

Republic of Lebanon  
National Council for Scientific Research

# Provisional Seismological Bulletin

from the

## NATIONAL SEISMIC NETWORK

September

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.

**September 1 2012 Hour: 1:16 8.0** Agency: REL Distant  
**EMSC OT=01:16:08.0 10.50N 126.72E 32Km M=5.7 PHILIPPINE REGION**  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 HWQ BZ EP 128 40.85  
 BHL BZ EP 128 42.08  
 QRWL SZ EP 128 42.95  
 DQRL SZ EP 128 43.07

**September 1 2012 Hour: 12: 8 57.2 Lat: 33.78N Lon: 35.75E Depth: 0 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 17 327 EP 12 8 59.87 0.03 35 1.0  
 DQRL SZ 19 244 EP 12 9 0.27 0.09 1.0  
 DQRL SN 19 244 ES 12 9 2.33-0.09 1.0  
 RCY SZ 32 166 EP 12 9 2.35-0.02 1.0  
 RCY SN 32 166 ES 12 9 6.22-0.01 1.0  
 HWQ SZ 58 18 EP 12 9 6.49-0.05 1.0

**September 1 2012 Hour: 15:54 41.0** Agency: REL Regional  
**EMSC OT=15:54:41.0 35.33N 32.35E 65Km M=3.5 CYPRUS REGION**  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 BHL BZ EP 1555 26.01  
 DQRL SZ EP 1555 26.74  
 HWQ BZ EP 1555 28.32  
 RCY SZ EP 1555 31.72  
 SHBL BZ EP 1555 31.97

**September 2 2012 Hour: 5: 1 0.0** Agency: REL Local  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 BHL BZ EP 5 2 13.49  
 RCY SZ EP 5 2 13.37

**September 2 2012 Hour: 11:27 42.0 Lat: 33.77N Lon: 36.69E Depth: 14 Agency: REL Local**  
**Magnitudes: 3.1MC REL Rms: 0.1 secs**  
**DAMASCUS REGION**  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 HWQ BZ 89 310 EP 1127 56.14 0.06 1.0  
 HWQ BE 89 310 ES 1128 6.41-0.08 1.0  
 BHL BZ 97 279 EP 1127 57.28 0.04 61 1.0  
 BHL BE 97 279 ES 1128 8.55 0.05 1.0  
 SHBL BZ 99 242 EP 1127 57.54-0.07 1.0  
 DQRL SZ 104 267 EP 1127 58.26 0.01 1.0

**September 2 2012 Hour: 13: 7 0.0** Agency: REL Local  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 DQRL SZ EP 13 7 44.85  
 RCY SZ EP 13 7 42.86

**September 2 2012 Hour: 23: 0 0.0** Agency: REL Regional  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 SHBL BZ EP 23 1 7.00  
 HWQ BZ EP 23 1 0.68

**September 3 2012 Hour: 18:23 4.0** Agency: REL Distant  
**EMSC OT=18:23:04.0 10.85S 113.91E 10Km M=6.3 SOUTH OF JAVA**  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 HWQ BZ EP 1835 47.83  
 RCY SZ EP 1835 47.73  
 SHBL BZ EP 1835 48.44  
 BHL BZ EP 1835 48.91  
 DQRL SZ EP 1835 49.34  
 BEYL BZ EP 1835 48.55

September 4 2012 Hour: 6:58 2.0 Agency: REL Distant  
**EMSC OT=06:58:02.0 10.61N 126.78E 36Km M=5.5 PHILIPPINE REGION**  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 HWQ BZ EP 710 34.17  
 RCY SZ EP 710 35.54  
 BHL BZ EP 710 35.40

September 4 2012 Hour: 11:17 23.1 Agency: REL Regional  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 DQRL SZ EP 1122 49.52  
 BHL BZ EP 1122 48.87  
 HWQ BZ EP 1122 51.07  
 RCY SZ EP 1122 51.22

September 4 2012 Hour: 11:40 44.0 Lat: 33.70N Lon: 36.79E Depth: 94 Agency: REL Local  
 Magnitudes: 3.3MC REL Rms: 0.0 secs  
**DAMASCUS REGION**

STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 RCY SZ 92 256 EP 1141 1.52-0.02 79 1.0  
 RCY SN 92 256 ES 1141 14.50 0.01 1.0  
 HWQ BZ 101 310 EP 1141 2.40 0.02 1.0  
 HWQ BN 101 310 ES 1141 15.94-0.01 1.0  
 DQRL SZ 113 271 EP 1141 3.53-0.00 1.0

September 4 2012 Hour: 14:45 50.0 Agency: REL Regional  
**EMSC OT=14:04:50.0 35.28N 27.98E 68Km M=4.2 DODECANESE ISLANDS**

STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 RCY SZ EP 14 6 25.88  
 HWQ BZ EP 14 6 25.08

September 4 2012 Hour: 15:11 10.0 Agency: REL Distant  
**EMSC OT=15:11:10.0 10.69N 126.81E 10Km M=5.2 PHILIPPINE REGION**

STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 HWQ BZ EP 1523 45.71  
 BHL BZ EP 1523 47.27

September 4 2012 Hour: 17:41 10.5 Lat: 34.17N Lon: 35.87E Depth: 17 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  
 HWQ SZ 14 30 EP 1741 14.22 0.05 40 1.0  
 HWQ SN 14 30 ES 1741 16.87-0.04 1.0  
 BHL BZ 35 214 EP 1741 16.80 0.04 40 1.0  
 BHL BN 35 214 ES 1741 21.42 0.01 1.0  
 DQRL SZ 58 208 EP 1741 20.01-0.04 1.0  
 DQRL SN 58 208 ES 1741 27.13-0.00 1.0  
 RCY SZ 74 182 EP 1741 22.45-0.02 1.0

September 5 2012 Hour: 14:24 38.8 Lat: 33.62N Lon: 34.89E Depth: 32 Agency: REL Local  
 Magnitudes: 2.9MC REL Rms: 0.1 secs  
**OFFSHORE SOUTH LEBANON**

STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 DQRL SZ 64 81 EP 1424 49.79-0.04 1.0  
 DQRL SN 64 81 ES 1424 58.02 0.01 1.0  
 BHL BZ 78 66 EP 1424 51.90 0.20 1.0  
 RCY SZ 89 98 EP 1424 53.11-0.01 49 1.0  
 RCY SN 89 98 ES 1425 3.71-0.03 1.0  
 HWQ BZ 122 53 EP 1424 57.11-0.14 1.0  
 HWQ BN 122 53 ES 1425 10.91-0.01 1.0

September 5 2012 Hour: 16:15 26.1 Lat: 33.78N Lon: 35.76E Depth: 0 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	324	EP		1615	28.94	-0.02							1.0
DQRL	SZ	20	247	EP		1615	29.31	0.02	51						1.0
DQRL	SN	20	247	ES		1615	31.64	-0.00							1.0
RCY	SZ	32	168	EP		1615	31.20	-0.01							1.0
RCY	SE	32	168	ES		1615	34.99	0.00							1.0
HWQ	BZ	58	17	EP		1615	35.52	0.01							1.0

September 6 2012 Hour: 1:57 13.0

Agency: REL Distant

EMSC OT=01:57:13.0 27.18N 54.04E 30Km M=5.3 SOUTHERN IRAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		2 1	7.65								
HWQ	BZ			EP		2 1	9.06								
BHL	BZ			EP		2 1	11.14								
DQRL	SZ			EP		2 1	11.03								

September 6 2012 Hour: 13:4 0.0

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		13 5	22.71								
RCY	SZ			EP		13 5	20.71								

September 6 2012 Hour: 20:35 49.9 Lat: 33.79N Lon: 35.77E 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	319	EP		2035	52.54	-0.04	46						1.0
DQRL	SZ	21	243	EP		2035	53.25	-0.02							1.0
DQRL	SE	21	243	ES		2035	55.82	0.02							1.0
BEYL	BZ	28	289	EP		2035	54.31	0.02							1.0
RCY	SZ	33	170	EP		2035	55.19	-0.02							1.0
RCY	SE	33	170	ES		2035	59.20	0.02							1.0
SHBL	BZ	49	183	EP		2035	57.77	-0.02							1.0
HWQ	SZ	56	16	EP		2035	58.98	0.03							1.0

September 7 2012 Hour: 3:19 42.0

Agency: REL Distant

EMSC OT=03:19:42.0 27.59N 104.02E 10Km M=5.6 SICHUAN-YUNNAN RG

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		329	34.54								
RCY	SZ			EP		329	36.82								
BHL	BZ			EP		329	36.72								
DQRL	SZ			EP		329	37.53								

September 7 2012 Hour: 4:16 30.0

Agency: REL Distant

EMSC OT=04:16:30.0 27.66N 104.06E 10Km M=5.6 SICHUAN-YUNNAN RG

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		426	23.23								
RCY	SZ			EP		426	25.38								
BHL	BZ			EP		426	25.54								

September 7 2012 Hour: 9:57 24.0 Lat: 33.91N Lon: 35.83E 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	267	EP		957	26.63	-0.04	37						1.0
BHL	BN	16	267	ES		957	28.62	0.00							1.0
DQRL	SZ	33	227	EP		957	29.45	0.06							1.0
HWQ	SZ	42	15	EP		957	30.83	0.01							1.0
RCY	SZ	46	179	EP		957	31.46	-0.01							1.0
RCY	SN	46	179	ES		957	36.96	-0.01							1.0

September 7 2012 Hour: 23:1 55.6 Lat: 33.79N Lon: 35.79E Depth: 0 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	315	EP		23	1	58.50-0.03	41						1.0
DQRL	SZ	23	247	EP		23	1	59.26	0.04						1.0
DQRL	SN	23	247	ES		23	2	1.94	0.02						1.0
BEYL	BZ	29	289	EP		23	2	0.26-0.05							1.0
RCY	SZ	32	173	EP		23	2	0.79-0.00							1.0
RCY	SN	32	173	ES		23	2	4.64-0.03							1.0
HWQ	SZ	56	14	EP		23	2	4.68	0.04						1.0

September 8 2012 Hour: 10:1 7.0 Agency: REL Regional

EMSC OT=10:01:07.0 37.30N 37.07E 2Km M=4.3 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		10	1	58.63							
BHL	BZ			EP		10	2	5.03							
DQRL	SZ			EP		10	2	8.36							
RCY	SZ			EP		10	2	9.96							

September 8 2012 Hour: 14:42 17.8 Lat: 33.80N Lon: 35.76E Depth: 14 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	15	320	EP		1442	21.20-0.05	38							1.0
BHL	BN	15	320	ES		1442	23.84	0.01							1.0
DQRL	SZ	21	240	EP		1442	21.92	0.04							1.0
RCY	SZ	34	168	EP		1442	23.81-0.02								1.0
RCY	SE	34	168	ES		1442	28.31	0.01							1.0
HWQ	BZ	56	18	EP		1442	26.97-0.03								1.0
HWQ	BN	56	18	ES		1442	33.86	0.04							1.0

September 8 2012 Hour: 14:52 16.2 Lat: 33.79N Lon: 35.77E Depth: 0 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	320	EP		1452	18.86-0.03	34							1.0
BHL	BE	17	320	ES		1452	20.84-0.03								1.0
DQRL	SZ	21	243	EP		1452	19.53-0.01								1.0
DQRL	SN	21	243	ES		1452	22.05	0.05							1.0
RCY	SZ	33	169	EP		1452	21.50-0.04								1.0
RCY	SE	33	169	ES		1452	25.48-0.00								1.0
HWQ	BZ	57	17	EP		1452	25.40	0.06							1.0

September 9 2012 Hour: 23:59 44.4 Lat: 33.59N Lon: 35.71E Depth: 9 Agency: REL Local  
Magnitudes: 2.4MC 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	16	132	EP		2359	47.45	0.02							1.0
RCY	SN	16	132	ES		2359	49.68-0.01								1.0
DQRL	SZ	18	314	EP		2359	47.75	0.01							1.0
DQRL	SN	18	314	ES		2359	50.22-0.01								1.0
BHL	BZ	35	351	EP		2359	50.25-0.02	25							1.0
BHL	BN	35	351	ES		2359	54.65	0.02							1.0
HWQ	BZ	79	16	EP		2359	57.25-0.01								1.0

September 10 2012 Hour: 11:17 17.7 Lat: 33.79N Lon: 35.79E Depth: 8 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	18	315	EP		1117	20.89-0.01	35							1.0
BHL	BE	18	315	ES		1117	23.31	0.01							1.0
DQRL	SZ	23	245	EP		1117	21.59-0.00								1.0



RCY	SZ	33	173	EP	1117	23.21	0.02										1.0
RCY	SN	33	173	ES	1117	27.28	-0.01										1.0
HWQ	BZ	56	15	EP	1117	26.80	-0.00										1.0

**September 11 2012 Hour: 15:46 4.4 Lat: 33.78N Lon: 35.76E Depth: 3 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	325	EP		1546	7.13	0.02	44						1.0
BHL	BN	16	325	ES		1546	9.09	-0.02							1.0
DQRL	SZ	19	243	EP		1546	7.60	0.02							1.0
DQRL	SN	19	243	ES		1546	9.95	0.02							1.0
RCY	SZ	33	167	EP		1546	9.66	-0.08							1.0
RCY	SN	33	167	ES		1546	13.71	0.02							1.0
HWQ	SZ	58	18	EP		1546	13.75	0.04							1.0

**September 12 2012 Hour: 3:27 45.0 Agency: REL Regional**  
**EMSC OT=03:27:45.0 34.74N 24.03E 30Km M=5.4 CRETE, GREECE**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		329	57.61								
RCY	SZ			EP		330	1.64								
HWQ	SZ			EP		330	2.22								

**September 12 2012 Hour: 12:58 50.0 Lat: 33.78N Lon: 35.76E Depth: 0 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	324	EP		1258	52.64	-0.09	60						1.0
BHL	BE	17	324	ES		1258	54.73	0.00							1.0
DQRL	SZ	20	244	EP		1258	53.21	0.01							1.0
DQRL	SN	20	244	ES		1258	55.57	0.01							1.0
BEYL	BZ	27	292	EP		1258	54.38	0.05							1.0
RCY	SZ	33	168	EP		1258	55.20	-0.07							1.0
RCY	SN	33	168	ES		1258	59.17	0.02							1.0
HWQ	SZ	58	17	EP		1258	59.36	0.06							1.0

**September 13 2012 Hour: 6: 6 8.5 Lat: 33.95N Lon: 35.63E Depth: 25 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	5	156	EP		6	6	12.68	0.05	39					1.0
BHL	BN	5	156	ES		6	6	15.65	-0.03						1.0
HWQ	SZ	47	39	EP		6	6	16.77	-0.02						1.0
HWQ	SE	47	39	ES		6	6	22.93	0.01						1.0
SHBL	BZ	68	171	EP		6	6	19.66	-0.03						1.0
SHBL	BE	68	171	ES		6	6	27.98	0.02						1.0

**September 15 2012 Hour: 9:30 40.3 Lat: 33.86N Lon: 35.80E Depth: 1 Agency: REL Local**  
**Magnitudes: 3.1MC 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	15	290	EP		930	42.77	0.04	68						1.0
BHL	BN	15	290	ES		930	44.54	0.01							1.0
DQRL	SZ	28	232	EP		930	44.81	0.05							1.0
DQRL	SN	28	232	ES		930	48.03	-0.03							1.0
BEYL	BZ	29	273	EP		930	44.97	0.00							1.0
RCY	SZ	40	176	EP		930	46.75	-0.06							1.0
RCY	SN	40	176	ES		930	51.60	-0.02							1.0
HWQ	SZ	48	16	EP		930	48.17	0.04							1.0
HWQ	SN	48	16	ES		930	53.88	-0.04							1.0

September 15 2012 Hour: 14: 4 0.0

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		14 4	54.16								
RCY	SZ			EP		14 4	58.12								

September 15 2012 Hour: 15:15 2.8 Lat: 33.78N Lon: 35.79E 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	317	EP		1515	5.74-0.02		37						1.0
BHL	BN	18	317	ES		1515	7.88-0.04								1.0
DQRL	SZ	22	246	EP		1515	6.36-0.03								1.0
DQRL	SE	22	246	ES		1515	9.07 0.06								1.0
RCY	SZ	32	172	EP		1515	8.03-0.03								1.0
HWQ	SZ	57	15	EP		1515	12.03 0.06								1.0

September 16 2012 Hour: 7:54 15.0

Agency: REL Regional

EMSC OT=07:54:15.0 37.44N 35.77E 18Km M=4.6 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		755	7.04								
BHL	BZ			EP		755	10.78								
RCY	SZ			EP		755	17.23								
SHBL	BZ			EP		755	18.68								

September 16 2012 Hour: 12:10 0.0

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		1210	36.96								
RCY	SZ			EP		1210	34.95								

September 16 2012 Hour: 21:46 19.0

Agency: REL Distant

EMSC OT=21:46:19.0 10.70N 126.83E 40Km M=5.3 PHILIPPINE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		2158	49.58								
BHL	BZ			EP		2158	50.95								
DQRL	SZ			EP		2158	52.10								

September 17 2012 Hour: 11:49 58.4 Lat: 34.71N Lon: 36.17E Depth: 3 Agency: REL Local  
 Magnitudes: 3.2MC REL Rms: 0.0 secs

AKKAR

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BENL	BZ	19	177	EP		1150	1.50 0.01								1.0
BENL	BN	19	177	ES		1150	3.81 0.01								1.0
HWQ	SZ	53	204	EP		1150	6.81-0.06		81						1.0
QRTL	BZ	75	204	EP		1150	10.49 0.00								1.0
QRTL	BN	75	204	ES		1150	19.49 0.03								1.0
BHL	BZ	102	208	EP		1150	14.75-0.02								1.0
DQRL	SZ	125	207	EP		1150	18.51 0.08								1.0
RCY	SZ	138	193	EP		1150	20.44-0.02								1.0
RCY	SN	138	193	ES		1150	36.78-0.03								1.0

September 17 2012 Hour: 15:56 57.7 Lat: 33.79N Lon: 35.76E Depth: 13 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	323	EP		1557	1.17 0.02		46						1.0
BHL	BN	16	323	ES		1557	3.70-0.01								1.0
DQRL	SZ	20	243	EP		1557	1.61-0.00								1.0
DQRL	SN	20	243	ES		1557	4.52 0.00								1.0
RCY	SZ	33	168	EP		1557	3.47-0.04								1.0
RCY	SN	33	168	ES		1557	7.84 0.02								1.0
HWQ	SZ	57	17	EP		1557	7.14 0.01								1.0

September 19 2012 Hour: 5:58 41.0

Agency: REL Regional

EMSC OT=05:58:41.0 37.31N 37.09E 5Km M=3.6 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		559	33.61								

September 19 2012 Hour: 7:19 20.0

Agency: REL Regional

EMSC OT=07:19:20.0 37.31N 37.12E 5Km M=3.8 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		720	12.98								
BHL	BZ			EP		720	15.46								
DQRL	SZ			EP		720	16.65								
RCY	SZ			EP		720	16.98								

September 19 2012 Hour: 7:54 18.8 Lat: 34.06N Lon: 35.70E Depth: 5 Agency: REL Local  
Magnitudes: 2.9MC REL Rms: 0.0 secs

KESROUANE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	195	EP		754	21.77	-0.03	51						1.0
BHL	BE	17	195	ES		754	24.03	0.04							1.0
BEYL	BZ	28	223	EP		754	23.33	-0.10							1.0
VERD	SZ	28	227	EP		754	23.51	0.05							1.0
HWQ	SZ	34	42	EP		754	24.37	0.03							1.0
HWQ	SE	34	42	ES		754	28.38	-0.02							1.0
DQRL	SZ	41	197	EP		754	25.47	0.01							1.0
RCY	SZ	63	169	EP		754	29.09	0.01							1.0
RCY	SN	63	169	ES		754	36.62	-0.05							1.0

September 19 2012 Hour: 9:17 46.0

Agency: REL Regional

EMSC OT=09:17:46.0 37.31N 37.10E 7Km M=4.7 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		918	38.33								
BHL	BZ			EP		918	43.78								
DQRL	SZ			EP		918	47.23								
RCY	SZ			EP		918	48.99								
SHBL	BZ			EP		918	50.97								

September 19 2012 Hour: 15:35 39.7 Lat: 33.79N Lon: 35.76E Depth: 11 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	323	EP		1535	42.89	0.00	37						1.0
BHL	BN	16	323	ES		1535	45.23	-0.00							1.0
DQRL	SZ	20	241	EP		1535	43.41	-0.00							1.0
DQRL	SN	20	241	ES		1535	46.15	-0.00							1.0
RCY	SZ	34	167	EP		1535	45.49	0.00							1.0
RCY	SN	34	167	ES		1535	49.76	0.00							1.0
HWQ	BZ	57	18	EP		1535	49.08	-0.00							1.0

September 19 2012 Hour: 16:31 7.5 Lat: 33.79N Lon: 35.65E Depth: 37 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	12	3	EP		1631	13.54	-0.02	49						1.0
BHL	BN	12	3	ES		1631	18.02	-0.00							1.0
DQRL	SZ	12	216	EP		1631	13.57	0.01							1.0
DQRL	SN	12	216	ES		1631	18.04	0.01							1.0
RCY	SZ	37	152	EP		1631	15.59	-0.02							1.0
RCY	SN	37	152	ES		1631	21.60	0.01							1.0
HWQ	SZ	60	27	EP		1631	18.20	0.01							1.0

September 19 2012 Hour: 16:36 41.8 Lat: 33.79N Lon: 35.77E Depth: 5 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	318	EP		1636	44.68	-0.00	40						1.0
BHL	BE	17	318	ES		1636	46.83	0.01							1.0
DQRL	SZ	21	243	EP		1636	45.38	0.01							1.0
DQRL	SN	21	243	ES		1636	48.02	-0.01							1.0
RCY	SZ	33	170	EP		1636	47.30	0.00							1.0
RCY	SE	33	170	ES		1636	51.37	-0.00							1.0
HWQ	BZ	56	17	EP		1636	50.92	-0.00							1.0

September 19 2012 Hour: 18:49 18.2 Lat: 34.12N Lon: 35.67E 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
QRTL	BZ	17	100	EP		1849	21.04	0.09							0.2
BHL	BZ	24	183	EP		1849	21.73	-0.28	50						1.0
HWQ	SZ	31	56	EP		1849	23.21	-0.00							1.0
HWQ	SN	31	56	ES		1849	26.94	-0.01							1.0
BEYL	BZ	32	210	EP		1849	23.39	0.11							0.2
DQRL	SZ	47	191	EP		1849	25.79	0.09							1.0
DQRL	SN	47	191	ES		1849	31.31	0.04							1.0
RCY	SZ	71	167	EP		1849	29.59	0.01							1.0
RCY	SN	71	167	ES		1849	38.07	0.03							1.0
SHBL	BZ	86	175	EP		1849	32.15	0.15							1.0
SHBL	BN	86	175	ES		1849	42.19	-0.05							1.0

September 19 2012 Hour: 23:15 8.0

Agency: REL Regional

EMSC OT=23:15:08.0 37.33N 37.14E 25Km M=4.2 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		2315	59.17								
BHL	BZ			EP		2316	5.59								
DQRL	SZ			EP		2316	9.04								
RCY	SZ			EP		2316	11.83								

September 20 2012 Hour: 1:10 29.0

Agency: REL Regional

EMSC OT=01:10:29.0 37.30N 37.12E 22Km M=3.9 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		111	20.51								
BHL	BZ			EP		111	27.03								
DQRL	SZ			EP		111	30.78								
RCY	SZ			EP		111	31.00								

September 20 2012 Hour: 10:11 0.0

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1011	59.56								
RCY	SZ			EP		1012	1.90								

September 20 2012 Hour: 11: 0 18.9 Lat: 33.77N Lon: 35.73E Depth: 0 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
DQRL	SZ	16	245	EP		11	0	21.50	-0.07						1.0
DQRL	SN	16	245	ES		11	0	23.56	0.03						1.0
BHL	BZ	17	335	EP		11	0	21.62	-0.00						1.0
RCY	SZ	32	162	EP		11	0	24.11	0.08	29					1.0
RCY	SE	32	162	ES		11	0	27.77	-0.04						1.0
HWQ	BZ	60	19	EP		11	0	28.61	0.01						1.0

September 20 2012 Hour: 14:57 0.0

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		1457	36.26								
RCY	SZ			EP		1457	34.29								

September 20 2012 Hour: 18:47 18.0

Agency: REL Regional

EMSC OT=18:47:18.0 35.38N 27.89E 40Km M=4.2 DODECANESE ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1848	54.08								
RCY	SZ			EP		1848	53.54								

September 21 2012 Hour: 8:47 39.0

Agency: REL Regional

EMSC OT=08:47:39.0 35.23N 22.55E 10Km M=5.0 CENTRAL MED SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		850	9.97								
HWQ	BZ			EP		850	14.06								
RCY	SZ			EP		850	14.36								

September 21 2012 Hour: 15:39 16.4

Agency: REL Regional

EMSC OT=15:39:16.0 35.42N 22.62E 44Km M=4.7 CENTRAL MED SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		1541	45.06								
HWQ	BZ			EP		1541	46.95								
RCY	SZ			EP		1541	47.31								

September 22 2012 Hour: 10: 0 11.2 Lat: 33.85N Lon: 35.82E Depth: 3 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	16	292	EP		10	0	13.93-0.00	33						1.0
BHL	BN	16	292	ES		10	0	15.92-0.01							1.0
DQRL	SZ	28	235	EP		10	0	15.78	0.00						1.0
RCY	SZ	39	177	EP		10	0	17.61	0.01						1.0
RCY	SN	39	177	ES		10	0	22.30-0.01							1.0
HWQ	SZ	49	14	EP		10	0	19.19	0.01						1.0

September 22 2012 Hour: 14: 7 9.9 Lat: 34.03N Lon: 35.71E Depth: 5 Agency: REL Local

Magnitudes: 2.8MC REL

Rms: 0.0 secs

KESROUANE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	15	199	EP		14	7	12.49	0.01	49					1.0
BHL	BE	15	199	ES		14	7	14.39-0.02							1.0
BEYL	BZ	26	229	EP		14	7	14.25	0.02						1.0
HWQ	SZ	35	39	EP		14	7	15.69	0.01						1.0
DQRL	SZ	38	199	EP		14	7	16.07-0.04							1.0
DQRL	SN	38	199	ES		14	7	20.77	0.05						1.0
RCY	SZ	60	169	EP		14	7	19.67	0.01						1.0
RCY	SN	60	169	ES		14	7	26.89-0.02							1.0

September 22 2012 Hour: 16:11 51.1 Lat: 33.80N Lon: 35.77E Depth: 12 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		1611	54.36-0.04	45							1.0
DQRL	SZ	21	241	EP		1611	55.04-0.01								1.0
DQRL	SN	21	241	ES		1611	58.02	0.03							1.0
RCY	SZ	34	169	EP		1611	56.92-0.02								1.0
RCY	SE	34	169	ES		1612	1.28	0.01							1.0
HWQ	SZ	56	17	EP		1612	0.38	0.04							1.0

September 22 2012 Hour: 21:40 6.1 Lat: 32.96N Lon: 35.55E Depth: 4 Agency: REL Local  
Magnitudes: 2.7MC REL Rms: 0.0 secs

**NORTH GALILEE**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	46	23	EP		2140	13.61	-0.01							1.0
SHBL	BN	46	23	ES		2140	19.19	0.01							1.0
RCY	SZ	65	24	EP		2140	16.55	-0.03	39						1.0
RCY	SE	65	24	ES		2140	24.35	0.01							1.0
DQRL	SZ	82	1	EP		2140	19.41	0.02							1.0
DQRL	SE	82	1	ES		2140	29.21	-0.02							1.0
BHL	BZ	105	5	EP		2140	23.01	0.01							1.0

September 23 2012 Hour: 17:12 43.9 Lat: 33.78N Lon: 35.75E Depth: 5 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	16	328	EP		1712	46.69	0.01	36						1.0
DQRL	SZ	18	242	EP		1712	47.07	0.01							1.0
DQRL	SN	18	242	ES		1712	49.38	-0.01							1.0
RCY	SZ	33	165	EP		1712	49.30	-0.02							1.0
RCY	SE	33	165	ES		1712	53.33	0.01							1.0
SHBL	BZ	48	180	EP		1712	51.77	0.01							1.0
HWQ	SZ	58	19	EP		1712	53.30	-0.01							1.0

September 24 2012 Hour: 8:53 9.4 Lat: 33.87N Lon: 35.82E Depth: 5 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	15	283	EP		853	12.03	-0.02	35						1.0
BHL	BN	15	283	ES		853	14.02	-0.01							1.0
DQRL	SZ	29	231	EP		853	14.20	-0.02							1.0
DQRL	SE	29	231	ES		853	17.85	0.04							1.0
RCY	SZ	42	178	EP		853	16.18	-0.03							1.0
RCY	SE	42	178	ES		853	21.27	0.01							1.0
HWQ	SZ	46	15	EP		853	16.96	0.03							1.0

September 24 2012 Hour: 14: 6 48.0 Lat: 33.81N Lon: 35.77E Depth: 13 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	16	315	EP		14 6	51.43	-0.02	36						1.0
BHL	BN	16	315	ES		14 6	53.98	0.01							1.0
DQRL	SZ	22	240	EP		14 6	52.24	0.00							1.0
RCY	SZ	35	170	EP		14 6	54.12	0.00							1.0
RCY	SE	35	170	ES		14 6	58.61	-0.00							1.0
HWQ	SZ	55	17	EP		14 6	57.17	0.00							1.0

September 24 2012 Hour: 16: 7 40.8 Lat: 33.78N Lon: 35.78E Depth: 0 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	318	EP		16 7	43.68	0.02	40						1.0
BHL	BE	18	318	ES		16 7	45.73	-0.05							1.0
DQRL	SZ	21	246	EP		16 7	44.21	-0.04							1.0
DQRL	SN	21	246	ES		16 7	46.86	0.04							1.0
RCY	SZ	32	171	EP		16 7	45.97	-0.05							1.0
RCY	SN	32	171	ES		16 7	49.90	0.02							1.0
SHBL	BZ	49	184	EP		16 7	48.63	0.01							1.0
SHBL	BE	49	184	ES		16 7	54.33	-0.08							1.0
HWQ	SZ	57	16	EP		16 7	49.97	0.01							1.0

September 25 2012 Hour: 3: 6 52.0

Agency: REL Distant

EMSC OT=03:06:52.0 15.48S 173.83W 109Km M=5.7 TONGA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		326	23.88								
RCY	SZ			EP		326	25.04								
BHL	BZ			EP		326	24.92								
DQRL	SZ			EP		326	25.59								

September 25 2012 Hour: 11:41 32.8 Lat: 33.79N

Lon: 35.77E Depth: 5 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	319	EP		1141	35.76	0.03	44						1.0
BHL	BN	17	319	ES		1141	37.89	0.01							1.0
DQRL	SZ	21	244	EP		1141	36.30	-0.03							1.0
DQRL	SN	21	244	ES		1141	38.95	0.01							1.0
BEYL	BZ	28	290	EP		1141	37.30	-0.04							1.0
RCY	SZ	33	170	EP		1141	38.21	-0.00							1.0
RCY	SN	33	170	ES		1141	42.18	-0.02							1.0
HWQ	SZ	57	16	EP		1141	41.99	-0.01							1.0

September 25 2012 Hour: 14: 9 13.0

Agency: REL Regional

EMSC OT=14:09:13.0 34.94N 33.87E 30Km M=2.9 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		14	9	44.21							
HWQ	SZ			EP		14	9	39.62							

September 26 2012 Hour: 1:28 30.0

Agency: REL Regional

EMSC OT=01:28:30.0 34.73N 30.00E 10Km M=4.6 EASTERN MED SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		129	40.67								
BHL	BZ			EP		129	40.29								
SHBL	BZ			EP		129	44.10								
HWQ	SZ			EP		129	43.91								

September 26 2012 Hour: 16:32 33.1 Lat: 33.78N

Lon: 35.76E Depth: 1 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	324	EP		1632	35.75	-0.01	53						1.0
BHL	BN	16	324	ES		1632	37.73	-0.00							1.0
DQRL	SZ	19	243	EP		1632	36.30	0.04							1.0
DQRL	SE	19	243	ES		1632	38.58	-0.01							1.0
BEYL	BZ	26	292	EP		1632	37.34	-0.00							1.0
RCY	SZ	33	167	EP		1632	38.37	-0.03							1.0
RCY	SN	33	167	ES		1632	42.35	0.02							1.0
SHBL	BZ	48	182	EP		1632	40.88	-0.04							1.0
HWQ	SZ	57	18	EP		1632	42.38	0.01							1.0

September 26 2012 Hour: 23:39 54.0

Agency: REL Distant

EMSC OT=23:39:54.0 51.57N 178.24W 10Km M=6.4 ANDREANOF ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2352	48.64								
BEYL	BZ			EP		2352	50.50								

September 27 2012 Hour: 14:38 36.7 Lat: 33.80N

Lon: 35.77E Depth: 11 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
BHL	BZ	16	317	EP		1438	39.91	-0.01	26						1.0
BHL	BE	16	317	ES		1438	42.32	0.00							1.0
DQRL	SZ	22	241	EP		1438	40.65	0.01							1.0
RCY	SZ	34	170	EP		1438	42.50	-0.01							1.0



RCY	SN	34	170	ES		1438	46.83	0.01										1.0
HWQ	SZ	56	17	EP		1438	45.86	0.01										1.0

**September 28 2012 Hour: 13:12 32.5 Lat: 33.79N Lon: 35.77E Depth: 3 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	319	EP		1312	35.31	0.00	34						1.0
BHL	BE	17	319	ES		1312	37.37	-0.00							1.0
DQRL	SZ	21	243	EP		1312	36.00	0.01							1.0
RCY	SZ	33	170	EP		1312	37.95	-0.00							1.0
RCY	SE	33	170	ES		1312	41.96	-0.01							1.0
HWQ	SZ	56	17	EP		1312	41.65	0.01							1.0

**September 28 2012 Hour: 23:1 44.5 Lat: 33.79N Lon: 35.80E 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	19	315	EP		23	1	47.40	-0.08	46					1.0
BHL	BN	19	315	ES		23	1	49.73	0.02						1.0
DQRL	SZ	23	247	EP		23	1	48.12	-0.04						1.0
DQRL	SN	23	247	ES		23	1	50.93	0.03						1.0
BEYL	BZ	30	289	EP		23	1	49.28	0.02						1.0
RCY	SZ	32	174	EP		23	1	49.64	-0.03						1.0
RCY	SN	32	174	ES		23	1	53.56	0.03						1.0
SHBL	BZ	49	186	EP		23	1	52.26	-0.07						1.0
HWQ	SZ	56	14	EP		23	1	53.59	0.05						1.0

**September 29 2012 Hour: 2:39 36.0 Agency: REL Regional**

**EMSC OT=02:39:36.0 35.27N 27.90E 40Km M=4.2 DODECANESE ISLANDS**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		241		11.61							
SHBL	BZ			EP		241		12.81							
RCY	SZ			EP		241		12.98							

**September 29 2012 Hour: 5:25 42.0 Agency: REL Regional**

**EMSC OT=05:25:42.0 35.19N 27.88E 10Km M=4.6 DODECANESE ISLANDS**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		527		21.49							
RCY	SZ			EP		527		22.16							

**September 29 2012 Hour: 13:56 33.3 Lat: 33.54N Lon: 35.74E Depth: 4 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		1356	35.31	0.08	34						1.0
RCY	SN	10	117	ES		1356	36.61	-0.04							1.0
SHBL	BZ	21	178	EP		1356	36.80	-0.04							1.0
SHBL	BN	21	178	ES		1356	39.47	0.01							1.0
DQRL	SZ	24	320	EP		1356	37.27	-0.00							1.0
DQRL	SN	24	320	ES		1356	40.22	0.01							1.0
BHL	BZ	41	350	EP		1356	39.98	-0.02							1.0

**September 30 2012 Hour: 15:52 35.0 Agency: REL Regional**

**EMSC OT=15:52:35.0 34.99N 33.66E 43Km M=3.4 CYPRUS REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1553		5.56							
DQRL	SZ			EP		1553		6.46							
HWQ	SZ			EP		1553		7.55							
RCY	SZ			EP		1553		11.55							



# Epicentral Map of Lebanon

## SEPTEMBER 2012

