

Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

February

2019

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
BEIL	3432.50N	3611.08E	572	BEINO	Opened Jan 2017

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.

February 1 2019 Hour: 10:29 51.8

Agency: REL Regional

EMSC OT=10:29:51.8 35.77N 27.30E 40Km M=4.8 DODECANESE ISLANDS, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ			EP		1031	31.64								
HWQ	BZ			EP		1031	33.37								
SHBL	SZ			EP		1031	34.17								
RCY	SZ			EP		1031	34.46								
BEIL	SZ			EP		1031	34.94								

February 1 2019 Hour: 23:48 14.3

Agency: Distant

EMSC OT=23:48:14.3 23.82S 176.82W 103Km M=5.3 SOUTH OF FIJI ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		0 7	52.17								
BHL	BZ			EP		0 7	53.59								
HWQ	BZ			EP		0 7	52.73								
FKH	SZ			EP		0 7	52.20								
DQRL	SZ			EP		0 7	54.33								
QRWL	SZ			EP		0 7	54.06								
RCY	SZ			EP		0 7	53.56								
ZAHL	SZ			EP		0 7	53.29								
SHBL	SZ			EP		0 7	54.03								

February 2 2019 Hour: 12:20 38.6

Agency: REL Regional

EMSC OT=12:20:38.6 37.25N 35.85E 16Km M=4.5 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1221	22.76								
HWQ	BZ			EP		1221	26.19								
FKH	SZ			EP		1221	27.09								
BHL	BZ			EP		1221	30.42								
ZAHL	SZ			EP		1221	35.44								
DQRL	SZ			EP		1221	33.57								
QRWL	SZ			EP		1221	35.82								
RCY	SZ			EP		1221	36.97								
SHBL	SZ			EP		1221	39.29								

February 2 2019 Hour: 21:34 35.7 Lat: 34.07N Lon: 36.28E Depth: 6 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
FKH	SZ	23	31	EP		2134	39.58	-0.08	57						1.0
FKH	SN	23	31	ES		2134	42.57	0.00							1.0
HWQ	BZ	39	307	EP		2134	42.02	-0.11							1.0
ZAHL	SZ	43	238	EP		2134	42.88	0.04							1.0
BEIL	SZ	54	350	EP		2134	44.55	0.11							1.0
BEIL	SN	54	350	ES		2134	50.97	0.09							1.0
BHL	BZ	61	253	EP		2134	45.51	-0.10							1.0
RCY	SZ	76	213	EP		2134	48.04	0.05							1.0
RCY	SN	76	213	ES		2134	57.18	0.13							1.0
DQRL	SZ	77	239	EP		2134	48.21	-0.02							1.0
QRWL	SZ	80	224	EP		2134	48.64	-0.05							1.0
SHBL	SZ	94	212	EP		2134	50.91	-0.04							1.0

February 3 2019 Hour: 14:52 0.6 Lat: 33.45N Lon: 35.66E Depth: 2 Agency: REL Local
Magnitudes: 2.5MC 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	12	12	EP		1452	2.41	-0.10	29						1.0
QRWL	SN	12	12	ES		1452	3.93	-0.00							1.0
SHBL	SZ	14	143	EP		1452	2.88	0.04							1.0
RCY	SZ	18	71	EP		1452	3.50	0.02							1.0
DQRL	SZ	30	345	EP		1452	5.37	-0.06							1.0
DQRL	SN	30	345	ES		1452	9.12	0.11							1.0
ZAHL	SZ	50	25	EP		1452	8.78	0.05							1.0

BHL BZ 51 360 EP 1452 8.74-0.05 1.0

February 4 2019 Hour: 0:50 44.8 Lat: 33.80N Lon: 35.81E Depth: 16 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	10	47	EP		050	47.97	-0.02							1.0
ZAHL	SN	10	47	ES		050	50.33	0.00							1.0
BHL	BZ	19	309	EP		050	48.85	-0.01	31						1.0
BHL	BN	19	309	ES		050	51.87	0.03							1.0
DQRL	SZ	25	245	EP		050	49.58	-0.01							1.0
QRWL	SZ	30	203	EP		050	50.30	-0.06							1.0
RCY	SZ	34	176	EP		050	50.91	0.05							1.0
SHBL	SZ	50	187	EP		050	53.30	0.02							1.0

February 4 2019 Hour: 11:25 4.8 Lat: 34.36N Lon: 36.64E Depth: 0 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.0 secs

SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	25	240	EP		1125	8.84	0.01	60						1.0
FKH	SN	25	240	ES		1125	11.79	0.00							1.0
BEIL	SZ	47	296	EP		1125	12.37	-0.02							1.0
HWQ	BZ	65	262	EP		1125	15.36	0.08							1.0
HWQ	BN	65	262	ES		1125	23.00	0.00							1.0
BHL	BZ	104	241	EP		1125	21.55	-0.08							1.0
RCY	SZ	121	218	EP		1125	24.35	-0.03							1.0
DQRL	SZ	123	234	EP		1125	24.57	-0.04							1.0
QRWL	SZ	126	225	EP		1125	25.21	0.01							1.0
SHBL	SZ	139	217	EP		1125	27.35	0.06							1.0

February 4 2019 Hour: 12:27 17.1 Lat: 34.34N Lon: 36.59E 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
FKH	SZ	20	238	EP		1227	19.96	-0.27	64						1.0
FKH	SN	20	238	ES		1227	22.63	0.04							1.0
BEIL	SZ	44	301	EP		1227	24.09	0.01							1.0
BEIL	SN	44	301	ES		1227	29.34	0.06							1.0
HWQ	BZ	60	264	EP		1227	26.65	-0.04							1.0
RCY	SZ	117	217	EP		1227	36.04	0.16							1.0
QRWL	SZ	122	224	EP		1227	36.56	-0.10							1.0
SHBL	SZ	135	216	EP		1227	38.97	0.14							1.0

February 5 2019 Hour: 2:26 9.4 Agency: REL Regional

EMSC OT=02:26:09.4 39.02N 20.56E 10Km M=5.4 GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		229	14.98								
HWQ	BZ			EP		229	15.76								
ZAHL	SZ			EP		229	16.65								
QRWL	SZ			EP		229	16.59								
BEIL	SZ			EP		229	17.52								
RCY	SZ			EP		229	18.22								
SHBL	SZ			EP		229	19.15								
FKH	SZ			EP		229	20.86								

February 5 2019 Hour: 5:18 1.6 Agency: REL Regional

EMSC OT=05:18:01.6 38.79N 38.07E 5Km M=4.0 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		519	9.86								
FKH	SZ			EP		519	12.42								
HWQ	BZ			EP		519	15.05								

February 5 2019 Hour: 15:11 52.0

Agency: REL Regional

EMSC OT=15:11:52.0 36.61N 30.13E 7Km M=4.5 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1513	12.53								
BEIL	SZ			EP		1513	13.16								
QRWL	SZ			EP		1513	13.78								
RCY	SZ			EP		1513	16.04								
SHBL	SZ			EP		1513	16.99								
FKH	SZ			EP		1513	17.84								

February 6 2019 Hour: 10:41 45.4 Lat: 33.85N Lon: 35.85E Depth: 1 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.2 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	4	78	EP		1041	46.16	-0.04							1.0
BHL	BZ	19	288	EP		1041	48.21	-0.30	54						1.0
BHL	BN	19	288	ES		1041	51.15	0.36							1.0
DQRL	SZ	30	238	EP		1041	50.38	0.02							1.0
DQRL	SN	30	238	ES		1041	53.78	-0.22							1.0
QRWL	SZ	37	205	EP		1041	51.45	0.02							1.0
RCY	SZ	39	182	EP		1041	51.89	0.07							1.0
RCY	SN	39	182	ES		1041	56.55	0.02							1.0
HWQ	BZ	48	11	EP		1041	53.06	-0.17							1.0
SHBL	SZ	57	190	EP		1041	54.69	0.10							1.0
FKH	SZ	68	50	EP		1041	56.51	0.12							1.0
BEIL	SZ	83	22	EP		1041	59.15	0.38							0.2

February 8 2019 Hour: 0:48 38.9 Lat: 34.69N Lon: 33.84E Depth: 0 Agency: REL Regional
Magnitudes: 3.3MC REL Rms: 0.1 secs

CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	188	117	EP		049	8.54	0.15							0.2
DQRL	SZ	193	124	EP		049	8.96	-0.03							0.2
HWQ	BZ	199	103	EP		049	9.63	-0.08							1.0
HWQ	BN	199	103	ES		049	32.36	-0.16							1.0
ZAHL	SZ	210	115	EP		049	10.96	-0.11							1.0
QRWL	SZ	212	126	EP		049	11.35	0.04							1.0
BEIL	SZ	216	94	EP		049	11.73	-0.02	71						1.0
BEIL	SN	216	94	ES		049	36.24	0.18							1.0
RCY	SZ	227	125	EP		049	13.29	0.09							1.0
SHBL	SZ	230	130	EP		049	13.69	0.04							1.0
FKH	SZ	241	101	EP		049	15.10	0.12							0.2

February 8 2019 Hour: 11:55 6.5

Agency: Distant

EMSC OT=11:55:06.5 9.84N 126.47E 12Km M=5.9 MINDANAO, PHILIPPINES

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		12 7	43.57								
HWQ	BZ			EP		12 7	41.96								

February 9 2019 Hour: 16:49 29.3 Lat: 34.81N Lon: 34.20E Depth: 8 Agency: REL Regional
Magnitudes: 3.1MC REL Rms: 0.2 secs

CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	168	126	EP		1649	55.07	-0.20							0.2
HWQ	BZ	171	110	EP		1649	56.06	0.26	57						1.0
HWQ	BN	171	110	ES		1650	15.44	0.02							1.0
BEIL	SZ	185	99	EP		1649	57.06	-0.35							1.0
BEIL	SN	185	99	ES		1650	18.39	0.16							1.0
ZAHL	SZ	188	124	EP		1649	57.83	-0.06							1.0
ZAHL	SN	188	124	ES		1650	18.90	-0.17							1.0
QRWL	SZ	196	135	EP		1649	58.94	0.09							1.0
RCY	SZ	210	134	EP		1650	0.64	-0.01							1.0
SHBL	SZ	216	138	EP		1650	1.51	0.09							1.0

February 10 2019 Hour: 15:16 20.4 Lat: 34.22N Lon: 36.20E Depth: 0 Agency: REL Local
Magnitudes: 3.2MC REL Rms: 0.1 secs

BAALBECK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	20	82	EP		1516	23.66	0.02							1.0
FKH	SN	20	82	ES		1516	25.99	-0.02							1.0
HWQ	BZ	24	286	EP		1516	24.22	-0.09	75						1.0
HWQ	BN	24	286	ES		1516	27.25	0.07							1.0
BEIL	SZ	36	358	EP		1516	26.23	0.04							1.0
BEIL	SN	36	358	ES		1516	30.45	-0.00							1.0
ZAHL	SZ	49	216	EP		1516	28.28	-0.13							1.0
BHL	BZ	61	235	EP		1516	30.27	-0.03							1.0
DQRL	SZ	81	226	EP		1516	33.48	-0.07							1.0
RCY	SZ	87	203	EP		1516	34.58	0.12							1.0
RCY	SN	87	203	ES		1516	44.87	0.03							1.0
QRWL	SZ	89	213	EP		1516	34.77	0.06							1.0
SHBL	SZ	105	204	EP		1516	37.45	0.01							1.0

February 10 2019 Hour: 20:17 51.2 Lat: 34.17N Lon: 36.31E Depth: 3 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.1 secs

BAALBECK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	12	49	EP		2017	53.19	-0.09	36						1.0
FKH	SN	12	49	ES		2017	54.87	0.05							1.0
HWQ	BZ	36	289	EP		2017	56.91	-0.08							1.0
HWQ	BN	36	289	ES		2018	1.25	-0.02							1.0
BEIL	SZ	42	344	EP		2017	58.14	0.06							1.0
ZAHL	SZ	53	228	EP		2018	0.05	0.31							1.0
RCY	SZ	87	211	EP		2018	5.25	-0.02							1.0
RCY	SN	87	211	ES		2018	15.64	-0.04							1.0
QRWL	SZ	91	220	EP		2018	5.71	-0.13							1.0
SHBL	SZ	106	210	EP		2018	8.22	-0.03							1.0

February 11 2019 Hour: 8:52 52.5 Lat: 34.31N Lon: 36.30E Depth: 11 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.1 secs

HERMEL REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	13	125	EP		852	55.39	0.00	36						1.0
BEIL	SZ	28	338	EP		852	57.34	-0.02							1.0
BEIL	SN	28	338	ES		853	0.98	0.02							1.0
HWQ	BZ	33	264	EP		852	58.08	-0.04							1.0
HWQ	BN	33	264	ES		853	2.29	0.02							1.0
RCY	SZ	100	205	EP		853	8.33	-0.04							1.0
QRWL	SZ	102	214	EP		853	8.58	-0.06							1.0
SHBL	SZ	118	206	EP		853	11.21	0.12							1.0

February 11 2019 Hour: 16:38 3.7 Agency: REL Regional
EMSC OT=16:38:03.7 36.45N 28.87E 10Km M=4.1 DODECANESE IS -TURKEY BORDER

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1639	34.34								
QRWL	SZ			EP		1639	35.57								
BEIL	SZ			EP		1639	35.72								
RCY	SZ			EP		1639	37.14								
SHBL	SZ			EP		1639	37.86								
FKH	SZ			EP		1639	39.43								

February 12 2019 Hour: 7:13 12.7 Lat: 34.02N Lon: 35.91E Depth: 16 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.0 secs

KESROUAN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	19	188	EP		713	16.86	0.00							1.0
BHL	BZ	27	241	EP		713	17.85	-0.08	26						1.0
BHL	BN	27	241	ES		713	21.78	0.01							1.0

HWQ	BZ	28	6	EP	713	18.08	-0.01										1.0
HWQ	BN	28	6	ES	713	22.08	0.04										1.0
DQRL	SZ	47	222	EP	713	20.73	-0.01										1.0
FKH	SZ	52	62	EP	713	21.34	-0.09										1.0
QRWL	SZ	57	202	EP	713	22.09	-0.03										1.0
RCY	SZ	59	187	EP	713	22.46	0.02										1.0
RCY	SN	59	187	ES	713	29.65	0.03										1.0
BEIL	SZ	63	23	EP	713	23.00	0.05										1.0
SHBL	SZ	77	192	EP	713	25.09	0.06										1.0

February 12 2019 Hour: 17:14 31.2

Agency: REL Regional

EMSC OT=17:14:31.2 40.57N 33.03E 7Km M=4.8 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1716	11.42								
HWQ	BZ			EP		1716	12.89								
FKH	SZ			EP		1716	16.04								
ZAHL	SZ			EP		1716	17.91								
QRWL	SZ			EP		1716	20.86								
SHBL	SZ			EP		1716	23.51								

February 12 2019 Hour: 21:25 12.3 Lat: 33.75N Lon: 35.54E Depth: 1 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
DQRL	SZ	5	151	EP		2125	13.31	0.01	48						1.0
BEYL	SZ	14	342	EP		2125	14.67	0.03							1.0
BHL	BZ	20	31	EP		2125	15.53	-0.05							1.0
BHL	BN	20	31	ES		2125	17.99	-0.02							1.0
QRWL	SZ	26	150	EP		2125	16.48	-0.01							1.0
ZAHL	SZ	34	69	EP		2125	17.88	0.06							1.0
RCY	SZ	39	136	EP		2125	18.63	0.00							1.0
RCY	SN	39	136	ES		2125	23.32	0.01							1.0
SHBL	SZ	48	157	EP		2125	20.07	-0.03							1.0

February 12 2019 Hour: 21:29 41.1 Lat: 34.15N Lon: 36.12E Depth: 1 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.1 secs

BAALBECK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	21	312	EP		2129	44.56	-0.06							1.0
HWQ	BN	21	312	ES		2129	47.23	0.04							1.0
FKH	SZ	29	68	EP		2129	45.78	-0.00	52						1.0
FKH	SN	29	68	ES		2129	49.23	0.01							1.0
ZAHL	SZ	39	214	EP		2129	47.39	-0.05							1.0
ZAHL	SE	39	214	ES		2129	52.10	-0.00							1.0
BEIL	SZ	44	8	EP		2129	48.25	0.04							1.0
BEIL	SN	44	8	ES		2129	53.43	-0.02							1.0
BHL	BZ	51	238	EP		2129	49.37	0.01							1.0
DQRL	SZ	71	226	EP		2129	52.79	0.23							0.2
RCY	SZ	77	200	EP		2129	53.75	0.17							0.2
QRWL	SZ	78	211	EP		2129	53.89	0.15							0.2
SHBL	SZ	96	202	EP		2129	56.68	0.14							0.2

February 13 2019 Hour: 13:32 42.5 Lat: 33.26N Lon: 35.38E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.1 secs

SOUR REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	SZ	35	75	EP		1332	48.01	-0.09							1.0
SHBL	SN	35	75	ES		1332	52.31	0.03							1.0
QRWL	SZ	42	42	EP		1332	49.14	-0.09							1.0
QRWL	SN	42	42	ES		1332	54.22	-0.02							1.0
RCY	SZ	49	59	EP		1332	50.61	0.18	49						1.0
DQRL	SZ	52	20	EP		1332	50.77	-0.06							1.0
DQRL	SN	52	20	ES		1332	57.03	0.00							1.0
BHL	BZ	75	20	EP		1332	54.71	0.11							1.0

HWQ	BZ	124	25	EP		1333	2.39	-0.05									1.0
FKH	SZ	145	41	EP		1333	5.51	-0.09									1.0
BEIL	SZ	160	27	EP		1333	7.92	0.09									1.0

February 15 2019 Hour: 13:40 51.9

Agency: Distant

EMSC OT=13:40:51.9 15.69S 174.83W 294Km M=5.3 TONGA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1359	59.43								
DQRL	SZ			EP		14	0	1.81							
BHL	BZ			EP		14	0	0.64							
RCY	SZ			EP		14	0	1.28							

February 16 2019 Hour: 12: 4 36.3 Lat: 34.78N Lon: 36.79E Depth: 0 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
BEIL	SZ	62	245	EP		12	4	46.25	0.00		38				1.0
BEIL	SN	62	245	ES		12	4	53.60	-0.01						1.0
FKH	SZ	69	211	EP		12	4	47.23	-0.17						1.0
FKH	SN	69	211	ES		12	4	55.65	0.04						1.0
HWQ	BZ	96	235	EP		12	4	51.71	0.00						1.0
RCY	SZ	167	212	EP		12	5	2.78	-0.07						1.0
QRWL	SZ	171	217	EP		12	5	3.39	0.09						1.0
SHBL	SZ	186	212	EP		12	5	5.66	0.11						1.0

February 17 2019 Hour: 0:24 3.7 Lat: 34.92N Lon: 34.50E Depth: 16 Agency: REL Regional
Magnitudes: 3.0MC REL Rms: 0.2 secs

CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	150	118	EP		024	26.96	0.19							1.0
HWQ	BN	150	118	ES		024	44.05	0.21							1.0
BHL	BZ	154	136	EP		024	27.20	-0.17							1.0
BHL	BN	154	136	ES		024	44.65	-0.23							1.0
BEIL	SZ	159	105	EP		024	27.63	-0.37		49					1.0
ZAHL	SZ	173	132	EP		024	29.89	0.16							1.0
QRWL	SZ	187	144	EP		024	31.55	0.16							1.0
RCY	SZ	200	142	EP		024	33.12	0.06							1.0
SHBL	SZ	208	146	EP		024	34.12	-0.00							1.0

February 17 2019 Hour: 13: 5 42.2 Lat: 31.83N Lon: 36.05E Depth: 15 Agency: REL Regional
Magnitudes: 3.2MC REL Rms: 0.3 secs

JORDAN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	SZ	171	350	EP		13	6	8.19	0.22						1.0
SHBL	SN	171	350	ES		13	6	26.29	-0.79						1.0
RCY	SZ	186	354	EP		13	6	9.48	-0.36		66				1.0
QRWL	SZ	193	350	EP		13	6	10.57	-0.17						1.0
DQRL	SZ	213	348	EP		13	6	13.17	0.03						1.0
DQRL	SN	213	348	ES		13	6	36.87	0.79						1.0
ZAHL	SZ	225	356	EP		13	6	14.82	0.09						1.0
BHL	BZ	233	351	EP		13	6	15.57	-0.08						1.0
HWQ	BZ	272	358	EP		13	6	20.75	0.28						1.0

February 17 2019 Hour: 14:35 56.2

Agency: Distant

EMSC OT=14:35:56.2 3.40S 152.14E 371Km M=6.5 NEW IRELAND REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1453	50.87								
BHL	BZ			EP		1453	52.05								
DQRL	SZ			EP		1453	52.67								
FKH	SZ			EP		1453	51.18								
HWQ	BZ			EP		1453	50.37								
QRWL	SZ			EP		1453	52.61								
RCY	SZ			EP		1453	52.05								
SHBL	SZ			EP		1453	52.55								

ZAHL SZ EP 1453 51.86

February 17 2019 Hour: 19: 7 43.2

Agency: REL Regional

EMSC OT=19:07:43.2 36.45N 22.95E 10Km M=4.8 SOUTHERN GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		1910	15.85								
QRWL	SZ			EP		1910	15.13								
ZAHL	SZ			EP		1910	16.35								
RCY	SZ			EP		1910	16.47								
HWQ	BZ			EP		1910	16.54								
SHBL	SZ			EP		1910	17.22								
BEIL	SZ			EP		1910	17.85								

February 18 2019 Hour: 11:24 50.7 Lat: 34.46N Lon: 36.72E Depth: 0 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
FKH	SZ	37	231	EP		1124	56.54	-0.14							1.0
FKH	SN	37	231	ES		1125	1.21	0.07							1.0
BEIL	SZ	51	281	EP		1124	58.98	0.17	50						1.0
BEIL	SN	51	281	ES		1125	4.83	-0.01							1.0
HWQ	BZ	74	255	EP		1125	2.49	-0.16							1.0
DQRL	SZ	135	232	EP		1125	12.28	-0.17							1.0
RCY	SZ	135	218	EP		1125	12.43	0.07							1.0
SHBL	SZ	153	217	EP		1125	15.23	0.17							1.0

February 18 2019 Hour: 19:30 25.6

Agency: Distant

EMSC OT=19:30:25.6 9.51S 112.86E 40Km M=5.6 SOUTH OF JAVA, INDONESIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1942	56.59								
DQRL	SZ			EP		1942	57.93								
BHL	BZ			EP		1942	57.93								
FKH	SZ			EP		1942	55.36								
HWQ	BZ			EP		1942	56.80								
QRWL	SZ			EP		1942	57.52								
RCY	SZ			EP		1942	56.59								
SHBL	SZ			EP		1942	56.80								

February 19 2019 Hour: 2: 7 9.3 Lat: 33.78N Lon: 35.80E Depth: 6 Agency: REL Local

Magnitudes: 2.6MC 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	12	42	EP		2 7	11.54	0.05							1.0
ZAHL	SN	12	42	ES		2 7	13.12	-0.02							1.0
BHL	BZ	19	316	EP		2 7	12.48	-0.10	33						1.0
BHL	BN	19	316	ES		2 7	15.09	0.05							1.0
DQRL	SZ	23	249	EP		2 7	13.09	-0.01							1.0
QRWL	SZ	28	203	EP		2 7	13.93	0.04							1.0
RCY	SZ	32	174	EP		2 7	14.41	-0.07							1.0
SHBL	SZ	48	186	EP		2 7	17.15	0.05							1.0
HWQ	BZ	57	14	EP		2 7	18.54	0.02							1.0

February 19 2019 Hour: 16:20 42.0 Lat: 34.04N Lon: 35.97E Depth: 4 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	22	202	EP		1620	45.52	-0.13							1.0
ZAHL	SN	22	202	ES		1620	48.46	0.13							1.0
HWQ	BZ	27	355	EP		1620	46.28	-0.13	63						1.0
HWQ	BN	27	355	ES		1620	49.75	0.09							1.0
BHL	BZ	33	243	EP		1620	47.27	-0.15							1.0
FKH	SZ	46	61	EP		1620	49.78	0.20							1.0
FKH	SN	46	61	ES		1620	54.95	-0.22							1.0
DQRL	SZ	52	225	EP		1620	50.46	-0.07							1.0

BEIL	SZ	59	19	EP		1620	51.75	0.16									1.0
QRWL	SZ	61	206	EP		1620	51.92	0.05									1.0
RCY	SZ	62	192	EP		1620	52.00	0.00									1.0
SHBL	SZ	80	195	EP		1620	54.96	0.07									1.0

February 20 2019 Hour: 5:35 22.0

Agency: REL Regional

EMSC OT=05:35:22.0 36.17N 35.84E 10Km M=4.1 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		535	50.75								
HWQ	BZ			EP		535	53.78								
FKH	SZ			EP		535	55.70								
BHL	BZ			EP		535	58.86								
DQRL	SZ			EP		536	1.49								
QRWL	SZ			EP		536	4.03								
RCY	SZ			EP		536	4.83								
SHBL	SZ			EP		536	6.84								

February 20 2019 Hour: 9:53 21.8 Lat: 33.80N Lon: 35.57E Depth: 16 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.1 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	11	181	EP		953	24.97-0.10		30						1.0
DQRL	SN	11	181	ES		953	27.55	0.08							1.0
BHL	BZ	14	34	EP		953	25.31-0.02								0.2
QRWL	SZ	30	160	EP		953	27.28-0.04								1.0
QRWL	SE	30	160	ES		953	31.33-0.06								1.0
RCY	SZ	42	144	EP		953	29.07	0.05							1.0
SHBL	SZ	53	162	EP		953	30.70	0.07							1.0

February 20 2019 Hour: 10:43 24.6

Agency: REL Regional

EMSC OT=10:43:24.6 34.61N 24.07E 40Km M=4.4 CRETE, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ			EP		1045	39.32								
SHBL	SZ			EP		1045	40.22								
RCY	SZ			EP		1045	41.05								
HWQ	BZ			EP		1045	42.01								
BEIL	SZ			EP		1045	43.32								
FKH	SZ			EP		1045	46.75								

February 20 2019 Hour: 18:23 28.1

Agency: REL Regional

EMSC OT=18:23:28.1 39.63N 26.45E 8Km M=5.1 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1825	43.64								
BEIL	SZ			EP		1825	42.97								
BHL	BZ			EP		1825	42.82								
DQRL	SZ			EP		1825	45.05								
ZAHL	SZ			EP		1825	46.46								
QRWL	SZ			EP		1825	47.05								
FKH	SZ			EP		1825	48.09								
RCY	SZ			EP		1825	48.39								
SHBL	SZ			EP		1825	49.57								

February 21 2019 Hour: 1: 6 52.1

Agency: REL Regional

EMSC OT=01:06:52.1 35.58N 29.43E 40Km M=3.7 EASTERN MEDITERRANEAN SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		1 8	8.40								
BHL	BZ			EP		1 8	7.33								
HWQ	BZ			EP		1 8	10.56								
QRWL	SZ			EP		1 8	11.10								
ZAHL	SZ			EP		1 8	11.10								
BEIL	SZ			EP		1 8	11.74								
SHBL	SZ			EP		1 8	12.84								
RCY	SZ			EP		1 8	12.92								
FKH	SZ			EP		1 8	15.89								

February 21 2019 Hour: 2:19 35.0

Agency: Distant

EMSC OT=02:19:35.0 32.76N 21.72E 10Km M=4.6 NEAR COAST OF LIBYA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ			EP		222	17.99								
RCY	SZ			EP		222	20.75								
HWQ	BZ			EP		222	21.83								
DQRL	SZ			EP		222	17.10								
BEIL	SZ			EP		222	25.32								
SHBL	SZ			EP		222	19.09								

February 21 2019 Hour: 6:34 38.6

Agency: Distant

EMSC OT=06:34:38.6 20.95S 178.80W 611Km M=5.6 FIJI REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		653	13.04								
BEIL	SZ			EP		653	12.52								
BHL	BZ			EP		653	14.01								
FKH	SZ			EP		653	12.58								
QRWL	SZ			EP		653	14.29								
RCY	SZ			EP		653	14.06								
SHBL	SZ			EP		653	14.41								
DQRL	SZ			EP		653	14.81								

February 21 2019 Hour: 12:15 16.2 Lat: 33.33N Lon: 35.05E Depth: 14 Agency: REL Local

Magnitudes: 3.0MC REL

Rms: 0.1 secs

OFFSHORE SOUTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	64	67	EP		1215	26.32	-0.22	55						1.0
DQRL	SZ	64	49	EP		1215	26.73	0.14							1.0
DQRL	SN	64	49	ES		1215	34.34	0.05							1.0
SHBL	SZ	65	88	EP		1215	26.83	0.11	54						1.0
SHBL	SN	65	88	ES		1215	34.46	-0.05							1.0
RCY	SZ	75	75	EP		1215	28.40	0.09							1.0
BHL	BZ	85	41	EP		1215	29.61	-0.08							1.0
HWQ	BZ	134	38	EP		1215	36.88	-0.04							1.0
FKH	SZ	162	51	EP		1215	40.95	0.00							1.0

February 21 2019 Hour: 12:20 20.5 Lat: 33.33N Lon: 35.03E Depth: 14 Agency: REL Local

Magnitudes: 2.8MC REL

Rms: 0.0 secs

OFFSHORE SOUTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	65	50	EP		1220	31.05	-0.01							1.0
DQRL	SN	65	50	ES		1220	38.86	-0.00							1.0
QRWL	SZ	65	68	EP		1220	31.05	-0.02	41						1.0
SHBL	SZ	66	88	EP		1220	31.26	-0.03							1.0
SHBL	SN	66	88	ES		1220	39.27	0.00							1.0
RCY	SZ	77	76	EP		1220	32.92	0.06							1.0
BHL	BZ	86	42	EP		1220	34.13	0.00							1.0

February 21 2019 Hour: 12:22 41.5

Agency: Distant

EMSC OT=12:22:41.5 42.86N 141.95E 40Km M=5.5 HOKKAIDO, JAPAN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1234	33.07								
BHL	BZ			EP		1234	36.60								
FKH	SZ			EP		1234	33.67								
HWQ	BZ			EP		1234	33.50								
QRWL	SZ			EP		1234	38.14								
RCY	SZ			EP		1234	38.31								
SHBL	SZ			EP		1234	39.09								

February 22 2019 Hour: 18:1 0.8

Agency: REL Regional

EMSC OT=18:01:00.8 38.27N 38.77E 3Km M=3.6 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		18 2	6.93								
FKH	SZ			EP		18 2	9.25								
HWQ	BZ			EP		18 2	11.36								
ZAHL	SZ			EP		18 2	17.44								
BHL	BZ			EP		18 2	18.17								
DQRL	SZ			EP		18 2	21.50								
RCY	SZ			EP		18 2	22.17								
QRWL	SZ			EP		18 2	22.31								
SHBL	SZ			EP		18 2	24.50								

February 23 2019 Hour: 2:41 14.7

Agency: REL Regional

EMSC OT=02:41:14.7 37.58N 38.49E 2Km M=3.3 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		242	11.50								
FKH	SZ			EP		242	14.00								
HWQ	BZ			EP		242	15.92								
ZAHL	SZ			EP		242	22.38								
DQRL	SZ			EP		242	27.96								

February 24 2019 Hour: 3:51 51.8 Lat: 33.73N Lon: 35.36E Depth: 0 Agency: REL Local

Magnitudes: 2.9MC 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	20	98	EP		351	54.94	-0.01	56						1.0
DQRL	SN	20	98	ES		351	57.22	-0.07							1.0
BEYL	SZ	20	38	EP		351	55.07	0.06							1.0
BHL	BZ	33	54	EP		351	57.07	-0.10							1.0
QRWL	SZ	36	124	EP		351	57.54	-0.06							1.0
ZAHL	SZ	51	74	EP		351	59.91	-0.04							1.0
ZAHL	SN	51	74	ES		352	6.03	0.04							1.0
RCY	SZ	51	120	EP		352	0.07	0.04							1.0
RCY	SN	51	120	ES		352	6.22	0.09							1.0
SHBL	SZ	55	140	EP		352	0.70	-0.01							1.0
HWQ	BZ	81	41	EP		352	5.25	0.33							0.2
BEIL	SZ	118	40	EP		352	11.39	0.60							0.2

February 24 2019 Hour: 4:29 23.5 Lat: 33.73N Lon: 35.39E Depth: 5 Agency: REL Local

Magnitudes: 2.9MC REL

Rms: 0.4 secs

OFFSHORE CENTRAL LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	17	99	EP		429	26.28	-0.08	53						1.0
DQRL	SN	17	99	ES		429	28.70	0.21							1.0
BEYL	SZ	18	31	EP		429	26.66	0.10							1.0
BHL	BZ	31	51	EP		429	28.38	-0.21							1.0
QRWL	SZ	34	127	EP		429	29.03	0.03							1.0
ZAHL	SZ	48	73	EP		429	31.11	-0.17							1.0
ZAHL	SN	48	73	ES		429	36.96	-0.09							1.0
RCY	SZ	49	122	EP		429	31.39	-0.01							1.0
SHBL	SZ	54	142	EP		429	32.13	-0.04							1.0
HWQ	BZ	80	40	EP		429	38.38	2.02							0.2
FKH	SZ	110	58	EP		429	42.17	0.89							0.2
BEIL	SZ	116	39	EP		429	43.26	1.15							0.2

February 24 2019 Hour: 21:46 5.8 Lat: 33.65N Lon: 35.59E Depth: 6 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	6	342	EP		2146	7.32	0.01	26						1.0
DQRL	SN	6	342	ES		2146	8.45	-0.00							1.0
QRWL	SZ	14	144	EP		2146	8.28	-0.08							1.0

QRWL	SN	14	144	ES		2146	10.30	0.02							1.0
BHL	BZ	29	12	EP		2146	10.48	-0.03							0.2
RCY	SZ	29	127	EP		2146	10.56	0.02							1.0
SHBL	SZ	37	157	EP		2146	11.83	0.03							1.0

February 25 2019 Hour: 23:49 8.4 Lat: 34.11N Lon: 36.41E Depth: 15 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.2 secs

BAALBECK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	47	294	EP		2349	16.54	0.25							1.0
HWQ	BN	47	294	ES		2349	22.04	-0.08							1.0
BEIL	SZ	52	337	EP		2349	17.16	0.10	29						1.0
BEIL	SN	52	337	ES		2349	23.28	-0.17							1.0
ZAHL	SZ	56	240	EP		2349	17.82	0.15							1.0
RCY	SZ	86	218	EP		2349	21.90	-0.25							1.0

February 26 2019 Hour: 9:44 29.0 Lat: 34.30N Lon: 36.54E Depth: 0 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
FKH	SZ	14	241	EP		944	30.89	-0.28	49						1.0
FKH	SN	14	241	ES		944	32.69	-0.11							1.0
BEIL	SZ	42	309	EP		944	35.71	-0.02							1.0
BEIL	SN	42	309	ES		944	40.77	0.04							1.0
HWQ	BZ	55	267	EP		944	37.99	0.20							1.0
RCY	SZ	111	216	EP		944	46.90	0.06							1.0
RCY	SN	111	216	ES		945	0.23	0.18							1.0
QRWL	SZ	115	224	EP		944	47.52	-0.07							1.0

Epicentral Map of Lebanon

FEBRUARY 2019

