

Republic of Lebanon  
National Council for Scientific Research

# Provisional Seismological Bulletin

from the

## NATIONAL SEISMIC NETWORK

April

2013

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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.

<b>P-wave velocity (km/sec)</b>	<b>depth to top of layer (km)</b>
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:

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

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

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

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

## **STATIONS USED**

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

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

STATION	LATITUDE	LONGITUDE	HEIGHT (m)	NAME	COMMENTS
BHL	3354.25N	3539.25E	1000	BHANNES	Opened May 1980
HWQ	3416.68N	3556.78E	1161	HAWQA	Opened Jan 2001
MATL	3329.32N	3519.78E	5	MATARIH	Opened Nov 2000
FKH	3414.69N	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\*(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.

**April 1 2013 Hour: 11:24 0.0** Agency: REL Local  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 DQRL SZ EP 1125 16.02  
 RCY SZ EP 1125 15.82

**April 1 2013 Hour: 13:21 28.1** Lat: 33.41N Lon: 35.37E Depth: 15 Agency: REL Local  
**Magnitudes: 2.9MC REL** Rms: 0.0 secs  
**SOUTH LEBANON**  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 DQRL SZ 38 29 EP 1321 34.73-0.02 52 1.0  
 DQRL SN 38 29 ES 1321 39.66 0.02 1.0  
 RCY SZ 44 77 EP 1321 35.74 0.02 1.0  
 RCY SN 44 77 ES 1321 41.31-0.02 1.0  
 BHL BZ 61 26 EP 1321 38.07-0.06 1.0  
 HWQ SZ 110 29 EP 1321 45.43 0.05 1.0

**April 1 2013 Hour: 15: 4 14.2** Lat: 33.45N Lon: 35.64E Depth: 1 Agency: REL Local  
**Magnitudes: 2.7MC REL** Rms: 0.0 secs  
**MOUNT HERMON REGION**  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 QRWL SZ 11 21 EP 15 4 16.01-0.02 1.0  
 QRWL SN 11 21 ES 15 4 17.37 0.00 1.0  
 SHBL BZ 15 141 EP 15 4 16.66-0.03 1.0  
 SHBL BN 15 141 ES 15 4 18.56 0.03 1.0  
 RCY SZ 19 75 EP 15 4 17.26-0.00 39 1.0  
 RCY SN 19 75 ES 15 4 19.52-0.00 1.0  
 DQRL SZ 29 347 EP 15 4 18.84-0.00 1.0  
 BHL BZ 50 1 EP 15 4 22.30 0.03 1.0

**April 1 2013 Hour: 22: 4 34.8** Lat: 33.78N Lon: 35.78E 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 18 321 EP 22 4 37.70-0.02 1.0  
 BHL BN 18 321 ES 22 4 39.86-0.03 1.0  
 DQRL SZ 21 248 EP 22 4 38.15 0.03 56 1.0  
 DQRL SN 21 248 ES 22 4 40.59 0.01 1.0  
 RCY SZ 32 170 EP 22 4 39.85-0.01 1.0  
 RCY SN 32 170 ES 22 4 43.58-0.04 1.0  
 SHBL BZ 48 184 EP 22 4 42.48 0.03 1.0  
 HWQ SZ 58 16 EP 22 4 44.14 0.03 1.0

**April 2 2013 Hour: 12:40 39.5** Lat: 33.38N Lon: 35.63E Depth: 5 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 11 110 EP 1240 41.56-0.00 1.0  
 QRWL SZ 19 14 EP 1240 42.69-0.01 1.0  
 QRWL SN 19 14 ES 1240 45.07 0.00 1.0  
 RCY SZ 23 56 EP 1240 43.32 0.01 31 1.0  
 RCY SN 23 56 ES 1240 46.12-0.01 1.0

**April 2 2013 Hour: 14:34 57.0** Agency: REL Distant  
**EMSC OT=14:34:57.0 40.31S 45.26E 10Km ML=5.9 S-W INDIAN RIDGE**  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 BHL BZ EP 1446 35.55  
 SHBL BZ EP 1446 32.38

**April 2 2013 Hour: 15:51 9.4** Lat: 33.78N Lon: 35.75E Depth: 4 Agency: REL Local  
**Magnitudes: 2.7MC REL**

**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	325	EP		1551	12.18	-0.01	42						1.0
BHL	BE	16	325	ES		1551	14.22	-0.01							1.0
DQRL	SZ	19	243	EP		1551	12.62	-0.03							1.0
DQRL	SN	19	243	ES		1551	15.06	0.03							1.0
RCY	SZ	33	167	EP		1551	14.82	-0.01							1.0
HWQ	SZ	58	18	EP		1551	18.79	0.02							1.0

**April 2 2013 Hour: 20:53 3.7** Lat: 33.69N Lon: 35.83E Depth: 1 Agency: REL Local  
**Magnitudes: 2.7MC REL**

**CENTRAL BEKAA**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	21	221	EP		2053	7.19	0.02							1.0
RCY	SZ	22	179	EP		2053	7.26	0.00							1.0
RCY	SN	22	179	ES		2053	9.88	0.00							1.0
DQRL	SZ	24	273	EP		2053	7.72	0.06							1.0
DQRL	SN	24	273	ES		2053	10.58	0.00							1.0
BHL	BZ	29	325	EP		2053	8.27	-0.08	41						1.0
BHL	BN	29	325	ES		2053	11.77	-0.01							1.0
SHBL	BZ	39	192	EP		2053	10.01	-0.03							1.0
HWQ	SZ	66	9	EP		2053	14.37	0.05							1.0

**April 3 2013 Hour: 14:05 14.4** Lat: 33.47N Lon: 35.69E Depth: 0 Agency: REL Local  
**Magnitudes: 2.8MC REL**

**MOUNT HERMON REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	8	354	EP		14	0	52.65	-0.06						1.0
RCY	SZ	14	79	EP		14	0	53.63	0.04	47					1.0
SHBL	BZ	15	161	EP		14	0	53.71	-0.06						1.0
SHBL	BN	15	161	ES		14	0	55.58	0.04						1.0
DQRL	SZ	28	336	EP		14	0	55.96	0.06						1.0
DQRL	SN	28	336	ES		14	0	59.27	0.02						1.0
BHL	BZ	48	356	EP		14	0	59.08	-0.01						1.0
HWQ	SZ	92	15	EP		14	1	6.23	-0.02						1.0

**April 3 2013 Hour: 15:53 42.2** Lat: 33.82N Lon: 35.71E Depth: 32 Agency: REL Local  
**Magnitudes: 2.7MC REL**

**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	10	331	EP		1553	47.53	-0.03	41						1.0
DQRL	SZ	18	224	EP		1553	48.06	0.02							1.0
DQRL	SN	18	224	ES		1553	52.38	0.02							1.0
QRWL	SZ	31	184	EP		1553	49.09	-0.06							1.0
RCY	SZ	38	162	EP		1553	50.07	0.05							1.0
RCY	SN	38	162	ES		1553	55.80	-0.01							1.0
HWQ	SZ	55	24	EP		1553	52.06	0.01							1.0

**April 3 2013 Hour: 16:35 46.0** Lat: 19.30N Lon: 95.72E Depth: 32 Agency: REL Distant  
**EMSC OT=16:35:46.0 19.30N 95.72E 10Km ML=5.6 MYANMAR**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ			EP		1645	18.19								
BHL	BZ			EP		1645	18.54								
DQRL	SZ			EP		1645	19.05								

April 4 2013 Hour: 6:35 26.3 Agency: REL Regional

**EMSC OT=06:34:26.3 37.34N 37.14E 7Km ML=3.5 CENTRAL TURKEY**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP			635	19.58							
RCY	SZ			EP			635	28.11							

April 4 2013 Hour: 9:3 6.4 Lat: 33.35N Lon: 35.60E Depth: 6 Agency: REL Local  
Magnitudes: 2.4MC REL

**SOUTH LEBANON**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	14	92	EP		9	3	8.90-0.02							1.0
SHBL	BE	14	92	ES		9	3	10.80 0.01							1.0
QRWL	SZ	23	20	EP		9	3	10.27-0.00							1.0
QRWL	SN	23	20	ES		9	3	13.13-0.01							1.0
RCY	SZ	27	54	EP		9	3	10.96 0.00	24						1.0
DQRL	SZ	39	356	EP		9	3	12.83 0.01							1.0

April 5 2013 Hour: 13:0 1.0 Agency: REL Distant

**EMSC OT=13:00:01.0 42.80N 131.08E 551Km ML=6.2 RUSSIA-CHINA REG**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		1310	23.34								
BHL	BZ			EP		1310	25.75								
RCY	SZ			EP		1310	27.08								
QRWL	SZ			EP		1310	27.35								
SHBL	BZ			EP		1310	27.89								

April 6 2013 Hour: 9:59 5.4 Lat: 33.33N Lon: 35.60E Depth: 20 Agency: REL Local  
Magnitudes: 2.7MC REL

**SOUTH LEBANON**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	14	83	EP		959	9.38	0.00							1.0
SHBL	BN	14	83	ES		959	12.35	0.00							1.0
QRWL	SZ	25	18	EP		959	10.48-0.03								1.0
QRWL	SE	25	18	ES		959	14.31	0.00							1.0
RCY	SZ	29	50	EP		959	10.99	0.00	39						1.0
DQRL	SZ	42	356	EP		959	12.67	0.02							1.0

April 6 2013 Hour: 11:26 8.0 Agency: REL Regional

**EMSC OT=11:26:08.0 34.80N 24.09E 40Km ML=5.0 CRETE, GREECE**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		1128	19.32								
BHL	BZ			EP		1128	19.17								
QRWL	SZ			EP		1128	21.10								
HWQ	SZ			EP		1128	23.38								
RCY	SZ			EP		1128	23.59								

April 6 2013 Hour: 12:8 17.0 Lat: 34.39N Lon: 36.61E Depth: 15 Agency: REL Local  
Magnitudes: 2.9MC REL

**NEBEK REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	63	259	EP		12	8	27.16-0.02	51						1.0
HWQ	SE	63	259	ES		12	8	34.75 0.02							1.0
BHL	BZ	104	239	EP		12	8	33.16-0.04							1.0
BHL	BE	104	239	ES		12	8	45.19-0.02							1.0
DQRL	SZ	123	232	EP		12	8	36.07 0.07							1.0
RCY	SZ	123	216	EP		12	8	35.99-0.01							1.0

**April 6 2013 Hour: 14:16 39.2**      Lat: 33.45N Lon: 35.65E Depth: 0 Agency: REL Local  
**Magnitudes: 2.4MC REL**  
**MOUNT HERMON REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	12	18	EP		1416	41.00	-0.05							1.0
QRWL	SN	12	18	ES		1416	42.43	0.00							1.0
SHBL	BZ	15	140	EP		1416	41.51	-0.03							1.0
SHBL	BN	15	140	ES		1416	43.30	0.02							1.0
RCY	SZ	19	73	EP		1416	42.21	0.02	27						1.0
DQRL	SZ	29	346	EP		1416	43.96	0.04							1.0

**April 7 2013 Hour: 11:18 35.9**      Lat: 33.67N Lon: 35.81E Depth: 0 Agency: REL Local  
**Magnitudes: 2.9MC REL**  
**CENTRAL BEKAA**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	18	223	EP		1118	38.79	-0.01							1.0
QRWL	SN	18	223	ES		1118	40.98	0.01							1.0
RCY	SZ	19	174	EP		1118	38.96	-0.00	52						1.0
DQRL	SZ	23	281	EP		1118	39.65	0.05							1.0
DQRL	SN	23	281	ES		1118	42.32	-0.03							1.0
BHL	BZ	30	331	EP		1118	40.71	-0.03							1.0
BHL	BN	30	331	ES		1118	44.34	0.00							1.0
SHBL	BZ	36	191	EP		1118	41.69	-0.00							1.0
SHBL	BN	36	191	ES		1118	45.99	-0.01							1.0
HWQ	SZ	69	10	EP		1118	46.99	0.02							1.0

**April 7 2013 Hour: 12:30 3.8**      Lat: 33.86N Lon: 35.82E Depth: 1 Agency: REL Local  
**Magnitudes: 2.9MC REL**

**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	289	EP		1230	6.48	0.00	56						1.0
BHL	BE	16	289	ES		1230	8.43	0.00							1.0
DQRL	SZ	29	234	EP		1230	8.49	0.03							1.0
DQRL	SE	29	234	ES		1230	11.85	-0.02							1.0
RCY	SZ	40	178	EP		1230	10.29	-0.01							1.0
RCY	SN	40	178	ES		1230	15.09	0.01							1.0
HWQ	SZ	48	14	EP		1230	11.62	-0.01							1.0

**April 7 2013 Hour: 15:30 13.1**      Lat: 34.02N Lon: 35.74E Depth: 5 Agency: REL Local  
**Magnitudes: 3.1MC REL**

**KESROUANE**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	210	EP		1530	15.78	0.01							1.0
BEYL	BZ	28	233	EP		1530	17.71	-0.03							1.0
HWQ	SZ	34	34	EP		1530	18.67	-0.00	69						1.0
DQRL	SZ	39	204	EP		1530	19.45	0.05							1.0
DQRL	SN	39	204	ES		1530	24.05	-0.02							1.0
RCY	SZ	59	171	EP		1530	22.67	-0.03							1.0
RCY	SN	59	171	ES		1530	29.80	-0.01							1.0
SHBL	BZ	75	180	EP		1530	25.24	0.01							1.0
SHBL	BN	75	180	ES		1530	34.23	0.02							1.0

**April 7 2013 Hour: 15:58 1.0**      Lat: 27.72N Lon: 34.05E Depth: 10Km ML=4.4 RED SEA      Agency: REL Regional  
**EMSC OT=15:58:01.0**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1559	37.85								
DQRL	SZ			EP		1559	37.17								

**April 7 2013 Hour: 16:16 56.9** Lat: 33.79N Lon: 35.79E Depth: 3 Agency: REL Local  
**Magnitudes: 2.8MC REL**

**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	317	EP		1616	59.93	0.02	44						1.0
BHL	BN	18	317	ES		1617	2.10	-0.00							1.0
DQRL	SZ	22	246	EP		1617	0.53	-0.02							1.0
RCY	SZ	33	172	EP		1617	2.20	-0.05							1.0
RCY	SN	33	172	ES		1617	6.18	0.01							1.0
SHBL	BZ	49	185	EP		1617	4.88	0.03							1.0
SHBL	BN	49	185	ES		1617	10.72	0.02							1.0
HWQ	SZ	57	15	EP		1617	6.09	0.00							1.0

**April 7 2013 Hour: 22:11 11.0** Lat: 33.54N Lon: 35.80E Depth: 2 Agency: REL Local  
**Magnitudes: 2.2MC REL**

**MOUNT HERMON REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	11	277	EP		2211	12.85	-0.03	19						1.0
QRWL	SN	11	277	ES		2211	14.28	0.02							1.0
SHBL	BZ	22	194	EP		2211	14.57	0.03							1.0
SHBL	BN	22	194	ES		2211	17.12	-0.02							1.0
DQRL	SZ	29	311	EP		2211	15.65	0.00							1.0

**April 8 2013 Hour: 5:54 14.6** Lat: 33.78N Lon: 35.76E Depth: 1 Agency: REL Local  
**Magnitudes: 2.7MC REL**

**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	326	EP		554	17.46	-0.00	39						1.0
BHL	BN	17	326	ES		554	19.55	0.00							1.0
DQRL	SZ	19	246	EP		554	17.75	0.01							1.0
DQRL	SE	19	246	ES		554	20.01	-0.01							1.0
RCY	SZ	32	167	EP		554	19.79	0.00							1.0
HWQ	SZ	59	17	EP		554	24.09	-0.00							1.0

**April 8 2013 Hour: 10:40 17.5** Lat: 33.35N Lon: 35.60E Depth: 12 Agency: REL Local  
**Magnitudes: 2.6MC REL**

**SOUTH LEBANON**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	13	93	EP		1040	20.48	0.01							1.0
SHBL	BN	13	93	ES		1040	22.70	0.00							1.0
QRWL	SZ	23	18	EP		1040	21.58	-0.08							1.0
RCY	SZ	27	54	EP		1040	22.26	-0.01	34						1.0
RCY	SN	27	54	ES		1040	25.84	0.02							1.0
DQRL	SZ	39	355	EP		1040	24.17	0.06							1.0

**April 8 2013 Hour: 11:49 41.8** Lat: 33.45N Lon: 35.57E Depth: 15 Agency: REL Local  
**Magnitudes: 2.6MC REL**

**SAIDA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	15	44	EP		1149	45.30	0.01							1.0
QRWL	SN	15	44	ES		1149	47.91	0.00							1.0
SHBL	BZ	20	124	EP		1149	45.88	-0.00							1.0
SHBL	BN	20	124	ES		1149	48.95	0.01							1.0
RCY	SZ	26	78	EP		1149	46.60	-0.01	36						1.0

**April 8 2013 Hour: 15: 9 41.2** Lat: 33.82N Lon: 35.76E Depth: 22 Agency: REL Local  
**Magnitudes: 2.7MC REL**

**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	13	314	EP		15	9	45.40	-0.04	42					1.0
BHL	BE	13	314	ES		15	9	48.59	0.02						1.0
DQRL	SZ	21	233	EP		15	9	46.20	0.01						1.0
RCY	SZ	37	168	EP		15	9	48.08	0.01						1.0

RCY SN 37 168 ES	15 9 53.14-0.01	1.0
HWQ SZ 54 19 EP	15 9 50.32 0.01	1.0

**April 8 2013 Hour: 17:35 9.5 Lat: 33.78N Lon: 35.78E Depth: 5 Agency: REL Local Magnitudes: 2.8MC REL**

**BEIRUT REGION**

STAT CO DIST AZI PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL BZ 17 320 EP		1735	12.41-0.05	44							1.0
DQRL SZ 21 245 EP		1735	13.06 0.05								1.0
DQRL SN 21 245 ES		1735	15.62 0.02								1.0
QRWL SZ 28 198 EP		1735	13.98-0.08								1.0
RCY SZ 32 170 EP		1735	14.85 0.02								1.0
RCY SN 32 170 ES		1735	18.79 0.01								1.0
HWQ SZ 57 16 EP		1735	18.77 0.03								1.0

**April 9 2013 Hour: 3:36 28.0 Agency: REL Regional EMSC OT=03:36:28.0 36.53N 23.03E 21Km ML=5.0 SOUTHERN GREECE**

STAT CO DIST AZI PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL SZ	EP	338	58.12								1.0
HWQ SZ	EP	338	59.17								1.0
RCY SZ	EP	339	0.49								1.0

**April 9 2013 Hour: 11:24 4.3 Lat: 33.69N Lon: 35.94E Depth: 29 Agency: REL Local Magnitudes: 2.9MC REL**

**CENTRAL BEKAA**

STAT CO DIST AZI PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY SZ 24 205 EP		1124	10.32-0.01								1.0
RCY SN 24 205 ES		1124	14.81 0.01								1.0
QRWL SZ 29 236 EP		1124	10.79 0.00								1.0
DQRL SZ 35 272 EP		1124	11.41 0.01								1.0
DQRL SN 35 272 ES		1124	16.66-0.00								1.0
BHL BZ 36 311 EP		1124	11.50-0.00	50							1.0
HWQ SZ 65 0 EP		1124	15.33 0.05								0.2

**April 9 2013 Hour: 11:52 50.0 Agency: REL Distant EMSC OT=11:52:50.0 28.48N 51.58E 10Km ML=6.3 SOUTHERN IRAN**

STAT CO DIST AZI PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY SZ	EP	1156	14.94								1.0
BHL BZ	EP	1156	18.26								1.0
DQRL SZ	EP	1156	19.07								1.0

**April 10 2013 Hour: 1:58 27.0 Agency: REL Distant EMSC OT=01:58:27.0 28.37N 51.68E 10Km ML=5.5 SOUTHERN IRAN**

STAT CO DIST AZI PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL SZ	EP	2 1	56.70								1.0
BHL BZ	EP	2 1	55.43								1.0

**April 10 2013 Hour: 7:59 59.0 Agency: REL Distant EMSC OT=07:59:59.0 28.35N 51.72E 10Km ML=5.2 SOUTHERN IRAN**

STAT CO DIST AZI PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL SZ	EP	8 3	30.33								1.0
BHL BZ	EP	8 3	30.33								1.0

**April 10 2013 Hour: 10:45 26.5 Lat: 33.80N Lon: 35.73E Depth: 25 Agency: REL Local Magnitudes: 2.7MC REL**

**BEIRUT REGION**

STAT CO DIST AZI PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL BZ 14 328 EP		1045	31.10-0.01	41							1.0
DQRL SZ 18 235 EP		1045	31.48 0.00								1.0
DQRL SN 18 235 ES		1045	35.18 0.00								1.0
RCY SZ 35 164 EP		1045	33.31-0.01								1.0
RCY SN 35 164 ES		1045	38.38 0.00								1.0
HWQ SZ 57 20 EP		1045	36.15 0.01								1.0

**April 10 2013 Hour: 20:20 27.0** **Agency: REL Distant**  
**EMSC OT=20:20:27.0 20.80N 122.07E 10Km ML=6.0 BATAN ISL REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2032	14.55								
RCY	SZ			EP		2032	14.73								
BEYL	BZ			EP		2032	15.03								
SHBL	BZ			EP		2032	15.38								
DQRL	SZ			EP		2032	15.50								

**April 10 2013 Hour: 21:38 25.9** **Lat: 33.17N Lon: 35.42E Depth: 0** **Agency: REL Local**  
**Magnitudes: 2.9MC REL**  
**SOUTH LEBANON**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	36	57	EP		2138	31.75	0.03							1.0
SHBL	BN	36	57	ES		2138	36.00	0.00							1.0
QRWL	SZ	48	31	EP		2138	33.60	-0.08							1.0
QRWL	SN	48	31	ES		2138	39.41	-0.01							1.0
RCY	SZ	53	47	EP		2138	34.41	-0.02							1.0
DQRL	SZ	61	13	EP		2138	35.65	-0.04							1.0
BHL	BZ	84	15	EP		2138	39.49	0.04							1.0
HWQ	SZ	132	22	EP		2138	47.26	0.08							1.0

**April 11 2013 Hour: 9:56 46.4** **Lat: 33.83N Lon: 35.74E Depth: 26** **Agency: REL Local**  
**Magnitudes: 2.7MC REL**  
**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	12	316	EP		956	51.14	0.02							1.0
BHL	BE	12	316	ES		956	54.56	-0.02							1.0
DQRL	SZ	21	231	EP		956	51.77	-0.03							1.0
DQRL	SN	21	231	ES		956	55.79	0.02							1.0
RCY	SZ	37	167	EP		956	53.66	-0.00							1.0
HWQ	SZ	54	20	EP		956	55.76	0.01							1.0

**April 11 2013 Hour: 10: 8 9.5** **Lat: 33.46N Lon: 35.59E Depth: 13** **Agency: REL Local**  
**Magnitudes: 2.3MC REL**  
**SAIDA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	13	40	EP		10	8	12.57	-0.01						1.0
QRWL	SN	13	40	ES		10	8	14.88	-0.00						1.0
SHBL	BZ	19	130	EP		10	8	13.31	0.01						1.0
SHBL	BN	19	130	ES		10	8	16.13	-0.00						1.0
RCY	SZ	23	79	EP		10	8	13.89	0.00						1.0

**April 11 2013 Hour: 11:17 44.0** **Agency: REL Regional**  
**EMSC OT=11:17:44.0 35.65N 31.66E 15Km ML=3.9 CYPRUS REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		1118	44.05								
RCY	SZ			EP		1118	47.61								

**April 11 2013 Hour: 11:35 24.4** **Lat: 33.78N Lon: 35.76E Depth: 0** **Agency: REL Local**  
**Magnitudes: 2.8MC REL**  
**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	324	EP		1135	27.03	-0.10							1.0
BHL	BE	17	324	ES		1135	29.17	-0.01							1.0
DQRL	SZ	20	246	EP		1135	27.60	0.05							1.0
DQRL	SE	20	246	ES		1135	29.94	0.03							1.0
QRWL	SZ	27	197	EP		1135	28.52	-0.16							1.0
QRWL	SN	27	197	ES		1135	31.91	0.02							1.0
BEYL	BZ	27	292	EP		1135	28.76	0.03							1.0
RCY	SZ	32	168	EP		1135	29.50	-0.03							1.0
RCY	SE	32	168	ES		1135	33.39	0.03							1.0
HWQ	SZ	58	17	EP		1135	33.75	0.08							1.0

HWQ	SN	58	17	ES	1135	40.58	0.01	1.0
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**April 11 2013 Hour: 12:55 7.8**      Lat: 33.33N Lon: 35.57E Depth: 21 Agency: REL Local  
**Magnitudes: 2.6MC REL**

**SOUTH LEBANON**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	16	83	EP		12	6	2.09-0.08							1.0
SHBL	BE	16	83	ES		12	6	5.47 0.05							1.0
QRWL	SZ	26	23	EP		12	6	3.16-0.00	33						1.0
RCY	SZ	31	53	EP		12	6	3.84 0.08							1.0
RCY	SE	31	53	ES		12	6	8.13-0.05							1.0

**April 11 2013 Hour: 14:18 55.8**      Lat: 33.78N Lon: 35.78E Depth: 0 Agency: REL Local  
**Magnitudes: 2.7MC REL**

**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	318	EP		1418	58.63-0.06	38							1.0
BHL	BN	18	318	ES		1419	0.84-0.00								1.0
DQRL	SZ	22	247	EP		1418	59.31 0.03								1.0
RCY	SZ	32	171	EP		1419	0.95-0.04								1.0
RCY	SN	32	171	ES		1419	4.81-0.02								1.0
HWQ	SZ	57	15	EP		1419	5.00 0.04								1.0

**April 11 2013 Hour: 15:36 8.1**      Lat: 33.42N Lon: 35.48E Depth: 9 Agency: REL Local  
**Magnitudes: 2.7MC REL**

**SAIDA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	24	53	EP		1536	12.18-0.09								1.0
QRWL	SN	24	53	ES		1536	15.37-0.01								1.0
DQRL	SZ	33	15	EP		1536	13.61-0.05								1.0
DQRL	SN	33	15	ES		1536	17.84 0.04								1.0
RCY	SZ	35	75	EP		1536	13.96 0.07								1.0
BHL	BZ	57	17	EP		1536	17.37 0.05	38							1.0
HWQ	SZ	105	24	EP		1536	24.79-0.01								1.0

**April 11 2013 Hour: 18:42 31.0**      Lat: 34.72N Lon: 36.13E Depth: 0 Agency: REL Local  
**Magnitudes: 2.9MC REL**

**HOMS REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	52	199	EP		1842	39.03-0.39	50							1.0
HWQ	SN	52	199	ES		1842	45.64-0.04								1.0
BHL	BZ	101	206	EP		1842	47.29 0.02								1.0
DQRL	SZ	124	205	EP		1842	50.92-0.10								1.0
DQRL	SE	124	205	ES		1843	5.98 0.12								1.0
SHBL	BZ	157	193	EP		1842	56.16 0.18								1.0

**April 11 2013 Hour: 23:42 20.4**      Lat: 33.79N Lon: 35.77E Depth: 0 Agency: REL Local  
**Magnitudes: 2.9MC REL**

**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	321	EP		2342	23.11 0.00	54							1.0
BHL	BE	17	321	ES		2342	25.08-0.01								1.0
DQRL	SZ	20	243	EP		2342	23.69-0.03								1.0
DQRL	SE	20	243	ES		2342	26.17 0.02								1.0
BEYL	BZ	27	290	EP		2342	24.83 0.05								1.0
QRWL	SZ	28	196	EP		2342	24.78-0.13								1.0
QRWL	SN	28	196	ES		2342	28.20-0.03								1.0
RCY	SZ	33	169	EP		2342	25.77 0.02								1.0
RCY	SN	33	169	ES		2342	29.76 0.07								1.0
SHBL	BZ	49	182	EP		2342	28.29-0.01								1.0
SHBL	BN	49	182	ES		2342	34.12-0.01								1.0
HWQ	SZ	57	17	EP		2342	29.59-0.01								1.0

**April 12 2013 Hour: 11:1 5.9**      Lat: 33.38N Lon: 35.61E Depth: 0 Agency: REL Local  
**Magnitudes: 2.5MC REL**  
**SOUTH LEBANON**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	13	106	EP		11	1	8.10	0.01						1.0
SHBL	BN	13	106	ES		11	1	9.78	0.03						1.0
QRWL	SZ	20	21	EP		11	1	9.12	0.01	30					1.0
QRWL	SN	20	21	ES		11	1	11.47	-0.00						1.0
RCY	SZ	25	59	EP		11	1	9.89	-0.05						1.0
DQRL	SZ	36	355	EP		11	1	11.72	-0.03						1.0
HWQ	SZ	104	17	EP		11	1	22.82	0.07						1.0

**April 12 2013 Hour: 13:12 47.2**      Lat: 33.46N Lon: 35.58E Depth: 15 Agency: REL Local  
**Magnitudes: 2.3MC REL**  
**SAIDA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	14	44	EP		1312	50.64	-0.01	24						1.0
QRWL	SN	14	44	ES		1312	53.18	-0.00							1.0
SHBL	BZ	20	127	EP		1312	51.33	0.00							1.0
SHBL	BN	20	127	ES		1312	54.36	-0.01							1.0
RCY	SZ	25	79	EP		1312	51.98	0.02							1.0

**April 13 2013 Hour: 14:29 30.7**      Lat: 33.79N Lon: 35.77E Depth: 0 Agency: REL Local  
**Magnitudes: 2.4MC REL**  
**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	321	EP		1429	33.42	0.01	26						1.0
DQRL	SZ	21	244	EP		1429	34.04	0.03							1.0
DQRL	SN	21	244	ES		1429	36.43	-0.03							1.0
RCY	SZ	33	169	EP		1429	36.00	0.01							1.0
RCY	SN	33	169	ES		1429	39.90	-0.01							1.0
HWQ	SZ	57	17	EP		1429	39.85	-0.02							1.0

**April 13 2013 Hour: 15:37 52.4**      Lat: 33.78N Lon: 35.77E Depth: 1 Agency: REL Local  
**Magnitudes: 2.8MC REL**  
**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	322	EP		1537	55.22	-0.03	46						1.0
BHL	BE	18	322	ES		1537	57.38	0.01							1.0
DQRL	SZ	20	247	EP		1537	55.70	0.04							1.0
DQRL	SN	20	247	ES		1537	58.08	-0.01							1.0
QRWL	SZ	27	198	EP		1537	56.66	-0.05							1.0
BEYL	BZ	28	292	EP		1537	56.85	-0.00							1.0
RCY	SZ	32	169	EP		1537	57.56	0.05							1.0
RCY	SE	32	169	ES		1538	1.31	-0.01							1.0
HWQ	SZ	58	16	EP		1538	1.70	-0.00							1.0

**April 13 2013 Hour: 15:58 30.9**      Lat: 33.78N Lon: 35.78E Depth: 0 Agency: REL Local  
**Magnitudes: 2.6MC REL**  
**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	318	EP		1558	33.69	-0.09	36						1.0
DQRL	SZ	22	246	EP		1558	34.37	-0.02							1.0
DQRL	SN	22	246	ES		1558	37.04	0.06							1.0
SHBL	BZ	49	184	EP		1558	38.73	-0.02							1.0
SHBL	BE	49	184	ES		1558	44.54	-0.01							1.0
HWQ	SZ	57	15	EP		1558	40.12	0.07							1.0

**April 14 2013 Hour: 3:40 0.0** Agency: REL Local  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 SHBL BZ EP 340 40.41  
 DQRL SZ EP 340 40.26

**April 14 2013 Hour: 3:58 0.0** Agency: REL Local  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 DQRL SZ EP 359 15.90  
 SHBL BZ EP 359 14.88

**April 14 2013 Hour: 11:1 0.0** Agency: REL Local  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 HWQ SZ EP 11 2 20.92  
 SHBL BZ EP 11 2 4.00

**April 14 2013 Hour: 11:43 28.9** Lat: 33.46N Lon: 35.64E Depth: 0 Agency: REL Local Rms: 0.0 secs  
**Magnitudes: 2.7MC REL MOUNT HERMON REGION**  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 QRWL SZ 11 24 EP 1143 30.66-0.01 1.0  
 QRWL SN 11 24 ES 1143 31.96-0.01 1.0  
 SHBL BZ 16 140 EP 1143 31.50 0.02 1.0  
 SHBL BE 16 140 ES 1143 33.37-0.01 1.0  
 RCY SZ 19 77 EP 1143 32.00-0.00 38 1.0  
 RCY SE 19 77 ES 1143 34.29 0.00 1.0  
 DQRL SZ 28 348 EP 1143 33.46 0.01 1.0

**April 14 2013 Hour: 11:47 34.0** Lat: 33.45N Lon: 35.63E Depth: 0 Agency: REL Local Rms: 0.0 secs  
**Magnitudes: 2.6MC REL MOUNT HERMON REGION**  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 QRWL SZ 12 25 EP 1147 35.91-0.04 1.0  
 QRWL SE 12 25 ES 1147 37.36-0.00 1.0  
 SHBL BZ 16 137 EP 1147 36.57-0.00 1.0  
 SHBL BN 16 137 ES 1147 38.45 0.00 1.0  
 RCY SZ 20 75 EP 1147 37.24-0.01 36 1.0  
 RCY SN 20 75 ES 1147 39.65 0.02 1.0  
 DQRL SZ 29 349 EP 1147 38.71 0.03 1.0

**April 14 2013 Hour: 14:33 38.1** Lat: 33.78N Lon: 35.77E Depth: 3 Agency: REL Local Rms: 0.1 secs  
**Magnitudes: 2.8MC REL BEIRUT REGION**  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 BHL BZ 17 321 EP 1433 40.84-0.08 46 1.0  
 BHL BN 17 321 ES 1433 43.03-0.01 1.0  
 DQRL SZ 21 245 EP 1433 41.48 0.02 1.0  
 DQRL SN 21 245 ES 1433 44.01 0.04 1.0  
 RCY SZ 32 169 EP 1433 43.28-0.07 1.0  
 RCY SN 32 169 ES 1433 47.30 0.04 1.0  
 SHBL BZ 48 183 EP 1433 45.87-0.04 1.0  
 SHBL BN 48 183 ES 1433 51.73 0.02 1.0  
 HWQ SZ 57 16 EP 1433 47.40 0.09 1.0

**April 15 2013 Hour: 10:10 0.0** Agency: REL Local  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 RCY SZ EP 1011 28.00  
 SHBL BZ EP 1011 26.16

**April 15 2013 Hour: 15:38 7.0** Lat: 33.31N Lon: 35.38E Depth: 0 Agency: REL Local  
**Magnitudes: 2.8MC REL**

**SOUTH LEBANON**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	38	47	EP		1538	13.11	-0.06							1.0
RCY	SZ	47	64	EP		1538	14.58	0.01	43						1.0
RCY	SE	47	64	ES		1538	20.18	0.02							1.0
DQRL	SZ	47	22	EP		1538	14.60	0.02							1.0
DQRL	SN	47	22	ES		1538	20.17	-0.01							1.0
HWQ	SZ	119	26	EP		1538	26.25	0.03							1.0

**April 15 2013 Hour: 18:42 0.0**

Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ			EP		1843	37.67								

**April 16 2013 Hour: 10:44 20.0**

Agency: REL Distant

**EMSC OT=10:44:20.0 28.14N 62.08E 87Km ML=7.8 IRAN-PAKISTAN REG**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		1049	21.84								
SHBL	BZ			EP		1049	21.33								
BHL	BZ			EP		1049	22.38								
BEYL	BZ			EP		1049	23.36								

**April 17 2013 Hour: 3:15 54.0**

Agency: REL Distant

**EMSC OT=03:15:54.0 28.18N 62.34E 80Km ML=5.6 IRAN-PAKISTAN REG**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		320	57.19								
RCY	SZ			EP		320	57.63								
BHL	BZ			EP		320	58.27								

**April 17 2013 Hour: 9:31 0.0**

Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		931	47.86								

**April 17 2013 Hour: 11:32 32.4**

Lat: 32.71N Lon: 35.69E Depth: 15 Agency: REL Regional

**Magnitudes: 3.1MC REL**

Rms: 0.1 secs

**NORTH GALILEE**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	88	9	EP		1132	46.39	0.07	63						1.0
RCY	SN	88	9	ES		1132	56.60	-0.06							1.0
QRWL	SZ	93	359	EP		1132	46.89	-0.09							1.0
QRWL	SN	93	359	ES		1132	57.93	0.13							1.0
DQRL	SZ	111	354	EP		1132	49.73	0.08							1.0
DQRL	SN	111	354	ES		1133	2.38	-0.07							1.0
BHL	BZ	132	358	EP		1132	52.76	-0.05							1.0
HWQ	SZ	175	8	EP		1132	58.75	0.00							1.0

**April 18 2013 Hour: 11:45 24.0**

Lat: 34.62N Lon: 36.20E Depth: 3 Agency: REL Local

**Magnitudes: 3.1MC REL**

Rms: 0.0 secs

**AKKAR**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	45	212	EP		1145	31.24	-0.02	66						1.0
HWQ	SN	45	212	ES		1145	36.58	-0.04							1.0
BHL	BZ	94	212	EP		1145	39.26	0.05							1.0
BHL	BN	94	212	ES		1145	50.43	-0.03							1.0
DQRL	SZ	117	210	EP		1145	42.91	0.01							1.0
DQRL	SE	117	210	ES		1145	56.94	0.06							1.0
RCY	SZ	129	195	EP		1145	44.72	-0.03							1.0
RCY	SN	129	195	ES		1146	0.11	0.01							1.0

**April 18 2013 Hour: 14:23 5.6** Lat: 33.47N Lon: 35.69E Depth: 0 Agency: REL Local  
**Magnitudes: 3.0MC REL**

**MOUNT HERMON REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	9	354	EP		1423	6.97	-0.07							1.0
QRWL	SN	9	354	ES		1423	8.09	0.01							1.0
RCY	SZ	14	78	EP		1423	7.89	0.02	65						1.0
SHBL	BZ	14	160	EP		1423	7.99	0.01							1.0
SHBL	BN	14	160	ES		1423	9.71	0.00							1.0
DQRL	SZ	28	337	EP		1423	10.25	0.02							1.0
DQRL	SN	28	337	ES		1423	13.66	0.04							1.0
BEYL	BZ	48	338	EP		1423	13.41	-0.00							0.2
BHL	BZ	48	356	EP		1423	13.39	-0.04							1.0
HWQ	SZ	93	15	EP		1423	20.60	0.01							1.0

**April 19 2013 Hour: 2:37 39.0**

Agency: REL Regional

**EMSC OT=02:37:39.0 36.54N 26.56E 131Km ML=4.1 DODECANESE ISLANDS**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		239	29.12								
BHL	BZ			EP		239	28.30								
HWQ	SZ			EP		239	31.09								
SHBL	BZ			EP		239	33.17								
RCY	SZ			EP		239	33.79								

**April 19 2013 Hour: 3: 5 52.0**

Agency: REL Distant

**EMSC OT=03:05:52.0 46.26N 150.85E 100Km ML=7.2 KURIL ISLANDS**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		317	54.07								
BHL	BZ			EP		317	56.36								
DQRL	SZ			EP		317	57.87								
RCY	SZ			EP		317	57.87								
QRWL	SZ			EP		317	58.13								
SHBL	BZ			EP		317	59.02								

**April 19 2013 Hour: 19:58 40.0**

Agency: REL Distant

**EMSC OT=19:58:40.0 50.07N 157.45E 10Km ML=6.1 KURIL ISLANDS**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2010	59.54								
RCY	SZ			EP		2011	0.82								
DQRL	SZ			EP		2011	0.82								
SHBL	BZ			EP		2011	1.95								

**April 19 2013 Hour: 20:50 0.0**

Agency: REL Regional

**EMSC OT=20:50:00.0 37.34N 37.12E 12Km ML=3.9 CENTRAL TURKEY**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		2050	54.49								
BHL	BZ			EP		2050	59.08								
DQRL	SZ			EP		2051	4.22								
QRWL	SZ			EP		2051	6.02								
RCY	SZ			EP		2051	6.38								

**April 20 2013 Hour: 0: 2 48.7**

Agency: REL Distant

**EMSC OT=00:02:48.7 30.33N 102.99E 20Km ML=6.6 WESTERN SICHUAN**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		012	26.77								
RCY	SZ			EP		012	27.86								
BHL	BZ			EP		012	26.98								
QRWL	SZ			EP		012	27.81								
DQRL	SZ			EP		012	28.54								
SHBL	BZ			EP		012	27.86								

<b>April 20 2013 Hour: 13:12 52.0</b>	<b>Agency: REL Distant</b>
<b>EMSC OT=13:12:52.0 50.12N 157.13E 30Km ML=6.1 KURIL ISLANDS</b>	
STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT	
BHL BZ EP 1325 7.89	
DQRL SZ EP 1325 9.13	
RCY SZ EP 1325 9.52	
QRWL SZ EP 1325 9.52	
SHBL BZ EP 1325 10.14	
<b>April 20 2013 Hour: 23:23 9.0</b>	<b>Agency: REL Regional</b>
<b>EMSC OT=23:23:09.0 37.31N 37.15E 3Km ML=3.7 CENTRAL TURKEY</b>	
STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT	
HWQ SZ EP 2324 10.00	
BHL BZ EP 2324 18.38	
DQRL SZ EP 2324 21.09	
<b>April 21 2013 Hour: 1:45 38.0</b>	<b>Agency: REL Regional</b>
<b>EMSC OT=01:45:38.0 36.03N 28.22E 80Km ML=4.1 DODECANESE-TURKEY</b>	
STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT	
BHL BZ EP 147 8.40	
DQRL SZ EP 147 8.83	
HWQ SZ EP 147 11.27	
QRWL SZ EP 147 11.76	
RCY SZ EP 147 13.78	
<b>April 21 2013 Hour: 3:22 17.0</b>	<b>Agency: REL Distant</b>
<b>EMSC OT=03:22:17.0 29.96N 138.96E 435Km ML=6.2 IZU ISLANDS, JAPAN</b>	
STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT	
HWQ SZ EP 333 57.87	
BHL BZ EP 333 59.72	
RCY SZ EP 334 0.78	
BEYL BZ EP 334 0.59	
DQRL SZ EP 334 1.80	
QRWL SZ EP 334 0.98	
<b>April 21 2013 Hour: 21: 6 30.0</b>	<b>Agency: REL Regional</b>
<b>EMSC OT=21:06:30.0 37.32N 37.11E 7Km ML=3.6 CENTRAL TURKEY</b>	
STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT	
HWQ SZ EP 21 7 23.51	
BHL BZ EP 21 7 29.96	
DQRL SZ EP 21 7 40.01	
QRWL SZ EP 21 7 32.75	
<b>April 22 2013 Hour: 21:50 5.9</b>	<b>Lat: 33.78N Lon: 35.78E Depth: 7 Agency: REL Local</b>
<b>Magnitudes: 2.7MC REL BEIRUT REGION</b>	<b>Rms: 0.0 secs</b>
STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT	
BHL BZ 18 321 EP 2150 8.96-0.07 39 1.0	
DQRL SZ 21 247 EP 2150 9.49 0.03 1.0	
DQRL SN 21 247 ES 2150 12.15 0.02 1.0	
QRWL SZ 27 199 EP 2150 10.48 0.06 1.0	
RCY SZ 32 170 EP 2150 11.12-0.04 1.0	
RCY SN 32 170 ES 2150 15.09 0.00 1.0	
HWQ SZ 58 16 EP 2150 15.28 0.05 1.0	
<b>April 22 2013 Hour: 23:40 50.0</b>	<b>Agency: REL Distant</b>
<b>EMSC OT=23:40:50.0 29.78S 176.02W 33Km ML=5.2 KERMADEC ISLANDS</b>	
STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT	
HWQ SZ EP 0 0 43.91	
BHL BZ EP 0 0 44.16	
QRWL SZ EP 0 0 45.19	
DQRL SZ EP 0 0 45.53	

**April 23 2013 Hour: 3:36 18.0** Agency: REL Regional

**EMSC OT=03:36:18.0 34.36N 28.26E 49Km ML=4.0 EASTERN MED SEA**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		337	44.46								
QRWL	SZ			EP		337	46.34								
RCY	SZ			EP		337	48.07								

**April 23 2013 Hour: 6:19 49.6** Lat: 33.80N Lon: 35.77E Depth: 21 Agency: REL Local

**Magnitudes: 2.7MC REL**

**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	15	317	EP		619	53.81-0.01	38							1.0
DQRL	SZ	21	239	EP		619	54.42 0.01								1.0
DQRL	SE	21	239	ES		619	57.98-0.00								1.0
BEYL	BZ	27	287	EP		619	54.97 0.07								0.2
QRWL	SZ	30	196	EP		619	55.33-0.02								1.0
RCY	SZ	35	170	EP		619	56.05-0.00								1.0
RCY	SE	35	170	ES		620	0.85 0.01								1.0
HWQ	SZ	55	17	EP		619	58.85 0.00								1.0

**April 23 2013 Hour: 7:32 36.0** Lat: 34.34N Lon: 34.65E Depth: 13 Agency: REL Local  
Magnitudes: 3.1MC REL

**OFFSHORE CENTRAL LEBANON**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	105	117	EP		732	52.39-0.02								1.0
BHL	BN	105	117	ES		733	4.56 0.01								1.0
HWQ	SZ	120	93	EP		732	54.77 0.10	64							1.0
HWQ	SE	120	93	ES		733	8.45-0.03								1.0
RCY	SZ	144	130	EP		732	58.12-0.13								1.0

**April 23 2013 Hour: 12:16 57.3** Lat: 33.45N Lon: 35.57E Depth: 14 Agency: REL Local  
Magnitudes: 2.5MC REL

**SAIDA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	15	46	EP		1217	0.80 0.02	31							1.0
QRWL	SN	15	46	ES		1217	3.35-0.00								1.0
SHBL	BZ	20	125	EP		1217	1.46 0.02								1.0
SHBL	BN	20	125	ES		1217	4.49-0.02								1.0
RCY	SZ	26	79	EP		1217	2.14-0.00								1.0
DQRL	SZ	28	1	EP		1217	2.44-0.02								1.0

**April 23 2013 Hour: 13:58 10.6** Lat: 33.46N Lon: 35.66E Depth: 2 Agency: REL Local  
Magnitudes: 2.3MC REL

**MOUNT HERMON REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	10	11	EP		1358	12.19-0.13	23							1.0
QRWL	SN	10	11	ES		1358	13.62 0.04								1.0
SHBL	BZ	14	148	EP		1358	12.99-0.04								1.0
SHBL	BN	14	148	ES		1358	14.86 0.04								1.0
RCY	SZ	17	76	EP		1358	13.40 0.02								1.0
DQRL	SZ	29	343	EP		1358	15.35 0.08								1.0

**April 23 2013 Hour: 15:42 38.7** Lat: 33.78N Lon: 35.79E Depth: 1 Agency: REL Local  
Magnitudes: 2.7MC REL

**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	318	EP		1542	41.63-0.04	39							1.0
DQRL	SZ	22	247	EP		1542	42.25 0.02								1.0
DQRL	SN	22	247	ES		1542	44.87 0.02								1.0
QRWL	SZ	28	200	EP		1542	43.17-0.02								1.0
RCY	SZ	32	172	EP		1542	43.87-0.01								1.0
RCY	SN	32	172	ES		1542	47.74 0.01								1.0
HWQ	SZ	57	15	EP		1542	47.91 0.03								1.0

**April 23 2013 Hour: 16:22 4.6** Lat: 33.80N Lon: 35.83E Depth: 8 Agency: REL Local  
**Magnitudes: 2.7MC REL**

**CENTRAL BEKAA**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	20	304	EP		1622	8.28	0.06	38						1.0
BHL	BE	20	304	ES		1622	10.88	-0.01							1.0
DQRL	SZ	27	246	EP		1622	9.18	-0.03							1.0
DQRL	SN	27	246	ES		1622	12.58	-0.01							1.0
SHBL	BZ	51	189	EP		1622	13.05	0.03							1.0
SHBL	BN	51	189	ES		1622	19.22	-0.01							1.0
HWQ	SZ	54	11	EP		1622	13.41	-0.03							1.0

**April 23 2013 Hour: 16:25 51.8** Lat: 33.68N Lon: 35.42E Depth: 6 Agency: REL Local  
**Magnitudes: 2.7MC REL**

**SAIDA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	14	79	EP		1625	54.34	-0.04	41						1.0
DQRL	SN	14	79	ES		1625	56.34	0.03							1.0
QRWL	SZ	29	121	EP		1625	56.45	-0.09							1.0
BHL	BZ	33	41	EP		1625	57.26	0.01							1.0
BHL	BN	33	41	ES		1626	1.30	0.01							1.0
SHBL	BZ	48	140	EP		1625	59.65	0.08							1.0

**April 24 2013 Hour: 11:40 3.8** Lat: 33.46N Lon: 35.64E Depth: 4 Agency: REL Local  
**Magnitudes: 2.4MC REL**

**MOUNT HERMON REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	11	20	EP		1140	5.65	-0.08	28						1.0
QRWL	SN	11	20	ES		1140	7.18	-0.00							1.0
SHBL	BZ	15	142	EP		1140	6.27	-0.14							1.0
SHBL	BN	15	142	ES		1140	8.45	0.10							1.0
RCY	SZ	19	76	EP		1140	6.94	0.03							1.0
DQRL	SZ	29	346	EP		1140	8.56	0.09							1.0

**April 24 2013 Hour: 12:10 37.3** Lat: 33.35N Lon: 35.61E Depth: 12 Agency: REL Local  
**Magnitudes: 2.3MC REL**

**SOUTH LEBANON**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	13	91	EP		1210	40.48	0.05	24						1.0
SHBL	BN	13	91	ES		1210	42.69	-0.03							1.0
QRWL	SZ	23	18	EP		1210	41.57	-0.09							1.0
QRWL	SN	23	18	ES		1210	44.90	0.03							1.0
RCY	SZ	27	53	EP		1210	42.24	0.01							1.0
DQRL	SZ	40	355	EP		1210	44.12	0.02							1.0

**April 24 2013 Hour: 14:54 51.0** Lat: 33.79N Lon: 35.79E Depth: 6 Agency: REL Local  
**Magnitudes: 2.9MC REL**

**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	316	EP		1454	54.13	0.01	51						1.0
BHL	BE	18	316	ES		1454	56.41	-0.01							1.0
DQRL	SZ	22	246	EP		1454	54.82	0.03							1.0
QRWL	SZ	29	200	EP		1454	55.73	-0.02							1.0
QRWL	SN	29	200	ES		1454	59.24	-0.03							1.0
RCY	SZ	33	172	EP		1454	56.43	0.00							1.0
RCY	SN	33	172	ES		1455	0.46	0.02							1.0
HWQ	SZ	56	15	EP		1455	0.13	-0.01							1.0

**April 25 2013 Hour: 4:6 51.0** Agency: REL Regional

**EMSC OT=04:06:51.0 35.00N 33.30E 52Km ML=3.0 CYPRUS REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP			4	7	26.13						
SHBL	BZ			EP			4	7	30.48						

**April 25 2013 Hour: 12:13 17.4** Lat: 33.35N Lon: 35.58E Depth: 13 Agency: REL Local  
Magnitudes: 2.5MC REL

**SOUTH LEBANON**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	15	92	EP		1213	20.73	-0.03							1.0
SHBL	BN	15	92	ES		1213	23.27	0.02							1.0
QRWL	SZ	24	23	EP		1213	21.84	0.03	30						1.0
QRWL	SN	24	23	ES		1213	25.05	-0.02							1.0
RCY	SZ	28	56	EP		1213	22.54	0.00							1.0

**April 25 2013 Hour: 12:26 47.5** Lat: 33.82N Lon: 35.75E Depth: 26 Agency: REL Local  
Magnitudes: 2.4MC REL

**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	13	317	EP		1226	52.18	0.01	26						1.0
DQRL	SZ	21	234	EP		1226	52.75	-0.03							1.0
DQRL	SN	21	234	ES		1226	56.72	0.01							1.0
RCY	SZ	36	168	EP		1226	54.55	0.03							1.0
RCY	SN	36	168	ES		1226	59.72	-0.02							1.0
HWQ	SZ	54	19	EP		1226	56.85	-0.00							1.0

**April 25 2013 Hour: 13:38 29.5** Lat: 33.45N Lon: 35.55E Depth: 15 Agency: REL Local  
Magnitudes: 2.4MC REL

**SAIDA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	16	48	EP		1338	33.12	-0.00	27						1.0
QRWL	SN	16	48	ES		1338	35.84	0.01							1.0
SHBL	BZ	21	122	EP		1338	33.75	0.01							1.0
SHBL	BN	21	122	ES		1338	36.91	0.00							1.0
RCY	SZ	27	78	EP		1338	34.50	-0.02							1.0

**April 25 2013 Hour: 15:55 25.0** Lat: 32.84N Lon: 34.98E Depth: 28 Agency: REL Local  
Magnitudes: 2.8MC REL

**NORTH GALILEE**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	91	51	EP		1555	39.70	0.00							1.0
SHBL	BE	91	51	ES		1555	50.57	-0.01							1.0
RCY	SZ	108	47	EP		1555	42.05	-0.00	42						1.0
DQRL	SZ	111	30	EP		1555	42.31	-0.02							1.0
DQRL	SN	111	30	ES		1555	55.17	0.01							1.0

**April 25 2013 Hour: 22:54 15.0**

Agency: REL Regional

**EMSC OT=22:54:15.0 37.30N 37.11E 20Km ML=4.3 CENTRAL TURKEY**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		2255	6.46								
BHL	BZ			EP		2255	11.43								
DQRL	SZ			EP		2255	17.10								
QRWL	SZ			EP		2255	19.47								
RCY	SZ			EP		2255	19.63								
SHBL	BZ			EP		2255	21.61								

**April 26 2013 Hour: 6:53 29.0** Agency: REL Distant  
**EMSC OT=06:53:29.0 28.69S 178.78W 350Km ML=6.2 KERMADEC ISLANDS**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP			712	38.73							
BHL	BZ			EP			712	38.94							
RCY	SZ			EP			712	39.52							
DQRL	SZ			EP			712	40.04							

**April 26 2013 Hour: 10:16 46.3** Lat: 33.54N Lon: 35.71E Depth: 1 Agency: REL Local  
**Magnitudes: 2.4MC REL**

#### **CENTRAL BEKAA**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	2	285	EP		1016	46.80-0.01		28						1.0
RCY	SZ	13	113	EP		1016	48.38-0.07							1.0	
RCY	SN	13	113	ES		1016	50.08 0.04							1.0	
SHBL	BZ	22	171	EP		1016	49.85 0.01							1.0	
DQRL	SZ	22	325	EP		1016	49.89 0.02							1.0	

**April 26 2013 Hour: 12:31 54.2** Lat: 33.80N Lon: 35.76E Depth: 14 Agency: REL Local  
**Magnitudes: 2.5MC REL**

#### **BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	15	320	EP		1231	57.61-0.06		30						1.0
BHL	BE	15	320	ES		1232	0.25 0.02								1.0
DQRL	SZ	20	239	EP		1231	58.33 0.02								1.0
RCY	SZ	34	168	EP		1232	0.27-0.03								1.0
RCY	SN	34	168	ES		1232	4.82 0.01								1.0
HWQ	SZ	56	18	EP		1232	3.44 0.03								1.0

**April 26 2013 Hour: 12:58 55.8** Lat: 33.34N Lon: 35.58E Depth: 16 Agency: REL Local  
**Magnitudes: 2.3MC REL**

#### **SOUTH LEBANON**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	16	86	EP		1258	59.54 0.00								1.0
QRWL	SZ	25	23	EP		1259	0.64 0.00		21						1.0
QRWL	SN	25	23	ES		1259	4.21-0.00								1.0
RCY	SZ	30	54	EP		1259	1.30-0.00								1.0
RCY	SN	30	54	ES		1259	5.37-0.00								1.0

**April 26 2013 Hour: 15:28 52.1** Lat: 33.79N Lon: 35.78E Depth: 4 Agency: REL Local  
**Magnitudes: 2.5MC REL**

#### **BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	318	EP		1528	54.95-0.02		30						1.0
DQRL	SZ	21	244	EP		1528	55.64-0.01								1.0
DQRL	SN	21	244	ES		1528	58.27 0.02								1.0
RCY	SZ	33	170	EP		1528	57.53-0.01								1.0
RCY	SE	33	170	ES		1529	1.55 0.00								1.0
HWQ	SZ	56	16	EP		1529	1.28 0.02								1.0

**April 27 2013 Hour: 9:12 0.2** Lat: 33.39N Lon: 35.64E Depth: 0 Agency: REL Local  
**Magnitudes: 2.5MC REL**

#### **SOUTH LEBANON**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	10	116	EP		912	1.85-0.01								1.0
QRWL	SZ	18	12	EP		912	2.99-0.05		31						1.0
RCY	SZ	21	57	EP		912	3.65 0.03								1.0
RCY	SN	21	57	ES		912	6.18-0.00								1.0
DQRL	SZ	36	349	EP		912	5.96 0.05								1.0
DQRL	SN	36	349	ES		912	10.15-0.02								1.0

**April 27 2013 Hour: 15:11 39.1** Lat: 33.79N Lon: 35.78E Depth: 2 Agency: REL Local  
**Magnitudes: 2.7MC REL**

**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	315	EP		1511	41.89	-0.04	38						1.0
BHL	BN	17	315	ES		1511	44.05	0.02							1.0
DQRL	SZ	22	244	EP		1511	42.72	0.01							1.0
RCY	SZ	33	172	EP		1511	44.52	0.02							1.0
RCY	SN	33	172	ES		1511	48.48	-0.01							1.0
HWQ	SZ	56	15	EP		1511	48.11	0.01							1.0

**April 27 2013 Hour: 15:16 2.0** Lat: 33.45N Lon: 35.64E Depth: 0 Agency: REL Local  
**Magnitudes: 2.4MC REL**

**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	12	21	EP		1516	3.83	-0.08	26						1.0
QRWL	SN	12	21	ES		1516	5.31	0.02							1.0
SHBL	BZ	15	139	EP		1516	4.49	-0.00							1.0
SHBL	BN	15	139	ES		1516	6.31	0.01							1.0
RCY	SZ	19	75	EP		1516	5.15	0.01							1.0
DQRL	SZ	29	348	EP		1516	6.72	0.01							1.0
BHL	BZ	50	2	EP		1516	10.20	0.04							1.0

**April 27 2013 Hour: 16:47 25.8** Lat: 33.78N Lon: 35.77E Depth: 0 Agency: REL Local  
**Magnitudes: 2.6MC REL**

**AKKAR**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	321	EP		1647	28.53	-0.07	33						1.0
BHL	BN	17	321	ES		1647	30.64	-0.03							1.0
DQRL	SZ	21	245	EP		1647	29.19	0.08							1.0
DQRL	SN	21	245	ES		1647	31.57	0.01							1.0
SHBL	BZ	48	183	EP		1647	33.53	-0.06							1.0
HWQ	SZ	57	16	EP		1647	35.11	0.07							1.0

**April 28 2013 Hour: 11:23 24.4** Lat: 34.70N Lon: 36.26E Depth: 2 Agency: REL Local  
**Magnitudes: 3.1MC REL**

**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	55	211	EP		1123	33.30	0.00	71						1.0
HWQ	SN	55	211	ES		1123	39.90	-0.01							1.0
BHL	BZ	105	212	EP		1123	41.27	0.01							1.0
DQRL	SZ	128	210	EP		1123	44.89	-0.00							1.0
DQRL	SN	128	210	ES		1124	0.10	0.01							1.0
RCY	SZ	140	196	EP		1123	46.66	-0.00							1.0

**April 28 2013 Hour: 13:52 5.3** Lat: 33.79N Lon: 35.78E Depth: 8 Agency: REL Local  
**Magnitudes: 2.7MC REL**

**MOUNT HERMON REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	317	EP		1352	8.53	-0.01	39						1.0
BHL	BN	18	317	ES		1352	10.93	-0.01							1.0
DQRL	SZ	22	245	EP		1352	9.12	-0.04							1.0
DQRL	SN	22	245	ES		1352	12.06	0.04							1.0
RCY	SZ	33	171	EP		1352	10.84	-0.01							1.0
HWQ	SZ	56	15	EP		1352	14.56	0.03							1.0

**April 28 2013 Hour: 16:31 4.0** Lat: 37.45N Lon: 22.70E Depth: 8 Agency: REL Regional  
**EMSC OT=16:31:04.0 37.45N 22.70E 58Km ML=4.7 SOUTHERN GREECE**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1632	36.48								
DQRL	SZ			EP		1632	36.88								
HWQ	SZ			EP		1632	38.99								
QRWL	SZ			EP		1632	40.46								

RCY SZ	EP	1632	41.87
SHBL BZ	EP	1632	42.12

**April 29 2013 Hour: 10:17 0.0** Agency: REL Regional

STAT CO DIST AZI PHASE P	HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
RCY SZ EP	1017 56.39
SHBL BZ EP	1017 55.90

**April 29 2013 Hour: 15:7 2.7** Lat: 33.45N Lon: 35.64E Depth: 0 Agency: REL Local Rms: 0.0 secs

**MOUNT HERMON REGION**

STAT CO DIST AZI PHASE P	HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
QRWL SZ 12 18 EP	15 7 4.48-0.10 30
QRWL SN 12 18 ES	15 7 5.99 0.02
SHBL BZ 15 140 EP	15 7 5.07 0.01
RCY SZ 19 73 EP	15 7 5.76 0.03
RCY SE 19 73 ES	15 7 7.97-0.00
DQRL SZ 29 347 EP	15 7 7.48 0.05

**April 29 2013 Hour: 15:25 37.8** Lat: 33.79N Lon: 35.77E Depth: 16 Agency: REL Local 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	1525 41.63-0.02 43
BHL BE 16 319 ES	1525 44.48 0.01
DQRL SZ 21 242 EP	1525 42.19-0.01
DQRL SN 21 242 ES	1525 45.43 0.01
RCY SZ 34 170 EP	1525 43.90-0.00
HWQ SZ 56 17 EP	1525 47.12 0.01

**April 29 2013 Hour: 16:31 9.2** Lat: 33.81N Lon: 35.79E Depth: 22 Agency: REL Local Rms: 0.0 secs

**BEIRUT REGION**

STAT CO DIST AZI PHASE P	HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
BHL BZ 16 311 EP	1631 13.60-0.05 42
BHL BE 16 311 ES	1631 16.94 0.01
DQRL SZ 23 240 EP	1631 14.36 0.01
DQRL SN 23 240 ES	1631 18.15 0.01
QRWL SZ 31 198 EP	1631 15.21-0.01
HWQ SZ 54 16 EP	1631 18.39 0.02

**April 29 2013 Hour: 19:38 49.3** Agency: REL Regional

STAT CO DIST AZI PHASE P	HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
SHBL BZ EP	1938 52.27
RCY SZ EP	1938 55.27
DQRL SZ EP	1938 59.12
BHL BZ EP	1939 2.59

**April 30 2013 Hour: 1:3 35.0** Agency: REL Distant EMSC OT=01:03:35.0 51.32N 92.44E 10Km ML=5.3 SIBERIA, RUSSIA

STAT CO DIST AZI PHASE P	HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
BHL BZ EP	111 43.37
DQRL SZ EP	111 45.23
SHBL BZ EP	111 46.05

**April 30 2013 Hour: 7:29 24.7** Lat: 33.70N Lon: 35.53E Depth: 5 Agency: REL Local Rms: 0.0 secs

**SAIDA REGION**

STAT CO DIST AZI PHASE P	HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
DQRL SZ 4 75 EP	729 25.93 0.00 36
DQRL SE 4 75 ES	729 26.81-0.01
QRWL SZ 22 140 EP	729 28.40 0.03
QRWL SN 22 140 ES	729 31.07 0.00
BHL BZ 26 26 EP	729 29.00 0.01

BHL	BN	26	26	ES	729	32.16	0.01	1.0
RCY	SZ	36	128	EP	729	30.59	-0.04	1.0
RCY	SN	36	128	ES	729	35.01	0.01	1.0
HWQ	SZ	75	31	EP	729	36.70	-0.17	0.2

**April 30 2013 Hour: 9:19 23.0** Agency: REL Regional  
**EMSC OT=09:19:23.0 39.16N 27.20E 5Km ML=3.3 WESTERN TURKEY**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		920		41.51							
BHL	BZ			EP		920		47.87							
DQRL	SZ			EP		920		50.93							
RCY	SZ			EP		920		53.87							

**April 30 2013 Hour: 9:32 10.6** Lat: 33.83N Lon: 35.76E Depth: 21 Agency: REL Local  
Magnitudes: 2.4MC REL  
**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	13	311	EP		932	14.73	0.00	26						1.0
BHL	BN	13	311	ES		932	17.75	-0.00							1.0
RCY	SZ	38	169	EP		932	17.54	0.01							1.0
RCY	SN	38	169	ES		932	22.63	-0.00							1.0
HWQ	SZ	53	19	EP		932	19.60	0.00							1.0

**April 30 2013 Hour: 20:45 32.0** Lat: 33.78N Lon: 35.77E Depth: 5 Agency: REL Local  
Magnitudes: 2.7MC REL  
**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	320	EP		2045	34.99	-0.02	39						1.0
DQRL	SZ	21	245	EP		2045	35.60	0.05							1.0
DQRL	SN	21	245	ES		2045	38.17	0.00							1.0
QRWL	SZ	28	198	EP		2045	36.54	-0.07							1.0
QRWL	SN	28	198	ES		2045	39.99	-0.02							1.0
RCY	SZ	33	170	EP		2045	37.41	0.03							1.0
RCY	SN	33	170	ES		2045	41.37	0.01							1.0
SHBL	BZ	49	183	EP		2045	39.93	0.01							1.0
HWQ	SZ	57	16	EP		2045	41.27	0.00							0.2

# Epicentral Map of Lebanon

## APRIL 2013

