

Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

October

2012

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 V_p/V_s 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	3414.69N	3624.61E	1152	FAKEHEH	Opened Dec 2004
RCY	3329.79N	3550.14E	1370	RACHAYA	Opened Jun 2006
DWR	3323.13N	3524.08E	420	DWEIR	Scheduled 2003
BEYL	3352.30N	3529.59E	49	BEIRUT	Opened Jul 2006
NAQL	3307.02N	3508.46E	83	NAQOURA	Opened Jul 2008
DQRL	3342.34N	3534.21E	963	DEIR QAMAR	Opened Mar 2010
QRWL	3332.86N	3540.93E	875	QARAOUN	Opened Oct 2011
SHBL	3320.90N	3544.63E	1422	CHEBAA	Opened Oct 2011

REGIONAL AND DISTANT EARTHQUAKES

Because regional events and teleseisms are not localized, but simply identified, EMSC determination data are given along with phase arrivals (in general first arrival) at the stations of our network.

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: REL throughout the bulletin, aka. REsearch Lebanon

MAGNITUDES: Up to 3 different magnitudes can be given followed by type and reporting agency, e.g. 3.1 MC REL - coda magnitude calculated according to above mentioned formula.

EMSC: Euro-Mediterranean Seismological Centre.

OT: Origin Time

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 ($0.5 * (\text{peak to peak})$), (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 2012 Hour: 22:21 46.0 Agency: REL Distant
EMSC OT=22:21:46.0 39.90N 143.10E 10Km M=6.1 COAST OF HONSHU
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL BZ EP 2233 58.86
 SHBL BZ EP 2234 0.18

October 3 2012 Hour: 15:43 38.6 Lat: 33.80N Lon: 35.78E Depth: 19 Agency: REL Local
 Magnitudes: 2.8MC REL Rms: 0.0 secs
BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	314	EP		1543	42.61-0.03		46						1.0
DQRL	SZ	22	241	EP		1543	43.26-0.03								1.0
DQRL	SN	22	241	ES		1543	46.81 0.03								1.0
RCY	SZ	35	171	EP		1543	44.89 0.00								1.0
RCY	SN	35	171	ES		1543	49.56-0.00								1.0
HWQ	SZ	55	16	EP		1543	47.75 0.02								1.0

October 3 2012 Hour: 15:58 3.7 Lat: 33.35N Lon: 35.59E Depth: 19 Agency: REL Local
 Magnitudes: 2.5MC REL Rms: 0.0 secs
SOUTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	14	89	EP		1558	7.75 0.01								1.0
SHBL	BN	14	89	ES		1558	10.69-0.01								1.0
RCY	SZ	28	54	EP		1558	9.27-0.00	30							1.0
RCY	SN	28	54	ES		1558	13.37 0.01								1.0
DQRL	SZ	40	358	EP		1558	10.77 0.01								1.0
BHL	BZ	62	6	EP		1558	13.80-0.14								0.2

October 4 2012 Hour: 3:29 9.0 Agency: REL Regional
EMSC OT=03:29:09.0 36.31N 30.57E 20Km M=3.5 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ			EP		330	25.43								

October 4 2012 Hour: 12: 6 18.8 Lat: 33.78N Lon: 35.78E Depth: 0 Agency: REL Local
 Magnitudes: 2.8MC REL Rms: 0.0 secs
BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	320	EP		12 6	21.58-0.02		44						1.0
DQRL	SZ	21	246	EP		12 6	22.16 0.01								1.0
DQRL	SE	21	246	ES		12 6	24.64-0.00								1.0
RCY	SZ	32	170	EP		12 6	24.01 0.01								1.0
RCY	SN	32	170	ES		12 6	27.85-0.01								1.0
HWQ	SZ	57	16	EP		12 6	27.99 0.01								1.0

October 4 2012 Hour: 15: 7 50.2 Lat: 33.79N Lon: 35.79E Depth: 8 Agency: REL Local
 Magnitudes: 2.7MC REL Rms: 0.0 secs
BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	315	EP		15 7	53.44 0.01		42						1.0
DQRL	SZ	22	245	EP		15 7	54.13 0.02								1.0
DQRL	SN	22	245	ES		15 7	56.98-0.02								1.0
RCY	SZ	33	173	EP		15 7	55.70-0.02								1.0
RCY	SE	33	173	ES		15 7	59.82 0.01								1.0
HWQ	SZ	56	15	EP		15 7	59.35-0.01								1.0

October 4 2012 Hour: 21: 7 12.7 Lat: 33.71N Lon: 35.83E Depth: 6 Agency: REL Local
 Magnitudes: 2.6MC REL Rms: 0.0 secs
CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	24	268	EP		21 7	16.71-0.05								1.0
DQRL	SN	24	268	ES		21 7	19.72-0.00								1.0
RCY	SZ	24	178	EP		21 7	16.82-0.02	35							1.0
RCY	SN	24	178	ES		21 7	19.88 0.01								1.0

BHL	BZ	26	323	EP		21	7	17.26	0.06								1.0
SHBL	BZ	41	191	EP		21	7	19.57	0.06								1.0
SHBL	BN	41	191	ES		21	7	24.49	-0.03								1.0
HWQ	SZ	64	10	EP		21	7	23.06	-0.04								1.0

October 5 2012 Hour: 6:32 0.0

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		633	11.58								
RCY	SZ			EP		633	13.21								

October 5 2012 Hour: 10:49 30.0

Lat: 33.78N Lon: 35.78E Depth: 0 Agency: REL Local

Magnitudes: 2.7MC REL

Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	321	EP		1049	32.80	-0.08	39						1.0
BHL	BN	18	321	ES		1049	35.05	0.02							1.0
DQRL	SZ	21	247	EP		1049	33.38	0.03							1.0
RCY	SZ	32	170	EP		1049	35.16	0.05							1.0
RCY	SN	32	170	ES		1049	38.87	-0.04							1.0
HWQ	SZ	58	16	EP		1049	39.27	0.02							1.0

October 5 2012 Hour: 15:37 45.5

Lat: 33.31N Lon: 35.38E Depth: 0 Agency: REL Local

Magnitudes: 2.7MC REL

Rms: 0.1 secs

SOUTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	34	84	EP		1537	50.81	-0.12							1.0
SHBL	BE	34	84	ES		1537	54.90	-0.05							1.0
RCY	SZ	47	64	EP		1537	53.09	0.08	38						1.0
RCY	SN	47	64	ES		1537	58.66	0.10							1.0
DQRL	SZ	47	22	EP		1537	53.00	-0.02							1.0
DQRL	SN	47	22	ES		1537	58.49	-0.10							1.0
BHL	BZ	70	21	EP		1537	56.86	0.07							1.0
HWQ	SZ	119	26	EP		1538	4.70	0.04							1.0

October 5 2012 Hour: 17:43 0.0

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		1743	34.47								
SHBL	BZ			EP		1743	36.30								

October 5 2012 Hour: 18:40 6.8

Agency: REL Regional

EMSC OT=18:40:06.0 37.31N 37.20E 3Km M=3.2 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		1841	3.48								
DQRL	SZ			EP		1841	9.73								
SHBL	BZ			EP		1841	18.70								

October 5 2012 Hour: 18:45 27.2

Lat: 33.79N Lon: 35.76E Depth: 5 Agency: REL Local

Magnitudes: 2.8MC REL

Rms: 0.1 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	323	EP		1845	29.99	-0.08	43						1.0
BHL	BN	16	323	ES		1845	32.25	0.07							1.0
DQRL	SZ	20	243	EP		1845	30.57	-0.01							1.0
DQRL	SN	20	243	ES		1845	33.04	-0.02							1.0
RCY	SZ	33	168	EP		1845	32.62	-0.02							1.0
RCY	SN	33	168	ES		1845	36.68	0.03							1.0
SHBL	BZ	49	182	EP		1845	35.14	0.00							1.0
SHBL	BN	49	182	ES		1845	40.94	-0.06							1.0
HWQ	SZ	57	17	EP		1845	36.50	-0.02							1.0

October 6 2012 Hour: 14:46 8.0 Lat: 33.55N Lon: 35.74E Depth: 3 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	11	121	EP		1446	9.92	-0.01	35						1.0
RCY	SE	11	121	ES		1446	11.34	0.00							1.0
SHBL	BZ	22	179	EP		1446	11.65	-0.01							1.0
SHBL	BN	22	179	ES		1446	14.36	0.01							1.0
DQRL	SZ	24	319	EP		1446	11.91	-0.01							1.0
BHL	BZ	41	349	EP		1446	14.63	0.02							1.0

October 6 2012 Hour: 15:59 45.4 Lat: 33.81N Lon: 35.70E Depth: 16 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	11	337	EP		1559	48.65	0.01	34						1.0
BHL	BN	11	337	ES		1559	51.04	-0.02							1.0
DQRL	SZ	17	227	EP		1559	49.17	-0.00							1.0
DQRL	SN	17	227	ES		1559	52.00	0.01							1.0
SHBL	BZ	51	176	EP		1559	53.89	-0.05							1.0
SHBL	BE	51	176	ES		16 0	0.32	0.03							1.0
HWQ	SZ	57	23	EP		1559	54.74	0.02							1.0

October 7 2012 Hour: 11:42 51.0 Agency: REL Distant

EMSC OT=11:42:51.0 40.70N 48.35E 40Km M=5.1 AZERBAIJAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ			EP		1145	49.61								
BHL	BZ			EP		1145	45.45								

October 7 2012 Hour: 15:38 8.3 Lat: 33.79N Lon: 35.78E Depth: 1 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	318	EP		1538	11.05	-0.06	58						1.0
DQRL	SZ	22	244	EP		1538	11.81	0.01							1.0
DQRL	SN	22	244	ES		1538	14.42	0.04							1.0
BEYL	BZ	28	289	EP		1538	12.81	-0.02							1.0
RCY	SZ	33	171	EP		1538	13.64	-0.02							1.0
RCY	SN	33	171	ES		1538	17.61	-0.00							1.0
HWQ	SZ	56	16	EP		1538	17.47	0.06							1.0

October 7 2012 Hour: 16:12 14.4 Lat: 33.80N Lon: 35.77E Depth: 7 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	319	EP		1612	17.35	0.08	49						1.0
BHL	BN	16	319	ES		1612	19.42	-0.00							1.0
DQRL	SZ	21	241	EP		1612	18.00	0.02							1.0
DQRL	SN	21	241	ES		1612	20.62	-0.04							1.0
BEYL	BZ	27	288	EP		1612	18.79	-0.03							1.0
RCY	SZ	34	169	EP		1612	19.99	-0.03							1.0
HWQ	SZ	56	17	EP		1612	23.45	-0.05							1.0

October 8 2012 Hour: 9:22 37.7 Lat: 33.85N Lon: 35.81E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	293	EP		922	40.23	-0.03	38						1.0
BHL	BN	16	293	ES		922	42.17	-0.01							1.0
DQRL	SZ	28	235	EP		922	42.14	0.02							1.0
DQRL	SE	28	235	ES		922	45.43	0.01							1.0
RCY	SZ	39	177	EP		922	43.99	0.02							1.0
RCY	SE	39	177	ES		922	48.60	-0.03							1.0

HWQ SZ 49 14 EP 922 45.60 0.01 1.0

October 9 2012 Hour: 13:58 0.0

Agency: REL Local

STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
DQRL SZ EP 1358 37.72
RCY SZ EP 1358 41.67

October 9 2012 Hour: 15:15 23.9

Lat: 33.79N Lon: 35.79E Depth: 7 Agency: REL Local

Magnitudes: 2.7MC REL

Rms: 0.0 secs

BEIRUT REGION

STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
BHL BZ 18 315 EP 1515 27.11 0.01 41 1.0
BHL BN 18 315 ES 1515 29.46-0.02 1.0
DQRL SZ 22 246 EP 1515 27.73-0.03 1.0
DQRL SN 22 246 ES 1515 30.66 0.03 1.0
RCY SZ 33 173 EP 1515 29.36-0.01 1.0
RCY SN 33 173 ES 1515 33.44 0.01 1.0
HWQ SZ 56 15 EP 1515 33.06 0.02 1.0

October 10 2012 Hour: 13:59 0.0

Agency: REL Local

STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
DQRL SZ EP 1359 52.75
RCY SZ EP 1359 51.23

October 10 2012 Hour: 16:56 35.0

Agency: REL Distant

EMSC OT=16:56:35.0 29.32N 52.56E 20Km M=4.8 SOUTHERN IRAN

STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
BHL BZ EP 17 0 4.54
SHBL BZ EP 17 0 1.60

October 10 2012 Hour: 19:0 49.2

Lat: 33.79N Lon: 35.77E Depth: 1 Agency: REL Local

Magnitudes: 2.8MC REL

Rms: 0.0 secs

BEIRUT REGION

STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
BHL BZ 16 319 EP 19 0 51.82-0.05 48 1.0
BHL BN 16 319 ES 19 0 53.85 0.01 1.0
DQRL SZ 21 242 EP 19 0 52.62 0.03 1.0
DQRL SN 21 242 ES 19 0 55.11 0.01 1.0
BEYL BZ 27 289 EP 19 0 53.55-0.02 1.0
RCY SZ 33 169 EP 19 0 54.56-0.06 1.0
RCY SN 33 169 ES 19 0 58.65 0.02 1.0
SHBL BZ 49 183 EP 19 0 57.21 0.03 1.0
HWQ SZ 56 17 EP 19 0 58.32 0.04 1.0

October 11 2012 Hour: 5:59 0.8

Lat: 33.88N Lon: 35.85E Depth: 0 Agency: REL Local

Magnitudes: 2.7MC REL

Rms: 0.0 secs

BEIRUT REGION

STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
BHL BZ 18 278 EP 559 3.70-0.06 42 1.0
BHL BN 18 278 ES 559 5.96 0.02 1.0
DQRL SZ 32 233 EP 559 6.08 0.05 1.0
DQRL SN 32 233 ES 559 9.89-0.01 1.0
RCY SZ 43 182 EP 559 7.67-0.02 1.0
RCY SE 43 182 ES 559 12.78-0.00 1.0
HWQ SZ 45 11 EP 559 8.09 0.05 1.0
HWQ SN 45 11 ES 559 13.38-0.03 1.0

October 11 2012 Hour: 14:42 19.5

Lat: 33.79N Lon: 35.78E Depth: 6 Agency: REL Local

Magnitudes: 2.6MC REL

Rms: 0.1 secs

BEIRUT REGION

STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
BHL BZ 17 316 EP 1442 22.39-0.08 36 1.0
DQRL SZ 22 244 EP 1442 23.13-0.06 1.0
DQRL SN 22 244 ES 1442 26.01 0.08 1.0

RCY	SZ	33	171	EP	1442	24.98	-0.01										1.0
RCY	SE	33	171	ES	1442	29.06	-0.00										1.0
HWQ	SZ	56	16	EP	1442	28.66	0.07										1.0

October 12 2012 Hour: 15:19 48.0 Lat: 33.79N Lon: 35.78E Depth: 12 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	317	EP		1519	51.36	-0.02	42						1.0
BHL	BN	17	317	ES		1519	53.90	-0.00							1.0
DQRL	SZ	22	243	EP		1519	52.03	0.00							1.0
DQRL	SN	22	243	ES		1519	55.04	0.01							1.0
RCY	SZ	34	171	EP		1519	53.78	-0.02							1.0
RCY	SN	34	171	ES		1519	58.11	0.01							1.0
HWQ	SZ	56	16	EP		1519	57.25	0.02							1.0

October 12 2012 Hour: 15:33 35.3 Lat: 33.80N Lon: 35.78E Depth: 15 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	317	EP		1533	39.02	0.00	34						1.0
BHL	BN	17	317	ES		1533	41.78	-0.00							1.0
DQRL	SZ	22	243	EP		1533	39.63	0.01							1.0
DQRL	SN	22	243	ES		1533	42.83	-0.01							1.0
RCY	SZ	34	171	EP		1533	41.28	-0.01							1.0
RCY	SE	34	171	ES		1533	45.74	0.01							1.0

October 13 2012 Hour: 9:24 7.1 Lat: 33.78N Lon: 35.78E Depth: 1 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.1 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	320	EP		924	9.91	-0.08	37						1.0
BHL	BE	18	320	ES		924	12.18	0.01							1.0
DQRL	SZ	21	247	EP		924	10.55	0.09							1.0
DQRL	SN	21	247	ES		924	12.96	-0.02							1.0
RCY	SZ	32	170	EP		924	12.24	0.03							1.0
RCY	SE	32	170	ES		924	16.01	-0.01							1.0
HWQ	SZ	58	16	EP		924	16.36	0.03							1.0

October 13 2012 Hour: 11:55 18.5 Lat: 33.78N Lon: 35.76E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.1 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	323	EP		1155	21.12	-0.07	52						1.0
BHL	BN	17	323	ES		1155	23.08	-0.09							1.0
DQRL	SZ	20	244	EP		1155	21.70	-0.02							1.0
DQRL	SN	20	244	ES		1155	24.18	0.10							1.0
BEYL	BZ	27	291	EP		1155	22.85	0.03							1.0
RCY	SZ	33	168	EP		1155	23.75	-0.07							1.0
RCY	SN	33	168	ES		1155	27.72	-0.01							1.0
HWQ	SZ	57	17	EP		1155	27.88	0.11							1.0
HWQ	SN	57	17	ES		1155	34.62	0.01							1.0

October 14 2012 Hour: 10:13 39.0 Agency: REL Distant

EMSC OT=10:13:39.0 41.88N 46.44E 10Km M=5.4 AZERBAIJAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1016	24.75								

October 14 2012 Hour: 18:14 55.1 Lat: 33.80N Lon: 35.77E Depth: 9 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.1 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	318	EP		1814	58.19	0.03	44						1.0
DQRL	SZ	21	241	EP		1814	58.83	-0.05							1.0
DQRL	SN	21	241	ES		1815	1.69	-0.00							1.0
RCY	SZ	34	169	EP		1815	0.79	-0.06							1.0
RCY	SE	34	169	ES		1815	5.08	-0.04							1.0
SHBL	BZ	50	183	EP		1815	3.29	-0.03							1.0
SHBL	BN	50	183	ES		1815	9.55	0.12							1.0
HWQ	SZ	56	17	EP		1815	4.26	0.02							1.0

October 15 2012 Hour: 1:19 1.0 Agency: REL Distant
EMSC OT=01:19:01.3 51.89N 159.42E 10Km M=5.6 COAST OF KAMCHATKA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		131	18.34								
SHBL	BZ			EP		131	20.67								

October 15 2012 Hour: 14:21 34.0 Lat: 33.55N Lon: 35.76E Depth: 11 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	9	130	EP		1421	36.54	-0.00	32						1.0
RCY	SN	9	130	ES		1421	38.45	0.00							1.0
SHBL	BZ	22	184	EP		1421	38.15	0.00							1.0
DQRL	SZ	25	315	EP		1421	38.46	0.00							1.0
DQRL	SN	25	315	ES		1421	41.78	-0.00							1.0

October 16 2012 Hour: 1:16 2.0 Agency: REL Regional
EMSC OT=01:16:02.0 37.30N 37.11E 9Km M=4.6 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		116	54.83								
BHL	BZ			EP		117	1.11								
BEYL	BZ			EP		117	4.06								
DQRL	SZ			EP		117	3.82								
RCY	SZ			EP		117	5.57								
SHBL	BZ			EP		117	7.67								

October 16 2012 Hour: 6:17 11.1 Lat: 34.03N Lon: 35.75E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.1 secs

KESROUANE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	211	EP		617	13.75	-0.06	55						1.0
BHL	BE	17	211	ES		617	15.79	-0.04							1.0
HWQ	SZ	33	34	EP		617	16.31	-0.02							1.0
HWQ	SE	33	34	ES		617	20.21	-0.00							1.0
DQRL	SZ	40	205	EP		617	17.52	-0.02							1.0
RCY	SZ	60	172	EP		617	20.80	0.02							1.0
RCY	SE	60	172	ES		617	27.98	0.02							1.0

October 16 2012 Hour: 6:27 0.0 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		628	9.62								
HWQ	SZ			EP		628	16.44								

October 16 2012 Hour: 10:25 5.7 Agency: REL Regional
EMSC OT=10:25:05.0 37.27N 37.16E 39Km M=4.5 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		1025	56.03								
BHL	BZ			EP		1026	2.73								
DQRL	SZ			EP		1026	6.03								
RCY	SZ			EP		1026	7.78								

October 16 2012 Hour: 15:10 59.0

Agency: REL Distant

EMSC OT=15:10:59.0 39.74N 15.59E 270Km M=4.8 SOUTHERN ITALY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1514	41.32								
RCY	SZ			EP		1514	45.52								

October 16 2012 Hour: 15:19 21.3

Lat: 33.54N

Lon: 35.74E

Depth: 19

Agency: REL Local

Magnitudes: 2.6MC REL

Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	10	117	EP		1519	24.84	-0.02	32						1.0
RCY	SN	10	117	ES		1519	27.53	0.01							1.0
DQRL	SZ	24	320	EP		1519	26.26	0.01							1.0
DQRL	SN	24	320	ES		1519	29.95	0.02							1.0
BHL	BZ	42	349	EP		1519	28.45	-0.06							1.0
BHL	BE	42	349	ES		1519	33.84	-0.02							1.0
HWQ	SZ	84	13	EP		1519	34.77	0.05							1.0

October 16 2012 Hour: 18:12 43.7

Lat: 33.79N

Lon: 35.76E

Depth: 0

Agency: REL Local

Magnitudes: 2.7MC REL

Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	324	EP		1812	46.26	-0.06	39						1.0
BHL	BN	16	324	ES		1812	48.25	-0.01							1.0
DQRL	SZ	20	243	EP		1812	46.88	0.04							1.0
DQRL	SN	20	243	ES		1812	49.20	0.02							1.0
RCY	SZ	33	167	EP		1812	48.95	-0.04							1.0
HWQ	SZ	57	18	EP		1812	52.98	0.06							1.0

October 17 2012 Hour: 4:42 31.0

Agency: REL Distant

EMSC OT=04:42:31.0 04.13N 124.64E 342Km M=6.1 CELEBES SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		454	38.48								
RCY	SZ			EP		454	38.24								

October 17 2012 Hour: 6:34 17.5

Lat: 33.88N

Lon: 35.84E

Depth: 0

Agency: REL Local

Magnitudes: 2.8MC REL

Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	279	EP		634	20.33	-0.03	44						1.0
BHL	BN	18	279	ES		634	22.46	-0.02							1.0
DQRL	SZ	32	233	EP		634	22.64	0.02							1.0
DQRL	SN	32	233	ES		634	26.44	0.03							1.0
RCY	SZ	42	181	EP		634	24.32	-0.02							1.0
RCY	SE	42	181	ES		634	29.31	-0.08							1.0
HWQ	SZ	45	12	EP		634	24.85	0.03							1.0
SHBL	BZ	60	189	EP		634	27.14	0.04							1.0
SHBL	BN	60	189	ES		634	34.28	0.08							1.0

October 17 2012 Hour: 14:42 8.2

Lat: 34.07N

Lon: 35.63E

Depth: 11

Agency: REL Local

Magnitudes: 2.7MC REL

Rms: 0.0 secs

KESROUANE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	19	174	EP		1442	11.83	-0.10	38						1.0
BHL	BN	19	174	ES		1442	14.70	0.04							1.0
HWQ	SZ	37	52	EP		1442	14.54	0.01							1.0
DQRL	SZ	41	188	EP		1442	15.26	0.06							1.0
DQRL	SE	41	188	ES		1442	20.33	-0.02							1.0
RCY	SZ	67	164	EP		1442	19.22	0.01							1.0
RCY	SN	67	164	ES		1442	27.32	-0.01							1.0

October 17 2012 Hour: 15:13 44.6 Lat: 33.79N Lon: 35.78E Depth: 4 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	318	EP		1513	47.52	-0.05	31						1.0
DQRL	SZ	22	245	EP		1513	48.24	0.04							1.0
DQRL	SN	22	245	ES		1513	50.86	0.01							1.0
RCY	SZ	33	171	EP		1513	49.98	0.03							1.0
RCY	SN	33	171	ES		1513	53.90	-0.01							1.0
HWQ	SZ	57	16	EP		1513	53.80	0.03							1.0

October 17 2012 Hour: 15:49 7.5 Lat: 33.79N Lon: 35.77E Depth: 1 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	320	EP		1549	10.15	-0.01	47						1.0
BHL	BN	17	320	ES		1549	12.11	-0.03							1.0
DQRL	SZ	21	243	EP		1549	10.85	0.03							1.0
DQRL	SN	21	243	ES		1549	13.35	0.06							1.0
RCY	SZ	33	169	EP		1549	12.82	-0.01							1.0
RCY	SN	33	169	ES		1549	16.78	-0.02							1.0
SHBL	BZ	49	183	EP		1549	15.35	-0.04							1.0
HWQ	SZ	57	17	EP		1549	16.67	0.07							1.0

October 17 2012 Hour: 17: 5 29.7 Lat: 33.81N Lon: 35.75E Depth: 21 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	13	319	EP		17 5	33.78	-0.01	36						1.0
BHL	BE	13	319	ES		17 5	36.84	0.01							1.0
DQRL	SZ	21	234	EP		17 5	34.47	0.02							1.0
DQRL	SN	21	234	ES		17 5	37.97	-0.01							1.0
RCY	SZ	36	167	EP		17 5	36.37	0.00							1.0
RCY	SE	36	167	ES		17 5	41.31	-0.00							1.0
HWQ	SZ	55	19	EP		17 5	38.88	-0.00							1.0

October 18 2012 Hour: 6:46 44.9 Lat: 34.56N Lon: 34.40E Depth: 0 Agency: REL Regional
Magnitudes: 3.4MC REL Rms: 0.0 secs

CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	136	122	EP		647	6.80	-0.07	87						1.0
BHL	BE	136	122	ES		647	23.11	-0.01							1.0
DQRL	SZ	143	131	EP		647	7.87	-0.03							1.0
DQRL	SE	143	131	ES		647	24.88	-0.04							1.0
HWQ	SZ	145	102	EP		647	8.26	0.04							1.0
HWQ	SE	145	102	ES		647	25.47	0.01							1.0
RCY	SZ	177	131	EP		647	12.93	0.02							1.0
SHBL	BZ	183	137	EP		647	13.73	0.01							1.0
SHBL	BN	183	137	ES		647	35.09	0.05							1.0

October 18 2012 Hour: 17: 8 21.9 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ			EP		17 8	28.05								
RCY	SZ			EP		17 8	30.47								
DQRL	SZ			EP		17 8	34.19								

October 19 2012 Hour: 3:35 11.7 Agency: REL Regional

EMSC OT=03:35:11.0 32.48N 30.94E 10Km M=5.1 EASTERN MED SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		336	12.38								
SHBL	BZ			EP		336	13.53								
BHL	BZ			EP		336	13.09								
RCY	SZ			EP		336	14.59								
HWQ	SZ			EP		336	18.32								

October 19 2012 Hour: 15:23 12.6 Lat: 33.78N Lon: 35.78E Depth: 0 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.1 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	320	EP		1523	15.33	-0.13	44						1.0
BHL	BN	18	320	ES		1523	17.68	0.07							1.0
DQRL	SZ	21	247	EP		1523	15.97	0.00							1.0
DQRL	SN	21	247	ES		1523	18.48	-0.01							1.0
RCY	SZ	32	170	EP		1523	17.64	-0.09							1.0
RCY	SN	32	170	ES		1523	21.59	0.04							1.0
HWQ	SZ	57	16	EP		1523	21.86	0.05							1.0

October 19 2012 Hour: 21:42 8.9 Agency: REL Regional

EMSC OT=21:42:08.0 37.32N 37.09E 28Km M=3.6 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		2142	59.68								
BHL	BZ			EP		2143	7.96								
DQRL	SZ			EP		2143	10.97								
SHBL	BZ			EP		2143	14.30								

October 19 2012 Hour: 23: 2 45.4 Lat: 33.78N Lon: 35.78E Depth: 3 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	321	EP		23 2	48.37	-0.00	53						1.0
BHL	BN	18	321	ES		23 2	50.60	-0.01							1.0
DQRL	SZ	21	247	EP		23 2	48.81	0.02							1.0
DQRL	SN	21	247	ES		23 2	51.33	0.00							1.0
BEYL	BZ	28	292	EP		23 2	49.92	-0.03							1.0
RCY	SZ	32	170	EP		23 2	50.51	-0.01							1.0
RCY	SN	32	170	ES		23 2	54.33	-0.02							1.0
SHBL	BZ	48	184	EP		23 2	53.13	0.04							1.0
HWQ	SZ	58	16	EP		23 2	54.72	0.02							1.0

October 21 2012 Hour: 0:37 0.0 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		037	43.75								
SHBL	BZ			EP		037	36.42								

October 21 2012 Hour: 1:25 22.0 Agency: REL Distant

EMSC OT=01:25:22.0 66.28N 18.88W 10Km M=5.6 ICELAND REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ			EP		133	43.46								
BHL	BZ			EP		133	39.19								

October 21 2012 Hour: 15: 7 26.2 Lat: 34.30N Lon: 36.53E Depth: 6 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.0 secs

HERMEL BAALBEK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	54	268	EP		15 7	35.04	0.00							1.0
HWQ	SE	54	268	ES		15 7	41.54	-0.03							1.0
BHL	BZ	92	242	EP		15 7	41.20	0.05							1.0
BHL	BN	92	242	ES		15 7	52.31	0.10							0.0
RCY	SZ	110	216	EP		15 7	43.88	-0.03	63						1.0
RCY	SN	110	216	ES		15 7	56.99	-0.03							1.0
DQRL	SZ	111	234	EP		15 7	43.99	-0.00							1.0
DQRL	SN	111	234	ES		15 7	57.21	0.05							1.0

October 21 2012 Hour: 15:43 28.4 Lat: 33.79N Lon: 35.77E Depth: 2 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.1 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	319	EP		1543	31.05	-0.02	45						1.0
BHL	BE	17	319	ES		1543	33.02	-0.05							1.0
DQRL	SZ	21	243	EP		1543	31.77	-0.02							1.0
DQRL	SN	21	243	ES		1543	34.41	0.09							1.0
BEYL	BZ	27	289	EP		1543	32.74	-0.03							1.0
RCY	SZ	33	170	EP		1543	33.75	-0.02							1.0
RCY	SN	33	170	ES		1543	37.77	-0.00							1.0
SHBL	BZ	49	183	EP		1543	36.29	-0.05							1.0
HWQ	SZ	56	17	EP		1543	37.53	0.08							1.0

October 22 2012 Hour: 18:53 8.1 Lat: 34.46N Lon: 35.53E Depth: 2 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.1 secs

OFFSHORE NORTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	43	118	EP		1853	15.02	-0.02	43						1.0
BHL	BZ	63	170	EP		1853	18.14	-0.03							1.0
BHL	BE	63	170	ES		1853	25.73	0.09							1.0
DQRL	SZ	84	178	EP		1853	21.57	0.00							1.0
DQRL	SE	84	178	ES		1853	31.48	-0.07							1.0
SHBL	BZ	125	171	EP		1853	28.25	0.06							1.0
SHBL	BE	125	171	ES		1853	43.05	-0.03							1.0

October 23 2012 Hour: 13:14 22.5 Lat: 33.78N Lon: 35.77E Depth: 4 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	321	EP		1314	25.43	0.01	44						1.0
BHL	BN	17	321	ES		1314	27.57	0.01							1.0
DQRL	SZ	20	245	EP		1314	25.96	0.01							1.0
DQRL	SN	20	245	ES		1314	28.46	-0.02							1.0
RCY	SZ	33	169	EP		1314	27.93	0.04							1.0
RCY	SN	33	169	ES		1314	31.82	-0.02							1.0
HWQ	SZ	57	17	EP		1314	31.77	-0.03							1.0

October 24 2012 Hour: 11:14 21.8 Lat: 33.79N Lon: 35.77E Depth: 4 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.1 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	322	EP		1114	24.59	-0.09	44						1.0
BHL	BN	17	322	ES		1114	26.88	0.09							1.0
DQRL	SZ	20	244	EP		1114	25.25	0.03							1.0
DQRL	SN	20	244	ES		1114	27.70	-0.03							1.0
RCY	SZ	33	169	EP		1114	27.19	0.00							1.0
RCY	SN	33	169	ES		1114	31.12	-0.04							1.0
HWQ	SZ	57	17	EP		1114	31.08	0.00							1.0

October 24 2012 Hour: 15: 2 14.1 Lat: 33.55N Lon: 35.74E Depth: 3 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	10	123	EP		15 2	15.97	0.01	22						1.0
RCY	SN	10	123	ES		15 2	17.31	-0.01							1.0
SHBL	BZ	22	179	EP		15 2	17.75	-0.02							1.0
SHBL	BE	22	179	ES		15 2	20.48	0.01							1.0
DQRL	SZ	24	318	EP		15 2	17.99	-0.00							1.0
BHL	BZ	40	348	EP		15 2	20.77	0.11							0.2

October 25 2012 Hour: 18:40 37.2 Agency: REL Distant
EMSC OT=18:40:37.0 19.85S 178.13W 577Km M=5.5 FIJI REGION
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL BZ EP 1859 15.21
 RCY SZ EP 1859 15.57
 SHBL BZ EP 1859 16.30

October 25 2012 Hour: 22:58 20.9 Agency: REL Distant
EMSC OT=22:58:20.0 11.44N 126.24E 40Km M=5.0 PHILIPPINE ISLANDS
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL BZ EP 23 9 17.64
 HWQ SZ EP 23 9 19.50
 RCY SZ EP 23 9 22.09
 SHBL BZ EP 23 9 22.28

October 26 2012 Hour: 6:57 42.4 Agency: REL Regional
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 RCY SZ EP 657 45.24
 DQRL SZ EP 657 47.83
 HWQ SZ EP 657 56.37

October 26 2012 Hour: 9:40 34.6 Agency: REL Regional
EMSC OT=09:40:34.0 36.52N 31.39E 50Km M=4.3 WESTERN TURKEY
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 HWQ SZ EP 941 37.88
 DQRL SZ EP 941 38.71
 RCY SZ EP 941 43.21
 SHBL BZ EP 941 44.29

October 28 2012 Hour: 14:51 0.0 Agency: REL Local
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 DQRL SZ EP 1452 29.58
 RCY SZ EP 1452 26.91

October 29 2012 Hour: 9:41 30.0 Lat: 33.79N Lon: 35.79E Depth: 5 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs
BEIRUT REGION
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL BZ 18 317 EP 941 33.05 0.00 29 1.0
 BHL BN 18 317 ES 941 35.33-0.01 1.0
 DQRL SZ 22 246 EP 941 33.66-0.02 1.0
 DQRL SN 22 246 ES 941 36.44 0.01 1.0
 RCY SZ 33 172 EP 941 35.33-0.00 1.0
 RCY SN 33 172 ES 941 39.31-0.00 1.0
 HWQ SZ 56 15 EP 941 39.14 0.01 1.0

October 29 2012 Hour: 15:42 0.0 Agency: REL Local
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL BZ EP 1542 46.04
 SHBL BZ EP 1542 45.98

October 29 2012 Hour: 18:20 30.4 Lat: 33.80N Lon: 35.74E Depth: 9 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs
BEIRUT REGION
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL BZ 14 326 EP 1820 33.34 0.01 39 1.0
 BHL BN 14 326 ES 1820 35.51 0.01 1.0
 DQRL SZ 19 238 EP 1820 33.93 0.03 1.0
 DQRL SN 19 238 ES 1820 36.45-0.03 1.0
 SHBL BZ 50 180 EP 1820 38.57-0.05 1.0
 SHBL BN 50 180 ES 1820 44.73 0.04 1.0
 HWQ SZ 57 19 EP 1820 39.73-0.01 1.0

October 29 2012 Hour: 23:24 8.2 Lat: 33.80N Lon: 35.59E Depth: 17 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	11	189	EP		2324	11.62	0.04							1.0
DQRL	SE	11	189	ES		2324	14.08	-0.03							1.0
BHL	BZ	13	28	EP		2324	11.83	0.02	32						1.0
BHL	BE	13	28	ES		2324	14.49	-0.01							1.0
SHBL	BZ	52	164	EP		2324	16.82	-0.07							1.0
SHBL	BE	52	164	ES		2324	23.39	0.04							1.0

October 30 2012 Hour: 0:44 56.5 Lat: 33.77N Lon: 35.69E Depth: 4 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	13	239	EP		044	58.84	0.05							1.0
DQRL	SE	13	239	ES		045	0.53	0.03							1.0
BHL	BZ	16	346	EP		044	59.06	-0.06	57						1.0
BHL	BE	16	346	ES		045	1.04	-0.03							1.0
BEYL	BZ	22	302	EP		045	0.05	-0.02							1.0
SHBL	BZ	47	174	EP		045	4.08	-0.01							1.0
SHBL	BN	47	174	ES		045	9.68	-0.03							1.0
HWQ	SZ	61	22	EP		045	6.46	0.07							1.0
HWQ	SE	61	22	ES		045	13.74	0.02							1.0

October 30 2012 Hour: 8:9 27.0 Agency: REL Regional
EMSC OT=08:09:27.0 36.56N 26.46E 125Km M=4.3 DODECANESE ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		811	21.15								
HWQ	SZ			EP		811	18.64								

October 30 2012 Hour: 10:18 7.9 Lat: 33.92N Lon: 35.84E Depth: 0 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	265	EP		1018	10.60	-0.02	43						1.0
BHL	BN	17	265	ES		1018	12.64	-0.03							1.0
DQRL	SZ	34	227	EP		1018	13.44	0.06							1.0
DQRL	SE	34	227	ES		1018	17.49	0.02							1.0
HWQ	SZ	41	14	EP		1018	14.48	-0.01							1.0
RCY	SZ	47	180	EP		1018	15.44	0.05							1.0
RCY	SN	47	180	ES		1018	20.91	-0.07							1.0

October 30 2012 Hour: 19:10 20.6 Lat: 33.68N Lon: 35.83E Depth: 1 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	24	277	EP		1910	24.45	-0.01	35						1.0
DQRL	SN	24	277	ES		1910	27.32	0.01							1.0
BHL	BZ	29	328	EP		1910	25.29	-0.09							1.0
BHL	BN	29	328	ES		1910	28.94	0.04							1.0
SHBL	BZ	38	192	EP		1910	26.65	-0.03							1.0
SHBL	BN	38	192	ES		1910	31.18	0.01							1.0
HWQ	SZ	67	10	EP		1910	31.50	0.03							1.0

October 30 2012 Hour: 21:7 3.0 Lat: 33.78N Lon: 35.64E Depth: 17 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	11	218	EP		21 7	6.30	0.04							1.0
DQRL	SN	11	218	ES		21 7	8.69	-0.02							1.0
BHL	BZ	14	6	EP		21 7	6.51	-0.05	23						1.0
BHL	BN	14	6	ES		21 7	9.25	0.03							1.0

October 30 2012 Hour: 21:10 1.1 Lat: 33.79N Lon: 35.63E Depth: 16 Agency: REL Local
Magnitudes: 2.1MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	11	213	EP		2110	4.39	-0.04							1.0
DQRL	SN	11	213	ES		2110	6.87	0.02							1.0
BHL	BZ	13	9	EP		2110	4.63	-0.04	16						1.0
BHL	BN	13	9	ES		2110	7.29	0.02							1.0

October 30 2012 Hour: 21:21 30.1 Lat: 33.79N Lon: 35.64E Depth: 14 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	11	217	EP		2121	33.21	-0.02							1.0
DQRL	SN	11	217	ES		2121	35.55	0.03							1.0
BHL	BZ	13	5	EP		2121	33.39	-0.03	26						1.0
BHL	BN	13	5	ES		2121	35.85	-0.00							1.0
SHBL	BZ	50	169	EP		2121	38.44	0.01							1.0
SHBL	BN	50	169	ES		2121	44.57	-0.00							1.0
HWQ	SZ	61	27	EP		2121	40.21	0.06							1.0

October 30 2012 Hour: 22:04 46.2 Lat: 33.78N Lon: 35.65E Depth: 16 Agency: REL Local
Magnitudes: 2.1MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	11	220	EP		2200	49.60	0.08							1.0
DQRL	SE	11	220	ES		2200	51.94	-0.04							1.0
BHL	BZ	14	3	EP		2200	49.77	-0.02	16						1.0
BHL	BN	14	3	ES		2200	52.45	0.01							1.0

October 30 2012 Hour: 22:23 27.7 Lat: 33.79N Lon: 35.62E Depth: 17 Agency: REL Local
Magnitudes: 2.1MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	10	206	EP		2223	31.09	0.00							1.0
DQRL	SE	10	206	ES		2223	33.56	-0.00							1.0
BHL	BZ	13	14	EP		2223	31.27	-0.04	17						1.0
BHL	BN	13	14	ES		2223	33.98	0.03							1.0

October 30 2012 Hour: 22:37 26.7 Lat: 33.79N Lon: 35.64E Depth: 15 Agency: REL Local
Magnitudes: 2.0MC REL Rms: 0.1 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	11	214	EP		2237	29.89	-0.04							1.0
DQRL	SE	11	214	ES		2237	32.31	0.02							1.0
BHL	BZ	13	7	EP		2237	30.08	-0.05	15						1.0
BHL	BN	13	7	ES		2237	32.67	0.03							1.0

October 31 2012 Hour: 0:12 46.9 Lat: 33.79N Lon: 35.64E Depth: 15 Agency: REL Local
Magnitudes: 2.0MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	11	214	EP		012	50.19	0.04							1.0
DQRL	SN	11	214	ES		012	52.52	-0.02							1.0
BHL	BZ	13	7	EP		012	50.33	0.03	14						1.0
BHL	BN	13	7	ES		012	52.77	-0.02							1.0

October 31 2012 Hour: 1:41 21.5 Lat: 33.79N Lon: 35.63E Depth: 16 Agency: REL Local
Magnitudes: 2.0MC REL Rms: 0.1 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	11	209	EP		141	24.75	0.01							1.0
DQRL	SN	11	209	ES		141	27.16	-0.01							1.0
BHL	BZ	13	12	EP		141	24.87	-0.11	14						1.0
BHL	BN	13	12	ES		141	27.64	0.06							1.0

October 31 2012 Hour: 18:54 0.0 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		1855	10.56								
SHBL	BZ			EP		1855	12.89								

Epicentral Map of Lebanon

OCTOBER 2012

