

Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

October

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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 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	Scheduled 2003
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.

October 1 2005 Hour: 2:24 2.1 Lat: 33.49N Lon: 36.22E Depth: 15 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.3 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	70	312	IPg		224	13.17	-0.2	36			2	-99	22.4	1.0
BHL	BN	70	312	ISg		224	21.55	-0.2							1.0
HWQ	SZ	92	344	IPg		224	16.71	0.1							1.0
HWQ	SE	92	344	ISg		224	27.65	0.4							1.0

October 2 2005 Hour: 2:39 55.0 Fiji Islands M=5.6 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		241	4.34								
BHL	BZ			EP		241	6.02								

October 2 2005 Hour: 23:28 0.4 Ethiopia M=4.9 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2329	39.84								

October 3 2005 Hour: 4: 5 29.1 Lat: 31.95N Lon: 35.43E Depth: 0 Agency: REL Regional
Magnitudes: 4.0MC REL Rms: 1.7 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MATL	SZ	171	357	EPn		4 5	55.25	-1.2							1.0
BHL	SZ	218	5	EPn		4 6	0.97	-1.4	202						1.0
BHL	SN	218	5	Sn		4 6	27.58	0.7							1.0
HWQ	SZ	263	10	EPn		4 6	6.86	-1.1							1.0
HWQ	SE	263	10	Sn		4 6	41.86	5.2							1.0
PHNC	SZ	363	339	EPn		4 6	18.80	-1.5							1.0
CSS	SZ	387	330	EPn		4 6	22.20	-1.1							1.0
SZAC	SZ	392	323	EPn		4 6	23.80	0.0							1.0
PPCY	SZ	434	319	EPn		4 6	29.10	0.0							1.0
ALFC	SZ	443	324	EPn		4 6	30.00	-0.2							1.0

October 3 2005 Hour: 11:46 0.8 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	SN			ISg		1146	48.23								
HWQ	SZ			IPg		1146	41.05								
HWQ	SN			ISg		1146	52.07								
BHL	SZ			IPg		1146	39.14								

October 3 2005 Hour: 14:38 18.1 Lat: 33.86N Lon: 35.51E Depth: 15 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
BHL	SZ	14	69	IPg		1438	20.67	-0.9	73			243	-5	23.2	1.0
BHL	SE	14	69	ISg		1438	24.40	0.3							1.0
MATL	SZ	44	202	IPg		1438	26.14	0.6							1.0
HWQ	SZ	62	41	IPg		1438	27.31	-0.9							1.0
HWQ	SE	62	41	ISg		1438	36.48	0.9							1.0

October 3 2005 Hour: 22:18 52.8 Nicobar Islands 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		2219	36.32								

October 4 2005 Hour: 14: 6 59.3 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			IPg		14 8	29.87								
HWQ	SE			ISg		14 8	36.75								
BHL	BN			ISg		14 8	33.88								
HWQ	SZ			IPg		14 8	31.80								

October 5 2005 Hour: 8:53 22.8 Sumatra 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 857 5.71

October 5 2005 Hour: 10:24 52.8 Tonga Islands 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 1027 7.77

October 5 2005 Hour: 10:56 1.2 Agency: REL Local
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 HWQ SZ IPg 1056 34.18
 BHL SZ IPg 1056 34.65
 HWQ SN ISg 1056 49.08
 BHL SN ISg 1056 48.95

October 5 2005 Hour: 21:3 21.5 Tonga Islands 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 21 4 19.14

October 6 2005 Hour: 5:43 3.4 Lat: 35.22N Lon: 36.64E Depth: 32 Agency: REL Local
Magnitudes: 3.4MC REL Rms: 0.5 secs
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 FKH SZ 112 191 IPg 543 21.16 0.0 1.0
 FKH SN 112 191 ISg 543 34.34 0.0 1.0
 HWQ SZ 123 211 IPg 543 22.71 0.0 98 1.0
 HWQ SE 123 211 ISg 543 36.69 -0.3 1.0
 BHL BZ 172 212 IPg 543 29.97 0.1 1.0
 BHL BN 172 212 ISg 543 50.50 1.0 1.0
 MATL SZ 227 212 ISg 544 2.71 -0.7 1.0

October 6 2005 Hour: 11:14 36.9 Lat: 33.83N Lon: 35.04E 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
 MATL SZ 46 145 IPg 1114 44.40 0.0 1.0
 BHL BZ 57 81 IPg 1114 45.76 -0.4 1.0
 BHL BE 57 81 ISg 1114 53.17 0.2 1.0
 HWQ SZ 97 59 IPg 1114 52.96 0.3 45 1.0
 HWQ SE 97 59 ISg 1115 4.06 -0.2 1.0

October 6 2005 Hour: 13:38 34.9 Lat: 33.16N Lon: 36.63E Depth: 15 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
 BHL SZ 123 312 IPg 1338 54.18 0.2 69 189 57 6.8 1.0
 BHL SE 123 312 ISg 1339 8.35 0.3 1.0
 HWQ SZ 139 333 IPg 1338 57.12 0.7 1.0
 HWQ SE 139 333 ISg 1339 11.07 -1.2 1.0

October 6 2005 Hour: 21:56 32.5 Lat: 33.96N Lon: 35.60E Depth: 15 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 1.3 secs
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL BZ 8 138 IPg 2156 33.35 -2.0 31 360 42 33.4 1.0
 BHL BN 8 138 ISg 2156 38.52 1.0 1.0
 HWQ SZ 48 42 IPg 2156 40.56 -0.1 1.0
 HWQ SE 48 42 ISg 2156 47.67 1.1 1.0

October 6 2005 Hour: 23:7 49.2 Arabian Sea M=5.0 Agency: REL Distant
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL BZ EP 2310 36.54

October 7 2005 Hour: 14:15 24.0 Lat: 33.53N Lon: 35.71E Depth: 8 Agency: REL Local
Magnitudes: 2.1MC REL Rms: 1.1 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	42	352	IPg		1415	31.16	0.1	17			291	118	20.8	1.0
BHL	BN	42	352	ISg		1415	34.96	-1.2							1.0
HWQ	SZ	86	14	IPg		1415	39.78	1.8							1.0
HWQ	SE	86	14	ISg		1415	47.66	-0.7							1.0

October 8 2005 Hour: 2:29 8.5 Lat: 33.89N Lon: 35.63E Depth: 32 Agency: REL Local
Magnitudes: 2.0MC REL Rms: 0.9 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	3	62	IPg		229	14.68	0.9	15						1.0
BHL	BN	3	62	ISg		229	17.53	-0.1							1.0
HWQ	SZ	52	34	IPg		229	19.02	1.0							1.0
HWQ	SE	52	34	ISg		229	23.97	-1.1							1.0
MATL	SZ	53	212	IPg		229	17.23	-0.8							1.0

October 8 2005 Hour: 3:55 17.8 Pakistan M=7.6 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		356	54.16								
BHL	BZ			EP		357	0.04								

October 8 2005 Hour: 9:45 34.0 Lat: 34.39N Lon: 35.40E Depth: 15 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 1.6 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	52	104	IPg		945	44.40	1.7				61	136	41.6	1.0
HWQ	SE	52	104	ISg		945	50.65	1.5							1.0
BHL	SZ	59	156	IPg		945	42.26	-1.5	42						1.0
BHL	SN	59	156	ISg		945	49.32	-1.6							1.0

October 8 2005 Hour: 9:47 29.7 Lat: 34.11N Lon: 35.30E Depth: 23 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 1.0 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	SZ	40	125	IPg		947	37.38	0.4	34			300	-4	25.4	1.0
BHL	SN	40	125	ISg		947	42.76	0.4							1.0
HWQ	SZ	62	72	IPg		947	41.00	0.9							1.0
HWQ	SN	62	72	ISg		947	46.13	-1.7							1.0

October 8 2005 Hour: 10:46 24.1 Pakistan 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		1052	46.92								

October 8 2005 Hour: 12:12 52.1 Pakistan M=5.3 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1214	46.50								

October 8 2005 Hour: 12:29 56.8 Pakistan M=5.7 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1231	39.48								

October 8 2005 Hour: 12:50 45.4 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		1251	9.45								

October 8 2005 Hour: 21:13 37.5 Pakistan 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		2119	50.83								
FKH	SZ			EP		2119	44.92								

October 8 2005 Hour: 21:51 9.4 Pakistan 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 2151 28.79

October 9 2005 Hour: 7:12 17.6 Pakistan M=5.3 Agency: REL Distant
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL BZ EP 715 37.59

October 9 2005 Hour: 8:27 48.8 Pakistan 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 836 20.44

October 9 2005 Hour: 11:56 1.0 Lat: 34.39N Lon: 35.22E Depth: 15 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.7 secs
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL SZ 67 143 IPg 1156 11.19 -0.7 36 89 125 14.6 1.0
 BHL SN 67 143 ISg 1156 19.21 -0.7 1.0
 HWQ SZ 68 100 IPg 1156 12.69 0.7 1.0
 HWQ SE 68 100 ISg 1156 20.86 0.7 1.0

October 9 2005 Hour: 12: 7 1.0 Agency: REL Local
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 HWQ SN ISg 12 7 56.32
 BHL SZ IPg 12 7 47.38
 HWQ SZ IPg 12 7 45.86
 BHL SE ISg 12 8 0.16

October 9 2005 Hour: 12:43 28.5 Pakistan M=5.0 Agency: REL Distant
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL BZ EP 1244 32.46

October 9 2005 Hour: 13:59 11.3 Tonga Islands M=5.3 Agency: REL Distant
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL BZ EP 1359 48.90

October 9 2005 Hour: 19:26 6.1 Pakistan 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 1926 59.70

October 10 2005 Hour: 1:51 51.6 Lat: 34.80N Lon: 36.97E Depth: 10 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
 HWQ SZ 110 239 IPg 152 9.69 0.2 87 59 1 21.9 1.0
 HWQ SE 110 239 ISg 152 22.51 -0.2 1.0
 BHL BZ 156 231 IPg 152 16.85 0.0 1.0
 BHL BE 156 231 ISg 152 35.81 0.2 1.0
 MATL SZ 210 227 IPg 152 25.30 -0.2 1.0

October 10 2005 Hour: 8: 1 1.4 Agency: REL Local
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 HWQ SZ IPg 8 1 30.70
 HWQ SE ISg 8 1 53.95
 BHL SE ISg 8 2 3.95

October 10 2005 Hour: 11:16 14.6 Philippine 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 1120 48.25

October 10 2005 Hour: 23:59 49.4 Lat: 34.38N Lon: 36.17E Depth: 27 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
HWQ	SZ	23	243	IPg		2359	55.76	0.6	53			63	0	20.0	1.0
HWQ	SN	23	243	ISg		2359	58.97	-0.4							1.0
BHL	SZ	71	223	IPg		24 0	0.47	-0.6							1.0
BHL	SE	71	223	ISg		24 0	10.15	0.4							1.0

October 11 2005 Hour: 3:47 16.0 Andaman India 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		347	44.83								

October 11 2005 Hour: 5:44 28.9 Lat: 35.62N Lon: 27.68E Depth: 0 Agency: REL Regional
Magnitudes: 4.7MC REL Rms: 1.0 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
PPCY	SZ	432	99	EP		545	28.90	0.4							1.0
ALFC	SZ	450	95	EP		545	31.20	0.5							1.0
MAMC	SZ	506	94	EP		545	38.40	1.0							1.0
CSS	SZ	519	96	EP		545	39.20	0.1							1.0
PHNC	SZ	582	95	EP		545	48.00	1.4							1.0
MATL	SZ	741	106	EPn		546	6.02	-0.9							1.0
BHL	SZ	754	102	EPn		546	7.31	-1.4	276						1.0
BHL	SN	754	102	Sn		547	21.81	-0.8							1.0
HWQ	SZ	770	99	EPn		546	10.10	-0.6							1.0
HWQ	SN	770	99	Sn		547	27.54	1.6							1.0

October 11 2005 Hour: 15:12 30.3 Sumatra 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		1515	59.82								

October 11 2005 Hour: 15:15 33.6 Lat: 33.86N Lon: 37.61E Depth: 92 Agency: REL Local
Magnitudes: 3.6MC REL Rms: 0.3 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	161	287	IPg		1515	58.32	0.3	120			57	-48	27.8	1.0
HWQ	SN	161	287	ISg		1516	16.32	0.3							1.0
BHL	SZ	181	272	IPg		1516	0.08	-0.2							1.0
BHL	SE	181	272	ISg		1516	19.50	-0.5							1.0

October 11 2005 Hour: 15:28 2.4 Lat: 34.16N Lon: 35.41E Depth: 15 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.7 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	SZ	36	141	IPg		1528	8.94	0.2				319	-2	12.0	1.0
BHL	SN	36	141	ISg		1528	13.71	0.2							1.0
HWQ	SZ	51	75	IPg		1528	11.65	0.7	40						1.0
HWQ	SE	51	75	ISg		1528	16.06	-1.2							1.0

October 11 2005 Hour: 23:25 0.4 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SN			ISg		2325	27.34								
BHL	SZ			IPg		2325	24.98								
HWQ	SZ			IPg		2325	21.48								

October 12 2005 Hour: 8:35 42.6 Lat: 33.25N Lon: 35.25E Depth: 0 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.7 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MATL	SZ	27	15	IPg		835	47.13	0.2	34						1.0
BHL	SZ	82	27	IPg		835	54.51	-1.2							1.0
BHL	SN	82	27	ISg		836	5.55	0.1							1.0
HWQ	SZ	131	29	IPg		836	4.70	1.0							1.0
HWQ	SN	131	29	ISg		836	19.18	-0.1							1.0

October 12 2005 Hour: 20:28 28.6 Pakistan 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 2029 56.37

October 13 2005 Hour: 13:46 24.7 Lat: 34.06N Lon: 35.84E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 1.8 secs
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL SZ 24 225 IPg 1346 26.65 -2.0 46 1 28.4 1.0
 BHL SE 24 225 ISg 1346 30.59 -0.9 1.0
 HWQ SZ 26 22 IPg 1346 28.16 -0.7 55 1.0
 HWQ SE 26 22 ISg 1346 32.27 0.3 1.0
 MATL SZ 79 217 IPg 1346 40.80 3.4 1.0

October 14 2005 Hour: 3:54 58.6 Fiji Islands 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 356 35.14

October 14 2005 Hour: 16:17 59.8 Lat: 34.54N Lon: 36.44E Depth: 15 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
 FKH SZ 34 186 IPg 1618 5.28 -0.5 65 125 119 25.7 1.0
 FKH SE 34 186 ISg 1618 10.61 0.4 1.0
 HWQ SZ 54 238 IPg 1618 9.19 0.5 1.0
 HWQ SN 54 238 ISg 1618 14.88 -0.4 1.0

October 15 2005 Hour: 10:15 19.5 Kuril Islands M=5.0 Agency: REL Distant
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL BZ EP 1018 35.24

October 15 2005 Hour: 13:15 37.1 Lat: 33.32N Lon: 35.87E Depth: 15 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
 BHL BZ 68 343 IPg 1315 48.67 0.6 36 293 130 27.8 1.0
 BHL BN 68 343 ISg 1315 55.73 -0.5 1.0
 HWQ SZ 106 4 IPg 1315 54.78 1.0 1.0
 HWQ SE 106 4 ISg 1316 5.00 -1.1 1.0

October 15 2005 Hour: 15:55 35.1 Taiwan M=6.6 Agency: REL Distant
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL BZ EP 16 2 27.10
 FKH SZ EP 16 2 22.88

October 16 2005 Hour: 8:51 32.3 Lat: 33.77N Lon: 35.72E Depth: 13 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
 BHL SZ 16 338 IPg 851 34.21 -1.5 62 152 -5 21.1 1.0
 BHL SN 16 338 ISg 851 38.64 0.4 1.0
 MATL SZ 48 229 IPg 851 40.99 0.7 1.0
 HWQ SZ 60 21 IPg 851 41.24 -1.0 1.0
 HWQ SE 60 21 ISg 851 50.90 1.2 1.0
 FKH SZ 82 51 IPg 851 44.51 -1.2 1.0
 FKH SE 82 51 ISg 851 57.01 1.4 1.0

October 16 2005 Hour: 11:2 60.0 Lat: 34.46N Lon: 36.85E Depth: 0 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 1.4 secs
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 FKH SZ 48 239 IPg 11 3 6.30 -1.4 65 1.0
 FKH SE 48 239 ISg 11 3 11.78 -1.7 1.0
 HWQ SZ 85 256 IPg 11 3 14.33 0.6 1.0
 HWQ SN 85 256 ISg 11 3 23.20 -0.7 1.0
 BHL SZ 126 241 IPg 11 3 21.22 0.9 1.0
 BHL SN 126 241 ISg 11 3 37.76 2.4 1.0

October 17 2005 Hour: 2:18 50.6 Lat: 34.79N Lon: 32.96E Depth: 28 Agency: REL Regional
Magnitudes: 3.8MC REL Rms: 0.6 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
CSS	SZ	39	61	IPg		218	57.70	-0.3							1.0
MAMC	SZ	48	29	IPg		218	58.80	-0.4							1.0
ALFC	SZ	52	321	IPg		218	59.30	-0.4							1.0
PPCY	SZ	57	280	IPg		219	00.70	0.3							1.0
AKMC	SZ	63	294	IPg		219	01.30	0.1							1.0
PHNC	SZ	101	76	IPg		219	07.40	0.9							1.0
MATL	SZ	262	123	EPn		219	26.65	0.1							1.0
BHL	BZ	267	111	EPn		219	27.08	-0.2	129						1.0
BHL	BN	267	111	Sn		219	52.96	-1.4							1.0
HWQ	SZ	280	101	EPn		219	29.19	0.3							1.0
HWQ	SE	280	101	Sn		219	58.45	1.2							1.0

October 17 2005 Hour: 5:45 22.1 Lat: 37.56N Lon: 26.61E Depth: 0 Agency: REL Regional
Magnitudes: 5.8MC REL Rms: 1.3 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
AKMC	SZ	585	117	EPn		546	41.30	0.4							1.0
PPCY	SZ	594	118	EPn		546	43.20	1.2							1.0
ALFC	SZ	600	115	EPn		546	43.00	0.4							1.0
CSS	SZ	669	113	EPn		546	51.50	0.3							1.0
PHNC	SZ	724	111	EPn		546	59.30	1.2							1.0
MATL	SZ	910	117	EPn		547	21.06	-0.1							1.0
BHL	BZ	912	114	EPn		547	19.55	-2.0	1017						1.0
BHL	BE	912	114	Sn		548	47.03	-2.9							1.0
HWQ	SZ	917	111	EPn		547	21.17	-1.0							1.0
HWQ	SN	917	111	Sn		548	54.02	3.0							1.0

October 17 2005 Hour: 9:41 1.3 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			IPg		941	27.80								
BHL	SE			ISg		941	55.17								
HWQ	SN			ISg		941	41.71								
BHL	SZ			IPg		941	36.59								

October 17 2005 Hour: 9:46 55.8 Aegean Sea M=5.9 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EPn		948	58.97								
HWQ	SN			Sn		950	30.52								
BHL	BZ			EPn		948	58.48								
BHL	BE			Sn		950	25.17								
MATL	SZ			EPn		948	57.32								

October 17 2005 Hour: 13:48 42.9 Lat: 34.20N Lon: 35.43E Depth: 7 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
BHL	SZ	39	148	IPg		1348	49.21	-0.1	42			328	0	16.2	1.0
BHL	SE	39	148	ISg		1348	54.06	0.0							1.0
HWQ	SZ	48	80	IPg		1348	50.84	0.1							1.0
HWQ	SE	48	80	ISg		1348	56.53	0.0							1.0

October 18 2005 Hour: 7:16 58.7 Lat: 39.44N Lon: 39.33E Depth: 0 Agency: REL Regional
Magnitudes: 4.7MC REL Rms: 3.1 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	634	205	EPn		718	22.50	-1.1							1.0
FKH	SN	634	205	Sn		719	22.17	-4.3							1.0
HWQ	SZ	647	209	EPn		718	25.36	0.1							1.0
HWQ	SN	647	209	Sn		719	32.73	3.4							1.0
BHL	BZ	697	209	EPn		718	32.30	0.9	265						1.0
BHL	BE	697	209	Sn		719	42.86	2.9							1.0
MATL	SZ	751	210	EPn		718	42.60	4.5							1.0

October 18 2005 Hour: 11:16 49.1 Lat: 34.46N Lon: 36.93E Depth: 0 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.5 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	55	243	IPg		1116	57.75	-0.2	71			51	-11	8.8	1.0
FKH	SE	55	243	ISg		1117	3.90	-0.7							1.0
HWQ	SZ	93	258	IPg		1117	4.87	0.7							1.0
HWQ	SE	93	258	ISg		1117	15.41	0.2							1.0

October 18 2005 Hour: 12:46 59.0 Lat: 34.79N Lon: 36.23E Depth: 15 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
HWQ	SZ	62	205	IPg		1247	9.47	0.3							1.0
HWQ	SE	62	205	ISg		1247	16.94	0.2							1.0
FKH	SZ	63	166	IPg		1247	9.09	-0.2	44			240	-99	39.2	1.0
FKH	SE	63	166	ISg		1247	16.64	-0.3							1.0

October 18 2005 Hour: 15:25 57.3 Lat: 35.86N Lon: 20.12E Depth: 15 Agency: REL Regional
Magnitudes: 6.6MC REL Rms: 4.4 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
AKMC	SZ	1111	91	EP		1528	15.80	-0.4							1.0
PPCY	SZ	1115	92	EP		1528	16.90	0.3							0.9
ALFC	SZ	1134	90	EP		1528	17.90	-0.9							0.9
ALFC	SZ	1134	90	ES		1530	00.10	-3.4							0.9
SZAC	SZ	1166	92	EP		1528	22.40	-0.2							0.9
SZAC	SZ	1166	92	ES		1530	09.00	-1.1							0.9
MAMC	SZ	1189	90	EP		1528	23.90	-1.4							0.9
CSS	SZ	1203	91	EP		1528	26.50	-0.4							0.9
CSS	SZ	1203	91	ES		1530	15.90	-1.7							0.9
PHNC	SZ	1265	90	EP		1528	34.20	-0.1							0.9
PHNC	SZ	1265	90	ES		1530	32.10	1.7							0.9
MATL	SZ	1417	96	EP		1528	51.57	-0.5							0.8
BHL	BZ	1435	94	EP		1528	56.08	1.8							0.8
BHL	BE	1435	94	ES		1531	22.29	17.1							0.8
HWQ	SZ	1452	92	EP		1528	57.23	0.9							0.8
HWQ	SE	1452	92	ES		1531	10.38	1.6							0.8
FKH	SZ	1494	92	EP		1529	1.27	0.0							0.8
FKH	SE	1494	92	ES		1531	20.08	2.7							0.8

October 19 2005 Hour: 2:37 14.8 Pakistan 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		239	46.86								

October 19 2005 Hour: 3:21 3.6 Pakistan 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		322	39.43								

October 19 2005 Hour: 11:51 57.6 Honshu 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		1156	56.13								

October 19 2005 Hour: 17:11 19.8 Lat: 34.73N Lon: 33.21E Depth: 18 Agency: REL Regional
Magnitudes: 3.4MC REL Rms: 1.2 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
CSS	SZ	28	23	EP		1711	23.8	-1.3							1.0
CSS	SZ	28	23	ES		1711	27.5	-1.6							1.0
SZAC	SZ	30	276	EP		1711	24.9	-0.5							1.0
SZAC	SZ	30	276	ES		1711	29.5	-0.1							1.0
MAMC	SZ	49	1	EP		1711	27.2	-0.8							1.0
ALFC	SZ	73	311	EP		1711	31.6	0.0							1.0
ALFC	SZ	73	311	ES		1711	40.6	0.3							1.0
PPCY	SZ	81	283	EP		1711	33.2	0.5							1.0
PHNC	SZ	81	68	EP		1711	33.9	1.2							1.0
PHNC	SZ	81	68	ES		1711	44.8	2.6							1.0

AKMC	SZ	87	293	EP		1711	34.4	0.8									1.0
BHL	BZ	243	111	EPn		1711	54.29	0.0									1.0
BHL	BN	243	111	Sn		1712	17.45	-2.4									1.0
HWQ	SZ	256	101	EPn		1711	57.58	1.6	79								1.0
HWQ	SE	256	101	Sn		1712	22.30	-0.4									1.0

October 20 2005 Hour: 19:147.4 Lat: 36.33N Lon: 36.45E Depth: 0 Agency: REL Regional
Magnitudes: 3.6MC REL Rms: 0.7 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	232	192	EPn		19	2	22.07	-0.3						1.0
FKH	SN	232	181	Sn		19	2	48.43	0.2						1.0
HWQ	SE	232	192	Sn		19	2	47.16	-1.1						1.0
FKH	SZ	232	181	EPn		19	2	22.65	0.3	107					1.0
BHL	SN	278	195	Sn		19	2	59.15	0.9						1.0

October 20 2005 Hour: 21:40 3.0 Lat: 37.78N Lon: 26.39E Depth: 0 Agency: REL Regional
Magnitudes: 6.1MC REL Rms: 1.2 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
AKMC	SZ	614	118	EP		2141	25.80	1.2							1.0
PPCY	SZ	624	119	EP		2141	27.00	1.3							1.0
ALFC	SZ	628	116	EP		2141	26.90	0.6							1.0
SZAC	SZ	673	118	EP		2141	32.90	1.1							1.0
MAMC	SZ	677	113	EP		2141	32.30	0.1							1.0
CSS	SZ	697	115	EP		2141	35.30	0.7							1.0
PHNC	SZ	751	112	EP		2141	43.40	2.4							1.0
MATL	SZ	939	118	EPn		2142	3.15	-2.5							1.0
BHL	BZ	940	114	EPn		2142	3.61	-2.3	1479						1.0
BHL	BE	940	114	Sn		2143	38.08	1.2							1.0
HWQ	SZ	944	111	EPn		2142	6.28	-0.1							1.0
HWQ	SE	944	111	Sn		2143	35.43	-2.3							1.0
FKH	SZ	984	111	EPn		2142	10.35	-1.0							1.0
FKH	SN	984	111	Sn		2143	47.83	1.5							1.0

October 20 2005 Hour: 23:30 50.8 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		2335	11.34								
HWQ	SZ			EPn		2335	15.80								
BHL	BZ			EPn		2335	19.23								

October 21 2005 Hour: 6:57 0.7 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	SZ			IPg		657	28.05								
HWQ	SE			ISg		657	35.48								
BHL	SN			ISg		657	34.29								
HWQ	SZ			IPg		657	29.02								

October 21 2005 Hour: 9:42 53.1 Lat: 34.15N Lon: 35.67E Depth: 27 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
BHL	BZ	27	183	IPg		942	59.24	0.0							1.0
BHL	BE	27	183	ISg		943	3.68	0.0							1.0
HWQ	SZ	30	61	IPg		942	59.43	-0.1	41						1.0
HWQ	SN	30	61	ISg		943	4.28	0.1							1.0
FKH	SZ	68	82	IPg		943	4.46	-0.1							1.0
FKH	SE	68	82	ISg		943	13.01	0.0							1.0
MATL	SZ	80	203	IPg		943	6.06	0.1							1.0

October 21 2005 Hour: 10:6 1.1 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			IPg		10	6	40.08							
BHL	SE			ISg		10	6	42.52							
HWQ	SN			ISg		10	6	45.51							
BHL	SZ			IPg		10	6	37.60							

October 22 2005 Hour: 9:42 26.3 Lat: 34.38N Lon: 36.77E Depth: 0 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
FKH	SZ	37	245	IPg		942	31.45	-0.9	61						1.0
FKH	SN	37	245	ISg		942	36.94	0.2							1.0
HWQ	SZ	76	262	IPg		942	39.03	0.4							1.0
HWQ	SN	76	262	ISg		942	47.57	-0.2							1.0
BHL	SZ	115	243	IPg		942	45.38	0.5							1.0

October 22 2005 Hour: 9:43 36.2 Lat: 34.06N Lon: 35.70E Depth: 25 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
BHL	BZ	18	193	IPg		943	40.96	-0.2	43						1.0
BHL	BE	18	193	ISg		943	44.92	0.1							1.0
HWQ	SZ	33	44	IPg		943	42.51	-0.3							1.0
HWQ	SE	33	44	ISg		943	47.84	0.2							1.0
FKH	SZ	68	73	IPg		943	47.88	0.5							1.0
FKH	SN	68	73	ISg		943	55.47	-0.3							1.0

October 22 2005 Hour: 13:23 46.2 Honshu 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		1324	56.30								

October 23 2005 Hour: 5: 9 1.7 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	SN			ISg		510	20.25								
FKH	SZ			IPg		510	14.38								
FKH	SN			ISg		510	20.84								

October 23 2005 Hour: 10:17 53.7 Sea of Japan M=5.9 Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1019	24.17								
FKH	SZ			EP		1019	20.83								

October 23 2005 Hour: 15: 4 9.4 Pakistan 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		1510	38.44								

October 23 2005 Hour: 18:10 22.1 Lat: 33.72N Lon: 35.71E 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
BHL	BZ	21	345	IPg		1810	24.75	-0.7							1.0
BHL	BN	21	345	ISg		1810	27.93	0.0							1.0
MATL	SZ	44	234	IPg		1810	29.70	0.5							1.0
HWQ	SZ	65	19	IPg		1810	32.73	0.1	55						1.0
HWQ	SN	65	19	ISg		1810	40.92	0.5							1.0
FKH	SZ	85	48	IPg		1810	34.91	-1.0							1.0
FKH	SE	85	48	ISg		1810	46.50	0.5							1.0

October 24 2005 Hour: 11:38 57.9 Lat: 34.43N Lon: 36.91E Depth: 0 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.9 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	52	245	IPg		1139	5.72	-0.5	65						1.0
FKH	SE	52	245	ISg		1139	11.06	-1.3							1.0
HWQ	SZ	90	260	IPg		1139	12.92	0.5							1.0
HWQ	SE	90	260	ISg		1139	23.13	-0.1							1.0
BHL	SN	130	244	ISg		1139	35.67	1.4							1.0

October 24 2005 Hour: 13:9 7.4 Lat: 34.42N Lon: 36.79E 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
FKH	SZ	42	240	IPg		13	9	13.34	-0.7	73					1.0
FKH	SE	42	240	ISg		13	9	18.45	-0.5						1.0
HWQ	SZ	79	258	IPg		13	9	20.88	0.7						1.0
HWQ	SN	79	258	ISg		13	9	29.13	-0.5						1.0
BHL	SN	120	242	ISg		13	9	41.98	1.0						1.0

October 24 2005 Hour: 23:9 57.3 Lat: 35.29N Lon: 37.80E Depth: 15 Agency: REL Local
Magnitudes: 3.5MC REL Rms: 0.5 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	174	228	IPg		2310	23.55	-0.3	96						1.0
FKH	SN	174	228	ISg		2310	43.07	-0.4							1.0
HWQ	SZ	204	237	IPg		2310	27.82	-0.4							1.0
HWQ	SN	204	237	ISg		2310	50.77	-0.4							1.0
BHL	SZ	250	232	IPg		2310	35.80	0.7							1.0
BHL	SE	250	232	ISg		2311	3.78	0.8							1.0

October 25 2005 Hour: 5:33 57.8 Tonga Islands 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		534	57.25								

October 25 2005 Hour: 9:46 11.7 Lat: 34.83N Lon: 35.35E 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
HWQ	SZ	82	138	IPg		946	26.40	1.6	57			24	66	21.6	1.0
HWQ	SN	82	138	ISg		946	33.58	-0.9							1.0
BHL	SZ	106	165	IPg		946	30.45	2.1							1.0
BHL	SN	106	165	ISg		946	37.29	-3.4							1.0
FKH	SZ	117	124	IPg		946	31.78	1.9							1.0
FKH	SN	117	124	ISg		946	42.16	-1.2							1.0

October 25 2005 Hour: 11:0 20.8 Lat: 34.47N Lon: 36.88E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 1.4 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	51	240	IPg		11	0	28.35	-0.7	48					1.0
FKH	SN	51	240	ISg		11	0	33.38	-1.8						1.0
HWQ	SZ	89	257	IPg		11	0	35.86	0.7						1.0
HWQ	SE	89	257	ISg		11	0	45.12	-0.6						1.0
BHL	SE	129	242	ISg		11	0	59.51	2.4						1.0

October 25 2005 Hour: 14:0 35.0 Lat: 33.64N Lon: 35.17E Depth: 14 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
MATL	SZ	23	138	IPg		14	0	39.13	-0.1						1.0
BHL	SZ	54	57	IPg		14	0	43.78	-0.1	56					1.0
BHL	SE	54	57	ISg		14	0	50.83	0.3						1.0
HWQ	SZ	101	45	IPg		14	0	51.26	0.4						1.0
HWQ	SN	101	45	ISg		14	1	2.02	-0.5						1.0

October 26 2005 Hour: 9:48 40.3 Lat: 33.86N Lon: 36.78E Depth: 0 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 1.0 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	54	320	IPg		948	47.76	-1.3	63						1.0
FKH	SN	54	320	ISg		948	55.49	-0.1							1.0
HWQ	SZ	90	302	IPg		948	56.43	1.6							1.0
HWQ	SE	90	302	ISg		949	5.93	0.4							1.0
BHL	SN	104	273	ISg		949	8.93	-0.6							1.0

October 26 2005 Hour: 10:58 11.7 Lat: 33.96N Lon: 36.27E 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
FKH	SZ	33	21	IPg		1058	17.21	0.2	38						1.0
FKH	SE	33	21	ISg		1058	20.45	-0.6							1.0
HWQ	SZ	47	320	IPg		1058	20.13	0.9							1.0
HWQ	SN	47	320	ISg		1058	24.76	0.0							1.0
BHL	SN	57	264	ISg		1058	27.28	-0.5							1.0

October 26 2005 Hour: 11:12 29.3 Lat: 33.87N Lon: 37.16E 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	81	300	IPg		1112	41.85	-0.3	89						1.0
FKH	SN	81	300	ISg		1112	51.89	0.2							1.0
HWQ	SZ	121	292	IPg		1112	48.15	0.1							1.0
HWQ	SE	121	292	ISg		1113	1.91	0.0							1.0
BHL	SZ	139	272	IPg		1112	50.98	0.2							1.0
BHL	SN	139	272	ISg		1113	6.55	-0.1							1.0

October 26 2005 Hour: 11:17 26.1 Lat: 33.83N Lon: 37.15E Depth: 15 Agency: REL Local
Magnitudes: 3.3MC REL Rms: 0.3 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	122	294	IPg		1117	45.12	0.1	79			85	-27	19.4	1.0
HWQ	SE	122	294	ISg		1117	59.47	0.5							1.0
BHL	SZ	139	274	IPg		1117	47.16	-0.4							1.0
BHL	SE	139	274	ISg		1118	3.21	-0.2							1.0

October 26 2005 Hour: 13:44 28.8 Lat: 33.94N Lon: 35.97E 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
BHL	SZ	30	262	IPg		1344	33.10	-0.5	49			82	0	24.3	1.0
BHL	SN	30	262	ISg		1344	37.51	0.3							1.0
HWQ	SZ	37	356	IPg		1344	35.43	0.6							1.0
HWQ	SE	37	356	ISg		1344	38.96	-0.4							1.0

October 27 2005 Hour: 6:54 1.0 Turkey 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		654	47.38								
BHL	SZ			EPn		654	52.39								

October 27 2005 Hour: 8:41 1.6 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	SZ			IPg		841	42.54								
HWQ	SZ			IPg		841	43.94								
HWQ	SN			ISg		841	48.91								
BHL	SE			ISg		841	47.05								

October 27 2005 Hour: 9:25 53.3 Lat: 33.79N Lon: 35.59E Depth: 15 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.9 secs

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	SZ	14	27	IPg		925	55.96	-0.8	64			207	0	26.4	1.0
BHL	SE	14	27	ISg		925	59.58	0.4							1.0
MATL	SZ	41	215	IPg		926	1.18	0.8							1.0
HWQ	SZ	63	32	IPg		926	2.63	-1.0							1.0
HWQ	SE	63	32	ISg		926	12.37	1.1							1.0
FKH	SZ	90	57	IPg		926	6.35	-1.2							1.0
FKH	SE	90	57	ISg		926	18.78	0.7							1.0

October 27 2005 Hour: 10:17 1.1 Agency: REL Local
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 FKH SZ IPg 1018 4.62
 HWQ SZ IPg 1018 6.90
 FKH SN ISg 1018 8.24
 HWQ SE ISg 1018 13.67

October 27 2005 Hour: 11:41 33.3 Lat: 34.45N Lon: 36.86E 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 48 241 IPg 1141 40.06 -1.0 56 1.0
 FKH SN 48 241 ISg 1141 45.39 -1.5 1.0
 HWQ SZ 86 257 IPg 1141 48.23 1.0 1.0
 HWQ SE 86 257 ISg 1141 56.70 -0.8 1.0
 BHL SN 127 242 ISg 1142 11.02 2.2 1.0

October 28 2005 Hour: 12:41 12.8 Lat: 33.88N Lon: 36.95E Depth: 14 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.2 secs
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 FKH SZ 65 308 IPg 1241 23.58 0.2 51 1.0
 FKH SN 65 308 ISg 1241 30.99 -0.1 1.0
 HWQ SZ 103 296 IPg 1241 28.75 -0.2 1.0
 HWQ SE 103 296 ISg 1241 41.09 0.1 1.0
 BHL SN 120 272 ISg 1241 45.31 0.0 1.0

October 28 2005 Hour: 21:40 2.3 Pakistan M=5.3 Agency: REL Distant
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL BZ EP 2140 33.81

October 29 2005 Hour: 4:15 13.8 Indian Ridge 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 419 26.72

October 30 2005 Hour: 10: 2 40.4 Lat: 33.25N Lon: 35.16E 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
 MATL SZ 31 31 IPg 10 2 45.66 0.3 56 1.0
 BHL SZ 86 32 IPg 10 2 53.22 -1.0 1.0
 BHL SE 86 32 ISg 10 3 3.64 -0.8 1.0
 HWQ SZ 135 32 IPg 10 3 2.92 0.7 1.0
 HWQ SE 135 32 ISg 10 3 19.20 0.8 1.0

October 30 2005 Hour: 11:58 0.1 Agency: REL Local
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL SZ IPg 1158 12.55
 HWQ SZ IPg 1158 14.54
 BHL SN ISg 1158 23.75
 HWQ SN ISg 1158 25.71

October 30 2005 Hour: 19:40 33.0 Lat: 35.23N Lon: 38.72E Depth: 15 Agency: REL Regional
Magnitudes: 3.6MC REL Rms: 1.3 secs
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 FKH SZ 239 243 EPn 1941 6.52 -0.8 112 1.0
 FKH SN 239 243 Sn 1941 30.74 -2.1 1.0
 HWQ SZ 275 248 EPn 1941 11.69 -0.1 1.0
 HWQ SE 275 248 Sn 1941 40.58 0.0 1.0
 BHL SZ 318 243 EPn 1941 18.04 1.0 1.0
 BHL SE 318 243 Sn 1941 51.69 2.0 1.0

October 31 2005 Hour: 5:26 5.7 Aegean Sea 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		528	45.21								
BHL	BZ			EPn		528	37.73								

October 31 2005 Hour: 10: 9 59.0 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			IPg		1010	12.92								
HWQ	SE			ISg		1010	31.44								
FKH	SN			ISg		1010	24.64								

October 31 2005 Hour: 10:29 14.5 Lat: 33.79N Lon: 37.17E Depth: 29 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	86	305	IPg		1029	28.34	-0.2	93						1.0
FKH	SN	86	305	ISg		1029	38.98	0.1							1.0
HWQ	SZ	125	296	IPg		1029	34.21	0.1							1.0
HWQ	SE	125	296	ISg		1029	48.55	-0.1							1.0
BHL	SZ	141	276	IPg		1029	36.43	0.1							1.0
BHL	SE	141	276	ISg		1029	52.48	0.0							1.0

October 31 2005 Hour: 17:42 48.5 Iran-Irak M=4.1 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EPn		1744	58.17								
HWQ	SZ			EPn		1744	53.64								

Epicentral Map of Lebanon

OCTOBER 2005

Magnitudes

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

