

Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

March

2016

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 ($0.5 \times (\text{peak to peak})$), (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.

March 1 2016 Hour: 21:58 8.0 Lat: 33.57N Lon: 36.45E Depth: 10 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
RCY	SZ	58	262	EP		2158	17.43	-0.09	49						1.0
RCY	SN	58	262	ES		2158	24.52	-0.05							1.0
ZAHL	SZ	61	301	EP		2158	18.06	-0.02							1.0
ZAHL	SN	61	301	ES		2158	25.58	0.03							1.0
SHBL	BZ	70	250	EP		2158	19.49	-0.00							1.0
QRWL	SZ	72	268	EP		2158	19.82	0.14							1.0
BHL	BZ	83	297	EP		2158	21.23	-0.13							1.0
DQRL	SZ	83	281	EP		2158	21.55	0.12							1.0

March 1 2016 Hour: 23:54 15.0 Agency: REL Regional
EMSC OT=23:54:15.0 34.08N 25.32E 33Km M=4.6 CRETE, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		2356	14.96								
QRWL	SZ			EP		2356	17.09								
SHBL	BZ			EP		2356	18.44								
RCY	SZ			EP		2356	19.01								
ZAHL	SZ			EP		2356	19.23								
HWQ	SZ			EP		2356	19.51								

March 2 2016 Hour: 12:49 48.0 Agency: REL Distant
EMSC OT=12:49:48.0 4.89S 94.25E 20Km M=7.8 SOUTHWEST OF SUMATRA, INDONESIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ			EP		13 0	39.67								
HWQ	BZ			EP		13 0	40.91								
BHL	BZ			EP		13 0	41.34								

March 2 2016 Hour: 16:54 8.5 Lat: 34.01N Lon: 35.70E Depth: 9 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs

KESROUAN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	13	200	EP		1654	11.12	-0.04	41						1.0
BHL	BN	13	200	ES		1654	13.18	0.02							1.0
DQRL	SZ	36	200	EP		1654	14.58	0.05							1.0
DQRL	SN	36	200	ES		1654	19.02	-0.01							1.0
HWQ	SZ	37	37	EP		1654	14.71	0.00							1.0
QRWL	SZ	52	182	EP		1654	16.90	-0.05							1.0
RCY	SZ	59	168	EP		1654	18.10	0.04							1.0
RCY	SN	59	168	ES		1654	25.17	-0.01							1.0

March 2 2016 Hour: 19:36 51.9 Lat: 33.64N Lon: 35.79E Depth: 18 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
QRWL	SZ	15	225	EP		1936	55.75	0.09							1.0
RCY	SZ	16	166	EP		1936	55.91	-0.01	46						1.0
RCY	SN	16	166	ES		1936	58.85	-0.05							1.0
DQRL	SZ	22	289	EP		1936	56.46	-0.01							1.0
DQRL	SN	22	289	ES		1936	59.87	0.01							1.0
ZAHL	SZ	26	20	EP		1936	57.04	0.08							1.0
BHL	BZ	32	336	EP		1936	57.66	-0.11							1.0

March 2 2016 Hour: 23:57 51.0 Lat: 33.82N Lon: 35.82E Depth: 2 Agency: REL Local
Magnitudes: 2.9MC 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	7	54	EP		2357	52.27	-0.06	51						1.0
ZAHL	SN	7	54	ES		2357	53.30	0.03							1.0
BHL	BZ	18	301	EP		2357	53.99	-0.02							1.0
DQRL	SZ	27	242	EP		2357	55.39	0.04							1.0

DQRL	SN	27	242	ES		2357	58.53	-0.01								1.0
BEYL	SZ	31	281	EP		2357	55.96	-0.09								0.2
QRWL	SZ	33	203	EP		2357	56.34	-0.03								1.0
QRWL	SN	33	203	ES		2358	0.32	0.02								1.0
HWQ	SZ	52	13	EP		2357	59.49	0.03								1.0

March 3 2016 Hour: 16:12 25.1 Lat: 33.79N Lon: 35.75E Depth: 13 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.1 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	324	EP		1612	28.53	-0.05	25						1.0
BHL	BE	16	324	ES		1612	31.15	0.01							1.0
DQRL	SZ	20	241	EP		1612	29.12	0.07							1.0
QRWL	SZ	28	194	EP		1612	30.05	-0.12							1.0
RCY	SZ	33	167	EP		1612	31.10	0.07							1.0
RCY	SN	33	167	ES		1612	35.41	0.00							1.0
HWQ	SZ	57	18	EP		1612	34.52	0.01							1.0

March 4 2016 Hour: 1: 2 54.9 Lat: 33.65N Lon: 35.80E Depth: 12 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	16	223	EP		1 2	58.27	-0.05							1.0
QRWL	SN	16	223	ES		1 3	0.88	0.02							1.0
RCY	SZ	18	170	EP		1 2	58.44	-0.13							1.0
DQRL	SZ	22	285	EP		1 2	59.11	-0.00							1.0
DQRL	SN	22	285	ES		1 3	2.27	0.04							1.0
ZAHL	SZ	24	19	EP		1 2	59.47	0.12	33						1.0
ZAHL	SN	24	19	ES		1 3	2.64	-0.00							1.0
BHL	BZ	31	334	EP		1 3	0.23	-0.12							1.0
SHBL	BZ	34	189	EP		1 3	1.03	0.13							1.0

March 4 2016 Hour: 1:53 55.6 Lat: 34.08N Lon: 35.73E Depth: 20 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

JBEIL REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	21	200	EP		154	0.23	-0.03	32						1.0
BHL	BN	21	200	ES		154	3.69	-0.02							1.0
ZAHL	SZ	29	150	EP		154	1.20	0.00							1.0
ZAHL	SN	29	150	ES		154	5.35	0.01							1.0
HWQ	SZ	30	42	EP		154	1.26	-0.04							1.0
HWQ	SN	30	42	ES		154	5.54	0.03							1.0
DQRL	SZ	44	200	EP		154	3.36	0.09							1.0
QRWL	SZ	59	184	EP		154	5.44	0.02							1.0
SHBL	BZ	81	179	EP		154	8.58	-0.06							1.0

March 4 2016 Hour: 4:25 14.5 Agency: REL Distant

EMSC OT=04:25:14.5 20.98S 178.93W 610Km M=5.5 FIJI REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ			EP		443	49.44								
BHL	BZ			EP		443	49.12								
RCY	SZ			EP		443	49.69								
QRWL	SZ			EP		443	49.85								
DQRL	SZ			EP		443	49.99								
SHBL	BZ			EP		443	49.80								

March 4 2016 Hour: 6:13 22.8 Agency: REL Regional

EMSC OT=06:13:22.8 34.09N 32.39E 60Km M=3.6 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		614	1.41								
QRWL	SZ			EP		614	3.52								
SHBL	BZ			EP		614	4.97								
RCY	SZ			EP		614	5.72								
HWQ	SZ			EP		614	6.09								

March 4 2016 Hour: 11:24 1.0 Lat: 33.47N Lon: 35.92E Depth: 2 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.1 secs

RACHAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	21	229	EP		1124	4.54	0.02	22						1.0
SHBL	BN	21	229	ES		1124	7.10	0.02							1.0
QRWL	SZ	23	291	EP		1124	4.70	-0.15							1.0
DQRL	SZ	41	309	EP		1124	7.78	0.05							1.0
DQRL	SN	41	309	ES		1124	12.72	0.04							1.0
HWQ	SZ	90	2	EP		1124	15.51	0.02							1.0

March 4 2016 Hour: 11:58 17.1 Lat: 33.54N Lon: 35.71E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.1 secs

RACHAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	3	288	EP		1158	17.54	-0.07	43						1.0
RCY	SZ	12	112	EP		1158	19.11	-0.02							1.0
SHBL	BZ	21	172	EP		1158	20.73	0.16							1.0
SHBL	BN	21	172	ES		1158	23.08	-0.05							1.0
DQRL	SZ	23	325	EP		1158	20.64	-0.14							1.0
DQRL	SN	23	325	ES		1158	23.61	0.13							1.0

March 4 2016 Hour: 15:9 57.6 Lat: 33.80N Lon: 35.78E Depth: 14 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	12	53	EP		1510	0.72	0.01							1.0
ZAHL	SN	12	53	ES		1510	3.04	-0.01							1.0
BHL	BZ	17	315	EP		1510	1.28	0.01	34						1.0
DQRL	SZ	22	243	EP		1510	1.89	-0.03							1.0
DQRL	SN	22	243	ES		1510	5.15	0.01							1.0
RCY	SZ	34	172	EP		1510	3.53	0.01							1.0

March 5 2016 Hour: 15:59 38.6 Lat: 33.81N Lon: 35.73E Depth: 23 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.0 secs

BAABDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	13	325	EP		1559	42.89	-0.01	22						1.0
DQRL	SZ	19	232	EP		1559	43.46	0.01							1.0
DQRL	SN	19	232	ES		1559	47.04	0.00							1.0
RCY	SZ	36	165	EP		1559	45.46	-0.00							1.0
RCY	SN	36	165	ES		1559	50.54	0.00							1.0
HWQ	SZ	55	21	EP		1559	48.08	0.08							0.2

March 6 2016 Hour: 9:31 24.9 Lat: 34.04N Lon: 35.73E Depth: 6 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

KESROUAN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	204	EP		931	27.67	-0.05	35						1.0
BHL	BN	16	204	ES		931	29.84	0.02							1.0
ZAHL	SZ	25	143	EP		931	29.01	-0.03							1.0
ZAHL	SN	25	143	ES		931	32.11	0.00							1.0
HWQ	SZ	34	37	EP		931	30.39	-0.03							1.0
HWQ	SN	34	37	ES		931	34.56	0.04							1.0
DQRL	SZ	39	201	EP		931	31.36	0.01							1.0
QRWL	SZ	54	184	EP		931	33.77	0.04							1.0

March 6 2016 Hour: 10:49 45.9 Lat: 33.46N Lon: 35.65E Depth: 1 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	11	15	EP		1049	47.55	-0.08							1.0
SHBL	BZ	15	144	EP		1049	48.31	-0.00							1.0
SHBL	BE	15	144	ES		1049	50.12	0.02							1.0
RCY	SZ	18	75	EP		1049	48.76	-0.02	29						1.0
RCY	SN	18	75	ES		1049	50.93	0.02							1.0
DQRL	SZ	29	345	EP		1049	50.52	-0.01							1.0
DQRL	SN	29	345	ES		1049	54.02	0.05							1.0
BHL	BZ	50	0	EP		1049	53.93	0.02							1.0

March 6 2016 Hour: 11:11 51.3 Lat: 33.78N Lon: 35.78E Depth: 11 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	13	51	EP		1111	54.19	-0.03							1.0
ZAHL	SN	13	51	ES		1111	56.38	0.04							1.0
BHL	BZ	18	319	EP		1111	54.72	-0.06	49						1.0
BHL	BN	18	319	ES		1111	57.31	-0.01							1.0
DQRL	SZ	21	246	EP		1111	55.35	0.07							1.0
RCY	SZ	32	170	EP		1111	56.95	-0.00							1.0
RCY	SN	32	170	ES		1112	1.07	-0.03							1.0
HWQ	SZ	57	16	EP		1112	0.75	0.02							1.0

March 6 2016 Hour: 12:10 25.9 Lat: 33.45N Lon: 35.65E Depth: 2 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	11	16	EP		1210	27.70	-0.11							1.0
SHBL	BZ	14	143	EP		1210	28.36	0.00							1.0
SHBL	BE	14	143	ES		1210	30.16	0.01							1.0
RCY	SZ	18	74	EP		1210	28.91	0.01	29						1.0
RCY	SE	18	74	ES		1210	31.12	0.02							1.0
DQRL	SZ	29	345	EP		1210	30.69	0.02							1.0
DQRL	SN	29	345	ES		1210	34.24	0.07							1.0
BHL	BZ	50	0	EP		1210	34.02	-0.03							1.0

March 6 2016 Hour: 16:51 17.2 Lat: 33.80N Lon: 35.83E Depth: 15 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.1 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	20	304	EP		1651	21.41	0.08	24						1.0
DQRL	SZ	27	246	EP		1651	22.17	-0.03							1.0
DQRL	SN	27	246	ES		1651	25.88	-0.02							1.0
QRWL	SZ	32	206	EP		1651	23.06	0.18							1.0
QRWL	SE	32	206	ES		1651	26.97	-0.12							1.0
HWQ	SZ	54	11	EP		1651	26.01	-0.09							1.0

March 6 2016 Hour: 17:16 12.4 Lat: 33.79N Lon: 35.78E Depth: 13 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	12	54	EP		1716	15.38	-0.03							1.0
BHL	BZ	17	317	EP		1716	15.92	-0.00	41						1.0
BHL	BN	17	317	ES		1716	18.57	0.01							1.0
DQRL	SZ	22	243	EP		1716	16.58	0.04							1.0
DQRL	SN	22	243	ES		1716	19.63	-0.00							1.0
QRWL	SZ	29	198	EP		1716	17.41	-0.11							1.0
RCY	SZ	33	171	EP		1716	18.26	0.02							1.0
RCY	SN	33	171	ES		1716	22.63	0.05							1.0
HWQ	SZ	56	16	EP		1716	21.66	0.02							1.0

March 7 2016 Hour: 16:2 7.8 Lat: 33.41N Lon: 35.64E Depth: 5 Agency: REL Local
Magnitudes: 2.7MC 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	12	128	EP		16	2	10.06	0.01						1.0
SHBL	BN	12	128	ES		16	2	11.71	-0.00						1.0
QRWL	SZ	15	13	EP		16	2	10.47	-0.03						1.0
RCY	SZ	20	63	EP		16	2	11.25	0.01	42					1.0
RCY	SN	20	63	ES		16	2	13.78	-0.00						1.0
DQRL	SZ	33	348	EP		16	2	13.24	-0.01						1.0
DQRL	SN	33	348	ES		16	2	17.30	0.02						1.0
BHL	BZ	54	1	EP		16	2	16.65	0.01						1.0

March 7 2016 Hour: 19:14 37.3 Lat: 34.03N Lon: 35.74E Depth: 3 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

KESROUAN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	210	EP		1914	39.92	-0.05	31						1.0
BHL	BE	16	210	ES		1914	41.95	0.02							1.0
HWQ	SZ	34	34	EP		1914	42.82	0.00							1.0
DQRL	SZ	39	204	EP		1914	43.66	0.01							1.0
QRWL	SZ	53	186	EP		1914	45.99	0.02							1.0
QRWL	SN	53	186	ES		1914	52.35	-0.02							1.0

March 8 2016 Hour: 16:3 21.9 Lat: 33.80N Lon: 35.81E Depth: 17 Agency: REL Local
Magnitudes: 2.4MC 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	18	309	EP		16	3	26.06	0.02	25					1.0
DQRL	SZ	25	245	EP		16	3	26.77	-0.00						1.0
DQRL	SN	25	245	ES		16	3	30.36	-0.01						1.0
QRWL	SZ	30	203	EP		16	3	27.55	0.02						1.0
QRWL	SN	30	203	ES		16	3	31.68	-0.01						1.0
HWQ	SZ	55	13	EP		16	3	30.95	-0.01						1.0

March 8 2016 Hour: 16:37 44.7 Lat: 34.02N Lon: 35.74E Depth: 0 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs

KESROUAN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	212	EP		1637	47.13	-0.04	48						1.0
BHL	BN	16	212	ES		1637	49.03	0.01							1.0
ZAHL	SZ	23	144	EP		1637	48.30	-0.03							1.0
ZAHL	SN	23	144	ES		1637	51.05	0.02							1.0
HWQ	SZ	34	34	EP		1637	50.18	0.02							1.0
DQRL	SZ	39	204	EP		1637	50.93	0.03							1.0
QRWL	SZ	53	186	EP		1637	53.26	0.04							1.0
QRWL	SN	53	186	ES		1637	59.57	0.02							1.0
RCY	SZ	59	171	EP		1637	54.13	-0.07							1.0

March 9 2016 Hour: 15:55 3.8 Lat: 33.80N Lon: 35.78E Depth: 13 Agency: REL Local
Magnitudes: 2.4MC 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	17	315	EP		1555	7.43	-0.00	27						1.0
DQRL	SZ	22	243	EP		1555	8.05	-0.06							1.0
DQRL	SN	22	243	ES		1555	11.31	0.04							1.0
RCY	SZ	34	172	EP		1555	9.80	0.03							1.0
RCY	SN	34	172	ES		1555	14.13	-0.02							1.0
HWQ	SZ	56	16	EP		1555	13.06	0.01							1.0

March 9 2016 Hour: 16:50 36.6 Lat: 33.41N Lon: 35.67E Depth: 8 Agency: REL Local
Magnitudes: 2.5MC 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	10	134	EP		1650	38.88	-0.00	28						1.0
QRWL	SZ	15	5	EP		1650	39.49	-0.04							1.0
RCY	SZ	18	58	EP		1650	40.03	0.04							1.0
RCY	SN	18	58	ES		1650	42.46	-0.01							1.0
DQRL	SZ	34	345	EP		1650	42.38	0.04							1.0
DQRL	SN	34	345	ES		1650	46.57	0.02							1.0
BHL	BZ	55	359	EP		1650	45.57	-0.05							1.0

March 11 2016 Hour: 1: 8 25.7 Lat: 33.92N Lon: 35.88E Depth: 17 Agency: REL Local
Magnitudes: 2.3MC 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	21	265	EP		1 8	30.27	0.13							1.0
BHL	BN	21	265	ES		1 8	33.35	-0.05							1.0
DQRL	SZ	37	230	EP		1 8	32.28	-0.01							1.0
HWQ	SZ	40	9	EP		1 8	32.68	-0.04							1.0
QRWL	SZ	45	204	EP		1 8	33.37	-0.05	22						1.0
QRWL	SN	45	204	ES		1 8	39.08	-0.03							1.0
RCY	SZ	47	185	EP		1 8	33.79	0.05							1.0

March 11 2016 Hour: 14:26 20.6 Lat: 33.81N Lon: 35.79E Depth: 16 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	10	57	EP		1426	23.86	-0.03							1.0
BHL	BZ	17	311	EP		1426	24.47	0.03	35						1.0
BHL	BE	17	311	ES		1426	27.30	0.01							1.0
DQRL	SZ	23	241	EP		1426	25.24	0.00							1.0
DQRL	SN	23	241	ES		1426	28.64	-0.03							1.0
RCY	SZ	35	173	EP		1426	26.79	-0.02							1.0
RCY	SE	35	173	ES		1426	31.44	0.03							1.0
HWQ	SZ	54	15	EP		1426	29.59	-0.00							1.0

March 11 2016 Hour: 16: 8 47.8 Lat: 33.80N Lon: 35.77E Depth: 14 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	13	58	EP		16 8	50.97	0.00							1.0
ZAHL	SN	13	58	ES		16 8	53.33	-0.00							1.0
BHL	BZ	16	318	EP		16 8	51.28	-0.00	36						1.0
DQRL	SZ	21	241	EP		16 8	51.90	-0.02							1.0
DQRL	SN	21	241	ES		16 8	55.01	0.01							1.0
RCY	SZ	34	169	EP		16 8	53.80	0.02							1.0
RCY	SN	34	169	ES		16 8	58.22	-0.01							1.0

March 11 2016 Hour: 18:30 55.6 Agency: REL Regional
EMSC OT=18:30:55.6 36.13N 27.60E 40Km M=3.5 DODECANESE IS.-TURKEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		1832	33.78								
QRWL	SZ			EP		1832	33.82								
SHBL	BZ			EP		1832	35.15								

March 12 2016 Hour: 12:40 39.5 Agency: REL Regional
EMSC OT=12:40:39.5 35.23N 23.52E 10Km M=4.6 CRETE, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		1243	2.50								
RCY	SZ			EP		1243	4.80								
HWQ	SZ			EP		1243	4.72								

March 12 2016 Hour: 13:40 39.1 Lat: 33.80N Lon: 35.77E Depth: 14 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	16	317	EP		1340	42.63	-0.01	25						1.0
DQRL	SZ	21	240	EP		1340	43.30	-0.03							1.0
DQRL	SE	21	240	ES		1340	46.45	0.02							1.0
RCY	SZ	34	169	EP		1340	45.23	0.02							1.0
RCY	SN	34	169	ES		1340	49.70	-0.01							1.0
HWQ	SZ	55	17	EP		1340	48.30	0.01							1.0

March 12 2016 Hour: 15:44 36.1

Agency: REL Regional

EMSC OT=15:44:36.1 36.52N 27.99E 79Km M=4.2 DODECANESE IS.-TURKEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1546	8.83								
DQRL	SZ			EP		1546	9.46								
HWQ	SZ			EP		1546	11.34								
QRWL	SZ			EP		1546	12.27								
RCY	SZ			EP		1546	14.00								
SHBL	BZ			EP		1546	14.19								

March 12 2016 Hour: 18: 6 45.9

Agency: REL Distant

EMSC OT=18:06:45.9 51.64N 173.94W 20Km M=6.3 ANDREANOF ISLANDS, ALEUTIAN IS.

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ			EP		1819	48.50								
BHL	BZ			EP		1819	48.18								
DQRL	SZ			EP		1819	49.98								
SHBL	BZ			EP		1819	49.37								

March 12 2016 Hour: 23:32 17.6

Agency: REL Regional

EMSC OT=23:32:17.6 35.12N 33.25E 43Km M=3.3 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2332	50.97								
DQRL	SZ			EP		2332	51.42								
HWQ	SZ			EP		2332	52.99								
QRWL	SZ			EP		2332	54.84								
SHBL	BZ			EP		2332	57.02								

March 13 2016 Hour: 3:49 7.8 Lat: 34.22N Lon: 35.65E Depth: 11 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.1 secs

BATROUN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	28	76	EP		349	12.83	-0.02	45						1.0
HWQ	SN	28	76	ES		349	16.58	0.03							1.0
BHL	BZ	35	179	EP		349	13.58	-0.17							1.0
BHL	BN	35	179	ES		349	18.13	0.01							1.0
DQRL	SZ	57	187	EP		349	17.40	0.16							1.0
SHBL	BZ	97	175	EP		349	23.23	-0.01							1.0

March 13 2016 Hour: 8:31 47.8 Lat: 33.44N Lon: 35.68E Depth: 2 Agency: REL Local
Magnitudes: 2.3MC 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	12	150	EP		831	49.73	0.02	22						1.0
SHBL	BN	12	150	ES		831	51.14	-0.01							1.0
QRWL	SZ	12	0	EP		831	49.78	-0.02							1.0
RCY	SZ	16	65	EP		831	50.38	0.01							1.0
DQRL	SZ	32	341	EP		831	52.86	-0.02							1.0
DQRL	SN	32	341	ES		831	56.68	0.03							1.0

March 13 2016 Hour: 8:40 7.5 Lat: 33.43N Lon: 35.67E Depth: 10 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	12	142	EP		840	10.17	0.01							1.0
SHBL	BN	12	142	ES		840	12.13	-0.00							1.0
QRWL	SZ	13	6	EP		840	10.25	-0.04	26						1.0
RCY	SZ	17	65	EP		840	10.88	0.01							1.0
DQRL	SZ	32	344	EP		840	12.95	-0.01							1.0
DQRL	SN	32	344	ES		840	17.02	0.02							1.0

March 13 2016 Hour: 11:37 39.6 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	289	EP		1137	40.02	-0.03							1.0
RCY	SZ	13	112	EP		1137	41.62	-0.03	24						1.0
RCY	SN	13	112	ES		1137	43.19	0.02							1.0
DQRL	SZ	23	325	EP		1137	43.30	0.08							1.0
DQRL	SN	23	325	ES		1137	45.91	-0.00							1.0
BHL	BZ	41	353	EP		1137	46.12	-0.05							1.0

March 13 2016 Hour: 11:49 26.5 Lat: 33.54N Lon: 35.70E 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	2	307	EP		1149	26.94	-0.01							1.0
RCY	SZ	13	109	EP		1149	28.67	0.00	23						1.0
RCY	SN	13	109	ES		1149	30.27	-0.00							1.0
DQRL	SZ	22	327	EP		1149	30.13	0.01							1.0
DQRL	SN	22	327	ES		1149	32.81	0.00							1.0
BHL	BZ	41	354	EP		1149	33.13	-0.00							1.0

March 13 2016 Hour: 14:34 41.6 Lat: 33.43N Lon: 35.67E Depth: 1 Agency: REL Local
Magnitudes: 3.1MC 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	11	144	EP		1434	43.45	0.01							1.0
SHBL	BN	11	144	ES		1434	44.85	0.03							1.0
QRWL	SZ	13	3	EP		1434	43.65	-0.08							1.0
QRWL	SN	13	3	ES		1434	45.33	-0.01							1.0
RCY	SZ	17	64	EP		1434	44.23	-0.10							1.0
DQRL	SZ	32	343	EP		1434	46.71	-0.06	73						1.0
DQRL	SN	32	343	ES		1434	50.67	0.05							1.0
ZAHL	SZ	51	22	EP		1434	49.85	-0.03							1.0
ZAHL	SN	51	22	ES		1434	56.17	0.14							1.0
BHL	BZ	53	358	EP		1434	50.09	0.01							1.0
BHL	BN	53	358	ES		1434	56.38	-0.00							1.0
HWQ	SZ	97	15	EP		1434	57.26	-0.04							0.2

March 15 2016 Hour: 15:51 7.8 Lat: 33.41N Lon: 35.65E Depth: 6 Agency: REL Local
Magnitudes: 2.3MC 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	11	130	EP		1551	9.97	0.02							1.0
SHBL	BE	11	130	ES		1551	11.52	-0.00							1.0
QRWL	SZ	15	10	EP		1551	10.52	-0.02	23						1.0
RCY	SZ	19	61	EP		1551	11.16	-0.01							1.0
DQRL	SZ	34	347	EP		1551	13.30	-0.05							1.0
DQRL	SN	34	347	ES		1551	17.47	0.02							1.0
BHL	BZ	55	0	EP		1551	16.76	0.04							1.0

March 15 2016 Hour: 21: 8 28.8 Lat: 33.69N Lon: 35.95E Depth: 27 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	20	342	EP		21	8	34.13-0.03							1.0
ZAHL	SN	20	342	ES		21	8	38.15	0.01						1.0
RCY	SZ	24	207	EP		21	8	34.52	0.01	39					1.0
DQRL	SZ	36	274	EP		21	8	35.78	0.00						1.0
DQRL	SN	36	274	ES		21	8	40.94-0.01							1.0
BHL	BZ	37	311	EP		21	8	35.96	0.03						1.0
HWQ	SZ	66	360	EP		21	8	39.79-0.00							1.0

March 17 2016 Hour: 14: 8 4.2 Lat: 33.93N Lon: 35.26E Depth: 27 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

OFFSHORE CENTRAL LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	37	94	EP		14	8	11.39	0.01						1.0
DQRL	SZ	38	130	EP		14	8	11.51-0.01							1.0
DQRL	SE	38	130	ES		14	8	16.91-0.01							1.0
QRWL	SZ	57	137	EP		14	8	14.05-0.02	29						1.0
QRWL	SE	57	137	ES		14	8	21.40	0.04						1.0
RCY	SZ	72	132	EP		14	8	16.09	0.01						1.0
RCY	SN	72	132	ES		14	8	24.83-0.02							1.0

March 18 2016 Hour: 16:15 50.0 Lat: 33.80N Lon: 35.78E Depth: 14 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	17	317	EP		1615	53.66	0.01	39						1.0
DQRL	SZ	22	242	EP		1615	54.26-0.01								1.0
DQRL	SN	22	242	ES		1615	57.46	0.02							1.0
QRWL	SZ	29	198	EP		1615	55.16-0.09								1.0
RCY	SZ	34	171	EP		1615	55.98	0.01							1.0
RCY	SN	34	171	ES		1616	0.41	0.01							1.0
SHBL	BZ	50	183	EP		1615	58.37	0.05							1.0
HWQ	SZ	56	16	EP		1615	59.18-0.00								1.0

March 19 2016 Hour: 1:35 10.8 Agency: REL Distant
EMSC OT=01:35:10.8 51.52N 174.20W 10Km M=6.1 ANDREANOF ISLANDS, ALEUTIAN IS.

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		148	14.63								
SHBL	BZ			EP		148	16.88								

March 19 2016 Hour: 5: 3 8.6 Lat: 33.78N Lon: 35.85E Depth: 12 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	9	21	EP		5	3	11.34	0.05	31					1.0
ZAHL	SN	9	21	ES		5	3	13.27-0.00							1.0
BHL	BZ	23	307	EP		5	3	12.84-0.05							1.0
DQRL	SZ	27	252	EP		5	3	13.58	0.04						1.0
DQRL	SN	27	252	ES		5	3	17.19-0.00							1.0
RCY	SZ	32	183	EP		5	3	14.14-0.07							1.0
RCY	SN	32	183	ES		5	3	18.30-0.04							1.0
SHBL	BZ	49	192	EP		5	3	16.88	0.03						1.0
SHBL	BN	49	192	ES		5	3	23.01	0.06						1.0

March 19 2016 Hour: 11:26 30.9 Agency: REL Distant
EMSC OT=11:26:30.9 18.05N 60.70W 20Km M=6.0 ANTIGUA AND BARBUDA REGION
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL BZ EP 1139 6.72
 QRWL SZ EP 1139 8.84

March 19 2016 Hour: 14: 4 24.8 Lat: 33.45N Lon: 35.61E Depth: 3 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs
JEZZINE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	13	30	EP		14 4	26.97	-0.03							1.0
QRWL	SN	13	30	ES		14 4	28.64	0.03							1.0
SHBL	BZ	16	132	EP		14 4	27.60	0.03							1.0
SHBL	BE	16	132	ES		14 4	29.60	-0.02							1.0
RCY	SZ	22	75	EP		14 4	28.35	-0.01	32						1.0
DQRL	SZ	29	352	EP		14 4	29.55	0.02							1.0
DQRL	SN	29	352	ES		14 4	32.99	-0.02							1.0

March 19 2016 Hour: 15:43 34.2 Lat: 35.31N Lon: 37.37E Depth: 33 Agency: REL Regional
Magnitudes: 3.3MC REL Rms: 0.3 secs
SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	173	229	EP		1543	58.38	-0.47	81						1.0
BHL	BZ	221	226	EP		1544	5.15	0.34							1.0
DQRL	SZ	242	223	EP		1544	7.58	0.13							1.0
DQRL	SN	242	223	ES		1544	32.20	0.12							1.0
SHBL	BZ	264	215	EP		1544	10.12	-0.00							1.0
SHBL	BN	264	215	ES		1544	36.61	-0.12							1.0

March 20 2016 Hour: 11:20 54.8 Lat: 33.98N Lon: 36.21E Depth: 20 Agency: REL Local
Magnitudes: 2.8MC 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	33	245	EP		1121	0.95	-0.08							1.0
ZAHL	SN	33	245	ES		1121	5.69	0.02							1.0
HWQ	SZ	41	323	EP		1121	2.02	-0.00	41						1.0
HWQ	SN	41	323	ES		1121	7.43	0.04							1.0
BHL	BZ	53	260	EP		1121	3.51	-0.12							1.0
RCY	SZ	64	213	EP		1121	5.41	0.04							1.0
DQRL	SZ	67	243	EP		1121	5.82	0.10							1.0

March 20 2016 Hour: 11:50 58.6 Lat: 33.40N Lon: 35.67E Depth: 12 Agency: REL Local
Magnitudes: 2.6MC 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	128	EP		1151	1.25	0.04							1.0
SHBL	BN	9	128	ES		1151	3.17	0.01							1.0
QRWL	SZ	17	5	EP		1151	1.72	-0.26							1.0
QRWL	SN	17	5	ES		1151	4.57	0.06							1.0
RCY	SZ	19	55	EP		1151	2.36	0.01	35						1.0
DQRL	SZ	35	345	EP		1151	4.73	0.08							1.0
BHL	BZ	56	359	EP		1151	7.93	0.06							1.0

March 20 2016 Hour: 22:50 20.1 Agency: REL Distant
EMSC OT=22:50:20.1 54.28N 162.90E 30Km M=6.4 NEAR EAST COAST OF KAMCHATKA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		23 2	30.18								
BHL	BZ			EP		23 2	32.79								
SHBL	BZ			EP		23 2	35.58								

March 21 2016 Hour: 15:11 16.2 Lat: 33.78N Lon: 35.77E Depth: 11 Agency: REL Local
Magnitudes: 2.9MC 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	51	EP		1511	19.04	-0.10	52						1.0
ZAHL	SN	13	51	ES		1511	21.36	0.06							1.0
BHL	BZ	17	321	EP		1511	19.55	-0.09							1.0
DQRL	SZ	21	246	EP		1511	20.17	0.10							1.0
QRWL	SZ	27	198	EP		1511	20.98	-0.05							1.0
QRWL	SN	27	198	ES		1511	24.58	-0.01							1.0
RCY	SZ	32	170	EP		1511	21.80	0.02							1.0
HWQ	SZ	57	16	EP		1511	25.72	0.06							1.0

March 22 2016 Hour: 13:25 17.8 Agency: REL Regional

EMSC OT=13:25:17.8 35.66N 31.76E 68Km M=4.5 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1326	12.54								
DQRL	SZ			EP		1326	13.32								
HWQ	BZ			EP		1326	13.39								
QRWL	SZ			EP		1326	15.03								
RCY	SZ			EP		1326	16.68								
SHBL	BZ			EP		1326	17.60								

March 22 2016 Hour: 14:23 11.0 Agency: REL Regional

EMSC OT=14:23:11.0 35.35N 32.49E 30Km M=3.8 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1423	54.54								
DQRL	SZ			EP		1423	55.76								
HWQ	BZ			EP		1423	57.37								
QRWL	SZ			EP		1423	59.06								
RCY	SZ			EP		1424	1.18								
SHBL	BZ			EP		1424	1.32								

March 22 2016 Hour: 16:12 41.1 Lat: 33.78N Lon: 35.76E 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
BHL	BZ	17	323	EP		1612	44.26	-0.02	33						1.0
DQRL	SZ	20	244	EP		1612	44.77	0.04							1.0
DQRL	SN	20	244	ES		1612	47.39	-0.00							1.0
QRWL	SZ	27	196	EP		1612	45.78	-0.06							1.0
QRWL	SN	27	196	ES		1612	49.33	0.02							1.0
RCY	SZ	33	168	EP		1612	46.69	0.01							1.0
HWQ	SZ	57	17	EP		1612	50.55	0.02							1.0

March 22 2016 Hour: 20:24 22.3 Lat: 34.73N Lon: 34.14E Depth: 0 Agency: REL Regional
Magnitudes: 4.0MC REL Rms: 0.2 secs

CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEYL	SZ	156	127	EP		2024	46.82	-0.36							0.2
BHL	BZ	166	123	EP		2024	48.30	-0.41							1.0
BHL	BE	166	123	ES		2025	8.41	0.16							1.0
HWQ	BZ	173	106	EP		2024	49.81	0.14							1.0
HWQ	BN	173	106	ES		2025	9.92	-0.00							1.0
DQRL	SZ	174	130	EP		2024	49.43	-0.35	206						1.0
QRWL	SZ	193	132	EP		2024	52.35	-0.08							1.0
RCY	SZ	208	131	EP		2024	54.49	0.23							1.0
RCY	SN	208	131	ES		2025	17.78	-0.12							1.0
SHBL	BZ	213	136	EP		2024	55.31	0.38							1.0
SHBL	BN	213	136	ES		2025	19.13	0.07							1.0

March 22 2016 Hour: 21:36 15.7 Lat: 33.64N Lon: 35.59E Depth: 5 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.1 secs

CHOUF REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	8	344	EP		2136	17.37	-0.03	43						1.0
DQRL	SN	8	344	ES		2136	18.67	0.04							1.0
QRWL	SZ	13	140	EP		2136	17.98	-0.10							1.0
RCY	SZ	27	125	EP		2136	20.31	0.01							1.0
RCY	SN	27	125	ES		2136	23.67	-0.01							1.0
BHL	BZ	30	11	EP		2136	20.60	-0.11							1.0
BHL	BN	30	11	ES		2136	24.41	0.01							1.0
SHBL	BZ	35	156	EP		2136	21.57	0.08							1.0
SHBL	BN	35	156	ES		2136	25.79	0.03							1.0
HWQ	SZ	78	25	EP		2136	28.48	0.08							1.0

March 23 2016 Hour: 9:48 40.3 Lat: 33.79N Lon: 35.78E Depth: 10 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
BHL	BZ	17	318	EP		948	43.62	-0.01	36						1.0
DQRL	SZ	21	245	EP		948	44.21	0.02							1.0
DQRL	SN	21	245	ES		948	47.06	-0.01							1.0
RCY	SZ	33	171	EP		948	45.84	-0.03							1.0
RCY	SE	33	171	ES		948	50.02	0.02							1.0
HWQ	SZ	57	16	EP		948	49.61	0.01							1.0

March 23 2016 Hour: 14:38 49.8 Lat: 33.78N Lon: 35.78E Depth: 7 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	18	320	EP		1438	52.93	-0.01	39						1.0
DQRL	SZ	21	247	EP		1438	53.44	0.04							1.0
DQRL	SN	21	247	ES		1438	56.09	-0.01							1.0
QRWL	SZ	27	199	EP		1438	54.34	-0.03							1.0
RCY	SZ	32	170	EP		1438	55.11	-0.00							1.0
RCY	SN	32	170	ES		1438	59.08	0.01							1.0
HWQ	SZ	57	16	EP		1438	59.12	0.01							1.0

March 23 2016 Hour: 21:25 37.5 Lat: 34.39N Lon: 36.65E Depth: 5 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.1 secs

SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	66	259	EP		2125	48.12	-0.00	36						1.0
HWQ	BN	66	259	ES		2125	55.98	-0.04							1.0
BHL	BZ	106	240	EP		2125	54.74	0.09							1.0
RCY	SZ	124	217	EP		2125	57.27	-0.07							1.0
RCY	SN	124	217	ES		2126	12.07	0.02							1.0
DQRL	SZ	125	233	EP		2125	57.49	0.07							1.0
QRWL	SZ	129	224	EP		2125	57.95	-0.07							1.0

March 23 2016 Hour: 23:52 43.6 Lat: 33.78N Lon: 35.73E Depth: 15 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	15	331	EP		2352	47.19	0.01	27						1.0
DQRL	SZ	18	240	EP		2352	47.36	-0.07							1.0
DQRL	SN	18	240	ES		2352	50.31	0.03							1.0
QRWL	SZ	27	190	EP		2352	48.68	0.09							1.0
QRWL	SN	27	190	ES		2352	52.28	-0.02							1.0
RCY	SZ	33	163	EP		2352	49.52	-0.03							1.0
HWQ	SZ	58	20	EP		2352	53.16	0.00							1.0

March 24 2016 Hour: 1:22 18.3 Agency: REL Regional

EMSC OT=01:22:18.3 36.01N 29.62E 2Km M=4.7 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		123	39.24								
QRWL	SZ			EP		123	40.48								

March 24 2016 Hour: 11:36 40.0 Lat: 33.79N 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	56	EP		1136	42.85	0.14							1.0
BHL	BZ	16	323	EP		1136	42.88	-0.12	45						1.0
BHL	BN	16	323	ES		1136	45.22	-0.01							1.0
DQRL	SZ	20	243	EP		1136	43.53	0.03							1.0
DQRL	SN	20	243	ES		1136	46.22	0.12							1.0
QRWL	SZ	28	195	EP		1136	44.42	-0.24							1.0
HWQ	SZ	57	17	EP		1136	49.31	-0.01							1.0

March 24 2016 Hour: 13:24 56.9 Lat: 33.42N Lon: 35.68E Depth: 0 Agency: REL Local
Magnitudes: 2.6MC 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	10	142	EP		1324	58.53	-0.04							1.0
QRWL	SZ	14	1	EP		1324	59.11	-0.14							1.0
RCY	SZ	17	60	EP		1324	59.79	0.10	35						1.0
RCY	SN	17	60	ES		1325	1.69	-0.02							1.0
DQRL	SZ	33	342	EP		1325	2.45	0.12							1.0
DQRL	SN	33	342	ES		1325	6.29	-0.02							1.0
HWQ	SZ	98	14	EP		1325	12.81	-0.01							1.0

March 25 2016 Hour: 16: 2 23.8 Lat: 33.79N Lon: 35.69E Depth: 24 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.2 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	13	343	EP		16 2	28.20	-0.12	34						1.0
BHL	BN	13	343	ES		16 2	31.66	0.02							1.0
DQRL	SZ	15	229	EP		16 2	28.60	0.11							1.0
DQRL	SN	15	229	ES		16 2	31.91	-0.02							1.0
ZAHL	SZ	19	68	EP		16 2	29.77	0.90							0.2
QRWL	SZ	27	182	EP		16 2	29.64	-0.03							1.0
RCY	SZ	36	158	EP		16 2	30.71	0.02							1.0
RCY	SN	36	158	ES		16 2	35.73	-0.04							1.0

March 26 2016 Hour: 3:24 24.1 Agency: REL Distant

EMSC OT=03:24:24.1 2.64S 67.98E 10Km M=5.7 CARLSBERG RIDGE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		332	59.27								
SHBL	BZ			EP		332	54.49								

March 26 2016 Hour: 11:43 45.7 Lat: 33.54N Lon: 35.71E Depth: 0 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.1 secs

RACHAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	3	279	EP		1143	46.09	-0.07	36						1.0
RCY	SZ	13	114	EP		1143	47.64	-0.08							1.0
RCY	SN	13	114	ES		1143	49.25	0.03							1.0
SHBL	BZ	22	172	EP		1143	49.27	0.06							1.0
DQRL	SZ	22	324	EP		1143	49.31	0.03							1.0
DQRL	SN	22	324	ES		1143	51.98	0.03							1.0

March 26 2016 Hour: 11:55 58.1 Lat: 33.47N Lon: 35.69E Depth: 0 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	9	357	EP		1155	59.43	-0.07							1.0
RCY	SZ	14	78	EP		1156	0.39	-0.01	29						1.0
RCY	SN	14	78	ES		1156	2.12	0.03							1.0
SHBL	BZ	15	159	EP		1156	0.49	0.01							1.0
DQRL	SZ	28	337	EP		1156	2.70	0.03							1.0
DQRL	SN	28	337	ES		1156	6.06	0.02							1.0

March 26 2016 Hour: 16:18 48.7 Agency: REL Distant

EMSC OT=16:18:48.7 14.84S 173.86W 10Km M=5.3 SAMOA ISLANDS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ			EP		1638	32.80								
BHL	BZ			EP		1638	32.37								

March 27 2016 Hour: 20:48 56.7 Lat: 33.66N Lon: 35.45E Depth: 0 Agency: REL Local
Magnitudes: 2.4MC 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	12	63	EP		2048	58.63	-0.05	26						1.0
DQRL	SN	12	63	ES		2049	0.17	0.02							1.0
BHL	BZ	33	34	EP		2049	2.06	-0.01							1.0
ZAHL	SZ	46	61	EP		2049	4.22	0.11							0.2
HWQ	SZ	83	33	EP		2049	10.07	0.02							1.0

March 28 2016 Hour: 0:26 26.5 Agency: REL Regional

EMSC OT=00:26:26.5 36.04N 35.73E 10Km M=3.8 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		026	57.20								
BHL	BZ			EP		027	2.56								
DQRL	SZ			EP		027	5.85								
RCY	SZ			EP		027	8.13								

March 28 2016 Hour: 22:39 31.6 Lat: 34.71N Lon: 36.61E Depth: 0 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
HWQ	SZ	77	232	EP		2239	44.04	-0.04	40						1.0
HWQ	SN	77	232	ES		2239	53.17	-0.12							1.0
BHL	BZ	125	225	EP		2239	51.73	-0.07							1.0
DQRL	SZ	147	221	EP		2239	55.20	0.10							1.0
DQRL	SN	147	221	ES		2240	12.75	0.29							1.0
RCY	SZ	152	208	EP		2239	55.89	-0.03							1.0
RCY	SN	152	208	ES		2240	13.75	-0.14							1.0

March 29 2016 Hour: 8:31 8.5 Lat: 33.43N Lon: 35.68E Depth: 3 Agency: REL Local
Magnitudes: 2.8MC 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	11	147	EP		831	10.41	-0.04							1.0
SHBL	BN	11	147	ES		831	11.96	0.05							1.0
RCY	SZ	16	65	EP		831	11.12	-0.07							1.0
DQRL	SZ	32	342	EP		831	13.59	-0.06	46						1.0
DQRL	SN	32	342	ES		831	17.49	0.01							1.0
BHL	BZ	52	357	EP	*	831	16.89	-0.03							0.0
HWQ	SZ	97	15	EP		831	24.21	0.10							1.0

March 30 2016 Hour: 15:55 16.4 Lat: 33.85N Lon: 35.74E Depth: 35 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

BAABDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	9	308	EP		1555	22.01	-0.03	30						1.0
DQRL	SZ	22	223	EP		1555	22.80	0.00							1.0
DQRL	SN	22	223	ES		1555	27.58	0.02							1.0
RCY	SZ	40	167	EP		1555	24.62	-0.02							1.0
RCY	SN	40	167	ES		1555	30.77	0.01							1.0
HWQ	SZ	51	22	EP		1555	25.90	0.02							1.0

March 30 2016 Hour: 23:55 21.8 Lat: 33.06N Lon: 35.49E Depth: 8 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.1 secs

DEAD SEA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	40	37	EP		2355	28.46	0.10	28						1.0
SHBL	BN	40	37	ES		2355	33.19	-0.04							1.0
QRWL	SZ	57	19	EP		2355	30.89	-0.14							1.0
RCY	SZ	58	34	EP		2355	31.21	-0.05							1.0
RCY	SN	58	34	ES		2355	38.32	0.05							1.0
DQRL	SZ	72	6	EP		2355	33.50	0.08							1.0

March 31 2016 Hour: 14:58 10.0 Lat: 33.78N Lon: 35.78E 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	18	317	EP		1458	12.93	-0.01	25						1.0
BHL	BN	18	317	ES		1458	15.07	-0.01							1.0
DQRL	SZ	22	246	EP		1458	13.58	0.02							1.0
RCY	SZ	32	172	EP		1458	15.29	0.02							1.0
RCY	SN	32	172	ES		1458	19.12	-0.02							1.0
HWQ	SZ	57	15	EP		1458	19.19	0.01							1.0

March 31 2016 Hour: 21:33 22.4 Agency: REL Regional
EMSC OT=21:33:22.4 37.04N 35.84E 21Km M=4.2 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		2134	8.96								
BHL	BZ			EP		2134	11.64								
ZAHL	SZ			EP		2134	14.94								
DQRL	SZ			EP		2134	15.24								
QRWL	SZ			EP		2134	16.71								
RCY	SZ			EP		2134	18.44								
SHBL	BZ			EP		2134	20.27								

Epicentral Map of Lebanon

Mars 2016

