

Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

September

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

September 1 2016 Hour: 8:34 56.5 Lat: 33.52N Lon: 35.70E Depth: 13 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.1 secs

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	3	335	EP		834	58.89	-0.07							1.0
QRWL	SN	3	335	ES		835	0.68	-0.07							1.0
RCY	SZ	13	102	EP		834	59.85	0.09	39						1.0
RCY	SN	13	102	ES		835	2.15	0.00							1.0
DQRL	SZ	24	330	EP		835	1.10	0.06							1.0
DQRL	SN	24	330	ES		835	4.43	0.05							1.0
HWQ	BZ	87	15	EP		835	10.31	-0.07							1.0

September 1 2016 Hour: 15:55 45.5 Lat: 33.79N Lon: 35.76E Depth: 6 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	14	55	EP		1555	48.06	0.01							1.0
BHL	BZ	17	322	EP		1555	48.34	-0.08	46						1.0
DQRL	SZ	20	243	EP		1555	48.97	0.03							1.0
DQRL	SN	20	243	ES		1555	51.49	0.02							1.0
RCY	SZ	33	168	EP		1555	50.89	-0.07							1.0
RCY	SN	33	168	ES		1555	55.00	0.02							1.0
HWQ	BZ	57	17	EP		1555	54.86	0.05							1.0

September 1 2016 Hour: 16:37 58.6 Agency: REL Distant
EMSC OT=16:37:58.6 37.45S 179.24E 26Km M=7.0 OFF E. COAST OF N. ISLAND N.Z

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1657	44.89								
HWQ	BZ			EP		1657	44.62								

September 2 2016 Hour: 10:56 37.3 Lat: 33.78N Lon: 35.76E Depth: 8 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.1 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	15	54	EP		1056	40.09	-0.02							1.0
BHL	BZ	17	325	EP		1056	40.29	-0.08	62						1.0
DQRL	SZ	19	244	EP		1056	40.77	0.03							1.0
DQRL	SN	19	244	ES		1056	43.29	-0.00							1.0
QRWL	SZ	27	195	EP		1056	41.80	-0.08							1.0
QRWL	SN	27	195	ES		1056	45.38	0.12							1.0
RCY	SZ	32	167	EP		1056	42.73	-0.03							1.0
RCY	SN	32	167	ES		1056	46.78	-0.02							1.0
HWQ	BZ	58	18	EP		1056	46.79	0.05	60						1.0
HWQ	BN	58	18	ES		1056	53.78	0.05							1.0

September 2 2016 Hour: 13:50 35.6 Lat: 33.79N Lon: 35.78E Depth: 13 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	52	EP		1350	38.70	-0.01							1.0
BHL	BZ	17	318	EP		1350	39.21	-0.02	32						1.0
BHL	BN	17	318	ES		1350	41.96	0.02							1.0
DQRL	SZ	21	245	EP		1350	39.74	-0.01							1.0
RCY	SZ	33	171	EP		1350	41.35	-0.03							1.0
RCY	SN	33	171	ES		1350	45.72	0.03							1.0
HWQ	SZ	57	16	EP		1350	44.92	0.02							1.0

September 2 2016 Hour: 20:50 50.5 Lat: 34.32N Lon: 36.46E Depth: 26 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.1 secs

BAALBECK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	48	265	EP		2050	58.93	-0.07	39						1.0
HWQ	BN	48	265	ES		2051	5.31	0.01							1.0
BHL	BZ	88	239	EP		2051	4.60	0.05							1.0
DQRL	SZ	107	231	EP		2051	7.37	0.04							1.0
DQRL	SN	107	231	ES		2051	19.71	-0.09							1.0
QRWL	SZ	112	220	EP		2051	8.04	-0.01							1.0
QRWL	SN	112	220	ES		2051	21.11	0.06							1.0

September 2 2016 Hour: 22:43 14.9 Lat: 33.78N Lon: 35.80E Depth: 5 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	12	44	EP		2243	17.13	0.02							1.0
BHL	BZ	19	316	EP		2243	18.06	-0.09	48						1.0
BHL	BE	19	316	ES		2243	20.52	-0.01							1.0
DQRL	SZ	23	248	EP		2243	18.77	0.05							1.0
DQRL	SN	23	248	ES		2243	21.55	0.03							1.0
QRWL	SZ	28	202	EP		2243	19.59	0.02							1.0
RCY	SZ	32	173	EP		2243	20.11	-0.08							1.0
RCY	SN	32	173	ES		2243	24.08	0.01							1.0
HWQ	BZ	57	14	EP		2243	24.21	0.06							1.0

September 3 2016 Hour: 14:31 18.7 Lat: 33.40N Lon: 36.53E Depth: 7 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.0 secs

SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	65	280	EP		1431	29.28	-0.06	50						1.0
RCY	SE	65	280	ES		1431	37.19	-0.01							1.0
DQRL	SZ	95	291	EP		1431	34.22	0.08							1.0
DQRL	SN	95	291	ES		1431	45.56	-0.00							1.0
BHL	BN	99	305	EP		1431	34.70	0.03							1.0
HWQ	BZ	112	331	EP		1431	36.54	-0.04							1.0

September 3 2016 Hour: 16:13 28.2 Lat: 34.59N Lon: 36.16E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.0 secs

AKKAR REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	40	209	EP		1613	34.58	-0.08	52						1.0
HWQ	BN	40	209	ES		1613	39.42	-0.00							1.0
BHL	BE	89	211	EP		1613	42.64	0.01							1.0
DQRL	SZ	112	209	EP		1613	46.41	0.07							1.0
QRWL	SZ	124	201	EP		1613	48.21	0.00							1.0
QRWL	SN	124	201	ES		1614	2.99	0.00							1.0

September 4 2016 Hour: 20:36 37.6 Lat: 33.24N Lon: 34.67E Depth: 28 Agency: REL Local
Magnitudes: 3.1MC 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	98	58	EP		2036	53.27	0.04	59						1.0
DQRL	SN	98	58	ES		2037	4.77	-0.01							1.0
RCY	SZ	112	75	EP		2036	55.13	0.04							1.0
RCY	SN	112	75	ES		2037	8.03	0.01							1.0
BHL	BZ	117	51	EP		2036	55.69	0.00							1.0
BHL	BN	117	51	ES		2037	9.04	-0.02							1.0
HWQ	BZ	164	45	EP		2037	1.59	-0.03							1.0

September 5 2016 Hour: 15:19 2.5

Agency: REL Distant

EMSC OT=15:19:02.5 37.03S 179.07E 30Km M=5.8 OFF E. OF COAST N. ISLAND N.Z

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1538	51.42								
DQRL	SZ			EP		1538	51.94								
QRWL	SZ			EP		1538	52.16								

September 5 2016 Hour: 16: 9 24.1 Lat: 34.03N Lon: 35.94E Depth: 12

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
ZAHL	SZ	20	194	EP		16 9	27.97	-0.03							1.0
ZAHL	SN	20	194	ES		16 9	30.95	0.03							1.0
HWQ	SZ	27	2	EP		16 9	28.93	-0.01							1.0
HWQ	SN	27	2	ES		16 9	32.59	0.04							1.0
BHL	BZ	30	241	EP		16 9	29.43	0.07	48						1.0
BHL	BN	30	241	ES		16 9	33.30	0.02							1.0
DQRL	SZ	50	223	EP		16 9	32.22	-0.17							1.0
RCY	SZ	61	189	EP		16 9	34.01	-0.06							1.0
RCY	SN	61	189	ES		16 9	41.58	0.11							1.0

September 5 2016 Hour: 17: 2 6.0

Agency: REL Distant

EMSC OT=17:02:06.0 37.27S 178.13E 35Km M=5.5 OFF E. OF COAST N. ISLAND N.Z

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1721	48.58								
DQRL	SZ			EP		1721	48.97								

September 6 2016 Hour: 5:27 27.4

Agency: REL Regional

EMSC OT=05:27:27.4 36.28N 28.25E 49Km M=4.3 DODECANESE-TURKEY BORDER REG.

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		528	59.22								
DQRL	SZ			EP		528	59.27								
HWQ	BZ			EP		529	1.31								
RCY	SZ			EP		529	4.22								

September 6 2016 Hour: 5:55 40.0 Lat: 33.87N Lon: 35.84E Depth: 0

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
ZAHL	SZ	5	104	EP		555	40.67	-0.09	25						1.0
ZAHL	SN	5	104	ES		555	41.41	0.05							1.0
BHL	BZ	17	283	EP		555	42.75	-0.03							1.0
BHL	BN	17	283	ES		555	44.88	0.00							1.0
DQRL	SZ	31	234	EP		555	44.95	0.04							1.0
DQRL	SN	31	234	ES		555	48.57	-0.00							1.0
HWQ	SZ	47	12	EP		555	47.50	0.03							1.0

September 6 2016 Hour: 5:56 7.7 Lat: 33.88N Lon: 35.85E Depth: 0

Agency: REL Local

Magnitudes: 2.7MC REL

Rms: 0.0 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	4	123	EP		556	8.40	-0.00							1.0
BHL	BZ	18	279	EP		556	10.54	-0.03	40						1.0
BHL	BN	18	279	ES		556	12.73	0.02							1.0
DQRL	SZ	32	233	EP		556	12.86	0.03							1.0
DQRL	SN	32	233	ES		556	16.63	-0.02							1.0
HWQ	SZ	45	12	EP		556	14.98	0.02							1.0
HWQ	SN	45	12	ES		556	20.34	-0.01							1.0

September 6 2016 Hour: 14:156.3 Lat: 34.05N Lon: 35.71E Depth: 19 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	17	197	EP		14	2	0.68	0.08	48					1.0
BHL	BN	17	197	ES		14	2	3.67	-0.09						1.0
ZAHL	SZ	27	143	EP		14	2	1.77	0.04						1.0
HWQ	BZ	33	41	EP		14	2	2.32	-0.17						1.0
HWQ	BN	33	41	ES		14	2	7.15	0.11						1.0
DQRL	SZ	41	199	EP		14	2	3.61	0.11						1.0
RCY	SZ	63	169	EP		14	2	6.59	-0.10						1.0
RCY	SN	63	169	ES		14	2	14.36	0.02						1.0

September 8 2016 Hour: 10:4437.3 Lat: 33.86N Lon: 35.84E Depth: 0 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.1 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	5	96	EP		1044	38.00	-0.06	31						1.0
BHL	BZ	17	286	EP		1044	40.00	-0.10							1.0
BHL	BN	17	286	ES		1044	42.17	-0.02							1.0
DQRL	SZ	30	235	EP		1044	42.21	0.07							1.0
DQRL	SN	30	235	ES		1044	45.77	0.03							1.0
HWQ	BZ	47	12	EP		1044	44.96	0.05							1.0
HWQ	BN	47	12	ES		1044	50.58	0.03							1.0

September 8 2016 Hour: 15:2714.1 Lat: 33.78N Lon: 35.77E Depth: 9 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.1 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	14	52	EP		1527	16.91	-0.05							1.0
BHL	BZ	17	322	EP		1527	17.29	-0.11	61						1.0
BHL	BN	17	322	ES		1527	19.86	0.03							1.0
DQRL	SZ	20	246	EP		1527	17.85	0.05	65						1.0
RCY	SZ	32	169	EP		1527	19.56	-0.04							1.0
RCY	SN	32	169	ES		1527	23.71	0.05							1.0
HWQ	BZ	58	17	EP		1527	23.57	0.01							1.0
HWQ	BN	58	17	ES		1527	30.62	0.07							1.0

September 9 2016 Hour: 14:5759.0 Lat: 33.78N Lon: 35.77E Depth: 4 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.0 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	14	50	EP		1458	1.41	0.02							1.0
BHL	BZ	18	322	EP		1458	1.87	-0.11	25						1.0
BHL	BN	18	322	ES		1458	4.21	0.01							1.0
DQRL	SZ	20	247	EP		1458	2.36	-0.00							1.0
DQRL	SN	20	247	ES		1458	4.91	0.05							1.0
RCY	SZ	32	169	EP		1458	4.18	0.00							1.0
RCY	SN	32	169	ES		1458	8.00	-0.02							1.0
HWQ	BZ	58	16	EP		1458	8.41	0.05							1.0

September 9 2016 Hour: 14:5826.1 Lat: 33.78N Lon: 35.77E 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	13	51	EP		1458	28.57	-0.04							1.0
BHL	BZ	17	321	EP		1458	29.12	-0.05	36						1.0
BHL	BN	17	321	ES		1458	31.48	0.05							1.0
DQRL	SZ	21	246	EP		1458	29.70	0.05							1.0
DQRL	SN	21	246	ES		1458	32.21	-0.05							1.0
RCY	SZ	32	170	EP		1458	31.40	-0.06							1.0
RCY	SN	32	170	ES		1458	35.48	0.06							1.0
HWQ	BZ	57	16	EP		1458	35.48	0.04							1.0

September 9 2016 Hour: 17:24 21.3

Agency: REL Regional

EMSC OT=17:24:21.3 36.88N 25.56E 179Km M=4.5 DODECANESE ISLANDS, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1726	22.02								
DQRL	SZ			EP		1726	22.33								
HWQ	BZ			EP		1726	24.59								
ZAHL	SZ			EP		1726	25.75								
RCY	SZ			EP		1726	27.35								

September 9 2016 Hour: 22:52 38.3 Lat: 33.82N Lon: 35.82E Depth: 20 Agency: REL Local

Magnitudes: 2.6MC REL

Rms: 0.1 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	8	54	EP		2252	41.94	0.10							1.0
ZAHL	SN	8	54	ES		2252	44.41	-0.06							1.0
BHL	BZ	18	303	EP		2252	42.66	0.04	34						1.0
BHL	BN	18	303	ES		2252	45.85	0.01							1.0
DQRL	SZ	26	242	EP		2252	43.46	-0.07							1.0
QRWL	SZ	32	203	EP		2252	44.31	-0.01							1.0
QRWL	SN	32	203	ES		2252	48.82	0.02							1.0
HWQ	BZ	53	13	EP		2252	47.09	-0.03							1.0

September 10 2016 Hour: 12:27 28.6

Agency: REL Distant

EMSC OT=12:27:28.6 1.06S 31.55E 10Km M=5.7 LAKE VICTORIA REGION, TANZANIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1234	20.80								
HWQ	BZ			EP		1234	25.05								

September 10 2016 Hour: 14:10 44.6 Lat: 33.77N Lon: 35.80E Depth: 12 Agency: REL Local

Magnitudes: 3.1MC 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	318	EP		1410	48.53	-0.06	66						1.0
DQRL	SZ	23	252	EP		1410	48.98	0.11							1.0
DQRL	SN	23	252	ES		1410	52.02	0.01							1.0
QRWL	SZ	27	204	EP		1410	49.30	-0.17							1.0
RCY	SZ	30	174	EP		1410	50.08	0.08							1.0
RCY	SN	30	174	ES		1410	54.00	0.02							1.0
BEYL	SZ	31	292	EP		*1410	49.83	-0.17							0.0
HWQ	BZ	58	13	EP		1410	54.22	-0.05							1.0
HWQ	BN	58	13	ES		1411	1.47	0.06							1.0

September 10 2016 Hour: 14:13 30.0 Lat: 33.78N Lon: 35.78E Depth: 4 Agency: REL Local

Magnitudes: 2.5MC REL

Rms: 0.0 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	14	49	EP		1413	32.44	0.03							1.0
BHL	BZ	18	322	EP		1413	32.99	-0.07	31						1.0
BHL	BN	18	322	ES		1413	35.31	0.00							1.0
DQRL	SZ	21	247	EP		1413	33.53	0.06							1.0
RCY	SZ	32	170	EP		1413	35.20	-0.03							1.0
RCY	SN	32	170	ES		1413	39.07	-0.01							1.0
HWQ	BZ	58	16	EP		1413	39.40	0.02							1.0

September 15 2016 Hour: 11: 8 31.0 Lat: 33.54N Lon: 35.70E Depth: 0 Agency: REL Local

Magnitudes: 2.5MC REL

Rms: 0.0 secs

RACHAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	2	302	EP		11 8	31.44	-0.00							1.0
RCY	SZ	13	110	EP		11 8	33.00	-0.08	31						1.0
RCY	SN	13	110	ES		11 8	34.69	0.04							1.0
SHBL	BZ	21	170	EP		11 8	34.42	0.03							1.0
DQRL	SZ	23	327	EP		11 8	34.61	-0.00							1.0

DQRL SN 23 327 ES 11 8 37.31-0.00 1.0
 ZAHL SZ 39 25 EP 11 8 37.36 0.03 1.0

September 15 2016 Hour: 15:15 34.2 Lat: 33.80N Lon: 35.80E Depth: 13 Agency: REL Local
Magnitudes: 2.8MC 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	49	EP		1515	37.00	-0.01							1.0
BHL	BZ	18	311	EP		1515	37.87	0.02							1.0
DQRL	SZ	24	245	EP		1515	38.59	-0.01	45						1.0
DQRL	SN	24	245	ES		1515	41.87	-0.01							1.0
QRWL	SZ	30	202	EP		1515	39.46	-0.01							1.0
QRWL	SN	30	202	ES		1515	43.42	0.02							1.0

September 16 2016 Hour: 5:12 25.0 Agency: REL Regional
EMSC OT=05:12:25.0 37.20N 36.90E 7Km M=3.9 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		513	13.76								
BHL	BZ			EP		513	20.38								
DQRL	SZ			EP		513	23.00								
QRWL	SZ			EP		513	24.76								
SHBL	BZ			EP		513	26.86								

September 16 2016 Hour: 15:44 57.7 Lat: 33.79N Lon: 35.76E Depth: 2 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	14	57	EP		1545	0.09	0.02							1.0
BHL	BZ	16	324	EP		1545	0.21	-0.12	34						1.0
BHL	BN	16	324	ES		1545	2.29	0.02							1.0
DQRL	SZ	20	242	EP		1545	0.95	0.05							1.0
DQRL	SN	20	242	ES		1545	3.28	0.02							1.0
RCY	SZ	33	167	EP		1545	3.05	-0.05							1.0
RCY	SN	33	167	ES		1545	7.09	0.00							1.0
HWQ	BZ	57	18	EP		1545	6.99	0.06							1.0

September 19 2016 Hour: 10:58 4.7 Lat: 33.55N Lon: 35.71E Depth: 0 Agency: REL Local
Magnitudes: 2.2MC 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	3	259	EP		1058	5.08	-0.06							1.0
RCY	SZ	13	118	EP		1058	6.80	-0.05	21						1.0
DQRL	SZ	21	323	EP		1058	8.18	0.03							1.0
DQRL	SN	21	323	ES		1058	10.71	0.01							1.0
SHBL	BZ	23	172	EP		1058	8.46	0.07							1.0
SHBL	BN	23	172	ES		1058	11.12	-0.00							1.0

September 19 2016 Hour: 10:58 27.9 Lat: 33.55N Lon: 35.72E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	3	265	EP		1058	28.34	-0.09	43						1.0
RCY	SZ	13	118	EP		1058	29.89	-0.04							1.0
DQRL	SZ	22	322	EP		1058	31.45	0.02							1.0
DQRL	SN	22	322	ES		1058	34.09	0.04							1.0
SHBL	BZ	23	173	EP		1058	31.58	0.05							1.0
SHBL	BN	23	173	ES		1058	34.26	0.03							1.0

September 20 2016 Hour: 14: 7 58.5 Lat: 33.78N Lon: 35.77E Depth: 2 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	14	50	EP		14 8	0.78	0.00	39						1.0
BHL	BZ	18	323	EP		14 8	1.36	-0.02							1.0
DQRL	SZ	20	247	EP		14 8	1.78	0.02							1.0
DQRL	SN	20	247	ES		14 8	4.19	-0.00							1.0
RCY	SZ	32	169	EP		14 8	3.57	-0.03							1.0
RCY	SN	32	169	ES		14 8	7.41	0.01							1.0
HWQ	BZ	58	16	EP		14 8	7.84	0.01							1.0

September 20 2016 Hour: 15: 0 21.1 Lat: 33.79N Lon: 35.78E Depth: 8 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	51	EP		15 0	23.67	0.03							1.0
BHL	BZ	17	319	EP		15 0	24.20	-0.06	36						1.0
DQRL	SZ	21	245	EP		15 0	24.88	0.07							1.0
DQRL	SN	21	245	ES		15 0	27.54	-0.01							1.0
RCY	SZ	33	170	EP		15 0	26.54	-0.02							1.0
RCY	SN	33	170	ES		15 0	30.59	-0.01							1.0
HWQ	BZ	57	16	EP		15 0	30.37	-0.00							1.0

September 20 2016 Hour: 16:21 16.3 Agency: REL Distant
EMSC OT=16:21:16.3 30.49N 142.13E 10Km M=6.1 IZU ISLANDS, JAPAN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1633	53.84								
BHL	BZ			EP		1633	55.83								
SHBL	BZ			EP		1633	57.24								

September 21 2016 Hour: 14:25 24.6 Agency: REL Regional
EMSC OT=14:25:24.6 36.90N 34.45E 5Km M=3.5 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1426	10.97								
RCY	SZ			EP		1426	20.61								
SHBL	BZ			EP		1426	21.93								

September 21 2016 Hour: 18: 8 13.6 Lat: 35.07N Lon: 32.00E Depth: 0 Agency: REL Regional
Magnitudes: 4.1MC REL Rms: 0.4 secs

CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	359	110	EP		18 9	3.81	-0.51							1.0
DQRL	SZ	361	114	EP		18 9	4.12	-0.42							1.0
DQRL	SE	361	114	ES		18 9	42.62	0.36							1.0
HWQ	BZ	372	102	EP		18 9	6.43	0.53	179						1.0
HWQ	BN	372	102	ES		18 9	44.71	0.09							1.0
QRWL	SZ	378	115	EP		18 9	6.81	0.15							1.0
ZAHL	SZ	381	109	EP		18 9	6.80	-0.25							1.0
ZAHL	SN	381	109	ES		18 9	46.21	-0.41							1.0
RCY	SZ	393	115	EP		18 9	8.81	0.23							1.0
SHBL	BZ	394	118	EP		18 9	8.89	0.26							1.0

September 22 2016 Hour: 0:51 1.5 Lat: 34.04N Lon: 36.22E Depth: 11 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs

BAALBECK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	36	315	EP		051	7.74	0.01	44						1.0
BHL	BZ	55	254	EP		051	10.54	-0.07							1.0
RCY	SZ	71	211	EP		051	13.11	0.01							1.0
RCY	SN	71	211	ES		051	21.66	-0.00							1.0
DQRL	SZ	71	238	EP		051	13.27	0.09							1.0
DQRL	SN	71	238	ES		051	21.82	0.01							1.0

QRWL SZ 75 222 EP 051 13.63-0.03 1.0
 SHBL BZ 89 210 EP 051 15.84-0.01 1.0

September 22 2016 Hour: 5:34 17.2 Lat: 33.87N Lon: 35.85E Depth: 0 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.1 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	4	113	EP		534	17.79	-0.01	23						1.0
BHL	BZ	18	282	EP		534	19.99	-0.11							1.0
DQRL	SZ	32	234	EP		534	22.22	-0.03							1.0
DQRL	SN	32	234	ES		534	26.12	0.10							1.0
HWQ	BZ	46	11	EP		534	24.52	-0.05							1.0
HWQ	BN	46	11	ES		534	30.16	0.09							1.0

September 22 2016 Hour: 14:39 7.3 Lat: 33.80N Lon: 35.77E Depth: 2 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	13	58	EP		1439	9.43	-0.00							1.0
BHL	BZ	16	318	EP		1439	9.85	-0.06	32						1.0
BHL	BN	16	318	ES		1439	11.87	0.02							1.0
DQRL	SZ	21	241	EP		1439	10.72	0.01							1.0
DQRL	SN	21	241	ES		1439	13.24	0.00							1.0
HWQ	BZ	56	17	EP		1439	16.33	0.02							1.0

September 23 2016 Hour: 15:22 7.2 Lat: 33.79N Lon: 35.78E Depth: 12 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
ZAHL	SZ	12	52	EP		1522	10.04	-0.06							1.0
ZAHL	SN	12	52	ES		1522	12.25	0.02							1.0
BHL	BZ	17	316	EP		1522	10.61	-0.10	27						1.0
DQRL	SZ	22	244	EP		1522	11.29	-0.07							1.0
DQRL	SN	22	244	ES		1522	14.51	0.10							1.0
HWQ	BZ	56	16	EP		1522	16.60	0.11							1.0

September 23 2016 Hour: 22:49 7.1 Lat: 33.79N Lon: 35.79E 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	12	47	EP		2249	9.50	-0.02							1.0
BHL	BZ	18	315	EP		2249	10.34	-0.10	47						1.0
BHL	BN	18	315	ES		2249	12.91	0.02							1.0
DQRL	SZ	23	247	EP		2249	11.06	-0.01							1.0
DQRL	SN	23	247	ES		2249	14.03	0.05							1.0
QRWL	SZ	29	201	EP		2249	11.90	-0.05							1.0
RCY	SZ	32	173	EP		2249	12.57	-0.01							1.0
RCY	SN	32	173	ES		2249	16.64	0.03							1.0
HWQ	BZ	56	14	EP		2249	16.42	0.09							1.0

September 23 2016 Hour: 23:53 9.0 Agency: REL Distant
EMSC OT=22:53:09.0 6.62N 126.57E 52Km M=6.4 MINDANAO, PHILIPPINES

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		23 5	48.03								
HWQ	BZ			EP		23 5	47.93								
RCY	SZ			EP		23 5	48.22								
QRWL	SZ			EP		23 5	48.13								
DQRL	SZ			EP		23 5	48.62								
SHBL	BZ			EP		23 5	49.79								

September 24 2016 Hour: 4: 2 15.2

Agency: REL Distant

EMSC OT=04:02:15.2 32.57S 177.64W 10Km M=5.6 SOUTH OF KERMADEC ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		422	10.81								
HWQ	BZ			EP		422	10.87								
SHBL	BZ			EP		422	11.34								

September 24 2016 Hour: 15:20 23.1 Lat: 33.78N Lon: 35.76E Depth: 3

Agency: REL Local

Magnitudes: 2.8MC REL

Rms: 0.0 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	14	56	EP		1520	25.58	0.03							1.0
BHL	BZ	16	324	EP		1520	25.76	-0.06	43						1.0
DQRL	SZ	19	243	EP		1520	26.39	0.09							1.0
DQRL	SN	19	243	ES		1520	28.67	-0.02							1.0
RCY	SZ	33	167	EP		1520	28.40	-0.05							1.0
RCY	SN	33	167	ES		1520	32.41	-0.00							1.0
HWQ	BZ	57	18	EP		1520	32.39	0.01							1.0

September 24 2016 Hour: 15:30 32.9 Lat: 33.79N Lon: 35.78E Depth: 11

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	13	52	EP		1530	35.79	0.02							1.0
BHL	BZ	17	318	EP		1530	36.23	-0.12							1.0
BHL	BN	17	318	ES		1530	38.92	0.00							1.0
DQRL	SZ	22	245	EP		1530	36.92	0.02	46						1.0
DQRL	SN	22	245	ES		1530	39.95	0.07							1.0
QRWL	SZ	28	199	EP		1530	37.77	-0.08							1.0
RCY	SZ	33	171	EP		1530	38.63	0.06							1.0
RCY	SN	33	171	ES		1530	42.75	-0.03							1.0
HWQ	BZ	57	16	EP		1530	42.27	0.06							1.0

September 24 2016 Hour: 15:33 36.6 Lat: 33.78N Lon: 35.75E Depth: 2

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
ZAHL	SZ	15	54	EP		1533	39.15	0.03							1.0
BHL	BZ	17	327	EP		1533	39.32	-0.03	32						1.0
DQRL	SZ	19	245	EP		1533	39.79	0.12							1.0
DQRL	SN	19	245	ES		1533	41.89	-0.05							1.0
RCY	SZ	32	166	EP		1533	41.77	-0.06							1.0
RCY	SN	32	166	ES		1533	45.71	0.01							1.0
HWQ	BZ	58	18	EP		1533	46.00	-0.02							1.0

September 24 2016 Hour: 19:14 23.0 Lat: 33.82N Lon: 35.31E Depth: 28

Agency: REL Local

Magnitudes: 2.4MC 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	27	118	EP		1914	29.05	-0.03	24						1.0
DQRL	SN	27	118	ES		1914	33.68	0.06							1.0
BHL	BZ	33	73	EP		1914	29.65	-0.10							1.0
ZAHL	SZ	53	85	EP		1914	32.34	0.02							1.0
ZAHL	SE	53	85	ES		1914	39.21	-0.03							1.0
HWQ	BZ	78	49	EP		1914	35.76	0.08							1.0

September 24 2016 Hour: 21: 7 12.6

Agency: REL Distant

EMSC OT=21:07:12.6 18.12S 175.05W 173Km M=6.4 TONGA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		2126	33.95								
BHL	BZ			EP		2126	34.30								
SHBL	BZ			EP		2126	35.08								

September 24 2016 Hour: 21:28 40.9

Agency: REL Distant

EMSC OT=21:28:40.9 19.82S 178.25W 587Km M=6.7 FIJI REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		2147	14.03								
BHL	BZ			EP		2147	14.80								
SHBL	BZ			EP		2147	15.31								

September 25 2016 Hour: 1:10 9.9

Agency: REL Distant

EMSC OT=01:10:09.9 19.71S 177.98W 574Km M=5.3 FIJI REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		128	48.44								
HWQ	BZ			EP		128	46.90								

September 25 2016 Hour: 11:56 11.2 Lat: 33.77N Lon: 35.77E Depth: 0

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
ZAHL	SZ	14	48	EP		1156	13.42	0.01							1.0
BHL	BZ	18	323	EP		1156	13.96	-0.12	30						1.0
DQRL	SZ	20	248	EP		1156	14.47	0.04							1.0
DQRL	SN	20	248	ES		1156	16.87	0.02							1.0
RCY	SZ	31	169	EP		1156	16.23	0.01							1.0
RCY	SN	31	169	ES		1156	19.93	-0.04							1.0
HWQ	BZ	58	16	EP		1156	20.61	0.08							1.0

September 26 2016 Hour: 5:19 58.2

Agency: REL Distant

EMSC OT=05:19:58.2 27.50N 128.54E 45Km M=5.6 RYUKYU ISLANDS, JAPAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		531	46.26								
BHL	BZ			EP		531	48.51								
SHBL	BZ			EP		531	50.02								

September 27 2016 Hour: 9:46 32.2 Lat: 33.79N Lon: 35.78E Depth: 3

Agency: REL Local

Magnitudes: 2.7MC 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	17	318	EP		946	34.91	-0.10	42						1.0
DQRL	SZ	21	244	EP		946	35.59	-0.08							1.0
DQRL	SN	21	244	ES		946	38.35	0.10							1.0
RCY	SZ	33	170	EP		946	37.53	-0.02							1.0
RCY	SN	33	170	ES		946	41.52	0.00							1.0
HWQ	BZ	56	16	EP		946	41.41	0.10							1.0

September 27 2016 Hour: 20:57 8.1

Agency: REL Regional

EMSC OT=20:57:08.1 36.36N 27.61E 90KM M=5.2 DODECANESE-TURKEY BORDER REG.

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEYL	SZ			EP		2058	45.51								
DQRL	SZ			EP		2058	46.81								
BHL	BZ			EP		2058	45.96								
HWQ	BZ			EP		2058	48.53								
QRWL	SZ			EP		2058	48.78								
ZAHL	SZ			EP		2058	49.71								
SHBL	BZ			EP		2058	50.99								
RCY	SZ			EP		2058	50.79								

September 29 2016 Hour: 14:42 36.6 Lat: 33.80N Lon: 35.77E Depth: 14

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	16	316	EP		1442	40.22	-0.01	27						1.0
DQRL	SZ	22	241	EP		1442	40.97	0.04							1.0
DQRL	SN	22	241	ES		1442	44.10	-0.02							1.0
RCY	SZ	34	170	EP		1442	42.67	-0.05							1.0

RCY	SN	34	170	ES	1442	47.25	0.03								1.0
HWQ	SZ	55	17	EP	1442	45.76	0.01								1.0

September 30 2016 Hour: 15:20 4.0 Lat: 33.78N Lon: 35.78E Depth: 0 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	18	319	EP		1520	6.93	0.01	35						1.0
DQRL	SZ	22	247	EP		1520	7.51	0.05							1.0
DQRL	SN	22	247	ES		1520	10.00	-0.04							1.0
RCY	SZ	32	171	EP		1520	9.17	0.03							1.0
RCY	SN	32	171	ES		1520	12.92	-0.03							1.0
HWQ	BZ	57	15	EP		1520	13.16	-0.03							1.0

Epicentral Map of Lebanon

September 2016

