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Catalogue of U.S. Geological Survey Strong-Motion Records, 1986

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Catalogue of U.S. Geological Survey Strong-Motion Records, 1986

Compiled by RONALD L. PORCELLA and
JOSEPHINE C. SWITZER

A revised format for the continuing yearly series previously entitled
"Strong-Motion Program Report, January–December [year] "

U.S. GEOLOGICAL SURVEY CIRCULAR 1032

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PREFACE

The first seismic engineering program in the United States was administered by the Seismological Field Survey (SFS) of the Coast and Geodetic Survey. This program was begun in 1931 and essentially remained the responsibility of the SFS until 1973, when the U.S. Geological Survey (USGS) assimilated the program into its National Earthquake Hazards Reduction Program. The current federal seismic engineering program operates the National Strong-Motion Instrumentation Network (NSMIN) with nearly 1,000 stations in 41 States and Puerto Rico. This network is administered by the USGS in cooperation with both private industry and numerous Federal, State, and local agencies and organizations. Primary objectives of the program are to record strong ground motions and the response of representative engineered structures during moderate to large earthquakes, and to disseminate the resultant data and information about the records, sites, and structures to the earthquake engineering research and design community.

This catalogue continues in a revised format the yearly publication "Strong-Motion Program Report, January–December [year]"; it is a continuation of the table 1 summary of accelerograms recovered at NSMIN stations which have been published in that format since 1974. This report includes all accelerograms recovered during 1986. Unless otherwise noted, event data are from the "Preliminary Determination of Epicenters," published weekly by the U.S. Geological Survey.

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Catalogue of U.S. Geological Survey Strong-Motion Records, 1986

Compiled by Ronald L. Porcella *and* Josephine C. Switzer

INTRODUCTION

The National Strong-Motion Instrumentation Network (NSMIN) operated by the U.S. Geological Survey produced 517 accelerograms during 1986, including 72 that were recorded during the M_L=6.0 North Palm Springs earthquake of July 8 and more than 120 aftershock records recovered during the period July 8 through October 15. Main-shock records are from nearly 50 NSMIN stations in the southern California region that include 30 ground sites, nine buildings, seven dams, and one freeway interchange (Porcella and others, 1987). Nineteen stations within 50 km of the epicenter recorded peak horizontal ground motions in the range 0.05 to 0.70 *g*. The main shock also triggered more than 30 stations operated by the California Division of Mines and Geology (Huang and others, 1986).

A series of five moderate-sized earthquakes (M_L=5.6–6.5) occurred in the region about 20 km north of Bishop in eastern California between July 20 and 31. Nearly 200 accelerograms related to these events and aftershocks were recovered from NSMIN stations during July–December; 13 of these contain peak horizontal ground motions in the range 0.11–0.40 *g* (Maley and others, 1986).

Three additional 1986 earthquakes produced noteworthy collections of accelerograms at NSMIN stations. A magnitude 5.5 event on January 26 near Hollister in central California triggered accelerographs at 12 stations. Maximum recorded vertical motion was 0.29 *g* at Hollister City Hall; maximum horizontal acceleration reached 0.17 *g* at a private residence in Hollister. A magnitude 5.7 earthquake southeast of Fremont, California, on March 31 triggered 10 accelerographs at 7 NSMIN stations in the southern San Francisco Bay area. The stations are located at two dams, two Veterans Administration hospitals, a freeway interchange, and two at Stanford University. On May 31 a magnitude 4.8 earthquake near Bear Valley in central California triggered six stations in the NSMIN Bear Valley Array and one at Hollister; maximum horizontal ground acceleration was 0.32 *g*, recorded at Array Station 12.

REFERENCES

Huang, M.J., Sherburne, R.W., Parke, D.L., and Shakal, A.F., 1986, CSMIP strong–motion records from the Palm Springs, California, earthquake of 8 July 1986: California Division of Mines and Geology Report No. OSMS 86-05, 74 p.

Maley, R. P., Etheredge, E.C., and Acosta, A., 1986, U.S. Geological Survey strong-motion records from the Chalfant Valley, California, earthquake of July 21, 1986: U.S. Geological Survey Open-File Report 86-568, 19 p.

Porcella, R., Etheredge, E., Maley, R., and Switzer, J., 1987, Strong-motion data from the July 8, 1986 North Palm Springs earthquake and aftershocks: U.S. Geological Survey Open-File Report 87-155, 37 p.

Manuscript approved for publication, March 1, 1989.

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986

[Station owners: ACOE, U.S. Army Corps of Engineers; BECH, Bechtel Corporation; CDOT, California Department of Transportation; CDWR, California Department of Water Resources; CLA, City of Los Angeles; MWD, Metropolitan Water District of Southern California; SDGE, San Diego Gas and Electric Company; UCB, University of California at Berkeley; USBR, U.S. Bureau of Reclamation; USGS, U.S. Geological Survey; VA, Veterans Administration. Instrument trigger time in seconds after the minute (or the following minute) listed in event column. S-minus trigger denotes S-wave-arrivalminus-trigger-time (S-t) or S-wave-minus- P-wave-arrival time interval. Direction is of case acceleration for upward trace deflection on accelerogram; horizontal components are listed as azimuth, and vertical components as "up" or "down." Maximum amplitude is peak acceleration recorded at ground level on one vertical and two horizontal (orthogonal) components unless otherwise noted. Duration is interval between first and last peaks of acceleration greater than 0.10 g.]

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
4 December 1985-14 January 1986 Central Calif. Epicenter and magnitude unknown	Bear Valley Station 10 Webb Residence (USGS)	36.532N 121.143W	*(2)*	0.9		*(1)*	
14 January 1986 0307:54.9 G.m.t. Central Calif. 36.563N, 121.203W Magnitude 3.3 ML	Bear Valley Station 10 Webb Residence (USGS)	36.532N 121.143W	56.7	1.4		*(1)*	
14 January 1986 0309:36.3 G.m.t. Central Calif. 36.572N, 121.205W Magnitude 4.7 ML	Bear Valley Station 1 CDF Fire Station (USGS)	36.573N 121.184W	38.1	0.8	310 Up 220	.27 .05 .19	0.1 --- 0.2
	Bear Valley Station 2 Stone Canyon West (USGS)	36.636N 121.234W	39.3	*(2)*		*(1)*	
	Bear Valley Station 5 Callens Ranch (USGS)	36.673N 121.195W	39.7	2.7	310 Up 220	.06 .04 .10	--- --- 1 peak
	Bear Valley Station 6 James Ranch (USGS)	36.504N 121.101W	41.3	*(2)*		*(1)*	
	Bear Valley Station 7 Pinnacles (USGS)	36.483N 121.184W	38.8	1.6	310 Up 220	.05 .05 .08	--- --- ---
	Bear Valley Station 10 Webb Residence (USGS)	36.532N 121.143W	38.2	2.0	310 Up 220	.22 .12 .22	1 peak 0.4 0.5
	Bear Valley Station 12 Williams Ranch (USGS)	36.658N 121.249W	39.7	2.1	310 Up 220	.09 .05 .14	--- --- ---

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
	Bear Valley Station 14 Upper Butts Ranch (USGS)	36.569N 121.043W	40.1	(2)		(1)	
14 January 1986 0535:47.9 G.m.t. Central Calif. 36.568N, 121.202W Magnitude 2.9 ML	Bear Valley Station 1 CDF Fire Station (USGS)	36.573N 121.184W	50.3	(2)		(1)	
	Bear Valley Station 7 Pinnacles (USGS)	36.483N 121.184W	49.9	(2)		(1)	
	Bear Valley Station 10 Webb Residence (USGS)	36.532N 121.143W	49.7	(2)		(1)	
14 January 1986 0550 G.m.t. Central Calif. Epicenter and magnitude unknown	Bear Valley Station 10 Webb Residence (USGS)	36.532N 121.143W	24.4	(2)			
15 January 1986- 26 January 1986 Central Calif. Epicenters and magnitudes unknown	Bear Valley Station 10 Webb Residence (USGS)	36.532N 121.143W	(2)	(2)		(1)	
	Note: One additional record[1] recovered at Webb Residence.						
26 January 1986 1920:51.2 G.m.t. Central Calif. 36.810N, 121.275W Magnitude 5.5 ML	Bear Valley Station 1 Fire Station (USGS)	36.573N 121.184W	57.8	(2)		(1)	
	Bear Valley Station 2 Stone Canyon West (USGS)	36.636N 121.234W	56.4	(2)		(1)	
	Bear Valley Station 5 Callens Ranch (USGS)	36.673N 121.195W	54.7	(2)		(1)	
	Bear Valley Station 6 James Ranch (USGS)	36.504N 121.101W	03.1	(2)		(1)	
	Bear Valley Station 10 Webb Residence (USGS)	36.532N 121.143W	(3)	(2)		(1)	
	Bear Valley Station 12 Williams Ranch (USGS)	36.658N 121.249W	(3)	3.4	310 Up 220	.12 .01 .12	0.6 --- 1 peak

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
	Bear Valley Station 14 Upper Butts Ranch (USGS)	36.569N 121.043W	58.3	(2)	310 Up 220	.03 .02 .06	--- --- ---
	Hollister City Hall Basement Annex (USGS)	36.851N 121.402W	54.8	2.8	180 Up 090	.10 .29 .12	1 peak 1.5 0.5
	Hollister Damler Residence (USGS)	36.807N 121.408W	54.5[4]	2.4	360 Up 270	.17 .09 .14	3.3 --- 0.8
	Hollister SAGO Vault (USGS)	36.765N 121.446W	57.7[4]	(2)		(1)	
	Hollister Diff. Array (SMA) (USGS)	36.888N 121.413W	54.7	(2)	255 Up 165	.09 .15 .10	--- 0.3 2 peaks
	San Justo Damsite (USBR)						
	Left Abutment	36.815N 121.447W	55.4	3.1	360 Up 270	.16 .07 .14	0.5 --- 0.4
	Right Abutment (Dike)	36.827N 121.445W	55.2	2.5	360 Up 270	.09 .04 .08	--- --- ---
26 January 1986 2346:54.9 G.m.t. Central Calif. 36.828N, 121.290W Magnitude 3.8 ML	Hollister City Hall Basement Annex (USGS)	36.851N 121.402W	57.4	2.4		(1)	
	Note: One additional record[1] recovered at Hollister City Hall Annex.						
10 February 1986 0340 G.m.t. Central Calif. Epicenter and magnitude unknown	Bear Valley Station 10 Webb Residence (USGS)	36.532N 121.143W	48.5	1.4		(1)	
9 March 1986 2241:42.5 G.m.t. Southern Calif. 34.110N, 117.770W Magnitude 3.5 ML	Live Oak Reservoir (MWD)	34.134N 117.753W	(3)				
	Abutment			0.6	180 Up 090	.10 .03 .05	1 peak --- ---

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
	Live Oak Reservoir - continued						
	Structure Array						
	Ch. 1-Center crest			0.8	155	.09	---
	Ch. 2-Center crest			(2)	Up	.04	---
	Ch. 3-Center crest			0.7	245	.13	0.1
	Ch. 4-Left crest			0.7	155	.09	---
	Ch. 5-Left crest			0.6	245	.14	0.1
	Ch. 6-Left slope			0.7	245	.10	1 peak
	Ch. 7-Center slope			0.6	155	.09	---
	Ch. 8-Center slope			(2)	Up	.02	---
	Ch. 9-Center slope			0.7	245	.09	---
	Ch. 10-Center toe			0.6	155	.07	---
	Ch. 11-Center toe			(2)	Up	.02	---
	Ch. 12-Center toe			0.6	245	.05	---
	San Antonio Dam (ACOE)	34.166N 117.680W	(3)	(2)			
	Crest					(1)	
	Weymouth Filter Plant (MWD)	34.114N 117.778W	(3)				
	Ground			0.7		(1)	
	Tank top					(1)	
10 March 1986 1533:16.2 G.m.t. Southern Calif. 34.400N, 119.800W Magnitude 4.0 ML	Santa Barbara Courthouse (USGS)	34.42 N 119.70 W	(3)	2.3		(1)	
13 March 1986 0836:59.4 G.m.t. Central Calif. 36.309N, 120.312W Magnitude 2.7 ML	Coalinga Oil City (USGS)	36.229N 120.360W	03.4	0.6	360 Up 270	.05 .01 .03	--- --- ---
24 March 1986 2255:34.0 G.m.t. Central Calif. 36.557N, 121.183W Magnitude 3.0 ML	Bear Valley Station 1 CDF Fire Station (USGS)	36.573N 121.184W	34.8	0.7		(1)	
29 March 1986 1624:04.2 G.m.t. Central Calif. 37.877N, 122.203W Magnitude 4.0 ML	Emeryville 6363 Christie Ave. (USGS)	37.844N 122.295W	(3)	(2)		(1)	
	U.C. Berkeley Strawberry Canyon (UCB)	37.87 N 122.24 W	07.5	(2)		(1)	

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
31 March 1986 1155:40.0 G.m.t. Central Calif. 37.483N, 121.690W Magnitude 5.7 ML	Anderson Dam (USGS)(SMA)	37.166N 121.628W					
	Crest		49.2	3.8		(*1*)	
	CR-1 (12-channel)		49.2	(*2*)		(*1*)	
	Del Valle Dam (CDWR)	37.615N 121.745W	(*3*)	2.5			
	Crest				065 Up 335	.15 .08 .10	1.4 --- 1 peak
	Livermore VA Hospital, Bldg. 62 (VA)	37.625N 121.762W	(*3*)	2.8			
	Basement				125 Up 035	.07 .05 .09	--- --- ---
	Roof (7th level)				125 Up 035	.15 .10 .39	0.7 3 peaks 1.4
	Palo Alto VA Hospital, Bldg. 1 (VA)	37.40 N 122.14 W	(*3*)	(*2*)			
	Basement					(*1*)	
	Roof (7th level)					(*1*)	
	San Jose, 101/280/680 Freeway Interchange (USGS/CDOT)	37.340N 121.851W	49.4[4]	4.6	322 Up 232	.07 .05 .04	--- --- ---
	Stanford Univ. Quad. Palm Dr. & Serra St. (USGS)	37.429N 122.169W	(*3*)	(*2*)		(*1*)	
	Stanford University SLAC Test Laboratory (USGS)	37.419N 122.205W	08.2[4]	(*2*)		(*1*)	
15 April 1986 0925:56.7 G.m.t. Central Calif. 36.677N, 121.347W Magnitude 3.6 ML	Bear Valley Station 12 Williams Ranch (USGS)	36.658N 121.249W	59.3	(*2*)		(*1*)	

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
26 April 1986 1719:46.5 G.m.t. Hawaii 20.811N, 155.749W Magnitude 5.0 ML	Kapaau, Hawaii Kohala Police Station (USGS)	20.230N 155.801W	(3)	(2)		(1)	
28 April 1986 2218:40.6 G.m.t. Central Calif. 36.815N, 121.258W Magnitude 3.5 ML	Hollister Differential Array (USGS)	36.888N 121.413W	44.4	(2)		(1)	
6 August 1985- 31 May 1986 Central Calif. Epicenters and magnitudes unknown	McGee Creek, SMA (USGS)	37.550N 118.811W	(2)	(2)		(1)	
	Note: Two additional records[1] recovered at McGee Creek SMA station.						
	McGee Creek, CRA (USGS)	37.550N 118.811W	(2)	(2)			
	166 m downhole					(1)	
	35 m downhole					(1)	
	Surface					(1)	
	Note: Two additional records[1] recovered at McGee Creek CRA station.						
31 May 1986 0847:56.1 G.m.t. Central Calif. 36.570N, 121.327W Magnitude 4.8 ML	Bear Valley Station 1 CDF Fire Station (USGS)	36.573N 121.184W	58.4	1.0	310 Up 220	.05 .03 .08	--- --- ---
	Bear Valley Station 2 Stone Canyon West (USGS)	36.636N 121.234W	58.9	(2)		(1)	
	Bear Valley Station 5 Callens Ranch (USGS)	36.673N 121.195W	59.3	1.7	310 Up 220	.05 .03 .04	--- --- ---
	Bear Valley Station 10 Webb Residence (USGS)	36.532N 121.143W	00.3	1.2		(1)	
	Bear Valley Station 12 Williams Ranch (USGS)	36.658N 121.249W	58.2	2.4	310 Up 220	.32 .13 .25	1.8 0.3 1.3
	Bear Valley Station 14 Upper Butts Ranch (USGS)	36.569N 121.043W	04.7	(2)	310 Up 220	.02 .02 .05	--- --- ---
	Hollister Damler Residence (USGS)	36.807N 121.408W	07.8[4]	(2)		(1)	

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
31 May 1986 1451:27.9 G.m.t. Central Calif. 36.635N, 121.261W Magnitude 2.6 ML	Bear Valley Station 12 Williams Ranch (USGS)	36.658N 121.249W	30.3	1.9		(*1*)	
1 June 1986 0649:34.1 G.m.t. Central Calif. 36.612N, 121.267W Magnitude 3.6 ML	Bear Valley Station 1 CDF Fire Station (USGS)	36.573N 121.184W	36.8	1.3	310 Up 220	.07 .02 .10	--- --- 1 peak
	Bear Valley Station 5 Callens Ranch (USGS)	36.673N 121.195W	38.0	(*2*)		(*1*)	
	Bear Valley Station 12 Williams Ranch (USGS)	36.658N 121.249W	37.0	1.9	310 Up 220	.05 .05 .05	--- --- ---
	Bear Valley Station 14 Upper Butts Ranch (USGS)	36.569N 121.043W	43.0	(*2*)		(*1*)	
1 June 1986 1934:44.6 G.m.t. Central Calif. 36.619N, 121.252W Magnitude 2.5 ML	Bear Valley Station 12 Williams Ranch (USGS)	36.658N 121.249W	47.25	1.9		(*1*)	
3 June 1986 1414:49.2 G.m.t. Southern Calif. 33.790N, 116.340W Magnitude 3.7 ML	Fun Valley Reservoir 261 (USGS)	33.925N 116.389W	52.6	(*2*)		(*1*)	
	Indio,Southern Calif. Gas Company (USGS)	33.747N 116.214W	52.6	3.1	315 Up 225	.05 .01 .02	--- --- ---
	Thousand Palms Post Office (USGS)	33.82 N 116.40 W	(*3*)	0.5	135 Up 045	.05 .02 .05	--- --- ---
11 June 1986 1508:59.6 G.m.t. Central Calif. 36.622N, 121.282W Magnitude 3.1 ML	Bear Valley Station 12 Williams Ranch (USGS)	36.658N 121.249W	01.7	2.0	310 Up 220	.10 .04 .06	1 peak --- ---
9 December 1985- 13 June 1986 Southern Calif. Epicenter and magnitude unknown	Brea Dam (ACOE)	33.890N 117.930W	(*3*)	3.6			
	Left abutment					(*1*)	
	Downstream					(*1*)	

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
	Long Beach VA Hospital (VA)	33.78 N 118.12 W	(3)	2.1			
	Basement					(1)	
	6th floor					(1)	
	11th floor					(1)	
30 June 1986 Time unknown Central Calif. Epicenter and magnitude unknown	Bear Valley Station 10 Webb Residence (USGS)	36.532N 121.143W	19.5	0.8		(1)	
8 July 1986 0920:44.5 G.m.t. N. Palm Springs 34.000N, 116.610W Magnitude 6.0 ML	Anza Fire Station ANZA Array (USGS)	33.556N 116.673W	54.36	5.1	315 Up 225	.07 .06 .11	--- --- .02
	Big Pines Station (USGS)	34.38 N 117.69 W	16.73	(2)		(1)	
	Borrego Springs Scripps Clinic (USGS)	33.210N 116.330W	02.5	9.3		(1)	
	Brea Dam: (ACOE)	33.889N 117.926W					
	Left abutment		(3)	(2)		(1)	
	Downstream		(3)	14.1		(1)	
	Crest		(3)	14.0	130 Up 040	.04 .03 .07	--- --- ---
	Note: One additional record[1] recovered at Brea Dam crest.						
	Cabazon Post Office (USGS)	33.918N 116.782W	49.50	2.4	270 Up 180	.21 .38 .22	3.3 3.2 2.7
	Note: One additional record[1] recovered at Cabazon.						
	Carbon Canyon Dam (ACOE)	33.92 N 117.84 W	(3)	(2)			
	Crest					(1)	
	Note: One additional record[1] recovered at Carbon Canyon Dam crest.						

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
	Cherry Valley	33.98 N	51.48	5.2	295	.10	1 peak
	(USGS)	116.99 W			Up	.06	---
					205	.10	1 peak
	Chihuahua Valley	33.38 N	*(3)*	7.9	270	.05	---
	ANZA Array	116.68 W			Up	.04	---
	(USGS)				180	.07	---
	Note: One additional record[1] recovered at Chihuahua Valley.						
	Coachella Canal	33.64 N	56.8	9.8	315	.09	---
	Station 1	116.08 W			Up	.05	---
	(USGS)				225	.14	2 peaks
	Coachella Canal	33.56 N	*(3)*	9.0		*(1)*	
	Station 2	115.95 W					
	(USGS)						
	Collins Valley	33.405N	56.3	*(2)*		*(1)*	
	(USGS)	116.467W					
	Colton Interchange	34.06 N	*(3)*	6.4			
	(CDOT)	117.30 W					
	Bridge cell				082	.12	1.7
					Up	.05	---
					352	.10	1 peak
	Vault		*(3)*	5.9	082	.06	---
					Up	.02	---
					352	.06	---
	Note: One each additional record[1] recovered at Colton Interchange bridge cell and vault.						
	Cranston Forest	33.74 N	51.40	4.6	315	.19	1.5
	Station, ANZA Array	116.84 W			Up	.13	0.4
	(USGS)				225	.14	1.7
	Note: Two additional records[1] recovered at Cranston Forest Station.						
	Diemer Filter Plant	33.91 N	*(3)*	11.2			
	(MWD)	117.82 W					
	Basement					*(1)*	
	Reservoir roof					*(1)*	
	Note: One each additional record[1] recovered at Diemer Filter Plant basement and reservoir roof.						
	Forest Falls	34.09 N	50.0	4.0	300	.07	---
	Post Office	116.92 W			Up	.05	---
	(USGS)				210	.08	---

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
	Fun Valley	33.925N	48.95	2.8	135	.14	0.6
	Reservoir 261	116.389W			Up	.09	---
	(USGS)				045	.13	0.6
	Note: One additional record[1] recovered at Fun Valley.						
	Highland	34.136N	54.86	7.0	315	.04	---
	Fire Station	117.213W			Up	.04	---
	(USGS)				225	.05	---
	Hurkey Creek Park	33.67 N	51.34	4.3	135	.18	1.0
	ANZA Array	116.68 W			Up	.08	---
	(USGS)				045	.24	0.3
	Note: Two additional records[1] recovered at Hurkey Creek Park.						
	Indio, Southern	33.747N	53.20	6.2	315	.12	0.4
	Calif. Gas Company	116.214W			Up	.09	---
	(USGS)				225	.06	---
	Note: One additional record[1] recovered at Indio.						
	Jensen Filter Plant	34.309 N	(3)	18.5			
	(MWD)	118.499W					
	Basement					(1)	
	Admin. bldg.						
	Generator room					(1)	
	Basement						
	Reservoir roof					(1)	
	Note: One each additional records[1] recovered at Jensen Filter Plant administration building basement and generator room basement.						
	Keenwild Forest Station	33.71 N	50.85	3.9	180	.33	4.7
	Anza Array	116.71 W			Up	.18	8.1
	(USGS)				090	.21	2.9
	Mathews Dam	33.852N	(3)	6.8	252	.05	---
	Dike Toe	117.451W			Up	.04	---
	(USGS)				162	.07	---
	Loma Linda University	34.05 N	(3)	6.0			
	Medical Center	117.26 W					
	(USGS)						
	Basement					(1)	

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
	Loma Linda VA Hospital (VA)						
	South FF	34.049N 117.250W	(3)	6.0		(1)	
	North FF	34.051N 117.248W	56.6	(2)	360	.05	---
					Up	.03	---
					270	.04	---
	Structure Array, 9 Channel CRA-1:	34.049N 117.248W	(3)	6.3			
	1-1st floor center				Down	.02	---
	2-1st floor center				180	.04	---
	3-1st floor center				270	.04	---
	4-4th floor center				270	.10	1 peak
	5-1st floor north				270	.04	---
	6-4th floor center				180	.08	---
	7-4th floor north				270	.09	---
	8-1st floor south				180	.04	---
	9-4th floor south				270	.11	1 peak
	Lone Pine Canyon (USGS)	34.32 N 117.57 W	03.65	8.7		(1)	
	Los Angeles Bulk Mail Center (USGS)	33.99 N 118.16 W	(3)	16.5		(1)	
	Lytle Creek Mann Residence (USGS)	34.26 N 117.50 W	11.98	(2)		(1)	
	Mentone Fire Station (USGS)	34.067N 117.117W	53.02	6.2	315	.06	---
					Up	.04	---
					225	.04	---
	Morongo Valley Fire Station (USGS)	34.048N 116.577W	47.0	1.9	135	.22	4.7
					Up	.35	4.2
					045	.23	4.8
	Note: Two additional records[1] recovered at Morongo Valley Fire Station.						
	North Palm Springs Post Office (USGS)	33.924N 116.543W	47.55	2.0	300	.68	6.0
					Up	.78	5.6
					210	.70	5.3
	Note: One additional record[1] recovered at N. Palm Springs Post Office.						

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
	Norwalk, 12400 Imperial Highway: (BECH)	33.92 N 118.07 W					
	Basement		(3)	16.8		(1)	
	4th floor		(3)	16.8		(1)	
	8th floor(roof)		(3)	16.9		(1)	
	North freefield		(3)	16.8		(1)	
	South freefield		(3)	16.6		(1)	
	Norwalk, 12440 Imperial Highway: (BECH)	33.92 N 118.07 W					
	Basement		(3)	16.8		(1)	
	North freefield		(3)	16.8		(1)	
	South freefield		(3)	16.8		(1)	
	Norwalk, 12440 Imperial Highway: Bechtel Bldg. 43 (USGS/BECH)	33.92 N 118.07 W	08.15	16.8			
	Structure Array, 12 channel CRA-1						
	1-6th floor ceiling center				090	.06	---
	2-4th floor ceiling center				090	.05	---
	3-1st floor ceiling center				090	.05	---
	4-Basement ceiling center				090	.04	---
	5-Basement floor east				360	.03	---
	6-4th floor ceiling 3/4 to west				360	.05	---
	7-Basement floor ceiling				090	.01	---
	8-Basement floor center				Up	.03	---
	9-Basement floor center				360	.04	---
	10-30 ft deep at base of caisson bldg center				090	.01	---
	11-30 ft deep at base of caisson bldg center				Up	.02	---
	12-30 ft deep at base of caisson bldg center				360	.03	---
	Ocotillo Wells Burro Bend Cafe (USGS)	33.14 N 116.13 W	03.7	(2)		(1)	
	Palos Verdes Reservoir (MWD)	34.774N 118.321W	(3)	(2)			
	Abutment					(1)	

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
	Pine Meadow ANZA Array (USGS)	33.578N 116.589W	52.91	5.6	360 Up 270	.08 .08 .10	--- --- 1 peak
	Pinyon Flat Observatory ANZA Array (USGS)	33.61 N 116.46 W	52.0	5.4	135 Up 045	.07 .06 .05	--- --- ---
	Note: One additional record[1] recovered at Pinyon Flat Observatory.						
	Prado Dam (ACOE)	33.89 N 117.64 W					
	Left abutment		*(3)*	*(2)*		*(1)*	
	Downstream		*(3)*	11.0	090 Up 360	.05 .04 .05	--- --- ---
	Crest		*(3)*	*(2)*		*(1)*	
	Rancho de Anza (USGS)	33.35 N 116.40 W	*(3)*	8.2	135 Up 045	.04 .03 .05	--- --- ---
	Note: One additional record[1] recovered at Rancho de Anza.						
	Reche Canyon Olive Dell Ranch (USGS)	34.01 N 117.22 W	56.78	5.5		*(1)*	
	Red Mountain ANZA Array (USGS)	33.64 N 116.86 W	*(3)*	*(2)*	360 Up 270	.14 .08 .10	0.4 --- 1 peak
	San Antonio Dam (ACOE)	34.16 N 117.68 W	*(3)*	*(2)*			
	Right Abutment					*(1)*	
	Crest					*(1)*	
	Santa Rosa Mountain ANZA Array (USGS)	33.57 N 116.52 W	53.25	5.9	360 Up 270	.09 .06 .12	--- --- 1 peak
	Skinner Dam (MWD)	33.58 N 117.07 W					
	Abutment		*(3)*	4.9	178 Up 088	.08 .04 .08	--- --- ---

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
	Skinner Dam - continued						
	Structure Array,						
	12 Channel CRA-1		(3)	(2)			
	1) Center crest				180	.09	---
	2) Center crest				Up	.05	---
	3) Center crest				270	.12	1 peak
	4) Left crest				180	.07	---
	5) Left crest				270	.07	---
	6) Left slope				270	.06	---
	7) Center slope				180	.07	---
	8) Center slope				Up	.06	---
	9) Center slope				270	.08	---
	10) Center toe				180	.10	1 peak
	11) Center toe				Up	.05	---
	12) Center toe				270	.09	---
	Sunnymead	33.95 N	53.54	6.2	315	.13	0.2
	Randa Ranch	117.15 W			Up	.06	---
	(USGS)				225	.11	1 peak
	Note: Two additional records[1] recovered at Sunnymead.						
	Terwilliger Valley	33.48 N	(3)	6.5	135	.03	---
	ANZA Array	116.59 W			Up	.04	---
	(USGS)				045	.07	---
	Tripp Flats	33.60 N	53.98	4.5	360	.05	---
	ANZA Array	116.74 W			Up	.05	---
	(USGS)				270	.08	---
	Tule Canyon	33.47 N	(3)	6.9	360	.10	1 peak
	ANZA Array	116.64 W			Up	.04	---
	(USGS)				270	.11	1 peak
	Note: One additional record[1] recovered at Tule Canyon.						
	Weymouth Filter Plant	34.506 N					
	(MWD)	117.778 W					
	Ground		(3)	9.7		(1)	
	Tank		(3)	9.7		(1)	
	Whitewater Trout Farm	33.989N	(3)	1.6	270	.66	4.5
	(USGS)	116.655W			Up	.44	4.9
					180	.50	4.5
	Note: 20 additional records[1] recovered at Whitewater Trout Farm.						

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
	Whittier 7215 Bright Ave. (USGS)	33.977N 118.036W	*(3)*	*(2)*			
	Basement					*(1)*	
	5th floor					*(1)*	
	10th floor					*(1)*	
8 July 1986 0924 G.m.t. Southern Calif. Epicenters and magnitudes unknown	Morongo Valley Fire Station (USGS)	34.048N 116.577W	15.2	2.2	135 Up 045	.03 .08 .05	--- --- ---
	Note: One additional record[1] recovered at Morongo Valley Fire Station.						
	North Palm Springs Post Office (USGS)	33.924N 116.543W	16.5	2.8	300 Up 210	.05 .03 .06	--- --- ---
	Note: One additional record[1] recovered at North Palm Springs Post Office.						
8 July 1986 0928 G.m.t. Southern Calif. Epicenters and magnitudes unknown	North Palm Springs Post Office (USGS)	33.924N 116.543W	17.0	2.1		*(1)*	
	Note: Two additional records[1] recovered at North Palm Springs Post Office.						
8 July 1986 0930:23.6 G.m.t. Southern Calif. 33.980N, 116.620W Magnitude 3.6 ML	Cabazon Post Office (USGS)	33.918N 116.782W	27.7	0.2		*(1)*	
	Note: One additional record[1] recovered at Cabazon.						
	Fun Valley Reservoir 261 (USGS)	33.925N 116.389W	29.4	*(2)*	135 Up 045	.04 .02 .05	--- --- ---
	Note: One additional record[1] recovered at Fun Valley.						
8 July 1986 0932:20.8 G.m.t. Southern Calif. 33.980N, 116.620W Magnitude 3.1 ML	North Palm Springs Post Office (USGS)	33.924N 116.543W	23.0	1.8		*(1)*	
	Note: One additional record[1] recovered at North Palm Springs Post Office.						
8 July 1986 0949:49.7 G.m.t. Southern Calif. 33.990N, 116.560W Magnitude 3.5 ML	North Palm Springs Post Office (USGS)	33.924N 116.543W	52.4	2.1		*(1)*	
	Note: One additional record[1] recovered at North Palm Springs Post Office.						

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
8 July 1986 1004:52.9 G.m.t. Southern Calif. 33.960N, 116.580W Magnitude 3.4 ML	North Palm Springs Post Office (USGS)	33.924N 116.543W	55.0	1.7		(*1*)	
8 July 1986 1009:02.9 G.m.t. Southern Calif. 33.970N, 116.580W Magnitude 3.9 ML	Morongo Valley Fire Station (USGS)	34.048N 116.577W				(*1*)	
	North Palm Springs Post Office (USGS)	33.924N 116.543W	05.1	1.7	300 Up 210	.17 .06 .14	0.1 --- 0.3
	Cabazon Post Office (USGS)	33.918N 116.782W	09.3	0.3		(*1*)	
8 July 1986 1011:00.0 G.m.t. Southern Calif. 34.020N, 116.670W Magnitude 3.3 ML	Morongo Valley Fire Station (USGS)	34.048N 116.577W	02.8	1.9		(*1*)	
	North Palm Springs Post Office (USGS)	33.924N 116.543W	06.3	0.3	300 Up 210	.03 .02 .06	--- --- ---
8 July 1986 1022:38.0 G.m.t. Southern Calif. 34.051N, 116.665W Magnitude 4.4 ML	Morongo Valley Fire Station (USGS)	34.048N 116.577W	41.7	1.9		(*1*)	
	Note: Two additional records[1] recovered at Morongo Valley Fire Station.						
	North Palm Springs Post Office (USGS)	33.924N 116.543W	43.0	2.4		(*1*)	
8 July 1986 1311 G.m.t. Southern Calif. Epicenter and magnitude unknown	North Palm Springs Post Office (USGS)	33.924N 116.543W	44.9	(*2*)		(*1*)	
8 July 1986 1639:44.1 G.m.t. Southern Calif. 34.000N, 116.590W Magnitude 3.6 ML	North Palm Springs Post Office (USGS)	33.924N 116.543W	47.0	2.2	300 Up 210	.07 .01 .03	--- --- ---
8 July 1986 1936:20.1 G.m.t. Southern Calif. 34.010N, 116.620W Magnitude 3.9 ML	Morongo Valley Fire Station (USGS)	34.048N 116.577W	22.4	2.2		(*1*)	
	North Palm Springs Post Office (USGS)	33.924N 116.543W	23.3	2.6		(*1*)	

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
9 July 1986 0012:32.1 G.m.t. Southern Calif. 33.990N, 116.570W Magnitude 4.4 ML	Morongo Valley Fire Station (USGS)	34.048N 116.577W	34.4	1.8		(*1*)	
	North Palm Springs Post Office (USGS)	33.924N 116.543W	34.4	1.8	300 Up 210	.11 .06 .10	1 peak --- 1 peak
	Desert Hot Springs Mission Lakes C.C. (USGS)	33.986N 116.535W	34.2	1.6	360 Up 270	.09 .05 .08	--- --- ---
9 July 1986 0941:21.0 G.m.t. Southern Calif. 33.970N, 116.570W Magnitude 3.5 ML	North Palm Springs Post Office (USGS)	33.924N 116.543W	23.2	1.8		(*1*)	
	Desert Hot Springs Mission Lakes C.C. (USGS)	33.986N 116.535W	23.0	1.6		(*1*)	
9 July 1986 1228:09.1 G.m.t. Hawaii 19.552N, 155.999W Magnitude 4.6 ML	Kealakekua, Hawaii Kona Hospital (USGS)	19.523N 155.879W	10.5	1.2	346 Up 256	.07 .05 .14	--- --- 0.2
9 July 1986 2010 G.m.t. Southern Calif. Epicenter and magnitude unknown	Desert Hot Springs Mission Lakes C.C. (USGS)	33.986N 116.535W	36.9	1.6		(*1*)	
11 July 1986 0851:28.7 G.m.t. Southern Calif. 33.970N, 116.580W Magnitude 3.1 ML	Whitewater Trout Farm (USGS)	33.989N 116.655W	33.1	(*2*)		(*1*)	
	Note: Four additional records[1] recovered at Whitewater Trout Farm.						
12 July 1986 0545:27.5 G.m.t. Southern Calif. 33.990N, 116.650W Magnitude 3.9 ML	Morongo Valley Fire Station (USGS)	34.048N 116.577W	30.9	0.9		(*1*)	
12 July 1986 1728:30.7 G.m.t. Southern Calif. 34.030N, 116.680W Magnitude 3.4 ML	Morongo Valley Fire Station (USGS)	34.048N 116.577W	33.2	2.0		(*1*)	

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
13 July 1986 0141:38.2 G.m.t. Southern Calif. 33.950N, 116.620W Magnitude 3.5 ML	North Palm Springs Post Office (USGS)	33.924N 116.543W	41.0	2.1		(*1*)	
	Desert Hot Springs Mission Lakes C.C. (USGS)	33.986N 116.535W	41.0	2.2		(*1*)	
	Escondido Power Plant (SDGE)	33.125N 117.117W	(*3*)	(*2*)	030 Up 300	.04 .02 .07	--- --- ---
13 July 1986 1347:08.2 G.m.t. Southern Calif. 32.970N, 117.870W Magnitude 5.3 ML	Escondido Power Plant (SDGE)	33.125N 117.117W	(*3*)	(*2*)	030 Up 300	.11 .03 .11	1 peak --- 0.2
	Los Angeles 1880 Century Park East (CLA)	34.06 N 118.41 W	(*3*)	(*2*)			
	17th floor					(*1*)	
	Note: One additional record[1] recovered at 1880 Century Park East, 17th floor.						
	Los Angeles 2029 Century Park East (CLA)	34.060N 118.413W	(*3*)	(*2*)			
	30th floor					(*1*)	
	Note: One additional record[1] recovered at 2029 Century Park East, 30th floor.						
	Los Angeles 2049 Century Park East (CLA)	34.06N 118.41W	(*3*)	(*2*)			
	30th floor					(*1*)	
	43th floor					(*1*)	
	Note: Two each additional records[1] recovered at 2049 Century Park East, 30th floor and 43th floor.						
	Mission Power Station (SDGE)	32.788N 117.138W	(*3*)	(*2*)	150 Up 060	.05 .06 .07	--- --- ---

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
	San Diego VA Hospital La Jolla, Bldg 1 (VA)	32.87 N 117.23 W	(3)	6.4			
	Basement				180	.05	---
					Up	.05	---
					090	.07	---
17 July 1986 2035:15.0 G.m.t. Southern Calif. 33.990N, 116.650W Magnitude 4.0 ML	Morongo Valley Fire Station (USGS)	34.048N 116.577W	17.3	1.5	135	.04	---
					Up	.04	---
					045	.07	---
	North Palm Springs Post Office (USGS)	33.924N 116.543W	17.8	2.2	300	.04	---
					Up	.03	---
					210	.08	---
	Whitewater Trout Farm (USGS)	33.989N 116.655	16.3	1.2	270	.14	1 peak
					Up	.08	---
					180	.11	.05
	Keenwild Forest Station ANZA Array (USGS)	33.71 N 116.71 W	20.6	4.0		(1)	
	Desert Hot Springs Mission Lakes C.C. (USGS)	33.986N 116.535W	35.2	1.9	360	.05	---
					Up	.04	---
					270	.13	0.2
	W. Palm Springs Village St. John's School (USGS)	33.925N 116.680W	16.6	1.3	360	.08	---
					Up	.04	---
					270	.05	---
	Morongo Valley Canyon House (USGS)	34.347N 116.604W	17.3	(2)	360	.08	---
					Up	.07	---
					270	.08	---
17 July 1986 2154:45.1 G.m.t. Southern Calif. 33.990N, 116.650W Magnitude 4.4 ML	Cabazon Post Office (USGS)	33.918N 116.782W	50.3	0.2		(1)	
	Desert Hot Springs Mission Lakes C.C. (USGS)	33.986N 116.535W	48.0	1.8	360	.06	---
					Up	.02	---
					270	.07	---
	Millard Canyon (USGS)	33.98 N 116.78 W	50.6	(2)		(1)	
	Note: One additional record[1] recovered at Millard Canyon.						
	Morongo Valley Fire Station (USGS)	34.048N 116.577W	47.4	1.7		(1)	
	North Palm Springs Post Office (USGS)	33.924N 116.543W	48.8	2.2	300	.03	---
					Up	.03	---
					210	.05	---

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
	W. Palm Springs Village St. John's School (USGS)	33.925N 116.680W	46.9	1.3	360 Up 270	.08 .04 .07	--- --- ---
	Whitewater Trout Farm (USGS)	33.989N 116.655W	46.6	1.1	270 Up 180	.16 .08 .16	.55 --- .35
18 July 1986 0718:05.4 G.m.t. Eastern Calif. 37.575N, 118.827W Magnitude 3.0 ML	McGee Creek, SMA (USGS)	37.550N 118.811W	07.4	(*2*)		(*1*)	
	McGee Creek, CRA (USGS)	37.550N 118.811W	07.5	(*2*)			
	166 m downhole					(*1*)	
	35 m downhole					(*1*)	
	Surface					(*1*)	
	1 m downhole					(*1*)	
18 July 1986 1958:01.8 G.m.t. Southern Calif. 33.970N, 116.570W Magnitude 3.2 ML	Desert Hot Springs Mission Lakes C.C. (USGS)	33.986N 116.535W	04.0	2.2		(*1*)	
20 July 1986 1429:45.5 G.m.t. Eastern Calif. 37.580N, 118.450W Magnitude 5.9 ML	Long Valley Dam Lake Crowley (USGS)	37.588N 118.705W					
	Left abutment		(*3*)	3.3	275 Up 185	.07 .07 .15	--- --- 1.0
	Note: One additional record[1] recovered at Long Valley Dam left abutment.						
	McGee Creek (USGS) (SMA-1)	37.550N 118.811W	55.5	1.1		(*1*)	
	McGee Creek (USGS) (CRA-1)	37.550N 118.811W	55.5	1.1			
	166 m downhole					(*1*)	
	35 m downhole					(*1*)	
	Surface					(*1*)	
	1 m downhole					(*1*)	
	Montgomery Pass Basalt, Nevada (USGS)	37.977N 118.318W	01.9	(*2*)		(*1*)	

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
	Terminus Dam Main Dam (ACOE)	36.420N 119.000W	(3)	(2)			
	Right crest					(1)	
	Upper tower					(1)	
	Terminus Dam Auxiliary Dam (ACOE)	36.404N 119.001W	24.6[4]	(2)			
	Center crest					(1)	
	Lake Success Dam (ACOE)	36.061N 118.920W	(3)	(2)			
	Slope					(1)	
	Right crest					(1)	
21 July 1986 1442:26.6 G.m.t. Eastern Calif. 37.537N, 118.447W Magnitude 6.5 ML	Buchanan Dam (ACOE)	37.22 N 119.98 W	55.2	11.4			
	Left crest					(1)	
	Hidden Dam (ACOE)	37.112N 119.883W	55.5	10.3			
	Left crest					(1)	
	Lake Success Dam (ACOE)	36.061N 118.920W					
	Right abutment		(3)	(2)		(1)	
	Downstream		(3)	(2)		(1)	
	Slope		(3)	(2)		(1)	
	Right crest		16.5[4]			(1)	
	Note: One each additional record[1] recovered at slope and right crest at Lake Success Dam.						
	Long Valley Fire Station (USGS)	37.567N 118.757W	32.0[4]	3.0		(1)	

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
	Long Valley Dam Lake Crowley (USGS)	37.588N 118.705W	(3)	(2)			
	Left abutment				275	.15	3.8
					Up	.11	2.6
					185	.36	4.5
	Note: One additional record[1] recovered at Long Valley Dam left abutment.						
	McGee Creek, SMA (USGS)	37.550N 118.811W	32.0	3.7	180	.09	---
					Up	.06	---
					090	.07	---
	McGee Creek,CRA (USGS)	37.550N 118.811W	55.5	1.1			
	166 m downhole					(1)	
	35 m downhole					(1)	
	Surface				360	.09	---
					Up	.06	---
					270	.08	---
	1 m downhole				180	.06	---
					Up	.08	---
					270	inoperative	
	Montgomery Pass Basalt, Nevada (USGS)	37.977N 118.318W	37.8[4]	4.8	360	.11	1.5
					Up	.07	---
					270	.11	1.7
	Pine Flat Dam (ACOE)	36.83 N 119.33 W	(3)	(2)			
	Right abutment west (Downstream)					(1)	
	Terminus Dam Main Dam	36.420N 119.000W					
	Right crest		(3)	(2)		(1)	
	Upper tower		(3)	(2)		(1)	
	Terminus dam Auxiliary Dam (ACOE)	36.404N 119.001W					
	Center crest		50.2[4]	(2)	320	.06	---
					Up	.06	---
					230	.05	---
	Right abutment		(3)	(2)		(1)	

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
21 July 1986 1451:11.0 G.m.t. Eastern Calif. 37.520N, 118.412W Magnitude 5.7 ML	McGee Creek, SMA (USGS)	37.550N 118.811W	(3)	(2)		(1)	
	McGee Creek, CRA (USGS)	37.550N 118.811W	(3)	(2)			
	166 m downhole					(1)	
	35 m downhole					(1)	
	Surface					(1)	
	1 m downhole					(1)	
	Montgomery Pass Basalt, Nevada (USGS)	37.977N 118.318W	29.3[4]	(2)		(1)	
	Terminus Dam Auxiliary Dam (ACOE)	36.404N 119.001W	46.5[4]	(2)			
	Center crest					(1)	
21 July 1986 2207:18.0 G.m.t. Eastern Calif. 37.498N, 118.397W Magnitude 5.6 ML	Long Valley Dam Lake Crowley (USGS)	37.588N 118.705W					
	Left abutment		(3)	3.7	275 Up 185	.09 .04 .19	--- --- 0.7
	Note: Six additional records[1] recovered at Long Valley Dam left abutment.						
	McGee Creek, SMA (USGS)	37.550N 118.811W	(3)	(2)		(1)	
	McGee Creek, CRA (USGS)	37.550N 118.811W	(3)	(2)			
	166 m downhole					(1)	
	35 m downhole					(1)	
	Surface					(1)	
	1 m downhole					(1)	
	Montgomery Pass Basalt, Nevada (USGS)	37.977N 118.318W	31.5[4]	(2)		(1)	

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
	TerminusDam Auxiliary Dam (ACOE)	36.404N 119.001W	16.1[4]	(2)			
	Center crest					(1)	
22 July 1986 2017:00.1 G.m.t. Eastern Calif. 37.554N, 118.359W Magnitude 4.2 ML	Laws, Calif. Northeast Bishop (USGS)	37.402N 118.346W	(3)	(2)		(1)	
22 July 1986 2206:41.8 G.m.t. Eastern Calif. 37.513N, 118.294W Magnitude 4.2 ML	Chalfant Valley Fire Station (USGS)	37.53 N 118.37 W	45.4[4]	1.6	360	.06	---
					Up	.05	---
					270	.08	---
	Note: 12 additional records[1] recovered at Chalfant Valley Fire Station.						
23 July 1986 0508 G.m.t. Eastern Calif. Epicenters and magnitudes unknown	Chalfant Valley Fire Station (USGS)	37.53 N 118.37 W	06.1[4]	1.3	360	.07	---
					Up	.04	---
					270	.05	---
	Note: 3 additional records[1] recovered at Chalfant Valley Fire Station.						
23 July 1986 1539:11:6 G.m.t. Eastern Calif. 37.517N, 118.409W Magnitude 4.7 MB	Chalfant Valley Fire Station (USGS)	37.53 N 118.37 W	16.5[4]	2.1	360	.24	0.5
					Up	.08	---
					270	.12	0.5
	Note: 11 additional records[1] recovered at Chalfant Valley Fire Station.						
	Hammil, Calif. Cinnamon Ranch (USGS)	37.68 N 118.39 W	17.0[4]	2.4		(1)	
24 July 1986 1134:51.5 G.m.t. Eastern Calif. 37.530N, 118.367W Magnitude 3.3 ML	Chalfant Valley Fire Station (USGS)	37.53 N 118.37 W	57.4[4]	0.6	360	.07	---
					Up	.01	---
					270	.03	---
	Note: 2 additional records[1] recovered at Chalfant Valley Fire Station.						
24 July 1986 1458:45.2 G.m.t. Eastern Calif. 37.514N, 118.289W Magnitude 3.7 ML	Chalfant Valley Fire Station (USGS)	37.53 N 118.37 W	48.6[4]	1.7	360	.09	---
					Up	.07	---
					270	.05	---
24 July 1986 1644:40.7 G.m.t. Eastern Calif. 37.529N, 118.398W Magnitude 3.5 ML	Chalfant Valley Fire Station (USGS)	37.53 N 118.37 W	44.9[4]	2.0	360	.18	0.3
					Up	.07	---
					270	.10	1 peak

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
24 July 1986 1903:25.9 G.m.t. Eastern Calif. 37.467N, 118.297W Magnitude 4.3 ML	Chalfant Valley Fire Station (USGS)	37.53 N 118.37 W	30.0[4]	1.9	360	.19	0.2
					Up	.06	---
					270	.16	0.1
	Note: 11 additional records[1] recovered at Chalfant Valley Fire Station.						
28 July 1986 2113 G.m.t. Southern California Epicenter and magnitude unknown	Salton Sea Wildlife Refuge	33.18 N 115.62 W (USGS)	24.8	(2)		(1)	
29 July 1986 0643:50.2 G.m.t. Southern Calif. 33.970N, 116.590W Magnitude 3.2 ML	Desert Hot Springs Mission Lakes C.C. (USGS)	33.986N 116.535W	52.3	1.5		(1)	
	North Palm Springs Post Office (USGS)	33.924N 116.543W	52.5	2.0		(1)	
	Whitewater Canyon Trout Farm (USGS)	33.989N 116.655W	53.7	(2)		(1)	
29 July 1986 0957:57.0 G.m.t. Eastern Calif. 37.593N, 118.447W Magnitude 4.6 ML	Hammil, Calif. Cinnamon Ranch (USGS)	37.68 N 118.39 W	01.2[4]	2.1		(1)	
30 July 1986 0603:32.1 G.m.t. Eastern Calif. 37.633N, 118.403W Magnitude 4.0 ML	Hammil, Calif. Cinnamon Ranch (USGS)	37.68 N 118.39 W	36.2[4]	2.2		(1)	
30 July 1986 0641:52.7 G.m.t. Eastern Calif. 37.562N, 118.424W Magnitude 4.8 ML	Hammil, Calif. Cinnamon Ranch (USGS)	37.68 N 118.39 W	58.8[4]	0.5		(1)	
22 July 1986- 31 July 1986 Eastern Calif. Epicenters and magnitudes unknown	Moran Spring (USGS)	37.654N 118.594W	(3)	(2)	360	.06	---
					Up	.04	---
					270	.03	---
	Note: Five additional records[1] recovered at Moran Spring.						

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
	South Hammil Valley White Mountain Ranch (USGS)	37.62 N 118.39 W	(3)	2.1	360 Up 270	.09 .04 .05	--- --- ---
			(3)	1.6	360 Up 270	.04 .07 .05	--- --- ---
			(3)	0.7	360 Up 270	.07 .06 .06	--- --- ---
	Note: Four additional records[1] recovered at White Mountain Ranch.						
31 July 1986 0722:40.2 G.m.t. Eastern Calif. 37.463N, 118.374W Magnitude 5.8 ML	Hammil, Calif. Cinnamon Ranch (USGS)	37.68 N 118.39 W	47.6[4]	1.3		(1)	
	McGee Creek, SMA (USGS)	37.550N 118.811W	47.3[4]	(2)		(1)	
	McGee Creek, CRA (USGS)	37.550N 118.811W	47.3[4]	(2)			
	166 m downhole					(1)	
	35 m downhole					(1)	
	Surface					(1)	
	1 m downhole					(1)	
	Moran Spring, Calif. (USGS)	37.654N 118.594W	46.2[4]	(2)		(1)	
	Montgomery Pass Basalt, Nevada (USGS)	37.977N 118.318W	01.5[4]	(2)		(1)	
	Terminus Dam Main Dam (ACOE)	36.420N 119.000W	(3)	(2)			
	Right crest					(1)	
	Upper tower					(1)	
	Terminus Dam Auxiliary Dam (ACOE)	36.404N 119.001W	16.1[4]	(2)			
	Center crest					(1)	

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
31 July 1986 0751:42.9 G.m.t. Southern Calif. 33.970N, 116.570W Magnitude 3.3 ML	Desert Hot Springs Mission Lakes C.C. (USGS)	33.986N 116.535W	44.8	(2)		(1)	
	Whitewater Canyon Trout Farm (USGS)	33.989N 116.655W	47.2	(2)		(1)	
1 August 1986 0634:42.9 G.m.t. Eastern Calif. 37.561N, 118.394W Magnitude 3.2 ML	Chalfant Valley Fire Station (USGS)	37.53 N 118.37 W	45.6	2.1	360 Up 270	.06 .01 .04	--- --- ---
	Note: Four additional records[1] recovered at Chalfant Valley Fire Station.						
	Laws, Calif. Northeast Bishop (USGS)	37.402N 118.346W	50.5[4]	(2)		(1)	
1 August 1986 1427:16.0 G.m.t. Eastern Calif. 37.501N, 118.352W Magnitude 4.3 ML	Chalfant Valley Fire Station (USGS)	37.53 N 118.37 W	17.8	0.5	360 Up 270	.25 .25 .23	0.9 0.4 0.8
	Hammil, Calif. Cinnamon Ranch (USGS)	37.68 N 118.39 W	20.3[4]	3.2		(1)	
	Laws, Calif. Northeast Bishop (USGS)	37.402N 118.346W	20.55[4]	(2)		(1)	
	South Hammil Valley White Mountain Ranch (USGS)	37.62 N 118.39 W	18.9[4]	1.9		(1)	
1 August 1986 1428:18.0 G.m.t. Eastern Calif. 37.375N, 118.442W Magnitude 4.7 ML	Chalfant Valley Fire Station (USGS)	37.53 N 118.37 W	20.0	0.5	360 Up 270	.40 .30 .29	1.4 3.0 1.5
	Note: Six additional records[1] recovered at Chalfant Valley Fire Station.						
	Laws, Calif. Northeast Bishop (USGS)	37.402N 118.346W	21.1[4]	0.8	360 Up 270	.11 .09 .07	0.2 --- ---
	South Hammil Valley White Mountain Ranch (USGS)	37.62 N 118.39 W	21.4[4]	1.7		(1)	
2 August 1986 0505 G.m.t. Southern Calif. Epicenter and magnitude unknown	Whitewater Canyon Trout Farm (USGS)	33.989N 116.655W	05.3	(2)		(1)	

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
2 August 1986	South Hammil Valley	37.62 N	38.5[4]	1.4	360	.04	---
1451:36.2 G.m.t.	White Mountain Ranch	118.39 W			Up	.05	---
Eastern Calif.	(USGS)				270	.05	---
37.594N, 118.368W							
Magnitude 3.7 ML	Hammil, Calif.	37.68 N	40.4[4]	(2)		(1)	
	Cinnamon Ranch	118.39 W					
	(USGS)						
3 August 1986	Chalfant Valley	37.53 N	32.3	1.2	360	.09	---
0137 G.m.t.	Fire Station	118.37 W			Up	.06	---
Eastern Calif.	(USGS)				270	.09	---
Epicenters and magnitudes unknown	Note: 15 additional records[1] recovered at Chalfant Valley Fire Station.						
3 August 1986	Bear Valley Station 1	36.573N	16.9	(2)		(1)	
0900:13.6 G.m.t.	CDF Fire Station	121.184W					
Central Calif.	(USGS)						
36.592N, 121.233W							
Magnitude 2.9 ML	Bear Valley Station 10	36.532N	16.6	1.7	310	.05	---
	Webb Residence	121.143W			Up	.01	---
	(USGS)				220	.05	---
3 August 1986	Laws, Calif.	37.402N	12.9[4]	0.6		(1)	
1033:04.5 G.m.t.	Northeast Bishop	118.346W					
Eastern Calif.	(USGS)						
37.615N, 118.410W							
Magnitude 4.0 ML	South Hammil Valley	37.62 N	06.8		360	.04	---
	White Mountain Ranch	118.39 W			Up	.06	---
	(USGS)				270	.04	---
	Hammil, Calif.	37.68 N	08.65[4]	0.5		(1)	
	Cinnamon Ranch	118.39 W					
	(USGS)						
4 August 1986	Laws, Calif.	37.402N	12.35[4]	0.5		(1)	
1231:06.4 G.m.t.	Northeast Bishop	118.346W					
Eastern Calif.	(USGS)						
37.521N, 118.415W							
Magnitude 3.3 ML							
6 August 1986	Bear Valley Station 10	36.532N	50.0	1.8		(1)	
0452 G.m.t.	Webb Residence	121.143W					
Central Calif.	(USGS)						
Epicenter and magnitude unknown							
6 August 1986	Whitewater Canyon	33.989N	32.7	(2)		(1)	
1116 G.m.t.	Trout Farm	116.655W					
Southern Calif.	(USGS)						
Epicenter and magnitude unknown							

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
10 August 1986 2014 G.m.t. Eastern Calif. Epicenter and magnitude unknown	Laws, Calif. Northeast Bishop (USGS)	37.402N 118.346W	43.45[4]	0.6		(*1*)	
11 August 1986 0426 G.m.t. Eastern Calif. Epicenter and magnitude unknown	Laws, Calif. Northeast Bishop (USGS)	37.402N 118.346W	52.78[4]	(*2*)		(*1*)	
12 August 1986 0929:48.0 G.m.t. Eastern Calif. 37.487N, 118.377W Magnitude 3.5 ML	Chalfant Valley Fire Station (USGS)	37.53 N 118.37 W	49.5[4]	1.3	360 Up 270	.11 .06 .07	1 peak --- ---
	Note: One additional record[1] recovered at Chalfant Valley Fire Station.						
12 August 1986 1537:27.9 G.m.t. Eastern Calif. 37.503N, 118.477W Magnitude 3.5 ML	Laws, Calif. Northeast Bishop (USGS)	37.402N 118.346W	33.0[4]	0.6		(*1*)	
14 August 1986 0836 G.m.t. Eastern Calif. Epicenter and magnitude unknown	Laws, Calif. Northeast Bishop (USGS)	37.402N 118.346W	07.4[4]	(*2*)		(*1*)	
16 August 1986 0948:56.1 G.m.t. Eastern Calif. 37.480N, 118.311W Magnitude 3.3 ML	Chalfant Valley Fire Station (USGS)	37.53 N 118.37 W	58.1[4]	1.4	360 Up 270	.13 .04 .09	1 peak --- ---
18 August 1986 1049:38.9 G.m.t. Eastern Calif. 37.537N, 118.452W Magnitude 3.4 ML	Chalfant Valley Fire Station (USGS)	37.53 N 118.37 W	43.4[4]	0.6		(*1*)	
19 August 1986 2353:39.6 G.m.t. Eastern Calif. 37.482N, 118.372W Magnitude 3.4 ML	Chalfant Valley Fire Station (USGS)	37.53 N 118.37 W	41.4[4]	1.5	360 Up 270	.11 .06 .07	0.1 --- ---
	Laws, Calif. Northeast Bishop (USGS)	37.402N 118.346W	42.8[4]	(*2*)		(*1*)	

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
21 August 1986 1846 G.m.t. Eastern Calif. Epicenter and magnitude unknown	McGee Creek, SMA (USGS)	37.550N 118.811W	25.6	(2)		(1)	
	McGee Creek, CRA (USGS)	37.550N 118.811W	25.6	(2)			
	166 m downhole					(1)	
	35 m downhole					(1)	
	Surface					(1)	
	1 m downhole					(1)	
23 August 1986 0301:29.9 G.m.t. Eastern Calif. 37.528N, 118.331W Magnitude 3.5 ML	Chalfant Valley Fire Station (USGS)	37.53 N 118.37 W	32.0[4]	1.4	360 Up 270	.09 .05 .08	--- --- ---
	Laws, Calif. Northeast Bishop (USGS)	37.402N 118.346W	33.7[4]	1.2		(1)	
25 August 1986 0820:58.0 Eastern Calif. 37.642N, 118.394W Magnitude 3.2 ML	Hammil, Calif. Cinnamon Ranch (USGS)	37.68 N 118.39 W	02.5[4]	0.3		(1)	
27 August 1986 0610 G.m.t. Eastern Calif. Epicenter and magnitude unknown	South Hammil Valley White Mountain Ranch (USGS)	37.62 N 118.39 W	37.2[4]	1.5		(1)	
29 August 1986 0746:53.3 G.m.t. Southern Calif. 33.953N, 116.623W Magnitude 4.0 ML	Desert Hot Springs Mission Lakes C.C. (USGS)	33.986N 116.535W	56.6	1.5	360 Up 270	.13 .08 .12	1 peak --- 1 peak
	North Palm Springs Post Office (USGS)	33.924N 116.543W	56.5	1.7	300 Up 210	.14 .04 .10	0.1 --- 1 peak
	Whitewater Canyon Trout Farm (USGS)	33.989N 116.655W	57.9	(2)		(1)	

Note: One additional record[1] recovered at Whitewater Canyon Trout Farm.

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
9 September 1986 1622:50.6 G.m.t. Southern Calif. 33.970N, 116.570W Magnitude 3.5 ML	Desert Hot Springs Mission Lakes C.C. (USGS)	33.986N 116.535W	52.7	1.5		(*1*)	
	North Palm Springs Post Office (USGS)	33.924N 116.543W	52.7	1.5	300 Up 210	.05 .02 .05	--- --- ---
16 September 1986 0007:41.2 G.m.t. Eastern Calif. 37.625N, 118.455W Magnitude 3.3 ML	South Hammil Valley White Mountain Ranch (USGS)	37.62 N 118.39 W	45.1[4]	(*2*)		(*1*)	
16 September 1986 0501:43.5 G.m.t. Eastern Calif. 37.642N, 118.398W Magnitude 3.3 ML	South Hammil Valley White Mountain Ranch (USGS)	37.62 N 118.39 W	47.2[4]	0.5		(*1*)	
	Hammil, Calif. Cinnamon Ranch (USGS)	37.68 N 118.39 W	48.1[4]	0.5		(*1*)	
16 September 1986 0636:57.8 G.m.t. Eastern Calif. 37.610N, 118.445W Magnitude 3.3 ML	Hammil, Calif. Cinnamon Ranch (USGS)	37.68 N 118.39 W	01.5[4]	0.4		(*1*)	
16 September 1986 1314:25.9 G.m.t. Eastern Calif. 37.595N, 118.413W Magnitude 3.5 ML	South Hammil Valley White Mountain Ranch (USGS)	37.62 N 118.39 W	29.2[4]	(*2*)		(*1*)	
18 September 1986 0759:47.5 G.m.t. Eastern Calif. 37.632N, 118.392W Magnitude 4.1 ML	Chalfant Valley Fire Station (USGS)	37.53 N 118.37 W	52.7[4]	0.8	360 Up 270	.05 .03 .06	--- --- ---
	Hammil, Calif. Cinnamon Ranch (USGS)	37.68 N 118.39 W	51.7[4]	0.5		(*1*)	
	Laws, Calif. Northeast Bishop (USGS)	37.402N 118.346W	55.7[4]	(*2*)		(*1*)	
	South Hammil Valley White Mountain Ranch (USGS)	37.62 N 118.39 W	50.8[4]	0.6	360 Up 270	.06 .05 .06	--- --- ---

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
23 September 1986 0619:46.2 G.m.t. Central Calif. 36.635N, 121.292W Magnitude 2.5 ML	Bear Valley Station 12 Williams Ranch (USGS)	36.658N 121.249W	47.7	1.5	310 Up 220	.05 .01 .02	--- --- ---
28 September 1986 0706:26.8 G.m.t. Southern Calif. 34.010N, 116.580W Magnitude 3.2 ML	Desert Hot Springs Mission Lakes C.C. (USGS)	33.986N 116.535W	31.7	(2)		(1)	
29 September 1986 0617:32.0 G.m.t. Eastern Calif. 37.514N, 118.398W Magnitude 3.4 ML	Laws, Calif. Northeast Bishop (USGS)	37.402N 118.346W	37.2[4]	0.4		(1)	
1 October 1986 0802 G.m.t. Hawaii Epicenter and magnitude unknown	Honokaa, Hawaii Police Station (USGS)	20.080N 155.465W	30.7[4]	(2)		(1)	
	Hilo, Hawaii U.S. Fish & Wildlife (USGS)	19.731N 155.100W	17.9[4]	4.4		(1)	
11 July 1986- 7 October 1986 Southern Calif. Epicenter and magnitude unknown	Loma Linda VA Hospital (VA/USGS)	34.05 N 117.26 W	(3)	(2)			
	Structure Array					(1)	
9 October 1986 0537:25.2 G.m.t. Eastern Calif. 37.358N, 118.335W Magnitude 4.2 ML	Laws, Calif. Northeast Bishop (USGS)	37.402N 118.346W	27.4[4]	1.9		(1)	
15 October 1986 0228:47.7 G.m.t. Southern Calif. 33.950N, 116.570W Magnitude 4.7 ML	Desert Hot Springs Mission Lakes C.C. (USGS)	33.986N 116.535W	50.0	1.5	360 Up 270	.11 .05 .09	0.2 --- ---
	Morongo Valley Fire Station (USGS)	34.048N 116.577W	50.1	2.1	135 Up 045	.03 .08 .03	--- --- ---
	North Palm Springs Post Office (USGS)	33.924N 116.543W	49.7	1.3	300 Up 210	.15 .09 .07	0.3 --- ---

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
21 October 1986 0836:25.1 G.m.t. Eastern Calif. 37.510N, 118.338W Magnitude 3.1 ML	Chalfant Valley Fire Station (USGS)	37.53 N 118.37 W	27.6[4]	1.6		(*1*)	
29 August 1986- 23 October 1986 Southern Calif. Epicenter and magnitude unknown	Whitewater Canyon Trout Farm (USGS)	33.989N 116.655W	(*3*)	0.5		(*1*)	
26 October 1986 1020:13.8 G.m.t. Eastern Calif. 37.473N, 118.371W Magnitude 3.2 ML	Laws, Calif. Northeast Bishop (USGS)	37.402N 118.346W	17.0[4]	(*2*)		(*1*)	
12 July 1986- 30 October 1986 Southern Calif. Epicenter and magnitude unknown	Colton, Calif. I-10/15 Interchange (CDOT)	34.06 N 117.30 W	(*3*)	(*2*)			
	Vault					(*1*)	
17 November 1985 or (*1*) 1986; 0247 G.m.t. Hawaii Epicenter and magnitude unknown	Wahaula Maint. Center (USGS)	Hawaii National Park 155.031W			19.329N	25.6[4]	1.3
17 November 1986 1240:22.4 G.m.t. Eastern Calif. 37.571N, 118.415W Magnitude 3.5 ML	South Hammil Valley White Mountain Ranch (USGS)	37.62 N 118.39 W	25.9[4]	1.4		(*1*)	
21 November 1986 2333:01.7 G.m.t. Northern Calif. 40.372N, 124.443W Magnitude 5.1 ML	Eel River Valley Array Bunker Hill (USGS)	40.498N 124.294W	11.6	(*2*)	360 Up 270	.05 .01 .05	--- --- ---
	Eel River Valley Array Centerville Beach (USGS)	40.563N 124.348W	08.9	4.1	360 Up 270	.14 .03 .16	0.3 --- 1 peak
	Eel River Valley Array College of the Redwoods (USGS)	40.699N 124.200W	(*3*)	(*2*)		(*1*)	
	Eel River Valley Array Ferndale Fire Station (USGS)	40.576N 124.262W	(*3*)	5.0	360 Up 270	.19 .03 .19	1 peak --- 0.6

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
	Eel River Valley Array Fortuna Fire Station (USGS)	40.599N 124.154W	(3)	1.4	360 Up 270	.13 .03 .28	0.3 --- 0.5
	Eel River Valley Array Loleta Fire Station (USGS)	40.644N 124.219W	(3)	5.9	360 Up 270	.06 .03 .08	--- --- ---
	Eel River Valley Array South Bay Union School (USGS)	40.735N 124.207W	(3)	(2)		(1)	
21 November 1986 2334:18.0 G.m.t. Northern Calif. 40.367N, 124.450W Magnitude 5.1 ML	Eel River Valley Array Bunker Hill (USGS)	40.498N 124.294W	28.3	(2)		(1)	
	Eel River Valley Array Centerville Beach (USGS)	40.563N 124.348W	24.6	4.8	360 Up 270	.21 .05 .10	0.3 --- 0.1
	Eel River Valley Array College of the Redwoods (USGS)	40.699N 124.200W	(3)	6.8		(1)	
	Eel River Valley Array Ferndale Fire Station (USGS)	40.576N 124.262W	(3)	5.5	360 Up 270	.17 .04 .11	1 peak --- 0.1
	Eel River Valley Array Fortuna Fire Station (USGS)	40.599N 124.154W	(3)	6.2	360 Up 270	.16 .03 .17	0.3 --- 0.3
	Eel River Valley Array Loleta Fire Station (USGS)	40.644N 124.219W	(3)	6.5	360 Up 270	.04 .05 .04	--- --- ---
	Eel River Valley Array South Bay Union School (USGS)	40.735N 124.207W	(3)	(2)		(1)	
24 November 1986 1508:01.3 G.m.t. Central Calif. 36.597N, 121.242W Magnitude 3.1 ML	Bear Valley Station 1 CDF Fire Station (USGS)	36.573N 121.184W	04.5	(2)		(1)	
8 December 1986 1727 G.m.t. Nevada Epicenter and magnitude unknown	Stillwater, Nevada Wildlife Refuge (USGS)	39.518N 118.510W	08.4[4]	(2)		(1)	

Table 1. Catalogue of National Strong-Motion Instrumentation Network accelerograph records recovered during 1986—Continued

Earthquake	Station name (owner)	Station location (°)	Trigger time	S-minus trigger (s)	Direction (az)	Maximum amplitude (g)	Duration (s)
17 November 1985- 11 December 1986 Hawaii Epicenters and magnitudes unknown	Waimea, Hawaii Fire Station (USGS)	20.03 N 155.66 W	(*3*)	(*2*)		(*1*)	
	Note: Two additional records[1] recovered at Waimea Fire Station.						
25 December 1986 0608:54.4 G.m.t. Eastern Calif. 37.570N, 118.407W Magnitude 3.5 ML	South Hammil Valley White Mountain Ranch (USGS)	37.62 N 118.39 W	58.0[4]	1.4		(*1*)	
26 December 1986 0956:27.4 G.m.t. Eastern Calif. 37.557N, 118.371W Magnitude 3.9 ML	Chalfant Valley Fire Station (USGS)	37.53 N 118.37 W	30.9[4]	1.4		(*1*)	
	South Hammil Valley White Mountain Ranch (USGS)	37.62 N 118.39 W	31.1[4]	(*2*)		(*1*)	
29 December 1986 1528:04.9 G.m.t. Central Calif. 37.458N, 121.800W Magnitude 4.5 ML	San Jose, 101/280/680 Freeway Interchange (USGS/CDOT)	37.340N 121.851W	08.8	2.3		(*1*)	

[1]Less than 0.05 g at ground-level or less than 0.10 g at non-ground-level stations.

[2]Questionable or indeterminable.

[3]WWVB time code illegible, or instrument not equipped with a radio receiver; correlation of accelerogram with event may be questionable.

[4]Internal clock time; accuracy is variable.

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