

Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

October

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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	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
ZAHL	3351.48N	3553.12E	1211	ZAHLE	Opened Aug 2015

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.

October 1 2015 Hour: 12:44 37.9 Lat: 33.70N Lon: 35.90E Depth: 19 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.1 secs

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	18	357	EP		1244	42.20	0.05	44						1.0
ZAHL	SN	18	357	ES		1244	45.30	0.00							1.0
RCY	SZ	23	194	EP		1244	42.72	-0.08							1.0
QRWL	SZ	26	230	EP		1244	43.16	0.07							1.0
DQRL	SZ	30	271	EP		1244	43.72	0.09							1.0
DQRL	SN	30	271	ES		1244	47.83	-0.03							1.0
BHL	BZ	32	315	EP		1244	43.75	-0.10							1.0

October 1 2015 Hour: 15:41 17.2 Lat: 33.81N Lon: 35.77E Depth: 17 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	12	62	EP		1541	20.76	-0.01							1.0
BHL	BZ	15	316	EP		1541	21.04	0.03	31						1.0
DQRL	SZ	22	239	EP		1541	21.72	0.01							1.0
DQRL	SN	22	239	ES		1541	25.05	-0.02							1.0
RCY	SZ	35	170	EP		1541	23.47	-0.03							1.0
RCY	SN	35	170	ES		1541	28.19	0.03							1.0

October 1 2015 Hour: 18:33 50.5 Lat: 33.90N Lon: 35.87E Depth: 1 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.1 secs

ZAHLE REGION

Earthquake was felt

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	5	168	EP		1833	51.33	-0.04							1.0
ZAHL	SN	5	168	ES		1833	52.06	0.01							1.0
BHL	BZ	20	270	EP		1833	53.77	0.03	61						1.0
BHL	BN	20	270	ES		1833	56.18	0.01							1.0
BEYL	SZ	35	264	EP		1833	56.21	0.05							0.2
DQRL	SZ	36	232	EP		1833	56.21	-0.00							1.0
DQRL	SN	36	232	ES		1834	0.47	-0.01							1.0
HWQ	SZ	42	9	EP		1833	57.42	0.17							0.2
QRWL	SZ	43	204	EP		1833	57.32	-0.12							1.0
RCY	SZ	45	184	EP		1833	57.81	0.04							1.0
RCY	SN	45	184	ES		1834	3.24	0.05							1.0

October 2 2015 Hour: 13:57 53.8 Lat: 33.35N Lon: 35.62E Depth: 6 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

MARJAAYOUN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	23	15	EP		1357	57.66	-0.06	32						1.0
RCY	SZ	26	51	EP		1357	58.25	0.03							1.0
RCY	SE	26	51	ES		1358	1.47	0.00							1.0
DQRL	SZ	40	354	EP		1358	0.44	0.05							1.0
DQRL	SE	40	354	ES		1358	5.26	0.01							1.0
BHL	BZ	62	3	EP		1358	3.85	-0.03							1.0

October 3 2015 Hour: 14:48 38.0 Lat: 34.01N Lon: 35.72E Depth: 14 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.1 secs

KESROUAN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	14	207	EP		1448	41.23	-0.02	29						1.0
ZAHL	SZ	23	138	EP		1448	42.37	-0.07							1.0
ZAHL	SN	23	138	ES		1448	45.74	0.02							1.0
HWQ	SZ	36	35	EP		1448	44.36	0.06							1.0
DQRL	SZ	37	202	EP		1448	44.28	-0.11							1.0
DQRL	SE	37	202	ES		1448	49.25	0.12							1.0

October 3 2015 Hour: 21: 8 3.3

Agency: REL Regional

EMSC OT=21:08:03.3 38.16N 38.97E 10Km M=4.1 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		21 9	14.57								
BHL	BZ			EP		21 9	20.72								
DQRL	SZ			EP		21 9	24.21								
RCY	SZ			EP		21 9	25.08								
QRWL	SZ			EP		21 9	25.84								

October 4 2015 Hour: 10:33 30.4 Lat: 33.53N Lon: 35.71E Depth: 0 Agency: REL Local

Magnitudes: 2.7MC 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	3	317	EP		1033	30.91-0.02								1.0
RCY	SZ	13	105	EP		1033	32.48 0.08	41							1.0
RCY	SN	13	105	ES		1033	33.82-0.08								1.0
DQRL	SZ	24	328	EP		1033	34.21 0.03								1.0
DQRL	SN	24	328	ES		1033	36.91-0.09								1.0
BHL	BZ	42	353	EP		1033	37.25 0.06								1.0
BHL	BN	42	353	ES		1033	42.24 0.02								1.0

October 4 2015 Hour: 13:56 29.4 Lat: 33.79N Lon: 35.78E Depth: 2 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	17	318	EP		1356	32.21-0.03	37							1.0
DQRL	SZ	21	244	EP		1356	32.90-0.01								1.0
DQRL	SN	21	244	ES		1356	35.50 0.02								1.0
RCY	SZ	33	170	EP		1356	34.77-0.02								1.0
RCY	SE	33	170	ES		1356	38.77 0.01								1.0
HWQ	SZ	56	16	EP		1356	38.58 0.03								1.0

October 4 2015 Hour: 14:32 9.8 Lat: 33.31N Lon: 36.42E Depth: 27 Agency: REL Local

Magnitudes: 2.8MC 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	58	291	EP		1432	19.82 0.05	44							1.0
RCY	SN	58	291	ES		1432	27.24 0.06								1.0
DQRL	SZ	90	299	EP		1432	24.10-0.18								1.0
BHL	BZ	97	313	EP		1432	25.30 0.06								1.0
BHL	BN	97	313	ES		1432	36.65-0.03								1.0
HWQ	SZ	116	338	EP		1432	27.89 0.04								1.0

October 4 2015 Hour: 15:35 23.6 Lat: 33.95N Lon: 36.07E Depth: 20 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
ZAHL	SZ	20	238	EP		1535	28.17-0.05								1.0
ZAHL	SN	20	238	ES		1535	31.70 0.03								1.0
HWQ	SZ	38	342	EP		1535	30.41 0.01								1.0
BHL	BZ	39	262	EP		1535	30.47-0.05	40							1.0
BHL	BN	39	262	ES		1535	35.67 0.01								1.0
DQRL	SZ	54	239	EP		1535	32.58-0.03								1.0
RCY	SZ	55	203	EP		1535	32.80-0.02								1.0
RCY	SN	55	203	ES		1535	39.64-0.03								1.0
QRWL	SZ	58	219	EP		1535	33.27 0.13								1.0

October 6 2015 Hour: 13:19 52.0 Lat: 33.80N Lon: 35.78E Depth: 10 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	12	55	EP		1319	54.74	0.00							1.0
ZAHL	SN	12	55	ES		1319	56.78	-0.00							1.0
BHL	BZ	17	316	EP		1319	55.23	-0.04	30						1.0
BHL	BN	17	316	ES		1319	57.72	0.02							1.0
DQRL	SZ	22	243	EP		1319	55.98	0.01							1.0
HWQ	SZ	56	16	EP		1320	1.18	0.01							1.0

October 6 2015 Hour: 21:27 35.1 Agency: REL Regional
EMSC OT=21:27:35.1 36.10N 29.91E 51Km M=5.1 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEYL	SZ			EP		2128	47.12								
BHL	BZ			EP		2128	48.06								
DQRL	SZ			EP		2128	48.78								
HWQ	SZ			EP		2128	50.21								
ZAHL	SZ			EP		2128	51.84								
QRWL	SZ			EP		2128	51.68								
RCY	SZ			EP		2128	53.61								

October 6 2015 Hour: 23:52 51.6 Lat: 35.17N Lon: 36.39E Depth: 15 Agency: REL Regional
Magnitudes: 3.2MC REL Rms: 0.0 secs

SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	107	203	EP		2353	8.38	0.05							1.0
HWQ	SN	107	203	ES		2353	20.75	0.02							1.0
BHL	BZ	156	206	EP		2353	15.41	-0.09	64						1.0
DQRL	SZ	179	205	EP		2353	18.49	0.06							1.0
DQRL	SE	179	205	ES		2353	38.31	-0.01							1.0
RCY	SZ	193	196	EP		2353	20.12	-0.02							1.0
RCY	SN	193	196	ES		2353	41.28	-0.01							1.0

October 7 2015 Hour: 0:24 20.6 Lat: 35.32N Lon: 35.24E Depth: 8 Agency: REL Regional
Magnitudes: 3.2MC REL Rms: 0.1 secs

OFFSHORE SYRIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	133	151	EP		024	41.39	-0.07							1.0
HWQ	SN	133	151	ES		024	56.88	-0.04							1.0
BHL	BZ	162	166	EP		024	45.70	-0.03	65						1.0
ZAHL	SZ	173	160	EP		024	47.36	0.04							1.0
ZAHL	SN	173	160	ES		025	7.26	0.13							1.0
DQRL	SZ	182	170	EP		024	48.32	-0.09							1.0
RCY	SZ	210	165	EP		024	52.04	0.12							1.0
RCY	SE	210	165	ES		025	15.07	-0.06							1.0

October 8 2015 Hour: 8:21 37.0 Lat: 34.39N Lon: 35.88E Depth: 0 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.0 secs

ZGHARTA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	14	154	EP		821	39.30	-0.03	62						1.0
HWQ	SN	14	154	ES		821	41.06	0.01							1.0
BHL	BZ	58	201	EP		821	46.39	0.01							1.0
DQRL	SZ	81	200	EP		821	50.17	0.02							1.0
DQRL	SN	81	200	ES		821	59.84	-0.03							1.0
RCY	SZ	100	182	EP		821	53.08	-0.00							1.0
RCY	SN	100	182	ES		822	4.99	0.02							1.0

October 10 2015 Hour: 2:55 51.6 Lat: 35.19N Lon: 35.28E Depth: 16 Agency: REL Regional
Magnitudes: 3.4MC REL Rms: 0.0 secs

OFFSHORE SYRIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	118	149	EP		256	10.01	0.02	89						1.0
HWQ	SN	118	149	ES		256	23.55	-0.03							1.0
BHL	BZ	147	166	EP		256	14.27	0.08							1.0
BHL	BN	147	166	ES		256	30.86	-0.03							1.0
ZAHL	SZ	158	159	EP		256	15.77	0.03							1.0
DQRL	SZ	167	171	EP		256	16.76	-0.07							1.0
QRWL	SZ	186	168	EP		256	19.17	-0.02							1.0
RCY	SZ	195	165	EP		256	20.31	-0.02							1.0
RCY	SN	195	165	ES		256	41.63	0.05							1.0

October 10 2015 Hour: 7:57 28.6 Lat: 35.34N Lon: 35.41E Depth: 2 Agency: REL Regional
Magnitudes: 3.3MC REL Rms: 0.1 secs

OFFSHORE SYRIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	127	157	EP		757	49.16	-0.01							1.0
HWQ	SN	127	157	ES		758	4.34	-0.02							1.0
BHL	BZ	160	172	EP		757	54.06	0.03	73						1.0
BHL	BN	160	172	ES		758	12.82	0.01							1.0
DQRL	SZ	181	175	EP		757	56.99	-0.12							1.0
RCY	SZ	208	169	EP		758	0.53	0.10							1.0
RCY	SN	208	169	ES		758	23.96	0.01							1.0

October 10 2015 Hour: 9:34 1.1 Lat: 33.78N Lon: 35.75E Depth: 0 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
ZAHL	SZ	15	55	EP		934	3.40	-0.06							1.0
ZAHL	SE	15	55	ES		934	5.24	0.00							1.0
BHL	BZ	17	326	EP		934	3.71	-0.02	31						1.0
BHL	BN	17	326	ES		934	5.73	0.03							1.0
DQRL	SZ	19	244	EP		934	4.14	0.01							1.0
DQRL	SN	19	244	ES		934	6.37	-0.03							1.0
RCY	SZ	32	167	EP		934	6.34	0.04							1.0
HWQ	SZ	58	18	EP		934	10.43	0.03							1.0

October 10 2015 Hour: 10:31 19.8 Lat: 33.51N Lon: 35.69E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC 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	4	351	EP		1031	20.49	-0.09	42						1.0
RCY	SZ	14	95	EP		1031	22.05	-0.00							1.0
RCY	SN	14	95	ES		1031	23.71	0.02							1.0
DQRL	SZ	25	333	EP		1031	23.85	0.04							1.0
DQRL	SN	25	333	ES		1031	26.79	0.04							1.0
BHL	BZ	44	356	EP		1031	26.95	-0.01							1.0

October 10 2015 Hour: 12:26 23.1 Lat: 33.78N Lon: 35.75E Depth: 7 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.0 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	15	55	EP		1226	25.89	-0.01							1.0
ZAHL	SN	15	55	ES		1226	27.99	0.00							1.0
BHL	BZ	17	327	EP		1226	26.03	-0.06	62						1.0
BHL	BN	17	327	ES		1226	28.32	0.00							1.0
DQRL	SZ	19	244	EP		1226	26.39	-0.01							1.0
DQRL	SN	19	244	ES		1226	28.90	0.03							1.0
QRWL	SZ	27	194	EP		1226	27.55	-0.01							1.0
HWQ	SZ	58	18	EP		1226	32.60	0.04							1.0

October 10 2015 Hour: 13:29 53.6 Lat: 33.31N Lon: 35.45E Depth: 10 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

MARJAAYOUN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	34	39	EP		1329	59.54	0.08	35						1.0
QRWL	SE	34	39	ES		1330	3.72	-0.05							1.0
DQRL	SZ	46	14	EP		1330	1.18	-0.04							1.0
DQRL	SE	46	14	ES		1330	6.87	0.05							1.0
BHL	BZ	69	16	EP		1330	4.85	-0.05							1.0
HWQ	SZ	117	23	EP		1330	12.12	0.01							1.0

October 10 2015 Hour: 14:20 14.6 Lat: 33.84N Lon: 35.81E Depth: 23 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.1 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	7	71	EP		1420	18.73	0.09							1.0
ZAHL	SE	7	71	ES		1420	21.59	-0.06							1.0
BHL	BZ	16	298	EP		1420	19.28	0.09	29						1.0
DQRL	SZ	27	237	EP		1420	20.11	-0.10							1.0
DQRL	SN	27	237	ES		1420	24.39	0.00							1.0
RCY	SZ	38	176	EP		1420	21.65	0.02							1.0
HWQ	SZ	51	14	EP		1420	23.27	-0.05							1.0

October 10 2015 Hour: 15:11 42.8 Lat: 33.81N Lon: 35.79E Depth: 23 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.1 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	10	60	EP		1511	46.92	0.03							1.0
ZAHL	SN	10	60	ES		1511	49.91	-0.01							1.0
BHL	BZ	16	309	EP		1511	47.39	0.08	28						1.0
DQRL	SZ	24	240	EP		1511	48.06	0.03							1.0
DQRL	SN	24	240	ES		1511	51.84	-0.07							1.0
HWQ	SZ	54	16	EP		1511	51.85	-0.07							1.0

October 11 2015 Hour: 4:0 14.4 Lat: 35.35N Lon: 35.35E Depth: 3 Agency: REL Regional
Magnitudes: 3.2MC REL Rms: 0.1 secs

OFFSHORE SYRIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	131	155	EP		4 0	35.19	-0.10							1.0
HWQ	SN	131	155	ES		4 0	50.71	-0.06							1.0
BHL	BZ	163	170	EP		4 0	39.90	-0.09	63						1.0
BHL	BN	163	170	ES		4 0	58.90	-0.04							1.0
ZAHL	SZ	173	163	EP		4 0	41.63	0.19							1.0
ZAHL	SN	173	163	ES		4 1	1.56	0.09							1.0
DQRL	SZ	184	174	EP		4 0	42.79	-0.12							1.0
RCY	SZ	210	168	EP		4 0	46.42	0.13							1.0

October 11 2015 Hour: 9:15 33.4 Lat: 33.44N Lon: 36.32E Depth: 7 Agency: REL Local
Magnitudes: 2.6MC 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	45	278	EP		915	40.88	0.01	32						1.0
RCY	SE	45	278	ES		915	46.30	-0.07							1.0
DQRL	SZ	75	293	EP		915	45.73	0.08							1.0
DQRL	SN	75	293	ES		915	54.74	0.05							1.0
BHL	BZ	80	310	EP		915	46.37	-0.05							1.0
HWQ	SZ	99	340	EP		915	49.36	-0.02							1.0

October 11 2015 Hour: 15:44 57.0 Lat: 33.80N Lon: 35.81E Depth: 15 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	19	309	EP		1545	1.04	0.01							1.0
DQRL	SZ	25	246	EP		1545	1.75	-0.01							1.0
DQRL	SN	25	246	ES		1545	5.26	0.00							1.0
QRWL	SZ	30	204	EP		1545	2.49	0.00	39						1.0
QRWL	SE	30	204	ES		1545	6.53	0.01							1.0
HWQ	SZ	55	13	EP		1545	6.09	-0.02							1.0

October 12 2015 Hour: 2:16 9.7 Agency: REL Regional

EMSC OT=02:16:09.7 34.42N 26.37E 10Km M=4.8 CRETE, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		218	0.35								
BHL	BZ			EP		218	0.91								
QRWL	SZ			EP		218	1.38								
RCY	SZ			EP		218	3.11								
HWQ	SZ			EP		218	3.35								

October 13 2015 Hour: 1:44 11.0 Agency: REL Regional

EMSC OT=01:44:11.0 35.26N 27.79E 10Km M=3.9 DODECANESE ISLANDS, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		145	47.75								
HWQ	SZ			EP		145	49.84								
RCY	SZ			EP		145	51.05								

October 13 2015 Hour: 10:18 12.5 Lat: 33.54N Lon: 35.71E Depth: 0 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.0 secs

RACHAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	3	295	EP		1018	13.01	-0.03	23						1.0
RCY	SZ	12	111	EP		1018	14.57	0.06							1.0
RCY	SN	12	111	ES		1018	15.93	-0.05							1.0
DQRL	SZ	23	325	EP		1018	16.26	0.03							1.0
DQRL	SN	23	325	ES		1018	18.97	-0.01							1.0
BHL	BZ	41	352	EP		1018	19.16	-0.01							0.2
HWQ	SZ	85	15	EP		1018	26.24	-0.01							1.0

October 13 2015 Hour: 12:28 41.7 Lat: 34.58N Lon: 36.60E Depth: 49 Agency: REL Local
Magnitudes: 3.2MC REL Rms: 0.0 secs

SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	69	241	EP		1228	53.97	0.03	71						1.0
HWQ	SE	69	241	ES		1229	2.98	-0.02							1.0
DQRL	SZ	136	225	EP		1229	1.86	-0.00							1.0
RCY	SZ	139	211	EP		1229	2.31	-0.03							1.0
RCY	SN	139	211	ES		1229	17.63	0.02							1.0

October 13 2015 Hour: 15:31 10.7 Lat: 33.78N Lon: 35.76E Depth: 3 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
ZAHL	SZ	15	54	EP		1531	13.20	0.05							1.0
ZAHL	SN	15	54	ES		1531	14.98	-0.02							1.0
BHL	BZ	17	325	EP		1531	13.39	-0.08	37						1.0
BHL	BN	17	325	ES		1531	15.57	0.03							1.0
DQRL	SZ	19	245	EP		1531	13.88	0.04							1.0
QRWL	SZ	27	195	EP		1531	15.00	-0.02							1.0
HWQ	SZ	58	17	EP		1531	20.05	0.01							1.0

October 14 2015 Hour: 11:2 3.5 Lat: 33.86N Lon: 35.91E Depth: 8 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.1 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	3	266	EP		11 2	5.15	0.02							1.0
ZAHL	SN	3	266	ES		11 2	6.32	-0.02							1.0
BHL	BZ	25	282	EP		11 2	7.63	-0.12							1.0
BHL	BN	25	282	ES		11 2	10.95	0.05							1.0
DQRL	SZ	36	242	EP		11 2	9.57	0.04							1.0
QRWL	SZ	41	212	EP		11 2	10.22	-0.03							1.0
RCY	SZ	41	190	EP		11 2	10.27	-0.02	55						1.0
RCY	SN	41	190	ES		11 2	15.36	0.04							1.0
HWQ	SZ	47	4	EP		11 2	11.19	0.04							1.0

October 14 2015 Hour: 11:43 27.0 Lat: 34.72N Lon: 36.25E Depth: 1 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.0 secs

SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	57	210	EP		1143	36.07	-0.05	63						1.0
HWQ	SN	57	210	ES		1143	42.91	0.02							1.0
BHL	BZ	106	211	EP		1143	44.03	-0.05							1.0
DQRL	SZ	129	209	EP		1143	47.86	0.08							1.0
RCY	SZ	141	196	EP		1143	49.63	0.02							1.0
RCY	SN	141	196	ES		1144	6.35	-0.02							1.0

October 14 2015 Hour: 13:17 10.4 Agency: REL Regional
EMSC OT=13:17:10.4 34.38N 26.58E 46Km M=4.5 CRETE, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		1318	58.29								
HWQ	SZ			EP		1318	58.68								

October 14 2015 Hour: 15:15 47.9 Lat: 33.79N Lon: 35.77E Depth: 6 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
ZAHL	SZ	13	53	EP		1515	50.36	-0.00							1.0
BHL	BZ	17	320	EP		1515	50.84	-0.06	32						1.0
DQRL	SZ	21	244	EP		1515	51.47	-0.01							1.0
DQRL	SN	21	244	ES		1515	54.16	0.04							1.0
RCY	SZ	33	170	EP		1515	53.31	-0.05							1.0
RCY	SN	33	170	ES		1515	57.41	0.02							1.0
HWQ	SZ	57	16	EP		1515	57.20	0.06							1.0

October 14 2015 Hour: 15:37 53.9 Lat: 33.97N Lon: 36.19E Depth: 1 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.0 secs

BAALBECK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	41	327	EP		1538	0.48	-0.01	58						1.0
HWQ	SE	41	327	ES		1538	5.37	0.02							1.0
BHL	BZ	50	262	EP		1538	1.91	-0.07							1.0
RCY	SZ	62	212	EP		1538	3.90	-0.03							1.0
RCY	SN	62	212	ES		1538	11.34	0.00							1.0
DQRL	SZ	64	243	EP		1538	4.35	0.04							1.0
QRWL	SZ	66	225	EP		1538	4.69	0.05							1.0

October 14 2015 Hour: 15:45 58.9 Lat: 33.78N Lon: 35.76E Depth: 8 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.1 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	14	54	EP		1546	1.60	-0.01							1.0
BHL	BZ	17	323	EP		1546	1.96	-0.03							1.0
DQRL	SZ	20	244	EP		1546	2.40	-0.04	43						1.0
DQRL	SN	20	244	ES		1546	5.12	0.06							1.0

QRWL	SZ	27	196	EP	1546	3.48	-0.05										1.0
RCY	SZ	33	168	EP	1546	4.44	0.07										1.0
RCY	SN	33	168	ES	1546	8.39	-0.02										1.0
HWQ	SZ	57	17	EP	1546	8.79	0.51										0.2

October 14 2015 Hour: 23:0 27.5 Lat: 33.79N Lon: 35.80E Depth: 8 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.1 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	11	49	EP		23	0	29.89	-0.01						1.0
ZAHL	SN	11	49	ES		23	0	31.69	0.00						1.0
BHL	BZ	18	313	EP		23	0	30.82	0.01	64					1.0
BHL	BN	18	313	ES		23	0	33.27	-0.00						1.0
DQRL	SZ	23	245	EP		23	0	31.60	0.07						1.0
QRWL	SZ	29	201	EP		23	0	32.39	-0.06						1.0
BEYL	SZ	29	287	EP		23	0	31.80	-0.65						0.2
RCY	SZ	33	174	EP		23	0	33.10	0.03						1.0
RCY	SN	33	174	ES		23	0	37.20	-0.00						1.0
HWQ	SZ	56	14	EP		23	0	36.62	0.01						1.0

October 15 2015 Hour: 15:34 1.7 Lat: 33.78N Lon: 35.76E Depth: 7 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
ZAHL	SZ	14	54	EP		1534		4.34	-0.02						1.0
ZAHL	SN	14	54	ES		1534		6.36	0.01						1.0
BHL	BZ	17	324	EP		1534		4.66	-0.01	26					1.0
BHL	BN	17	324	ES		1534		6.91	0.00						1.0
DQRL	SZ	20	244	EP		1534		5.13	0.04						1.0
QRWL	SZ	27	196	EP		1534		6.14	-0.08						1.0
RCY	SZ	33	168	EP		1534		7.15	0.07						1.0
RCY	SN	33	168	ES		1534		11.09	-0.01						1.0

October 15 2015 Hour: 15:45 33.9 Lat: 33.78N Lon: 35.77E Depth: 4 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.0 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	14	53	EP		1545		36.24	-0.04						1.0
ZAHL	SN	14	53	ES		1545		38.06	0.00						1.0
BHL	BZ	17	322	EP		1545		36.70	-0.05	52					1.0
BHL	BN	17	322	ES		1545		38.91	0.03						1.0
DQRL	SZ	20	244	EP		1545		37.30	0.02						1.0
QRWL	SZ	28	197	EP		1545		38.34	-0.06						1.0
RCY	SZ	33	169	EP		1545		39.26	0.03						1.0
RCY	SN	33	169	ES		1545		43.22	0.02						1.0
HWQ	SZ	57	17	EP		1545		43.17	0.04						1.0

October 16 2015 Hour: 14:16 9.8 Lat: 33.79N Lon: 35.79E Depth: 9 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	12	50	EP		1416		12.31	0.03						1.0
ZAHL	SN	12	50	ES		1416		14.12	-0.03						1.0
BHL	BZ	18	316	EP		1416		12.96	-0.06	36					1.0
BHL	BN	18	316	ES		1416		15.47	0.03						1.0
DQRL	SZ	22	245	EP		1416		13.69	0.03						1.0
QRWL	SZ	29	200	EP		1416		14.57	-0.05						1.0
RCY	SZ	33	172	EP		1416		15.24	-0.06						1.0
RCY	SN	33	172	ES		1416		19.47	0.06						1.0
HWQ	SZ	56	15	EP		1416		19.00	0.04						1.0

October 17 2015 Hour: 14:37 13.0 Lat: 33.79N Lon: 35.77E 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
ZAHL	SZ	13	57	EP		1437	15.86	-0.01							1.0
ZAHL	SN	13	57	ES		1437	17.99	0.00							1.0
BHL	BZ	16	319	EP		1437	16.23	-0.01	30						1.0
BHL	BN	16	319	ES		1437	18.63	0.00							1.0
DQRL	SZ	21	242	EP		1437	16.86	0.00							1.0
HWQ	SZ	56	17	EP		1437	22.28	0.01							1.0

October 17 2015 Hour: 15:27 26.2 Lat: 33.78N Lon: 35.77E Depth: 8 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.1 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	13	52	EP		1527	28.88	0.05							1.0
BHL	BZ	17	321	EP		1527	29.29	-0.05							1.0
BHL	BN	17	321	ES		1527	31.65	-0.02							1.0
DQRL	SZ	21	245	EP		1527	29.86	0.05	59						1.0
DQRL	SN	21	245	ES		1527	32.50	0.02							1.0
BEYL	SZ	28	291	EP		1527	30.75	-0.08							0.2
RCY	SZ	32	169	EP		1527	31.57	-0.05							1.0
RCY	SN	32	169	ES		1527	35.63	-0.01							1.0
HWQ	SZ	57	16	EP		1527	35.54	-0.01							1.0
HWQ	SN	57	16	ES		1527	42.49	0.02							1.0

October 18 2015 Hour: 9:59 11.5 Lat: 33.80N Lon: 35.76E Depth: 12 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
ZAHL	SZ	14	61	EP		959	14.61	-0.03							1.0
BHL	BZ	15	321	EP		959	14.79	-0.02	46						1.0
BHL	BN	15	321	ES		959	17.29	0.03							1.0
DQRL	SZ	20	240	EP		959	15.39	-0.04							1.0
DQRL	SN	20	240	ES		959	18.37	0.01							1.0
RCY	SZ	34	168	EP		959	17.46	-0.00							1.0
RCY	SN	34	168	ES		959	21.91	0.03							1.0
HWQ	SZ	56	18	EP		959	20.82	0.02							1.0

October 18 2015 Hour: 12:2 24.9 Lat: 33.78N Lon: 35.77E Depth: 3 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.1 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	14	49	EP		12 2	27.20	-0.05							1.0
BHL	BZ	18	322	EP		12 2	27.80	-0.10	58						1.0
BHL	BN	18	322	ES		12 2	30.17	0.05							1.0
DQRL	SZ	21	247	EP		12 2	28.32	0.04							1.0
BEYL	SZ	28	292	EP		12 2	29.01	-0.45							0.2
RCY	SZ	32	170	EP		12 2	29.99	-0.06							1.0
RCY	SN	32	170	ES		12 2	33.92	0.05							1.0
HWQ	SZ	58	16	EP		12 2	34.35	0.09							1.0

October 18 2015 Hour: 13:16 20.8 Lat: 34.72N Lon: 36.34E Depth: 1 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.2 secs

SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	61	216	EP		1316	30.59	-0.07	61						1.0
HWQ	BN	61	216	ES		1316	38.32	0.40							1.0
ZAHL	SZ	104	204	EP		1316	37.81	0.14							1.0
ZAHL	SN	104	204	ES		1316	50.02	-0.10							1.0
BHL	BZ	110	215	EP		1316	38.51	-0.11							1.0
BHL	BN	110	215	ES		1316	51.50	-0.29							1.0
DQRL	SZ	133	212	EP		1316	42.15	-0.07							1.0

RCY SZ 143 199 EP 1316 43.88 0.10 1.0

October 18 2015 Hour: 15: 9 34.2 Lat: 34.00N Lon: 36.09E Depth: 26 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.1 secs

BAALBECK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	24	231	EP		15	9	39.85	-0.05						1.0
ZAHL	SN	24	231	ES		15	9	44.16	0.01						1.0
HWQ	SZ	34	337	EP		15	9	40.93	-0.01	62					1.0
BHL	BZ	42	256	EP		15	9	41.98	0.10						1.0
BHL	BN	42	256	ES		15	9	47.58	-0.00						1.0
DQRL	SZ	58	236	EP		15	9	43.95	-0.10						1.0
RCY	SZ	60	203	EP		15	9	44.48	0.07						1.0
RCY	SE	60	203	ES		15	9	51.98	-0.02						1.0

October 18 2015 Hour: 16:18 35.4 Agency: REL Distant

EMSC OT=16:18:35.4 16.03S 173.31W 10Km M=6.0 TONGA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1638	19.22								
BHL	BZ			EP		1638	20.15								
RCY	SZ			EP		1638	20.43								

October 19 2015 Hour: 13:50 43.1 Agency: REL Distant

EMSC OT=13:50:43.1 13.87N 120.72E 123Km M=5.8 MINDORO, PHILIPPINES

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		14	2	28.78							
BHL	BZ			EP		14	2	30.10							
SHBL	BZ			EP		14	2	30.37							

October 20 2015 Hour: 10:16 22.4 Lat: 33.46N Lon: 35.71E Depth: 0 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
QRWL	SZ	10	347	EP		1016	23.88	-0.11	26						1.0
RCY	SZ	13	73	EP		1016	24.40	-0.08							1.0
RCY	SN	13	73	ES		1016	26.04	0.04							1.0
SHBL	BZ	13	164	EP		1016	24.62	0.04							1.0
DQRL	SZ	30	335	EP		1016	27.22	-0.00							1.0
DQRL	SN	30	335	ES		1016	30.81	0.05							1.0
HWQ	SZ	93	14	EP		1016	37.52	0.08							1.0

October 20 2015 Hour: 21:52 3.1 Agency: REL Distant

EMSC OT=21:52:03.1 14.87S 167.35E 147Km M=7.1 VANUATU

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2210	59.81								
HWQ	BZ			EP		2210	59.90								
RCY	SZ			EP		2211	1.46								

October 21 2015 Hour: 15:21 13.2 Lat: 33.79N Lon: 35.76E Depth: 0 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.1 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	14	59	EP		1521	15.33	-0.16							1.0
ZAHL	SN	14	59	ES		1521	17.25	0.07							1.0
BHL	BZ	16	323	EP		1521	15.63	-0.08	22						1.0
DQRL	SZ	20	241	EP		1521	16.39	0.02							1.0
DQRL	SN	20	241	ES		1521	18.74	0.03							1.0
HWQ	SZ	57	18	EP		1521	22.46	0.11							1.0

October 24 2015 Hour: 17:31 18.1 Agency: REL Distant
EMSC OT=17:31:18.1 30.34S 179.22W 311Km M=5.1 KERMADEC ISLANDS REGION
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 RCY SZ EP 1750 33.11
 BHL BZ EP 1750 33.45
 DQRL SZ EP 1750 33.89

October 26 2015 Hour: 9: 9 32.0 Agency: REL Distant
EMSC OT=09:09:32.0 36.48N 70.91E 207Km M=7.5 HINDU KUSH REGION, AFGHANISTAN
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 HWQ BZ EP 915 12.89
 RCY SZ EP 915 15.57
 BHL BZ EP 915 17.35

October 27 2015 Hour: 10:35 32.3 Lat: 33.87N Lon: 35.84E Depth: 4 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs
ZAHLE REGION
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 ZAHL SZ 4 102 EP 1035 33.43 0.00 1.0
 BHL BZ 18 284 EP 1035 35.32-0.00 35 1.0
 DQRL SZ 31 235 EP 1035 37.34-0.01 1.0
 DQRL SN 31 235 ES 1035 41.10 0.01 1.0
 QRWL SZ 38 203 EP 1035 38.55 0.01 1.0
 QRWL SN 38 203 ES 1035 43.14-0.01 1.0

October 27 2015 Hour: 11:51 19.3 Lat: 33.87N Lon: 35.84E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs
ZAHLE REGION
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 ZAHL SZ 4 114 EP 1151 19.95-0.00 1.0
 BHL BZ 18 281 EP 1151 22.09-0.06 38 1.0
 BHL BN 18 281 ES 1151 24.29-0.00 1.0
 DQRL SZ 32 234 EP 1151 24.31-0.02 1.0
 DQRL SN 32 234 ES 1151 28.15 0.06 1.0
 RCY SZ 42 181 EP 1151 25.97-0.03 1.0
 RCY SN 42 181 ES 1151 31.00 0.01 1.0
 HWQ SZ 46 12 EP 1151 26.70 0.05 1.0

October 29 2015 Hour: 14:10 56.2 Lat: 33.98N Lon: 36.16E Depth: 18 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs
BAALBECK REGION
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 ZAHL SZ 29 242 EP 1411 1.76-0.01 1.0
 ZAHL SN 29 242 ES 1411 5.87-0.00 1.0
 HWQ BZ 38 329 EP 1411 3.02 0.02 1.0
 BHL BZ 48 260 EP 1411 4.25-0.08 43 1.0
 BHL BN 48 260 ES 1411 10.36 0.04 1.0
 RCY SZ 62 209 EP 1411 6.44 0.05 1.0
 RCY SN 62 209 ES 1411 13.90-0.01 1.0

October 30 2015 Hour: 10: 5 36.0 Lat: 33.82N Lon: 35.81E Depth: 29 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs
ZAHLE REGION
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 ZAHL SZ 8 56 EP 10 5 40.87-0.01 1.0
 BHL BZ 17 304 EP 10 5 41.38-0.01 37 1.0
 DQRL SZ 26 241 EP 10 5 42.10 0.01 1.0
 DQRL SE 26 241 ES 10 5 46.63 0.00 1.0
 QRWL SZ 32 202 EP 10 5 42.78 0.00 1.0
 QRWL SE 32 202 ES 10 5 47.83 0.00 1.0

October 30 2015 Hour: 14:33 2.2 Lat: 33.80N Lon: 35.78E Depth: 15 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	11	56	EP		1433	5.41	0.00							1.0
ZAHL	SN	11	56	ES		1433	7.79	-0.00							1.0
BHL	BZ	17	314	EP		1433	5.92	-0.01	31						1.0
BHL	BN	17	314	ES		1433	8.71	0.01							1.0
DQRL	SZ	23	242	EP		1433	6.63	-0.01							1.0
RCY	SZ	34	172	EP		1433	8.26	0.01							1.0

October 31 2015 Hour: 6:3 8.4 Lat: 33.56N Lon: 36.08E Depth: 14 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

RACHAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	24	253	EP		6 3	12.91	-0.05	28						1.0
RCY	SN	24	253	ES		6 3	16.37	0.01							1.0
QRWL	SZ	37	268	EP		6 3	14.87	0.08							1.0
QRWL	SN	37	268	ES		6 3	19.55	-0.00							1.0
ZAHL	SZ	38	331	EP		6 3	14.97	0.04							1.0
DQRL	SZ	50	289	EP		6 3	16.67	-0.05							1.0
BHL	BZ	55	314	EP		6 3	17.41	-0.04							1.0

Epicentral Map of Lebanon

October 2015

