

Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

February

2015

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:

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

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

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

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

STATIONS USED

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

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

STATION	LATITUDE	LONGITUDE	HEIGHT (m)	NAME	COMMENTS
BHL	3354.25N	3539.25E	1000	BHANNES	Opened May 1980
HWQ	3416.68N	3556.78E	1161	HAWQA	Opened Jan 2001
MATL	3329.32N	3519.78E	5	MATARIH	Nov2000-Sep2012
FKH	3414.69N	3624.61E	1152	FAKEHEH	Opened Dec 2004
RCY	3329.79N	3550.14E	1370	RACHAYA	Opened Jun 2006
BEYL	3352.30N	3529.59E	49	BEIRUT	Opened Jul 2006
NAQL	3307.02N	3508.46E	83	NAQOURA	Jul2008-Jan2012
DQRL	3342.34N	3534.21E	963	DEIR QAMAR	Opened Mar 2010
QRWL	3332.86N	3540.93E	875	QARAOUN	Opened Oct 2011
SHBL	3320.90N	3544.63E	1422	CHEBAA	Opened Oct 2011

REGIONAL AND DISTANT EARTHQUAKES

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

MACROSEISMIC DATA

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

MONTHLY EPICENTER MAPS

Maps will be found on the last page.

ELECTRONIC PUBLICATION

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

REFERENCES

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

Abbreviations:

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

LAT: Latitude of epicenter

LON: Longitude of epicenter

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

AGENCY: REL throughout the bulletin, aka. REsearch Lebanon

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

EMSC: Euro-Mediterranean Seismological Centre.

OT: Origin Time

RMS: Root mean square value of travel time residuals

STAT: Station code

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

DIST: Epicenter distance (km)

AZI: Azimuth from source to station

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

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

HR: Hour

MN: Minute

SECON: Seconds

TRES: Residual (seconds)

CODA: Signal duration in seconds

AMPL: Ground Amplitude (0.5*(peak to peak)), (nm) at period PERI

PERI: Period where amplitude is measured

BAZ: Back azimuth (station to event)

ARES: Back azimuth residual

VELO: Apparent phase velocity (km/sec)

WT: Weight of phase in the location

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

**February 1 2015 Hour: 11:10 39.8 Lat: 33.28N Lon: 35.69E Depth: 26 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.1 secs**

HASBAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	9	34	EP		1110	44.36	-0.03							1.0
RCY	SZ	27	30	EP		1110	45.86	-0.02	26						1.0
RCY	SN	27	30	ES		1110	50.37	-0.00							1.0
QRWL	SZ	29	359	EP		1110	46.16	0.11							1.0
DQRL	SZ	48	347	EP		1110	48.35	-0.05							1.0
DQRL	SN	48	347	ES		1110	54.74	-0.01							1.0

**February 1 2015 Hour: 11:58 50.4 Lat: 33.63N Lon: 35.36E Depth: 11 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
DQRL	SZ	21	67	EP		1158	54.32	-0.04	38						1.0
DQRL	SN	21	67	ES		1158	57.30	0.02							1.0
QRWL	SZ	31	107	EP		1158	55.81	-0.00							1.0
BHL	BZ	41	42	EP		1158	57.28	0.01							1.0
BHL	BN	41	42	ES		1159	2.35	-0.00							1.0
RCY	SZ	46	109	EP		1158	58.22	0.04							1.0
RCY	SN	46	109	ES		1159	3.92	-0.02							1.0

**February 1 2015 Hour: 12: 5 19.7 Lat: 33.62N Lon: 35.31E Depth: 9 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
DQRL	SZ	26	69	EP		12	5	24.20	-0.00	40					1.0
DQRL	SN	26	69	ES		12	5	27.61	0.04						1.0
QRWL	SZ	36	103	EP		12	5	25.59	-0.08						1.0
BHL	BZ	45	46	EP		12	5	27.04	-0.06						1.0
BHL	BN	45	46	ES		12	5	32.63	0.02						1.0
RCY	SZ	51	106	EP		12	5	28.10	0.03						1.0
RCY	SN	51	106	ES		12	5	34.28	-0.01						1.0
HWQ	SZ	94	39	EP		12	5	34.76	0.02						1.0

**February 1 2015 Hour: 15: 2 0.9 Lat: 33.84N Lon: 35.77E Depth: 23 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.1 secs**

BAABDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	13	304	EP		15	2	5.30	0.09						1.0
BHL	BN	13	304	ES		15	2	8.31	-0.07						1.0
DQRL	SZ	24	232	EP		15	2	6.12	-0.07	48					1.0
DQRL	SN	24	232	ES		15	2	10.14	0.05						1.0
RCY	SZ	38	171	EP		15	2	7.95	-0.06						1.0
RCY	SN	38	171	ES		15	2	13.28	0.03						1.0
HWQ	SZ	51	18	EP		15	2	9.77	0.01						1.0

**February 1 2015 Hour: 21: 9 7.5 Lat: 33.58N Lon: 35.57E Depth: 5 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs**

JEZZINE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SN	11	111	EP		21	9	9.55	-0.05						1.0
QRWL	SE	11	111	ES		21	9	11.21	0.06						1.0
DQRL	SZ	14	0	EP		21	9	9.89	-0.05	38					1.0
RCY	SZ	27	111	EP		21	9	11.94	-0.00						1.0
RCY	SN	27	111	ES		21	9	15.18	-0.04						1.0
BHL	BZ	36	12	EP		21	9	13.44	-0.04						1.0
BHL	BN	36	12	ES		21	9	17.92	0.03						1.0
HWQ	SZ	85	24	EP		21	9	21.24	0.05						1.0

**February 2 2015 Hour: 1:23 17.4 Lat: 34.06N Lon: 35.99E Depth: 8 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.1 secs**

BAALBECK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	24	351	EP		123	21.54	-0.00	41						1.0
HWQ	SN	24	351	ES		123	24.63	0.01							1.0
BHL	BZ	36	240	EP		123	23.26	-0.05							1.0
BHL	BN	36	240	ES		123	27.68	-0.01							1.0
DQRL	SZ	55	224	EP		123	26.52	0.07							1.0
QRWL	SZ	64	206	EP		123	27.87	0.06							1.0
RCY	SZ	65	193	EP		123	27.82	-0.10							1.0
RCY	SN	65	193	ES		123	35.74	0.03							1.0

**February 2 2015 Hour: 16:12 25.5 Lat: 33.81N Lon: 35.76E Depth: 25 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.1 secs**

BAABDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	14	317	EP		1612	30.17	0.00							1.0
DQRL	SZ	21	235	EP		1612	30.81	0.06	41						1.0
DQRL	SN	21	235	ES		1612	34.62	-0.01							1.0
QRWL	SZ	30	193	EP		1612	31.63	-0.10							1.0
RCY	SZ	36	168	EP		1612	32.52	0.06							1.0
RCY	SN	36	168	ES		1612	37.60	-0.00							1.0
HWQ	SZ	55	19	EP		1612	34.68	-0.22							0.2

**February 3 2015 Hour: 11: 9 12.6 Lat: 33.49N Lon: 35.63E Depth: 17 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.1 secs**

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	7	36	EP		11	9	15.72	0.09	25					1.0
RCY	SZ	19	89	EP		11	9	16.74	0.03						1.0
RCY	SE	19	89	ES		11	9	19.75	-0.03						1.0
SHBL	BZ	19	148	EP		11	9	16.78	0.03						1.0
SHBL	BN	19	148	ES		11	9	19.82	-0.04						1.0
DQRL	SZ	24	346	EP		11	9	17.28	-0.07						1.0

**February 4 2015 Hour: 10:56 23.3 Lat: 33.47N Lon: 35.68E Depth: 0 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.1 secs**

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	9	2	EP		1056	24.59	-0.11	33						1.0
SHBL	BZ	15	156	EP		1056	25.67	-0.00							1.0
RCY	SZ	15	78	EP		1056	25.67	-0.03							1.0
RCY	SN	15	78	ES		1056	27.52	0.04							1.0
DQRL	SZ	28	339	EP		1056	27.92	0.10							1.0
DQRL	SN	28	339	ES		1056	31.18	0.00							1.0

**February 4 2015 Hour: 12: 2 2.8 Lat: 33.88N Lon: 35.84E Depth: 4 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.1 secs**

METN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	278	EP		12	2	5.54	-0.12	52					1.0
BHL	BN	17	278	ES		12	2	7.85	0.04						1.0
DQRL	SZ	32	232	EP		12	2	8.02	0.08						1.0
RCY	SZ	43	180	EP		12	2	9.61	-0.12						1.0
RCY	SN	43	180	ES		12	2	14.95	0.06						1.0
HWQ	SZ	45	13	EP		12	2	10.09	0.05						1.0

February 4 2015 Hour: 15:56 24.3 Lat: 33.80N Lon: 35.76E Depth: 10 Agency: REL Local Magnitudes: 2.5MC REL Rms: 0.0 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	319	EP		1556	27.47	0.01	28						1.0
BHL	BN	16	319	ES		1556	29.77	0.00							1.0
DQRL	SZ	21	241	EP		1556	28.19	0.04							1.0
DQRL	SN	21	241	ES		1556	30.94	-0.03							1.0
RCY	SZ	34	169	EP		1556	30.13	-0.01							1.0
RCY	SN	34	169	ES		1556	34.45	0.01							1.0
HWQ	SZ	56	17	EP		1556	33.52	-0.02							1.0

February 5 2015 Hour: 16:17 46.9 Agency: REL Regional

EMSC OT=16:17:46.9 34.74N 25.41E 10Km M=4.4 CRETE, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ			EP		1619	48.63								
RCY	SZ			EP		1619	50.84								
HWQ	SZ			EP		1619	53.21								

February 5 2015 Hour: 21:52 38.5 Lat: 32.78N Lon: 35.64E Depth: 4 Agency: REL Regional Magnitudes: 3.0MC REL Rms: 0.0 secs

DEAD SEA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	81	13	EP		2152	51.66	0.03	53						1.0
RCY	SE	81	13	ES		2153	1.33	-0.02							1.0
DQRL	SZ	103	356	EP		2152	55.02	-0.03							1.0
DQRL	SE	103	356	ES		2153	7.34	0.02							1.0
BHL	BZ	124	1	EP		2152	58.37	-0.00							1.0
HWQ	SZ	168	10	EP		2153	4.84	0.00							1.0

February 6 2015 Hour: 10:30 28.3 Lat: 33.38N Lon: 35.67E Depth: 8 Agency: REL Local Magnitudes: 2.7MC REL Rms: 0.1 secs

HASBAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	8	120	EP		1030	30.26	-0.00							1.0
SHBL	BN	8	120	ES		1030	31.76	0.01							1.0
QRWL	SZ	18	4	EP		1030	31.39	-0.12							1.0
RCY	SZ	20	51	EP		1030	31.78	-0.03	41						1.0
RCY	SN	20	51	ES		1030	34.46	0.03							1.0
DQRL	SZ	37	346	EP		1030	34.47	0.11							1.0

February 6 2015 Hour: 13:51 59.1 Lat: 33.79N Lon: 35.77E Depth: 0 Agency: REL Local Magnitudes: 2.4MC REL Rms: 0.0 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	319	EP		1352	1.72	-0.01	25						1.0
BHL	BN	17	319	ES		1352	3.70	-0.01							1.0
DQRL	SZ	21	243	EP		1352	2.47	0.01							1.0
RCY	SZ	33	170	EP		1352	4.43	-0.01							1.0
RCY	SN	33	170	ES		1352	8.44	0.01							1.0
HWQ	SZ	56	17	EP		1352	8.13	0.01							1.0

February 6 2015 Hour: 15:19 51.6 Lat: 33.87N Lon: 35.83E Depth: 11 Agency: REL Local Magnitudes: 2.7MC REL Rms: 0.1 secs

BAABDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	283	EP		1519	54.78	-0.14	41						1.0
BHL	BE	16	283	ES		1519	57.38	0.03							1.0
DQRL	SZ	30	233	EP		1519	56.93	0.09							1.0
DQRL	SE	30	233	ES		1520	0.72	0.03							1.0
QRWL	SZ	38	201	EP		1519	57.97	-0.11							1.0
QRWL	SN	38	201	ES		1520	2.88	0.03							1.0
RCY	SZ	41	179	EP		1519	58.62	0.02							1.0

HWQ SZ 47 14 EP 1519 59.46 0.06 1.0

February 6 2015 Hour: 16: 0 17.3 Lat: 34.09N Lon: 35.58E Depth: 10 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	22	161	EP		16	0	21.28	0.04	41					1.0
BHL	BE	22	161	ES		16	0	24.14	-0.02						1.0
HWQ	SZ	40	58	EP		16	0	23.96	-0.01						1.0
HWQ	SN	40	58	ES		16	0	28.93	0.01						1.0
DQRL	SZ	43	181	EP		16	0	24.38	-0.02						1.0
QRWL	SZ	61	171	EP		16	0	27.37	0.09						1.0
QRWL	SN	61	171	ES		16	0	34.65	-0.02						1.0
RCY	SZ	70	160	EP		16	0	28.64	-0.10						1.0
RCY	SN	70	160	ES		16	0	37.26	0.04						1.0

February 7 2015 Hour: 11: 1 16.6 Lat: 33.48N Lon: 35.67E Depth: 9 Agency: REL Local Magnitudes: 2.5MC REL Rms: 0.0 secs

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	8	7	EP		11	1	18.60	-0.03	29					1.0
QRWL	SN	8	7	ES		11	1	20.18	0.01						1.0
RCY	SZ	15	81	EP		11	1	19.58	0.00						1.0
SHBL	BZ	16	155	EP		11	1	19.62	0.01						1.0
SHBL	BN	16	155	ES		11	1	21.87	-0.00						1.0
DQRL	SZ	27	340	EP		11	1	21.25	0.01						1.0

February 7 2015 Hour: 13:36 42.2 Lat: 33.45N Lon: 35.64E Depth: 0 Agency: REL Local Magnitudes: 2.4MC REL Rms: 0.0 secs

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	12	21	EP		1336	44.11	-0.08							1.0
SHBL	BZ	15	137	EP		1336	44.62	-0.02							1.0
SHBL	BN	15	137	ES		1336	46.43	0.02							1.0
RCY	SZ	19	73	EP		1336	45.40	0.03	27						1.0
RCY	SN	19	73	ES		1336	47.70	0.01							1.0
DQRL	SZ	29	348	EP		1336	47.00	0.01							1.0
DQRL	SN	29	348	ES		1336	50.55	0.04							1.0

February 10 2015 Hour: 3:25 1.6 Agency: REL Regional
EMSC OT=03:25:01.6 35.70N 40.46E 40Km M=4.4 SYRIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP			326	1.45							
BHL	BZ			EP			326	5.38							
DQRL	SZ			EP			326	6.72							
QRWL	SZ			EP			326	9.22							
RCY	SZ			EP			326	8.58							

February 10 2015 Hour: 4: 1 57.1 Lat: 36.11N Lon: 35.97E Depth: 9 Agency: REL Regional Magnitudes: 4.5MC REL Rms: 0.2 secs

TURKEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	203	181	EP		4	2	27.44	-0.04	372					1.0
HWQ	SN	203	181	ES		4	2	49.69	-0.30						1.0
BHL	BZ	246	187	EP		4	2	32.78	-0.05						1.0
BHL	BN	246	187	ES		4	2	59.39	0.11						1.0
BEYL	SZ	252	190	EP		4	2	33.24	-0.20						1.0
DQRL	SZ	269	188	EP		4	2	35.51	-0.15						1.0
QRWL	SZ	285	185	EP		4	2	37.91	0.24						1.0
RCY	SZ	290	182	EP		4	2	38.76	0.46						1.0

February 10 2015 Hour: 5:31 34.3 Agency: REL Regional

EMSC OT=05:31:34.3 34.60N 28.46E 30Km M=4.4 EASTERN MEDITERRANEAN SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		533		3.14							
QRWL	SZ			EP		533		0.57							

February 10 2015 Hour: 8:56 34.3 Agency: REL Regional

EMSC OT=08:56:34.3 37.15N 29.99E 10Km M=4.5 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		857		57.17							
DQRL	SZ			EP		857		59.24							
RCY	SZ			EP		858		1.67							

February 11 2015 Hour: 7:34 27.7 Lat: 33.87N Lon: 35.78E Depth: 15 Agency: REL Local

Magnitudes: 2.7MC REL

BAABDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	12	290	EP		734	30.96	-0.06							1.0
BHL	BN	12	290	ES		734	33.51	0.02							1.0
DQRL	SZ	26	227	EP		734	32.65	-0.02							1.0
DQRL	SE	26	227	ES		734	36.38	0.03							1.0
RCY	SZ	41	173	EP		734	34.82	-0.01	39						1.0
RCY	SN	41	173	ES		734	40.11	0.00							1.0
HWQ	SZ	48	19	EP		734	35.84	0.03							1.0

February 11 2015 Hour: 22:42 8.2 Agency: REL Regional

EMSC OT=22:42:08.2 35.41N 31.46E 20Km M=3.6 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		2243		7.71							
RCY	SZ			EP		2243		9.60							

February 14 2015 Hour: 11:50 8.0 Lat: 33.71N Lon: 34.90E Depth: 29 Agency: REL Local

Magnitudes: 3.9MC REL

OFFSHORE CENTRAL LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEYL	SZ	58	72	EP		1150	17.64	-0.22							1.0
DQRL	SZ	62	90	EP		1150	18.49	-0.04							1.0
DQRL	SE	62	90	ES		1150	26.46	0.11							1.0
BHL	BZ	73	73	EP		1150	20.10	0.06	201						1.0
BHL	BE	73	73	ES		1150	28.96	-0.03							1.0
QRWL	SZ	75	104	EP		1150	20.38	0.10							1.0
SHBL	BZ	88	117	EP		1150	22.28	0.08							1.0
RCY	SZ	90	105	EP		1150	22.55	0.08							1.0
HWQ	SZ	115	57	EP		1150	25.92	0.13							1.0
HWQ	SN	115	57	ES		1150	38.82	-0.16							1.0

February 14 2015 Hour: 12: 8 2.6 Lat: 33.69N Lon: 34.96E Depth: 40 Agency: REL Local

Magnitudes: 3.1MC REL

OFFSHORE CENTRAL LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	57	88	EP		12	8	12.96	-0.03	63					1.0
DQRL	SE	57	88	ES		12	8	20.72	0.05						1.0
BHL	BZ	69	70	EP		12	8	14.48	0.08						1.0
BHL	BN	69	70	ES		12	8	23.01	-0.10						1.0
QRWL	SZ	69	103	EP		12	8	14.57	0.13						1.0
QRWL	SN	69	103	ES		12	8	23.15	-0.03						1.0
SHBL	BZ	83	117	EP		12	8	16.19	0.08						1.0
SHBL	BN	83	117	ES		12	8	26.11	0.03						1.0
RCY	SZ	85	105	EP		12	8	16.41	0.07						1.0
HWQ	SZ	112	54	EP		12	8	19.81	0.06						1.0
HWQ	SN	112	54	ES		12	8	32.31	-0.11						1.0

**February 14 2015 Hour: 17:14 15.3 Lat: 33.34N Lon: 35.41E Depth: 0 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.1 secs**

NABATIYE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	34	48	EP		1714	20.79	0.04							1.0
QRWL	SE	34	48	ES		1714	24.75	-0.07							1.0
DQRL	SZ	43	20	EP		1714	22.24	0.04							1.0
DQRL	SE	43	20	ES		1714	27.33	-0.00							1.0
RCY	SZ	43	66	EP		1714	22.13	-0.09	25						1.0
RCY	SE	43	66	ES		1714	27.45	0.08							1.0
BHL	BZ	66	20	EP		1714	25.92	-0.04							0.2

**February 15 2015 Hour: 18:56 22.4 Lat: 33.65N Lon: 35.67E Depth: 0 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs**

CHOUF REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	11	305	EP		1856	24.27	0.05	36						1.0
QRWL	SZ	11	174	EP		1856	24.19	-0.03							1.0
DQRL	SN	11	305	ES		1856	25.53	-0.03							1.0
RCY	SZ	23	138	EP		1856	26.14	0.05							1.0
RCY	SN	23	138	ES		1856	28.78	-0.04							1.0
BHL	BZ	28	357	EP		1856	26.92	-0.07							1.0
BHL	BN	28	357	ES		1856	30.36	-0.02							1.0
HWQ	SZ	74	20	EP		1856	34.46	0.06							1.0

**February 16 2015 Hour: 9:33 6.1 Lat: 33.50N Lon: 36.27E Depth: 0 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.1 secs**

SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	40	270	EP		933	12.64	-0.01	56						1.0
RCY	SN	40	270	ES		933	17.41	-0.07							1.0
SHBL	BZ	52	251	EP		933	14.56	0.08							1.0
QRWL	SZ	55	276	EP		933	14.96	-0.03							1.0
DQRL	SZ	69	290	EP		933	17.21	-0.03							1.0
DQRL	SE	69	290	ES		933	25.55	0.08							1.0
BHL	BZ	73	308	EP		933	17.83	-0.02							1.0

**February 16 2015 Hour: 10:37 2.0 Lat: 33.62N Lon: 34.85E Depth: 30 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.1 secs**

OFFSHORE CENTRAL LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	68	81	EP		1037	13.43	-0.10							1.0
QRWL	SZ	78	95	EP		1037	14.90	-0.02							1.0
QRWL	SN	78	95	ES		1037	24.44	-0.01							1.0
BHL	BZ	82	67	EP		1037	15.50	0.09							1.0
SHBL	BZ	89	109	EP		1037	16.56	0.11							1.0
SHBL	BN	89	109	ES		1037	27.12	0.01							1.0
RCY	SZ	93	98	EP		1037	16.87	-0.11	31						1.0
RCY	SE	93	98	ES		1037	28.05	0.02							1.0

**February 16 2015 Hour: 11:52 45.4 Agency: REL Regional
EMSC OT=11:52:45.4 37.21N 30.00E 10Km M=4.8 WESTERN TURKEY**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		1154	12.05								
BHL	BZ			EP		1154	11.86								
DQRL	SZ			EP		1154	13.40								
QRWL	SZ			EP		1154	13.97								
RCY	SZ			EP		1154	15.57								
SHBL	BZ			EP		1154	16.78								

February 16 2015 Hour: 23:6 27.4 Agency: REL Distant
EMSC OT=23:06:27.4 39.87N 142.94E 15Km M=6.8 NEAR EAST COAST OF HONSHU, JAPAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		2318	34.82								
BHL	BZ			EP		2318	39.34								
RCY	SZ			EP		2318	39.61								

February 18 2015 Hour: 0:38 57.5 Lat: 33.21N Lon: 35.65E Depth: 0 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

DEAD SEA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	36	28	EP		039	3.32-0.02	31							1.0
RCY	SN	36	28	ES		039	7.66 0.02								1.0
QRWL	SZ	38	4	EP		039	3.48-0.09								1.0
QRWL	SN	38	4	ES		039	8.06 0.01								1.0
DQRL	SZ	55	352	EP		039	6.50 0.04								1.0
DQRL	SN	55	352	ES		039	13.06-0.02								1.0
BHL	BZ	77	0	EP		039	9.99 0.06								1.0

February 18 2015 Hour: 12:39 16.8 Lat: 36.62N Lon: 34.78E Depth: 19 Agency: REL Regional
Magnitudes: 3.6MC REL Rms: 0.1 secs

TURKEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	281	158	EP		1239	55.88-0.03	102							1.0
HWQ	SN	281	158	ES		1240	24.86-0.02								1.0
BHL	BZ	312	165	EP		1239	59.85 0.10								1.0
DQRL	SZ	331	167	EP		1240	2.00-0.19								1.0
DQRL	SN	331	167	ES		1240	35.81 0.02								1.0
RCY	SZ	360	164	EP		1240	5.88 0.12								1.0

February 19 2015 Hour: 15:16 35.7 Agency: REL Regional
EMSC OT=15:16:35.7 36.56N 31.11E 107Km M=3.4 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		1517	47.17								

February 20 2015 Hour: 17:51 0.0 Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		1751	43.58								
RCY	SZ			EP		1751	42.70								

February 22 2015 Hour: 4:39 2.7 Agency: REL Regional
EMSC OT=04:39:02.7 35.39N 27.81E 10Km M=3.9 DODECANESE ISLANDS, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ			EP		440	39.85								
RCY	SZ			EP		440	42.07								

February 22 2015 Hour: 10:39 53.7 Lat: 33.35N Lon: 35.63E Depth: 18 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

MARJAAYOU REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	10	94	EP		1039	57.27 0.02								1.0
SHBL	BN	10	94	ES		1039	59.83-0.01								1.0
QRWL	SZ	22	12	EP		1039	58.31-0.01								1.0
RCY	SZ	25	50	EP		1039	58.70 0.00	32							1.0
DQRL	SZ	39	351	EP		1040	0.62-0.02								1.0
DQRL	SN	39	351	ES		1040	5.76 0.02								1.0

**February 22 2015 Hour: 13:21 15.1 Lat: 0.00N Lon: -0.00W Depth: 0 Agency: REL Distant
EMSC OT=13:02:15.1 18.05S 178.27W 583Km M=5.1 FIJI REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1320	48.78								
SHBL	BZ			EP		1320	49.53								
QRWL	SZ			EP		1320	49.53								

**February 22 2015 Hour: 13:36 46.1 Lat: 33.35N Lon: 35.62E Depth: 17 Agency: REL Local
Magnitudes: 2.7MC REL
MARJAAYOUN REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	11	91	EP		1336	49.52-0.05								1.0
SHBL	BN	11	91	ES		1336	52.23 0.12								1.0
QRWL	SZ	23	14	EP		1336	50.42-0.28								1.0
RCY	SZ	26	51	EP		1336	51.09-0.04								1.0
RCY	SN	26	51	ES		1336	54.84 0.01								1.0
DQRL	SZ	40	353	EP		1336	53.14 0.11								1.0
BHL	BZ	61	3	EP		1336	56.33 0.14								1.0

**February 22 2015 Hour: 15:17 34.6 Lat: 33.50N Lon: 35.69E Depth: 11 Agency: REL Local
Magnitudes: 3.0MC REL
WEST BEKAA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	6	355	EP		1517	36.80-0.05								1.0
RCY	SZ	14	90	EP		1517	37.70 0.02								1.0
RCY	SN	14	90	ES		1517	39.95 0.01								1.0
DQRL	SZ	26	335	EP		1517	39.29 0.05								1.0
DQRL	SN	26	335	ES		1517	42.65-0.01								1.0
BHL	BZ	45	356	EP		1517	42.25 0.02								1.0
HWQ	SZ	90	15	EP		1517	49.00-0.03								1.0

**February 23 2015 Hour: 11:50 12.5 Lat: 33.47N Lon: 35.67E Depth: 4 Agency: REL Local
Magnitudes: 2.6MC REL
WEST BEKAA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	9	7	EP		1150	14.10-0.08								1.0
QRWL	SN	9	7	ES		1150	15.45 0.03								1.0
SHBL	BZ	15	153	EP		1150	15.12 0.01								1.0
RCY	SZ	16	79	EP		1150	15.22 0.02								1.0
RCY	SN	16	79	ES		1150	17.19-0.01								1.0
DQRL	SZ	28	340	EP		1150	17.11 0.02								1.0

**February 23 2015 Hour: 12:28 32.5 Lat: 34.33N Lon: 36.67E Depth: 0 Agency: REL Local
Magnitudes: 3.0MC REL
SYRIA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	67	266	EP		1228	43.30-0.04								1.0
HWQ	SN	67	266	ES		1228	51.38 0.02								1.0
BHL	BZ	105	244	EP		1228	49.40-0.06								1.0
BHL	BN	105	244	ES		1229	1.99-0.02								1.0
RCY	SZ	120	220	EP		1228	51.85-0.08								1.0
DQRL	SZ	123	236	EP		1228	52.56 0.20								1.0

**February 23 2015 Hour: 15:16 24.9 Lat: 33.83N Lon: 35.73E Depth: 27 Agency: REL Local
Magnitudes: 2.9MC REL
BAABDA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	10	320	EP		1516	29.68 0.06								1.0
DQRL	SZ	20	226	EP		1516	30.37 0.05								1.0
DQRL	SN	20	226	ES		1516	34.28-0.06								1.0
RCY	SZ	39	165	EP		1516	32.32-0.04								1.0
RCY	SE	39	165	ES		1516	37.91 0.03								1.0
HWQ	SZ	53	22	EP		1516	34.20-0.04								1.0

**February 25 2015 Hour: 15:30 35.8 Lat: 33.79N Lon: 35.75E Depth: 3 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs**

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	325	EP		1530	38.47	0.04							1.0
DQRL	SZ	19	242	EP		1530	39.00	0.07	44						1.0
DQRL	SN	19	242	ES		1530	41.21	-0.07							1.0
QRWL	SZ	27	194	EP		1530	40.17	-0.03							1.0
QRWL	SN	27	194	ES		1530	43.52	0.03							1.0
HWQ	SZ	57	18	EP		1530	45.00	-0.04							1.0

**February 26 2015 Hour: 10:33 28.5 Lat: 33.29N Lon: 35.67E Depth: 18 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.0 secs**

HASBAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	9	46	EP		1033	31.95	0.00							1.0
RCY	SZ	27	34	EP		1033	33.83	-0.01	24						1.0
RCY	SN	27	34	ES		1033	37.78	0.01							1.0
DQRL	SZ	47	348	EP		1033	36.51	0.01							1.0
DQRL	SN	47	348	IS		1033	42.40	-0.01							1.0

**February 26 2015 Hour: 11:48 19.4 Lat: 33.47N Lon: 35.69E Depth: 1 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.1 secs**

HASBAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	9	354	EP		1148	20.76	-0.14							1.0
RCY	SZ	14	76	EP		1148	21.63	-0.04	29						1.0
RCY	SE	14	76	ES		1148	23.38	0.05							1.0
SHBL	BZ	14	160	EP		1148	21.76	0.05							1.0
DQRL	SZ	29	337	EP		1148	24.00	-0.07							1.0
DQRL	SN	29	337	ES		1148	27.66	0.15							1.0

**February 26 2015 Hour: 16:13 41.4 Lat: 33.71N Lon: 34.99E Depth: 32 Agency: REL Local
Magnitudes: 2.9MC 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	53	90	EP		1613	51.13	0.06	48						1.0
DQRL	SN	53	90	ES		1613	58.20	-0.01							1.0
BHL	BZ	65	70	EP		1613	52.52	-0.06							1.0
QRWL	SZ	66	106	EP		1613	52.78	0.01							1.0
RCY	SZ	82	107	EP		1613	54.79	-0.04							1.0
RCY	SN	82	107	ES		1614	4.76	0.01							1.0
HWQ	SZ	108	54	EP		1613	58.15	0.03							1.0

February 27 2015 Hour: 12:53 8.4

Agency: REL Regional

EMSC OT=12:53:08.4 31.78N 30.91E 10Km M=4.5 EGYPT

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ			EP		1254	11.85								1.0
DQRL	SZ			EP		1254	11.74								1.0
QRWL	SZ			EP		1254	12.58								1.0
RCY	SZ			EP		1254	13.81								1.0
BHL	BZ			EP		1254	14.48								1.0
HWQ	SZ			EP		1254	18.95								1.0

February 27 2015 Hour: 13:45 5.3

Agency: REL Distant

EMSC OT=13:45:05.3 7.34S 122.52E 548Km M=7.0 FLORES SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		1357	11.80								1.0
SHBL	BZ			EP		1357	12.58								1.0
QRWL	SZ			EP		1357	13.06								1.0
BHL	BZ			EP		1357	13.74								1.0
DQRL	SZ			EP		1357	14.03								1.0

**February 27 2015 Hour: 15:14 9.7 Lat: 33.80N Lon: 35.77E Depth: 10 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs**

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	319	EP		1514	12.89	-0.02							1.0
DQRL	SZ	21	241	EP		1514	13.58	0.00	42						1.0
DQRL	SN	21	241	ES		1514	16.44	0.01							1.0
RCY	SZ	34	169	EP		1514	15.50	-0.02							1.0
RCY	SN	34	169	ES		1514	19.81	0.01							1.0
HWQ	SZ	56	17	EP		1514	18.96	0.02							1.0

**February 27 2015 Hour: 22:37 52.9 Agency: REL Regional
EMSC OT=22:37:52.9 34.57N 33.90E 25Km M=3.1 CYPRUS REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2238	17.72								
HWQ	SZ			EP		2238	20.48								
QRWL	SZ			EP		2238	21.40								
RCY	SZ			EP		2238	23.47								

**February 27 2015 Hour: 22:54 17.1 Lat: 34.76N Lon: 35.93E Depth: 9 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.1 secs**

SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	54	178	EP		2254	26.02	-0.00	53						1.0
BHL	BZ	99	195	EP		2254	32.93	0.03							1.0
BHL	BN	99	195	ES		2254	44.62	0.05							1.0
DQRL	SZ	122	196	EP		2254	36.22	-0.10							1.0
QRWL	SZ	137	190	EP		2254	38.57	0.07							1.0
QRWL	SN	137	190	ES		2254	54.28	-0.05							1.0

**February 28 2015 Hour: 9:51 57.2 Lat: 33.34N Lon: 35.60E Depth: 14 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs**

MARJAAYOUН REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	13	87	EP		952	0.54	-0.03							1.0
SHBL	BN	13	87	ES		952	3.08	0.02							1.0
QRWL	SZ	24	19	EP		952	1.80	0.00	33						1.0
QRWL	SN	24	19	ES		952	5.18	-0.01							1.0
RCY	SZ	28	52	EP		952	2.36	0.00							1.0
DQRL	SZ	40	356	EP		952	4.15	0.01							1.0

Epicentral Map of Lebanon

FEBRUARY 2015

