

Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

November

2006

Prepared by
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GENERAL BULLETIN INFORMATION

The National Centre for Geophysical Research is a governmental agency established 1975 in Lebanon by the National Council for Scientific Research (CNRS). The mission of the Centre, among other assignments, is the monitoring of seismic activity within the national territory. Currently, the national seismic network is under deployment; it has been officially registered as GRAL, an acronym for Geophysical Research Arrays of Lebanon. Station coordinates and status are given below.

Since 1993, the Centre has been participating in a regional initiative by the UNESCO and the USGS known as RELEMR, i.e. Reducing Earthquake Losses in the Eastern Mediterranean Region.

Within this framework, the Centre routinely contributes to the database set up for this purpose and maintained by the Euro-Mediterranean Seismological Centre (EMSC). For coherence, the Centre has adopted the recommended seismic analysis system SEISAN developed by Jens Havskov and Lars Ottemoller from the University of Bergen, Norway.

The localization program currently used for locating earthquakes is Hypocenter (Lienert et al., 1986). Plane parallel layers are assumed for local and regional events, while the IASPEI travel time tables are used for distant events.

The velocity model used for all local and regional events is the one currently adopted by the RELEMR initiative.

P-wave velocity (km/sec)	depth to top of layer (km)
6.2	0.0
6.8	14.0
8.05	34.0
8.25	50.0
8.5	80.0

Magnitudes are calculated from the coda duration. The coda wave magnitude is estimated via the formula:

$$M_c = 0.08 + 1.63 * \log_{10}(T) + 0.0009 * D.$$

where T is the coda duration (sec) and D is the epicentral distance (km). The coefficients above were adopted at the outset of our Centre in 1980 and thus are still in use for the sake of continuity.

All available coda values are used for magnitude calculations. No station corrections are used for either travel times or magnitudes calculations. The Vp/Vs velocity ratio used in both layered models above is 1.74.

As a general policy, neither depths, nor epicenters, are fixed unless stated otherwise since this might restrict later use of the data. Consequently, some event locations might be unrealistic such as zero depth earthquakes or teleseismic locations off by 1000 km. However, the locations are based on the available data and reflect the localization procedure and the models used.

STATIONS USED

The stations listed below are operated by the National Centre for Geophysical Research. They constitute the basic setup of the National Seismic Network of Lebanon.

However, readings from other cooperating agencies are also used in locating the events and thus more stations may appear in the event lists than in the station list; it is worth mentioning the systematic use of arrival times from the Cypriot seismic network CSS in order to constrain events corresponding to an active zone off the Lebanese shorelines.

STATION	LATITUDE	LONGITUDE	HEIGHT (m)	NAME	COMMENTS
BHL	3354.25N	3539.25E	1000	BHANNES	Opened May 1980
HWQ	3416.68N	3556.78E	1161	HAWQA	Opened Jan 2001
MATL	3329.32N	3519.78E	5	MATARIH	Opened Nov 2000
FKH	3414.13N	3624.11E	1170	FAKEHEH	Opened Dec 2004
RCY	3329.08N	3549.13E	1360	RACHAYA	Opened Jun 2006
DWR	3323.13N	3524.08E	420	DWEIR	Scheduled 2003
BEYL	3352.30N	3529.59E	49	BEIRUT	Opened Jul 2006

MACROSEISMIC DATA

Macroseismic data, if available, are included in the bulletin.

MONTHLY EPICENTER MAPS

Maps will be found on the last page.

ELECTRONIC PUBLICATION

This provisional bulletin is available for download in pdf format on:
<http://www.cnrs.edu.lb/grdownload.html>

REFERENCES

- Havskov, J. and Ottemoller, L.(2001). SEISAN: The Earthquake Analysis Software.
-version 7.2-
Institute of Solid Earth Physics, University of Bergen.
<http://www.ifjf.uib.no/seismo/software/seisan.html>
- Lienert, B.R., Berg, E. and Frazer, L.N.(1986). Hypocenter: An earthquake location method using centered, scaled, and adaptively least squares. Bull. Seism. Soc. Am., 76., pp 771-783.

Abbreviations:

TIME: Origin time in UTC (hr. min. and sec.) or data file onset time if event is not located.

LAT: Latitude of epicenter

LON: Longitude of epicenter

DEPTH: Focal depth in kilometer (trailing F indicates fixed depth)

AGENCY: GRL throughout the bulletin, aka. Geophysical Research Lebanon

MAGNITUDES: Up to 3 different magnitudes can be given followed by type and reporting agency, e.g. 3.1 MC GRL - coda magnitude calculated according to GRL standard parameters.

RMS: Root mean square value of travel time residuals

STAT: Station code

CO: Component; S:short period, L:long period, B:broadband.

DIST: Epicenter distance (km)

AZI: Azimuth from source to station

PHAS: Phase; The first letter characterizes onset E(mergent) or I(mpulsive)

P: Polarity (C for compression, D for dilatation)

HR: Hour

MN: Minute

SECON: Seconds

TRES: Residual (seconds)

CODA: Signal duration in seconds

AMPL: Ground Amplitude ($0.5 \times (\text{peak to peak})$), (nm) at period PERI

PERI: Period where amplitude is measured

BAZ: Back azimuth (station to event)

ARES: Back azimuth residual

VELO: Apparent phase velocity (km/sec)

WT: Weight of phase in the location

*: An asterisk before the phase arrival time implies a potential timing error. If an S phase is read, differential S-P times will be used in the hypocenter location.

November 1 2006 Hour: 21:19 48.6 Lat: 39.81N Lon: 40.21E Depth: 0 Agency: REL Regional
Magnitudes: 4.7MC REL Rms: 1.9 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	721	213	EP		2121	23.35	0.13	277						1.0
HWQ	SN	721	213	ES		2122	36.66	3.44							1.0
BHL	BZ	771	213	EP		2121	28.82	-0.19							1.0
BHL	BN	771	213	ES		2122	45.70	2.39							1.0
BEYL	BZ	781	214	EP		2121	31.74	1.57							1.0
BEYL	BE	781	214	ES		2122	43.69	-1.63							1.0
RCY	SZ	804	211	EP		2121	33.01	0.06							1.0
RCY	SN	804	211	ES		2122	46.04	-4.12							1.0

November 2 2006 Hour: 11:46 5.6 Lat: 33.59N Lon: 36.56E Depth: 0 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.5 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	70	260	EPg		1146	16.61	-0.26	45						1.0
RCY	SN	70	260	ESg		1146	24.46	-0.77							1.0
BHL	BZ	91	293	EPg		1146	19.67	-0.56							1.0
BHL	BE	91	293	ESg		1146	31.08	0.01							1.0
HWQ	SZ	95	323	EPg		1146	20.66	-0.21							1.0
HWQ	SE	95	323	ESg		1146	32.84	0.65							1.0

November 4 2006 Hour: 11:59 30.0 Lat: 34.51N Lon: 36.86E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.3 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	88	253	EPg		1159	44.42	0.23	48						1.0
HWQ	SE	88	253	ESg		1159	54.38	-0.32							1.0
BHL	BZ	130	239	EPg		1159	51.29	0.31							1.0
BHL	BE	130	239	ESg		12 0	6.65	0.13							1.0
RCY	SZ	149	220	EPg		1159	53.57	-0.51							1.0
RCY	SN	149	220	ESg		12 0	12.06	0.15							1.0

November 4 2006 Hour: 13: 0 13.7 Lat: 34.75N Lon: 36.77E Depth: 14 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.2 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	92	235	EPg		13 0	28.46	0.22	41						1.0
HWQ	SE	92	235	ESg		13 0	38.71	-0.31							1.0
BHL	BZ	139	228	EPg		13 0	35.27	0.10							1.0
BHL	BE	139	228	ESg		13 0	51.28	0.21							1.0

November 5 2006 Hour: 14:44 19.2 Lat: 33.51N Lon: 35.39E Depth: 23 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.1 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	40	94	EPg		1444	26.53	0.08	36						1.0
RCY	SN	40	94	ESg		1444	31.78	-0.05							1.0
BHL	BZ	50	29	EPg		1444	27.71	-0.08							1.0
BHL	BE	50	29	ESg		1444	34.22	0.05							1.0
HWQ	SN	100	31	ESg		1444	46.53	0.00							1.0

November 6 2006 Hour: 11:16 37.4 Lat: 33.59N Lon: 36.60E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.9 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	74	261	EPg		1116	48.86	-0.48	52						1.0
RCY	SE	74	261	ESg		1116	57.29	-0.86							1.0
BHL	BZ	95	292	EPg		1116	51.41	-1.27							1.0
BHL	BE	95	292	ESg		1117	3.54	-0.43							1.0
HWQ	SZ	98	322	EPg		1116	53.40	0.25							1.0
HWQ	SE	98	322	ESg		1117	5.88	1.09							1.0

November 6 2006 Hour: 11:32 49.2 Lat: 33.58N Lon: 36.54E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.5 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	68	261	EPg		1132	59.73	-0.44	36						1.0
RCY	SE	68	261	ESg		1133	7.73	-0.56							1.0
BHL	BZ	90	294	EPg		1133	3.35	-0.30							1.0
BHL	BE	90	294	ESg		1133	14.04	-0.32							1.0
HWQ	SZ	95	325	EPg		1133	4.44	-0.04							1.0
HWQ	SE	95	325	ESg		1133	16.47	0.67							1.0

November 6 2006 Hour: 13:41 7.6 Lat: 33.76N Lon: 37.17E Depth: 8 Agency: REL Local
Magnitudes: 3.4MC REL Rms: 0.4 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	127	297	EPg		1341	28.93	0.78							1.0
HWQ	SE	127	297	ESg		1341	43.19	-0.14							1.0
RCY	SZ	129	257	EPg		1341	28.22	-0.27	97						1.0
RCY	SN	129	257	ESg		1341	44.11	0.19							1.0
BHL	BZ	141	277	EPg		1341	30.13	-0.33							1.0
BHL	BN	141	277	ESg		1341	47.05	-0.29							1.0

November 7 2006 Hour: 4:40 6.6 Crete mb=4.2 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EPn		444	51.42								
RCY	SZ			EPn		444	52.95								
HWQ	SZ			EPn		444	54.44								

November 7 2006 Hour: 6:31 1.7 Fiji mb=5.0 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		642	25.04								
BHL	BZ			EP		642	25.16								
BEYL	BZ			EP		642	25.83								

November 7 2006 Hour: 7:47 2.4 Lat: 33.58N Lon: 36.03E Depth: 0 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.3 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	23	242	EPg		747	5.53	-0.54	22						1.0
RCY	SN	23	242	ESg		747	9.02	0.23							1.0
BHL	BZ	50	316	EPg		747	10.64	0.14							1.0
BHL	BE	50	316	ESg		747	16.44	-0.05							1.0

November 7 2006 Hour: 8:21 19.9 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		821	30.98								
BHL	BZ			EP		821	37.58								
RCY	SZ			EP		821	44.90								

November 7 2006 Hour: 12:35 43.2 Pakistan mb=5.2 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1237	25.14								
RCY	SZ			EP		1237	23.57								

November 7 2006 Hour: 17:54 44.0 New Britain Mw=6.5 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1757	17.72								
BEYL	BZ			EP		1757	25.91								

November 8 2006 Hour: 4:32 57.5 Egypt mb=4.4 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		433	41.69								
BEYL	BZ			EP		433	44.33								
BHL	BZ			EP		433	45.84								
HWQ	SZ			EP		433	51.72								

November 8 2006 Hour: 11:9 25.6 Lat: 33.78N Lon: 35.68E Depth: 5 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 1.1 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	14	349	IPg		11 9	27.21	-0.88							1.0
BHL	BN	14	349	ISg		11 9	30.64	0.70							1.0
RCY	SZ	35	159	IPg		11 9	29.86	-1.49	51						1.0
RCY	SE	35	159	ISg		11 9	34.90	-0.73							1.0
MATL	SZ	46	225	IPg		11 9	31.98	-1.07							1.0
HWQ	SZ	60	24	IPg		11 9	35.53	0.15							1.0
HWQ	SN	60	24	ISg		11 9	43.17	0.54							1.0

November 8 2006 Hour: 13:54 58.2 Lat: 34.69N Lon: 36.77E Depth: 34 Agency: REL Local
Magnitudes: 3.2MC REL Rms: 0.5 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	88	239	EPg		1355	13.47	0.82	76						1.0
HWQ	SE	88	239	ESg		1355	23.17	-0.18							1.0
BHL	BZ	134	230	EPg		1355	18.82	-0.42							1.0
BHL	BN	134	230	ESg		1355	34.64	-0.17							1.0
RCY	SZ	160	214	EPg		1355	22.20	-0.71							1.0
RCY	SN	160	214	ESg		1355	40.91	-0.28							1.0

November 8 2006 Hour: 14:26 27.6 Lat: 33.58N Lon: 35.48E Depth: 21 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.5 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	33	108	EPg		1426	33.20	-0.68	42						1.0
RCY	SN	33	108	ESg		1426	38.92	0.39							1.0
BHL	BZ	39	24	EPg		1426	34.54	-0.18							1.0
BHL	BE	39	24	ESg		1426	40.08	0.10							1.0
HWQ	SZ	89	29	EPg		1426	42.59	0.86							1.0
HWQ	SE	89	29	ESg		1426	51.68	-0.50							1.0

November 8 2006 Hour: 15:6 52.1 Lat: 33.64N Lon: 35.41E Depth: 0 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.6 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	37	38	EPg		15 6	57.26	-0.85							1.0
BHL	BE	37	38	ESg		15 7	2.86	0.28							1.0
RCY	SZ	42	114	EPg		15 6	58.04	-0.80	43						1.0
RCY	SE	42	114	ESg		15 7	3.68	-0.17							1.0
HWQ	SZ	87	35	EPg		15 7	6.38	0.31							1.0
HWQ	SN	87	35	ESg		15 7	16.94	0.50							1.0

November 8 2006 Hour: 20:59 31.6 Kuril Islands mb=5.2 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2059	46.55								

November 9 2006 Hour: 11:53 6.6 Lat: 33.59N Lon: 36.57E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.8 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	71	261	EPg		1153	17.06	-1.00	39						1.0
RCY	SN	71	261	ESg		1153	25.46	-1.07							1.0
BHL	BZ	92	293	EPg		1153	20.78	-0.68							1.0
BHL	BE	92	293	ESg		1153	32.60	0.16							1.0
HWQ	SZ	96	323	EPg		1153	22.55	0.45							1.0
HWQ	SN	96	323	ESg		1153	33.98	0.44							1.0

November 9 2006 Hour: 12:49 38.2 Lat: 34.57N Lon: 36.10E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.6 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	35	204	IPg		1249	43.34	-0.50	50						1.0
HWQ	SE	35	204	ISg		1249	46.75	-1.29							1.0
BHL	BZ	84	209	IPg		1249	52.13	0.37							1.0
BHL	BN	84	209	ISg		1250	2.57	0.73							1.0
RCY	SZ	123	192	EPg		1249	58.01	0.01							1.0

RCY SE 123 192 ESg 1250 12.62-0.07 1.0

November 10 2006 Hour: 8:32.3 Lat: 32.38N Lon: 35.66E Depth: 0 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.8 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	123	7	EPg		8 3	41.38	-0.72	56						1.0
RCY	SE	123	7	ESg		8 3	56.46	-0.32							1.0
MATL	SZ	126	346	EP		8 3	42.45	-0.17							1.0
BHL	BZ	169	360	EP		8 3	48.97	0.00							1.0
BHL	BE	169	360	ES		8 4	10.48	1.74							1.0
HWQ	SZ	212	7	EP		8 3	55.70	0.99							1.0
HWQ	SN	212	7	ES		8 4	18.88	0.15							1.0

November 11 2006 Hour: 0:29 57.3 Fiji mb=5.1 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		044	24.33								
RCY	SZ			EP		044	24.43								
BEYL	BZ			EP		044	24.69								

November 11 2006 Hour: 2:33 50.7 Fiji mb=5.0 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		248	6.29								
RCY	SZ			EP		248	6.61								
BEYL	BZ			EP		248	6.81								

November 12 2006 Hour: 0:37 2.5 Lat: 33.56N Lon: 35.55E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.8 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MATL	SZ	21	250	EPg		037	5.90	-0.04							1.0
RCY	SZ	27	107	EPg		037	5.96	-0.82	52						1.0
RCY	SN	27	107	ESg		037	10.05	0.09							1.0
BEYL	BZ	35	352	EPg		037	8.57	0.36							1.0
BEYL	BE	35	352	ESg		037	12.82	0.38							1.0
BHL	BZ	40	15	EPg		037	7.68	-1.27							1.0
BHL	BN	40	15	ESg		037	13.63	-0.09							1.0
HWQ	SZ	88	25	EPg		037	15.93	-0.81							1.0
HWQ	SN	88	25	ESg		037	28.74	1.46							1.0

November 12 2006 Hour: 11:7 31.1 Lat: 33.69N Lon: 36.59E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.6 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	75	252	EPg		11 7	43.23	0.10	46						1.0
RCY	SN	75	252	ESg		11 7	50.90	-1.18							1.0
BHL	BZ	90	285	EPg		11 7	45.19	-0.29							1.0
BHL	BE	90	285	ESg		11 7	56.72	0.55							1.0

November 12 2006 Hour: 11:21 33.1 Lat: 33.65N Lon: 36.57E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.6 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	72	255	EPg		1121	44.32	-0.38	37						1.0
RCY	SN	72	255	ESg		1121	52.34	-0.96							1.0
BHL	BZ	89	289	EPg		1121	47.86	0.38							1.0
BHL	BE	89	289	ESg		1121	58.33	0.19							1.0
HWQ	SE	90	321	ESg		1121	58.44	0.02							1.0

November 12 2006 Hour: 12:12 1.2 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EPg		1212	34.76								
BHL	BE			ESg		1212	57.77								
HWQ	SE			ESg		1212	43.49								
BHL	BZ			EPg		1212	42.58								

November 12 2006 Hour: 21:34 46.8 Kuril Islands mb=6.1 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2139	55.89								
BEYL	BZ			EP		2139	56.84								
RCY	SZ			EP		2139	58.20								

November 13 2006 Hour: 1:42 14.0 Argentina Mw=6.8 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		144	9.57								
BEYL	BZ			EP		144	9.25								

**November 13 2006 Hour: 11:39 14.9 Lat: 33.60N Lon: 37.03E Depth: 0 Agency: REL Local
Magnitudes: 3.2MC REL Rms: 0.7 secs**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	114	264	EPg		1139	33.07	-0.20		69					1.0
RCY	SE	114	264	ESg		1139	45.55	-1.29							1.0
HWQ	SZ	125	307	EPg		1139	35.51	0.35							1.0
HWQ	SE	125	307	ESg		1139	49.99	-0.15							1.0
BHL	BZ	132	285	EPg		1139	36.25	-0.01							1.0
BHL	BE	132	285	ESg		1139	52.52	0.48							1.0

November 13 2006 Hour: 12:14 25.2 Fiji mb=4.9 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1215	12.53								

November 13 2006 Hour: 16:30 3.6 New Britain Mw=6.0 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEYL	BZ			EP		1632	16.50								
BHL	BZ			EP		1632	15.55								

**November 14 2006 Hour: 10: 4 20.4 Lat: 33.80N Lon: 37.13E Depth: 0 Agency: REL Local
Magnitudes: 3.2MC REL Rms: 0.5 secs**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	121	296	EPg		10 4	40.41	0.44							1.0
HWQ	SN	121	296	ESg		10 4	54.74	0.30							1.0
RCY	SZ	126	254	EPg		10 4	40.27	-0.47		75					1.0
RCY	SE	126	254	ESg		10 4	55.26	-0.52							1.0
BHL	BZ	137	275	EPg		10 4	42.48	0.03							1.0
BHL	BE	137	275	ESg		10 4	58.17	-0.59							1.0

**November 14 2006 Hour: 11:30 38.6 Lat: 33.60N Lon: 36.48E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.9 secs**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	63	258	EPg		1130	47.90	-0.84		50					1.0
RCY	SE	63	258	ESg		1130	55.68	-0.57							1.0
BHL	BZ	83	294	EPg		1130	51.35	-0.71							1.0
BHL	BN	83	294	ESg		1131	1.70	-0.32							1.0
HWQ	SZ	90	327	EPg		1130	54.05	1.00							1.0
HWQ	SE	90	327	ESg		1131	4.09	0.36							1.0

**November 14 2006 Hour: 11:58 27.2 Lat: 34.58N Lon: 36.83E Depth: 0 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.5 secs**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	87	248	EPg		1158	41.63	0.40		40					1.0
HWQ	SE	87	248	ESg		1158	51.21	-0.43							1.0
BHL	BZ	131	236	EPg		1158	48.71	0.41							1.0
BHL	BN	131	236	ESg		1159	4.05	0.11							1.0
RCY	SZ	153	218	EPg		1158	50.66	-1.10							1.0
RCY	SE	153	218	ESg		1159	10.27	0.30							1.0

November 14 2006 Hour: 12:47 10.1 Lat: 34.49N Lon: 36.82E Depth: 0 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.6 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	83	254	EPg		1247	23.97	0.45	58						1.0
HWQ	SN	83	254	ESg		1247	32.81	-0.67							1.0
BHL	BZ	125	239	EPg		1247	30.95	0.67							1.0
BHL	BN	125	239	ESg		1247	45.54	0.30							1.0
RCY	SZ	145	220	EPg		1247	32.49	-0.93							1.0
RCY	SE	145	220	ESg		1247	50.99	0.30							1.0

November 14 2006 Hour: 14:11 37.7 Lat: 33.51N Lon: 37.08E Depth: 52 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.3 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	117	269	EPg		1411	55.15	-0.50	62						1.0
RCY	SE	117	269	ESg		1412	8.87	-0.06							1.0
HWQ	SZ	135	309	EPg		1411	57.63	-0.14							1.0
HWQ	SE	135	309	ESg		1412	12.43	-0.20							1.0
BHL	BZ	139	289	EPg		1411	58.67	0.42							1.0
BHL	BN	139	289	ESg		1412	13.76	0.31							1.0

November 15 2006 Hour: 5:33 3.0 Eastern Med Sea ML=3.7 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EPn		533	56.56								
RCY	SZ			EPn		533	59.33								

November 15 2006 Hour: 11:23 28.0 Kuril Islands Mw=8.3 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		1126	36.58								
BHL	BZ			EP		1126	34.82								

November 15 2006 Hour: 11:40 3.9 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EPn		1141	3.77								
RCY	SZ			EPn		1141	5.25								

November 15 2006 Hour: 13:4 52.9 Lat: 33.57N Lon: 36.51E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.5 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	65	262	EPg		13	5	3.13	-0.29						1.0
RCY	SE	65	262	ESg		13	5	10.94	-0.27						1.0
BHL	BZ	88	295	EPg		13	5	6.35	-0.73	51					1.0
BHL	BE	88	295	ESg		13	5	17.14	-0.44						1.0
HWQ	SZ	95	326	EPg		13	5	8.20	0.05						1.0
HWQ	SE	95	326	ESg		13	5	20.24	0.80						1.0

November 15 2006 Hour: 19:35 19.7 Kuril Islands mb=5.8 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1937	50.68								

November 15 2006 Hour: 21:30 26.5 Kuril Islands mb=5.7 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2134	41.87								
RCY	SZ			EP		2134	43.58								

November 16 2006 Hour: 6:29 39.5 Kuril Islands mb=6.1 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		632	47.04								

November 16 2006 Hour: 9:41 22.7 Owen fracture zone mb=5.4 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		942	8.65								
RCY	SZ			EP		942	7.11								

November 16 2006 Hour: 13:57 22.3 Syria-Iraq border ML=4.1 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EPn		1357	40.14								
BHL	BZ			EPn		1357	45.73								

November 16 2006 Hour: 14:48 24.5 Lat: 33.61N Lon: 35.95E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 1.1 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	19	222	IPg		1448	25.84-1.63		38						1.0
RCY	SN	19	222	ISg		1448	29.29-0.41								1.0
BHL	BZ	43	320	EPg		1448	29.80-1.56								1.0
BHL	BE	43	320	ESg		1448	37.22 0.75								1.0
HWQ	SZ	74	360	EPg		1448	36.28-0.13								1.0
HWQ	SE	74	360	ESg		1448	46.10 0.85								1.0

November 16 2006 Hour: 15:13 45.0 Lat: 34.53N Lon: 36.81E Depth: 0 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.6 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	84	251	EPg		1513	59.36 0.88		60						1.0
HWQ	SN	84	251	ESg		1514	7.89-0.60								1.0
BHL	BZ	127	237	EPg		1514	5.87 0.45								1.0
BHL	BE	127	237	ESg		1514	20.48-0.08								1.0
RCY	SZ	148	218	EPg		1514	7.80-0.96								1.0
RCY	SE	148	218	ESg		1514	26.65 0.28								1.0

November 16 2006 Hour: 23:29 7.2 Izu Japan mb=5.0 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2329	15.08								

November 17 2006 Hour: 2:21 32.1 Fiji mb=4.8 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		221	45.09								

November 17 2006 Hour: 4:22 8.6 Kuril Islands mb=5.4 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		422	19.17								

November 17 2006 Hour: 6:17 28.4 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EPn		617	44.10								
BHL	BZ			EPn		617	52.49								

November 17 2006 Hour: 9:42 38.9 Lat: 33.87N Lon: 36.27E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 1.0 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	57	274	EPg		942	48.49 0.41								1.0
BHL	BE	57	274	ESg		942	54.89 0.04								1.0
RCY	SZ	60	224	EPg		942	47.92-0.66		38						1.0
RCY	SN	60	224	ESg		942	54.28-1.44								1.0

November 17 2006 Hour: 12:43 6.0 Honshu mb=5.3 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1243	10.75								

November 17 2006 Hour: 14:28 44.4 Lat: 32.89N Lon: 35.59E Depth: 13 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.2 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	70	18	IPg		1428	56.05	0.17	40						1.0
RCY	SE	70	18	ISg		1429	4.28	-0.09							1.0
BHL	BZ	113	3	EPg		1429	2.39	-0.36							1.0
BHL	BN	113	3	ESg		1429	16.54	0.21							1.0
HWQ	SZ	158	12	IPg		1429	9.92	-0.03							1.0
HWQ	SE	158	12	ISg		1429	28.86	0.00							1.0

November 17 2006 Hour: 18:13 30.4 Ryukyu Mw=6.2 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1815	8.30								
RCY	SZ			EP		1815	9.82								

November 18 2006 Hour: 1:42 10.9 Tonga mb=5.2 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		142	15.59								

November 18 2006 Hour: 2:57 56.0 Lat: 32.00N Lon: 35.33E Depth: 0 Agency: REL Regional
Magnitudes: 4.0MC REL Rms: 0.8 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MATL	SZ	166	0	EP		258	21.42	-0.81							1.0
RCY	SZ	171	15	EP		258	21.88	-1.30							1.0
RCY	SE	171	15	ES		258	42.96	-0.31							1.0
BEYL	BZ	209	4	EP		258	28.06	0.08							1.0
BEYL	BN	209	4	ES		258	53.24	1.62							1.0
BHL	BZ	214	8	EP		258	28.71	-0.01	200						1.0
BHL	BN	214	8	ES		258	53.30	0.39							1.0
HWQ	SZ	260	13	EP		258	35.49	1.07							1.0
HWQ	SE	260	13	ES		259	4.12	1.28							1.0

November 18 2006 Hour: 9:24 7.9 Dead Sea region Mw=3.5 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EPn		924	51.30								
BHL	BZ			EPn		924	59.48								

November 18 2006 Hour: 12:56 53.5 Lat: 34.52N Lon: 36.83E Depth: 0 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 1.1 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	51	231	EPg		1257	0.04	-1.60	63						1.0
FKH	SN	51	231	ESg		1257	6.14	-1.55							1.0
HWQ	SZ	86	252	EPg		1257	8.24	0.95							1.0
HWQ	SN	86	252	ESg		1257	16.94	-0.59							1.0
BHL	BZ	128	238	EPg		1257	15.29	1.14							1.0
BHL	BN	128	238	ESg		1257	30.48	1.01							1.0
RCY	SZ	148	219	EPg		1257	16.82	-0.55							1.0
RCY	SN	148	219	ESg		1257	36.26	1.19							1.0

November 18 2006 Hour: 14:3 54.3 Sumatra Mw=5.9 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEYL	BZ			EP		14	5	40.97							
BHL	BZ			EP		14	5	40.39							

November 18 2006 Hour: 17:24 26.6 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EPn		1727	25.57								
BHL	BZ			EPn		1727	31.93								
HWQ	SZ			EPn		1727	39.15								

November 18 2006 Hour: 22: 4 10.3 Tonga mb=5.0

Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		22	4	59.87							

November 19 2006 Hour: 11:12 30.4 Lat: 33.60N Lon: 36.60E Depth: 0 Agency: REL Local

Magnitudes: 2.9MC REL

Rms: 0.8 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	74	261	EPg		1112	42.27	0.02	46						1.0
RCY	SE	74	261	ESg		1112	49.67	-1.38							1.0
BHL	BZ	94	292	EPg		1112	44.89	-0.68							1.0
BHL	BE	94	292	ESg		1112	56.75	-0.06							1.0
HWQ	SZ	97	322	EPg		1112	45.68	-0.33							1.0
HWQ	SE	97	322	ESg		1112	58.55	0.95							1.0

November 20 2006 Hour: 11:34 22.2 Lat: 33.38N Lon: 36.35E Depth: 67 Agency: REL Local

Magnitudes: 2.9MC REL

Rms: 0.4 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	51	283	EPg		1134	34.22	0.24	45						1.0
RCY	SN	51	283	ESg		1134	42.58	-0.14							1.0
BHL	BZ	87	312	EPg		1134	36.66	-0.65							1.0
BHL	BE	87	312	ESg		1134	48.89	0.37							1.0
HWQ	SZ	106	339	EPg		1134	39.82	0.41							1.0
HWQ	SE	106	339	ESg		1134	51.93	-0.24							1.0

November 20 2006 Hour: 12: 3 5.1 Lat: 33.77N Lon: 35.51E Depth: 0 Agency: REL Local

Magnitudes: 2.9MC REL

Rms: 0.9 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	20	41	IPg		12	3	8.77	0.49	56					1.0
MATL	SZ	35	209	EPg		12	3	10.25	-0.53						1.0
RCY	SZ	43	138	IPg		12	3	11.38	-0.54						1.0
RCY	SE	43	138	ISg		12	3	16.62	-0.37						1.0
HWQ	SZ	69	35	IPg		12	3	14.93	-1.30						1.0
HWQ	SE	69	35	ISg		12	3	25.14	0.65						1.0

November 20 2006 Hour: 12:26 10.1 Lat: 33.64N Lon: 36.71E Depth: 0 Agency: REL Local

Magnitudes: 2.8MC REL

Rms: 1.1 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	84	258	EPg		1226	23.70	-0.05	43						1.0
RCY	SE	84	258	ESg		1226	31.98	-1.83							1.0
HWQ	SE	100	315	ESg		1226	39.02	0.89							1.0
BHL	BZ	102	287	EPg		1226	25.40	-1.17							1.0
BHL	BE	102	287	ESg		1226	38.88	0.15							1.0

November 21 2006 Hour: 10:27 15.1 Lat: 33.63N Lon: 36.48E Depth: 15 Agency: REL Local

Magnitudes: 2.9MC REL

Rms: 0.5 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	63	256	EPg		1027	25.04	-0.42	48						1.0
RCY	SE	63	256	ESg		1027	33.40	0.31							1.0
BHL	BZ	82	292	EPg		1027	28.36	0.14							1.0
BHL	BE	82	292	ESg		1027	38.10	0.21							1.0
HWQ	SZ	87	326	EPg		1027	29.93	0.97							1.0
HWQ	SE	87	326	ESg		1027	38.38	-0.81							1.0

November 21 2006 Hour: 14:14 60.0

Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EPn		1415	10.33								
BHL	BZ			EPn		1415	11.24								

November 22 2006 Hour: 8:50 57.7

Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EPn		851	28.17								
BHL	BZ			EPn		851	35.97								

November 22 2006 Hour: 10:13 13.3 Lat: 33.57N Lon: 37.04E Depth: 15 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.6 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	114	266	EPg		1013	30.13	-0.88							1.0
RCY	SE	114	266	ESg		1013	44.35	0.23							1.0
HWQ	SZ	128	308	EPg		1013	32.59	-0.50	59						1.0
HWQ	SE	128	308	ESg		1013	47.64	-0.10							1.0
BHL	BZ	133	286	EPg		1013	35.29	1.39							1.0
BHL	BE	133	286	ESg		1013	49.03	-0.12							1.0

November 22 2006 Hour: 11:29 2.3

Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EPn		1130	1.10								
BHL	BZ			EPn		1129	57.66								

November 23 2006 Hour: 4:36 28.4 Turkey mb=4.6

Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EPn		439	32.12								
BHL	BZ			EPn		439	39.81								
BEYL	BZ			EPn		439	41.52								

November 23 2006 Hour: 4:58 1.8

Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EPn		458	51.86								
RCY	SZ			EPn		458	45.65								

November 23 2006 Hour: 10:46 59.1 Lat: 34.65N Lon: 36.41E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 1.3 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	46	181	EPg		1047	6.30	-0.21	52						1.0
FKH	SE	46	181	ESg		1047	11.79	-0.23							1.0
HWQ	SZ	60	226	EPg		1047	7.01	-1.66							1.0
BHL	SE	60	226	ESg		1047	14.54	-1.23							1.0
BHL	BZ	108	220	EPg		1047	18.61	2.07							1.0
BHL	BE	108	220	ESg		1047	30.72	1.25							1.0

November 23 2006 Hour: 10:59 14.7 Lat: 33.33N Lon: 36.42E Depth: 60 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.4 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	59	287	EPg		1059	27.35	0.74	39						1.0
RCY	SE	59	287	ESg		1059	35.18	-0.25							1.0
BHL	BZ	95	312	EPg		1059	30.40	0.01							1.0
BHL	BE	95	312	ESg		1059	42.24	0.24							1.0
HWQ	SZ	114	337	EPg		1059	32.36	-0.13							1.0
HWQ	SE	114	337	ESg		1059	45.46	-0.20							1.0

November 23 2006 Hour: 11:24 46.6 Lat: 34.93N Lon: 36.61E Depth: 17 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 1.1 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	95	220	EP		1125	2.32	0.70	47						1.0
HWQ	SE	95	220	ES		1125	12.22	-0.50							1.0
BHL	BZ	144	218	EP		1125	8.72	-0.12							1.0
BHL	BE	144	218	ES		1125	25.46	0.17							1.0
RCY	SZ	177	205	EP		1125	11.63	-1.41							1.0
RCY	SN	177	205	ES		1125	31.13	-1.47							1.0

November 23 2006 Hour: 11:26 31.1 Lat: 33.31N Lon: 35.24E Depth: 0 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.8 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MATL	SZ	21	23	EPg		1126	33.95	-0.54							1.0
RCY	SZ	57	70	EPg		1126	38.87	-1.40	46						1.0
RCY	SE	57	70	ESg		1126	46.69	-0.39							1.0
BHL	BZ	76	30	EPg		1126	43.22	-0.11							1.0
BHL	BE	76	30	ESg		1126	53.33	0.93							1.0
HWQ	SZ	125	31	EPg		1126	51.33	0.03							1.0
HWQ	SN	125	31	ESg		1127	6.46	0.19							1.0

November 23 2006 Hour: 12: 9 15.6 Lat: 33.64N Lon: 36.13E Depth: 86 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.4 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	53	304	EPg		12 9	29.58	0.36	33						1.0
BHL	BE	53	304	ESg		12 9	39.10	-0.21							1.0
HWQ	SZ	73	347	EPg		12 9	31.10	0.31							1.0
HWQ	SE	73	347	ESg		12 9	41.88	-0.18							1.0

November 23 2006 Hour: 15:17 6.4 Lat: 33.64N Lon: 35.75E Depth: 8 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.9 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	19	161	IPg		1517	9.12	-0.63	50						1.0
RCY	SE	19	161	ISg		1517	12.49	0.25							1.0
BHL	BZ	30	342	IPg		1517	10.22	-1.24							1.0
BHL	BN	30	342	ISg		1517	14.27	-0.96							1.0
BEYL	BZ	35	316	EPg		1517	12.36	0.21							1.0
BEYL	BN	35	316	ESg		1517	18.05	1.63							1.0
MATL	SZ	43	246	IPg		1517	12.12	-1.30							1.0
HWQ	SZ	73	14	IPg		1517	18.43	0.27							1.0
HWQ	SE	73	14	ISg		1517	27.65	0.76							1.0

November 23 2006 Hour: 20: 7 15.0 Kuril Islands mb=5.8 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		2017	4.60								
BHL	BZ			EP		2017	7.05								
BEYL	BZ			EP		2017	7.87								
RCY	SZ			EP		2017	8.46								

November 24 2006 Hour: 9: 2 21.7 Lat: 33.77N Lon: 36.10E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.6 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	41	220	EPg		9 2	27.62	-0.66	41						1.0
RCY	SE	41	220	ESg		9 2	32.54	-0.62							1.0
BHL	BZ	44	290	EPg		9 2	29.05	0.29							1.0
BHL	BE	44	290	ESg		9 2	33.87	-0.13							1.0
HWQ	SZ	58	346	EPg		9 2	31.29	0.20							1.0

November 24 2006 Hour: 9: 7 46.5 Lat: 33.74N Lon: 36.08E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.6 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	37	221	EPg		9 7	51.76	-0.68	40						1.0
RCY	SE	37	221	ESg		9 7	56.70	-0.17							1.0
BHL	BZ	44	295	EPg		9 7	52.86	-0.64							1.0
BHL	BE	44	295	ESg		9 7	58.83	0.12							1.0
HWQ	SE	61	348	ESg		9 8	4.12	0.46							1.0

November 24 2006 Hour: 13:34 28.1 Turkey MD=3.6 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EPn		1334	32.02								
BHL	BZ			EPn		1334	36.77								
BEYL	BZ			EPn		1334	39.39								

November 24 2006 Hour: 15:27 53.6 Kamchatka mb=5.0 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1546	32.38								
BHL	BZ			EP		1546	33.15								
BEYL	BZ			EP		1546	33.26								

November 24 2006 Hour: 19:35 2.1 Kermadec Islands mb=5.1 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1935	9.72								

November 24 2006 Hour: 21:14 20.5 Kuril Islands mb=5.4 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEYL	BZ			EP		2114	39.47								
BHL	BZ			EP		2114	39.43								

November 25 2006 Hour: 13:41 5.9 Lat: 34.74N Lon: 36.77E Depth: 14 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.4 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	92	236	EPg		1341	20.86	0.55	47						1.0
HWQ	SE	92	236	ESg		1341	30.58	-0.43							1.0
BHL	BZ	138	228	EPg		1341	27.20	-0.01							1.0
BHL	BE	138	228	ESg		1341	43.18	0.17							1.0

November 26 2006 Hour: 9:35 3.7 Lat: 33.14N Lon: 35.89E Depth: 11 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.1 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	39	350	EPg		935	10.37	0.13	33						1.0
RCY	SE	39	350	ESg		935	15.00	-0.08							1.0
BHL	BZ	87	346	EPg		935	17.91	0.00							1.0

November 26 2006 Hour: 10:27 45.2 Lat: 33.15N Lon: 35.53E Depth: 29 Agency: REL Local
Magnitudes: 2.2MC REL Rms: 1.0 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MATL	SZ	42	333	EPg		1027	53.46	0.40	20						1.0
MATL	SZ	42	333	ESg		1027	59.19	0.30							1.0
BHL	BZ	84	8	EPg		1027	57.27	-1.63							1.0
BHL	BN	84	8	ESg		1028	7.98	-1.07							1.0
HWQ	SZ	131	17	EPg		1028	6.52	0.92							1.0
HWQ	SN	131	17	ESg		1028	21.77	1.07							1.0

November 26 2006 Hour: 12:32 33.2 Lat: 34.62N Lon: 36.80E Depth: 14 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.1 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	87	245	EPg		1232	46.97	-0.01	50						1.0
HWQ	SE	87	245	ESg		1232	57.13	-0.07							1.0
BHL	BZ	132	233	EPg		1232	53.67	0.10							1.0
BHL	BE	132	233	ESg		1233	8.74	0.07							1.0

November 26 2006 Hour: 14:36 1.0 Turkey ML=3.4 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EPn		1436	27.01								
BHL	BZ			EPn		1436	24.33								

November 26 2006 Hour: 14:55 5.8 Lat: 34.60N Lon: 36.74E Depth: 33 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.1 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	81	245	EPg		1455	19.18	-0.09	39						1.0
HWQ	SN	81	245	ESg		1455	29.34	0.07							1.0
BHL	BZ	126	233	EPg		1455	25.72	0.07							1.0
BHL	BN	126	233	ESg		1455	40.30	-0.07							1.0

November 26 2006 Hour: 17:37 23.3 Kermadec Islands mb=5.2 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1756	4.07								
BHL	BZ			EP		1756	4.66								
BEYL	BZ			EP		1756	4.78								

November 27 2006 Hour: 1:9 16.0 Lat: 33.56N Lon: 36.56E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.3 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	70	263	EPg		1 9	26.96	-0.32	50						1.0
RCY	SE	70	263	ESg		1 9	35.63	0.01							1.0
BHL	BZ	93	294	EPg		1 9	30.55	-0.39							1.0
BHL	BE	93	294	ESg		1 9	41.99	0.00							1.0
HWQ	SZ	98	324	EPg		1 9	31.80	0.00							1.0
HWQ	SE	98	324	ESg		1 9	43.72	0.23							1.0

November 28 2006 Hour: 7:43 2.1 Lat: 33.72N Lon: 36.36E Depth: 20 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.1 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	57	243	EPg		743	11.49	-0.08							1.0
BHL	BZ	69	287	EPg		743	13.08	-0.17							1.0
HWQ	SZ	73	328	EPg		743	13.78	-0.09	58						1.0
HWQ	SE	73	328	ESg		743	22.74	0.15							1.0

November 28 2006 Hour: 8:2 20.7 Kuril Islands mb=5.7 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		814	16.43								
BHL	BZ			EP		814	18.86								
BEYL	BZ			EP		814	19.33								

November 28 2006 Hour: 8:52 50.3 Lat: 33.60N Lon: 35.46E Depth: 17 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.4 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MATL	SZ	17	224	IPg		852	54.45	0.31							1.0
RCY	SZ	36	110	IPg		852	56.45	-0.31							1.0
RCY	SE	36	110	ISg		853	1.70	0.19							1.0
BHL	BZ	39	29	IPg		852	56.42	-0.67	40						1.0
BHL	BN	39	29	ISg		853	1.85	-0.23							1.0
HWQ	BZ	88	31	IPg		853	4.28	-0.02							1.0
HWQ	BN	88	31	ISg		853	15.37	0.74							1.0

November 28 2006 Hour: 11:29 23.5 Lat: 33.65N Lon: 36.56E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 1.0 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	71	256	EPg		1129	34.87	-0.11	50						1.0
RCY	SE	71	256	ESg		1129	42.58	-0.88							1.0
BHL	SZ	89	289	EPg		1129	36.40	-1.41							1.0
BHL	SN	89	289	ESg		1129	47.65	-0.75							1.0
HWQ	SZ	90	321	EPg		1129	38.07	0.01							1.0
HWQ	SN	90	321	ESg		1129	50.31	1.48							1.0

November 28 2006 Hour: 13:29 52.6 Lat: 34.61N Lon: 36.89E Depth: 0 Agency: REL Local
Magnitudes: 3.2MC REL Rms: 0.4 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	94	247	EPg		1330	8.23	0.52	74						1.0
HWQ	BE	94	247	ESg		1330	18.74	-0.19							1.0
BHL	BZ	138	236	EPg		1330	14.79	0.00							1.0
BHL	BN	138	236	ESg		1330	30.51	-0.73							1.0
BEYL	BN	152	238	ESg		1330	35.77	0.49							1.0
RCY	SZ	159	219	EPg		1330	17.67	-0.51							1.0
RCY	SE	159	219	ESg		1330	37.71	0.57							1.0

November 28 2006 Hour: 17:27 13.3 Lat: 34.40N Lon: 36.28E Depth: 15 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.1 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	34	247	EPg		1727	19.23	-0.10	41						1.0
HWQ	BE	34	247	ESg		1727	23.82	0.05							1.0
BHL	BZ	80	227	EPg		1727	25.91	-0.15							1.0
BHL	BN	80	227	ESg		1727	35.58	0.09							1.0

November 28 2006 Hour: 22:4 33.5 Lat: 34.56N Lon: 32.12E Depth: 30 Agency: REL Regional
Magnitudes: 4.1MC REL Rms: 0.6 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEYL	BZ	320	103	EPn		22 5	17.30	0.70							1.0
BEYL	BE	320	103	Sn		22 5	48.47	0.01							1.0
BHL	BZ	333	102	EPn		22 5	17.33	-1.05	185						1.0
BHL	BN	333	102	Sn		22 5	49.57	-1.99							1.0
HWQ	BZ	353	94	EPn		22 5	20.92	0.10							1.0
HWQ	BE	353	94	Sn		22 5	56.93	1.13							1.0
RCY	SZ	362	108	EPn		22 5	21.56	-0.36							1.0
RCY	SE	362	108	Sn		22 5	58.52	0.80							1.0

November 29 2006 Hour: 1:31 23.2 Indonesia Mw=6.2 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		145	14.78								
BHL	BZ			EP		145	16.12								
BEYL	BZ			EP		145	15.98								

November 29 2006 Hour: 10:17 37.5 Lat: 33.29N Lon: 35.85E Depth: 10 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.6 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	21	352	EPg		1017	40.64	-0.77	24						1.0
RCY	SE	21	352	ESg		1017	44.42	0.13							1.0
BHL	BZ	70	345	EPg		1017	49.36	0.41							1.0
BHL	BE	70	345	ESg		1017	56.69	-0.73							1.0
HWQ	SE	109	5	ESg		1018	9.28	0.90							1.0

November 29 2006 Hour: 11:45 47.1 Lat: 33.62N Lon: 37.01E Depth: 15 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.6 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	111	263	EPg		1146	3.51	-0.98	66						1.0
RCY	SN	111	263	ESg		1146	17.53	0.15							1.0
HWQ	SZ	122	307	EPg		1146	6.20	0.11							1.0
HWQ	SE	122	307	ESg		1146	19.72	-0.44							1.0
BHL	BZ	129	285	EPg		1146	8.36	1.25							1.0

November 29 2006 Hour: 15:42 59.1 Reykjanes Ridge mb=5.7 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1547	57.90								
BHL	BZ			EP		1547	57.90								

November 29 2006 Hour: 23:26 51.5 Fiji mb=5.2 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2327	4.94								

November 30 2006 Hour: 11:45 24.6 Lat: 33.60N Lon: 36.46E Depth: 0 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 1.4 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	61	258	EPg		1145	33.11	-1.32	44						1.0
RCY	SE	61	258	ESg		1145	41.00	-0.70							1.0
BHL	BZ	82	294	EPg		1145	35.05	-2.76							1.0
BHL	BE	82	294	ESg		1145	47.78	0.20							1.0
HWQ	SZ	89	328	EPg		1145	40.21	1.27							1.0
HWQ	SE	89	328	ESg		1145	50.44	0.90							1.0

November 30 2006 Hour: 11:43 51.0 Tonga mb=5.8 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1153	4.02								
HWQ	BZ			EP		1153	4.59								
RCY	SZ			EP		1153	6.26								

November 30 2006 Hour: 18:45 33.7 Lat: 36.66N Lon: 27.35E Depth: 0 Agency: REL Regional
Magnitudes: 4.4MC REL Rms: 1.2 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MATL	SZ	808	113	EPn		1847	19.99	-0.15							1.0
BHL	BZ	815	110	EPn		1847	20.24	-0.83	158						1.0
BHL	BN	815	110	Sn		1848	38.20	-2.31							1.0
HWQ	SZ	824	106	EPn		1847	22.97	0.79							1.0
HWQ	SN	824	106	Sn		1848	43.13	0.69							1.0
RCY	SZ	849	112	EPn		1847	25.49	0.18							1.0
RCY	SE	849	112	Sn		1848	49.53	1.63							1.0

Epicentral Map of Lebanon

November 2006

Magnitudes

- Ml = 2
- Ml = 3
- Ml = 4
- Ml = 5
- ★ Felt

