UNIVERSITY OF CHILE
FACULTY OF MATHEMATHICS AND PHYSICAL SCIENCES
CIVIL ENGINEERING DEPARTAMENT

MAULE REGION EARTHQUAKE

FEBRUARY 27, 2010
Mw = 8.8

R. BOROSCHEK
P. SOTO
R. LEON

RENADIC REPORT 10/08 Rev. 2
OCTUBER 2010

NATIONAL STRONG MOTION NETWORK OF

UNIVERSITY OF CHILE
FACULTY OF MATHEMATICS AND PHYSICAL SCIENCES
CIVIL ENGINEERING DEPARTAMENT

RENADIC - UCH

MAULE REGION EARTHQUAKE

FEBRUARY 27, 2010 Mw = 8.8

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RENADIC REPORT 10/08 REV. 2

CIVIL ENGINEERING DEPARTAMENT
FACULTY OF MATHEMATHICS AND PHYSICAL SCIENCES
UNIVERSITY OF CHILE

OCTUBER 2010

2002, Blanco Encalada Avenue, Santiago, Chile.- Phone number: (56-2) 978 43 72 – Fax number: (56-2) 689 28 33
www.terremotosuchile.cl
www.renadic.cl

The Department of Civil Engineering, Faculty of Mathematics and Physical Sciences of University of Chile keeps a strong motion network part of which is located central and southern regions as indicated in Table 1 and Figure 1. The information obtained from this network is available in **www.renadic.cl**

Table 1. Equipment Location

Region	Locality	Station	Type of Equipment
III	Copiapo	Copiapo	QDR, digital free field, U. de Chile
	Vallenar	Vallenar	QDR, digital free field, U. de Chile
IV	La Serena	La Serena	SMA1, analog free field, U. de Chile
	Illapel	Illapel	SMA1, analog free field, U. de Chile
	Puerto Oscuro	Amolanas Bridge	K2, digital free field, U. de Chile
V	Papudo	Papudo	SMA1, analog free field, U. de Chile
	Viña del Mar	Marga-Marga Viaduct (El Salto)	Etna, digital free field, U. de Chile
		Viña del Mar (center)	QDR, digital free field, U. de Chile
	Valparaíso	U.T.F.M	SMA1, analog free field , U. de Chile
		Almendral	SMA1, analog free field , U. de Chile
	Llolleo	Llolleo	SMA1, analog free field , U. de Chile
MR	Santiago	FCFM	Etna, analog structural slab , U. de Chile
		Isolated (Center)	SSA-2, analog free field, U. de Chile
		Maipú	QDR, digital free field, U. de Chile
		Peñalolen	QDR, digital free field, U. de Chile
		Puente Alto	QDR, digital free field, U. de Chile
		La Florida	K2, digital free field, METRO S.A.
VI	Matanzas	Matanzas	SMA1, analog free field, U. de Chile
	Rancagua	Rancagua	QDR, digital free field, U. de Chile
	Pichilemu	Pichilemu	CUSP, digital free field, U. de Chile
VII	Hualañe	Hualañe	SMA1, analog free field, U. de Chile
	Curico	Curico	QDR, digital free field, U. de Chile
	Iloca	Iloca	SMA1, analog free field, U. de Chile
	Talca	Talca	SMA1, analog free field, U. de Chile
	Constitución	Constitución	SMA1, analog free field , U. de Chile
	Cauquenes	Cuaquenes	SMA1, analog free field , U. de Chile
VIII	Chillan	Chillan	SMA1, analog free field , U. de Chile
	Concepción	Concepción (center)	SMA1, analog free field , U. de Chile
IV	Angol	Algol	QDR,digital free field , U. de Chile
XV	Valdivia	Valdivia	QDR,digital free field , U. de Chile

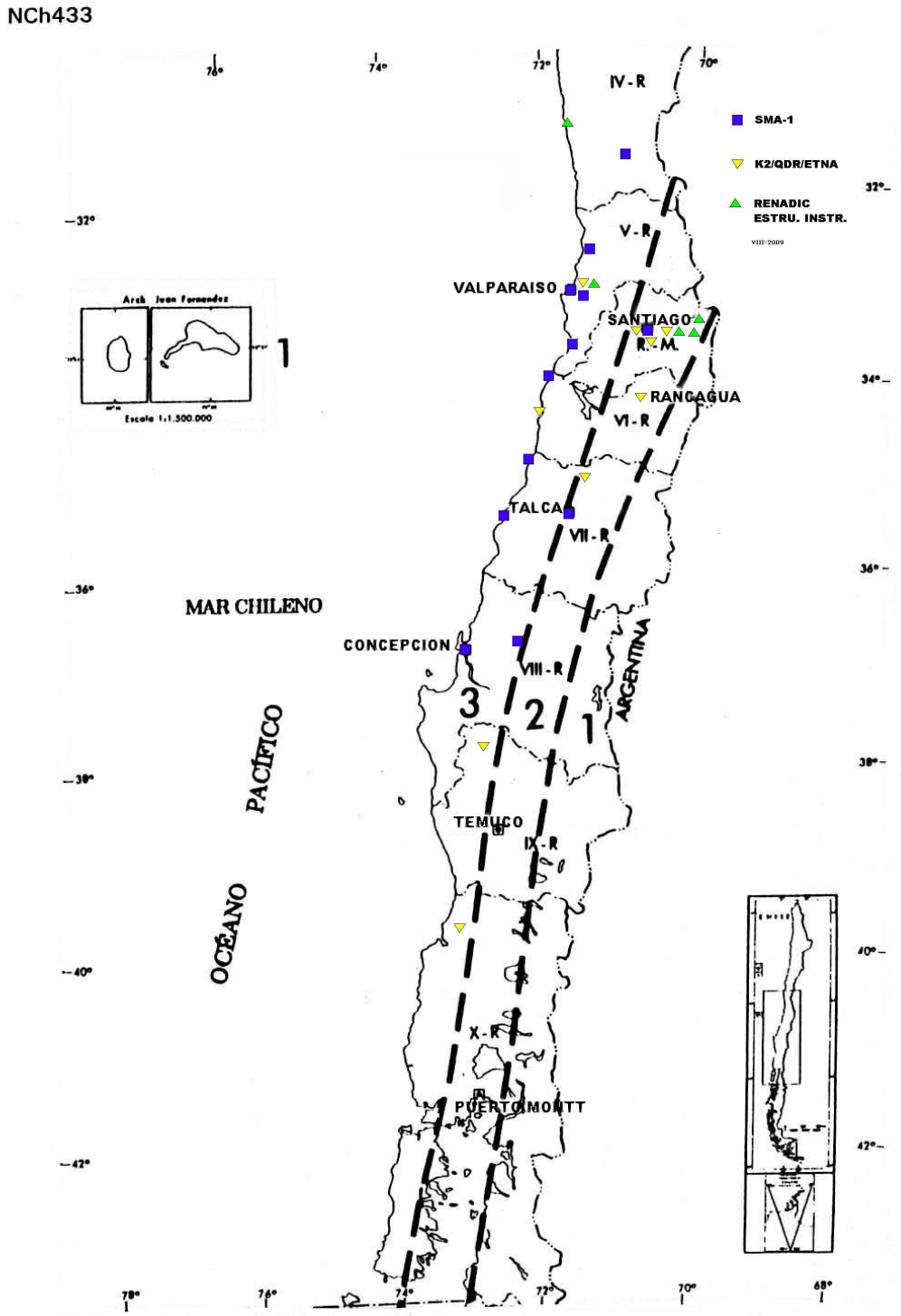

Figure 1. Strong Motion Network

On February 27, 2010 an earthquake of Mw Magnitude = 8.8 took place in the south-central area of Chile affecting localities from the V and XV Regions. Its epicenter was estimated at 43 km south west of the locality of Cobquecura (VIII Region), Figure 2. The damage and casualties were concentrated mainly in the coastal zone from the V to the IX Regions.

This report presents the records obtained by the strong motion network of the Department of Civil Engineering at stations located between the III and the XV Regions. These records were obtained with Kinemetrics Etna, QDR, SSA-2 or K2 oriented according to the geographical North and analog equipment Kinemetrics SMA-1 whose Azimuth between the North and the longitudinal direction of the equipment is known.

The peak accelerations recorded are shown in Table 2, Figures 3, 4, 5, 6, 7 and 8.

UNIVERSIDAD DE CHILE
DEPARTAMENTO DE GEOFISICA
SERVICIO SISMOLOGICO
Blanco Encalada 2002 - Casilla 2777 - Santiago, Chile
Teléfonos: 9784298 - Fax 56-2-6873508
Dirección web : http://www.sismologia.cl
E-mail: sismoguc@dgf.uchile.cl

INFORME DE SISMO

Fecha y Hora Local: 27/02/2010 03:34:08

HIPOCENTRO

Hora UTC:	06:34:08 27/02/2010
Latitud:	-36 17' 23"
Longitud:	-73 14' 20"
Profundidad:	30.1 km
Magnitud:	8.8 (Mw) GS
Fuente:	Servicio Sismológico (U. de Chile)

Referencia: 43 km al SO de Cobquecura

Intensidades (Escala de Mercalli)

Fuente: ONEMI-DIREMER Desde la Región de Antofagasta hasta la Región de Los Lagos

Concepción	IX	Calama	II
Rancagua	VIII		
Santiago	VIII		
Talca	VIII		
Temuco	VIII		
Valdivia	VI		
Valparaíso	VI		
Viña del Mar	VI		
Pto. Montt	V		
Vicuña	III-IV		
Copiapó	III		
Coquinbo	III		
Huayco	III		
T.Amarilla	III		
Antofagasta	II		

OBSERVACIONES: Se reporta cortes de energía eléctrica y daños estructurales en viviendas.

Informe preparado por: Oficina de Análisis Revisada 12/04/2010 FIGURE 2

Table 2. Uncorrected peak accelerations recorded on February 27, 2010 Rev. 2

Locality	Station	Azimuth	Peak Accelerations (g)					
			Channel 1		Channel 2		Channel 3	
Copiapó (III Region)	QDR	0	EW	0.030	NS.	0.016	V	0.008
Vallenar (III Region)	QDR	0	EW	0.020	NS	0.019	V	0.010
Papudo (V Region)	SMA-1	60	Long.	0.295	V	0.155	Trans	0.421
Viña del Mar, Marga-marga (V Region)	Etna	0	NS	0.351	V	0.261	EW	0.338
Viña del Mar, Center (3) (V Region)	QDR	0	EW	0.334	NS	0.219	V	0.186
Valparaíso, UTFSM (3) (V Region)	SMA–1	180	Long.	0.137	V	0.079	Trans.	0.304
Valparaíso, Almendral (3) (V Region)	SMA-1	310	Long.	0.224	V	0.146	Trans.	0.265
Llolleo (3) (V Region)	SMA-1	340	Long.	0.319	V	0.702	Trans.	0.564
Santiago, FCFM (1) MR	**ETNA**	**0**	**EW**	**0.163**	**NS**	**0.165**	**V**	**0.138**
Santiago, center MR	SSA-2	270	Long.	0.218	V	0.182	Trans.	0.309
Santiago, Maipú MR	QDR	0	EW	0.478	NS	0.561	V	0.240
Santiago, Peñalolen MR	QDR	0	EW	0.293	NS	0.295	V	0.280
Santiago, Puente Alto MR	QDR	0	EW	0.263	NS	0.265	V	0.130
Santiago, La Florida MR	K2	0	NS	0.236	V	0.130	EW	0.165
Matanzas (VI Region)	SMA-1	0	Long.	0.342	V	0.234	Trans.	0.308
Hualañe (VII Region)	SMA-1	0	Long.	0.389	V	0.390	Trans.	0.461
Curico (VII Region)	QDR	150	NS	0.470	V	0.198	Trans.	0.409
Talca (VII Region)	SMA-1	0	Long.	0.477	V	0.244	Trans.	0.424
Constitución (VII Region)	SMA-1	0	Long.	0.552	V	0.352	Trans.	0.640
Concepción (VIII Region)	SMA-1	60	Long.	0.402	V	0.398	Trans.	0.284
Angol (2) (IX Region)	**QDR**	**0**	**EW**	**0.681**	**NS**	**0.928**	**V**	**0.281**
Valdivia (XV Region)	QDR	0	EW	0.138	NS	0.092	V	0.051

Notes :
1 – Not a free field station, recorder inside building.
2 – Recording site in evaluation of possible station, equipment, structure and foundation interaction.
3 - The same site for the earthquake of 1985.

The data were processed by means of an automatic processing system based on a standard software. The latter consists basically on the baseline correction of records and the filtering of high and low frequencies with a band pass filter of 0.15- 0.25 to 23.0-25.0 Hz . This condition may not be satisfactory for some specific studies. The integration into velocity and displacement is given only for records that present a peak acceleration higher than 0.10 g. The acceleration response spectrum is presented for all records for critical damping ratio of 0.00, 0.02, 0.05, 0.10 and 0.20. The highest acceleration recorded was 916 cm/seg2 (0.935 g) in the North-South component of the Angol Station.

ACKNOWLEDGEMENTS

- METRO DE SANTIAGO S.A.

- MINISTRY OF HEALTH, GOVERNMENT OF CHILE

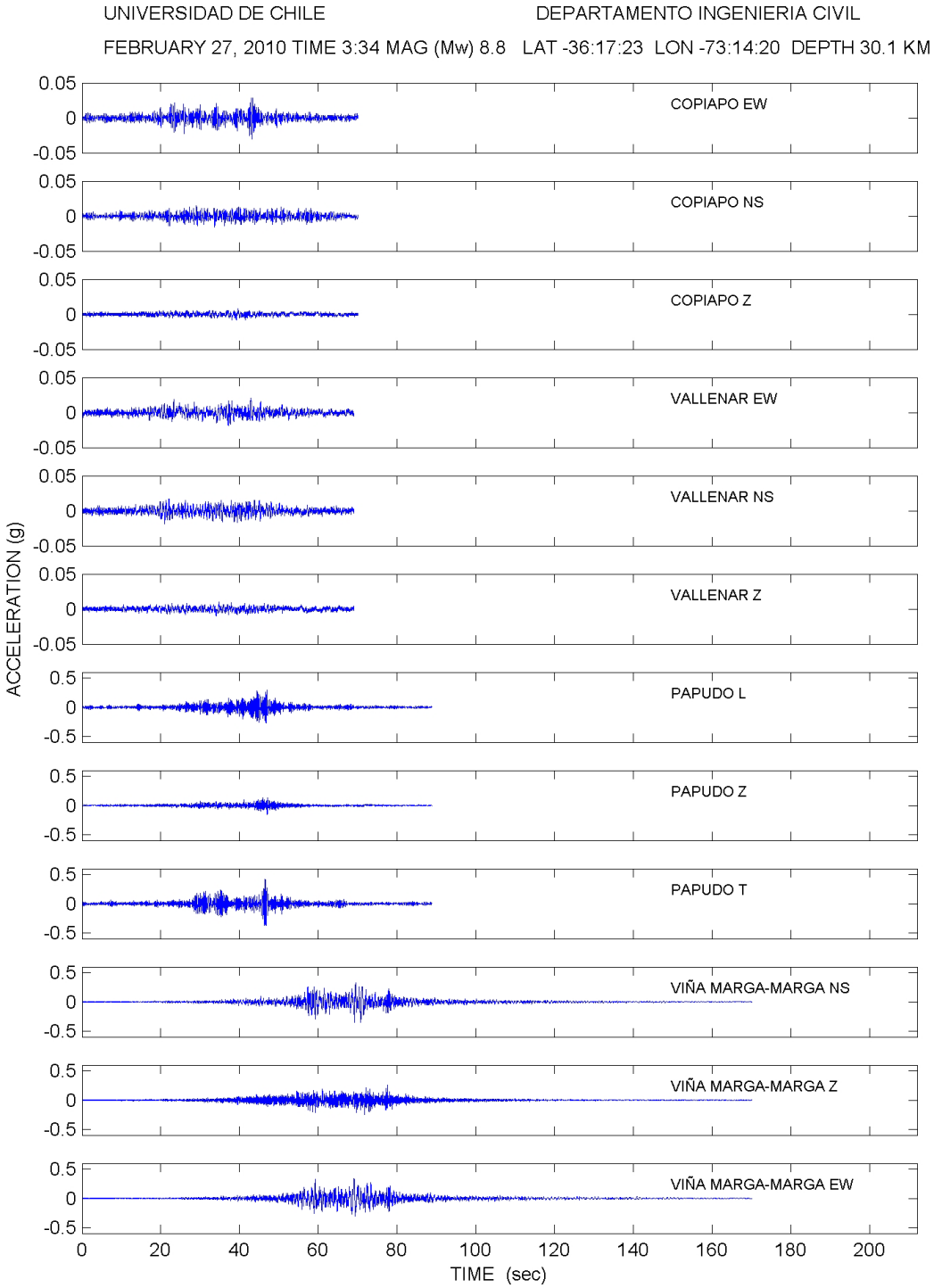

Figure 3. Record of February 27 , 2010

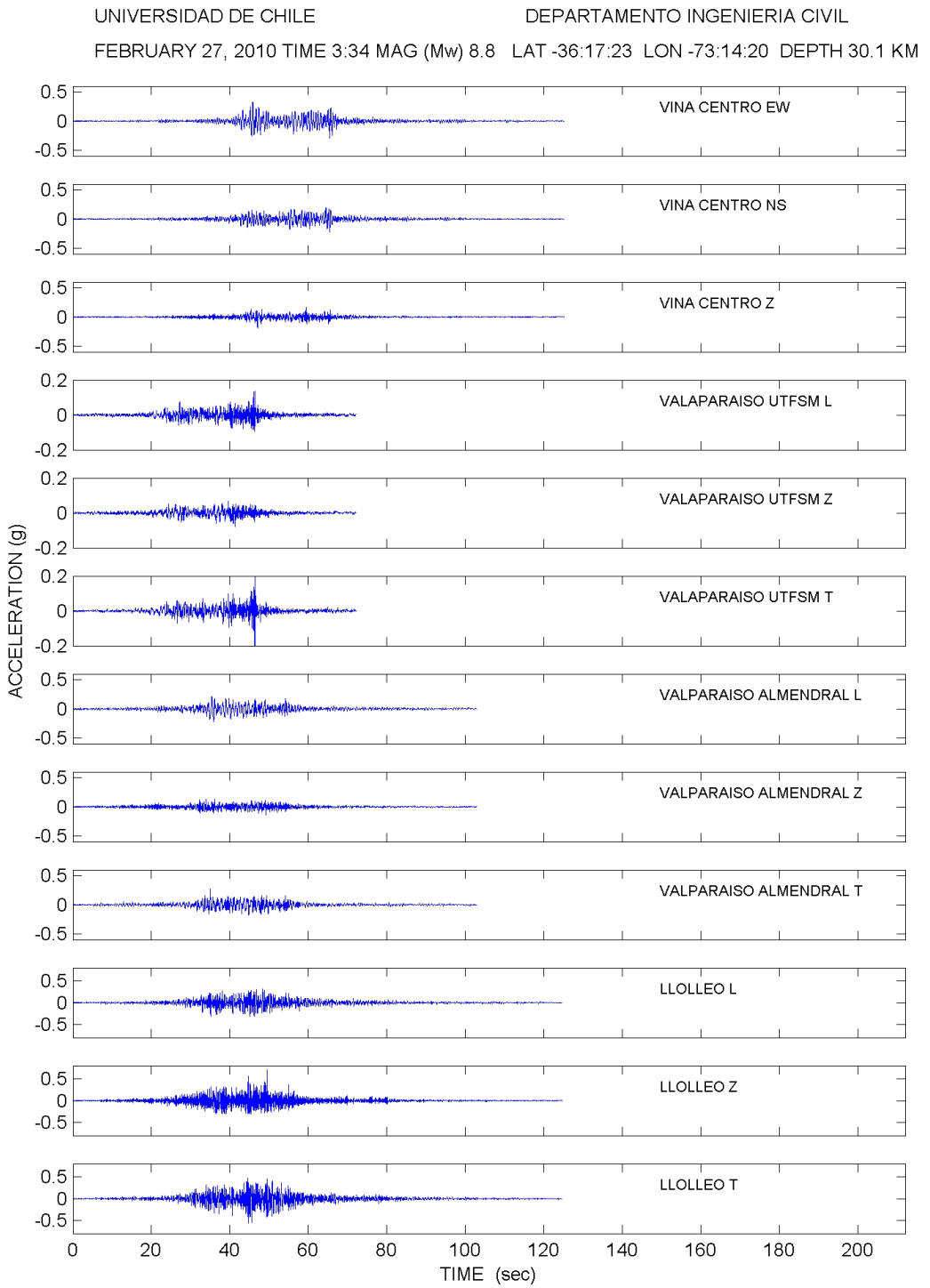

Figure 4. Record of February 27 , 2010

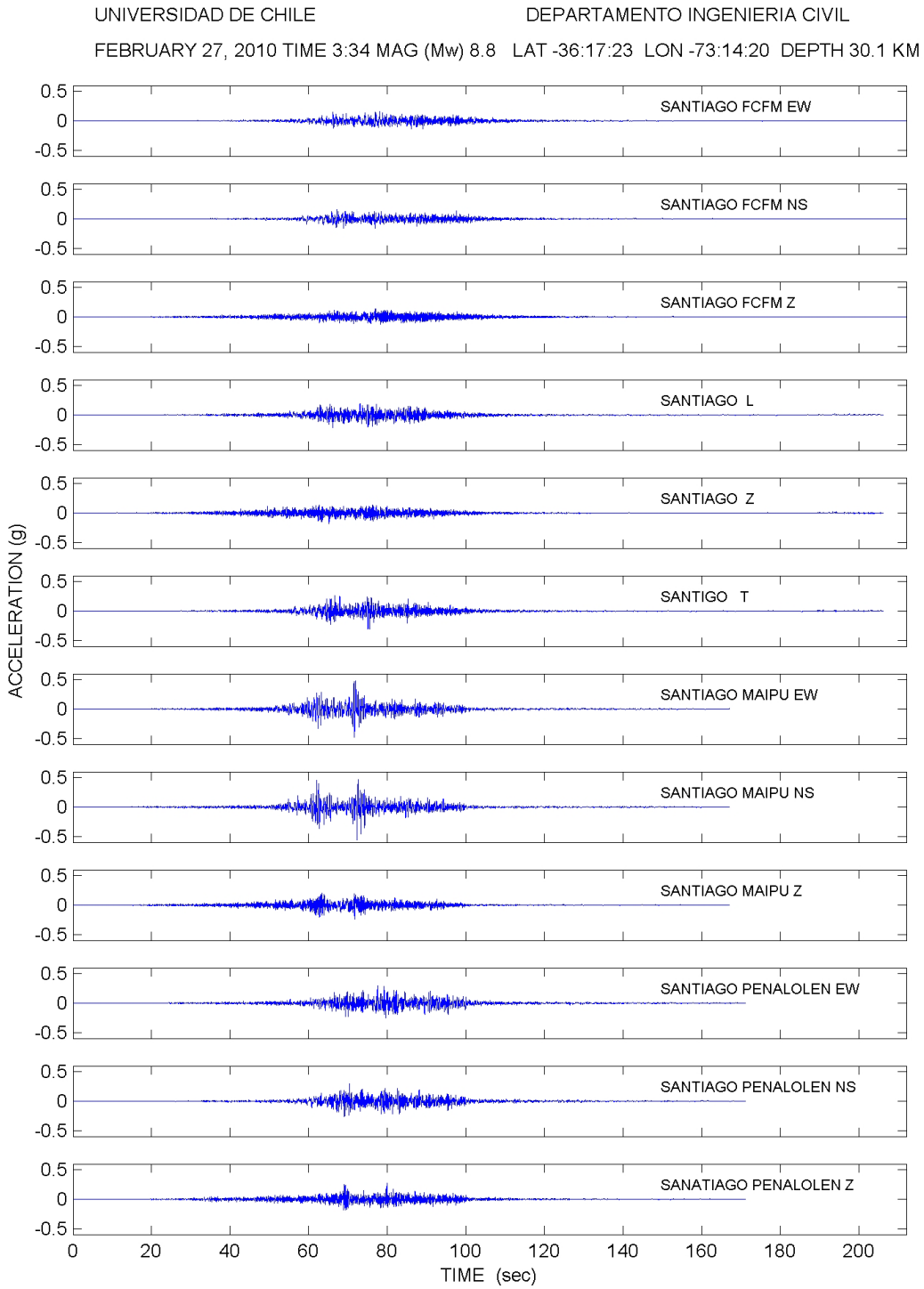

Figure 5. Record of February 27 , 2010

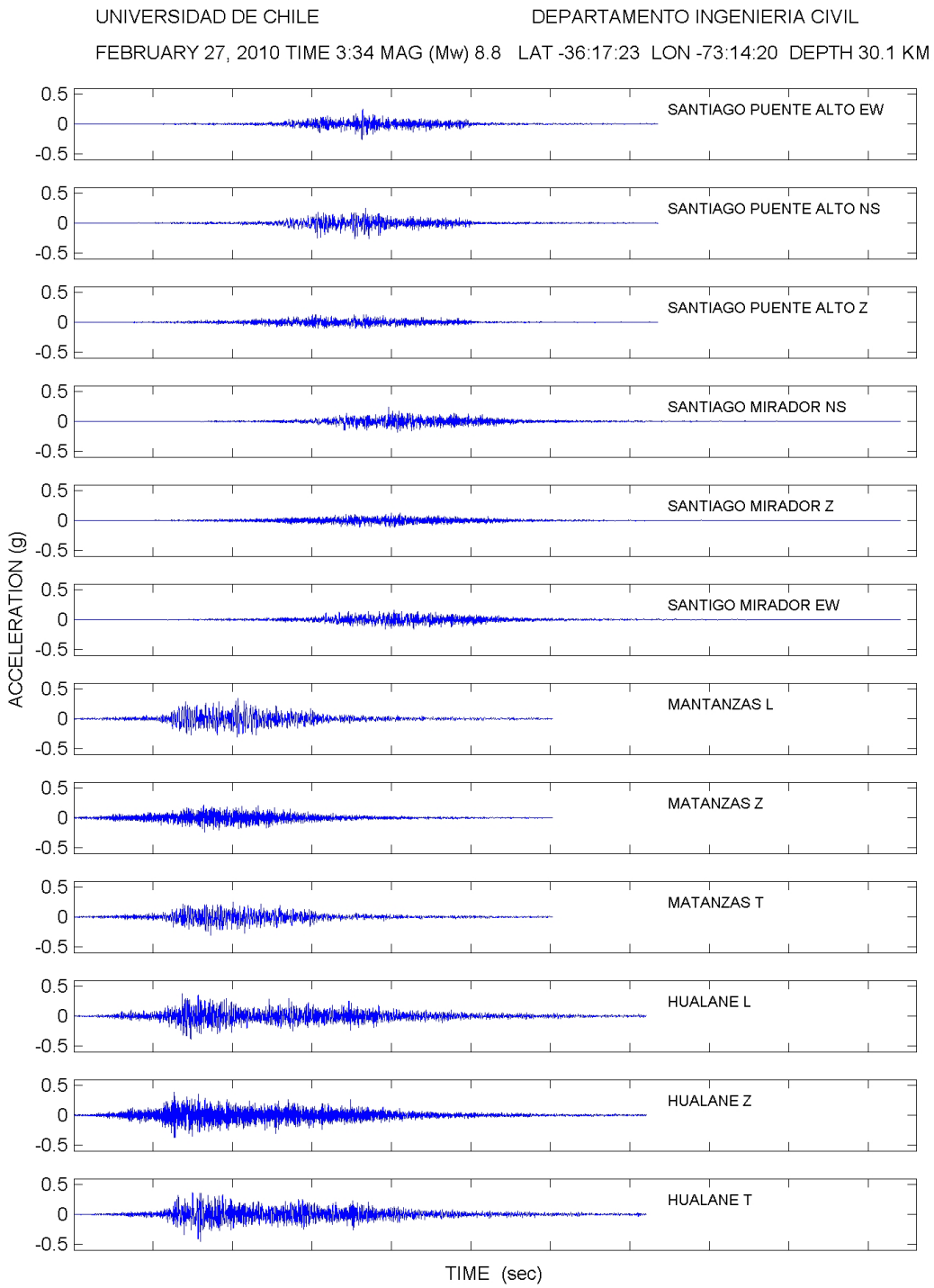

Figure 6. Record of February 27 , 2010

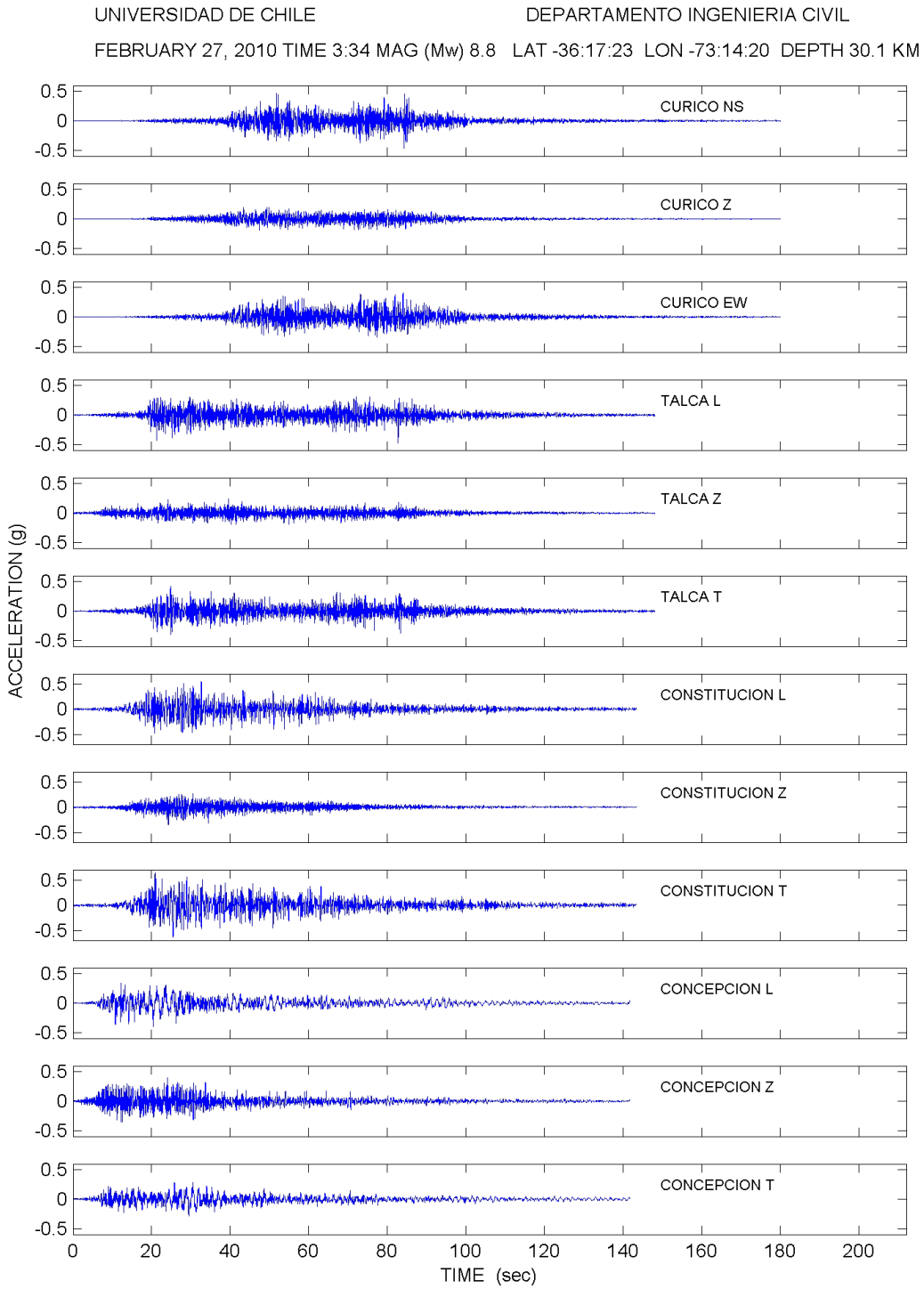

Figure 7. Record of February 27 , 2010

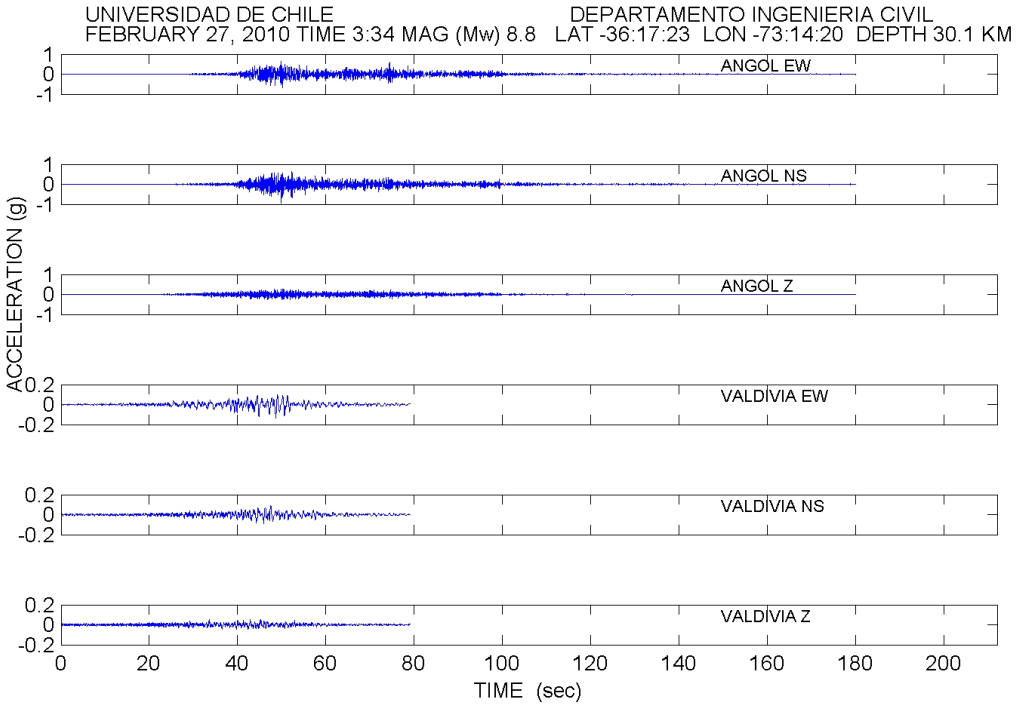

Figure 8. Record of February 27 , 2010

NATIONAL STRONG MOTION NETWORK OF

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FACULTY OF MATHEMATICS AND PHYSICAL SCIENCES
CIVIL ENGINEERING DEPARTAMENT

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CORRECTED ACCELEROGRAM

2002, Blanco Encalada Avenue, Santiago, Chile.- Phone number: (56-2) 978 43 72 – Fax number: (56-2) 689 28 33
www.terremotosuchile.cl
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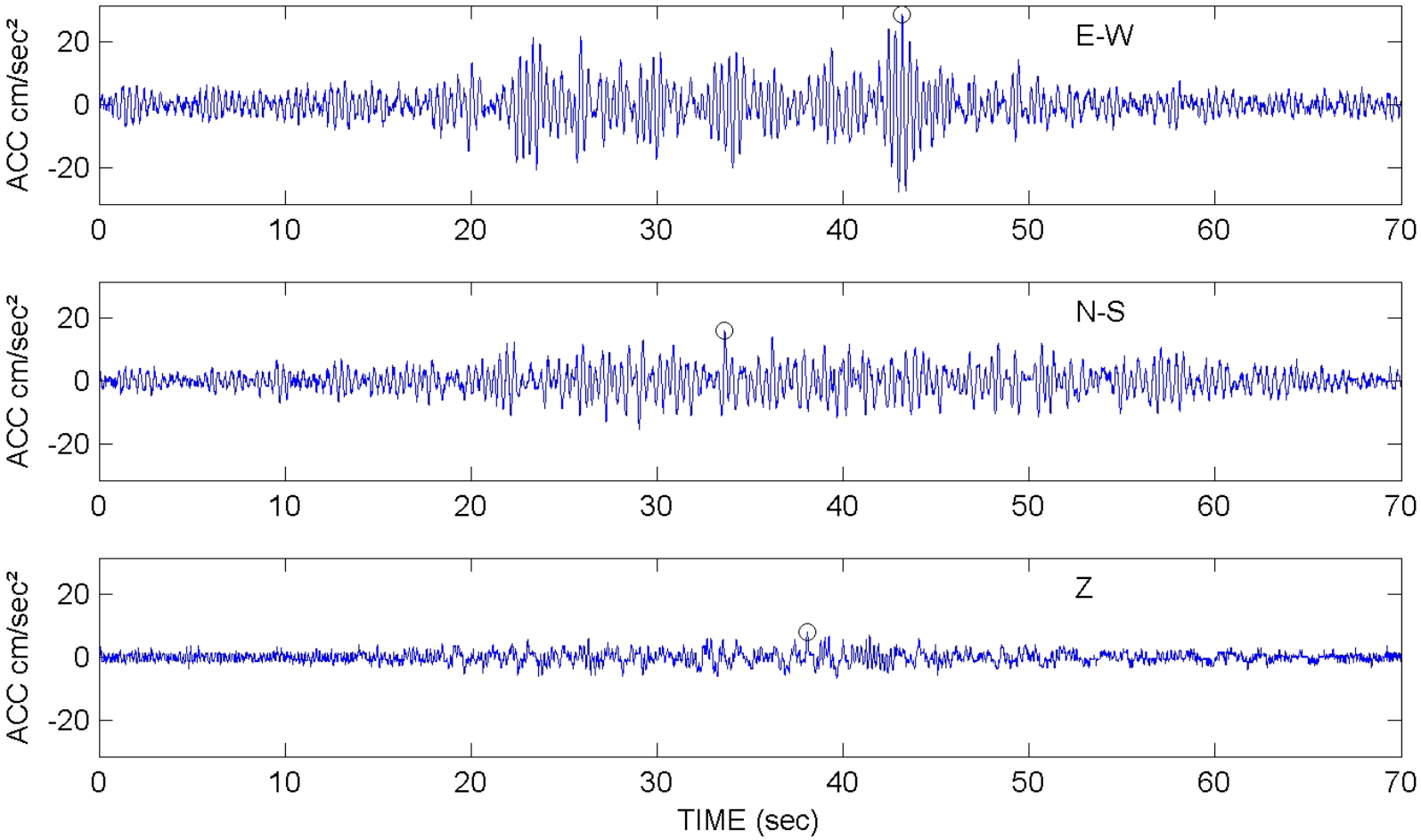
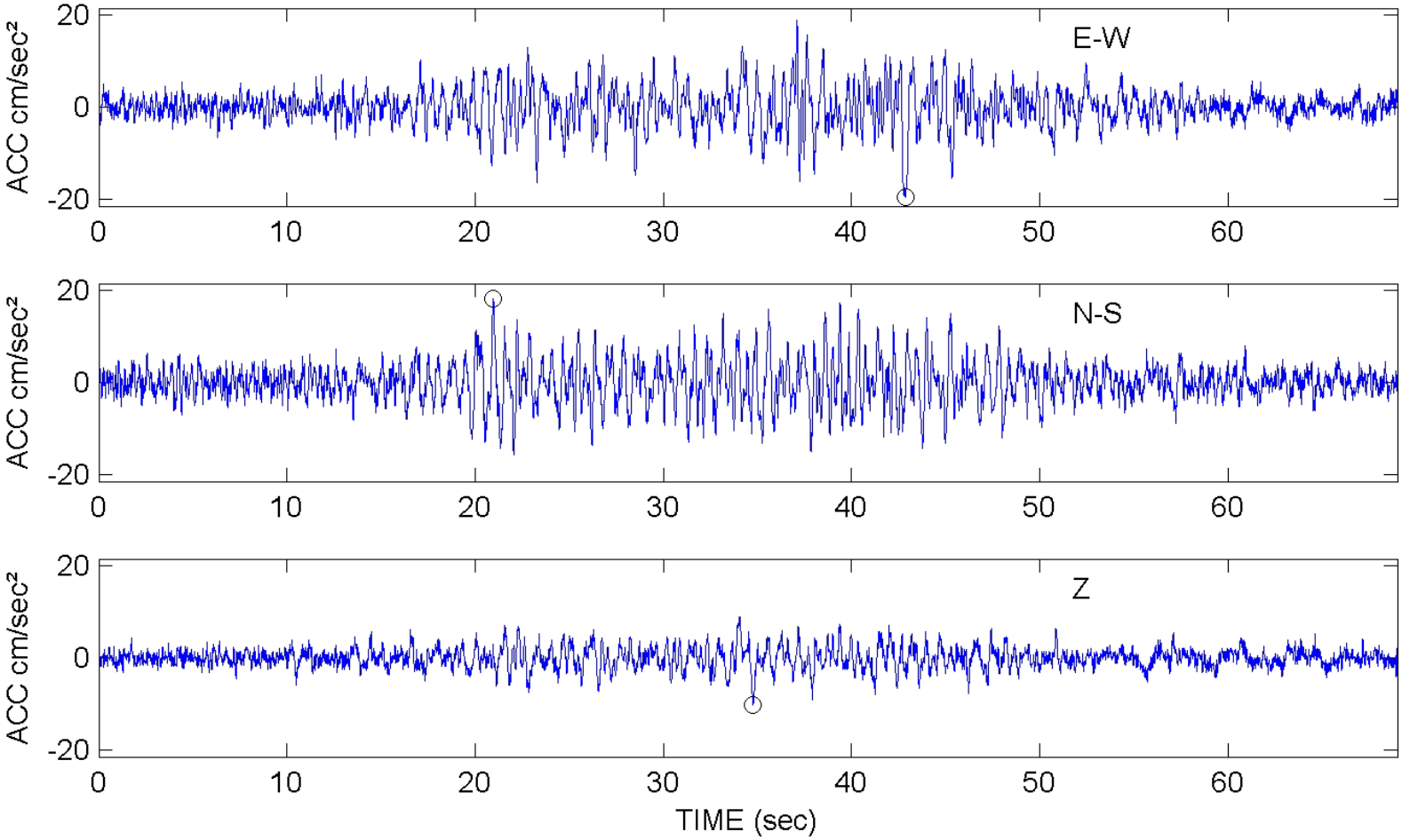
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
COPIAPO QDR 672
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : E-W =28.71 cm/sec² N-S =15.98 cm/sec² Z =7.86 cm/sec²



UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
VALLENAR QDR 501
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : E-W =19.43 cm/sec² N-S =18.14 cm/sec² Z =10.24 cm/sec²



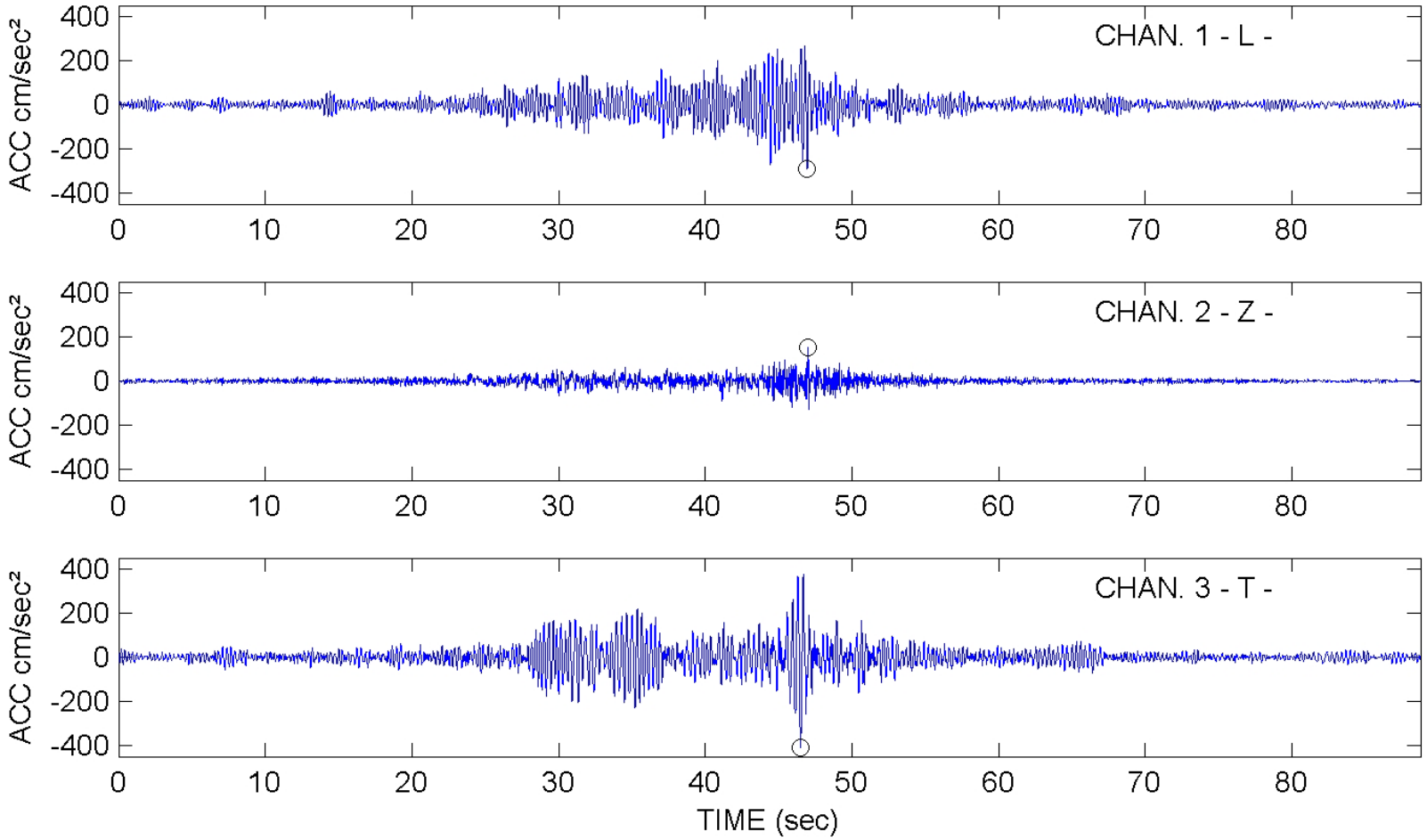
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL

PAPUDO PRELIMINARY SMA-1 5014

FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM

BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ

PEAK : CHAN.1 L =291.21 cm/sec² CHAN.2 Z =153.44 cm/sec² CHAN.3 T =408.59 cm/sec²



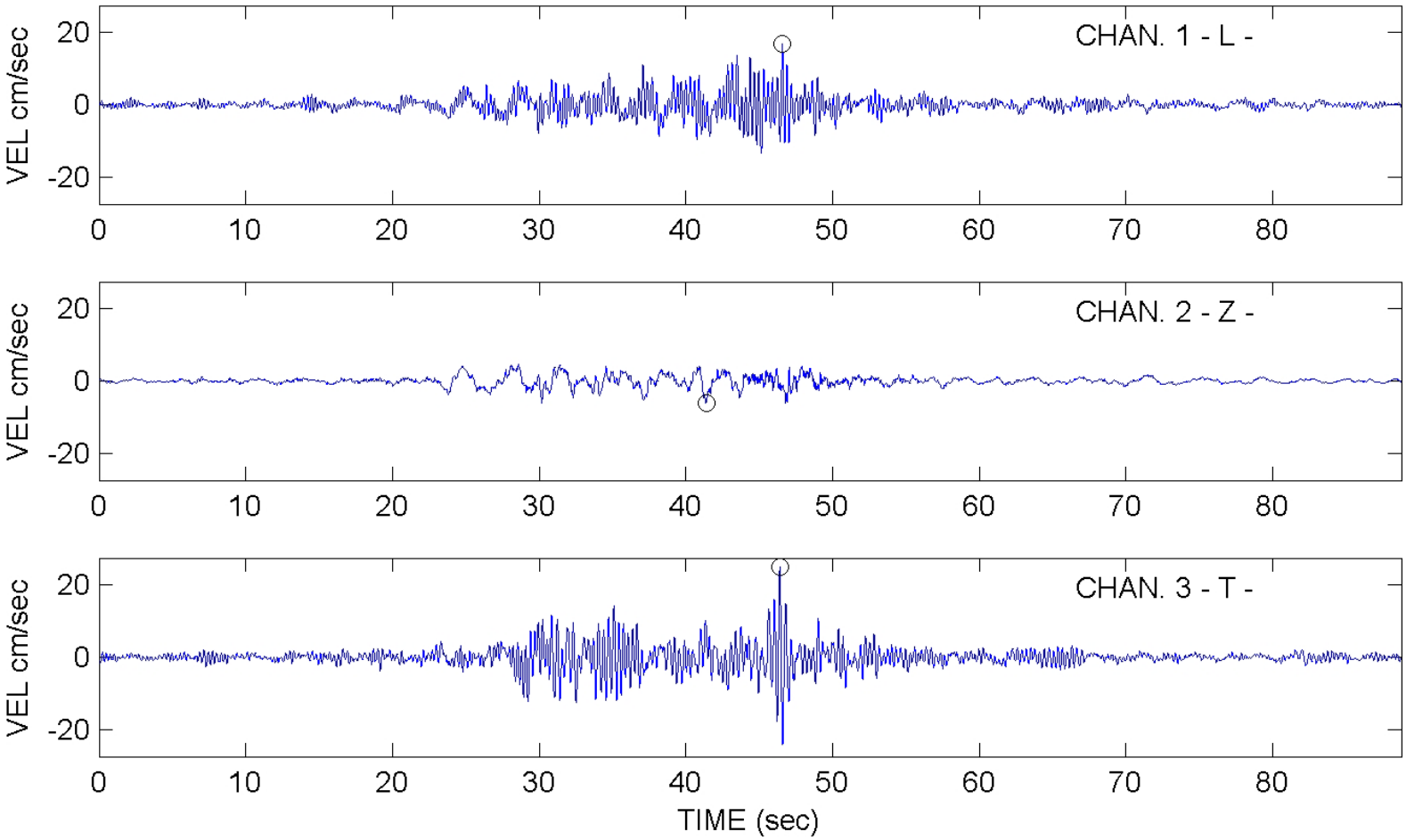
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL

PAPUDO PRELIMINARY SMA-1 5014

FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM

BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ

PEAK : CHAN.1 L =16.71 cm/sec CHAN.2 Z =6.11 cm/sec CHAN.3 T =24.80 cm/sec



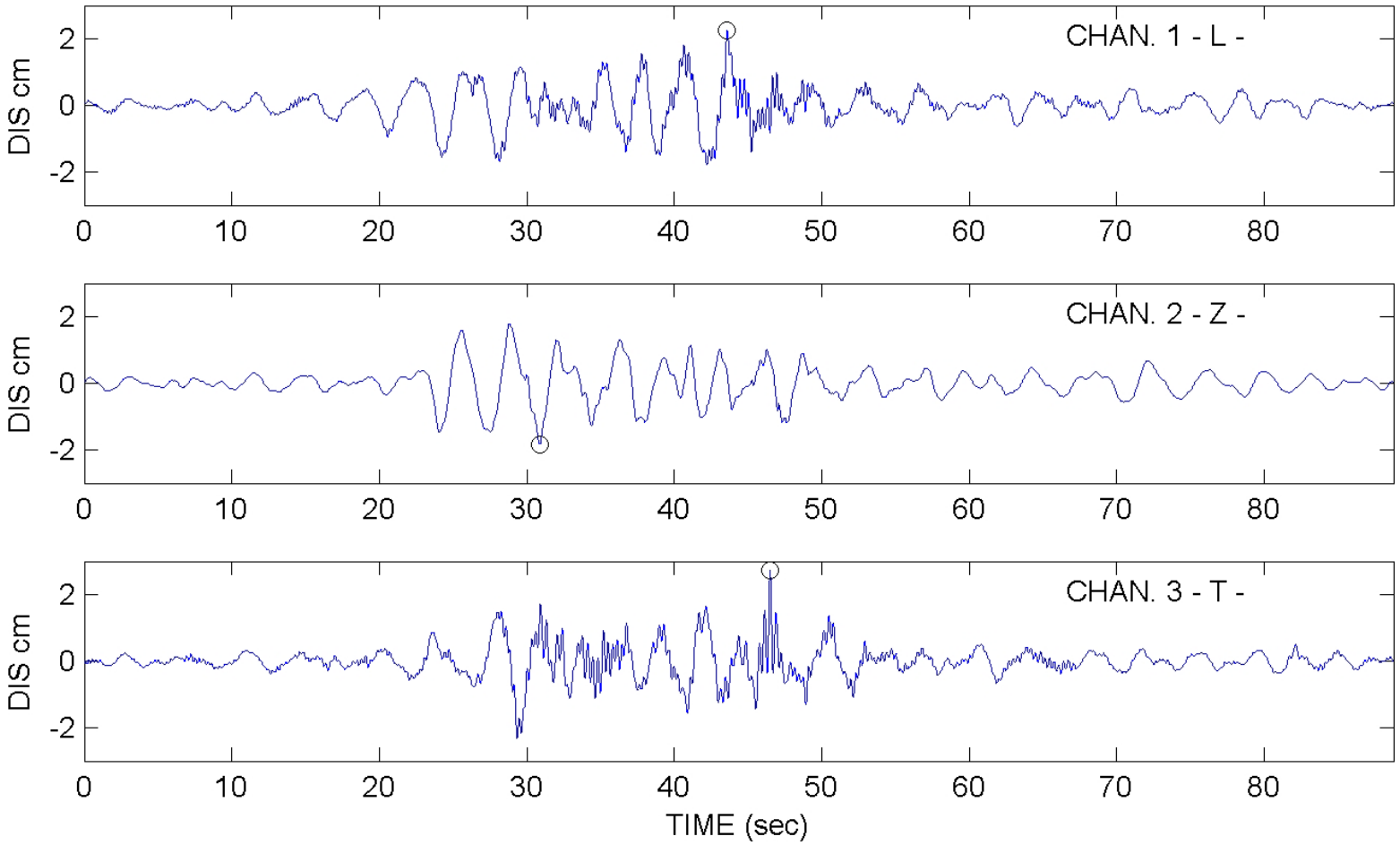
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL

PAPUDO PRELIMINARY SMA-1 5014

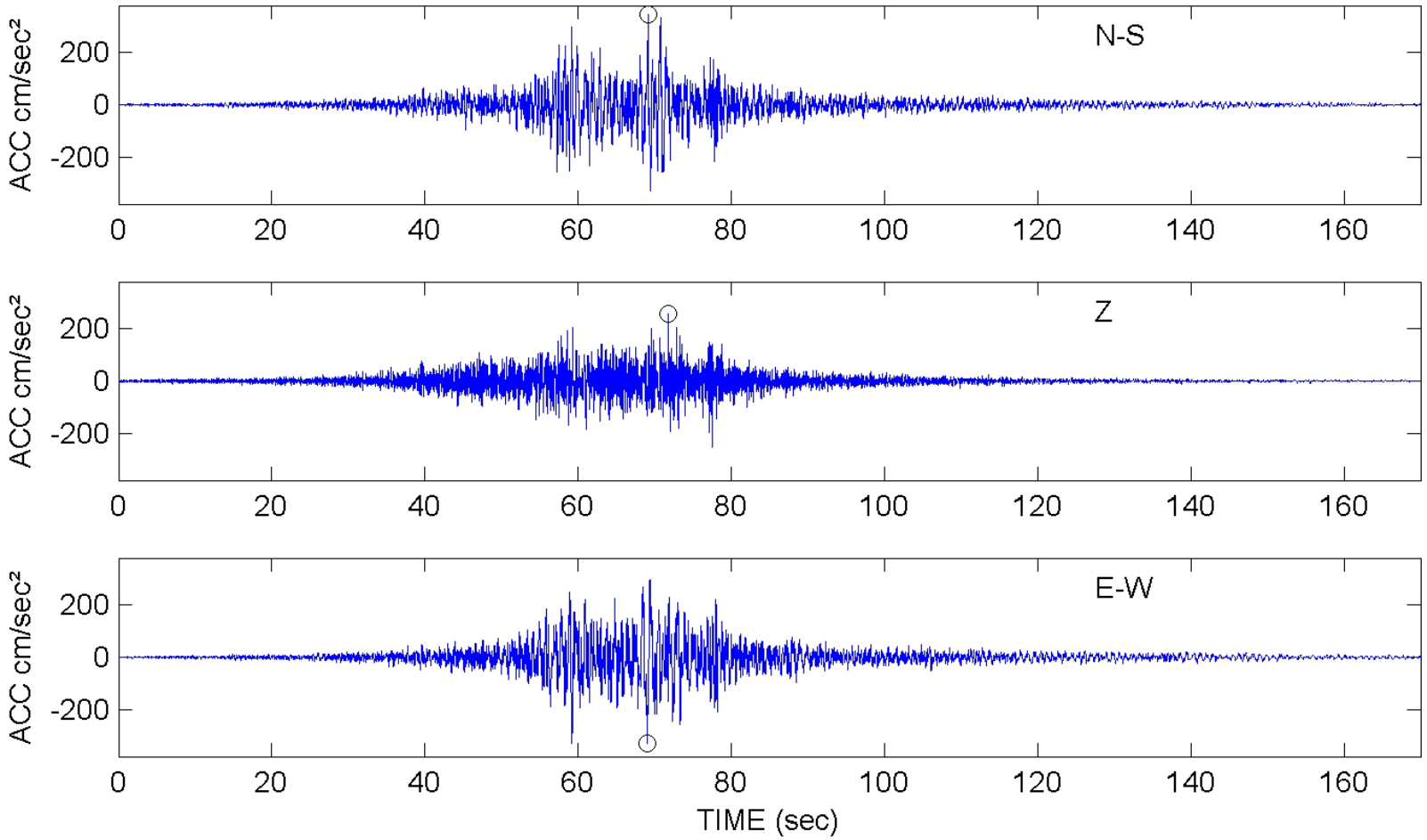
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM

BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ

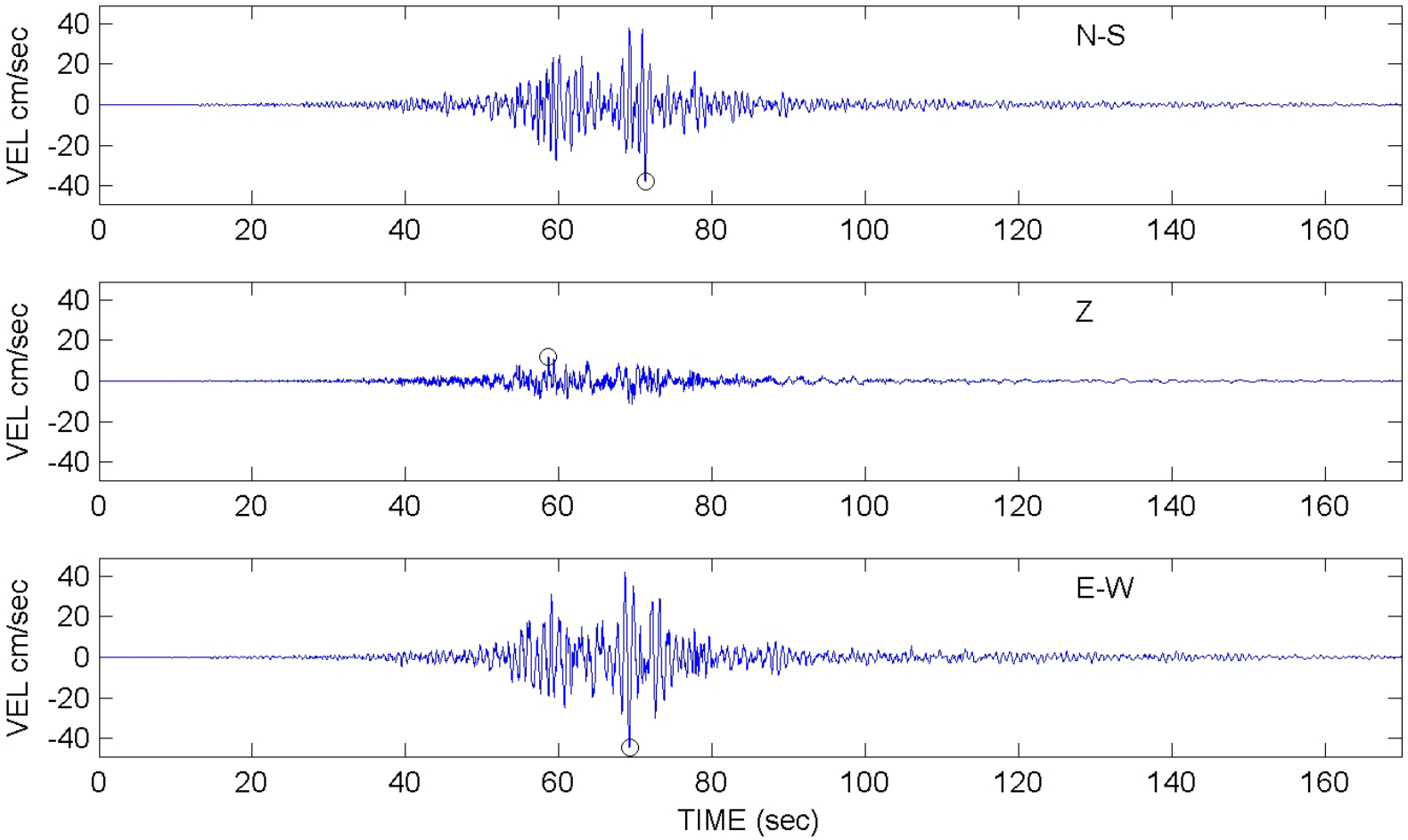
PEAK : CHAN.1 L =2.27 cm CHAN.2 Z =1.83 cm CHAN.3 T =2.73 cm



UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
VIADUCTO MARGA-MARGA ETNA 1215
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : N-S =345.20 cm/sec² Z =256.15 cm/sec² E-W =331.49 cm/sec²



UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
VIADUCTO MARGA-MARGA ETNA 1215
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : N-S =37.92 cm/sec Z =12.15 cm/sec E-W =44.58 cm/sec



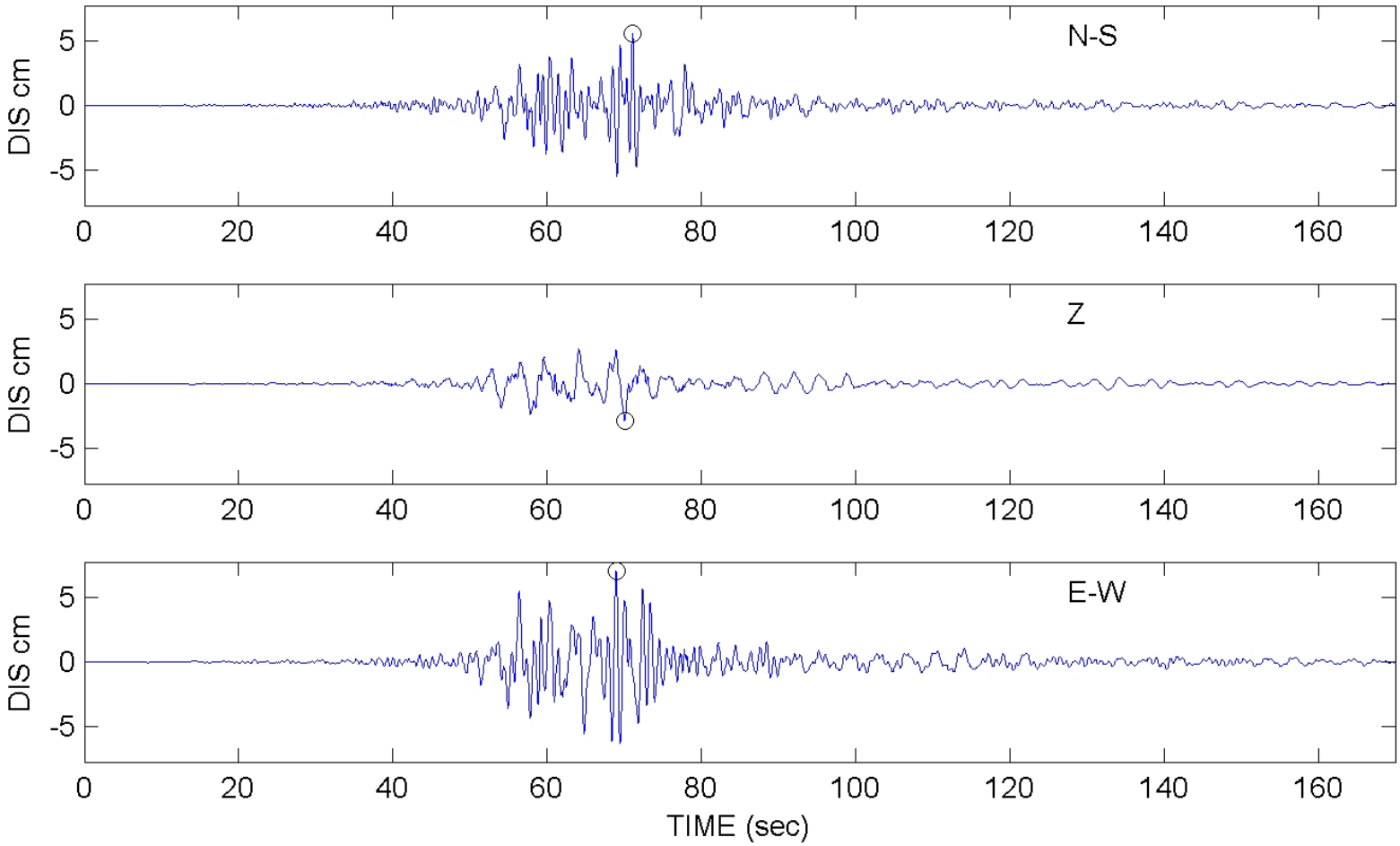
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL

VIADUCTO MARGA-MARGA ETNA 1215

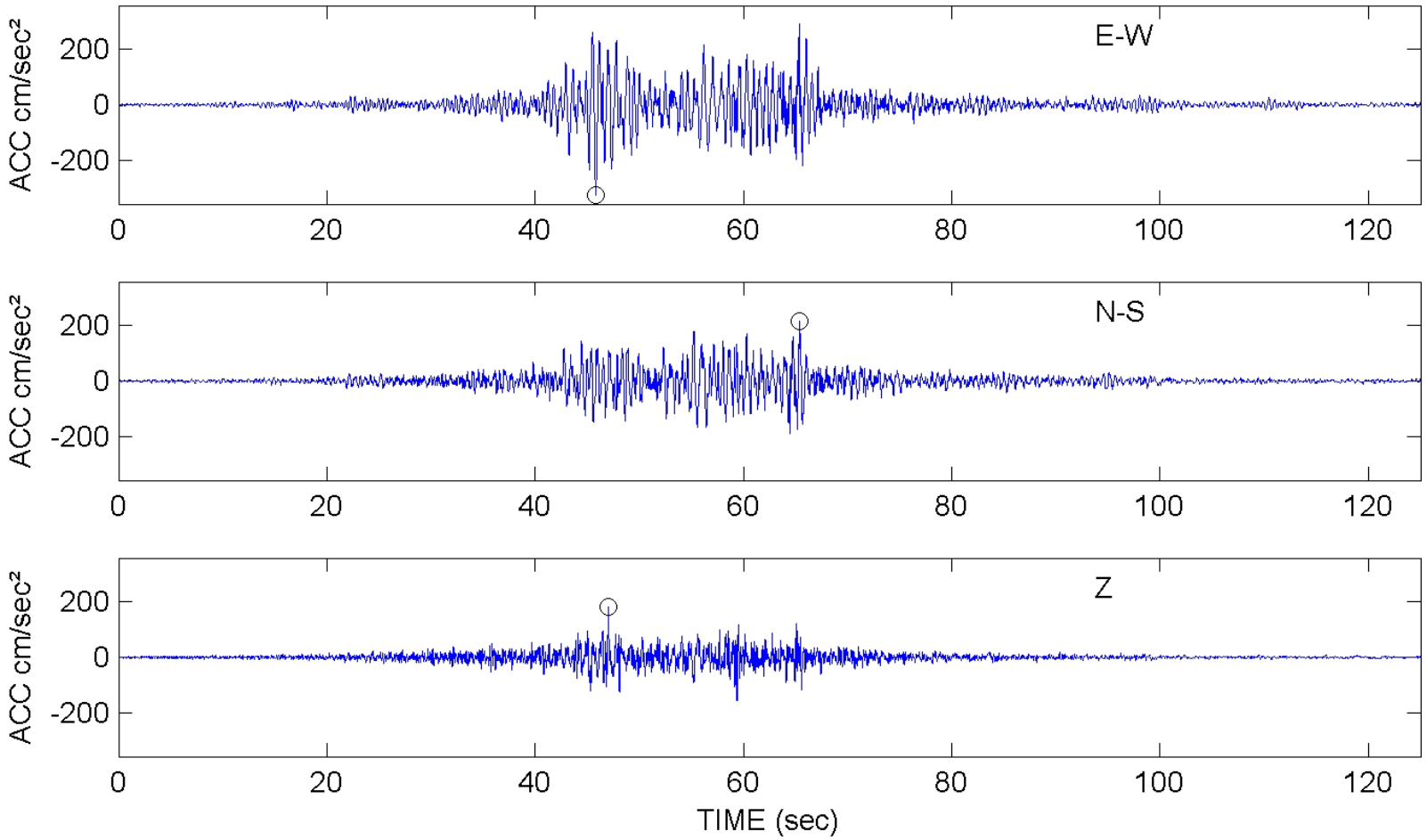
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM

BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ

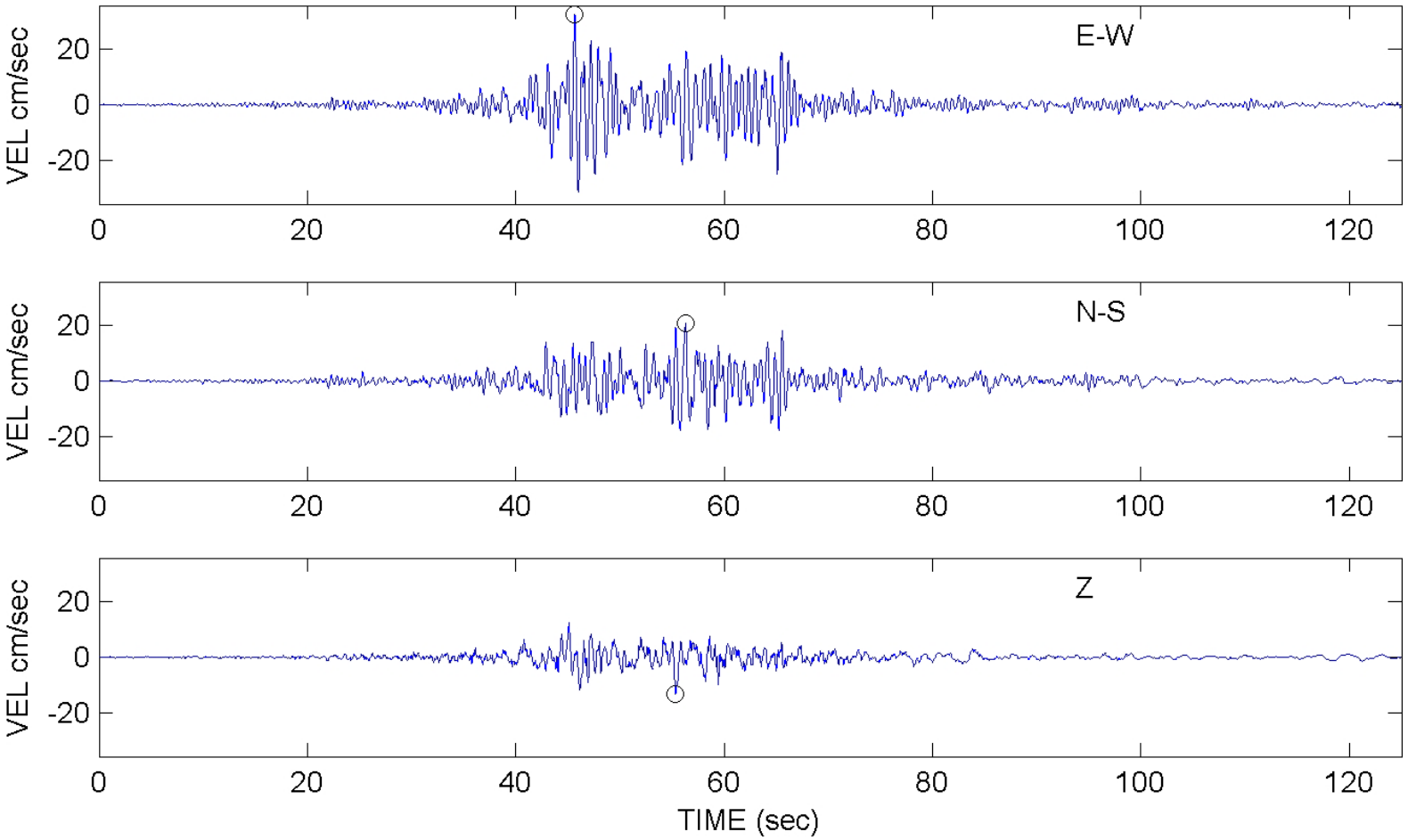
PEAK : N-S =5.50 cm Z =2.87 cm E-W =7.00 cm



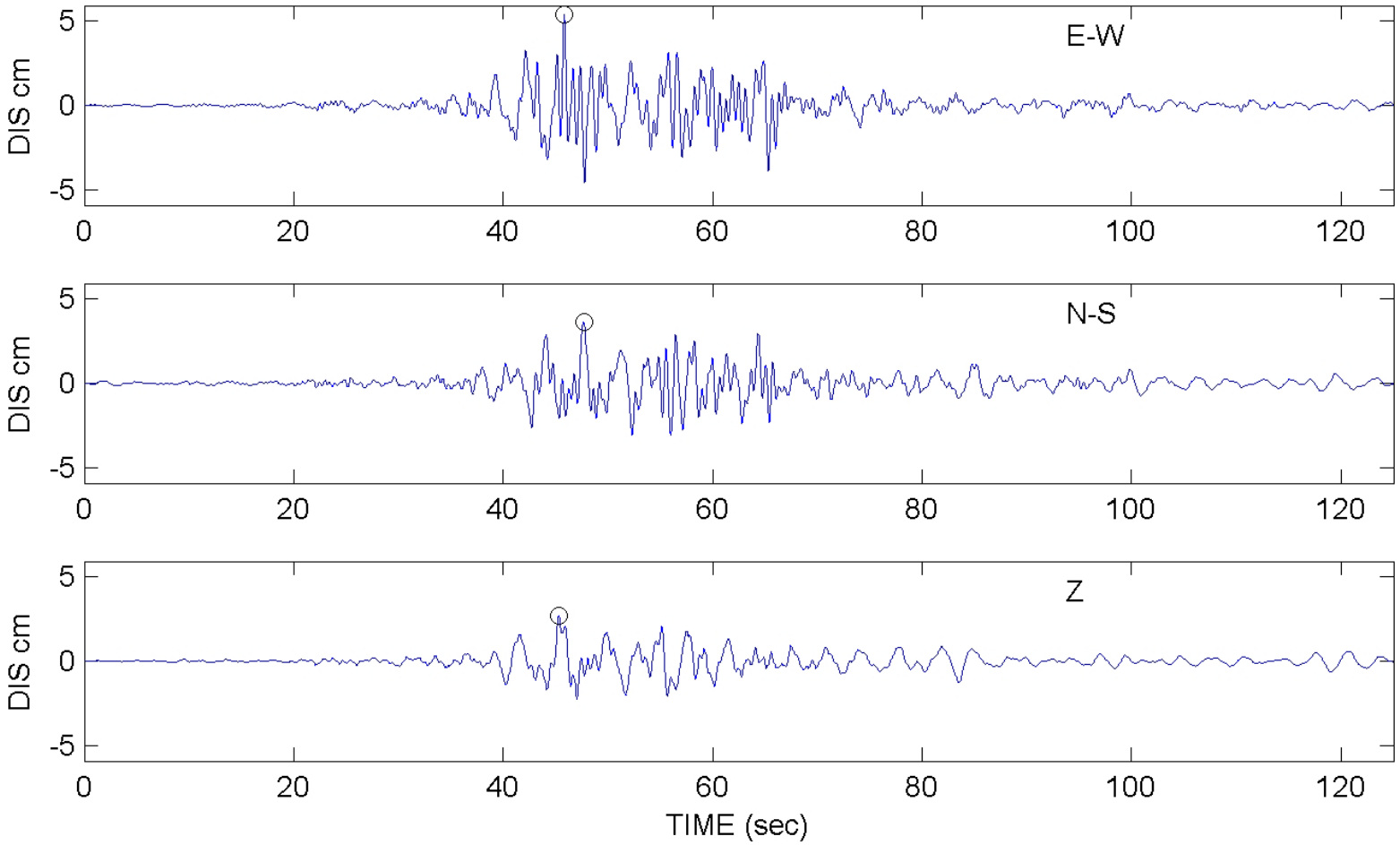
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
VIÑA DEL MAR QDR 675
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : E-W =324.64 cm/sec² N-S =214.40 cm/sec² Z =179.64 cm/sec²



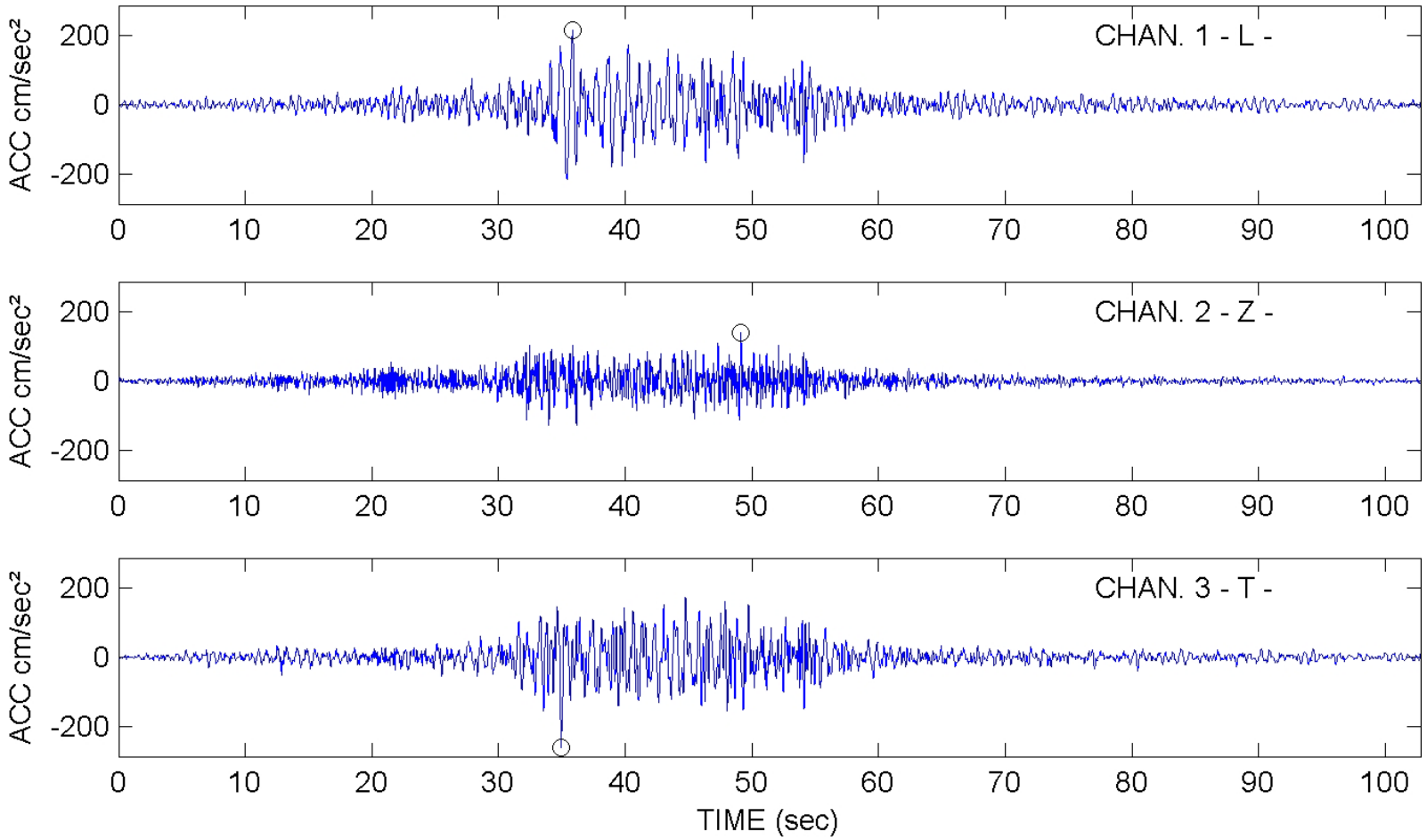
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
VIÑA DEL MAR QDR 675
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : E-W =32.61 cm/sec N-S =20.86 cm/sec Z =13.30 cm/sec



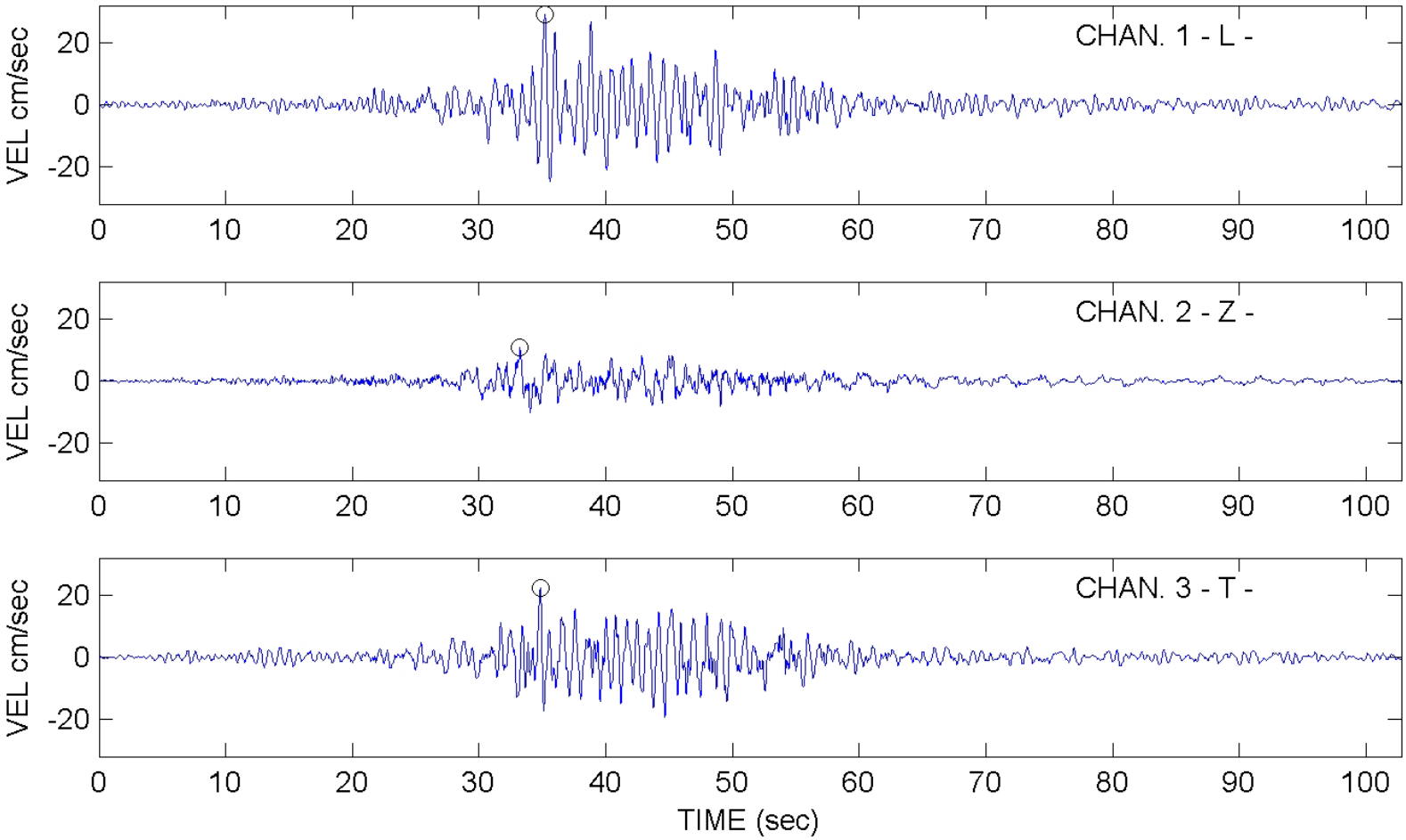
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
VIÑA DEL MAR QDR 675
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : E-W =5.39 cm N-S =3.66 cm Z =2.72 cm



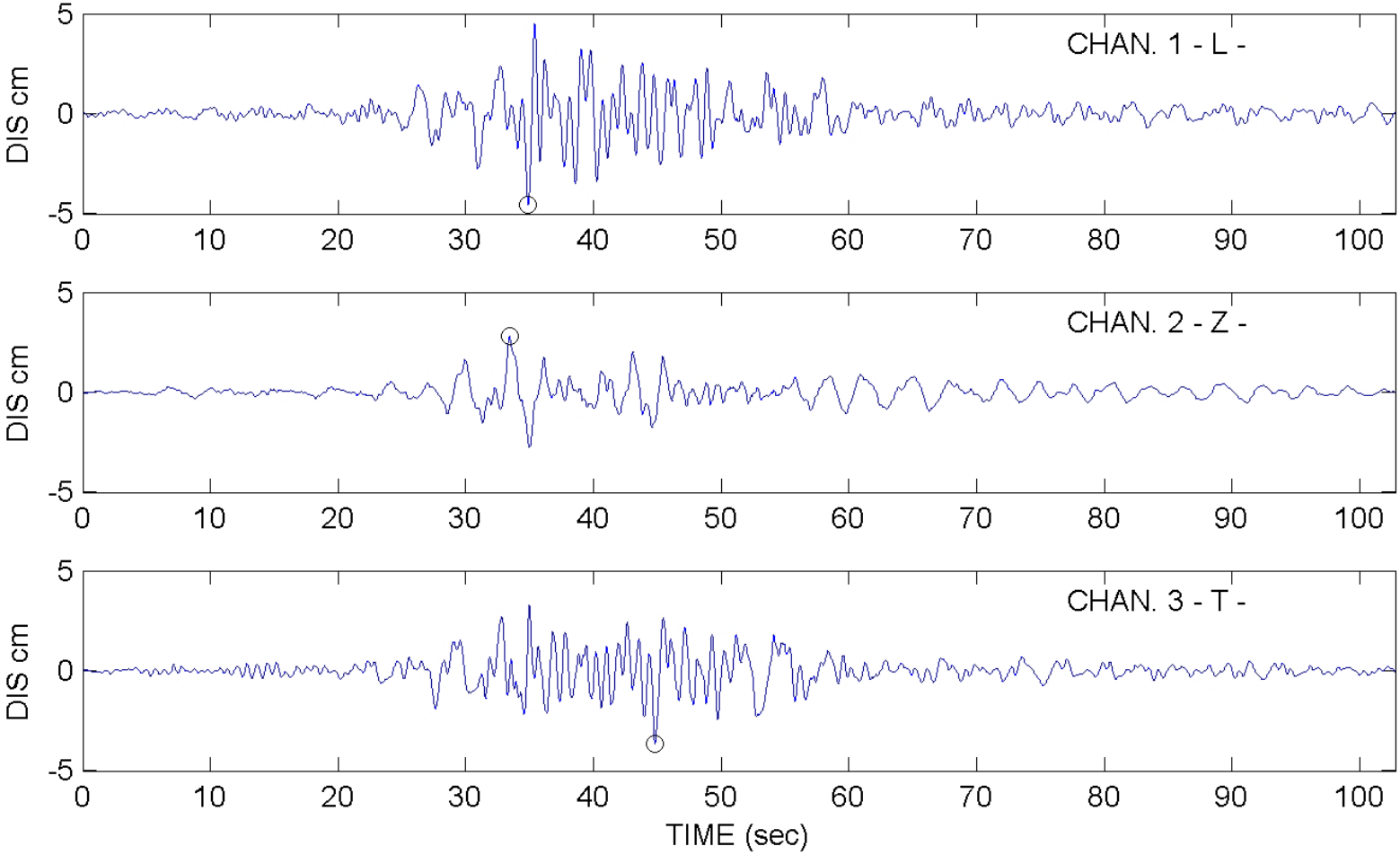
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
VALPARAISO - ALMENDRAL PRELIMINARY SMA-1 4567
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =216.30 cm/sec² CHAN.2 Z =141.08 cm/sec² CHAN.3 T =262.11 cm/sec²



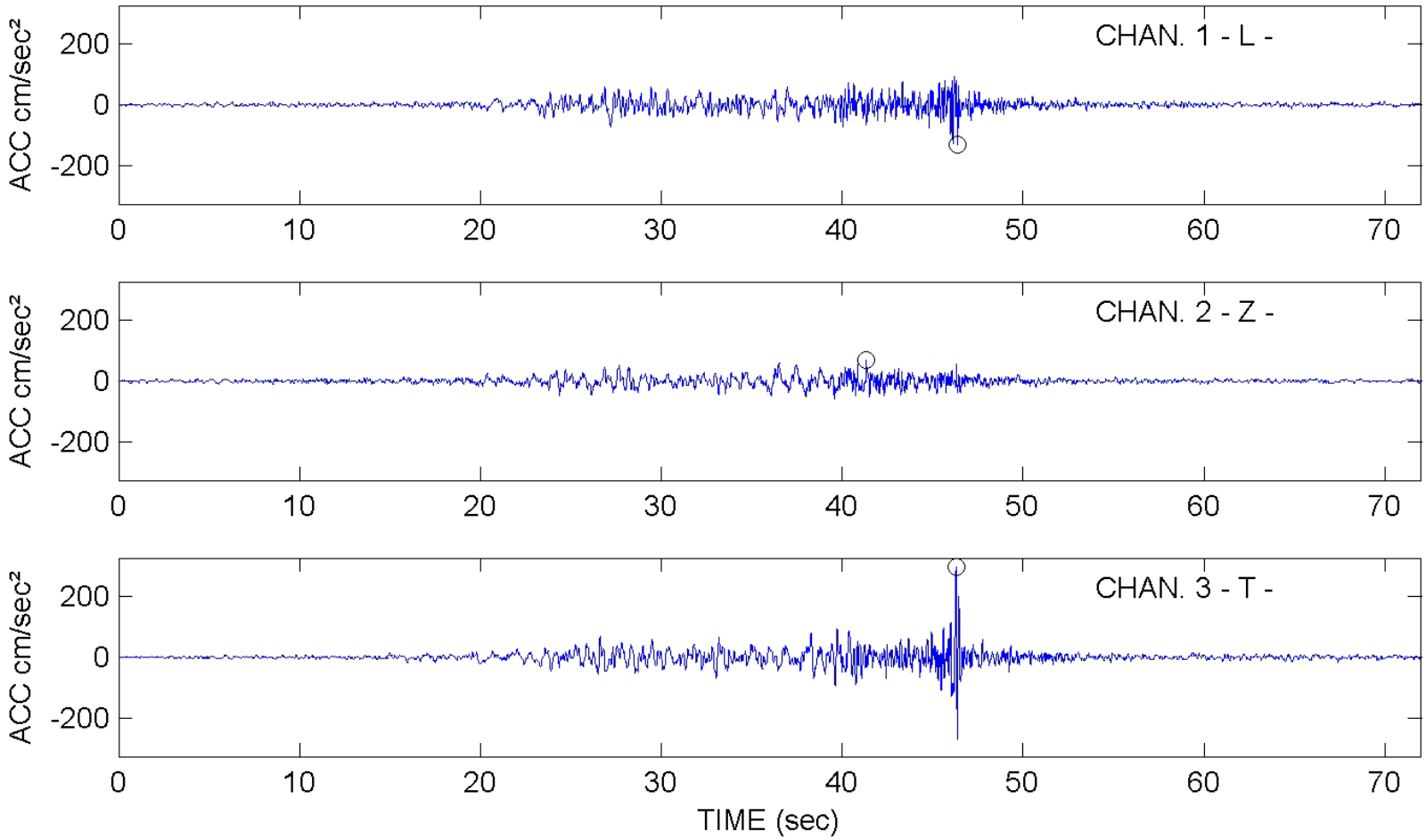
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
VALPARAISO - ALMENDRAL PRELIMINARY SMA-1 4567
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =29.15 cm/sec CHAN.2 Z =10.73 cm/sec CHAN.3 T =22.31 cm/sec



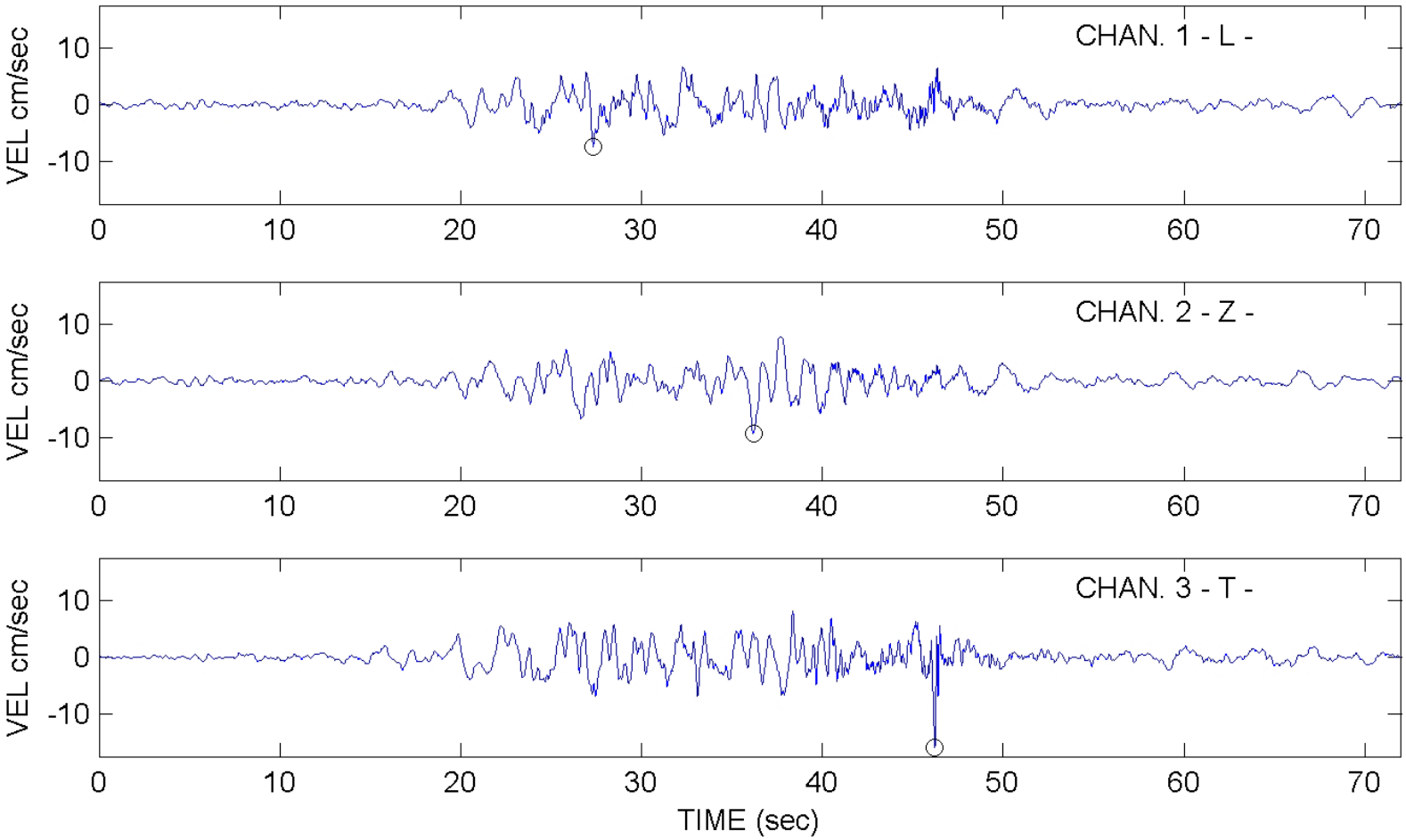
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
VALPARAISO - ALMENDRAL PRELIMINARY SMA-1 4567
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =4.59 cm CHAN.2 Z =2.82 cm CHAN.3 T =3.69 cm



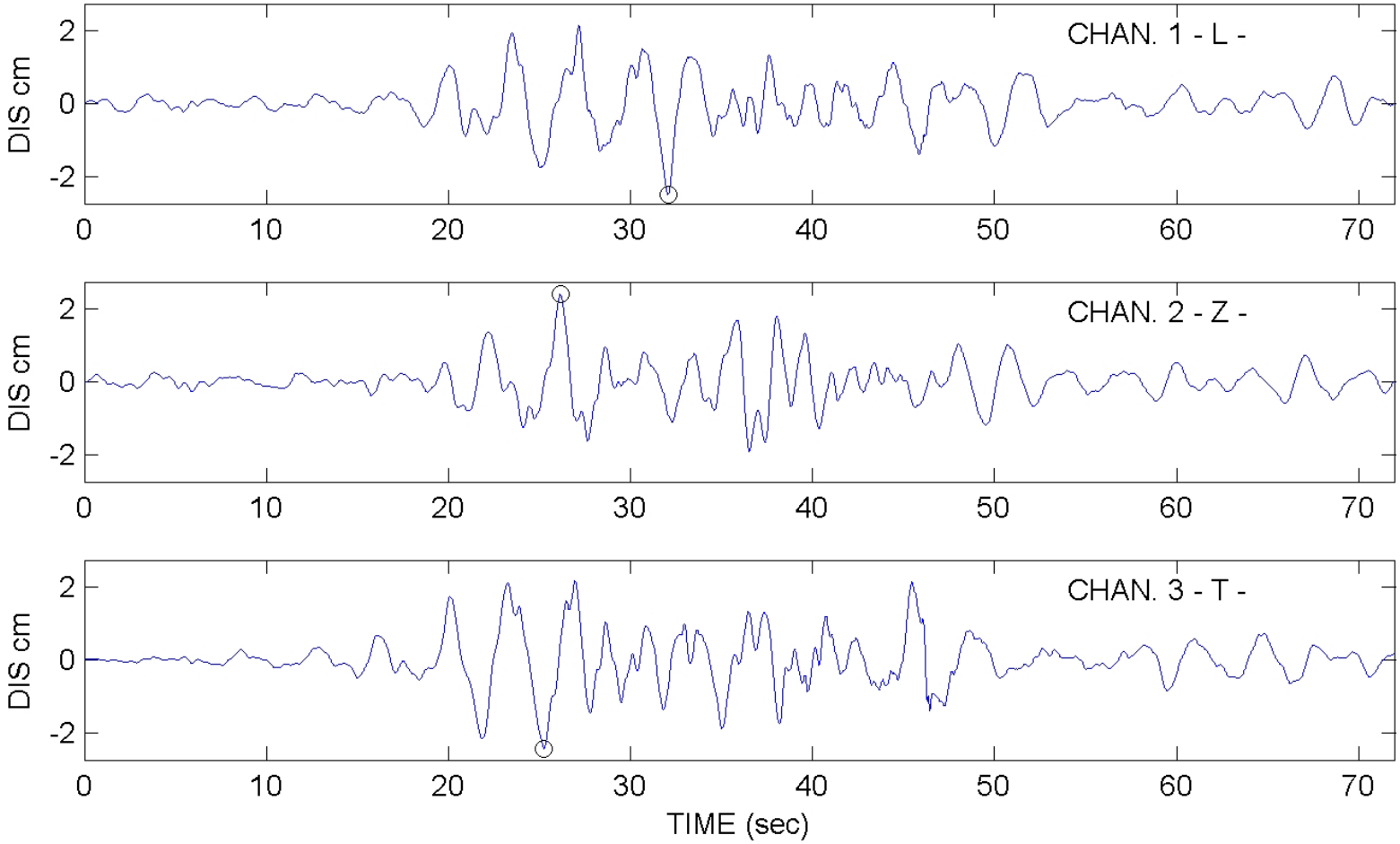
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
VALPARAISO - UTFM PRELIMINARY SMA-1 6976
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =128.95 cm/sec² CHAN.2 Z =69.05 cm/sec² CHAN.3 T =295.35 cm/sec²



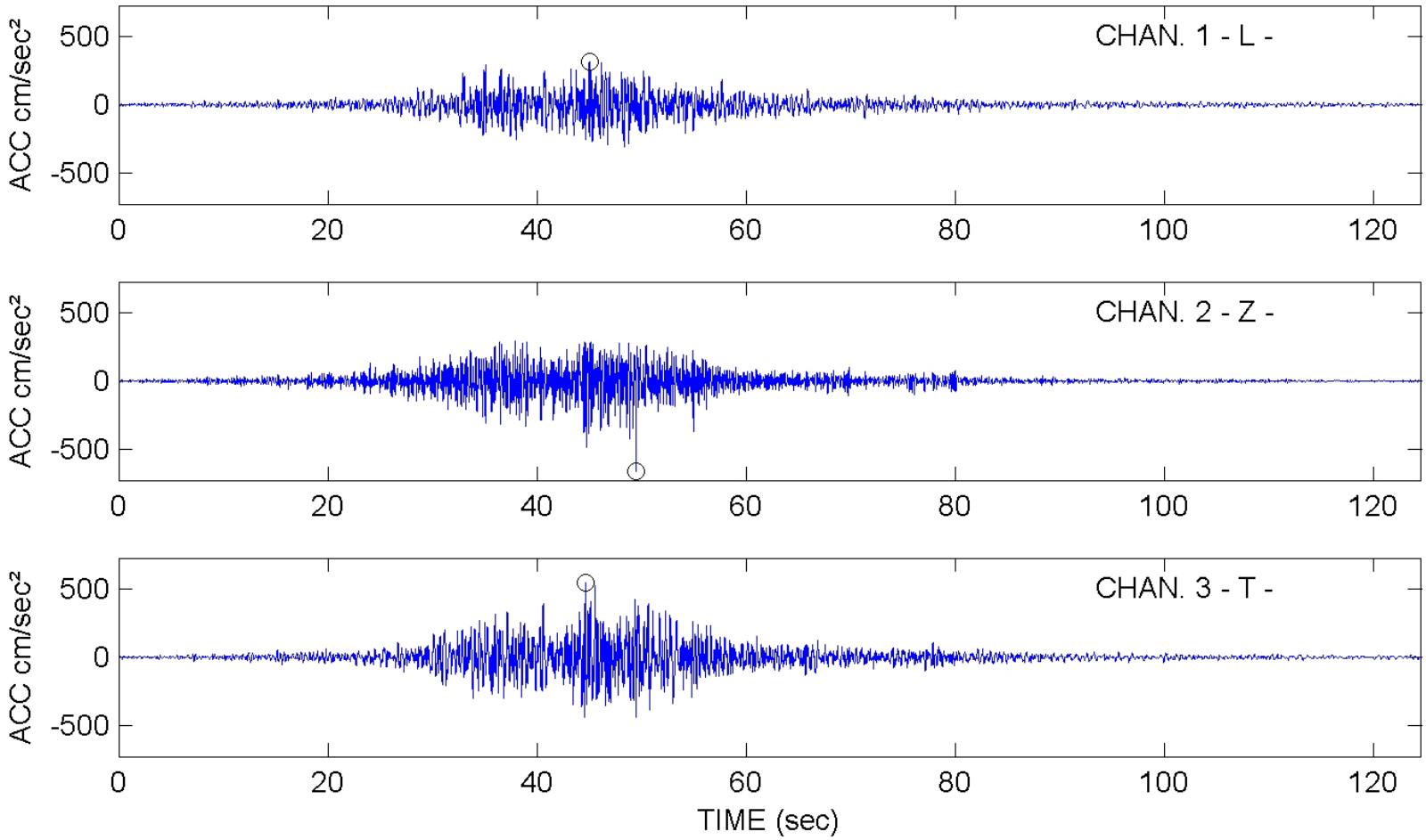
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
VALPARAISO - UTFM PRELIMINARY SMA-1 6976
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =7.38 cm/sec CHAN.2 Z =9.37 cm/sec CHAN.3 T =16.02 cm/sec



UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
VALPARAISO - UTFM PRELIMINARY SMA-1 6976
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =2.48 cm CHAN.2 Z =2.39 cm CHAN.3 T =2.41 cm



UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
LLOLLEO PRELIMINARY SMA-1 4566
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =318.97 cm/sec² CHAN.2 Z =661.38 cm/sec² CHAN.3 T =546.63 cm/sec²



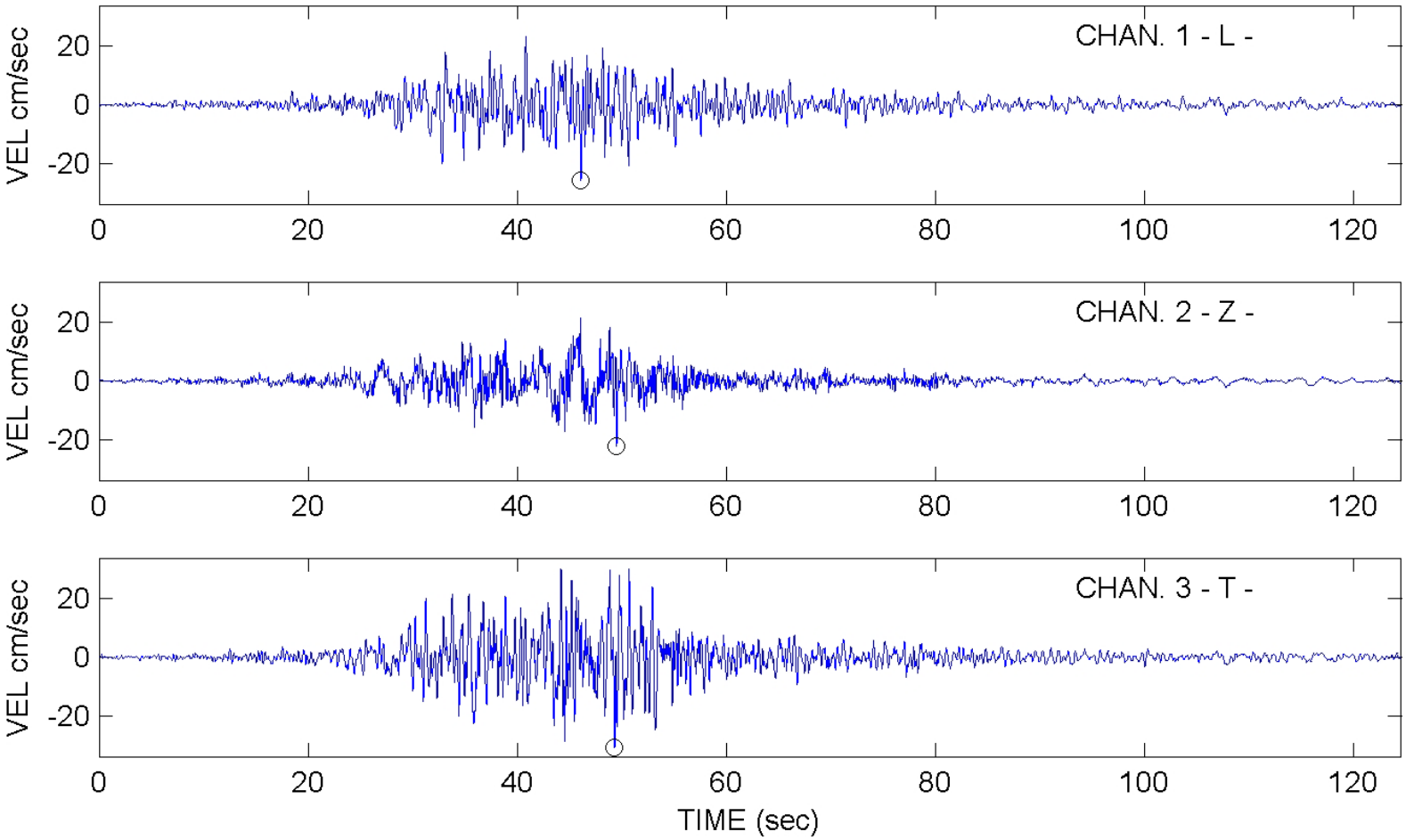
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL

LLOLLEO PRELIMINARY SMA-1 4566

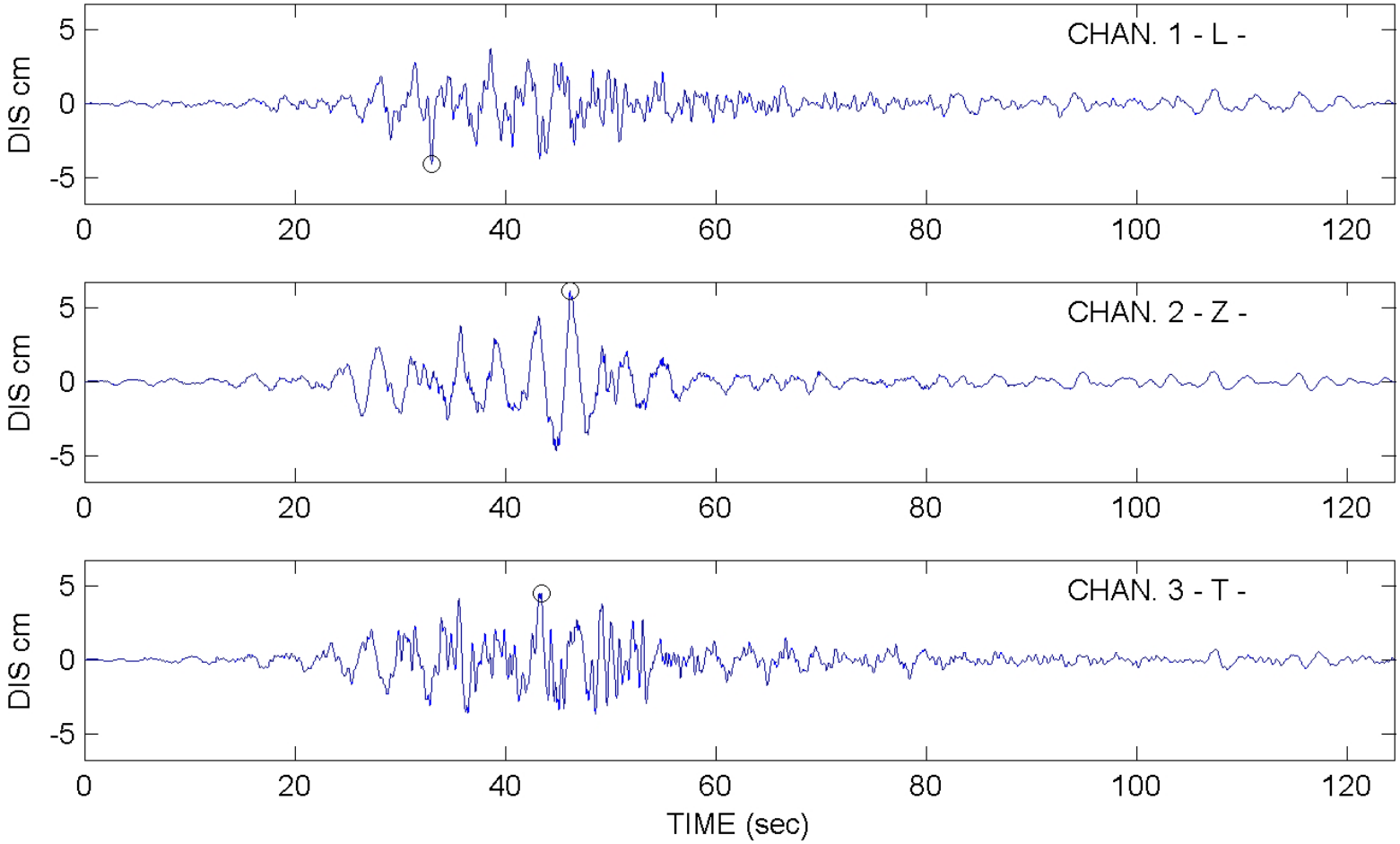
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM

BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ

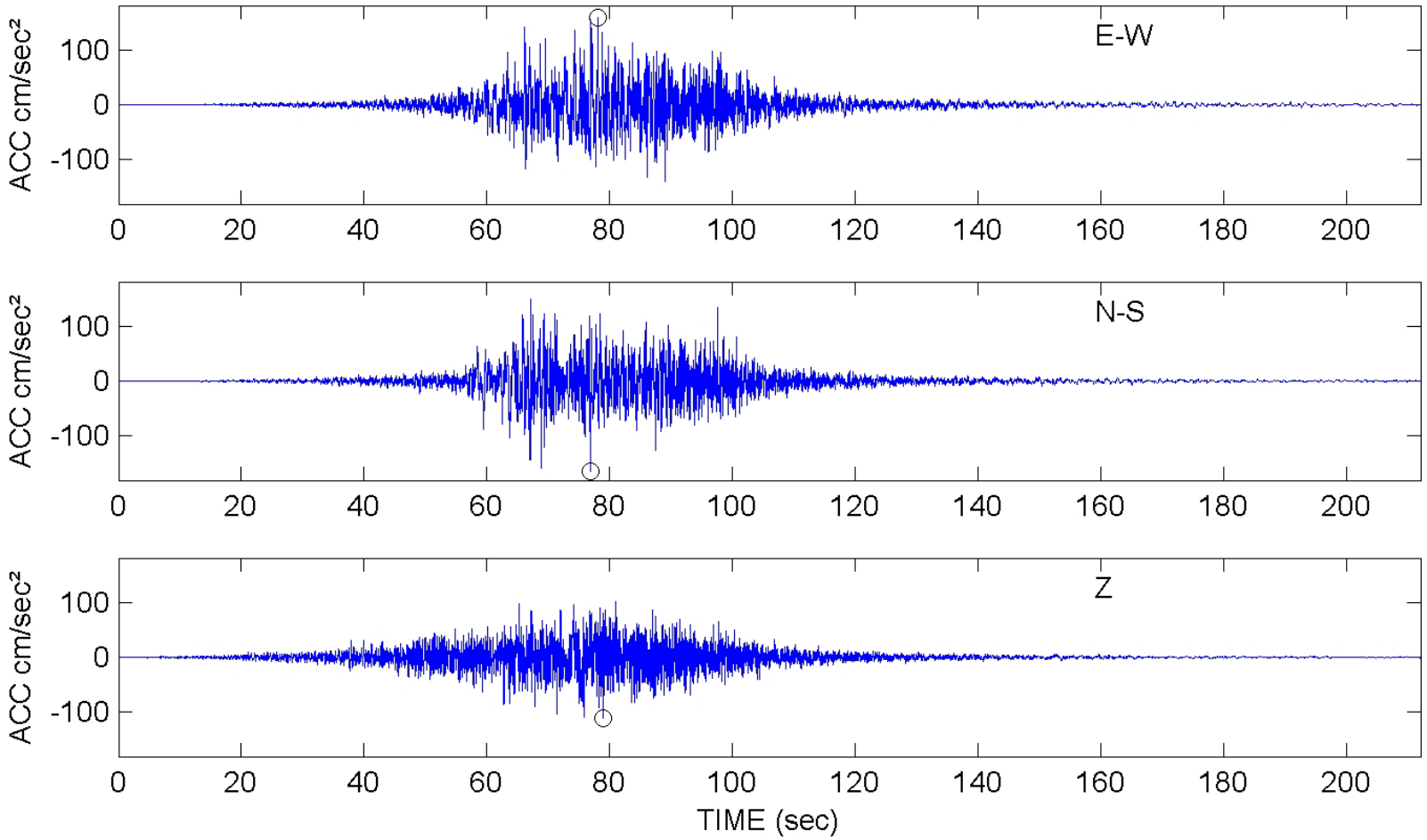
PEAK : CHAN.1 L =25.84 cm/sec CHAN.2 Z =22.31 cm/sec CHAN.3 T =30.95 cm/sec



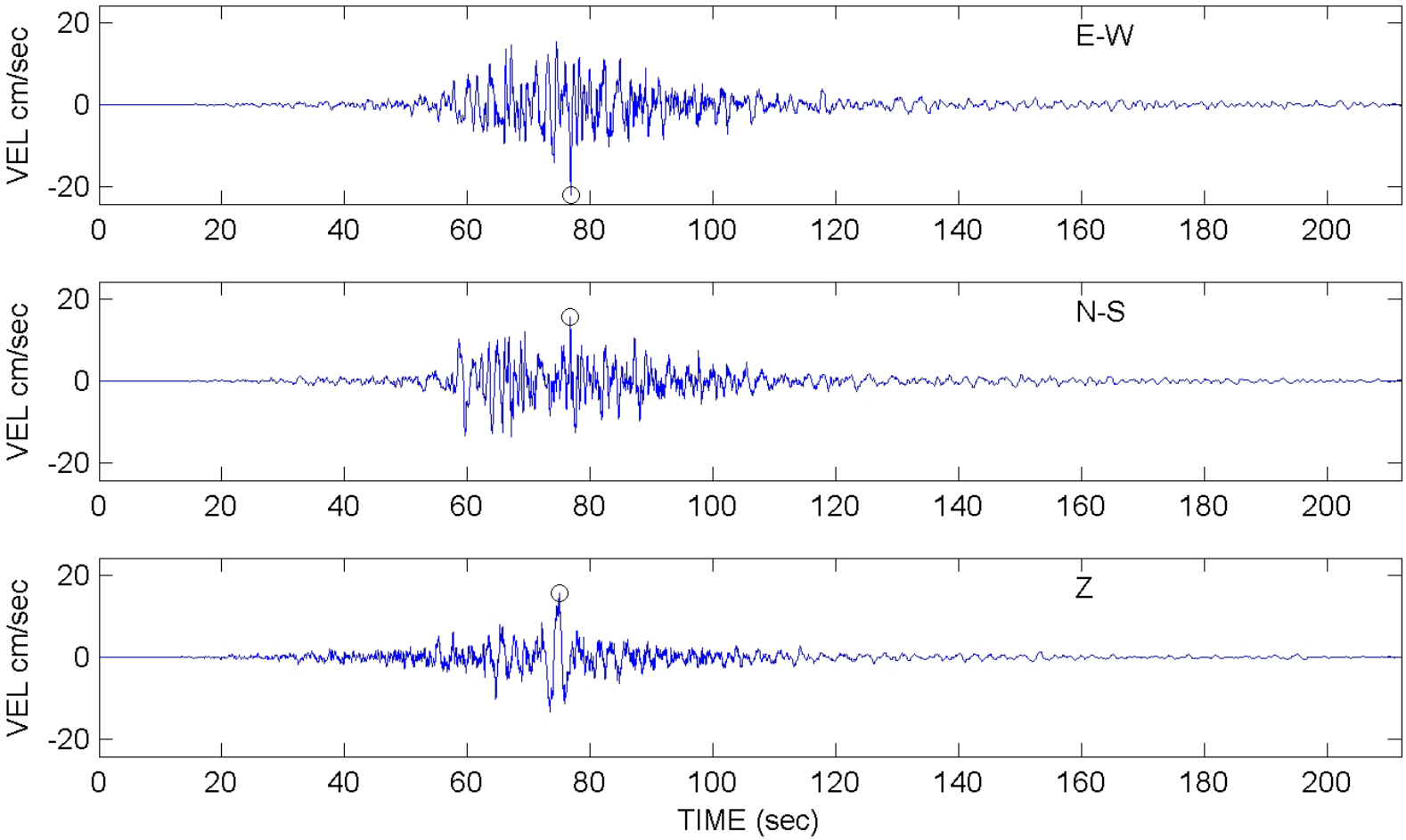
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
LLOLLEO PRELIMINARY SMA-1 4566
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =4.03 cm CHAN.2 Z =6.10 cm CHAN.3 T =4.49 cm



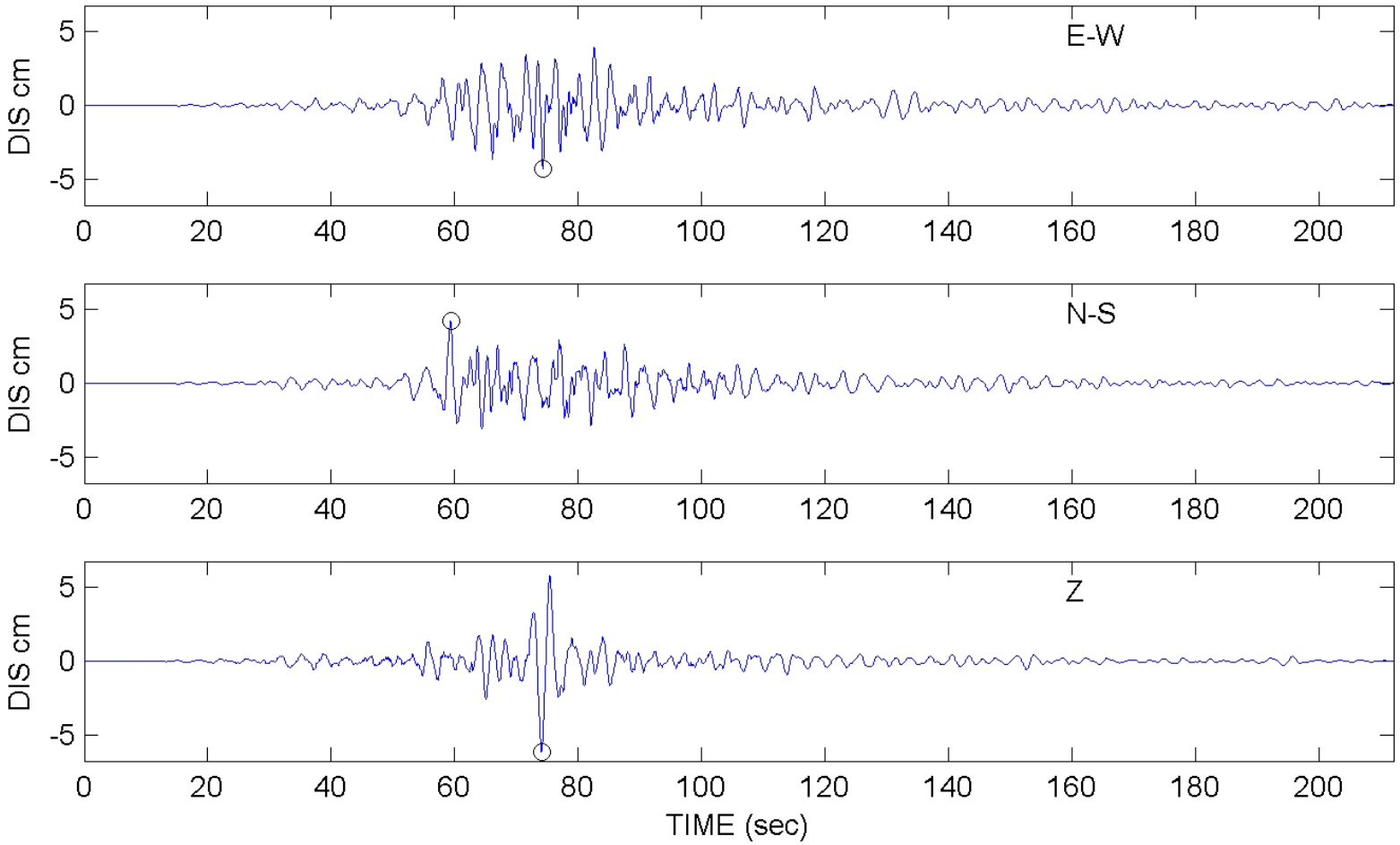
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
SANTIAGO - FCFM LEE ETNA 2802
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : E-W =158.84 cm/sec² N-S =164.08 cm/sec² Z =110.42 cm/sec²



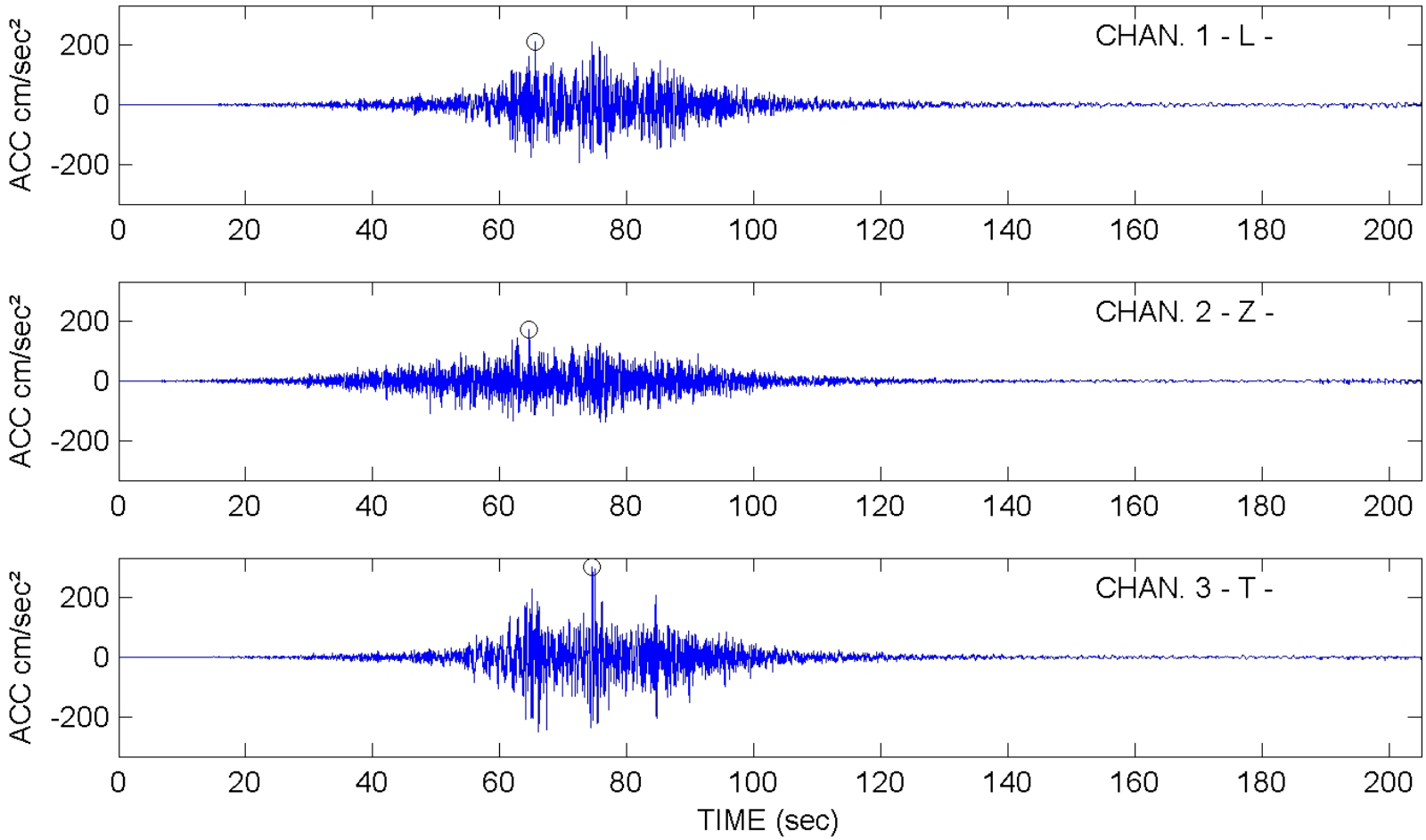
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
SANTIAGO - FCFM LEE ETNA 2802
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : E-W =21.96 cm/sec N-S =15.59 cm/sec Z =15.65 cm/sec



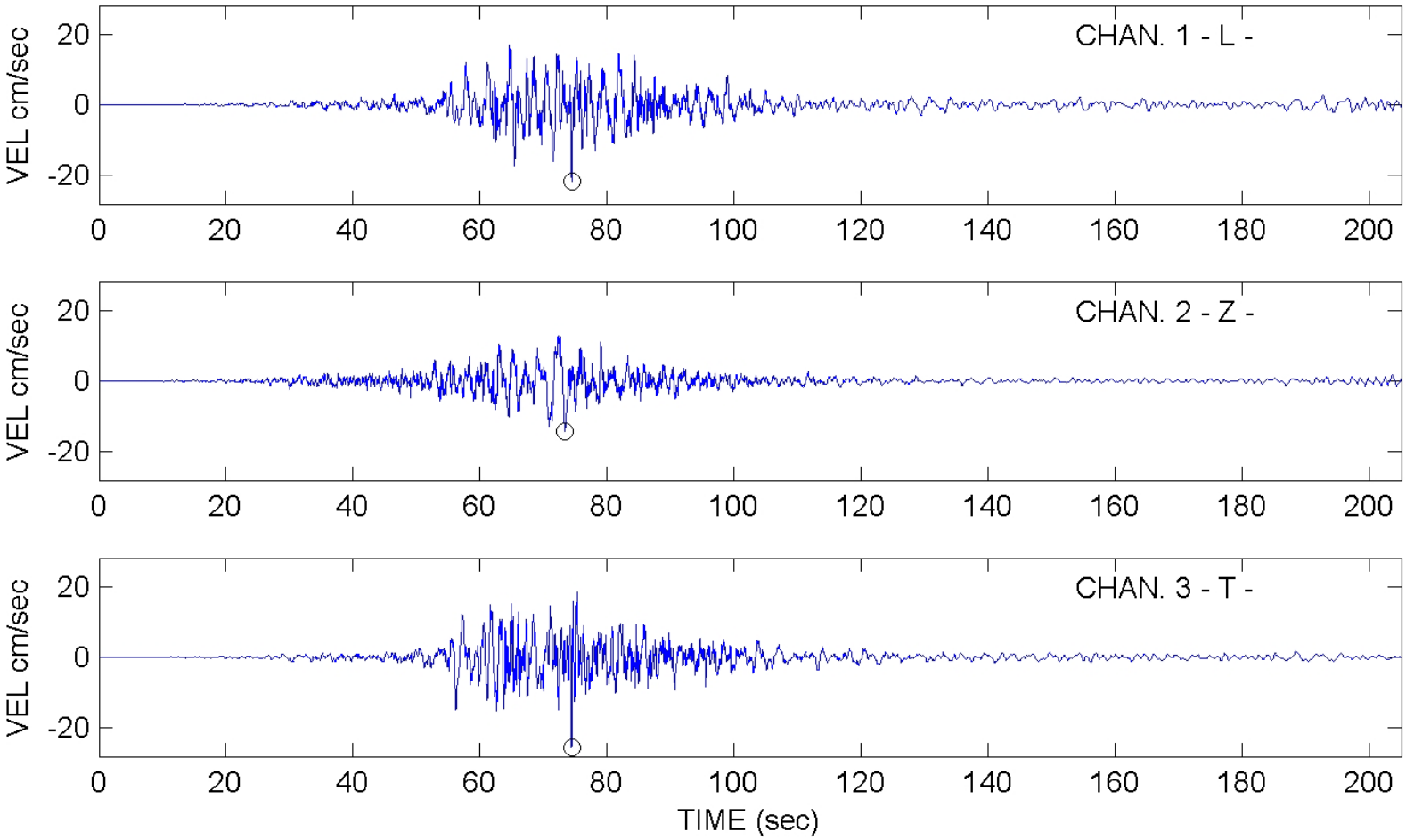
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
SANTIAGO - FCFM LEE ETNA 2802
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : E-W =4.31 cm N-S =4.23 cm Z =6.15 cm



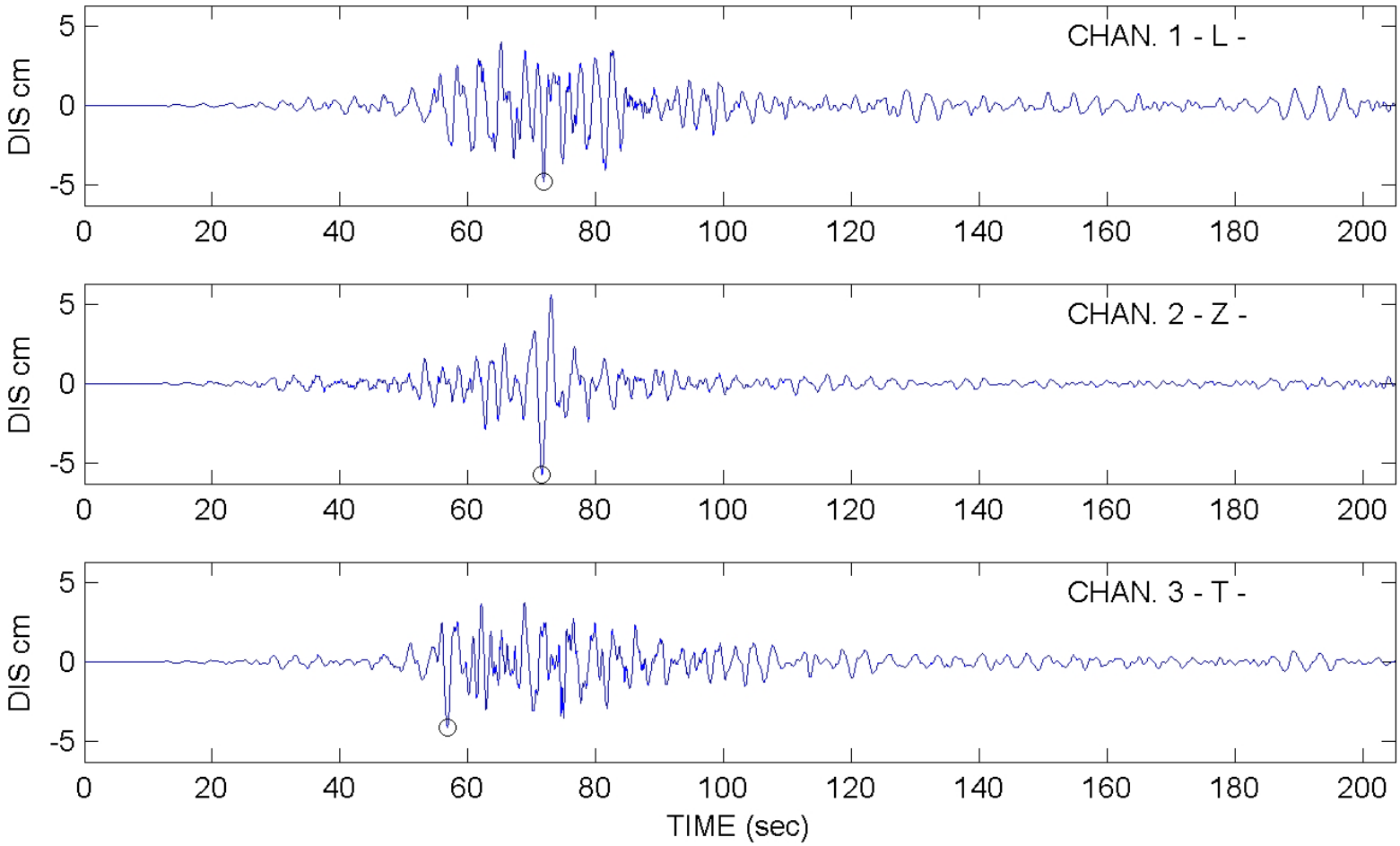
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
SANTIAGO SSA-2 935
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =210.57 cm/sec² CHAN.2 Z =172.40 cm/sec² CHAN.3 T =302.18 cm/sec²



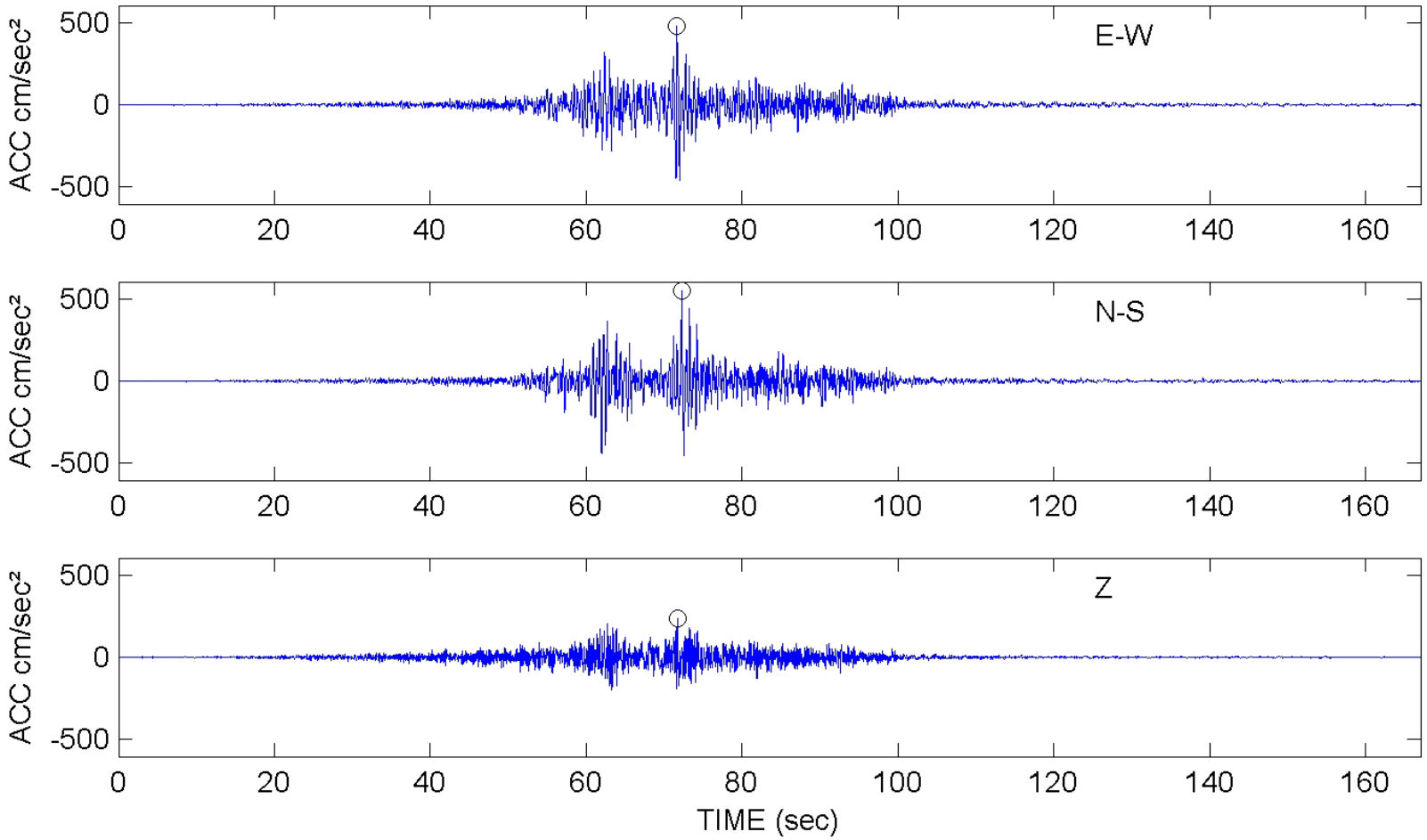
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
SANTIAGO SSA-2 935
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =21.93 cm/sec CHAN.2 Z =14.43 cm/sec CHAN.3 T =25.64 cm/sec



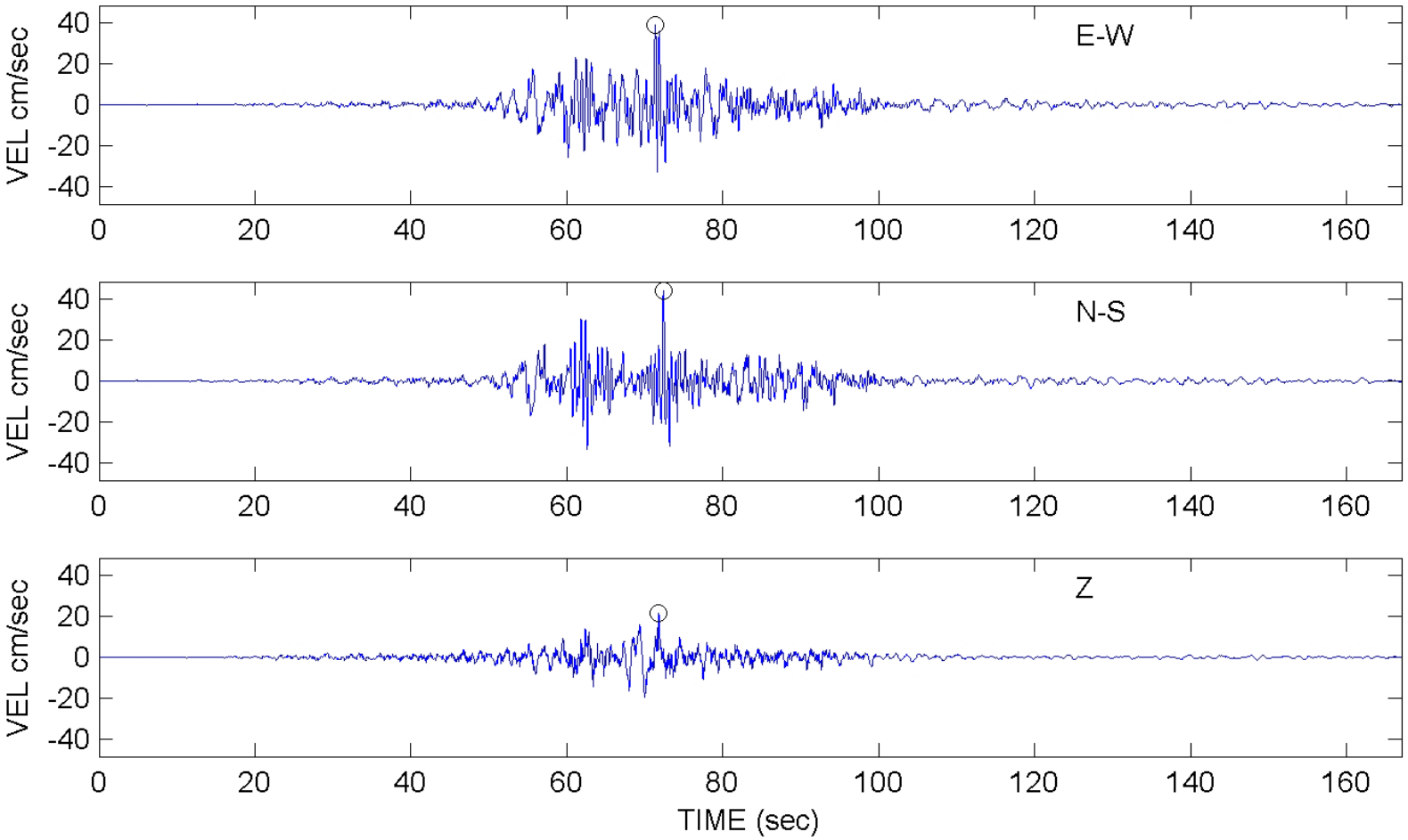
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
SANTIAGO SSA-2 935
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =4.81 cm CHAN.2 Z =5.72 cm CHAN.3 T =4.14 cm



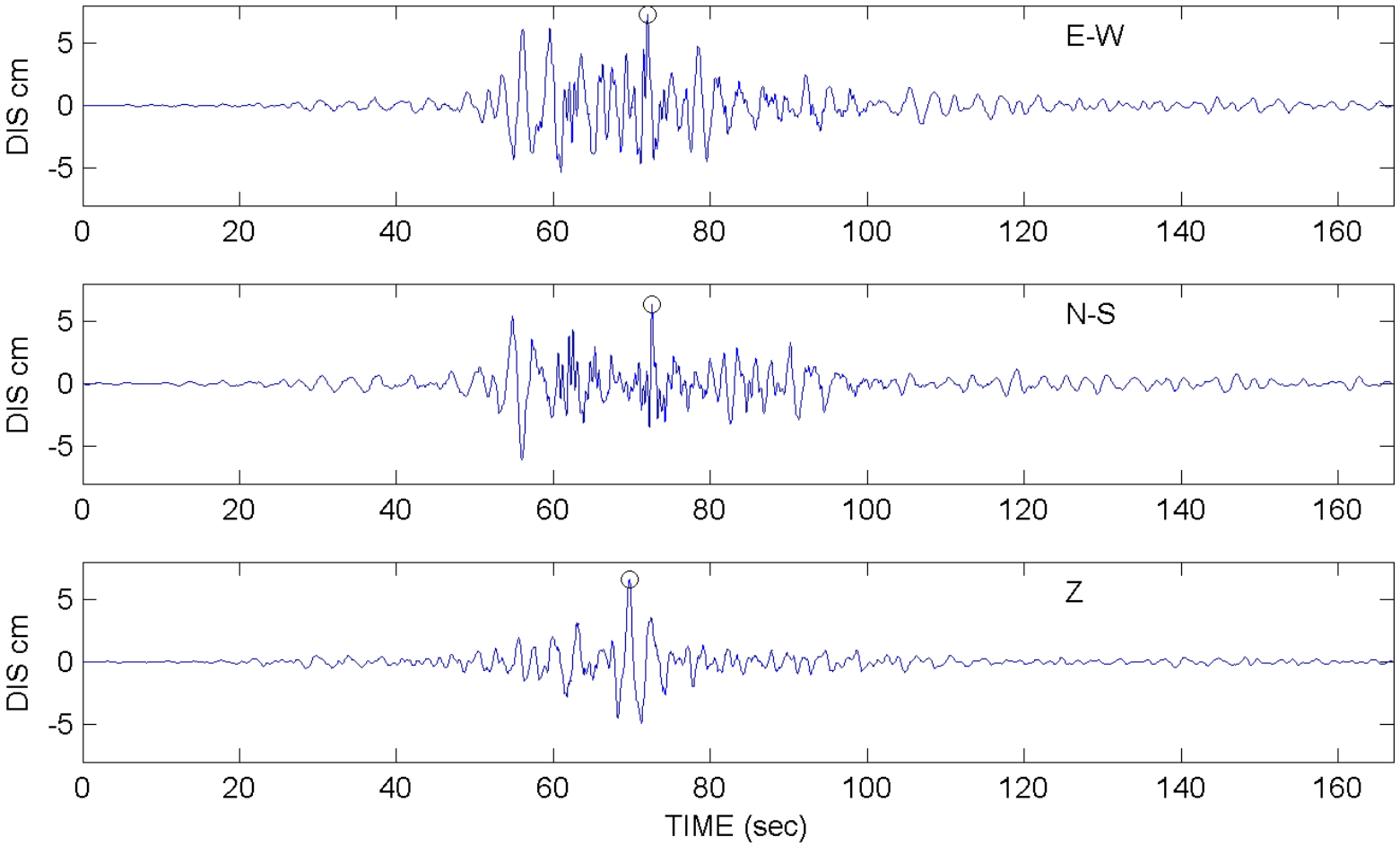
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
SANTIAGO - C.R.S. MAIPU QDR 663
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : E-W =478.60 cm/sec² N-S =549.54 cm/sec² Z =236.47 cm/sec²



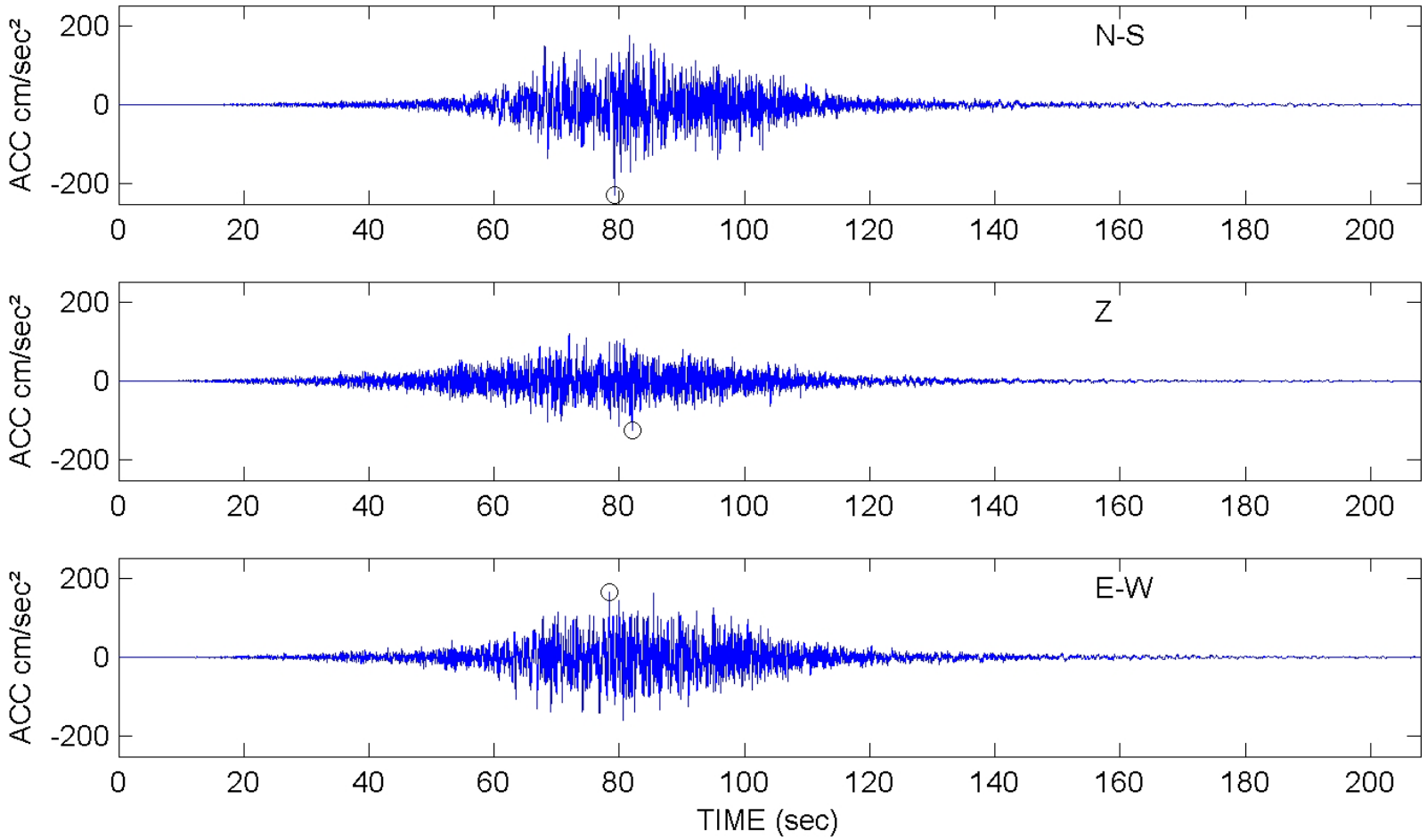
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
SANTIAGO - C.R.S. MAIPU QDR 663
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : E-W =38.97 cm/sec N-S =44.13 cm/sec Z =21.80 cm/sec



UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
SANTIAGO - C.R.S. MAIPU QDR 663
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : E-W =7.24 cm N-S =6.31 cm Z =6.57 cm



UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
SANTIAGO - MIRADOR STATION METRO S.A. K2 958
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : N-S =227.96 cm/sec² Z =124.55 cm/sec² E-W =163.91 cm/sec²



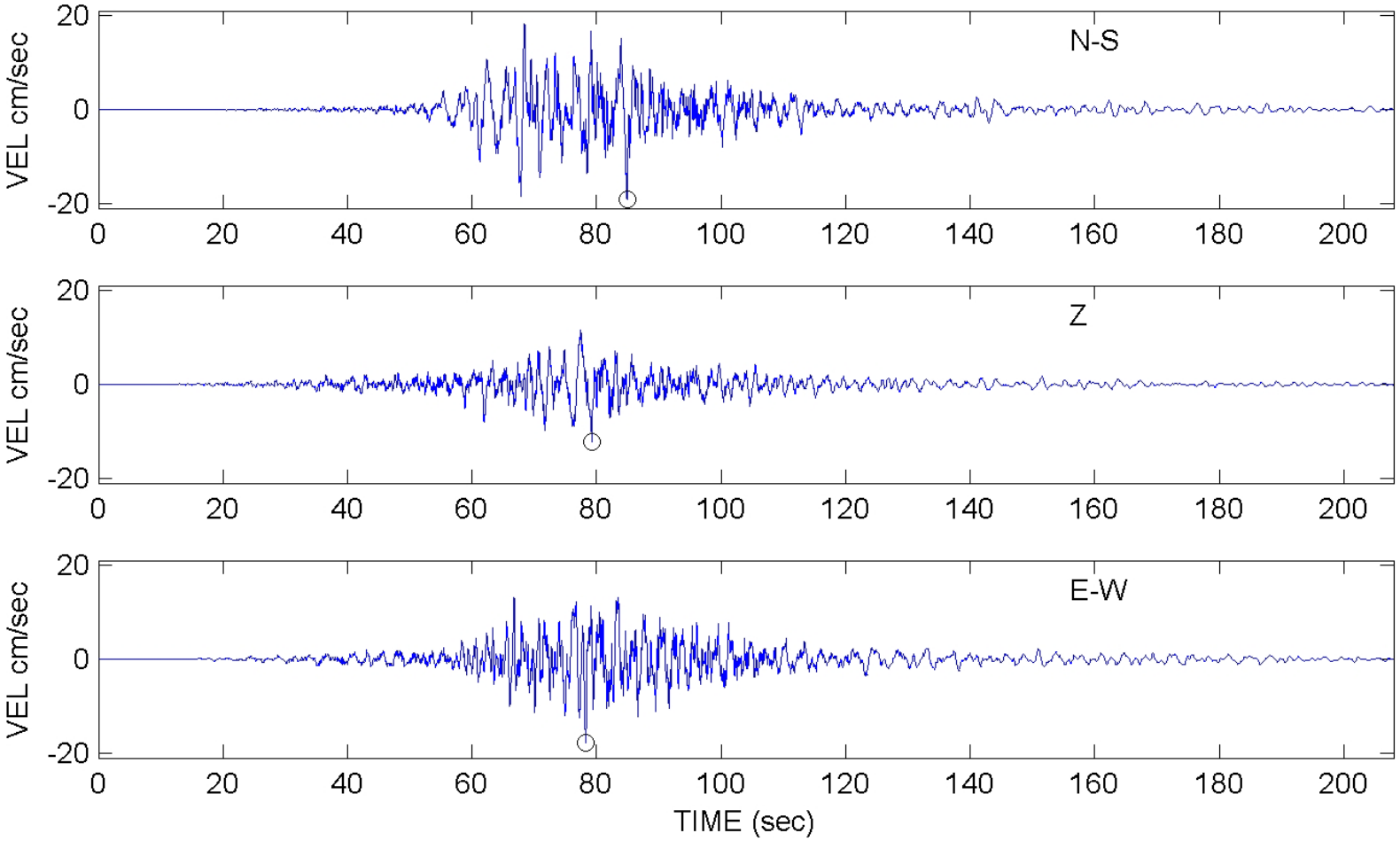
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL

SANTIAGO - MIRADOR STATION METRO S.A. K2 958

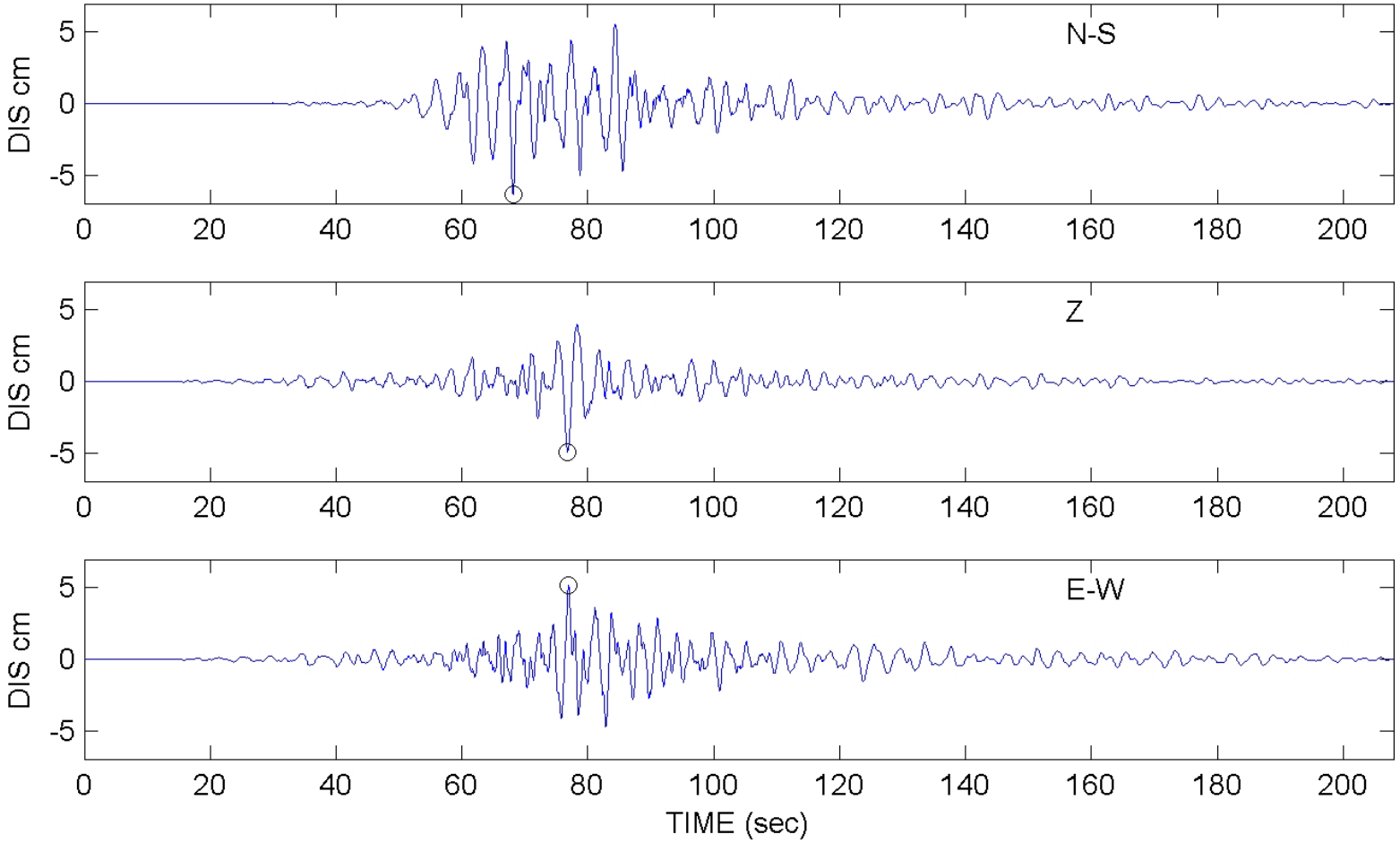
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM

BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ

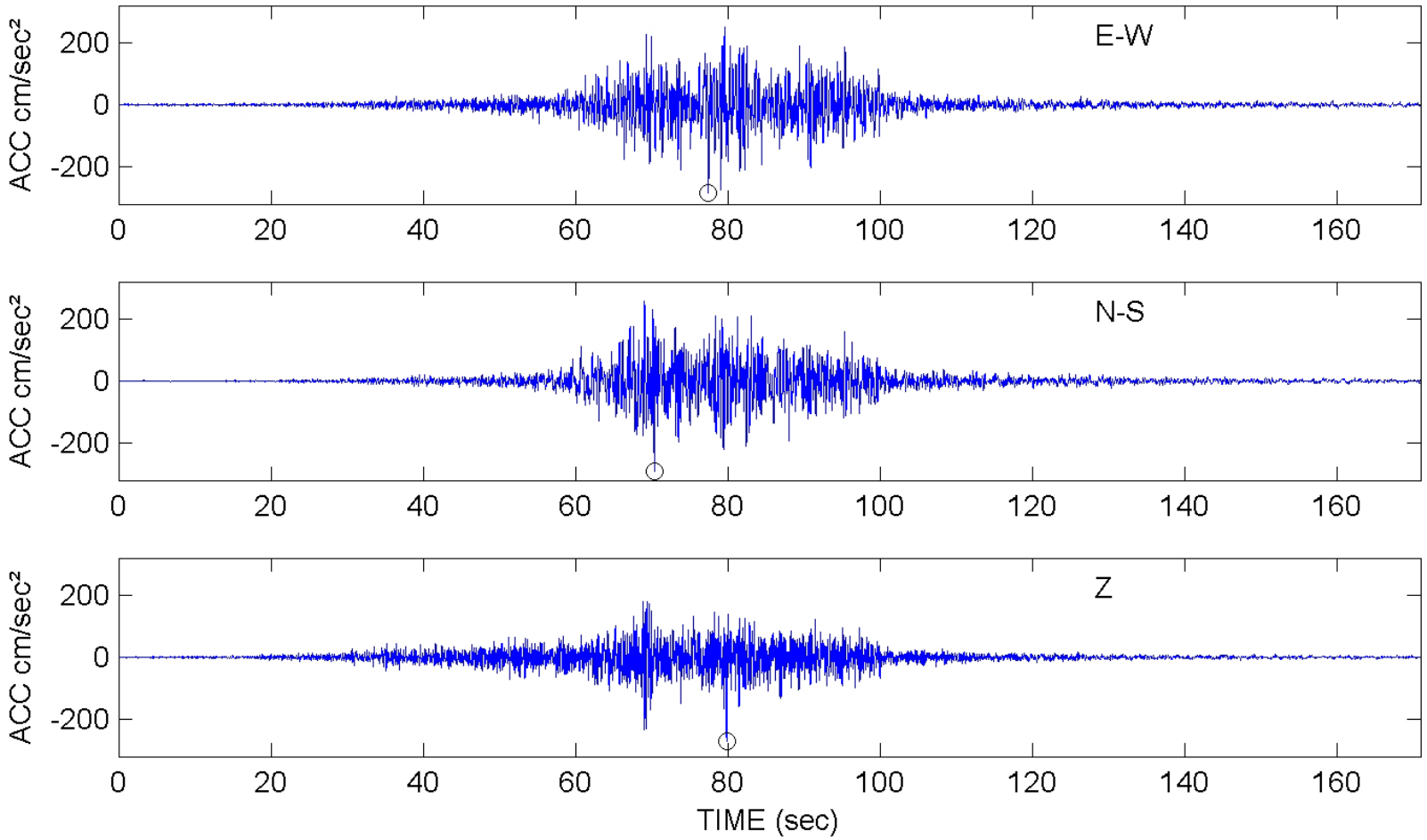
PEAK : N-S =19.18 cm/sec Z =12.36 cm/sec E-W =17.88 cm/sec



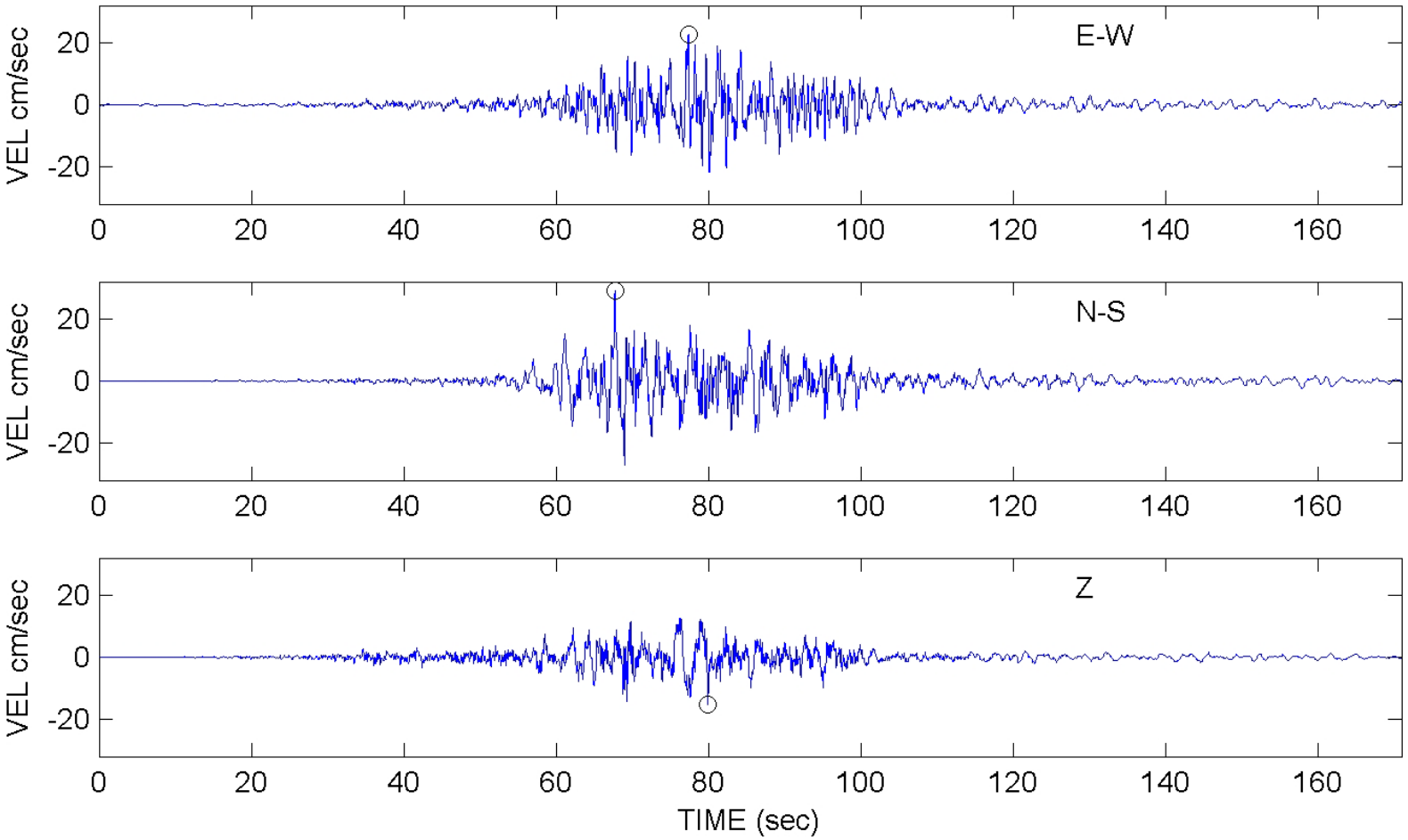
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
SANTIAGO - MIRADOR STATION METRO S.A. K2 958
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : N-S =6.28 cm Z =4.86 cm E-W =5.10 cm



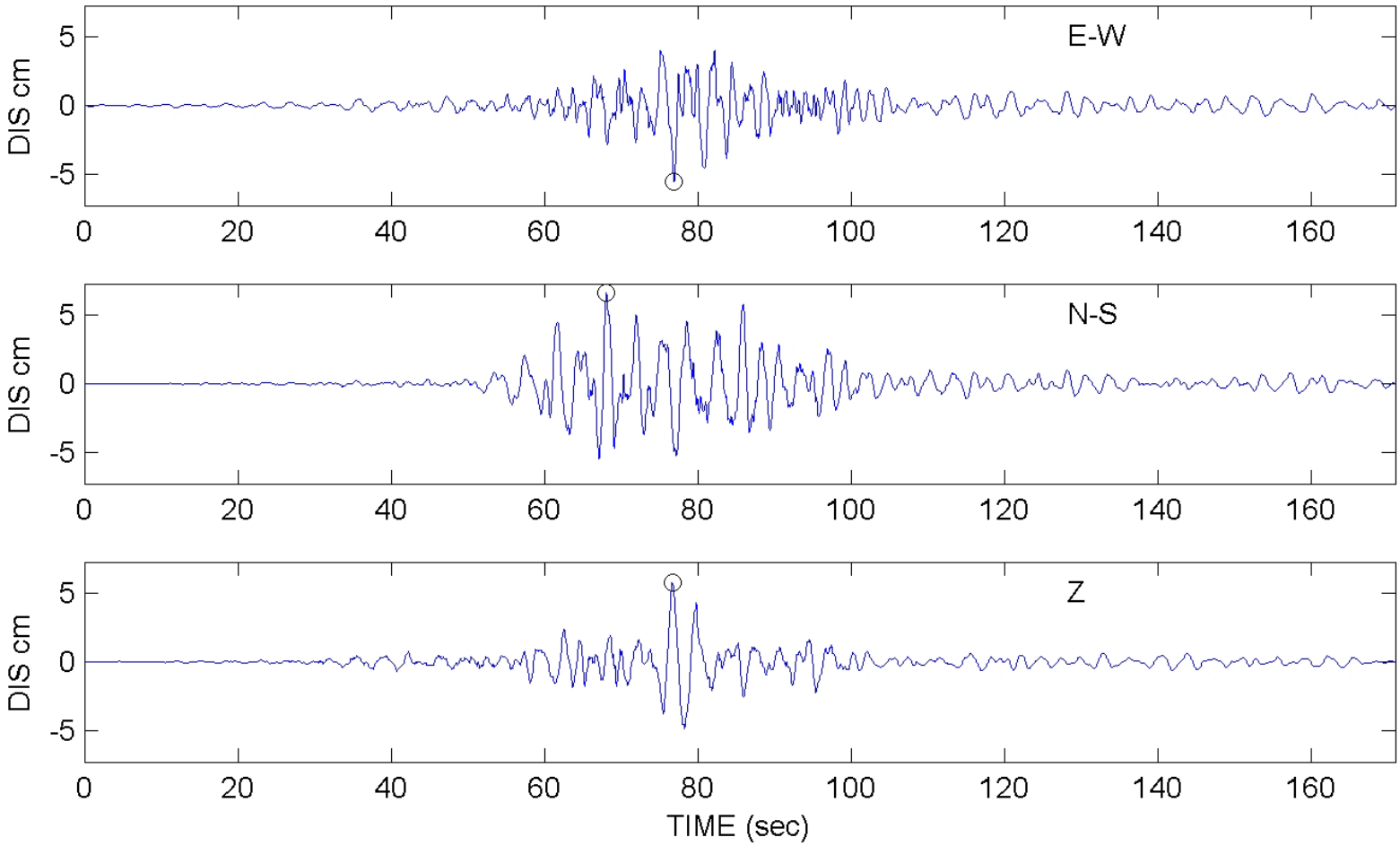
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
SANTIAGO - HOSPITAL SANTIAGO ORIENTE QDR 670
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : E-W =286.96 cm/sec² N-S =292.42 cm/sec² Z =273.21 cm/sec²

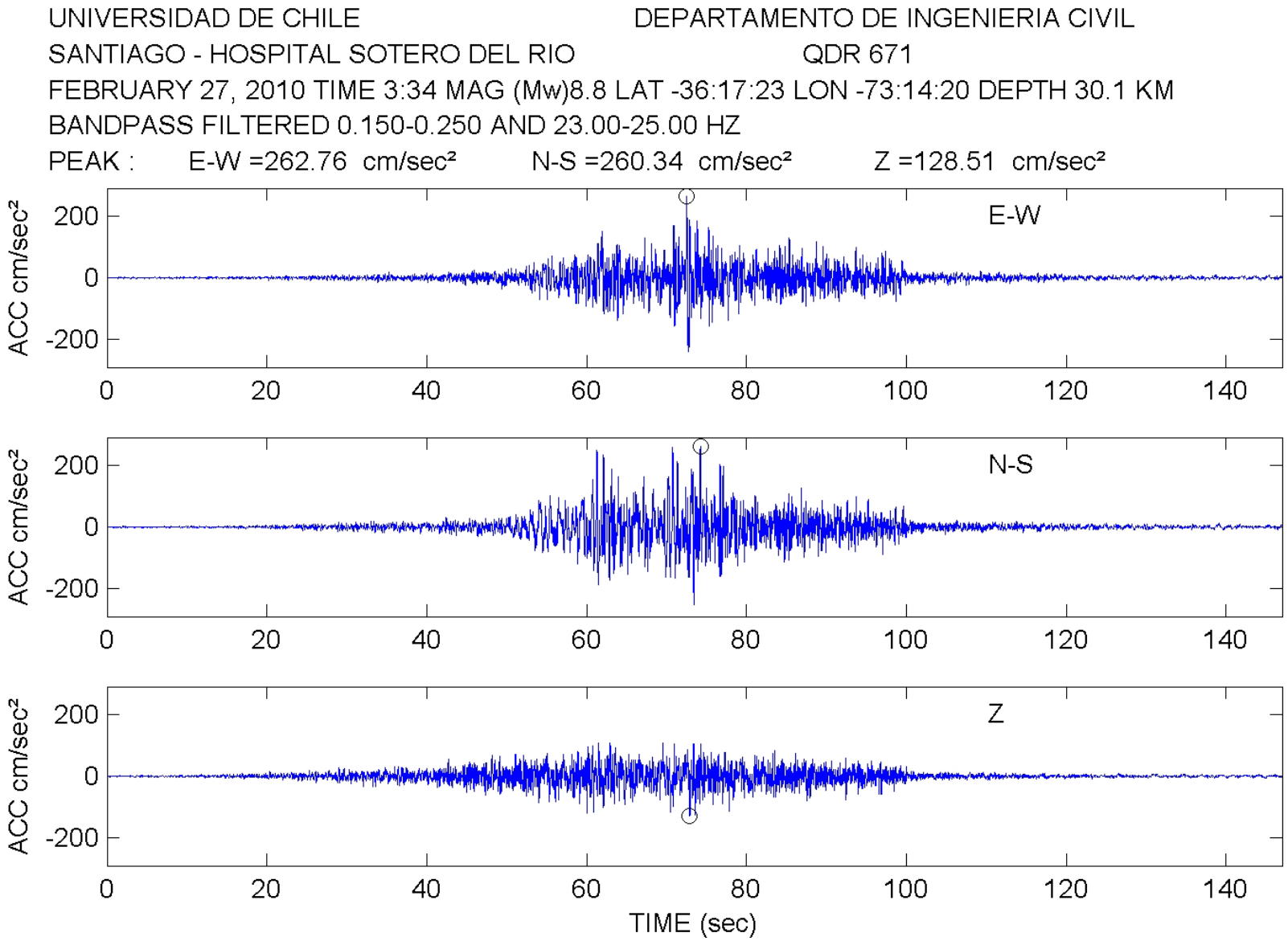


UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
SANTIAGO - HOSPITAL SANTIAGO ORIENTE QDR 670
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : E-W =22.74 cm/sec N-S =29.30 cm/sec Z =15.28 cm/sec



UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
SANTIAGO - HOSPITAL SANTIAGO ORIENTE QDR 670
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : E-W =5.60 cm N-S =6.64 cm Z =5.79 cm




UNIVERSIDAD DE CHILE
DEPARTAMENTO DE INGENIERIA CIVIL
SANTIAGO - HOSPITAL SOTERO DEL RIO
QDR 671
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : E-W =262.76 cm/sec² N-S =260.34 cm/sec² Z =128.51 cm/sec²
E-W
N-S
Z
ACC cm/sec²
200
0
-200
0
20
40
60
80
100
120
140
TIME (sec)

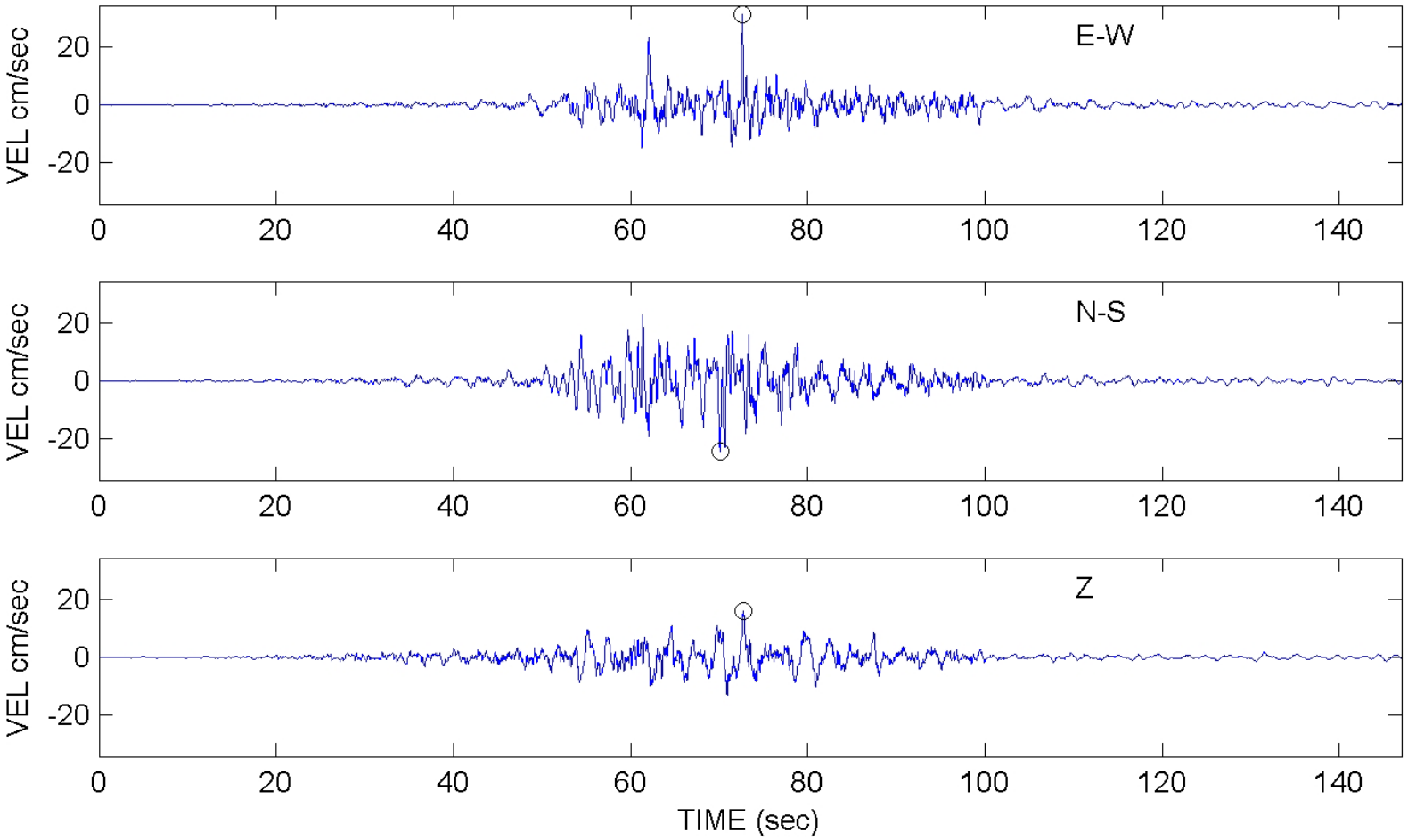
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL

SANTIAGO - HOSPITAL SOTERO DEL RIO QDR 671

FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM

BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ

PEAK : E-W =31.45 cm/sec N-S =24.58 cm/sec Z =16.18 cm/sec



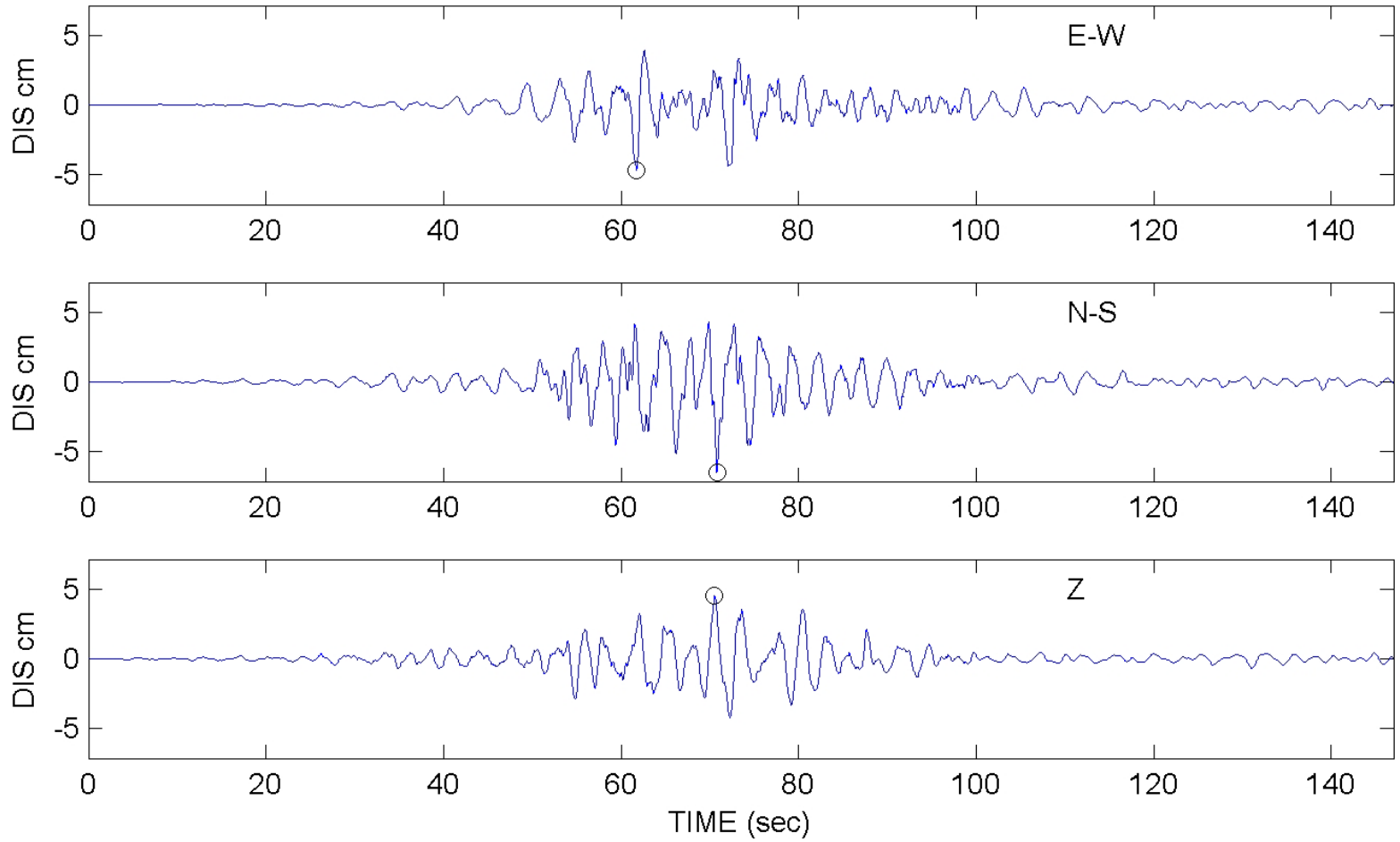
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL

SANTIAGO - HOSPITAL SOTERO DEL RIO QDR 671

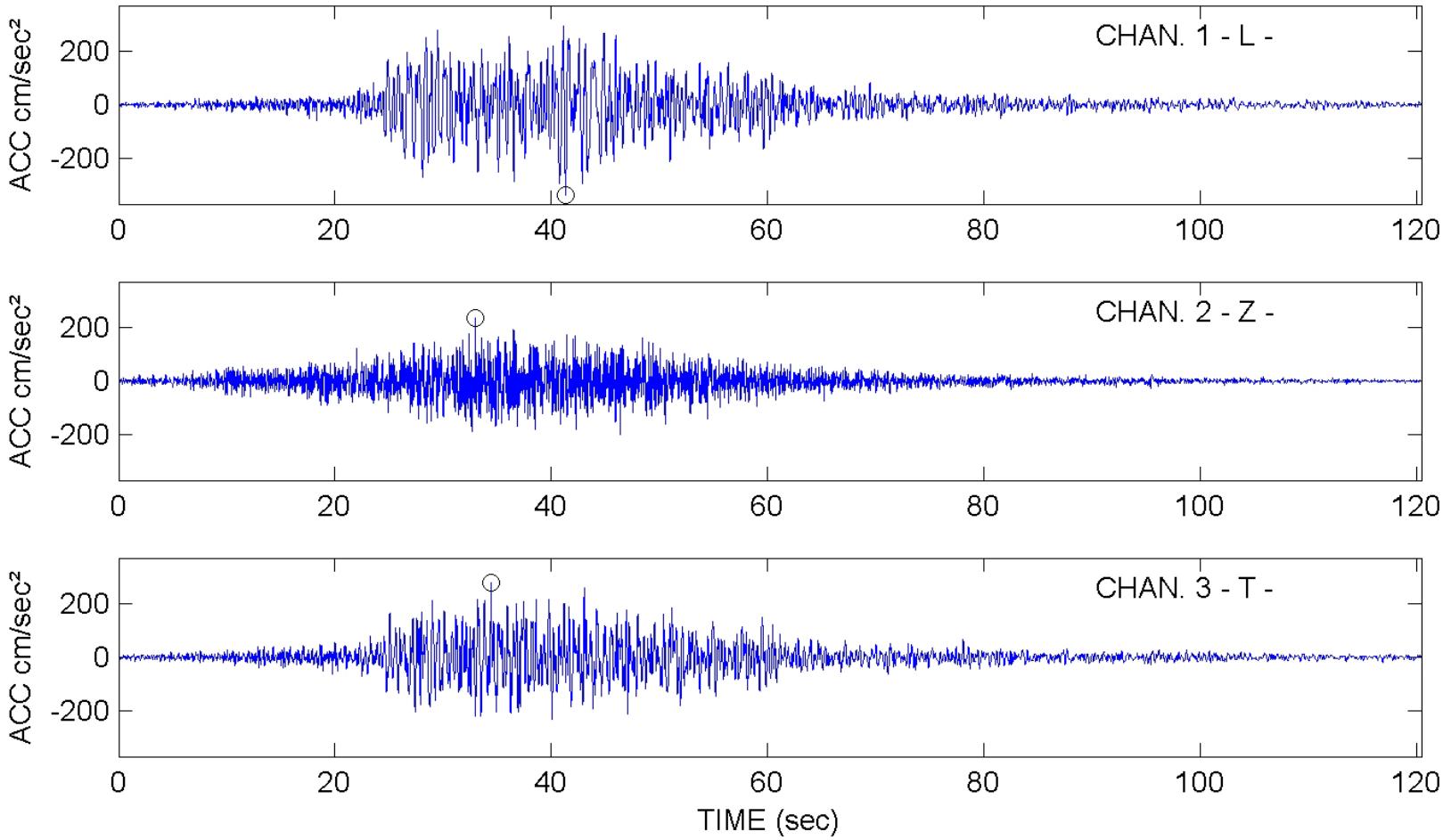
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM

BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ

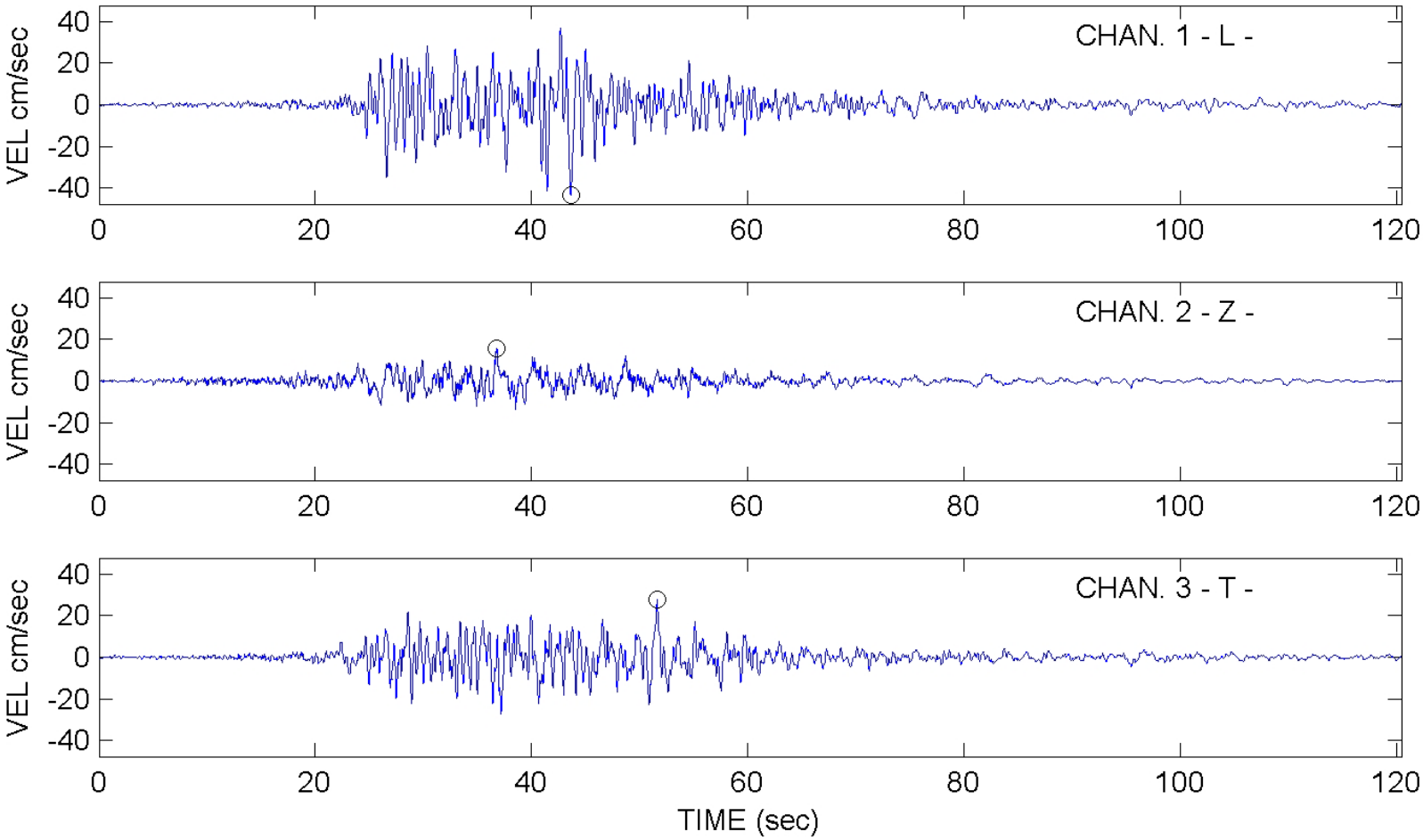
PEAK : E-W =4.67 cm N-S =6.52 cm Z =4.53 cm



UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
MATANZAS PRELIMINARY SMA-1 6736
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =337.52 cm/sec² CHAN.2 Z =234.61 cm/sec² CHAN.3 T =280.90 cm/sec²



UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
MATANZAS PRELIMINARY SMA-1 6736
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =43.35 cm/sec CHAN.2 Z =15.72 cm/sec CHAN.3 T =27.75 cm/sec



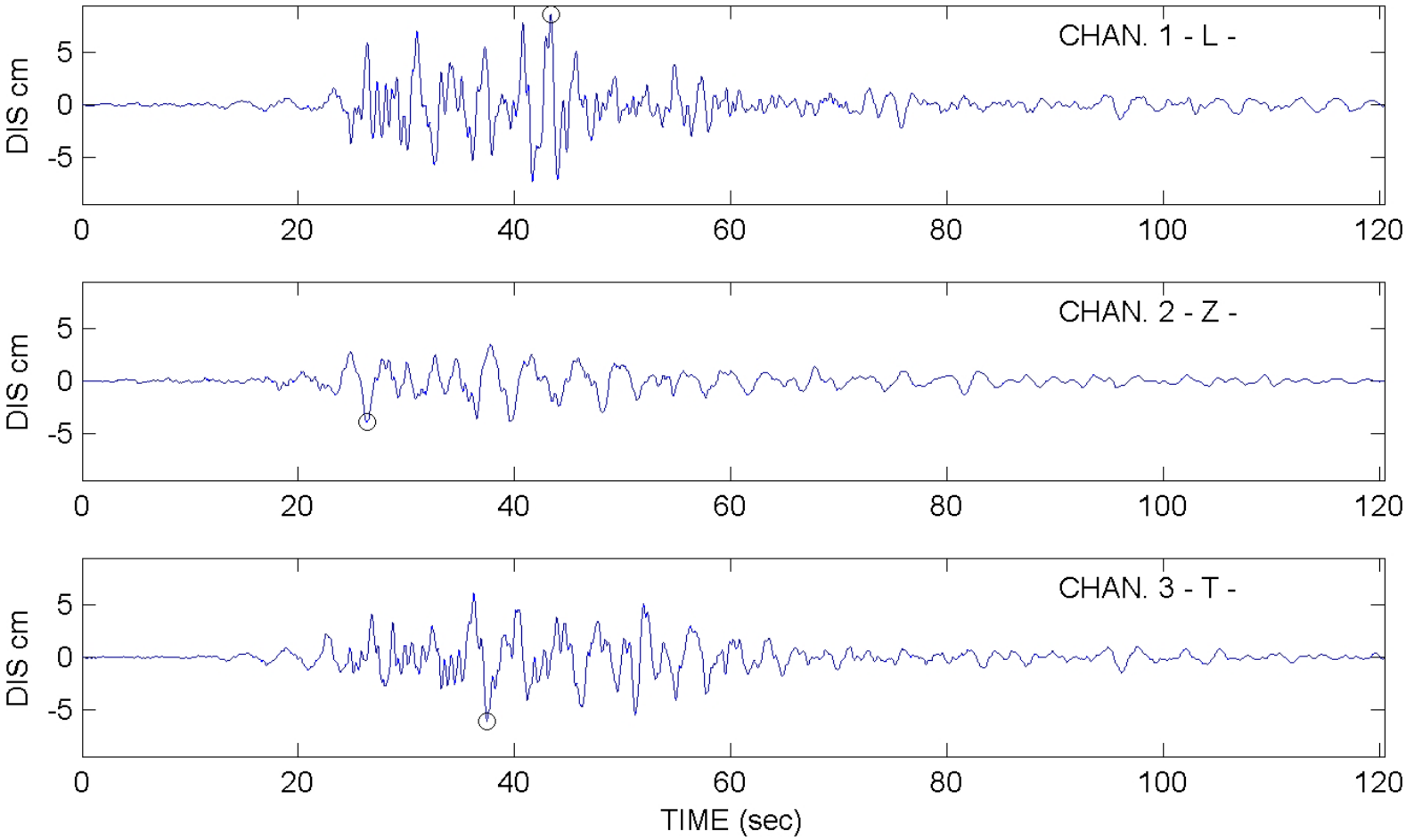
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL

MATANZAS PRELIMINARY SMA-1 6736

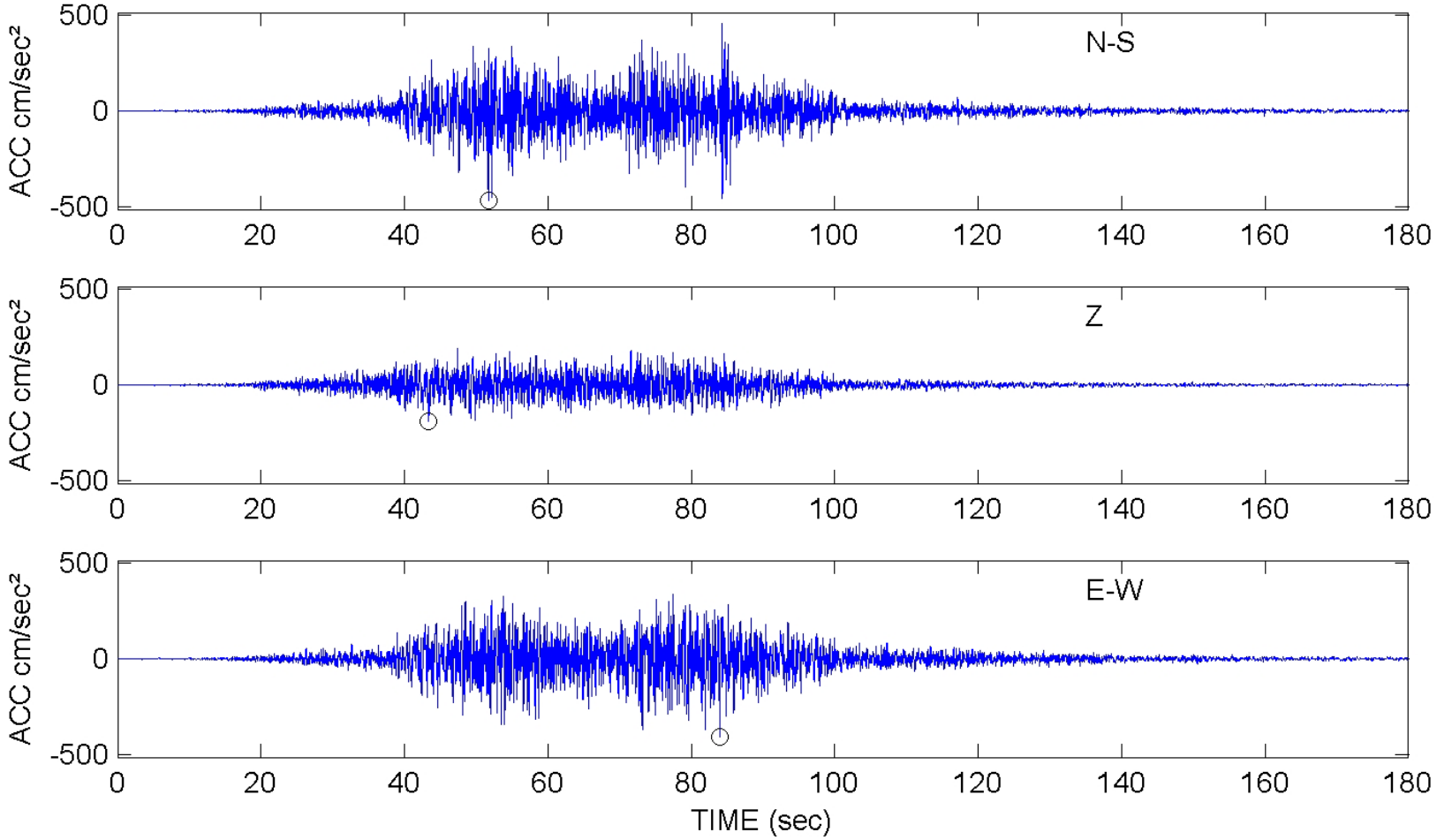
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM

BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ

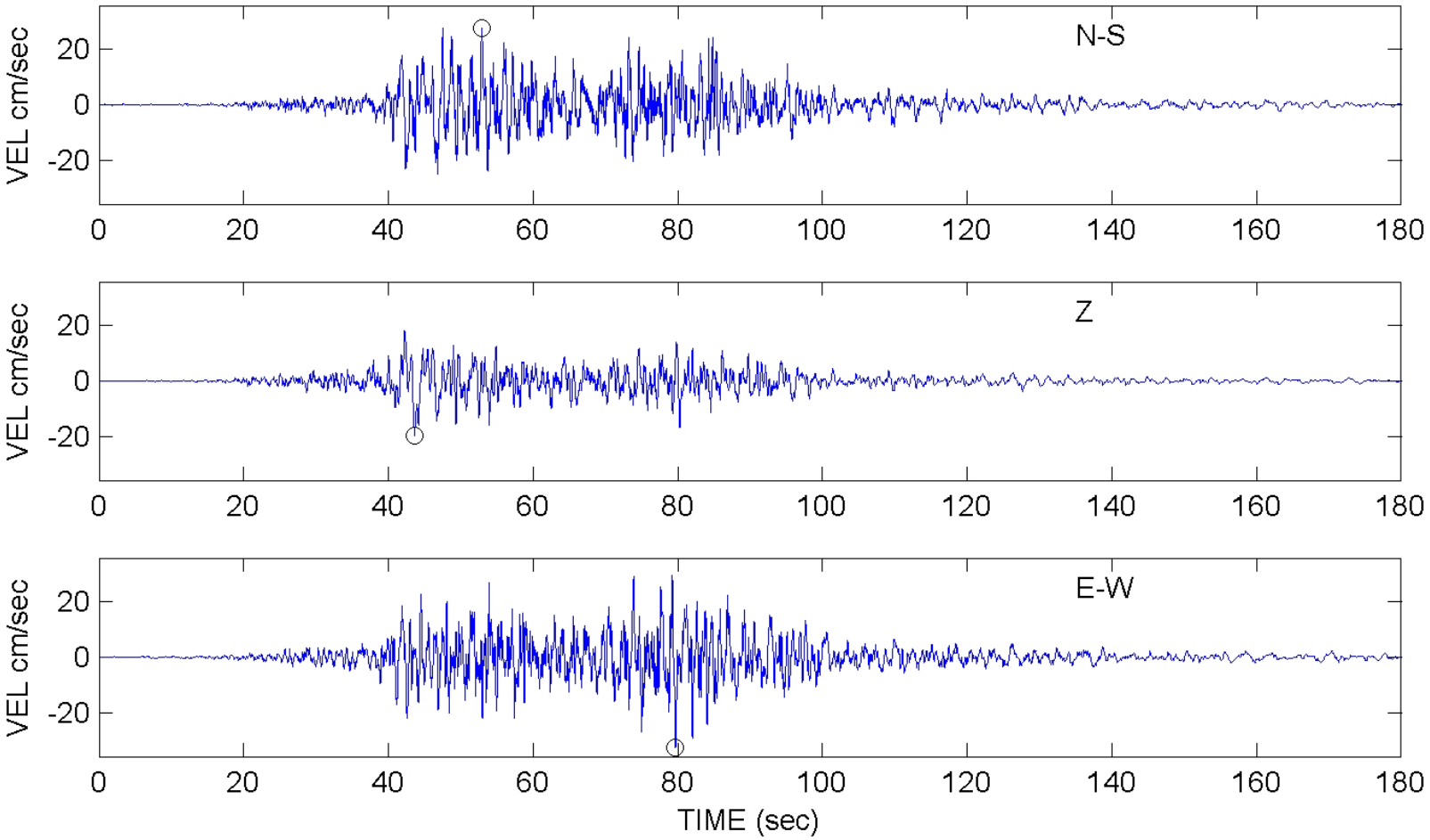
PEAK : CHAN.1 L =8.58 cm CHAN.2 Z =3.90 cm CHAN.3 T =6.08 cm



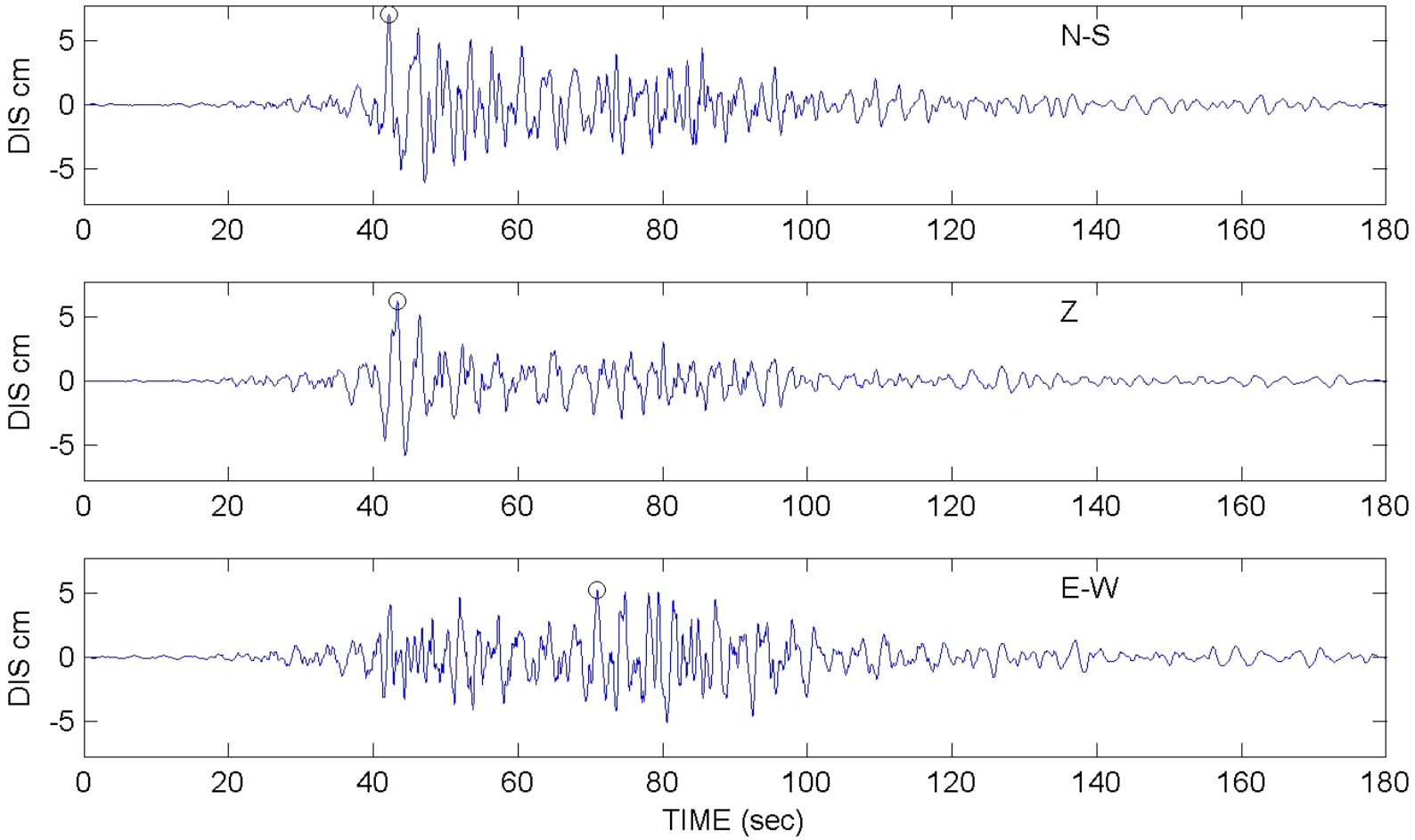
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
CURICO QDR 499
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : N-S =465.48 cm/sec² Z =191.43 cm/sec² E-W =405.63 cm/sec²



UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
CURICO QDR 499
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : N-S =27.71 cm/sec Z =19.83 cm/sec E-W =32.64 cm/sec



UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
CURICO QDR 499
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : N-S =7.00 cm Z =6.23 cm E-W =5.25 cm



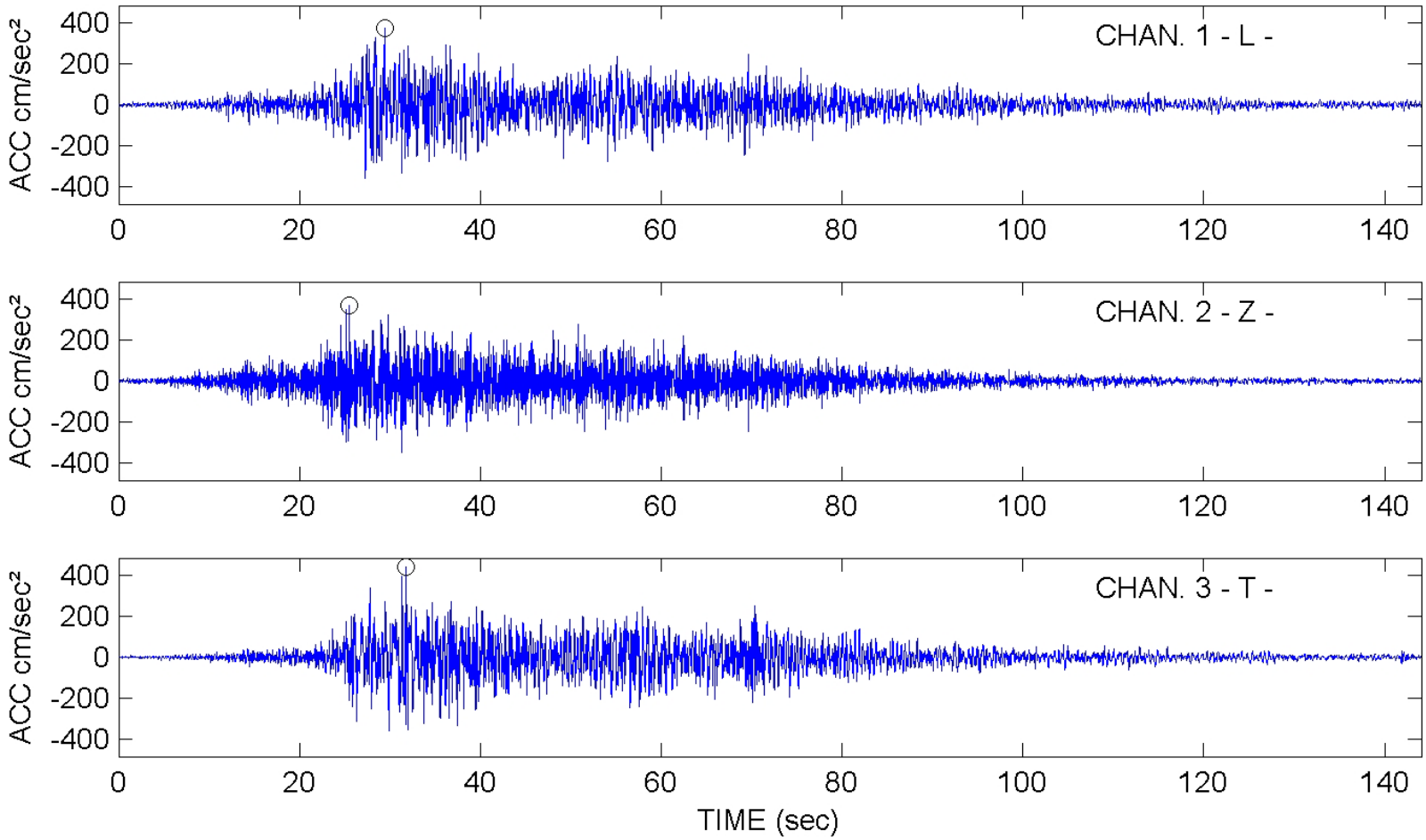
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL

HUALAÑE PRELIMINARY SMA-1 4564

FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM

BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ

PEAK : CHAN.1 L =374.70 cm/sec² CHAN.2 Z =370.54 cm/sec² CHAN.3 T =442.80 cm/sec²



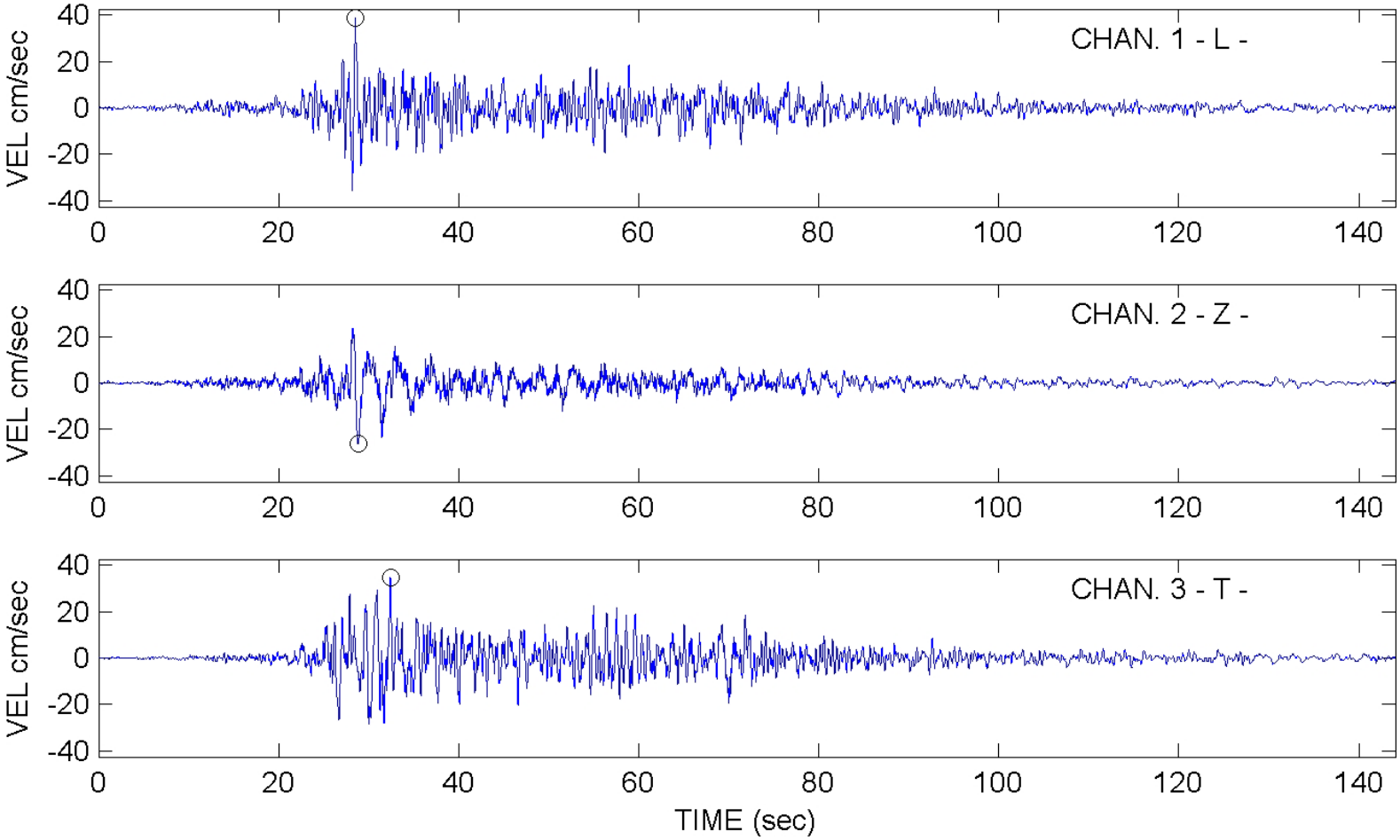
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL

HUALAÑE PRELIMINARY SMA-1 4564

FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM

BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ

PEAK : CHAN.1 L =38.83 cm/sec CHAN.2 Z =26.18 cm/sec CHAN.3 T =35.02 cm/sec



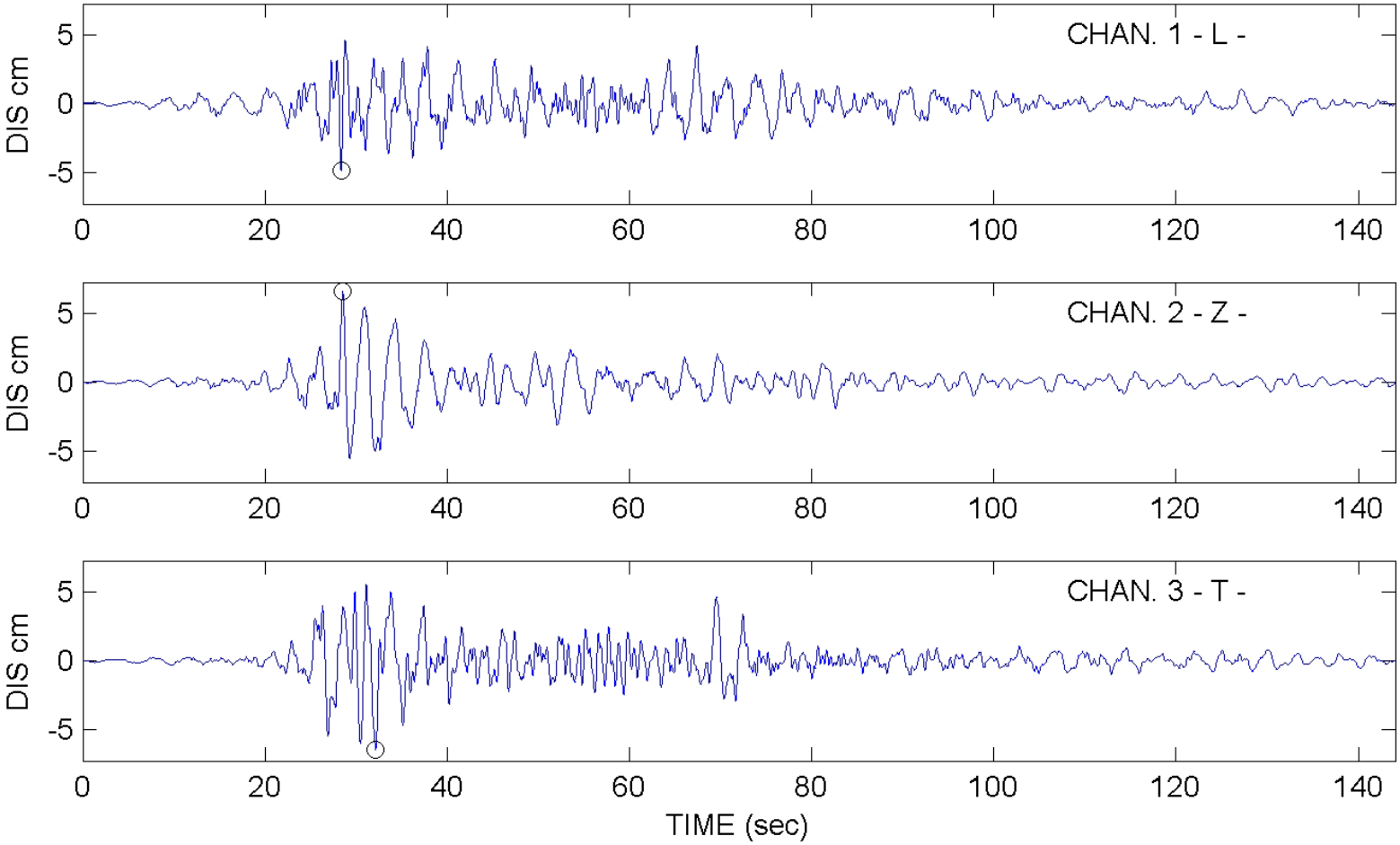
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL

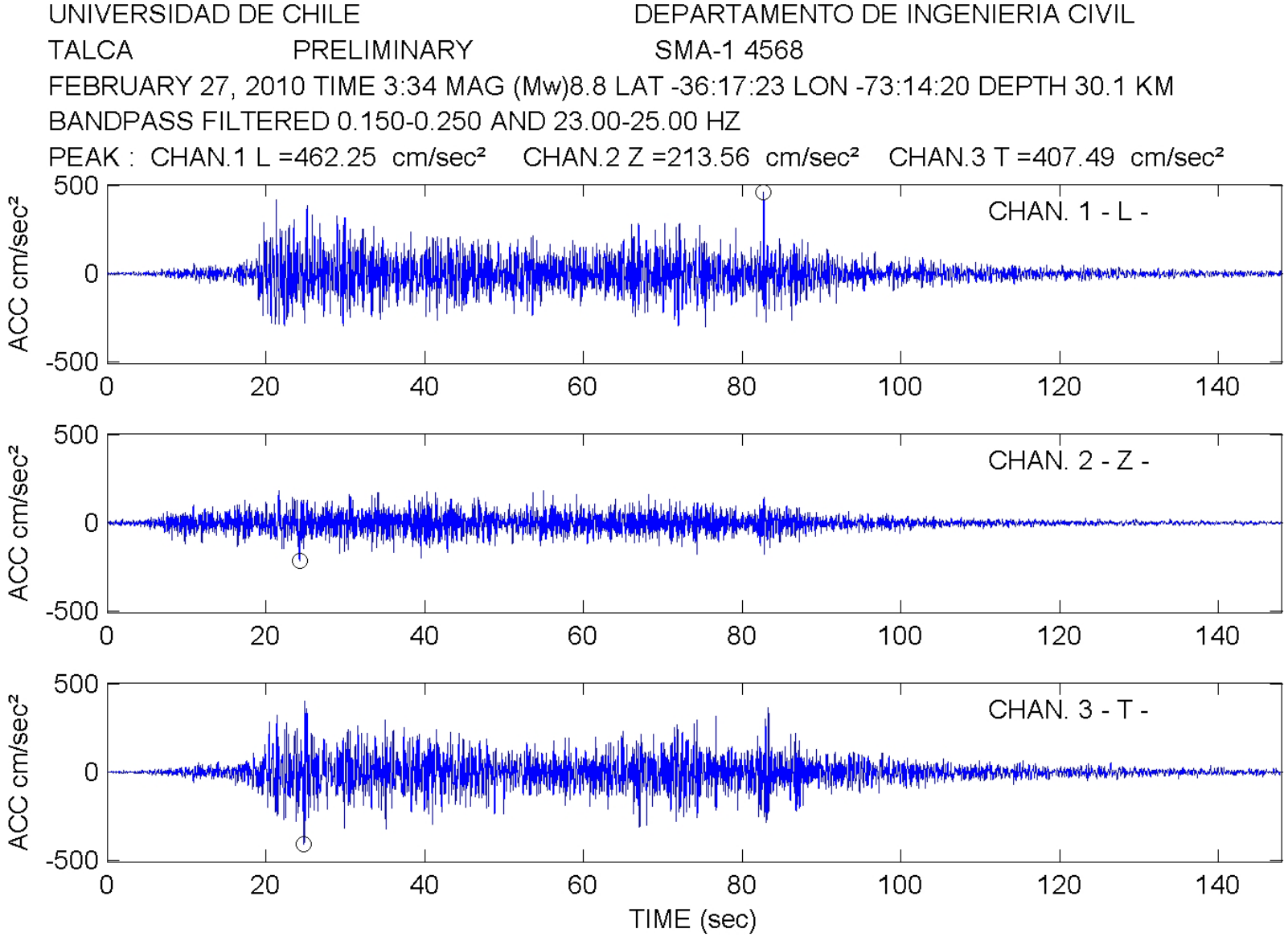
HUALAÑE PRELIMINARY SMA-1 4564

FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM

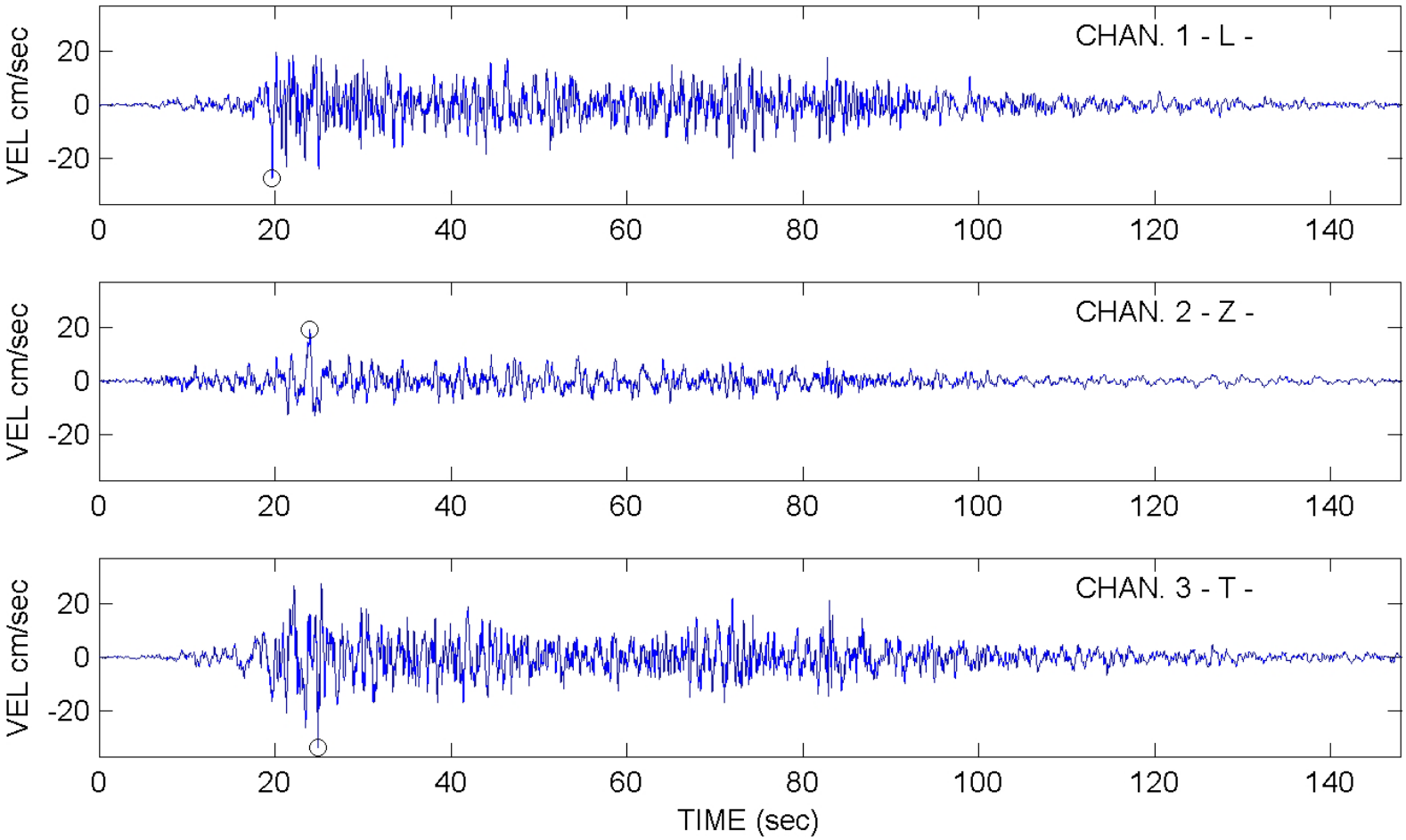
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ

PEAK : CHAN.1 L =4.84 cm CHAN.2 Z =6.65 cm CHAN.3 T =6.49 cm

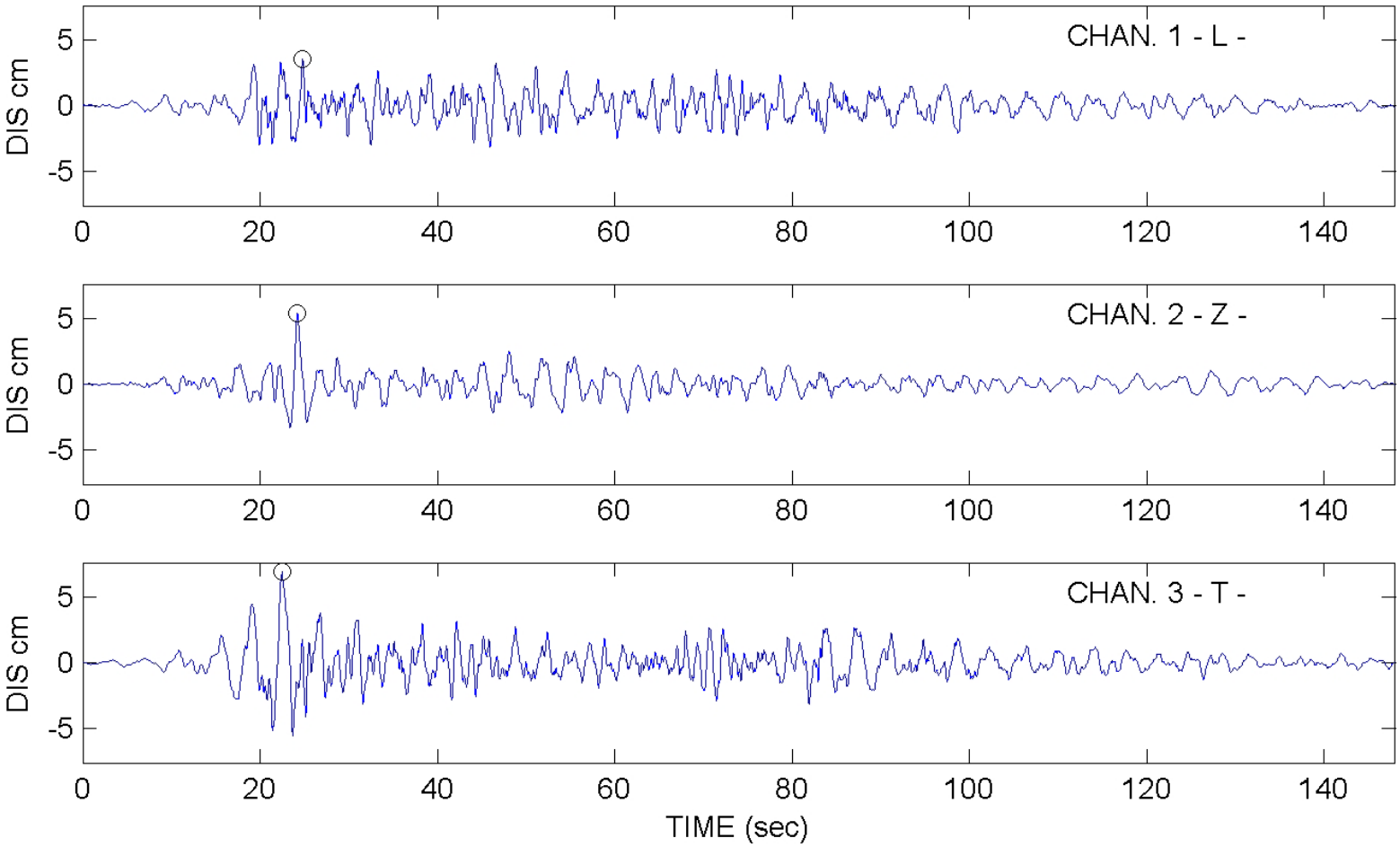



UNIVERSIDAD DE CHILE
DEPARTAMENTO DE INGENIERIA CIVIL
TALCA
PRELIMINARY
SMA-1 4568
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =462.25 cm/sec² CHAN.2 Z =213.56 cm/sec² CHAN.3 T =407.49 cm/sec²
CHAN. 1 - L -
CHAN. 2 - Z -
CHAN. 3 - T -
ACC cm/sec²
500
0
-500
0
20
40
60
80
100
120
140
TIME (sec)

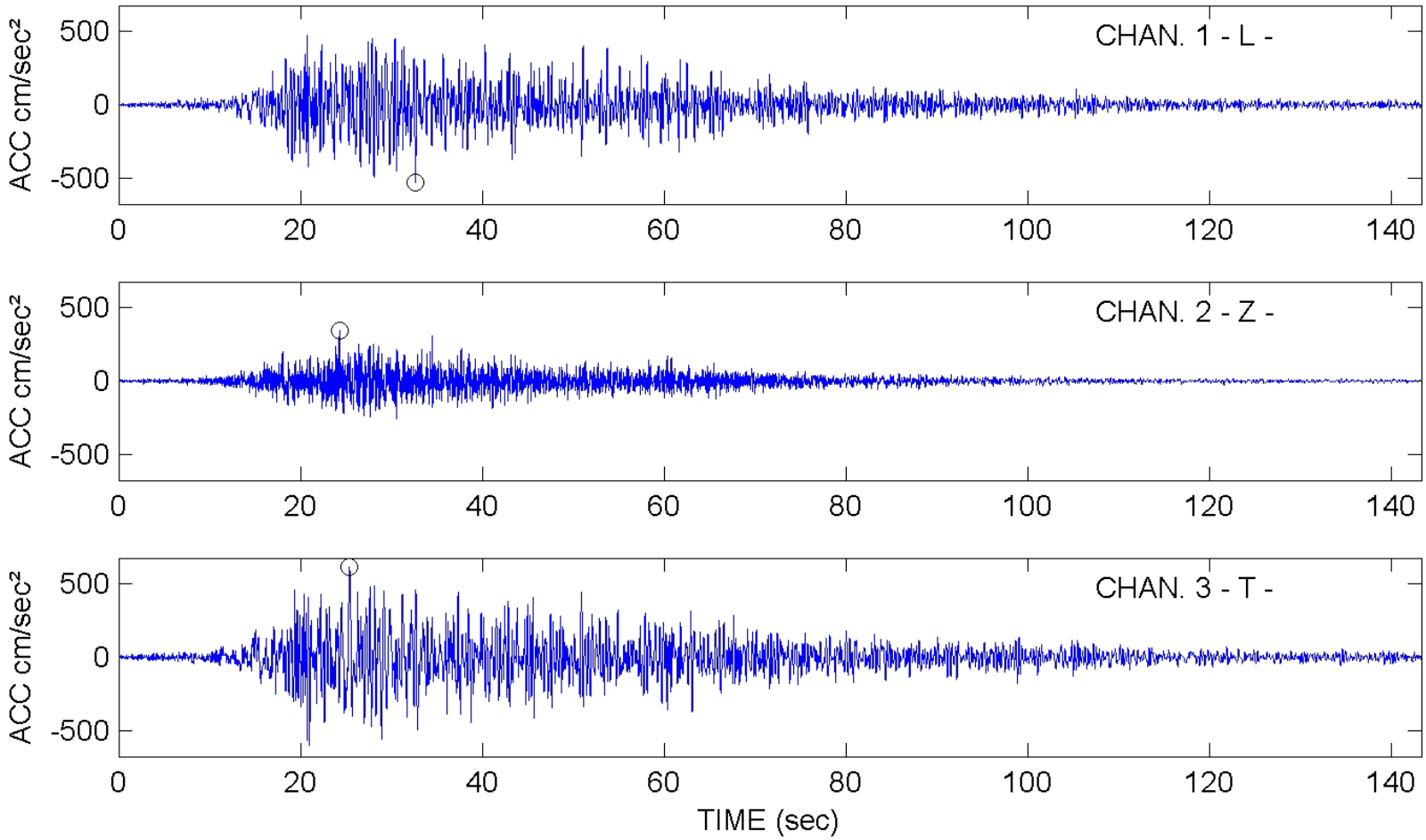
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
TALCA PRELIMINARY SMA-1 4568
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =27.35 cm/sec CHAN.2 Z =19.11 cm/sec CHAN.3 T =33.42 cm/sec



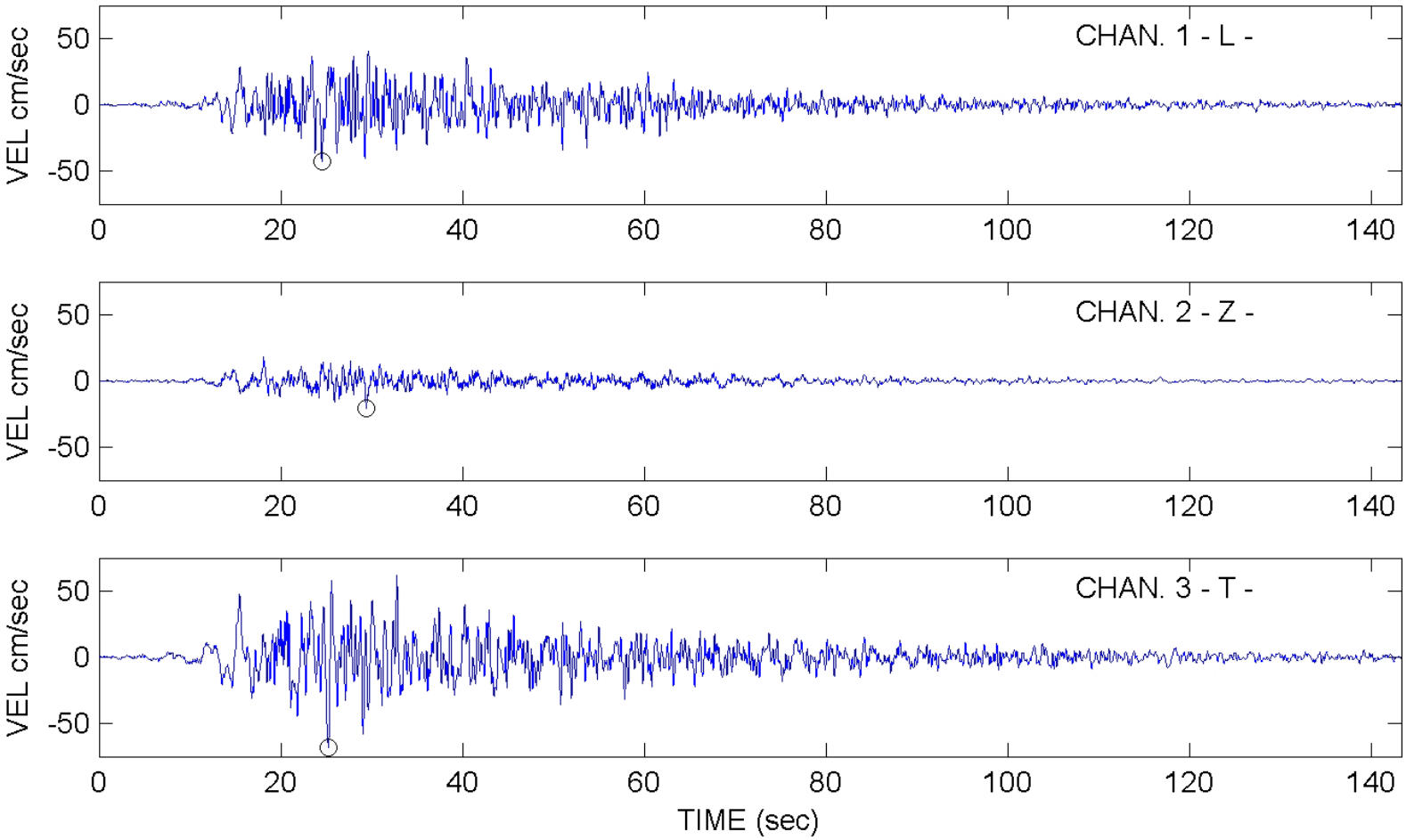
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
TALCA PRELIMINARY SMA-1 4568
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =3.58 cm CHAN.2 Z =5.44 cm CHAN.3 T =6.97 cm



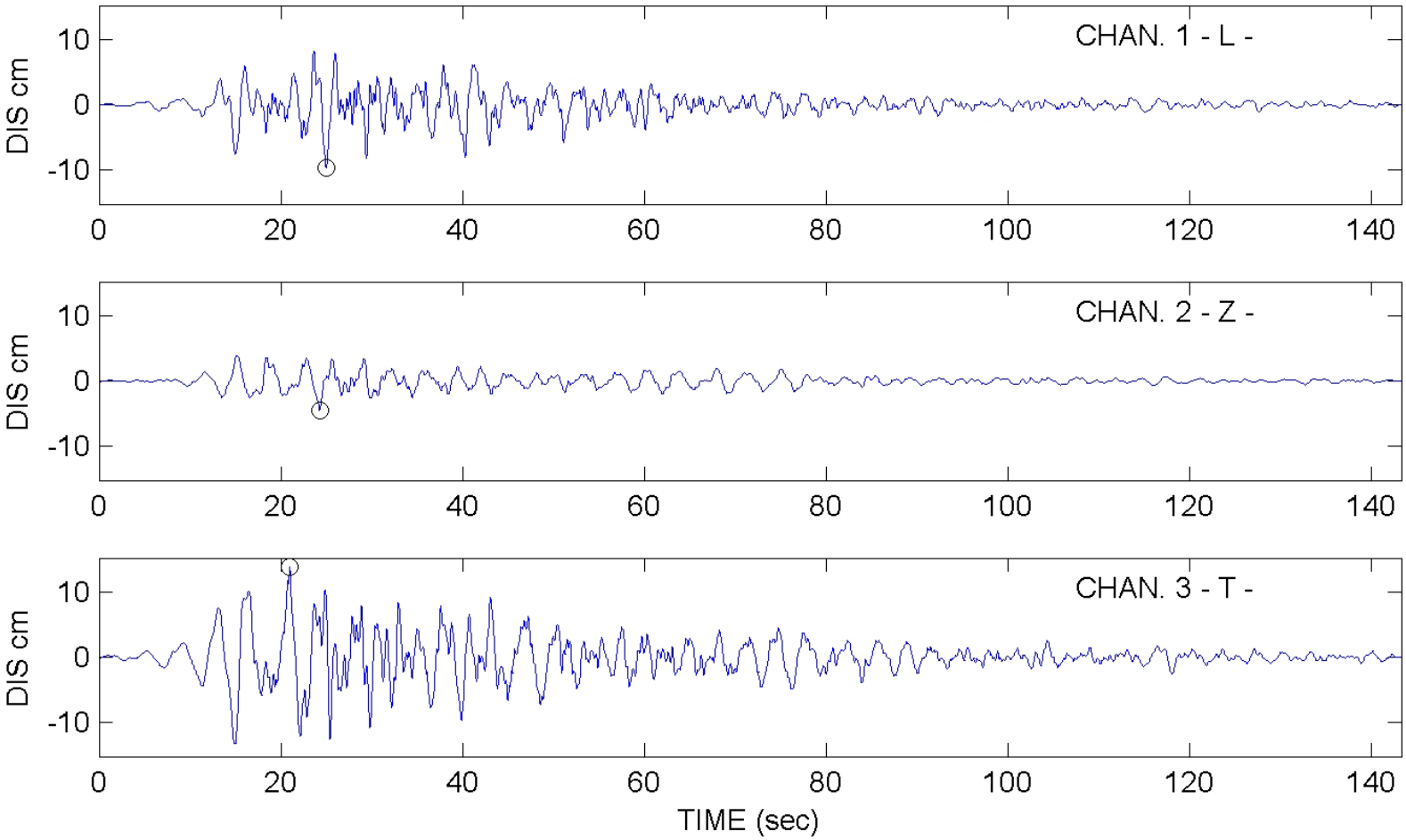
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
CONSTITUCION PRELIMINARY SMA-1 4598
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =527.28 cm/sec² CHAN.2 Z =345.78 cm/sec² CHAN.3 T =613.80 cm/sec²



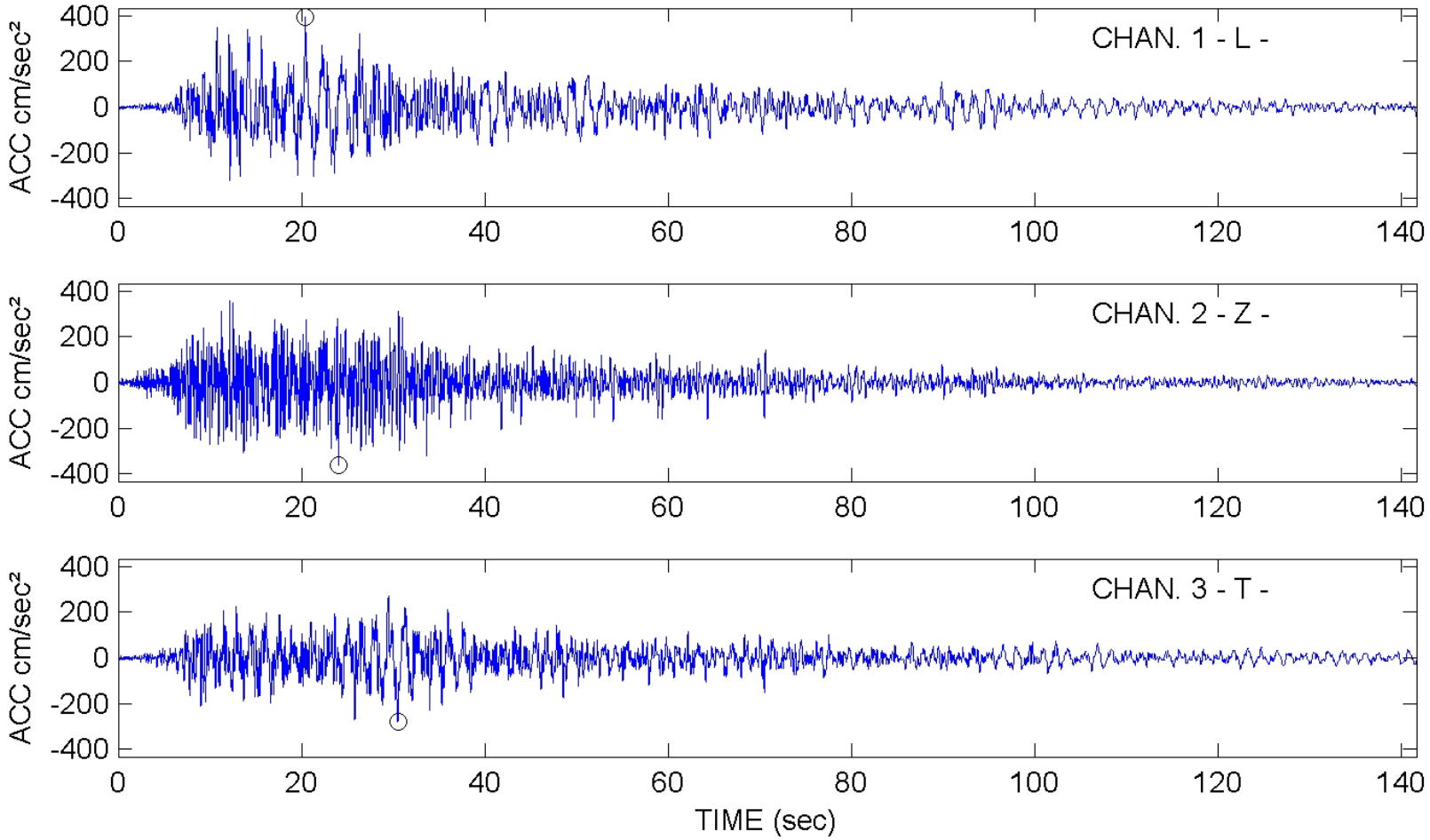
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
CONSTITUCION PRELIMINARY SMA-1 4598
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =43.31 cm/sec CHAN.2 Z =20.47 cm/sec CHAN.3 T =68.59 cm/sec



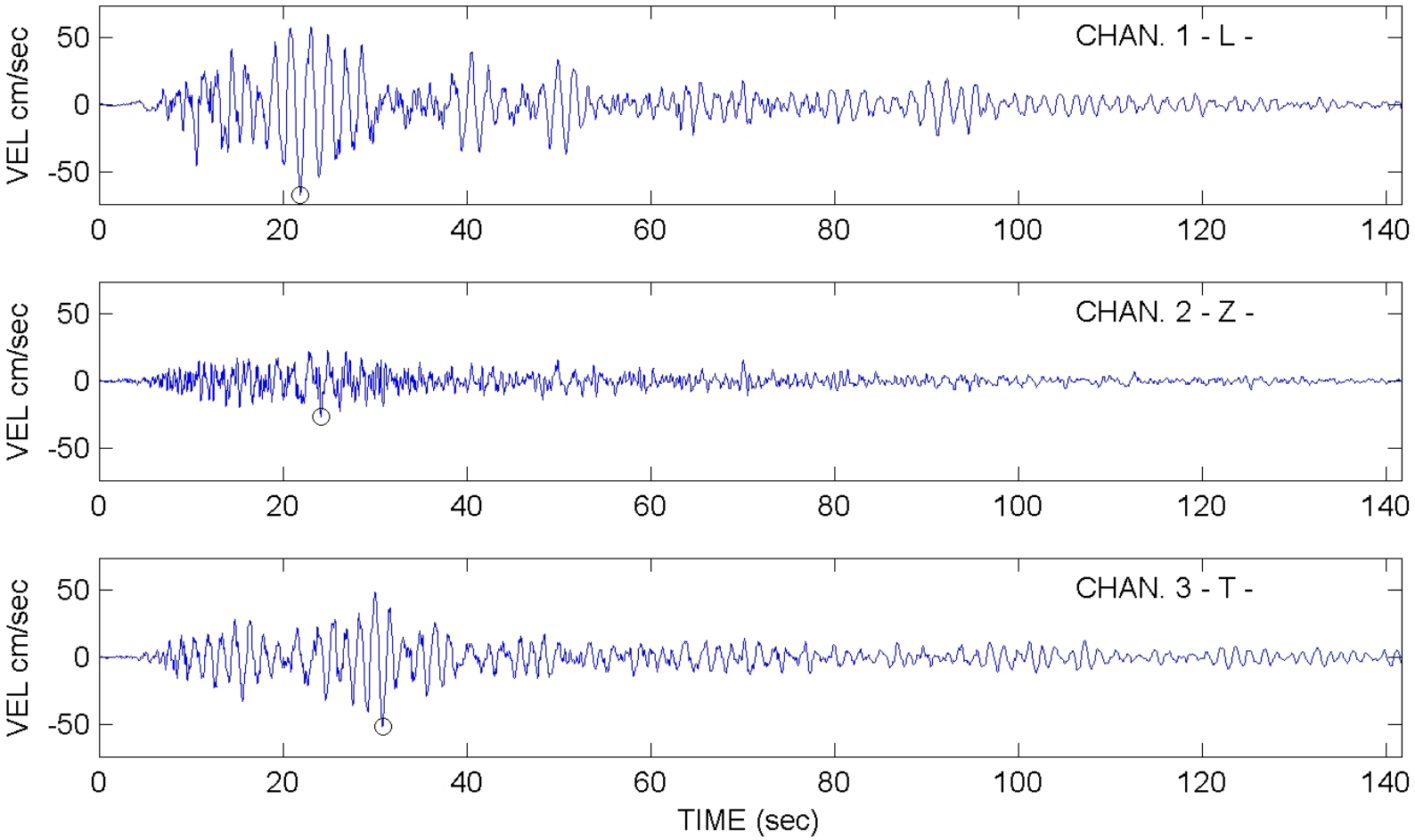
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
CONSTITUCION PRELIMINARY SMA-1 4598
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =9.76 cm CHAN.2 Z =4.51 cm CHAN.3 T =13.92 cm



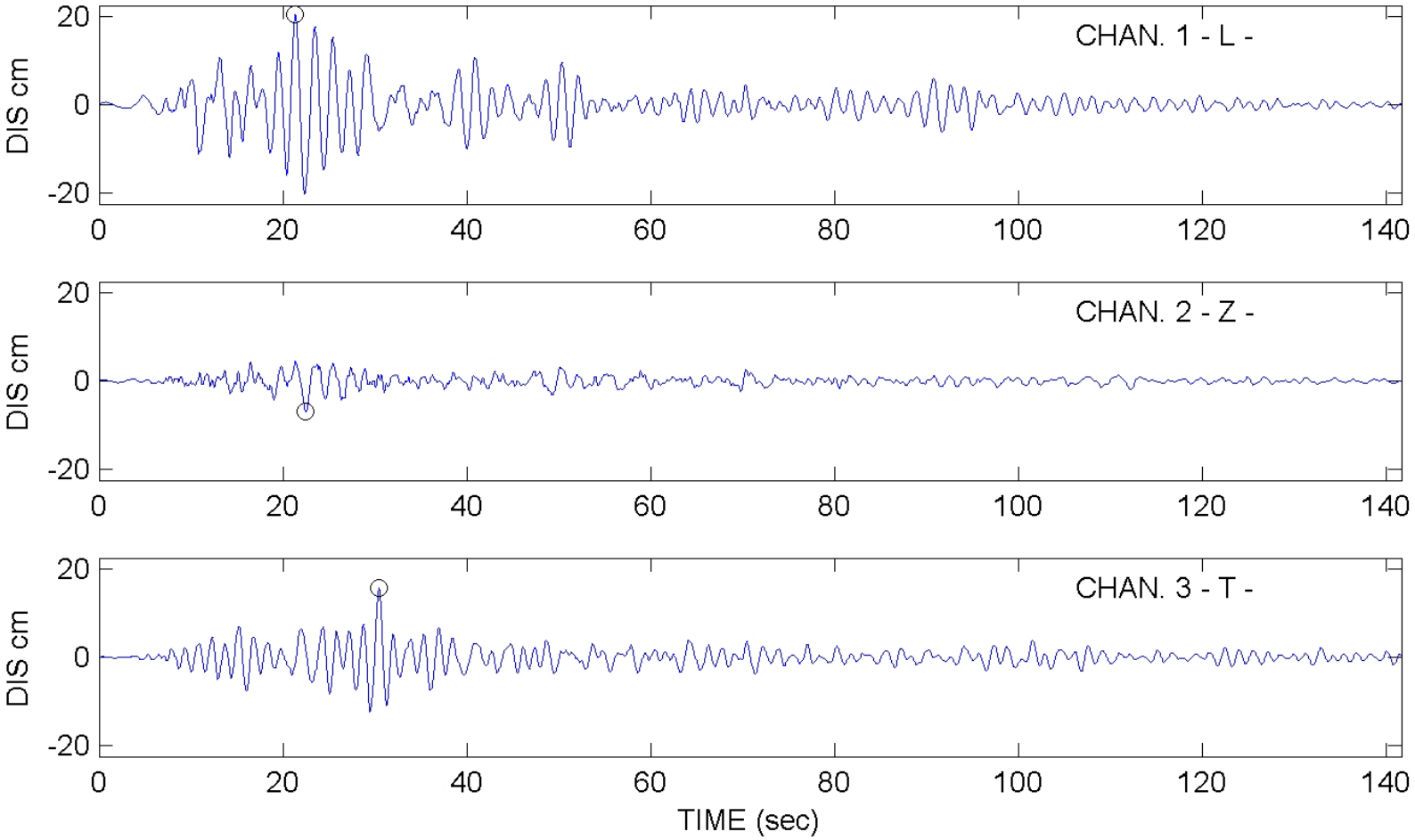
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
CONCEPCION PRELIMINARY SMA-1 5003
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =393.21 cm/sec² CHAN.2 Z =359.51 cm/sec² CHAN.3 T =280.47 cm/sec²

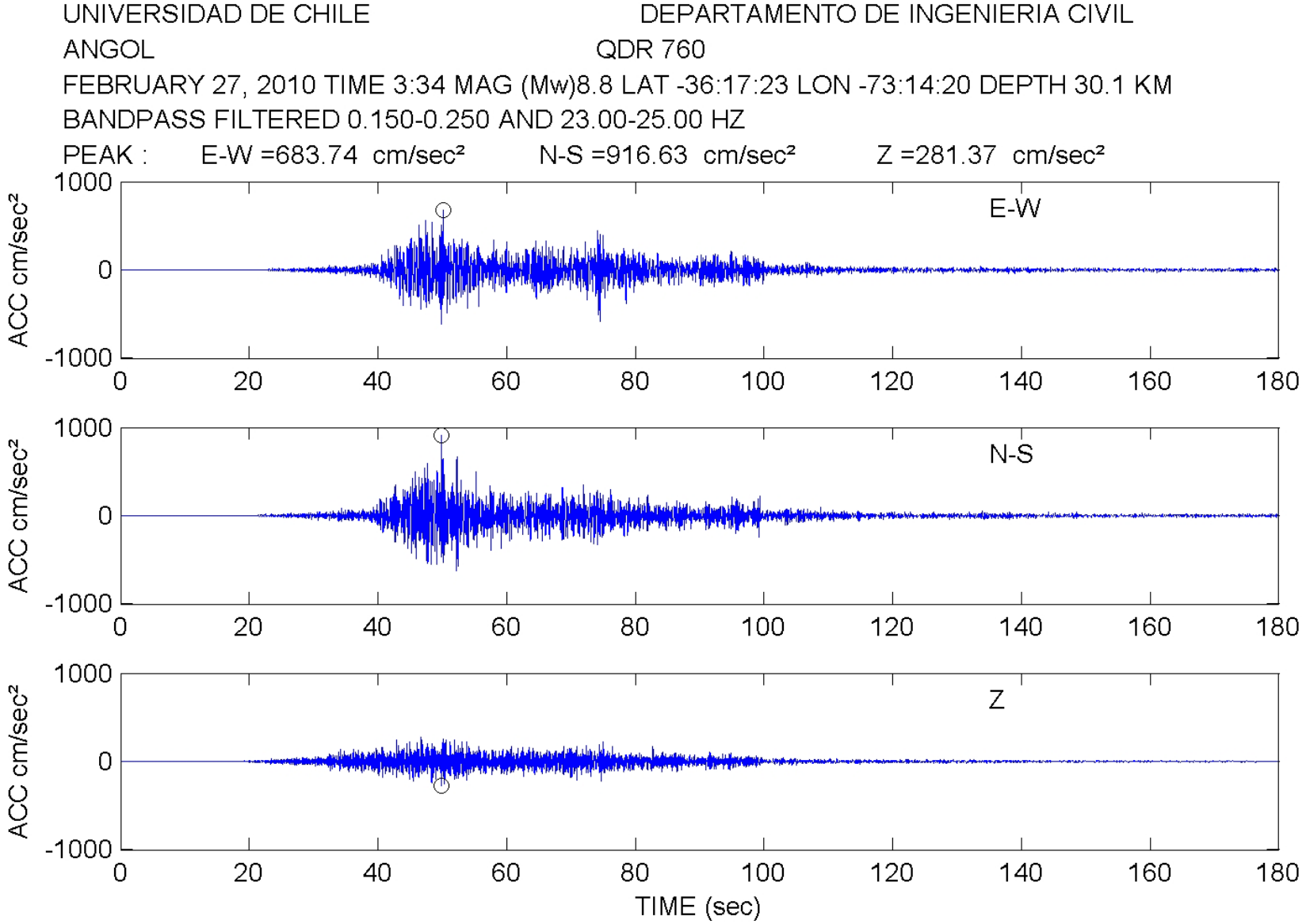


UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
CONCEPCION PRELIMINARY SMA-1 5003
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =67.63 cm/sec CHAN.2 Z =26.69 cm/sec CHAN.3 T =51.74 cm/sec



UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
CONCEPCION PRELIMINARY SMA-1 5003
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : CHAN.1 L =20.43 cm CHAN.2 Z =6.83 cm CHAN.3 T =15.66 cm




UNIVERSIDAD DE CHILE
DEPARTAMENTO DE INGENIERIA CIVIL
ANGOL
QDR 760
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : E-W =683.74 cm/sec² N-S =916.63 cm/sec² Z =281.37 cm/sec²
E-W
N-S
Z
ACC cm/sec²
1000
0
-1000
0
20
40
60
80
100
120
140
160
180
TIME (sec)

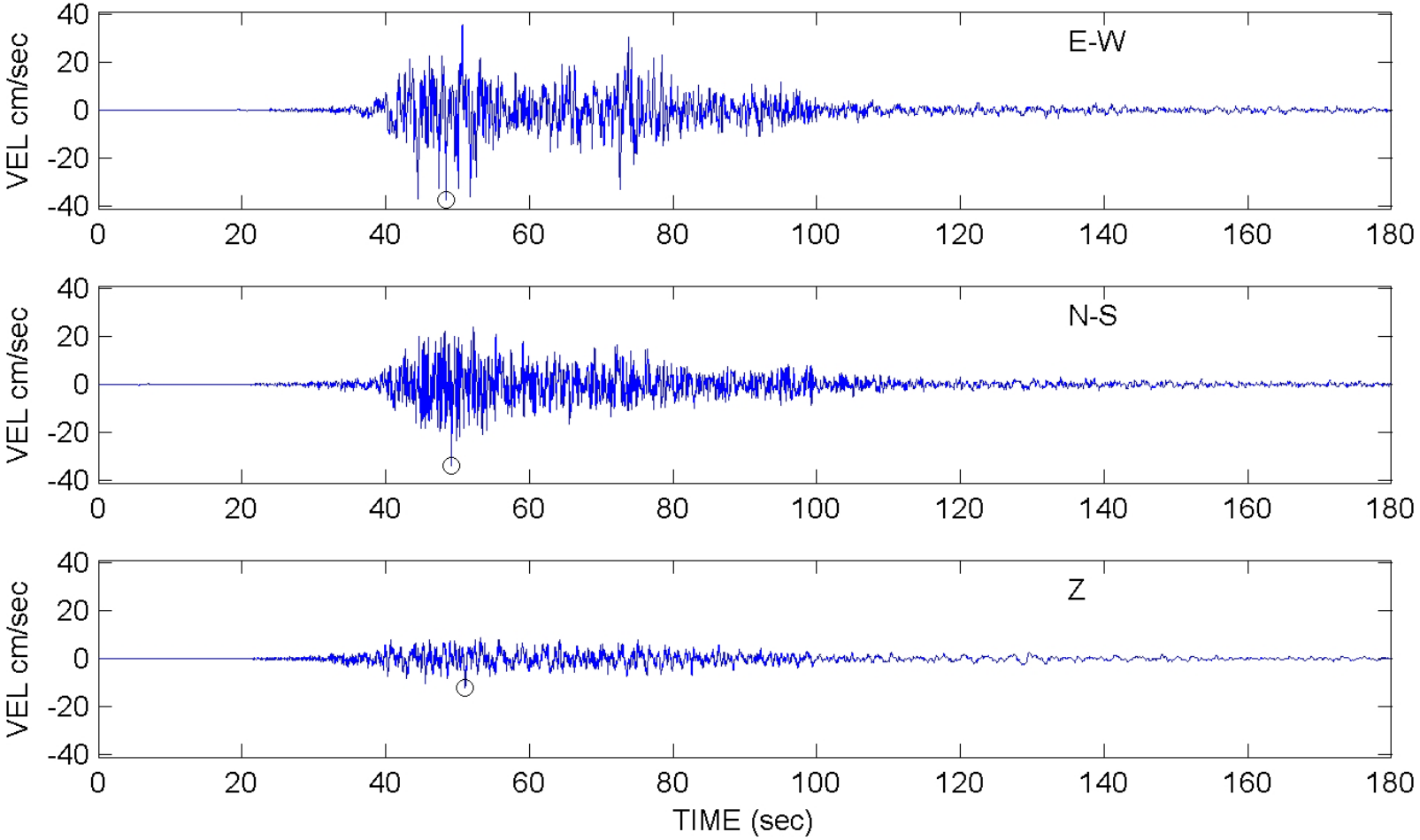
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL

ANGOL QDR 760

FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM

BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ

PEAK : E-W =37.55 cm/sec N-S =34.25 cm/sec Z =12.15 cm/sec



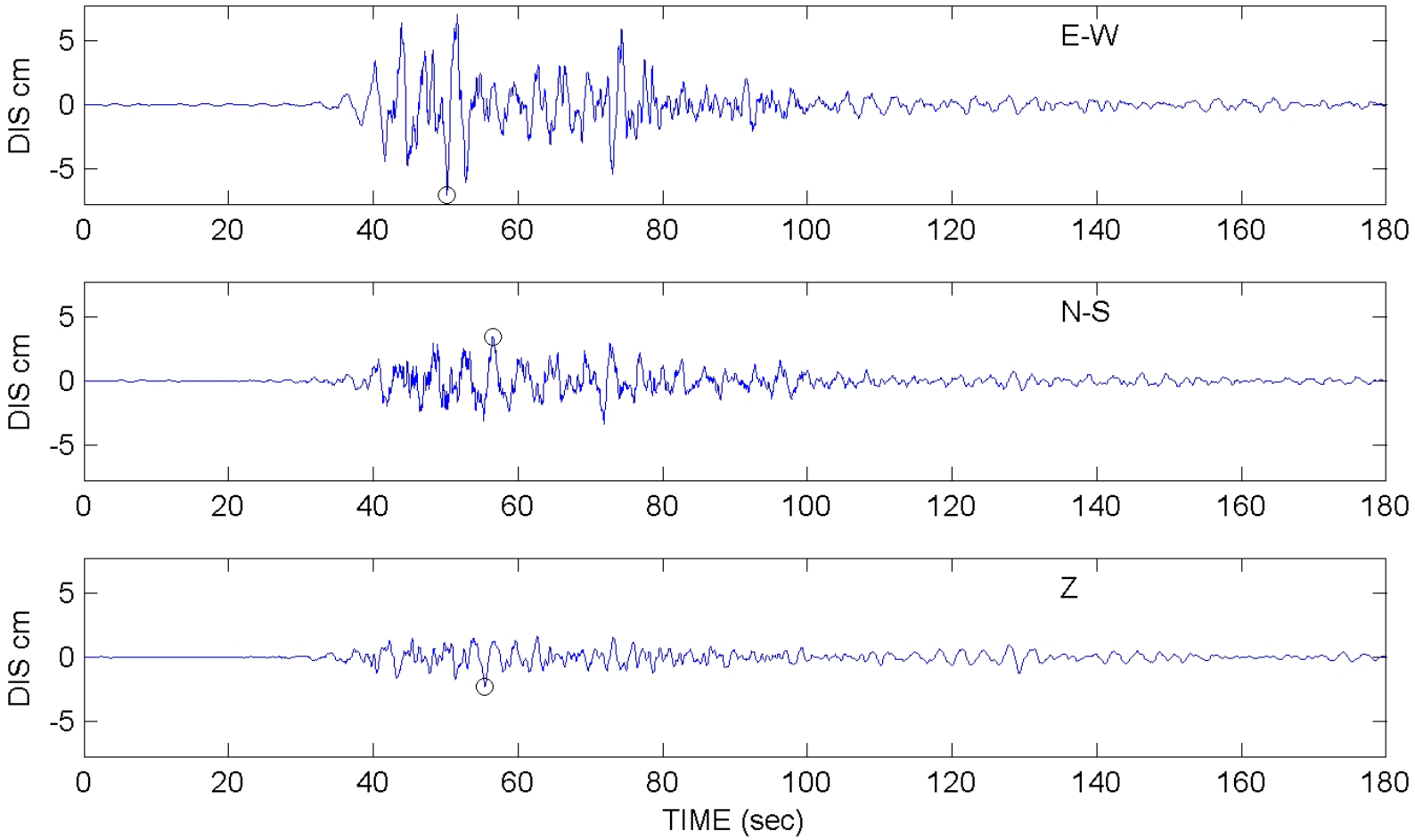
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL

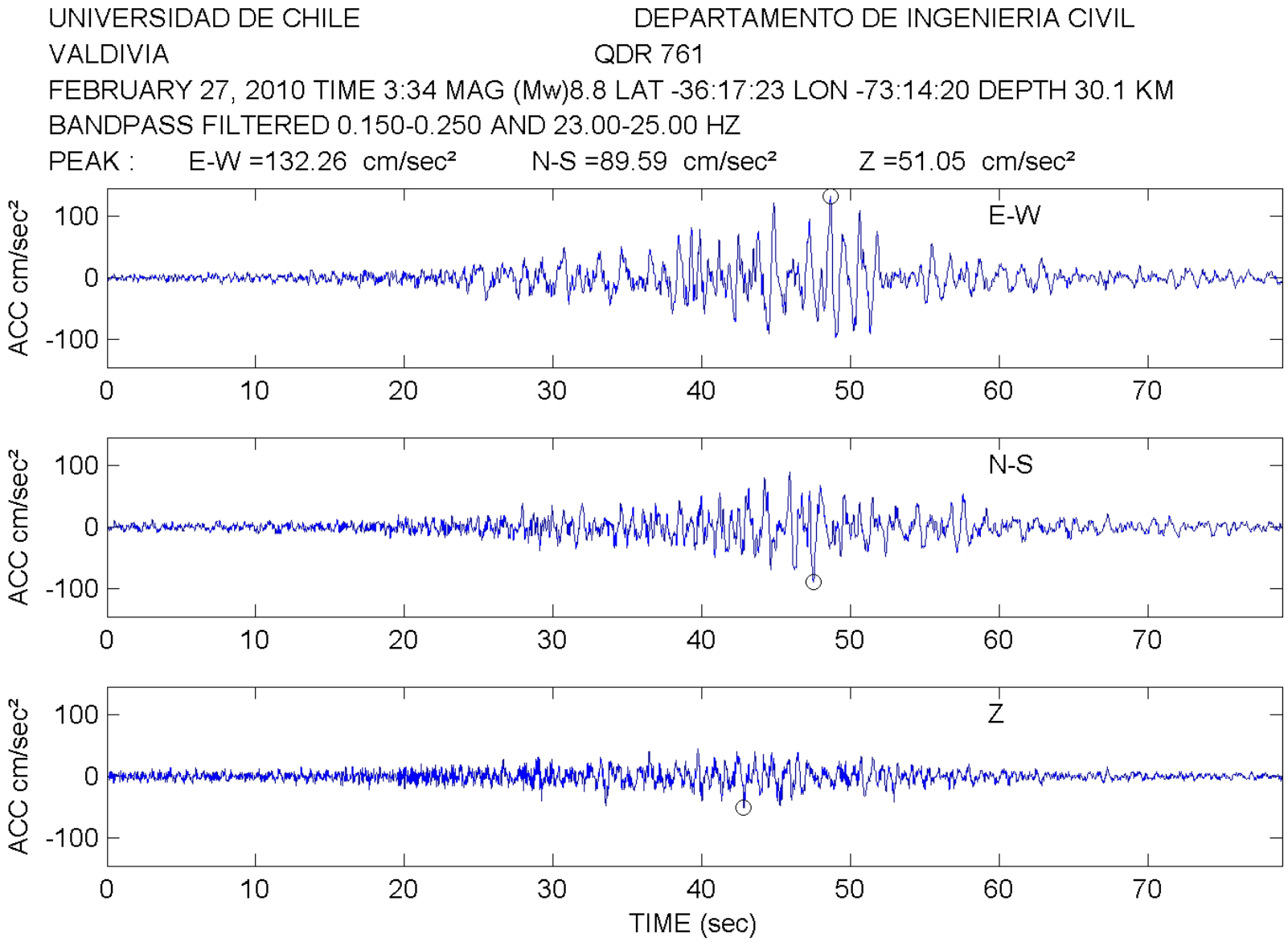
ANGOL QDR 760

FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM

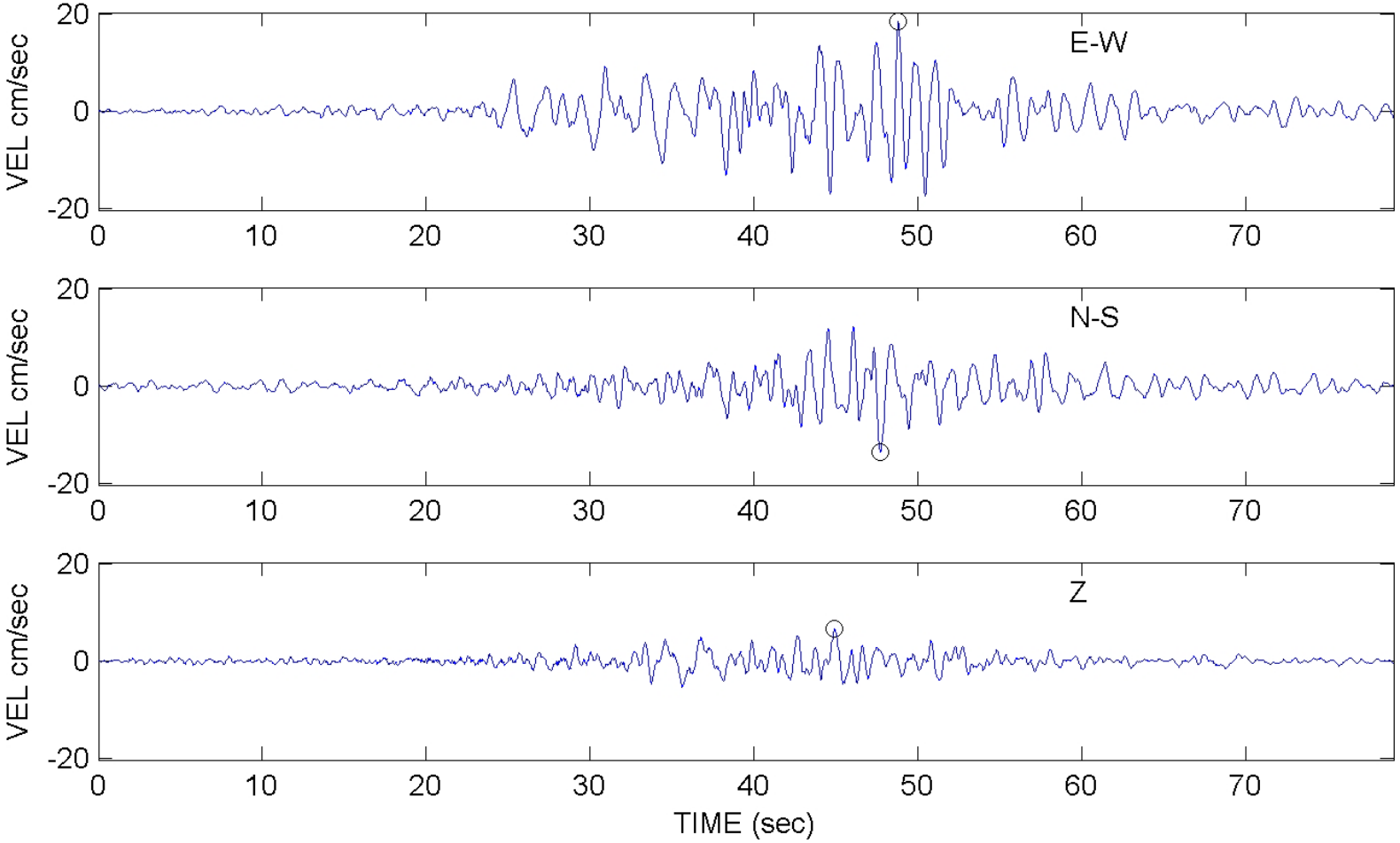
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ

PEAK : E-W =7.05 cm N-S =3.44 cm Z =2.28 cm

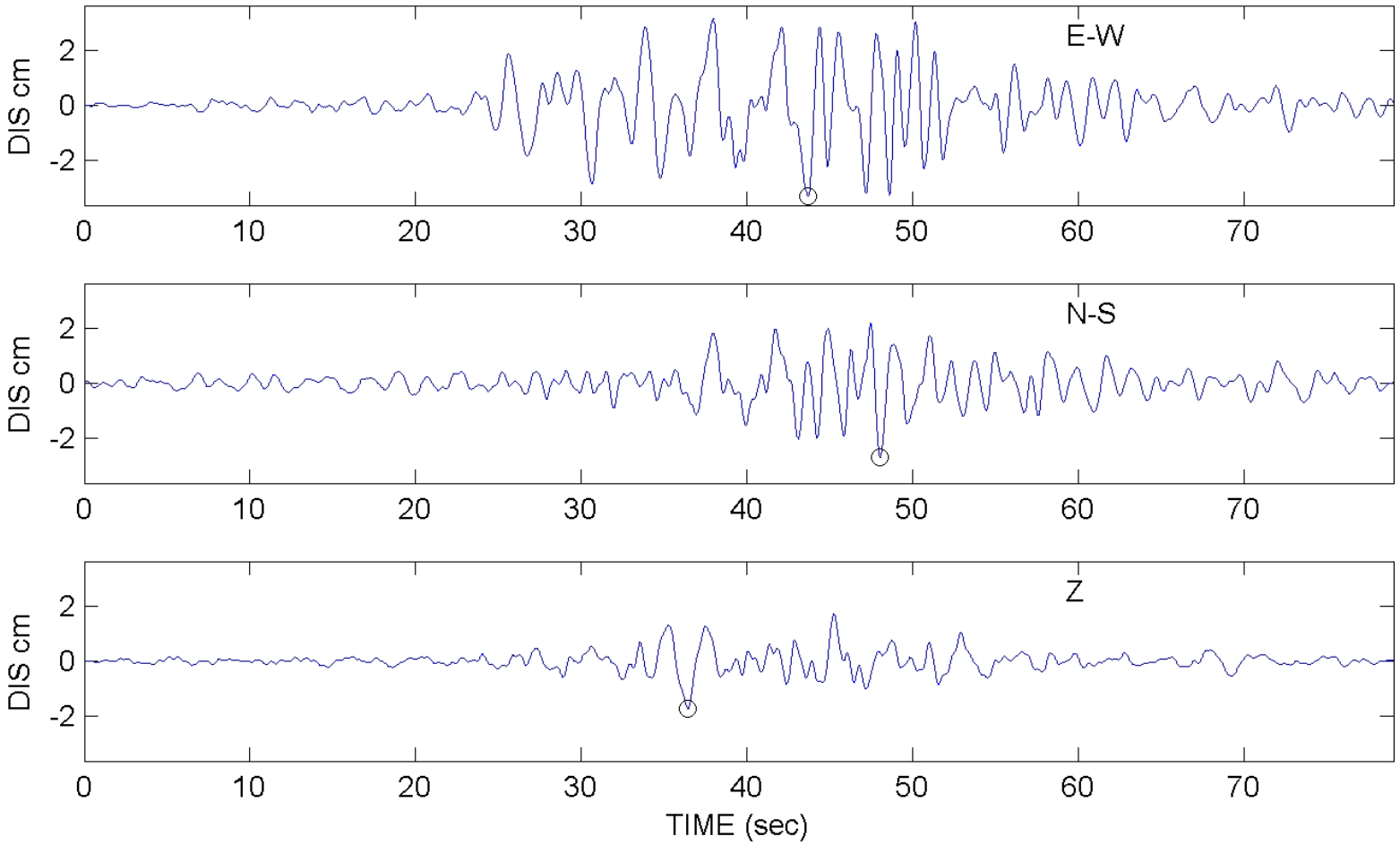



UNIVERSIDAD DE CHILE
DEPARTAMENTO DE INGENIERIA CIVIL
VALDIVIA
QDR 761
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : E-W =132.26 cm/sec² N-S =89.59 cm/sec² Z =51.05 cm/sec²
E-W
N-S
Z
ACC cm/sec²
100
0
-100
0
10
20
30
40
50
60
70
TIME (sec)

UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
VALDIVIA QDR 761
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : E-W =18.41 cm/sec N-S =13.55 cm/sec Z =6.57 cm/sec



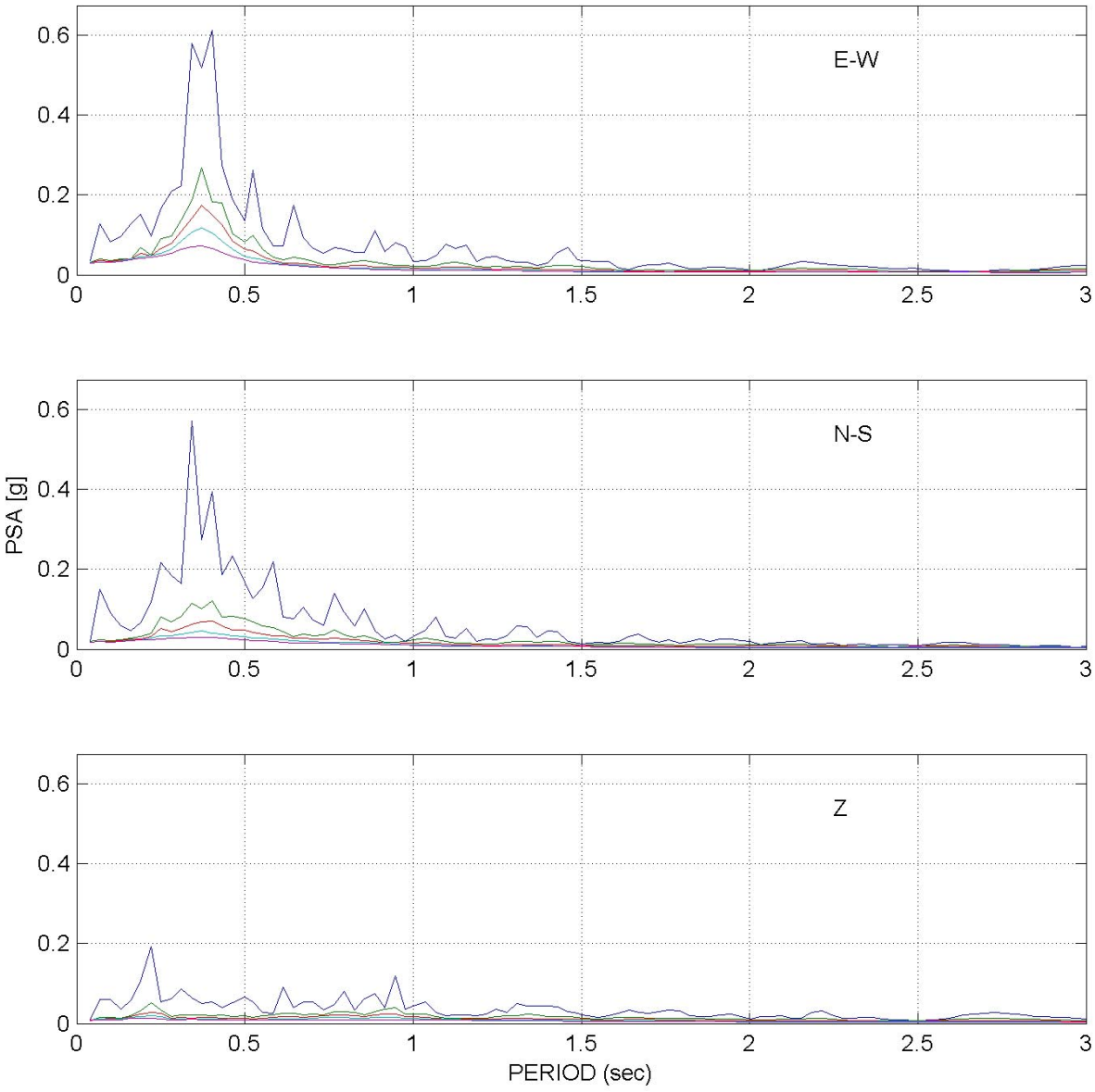
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
VALDIVIA QDR 761
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
PEAK : E-W =3.27 cm N-S =2.67 cm Z =1.72 cm



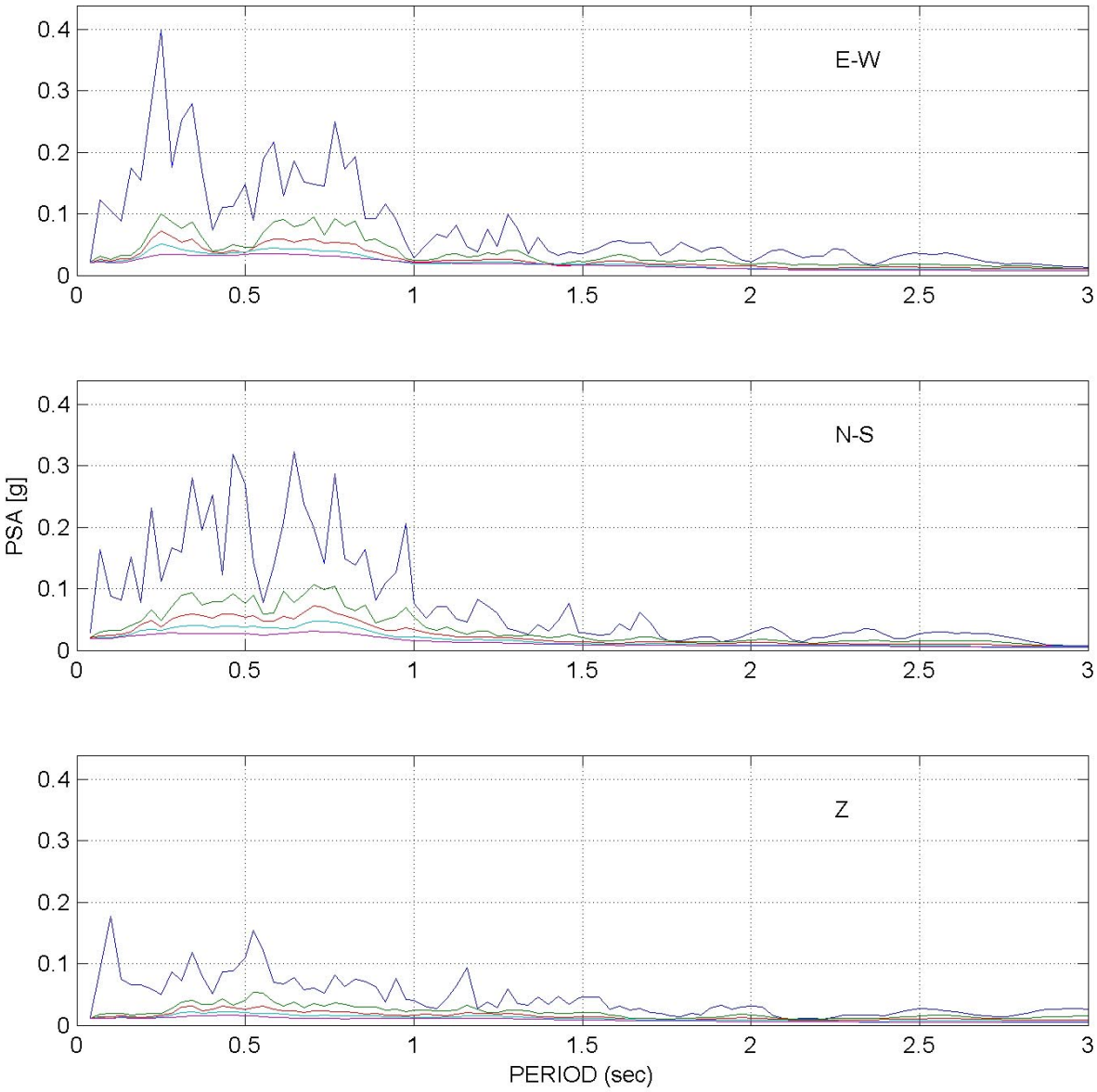
RESPONSE SPECTRA

2002, Blanco Encalada Avenue, Santiago, Chile.- Phone number: (56-2) 978 43 72 – Fax number: (56-2) 689 28 33
www.terremotosuchile.cl
www.renadic.cl

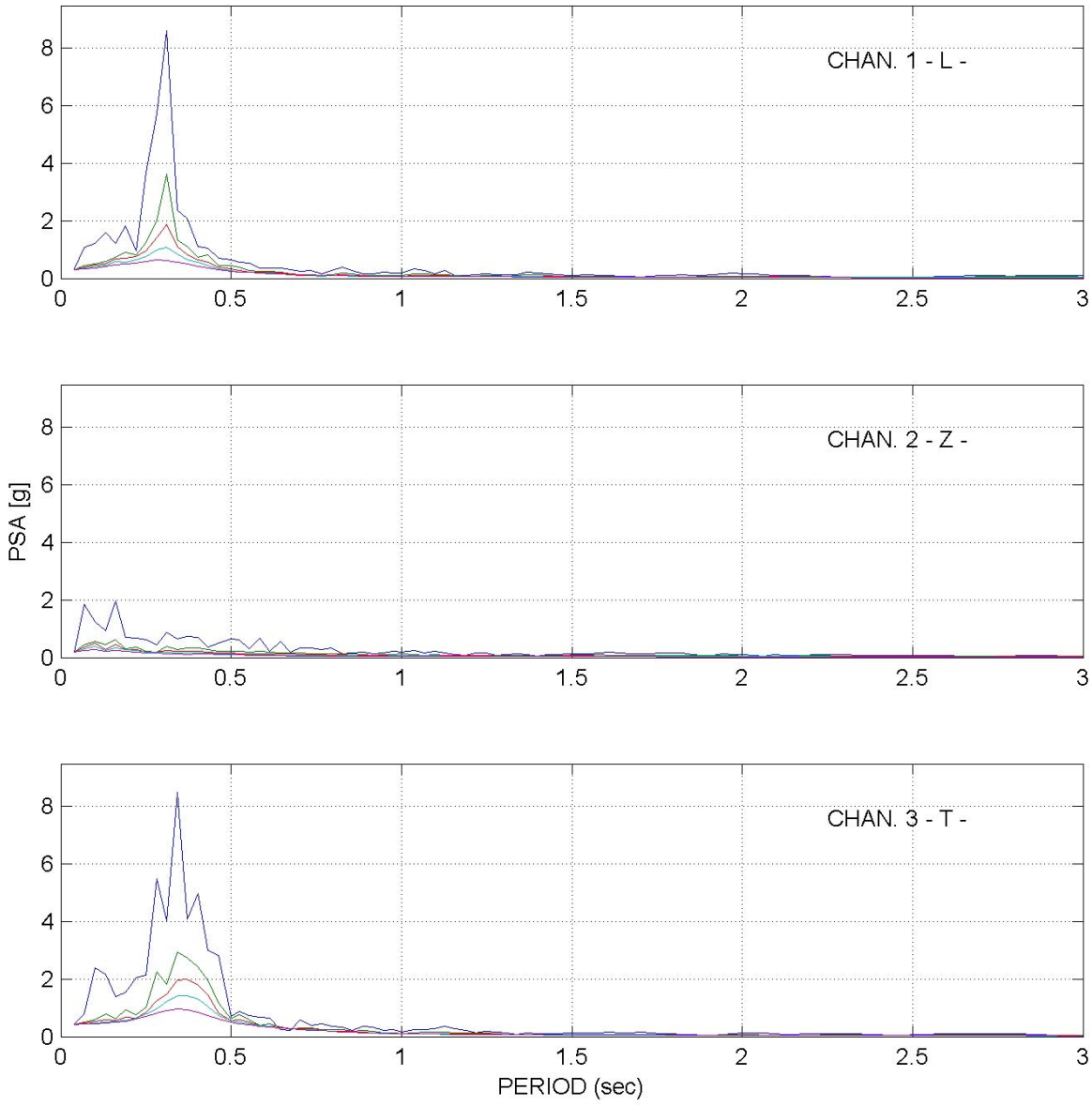
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
COPIAPO QDR 672
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20



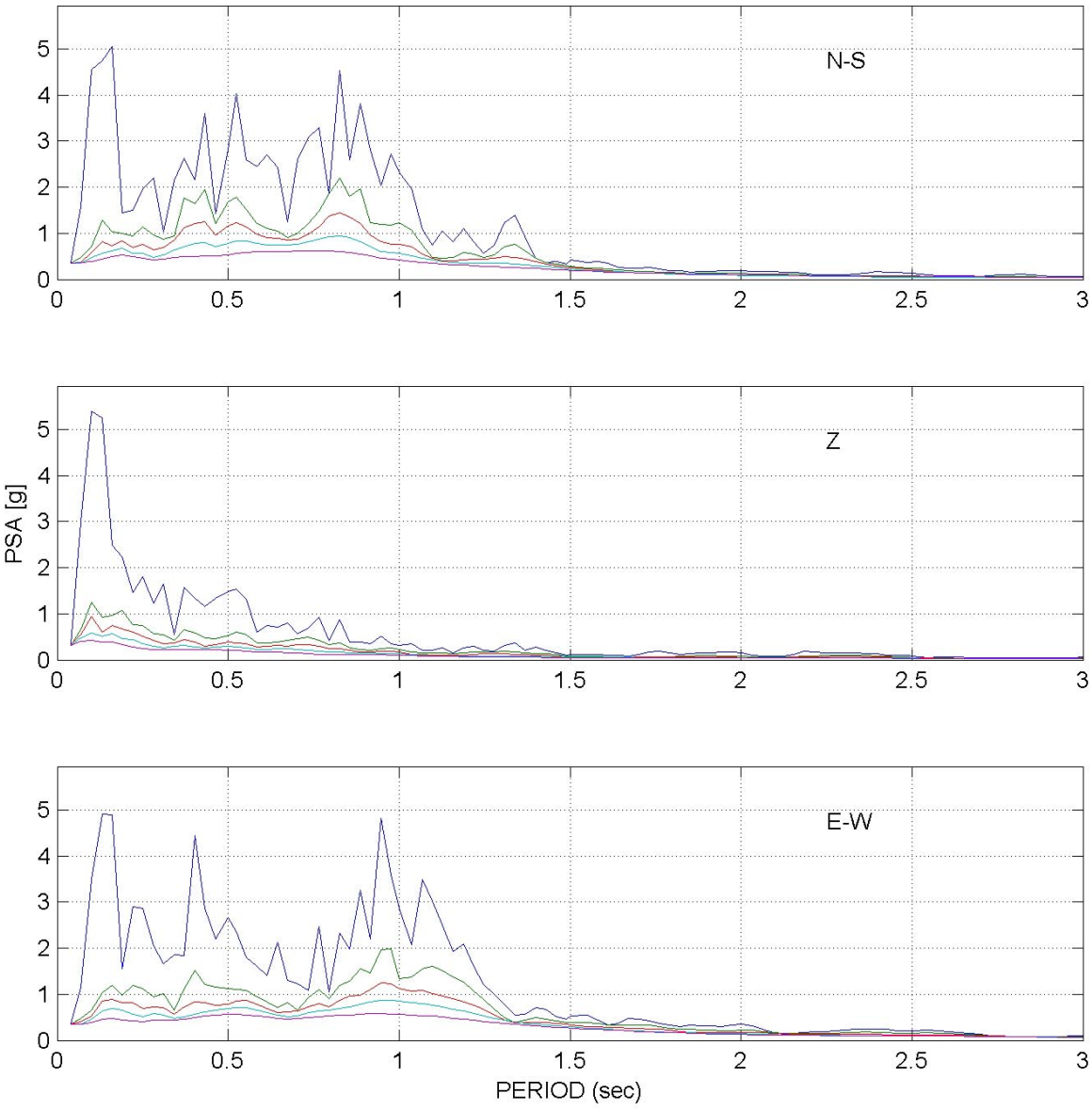
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
VALLENAR QDR 501
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20



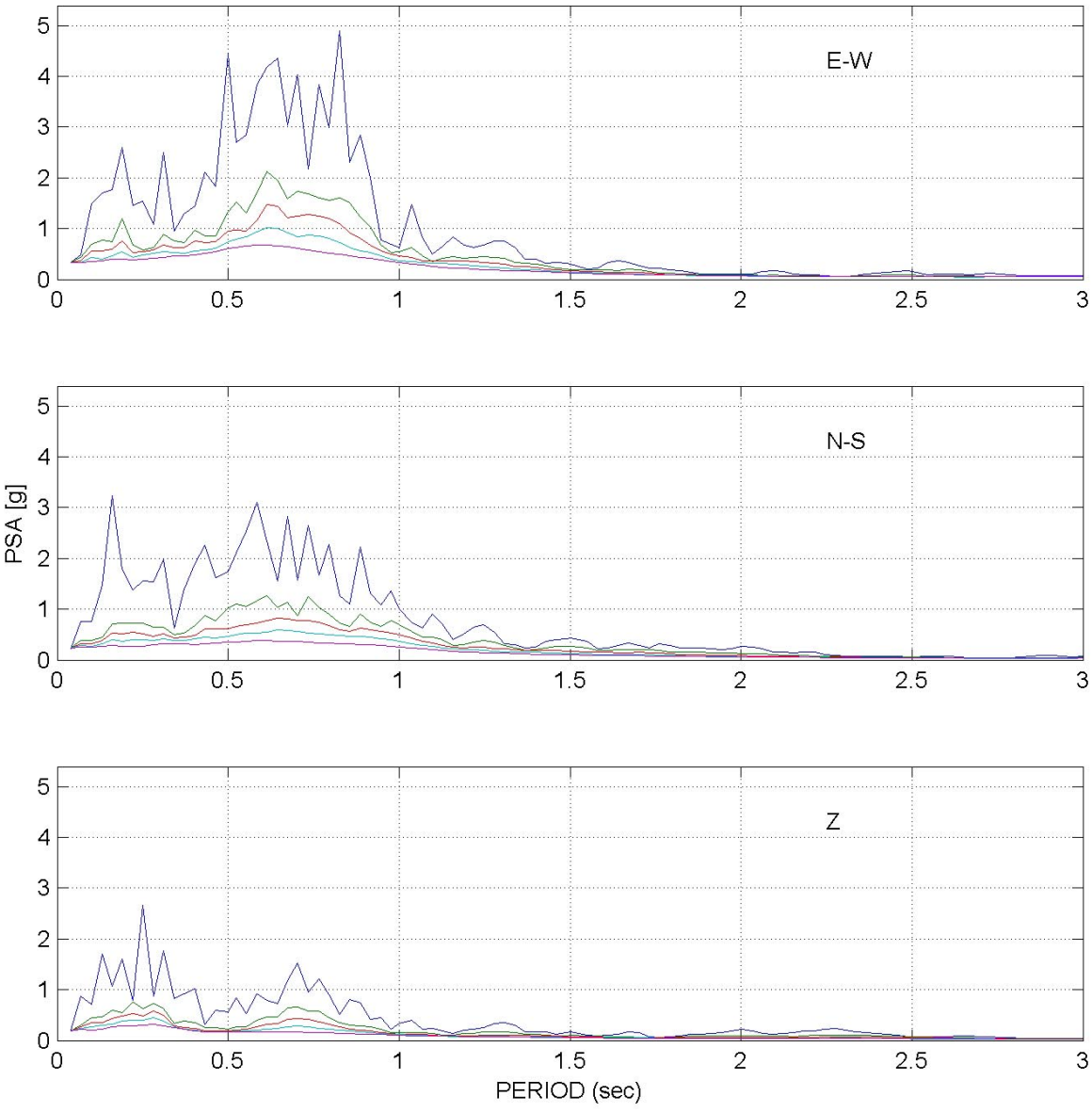
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
PAPUDO PRELIMINARY SMA-1 5014
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20



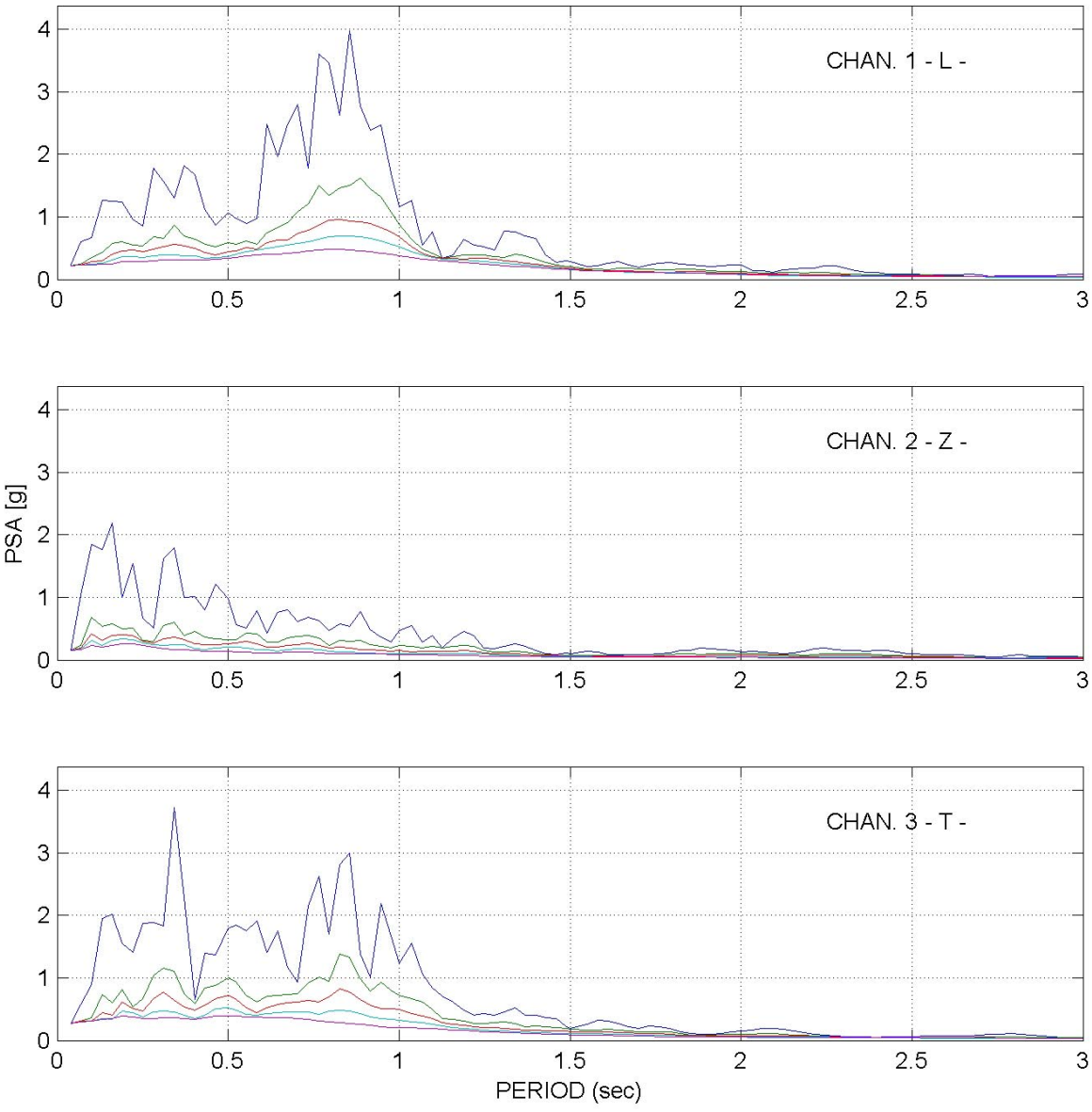
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
VIADUCTO MARGA-MARGA ETNA 1215
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20



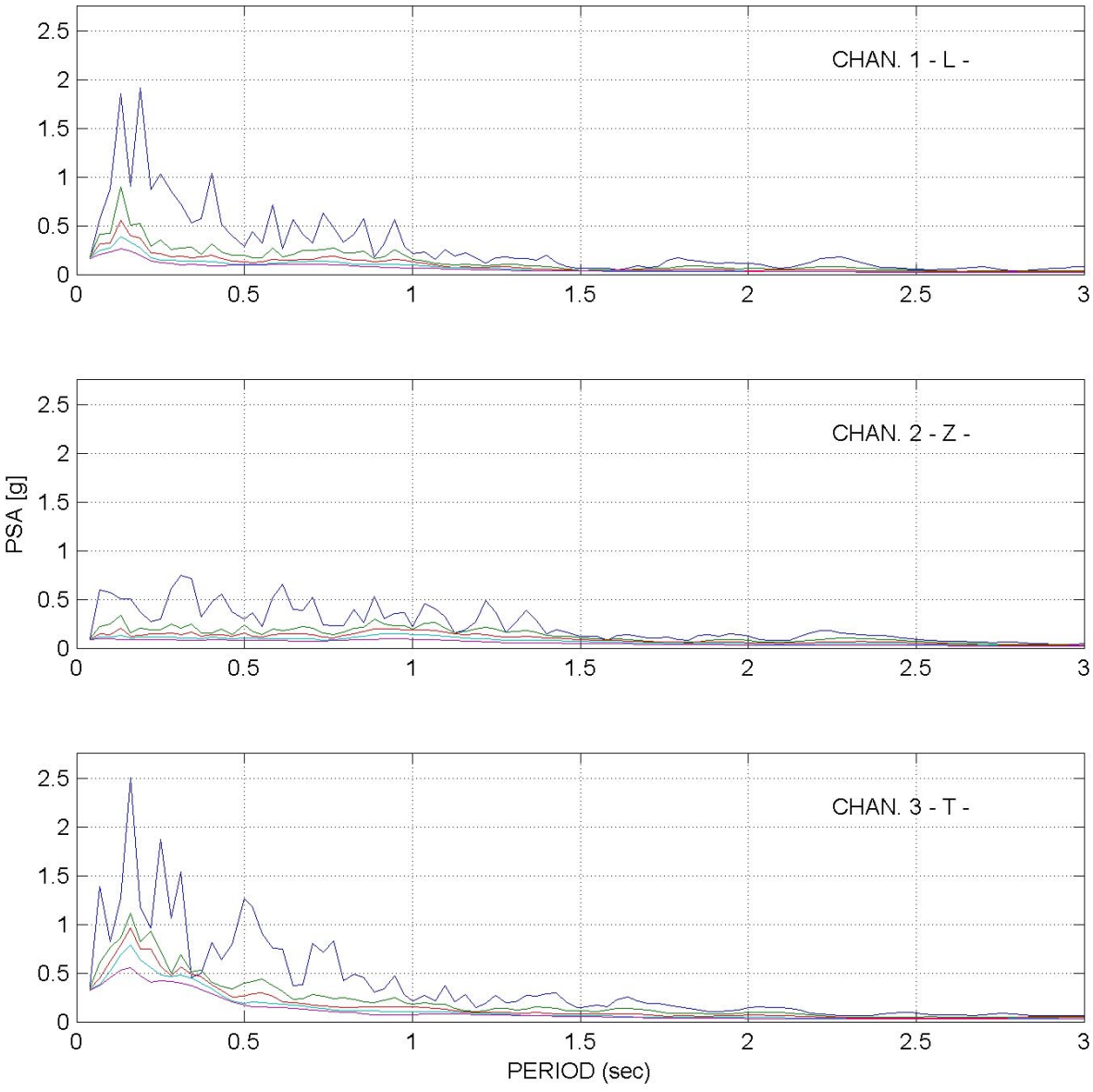
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
VIÑA DEL MAR QDR 675
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20



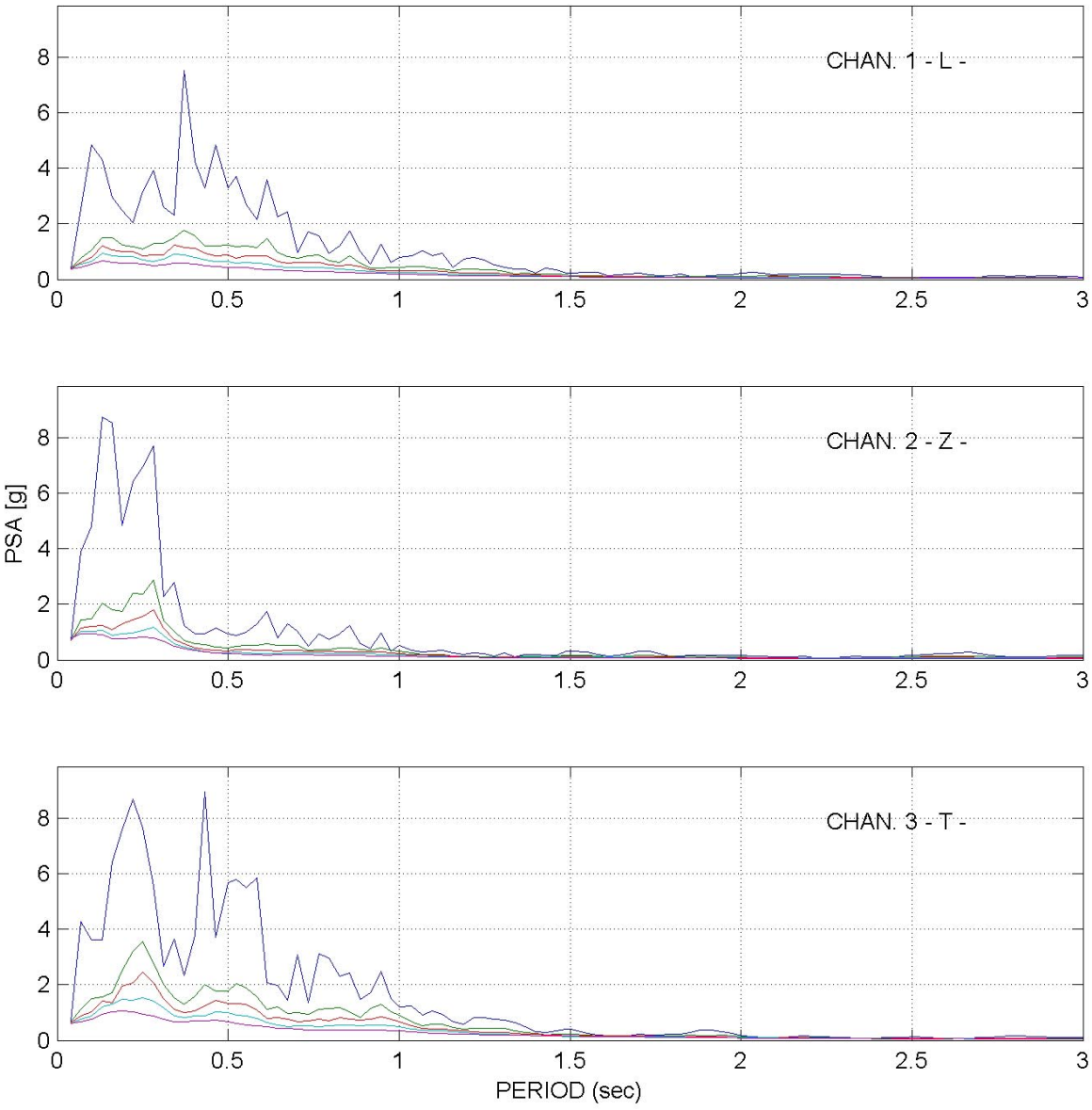
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
VALPARAISO - ALMENDRAL PRELIMINARY SMA-1 4567
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20



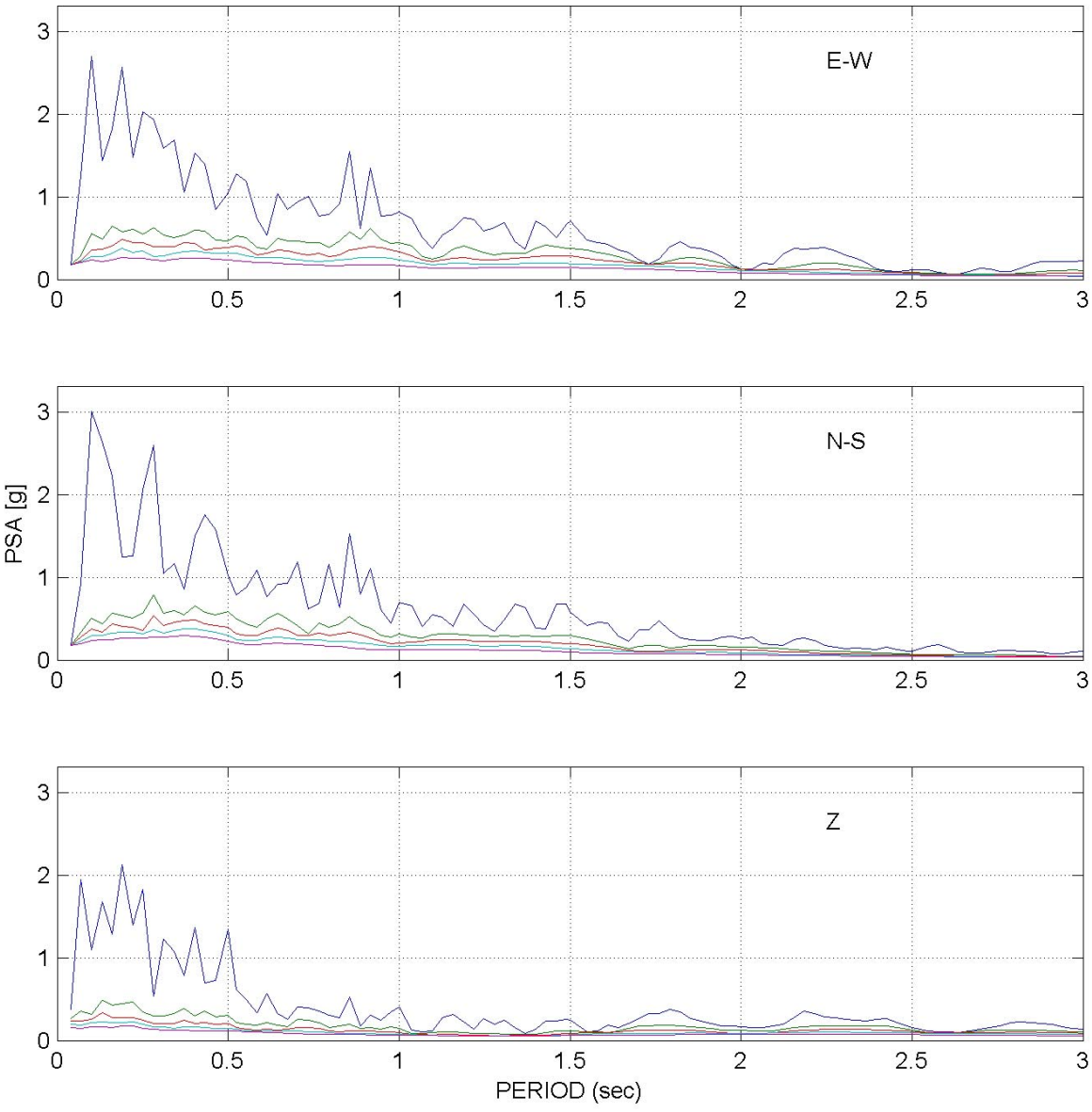
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
VALPARAISO - UTFM PRELIMINARY SMA-1 6976
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20



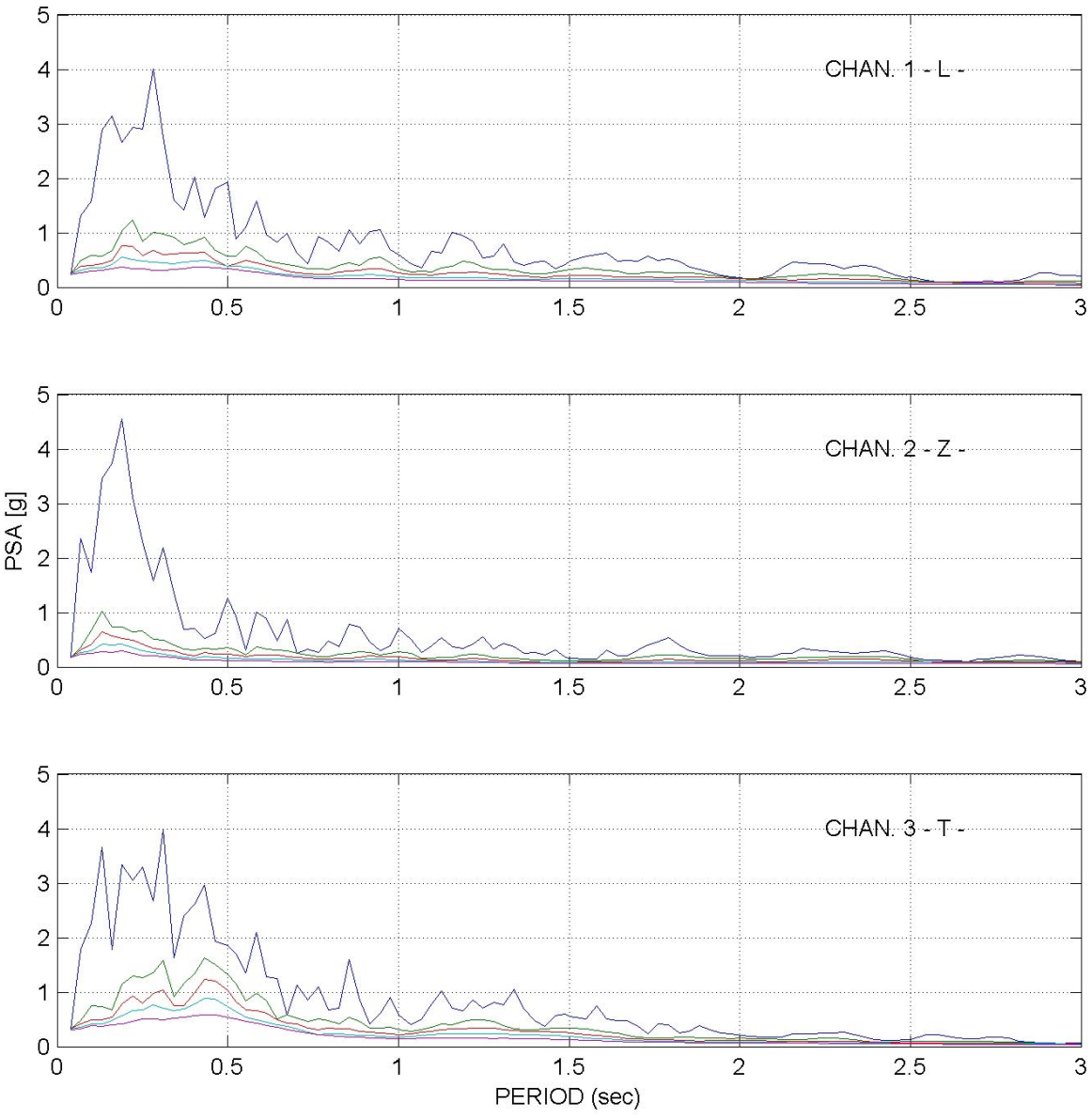
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
LLOLLEO PRELIMINARY SMA-1 4566
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20



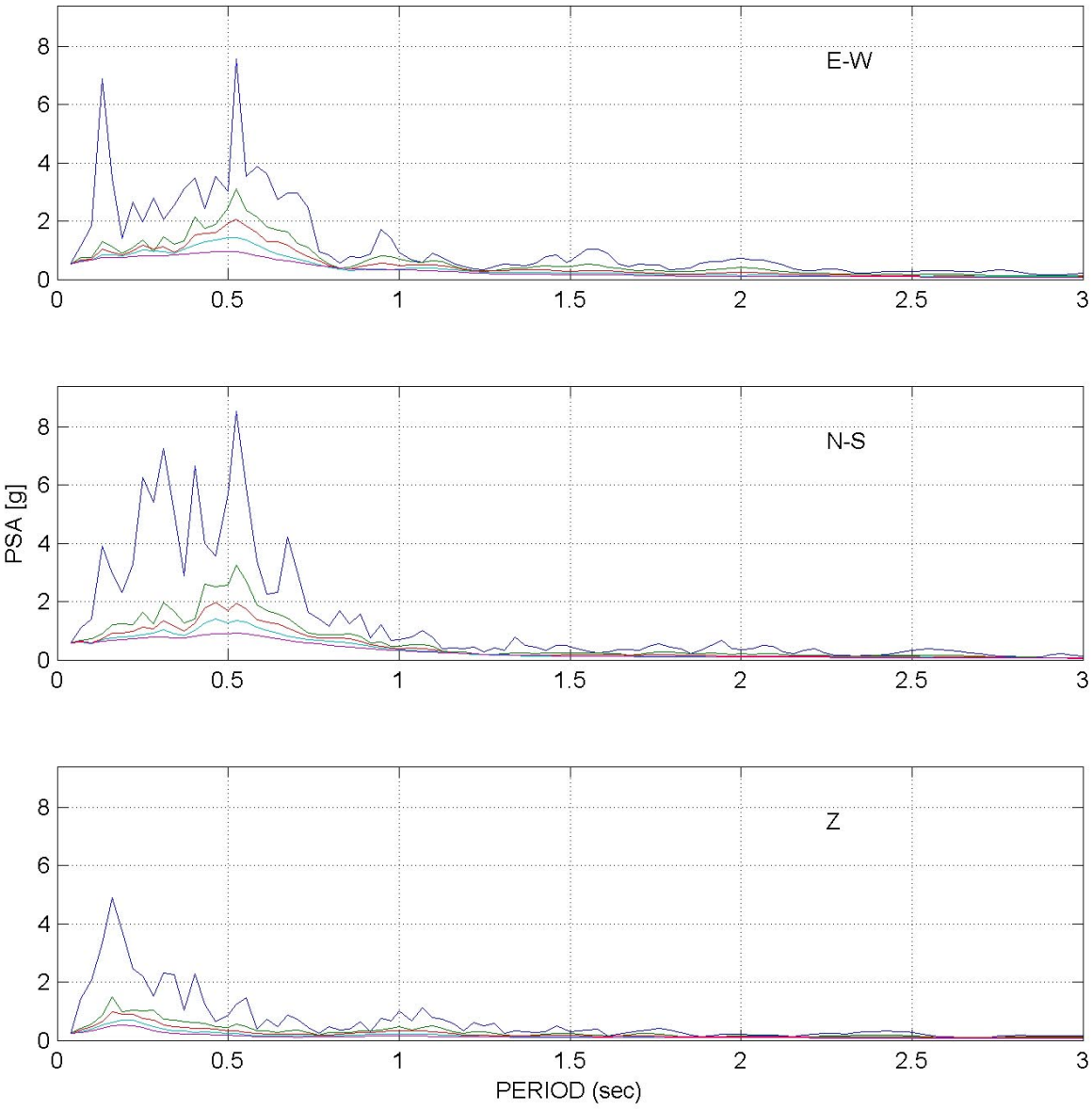
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
SANTIAGO - FCFM LEE ETNA 2802
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20



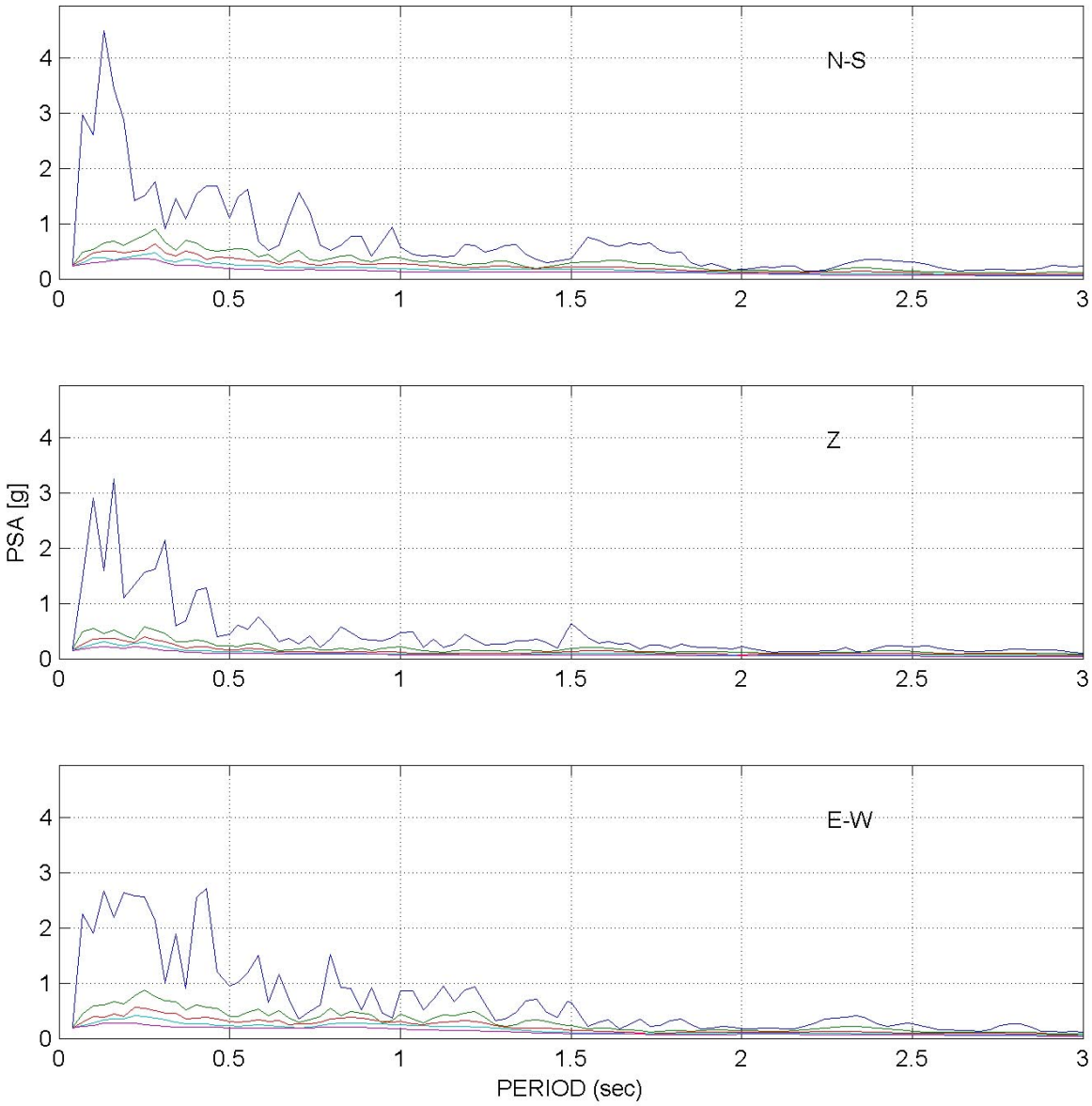
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
SANTIAGO SSA-2 935
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20



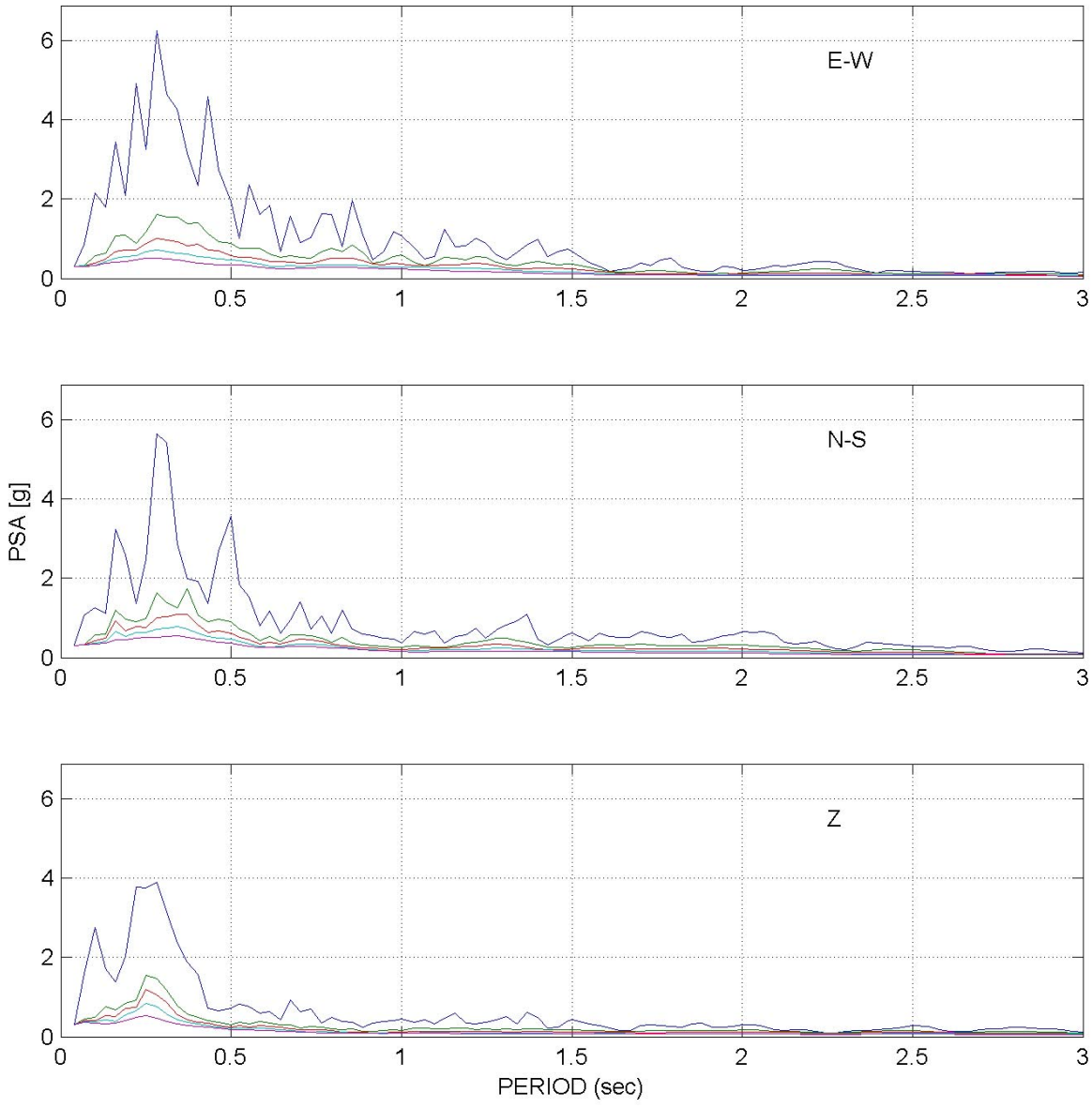
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
SANTIAGO - C.R.S. MAIPU QDR 663
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20



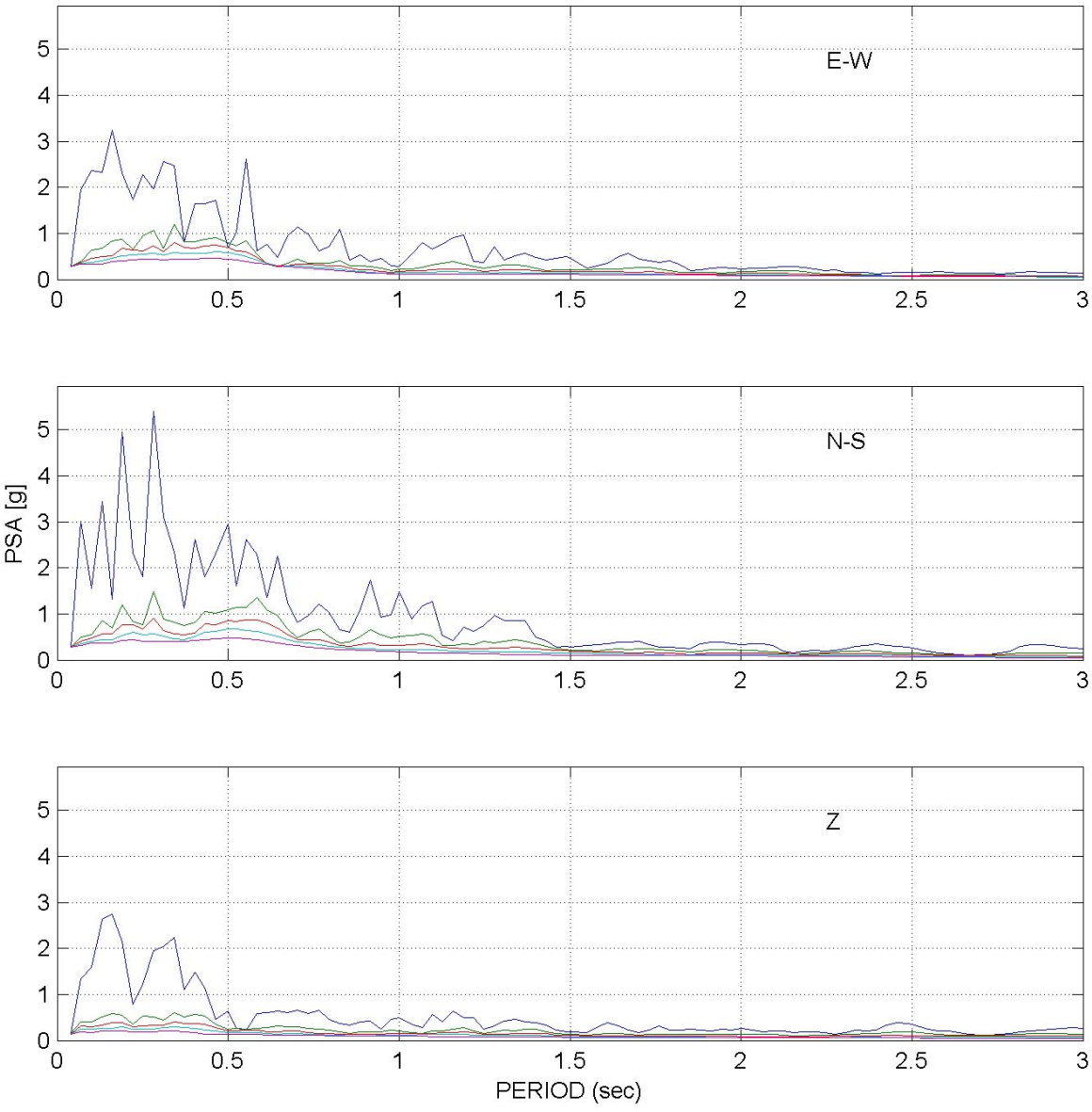
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
SANTIAGO - MIRADOR STATION METRO S.A. K2 958
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20



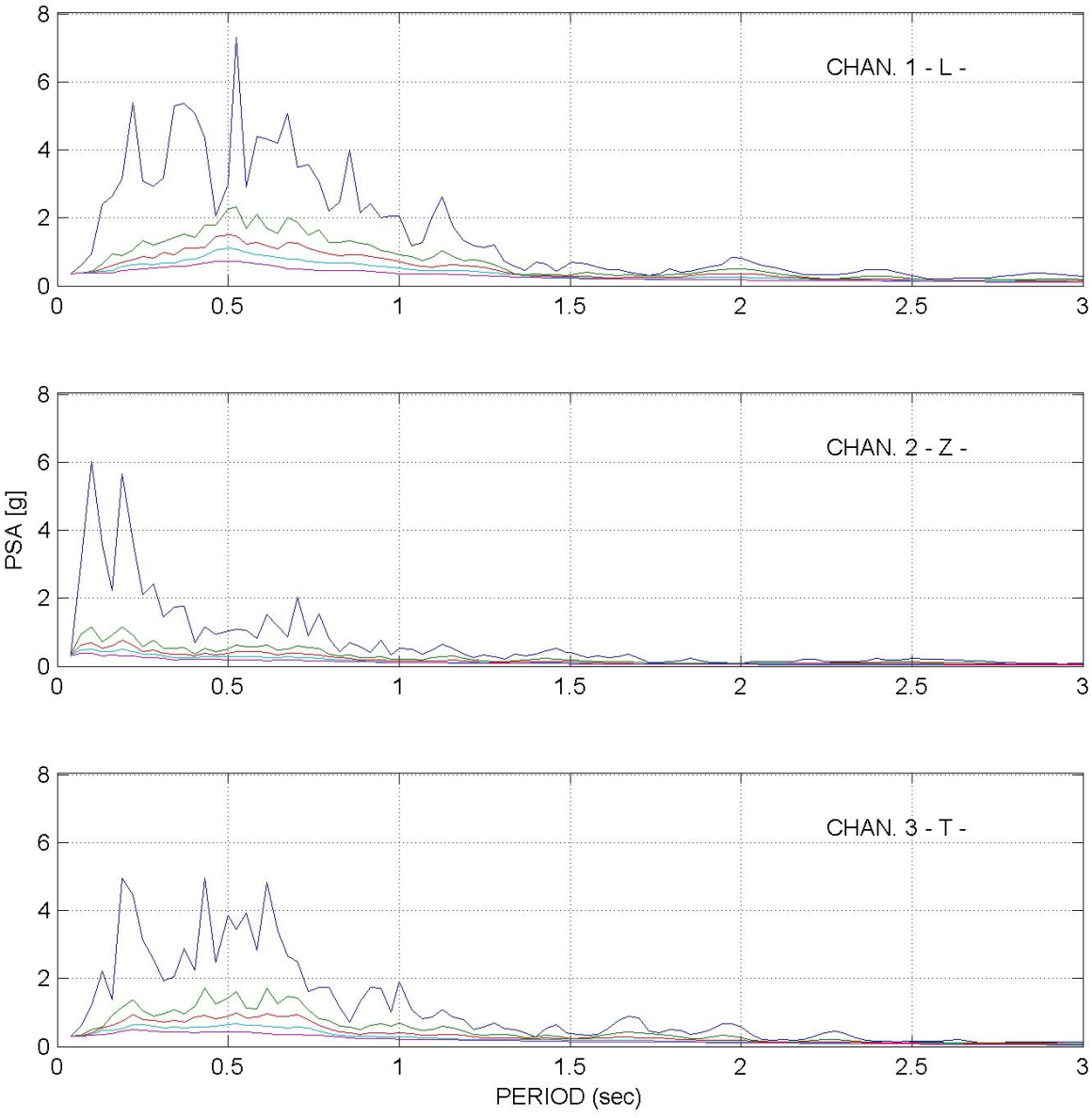
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
SANTIAGO - HOSPITAL SANTIAGO ORIENTE QDR 670
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20



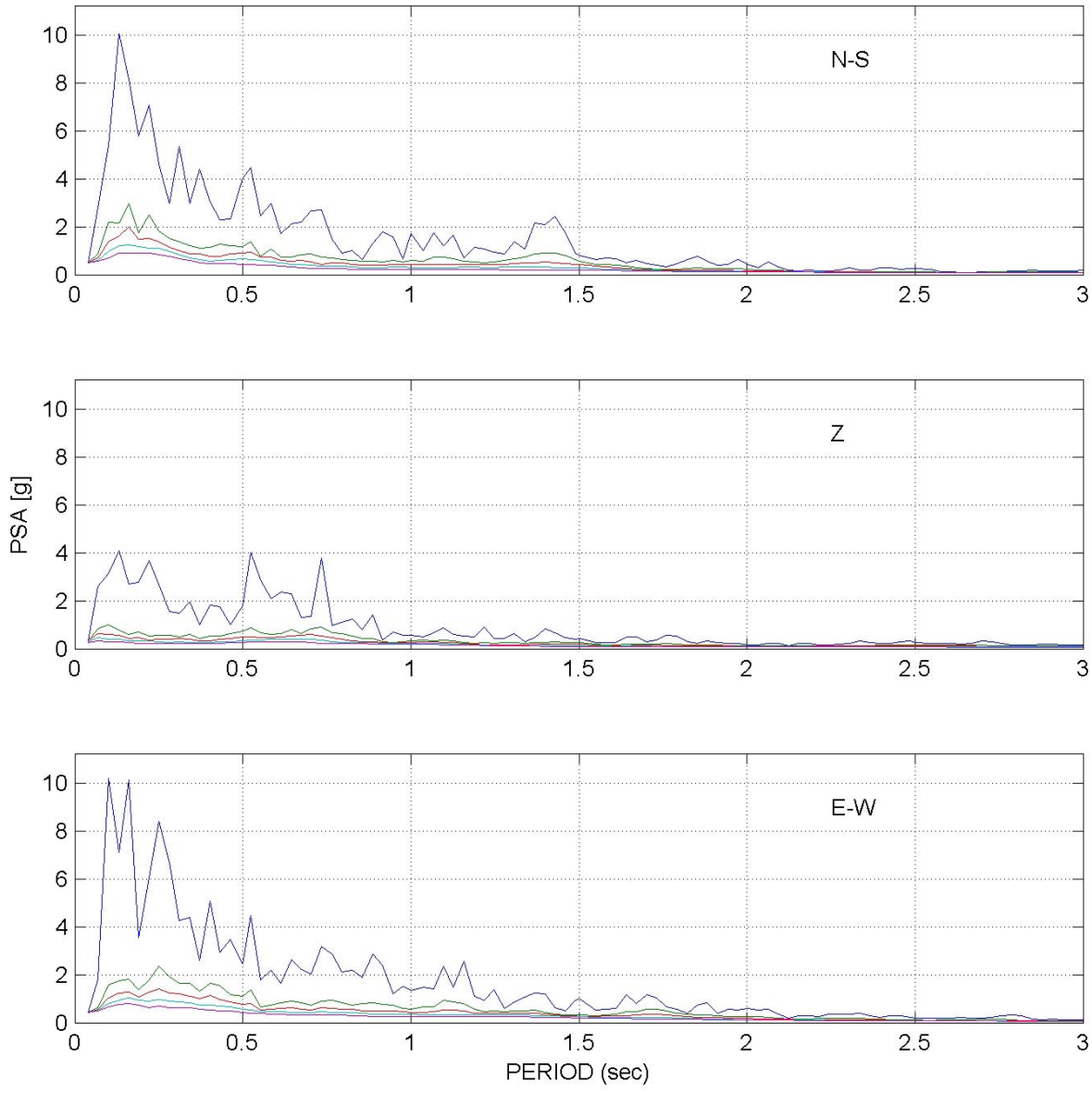
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
SANTIAGO - HOSPITAL SOTERO DEL RIO QDR 671
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20



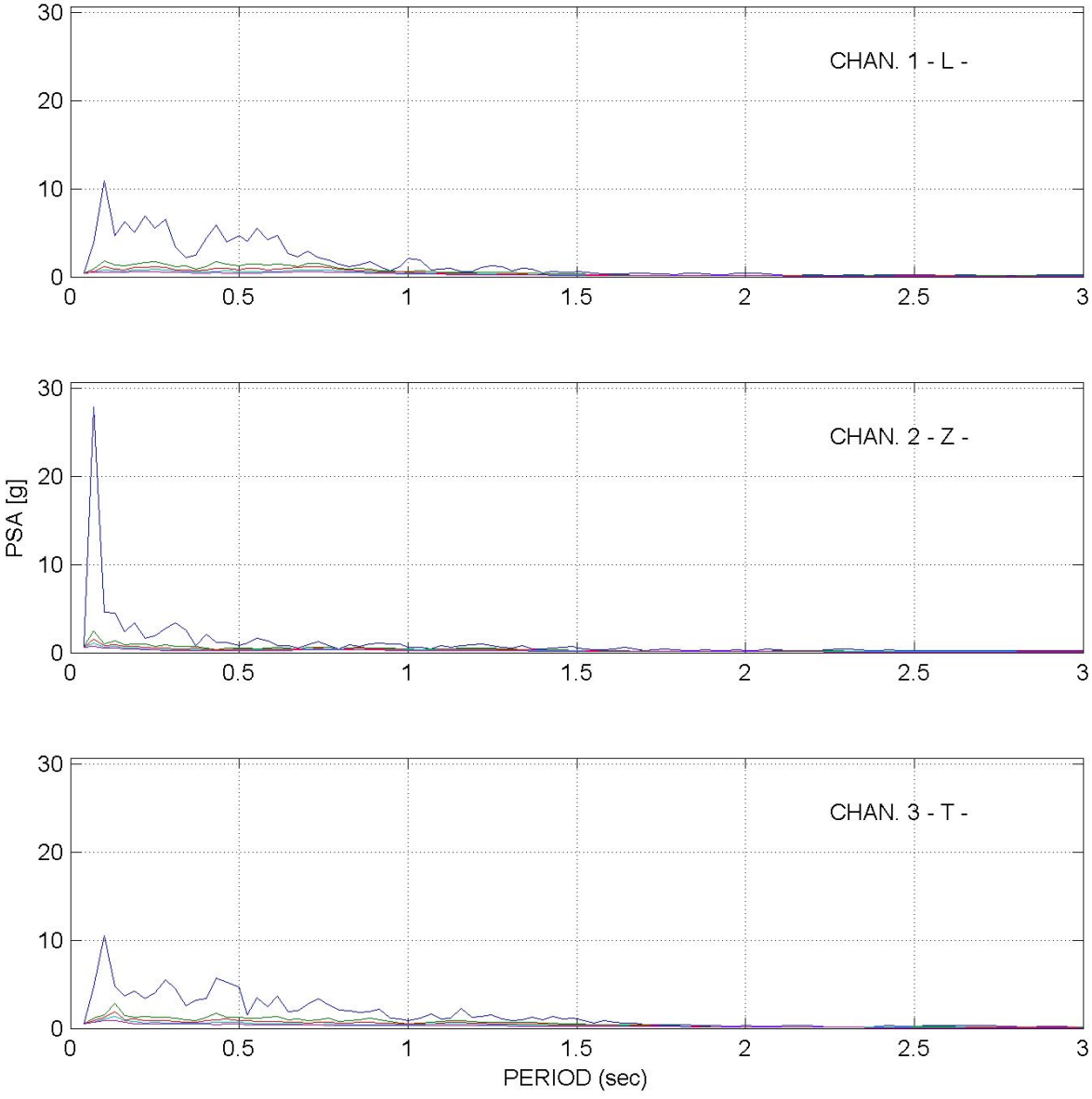
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
MATANZAS PRELIMINARY SMA-1 6736
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20



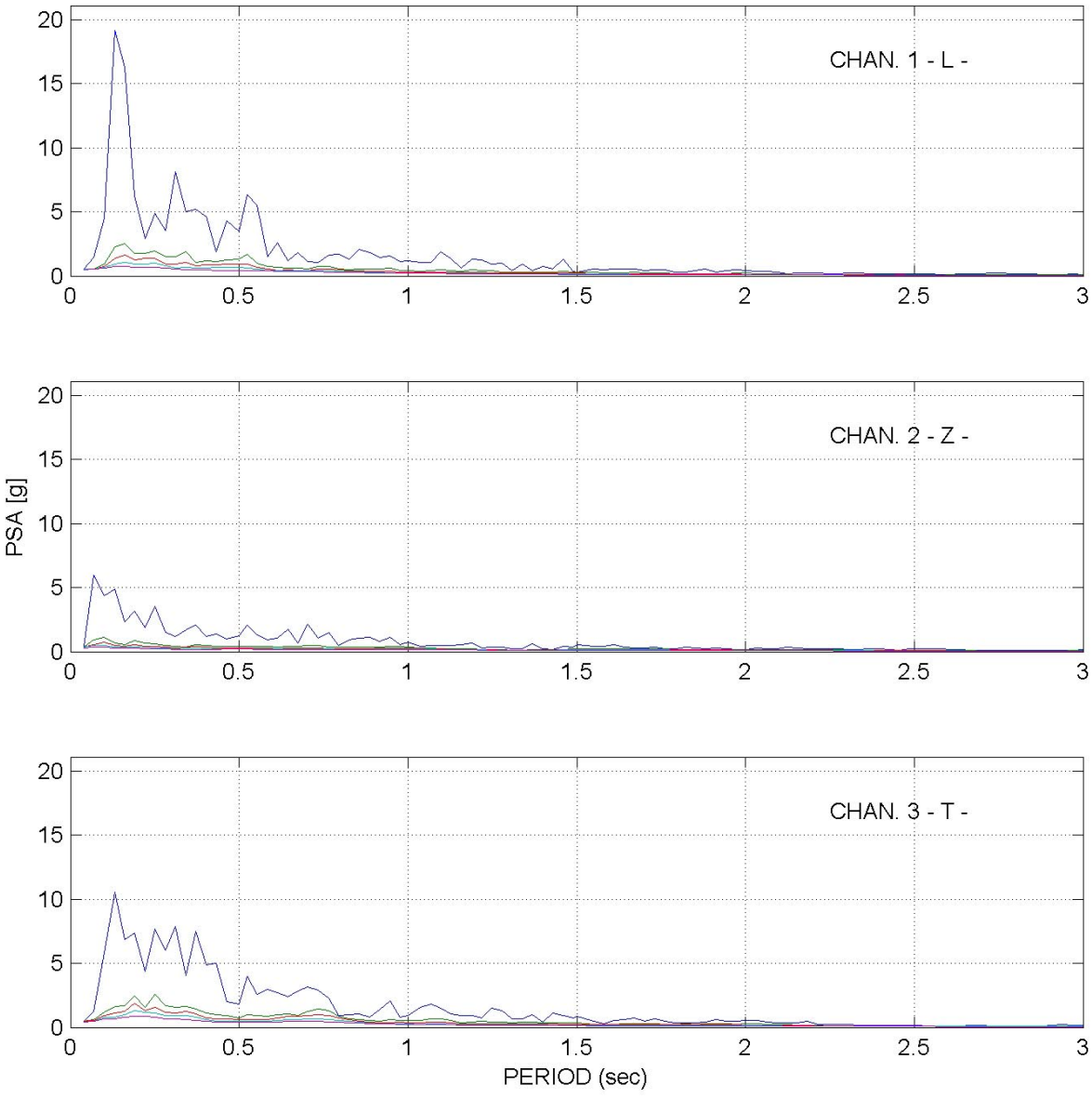
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
CURICO QDR 499
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20



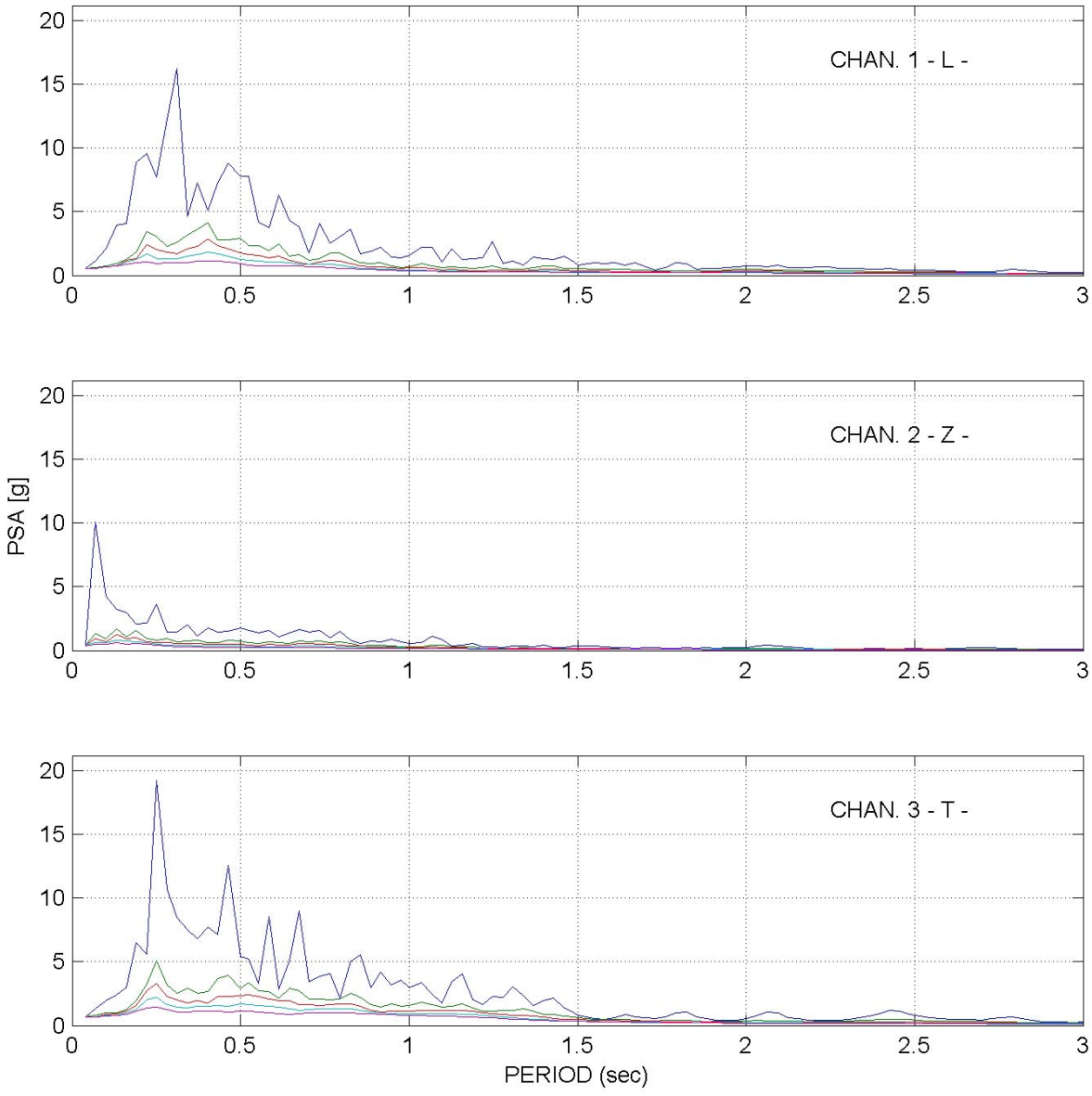
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
HUALAÑE PRELIMINARY SMA-1 4564
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20



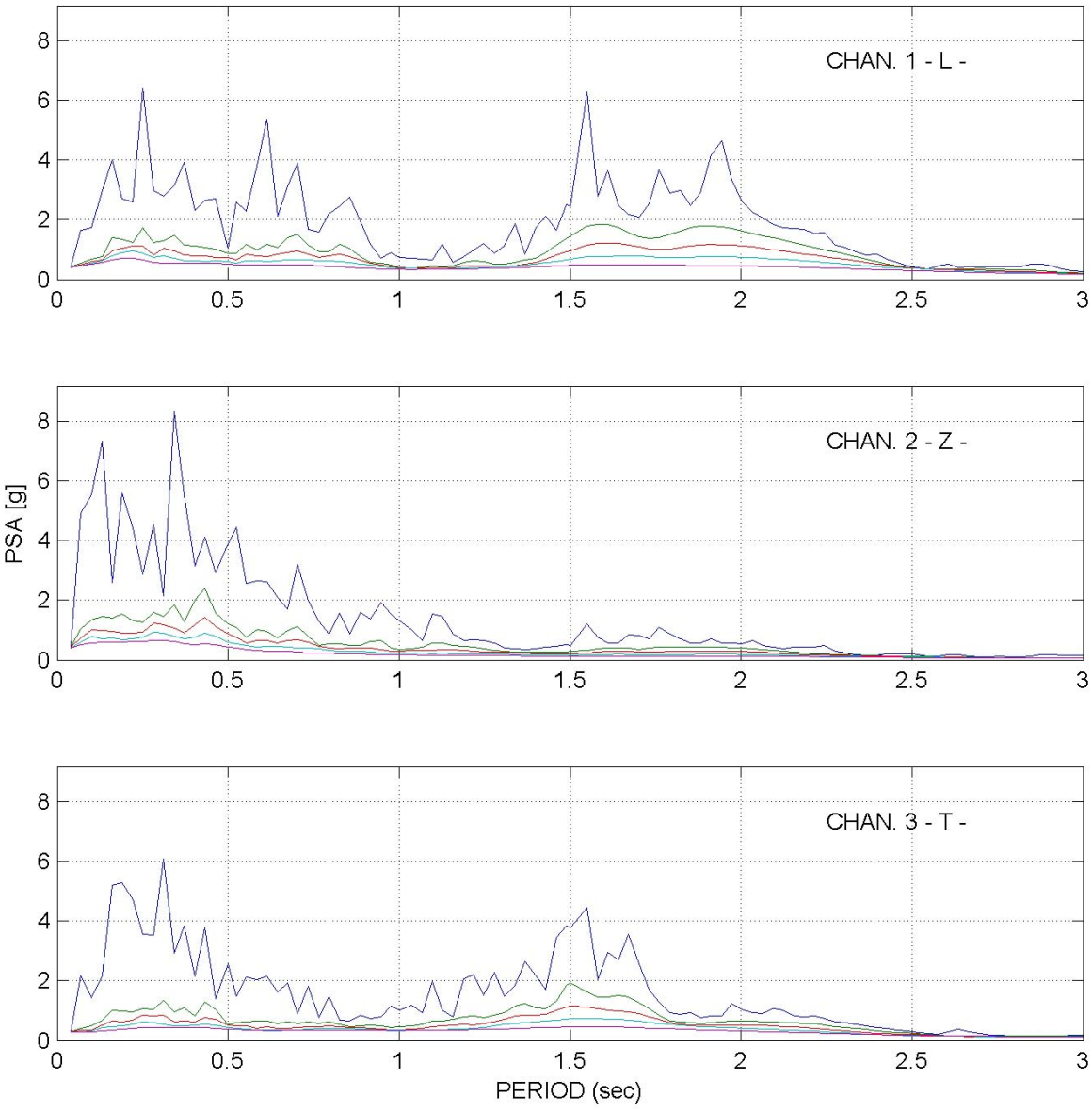
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
TALCA PRELIMINARY SMA-1 4568
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20



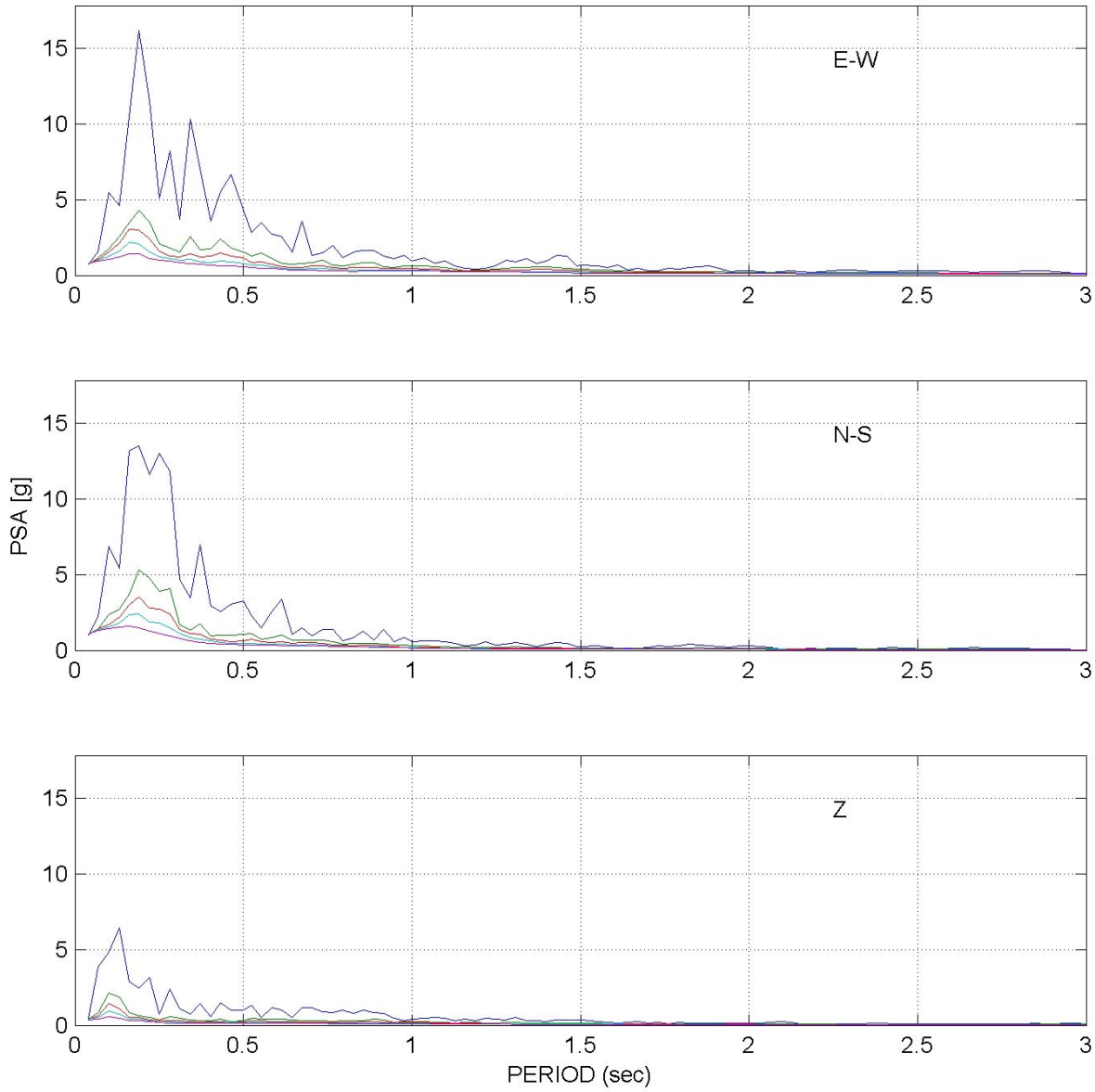
UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
CONSTITUCION PRELIMINARY SMA-1 4598
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20



UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
CONCEPCION PRELIMINARY SMA-1 5003
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20



UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
ANGOL QDR 760
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20



UNIVERSIDAD DE CHILE DEPARTAMENTO DE INGENIERIA CIVIL
VALDIVIA QDR 761
FEBRUARY 27, 2010 TIME 3:34 MAG (Mw)8.8 LAT -36:17:23 LON -73:14:20 DEPTH 30.1 KM
BANDPASS FILTERED 0.150-0.250 AND 23.00-25.00 HZ
DAMPING 0.00 0.02 0.05 0.10 0.20