

# Seismological Bulletin

from the

UNIVERSITY OF LISBON  
FACULTY OF SCIENCE

## IDL Seismic Network

November to December

2019

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Faculty of Science  
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## STATIONS USED

The stations listed below are those operated by the Instituto D. Luiz, Faculty of Science, University of Lisbon (FCUL).  
Former Instituto Geofisico Infante D.Luiz.

Lisboa (IGIDL)  
GGNV

Latitude	38.7165N
Longitude	9.1491W
Height	77m

Marmelete (Picos)  
MORF

Latitude	37.3043N
Longitude	8.6527W
Height	560m

Messejana  
MESJ

Latitude	37.8395N
Longitude	8.2199W
Height	250m

November 1 2019 Hour: 5:25 44.1 Lat: 40.46N Lon: 20.76E Depth: 4F Agency: IGL Distant  
Magnitudes: 4.7Mb IGL Rms: 0.1 secs

ALBANIA Net: CSEM

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ	2511	273	EP		530	45.560	.080							1.0
MESJ	BZ	2511	273	IAMB		530	51.00			35	1.1				
MESJ	BE	2511	273	ES		534	54.96	-.080							1.0

November 1 2019 Hour: 15:24 11.3 Lat: 11.57N Lon: 86.79W Depth: 50F Agency: IGL Distant  
Magnitudes: 5.3Ms IGL Rms: 0.1 secs

NEAR COAST OF NICARAGUA Net: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	BZ	8202	54	EP		1535	40.03	-.060							1.0
MORF	BZ	8202	54	IAMS_20		16 5	54.41			1566	19.7				
MESJ	BZ	8238	54	EP		1535	41.990	.060							1.0
MESJ	BZ	8238	54	IAMS_20		16 5	1.18			1802	18.5				

November 1 2019 Hour: 17:17 7.6 Lat: 38.84N Lon: 9.14W Depth: 8F Agency: IGL Regional  
Magnitudes: 1.1ML IGL Rms: 0.1 secs

NE LOURES, PORTUGAL Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
GGNV	HZ	14	183	EP		1717	9.99	-.150							1.0
GGNV	HN	14	183	ES		1717	12.170	.150							1.0
GGNV	HE	14	183	IAML		1717	12.89			117	0.2				
MESJ	HZ	137	144	EP		1717	29.13	-.120							0.9
MESJ	HN	137	144	ES		1717	45.190	.120							0.9
MESJ	HN	137	144	IAML		1717	46.39			2	0.2				

November 1 2019 Hour: 18:11 16.1 Lat: 36.95N Lon: 8.98W Depth: 19F Agency: IGL Regional  
Magnitudes: 1.7ML IGL Rms: 0.1 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	49	36	EP		1811	24.570	.160							1.0
MORF	HE	49	36	ES		1811	30.39	-.070							1.0
MORF	HN	49	36	IAML		1811	31.27			48	0.2				
MESJ	HZ	119	34	EP		1811	34.49	-.100							1.0

November 1 2019 Hour: 19:16 36.3 Lat: 36.91N Lon: 8.72W Depth: 29F Agency: IGL Regional  
Magnitudes: 1.2ML IGL Rms: 0.1 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	44	8	EP		1916	44.24	-.150							1.0
MORF	HE	44	8	ES		1916	50.370	.040							1.0
MORF	HE	44	8	IAML		1916	50.67			24	0.3				
MESJ	HE	112	23	ES		1917	5.490	.120							1.0
MESJ	HE	112	23	IAML		1917	6.87			2	0.1				

November 1 2019 Hour: 19:17 17.8 Lat: 36.91N Lon: 8.73W Depth: 30F Agency: IGL Regional  
Magnitudes: 0.7ML IGL Rms: 0.1 secs

WEST OF GIBRALTAR Net:IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	44	9	EP		1917	25.86	-.110							1.0
MORF	HE	44	9	ES		1917	32.070	.110							1.0
MORF	HE	44	9	IAML		1917	32.82			5	0.1				

November 2 2019 Hour: 8:49 25.6 Lat: 36.55N Lon: 7.72W Depth: 24F Agency: IGL Regional  
Magnitudes: 1.0ML IGL Rms: 0.0 secs

STRAIT OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	150	343	EP		849	47.430	.030							1.0
MESJ	HN	150	343	ES		850	3.31	-.030							1.0
MESJ	HE	150	343	IAML		850	4.78			2	0.1				

**November 2 2019 Hour: 18: 8 41.4 Lat: 55.69S Lon: 26.30W Depth: 10F Agency: IGL Distant**  
**Magnitudes: 6.2Ms IGL Rms: 0.1 secs**

**SOUTH SANDWICH ISLANDS REGION Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	BZ10423		14	EP		1821	57.80	-.050							1.0
MORF	BZ10423		14	EPP		1825	44.08	-.140							1.0
MORF	BN10423		14	ESKSac		1832	33.610	.160							1.0
MORF	BZ10423		14	IAMs_20		1857	5.30		11691	24.9					
MESJ	BZ10488		14	EP		1822	0.40	-.070							1.0
MESJ	BZ10488		14	EPP		1825	48.61	-.140							1.0
MESJ	BN10488		14	ESKSac		1832	36.730	.180							1.0
MESJ	BZ10488		14	IAMs_20		1859	0.80		8712	19.1					
GGNV	BZ10570		13	EP		1822	3.930	.170							1.0
GGNV	BZ10570		13	EPP		1825	54.36	-.100							1.0
GGNV	BZ10570		13	IAMs_20		1857	18.66		8928	21.7					

**November 2 2019 Hour: 21: 8 59.1 Lat: 37.19N Lon: 8.91W Depth: 16F Agency: IGL Regional**  
**Magnitudes: 0.4ML IGL Rms: 0.1 secs**

**N VILA DO BISPO, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	26	61	EP		21 9	3.82	-.140							1.0
MORF	HE	26	61	ES		21 9	7.690	.140							1.0
MORF	HN	26	61	IAML		21 9	7.91		6	0.1					

**November 3 2019 Hour: 12:42 5.9 Lat: 36.84N Lon: 7.15W Depth: 28F Agency: IGL Regional**  
**Magnitudes: 1.8ML IGL Rms: 0.1 secs**

**STRAIT OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	143	292	EP		1242	26.52	-.190							1.0
MORF	HE	143	292	ES		1242	41.83	-.050							1.0
MORF	HE	143	292	IAML		1242	42.81		20	0.1					
MESJ	HZ	146	320	EP		1242	27.140	.120							1.0
MESJ	HE	146	320	ES		1242	42.520	.120							1.0
MESJ	HN	146	320	IAML		1242	43.95		7	0.1					

**November 3 2019 Hour: 13:23 18.3 Lat: 29.15S Lon: 67.72W Depth:115F Agency: IGL Distant**  
**Magnitudes: 5.4Mb IGL Rms: 0.0 secs**

**LA RIOJA, ARGENTINA Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ	9657	43	EP		1335	49.700	.010							1.0
MESJ	BZ	9657	43	IAMB		1335	51.24		65	1.5					

**November 4 2019 Hour: 9:25 1.4 Lat: 36.86N Lon: 8.55W Depth: 20F Agency: IGL Regional**  
**Magnitudes: 1.6ML IGL Rms: 0.1 secs**

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	50	350	EP		925	9.880	.020							1.0
MORF	HN	50	350	ES		925	16.02	-.060							1.0
MORF	HE	50	350	IAML		925	17.50		49	0.1					
MESJ	HZ	113	15	EP		925	18.80	-.070							1.0
MESJ	HN	113	15	ES		925	31.780	.120							1.0
MESJ	HN	113	15	IAML		925	34.00		9	0.1					

**November 4 2019 Hour: 20:28 45.3 Lat: 38.42N Lon: 9.51W Depth: 31F Agency: IGL Regional**  
**Magnitudes: 1.8ML IGL Rms: 0.1 secs**

**NORTH ATLANTIC OCEAN Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
GGNV	HE	46	44	ES		2028	58.47	-.060							1.0
GGNV	HE	46	44	IAML		2028	59.62		116	0.2					
MESJ	HZ	130	119	EP		2029	3.45	-.030							1.0
MESJ	HN	130	119	ES		2029	16.850	.100							1.0
MESJ	HN	130	119	IAML		2029	17.77		9	0.1					

November 4 2019 Hour: 21:53 25.1 Lat: 31.81S Lon: 71.38W Depth: 53F Agency: IGL Distant  
Magnitudes: 6.1Ms IGL Rms: 0.1 secs

COQUIMBO, CHILE Net: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	BZ10044		45	EP		22	6	20.370							1.0
MORF	BE10044		45	ESKSac		2216		46.21-.180							1.0
MORF	BE10044		45	IAMs_20		2245		18.30		5040	14.2				
MESJ	BZ10112		45	EP		22	6	22.88-.120							1.0
MESJ	BE10112		45	ESKSac		2216		49.980.150							1.0
MESJ	BZ10112		45	IAMs_20		2244		27.18		4971	14.8				
GGNV	BN10114		44	ESKSac		2216		49.890.000							1.0
GGNV	BZ10114		44	IAMs_20		2243		34.86		9028	18.3				

November 5 2019 Hour: 5:18 2.0 Lat: 37.35N Lon: 8.52W Depth: 5F Agency: IGL Regional  
Magnitudes: 0.5ML IGL Rms: 0.2 secs

NE MONCHIQUE, PORTUGAL Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	13	247	EP		518		3.94-.280							1.0
MORF	HE	13	247	ES		518		6.070.200							1.0
MORF	HE	13	247	IAML		518		6.47		51	0.2				
MESJ	HZ	60	26	EP		518		11.65-.110							1.0
MESJ	HN	60	26	ES		518		19.090.190							1.0
MESJ	HE	60	26	IAML		518		20.00		1	0.1				

November 5 2019 Hour: 5:32 25.8 Lat: 35.92N Lon: 7.69W Depth: 25F Agency: IGL Regional  
Magnitudes: 1.1ML IGL Rms: 0.1 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	176	331	EP		532		50.72-.140							1.0
MESJ	HZ	218	348	EP		532		56.180.120							1.0
MESJ	HE	218	348	ES		533		18.160.020							1.0
MESJ	HE	218	348	IAML		533		19.60		1	0.3				

November 5 2019 Hour: 22:34 59.7 Lat: 37.26N Lon: 8.49W Depth: 20F Agency: IGL Regional  
Magnitudes: 1.5ML IGL Rms: 0.1 secs

SE MONCHIQUE, PORTUGAL Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	15	289	EP		2235		3.52-.260							1.0
MORF	HE	15	289	ES		2235		6.800.080							1.0
MORF	HE	15	289	IAML		2235		8.31		154	0.1				
MESJ	HZ	69	20	EP		2235		11.060.110							1.0
MESJ	HE	69	20	ES		2235		19.190.070							1.0
MESJ	HN	69	20	IAML		2235		21.00		13	0.1				

November 6 2019 Hour: 0:37 53.9 Lat: 37.31N Lon: 8.56W Depth: 7F Agency: IGL Regional  
Magnitudes: 0.9ML IGL Rms: 0.1 secs

SW MONCHIQUE, PORTUGAL Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	8	266	EP		037		55.58-.170							1.0
MORF	HE	8	266	ES		037		57.150.090							1.0
MORF	HN	8	266	IAML		037		57.75		152	0.1				
MESJ	HZ	66	27	EP		038		4.730.080							1.0
MESJ	HE	66	27	ES		038		12.480.010							1.0
MESJ	HN	66	27	IAML		038		13.99		3	0.1				

November 6 2019 Hour: 12:45 49.7 Lat: 36.99N Lon: 8.17W Depth: 14F Agency: IGL Regional  
Rms: 0.0 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	55	309	EP		1245		58.79-.040							1.0
MESJ	HZ	94	357	EP		1246		4.770.040							1.0

November 6 2019 Hour: 22:25 31.7 Lat: 37.03N Lon: 7.85W Depth: 10F Agency: IGL Regional  
Magnitudes: 1.4ML IGL Rms: 0.1 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	78	293	EP		2225	44.24	-.010							1.0
MORF	HN	78	293	ES		2225	53.480	0.070							1.0
MORF	HN	78	293	IAML		2225	55.52			13	0.2				
MESJ	HZ	96	340	EP		2225	46.91	-.060							1.0

November 7 2019 Hour: 5:13 5.1 Lat: 36.64N Lon: 7.61W Depth: 27F Agency: IGL Regional  
Magnitudes: 0.7ML IGL Rms: 0.0 secs

STRAIT OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	144	338	EP		513	25.98	-.000							1.0
MESJ	HN	144	338	ES		513	41.210	0.000							1.0
MESJ	HE	144	338	IAML		513	44.86			1.00	0.0				

November 7 2019 Hour: 16:59 19.0 Lat: 37.25N Lon: 8.58W Depth: 20F Agency: IGL Regional  
Magnitudes: 1.1ML IGL Rms: 0.1 secs

SW MONCHIQUE, PORTUGAL Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	9	313	EP		1659	22.46	-.090							1.0
MORF	HE	9	313	ES		1659	25.210	0.090							1.0
MORF	HE	9	313	IAML		1659	25.71			42	0.2				

November 7 2019 Hour: 22:47 5.0 Lat: 37.81N Lon: 47.56E Depth: 10F Agency: IGL Distant  
Magnitudes: 5.8Ms IGL Rms: 0.1 secs

NORTHWESTERN IRAN Net: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ	4835	288	EP		2255	8.490	0.080							1.0
MESJ	BN	4835	288	ES		23 1	37.84	-.060							1.0
MESJ	BZ	4835	288	IAMs_20		2315	1.23		10952	18.5					
GGNV	BZ	4883	289	EP		2255	11.82	-.020							1.0
GGNV	BN	4883	289	ES		23 1	44.150	0.010							1.0
GGNV	BN	4883	289	IAMs_20		23 9	35.53		26385	37.8					
MORF	BZ	4889	287	EP		2255	12.35	-.090							1.0
MORF	BN	4889	287	ES		23 1	45.280	0.070							1.0
MORF	BZ	4889	287	IAMs_20		2316	10.10		9185	22.6					

November 8 2019 Hour: 0:19 15.9 Lat: 36.61N Lon: 9.82W Depth: 13F Agency: IGL Regional  
Magnitudes: 1.6ML IGL Rms: 0.0 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	129	53	EP		019	36.07	-.060							1.0
MORF	HE	129	53	ES		019	50.950	0.030							1.0
MORF	HN	129	53	IAML		019	52.16			21	0.1				
MESJ	HZ	197	46	EP		019	44.510	0.020							1.0
MESJ	HE	197	46	ES		020	5.390	0.020							1.0
MESJ	HE	197	46	IAML		020	8.00			2	0.1				

November 8 2019 Hour: 1:56 47.2 Lat: 39.13N Lon: 10.86W Depth: 31F Agency: IGL Regional  
Magnitudes: 3.9ML IGL Rms: 0.2 secs

NORTH ATLANTIC OCEAN Net: MAD

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
GGNV	HZ	155	106	EP		157	8.890	0.440							1.0
GGNV	HN	155	106	ES		157	24.000	0.020							1.0
GGNV	HN	155	106	IAML		157	26.22		4182	0.3					
MESJ	HZ	271	121	EP		157	22.79	-.060							0.9
MESJ	HE	271	121	ES		157	48.72	-.180							0.9
MESJ	HN	271	121	IAML		157	53.66		177	0.2					
MORF	HZ	280	136	EP		157	23.94	-.020							0.9
MORF	HE	280	136	ES		157	50.56	-.260							0.9

November 8 2019 Hour: 4:47 22.5 Lat: 36.60N Lon: 9.81W Depth: 13F Agency: IGL Regional  
Magnitudes: 1.3ML IGL Rms: 0.0 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	129	52	EP		447	42.800	.030							1.0
MORF	HN	129	52	ES		447	57.54	-.010							1.0
MORF	HN	129	52	IAML		447	59.17			4	0.1				
MESJ	HZ	197	45	EP		447	51.08	-.070							1.0
MESJ	HN	197	45	ES		448	12.090	.050							1.0
MESJ	HN	197	45	IAML		448	14.30			4	0.2				

November 8 2019 Hour: 8:20 35.0 Lat: 35.18N Lon: 11.64W Depth: 30F Agency: IGL Regional  
Magnitudes: 3.2ML IGL Rms: 0.1 secs

AZORES-CAPE ST. VINCENT RIDGE Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	357	48	EP		821	22.410	.140							1.0
MORF	HE	357	48	ES		821	56.750	.000							1.0
MORF	HN	357	48	IAML		821	59.96			119	0.3				
MESJ	HZ	425	45	EP		821	30.47	-.110							1.0
MESJ	HN	425	45	ES		822	11.09	-.040							1.0
MESJ	HN	425	45	IAML		822	13.75			32	0.3				

November 8 2019 Hour: 8:31 36.0 Lat: 40.80N Lon: 8.12W Depth: 13F Agency: IGL Regional  
Magnitudes: 1.4ML IGL Rms: 0.1 secs

NW S. PEDRO DO SUL, PORTUGAL Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	329	182	EP		832	20.78	-.160							1.0
MESJ	HN	329	182	ES		832	53.930	.160							1.0
MESJ	HN	329	182	IAML		832	55.40			1	0.2				

November 8 2019 Hour: 9:24 39.1 Lat: 42.38N Lon: 12.05W Depth: 31F Agency: IGL Regional  
Magnitudes: 2.3ML IGL Rms: 0.1 secs

NORTH ATLANTIC OCEAN Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	600	146	EP		925	55.050	.060							1.0
MESJ	HE	600	146	ES		926	50.34	-.060							1.0
MESJ	HE	600	146	IAML		926	52.99			4	0.3				

November 8 2019 Hour: 10:44 45.3 Lat: 21.97S Lon: 179.49W Depth: 583F Agency: IGL Distant  
Rms: 0.1 secs

FIJI REGION Net: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ18079		24	EPKpdf		11 3	40.400	.070							1.0
MORF	BZ18113		25	EPKpdf		11 3	40.60	-.070							1.0

November 8 2019 Hour: 13:4 38.8 Lat: 37.01N Lon: 7.23W Depth: 10F Agency: IGL Regional  
Magnitudes: 1.4ML IGL Rms: 0.0 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HE	127	317	ES		13 5	13.540	.040							1.0
MESJ	HN	127	317	IAML		13 5	16.29			2	0.1				
MORF	HZ	131	285	EP		13 4	59.35	-.060							1.0
MORF	HE	131	285	ES		13 5	14.450	.020							1.0
MORF	HE	131	285	IAML		13 5	16.53			16	0.2				

November 8 2019 Hour: 20:59 33.3 Lat: 37.39N Lon: 9.08W Depth: 30F Agency: IGL Regional  
Magnitudes: 1.9ML IGL Rms: 0.1 secs

NW ALJEZUR, PORTUGAL Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	39	104	EP		2059	41.030	.170							1.0
MORF	HE	39	104	ES		2059	46.30	-.090							1.0
MORF	HE	39	104	IAML		2059	47.35			90	0.1				
MESJ	HZ	91	56	EP		2059	47.30	-.090							1.0

November 9 2019 Hour: 6:54 25.4 Lat: 36.14N Lon: 8.78W Depth: 16F Agency: IGL Regional  
Magnitudes: 1.3ML IGL Rms: 0.1 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	130	5	EP		654	45.550	.080							1.0
MORF	HE	130	5	ES		655	0.130	.040							1.0
MORF	HN	130	5	IAML		655	1.14			5	0.1				
MESJ	HZ	195	15	EP		654	53.43-	.120							1.0
MESJ	HE	195	15	ES		655	14.07-	.010							1.0
MESJ	HE	195	15	IAML		655	16.14			2	0.1				

November 9 2019 Hour: 8:32 50.2 Lat: 14.48N Lon: 90.29W Depth: 198F Agency: IGL Distant  
Magnitudes: 5.0Mb IGL Rms: 0.1 secs

GUATEMALA Net: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	BZ	8325	55	EP		844	8.910	.090							1.0
MORF	BZ	8325	55	IAMB		844	12.57			40	1.3				
MESJ	BZ	8356	54	EP		844	10.26-	.090							1.0
MESJ	BZ	8356	54	IAMB		844	13.11			45	1.5				

November 9 2019 Hour: 20:44 48.4 Lat: 37.92N Lon: 11.98W Depth: 31F Agency: IGL Regional  
Rms: 0.1 secs

NORTH ATLANTIC OCEAN Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	302	102	EP		2045	27.75-	.120							1.0
MESJ	HZ	331	90	EP		2045	31.600	.120							1.0

November 10 2019 Hour: 2:15 5.5 Lat: 35.78N Lon: 4.72W Depth: 5F Agency: IGL Regional  
Magnitudes: 1.4ML IGL Rms: 0.0 secs

STRAIT OF GIBRALTAR Net: MAD

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	387	307	EP		215	58.550	.020							1.0
MESJ	HN	387	307	ES		216	37.20-	.020							1.0
MESJ	HE	387	307	IAML		216	38.06			1.00	0.3				

November 10 2019 Hour: 10:55 40.7 Lat: 36.80N Lon: 8.17W Depth: 27F Agency: IGL Regional  
Magnitudes: 1.8ML IGL Rms: 0.1 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	71	323	EP		1055	52.17-	.130							1.0
MORF	HN	71	323	ES		1056	0.76-	.000							1.0
MORF	HE	71	323	IAML		1056	3.43			76	0.2				
MESJ	HZ	115	358	EP		1055	58.150	.080							1.0
MESJ	HN	115	358	ES		1056	10.800	.060							1.0
MESJ	HE	115	358	IAML		1056	11.40			7	0.2				

November 10 2019 Hour: 16:14 21.3 Lat: 7.29S Lon: 75.82W Depth: 112F Agency: IGL Distant  
Magnitudes: 4.9Mb IGL Rms: 0.0 secs

NORTHERN PERU Net: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ	8589	49	EP		1626	2.95-	.000							1.0
MESJ	BZ	8589	49	IAMB		1626	3.80			19	0.9				

November 11 2019 Hour: 3:28 41.2 Lat: 36.23N Lon: 9.52W Depth: 15F Agency: IGL Regional  
Magnitudes: 2.7ML IGL Rms: 0.1 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	142	33	EP		329	2.75-	.070							1.0
MORF	HE	142	33	ES		329	18.57-	.060							1.0
MORF	HN	142	33	IAML		329	20.44			203	0.2				
MESJ	HZ	213	33	EP		329	11.56-	.000							1.0
MESJ	HE	213	33	ES		329	33.900	.140							1.0
MESJ	HN	213	33	IAML		329	36.35			27	0.1				



**November 11 2019 Hour: 11:38 3.3 Lat: 36.96N Lon: 13.70W Depth: 31F Agency: IGL Regional**  
**Magnitudes: 2.6ML IGL Rms: 0.1 secs**

**AZORES-CAPE ST. VINCENT RIDGE Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	450	84	EP		1139	1.120	.070							1.0
MORF	HE	450	84	ES		1139	43.240	.070							1.0
MORF	HE	450	84	IAML		1139	45.22			26	0.2				
MESJ	HZ	495	77	EP		1139	6.43	-.010							1.0
MESJ	HE	495	77	ES		1139	52.38	-.130							1.0
MESJ	HN	495	77	IAML		1139	56.96			6	0.2				

**November 11 2019 Hour: 20: 4 38.1 Lat: 37.24N Lon: 7.93W Depth: 7F Agency: IGL Regional**  
**Magnitudes: 1.2ML IGL Rms: 0.1 secs**

**NW S. BRAS DE ALPORTEL, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	65	277	EP		20 4	48.47	-.120							1.0
MORF	HN	65	277	ES		20 4	56.310	.070							1.0
MORF	HN	65	277	IAML		20 4	59.74			13	0.2				
MESJ	HZ	71	339	EP		20 4	49.56	-.120							1.0
MESJ	HN	71	339	ES		20 4	58.290	.170							1.0
MESJ	HN	71	339	IAML		20 5	1.07			8	0.1				

**November 11 2019 Hour: 20:14 46.8 Lat: 37.29N Lon: 7.92W Depth: 1 Agency: IGL Regional**  
**Magnitudes: 0.9ML IGL Rms: 0.1 secs**

**NW S. BRAS DE ALPORTEL, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HE	65	272	ES		2015	5.060	.150							1.0
MORF	HN	65	272	IAML		2015	6.44			9	0.2				
MESJ	HZ	67	337	EP		2014	57.45	-.050							1.0
MESJ	HN	67	337	ES		2015	5.24	-.090							1.0
MESJ	HN	67	337	IAML		2015	8.05			3	0.2				

**November 11 2019 Hour: 22: 1 55.4 Lat: 36.72N Lon: 9.76W Depth: 16F Agency: IGL Regional**  
**Magnitudes: 1.2ML IGL Rms: 0.1 secs**

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	118	56	EP		22 2	14.080	.110							1.0
MORF	HE	118	56	ES		22 2	27.52	-.010							1.0
MORF	HE	118	56	IAML		22 2	28.91			11	0.1				
MESJ	HZ	185	47	EP		22 2	22.18	-.040							1.0
MESJ	HE	185	47	ES		22 2	41.73	-.070							1.0
MESJ	HE	185	47	IAML		22 2	44.69			1.00	0.1				

**November 12 2019 Hour: 19:50 55.3 Lat: 37.90N Lon: 9.47W Depth: 33F Agency: IGL Regional**  
**Magnitudes: 1.9ML IGL Rms: 0.1 secs**

**NORTH ATLANTIC OCEAN Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	98	132	EP		1951	10.08	-.170							1.0
MORF	HN	98	132	ES		1951	21.15	-.000							1.0
MORF	HE	98	132	IAML		1951	22.12			44	0.2				
MESJ	HZ	110	93	EP		1951	11.830	.090							1.0
MESJ	HE	110	93	ES		1951	23.830	.090							1.0
MESJ	HN	110	93	IAML		1951	25.47			16	0.2				

**November 12 2019 Hour: 23:39 13.3 Lat: 36.98N Lon: 5.32W Depth: 8F Agency: IGL Regional**  
**Magnitudes: 1.9ML IGL Rms: 0.1 secs**

**SPAIN Net: MAD**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	274	291	EP		2339	51.89	-.060							1.0
MORF	HZ	298	278	EP		2339	55.050	.060							1.0

November 13 2019 Hour: 0:9 19.9 Lat: 15.33S Lon: 70.42W Depth:200F Agency: IGL Distant  
Magnitudes: 5.3Mb IGL Rms: 0.0 secs

SOUTHERN PERU Net: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	BZ	8697	46	EP		020	57.180	.030							1.0
MORF	BZ	8697	46	I Amb		020	58.52			70	0.9				
MESJ	BZ	8760	46	EP		021	0.14	-.030							1.0
MESJ	BZ	8760	46	I Amb		021	1.88			41	0.9				

November 13 2019 Hour: 13:44 5.8 Lat: 7.30N Lon: 35.43W Depth: 10F Agency: IGL Distant  
Magnitudes: 5.2Mb IGL Rms: 0.1 secs

CENTRAL MID-ATLANTIC RIDGE Net: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	BZ	4288	35	EP		1351	28.690	.100							1.0
MORF	BZ	4288	35	I Amb		1351	29.77			167	1.8				
MESJ	BZ	4357	35	EP		1351	33.62	-.100							1.0
MESJ	BZ	4357	35	I Amb		1351	34.43			29	1.0				

November 13 2019 Hour: 20:21 20.2 Lat: 38.04N Lon: 8.26W Depth: 8F Agency: IGL Regional  
Magnitudes: 0.5ML IGL Rms: 0.0 secs

W FERREIRA DO ALENTEJO, PORTUGAL Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	23	171	EP		2021	24.110	.050							1.0
MESJ	HE	23	171	ES		2021	26.84	-.050							1.0
MESJ	HE	23	171	I AML		2021	27.11			9	0.1				

November 13 2019 Hour: 21:46 6.3 Lat: 38.85N Lon: 8.98W Depth: 1 Agency: IGL Regional  
Magnitudes: 0.9ML IGL Rms: 0.1 secs

N ALCOCHETE, PORTUGAL Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	130	149	EP		2146	27.26	-.090							1.0
MESJ	HE	130	149	ES		2146	42.780	.090							1.0
MESJ	HN	130	149	I AML		2146	43.64			2	0.1				

November 14 2019 Hour: 12:5 44.4 Lat: 38.13N Lon: 8.22W Depth: 12F Agency: IGL Regional  
Magnitudes: 1.3ML IGL Rms: 0.0 secs

NW FERREIRA DO ALENTEJO, PORTUGAL Net: MAD

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	32	180	EP		12 5	49.930	.000							1.0
MESJ	HN	32	180	ES		12 5	53.97	-.000							1.0
MESJ	HN	32	180	I AML		12 5	54.10			32	0.4				

November 14 2019 Hour: 16:17 42.2 Lat: 1.60N Lon: 126.42E Depth: 33F Agency: IGL Distant  
Magnitudes: 7.1Ms IGL Rms: 0.1 secs

MOLUCCA SEA Net: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ	13651	318	EPK P <sub>df</sub>		1636	34.16	-.020							1.0
MESJ	BZ	13651	318	EPP		1638	11.58	-.140							1.0
MESJ	BN	13651	318	ESS		1654	52.68	-.070							1.0
MESJ	BZ	13651	318	I Ams_20		1731	4.39			58340	31.4				
GGNV	BZ	13666	319	EPK P <sub>df</sub>		1636	34.550	.140							1.0
GGNV	BZ	13666	319	EPP		1638	12.690	.080							1.0
GGNV	BE	13666	319	I Ams_20		1728	18.64			62641	25.3				
MORF	BZ	13715	318	EPK P <sub>df</sub>		1636	35.350	.020							1.0
MORF	BE	13715	318	I Ams_20		1726	37.49			58724	23.2				

November 14 2019 Hour: 19:4 1.3 Lat: 34.38N Lon: 5.90W Depth: 58F Agency: IGL Regional  
Rms: 0.1 secs

MOROCCO, PORTUGAL Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	409	323	EP		19 4	54.370	.100							1.0
MESJ	HZ	437	332	EP		19 4	57.55	-.110							1.0

November 14 2019 Hour: 21:12 55.2 Lat: 1.54N Lon: 126.47E Depth: 26F Agency: IGL Distant  
Rms: 0.1 secs

MOLUCCA SEA Net: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ13660	318	EP	KPdf		2131	48.28	-.060							1.0
MORF	BZ13724	318	EP	KPdf		2131	49.560	.060							1.0

November 15 2019 Hour: 3:16 5.1 Lat: 36.52N Lon: 11.16W Depth: 14F Agency: IGL Regional  
Magnitudes: 2.0ML IGL Rms: 0.1 secs

AZORES-CAPE ST. VINCENT RIDGE Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	240	68	EP		316	39.000	.010							1.0
MORF	HN	240	68	ES		317	3.770	.050							1.0
MORF	HE	240	68	IAML		317	5.51			20	0.2				
MESJ	HZ	299	60	EP		316	46.22	-.130							1.0
MESJ	HN	299	60	ES		317	16.520	.060							1.0
MESJ	HE	299	60	IAML		317	17.80			3	0.1				

November 15 2019 Hour: 16:7 7.1 Lat: 36.39N Lon: 11.22W Depth: 32F Agency: IGL Regional  
Magnitudes: 1.8ML IGL Rms: 0.1 secs

AZORES-CAPE ST. VINCENT RIDGE Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	250	65	EP		16 7	41.000	.050							1.0
MORF	HN	250	65	ES		16 8	5.67	-.020							1.0
MORF	HN	250	65	IAML		16 8	7.16			7	0.0				
MESJ	HZ	311	58	EP		16 7	48.580	.090							1.0
MESJ	HN	311	58	ES		16 8	18.62	-.110							1.0
MESJ	HE	311	58	IAML		16 8	21.31			3	0.2				

November 16 2019 Hour: 2:42 11.4 Lat: 36.64N Lon: 9.71W Depth: 17F Agency: IGL Regional  
Magnitudes: 1.4ML IGL Rms: 0.0 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	120	52	EP		242	30.01	-.030							1.0
MORF	HE	120	52	ES		242	43.700	.030							1.0
MORF	HE	120	52	IAML		242	44.37			7	0.2				

November 16 2019 Hour: 10:19 15.3 Lat: 1.55N Lon: 126.33E Depth: 35F Agency: IGL Distant  
Magnitudes: 5.4Ms IGL Rms: 0.0 secs

MOLUCCA SEA Net: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ13648	318	EP	KPdf		1038	6.900	.010							1.0
MESJ	BN13648	318	IAMs	_20		1132	55.69			805	23.2				
MORF	BZ13712	318	EP	KPdf		1038	8.03	-.010							1.0
MORF	BZ13712	318	IAMs	_20		1132	59.58			1264	27.9				

November 16 2019 Hour: 23:16 56.3 Lat: 36.59N Lon: 9.75W Depth: 15F Agency: IGL Regional  
Magnitudes: 1.0ML IGL Rms: 0.0 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HE	126	51	ES		2317	30.300	.040							1.0
MORF	HE	126	51	IAML		2317	32.03			3	0.1				
MESJ	HZ	194	44	EP		2317	24.34	-.030							1.0
MESJ	HE	194	44	ES		2317	44.85	-.020							1.0
MESJ	HE	194	44	IAML		2317	46.20			1	0.2				

November 17 2019 Hour: 7:15 14.5 Lat: 37.07N Lon: 5.32W Depth: 9F Agency: IGL Regional  
Magnitudes: 1.3ML IGL Rms: 0.1 secs

SPAIN Net: MAD

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	271	289	EP		715	52.53	-.180							1.0
MESJ	HN	271	289	ES		716	20.56	-.020							1.0
MESJ	HN	271	289	IAML		716	26.65			2	0.3				

MORF HZ 297 276 EP 715 56.260.210 1.0

**November 17 2019 Hour: 8:39 10.1 Lat: 32.59N Lon: 4.26W Depth: 20F Agency: IGL Regional  
Magnitudes: 4.8ML IGL Rms: 0.1 secs**

**MOROCCO Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	659	324	EP		840	34.71	-.120							1.0
MORF	HN	659	324	ES		841	36.50	-.140							1.0
MORF	HN	659	324	IAML		841	45.24			1197	0.3				
MESJ	HZ	685	329	EP		840	38.050	.130							1.0
MESJ	HE	685	329	ES		841	42.120	.130							1.0
MESJ	HN	685	329	IAML		841	50.84			931	0.3				

**November 17 2019 Hour: 8:52 32.1 Lat: 32.80N Lon: 4.59W Depth: 1 Agency: IGL Regional  
Rms: 0.1 secs**

**MOROCCO Net: MAD**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	622	325	EP		853	54.260	.130							1.0
MESJ	HZ	649	330	EP		853	57.25	-.140							1.0

**November 17 2019 Hour: 9:16 6.7 Lat: 32.71N Lon: 3.93W Depth: 1 Agency: IGL Regional  
Magnitudes: 3.0ML IGL Rms: 0.1 secs**

**MOROCCO Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	667	321	EP		917	34.11	-.120							1.0
MESJ	HZ	690	327	EP		917	37.090	.160							1.0
MESJ	HN	690	327	ES		918	42.77	-.030							1.0
MESJ	HN	690	327	IAML		918	48.33			17	0.4				

**November 17 2019 Hour: 11:2 18.4 Lat: 32.67N Lon: 4.03W Depth: 7F Agency: IGL Regional  
Magnitudes: 3.2ML IGL Rms: 0.1 secs**

**MOROCCO Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	665	322	EP		11 3	44.89	-.160							1.0
MESJ	HZ	689	328	EP		11 3	47.960	.090							1.0
MESJ	HE	689	328	ES		11 4	53.260	.070							1.0
MESJ	HE	689	328	IAML		11 4	59.51			27	0.3				

**November 17 2019 Hour: 12:13 27.7 Lat: 20.80S Lon: 177.82W Depth: 494F Agency: IGL Distant  
Rms: 0.0 secs**

**FIJI REGION Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	BZ17920	27	EPK	pdf		1232	30.370	.050							1.0
MORF	BZ17920	27	EPK	Pab		1233	17.15	-.050							1.0

**November 17 2019 Hour: 14:39 5.7 Lat: 32.06N Lon: 4.59W Depth: 37F Agency: IGL Regional  
Magnitudes: 4.3ML IGL Rms: 0.1 secs**

**MOROCCO Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	691	329	EP		1440	33.100	.110							1.0
MORF	HE	691	329	ES		1441	36.60	-.140							1.0
MORF	HN	691	329	IAML		1441	45.90			416	0.3				
MESJ	HZ	722	334	EP		1440	36.720	.100							1.0
MESJ	HN	722	334	ES		1441	42.96	-.060							1.0
MESJ	HN	722	334	IAML		1441	48.53			197	0.6				

**November 18 2019 Hour: 6:0 4.9 Lat: 32.68N Lon: 4.29W Depth: 16F Agency: IGL Regional  
Rms: 0.0 secs**

**MOROCCO Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	649	323	EP		6 1	28.760	.030							1.0
MESJ	HZ	675	329	EP		6 1	31.76	-.030							1.0

November 18 2019 Hour: 17:44 46.7 Lat: 35.75N Lon: 4.54W Depth: 30F Agency: IGL Regional  
Magnitudes: 1.6ML IGL Rms: 0.1 secs

**STRAIT OF GIBRALTAR Net: MAD**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	402	306	EP		1745	39.43	-.020							1.0
MESJ	HN	402	306	ES		1746	18.010	.080							1.0
MESJ	HN	402	306	IAML		1746	21.36			2	0.2				
MORF	HZ	407	296	EP		1745	40.00	-.060							1.0

November 18 2019 Hour: 21:31 52.3 Lat: 37.26N Lon: 8.55W Depth: 20F Agency: IGL Regional  
Magnitudes: 1.0ML IGL Rms: 0.1 secs

**S MONCHIQUE, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	10	298	EP		2131	55.83	-.090							1.0
MORF	HE	10	298	ES		2131	58.580	.010							1.0
MORF	HE	10	298	IAML		2131	58.88			70	0.2				
MESJ	HZ	71	24	EP		2132	4.010	.210							1.0
MESJ	HN	71	24	ES		2132	12.07	-.120							1.0
MESJ	HN	71	24	IAML		2132	14.79			2	0.2				

November 19 2019 Hour: 0:31 31.2 Lat: 34.56N Lon: 13.36W Depth: 26F Agency: IGL Regional  
Magnitudes: 1.9ML IGL Rms: 0.1 secs

**MADEIRA ISLANDS, PORTUGAL REGION Net: MAD**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	523	53	EP		032	38.76	-.080							1.0
MORF	HE	523	53	ES		033	28.14	-.100							1.0
MORF	HN	523	53	IAML		033	31.17			4	0.2				
MESJ	HZ	588	50	EP		032	46.790	.030							1.0
MESJ	HN	588	50	ES		033	42.090	.160							1.0
MESJ	HE	588	50	IAML		033	47.17			1.00	0.2				

November 19 2019 Hour: 4:20 38.6 Lat: 36.47N Lon: 5.56W Depth: 34F Agency: IGL Regional  
Magnitudes: 2.1ML IGL Rms: 0.1 secs

**STRAIT OF GIBRALTAR Net: MAD**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	281	304	EP		421	16.260	.040							1.0
MESJ	HE	281	304	ES		421	43.730	.010							1.0
MESJ	HN	281	304	IAML		421	46.00			8	0.2				
MORF	HZ	291	290	EP		421	17.30	-.180							1.0
MORF	HE	291	290	ES		421	46.030	.140							1.0
MORF	HE	291	290	IAML		421	47.84			9	0.1				

November 19 2019 Hour: 7:29 46.8 Lat: 36.52N Lon: 11.04W Depth: 10F Agency: IGL Regional  
Magnitudes: 1.5ML IGL Rms: 0.1 secs

**AZORES-CAPE ST. VINCENT RIDGE Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	230	67	EP		730	19.63	-.200							1.0
MORF	HE	230	67	ES		730	44.040	.110							1.0
MORF	HE	230	67	IAML		730	46.39			3					
MESJ	HZ	290	59	EP		730	27.370	.090							1.0

November 19 2019 Hour: 12:55 51.8 Lat: 37.05N Lon: 9.01W Depth: 21F Agency: IGL Regional  
Magnitudes: 0.5ML IGL Rms: 0.1 secs

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	43	48	EP		1255	59.17	-.080							1.0
MORF	HE	43	48	ES		1256	4.780	.080							1.0
MORF	HE	43	48	IAML		1256	5.35			4	0.2				

November 19 2019 Hour: 13:30 55.7 Lat: 29.32N Lon: 81.14E Depth: 10F Agency: IGL Distant  
Magnitudes: 4.9Mb IGL Rms: 0.0 secs

NET: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ	8033	304	EP		1342	21.170	.000							1.0
MESJ	BZ	8033	304	IAMB		1342	26.28			11	0.9				

November 19 2019 Hour: 18:10 58.0 Lat: 36.45N Lon: 8.05W Depth: 31F Agency: IGL Regional  
Magnitudes: 2.7ML IGL Rms: 0.1 secs

NET: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	109	331	EP		1811	13.55	-.070							1.0
MORF	HE	109	331	ES		1811	24.83	-.170							1.0
MORF	HN	109	331	IAML		1811	28.02			162	0.2				
MESJ	HZ	155	354	EP		1811	19.390	.090							1.0
MESJ	HN	155	354	ES		1811	34.980	.160							1.0
MESJ	HE	155	354	IAML		1811	36.54			69	0.1				

November 19 2019 Hour: 22:5 17.0 Lat: 37.15N Lon: 8.61W Depth: 25F Agency: IGL Regional  
Magnitudes: 0.7ML IGL Rms: 0.0 secs

NET: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	18	348	EP		225	21.84	-.000							1.0
MORF	HE	18	348	ES		225	25.360	.000							1.0
MORF	HE	18	348	IAML		225	25.76			11	0.1				

November 19 2019 Hour: 22:26 35.1 Lat: 54.99N Lon: 156.36W Depth: 26F Agency: IGL Distant  
Magnitudes: 5.3Mb IGL Rms: 0.0 secs

NET: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ	9284	25	EP		2239	0.48	-.000							1.0
MESJ	BZ	9284	25	IAMB		2239	3.92			45	2.0				
MORF	BZ	9329	25	EP		2239	2.610	.000							1.0
MORF	BZ	9329	25	IAMB		2239	4.21			16	0.9				

November 20 2019 Hour: 4:27 4.7 Lat: 13.98N Lon: 93.13W Depth: 11F Agency: IGL Distant  
Magnitudes: 6.2Ms IGL Rms: 0.1 secs

NET: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
GGNV	BE	8543	53	ES		448	44.14	-.070							1.0
GGNV	BZ	8543	53	IAMS_20		515	59.40			13878	27.5				
MORF	BZ	8607	54	EP		438	59.730	.030							1.0
MORF	BN	8607	54	ES		448	50.47	-.170							1.0
MORF	BZ	8607	54	IAMS_20		510	5.97			17062	19.5				
MESJ	BZ	8636	54	EP		439	1.300	.160							1.0
MESJ	BE	8636	54	ES		448	53.480	.050							1.0
MESJ	BZ	8636	54	IAMS_20		59	3.20			8271	24.7				

November 20 2019 Hour: 4:32 51.4 Lat: 40.80N Lon: 8.10W Depth: 4F Agency: IGL Regional  
Magnitudes: 2.0ML IGL Rms: 0.1 secs

NET: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	329	182	EP		433	37.27	-.040							1.0
MESJ	HN	329	182	ES		434	11.000	.190							1.0
MESJ	HN	329	182	IAML		434	13.94			4	0.2				
MORF	HZ	391	187	EP		433	44.93	-.130							1.0
MORF	HN	391	187	ES		434	24.19	-.040							1.0
MORF	HN	391	187	IAML		434	27.29			8	0.3				

November 20 2019 Hour: 9:11 38.6 Lat: 36.54N Lon: 7.78W Depth: 16F Agency: IGL Regional  
Rms: 0.0 secs

**STRAIT OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	149	345	EP		912	1.00	-.010							1.0

November 20 2019 Hour: 13:10 12.1 Lat: 37.04N Lon: 7.32W Depth: 11F Agency: IGL Regional  
Magnitudes: 1.4ML IGL Rms: 0.0 secs

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	119	318	EP		1310	30.960	.030							1.0
MESJ	HE	119	318	ES		1310	44.62	-.040							1.0
MESJ	HE	119	318	IAML		1310	46.18			3	0.1				
MORF	HZ	122	284	EP		1310	31.34	-.020							1.0
MORF	HE	122	284	ES		1310	45.420	.030							1.0
MORF	HN	122	284	IAML		1310	46.96			18	0.2				

November 20 2019 Hour: 20:34 23.1 Lat: 36.63N Lon: 7.63W Depth: 32F Agency: IGL Regional  
Magnitudes: 2.0ML IGL Rms: 0.1 secs

**STRAIT OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	118	310	EP		2034	40.34	-.200							1.0
MORF	HE	118	310	ES		2034	53.24	-.010							1.0
MORF	HE	118	310	IAML		2034	55.15			46	0.1				
MESJ	HZ	144	339	EP		2034	43.930	.170							1.0
MESJ	HN	144	339	ES		2034	58.870	.040							1.0
MESJ	HN	144	339	IAML		2035	1.11			14	0.1				

November 21 2019 Hour: 4:43 46.6 Lat: 37.61N Lon: 9.24W Depth: 6F Agency: IGL Regional  
Magnitudes: 1.8ML IGL Rms: 0.1 secs

**NW ALJEZUR, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	62	123	EP		443	56.62	-.000							1.0
MORF	HE	62	123	ES		444	3.85	-.120							1.0
MORF	HE	62	123	IAML		444	6.53			90	0.2				
MESJ	HZ	94	74	EP		444	1.880	.220							1.0
MESJ	HE	94	74	ES		444	12.60	-.090							1.0
MESJ	HE	94	74	IAML		444	17.85			12	0.2				

November 21 2019 Hour: 5:34 55.2 Lat: 38.05N Lon: 8.20W Depth: 1F Agency: IGL Regional  
Magnitudes: 1.1ML IGL Rms: 0.1 secs

**W FERREIRA DO ALENTEJO, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	23	184	EP		534	58.80	-.170							1.0
MESJ	HE	23	184	ES		535	1.740	.000							1.0
MESJ	HN	23	184	IAML		535	1.89			24	0.1				
MORF	HZ	92	206	EP		535	9.95	-.060							1.0
MORF	HE	92	206	ES		535	21.080	.250							1.0
MORF	HN	92	206	IAML		535	23.70			8	0.2				

November 21 2019 Hour: 18:10 49.5 Lat: 34.96N Lon: 5.43W Depth: 19F Agency: IGL Regional  
Magnitudes: 2.0ML IGL Rms: 0.0 secs

**MOROCCO Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	406	323	EP		1811	43.580	.030							1.0
MESJ	HN	406	323	ES		1812	22.96	-.030							1.0
MESJ	HN	406	323	IAML		1812	28.64			4	0.3				

November 21 2019 Hour: 20:11 53.7 Lat: 38.44N Lon: 8.77W Depth: 6F Agency: IGL Regional  
Magnitudes: 1.3ML IGL Rms: 0.1 secs

SE SETUBAL, PORTUGAL Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	82	144	EP		2012	6.81	-.220							1.0
MESJ	HE	82	144	ES		2012	16.800	.060							1.0
MESJ	HN	82	144	IAML		2012	19.46			3	0.1				
MORF	HZ	126	175	EP		2012	14.110	.200							1.0
MORF	HN	126	175	ES		2012	28.61	-.040							1.0
MORF	HE	126	175	IAML		2012	29.46			19	0.2				

November 22 2019 Hour: 10:20 24.2 Lat: 36.66N Lon: 11.20W Depth: 31F Agency: IGL Regional  
Magnitudes: 2.1ML IGL Rms: 0.0 secs

AZORES-CAPE ST. VINCENT RIDGE Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	238	72	EP		1020	55.74	-.030							1.0
MORF	HE	238	72	ES		1021	18.860	.030							1.0
MORF	HN	238	72	IAML		1021	20.25			13	0.1				

November 22 2019 Hour: 10:37 1.2 Lat: 36.88N Lon: 9.66W Depth: 22F Agency: IGL Regional  
Magnitudes: 1.7ML IGL Rms: 0.0 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	101	62	EP		1037	17.150	.070							1.0
MORF	HE	101	62	ES		1037	28.64	-.060							1.0
MORF	HN	101	62	IAML		1037	30.47			18	0.1				
MESJ	HZ	166	50	EP		1037	25.17	-.010							1.0

November 23 2019 Hour: 12:11 16.3 Lat: 1.63N Lon: 132.79E Depth: 10F Agency: IGL Distant  
Magnitudes: 5.8Ms IGL Rms: 0.1 secs

PAPUA REGION, INDONESIA Net: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ14106	322	EPP			1232	16.760	.020							1.0
MESJ	BN14106	322	ESS			1249	24.27	-.060							1.0
MESJ	BZ14106	322	IAMs_20			1326	47.52			1013	18.8				
GGNV	BZ14108	323	EPP			1232	16.920	.100							1.0
GGNV	BZ14108	323	IAMs_20			1329	10.64			1978	10.8				
MORF	BZ14173	321	EPP			1232	20.72	-.050							1.0
MORF	BZ14173	321	IAMs_20			1327	14.35			2509	22.6				

November 23 2019 Hour: 16:34 44.4 Lat: 37.53S Lon: 177.22E Depth: 123F Agency: IGL Distant  
Rms: 0.1 secs

OFF EST COAST OF NORTH ISLAND, NEW ZEALAND Net: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
GGNV	BZ19439	75	EPP			17 0	6.80	-.160							1.0
MORF	BZ19492	91	EPKpdf			1654	39.420	.190							1.0
MORF	BZ19492	91	EPP			17 0	9.27	-.050							1.0
MESJ	BZ19532	84	EPKpdf			1654	39.420	.150							1.0
MESJ	BZ19532	84	EPP			17 0	10.83	-.120							1.0

November 23 2019 Hour: 18: 8 59.2 Lat: 34.98N Lon: 4.60W Depth: 30F Agency: IGL Regional  
Magnitudes: 1.4ML IGL Rms: 0.1 secs

MOROCCO Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	454	315	EP		18 9	58.330	.090							1.0
MESJ	HN	454	315	ES		1810	41.22	-.090							1.0
MESJ	HE	454	315	IAML		1810	45.16			0.90	0.1				



November 24 2019 Hour: 0:54 2.8 Lat: 51.53N Lon: 175.56W Depth: 25F Agency: IGL Distant  
Magnitudes: 6.2Ms IGL Rms: 0.1 secs

ANDREANOF ISLANDS, ALEUTIAN ISLANDS Net: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
GGNV	BZ	9926	11	EP		1 6	56.490	.040							1.0
GGNV	BN	9926	11	ESKSac		117	24.840	.000							1.0
GGNV	BZ	9926	11	IAMs_20		141	14.81		15116	28.5					
MESJ	BZ10034	10	EP			1 7	1.100	.070							1.0
MESJ	BN10034	10	ESKSac			117	30.58	-.020							1.0
MESJ	BZ10034	10	IAMs_20			155	38.71		5244	20.3					
MORF	BZ10087	10	EP			1 7	3.23	-.100							1.0
MORF	BZ10087	10	IAMs_20			150	15.49		12211	21.1					

November 24 2019 Hour: 1: 6 48.5 Lat: 37.62N Lon: 8.59W Depth: 12F Agency: IGL Regional  
Magnitudes: 1.5ML IGL Rms: 0.1 secs

NE ODEMIRA, PORTUGAL Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	36	189	EP		1 6	54.42	-.120							1.0
MORF	HE	36	189	ES		1 6	58.980	.010							1.0
MORF	HN	36	189	IAML		1 6	59.95		150	0.2					
MESJ	HZ	41	53	EP		1 6	55.350	.030							1.0
MESJ	HE	41	53	ES		1 7	0.390	.080							1.0
MESJ	HE	41	53	IAML		1 7	0.91		16	0.2					

November 24 2019 Hour: 1:52 43.0 Lat: 36.52N Lon: 7.78W Depth: 17F Agency: IGL Regional  
Magnitudes: 1.7ML IGL Rms: 0.1 secs

STRAIT OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	117	318	EP		153	1.29	-.070							1.0
MESJ	HZ	152	345	EP		153	5.740	.080							1.0
MESJ	HN	152	345	ES		153	22.17	-.000							1.0
MESJ	HE	152	345	IAML		153	23.85		10	0.1					

November 24 2019 Hour: 6:26 53.9 Lat: 34.85N Lon: 3.75W Depth: 4F Agency: IGL Regional  
Magnitudes: 2.3ML IGL Rms: 0.1 secs

MOROCCO Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	519	303	EP		628	3.320	.210							1.0
MESJ	HZ	521	311	EP		628	3.18	-.120							1.0
MESJ	HN	521	311	ES		628	53.90	-.090							1.0
MESJ	HN	521	311	IAML		628	58.04		5	0.3					

November 24 2019 Hour: 9:32 29.2 Lat: 35.01N Lon: 3.83W Depth: 2F Agency: IGL Regional  
Rms: 0.0 secs

MOROCCO Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	503	302	EP		933	36.80	-.000							1.0

November 24 2019 Hour: 9:34 44.0 Lat: 35.02N Lon: 3.92W Depth: 3F Agency: IGL Regional  
Magnitudes: 2.3ML IGL Rms: 0.1 secs

MOROCCO Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	496	302	EP		935	50.49	-.040							1.0
MESJ	HZ	496	310	EP		935	50.52	-.100							1.0
MESJ	HN	496	310	ES		936	39.400	.150							1.0
MESJ	HN	496	310	IAML		936	44.72		5	0.5					

November 24 2019 Hour: 23:16 7.3 Lat: 35.88N Lon: 7.54W Depth: 32F Agency: IGL Regional  
Magnitudes: 1.5ML IGL Rms: 0.1 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	187	328	EP		2316	33.08	-.180							1.0
MORF	HE	187	328	ES		2316	52.250	.020							1.0
MORF	HN	187	328	IAML		2316	53.12		6	0.1					
MESJ	HZ	226	345	EP		2316	38.160	.090							1.0
MESJ	HN	226	345	ES		2317	0.630	.080							1.0
MESJ	HN	226	345	IAML		2317	2.62		2	0.2					

November 24 2019 Hour: 23:34 45.6 Lat: 36.33N Lon: 9.22W Depth: 4F Agency: IGL Regional  
Magnitudes: 1.7ML IGL Rms: 0.1 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	119	25	EP		2335	4.960	.090							1.0
MORF	HN	119	25	ES		2335	19.010	.110							1.0
MORF	HN	119	25	IAML		2335	21.32		22	0.2					
MESJ	HZ	190	28	EP		2335	14.11	-.140							1.0
MESJ	HE	190	28	ES		2335	35.07	-.070							1.0
MESJ	HN	190	28	IAML		2335	39.71		5	0.2					

November 25 2019 Hour: 11:38 9.5 Lat: 36.64N Lon: 4.61W Depth: 81F Agency: IGL Regional  
Magnitudes: 2.9ML IGL Rms: 0.1 secs

STRAIT OF GIBRALTAR Net: MAD

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	368	283	EP		1138	57.610	.120							1.0
MORF	HN	368	283	ES		1139	32.38	-.120							1.0
MORF	HN	368	283	IAML		1139	37.93		35	0.1					

November 25 2019 Hour: 14:39 49.2 Lat: 38.19N Lon: 10.12W Depth: 32F Agency: IGL Regional  
Magnitudes: 1.9ML IGL Rms: 0.1 secs

NORTH ATLANTIC OCEAN Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	162	127	EP		1440	12.15	-.020							1.0
MORF	HE	162	127	ES		1440	28.74	-.190							1.0
MORF	HE	162	127	IAML		1440	30.07		34	0.2					
MESJ	HZ	171	103	EP		1440	13.360	.120							1.0
MESJ	HN	171	103	ES		1440	30.880	.100							1.0
MESJ	HN	171	103	IAML		1440	32.99		6	0.3					

November 25 2019 Hour: 16: 0 20.9 Lat: 6.36S Lon: 154.82E Depth: 50F Agency: IGL Distant  
Rms: 0.0 secs

BOUNGAINVILLE REGION, PAPUA NEW GUINEA Net: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ16149	336	EPKP			1619	52.150	.030							1.0
MORF	BZ16220	336	EPKP			1619	54.16	-.030							1.0

November 26 2019 Hour: 2:54 11.2 Lat: 41.45N Lon: 19.44E Depth: 10F Agency: IGL Distant  
Magnitudes: 6.6Ms IGL Rms: 0.1 secs

ADRIATIC SEA Net: CSEM

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ	2397	269	EP		259	1.020	.150							1.0
MESJ	BE	2397	269	ES		3 3	0.890	.060							1.0
MESJ	BZ	2397	269	IAMs_20		3 8	22.94		194000	14.8					
GGNV	BZ	2446	272	EP		259	5.47	-.070							1.0
GGNV	BN	2446	272	ES		3 3	9.370	.000							1.0
GGNV	BZ	2446	272	IAMs_20		310	15.59		205000	12.2					
MORF	BZ	2453	268	EP		259	6.320	.060							1.0
MORF	BN	2453	268	ES		3 3	10.45	-.230							1.0
MORF	BZ	2453	268	IAMs_20		3 9	15.84		119000	14.8					

November 26 2019 Hour: 5:44 13.7 Lat: 32.89N Lon: 3.96W Depth: 5F Agency: IGL Regional  
Rms: 0.1 secs

**MOROCCO Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	650	320	EP		545	38.69	-.090							1.0
MESJ	HZ	672	326	EP		545	41.460	.090							1.0

November 26 2019 Hour: 5:59 8.6 Lat: 38.14N Lon: 9.23W Depth: 29F Agency: IGL Regional  
Magnitudes: 2.7ML IGL Rms: 0.1 secs

**NORTH ATLANTIC OCEAN Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
GGNV	HZ	64	6	EP		559	19.27	-.090							1.0
GGNV	HE	64	6	ES		559	27.13	-.080							1.0
GGNV	HN	64	6	IAML		559	29.28		640	0.3					
MESJ	HZ	95	110	EP		559	23.320	.060							1.0
MESJ	HE	95	110	ES		559	33.970	.020							1.0
MESJ	HN	95	110	IAML		559	36.93		53	0.1					
MORF	HZ	106	151	EP		559	24.670	.010							1.0
MORF	HE	106	151	ES		559	36.460	.090							1.0
MORF	HN	106	151	IAML		559	38.53		248	0.2					

November 26 2019 Hour: 6: 8 22.9 Lat: 41.58N Lon: 19.33E Depth: 10F Agency: IGL Distant  
Magnitudes: 5.3Ms IGL Rms: 0.1 secs

**ADRIATIC SEA Net: CSEM**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ	2388	269	EP		613	11.830	.210							1.0
MESJ	BE	2388	269	ES		617	10.74	-.120							1.0
MESJ	BZ	2388	269	IAMs_20		622	31.39		8860	21.0					
GGNV	BN	2436	272	ES		617	19.17	-.110							1.0
GGNV	BZ	2436	272	IAMs_20		623	33.98		8913	11.8					
MORF	BZ	2444	268	EP		613	17.180	.140							1.0
MORF	BN	2444	268	ES		617	20.65	-.110							1.0
MORF	BZ	2444	268	IAMs_20		625	14.39		5448	10.3					

November 26 2019 Hour: 9:19 25.4 Lat: 43.20N Lon: 17.96E Depth: 10F Agency: IGL Distant  
Magnitudes: 4.7Ms IGL Rms: 0.0 secs

**BOSNIA AND HERZEGOVINA Net: CSEM**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ	2286	264	EP		924	4.310	.010							1.0
MESJ	BN	2286	264	ES		927	55.360	.050							1.0
MESJ	BZ	2286	264	IAMs_20		933	22.17		1648	15.3					
MORF	BN	2345	263	ES		928	5.87	-.060							1.0
MORF	BE	2345	263	IAMs_20		933	33.27		3652	14.6					

November 27 2019 Hour: 1:37 21.8 Lat: 35.29N Lon: 11.56W Depth: 28F Agency: IGL Regional  
Magnitudes: 1.6ML IGL Rms: 0.1 secs

**AZORES-CAPE ST. VINCENT RIDGE Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	344	49	EP		138	7.40	-.060							1.0
MORF	HN	344	49	ES		138	40.920	.120							1.0
MORF	HN	344	49	IAML		138	42.49		2	0.1					
MESJ	HZ	412	46	EP		138	15.67	-.120							1.0
MESJ	HE	412	46	ES		138	55.280	.050							1.0

November 27 2019 Hour: 7:23 40.5 Lat: 35.62N Lon: 23.17E Depth: 65F Agency: IGL Distant  
Magnitudes: 5.5Mb IGL Rms: 0.1 secs

**CRETE, GREECE Net: CSEM**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ	2802	284	EP		729	0.280	.250							1.0
MESJ	BZ	2802	284	IAMB		729	2.97		101	0.7					
MESJ	BN	2802	284	ES		733	21.580	.070							1.0
MORF	BZ	2845	283	EP		729	3.690	.060							1.0
MORF	BZ	2845	283	IAMB		729	7.76		95	1.1					

MORF	BE	2845	283	ES		733	27.68	-.120									1.0
GGNV	BZ	2876	287	EP		729	5.86	-.200									1.0
GGNV	BZ	2876	287	IAmb		729	9.16			622	1.1						
GGNV	BE	2876	287	ES		733	32.00	-.050									1.0

**November 27 2019 Hour: 7:34 46.2 Lat: 38.90N Lon: 8.34W Depth: 13F Agency: IGL Regional**  
**Magnitudes: 0.8ML IGL Rms: 0.1 secs**

**SW MORA, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	118	175	EP		735	4.890	.090							1.0
MESJ	HE	118	175	ES		735	18.28	-.090							1.0
MESJ	HE	118	175	IAML		735	18.81			2	0.2				

**November 27 2019 Hour: 10: 0 40.6 Lat: 22.12S Lon: 179.48W Depth: 570F Agency: IGL Distant**  
**Rms: 0.0 secs**

**SOUTH OF FIJI ISLANDS Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	BZ	18127	26	EPKpdf		1019	37.38	-.030							1.0

**November 27 2019 Hour: 14:45 28.7 Lat: 41.56N Lon: 19.35E Depth: 40F Agency: IGL Distant**  
**Magnitudes: 4.9Ms IGL Rms: 0.1 secs**

**ADRIATIC SEA Net: CSEM**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ	2390	269	EP		1450	13.97	-.060							1.0
MESJ	BN	2390	269	ES		1454	10.83	-.120							1.0
MESJ	BZ	2390	269	IAMs_20		1459	30.66			4476	16.7				
GGNV	BZ	2438	272	EP		1450	18.690	.060							1.0
GGNV	BE	2438	272	ES		1454	19.510	.150							1.0
GGNV	BE	2438	272	IAMs_20		15	0	22.38		6060	18.3				
MORF	BZ	2445	268	EP		1450	19.520	.090							1.0
MORF	BE	2445	268	ES		1454	20.70	-.110							1.0
MORF	BZ	2445	268	IAMs_20		15	0	39.73		3137	15.9				

**November 27 2019 Hour: 23: 1 1.8 Lat: 37.29N Lon: 15.66W Depth: 30F Agency: IGL Regional**  
**Magnitudes: 2.1ML IGL Rms: 0.1 secs**

**AZORES-CAPE ST. VINCENT RIDGE Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	621	88	EP		23	2	21.290	.150						1.0
MORF	HE	621	88	ES		23	3	18.92	-.120						1.0
MORF	HE	621	88	IAML		23	3	21.11		4	0.1				
MESJ	HZ	660	82	EP		23	2	25.920	.100						1.0
MESJ	HE	660	82	ES		23	3	26.99	-.130						1.0
MESJ	HE	660	82	IAML		23	3	29.95		1	0.1				

**November 28 2019 Hour: 6:34 52.8 Lat: 37.16N Lon: 7.92W Depth: 18F Agency: IGL Regional**  
**Magnitudes: 0.9ML IGL Rms: 0.1 secs**

**NW S. BRAS DE ALPORTEL, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	67	284	EP		635	3.67	-.010							1.0
MESJ	HZ	80	341	EP		635	5.55	-.060							1.0
MESJ	HE	80	341	ES		635	15.070	.080							1.0
MESJ	HN	80	341	IAML		635	18.18			4	0.2				

**November 28 2019 Hour: 10: 4 59.2 Lat: 37.14N Lon: 5.42W Depth: 0 Agency: IGL Regional**  
**Magnitudes: 3.6ML IGL Rms: 0.2 secs**

**SPAIN Net: MAD**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	259	288	EP		10	5	37.050	.200						1.0
MORF	HZ	287	275	EP		10	5	40.13	-.240						1.0
MORF	HN	287	275	ES		10	6	10.440	.030						1.0
MORF	HN	287	275	IAML		10	6	28.49		269	0.3				

November 28 2019 Hour: 13:39 26.5 Lat: 38.39N Lon: 9.40W Depth: 0 Agency: IGL Regional  
Magnitudes: 1.0ML IGL Rms: 0.1 secs

W SESIMBRA, PORTUGAL Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	120	120	EP		1339	45.70	-.140							1.0
MESJ	HE	120	120	ES		1340	0.070	.080							1.0
MESJ	HE	120	120	IAML		1340	2.63			1	0.1				
MORF	HZ	137	151	EP		1339	48.700	.100							1.0
MORF	HE	137	151	ES		1340	4.72	-.040							1.0
MORF	HE	137	151	IAML		1340	6.23			6	0.2				

November 28 2019 Hour: 18:47 40.8 Lat: 37.10N Lon: 9.38W Depth: 31F Agency: IGL Regional  
Magnitudes: 1.7ML IGL Rms: 0.0 secs

NORTH ATLANTIC OCEAN Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	68	70	EP		1847	51.26	-.040							1.0
MORF	HN	68	70	ES		1847	59.050	.050							1.0
MORF	HE	68	70	IAML		1848	0.98			26	0.1				
MESJ	HZ	131	51	EP		1847	59.09	-.000							1.0

November 28 2019 Hour: 19:50 29.0 Lat: 36.90N Lon: 7.42W Depth: 27F Agency: IGL Regional  
Magnitudes: 0.8ML IGL Rms: 0.0 secs

STRAIT OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HN	118	293	ES		1950	59.720	.020							1.0
MORF	HE	118	293	IAML		1951	0.91			4	0.1				
MESJ	HZ	126	326	EP		1950	47.720	.060							1.0
MESJ	HN	126	326	ES		1951	1.22	-.070							1.0
MESJ	HE	126	326	IAML		1951	2.90			0.80	0.1				

November 28 2019 Hour: 23:7 31.5 Lat: 36.91N Lon: 8.59W Depth: 26F Agency: IGL Regional  
Magnitudes: 0.7ML IGL Rms: 0.1 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	44	353	EP		23 7	39.650	.200							1.0
MORF	HE	44	353	ES		23 7	45.16	-.100							1.0
MORF	HE	44	353	IAML		23 7	46.95			8	0.1				
MESJ	HZ	108	18	EP		23 7	47.88	-.140							1.0
MESJ	HN	108	18	ES		23 8	0.130	.040							1.0
MESJ	HN	108	18	IAML		23 8	2.58			1	0.1				

November 28 2019 Hour: 23:41 20.8 Lat: 36.24N Lon: 8.52W Depth: 9F Agency: IGL Regional  
Magnitudes: 0.8ML IGL Rms: 0.0 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	119	354	EP		2341	39.57	-.030							1.0
MESJ	HZ	180	8	EP		2341	47.55	-.040							1.0
MESJ	HN	180	8	ES		2342	7.250	.070							1.0
MESJ	HN	180	8	IAML		2342	10.29			1.00	0.1				

November 30 2019 Hour: 3:3 40.9 Lat: 37.36N Lon: 8.83W Depth: 0 Agency: IGL Regional  
Magnitudes: 1.1ML IGL Rms: 0.0 secs

NW ALJEZUR, PORTUGAL Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	17	111	EP		3 3	43.660	.030							1.0
MORF	HE	17	111	ES		3 3	45.58	-.030							1.0
MORF	HN	17	111	IAML		3 3	46.57			60	0.1				

November 30 2019 Hour: 7:7 36.2 Lat: 36.63N Lon: 9.73W Depth: 14F Agency: IGL Regional  
Magnitudes: 1.1ML IGL Rms: 0.1 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HE	122	52	ES		7 8	9.34	0.070							1.0
MORF	HE	122	52	IAML		7 8	12.11			3	0.1				
MESJ	HZ	190	44	EP		7 8	3.71	-.080							1.0

November 30 2019 Hour: 7:44 23.8 Lat: 13.93N Lon: 91.86W Depth: 48F Agency: IGL Distant  
Magnitudes: 5.4Ms IGL Rms: 0.1 secs

OFFSHORE GUATEMALA Net: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
GGNV	BZ	8436	53	EP		756	4.86	-.060							1.0
GGNV	BZ	8436	53	IAMs_20		825	58.10			3115	22.6				
MORF	BZ	8498	55	EP		756	8.09	-.100							1.0
MORF	BE	8498	55	ES		8 5	50.19	-.080							1.0
MORF	BZ	8498	55	IAMs_20		827	8.06			2634	19.7				
MESJ	BE	8529	54	EP		756	9.85	0.170							1.0
MESJ	BE	8529	54	ES		8 5	53.26	0.090							1.0
MESJ	BZ	8529	54	IAMs_20		826	50.20			1139	20.3				

November 30 2019 Hour: 17:51 2.3 Lat: 36.54N Lon: 9.75W Depth: 31F Agency: IGL Regional  
Magnitudes: 1.3ML IGL Rms: 0.1 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	129	49	EP		1751	20.40	-.000							1.0
MORF	HE	129	49	ES		1751	33.55	-.080							1.0
MORF	HN	129	49	IAML		1751	35.14			9	0.1				
MESJ	HZ	198	43	EP		1751	28.89	-.010							1.0
MESJ	HN	198	43	ES		1751	48.44	0.100							1.0
MESJ	HE	198	43	IAML		1751	50.92			2	0.2				

November 30 2019 Hour: 19:52 39.8 Lat: 26.66S Lon: 178.33E Depth: 608F Agency: IGL Distant  
Magnitudes: 5.4Ms IGL Rms: 0.0 secs

SOUTH OF FIJI ISLANDS Net: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ	18640	25	EPKpdf		2011	36.58	-.000							1.0
MESJ	BZ	18640	25	IAMs_20		21 8	12.43			439	18.3				

December 1 2019 Hour: 5:40 29.2 Lat: 32.81N Lon: 15.17W Depth: 27F Agency: IGL Regional  
Magnitudes: 2.7ML IGL Rms: 0.1 secs

MADEIRA ISLANDS, PORTUGAL REGION Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	776	48	EP		542	7.16	0.100							1.0
MORF	HE	776	48	ES		543	18.41	-.100							1.0
MORF	HE	776	48	IAML		543	19.62			6	0.1				

December 1 2019 Hour: 9:8 38.6 Lat: 37.09N Lon: 5.42W Depth: 7F Agency: IGL Regional  
Rms: 0.0 secs

SPAIN Net: MAD

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	288	276	EP		9 9	19.21	0.010							1.0

December 1 2019 Hour: 19:11 0.1 Lat: 36.67N Lon: 9.62W Depth: 18F Agency: IGL Regional  
Magnitudes: 1.4ML IGL Rms: 0.1 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	111	50	EP		1911	17.56	-.130							1.0
MORF	HE	111	50	ES		1911	30.63	0.130							1.0
MORF	HE	111	50	IAML		1911	31.75			8	0.1				

**December 2 2019 Hour: 5:1 55.0 Lat: 51.32N Lon: 178.24W Depth: 27F Agency: IGL Distant**  
**Magnitudes: 5.8Ms IGL Rms: 0.1 secs**

**ANDREANOF ISLANDS, ALEUTIAN ISLANDS Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
GGNV	BZ	9980	9	EP		514	50.59	-.010							1.0
GGNV	BN	9980	9	ESKSac		525	19.360	.000							1.0
GGNV	BN	9980	9	IAMs_20		550	55.14		9537	35.2					
MESJ	BZ10086		8	EP		514	55.06	-.020							1.0
MESJ	BN10086		8	ESKSac		525	24.84	-.130							1.0
MESJ	BZ10086		8	IAMs_20		549	54.82		1906	23.1					
MORF	BZ10141		8	EP		514	57.42	-.000							1.0
MORF	BN10141		8	ESKSac		525	28.070	.160							1.0
MORF	BZ10141		8	IAMs_20		551	33.86		7284	27.8					

**December 3 2019 Hour: 8:46 34.1 Lat: 18.56S Lon: 70.65W Depth: 32F Agency: IGL Distant**  
**Magnitudes: 5.7Mb IGL Rms: 0.1 secs**

**OFFSHORE TARAPACA, CHILE Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	BZ	8963	46	EP		858	43.38	-.060							1.0
MORF	BZ	8963	46	IAMB		858	44.53		86	0.9					
MORF	BE	8963	46	ES		9 8	48.59	-.090							1.0
GGNV	BZ	9010	44	EP		858	45.640	.070							1.0
GGNV	BZ	9010	44	IAMB		858	48.15		247	1.1					
MESJ	BZ	9027	45	EP		858	46.30	-.140							1.0
MESJ	BZ	9027	45	IAMB		858	50.21		58	1.9					
MESJ	BN	9027	45	ES		9 8	54.770	.230							1.0

**December 3 2019 Hour: 11:39 39.6 Lat: 37.12N Lon: 8.40W Depth: 21F Agency: IGL Regional**  
**Magnitudes: 1.6ML IGL Rms: 0.1 secs**

**SE LAGOA, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	30	312	EP		1139	45.36	-.130							1.0
MORF	HE	30	312	ES		1139	49.880	.130							1.0
MORF	HE	30	312	IAML		1139	50.53		67	0.2					

**December 3 2019 Hour: 13:29 31.7 Lat: 33.64N Lon: 3.78W Depth: 12F Agency: IGL Regional**  
**Magnitudes: 1.6ML IGL Rms: 0.0 secs**

**MOROCCO Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	601	314	EP		1330	50.00	-.040							1.0

**December 3 2019 Hour: 19:40 49.2 Lat: 37.33N Lon: 8.55W Depth: 10F Agency: IGL Regional**  
**Magnitudes: 0.7ML IGL Rms: 0.1 secs**

**NE MONCHIQUE, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	10	253	EP		1940	51.32	-.220							1.0
MORF	HE	10	253	ES		1940	53.290	.080							1.0
MORF	HN	10	253	IAML		1940	53.71		85	0.2					
MESJ	HZ	64	27	EP		1940	59.770	.140							1.0
MESJ	HN	64	27	ES		1941	7.230	.010							1.0
MESJ	HE	64	27	IAML		1941	7.95		2	0.1					

**December 3 2019 Hour: 19:53 18.9 Lat: 37.04N Lon: 5.39W Depth: 9F Agency: IGL Regional**  
**Magnitudes: 0.7ML IGL Rms: 0.0 secs**

**SPAIN Net: MAD**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	266	290	EP		1953	56.45	-.020							1.0

December 4 2019 Hour: 4:247.4 Lat: 36.95N Lon: 13.62W Depth: 32F Agency: IGL Regional  
Rms: 0.1 secs

**AZORES-CAPE ST. VINCENT RIDGE Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	443	83	EP		4	3	44.95	-	.070					1.0
MESJ	HZ	488	77	EP		4	3	50.53	0.080						1.0

December 4 2019 Hour: 13:3240.6 Lat: 37.79N Lon: 8.19W Depth: 5F Agency: IGL Regional  
Magnitudes: 2.2ML IGL  
Rms: 0.1 secs

**SW ALJUSTREL, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	6	334	EP		1332		41.83	-	.090					1.0
MESJ	HE	6	334	ES		1332		42.83	-	.040					1.0
MESJ	HN	6	334	IAML		1332		43.21			2393	0.1			
MORF	HZ	68	217	EP		1332		51.72	0.140						1.0

December 4 2019 Hour: 20:103.7 Lat: 19.06S Lon: 169.58E Depth: 259F Agency: IGL Distant  
Rms: 0.0 secs

**VANUATU Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	BZ18001	355		EPKPdf		2029		33.09	0.010						1.0
MORF	BZ18001	355		EPKPab		2030		20.61	-	.010					1.0

December 4 2019 Hour: 21:058.1 Lat: 37.36N Lon: 8.46W Depth: 8F Agency: IGL Regional  
Magnitudes: 1.7ML IGL  
Rms: 0.1 secs

**NE MONCHIQUE, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	18	250	EP		21	1	1.24	-	.090					1.0
MORF	HE	18	250	ES		21	1	3.69	-	.000					1.0
MORF	HN	18	250	IAML		21	1	4.35			191	0.2			
MESJ	HZ	57	22	EP		21	1	7.63	0.200						1.0
MESJ	HN	57	22	ES		21	1	14.13	-	.110					1.0

December 5 2019 Hour: 1:594.8 Lat: 37.41N Lon: 8.49W Depth: 11F Agency: IGL Regional  
Magnitudes: 1.9ML IGL  
Rms: 0.1 secs

**NE MONCHIQUE, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	19	231	EP		159		8.54	0.170						1.0
MORF	HN	19	231	ES		159		10.83	-	.120					1.0
MORF	HE	19	231	IAML		159		12.08			307	0.1			
MESJ	HZ	53	26	EP		159		13.65	0.020						1.0
MESJ	HE	53	26	ES		159		19.96	-	.080					1.0
MESJ	HN	53	26	IAML		159		20.63			58	0.1			

December 5 2019 Hour: 2:318.3 Lat: 45.43N Lon: 150.06E Depth: 35F Agency: IGL Distant  
Magnitudes: 5.5Mb IGL  
Rms: 0.0 secs

**KURIL ISLANDS Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ10539	343		EP		216		35.97	-	.000					1.0
MESJ	BZ10539	343		IAMB		216		36.96			18	1.0			

December 5 2019 Hour: 5:1734.1 Lat: 36.63N Lon: 11.22W Depth: 21F Agency: IGL Regional  
Magnitudes: 1.7ML IGL  
Rms: 0.1 secs

**AZORES-CAPE ST. VINCENT RIDGE Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	241	71	EP		518		7.43	-	.070					1.0
MORF	HE	241	71	ES		518		31.83	-	.030					1.0
MORF	HE	241	71	IAML		518		34.52			11	0.2			
MESJ	HZ	298	62	EP		518		14.63	0.010						1.0
MESJ	HN	298	62	ES		518		44.28	0.100						1.0
MESJ	HE	298	62	IAML		518		46.13			1	0.1			



**December 5 2019 Hour: 11:27 23.2 Lat: 35.10N Lon: 3.68W Depth: 1 Agency: IGL Regional**  
**Magnitudes: 3.3ML IGL Rms: 0.0 secs**

**MOROCCO Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	508	308	EP		1128	31.320	.020							1.0
MORF	HZ	510	300	EP		1128	31.55-	.000							1.0
MORF	HE	510	300	ES		1129	21.47-	.020							1.0
MORF	HE	510	300	IAML		1129	26.19			50	0.4				

**December 5 2019 Hour: 12:24 45.7 Lat: 5.36N Lon: 126.77E Depth: 61F Agency: IGL Distant**  
**Magnitudes: 5.5Ms IGL Rms: 0.0 secs**

**MINDANAO, PHILIPPINES Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ13363	320	EP	KP $\bar{d}$ f		1243	29.260	.040							1.0
MESJ	BZ13363	320	IAMS	_20		1341	14.16			767	11.7				
MORF	BZ13429	319	EP	KP $\bar{d}$ f		1243	30.37-	.040							1.0
MORF	BZ13429	319	IAMS	_20		1341	24.69			1074	19.1				

**December 7 2019 Hour: 11:41 13.7 Lat: 36.88N Lon: 8.56W Depth: 18F Agency: IGL Regional**  
**Magnitudes: 0.8ML IGL Rms: 0.0 secs**

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	48	350	EP		1141	21.71-	.040							1.0
MORF	HN	48	350	ES		1141	27.680	.030							1.0
MORF	HE	48	350	IAML		1141	29.12			8	0.2				
MESJ	HE	111	16	ES		1141	43.850	.010							1.0
MESJ	HE	111	16	IAML		1141	45.47			1	0.2				

**December 7 2019 Hour: 12:34 14.6 Lat: 35.15N Lon: 5.72W Depth: 18F Agency: IGL Regional**  
**Magnitudes: 1.4ML IGL Rms: 0.0 secs**

**MOROCCO Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	373	324	EP		1235	4.62-	.010							1.0
MESJ	HE	373	324	ES		1235	41.180	.010							1.0
MESJ	HE	373	324	IAML		1235	42.65			1	0.1				

**December 7 2019 Hour: 14:41 20.2 Lat: 37.26N Lon: 8.57W Depth: 4F Agency: IGL Regional**  
**Magnitudes: 0.9ML IGL Rms: 0.1 secs**

**S MONCHIQUE, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	9	304	EP		1441	21.64-	.200							1.0
MORF	HE	9	304	ES		1441	23.140	.130							1.0
MORF	HN	9	304	IAML		1441	23.30			94	0.2				
MESJ	HZ	71	26	EP		1441	31.850	.080							1.0

**December 7 2019 Hour: 21:50 49.4 Lat: 37.22N Lon: 8.54W Depth: 19F Agency: IGL Regional**  
**Magnitudes: 0.9ML IGL Rms: 0.1 secs**

**NW SILVES, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	14	313	EP		2150	52.98-	.180							1.0
MORF	HE	14	313	ES		2150	56.000	.090							1.0
MORF	HE	14	313	IAML		2150	56.37			51	0.2				
MESJ	HZ	74	22	EP		2151	1.460	.040							1.0
MESJ	HE	74	22	ES		2151	10.250	.050							1.0
MESJ	HE	74	22	IAML		2151	11.31			2	0.1				

**December 8 2019 Hour: 1:11 11.2 Lat: 37.00N Lon: 8.40W Depth: 26F Agency: IGL Regional**  
**Magnitudes: 1.3ML IGL Rms: 0.0 secs**

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	41	326	EP		111	18.62-	.050							1.0
MORF	HE	41	326	ES		111	24.12-	.020							1.0
MORF	HN	41	326	IAML		111	25.19			19	0.1				

MESJ HZ 95 10 EP 111 26.070.070 1.0

**December 8 2019 Hour: 3:58 17.4 Lat: 36.72N Lon: 9.68W Depth: 19F Agency: IGL Regional  
Magnitudes: 1.0ML IGL Rms: 0.1 secs**

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	112	54	EP		358	35.050	.040							1.0
MORF	HE	112	54	ES		358	47.930	.080							1.0
MORF	HE	112	54	IAML		358	48.72		4	0.2					
MESJ	HZ	179	46	EP		358	43.29-	.060							1.0
MESJ	HE	179	46	ES		359	2.19-	.070							1.0
MESJ	HE	179	46	IAML		359	4.75		1	0.0					

**December 8 2019 Hour: 12:16 6.6 Lat: 38.04N Lon: 13.67W Depth: 31F Agency: IGL Regional  
Magnitudes: 2.0ML IGL Rms: 0.1 secs**

**AZORES-CAPE ST. VINCENT RIDGE Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	450	99	EP		1217	4.31-	.040							1.0
MORF	HE	450	99	ES		1217	46.36-	.120							1.0
MORF	HE	450	99	IAML		1217	49.06		3	0.1					
MESJ	HZ	480	91	EP		1217	8.130	.240							1.0
MESJ	HE	480	91	ES		1217	52.53-	.070							1.0
MESJ	HN	480	91	IAML		1217	58.10		3	0.4					

**December 8 2019 Hour: 18:1 2.3 Lat: 36.88N Lon: 7.42W Depth: 27F Agency: IGL Regional  
Magnitudes: 1.3ML IGL Rms: 0.0 secs**

**STRAIT OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HE	119	294	ES		18 1	33.250	.010							1.0
MORF	HN	119	294	IAML		18 1	33.95		5	0.2					
MESJ	HZ	128	327	EP		18 1	21.23-	.010							1.0

**December 8 2019 Hour: 21:29 1.0 Lat: 36.35N Lon: 8.28W Depth: 14F Agency: IGL Regional  
Magnitudes: 1.4ML IGL Rms: 0.1 secs**

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	111	343	EP		2129	18.29-	.200							1.0
MORF	HE	111	343	ES		2129	31.470	.190							1.0
MORF	HE	111	343	IAML		2129	32.61		13	0.3					
MESJ	HZ	165	2	EP		2129	25.49-	.090							1.0
MESJ	HE	165	2	ES		2129	43.640	.100							1.0
MESJ	HN	165	2	IAML		2129	45.24		2	0.1					

**December 8 2019 Hour: 22:39 5.7 Lat: 37.32N Lon: 8.59W Depth: 14F Agency: IGL Regional  
Magnitudes: 0.7ML IGL Rms: 0.0 secs**

**NW MONCHIQUE, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	6	253	EP		2239	8.19-	.010							1.0
MORF	HN	6	253	ES		2239	10.050	.010							1.0
MORF	HN	6	253	IAML		2239	10.62		30	0.1					

**December 8 2019 Hour: 23: 8 34.9 Lat: 36.20N Lon: 8.30W Depth: 15F Agency: IGL Regional  
Magnitudes: 0.9ML IGL Rms: 0.1 secs**

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	127	346	EP		23 8	54.65-	.010							1.0
MESJ	HZ	182	2	EP		23 9	1.47-	.060							1.0
MESJ	HN	182	2	ES		23 9	21.020	.080							1.0
MESJ	HE	182	2	IAML		23 9	22.52		1	0.1					

**December 9 2019 Hour: 4:43 15.8 Lat: 37.30N Lon: 8.63W Depth: 11F Agency: IGL Regional**  
**Magnitudes: 0.5ML IGL Rms: 0.1 secs**

**W MONCHIQUE, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	2	283	EP		443	17.48	-.190							1.0
MORF	HE	2	283	ES		443	19.150	.100							1.0
MORF	HE	2	283	IAML		443	19.87			27	0.1				
MESJ	HZ	70	31	EP		443	27.200	.090							1.0

**December 9 2019 Hour: 6:12 23.9 Lat: 19.10N Lon: 80.43W Depth: 10F Agency: IGL Distant**  
**Magnitudes: 5.0Mb IGL Rms: 0.0 secs**

**CAYMAN ISLANDS REGION Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	BZ	7167	57	EP		623	0.40	-.020							1.0
MORF	BZ	7167	57	IAMB		623	2.18			11	0.9				
MESJ	BZ	7199	57	EP		623	2.320	.020							1.0
MESJ	BZ	7199	57	IAMB		623	3.44			9	0.9				

**December 9 2019 Hour: 9:11 19.9 Lat: 6.26S Lon: 154.79E Depth: 78F Agency: IGL Distant**  
**Magnitudes: 0.5ML IGL Rms: 0.0 secs**

**BOUGAINVILLE REGION, PAPUA NEW GUINEA Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ16138	336	EP	PKP		930	47.37	-.020							1.0
MORF	BZ16209	336	EP	PKP		930	48.600	.020							1.0

**December 9 2019 Hour: 13:1 19.8 Lat: 36.50N Lon: 7.74W Depth: 16F Agency: IGL Regional**  
**Magnitudes: 1.1ML IGL Rms: 0.1 secs**

**STRAIT OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	121	318	EP		13	1	38.60	-.110						1.0
MESJ	HZ	155	344	EP		13	1	43.100	.210						1.0
MESJ	HE	155	344	ES		13	1	59.66	-.090						1.0
MESJ	HE	155	344	IAML		13	2	0.79		2	0.1				

**December 9 2019 Hour: 19:47 44.7 Lat: 36.46N Lon: 9.80W Depth: 32F Agency: IGL Regional**  
**Magnitudes: 2.1ML IGL Rms: 0.1 secs**

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	139	47	EP		1948	4.63	-.070							1.0
MORF	HE	139	47	ES		1948	19.380	.070							1.0
MORF	HN	139	47	IAML		1948	21.07			37	0.1				
MESJ	HZ	208	42	EP		1948	13.15	-.090							1.0
MESJ	HE	208	42	ES		1948	34.160	.080							1.0
MESJ	HN	208	42	IAML		1948	36.80			8	0.1				

**December 9 2019 Hour: 20:52 36.4 Lat: 37.37N Lon: 7.77W Depth: 8F Agency: IGL Regional**  
**Magnitudes: 0.7ML IGL Rms: 0.0 secs**

**NE S. BRAS DE ALPORTEL, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	66	323	EP		2052	47.120	.050							1.0
MESJ	HN	66	323	ES		2052	54.80	-.050							1.0
MESJ	HN	66	323	IAML		2052	56.05			3	0.1				

**December 9 2019 Hour: 22:36 30.7 Lat: 52.84N Lon: 34.93W Depth: 10F Agency: IGL Distant**  
**Magnitudes: 5.5Mb IGL Rms: 0.0 secs**

**REYKJANES RIDGE Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ	2648	118	EP		2241	44.010	.030							1.0
MESJ	BZ	2648	118	IAMB		2241	47.02			346	2.0				
MESJ	BN	2648	118	ES		2246	0.830	.030							1.0
MORF	BZ	2667	120	EP		2241	45.50	-.070							1.0
MORF	BZ	2667	120	IAMB		2241	47.38			315	2.2				

**December 10 2019 Hour: 1:27 18.4 Lat: 37.31N Lon: 8.59W Depth: 10F Agency: IGL Regional**  
**Magnitudes: 0.8ML IGL Rms: 0.1 secs**

**W MONCHIQUE, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	6	264	EP		127	20.15	-.220							1.0
MORF	HN	6	264	ES		127	21.880	.100							1.0
MORF	HE	6	264	IAML		127	22.51		53	0.1					
MESJ	HZ	67	29	EP		127	29.580	.160							1.0
MESJ	HE	67	29	ES		127	37.39	-.040							1.0
MESJ	HN	67	29	IAML		127	39.60		5	0.1					

**December 10 2019 Hour: 8:40 42.4 Lat: 20.90S Lon: 168.57E Depth: 10F Agency: IGL Distant**  
**Magnitudes: 5.7Ms IGL Rms: 0.1 secs**

**LOYALTY ISLANDS Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ18125	351	EPK	Pdf		9	0	44.350	.070						1.0
MESJ	BZ18125	351	EPK	Pab		9	1	33.87	-.040						1.0
MORF	BZ18125	351	IAMs	_20		1023	10.10		975	17.4					
MORF	BZ18191	352	EPK	Pdf		9	0	44.980	.080						1.0
MORF	BZ18191	352	EPK	Pab		9	1	36.44	-.100						1.0

**December 10 2019 Hour: 17:5 3.3 Lat: 30.69N Lon: 141.74E Depth: 15F Agency: IGL Distant**  
**Magnitudes: 6.2Ms IGL Rms: 0.0 secs**

**IZU ISLANDS, JAPAN REGION Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
GGNV	BZ11769	337	EPP			1723	36.250	.010							1.0
GGNV	BE11769	337	IAMs	_20		18	4	33.91	6187	23.0					
MESJ	BZ11820	336	EPP			1723	39.64	-.040							1.0
MESJ	BZ11820	336	IAMs	_20		1815	22.56		5238	13.2					
MORF	BZ11890	336	EPP			1723	44.410	.030							1.0
MORF	BZ11890	336	IAMs	_20		1812	17.82		4830	16.2					

**December 10 2019 Hour: 21:58 27.8 Lat: 35.24N Lon: 26.47E Depth: 51F Agency: IGL Distant**  
**Magnitudes: 5.2Mb IGL Rms: 0.1 secs**

**CRETE, GREECE Net: CSEM**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ	3102	286	EP		22	4	13.130	.150						1.0
MESJ	BZ	3102	286	IAMB		22	4	28.44	82	1.3					
MESJ	BE	3102	286	ES		22	8	53.72	-.150						1.0

**December 11 2019 Hour: 14:33 2.2 Lat: 37.47N Lon: 8.86W Depth: 1 Agency: IGL Regional**  
**Magnitudes: 1.3ML IGL Rms: 0.1 secs**

**NW ALJEZUR, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	26	135	EP		1433	6.460	.050							1.0
MORF	HE	26	135	ES		1433	9.490	.010							1.0
MORF	HN	26	135	IAML		1433	10.70		89	0.1					
MESJ	HZ	70	54	EP		1433	13.520	.050							1.0
MESJ	HN	70	54	ES		1433	21.59	-.100							1.0
MESJ	HE	70	54	IAML		1433	22.28		7	0.2					

**December 11 2019 Hour: 18:54 42.3 Lat: 36.68N Lon: 11.26W Depth: 24F Agency: IGL Regional**  
**Magnitudes: 2.3ML IGL Rms: 0.1 secs**

**AZORES-CAPE ST. VINCENT RIDGE Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	242	73	EP		1855	15.65	-.010							1.0
MORF	HE	242	73	ES		1855	39.96	-.040							1.0
MORF	HE	242	73	IAML		1855	42.57		34	0.2					
MESJ	HZ	299	64	EP		1855	22.61	-.050							1.0
MESJ	HN	299	64	ES		1855	52.200	.100							1.0
MESJ	HN	299	64	IAML		1855	54.96		6	0.1					

**December 12 2019 Hour: 1:42 32.4 Lat: 35.35N Lon: 6.11W Depth: 32F Agency: IGL Regional  
Magnitudes: 1.9ML IGL Rms: 0.1 secs**

**STRAIT OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HE	315	314	ES		143	44.76	-.120							1.0
MORF	HN	315	314	IAML		143	46.74			8	0.2				
MESJ	HZ	335	326	EP		143	16.900	.190							1.0
MESJ	HN	335	326	ES		143	48.99	-.070							1.0
MESJ	HE	335	326	IAML		143	50.12			2	0.3				

**December 12 2019 Hour: 1:50 35.3 Lat: 37.49N Lon: 9.10W Depth: 16F Agency: IGL Regional  
Magnitudes: 1.0ML IGL Rms: 0.1 secs**

**NW ALJEZUR, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	45	117	EP		150	42.970	.090							1.0
MORF	HE	45	117	ES		150	48.25	-.140							1.0
MORF	HE	45	117	IAML		150	49.29			16	0.1				
MESJ	HZ	87	63	EP		150	49.300	.110							1.0
MESJ	HE	87	63	ES		150	59.23	-.070							1.0
MESJ	HN	87	63	IAML		151	0.16			4	0.1				

**December 12 2019 Hour: 6:24 48.6 Lat: 36.90N Lon: 8.58W Depth: 21F Agency: IGL Regional  
Magnitudes: 1.6ML IGL Rms: 0.1 secs**

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	45	352	EP		624	56.43	-.090							1.0
MORF	HN	45	352	ES		625	2.350	.090							1.0
MORF	HE	45	352	IAML		625	3.82			42	0.2				

**December 12 2019 Hour: 12:33 15.3 Lat: 37.33N Lon: 8.56W Depth: 12F Agency: IGL Regional  
Magnitudes: 1.2ML IGL Rms: 0.2 secs**

**N MONCHIQUE, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	9	251	EP		1233	17.57	-.230							1.0
MORF	HN	9	251	ES		1233	19.650	.050							1.0
MORF	HN	9	251	IAML		1233	20.00			285	0.2				
MESJ	HZ	64	28	EP		1233	25.69	-.030							1.0
MESJ	HE	64	28	ES		1233	33.510	.220							1.0
MESJ	HE	64	28	IAML		1233	35.86			4	0.1				

**December 12 2019 Hour: 16:37 44.3 Lat: 37.51N Lon: 7.59W Depth: 17F Agency: IGL Regional  
Magnitudes: 1.3ML IGL Rms: 0.1 secs**

**NW ALCOUTIM, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	67	304	EP		1637	55.140	.010							1.0
MESJ	HN	67	304	ES		1638	2.90	-.120							1.0
MESJ	HN	67	304	IAML		1638	4.52			12	0.1				
MORF	HZ	97	257	EP		1637	59.820	.110							1.0

**December 13 2019 Hour: 1:39 2.1 Lat: 37.51N Lon: 7.62W Depth: 14F Agency: IGL Regional  
Magnitudes: 0.6ML IGL Rms: 0.0 secs**

**NW ALCOUTIM, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	64	305	EP		139	12.47	-.030							1.0
MESJ	HE	64	305	ES		139	20.140	.030							1.0
MESJ	HN	64	305	IAML		139	21.38			3	0.1				

December 13 2019 Hour: 8:12 19.1 Lat: 37.86N Lon: 1.91W Depth: 1F Agency: IGL Regional  
Rms: 0.1 secs

SPAIN Net: MAD

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	556	272	EP		813	33.210	.080							1.0
MORF	HZ	599	266	EP		813	38.32-	-.090							1.0

December 13 2019 Hour: 10:12 15.8 Lat: 35.92N Lon: 7.60W Depth: 27F Agency: IGL Regional  
Magnitudes: 1.8ML IGL Rms: 0.1 secs

STRAIT OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	180	329	EP		1012	41.17-	-.060							1.0
MORF	HE	180	329	ES		1012	59.73-	-.060							1.0
MORF	HE	180	329	IAML		1013	2.27			11	0.2				
MESJ	HZ	220	346	EP		1012	46.270	.110							1.0
MESJ	HN	220	346	ES		1013	8.330	.020							1.0
MESJ	HN	220	346	IAML		1013	11.06			5	0.1				

December 13 2019 Hour: 10:16 23.3 Lat: 36.99N Lon: 5.26W Depth: 3F Agency: IGL Regional  
Rms: 0.1 secs

STRAIT OF GIBRALTAR Net: MAD

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	278	291	EP		1017	3.100	.090							1.0
MORF	HZ	303	278	EP		1017	6.05-	-.090							1.0

December 13 2019 Hour: 10:21 50.7 Lat: 36.98N Lon: 5.22W Depth: 8F Agency: IGL Regional  
Rms: 0.0 secs

SPAIN Net: MAD

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	282	291	EP		1022	30.380	.010							1.0

December 13 2019 Hour: 23:47 52.1 Lat: 37.33N Lon: 8.57W Depth: 16F Agency: IGL Regional  
Magnitudes: 0.9ML IGL Rms: 0.1 secs

NW MONCHIQUÉ, PORTUGAL Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	8	249	EP		2347	54.76-	-.270							1.0
MORF	HE	8	249	ES		2347	57.270	.120							1.0
MORF	HE	8	249	IAML		2347	57.98			36	0.1				
MESJ	HZ	64	29	EP		2348	2.680	.090							1.0
MESJ	HE	64	29	ES		2348	10.310	.070							1.0
MESJ	HE	64	29	IAML		2348	10.71			5	0.1				

December 14 2019 Hour: 1:40 18.2 Lat: 36.73N Lon: 9.64W Depth: 19F Agency: IGL Regional  
Magnitudes: 1.8ML IGL Rms: 0.1 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	109	54	EP		140	35.33-	-.030							1.0
MORF	HN	109	54	ES		140	47.83-	-.020							1.0
MORF	HE	109	54	IAML		140	49.08			41	0.2				
MESJ	HZ	176	45	EP		140	43.63-	-.120							1.0
MESJ	HN	176	45	ES		141	2.530	.170							1.0
MESJ	HE	176	45	IAML		141	4.34			5	0.1				

December 14 2019 Hour: 4:52 18.5 Lat: 36.34N Lon: 11.46W Depth: 31F Agency: IGL Regional  
Magnitudes: 2.7ML IGL Rms: 0.1 secs

AZORES-CAPE ST. VINCENT RIDGE Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	272	66	EP		452	54.33-	-.100							1.0
MORF	HN	272	66	ES		453	20.62-	.000							1.0
MORF	HN	272	66	IAML		453	22.92			79	0.2				
MESJ	HZ	333	59	EP		453	1.890	.010							1.0
MESJ	HE	333	59	ES		453	33.620	.100							1.0
MESJ	HN	333	59	IAML		453	37.03			14	0.1				

**December 14 2019 Hour: 4:57 38.0 Lat: 14.42S Lon: 167.69E Depth: 27F Agency: IGL Distant**  
**Magnitudes: 5.9Ms IGL Rms: 0.0 secs**

**VANUATU Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ17406	352		EPKPdf		517	29.590	.020							1.0
MESJ	BZ17406	352		EPKPab		517	58.72	-.040							1.0
MESJ	BZ17406	352		IAMs_20		626	43.79		2051	20.7					
MORF	BZ17471	353		EPKPdf		517	30.33	-.050							1.0
MORF	BZ17471	353		EPKPab		518	1.400	.070							1.0
MORF	BZ17471	353		IAMs_20		623	52.52		2590	31.7					

**December 14 2019 Hour: 8:49 54.4 Lat: 36.36N Lon: 4.65W Depth: 74F Agency: IGL Regional**  
**Magnitudes: 2.1ML IGL Rms: 0.0 secs**

**STRAIT OF GIBRALTAR Net: MAD**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	358	298	EP		850	41.26	-.060							1.0
MESJ	HE	358	298	ES		851	15.590	.040							1.0
MESJ	HE	358	298	IAML		851	18.26		2	0.1					
MORF	HE	372	288	ES		851	18.660	.020							1.0
MORF	HE	372	288	IAML		851	21.68		12	0.2					

**December 14 2019 Hour: 11:26 3.0 Lat: 38.81N Lon: 9.17W Depth: 1F Agency: IGL Regional**  
**Magnitudes: 1.3ML IGL Rms: 0.1 secs**

**SW LOURES, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
GGNV	HZ	11	170	EP		1126	4.54	-.170							1.0
GGNV	HE	11	170	ES		1126	6.130	.170							1.0
GGNV	HE	11	170	IAML		1126	7.20		455	0.4					
MESJ	HZ	136	142	EP		1126	24.920	.020							0.9
MESJ	HE	136	142	ES		1126	40.85	-.030							0.9
MESJ	HE	136	142	IAML		1126	41.97		2	0.1					

**December 14 2019 Hour: 12:54 41.5 Lat: 37.14N Lon: 3.76W Depth: 1F Agency: IGL Regional**  
**Magnitudes: 0.4ML IGL Rms: 0.0 secs**

**SPAIN Net: MAD**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	403	283	EP		1255	36.850	.020							1.0
MORF	HZ	435	274	EP		1255	40.87	-.020							1.0

**December 14 2019 Hour: 17:25 48.8 Lat: 35.90N Lon: 7.69W Depth: 25F Agency: IGL Regional**  
**Magnitudes: 2.1ML IGL Rms: 0.1 secs**

**STRAIT OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	178	331	EP		1726	13.99	-.090							1.0
MORF	HE	178	331	ES		1726	32.600	.060							1.0
MORF	HN	178	331	IAML		1726	37.29		24	0.2					
MESJ	HZ	220	348	EP		1726	19.350	.050							1.0
MESJ	HN	220	348	ES		1726	41.56	-.020							1.0
MESJ	HN	220	348	IAML		1726	43.95		11	0.1					

**December 14 2019 Hour: 19:20 56.9 Lat: 37.32N Lon: 8.62W Depth: 13F Agency: IGL Regional**  
**Magnitudes: 0.4ML IGL Rms: 0.1 secs**

**W MONCHIQUE, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	3	239	EP		1920	58.92	-.250							1.0
MORF	HN	3	239	ES		1921	0.900	.090							1.0
MORF	HE	3	239	IAML		1921	1.43		21	0.1					
MESJ	HZ	68	31	EP		1921	7.920	.070							1.0
MESJ	HN	68	31	ES		1921	15.930	.100							1.0
MESJ	HN	68	31	IAML		1921	17.10		1	0.1					

December 14 2019 Hour: 21:13 11.5 Lat: 36.59N Lon: 7.37W Depth: 30F Agency: IGL Regional  
Magnitudes: 1.4ML IGL Rms: 0.1 secs

STRAIT OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	139	305	EP		2113	31.54	-.080							1.0
MORF	HE	139	305	ES		2113	46.41	0.100							1.0
MORF	HN	139	305	IAML		2113	47.78			9	0.1				
MESJ	HZ	158	332	EP		2113	33.96	0.030							1.0
MESJ	HN	158	332	ES		2113	50.25	-.050							1.0
MESJ	HN	158	332	IAML		2113	51.61			3	0.1				

December 15 2019 Hour: 1:43 18.9 Lat: 35.85N Lon: 6.38W Depth: 32F Agency: IGL Regional  
Magnitudes: 1.1ML IGL Rms: 0.1 secs

STRAIT OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	275	324	EP		143	55.77	-.090							1.0
MESJ	HE	275	324	ES		144	22.91	0.090							1.0
MESJ	HE	275	324	IAML		144	24.66			1.00	0.1				

December 15 2019 Hour: 5:14 1.7 Lat: 37.05N Lon: 8.61W Depth: 16F Agency: IGL Regional  
Magnitudes: 0.6ML IGL Rms: 0.1 secs

WEST OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	29	352	EP		514	6.93	0.010							1.0
MORF	HE	29	352	ES		514	10.73	-.010							1.0
MORF	HE	29	352	IAML		514	11.72			15	0.3				
MESJ	HZ	94	21	EP		514	16.79	0.130							1.0
MESJ	HN	94	21	ES		514	27.46	-.120							1.0
MESJ	HN	94	21	IAML		514	28.38			0.90	0.2				

December 15 2019 Hour: 6:11 52.3 Lat: 6.71N Lon: 125.19E Depth: 22F Agency: IGL Distant  
Magnitudes: 7.0Ms IGL Rms: 0.1 secs

MINDANAO, PHILIPPINES Net: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ	13136	319	EPP		631	51.45	-.180							1.0
MESJ	BN	13136	319	ESS		648	6.09	-.010							1.0
MESJ	BE	13136	319	IAMs_20		717	27.12			32394	26.0				
GGNV	BZ	13145	321	EPP		631	52.22	0.050							1.0
GGNV	BE	13145	321	IAMs_20		715	45.11			95412	32.2				
MORF	BZ	13201	319	EPP		631	55.91	0.140							1.0
MORF	BE	13201	319	IAMs_20		718	51.11			43539	20.4				

December 15 2019 Hour: 7:1 4.7 Lat: 37.01N Lon: 5.30W Depth: 3F Agency: IGL Regional  
Rms: 0.1 secs

SPAIN Net: MAD

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	275	291	EP		7	1	44.02	0.060						1.0
MORF	HZ	300	277	EP		7	1	47.06	-.060						1.0

December 15 2019 Hour: 7:37 7.4 Lat: 37.05N Lon: 5.32W Depth: 1F Agency: IGL Regional  
Rms: 0.0 secs

SPAIN Net: MAD

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	271	290	EP		737	46.35	-.020							1.0

December 16 2019 Hour: 4:13 13.0 Lat: 36.17N Lon: 10.32W Depth: 34F Agency: IGL Regional  
Magnitudes: 2.3ML IGL Rms: 0.0 secs

AZORES-CAPE ST. VINCENT RIDGE Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	195	49	EP		413	39.92	-.040							1.0
MORF	HN	195	49	ES		413	59.73	0.050							1.0
MORF	HE	195	49	IAML		414	1.32			34	0.2				
MESJ	HE	263	45	ES		414	14.26	-.010							1.0



MESJ HN 263 45 IAML 414 15.90 10 0.3

**December 16 2019 Hour: 12:31 48.4 Lat: 36.61N Lon: 7.73W Depth: 34F Agency: IGL Regional  
Magnitudes: 1.4ML IGL Rms: 0.0 secs**

**STRAIT OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	143	342	EP		1232	9.000	.050							1.0
MESJ	HE	143	342	ES		1232	23.89-	.050							1.0
MESJ	HE	143	342	IAML		1232	25.91			5	0.1				

**December 16 2019 Hour: 16:46 48.1 Lat: 8.43S Lon: 158.96E Depth: 70F Agency: IGL Distant  
Rms: 0.1 secs**

**SOLOMON ISLANDS Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ16531	340	EPKP			17 6	27.070	.100							1.0
MORF	BZ16601	341	EPKP			17 6	28.62-	.100							1.0

**December 16 2019 Hour: 18:37 52.0 Lat: 36.68N Lon: 12.61W Depth: 30F Agency: IGL Regional  
Magnitudes: 2.3ML IGL Rms: 0.1 secs**

**AZORES-CAPE ST. VINCENT RIDGE Net: MAD**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	359	78	EP		1838	39.500	.040							1.0
MORF	HN	359	78	ES		1839	13.89-	.180							1.0
MORF	HN	359	78	IAML		1839	17.25			17	0.2				
MESJ	HZ	410	70	EP		1838	45.720	.010							1.0
MESJ	HE	410	70	ES		1839	25.020	.140							1.0
MESJ	HE	410	70	IAML		1839	28.64			5	0.2				

**December 16 2019 Hour: 20:16 44.6 Lat: 36.55N Lon: 7.53W Depth: 15F Agency: IGL Regional  
Magnitudes: 0.8ML IGL Rms: 0.0 secs**

**STRAIT OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	156	337	EP		2017	7.90-	.010							1.0
MESJ	HE	156	337	ES		2017	24.940	.010							1.0
MESJ	HN	156	337	IAML		2017	25.49			1	0.1				

**December 16 2019 Hour: 22:42 4.7 Lat: 37.02N Lon: 5.30W Depth: 8F Agency: IGL Regional  
Rms: 0.0 secs**

**SPAIN Net: MAD**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	274	290	EP		2242	43.390	.010							1.0

**December 16 2019 Hour: 23:17 27.8 Lat: 38.23N Lon: 9.40W Depth: 18F Agency: IGL Regional  
Magnitudes: 1.7ML IGL Rms: 0.2 secs**

**NORTH ATLANTIC OCEAN Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	112	112	EPg		2317	45.640	.160							1.0
MESJ	HE	112	112	ES		2317	58.420	.110							1.0
MESJ	HN	112	112	IAML		2318	0.75			13	0.1				
MORF	HZ	122	147	EP		2317	46.38-	.280							1.0

**December 17 2019 Hour: 15:38 31.3 Lat: 37.10N Lon: 8.61W Depth: 13F Agency: IGL Regional  
Magnitudes: 2.0ML IGL Rms: 0.1 secs**

**E LAGOS, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	23	351	EP		1538	35.56-	.070							1.0
MORF	HN	23	351	ES		1538	38.76-	.000							1.0
MORF	HE	23	351	IAML		1538	39.14			231	0.2				
MESJ	HZ	89	23	EP		1538	45.610	.090							1.0
MESJ	HN	89	23	ES		1538	55.85-	.010							1.0
MESJ	HN	89	23	IAML		1538	57.55			38	0.1				

**December 18 2019 Hour: 6:19 22.4 Lat: 36.97N Lon: 10.86W Depth: 29F Agency: IGL Regional**  
**Magnitudes: 1.8ML IGL Rms: 0.1 secs**

**AZORES-CAPE ST. VINCENT RIDGE Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	200	79	EP		619	50.150	.090							1.0
MESJ	HZ	253	67	EP		619	56.59	-.060							1.0
MESJ	HE	253	67	ES		620	21.65	-.030							1.0
MESJ	HN	253	67	IAML		620	23.79			5	0.2				

**December 18 2019 Hour: 6:29 50.5 Lat: 36.85N Lon: 7.42W Depth: 28F Agency: IGL Regional**  
**Magnitudes: 2.4ML IGL Rms: 0.1 secs**

**STRAIT OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	121	295	EP		630	8.39	-.050							1.0
MORF	HE	121	295	ES		630	21.630	.080							1.0
MORF	HN	121	295	IAML		630	22.54			128	0.1				
MESJ	HZ	131	327	EP		630	9.700	.040							1.0
MESJ	HN	131	327	ES		630	23.59	-.070							1.0
MESJ	HN	131	327	IAML		630	27.33			29	0.3				

**December 18 2019 Hour: 13:47 15.5 Lat: 36.58N Lon: 9.77W Depth: 13F Agency: IGL Regional**  
**Magnitudes: 1.7ML IGL Rms: 0.1 secs**

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	128	51	EP		1347	35.650	.040							1.0
MORF	HE	128	51	ES		1347	50.21	-.050							1.0
MORF	HE	128	51	IAML		1347	51.88			19	0.2				
MESJ	HZ	196	44	EP		1347	43.95	-.100							1.0
MESJ	HE	196	44	ES		1348	4.960	.100							1.0
MESJ	HE	196	44	IAML		1348	8.04			4	0.2				

**December 18 2019 Hour: 17:39 28.6 Lat: 34.42N Lon: 14.91W Depth: 10F Agency: IGL Regional**  
**Magnitudes: 0.0ML IGL Rms: 0.0 secs**

**MADEIRA ISLANDS, PORTUGAL REGION Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	649	59	EP		1740	53.06	-.000							1.0
MESJ	HZ	712	56	EP		1741	0.520	.000							1.0

**December 18 2019 Hour: 20:13 8.4 Lat: 37.97N Lon: 6.43W Depth: 6F Agency: IGL Regional**  
**Magnitudes: 2.1ML IGL Rms: 0.1 secs**

**SPAIN Net: MAD**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	158	265	EP		2013	34.050	.120							1.0
MESJ	HN	158	265	ES		2013	52.41	-.120							1.0
MESJ	HN	158	265	IAML		2013	53.87			20	0.3				

**December 19 2019 Hour: 4: 7 18.0 Lat: 37.06N Lon: 13.59W Depth: 31F Agency: IGL Regional**  
**Magnitudes: 2.2ML IGL Rms: 0.0 secs**

**AZORES-CAPE ST. VINCENT RIDGE Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	440	85	EP		4 8	14.40	-.020							1.0
MORF	HN	440	85	ES		4 8	55.55	-.060							1.0
MORF	HE	440	85	IAML		4 8	58.40			8	0.2				
MESJ	HZ	483	78	EP		4 8	19.750	.060							1.0
MESJ	HN	483	78	ES		4 9	4.750	.030							1.0
MESJ	HN	483	78	IAML		4 9	8.14			4	0.2				

December 19 2019 Hour: 5:51 5.2 Lat: 36.82N Lon: 7.64W Depth: 26F Agency: IGL Regional  
Magnitudes: 2.4ML IGL Rms: 0.2 secs

STRAIT OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	105	301	EP		551	21.10	-.190							1.0
MORF	HE	105	301	ES		551	32.93	-.140							1.0
MORF	HN	105	301	IAML		551	34.50		166	0.2					
MESJ	HZ	124	336	EP		551	23.840	.170							1.0
MESJ	HN	124	336	ES		551	37.360	.170							1.0
MESJ	HN	124	336	IAML		551	40.86		29	0.1					

December 19 2019 Hour: 8:47 15.1 Lat: 37.00N Lon: 5.28W Depth: 1F Agency: IGL Regional  
Rms: 0.0 secs

SPAIN Net: MAD

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	276	291	EP		847	54.800	.010							1.0

December 19 2019 Hour: 11:1 26.8 Lat: 36.80N Lon: 7.68W Depth: 26F Agency: IGL Regional  
Magnitudes: 2.1ML IGL Rms: 0.1 secs

STRAIT OF GIBRALTAR Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	103	303	EP		11	1	42.740	.050						1.0
MORF	HN	103	303	ES		11	1	54.350	.040						1.0
MORF	HN	103	303	IAML		11	1	55.31		89	0.1				
MESJ	HZ	125	338	EP		11	1	45.380	.000						1.0
MESJ	HE	125	338	ES		11	1	58.85	-.100						1.0
MESJ	HE	125	338	IAML		11	2	0.09		14	0.1				

December 19 2019 Hour: 15:25 59.0 Lat: 1.76N Lon: 8.22E Depth: 10F Agency: IGL Distant  
Magnitudes: 5.2Mb IGL Rms: 0.0 secs

SAO TOME E PRINCIPE REGION Net: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	BZ	4301	338	EP		1533	22.68	-.030							1.0
MORF	BZ	4301	338	IAMB		1533	28.88		68	1.1					
MESJ	BZ	4336	339	EP		1533	25.360	.030							1.0
MESJ	BZ	4336	339	IAMB		1533	37.89		45	0.8					

December 19 2019 Hour: 21:58 13.9 Lat: 38.79N Lon: 8.00W Depth: 11F Agency: IGL Regional  
Magnitudes: 1.4ML IGL Rms: 0.1 secs

N ARRAIOLOS, PORTUGAL Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	107	190	EP		2158	31.040	.150							1.0
MESJ	HE	107	190	ES		2158	43.13	-.150							1.0
MESJ	HN	107	190	IAML		2158	44.78		9	0.2					

December 20 2019 Hour: 11:39 53.1 Lat: 36.53N Lon: 70.44E Depth: 210F Agency: IGL Distant  
Magnitudes: 6.1Mb IGL Rms: 0.1 secs

HINDU KUSH REGION, AFGHANISTAN Net: NEIC

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ	6764	297	EP		1149	43.24	-.020							1.0
MESJ	BZ	6764	297	IAMB		1149	44.93		726	1.4					
MESJ	BE	6764	297	ES		1157	44.590	.100							1.0
GGNV	BZ	6796	299	EP		1149	45.300	.150							1.0
GGNV	BZ	6796	299	IAMB		1149	46.65		557	1.1					
GGNV	BE	6796	299	ES		1157	47.91	-.130							1.0
MORF	BZ	6824	297	EP		1149	46.89	-.060							1.0
MORF	BZ	6824	297	IAMB		1149	48.01		447	1.5					
MORF	BE	6824	297	ES		1157	51.37	-.040							1.0

**December 20 2019 Hour: 19:20 23.4 Lat: 37.35N Lon: 8.72W Depth: 13F Agency: IGL Regional  
Magnitudes: 1.0ML IGL Rms: 0.1 secs**

**NE ALJEZUR, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	8	130	EP		1920	25.74	-.170							1.0
MORF	HE	8	130	ES		1920	27.71	-.030							1.0
MORF	HE	8	130	IAML		1920	27.90			95	0.1				
MESJ	HZ	70	39	EP		1920	34.870	.190							1.0
MESJ	HE	70	39	ES		1920	42.950	.030							1.0
MESJ	HE	70	39	IAML		1920	44.25			3	0.1				

**December 20 2019 Hour: 20:13 50.7 Lat: 36.46N Lon: 8.96W Depth: 6F Agency: IGL Regional  
Magnitudes: 1.8ML IGL Rms: 0.1 secs**

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	98	16	EP		2014	6.23	-.200							1.0
MORF	HN	98	16	ES		2014	18.070	.120							1.0
MORF	HN	98	16	IAML		2014	19.98			50	0.3				
MESJ	HN	167	23	ES		2014	34.940	.090							1.0
MESJ	HE	167	23	IAML		2014	36.51			5	0.1				

**December 20 2019 Hour: 20:55 53.6 Lat: 38.79N Lon: 7.99W Depth: 10F Agency: IGL Regional  
Magnitudes: 1.3ML IGL Rms: 0.1 secs**

**N ARRADIOLOS, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	107	191	EP		2056	10.670	.060							1.0
MESJ	HE	107	191	ES		2056	23.01	-.060							1.0
MESJ	HN	107	191	IAML		2056	24.25			6	0.1				

**December 21 2019 Hour: 1:55 22.7 Lat: 38.79N Lon: 7.99W Depth: 8F Agency: IGL Regional  
Magnitudes: 1.5ML IGL Rms: 0.0 secs**

**N ARRADIOLOS, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	107	191	EP		155	39.85	-.000							1.0
MESJ	HE	107	191	ES		155	52.390	.000							1.0
MESJ	HN	107	191	IAML		155	53.61			10	0.1				

**December 21 2019 Hour: 10:40 9.3 Lat: 36.73N Lon: 7.53W Depth: 23F Agency: IGL Regional  
Magnitudes: 1.9ML IGL Rms: 0.1 secs**

**STRAIT OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	119	303	EP		1040	27.52	-.100							1.0
MORF	HE	119	303	ES		1040	41.040	.070							1.0
MORF	HN	119	303	IAML		1040	42.35			31	0.2				
MESJ	HZ	138	334	EP		1040	29.990	.040							1.0
MESJ	HE	138	334	ES		1040	44.99	-.010							1.0
MESJ	HN	138	334	IAML		1040	46.99			13	0.1				

**December 21 2019 Hour: 10:49 41.8 Lat: 37.26N Lon: 3.68W Depth: 1 Agency: IGL Regional  
Rms: 0.0 secs**

**SPAIN Net: MAD**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	406	281	EP		1050	37.550	.010							1.0
MORF	HZ	441	272	EP		1050	41.82	-.020							1.0

**December 21 2019 Hour: 10:54 16.8 Lat: 35.65N Lon: 10.06W Depth: 31F Agency: IGL Regional  
Magnitudes: 2.1ML IGL Rms: 0.1 secs**

**AZORES-CAPE ST. VINCENT RIDGE Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	223	34	EP		1054	46.46	-.080							1.0
MORF	HE	223	34	ES		1055	8.370	.140							1.0
MORF	HE	223	34	IAML		1055	9.80			28	0.2				
MESJ	HZ	293	34	EP		1054	55.17	-.110							1.0

MESJ HE 293 34 ES 1055 23.400.050 1.0  
 MESJ HE 293 34 IAML 1055 26.72 4 0.1

**December 21 2019 Hour: 22:29 23.6 Lat: 36.92N Lon: 8.59W Depth: 26F Agency: IGL Regional  
 Magnitudes: 1.1ML IGL Rms: 0.1 secs**

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	43	353	EP		2229	31.39	-.040							1.0
MORF	HE	43	353	ES		2229	37.240	.110							1.0
MORF	HE	43	353	IAML		2229	37.57		25	0.2					
MESJ	HZ	107	18	EP		2229	39.84	-.170							1.0
MESJ	HN	107	18	ES		2229	52.070	.090							1.0
MESJ	HE	107	18	IAML		2229	53.34		2	0.2					

**December 22 2019 Hour: 21:11 40.8 Lat: 36.99N Lon: 5.31W Depth: 2F Agency: IGL Regional  
 Rms: 0.0 secs**

**SPAIN Net: MAD**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	275	291	EP		2112	20.160	.000							1.0

**December 23 2019 Hour: 6:33 40.9 Lat: 11.53N Lon: 141.70E Depth: 47F Agency: IGL Distant  
 Magnitudes: 5.7Ms IGL Rms: 0.0 secs**

**STATE OF YAP, MICRONESIA Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ13733	332	EPKp	df		652	32.47	-.020							1.0
MESJ	BZ13733	332	IAMS	_20		748	58.28		2400	26.3					

**December 23 2019 Hour: 10:16 2.2 Lat: 37.91N Lon: 6.64W Depth: 8F Agency: IGL Regional  
 Magnitudes: 1.2ML IGL Rms: 0.0 secs**

**SPAIN Net: MAD**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	139	267	EP		1016	24.200	.020							1.0
MESJ	HE	139	267	ES		1016	40.20	-.020							1.0
MESJ	HN	139	267	IAML		1016	42.24		4	0.2					

**December 23 2019 Hour: 14:52 47.8 Lat: 37.01N Lon: 5.29W Depth: 6F Agency: IGL Regional  
 Rms: 0.0 secs**

**SPAIN Net: MAD**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	275	290	EP		1453	26.860	.020							1.0

**December 23 2019 Hour: 15:47 55.9 Lat: 13.75N Lon: 92.82W Depth: 10F Agency: IGL Distant  
 Magnitudes: 5.5Mb IGL Rms: 0.0 secs**

**OFF COAST OF CHIAPAS, MEXICO Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	BZ	8594	54	EP		1559	50.500	.000							1.0
MORF	BZ	8594	54	IAMB		1559	51.58		55	1.0					
MESJ	BZ	8624	54	EP		1559	51.95	-.000							1.0
MESJ	BZ	8624	54	IAMB		1559	53.30		29	1.0					

**December 23 2019 Hour: 15:57 7.2 Lat: 37.07N Lon: 7.97W Depth: 2F Agency: IGL Regional  
 Magnitudes: 0.8ML IGL Rms: 0.0 secs**

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HE	66	293	ES		1557	25.59	-.070							1.0
MORF	HE	66	293	IAML		1557	26.74		6	0.1					
MESJ	HZ	88	346	EP		1557	21.530	.060							1.0
MESJ	HN	88	346	ES		1557	31.880	.010							1.0
MESJ	HE	88	346	IAML		1557	33.44		2	0.1					

**December 23 2019 Hour: 15:58 3.8 Lat: 36.56N Lon: 9.78W Depth: 14F Agency: IGL Regional**  
**Magnitudes: 1.8ML IGL Rms: 0.1 secs**

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	130	50	EP		1558	23.99	-.040							1.0
MORF	HN	130	50	ES		1558	38.96	0.160							1.0
MORF	HE	130	50	IAML		1558	40.15		23	0.1					
MESJ	HZ	198	44	EP		1558	32.37	-.110							1.0
MESJ	HE	198	44	ES		1558	53.41	-.020							1.0
MESJ	HE	198	44	IAML		1558	55.68		5	0.2					

**December 24 2019 Hour: 2:49 30.4 Lat: 36.74N Lon: 7.55W Depth: 26F Agency: IGL Regional**  
**Magnitudes: 0.7ML IGL Rms: 0.1 secs**

**STRAIT OF GIBRALTAR Net: MAD**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	136	334	EP		249	50.14	-.150							1.0
MESJ	HN	136	334	ES		250	4.99	0.150							1.0
MESJ	HE	136	334	IAML		250	7.46		1	0.1					

**December 24 2019 Hour: 4:16 45.2 Lat: 36.65N Lon: 9.80W Depth: 16F Agency: IGL Regional**  
**Magnitudes: 1.8ML IGL Rms: 0.1 secs**

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	125	54	EP		417	4.62	-.070							1.0
MORF	HE	125	54	ES		417	19.06	0.140							1.0
MORF	HE	125	54	IAML		417	22.01		34	0.2					
MESJ	HZ	193	46	EP		417	12.79	-.220							1.0
MESJ	HE	193	46	ES		417	33.45	0.140							1.0
MESJ	HE	193	46	IAML		417	35.35		5	0.1					

**December 24 2019 Hour: 16:43 32.8 Lat: 26.98S Lon: 63.37W Depth: 561F Agency: IGL Distant**  
**Magnitudes: 5.8Mb IGL Rms: 0.1 secs**

**SANTIAGO DEL ESTERO, ARGENTINA Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	BZ	9125	41	EP		1654	54.62	-.140							1.0
MORF	BZ	9125	41	IAMB		1654	56.50		496	1.5					
MESJ	BZ	9193	41	EP		1654	57.76	-.030							1.0
MESJ	BZ	9193	41	IAMB		1654	58.96		344	0.9					
MESJ	BE	9193	41	ESK Sac		174	24.64	0.080							1.0
GGNV	BZ	9200	40	EP		1654	58.12	0.090							1.0
GGNV	BZ	9200	40	IAMB		1654	58.68		358	1.2					

**December 24 2019 Hour: 19:3 52.5 Lat: 3.50N Lon: 74.05W Depth: 11F Agency: IGL Distant**  
**Magnitudes: 5.7Mb IGL 5.6Ms IGL Rms: 0.1 secs**

**COLOMBIA Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
GGNV	BN	7608	50	ES		1923	55.86	-.160							1.0
GGNV	BN	7608	50	IAMS_20		1938	44.27		4932	26.8					
MORF	BZ	7615	51	EP		1914	54.56	0.010							1.0
MORF	BZ	7615	51	IAMB		1914	56.82		143	1.3					
MORF	BE	7615	51	ES		1923	57.02	0.090							1.0
MESJ	BZ	7666	51	EP		1914	57.32	0.000							1.0
MESJ	BZ	7666	51	IAMB		1914	59.80		40	1.2					
MESJ	BN	7666	51	ES		1924	2.26	0.050							1.0

**December 24 2019 Hour: 19:19 3.3 Lat: 3.46N Lon: 74.06W Depth: 10F Agency: IGL Distant**  
**Magnitudes: 5.5Mb IGL Rms: 0.0 secs**

**COLOMBIA Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	BZ	7619	51	EP		1930	5.71	-.050							1.0
MORF	BZ	7619	51	IAMB		1930	8.99		61	0.9					
MESJ	BZ	7669	51	EP		1930	8.57	0.050							1.0
MESJ	BZ	7669	51	IAMB		1930	11.90		18	0.9					

**December 25 2019 Hour: 3:36 2.7 Lat: 50.58N Lon: 130.00W Depth: 10F Agency: IGL Distant**  
**Magnitudes: 6.4Ms IGL Rms: 0.1 secs**

**VANCOUVER ISLAND, CANADA REGION Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
GGNV	BZ	8560	44	EP		347	55.930	.120							1.0
GGNV	BN	8560	44	ES		357	44.75	-.200							1.0
GGNV	BE	8560	44	IAMs_20		419	7.75		22088		18.4				
MESJ	BZ	8686	43	EP		348	2.290	.100							1.0
MESJ	BE	8686	43	ES		357	57.28	-.010							1.0
MESJ	BZ	8686	43	IAMs_20		422	47.20		14720		17.7				
MORF	BZ	8714	44	EP		348	3.780	.120							1.0
MORF	BN	8714	44	ES		357	59.98	-.150							1.0
MORF	BZ	8714	44	IAMs_20		422	13.05		19984		19.5				

**December 25 2019 Hour: 15:31 27.2 Lat: 36.62N Lon: 9.49W Depth: 23F Agency: IGL Regional**  
**Magnitudes: 1.4ML IGL Rms: 0.1 secs**

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	106	44	EP		1531	43.90	-.030							1.0
MORF	HN	106	44	ES		1531	56.270	.110							1.0
MORF	HN	106	44	IAML		1531	57.91		8		0.1				
MESJ	HZ	176	39	EP		1531	52.50	-.080							1.0

**December 25 2019 Hour: 21:0 51.3 Lat: 36.11N Lon: 11.10W Depth: 18F Agency: IGL Regional**  
**Magnitudes: 1.6ML IGL Rms: 0.1 secs**

**AZORES-CAPE ST. VINCENT RIDGE Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	256	58	EP		21 1	26.870	.090							1.0
MORF	HE	256	58	ES		21 1	52.65	-.050							1.0
MORF	HN	256	58	IAML		21 1	54.75		7		0.1				
MESJ	HZ	320	52	EP		21 1	34.74	-.030							1.0
MESJ	HE	320	52	ES		21 2	6.52	-.010							1.0
MESJ	HE	320	52	IAML		21 2	9.06		1		0.2				

**December 26 2019 Hour: 0:31 42.3 Lat: 36.76N Lon: 8.26W Depth: 10F Agency: IGL Regional**  
**Magnitudes: 1.0ML IGL Rms: 0.1 secs**

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HN	70	330	ES		032	2.080	.100							1.0
MORF	HN	70	330	IAML		032	3.28		15		0.2				
MESJ	HZ	120	2	EP		032	1.22	-.020							1.0
MESJ	HN	120	2	ES		032	14.98	-.090							1.0
MESJ	HE	120	2	IAML		032	17.45		0.90		0.1				

**December 26 2019 Hour: 1:3 29.1 Lat: 37.31N Lon: 8.53W Depth: 12F Agency: IGL Regional**  
**Magnitudes: 0.7ML IGL Rms: 0.1 secs**

**E MONCHIQUE, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	11	267	EP		1 3	31.52	-.220							1.0
MORF	HE	11	267	ES		1 3	33.770	.070							1.0
MORF	HE	11	267	IAML		1 3	34.36		25		0.1				
MESJ	HZ	65	25	EP		1 3	39.750	.190							1.0
MESJ	HN	65	25	ES		1 3	47.20	-.030							1.0
MESJ	HN	65	25	IAML		1 3	48.20		4		0.1				

**December 26 2019 Hour: 2:33 54.2 Lat: 38.23N Lon: 7.98W Depth: 7F Agency: IGL Regional**  
**Magnitudes: 1.9ML IGL Rms: 0.1 secs**

**SE ALVITO, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	48	206	EP		234	2.210	.180							1.0
MESJ	HE	48	206	ES		234	7.58	-.190							1.0
MESJ	HN	48	206	IAML		234	8.74		35		0.1				
MORF	HZ	119	210	EP		234	13.250	.140							1.0

MORF HE 119 210 ES 234 26.82-.120 1.0  
MORF HN 119 210 IAML 234 28.95 60 0.2

**December 26 2019 Hour: 22:53 40.2 Lat: 36.98N Lon: 9.68W Depth: 19F Agency: IGL Regional  
Magnitudes: 0.9ML IGL Rms: 0.0 secs**

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	98	68	EP		2253	55.77	-.050							1.0
MORF	HE	98	68	ES		2254	7.270	.050							1.0
MORF	HE	98	68	IAML		2254	9.07			3	0.1				

**December 27 2019 Hour: 7: 2 26.1 Lat: 38.34N Lon: 38.99E Depth: 4F Agency: IGL Distant  
Magnitudes: 5.1Mb IGL Rms: 0.0 secs**

**EASTERN TURKEY Net: CSEM**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ	4096	284	EP		7 9	35.30	-.040							1.0
MESJ	BZ	4096	284	IAMB		7 9	35.63			93	2.0				
MORF	BZ	4149	284	EP		7 9	39.500	.040							1.0
MORF	BZ	4149	284	IAMB		7 9	40.73			44	1.3				

**December 27 2019 Hour: 12:55 55.1 Lat: 36.43N Lon: 7.87W Depth: 7F Agency: IGL Regional  
Magnitudes: 1.4ML IGL Rms: 0.0 secs**

**STRAIT OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	120	325	EP		1256	14.11	-.030							1.0
MESJ	HZ	159	349	EP		1256	19.61	-.000							1.0
MESJ	HE	159	349	ES		1256	37.570	.030							1.0
MESJ	HN	159	349	IAML		1256	39.04			4	0.2				

**December 28 2019 Hour: 12: 9 47.8 Lat: 36.54N Lon: 11.27W Depth: 10F Agency: IGL Regional  
Magnitudes: 1.7ML IGL Rms: 0.0 secs**

**AZORES-CAPE ST. VINCENT RIDGE Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	248	69	EP		1210	23.06	-.010							1.0
MORF	HE	248	69	ES		1210	48.880	.040							1.0
MORF	HE	248	69	IAML		1210	51.03			9	0.3				
MESJ	HZ	307	61	EP		1210	30.26	-.070							1.0
MESJ	HN	307	61	ES		1211	1.430	.040							1.0
MESJ	HE	307	61	IAML		1211	4.37			1	0.3				

**December 28 2019 Hour: 14: 5 23.2 Lat: 36.48N Lon: 9.72W Depth: 17F Agency: IGL Regional  
Magnitudes: 1.6ML IGL Rms: 0.0 secs**

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	132	46	EP		14 5	43.40	-.030							1.0
MORF	HN	132	46	ES		14 5	58.200	.000							1.0
MORF	HN	132	46	IAML		14 5	59.13			13	0.1				
MESJ	HZ	201	41	EP		14 5	51.99	-.020							1.0
MESJ	HE	201	41	ES		14 6	13.090	.050							1.0
MESJ	HN	201	41	IAML		14 6	14.32			3	0.2				

**December 28 2019 Hour: 22:33 48.1 Lat: 36.26N Lon: 8.56W Depth: 4F Agency: IGL Regional  
Magnitudes: 1.5ML IGL Rms: 0.1 secs**

**WEST OF GIBRALTAR Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	116	356	EP		2234	6.69	-.120							1.0
MORF	HN	116	356	ES		2234	20.47	-.020							1.0
MORF	HE	116	356	IAML		2234	22.76			25	0.2				
MESJ	HE	178	10	ES		2234	35.190	.150							1.0
MESJ	HE	178	10	IAML		2234	39.20			2	0.1				



December 29 2019 Hour: 0:21 21.8 Lat: 37.95N Lon: 6.60W Depth: 9F Agency: IGL Regional  
Magnitudes: 2.5ML IGL Rms: 0.1 secs

SPAIN Net: MAD

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	143	266	EP		021	44.170	.060							1.0
MESJ	HE	143	266	ES		022	0.450	.020							1.0
MESJ	HN	143	266	IAML		022	2.73			48	0.1				
MORF	HZ	195	249	EP		021	50.600	.020							1.0
MORF	HN	195	249	ES		022	11.51	-.100							1.0
MORF	HN	195	249	IAML		022	17.66			45	0.2				

December 29 2019 Hour: 14:42 16.0 Lat: 38.11N Lon: 8.26W Depth: 4F Agency: IGL Regional  
Rms: 0.0 secs

NW FERREIRA DO ALENTEJO, PORTUGAL Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	30	173	EP		1442	20.950	.020							1.0
MESJ	HE	30	173	ES		1442	24.50	-.020							1.0

December 29 2019 Hour: 23:50 33.8 Lat: 39.35N Lon: 11.69W Depth: 31F Agency: IGL Regional  
Magnitudes: 2.7ML IGL Rms: 0.1 secs

NORTH ATLANTIC OCEAN Net: MAD

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
GGNV	HZ	231	107	EP		2351	4.35	-.170							1.0
MESJ	HZ	346	118	EP		2351	18.890	.100							0.9
MESJ	HE	346	118	ES		2351	51.690	.060							0.9
MESJ	HN	346	118	IAML		2351	54.58			13	0.1				
MORF	HZ	350	130	EP		2351	19.21	-.070							0.9
MORF	HE	350	130	ES		2351	52.590	.100							0.9
MORF	HE	350	130	IAML		2351	54.87			41	0.1				

December 30 2019 Hour: 4:41 5.4 Lat: 36.45N Lon: 11.10W Depth: 28F Agency: IGL Regional  
Magnitudes: 1.3ML IGL Rms: 0.1 secs

AZORES-CAPE ST. VINCENT RIDGE Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	238	66	EP		441	37.83	-.080							1.0
MORF	HE	238	66	ES		442	1.62	-.040							1.0
MORF	HE	238	66	IAML		442	3.85			3	0.1				
MESJ	HE	299	58	ES		442	14.810	.130							1.0
MESJ	HE	299	58	IAML		442	16.51			0.70	0.1				

December 30 2019 Hour: 10:42 45.7 Lat: 38.08N Lon: 8.38W Depth: 1 Agency: IGL Regional  
Magnitudes: 1.1ML IGL Rms: 0.1 secs

SE GRANDOLA, PORTUGAL Net: IMP

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	30	152	EP		1042	50.48	-.130							1.0
MESJ	HE	30	152	ES		1042	54.290	.130							1.0
MESJ	HN	30	152	IAML		1042	56.17			25	0.2				

December 30 2019 Hour: 13:14 2.0 Lat: 36.54N Lon: 5.23W Depth: 11F Agency: IGL Regional  
Magnitudes: 2.0ML IGL Rms: 0.1 secs

STRAIT OF GIBRALTAR Net: MAD

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	302	299	EP		13 2	23.82	-.090							1.0
MESJ	HE	302	299	ES		13 2	54.47	-.010							1.0
MESJ	HN	302	299	IAML		13 2	56.37			5	0.3				
MORF	HZ	317	286	EP		13 2	25.840	.090							1.0
MORF	HE	317	286	ES		13 2	57.670	.010							1.0
MORF	HN	317	286	IAML		13 3	0.71			8	0.3				

**December 30 2019 Hour: 17:18 57.5 Lat: 35.58N Lon: 74.61E Depth: 13F Agency: IGL Distant**  
**Magnitudes: 5.2Ms IGL Rms: 0.0 secs**

**NORTHWESTERN KASHMIR Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ	7145	299	EP		1729	32.38	-.030							1.0
MESJ	BN	7145	299	ES		1738	10.640	.030							1.0
MESJ	BZ	7145	299	IAMs_20		18 3	33.08			1341	17.0				
MORF	BE	7205	299	ES		1738	17.460	.010							1.0
MORF	BE	7205	299	IAMs_20		18 4	6.99			1731	24.8				

**December 30 2019 Hour: 17:49 58.3 Lat: 35.64N Lon: 74.63E Depth: 16F Agency: IGL Distant**  
**Magnitudes: 5.2Mb IGL Rms: 0.0 secs**

**NORTHWESTERN KASHMIR Net: NEIC**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	BZ	7143	299	EP		18 0	32.65	-.000							1.0
MESJ	BZ	7143	299	IAMB		18 0	33.69			21	1.1				

**December 30 2019 Hour: 17:50 36.0 Lat: 35.99N Lon: 2.19W Depth: 10F Agency: IGL Regional**  
**Magnitudes: 3.3ML IGL Rms: 0.1 secs**

**STRAIT OF GIBRALTAR Net: MAD**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	575	293	EP		1751	51.24	-.080							1.0
MESJ	HN	575	293	ES		1752	46.390	.060							1.0
MESJ	HN	575	293	IAML		1752	51.06			38	0.5				
MORF	HZ	595	286	EP		1751	53.900	.020							1.0

**December 30 2019 Hour: 21:51 24.4 Lat: 37.31N Lon: 8.67W Depth: 12F Agency: IGL Regional**  
**Magnitudes: 3.3ML IGL Rms: 0.1 secs**

**W MONCHIQUE, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MORF	HZ	2	112	EP		2151	26.47	-.020							1.0
MORF	HE	2	112	ES		2151	28.000	.020							1.0

**December 31 2019 Hour: 2:21 53.2 Lat: 37.60N Lon: 8.39W Depth: 10F Agency: IGL Regional**  
**Magnitudes: 1.1ML IGL Rms: 0.1 secs**

**SW OURIQUE, PORTUGAL Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	31	29	EP		221	58.530	.140							1.0
MESJ	HE	31	29	ES		222	2.190	.010							1.0
MESJ	HE	31	29	IAML		222	3.15			32	0.1				
MORF	HZ	40	215	EP		221	59.73	-.170							1.0
MORF	HE	40	215	ES		222	4.810	.010							1.0
MORF	HE	40	215	IAML		222	6.42			13	0.1				

**December 31 2019 Hour: 15:14 16.9 Lat: 38.47N Lon: 7.18W Depth: 0 Agency: IGL Regional**  
**Magnitudes: 0.6ML IGL Rms: 0.1 secs**

**SPAIN Net: IMP**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
MESJ	HZ	115	233	EP		1514	35.460	.070							1.0
MESJ	HN	115	233	ES		1514	48.86	-.070							1.0
MESJ	HN	115	233	IAML		1514	50.08			1	0.2				