Terr. Atmos. Ocean. Sci., Vol. 19, No. 6, 595-639, December 2008 doi: 10.3319/TAO.2008.19.6.595(PT)

Strong-Motion Data from the Two Pingtung, Taiwan, Earthquakes of 26 December 2006

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Received 30 November 2007, accepted 26 September 2008

ABSTRACT

1016 strong-motion records at 527 free-field stations and 131 records at 42 strong-motion arrays at buildings and bridges were obtained for the Pingtung earthquake doublet from the Taiwan Central Weather Bureau's dense, digital strong-motion network. We carried out standard processing of these strong-motion records at free-field stations. A data set, including the originally recorded files, processed data files, and supporting software and information, is archived online http://tecdc.earth.sinica.edu.tw/data/EQ2006Pingtung/. We have not yet completed the processing of the strong-motion array data at buildings and bridges. However, some preliminary results and the strong-motion array data recorded at the second nearest instrumented building to the Pingtung earthquake doublet are shown.

This paper is intended to document our data processing procedures and the online archived data files, so that researchers can efficiently use the data. We also include two preliminary analyses: (1) a comparison of ground motions recorded by multiple accelerographs at a common site, the TAP117 station in Taipei, and (2) attenuation of the horizontal ground motions (peak acceleration and response spectra at periods of 0.2, 1.0, and 3.0 s) with respect to distance.

Our comparison study of multiple recordings at TAP117 indicates that waveform coherence among 20- and 24-bit accelerograph records is much higher as compared to records from 16-bit or 12-bit accelerographs, suggesting that the former are of better quality. For the 20- and 24-bit accelerographs, waveform coherence is nearly 1 over the frequency range 1 to 8 Hz for all components, and is greater than about 0.9 from 8 to 20 Hz for the horizontal component, but only from 8 to 12 Hz for the vertical component. Plots of pseudo-acceleration response spectra (PSA) as a function of distance, however, show no clear indication for a difference related to the performance level of the accelerographs.

The ground-motions of the first event (M_W = 7.0) are comparable, or even somewhat lower, than those from the smaller second event (M_W = 6.9), consistent with the relative difference of the local magnitudes (M_L = 6.96 and 6.99 for the first and second events, respectively). The ground motions from the first event are generally lower than those predicted from equations based on other in-slab subduction earthquakes, whereas the ground motions from the second event are closer to the predictions. Ground-motions for soil sites are generally larger than those from rock sites.

Key words: Accelerographs, Attenuation of ground motions, Central Weather Bureau of Taiwan, Pseudo-acceleration response spectra strong-motion data

Citation: Wu, C. F., W. H. K. Lee, and D. M. Boore, 2008: Strong-motion data from the two Pingtung, Taiwan, earthquakes of 26 December 2006. Terr. Atmos. Ocean. Sci., 19, 595-639, doi: 10.3319/TAO.2008.19.6.595(PT)

1. INTRODUCTION

One of the major tasks at the Central Weather Bureau (CWB) is to monitor earthquakes in the Taiwan region and to provide near realtime information about earthquake activities to the public. An extensive strong-motion instrumentation program was carried out by the CWB from 1992 to 1996 (Shin 1993; Liu et al. 1999). By the end of 2000, a total of 640 digital accelerographs and 56 accelerometer arrays had been deployed in free-field sites and in buildings and bridges, respectively (Shin et al. 2003). Since then, models of the new generation of 24-bit accelerographs have been purchased annually (from 50 to 100 units), mostly

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for replacing the older 16-bit accelerographs. Thus, several different types of digital accelerographs are used, and their general information is given in Table 1. Most of the digital accelerographs have a full scale of ± 2 g, 200 samples per second, 20 second pre-event data before the triggered time, and GPS timing.

Table 1. General information about the digital accelerographs deployed by CWB as of December 2006.

Model	Quantities*	Full-Scale	A/D	Digital Counts per g
Geotech A800	39 (75)	± 1 g	12-bit	2048
Geotech A900	144 (252)	± 2 g	16-bit	16384
Geotech A900A	259 (259)	± 2 g	16-bit	16384
Geotech SMART-24A	145 (145)	± 2 g	24-bit	3145725
Kinemetrics ETNA	35 (45)	± 2 g	~20-bit	4194304
Kinemetrics K2	2 (24)	± 2 g	~20-bit	4194304
Ref Tek 130-SMA/01	10 (10)	± 2 g	24-bit	4194304
Terra Tech IDS/IDSA	0 (192)	± 2 g	16-bit	16384
Tokyo Sokushin CV-574	92 (93)	± 2 g	16-bit	16384
Tokyo Sokushin CV-575	51 (52)	± 2 g	24-bit	4194304

** Note: The first number is the number of units that were deployed at the time of the Pingtung earthquakes. The number in parenthesis is the number of units that CWB purchased as of December 2006 (a total of 1147 digital accelerographs). About 10 Kinemetrics ETNA and 22 six-channel Kinemetrics K2 were kept in reserve and were not deployed in the field. All Terra Tech IDS/IDSA had been transferred to other institutions or discarded. Please see text for explanation of the A/D column.*

For the first of the two Pingtung earthquakes, at 12:26 on 26 December 2006, a total of 484 strong-motion records at 457 free-field stations were obtained, and for the second event at 12:34, a total of 532 records at 502 free-field stations were obtained. The number of records exceeded the number of stations because some stations have more than one accelerograph, as some first generation 12-bit digital accelerographs are still in operation. Figures 1 and 2 show the locations of the triggered stations from the two Pingtung earthquakes, respectively. The origin time of two events was separated by about 8 minutes; and their magnitudes are about 7 [M_W = 7.0, and M_W = 6.9, respectively (http://www.globalcmt.org/CMTsearch.html)]. The first earthquake was clearly a normal-fault earthquake, whereas the second has a significant amount of strike-slip faulting (e.g., Wu et al. 2008). These two in-slab earthquakes were very well-recorded, and the recordings will greatly increase the worldwide sample of ground-motions from in-slab earthquakes, thus leading to an improvement of empirically based ground-motion prediction equations for in-slab, subduction-zone earthquakes.

Figure 3 shows the intensity maps of the two Pingtung earthquakes. Generally higher intensities were observed for the second event, which could be due to the somewhat closer distance of the event to Taiwan; we show later, however, that the ground motions seem to be somewhat higher for the second event than for the first event, at similar distances -

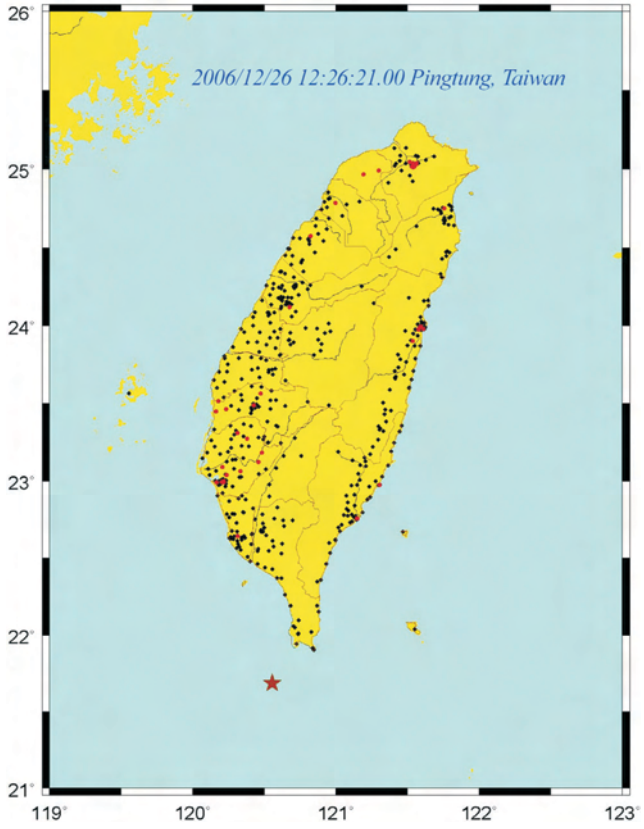

Fig. 1. Map showing the locations of the triggered stations from the first Pingtung earthquake. Free-field accelerograph stations are plotted as small black "diamonds", and strong-motion arrays in buildings or bridges are plotted as red "dots". The earthquake epicenter is shown as "star".

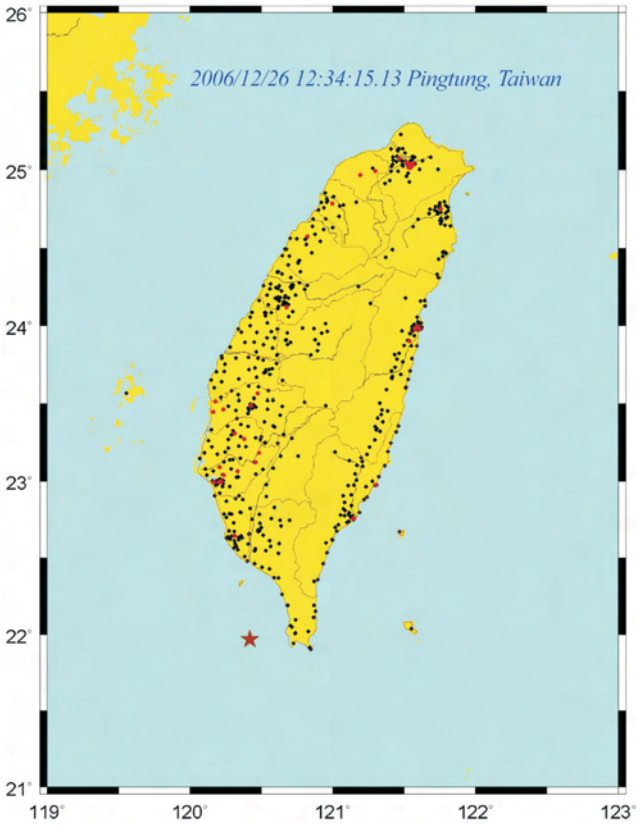

Fig. 2. Map showing the locations of the triggered stations from the second Pingtung earthquake. Free-field accelerograph stations are plotted as small black "diamonds", and strong-motion arrays in buildings or bridges are plotted as red "dots". The earthquake epicenter is shown as "star".

thus the second event may have had a somewhat larger stress drop. We will first describe our strong-motion processing procedures that are essentially the same as those for the 1999 Chi-Chi earthquake (Lee et al. 2001a, b). A data set, including the originally recorded files, processed data files in both binary and ASCII formats, and supporting software and information, is archived online for universal open access.

We also include in this paper two preliminary analyses: (1) a comparison of ground motions recorded by multiple accelerographs at the TAP117 site in Taipei, and (2) attenuation of the horizontal ground motion with respect to distance. We intend to publish our results from more detailed analyses in a future paper, which will also include some small amounts of recorded acceleration data that we did have time to process.

2. DATA PROCESSING AND ONLINE ARCHIVING

This large collection of data from hundreds of instruments requires extensive quality assurance. Data collection was also complicated by the use of 10 different models of accelerographs (see Table 1) with different data formats.

2.1 Assurance of Data Quality

The CWB strong-motion data were collected by four academic groups under the direction of Mr. Chun-Chi Liu and Dr. Kou-Cheng Chen of Academia Sinica, Prof. Gwo-

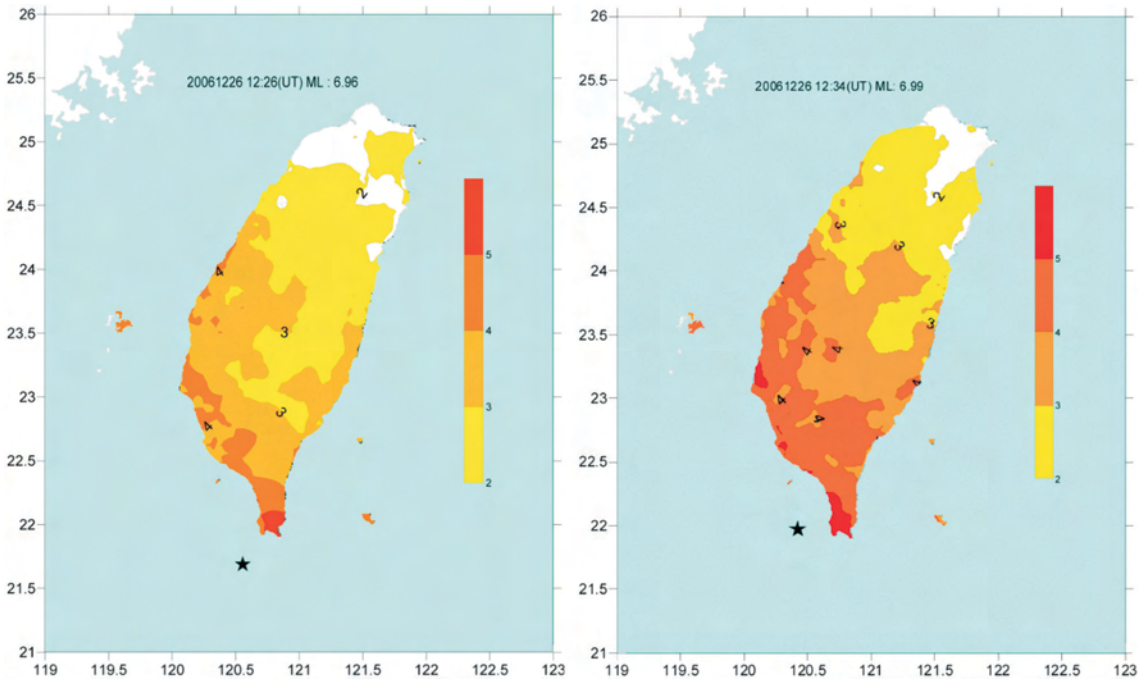

Fig. 3. Intensity maps of the first Pingtung earthquake (left), and of the second Pingtung earthquake (right). The intensity scale is that of CWB: I = 1: 0.8 - 2.5 gal (white color in map), I = 2: 2.5 - 8 gal, I = 3: 8 - 25 gal, I = 4: 25 - 80 gal, I = 5: 80 - 250 gal, I = 6: 250 - 400 gal, and I = 7: > 400 gal. Earthquake epicenters are shown as black stars.

Bin Ou of National Chung Cheng University, and Prof. Chien-Ying Wang of National Central University. The collected data were centralized at the CWB headquarters and collated for these two Pingtung earthquakes by the first author.

Several quality control tasks were performed on the recorded data. The principal tool we used was an interactive computer program called SMQC, written by Doug Dodge, for performing quality assurance tasks (see section C of the report by Teng and Lee 2000). Some of the accelerograms (mostly recorded by the A800, A900, and A900A accelerographs) have obvious spikes (mostly at the end of the record); these spikes were removed using the SMQC program, and the resulting processed data files have a slightly smaller total number of samples than the corresponding original records.

2.2 Header Information

Although information about the unit serial number, station name, coordinates, timing device, and other parameters are encoded in the header of each strong-motion data file, we found many errors. Because this header information must be entered manually by a technician, it is easy to make some mistakes. We corrected many errors using a master file of station information maintained at the strong-motion group at the CWB headquarters. We devoted a considerable amount of time building a reliable master file of station information, especially with respect to station coordinates and timing. In the data processing, we correct all header information using a computer program called "sudsfix" and our master station file (Lee and Dodge 2007).

2.3 DC-Offset Corrections, Filtering, and Peak Ground Acceleration and Peak Ground Velocity Values

The DC-offset in a given data waveform was corrected by removing the mean of the entire waveform. We then determined the peak ground acceleration (PGA) values in units of cm s^{-2} from the processed strong-motion records. We also filtered the accelerations using a low-cut 0.1 Hz acausal filter, and then we obtained peak ground velocities (PGV) and response spectral amplitudes from the filtered data, using the TSPP software of Boore (2008). The PGA and PGV values are summarized in Table 2 and Table 3 for the first and

Table 2. Summary information about the strong-motion records from the first Pingtung earthquake*.

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
KAU082	5	33.2	78.0	240.3	217.9	8.4	23.1	33.1	11	42	90.0	T014001.360	A900	122611
KAU091	5	38.5	61.1	118.2	138.4	5.7	17.1	15.1	23	47	90.0	T453001.360	A900	122611
KAU043	5	38.8	66.7	163.8	145.9	5.2	17.2	13.3	23	47	90.0	T145001.360	A900	122611
HEN	5	40.0	75.0	184.7	177.0						60.0	E008003.360	A800	122642
KAU046	5	40.0	76.4	186.5	168.4	8.6	36.1	33.2	16	44	90.0	T328001.360	A900	122611
KAU081	5	40.4	57.3	181.6	191.9	8.6	26.0	36.2	16	44	90.0	T342001.360	A900	122605
MND012	5	43.4	106.1	241.0	188.4	6.7	13.6	24.9	17	44	110.0	05536000.CVA	CVA	122633
KAU080	5	43.8	56.1	159.5	177.2	5.3	16.2	25.2	18	45	85.0	T388001.360	A900	122608
KAU042	6	46.7	116.2	229.3	320.9	6.4	11.1	21.1	24	48	82.0	T053001.360	A900	122612
KAU039	5	49.1	70.3	219.5	158.3	5.5	9.6	13.3	23	47	74.0	T059001.360	A900	122612
KAU038	5	57.4	60.1	130.9	137.4	3.2	6.1	7.9	30	51	72.0	T116001.360	A900	122613
MND022	4	61.6	74.7	58.1	57.5	4.8	6.2	6.0	38	56	84.0	14136000.CVA	CVA	122636
KAU037	5	64.4	59.2	97.1	155.0	5.2	10.1	13.7	37	55	80.0	T194001.360	A900	122614
KAU040	4	64.6	72.3	60.5	62.7	4.0	5.4	7.3	40	57	70.0	T249001.360	A900	122447
TRB008	4	75.7	36.4	67.8	77.8	3.4	8.3	9.8	49	64	127.0	02936000.CVA	CVA	122338
KAU051	4	76.1	19.2	49.5	41.2	2.3	3.2	2.6	49	64	66.0	T335001.360	A900	122617
SCZ	4	76.1	19.7	51.3	43.4						36.0	E072005.360	A800	202501
TRB037	4	80.0	27.9	73.8	63.8	1.9	7.1	5.0	54	68	80.0	03036000.CVA	CVA	122630

Table 2. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
KAU076	5	82.0	44.1	86.8	65.8	1.7	9.8	8.0	56	69	84.0	T413001.360	A900	122609
TAW	4	82.1	19.2	44.5	31.2						44.0	E005015.360	A800	122620
KAU044	4	83.3	35.2	63.2	67.2	2.3	6.4	5.1	58	71	90.0	T082001.360	A900	122621
KAU033	5	86.7	28.9	97.1	104.4	2.1	9.1	6.8	62	74	90.0	T080001.360	A900	122619
KAU089	4	89.2	28.3	55.0	52.1	1.9	5.9	5.0	65	77	120.0	D3136000.SMT	SMTA	122600
KAU017	4	92.7	40.6	60.9	60.5	1.9	6.3	5.8	68	80	90.0	T166001.360	A900	122608
KAU034	3	93.6	10.4	16.6	18.0	0.8	1.6	1.2	67	78	56.0	T098001.360	A900	122622
TTN038	4	94.4	19.5	33.7	32.6						69.0	T323001.360	A900	122416
KAU035	4	95.4	21.0	45.1	37.7	1.7	4.0	3.6	69	81	87.0	T191001.360	A900	122622
KAU032	4	95.6	20.4	35.3	37.0	1.8	4.6	3.9	70	81	90.0	T095001.360	A900	122622
KAU083	4	97.2	14.3	28.0	39.8	1.7	2.9	4.7	72	83	90.0	T377001.360	A900	122616
KAU074	5	98.2	27.8	90.7	91.2	2.2	6.3	6.6	72	83	90.0	T332001.360	A900	122620
KAU056	4	98.7	25.8	66.0	46.2	2.1	5.4	4.0	75	86	88.0	T385001.360	A900	122646
KAU079	4	100.5	18.7	35.8	35.1	1.0	1.7	1.9	73	84	68.0	T343001.360	A900	122610
KAU045	4	100.8	32.5	66.4	58.1	1.5	5.1	4.0	77	88	90.0	T322001.360	A900	122623
KAU	4	100.8	33.4	70.5	56.5						90.0	E018001.360	A800	122606
KAU055	4	101.2	27.4	66.4	61.8	1.4	4.5	6.2	78	88	90.0	T315001.360	A900	122620
KAU090	4	101.4	17.4	41.9	44.9	2.2	5.8	4.4	77	87	90.0	T503001.360	A900	122624
KAU030	5	102.4	23.1	87.2	84.8	1.5	6.1	6.9	76	86	89.0	T214001.360	A900	122621
TTN037	4	102.7	16.6	26.0	33.2						70.0	T341001.360	A900	122602
KAU006	4	103.0	31.1	46.5	45.3	1.6	4.0	3.8	79	89	90.0	T426001.360	A900	122608
KAU087	4	105.5	30.0	39.4	32.0	1.6	5.4	3.1	81	92	120.0	D4436000.SMT	SMTA	122600
KAU005	4	105.5	46.0	76.4	74.9	1.8	4.8	4.5	81	91	90.0	T056001.360	A900	122615
KAU008	4	106.2	37.9	53.4	55.8	1.7	5.9	4.0	82	92	90.0	T405001.360	A900	122604
KAU071	5	106.6	17.1	99.2	54.1	1.2	7.7	5.3	81	90	85.0	T406001.360	A900	122619
KAU004	4	106.9	28.9	41.2	36.7	1.7	4.3	3.1	83	92	90.0	T432001.360	A900	122556
KAU062	4	107.4	28.1	36.4	36.0	1.6	4.6	3.6	83	94	90.0	T554001.360	A900	122626
KAU007	4	107.9	32.6	51.0	49.1	2.1	5.3	5.5	83	93	90.0	T138001.360	A900	122614
TRB032	4	108.0	28.5	44.4	51.7	1.8	5.4	3.6	83	93	93.0	04236000.CVA	CVA	122645
MND019	3	108.1	7.1	17.2	18.8	0.8	2.3	3.0	84	95	100.0	05636000.CVA	CVA	122654
KAU092	4	108.2	44.4	61.5	56.9	1.8	4.9	6.0	75	87	90.0	T435001.360	A900	122621
KAU067	4	108.3	23.6	40.3	31.3	1.5	3.4	3.3	83	93	76.0	T446001.360	A900	122618
KAU003	3	108.6	15.3	17.9	18.0	1.1	1.5	2.0	85	96	120.0	D6836000.SMT	SMTA	122600
TTN052	4	108.8	14.5	24.1	25.8						72.0	T353001.360	A900	122719
KAU022	4	109.0	20.1	56.1	55.5	1.3	8.1	7.1	83	93	85.0	T032001.360	A900	122620
KAU061	4	109.0	32.3	37.4	43.4	1.4	3.9	2.7	85	95	90.0	T516001.360	A900	122625
KAU088	4	109.1	26.3	33.5	35.4	1.3	4.0	2.7	85	95	120.0	D5836000.SMT	SMTA	122600

Table 2. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
TRB007	4	109.2	19.3	59.5	41.9	1.3	7.5	5.3	84	93	102.0	02836000.CVA	CVA	122446
KAU057	4	109.3	18.5	33.7	31.7	1.2	1.8	2.0	85	96	78.0	T425001.360	A900	122621
KAU023	4	109.9	17.4	65.0	48.3	1.1	8.3	4.7	84	94	81.0	T350001.360	A900	122623
TTN017	4	110.0	18.6	53.2	53.9	0.8	2.2	2.2	97	105	90.0	T317001.360	A900	122621
KAU025	4	110.5	21.2	59.6	51.4	1.1	8.1	6.4	85	94	85.0	T151001.360	A900	122623
KAU060	4	111.8	33.7	44.9	41.3	1.2	3.1	2.2	88	97	120.0	D4736000.SMT	SMTA	122600
KAU026	4	112.2	14.8	37.5	39.5	1.2	4.0	5.0	86	96	89.0	T428001.360	A900	122623
TTN003	4	112.6	18.1	31.7	25.6	0.8	2.8	2.4	86	96	81.0	11436000.CVA	CVA	122644
TRB033	4	112.9	14.7	29.2	23.0	1.0	2.0	2.1	85	95	78.0	02636000.CVA	CVA	122638
MND004	4	113.4	17.5	30.5	32.0	1.2	1.8	1.6	89	99	84.0	T486001.360	A900	122624
KAU078	4	113.4	30.4	59.9	72.6	1.6	2.5	3.8	87	96	82.0	T302001.359	A900	121244
KAU048	4	115.2	9.8	53.3	41.2	1.9	6.1	6.4	89	98	83.0	T440001.360	A900	122626
SGL	4	115.2	10.9	52.5	38.1						52.0	E084002.360	A800	122725
SSD	4	117.5	34.5	76.6	45.9						60.0	E095007.360	A800	122530
KAU049	4	117.5	34.8	73.5	45.1	1.7	2.3	2.0	91	100	75.0	T449001.360	A900	122625
KAU059	4	118.0	24.3	50.1	44.4	1.2	3.7	4.1	94	103	90.0	T309001.360	A900	122622
KAU029	4	118.3	19.4	35.1	31.1	1.4	4.2	3.1	92	101	74.0	T176001.360	A900	122625
KAU077	4	118.3	22.3	50.6	37.7	1.4	2.1	2.2	92	100	75.0	T303001.360	A900	122651
KAU021	4	118.4	27.2	34.9	36.0	1.5	3.8	3.3	93	102	120.0	C8936000.SMT	SMTA	122600
TTN050	4	119.7	16.4	20.2	25.3						73.0	T533001.360	A900	121828
KAU070	4	121.5	14.9	31.6	53.6	1.3	3.8	5.5	96	104	86.0	T372001.360	A900	122319
TTN030	3	121.8	16.8	16.6	21.5						70.0	T407001.360	A900	122615
KAU011	4	122.9	31.1	70.9	53.4	1.3	4.1	3.8	99	108	90.0	T250001.360	A900	122626
TRB031	4	124.5	21.5	54.7	40.0	1.7	3.4	3.3	100	108	133.0	04536000.CVA	CVA	122650
KAU013	4	124.5	26.7	34.2	35.6	1.8	2.8	2.6	100	108	120.0	D2936000.SMT	SMTA	122600
TTN029	3	124.6	23.9	21.3	19.3	1.0	1.7	2.0	98	106	68.0	T356001.360	A900	122700
MND002	4	124.7	31.1	38.5	44.7	1.6	3.3	2.9	100	108	90.0	T477001.360	A900	122634
KAU010	4	125.1	22.2	65.6	58.3	1.4	3.2	3.0	101	109	90.0	T219001.360	A900	122626
KAU064	5	125.9	31.3	80.2	78.8	1.4	5.7	6.5	102	110	90.0	T338001.360	A900	121646
KAU028	3	126.3	16.4	22.6	18.2	1.0	2.0	1.5	100	108	71.0	T122001.360	A900	122623
KAU053	4	126.6	9.7	36.8	27.5	1.3	3.5	3.7	101	109	82.0	T439001.360	A900	122630
TTN049	4	128.6	17.4	29.5	21.1						98.0	09836000.CVA	CVA	122647
TTN010	4	129.9	10.9	21.8	26.2	1.1	3.2	3.8	104	112	72.0	T168001.360	A900	122625
TTN028	3	131.3	11.9	14.5	15.9	1.2	1.4	1.9	105	113	66.0	T334001.360	A900	122618
TTN048	3	132.1	14.5	15.2	20.1						67.0	T534001.360	A900	122624
TTN009	3	132.3	12.9	19.1	20.9	1.5	2.8	2.5	107	114	67.0	T037001.360	A900	122634
TTN015	3	132.9	11.0	14.6	17.6	1.4	2.6	2.1	107	115	77.0	T344001.360	A900	122629

Table 2. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
TTN005	3	132.9	11.3	17.3	14.2	1.3	2.5	2.3	107	115	71.0	T131001.360	A900	122629
TTN013	3	133.3	5.6	7.7	11.8	0.6	1.8	1.8	107	115	49.0	T245001.360	A900	122642
KAU012	4	133.4	24.2	49.0	62.0	1.1	2.7	3.0	108	116	88.0	T169001.360	A900	122630
TTN012	3	133.5	5.0	9.8	17.5	0.7	1.6	2.3	108	115	52.0	T251001.360	A900	122638
TTN008	3	133.5	10.7	13.3	11.1	1.5	2.3	1.6	108	115	57.0	T197001.360	A900	122623
TTN007	3	133.6	7.6	12.5	13.3						60.0	T055001.360	A900	122629
TTN006	3	134.2	9.7	13.6	18.8	1.3	2.5	2.1	108	116	63.0	T243001.360	A900	122623
TTN011	3	134.2	13.1	20.9	19.4	1.3	2.0	1.5	108	116	75.0	T228001.360	A900	122619
KAU009	4	134.5	16.6	32.0	33.1	1.2	2.5	2.3	110	118	90.0	T154001.360	A900	122630
KAU020	4	134.5	18.3	37.4	51.1	1.7	5.1	4.1	108	116	90.0	T070001.360	A900	122627
KAU066	4	134.5	26.9	45.0	35.6	1.4	3.1	3.2	110	118	90.0	T434001.360	A900	122615
KAU085	4	134.9	19.5	42.4	30.6	1.3	3.6	3.0	110	118	120.0	D3636000.SMT	SMTA	122600
TTN027	4	135.7	13.4	22.8	27.7	1.1	2.7	2.8	109	117	86.0	T324001.360	A900	122623
TTN018	3	136.4	15.3	13.0	16.6	0.9	1.0	1.6	110	117	71.0	T320001.360	A900	122625
CHY065	4	136.7	34.5	43.6	55.5	1.9	3.4	3.6	112	119	114.0	15836000.CVA	CVA	122657
TTN036	3	139.1	4.6	9.1	6.7						50.0	T365001.360	A900	122639
KAU063	4	140.5	21.6	35.8	37.6	1.1	2.0	1.7	116	124	90.0	T329001.360	A900	122625
TTN047	3	140.7	5.9	13.8	11.9						70.0	T541001.360	A900	121221
TTN026	3	140.9	12.6	16.4	14.9	0.9	1.7	1.7	115	122	66.0	T421001.360	A900	122624
CHY066	4	141.2	20.0	31.0	28.5	1.1	2.4	2.0	117	125	120.0	D7436000.SMT	SMTA	122600
KAU068	3	142.9	10.1	13.4	19.0	0.8	1.0	1.1	117	124	63.0	T340001.360	A900	122637
TTN055	3	144.2	15.0		20.4						73.0	T441001.360	A900	121638
CHY023	4	144.4	15.7	23.7	25.5	0.9	2.2	2.0	120	127	120.0	E0136000.SMT	SMTA	122600
TTN025	3	144.9	16.8	17.0	20.2	0.8	1.1	1.3	118	125	78.0	T396001.360	A900	122625
CHY070	4	145.4	23.9	33.9	29.7	1.1	2.1	1.7	121	128	118.0	15436000.CVA	CVA	122652
CHY096	4	147.2	50.3	40.3	43.2	1.1	1.8	2.1	123	130	120.0	D3036000.SMT	SMTA	122600
CHY069	4	147.6	34.5	57.4	51.9	0.7	2.4	2.1	124	131	104.0	15936000.CVA	CVA	122655
TTN004	4	147.9	17.5	26.5	18.3	1.3	2.6	1.7	122	128	90.0	11236000.CVA	CVA	122625
CHY125	3	148.0	12.1	18.6	20.5	0.9	3.5	1.8	127	134	103.0	05036000.CVA	CVA	122103
CHY068	4	148.5	16.7	40.0	32.3	0.9	1.9	1.7	124	131	83.0	T326001.360	A900	122633
TTN035	3	148.7	10.1	17.3	22.0						77.0	T310001.360	A900	122719
CHY085	4	149.4	27.0	31.9	20.6	0.7	1.4	1.3	125	132	81.0	T570001.360	A900	122630
CHY064	4	149.5	29.0	37.8	33.2	1.0	2.1	1.9	126	132	88.0	T562001.360	A900	122634
MND024	4	149.9	28.6	39.4	43.5	1.5	3.3	2.8	125	131	105.0	14236000.CVA	CVA	122700
CHY063	4	150.0	15.5	33.6	41.2	1.0	2.6	2.1	125	132	102.0	16236000.CVA	CVA	122701
CHY067	4	150.2	44.6	51.3	45.0	1.0	2.5	2.1	126	133	120.0	C8236000.SMT	SMTA	122600
CHY022	4	150.7	12.9	23.2	25.9	0.9	1.4	1.4	125	131	120.0	D3436000.SMT	SMTA	122600

Table 2. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
MND018	4	150.9	23.0	31.4	36.1	1.2	2.0	2.5	127	134	95.0	05436000.CVA	CVA	122652
CHY097	4	151.0	26.8	50.0	41.7	1.0	2.2	2.1	127	134	120.0	C9536000.SMT	SMTA	122600
CHY098	4	151.2	29.6	43.2	35.6	1.0	2.6	1.9	127	134	120.0	D2036000.SMT	SMTA	122600
TTN034	4	151.4	12.5	27.8	20.9						83.0	T363001.360	A900	122603
TTN024	3	153.2	9.9	15.1	14.6	0.6	1.4	1.1	127	133	70.0	T316001.360	A900	122628
CHY078	4	153.5	13.7	29.9	30.6	0.9	2.0	3.1	129	136	86.0	T375001.360	A900	122638
TAI1	4	153.5	13.8	29.6	28.2						71.0	E013002.360	A800	122550
CHY061	3	153.9	10.7	23.5	19.1	0.6	1.2	1.2	128	134	73.0	16136000.CVA	CVA	122702
SGS	3	154.6	7.1	18.2	14.3						44.0	E029002.360	A800	122555
KAU047	3	154.6	7.8	18.0	12.5	0.8	1.0	1.1	128	134	55.0	T354001.360	A900	122642
TTN045	3	155.1	9.1	9.6	10.8						71.0	T542001.360	A900	122633
CHY114	4	156.2	16.0	28.4	28.1	0.9	2.0	2.3	132	139	120.0	D9336000.SMT	SMTA	122600
CHY021	4	156.7	18.0	26.9	27.9	1.1	2.8	2.3	132	138	120.0	D1036000.SMT	SMTA	122600
TTN046	3	157.7	7.3	20.4	16.4						81.0	11636000.CVA	CVA	122652
CHY071	4	157.7	22.0	27.2	37.3						134.0	14936000.CVA	CVA	122650
TTN044	3	159.2	11.8	23.4	20.1						96.0	09936000.CVA	CVA	122654
CHY116	4	160.8	25.2	45.7	79.1	0.7	3.3	2.9	137	144	120.0	D3736000.SMT	SMTA	122600
TTN002	3	161.5	6.7	10.4	10.2	0.8	1.0	0.9	136	142	73.0	12836000.CVA	CVA	122656
CHY060	4	162.6	16.3	42.1	46.6	0.8	2.9	3.2	138	144	90.0	T509001.360	A900	122630
TRB035	3	162.9	7.6	18.2	13.4	1.0	1.9	1.7	136	142	84.0	02336000.CVA	CVA	122704
TRB029	4	162.9	13.2	32.5	24.9	1.5	2.5	2.0	138	144	109.0	04436000.CVA	CVA	122703
MND011	4	163.0	18.7	32.1	31.9	0.9	2.5	1.9	138	144	99.0	05336000.CVA	CVA	122928
CHY099	4	163.1	18.2	31.2	30.3	1.1	2.5	2.4	138	144	90.0	T571001.360	A900	122631
TTN042	4	163.3	6.6	28.7	17.9						89.0	09436000.CVA	CVA	122650
KAU001	3	163.6	5.3	8.7	7.9	0.5	0.6	0.6	137	143	120.0	D5136000.SMT	SMTA	122600
STY	3	164.6	7.3	13.3	11.6						45.0	E089003.360	A800	122520
KAU050	3	164.6	7.4	12.4	11.8	0.6	0.9	0.8	138	144	68.0	T422001.360	A900	122631
TTN043	4	168.2	14.1	27.1	30.0						86.0	09336000.CVA	CVA	122648
SCL	4	168.9	12.9	48.9	42.6						71.0	E003001.360	A800	122610
CHY077	4	168.9	13.2	49.0	43.4	0.7	2.2	2.2	145	150	90.0	T333001.360	A900	122633
TTN021	3	169.0	8.1	16.1	11.2	0.4	0.7	0.5	143	148	64.0	T206001.360	A900	122630
CHY108	4	169.2	12.7	30.3	33.4	1.1	1.8	1.9	145	150	120.0	C8636000.SMT	SMTA	122600
CHY115	4	169.3	18.8	62.0	43.6	0.8	2.3	2.3	145	152	90.0	T417001.360	A900	122638
TTN022	3	170.1	9.1	18.0	15.2	0.9	1.7	1.8	144	149	80.0	T376001.360	A900	122636
TTN041	4	170.3	19.0	35.5	35.8						84.0	10036001.CVA	CVA	122652
CHY018	3	171.0	9.8	17.6	18.2	0.6	1.0	1.2	145	151	120.0	D7836000.SMT	SMTA	122600
CHY017	3	171.7	14.6	24.3	23.6	0.8	2.5	1.9	147	153	120.0	D0736000.SMT	SMTA	122600

Table 2. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
CHY100	4	171.9	12.4	32.7	30.3	0.9	2.5	3.1	147	152	120.0	D1936000.SMT	SMTA	122600
CHY059	5	172.2	32.3	115.5	60.1	1.0	4.9	2.4	148	154	120.0	D3936000.SMT	SMTA	122600
WTP	4	172.7	4.6	16.6	28.5						32.0	E031005.360	A800	122723
CHY102	4	172.7	5.7	16.2	28.7	0.5	0.9	0.9	146	152	67.0	T347001.360	A900	122638
CHY109	3	172.9	4.8	9.1	7.5	0.6	1.0	0.8	147	152	120.0	B9236000.SMT	SMTA	122600
TTN020	3	172.9	5.0	11.1	8.1	0.6	0.8	0.9	147	152	68.0	T393001.360	A900	122631
TTN051	3	172.9	10.3	11.3	9.9						67.0	T301002.360	A900	122632
CHY110	2	173.0	4.6	6.9	5.6						48.0	T514001.360	A900	122643
CHY016	4	174.8	18.6	49.4	70.0	0.8	1.9	3.7	151	156	120.0	E0236000.SMT	SMTA	122600
TTN040	2	175.1	5.1	7.1	5.3						51.0	09636000.CVA	CVA	122711
CHY081	3	175.2	7.4	7.6	8.3	0.6	0.9	0.9	149	154	52.0	T398001.360	A900	122647
KAU054	3	176.9	9.8	20.3	13.2	0.6	1.5	0.9	150	156	68.0	T224001.360	A900	122625
CHY051	3	176.9	11.0	22.5	21.5	0.6	1.2	1.4	151	156	69.0	T346001.360	A900	122646
TTN014	3	177.2	8.7	17.4	21.8	0.7	1.2	1.7	152	157	81.0	T411002.360	A900	122632
CHK	3	177.2	8.8	17.5	21.5						55.0	E014002.360	A800	122814
CHY052	3	177.3	7.5	15.2	11.6	0.5	0.7	0.8	151	157	120.0	D9036000.SMT	SMTA	122600
CHY055	4	177.7	13.3	30.8	31.9	0.8	1.8	1.8	153	158	120.0	D7536000.SMT	SMTA	122600
CHY053	4	178.4	6.6	26.8	24.9	1.0	1.9	1.7	153	158	120.0	D3836000.SMT	SMTA	122600
HWA004	3	179.1	8.6	18.0	14.7	0.8	1.1	1.6	153	158	79.0	11536000.CVA	CVA	122703
CHY056	4	179.9	12.8	50.7	61.5	0.9	2.8	2.5	156	161	93.0	15736000.CVA	CVA	122707
CHY107	4	180.6	15.7	28.4	28.6	0.9	1.8	1.7	156	161	120.0	D6436000.SMT	SMTA	122600
CHY122	3	183.3	15.1	11.5	17.2	1.1	1.7	1.6	158	163	82.0	T527001.360	A900	122651
CHY086	3	184.3	7.8	24.4	13.3	0.7	1.6	1.4	158	163	64.0	T418001.360	A900	122647
HWA042	3	184.6	4.6	8.6	9.4						51.0	T369001.360	A900	122344
CHY042	3	185.0	7.0	8.6	11.4						64.0	16936000.CVA	CVA	122711
CHY015	4	185.3	16.3	51.7	43.4	1.0	2.9	2.1	160	165	120.0	C8536000.SMT	SMTA	122600
CHY012	4	186.9	26.6	44.0	51.7	0.7	1.7	1.8	163	168	120.0	C8036000.SMT	SMTA	122600
CHY049	4	187.1	13.3	31.8	33.1	0.9	1.9	2.6	162	167	117.0	15036000.CVA	CVA	122707
CHY013	3	187.4	17.4	16.9	23.3	0.7	2.3	1.8	162	168	120.0	C8136000.SMT	SMTA	122600
TTN033	3	187.5	8.7	14.9	19.1						72.0	T307001.360	A900	122635
CHY087	4	187.9	15.2	26.0	28.6	0.6	1.1	1.2	162	167	120.0	C2136000.SMT	SMTA	122600
HWA041	3	190.7	8.1	16.5	14.3	0.9	1.5	1.2	164	169	69.0	T445002.360	A900	122629
TTN032	3	193.6	5.0	12.7	12.4						69.0	T386002.360	A900	122636
CHY106	3	194.5	10.2	22.5	24.2	0.7	1.5	1.3	169	174	120.0	D3536000.SMT	SMTA	122600
TRB025	4	196.8	15.4	41.6	40.1	0.6	1.8	1.8	171	176	99.0	03836000.CVA	CVA	122703
CHY010	3	196.9	9.7	19.2	18.0	0.6	1.2	0.9	170	175	120.0	D0036000.SMT	SMTA	122600
CHY095	4	197.5	12.6	18.7	28.7	0.5	1.2	1.6	172	177	120.0	D1836000.SMT	SMTA	122600

Table 2. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
TRB034	3	197.8	07.0	12.3	11.2						69.0	02436001.CVA	CVA	122716
HWA055	3	197.9	6.0	13.4	13.1						66.0	09536001.CVA	CVA	122715
CHY048	3	198.1	11.9	21.5	17.9	0.7	1.1	1.2	172	177	120.0	D0336000.SMT	SMTA	122600
CHY009	4	198.4	16.5	22.4	29.9	0.6	1.8	1.3	173	177	120.0	D2336000.SMT	SMTA	122600
CHY046	4	198.4	16.9	35.6	39.7	0.8	1.6	1.6	172	177	98.0	18236000.CVA	CVA	122659
HWA040	3	198.5	6.0	13.0	12.7	0.6	1.4	1.3	172	177	69.0	T416002.360	A900	122639
CHY011	3	199.2	7.5	15.9	11.2	0.4	0.9	0.8	173	177	120.0	D5536000.SMT	SMTA	122600
HWA024	2	199.6	3.3	5.1	4.6						40.0	T391002.360	A900	122655
CHY047	4	200.5	14.5	36.1	51.4	0.7	1.5	1.8	175	179	120.0	D7236000.SMT	SMTA	122600
CHY073	4	200.9	13.1	20.3	25.9	0.5	1.5	1.6	175	180	90.0	T359001.360	A900	122641
CHY	4	200.9	14.0	20.0	25.3						66.0	E009002.360	A800	122605
CHY008	3	201.3	15.1	17.4	17.5	0.5	1.4	1.1	177	181	120.0	C9736000.SMT	SMTA	122600
TTN001	3	202.4	7.8	18.2	16.1						62.0	11936001.CVA	CVA	122717
CHY035	4	203.0	11.8	37.2	28.2	0.8	2.2	1.4	176	181	81.0	T438001.360	A900	122639
CHY034	4	203.1	16.4	28.3	21.0	0.9	1.4	1.3	177	182	120.0	D8836000.SMT	SMTA	122600
ALS	3	203.5	5.6	12.0	12.5						32.0	E026016.360	A800	122724
CHY074	3	203.5	06.5	11.5	12.4	0.6	1.1	1.2	176	181	76.0	T401001.360	A900	122637
CHY121	3	203.7	7.9	14.0	16.4	0.4	1.3	2.0	177	181	79.0	T565001.360	A900	122628
CHY039	4	204.2	12.7	23.8	31.0						79.0	17736000.CVA	CVA	122713
HWA039	3	205.0	7.2	9.0	10.0						53.0	T312002.360	A900	122656
CHY038	3	205.0	12.6	24.2	23.4	0.6	1.3	1.3	179	184	85.0	T511001.360	A900	122638
TTN031	3	207.0	8.1	15.3	23.9						81.0	T304002.360	A900	122633
CHY033	4	208.1	10.8	34.7	37.9	0.6	1.6	1.6	183	188	91.0	17136000.CVA	CVA	122659
CHY105	4	208.2	13.0	36.3	28.4	0.6	1.8	1.7	183	187	120.0	D5936000.SMT	SMTA	122600
HWA054	3	209.4	4.5	8.4							52.0	T544002.360	A900	122703
CHY006	3	209.8	14.7	20.5	13.4	1.0	1.4	1.8	183	188	120.0	D9536000.SMT	SMTA	122600
CHY032	4	211.3	18.7	29.0	27.4	0.6	1.6	1.9	186	190	114.0	18136000.CVA	CVA	122659
CHY032	4	211.3	19.4	31.8	32.7	0.7	1.9	1.7	186	191	90.0	T089001.360	A900	122614
HWA038	3	212.4	5.5	8.6	8.1	0.4	0.6	0.7	186	190	63.0	T429002.360	A900	122643
CHY036	4	212.8	9.8	24.7	33.5						97.0	17336000.CVA	CVA	122715
HWA037	3	213.4	10.8	21.5	20.3	1.0	1.9	1.9	187	192	87.0	T430002.360	A900	122546
CHY005	4	213.6	10.1	28.4	29.5	0.7	1.8	1.9	188	192	120.0	D6636000.SMT	SMTA	122600
CHY004	4	215.6	14.4	29.7	41.1	0.4	1.5	2.3	191	195	120.0	D7736000.SMT	SMTA	122600
HWA021	3	216.3	5.7	9.2	7.1	0.4	0.6	0.5	190	194	66.0	T337002.360	A900	122641
EHY	3	216.3	6.0	9.4	7.1						16.0	E025001.360	A800	122706
TCU090	3	217.3	06.0	14.0	10.6						120.0	B7936000.SMT	SMTA	122600
WSF	4	218.7	18.0	39.0	67.2						39.0	E034002.360	A800	122628

Table 2. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
CHY076	4	218.7	19.4	39.3	70.4	0.5	1.8	2.5	194	198	88.0	T419001.360	A900	122637
CHY031	4	219.4	14.3	25.0	29.5	0.5	1.4	2.1	194	198	111.0	16836000.CVA	CVA	122658
CHY104	3	219.7	9.7	21.5	19.0	1.0	1.6	1.6	194	198	120.0	D5336000.SMT	SMTA	122600
CHY101	4	221.4	7.8	30.2	22.0	0.7	1.6	1.5	195	199	90.0	T397001.360	A900	122634
WGK	4	221.4	10.2	32.8	21.9						40.0	E092002.360	A800	122633
CHY093	4	221.6	17.3	31.1	30.2	0.5	1.6	1.3	197	201	120.0	D2636000.SMT	SMTA	122600
CHY103	4	223.0	16.1	34.6	31.8	0.7	2.3	1.7	197	201	120.0	D6036000.SMT	SMTA	122600
CHY003	4	224.7	9.4	26.3	19.1	0.8	1.6	1.5	199	203	90.0	T381001.360	A900	122635
TRB027	4	224.8	14.7	29.7	20.2	0.7	1.5	1.3	200	204	103.0	03636000.CVA	CVA	122658
CHY002	3	225.4	15.1	20.5	24.1	0.6	1.3	1.5	200	204	120.0	D1636000.SMT	SMTA	122600
CHY083	4	225.5	12.0	37.1	23.6	0.7	2.4	1.5	199	203	120.0	C0036000.SMT	SMTA	122600
CHY001	3	225.9	16.6	22.9	20.9	0.3	0.8	0.9	201	205	120.0	D7136000.SMT	SMTA	122600
CHY084	3	226.3	12.8	22.1	18.1	0.8	1.6	2.1	200	204	120.0	C3836000.SMT	SMTA	122600
CHY112	4	226.5	18.1	26.8	31.4	0.4	0.9	1.3	202	206	120.0	C9336000.SMT	SMTA	122600
HWA034	3	226.9	7.1	15.4	11.3	0.4	1.1	0.9	200	205	78.0	T379002.360	A900	122642
CHY027	4	230.8	21.3	30.3	22.8	0.5	0.9	1.1	206	210	85.0	16336000.CVA	CVA	122700
CHY025	3	231.7	15.2	24.4	20.8	1.0	1.4	1.0	205	209	101.0	15636000.CVA	CVA	122659
PNG	4	232.2	8.9	38.1	28.5						21.0	E015013.360	A800	122513
CHY075	4	232.2	12.5	38.0	33.1	0.4	0.9	0.7	208	214	72.0	T395001.360	A900	122642
CHY092	3	233.1	9.1	15.8	15.6	0.6	1.1	1.1	207	211	120.0	C3936000.SMT	SMTA	122600
HWA002	3	233.5	4.6	11.0	11.4						57.0	12036000.CVA	CVA	122723
HWA003	2	233.9	2.8	6.3	5.6						50.0	12336001.CVA	CVA	122726
CHY026	3	234.2	16.1	19.8	24.8	0.8	1.5	1.4	208	212	115.0	15236000.CVA	CVA	122700
CHY094	4	234.5	11.9	24.6	32.7	0.3	1.2	1.4	198	202	120.0	D1436000.SMT	SMTA	122600
TCU122	3	235.4	9.5	12.8	19.5						63.0	T519001.360	A900	122652
CHY111	4	235.4	21.3	42.4	36.2	0.4	1.2	1.4	210	214	120.0	D3236000.SMT	SMTA	122600
HWA005	3	235.5	5.7	18.2	14.2	0.5	1.7	1.2	209	213	80.0	T531002.360	A900	122644
TRB020	4	235.5	9.8	26.6	16.6						62.0	01136000.CVA	CVA	122721
TRB038	3	236.4	6.4	11.9	11.3						65.0	03436000.CVA	CVA	122721
CHY117	4	236.9	21.6	33.0	37.0	0.6	1.4	1.4	212	216	120.0	C3436000.SMT	SMTA	122600
HWA006	3	237.0	4.5	7.6	9.7						55.0	13036000.CVA	CVA	122725
TCU078	3	237.2	4.4	10.5	8.0						60.0	C1536000.SMT	SMTA	122700
TCU141	3	237.8	12.7	24.6	17.7						120.0	D6536000.SMT	SMTA	122600
HWA044	3	239.5	3.6	8.6	9.9						48.0	T423001.360	A900	122708
TCU116	3	240.3	9.7	12.5	14.8						74.0	T196001.360	A900	122642
HWA032	3	240.7	5.6	8.6	10.0						48.0	T414002.360	A900	122704
HWA033	3	240.7	06.3	13.3	13.2	0.6	1.1	1.0	214	218	76.0	T387001.360	A900	122641

Table 2. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
TCU079	3	240.8	08.0	15.7	11.4						120.0	B7136000.SMT	SMTA	122600
TCU086	4	242.5	13.7	28.3	28.1						65.0	T313002.360	A900	122700
WTC	4	242.5	14.1	26.6	30.0						28.0	E022003.360	A800	122653
TCU114	3	242.7	13.1	23.0	17.2						90.0	T036001.360	A900	122640
WNT	4	243.0	3.6	34.1	31.3						26.0	E030001.360	A800	122545
TCU129	4	243.0	5.0	32.9	30.9						79.0	T436001.360	A900	122640
HWA035	2	243.8	5.0	7.3	7.3						49.0	T390002.360	A900	122701
TCU150	3	244.7	9.9		21.0						82.0	T561001.360	A900	122641
TCU113	4	244.9	14.1	33.7	29.1						84.0	T141001.360	A900	122641
TCU121	3	244.9	15.8	21.9	20.7						88.0	T152001.360	A900	122632
TCU084	3	245.7	4.6	16.8	17.5						70.0	T448001.360	A900	122652
HWA043	3	245.7	4.9	9.7	8.7						46.0	T349001.360	A900	122706
SML	3	245.7	6.8	20.9	23.1						40.0	E024002.360	A800	122650
TCU076	3	246.2	5.9	11.0	13.3						60.0	B9936000.SMT	SMTA	122700
TCU159	3	246.3	7.8	10.8	8.2						54.0	T524001.360	A900	122701
TCU138	3	247.5	8.2	17.0	17.3						120.0	D2536000.SMT	SMTA	122700
TCU139	4	247.5	9.9	25.7	23.6						120.0	C9836000.SMT	SMTA	122700
TCU089	2	248.2	3.0	5.9	5.1						41.0	T351001.360	A900	122707
HWA031	3	249.5	5.8	6.2	9.0						50.0	T451002.360	A900	122657
HWA030	2	249.8	3.6	4.5	7.0						42.0	T373001.360	A900	122705
TCU125	4	251.4	9.9	20.0	29.0						120.0	B9536000.SMT	SMTA	122700
TCU115	4	251.8	19.4	28.9	32.2						90.0	T222001.360	A900	122621
TCU110	3	251.9	13.7	13.5	19.2						79.0	T357001.360	A900	122656
HWA020	2	252.1	4.3	6.7	7.0						46.0	T412001.360	A900	122706
TCU140	4	252.3	12.3	33.3	27.9						120.0	D2236000.SMT	SMTA	122600
TCU148	3	253.8	6.8	15.0	13.7						120.0	B9636000.SMT	SMTA	122600
TCU120	3	253.9	9.0	16.6	17.0						120.0	C5036000.SMT	SMTA	122700
HWA001	2	254.4	4.8	8.0	7.5						49.0	T394001.360	A900	122709
TCU145	4	254.9	15.9	26.8	24.2						120.0	D2836000.SMT	SMTA	122700
TCU074	3	255.4	4.8	10.2	12.1						120.0	C4136000.SMT	SMTA	122700
TCU071	3	255.7	4.7	8.6	10.0						120.0	B8636000.SMT	SMTA	122700
TCU142	3	256.2	4.7	7.8	8.8						42.0	T450001.360	A900	122707
TCU118	4	256.7	18.0	40.0	34.5						90.0	T084001.360	A900	122639
TCU123	3	258.1	11.4	21.6	21.6						76.0	T198007.360	A900	122700
HWA059	3	260.6	4.0	10.6	8.5						51.0	T415002.360	A900	122709
TCU073	2	260.8	3.7	4.5	6.3						46.0	T505001.360	A900	122710
HWA051	3	262.4	03.7	9.2	14.7						57.0	11736000.CVA	CVA	122733

Table 2. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
TCU112	4	262.8	15.4	32.0	28.4						66.0	T065002.360	A900	122702
TCU065	4	263.0	13.0	24.7	26.0						69.0	T319001.360	A900	122701
TCU158	4	263.4	17.6	30.6	38.3						63.0	T521002.360	A900	124656
HWA060	3	264.0	3.9	7.8	8.6						51.0	T370001.360	A900	122711
TCU107	3	264.1	9.8	3.9	4.0						40.0	T159001.360	A900	122643
HWA018	2	265.1	4.0	4.7	5.9						51.0	11136000.CVA	CVA	122740
TRB019	4	265.3	12.7	28.5	37.8						83.0	00736000.CVA	CVA	202515
TRB021	4	265.3	15.8	35.6	28.6	1.0	2.1	1.7	238	241	107.0	04136000.CVA	CVA	122232
TCU109	4	265.5	17.1	37.1	38.4						90.0	T017001.360	A900	122637
TCU108	4	265.6	14.5	31.3	29.3						68.0	T019002.360	A900	122705
TCU144	4	265.9	8.6	24.8	31.8						120.0	D5236000.SMT	SMTA	122600
TCU067	3	266.7	7.2	15.4	10.8						120.0	B6036000.SMT	SMTA	122700
TCU063	3	268.3	7.1	23.8	23.9						120.0	B8136000.SMT	SMTA	122700
TCU062	4	269.3	7.6	20.0	25.3						120.0	B8736000.SMT	SMTA	122700
HWA058	3	269.9	5.0	9.0	5.9						44.0	T409002.360	A900	122712
TCU134	4	269.9	5.7	22.0	25.1						57.0	T526002.360	A900	122705
HWA017	2	270.0	3.3	6.6	4.8						46.0	13436000.CVA	CVA	122734
HWA029	2	270.1	2.5	4.1	4.9						36.0	T364001.360	A900	122714
TCU061	3	271.2	11.2	24.4	17.6						64.0	T528002.360	A900	122706
TCU133	3	271.4	6.2	19.4	16.7						58.0	13936000.CVA	CVA	122730
TCU099	3	271.7	5.0	9.1	14.2						120.0	C0436000.SMT	SMTA	122700
TCU055	3	271.8	10.6	17.7	20.1						120.0	B8236000.SMT	SMTA	122700
TCU082	3	272.7	5.0	14.0	11.8						49.0	T374001.360	A900	122718
TCU	3	272.7	5.4	15.6	13.1						22.0	E077003.360	A800	122659
HWA015	2	273.3	4.3	6.2	5.0						38.0	T433001.360	A900	122716
TCU155	3	273.6	12.3	16.8	15.7						48.0	T515001.360	A900	121821
TCU056	3	273.8	4.9	10.5	15.5						60.0	C0736000.SMT	SMTA	122700
TCU146	4	274.2	12.5	29.6	32.4						120.0	B9336000.SMT	SMTA	122700
HWA014	3	274.8	4.2	8.9	9.0						67.0	13636000.CVA	CVA	122739
HWA013	3	274.9	5.0	7.3	9.4						69.0	13336000.CVA	CVA	122735
TCU057	3	275.2	4.5	19.3	11.9						60.0	C0336000.SMT	SMTA	122700
HWA010	3	275.4	5.0	8.2	11.1						65.0	13536000.CVA	CVA	122736
HWA	3	275.5	2.2	9.7	10.7						20.0	E028004.360	A800	122752
HWA	3	275.5	2.6	8.3	11.7						91.0	M1436000.EVT	K2	202714
HWA019	3	275.5	2.7	9.1	12.2	0.4	0.8	1.0	249	253	54.0	T427001.360	A900	122714
HWA019	3	275.5	2.7	9.2	12.2						101.0	19236000.CVA	CVA	122714
HWA	3	275.5	2.7	9.3	12.4						90.0	90636000.RTE	REFT	122714

Table 2. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
HWA063	3	275.9		7.4	8.6						36.0	T537001.360	A900	122724
HWA050	3	275.9	4.1	9.8	8.7						63.0	11836000.CVA	CVA	122735
TCU048	3	275.9	9.8	12.3	15.5						60.0	B6936000.SMT	SMTA	122700
MND016	2	276.0	4.1	6.4	8.0						50.0	06036000.CVA	CVA	122739
HWA062	2	276.3	01.3	4.1	5.2						36.0	T495001.360	A900	122722
TCU050	3	276.3	4.6	11.6	10.4						60.0	B8036000.SMT	SMTA	122700
HWA008	3	276.3	4.7	8.1	9.3						68.0	12236000.CVA	CVA	122736
TCU049	3	276.3	8.3	17.2	16.1						53.0	18936000.CVA	CVA	122731
MND010	3	276.4	5.9	10.7	9.9						47.0	T498001.360	A900	122706
TCU100	3	276.7	3.5	13.0	12.0						60.0	C0136000.SMT	SMTA	122700
TRB042	3	276.8	4.0	10.0	9.3						60.0	02536000.CVA	CVA	122736
HWA011	3	276.8	4.3	10.5	10.7						56.0	13136000.CVA	CVA	122736
HWA007	2	277.2	2.2	5.2	5.2						45.0	12536000.CVA	CVA	122745
HWA009	2	277.5	2.5	5.7	4.4						46.0	13236000.CVA	CVA	122745
HWA048	2	277.6	3.8	7.0	6.4						56.0	12136000.CVA	CVA	122735
HWA012	2	277.8	2.4	4.0	5.0						45.0	13736000.CVA	CVA	122749
TCU070	4	278.0	15.0	35.8	33.4						120.0	B8436000.SMT	SMTA	122700
TCU052	3	278.7	6.2		22.4						120.0	C1736000.SMT	SMTA	122700
HWA028	3	279.3	3.8	8.5	6.6						52.0	T360001.360	A900	122712
HWA061	3	279.7	3.5	6.4	8.9						60.0	12436000.CVA	CVA	122427
MND006	2	280.1	2.9	6.7	4.7						45.0	T497001.360	A900	122715
MND025	3	280.1	5.4	10.8	7.6						51.0	T575001.360	A900	122714
TCU060	3	281.0	5.1	11.4	10.2						52.0	18636000.CVA	CVA	122732
TCU130	3	281.8	2.9	9.7	9.4						76.0	T345001.360	A900	122649
TCU105	3	282.6	4.0	8.7	8.8						120.0	B9736000.SMT	SMTA	122700
MND023	3	282.6	7.2	11.7	11.0						51.0	14336200.CVA	CVA	122430
HWA027	2	282.9	3.1	5.9	4.2						41.0	T402001.360	A900	122709
MND001	3	283.1	6.4	16.6	12.8						58.0	T499001.360	A900	122712
TCU101	3	283.2	5.0	12.2	15.0						60.0	C1036000.SMT	SMTA	122700
TCU104	3	283.3	5.9	10.9	13.8						120.0	C0836000.SMT	SMTA	122600
TCU102	3	284.1	6.3	10.4	10.6						120.0	B8536000.SMT	SMTA	122700
TCU058	3	284.4	5.2	7.8	13.4						60.0	B3636000.SMT	SMTA	122700
TCU149	4	284.5		32.6	33.0						61.0	T485002.360	A900	122612
MND005	3	284.6	6.2	10.4	18.0						46.0	T489001.360	A900	122713
TCU156	3	285.4	5.6	10.9	14.7						49.0	T525001.360	A900	122714
TRB017	3	285.8	5.7	17.7							52.0	01036000.CVA	CVA	122805
TCU059	4	285.9	16.0	28.5	35.2						85.0	19136000.CVA	CVA	122732

Table 2. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
TCU069	3	286.2	4.9	9.5	9.4						52.0	T410001.360	A900	122712
TCU068	3	287.7	6.7	15.3	15.9						66.0	18736000.CVA	CVA	122734
TCU103	3	290.7	4.2	9.2	8.5						48.0	T078001.360	A900	122709
TCU088	3	291.3	3.7	12.4	8.7						50.0	T318002.360	A900	122714
HWA047	2	292.4	2.0	5.1	4.1						45.0	14036000.CVA	CVA	122742
HWA056	2	292.8	3.1	4.7	5.1						41.0	T330001.360	A900	122717
TCU135	3	293.3	4.2	7.5	8.4						48.0	T569001.360	A900	122715
TCU064	3	294.5	4.2	7.4	9.6						60.0	B8836000.SMT	SMTA	122700
HWA057	2	294.6	2.7	5.0	4.2						36.0	T431002.360	A900	122659
TRB023	3	294.6	5.9	8.6	8.4						58.0	00809100.CVA	CVA	122660
TCU087	3	295.5	5.8	9.9	16.7						53.0	T447001.360	A900	122714
HWA025	2	296.1	2.7	4.5	3.3						36.0	T361001.360	A900	122723
TCU041	3	299.7	4.0	8.8	8.8						120.0	B9136000.SMT	SMTA	122700
TCU044	3	301.5	7.9	10.9	11.5						60.0	18536000.CVA	CVA	122737
NSY	3	302.9	3.2	9.9	6.4						16.0	E076008.360	A800	122746
TCU128	3	302.9	3.3	10.5	5.6						48.0	T444001.360	A900	122718
TRB006	3	303.6	5.0		12.5						56.0	03736000.CVA	CVA	122732
TCU040	3	306.1	5.0	7.4	9.8						120.0	B9036000.SMT	SMTA	122700
TCU036	3	306.1	5.4	6.2	9.3						120.0	C9236000.SMT	SMTA	122700
TCU046	2	309.4	2.6	5.5	5.0						120.0	B8936000.SMT	SMTA	122700
TCU037	2	311.0	3.4	6.2	6.2						55.0	T143001.360	A900	122719
TCU038	3	311.0	4.0	7.5	8.9						120.0	D6936000.SMT	SMTA	122700
HWA045	2	314.8		6.0	6.1						41.0	T491001.360	A900	122725
TCU032	2	315.1	3.3	7.3	6.2						120.0	B7036000.SMT	SMTA	122700
ILA067	3	316.1	3.7	8.8	8.6						50.0	T392001.360	A900	122716
ILA053	2	316.6	4.0	5.7	8.0	0.3	0.4	0.6	290	293	120.0	C8836000.SMT	SMTA	122700
TCU154	2	317.4			5.9						54.0	T522008.360	A900	122700
TCU045	2	318.2	2.0	5.4	4.6						41.0	T358001.360	A900	122722
TCU029	2	318.6	2.8	7.1	6.7						120.0	B8336000.SMT	SMTA	122700
TCU031	2	318.6	3.3	5.6	5.7						61.0	T034001.360	A900	122715
TCU042	3	318.6	5.5		8.6						120.0	B9836000.SMT	SMTA	122700
TCU131	2	319.9	2.6	5.2	5.3						46.0	T380001.360	A900	122720
TCU132	2	321.0	3.4	6.6	5.9						45.0	T523002.360	A900	122736
ILA063	2	322.7	1.5	4.2	2.9	0.2	0.3	0.2	312	314	120.0	D0836000.SMT	SMTA	122700
TCU030	2	322.9	2.7	5.5	6.0						42.0	T216001.360	A900	122723
ILA050	2	326.9	2.1	4.0	4.1						36.0	T327001.360	A900	122729
ENA	2	326.9	2.3	3.3	4.4						38.0	T578001.360	A900	122721

Table 2. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
TCU047	3	327.0	7.4	9.8	6.6						120.0	C3736000.SMT	SMTA	122800
TCU034	3	328.4	3.9	9.4	10.6						120.0	C4336000.SMT	SMTA	122700
ILA066	2	330.0	2.6	5.3	7.5	0.2	0.4	0.5	304	307	120.0	D4036000.SMT	SMTA	122700
ILA065	2	332.6	3.0	4.9	5.8	0.2	0.3	0.4	306	309	120.0	D6136000.SMT	SMTA	122700
ILA062	2	333.0	2.8	4.7	4.7						39.0	T563001.360	A900	122730
ILA064	2	333.4	2.0	4.3	3.5						120.0	D5736000.SMT	SMTA	122700
TCU033	3	333.5	2.7	9.4	7.3						120.0	C3536000.SMT	SMTA	122700
TCU043	2	334.9	3.1	6.8	7.6						51.0	T081001.360	A900	122722
TCU028	3	337.6	4.6	9.0	6.7						55.0	T231001.360	A900	122724
TCU098	2	340.3	3.4	7.6	7.2						55.0	T087001.360	A900	112721
TCU015	2	342.3	4.1	7.6	5.9						53.0	T088001.360	A900	122727
ILA025	2	342.6	1.8	5.2	3.4						40.0	T568001.360	A900	122730
TCU097	2	345.7	2.4		5.5						42.0	T163001.360	A900	122709
TCU026	2	346.1	2.5	3.9	4.8						36.0	T101001.360	A900	122738
TCU152	2	348.4		4.6	3.1						45.0	04936000.CVA	CVA	122617
TCU016	2	348.9	1.9	5.6	6.5						44.0	14436000.CVA	CVA	122752
TCU021	2	349.7	1.7	3.5	4.2						36.0	T195001.360	A900	122730
ILA047	2	351.0	1.8	4.8	5.1						55.0	10536000.CVA	CVA	122756
ILA044	2	351.0	3.0	6.4	7.6						64.0	09236000.CVA	CVA	122723
ILA006	2	352.0	2.5	5.0	6.7						52.0	06236000.CVA	CVA	122757
TCU093	2	352.8	2.4	7.2	5.8						48.0	T100001.360	A900	122720
ILA058	2	352.9	2.7	5.7	5.7						56.0	10936000.CVA	CVA	122754
ILA026	2	353.2	2.9	5.4	5.2						57.0	10636000.CVA	CVA	122759
ILA027	2	354.7	1.9	5.2	4.9						36.0	T540001.360	A900	112219
ILA042	2	355.7	1.5	4.3	5.4						44.0	08836000.CVA	CVA	122717
ILA038	2	357.0	2.2	5.6	4.8						42.0	T532002.360	A900	122652
ILA005	2	357.1	1.7	4.2	5.3						60.0	06136000.CVA	CVA	122730
ILA016	2	358.2	2.4	5.4	5.8						38.0	T476001.360	A900	122736
ILA013	2	358.3	2.2	6.0	8.0						55.0	08736000.CVA	CVA	122754
ILA037	2	358.8	2.4	4.7	5.2						49.0	09036000.CVA	CVA	122800
ILA028	2	361.0	2.6	6.1	5.7						49.0	08936000.CVA	CVA	122757
ILA055	2	361.3	1.7	3.6	4.0	0.5	1.0	0.9	335	338	120.0	D0436000.SMT	SMTA	122700
ILA056	2	363.7	1.7	4.2	4.1	0.5	1.1	1.1	337	340	120.0	D1336000.SMT	SMTA	122700
ILA040	2	364.4	2.0	7.2	6.1	0.6	1.2	1.2	338	341	120.0	D8736000.SMT	SMTA	122700
MTN109	2	366.8	2.0	4.2	4.3						60.0	T079001.360	A900	122737
TAP035	2	372.3	1.3	3.7	2.6						36.0	T041001.360	A900	122740
TAP053	2	375.5	1.4	5.0	3.9						61.0	A0136000.EVT	ETNA	122738

Table 2. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
TAP115	2	377.4	2.4	7.0	6.0						51.0	T153001.360	A900	122738
TAP038	2	379.7	2.0	5.0	6.3						39.0	T263001.360	A900	122742
MND021	2	381.3	2.7	4.3	4.6						46.0	07836000.CVA	CVA	122805
TAP117	2	381.9	1.3	5.1	5.2						56.0	E091010.360	A800	122726
TAP117	2	381.9	1.4	4.6	4.7						91.0	98136000.EVT	ETNA	122740
TAP117	2	381.9	1.4	4.6	5.1						91.0	63236000.EVT	K2	122740
TAP117	2	381.9	1.5	4.5	4.4	0.2	0.6	0.4	355	357	120.0	D3336000.SMT	SMTA	122700
TAP097	2	382.2	1.5	3.6	4.3	0.2	0.6	0.6	355	358	120.0	D5636000.SMT	SMTA	122700
TAP019	2	383.1	1.6	4.1	4.2						61.0	F7836000.EVT	ETNA	122747
TAP116	2	383.4	1.9	4.9	3.8						38.0	98736000.EVT	ETNA	122748
TAP017	2	383.8	1.7	5.1	4.4						61.0	A0836000.EVT	ETNA	122748
TAP020	2	384.2	1.9	4.0	4.6						36.0	A0236000.EVT	ETNA	122750
TAP022	3	384.3	4.4	7.7	9.7	0.3	0.8	0.9	358	360	104.0	99736000.EVT	ETNA	122710
TAP021	2	384.5	2.3	5.3	4.1						61.0	F8036000.EVT	ETNA	122207
TAP088	2	385.6	2.0	7.2	3.4						61.0	F7436000.EVT	ETNA	122743
TAP003	2	387.5	2.5	4.1	3.9						61.0	A0336000.EVT	ETNA	122748
TRB012	2	389.1	3.3	6.9	6.6						49.0	03536000.CVA	CVA	122806
TAP009	2	390.0	2.1	4.0	4.6						61.0	A0636000.EVT	ETNA	122747
TAP093	2	390.1	2.0	4.2	4.7						61.0	F8236000.EVT	ETNA	122746
MTN118	2	391.4	1.4	3.4	2.7						45.0	T258001.360	A900	122725
TAP057	2	393.3	1.4	4.2	4.1						38.0	T479001.360	A900	122746
TAP095	2	393.7	1.6	3.5	4.4						61.0	F7536000.EVT	ETNA	122751

**Note:*

(1)Source parameter is taken from CWB's Seismological Bulletin, Vol. 53, No. 4, P. 77, 2007: (i) Origin Time: 2006/12/26 12:26:21.00, and (ii) Hypocenter: 21.69°N, 120.56°E, 44.1 km; M_L = 6.96.

(2) STname = Station Name (up to 6 characters).

(3) I = Intensity (CWB scale).

1: 0.8 – 2.5 gal
2: 2.5 – 8 gal
3: 8 – 25 gal
4: 25 – 80 gal
5: 80 – 250 gal
6: 250 – 400 gal
7: > 400 gal

(4) Delta = Epicentral distance in km.

(5) PGA = Peak ground acceleration in cm s^{-1} s^{-1} (V = vertical; N = north-south; E = east-west). If the recorded acceleration is defective, then PGA is not computed and is displayed as "blank" in the Table.

(6) PGV = Peak ground velocity in cm s^{-1} (V = vertical; N = north-south; E = east-west). If the quality of the recorded acceleration is poor, then PGV is not computed and is displayed as "blank" in the Table.

(7) DJB = Distance to fault according to Joyner and Boore in km.

(8) D2F = Closest distance to the fault in km.

(9) REC = Record length in seconds.

(10) Filename is up to 12 characters (abbreviated info about model, serial number, Julian date, and earthquake number on that date).

(11) Model = Model of accelerograph. Model CVA can be either CV-574 or CV-575, but it can be distinguished by its serial number. Model SMTA is an abbreviation for SMART-24A.

(12)Time = Initial time of the file (hour, minute, second).

Table 3. Summary information about the strong-motion records from the second Pingtung earthquake*.

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
KAU080	6	30.9	79.3	340.0	192.7	4.9	18.0	33.5	22	38	86.0	T388003.360	A900	123401
MND012	6	31.6	64.7	166.2	259.5	6.7	17.5	39.7	22	38	108.0	05536001.CVA	CVA	123426
KAU082	5	31.6	82.1	176.1	182.5	8.3	26.8	47.6	17	36	90.0	T014004.360	A900	123404
KAU081	6	33.1	59.6	250.9	195.6	5.3	33.3	29.0	22	39	90.0	T342004.360	A900	123357
HEN	5	33.1	66.2	242.1	165.1						60.0	E008007.360	A800	123435
KAU046	6	33.1	69.0	254.1	172.4	6.0	35.2	32.5	22	38	90.0	T328004.360	A900	123404
KAU039	5	35.9	93.1	161.1	156.2	5.1	8.8	13.3	27	42	73.0	T059002.360	A900	123404
KAU038	6	36.8	85.3	253.4	203.1	5.5	12.8	12.8	27	42	79.0	T116002.360	A900	123404
KAU037	5	39.8	36.3	98.5	82.0	3.3	10.2	10.9	27	42	83.0	T194002.360	A900	123406
KAU042	5	42.7	92.2	226.3	165.6	5.0	15.3	13.5	31	44	88.0	T053002.360	A900	123405
KAU043	5	43.9	55.4	155.3	175.4	5.3	20.3	19.1	27	41	90.0	T145002.360	A900	123406
KAU091	5	44.7	44.0	166.5	103.1	7.8	24.5	19.1	27	42	90.0	T453002.360	A900	123408
TRB008	5	47.6	51.6	94.5	95.6	4.1	21.1	12.8	30	44	113.0	02936001.CVA	CVA	123129
KAU041	5	48.7	109.2	127.2	135.7	4.2	13.6	11.7	40	50	73.0	T127001.360	A900	123405
KAU051	4	49.0	25.8	56.6	58.2	2.2	5.5	6.5	33	45	67.0	T335002.360	A900	123408
SCZ	4	49.0	26.5	56.6	62.9						37.0	E072006.360	A800	203253
MND022	4	51.6	50.8	66.2	65.8	2.9	7.3	10.4	43	54	81.0	14136001.CVA	CVA	123427
KAU040	4	52.5	51.8	54.1	79.4	3.1	5.7	9.8	44	54	76.0	T249002.360	A900	123238
KAU044	5	52.6	68.7	71.2	98.4	2.9	11.9	10.5	33	46	90.0	T082002.360	A900	123409
KAU076	5	52.7	69.0	97.2	78.9	2.6	17.0	13.4	34	46	90.0	T413002.360	A900	123357
KAU033	5	54.9	61.2	127.2	97.6	3.2	17.4	14.2	35	47	90.0	T080002.360	A900	123408
KAU089	4	56.6	62.6	78.6	67.4	3.2	10.0	7.1	36	48	120.0	D3136002.SMT	SMTA	123400
KAU017	5	59.8	57.0	104.9	114.6	4.0	13.5	8.2	39	50	90.0	T166002.360	A900	123356
TRB037	4	62.5	41.2	66.7	79.7	2.2	5.9	5.4	52	61	85.0	03036001.CVA	CVA	123419
KAU032	4	63.8	34.8	58.1	70.8	2.4	6.9	4.6	44	54	90.0	T095002.360	A900	123410
TAW	4	65.2	21.5	42.1	43.3						47.0	E005016.360	A800	123411
KAU035	4	65.2	37.3	68.0	61.8	2.0	9.3	6.2	46	55	90.0	T191002.360	A900	123410
KAU034	4	65.4	18.2	39.8	37.8	2.2	4.0	2.8	47	57	66.0	T098002.360	A900	123411
KAU056	5	65.4	87.9	140.2	105.3	3.0	11.0	12.0	45	55	90.0	T385002.360	A900	123431
KAU083	4	65.6	20.8	34.4	47.8	3.0	5.2	3.8	46	55	90.0	T377002.360	A900	123406
KAU	5	67.2	50.3	128.8	122.9						90.0	E018002.360	A800	123350
KAU045	5	67.2	51.5	124.7	120.5	2.9	10.8	14.6	47	57	90.0	T322002.360	A900	123410
KAU055	5	67.8	64.4	127.6	153.5	1.9	6.8	13.9	48	57	90.0	T315002.360	A900	123405
KAU074	5	68.6	85.6	122.4	122.8	42	16.2	13.7	50	59	90.0	T332002.360	A900	123409
KAU090	4	69.0	25.7	74.7	66.9	2.9	9.8	8.1	49	58	90.0	T503002.360	A900	123411
KAU006	5	69.6	96.9	108.9	81.1	2.1	7.7	10.6	49	59	90.0	T426002.360	A900	123355
KAU087	5	72.0	78.5	83.5	76.0	2.8	7.4	6.7	52	61	120.0	D4436002.SMT	SMTA	123400

Table 3. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
KAU079	4	72.2	34.8	62.4	64.2	1.9	4.9	3.3	53	62	74.0	T343002.360	A900	123400
KAU005	5	72.3	104.5	119.6	112.8	2.8	5.4	6.7	52	61	90.0	T056002.360	A900	123404
KAU030	5	72.5	88.7	137.3	88.7	4.1	16.9	17.5	53	62	90.0	T214002.360	A900	123409
KAU008	5	73.3	78.0	72.3	106.6	2.4	5.7	9.9	53	62	90.0	T405002.360	A900	123351
KAU062	5	73.7	73.0	97.0	124.8	2.7	7.2	10.3	54	62	90.0	T554002.360	A900	123410
KAU004	5	73.8	78.0	95.6	89.4	2.3	6.6	6.1	54	62	90.0	T432002.360	A900	123343
MND019	4	74.4	31.9	48.8	75.0	1.9	5.4	8.5	55	63	116.0	05636001.CVA	CVA	123434
KAU092	5	74.4	156.4	108.6	119.8	3.2	10.3	15.0	46	55	90.0	T435002.360	A900	123408
KAU003	4	74.8	30.1	47.3	66.0	2.2	3.7	4.9	55	64	120.0	D6836001.SMT	SMTA	123400
KAU007	5	74.9	66.1	85.4	90.6	2.3	5.2	8.0	55	63	90.0	T138002.360	A900	123400
KAU061	5	75.4	82.8	97.1	103.4	2.3	7.1	8.7	55	64	90.0	T516002.360	A900	123411
KAU057	5	75.6	47.8	96.8	78.3	2.5	6.2	6.0	56	64	90.0	T425002.360	A900	123406
KAU088	5	75.7	55.7	72.1	85.2	2.2	4.4	5.7	55	64	120.0	D5836002.SMT	SMTA	123400
TRB032	4	75.7	69.5	61.7	57.8	2.4	6.1	7.4	55	64	109.0	04236001.CVA	CVA	123432
KAU071	5	75.8	40.2	85.8	81.0	2.5	12.6	9.6	56	64	90.0	T406002.360	A900	123408
TTN038	4	76.1	33.9	46.5	43.1						74.0	T323002.360	A900	123206
KAU067	4	76.1	47.2	60.3	45.1	2.2	5.0	6.6	56	64	83.0	T446002.360	A900	123405
TRB007	5	77.9	53.9	73.1	102.0	2.1	10.8	8.9	58	66	106.0	02836001.CVA	CVA	123233
KAU060	5	78.5	77.0	111.0	89.3	1.9	6.1	5.1	58	66	120.0	D4736001.SMT	SMTA	123400
KAU023	5	78.8	41.3	91.1	87.8	1.9	11.3	7.4	59	67	90.0	T350002.360	A900	123410
KAU025	5	79.2	61.3	102.2	83.7	2.6	11.8	8.4	59	67	90.0	T151002.360	A900	123410
MND004	4	79.8	38.5	65.9	75.7	2.0	5.1	3.8	60	67	90.0	T486002.360	A900	123409
KAU026	4	81.2	32.9	63.8	53.6	2.5	10.5	6.3	61	69	90.0	T428002.360	A900	123411
TTN037	4	83.7	21.2	42.2	42.3						76.0	T341002.360	A900	123351
KAU048	5	84.0	18.9	82.1	71.4	3.0	8.4	10.9	64	71	90.0	T440002.360	A900	123413
SGL	5	84.0	19.7	83.3	73.2						60.0	E084003.360	A800	123511
KAU059	5	84.7	74.6	99.7	97.6	2.2	8.5	10.2	65	72	90.0	T309002.360	A900	123408
KAU078	5	84.8	71.8	89.0	185.6	3.0	4.0	9.2	66	73	86.0	T302002.359	A900	122034
KAU021	4	86.5	39.9	77.5	75.7	2.9	5.6	5.5	66	73	120.0	C8936001.SMT	SMTA	123400
KAU029	4	88.4	33.0	54.8	49.0	2.3	7.4	6.0	69	76	87.0	T176002.360	A900	123413
TTN052	4	88.7	27.0	34.5	42.4						76.0	T353002.360	A900	123508
KAU049	4	88.7	36.1	75.5	69.2	2.4	3.6	2.8	70	76	82.0	T449002.360	A900	123414
SSD	5	88.7	37.8	80.4	70.3						60.0	E095008.360	A800	123320
KAU011	5	89.3	53.0	101.9	117.8						90.0	T250002.360	A900	123413
KAU070	4	90.3	25.4	54.7	45.1	1.9	6.6	6.7	70	77	87.0	T372002.360	A900	123106
KAU077	5	90.7	63.0	78.7	93.2	3.6	6.0	7.0	74	80	81.0	T303002.360	A900	123440
TRB031	5	91.2	58.6	73.3	93.9	3.2	7.4	8.4	71	77	127.0	04536001.CVA	CVA	123435

Table 3. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
KAU013	4	91.7	41.5	77.3	58.3	2.6	4.7	5.1	71	78	120.0	D2936002.SMT	SMTA	123400
KAU010	5	91.7	45.4	73.1	99.4	2.0	6.3	7.1	71	78	90.0	T219002.360	A900	123413
MND002	5	91.9	57.4	92.6	79.4	3.2	4.9	6.5	72	78	90.0	T477002.360	A900	123420
KAU064	5	92.3	50.0	171.4	119.8	2.7	15.2	9.6	72	79	90.0	T338002.360	A900	122434
TTN003	4	93.2	27.0	42.6	38.1	2.0	3.1	3.6	80	86	87.0	11436001.CVA	CVA	123433
TRB033	4	93.4	22.6	31.2	31.8	2.0	3.3	3.4	78	84	82.0	02636001.CVA	CVA	123427
KAU053	4	94.5	18.5	56.9	41.3	2.0	7.2	4.0	74	81	90.0	T439002.360	A900	123417
KAU028	4	96.6	25.1	34.3	29.2	1.5	3.7	3.9	77	83	79.0	T122002.360	A900	123412
TTN050	4	100.1	25.1	42.0	46.7						74.0	T533002.360	A900	122619
KAU012	5	100.9	44.7	119.4	71.2	2.2	5.2	5.1	81	86	90.0	T169002.360	A900	123414
KAU009	4	101.0	31.1	60.2	62.5	1.9	4.5	4.6	81	87	90.0	T154002.360	A900	123415
KAU066	5	101.0	64.2	105.1	109.4	2.0	7.4	7.0	81	87	90.0	T434002.360	A900	123401
TTN030	4	101.6	24.7	19.9	31.2						73.0	T407002.360	A900	123406
KAU085	5	101.9	35.6	83.0	67.8	2.2	5.1	4.2	82	87	120.0	D3636002.SMT	SMTA	123400
KAU020	4	103.8	28.9	53.1	52.7	1.8	4.9	5.5	84	90	90.0	T070002.360	A900	123416
CHY065	5	104.0	51.5	83.5	79.9	2.8	5.2	4.8	84	89	127.0	15836001.CVA	CVA	123437
TTN029	4	104.7	25.8	37.3	28.3	2.7	3.2	3.6	91	96	72.0	T356002.360	A900	123451
KAU063	4	106.6	48.0	65.4	54.8	1.6	4.8	4.4	87	92	90.0	T329002.360	A900	123409
CHY066	4	107.5	32.1	49.2	50.7	1.7	4.9	5.2	87	93	120.0	D7436002.SMT	SMTA	123400
TTN049	4	109.7	19.3	38.7	36.9						96.0	09836001.CVA	CVA	123437
TTN028	4	110.9	20.2	26.6	19.0	2.2	2.6	3.2	96	101	70.0	T334002.360	A900	123408
TTN010	4	111.2	16.9	38.3	32.9	2.9	5.7	3.7	98	103	82.0	T168002.360	A900	123415
CHY023	4	111.2	26.5	59.3	45.8	1.5	3.9	4.6	91	96	120.0	E0136002.SMT	SMTA	123400
CHY070	4	111.9	67.7	53.9	48.2	2.4	3.3	3.7	92	97	121.0	15436001.CVA	CVA	123437
KAU068	4	112.2	20.0	34.9	28.1	1.2	2.0	1.5	92	98	77.0	T340002.360	A900	123415
TTN048	4	112.3	22.0	32.7	27.2						74.0	T534002.360	A900	123416
CHY096	4	113.8	69.4	76.9	72.9	1.8	3.0	3.6	94	99	120.0	D3036001.SMT	SMTA	123400
CHY069	5	113.9	61.3	90.2	115.4	1.8	4.8	4.9	94	99	119.0	15936001.CVA	CVA	123440
TTN009	4	114.1	11.1	30.9	26.7	1.9	8.1	5.7	101	106	74.0	T037002.360	A900	123424
CHY125	4	114.3	22.8	35.2	38.4	1.5	5.5	4.7	97	102	134.0	05036001.CVA	CVA	122843
TTN013	3	114.4	7.6	15.4	12.8	2.1	2.6	3.1	101	106	63.0	T245002.360	A900	123421
TTN005	4	114.4	11.3	29.8	24.6	2.1	5.4	3.6	101	106	72.0	T131002.360	A900	123422
TTN015	4	114.7	12.8	17.0	25.7	2.1	5.5	3.7	101	106	74.0	T344002.360	A900	123423
TTN012	4	114.8	7.7	14.1	25.9	1.9	3.0	3.0	101	106	70.0	T251002.360	A900	123417
TTN011	4	114.8	16.4	42.0	29.4	2.5	3.6	3.4	101	106	79.0	T228002.360	A900	123409
CHY068	4	114.8	24.9	66.0	59.6	1.1	3.5	3.2	95	100	90.0	T326002.360	A900	123417
TTN007	3	115.2	9.3	19.2	17.9	2.0	5.3	3.2	102	107	65.0	T055002.360	A900	123413

Table 3. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
TTN008	3	115.3	7.6	20.0	23.9	1.4	5.8	4.1	102	107	64.0	T197002.360	A900	123414
TTN006	4	115.5	13.0	26.4	29.0	1.9	4.2	3.7	102	107	73.0	T243002.360	A900	123409
TTN027	4	115.5	22.3	35.5	27.2	2.6	3.9	3.4	101	106	82.0	T324002.360	A900	123413
CHY085	5	115.8	45.8	92.9	66.7	1.9	3.9	4.3	96	101	90.0	T570002.360	A900	123416
TTN018	3	115.9	16.5	24.7	18.9	1.6	2.8	3.0	101	106	71.0	T320002.360	A900	123415
CHY064	4	116.1	35.0	69.2	71.7	1.4	4.1	5.4	96	101	90.0	T562002.360	A900	123417
TRB036	4	116.2	17.3	35.5	32.0	2.5	4.9	3.4	102	107	80.0	03136000.CVA	CVA	123428
CHY067	5	116.5	79.5	89.6	97.3	1.8	5.8	3.4	96	101	120.0	C8236002.SMT	SMTA	123400
TTN017	5	117.0	18.5	93.9	68.5	0.8	3.5	2.8	101	106	90.0	T317002.360	A900	123414
MND024	5	117.2	39.8	86.8	60.6	2.3	8.4	4.7	96	101	129.0	14236001.CVA	CVA	123441
CHY063	4	117.3	34.2	66.8	69.0	2.2	4.5	4.2	97	102	118.0	16236001.CVA	CVA	123441
MND018	5	117.3	55.9	58.5	99.1	3.0	3.8	6.6	98	102	115.0	05436001.CVA	CVA	123431
CHY098	4	117.4	47.1	68.8	69.7	1.6	7.4	5.1	97	102	120.0	D2036002.SMT	SMTA	123400
CHY097	5	117.4	64.6	100.1	121.6	2.2	6.7	6.3	97	102	120.0	C9536001.SMT	SMTA	123400
CHY022	4	119.2	27.6	46.7	62.8	1.1	2.2	2.2	99	104	120.0	D3436001.SMT	SMTA	123400
TTN026	4	120.1	19.9	25.7	22.4	1.1	2.5	4.0	105	110	76.0	T421002.360	A900	123413
CHY078	4	120.1	29.1	45.0	46.1	1.7	4.4	3.7	100	105	90.0	T375002.360	A900	123421
TAI1	4	120.1	30.6	45.4	45.5						90.0	E013003.360	A800	123330
TTN047	3	121.0	8.1	19.8	20.2						73.0	T541002.360	A900	122013
TTN036	3	121.0	9.4	12.8	11.7						50.0	T365002.360	A900	123430
CHY114	4	122.3	35.2	61.1	63.8	1.5	4.9	6.0	102	107	120.0	D9336002.SMT	SMTA	123400
CHY061	4	122.9	21.9	44.1	39.8	1.2	2.3	1.9	103	108	84.0	16136001.CVA	CVA	123442
TTN025	4	123.4	27.7	29.4	34.7	1.5	2.7	2.3	108	112	79.0	T396002.360	A900	123414
CHY021	4	123.7	34.9	48.3	54.5	1.4	3.7	3.4	103	108	120.0	D1036002.SMT	SMTA	123400
CHY071	5	124.1	64.1	57.8	81.6	1.4	4.3	5.6	104	109	142.0	14936001.CVA	CVA	123436
SGS	4	124.5	10.0	28.2	25.8						64.0	E029003.360	A800	123333
KAU047	4	124.5	10.9	29.1	24.3	1.0	2.7	1.7	105	109	70.0	T354002.360	A900	123421
CHY116	5	126.9	47.8	95.8	116.5	1.3	7.2	6.8	107	111	120.0	D3736002.SMT	SMTA	123400
TTN004	4	127.3	33.9	39.4	42.9	2.4	3.7	5.1	112	117	91.0	11236001.CVA	CVA	123417
CHY062	4	127.8	13.0	37.4	39.0	1.1	1.8	2.3	108	112	89.0	16036000.CVA	CVA	123441
CHY060	5	129.4	49.3	90.3	98.9	1.7	5.6	5.3	109	113	90.0	T509002.360	A900	123416
TRB029	4	130.0	21.8	76.6	55.1	1.8	4.0	3.7	110	114	127.0	04436001.CVA	CVA	123442
TTN035	3	130.1	9.4	20.9	24.8						75.0	T310002.360	A900	123515
CHY099	4	130.1	35.1	52.0	62.4	1.5	3.5	4.4	110	114	90.0	T571002.360	A900	123418
MND011	4	130.6	31.5	62.7	64.9	1.9	3.3	3.3	110	115	121.0	05336001.CVA	CVA	123706
TTN024	4	131.7	16.2	30.1	21.9	1.2	2.3	1.5	116	120	75.0	T316002.360	A900	123419
TTN034	4	133.0	11.4	39.9	28.7						80.0	T363002.360	A900	123359

Table 3. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
TTN055	4	133.2	12.5		50.6						72.0	T441002.360	A900	122431
KAU001	3	133.9	9.4	17.7	15.3	0.6	1.3	1.2	114	119	120.0	D5136001.SMT	SMTA	123400
TTN045	3	134.2	11.6	15.2	14.8						79.0	T542002.360	A900	123426
CHY115	5	135.3	59.4	105.3	122.6	1.4	7.2	6.2	115	119	90.0	T417002.360	A900	123417
CHY077	4	135.5	24.7	68.6	75.0	1.1	5.3	4.2	115	119	90.0	T333002.360	A900	123419
SCL	4	135.5	25.3	67.1	72.8						90.0	E003002.360	A800	123345
CHY108	4	136.1	22.4	45.9	62.7	1.5	3.4	2.9	116	120	120.0	C8636002.SMT	SMTA	123400
STY	4	136.5	10.5	20.6	26.8						52.0	E089004.360	A800	123306
KAU050	4	136.5	11.0	21.0	28.8	0.9	1.1	1.4	118	122	72.0	T422002.360	A900	123422
TTN044	4	138.2	17.3	37.0	23.2						103.0	09936001.CVA	CVA	123445
TTN046	4	138.3	9.3	24.4	27.4						84.0	11636001.CVA	CVA	123448
CHY059	5	138.4	40.1	122.6	82.1	1.5	7.4	4.8	118	123	120.0	D3936002.SMT	SMTA	123400
CHY017	4	138.7	25.2	43.0	46.7	1.5	2.5	2.9	118	123	120.0	D0736002.SMT	SMTA	123400
CHY018	4	138.9	17.8	29.8	22.9	1.1	1.8	1.9	119	123	120.0	D7836001.SMT	SMTA	123400
CHY100	5	139.5	26.5	64.2	95.9	1.4	3.6	6.1	119	123	120.0	D1936002.SMT	SMTA	123400
CHY016	5	141.2	29.5	105.1	100.9	1.2	7.1	5.4	121	125	120.0	E0236002.SMT	SMTA	123400
TRB035	3	141.4	10.0	20.1	18.9	1.5	3.3	2.6	126	130	88.0	02336001.CVA	CVA	123447
CHY109	3	142.0	6.2	15.4	13.5	0.8	1.2	1.2	122	126	120.0	B9236001.SMT	SMTA	123400
CHY110	3	142.1	8.9	12.2	11.4	0.7	1.0	1.0	122	126	67.0	T514002.360	A900	123420
WTP	4	142.7	9.8	41.9	53.9						52.0	E031006.360	A800	123501
CHY102	4	142.7	10.4	44.1	52.2	0.8	1.7	1.4	123	127	79.0	T347002.360	A900	123420
TTN002	3	143.1	10.5	13.4	12.7	1.1	1.6	1.7	129	133	77.0	12836001.CVA	CVA	123448
CHY081	4	144.0	11.2	18.0	26.0	1.0	1.4	2.1	124	127	74.0	T398002.360	A900	123422
TTN042	4	144.3	9.3	47.3	20.7						92.0	09436001.CVA	CVA	123441
CHY055	5	144.8	22.7	82.7	65.6	1.5	4.7	3.7	125	128	120.0	D7536002.SMT	SMTA	123400
CHY051	4	145.4	28.6	43.9	45.8	1.2	2.1	2.4	125	129	89.0	T346002.360	A900	123421
CHY053	4	146.1	11.9	52.4	45.7	1.4	3.8	3.0	126	130	120.0	D3836002.SMT	SMTA	123400
CHY052	3	146.2	11.9	23.3	21.6	0.8	1.4	1.4	126	130	120.0	D9036001.SMT	SMTA	123400
CHY056	5	146.3	20.0	90.3	88.3	1.0	6.1	4.7	126	130	132.0	15736001.CVA	CVA	123444
TTN021	3	147.2	15.4	21.6	16.8	0.6	1.2	1.4	132	135	65.0	T206002.360	A900	123422
TTN041	4	147.5	20.6	40.5	41.8						91.0	10036002.CVA	CVA	123440
CHY107	4	147.8	21.2	42.5	50.9	1.4	2.7	3.0	128	131	120.0	D6436002.SMT	SMTA	123400
KAU054	4	147.9	30.0	45.9	35.5	0.9	1.9	1.7	129	132	73.0	T224002.360	A900	123413
TTN051	3	148.2	13.5	17.0	16.6						67.0	T301003.360	A900	123424
CHY054	4	148.6	38.4	60.4	44.1	1.4	3.1	3.0	128	132	129.0	15536000.CVA	CVA	123444
TTN022	4	149.0	19.5	48.2	31.4	2.2	3.4	3.3	134	137	83.0	T376002.360	A900	123428
CHY045	4	149.5	13.7	26.1	36.6	0.8	1.1	1.8	130	134	87.0	17636000.CVA	CVA	123444

Table 3. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
TTN043	4	149.6	12.4	23.6	43.6						86.0	09336001.CVA	CVA	123444
CHY122	4	150.7	27.7	37.2	56.2	1.5	2.9	3.7	130	134	90.0	T527002.360	A900	123430
TTN020	3	151.6	7.2	12.5	13.5	0.9	1.7	1.6	136	140	74.0	T393002.360	A900	123424
TTN040	3	153.4	7.3	8.6	10.3						73.0	09636001.CVA	CVA	123447
CHY015	5	153.4	26.4	101.1	72.1	1.2	4.8	3.8	133	137	120.0	C8536002.SMT	SMTA	123400
CHY012	5	153.4	32.1	74.9	98.2	1.1	4.1	4.1	133	137	120.0	C8036001.SMT	SMTA	123400
CHY086	4	154.0	14.1	35.0	28.6	1.1	2.4	2.5	134	138	85.0	T418002.360	A900	123423
CHY013	4	154.5	29.3	44.3	51.7	1.2	2.8	2.7	134	138	120.0	C8136002.SMT	SMTA	123400
CHY042	3	154.6	13.1	16.8	19.7						86.0	16936001.CVA	CVA	123444
CHY049	4	154.9	29.3	78.7	65.9	1.5	3.5	3.1	135	138	132.0	15036001.CVA	CVA	123444
CHY087	4	156.9	25.4	44.6	46.7	0.9	2.4	2.0	137	140	120.0	C2136001.SMT	SMTA	123400
HWA004	4	157.8	12.3	23.5	28.1	2.2	2.2	1.9	142	146	81.0	11536001.CVA	CVA	123456
TTN014	4	158.4	8.8	27.5	28.7	1.2	1.7	1.8	144	148	79.0	T411003.360	A900	123427
CHK	4	158.4	8.9	29.1	26.6						58.0	E014003.360	A800	123604
CHY043	4	159.3	21.5	41.8	37.2	1.0	3.5	3.2	139	143	139.0	17412200.CVA	CVA	123460
CHY106	4	162.6	31.2	41.5	54.6	1.1	2.9	3.2	142	146	120.0	D3536002.SMT	SMTA	123400
CHY040	4	162.8	13.4	23.6	29.3	0.8	1.4	1.5	143	146	83.0	17036000.CVA	CVA	123438
HWA042	3	163.1	6.5	11.3	13.2	1.0	1.3	1.8	147	151	73.0	T369002.360	A900	123119
TRB025	4	164.9	26.2	74.9	68.0	1.3	4.3	3.8	145	148	118.0	03836001.CVA	CVA	123438
CHY095	4	165.1	26.4	43.7	63.5	0.8	3.9	2.9	145	148	120.0	D1836002.SMT	SMTA	123400
CHY010	4	166.1	18.9	26.6	34.1	0.8	1.8	1.2	146	149	120.0	D0036001.SMT	SMTA	123400
CHY048	4	166.5	18.6	30.0	37.9	1.0	2.6	1.9	146	149	120.0	D0336002.SMT	SMTA	123400
CHY009	4	166.6	24.0	38.3	41.7	1.2	2.2	2.2	146	150	120.0	D2336002.SMT	SMTA	123400
CHY046	4	167.0	36.6	58.1	63.7	1.3	2.6	2.3	147	150	115.0	18236001.CVA	CVA	123444
TTN033	4	168.1	11.1	21.8	27.2						72.0	T307002.360	A900	123430
CHY008	4	168.6	30.7	29.8	29.8	1.2	2.6	2.2	148	152	120.0	C9736002.SMT	SMTA	123400
CHY047	4	168.9	29.1	64.1	76.4	1.2	2.7	2.7	149	152	120.0	D7236002.SMT	SMTA	123400
CHY073	4	169.2	19.9	34.0	43.6	1.2	2.5	2.6	149	152	90.0	T359002.360	A900	123425
CHY	4	169.2	21.5	33.2	43.1						90.0	E009003.360	A800	123338
CHY011	4	169.3	17.0	28.0	27.8	0.6	1.4	1.6	150	153	120.0	D5536001.SMT	SMTA	123400
HWA041	4	169.5	9.5	25.8	22.3	1.7	2.5	2.2	154	157	72.0	T445003.360	A900	123422
CHY039	4	171.9	23.1	36.3	50.0	0.9	2.1	2.4	152	155	109.0	17736001.CVA	CVA	123446
CHY034	4	172.3	27.3	38.0	36.2	1.4	2.4	1.8	152	156	120.0	D8836001.SMT	SMTA	123400
CHY035	4	172.5	15.8	55.0	44.4	1.2	2.7	2.0	153	156	89.0	T438002.360	A900	123425
CHY038	4	173.4	30.0	50.4	51.8	1.0	2.6	2.2	153	156	90.0	T511002.360	A900	123423
TTN032	3	174.0	8.0	16.0	19.1						66.0	T386003.360	A900	123430
ALS	4	175.1	9.3	24.6	25.1						37.0	E026018.360	A800	123512

Table 3. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
CHY074	4	175.1	11.2	24.6	25.7	0.6	1.9	2.6	156	159	81.0	T401002.360	A900	123426
CHY033	4	175.2	29.1	45.4	41.4	1.0	2.4	4.1	155	158	127.0	17136001.CVA	CVA	123444
CHY105	4	175.9	34.1	55.4	73.1	1.0	2.9	3.2	156	159	120.0	D5936002.SMT	SMTA	123400
TRB034	3	176.1	9.6	16.8	17.7						73.0	02436002.CVA	CVA	123506
HWA055	3	176.7	10.8	19.7	21.4						70.0	09536002.CVA	CVA	123506
HWA040	4	176.9	7.5	18.0	25.6						65.0	T416003.360	A900	123439
CHY121	3	176.9	12.1	18.4	19.4	0.7	1.9	2.3	158	161	86.0	T565002.360	A900	123418
HWA024	3	177.7	6.6	8.7	9.1						44.0	T391003.360	A900	123446
CHY032	5	178.7	52.2	97.5	73.2	1.0	3.1	4.1	158	161	130.0	18136001.CVA	CVA	123444
CHY032	4	178.7	55.6	75.4	77.1	1.0	4.6	3.4	159	162	90.0	T089002.360	A900	123400
CHY006	4	179.0	17.1	32.6	31.2	1.3	3.0	2.2	159	162	120.0	D9536001.SMT	SMTA	123400
CHY036	4	181.5	26.4	43.0	35.8	1.0	2.6	2.4	161	164	119.0	17336001.CVA	CVA	123448
CHY005	4	181.9	19.8	57.5	65.7	1.1	3.3	3.3	162	165	120.0	D6636002.SMT	SMTA	123400
CHY004	4	182.5	33.0	47.9	49.5	0.7	2.6	3.3	162	165	120.0	D7736001.SMT	SMTA	123400
TTN001	3	182.6	9.2	18.6	22.6						74.0	11936002.CVA	CVA	123506
HWA039	3	183.6	7.9	20.7	15.6	1.5	2.7	2.5	168	171	71.0	T312003.360	A900	123430
HWA053	3	183.7	5.4	8.2	7.6						51.0	11336001.CVA	CVA	123510
WSF	5	185.9	31.4	91.8	113.8						60.0	E034003.360	A800	123400
CHY076	5	185.9	31.4	94.7	114.3	1.1	4.2	6.3	166	168	90.0	T419002.360	A900	123424
TTN031	3	187.1	9.5	23.9	24.9						80.0	T304003.360	A900	123428
CHY031	4	187.2	49.3	58.6	62.9	0.9	3.1	4.3	167	170	118.0	16836001.CVA	CVA	123446
TCU090	3	187.3	9.9	21.2	16.7						120.0	B7936001.SMT	SMTA	123400
HWA054	3	187.5	7.3	12.1							66.0	T544003.360	A900	123441
CHY104	4	188.3	21.5	33.4	30.2	1.0	2.6	2.4	168	171	120.0	D5336002.SMT	SMTA	123400
CHY093	4	188.4	27.6	36.6	38.3	0.7	2.8	2.3	168	171	120.0	D2636001.SMT	SMTA	123400
HWA038	3	190.4	7.7	10.8	9.0	0.8	1.1	1.2	174	177	65.0	T429003.360	A900	123434
CHY101	4	190.7	29.1	38.8	34.0	1.0	2.1	2.0	171	173	90.0	T397002.360	A900	123424
WGK	4	190.7	29.6	41.2	35.0						60.0	E092003.360	A800	123403
CHY126	4	191.5	46.4	44.6	43.8	1.2	2.9	2.4	172	175	137.0	04736000.CVA	CVA	123446
HWA037	4	191.9	15.0	21.4	25.5	1.4	3.0	2.9	176	179	85.0	T430003.360	A900	123341
HY103	4	192.1	36.5	40.4	55.1	1.4	2.8	3.0	172	175	120.0	D6036002.SMT	SMTA	123400
CHY001	4	193.2	39.0	41.5	49.8	0.8	1.5	2.1	173	176	120.0	D7136001.SMT	SMTA	123400
CHY112	4	193.5	38.7	45.9	51.7	0.8	1.7	1.8	173	176	120.0	C9336001.SMT	SMTA	123400
CHY002	4	193.7	48.8	32.8	43.4	1.2	2.0	2.1	173	176	120.0	D1636002.SMT	SMTA	123400
CHY003	4	193.8	19.4	32.0	36.5	1.4	2.4	2.5	174	177	90.0	T381002.360	A900	123423
EHY	3	193.9	8.5	12.1	11.2						24.0	E025002.360	A800	123455
HWA021	3	193.9	9.8	11.3	12.2	0.7	0.7	0.7	177	180	69.0	T337003.360	A900	123433

Table 3. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
TRB027	4	194.0	36.0	37.6	32.6	1.0	2.1	1.7	175	178	108.0	03636001.CVA	CVA	123446
CHY084	4	194.8	58.3	28.2	34.6	1.4	1.7	2.2	175	177	120.0	C3836002.SMT	SMTA	123400
CHY083	4	194.9	37.5	37.2	34.5	0.9	2.3	1.9	175	178	120.0	C0036001.SMT	SMTA	123400
PNG	4	197.9	12.6	44.7	38.0						24.0	E015015.360	A800	123302
CHY075	4	197.9	21.7	43.0	40.1	0.7	1.6	2.0	179	182	82.0	T395002.360	A900	123429
CHY027	4	198.1	40.3	41.3	31.5	0.8	1.5	1.7	178	181	101.0	16336001.CVA	CVA	123447
CHY024	4	198.8	25.1	30.3	23.9	0.9	1.4	1.4	179	182	90.0	14836000.CVA	CVA	123449
CHY025	4	200.6	51.3	28.8	31.6	1.1	1.9	1.5	180	183	111.0	15636001.CVA	CVA	123447
CHY092	4	201.7	31.3	28.3	18.7	0.7	1.6	1.7	182	184	120.0	C3936002.SMT	SMTA	123400
CHY094	4	202.2	26.5	31.1	30.8	0.7	1.4	1.8	171	174	120.0	D1436002.SMT	SMTA	123400
CHY026	4	202.5	23.5	33.5	25.6	0.9	1.8	1.9	182	185	135.0	15236001.CVA	CVA	123447
CHY111	4	202.7	46.5	58.6	53.7	0.7	2.2	2.0	182	185	120.0	D3236002.SMT	SMTA	123400
CHY117	4	204.1	36.9	28.1	40.5	0.9	1.2	1.7	184	187	120.0	C3436001.SMT	SMTA	123400
HWA034	3	204.5	7.6	13.8	14.1	0.5	1.4	1.5	188	191	79.0	T379003.360	A900	123433
TCU122	3	205.0	14.6	20.9	21.0						84.0	T519002.360	A900	123427
TRB020	3	205.1	18.8	25.0	24.1	0.4	1.4	1.0	185	188	87.0	01136001.CVA	CVA	123451
TCU141	4	206.4	24.9	30.0	27.4						120.0	D6536002.SMT	SMTA	123400
TCU078	3	208.6	5.6	9.6	10.5						120.0	C1536001.SMT	SMTA	123400
TCU116	3	209.6	15.0	15.0	17.0						83.0	T196002.360	A900	123428
WTC	4	210.1	20.4	41.9	46.7						39.0	E022005.360	A800	123441
TCU086	4	210.1	22.6	42.1	45.0						90.0	T313003.360	A900	123429
TCU114	4	211.6	19.3	33.0	30.3						90.0	T036002.360	A900	123427
HWA002	3	212.5	6.4	15.8	15.0						59.0	12036001.CVA	CVA	123514
TCU079	3	212.6	8.6	13.9	15.0						120.0	B7136001.SMT	SMTA	123400
HWA003	2	212.9	4.1	7.9	6.8						58.0	12336002.CVA	CVA	123516
TCU113	4	213.0	25.8	32.0	38.6						90.0	T141002.360	A900	123430
HWA005	3	213.1	7.2	16.6	15.5	0.8	1.9	1.6	197	199	85.0	T531003.360	A900	123438
WNT	4	213.1	7.4	40.3	44.7						32.0	E030003.360	A800	123334
TCU129	4	213.1	8.4	40.7	45.0						80.0	T436002.360	A900	123429
TCU121	4	213.4	33.7	28.7	38.0						90.0	T152002.360	A900	123421
TRB038	3	213.9	7.6	13.8	14.9						66.0	03436001.CVA	CVA	123514
HWA006	3	214.6	5.3	9.6	10.4						59.0	13036001.CVA	CVA	123517
TCU150	4	215.0	17.6		36.3						90.0	T561002.360	A900	123430
TCU076	3	216.2	11.7	15.8	19.0						120.0	B9936001.SMT	SMTA	123400
TCU159	3	216.2	16.0	11.8	12.2						75.0	T524002.360	A900	123433
TCU139	4	216.6	14.5	33.7	23.1						120.0	C9836001.SMT	SMTA	123400
TCU138	4	216.9	14.8	29.3	23.3						120.0	D2536001.SMT	SMTA	123400

Table 3. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
TCU084	3	217.5	6.4	15.9	14.1						82.0	T448002.360	A900	123434
SML	3	217.5	8.5	21.5	19.5						43.0	E024004.360	A800	123439
HWA032	3	218.0	5.6	9.6	8.4	0.5	0.9	0.8	201	204	71.0	T414003.360	A900	123434
HWA044	3	218.4	5.0	10.6	9.1						51.0	T423002.360	A900	123459
HWA033	3	218.7	7.8	15.2	15.2	0.8	1.3	1.5	203	205	78.0	T387002.360	A900	123435
TCU089	2	219.8	3.4	6.0	6.0						47.0	T351002.360	A900	123455
TCU140	4	220.3	30.8	37.0	34.7						120.0	D2236002.SMT	SMTA	123400
TCU115	4	220.4	29.0	48.7	50.0						90.0	T222002.360	A900	123411
TCU110	3	221.2	18.6	19.2	22.6						90.0	T357002.360	A900	123427
HWA035	3	221.3	5.0	9.6	8.6	0.4	0.8	0.8	205	207	69.0	T390003.360	A900	123434
TCU125	4	221.4	11.9	28.4	29.6						120.0	B9536001.SMT	SMTA	123400
TCU145	4	222.8	16.9	35.0	40.0						120.0	D2836001.SMT	SMTA	123400
TCU120	3	223.4	11.2	20.2	21.4						120.0	C5036001.SMT	SMTA	123400
HWA043	3	224.3	6.1	9.3	17.1						53.0	T349002.360	A900	123456
TCU118	4	225.1	31.8	41.3	38.8						90.0	T084002.360	A900	123427
TCU148	3	225.7	8.0	18.5	20.5						120.0	B9636001.SMT	SMTA	123400
TCU071	3	226.5	5.6	15.3	14.1						120.0	B8636001.SMT	SMTA	123400
HWA030	2	227.1	3.8	6.8	6.4						46.0	T373002.360	A900	123456
TCU123	4	227.1	16.4	31.7	23.5						90.0	T198008.360	A900	123428
HWA031	3	227.3	6.1	10.0	10.2						50.0	T451004.360	A900	123450
TCU142	3	227.6	5.4	9.8	11.6						49.0	T450002.360	A900	123454
TCU074	3	227.6	6.9	13.2	12.0						120.0	C4136001.SMT	SMTA	123400
HWA020	3	229.1	6.1	10.0	7.8						50.0	T412002.360	A900	123456
ESL	3	229.1	6.4	11.8	8.8						36.0	E098006.360	A800	123431
TCU112	4	231.1	29.8	31.4	42.0						90.0	T065003.360	A900	123429
HWA052	2	231.4	3.6	5.0	3.8						44.0	12936000.CVA	CVA	123526
TCU158	4	232.3	33.5	52.8	46.0						90.0	T521003.360	A900	125422
HWA001	3	232.7	5.1	8.2	11.1						58.0	T394002.360	A900	123459
TCU073	3	232.8	5.0	5.1	8.1						44.0	T505002.360	A900	123500
TCU065	4	233.0	19.6	43.7	37.5						90.0	T319002.360	A900	123430
TCU144	4	234.3	15.3	37.6	26.0						120.0	D5236002.SMT	SMTA	123400
TRB019	4	234.3	20.4	48.6	45.9	0.8	2.8	2.0	214	216	114.0	00736001.CVA	CVA	203242
TRB021	4	234.3	22.1	41.8	37.0	1.5	1.9	2.0	213	215	121.0	04136001.CVA	CVA	123021
TCU108	4	234.6	23.3	34.3	39.2						90.0	T019003.360	A900	123430
TCU109	4	234.7	25.1	48.6	43.9						90.0	T017002.360	A900	123425
TCU067	3	236.9	11.4	15.7	14.8						120.0	B6036001.SMT	SMTA	123400
TCU063	4	237.8	11.3	31.2	26.9						120.0	B8136001.SMT	SMTA	123400

Table 3. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
HWA059	3	238.0	3.8	14.0	12.4	0.4	1.0	0.9	221	224	74.0	T415003.360	A900	123440
TCU062	4	239.2	12.8	25.0	34.4						120.0	B8736001.SMT	SMTA	123400
TCU134	4	239.4	10.3	27.6	26.8						90.0	T526003.360	A900	123432
HWA051	3	240.2	6.4	15.4	14.8						66.0	11736001.CVA	CVA	123520
TCU061	4	240.3	12.4	29.2	31.2						90.0	T528003.360	A900	123434
TCU133	3	241.1	14.9	22.3	22.7						83.0	13936001.CVA	CVA	123457
TCU099	3	241.6	8.4	16.6	18.6						120.0	C0436001.SMT	SMTA	123400
TCU055	4	241.6	12.6	21.1	26.2						120.0	B8236001.SMT	SMTA	123400
HWA060	3	242.3	6.3	10.8	12.7						53.0	T370003.360	A900	123502
TCU082	3	242.6	5.4	15.3	15.3						58.0	T374003.360	A900	123507
HWA018	3	242.6	5.8	8.9	10.7						61.0	11136001.CVA	CVA	123530
TCU	3	242.6	6.0	16.1	16.0						25.0	E077004.360	A800	123448
TCU146	4	242.9	14.5	32.4	29.3						120.0	B9336001.SMT	SMTA	123400
TCU056	3	243.3	8.9	14.6	16.9						120.0	C0736001.SMT	SMTA	123400
TCU155	3	243.3	12.4	18.7	17.4						80.0	T515002.360	A900	122549
TCU057	3	244.7	6.7	17.8	18.6						120.0	C0336001.SMT	SMTA	123400
TCU048	3	245.2	11.2	13.0	15.3						120.0	B6936001.SMT	SMTA	123400
TCU050	3	245.9	5.4	18.6	13.6						120.0	B8036001.SMT	SMTA	123400
MND010	3	246.2	7.1	10.1	15.1	0.4	0.6	0.9	226	228	75.0	T498002.360	A900	123432
TCU100	3	246.2	8.4	16.1	14.8						120.0	C0136001.SMT	SMTA	123400
TCU049	3	246.2	10.2	23.0	16.2						81.0	18936001.CVA	CVA	123457
HWA058	3	246.7	6.0	7.2	9.4						50.0	T409004.360	A900	123501
TCU070	4	247.0	17.7	34.9	42.6						120.0	B8436001.SMT	SMTA	123400
HWA017	2	247.4	4.2	6.4	6.6						55.0	13436001.CVA	CVA	123527
TCU053	3	247.6	9.1	13.3	14.4						120.0	B9436000.SMT	SMTA	123400
HWA029	3	247.8	2.8	6.8	8.4						45.0	T364002.360	A900	123505
TCU052	3	248.9	8.8		20.4						120.0	C1736001.SMT	SMTA	123400
HWA016	3	250.0	4.1	6.4	8.5						46.0	12736000.CVA	CVA	123531
TCU060	3	250.6	8.2	12.7	12.6						79.0	18636001.CVA	CVA	123458
HWA015	2	250.7	3.7	7.0	6.9						48.0	T433002.360	A900	123503
TCU105	3	251.7	4.6	9.8	11.6						120.0	B9736001.SMT	SMTA	123500
MND023	3	252.1	13.5	14.3	19.4	0.6	1.0	1.0	231	233	81.0	14336201.CVA	CVA	123155
HWA013	3	252.6	5.3	11.4	12.8						65.0	13336001.CVA	CVA	123527
HWA014	3	252.6	5.4	11.9	9.2						76.0	13636001.CVA	CVA	123528
HWA049	2	252.7	4.0	6.0	6.4						53.0	12636000.CVA	CVA	123526
TCU104	3	252.7	10.4	14.6	20.8						120.0	C0836001.SMT	SMTA	123400
HWA010	3	253.1	5.6	11.5	11.0						85.0	3536001.CVA	CVA	123526

Table 3. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
TCU101	3	253.3	7.6	18.7	13.1						120.0	C1036001.SMT	SMTA	123400
HWA	3	253.4	4.0	9.7	14.1						28.0	E028005.360	A800	123538
HWA	3	253.4	4.9	10.4	13.5						90.0	90636001.RTE	REFT	123503
HWA019	3	253.4	4.9	10.6	13.3						129.0	19236001.CVA	CVA	123503
HWA019	3	253.4	4.9	10.9	13.3	0.6	1.0	1.6	237	239	55.0	T427002.360	A900	123503
HWA	3	253.4	4.9	12.6	12.3						91.0	M1436001.EVT	K2	203503
HWA050	3	253.4	5.1	7.7	11.4						75.0	11836001.CVA	CVA	123525
TCU149	4	253.4	46.5	37.4	33.4						89.0	T485003.360	A900	123338
HWA063	3	253.7		11.3	12.9						44.0	T537002.360	A900	123512
MND001	3	253.7	7.5	17.6	10.7						62.0	T499003.360	A900	123500
MND016	3	253.9	6.4	8.3	8.1						58.0	06036001.CVA	CVA	123529
HWA008	3	254.0	6.0	12.7	10.7						68.0	12236001.CVA	CVA	123528
MND005	3	254.1	5.9	14.6	12.9						53.0	T489003.360	A900	123501
HWA062	2	254.2	1.6	6.8	5.9						44.0	T495002.360	A900	123512
CU102	3	254.2	5.4	11.7	12.1						120.0	B8536001.SMT	SMTA	123400
TCU058	3	254.3	7.9	11.9	10.5						120.0	B3636001.SMT	SMTA	123400
TRB042	3	254.4	6.5	10.4	11.0						73.0	02536001.CVA	CVA	123527
HWA011	3	254.4	7.0	10.6	9.1						74.0	13136001.CVA	CVA	123525
HWA048	3	255.0	4.0	9.6	9.4						60.0	12136001.CVA	CVA	123527
TCU059	4	255.0	15.4	38.5	55.7						119.0	19136001.CVA	CVA	123458
HWA007	2	255.1	2.9	7.4	5.6						54.0	12536001.CVA	CVA	123533
HWA009	3	255.4	3.3	8.5	7.9						49.0	13236001.CVA	CVA	123532
TCU156	3	255.4	7.9	12.1	14.5						78.0	T525002.360	A900	123439
HWA012	2	255.7	2.6	6.0	5.2						49.0	13736001.CVA	CVA	123531
TRB017	3	255.9	8.4	18.1							51.0	01036001.CVA	CVA	123557
TCU130	3	256.0	4.6	11.0	13.1						78.0	T345002.360	A900	123439
HWA028	3	257.0	4.5	10.8	9.9						58.0	T360003.360	A900	123501
TCU069	3	257.0	6.6	13.3	12.6						61.0	T410003.360	A900	123502
HWA061	3	257.3	4.4	10.1	9.5						78.0	12436001.CVA	CVA	123219
MND025	3	257.6	5.5	11.9	11.5	1.6	2.3	2.7	241	243	53.0	T575002.360	A900	123503
MND006	3	257.8	3.3	7.5	8.1						50.0	T497002.360	A900	123504
TCU068	3	258.0	6.6	17.5	13.3						69.0	18736001.CVA	CVA	123521
HWA027	2	260.3	3.8	6.6	5.9						44.0	T402002.360	A900	123500
TCU103	3	260.7	5.1	10.4	10.9						51.0	T078002.360	A900	123458
TCU135	3	262.9	4.9	8.2	8.6						51.0	T569002.360	A900	123505
TCU064	2	263.9	6.6	7.6	7.9						120.0	B8836001.SMT	SMTA	123400
TRB023	3	264.0	7.7	12.5	8.9						56.0	00809102.CVA	CVA	123560

Table 3. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
TCU088	3	264.6	5.3	13.1	7.2						81.0	T318003.360	A900	123437
TCU087	3	265.9	8.3	12.0	14.2						62.0	T447003.360	A900	123502
HWA056	2	268.9	3.0	5.0	5.8						44.0	T330002.360	A900	123509
TCU041	3	269.5	4.8	11.8	10.0						120.0	B9136001.SMT	SMTA	123500
HWA047	2	269.9	2.4	4.4	5.4						44.0	14036001.CVA	CVA	123536
HWA057	2	271.7	3.0	6.6	5.4						44.0	T431003.360	A900	123451
TCU044	3	271.7	12.3	13.0	12.2						92.0	18536001.CVA	CVA	123500
TCU128	3	273.1	4.0	9.3	5.4						56.0	T444003.360	A900	123506
NSY	3	273.1	4.5	9.9	6.3						16.0	E076009.360	A800	123534
HWA025	2	273.4	2.5	6.0	3.8						39.0	T361002.360	A900	123516
TRB006	3	273.9	5.6		22.0						61.0	03736001.CVA	CVA	123522
TCU040	3	275.6	6.5	11.2	12.6						120.0	B9036001.SMT	SMTA	123500
TCU036	3	275.9	6.5	8.8	8.3						120.0	C9236001.SMT	SMTA	123400
TCU046	2	280.2	3.3	4.4	4.3						60.0	B8936001.SMT	SMTA	123500
TCU037	3	280.6	4.3	8.8	9.0						56.0	T143002.360	A900	123509
TCU038	3	280.6	4.3	10.3	11.0						120.0	D6936001.SMT	SMTA	123500
TCU032	3	285.6	4.0	10.9	7.8						120.0	B7036001.SMT	SMTA	123500
TCU031	2	288.4	4.0	7.5	6.0						54.0	T034002.360	A900	123505
TCU029	3	288.7	3.6	7.2	8.6						120.0	B8336001.SMT	SMTA	123400
TCU042	3	289.0	8.5	9.7	11.6						120.0	B9836001.SMT	SMTA	123400
TCU045	2	289.2	2.1	5.8	6.7						47.0	T358002.360	A900	123514
TCU131	2	290.4	3.0	5.1	6.3						42.0	T380002.360	A900	123509
ILA067	3	290.4	3.1	7.9	9.4						53.0	T392003.360	A900	123506
TCU132	3	291.4	4.3	6.2	8.2						52.0	T523004.360	A900	123525
HWA045	2	292.3		6.9	6.5						47.0	T491002.360	A900	123514
TCU030	2	293.7	4.7	6.1	6.5						46.0	T216002.360	A900	123512
ILA053	2	293.9	4.8	6.3	6.1						120.0	C8836001.SMT	SMTA	123500
ILA063	2	297.2	2.1	3.9	4.1						60.0	D0836001.SMT	SMTA	123500
TCU047	3	298.1	17.7	14.2	18.5						120.0	C3736001.SMT	SMTA	123600
TCU034	3	299.1	8.4	10.3	13.7						120.0	C4336001.SMT	SMTA	123400
TCU127	2	300.6	2.5	3.7	4.8						36.0	T408001.360	A900	123518
ENA	2	303.9	3.0	4.4	5.9						44.0	T578002.360	A900	123510
ILA050	2	303.9	3.1	5.3	5.2						43.0	T327002.360	A900	123518
TCU033	3	304.1	6.1	8.8	7.9						120.0	C3536001.SMT	SMTA	123400
TCU043	3	306.0	4.8	11.6	12.3						57.0	T081003.360	A900	123512
ILA066	2	307.2	4.0	7.0	7.3						120.0	D4036001.SMT	SMTA	123500
TCU028	3	309.3	5.3	10.5	9.1						63.0	T231003.360	A900	123513

Table 3. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
ILA065	2	309.7	3.3	5.2	6.1						120.0	D6136001.SMT	SMTA	123500
TRB044	2	310.1	2.8	5.1	6.0						52.0	01836000.CVA	CVA	123728
ILA062	2	310.3	3.5	5.5	5.9						44.0	T563002.360	A900	123520
ILA064	2	310.5	3.3	4.6	4.1						120.0	D5736001.SMT	SMTA	123500
TCU098	3	311.1	3.9	8.6	9.1						61.0	T087003.360	A900	113510
TCU015	3	313.2	6.3	8.3	6.7						63.0	T088003.360	A900	123515
TCU097	3	316.5	3.0		8.6						60.0	T163003.360	A900	123459
TCU094	2	316.6	2.3	4.8	4.8						36.0	T012001.360	A900	123523
TCU096	2	317.6	2.7		4.9						39.0	T044002.360	A900	123525
ILA025	2	317.8	2.5	6.8	5.4						41.0	T568003.360	A900	123521
TCU026	2	317.9	2.5	4.2	4.2						36.0	T101002.360	A900	123529
TRB015	2	318.6	2.2	5.6	4.8						46.0	01436001.CVA	CVA	123433
TCU016	3	319.9	2.3	8.1	9.4						58.0	14436002.CVA	CVA	123538
TCU021	2	322.0	2.0	5.1	6.4						44.0	T195002.360	A900	123520
TCU081	2	322.3	2.6	4.1	4.3						36.0	T367001.360	A900	123532
TCU093	3	323.7	3.4	7.3	8.4						56.0	T100003.360	A900	123508
ILA023	2	323.8	2.1	5.5	5.7						51.0	10336000.CVA	CVA	123543
ILA044	3	327.4	4.8	11.1	7.5						86.0	09236001.CVA	CVA	123512
ILA047	2	327.6	2.4	6.5	6.6						53.0	10536001.CVA	CVA	123545
ILA006	3	328.9	3.6	8.7	7.6						63.0	06236001.CVA	CVA	123546
ILA058	3	329.2	3.0	8.3	7.5						61.0	10936001.CVA	CVA	123545
ILA026	3	329.6	4.4	8.5	7.8						59.0	10636001.CVA	CVA	123546
ILA051	2	330.5	1.6	3.2	5.0						38.0	T352001.360	A900	123524
ILA027	2	331.0	2.8	6.9	7.1						47.0	T540002.360	A900	113007
ILA042	2	332.2	3.6	6.7	6.9						48.0	08836001.CVA	CVA	123513
ILA038	2	333.1	3.4	7.2	7.7						40.0	T532003.360	A900	123443
ILA005	2	333.7	2.8	6.9	6.0						56.0	06136001.CVA	CVA	123522
ILA016	2	333.8	2.6	6.2	4.7						39.0	T476002.360	A900	123524
ILA013	3	334.2	4.1	9.3	9.2						82.0	08736001.CVA	CVA	123544
ILA030	2	334.6	3.3	7.3	6.0						87.0	08336000.CVA	CVA	123547
ILA037	3	334.7	3.0	5.6	8.1						50.0	09036001.CVA	CVA	123548
ILA041	2	335.7	2.0	7.5	6.7						68.0	14536001.CVA	CVA	123553
ILA039	2	336.9	1.9	5.7	5.6						36.0	T539001.360	A900	085304
ILA028	3	337.0	3.9	6.6	8.1						65.0	08936001.CVA	CVA	123548
TRB039	3	337.3	3.1	6.1	8.8						68.0	01636000.CVA	CVA	123427
ILA055	2	337.8	3.2	6.4	5.4	0.9	1.5	1.4	321	322	120.0	D0436001.SMT	SMTA	123500
ILA049	2	338.1	2.4	4.6	4.9						36.0	T311001.360	A900	123531

Table 3. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
ILA029	2	338.7	2.7	5.9	7.0						36.0	T543001.360	A900	122334
MTN109	2	340.0	2.4	4.7	4.8						60.0	T079003.360	A900	123533
ILA056	2	340.1	3.4	6.2	7.3	1.1	1.6	2.1	323	325	120.0	D1336001.SMT	SMTA	123500
ILA036	2	340.6	2.6	4.8	3.9						45.0	08236000.CVA	CVA	123548
ILA040	3	340.6	2.6	6.8	8.7	0.8	1.4	1.8	324	325	120.0	D8736001.SMT	SMTA	123500
ILA003	2	342.7	3.3	5.1	5.2						45.0	06536000.CVA	CVA	123402
MTN110	2	343.2	1.5	2.9	3.5						60.0	T208001.360	A900	123524
TAP035	2	346.6	1.6	4.6	6.2						39.0	T041002.360	A900	123531
TCU092	3	348.1	3.5	8.6	7.6						46.0	T238001.360	A900	123529
TAP043	2	349.6	1.6	4.6	5.3						36.0	T092001.360	A900	123538
TAP053	2	349.6	1.8	5.0	5.0						61.0	A0136001.EVT	ETNA	123528
TAP115	3	351.0	3.0	9.3	7.0						54.0	T153002.360	A900	123527
TAP033	2	352.1	1.9	4.5	4.2						36.0	T244001.360	A900	123528
TAP038	2	353.0	3.8	6.3	7.2						37.0	T263002.360	A900	123537
MND021	2	354.7	3.5	5.7	6.8						45.0	07836001.CVA	CVA	123557
TAP025	2	355.6	1.5	3.6	4.4						61.0	F8305700.EVT	ETNA	123560
TAP117	2	356.0	2.3	7.2	5.1						91.0	63236001.EVT	K2	123534
TAP117	2	356.0	2.3	7.3	4.7	0.4	0.9	0.6	338	339	91.0	98136001.EVT	ETNA	123530
TAP117	2	356.0	2.4	7.3	4.8						38.0	T058001.360	A900	123528
TAP117	2	356.0	2.4	7.3	4.9						45.0	19436000.CVA	CVA	123635
TAP117	2	356.0	2.5	7.2	4.3						120.0	D3336001.SMT	SMTA	123500
TAP117	3	356.0	2.7	8.0	4.9						62.0	E091011.360	A800	123518
TAP097	2	356.3	1.8	4.3	5.3	0.5	0.7	0.7	338	339	120.0	D5636001.SMT	SMTA	123500
TAP019	2	356.8	1.8	4.4	4.2						61.0	F7836001.EVT	ETNA	123538
TAP071	2	357.2	1.6	3.8	2.8	0.3	0.7	0.6	339	341	120.0	C8436000.SMT	SMTA	123500
TAP017	2	357.3	2.4	4.9	7.9						61.0	A0836001.EVT	ETNA	123536
TAP116	2	357.4	2.5	5.9	5.6						61.0	98736001.EVT	ETNA	123533
TAP016	2	357.6	2.0	3.9	3.8						61.0	99101500.EVT	ETNA	123560
TAP020	2	358.2	3.2	6.0	4.4						61.0	A0236001.EVT	ETNA	123533
TAP022	3	358.5	4.3	12.2	10.8	0.3	1.0	1.2	340	342	114.0	99736001.EVT	ETNA	123456
TAP021	2	358.6	2.7	5.6	5.3						61.0	F8036001.EVT	ETNA	122955
TAP011	2	358.9	2.1	3.3	4.1						61.0	98936000.EVT	ETNA	123541
TAP012	2	359.4	1.6	3.6	4.2						61.0	A0536000.EVT	ETNA	123541
TAP010	2	359.4	1.9	4.0	4.2						61.0	A0936000.EVT	ETNA	123538
MTN120	2	359.7	2.9	5.2	5.8						36.0	T111001.360	A900	123535
TAP088	2	359.9	2.6	6.5	5.1						61.0	F7436001.EVT	ETNA	123528
TAP014	2	360.8	3.0	5.1	5.5						61.0	99936000.EVT	ETNA	123534

Table 3. (Continued)

STname	I	Delta (km)	PGA (cm s^{-2})			PGV (cm s^{-1})			DJB (km)	D2F (km)	REC (s)	Filename	Model	Time H:M:S
			(V)	(NS)	(EW)	(V)	(NS)	(EW)						
TAP003	3	360.9	2.7	8.5	5.7						84.0	A0336001.EVT	ETNA	123536
TAP092	2	361.9	2.2	5.1	4.2						61.0	F7936000.EVT	ETNA	123535
MTN116	2	362.0	1.4	3.3	2.7						60.0	T005001.360	A900	123534
TRB012	3	363.6	4.1	7.1	8.3						61.0	03536001.CVA	CVA	123553
TAP009	2	364.1	3.0	5.8	6.4						61.0	A0636001.EVT	ETNA	123533
TAP093	2	364.2	2.1	5.7	5.1						62.0	F8236001.EVT	ETNA	123534
MTN118	2	364.6	2.0	3.8	3.5						59.0	T258002.360	A900	123505
MTN119	2	364.7	2.7	6.6	5.0						48.0	T077001.360	A900	123527
TAP005	2	364.8	1.5	4.2	5.9						61.0	99036000.EVT	ETNA	123537
TAP002	2	365.4	2.6	4.5	4.6						61.0	99536000.EVT	ETNA	123535
TAP106	2	366.4	1.9	4.0	4.3						61.0	F8136000.EVT	ETNA	123539
TAP095	2	367.3	2.1	5.8	6.4						61.0	F7536001.EVT	ETNA	123533
TAP057	2	368.1	1.7	4.8	4.9						42.0	T479002.360	A900	123538
MTN103	2	376.4	2.5	6.4	5.1						60.0	T060002.360	A900	123534

**Note:*
(1) Source parameter is taken from CWB's Seismological Bulletin, Vol. 53, No. 4, P. 77, 2007: (i) Origin Time: 2006/12/26 12:34:15.13, and (ii) Hypocenter: 21.97°N, 120.42°E, 50.2 km; M_L = 6.99.
(2) STname = Station Name (up to 6 characters).
(3) I = Intensity (CWB scale).
1: 0.8 – 2.5 gal
2: 2.5 – 8 gal
3: 8 – 25 gal
4: 25 – 80 gal
5: 80 – 250 gal
6: 250 – 400 gal
7: > 400 gal
(4) Delta = Epicentral distance in km.
(5) PGA = Peak ground acceleration in cm s^{-1} s^{-1} (V = vertical; N = north-south; E = east-west). If the recorded acceleration is defective, then PGA is not computed and is displayed as "blank" in the Table.
(6) PGV = Peak ground velocity in cm s^{-1} (V = vertical; N = north-south; E = east-west). If the quality of the recorded acceleration is poor, then PGV is not computed and is displayed as "blank" in the Table.
(7) DJB = Distance to fault according to Joyner and Boore in km.
(8) D2F = Closest distance to the fault in km.
(9) REC = Record length in seconds.
(10) Filename is up to 12 characters (abbreviated info about model, serial number, Julian date, and earthquake number on that date).
(11) Model = Model of accelerograph. Model CVA can be either CV-574 or CV-575, but it can be distinguished by its serial number. Model SMTA is an abbreviation for SMART-24A.
(12) Time = Initial time of the file (hour, minute, second).

second of the Pingtung earthquakes, respectively, along with other details. Sample acceleration, velocity, and displacement time series at one of the closest stations (KAU082) are shown in Figs. 4, 5, and 6, respectively. Smoothed Fourier spectra are shown in Fig. 7. Although the detailed ground motions differ for the two events, overall they are similar.

2.4 Data Archived Online

All the recorded strong-motion data are archived online at the Taiwan Earthquake Research Center http://tecdc.earth.sinica.edu.tw/data/EQ2006Pingtung/. For documentation purposes, we include (1) original data files as recorded by the accelerographs, (2) software from the manufacturers that will read (and often display) the original recorded data; software is also provided by the manufacturers to convert an original recorded data file to a binary file in PC-SUDS format (see Banfill 1994 for format specifications), (3) software and associated master files that were used to correct the header information and produce the processed data in

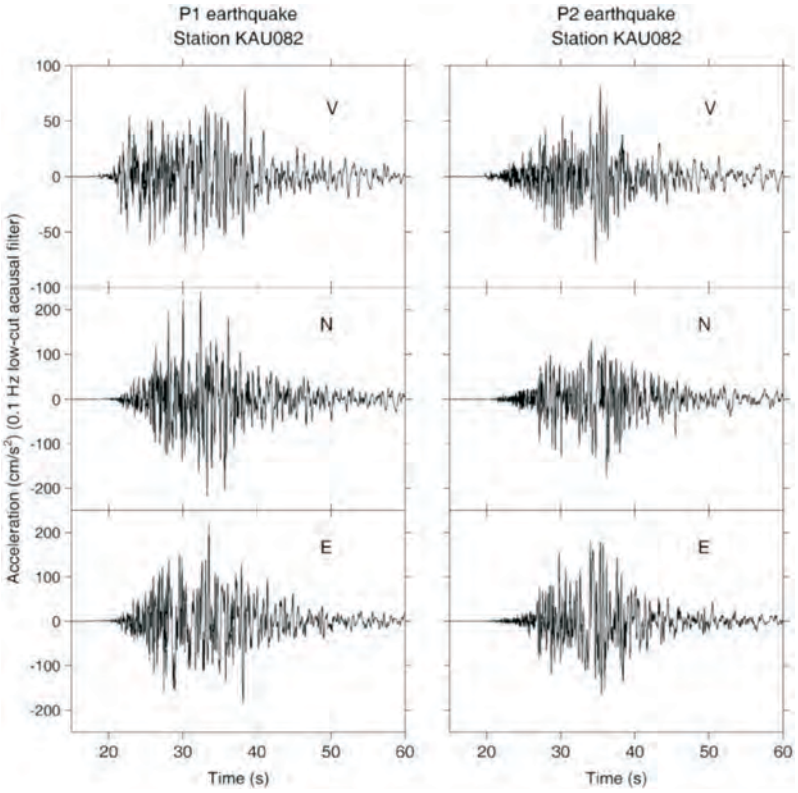

Fig. 4. Acceleration time series for both events at station KAU082, one of the closest stations.

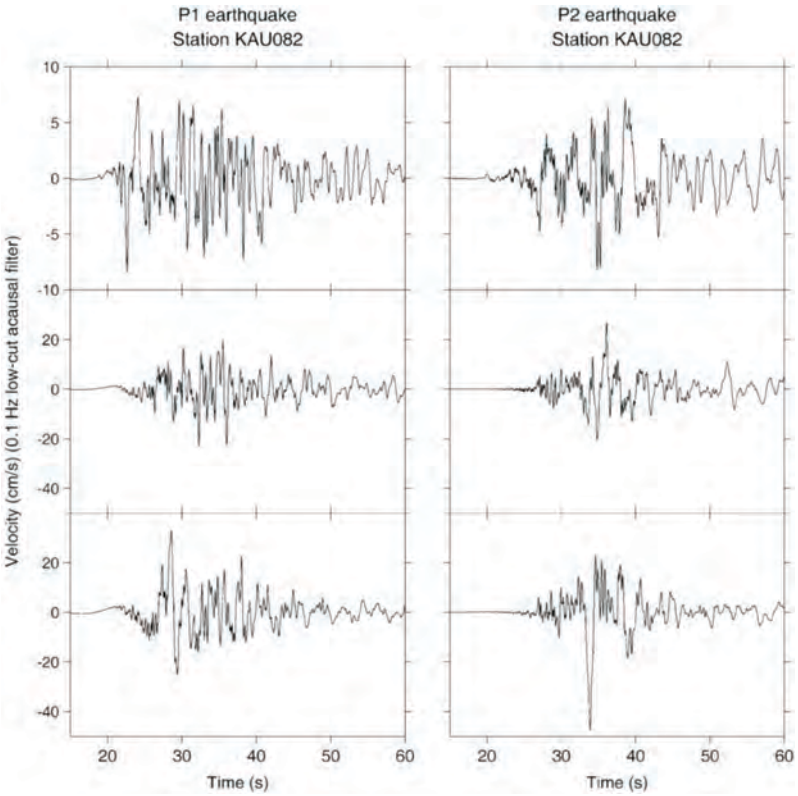

Fig. 5. Velocity time series for both events at station KAU082, one of the closest stations.

PC-SUDS format, (4) software that can be used to convert the PC-SUDS formatted files into ASCII-formatted files, and (5) the converted ASCII data files.

For completeness, we will archive all the strong-motion data files recorded for the two Pingtung earthquakes, including those that have defects, such as spikes, bad data channel(s), late triggering, Users can select the data files that are appropriate for their needs. For example, if a user wishes to use the data for picking *P-wave* arrivals in an earthquake location study, then they should use only the data files that have absolute timing.

In this paper, we classify the recorded data files into three quality groups: good, fair, and bad. For the archived data set, the recorded data files are classified into four quality classes. Since the recorded strong-motion data are based on a triggering algorithm, a main concern is whether the record has pre-event data and whether the record is long enough to cover adequately the duration of the strong ground shaking at that station. In addition, we are concerned whether the record has defects (e.g., spikes, or components that were not recorded), and whether the record has absolute timing. In general, QA-class records are the best and can be used for any studies. The QB-class records are the next best because they do not have absolute timing. The QC-class records include the principal strong motions but have less than one second of pre-event data. The QD-class records have significant defects; they are included here for completeness and should not be used for most studies.

3. A COMPARISON OF GROUND MOTIONS RECORDED BY MULTIPLE ACCELEOGRAPHS

Because of the Taiwan government open-procurement requirements, any accelerograph manufacturer can submit their instruments to CWB for technical evaluation to see if they meet the CWB technical specifications (which are included in the procurement announcement). If qualified, they can bid their instruments, and the order is then awarded to the lowest bidder. Consequently, CWB has purchased many different types of accelerographs, because the lowest

bidder was often different from year to year. It is, therefore, desirable to compare the performance of the various instruments at one site. In collaboration with the National Taiwan University (NTU), CWB established a test site (TAP117) in September 2006 using the concrete foundation of an abandoned weather station at NTU. Several different types of accelerographs were installed, and records were obtained from the two PingTung earthquakes. This experiment is similar to that conducted at the Hualien station as reported by Lee et al. (2005).

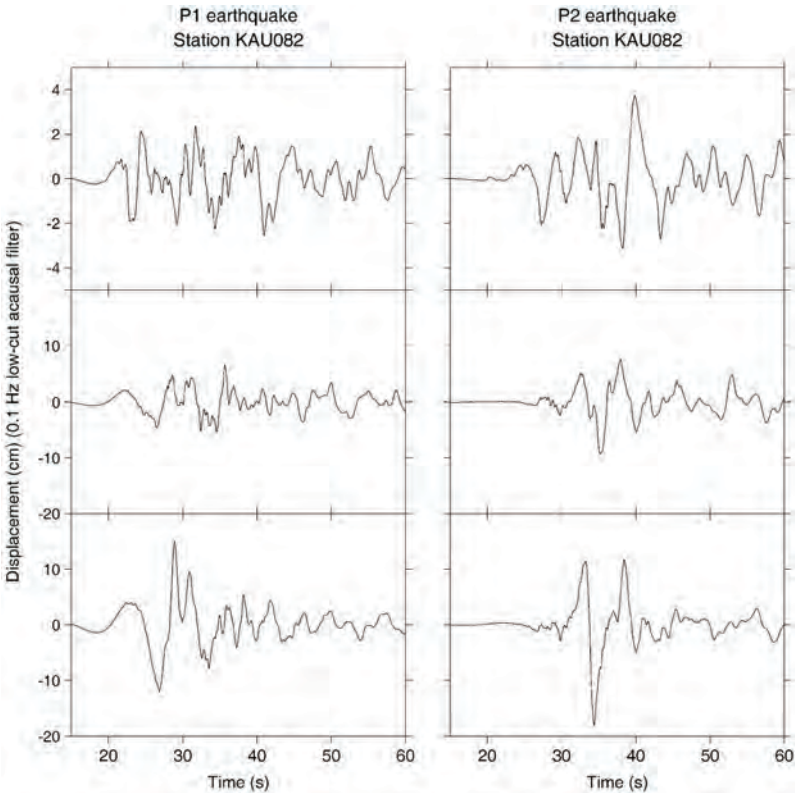

Fig. 6. Displacement time series for both events at station KAU082, one of the closest stations.

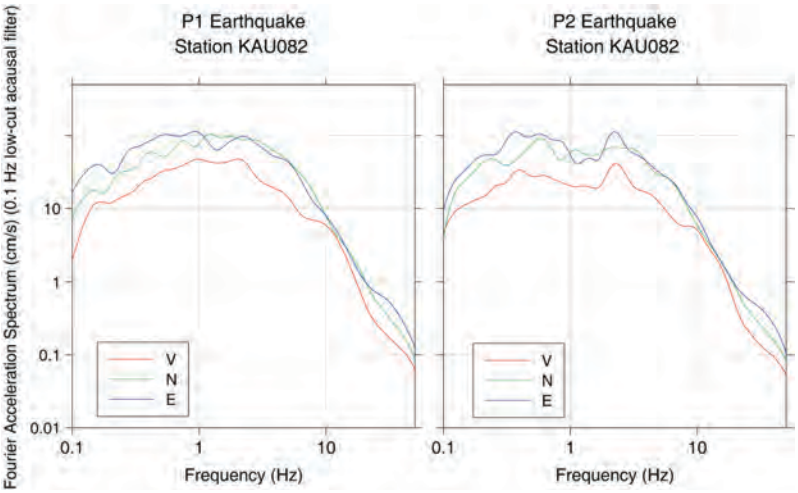

Fig. 7. Fourier acceleration spectra for both events at station KAU082, one of the closest stations. To make it easier to compare the spectra, they have been smoothed over log-spaced frequencies, with a Konno and Ohmachi (1998) smoothing operator with a width of 0.4 of a decade.

For a preliminary analysis, we used the records from the second Pingtung earthquake following the procedure described in Lee et al. (2005). Table 4 shows the results from six co-located accelerographs at TAP 117. Note that the bit-designation in the A/D column is not precise. Kinemetrics (http://www.kmi.com) states that their Etna and K2 accelerographs (basically the same, but the K2 has more features) have 19- to 20-bit resolution from DC to 50 Hz, although these accelerographs use 24-bit A/D chips similar to those in the other 24-bit accelerographs. Also, data from Etna's and K2's are recorded as 24-bit integers. In the following discussion, we will consider Etna and K2 accelerographs to belong to the 24-bit class of accelerographs. In Table 4, the PGA values from the six different accelerographs are comparable, but these are "nominal" values because corrections for the calibration data of each accelerograph have not been applied.

In order to compare the waveforms, we use the record from the CV-575 accelerograph as the standard, and compute coherence between it and the other four accelerographs. It is reasonable to assume that the newer 24-bit accelerograph (such as CV-575) is superior to the older generations of 16-bit and 12-bit accelerographs. The waveform coherence results are shown in Fig. 8. The 12-bit A800 accelerograph (due to very few digital counts in the waveform data) does not compare well: the coherence with the CV-575 data is less than 0.8, except for frequencies between 2 to 6 Hz. The 16-bit A900 accelerograph appears to perform slightly better: the coherence is near 1 for frequencies up to 8 Hz. Waveforms from the Etna accelerograph and the SMART-24A accelerograph agree well with that of the CV-575 accelerograph: coherence is nearly 1 from 1 to 8 Hz for all components. The coherence starts to fall below 0.9 for frequencies above about 20 and 10 Hz on the horizontal and vertical components, respectively. We did not show the K2 results because they are essentially the same as the Etna re-

Table 4. Strong-motion data recorded at TAP117 from the 1234 UT 26 Dec. 2006 Pingtung earthquake. The PGA values are in gals (cm s^{-1} s^{-1}).

Intensity (CWB scale)	Epicenter Distance (km)	PGA			Instrument type
		V	NS	EW	
3	355.97	2.74	8.02	4.93	A800
2	355.97	2.40	7.26	4.78	A900
2	355.97	2.48	7.18	4.30	SMART-24A
2	355.97	2.26	7.30	4.66	Etna
2	355.97	2.28	7.18	5.14	K2
2	355.97	2.36	7.26	4.94	CV-575

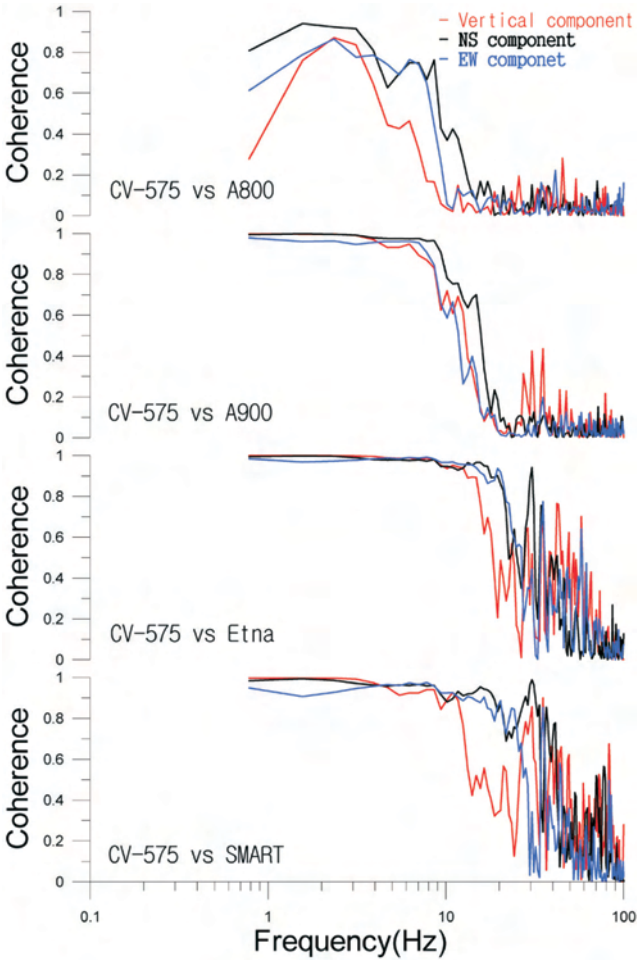

Fig. 8. Waveform coherence at Station TAP117 between the record of the second Pingtung earthquake from the CV-575 accelerograph and the records from the A800, A900, Etna, and SMART-24A accelerographs.

sults. We note that this is a particularly severe test of the lower-bit systems because TAP117 is very far from the source (356 km) and thus the long-period signal will be smaller than if the recording had been made at closer distances.

These results are similar to the unpublished results obtained by Lee et al. (2005), where they reported only the coherence comparisons between the 24-bit class of accelerographs (Kinemetrics' Etna and K2, Reftek's 130-SMA/01, Tokyo-Sokushin's CV-575 and G3) for records from 16 earthquakes that occurred in the spring of 2004. During that same time period, data were also recorded by 3 other co-located accelerographs: one A800 (12-bit) and two A900 (16-bit), and coherence between these data and the 24-bit accelerographs's data were also computed and showed results similar to those reported here.

The present experiment at TAP117 site is intended as a long-term test of co-located accelerographs to assess, for example, whether or not there are any aging effects of the accelerographs. We will perform calibrations of these accelerographs periodically and report the results in the future, along with calibrated data from more earthquakes.

4. ATTENUATION OF THE HORIZONTAL GROUND MOTION WITH RESPECT TO DISTANCE

The 5%-damped pseudo-acceleration response spectra (PSA) were computed for the horizontal components of the two earthquakes. The periods at which the PSA were computed were 0.0 (for which PSA = PGA), 0.2, 1.0, and 3.0 s. As mentioned earlier, a 0.1 Hz low-cut filter was applied, but this has an inconsequential impact on the PSA values (the filter was necessary in order to obtain PGV). Figures 9 and 10 show the ground motions for the two earthquakes, using different symbols for sites with Vs30 less than and greater than 360 m s^{-1} (these correspond in a rough way to soil and rock sites). The Vs30 estimates were taken from Lee and Tsai (2008). The distance measure is the closest distance from the station to the rupture surface, where the rupture surface was estimated from the aftershock locations in Wu et al. (2008), with guidance from the empirical relations between magnitude and rupture length, rupture width, and rupture area given by Wells and Coppersmith (1994). Figure 11

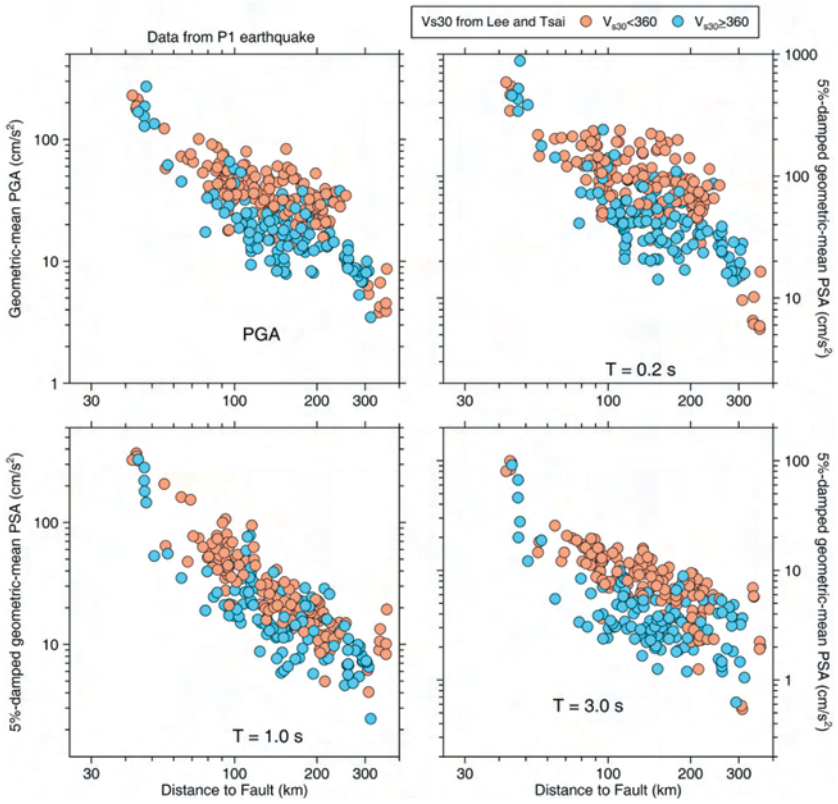

Fig. 9. Ground-motions vs. distance for the first earthquake (P1), separated by Vs30 values at each station. Shown are the geometric means of the two horizontal components.

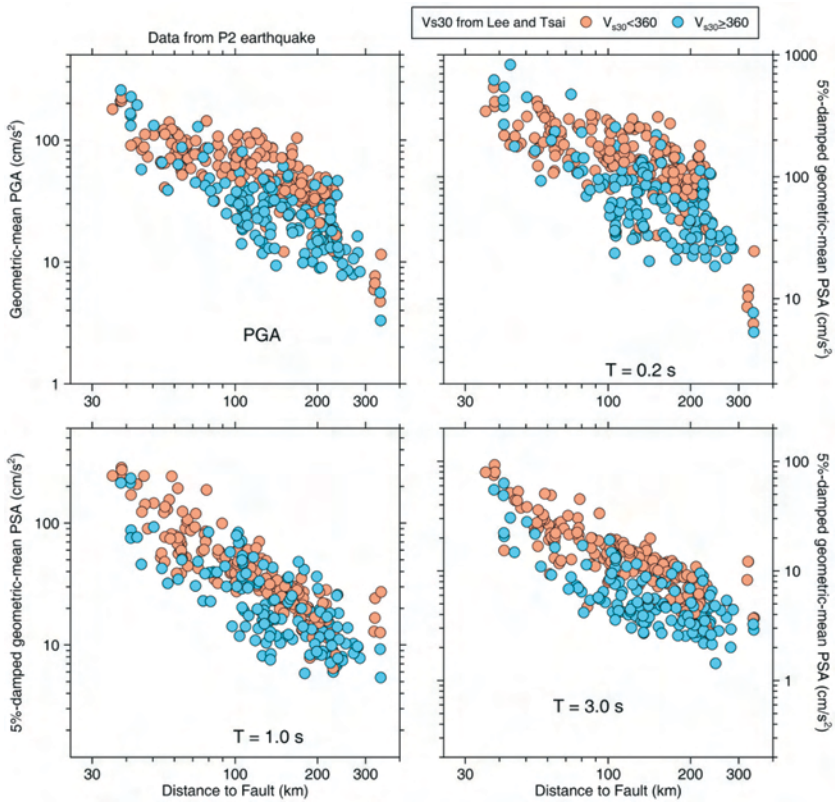

Fig. 10. Ground-motions vs. distance for the second earthquake (P2), separated by Vs30 values at each station. Shown are the geometric means of the two horizontal components.

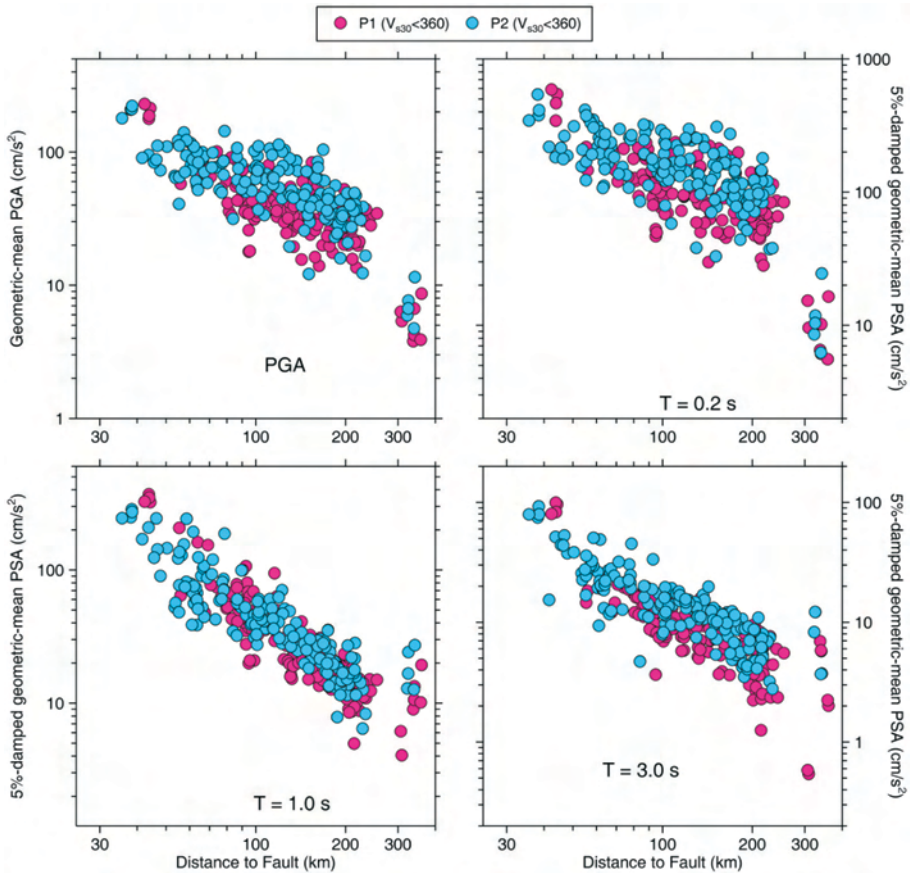

Fig. 11. Comparison of ground motions for the two events for "soil" sites. Shown are the geometric means of the two horizontal components.

shows a direct comparison of the ground motions for the two earthquakes for "soil" sites. The ground motions for the two events are very similar to one another, with the motions from the second event being somewhat higher than from the first event for some periods and distances.

Comparisons were also made of the data with ground-motion prediction equations (GMPEs) for subduction earthquakes. The comparisons are given in the next four figures (Figs. 12 - 15). Only data from stations with a value of Vs30 provided by an Excel file accompanying the paper of Lee and Tsai (2008) are included in the plot. The types of system (16- and 24-bit) are indicated by the colors. The close and far recordings are on 16- and 24-bit systems, respectively, but for distances with both types of recordings the motions seem comparable. The GMPEs used include Atkinson and Boore (2003; abbreviated AB03), Kanno et al. (2006; abbreviated Kea06), Youngs et al. (1997; abbreviated Yea97), and Zhao et al. (2006; abbreviated Zea06). In general, the motions at close and far distances are in reasonable agreement with the predicted motions. In general, however, motions for the second earthquake are better predicted for all distances than those from the first earthquake, for which the motions are somewhat lower than the predictions.

5. STRONG-MOTION ARRAY DATA RECORDED AT BUILDINGS AND BRIDGES

Over 60 strong-motion arrays have been installed and operated by the Central Weather bureau since the 1990s, and a brief description of these arrays is given in Lee and Shin (1997). Sixty five records at 41 strong-motion arrays were obtained from the first Pingtung earthquake as summarized in Table 5, and 66 records at 42 strong-motion arrays were obtained from the second Pingtung earthquake as summarized in Table 6. The dataloggers for these strong-motion arrays are either (1) the 16-bit, 32- or 64-channel PC-based systems (designed by W. H. K. Lee), or (2) the more recent 24-bit, 32-channel Tokyo-Sokushin systems (Model SAMTAC 700). Since the PC-based systems have both high-gain and low-gain units, two records are often obtained for a given strong-motion array.

As an example, we will select the building array at the National Taitung Senior High Commercial and Vocational School (TTNBA0). Accelerometers are installed at different levels of the building as shown in Fig. 16. Waveforms recorded in this strong-motion array from the first Pingtung earthquake is shown in Fig. 17, and that for the second

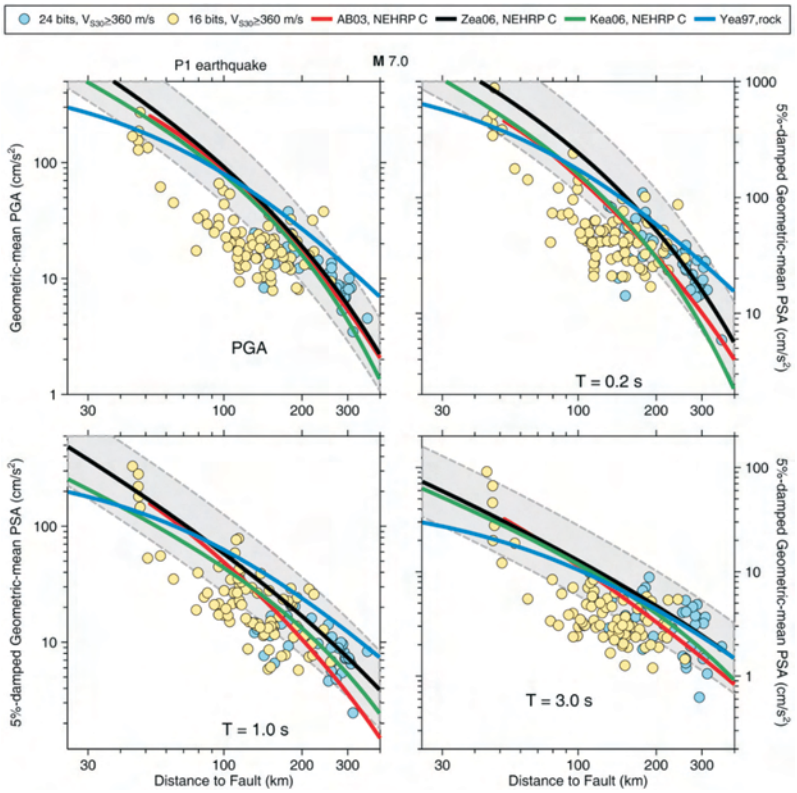

Fig. 12. Comparison of earthquake P1 data for 16- and 24-bit instruments and ground-motion predictions for indicated references (AB03 = Atkinson and Boore 2003; Kea06 = Kanno et al. 2006; Yea97 = Youngs et al. 1997; Zea06 = Zhao et al. 2006). The curves are plotted for a "stiff soil" site class (NEHRP C). The gray bands show the plus and minus one standard deviations for the Zea06 GMPEs.

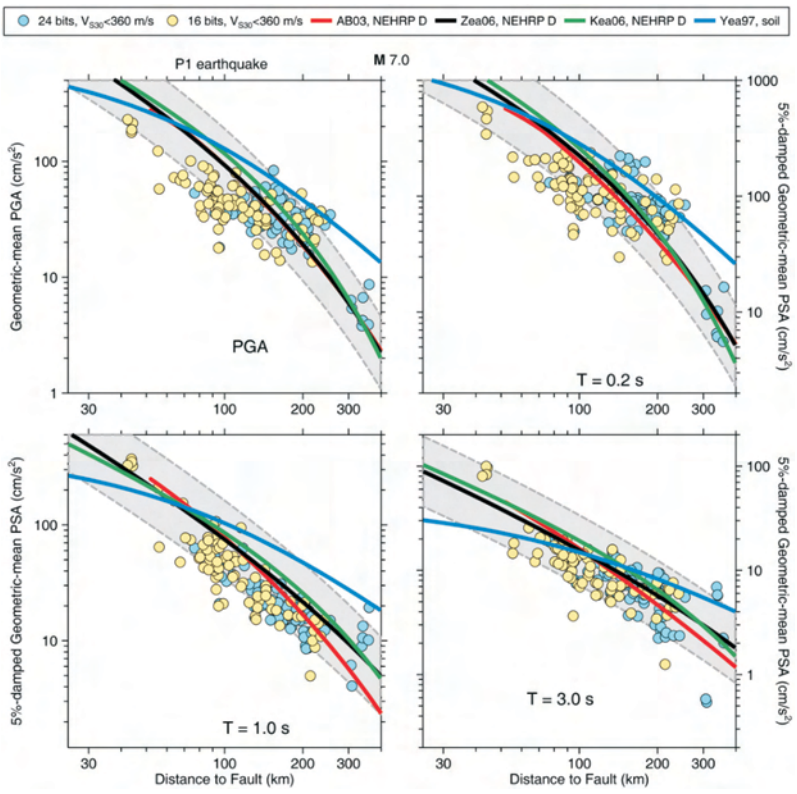

Fig. 13. Comparison of earthquake P1 data for 16- and 24-bit instruments and ground-motion predictions for indicated references (AB03 = Atkinson and Boore 2003; Kea06 = Kanno et al. 2006; Yea97 = Youngs et al. 1997; Zea06 = Zhao et al. 2006). The curves are plotted for a "soft soil" site class (NEHRP D). The gray bands show the plus and minus one standard deviations for the Zea06 GMPEs.

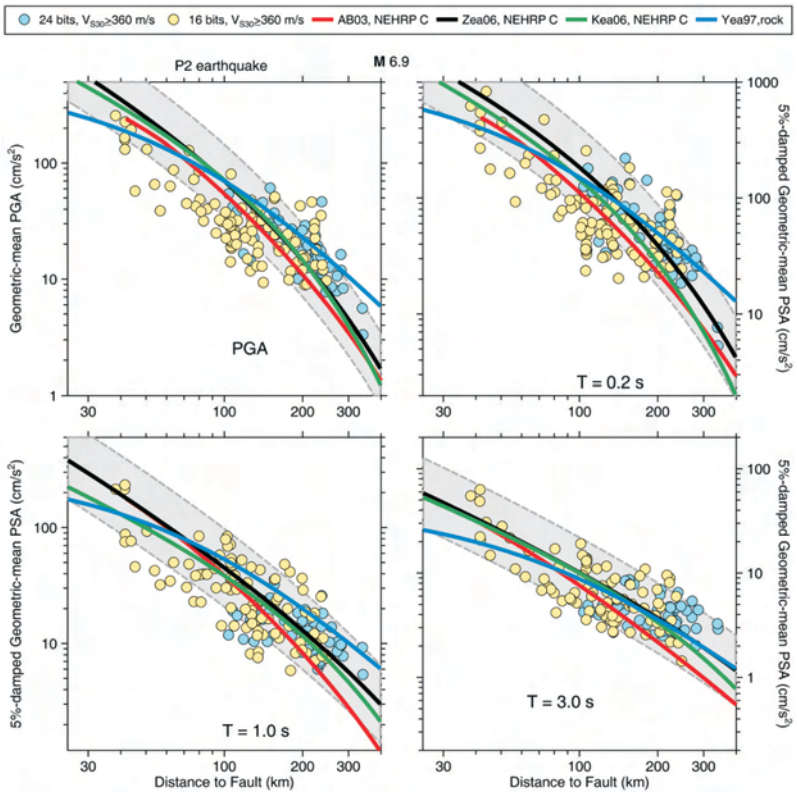

Fig. 14. Comparison of earthquake P2 data for 16- and 24-bit instruments and ground-motion predictions for indicated references (AB03 = Atkinson and Boore 2003; Kea06 = Kanno et al. 2006; Yea97 = Youngs et al. 1997; Zea06 = Zhao et al. 2006). The curves are plotted for a "stiff soil" site class (NEHRP C). The gray bands show the plus and minus one standard deviations for the Zea06 GMPEs.

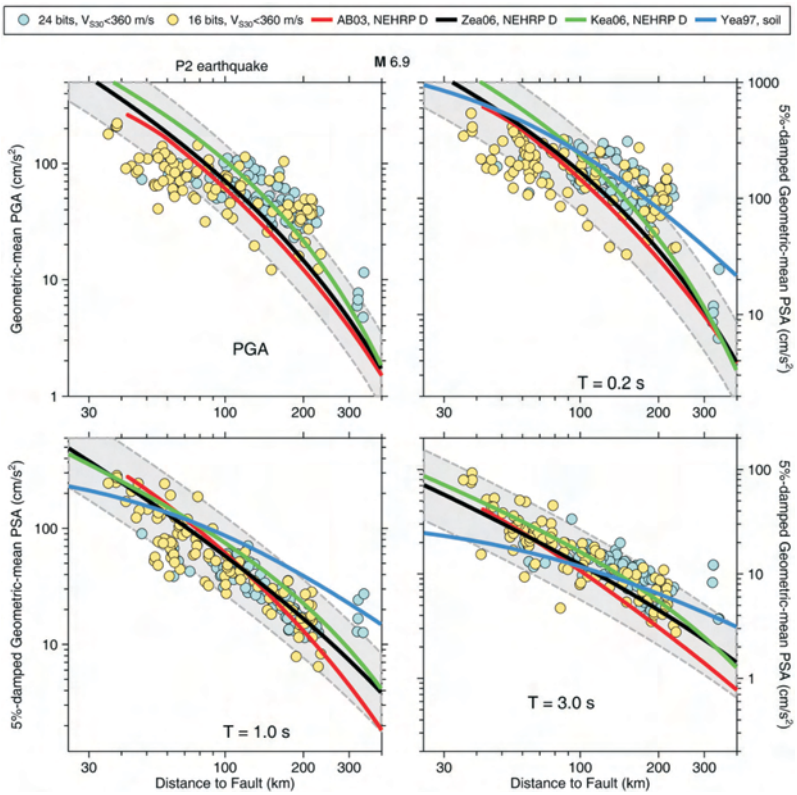

Fig. 15. Comparison of earthquake P2 data for 16- and 24-bit instruments and ground-motion predictions for indicated references (AB03 = Atkinson and Boore 2003; Kea06 = Kanno et al. 2006; Yea97 = Youngs et al. 1997; Zea06 = Zhao et al. 2006). The curves are plotted for a "soft soil" site class (NEHRP D). The gray bands show the plus and minus one standard deviations for the Zea06 GMPEs.

Table 5. Summary of strong-motion array data recorded for the first Pingtung earthquake.

Array Name	Distance (km)	Latitude (Degrees N)	Longitude (Degrees E)	No. of Channels	Record length (seconds)	Maximum PGA (gal)	Datalogger	Ownership
KAUBA0	108.83	22.643	120.315	26	330	50.94	SAMTAC700	Private
TTNBA0	133.68	22.758	121.146	20	103.68	32.79	PC Sys_high-gain	Public
TTNBA0	133.68	22.758	121.146	20	103.68	32.68	PC Sys_low-gain	Public
TTNBA1	134.16	22.757	121.151	25	101.12	37.24	PC Sys_low-gain	Public
CHYBA2	149.15	22.992	120.217	27	102.4	89.52	PC Sys_high-gain	Private
CHYBA2	149.15	22.992	120.217	27	102.4	88.53	PC Sys_low-gain	Private
CHYBAH	149.64	22.993	120.205	30	102.4	78.69	PC Sys_high-gain	Public
CHYBAH	149.64	22.993	120.205	30	102.4	79.94	PC Sys_low-gain	Public
CHYBA0	149.74	22.999	120.217	28	120	78.27	SAMTAC700	Public
CHYBA7	150.39	22.991	120.168	29	102.4	37.15	PC Sys_high-gain	Private
CHYBA7	150.39	22.991	120.168	29	102.4	37.13	PC Sys_low-gain	Private
CHYBAA	153.74	23.038	120.237	30	101.76	74.63	PC Sys_high-gain	Public
CHYBAA	153.74	23.038	120.237	30	99.2	85.99	PC Sys_low-gain	Public
CHYBAI	154.07	23.063	120.335	25	99.84	49.96	PC Sys_high-gain	Public
CHYBAI	154.07	23.063	120.335	25	102.4	50.37	PC Sys_low-gain	Public
CHYBAB	159.4	23.09	120.208	30	99.84	72.92	PC Sys_high-gain	Public
CHYBAB	159.4	23.09	120.208	30	102.4	73.05	PC Sys_low-gain	Public
CHYBA9	160	23.124	120.461	21	96	90.47	PC Sys_high-gain	Public
CHYBA9	160	23.124	120.461	21	96	89.69	PC Sys_low-gain	Public
TTNBA3	162.81	22.976	121.307	28	97.28	84.82	PC Sys_high-gain	Public
TTNBA3	162.81	22.976	121.307	28	97.28	86.47	PC Sys_low-gain	Public
CHYBAC	166.34	23.182	120.485	30	89.6	55.12	PC Sys_high-gain	Public
CHYBAC	166.34	23.182	120.485	30	89.6	56.97	PC Sys_low-gain	Public
CHYBAF	177.34	23.274	120.382	24	120	346.82	SAMTAC700	Public
CHYBA5	181.93	23.309	120.313	30	99.84	72.69	PC Sys_high-gain	Public
CHYBA5	181.93	23.309	120.313	30	99.84	72.95	PC Sys_low-gain	Public
CHYBAE	199.94	23.449	120.165	30	99.84	94.21	PC Sys_high-gain	Public
CHYBAE	199.94	23.449	120.165	30	99.84	94.02	PC Sys_low-gain	Public
CHYBA4	200.32	23.464	120.235	26	102.4	50.83	PC Sys_high-gain	Public
CHYBA4	200.32	23.464	120.235	26	102.4	51.13	PC Sys_low-gain	Public
CHYBA3	200.75	23.489	120.428	29	102.4	44.04	PC Sys_high-gain	Public
CHYBA3	200.75	23.489	120.428	29	102.4	43.44	PC Sys_low-gain	Public
CHYBAD	207.02	23.515	120.179	30	102.4	134.33	PC Sys_high-gain	Public
CHYBAD	207.02	23.515	120.179	30	99.84	86.14	PC Sys_low-gain	Public
CHYBA1	208.88	23.564	120.476	23	102.4	43.89	PC Sys_high-gain	Public
HWABA4	265.55	23.901	121.538	29	99.84	22.72	PC Sys_high-gain	Public
HWABA4	265.55	23.901	121.538	29	099.84	22.49	PC Sys_low-gain	Public

Table 5. (Continued)

Array Name	Distance (km)	Latitude (Degrees N)	Longitude (Degrees E)	No. of Channels	Record length (seconds)	Maximum PGA (gal)	Datalogger	Ownership
TCUBA3	270.84	24.121	120.678	29	90	33.39	SAMTAC700	Public
HWABA1	275.07	23.975	121.577	30	84.48	17.42	PC Sys_high-gain	Public
HWABA1	275.07	23.975	121.577	30	84.48	17.71	PC Sys_low-gain	Public
HWABA0	276.93	23.98	121.611	30	120	20.33	SAMTAC700	Public
HWABA5	277.17	23.996	121.594	26	180	25.14	SAMTAC700	Private
HWABA2	277.72	23.995	121.593	27	89.6	15.64	PC Sys_high-gain	Private
HWABA2	277.72	23.995	121.593	27	89.6	15.75	PC Sys_low-gain	Private
HWABA3	277.81	23.996	121.592	30	101.12	27.12	PC Sys_high-gain	Private
HWABA3	277.81	23.996	121.592	30	94.72	27.12	PC Sys_low-gain	Private
TCUBA2	322.34	24.575	120.825	30	101.12	50.43	PC Sys_high-gain	Private
TCUBA2	322.34	24.575	120.825	30	101.12	50.79	PC Sys_low-gain	Private
TCUBAA	347.6	24.786	120.998	28	60	14.11	SAMTAC700	Public
ILABA2	362.21	24.751	121.758	30	102.4	7.12	PC Sys_high-gain	Public
ILABA2	362.21	24.751	121.758	30	94.72	7.32	PC Sys_low-gain	Public
TCUBA0	370.64	24.968	121.194	28	60	14.91	SAMTAC700	Public
TCUBA4	375.36	24.993	121.3	26	97.28	14.05	PC Sys_high-gain	Public
TCUBA4	375.36	24.993	121.3	26	97.28	14.13	PC Sys_low-gain	Public
TAPBA5	383.22	25.013	121.541	30	102.4	28.48	PC Sys_low-gain	Public
TAPBA6	383.41	25.014	121.542	30	102.4	17.81	PC Sys_low-gain	Public
TAPBA4	383.45	25.017	121.531	26	102.4	20.83	PC Sys_high-gain	Public
TAPBA4	383.45	25.017	121.531	26	102.4	20.85	PC Sys_low-gain	Public
TAPBAF	383.93	25.017	121.548	30	66.56	26.11	PC Sys_high-gain	Public
TAPBAF	383.93	25.017	121.548	30	61.44	25.69	PC Sys_low-gain	Public
TAPBA1	384.19	25.022	121.542	26	101.12	11.16	PC Sys_low-gain	Private
TAPBA8	385.9	25.038	121.537	30	90	23.99	SAMTAC700	Public
TAPBA7	386.21	25.046	121.515	29	102.4	8.4	PC Sys_low-gain	Private
TAPBA2	386.55	25.038	121.565	57	150	11.35	SAMTAC700	Public
TAPBAG	386.56	25.033	121.565	30	120	29.9	SAMTAC700	Private

Pingtung earthquake is shown in Fig. 18. Please note that the waveform amplitudes are not shown in true scale (they are normalized to fit within the plotting space).

6. Conclusions

Over 1000 strong-motion records were obtained by CWB for the two Pingtung earthquakes. Since large (M ~ 7) normal-faulting earthquakes are rare, these data are significant for studying the subduction and collision processes near Taiwan. Our main effort thus far has been to document and process this data set following a standard procedure so that it can be archived online to provide universal access for research purposes. We have done some preliminary data analysis and presented some tentative results. We plan to perform additional data analyses for a future paper intended to be published in about one year. The computed pseudo-acceleration response spectra (PSA) of these two earthquakes are

Table 6. Summary of strong-motion array data recorded for the second Pingtung earthquake.

Array Name	Distance (km)	Latitude (Degrees N)	Longitude (Degrees E)	No. of Channels	Record length (seconds)	Maximum PGA (gal)	Datalogger	Ownership
KAUBA0	75.34	22.643	120.315	26	300	85.57	SAMTAC700	Private
TTNBA0	115.13	22.758	121.146	20	101.12	68.1	PC Sys_high-gain	Public
TTNBA0	115.13	22.758	121.146	20	103.68	68.16	PC Sys_low-gain	Public
CHYBA2	115.52	22.992	120.217	27	102.4	139.87	PC Sys_high-gain	Private
CHYBA2	115.52	22.992	120.217	27	102.4	137.9	PC Sys_low-gain	Private
TTNBA1	115.84	22.757	121.151	25	103.68	53.98	PC Sys_high-gain	Public
TTNBA1	115.84	22.757	121.151	25	103.68	54.14	PC Sys_low-gain	Public
CHYBAH	115.94	22.993	120.205	30	99.84	107.54	PC Sys_high-gain	Public
CHYBAH	115.94	22.993	120.205	30	102.4	109	PC Sys_low-gain	Public
CHYBA0	116.11	22.999	120.217	28	150	148.35	SAMTAC700	Public
CHYBA7	116.51	22.991	120.168	29	102.4	78	PC Sys_high-gain	Private
CHYBA7	116.51	22.991	120.168	29	102.4	78.22	PC Sys_low-gain	Private
CHYBAA	120.27	23.038	120.237	30	101.76	123.75	PC Sys_high-gain	Public
CHYBAA	120.27	23.038	120.237	30	101.76	140.41	PC Sys_low-gain	Public
CHYBAI	121.3	23.063	120.335	25	102.4	87.14	PC Sys_high-gain	Public
CHYBAI	121.3	23.063	120.335	25	99.84	87.91	PC Sys_low-gain	Public
CHYBAB	125.92	23.09	120.208	30	99.84	256.83	PC Sys_high-gain	Public
CHYBAB	125.92	23.09	120.208	30	99.84	252.64	PC Sys_low-gain	Public
CHYBA9	128.35	23.124	120.461	21	103.68	181.28	PC Sys_high-gain	Public
CHYBA9	128.35	23.124	120.461	21	103.68	209.59	PC Sys_low-gain	Public
CHYBAC	134.94	23.182	120.485	30	99.84	133.44	PC Sys_high-gain	Public
CHYBAC	134.94	23.182	120.485	30	99.84	130.16	PC Sys_low-gain	Public
TTNBA3	144.27	22.976	121.307	28	94.72	57.92	PC Sys_high-gain	Public
TTNBA3	144.27	22.976	121.307	28	94.72	59.42	PC Sys_low-gain	Public
CHYBAF	145.07	23.274	120.382	24	150	406.68	SAMTAC700	Public
CHYBA5	149.21	23.309	120.313	30	102.4	91.62	PC Sys_high-gain	Public
CHYBA5	149.21	23.309	120.313	30	102.4	91.46	PC Sys_low-gain	Public
CHYBAE	166.54	23.449	120.165	30	102.4	166.89	PC Sys_high-gain	Public
CHYBAE	166.54	23.449	120.165	30	102.4	163.23	PC Sys_low-gain	Public
CHYBA4	167.26	23.464	120.235	26	102.4	114.12	PC Sys_high-gain	Public
CHYBA4	167.26	23.464	120.235	26	99.84	114.37	PC Sys_low-gain	Public
CHYBA3	168.91	23.489	120.428	29	99.84	71.98	PC Sys_high-gain	Public
CHYBA3	168.91	23.489	120.428	29	102.4	70.96	PC Sys_low-gain	Public
CHYBAD	173.74	23.515	120.179	30	102.4	134.31	PC Sys_low-gain	Public
CHYBA1	177.4	23.564	120.476	23	102.4	92.04	PC Sys_high-gain	Public
TCUBA3	240.6	24.121	120.678	29	120	63.65	SAMTAC700	Public
HWABA4	243.02	23.901	121.538	29	102.40	030.66	PC Sys_high-gain	Public

Table 6. (Continued)

Array Name	Distance (km)	Latitude (Degrees N)	Longitude (Degrees E)	No. of Channels	Record length (seconds)	Maximum PGA (gal)	Datalogger	Ownership
HWABA4	243.02	23.901	121.538	29	102.40	031.05	PC Sys_low-gain	Public
HWABA1	252.48	23.975	121.577	30	93.44	27.47	PC Sys_high-gain	Public
HWABA1	252.48	23.975	121.577	30	92.16	27.5	PC Sys_low-gain	Public
HWABA0	254.61	23.98	121.611	30	150	24.89	SAMTAC700	Public
HWABA5	254.62	23.996	121.594	26	180	31.65	SAMTAC700	Private
HWABA2	255.16	23.995	121.593	27	94.72	17.92	PC Sys_high-gain	Private
HWABA2	255.16	23.995	121.593	27	97.28	17.99	PC Sys_low-gain	Private
HWABA3	255.25	23.996	121.592	30	102.4	24.52	PC Sys_high-gain	Private
HWABA3	255.25	23.996	121.592	30	102.4	24.6	PC Sys_low-gain	Private
TCUBA2	292.69	24.575	120.825	30	101.12	36.63	PC Sys_high-gain	Private
TCUBA2	292.69	24.575	120.825	30	101.12	36.45	PC Sys_low-gain	Private
TCUBAA	318.75	24.786	120.998	28	90	21.44	SAMTAC700	Public
ILABA2	338.07	24.751	121.758	30	102.4	8.16	PC Sys_high-gain	Public
ILABA2	338.07	24.751	121.758	30	102.4	8.25	PC Sys_low-gain	Public
TCUBA0	342.67	24.968	121.194	28	90	13.92	SAMTAC700	Public
TCUBA4	347.95	24.993	121.3	26	102.4	16.09	PC Sys_high-gain	Public
TCUBA4	347.95	24.993	121.3	26	102.4	16.17	PC Sys_low-gain	Public
TAPBA5	357.16	25.013	121.541	30	102.4	29.73	PC Sys_low-gain	Public
TAPBA4	357.32	25.017	121.531	26	122.88	19.38	PC Sys_high-gain	Public
TAPBA4	357.32	25.017	121.531	26	122.88	19.62	PC Sys_low-gain	Public
TAPBA6	357.36	25.014	121.542	30	102.4	15.32	PC Sys_low-gain	Public
TAPBAF	357.9	25.017	121.548	30	69.12	25.92	PC Sys_high-gain	Public
TAPBAF	357.9	25.017	121.548	30	66.56	25.75	PC Sys_low-gain	Public
TAPBA1	358.11	25.022	121.542	26	101.12	15.72	PC Sys_low-gain	Private
TAPBA8	359.77	25.038	121.537	30	60	24.76	SAMTAC700	Public
TAPBA7	359.94	25.046	121.515	29	102.4	10.54	PC Sys_low-gain	Private
TAPBA2	360.58	25.038	121.565	57	150	18.02	SAMTAC700	Public
TAPBAG	360.7	25.033	121.565	30	120	29.94	SAMTAC700	Private
TAPBAA	361.5	25.075	121.469	29	101.12	41.9	PC Sys_ low-gain	Public

similar, with the motions from the second event being somewhat larger on average. Motions from soil sites are clearly larger than for rock sites for most distances. Comparisons were also made of the data with ground-motion prediction equations (GMPEs) for subduction earthquakes. The motions from the second event are in better agreement with the predictions than for the first event, which are generally lower than the predicted motions. A preliminary coherence analysis of the recorded waveforms between several co-located accelerographs at the TAP117 site was also made. The results indicate that data from 24-bit accelerographs are similar, and are superior to that from 12- and 16-bit accelerographs, but in the period range 0 - 3 s, there are no obvious systematic differences between PSA values computed from these two classes of instruments.

Acknowledgements We thank Gail Atkinson and Chris

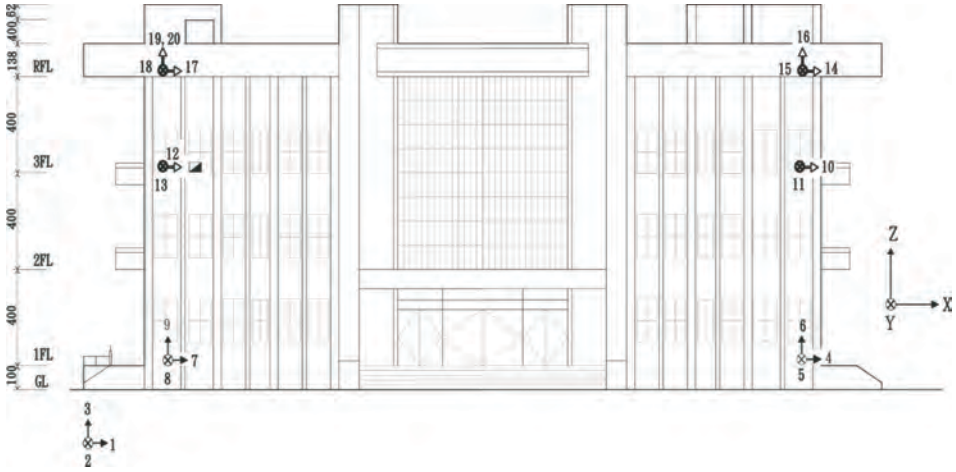

Fig. 16. Cross section view of the National Taitung Senior High Commercial and Vocational School where a strong-motion array is installed. The numbers in the left-hand side is in cm units, i.e., 4 m in height between different floors. The numbers (1 to 20) indicate where accelerometers are installed and correspond to the channel numbers in the Figs. 17 and 18.

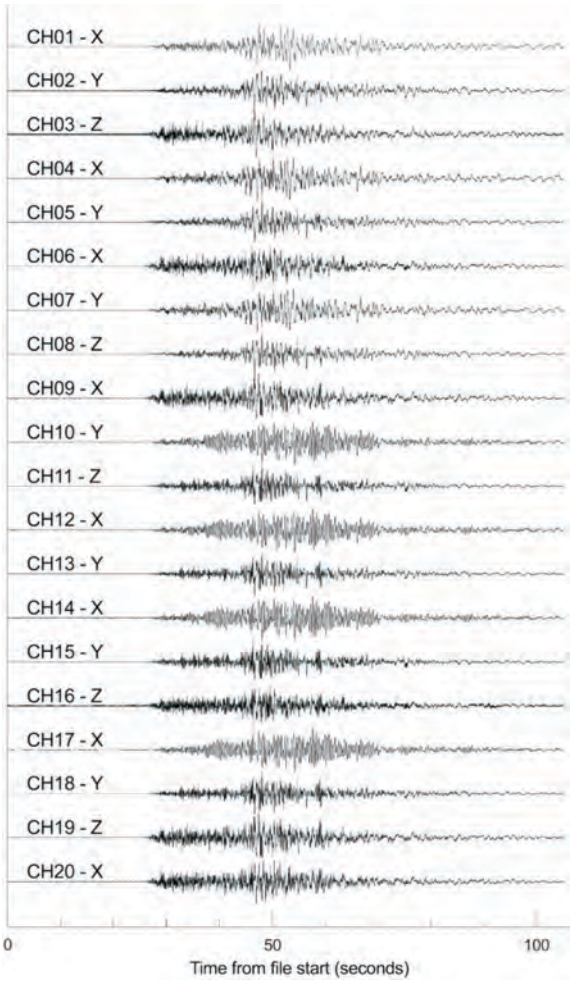

Fig. 17. Waveforms recorded by the strong-motion array (TTNBA0) at the National Taitung Senior High Commercial and Vocational School from the first Pingtung earthquake. The channel number corresponds to the accelerometer number shown in Fig. 16. Please note that the waveform amplitudes are not shown in true scale (they are normalized to fit within the plotting space).

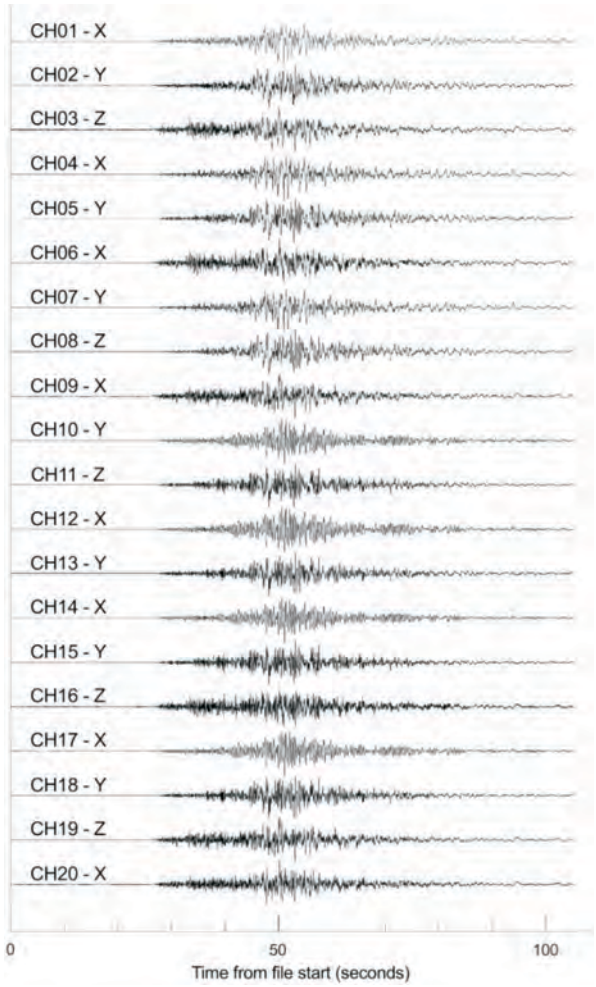

Fig. 18. Waveforms recorded by the strong-motion array (TTNBA0) at the National Taitung Senior High Commercial and Vocational School from the second Pingtung earthquake. The channel number corresponds to the accelerometer number shown in Fig. 16. Please note that the waveform amplitudes are not shown in true scale (they are normalized to fit within the plotting space).

Stephens for their thoughtful comments and suggestions that greatly improved our manuscript. We also wished to thank Dr. Moh-Jiann Huang and Prof. Chin-Hsiung Loh for reviewing the manuscript with many helpful comments. A careful reading by John Douglas caught several errors. This study was fund by the National Science Council, ROC under Grant No. NSC97-2119-M-052-003.

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