

Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

March

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.

March 2 2019 Hour: 0:59 5.1 Lat: 33.67N Lon: 35.82E Depth: 2 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	19	222	EP		059	8.21	0.04							1.0
QRWL	SN	19	222	ES		059	10.39	-0.04							1.0
RCY	SZ	20	175	EP		059	8.34	-0.01	40						1.0
RCY	SN	20	175	ES		059	10.73	-0.00							1.0
ZAHL	SZ	22	17	EP		059	8.56	-0.07							1.0
DQRL	SZ	23	279	EP		059	8.86	-0.02							1.0
BHL	BZ	30	330	EP		059	9.65	-0.29							1.0
BHL	BN	30	330	ES		059	13.71	0.21							1.0
SHBL	SZ	37	191	EP		059	11.16	0.10							1.0
HWQ	BZ	68	10	EP		059	16.16	0.04							1.0
FKH	SZ	84	41	EP		059	18.70	0.04							1.0

March 2 2019 Hour: 3:22 52.0 Agency: Distant

EMSC OT=03:22:52.0 41.93N 146.99E 10Km M=6.0 COAST HOKKAIDO, JAPAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		335	7.11								
FKH	SZ			EP		335	7.71								
RCY	SZ			EP		335	12.14								
SHBL	SZ			EP		335	13.01								
ZAHL	SZ			EP		335	10.46								
HWQ	BZ			EP		335	13.47								
BHL	BZ			EP		335	10.33								

March 3 2019 Hour: 10:45 6.1 Agency: Distant

EMSC OT=10:45:06.1 1.48S 120.19E 10Km M=4.9 SULAWESI, INDONESIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1051	9.48								
BHL	BZ			EP		1051	10.53								
DQRL	SZ			EP		1051	10.86								
HWQ	BZ			EP		1051	9.61								
QRWL	SZ			EP		1051	10.66								
RCY	SZ			EP		1051	10.14								
SHBL	SZ			EP		1051	10.14								
ZAHL	SZ			EP		1051	10.27								

March 4 2019 Hour: 23:12 42.1 Lat: 36.09N Lon: 35.54E Depth: 22 Agency: REL Regional
Magnitudes: 3.5MC REL Rms: 0.2 secs

SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	181	161	EP		2313	8.38	-0.16	96						1.0
BEIL	SN	181	161	ES		2313	27.87	-0.26							1.0
HWQ	BZ	204	170	EP		2313	11.15	-0.30							1.0
HWQ	BN	204	170	ES		2313	33.36	0.17							1.0
FKH	SZ	219	159	EP		2313	13.59	0.28							1.0
FKH	SN	219	159	ES		2313	36.53	0.09							1.0
BHL	BZ	243	178	EP		2313	15.87	-0.32							1.0
ZAHL	SZ	250	173	EP		2313	17.35	0.28							1.0
DQRL	SZ	264	179	EP		2313	18.84	-0.06							1.0
QRWL	SZ	282	177	EP		2313	21.74	0.64							0.2
RCY	SZ	289	175	EP		2313	22.05	0.07							1.0
SHBL	SZ	305	176	EP		2313	24.10	0.16							1.0

March 5 2019 Hour: 14:41 20.6 Lat: 34.25N Lon: 36.41E 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	0	132	EP		1441	20.70	-0.06	47						1.0
BEIL	SZ	39	328	EP		1441	26.83	0.06							1.0
BEIL	SN	39	328	ES		1441	31.31	-0.05							1.0

HWQ	BZ	43	275	EP	1441	27.55	0.13										1.0
HWQ	BN	43	275	ES	1441	32.42	-0.08										1.0
RCY	SZ	99	213	EP	1441	36.48	0.01										1.0
SHBL	SZ	117	212	EP	1441	39.42	-0.02										1.0

March 6 2019 Hour: 0:13 1.2

Agency: Distant

EMSC OT=00:13:01.2 8.56N 126.96E 20Km M=5.9 MINDANAO, PHILIPPINES

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		025	39.91								
DQRL	SZ			EP		025	43.02								
FKH	SZ			EP		025	39.21								
SHBL	SZ			EP		025	42.45								
ZAHL	SZ			EP		025	41.53								
HWQ	BZ			EP		025	39.76								
BHL	BZ			EP		025	41.65								
RCY	SZ			EP		025	41.57								

March 6 2019 Hour: 15:46 11.3

Agency: Distant

EMSC OT=15:46:11.3 32.13S 177.79W 10Km M=6.3 SOUTH OF KERMADEC ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		16	5	57.52							
BHL	BZ			EP		16	5	58.25							

March 6 2019 Hour: 20:19 58.7

Agency: Distant

EMSC OT=20:19:58.7 32.19S 177.69W 10Km M=5.9 SOUTH OF KERMADEC ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2039	52.06								
HWQ	BZ			EP		2039	51.74								

March 6 2019 Hour: 21:32 52.6 Lat: 35.00N Lon: 32.93E Depth: 4 Agency: REL Regional
Magnitudes: 3.6MC 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	278	115	EP		2133	32.41	-0.42							1.0
DQRL	SZ	282	120	EP		2133	33.06	-0.25							1.0
HWQ	BZ	288	105	EP		2133	34.35	0.29	94						1.0
HWQ	BN	288	105	ES		2134	4.90	0.17							1.0
ZAHL	SZ	299	114	EP		2133	35.59	0.07							1.0
QRWL	SZ	300	122	EP		2133	35.53	-0.02							1.0
BEIL	SZ	302	99	EP		2133	35.77	-0.01							1.0
BEIL	SN	302	99	ES		2134	7.57	-0.17							1.0
RCY	SZ	315	121	EP		2133	37.49	0.02							1.0
SHBL	SZ	317	124	EP		2133	38.03	0.28							1.0
FKH	SZ	330	104	EP		2133	39.32	0.04							1.0

March 7 2019 Hour: 16: 2 12.4 Lat: 34.01N Lon: 35.75E Depth: 5 Agency: REL Local
Magnitudes: 2.8MC 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	15	217	EP		16	2	14.87	-0.13	44					1.0
BHL	BN	15	217	ES		16	2	16.98	0.06						1.0
ZAHL	SZ	21	144	EP		16	2	15.89	-0.05						1.0
ZAHL	SN	21	144	ES		16	2	18.56	-0.00						1.0
HWQ	BZ	35	31	EP		16	2	18.13	0.07						1.0
HWQ	BN	35	31	ES		16	2	22.27	0.02						1.0
DQRL	SZ	38	206	EP		16	2	18.63	0.05						0.2
QRWL	SZ	52	187	EP		16	2	20.91	0.09						0.2
RCY	SZ	58	172	EP		16	2	21.75	-0.01						1.0
BEIL	SZ	71	34	EP		16	2	23.81	-0.07						1.0
SHBL	SZ	74	181	EP		16	2	24.40	0.09						1.0

March 7 2019 Hour: 16:25 41.1 Agency: REL Regional

EMSC OT=16:25:41.1 35.57N 31.04E 40Km M=4.3 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1626	39.66								
DQRL	SZ			EP		1626	39.98								
HWQ	BZ			EP		1626	42.69								
QRWL	SZ			EP		1626	43.65								
ZAHL	SZ			EP		1626	43.06								
BEIL	SZ			EP		1626	43.09								
RCY	SZ			EP		1626	44.99								
SHBL	SZ			EP		1626	45.26								
FKH	SZ			EP		1626	47.82								

March 8 2019 Hour: 15: 6 14.1 Agency: Distant

EMSC OT=15:06:14.1 10.43N 126.04E 40Km M=6.0 PHILIPPINE ISLANDS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1518	40.62								
BHL	BZ			EP		1518	43.54								
DQRL	SZ			EP		1518	44.04								
FKH	SZ			EP		1518	40.26								
HWQ	BZ			EP		1518	41.69								
QRWL	SZ			EP		1518	43.75								
RCY	SZ			EP		1518	43.26								
SHBL	SZ			EP		1518	43.83								

March 10 2019 Hour: 8:12 24.6 Agency: Distant

EMSC OT=08:12:24.6 17.93S 178.60W 561Km M=6.2 FIJI REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		830	57.97								
BHL	BZ			EP		830	58.46								
FKH	SZ			EP		830	58.58								
HWQ	BZ			EP		830	57.75								
RCY	SZ			EP		830	59.14								
SHBL	SZ			EP		830	59.50								
ZAHL	SZ			EP		830	58.93								

March 11 2019 Hour: 16:34 29.2 Agency: Distant

EMSC OT=16:34:29.2 1.14N 98.86E 80Km M=5.4 NORTHERN SUMATRA, INDONESIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1645	14.55								
BHL	BZ			EP		1645	15.61								
FKH	SZ			EP		1645	13.00								
RCY	SZ			EP		1645	14.91								
SHBL	SZ			EP		1645	14.94								
HWQ	BZ			EP		1645	15.17								

March 11 2019 Hour: 17:13 26.4 Lat: 33.20N Lon: 35.72E 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
SHBL	SZ	17	7	EP		1713	29.23-0.06		39						1.0
SHBL	SN	17	7	ES		1713	31.39-0.06								1.0
RCY	SZ	35	18	EP		1713	32.10 0.04								1.0
RCY	SN	35	18	ES		1713	36.29 0.01								1.0
QRWL	SZ	39	355	EP		1713	32.77 0.06								1.0
DQRL	SZ	58	346	EP		1713	35.75-0.01								1.0
BHL	BZ	78	355	EP		1713	39.11 0.06								1.0
HWQ	BZ	121	10	EP		1713	45.29-0.47								0.2

March 12 2019 Hour: 1:22 46.4 Lat: 33.63N Lon: 35.10E Depth: 1 Agency: REL Local
 Magnitudes: 2.5MC REL Rms: 0.1 secs

OFFSHORE SOUTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	44	79	EP		122	53.53	-0.05	30						1.0
DQRL	SN	44	79	ES		122	58.90	0.03							1.0
QRWL	SZ	55	99	EP		122	55.17	-0.06							1.0
QRWL	SN	55	99	ES		123	1.62	-0.13							1.0
BHL	BZ	60	59	EP		122	56.11	0.05							1.0
SHBL	SZ	67	117	EP		122	57.29	0.02							1.0
RCY	SZ	70	102	EP		122	57.73	0.06							1.0
RCY	SN	70	102	ES		123	6.10	0.11							1.0
ZAHL	SZ	77	70	EP		122	58.81	-0.04							1.0

March 12 2019 Hour: 3:25 18.8 Agency: Distant

EMSC OT=03:25:18.8 17.98S 177.92W 604Km M=5.0 FIJI REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		343	50.90								
FKH	SZ			EP		343	50.90								
ZAHL	SZ			EP		343	52.38								
HWQ	BZ			EP		343	51.65								
DQRL	SZ			EP		343	53.27								
BHL	BZ			EP		343	52.27								
RCY	SZ			EP		343	53.27								

March 12 2019 Hour: 21:34 28.4 Lat: 33.37N Lon: 35.87E 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
SHBL	SZ	12	258	EP		2134	30.45	0.10	46						1.0
RCY	SZ	14	348	EP		2134	30.69	-0.05							1.0
RCY	SN	14	348	ES		2134	32.50	0.05							1.0
QRWL	SZ	26	319	EP		2134	32.48	-0.15							1.0
QRWL	SN	26	319	ES		2134	35.78	0.04							1.0
DQRL	SZ	46	323	EP		2134	35.86	-0.02							1.0
DQRL	SN	46	323	ES		2134	41.48	0.08							1.0
ZAHL	SZ	54	2	EP		2134	37.28	0.14							1.0
BHL	BZ	62	342	EP		2134	38.19	-0.29							1.0
HWQ	BZ	101	4	EP		2134	44.68	-0.01							1.0
FKH	SZ	109	27	EP		2134	46.07	0.04							1.0
BEIL	SZ	133	13	EP		2134	49.89	0.05							1.0

March 13 2019 Hour: 0:13 47.0 Lat: 35.08N Lon: 33.96E Depth: 34 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	202	129	EP		014	14.87	-0.41							1.0
HWQ	BZ	202	115	EP		014	15.79	0.54							1.0
HWQ	BN	202	115	ES		014	36.05	-0.10							1.0
BEIL	SN	212	106	ES		014	38.11	-0.01							1.0
DQRL	SZ	212	135	EP		014	16.44	-0.01							1.0
BEIL	SZ	212	106	EP		014	16.22	-0.16	52						1.0
ZAHL	SZ	222	127	EP		014	17.77	0.01							1.0
RCY	SZ	246	135	EP		014	20.75	0.06							1.0
RCY	SN	246	135	ES		014	45.71	0.10							1.0
SHBL	SZ	252	139	EP		014	21.48	-0.02							1.0

March 13 2019 Hour: 11:18 56.1 Lat: 33.83N Lon: 36.11E Depth: 9 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
ZAHL	SZ	21	277	EP		1118	59.86	-0.02							1.0
ZAHL	SN	21	277	ES		1119	2.68	-0.00							1.0
RCY	SZ	45	214	EP		1119	3.60	-0.01	49						1.0
QRWL	SZ	51	231	EP		1119	4.57	0.10							1.0
HWQ	BZ	51	343	EP		1119	4.47	-0.09							1.0
HWQ	BN	51	343	ES		1119	10.85	0.03							1.0
DQRL	SZ	52	254	EP		1119	4.66	0.01							1.0
FKH	SZ	53	31	EP		1119	4.88	0.04							1.0
SHBL	SZ	64	212	EP		1119	6.47	-0.06							1.0

March 13 2019 Hour: 17:34 32.5 Lat: 33.75N Lon: 35.70E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC 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	13	249	EP		1734	34.68	0.00							1.0
DQRL	SN	13	249	ES		1734	36.31	0.05							1.0
BHL	BZ	18	345	EP		1734	35.21	-0.22	38						1.0
ZAHL	SZ	21	54	EP		1734	35.88	-0.03							1.0
QRWL	SZ	22	185	EP		1734	36.16	0.01							1.0
RCY	SZ	31	156	EP		1734	37.46	-0.01							1.0
RCY	SN	31	156	ES		1734	41.05	-0.07							1.0
SHBL	SZ	45	175	EP		1734	39.78	0.05							1.0
HWQ	BZ	63	21	EP		1734	42.86	0.17							1.0
FKH	SZ	85	50	EP		1734	46.39	0.06							1.0

March 13 2019 Hour: 20: 9 10.3 Lat: 34.44N Lon: 36.26E Depth: 23 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.1 secs

MINIEH-DINNIEH REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	13	329	EP		20 9	14.58	0.03	25						1.0
BEIL	SN	13	329	ES		20 9	17.67	-0.02							1.0
FKH	SZ	26	147	EP		20 9	15.79	-0.05							1.0
FKH	SN	26	147	ES		20 9	19.94	0.02							1.0
HWQ	BZ	34	238	EP		20 9	16.87	0.05							1.0
BHL	BZ	82	223	EP		20 9	23.35	-0.07							1.0
RCY	SZ	112	201	EP		20 9	28.16	0.31							0.2
SHBL	SZ	130	202	EP		20 9	30.78	0.28							0.2

March 13 2019 Hour: 21:24 9.6 Lat: 33.66N Lon: 35.69E Depth: 14 Agency: REL Local
Magnitudes: 2.3MC 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	292	EP		2124	12.70	0.01							1.0
QRWL	SZ	13	184	EP		2124	12.75	-0.00	22						1.0
QRWL	SN	13	184	ES		2124	15.10	-0.01							1.0
RCY	SZ	23	144	EP		2124	14.02	0.00							1.0
BHL	BZ	27	352	EP		2124	14.58	0.04							0.2
ZAHL	SZ	28	40	EP		2124	14.68	-0.03							1.0
ZAHL	SN	28	40	ES		2124	18.53	0.02							1.0
SHBL	SZ	35	172	EP		2124	15.98	0.19							0.2

March 14 2019 Hour: 7:47 7.0 Lat: 34.02N Lon: 35.75E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.1 secs

KEŠROUAN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	15	215	EP		747	9.48	0.00							1.0
BHL	BN	15	215	ES		747	11.24	-0.07							1.0
ZAHL	SZ	22	145	EP		747	10.44	-0.05							1.0
HWQ	BZ	34	32	EP		747	12.42	-0.09	53						1.0

DQRL	SZ	38	206	EP		747	13.26	0.08								1.0
QRWL	SZ	52	187	EP		747	15.42	-0.03								1.0
QRWL	SN	52	187	ES		747	21.77	0.06								1.0
RCY	SZ	58	172	EP		747	16.39	-0.01								1.0
FKH	SZ	66	67	EP		747	17.35	-0.28								0.2
BEIL	SZ	71	34	EP		747	18.50	0.11								1.0
SHBL	SZ	74	180	EP		747	18.98	0.02								1.0

March 15 2019 Hour: 17:53 32.7

Agency: Distant

EMSC OT=17:53:32.7 27.62S 176.23W 10Km M=5.5 KERMADEC ISLANDS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1813	30.19								
BHL	BZ			EP		1813	31.07								
DQRL	SZ			EP		1813	31.75								
QRWL	SZ			EP		1813	31.54								
RCY	SZ			EP		1813	31.38								
SHBL	SZ			EP		1813	31.54								
ZAHL	SZ			EP		1813	31.18								

March 18 2019 Hour: 15: 8 48.3

Lat: 33.19N

Lon: 36.18E

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
SHBL	SZ	44	293	EP		15 8	55.48	0.05	52						1.0
SHBL	SN	44	293	ES		15 9	0.70	0.01							1.0
RCY	SZ	46	317	EP		15 8	55.83	0.02							1.0
RCY	SN	46	317	ES		15 9	1.35	-0.00							1.0
QRWL	SZ	61	311	EP		15 8	57.95	-0.16							1.0
QRWL	SN	61	311	ES		15 9	5.32	-0.04							1.0
ZAHL	SZ	79	340	EP		15 9	1.03	0.02							1.0
DQRL	SZ	80	315	EP		15 9	1.23	-0.03							1.0
BHL	BZ	93	328	EP		15 9	3.44	0.16							1.0
FKH	SZ	119	10	EP		15 9	7.36	-0.10							1.0
HWQ	BZ	122	350	EP		15 9	8.11	0.07							1.0
BEIL	SZ	150	0	EP		15 9	12.19	0.00							1.0

March 18 2019 Hour: 21:18 29.6

Lat: 34.73N

Lon: 32.71E

Depth: 0

Agency: REL

Regional

Magnitudes: 3.6MC 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	286	108	EP		2119	11.29	0.07							1.0
DQRL	SZ	287	113	EP		2119	11.22	-0.11							1.0
HWQ	BZ	301	99	EP		2119	13.05	-0.09							1.0
HWQ	BN	301	99	ES		2119	45.19	-0.21							1.0
QRWL	SZ	304	115	EP		2119	13.49	0.07							1.0
ZAHL	SZ	308	107	EP		2119	13.79	-0.17							1.0
RCY	SN	319	114	ES		2119	49.32	0.05							1.0
BEIL	SN	319	93	ES		2119	49.32	0.16							1.0
SHBL	SZ	319	118	EP		2119	15.52	0.13							1.0
RCY	SZ	319	114	EP		2119	15.31	-0.06							1.0
BEIL	SZ	319	93	EP		2119	15.26	-0.04	97						1.0
FKH	SZ	344	98	EP		2119	18.64	0.19							1.0

March 18 2019 Hour: 23: 8 30.5

Lat: 33.79N

Lon: 35.74E

Depth: 0

Agency: REL

Local

Magnitudes: 2.8MC 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	14	327	EP		23 8	32.76	-0.02	46						1.0
ZAHL	SZ	15	63	EP		23 8	32.94	-0.01							1.0
DQRL	SZ	18	237	EP		23 8	33.35	-0.09							1.0
QRWL	SZ	28	191	EP		23 8	34.87	-0.10							1.0
QRWL	SN	28	191	ES		23 8	38.57	0.26							1.0
RCY	SZ	34	165	EP		23 8	35.78	-0.23							1.0
SHBL	SZ	50	179	EP		23 8	38.57	0.11							1.0

SHBL	SN	50	179	ES	23	8	44.34	-0.04									1.0
HWQ	BZ	57	20	EP	23	8	39.72	0.08									1.0
BEIL	SZ	93	26	EP	23	8	46.28	0.90									0.2

March 19 2019 Hour: 10:23 41.3 Lat: 34.36N Lon: 36.55E 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
FKH	SZ	18	226	EP		1023	44.20	-0.01	41						1.0
FKH	SN	18	226	ES		1023	46.41	0.06							1.0
BEIL	SZ	39	302	EP		1023	47.76	0.09							1.0
BEIL	SN	39	302	ES		1023	52.33	-0.03							1.0
HWQ	BZ	56	261	EP		1023	50.31	-0.08							1.0
RCY	SZ	116	215	EP		1023	59.97	-0.06							1.0
QRWL	SZ	120	222	EP		1024	0.83	0.10							0.2
SHBL	SZ	134	214	EP		1024	3.03	0.03							1.0

March 19 2019 Hour: 12: 5 53.5 Lat: 34.41N Lon: 36.66E Depth: 2 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
FKH	SZ	30	232	EP		12 5	58.23	-0.08	38						1.0
FKH	SN	30	232	ES		12 6	1.87	-0.01							1.0
BEIL	SZ	46	288	EP		12 6	0.95	-0.02							1.0
BEIL	SN	46	288	ES		12 6	6.45	-0.05							1.0
HWQ	BZ	68	258	EP		12 6	4.56	0.16							1.0
HWQ	BN	68	258	ES		12 6	12.49	0.02							1.0
RCY	SZ	127	217	EP		12 6	13.88	-0.04							1.0
SHBL	SZ	145	216	EP		12 6	16.64	0.02							1.0

March 19 2019 Hour: 14: 6 25.6 Lat: 34.57N Lon: 36.36E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.1 secs

AKKAR REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	16	258	EP		14 6	28.38	0.12	37						1.0
BEIL	SN	16	258	ES		14 6	30.16	-0.04							1.0
FKH	SZ	37	172	EP		14 6	31.41	-0.12							1.0
FKH	SN	37	172	ES		14 6	35.97	0.07							1.0
HWQ	BZ	50	229	EP		14 6	33.63	-0.06							1.0
DQRL	SZ	120	217	EP		14 6	44.99	-0.07							1.0
RCY	SZ	129	202	EP		14 6	46.40	0.02							1.0
SHBL	SZ	147	203	EP		14 6	49.30	0.09							1.0

March 20 2019 Hour: 6:34 28.8 Agency: REL Regional
EMSC OT=06:34:28.8 37.43N 29.44E 11Km M=5.7 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		635	58.39								
HWQ	BZ			EP		635	59.17								
BEIL	SZ			EP		635	59.86								
DQRL	SZ			EP		635	59.86								
QRWL	SZ			EP		636	2.55								
FKH	SZ			EP		636	4.62								
RCY	SZ			EP		636	4.71								
SHBL	SZ			EP		636	4.54								

March 20 2019 Hour: 15:24 0.1 Agency: Distant
EMSC OT=15:24:00.1 15.61S 167.68E 134Km M=6.2 VANUATU

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1542	59.86								
BEIL	SZ			EP		1543	0.32								
BHL	BZ			EP		1543	0.47								
QRWL	SZ			EP		1543	1.23								
RCY	SZ			EP		1543	0.87								
SHBL	SZ			EP		1543	1.44								

DQRL SZ EP 1543 1.39
FKH SZ EP 1542 59.99

March 20 2019 Hour: 17: 4 17.4

Agency: REL Regional

EMSC OT=17:04:17.4 37.38N 29.46E 3Km M=4.1 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		17 5	50.08								
HWQ	BZ			EP		17 5	50.97								
DQRL	SZ			EP		17 5	51.06								
ZAHL	SZ			EP		17 5	52.31								
QRWL	SZ			EP		17 5	52.93								
RCY	SZ			EP		17 5	55.25								
SHBL	SZ			EP		17 5	55.52								
FKH	SZ			EP		17 5	55.39								

March 20 2019 Hour: 17:42 54.6

Agency: REL Regional

EMSC OT=17:42:54.6 37.41N 29.45E 7Km M=4.3 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1744	28.99								
DQRL	SZ			EP		1744	29.80								
ZAHL	SZ			EP		1744	30.56								
QRWL	SZ			EP		1744	30.99								
SHBL	SZ			EP		1744	32.95								

March 20 2019 Hour: 18:41 52.8

Agency: REL Regional

EMSC OT=18:41:52.8 37.30N 29.32E 5Km M=3.8 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1843	24.98								
DQRL	SZ			EP		1843	26.11								
HWQ	BZ			EP		1843	25.69								
BEIL	SZ			EP		1843	27.02								
RCY	SZ			EP		1843	29.98								
SHBL	SZ			EP		1843	29.98								

March 21 2019 Hour: 16:41 11.8

Agency: REL Regional

EMSC OT=16:41:11.8 37.45N 29.42E 8Km M=3.8 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1642	46.21								
DQRL	SZ			EP		1642	46.39								
BEIL	SZ			EP		1642	46.77								
QRWL	SZ			EP		1642	48.25								
RCY	SZ			EP		1642	50.21								
SHBL	SZ			EP		1642	50.39								

March 21 2019 Hour: 19:24 7.0

Agency: Distant

EMSC OT=19:24:07.0 31.53S 177.70W 10Km M=5.1 KERMADEC ISLANDS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1944	2.57								
BHL	BZ			EP		1944	3.54								
DQRL	SZ			EP		1944	3.89								
FKH	SZ			EP		1944	2.28								
HWQ	BZ			EP		1944	2.68								
QRWL	SZ			EP		1944	3.48								
RCY	SZ			EP		1944	3.43								
SHBL	SZ			EP		1944	3.48								
ZAHL	SZ			EP		1944	3.20								

March 23 2019 Hour: 3: 9 4.6

Lat: 33.61N

Lon: 34.53E

Depth: 34

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	97	83	EP		3 9	19.79	0.01	41						1.0
QRWL	SZ	107	93	EP		3 9	21.08	0.06							1.0
QRWL	SN	107	93	ES		3 9	33.17	-0.01							1.0

BHL	BZ	109	72	EP	3	9	21.27	-0.02										1.0
SHBL	SZ	117	104	EP	3	9	22.12	-0.10										1.0
SHBL	SN	117	104	ES	3	9	35.28	0.00										1.0
RCY	SZ	122	95	EP	3	9	22.98	0.08										1.0
ZAHL	SZ	129	77	EP	3	9	23.73	0.01										1.0
HWQ	BZ	151	60	EP	3	9	26.40	-0.05										1.0
BEIL	SZ	185	55	EP	3	9	30.63	0.02										1.0

March 24 2019 Hour: 0:26 12.5

Agency: REL Regional

EMSC OT=00:26:12.5 37.43N 29.45E 6Km M=3.4 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		027	45.16								
HWQ	BZ			EP		027	45.51								
BEIL	SZ			EP		027	46.27								
ZAHL	SZ			EP		027	47.50								
RCY	SZ			EP		027	49.94								
SHBL	SZ			EP		027	49.94								

March 24 2019 Hour: 1:31 59.5

Agency: Distant

EMSC OT=01:31:59.5 1.80S 120.58E 10Km M=5.4 SULAWESI, INDONESIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		144	41.76								
BHL	BZ			EP		144	42.19								
FKH	SZ			EP		144	40.81								
HWQ	BZ			EP		144	41.41								
RCY	SZ			EP		144	43.48								
SHBL	SZ			EP		144	43.40								
ZAHL	SZ			EP		144	43.05								

March 24 2019 Hour: 4:37 36.1

Agency: Distant

EMSC OT=04:37:36.1 1.67N 126.42E 52Km M=6.1 MOLUCCA SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		450	27.43								
BHL	BZ			EP		450	29.27								
DQRL	SZ			EP		450	29.84								
FKH	SZ			EP		450	26.80								
HWQ	BZ			EP		450	28.18								
QRWL	SZ			EP		450	29.44								
RCY	SZ			EP		450	29.04								
SHBL	SZ			EP		450	29.44								
ZAHL	SZ			EP		450	28.81								

March 25 2019 Hour: 10:22 21.9 Lat: 34.44N Lon: 36.84E 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
FKH	SZ	45	241	EP		1022	29.22	0.05	46						1.0
FKH	SE	45	241	ES		1022	34.45	-0.11							1.0
BEIL	SZ	61	281	EP		1022	31.55	-0.19							1.0
BEIL	SN	61	281	ES		1022	39.19	0.15							1.0
HWQ	BZ	84	258	EP		1022	35.43	-0.02							1.0
RCY	SZ	140	222	EP		1022	44.52	0.10							1.0
QRWL	SZ	146	227	EP		1022	45.24	-0.00							1.0
SHBL	SZ	158	220	EP		1022	47.09	0.02							1.0

March 25 2019 Hour: 11:29 25.9

Agency: REL Regional

EMSC OT=11:29:25.9 38.77N 38.06E 7Km M=4.7 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1130	33.98								
FKH	SZ			EP		1130	36.90								
HWQ	BZ			EP		1130	38.01								
BHL	BZ			EP		1130	45.72								
DQRL	SZ			EP		1130	48.03								
QRWL	SZ			EP		1130	51.88								

RCY SZ EP 1130 49.83
 SHBL SZ EP 1130 52.14

March 26 2019 Hour: 11:13 40.2 Lat: 34.40N Lon: 36.79E 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
FKH	SZ	39	244	EP		1113	46.55	-0.02	45						1.0
FKH	SN	39	244	ES		1113	51.28	0.00							1.0
BEIL	SZ	58	286	EP		1113	49.57	-0.01							1.0
BEIL	SN	58	286	ES		1113	56.54	0.03							1.0
HWQ	BZ	79	260	EP		1113	52.96	-0.03							1.0
RCY	SZ	134	222	EP		1114	1.76	-0.06							1.0
QRWL	SZ	140	228	EP		1114	2.56	-0.12							1.0
SHBL	SZ	152	220	EP		1114	4.72	0.20							1.0

March 27 2019 Hour: 7:13 24.4 Lat: 34.04N Lon: 34.56E Depth: 25 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs

OFFSHORE CENTRAL LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	117	117	EP		713	42.71	-0.00							1.0
HWQ	BZ	130	78	EP		713	44.36	-0.06	33						1.0
HWQ	BN	130	78	ES		713	59.23	0.02							1.0
RCY	SZ	132	117	EP		713	44.76	0.09							1.0
RCY	SN	132	117	ES		713	59.64	-0.02							1.0
SHBL	SZ	133	125	EP		713	44.79	-0.04							1.0
BEIL	SZ	159	69	EP		713	48.00	0.02							1.0

March 27 2019 Hour: 11:27 2.2 Agency: REL Regional
EMSC OT=11:27:02.2 37.46N 29.44E 8Km M=4.3 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1128	36.65								
DQRL	SZ			EP		1128	37.20								
BEIL	SZ			EP		1128	37.93								
QRWL	SZ			EP		1128	39.16								
RCY	SZ			EP		1128	40.81								
SHBL	SZ			EP		1128	42.28								
FKH	SZ			EP		1128	41.93								

March 27 2019 Hour: 21:37 23.4 Lat: 34.33N Lon: 34.26E Depth:346 Agency: REL Regional
Magnitudes: 3.5MC REL Rms: 0.1 secs

EASTERN MEDITERRANEAN SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	137	110	EP		2138	8.78	-0.03							1.0
HWQ	BZ	155	92	EP		2138	9.76	0.07							1.0
QRWL	SZ	157	123	EP		2138	9.80	0.04							1.0
ZAHL	SZ	159	109	EP		2138	9.78	-0.10							1.0
RCY	SZ	172	122	EP		2138	10.48	-0.14							1.0
RCY	SN	172	122	ES		2138	45.66	0.09							1.0
SHBL	SZ	175	128	EP		2138	10.77	0.00							1.0
BEIL	SZ	178	82	EP		2138	10.97	0.16	80						1.0
BEIL	SN	178	82	ES		2138	45.82	-0.09							1.0

March 28 2019 Hour: 22: 6 49.0 Agency: Distant
EMSC OT=22:06:49.0 50.52N 159.94E 10Km M=6.1 EAST OF KURIL ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		2219	8.39								
BHL	BZ			EP		2219	12.31								
FKH	SZ			EP		2219	9.44								
HWQ	BZ			EP		2219	9.71								
QRWL	SZ			EP		2219	13.98								
ZAHL	SZ			EP		2219	12.12								
SHBL	SZ			EP		2219	14.95								

March 31 2019 Hour: 11:30 16.3

Agency: REL Regional

EMSC OT=11:30:16.3 37.49N 29.39E 5Km M=5.0 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1131	49.61								
HWQ	BZ			EP		1131	51.16								
DQRL	SZ			EP		1131	50.81								
QRWL	SZ			EP		1131	52.79								
ZAHL	SZ			EP		1131	52.51								
RCY	SZ			EP		1131	54.48								
SHBL	SZ			EP		1131	55.54								

March 31 2019 Hour: 11:45 35.6

Agency: REL Regional

EMSC OT=11:45:35.6 37.49N 29.37E 7Km M=4.1 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1147	8.12								
DQRL	SZ			EP		1147	8.23								
ZAHL	SZ			EP		1147	9.99								
RCY	SZ			EP		1147	12.18								
SHBL	SZ			EP		1147	12.31								

March 31 2019 Hour: 15:47 15.8 Lat: 34.22N Lon: 36.39E Depth: 1 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	4	32	EP		1547	16.56	-0.00	49						1.0
BEIL	SZ	41	333	EP		1547	22.44	0.04							1.0
BEIL	SN	41	333	ES		1547	27.31	0.04							1.0
HWQ	BZ	41	280	EP		1547	22.32	-0.18							1.0
HWQ	BN	41	280	ES		1547	27.46	0.03							1.0
ZAHL	SZ	61	230	EP		1547	25.76	0.07							1.0
BHL	BZ	76	243	EP		1547	28.10	-0.00							1.0
DQRL	SZ	94	233	EP		1547	31.06	-0.00							1.0
RCY	SZ	95	213	EP		1547	31.01	-0.11							1.0
RCY	SN	95	213	ES		1547	42.48	0.05							1.0
QRWL	SZ	99	222	EP		1547	31.79	0.03							1.0
SHBL	SZ	113	212	EP		1547	34.13	0.04							1.0

Epicentral Map of Lebanon

MARCH 2019

