Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

September

2009

Prepared by
The National Centre for Geophysical Research
Bhannes

P.o.b. : 165432
Ashrafyeh Beirut 1100-2040

Tel : +9614-981885
Fax : +9614-981886
Email : geophys@cnrs.edu.lb

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:

$$Mc = 0.08 + 1.63 * \log10(T) + 0.0009 * D.$$

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

REGIONAL AND DISTANT EARTHQUAKES

Because regional events and teleseims 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 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.

September 1 2009 Hour: 22:28 12.3 Lat: 33.50N Lon: 35.67E Depth: 10 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
RCY	SZ	15	90	EP		2228	15.51	0.03	30						1.0
RCY	SN	15	90	ES		2228	17.78	-0.02							1.0
BHL	BZ	45	358	EP		2228	19.88	0.02							1.0
BHL	BN	45	358	ES		2228	25.40	-0.02							1.0
HWQ	BZ	90	16	EP		2228	26.82	-0.01							1.0

September 2 2009 Hour: 7:55 4.3 Agency: REL Distant
EMSC OT=07:55:04.3 7.78S 107.41E 70Km Mw=7.1 JAVA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		8 7	1.05								
RCY	SZ			EP		8 7	2.75								
HWQ	BZ			EP		8 7	3.11								
BHL	BZ			EP		8 7	3.99								
NAQL	SZ			EP		8 7	4.94								

September 2 2009 Hour: 16:25 53.8 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	320	EP		1625	56.73	0.03							1.0
BHL	BN	17	320	ES		1625	58.79	-0.02							1.0
RCY	SZ	33	170	EP		1625	59.07	-0.05	38						1.0
RCY	SN	33	170	ES		1626	3.06	0.03							1.0
HWQ	BZ	57	16	EP		1626	3.06	0.00							1.0

September 2 2009 Hour: 18: 0 10.0 Agency: REL Distant
EMSC OT=18:00:10.0 29.23S 178.70W 259Km Mw=6.2 KERMADEC ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1819	23.70								
BHL	BZ			EP		1819	24.69								
FKH	SZ			EP		1819	25.34								
RCY	SZ			EP		1819	26.06								

September 2 2009 Hour: 19:41 58.6 Agency: REL Regional
EMSC OT=19:41:58.6 34.48N 32.33E 5Km ML=3.2 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1942	45.16								
HWQ	BZ			EP		1942	47.73								

September 3 2009 Hour: 12:19 36.4 Lat: 33.78N Lon: 35.77E 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	17	321	EP		1219	39.30	-0.02							1.0
BHL	BE	17	321	ES		1219	41.48	0.01							1.0
RCY	SZ	32	169	EP		1219	41.67	0.01	39						1.0
RCY	SN	32	169	ES		1219	45.54	-0.01							1.0
HWQ	BZ	57	16	EP		1219	45.71	0.00							1.0

September 3 2009 Hour: 13:26 18.8 Agency: REL Distant
EMSC OT=13:26:18.8 31.20N 130.08E 164Km Mw=6.2 KYUSHU, JAPAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		1337	48.10								
HWQ	BZ			EP		1337	49.26								
BHL	BZ			EP		1337	51.59								
RCY	SZ			EP		1337	52.69								

September 3 2009 Hour: 21:56 11.4 Lat: 33.14N Lon: 35.59E Depth: 2 Agency: REL Local
Magnitudes: 2.9MC 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	46	30	EP		2156	18.85	0.01	48						1.0
RCY	SN	46	30	ES		2156	24.38	0.00							1.0
BHL	BZ	85	4	EP		2156	25.14	-0.01							1.0
HWQ	BZ	131	15	EP		2156	32.43	0.01							1.0
HWQ	BN	131	15	ES		2156	48.00	-0.01							1.0

September 4 2009 Hour: 5:13 47.4 Lat: 33.88N Lon: 35.82E Depth: 20 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.0 secs
BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	281	EP		513	51.55	0.00	27						1.0
BHL	BN	16	281	ES		513	54.64	0.00							1.0
RCY	SZ	42	178	EP		513	54.82	-0.04							1.0
RCY	SN	42	178	ES		514	0.41	0.02							1.0
HWQ	BZ	46	15	EP		513	55.32	0.01							1.0

September 5 2009 Hour: 0: 2 6.8 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		0 2	55.04								
HWQ	BZ			EP		0 2	56.69								

September 6 2009 Hour: 14:29 15.7 Lat: 33.78N Lon: 35.77E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.2 secs
BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	321	EP		1429	18.56	-0.01							1.0
RCY	SZ	32	170	EP		1429	20.80	-0.11	52						1.0
RCY	SN	32	170	ES		1429	24.74	0.00							1.0
HWQ	BZ	57	16	EP		1429	24.94	-0.04							1.0
HWQ	BE	57	16	ES		1429	31.82	0.00							1.0
FKH	SZ	78	49	EP		1429	29.16	0.84							0.2

September 7 2009 Hour: 9: 2 26.5 Lat: 34.44N Lon: 36.85E 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	46	242	EP		9 2	33.87	-0.11	59						1.0
FKH	SN	46	242	ES		9 2	39.49	-0.02							1.0
HWQ	BZ	85	258	EP		9 2	40.29	0.01							1.0
HWQ	BN	85	258	ES		9 2	50.50	0.03							1.0
BHL	BZ	126	242	EP		9 2	46.83	0.05							1.0
RCY	SZ	141	222	EP		9 2	49.15	-0.04							1.0

September 7 2009 Hour: 16:12 9.8 Agency: REL Distant
EMSC OT=16:12:20.6 10.30S 110.60E 10Km Mw=6.1 SOUTH OF JAVA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		1624	47.38								
RCY	SZ			EP		1624	49.10								
HWQ	BZ			EP		1624	49.46								
BHL	BZ			EP		1624	50.17								
NAQL	SZ			EP		1624	50.89								

September 7 2009 Hour: 18:46 42.2 Lat: 33.56N Lon: 35.48E Depth: 7 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
RCY	SZ	33	103	EP		1846	47.82	0.01	37						1.0
RCY	SN	33	103	ES		1846	51.94	-0.01							1.0
BHL	BZ	41	22	EP		1846	48.98	-0.02							1.0

```
BHL  BN   41  22 ES       1846 54.01 0.01                                1.0
HWQ  BZ   90  28 EP       1846 56.84 0.00                                1.0
```

September 7 2009 Hour: 22:44 0.7 **Agency: REL Distant**

EMSC OT=22:41:36.5 42.66N 43.42E 10Km Mw=5.9 GEORGIA

```
STAT CO DIST AZI PHASE  P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO  WT
HWQ  BZ          EP       2244  3.81
BHL  BZ          EP       2244  9.22
RCY  SZ          EP       2244 14.80
```

September 8 2009 Hour: 11:26 52.3 **Agency: REL Regional**

```
STAT CO DIST AZI PHASE  P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO  WT
HWQ  BZ          EP       1127 31.46
RCY  SZ          EP       1127 20.48
```

September 9 2009 Hour: 5:56 50.1 **Agency: REL Regional**

EMSC OT=05:56:50.1 35.56N 29.90E 60Km ML=4.2 EASTERN MED SEA

```
STAT CO DIST AZI PHASE  P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO  WT
RCY  SZ          EP        558  5.93
HWQ  BZ          EP        558  3.39
```

September 9 2009 Hour: 15:59 51.7 Lat: 33.91N Lon: 36.14E Depth: 9 Agency: REL Local

Magnitudes: 2.8MC REL **Rms: 0.0 secs**

HERMEL BAALBEK REGION

```
STAT CO DIST AZI PHASE  P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO  WT
HWQ  BZ   45 336 EP       1559 59.17 0.03                               1.0
HWQ  BN   45 336 ES       16 0  4.61-0.02                               1.0
BHL  BZ   45 269 EP       1559 59.20 0.00                               1.0
RCY  SZ   54 212 EP       16 0  0.56-0.03   41                          1.0
RCY  SN   54 212 ES       16 0  7.17 0.02                               1.0
```

September 9 2009 Hour: 16:29 46.7 Lat: 33.79N Lon: 35.76E Depth: 5 Agency: REL Local

Magnitudes: 2.7MC REL **Rms: 0.0 secs**

BEIRUT REGION

```
STAT CO DIST AZI PHASE  P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO  WT
BHL  BZ   16 323 EP       1629 49.56 0.02                               1.0
BHL  BE   16 323 ES       1629 51.63-0.01                               1.0
RCY  SZ   33 167 EP       1629 52.20 0.05   39                          1.0
RCY  SE   33 167 ES       1629 56.16-0.02                               1.0
HWQ  BZ   57  18 EP       1629 55.98-0.01                               1.0
```

September 10 2009 Hour: 0:57 52.4 **Agency: REL Regional**

EMSC OT=00:57:52.4 36.64N 36.59E 20Km ML=3.4 TURKEY-SYRIA REG

```
STAT CO DIST AZI PHASE  P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO  WT
BHL  BZ          EP        058 39.88
HWQ  BZ          EP        058 32.55
```

September 10 2009 Hour: 2:10 54.2 **Agency: REL Local**

```
STAT CO DIST AZI PHASE  P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO  WT
RCY  SZ          EP        211 17.31
HWQ  BZ          EP        211 21.12
```

September 10 2009 Hour: 2:46 53.1 **Agency: REL Distant**

EMSC OT=02:46:53.1 48.33N 154.24E 60Km mb=5.9 KURIL ISLANDS

```
STAT CO DIST AZI PHASE  P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO  WT
HWQ  BZ          EP        259  1.82
BHL  BZ          EP        259  3.60
RCY  SZ          EP        259  5.91
```

September 10 2009 Hour: 8:20 22.3 **Agency: REL Local**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		820	56.99								
FKH	SZ			EP		820	50.08								

September 10 2009 Hour: 9:12 2.4 **Agency: REL Local**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		913	4.72								
FKH	SZ			EP		912	57.72								

September 10 2009 Hour: 18:29 54.8 **Agency: REL Regional**

EMSC OT=18:29:54.8 37.92N 32.54E 10Km mb=4.8 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1831	3.21								
BHL	BZ			EP		1831	6.31								
FKH	SZ			EP		1831	7.37								
RCY	SZ			EP		1831	11.72								

September 11 2009 Hour: 1:58 31.9 **Agency: REL Regional**

EMSC OT=01:58:31.9 37.91N 32.48E 10Km Mw=4.9 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		159	40.53								
FKH	SZ			EP		159	43.86								
BHL	BZ			EP		159	44.57								
RCY	SZ			EP		159	49.01								

September 11 2009 Hour: 21:28 10.2 **Agency: REL Regional**

EMSC OT=21:27:48.9 34.64N 32.13E 12Km ML=3.3 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		2128	39.35								

September 12 2009 Hour: 2:47 30.8 **Agency: REL Regional**

EMSC OT=02:47:30.9 33.99N 25.58E 40Km ML=4.4 EASTERN MED SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		249	31.96								
RCY	SZ			EP		249	30.46								

September 12 2009 Hour: 10: 1 35.7 Lat: 34.44N Lon: 36.56E Depth: 12 Agency: REL Local

Magnitudes: 2.7MC REL **Rms: 0.1 secs**

NEBEK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	59	253	EP		10 1	45.54	0.04	39						1.0
HWQ	BN	59	253	ES		10 1	52.81	0.03							1.0
BHL	BZ	102	235	EP		10 1	51.68	-0.14							1.0
RCY	SZ	124	213	EP		10 1	54.94	-0.07							1.0
RCY	SN	124	213	ES		10 2	9.30	-0.02							1.0

September 14 2009 Hour: 18:42 1.3 **Agency: REL Local**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1842	37.00								
FKH	SZ			EP		1842	32.93								

September 15 2009 Hour: 9:22 3.9 **Agency: REL Local**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		923	8.23								
FKH	SZ			EP		923	1.26								

September 15 2009 Hour: 10:37 53.7 Lat: 34.11N Lon: 35.53E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.1 secs
OFFSHORE CENTRAL LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	26	153	EP		1037	57.77	-0.09	37						1.0
BHL	BN	26	153	ES		1038	0.92	0.01							1.0
HWQ	BZ	43	64	EP		1038	0.60	0.00							1.0
HWQ	BN	43	64	ES		1038	5.70	0.01							1.0
RCY	SZ	74	157	EP		1038	5.68	0.06							1.0

September 15 2009 Hour: 11: 9 15.0 Lat: 34.10N Lon: 35.51E Depth: 0 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.1 secs
OFFSHORE CENTRAL LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	25	148	EP		11 9	18.97	-0.10	30						1.0
BHL	BN	25	148	ES		11 9	22.09	0.00							1.0
HWQ	BZ	45	63	EP		11 9	22.20	-0.06							1.0
HWQ	BN	45	63	ES		11 9	27.70	0.06							1.0
RCY	SZ	73	155	EP		11 9	26.81	0.02							1.0

September 15 2009 Hour: 14:17 12.2 Lat: 33.97N Lon: 36.11E Depth: 0 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs
HERMEL BAALBEK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	37	336	EP		1417	18.22	0.01	46						1.0
HWQ	BN	37	336	ES		1417	22.62	-0.03							1.0
BHL	BZ	43	260	EP		1417	19.14	0.05							1.0
RCY	SZ	58	206	EP		1417	21.62	-0.01							1.0
RCY	SN	58	206	ES		1417	28.54	-0.06							1.0

September 15 2009 Hour: 23:13 7.7 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		2313	57.93								
HWQ	BZ			EP		2314	1.28								

September 16 2009 Hour: 9:56 1.8 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		957	2.67								
RCY	SZ			EP		957	11.34								

September 16 2009 Hour: 13:31 47.5 Lat: 33.78N Lon: 35.76E Depth: 0 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs
BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	324	EP		1331	50.15	-0.01							1.0
BHL	BN	17	324	ES		1331	52.15	-0.01							1.0
RCY	SZ	32	167	EP		1331	52.69	-0.02	48						1.0
RCY	SN	32	167	ES		1331	56.55	-0.03							1.0
HWQ	BZ	58	17	EP		1331	56.78	0.01							1.0

September 16 2009 Hour: 14: 9 42.9 Lat: 34.79N Lon: 33.13E Depth: 13 Agency: REL Regional
Magnitudes: 4.4MC REL Rms: 0.3 secs
EMSC OT=14:09:42.2 34.72N 33.15E 2Km ML=4.6 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	252	112	EP		1410	18.64	-0.33							1.0
NAQL	SZ	262	134	EP		1410	20.22	0.06							1.0
HWQ	BZ	265	101	EP		1410	20.68	0.12	341						1.0
HWQ	BE	265	101	ES		1410	48.36	-0.04							1.0
RCY	SZ	288	119	EP		1410	23.55	0.12							1.0
RCY	SE	288	119	ES		1410	53.36	-0.05							1.0

September 16 2009 Hour: 14:48 48.4 **Agency: REL Regional**

EMSC OT=14:48:21.1 34.66N 33.08E 15Km ML=3.5 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1449	0.99								

September 16 2009 Hour: 15:41 39.0 **Agency: REL Regional**

EMSC OT=15:40:00.2 36.57N 27.25E 119Km ML=3.4 DODECANESE ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1541	42.67								
HWQ	BZ			EP		1541	45.36								
RCY	SZ			EP		1541	47.85								

September 17 2009 Hour: 7:49 0.7 **Agency: REL Local**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		750	12.32								
RCY	SZ			EP		750	0.11								

September 17 2009 Hour: 9:50 45.2 Lat: 33.78N Lon: 35.76E Depth: 0 Agency: REL Local

Magnitudes: 2.9MC REL **Rms: 0.0 secs**

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	325	EP		950	48.00	-0.01							1.0
RCY	SZ	32	167	EP		950	50.24	-0.06	54						1.0
RCY	SN	32	167	ES		950	54.10	0.03							1.0
HWQ	BZ	58	17	EP		950	54.70	0.09							1.0
HWQ	BN	58	17	ES		951	1.54	-0.04							1.0
FKH	SZ	79	49	EP		950	57.99	-0.02							1.0

September 17 2009 Hour: 9:56 6.5 **Agency: REL Local**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		956	27.65								
HWQ	BZ			EP		956	35.59								

September 17 2009 Hour: 12:19 1.5 **Agency: REL Local**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1219	39.68								
FKH	SZ			EP		1219	32.78								

September 18 2009 Hour: 1:52 41.3 Lat: 33.95N Lon: 35.88E 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	22	257	EP		152	44.82	0.05							1.0
BHL	BN	22	257	ES		152	47.29	-0.05							1.0
HWQ	BZ	37	9	EP		152	47.34	0.03							1.0
HWQ	BE	37	9	ES		152	51.73	-0.02							1.0
RCY	SZ	50	185	EP		152	49.34	-0.06	48						1.0
FKH	SZ	59	56	EP		152	50.88	0.06							1.0
FKH	SN	59	56	ES		152	57.81	-0.05							1.0

September 18 2009 Hour: 6:23 58.1 **Agency: REL Distant**

EMSC OT=06:23:58.1 12.63N 120.48E 40Km Mw=5.9 MINDORO

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		635	37.40								
FKH	SZ			EP		635	53.83								
BHL	BZ			EP		635	57.89								
RCY	SZ			EP		635	56.73								

September 18 2009 Hour: 16: 4 14.7 Lat: 33.77N Lon: 35.56E Depth: 22 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	30	EP		16 4	19.30	0.05							1.0
BHL	BN	17	30	ES		16 4	22.58	-0.03							1.0
RCY	SZ	40	140	EP		16 4	21.89	-0.01	44						1.0
RCY	SN	40	140	ES		16 4	27.22	0.00							1.0
HWQ	BZ	67	32	EP		16 4	25.68	0.00							1.0

September 18 2009 Hour: 23: 6 56.8 Agency: REL Distant
EMSC OT=23:06:56.8 9.17S 115.58E 64Km Mw=5.9 SOUTH OF BALI

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		2319	33.06								
HWQ	BZ			EP		2319	34.55								
RCY	SZ			EP		2319	34.78								
BHL	BZ			EP		2319	35.58								
NAQL	SZ			EP		2319	36.84								

September 19 2009 Hour: 1:55 16.5 Lat: 32.93N Lon: 35.45E Depth: 0 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs
NORTH GALILEE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	73	30	EP		155	28.27	0.07	44						1.0
RCY	SN	73	30	ES		155	36.85	-0.02							1.0
BHL	BZ	110	10	EP		155	34.16	-0.04							1.0
BHL	BN	110	10	ES		155	47.33	0.02							1.0
HWQ	BZ	157	17	EP		155	41.44	0.00							1.0

September 19 2009 Hour: 7:41 0.4 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		741	17.95								
FKH	SZ			EP		741	10.72								

September 19 2009 Hour: 9:13 3.1 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		913	44.16								
RCY	SZ			EP		913	33.51								

September 19 2009 Hour: 16:20 41.0 Lat: 33.66N Lon: 35.71E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.1 secs
BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	22	147	EP		1620	44.46	-0.07	38						1.0
RCY	SE	22	147	ES		1620	47.14	-0.02							1.0
BHL	BZ	27	350	EP		1620	45.31	-0.05							1.0
BHL	BN	27	350	ES		1620	48.56	-0.05							1.0
HWQ	BZ	72	18	EP		1620	52.67	0.12							1.0

September 21 2009 Hour: 5:29 1.5 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		530	2.96								
RCY	SZ			EP		529	48.49								

September 21 2009 Hour: 15: 2 15.2 Lat: 33.61N Lon: 36.42E Depth: 0 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.1 secs
DAMASCUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	56	257	EP		15 2	24.25	0.00	44						1.0
RCY	SE	56	257	ES		15 2	30.84	-0.09							1.0
BHL	BZ	78	295	EP		15 2	27.80	-0.01							1.0
BHL	BN	78	295	ES		15 2	37.20	0.08							1.0
HWQ	BZ	86	329	EP		15 2	29.01	-0.04							1.0

```
HWQ  BN   86 329 ES       15 2 39.27-0.01                                1.0
```

September 21 2009 Hour: 19:38 0.2 **Agency: REL Distant**

EMSC OT=19:38:42.4 20.42N 94.83E 80Km Mw=5.5 MYANMAR

```
STAT CO DIST AZI PHASE   P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO  WT
HWQ  BZ          EP       1947 55.16
RCY  SZ          EP       1947 55.93
BHL  BZ          EP       1947 56.87
```

September 22 2009 Hour: 22: 9 28.9 **Agency: REL Regional**

EMSC OT=22:11:32.1 36.52N 30.83E 80Km mb=4.0 WESTERN TURKEY

```
STAT CO DIST AZI PHASE   P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO  WT
BHL  BZ          EP       2212 40.69
HWQ  BZ          EP       2212 42.19
NAQL SZ          EP       2212 42.71
RCY  SZ          EP       2212 45.81
FKH  SZ          EP       2212 47.59
```

September 23 2009 Hour: 12:40 49.6 **Agency: REL Local**

```
STAT CO DIST AZI PHASE   P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO  WT
HWQ  BZ          EP       1241  4.95
RCY  SZ          EP       1241 12.48
```

September 24 2009 Hour: 20:56 4.2 **Agency: REL Local**

```
STAT CO DIST AZI PHASE   P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO  WT
HWQ  BZ          EP       2057  9.29
FKH  SZ          EP       2057  6.15
```

September 25 2009 Hour: 10: 6 32.9 Lat: 33.80N 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   18 313 EP       10 6 35.68-0.02                               1.0
RCY  SZ   34 173 EP       10 6 38.24-0.02   49                          1.0
RCY  SN   34 173 ES       10 6 42.25-0.01                               1.0
HWQ  BZ   55  15 EP       10 6 41.83 0.06                               1.0
HWQ  BN   55  15 ES       10 6 48.33-0.04                               1.0
```

September 25 2009 Hour: 10: 9 31.4 **Agency: REL Regional**

```
STAT CO DIST AZI PHASE   P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO  WT
NAQL SZ          EP       10 9 38.98
RCY  SZ          EP       10 9 44.66
HWQ  BZ          EP       10 9 58.81
```

September 26 2009 Hour: 2:53 45.9 **Agency: REL Regional**

EMSC OT=02:52:11.1 33.96N 25.59E 40Km mb=4.5 EASTERN MED SEA

```
STAT CO DIST AZI PHASE   P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO  WT
HWQ  BZ          EP        254 12.18
RCY  SZ          EP        254 11.31
```

September 26 2009 Hour: 14:45 33.5 Lat: 34.01N Lon: 36.20E Depth: 48 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   32  36 EP       1445 42.09 0.03   51                          1.0
FKH  SN   32  36 ES       1445 48.40-0.02                               1.0
HWQ  BZ   38 321 EP       1445 42.49-0.03                               1.0
HWQ  BN   38 321 ES       1445 49.23 0.02                               1.0
BHL  BZ   52 257 EP       1445 43.83 0.00                               1.0
```

September 27 2009 Hour: 3:35 52.7 Lat: 33.66N Lon: 34.88E Depth: 14 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.0 secs
OFFSHORE SOUTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
NAQL	SZ	65	158	EP		336	3.20	-0.02							1.0
BHL	BZ	77	69	EP		336	4.90	-0.06	54						1.0
BHL	BN	77	69	ES		336	14.04	-0.01							1.0
RCY	SZ	91	101	EP		336	7.05	-0.01							1.0
RCY	SN	91	101	ES		336	17.72	0.01							1.0
HWQ	BZ	120	55	EP		336	11.39	0.06							1.0

September 27 2009 Hour: 12:28 8.3 Lat: 33.60N Lon: 36.47E Depth: 9 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.0 secs
DAMASCUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	60	260	EP		1228	18.04	-0.01							1.0
RCY	SN	60	260	ES		1228	25.24	-0.04							1.0
FKH	SZ	72	356	EP		1228	20.02	-0.04							1.0
BHL	BZ	83	295	EP		1228	21.83	0.10	52						1.0
HWQ	BZ	90	328	EP		1228	22.79	0.01							1.0
HWQ	BN	90	328	ES		1228	33.49	-0.02							1.0

September 27 2009 Hour: 18:18 21.7 Agency: REL Regional
EMSC OT=18:18:23.9 35.94N 30.96E 10Km ML=3.5 EASTERN MED SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1819	31.43								
BHL	BZ			EP		1819	32.15								
RCY	SZ			EP		1819	36.18								

September 28 2009 Hour: 11:23 13.2 Lat: 34.44N Lon: 36.83E Depth: 0 Agency: REL Local
Magnitudes: 3.1MC 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	44	241	EP		1123	20.17	-0.15	65						1.0
FKH	SN	44	241	ES		1123	25.68	0.08							1.0
HWQ	BZ	83	258	EP		1123	26.75	0.14							1.0
HWQ	BN	83	258	ES		1123	36.47	-0.07							1.0
RCY	SZ	139	222	EP		1123	35.61	0.01							1.0

September 29 2009 Hour: 3:23 9.8 Lat: 33.32N Lon: 35.39E Depth: 19 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
NAQL	SZ	32	225	EP		323	15.73	0.03							1.0
RCY	SZ	46	65	EP		323	17.75	0.03	39						1.0
RCY	SE	46	65	ES		323	23.61	0.03							1.0
BHL	BZ	69	21	EP		323	20.94	-0.08							1.0
HWQ	BZ	118	26	EP		323	28.21	0.03							1.0

September 29 2009 Hour: 8:30 51.0 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		831	22.01								
FKH	SZ			EP		831	14.57								

September 29 2009 Hour: 14:26 47.5 Lat: 34.73N Lon: 36.15E Depth: 7 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.1 secs
HOMS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	53	200	EP		1426	56.21	0.00	51						1.0
BHL	BZ	102	206	EP		1427	3.77	-0.13							1.0
BHL	BN	102	206	ES		1427	16.10	0.08							1.0
RCY	SZ	139	192	EP		1427	9.59	0.13							1.0
RCY	SN	139	192	ES		1427	25.61	-0.08							1.0

September 29 2009 Hour: 18: 6 8.5 **Agency: REL Distant**

EMSC OT=17:48:11.2 15.42S 172.13W 10Km Mw=8.1 SAMOA ISLANDS REG

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		18 7	55.14								
BHL	BZ			EP		18 7	55.45								
FKH	SZ			EP		18 7	57.77								
RCY	SZ			EP		18 7	59.11								
NAQL	SZ			EP		18 8	0.74								

September 30 2009 Hour: 0: 3 14.4 **Agency: REL Distant**

EMSC OT=23:45:03.9 15.82S 172.50W 10Km mb=6.0 SAMOA ISLANDS REG

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		0 4	55.11								
BHL	BZ			EP		0 4	55.76								

September 30 2009 Hour: 1: 1 5.2 Lat: 33.99N Lon: 36.06E Depth: 0 Agency: REL Local

Magnitudes: 2.7MC REL **Rms: 0.1 secs**

HERMEL BAALBEK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	34	341	EP		1 1	10.73	0.08							1.0
HWQ	BN	34	341	ES		1 1	14.61	-0.05							1.0
BHL	BZ	39	256	EP		1 1	11.51	-0.03							1.0
BHL	BN	39	256	ES		1 1	16.24	0.03							1.0
RCY	SZ	59	201	EP		1 1	14.68	-0.04	40						1.0

September 30 2009 Hour: 9:41 2.0 **Agency: REL Local**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		941	28.55								
HWQ	BZ			EP		941	36.54								

September 30 2009 Hour: 9:43 8.5 Lat: 34.37N Lon: 36.78E Depth: 1 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
FKH	SZ	37	248	EP		943	14.17	-0.21	50						1.0
FKH	SN	37	248	ES		943	18.87	0.12							1.0
HWQ	BZ	77	263	EP		943	20.92	0.00							1.0
RCY	SZ	130	222	EP		943	29.70	0.21							1.0
RCY	SN	130	222	ES		943	44.91	-0.12							1.0

September 30 2009 Hour: 10:14 1.1 **Agency: REL Local**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		1014	47.94								
HWQ	BZ			EP		1014	50.29								

September 30 2009 Hour: 10:14 47.6 **Agency: REL Distant**

EMSC OT=10:16:09.9 00.76S 99.84E 80Km Mw=7.6 SOUTHERN SUMATRA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		1027	6.34								
RCY	SZ			EP		1027	7.78								
HWQ	BZ			EP		1027	8.29								
BHL	BZ			EP		1027	9.06								

September 30 2009 Hour: 11:27 0.8 **Agency: REL Local**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		1127	20.60								
HWQ	BZ			EP		1127	29.06								

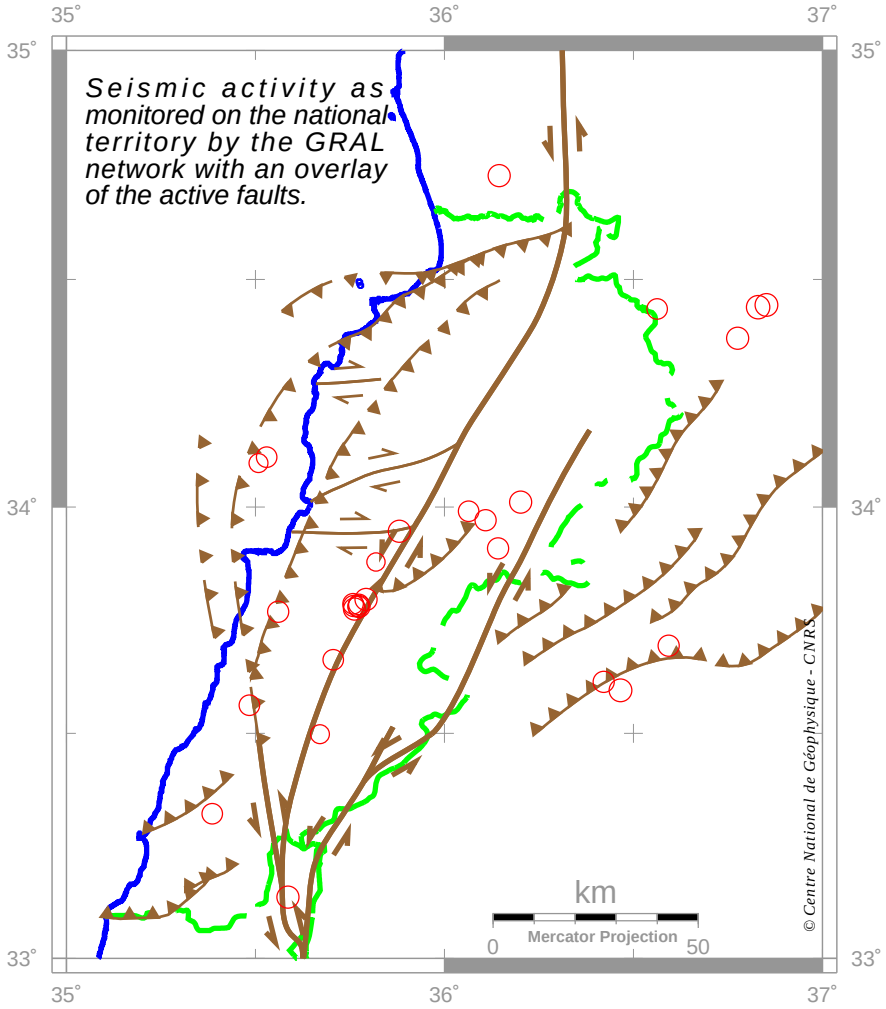
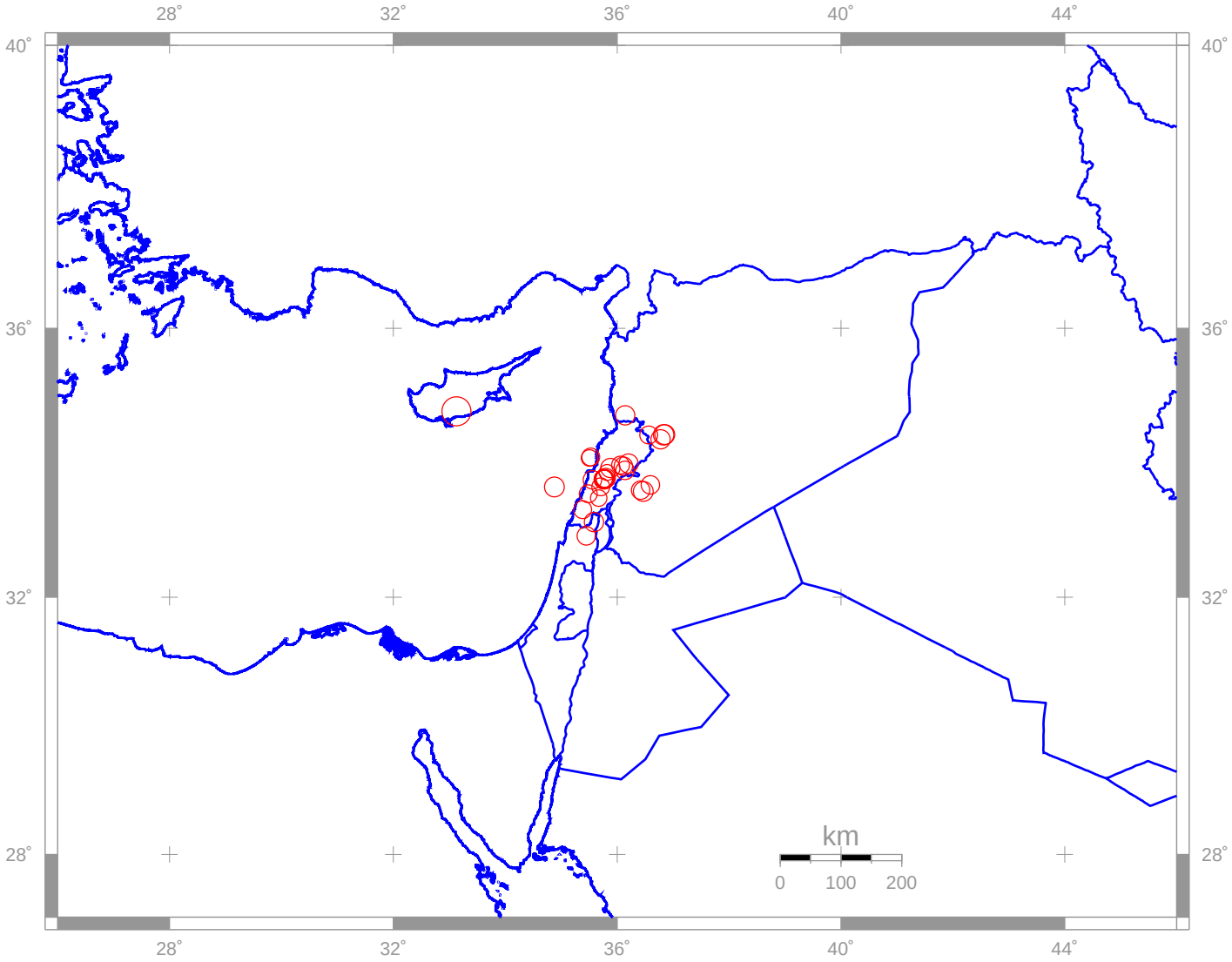
September 30 2009 Hour: 18:32 39.2 Lat: 33.69N Lon: 36.59E Depth: 0 Agency: REL Local Magnitudes: 2.8MC REL Rms: 0.2 secs

DAMASCUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	63	345	EP		1832	49.50	0.02							1.0
FKH	SN	63	345	ES		1832	57.02	-0.03							1.0
RCY	SZ	74	253	EP		1832	51.08	-0.05	42						1.0
RCY	SN	74	253	ES		1832	59.92	0.00							1.0
HWQ	BZ	88	317	EP		1832	53.47	0.00							1.0
BHL	BZ	90	285	EP		1832	54.59	0.82							0.2

Epicentral Map of Lebanon

September 2009

Magnitudes

- Ml = 2
- Ml = 3
- Ml = 4
- Ml = 5
- ★ Felt