

Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

November

2005

Prepared by
The National Centre for Geophysical Research
Bhannes

*P.o.b. : 165432
Ashrafyeh Beirut 1100-2040*

*Tel : +9614-981885
Fax : +9614-981886
Email : geophys@cnrs.edu.lb*

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 of 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 location 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 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 coda duration. The coda wave magnitude is estimated via the formula:

$$M_c = 0.08 + 1.63 * \log_{10}(T) + 0.009 * D.$$

where T is the coda duration (sec) and D is the epicentral distance (km). The coefficients were adopted at the beginning of operation 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 since this might restrict later use of the data. As a consequence, some event locations might be unrealistic like zero depth earthquakes or teleseismic locations off by 1000 km. However, the locations are based on the available data and reflect the location procedure and the models used.

STATIONS USED

The stations listed below are operated by the National Centre for Geophysical Research. They form 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 to mention 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	Scheduled 2003
DWR	3323.13N	3524.08E	420	DWEIR	Scheduled 2003

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 will be available for download in pdf format on:
<http://www.cnrs.edu.lb/geophysicalresearch/>

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.ifjff.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: REL 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 2005 Hour: 11:58 1.7

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	SZ			EPg		1158	29.07								
BHL	SN			ESg		1158	38.88								
HWQ	SZ			EPg		1158	28.65								
HWQ	SE			ESg		1158	38.44								

November 2 2005 Hour: 3:26 26.4 Kermadec M=5.8

Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		329	8.66								

November 2 2005 Hour: 10:30 10.9 Lat: 33.49N Lon: 35.33E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 4.0 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MATL	SZ	0	19	EPg		1030	8.45	-2.5							1.0
MATL	SZ	0	19	ESg		1030	11.88	0.9							1.0
BHL	SZ	55	33	EPg		1030	14.69	-5.1							1.0
BHL	SN	55	33	ESg		1030	26.29	-0.1							1.0
HWQ	SZ	105	33	EPg		1030	35.56	7.8	47						1.0
HWQ	SN	105	33	ESg		1030	39.23	-1.0							1.0

November 2 2005 Hour: 11: 6 38.6 Lat: 33.03N Lon: 36.73E Depth: 0 Agency: REL Local
Magnitudes: 3.2MC REL Rms: 3.0 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	SZ	139	315	EPg		11 6	56.33	-4.8	65						1.0
BHL	SN	139	315	ESg		11 7	16.12	-1.7							1.0
MATL	SZ	140	292	EPg		11 7	4.86	3.6							1.0
HWQ	SZ	157	333	EPg		11 7	4.36	0.5							1.0
HWQ	SE	157	333	ESg		11 7	24.92	2.3							1.0

November 2 2005 Hour: 14:20 29.9 Lat: 33.07N Lon: 35.61E Depth: 15 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 2.0 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MATL	SZ	53	331	EPg		1420	40.10	1.4							1.0
BHL	SZ	93	3	EPg		1420	44.18	-0.4	58						1.0
BHL	SN	93	3	ESg		1420	52.69	-2.7							1.0
HWQ	SZ	138	13	EPg		1420	49.82	-1.4							1.0
HWQ	SE	138	13	ESg		1421	10.04	3.1							1.0

November 2 2005 Hour: 21: 4 1.9 Turkey M=3.8

Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EPn		2116	10.44								
FKH	SZ			EPn		2116	10.47								
BHL	SZ			EPn		2116	12.54								

November 3 2005 Hour: 20:22 22.6 Afghanistan M=4.5

Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EPn		2024	1.57								
BHL	BZ			EPn		2024	12.90								

November 4 2005 Hour: 3:54 0.6

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EPg		354	47.51								
BHL	SZ			EPg		354	52.63								
BHL	SN			ESg		355	1.90								
HWQ	SN			ESg		354	54.46								

November 4 2005 Hour: 10:37 51.6 Lat: 34.81N Lon: 36.44E Depth: 15 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.2 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	74	217	EPg		1038	3.54	0.0	56			48	11	21.4	1.0
HWQ	SN	74	217	ESg		1038	12.12	-0.3							1.0
BHL	SZ	124	216	EPg		1038	10.79	0.0							1.0
BHL	SE	124	216	ESg		1038	25.32	0.3							1.0

November 6 2005 Hour: 2:13 47.1 Pakistan M=5.2 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		218	13.07								

November 6 2005 Hour: 5:0 1.3 Turkey M=3.8 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EPn		5	1	18.32							
HWQ	SZ			EPn		5	1	11.07							

November 6 2005 Hour: 8:8 18.7 Lat: 34.72N Lon: 36.53E Depth: 15 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.2 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	55	192	EPg		8	8	27.74							1.0
FKH	SN	55	192	ESg		8	8	34.33							1.0
HWQ	SZ	72	228	EPg		8	8	30.16	54						1.0
HWQ	SN	72	228	ESg		8	8	38.66							1.0
BHL	SZ	121	222	EPg		8	8	37.57							1.0
BHL	SN	121	222	ESg		8	8	51.63							1.0

November 6 2005 Hour: 9:50 0.2 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EPg		951	11.55								
FKH	SN			ESg		951	16.45								
HWQ	SZ			EPg		951	14.43								
HWQ	SE			ESg		951	23.57								

November 6 2005 Hour: 10:8 51.0 Lat: 33.72N Lon: 35.03E 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
MATL	SZ	39	133	EPg		10	8	57.56							1.0
BHL	SZ	62	71	EPg		10	8	59.59	76						1.0
BHL	SE	62	71	ESg		10	9	8.25							1.0
HWQ	SZ	105	54	EPg		10	9	8.47							1.0
HWQ	SE	105	54	ESg		10	9	20.73							1.0

November 6 2005 Hour: 12:21 0.3 Turkey M=4.1 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EPn		1223	5.00								

November 7 2005 Hour: 13:9 25.1 Lat: 34.45N Lon: 36.94E Depth: 0 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 1.2 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	55	244	EPg		13	9	33.37	56						1.0
FKH	SE	55	244	ESg		13	9	38.64							1.0
HWQ	SZ	93	258	EPg		13	9	40.55							1.0
HWQ	SE	93	258	ESg		13	9	50.99							1.0
BHL	SN	133	243	ESg		1310	4.27	1.9							1.0

November 7 2005 Hour: 13:47 14.3 Lat: 34.47N Lon: 36.84E Depth: 0 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 1.4 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	48	238	EPg		1347	20.82	-1.3	60						1.0
FKH	SE	48	238	ESg		1347	26.13	-1.7							1.0
HWQ	SZ	85	256	EPg		1347	28.65	0.6							1.0
HWQ	SN	85	256	ESg		1347	37.38	-0.8							1.0

BHL	SZ	126	241	EPg		1347	35.38	0.7									1.0
BHL	SN	126	241	ESg		1347	52.17	2.4									1.0

November 7 2005 Hour: 15:19 1.6

Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EPn		1520	3.56								

November 7 2005 Hour: 17:9 23.3 Lat: 35.63N Lon: 36.72E Depth: 14 Agency: REL Local
Magnitudes: 3.3MC REL Rms: 0.2 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	157	191	EPg		17 9	47.48	0.0							1.0
FKH	SN	157	191	ESg		1710	5.33	0.0							1.0
HWQ	SZ	166	206	EPg		17 9	48.65	0.0	79						1.0
HWQ	SE	166	206	ESg		1710	7.19	-0.3							1.0
BHL	SZ	215	207	EPg		17 9	55.92	0.0							1.0
BHL	SN	215	207	ESg		1710	20.29	0.3							1.0

November 8 2005 Hour: 14:34 0.1

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EPg		1434	50.47								
FKH	SN			ESg		1434	56.47								
HWQ	SZ			EPg		1434	52.01								
HWQ	SN			ESg		1434	58.98								

November 8 2005 Hour: 16:29 46.9 Lat: 34.81N Lon: 36.69E Depth: 12 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
FKH	SZ	69	202	EPg		1629	59.12	0.8							1.0
FKH	SN	69	202	ESg		1630	6.33	-0.5							1.0
HWQ	SZ	91	229	EPg		1630	0.89	-0.8	65						1.0
HWQ	SN	91	229	ESg		1630	13.06	0.5							1.0
BHL	SN	139	224	ESg		1630	26.05	0.0							1.0

November 9 2005 Hour: 0:41 53.0 Kermadec M=5.8

Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		042	16.94								

November 9 2005 Hour: 13:13 36.7 Lat: 34.79N Lon: 36.26E Depth: 15 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
FKH	SZ	64	168	EPg		1313	46.08	-0.9	48			263	-84	15.9	1.0
FKH	SE	64	168	ESg		1313	53.67	-1.0							1.0
HWQ	SZ	64	207	EPg		1313	48.07	1.0							1.0
HWQ	SE	64	207	ESg		1313	55.75	0.9							1.0

November 9 2005 Hour: 14:3 28.1 Lat: 34.56N Lon: 36.86E Depth: 0 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 1.0 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	56	229	EPg		14 3	35.80	-1.4	55						1.0
FKH	SN	56	229	ESg		14 3	43.42	-0.4							1.0
HWQ	SZ	90	250	EPg		14 3	43.25	0.6							1.0
HWQ	SN	90	250	ESg		14 3	52.35	-1.1							1.0
BHL	SZ	133	237	EPg		14 3	50.52	0.9							1.0
BHL	SN	133	237	ESg		14 4	7.02	1.5							1.0

November 9 2005 Hour: 14:32 0.7

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EPg		1433	5.54								
FKH	SN			ESg		1433	11.53								
HWQ	SE			ESg		1433	23.79								

November 9 2005 Hour: 17:12 0.9

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EPg		1713	13.41								
HWQ	SE			ESg		1713	19.01								
FKH	SE			ESg		1713	17.67								
HWQ	SZ			EPg		1713	14.21								

November 10 2005 Hour: 12:10 0.9 Turkey M=3.4

Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EPn		1210	55.95								

November 10 2005 Hour: 14:34 39.5 Lat: 33.90N Lon: 36.28E Depth: 33

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
FKH	SZ	39	16	EPg		1434	46.88	-0.5	68						1.0
FKH	SE	39	16	ESg		1434	53.55	0.3							1.0
HWQ	SZ	52	324	EPg		1434	49.29	0.3							1.0
HWQ	SE	52	324	ESg		1434	55.93	-0.2							1.0
BHL	SZ	58	271	EPg		1434	50.02	0.2							1.0
BHL	SN	58	271	ESg		1434	57.26	-0.1							1.0

November 10 2005 Hour: 19:31 27.2 Siberia M=6.0

Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1939	57.40								

November 11 2005 Hour: 7:56 0.8 Cyprus M=3.2

Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EPn		756	16.55								

November 11 2005 Hour: 13:47 1.3

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	SZ			EPg		1348	7.98								
BHL	SN			ESg		1348	12.05								
HWQ	SZ			EPg		1348	8.77								
HWQ	SN			ESg		1348	14.42								

November 11 2005 Hour: 15:54 59.8 Lat: 33.39N Lon: 35.40E Depth: 23

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
MATL	SZ	12	329	EPg		1555	4.15	0.3							1.0
BHL	SZ	62	23	EPg		1555	8.84	-1.1							1.0
BHL	SN	62	23	ESg		1555	17.26	-0.3							1.0
HWQ	SZ	110	27	EPg		1555	17.72	0.6	70						1.0
HWQ	SN	110	27	ESg		1555	30.44	0.5							1.0

November 12 2005 Hour: 9:14 1.2

Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EPn		915	6.99								
HWQ	SE			Sn		915	20.91								
BHL	SE			Sn		915	33.75								

November 12 2005 Hour: 11:4 26.5 Lat: 33.83N Lon: 36.54E Depth: 0

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
FKH	SZ	47	344	EPg		11 4	33.88	-0.1	46						1.0
FKH	SN	47	344	ESg		11 4	39.66	0.1							1.0
HWQ	SZ	74	312	EPg		11 4	38.62	0.2							1.0
HWQ	SE	74	312	ESg		11 4	47.25	-0.1							1.0
BHL	SN	83	276	ESg		11 4	49.68	0.0							1.0

November 12 2005 Hour: 14:14 1.1

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EPg		1415	23.09								
HWQ	SZ			EPg		1415	29.99								
FKH	SE			ESg		1415	28.54								
HWQ	SE			ESg		1415	41.04								

November 12 2005 Hour: 14:53 35.0 Lat: 33.67N Lon: 35.88E Depth: 15

Agency: REL Local

Magnitudes: 3.0MC REL

Rms: 0.5 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	SZ	33	321	EPg		1453	41.37	0.5							1.0
BHL	SE	33	321	ESg		1453	44.86	-0.3							1.0
MATL	SZ	55	248	EPg		1453	43.56	-0.4							1.0
HWQ	SZ	67	5	EPg		1453	46.36	0.5	60						1.0
HWQ	SE	67	5	ESg		1453	53.96	0.0							1.0
FKH	SZ	79	38	EPg		1453	48.04	0.5							1.0
FKH	SE	79	38	ESg		1453	56.14	-0.7							1.0

November 12 2005 Hour: 17:14 53.6 Turkey M=3.9

Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EPn		1715	40.14								
BHL	BZ			EPn		1715	47.39								
HWQ	SZ			EPn		1715	39.69								

November 12 2005 Hour: 18:17 26.9 Lat: 35.20N Lon: 36.85E Depth: 14

Agency: REL Local

Magnitudes: 3.4MC REL

Rms: 0.1 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	115	201	EPg		1817	44.61	-0.1	91						1.0
FKH	SN	115	201	ESg		1817	58.04	0.1							1.0
HWQ	SZ	131	219	EPg		1817	47.38	0.1							1.0
HWQ	SE	131	219	ESg		1818	2.13	-0.2							1.0
BHL	SN	181	218	ESg		1818	14.97	0.1							1.0

November 13 2005 Hour: 2:52 8.3 Kermadec M=5.3

Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		253	58.20								
BHL	BZ			EP		253	58.99								

November 13 2005 Hour: 10:1 0.5

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	SZ			EPg		10	1 37.71								
BHL	SN			ESg		10	1 42.68								
HWQ	SZ			EPg		10	1 39.15								
HWQ	SN			ESg		10	1 44.46								

November 13 2005 Hour: 10:42 1.0

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	SZ			EPg		1042	46.68								
BHL	SE			ESg		1042	59.35								
HWQ	SZ			EPg		1042	46.99								
HWQ	SE			ESg		1043	0.15								

November 13 2005 Hour: 12:28 59.1 Lat: 34.37N Lon: 36.86E Depth: 0

Agency: REL Local

Magnitudes: 3.0MC REL

Rms: 0.4 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	45	251	EPg		1229	5.94	-0.4	56						1.0
FKH	SE	45	251	ESg		1229	11.18	-0.5							1.0
HWQ	SZ	85	264	EPg		1229	13.12	0.4							1.0
HWQ	SE	85	264	ESg		1229	22.87	0.0							1.0
BHL	SN	122	246	ESg		1229	33.96	0.5							1.0

November 13 2005 Hour: 12:57 0.1

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	SZ			EPg		1257	19.20								
BHL	SN			ESg		1257	28.77								
HWQ	SN			ESg		1257	30.26								

November 13 2005 Hour: 16:21 28.0 Lat: 33.64N Lon: 35.62E Depth: 10 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
BHL	SZ	30	6	EPg		1621	32.91	-0.3	47			186	0	47.3	1.0
BHL	SE	30	6	ESg		1621	37.11	0.1							1.0
HWQ	SZ	77	23	EPg		1621	40.84	0.3							1.0
HWQ	SN	77	23	ESg		1621	49.74	-0.1							1.0

November 13 2005 Hour: 23:7 9.2 Lat: 33.01N Lon: 35.18E Depth: 3 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.4 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MATL	SZ	55	15	EPg		23 7	18.35	0.3							1.0
MATL	SZ	55	15	ESg		23 7	24.12	-0.4							1.0
BHL	BZ	108	24	EPg		23 7	26.55	-0.1	65						1.0
BHL	BN	108	24	ESg		23 7	40.41	0.8							1.0
HWQ	SZ	157	27	EPg		23 7	34.72	0.1							1.0
HWQ	SE	157	27	ESg		23 7	52.92	-0.5							1.0
FKH	SZ	177	40	EPg		23 7	37.43	-0.3							1.0
FKH	SN	177	40	ESg		23 7	58.97	0.1							1.0

November 14 2005 Hour: 21:47 8.5 Honshu M=7.2

Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2151	16.59								
FKH	SZ			EP		2151	13.81								

November 15 2005 Hour: 11:8 1.0

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EPg		11 8	59.14								
HWQ	SZ			EPg		11 9	3.39								
FKH	SN			ESg		11 9	3.72								
HWQ	SN			ESg		11 9	11.37								

November 15 2005 Hour: 14:12 31.2 Lat: 34.34N Lon: 36.78E Depth: 0 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.7 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	37	252	EPg		1412	35.90	-1.3	67						1.0
FKH	SE	37	252	ESg		1412	41.19	-0.4							1.0
HWQ	SZ	77	265	EPg		1412	44.14	0.4							1.0
HWQ	SN	77	265	ESg		1412	53.02	0.1							1.0
BHL	SZ	115	246	EPg		1412	50.51	0.8							1.0
BHL	SE	115	246	ESg		1413	3.67	0.3							1.0

November 15 2005 Hour: 20:26 59.0 Honshu M=5.6

Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2033	12.88								

November 16 2005 Hour: 12:44 59.0 Lat: 34.01N Lon: 36.35E Depth: 15 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
FKH	SZ	25	12	EPg		1245	3.65	-0.1	62			97	-94	9.0	1.0
FKH	SE	25	12	ESg		1245	7.17	-0.1							1.0
HWQ	SZ	47	308	EPg		1245	7.04	0.1							1.0
HWQ	SE	47	308	ESg		1245	12.83	0.1							1.0

November 16 2005 Hour: 15:25 50.9 Lat: 33.29N Lon: 35.27E Depth: 27 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 1.4 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MATL	SZ	23	14	EPg		1525	57.30	0.9	38						1.0
BHL	SZ	77	27	EPg		1526	1.90	-1.6							1.0
BHL	SN	77	27	ESg		1526	11.08	-1.7							1.0
HWQ	SZ	126	30	EPg		1526	11.04	0.4							1.0
HWQ	SN	126	30	ESg		1526	27.10	1.9							1.0

November 17 2005 Hour: 11:36 0.2 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EPg		1136	38.60								
FKH	SN			ESg		1136	43.93								
HWQ	SE			EPg		1136	45.92								

November 17 2005 Hour: 11:54 0.4 Lat: 34.02N Lon: 36.76E Depth: 0 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.3 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	41	307	EPg		1154	6.52	-0.4	46			127	0	36.4	1.0
FKH	SN	41	307	ESg		1154	11.83	0.0							1.0
HWQ	SZ	80	291	EPg		1154	13.70	0.4							1.0
HWQ	SN	80	291	ESg		1154	22.85	0.0							1.0

November 17 2005 Hour: 12:25 14.8 Lat: 35.31N Lon: 36.69E Depth: 14 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.1 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	122	192	EPg		1225	33.79	0.0	61						1.0
FKH	SN	122	192	ESg		1225	47.80	0.0							1.0
HWQ	SZ	133	211	EPg		1225	35.37	0.0							1.0
HWQ	SN	133	211	ESg		1225	50.55	-0.1							1.0
BHL	SN	183	212	ESg		1226	3.34	0.1							1.0

November 17 2005 Hour: 13:51 22.6 Lat: 34.03N Lon: 35.74E Depth: 45 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	SZ	16	211	EPg		1351	30.87	1.0	46						1.0
BHL	SN	16	211	ESg		1351	35.01	-0.2							1.0
HWQ	SZ	34	34	EPg		1351	31.38	0.3							1.0
HWQ	SN	34	34	ESg		1351	36.80	-0.5							1.0
MATL	SZ	71	213	EPg		1351	34.13	-0.6							1.0

November 17 2005 Hour: 16: 8 50.7 Lat: 34.24N Lon: 33.67E Depth: 58 Agency: REL Local
Magnitudes: 3.3MC REL Rms: 0.0 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	SN	187	101	ESg		16 9	36.67	0.0							1.0
HWQ	SZ	210	88	EPg		16 9	19.87	0.0	75						1.0
HWQ	SE	210	88	ESg		16 9	41.47	0.0							1.0
FKH	SZ	252	89	EPg		16 9	24.97	0.0							1.0
FKH	SN	252	89	ESg		16 9	50.29	0.0							1.0

November 17 2005 Hour: 19:42 38.0 Chile-Bolivia M=6.8 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1946	4.07								

November 18 2005 Hour: 11:29 38.2 Lat: 33.65N Lon: 35.74E Depth: 0 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
BHL	SZ	30	345	EPg		1129	43.13	0.2							1.0
BHL	SN	30	345	ESg		1129	46.44	-0.1							1.0
MATL	SZ	42	246	EPg		1129	44.90	0.0							1.0
HWQ	SZ	73	15	EPg		1129	49.75	-0.2	55						1.0
HWQ	SE	73	15	ESg		1129	58.70	0.1							1.0

November 18 2005 Hour: 15:16 30.1

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EPg		1517	7.58								
HWQ	SZ			EPg		1517	15.55								
BHL	BE			ESg		1517	13.13								
HWQ	SE			ESg		1517	24.35								

November 18 2005 Hour: 16:47 13.6 Kuril M=5.1

Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1648	12.95								

November 19 2005 Hour: 11:28 0.7

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	SZ			EPg		1128	30.37								
BHL	SN			ESg		1128	38.91								
HWQ	SE			EPg		1128	41.72								

November 19 2005 Hour: 12:21 30.5 Lat: 34.22N Lon: 36.91E Depth: 0 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
FKH	SZ	47	272	EPg		1221	37.92	-0.2	45						1.0
FKH	SE	47	272	ESg		1221	43.54	-0.2							1.0
HWQ	SZ	89	274	EPg		1221	45.10	0.2							1.0
HWQ	SE	89	274	ESg		1221	55.87	0.3							1.0
BHL	SZ	122	254	EPg		1221	50.20	0.1							1.0

November 19 2005 Hour: 13: 8 12.2 Lat: 34.36N Lon: 36.71E 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
FKH	SZ	32	245	EPg		13 8	16.04	-1.3	51						1.0
FKH	SN	32	245	ESg		13 8	21.09	0.0							1.0
HWQ	SZ	71	263	EPg		13 8	23.76	0.1							1.0
HWQ	SN	71	263	ESg		13 8	32.15	0.0							1.0
BHL	SZ	110	243	EPg		13 8	31.05	1.1							1.0

November 19 2005 Hour: 14:18 3.9 Sumatra M=6.5

Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1420	52.31								

November 19 2005 Hour: 14:47 43.3 Lat: 34.39N Lon: 36.89E 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
FKH	SZ	48	249	EPg		1447	50.69	-0.4	62						1.0
FKH	SE	48	249	ESg		1447	56.06	-0.8							1.0
HWQ	SZ	88	262	EPg		1447	58.11	0.6							1.0
HWQ	SE	88	262	ESg		1448	7.87	-0.1							1.0
BHL	SZ	126	245	EPg		1448	3.48	-0.2							1.0
BHL	SE	126	245	ESg		1448	19.72	0.9							1.0

November 19 2005 Hour: 17:28 0.4 Crete M=4.6

Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EPn		1728	33.61								
FKH	SZ			EPn		1728	37.77								

November 20 2005 Hour: 13: 0 53.5 Alaska M=5.8

Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		13 6	3.39								

November 20 2005 Hour: 21:22 1.0 Dodecanese M=4.0 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EPn		2122	40.13								
BHL	SZ			EPn		2122	32.48								

November 20 2005 Hour: 23:19 13.6 Lat: 33.09N Lon: 35.03E Depth: 0 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 1.7 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MATL	SZ	52	33	EPg		2319	19.08	-3.0							1.0
BHL	SZ	107	33	EPg		2319	31.56	0.6							1.0
BHL	SN	107	33	ESg		2319	43.62	-0.1							1.0
HWQ	SZ	157	33	EPg		2319	41.19	2.3	58						1.0
HWQ	SE	157	33	ESg		2319	57.66	0.1							1.0

November 21 2005 Hour: 15:42 40.7 Kyushu M=6.1 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1548	6.54								
FKH	SZ			EP		1548	3.17								

November 22 2005 Hour: 11: 8 24.8 Jordan-Syria M=3.5 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EPn		1110	39.76								
HWQ	SN			Sn		1111	45.00								
BHL	BN			Sn		1111	58.04								

November 22 2005 Hour: 11:56 1.4 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EPg		1156	37.26								
BHL	SN			ESg		1156	46.91								
HWQ	SN			ESg		1156	49.09								

November 23 2005 Hour: 4: 9 51.5 Lat: 34.71N Lon: 35.84E Depth: 0 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.7 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	49	169	EPg		4 9	58.48	-0.9	64						1.0
HWQ	SE	49	169	ESg		410	4.48	-0.7							1.0
FKH	SZ	74	135	EPg		410	3.91	0.5							1.0
FKH	SN	74	135	ESg		410	12.43	0.3							1.0
BHL	SN	91	191	ESg		410	17.88	0.8							1.0

November 23 2005 Hour: 12:43 0.9 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EPg		1243	33.91								
FKH	SE			ESg		1243	37.39								
HWQ	SZ			EPg		1243	35.92								
HWQ	SN			ESg		1243	40.89								

November 23 2005 Hour: 13:10 41.3 Lat: 34.20N Lon: 36.82E Depth: 15 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
FKH	SZ	39	277	EPg		1310	47.33	-0.6	52						1.0
FKH	SE	39	277	ESg		1310	53.03	0.1							1.0
HWQ	SZ	81	277	EPg		1310	54.79	0.6							1.0
HWQ	SN	81	277	ESg		1311	3.57	-0.1							1.0
BHL	SZ	112	254	EPg		1310	58.76	0.0							1.0

November 23 2005 Hour: 13:26 0.8 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	SZ			EPg		1326	34.02								
HWQ	SZ			EPg		1326	40.27								
BHL	SE			ESg		1326	41.36								
HWQ	SN			ESg		1326	45.48								

November 23 2005 Hour: 15:20 53.1 Lat: 33.33N Lon: 35.43E Depth: 25 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 1.0 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MATL	SZ	19	332	EPg		1520	58.65	0.6	48						1.0
BHL	SZ	67	18	EPg		1521	2.97	-1.2							1.0
BHL	SE	67	18	ESg		1521	11.27	-1.0							1.0
HWQ	SZ	115	24	EPg		1521	11.36	0.2							1.0
HWQ	SE	115	24	ESg		1521	25.91	1.4							1.0

November 24 2005 Hour: 9:13 0.3 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EPg		913	29.71								
FKH	SN			ESg		913	35.35								
HWQ	SE			ESg		913	40.53								

November 24 2005 Hour: 11: 5 55.1 Fiji M=5.8 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		11 6	27.75								

November 24 2005 Hour: 12:19 22.5 Lat: 34.50N Lon: 36.34E Depth: 15 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
FKH	SZ	30	169	EPg		1219	27.92	0.0	51			138	149	26.1	1.0
FKH	SE	30	169	ESg		1219	31.41	-0.5							1.0
HWQ	SZ	44	236	EPg		1219	30.39	0.4							1.0
HWQ	SN	44	236	ESg		1219	35.57	0.1							1.0

November 24 2005 Hour: 12:36 1.1 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EPg		1236	44.59								
HWQ	SZ			EPg		1236	56.48								
FKH	SN			ESg		1236	53.11								
HWQ	SE			ESg		1237	6.02								

November 24 2005 Hour: 15:40 1.2 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EPg		1540	52.92								
FKH	SN			ESg		1541	16.38								
HWQ	SZ			EPg		1540	52.18								
HWQ	SN			ESg		1541	14.81								

November 24 2005 Hour: 21: 2 0.9 Eastern Mediterranean M=4.5 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	SZ			EPn		21 2	14.55								
HWQ	SZ			EPn		21 2	19.56								

November 25 2005 Hour: 9:30 21.7 Crete M=5.0 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EPn		933	26.57								
BHL	BZ			EPn		933	23.88								

November 25 2005 Hour: 9:48 48.6 Fiji M=5.4 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		949	29.41								
BHL	BZ			EP		949	30.68								

November 25 2005 Hour: 13:25 0.5 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EPg		1326	26.83								
FKH	SE			ESg		1326	30.46								
HWQ	SZ			EPg		1326	29.53								
HWQ	SE			ESg		1326	34.81								

November 25 2005 Hour: 13:49 0.4

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	SZ			EPg		1350	7.74								
HWQ	SZ			EPg		1350	8.63								
HWQ	SE			ESg		1350	14.33								
BHL	SN			ESg		1350	12.10								

November 26 2005 Hour: 0:59 27.0 China M=5.5

Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1	0	28.36							
FKH	SZ			EP		1	0	24.21							

November 26 2005 Hour: 4:52 35.3 Crete M=4.2

Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EPn		453	22.32								
BHL	BZ			EPn		453	21.63								

November 26 2005 Hour: 11:0 0.9

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EPg		11	0	46.07							
FKH	SN			ESg		11	0	57.17							
HWQ	SZ			EPg		11	0	51.66							
HWQ	SE			ESg		11	1	6.11							

November 26 2005 Hour: 12:50 47.2 Lat: 34.41N Lon: 36.93E Depth: 0 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
FKH	SZ	52	249	EPg		1250	55.24	-0.4	53						1.0
FKH	SE	52	249	ESg		1251	1.28	-0.5							1.0
HWQ	SZ	91	261	EPg		1251	2.31	0.3							1.0
HWQ	SE	91	261	ESg		1251	12.84	0.0							1.0
BHL	SN	130	245	ESg		1251	24.25	0.6							1.0

November 26 2005 Hour: 15:30 23.1 Lat: 33.52N Lon: 35.09E Depth: 33 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
MATL	SZ	22	98	EPg		1530	29.82	0.5							1.0
BHL	BZ	68	51	EPg		1530	34.06	-0.6	47						1.0
BHL	BE	68	51	ESg		1530	42.66	-0.6							1.0
HWQ	SZ	116	43	EPg		1530	41.33	-0.1							1.0
HWQ	SE	116	43	ESg		1530	55.95	1.0							1.0
FKH	SZ	145	56	EPg		1530	45.50	-0.2							1.0
FKH	SE	145	56	ESg		1531	2.34	0.0							1.0

November 26 2005 Hour: 15:56 56.7 Lat: 38.35N Lon: 39.01E Depth: 8 Agency: REL Regional

Magnitudes: 5.1MC REL

Rms: 1.2 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	513	208	EPn		1558	5.86	0.1							1.0
FKH	SE	513	208	Sn		1558	56.84	0.0							1.0
HWQ	SZ	529	212	EPn		1558	7.64	0.0							1.0
HWQ	SN	529	212	Sn		1558	58.01	-2.2							1.0
BHL	BZ	579	212	EPn		1558	13.54	-0.3	586						1.0
BHL	BN	579	212	Sn		1559	13.06	2.2							1.0
MATL	SZ	634	213	EPn		1558	20.68	0.2							1.0

November 26 2005 Hour: 16:13 51.8 Kamchatka M=5.5

Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1614	54.25								
FKH	SZ			EP		1614	51.70								

November 27 2005 Hour: 6:39 51.0 Crete M=4.3 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EPn		640	12.82								
FKH	SZ			EPn		640	18.04								

November 27 2005 Hour: 10:23 7.7 Iran M=6.1 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EPn		1026	33.96								
HWQ	SZ			EPn		1026	39.16								
BHL	BZ			EPn		1026	40.05								
MATL	SZ			EPn		1026	40.60								

November 27 2005 Hour: 11:0 0.5 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EPg		11	0	57.49							
FKH	SE			ESg		11	1	2.63							
HWQ	SZ			EPg		11	0	59.43							
HWQ	SN			ESg		11	1	6.50							

November 27 2005 Hour: 11:12 16.0 Iran M=5.3 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EPn		1117	23.43								
HWQ	SZ			EPn		1117	30.84								
BHL	BZ			EPn		1117	30.22								
MATL	SZ			EPn		1117	33.41								

**November 27 2005 Hour: 11:50 56.1 Lat: 34.31N Lon: 36.48E Depth: 15 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 2.0 secs**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	11	219	EPg		1150	56.38	-2.9	63			240	159	26.5	1.0
FKH	SN	11	219	ESg		1151	2.27	0.7							1.0
HWQ	SZ	49	265	EPg		1151	4.07	-0.3							1.0
HWQ	SE	49	265	ESg		1151	12.98	2.5							1.0

**November 27 2005 Hour: 13:13 38.3 Lat: 34.44N Lon: 36.82E Depth: 0 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 1.1 secs**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	45	240	EPg		1313	44.26	-1.2	59						1.0
FKH	SE	45	240	ESg		1313	49.72	-1.1							1.0
HWQ	SZ	83	258	EPg		1313	52.25	0.7							1.0
HWQ	SN	83	258	ESg		1314	0.84	-0.6							1.0
BHL	SZ	123	241	EPg		1313	58.70	0.6							1.0
BHL	SE	123	241	ESg		1314	14.50	1.7							1.0

November 27 2005 Hour: 16:29 43.3 Iran M=5.5 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EPn		1634	51.03								
HWQ	SZ			EPn		1634	57.57								
BHL	BZ			EPn		1634	58.56								
MATL	SZ			EPn		1635	1.50								

November 27 2005 Hour: 23:39 52.8 Sumatra M=5.4 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2342	22.67								

November 28 2005 Hour: 4:57 59.7 Turkey M=3.7 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EPn		5	2	46.40							
HWQ	SZ			EPn		5	2	48.26							
BHL	BZ			EPn		5	2	55.00							

November 28 2005 Hour: 6:24 1.5

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	SZ			EPg		625	7.39								
HWQ	SZ			EPg		625	15.01								
BHL	SE			ESg		625	10.38								
HWQ	SE			ESg		625	24.36								

November 28 2005 Hour: 13:39 0.7

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EPg		1339	33.91								
FKH	SE			ESg		1339	37.13								
HWQ	SE			ESg		1339	41.02								

November 28 2005 Hour: 16:54 8.3 Mariana M=6.1

Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1658	39.57								

November 28 2005 Hour: 20:1 23.7 Lat: 34.32N Lon: 36.41E Depth: 17 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
FKH	SZ	9	186	EPg		20	1 26.83	-0.2	44						1.0
FKH	SN	9	186	ESg		20	1 29.58	0.1							1.0
HWQ	SZ	43	264	EPg		20	1 30.99	-0.2							1.0
HWQ	SE	43	264	ESg		20	1 36.75	0.1							1.0
BHL	SZ	84	237	EPg		20	1 37.43	0.4							1.0
BHL	SE	84	237	ESg		20	1 46.74	-0.2							1.0

November 29 2005 Hour: 14:2 1.2

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	SZ			EPg		14	2 24.20								
HWQ	SZ			EPg		14	2 25.56								
BHL	SE			ESg		14	2 28.00								
HWQ	SE			ESg		14	2 30.04								

November 29 2005 Hour: 15:3 13.8 Lat: 34.05N Lon: 36.97E Depth: 39 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
FKH	SZ	56	291	EPg		15	3 23.97	-0.1	60						1.0
FKH	SN	56	291	ESg		15	3 31.69	0.1							1.0
HWQ	SZ	97	285	EPg		15	3 29.18	0.1							1.0
HWQ	SN	97	285	ESg		15	3 40.31	-0.1							1.0
BHL	SN	122	263	ESg		15	3 45.74	0.0							1.0

November 30 2005 Hour: 11:5 55.0 Lat: 34.00N Lon: 36.78E Depth: 14 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.0 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	44	306	EPg		11	6 2.46	0.0	58						1.0
FKH	SE	44	306	ESg		11	6 7.98	0.0							1.0
HWQ	SZ	83	292	EPg		11	6 8.28	0.0							1.0
HWQ	SN	83	292	ESg		11	6 18.08	0.0							1.0
BHL	SN	105	264	ESg		11	6 23.63	0.0							1.0

November 30 2005 Hour: 15:37 22.4 Lat: 33.68N Lon: 34.91E Depth: 21 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
MATL	SZ	44	118	EPg		1537	30.12	0.0							1.0
BHL	SZ	74	70	EPg		1537	34.35	0.0	45						1.0
BHL	SE	74	70	ESg		1537	43.05	-0.1							1.0
HWQ	SZ	117	55	EPg		1537	40.55	-0.1							1.0
HWQ	SN	117	55	ESg		1537	54.27	0.1							1.0

November 30 2005 Hour: 17:2 7.7 Philippine M=6.3 Agency: REL Distant
STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
BHL BZ EP 17 6 20.00

Epicentral Map of Lebanon

NOVEMBER 2005

Magnitudes

- Ml = 2
- Ml = 3
- Ml = 4
- Ml = 5

