

Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

November

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
QRWL	3332.86N	3540.93E	875	QARAOUN	Opened Oct 2011
SHBL	3320.90N	3544.63E	1422	CHEBAA	Opened Oct 2011

REGIONAL AND DISTANT EARTHQUAKES

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

MACROSEISMIC DATA

Macroseismic data, if available, are included in the bulletin.

MONTHLY EPICENTER MAPS

Maps will be found on the last page.

ELECTRONIC PUBLICATION

This provisional bulletin is available for download in pdf format on:
<http://www.cnrs.edu.lb/grdownload.html>

REFERENCES

- Havskov, J. and Ottemoller, L. (2001). SEISAN: The Earthquake Analysis Software. -version 7.2-
Institute of Solid Earth Physics, University of Bergen.
<http://www.ifjf.uib.no/seismo/software/seisan.html>
- Lienert, B.R., Berg, E. and Frazer, L.N. (1986). Hypocenter: An earthquake location method using centered, scaled, and adaptively least squares. Bull. Seism. Soc. Am., 76., pp 771-783.

Abbreviations:

TIME: Origin time in UTC (hr. min. and sec.) or data file onset time if event is not located.

LAT: Latitude of epicenter

LON: Longitude of epicenter

DEPTH: Focal depth in kilometer (trailing F indicates fixed depth)

AGENCY: REL throughout the bulletin, aka. REsearch Lebanon

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

EMSC: Euro-Mediterranean Seismological Centre.

OT: Origin Time

RMS: Root mean square value of travel time residuals

STAT: Station code

CO: Component; S:short period, L:long period, B:broadband.

DIST: Epicenter distance (km)

AZI: Azimuth from source to station

PHAS: Phase; The first letter characterizes onset E(mergent) or I(mpulsive)

P: Polarity (C for compression, D for dilatation)

HR: Hour

MN: Minute

SECON: Seconds

TRES: Residual (seconds)

CODA: Signal duration in seconds

AMPL: Ground Amplitude ($0.5 * (\text{peak to peak})$), (nm) at period PERI

PERI: Period where amplitude is measured

BAZ: Back azimuth (station to event)

ARES: Back azimuth residual

VELO: Apparent phase velocity (km/sec)

WT: Weight of phase in the location

*: An asterisk before the phase arrival time implies a potential timing error. If an S phase is read, differential S-P times will be used in the hypocenter location.

November 1 2011 Hour: 0:21 25.0

Agency: REL Distant

EMSC OT=00:21:25.0 43.71N 82.45E 10Km M=5.6 NORTHERN XINJIANG

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		028	32.63								
HWQ	SZ			EP		028	35.42								
BHL	BZ			EP		028	38.52								
RCY	SZ			EP		028	39.64								
DQRL	SZ			EP		028	40.15								
QRWL	SZ			EP		028	39.99								
SHBL	BZ			EP		028	40.71								

November 1 2011 Hour: 10:58 7.5 Lat: 33.78N Lon: 35.77E Depth: 0 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	323	EP		1058	10.22-0.10		66						1.0
DQRL	SZ	20	247	EP		1058	10.76 0.08								1.0
DQRL	SN	20	247	ES		1058	13.07 0.00								1.0
QRWL	SZ	27	198	EP		1058	11.69-0.05								1.0
QRWL	SN	27	198	ES		1058	14.90-0.02								1.0
RCY	SZ	32	169	EP		1058	12.61 0.05								1.0
RCY	SN	32	169	ES		1058	16.33-0.01								1.0
SHBL	BZ	48	183	EP		1058	15.13 0.01								1.0
SHBL	BN	48	183	ES		1058	20.76-0.03								1.0
HWQ	SZ	58	16	EP		1058	16.85 0.03								1.0

November 1 2011 Hour: 11:49 24.6 Lat: 33.78N Lon: 35.77E Depth: 2 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	323	EP		1149	27.34-0.08		41						1.0
BHL	BN	17	323	ES		1149	29.51 0.01								1.0
DQRL	SZ	20	245	EP		1149	27.86-0.02								1.0
DQRL	SN	20	245	ES		1149	30.35 0.04								1.0
RCY	SZ	32	168	EP		1149	29.83-0.03								1.0
RCY	SN	32	168	ES		1149	33.75 0.01								1.0
HWQ	SZ	58	17	EP		1149	33.96 0.06								1.0

November 1 2011 Hour: 16:13 48.8 Lat: 33.78N Lon: 35.77E 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	322	EP		1613	51.58-0.06		47						1.0
DQRL	SZ	20	246	EP		1613	52.07-0.01								1.0
DQRL	SN	20	246	ES		1613	54.59 0.07								1.0
RCY	SZ	32	169	EP		1613	53.87-0.09								1.0
RCY	SN	32	169	ES		1613	57.85 0.07								1.0
SHBL	BZ	48	183	EP		1613	56.49-0.04								1.0
SHBL	BN	48	183	ES		1614	2.24-0.01								1.0
HWQ	SZ	58	16	EP		1613	58.18 0.09								1.0

November 1 2011 Hour: 17:41 24.8 Lat: 33.81N Lon: 35.75E Depth: 19 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	14	319	EP		1741	28.66 0.01		47						1.0
DQRL	SZ	20	236	EP		1741	29.25-0.03								1.0
DQRL	SN	20	236	ES		1741	32.65 0.01								1.0
RCY	SZ	35	167	EP		1741	31.21 0.00								1.0
RCY	SN	35	167	ES		1741	35.99 0.00								1.0
SHBL	BZ	51	181	EP		1741	33.44 0.05								1.0
SHBL	BN	51	181	ES		1741	39.74-0.04								1.0
HWQ	SZ	55	19	EP		1741	33.93-0.02								1.0

November 2 2011 Hour: 0:56 30.0

Agency: REL Regional

EMSC OT=00:56:30.0 35.42N 34.22E 20Km M=3.0 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ			EP		057	1.87								
HWQ	SZ			EP		056	53.68								

November 2 2011 Hour: 4:34 24.0

Agency: REL Regional

EMSC OT=04:34:24.0 38.70N 43.57E 7Km M=4.7 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		436	11.58								
HWQ	SZ			EP		436	15.32								
BHL	BZ			EP		436	25.28								
DQRL	SZ			EP		436	27.83								
SHBL	BZ			EP		436	27.33								

November 2 2011 Hour: 10:17 44.2 Lat: 34.07N Lon: 35.61E Depth: 0 Agency: REL Local

Magnitudes: 2.7MC REL

Rms: 0.0 secs

OFFSHORE CENTRAL LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	19	168	EP		1017	47.30	-0.05	42						1.0
HWQ	SZ	38	54	EP		1017	50.37	-0.03							1.0
HWQ	SN	38	54	ES		1017	55.00	0.03							1.0
DQRL	SZ	41	185	EP		1017	50.90	0.04							1.0
DQRL	SE	41	185	ES		1017	55.76	-0.00							1.0
RCY	SZ	67	162	EP		1017	55.11	0.01							1.0

November 2 2011 Hour: 11:43 3.0

Agency: REL Regional

EMSC OT=11:43:03.0 37.19N 43.82E 2Km M=4.8 TURKEY-IRAQ REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		1144	44.50								
HWQ	SZ			EP		1144	48.53								
BHL	BZ			EP		1144	57.68								
RCY	SZ			EP		1144	55.78								
DQRL	SZ			EP		1144	57.46								
SHBL	BZ			EP		1144	57.65								

November 2 2011 Hour: 20:48 22.0

Agency: REL Regional

EMSC OT=20:48:22.0 38.78N 43.34E 5Km M=4.2 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ			EP		2050	24.50								
DQRL	SZ			EP		2050	25.02								

November 4 2011 Hour: 5:37 47.0 Lat: 34.04N Lon: 34.57E Depth: 20 Agency: REL Regional

Magnitudes: 3.3MC REL

Rms: 0.1 secs

EMSC OT=05:37:46.0 34.07N 34.61E 20Km M=3.4 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEYL	BZ	87	102	EP		538	0.80	0.02							1.0
DQRL	SZ	100	111	EP		538	2.60	-0.04							1.0
DQRL	SN	100	111	ES		538	14.25	0.01							1.0
BHL	BZ	101	98	EP		538	2.82	-0.07	86						1.0
BHL	BE	101	98	ES		538	14.65	-0.03							1.0
NAQL	SZ	115	152	EP		538	4.85	0.00							1.0
QRWL	SZ	116	118	EP		538	5.18	0.07							1.0
QRWL	SN	116	118	ES		538	18.52	-0.01							1.0
HWQ	SZ	130	78	EP		538	7.09	0.02							1.0
HWQ	SE	130	78	ES		538	21.97	0.03							1.0
RCY	SZ	132	117	EP		538	7.42	0.04							1.0
RCY	SN	132	117	ES		538	22.49	0.00							1.0
SHBL	BZ	133	125	EP		538	7.45	-0.12							1.0
SHBL	BN	133	125	ES		538	22.88	0.06							1.0

November 4 2011 Hour: 20:44 58.6 Lat: 33.30N Lon: 35.41E Depth: 8 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	32	80	EP		2045	3.90	-0.02							1.0
SHBL	BN	32	80	ES		2045	7.88	0.01							1.0
RCY	SZ	45	61	EP		2045	6.08	0.02	30						1.0
RCY	SN	45	61	ES		2045	11.59	-0.01							1.0
DQRL	SZ	48	18	EP		2045	6.40	-0.00							1.0

November 4 2011 Hour: 20:49 20.3 Lat: 33.25N Lon: 35.36E Depth: 8 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

SOUTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	45	42	EP		2049	27.63	0.02							1.0
QRWL	SN	45	42	ES		2049	33.04	0.00							1.0
RCY	SZ	52	58	EP		2049	28.79	-0.01	32						1.0
RCY	SE	52	58	ES		2049	35.10	-0.00							1.0
DQRL	SZ	54	21	EP		2049	29.13	-0.01							1.0
BHL	BZ	78	20	EP		2049	32.93	0.06							0.2

November 5 2011 Hour: 13:44 14.3 Lat: 33.42N Lon: 35.68E Depth: 2 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.0 secs

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	10	142	EP		1344	16.00	-0.05							1.0
SHBL	BN	10	142	ES		1344	17.39	0.03							1.0
QRWL	SZ	14	2	EP		1344	16.58	-0.04							1.0
RCY	SZ	17	60	EP		1344	17.13	0.03	25						1.0
RCY	SN	17	60	ES		1344	19.18	-0.01							1.0
DQRL	SZ	33	343	EP		1344	19.68	0.03							1.0
DQRL	SN	33	343	ES		1344	23.64	0.01							1.0

November 5 2011 Hour: 19:19 16.0 Agency: REL Regional
EMSC OT=19:19:16.0 38.81N 43.51E 19Km M=4.3 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ			EP		1921	20.06								
DQRL	SZ			EP		1921	20.80								
BHL	BZ			EP		1921	24.52								

November 6 2011 Hour: 2:43 13.0 Agency: REL Regional
EMSC OT=02:43:13.0 38.92N 43.51E 3Km M=4.7 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		245	3.64								
HWQ	SZ			EP		245	6.61								
BHL	BZ			EP		245	24.36								
BEYL	BZ			EP		245	28.52								
DQRL	SZ			EP		245	23.28								
QRWL	SZ			EP		245	18.32								
SHBL	BZ			EP		245	20.35								

November 6 2011 Hour: 5:33 0.4 Lat: 33.19N Lon: 35.61E Depth: 11 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

NORTH GALILEE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	22	36	EP		533	4.44	-0.01							1.0
SHBL	BN	22	36	ES		533	7.46	0.02							1.0
RCY	SZ	40	32	EP		533	7.12	-0.05	28						1.0
RCY	SN	40	32	ES		533	12.22	0.04							1.0
QRWL	SZ	40	10	EP		533	7.19	0.01							1.0
QRWL	SN	40	10	ES		533	12.14	-0.05							1.0
DQRL	SZ	57	356	EP		533	9.91	0.06							1.0

November 6 2011 Hour: 5:54 12.0 Lat: 34.15N Lon: 36.29E Depth: 3 Agency: REL Local
Magnitudes: 3.2MC 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	15	49	EP		554	14.59	-0.00	81						1.0
HWQ	BZ	34	294	EP		554	17.59	0.01							1.0
BHL	BZ	65	245	EP		554	22.37	-0.10							1.0
DQRL	SZ	83	233	EP		554	25.38	-0.02							1.0
DQRL	SN	83	233	ES		554	35.43	0.13							1.0
RCY	SZ	84	210	EP		554	25.69	0.09							1.0
QRWL	SZ	88	220	EP		554	26.15	0.00							1.0
QRWL	SN	88	220	ES		554	36.49	-0.12							1.0
SHBL	BZ	103	209	EP		554	28.62	0.04							1.0
SHBL	BN	103	209	ES		554	40.82	-0.02							1.0

November 6 2011 Hour: 8: 8 26.1 Lat: 34.15N Lon: 36.31E Depth: 3 Agency: REL Local
Magnitudes: 2.6MC 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	14	40	EP		8 8	28.45	-0.04	34						1.0
FKH	SN	14	40	ES		8 8	30.29	0.02							1.0
HWQ	SZ	37	294	EP		8 8	32.08	0.05							1.0
HWQ	SN	37	294	ES		8 8	36.43	-0.01							1.0
BHL	BZ	66	246	EP		8 8	36.77	-0.03							1.0
DQRL	SZ	84	235	EP		8 8	39.60	-0.07							1.0
QRWL	SZ	88	221	EP		8 8	40.39	0.05							1.0
SHBL	BZ	103	211	EP		8 8	42.73	0.03							1.0
SHBL	BN	103	211	ES		8 8	54.99	-0.01							1.0

November 6 2011 Hour: 20:56 0.0 Agency: REL Regional

EMSC OT=20:56:00.0 38.60N 43.16E 5Km M=4.2 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2058	49.78								
DQRL	SZ			EP		2058	51.71								
QRWL	SZ			EP		2058	51.53								
HWQ	SZ			EP		2058	52.50								
RCY	SZ			EP		2058	53.39								
SHBL	BZ			EP		2058	53.19								

November 7 2011 Hour: 11:59 32.0 Agency: REL Distant

EMSC OT=11:59:32.0 36.64N 71.17E 218Km M=5.6 HINDU KUSH REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		12 5	10.27								
RCY	SZ			EP		12 5	12.94								
BHL	BZ			EP		12 5	12.71								
SHBL	BZ			EP		12 5	13.07								
QRWL	SZ			EP		12 5	13.98								
DQRL	SZ			EP		12 5	14.41								

November 7 2011 Hour: 15:53 52.0 Agency: REL Regional

EMSC OT=15:53:52.0 38.62N 43.66E 6Km M=4.6 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		1555	39.73								
HWQ	SZ			EP		1555	44.99								
BHL	BZ			EP		1555	59.83								
DQRL	SZ			EP		1555	54.27								
QRWL	SZ			EP		1555	53.94								

November 7 2011 Hour: 22:14 16.0

Agency: REL Regional

EMSC OT=22:14:16.0 38.78N 43.56E 7Km M=4.5 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		2216	4.34								
BHL	BZ			EP		2216	23.10								
QRWL	SZ			EP		2216	17.83								
DQRL	SZ			EP		2216	18.00								
SHBL	BZ			EP		2216	19.59								

November 8 2011 Hour: 2:59 7.0

Agency: REL Distant

EMSC OT=02:59:07.0 27.35N 125.76E 220Km M=6.9 TAIWAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		310	23.77								
HWQ	BZ			EP		310	25.17								
BHL	BZ			EP		310	27.35								
RCY	SZ			EP		310	27.89								
BEYL	BZ			EP		310	27.89								
QRWL	SZ			EP		310	28.05								
SHBL	BZ			EP		310	28.75								

November 8 2011 Hour: 22: 5 50.0

Agency: REL Regional

EMSC OT=22:05:50.0 38.71N 43.11E 6Km M=5.3 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		22 7	34.40								
HWQ	SZ			EP		22 7	38.59								
BHL	BZ			EP		22 7	51.38								
RCY	SZ			EP		22 7	47.37								
DQRL	SZ			EP		22 7	49.14								
SHBL	BZ			EP		22 7	49.07								

November 9 2011 Hour: 4:33 22.6 Lat: 33.91N Lon: 35.93E Depth: 1 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
BHL	BZ	26	269	EP		433	26.74	-0.03	22						1.0
BHL	BN	26	269	ES		433	29.86	0.02							1.0
DQRL	SZ	40	236	EP		433	29.13	0.02							1.0
DQRL	SE	40	236	ES		433	33.89	-0.02							1.0
HWQ	SZ	41	2	EP		433	29.27	-0.01							1.0
RCY	SZ	46	191	EP		433	30.12	0.02							1.0
RCY	SN	46	191	ES		433	35.64	-0.01							1.0

November 9 2011 Hour: 15: 2 14.1 Lat: 34.07N Lon: 35.64E Depth: 1 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.1 secs

KESROUANE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	19	175	EP		15 2	17.02	-0.05	36						1.0
BHL	BN	19	175	ES		15 2	19.33	0.03							1.0
HWQ	SZ	37	51	EP		15 2	19.99	0.01							1.0
DQRL	SZ	41	189	EP		15 2	20.77	0.09							1.0
DQRL	SN	41	189	ES		15 2	25.53	-0.04							1.0
RCY	SZ	66	164	EP		15 2	24.70	-0.06							1.0
RCY	SE	66	164	ES		15 2	32.71	0.03							1.0

November 9 2011 Hour: 19:23 35.0

Agency: REL Regional

EMSC OT=19:23:35.0 38.42N 43.29E 6Km M=5.7 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		1925	18.71								
HWQ	SZ			EP		1925	22.44								
BHL	BZ			EP		1925	27.64								
RCY	SZ			EP		1925	31.08								
DQRL	SZ			EP		1925	33.96								
QRWL	SZ			EP		1925	31.85								

SHBL BZ EP 1925 32.47

November 9 2011 Hour: 20:45 40.0

Agency: REL Regional

EMSC OT=20:45:40.0 38.42N 43.35E 2Km M=4.6 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		2047	27.66								
BHL	BZ			EP		2047	41.49								
DQRL	SZ			EP		2047	38.11								
QRWL	SZ			EP		2047	37.80								
SHBL	BZ			EP		2047	38.62								

November 9 2011 Hour: 21:54 48.2 Lat: 34.30N Lon: 35.83E Depth: 11 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.0 secs

NORTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	11	101	EP		2154	50.85	0.01							1.0
HWQ	SN	11	101	ES		2154	52.82	-0.01							1.0
BHL	BZ	47	201	EP		2154	55.93	-0.01	23						1.0
BHL	BE	47	201	ES		2155	1.70	0.01							1.0
DQRL	SZ	70	200	EP		2154	59.61	0.00							1.0

November 9 2011 Hour: 22:38 36.6 Lat: 33.78N Lon: 35.29E Depth: 22 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

OFFSHORE CENTRAL LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	27	108	EP		2238	42.27	0.00	28						1.0
DQRL	SN	27	108	ES		2238	46.43	0.00							1.0
BHL	BZ	36	68	EP		2238	43.40	0.00							1.0
QRWL	SZ	45	125	EP		2238	44.47	-0.02							1.0
QRWL	SE	45	125	ES		2238	50.30	0.00							1.0
SHBL	BZ	64	139	EP		2238	47.24	0.01							1.0

November 9 2011 Hour: 22:38 20.0

Agency: REL Regional

EMSC OT=22:38:20.0 38.32N 43.29E 2Km M=4.6 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		2240	2.15								
HWQ	SZ			EP		2240	5.64								
BHL	BZ			EP		2240	19.70								
DQRL	SZ			EP		2240	15.55								
QRWL	SZ			EP		2240	15.74								
SHBL	BZ			EP		2240	17.43								

November 10 2011 Hour: 4:46 14.7 Lat: 33.45N Lon: 35.61E Depth: 2 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs

SAIDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	13	33	EP		446	16.69	-0.07							1.0
QRWL	SN	13	33	ES		446	18.26	-0.03							1.0
SHBL	BZ	17	133	EP		446	17.53	0.01							1.0
RCY	SZ	22	77	EP		446	18.27	0.04	45						1.0
RCY	SE	22	77	ES		446	20.86	0.02							1.0
DQRL	SZ	28	353	EP		446	19.24	-0.03							1.0
DQRL	SN	28	353	ES		446	22.75	0.10							1.0
BHL	BZ	50	5	EP		446	22.75	-0.05							1.0
HWQ	SZ	97	19	EP		446	30.29	-0.00							1.0

November 10 2011 Hour: 15:20 45.7 Lat: 33.42N Lon: 35.67E Depth: 4 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	10	138	EP		1520	47.54	-0.01							1.0
SHBL	BE	10	138	ES		1520	48.96	0.01							1.0
QRWL	SZ	15	4	EP		1520	48.17	-0.02							1.0
RCY	SZ	18	59	EP		1520	48.69	0.03	36						1.0

RCY	SN	18	59	ES		1520	50.88	-0.01											1.0
DQRL	SZ	34	344	EP		1520	51.13	-0.01											1.0
DQRL	SN	34	344	ES		1520	55.21	0.01											1.0

November 11 2011 Hour: 15: 2 20.0

Agency: REL Distant

EMSC OT=15:02:20.0 17.69S 172.98W 10Km M=5.5 TONGA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ			EP		1522	6.28								
BHL	BZ			EP		1522	6.39								
DQRL	SZ			EP		1522	6.98								

November 13 2011 Hour: 13:59 54.4 Lat: 34.29N Lon: 35.11E Depth: 29 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
BHL	BZ	66	130	EP		14 0	5.58	-0.06							1.0
HWQ	SZ	77	91	EP		14 0	7.22	0.02	73						1.0
HWQ	SN	77	91	ES		14 0	16.65	0.02							1.0
DQRL	SZ	78	146	EP		14 0	7.24	0.01							1.0
RCY	SZ	111	142	EP		14 0	11.79	0.07							1.0
RCY	SN	111	142	ES		14 0	24.49	-0.01							1.0
FKH	SZ	120	92	EP		14 0	12.80	-0.05							1.0
FKH	SN	120	92	ES		14 0	26.47	0.00							1.0

November 13 2011 Hour: 18:23 43.5 Lat: 33.99N Lon: 35.80E Depth: 3 Agency: REL Local

Magnitudes: 3.0MC REL

Rms: 0.0 secs

KESROUANE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	235	EP		1823	46.14	-0.06	63						1.0
BHL	BN	17	235	ES		1823	48.27	0.03							1.0
HWQ	SZ	35	23	EP		1823	49.09	-0.01							1.0
DQRL	SZ	38	214	EP		1823	49.66	0.04							1.0
RCY	SZ	55	177	EP		1823	52.32	-0.00							1.0
RCY	SN	55	177	ES		1823	58.87	-0.01							1.0
FKH	SZ	63	63	EP		1823	53.66	0.02							1.0

November 14 2011 Hour: 9:46 48.0

Agency: REL Regional

EMSC OT=09:46:48.0 36.15N 29.03E 26Km M=4.0 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		948	15.65								
HWQ	SZ			EP		948	13.34								

November 14 2011 Hour: 16:47 17.7

Agency: REL Regional

EMSC OT=16:47:17.0 38.61N 43.01E 7Km M=4.6 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		1649	0.35								
HWQ	SZ			EP		1649	5.00								
DQRL	SZ			EP		1649	15.71								

November 14 2011 Hour: 22: 8 16.0

Agency: REL Regional

EMSC OT=22:08:16.0 38.75N 43.17E 10Km M=5.2 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		2210	3.28								
BHL	BZ			EP		2210	11.06								
DQRL	SZ			EP		2210	12.01								
QRWL	SZ			EP		2210	13.24								

November 17 2011 Hour: 2:37 19.0

Agency: REL Regional

EMSC OT=02:37:19.0 39.16N 41.59E 10Km M=4.8 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		239	0.46								
BHL	BZ			EP		239	5.68								
QRWL	SZ			EP		239	10.92								
RCY	SZ			EP		239	10.52								

November 17 2011 Hour: 11:38 42.0 Lat: 34.35N Lon: 36.63E Depth: 0 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.1 secs

NEBEK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	23	241	EP		1138	45.40	-0.35							0.2
FKH	SN	23	241	ES		1138	48.48	-0.01							1.0
HWQ	SZ	63	263	EP		1138	52.20	-0.03	61						1.0
HWQ	SE	63	263	ES		1138	59.77	0.01							1.0
BHL	BZ	102	242	EP		1138	58.61	0.06							1.0
RCY	SZ	119	218	EP		1139	1.29	-0.01							1.0

November 18 2011 Hour: 7:51 24.0

Agency: REL Distant

EMSC OT=07:51:24.0 37.69S 179.30E 10Km M=5.9 NEW ZEALAND

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		811	15.75								
SHBL	BZ			EP		811	16.41								
QRWL	SZ			EP		811	15.99								
BHL	BZ			EP		811	16.53								

November 18 2011 Hour: 17:39 40.0

Agency: REL Regional

EMSC OT=17:39:40.0 38.85N 43.87E 2Km M=5.0 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		1741	32.39								
HWQ	SZ			EP		1741	36.61								
BHL	BZ			EP		1741	43.90								
RCY	SZ			EP		1741	43.89								
SHBL	BZ			EP		1741	47.09								

November 19 2011 Hour: 7: 8 56.8

Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		714	3.37								
DQRL	SZ			EP		714	7.17								
BHL	BZ			EP		714	7.67								
HWQ	SZ			EP		714	8.79								

November 21 2011 Hour: 3:15 43.0

Agency: REL Distant

EMSC OT=03:15:43.0 24.98N 95.22E 119Km M=5.9 MYANMAR

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		324	36.25								
HWQ	SZ			EP		324	38.88								
BHL	BZ			EP		324	41.30								
SHBL	BZ			EP		324	41.45								
QRWL	SZ			EP		324	42.08								

November 21 2011 Hour: 5:54 53.2 Lat: 33.78N Lon: 35.78E Depth: 1 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	319	EP		554	56.17	-0.00	56						1.0
BHL	BN	18	319	ES		554	58.35	-0.01							1.0
DQRL	SZ	21	247	EP		554	56.71	0.03							1.0
DQRL	SN	21	247	ES		554	59.24	-0.00							1.0
QRWL	SZ	27	200	EP		554	57.64	-0.02							1.0
RCY	SZ	32	171	EP		554	58.37	-0.02							1.0
RCY	SN	32	171	ES		555	2.23	0.02							1.0
HWQ	SZ	57	15	EP		555	2.48	0.01							1.0

November 21 2011 Hour: 13:53 59.6 Lat: 33.45N Lon: 35.65E Depth: 0 Agency: REL Local
Magnitudes: 2.3MC 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	17	EP		1354	1.35	-0.07							1.0
SHBL	BZ	15	142	EP		1354	2.00	0.04							1.0
SHBL	BE	15	142	ES		1354	3.67	-0.03							1.0
RCY	SZ	18	74	EP		1354	2.60	0.04	24						1.0
RCY	SN	18	74	ES		1354	4.75	0.00							1.0
DQRL	SZ	29	346	EP		1354	4.33	0.02							1.0

November 21 2011 Hour: 14:55 58.3 Lat: 33.42N Lon: 35.68E Depth: 1 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.0 secs

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	10	145	EP		1455	59.99	-0.02							1.0
SHBL	BN	10	145	ES		1456	1.25	0.01							1.0
QRWL	SZ	14	359	EP		1456	0.64	-0.01							1.0
RCY	SZ	16	59	EP		1456	1.05	0.01	23						1.0
RCY	SN	16	59	ES		1456	3.03	-0.00							1.0
DQRL	SZ	33	342	EP		1456	3.75	0.01							1.0

November 21 2011 Hour: 15:53 15.9 Lat: 33.78N Lon: 35.77E Depth: 7 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	321	EP		1553	18.93	-0.04	50						1.0
DQRL	SZ	20	245	EP		1553	19.50	0.05							1.0
DQRL	SN	20	245	ES		1553	22.11	0.02							1.0
QRWL	SZ	27	197	EP		1553	20.41	-0.10							1.0
QRWL	SN	27	197	ES		1553	23.92	-0.01							1.0
RCY	SZ	32	169	EP		1553	21.36	0.04							1.0
SHBL	BZ	48	183	EP		1553	23.81	-0.01							1.0
SHBL	BN	48	183	ES		1553	29.71	0.02							1.0
HWQ	SZ	57	17	EP		1553	25.25	0.03							1.0

November 21 2011 Hour: 20:55 57.0 Agency: REL Regional
EMSC OT=20:55:57.0 38.68N 43.21E 18Km M=4.3 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		2057	46.52								
BHL	BZ			EP		2057	55.55								
DQRL	SZ			EP		2058	1.49								
SHBL	BZ			EP		2057	57.13								

November 22 2011 Hour: 3:30 37.0 Agency: REL Regional
EMSC OT=03:30:37.0 38.62N 43.31E 5Km M=4.7 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		332	32.44								
SHBL	BZ			EP		332	35.42								
BHL	BZ			EP		332	36.07								

November 22 2011 Hour: 5:16 32.9 Lat: 33.88N Lon: 35.85E 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		516	35.80	-0.01	48						1.0
DQRL	SZ	32	233	EP		516	38.07	0.03							1.0
DQRL	SN	32	233	ES		516	41.83	-0.01							1.0
QRWL	SZ	40	203	EP		516	39.19	-0.09							1.0
QRWL	SN	40	203	ES		516	44.02	0.02							1.0
RCY	SZ	42	181	EP		516	39.76	0.04							1.0
HWQ	SZ	45	12	EP		516	40.24	0.00							1.0
SHBL	BZ	59	189	EP		516	42.48	-0.00							1.0

SHBL BN 59 189 ES 516 49.58 0.00 1.0

November 22 2011 Hour: 11:10 0.0

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		1110	51.20								
SHBL	BZ			EP		1111	10.64								

November 23 2011 Hour: 12:17 50.0

Agency: REL Regional

EMSC OT=12:17:50.0 34.20N 25.09E 10Km M=5.5 CRETE, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		1219	58.40								
HWQ	SZ			EP		1219	59.08								
FKH	SZ			EP		1220	4.49								

November 23 2011 Hour: 15: 5 23.2 Lat: 33.42N Lon: 35.67E Depth: 1 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
SHBL	BZ	11	139	EP		15 5	24.92	-0.00							1.0
SHBL	BN	11	139	ES		15 5	26.21	-0.00							1.0
QRWL	SZ	14	5	EP		15 5	25.50	0.01							1.0
QRWL	SE	14	5	ES		15 5	27.20	-0.00							1.0
RCY	SZ	18	61	EP		15 5	26.06	0.01	45						1.0
RCY	SN	18	61	ES		15 5	28.16	-0.01							1.0
DQRL	SZ	33	344	EP		15 5	28.51	-0.00							1.0

November 23 2011 Hour: 19:24 32.0

Agency: REL Distant

EMSC OT=19:24:32.0 37.42N 141.40E 38Km M=6.1 COAST OF HONSHU

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		1936	40.11								
BHL	BZ			EP		1936	42.90								
DQRL	SZ			EP		1936	44.68								
SHBL	BZ			EP		1936	45.33								

November 24 2011 Hour: 0:48 7.0

Agency: REL Regional

EMSC OT=00:48:07.0 38.62N 43.04E 5Km M=4.5 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		049	51.17								
HWQ	SZ			EP		049	52.98								
DQRL	SZ			EP		050	4.01								
SHBL	BZ			EP		050	5.91								

November 24 2011 Hour: 2:26 48.7 Lat: 33.51N Lon: 35.72E Depth: 4 Agency: REL Local
 Magnitudes: 2.3MC 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	6	318	EP		226	49.96	0.00	24						1.0
QRWL	SE	6	318	ES		226	50.89	-0.01							1.0
SHBL	BZ	18	174	EP		226	51.70	-0.01							1.0
SHBL	BN	18	174	ES		226	53.96	0.01							1.0
DQRL	SZ	26	327	EP		226	53.01	0.01							1.0

November 24 2011 Hour: 10:25 34.0

Agency: REL Distant

EMSC OT=10:25:34.0 41.89N 142.70E 42Km M=6.2 HOKKAIDO

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		1037	32.01								
HWQ	SZ			EP		1037	32.59								
BHL	BZ			EP		1037	35.35								
DQRL	SZ			EP		1037	36.54								
RCY	SZ			EP		1037	36.50								
SHBL	BZ			EP		1037	37.61								

November 24 2011 Hour: 15:42 45.5 Lat: 33.42N Lon: 35.67E Depth: 4 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
SHBL	BZ	11	138	EP		1542	47.45	-0.05							1.0
SHBL	BN	11	138	ES		1542	48.99	0.03							1.0
QRWL	SZ	14	6	EP		1542	47.97	0.01							1.0
QRWL	SE	14	6	ES		1542	49.74	-0.02							1.0
RCY	SZ	18	62	EP		1542	48.56	0.00	41						1.0
RCY	SN	18	62	ES		1542	50.81	0.01							1.0
DQRL	SZ	33	344	EP		1542	50.93	0.04							1.0
BHL	BZ	54	359	EP		1542	54.20	-0.02							1.0

November 24 2011 Hour: 15:49 33.8 Lat: 33.36N Lon: 35.61E Depth: 1 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.0 secs

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	13	97	EP		1549	35.92	-0.00							1.0
SHBL	BN	13	97	ES		1549	37.52	-0.00							1.0
QRWL	SZ	22	19	EP		1549	37.29	-0.00							1.0
QRWL	SN	22	19	ES		1549	39.90	0.00							1.0
RCY	SZ	26	55	EP		1549	38.00	0.01	21						1.0
RCY	SN	26	55	ES		1549	41.12	-0.00							1.0

November 24 2011 Hour: 16:33 24.5 Lat: 33.79N Lon: 35.77E Depth: 4 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		1633	27.32	-0.04	78						1.0
DQRL	SZ	21	244	EP		1633	27.90	-0.02							1.0
DQRL	SN	21	244	ES		1633	30.54	0.07							1.0
QRWL	SZ	28	197	EP		1633	28.97	-0.06							1.0
QRWL	SN	28	197	ES		1633	32.36	-0.04							1.0
RCY	SZ	33	169	EP		1633	29.86	0.02							1.0
RCY	SN	33	169	ES		1633	33.80	-0.01							1.0
SHBL	BZ	49	183	EP		1633	32.40	0.02							1.0
SHBL	BN	49	183	ES		1633	38.27	0.04							1.0
HWQ	SZ	57	17	EP		1633	33.71	0.00							1.0
FKH	SZ	78	49	EP		1633	37.12	0.03							1.0

November 25 2011 Hour: 19:29 20.3 Lat: 33.22N Lon: 35.66E Depth: 10 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	16	31	EP		1929	23.49	0.01							1.0
SHBL	BN	16	31	ES		1929	25.82	-0.00							1.0
RCY	SZ	35	29	EP		1929	26.14	-0.03	32						1.0
RCY	SN	35	29	ES		1929	30.53	0.03							1.0
QRWL	SZ	36	4	EP		1929	26.34	-0.03							1.0
QRWL	SN	36	4	ES		1929	30.83	-0.02							1.0
DQRL	SZ	54	351	EP		1929	29.25	0.05							1.0
BHL	BZ	75	360	EP		1929	32.60	-0.01							1.0

November 26 2011 Hour: 14: 2 26.5 Lat: 33.90N Lon: 36.57E Depth: 13 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.1 secs

DAMASCUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	40	339	EP		14 2	33.47	0.03	53						1.0
FKH	SN	40	339	ES		14 2	38.56	-0.03							1.0
RCY	SZ	82	237	EP		14 2	39.54	0.03							1.0
RCY	SN	82	237	ES		14 2	49.13	-0.02							1.0
DQRL	SZ	95	257	EP		14 2	41.53	0.08							1.0
SHBL	BZ	98	231	EP		14 2	41.88	-0.08							1.0

November 26 2011 Hour: 14:54 38.8 Lat: 33.39N Lon: 35.65E Depth: 11 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.0 secs

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	10	120	EP		1454	41.46	0.00							1.0
SHBL	BE	10	120	ES		1454	43.41	-0.00							1.0
RCY	SZ	21	55	EP		1454	42.75	-0.00	21						1.0
RCY	SE	21	55	ES		1454	45.66	0.00							1.0
DQRL	SZ	36	347	EP		1454	44.93	0.00							1.0

November 27 2011 Hour: 8:32 22.0 Lat: 33.41N Lon: 35.63E Depth: 0 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.0 secs

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	13	121	EP		832	24.13	0.01							1.0
SHBL	BE	13	121	ES		832	25.65	-0.01							1.0
RCY	SZ	22	63	EP		832	25.58	0.01	22						1.0
RCY	SN	22	63	ES		832	28.20	0.00							1.0
DQRL	SZ	33	351	EP		832	27.42	-0.01							1.0

November 27 2011 Hour: 13:35 5.0 Lat: 33.38N Lon: 35.62E Depth: 7 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	12	108	EP		1335	7.42	-0.03							1.0
SHBL	BE	12	108	ES		1335	9.25	0.00							1.0
QRWL	SZ	19	18	EP		1335	8.51	0.10							1.0
QRWL	SN	19	18	ES		1335	10.89	-0.02							1.0
RCY	SZ	24	58	EP		1335	9.15	0.04	35						1.0
RCY	SN	24	58	ES		1335	12.12	-0.01							1.0
DQRL	SZ	36	353	EP		1335	11.01	-0.01							1.0
BHL	BZ	58	3	EP		1335	14.41	-0.07							1.0

November 27 2011 Hour: 13:57 41.8 Lat: 33.38N Lon: 35.72E Depth: 15 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	4	148	EP		1357	44.61	0.00							1.0
SHBL	BN	4	148	ES		1357	46.65	-0.00							1.0
RCY	SZ	17	38	EP		1357	45.66	-0.00	30						1.0
RCY	SN	17	38	ES		1357	48.49	0.00							1.0
DQRL	SZ	39	339	EP		1357	48.62	0.00							1.0

November 27 2011 Hour: 14:26 36.3 Lat: 33.78N Lon: 35.76E Depth: 8 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	322	EP		1426	39.39	-0.00	33						1.0
DQRL	SZ	20	244	EP		1426	39.86	-0.01							1.0
DQRL	SN	20	244	ES		1426	42.53	0.00							1.0
RCY	SZ	33	168	EP		1426	41.79	0.00							1.0
RCY	SE	33	168	ES		1426	45.86	-0.00							1.0
HWQ	SZ	57	17	EP		1426	45.64	0.00							1.0

November 27 2011 Hour: 20:31 50.2 Lat: 33.70N Lon: 35.82E Depth: 4 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
QRWL	SZ	21	216	EP		2031	53.77	-0.05							1.0
RCY	SN	23	176	ES		2031	56.92	-0.01							1.0
DQRL	SZ	23	271	EP		2031	54.07	-0.00							1.0
DQRL	SN	23	271	ES		2031	56.92	0.01							1.0
RCY	SZ	23	176	EP		2031	54.05	-0.03	50						1.0

BHL	BZ	27	326	EP	2031	54.68	-0.01										1.0
SHBL	BZ	40	190	EP	2031	56.71	-0.06										1.0
SHBL	BN	40	190	ES	2032	1.70	0.10										1.0
HWQ	SZ	65	10	EP	2032	0.77	0.04										1.0

November 28 2011 Hour: 9:13 11.0

Agency: REL Distant

EMSC OT=09:13:11.0 07.02S 117.00E 621Km M=5.8 BALI SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		924	50.52								
HWQ	SZ			EP		924	51.77								
RCY	SZ			EP		924	51.95								
SHBL	BZ			EP		924	52.39								
BHL	BZ			EP		924	52.76								
DQRL	SZ			EP		924	53.17								

November 28 2011 Hour: 10: 5 12.2 Lat: 33.66N Lon: 35.73E Depth: 1 Agency: REL Local

Magnitudes: 3.0MC REL

Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	13	200	EP		10	5	14.31	-0.03						1.0
QRWL	SN	13	200	ES		10	5	15.90	-0.02						1.0
DQRL	SZ	16	289	EP		10	5	14.75	-0.03	64					1.0
DQRL	SN	16	289	ES		10	5	16.72	0.04						1.0
RCY	SZ	20	152	EP		10	5	15.57	0.04						1.0
BHL	BZ	28	345	EP		10	5	16.73	-0.04						1.0
SHBL	BZ	34	178	EP		10	5	17.80	0.02						1.0
SHBL	BN	34	178	ES		10	5	21.89	-0.00						1.0

November 28 2011 Hour: 12:22 45.9 Lat: 33.92N Lon: 35.84E Depth: 0 Agency: REL Local

Magnitudes: 2.5MC REL

Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	266	EP		1222	48.63	-0.04	28						1.0
BHL	BE	17	266	ES		1222	50.72	-0.01							1.0
DQRL	SZ	34	227	EP		1222	51.48	0.09							1.0
DQRL	SN	34	227	ES		1222	55.47	-0.01							1.0
HWQ	SZ	41	14	EP		1222	52.56	0.01							1.0
RCY	SZ	47	181	EP		1222	53.32	-0.06							1.0
RCY	SN	47	181	ES		1222	58.95	0.01							1.0

November 28 2011 Hour: 12:40 20.0 Lat: 33.78N Lon: 35.78E Depth: 3 Agency: REL Local

Magnitudes: 2.5MC REL

Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	319	EP		1240	22.95	-0.07	30						1.0
DQRL	SZ	21	247	EP		1240	23.53	-0.02							1.0
DQRL	SN	21	247	ES		1240	26.19	0.05							1.0
RCY	SZ	32	171	EP		1240	25.23	-0.05							1.0
RCY	SN	32	171	ES		1240	29.17	0.02							1.0
HWQ	SZ	57	16	EP		1240	29.35	0.07							1.0

November 29 2011 Hour: 0:28 59.7 Lat: 33.65N Lon: 35.71E Depth: 10 Agency: REL Local

Magnitudes: 2.5MC REL

Rms: 0.0 secs

SAIDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	12	190	EP		029	2.36	0.04							0.2
QRWL	SN	12	190	ES		029	4.25	-0.03							1.0
DQRL	SZ	14	295	EP		029	2.58	0.01	30						1.0
DQRL	SN	14	295	ES		029	4.71	0.01							1.0
RCY	SZ	21	145	EP		029	3.59	0.00							1.0
RCY	SN	21	145	ES		029	6.49	0.01							1.0
BHL	BZ	28	350	EP		029	4.59	-0.01							1.0
SHBL	BZ	34	174	EP		029	5.46	-0.02							1.0
SHBL	BN	34	174	ES		029	9.80	0.02							1.0

November 29 2011 Hour: 0:36 22.1 Lat: 33.66N Lon: 35.72E Depth: 4 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

SAIDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	13	195	EP		036	24.28	-0.04							1.0
DQRL	SZ	15	291	EP		036	24.66	0.02							1.0
DQRL	SN	15	291	ES		036	26.51	0.01							1.0
RCY	SZ	21	149	EP		036	25.66	0.04	34						1.0
RCY	SN	21	149	ES		036	28.19	-0.01							1.0
BHL	BZ	28	348	EP		036	26.69	-0.02							1.0

November 29 2011 Hour: 4:27 15.1 Lat: 34.11N Lon: 36.20E Depth: 18 Agency: REL Local
Magnitudes: 2.7MC 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	24	52	EP		427	20.01	0.00	38						1.0
FKH	SN	24	52	ES		427	23.63	-0.02							1.0
HWQ	SZ	30	308	EP		427	20.78	0.02							1.0
HWQ	SN	30	308	ES		427	24.97	0.02							1.0
BHL	BZ	56	246	EP		427	24.24	-0.07							1.0
DQRL	SZ	74	233	EP		427	26.91	-0.04							1.0
RCY	SZ	76	207	EP		427	27.32	0.01							1.0
RCY	SN	76	207	ES		427	36.35	-0.00							1.0
SHBL	BZ	95	207	EP		427	30.10	0.07							1.0

November 29 2011 Hour: 14:7 20.0 Agency: REL Regional

EMSC OT=14:07:20.0 35.94N 28.53E 20Km M=4.3 EASTERN MED SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		14 8	48.59								
HWQ	SZ			EP		14 8	49.57								
SHBL	BZ			EP		14 8	52.32								
RCY	SZ			EP		14 8	52.07								
FKH	SZ			EP		14 8	55.33								

November 29 2011 Hour: 14:56 2.7 Lat: 33.41N Lon: 35.65E Depth: 9 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.0 secs

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	11	127	EP		1456	5.18	0.00							1.0
SHBL	BN	11	127	ES		1456	7.04	-0.00							1.0
QRWL	SZ	16	11	EP		1456	5.74	0.01							1.0
QRWL	SN	16	11	ES		1456	7.99	-0.01							1.0
RCY	SZ	20	60	EP		1456	6.31	-0.02	21						1.0
RCY	SN	20	60	ES		1456	9.06	0.01							1.0

November 29 2011 Hour: 17:3 49.7 Lat: 33.65N Lon: 35.71E Depth: 4 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.0 secs

SAIDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	11	192	EP		17 3	51.62	-0.03							1.0
QRWL	SN	11	192	ES		17 3	53.14	0.02							1.0
DQRL	SZ	14	298	EP		17 3	52.12	-0.01							1.0
RCY	SZ	20	144	EP		17 3	53.07	-0.01	26						1.0
RCY	SN	20	144	ES		17 3	55.61	-0.00							1.0
BHL	BZ	29	350	EP		17 3	54.45	0.02							1.0
SHBL	BZ	33	174	EP		17 3	55.10	0.02							1.0

November 30 2011 Hour: 0:27 9.0

Agency: REL Distant

EMSC OT=00:27:09.0 15.52N 119.04E 20Km M=6.0 LUZON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		038	52.91								
HWQ	SZ			EP		038	54.45								
BHL	BZ			EP		038	56.11								
RCY	SZ			EP		038	56.37								
QRWL	SZ			EP		038	56.76								
BEYL	BZ			EP		038	56.95								
DQRL	SZ			EP		038	57.14								
SHBL	BZ			EP		038	57.21								

November 30 2011 Hour: 0:47 23.0

Agency: REL Regional

EMSC OT=00:47:23.0 38.52N 43.41E 2Km M=5.0 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		049	6.63								
HWQ	SZ			EP		049	10.17								
BHL	BZ			EP		049	18.36								
RCY	SZ			EP		049	19.08								
QRWL	SZ			EP		049	19.92								
SHBL	BZ			EP		049	19.26								

November 30 2011 Hour: 11:17 1.3 Lat: 34.46N Lon: 36.70E Depth: 0 Agency: REL Local

Magnitudes: 3.0MC REL

Rms: 0.1 secs

NEBEK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	35	228	EP		1117	6.89-0.07	56							1.0
FKH	SN	35	228	ES		1117	11.10-0.08								1.0
HWQ	SZ	72	254	EP		1117	12.92 0.08								1.0
HWQ	SN	72	254	ES		1117	21.39-0.01								1.0
RCY	SZ	133	217	EP		1117	22.68-0.03								1.0
DQRL	SZ	133	232	EP		1117	22.75 0.00								1.0
RCY	SN	133	217	ES		1117	38.68 0.10								1.0

November 30 2011 Hour: 15: 7 48.8 Lat: 33.79N Lon: 35.78E Depth: 4 Agency: REL Local

Magnitudes: 2.5MC REL

Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	318	EP		15 7	51.74-0.03	29							1.0
DQRL	SZ	21	245	EP		15 7	52.39 0.02								1.0
DQRL	SN	21	245	ES		15 7	55.02 0.01								1.0
RCY	SZ	33	171	EP		15 7	54.09-0.05								1.0
RCY	SN	33	171	ES		15 7	58.11 0.02								1.0
HWQ	SZ	57	16	EP		15 7	58.03 0.03								1.0

November 30 2011 Hour: 15:40 26.1 Lat: 33.79N Lon: 35.75E Depth: 8 Agency: REL Local

Magnitudes: 2.7MC REL

Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	323	EP		1540	28.90-0.05	38							1.0
BHL	BN	16	323	ES		1540	31.08-0.01								1.0
DQRL	SZ	20	241	EP		1540	29.46-0.07								1.0
DQRL	SN	20	241	ES		1540	32.16 0.06								1.0
QRWL	SZ	28	194	EP		1540	30.80 0.02								1.0
QRWL	SN	28	194	ES		1540	34.32 0.04								1.0
RCY	SZ	34	167	EP		1540	31.65-0.04								1.0
SHBL	BZ	49	181	EP		1540	34.16 0.02								1.0
SHBL	BE	49	181	ES		1540	40.09-0.03								1.0
HWQ	SZ	57	18	EP		1540	35.40 0.07								1.0

November 30 2011 Hour: 21:52 58.5 Lat: 33.48N Lon: 35.19E Depth: 43 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.1 secs

OFFSHORE SOUTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	43	54	EP		2153	7.50	-0.08							1.0
DQRL	SN	43	54	ES		2153	14.27	-0.01							1.0
QRWL	SZ	46	80	EP		2153	7.97	0.10							1.0
QRWL	SN	46	80	ES		2153	14.83	0.03							1.0
SHBL	BZ	53	106	EP		2153	8.65	-0.05							1.0
SHBL	BN	53	106	ES		2153	16.18	-0.06							1.0
RCY	SZ	60	88	EP		2153	9.50	0.08	49						1.0
BHL	BZ	64	42	EP		2153	9.89	0.07							1.0
HWQ	SZ	113	38	EP		2153	15.68	-0.08							1.0

Epicentral Map of Lebanon

NOVEMBER 2011

