

Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

November

2015

Prepared by
The National Centre for Geophysical Research
Bhannes

*P.o.b. : 165432
Ashrafyeh Beirut 1100-2040*

*Tel : +9614-981885
Fax : +9614-981886
Email : geophys@cnrs.edu.lb*

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.

November 1 2015 Hour: 10:26 8.7 Lat: 33.43N Lon: 35.68E Depth: 0 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

HASBAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	13	1	EP		1026	10.76	-0.02	34						1.0
QRWL	SN	13	1	ES		1026	12.33	-0.01							1.0
RCY	SZ	16	63	EP		1026	11.30	0.01							1.0
DQRL	SZ	32	342	EP		1026	13.87	0.00							1.0
DQRL	SN	32	342	ES		1026	17.73	0.01							1.0
BHL	BZ	53	357	EP		1026	17.16	0.00							1.0

November 1 2015 Hour: 11:21 32.4 Lat: 33.79N Lon: 35.77E Depth: 8 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
ZAHL	SZ	13	56	EP		1121	34.97	-0.01							1.0
BHL	BZ	16	319	EP		1121	35.34	-0.09	42						1.0
DQRL	SZ	21	242	EP		1121	36.13	0.03							1.0
DQRL	SN	21	242	ES		1121	38.91	0.04							1.0
RCY	SZ	34	170	EP		1121	37.88	-0.14							1.0
RCY	SN	34	170	ES		1121	42.28	0.08							1.0
HWQ	SZ	56	17	EP		1121	41.65	0.10							1.0

November 2 2015 Hour: 3:4 7.5 Agency: REL Distant

EMSC OT=03:04:07.5 18.22S 177.82W 609Km M=5.6 FIJI REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ			EP		322	41.56								
BHL	BZ			EP		322	41.56								
RCY	SZ			EP		322	41.87								
DQRL	SZ			EP		322	42.26								

November 2 2015 Hour: 6:27 23.3 Lat: 34.42N Lon: 36.18E Depth: 9 Agency: REL Local
Magnitudes: 3.2MC REL Rms: 0.1 secs

AKKAR REGION

Earthquake was felt

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	26	234	EP		627	27.87	-0.01	75						1.0
HWQ	BN	26	234	ES		627	31.21	-0.05							1.0
BHL	BZ	75	220	EP		627	35.37	-0.08							1.0
BHL	BN	75	220	ES		627	44.52	0.08							1.0
DQRL	SZ	97	216	EP		627	38.91	0.11							1.0
QRWL	SZ	107	205	EP		627	40.36	0.10							1.0
RCY	SZ	107	197	EP		627	40.37	0.06							1.0
RCY	SN	107	197	ES		627	52.83	-0.08							1.0

November 2 2015 Hour: 7:53 45.9 Lat: 33.89N Lon: 35.85E Depth: 0 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	5	137	EP		753	46.67	0.00							1.0
BHL	BZ	18	276	EP		753	48.83	-0.04	35						1.0
BHL	BN	18	276	ES		753	51.09	0.01							1.0
DQRL	SZ	33	232	EP		753	51.26	0.03							1.0
RCY	SZ	43	182	EP		753	52.86	-0.05							1.0
RCY	SN	43	182	ES		753	58.12	0.02							1.0
HWQ	SZ	44	11	EP		753	53.04	0.02							1.0

November 2 2015 Hour: 14:14 24.3 Lat: 33.82N Lon: 35.76E Depth: 0 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.0 secs

BAABDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	12	71	EP		1414	26.26	-0.00							1.0
BHL	BZ	14	312	EP		1414	26.49	-0.03	27						1.0
BHL	BN	14	312	ES		1414	28.15	0.01							1.0
DQRL	SZ	22	234	EP		1414	27.92	0.03							1.0
DQRL	SN	22	234	ES		1414	30.52	-0.01							1.0
HWQ	SZ	53	18	EP		1414	32.92	0.00							1.0

November 2 2015 Hour: 16:54 21.0 Lat: 33.79N Lon: 35.77E Depth: 9 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	55	EP		1654	23.75	0.00							1.0
BHL	BZ	16	320	EP		1654	24.14	-0.02	31						1.0
DQRL	SZ	21	243	EP		1654	24.78	0.03							1.0
DQRL	SE	21	243	ES		1654	27.51	-0.01							1.0
RCY	SZ	33	169	EP		1654	26.62	-0.04							1.0
RCY	SN	33	169	ES		1654	30.85	0.02							1.0
HWQ	SZ	57	17	EP		1654	30.30	0.01							1.0

November 3 2015 Hour: 10:54 49.6 Lat: 33.78N Lon: 35.76E Depth: 8 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	323	EP		1054	52.70	-0.01	39						1.0
DQRL	SZ	20	244	EP		1054	53.24	0.07							1.0
DQRL	SN	20	244	ES		1054	55.80	-0.02							1.0
QRWL	SZ	27	196	EP		1054	54.18	-0.09							1.0
QRWL	SE	27	196	ES		1054	57.75	0.02							1.0
RCY	SZ	33	168	EP		1054	55.13	0.03							1.0
HWQ	SZ	57	17	EP		1054	58.97	0.00							1.0

November 3 2015 Hour: 16:48 29.8 Lat: 33.79N Lon: 35.76E Depth: 2 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.1 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	14	57	EP		1648	32.04	-0.11							1.0
ZAHL	SN	14	57	ES		1648	33.92	0.06							1.0
BHL	BZ	16	323	EP		1648	32.41	-0.07	24						1.0
DQRL	SZ	20	242	EP		1648	33.05	-0.03							1.0
DQRL	SN	20	242	ES		1648	35.54	0.06							1.0
HWQ	SZ	57	18	EP		1648	39.14	0.10							1.0

November 4 2015 Hour: 1:56 47.5 Lat: 33.57N Lon: 35.51E Depth: 9 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.0 secs

JEZZINE REGION

Earthquake was felt

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	16	19	EP		156	50.50	0.02	68						1.0
DQRL	SN	16	19	ES		156	52.72	-0.01							1.0
RCY	SZ	31	105	EP		156	52.73	-0.00							1.0
RCY	SN	31	105	ES		156	56.64	0.00							1.0
BEYL	SZ	33	357	EP		156	53.09	0.05							0.2
BHL	BZ	39	19	EP		156	53.96	-0.02							1.0
BHL	BN	39	19	ES		156	58.82	0.01							1.0
HWQ	SZ	88	27	EP		157	1.72	0.00							1.0

November 4 2015 Hour: 4:40 32.1 Lat: 33.57N Lon: 35.51E Depth: 5 Agency: REL Local
Magnitudes: 3.2MC REL Rms: 0.1 secs

JEZZINE REGION

Earthquake was felt

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	16	19	EP		440	34.90	0.04	82						1.0
DQRL	SE	16	19	ES		440	36.95	0.01							1.0
RCY	SZ	31	105	EP		440	37.12	-0.04							1.0
RCY	SN	31	105	ES		440	40.95	0.01							1.0
BEYL	SZ	34	357	EP		440	37.69	0.12							0.2
BHL	BZ	39	19	EP		440	38.36	-0.14							1.0
BHL	BN	39	19	ES		440	43.25	-0.02							1.0
ZAHL	SZ	47	47	EP		440	39.76	0.04							1.0
HWQ	SZ	88	27	EP		440	46.42	0.09							1.0

November 4 2015 Hour: 14:41 6.8 Lat: 33.59N Lon: 35.56E Depth: 6 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs

JEZZINE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	13	5	EP		1441	9.20	-0.00	49						1.0
DQRL	SE	13	5	ES		1441	10.96	0.01							1.0
RCY	SZ	28	112	EP		1441	11.46	-0.03							1.0
RCY	SN	28	112	ES		1441	14.93	-0.00							1.0
BHL	BZ	36	14	EP		1441	12.65	-0.08							1.0
ZAHL	SZ	42	46	EP		1441	13.83	0.06							1.0
HWQ	SZ	84	25	EP		1441	20.48	0.02							1.0

November 4 2015 Hour: 16:48 0.7 Lat: 33.79N Lon: 35.76E Depth: 0 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	56	EP		1648	2.96	-0.00							1.0
ZAHL	SN	14	56	ES		1648	4.61	-0.01							1.0
BHL	BZ	16	322	EP		1648	3.33	-0.02	37						1.0
BHL	BN	16	322	ES		1648	5.29	-0.01							1.0
DQRL	SZ	20	243	EP		1648	3.94	0.01							1.0
HWQ	SZ	57	17	EP		1648	9.95	0.04							1.0

November 5 2015 Hour: 1:13 56.6 Lat: 33.96N Lon: 35.01E Depth: 25 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs

OFFSHORE CENTRAL LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	59	118	EP		114	6.58	0.01	45						1.0
DQRL	SN	59	118	ES		114	14.00	0.03							1.0
BHL	BZ	60	96	EP		114	6.64	-0.06							1.0
RCY	SZ	92	123	EP		114	11.33	0.02							1.0
RCY	SN	92	123	ES		114	22.21	-0.02							1.0
HWQ	SZ	94	67	EP		114	11.52	0.03							1.0

November 6 2015 Hour: 17:50 25.7 Lat: 34.12N Lon: 36.26E Depth: 15 Agency: REL Local
Magnitudes: 3.9MC REL Rms: 0.0 secs

BAALBECK REGION

Earthquake was felt

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	34	300	EP		1750	31.79	0.06							1.0
HWQ	BN	34	300	ES		1750	36.18	-0.02							1.0
ZAHL	SZ	46	230	EP		1750	33.43	-0.02							1.0
BHL	BZ	61	247	EP		1750	35.61	-0.12	198						1.0
BHL	BN	61	247	ES		1750	43.13	-0.02							1.0
BEYL	SZ	77	249	EP		1750	37.92	0.03							1.0
DQRL	SZ	79	234	EP		1750	38.41	0.07							1.0
DQRL	SN	79	234	ES		1750	47.73	0.04							1.0
RCY	SZ	80	210	EP		1750	38.47	-0.03							1.0

RCY SN 80 210 ES 1750 47.98 0.01 1.0

November 7 2015 Hour: 11:9 32.7 Lat: 33.49N Lon: 35.66E Depth: 4 Agency: REL Local
Magnitudes: 2.3MC 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	7	19	EP		11	9	34.04	-0.01	22					1.0
QRWL	SN	7	19	ES		11	9	35.03	-0.01						1.0
RCY	SZ	16	88	EP		11	9	35.52	0.01						1.0
DQRL	SZ	25	341	EP		11	9	36.86	0.00						1.0
DQRL	SN	25	341	ES		11	9	39.93	0.01						1.0

November 8 2015 Hour: 9:34 57.8 Agency: REL Distant
EMSC OT=09:34:57.8 0.76N 98.90E 80Km M=5.8 NIAS REGION, INDONESIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		945	45.45								
ZAHL	SZ			EP		945	45.81								
HWQ	BZ			EP		945	45.81								
QRWL	SZ			EP		945	45.93								
BHL	BZ			EP		945	46.65								
DQRL	SZ			EP		945	47.13								

November 8 2015 Hour: 10:5 12.2 Lat: 33.44N Lon: 35.68E Depth: 0 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.0 secs

HASBAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	12	359	EP		10	5	14.03	-0.06	27					1.0
QRWL	SN	12	359	ES		10	5	15.46	-0.03						1.0
RCY	SZ	15	67	EP		10	5	14.73	0.04						1.0
DQRL	SZ	31	340	EP		10	5	17.22	0.00						1.0
DQRL	SN	31	340	ES		10	5	20.99	0.07						1.0
BHL	BZ	51	357	EP		10	5	20.45	-0.03						1.0

November 8 2015 Hour: 14:47 45.7 Lat: 33.80N Lon: 35.77E Depth: 13 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	12	59	EP		1447	48.72	-0.05							1.0
ZAHL	SN	12	59	ES		1447	51.03	0.02							1.0
BHL	BZ	16	316	EP		1447	49.17	0.01	37						1.0
DQRL	SZ	22	241	EP		1447	49.87	-0.02							1.0
DQRL	SN	22	241	ES		1447	52.96	0.00							1.0
RCY	SZ	34	170	EP		1447	51.75	0.02							1.0
HWQ	SZ	55	17	EP		1447	54.94	0.01							1.0

November 8 2015 Hour: 15:12 29.7 Lat: 33.80N Lon: 35.78E Depth: 17 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	12	58	EP		1512	33.21	-0.00							1.0
BHL	BZ	16	315	EP		1512	33.57	-0.00	28						1.0
DQRL	SZ	22	241	EP		1512	34.25	0.02							1.0
DQRL	SN	22	241	ES		1512	37.55	-0.01							1.0
RCY	SZ	34	171	EP		1512	35.87	-0.04							1.0
RCY	SN	34	171	ES		1512	40.50	0.02							1.0
HWQ	SZ	55	17	EP		1512	38.99	0.11							0.2

November 8 2015 Hour: 15:26 32.0 Lat: 33.31N Lon: 35.63E Depth: 0 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.1 secs

MARJAAYOUN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	28	44	EP		1526	36.58	0.04							1.0
RCY	SE	28	44	ES		1526	39.83	-0.06							1.0
DQRL	SZ	44	353	EP		1526	38.95	-0.13	60						1.0

DQRL	SN	44	353	ES	1526	44.35	0.04										1.0
BHL	BZ	66	2	EP	1526	42.54	-0.04										1.0
HWQ	SZ	111	15	EP	1526	50.05	0.14										1.0

November 9 2015 Hour: 10:10 59.9 Lat: 33.86N Lon: 35.85E Depth: 3 Agency: REL Local
Magnitudes: 2.9MC 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	4	99	EP		1011	0.83	-0.01							1.0
BHL	BZ	18	284	EP		1011	2.90	-0.03	52						1.0
DQRL	SZ	31	236	EP		1011	4.84	-0.09							1.0
DQRL	SN	31	236	ES		1011	8.75	0.09							1.0
QRWL	SZ	38	203	EP		1011	6.01	-0.08							1.0
RCY	SZ	41	181	EP		1011	6.55	0.05							1.0
RCY	SN	41	181	ES		1011	11.41	0.02							1.0
HWQ	SZ	47	11	EP		1011	7.55	0.05							1.0

November 9 2015 Hour: 16:4 37.3 Lat: 33.80N Lon: 35.76E Depth: 13 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	13	59	EP		16 4	40.39	-0.02							1.0
BHL	BZ	16	319	EP		16 4	40.72	0.03	26						1.0
DQRL	SZ	21	241	EP		16 4	41.34	0.02							1.0
DQRL	SN	21	241	ES		16 4	44.27	-0.03							1.0
RCY	SZ	34	169	EP		16 4	43.23	-0.01							1.0
RCY	SN	34	169	ES		16 4	47.66	0.02							1.0
HWQ	SZ	56	17	EP		16 4	46.58	-0.01							1.0

November 11 2015 Hour: 0:5 42.8 Lat: 33.79N Lon: 35.80E Depth: 7 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	11	46	EP		0 5	45.15	0.03							1.0
ZAHL	SN	11	46	ES		0 5	46.83	0.01							1.0
BHL	BZ	19	313	EP		0 5	46.07	-0.07	36						1.0
DQRL	SZ	23	246	EP		0 5	46.79	-0.05							1.0
DQRL	SN	23	246	ES		0 5	49.83	0.02							1.0
BEYL	SZ	30	288	EP		0 5	47.88	0.07							1.0
RCY	SZ	33	174	EP		0 5	48.27	-0.03							1.0
HWQ	SZ	56	14	EP		0 5	51.93	-0.02							1.0

November 11 2015 Hour: 8:49 39.2 Lat: 33.87N Lon: 35.84E Depth: 0 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	4	109	EP		849	39.82	-0.05							1.0
BHL	BZ	18	282	EP		849	41.98	-0.06	44						1.0
BHL	BN	18	282	ES		849	44.17	0.01							1.0
DQRL	SZ	31	234	EP		849	44.21	0.03							1.0
QRWL	SZ	39	203	EP		849	45.37	-0.04							1.0
RCY	SZ	42	181	EP		849	45.91	0.06							1.0
RCY	SN	42	181	ES		849	50.82	0.01							1.0
HWQ	SZ	46	12	EP		849	46.66	0.04							1.0
HWQ	BN	46	12	ES		849	52.14	0.00							1.0

November 11 2015 Hour: 9:42 55.1 Lat: 33.38N Lon: 35.23E Depth: 41 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs

SAIDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	46	66	EP		943	4.29	-0.01							1.0
DQRL	SZ	48	41	EP		943	4.55	0.02							1.0
DQRL	SN	48	41	ES		943	11.49	-0.01							1.0
RCY	SZ	58	77	EP		943	5.66	-0.01	36						1.0

RCY	SN	58	77	ES		943	13.49	0.01										1.0
HWQ	SZ	120	33	EP		943	13.11	-0.04										0.2

November 11 2015 Hour: 11:45 22.9 Agency: REL Distant
EMSC OT=11:45:22.9 8.82S 110.21E 69Km M=5.5 JAVA, INDONESIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		1157	36.66								
RCY	SZ			EP		1157	36.99								
BHL	BZ			EP		1157	37.53								

November 11 2015 Hour: 15:6 4.5 Lat: 33.79N Lon: 35.77E 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
ZAHL	SZ	13	53	EP		15	6	6.52-0.07							1.0
ZAHL	SN	13	53	ES		15	6	8.20	0.03						1.0
BHL	BZ	17	320	EP		15	6	7.18-0.03	35						1.0
DQRL	SZ	21	245	EP		15	6	7.84	0.04						1.0
DQRL	SN	21	245	ES		15	6	10.27-0.01							1.0
HWQ	SZ	57	16	EP		15	6	13.68	0.05						1.0

November 12 2015 Hour: 0:4 13.1 Lat: 34.90N Lon: 36.48E Depth: 3 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
HWQ	SZ	85	215	EP		0	4	26.95	0.07	50					1.0
HWQ	SN	85	215	ES		0	4	37.06	0.01						1.0
BHL	BZ	135	215	EP		0	4	34.53-0.05							1.0
DQRL	SZ	157	213	EP		0	4	37.83-0.09							1.0
DQRL	SN	157	213	ES		0	4	56.27	0.01						1.0
RCY	SZ	167	201	EP		0	4	39.29-0.11							1.0
SHBL	BZ	186	202	EP		0	4	42.12	0.16						1.0

November 12 2015 Hour: 16:12 31.8 Lat: 33.39N Lon: 35.67E Depth: 13 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.0 secs

HASBAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	8	124	EP		1612	34.52	0.03							1.0
RCY	SZ	19	52	EP		1612	35.67-0.04		51						1.0
RCY	SN	19	52	ES		1612	38.60	0.01							1.0
DQRL	SZ	36	345	EP		1612	38.02-0.07								1.0
DQRL	SE	36	345	ES		1612	42.76	0.03							1.0
BHL	BZ	57	358	EP		1612	41.33	0.06							1.0
HWQ	SZ	102	14	EP		1612	47.83-0.03								1.0

November 13 2015 Hour: 9:58 5.3 Lat: 33.43N Lon: 35.67E Depth: 7 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

HASBAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	11	144	EP		958	7.60-0.01								1.0
SHBL	BN	11	144	ES		958	9.33	0.02							1.0
QRWL	SZ	13	3	EP		958	7.73-0.09								1.0
RCY	SZ	17	64	EP		958	8.40	0.02	32						1.0
DQRL	SZ	32	343	EP		958	10.68	0.01							1.0
DQRL	SE	32	343	ES		958	14.67	0.04							1.0

November 13 2015 Hour: 10:28 32.9 Lat: 33.48N Lon: 35.69E Depth: 2 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.1 secs

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	8	358	EP		1028	34.29-0.05								1.0
RCY	SZ	14	81	EP		1028	35.36	0.04	47						1.0
SHBL	BZ	15	159	EP		1028	35.49	0.01							1.0
SHBL	BN	15	159	ES		1028	37.36-0.01								1.0

DQRL	SZ	28	337	EP		1028	37.44	0.02									1.0
DQRL	SN	28	337	ES		1028	40.77	0.03									1.0
HWQ	SZ	92	15	EP		1028	47.16	-0.65									0.2

November 13 2015 Hour: 10:45 1.5 Lat: 33.78N Lon: 35.79E 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	13	48	EP		1045	3.89	-0.01							1.0
BHL	BZ	18	318	EP		1045	4.64	-0.06	45						1.0
BHL	BN	18	318	ES		1045	7.08	0.01							1.0
DQRL	SZ	22	247	EP		1045	5.26	0.03							1.0
DQRL	SN	22	247	ES		1045	7.99	0.01							1.0
QRWL	SZ	28	200	EP		1045	6.11	-0.04							1.0
RCY	SZ	32	172	EP		1045	6.82	-0.02							1.0
RCY	SN	32	172	ES		1045	10.82	0.03							1.0
HWQ	SZ	57	15	EP		1045	10.83	0.05							1.0

November 13 2015 Hour: 20:51 35.2 Agency: Distant

EMSC OT=20:51:35.2 30.95N 129.00E 10Km M=6.7 KYUSHU, JAPAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		21	3	23.39							
BHL	BZ			EP		21	3	24.72							
DQRL	SZ			EP		21	3	24.99							
SHBL	BZ			EP		21	3	26.45							

November 14 2015 Hour: 11:22 15.2 Lat: 33.81N Lon: 35.74E Depth: 13 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs

BAABDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	13	326	EP		1122	18.31	-0.05	37						1.0
BHL	BN	13	326	ES		1122	20.70	0.02							1.0
DQRL	SZ	19	234	EP		1122	19.04	0.01							1.0
RCY	SZ	36	165	EP		1122	21.41	-0.01							1.0
RCY	SE	36	165	ES		1122	26.02	0.01							1.0
HWQ	SZ	56	20	EP		1122	24.51	0.01							1.0

November 14 2015 Hour: 17:9 35.7 Agency: REL Regional

EMSC OT=17:09:35.7 34.85N 32.14E 10Km M=3.5 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1710	27.46								
SHBL	BZ			EP		1710	28.92								
DQRL	SZ			EP		1710	29.27								

November 15 2015 Hour: 10:27 53.0 Lat: 33.40N Lon: 35.70E Depth: 16 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

HASBAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	7	145	EP		1027	56.07	0.02							1.0
SHBL	BN	7	145	ES		1027	58.31	-0.01							1.0
RCY	SZ	17	49	EP		1027	56.87	-0.00	36						1.0
DQRL	SZ	36	340	EP		1027	59.35	-0.02							1.0
DQRL	SN	36	340	ES		1028	4.10	0.01							1.0
BHL	BZ	56	356	EP		1028	2.28	0.00							1.0

November 16 2015 Hour: 10:44 1.8 Lat: 34.08N Lon: 35.67E Depth: 0 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.1 secs

JBEIL REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	20	184	EP		1044	5.02	0.00	44						1.0
BHL	BE	20	184	ES		1044	7.27	-0.10							1.0
HWQ	SZ	34	49	EP		1044	7.19	-0.07							1.0
HWQ	SE	34	49	ES		1044	11.30	0.02							1.0
DQRL	SZ	43	192	EP		1044	8.76	0.04							1.0

RCY SZ 67 167 EP 1044 12.70 0.11 1.0

November 16 2015 Hour: 11:10 29.5 Lat: 34.61N Lon: 36.81E 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
HWQ	SZ	88	245	EP		1110	43.70	0.06	50						1.0
HWQ	SN	88	245	ES		1110	54.09	-0.03							1.0
BHL	BZ	132	234	EP		1110	50.64	-0.18							1.0
DQRL	SZ	152	229	EP		1110	54.01	0.26							1.0
RCY	SZ	153	216	EP		1110	53.75	-0.13							1.0
RCY	SN	153	216	ES		1111	11.97	0.03							1.0

November 16 2015 Hour: 13:37 51.2 Lat: 33.87N Lon: 35.84E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC 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	4	102	EP		1337	51.89	-0.03							1.0
ZAHL	SN	4	102	ES		1337	52.41	-0.03							1.0
BHL	BZ	18	284	EP		1337	54.02	-0.07	52						1.0
BHL	BN	18	284	ES		1337	56.28	0.06							1.0
DQRL	SZ	31	235	EP		1337	56.07	-0.11							1.0
RCY	SZ	41	181	EP		1337	57.89	0.07							1.0
RCY	SN	41	181	ES		1338	2.76	0.05							1.0
HWQ	SZ	47	12	EP		1337	58.83	0.07							1.0

November 16 2015 Hour: 14:17 9.1 Lat: 33.46N Lon: 35.69E Depth: 5 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs

HASBAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	14	159	EP		1417	11.61	0.03							1.0
SHBL	BN	14	159	ES		1417	13.38	-0.01							1.0
RCY	SZ	14	74	EP		1417	11.61	-0.01	39						1.0
DQRL	SZ	29	337	EP		1417	13.88	-0.07							1.0
DQRL	SN	29	337	ES		1417	17.55	0.03							1.0
BHL	BZ	49	356	EP		1417	17.15	0.04							1.0
HWQ	SZ	94	15	EP		1417	24.24	0.00							1.0

November 16 2015 Hour: 16:49 14.6 Agency: REL Distant

EMSC OT=16:49:14.6 48.25N 154.34E 40Km M=5.9 KURIL ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		17	1	25.35							
BHL	BZ			EP		17	1	28.16							
SHBL	BZ			EP		17	1	30.31							

November 17 2015 Hour: 7:10 8.8 Agency: REL Distant

EMSC OT=07:10:08.8 38.76N 20.45E 10Km M=6.5 GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		713	14.44								
HWQ	BZ			EP		713	15.28								
SHBL	BZ			EP		713	15.75								

November 17 2015 Hour: 15:34 54.1 Lat: 33.79N Lon: 35.78E Depth: 5 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.0 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	318	EP		1534	57.07	-0.00	22						1.0
DQRL	SZ	21	244	EP		1534	57.71	-0.02							1.0
DQRL	SN	21	244	ES		1535	0.39	0.01							1.0
RCY	SZ	33	170	EP		1534	59.59	0.01							1.0
RCY	SN	33	170	ES		1535	3.59	-0.01							1.0
HWQ	SZ	56	16	EP		1535	3.30	0.00							1.0

November 17 2015 Hour: 17:29 36.2

Agency: REL Distant

EMSC OT=17:29:36.2 40.35N 73.26E 15Km M=5.5 KYRGYZSTAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1735	55.42								
HWQ	SZ			EP		1735	52.16								

November 18 2015 Hour: 5:44 31.3 Lat: 33.41N Lon: 35.69E

Depth: 17 Agency: REL Local

Magnitudes: 2.5MC REL

Rms: 0.0 secs

HASBAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	8	144	EP		544	34.56	-0.02	28						1.0
SHBL	BN	8	144	ES		544	37.03	0.01							1.0
RCY	SZ	17	53	EP		544	35.29	0.00							1.0
DQRL	SZ	35	341	EP		544	37.59	0.02							1.0
DQRL	SN	35	341	ES		544	42.23	-0.01							1.0

November 18 2015 Hour: 6:46 23.8 Lat: 33.82N Lon: 35.71E

Depth: 32 Agency: REL Local

Magnitudes: 2.7MC REL

Rms: 0.0 secs

BAABDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	10	329	EP		646	29.22	-0.00	39						1.0
DQRL	SZ	19	225	EP		646	29.73	0.02							1.0
DQRL	SN	19	225	ES		646	34.05	-0.01							1.0
QRWL	SZ	31	185	EP		646	30.77	-0.02							1.0
RCY	SZ	38	162	EP		646	31.65	0.00							1.0
RCY	SE	38	162	ES		646	37.44	0.01							1.0
HWQ	SZ	55	23	EP		646	33.69	0.00							0.2

November 18 2015 Hour: 12:9 37.4 Lat: 33.47N Lon: 35.68E

Depth: 0 Agency: REL Local

Magnitudes: 2.5MC REL

Rms: 0.0 secs

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	8	359	EP		12 9	38.64	-0.06							1.0
RCY	SZ	14	80	EP		12 9	39.73	0.02	29						1.0
SHBL	BZ	15	158	EP		12 9	39.80	-0.02							1.0
SHBL	BN	15	158	ES		12 9	41.64	0.01							1.0
DQRL	SZ	28	338	EP		12 9	41.87	0.02							1.0
DQRL	SN	28	338	ES		12 9	45.20	0.04							1.0
HWQ	SZ	92	15	EP		12 9	52.22	-0.06							0.2

November 18 2015 Hour: 14:55 39.6

Agency: REL Regional

EMSC OT=14:55:39.6 37.85N 29.32E 9Km M=4.2 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		1457	21.37								
DQRL	SZ			EP		1457	17.62								

November 18 2015 Hour: 15:35 9.5 Lat: 34.02N Lon: 36.17E

Depth: 48 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	SZ	35	324	EP		1535	18.20	-0.03	43						1.0
HWQ	SN	35	324	ES		1535	24.72	0.02							1.0
BHL	BZ	50	255	EP		1535	19.56	0.00							1.0
BHL	BE	50	255	ES		1535	26.98	-0.02							1.0
DQRL	SZ	66	238	EP		1535	21.31	0.03							1.0
RCY	SZ	66	208	EP		1535	21.36	-0.00							1.0

November 19 2015 Hour: 9:47 6.9 Lat: 33.42N Lon: 35.65E Depth: 3 Agency: REL Local
 Magnitudes: 3.0MC REL Rms: 0.1 secs

HASBAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	11	131	EP		947	8.89	0.02							1.0
QRWL	SZ	15	10	EP		947	9.35	-0.08							1.0
QRWL	SN	15	10	ES		947	11.28	-0.00							1.0
RCY	SZ	19	62	EP		947	10.03	-0.07	62						1.0
RCY	SN	19	62	ES		947	12.51	0.06							1.0
DQRL	SZ	33	346	EP		947	12.39	0.07							1.0
BHL	BZ	54	360	EP		947	15.73	0.02							1.0
HWQ	SZ	100	16	EP		947	22.98	-0.01							1.0

November 20 2015 Hour: 9:53 37.9 Lat: 33.80N Lon: 35.79E Depth: 15 Agency: REL Local
 Magnitudes: 2.6MC REL Rms: 0.0 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	11	53	EP		953	41.14	0.01							1.0
ZAHL	SN	11	53	ES		953	43.52	-0.01							1.0
BHL	BZ	17	314	EP		953	41.69	-0.02	33						1.0
DQRL	SZ	23	244	EP		953	42.39	0.04							1.0
DQRL	SE	23	244	ES		953	45.66	0.01							1.0
QRWL	SZ	29	200	EP		953	43.18	-0.06							1.0
RCY	SZ	34	172	EP		953	43.91	0.03							1.0
HWQ	SZ	55	15	EP		953	47.10	0.04							0.2

November 21 2015 Hour: 0:2 38.9 Lat: 33.77N Lon: 35.80E Depth: 0 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	39	EP		0 2	40.83	-0.08							1.0
ZAHL	SN	13	39	ES		0 2	42.45	0.04							1.0
DQRL	SZ	23	251	EP		0 2	42.42	-0.10							1.0
DQRL	SN	23	251	ES		0 2	45.26	0.05							1.0
RCY	SZ	31	174	EP		0 2	43.85	0.01	32						1.0
SHBL	BZ	47	186	EP		0 2	46.53	0.03							1.0
HWQ	SZ	58	14	EP		0 2	48.27	0.06							1.0

November 21 2015 Hour: 6:46 33.8 Lat: 33.45N Lon: 35.92E Depth: 4 Agency: REL Local
 Magnitudes: 2.5MC REL Rms: 0.1 secs

RACHAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	10	304	EP		646	35.69	0.00	31						1.0
RCY	SN	10	304	ES		646	37.04	-0.03							1.0
SHBL	BZ	20	237	EP		646	37.19	0.00							1.0
SHBL	BN	20	237	ES		646	39.68	-0.00							1.0
QRWL	SZ	25	297	EP		646	38.01	0.05							1.0
DQRL	SZ	44	311	EP		646	40.59	-0.32							0.2

November 21 2015 Hour: 7:5 4.2 Lat: 33.87N Lon: 35.81E Depth: 5 Agency: REL Local
 Magnitudes: 2.3MC REL Rms: 0.1 secs

BAABDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	7	103	EP		7 5	5.68	-0.09	22						1.0
ZAHL	SN	7	103	ES		7 5	6.96	0.05							1.0
BHL	BZ	15	284	EP		7 5	6.77	-0.05							1.0
DQRL	SZ	29	230	EP		7 5	8.98	-0.02							1.0
DQRL	SN	29	230	ES		7 5	12.59	0.06							1.0
HWQ	SZ	47	16	EP		7 5	11.88	0.06							1.0

November 21 2015 Hour: 9:29 59.0 Lat: 33.41N Lon: 35.67E Depth: 8 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.1 secs

HASBAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	10	136	EP		930	1.19	0.01	41						1.0
SHBL	BE	10	136	ES		930	2.81	0.02							1.0
QRWL	SZ	15	4	EP		930	1.73	-0.11							1.0
RCY	SZ	18	58	EP		930	2.29	0.02							1.0
RCY	SN	18	58	ES		930	4.70	-0.00							1.0
DQRL	SZ	34	344	EP		930	4.65	-0.03							1.0
DQRL	SN	34	344	ES		930	8.96	0.08							1.0
HWQ	SZ	100	15	EP		930	15.04	0.02							1.0

November 21 2015 Hour: 11:18 49.3 Lat: 33.47N Lon: 35.68E Depth: 3 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	9	1	EP		1118	50.89	0.02							1.0
SHBL	BZ	15	156	EP		1118	51.76	-0.00							1.0
RCY	SZ	15	78	EP		1118	51.80	-0.00	36						1.0
RCY	SE	15	78	ES		1118	53.64	-0.01							1.0
DQRL	SZ	28	339	EP		1118	53.91	-0.01							1.0
DQRL	SE	28	339	ES		1118	57.32	-0.01							1.0
HWQ	SZ	93	15	EP		1119	4.48	0.13							0.2

November 21 2015 Hour: 14:20 17.3 Lat: 33.80N Lon: 35.77E 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	13	58	EP		1420	19.40	-0.01							1.0
BHL	BZ	16	317	EP		1420	19.88	-0.07	33						1.0
BHL	BN	16	317	ES		1420	21.91	0.00							1.0
DQRL	SZ	21	241	EP		1420	20.66	-0.13							1.0
DQRL	SN	21	241	ES		1420	23.47	0.11							1.0
HWQ	SZ	56	17	EP		1420	26.40	0.09							1.0

November 21 2015 Hour: 14:36 28.4 Lat: 33.79N Lon: 35.78E Depth: 9 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	13	52	EP		1436	31.07	-0.02							1.0
ZAHL	SN	13	52	ES		1436	33.09	0.01							1.0
BHL	BZ	17	319	EP		1436	31.64	-0.03	32						1.0
DQRL	SZ	21	245	EP		1436	32.20	-0.02							1.0
DQRL	SN	21	245	ES		1436	35.09	0.03							1.0
HWQ	SZ	57	16	EP		1436	37.73	0.04							1.0

November 23 2015 Hour: 15:50 13.8 Lat: 33.82N Lon: 35.77E Depth: 21 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.0 secs

BAABDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	11	68	EP		1550	17.77	0.03							1.0
BHL	BZ	14	310	EP		1550	18.00	0.05	26						1.0
BHL	BN	14	310	ES		1550	21.02	-0.02							1.0
DQRL	SZ	23	236	EP		1550	18.75	-0.02							1.0
RCY	SZ	36	171	EP		1550	20.55	0.06							1.0
RCY	SN	36	171	ES		1550	25.41	-0.05							1.0
HWQ	SZ	53	17	EP		1550	22.72	-0.05							1.0

November 23 2015 Hour: 23:54 6.2 Lat: 33.80N Lon: 35.82E Depth: 19 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	9	42	EP		2354	9.77	0.04							1.0
ZAHL	SN	9	42	ES		2354	12.35	-0.02							1.0
BHL	BZ	19	306	EP		2354	10.60	-0.04	26						1.0
BHL	BE	19	306	ES		2354	13.97	0.02							1.0
DQRL	SZ	26	246	EP		2354	11.36	-0.00							1.0
HWQ	SZ	54	12	EP		2354	15.23	-0.00							1.0

November 24 2015 Hour: 14:32 36.1 Lat: 33.45N Lon: 35.73E Depth: 16 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs

HASBAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	11	63	EP		1432	39.32	-0.00	46						1.0
SHBL	BZ	12	176	EP		1432	39.43	0.02							1.0
SHBL	BN	12	176	ES		1432	41.89	-0.01							1.0
DQRL	SZ	32	332	EP		1432	41.80	-0.02							1.0
DQRL	SN	32	332	ES		1432	46.10	0.01							1.0
BHL	BZ	51	352	EP		1432	44.52	0.00							1.0

November 24 2015 Hour: 14:37 33.6 Lat: 33.78N Lon: 35.78E Depth: 7 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
ZAHL	SZ	13	49	EP		1437	36.00	-0.01							1.0
BHL	BZ	18	319	EP		1437	36.67	-0.08	37						1.0
BHL	BN	18	319	ES		1437	39.13	0.02							1.0
DQRL	SZ	22	247	EP		1437	37.31	0.04							1.0
RCY	SZ	32	171	EP		1437	38.86	-0.07							1.0
RCY	SN	32	171	ES		1437	42.94	0.05							1.0
HWQ	SZ	57	15	EP		1437	42.92	0.06							1.0

November 24 2015 Hour: 15:38 36.2 Lat: 33.79N Lon: 35.76E Depth: 3 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	59	EP		1538	38.42	-0.08							1.0
ZAHL	SN	14	59	ES		1538	40.24	0.04							1.0
BHL	BZ	16	321	EP		1538	38.77	-0.05	29						1.0
DQRL	SZ	20	241	EP		1538	39.53	-0.01							1.0
DQRL	SN	20	241	ES		1538	42.05	0.04							1.0
HWQ	SZ	56	18	EP		1538	45.37	0.06							1.0

November 24 2015 Hour: 22:45 40.1 Agency: REL Distant

EMSC OT=22:45:40.1 10.67S 71.05W 636Km M=7.6 CENTRAL PERU

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		23	3	2.12							
BHL	BZ			EP		23	3	1.59							
SHBL	BZ			EP		23	3	1.72							
RCY	SZ			EP		23	3	2.51							

November 25 2015 Hour: 3:1 22.3 Lat: 33.70N Lon: 35.13E Depth: 25 Agency: REL Local
Magnitudes: 2.6MC 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	41	89	EP		3	1	29.85	0.02						1.0
DQRL	SN	41	89	ES		3	1	35.42	-0.01						1.0
SHBL	BZ	69	124	EP		3	1	33.65	-0.09						1.0
RCY	SZ	70	109	EP		3	1	33.89	0.13	33					1.0
RCY	SE	70	109	ES		3	1	42.26	-0.01						1.0
ZAHL	SZ	72	76	EP		3	1	34.11	-0.05						1.0

November 25 2015 Hour: 5:37 5.7 Lat: 33.89N Lon: 35.81E Depth: 1 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.0 secs

METN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	8	116	EP		537	7.06	-0.00							1.0
BHL	BZ	15	277	EP		537	8.03	-0.07	22						1.0
BHL	BN	15	277	ES		537	9.90	0.04							1.0
DQRL	SZ	30	228	EP		537	10.60	0.01							1.0
HWQ	SZ	45	16	EP		537	13.05	0.05							1.0
HWQ	SN	45	16	ES		537	18.35	-0.03							1.0

November 25 2015 Hour: 15:19 37.9 Lat: 33.97N Lon: 36.17E Depth: 8 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	40	329	EP		1519	44.63	0.02	43						1.0
HWQ	BN	40	329	ES		1519	49.54	-0.01							1.0
BHL	BZ	49	262	EP		1519	45.91	-0.02							1.0
BHL	BN	49	262	ES		1519	51.85	0.01							1.0
RCY	SZ	61	211	EP		1519	47.93	0.01							1.0
RCY	SN	61	211	ES		1519	55.31	-0.00							1.0
DQRL	SZ	63	243	EP		1519	48.22	-0.01							1.0

November 25 2015 Hour: 21:17 18.6 Agency: REL Distant

EMSC OT=21:17:18.6 31.79N 49.60E 10Km M=5.3 WESTERN IRAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		2120	4.91								
BHL	BZ			EP		2120	7.37								
DQRL	SZ			EP		2120	7.99								

November 26 2015 Hour: 4:44 8.0 Lat: 33.46N Lon: 35.62E Depth: 15 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	17	137	EP		444	11.71	0.01							1.0
RCY	SZ	20	77	EP		444	12.10	-0.05	35						1.0
RCY	SE	20	77	ES		444	15.28	0.03							1.0
DQRL	SZ	28	350	EP		444	13.16	0.02							1.0
DQRL	SN	28	350	ES		444	16.95	-0.02							1.0
BHL	BZ	50	3	EP		444	16.28	0.01							1.0
HWQ	SZ	96	18	EP		444	23.05	-0.01							0.2

November 26 2015 Hour: 10: 4 30.0 Lat: 33.55N Lon: 35.33E Depth: 0 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.1 secs

SAIDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	28	53	EP		10 4	34.48	-0.14	36						1.0
DQRL	SN	28	53	ES		10 4	38.05	0.04							1.0
QRWL	SZ	33	90	EP		10 4	35.29	-0.07							1.0
RCY	SZ	48	97	EP		10 4	37.86	0.13							1.0
RCY	SN	48	97	ES		10 4	43.40	-0.02							1.0
HWQ	SZ	99	35	EP		10 4	46.06	0.06							1.0

November 26 2015 Hour: 23:56 5.7 Lat: 33.80N Lon: 35.80E Depth: 12 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	11	50	EP		2356	8.44	-0.02							1.0
ZAHL	SN	11	50	ES		2356	10.50	0.01							1.0
BHL	BZ	18	312	EP		2356	9.26	-0.02	27						1.0
DQRL	SZ	23	244	EP		2356	10.02	-0.01							1.0
DQRL	SN	23	244	ES		2356	13.23	0.02							1.0
HWQ	SZ	55	14	EP		2356	14.89	0.02							1.0

November 27 2015 Hour: 9:53 42.3 Lat: 34.03N Lon: 35.70E Depth: 0 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	198	EP		953	44.64	-0.03	43						1.0
BHL	BN	15	198	ES		953	46.34	-0.07							1.0
HWQ	SZ	36	39	EP		953	48.01	-0.05							1.0
HWQ	SN	36	39	ES		953	52.32	0.02							1.0
DQRL	SZ	38	199	EP		953	48.56	0.13							1.0
RCY	SZ	60	168	EP		953	52.02	-0.02							1.0
RCY	SN	60	168	ES		953	59.25	0.02							1.0

November 27 2015 Hour: 11:17 20.2 Lat: 33.43N Lon: 35.68E Depth: 0 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.0 secs

HASBAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	11	148	EP		1117	21.96	-0.02							1.0
SHBL	BN	11	148	ES		1117	23.35	0.02							1.0
QRWL	SZ	13	0	EP		1117	22.15	-0.08							1.0
RCY	SZ	16	64	EP		1117	22.79	0.02	27						1.0
DQRL	SZ	32	341	EP		1117	25.35	0.02							1.0
DQRL	SN	32	341	ES		1117	29.18	0.04							1.0

November 27 2015 Hour: 13:1 11.6 Lat: 33.74N Lon: 35.29E Depth: 1 Agency: REL Local
Magnitudes: 2.7MC 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	99	EP		13	1	15.85	-0.09	38					1.0
DQRL	SN	27	99	ES		13	1	19.13	0.01						1.0
BHL	BZ	38	62	EP		13	1	17.94	0.10						1.0
QRWL	SZ	43	121	EP		13	1	18.31	-0.21						1.0
SHBL	BZ	61	136	EP		13	1	21.62	0.13						1.0
SHBL	BN	61	136	ES		13	1	28.83	0.06						1.0

November 27 2015 Hour: 15:57 19.2 Lat: 33.80N Lon: 35.77E Depth: 13 Agency: REL Local
Magnitudes: 2.3MC 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		1557	22.25	0.03							1.0
ZAHL	SN	13	58	ES		1557	24.47	-0.01							1.0
BHL	BZ	16	317	EP		1557	22.60	-0.00	21						1.0
DQRL	SZ	21	241	EP		1557	23.25	-0.03							1.0
DQRL	SN	21	241	ES		1557	26.33	0.02							1.0
HWQ	SZ	56	17	EP		1557	28.42	0.00							1.0

November 29 2015 Hour: 0:28 8.0 Agency: REL Regional

EMSC OT=00:28:08.0 38.84N 37.84E 22Km M=5.0 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		029	25.72								
ZAHL	SZ			EP		029	31.67								
BHL	BZ			EP		029	31.24								
DQRL	SZ			EP		029	35.69								
RCY	SZ			EP		029	37.25								
SHBL	BZ			EP		029	38.70								

November 30 2015 Hour: 1:4 41.8 Agency: REL Regional

EMSC OT=01:04:41.8 34.49N 28.62E 60Km M=3.9 EASTERN MEDITERRANEAN SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		1	6	4.10							
BHL	BZ			EP		1	6	4.06							
ZAHL	SZ			EP		1	6	7.76							
SHBL	BZ			EP		1	6	7.22							
RCY	SZ			EP		1	6	8.07							