. PST
FEB. 19	17	01	01.1	36.17 N.	117.43 W.	5	...	...	3.9P	...	G	FEB. 19	09 A.M. PST
FEB. 19	22	09	55.1	34.39 N.	118.35 W.	9	...	...	3.1P	III	P	FEB. 19	02 P.M. PST
FEB. 24	15	13	10.5	40.29 N.	124.37 W.	6	3.5	...	3.5B	IV	B	FEB. 24	07 A.M. PST
FEB. 29	13	01	26.2	33.69 N.	118.02 W.	8	...	...	3.0P	...	P	FEB. 29	05 A.M. PST
FEB. 29	19	43	07.8	34.14 N.	116.73 W.	3	3.6	...	3.0P	...	P	FEB. 29	11 A.M. PST
FEB. 29	22	30	09.9	34.14 N.	116.72 W.	8	...	...	3.8P	...	P	FEB. 29	02 P.M. PST
FEB. 29	22	40	35.4	34.13 N.	116.73 W.	4	...	...	3.2P	...	P	FEB. 29	02 P.M. PST
MAR. 1	17	06	40.3	37.73 N.	121.96 W.	7	...	...	2.8B	II	B	MAR. 1	09 A.M. PST
MAR. 2	06	48	09.3	34.14 N.	116.71 W.	5	...	...	3.1P	...	P	MAR. 1	10 P.M. PST
MAR. 4	15	08	09.7	38.79 N.	122.75 W.	2	...	...	3.1B	II	B	MAR. 4	07 A.M. PST
MAR. 4	17	42	54.8	35.18 N.	118.89 W.	7	...	...	3.2P	...	P	MAR. 4	09 A.M. PST
MAR. 6	12	17	08.6	35.89 N.	117.80 W.	3	...	...	3.0F	...	F	MAR. 6	04 A.M. PST
MAR. 6	13	51	08.1	38.81 N.	122.83 W.	4	...	...	2.9B	II	B	MAR. 6	05 A.M. PST
MAR. 7	10	34	15.3	33.03 N.	117.54 W.	6	...	...	3.1P	...	P	MAR. 7	02 A.M. PST
MAR. 8	20	23	27.3	37.39 N.	120.10 W.	2	...	...	2.5B	IV	B	MAR. 8	12 P.M. PST
MAR. 16	10	00	33.9	36.19 N.	117.56 W.	8	...	...	3.6P	...	P	MAR. 16	02 A.M. PST
MAR. 17	04	01	52.7	36.82 N.	121.13 W.	8	4.2	...	4.3B	IV	B	MAR. 16	08 P.M. PST
MAR. 22	04	38	56.9	37.23 N.	117.28 W.	5	...	...	3.3B	...	G	MAR. 21	08 P.M. PST
MAR. 23	00	54	18.7	34.75 N.	116.42 W.	0	...	...	3.0P	...	P	MAR. 22	04 P.M. PST
MAR. 28	05	33	49.1	34.44 N.	116.44 W.	8	...	...	3.1P	...	P	MAR. 27	09 P.M. PST
MAR. 28	07	14	10.5	33.68 N.	116.60 W.	1	...	...	3.0P	...	P	MAR. 27	11 P.M. PST
MAR. 28	07	15	17.1	33.46 N.	116.44 W.	8	...	...	3.0P	...	P	MAR. 27	11 P.M. PST
MAR. 28	07	22	36.7	33.46 N.	116.44 W.	11	3.9	...	3.5P	...	P	MAR. 27	11 P.M. PST
MAR. 30	23	34	54.1	33.69 N.	116.83 W.	14	...	...	3.0P	...	P	MAR. 30	03 P.M. PST
CALIFORNIA--OFF THE COAST													
JAN. 20	13	59	37.2	40.38 N.	125.34 W.	33N	4.8	...	4.5B	IV	G	JAN. 20	05 A.M. PST
JAN. 25	22	01	05.4	40.33 N.	125.26 W.	33N	4.4	...	4.0B	...	G	JAN. 25	02 P.M. PST
FEB. 11	04	21	59.5	40.33 N.	125.45 W.	33N	...	...	3.7B	...	G	FEB. 10	08 P.M. PST
FEB. 16	22	14	35.0	32.65 N.	117.95 W.	12	...	...	3.1F	...	F	FEB. 16	02 P.M. PST
MAR. 12	01	49	17.0	32.83 N.	118.37 W.	12	...	...	3.0P	...	P	MAR. 11	05 P.M. PST

Table 1.—*Summary of U.S. earthquakes for January-March 1976*—Continued

Date (1976)	Origin time (UTC) hr	min	s	Lat	Long	Depth (km)	Magnitude mb	MS	ML or mbLg	Maximum intensity	Hypocenter source	Local time Date	Hour
					HAWAII								
JAN. 1	10	02	48.0	18.84 N.	155.08 W.	20	...	...	3.6H	...	H	JAN. 1	12 A.M. HST
JAN. 1	18	54	23.0	18.85 N.	155.08 W.	26	...	...	4.5H	III	H	JAN. 1	08 A.M. HST
JAN. 2	01	36	47.2	19.36 N.	155.25 W.	9	...	...	3.5H	III	H	JAN. 1	03 P.M. HST
JAN. 6	10	43	37.6	19.31 N.	155.40 W.	5	...	...	3.0H	...	H	JAN. 6	12 A.M. HST
JAN. 6	22	58	52.0	19.44 N.	154.90 W.	9	...	...	3.2H	...	H	JAN. 6	12 P.M. HST
JAN. 7	10	16	39.3	19.31 N.	155.34 W.	10	...	...	3.7H	...	H	JAN. 7	12 A.M. HST
JAN. 7	11	44	33.2	19.45 N.	154.88 W.	9	...	...	3.8H	III	H	JAN. 7	01 A.M. HST
JAN. 7	21	35	07.9	19.37 N.	155.10 W.	8	...	...	3.1H	...	H	JAN. 7	11 A.M. HST
JAN. 8	12	22	53.3	19.79 N.	156.04 W.	8	...	...	3.3H	...	H	JAN. 8	02 A.M. HST
JAN. 11	22	26	10.0	20.00 N.	155.50 W.	10	...	...	3.3H	...	H	JAN. 11	12 P.M. HST
JAN. 12	00	05	40.1	19.51 N.	155.27 W.	24	4.5	4.2	4.2H	IV	H	JAN. 11	02 P.M. HST
JAN. 12	13	48	32.9	19.37 N.	155.12 W.	9	...	...	3.0H	III	H	JAN. 12	03 A.M. HST
JAN. 13	09	56	20.8	19.35 N.	155.12 W.	8	...	...	3.2H	...	H	JAN. 12	11 P.M. HST
JAN. 14	18	03	27.6	19.37 N.	155.11 W.	8	...	...	3.2H	...	H	JAN. 14	08 A.M. HST
JAN. 14	22	09	51.9	19.38 N.	155.11 W.	7	...	...	2.3H	II	H	JAN. 14	09 A.M. HST
JAN. 15	22	41	45.2	19.41 N.	155.29 W.	14	...	...	4.4H	V	H	JAN. 15	12 P.M. HST
JAN. 15	22	59	26.0	19.41 N.	155.29 W.	16	4.8	...	4.5H	V	H	JAN. 15	12 P.M. HST
JAN. 17	05	29	13.8	19.38 N.	155.11 W.	8	...	...	3.7H	IV	H	JAN. 16	07 P.M. HST
JAN. 18	06	00	03.9	19.35 N.	155.00 W.	4	...	...	3.2H	III	H	JAN. 16	08 P.M. HST
JAN. 18	14	49	28.3	19.36 N.	155.25 W.	10	...	...	3.6H	III	H	JAN. 18	04 A.M. HST
JAN. 19	00	05	10.9	19.37 N.	155.12 W.	9	...	...	3.6H	...	H	JAN. 18	02 P.M. HST
JAN. 19	00	13	37.8	19.36 N.	155.13 W.	8	...	...	3.6H	II	H	JAN. 18	02 P.M. HST
JAN. 19	09	57	46.4	19.38 N.	155.10 W.	8	...	...	3.5H	II	H	JAN. 18	11 P.M. HST
JAN. 21	15	22	17.7	19.37 N.	155.11 W.	8	...	...	3.0H	...	H	JAN. 21	05 A.M. HST
JAN. 21	21	41	21.2	19.37 N.	155.12 W.	9	...	...	4.1H	III	H	JAN. 21	11 A.M. HST
JAN. 23	12	47	40.0	19.36 N.	155.09 W.	9	...	...	3.7H	III	H	JAN. 23	02 A.M. HST
JAN. 23	18	20	14 0	19.36 N	155.13 W	9	...	...	3.2H	...	H	JAN. 23	08 A.M. HST
JAN. 26	20	55	58.5	19.43 N.	154.91 W.	9	...	...	3.0H	...	H	JAN. 26	10 A.M. HST
JAN. 27	15	35	51.3	19.35 N.	155.10 W.	9	...	...	3.6H	III	H	JAN. 27	05 A.M. HST
JAN. 27	21	34	04.5	19.34 N.	155.09 W.	7	...	...	2.9H	II	H	JAN. 27	11 A.M. HST
JAN. 28	08	26	28.1	19.34 N.	155.11 W.	9	...	...	4.0H	IV	H	JAN. 27	10 P.M. HST
JAN. 29	12	07	24.2	19.20 N.	155.63 W.	10	...	...	3.0H	...	H	JAN. 29	02 A.M. HST
JAN. 29	15	00	56.1	19.35 N.	155.11 W.	9	...	...	3.2H	...	H	JAN. 29	05 A.M. HST
JAN. 29	20	19	56.4	19.38 N.	155.00 W.	8	4.5	...	4.7H	IV	H	JAN. 29	10 A.M. HST
JAN. 31	11	22	00.0	19.44 N.	155.37 W.	10	...	...	3.1H	...	H	JAN. 31	01 A.M. HST
FEB. 1	06	07	26.9	19.37 N.	155.08 W.	8	...	...	3.3H	III	H	JAN. 31	08 P.M. HST
FEB. 4	02	42	13.4	19.38 N.	155.10 W.	8	...	...	3.4H	III	H	FEB. 3	04 P.M. HST
FEB. 4	06	50	58.3	19.36 N.	155.25 W.	10	...	...	3.5H	III	H	FEB. 3	08 P.M. HST
FEB. 5	21	49	04.4	19.36 N.	155.14 W.	8	...	...	3.1H	...	H	FEB. 5	11 A.M. HST
FEB. 6	05	19	16.6	19.34 N.	155.12 W.	9	...	...	3.2H	...	H	FEB. 5	07 P.M. HST
FEB. 8	08	48	12.2	19.33 N.	155.13 W.	8	...	...	3.2H	III	H	FEB. 7	10 P.M. HST
FEB. 12	16	18	26.2	19.36 N.	155.06 W.	8	...	...	3.2H	II	H	FEB. 12	06 A.M. HST
FEB. 13	10	49	51.8	19.52 N.	155.96 W.	10	...	...	3.6H	III	H	FEB. 13	12 A.M. HST
FEB. 13	17	12	29.1	19.37 N.	155.84 W.	7	...	...	2.9H	II	H	FEB. 13	07 A.M. HST
FEB. 21	04	40	52.5	19.43 N.	155.28 W.	1	...	...	2.8H	III	H	FEB. 18	06 P.M. HST
FEB. 21	05	51	13.8	20.21 N.	156.27 W.	33N	4.9	4.0	5.1H	V	G	FEB. 20	07 P.M. HST
FEB. 23	19	45	23.4	19.36 N.	155.25 W.	9	...	...	3.2H	...	H	FEB. 23	09 A.M. HST
FEB. 24	15	50	19.1	19.37 N.	155.11 W.	9	...	...	4.2H	III	H	FEB. 24	05 A.M. HST
FEB. 25	00	42	32.6	19.39 N.	155.08 W.	8	...	...	3.2H	...	H	FEB. 24	02 P.M. HST
FEB. 25	05	18	30.5	19.35 N.	155.13 W.	9	...	...	3.1H	...	H	FEB. 24	07 P.M. HST
FEB. 25	23	48	20.3	19.37 N.	155.11 W.	9	...	...	3.9H	III	H	FEB. 25	01 P.M. HST
FEB. 29	09	55	25.9	19.37 N.	155.11 W.	8	...	...	3.2H	...	H	FEB. 28	11 P.M. HST
MAR. 1	05	41	58.8	19.34 N.	155.11 W.	9	...	...	3.1H	...	H	FEB. 29	07 P.M. HST
MAR. 3	16	52	01.2	19.40 N.	155.26 W.	5	...	...	2.5H	II	H	MAR. 3	06 A.M. HST
MAR. 3	23	06	10.3	19.43 N.	155.28 W.	1	...	...	2.2H	II	H	MAR. 3	01 P.M. HST
MAR. 5	13	16	52.4	19.61 N.	155.13 W.	11	...	...	2.6H	II	H	MAR. 5	03 A.M. HST
MAR. 6	22	23	04.6	19.36 N.	155.03 W.	7	...	...	3.5H	III	H	MAR. 6	12 P.M. HST
MAR. 7	17	49	14.0	19.33 N.	155.20 W.	11	...	...	3.1H	...	H	MAR. 7	07 A.M. HST
MAR. 8	02	25	34.6	19.36 N.	155.12 W.	8	...	...	3.7H	III	H	MAR. 7	04 P.M. HST
MAR. 11	14	02	42.1	19.36 N.	155.26 W.	9	...	...	3.1H	...	H	MAR. 11	04 A.M. HST
MAR. 13	07	10	17.1	19.50 N.	154.84 W.	3	...	...	3.3H	...	H	MAR. 12	09 P.M. HST
MAR. 13	16	16	16.3	19.14 N.	155.50 W.	11	...	...	3.5H	...	H	MAR. 13	06 A.M. HST
MAR. 14	06	22	03.9	19.83 N.	155.85 W.	11	...	...	3.0H	...	H	MAR. 13	08 A.M. HST
mar. 16	16	48	16.9	19.37 N.	155.12 W.	8	...	...	2.8H	II	H	MAR. 16	06 A.M. HST
MAR. 19	13	04	01.3	19.41 N.	155.26 W.	4	...	...	2.7H	...	H	MAR. 19	03 A.M. HST
MAR. 19	23	24	30.3	19.36 N.	155.06 W.	8	...	...	3.9H	...	H	MAR. 19	01 P.M. HST
MAR. 20	23	13	19.8	19.33 N.	155.11 W.	9	...	...	3.1H	II	H	MAR. 20	01 P.M. HST
MAR. 21	19	31	33.4	19.37 N.	155.26 W.	10	...	...	3.3H	...	H	MAR. 21	09 A.M. HST
MAR. 21	22	18	10.6	19.36 N.	155.22 W.	9	...	...	3.0H	...	H	MAR. 21	12 P.M. HST
MAR. 21	23	58	00.2	19.35 N.	155.19 W.	7	...	...	2.6H	II	H	MAR. 21	01 P.M. HST
MAR. 22	06	31	24.5	19.34 N.	155.14 W.	9	...	...	3.2H	...	H	MAR. 21	08 P.M. HST
MAR. 22	17	27	41.6	19.29 N.	155.36 W.	9	...	...	2.4H	II	H	MAR. 22	07 A.M. HST
MAR. 23	06	48	26.9	19.37 N.	155.09 W.	8	...	...	3.3H	III	H	MAR. 22	08 P.M. HST
MAR. 23	07	19	56.6	19.34 N.	155.11 W.	9	...	...	3.1H	II	H	MAR. 22	09 P.M. HST
MAR. 24	00	38	11.1	19.33 N.	155.19 W.	8	...	...	2.8H	II	H	MAR. 23	02 P.M. HST

Table 1.—*Summary of U.S. earthquakes for January-March 1976*—Continued

Date (1976)	Origin time (UTC) hr	min	s	Lat	Long	Depth (km)	Magnitude mb	MS	ML or mbLg	Maximum intensity	Hypocenter source	Local time Date	Hour
HAWAII--Continued													
MAR. 24	01	06	03.1	19.32 N.	155.31 W.	9	...	...	3.7H	III	H	MAR. 23	03 P.M. HST
MAR. 26	18	44	47.2	19.34 N.	155.18 W.	12	...	...	3.0H	...	H	MAR. 26	08 A.M. HST
MAR. 29	15	09	51.9	19.37 N.	155.25 W.	10	...	...	3.7H	III	H	MAR. 29	05 A.M. HST
MAR. 29	18	31	29.8	19.40 N.	155.26 W.	14	...	...	3.0H	II	H	MAR. 29	08 A.M. HST
MAR. 31	00	52	10.2	19.34 N.	155.12 W.	9	...	...	3.4H	III	H	MAR. 30	02 P.M. HST
IDAHO													
FEB. 14	13	11	11.0	42.72 N.	111.27 W.	5	...	...	3.4A	...	G	FEB. 14	06 A.M. MST
FEB. 21	14	12	47.0	41.99 N.	112.55 W.	5	...	...	3.3A	...	G	FEB. 21	07 A.M. MST
FEB. 23	01	01	18.2	42.01 N.	112.52 W.	5	...	...	2.8A	...	G	FEB. 22	06 P.M. MST
MAR. 7	07	23	11.1	42.06 N.	112.57 W.	5	...	...	...	...	G	MAR. 7	12 A.M. MST
MAR. 10	02	29	50.7	47.40 N.	115.80 W.	0	...	...	2.7D	II	G	MAR. 9	07 P.M. MST
MAR. 22	09	18	45.7	42.05 N.	112.64 W.	5	...	...	...	...	G	MAR. 22	02 A.M. MST
KENTUCKY													
JAN. 19	06	20	39.5	36.88 N.	83.82 W.	5	4.0	...	3.8S	VI	G	JAN. 19	01 A.M. EST
MARYLAND													
JAN. 30	18	58	49.8	39.68 N.	78.17 W.	15	...	...	2.8V	...	G	JAN. 30	01 P.M. EST
MASSACHUSETTS													
MAR. 14	23	12	24.6	41.66 N.	69.97 W.	0	...	...	3.0C	V	C	MAR. 14	06 P.M. EST
MISSOURI													
MAR. 13	07	25	00.4	38.12 N.	91.07 W.	0	...	...	...	...	S	MAR. 13	01 A.M. CST
JAN. 23	00	56	39.6	36.55 N.	89.60 W.	9	...	...	2.0S	IV	S	JAN. 22	06 P.M. CST
MONTANA													
JAN. 21	13	43	29.6	48.22 N.	114.10 W.	5	...	...	3.1G	IV	G	JAN. 21	05 A.M. PST
JAN. 24	23	53	02.3	45.06 N.	112.59 W.	5	...	...	3.5D	...	G	JAN. 24	04 P.M. MST
FEB. 13	06	13	43.1	46.75 N.	112.13 W.	1	...	...	3.8G	IV	G	FEB. 12	11 P.M. MST
MAR. 31	17	40	38.3	45.44 N.	112.63 W.	5	...	...	3.5D	...	G	MAR. 31	10 A.M. MST
MAR. 31	19	31	21.4	45.42 N.	112.64 W.	1	...	...	3.5D	...	G	MAR. 31	12 P.M. MST
NEVADA													
JAN. 3	19	15	00.2	37.30 N.	116.33 W.	0	6.2	5.5	6.2P	...	A	JAN. 3	11 A.M. PST
JAN. 3	22	20	25.0	37.30 N.	116.33 W.	0	...	...	3.6B	...	G	JAN. 3	02 P.M. PST
JAN. 4	01	18	18.3	37.29 N.	116.37 W.	5	4.1	...	4.5B	...	G	JAN. 3	05 P.M. PST
JAN. 4	03	23	24.7	37.30 N.	116.33 W.	0	...	...	...	...	G	JAN. 3	07 P.M. PST
JAN. 4	16	16	09.0	37.30 N.	116.33 W.	0	4.2	...	4.2B	...	G	JAN. 4	08 A.M. PST
JAN. 8	16	14	19.9	37.31 N.	116.36 W.	5	4.5	...	4.3B	...	G	JAN. 8	08 A.M. PST
JAN. 17	21	39	33.4	37.28 N.	116.40 W.	5	...	...	4.3B	...	G	JAN. 17	01 P.M. PST
JAN. 18	07	20	17.9	37.31 N.	116.43 W.	5	4.4	...	4.4B	...	G	JAN. 17	11 P.M. PST
FEB. 3	00	14	28.4	37.33 N.	116.36 W.	5	...	...	4.0B	...	G	FEB. 2	04 P.M. PST
FEB. 4	06	51	47.8	37.32 N.	116.46 W.	5	...	...	3.7B	...	G	FEB. 3	10 P.M. PST
FEB. 4	14	20	00.1	37.07 N.	116.03 W.	0	5.8	...	5.4B	...	A	FEB. 4	06 A.M. PST
FEB. 4	14	40	00.2	37.11 N.	116.04 W.	0	5.7	...	5.6B	...	A	FEB. 4	06 A.M. PST
FEB. 6	01	14	24.2	37.32 N.	116.37 W.	5	...	...	4.2B	...	G	FEB. 5	05 P.M. PST
FEB. 6	01	41	11.8	37.33 N.	116.40 W.	5	...	...	3.5G	...	G	FEB. 5	05 P.M. PST
FEB. 7	07	36	55.6	37.25 N.	116.39 W.	5	4.3	...	4.3B	...	G	FEB. 6	11 P.M. PST
FEB. 8	06	09	26.5	39.47 N.	119.76 W.	5	...	...	3.4B	IV	G	FEB. 7	10 P.M. PST
FEB. 12	14	45	00.2	37.27 N.	116.49 W.	0	6.3	5.5	6.3B	...	A	FEB. 12	06 A.M. PST
FEB. 12	17	37	29.0	37.27 N.	116.49 W.	0	4.8	...	4.3B	...	G	FEB. 12	09 A.M. PST
FEB. 13	07	52	20.0	37.33 N.	116.62 W.	5	...	...	3.5G	...	G	FEB. 12	11 P.M. PST
FEB. 14	11	30	00.2	37.24 N.	116.42 W.	0	6.0	...	5.7B	...	A	FEB. 14	03 A.M. PST
FEB. 17	23	18	17.6	37.31 N.	116.48 W.	5	4.0	...	4.3B	...	G	FEB. 17	03 P.M. PST
FEB. 26	14	49	59.9	37.01 N.	115.97 W.	5	4.2	...	4.1B	...	G	FEB. 26	06 A.M. PST
MAR. 9	14	00	00.1	37.31 N.	116.36 W.	0	6.0	4.8	5.9B	...	A	MAR. 9	06 A.M. PST
MAR. 9	16	55	02.0	37.31 N.	116.36 W.	0	4.1	...	4.0B	...	G	MAR. 9	08 A.M. PST
MAR. 9	20	54	07.2	37.32 N.	116.29 W.	5	4.1	...	4.1B	...	G	MAR. 9	12 P.M. PST
MAR. 14	12	30	00.2	37.31 N.	116.47 W.	0	6.3	5.3	6.2B	...	A	MAR. 14	04 A.M. PST
MAR. 14	13	52	42.5	37.31 N.	116.47 W.	0	...	...	...	...	G	MAR. 14	05 A.M. PST
MAR. 14	14	09	52.0	37.31 N.	116.47 W.	0	4.3	...	...	...	G	MAR. 14	06 A.M. PST
MAR. 14	14	18	15.0	37.31 N.	116.47 W.	0	4.2	...	...	...	G	MAR. 14	06 A.M. PST
MAR. 14	14	59	22.2	37.31 N.	116.47 W.	0	4.3	...	...	...	G	MAR. 14	06 A.M. PST
MAR. 14	15	24	28.8	37.31 N.	116.47 W.	0	4.1	...	4.7B	...	G	MAR. 14	07 A.M. PST
MAR. 14	19	27	52.9	37.32 N.	116.35 W.	5	3.9	...	...	...	G	MAR. 14	11 A.M. PST
MAR. 17	14	15	00.1	37.26 N.	116.31 W.	0	6.1	4.5	5.8B	...	A	MAR. 17	06 A.M. PST
MAR. 17	14	45	00.1	37.11 N.	116.05 W.	0	5.8	4.2	5.6B	...	A	MAR. 17	06 A.M. PST
MAR. 19	08	17	03.2	37.20 N.	116.58 W.	5	4.1	...	...	...	G	MAR. 19	12 A.M. PST
MAR. 20	06	23	04.9	37.35 N.	116.69 W.	5	4.0	...	...	...	G	MAR. 19	10 P.M. PST
MAR. 23	02	48	06.1	37.33 N.	116.46 W.	5	...	...	4.4B	...	G	MAR. 22	06 P.M. PST

Table 1.—*Summary of U.S. earthquakes for January-March 1976*—Continued

Date (1976)	Origin time (UTC) hr	min	s	Lat	Long	Depth (km)	Magnitude mb	MS	ML or mbLg	Maximum intensity	Hypocenter source	Local time Date	Hour
NEW JERSEY													
MAR. 11	21	07	20.4	40.96 N.	74.37 W.	4	...	...	2.4L	V	L	MAR. 11	04 P.M. EST
NEW MEXICO													
JAN. 5	06	23	32.9	35.84 N.	108.34 W.	25	5.0	...	4.6G	VI	G	JAN. 4	11 P.M. MST
JAN. 14	07	01	32.0	34.17 N.	106.81 W.	0	...	...	...	II	G	JAN. 13	11 P.M. MST
OKLAHOMA													
MAR. 16	07	39	54.5	35.30 N.	95.50 W.	0	...	...	2.3T	III	T	MAR. 16	01 A.M. CST
MAR. 30	09	27	01.0	36.61 N.	102.08 W.	5	...	...	2.7T	V	G	MAR. 30	03 A.M. CST
OREGON													
JAN. 13	17	09	31.3	44.46 N.	117.73 W.	5	...	...	3.8A	...	G	JAN. 13	09 A.M. PST
OREGON--OFF THE COAST													
JAN. 10	08	58	45.2	43.55 N.	127.43 W.	33N	5.4	...	...	...	G	JAN. 10	12 A.M. PST
JAN. 14	06	06	55.8	44.13 N.	127.96 W.	33N	4.5	...	...	...	G	JAN. 13	10 P.M. PST
JAN. 27	16	06	47.5	43.57 N.	127.41 W.	33N	5.2	4.9	5.0B	...	G	JAN. 27	08 A.M. PST
JAN. 29	18	45	54.3	43.56 N.	127.25 W.	33N	5.2	4.7	...	...	G	JAN. 29	10 A.M. PST
MAR. 7	09	43	20.4	44.43 N.	130.00 W.	33N	5.2	4.5	...	...	G	MAR. 7	01 A.M. PST
MAR. 16	11	54	42.5	43.86 N.	127.99 W.	33N	4.3	3.6	...	...	G	MAR. 16	03 A.M. PST
RHODE ISLAND													
MAR. 11	08	29	32.2	41.56 N.	71.21 W.	0	...	...	3.5C	VI	C	MAR. 11	03 A.M. EST
TENNESSEE													
FEB. 4	19	53	52.9	35.00 N.	84.75 W.	5	...	...	3.0V	VI	G	FEB. 4	02 P.M. EST
TEXAS													
JAN. 19	04	03	30.5	31.90 N.	103.08 W.	1	...	...	3.3G	IV	G	JAN. 18	09 P.M. MST
JAN. 22	07	21	57.0	31.90 N.	103.07 W.	1	...	...	2.8G	III	G	JAN. 22	12 A.M. MST
JAN. 25	04	48	27.9	31.90 N.	103.08 W.	2	...	...	4.1G	V	G	JAN. 24	09 P.M. MST
UTAH													
FEB. 11	03	28	14.7	41.27 N.	111.84 W.	13	...	...	2.7U	III	U	FEB. 10	08 P.M. MST
FEB. 27	07	18	16.4	41.24 N.	111.27 W.	5	...	...	2.4U	II	G	FEB. 27	12 A.M. MST
WASHINGTON													
JAN. 5	13	25	43.8	47.46 N.	122.60 W.	42	...	...	2.7G	IV	W	JAN. 5	05 A.M. PST
JAN. 27	03	09	31.3	47.88 N.	122.17 W.	19	...	...	2.1G	IV	W	JAN. 26	07 P.M. PST
JAN. 31	12	27	14.0	48.35 N.	122.32 W.	18	...	...	2.4G	IV	W	JAN. 31	04 A.M. PST
WYOMING													
JAN. 27	10	54	38.7	41.95 N.	107.22 W.	5	...	...	2.3G	V	G	JAN. 27	03 A.M. MST
MAR. 15	02	28	34.5	43.25 N.	110.73 W.	5	3.7	...	3.2A	...	G	MAR. 14	07 P.M. MST
MAR. 17	08	02	46.3	43.24 N.	110.68 W.	5	3.9	...	3.5A	...	G	MAR. 17	01 A.M. MST
MAR. 21	07	52	33.3	43.26 N.	110.69 W.	5	...	...	...	...	G	MAR. 21	12 A.M. MST
MAR. 21	08	03	07.3	43.27 N.	110.68 W.	17	...	...	...	...	G	MAR. 21	01 A.M. MST

Table 2.— *Summary of macroseismic data for U.S. earthquakes, January-March 1976*

[Sources of the hypocenter and magnitudes: (A) U.S. Energy Research and Development Administration; (B) University of California, Berkeley; (C) University of Connecticut, Groton; (D) University of Montana, Missoula; (G) U.S. Geological Survey, National Earthquake Information Service; (H) U.S. Geological Survey, Hawaiian Volcano Observatory; (K) NOAA, Adak Observatory, Alaska; (L) Lamont-Doherty Geological Observatory, Palisades, New York; (M) NOAA, Alaska Tsunami Warning Center, Palmer; (O) Seismological Service of Canada, Ottawa; (P) California Institute of Technology, Pasadena; (S) St. Louis University, St. Louis, Missouri; (T) University of Oklahoma, Leonard; (U) University of Utah, Salt Lake City; (V) Virginia Polytechnic Institute and State University, Blacksburg; (W) University of Washington, Seattle. Dates and origin times are listed in Universal Coordinated Time (UTC), giving the hour, minute, and second. Epicenters are shown in decimal degrees. Only earthquakes with intensity data and explosions are listed]

Alaska

7 January (G) Southern Alaska
- Origin time: 17 18 46.7
- Epicenter: 61.86 N., 150.67 W.
- Depth: 44 km
- Magnitude: None computed.
- Intensity III: Palmer (press report).

13 January (G) Andreanof Islands, Aleutian Islands
- Origin time: 23 48 22.6
- Epicenter: 51.79 N., 174.70 W.
- Depth: Normal.
- Magnitude: 3.9 mb
- Intensity II: Adak.

15 January (G) Southern Alaska
- Origin time: 02 17 20.4
- Epicenter: 61.74 N., 149.77 W.
- Depth: 30 km
- Magnitude: None computed.
- Intensity II: Willow.

15 January (G) Southern Alaska
- Origin time: 13 12 31.2
- Epicenter: 62.26 N., 150.46 W.
- Depth: Normal.
- Magnitude: 3.3 ML(M)
- Intensity IV: Talkeetna.

17 January (G) Southern Alaska
- Origin time: 09 09 51.4
- Epicenter: 61.44 N., 148.38 W.
- Depth: 28 km
- Magnitude: 2.6 ML(M)
- Intensity II: Palmer (M).

22 January (G) Southern Alaska
- Origin time: 07 59 20.0
- Epicenter: 61.57 N., 149.96 W.
- Depth: 59 km
- Magnitude: None computed.
- Intensity II: Nancy Lake (M).

23 January (G) Fox Islands, Aleutian Islands
- Origin time: 13 03 04.7
- Epicenter: 53.52 N., 166.49 W.
- Depth: 104 km
- Magnitude: 3.7 mb
- Intensity IV: Unalaska, Dutch Harbor (M).

Table 2.— *Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Alaska-Continued

5 February (G) Kenai Peninsula, Alaska
- Origin time: 09 36 36.5
- Epicenter: 59.99 N., 149.35 W.
- Depth: 35 km
- Magnitude: 5.2 mb, 3.9 MS, 4.8 ML(M)

Intensity data from Alaska Tsunami Warning Center.
- Intensity V: Seward.
- Intensity IV: Moose Pass area.
- Intensity III: Anchorage, Whittier.
- Intensity II: Palmer.

18 February (G) Andreanof Islands, Aleutian Islands
- Origin time: 08 00 58.6
- Epicenter: 51.57 N., 178.68 W.
- Depth: 39 km
- Magnitude: 4.9 mb, 4.3 MS
- Intensity IV: Adak (K).

19 February (G) Andreanof Islands, Aleutian Islands
- Origin time: 10 28 33.5
- Epicenter: 52.49 N., 179.52 W.
- Depth: 212 km
- Magnitude: 4.9 mb
- Intensity II: Adak (K).

22 February (G) Andreanof Islands, Aleutian Islands
- Origin time: 07 21 25.8
- Epicenter: 51.73 N., 176.87 W.
- Depth: 58 km
- Magnitude: 5.0 mb
- Intensity IV: Adak (K).

28 February (G) Andreanof Islands, Aleutian Islands
- Origin time: 09 43 58.0
- Epicenter: 51.56 N., 178.54 W.
- Depth: 32 km
- Magnitude: 4.8 mb
- Intensity II: Adak (K).

8 March (G) Andreanof Islands, Aleutian Islands
- Origin time: 02 28 47.7
- Epicenter: 51.34 N., 178.03 W.
- Depth: 54 km
- Magnitude: 4.7 mb, 4.1 MS
- Intensity III: Adak (K).

13 March (G) Central Alaska
- Origin time: 14 33 42.5
- Epicenter: 65.50 N., 148.67 W.
- Depth: 22 km
- Magnitude: 3.9 mb, 4.2 ML(M)
- Intensity V: Cantwell, Summit area.
- Intensity III: Broad Pass, Sun Trana.

Table 2.— *Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Alaska--Continued

13 March (G) Central Alaska
Origin time: 15 18 57.8
Epicenter: 63.51 N., 148.70 W.
Depth: 45 km
Magnitude: 3.3 ML(M)
Intensity III: Cantwell.

21 March (G) Kenai Peninsula
Origin time: 17 20 27.9
Epicenter: 60.87 N., 149.69 W.
Depth: 59 km
Magnitude: None computed.
Intensity III: Alyeska, Anchorage, Palmer (M).

25 March (G) Kodiak Island region, Aleutian Islands
Origin time: 07 49 33.6
Epicenter: 57.01 N., 153.70 W.
Depth: 28 km
Magnitude: 5.0 mb
Intensity III: Sitkinak Island (Trinity Island group), Old Harbor area.

26 March (G) Central Alaska
Origin time: 14 40 14.2
Epicenter: 63.60 N., 147.65 W.
Depth: Normal.
Magnitude: 4.1 mb, 4.2 ML(M)
Intensity IV: Fairbanks.

Arizona

4 February (G) Central Arizona
Origin time: 00 04 58.1
Epicenter: 34.66 N., 112.50 W.
Depth: 12 km
Magnitude: 4.9 mb, 5.1 ML, 5.2 ML(P)

A field survey of the epicentral area was conducted by USGS personnel following this earthquake. Listed below are the results of this survey:

The earthquake was felt from Yuma to Tucson and as far north as Flagstaff. It was felt most strongly in the vicinity of Prescott. Sheriff Byron Langdell of Yavapi County reported that telephone service was interrupted for a short time such that calls could be made but none received. Aftershocks were felt at 10 p.m., February 3 and at 2 a.m. and 6 a.m., February 4 (local time), waking many.

Most of the housing in the sparsely populated area surveyed consisted of mobile-trailer homes, some of which were placed on concrete platforms and called "modular homes." Many were placed on cinderblocks and "skirted" with sheet-metal or some other material. There were almost no brick chimneys in the area.

Table 2.— *Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Arizona--Continued

Many fallen rocks and boulders were observed south of Prescott on Highway 89, a winding, mountainous road in Prescott National Forest. These were believed to have resulted from an intense rainstorm on February 4-5 and not from the earthquake.

An area around the epicenter having a radius of 360 km was canvassed, and 362 questionnaires were mailed. Figure 7 shows the results of this canvass. The quake was felt over an area of approximately 25,000 sq km.

Intensity VI:

Chino Valley--At the Buckaroo shopping center and liquor store bottles were thrown from shelves along the north wall. Estimated loss due to breakage was about $100, according to Gladys Armstrong, owner. She said bottles along the shelves on the west wall rattled but did not fall.

This one-story building of recent frame construction on flat ground had ceiling beams from east to west. One beam was loosened slightly and the plaster separated from the ceiling. The beams were not structural members of the building, but ornamental.

The proprietor of the Shell gas station in this town said he believed cracks in the cinderblock partition in his garage were due to the earthquake. The building was in such poor condition, however, that it would be difficult to say any damage was due to the shock. He related to local TV reporters that he saw waves on the ground and nearly fell over. He also told us he had lived in California for 30 years before coming to Arizona.

The Forest Ranger said there was a report of muddied water in a well in the area. This was unconfirmed.

Cottonwood--Slight damage.

Miller Valley--In this northern suburb of Prescott, the recently constructed addition to the Safeway supermarket had small cracks in the west wall, beginning at the ceiling and extending downward about 1 m where they disappeared behind shelves. These cracks were located at the juncture of the old and new section of the store. The addition to the building was made in early 1975. The mortar joining the cinderblocks was cracked in a way that might have indicated settling. The assistant manager was sure the cracks were not present before the earthquake. The liquor department just adjacent to the cracked wall is in the new section along the west wall. The bottles rattled and clinked together, the manager stated, but none were thrown from the shelf.

Table 2.—*Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Arizona--Continued

Paulden--This small community is about 12 km north of Chino Valley. The barmaid at the only bar in town said she heard of a mirror falling from the wall at one home. A lamp hanging in the bar swung considerably during the earthquake, she said when asked.
The retired deputy-sheriff reported that the most significant thing he noticed was the sound of a large explosion coming from a northeasterly direction. That would be at or near the Dillard's Verde River Ranch, he thought.
One resident reported that the waste-line to his son's trailer-home had been broken off by the earthquake. He also stated that it had been loose for some time and that when the shock occurred, the waste-line became disconnected.

Intensity V: Clarkdale, Cornville, Dewey, Jerome, Mayer, Peeples Valley (field report), Rio Verde Ranch (southeast of Paulden), Skull Valley. (Interviews in Skull Valley and Peeples Valley, and in small wayside stops, gas stations, and cafes revealed that almost everybody felt the main shock and the aftershocks. Most of those who noticed the swing of hanging objects stated that the direction was from north to south. Many believed damage reports heard on radio and TV were exaggerated. The places mentioned here were all south and west of Prescott.)

Arizona--Continued

Intensity IV: Ash Fork, Humboldt, Parker Dam, Phoenix, Picacho, Rimrock, Wickenburg, Wide Ruin, Yarnell.
Intensity III: Bouse, Wikieup.
Intensity II: Chloride, Seligman.

Between February 4 and February 9, 12 aftershocks were reported by the Arizona State University Seismograph Station.

23 February (G) Central Arizona
Origin time: 14 09 54.4
Epicenter: 34.68 N., 112.43 W.
Depth: 10 km
Magnitude: 3.5 ML
Intensity VI: Chino Valley.
Intensity V: Humboldt, Prescott, Skull Valley.
Intensity IV: Dewey, Paulden.

Arkansas

16 January (G) Northern Arkansas
Origin time: 19 42 57.0
Epicenter: 35.92 N., 92.12 W.
Depth: 14 km
Magnitude: 3.2 ML(S)
Intensity V: Blanchard Springs Cavern (underground rocks fell).
Intensity IV: Bull Shoals, Cotter, Fifty-six, Mountain View, Norfolk.
Intensity III: Mountain Home (telephone report).

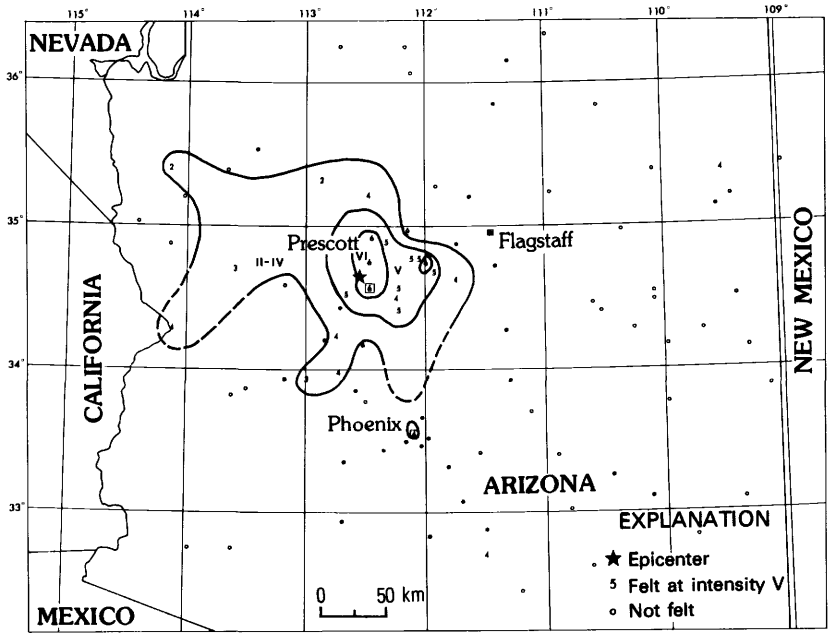

FIGURE 7.--Isoseismal map for the central Arizona earthquake of 4 February 1976, 00 04 58.1 UTC. Roman numerals represent Modified Mercali intensities between isoseismals; Arabic numbers are used to represent the intensitiesat specific sites.

Table 2.— *Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Arkansas--Continued

25 March (S) Northeastern Arkansas
Origin time: 00 41 20.5
Epicenter: 35.59 N., 90.48 W.
Depth: 15 km
Magnitude: 4.9 mb(G), 5.0 ML.

An area around the epicenter having a radius of 500 km was canvassed, and 1,809 questionnaires were maile. Figure 8 shows the results of this canvass. The quake was felt over an area of approximately 280,000 sq km. This earthquake triggered seven accelerographs located at four stations, Arkabutla dam, Mississippi; Wappapelo dam, Missouri; Tiptonville, Tenn.; and New Madrid, Mo. The maximum recorded acceleration was 0.04 g (C. F. Porcella, written commun., 1977 .

Intensity VI:
Arkansas--Bay, Biggers, Blytheville, Brookland, Bunker, Cash, Datto, Decatur (unconfirmed reports of minor property damage; ceiling tiles fell and some roof damage--press report), Delaplaine, Dolph, Egypt, Hardy, Harrisburg, Jonesboro (power blackout, telephone lines down; ceilings, walls floors shook violently at state police headquarters, which is 7.6 m underground--press report), Knobel, Lake City, Lepanto, Luxora, Marked Tree, McDougal, Minturn, Okean, Paragould (windows broken; $700 damage estimated--press report), Peach Orchard, Portia, Sedgwick, Smithville, Tomato, Trumann, Walnut Ridge (windows blown out in downtown businesses--press report), Wynne.
Kentucky--Fancy Farm.
Mississippi--Abbeville, Arkabulta, De Soto County (press report), Falkner, Lafayette County (press report), Lee County (press report), Michigan City, Monroe County (press report), Panola County (press report), Quitman County (press report), Tate County (press report), Tunica County (press report), Tupelo (cracked masonry--press report).

Table 2.— *Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Arkansas--Continued

FIGURE 8.--Isoseismal map for the northeastern Arkansas earthquake of 25 March 1976, 00 41 20.5 UTC. Roman numerals represent Modified Mercali intensities between isoseismals; Arabic numbers are used to represent the intensities at specific sites.

Table 2.—*Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Arkansas--Continued

Missouri--Arab, Arbyrd, Brandsville, Lilbourn, Puxico.
Tennessee--Brunswick, Drummonds, Dyersburg, Ellendale, Macon, Memphis (minor damage at nine stations of Memphis Fire Department; books shaken from shelves in 11-story library tower at Memphis State University--press report), Tipton, Union City (damage to telephone circuits--press report).

Intensity V:
Alabama--Albertville, Bankston, Cherokee, Coker, Florence (furniture moved--press report), Lawrence County (some downed powerlines--press report), Lexington, Muscle Shoals (press report), Waterloo.
Arkansas--Alexander, Augusta, Balch, Bassett, Batesville (powerlines down--press report), Beech Grove, Bexar, Biscoe, Black Oak, Black Rock, Boswell, Brickeys, Brinkley, Burdette, Caldwell, Camp, Cave City, Chatfield, Cherry Valley, Clarendon, Concord, Cord, Corning, Cotter, Coy, Crawfordsville, Cushman, Dardanelle, Dell, Devalls Bluff, Diaz, Dyess, Earle, Edmondson, Ethel, Etowah, Fisher, Forrest City, Franklin, Gepp, Gillett, Gilmore, Glencoe, Goodwin, Greenway, Gregory, Griffithville, Grubbs, Helena, Henderson, Heth, Higden, Higginson, Howell, Hoxie, Hughes, Humphrey, Hunter, Imboden, Jacksonport, Jefferson, Joiner, Jordan, Keiser, Kensett, Keo, La Grange, Leachville, Light, Locust Grove, Lynn, Mammoth Spring, Manila, Marcella, Marianna, Marmaduke, Marvell, Maynard, Mcrae, Mellwood, Moro, Moscow, Mountain View, Mount Pleasant, Mountain Home, Newark, Newport, Nimmons, Norfork, Oil Trough, Osceola, Oxford, Palestine, Pineville, Pleasant Grove, Pocahontas, Powhatan, Proctor, Ravenden, Ravenden Springs, Reydell, Reyno, Roe, Rosie, Round Pond, Saffell, Saint Charles, Saint Francis, Shoffner, Smithville, Stonewall, Strawberry, Sweet Home, Swifton, Tilly, Tucker, Tuckerman, Turner, Tyronza, Vanndale, Violet Hill, Wabbaseka, Walcott, Waldenburg, Weiner, Weldon, West Helena, West Memphis, West Ridge, Wheatley, Wideman, Widener, Williford, Wilson.
Illinois--Cisne, Edwardsville.
Kentucky--Canton, Clinton, Farmington, Fulton, Grand Rivers, Lovelaceville, Wingo.
Mississippi--Alligator, Ashland, Askew, Batesville (powerlines down--press report), Belen, Blue Mountain, Blue Springs, Carthage, Cleveland, Coahoma, Coffeeville, Coldwater, Como, Crenshaw, Darling, Derma, Duck Hill, Dumas, Duncan, Dundee, Ecru, Elliott, Etta, Friars Point, Glendora, Gore Springs, Hernando (powerlines down--press report), Hickory Flat, Holly Springs (all residents alarmed--press report), Lake Cormorant, Lamar, Le Flore, Marks, Mattson, Mineral Wells, Minter City, Moorhead, Nesbit, Olive Branch, Oxford (press report), Pittsboro, Pleasant Grove, Potts Camp, Red Banks, Rienzi, Robinsonville, Rome, Rosedale, Sarah, Scobey, Sherman, Taylor, Thaxton, Tie Plant, Tiplersville, Toccopola, Tula, Tunica, Victoria, Walls, Waterford, Water Valley, Webb.
Missouri--Alton, Bakersfield, Blodgett, Bloomfield, Bradleyville, Bragg City, Braggadocio, Briar, Broseley, Brownwood, Canalou, Cardwell, Charleston, Clarkton, Conran, Cooter, Couch, Deering, Dexter, Doniphan, Dudley, Ellington, Fairdealing, Fisk, Fremont, Gibson, Gideon, Gipsy, Cobler, Grayridge, Greenville, Hardenville, Harviell, Hayti, Hendrickson, Hiram, Holcomb, Holland, Hornersville, Kennett, Kewanee, Kinder, Malden (telephone service disrupted--press report), Mill Spring, Montier, Mountain Grove, Mountain View, Myrtle, Neelyville, Oxly, Pascola, Patterson, Peace Valley, Perkins, Piedmont, Pomona, Qulin, Risco, Rives, Senath, Sikeston, Sturdivant, Tallapoosa, Teresita, Thayer, Vanduser, Wardell, Washington, West Plains (press report), Winona, Zalma.
Tennessee--Alamo, Atwood, Beech Bluff, Bells, Bolivar, Braden, Brighton, Brownsville, Burlison, Cedar Grove, Clifton, College Grove, Collierville, Covington, Crockett Mills, Denmark, Denver, Dukedom, Dyer, Elora, Finley, Fort Pillow, Friendship, Fruitland, Fruitvale, Gadsden, Gallaway, Gattes, Grand Junction, Greenfield, Guys, Halls, Henderson, Hickory Valley, Hickory Withe, Hornbeak, Hornsby, Idlewild, Jackson, La Grange, Laconia, Lavinia, Leach, Lexington, Luray, Llyles, Maury City, Medina, Milledgeville, Millington, Munford, Newbern, North Memphis (press report), Oakfield, Obion, Pinson, Ramer, Ridgely, Ripley, Rives, Rutherford, Samburg, Saulsbury, Selmer, Silerton, Somerville, Trenton, Trimble, Troy, Williston, Yorkville.

Intensity IV:
Alabama--Adger, Brent, Burnwell, Cloverdale, Crestwood, Echola, Ethelsville, Ford City (press report), Gainesville, Hamilton (press report), Killen, New Market, Northport (press report), Northwood, Ragland, Samantha, Sheffield (press report), Tanner,

Table 2.—*Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Arkansas--Continued

Table 2.— *Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Arkansas--Continued

Tuscaloosa (severe shaking on top floors of hospital--press report), Woodlawn (lamps shook, glasses rattled--press report).

Arkansas--Beebe, Birdeye, Blackwell, Bradford, Byron, Calico Rock, Choctaw, Clinton, Cotton Plant, Crocketts Bluff, Crumrod, Damascus, Dennard, Drasco, Edgemont, Elaine, Elizabeth, England, Fargo, Floral, Forty Four, Gamaliel, Gilbert, Gould, Grand Glaise, Guion, Hamilton, Haynes, Hazen, Heber Springs, Holly Grove, Humnoke, Jacksonville, Lacrosse, Leslie, Lexa, Little Rock (press report), Lonoke, Mabelvale, Madison, Mammoth Spring (press report), Mayflower, Moko, Monroe, Newburg, Pangburn, Patterson, Pleasant Plains, Pollard, Poughkeepsie, Prim, Redfield, Romance, Roseland, Russell, Sage, Salem, Scotland, Sherrill, Sidney, Steprock, Stuttgart, Success, Sulphur Rock, Tichnor, Tumbling Shoals, Tupelo, Viola, Wabash, Ward, Wilburn, Zion.

Illinois--Akin, Belleville (press report), Cairo (press report), Centralia, Coulterville, Donnellson, Fairmont City, Hillsboro, Madison County (press report), Valmeyer, Washington Park (press report).

Kentucky--Arlington, Bardwell, Barlow, Boaz, Cadiz, Carrsville, Cunningham, Eddyville, Fulton (press report), Hamlin, Hickman, Hickory, Jackson Purchase (press report), Kevil, Kirksey, Lynn Grove, Lynnville, Paducah, South Fulton (press report), Wickliffe.

Mississippi--Byhalia, Cascilla, Clarksdale, Courtland, Crowder, Enid, Grenada, Horn Lake (powerlines down--press report), Independence, Indianola (momentary power failure--press report), Lafayette Springs, Lambert, Merigold, Mount Pleasant, Myrtle, New Albany (powerlines down, telephone service interrupted--press report), Oakland, Paris, Randolph, Rena Lara, Ripley, Savage, Schlater, Senatobia, Shelby, Sherard, Sidon, Slate Spring, Sunflower, Swiftown, Tillatoba, Tippo, Tutwiler, Vance, Vicksburg (press report).

Missouri--Advance, Anniston, Ava, Bell City, Bellflower, Bertrand, Birchtree, Bonnots Mill, Brighton, Cape Girardeau (press report), Caruthersville (press report), Caulfield, Chamois, Chesterfield, Conway, Creve Coeur, Des Arc, Dittmer, Eminence, Essex, Gatewood, Grandin, Hocomo, Howards Ridge, Jackson (press report), Kennett (press report), La Due (press report), Lanton, Lodi, Matthews, McGee, Moody, Morehouse, Naylor, New Haven, Oran, Painton, Parma, Poplar Bluff, Portland, Richmond Heights (press report), Shook, St. Charles County (press report), Tecumseh, Udall, University City (press report), Wappapello, Williamsville, Wolf Island.

Tennessee--Atoka, Buchanan, Bumpus Mills, Camden (press report), Chattanooga (press report), Columbia (press report), Como, Cordova, Cottage Grove, Cunningham, Daisy, Dover, Dresden, Eads, Eaton, Elbridge, Enville, Finger, Flintville, Frayser (press report), Humboldt, Huron, Indian Mound, Jacks Creek, Kenton, Lafayette, Linden, Lobelville, Martin, Mc Ewen, Mc Nairy, Milan, Moscow, Oakland, Palmersville, Puryear, Raleigh Springs (people left the cinema--press report), Sharon, Springcreek, Stanton, Tigrett, Toone, Trezevant, Whiteville.

Intensity III:

Alabama--Belle Mina, Birmingham (press report), Colbert County (press report), Franklin County (press report), Lauderdale County, Limestone (press report), Madison County (press report), Marion County (press report), Marshall County (press report), Morgan County (press report), Rogersville.

Arkansas--Cozahome, Des Arc, Evening Shade, Fifty Six, Huff, Midway, Oneida, Wolf Bayou.

Illinois--Buckner, Chester (press report), DuQuoin (press report), Murphysboro (press report).

Kentucky--Deepwood (press report), Hickman (press report), Hopkinsville (press report), Murray (high-rise dormitories at Murray College were evacuated--press report).

Mississippi--Banner, Big Creek, Calhoun City, Lula, Lyon.

Missouri--Bendavis, Leslie, Poynor, Saint Louis.

Tennessee--Bath Springs, Charlotte.

Intensity II:

Alabama--Arab, Cardiff, Tuscumbia (press report).

Arkansas--Barton, Bass, Brockwell, De Witt, El Paso, Greenbrier, Leslie, Ulm.

Illinois--Belle Rive, Cutler, Godfrey, Michael.

Indiana--Evansville.

Kentucky--Bandana, Benton, Kuttawa, Ledbetter.

Mississippi--Carrollton, Farrell, Jonestown, Pope, Rich, Sledge, Sumner.

Missouri--Barnett, Whiteman AFB.

Oklahoma--Tulsa (press report).

Tennessee--Cades, Cunningham, Gibson, Gleason, Henry County (hundreds of calls--press report), Nashville (press report), New Johnsville (press report), Paris (press report).

Table 2.—*Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

California

1 January (P) Southern California
Origin time: 17 20 12.9
Epicenter: 33.97 N., 117.89 W.
Depth: 6 km
Magnitude: 4.2 ML, 4.6 mb(G)

This earthquake was felt in Los Angeles, Orange, Riverside, and San Bernardino Counties. It disturbed millions of residents but caused no injuries and did no serious damage (press report). Some telephone service was interrupted (press report). The USGS (C. F. Porcella, written commun., 1977) reported 11 strong-motion accelerograph records were obtained from within a 14 km radius of the epicenter. The maximum recorded acceleration of 0.28 g occurred in Whittier, about 13.8 km west of the epicenter.

An area around the epicenter having a radius of 60 km was canvassed, and 158 questionnaires were mailed. Figure 9 shows the results of this survey.

Intensity VI: Bell, Cudahy, Maywood.
Intensity V: Anaheim, Artesia, Atwood, Brea, Buena Park, Claremont, Compton, Duarte, Fullerton, Huntington Beach, La Habra (earthquake knocked phone service out and rearranged all the pictures on the

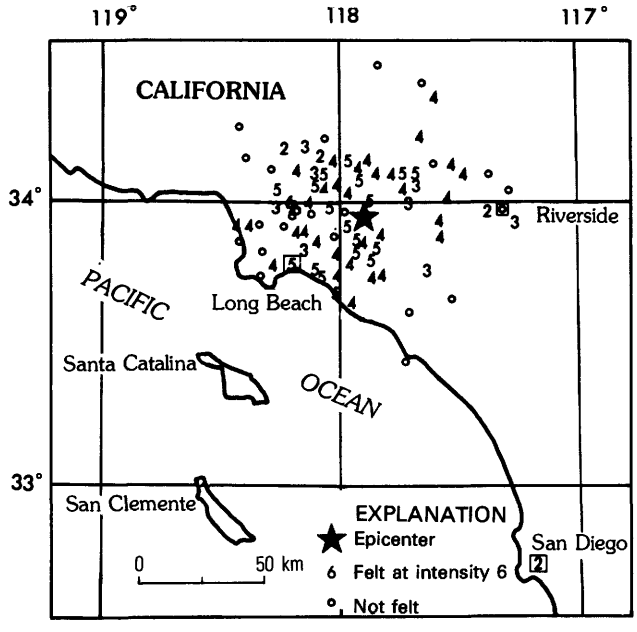

FIGURE 9.--Intensity map for the southern California earthquake of 1 January 1976, 17 20 12.9 UTC. Arabic numbers are used to represent modified Mercali intensities at specific sites.

Table 2.—*Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

California--Continued

wall--press report), La Mirada, Long Beach, Los Angeles, Monrovia, Monterey Park, Orange, Pomona, Rosemead, Seal Beach, Sunset Beach, Upland (press report), Walnut, West Covina, Whittier.
Intensity IV: Arcadia, Azusa, Baldwin Park, Bassett, Bellflower, Cerritos, Corona, Costa Mesa, Cypress, El Monte, El Segundo, Etiwanda, Fontana, Garden Grove, Glendale, Glendora, Hacienda Heights, Inglewood, La Puente, Laverne, Midway City, Mira Loma, Montclair, Montebello, Mt. Baldy, Newport Beach, Norco (press report), Paramount, Phelan, Placentia, San Dimas, Santa Ana, South Gate, South Pasadena, Stanton, Tustin, Westminster, Wilmington, Yorba Linda.
Intensity III: Altadena, Chino, Covina, Huntington Park, Lakewood, Ontario, Silverado, Sunnymead, Temple City.
Intensity II: Bell Gardens, Downey, Lomita, Montrose, Riverside, San Diego, Sierra Madre.

10 January (G) Baja California, Mexico
Origin time: 12 58 15.9
Epicenter: 32.05 N., 115.54 W.
Depth: Normal.
Magnitude: 4.6 mb
Intensity III: El Centro (press report).

14 January (P) Southern California
Origin time: 20 26 24.5
Epicenter: 33.09 N., 116.65 W.
Depth: 13 km
Magnitude: 3.4 ML
Intensity III: San Diego (P).

14 January (B) Central California
Origin time: 21 43 59.3
Epicenter: 36.11 N., 120.16 W.
Depth: 5 km
Magnitude: 5.1 mb, 4.9 ML(B)

An area around the epicenter having a radius of 200 km was canvassed, and 290 questionnaires were mailed.

Intensity VI: Avenal.
Intensity V: Mount Hamilton.
Intensity IV: Cholame, Coalinga, Creston, Dos Palos, Five Points, Friant, Huron, Kettleman City, King City, Lemoore, Lost Hills, Piedra, Riverdale, Stratford, Templeton, Westhaven, Yosemite National Park.
Intensity III: Caruthers, Delano.
Intensity II: Laton.

Table 2.— *Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

California--Continued

14 January (B) Central California
Origin time: 23 40 17.6
Epicenter: 36.14 N., 120.21 W.
Depth: 2 km
Magnitude: 3.4 ML(B)
Aftershock of 14 January 21 43 58.5 UTC earthquake.
Intensity II: San Joaquin Valley (press report).

15 January (B) Central California
Origin time: 00 09 37.4
Epicenter: 36.15 N., 120.25 W.
Depth: 7 km
Magnitude: 3.5 ML(B)
Aftershock of 14 January 21 43 58.5 UTC earthquake.
Intensity II: San Joaquin Valley (press report).

18 January (B) Northern California
Origin time: 01 00 24.7
Epicenter: 40.64 N., 124.35 W.
Depth: 23 km
Magnitude: 4.0 mb, 3.7 ML(B)
Intensity IV: Ferndale.

18 January (B) Northern California
Origin time: 07 38 25.2
Epicenter: 39.06 N., 122.96 W.
Depth: 7 km
Magnitude: 2.6 ML(B)
Intensity III: Lakeport vicinity.

1 February (B) Northern California
Origin time: 02 57 39.7
Epicenter: 37.93 N., 122.31 W.
Depth: 4 km
Magnitude: 2.6 ML
Intensity II: Richmond.

19 February (P) Southern California
Origin time: 22 09 55.1
Epicenter: 34.39 N., 118.35 W.
Depth: 9 km
Magnitude: 3.1 ML
Intensity III: Soledad, Sylmar (P).

24 February (B) Northern California
Origin time: 15 13 10.5
Epicenter: 40.29 N., 124.37 W.
Depth: 6 km
Magnitude: 3.5 mb(G), 3.5 ML
Intensity IV: Fortuna, Kneeland.

1 March (B) Central California
Origin time: 17 06 40.3
Epicenter: 37.73 N., 121.96 W.
Depth: 7 km
Magnitude: 2.8 ML
Intensity II: Dublin.

Table 2.— *Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

California--Continued

4 March (B) Central California
Origin time: 15 08 09.7
Epicenter: 38.79 N., 122.75 W.
Depth: 2 km
Magnitude: 3.1 ML
Intensity II: Cobb.

6 March (B) Central California
Origin time: 13 51 08.1
Epicenter: 38.83 N., 122.83 W.
Depth: 4 km
Magnitude: 2.9 ML
Intensity II: Cobb.

8 March (B) Central California
Origin time: 20 23 27.3
Epicenter: 37.39 N., 120.10 W.
Depth: 2 km
Magnitude: 2.5 ML(B)
Intensity IV: Mariposa.

9 March (B) Central California
Origin time: 19 45 00.3
Epicenter: 37.33 N., 122.18 W.
Depth: 7 km
Magnitude: 2.6 ML
Intensity II: Palo Alto.

17 March (B) Central California
Origin time: 04 01 52.7
Epicenter: 36.82 N., 121.13 W.
Depth: 8 km
Magnitude: 4.2 mb(G), 4.3 ML
Intensity IV: 15 km northeast of Gilroy.

California--Off the coast

20 January (G) Northern California
Origin time: 13 59 37.2
Epicenter: 40.38 N., 125.34 W.
Depth: Normal.
Magnitude: 4.8 mb, 4.7 ML(B)
Intensity IV: Eureka, Ferndale, Petrolia (press report).

Hawaii

The locations shown below followed by (H) designate intensity values assigned by the Hawaiian Volcano Observatory.

1 January (H) Island of Hawaii
Origin time: 18 54 23.0
Epicenter: 18.85 N., 155.08 W.
Depth: 26 km
Magnitude: 4.5 ML
Intensity III: Kalapana (H).
Intensity II: Kona (H), Naalehu (H).

Table 2.—*Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Hawaii--Continued

2 January (H) Island of Hawaii
Origin time: 01 36 47.2
Epicenter: 19.36 N., 155.25 W.
Depth: 9 km
Magnitude: 3.5 ML
Intensity III: Volcano (H).

7 January (H) Island of Hawaii
Origin time: 11 44 33.2
Epicenter: 19.45 N., 154.88 W.
Depth: 9 km
Magnitude: 3.8 ML
Intensity III: Pahoa (H).

12 January (H) Island of Hawaii
Origin time: 00 05 40.1
Epicenter: 19.51 N., 155.27 W.
Depth: 24 km
Magnitude: 4.2 ML, 4.5 mb(G), 4.2 MS(G)
Intensity IV: Felt islandwide (houses shaken on the eastern side of the island of Hawaii--press report), Hilo (H), Puna (H).
Intensity III: Kau (H).
Intensity II: Kamuela (H), Kona (H).

12 January (H) Island of Hawaii
Origin time: 13 48 32.9
Epicenter: 19.37 N., 155.12 W.
Depth: 9 km
Magnitude: 3.0 ML
Intensity III: Nanawale (H).

14 January (H) Island of Hawaii
Origin time: 22 09 51.9
Epicenter: 19.38 N., 155.11 W.
Depth: 7 km
Magnitude: 2.3 ML
Intensity II: Volcano (H).

15 January (H) Island of Hawaii
Origin time: 22 41 45.2
Epicenter: 19.41 N., 155.29 W.
Depth: 14 km
Magnitude: 4.4 ML
Intensity V: Hilo (H).
Intensity IV: Other parts of Hawaii Island (H).
Intensity II: Oahu Island (H).

15 January (H) Island of Hawaii
Origin time: 22 59 26.0
Epicenter: 19.41 N., 155.29 W.
Depth: 16 km
Magnitude: 4.8 mb(G), 4.5 ML
Intensity V: Hilo (H).
Intensity IV: Other parts of Hawaii Island (H).
Intensity III: Felt islandwide (press report).
Intensity II: Oahu Island (H).

Table 2.—*Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Hawaii--Continued

17 January (H) Island of Hawaii
Origin time: 05 29 13.8
Epicenter: 19.38 N., 155.11 W.
Depth: 8 km
Magnitude: 3.7 ML
Intensity IV: Hilo (H).
Intensity III: Puna (H), Volcano (H).

18 January (H) Island of Hawaii
Origin time: 06 00 03.9
Epicenter: 19.35 N., 155.00 W.
Depth: 4 km
Magnitude: 3.2 ML
Intensity III: Hilo (H), Kalapana (H).
Intensity II: Parts of Puna (H), Volcano (H).

18 January (H) Island of Hawaii
Origin time: 14 49 28.3
Epicenter: 19.36 N., 155.25 W.
Depth: 10 km
Magnitude: 3.6 ML
Intensity III: Hilo (H), Volcano (H).
Intensity II: Puna (H).

19 January (H) Island of Hawaii
Origin time: 00 13 37.8
Epicenter: 19.36 N., 155.13 W.
Depth: 8 km
Magnitude: 3.6 ML
Intensity II: Hawaii National Park (H).

19 January (H) Island of Hawaii
Origin time: 09 57 46.4
Epicenter: 19.38 N., 155.10 W.
Depth: 8 km
Magnitude: 3.5 ML
Intensity II: Hawaii National Park (H), Volcano (H).

21 January (H) Island of Hawaii
Origin time: 21 41 21.2
Epicenter: 19.37 N., 155.12 W.
Depth: 9 km
Magnitude: 4.1 ML
Intensity III: Hilo (H).
Intensity II: Honomu (H), Kalapana (H), Papaikou (H), Volcano (H).

23 January (H) Island of Hawaii
Origin time: 12 47 40.0
Epicenter: 19.36 N., 155.09 W.
Depth: 9 km
Magnitude: 3.7 ML
Intensity III: Hilo (H), Puna (H).
Intensity II: Kahuku (H), Volcano (H).

27 January (H) Island of Hawaii
Origin time: 15 35 51.3
Epicenter: 19.35 N., 155.10 W.
Depth: 9 km
Magnitude: 3.6 ML
Intensity III: Hilo (H).
Intensity II: Glenwood (H), Keaau (H), Kurtistown (H), Volcano (H).

Table 2.— *Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Hawaii--Continued

27 January (H) Island of Hawaii
Origin time: 21 34 04.5
Epicenter: 19.34 N., 155.09 W.
Depth: 7 km
Magnitude: 2.9 ML
Intensity II: Hawaii National Park (H).

28 January (H) Island of Hawaii
Origin time: 08 26 28.1
Epicenter: 19.34 N., 155.11 W.
Depth: 9 km
Magnitude: 4.0 ML
Intensity IV: Hilo (H).
Intensity III: Puna areas (H), Volcano (H).

29 January (H) Island of Hawaii
Origin time: 20 19 56.4
Epicenter: 19.38 N., 155.00 W.
Depth: 8 km
Magnitude: 4.7 ML, 4.5 mb(G)

Minor household breakage at unknown location (press report).

Intensity IV: Hilo (H), Puna areas.
Intensity III: Kau (H), Volcano (H).
Intensity II: Kona (H), northern part of the island.

1 February (H) Island of Hawaii
Origin time: 06 07 26.9
Epicenter: 19.37 N., 155.08 W.
Depth: 8 km
Magnitude: 3.3 ML
Intensity III: Hilo (H).
Intensity II: Glenwood (H).

4 February (H) Island of Hawaii
Origin time: 02 42 13.4
Epicenter: 19.38 N., 155.10 W.
Depth: 8 km
Magnitude: 3.4 ML
Intensity III: Glenwood (H).
Intensity II: Volcano (H).

4 February (H) Island of Hawaii
Origin time: 06 50 58.3
Epicenter: 19.36 N., 155.25 W.
Depth: 10 km
Magnitude: 3.5 ML
Intensity III: Hilo (H), Volcano (H).
Intensity II: Glenwood (H), Keaau (H), Kurtistown (H), Mountainview (H).

8 February (H) Island of Hawaii
Origin time: 08 48 12.2
Epicenter: 19.33 N., 155.13 W.
Depth: 8 km
Magnitude: 3.2 ML
Intensity III: Volcano (H).

Table 2.—*Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Hawaii--Continued

12 February (H) Island of Hawaii
Origin time: 16 18 26.2
Epicenter: 19.36 N., 155.06 W.
Depth: 8 km
Magnitude: 3.2 ML
Intensity II: Hilo (H).

13 February (H) Island of Hawaii
Origin time: 10 49 51.8
Epicenter: 19.52 N., 155.96 W.
Depth: 10 km
Magnitude: 3.6 ML
Intensity III: Captain Cook (H), Holualoa (H), Kealakekua (H).

13 February (H) Island of Hawaii
Origin time: 17 12 29.1
Epicenter: 19.37 N., 155.84 W.
Depth: 7 km
Magnitude: 2.9 ML
Intensity II: Hilo (H).

19 February (H) Island of Hawaii
Origin time: 04 40 52.5
Epicenter: 19.43 N., 155.28 W.
Depth: 1 km
Magnitude: 2.8 ML
Intensity III: Hawaii National Park (H).
Intensity II: Hilo (H), Volcano (H).

21 February (G) Island of Hawaii
Origin time: 05 51 13.8
Epicenter: 20.21 N., 156.27 W.
Depth: Normal.
Magnitude: 4.9 mb(G), 4.0 MS(G), 5.1 ML
Intensity V: Hana (on Maui Island--press report), Honolulu, Hoolehua, Kahului, Kamuela, Kapaau, Kealakekua, Paauhau, Paia.
Intensity IV: Captain Cook, Holualoa, Honokaa, Honomu, Kamuela (H), Kohala (H), Kualapuu, Lanai City, Makawao, Maunaloa, Papaikou, Volcano, Wheeler AFB.
Intensity III: Kaaawa, southern parts of Hawaii Island (H).
Intensity II: Kaneohe, Ookala.

Felt islandwide: Maui (H), Oahu (H).

24 February (H) Island of Hawaii
Origin time: 15 50 19.1
Epicenter: 19.37 N., 155.11 W.
Depth: 9 km
Magnitude: 4.2 ML
Intensity III: Mountainview (H), Volcano (H).

25 February (H) Island of Hawaii
Origin time: 23 48 20.3
Epicenter: 19.37 N., 155.11 W.
Depth: 9 km
Magnitude: 3.9 ML
Intensity III: Hilo (H).
Intensity II: Pahoa (H), Volcano (H).

Table 2.—*Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Hawaii--Continued

3 March (H) Island of Hawaii
Origin time: 16 52 01.2
Epicenter: 19.40 N., 155.26 W.
Depth: 5 km
Magnitude: 2.5 ML
Intensity II: Hawaii National Park (H), Volcano (H).

3 March (H) Island of Hawaii
Origin time: 23 06 10.3
Epicenter: 19.43 N., 155.28 W.
Depth: 1 km
Magnitude: 2.2 ML
Intensity II: Hawaii National Park (H), Volcano (H).

5 March (H) Island of Hawaii
Origin time: 13 16 52.4
Epicenter: 19.61 N., 155.13 W.
Depth: 11 km
Magnitude: 2.6 ML
Intensity II: Glenwood (H), Hilo (H).

6 March (H) Island of Hawaii
Origin time: 22 23 04.6
Epicenter: 19.36 N., 155.03 W.
Depth: 7 km
Magnitude: 3.5 ML
Intensity III: Wahaula Visitors Center (H).

8 March (H) Island of Hawaii
Origin time: 02 25 34.6
Epicenter: 19.36 N., 155.12 W.
Depth: 8 km
Magnitude: 3.7 ML
Intensity III: Volcano (H).

16 March (H) Island of Hawaii
Origin time: 16 48 16.9
Epicenter: 19.37 N., 155.12 W.
Depth: 8 km
Magnitude: 2.8 ML
Intensity II: Volcano (H).

19 March (H) Island of Hawaii
Origin time: 13 04 01.3
Epicenter: 19.41 N., 155.26 W.
Depth: 4 km
Magnitude: 2.7 ML
Intensity III: Hawaii National Park (H).
Intensity II: Volcano (H).

19 March (H) Island of Hawaii
Origin time: 23 24 30.3
Epicenter: 19.36 N., 155.06 W.
Depth: 8 km
Magnitude: 3.9 ML
Intensity III: Hilo (H).
Intensity II: Volcano (H).

Table 2.—*Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Hawaii--Continued

20 March (H) Island of Hawaii
Origin time: 23 13 19.8
Epicenter: 19.33 N., 155.11 W.
Depth: 9 km
Magnitude: 3.1 ML
Intensity II: Hilo (H).

21 March (H) Island of Hawaii
Origin time: 23 58 00.2
Epicenter: 19.35 N., 155.19 W.
Depth: 7 km
Magnitude: 2.6 ML
Intensity II: Volcano (H).

22 March (H) Island of Hawaii
Origin time: 17 27 41.6
Epicenter: 19.29 N., 155.36 W.
Depth: 9 km
Magnitude: 2.4 ML
Intensity II: Waikeauka (H).

23 March (H) Island of Hawaii
Origin time: 06 48 26.9
Epicenter: 19.37 N., 155.09 W.
Depth: 8 km
Magnitude: 3.3 ML
Intensity III: Hilo (H).

23 March (H) Island of Hawaii
Origin time: 07 19 56.6
Epicenter: 19.34 N., 155.11 W.
Depth: 9 km
Magnitude: 3.1 ML
Intensity II: Hilo (H).

24 March (H) Island of Hawaii
Origin time: 00 38 11.1
Epicenter: 19.33 N., 155.19 W.
Depth: 8 km
Magnitude: 2.8
Intensity II: Volcano (H).

24 March (H) Island of Hawaii
Origin time: 01 06 03.1
Epicenter: 19.32 N., 155.31 W.
Depth: 9 km
Magnitude: 3.7 ML
Intensity III: Kona (H).
Intensity II: Hawaii National Park (H), Hilo (H).

29 March (H) Island of Hawaii
Origin time: 15 09 51.9
Epicenter: 19.37 N., 155.25 W.
Depth: 10 km
Magnitude: 3.7 ML
Intensity III: Hilo (H).
Intensity II: Hawaii National Park (H), Keaau (H), Volcano (H).

Table 2.—*Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Hawaii--Continued

29 March (H) Island of Hawaii
Origin time: 18 31 29.8
Epicenter: 19.40 N., 155.26 W.
Depth: 14 km
Magnitude: 3.0 ML
Intensity II: Volcano (H).

31 March (H) Island of Hawaii
Origin time: 00 52 10.2
Epicenter: 19.34 N., 155.12 W.
Depth: 9 km
Magnitude: 3.4 ML
Intensity III: Hilo (H).

Idaho

10 March (G) Northern Idaho
Origin time: 02 29 50.7
Epicenter: 47.40 N., 115.80 W.
Depth: 0 km
Magnitude: 2.7 ML(D)

Rockburst in Star mine.

Intensity III: Star mine, Mullan.

Kentucky

19 January (G) Eastern Kentucky
Origin time: 06 20 39.5
Epicenter: 36.88 N., 83.82 W.
Depth: 5 km
Magnitude: 4.0 mb, 3.8 ML(S).

This earthquake was felt in southeastern Kentucky, northeastern Tennessee, northwestern North Carolina, southwestern West Virginia, and western Virginia.

An area around the epicenter having a radius of 200 km was canvassed, and 1,528 questionnaires were mailed. Figure 10 shows the results of this canvass and of the re-evaluated questionnaires obtained from G. R. Keller, University of Kentucky, who made an on-site survey.

Intensity VI:
Kentucky--Minor damage reported in Knox and Bell Counties (press report). Artemus (windows broken), Barbourville (objects knocked from shelves in stores, cracked plaster at Union College--Univ. of Kentucky commun.), Bimble (fence fell on railroad tracks--telephone report), Flat Lick (windows broken--Univ. of Kentucky commun.),

Table 2.—*Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Kentucky--Continued

Greenroad (sidewalk cracked), Himyar, Hinkle, Jenson, Julip, Kettle Island (plaster cracked), Lexington (at Eastover Mine rocks fell on tracks, material from ceiling fell--press report), Pineville (walls cracked), Trosper, Walker (cracks in brick school building), Williamsburg (press report).
Intensity V:
Kentucky--Bryants Store, Bypro, Callaway, Calvin, Cannon, Corbin, Cubage, Emlyn, Four Mile, Frakes, Gausdale, Girdler, Gray, Hulen, Ingram, Jeffersonville, Lida, London, Marydell, Nevisdale, Pine Knot, Pulaski, Revelo, Salt Gum, Sasser, Scalf, Siler, Sizerock, Somerset (press report), Steubenville, Strunk, Tinsley, West Liberty, Woodbine.
North Carolina--Tuckasegee.
Tennessee--Andersonville (press report), Duff, Eagan, Jellico, Johnson City (press report), La Follette, Midway, Shawanee, Tri-County Airport (press report), Vonore, Walland.
Virginia--Ewing, Rose Hill.
West Virginia--Naugatuck.
Intensity IV:
Kentucky--Arjay, Baileys Switch, Beauty, Bush, Buskirk, Dice, Garrard, Hazel Green (press report), Hector, Keavy, Kona, Loyall, Manchester, Mount Sterling, Napfor, Pointer, River, Ruth, Sitka, Tedders, Tuttle, Walden, Wendover, Wittensville.
North Carolina--Alexander, Montreat.
Tennessee--Clairfield, Gatlinburg, Jacksboro, Knoxville, Kodak, Maryville, Oneida, Speedwell, Tallassee.
Intensity III:
Kentucky--Chenoa, Dana, Faubush, Field, Harlan (Univ. of Kentucky commun.), Hyden (Univ. of Kentucky commun.), Middlesboro (press report).
North Carolina--Almond.
Tennessee--Lafayette.
Intensity II:
Kentucky--Ashland (Univ. of Kentucky commun.), Cumberland (press report), Molus (press report), Paint Lick, Summersville.
West Virginia--Switzer.

Massachusetts

14 March (C) Cape Cod, Massachusetts
Origin time: 23 12 24.6
Epicenter: 41.66 N., 69.97 W.
Depth: 0 km
Magnitude: 3.0 ML(L)
Intensity V: Harwich, North Chatham, West Dennis, West Harwich.

Table 2.— *Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Massachusetts--Continued

Intensity IV: Brewster, Chatham (press report), Dennis, Dennis Port, Harwich Port, Sandwich (press report), South Chatham, South Dennis, South Orleans, Yarmouth.
Intensity III: West Yarmouth.
Intensity II: East Dennis, Sagamore Beach.

Michigan

2 February (O) Southwestern Ontario, Canada
Origin time: 21 14 02.0
Epicenter: 41.96 N., 82.67 W.
Depth: 10 km
Magnitude: 3.4 ML

The intensities listed below are based on press reports:

Intensity V:
Michigan--Flat Rock (rattled windows and frightened residents).

Table 2.— *Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Michigan--Continued

Intensity IV:
Michigan--Rockwood, Trenton.
Intensity III:
Michigan--New Boston, Grosse Ile.
Ontario, Canada--Colchester, Leamington.

Missouri

23 January (S) New Madrid, Missouri
Origin time: 00 56 39.6
Epicenter: 36.55 N., 89.60 W.
Depth: 9 km
Magnitude: 2.0 ML
Intensity IV: Marston.

13 March (S) Eastern Missouri
Origin time: 07 25 00.4
Epicenter: 38.12 N., 91.07 W.
Depth: 0 km
Magnitude: None computed.

Pea Ridge mine explosion--420 tons of explosives.

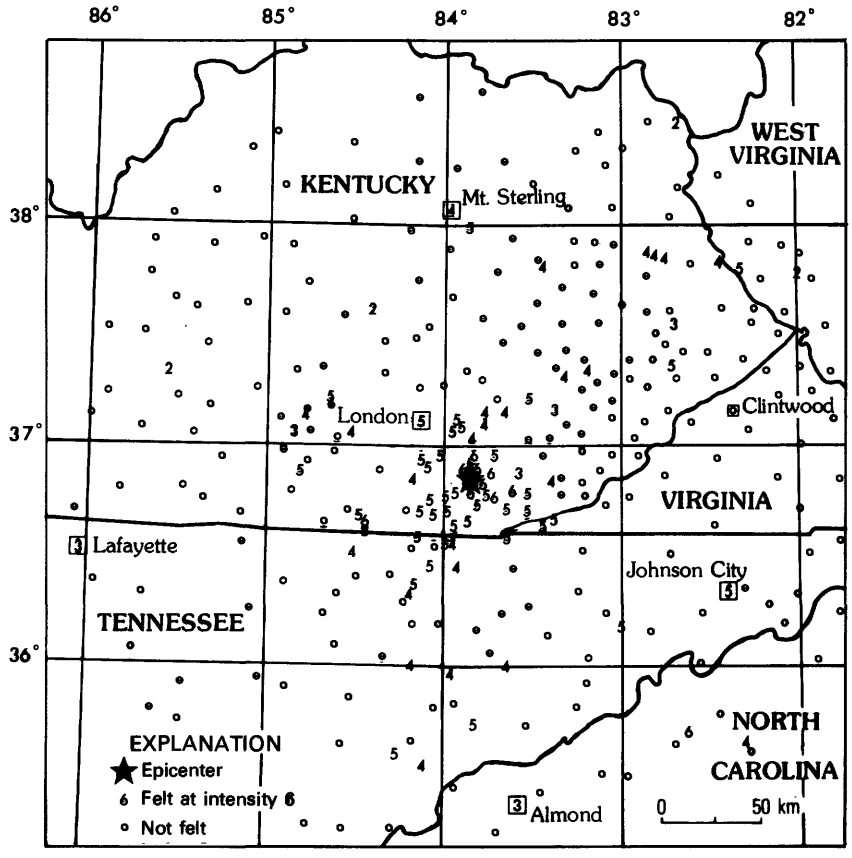

FIGURE 10.--Intensity map for the eastern Kentucky earthquake of 19 January 1976, 06 20 39.5 UTC. Arabic numbers are used to represent modified Mercali intensities at specific sites.

Table 2.— *Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Montana

21 January (G) Northwestern Montana
Origin time: 13 43 29.6
Epicenter: 48.22 N., 114.10 W.
Depth: 5 km
Magnitude: 3.1 ML
Intensity IV: Creston, Hungry Horse, Somers.
Intensity III: Flathead Lake region (press report).

13 February (G) Western Montana
Origin time: 06 13 43.1
Epicenter: 46.75 N., 112.13 W.
Depth: 1 km
Magnitude: 3.8 ML
Intensity IV: Clancy, East Helena, Marysville.
Intensity II: Helena.

Nevada

3 January (A) Southern Nevada
Origin time: 19 15 00.2
Epicenter: 37.30 N., 116.33 W.
Depth: 0 km
Magnitude: 6.2 mb(G), 5.5 MS(G), 6.2 ML(P), 6.3 ML(B)

Nevada Test Site (NTS) explosion at 37° 17′47.48" N.,116°19′59.47" W., elevation 2,109 m. Depth of burial 1,451 m.

3 January (G) Southern Nevada
Origin time: 22 20 25.0
Epicenter: 37.30 N., 116.33 W.
Depth: 0 km
Magnitude: 3.6 ML(B)

Collapse from the NTS explosion on 3 January, 19 15 00.2 UTC.

4 January (G) Southern Nevada
Origin time: 03 23 24.7
Epicenter: 37.30 N., 116.33 W.
Depth: 0 km
Magnitude: None computed.

Collapse from the NTS explosion on 3 January, 19 15 00.2 UTC.

4 January (G) Southern Nevada
Origin time: 16 16 09.0
Epicenter: 37.30 N., 116.33 W.
Depth: 0 km
Magnitude: 4.2 ML(B)

Collapse from the NTS explosion on 3 January, 19 15 00.2 UTC.

Table 2.— *Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Nevada--Continued

4 February (A) Southern Nevada
Origin time: 14 20 00.1
Epicenter: 37.07 N., 116.03 W.
Depth: 0 km
Magnitude: 5.8 mb(G), 5.4 ML(B)

Nevada Test Site explosion at 37°04′09.32" N., 116°01′48.58" W., elevation 1,245′m. Depth of burial 640 m.

4 February (A) Southern Nevada
Origin time: 14 40 00.2
Epicenter: 37.11 N., 116.04 W.
Depth: 0 km
Magnitude: 5.7 mb(G), 5.6 ML(B)

Nevada Test Site explosion at 37°06′23.74" N., 116°02′14.73" W., elevation 1,285 m. Depth of burial 655 m.

8 February (G) Northwestern Nevada
Origin time: 06 09 26.5
Epicenter: 39.47 N., 119.76 W.
Depth: 5 km
Magnitude: 3.4 ML(B)
Intensity IV: Virginia City.
Intensity III: Reno.
Intensity II: Steamboat (telephone report).

12 February (A) Southern Nevada
Origin time: 14 45 00.2
Epicenter: 37.27 N., 116.49 W.
Depth: 0 km
Magnitude: 6.3 mb(G), 5.5 MS(G), 6.3 ML(B)

Nevada Test Site explosion at 37°16′17.07" N., 116°29′18.40" W., elevation 1,864 m. Depth of burial 1,219 m.

12 February (G) Southern Nevada
Origin time: 17 37 29.0
Epicenter: 37.27 N., 116.49 W.
Depth: 0 km
Magnitude: 4.8 mb, 4.3 ML(B)

Collapse from the NTS explosion on 12 February, 14 45 00.2 UTC.

14 February (A) Southern Nevada
Origin time: 11 30 00.2
Epicenter: 37.24 N., 116.42 W.
Depth: 0 km
Magnitude: 6.0 mb(G), 5.7 ML(B)

Nevada Test Site explosion at 37°14′33.49" N., 116°25′12.76" W., elevation 1,974 m. Depth of burial 1,167 m.

Table 2.— *Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Nevada--Continued

9 March (A) Southern Nevada
Origin time: 14 00 00.1
Epicenter: 37.31 N., 116.36 W.
Depth: 0 km
Magnitude: 6.0 mb(G), 4.8 MS(G), 5.9 ML(B)

Nevada Test Site explosion at 37°18′35.87" N., 116°21′51.19" W., elevation 2,053 m. Depth of burial 869 m.

9 March (G) Southern Nevada
Origin time: 16 55 02.0
Epicenter: 37.31 N., 116.36 W.
Depth: 0 km
Magnitude: 4.1 mb, 4.0 ML(B)

Collapse from the NTS explosion on 9 March, 14 00 00.1 UTC.

14 March (A) Southern Nevada
Origin time: 12 30 00.2
Epicenter: 37.31 N., 116.47 W.
Depth: 0 km
Magnitude: 6.3 mb(G), 5.3 MS(G), 6.2 ML(B)

Nevada Test Site explosion at 37°18′21.58" N., 116°28′17.34" W., elevation 1,931 m. Depth of burial 1,273 m.

14 March (G) Southern Nevada
Origin time: 13 52 42.5
Epicenter: 37.31 N., 116.47 W.
Depth: 0 km
Magnitude: None computed.

Collapse from the NTS explosion on 14 March, 12 30 00.2 UTC.

14 March (G) Southern Nevada
Origin time: 14 09 52.0
Epicenter: 37.31 N., 116.47 W.
Depth: 0 km
Magnitude: 4.3 mb

Collapse from the NTS explosion on 14 March, 12 30 00.2 UTC.

14 March (G) Southern Nevada
Origin time: 14 18 15.0
Epicenter: 37.31 N., 116.47 W.
Depth: 0 km
Magnitude: 4.2 mb

Collapse from the NTS explosion on 14 March, 12 30 00.2 UTC.

14 March (G) Southern Nevada
Origin time: 14 59 22.2
Epicenter: 37.31 N., 116.47 W.
Depth: 0 km
Magnitude: 4.3 mb

Table 2.— *Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Nevada--Continued

Collapse from the NTS explosion on 14 March, 12 30 00.2 UTC.

14 March (G) Southern Nevada
Origin time: 15 24 28.8
Epicenter: 37.31 N., 116.47 W.
Depth: 0 km
Magnitude: 4.1 mb, 4.7 ML(B)

Collapse from the NTS explosion on 14 March, 12 30 00.2 UTC

17 March (A) Southern Nevada
Origin time: 14 15 00.1
Epicenter: 37.26 N., 116.31 W.
Depth: 0 km
Magnitude: 6.1 mb(G), 4.5 MS(G), 5.8 ML(B)

Nevada Test Site explosion at 37°15′21.20" N., 116°18′42.89" W., elevation 2,108 m. Depth of burial 879 m.

17 March (A) Southern Nevada
Origin time: 14 45 00.1
Epicenter: 37.11 N., 116.05 W.
Depth: 0 km
Magnitude: 5.8 mb(G), 4.2 MS(G), 5.6 ML(B)

Nevada Test Site explosion at 37°06′26.22" N., 116°03′08.91" W., elevation 1,271 m. Depth of burial 780 m.

New Jersey

11 March (L) Central New Jersey
Origin time: 21 07 20.4
Epicenter: 40.96 N., 74.37 W.
Depth: 4 km
Magnitude: 2.4 mbLg

The densely populated areas of Morris and Passaic Counties, along with a few places in Bergen County in northern New Jersey felt this earthquake. The Lamont-Doherty Geological Observatory (LDGO), Columbia University, Palisades, N. Y. placed an earthquake questionnaire form in several community newspapers in the area. The 56 completed forms received by LDGO and forwarded to USGS were evaluated by the USGS-NEIS as well as by LDGO. There was one report of cracked and fallen plaster, an Intensity VI. There were five returns of Intensity V, reporting that small objects moved, chinaware fell, and pictures were knocked askew; some people were frightened, especially children and animals. Twenty-six Intensity IV reports

New Jersey--Continued

indicated that the earthquake was felt by many; buildings and their contents rattled. Twenty-two letters evaluated at Intensity III reported direction and (or) deviation of the event. Two Intensity II returns reported that people felt the earthquake, giving no other information. There were no "not felt" reports forwarded to us.

The results of the USGS canvass were as follows:

Intensity VI: Pompton Lakes (reports of ceiling cracks from fireplace to center of room, with small pieces of plaster found on rug; pictures dislodged--confirmed by LDGO personnel).

Intensity V: Butler, Kinnelon (pictures crooked on walls, some chinaware fell), Smoke Rise, West Milford (Shady Lake and High Crest Lake, subdivisions of West Milford).

Intensity IV: Bloomingdale, Montville, Newfoundland, Totowa Boro.

Intensity III: Lake Edenwold, Midvale, Riverdale, Wayne.

Intensity II: Ringwood.

Table 2.— *Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

New Mexico

5 January (G) Northwestern New Mexico
Origin time: 06 23 32.9
Epicenter: 35.84 N., 108.34 W.
Depth: 25 km
Magnitude: 5.0 mb, 4.6 ML

An area around the epicenter having a radius of 300 km was canvassed, and 359 questionnaires were mailed. Figure 11 shows the result of this canvass, combined with information from Dr. Allan R. Sanford, New Mexico Institute of Mining Technology, and the results of a USGS field survey. The earthquake was felt over an area of approximately 115,000 sq km.

Intensity VI:
Arizona--Leupp (cracked plaster).
Colorado--Cahone (cracked plaster, chimney cracked), Hesperus (new cracks in new concrete platform--telephone report).
New Mexico--Crownpoint (cracked plaster), Cubero, Fort Wingate (cracked plaster), Gallup (minor damage--press report),

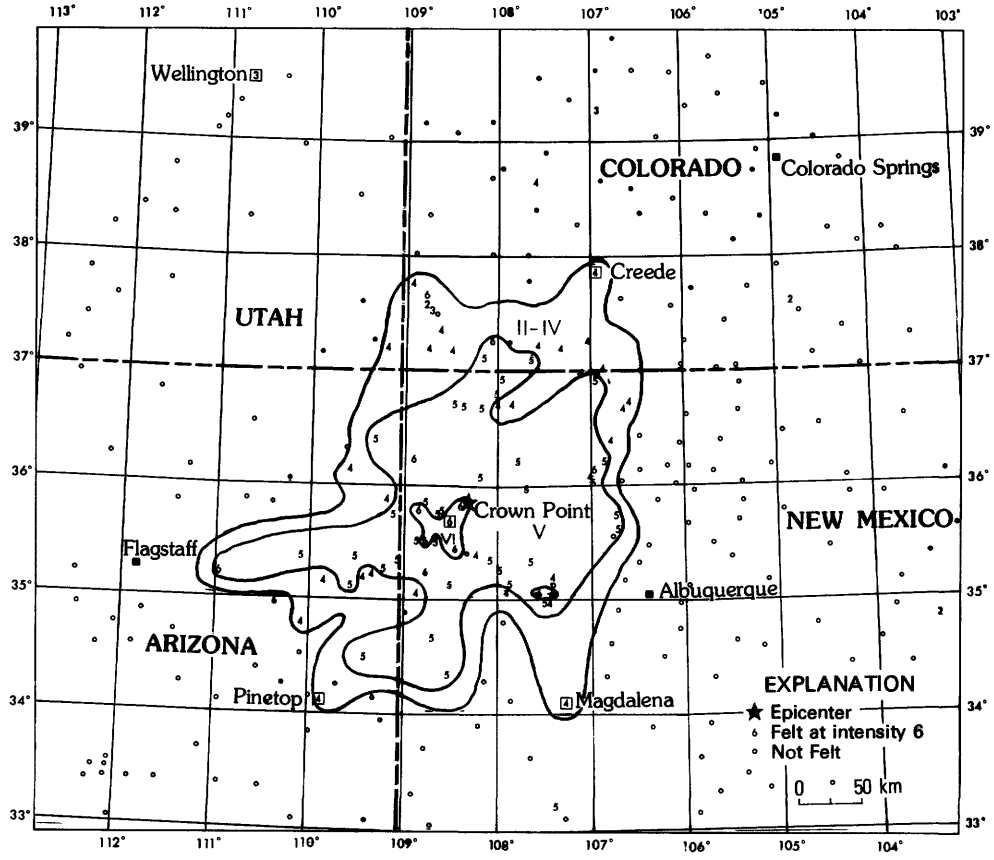

FIGURE 11.--Isoseismal map for the northwestern New Mexico earthquake of 5 January 1976, 06 23 32.9 UTC. Arabic numbers are used to represent modified Mercali intensities at specific sites.

Table 2.— *Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

New Mexico--Continued

Laguna, Mexican Springs (cracked plaster), Regina, Standing Rock (cracked plaster), Thoreau (cracked plaster), Toadlena (cracked plaster), Vanderwagen (cracked plaster).

Intensity V:
Arizona--Fort Defiance, Indian Wells, Houck, Lukachukai, Lupton, Navajo, St. Johns, Wide Ruins.
Colorado--Ignazio, Marvel.
New Mexico--Aztec, Bluewater, Brimhall, Casa Blanca, Church Rock, Cuchillo, Farmington (groceries fell from shelves--press report), Fence Lake (bottles fell from shelf), Galina, Gamerco, Grants (press report), Jemez Springs, Kirtland, Lake Valley School, Lumberton, Mentmore, Nageez, Navajo Dam, Ponderosa, Prewitt, Pueblo Pintado School, Quemado, Ramah, Rehoboth, San Mateo, Tohatchi, Waterflow.

Intensity IV:
Arizona--Chambers, Chinle, Petrified Forest National Park, Pinetop, Sanders, Sawmill, Woodruff.
Colorado--Bayfield, Chimney Rock, Chromo, Cortez, Creede, Dove Creek, Durango, Maher, Mesa Verde, Pagosa Springs, Rico, Towaoc.
New Mexico--Aneth, Blanco, Bloomfield, Continental Divide, Cuba, Dulce, La Jara, La Puente, Llaves, Los Ojos, Magdalena, New Laguna, Nulan, Rutherton, San Rafael, Seboyeta, Silver City, Thoreau, Zuni.

Intensity III:
Colorado--Woody Creek, Yellow Jacket.
New Mexico--Milan.
Utah--Wellington.

Intensity II:
Colorado--Pleasant View, Walsenburg.
New Mexico--Grady.

14 January (G) Central New Mexico
Origin time: 07 01 32.0
Epicenter: 34.17 N., 106.81 W.
Depth: None computed.
Magnitude: None computed.
Intensity II: 10 km east of Socorro.

Oklahoma

16 March (T) Eastern Oklahoma
Origin time: 07 39 54.5
Epicenter: 35.30 N., 95.50 W.
Depth: None computed.
Magnitude: 2.3 ML

The epicenter and intensity data were provided by J. Lawson, Earth Sciences Laboratory, University of Oklahoma, Leonard.

Table 2.— *Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Oklahoma--Continued

Intensity III: Eufaula, Stidham, Vivian.
Intensity II: 8 km northwest of Hannah, Lenna.

30 March (G) Northwestern Oklahoma
Origin time: 09 27 01.0
Epicenter: 36.61 N., 102.08 W.
Depth: 5 km
Magnitude: 2.7 ML(T)
An earlier and smaller shock occurred at 07 05 (T).
Intensity V: Boise City, Keyes.
Intensity IV: Griggs (press report).

Rhode Island

11 March (C) Southeastern Rhode Island
Origin time: 08 29 32.2
Epicenter: 41.56 N., 71.21 W.
Depth: 0 km
Magnitude: 3.5 mbLg
Intensity VI:
Connecticut--Rogers (plaster cracked).
Intensity V:
Massachusetts--Dartmouth, Fairhaven, Fall River (press report), Marshfield Hills, New Bedford, Somerset (press report), Swansea, Westport (knocked snow from roof--press report), Westport Point.
Rhode Island--Bristol, Coventry, Exeter, Hope Valley, Jamestown, Little Compton, Newport (lamp fell from table), North Kingston (press report), North Scituate, Providence (press report), Tiverton, Warren, Warwick.
Intensity IV:
Massachusetts--Dennisport, Edgartown, Elmwood, Leicester, Osterville, Plymouth, Wakefield.
Rhode Island--Oakland, Richmond.
Intensity III:
Massachusetts--Hyannis.
Intensity II:
Massachusetts--West Falmouth.

Tennessee

4 February (G) Tennessee-Georgia border
Origin time: 19 53 52.9
Epicenter: 35.00 N., 84.75 W.
Depth: 5 km
Magnitude: 3.0 mbLg(V)
Intensity VI:
Tennessee--Conasauga (cracked masonry; everyone frightened).
Intensity V:
Georgia--Cisco.
Intensity IV:
Tennessee--Copperhill, Ducktown.
Intensity III:
Tennessee--Chattanooga (telephone report).

Table 2.— *Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Texas

19 January (G) Southwestern Texas
Origin time: 04 03 30.5
Epicenter: 31.90 N., 103.08 W.
Depth: 1 km
Magnitude: 3.3 ML
Intensity IV: Kermit.

22 January (G) Southwestern Texas
Origin time: 07 21 57.0
Epicenter: 31.90 N., 103.07 W.
Depth: 1 km
Magnitude: 2.8 ML
Intensity III: Kermit (press report).

25 January (G) Southwestern Texas
Origin time: 04 48 27.9
Epicenter: 31.90 N., 103.08 W.
Depth: 2 km
Magnitude: 4.1 ML
Intensity V:
Texas--Kermit.
Intensity IV:
New Mexico--Jal.
Texas--Notrees.
Intensity III:
New Mexico--Lea County (press reports).
Texas--Ector and Winkler Counties.

Utah

11 February (U) Northern Utah
Origin time: 03 28 14.7
Epicenter: 41.27 N., 111.84 W.
Depth: 13 km
Magnitude: 2.7 ML(U)
Intensity III: Ogden (U).

27 February (G) Northern Utah
Origin time: 07 18 16.4
Epicenter: 41.24 N., 111.27 W.
Depth: 5 km
Magnitude: 2.4 ML(U)
Intensity II: Hill AFB, Ogden, Pleasant View, Roy (all from press reports).

Washington

5 January (W) Puget Sound, Washington
Origin time: 13 25 43.8
Epicenter: 47.46 N., 122.60 W.
Depth: 42 km
Magnitude: 2.7 ML(G)
Intensity IV: Burley, Olympia, Port Orchard.
Intensity III: Bremerton (press report), Eatonville, La Grande, Preston.
Intensity II: Steilacoom, Tacoma (press report).

Table 2.— *Summary of macroseismic data for U.S. earthquakes, January-March 1976* — Con.

Washington--Continued

27 January (W) Northwestern Washington
Origin time: 03 09 31.3
Epicenter: 47.88 N., 122.17 W.
Depth: 19 km
Magnitude: 2.1 ML(G)
Intensity IV: Snohomish.
Intensity III: Everett.

31 January (W) Northwestern Washington
Origin time: 12 27 14.0
Epicenter: 48.35 N., 122.32 W.
Depth: 18 km
Magnitude: 2.4 ML(G)
Intensity IV: Camano Island, Silvana, Stanwood.

Wyoming

27 January (G) Southern Wyoming
Origin time: 10 54 38.7
Epicenter: 41.95 N., 107.22 W.
Depth: 5 km
Magnitude: 2.3 ML
Intensity V: Rawlins (knocked lamp off table, pictures off wall--press report).

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