

Republic of Lebanon  
National Council for Scientific Research

# Provisional Seismological Bulletin

from the

## NATIONAL SEISMIC NETWORK

April

2011

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

## 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.

April 1 2011 Hour: 11:11 47.9 Lat: 33.78N Lon: 35.77E Depth: 0 Agency: REL Local  
Magnitudes: 3.2MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	321	EP		1111	50.59	-0.08	77						1.0
DQRL	SZ	20	245	EP		1111	51.25	0.03							1.0
DQRL	SE	20	245	ES		1111	53.69	0.04							1.0
BEYL	BZ	27	291	EP		1111	52.34	0.01							0.2
RCY	SZ	33	169	EP		1111	53.12	-0.06	74						1.0
RCY	SN	33	169	ES		1111	57.06	-0.00							1.0
HWQ	BZ	57	17	EP		1111	57.13	-0.01							1.0
FKH	SZ	78	49	EP		1112	0.61	0.07							1.0

April 1 2011 Hour: 11:36 59.9 Lat: 34.02N Lon: 35.27E Depth: 45 Agency: REL Local  
Magnitudes: 3.2MC REL Rms: 0.0 secs

OFFSHORE CENTRAL LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEYL	BZ	26	127	EP		1137	7.55	0.02							1.0
BHL	BZ	38	109	EP		1137	8.58	-0.02	74						1.0
DQRL	SZ	45	141	EP		1137	9.22	0.01							1.0
DQRL	SE	45	141	ES		1137	16.14	0.01							1.0
HWQ	BZ	69	65	EP		1137	11.86	-0.04							1.0
RCY	SZ	78	137	EP		1137	12.96	-0.02							1.0
RCY	SN	78	137	ES		1137	22.68	-0.00							1.0
FKH	SZ	109	76	EP		1137	16.66	0.05							1.0

April 1 2011 Hour: 11:57 53.0 Agency: REL Distant

EMSC OT=11:57:53.0 39.38N 141.93E 35Km M=6.0 EASTERN HONSHU

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		12 9	57.83								
HWQ	BZ			EP		12 9	58.79								
BHL	BZ			EP		1210	1.00								
RCY	SZ			EP		1210	2.32								

April 1 2011 Hour: 13:29 11.0 Agency: REL Regional

EMSC OT=13:29:11.0 35.54N 26.63E 60Km M=6.0 CRETE, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
NAQL	SZ			EP		1330	53.78								
BEYL	BZ			EP		1330	54.02								
DQRL	SZ			EP		1330	55.76								
BHL	BZ			EP		1330	55.26								
HWQ	BZ			EP		1330	58.53								
RCY	SZ			EP		1331	0.11								
FKH	SZ			EP		1331	4.17								

April 1 2011 Hour: 13:45 25.0 Agency: REL Regional

EMSC OT=13:45:25.0 35.50N 26.67E 60Km M=4.6 CRETE, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		1347	11.60								
HWQ	BZ			EP		1347	13.35								
RCY	SZ			EP		1347	14.45								

April 1 2011 Hour: 16: 9 13.0 Lat: 33.80N Lon: 35.76E Depth: 14 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	15	320	EP		16 9	16.49	-0.04							1.0
DQRL	SZ	20	240	EP		16 9	17.19	0.05							1.0
DQRL	SE	20	240	ES		16 9	20.21	0.02							1.0
BEYL	BZ	26	288	EP		16 9	17.77	-0.04							1.0
RCY	SZ	34	168	EP		16 9	19.03	-0.06	47						1.0
RCY	SN	34	168	ES		16 9	23.59	0.01							1.0
HWQ	BZ	56	18	EP		16 9	22.30	0.05							1.0

**April 2 2011 Hour: 12:48 0.0** Agency: REL Local  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 RCY SZ EP 1248 50.45  
 DQRL SZ EP 1248 51.97

**April 3 2011 Hour: 9:36 5.6** Lat: 34.35N Lon: 36.69E Depth: 0 Agency: REL Local  
 Magnitudes: 3.1MC REL Rms: 0.0 secs

**NEBEK REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	29	245	EP		936	10.21	-0.06	65						1.0
HWQ	BZ	69	263	EP		936	16.80	0.00							1.0
HWQ	BN	69	263	ES		936	25.05	-0.01							1.0
BHL	BZ	108	243	EP		936	23.07	0.01							1.0
RCY	SZ	124	220	EP		936	25.57	-0.04							1.0
DQRL	SZ	126	236	EP		936	26.08	0.09							1.0
DQRL	SN	126	236	ES		936	41.05	0.00							1.0

**April 3 2011 Hour: 14: 7 8.0** Agency: REL Distant  
 EMSC OT=14:07:08.0 17.60S 178.58W 532Km M=6.5 FIJI REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		1425	45.48								
HWQ	BZ			EP		1425	45.91								
BHL	BZ			EP		1425	47.07								
BEYL	BZ			EP		1425	47.33								
RCY	SZ			EP		1425	47.42								
DQRL	SZ			EP		1425	47.98								

**April 3 2011 Hour: 15: 2 37.7** Lat: 33.78N Lon: 35.75E Depth: 5 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	326	EP		15 2	40.50	-0.02							1.0
DQRL	SZ	19	244	EP		15 2	40.89	-0.02	51						1.0
DQRL	SN	19	244	ES		15 2	43.34	0.02							1.0
RCY	SZ	33	167	EP		15 2	43.02	-0.00							1.0
RCY	SN	33	167	ES		15 2	46.99	-0.00							1.0
HWQ	BZ	58	18	EP		15 2	47.07	0.02							1.0

**April 3 2011 Hour: 15:11 0.0** Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		1512	12.30								
DQRL	SZ			EP		1512	14.90								

**April 3 2011 Hour: 20: 6 40.0** Agency: REL Distant  
 EMSC OT=20:06:40.0 09.85S 107.77E 10Km M=6.8 SOUTH OF JAVA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		2018	54.44								
RCY	SZ			EP		2018	54.44								
BHL	BZ			EP		2018	55.88								
DQRL	SZ			EP		2018	56.14								
BEYL	BZ			EP		2018	56.14								

**April 5 2011 Hour: 11:17 4.5** Lat: 33.88N Lon: 35.84E 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	17	281	EP		1117	7.30	-0.01							1.0
DQRL	SZ	31	233	EP		1117	9.57	0.02							1.0
DQRL	SE	31	233	ES		1117	13.25	-0.01							1.0
RCY	SZ	42	180	EP		1117	11.31	-0.01	52						1.0
RCY	SN	42	180	ES		1117	16.34	0.00							1.0
HWQ	BZ	46	13	EP		1117	11.91	-0.01							1.0
HWQ	BN	46	13	ES		1117	17.40	0.01							1.0

**April 5 2011 Hour: 13:37 3.4 Lat: 33.79N Lon: 35.79E 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	314	EP		1337	6.29	-0.02							1.0
DQRL	SZ	23	245	EP		1337	7.11	-0.00							1.0
DQRL	SN	23	245	ES		1337	9.84	0.01							1.0
RCY	SZ	33	173	EP		1337	8.77	-0.02	51						1.0
RCY	SE	33	173	ES		1337	12.76	0.01							1.0
HWQ	BZ	56	15	EP		1337	12.44	0.02							1.0

**April 6 2011 Hour: 9:42 0.0 Agency: REL Local**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		943	14.04								
FKH	SZ			EP		943	7.15								

**April 7 2011 Hour: 4:47 40.0 Agency: REL Regional**

**EMSC OT=04:47:40.0 34.14N 45.71E 40Km M=4.6 IRAN-IRAQ BORDER**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		449	32.80								
RCY	SZ			EP		449	34.10								
DQRL	SZ			EP		449	37.17								

**April 7 2011 Hour: 8:33 0.0 Agency: REL Local**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		833	53.35								
HWQ	BZ			EP		834	0.25								

**April 7 2011 Hour: 9:9 44.2 Lat: 34.30N Lon: 36.50E Depth: 0 Agency: REL Local**  
**Magnitudes: 3.1MC REL Rms: 0.1 secs**

**HERMEL BAALBEK REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	10	234	EP		9 9	45.75	-0.03	69						1.0
HWQ	BZ	51	268	EP		9 9	52.31	-0.05							1.0
HWQ	BN	51	268	ES		9 9	58.42	0.01							1.0
DQRL	SZ	108	233	EP		910	1.68	0.10							1.0
RCY	SZ	108	215	EP		910	1.56	-0.01							1.0
RCY	SN	108	215	ES		910	14.42	-0.02							1.0

**April 7 2011 Hour: 9:28 0.0 Agency: REL Local**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		928	58.47								
HWQ	BZ			EP		929	5.43								

**April 7 2011 Hour: 10:34 0.0 Agency: REL Local**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		1035	14.43								
HWQ	BZ			EP		1035	21.26								

**April 7 2011 Hour: 11:23 0.0 Agency: REL Local**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		1123	56.20								
RCY	SZ			EP		1123	56.87								

**April 7 2011 Hour: 12:42 0.0 Agency: REL Local**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1242	47.98								
FKH	SZ			EP		1242	45.26								

April 7 2011 Hour: 14:32 44.0

Agency: REL Distant

EMSC OT=14:32:44.0 38.29N 141.63E 50Km M=7.1 COAST OF HONSHU

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		1444	49.10								
HWQ	BZ			EP		1444	50.11								
BHL	BZ			EP		1444	52.51								
BEYL	BZ			EP		1444	53.27								
RCY	SZ			EP		1444	53.53								
DQRL	SZ			EP		1444	53.65								
NAQL	SZ			EP		1444	56.81								

April 7 2011 Hour: 23:46 40.2

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	19	316	EP		2346	43.15-0.03								1.0
DQRL	SZ	22	247	EP		2346	43.84 0.03								1.0
DQRL	SN	22	247	ES		2346	46.48-0.00								1.0
RCY	SZ	32	173	EP		2346	45.33-0.05		41						1.0
RCY	SN	32	173	ES		2346	49.25 0.03								1.0
HWQ	BZ	57	14	EP		2346	49.35 0.03								1.0

April 8 2011 Hour: 3:3 2.0

Agency: REL Regional

EMSC OT=03:03:02.0 36.27N 35.56E 12Km M=3.3 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		3 3	36.67								
FKH	SZ			EP		3 3	38.48								
BHL	BZ			EP		3 3	42.92								
DQRL	SZ			EP		3 3	46.54								

April 8 2011 Hour: 15:38 27.1

Lat: 33.78N

Lon: 35.78E

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	18	320	EP		1538	30.18-0.05								1.0
DQRL	SZ	21	247	EP		1538	30.74 0.05								1.0
DQRL	SN	21	247	ES		1538	33.36 0.02								1.0
BEYL	BZ	29	291	EP		1538	31.78-0.03								1.0
RCY	SZ	32	171	EP		1538	32.32-0.05		43						1.0
RCY	SN	32	171	ES		1538	36.26 0.01								1.0
HWQ	BZ	57	15	EP		1538	36.49 0.05								1.0

April 8 2011 Hour: 18:46 1.0

Lat: 34.31N

Lon: 36.42E

Depth: 14

Agency: REL

Local

Magnitudes: 2.9MC REL

Rms: 0.0 secs

HERMEL BAALBEK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	8	189	EP		1846	3.70-0.02		54						1.0
FKH	SN	8	189	ES		1846	5.77 0.01								1.0
HWQ	BZ	44	265	EP		1846	8.47 0.03								1.0
HWQ	BN	44	265	ES		1846	13.97-0.02								1.0
BHL	BZ	84	238	EP		1846	14.30-0.04								1.0
DQRL	SZ	104	230	EP		1846	17.25 0.04								1.0

April 9 2011 Hour: 14:39 17.8

Lat: 33.62N

Lon: 36.00E

Depth: 0

Agency: REL

Local

Magnitudes: 2.8MC REL

Rms: 0.1 secs

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	21	226	EP		1439	21.08-0.04		43						1.0
RCY	SN	21	226	ES		1439	23.56-0.02								1.0
DQRL	SZ	41	283	EP		1439	24.37 0.03								1.0
DQRL	SN	41	283	ES		1439	29.18 0.01								1.0
BHL	BZ	44	315	EP		1439	24.96-0.00								1.0
HWQ	BZ	73	356	EP		1439	29.52-0.02								1.0



April 10 2011 Hour: 9:20 10.7 Lat: 34.52N Lon: 36.65E Depth: 14 Agency: REL Local  
Magnitudes: 2.9MC REL Rms: 0.2 secs

NEBEK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	70	248	EP		920	21.84	-0.16	51						1.0
HWQ	BN	70	248	ES		920	30.38	-0.01							1.0
BHL	BZ	115	234	EP		920	28.60	0.11							1.0
DQRL	SZ	135	228	EP		920	31.70	0.27							1.0
RCY	SZ	136	214	EP		920	31.50	-0.19							1.0
RCY	SN	136	214	ES		920	47.25	-0.01							1.0

April 10 2011 Hour: 10:31 35.0 Lat: 33.60N Lon: 35.99E Depth: 13 Agency: REL Local  
Magnitudes: 2.8MC REL Rms: 0.0 secs

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	18	231	EP		1031	38.67	-0.08	48						1.0
RCY	SN	18	231	ES		1031	41.59	0.06							1.0
DQRL	SZ	41	287	EP		1031	41.89	-0.02							1.0
DQRL	SN	41	287	ES		1031	47.02	-0.02							1.0
BHL	BZ	46	318	EP		1031	42.77	0.04							1.0
HWQ	BZ	75	357	EP		1031	47.14	0.01							1.0

April 10 2011 Hour: 11:11 51.0 Agency: REL Regional

EMSC OT=11:11:51.0 36.48N 28.90E 2Km M=4.2 DODECANESE ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1113	22.05								
RCY	SZ			EP		1113	24.85								

April 13 2011 Hour: 9:21 0.0 Agency: REL Regional

EMSC OT=09:21:35.0 34.54N 32.13E 30Km M=3.3 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		922	21.50								
RCY	SZ			EP		922	22.54								

April 13 2011 Hour: 9:57 42.3 Lat: 34.40N Lon: 36.81E Depth: 0 Agency: REL Local  
Magnitudes: 3.1MC REL Rms: 0.0 secs

NEBEK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	40	245	EP		957	48.68	-0.07	64						1.0
HWQ	BZ	80	261	EP		957	55.26	0.05							1.0
HWQ	BN	80	261	ES		958	4.79	-0.00							1.0
BHL	BZ	120	243	EP		958	1.54	-0.00							1.0
RCY	SZ	134	222	EP		958	3.95	0.03							1.0
RCY	SN	134	222	ES		958	19.96	0.01							1.0
DQRL	SZ	138	236	EP		958	4.29	-0.08							0.2

April 13 2011 Hour: 12:25 8.4 Lat: 33.88N Lon: 35.84E Depth: 0 Agency: REL Local  
Magnitudes: 2.8MC REL Rms: 0.1 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	280	EP		1225	11.20	-0.06	48						1.0
BHL	BN	18	280	ES		1225	13.38	-0.01							1.0
DQRL	SZ	32	233	EP		1225	13.60	0.13							1.0
RCY	SZ	42	181	EP		1225	15.15	-0.02							1.0
RCY	SN	42	181	ES		1225	20.14	-0.04							1.0
HWQ	BZ	46	12	EP		1225	15.77	0.01							1.0

**April 14 2011 Hour: 9:31 0.0** Agency: REL Local  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 FKH SZ EP 931 43.66  
 HWQ BZ EP 931 50.97

**April 14 2011 Hour: 19:2 0.0** Agency: REL Local  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 DQRL SZ EP 19 3 10.28  
 RCY SZ EP 19 3 7.75

**April 15 2011 Hour: 12:0 15.5** Lat: 33.78N Lon: 35.75E Depth: 9 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	326	EP		12	0	18.59	0.01	46					1.0
BHL	BE	16	326	ES		12	0	20.87	-0.01						1.0
DQRL	SZ	19	243	EP		12	0	18.94	-0.00						1.0
RCY	SZ	33	166	EP		12	0	21.03	-0.01						1.0
RCY	SN	33	166	ES		12	0	25.16	0.01						1.0
HWQ	BZ	58	18	EP		12	0	24.95	-0.00						1.0

**April 15 2011 Hour: 14:16 11.3** Lat: 33.79N Lon: 35.75E Depth: 9 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		1416	14.34	-0.01	48						1.0
BHL	BN	16	325	ES		1416	16.62	0.00							1.0
DQRL	SZ	19	242	EP		1416	14.78	-0.00							1.0
RCY	SZ	33	166	EP		1416	16.89	0.01							1.0
RCY	SN	33	166	ES		1416	21.01	-0.00							1.0
HWQ	BZ	58	18	EP		1416	20.71	0.00							1.0

**April 15 2011 Hour: 21:46 22.0** Agency: REL Distant  
**EMSC OT=21:46:22.0 18.65S 175.34W 213Km M=5.7 TONGA**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		22	5	40.38							
RCY	SZ			EP		22	5	41.33							
BHL	BZ			EP		22	5	41.21							
DQRL	SZ			EP		22	5	42.01							

**April 16 2011 Hour: 1:11 11.0** Agency: REL Distant  
**EMSC OT=01:11:11.0 25.41N 123.91E 144Km M=5.8 NORTHEAST TAIWAN**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		122	35.91								
BHL	BZ			EP		122	37.96								
RCY	SZ			EP		122	38.51								
DQRL	SZ			EP		122	39.09								

**April 16 2011 Hour: 2:19 29.0** Agency: REL Distant  
**EMSC OT=02:19:29.0 36.43N 139.67E 60Km M=5.9 EASTERN HONSHU**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		231	32.77								
BHL	BZ			EP		231	35.10								
RCY	SZ			EP		231	36.27								
DQRL	SZ			EP		231	36.27								

**April 16 2011 Hour: 14:29 35.0** Lat: 33.89N Lon: 36.83E Depth: 8 Agency: REL Local  
 Magnitudes: 3.1MC REL Rms: 0.0 secs  
**DAMASCUS REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	55	316	EP		1429	44.08	0.03	64						1.0
FKH	SN	55	316	ES		1429	50.73	-0.02							1.0
HWQ	BZ	92	298	EP		1429	49.98	0.05							1.0

HWQ	BN	92	298	ES		1430	0.96-0.02										1.0
BHL	BZ	109	271	EP		1429	52.26-0.08										1.0
DQRL	SZ	118	260	EP		1429	53.75-0.01										1.0
DQRL	SN	118	260	ES		1430	7.67 0.04										1.0

**April 16 2011 Hour: 14:51 0.0 Agency: REL Local**  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 FKH SZ EP 1451 31.90  
 HWQ BZ EP 1451 33.57

**April 18 2011 Hour: 10:0 39.0 Lat: 33.39N Lon: 35.57E Depth: 0 Agency: REL Local**  
**Magnitudes: 3.0MC REL Rms: 0.1 secs**  
**SOUTH LEBANON**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	27	65	EP		10	0	43.28-0.09							1.0
RCY	SN	27	65	ES		10	0	46.63 0.01							1.0
DQRL	SZ	35	360	EP		10	0	44.52-0.09							1.0
BHL	BZ	57	8	EP		10	0	48.20-0.04	54						1.0
BHL	BN	57	8	ES		10	0	55.04-0.05							1.0
HWQ	BZ	104	19	EP		10	0	56.06 0.26							1.0

**April 18 2011 Hour: 12:50 38.2 Lat: 34.92N Lon: 34.29E Depth: 2 Agency: REL Regional**  
**Magnitudes: 3.6MC REL Rms: 0.3 secs**  
**EMSC OT=12:50:40.0 34.97N 34.51E 5Km M=3.5 CYPRUS REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	168	132	EP		1251	4.40-0.28								1.0
HWQ	BZ	168	115	EP		1251	4.66 0.10	110							1.0
HWQ	BN	168	115	ES		1251	24.34 0.25								1.0
DQRL	SZ	179	139	EP		1251	5.95-0.26								1.0
FKH	SZ	208	111	EP		1251	9.86-0.03								1.0
FKH	SN	208	111	ES		1251	33.12-0.25								1.0
RCY	SZ	213	138	EP		1251	10.93 0.48								1.0

**April 18 2011 Hour: 13:3 26.0 Agency: REL Distant**  
**EMSC OT=13:03:26.0 40.90N 140.05E 16Km M=5.1 EASTERN HONSHU**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1322	39.53								
HWQ	BZ			EP		1322	39.27								

**April 19 2011 Hour: 13:0 43.8 Lat: 33.79N Lon: 35.79E Depth: 0 Agency: REL Local**  
**Magnitudes: 2.8MC REL Rms: 0.0 secs**  
**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	317	EP		13	0	46.67-0.00	43						1.0
DQRL	SZ	22	246	EP		13	0	47.32 0.00							1.0
DQRL	SN	22	246	ES		13	0	49.95-0.00							1.0
RCY	SZ	32	172	EP		13	0	48.98 0.00							1.0
RCY	SN	32	172	ES		13	0	52.84-0.00							1.0
HWQ	BZ	57	15	EP		13	0	52.88 0.01							1.0

**April 20 2011 Hour: 13:31 14.7 Lat: 33.88N Lon: 35.84E Depth: 0 Agency: REL Local**  
**Magnitudes: 2.8MC REL Rms: 0.0 secs**  
**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	280	EP		1331	17.55-0.02								1.0
DQRL	SZ	32	233	EP		1331	19.86 0.08								1.0
DQRL	SN	32	233	ES		1331	23.51-0.03								1.0
RCY	SZ	42	181	EP		1331	21.45-0.04	42							1.0
RCY	SN	42	181	ES		1331	26.52 0.01								1.0
HWQ	BZ	46	12	EP		1331	22.07-0.00								1.0

**April 20 2011 Hour: 21:59 23.4 Lat: 33.69N Lon: 35.80E Depth: 12 Agency: REL Local**  
**Magnitudes: 2.3MC REL Rms: 0.0 secs**

**CENTRAL BEKAA**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	21	172	EP		2159	27.48	-0.01	22						1.0
RCY	SN	21	172	ES		2159	30.50	0.00							1.0
DQRL	SZ	22	276	EP		2159	27.53	0.00							1.0
DQRL	SN	22	276	ES		2159	30.58	0.01							1.0
BHL	BZ	28	330	EP		2159	28.41	-0.00							1.0
HWQ	BZ	67	11	EP		2159	34.39	-0.00							0.2

**April 21 2011 Hour: 10:25 26.5 Lat: 33.76N Lon: 35.91E Depth: 8 Agency: REL Local**  
**Magnitudes: 2.9MC REL Rms: 0.0 secs**

**CENTRAL BEKAA**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	29	303	EP		1025	31.40	-0.01	50						1.0
RCY	SZ	30	194	EP		1025	31.70	-0.00							1.0
RCY	SN	30	194	ES		1025	35.52	-0.00							1.0
DQRL	SZ	32	259	EP		1025	31.99	-0.00							1.0
DQRL	SN	32	259	ES		1025	36.03	0.00							1.0
HWQ	BZ	57	3	EP		1025	35.90	0.01							1.0

**April 21 2011 Hour: 12:9 0.0 Agency: REL Local**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		12	9	26.92							
RCY	SZ			EP		12	9	25.06							

**April 21 2011 Hour: 14:32 0.0 Agency: REL Local**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		1432	41.73								
RCY	SZ			EP		1432	39.08								

**April 21 2011 Hour: 15:55 11.4 Lat: 33.80N Lon: 35.77E 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	319	EP		1555	14.70	0.00	41						1.0
DQRL	SZ	21	241	EP		1555	15.37	0.01							1.0
DQRL	SN	21	241	ES		1555	18.24	-0.01							1.0
RCY	SZ	34	169	EP		1555	17.28	-0.01							1.0
RCY	SN	34	169	ES		1555	21.63	0.01							1.0
HWQ	BZ	56	17	EP		1555	20.69	-0.00							1.0

**April 22 2011 Hour: 14:33 31.8 Lat: 33.78N Lon: 35.80E 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	19	316	EP		1433	34.87	-0.01	38						1.0
BHL	BE	19	316	ES		1433	37.13	-0.01							1.0
DQRL	SZ	23	248	EP		1433	35.45	-0.05							1.0
DQRL	SN	23	248	ES		1433	38.22	0.01							1.0
BEYL	BZ	30	289	EP		1433	36.68	0.04							1.0
RCY	SZ	32	174	EP		1433	37.00	0.01							1.0

**April 23 2011 Hour: 5:22 11.0 Agency: REL Regional**

**EMSC OT=05:22:11.0 37.47N 35.58E 10Km M=4.1 CENTRAL TURKEY**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		523	2.95								
BHL	BZ			EP		523	7.11								
DQRL	SZ			EP		523	9.50								

April 24 2011 Hour: 0:25 50.1

Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		029	1.22								
BHL	BZ			EP		029	2.03								
RCY	SZ			EP		029	4.78								
HWQ	BZ			EP		029	5.70								

April 24 2011 Hour: 0:59 42.1

Lat: 33.86N Lon: 35.83E 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	17	285	EP		059	44.82	-0.03							1.0
BHL	BE	17	285	ES		059	46.90	0.01							1.0
DQRL	SZ	30	234	EP		059	46.93	0.00							1.0
DQRL	SN	30	234	ES		059	50.52	0.01							1.0
BEYL	BZ	31	272	EP		059	47.20	0.05							0.2
RCY	SZ	41	180	EP		059	48.67	-0.00	50						1.0
HWQ	BZ	47	13	EP		059	49.69	0.01							1.0

April 24 2011 Hour: 2:10 45.0

Lat: 33.87N Lon: 35.84E 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	283	EP		210	47.90	-0.01							1.0
DQRL	SZ	31	235	EP		210	50.03	0.01							1.0
DQRL	SN	31	235	ES		210	53.73	0.01							1.0
BEYL	BZ	32	271	EP		210	50.22	-0.01							1.0
RCY	SZ	41	181	EP		210	51.68	0.01	48						1.0
RCY	SN	41	181	ES		210	56.58	-0.01							1.0
HWQ	BZ	47	12	EP		210	52.53	0.01							1.0

April 24 2011 Hour: 12:28 15.6

Lat: 33.79N Lon: 35.78E Depth: 1 Agency: REL Local

Magnitudes: 2.8MC REL

Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	317	EP		1228	18.41	0.00	46						1.0
DQRL	SZ	22	244	EP		1228	19.18	0.03							1.0
DQRL	SN	22	244	ES		1228	21.73	-0.02							1.0
RCY	SZ	33	171	EP		1228	21.00	-0.02							1.0
RCY	SN	33	171	ES		1228	25.01	0.01							1.0
HWQ	BZ	56	16	EP		1228	24.69	-0.00							1.0

April 24 2011 Hour: 13: 3 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 3	43.72								
RCY	SZ			EP		13 3	41.22								

April 24 2011 Hour: 18: 2 0.7

Lat: 33.62N Lon: 35.59E Depth: 8 Agency: REL Local

Magnitudes: 2.7MC REL

Rms: 0.0 secs

SAIDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	10	348	EP		18 2	2.81	0.01							1.0
DQRL	SN	10	348	ES		18 2	4.38	0.00							1.0
RCY	SZ	26	121	EP		18 2	5.18	0.00	37						1.0
RCY	SN	26	121	ES		18 2	8.52	-0.00							1.0
BHL	BZ	32	10	EP		18 2	5.99	-0.05							1.0
HWQ	BZ	80	24	EP		18 2	13.69	0.03							1.0

April 25 2011 Hour: 15:51 21.8 Lat: 33.79N Lon: 35.79E Depth: 3 Agency: REL Local  
Magnitudes: 2.7MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	315	EP		1551	24.77	-0.01	37						1.0
BHL	BN	18	315	ES		1551	26.97	-0.00							1.0
DQRL	SZ	22	245	EP		1551	25.48	-0.02							1.0
DQRL	SN	22	245	ES		1551	28.24	0.02							1.0
RCY	SZ	33	172	EP		1551	27.17	-0.00							1.0
HWQ	BZ	56	15	EP		1551	30.90	0.01							1.0

April 25 2011 Hour: 16:13 7.9 Lat: 33.79N Lon: 35.78E Depth: 0 Agency: REL Local  
Magnitudes: 2.7MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	317	EP		1613	10.75	0.00	41						1.0
DQRL	SZ	22	245	EP		1613	11.45	-0.01							1.0
DQRL	SN	22	245	ES		1613	14.06	0.00							1.0
RCY	SZ	33	171	EP		1613	13.29	0.04							1.0
RCY	SN	33	171	ES		1613	17.16	-0.02							1.0
HWQ	BZ	56	16	EP		1613	17.00	-0.01							1.0

April 26 2011 Hour: 3:59 32.6 Lat: 33.21N Lon: 35.74E Depth: 0 Agency: REL Local  
Magnitudes: 2.9MC REL Rms: 0.1 secs

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	33	15	EP		359	37.88	-0.08	48						1.0
RCY	SN	33	15	ES		359	41.91	-0.01							1.0
NAQL	SZ	57	260	EP		359	41.79	-0.01							1.0
DQRL	SZ	57	344	EP		359	41.96	0.08							1.0
DQRL	SN	57	344	ES		359	48.70	-0.02							1.0
BHL	BZ	78	354	EP		359	45.09	-0.04							1.0
HWQ	BZ	120	9	EP		359	52.08	0.09							1.0

April 26 2011 Hour: 10:24 0.0 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		1025	27.35								
HWQ	BZ			EP		1025	34.34								

April 26 2011 Hour: 10:28 0.0 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		1029	20.24								
HWQ	BZ			EP		1029	27.63								

April 26 2011 Hour: 14:6 45.9 Lat: 33.80N Lon: 35.79E Depth: 8 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	315	EP		14 6	49.14	0.01	63						1.0
DQRL	SZ	22	244	EP		14 6	49.83	-0.05							1.0
DQRL	SN	22	244	ES		14 6	52.80	0.01							1.0
BEYL	BZ	28	287	EP		14 6	50.76	0.02							1.0
RCY	SZ	34	172	EP		14 6	51.61	0.03							1.0
RCY	SN	34	172	ES		14 6	55.75	-0.01							1.0
HWQ	BZ	56	15	EP		14 6	55.02	-0.01							1.0

April 27 2011 Hour: 9:21 2.8 Lat: 33.97N Lon: 36.97E Depth: 7 Agency: REL Local  
Magnitudes: 3.1MC REL Rms: 0.0 secs

DAMASCUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	60	300	EP		921	12.57	-0.00	68						1.0
HWQ	BZ	101	290	EP		921	19.02	0.02							1.0
HWQ	BN	101	290	ES		921	30.99	-0.01							1.0

RCY	SZ	118	244	EP		921	21.58	-0.00								1.0
RCY	SN	118	244	ES		921	35.50	0.01								1.0
BHL	BZ	122	267	EP		921	22.00	-0.18								0.2
DQRL	SZ	133	257	EP		921	23.67	-0.13								0.2

**April 27 2011 Hour: 11:49 0.0**

**Agency: REL Local**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		1149	28.48								
HWQ	BZ			EP		1149	35.35								

**April 28 2011 Hour: 3:15 2.5**

**Lat: 33.30N Lon: 35.41E Depth: 0 Agency: REL Local**

**Magnitudes: 3.1MC REL**

**Rms: 0.1 secs**

**SOUTH LEBANON**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
NAQL	SZ	32	231	EP		3	1	57.74	0.03						1.0
NAQL	SN	32	231	ES		3	2	1.59	0.01						1.0
RCY	SZ	45	61	EP		3	1	59.72	-0.04	68					1.0
RCY	SN	45	61	ES		3	2	5.13	-0.02						1.0
DQRL	SZ	47	18	EP		3	2	0.02	-0.06						1.0
DQRL	SN	47	18	ES		3	2	5.65	-0.06						1.0
BHL	BZ	70	19	EP		3	2	3.87	0.02	61					1.0
HWQ	BZ	119	25	EP		3	2	11.71	0.02						1.0
FKH	SZ	140	41	EP		3	2	14.92	-0.04						1.0
FKH	SN	140	41	ES		3	2	31.75	0.16						1.0

**April 28 2011 Hour: 11:23 24.2**

**Lat: 34.60N Lon: 36.37E Depth: 6 Agency: REL Local**

**Magnitudes: 3.0MC REL**

**Rms: 0.0 secs**

**HERMEL BAALBEK REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	39	175	EP		1123	30.63	-0.03	56						1.0
FKH	SN	39	175	ES		1123	35.44	0.00							1.0
HWQ	BZ	53	228	EP		1123	32.78	-0.03							1.0
HWQ	BN	53	228	ES		1123	39.15	-0.03							1.0
BHL	BZ	101	221	EP		1123	40.70	0.11							1.0
DQRL	SZ	123	217	EP		1123	43.81	-0.03							1.0

**April 28 2011 Hour: 12:34 25.3**

**Lat: 33.32N Lon: 35.38E Depth: 1 Agency: REL Local**

**Magnitudes: 2.8MC REL**

**Rms: 0.1 secs**

**SOUTH LEBANON**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	46	22	EP		1234	32.70	-0.06							1.0
DQRL	SN	46	22	ES		1234	38.23	-0.02							1.0
RCY	SZ	46	65	EP		1234	32.85	0.04	41						1.0
RCY	SN	46	65	ES		1234	38.34	-0.01							1.0
BHL	BZ	69	21	EP		1234	36.52	-0.00							1.0
HWQ	BZ	118	26	EP		1234	44.45	0.05							1.0
FKH	SZ	140	43	EP		1234	47.85	0.11							1.0
FKH	SN	140	43	ES		1235	4.25	-0.07							1.0

**April 28 2011 Hour: 16:49 19.8**

**Lat: 33.79N Lon: 35.78E Depth: 0 Agency: REL Local**

**Magnitudes: 2.7MC REL**

**Rms: 0.0 secs**

**BEIRUT REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	319	EP		1649	22.55	-0.04	42						1.0
DQRL	SZ	21	245	EP		1649	23.20	0.00							1.0
DQRL	SN	21	245	ES		1649	25.75	0.02							1.0
RCY	SZ	33	170	EP		1649	25.06	0.02							1.0
RCY	SN	33	170	ES		1649	28.89	-0.03							1.0
HWQ	BZ	57	16	EP		1649	28.97	0.03							1.0

April 29 2011 Hour: 11:15 2.9 Lat: 33.87N Lon: 35.84E 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	281	EP		1115	5.72	-0.03	52						1.0
DQRL	SZ	31	233	EP		1115	7.96	0.01							1.0
DQRL	SN	31	233	ES		1115	11.71	0.01							1.0
RCY	SZ	42	181	EP		1115	9.65	-0.00							1.0
RCY	SN	42	181	ES		1115	14.65	-0.01							1.0
HWQ	BZ	46	12	EP		1115	10.29	0.01							1.0

April 29 2011 Hour: 17:46 0.0 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		1747	7.90								
RCY	SZ			EP		1747	7.99								

April 30 2011 Hour: 2: 7 41.2 Lat: 33.09N Lon: 34.71E Depth: 2 Agency: REL Local  
 Magnitudes: 2.7MC REL Rms: 0.1 secs

**OFFSHORE SOUTH LEBANON**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
NAQL	SZ	41	85	EP		2 7	47.88	0.05	41						1.0
NAQL	SN	41	85	ES		2 7	52.67	-0.03							1.0
DQRL	SZ	106	49	EP		2 7	58.35	0.06							1.0
DQRL	SN	106	49	ES		2 8	10.86	-0.04							1.0
BHL	BZ	126	44	EP		2 8	1.50	-0.07							1.0
HWQ	BZ	175	41	EP		2 8	8.70	-0.05							1.0
HWQ	BE	175	41	ES		2 8	29.17	0.07							1.0

April 30 2011 Hour: 13:22 42.4 Lat: 33.28N Lon: 35.35E Depth: 0 Agency: REL Local  
 Magnitudes: 2.7MC REL Rms: 0.0 secs

**SOUTH LEBANON**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	51	61	EP		1322	50.65	-0.02	38						1.0
RCY	SN	51	61	ES		1322	56.77	0.01							1.0
DQRL	SZ	52	23	EP		1322	50.78	0.02							1.0
DQRL	SN	52	23	ES		1322	56.85	-0.07							1.0
BHL	BZ	75	22	EP		1322	54.52	-0.00							1.0
BHL	BN	75	22	ES		1323	3.47	0.01							1.0
HWQ	BZ	124	26	EP		1323	2.42	0.01							1.0
HWQ	BN	124	26	ES		1323	17.23	0.04							1.0



# Epicentral Map of Lebanon

## APRIL 2011

