

GEOLOGICAL SURVEY CIRCULAR 853-B



**Earthquakes
in the United States,
April-June 1980**

Earthquakes in the United States, April—June 1980

By C. W. Stover, J. H. Minsch, P. K. Smith,
and W. J. Person

GEOLOGICAL SURVEY CIRCULAR 853-B

United States Department of the Interior

JAMES G. WATT, *Secretary*



Geological Survey

Doyle G. Frederick, *Acting Director*

CONTENTS

	Page
Introduction.....	B1
Discussion of tables.....	1
Modified Mercalli Intensity Scale of 1931.....	8
Acknowledgments.....	53
References cited.....	53

ILLUSTRATIONS

	Page
FIGURE 1. "Earthquake Report" form.....	B2
2. Map showing standard time zones of the conterminous United States.	4
3. Map showing standard time zones of Alaska and Hawaii.....	5
4. Map of earthquake epicenters in the conterminous United States for April-June 1980.....	6
5. Map of earthquake epicenters in Alaska for April-June 1980.....	7
6. Map of earthquake epicenters in Hawaii for April-June 1980.....	8
7. Iseismal map for the central California earthquake of 13 April 1980.....	31
8. Iseismal map for the Owens Valley area, California, earthquake of 25 May 1980, 16 33 44.7 UTC.....	33
9. Iseismal map for the Owens Valley area, California, earthquake of 25 May 1980, 19 44 51.5 UTC.....	38
10. Iseismal map for the Owens Valley area, California, earthquake of 27 May 1980.....	41
11. Iseismal map for the Baja California, Mexico, earthquake of 9 June 1980.....	44
12. Intensity map for the Mount St. Helens, Washington, earthquake of 18 May 1980.....	51

TABLES

	Page
TABLE 1. Summary of U.S. earthquakes for April-June 1980:	
Alaska.....	B10
Arizona.....	11
California.....	11
California--Off the coast.....	21
Hawaii.....	21
Maine.....	21
Montana.....	21
Nevada.....	21
New Hampshire.....	22
New York.....	22
North Carolina.....	22
Oregon--Off the coast.....	22
Pennsylvania.....	22
South Carolina.....	22
Tennessee.....	22
Texas.....	22
Utah.....	22
Washington.....	22

	Page
2. Summary of macroseismic data for U.S. earthquakes, April-June 1980:	
Alaska.....	B28
Arizona.....	29
California.....	29
Hawaii.....	46
Idaho.....	47
Maine.....	47
Montana.....	47
Nevada.....	47
New York.....	48
North Carolina.....	48
Oregon.....	48
South Carolina.....	49
Tennessee.....	49
Texas.....	49
Utah.....	49
Washington.....	49
Wyoming.....	53

Earthquakes in the United States, April-June 1980

By C. W. Stover, J. H. Minsch, P. K. Smith, and W. J. Person

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," by providing detailed felt and intensity data for U.S. earthquakes. The purpose of this circular is to provide a complete listing of macro-seismic effects of earthquakes, which can be used in risk studies, nuclear power plant site evaluations, seismicity studies, and to answer inquiries by the public.

This publication contains two major sections. The first part (table 1), which is mainly concerned with data obtained by seismographs, 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, which concerns intensity information, consists of six maps and table 2. This section also contains information on events that were felt but were not listed in the PDE because there was not enough instrumental data to obtain a solution. The list of earthquakes in table 1 was compiled from those located in the United States or nearby offshore areas that were published in the PDE; from aftershock studies carried out by the U.S. Geological Survey and other organizations; from hypocenters in California above magnitude 3.0 supplied by the 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 other institutions as listed in the acknowledgments. Known or suspected explosions are also listed in table 1 and table 2.

The intensities and macroseismic data were compiled from information obtained from postal

questionnaires, from newspaper articles, and from other Government agencies, State institutions, local organizations, and individuals. (See "Acknowledgments" for a list of collaborators.) Figure 1 is the questionnaire in use by the NEIS. Other types of questionnaires are used by State agencies, engineering firms, and other Government agencies to collect intensity data. 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, CO 80225. Copies of the current "Earthquake Report" questionnaire can be obtained at this address.

The NEIS uses the postal questionnaire as the primary source of macroseismic data to carry out an intensity survey; however, on-site field investigations are made following earthquakes that do significant damage. The "Earthquake Report" forms are mailed to postmasters within the area affected by the earthquake. The completed forms are returned to the NEIS, where they are evaluated and intensity values are assigned to individual locations. In the case of large or significant earthquakes, the intensity observations are plotted and isoseismal maps are prepared. It should be pointed out that the isoseismals represent a general intensity level and that they do not necessarily agree with every individual observation.

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 source of the computed solution. 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 not

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

Form Approved
OMB No. 42-R1700

Please answer this questionnaire and return as soon as possible

1. Was an earthquake felt by anyone in your town near the date and time indicated on the opposite page?

☐ No: Please refold and tape for return mail.

☐ Yes: Date _____ Time _____ ☐ AM ☐ Standard time
☐ PM ☐ 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

2. Did you personally feel the earthquake? 1 ☐ Yes ☐ No
Were you awakened by the earthquake? 2 ☐ Yes ☐ No
Were you frightened by the earthquake? 3 ☐ Yes ☐ No
Were you at 4 ☐ Home 5 ☐ Work 6 ☐ Other? _____

Town and zip code of your location at time of earthquake _____

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 _____

Were you 14 ☐ Inside or 15 ☐ Outside?
If inside, on what floor were you? 16 _____

Did you have difficulty in standing or walking 17 ☐ Yes 18 ☐ No

Vibration could be described as 19 ☐ Light 20 ☐ Moderate 21 ☐ Strong

Was there earth noise? ☐ No 22 ☐ Faint 23 ☐ Moderate 24 ☐ Loud

Direction of noise ☐ North ☐ South ☐ East ☐ West

Estimated duration of shaking 25 ☐ Sudden, sharp (less than 10 secs) 26 ☐ Long (30-60 secs)
27 ☐ Short (10-30 secs)

Continue on to next section which should include personal as well as reported observations.

COMMUNITY REPORT

Town and zip code _____

DO NOT INCLUDE EFFECTS FROM OTHER COMMUNITIES/TOWNS

Check one box for each question that is applicable.

- 3a. The earthquake was felt by ☐ No one 28 ☐ Few 29 ☐ Several 30 ☐ Many 31 ☐ All?
b. This earthquake awakened ☐ No one 32 ☐ Few 33 ☐ Several 34 ☐ Many 35 ☐ All?
c. This earthquake frightened ☐ No one 36 ☐ Few 37 ☐ Several 38 ☐ Many 39 ☐ All?

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

Windows, doors, dishes rattled 40 ☐ Yes ☐ No
Walls creaked 41 ☐ Yes ☐ No
Building trembled (shook) 42 ☐ Slightly 43 ☐ Strongly
Hanging pictures (more than one) 44 ☐ Swung 45 ☐ Out of place 46 ☐ Fallen
Windows 47 ☐ Few cracked 48 ☐ Some broken out 49 ☐ Many broken out
Small objects overturned 50 ☐ Few 51 ☐ Many
Small objects fallen 52 ☐ Few 53 ☐ Many
Glassware/dishes broken 54 ☐ Few 55 ☐ Many
Light furniture or small appliances 56 ☐ Overturned 57 ☐ Damaged seriously
Heavy furniture or appliances 58 ☐ Overturned 59 ☐ Damaged seriously
Did hanging objects or doors swing? 60 ☐ Slightly 61 ☐ Moderately 62 ☐ Violently
Can you estimate direction? ☐ North/South ☐ East/West ☐ Other _____
Items thrown from store shelves 63 ☐ Few 64 ☐ Many

Continued on the reverse side

FIGURE 1.—Example of the "Earthquake Report" form used for evaluating the intensities of earthquakes. A, front side.

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

Plaster/stucco	65 ☐ Hairline cracks	66 ☐ Large cracks (many)	67 ☐ Fell in large amounts
Dry wall	68 ☐ Hairline cracks	69 ☐ Large cracks (many)	70 ☐ Fell in large amounts

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

Trees and bushes shaken	71 ☐ Slightly	72 ☐ Moderately	73 ☐ Strongly
Standing vehicles rocked	74 ☐ Slightly	75 ☐ Moderately	
Moving vehicles rocked	76 ☐ Slightly	77 ☐ Moderately	
Water splashed onto sides of lakes, ponds, swimming pools	78 ☐ Yes	☐ No	
Elevated water tanks	79 ☐ Cracked	80 ☐ Twisted	81 ☐ Fallen (thrown down)
Tombstones	82 ☐ Displaced	83 ☐ Cracked	84 ☐ Rotated
	85 ☐ Fallen		
Chimneys	86 ☐ Cracked	87 ☐ Twisted	88 ☐ Fallen
	89 ☐ Broken at roof line	90 ☐ Bricks fallen	
Railroad tracks bent	91 ☐ Slightly	92 ☐ Greatly	
Stone or brick fences /walls	93 ☐ Open cracks	94 ☐ Fallen	95 ☐ Destroyed
Underground pipes	96 ☐ Broken	97 ☐ Out of service	
Highways or streets	98 ☐ Large cracks	99 ☐ Large displacements	
Sidewalks	100 ☐ Large cracks	101 ☐ Large displacements	

7a. Check below any structural damage to buildings.

Foundation	102 ☐ Cracked	103 ☐ Destroyed
Interior walls	104 ☐ Split	105 ☐ Fallen
Exterior walls	107 ☐ Large Cracks	108 ☐ Bulged outward
	109 ☐ Partial collapse	110 ☐ Total collapse

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

111 ☐ Wood	112 ☐ Stone	113 ☐ Brick veneer	114 ☐ Other _____
115 ☐ Brick	116 ☐ Cinderblock	117 ☐ Reinforced concrete	118 ☐ Mobile home

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

☐ Don't know	119 ☐ Sandy soil	120 ☐ Marshy	121 ☐ Fill
122 ☐ Hard rock	123 ☐ Clay soil	124 ☐ Sandstone, limestone, shale	

d. Was the ground:

125 ☐ Level	126 ☐ Sloping	127 ☐ Steep?
------------------------------------	--------------------------------------	-------------------------------------

e. Check the approximate age of the building:

128 ☐ Built before 1935	129 ☐ Built 1935-65	130 ☐ Built after 1965
--	--	---

8. Check below any structural damage to

Bridges/Overpasses	131 ☐ Concrete	132 ☐ Wood	133 ☐ Steel	134 ☐ Other _____
Damage was	135 ☐ Slight	136 ☐ Moderate	137 ☐ Severe	
Dams	138 ☐ Concrete	139 ☐ Large earthen		
Damage was	140 ☐ Slight	141 ☐ Moderate	142 ☐ Severe	

9. What geologic effects were noted in your community?

Ground cracks	143 ☐ Wet ground	144 ☐ Steep slopes	145 ☐ Dry and level ground
Landslides	146 ☐ Small	147 ☐ Large	
Slumping	148 ☐ River bank	149 ☐ Road fill	150 ☐ Land fill
Were springs or well water disturbed?	151 ☐ Level changed	152 ☐ Flow disturbed	
	153 ☐ Muddied	☐ Don't know	
Were rivers or lakes changed?	154 ☐ Yes	☐ No	☐ Don't know

10a. What percentage of buildings were damaged?

Within 2 city blocks of your location	☐ None	155 ☐ Few (about 5%)
	156 ☐ Many (about 50%)	157 ☐ Most (about 75%)

b. In area covered by your zip code

	☐ None	158 ☐ Few (about 5%)
	159 ☐ Many (about 50%)	160 ☐ Most (about 75%)

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

FIGURE 1.--Example of the "Earthquake Report" form used for evaluating the intensities of earthquakes. B, reverse side.

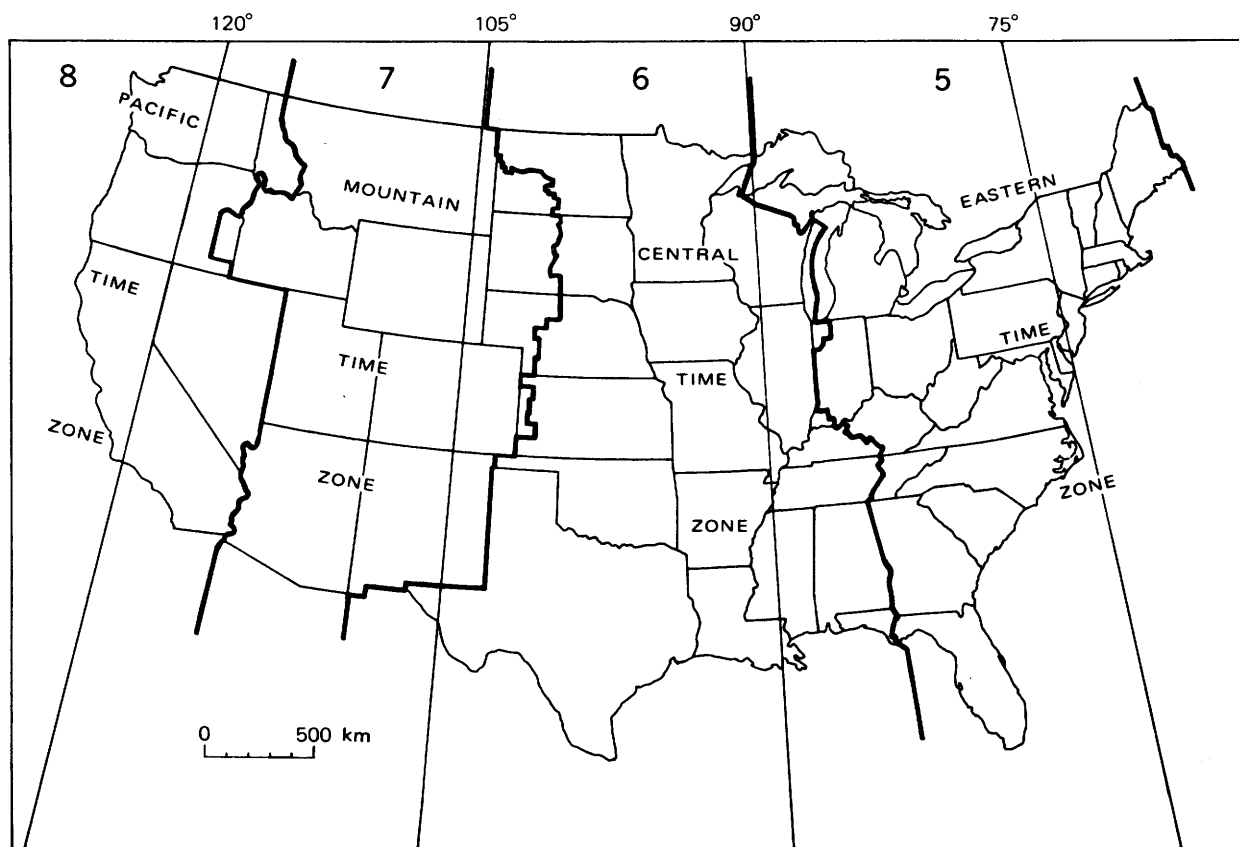


FIGURE 2.--Standard time zones of the conterminous United States. The number in each zone shows the number of hours to be subtracted from Universal Coordinated Time to convert to local standard time. (Subtract 1 hour less for local daylight-saving time.)

necessarily indicated by the number of decimals listed. The epicenters located by the NEIS usually are accurate to two-tenths of a degree or less. In general, epicenters located offshore are less accurate than those on land, even though they are listed to two decimals. In regions covered by dense networks of seismographs such as California, epicenter accuracy is significantly better than the two-tenths of a degree listed. 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 April-June 1980. The magnitudes represented in these figures are based on ML or Mn; 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 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 source is NEIS. The magnitude values calculated by 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 vertical surface-wave ground amplitude, in micrometers; T is the period, in seconds, and $18 < T < 22$; and D is the distance, in geocentric degrees (station to epicenter), and $20^\circ < D < 160^\circ$. 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),

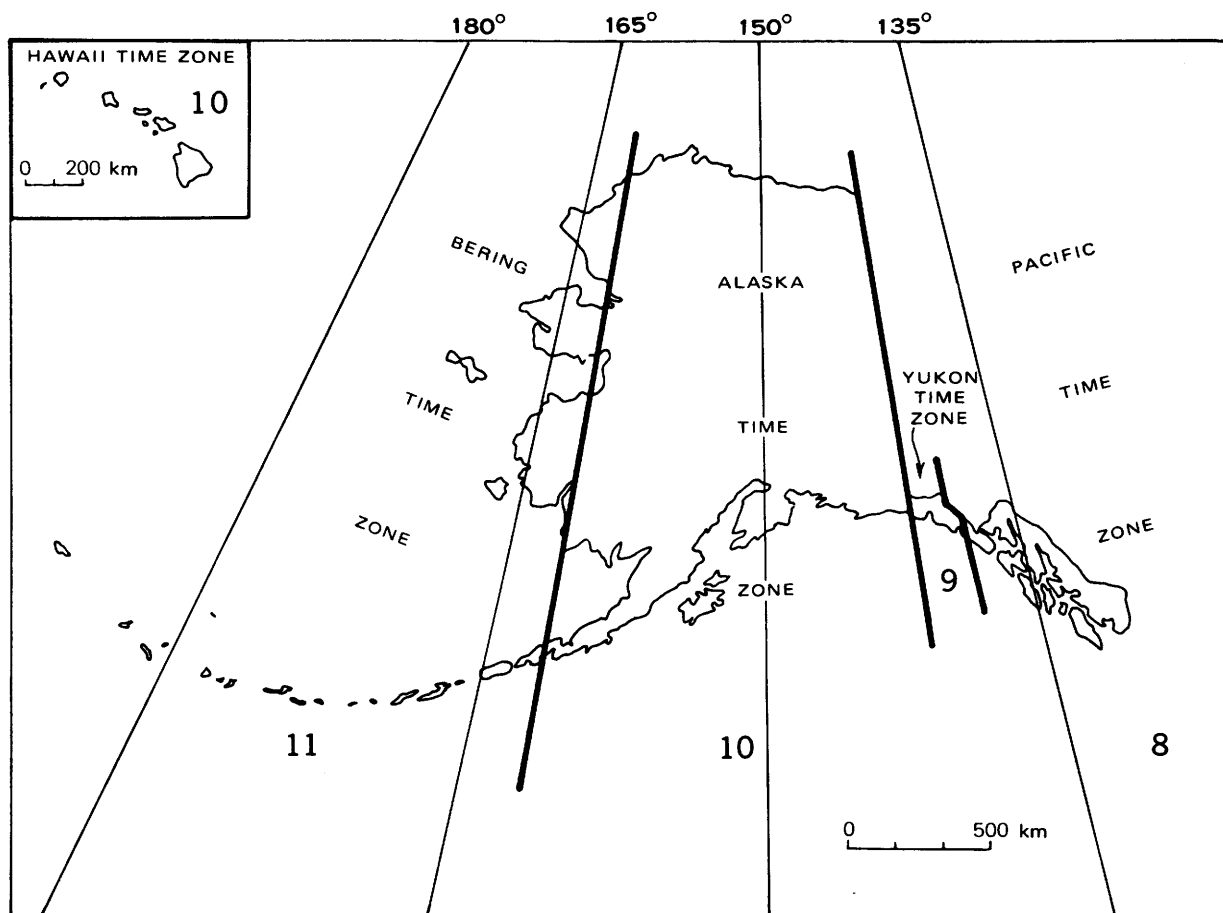


FIGURE 3.—Standard time zones of Alaska and Hawaii. The number in each zone shows the number of hours to be subtracted from Universal Coordinated Time to convert to local standard time. (Subtract 1 hour less for local daylight-saving time.)

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 $D \geq 5^\circ$.

$$ML = \log A - \log A_0, \quad (3)$$

as defined by Richter (1958, p. 340), where A is the maximum trace amplitude in millimeters, written by a Wood-Anderson torsion seismometer, and $\log A_0$ 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 expected response of the torsion seismometer.

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

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

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

All of the intensity values (indicated by Roman numerals) listed in this summary were determined, 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 that contain minimal or sketchy information are listed only as "FELT." This does not imply that the earthquake was felt at a low intensity level, but indicates that the available data is not sufficient for assigning a valid intensity value. These reports are filed in the offices of the NEIS or in government archives and are available for detailed study.

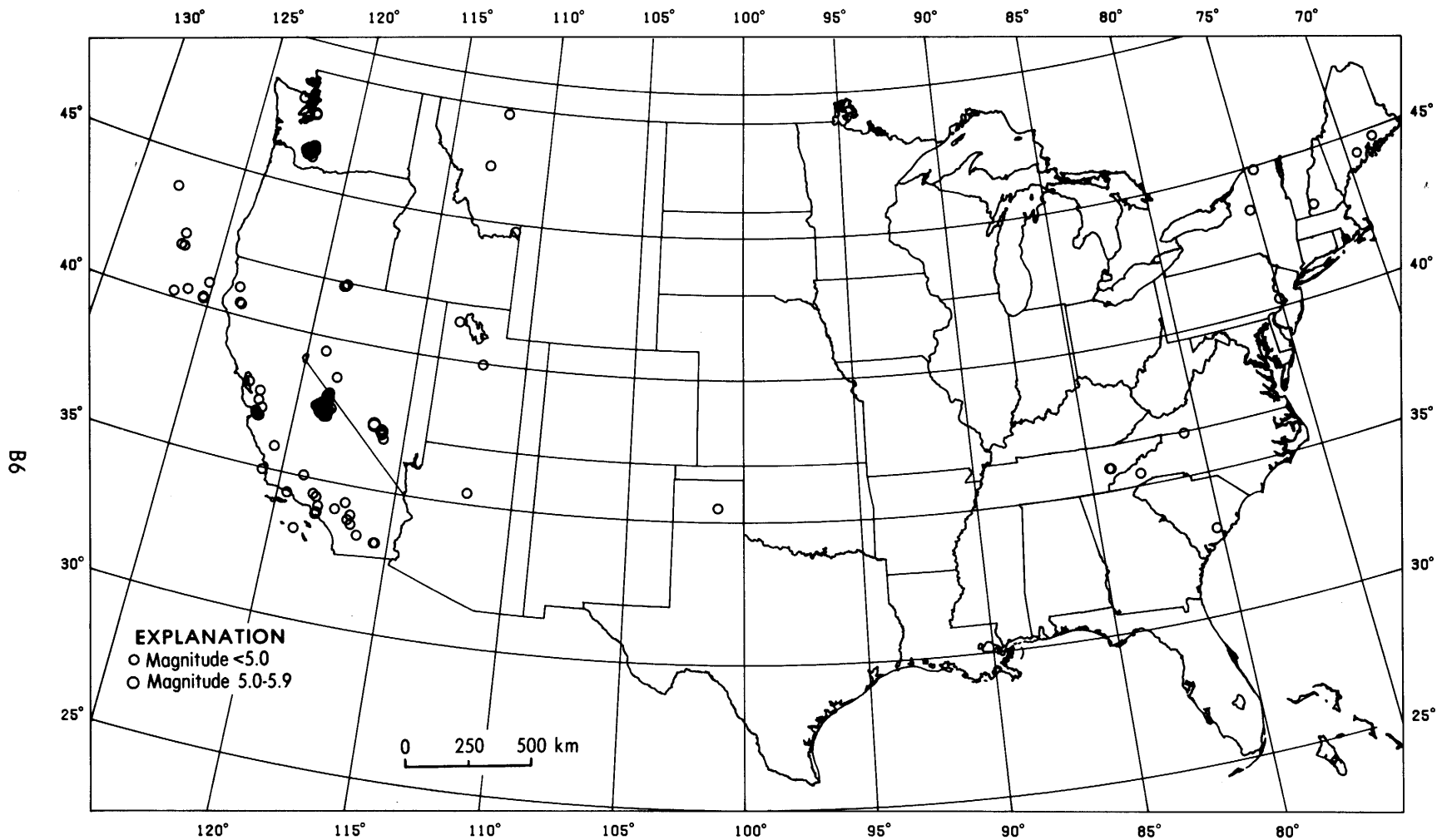


FIGURE 4.--Earthquake epicenters in the conterminous United States for April-June 1980, plotted from table 1.

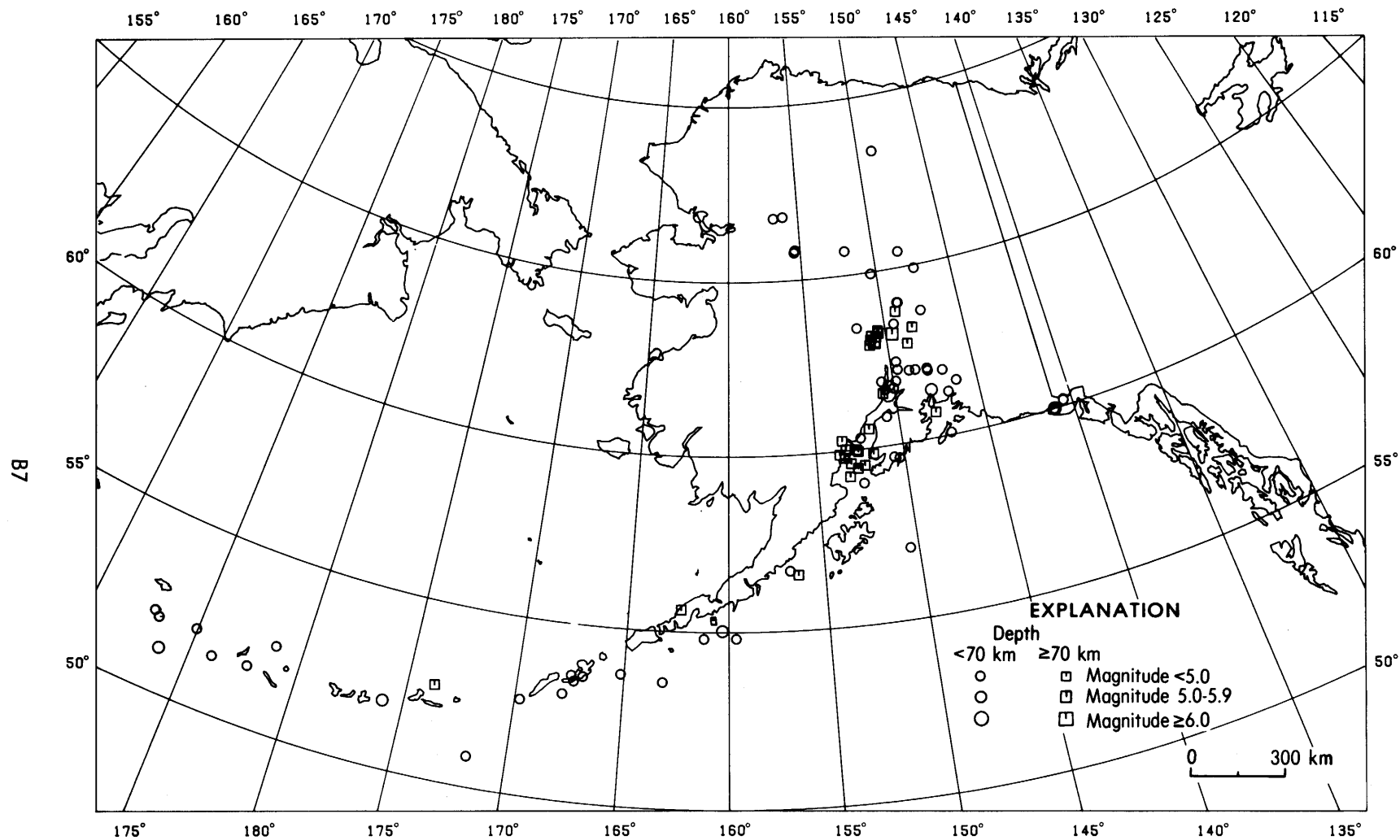


FIGURE 5.--Earthquake epicenters in Alaska for April-June 1980, plotted from table 1.

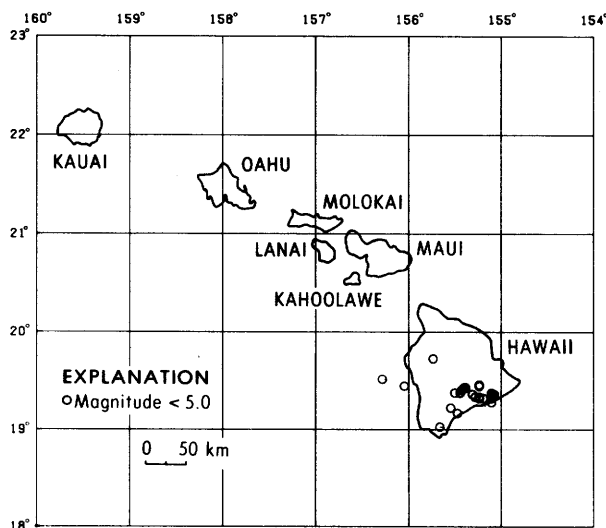


FIGURE 6.--Earthquake epicenters in Hawaii for April-June 1980, plotted from table 1.

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 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.

Table 1.--Summary of U.S. earthquakes for April-June 1980

[Sources of the hypocenters and magnitudes: (B) University of California, Berkeley; (D) University of Montana, Missoula; (E) U.S. Department of Energy, Las Vegas, Nevada; (G) U.S. Geological Survey, National Earthquake Information Service; (H) U.S. Geological Survey, Hawaiian Volcano Observatory; (J) Weston Observatory, Massachusetts; (L) Lamont-Doherty Geological Observatory, Palisades, N.Y.; (M) National Oceanic and Atmospheric Administration, Alaska Tsunami Warning Center, Palmer;

(P) California Institute of Technology, Pasadena; (T) University of Oklahoma, Leonard; (U) University of Utah, Salt Lake; (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 (1980)	Origin time (UTC)			Lat	Long	Depth (km)	Magnitude			Maximum intensity	Hypocenter source	Local time					
	hr	min	s				mb	MS	ML or Mn			Date	Hour				
ALASKA																	
APR.	3	03	46	4.3	63.15 N.	149.57 W.	92	5.0	...	...	IV	G	APR.	2	05	P.M.	AST
APR.	3	08	37	29.5	61.60 N.	150.56 W.	58	...	...	...	FELT	G	APR.	2	10	P.M.	AST
APR.	4	20	05	31.7	53.70 N.	165.17 W.	33N	4.8	...	...	...	G	APR.	4	09	A.M.	BST
APR.	5	01	40	48.0	53.55 N.	163.16 W.	33N	4.7	...	3.9M	...	G	APR.	4	02	P.M.	BST
APR.	6	14	47	43.2	61.38 N.	147.82 W.	49	4.9	5.2	5.2M	V	G	APR.	6	04	A.M.	AST
APR.	7	03	31	17.9	62.11 N.	149.64 W.	62	...	...	...	...	G	APR.	6	05	P.M.	AST
APR.	12	10	22	17.5	59.80 N.	153.39 W.	124	3.8	...	...	...	G	APR.	12	00	A.M.	AST
APR.	12	18	31	45.1	60.32 N.	152.38 W.	66	3.5	...	...	...	G	APR.	12	08	A.M.	AST
APR.	13	02	08	32.2	55.04 N.	160.31 W.	57	5.4	...	...	IV	G	APR.	12	04	P.M.	AST
APR.	14	22	07	36.8	52.98 N.	167.84 W.	46	4.7	4.1	...	IV	G	APR.	14	11	A.M.	BST
APR.	15	07	50	19.5	51.87 N.	175.96 W.	69	5.1	...	...	FELT	G	APR.	14	08	P.M.	BST
APR.	16	20	10	55.1	54.80 N.	161.23 W.	59	4.6	...	...	...	G	APR.	16	09	A.M.	BST
APR.	18	18	49	5.6	50.86 N.	171.75 W.	33N	4.9	...	4.2M	...	G	APR.	18	07	A.M.	BST
APR.	20	10	27	31.4	60.84 N.	150.71 W.	37	...	...	3.5M	...	G	APR.	20	00	A.M.	AST
APR.	20	19	24	59.2	63.07 N.	151.00 W.	95	...	...	...	...	G	APR.	20	09	A.M.	AST
APR.	21	10	53	36.4	64.95 N.	150.38 W.	33N	...	...	...	...	G	APR.	21	00	A.M.	AST
APR.	22	13	06	39.4	62.33 N.	149.63 W.	61	4.0	...	...	...	G	APR.	22	03	A.M.	AST
APR.	23	16	48	59.4	65.69 N.	151.96 W.	33N	...	...	3.1M	...	G	APR.	23	06	A.M.	AST
APR.	24	03	32	22.0	60.72 N.	147.81 W.	117	...	...	...	...	G	APR.	23	05	P.M.	AST
APR.	24	03	51	2.1	66.80 N.	156.76 W.	33N	...	...	...	...	G	APR.	23	05	P.M.	AST
APR.	24	14	52	49.4	60.27 N.	140.40 W.	33N	3.1	...	...	...	G	APR.	24	05	A.M.	YST
APR.	25	01	48	9.7	57.04 N.	150.43 W.	33N	3.9	...	3.1M	...	G	APR.	24	03	P.M.	AST
APR.	25	12	25	22.3	59.62 N.	153.05 W.	119	...	...	...	...	G	APR.	25	02	A.M.	AST
APR.	27	20	05	39.7	52.47 N.	178.69 E.	33N	4.2	...	4.0M	...	G	APR.	27	09	A.M.	BST
APR.	28	03	35	59.2	56.69 N.	156.81 W.	58	4.7	...	...	...	G	APR.	27	05	P.M.	AST
APR.	28	17	34	37.6	56.57 N.	156.40 W.	75	3.9	...	...	...	G	APR.	28	07	A.M.	AST
APR.	29	13	04	55.6	54.81 N.	159.64 W.	33N	4.1	...	...	...	G	APR.	29	03	A.M.	AST
MAY	1	08	22	52.9	61.89 N.	146.94 W.	66	4.3	...	...	IV	G	APR.	30	10	P.M.	AST
MAY	1	18	39	2.4	59.65 N.	150.58 W.	44	3.7	...	...	...	G	MAY	1	08	A.M.	AST
MAY	2	05	05	34.7	63.22 N.	150.46 W.	140	...	...	...	...	G	MAY	1	07	P.M.	AST
MAY	2	22	55	34.9	59.95 N.	152.58 W.	115	...	...	...	...	G	MAY	2	12	P.M.	AST
MAY	3	09	30	8.5	51.23 N.	173.68 E.	33N	5.8	5.3	...	...	G	MAY	2	10	P.M.	BST
MAY	4	04	40	6.1	66.83 N.	156.09 W.	33N	...	...	3.5M	...	G	MAY	3	06	P.M.	AST
MAY	4	11	40	47.0	52.67 N.	169.77 W.	51	4.4	...	4.8M	...	G	MAY	4	00	A.M.	BST
MAY	6	18	18	17.7	63.13 N.	150.65 W.	135	...	...	...	...	G	MAY	6	08	A.M.	AST
MAY	7	01	08	11.8	64.01 N.	148.96 W.	33N	...	...	2.7M	...	G	MAY	6	03	P.M.	AST
MAY	7	03	06	16.0	62.99 N.	150.80 W.	118	5.0	...	...	II	G	MAY	6	05	P.M.	AST
MAY	7	19	14	48.0	55.63 N.	162.40 W.	80	4.8	...	...	...	G	MAY	7	08	A.M.	BST
MAY	10	02	57	13.7	60.07 N.	147.15 W.	33N	...	...	3.3M	...	G	MAY	9	04	P.M.	AST
MAY	12	09	09	56.1	63.67 N.	147.52 W.	14	...	...	3.1M	...	G	MAY	11	11	P.M.	AST
MAY	14	06	40	37.2	68.41 N.	148.90 W.	19	4.4	...	4.4M	III	G	MAY	13	08	P.M.	AST
MAY	14	08	38	32.4	61.61 N.	150.02 W.	46	...	...	...	...	G	MAY	13	10	P.M.	AST
MAY	14	13	05	36.6	62.03 N.	148.57 W.	32	...	...	2.9M	...	G	MAY	14	03	A.M.	AST
MAY	16	04	18	44.5	65.44 N.	148.29 W.	20	...	...	2.8M	...	G	MAY	15	06	P.M.	AST
MAY	16	22	40	45.6	62.97 N.	150.73 W.	120	4.0	...	...	...	G	MAY	16	12	P.M.	AST
MAY	18	17	17	29.7	61.84 N.	150.70 W.	36	...	...	3.4M	...	G	MAY	18	07	A.M.	AST
MAY	20	15	42	8.0	63.18 N.	150.92 W.	150	...	...	...	...	G	MAY	20	05	A.M.	AST
MAY	23	11	10	0.9	61.24 N.	146.82 W.	33N	...	...	3.0M	...	G	MAY	23	01	A.M.	AST
MAY	26	10	31	37.1	63.45 N.	151.76 W.	33N	...	...	3.1M	...	G	MAY	26	00	A.M.	AST
MAY	29	07	04	39.9	64.91 N.	147.43 W.	33N	...	...	3.6M	III	G	MAY	28	09	P.M.	AST
MAY	30	23	28	24.7	61.94 N.	147.82 W.	66	...	...	...	...	G	MAY	30	01	P.M.	AST
MAY	31	00	00	10.2	62.00 N.	147.84 W.	42	...	...	...	...	G	MAY	30	02	P.M.	AST
MAY	31	03	43	24.5	59.25 N.	153.17 W.	128	...	...	...	...	G	MAY	30	05	P.M.	AST
MAY	31	13	20	36.6	59.46 N.	152.73 W.	125	...	...	...	...	G	MAY	31	03	A.M.	AST
JUNE	1	16	26	34.5	61.70 N.	150.25 W.	45	...	...	2.6M	...	G	JUNE	1	06	A.M.	AST
JUNE	3	10	59	25.2	60.00 N.	152.67 W.	117	3.7	...	...	II	G	JUNE	3	00	A.M.	AST
JUNE	4	17	29	54.0	65.85 N.	155.37 W.	29	...	...	3.4M	...	G	JUNE	4	07	A.M.	AST

Table 1.--Summary of U.S. earthquakes for April-June 1980--Continued

Date (1980)	Origin time (UTC)			Lat	Long	Depth (km)	Magnitude			Maximum intensity	Hypocenter source	Local time			
	hr	min	s				mb	MS	ML or Mn			Date	Hour		
ALASKA--Continued															
JUNE 4	17	33	26.3	65.78 N.	155.44 W.	5	...	...	3.8M	...	G	JUNE 4	07	A.M.	AST
JUNE 8	18	44	42.1	63.30 N.	150.49 W.	133	...	...	...	...	G	JUNE 8	08	A.M.	AST
JUNE 9	08	51	47.0	61.51 N.	150.71 W.	73	4.5	...	...	IV	G	JUNE 8	10	P.M.	AST
JUNE 10	21	55	43.6	52.64 N.	173.78 W.	186	4.1	...	...	...	G	JUNE 10	10	A.M.	BST
JUNE 11	04	38	3.4	59.54 N.	152.31 W.	117	...	...	...	...	G	JUNE 10	06	P.M.	AST
JUNE 11	05	44	31.7	60.55 N.	151.80 W.	101	...	...	...	...	G	JUNE 10	07	P.M.	AST
JUNE 11	20	56	4.3	63.24 N.	148.25 W.	90	3.8	...	...	...	G	JUNE 11	10	A.M.	AST
JUNE 12	00	38	38.5	51.68 N.	177.70 E.	65	4.9	...	...	...	G	JUNE 11	01	P.M.	BST
JUNE 12	10	49	23.3	59.82 N.	151.75 W.	97	...	...	...	FELT	G	JUNE 12	00	A.M.	AST
JUNE 12	20	53	15.2	64.02 N.	148.89 W.	53	...	...	...	...	G	JUNE 12	10	A.M.	AST
JUNE 14	00	03	1.2	52.17 N.	172.84 E.	39	4.9	...	...	...	G	JUNE 13	01	P.M.	BST
JUNE 14	09	08	31.4	52.03 N.	173.12 E.	36	4.4	...	...	...	G	JUNE 13	10	P.M.	BST
JUNE 14	09	31	31.3	63.77 N.	149.14 W.	124	3.8	...	...	...	G	JUNE 13	11	P.M.	AST
JUNE 15	01	06	6.9	59.95 N.	141.10 W.	15	...	...	...	...	G	JUNE 14	03	P.M.	AST
JUNE 15	18	16	6.9	62.04 N.	148.91 W.	33N	...	...	2.7M	...	G	JUNE 15	08	A.M.	AST
JUNE 15	19	01	53.0	60.04 N.	153.30 W.	120	4.4	...	...	...	G	JUNE 15	09	A.M.	AST
JUNE 16	01	18	43.6	51.59 N.	176.02 E.	53	4.7	...	...	...	G	JUNE 15	02	P.M.	BST
JUNE 17	09	16	11.6	60.28 N.	153.46 W.	171	4.4	...	...	...	G	JUNE 16	11	P.M.	AST
JUNE 17	16	46	19.8	52.14 N.	174.95 E.	59	4.8	...	...	...	G	JUNE 17	05	A.M.	BST
JUNE 22	13	56	55.7	53.54 N.	167.52 W.	33N	...	...	3.6M	...	G	JUNE 22	02	A.M.	BST
JUNE 22	21	42	30.7	62.80 N.	148.76 W.	99	...	...	...	...	G	JUNE 22	11	A.M.	AST
JUNE 23	04	04	33.1	53.54 N.	166.97 W.	33N	4.2	...	4.5M	...	G	JUNE 22	05	P.M.	BST
JUNE 25	07	22	19.6	59.62 N.	150.31 W.	33N	...	...	...	III	G	JUNE 24	09	P.M.	AST
JUNE 26	04	59	13.0	53.38 N.	167.38 W.	33N	4.0	...	3.8M	...	G	JUNE 25	05	P.M.	BST
JUNE 26	08	00	57.9	61.52 N.	146.23 W.	63	...	...	...	...	G	JUNE 25	10	P.M.	AST
JUNE 27	09	40	4.4	59.02 N.	152.47 W.	33N	...	...	3.7M	...	G	JUNE 26	11	P.M.	AST
JUNE 28	18	51	49.4	62.92 N.	151.10 W.	124	4.3	...	...	FELT	G	JUNE 28	08	A.M.	AST
JUNE 28	23	44	53.5	63.42 N.	149.38 W.	33N	...	...	3.1M	...	G	JUNE 28	01	P.M.	AST
JUNE 30	10	03	21.9	59.89 N.	153.67 W.	170	...	...	...	...	G	JUNE 30	00	A.M.	AST
JUNE 30	18	07	39.0	60.01 N.	141.05 W.	13	5.0	...	5.1M	IV	G	JUNE 30	08	A.M.	AST
JUNE 30	18	24	14.4	61.79 N.	149.81 W.	30	...	...	3.0M	...	G	JUNE 30	08	A.M.	AST
JUNE 30	18	47	49.1	60.00 N.	141.13 W.	15	...	...	4.5M	...	G	JUNE 30	08	A.M.	AST
JUNE 30	18	59	31.7	60.02 N.	141.11 W.	15	4.9	4.8	5.2M	IV	G	JUNE 30	08	A.M.	AST
ARIZONA															
JUNE 1	08	40	27.5	35.39 N.	111.99 W.	5	...	...	3.6G	FELT	G	JUNE 1	01	A.M.	MST
CALIFORNIA															
APR. 2	08	04	40.7	37.60 N.	118.84 W.	8	...	...	3.0B	FELT	B	APR. 2	00	A.M.	PST
APR. 2	18	20	40.6	36.85 N.	115.91 W.	5	...	...	3.2P	...	G	APR. 2	10	A.M.	PST
APR. 3	03	00	45.5	37.49 N.	118.67 W.	16	...	...	3.6B	FELT	B	APR. 2	07	P.M.	PST
APR. 5	04	10	21.1	41.07 N.	124.00 W.	19	...	...	3.6B	...	B	APR. 4	08	P.M.	PST
APR. 5	14	02	13.7	37.55 N.	118.78 W.	13	...	...	3.2B	...	B	APR. 13	06	A.M.	PST
APR. 6	22	05	49.1	33.18 N.	115.52 W.	5	...	...	3.3P	FELT	P	APR. 6	02	P.M.	PST
APR. 7	02	07	37.4	37.62 N.	118.91 W.	14	...	...	3.0B	...	B	APR. 6	06	P.M.	PST
APR. 7	05	17	30.6	37.84 N.	122.24 W.	6	...	...	3.5B	V	B	APR. 6	09	P.M.	PST
APR. 7	22	01	35.9	33.20 N.	115.58 W.	5	...	...	3.0P	FELT	P	APR. 7	02	P.M.	PST
APR. 7	22	40	52.1	33.20 N.	115.55 W.	5	...	...	3.1P	FELT	P	APR. 7	02	P.M.	PST
APR. 13	03	52	27.5	33.87 N.	118.18 W.	6	...	...	2.2P	II	P	APR. 12	07	P.M.	PST
APR. 13	06	15	56.1	36.76 N.	121.55 W.	6	4.5	...	4.8B	V	B	APR. 12	10	P.M.	PST
APR. 13	06	20	39.9	36.78 N.	121.57 W.	5	...	...	3.1B	...	B	APR. 12	10	P.M.	PST
APR. 13	07	58	10.3	36.76 N.	121.54 W.	5	...	...	3.2B	...	B	APR. 12	11	P.M.	PST
APR. 13	23	08	44.1	36.75 N.	121.53 W.	5	...	...	3.1B	...	B	APR. 13	03	P.M.	PST
APR. 16	09	58	47.5	37.61 N.	121.69 W.	10	...	...	3.0B	...	B	APR. 16	01	A.M.	PST
APR. 16	20	26	14.9	34.35 N.	119.60 W.	8	...	...	3.0P	III	P	APR. 16	12	P.M.	PST
APR. 21	13	25	5.2	37.63 N.	118.89 W.	13	...	...	3.1B	...	B	APR. 21	13	A.M.	PST
APR. 25	12	53	14.5	37.60 N.	118.92 W.	5	...	...	3.0B	...	B	APR. 25	04	A.M.	PST
APR. 26	07	36	47.8	37.32 N.	121.67 W.	7	...	...	3.1B	...	B	APR. 25	11	P.M.	PST
APR. 28	18	21	25.3	36.79 N.	121.59 W.	5	...	...	3.2B	FELT	B	APR. 28	10	A.M.	PST
APR. 29	10	50	25.0	34.08 N.	118.17 W.	5	...	...	2.1P	FELT	P	APR. 29	02	A.M.	PST
APR. 29	13	50	22.6	40.44 N.	123.48 W.	5	...	...	4.0B	...	B	APR. 29	05	A.M.	PST
APR. 29	14	30	3.2	40.48 N.	123.55 W.	9	...	...	3.0B	...	B	APR. 29	06	A.M.	PST
MAY 3	23	01	13.3	37.25 N.	118.58 W.	6	...	...	3.0P	...	P	MAY 3	03	P.M.	PST

Table 1.--Summary of U.S. earthquakes for April-June 1980--Continued

Date (1980)	Origin time (UTC)				Lat	Long	Depth (km)	Magnitude			Maximum intensity	Hypocenter source	Local time				
	hr	min	s	mb				MS	ML or Mn	Date			Hour				
CALIFORNIA--Continued																	
MAY	4	19	50	39.7	34.08 N.	118.17 W.	4	...	...	2.2P	FELT	P	MAY	4	11	A.M.	PST
MAY	7	17	41	26.7	37.61 N.	118.88 W.	12	...	...	3.3B	...	B	MAY	7	09	A.M.	PST
MAY	7	22	22	31.4	37.63 N.	118.90 W.	21	...	...	3.3B	...	B	MAY	7	02	P.M.	PST
MAY	8	18	00	51.9	37.63 N.	118.91 W.	23	...	...	3.5B	...	B	MAY	8	10	A.M.	PST
MAY	9	19	56	36.8	37.67 N.	118.95 W.	33	...	...	3.3B	...	B	MAY	9	11	A.M.	PST
MAY	11	02	19	23.0	34.38 N.	118.33 W.	8	...	...	3.1P	IV	P	MAY	10	06	P.M.	PS
MAY	12	06	07	34.5	37.56 N.	118.88 W.	5	...	...	3.1P	...	G	MAY	11	10	P.M.	PST
MAY	14	08	02	32.6	37.59 N.	118.84 W.	28	...	...	4.1B	IV	B	MAY	14	00	A.M.	PST
MAY	14	11	18	3.4	37.62 N.	118.85 W.	6	...	...	3.3P	FELT	B	MAY	14	03	A.M.	PST
MAY	14	11	41	33.3	37.61 N.	118.84 W.	6	...	...	3.3B	FELT	B	MAY	14	03	A.M.	PST
MAY	14	12	03	55.0	37.62 N.	118.84 W.	13	...	...	3.1B	FELT	B	MAY	14	04	A.M.	PST
MAY	14	19	48	59.5	37.61 N.	118.91 W.	12	...	...	3.6B	FELT	B	MAY	14	11	A.M.	PST
MAY	14	21	08	28.6	37.64 N.	118.89 W.	5	...	...	3.1P	...	G	MAY	14	01	P.M.	PST
MAY	17	00	01	14.1	37.62 N.	115.84 W.	15	...	...	4.3B	FELT	B	MAY	16	04	P.M.	PST
MAY	18	12	47	30.2	37.62 N.	118.87 W.	13	...	...	4.0B	FELT	B	MAY	18	04	A.M.	PST
MAY	18	12	50	13.5	37.61 N.	118.88 W.	13	...	...	2.9B	...	B	MAY	18	13	A.M.	PST
MAY	18	18	40	52.3	37.61 N.	118.87 W.	9	...	...	3.7B	FELT	B	MAY	18	10	A.M.	PST
MAY	19	03	03	13.2	35.83 N.	120.51 W.	7	...	...	3.2B	...	B	MAY	18	07	P.M.	PST
MAY	19	10	25	17.6	37.63 N.	118.89 W.	12	...	...	3.3B	...	B	MAY	19	02	A.M.	PST
MAY	19	12	53	26.2	37.62 N.	118.90 W.	17	...	...	3.3B	...	B	MAY	19	04	A.M.	PST
MAY	19	22	19	8.9	37.62 N.	118.89 W.	15	...	...	3.6B	...	B	MAY	19	02	P.M.	PST
MAY	19	23	16	47.0	37.62 N.	118.89 W.	19	...	...	3.0B	...	B	MAY	19	03	P.M.	PST
MAY	20	00	50	33.0	35.05 N.	119.05 W.	10	...	...	3.8P	...	P	MAY	19	04	P.M.	PST
MAY	20	01	32	51.1	35.07 N.	119.02 W.	8	...	...	3.1P	...	P	MAY	19	05	P.M.	PST
MAY	20	05	22	11.0	37.63 N.	118.89 W.	28	...	...	2.8B	...	B	MAY	19	09	P.M.	PST
MAY	20	18	43	0.1	37.58 N.	118.89 W.	5	...	...	3.2P	...	G	MAY	20	10	A.M.	PST
MAY	20	23	07	13.5	37.61 N.	118.90 W.	27	...	...	3.1B	...	B	MAY	20	03	P.M.	PST
MAY	21	10	27	47.5	37.62 N.	118.83 W.	17	...	...	3.0B	...	B	MAY	21	02	A.M.	PST
MAY	21	20	03	38.8	37.59 N.	118.84 W.	5	...	...	3.0P	...	G	MAY	21	12	P.M.	PST
MAY	22	13	03	32.3	37.53 N.	118.83 W.	5	...	...	3.1P	...	P	MAY	22	05	A.M.	PST
MAY	25	04	49	36.2	37.57 N.	118.87 W.	4	...	...	3.9P	...	P	MAY	24	08	P.M.	PST
MAY	25	16	33	44.7	37.60 N.	118.84 W.	5	6.1	6.1	6.1B	VII	B	MAY	25	08	A.M.	PST
MAY	25	16	39	44.6	37.42 N.	118.85 W.	5	...	...	3.9P	...	P	MAY	25	08	A.M.	PST
MAY	25	16	41	57.3	37.53 N.	118.83 W.	4	...	...	4.4P	...	P	MAY	25	08	A.M.	PST
MAY	25	16	45	28.9	37.48 N.	118.80 W.	5	...	...	4.1P	...	P	MAY	25	08	A.M.	PST
MAY	25	16	49	27.6	37.61 N.	118.90 W.	24	5.5	...	6.0B	FELT	B	MAY	25	08	A.M.	PST
MAY	25	16	52	28.5	37.65 N.	118.73 W.	5	...	...	4.5P	...	P	MAY	25	08	A.M.	PST
MAY	25	16	56	13.1	37.63 N.	118.90 W.	5	...	...	4.3P	...	P	MAY	25	08	A.M.	PST
MAY	25	16	59	49.7	37.57 N.	118.83 W.	4	...	...	4.0P	...	P	MAY	25	08	A.M.	PST
MAY	25	17	03	29.8	37.53 N.	118.87 W.	5	...	...	3.8P	...	P	MAY	25	09	A.M.	PST
MAY	25	17	05	40.0	37.45 N.	118.70 W.	5	...	...	3.1P	...	P	MAY	25	09	A.M.	PST
MAY	25	17	06	24.0	37.61 N.	118.91 W.	15	...	...	4.6B	FELT	B	MAY	25	09	A.M.	PST
MAY	25	17	08	28.6	37.61 N.	118.85 W.	23	4.2	...	4.8B	FELT	B	MAY	25	09	A.M.	PST
MAY	25	17	16	55.4	37.42 N.	118.80 W.	5	...	...	3.8P	...	P	MAY	25	09	A.M.	PST
MAY	25	17	18	23.6	37.53 N.	118.88 W.	5	...	...	3.9P	...	P	MAY	25	09	A.M.	PST
MAY	25	17	21	53.3	37.62 N.	118.82 W.	5	...	...	3.5P	...	P	MAY	25	09	A.M.	PST
MAY	25	17	27	12.5	37.50 N.	118.87 W.	4	...	...	3.6P	...	P	MAY	25	09	A.M.	PST
MAY	25	17	32	59.1	37.62 N.	118.90 W.	6	...	...	3.4P	...	P	MAY	25	09	A.M.	PST
MAY	25	17	44	28.2	37.50 N.	118.82 W.	5	...	...	3.4P	...	P	MAY	25	09	A.M.	PST
MAY	25	17	45	35.7	37.55 N.	118.82 W.	3	...	...	3.6P	...	P	MAY	25	09	A.M.	PST
MAY	25	17	48	30.7	37.53 N.	118.83 W.	12	3.9	...	4.6B	FELT	B	MAY	25	09	A.M.	PST
MAY	25	17	54	41.8	37.53 N.	118.93 W.	6	...	...	3.6P	...	P	MAY	25	09	A.M.	PST
MAY	25	18	05	47.1	37.57 N.	118.70 W.	5	...	...	3.8P	...	P	MAY	25	10	A.M.	PST
MAY	25	18	11	40.4	37.53 N.	118.82 W.	4	...	...	3.5P	...	P	MAY	25	10	A.M.	PST
MAY	25	18	13	58.5	37.55 N.	118.82 W.	1	...	...	4.1P	...	P	MAY	25	10	A.M.	PST
MAY	25	18	29	23.2	37.68 N.	118.82 W.	7	...	...	3.3P	...	P	MAY	25	10	A.M.	PST
MAY	25	18	34	15.5	37.55 N.	118.90 W.	14	4.1	...	4.6B	FELT	B	MAY	25	14	A.M.	PST
MAY	25	18	45	0.8	37.58 N.	118.82 W.	4	...	...	3.7P	...	P	MAY	25	10	A.M.	PST
MAY	25	18	47	21.4	37.68 N.	118.72 W.	4	...	...	3.2P	...	P	MAY	25	10	A.M.	PST
MAY	25	19	03	49.0	33.35 N.	116.38 W.	13	...	...	3.2P	...	P	MAY	25	11	A.M.	PST
MAY	25	19	04	34.7	37.54 N.	118.91 W.	12	...	...	4.5B	FELT	B	MAY	25	11	A.M.	PST
MAY	25	19	12	6.9	37.52 N.	118.82 W.	5	...	...	3.2P	...	P	MAY	25	11	A.M.	PST
MAY	25	19	19	25.9	37.48 N.	118.83 W.	5	...	...	3.2P	...	P	MAY	25	11	A.M.	PST
MAY	25	19	31	47.7	37.70 N.	118.68 W.	4	...	...	3.5P	...	P	MAY	25	11	A.M.	PST
MAY	25	19	35	21.7	37.45 N.	118.95 W.	5	...	...	3.5P	...	P	MAY	25	11	A.M.	PST

Table 1.--Summary of U.S. earthquakes for April-June 1980--Continued

Date (1980)	Origin time (UTC)			Lat	Long	Depth (km)	Magnitude			Maximum intensity	Hypocenter source	Local time					
	hr	min	s				mb	MS	ML or Mn			Date	Hour				
CALIFORNIA--Continued																	
MAY	25	19	41	25.4	37.52 N.	118.80 W.	5	...	...	4.4P	...	P	MAY	25	11	A.M.	PST
MAY	25	19	44	51.5	37.56 N.	118.82 W.	21	5.5	5.8	6.1B	VII	B	MAY	25	11	A.M.	PST
MAY	25	19	51	52.7	37.53 N.	118.88 W.	5	...	...	4.0P	...	P	MAY	25	11	A.M.	PST
MAY	25	19	53	27.6	37.47 N.	118.88 W.	5	...	...	3.4P	...	P	MAY	25	11	A.M.	PST
MAY	25	19	55	0.8	37.53 N.	118.77 W.	5	...	...	4.0P	...	P	MAY	25	11	A.M.	PST
MAY	25	19	56	34.6	37.55 N.	118.70 W.	5	...	...	3.3P	...	P	MAY	25	11	A.M.	PST
MAY	25	20	01	14.0	37.62 N.	118.77 W.	5	...	...	3.1P	...	P	MAY	25	12	P.M.	PST
MAY	25	20	02	57.7	37.50 N.	118.80 W.	5	...	...	3.4P	...	P	MAY	25	12	P.M.	PST
MAY	25	20	10	40.9	37.42 N.	118.80 W.	6	...	...	3.3P	...	P	MAY	25	12	P.M.	PST
MAY	25	20	12	24.0	37.37 N.	118.82 W.	6	...	...	3.7P	...	P	MAY	25	12	P.M.	PST
MAY	25	20	23	27.1	37.62 N.	118.82 W.	3	...	...	4.7P	...	P	MAY	25	12	P.M.	PST
MAY	25	20	28	45.8	37.60 N.	118.75 W.	4	...	...	3.2P	...	P	MAY	25	12	P.M.	PST
MAY	25	20	34	52.6	37.40 N.	118.70 W.	5	...	...	3.3P	...	P	MAY	25	12	P.M.	PST
MAY	25	20	35	48.5	37.61 W.	118.86 W.	6	5.2	5.3	5.7B	FELT	B	MAY	25	06	P.M.	PST
MAY	25	20	38	41.6	37.57 N.	118.68 W.	4	...	...	4.9P	...	P	MAY	25	12	P.M.	PST
MAY	25	20	44	43.1	37.47 N.	118.92 W.	6	...	...	3.7P	...	P	MAY	25	12	P.M.	PST
MAY	25	20	47	53.0	37.40 N.	118.87 W.	4	...	...	3.5P	...	P	MAY	25	12	P.M.	PST
MAY	25	20	59	23.3	37.57 N.	118.82 W.	17	4.2	...	5.0B	FELT	B	MAY	25	12	P.M.	PST
MAY	25	21	08	51.6	37.38 N.	118.80 W.	5	...	...	3.0P	...	P	MAY	25	01	P.M.	PST
MAY	25	21	14	6.5	37.52 N.	118.83 W.	5	...	...	3.3P	...	P	MAY	25	01	P.M.	PST
MAY	25	21	17	25.9	37.52 N.	118.97 W.	7	...	...	3.8P	...	P	MAY	25	01	P.M.	PST
MAY	25	21	20	8.8	37.52 N.	118.82 W.	4	...	...	3.6P	...	P	MAY	25	01	P.M.	PST
MAY	25	21	20	54.7	37.52 N.	118.82 W.	5	...	...	3.5P	...	P	MAY	25	01	P.M.	PST
MAY	25	21	25	54.3	37.53 N.	118.75 W.	5	...	...	3.5P	...	P	MAY	25	01	P.M.	PST
MAY	25	21	47	16.7	37.45 N.	118.83 W.	4	...	...	3.9P	...	P	MAY	25	01	P.M.	PST
MAY	25	22	00	1.1	37.52 N.	118.85 W.	6	...	...	3.3P	...	P	MAY	25	02	P.M.	PST
MAY	25	22	10	36.4	37.43 N.	118.77 W.	5	...	...	4.2P	...	P	MAY	25	02	P.M.	PST
MAY	25	22	29	20.6	37.57 N.	118.75 W.	4	...	...	3.6P	...	P	MAY	25	02	P.M.	PST
MAY	25	22	33	38.2	37.47 N.	118.83 W.	4	...	...	3.9P	...	P	MAY	25	02	P.M.	PST
MAY	25	22	43	38.3	37.53 N.	118.65 W.	5	...	...	3.1P	...	P	MAY	25	02	P.M.	PST
MAY	25	22	44	7.9	37.50 N.	118.88 W.	5	...	...	3.9P	...	P	MAY	25	02	P.M.	PST
MAY	25	22	46	22.5	37.50 N.	118.83 W.	4	...	...	3.6P	...	P	MAY	25	02	P.M.	PST
MAY	25	22	53	6.4	37.53 N.	118.73 W.	4	...	...	3.2P	...	P	MAY	25	02	P.M.	PST
MAY	25	23	21	32.7	37.48 N.	118.75 W.	4	...	...	3.1P	...	P	MAY	25	03	P.M.	PST
MAY	25	23	49	14.7	37.58 N.	118.95 W.	5	...	...	3.2P	...	P	MAY	25	03	P.M.	PST
MAY	25	23	55	46.7	37.55 N.	118.85 W.	5	...	...	3.6P	...	P	MAY	25	03	P.M.	PST
MAY	25	23	59	19.7	37.52 N.	118.83 W.	3	...	...	3.8P	...	P	MAY	25	03	P.M.	PST
MAY	26	00	57	5.1	37.55 N.	118.80 W.	5	4.2	...	4.4P	...	P	MAY	25	04	P.M.	PST
MAY	26	01	19	3.0	37.66 N.	118.97 W.	15	4.4	...	4.6B	FELT	B	MAY	25	05	P.M.	PST
MAY	26	01	20	50.4	37.52 N.	118.88 W.	5	...	...	3.6P	...	P	MAY	25	05	P.M.	PST
MAY	26	01	29	21.7	37.55 N.	118.75 W.	5	...	...	3.1P	...	P	MAY	25	05	P.M.	PST
MAY	26	01	46	14.6	37.60 N.	118.78 W.	3	...	...	3.0P	...	P	MAY	25	05	P.M.	PST
MAY	26	01	47	47.7	37.50 N.	118.80 W.	3	...	...	3.0P	...	P	MAY	25	05	P.M.	PST
MAY	26	01	49	23.8	37.40 N.	118.92 W.	5	...	...	3.2P	...	P	MAY	25	05	P.M.	PST
MAY	26	02	06	33.6	37.53 N.	118.97 W.	5	...	...	3.3P	...	P	MAY	25	06	P.M.	PST
MAY	26	02	07	51.6	37.47 N.	118.98 W.	5	...	...	3.2P	...	P	MAY	25	06	P.M.	PST
MAY	26	02	09	6.2	37.57 N.	118.77 W.	5	...	...	3.6P	...	P	MAY	25	06	P.M.	PST
MAY	26	02	10	29.4	37.40 N.	118.90 W.	5	...	...	3.3P	...	P	MAY	25	06	P.M.	PST
MAY	26	02	23	49.8	37.38 N.	118.87 W.	5	...	...	3.3P	...	P	MAY	25	06	P.M.	PST
MAY	26	02	33	28.8	37.45 N.	118.87 W.	5	...	...	3.0P	...	P	MAY	25	06	P.M.	PST
MAY	26	02	36	15.1	37.42 N.	118.77 W.	5	...	...	3.1P	...	P	MAY	25	06	P.M.	PST
MAY	26	02	41	23.7	37.57 N.	118.85 W.	4	...	...	3.3P	...	P	MAY	25	06	P.M.	PST
MAY	26	02	46	41.0	37.50 N.	118.68 W.	4	...	...	3.0P	...	P	MAY	25	06	P.M.	PST
MAY	26	02	54	33.1	37.38 N.	118.83 W.	5	...	...	3.3P	...	P	MAY	25	06	P.M.	PST
MAY	26	03	00	1.5	37.48 N.	118.80 W.	5	...	...	3.2P	...	P	MAY	25	07	P.M.	PST
MAY	26	03	06	31.9	37.37 N.	118.73 W.	4	...	...	3.0P	...	P	MAY	25	07	P.M.	PST
MAY	26	03	12	40.6	37.52 N.	118.87 W.	4	...	...	3.4P	...	P	MAY	25	07	P.M.	PST
MAY	26	03	16	41.4	37.63 N.	118.77 W.	3	...	...	3.0P	...	P	MAY	25	07	P.M.	PST
MAY	26	03	19	4.4	37.53 N.	118.75 W.	5	...	...	3.3P	...	P	MAY	25	07	P.M.	PST
MAY	26	03	24	10.6	37.58 N.	118.85 W.	4	...	...	3.1P	...	P	MAY	25	07	P.M.	PST
MAY	26	03	24	32.8	37.47 N.	118.80 W.	5	...	...	3.8P	...	P	MAY	25	07	P.M.	PST
MAY	26	03	31	8.2	37.78 N.	118.62 W.	5	...	...	3.2P	...	P	MAY	25	07	P.M.	PST
MAY	26	03	49	8.0	37.63 N.	118.72 W.	1	...	...	4.0P	...	P	MAY	25	07	P.M.	PST
MAY	26	04	02	35.3	37.48 N.	118.73 W.	5	...	...	3.4P	...	P	MAY	25	08	P.M.	PST
MAY	26	04	20	40.0	37.52 N.	118.78 W.	5	...	...	3.5P	...	P	MAY	25	08	P.M.	PST

Table 1.--Summary of U.S. earthquakes for April-June 1980--Continued

Date (1980)	Origin time (UTC)			Lat	Long	Depth (km)	Magnitude			Maximum intensity	Hypocenter source	Local time				
	hr	min	s				mb	MS	ML or Mn			Date	Hour			
CALIFORNIA--Continued																
MAY	26	04	24	27.6	37.50 N.	118.87 W.	5	...	...	3.0P	...	P	MAY	25	08 P.M.	PST
MAY	26	04	36	54.8	37.65 N.	118.70 W.	3	...	...	4.0P	...	P	MAY	25	08 P.M.	PST
MAY	26	04	47	17.4	37.50 N.	118.80 W.	5	...	...	3.7P	...	P	MAY	25	08 P.M.	PST
MAY	26	04	52	6.3	37.45 N.	118.72 W.	3	...	...	3.0P	...	P	MAY	25	08 P.M.	PST
MAY	26	05	12	47.7	37.38 N.	118.92 W.	5	...	...	3.3P	...	P	MAY	25	09 P.M.	PST
MAY	26	05	14	40.5	37.37 N.	118.83 W.	5	...	...	3.0P	...	P	MAY	25	09 P.M.	PST
MAY	26	05	26	10.2	37.60 N.	118.77 W.	4	...	...	3.2P	...	P	MAY	25	09 P.M.	PST
MAY	26	05	35	52.4	37.43 N.	118.72 W.	5	...	...	3.0P	...	P	MAY	25	09 P.M.	PST
MAY	26	05	45	7.8	37.37 N.	118.70 W.	5	...	...	3.5P	...	P	MAY	25	09 P.M.	PST
MAY	26	05	56	27.0	37.58 N.	118.90 W.	11	4.0	...	4.7B	FELT	B	MAY	25	09 P.M.	PST
MAY	26	06	02	33.7	37.35 N.	118.90 W.	5	...	...	3.2P	...	P	MAY	25	10 P.M.	PST
MAY	26	06	04	1.5	37.42 N.	118.73 W.	5	...	...	3.4P	...	P	MAY	25	10 P.M.	PST
MAY	26	06	05	29.3	37.42 N.	118.88 W.	5	...	...	3.2P	...	P	MAY	25	10 P.M.	PST
MAY	26	06	21	12.2	37.47 N.	118.82 W.	4	...	...	3.1P	...	P	MAY	25	10 P.M.	PST
MAY	26	06	21	58.6	37.48 N.	118.90 W.	5	...	...	3.0P	...	P	MAY	25	10 P.M.	PST
MAY	26	06	37	11.8	37.51 N.	118.80 W.	3	...	...	3.1P	...	P	MAY	25	10 P.M.	PST
MAY	26	06	43	27.8	37.58 N.	118.78 W.	5	...	...	3.0P	...	P	MAY	25	10 P.M.	PST
MAY	26	06	43	48.6	37.45 N.	118.85 W.	4	...	...	4.1P	...	P	MAY	25	10 P.M.	PST
MAY	26	06	53	35.5	37.42 N.	118.73 W.	4	...	...	3.1P	...	P	MAY	25	10 P.M.	PST
MAY	26	07	02	49.2	37.40 N.	118.75 W.	6	...	...	3.5P	...	P	MAY	25	11 P.M.	PST
MAY	26	07	04	53.7	37.33 N.	118.80 W.	5	...	...	3.2P	...	P	MAY	25	11 P.M.	PST
MAY	26	07	14	52.9	37.55 N.	118.93 W.	4	...	...	3.4P	...	P	MAY	25	11 P.M.	PST
MAY	26	07	18	38.0	37.67 N.	118.82 W.	3	...	...	3.5P	...	P	MAY	25	11 P.M.	PST
MAY	26	07	21	3.2	37.60 N.	118.88 W.	2	...	...	3.3P	...	P	MAY	25	11 P.M.	PST
MAY	26	07	42	3.0	37.62 N.	118.80 W.	4	...	...	3.3P	...	P	MAY	25	11 P.M.	PST
MAY	26	07	42	50.1	37.47 N.	118.83 W.	5	...	...	3.9P	...	P	MAY	25	11 P.M.	PST
MAY	26	07	43	43.2	37.38 N.	118.92 W.	5	...	...	3.5P	...	P	MAY	25	11 P.M.	PST
MAY	26	08	05	12.7	37.38 N.	118.70 W.	5	...	...	3.2P	...	P	MAY	26	00 A.M.	PST
MAY	26	10	16	50.0	37.57 N.	118.65 W.	4	...	...	3.0P	...	P	MAY	26	02 A.M.	PST
MAY	26	10	20	31.9	37.62 N.	118.81 W.	16	4.0	...	4.5B	FELT	B	MAY	26	02 A.M.	PST
MAY	26	10	39	31.8	37.50 N.	118.75 W.	4	...	...	3.0P	...	P	MAY	26	02 A.M.	PST
MAY	26	10	39	58.5	37.48 N.	118.85 W.	5	...	...	3.7P	...	P	MAY	26	02 A.M.	PST
MAY	26	10	42	28.0	37.30 N.	118.82 W.	5	...	...	3.0P	...	P	MAY	26	02 A.M.	PST
MAY	26	10	44	19.5	37.52 N.	118.83 W.	4	...	...	3.3P	...	P	MAY	26	02 A.M.	PST
MAY	26	10	56	55.5	37.58 N.	118.77 W.	5	...	...	3.4P	...	P	MAY	26	02 A.M.	PST
MAY	26	11	04	6.7	37.50 N.	118.70 W.	5	...	...	4.0P	FELT	P	MAY	26	03 A.M.	PST
MAY	26	11	24	31.1	37.55 N.	118.83 W.	5	...	...	3.1P	...	P	MAY	26	03 A.M.	PST
MAY	26	11	47	39.7	37.55 N.	118.83 W.	4	...	...	3.2P	...	P	MAY	26	03 A.M.	PST
MAY	26	12	22	34.9	37.42 N.	118.80 W.	4	...	...	3.1P	...	P	MAY	26	04 A.M.	PST
MAY	26	12	24	25.7	37.57 N.	118.89 W.	12	4.7	...	5.1B	IV	B	MAY	26	04 A.M.	PST
MAY	26	12	50	51.8	37.45 N.	118.87 W.	5	...	...	3.2P	...	P	MAY	26	04 A.M.	PST
MAY	26	13	01	48.7	37.42 N.	118.85 W.	5	...	...	3.0P	...	P	MAY	26	05 A.M.	PST
MAY	26	13	03	23.3	37.37 N.	118.73 W.	4	...	...	3.0P	...	P	MAY	26	05 A.M.	PST
MAY	26	13	04	20.6	37.50 N.	118.82 W.	2	...	...	4.1P	FELT	P	MAY	26	05 A.M.	PST
MAY	26	13	29	23.9	37.55 N.	118.87 W.	5	...	...	3.3P	...	P	MAY	26	05 A.M.	PST
MAY	26	13	55	30.5	37.53 N.	118.77 W.	3	...	...	3.3P	...	P	MAY	26	05 A.M.	PST
MAY	26	13	56	5.0	37.25 N.	118.72 W.	5	...	...	3.0P	...	P	MAY	26	05 A.M.	PST
MAY	26	13	57	26.9	37.57 N.	118.73 W.	1	...	...	3.8P	...	P	MAY	26	05 A.M.	PST
MAY	26	14	04	7.7	37.48 N.	118.83 W.	5	...	...	3.2P	...	P	MAY	26	06 A.M.	PST
MAY	26	14	31	22.9	37.58 N.	118.87 W.	5	...	...	3.1P	...	P	MAY	26	06 A.M.	PST
MAY	26	14	37	32.4	37.48 N.	118.82 W.	1	4.1	...	4.2P	...	P	MAY	26	06 A.M.	PST
MAY	26	14	48	56.7	37.40 N.	118.78 W.	4	...	...	3.0P	...	P	MAY	26	06 A.M.	PST
MAY	26	15	06	24.5	37.62 N.	118.87 W.	3	...	...	3.0P	...	P	MAY	26	07 A.M.	PST
MAY	26	15	50	37.4	37.38 N.	118.67 W.	5	...	...	3.6P	...	P	MAY	26	07 A.M.	PST
MAY	26	15	55	57.2	37.42 N.	118.73 W.	2	...	...	3.0P	...	P	MAY	26	07 A.M.	PST
MAY	26	16	04	44.5	37.43 N.	118.78 W.	5	...	...	3.0P	...	P	MAY	26	08 A.M.	PST
MAY	26	16	17	19.3	37.45 N.	118.85 W.	5	...	...	3.3P	...	P	MAY	26	08 A.M.	PST
MAY	26	16	20	21.7	37.59 N.	118.90 W.	10	4.7	...	4.8B	FELT	B	MAY	26	08 A.M.	PST
MAY	26	17	22	14.5	37.52 N.	118.72 W.	3	...	...	3.1P	...	P	MAY	26	09 A.M.	PST
MAY	26	17	32	12.6	37.40 N.	118.80 W.	5	...	...	3.0P	...	P	MAY	26	09 A.M.	PST
MAY	26	17	38	4.0	37.63 N.	118.77 W.	3	...	...	3.5P	...	P	MAY	26	09 A.M.	PST
MAY	26	17	40	6.1	37.55 N.	118.83 W.	5	...	...	3.3P	...	P	MAY	26	09 A.M.	PST
MAY	26	17	50	27.7	37.50 N.	118.75 W.	4	...	...	3.1P	...	P	MAY	26	09 A.M.	PST
MAY	26	18	19	5.3	37.53 N.	118.68 W.	5	...	...	3.0P	...	P	MAY	26	10 A.M.	PST
MAY	26	18	57	56.4	37.51 N.	118.87 W.	9	5.0	...	5.7B	FELT	B	MAY	26	10 A.M.	PST

Table 1.--Summary of U.S. earthquakes for April-June 1980--Continued

Date (1980)	Origin time (UTC)			Lat	Long	Depth (km)	Magnitude			Maximum intensity	Hypocenter source	Local time					
	hr	min	s				mb	MS	ML or Mn			Date	Hour				
CALIFORNIA--Continued																	
MAY	26	19	10	41.4	37.52 N.	118.68 W.	7	...	...	3.3P	...	P	MAY	26	11	A.M.	PST
MAY	26	19	21	55.5	37.35 N.	118.82 W.	4	...	...	3.1P	...	P	MAY	26	11	A.M.	PST
MAY	26	19	24	9.8	37.53 N.	118.89 W.	5	...	...	4.7B	FELT	B	MAY	26	11	A.M.	PST
MAY	26	19	44	31.0	37.63 N.	118.87 W.	4	...	...	3.5P	...	P	MAY	26	11	A.M.	PST
MAY	26	19	52	41.8	37.47 N.	118.83 W.	5	...	...	3.3P	...	P	MAY	26	11	A.M.	PST
MAY	26	20	01	30.8	37.62 N.	118.77 W.	2	...	...	3.4P	...	P	MAY	26	12	P.M.	PST
MAY	26	20	03	40.8	37.58 N.	118.88 W.	5	...	...	3.8P	...	P	MAY	26	12	P.M.	PST
MAY	26	20	07	41.3	37.35 N.	118.97 W.	5	...	...	3.2P	...	P	MAY	26	12	P.M.	PST
MAY	26	20	12	57.0	37.48 N.	118.75 W.	4	...	...	3.0P	...	P	MAY	26	12	P.M.	PST
MAY	26	21	10	3.3	37.42 N.	118.83 W.	5	...	...	3.0P	...	P	MAY	26	01	P.M.	PST
MAY	26	21	19	38.3	37.57 N.	118.68 W.	4	...	...	3.0P	...	P	MAY	26	01	P.M.	PST
MAY	26	21	42	10.8	37.57 N.	118.83 W.	4	...	...	3.3P	...	P	MAY	26	01	P.M.	PST
MAY	26	21	57	42.4	37.57 N.	118.90 W.	3	...	...	3.0P	...	P	MAY	26	01	P.M.	PST
MAY	26	21	58	10.1	37.65 N.	118.85 W.	4	...	...	3.6P	...	P	MAY	26	01	P.M.	PST
MAY	26	22	35	42.4	37.57 N.	118.90 W.	2	...	...	3.2P	...	P	MAY	26	02	P.M.	PST
MAY	26	22	49	59.1	37.38 N.	118.90 W.	4	...	...	3.0P	...	P	MAY	26	02	P.M.	PST
MAY	26	23	19	27.4	37.52 N.	118.88 W.	5	...	...	3.3P	...	P	MAY	26	03	P.M.	PST
MAY	27	00	02	48.4	37.62 N.	118.80 W.	4	...	...	3.0P	...	P	MAY	26	04	P.M.	PST
MAY	27	00	24	7.4	37.47 N.	118.82 W.	5	...	...	3.3P	...	P	MAY	26	04	P.M.	PST
MAY	27	00	43	17.9	37.58 N.	118.87 W.	5	...	...	3.6P	...	P	MAY	26	04	P.M.	PST
MAY	27	00	54	3.6	37.32 N.	118.88 W.	5	...	...	3.1P	...	P	MAY	26	04	P.M.	PST
MAY	27	01	14	18.5	37.52 N.	118.67 W.	5	...	...	3.2P	...	P	MAY	26	05	P.M.	PST
MAY	27	01	19	41.1	37.62 N.	118.90 W.	4	...	...	3.4P	...	P	MAY	26	05	P.M.	PST
MAY	27	01	44	48.9	37.55 N.	118.70 W.	4	...	...	3.0P	...	P	MAY	26	05	P.M.	PST
MAY	27	02	01	17.7	37.55 N.	118.85 W.	3	...	...	3.3P	...	P	MAY	26	06	P.M.	PST
MAY	27	02	21	24.1	37.65 N.	118.83 W.	5	...	...	3.2P	...	P	MAY	26	06	P.M.	PST
MAY	27	02	22	14.9	37.63 N.	118.87 W.	6	...	...	3.3P	...	P	MAY	26	06	P.M.	PST
MAY	27	03	43	49.3	37.57 N.	118.87 W.	4	...	...	3.7P	...	P	MAY	26	07	P.M.	PST
MAY	27	04	07	12.4	37.57 N.	118.80 W.	4	...	...	3.5P	...	P	MAY	26	08	P.M.	PST
MAY	27	04	22	0.4	37.25 N.	118.60 W.	4	...	...	3.0P	...	P	MAY	26	08	P.M.	PST
MAY	27	04	22	1.7	37.50 N.	118.85 W.	4	...	...	3.5P	...	P	MAY	26	08	P.M.	PST
MAY	27	05	29	11.6	37.48 N.	118.87 W.	5	...	...	3.0P	...	P	MAY	26	09	P.M.	PST
MAY	27	05	36	40.0	37.48 N.	118.78 W.	6	...	...	3.1P	...	P	MAY	26	09	P.M.	PST
MAY	27	05	44	58.1	37.60 N.	118.82 W.	5	...	...	3.7P	...	P	MAY	26	09	P.M.	PST
MAY	27	05	50	13.2	37.38 N.	118.82 W.	5	...	...	3.1P	...	P	MAY	26	09	P.M.	PST
MAY	27	06	15	36.9	37.52 N.	118.92 W.	0	...	...	3.5P	...	P	MAY	26	10	P.M.	PST
MAY	27	06	36	53.2	37.50 N.	118.88 W.	5	...	...	3.8P	...	P	MAY	26	10	P.M.	PST
MAY	27	06	46	42.5	37.60 N.	118.88 W.	2	...	...	3.6P	...	P	MAY	26	10	P.M.	PST
MAY	27	07	02	4.5	37.47 N.	118.78 W.	4	...	...	3.4P	...	P	MAY	26	11	P.M.	PST
MAY	27	07	22	34.9	37.60 N.	118.75 W.	4	...	...	3.2P	...	P	MAY	26	11	P.M.	PST
MAY	27	07	30	1.6	37.48 N.	118.87 W.	4	...	...	3.0P	...	P	MAY	26	11	P.M.	PST
MAY	27	09	09	31.3	37.60 N.	118.85 W.	2	...	...	4.0P	...	P	MAY	27	01	A.M.	PST
MAY	27	10	27	33.4	37.38 N.	118.72 W.	4	...	...	3.5P	...	P	MAY	27	02	A.M.	PST
MAY	27	10	29	12.9	37.48 N.	118.82 W.	5	...	...	3.2P	...	P	MAY	27	02	A.M.	PST
MAY	27	10	39	47.2	37.67 N.	118.78 W.	1	...	...	3.0P	...	P	MAY	27	02	A.M.	PST
MAY	27	10	46	18.6	37.53 N.	118.73 W.	4	...	...	3.2P	...	P	MAY	27	02	A.M.	PST
MAY	27	10	51	15.0	37.45 N.	118.82 W.	5	...	...	3.2P	...	P	MAY	27	02	A.M.	PST
MAY	27	11	33	49.7	37.57 N.	118.78 W.	4	...	...	3.2P	FELT	P	MAY	27	03	A.M.	PST
MAY	27	13	10	27.8	37.60 N.	118.80 W.	3	...	...	3.2P	...	P	MAY	27	05	A.M.	PST
MAY	27	13	27	7.3	37.52 N.	118.88 W.	2	3.9	...	3.9P	...	P	MAY	27	05	A.M.	PST
MAY	27	13	38	53.8	37.46 N.	118.80 W.	4	...	...	3.2P	...	P	MAY	27	05	A.M.	PST
MAY	27	14	29	14.2	37.52 N.	118.88 W.	4	...	...	3.3P	...	P	MAY	27	06	A.M.	PST
MAY	27	14	50	57.3	37.48 N.	118.82 W.	13	5.7	6.0	6.2B	VI	B	MAY	27	06	A.M.	PST
MAY	27	14	58	42.7	37.43 N.	118.88 W.	5	...	...	3.4P	...	P	MAY	27	06	A.M.	PST
MAY	27	15	01	12.0	37.50 N.	118.82 W.	7	...	...	3.7P	...	P	MAY	27	07	A.M.	PST
MAY	27	15	04	39.4	37.35 N.	118.72 W.	2	...	...	3.0P	...	P	MAY	27	07	A.M.	PST
MAY	27	15	05	38.6	37.60 N.	118.73 W.	4	...	...	3.6P	...	P	MAY	27	07	A.M.	PST
MAY	27	15	11	19.8	37.43 N.	118.77 W.	4	...	...	3.2P	...	P	MAY	27	07	A.M.	PST
MAY	27	15	13	4.5	37.38 N.	118.73 W.	3	...	...	3.0P	...	P	MAY	27	07	A.M.	PST
MAY	27	15	13	46.8	37.50 N.	118.82 W.	4	...	...	3.9P	...	P	MAY	27	07	A.M.	PST
MAY	27	15	17	30.8	37.38 N.	118.75 W.	4	...	...	3.3P	...	P	MAY	27	07	A.M.	PST
MAY	27	15	41	46.9	37.48 N.	118.82 W.	1	...	...	4.0P	...	P	MAY	27	07	A.M.	PST
MAY	27	15	56	3.3	37.58 N.	118.75 W.	5	...	...	3.2P	...	P	MAY	27	07	A.M.	PST
MAY	27	16	01	47.9	37.55 N.	118.73 W.	4	...	...	3.2P	...	P	MAY	27	08	A.M.	PST
MAY	27	16	09	55.9	37.50 N.	118.68 W.	3	...	...	3.4P	...	P	MAY	27	08	A.M.	PST

Table 1.--Summary of U.S. earthquakes for April-June 1980--Continued

Date (1980)	Origin time (UTC)			Lat	Long	Depth (km)	Magnitude			Maximum intensity	Hypocenter source	Local time					
	hr	min	s				mb	MS	ML or Mn			Date	Hour				
CALIFORNIA--Continued																	
MAY	27	16	10	38.5	37.58 N.	118.87 W.	5	...	...	3.7P	...	P	MAY	27	08	A.M.	PST
MAY	27	16	35	45.5	37.45 N.	118.83 W.	2	...	...	3.6P	...	P	MAY	27	08	A.M.	PST
MAY	27	16	45	55.0	37.53 N.	118.82 W.	2	...	...	3.6P	...	P	MAY	27	08	A.M.	PST
MAY	27	16	49	13.8	37.43 N.	118.82 W.	5	...	...	3.3P	...	P	MAY	27	08	A.M.	PST
MAY	27	17	01	18.1	37.40 N.	118.82 W.	5	...	...	3.0P	...	P	MAY	27	09	A.M.	PST
MAY	27	17	04	5.5	37.43 N.	118.85 W.	4	...	...	3.0P	...	P	MAY	27	09	A.M.	PST
MAY	27	17	09	58.6	37.48 N.	118.82 W.	6	...	...	4.1P	...	P	MAY	27	09	A.M.	PST
MAY	27	17	20	1.3	37.60 N.	118.85 W.	6	...	...	3.0P	...	P	MAY	27	09	A.M.	PST
MAY	27	17	22	45.1	37.50 N.	118.82 W.	2	...	...	3.0P	...	P	MAY	27	09	A.M.	PST
MAY	27	17	34	33.8	37.55 N.	118.80 W.	5	...	...	3.3P	...	P	MAY	27	09	A.M.	PST
MAY	27	17	43	19.1	37.38 N.	118.67 W.	5	...	...	3.3P	...	P	MAY	27	09	A.M.	PST
MAY	27	17	47	41.1	37.43 N.	118.73 W.	5	...	...	3.3P	...	P	MAY	27	09	A.M.	PST
MAY	27	17	50	55.5	37.40 N.	118.80 W.	4	...	...	3.0P	...	P	MAY	27	09	A.M.	PST
MAY	27	17	52	38.0	37.57 N.	118.68 W.	3	...	...	3.1P	...	P	MAY	27	09	A.M.	PST
MAY	27	18	36	9.1	37.45 N.	118.85 W.	3	...	...	3.9P	...	P	MAY	27	10	A.M.	PST
MAY	27	19	01	8.6	37.59 N.	118.78 W.	10	4.3	...	4.8B	FELT	B	MAY	27	10	A.M.	PST
MAY	27	19	23	22.1	37.46 N.	118.83 W.	5	...	...	3.0P	...	P	MAY	27	11	A.M.	PST
MAY	27	19	23	40.6	37.47 N.	118.73 W.	5	...	...	3.1P	...	P	MAY	27	11	A.M.	PST
MAY	27	19	47	22.1	37.67 N.	118.73 W.	5	...	...	3.5P	...	P	MAY	27	11	A.M.	PST
MAY	27	19	54	2.8	37.58 N.	118.75 W.	4	...	...	3.0P	...	P	MAY	27	11	A.M.	PST
MAY	27	19	54	39.0	37.55 N.	118.77 W.	3	...	...	3.2P	...	P	MAY	27	11	A.M.	PST
MAY	27	19	59	55.9	37.72 N.	118.72 W.	0	...	...	3.3P	...	P	MAY	27	11	A.M.	PST
MAY	27	20	00	47.4	37.65 N.	118.70 W.	4	...	...	3.6P	...	P	MAY	27	12	P.M.	PST
MAY	27	20	26	10.0	37.65 N.	118.82 W.	6	...	...	3.3P	...	P	MAY	27	12	P.M.	PST
MAY	27	21	14	9.3	37.42 N.	118.65 W.	4	...	...	3.0P	...	P	MAY	27	01	P.M.	PST
MAY	27	21	31	14.6	37.50 N.	118.88 W.	7	...	...	3.2P	...	P	MAY	27	01	P.M.	PST
MAY	27	21	34	54.3	37.50 N.	118.82 W.	5	...	...	4.5P	...	P	MAY	27	01	P.M.	PST
MAY	27	21	46	13.3	37.55 N.	118.93 W.	5	...	...	3.1P	...	P	MAY	27	01	P.M.	PST
MAY	27	22	29	30.3	37.55 N.	118.92 W.	5	...	...	3.0P	...	P	MAY	27	02	P.M.	PST
MAY	27	23	14	42.8	37.40 N.	118.53 W.	5	...	...	3.0P	...	P	MAY	27	03	P.M.	PST
MAY	27	23	41	3.9	37.57 N.	118.85 W.	5	...	...	4.0P	...	P	MAY	27	03	P.M.	PST
MAY	27	23	57	43.7	37.55 N.	118.90 W.	3	...	...	3.8P	...	P	MAY	27	03	P.M.	PST
MAY	28	00	08	19.6	37.45 N.	118.82 W.	7	...	...	3.5P	...	P	MAY	27	04	P.M.	PST
MAY	28	01	12	9.0	37.48 N.	118.83 W.	3	...	...	3.1P	...	P	MAY	27	05	P.M.	PST
MAY	28	01	37	27.4	37.52 N.	118.83 W.	5	...	...	3.2P	...	P	MAY	27	05	P.M.	PST
MAY	28	01	55	8.7	37.42 N.	118.82 W.	4	...	...	3.2P	...	P	MAY	27	05	P.M.	PST
MAY	28	02	01	0.7	37.52 N.	118.83 W.	5	...	...	3.3P	...	P	MAY	27	06	P.M.	PST
MAY	28	02	12	14.6	37.57 N.	118.90 W.	3	...	...	3.4P	...	P	MAY	27	06	P.M.	PST
MAY	28	02	52	51.0	37.48 N.	118.85 W.	5	...	...	3.2P	...	P	MAY	27	06	P.M.	PST
MAY	28	03	26	36.0	37.53 N.	118.83 W.	1	...	...	3.2P	...	P	MAY	27	07	P.M.	PST
MAY	28	04	02	58.7	37.60 N.	118.78 W.	3	...	...	3.8P	...	P	MAY	27	08	P.M.	PST
MAY	28	04	22	11.4	37.55 N.	118.90 W.	2	...	...	3.7P	...	P	MAY	27	08	P.M.	PST
MAY	28	04	49	53.1	37.55 N.	118.95 W.	5	...	...	3.1P	...	P	MAY	27	08	P.M.	PST
MAY	28	04	55	34.7	37.50 N.	118.82 W.	5	...	...	3.0P	...	P	MAY	27	08	P.M.	PST
MAY	28	05	05	32.6	37.32 N.	118.72 W.	4	...	...	3.0P	...	P	MAY	27	09	P.M.	PST
MAY	28	05	16	23.7	37.58 N.	118.90 W.	10	4.1	...	4.9B	FELT	B	MAY	27	09	P.M.	PST
MAY	28	05	48	30.4	37.58 N.	118.87 W.	5	4.0	...	4.6B	FELT	B	MAY	27	09	P.M.	PST
MAY	28	06	07	43.6	37.60 N.	118.92 W.	4	...	...	3.6P	...	P	MAY	27	10	P.M.	PST
MAY	28	06	13	5.9	37.63 N.	118.87 W.	5	...	...	3.5P	...	P	MAY	27	10	P.M.	PST
MAY	28	06	34	51.2	37.57 N.	118.97 W.	0	...	...	3.2P	...	P	MAY	27	10	P.M.	PST
MAY	28	06	42	45.5	37.62 N.	118.88 W.	4	...	...	3.3P	...	P	MAY	27	10	P.M.	PST
MAY	28	06	43	48.1	37.57 N.	119.02 W.	4	...	...	3.0P	...	P	MAY	27	10	P.M.	PST
MAY	28	06	49	19.5	37.63 N.	118.87 W.	4	...	...	3.4P	...	P	MAY	27	10	P.M.	PST
MAY	28	07	51	45.6	37.62 N.	118.87 W.	5	...	...	3.3P	...	P	MAY	27	11	P.M.	PST
MAY	28	08	32	20.7	37.60 N.	118.97 W.	6	...	...	3.2P	...	P	MAY	28	00	A.M.	PST
MAY	28	08	44	51.2	37.48 N.	118.80 W.	4	...	...	3.1P	...	P	MAY	28	00	A.M.	PST
MAY	28	09	02	38.7	37.62 N.	119.00 W.	7	...	...	3.0P	...	P	MAY	28	01	A.M.	PST
MAY	28	09	19	46.5	37.43 N.	118.92 W.	1	...	...	3.0P	...	P	MAY	28	01	A.M.	PST
MAY	28	09	20	31.2	37.55 N.	118.80 W.	7	...	...	3.4P	...	P	MAY	28	01	A.M.	PST
MAY	28	10	03	36.9	37.58 N.	118.97 W.	5	...	...	3.0P	...	P	MAY	28	02	A.M.	PST
MAY	28	10	13	2.7	37.48 N.	118.83 W.	3	...	...	3.7P	...	P	MAY	28	02	A.M.	PST
MAY	28	11	54	37.9	37.47 N.	118.82 W.	6	...	...	4.2P	FELT	P	MAY	28	03	A.M.	PST
MAY	28	13	27	39.2	37.57 N.	118.85 W.	4	...	...	3.4P	...	P	MAY	28	05	A.M.	PST
MAY	28	14	06	30.2	37.52 N.	118.78 W.	4	...	...	3.6P	...	P	MAY	28	06	A.M.	PST
MAY	28	14	18	22.4	37.47 N.	118.85 W.	4	...	...	3.8P	...	P	MAY	28	06	A.M.	PST

Table 1.--Summary of U.S. earthquakes for April-June 1980--Continued

Date (1980)	Origin time (UTC)			Lat	Long	Depth (km)	Magnitude			Maximum intensity	Hypocenter source	Local time					
	hr	min	s				mb	MS	ML or Mn			Date	Hour				
CALIFORNIA—Continued																	
MAY	28	14	47	33.6	37.48 N.	118.60 W.	5	...	...	3.1P	...	P	MAY	28	06	A.M.	PST
MAY	28	15	00	8.2	37.57 N.	118.90 W.	4	...	...	3.6P	...	P	MAY	28	07	A.M.	PST
MAY	28	15	42	39.8	37.45 N.	118.83 W.	6	...	...	3.4P	...	P	MAY	28	07	A.M.	PST
MAY	28	15	45	16.9	37.53 N.	118.92 W.	5	...	...	3.2P	...	P	MAY	28	07	A.M.	PST
MAY	28	17	28	24.6	37.53 N.	118.90 W.	6	...	...	3.2P	...	P	MAY	28	09	A.M.	PST
MAY	28	17	32	22.5	37.50 N.	118.90 W.	3	...	...	3.2P	...	P	MAY	28	09	A.M.	PST
MAY	28	18	12	5.6	37.48 N.	118.95 W.	7	...	...	3.0P	...	P	MAY	28	10	A.M.	PST
MAY	28	18	35	9.9	37.48 N.	118.82 W.	5	...	...	3.2P	...	P	MAY	28	10	A.M.	PST
MAY	28	18	37	19.1	37.55 N.	118.90 W.	5	...	...	3.5P	...	P	MAY	28	10	A.M.	PST
MAY	28	19	01	1.3	37.38 N.	118.78 W.	5	...	...	3.0P	...	P	MAY	28	11	A.M.	PST
MAY	28	19	26	41.1	37.47 N.	118.87 W.	8	...	...	3.1P	...	P	MAY	28	11	A.M.	PST
MAY	28	21	01	59.7	37.50 N.	118.83 W.	6	...	...	3.0P	...	P	MAY	28	01	P.M.	PST
MAY	28	21	41	56.2	37.52 N.	118.90 W.	6	...	...	3.0P	...	P	MAY	28	01	P.M.	PST
MAY	28	23	07	19.8	37.48 N.	118.92 W.	5	...	...	3.0P	...	P	MAY	28	03	P.M.	PST
MAY	28	23	07	25.5	37.53 N.	118.80 W.	4	...	...	3.4P	...	P	MAY	28	03	P.M.	PST
MAY	28	23	17	18.8	37.47 N.	118.77 W.	5	...	...	3.2P	...	P	MAY	28	03	P.M.	PST
MAY	28	23	50	22.0	37.42 N.	118.82 W.	6	...	...	3.1P	...	P	MAY	28	03	P.M.	PST
MAY	29	01	32	22.5	37.58 N.	118.78 W.	4	...	...	3.2P	...	P	MAY	28	05	P.M.	PST
MAY	29	03	38	47.0	34.93 N.	120.82 W.	5	5.1	...	4.7P	V	P	MAY	28	07	P.M.	PST
MAY	29	04	17	41.5	37.45 N.	118.88 W.	3	...	...	3.3P	...	P	MAY	28	08	P.M.	PST
MAY	29	04	18	52.8	37.53 N.	118.83 W.	5	...	...	3.8P	...	P	MAY	28	08	P.M.	PST
MAY	29	04	33	35.7	37.47 N.	118.85 W.	6	...	...	3.2P	...	P	MAY	28	08	P.M.	PST
MAY	29	04	42	30.5	37.60 N.	118.82 W.	5	...	...	3.2P	...	P	MAY	28	08	P.M.	PST
MAY	29	04	58	56.6	37.52 N.	118.88 W.	1	...	...	3.5P	...	P	MAY	28	08	P.M.	PST
MAY	29	05	32	5.2	37.60 N.	118.90 W.	2	...	...	3.0P	...	P	MAY	28	09	P.M.	PST
MAY	29	05	55	43.9	37.50 N.	118.88 W.	3	...	...	3.5P	...	P	MAY	28	09	P.M.	PST
MAY	29	07	32	21.1	37.48 N.	118.82 W.	3	...	...	3.5P	...	P	MAY	28	11	P.M.	PST
MAY	29	09	47	38.6	37.57 N.	118.88 W.	5	...	...	3.5P	...	P	MAY	29	01	A.M.	PST
MAY	29	10	39	38.4	37.58 N.	118.90 W.	5	...	...	3.2P	...	P	MAY	29	02	A.M.	PST
MAY	29	11	03	57.2	37.47 N.	118.82 W.	1	...	...	3.0P	...	P	MAY	29	03	A.M.	PST
MAY	29	11	59	18.7	37.57 N.	118.87 W.	5	...	...	3.2P	...	P	MAY	29	03	A.M.	PST
MAY	29	12	33	44.0	37.62 N.	118.87 W.	5	...	...	3.3P	...	P	MAY	29	04	A.M.	PST
MAY	29	13	36	32.2	37.67 N.	118.77 W.	5	...	...	3.3P	...	P	MAY	29	05	A.M.	PST
MAY	29	14	00	26.7	37.50 N.	118.87 W.	5	...	...	3.4P	...	P	MAY	29	06	A.M.	PST
MAY	29	15	16	6.2	37.57 N.	118.87 W.	5	...	...	3.0P	...	P	MAY	29	07	A.M.	PST
MAY	29	15	20	34.4	37.52 N.	118.87 W.	4	...	...	3.0P	...	P	MAY	29	07	A.M.	PST
MAY	29	16	01	45.2	37.58 N.	118.90 W.	2	...	...	3.3P	...	P	MAY	29	08	A.M.	PST
MAY	29	16	14	9.2	37.60 N.	118.93 W.	5	...	...	3.0P	...	P	MAY	29	08	A.M.	PST
MAY	29	16	56	56.8	37.50 N.	118.87 W.	4	...	...	3.5P	...	P	MAY	29	08	A.M.	PST
MAY	29	17	21	1.3	37.52 N.	118.83 W.	4	...	...	4.0P	...	P	MAY	29	09	A.M.	PST
MAY	29	17	28	30.1	37.52 N.	118.85 W.	2	...	...	3.2P	...	P	MAY	29	09	A.M.	PST
MAY	29	18	24	47.5	37.55 N.	118.70 W.	4	...	...	3.1P	...	P	MAY	29	10	A.M.	PST
MAY	29	18	54	0.1	37.30 N.	118.83 W.	6	...	...	3.3P	...	P	MAY	29	10	A.M.	PST
MAY	29	18	55	12.2	37.48 N.	118.77 W.	3	...	...	3.4P	...	P	MAY	29	10	A.M.	PST
MAY	29	18	56	29.3	37.35 N.	118.93 W.	13	...	...	3.1P	...	P	MAY	29	10	A.M.	PST
MAY	30	01	19	33.4	37.57 N.	118.82 W.	4	...	...	3.0P	...	P	MAY	29	05	P.M.	PST
MAY	30	02	25	55.4	37.57 N.	118.83 W.	0	...	...	3.0P	...	P	MAY	29	06	P.M.	PST
MAY	30	02	58	30.1	37.52 N.	118.87 W.	5	...	...	3.0P	...	P	MAY	29	06	P.M.	PST
MAY	30	03	04	54.8	37.62 N.	118.88 W.	6	...	...	3.0P	...	P	MAY	29	07	P.M.	PST
MAY	30	04	11	47.7	37.52 N.	119.15 W.	2	...	...	3.1P	...	P	MAY	29	08	P.M.	PST
MAY	30	05	13	49.0	37.55 N.	118.93 W.	2	...	...	3.1P	...	P	MAY	29	09	P.M.	PST
MAY	30	05	29	0.9	37.52 N.	118.82 W.	3	...	...	3.0P	...	P	MAY	29	09	P.M.	PST
MAY	30	06	29	28.4	37.62 N.	118.88 W.	4	...	...	3.2P	...	P	MAY	29	10	P.M.	PST
MAY	30	06	52	5.0	37.55 N.	118.93 W.	1	...	...	3.0P	...	P	MAY	29	10	P.M.	PST
MAY	30	07	08	22.2	37.47 N.	118.83 W.	9	...	...	3.4P	...	P	MAY	29	11	P.M.	PST
MAY	30	07	12	39.9	37.52 N.	118.85 W.	2	...	...	3.1P	...	P	MAY	29	11	P.M.	PST
MAY	30	10	30	52.8	37.57 N.	118.98 W.	6	...	...	3.1P	...	P	MAY	30	02	A.M.	PST
MAY	30	11	14	4.2	37.52 N.	118.85 W.	1	...	...	3.6P	...	P	MAY	30	03	A.M.	PST
MAY	30	12	01	52.9	37.52 N.	118.87 W.	4	...	...	3.8P	...	P	MAY	30	04	A.M.	PST
MAY	30	13	40	52.9	37.57 N.	118.83 W.	7	...	...	3.1P	...	P	MAY	30	05	A.M.	PST
MAY	30	13	53	41.0	37.50 N.	118.90 W.	6	...	...	3.2P	...	P	MAY	30	05	A.M.	PST
MAY	30	15	05	17.2	37.67 N.	118.83 W.	2	...	...	3.3P	...	P	MAY	30	07	A.M.	PST
MAY	30	15	41	58.5	37.57 N.	118.91 W.	12	...	...	4.0B	...	B	MAY	30	07	A.M.	PST
MAY	30	15	49	2.3	37.53 N.	118.80 W.	2	...	...	3.6P	...	P	MAY	30	07	A.M.	PST
MAY	30	16	48	47.4	37.46 N.	118.85 W.	10	...	...	3.0P	...	P	MAY	30	08	A.M.	PST

Table 1.--Summary of U.S. earthquakes for April-June 1980--Continued

Date (1980)	Origin time (UTC)			Lat	Long	Depth (km)	Magnitude			Maximum intensity	Hypocenter source	Local time				
	hr	min	s				mb	MS	ML or Mn			Date	Hour			
CALIFORNIA--Continued																
MAY	30	19	49	2.9	37.60 N.	118.88 W.	17	...	...	3.7B	...	B	MAY	30	11 A.M.	PST
MAY	30	20	36	36.7	37.47 N.	118.88 W.	7	...	...	3.1P	...	P	MAY	30	12 P.M.	PST
MAY	30	21	49	37.7	37.37 N.	118.77 W.	5	...	...	3.0P	...	P	MAY	30	01 P.M.	PST
MAY	30	22	42	38.3	37.53 N.	118.92 W.	7	...	...	3.1P	...	P	MAY	30	02 P.M.	PST
MAY	30	23	02	32.4	37.57 N.	118.83 W.	4	...	...	3.4P	...	P	MAY	30	03 P.M.	PST
MAY	31	00	13	26.1	37.58 N.	118.90 W.	1	...	...	3.0P	...	P	MAY	30	04 P.M.	PST
MAY	31	00	58	18.1	37.50 N.	118.86 W.	20	4.1	...	4.5B	FELT	B	MAY	30	04 P.M.	PST
MAY	31	08	05	19.9	37.58 N.	118.85 W.	17	...	...	4.1B	IV	B	MAY	31	00 A.M.	PST
MAY	31	10	11	31.3	37.58 N.	118.83 W.	10	...	...	4.3B	...	B	MAY	31	02 A.M.	PST
MAY	31	10	14	32.2	37.57 N.	118.87 W.	6	...	...	3.2P	...	P	MAY	31	02 A.M.	PST
MAY	31	12	13	39.3	37.60 N.	118.88 W.	5	...	...	3.0P	...	P	MAY	31	04 A.M.	PST
MAY	31	13	13	41.0	37.60 N.	118.85 W.	5	...	...	3.3P	...	P	MAY	31	05 A.M.	PST
MAY	31	13	43	50.1	37.58 N.	118.72 W.	3	...	...	3.2P	...	P	MAY	31	05 A.M.	PST
MAY	31	14	08	35.0	37.47 N.	118.93 W.	2	...	...	3.1P	...	P	MAY	31	06 A.M.	PST
MAY	31	14	20	51.5	37.58 N.	118.93 W.	3	...	...	3.1P	...	P	MAY	31	06 A.M.	PST
MAY	31	15	07	44.8	37.42 N.	118.83 W.	6	...	...	3.2P	...	P	MAY	31	07 A.M.	PST
MAY	31	15	16	12.1	37.60 N.	118.80 W.	15	4.1	...	4.9B	IV	B	MAY	31	07 A.M.	PST
MAY	31	15	20	20.0	37.61 N.	118.80 W.	15	...	...	4.0B	...	B	MAY	31	07 A.M.	PST
MAY	31	15	30	53.3	37.61 N.	118.83 W.	12	...	...	3.8B	...	B	MAY	31	07 A.M.	PST
MAY	31	15	35	20.4	37.45 N.	118.83 W.	5	...	...	3.5P	...	P	MAY	31	07 A.M.	PST
MAY	31	18	23	9.9	37.55 N.	118.73 W.	4	...	...	3.0P	...	P	MAY	31	10 A.M.	PST
MAY	31	19	06	48.3	37.55 N.	118.78 W.	2	...	...	3.0P	...	P	MAY	31	11 A.M.	PST
MAY	31	19	48	58.6	37.62 N.	118.97 W.	5	...	...	3.1P	...	P	MAY	31	11 A.M.	PST
MAY	31	19	56	7.5	37.60 N.	118.98 W.	1	...	...	3.2P	...	P	MAY	31	11 A.M.	PST
MAY	31	19	57	21.2	37.57 N.	118.97 W.	5	...	...	3.3P	...	P	MAY	31	11 A.M.	PST
MAY	31	20	14	42.3	37.57 N.	118.90 W.	5	...	...	3.0P	...	P	MAY	31	12 P.M.	PST
MAY	31	23	15	29.5	37.62 N.	118.85 W.	18	...	...	3.9B	...	B	MAY	31	03 P.M.	PST
MAY	31	23	38	37.4	37.53 N.	118.90 W.	6	...	...	3.0P	...	P	MAY	31	03 P.M.	PST
JUNE	1	00	57	37.6	37.58 N.	118.93 W.	7	...	...	3.4P	...	P	MAY	31	04 P.M.	PST
JUNE	1	03	17	44.5	37.52 N.	118.87 W.	4	...	...	3.3P	...	P	MAY	31	07 P.M.	PST
JUNE	1	03	34	30.0	37.53 N.	118.92 W.	5	...	...	3.0P	...	P	MAY	31	07 P.M.	PST
JUNE	1	05	28	48.8	37.47 N.	118.82 W.	5	...	...	3.0P	...	P	MAY	31	09 P.M.	PST
JUNE	1	06	47	36.7	37.48 N.	118.85 W.	18	3.7	...	4.7B	...	B	MAY	31	10 P.M.	PST
JUNE	1	07	00	17.1	37.47 N.	118.88 W.	6	...	...	3.4P	...	P	MAY	31	11 P.M.	PST
JUNE	1	07	47	18.2	37.60 N.	118.95 W.	5	...	...	3.3P	...	P	MAY	31	11 P.M.	PST
JUNE	1	11	40	29.8	37.50 N.	118.87 W.	6	...	...	3.0P	...	P	JUNE	1	03 A.M.	PST
JUNE	1	12	20	59.8	37.59 N.	118.80 W.	7	...	...	3.0B	...	B	JUNE	1	04 A.M.	PST
JUNE	1	13	08	25.2	37.58 N.	118.83 W.	6	...	...	3.2P	...	P	JUNE	1	05 A.M.	PST
JUNE	1	14	59	5.9	37.61 N.	118.91 W.	8	...	...	3.4B	...	B	JUNE	1	06 A.M.	PST
JUNE	1	17	27	25.3	37.59 N.	118.80 W.	11	...	...	3.6B	...	B	JUNE	1	09 A.M.	PST
JUNE	1	17	50	12.8	37.60 N.	118.94 W.	11	...	...	3.4B	...	B	JUNE	1	09 A.M.	PST
JUNE	1	22	30	22.8	37.63 N.	118.90 W.	15	...	...	3.5B	...	B	JUNE	1	02 P.M.	PST
JUNE	1	23	34	15.7	37.45 N.	118.85 W.	6	...	...	3.4P	...	P	JUNE	1	03 P.M.	PST
JUNE	1	23	39	17.4	37.50 N.	118.95 W.	6	...	...	3.0P	...	P	JUNE	1	03 P.M.	PST
JUNE	2	01	02	46.7	37.58 N.	118.90 W.	5	...	...	3.0P	...	P	JUNE	1	05 P.M.	PST
JUNE	2	02	01	10.2	37.50 N.	119.05 W.	6	...	...	3.0P	...	P	JUNE	1	06 P.M.	PST
JUNE	2	02	06	24.7	37.58 N.	118.88 W.	5	...	...	3.0P	...	P	JUNE	1	06 P.M.	PST
JUNE	2	06	39	48.2	37.55 N.	118.88 W.	4	...	...	3.6P	...	P	JUNE	1	10 P.M.	PST
JUNE	2	09	19	4.0	37.58 N.	118.88 W.	5	...	...	3.0P	...	P	JUNE	2	01 A.M.	PST
JUNE	2	10	22	21.2	37.58 N.	118.93 W.	7	...	...	4.1B	...	B	JUNE	2	02 A.M.	PST
JUNE	2	16	19	4.6	37.60 N.	118.93 W.	4	...	...	3.0P	...	P	JUNE	2	08 A.M.	PST
JUNE	2	20	34	14.2	37.59 N.	118.88 W.	25	...	...	4.0B	...	B	JUNE	2	12 P.M.	PST
JUNE	2	22	49	24.3	37.58 N.	118.82 W.	5	...	...	3.1P	...	P	JUNE	2	02 P.M.	PST
JUNE	3	02	35	45.5	37.52 N.	118.93 W.	1	...	...	3.4P	...	P	JUNE	2	06 P.M.	PST
JUNE	3	04	27	52.6	37.43 N.	118.87 W.	7	...	...	3.0P	...	P	JUNE	2	08 P.M.	PST
JUNE	3	07	32	2.5	37.60 N.	118.88 W.	6	...	...	3.0P	...	P	JUNE	2	11 P.M.	PST
JUNE	3	16	43	37.8	34.50 N.	118.52 W.	5	...	...	3.4P	III	P	JUNE	3	08 A.M.	PST
JUNE	3	17	34	11.4	37.56 N.	118.68 W.	5	...	...	3.5B	...	B	JUNE	3	09 A.M.	PST
JUNE	3	20	59	20.1	37.50 N.	118.87 W.	5	...	...	3.0P	...	P	JUNE	3	12 P.M.	PST
JUNE	4	00	23	9.4	37.67 N.	118.85 W.	5	...	...	3.1P	...	P	JUNE	3	04 P.M.	PST
JUNE	4	02	38	22.2	37.60 N.	118.87 W.	3	...	...	3.0P	...	P	JUNE	3	06 P.M.	PST
JUNE	4	04	00	6.0	37.54 N.	118.91 W.	15	...	...	3.1B	...	B	JUNE	3	08 P.M.	PST
JUNE	4	05	45	5.6	37.45 N.	118.92 W.	5	...	...	3.0P	...	P	JUNE	3	09 P.M.	PST
JUNE	4	05	45	24.8	37.55 N.	118.88 W.	5	...	...	3.0P	...	P	JUNE	3	09 P.M.	PST
JUNE	4	08	34	20.2	37.48 N.	118.83 W.	1	...	...	3.6P	...	P	JUNE	4	00 A.M.	PST

Table 1.--Summary of U.S. earthquakes for April-June 1980--Continued

Date (1980)	Origin time (UTC)				Lat	Long	Depth (km)	Magnitude			Maximum intensity	Hypocenter source	Local time				
	hr	min	s	mb				MS	ML or Mn	Date			Hour				
CALIFORNIA--Continued																	
JUNE	4	16	59	50.3	37.58 N.	118.82 W.	5	...	...	3.0P	...	P	JUNE	4	08	A.M.	PST
JUNE	4	17	09	43.3	37.70 N.	118.85 W.	5	...	...	3.0P	...	P	JUNE	4	09	A.M.	PST
JUNE	4	19	09	22.0	37.55 N.	118.90 W.	13	...	...	3.8B	...	B	JUNE	4	11	A.M.	PST
JUNE	4	21	00	20.4	37.61 N.	118.93 W.	12	...	...	3.1B	...	B	JUNE	4	01	P.M.	PST
JUNE	5	03	07	44.2	37.50 N.	118.88 W.	23	...	...	3.1B	...	B	JUNE	4	07	P.M.	PST
JUNE	5	08	59	17.8	37.47 N.	118.62 W.	4	...	...	3.2P	...	P	JUNE	5	00	A.M.	PST
JUNE	5	10	33	25.0	37.53 N.	118.65 W.	4	...	...	3.0P	...	P	JUNE	5	02	A.M.	PST
JUNE	5	19	41	2.3	37.57 N.	118.88 W.	15	...	...	4.3B	FELT	B	JUNE	5	11	A.M.	PST
JUNE	5	20	48	31.2	37.55 N.	118.83 W.	5	...	...	3.0P	...	P	JUNE	5	12	P.M.	PST
JUNE	5	23	41	35.7	37.56 N.	118.77 W.	2	...	...	3.1B	...	B	JUNE	5	03	P.M.	PST
JUNE	6	09	25	24.9	37.77 N.	118.67 W.	5	...	...	3.0P	...	P	JUNE	6	01	A.M.	PST
JUNE	6	09	52	36.9	37.58 N.	118.87 W.	5	...	...	3.0P	...	P	JUNE	6	01	A.M.	PST
JUNE	6	13	33	23.9	37.55 N.	118.87 W.	6	...	...	3.1P	...	P	JUNE	6	05	A.M.	PST
JUNE	6	14	18	18.1	37.48 N.	118.87 W.	3	...	...	3.0P	...	P	JUNE	6	06	A.M.	PST
JUNE	6	15	43	7.7	37.45 N.	118.88 W.	6	...	...	3.1P	...	P	JUNE	6	07	A.M.	PST
JUNE	6	16	26	11.4	37.57 N.	118.93 W.	6	...	...	3.5B	...	B	JUNE	6	08	A.M.	PST
JUNE	6	17	16	15.5	37.46 N.	118.83 W.	27	...	...	3.7B	...	B	JUNE	6	09	A.M.	PST
JUNE	6	17	41	22.7	37.53 N.	118.90 W.	5	...	...	3.3B	...	B	JUNE	6	09	A.M.	PST
JUNE	7	01	31	46.0	37.63 N.	118.90 W.	5	...	...	3.1P	...	P	JUNE	6	05	P.M.	PST
JUNE	7	01	31	58.4	37.61 N.	118.91 W.	5	...	...	3.8B	...	B	JUNE	6	05	P.M.	PST
JUNE	7	03	14	7.6	37.62 N.	118.90 W.	5	...	...	3.0P	...	P	JUNE	6	07	P.M.	PST
JUNE	7	03	16	41.5	37.53 N.	118.77 W.	5	...	...	3.1P	...	P	JUNE	6	07	P.M.	PST
JUNE	7	06	14	29.3	37.58 N.	118.82 W.	5	...	...	3.0P	...	P	JUNE	6	10	P.M.	PST
JUNE	7	07	37	15.1	37.57 N.	118.92 W.	3	...	...	3.2P	...	P	JUNE	6	11	P.M.	PST
JUNE	7	07	38	46.2	37.60 N.	118.93 W.	5	...	...	3.4P	...	P	JUNE	6	11	P.M.	PST
JUNE	7	10	30	6.5	37.52 N.	118.80 W.	5	...	...	3.4P	...	P	JUNE	7	02	A.M.	PST
JUNE	7	18	30	2.9	37.53 N.	118.95 W.	5	...	...	3.4P	...	P	JUNE	7	10	A.M.	PST
JUNE	7	18	30	16.6	37.47 N.	118.62 W.	5	...	...	3.3P	...	P	JUNE	7	10	A.M.	PST
JUNE	7	22	23	38.0	37.62 N.	118.98 W.	3	...	...	3.0P	...	P	JUNE	7	02	P.M.	PST
JUNE	7	22	25	41.0	37.47 N.	118.90 W.	4	...	...	3.1P	...	P	JUNE	7	02	P.M.	PST
JUNE	7	23	17	53.2	37.62 N.	118.88 W.	8	...	...	3.9B	...	B	JUNE	7	03	P.M.	PST
JUNE	8	06	25	27.6	37.55 N.	118.89 W.	20	...	...	3.9B	...	B	JUNE	7	10	P.M.	PST
JUNE	8	09	26	8.5	37.53 N.	118.83 W.	5	...	...	3.0P	...	P	JUNE	8	01	A.M.	PST
JUNE	8	16	40	30.2	37.63 N.	118.90 W.	5	...	...	3.0P	...	P	JUNE	8	08	A.M.	PST
JUNE	8	17	55	22.9	37.60 N.	118.83 W.	5	...	...	3.0P	...	P	JUNE	8	09	A.M.	PST
JUNE	8	17	56	45.2	37.62 N.	118.98 W.	5	...	...	3.5P	...	P	JUNE	8	09	A.M.	PST
JUNE	8	23	22	21.2	37.49 N.	118.84 W.	30	...	...	4.4B	...	B	JUNE	8	03	P.M.	PST
JUNE	9	08	05	49.5	37.52 N.	118.83 W.	7	...	...	3.2P	...	P	JUNE	9	00	A.M.	PST
JUNE	9	15	33	13.0	37.48 N.	118.67 W.	5	...	...	3.0P	...	P	JUNE	9	07	A.M.	PST
JUNE	9	20	30	21.5	37.60 N.	118.85 W.	5	...	...	3.0P	...	P	JUNE	9	12	P.M.	PST
JUNE	10	09	28	29.7	37.45 N.	118.75 W.	5	...	...	3.0P	...	P	JUNE	10	01	A.M.	PST
JUNE	10	15	21	36.4	37.57 N.	118.82 W.	8	...	...	3.4P	...	P	JUNE	10	07	A.M.	PST
JUNE	10	17	13	34.2	37.62 N.	118.78 W.	5	...	...	3.2P	...	P	JUNE	10	09	A.M.	PST
JUNE	10	18	22	11.2	37.65 N.	118.91 W.	20	...	...	3.2B	...	B	JUNE	10	10	A.M.	PST
JUNE	10	22	15	32.2	37.50 N.	118.78 W.	4	...	...	3.4P	...	P	JUNE	10	02	P.M.	PST
JUNE	11	03	04	47.8	37.60 N.	118.90 W.	6	...	...	3.4P	...	P	JUNE	10	07	P.M.	PST
JUNE	11	04	40	59.1	37.55 N.	118.90 W.	16	3.9	...	4.7B	V	B	JUNE	10	08	P.M.	PST
JUNE	11	04	42	25.7	37.47 N.	118.80 W.	5	...	...	3.6P	...	P	JUNE	10	08	P.M.	PST
JUNE	11	04	47	36.3	37.58 N.	118.91 W.	17	...	...	3.7B	...	B	JUNE	10	08	P.M.	PST
JUNE	11	05	02	21.7	37.55 N.	118.93 W.	2	...	...	3.0P	...	P	JUNE	10	09	P.M.	PST
JUNE	11	13	44	45.5	37.43 N.	118.83 W.	6	...	...	3.0P	...	P	JUNE	11	05	A.M.	PST
JUNE	11	17	10	23.3	37.64 N.	118.88 W.	12	...	...	3.6B	...	B	JUNE	11	09	A.M.	PST
JUNE	11	22	39	31.4	37.51 N.	118.80 W.	17	...	...	3.2B	...	B	JUNE	11	02	P.M.	PST
JUNE	12	00	55	56.0	37.61 N.	118.92 W.	5	...	...	3.4B	...	B	JUNE	11	04	P.M.	PST
JUNE	12	05	29	31.6	37.85 N.	118.65 W.	3	...	...	3.0P	...	P	JUNE	11	09	P.M.	PST
JUNE	12	10	22	41.5	37.62 N.	118.92 W.	0	...	...	3.3P	...	P	JUNE	12	02	A.M.	PST
JUNE	12	23	17	26.1	37.54 N.	118.88 W.	12	...	...	3.1B	...	B	JUNE	12	03	P.M.	PST
JUNE	13	02	36	23.7	37.62 N.	118.98 W.	1	...	...	3.1P	...	P	JUNE	12	06	P.M.	PST
JUNE	13	05	08	18.8	37.53 N.	118.42 W.	5	...	...	3.0P	...	P	JUNE	12	09	P.M.	PST
JUNE	13	12	13	18.4	37.53 N.	118.73 W.	5	...	...	3.0P	...	P	JUNE	13	04	A.M.	PST
JUNE	13	14	56	59.3	37.63 N.	118.91 W.	8	...	...	3.8B	FELT	B	JUNE	13	06	A.M.	PST
JUNE	13	21	13	43.6	37.54 N.	118.84 W.	18	...	...	3.2B	...	B	JUNE	13	01	P.M.	PST
JUNE	13	21	37	4.9	37.47 N.	118.90 W.	8	...	...	3.1P	...	P	JUNE	13	01	P.M.	PST
JUNE	13	23	23	20.2	37.48 N.	118.80 W.	25	...	...	4.1B	FELT	B	JUNE	13	03	P.M.	PST
JUNE	14	00	04	34.3	37.54 N.	118.84 W.	10	...	...	3.0B	...	B	JUNE	13	04	P.M.	PST

Table 1.--Summary of U.S. earthquakes for April-June 1980--Continued

Date (1980)	Origin time (UTC)			Lat	Long	Depth (km)	Magnitude			Maximum intensity	Hypocenter source	Local time					
	hr	min	s				mb	MS	ML or Mn			Date	Hour				
CALIFORNIA--Continued																	
JUNE	14	03	36	33.2	37.55 N.	118.90 W.	7	...	...	3.5P	...	P	JUNE	13	07	P.M.	PST
JUNE	14	05	47	47.6	37.62 N.	118.88 W.	0	...	...	3.3P	...	P	JUNE	13	09	P.M.	PST
JUNE	14	07	35	55.5	37.52 N.	118.82 W.	5	...	...	3.7P	...	P	JUNE	13	11	P.M.	PST
JUNE	14	11	30	47.8	37.60 N.	118.90 W.	6	...	...	3.2P	...	P	JUNE	14	03	A.M.	PST
JUNE	14	12	28	46.3	37.53 N.	118.95 W.	6	...	...	3.0P	...	P	JUNE	14	04	A.M.	PST
JUNE	15	12	23	54.7	37.55 N.	118.77 W.	5	...	...	3.4P	...	P	JUNE	15	04	A.M.	PST
JUNE	16	08	22	39.0	37.62 N.	118.88 W.	12	...	...	3.4B	...	B	JUNE	16	00	A.M.	PST
JUNE	16	12	55	40.9	37.50 N.	118.90 W.	5	...	...	3.0P	...	P	JUNE	16	04	A.M.	PST
JUNE	16	13	33	50.6	37.42 N.	118.83 W.	4	...	...	3.1P	...	P	JUNE	16	05	A.M.	PST
JUNE	16	14	02	19.9	37.57 N.	118.81 W.	9	...	...	3.2B	...	B	JUNE	16	06	A.M.	PST
JUNE	16	14	38	7.4	37.56 N.	118.91 W.	14	...	...	3.2B	...	B	JUNE	16	06	A.M.	PST
JUNE	16	21	46	30.8	37.56 N.	118.83 W.	26	...	...	3.1B	...	B	JUNE	16	01	P.M.	PST
JUNE	16	21	52	59.3	37.53 N.	118.82 W.	5	...	...	3.0P	...	P	JUNE	16	01	P.M.	PST
JUNE	17	07	07	20.7	37.52 N.	118.92 W.	6	...	...	3.1P	...	P	JUNE	16	11	P.M.	PST
JUNE	17	12	26	40.1	37.51 N.	118.90 W.	17	...	...	3.7B	FELT	B	JUNE	17	04	A.M.	PST
JUNE	17	12	27	13.2	37.50 N.	118.89 W.	7	...	...	4.0B	FELT	B	JUNE	17	04	A.M.	PST
JUNE	17	23	16	11.4	37.47 N.	118.87 W.	6	...	...	3.0P	...	P	JUNE	17	03	P.M.	PST
JUNE	18	03	48	9.0	36.88 N.	121.68 W.	6	...	...	3.8B	FELT	B	JUNE	17	07	P.M.	PST
JUNE	18	04	52	26.6	36.88 N.	121.68 W.	7	...	...	4.1B	IV	B	JUNE	17	08	P.M.	PST
JUNE	18	05	31	5.2	36.89 N.	121.69 W.	7	...	...	3.8B	FELT	B	JUNE	17	09	P.M.	PST
JUNE	18	06	04	58.9	37.38 N.	118.93 W.	5	...	...	3.0P	...	P	JUNE	17	10	P.M.	PST
JUNE	18	08	35	26.9	36.88 N.	121.66 W.	12	...	...	3.5B	FELT	B	JUNE	18	00	A.M.	PST
JUNE	18	11	58	21.5	37.49 N.	118.90 W.	6	...	...	3.0B	...	B	JUNE	18	03	A.M.	PST
JUNE	18	18	55	38.2	37.50 N.	118.85 W.	11	...	...	3.2B	...	B	JUNE	18	10	A.M.	PST
JUNE	18	22	21	24.7	37.47 N.	118.88 W.	17	...	...	3.2B	...	B	JUNE	18	02	P.M.	PST
JUNE	19	04	45	32.2	37.52 N.	118.88 W.	4	...	...	3.1P	...	P	JUNE	18	08	P.M.	PST
JUNE	19	07	18	2.4	37.57 N.	118.92 W.	6	...	...	3.0P	...	P	JUNE	18	11	P.M.	PST
JUNE	19	07	19	32.4	37.53 N.	118.97 W.	3	...	...	3.0P	...	P	JUNE	18	11	P.M.	PST
JUNE	19	07	22	26.5	37.56 N.	118.93 W.	16	...	...	3.2B	...	B	JUNE	18	11	P.M.	PST
JUNE	19	14	04	30.5	37.62 N.	118.87 W.	2	...	...	3.5P	...	P	JUNE	19	06	A.M.	PST
JUNE	19	14	06	22.0	37.53 N.	118.90 W.	4	...	...	3.0P	...	P	JUNE	19	06	A.M.	PST
JUNE	19	17	21	5.7	37.57 N.	118.88 W.	4	...	...	3.0P	...	P	JUNE	19	09	A.M.	PST
JUNE	19	22	26	17.3	37.61 N.	118.93 W.	2	...	...	3.3B	...	B	JUNE	19	02	P.M.	PST
JUNE	20	13	44	36.1	37.50 N.	118.83 W.	6	...	...	3.0P	...	P	JUNE	20	05	A.M.	PST
JUNE	20	15	25	00.0	37.53 N.	118.86 W.	24	...	...	3.4B	...	B	JUNE	20	07	A.M.	PST
JUNE	20	17	24	8.1	37.54 N.	118.92 W.	18	...	...	4.0B	FELT	B	JUNE	20	09	A.M.	PST
JUNE	21	22	01	10.5	37.54 N.	118.90 W.	27	...	...	3.3B	...	B	JUNE	21	02	P.M.	PST
JUNE	22	06	07	20.3	37.49 N.	118.92 W.	5	...	...	3.2B	...	B	JUNE	21	10	P.M.	PST
JUNE	22	09	50	7.7	37.59 N.	118.87 W.	29	...	...	3.0B	...	B	JUNE	22	01	A.M.	PST
JUNE	22	17	39	35.8	33.83 N.	116.87 W.	14	...	...	3.1P	...	P	JUNE	22	09	A.M.	PST
JUNE	23	06	32	22.3	37.55 N.	118.85 W.	5	...	...	3.8P	...	P	JUNE	22	10	P.M.	PST
JUNE	23	05	16	53.3	37.59 N.	118.86 W.	22	...	...	3.5B	...	B	JUNE	22	09	P.M.	PST
JUNE	23	21	11	40.2	34.12 N.	117.47 W.	5	...	...	3.0P	IV	P	JUNE	23	01	P.M.	PST
JUNE	24	21	44	42.6	37.55 N.	118.87 W.	4	...	...	3.0P	...	P	JUNE	24	01	P.M.	PST
JUNE	25	05	51	23.6	37.58 N.	118.87 W.	4	...	...	3.1P	...	P	JUNE	24	09	P.M.	PST
JUNE	25	22	32	19.4	34.00 N.	116.75 W.	7	...	...	3.0P	...	P	JUNE	25	02	P.M.	PST
JUNE	26	03	56	46.9	37.04 N.	121.48 W.	5	...	...	3.2B	...	B	JUNE	25	07	P.M.	PST
JUNE	26	04	41	24.0	34.37 N.	117.05 W.	12	...	...	3.0P	...	P	JUNE	25	08	P.M.	PST
JUNE	26	10	47	2.8	33.68 N.	116.73 W.	6	...	...	2.6P	FELT	P	JUNE	26	02	A.M.	PST
JUNE	26	11	19	1.4	33.80 N.	118.28 W.	4	...	...	2.6P	III	P	JUNE	26	03	A.M.	PST
JUNE	27	01	29	29.9	37.59 N.	118.86 W.	16	...	...	3.8B	FELT	B	JUNE	26	16	P.M.	PST
JUNE	27	13	21	1.7	37.45 N.	118.85 W.	5	...	...	3.2P	...	P	JUNE	27	05	A.M.	PST
JUNE	28	00	57	34.4	37.57 N.	118.85 W.	17	...	...	3.8B	...	B	JUNE	27	04	P.M.	PST
JUNE	28	00	58	42.9	37.58 N.	118.84 W.	11	...	...	4.3B	...	B	JUNE	27	04	P.M.	PST
JUNE	28	03	53	2.0	37.59 N.	118.84 W.	18	...	...	3.5B	...	B	JUNE	27	07	P.M.	PST
JUNE	28	20	32	37.5	37.60 N.	118.90 W.	5	...	...	3.1P	...	P	JUNE	28	12	P.M.	PST
JUNE	29	04	16	13.5	37.53 N.	118.85 W.	17	...	...	3.4B	...	B	JUNE	28	08	P.M.	PST
JUNE	29	07	44	46.5	38.03 N.	118.71 W.	6	...	...	3.3B	...	B	JUNE	28	11	P.M.	PST
JUNE	29	07	46	14.1	38.01 N.	118.68 W.	6	4.2	...	5.1B	VI	B	JUNE	28	11	P.M.	PST
JUNE	29	07	57	2.6	38.02 N.	118.72 W.	5	...	...	3.2B	...	B	JUNE	28	11	P.M.	PST
JUNE	29	07	59	11.1	37.58 N.	118.88 W.	6	...	...	3.3P	...	P	JUNE	28	11	P.M.	PST
JUNE	29	10	55	2.7	38.02 N.	118.70 W.	7	...	...	3.3B	...	B	JUNE	29	02	A.M.	PST
JUNE	29	13	49	0.9	38.01 N.	118.71 W.	5	...	...	3.6B	...	B	JUNE	29	05	A.M.	PST
JUNE	29	18	04	58.7	38.04 N.	118.70 W.	11	...	...	3.7B	...	B	JUNE	29	10	A.M.	PST
JUNE	29	22	13	29.1	38.01 N.	118.71 W.	5	...	...	3.2B	...	B	JUNE	29	02	P.M.	PST

Table 1.--Summary of U.S. earthquakes for April-June 1980--Continued

Date (1980)	Origin time (UTC)			Lat	Long	Depth (km)	Magnitude			Maximum intensity	Hypocenter source	Local time			
	hr	min	s				mb	MS	ML or Mn			Date	Hour		
CALIFORNIA—Cont inued															
JUNE 30	01	49	15.0	37.59 N.	118.93 W.	4	...	...	3.6B	...	B	JUNE 29	04	P.M.	PST
JUNE 30	02	09	44.1	37.47 N.	118.83 W.	27	...	...	3.6B	...	B	JUNE 29	06	P.M.	PST
JUNE 30	09	21	20.0	37.62 N.	118.88 W.	11	...	...	3.2B	...	B	JUNE 30	01	A.M.	PST
JUNE 30	10	23	1.3	38.01 N.	118.71 W.	2	...	...	4.0B	...	B	JUNE 30	02	A.M.	PST
JUNE 30	22	29	3.2	33.15 N.	119.02 W.	5	...	...	3.3P	...	P	JUNE 30	02	P.M.	PST
CALIFORNIA—OFF THE COAST															
APR. 2	03	13	59.5	40.35 N.	125.30 W.	5	...	...	3.3B	...	B	APR. 1	07	P.M.	PST
APR. 15	12	51	57.5	40.89 N.	124.95 W.	5	...	...	3.7B	...	B	APR. 15	04	A.M.	PST
MAY 29	17	45	39.4	41.89 N.	126.94 W.	15	5.1	4.9	4.4B	...	G	MAY 29	09	A.M.	PST
MAY 29	21	17	26.3	41.87 N.	126.80 W.	15	4.5	...	3.6B	...	G	MAY 29	01	P.M.	PST
JUNE 9	18	39	24.6	40.43 N.	126.10 W.	5	...	...	3.9B	...	B	JUNE 9	10	A.M.	PST
JUNE 17	06	49	33.7	40.26 N.	126.70 W.	15	4.1	...	...	...	G	JUNE 16	10	P.M.	PST
JUNE 29	20	06	17.9	40.30 N.	125.25 W.	5	...	...	3.6B	...	B	JUNE 29	12	P.M.	PST
HAWAII															
APR. 7	10	17	41.6	19.38 N.	155.45 W.	10	...	...	3.4H	...	H	APR. 7	00	A.M.	HST
APR. 12	19	40	09.6	19.38 N.	155.50 W.	10	...	...	3.2H	...	H	APR. 12	09	A.M.	HST
APR. 17	06	30	44.9	19.36 N.	155.08 W.	9	...	...	3.0H	...	H	APR. 16	08	P.M.	HST
APR. 17	08	13	00.9	19.17 N.	155.48 W.	34	...	...	3.4H	...	H	APR. 16	10	P.M.	HST
APR. 18	00	14	45.4	19.45 N.	156.05 W.	43	...	...	3.2H	...	H	APR. 17	02	P.M.	HST
APR. 18	02	16	45.5	19.45 N.	155.24 W.	33	...	...	3.2H	...	H	APR. 17	04	P.M.	HST
APR. 18	02	20	04.4	19.45 N.	155.24 W.	33	...	...	3.0H	...	H	APR. 17	04	P.M.	HST
APR. 18	02	22	05.4	19.37 N.	155.31 W.	32	...	...	3.1H	...	H	APR. 17	04	P.M.	HST
APR. 30	10	46	23.6	19.42 N.	155.42 W.	11	...	...	3.3H	...	H	APR. 30	00	A.M.	HST
MAY 1	02	22	14.0	19.28 N.	155.10 W.	11	...	...	3.4H	...	H	APR. 30	04	P.M.	HST
MAY 5	09	07	37.7	19.23 N.	155.55 W.	11	...	...	3.9H	IV	H	MAY 4	11	P.M.	HST
MAY 6	06	54	43.0	19.35 N.	155.10 W.	9	...	...	3.1H	III	H	MAY 5	08	P.M.	HST
MAY 6	14	08	36.8	19.40 N.	155.43 W.	11	...	...	3.6H	III	H	MAY 6	04	A.M.	HST
MAY 8	09	42	33.4	19.73 N.	155.74 W.	12	...	...	3.4H	III	H	MAY 7	11	P.M.	HST
MAY 12	16	52	31.4	19.33 N.	155.23 W.	10	...	...	3.4H	...	H	MAY 12	06	A.M.	HST
MAY 13	00	40	27.1	19.32 N.	155.11 W.	9	...	...	3.3H	IV	H	MAY 12	02	P.M.	HST
MAY 13	00	43	44.6	19.33 N.	155.11 W.	9	...	...	3.4H	IV	H	MAY 12	02	P.M.	HST
MAY 13	03	18	48.5	19.46 N.	155.24 W.	33	...	...	3.1H	...	H	MAY 12	05	P.M.	HST
MAY 23	04	28	39.0	19.34 N.	155.28 W.	33	...	...	3.8H	IV	H	MAY 22	06	P.M.	HST
MAY 28	18	04	50.9	19.32 N.	155.23 W.	10	...	...	3.2H	III	H	MAY 28	08	A.M.	HST
JUNE 3	10	26	41.5	19.02 N.	155.67 W.	31	...	...	3.2H	...	H	JUNE 3	00	A.M.	HST
JUNE 9	10	01	16.7	19.43 N.	155.39 W.	11	...	...	3.2H	...	H	JUNE 9	00	A.M.	HST
JUNE 9	10	43	23.3	19.43 N.	155.40 W.	12	...	...	3.5H	III	H	JUNE 9	00	A.M.	HST
JUNE 9	23	04	15.7	19.52 N.	156.28 W.	34	...	...	3.1H	...	H	JUNE 9	01	P.M.	HST
JUNE 14	22	34	02.8	19.32 N.	155.19 W.	9	...	...	3.0H	...	H	JUNE 14	12	P.M.	HST
JUNE 24	18	05	24.6	19.38 N.	155.10 W.	1	...	...	3.4H	...	H	JUNE 24	08	A.M.	HST
JUNE 24	19	15	17.5	19.37 N.	155.11 W.	1	...	...	3.0H	...	H	JUNE 24	09	A.M.	HST
JUNE 25	11	48	44.4	19.72 N.	155.74 W.	16	...	...	3.3H	III	H	JUNE 25	01	A.M.	HST
MAINE															
APR. 10	15	36	43.8	44.71 N.	68.36 W.	0	...	...	3.0J	FELT	J	APR. 10	10	A.M.	EST
APR. 21	13	39	57.5	44.72 N.	68.36 W.	0	...	...	2.5J	FELT	J	APR. 21	08	A.M.	EST
MAY 4	08	56	13.1	44.29 N.	69.61 W.	2	...	...	2.6J	FELT	J	MAY 4	03	A.M.	EST
MONTANA															
APR. 14	03	27	33.8	48.79 N.	112.34 W.	5	...	...	3.6D	...	G	APR. 13	08	P.M.	MST
APR. 20	22	45	12.7	46.93 N.	112.93 W.	5	...	...	3.8G	...	G	APR. 20	03	P.M.	MST
MAY 10	23	41	47.5	44.76 N.	111.28 W.	5	...	...	4.2G	III	G	MAY 10	04	P.M.	MST
NEVADA															
APR. 3	14	00	0.1	37.15 N.	116.08 W.	0	4.7	...	4.7B	...	E	APR. 3	06	A.M.	PST
APR. 8	00	13	41.8	39.50 N.	119.18 W.	5	...	...	4.7B	V	G	APR. 7	04	P.M.	PST
APR. 16	20	00	0.1	37.10 N.	116.03 W.	0	5.3	4.2	5.5B	...	E	APR. 16	12	P.M.	PST
APR. 26	17	00	0.1	37.25 N.	116.42 W.	0	5.4	4.2	5.6B	...	E	APR. 26	09	A.M.	PST
APR. 28	13	55	34.0	41.86 N.	118.91 W.	5	4.3	...	4.1B	IV	G	APR. 28	05	A.M.	PST

Table 1.--Summary of U.S. earthquakes for April-June 1980--Continued

Date (1980)	Origin time (UTC)			Lat	Long	Depth (km)	Magnitude			Maximum intensity	Hypocenter source	Local time			
	hr	min	s				mb	MS	ML or Mn			Date	Hour		
NEVADA--Continued															
APR. 28	17	07	10.1	41.85 N.	118.93 W.	5	3.8	...	...	FELT	G	APR. 28	09	A.M.	PST
APR. 30	07	23	57.8	38.62 N.	118.47 W.	5	...	...	3.5B	...	B	APR. 29	11	P.M.	PST
MAY 2	18	46	30.1	37.06 N.	116.02 W.	0	4.4	...	4.5B	...	E	MAY 2	10	A.M.	PST
MAY 3	00	17	38.1	41.94 N.	118.84 W.	5	4.5	...	4.3B	IV	G	MAY 2	04	P.M.	PST
MAY 22	13	00	0.1	37.00 N.	116.03 W.	0	...	...	3.8B	...	E	MAY 22	05	A.M.	PST
JUNE 12	17	15	0.1	37.28 N.	116.45 W.	0	5.6	...	5.5B	...	E	JUNE 12	09	A.M.	PST
JUNE 24	15	10	0.1	37.02 N.	116.03 W.	0	4.4	...	4.3B	...	E	JUNE 24	07	A.M.	PST
NEW HAMPSHIRE															
APR. 7	09	36	00.4	43.13 N.	72.22 W.	0	...	...	3.2L	...	L	APR. 7	04	A.M.	EST
NEW YORK															
MAY 23	08	39	44.0	44.89 N.	74.55 W.	0	...	...	3.4L	...	L	MAY 23	03	A.M.	EST
JUNE 6	13	15	52.0	43.56 N.	75.23 W.	1	...	...	3.8J	V	L	JUNE 6	08	A.M.	EST
NORTH CAROLINA															
APR. 22	03	14	6.2	36.50 N.	80.66 W.	5	...	...	2.5V	IV	G	APR. 21	10	P.M.	EST
JUNE 10	23	47	32.7	35.45 N.	82.88 W.	5	...	...	3.0V	...	G	JUNE 10	06	P.M.	EST
OREGON--OFF THE COAST															
APR. 5	03	42	55.1	43.85 N.	127.93 W.	15	...	...	...	...	G	APR. 4	07	P.M.	PST
APR. 9	23	31	51.9	42.29 N.	126.90 W.	15	...	...	...	...	G	APR. 9	03	P.M.	PST
APR. 22	16	14	57.4	43.83 N.	127.91 W.	15	4.4	...	...	...	G	APR. 22	08	A.M.	PST
PENNSYLVANIA															
MAY 2	19	02	24.4	40.26 N.	75.03 W.	0	...	...	3.0L	...	L	MAY 2	02	P.M.	EST
SOUTH CAROLINA															
JUNE 22	20	33	6.2	33.01 N.	80.16 W.	1	...	...	2.1G	FELT	G	JUNE 22	03	P.M.	EST
JUNE 22	23	35	26.5	33.01 N.	80.16 W.	1	...	...	1.6G	FELT	G	JUNE 22	06	P.M.	EST
TENNESSEE															
APR. 21	20	44	5.7	35.76 N.	84.13 W.	5	...	...	2.6G	III	G	APR. 21	03	P.M.	EST
APR. 21	23	20	39.5	35.76 N.	84.12 W.	5	...	...	2.4G	...	G	APR. 21	06	P.M.	EST
JUNE 25	18	02	1.5	35.78 N.	84.05 W.	5	...	...	3.3V	IV	G	JUNE 25	01	P.M.	EST
TEXAS															
JUNE 9	22	37	9.9	35.51 N.	101.08 W.	5	...	...	3.4T	IV	G	JUNE 9	04	P.M.	CST
UTAH															
APR. 4	00	45	4.4	41.34 N.	113.31 W.	7	...	...	3.0U	IV	U	APR. 3	05	P.M.	MST
APR. 4	00	56	9.3	41.35 N.	113.32 W.	7	...	...	2.7U	FELT	U	APR. 3	05	P.M.	MST
APR. 6	10	45	4.1	39.95 N.	111.98 W.	5	...	...	3.8U	IV	U	APR. 6	03	A.M.	MST
MAY 24	10	03	36.3	39.94 N.	111.97 W.	5	5.0	...	4.2U	V	U	MAY 24	03	A.M.	MST
WASHINGTON															
APR. 1	04	24	30.5	46.22 N.	122.18 W.	4	5.0	3.7	4.7G	...	W	MAR. 31	08	P.M.	PST
APR. 1	08	54	25.4	46.22 N.	122.18 W.	4	4.5	...	4.5G	...	W	APR. 1	00	A.M.	PST
APR. 1	12	30	46.7	46.22 N.	122.18 W.	4	4.8	...	4.0G	...	W	APR. 1	04	A.M.	PST
APR. 1	23	14	38.6	46.21 N.	122.19 W.	5	4.5	...	4.6G	...	W	APR. 1	03	P.M.	PST
APR. 2	09	37	13.1	46.22 N.	122.18 W.	3	4.8	3.7	4.7G	...	W	APR. 2	01	A.M.	PST
APR. 2	18	48	20.8	46.21 N.	122.19 W.	4	...	...	4.1G	...	W	APR. 2	10	A.M.	PST
APR. 3	02	43	19.8	46.23 N.	122.20 W.	3	4.5	...	4.4G	...	W	APR. 2	06	P.M.	PST
APR. 3	09	35	27.2	46.23 N.	122.17 W.	1	4.8	...	4.8G	...	W	APR. 3	01	A.M.	PST
APR. 3	15	30	20.2	46.21 N.	122.19 W.	4	...	...	3.7G	...	W	APR. 3	07	A.M.	PST
APR. 3	21	51	58.8	46.23 N.	122.20 W.	3	...	...	3.6G	...	W	APR. 3	01	P.M.	PST

Table 1.--Summary of U.S. earthquakes for April-June 1980--Continued

Date (1980)	Origin time (UTC)				Lat	Long	Depth (km)	Magnitude			Maximum intensity	Hypocenter source	Local time				
	hr	min	s	mb				MS	ML or Mn	Date			Hour				
WASHINGTON--Continued																	
APR.	3	23	57	52.3	46.23 N.	122.22 W.	2	5.0	...	4.5G	...	W	APR.	3	03	P.M.	PST
APR.	4	09	42	35.5	46.22 N.	122.21 W.	5	4.4	...	3.8G	...	W	APR.	4	01	A.M.	PST
APR.	4	09	48	56.3	46.24 N.	122.21 W.	5	...	...	3.6G	...	W	APR.	4	01	A.M.	PST
APR.	4	13	45	5.8	46.21 N.	122.18 W.	4	4.5	3.8	4.5G	...	W	APR.	4	05	A.M.	PST
APR.	4	21	40	43.5	46.13 N.	122.03 W.	10	...	...	4.4G	...	W	APR.	4	01	P.M.	PST
APR.	5	02	09	29.0	46.22 N.	122.18 W.	3	...	...	3.4G	...	W	APR.	4	06	P.M.	PST
APR.	5	06	39	3.3	46.21 N.	122.18 W.	5	...	...	3.7G	...	W	APR.	4	10	P.M.	PST
APR.	5	08	49	17.3	46.23 N.	122.17 W.	4	4.3	...	3.9G	...	W	APR.	5	00	A.M.	PST
APR.	5	10	58	49.5	46.21 N.	122.19 W.	3	4.1	...	3.6G	...	W	APR.	5	02	A.M.	PST
APR.	5	13	46	56.0	46.22 N.	122.18 W.	1	4.4	...	3.8G	...	W	APR.	5	05	A.M.	PST
APR.	5	16	42	5.7	46.23 N.	122.19 W.	2	4.9	4.5	4.5G	...	W	APR.	5	08	A.M.	PST
APR.	5	23	56	53.2	46.19 N.	122.19 W.	8	...	...	3.6G	...	W	APR.	5	03	P.M.	PST
APR.	6	06	41	38.6	46.23 N.	122.18 W.	1	...	...	3.1G	...	W	APR.	5	10	P.M.	PST
APR.	6	06	58	4.5	46.23 N.	122.19 W.	2	4.7	3.8	4.7G	...	W	APR.	5	10	P.M.	PST
APR.	6	11	08	27.6	46.22 N.	122.18 W.	2	...	...	3.2G	...	W	APR.	6	03	A.M.	PST
APR.	6	15	00	38.4	46.21 N.	122.18 W.	5	...	...	3.4G	...	W	APR.	6	07	A.M.	PST
APR.	6	17	18	49.3	46.30 N.	121.83 W.	1	...	...	3.6G	...	W	APR.	6	09	A.M.	PST
APR.	6	20	26	12.4	46.20 N.	122.19 W.	5	...	...	3.6G	...	W	APR.	6	12	P.M.	PST
APR.	6	23	22	56.2	46.22 N.	122.17 W.	3	...	...	3.4G	...	W	APR.	6	03	P.M.	PST
APR.	6	23	26	1.1	46.22 N.	122.19 W.	1	4.3	...	3.7G	...	W	APR.	6	03	P.M.	PST
APR.	7	01	54	14.4	46.29 N.	122.15 W.	5	...	...	3.5G	...	W	APR.	6	05	P.M.	PST
APR.	7	01	57	45.0	46.22 N.	122.19 W.	4	4.0	...	3.5G	...	W	APR.	6	05	P.M.	PST
APR.	7	03	52	3.4	46.21 N.	122.18 W.	4	...	...	3.5G	...	W	APR.	6	07	P.M.	PST
APR.	7	04	52	53.8	46.19 N.	122.17 W.	5	...	...	3.5G	...	W	APR.	6	08	P.M.	PST
APR.	7	06	45	19.2	46.22 N.	122.18 W.	4	4.6	...	4.5G	...	W	APR.	6	10	P.M.	PST
APR.	7	10	29	3.6	46.21 N.	122.18 W.	6	...	...	3.2G	...	W	APR.	7	02	A.M.	PST
APR.	7	15	05	32.7	46.23 N.	122.21 W.	5	4.9	...	4.7G	...	W	APR.	7	07	A.M.	PST
APR.	7	22	50	46.4	46.21 N.	122.18 W.	4	...	...	3.4G	...	W	APR.	7	02	P.M.	PST
APR.	8	02	18	47.1	46.22 N.	122.19 W.	5	...	...	3.5G	...	W	APR.	7	06	P.M.	PST
APR.	8	04	46	58.3	46.22 N.	122.18 W.	7	...	...	3.8G	...	W	APR.	7	08	P.M.	PST
APR.	8	06	07	4.6	46.22 N.	122.19 W.	3	4.7	...	4.5G	...	W	APR.	7	10	P.M.	PST
APR.	8	12	29	14.8	46.18 N.	122.16 W.	7	...	...	3.2G	...	W	APR.	8	04	A.M.	PST
APR.	8	13	40	56.3	46.22 N.	122.18 W.	3	...	...	3.2G	...	W	APR.	8	05	A.M.	PST
APR.	8	13	42	27.1	46.21 N.	122.18 W.	5	...	...	3.5G	...	W	APR.	8	05	A.M.	PST
APR.	8	14	37	32.5	46.22 N.	122.18 W.	3	...	...	3.2G	...	W	APR.	8	06	A.M.	PST
APR.	8	15	47	29.7	46.22 N.	122.19 W.	2	...	...	3.5G	...	W	APR.	8	07	A.M.	PST
APR.	8	19	29	2.8	46.21 N.	122.17 W.	4	4.3	...	4.4G	...	W	APR.	8	11	A.M.	PST
APR.	8	22	10	15.4	46.23 N.	122.18 W.	2	...	...	3.4G	...	W	APR.	8	02	P.M.	PST
APR.	8	22	13	50.0	46.21 N.	122.19 W.	4	4.4	...	4.2G	...	W	APR.	8	02	P.M.	PST
APR.	9	03	25	20.5	46.20 N.	122.18 W.	4	...	...	3.2G	...	W	APR.	8	07	P.M.	PST
APR.	9	03	28	51.4	46.21 N.	122.19 W.	4	...	...	3.4G	...	W	APR.	8	07	P.M.	PST
APR.	9	07	04	47.4	46.21 N.	122.18 W.	3	...	...	3.3G	...	W	APR.	8	11	P.M.	PST
APR.	9	09	01	44.2	46.22 N.	122.18 W.	3	4.2	...	4.2G	...	W	APR.	9	01	A.M.	PST
APR.	9	10	13	20.3	46.22 N.	122.15 W.	4	4.9	...	4.5G	...	W	APR.	9	02	A.M.	PST
APR.	9	11	55	26.0	46.21 N.	122.17 W.	4	4.1	...	3.4G	...	W	APR.	9	03	A.M.	PST
APR.	9	18	19	27.3	46.20 N.	122.20 W.	5	4.8	...	4.5G	...	G	APR.	9	10	A.M.	PST
APR.	9	22	29	3.5	46.21 N.	122.18 W.	4	...	...	3.7G	...	W	APR.	9	02	P.M.	PST
APR.	10	00	25	47.9	46.22 N.	122.17 W.	4	4.4	...	4.3G	...	W	APR.	9	04	P.M.	PST
APR.	10	00	44	15.7	46.23 N.	122.18 W.	4	4.7	...	4.6G	...	W	APR.	9	04	P.M.	PST
APR.	10	14	16	15.3	46.22 N.	122.18 W.	2	4.7	3.3	4.5G	...	W	APR.	10	06	A.M.	PST
APR.	10	21	08	26.2	46.21 N.	122.18 W.	4	...	...	3.7G	...	W	APR.	10	01	P.M.	PST
APR.	11	00	51	48.3	46.21 N.	122.18 W.	4	...	...	3.4G	...	W	APR.	10	04	P.M.	PST
APR.	11	03	36	4.3	46.21 N.	122.18 W.	2	...	...	3.2G	...	W	APR.	10	07	P.M.	PST
APR.	11	04	45	22.1	46.23 N.	122.17 W.	4	4.7	...	4.4G	...	W	APR.	10	08	P.M.	PST
APR.	11	07	42	1.8	46.21 N.	122.19 W.	2	4.3	...	3.6G	...	W	APR.	10	11	P.M.	PST
APR.	11	14	52	25.1	46.21 N.	122.18 W.	3	...	...	3.6G	...	W	APR.	11	06	A.M.	PST
APR.	11	18	01	10.6	46.21 N.	122.18 W.	1	...	...	3.7G	...	W	APR.	11	10	A.M.	PST
APR.	11	21	56	31.2	46.21 N.	122.17 W.	4	...	...	3.5G	...	W	APR.	11	01	P.M.	PST
APR.	11	23	52	0.0	46.22 N.	122.16 W.	3	4.4	...	4.8G	...	W	APR.	11	03	P.M.	PST
APR.	12	05	16	22.3	46.22 N.	122.18 W.	5	4.3	...	4.2G	...	W	APR.	11	09	P.M.	PST
APR.	12	15	08	11.8	46.21 N.	122.18 W.	1	3.8	...	3.6G	...	W	APR.	12	07	A.M.	PST
APR.	12	20	45	34.2	46.21 N.	122.18 W.	1	...	...	3.6G	...	W	APR.	12	12	P.M.	PST
APR.	12	21	25	19.7	46.22 N.	122.18 W.	2	...	...	3.4G	...	W	APR.	12	01	P.M.	PST
APR.	12	22	29	12.0	46.22 N.	122.18 W.	5	4.2	...	4.3G	...	W	APR.	12	02	P.M.	PST
APR.	13	01	25	56.1	46.21 N.	122.18 W.	2	4.2	...	3.6G	...	W	APR.	12	05	P.M.	PST

Table 1.--Summary of U.S. earthquakes for April-June 1980--Continued

Date (1980)	Origin time (UTC)			Lat	Long	Depth (km)	Magnitude			Maximum intensity	Hypocenter source	Local time			
	hr	min	s				mb	MS	ML or Mn			Date	Hour		
WASHINGTON--Continued															
APR. 13	03	03	23.0	46.25 N.	122.20 W.	1			3.5G	...	W	APR. 12	07	P.M.	PST
APR. 13	06	13	18.5	46.21 N.	122.19 W.	3	3.8	...	3.6G	...	W	APR. 12	10	P.M.	PST
APR. 13	07	39	32.2	46.22 N.	122.18 W.	2		...	3.1G	...	W	APR. 12	11	P.M.	PST
APR. 13	08	36	18.8	46.22 N.	122.18 W.	1	4.7	...	4.5G	...	W	APR. 13	00	A.M.	PST
APR. 13	09	40	46.5	46.22 N.	122.18 W.	2	...	...	3.5G	...	W	APR. 13	01	A.M.	PST
APR. 13	12	06	20.7	46.22 N.	122.17 W.	1		...	3.5G	...	W	APR. 13	04	A.M.	PST
APR. 13	17	35	41.8	46.21 N.	122.19 W.	4	4.2	...	4.1G	...	W	APR. 13	09	A.M.	PST
APR. 13	18	58	21.7	46.22 N.	122.17 W.	4	4.0	...	4.3G	...	W	APR. 13	10	A.M.	PST
APR. 13	23	57	32.1	46.22 N.	122.18 W.	3		...	3.6G	...	W	APR. 13	03	P.M.	PST
APR. 14	03	01	2.5	46.21 N.	122.19 W.	4	4.0	...	3.7G	...	W	APR. 13	07	P.M.	PST
APR. 14	06	53	38.9	46.22 N.	122.17 W.	3	4.4	...	3.7G	...	W	APR. 13	10	P.M.	PST
APR. 14	06	59	22.3	46.22 N.	122.19 W.	4	4.7	...	4.5G	...	W	APR. 13	10	P.M.	PST
APR. 14	08	42	11.6	46.21 N.	122.17 W.	3		...	3.4G	...	W	APR. 14	00	A.M.	PST
APR. 14	12	28	43.6	46.22 N.	122.18 W.	4	4.2	...	3.9G	...	W	APR. 14	04	A.M.	PST
APR. 14	13	49	4.1	46.21 N.	122.19 W.	3	4.8	5.3	4.7G	...	W	APR. 14	05	A.M.	PST
APR. 14	15	30	30.6	46.23 N.	122.20 W.	1		...	3.4G	...	W	APR. 14	07	A.M.	PST
APR. 14	22	28	53.3	46.22 N.	122.19 W.	2		...	3.4G	...	W	APR. 14	02	P.M.	PST
APR. 15	00	37	5.4	46.22 N.	122.16 W.	4		...	4.0G	...	W	APR. 14	04	P.M.	PST
APR. 15	02	26	18.6	46.23 N.	122.21 W.	1	4.2	...	3.7G	...	W	APR. 14	06	P.M.	PST
APR. 15	06	58	22.4	46.22 N.	122.20 W.	6	4.5	...	4.3G	...	W	APR. 14	10	P.M.	PST
APR. 15	07	35	25.8	46.22 N.	122.20 W.	4	3.9	...	3.4G	...	W	APR. 14	11	P.M.	PST
APR. 15	11	53	53.7	46.20 N.	122.19 W.	4		...	3.7G	...	W	APR. 15	03	A.M.	PST
APR. 15	13	56	24.7	46.21 N.	122.19 W.	3		...	3.4G	...	W	APR. 15	05	A.M.	PST
APR. 15	15	27	51.3	46.22 N.	122.19 W.	4	3.7	...	3.3G	...	W	APR. 15	07	A.M.	PST
APR. 15	16	12	4.8	46.21 N.	122.18 W.	1		...	3.5G	...	W	APR. 15	08	A.M.	PST
APR. 15	17	54	54.3	46.22 N.	122.18 W.	3	4.9	3.6	4.7G	...	W	APR. 15	09	A.M.	PST
APR. 15	21	55	49.0	46.43 N.	121.93 W.	5	4.1		4.0G	...	G	APR. 15	01	P.M.	PST
APR. 16	01	54	45.9	46.20 N.	122.20 W.	6		...	3.5G	...	W	APR. 15	05	P.M.	PST
APR. 16	04	58	57.4	46.22 N.	122.19 W.	4		...	3.4G	...	W	APR. 15	08	P.M.	PST
APR. 16	06	25	52.5	46.22 N.	122.20 W.	4	4.1		3.2G	...	W	APR. 15	10	P.M.	PST
APR. 16	11	47	28.6	46.21 N.	122.19 W.	3	3.8	...	3.5G	...	W	APR. 16	03	A.M.	PST
APR. 16	15	22	5.6	46.22 N.	122.18 W.	3	4.9	...	4.9G	...	W	APR. 16	07	A.M.	PST
APR. 16	15	40	23.5	46.22 N.	122.17 W.	4	4.8	...	4.5G	...	W	APR. 16	07	A.M.	PST
APR. 16	22	46	24.9	46.22 N.	122.18 W.	1	4.3	...	3.5G	...	W	APR. 16	02	P.M.	PST
APR. 17	04	26	16.0	46.22 N.	122.19 W.	4	4.1	...	4.3G	...	W	APR. 16	08	P.M.	PST
APR. 17	07	06	47.1	46.20 N.	122.17 W.	1	4.0	3.3	3.5G	...	W	APR. 16	11	P.M.	PST
APR. 17	08	58	44.8	46.21 N.	122.19 W.	2		...	3.3G	...	W	APR. 17	00	A.M.	PST
APR. 17	17	43	22.6	46.22 N.	122.18 W.	3	4.7	3.6	4.6G	...	W	APR. 17	09	A.M.	PST
APR. 18	00	51	6.0	46.22 N.	122.19 W.	1	3.7	...	3.4G	...	W	APR. 17	04	P.M.	PST
APR. 18	00	53	40.5	46.22 N.	122.18 W.	2	4.7	...	4.4G	...	W	APR. 17	04	P.M.	PST
APR. 18	02	24	31.3	46.21 N.	122.19 W.	3	4.1	...	3.4G	...	W	APR. 17	06	P.M.	PST
APR. 18	08	28	9.2	46.22 N.	122.19 W.	3	4.3	...	3.4G	...	W	APR. 18	00	A.M.	PST
APR. 18	09	23	39.1	46.21 N.	122.19 W.	3	3.9	...	3.7G	...	W	APR. 18	01	A.M.	PST
APR. 18	10	45	22.4	46.22 N.	122.19 W.	3	4.0	...	3.4G	...	W	APR. 18	02	A.M.	PST
APR. 18	12	15	43.9	46.23 N.	122.18 W.	4		...	3.4G	...	W	APR. 18	04	A.M.	PST
APR. 18	13	08	29.4	46.21 N.	122.18 W.	4		...	3.6G	...	W	APR. 18	05	A.M.	PST
APR. 18	15	53	13.9	46.21 N.	122.20 W.	4		...	3.3G	...	W	APR. 18	07	A.M.	PST
APR. 18	19	16	25.4	46.22 N.	122.20 W.	5		...	3.5G	...	W	APR. 18	11	A.M.	PST
APR. 18	21	16	2.2	46.22 N.	122.19 W.	4	4.8	...	4.7G	...	W	APR. 18	01	P.M.	PST
APR. 18	22	27	14.5	46.22 N.	122.18 W.	4	4.5	...	4.1G	...	W	APR. 18	02	P.M.	PST
APR. 19	02	37	26.3	46.22 N.	122.18 W.	2	4.1	...	3.6G	...	W	APR. 18	06	P.M.	PST
APR. 19	06	03	12.6	46.21 N.	122.19 W.	2		...	3.6G	...	W	APR. 18	10	P.M.	PST
APR. 19	08	07	18.1	46.22 N.	122.19 W.	3	4.0	...	3.8G	...	W	APR. 19	00	A.M.	PST
APR. 19	14	53	14.5	46.23 N.	122.19 W.	1		...	3.6G	...	W	APR. 19	06	A.M.	PST
APR. 19	17	48	35.7	46.23 N.	122.17 W.	3	4.3	...	3.9G	...	W	APR. 19	09	A.M.	PST
APR. 19	19	07	51.2	46.22 N.	122.20 W.	5	3.9	...	3.8G	...	W	APR. 19	11	A.M.	PST
APR. 19	19	17	58.3	46.20 N.	122.17 W.	2		...	3.5G	...	W	APR. 19	11	A.M.	PST
APR. 19	20	41	38.7	46.21 N.	122.18 W.	2		...	3.4G	...	W	APR. 19	12	P.M.	PST
APR. 19	22	28	28.2	46.23 N.	122.18 W.	3	4.7	...	4.6G	...	W	APR. 19	02	P.M.	PST
APR. 20	00	13	41.2	46.21 N.	122.18 W.	4	4.1	...	3.4G	...	W	APR. 19	04	P.M.	PST
APR. 20	04	53	2.6	46.22 N.	122.19 W.	2	4.1	...	3.7G	...	W	APR. 19	08	P.M.	PST
APR. 20	05	04	50.3	46.22 N.	122.19 W.	4	4.0	...	3.8G	...	W	APR. 19	09	P.M.	PST
APR. 20	08	08	8.7	46.23 N.	122.19 W.	1	3.9	...	3.6G	...	W	APR. 20	00	A.M.	PST
APR. 20	10	25	25.2	46.22 N.	122.17 W.	2	4.1	...	4.0G	...	W	APR. 20	02	A.M.	PST
APR. 20	11	59	31.1	46.21 N.	122.19 W.	3	4.1	...	3.6G	...	W	APR. 20	03	A.M.	PST

Table 1.--Summary of U.S. earthquakes for April-June 1980--Continued

Date (1980)	Origin time (UTC)			Lat	Long	Depth (km)	Magnitude			Maximum intensity	Hypocenter source	Local time					
	hr	min	s				mb	MS	ML or Mn			Date	Hour				
WASHINGTON—Continued																	
APR.	20	13	29	24.3	46.21 N.	122.19 W.	3	3.8	...	3.5G	...	W	APR.	20	05	A.M.	PST
APR.	20	17	53	34.1	46.21 N.	122.19 W.	3	3.7	...	3.3G	...	W	APR.	20	09	A.M.	PST
APR.	20	19	19	33.0	46.22 N.	122.19 W.	5	4.8	3.9	4.8G	...	W	APR.	20	11	A.M.	PST
APR.	20	20	12	19.5	46.21 N.	122.19 W.	4	4.2	...	3.5G	...	W	APR.	20	12	P.M.	PST
APR.	20	22	03	48.7	46.22 N.	122.17 W.	3	4.1	...	4.0G	...	W	APR.	20	02	P.M.	PST
APR.	21	03	23	33.8	46.22 N.	122.20 W.	3	4.1	...	3.5G	...	W	APR.	20	07	P.M.	PST
APR.	21	05	17	52.4	46.22 N.	122.18 W.	2	4.4	...	3.7G	...	W	APR.	20	09	P.M.	PST
APR.	21	15	13	55.5	46.11 N.	122.17 W.	10	4.5	...	4.5G	...	W	APR.	21	07	A.M.	PST
APR.	21	19	52	8.8	46.22 N.	122.17 W.	4	...	...	4.0G	...	W	APR.	21	11	A.M.	PST
APR.	21	20	33	59.5	46.22 N.	122.18 W.	2	...	...	3.5G	...	W	APR.	21	12	P.M.	PST
APR.	22	06	11	55.8	46.22 N.	122.18 W.	5	...	...	3.8G	...	W	APR.	21	10	P.M.	PST
APR.	22	10	25	5.6	46.22 N.	122.19 W.	3	4.2	...	3.9G	...	W	APR.	22	02	A.M.	PST
APR.	22	19	28	18.8	46.22 N.	122.18 W.	4	4.6	...	4.6G	...	W	APR.	22	11	A.M.	PST
APR.	22	22	04	10.9	46.22 N.	122.17 W.	5	4.1	...	...	...	W	APR.	22	02	P.M.	PST
APR.	23	03	01	4.9	46.22 N.	122.19 W.	2	...	...	3.4G	...	W	APR.	22	07	P.M.	PST
APR.	23	06	04	53.9	46.21 N.	122.18 W.	3	3.9	...	...	...	W	APR.	22	10	P.M.	PST
APR.	23	06	44	41.7	46.21 N.	122.18 W.	1	...	...	3.3G	...	W	APR.	22	10	P.M.	PST
APR.	23	08	42	42.9	46.21 N.	122.18 W.	2	...	...	3.2G	...	W	APR.	23	00	A.M.	PST
APR.	23	12	28	39.3	46.21 N.	122.19 W.	2	...	...	3.3G	...	W	APR.	23	04	A.M.	PST
APR.	23	12	30	53.1	46.26 N.	122.01 W.	5	4.5	...	4.7G	...	G	APR.	23	04	A.M.	PST
APR.	23	13	08	15.4	46.22 N.	122.20 W.	2	...	...	3.4G	...	W	APR.	23	05	A.M.	PST
APR.	23	15	18	1.1	46.22 N.	122.18 W.	4	4.2	...	4.2G	...	W	APR.	23	07	A.M.	PST
APR.	23	15	31	2.9	46.20 N.	122.18 W.	4	...	...	3.5G	...	W	APR.	23	07	A.M.	PST
APR.	23	23	06	50.5	46.20 N.	122.20 W.	4	...	...	3.4G	...	W	APR.	23	03	P.M.	PST
APR.	24	01	41	5.3	46.21 N.	122.20 W.	1	...	...	3.5G	...	W	APR.	23	05	P.M.	PST
APR.	24	04	21	41.2	46.21 N.	122.19 W.	3	3.6	...	3.4G	...	W	APR.	23	08	P.M.	PST
APR.	24	09	50	9.5	46.22 N.	122.18 W.	4	4.0	...	3.9G	...	W	APR.	24	01	A.M.	PST
APR.	24	10	50	42.8	46.22 N.	122.20 W.	3	...	...	3.4G	...	W	APR.	24	02	A.M.	PST
APR.	24	13	32	7.7	46.20 N.	122.17 W.	5	...	...	3.5G	...	W	APR.	24	05	A.M.	PST
APR.	24	15	31	37.9	46.21 N.	122.19 W.	3	...	...	3.5G	...	W	APR.	24	07	A.M.	PST
APR.	24	17	34	10.4	46.22 N.	122.19 W.	4	4.7	3.8	4.8G	...	W	APR.	24	09	A.M.	PST
APR.	24	19	00	42.2	46.21 N.	122.19 W.	3	...	...	3.4G	...	W	APR.	24	11	A.M.	PST
APR.	24	23	07	53.7	46.22 N.	122.18 W.	4	...	...	3.7G	...	W	APR.	24	03	P.M.	PST
APR.	25	00	27	57.7	46.21 N.	122.19 W.	3	...	...	3.6G	...	W	APR.	24	04	P.M.	PST
APR.	25	04	55	31.9	46.21 N.	122.19 W.	3	...	...	3.3G	...	W	APR.	24	08	P.M.	PST
APR.	25	11	00	21.8	46.21 N.	122.19 W.	3	3.9	...	3.6G	...	W	APR.	25	03	A.M.	PST
APR.	25	11	03	43.6	46.22 N.	122.18 W.	3	...	...	3.5G	...	W	APR.	25	03	A.M.	PST
APR.	25	23	20	27.9	46.26 N.	122.18 W.	5	5.0	...	...	...	G	APR.	25	03	P.M.	PST
APR.	26	12	16	55.8	46.21 N.	122.18 W.	1	...	...	3.5G	...	W	APR.	26	04	A.M.	PST
APR.	26	14	26	0.3	46.22 N.	122.18 W.	4	3.9	...	3.6G	...	W	APR.	26	06	A.M.	PST
APR.	26	15	53	59.9	46.22 N.	122.18 W.	1	...	...	3.7G	...	W	APR.	26	07	A.M.	PST
APR.	27	01	15	41.5	46.21 N.	122.18 W.	4	3.9	...	3.8G	...	W	APR.	26	05	P.M.	PST
APR.	27	01	59	56.2	46.21 N.	122.18 W.	2	3.9	...	3.8G	...	W	APR.	26	05	P.M.	PST
APR.	27	06	00	27.0	47.37 N.	122.55 W.	20	...	...	3.2G	IV	W	APR.	26	10	P.M.	PST
APR.	27	07	15	17.1	46.20 N.	122.18 W.	7	3.8	...	3.5G	...	W	APR.	26	11	P.M.	PST
APR.	27	07	26	21.3	46.22 N.	122.18 W.	4	4.5	...	4.6G	...	W	APR.	26	11	P.M.	PST
APR.	27	12	34	37.6	46.22 N.	122.19 W.	1	4.0	...	3.6G	...	W	APR.	27	04	A.M.	PST
APR.	27	14	48	20.3	46.22 N.	122.18 W.	4	...	...	3.9G	...	W	APR.	27	06	A.M.	PST
APR.	27	17	04	39.4	46.21 N.	122.19 W.	2	...	...	3.5G	...	W	APR.	27	09	A.M.	PST
APR.	27	20	54	19.8	46.21 N.	122.18 W.	2	4.1	...	3.5G	...	W	APR.	27	12	P.M.	PST
APR.	27	23	40	47.6	46.21 N.	122.18 W.	4	...	...	3.4G	...	W	APR.	27	03	P.M.	PST
APR.	28	03	49	33.5	46.22 N.	122.18 W.	4	4.4	...	4.6G	...	W	APR.	27	07	P.M.	PST
APR.	28	05	15	54.1	46.22 N.	122.18 W.	2	4.0	...	3.9G	...	W	APR.	27	09	P.M.	PST
APR.	28	12	30	54.8	46.21 N.	122.19 W.	1	3.7	...	3.6G	...	W	APR.	28	04	A.M.	PST
APR.	28	12	38	41.9	46.22 N.	122.18 W.	2	4.0	...	3.8G	...	W	APR.	28	04	A.M.	PST
APR.	28	15	09	7.7	46.21 N.	122.18 W.	3	...	...	3.5G	...	W	APR.	28	07	A.M.	PST
APR.	28	17	07	11.9	46.23 N.	122.19 W.	1	...	...	3.3G	...	W	APR.	28	09	A.M.	PST
APR.	28	23	52	35.6	46.21 N.	122.18 W.	3	...	...	3.6G	...	W	APR.	28	03	P.M.	PST
APR.	29	03	37	36.4	46.22 N.	122.19 W.	4	4.0	...	3.4G	...	W	APR.	28	07	P.M.	PST
APR.	29	04	24	30.2	46.22 N.	122.17 W.	2	4.7	3.6	4.6G	...	W	APR.	28	08	P.M.	PST
APR.	29	06	20	50.7	46.23 N.	122.21 W.	2	4.2	...	3.6G	...	W	APR.	28	10	P.M.	PST
APR.	29	06	22	38.9	46.23 N.	122.19 W.	2	4.7	...	4.5G	...	W	APR.	28	10	P.M.	PST
APR.	29	08	59	23.6	46.20 N.	122.23 W.	5	...	...	3.4G	...	W	APR.	29	00	A.M.	PST
APR.	29	12	41	36.4	46.22 N.	122.19 W.	5	4.3	...	4.1G	...	W	APR.	29	04	A.M.	PST
APR.	29	12	46	8.1	46.22 N.	122.19 W.	2	...	...	3.6G	...	W	APR.	29	04	A.M.	PST

Table 1.--Summary of U.S. earthquakes for April-June 1980--Continued

Date (1980)	Origin time (UTC)				Lat	Long	Depth (km)	Magnitude			Maximum intensity	Hypocenter source	Local time				
	hr	min	s	mb				MS	ML or Mn	Date			Hour				
WASHINGTON--Continued																	
APR.	29	17	46	6.0	46.22 N.	122.19 W.	2	...	...	3.6G	...	W	APR.	29	09	A.M.	PST
APR.	30	00	34	10.6	46.21 N.	122.17 W.	1	4.2	...	3.7G	...	W	APR.	29	04	P.M.	PST
APR.	30	05	09	2.7	46.22 N.	122.17 W.	3	4.8	3.8	4.7G	...	W	APR.	29	09	P.M.	PST
APR.	30	07	42	9.2	46.22 N.	122.19 W.	4	4.1	...	4.2G	...	W	APR.	29	11	P.M.	PST
APR.	30	07	54	59.1	46.22 N.	122.16 W.	2	4.1	...	3.6G	...	W	APR.	29	11	P.M.	PST
APR.	30	20	50	38.6	46.21 N.	122.19 W.	3	3.9	...	3.6G	...	W	APR.	30	12	P.M.	PST
MAY	1	04	46	15.6	46.22 N.	122.19 W.	3	4.3	...	4.2G	...	W	APR.	30	08	P.M.	PST
MAY	1	04	53	5.4	46.23 N.	122.20 W.	2	4.0	...	3.4G	...	W	APR.	30	08	P.M.	PST
MAY	1	06	18	32.3	46.21 N.	122.19 W.	3	4.2	...	3.7G	...	W	APR.	30	10	P.M.	PST
MAY	1	10	59	3.4	46.19 N.	122.18 W.	3	3.7	...	3.6G	...	W	MAY	1	02	A.M.	PST
MAY	1	12	46	12.3	46.21 N.	122.18 W.	3	...	...	3.2G	...	W	MAY	1	04	A.M.	PST
MAY	1	19	27	15.7	46.21 N.	122.18 W.	1	4.3	...	4.3G	...	W	MAY	1	11	A.M.	PST
MAY	1	21	31	9.7	46.22 N.	122.16 W.	1	3.7	...	3.7G	...	W	MAY	1	01	P.M.	PST
MAY	1	23	01	10.8	46.22 N.	122.18 W.	2	...	...	3.3G	...	W	MAY	1	03	P.M.	PST
MAY	2	00	57	9.4	46.23 N.	122.20 W.	1	...	...	3.3G	...	W	MAY	1	04	P.M.	PST
MAY	2	05	12	19.0	46.22 N.	122.17 W.	2	4.3	...	4.0G	...	W	MAY	1	09	P.M.	PST
MAY	2	08	36	31.6	46.21 N.	122.20 W.	2	4.0	...	3.6G	...	W	MAY	2	00	A.M.	PST
MAY	2	09	52	25.4	46.21 N.	122.19 W.	3	...	...	3.4G	...	W	MAY	2	01	A.M.	PST
MAY	2	12	52	17.5	46.19 N.	122.15 W.	10	...	...	3.8G	...	W	MAY	2	04	A.M.	PST
MAY	2	13	02	29.6	46.23 N.	122.20 W.	1	4.6	3.6	4.5G	...	W	MAY	2	05	A.M.	PST
MAY	2	18	59	47.4	46.21 N.	122.19 W.	3	...	...	3.4G	...	W	MAY	2	10	A.M.	PST
MAY	3	05	00	46.0	46.21 N.	122.18 W.	10	4.4	4.2	4.5G	...	W	MAY	2	09	P.M.	PST
MAY	3	05	05	30.5	46.23 N.	122.19 W.	2	4.5	...	4.1G	...	W	MAY	2	09	P.M.	PST
MAY	3	06	47	50.8	46.21 N.	122.19 W.	3	...	...	3.6G	...	W	MAY	2	10	P.M.	PST
MAY	3	13	12	13.7	46.43 N.	121.94 W.	1	4.1	...	3.9G	...	G	MAY	3	05	A.M.	PST
MAY	3	15	40	57.2	46.22 N.	122.20 W.	2	3.8	...	3.8G	...	W	MAY	3	07	A.M.	PST
MAY	3	20	45	38.0	46.21 N.	122.17 W.	1	...	...	3.7G	...	W	MAY	3	12	P.M.	PST
MAY	4	07	47	28.9	46.22 N.	122.19 W.	1	...	...	3.6G	...	W	MAY	3	11	P.M.	PST
MAY	4	11	58	27.4	46.23 N.	122.18 W.	2	4.6	4.0	4.6G	...	W	MAY	4	03	A.M.	PST
MAY	4	17	34	30.7	46.22 N.	122.19 W.	1	...	...	3.4G	...	W	MAY	4	09	A.M.	PST
MAY	4	21	39	22.1	46.21 N.	122.19 W.	2	4.2	...	3.5G	...	W	MAY	4	01	P.M.	PST
MAY	5	01	53	30.5	46.22 N.	122.20 W.	1	4.0	...	3.7G	...	W	MAY	4	05	P.M.	PST
MAY	5	04	44	32.2	46.21 N.	122.18 W.	2	...	...	3.4G	...	W	MAY	4	08	P.M.	PST
MAY	5	05	43	4.1	46.22 N.	122.17 W.	3	4.6	3.7	4.6G	...	W	MAY	4	09	P.M.	PST
MAY	5	07	27	30.6	46.21 N.	122.16 W.	1	...	...	3.6G	...	W	MAY	4	11	P.M.	PST
MAY	5	09	12	54.4	46.22 N.	122.17 W.	2	4.4	...	4.0G	...	W	MAY	5	01	A.M.	PST
MAY	5	09	22	15.9	46.21 N.	122.20 W.	11	3.8	...	3.4G	...	W	MAY	5	01	A.M.	PST
MAY	5	10	44	57.8	46.22 N.	122.17 W.	1	...	...	3.3G	...	W	MAY	5	02	A.M.	PST
MAY	5	13	19	8.3	46.22 N.	122.19 W.	6	...	...	3.6G	...	W	MAY	5	05	A.M.	PST
MAY	5	16	13	51.9	46.21 N.	122.18 W.	1	4.4	...	3.5G	...	W	MAY	5	08	A.M.	PST
MAY	6	00	03	31.6	46.22 N.	122.17 W.	4	...	...	4.0G	...	W	MAY	5	04	P.M.	PST
MAY	6	08	15	1.8	46.22 N.	122.19 W.	1	4.2	...	3.8G	...	W	MAY	6	00	A.M.	PST
MAY	6	15	30	44.8	46.38 N.	121.90 W.	1	4.0	...	3.7G	...	G	MAY	6	07	A.M.	PST
MAY	6	17	04	50.9	46.36 N.	122.08 W.	1	4.7	4.2	4.7G	...	G	MAY	6	09	A.M.	PST
MAY	6	19	22	28.4	46.22 N.	122.17 W.	3	4.6	...	4.2G	...	W	MAY	6	11	A.M.	PST
MAY	7	03	44	42.8	46.21 N.	122.19 W.	2	3.9	...	3.7G	...	W	MAY	6	07	P.M.	PST
MAY	7	08	52	33.1	46.22 N.	122.17 W.	1	4.0	...	3.6G	...	W	MAY	7	00	A.M.	PST
MAY	7	11	09	18.0	46.22 N.	122.19 W.	1	4.7	...	4.6G	...	W	MAY	7	03	A.M.	PST
MAY	8	01	19	59.0	46.21 N.	122.18 W.	1	4.0	...	3.6G	...	W	MAY	7	05	P.M.	PST
MAY	8	07	46	49.1	46.06 N.	121.94 W.	10	3.9	...	3.8G	...	W	MAY	7	11	P.M.	PST
MAY	8	07	48	46.1	46.23 N.	122.17 W.	1	5.0	4.0	4.7G	...	W	MAY	7	11	P.M.	PST
MAY	8	08	47	55.4	46.22 N.	122.20 W.	1	...	...	3.6G	...	W	MAY	8	00	A.M.	PST
MAY	8	09	03	40.0	46.22 N.	122.17 W.	2	4.2	...	4.3G	...	W	MAY	8	01	A.M.	PST
MAY	8	10	05	38.4	46.23 N.	122.20 W.	4	4.2	...	3.7G	...	W	MAY	8	02	A.M.	PST
MAY	8	15	31	48.9	46.22 N.	122.19 W.	1	...	...	3.6G	...	W	MAY	8	07	A.M.	PST
MAY	8	19	27	30.0	46.22 N.	122.18 W.	1	3.8	...	3.6G	...	W	MAY	8	11	A.M.	PST
MAY	9	00	55	2.4	46.21 N.	122.19 W.	1	4.2	...	3.5G	...	W	MAY	8	04	P.M.	PST
MAY	9	04	31	58.1	46.21 N.	122.18 W.	1	...	...	3.5G	...	W	MAY	8	08	P.M.	PST
MAY	9	07	01	1.3	46.22 N.	122.17 W.	2	4.8	...	4.6G	...	W	MAY	8	11	P.M.	PST
MAY	9	08	32	30.5	46.22 N.	122.19 W.	1	...	...	3.3G	...	W	MAY	9	00	A.M.	PST
MAY	9	14	10	37.3	46.22 N.	122.17 W.	1	3.8	...	3.7G	...	W	MAY	9	06	A.M.	PST
MAY	9	18	06	26.5	46.22 N.	122.17 W.	2	4.4	3.7	4.6G	...	W	MAY	9	10	A.M.	PST
MAY	9	21	29	35.8	46.21 N.	122.18 W.	1	...	...	3.6G	...	W	MAY	9	01	P.M.	PST
MAY	10	01	14	10.7	46.22 N.	122.18 W.	1	...	...	3.6G	...	W	MAY	9	05	P.M.	PST
MAY	10	05	50	4.0	46.22 N.	122.19 W.	1	4.2	...	3.7G	...	W	MAY	9	09	P.M.	PST

Table 1.--Summary of U.S. earthquakes for April-June 1980--Continued

Date (1980)	Origin time (UTC)				Lat	Long	Depth (km)	Magnitude			Maximum intensity	Hypocenter source	Local time				
	hr	min	s	mb				MS	ML or Mn	Date			Hour				
WASHINGTON--Continued																	
MAY	10	09	25	56.1	46.22 N.	122.19 W.	4	3.9	...	3.8G	...	W	MAY	10	01	A.M.	PST
MAY	10	11	15	54.9	46.22 N.	122.18 W.	1	4.1	...	3.5G	...	W	MAY	10	03	A.M.	PST
MAY	10	12	31	51.0	46.35 N.	122.03 W.	10	4.4	...	4.0G	...	G	MAY	10	04	A.M.	PST
MAY	10	17	35	20.6	46.22 N.	122.19 W.	3	...	...	4.0G	...	W	MAY	10	09	A.M.	PST
MAY	11	01	19	29.5	46.21 N.	122.20 W.	4	...	...	3.7G	...	W	MAY	10	05	P.M.	PST
MAY	11	04	00	18.1	46.22 N.	122.17 W.	1	4.7	...	4.5G	...	W	MAY	10	08	P.M.	PST
MAY	11	08	09	48.4	46.22 N.	122.18 W.	2	4.0	...	3.6G	...	W	MAY	11	00	A.M.	PST
MAY	11	08	15	42.1	46.19 N.	122.20 W.	12	4.0	...	3.5G	...	W	MAY	11	00	A.M.	PST
MAY	11	13	29	54.0	46.22 N.	122.18 W.	1	4.2	...	4.1G	...	W	MAY	11	05	A.M.	PST
MAY	11	15	00	52.2	46.21 N.	122.17 W.	1	...	...	3.6G	...	W	MAY	11	07	A.M.	PST
MAY	11	22	46	24.5	46.21 N.	122.19 W.	2	3.8	...	4.0G	...	W	MAY	11	02	P.M.	PST
MAY	12	05	24	36.2	46.21 N.	122.18 W.	2	3.6	...	3.5G	...	W	MAY	11	09	P.M.	PST
MAY	12	12	11	25.4	46.21 N.	122.19 W.	1	...	...	3.5G	...	W	MAY	12	04	A.M.	PST
MAY	12	16	26	29.7	46.22 N.	122.18 W.	2	4.8	4.4	4.9G	...	W	MAY	12	08	A.M.	PST
MAY	12	16	46	50.3	46.22 N.	122.18 W.	2	...	...	3.7G	...	W	MAY	12	08	A.M.	PST
MAY	12	17	24	11.9	46.22 N.	122.18 W.	1	...	...	3.6G	...	W	MAY	12	09	A.M.	PST
MAY	12	20	33	40.7	46.25 N.	122.31 W.	10	4.4	...	4.6G	...	W	MAY	12	12	P.M.	PST
MAY	13	01	30	53.4	46.31 N.	121.89 W.	5	...	...	4.0G	...	G	MAY	12	05	P.M.	PST
MAY	13	08	59	55.6	46.21 N.	122.16 W.	1	4.0	...	3.6G	...	W	MAY	13	00	A.M.	PST
MAY	13	11	12	12.9	46.20 N.	122.22 W.	8	4.0	...	3.7G	...	W	MAY	13	03	A.M.	PST
MAY	14	02	18	57.8	46.22 N.	122.17 W.	2	4.6	...	4.5G	...	W	MAY	13	06	P.M.	PST
MAY	14	05	00	49.3	46.22 N.	122.19 W.	1	4.2	...	3.5G	...	W	MAY	13	09	P.M.	PST
MAY	14	09	43	51.8	46.22 N.	122.18 W.	2	4.0	...	3.7G	...	W	MAY	14	01	A.M.	PST
MAY	14	14	08	16.4	46.22 N.	122.17 W.	2	...	...	3.9G	...	W	MAY	14	06	A.M.	PST
MAY	14	18	48	2.2	46.21 N.	122.18 W.	1	...	...	3.6G	...	W	MAY	14	10	A.M.	PST
MAY	15	06	48	24.7	46.21 N.	122.19 W.	2	4.0	...	3.6G	...	W	MAY	14	10	P.M.	PST
MAY	15	09	13	0.1	46.22 N.	122.17 W.	1	...	...	3.8G	...	W	MAY	15	01	A.M.	PST
MAY	15	11	41	34.6	46.21 N.	122.19 W.	2	4.9	3.6	4.6G	...	W	MAY	15	03	A.M.	PST
MAY	15	17	29	16.8	46.21 N.	122.17 W.	1	...	...	3.6G	...	W	MAY	15	09	A.M.	PST
MAY	16	03	31	4.7	46.22 N.	122.18 W.	1	4.4	...	3.7G	...	W	MAY	15	07	P.M.	PST
MAY	16	07	30	25.9	46.23 N.	122.20 W.	1	...	...	3.4G	...	W	MAY	15	11	P.M.	PST
MAY	16	11	15	13.9	46.21 N.	122.17 W.	1	...	...	3.5G	...	W	MAY	16	03	A.M.	PST
MAY	16	12	34	54.1	46.22 N.	122.17 W.	2	4.6	3.7	4.7G	...	W	MAY	16	04	A.M.	PST
MAY	16	13	27	13.5	46.21 N.	122.18 W.	3	4.3	...	3.9G	...	W	MAY	16	05	A.M.	PST
MAY	16	14	22	0.3	46.22 N.	122.18 W.	2	4.2	...	4.0G	...	W	MAY	16	06	A.M.	PST
MAY	16	16	17	44.5	46.21 N.	122.19 W.	2	3.9	...	3.8G	...	W	MAY	16	08	A.M.	PST
MAY	17	08	05	52.6	46.21 N.	122.19 W.	1	3.6	...	3.6G	...	W	MAY	17	00	A.M.	PST
MAY	17	08	31	53.0	46.20 N.	122.20 W.	4	4.2	...	3.9G	...	W	MAY	17	00	A.M.	PST
MAY	17	19	27	53.4	46.20 N.	122.17 W.	5	3.8	...	3.6G	...	W	MAY	17	11	A.M.	PST
MAY	17	21	42	7.4	46.21 N.	122.17 W.	4	4.2	3.7	3.9G	...	W	MAY	17	01	P.M.	PST
MAY	18	01	50	52.1	46.21 N.	122.19 W.	4	3.8	...	3.7G	...	W	MAY	17	05	P.M.	PST
MAY	18	06	20	36.1	46.21 N.	122.18 W.	5	3.9	...	3.7G	...	W	MAY	17	10	P.M.	PST
MAY	18	14	36	10.6	46.21 N.	122.18 W.	5	4.0	...	3.6G	...	W	MAY	18	06	A.M.	PST
MAY	18	15	32	11.4	46.21 N.	122.19 W.	4	4.7	5.2	5.0G	IV	W	MAY	18	07	A.M.	PST
MAY	19	07	18	50.4	46.20 N.	122.20 W.	19	4.2	...	3.8G	...	W	MAY	18	11	P.M.	PST
MAY	19	14	21	56.9	46.21 N.	122.20 W.	18	...	...	3.7G	...	W	MAY	19	06	A.M.	PST
MAY	21	16	02	31.6	46.19 N.	122.20 W.	16	...	...	3.3G	...	W	MAY	21	08	A.M.	PST
MAY	24	23	01	23.6	46.33 N.	122.20 W.	8	...	...	3.8G	...	W	MAY	24	03	P.M.	PST
MAY	28	14	15	31.5	46.34 N.	122.21 W.	7	...	...	3.8G	FELT	W	MAY	28	06	A.M.	PST
MAY	28	14	18	30.0	46.34 N.	122.20 W.	8	...	...	3.6G	FELT	W	MAY	28	06	A.M.	PST
JUNE	8	22	40	9.8	47.95 N.	123.02 W.	51	...	...	3.5G	IV	W	JUNE	8	02	P.M.	PST
JUNE	23	16	05	15.9	47.52 N.	122.23 W.	3	...	...	3.1G	V	W	JUNE	23	08	A.M.	PST
JUNE	23	16	09	54.4	47.53 N.	122.25 W.	3	...	...	3.0G	FELT	W	JUNE	23	08	A.M.	PST

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980

[Sources of the hypocenters, magnitudes, and macroseismic data: (B) University of California, Berkeley; (D) University of Montana, Missoula; (E) U.S. Department of Energy, Las Vegas, Nevada; (G) U.S. Geological Survey, National Earthquake Information Service; (H) U.S. Geological Survey, Hawaiian Volcano Observatory; (J) Weston Observatory, Massachusetts; (L) Lamont-Doherty Geological Observatory, Palisades, N.Y.; (M) National Oceanic and Atmospheric Administration, Alaska Tsunami Warning Center, Palmer; (P) California Institute of Technology, Pasadena; (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; (Y) Baptist College, Charleston. 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

3 April (G) Southern Alaska

Origin time: 03 46 04.3
Epicenter: 63.15 N., 149.57 W.
Depth: 92 km
Magnitude: 5.0 mb(G)
Intensity IV: Anchorage, Cantwell, Girdwood, Healy, McKinley Park, Palmer, Talkeetna, Usibelli, Wasilla, Willow (W).
Intensity III: Anchorage (Eastchester), Chugiak, Fairbanks (M), Hope, Skwentna, Spenard, Sutton, Tyonek.
Intensity II: Delta Junction, Whittier.

3 April (G) Southern Alaska

Origin time: 08 37 29.5
Epicenter: 61.60 N., 150.56 W.
Depth: 58 km
Magnitude: None computed.

Felt in the Big Lake Area (M).

6 April (G) Southern Alaska

Origin time: 14 47 43.2
Epicenter: 61.38 N., 147.82 W.
Depth: 49 km
Magnitude: 4.9 mb(G), 5.2 MS(G), 5.2 ML(M)

Intensity V: Chugiak (small objects overturned; buildings shook strongly; windows, doors, and dishes rattled; felt by and awakened many), Gunsight Mountain Lodge--near Palmer (cracks in chimney, building shook strongly).

Intensity IV: Anchorage, Chickaloon, Cordova (M), Eastchester, Girdwood, Hope, King Mountain Lodge (near Palmer), Mountain View, Palmer, Sutton, Talkeetna, Valdez (M), Wasilla, Whittier.

Intensity III: Moose Pass, Skwentna, Tyonek.

13 April (G) Alaska Peninsula area

Origin time: 02 08 32.2
Epicenter: 55.04 N., 160.31 W.
Depth: 57 km
Magnitude: 5.4 mb(G)
Intensity IV: Sand Point.
Felt: Cold Bay (M).

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

Alaska--Continued

14 April (G) Fox Islands, Aleutian Islands

Origin time: 22 07 36.8
Epicenter: 52.98 N., 167.84 W.
Depth: 46 km
Magnitude: 4.7 mb(G), 4.1 MS(G)
Intensity IV: Unalaska (M).

15 April (G) Andreanof Islands, Aleutian Islands

Origin time: 07 50 19.5
Epicenter: 51.87 N., 175.96 W.
Depth: 69 km
Magnitude: 5.1 mb(G)

Felt on Adak Island.

1 May (G) Southern Alaska

Origin time: 08 22 52.9
Epicenter: 61.89 N., 146.94 W.
Depth: 66 km
Magnitude: 4.3 mb(G)

Felt in the Matanuska Valley (M).

Intensity IV: Copper Center (M), Valdez.

Intensity III: Anchorage, Sutton.

7 May (G) Southern Alaska

Origin time: 03 06 16.0
Epicenter: 62.99 N., 150.80 W.
Depth: 118 km
Magnitude: 5.0 mb(G)
Intensity II: Palmer and Talkeetna (M).

14 May (G) Central Alaska

Origin time: 06 40 37.2
Epicenter: 68.41 N., 148.90 W.
Depth: 19 km
Magnitude: 4.4 mb(G), 4.4 ML(M)
Intensity III: Fairbanks (M).

29 May (G) Central Alaska

Origin time: 07 04 39.9
Epicenter: 64.91 N., 147.43 W.
Depth: Normal.
Magnitude: 3.6 ML(M)
Intensity III: College (M) and Fairbanks.

3 June (G) Southern Alaska

Origin time: 10 59 25.2
Epicenter: 60.00 N., 152.67 W.
Depth: 117 km
Magnitude: 3.7 mb(G)
Intensity II: Homer (M).

9 June (G) Southern Alaska

Origin time: 08 51 47.0
Epicenter: 61.51 N., 150.71 W.
Depth: 73 km
Magnitude: 4.5 mb(G)

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

Alaska--Continued	
<u>Intensity IV:</u> Houston (M), Willow (M).	
<u>Intensity III:</u> Palmer (M), Wasilla (M).	
12 June (G) Southern Alaska	
Origin time:	10 49 23.3
Epicenter:	59.82 N., 151.75 W.
Depth:	97 km
Magnitude:	None computed.
Felt at Homer (M).	
25 June (G) Southern Alaska	
Origin time:	07 22 19.6
Epicenter:	59.62 N., 150.31 W.
Depth:	Normal.
Magnitude:	None computed.
<u>Intensity III:</u> Anchorage (M), Eagle River (M).	
28 June (G) Southern Alaska	
Origin time:	18 51 49.4
Epicenter:	62.92 N., 151.10 W.
Depth:	124 km
Magnitude:	4.3 mb(G)
Felt at Palmer (M).	
30 June (G) Southeastern Alaska	
Origin time:	18 07 39.0
Epicenter:	60.01 N., 141.05 W.
Depth:	13 km
Magnitude:	5.0 mb(G), 5.1 ML(M)
<u>Intensity IV:</u> Icy Bay.	
30 June (G) Southeastern Alaska	
Origin time:	18 59 31.7
Epicenter:	60.02 N., 141.11 W.
Depth:	15 km
Magnitude:	4.9 mb(G), 4.8 MS(G), 5.2 ML(M)
<u>Intensity IV:</u> Icy Bay, Yakutat.	

Arizona

- 1 June (G) Central Arizona
- Origin time: 08 40 27.5
- Epicenter: 35.39 N., 111.99 W.
- Depth: 5 km
- Magnitude: 3.6 ML(G)
- Felt in the epicentral area (telephone report).
- 9 June (G) Baja California, Mexico
- Origin time: 03 28 18.9
- See California listing.

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California	
2 April (B) Owens Valley area	
Origin time:	08 04 40.7
Epicenter:	37.60 N., 118.84 W.
Depth:	8 km
Magnitude:	3.0 ML(B), 3.2 ML(P)
Felt at Mammoth Lakes (B).	
3 April (B) Owens Valley area	
Origin time:	03 00 45.5
Epicenter:	37.49 N., 118.67 W.
Depth:	16 km
Magnitude:	3.6 ML(B), 3.4 ML(P)
Felt in the Bishop area (B).	
4 April (P) Imperial Valley	
Origin time:	22 05 49.1
Epicenter:	33.18 N., 115.52 W.
Depth:	5 km
Magnitude:	3.3 ML(P)
Felt in the Imperial Valley (P).	
7 April (B) San Francisco Bay area	
Origin time:	05 17 30.6
Epicenter:	37.84 N., 122.24 W.
Depth:	6 km
Magnitude:	3.5 ML(B)
<u>Intensity V:</u> Oakland Hills--about 4 km southeast of Berkeley (books knocked off shelves--B).	
<u>Intensity IV:</u> Berkeley (press report), Oakland, Oakland International Airport, Piedmont (press report), Pleasant Hill.	
<u>Intensity III:</u> Martinez, San Francisco (press report), South San Francisco, Vallejo.	
<u>Intensity II:</u> San Leandro.	
<u>Felt:</u> Moraga (B), Orinda (B).	
7 April (P) Imperial Valley	
Origin time:	22 01 35.9
Epicenter:	33.20 N., 115.58 W.
Depth:	5 km
Magnitude:	3.0 ML(P)
Felt in the Imperial Valley (P).	
7 April (P) Imperial Valley	
Origin time:	22 40 52.1
Epicenter:	33.20 N., 115.55 W.
Depth:	5 km
Magnitude:	3.1 ML(P)
Felt in the Imperial Valley (P).	

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued	
13 April (P) Southern California	
Origin time: 03 52 27.5	
Epicenter: 33.87 N., 118.18 W.	
Depth: 6 km	
Magnitude: 2.2 ML(P)	
<u>Intensity II</u> : Long Beach (press report).	
13 April (B) Central California	
Origin time: 06 15 56.1	
Epicenter: 36.76 N., 121.55 W.	
Depth: 6 km	
Magnitude: 4.5 mb(G), 4.8 ML(B)	
This earthquake was felt over an area of approximately 20,000 sq km of the coastal region of central California (fig. 7).	
<u>Intensity V</u> :	
Monterey (small objects and light furniture moved; hanging pictures swung; windows, doors, and dishes rattled; felt by many).	
Pebble Beach (few windows cracked, small objects and light furniture moved, water splashed onto sides of swimming pools, hanging pictures swung, felt by many).	
San Martin (light and heavy furniture moved, small objects broke, hanging pictures fell, building shook strongly, felt by many).	
<u>Intensity IV</u> : Aromas, Belmont, Boulder Creek, Capitola, Castroville, Chualar, Daly City, Felton, Foster City, Freedom, Hollister, Marina, Moss Landing, Mount Hermon, New Almaden, Pacific Grove, Paicines, Pescadero, Salinas, San Carlos, San Francisco, San Jose, San Juan Bautista, Santa Cruz, Seaside, Soquel, South San Francisco, Tres Pinos, Watsonville.	
<u>Intensity III</u> : Ben Lomond, Big Sur, Byron, Campbell, El Granada, Fremont, Glen Ellen, King City, Lagunitas, La Honda, Los Banos, Moffitt Field, Newman, Pacifica, Port Costa, Redwood City, Redwood Estates, San Ardo, San Mateo, Santa Clara.	
<u>Intensity II</u> : Half Moon Bay, Hilmar, Orinda, San Geronimo, Sunnyvale.	
<u>Felt</u> : Hayward.	
16 April (P) Southern California	
Origin time: 20 26 14.9	
Epicenter: 34.35 N., 119.60 W.	
Depth: 8 km	
Magnitude: 3.0 ML(P)	
<u>Intensity III</u> : Santa Barbara (press report).	

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued	
28 April (B) Central California	
Origin time: 18 21 25.3	
Epicenter: 36.79 N., 121.59 W.	
Depth: 5 km	
Magnitude: 3.2 ML(B)	
Felt at Salinas (B).	
29 April (P) Southern California	
Origin time: 10 50 25.0	
Epicenter: 34.08 N., 118.17 W.	
Depth: 5 km	
Magnitude: 2.1 ML(P)	
Felt at Alhambra and Pasadena (P).	
4 May (P) Southern California	
Origin time: 19 50 39.7	
Epicenter: 34.08 N., 118.17 W.	
Depth: 4 km	
Magnitude: 2.2 ML(P)	
Felt at Pasadena (P).	
11 May (P) Southern California	
Origin time: 02 19 23.0	
Epicenter: 34.38 N., 118.33 W.	
Depth: 8 km	
Magnitude: 3.1 ML(P)	
<u>Intensity IV</u> : Eagle Rock (press report).	
<u>Intensity III</u> : Glendale (press report).	
<u>Felt</u> : Pasadena (P).	
14 May (B) Owens Valley area	
Origin time: 08 02 32.6	
Epicenter: 37.59 N., 118.84 W.	
Depth: 28 km	
Magnitude: 4.1 ML(B), 3.9 ML(P)	
<u>Intensity IV</u> : Crowley Lake.	
<u>Felt</u> : Bishop (P), Mammoth Lakes (B).	
14 May (B) Owens Valley area	
Origin time: 11 18 03.4	
Epicenter: 37.62 N., 118.85 W.	
Depth: 6 km	
Magnitude: 3.3 ML(P), 2.9 ML(B)	
Felt at Bishop (P).	
14 May (B) Owens Valley area	
Origin time: 11 41 33.3	
Epicenter: 37.61 N., 118.84 W.	
Depth: 6 km	
Magnitude: 3.3 ML(B), 3.4 ML(P)	
Felt at Bishop (P).	

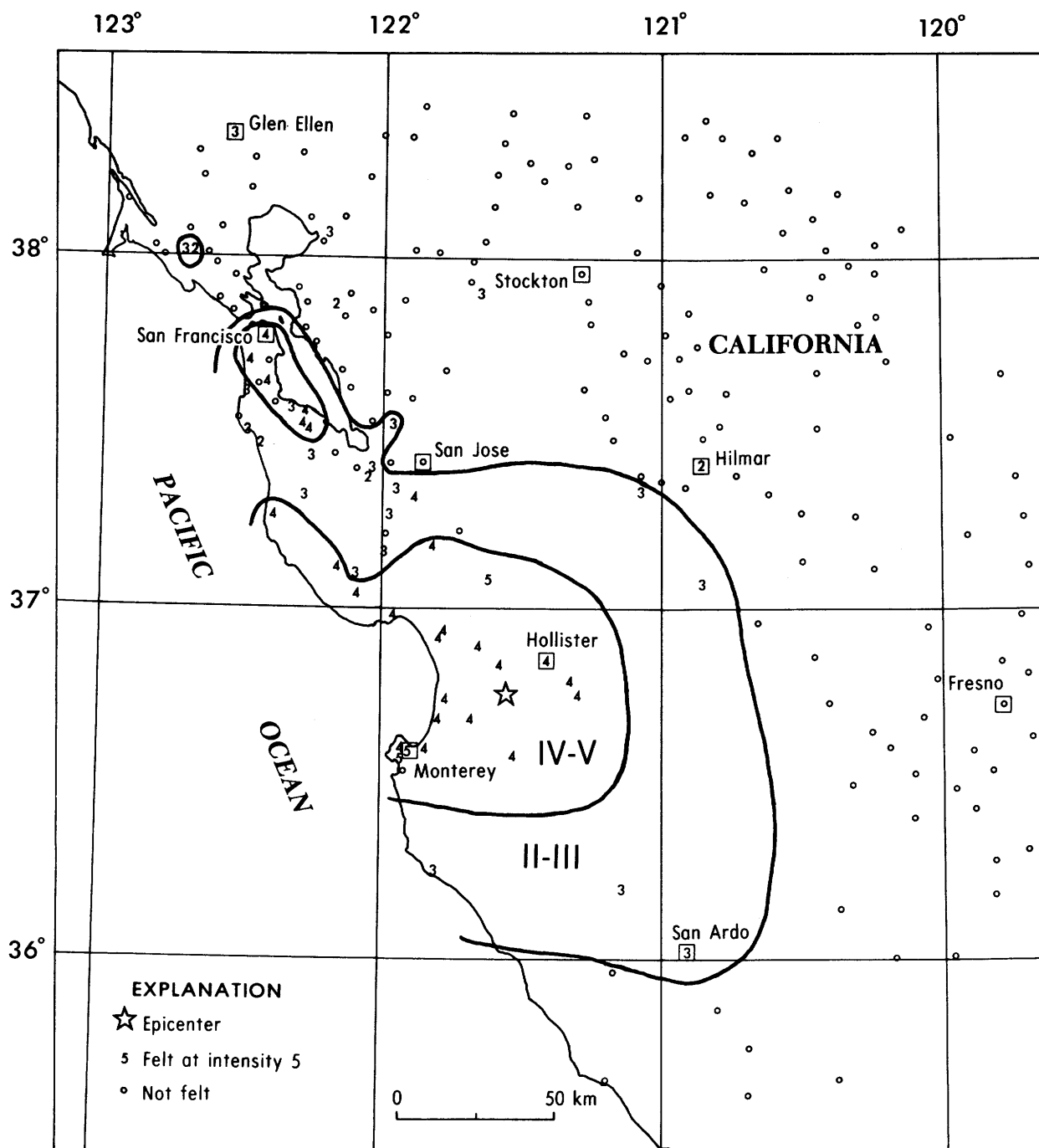


FIGURE 7.--Isoseismal map for the central California earthquake of 13 April 1980, 06 15 56.1 UTC. Roman numerals represent Modified Mercalli intensities between isoseismals; Arabic numerals are used to represent these intensities at specific sites.

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued	
14 May (B) Owens Valley area	
Origin time:	12 03 55.0
Epicenter:	37.62 N., 118.84 W.
Depth:	13 km
Magnitude:	3.1 ML(B), 3.3 ML(P)
Felt at Bishop (P).	
14 May (B) Owens Valley area	
Origin time:	19 48 59.5
Epicenter:	37.61 N., 118.91 W.
Depth:	12 km
Magnitude:	3.6 ML(B), 3.7 ML(P)
Felt at Mammoth Lakes (B).	
17 May (B) Owens Valley area	
Origin time:	00 01 14.1
Epicenter:	37.62 N., 118.84 W.
Depth:	15 km
Magnitude:	4.3 ML(B), 4.3 ML(P)
Felt at Mammoth Lakes (B).	
18 May (B) Owens Valley area	
Origin time:	12 47 30.2
Epicenter:	37.62 N., 118.87 W.
Depth:	13 km
Magnitude:	4.0 ML(B), 4.2 ML(P)
Felt at Mammoth Lakes (B).	
18 May (B) Owens Valley area	
Origin time:	18 40 52.3
Epicenter:	37.61 N., 118.87 W.
Depth:	9 km
Magnitude:	3.7 ML(B), 3.7 ML(P)
Felt at Mammoth Lakes (B).	
25 May (B) Owens Valley area	
Origin time:	16 33 44.7
Epicenter:	37.60 N., 118.84 W.
Depth:	5 km
Magnitude:	6.1 mb(G), 6.1 MS(G), 6.1 ML(B), 6.4 ML(P)
Nine people were injured by the two largest events occurring on this date. Most of the injuries were due to falling rock. Another earthquake in the same magnitude range occurred on May 27 at 14 50 57.1 UTC. The preliminary estimation of damage to schools, other public buildings, and roads in the Mammoth Lakes region caused by these three earthquakes was \$2 million (McJenkins and Bedrossian, 1980). There were hundreds of aftershocks associated with these events, many of which were felt	

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued	
in the Mammoth Lakes area. This earthquake was felt over an area of approximately 272,000 sq km of California and Nevada (fig. 8).	
The worst damage occurred at Mammoth Lakes where water mains broke, windows shattered, chimneys fell, and plaster cracked. There was also extensive damage in stores and restaurants when shelf stock was thrown to the floor. This type of damage also occurred in homes. The most extensive damage occurred to the Mammoth Elementary School, east of U.S. Highway 395, which apparently was caused by a fault underneath the building.	
Landslides and rockfalls were common in the Mammoth Lakes area and Yosemite National Park. After the snow had melted in the higher elevations, a Forest Service ranger survey of the Sierras reported hundreds of rockslides in back-country canyons. In the First Recess, a steep heavily glaciated canyon that feeds into Mono Creek, a ranger reported a football-field-sized lake had disappeared. It was located at about the 3353 m elevation approximately 6.4 km east of Lake Thomas A. Edison. Another report indicated a loss of 30.5 m off the Coxcomb, a 3,267 m peak in the John Muir Wilderness 13 km northeast of Lake Edison. The Park Service also reported the collapse of five of the 18.3 m columns of the Devils Postpile, a 3.2-sq km national monument of blue-gray basaltic columns located 29 km north of Lake Edison. The damage of rockfalls and landslides prompted the closure of many wilderness areas usually filled with backpackers and campers.	
McJenkins and Bedrossian (1980) reported ground cracks were abundant in the Mammoth Lakes region following the earthquakes of May 25-27. Many of these were in fill along paved and dirt roads. Clark and Yount (1981) reported a 17-km long zone of discontinuous surface fracture associated with the Hilton Creek Fault which had a net vertical displacement of less than 50 mm and more than 200 mm of slip on single fractures.	
A ranger at the White Mountain Ranger Station in Inyo National Park said boulders and earthslides tumbled onto roads around Convict Lake. U.S. Highway 395 had several boulders blocking one lane and at	

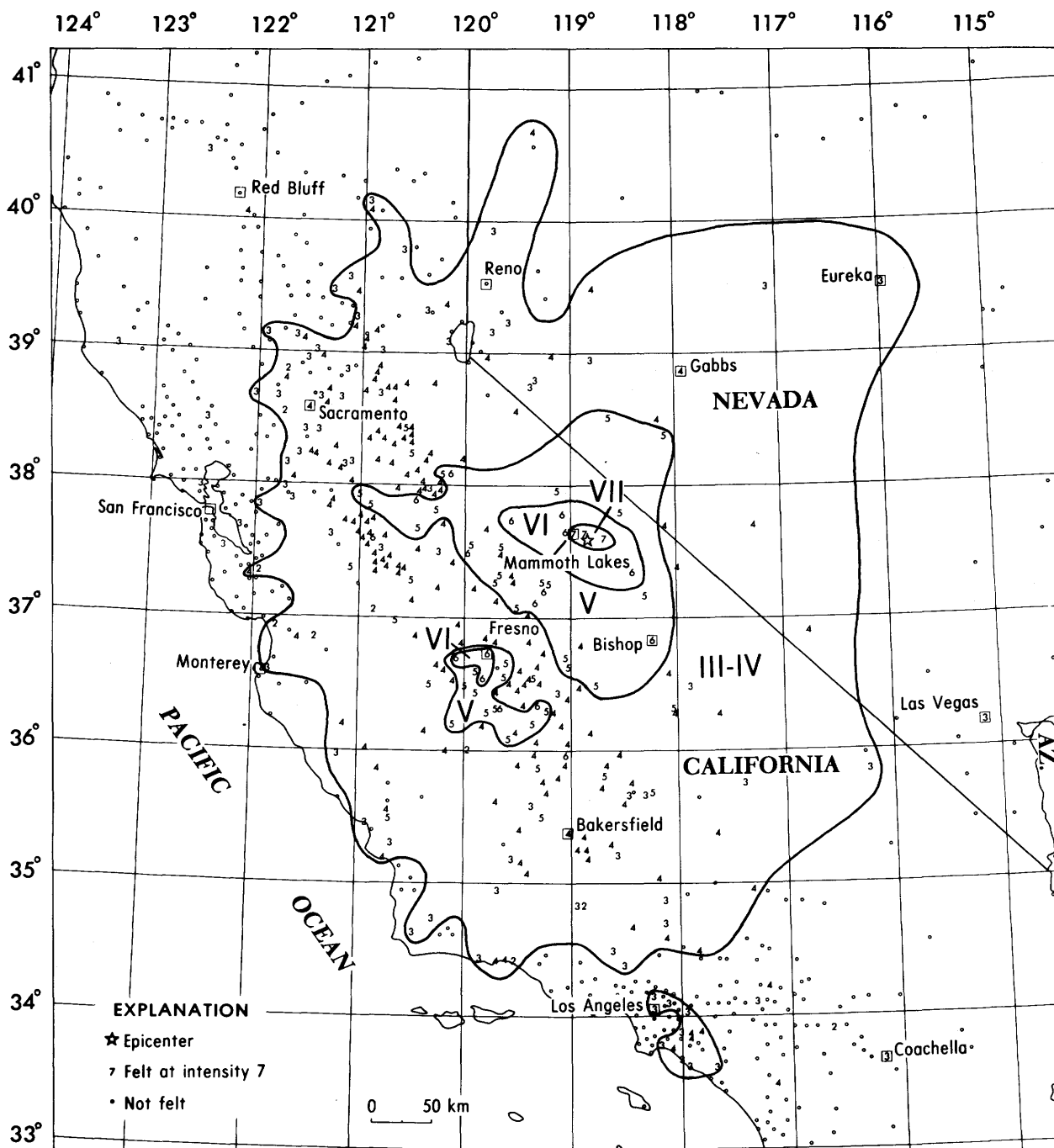


FIGURE 8.--Isoseismal map for the Owens Valley area, California, earthquake of 25 May 1980, 16 33 44.7 UTC. Roman numerals represent Modified Mercalli intensities between isoseismals; Arabic numerals are used to represent these intensities at specific sites.

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued

some places the road had buckled. Some smaller roads had cracks of 50 mm (2 inches).

A first-hand report of this earthquake was published by the press. Excerpts from it are listed below.

"The 6.0 quake that started it all at 9:40 (actually 9:33) last Sunday morning came while I was reading the newspaper in my cabin in Old Mammoth beside Mammoth Creek. The shaking and creaking of the walls around me was intially dumbfounding. Then the crash of several paintings falling off the walls and the creaking of the walls and floor catapulted me out of my chair in terror. A glass vase crashed to the floor as I ran out the door and down a small slope to the stream.

There I turned to watch as the second quake hit (9:49 a.m.). The cabin shimmered and rocked. The chimney seemed to wobble totally independent of the structure to which it's attached. It went east the wall went west. It held and so did my breath. The lights went out."

The descriptions of damage and other effects listed below could not be differentiated by time from the press reports; therefore these effects are assumed to apply equally to this event and to the one at 19 44 51.4 UTC.

Intensity VII:
California--

Crowley Lake (The press reported cars were bouncing on the ground and refrigerators were knocked over in homes near the lake. The road over the dam was cracked but there was no apparent structural damage to the dam.

Mammoth Elementary School--located about 9 km east of Mammoth Lakes (The 20-year-old school was severely damaged by faulting that passed under the school building. Large cracks zig-zagged across the floors of the multi-purpose rooms, cafeteria and classrooms. The heating and water systems were destroyed; gas lines were pulled loose from large ovens when the shaking bounced the ovens across the floor; metal heating vents fell out of the ceiling; and there were piles of books, papers, pencils, and school supplies strewn over the floor in every classroom--press reports).

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued

Mammoth Lakes (Water and sewer lines were broken, windows were shattered, and merchandise was dumped from store shelves. The Safeway store estimated \$50,000 worth of groceries were thrown to the floor. The Kittredge Sporting Goods Store had plate-glass windows shattered, skis and camping equipment thrown from shelves, and office typewriters and calculators dumped on the floor. Mammoth Lakes Hospital had broken windows and a broken steam line. There were some chimneys knocked loose or partially thrown down and some ruptured gas lines causing several small fires. At the International Inn a large picture window was broken in the lobby, six television sets were knocked off tables onto the floor, ceilings were cracked, and all the mirrors were shattered--press reports).

Intensity VI:
California--

Big Creek (bricks fell from chimneys, there were small landslides in the area, water splashed onto sides of lakes or ponds, light furniture and small objects moved, felt by all).

Bishop (large cracks in interior plaster walls, bricks loosened on chimneys, light and heavy furniture moved, a few windows cracked, felt by all).

Caruthers (large cracks in interior plaster walls, cracked foundation, moving vehicles rocked moderately, small objects overturned and broke, felt by all).

Chinese Camp (large cracks in old brick buildings, open cracks in old stone or brick fences, small objects and light furniture moved, felt by all).

Fresno (large cracks in interior plaster walls and exterior brick walls, bricks loosened on chimneys, a foundation cracked, some windows broke, felt by many).

Hanford (bricks fell from chimneys, large cracks in plaster and dry wall, light furniture and small objects moved, a few windows cracked, felt by many).

Hughson (some windows broke, water splashed onto sides of lakes or swimming pools, light furniture and small objects moved, felt by many).

Independence (a foundation cracked, standing vehicles rocked moderately, small objects moved).

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued

June Lake (cement walkway at Boulder Lodge cracked, merchandise fell from store shelves, rocks dislodged and rolled across highway, moving vehicles rocked slightly, light furniture overturned, felt by all).

Kerman (a foundation cracked, moving vehicles rocked moderately, light furniture and small objects moved, felt by several).

Long Barn (a foundation cracked, small objects moved, hanging pictures out of place, felt by many).

Mammoth Mountain Ski Area--5.5 km west of Mammoth Lakes (The Mammoth Lodge kitchen was in a shambles from objects thrown to the floor, glassware was thrown down and broken, bottles of liquor were knocked from shelves and broken, tables bounced around in the cafeteria and a chandelier fell. Concrete and mortar fell from the walls of the gondola room, and people were stranded in the gondola and chair lifts when power failed. There were reported cracks in a four-plex apartment house--press reports).

Shaver Lake (bricks fell from chimneys, small landslides, small objects moved, hanging pictures out of place, felt by all).

Terra Bella (dry wall fell in large amounts, moving vehicles rocked slightly, felt by many).

Tom's Place (standing and moving vehicles rocked strongly, trees and bushes shook strongly, small objects moved, felt by all).

Visalia (some windows broke, water splashed onto sides of lakes or swimming pools, small objects moved, felt by many).

Yosemite National Park--Lodge area (The press reported water pipes were shaken loose from water heaters, some plaster was cracked in the lodge, and everything in the grocery stores fell to the floor. A few windows were cracked and it was felt by all).

Intensity V: The most common effects reported at this intensity level were light furniture moved, a few windows cracked, moving vehicles rocked slightly, water splashed onto sides of swimming pools, and felt by many or all.
California--Armona, Atascadero, Auberry, Badger, Benton, Big Oak Flat, Big Pine,

California--Continued

Burrell, Cantua Creek, Cartago, Caruthers, Coarsegold, Corcoran, Crows Landing, Del Rey, Dos Palos, Earlimart, Farmersville, Farmington, Huntington Lake, Huron, La Grange, Lakeshore, Lee Vining, Lemoore, Mariposa, Merced, Midpines, Miramonte, Mi-Wuk Village, Mountain Ranch, Oakhurst, Onyx, Pioneer, Posey, Raisin, Riverdale, Selma, Sequoia National Park, Shafter, Sultana, Tulare, Valley Home, Wawona.

Nevada--Nawthorne, Mina.

Intensity IV:

California--Alpaugh, Altaville, Anaheim, Arnold, Arvin, Atwater, Avenal, Avery, Avila Beach, Bakersfield, Ballico, Bass Lake, Bethel Island, Biola, Bishop, Bodfish, Bradley, Broderick, Burrell, Buttonwillow, Caliente, California Hot Springs, Camino, Camptonville, Carmichael, Castle Air Force Base, Catheys Valley, Ceres, Chinese Camp, Clovis, Coalinga, Coleville, Colfax, Coloma, Columbia, Copperopolis, Corcoran, Coulterville, Crescent Mills, Cupertino, Cutler, Darwin, Deep Springs, Delano, Delhi, Di Giorgio, Dinuba, Ducor, Edison, El Nido, El Portal, Empire, Escalon, Exeter, Fair Oaks, Firebaugh, Fish Camp, French Camp, Fullerton, Garden Valley, Georgetown, Gerber, Glencoe, Glennville, Gold Run, Goshen, Grass Valley, Hathaway Pines, Helm, Herald, Hickman, Hilmar, Hume, Ione, Jackson, Jamestown, Johnsondale, Kaweah, Kernville, Keyes, King City, Kingsburg, Knights Landing, Kyburz, Lake Hughes, Lake Isabella, Lamont, Lathrop, Laton, Le Grand, Lemon Cove, Linden, Lindsay, Livingston, Llano, London, Lone Pine, Lost Hills, Madera, March Air Force Base (telegram), Maricopa, Mariposa, Mather AFB, McFarland, Miramonte, Moccasin, Modesto, Mojave, Mokelumne Hill, Morgan Hill, Mt. Aukum, Murphys, North Fork, Oakdale, Olancho, Olivehurst, O'Neals, Orange Cove, Palmdale, Piedra, Pine Grove, Pinecrest, Pinedale, Pixley, Pollock Pines, Porterville, Prather, Rail Road Flat, Rancho Cordova, Randsburg, Raymond, Reedley, Rescue, Richgrove, Rimforest, Ripon, River Pines, Riverbank, Roseville, Sacramento, Salida, San Andreas, San Ardo, San Joaquin, San Juan Bautista, Seal Beach, Sheridan, Sloughhouse, Smithflat, Snelling, Somerset, Sonora, Soulsbyville, South Dos Palos, Springville, Squaw Valley, Stevinson,

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued
Stratford, Strawberry, Summerland, Sutter Creek, Taft, Temecula, Templeton, Terra Bella, Thornton, Three Rivers, Tipton, Tollhouse, Topaz, Tranquillity, Traver, Truckee, Tuolumne, Turlock, Twain Harte, Vallecito, Valley Springs, Ventura, Victor, Visalia, Volcano, Wal- nut Grove, Waterford, Waukena, Weimar, West Point, Wilseyville, Winton, Wishon, Woodbridge, Yorba Linda.
Nevada--Beatty, Dyer, Fallon, Gabbs, Ger- lach, Goldfield, Luning, Minden, Yering- ton.
<u>Intensity III:</u>
California--Angels Camp, Belmont, Blairsdon, Boonville, Brownsville, Buena Park, Byron, Castaic, Cayucos, China Lake, Clarksburg, Clements, Coachella, Denair, Diablo, Diamond Springs, El Toro, Elk Grove, Esparto, Fellows, Foresthill, Frazier Park, Glendale, Goleta, Greenville, Homewood, Hornitos, Huntington Beach, Igo, Industry, Jolon, Keeler, Keene, Lancaster, Lockeford, Lompoc, Long Beach, Los Alamos, Los Angeles, Meridian, Nevada City, New Cuyama, Newcastle, Newhall, Newport Beach, North Highlands, Oakley, Orangevale, Rio Oso, Rio Vista, Rosa- mond, Ryde, Saint Helena, San Bernar- dino, San Gabriel, San Lorenzo, San Luis Obispo, San Rafael, Saugus, Seaside, Soda Springs, Standard, Strawberry Val- ley, Tecopa, Tracy, Trona, Vernalis, Wasco, Weimar, Weldon, Wheatland, Woodlake, Woodland, Yuba City.
Nevada--Austin, Babbitt, Carson City, Day- ton, Eureka, Gardnerville, Las Vegas, Nellis Air Force Base, Schurz, Smith, Wellington.
<u>Intensity II:</u>
California--Carpinteria, Davis (press report), Freedom, Hollister, Kettleman City, Lebec, Los Banos, Robbins, Santa Clara, White Water.
Nevada--Minden.

25 May (B) Owens Valley area
Origin time: 16 49 27.6
Epicenter: 37.61 N., 118.90 W.
Depth: 24 km
Magnitude: 5.5 mb(G), 6.0 ML(B),
5.8 ML(P)

This earthquake was felt over a large area
of central California and western Nevada,
but because it followed the intensity VII
of 16 33 44.7 UTC event by only about 16
minutes, the effects could not be

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued
separated from the earlier event. Most press accounts combined the effects of these two earthquakes in their descrip- tions.
25 May (B) Owens Valley area Origin time: 17 06 24.0 Epicenter: 37.61 N., 118.91 W. Depth: 15 km Magnitude: 4.6 ML(B), 5.1 ML(P)
Felt in the Mammoth Lakes area (B).
25 May (B) Owens Valley area Origin time: 17 08 28.6 Epicenter: 37.61 N., 118.85 W. Depth: 23 km Magnitude: 4.2 mb(G), 4.8 ML(B), 4.6 ML(P)
Felt in the Mammoth Lakes area (B).
25 May (B) Owens Valley area Origin time: 17 48 30.7 Epicenter: 37.53 N., 118.83 W. Depth: 12 km Magnitude: 3.9 mb(G), 4.6 ML(B), 4.6 ML(P)
Felt in the Mammoth Lakes area (B).
25 May (B) Owens Valley area Origin time: 18 34 15.5 Epicenter: 37.55 N., 118.90 W. Depth: 14 km Magnitude: 4.1 mb(G), 4.6 ML(B), 4.0 ML(P)
Felt in the Mammoth Lakes area (B).
25 May (B) Owens Valley area Origin time: 19 04 34.7 Epicenter: 37.54 N., 118.91 W. Depth: 12 km Magnitude: 4.5 ML(B), 4.2 ML(P)
Felt in the Mammoth Lakes area (B).
25 May (B) Owens Valley area Origin time: 19 44 51.5 Epicenter: 37.56 N., 118.82 W. Depth: 21 km Magnitude: 5.5 mb(G), 5.8 MS(G), 6.1 ML(B), 6.5 ML(P)

The effects of this earthquake in the Mam-
moth Lakes and nearby areas could not be
separated from those of the 16 33 44.7 UTC
event on the basis of press and other

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued

reports. However, it is believed the shaking was equally as strong if not stronger than the earlier intensity VII event. It was felt over an area of approximately 223,000 sq km of California and Nevada (fig. 9).

Intensity VII:

California--Crowley Lake, Mammoth Lakes.

Intensity VI:

California--

Benton (few buildings damaged, well water muddied, standing vehicles rocked moderately, trees and bushes shook strongly, small objects broke, felt by all).

Bishop (moving vehicles rocked moderately, trees and bushes shook strongly, light and heavy furniture moved, felt by and frightened all).

East Fresno (foundation cracked, light and heavy furniture moved, few windows cracked, felt by many).

Farmersville (large plaster or stucco cracks, moving vehicles rocked slightly, light and heavy furniture moved, few windows cracked, felt by many).

Hanford (large cracks in interior wall of plaster and dry wall, felt by many).

Independence (large cracks in interior plaster or stucco walls and in stucco exterior walls, moving vehicles rocked slightly, light and heavy furniture moved).

Lemoore (large cracks in interior plaster or stucco walls, trees and bushes shook strongly, few windows cracked, felt by all).

Shaver Lake (cracked foundation, some small landslides, a few windows cracked, felt by all).

Tranquillity (bricks loosened on chimneys, some new cracks in older buildings including the post office, felt by many).

Visalia (some windows broke, moving vehicles rocked slightly, light and heavy furniture moved, felt by many).

Intensity V: The most common effects at this intensity level were light furniture moved, few windows cracked, water splashed onto sides of lakes or swimming pools, moving vehicles rocked slightly to moderately, small objects overturned, and felt by many or all. All of these effects did not occur at every location listed below:

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued

California--Armona, Avenal, Badger, Big Pine, Burrell, Caruthers, Clovis, Corcoran, Dos Palos, Earlimart, Fresno, Ivanhoe, Los Banos, Mariposa, Miramonte, Mi-Wuk Village, Posey, Raisin, Selma, Sequoia National Park, Shafter, Springville, Squaw Valley, Terra Bella, Turlock, Wawona, Wilseyville.

Nevada--Mina.

Intensity IV:

California--Ahwahnee, Altaville, Arnold, Arvin, Atascadero, Auberry, Avenal, Avery, Bakersfield, Ballico, Bass Lake, Big Creek, Biola, Bodfish, Camino, Cantua Creek, Catheys Valley, Ceres, Chinese Camp, Chowchilla, Clinter, Clovis, Coalinga, Coarsegold, Coleville, Columbia, Copperopolis, Cutler, Deep Springs, Del Rey, Delano (press report), Delhi, Dinuba, Dunlap, Edison, El Dorado, El Nido, El Portal, Escalon, Farmington, Fish Camp, French Camp, Garden Valley, Georgetown, Glencoe, Glennville, Goshen, Grass Valley, Groveland, Hathaway Pines, Herald, Hickman, Hilmar, Hume, Huron, Jackson, Johnsondale, King City, Kyburz, La Grange, Lake Hughes, Laton, Lemoncove, Lindsay, London, Lone Pine, Long Barn, Lee Vining, Los Olivos, Madera, Maricopa, McFarland, McKittrick, Modesto, Mokelumne Hill, Mount Aukum, Mountain Ranch, North Fork, Olancho, Orange Cove, Pine Grove, Pioneer, Pixley, Porterville, Prather, Rail Road Flat, Raymond, Reedley, Richgrove, Rimforest, Riverdale, Rosamond, Sacramento, Salida, San Andreas, San Juan Bautista, Sheridan, Snelling, Soulsbyville, South Dos Palos, Stevinson, Stratford, Strawberry, Sutter Creek, Taft, Three Rivers, Tipton, Tollhouse, Twain Harte, Valley Home, Ventura, Volcano, Waterford, Waukena, Weldon, Wilton, Winton, Wishon, Woodbridge, Woodlake.

Nevada--Gabbs, Incline Village, Luning, Yerington.

Intensity III:

California--Alpaugh, Altadena, Amador City, Angels Camp, Atwater, Avila Beach, Bethel Island, Blairsden, Bolinas, Bradley, Bridgeport, Byron, Caliente, California Hot Springs, Carpinteria, Castle Air Force Base, Clements, Coachella, Denair, Diamond Springs, Dos Palos, Douglas Flat, Elk Grove, Empire, Firebaugh, Foresthill, Glendale, Gold Run, Goleta, Guadalupe, Hornitos, Jolon, Keeler, Keene, Kerman, Kettleman City,

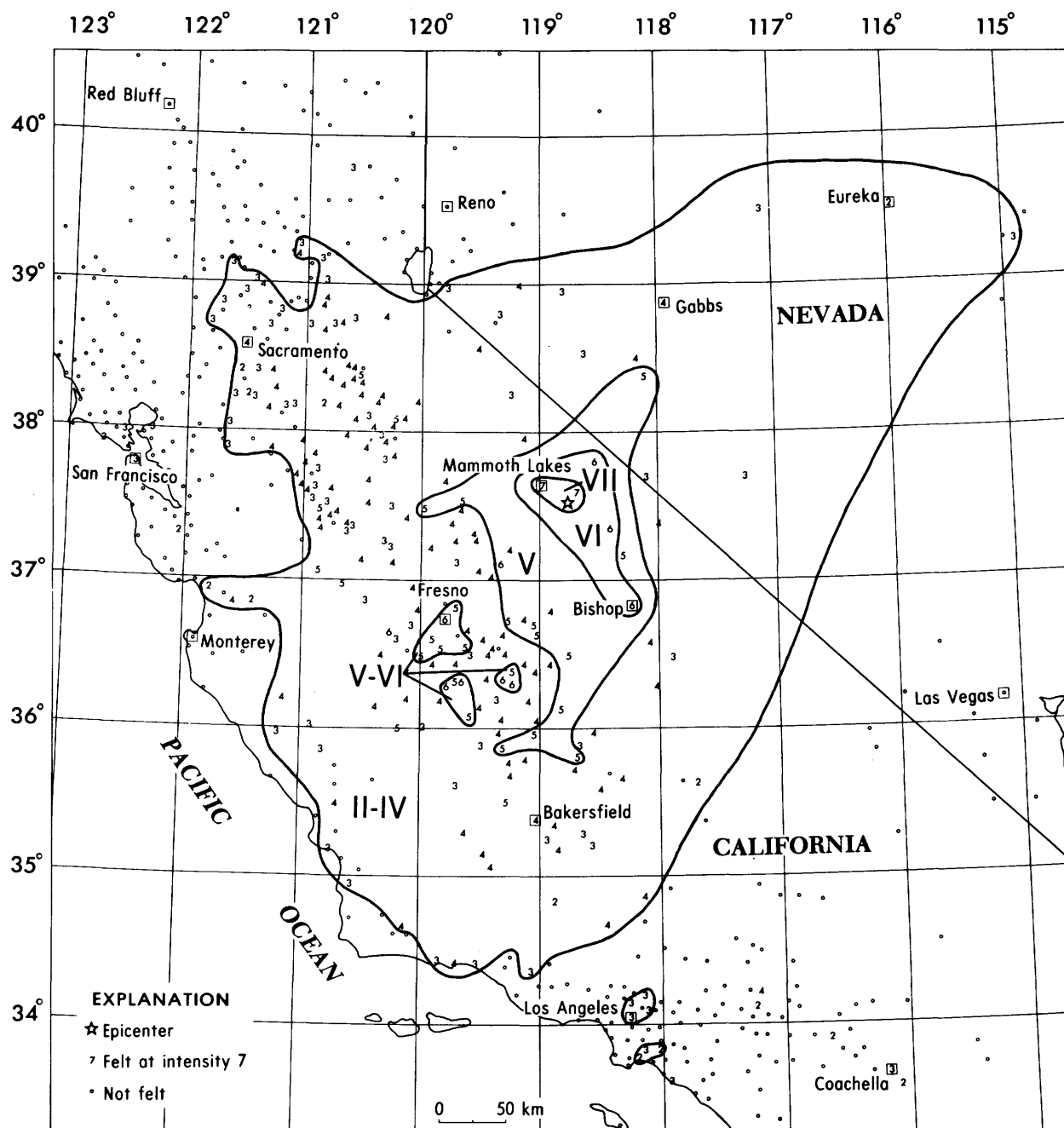


FIGURE 9.--Isoseismal map for the Owens Valley area, California, earthquake of 25 May 1980, 19 44 51.5 UTC. Roman numerals represent Modified Mercalli intensities between isoseismals; Arabic numerals are used to represent these intensities at specific sites.

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued	
Keyes, Kingsburg, Lakewood, Lamont, Le Grand, Lockeford, Loomis, Los Angeles, Lost Hills, Moccasin, Nevada City, Newport Beach, Oakdale, O'Neals, Pinole, Planada, Pollock Pines, Rescue, Rio Oso, River Pines, Robbins, Roseville, Ryde, San Ardo, San Francisco, San Gabriel, San Joaquin, San Rafael, Santa Barbara, Santa Paula, Smithflat, Standard, Thornton, Topaz, Tulare, Wasco, Wheatland, Yettam, Yolo, Yuba City. Nevada--Austin, Babbitt, Dyer, Ely, Goldfield, Minden, Schurz, Smith.	
<u>Intensity II:</u>	
California--Big Oak Flat, Clarksburg, Cupertino, Cypress, Freedom, Highland, Hollister, Lebec, Long Beach, Los Banos, Mecca, Ridgecrest, Valley Springs, Walnut Grove, White Water. Nevada--Eureka, Hawthorne.	
<u>Felt:</u>	
California--Lakeshore.	
25 May (B) Owens Valley area	
Origin time:	20 35 48.5
Epicenter:	37.61 N., 118.86 W.
Depth:	6 km
Magnitude:	5.2 mb(G), 5.3 MS(G), 5.7 ML(B), 5.9 ML(P)
Felt in the Mammoth Lakes area (B) and at Lakeshore.	
<u>Intensity III: Avenal.</u>	
25 May (B) Owens Valley area	
Origin time:	20 59 23.3
Epicenter:	37.57 N., 118.82 W.
Depth:	17 km
Magnitude:	4.2 mb(G), 5.0 ML(B), 5.5 ML(P)
Felt in the Mammoth Lakes area (B).	
26 May (B) Owens Valley area	
Origin time:	01 19 03.0
Epicenter:	37.66 N., 118.97 W.
Depth:	15 km
Magnitude:	4.4 mb(G), 4.6 ML(B), 4.7 ML(P)
Felt in the Mammoth Lakes area (B).	
26 May (B) Owens Valley area	
Origin time:	05 56 27.0
Epicenter:	37.58 N., 118.90 W.
Depth:	11 km
Magnitude:	4.0 mb(G), 4.7 ML(B), 4.6 ML(P)

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued	
Felt in the Mammoth Lakes area (B) and at Lakeshore.	
26 May (B) Owens Valley area	
Origin time:	10 20 31.9
Epicenter:	37.62 N., 118.81 W.
Depth:	16 km
Magnitude:	4.0 mb(G), 4.5 ML(B), 4.1 ML(P)
Felt in the Mammoth Lakes area (B) and at Lakeshore.	
26 May (P) Owens Valley area	
Origin time:	11 04 06.7
Epicenter:	37.50 N., 118.70 W.
Depth:	5 km
Magnitude:	4.0 ML(P)
Felt at Lakeshore.	
26 May (B) Owens Valley area	
Origin time:	12 24 25.7
Epicenter:	37.57 N., 118.89 W.
Depth:	12 km
Magnitude:	4.7 mb(G), 5.1 ML(B), 5.6 ML(P)
Felt in the Mammoth Lakes area (B) and at Lakeshore.	
<u>Intensity IV: Castle Air Force Base, Iowa Hill, Lemoore Naval Air Station.</u>	
26 May (P) Owens Valley area	
Origin time:	13 04 20.6
Epicenter:	37.50 N., 118.82 W.
Depth:	2 km
Magnitude:	4.1 ML(P)
Felt at Lakeshore.	
26 May (B) Owens Valley area	
Origin time:	16 20 21.7
Epicenter:	37.59 N., 118.90 W.
Depth:	10 km
Magnitude:	4.7 mb(G), 4.8 ML(B), 4.4 ML(P)
Felt in the Mammoth Lakes area (B).	
26 May (B) Owens Valley area	
Origin time:	18 57 56.4
Epicenter:	37.51 N., 118.87 W.
Depth:	9 km
Magnitude:	5.0 mb(G), 5.7 ML(B), 5.5 ML(P)

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued	
Felt in the Mammoth Lakes area (B) and at Lakeshore.	
26 May (B) Owens Valley area	
Origin time:	19 24 09.8
Epicenter:	37.53 N., 118.89 W.
Depth:	5 km
Magnitude:	4.7 ML(B), 4.1 ML(P)
Felt in the Mammoth Lakes area (B).	
27 May (P) Owens Valley area	
Origin time:	11 33 49.7
Epicenter:	37.57 N., 118.78 W.
Depth:	4 km
Magnitude:	3.2 ML(P)
Felt at Lakeshore.	
27 May (B) Owens Valley area	
Origin time:	14 50 57.3
Epicenter:	37.48 N., 118.82 W.
Depth:	13 km
Magnitude:	5.7 mb(G), 6.0 MS(G), 6.2 ML(B), 6.3 ML(P)
Four people in the Mammoth Lakes area were reported injured as a result of this earthquake. The damage was similar to that described for the May 25; 16 33 44.7 UTC event; however, the information is sparse because most of the press coverage and earthquake investigators tended to lump the effects of the two large May 25 events with this one.	
In Yosemite National Park landslides and falling boulders were common, so many in fact that, the Chief Ranger closed all hiking trails leading from Yosemite Valley. Also, boulders fell onto Highway 140 leading to Merced. East of Mammoth Lakes the road to Crowley Dam was closed by rockslides and old U.S. Highway 395 was cracked badly enough to require closing (press report).	
At Convict Lake a fisherman in a boat reported "The lake tilted from side to side, one side would be real high, covering the bank, and the other would be real low. The water actually moved a foot on each side."	
This earthquake was felt over an area of approximately 240,000 sq km of California and Nevada (fig. 10).	

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued	
<u>Intensity VI:</u> California--	
Benton (partial collapse of an exterior stone wall, trees and bushes shook strongly, small objects broke, felt by all).	
Big Creek (chimneys twisted, vehicles rocked slightly, small objects moved, felt by all).	
Bishop (large cracks in highways, moving vehicles rocked slightly, light and heavy furniture moved, few windows cracked, felt by all).	
Cartago (large cracks in interior plaster walls, felt by several).	
Caruthers (plaster cracked in interior walls and some fell, light furniture moved, small objects overturned, a few windows cracked, felt by all).	
Crowley Lake (bricks loosened on chimneys, moving vehicles rocked moderately, light furniture moved, hanging pictures swung, felt by all).	
East Fresno (a foundation was cracked and an exterior wall partially collapsed, light and heavy furniture moved, some windows broke, felt by many).	
Hanford (large cracks in interior walls, felt by many).	
Long Barn (a foundation cracked, light and heavy furniture moved, felt by many).	
Mammoth Lakes (The press reported many landslides and rockslides in the surrounding mountains and that several water pipes were broken, a few chimneys were cracked, minor structural damage occurred, dishes in stores and homes broke, jars and bottles were knocked off shelves, and it was felt by all).	
Shaver Lake (foundation cracked, small landslides, slight damage to concrete dam, few windows cracked, felt by all).	
Springville (sidewalks were cracked and a fireplace was damaged--press report).	
Visalia (The press reported minor cracking in the walls of the 1973 annex of the Tulare County Public Social Services Building, some broken windows along Mooney Boulevard, some broken plaster statues at the Tulare County Museum. The R-N Market reportedly had items thrown from shelves. Felt by all).	

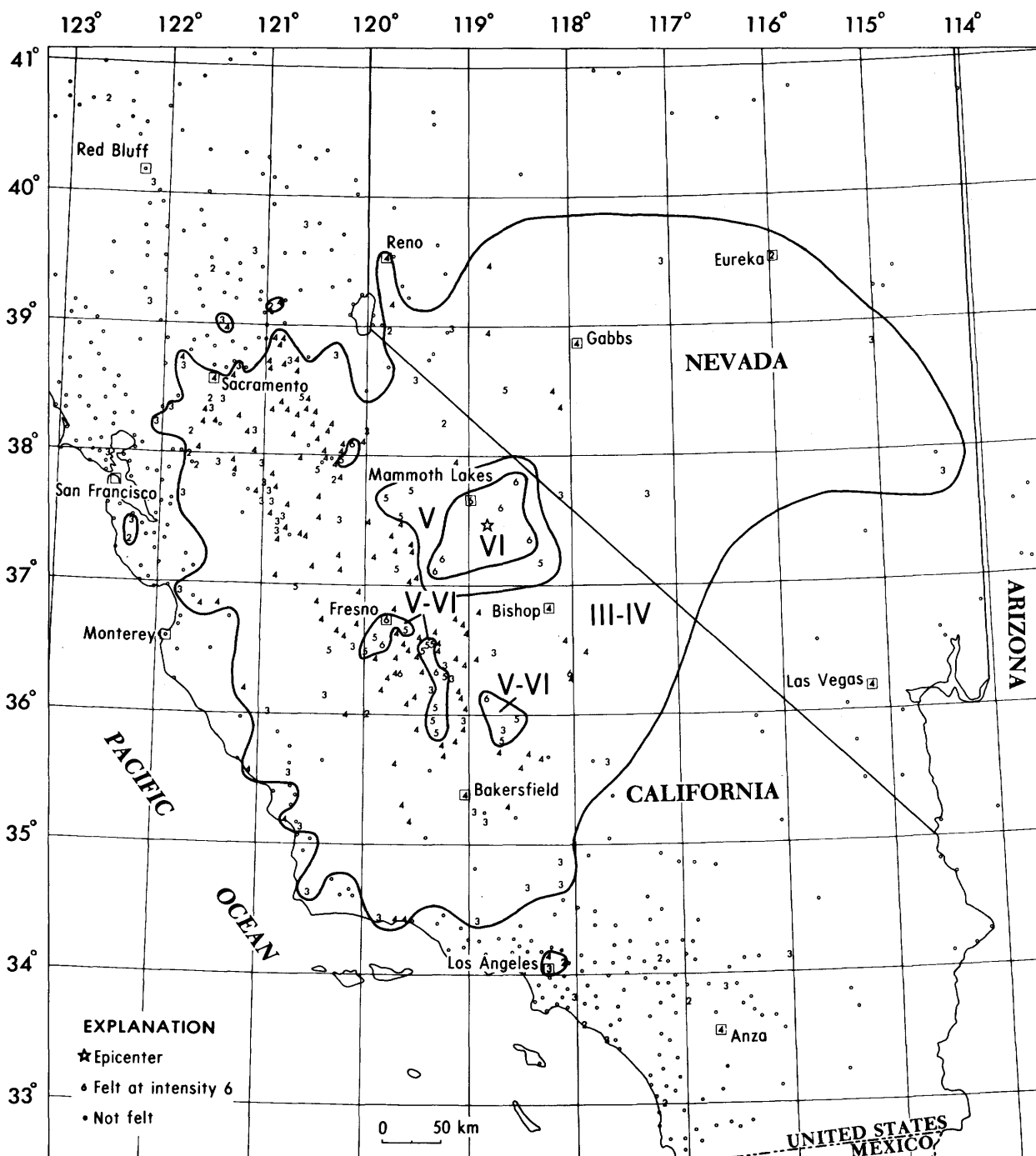


FIGURE 10.--Isoseismal map for the Owens valley area, California, earthquake of 27 May 1980, 14 50 57.3 UTC. Roman numerals represent Modified Mercalli intensities between isoseismals; Arabic numerals are used to represent these intensities at specific sites.

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued
<u>Intensity V:</u> The most common effects reported at this intensity were items fallen off shelves with a few broken, light furniture moved, water splashed onto sides of lakes or swimming pools, moving vehicles rocked slightly, hanging pictures swung out of place, a few windows cracked, felt by many or all. All of these effects did not occur at every location. California--Big Pine, Burrel, Cantua Creek, Chinese Camp, (crack in an old exterior brick wall), Del Rey, Dinuba, Dos Palos, Earlimart, El Portal (small landslides), Farmersville, Fresno, Johnsondale, London, O'Neals (level changed in well water), Pixley (press report), Posey, Raisin, Sultana, Tipton, Toms Place, Tuolumne, Volcano, Wawona (small landslides), Yosemite National Park (small landslide). Nevada--Hawthorne. <u>Intensity IV:</u> California--Ahwahnee, Alpaugh, Amador City, Anza, Armona, Arnold, Auberry, Avenal, Avila Beach, Badger, Bakersfield, Barton, Bass Lake, Bethel Island, Biola, Bodfish, Caliente, Cambria, Camino, Castle Air Force Base (telegram), Chowchilla, Clovis, Coarsegold, Columbia, Copperopolis, Corcoran, Courtland, Cutler, Delano, Delhi, Diamond Springs, Ducuro, Dunlap, El Nido, Fellows, Firebaugh, Fish Camp, Fowler, French Camp, Fresno Air Terminal, Garden Valley, Georgetown, Glencoe, Glendale, Glennville, Gold Run, Goshen, Greenwood, Groveland, Hathaway Pines, Herald, Hickman, Hollister, Hume, Independence, Ione, Jackson, Keeler, Kerman, Keyes, King City, Kingsburg, La Grange, Laton, Le Grand, Lee Vining, Lemoncove, Lemoore, Linden, Lindsay, Lockeford, Lone Pine, Los Banos, Lost Hills, Madera, Mariposa, McFarland, McKittrick, Mendota, Miramonte, Mi-Wuk Village, Mokelumne Hill, Mountain Ranch, Mt. Aukum, Murphys, North Fork, Oakdale, Olancho, Orange Cove, Orosi, Pine Grove, Pioneer, Porterville, Prather, Rail Road Flat, Rancho Cordova, Raymond, Reedley, Rescue, Richgrove, River Pines, Riverdale, Ryde, Sacramento, Salida, San Andreas, San Joaquin, San Juan Bautista, Selma, Sheridan, Shingle Springs, Sloughhouse, Snelling, Somerset, Sonora (press report), Soulsbyville, South Dos Palos, Stevinson, Stockton, Stratford, Strathmore, Strawberry, Summerland, Sutter Creek, Three Rivers, Tranquillity, Traver, Twain Harte, Valley Home,

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued
Ventura, Walnut Grove, Waukena, Weldon, Winton, Wishon, Wofford Heights, Woodlake, Yolo. Nevada--Babbitt, Carson City (press report), Fallon, Gabbs, Las Vegas (press report), Luning, Mina, Reno (press report), Schurz. <u>Intensity III:</u> California--Arroyo Grande, Arvin, Avery, Blairsden, California Hot Springs, Citrus Heights, Clements, Coalinga, Cypress, Denair, Dos Palos, Elk Grove, Elmira, Empire, Escalon, Exeter, Fairfield, Farmington, Fillmore, Freedom, Goleta, Helm, Hilmar, Holt, Hood, Hornitos, Ivanhoe, Kyburz, Laguna Niguel, Lake Hughes, Lamont, Lancaster, Livermore, Lompoc, Los Angeles, Modesto, Pinecrest, Placerville, Proberta, Redwood City, Ridgecrest, Riverbank, Rosamond, San Ardo, San Rafael, Sequoia National Park, Smithflat, Strawberry Valley, Templeton, Terra Bella, Topaz, Tulare, Turlock, Twentynine Palms, Waterford, Wheatland, White Water, Williams, Woodland, Yettam. Nevada--Austin, Dyer, Goldfield, Lund, Panaca, Yerington. <u>Intensity II:</u> California--Big Oak Flat, Bridgeport, Byron, Chicago Park, Clarksburg, French Gulch, Highland, Kettleman City, La Honda, Moccasin, Newport Beach, Oakley, Palermo, Rancho Santa Fe, Rio Vista, San Gabriel, San Jacinto. Nevada--Eureka, Minden. <u>Felt:</u> California--Lakeshore, Oakhurst, Ross, Tollhouse. 27 May (B) Owens Valley area Origin time: 19 01 08.6 Epicenter: 37.59 N., 118.78 W. Depth: 10 km Magnitude: 4.3 mb(G), 4.8 ML(B), 5.0 ML(P) Felt in the Mammoth Lakes area (B). 28 May (B) Owens Valley area Origin time: 05 16 23.7 Epicenter: 37.58 N., 118.90 W. Depth: 10 km Magnitude: 4.1 mb(G), 4.9 ML(B), 4.8 ML(P) Felt in the Mammoth Lakes area (B). 28 May (B) Owens Valley area Origin time: 05 48 30.4

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued	
Epicenter:	37.58 N., 118.87 W.
Depth:	5 km
Magnitude:	4.0 mb(G), 4.6 ML(B), 4.8 ML(P)
Felt in the Mammoth Lakes area (B).	
28 May (P) Owens Valley area	
Origin time:	11 54 37.9
Epicenter:	37.47 N., 118.82 W.
Depth:	6 km
Magnitude:	4.2 ML(P), 4.4 ML(B)
Felt at Castle Air Force Base (telegram).	
29 May (P) Southern California	
Origin time:	03 38 47.0
Epicenter:	34.93 N., 120.82 W.
Depth:	5 km
Magnitude:	5.1 mb(G), 4.7 ML(P), 4.9 ML(B)
<u>Intensity V:</u>	
Atascadero (few windows cracked, hanging pictures swung, felt by many).	
Avila Beach (light furniture and small objects moved, hanging pictures swung, felt by many).	
Nipomo (light furniture and small objects moved, building shook strongly, felt by all).	
Templeton (small cracks in interior walls, hanging pictures swung, felt by all).	
<u>Intensity IV:</u>	Arroyo Grande, Bradley, Guadalupe, Oceano, Paso Robles (press report), San Luis Obispo (press report), San Miguel, Santa Maria, Shandon.
<u>Intensity III:</u>	Alpaugh, Goleta, King City, Lompoc, Los Alamos, Los Olivos, Morro Bay, San Simeon, Solvang, Stratford.
<u>Intensity II:</u>	Lost Hills.
<u>Felt:</u>	Santa Margarita (press report).
31 May (B) Owens Valley area	
Origin time:	00 58 18.1
Epicenter:	37.50 N., 118.86 W.
Depth:	20 km
Magnitude:	4.1 mb(G), 4.5 ML(B), 4.6 ML(P)
Felt in the Mammoth Lakes area (B).	
31 May (B) Owens Valley area	
Origin time:	08 05 19.9
Epicenter:	37.58 N., 118.85 W.
Depth:	17 km
Magnitude:	4.1 ML(B), 4.1 ML(P)
<u>Intensity IV:</u>	Mariposa.

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued	
31 May (B) Owens Valley area	
Origin time:	15 16 12.1
Epicenter:	37.60 N., 118.80 W.
Depth:	15 km
Magnitude:	4.1 mb(G), 4.9 ML(B), 4.9 ML(P)
<u>Intensity IV:</u>	Mammoth Lakes area (press report), Mariposa.
<u>Intensity III:</u>	Castle Air Force Base.
3 June (P) Southern California	
Origin time:	16 43 37.8
Epicenter:	34.50 N., 118.52 W.
Depth:	5 km
Magnitude:	3.4 ML(P)
<u>Intensity III:</u>	Newhall (press report).
<u>Felt:</u>	North Hollywood (P)
5 June (B) Owens Valley area	
Origin time:	19 41 02.3
Epicenter:	37.57 N., 118.88 W.
Depth:	15 km
Magnitude:	4.3 ML(B), 3.9 ML(P)
Felt in the Mammoth Lakes area (B) and at Mariposa.	
9 June (G) Baja California, Mexico	
Origin time:	03 28 18.9
Epicenter:	32.22 N., 114.98 W.
Depth:	5 km
Magnitude:	5.6 mb(G), 6.4 MS(G), 6.1 ML(P)
This earthquake caused 2 deaths, 100 injuries, and major damage in Baja California. The press reported 50 homes were seriously damaged, several breaks occurred in concrete irrigation canals, a railroad bridge at Coahuila collapsed, railroad tracks buckled and a train derailed, ground cracked, and water mains and power lines broke. The worst building damage was at Pescadero, Mexico. This earthquake was felt over an area of approximately 92,000 sq km of southern California and Arizona (fig. 11). No data was available on the intensity and felt area in Mexico.	
<u>Intensity V:</u>	The most common effects at this intensity were hanging pictures swung, moving vehicles rocked slightly, a few windows cracked, water splashed onto sides of swimming pools, small objects overturned, felt by all. All of these effects did not occur at every location. Arizona--Gadsden, San Luis (unconfirmed report of broken underground pipes),

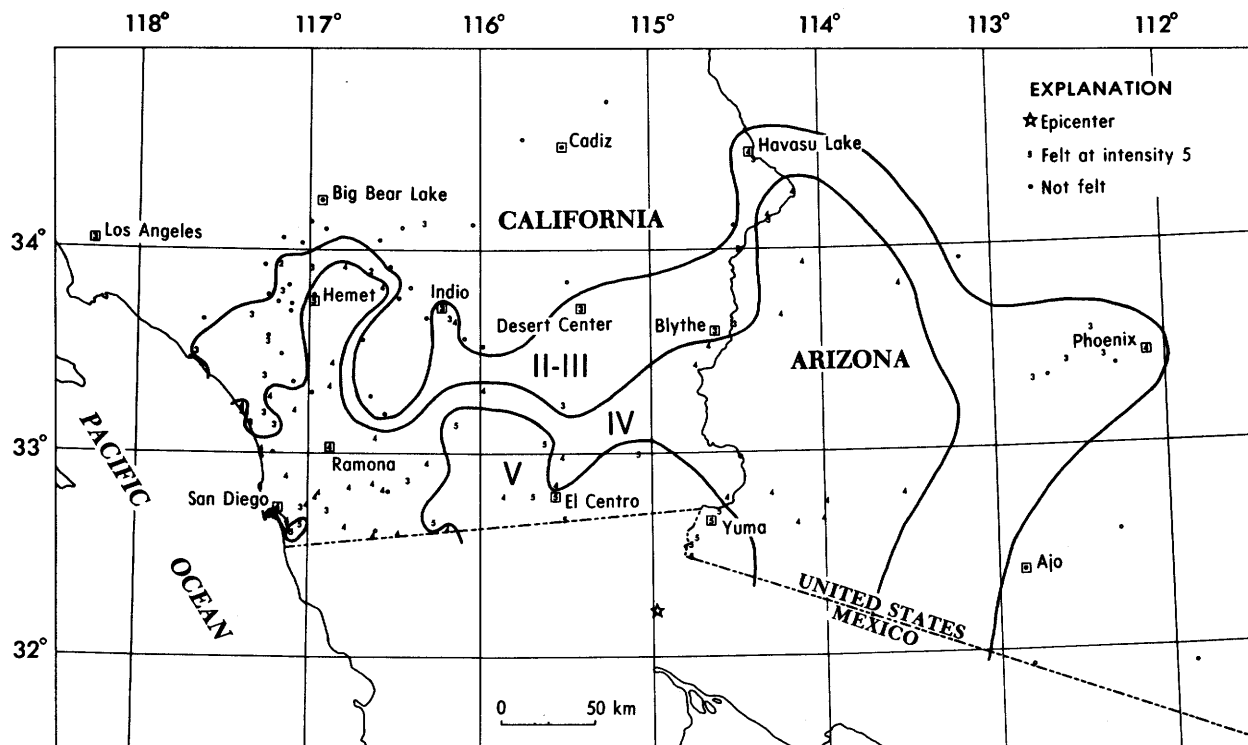


FIGURE 11.--Isoseismal map for the Baja California, Mexico, earthquake of 9 June 1980, 03 28 18.9 UTC. Roman numerals represent Modified Mercalli intensities between isoseismals; Arabic numerals are used to represent these intensities at specific sites.

Table 2.--Summary of macroseismic data for U.S. earthquakes, April-June 1980--Continued

California--Continued
Somerton, Yuma (knocked goods off grocery store shelves--press report).
California--Bonita, Boulevard, Calexico, Chula Vista, El Centro (knocked goods off grocery store shelves--press report), Glamis (small cracks in dry wall), Hemet, Ocotillo, Seeley, Westmorland, Winterhaven.
<u>Intensity IV:</u>
Arizona--Bouse, Dateland, Martinez Lake (Yuma), Phoenix, Quartzite, Roll, Tacna, Wellton, Wenden.
California--Agua Caliente Springs (Canebrake Canyon), Aguanga, Alpine, Bard, Bonsall, Brawley, Cabazon, Camp Pendleton, Campo, Cardiff by the Sea, Coronado, Descanso, Dulzura, Earp, El Cajon, Guatay, Havasu Lake, Imperial, Jacumba, Julian, La Jolla, Miramar, National City, Oceanside, Palm Springs, Palo Verde, Palomar Mountain, Parker Dam, Plaster City, Ramona, Ripley, Salton City, San Diego, Santee, Spring Valley, Tecate, Thermal, Valley Center.

Table 2.--Summary of macroseismic data for U.S. earthquakes, April-June 1980--Continued

California--Continued
<u>Intensity III:</u>
Arizona--Arlington, Buckeye, Ehrenburg, Goodyear, Lake Havasu City, Parker, Tucson (press report), Waddell.
California--Beaumont, Blythe, Carlsbad, Coachella, Desert Center, Fallbrook, Indio, Jamul, Joshua Tree, Lake Elsinore, Lemon Grove, Los Angeles (press report), Lost Lake, Mount Laguna, Murrieta, Niland, Nuevo, Oceanside, San Juan Capistrano, San Luis Obispo (press report), San Marcos, Vista.
<u>Intensity II:</u>
California--Chiriaco Summit, Maricopa, Moreno, White Water.
11 June (B) Owens Valley area
Origin time: 04 40 59.1
Epicenter: 37.55 N., 118.90 W.
Depth: 16 km
Magnitude: 3.9 mb(G), 4.7 ML(B), 4.9 ML(P)
<u>Intensity V:</u> Bishop (few windows cracked, felt by many).

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued	
13 June (B) Owens Valley area	
Origin time: 14 56 59.3	
Epicenter: 37.63 N., 118.91 W.	
Depth: 8 km	
Magnitude: 3.8 ML(B), 4.0 ML(P)	
Felt at Mammoth Lakes (B).	
13 June (B) Owens Valley area	
Origin time: 23 23 20.2	
Epicenter: 37.48 N., 118.80 W.	
Depth: 25 km	
Magnitude: 4.1 ML(B), 4.1 ML(P)	
Felt at Mammoth Lakes (B).	
17 June (B) Owens Valley area	
Origin time: 12 26 40.1	
Epicenter: 37.51 N., 118.90 W.	
Depth: 17 km	
Magnitude: 3.7 ML(B), 3.4 ML(P)	
Felt at Mammoth Lakes (B).	
17 June (B) Owens Valley area	
Origin time: 12 27 13.2	
Epicenter: 37.50 N., 118.89 W.	
Depth: 7 km	
Magnitude: 4.0 ML(B), 3.5 ML(P)	
Felt at Mammoth Lakes (B).	
18 June (B) Central California	
Origin time: 03 48 09.0	
Epicenter: 36.88 N., 121.68 W.	
Depth: 6 km	
Magnitude: 3.8 ML(B)	
Felt in parts of the East Bay and San Francisco Peninsula and Monterey and Santa Cruz Counties (press report). Also felt at Hollister (B), Salinas (B), and Watsonville (B).	
18 June (B) Central California	
Origin time: 04 52 26.6	
Epicenter: 36.88 N., 121.68 W.	
Depth: 7 km	
Magnitude: 4.1 ML(B)	
Felt in parts of the East Bay and San Francisco Peninsula and in Monterey and Santa Cruz Counties (press report).	
Intensity IV: Aromas, Capitola, French Camp, Merced, Monterey, Redwood City, San Jose (press report), San Juan Bautista, Watsonville.	

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued	
Intensity III: Belmont, Ben Lomond, Brisbane, Clayton, Firebaugh, Fremont (press report), Hollister, Marina, Mount Herman, Pescadero, Ross, San Martin, Santa Cruz.	
Intensity II: Felton.	
Felt: Oakland (B), Salinas (B), San Francisco (B).	
18 June (B) Central California	
Origin time: 05 31 05.2	
Epicenter: 36.89 N., 121.69 W.	
Depth: 7 km	
Magnitude: 3.8 ML(B)	
Felt in parts of the East Bay and San Francisco Peninsula and in Monterey and Santa Cruz Counties (press report). Also felt at Hollister (B), Salinas (B), San Jose (B), and Watsonville (B).	
18 June (B) Central California	
Origin time: 08 35 26.9	
Epicenter: 36.88 N., 121.66 W.	
Depth: 12 km	
Magnitude: 3.5 ML(B)	
Felt at Watsonville (B).	
20 June (B) Owens Valley area	
Origin time: 17 24 08.1	
Epicenter: 37.54 N., 118.92 W.	
Depth: 18 km	
Magnitude: 4.0 ML(B), 3.7 ML(P)	
Felt at Mammoth Lakes (B).	
23 June (P) Southern California	
Origin time: 21 11 40.2	
Epicenter: 34.12 N., 117.47 W.	
Depth: 5 km	
Magnitude: 3.0 ML(P)	
Intensity IV: Etiwanda.	
Intensity III: San Bernardino (press report).	
Felt: Redlands (P), Riverside (P).	
26 June (P) Southern California	
Origin time: 10 47 02.8	
Epicenter: 33.68 N., 116.73 W.	
Depth: 6 km	
Magnitude: 2.6 ML(P)	
Felt at Palm Springs (P).	
26 June (P) Southern California	
Origin time: 11 19 01.4	
Epicenter: 33.80 N., 118.28 W.	
Depth: 4 km	
Magnitude: 2.6 ML(P)	

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

California--Continued	
<u>Intensity III:</u>	Torrance (press report).
<u>Felt:</u>	Carson (P), Lomita (P).
27 June (B) Owens Valley area	
Origin time:	01 29 29.9
Epicenter:	37.59 N., 118.86 W.
Depth:	16 km
Magnitude:	3.8 ML(B), 3.7 ML(P)
Felt at Mammoth lakes (B).	
29 June (B) Mono Lake area	
Origin time:	07 46 14.1
Epicenter:	38.01 N., 118.68 W.
Depth:	6 km
Magnitude:	4.2 mb(G), 4.7 ML(P), 5.1 ML(B)
<u>Intensity VI:</u>	
California--Mono Hot Springs (large cracks in interior plaster walls, foundation cracked, cracks in exterior stone walls, felt by and awakened all).	
<u>Intensity V:</u>	
California--Mono Lake (cracks in chimney mortar, cracks in brick or stone walls, felt by many).	
<u>Intensity IV:</u>	
California--Benton, El Portal, Groveland, Raisin, Toms Place, Volcano, Wawona, Wishon, Yosemite National Park (Curry Village).	
<u>Intensity III:</u>	
California--Bishop, Delhi, Lakeshore, Mountain Ranch, Piedra, Rail Road Flat, Shaver Lake.	
<u>Intensity II:</u>	
California--Arnold, Bass Lake, Big Oak Flat, Cartago, Hathaway Pines, Mariposa, Tuolumne Meadows.	
Nevada--Silver City.	
<u>Felt:</u>	
California--Bridgeport (press report). Nevada--Hawthorne (press report).	

Hawaii

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

5 May (H) Island of Hawaii
Origin time: 09 07 37.6
Epicenter: 19.23 N., 155.55 W.
Depth: 11 km
Magnitude: 3.9 ML(H)
Intensity IV: Pahala (H).
Intensity III: Hilo (H), South Kona (H).

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

Hawaii--Continued	
6 May (H) Island of Hawaii	
Origin time:	06 54 43.0
Epicenter:	19.35 N., 155.10 W.
Depth:	9 km
Magnitude:	3.1 ML(H)
<u>Intensity III:</u>	Hilo (H).
6 May (H) Island of Hawaii	
Origin time:	14 08 36.8
Epicenter:	19.40 N., 155.43 W.
Depth:	11 km
Magnitude:	3.6 ML(H)
<u>Intensity III:</u>	Glenwood (H).
8 May (H) Island of Hawaii	
Origin time:	09 42 33.4
Epicenter:	19.73 N., 155.74 W.
Depth:	12 km
Magnitude:	3.4 ML(H)
<u>Intensity III:</u>	Kamuela (H).
13 May (H) Island of Hawaii	
Origin time:	00 40 27.1
Epicenter:	19.32 N., 155.11 W.
Depth:	9 km
Magnitude:	3.3 ML(H)
<u>Intensity IV:</u>	Hilo (H).
13 May (H) Island of Hawaii	
Origin time:	00 43 44.6
Epicenter:	19.33 N., 155.11 W.
Depth:	9 km
Magnitude:	3.4 ML(H)
<u>Intensity IV:</u>	Hilo (H).
23 May (H) Island of Hawaii	
Origin time:	04 28 39.0
Epicenter:	19.34 N., 155.28 W.
Depth:	33 km
Magnitude:	3.8 ML(H)
<u>Intensity IV:</u>	Volcano (H).
<u>Intensity III:</u>	Hilo (H).
<u>Intensity II:</u>	Ahualoa (H), Hawaiian Ocean View Estates (H), Honoumuli (H).
28 May (H) Island of Hawaii	
Origin time:	18 04 50.9
Epicenter:	19.32 N., 155.23 W.
Depth:	10 km
Magnitude:	3.2 ML(H)
<u>Intensity III:</u>	Hilo (H).
9 June (H) Island of Hawaii	
Origin time:	10 43 23.3
Epicenter:	19.43 N., 155.40 W.
Depth:	12 km
Magnitude:	3.5 ML(H)
<u>Intensity III:</u>	Pahala (H).
<u>Intensity II:</u>	Hawaiian Ocean View Estates (H), Keaau (H), Kona (H).

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

Hawaii--Continued	
25 June (H) Island of Hawaii	
Origin time:	11 48 44.4
Epicenter:	19.72 N., 155.74 W.
Depth:	16 km
Magnitude:	3.3 ML(H)
Intensity III:	Honokaa (H).
Intensity II:	Holualoa (H).
Idaho	
18 May (W) Mount St. Helens area	
Origin time:	15 32 11.4
See Washington listing.	
Maine	
10 April (J) Eastern Maine	
Origin time:	15 36 43.8
Epicenter:	44.71 N., 68.36 W.
Depth:	0 km
Magnitude:	3.0 Mn(J)
Felt in the epicentral area (J).	
21 April (J) Eastern Maine	
Origin time:	13 39 57.5
Epicenter:	44.72 N., 68.36 W.
Depth:	0 km
Magnitude:	2.5 Mn(J)
Felt in the epicentral area (J).	
4 May (J) Southern Maine	
Origin time:	08 56 13.1
Epicenter:	44.29 N., 69.61 W.
Depth:	2 km
Magnitude:	2.6 Mn(J)
Felt at Coopers Mills and Windsor (press report).	
Montana	
10 May (G) Hebgen Lake area	
Origin time:	23 41 47.5
Epicenter:	44.76 N., 111.28 W.
Depth:	5 km
Magnitude:	4.2 ML(G), 4.0 ML(D)
Intensity II:	
Montana--West Yellowstone.	
Wyoming--Madison Junction, Mammoth Hot Springs, Old Faithful.	

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

Nevada	
3 April (E) Southern Nevada	
Origin time:	14 00 00.090
Epicenter:	37.15 N., 116.08 W.
Depth:	0 km
Magnitude:	4.7 mb(G), 4.7 ML(B)
Nevada Test Site explosion "LIPTAUER" at 37°08'59.55" N., 116°04'56.14" W., surface elevation 1335 m, depth of burial 417 m.	
8 April (G) Western Nevada	
Origin time:	00 13 41.8
Epicenter:	39.50 N., 119.18 W.
Depth:	5 km
Magnitude:	4.7 ML(B)
Intensity V:	Fernley (dishes fell to the floor, hanging pictures fell, pendulum clocks stopped, hanging objects swung violently, small objects moved, standing vehicles rocked moderately, felt by many).
Intensity IV:	Dayton, Fallon, Reno, Silver Springs.
Intensity III:	Carson City, Gabbs, Greenwood, Nevada City, Silver City, Stateline, Wadsworth.
Intensity II:	Hawthorne, Yerington.
16 April (E) Southern Nevada	
Origin time:	20 00 00.089
Epicenter:	37.10 N., 116.03 W.
Depth:	0 km
Magnitude:	5.3 mb(G), 4.2 MS(G), 5.5 ML(B)
Nevada Test Site explosion "PYRAMID" at 37°06'04.03" N., 116°01'49.91" W., surface elevation 1293 m, depth of burial 579 m.	
26 April (E) Southern Nevada	
Origin time:	17 00 00.083
Epicenter:	37.25 N., 116.42 W.
Depth:	0 km
Magnitude:	5.4 mb(G), 4.2 MS(G), 5.6 ML(B)
Nevada Test Site explosion "COLWICK" at 37°14'54.34" N., 116°25'20.64" W., surface elevation 1973 m, depth of burial 633 m.	
28 April (G) Northern Nevada	
Origin time:	13 55 34.0
Epicenter:	41.86 N., 118.91 W.
Depth:	5 km
Magnitude:	4.3 mb(G), 4.1 ML(B)
Intensity IV:	Denio.
28 April (G) Northern Nevada	
Origin time:	17 07 10.1
Epicenter:	41.85 N., 118.93 W.

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

Nevada--Continued	
Depth:	5 km
Magnitude:	3.8 mb(G)
Felt at Denio (press report).	
2 May (E) Southern Nevada	
Origin time:	18 46 30.092
Epicenter:	37.06 N., 116.02 W.
Depth:	0 km
Magnitude:	4.4 mb(G), 4.5 ML(B)
Nevada Test Site explosion "CANFIELD" at 37°03'21.64" N., 116°01'08.22" W., surface elevation 1238 m, depth of burial 351 m.	
3 May (G) Northern Nevada	
Origin time:	00 17 38.1
Epicenter:	41.94 N., 118.84 W.
Depth:	5 km
Magnitude:	4.5 mb(G), 4.3 ML(B)
Intensity IV:	Denio.
22 May (E) Southern Nevada	
Origin time:	13 00 00.089
Epicenter:	37.00 N., 116.03 W.
Depth:	0 km
Magnitude:	3.8 ML(B)
Nevada Test Site explosion "FLORA" at 37°00'11.03" N., 116°01'53.01" W., surface elevation 1206 m, depth of burial 335 m.	
25 May (B) Owens Valley area	
Origin time:	16 33 44.7
See California listing.	
25 May (B) Owens Valley area	
Origin time:	19 44 51.4
See California listing.	
27 May (B) Owens Valley area	
Origin time:	14 50 57.1
See California listing.	
12 June (E) Southern Nevada	
Origin time:	17 15 00.086
Epicenter:	37.28 N., 116.45 W.
Depth:	0 km
Magnitude:	5.6 mb(G), 5.5 ML(B)
Nevada Test Site explosion "KASH" at 37°16'53.97" N., 116°27'13.87" W., surface elevation 1938 m, depth of burial 645 m.	
24 June (E) Southern Nevada	
Origin time:	15 10 00.074
Epicenter:	37.02 N., 116.03 W.

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

Nevada--Continued	
Depth:	0 km
Magnitude:	4.4 mb(G), 4.3 ML(B)
Nevada Test Site explosion "HURON KING" at 37°01'23.85" N., 116°02'02.89" W., surface elevation 1215 m, depth of burial 320 m.	
29 June (B) Mono Lake area	
Origin time:	07 46 14.1
See California listing.	
New York	
6 June (L) Central New York	
Origin time:	13 15 52.0
Epicenter:	43.56 N., 75.23 W.
Depth:	1 km
Magnitude:	3.5 Mn(J), 3.5 Mn(G)
Intensity V:	Forestport (few windows cracked), Hinckley (few windows cracked).
Intensity IV:	Alder Creek, Boonville, Griffiss Air Force Base, Inlet, Prospect, Rensen, Woodgate.
Intensity III:	Constableville, Indian Lake, Newcomb, Palatine Bridge, Poland, Thendara, Utica (press report), Westernville.
Intensity II:	Holland, Patent.
North Carolina	
22 April (G) Northern North Carolina	
Origin time:	03 14 06.2
Epicenter:	36.50 N., 80.66 W.
Depth:	5 km
Magnitude:	2.5 Mn(V)
Some of the intensities listed below are from a newspaper questionnaire published in the Mt. Airy, North Carolina, newspaper by G. A. Bollinger, Virginia Polytechnic Institute and State University.	
Intensity IV:	Ararat, Mount Airy, Pilot Mountain, Westfield.
Intensity III:	Dobson, Longhill, Pinnacle.
Intensity II:	Toast.
Oregon	
18 May (W) Mount St. Helens area	
Origin time:	15 32 11.4
See Washington listing.	

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

South Carolina	
22 June (G) Charleston area	
Origin time:	20 33 06.2
Epicenter:	33.01 N., 80.16 W.
Depth:	1 km
Magnitude:	2.1 Mn(G)
Felt in the Lincolnville-Ladson area (Y).	
22 June (G) Charleston area	
Origin time:	23 35 26.5
Epicenter:	33.01 N., 80.16 W.
Depth:	1 km
Magnitude:	1.6 Mn(G)
Felt in the Lincolnville-Ladson area (Y).	

Tennessee

21 April (G) Eastern Tennessee	
Origin time:	20 44 05.7
Epicenter:	35.76 N., 84.13 W.
Depth:	5 km
Magnitude:	2.6 Mn(G)
Intensity III:	South Knoxville.
25 June (G) Eastern Tennessee	
Origin time:	18 02 01.5
Epicenter:	35.78 N., 84.05 W.
Depth:	5 km
Magnitude:	3.3 Mn(V)
Intensity IV:	Louisville, Maryville, Rock- ford, Tallassee, Townsend.
Intensity III:	Alcoa, Farragut, Greenback, Knoxville (telegram), Walland.

Texas

9 June (G) Northwestern Texas	
Origin time:	22 37 09.9
Epicenter:	35.51 N., 101.08 W.
Depth:	5 km
Magnitude:	3.4 Mn(T)
Felt over parts of Carson, Gary, Hudson, and Potter Counties (press report).	
Intensity V:	Pampa (minor cracks in walls--press report).
Intensity IV:	Lefors, Mobeetic, Skellytown, White Deer.
Intensity III:	Amarillo, Dawn, Memphis, Miami, Panhandle, Vega.
Felt:	Borger (press report).

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

Utah	
4 April (U) Northwestern Utah	
Origin time:	00 45 04.4
Epicenter:	41.34 N., 113.31 W.
Depth:	7 km
Magnitude:	3.0 ML(U)
Intensity IV:	Pleasant Grove, St. John, Willard.
Intensity III:	Riverside, Salt Lake City.
Felt:	Tooele (U).
4 April (U) Northwestern Utah	
Origin time:	00 56 09.3
Epicenter:	41.35 N., 113.32 W.
Depth:	7 km
Magnitude:	2.7 ML(U)
Felt at Salt Lake City and Tooele (U).	

6 April (U) Central Utah	
Origin time:	10 45 04.1
Epicenter:	39.95 N., 111.98 W.
Depth:	5 km
Magnitude:	3.8 ML(U)
Intensity IV:	Eureka (one report of small cracks in interior walls).
Intensity III:	Santaquin.

24 May (U) Central Utah	
Origin time:	10 03 36.3
Epicenter:	39.94 N., 111.97 W.
Depth:	5 km
Magnitude:	5.0 mb(G), 4.2 ML(U)

Intensity V:	Goshen (few windows cracked, underground pipes reported broken, build- ing shook slightly, felt by and awakened many), Santaquin (small objects and light furniture moved, hanging pictures fell, felt by and awakened many).
Intensity IV:	Eureka, Levan, Ophir, Payson, Salem (press report), Farmington.
Intensity III:	Hinckley.

Washington

27 April (W) Puget Sound area	
Origin time:	06 00 27.0
Epicenter:	47.37 N., 122.55 W.
Depth:	20 km
Magnitude:	3.2 ML(G)

Felt from the Magnolia area north of Seat-
tle, east to Bellvue, and south to Tacoma
(press report).

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

Washington--Continued

Intensity IV: Kent, Port Orchard, Renton
(press report), Seahurst, Seattle, Vashon.
Intensity III: Burley, Fox Island.
Intensity II: Sauna, Southworth

18 May (W) Mount St. Helens area

Origin time: 15 32 11.4
Epicenter: 46.21 N., 122.19 W.
Depth: 4 km
Magnitude: 4.7 mb(G), 5.2 MS(G),
5.0 ML(G)

This earthquake occurred only seconds before the explosion which began the eruption of Mount St. Helens volcano. This eruption and blast took 396 m (1300 feet) off the top of Mount St. Helens, killed 31 people, left 33 others missing, and caused damage of between \$500 million and \$2 billion (U.S. Geological Survey, 1980).

The earthquake sequence associated with the volcano began on March 20 with swarms of earthquakes centered near or under Mount St. Helens. Most of the events were too small to be located without a local seismographic network; however, a number of the larger ones were located and are listed in table 1. The seismic activity was continuous until the major eruption on May 18, after which the seismic activity declined. The last earthquake located in this sequence was on May 24.

The USGS Newsletter (1980) described the major eruption as follows:

"The Big One. Earthquake of 5.2 magnitude occurring at 8:32 (a.m. PST) causes catastrophic slumping of material in the unstable bulge, which in turn releases pressure on underlying steam column leading to the explosion that blows out the north side of the mountain and removes 1300 feet (396 m) from its former elevation. Lateral blast flattens mature trees up to 15 miles (24 km) distant and opens up a wedge shaped crater on the north face of the mountain roughly 1 km wide, 2 km long, and more than 0.5 km deep. Mud and debris released by the failure of the north flank flow down slope to a point about 18 miles (29 km) down the Toutle River Valley. Pyroclastic flows pour out of the breach in the north face, turning Spirit Lake into a large muddy pond. Debris flow wipes out virtually all bridges on the Toutle, reduces the carrying capacity of the Cowlitz River from

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

Washington--Continued

2264 cubic meters (80,000 cubic feet) per second to about 255 cms (9000 cfs), and finally plugs up the ship channel in the Columbia River below Portland. Mud flows to south and southeast reach the head of Swift Reservoir. The vertical columns of ash and steam rises to 18,288 m (60,000 feet) and drops significant quantities of ash over three western states. Particles expected to remain in stratosphere of Northern Hemisphere for at least 2 years. Blast force estimated at 10-50 megatons and volume of ejected material at 1 cubic kilometer."

The closeness in time of the earthquake and the explosion of the volcano made the collection of information on the effects of the earthquake very difficult, as the ground shaking and the effects of the sound waves from the volcanic explosion were virtually indistinguishable. It is known that sound waves can be refracted from the stratosphere and may arrive with considerable energy, rattling windows and causing shaking that can be misinterpreted as an earthquake (Richter, 1958). The questionnaires were evaluated as if the effects were due to ground shaking even though there is this ambiguity. Some of the questionnaires noted that the sound of an explosion was heard without feeling any vibrating effects. These are given an intensity of I on figure 12.

This earthquake and eruption were felt or heard over an area of approximately 349,000 sq km of Idaho, Oregon, and Washington plus an additional area in Canada of unknown dimensions (fig. 12).

Intensity IV:

Oregon--Aloha, Athena, Bay City, Beaver, Blodgett, Cascadia, Cloverdale, Crescent Lake, Elkton, Enterprise, Garibaldi, Gleneden Beach, Hebo, Monument, Newport, Noti, Pacific City, Toledo, Trail, Union, Valsetz, Waldport, Walterville, Yachats, Yoncalla.

Washington--Almira, Amanda Park, Ariel, Arlington, Ashford, Bellingham, Bow, Bremerton, Bridgeport, Brinnon, Carlsborg, Carrols, Cashmere, Chattaroy, Chelan Falls, Chimacum, Clinton, Conconcully, Concrete, Coulee Dam, Creston, Darrington, Deming, Dixie, East Wenatchee, Eastsound, Edison, Edmonds, Elbe, Electric City, Elk, Everett, Forks, Gifford, Gilchrist, Glenoma, Glenwood, Hamilton, Hooper, Humptulips,

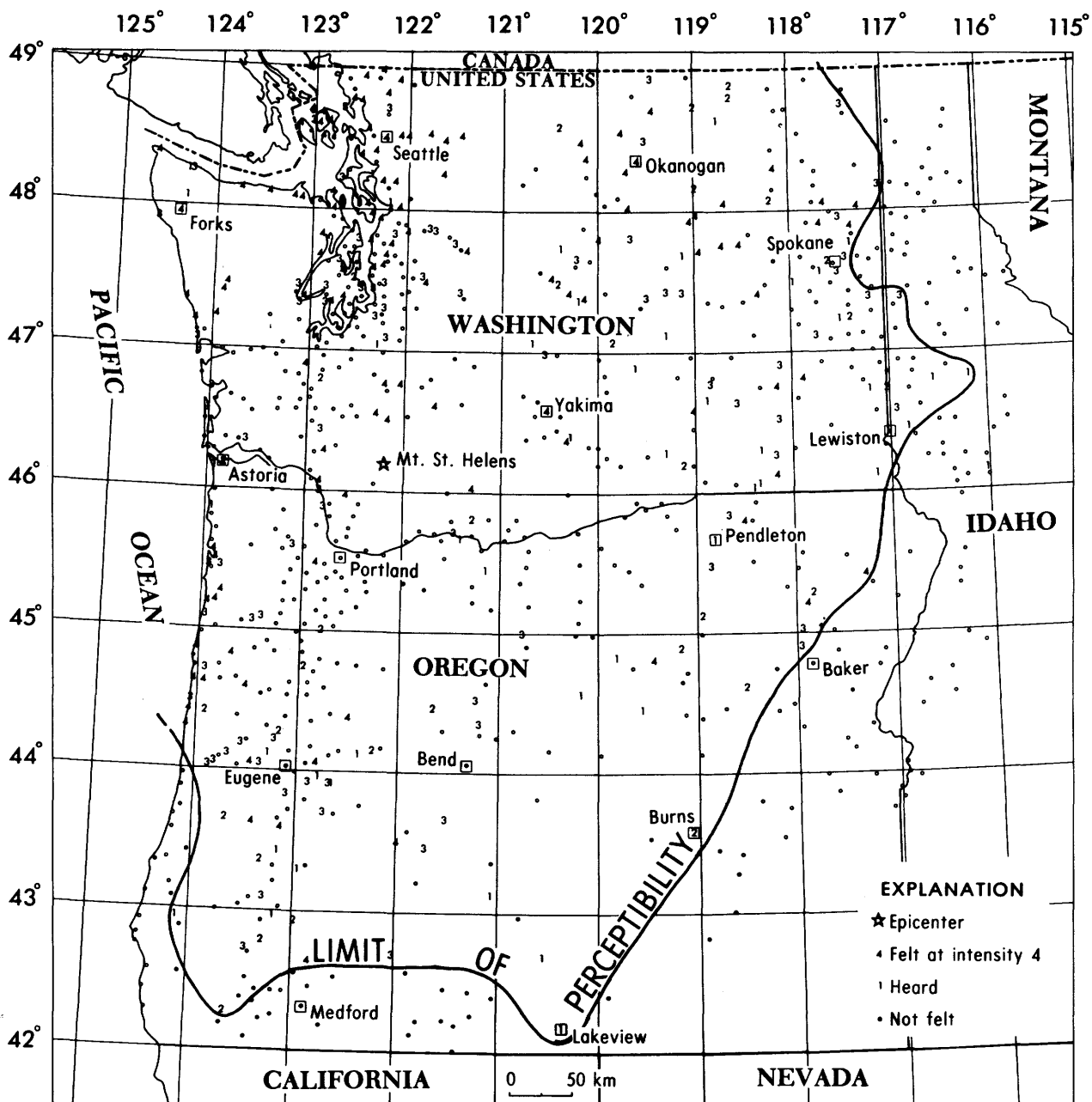


FIGURE 12.--Intensity map for the Mount St. Helens, Washington, earthquake of 18 May 1980, 15 32 11.4 UTC. Arabic numerals are used to represent Modified Mercalli intensities at specific sites.

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

Washington--Continued

Joyce, Keller, Kirkland, La Conner, Lacrosse, Lake Stevens, Langley, Littlerock, Loon Lake, Lopez, Lyman, Lynden, Malott, Maple Falls, Marblemount, Marietta, Medina, Mesa, Moclips, Muhler, Monroe, Morton, Mount Vernon, Mukilteo, Neah Bay, Neilton, Nordland, North Bend, Olga, Okanogan, Orcas, Pacific Beach, Packwood, Point Roberts, Port Angeles, Port Orchard, Port Townsend, Quilcene, Quinault, Richmond Beach, Roche Harbor, Rock Island, Rockport, Seattle, Sedro Woolley, Sequim, Silvana, Silver Lake, Skykomish, Sumas, Tacoma, Taholah, Tahuya, Tonasket, Toppenish, Tumtu, Twisp, Vaughn, Waldron, Wauna, Wilbur, Winthrop, Woodinville, Yakima.

Intensity III:
Idaho--Genesee, Worley.
Oregon--Banks, Blachly, Columbia City, Crescent, Creswell, Culver, Dexter, Dillard, Dorena, Fort Kilamath, Glendale, Greenleaf, Haines, Helix, Junction City, La Pine, Lorane, Mapleton, Neskowin, North Powder, Oceanside, Pilot Rock, Seal Rock, Shaniko, Sheridan, Siletz, Swisshome, Terrebonne, Tillamook, Veneta, Willamina.
Washington--Acme, Auburn, Baring, Belfair, Benge, Bingen, Burien, Clallam Bay, Clearlake, Clearview, Coupeville, Deer Harbor, Deer Park, Ellensburg, Entiat, Ewan, Fairfield, Gold Bar, Grapeview, Grays River, Hatton, Ione, Kahlottus, Kalama, Kingston, La Push, Lilliwaup, Lummi Island, Mansfield, Marshall, Milton, Newport, Ocean City, Oroville, Orting, Quillayute Airport, Renton, Riverside, Seahurst, Shaw Island, Silverdale, Skyway, Snoqualmie, Snoqualmie Pass, Soap Lake, Spokane, Starbuck, Startup, Stratford, Tokeland, Toledo, Union, Vashon, Waitsburg, Wilson Creek.

Intensity II:
Idaho--Moscow.
Oregon--Astoria, Azalea, Bates, Blue River, Burns, Camp Sherman, Cove, Harrisburg, Marion, Ritter, Scottsburg, Selma, Silverton, Tidewater, Tiller, Ukiah, Umpqua.
Washington--Airway Heights, Appleton, Bucoda, Curlew, Fruitland, George, Kennewick, Malo, Mazama, Mercer Island, Monitor, Nespelem, Rosalia, Southworth, Wauconda, White Salmon.

Heard:

Idaho--Deary, Elk River, Kooskia, Spalding.

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

Washington--Continued

Oregon--Alvadore, Brownsville, Christmas Valley, Days Creek, Dayville, Dufur, Finn Rock, Gaylord, Glide, Lakeview, Lowell, Mitchell, Mosier, Oakland, Paisley, Pendleton, Pleasant Hill, Spray, Tolovana Park, Warrenton.
Washington--Anatone, Ardenvoir, Beaver, College Place, Connell, Edwall, Graham, Grand Coulee, Hartline, Malaga, Malden, Marlin, Marysville, Mead, Medical Lake, Moses Lake, Nahcotta, Prescott, Pulmann, Republic, Richland, Royal City, Sekiu, Stanwood, Thorp, Walla Walla, Zillah.

28 May (W) Mount St. Helens area
Origin time: 14 15 31.5
Epicenter: 46.34 N., 122.21 W.
Depth: 7 km
Magnitude: 3.8 ML(G)
Felt at Kelso and Longview (press report).

28 May (W) Mount St. Helens area
Origin time: 14 18 30.0
Epicenter: 46.34 N., 122.20 W.
Depth: 8 km
Magnitude: 3.6 ML(G)
Felt at Kelso and Longview (press report).

8 June (W) Puget Sound area
Origin time: 22 40 09.8
Epicenter: 47.95 N., 123.02 W.
Depth: 51 km
Magnitude: 3.5 ML(G)
Felt at Victoria, B.C., Canada (press report).

Intensity IV: Chimacum, Mount Vernon.
Intensity III: Friday Harbor, Keyport, La Conner, Oak Harbor, Port Ludlow.
Intensity II: Hadlock, Lopez.

23 June (W) Puget Sound area
Origin time: 16 05 15.9
Epicenter: 47.52 N., 122.23 W.
Depth: 3 km
Magnitude: 3.1 ML(G)
Intensity V: South Seattle (moved light and heavy furniture, small objects moved, hanging pictures swung, felt by several).
Intensity IV: Dockton, Magnolia, Mercer Island, Renton, Seattle, West Seattle.
Intensity III: East Union, Lakeview, White Center.
Intensity II: Bellevue.
Felt: Tukwila.

Table 2.--Summary of macroseismic data for U.S. earthquakes,
April-June 1980--Continued

Washington--Continued

23 June (W) Puget Sound area
Origin time: 16 09 54.4
Epicenter: 47.53 N., 122.25 W.
Depth: 3 km
Magnitude: 3.0 ML(G)

The effects of this earthquake could not be separated from the June 23, 16 05 15.9 event; the effects are about the same as those described above with about the same maximum intensity.

Wyoming

10 May (G) Hebgen Lake area
Origin time: 23 41 47.5

See Montana listing.

ACKNOWLEDGMENTS

Listed below are the collaborators who furnished data to the National Earthquake Information Service for use in this circular:

ALASKA: Staff of National Oceanic and Atmospheric Administration, Alaska Tsunami Warning Center, Palmer.

CALIFORNIA: Clarence R. Allen, Seismological Laboratory, California Institute of Technology, Pasadena.
Bruce A. Bolt, Seismograph Station, University of California, Berkeley.

HAWAII: Robert Y. Koyanagi, U.S. Geological Survey, Hawaiian Volcano Observatory, Hawaii National Park.

MASSACHUSETTS: Staff of Weston Observatory, Weston.

MISSOURI: Otto Nuttli, Department of Geology and Geophysics, St. Louis University, St. Louis

MONTANA: Anthony Qamar, University of Montana, Missoula.

NEW YORK:

Lynn R. Sykes and Yash P. Aggarwal, Lamont-Doherty Geological Observatory, Columbia University, Palisades.

OKLAHOMA:

James E. Lawson, Jr., Oklahoma Geophysical Observatory, Oklahoma Geological Survey, Leonard.

PENNSYLVANIA:

Richard A. Bischke, Temple University, Philadelphia.

SOUTH CAROLINA:

Joyce Bagwell, Baptist College at Charleston.

UTAH:

Department of Geological and Geophysical Sciences, University of Utah, Salt Lake City.

VIRGINIA:

G. A. Bollinger, Department of Geological Sciences, Virginia Polytechnic Institute and State University, Blacksburg.

WASHINGTON:

Robert S. Crosson, Geophysics Program, University of Washington, Seattle.

REFERENCES CITED

- Bath, Markus, 1966, Earthquake energy and magnitude, in *Physics and chemistry of the Earth*, Volume 7: Oxford and New York, Pergamon Press, p. 115-165.
- Clark, Malcolm M. and Yount, James C., 1981, Surface faulting along the Hilton Creek Fault associated with the Mammoth Lakes, California, earthquake of May 1980 (abstract): *Earthquake Notes*, Eastern Section, Seismological Society of America, p. 45-46.
- Gutenberg, B. and Richter, C. F., 1956, Magnitude and energy of earthquakes: *Annali di Geofisica*, v. 9, no. 1, p. 1-15.
- McJenkins, R. D. and Bedrossian, T. L., 1980, Mammoth Lakes earthquakes, May 25-27, 1980, Mono County, California: *California Geology*, v. 33, no. 9, p. 194-201.
- Nuttli, O. W., 1973, Seismic wave attenuation and magnitude relations for eastern North America: *Journal of Geophysical Research*, v. 78, no. 5, p. 876-885.
- Richter, C. F., 1958, *Elementary seismology*: San Francisco, W. H. Freeman, 768 p.
- U.S. Geological Survey, 1980, *Volcano II*: USGS Newsletter, v. 2, no. 3, p. 16-18.
- Wood, H. O., and Neumann, F., 1931, Modified Mercalli Intensity Scale of 1931: *Seismological Society of America Bulletin*, v. 21, no. 4, p. 277-283.

