

BRITISH GEOLOGICAL SURVEY

REPORT OR/17/061

Bulletin of British Earthquakes 2016

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1 Introduction

The British Geological Survey's (BGS) Seismic Monitoring and Information Service operate a nationwide network of seismograph stations in the United Kingdom (UK). Earthquakes in the UK and coastal waters are detected within limits dependent on the distribution of seismograph stations. Location accuracy is improved in offshore areas through data exchange with neighbouring countries. This bulletin contains locations, magnitudes and phase data for all earthquakes detected and located by the BGS during 2016, listed in Tables 1 and 2. Maps showing seismic activity in 2016 (Figure 1), and the larger magnitude events since 1979 ($ML > 2.5$) and since 1970 ($ML > 3.5$) are also included. The bulletin covers all of the UK land mass and its coastal waters including the North Sea ($11^{\circ}W$ to $6^{\circ}E$ and $48^{\circ}N$ to $64^{\circ}N$).

All events believed to be of true tectonic origin are included. Coalfield events are also included. Acoustic disturbances, such as sonic booms from supersonic aircraft, are included when they are felt. The airborne waves are readily identified by their slow travel time across an array but they are frequently mistaken as small earthquakes by the public. They are indicated by 'SONIC' in both the locality and comments column of Table 1.

Significant non-natural events, such as explosions, which received media attention or were greater than magnitude 2.5 ML or felt by local residents, are also included in Table 1. Smaller events that are known, or suspected to be of explosive origin are excluded from the bulletin where possible. These include explosions due to quarrying, mining, weapon testing or disposal, naval exercises, geophysical prospecting and civil engineering. Unfortunately, identification by record character, location and time of occurrence is not always conclusive and some man-made events may be included in the bulletin or, more rarely, a small natural event may have been excluded.

2 The BGS UK Seismograph Network

The UK seismograph network consists of 91 (77 permanent and 14 temporary) stations with broadband, short period and strong motion accelerometers. Of the permanent sites, some 43 are equipped with broadband seismometers and 30 have strong motion accelerometers, 23 of which are co-located with broadband sensors. The remaining 28 sites are equipped with short period seismometers, one of which is co-located with a strong motion accelerometer. Data from all stations are transferred in near real-time to the BGS offices in Edinburgh for automatic processing, analysis and archiving. Seismic events are detected using automatic processing algorithms, but they can also be extracted manually from the archive of continuous data, then analysed to determine event types, locations and magnitudes. Operational BGS seismograph stations are shown in Figure 2.

The detection capabilities of a network depend upon station distribution, instrument sensitivity and background noise levels. Figure 2 also shows the magnitude detection thresholds for the seismograph stations operational in December 2016. The contours illustrate the lower threshold magnitude for an earthquake to significantly exceed 4 nanometres of noise (average) at 10 Hz on at least four seismographs. These detection levels hold true only if data from all stations are continuously monitored. Smaller events may go undetected unless they are felt and reported to BGS by local inhabitants, in which case detection can be strongly dependent on the population density.

The whole of the UK is covered by the seismograph network for approximately magnitude 1.5 ML, and above, at times of average ambient noise levels. Noise sources such as wind, ocean waves and traffic vary considerably with time (typically 0.5 to 15 nanometres, at 10 Hz) causing the magnitude thresholds to increase or decrease. In conditions of high noise, 0.8 ML should be added

to the contour values, causing the threshold to rise to about 2.3 ML. Normally, however, an earthquake of this size would be felt, if not detected, in the areas of poorer instrumental coverage. The bulletin can, therefore, be assumed to be complete for all earthquakes of magnitude 2.3 ML and above.

Given the variability in the earthquake detection threshold, as governed by ambient noise conditions and the geometry of the observing network, the bulletin is biased towards certain localities. Figure 3 shows only earthquakes with magnitude 2.5 ML or above, in the period 1979 to 2016. The data set is considered complete for these magnitudes in all localities onshore. Seismicity for the period 1970 to 2016 is shown in Figure 4 with a threshold magnitude of 3.5 ML. This is the period covered by BGS instrumentation that, in the early years, only consisted of the network around Edinburgh (LOWNET) and Eskdalemuir (ESK) and a station near Kyle of Lochalsh (KYL). The data set is likely to be complete for such magnitudes.

3 Earthquake Parameters and Their Errors

HYPOCENTRE LOCATION

By accurately timing the signal onsets at a minimum of three stations, a location can be found for an earthquake that satisfies the observed pattern of arrivals. Instrumental locations in the bulletin were obtained using the computer program HYPOCENTER (Lienert and Havskov 1995) that iteratively adjusts a trial hypocentre (latitude, longitude, depth, and origin time) until the observed and computed arrival times coincide closely.

The accuracy of locations is dependent on distances from the closest stations, the distribution of the stations around the epicentre, the resolution to which signal onsets can be timed from the records, and the accuracy with which the seismic wave velocities through the Earth are known.

The accurate determination of earthquake depth presents a more difficult problem, mainly because phase arrival patterns at the seismographs can still be satisfied for a large range of depths merely by adjusting the origin time to suit. Depth is usually only well constrained when there is a station very close to the epicentre.

The best depth determinations are obtained when an earthquake or earthquake series occurs almost beneath a network. For events at larger distances the depth errors can be many kilometres.

MAGNITUDE

All earthquakes in the bulletin have been assigned a local magnitude (ML) as defined by Richter (1935):

$$ML = \log_{10} (A / A_0)$$

Where A is the maximum deflection (centre to peak in mm) registered on a Wood-Anderson seismograph and A_0 is that for a 'standard' magnitude zero earthquake at the same distance. The A_0 term is thus a distance correction factor, tabulated by Richter to 200 km, and later adjusted to include up to 600 km. Although Richter intended his method to be an approximate quantification of earthquake size and his attenuation term, A_0 , strictly only applies to California, the formula is still used worldwide today. The ML magnitudes in this bulletin have been calculated according to Richter's formula after converting the output of the BGS instruments to an equivalent Wood-Anderson deflection. Ideally, the measurements are made on two horizontal instruments and averaged but, if this is not possible, the mean of the magnitudes from a number of verticals are used. Ground motion registered at a seismograph varies with site conditions, distance and direction from the earthquake, and the nature of the ray path. Consequently, it is important to take

the mean from a good distribution of stations. The resulting errors on magnitudes quoted in the bulletin will normally be less than 0.4 ML.

INTENSITY

Intensity is a measure of the effect of the shaking produced by the earthquake on people, structures and objects. It decreases with distance from a maximum value (I_{\max}) usually found close to the epicentre. The maximum felt intensity is quoted, where known, with reference to the European Macroseismic Scale (EMS), (Grünthal, 1998).

FOCAL MECHANISM

Earthquake focal mechanisms provide information on the fault geometry and type of faulting that caused the earthquake, and can be used to better understand tectonic processes occurring within the Earth's crust. Calculating them involves mapping directions where the initial motion of the seismic waves is up (compressional) or down (dilatational) on a spherical projection. This results in distinctive "beach-ball" diagrams that show two shaded quadrants and two white quadrants that represent upward and downward initial motions. The dividing lines between the quadrants on the "beach-ball" define the orientation of the fault planes and the directions of slip. It is not possible to determine which of the two possible fault planes shown in the mechanism is the actual fault, so *a priori* information such as aftershock distribution are sometimes used to determine the causative fault. The strike and dip describe the orientation of the fault, and the rake describes the direction of slip (-90° for thrust or reverse faulting, 90° for normal faulting and 0° or 180° for strike-slip). The axes of maximum and minimum compression are denoted by black and white squares, respectively. The grid search method of Snoke *et al.* (1984) is used to determine the best-fitting fault plane solutions. For 2016, there were no earthquakes where focal mechanisms could be reliably determined.

4 Summary of 2016 Seismicity

There were 205 earthquakes located by the BGS seismic monitoring network during the year, with 22 having magnitudes of 2.0 ML or above and three having magnitudes of 3.0 ML or above. Two events with a magnitude of 2.0 ML or above were reported felt, together with a further thirteen smaller ones, bringing the total to fifteen felt earthquakes in 2016.

The largest earthquakes of the year occurred in the Northern North Sea on 9 September and on 3 November, both with a magnitude of 3.9 ML. The 9 September event was located approximately 275 km ENE of Lerwick, Shetland Islands and around 45 km SSE of the magnitude 4.8 ML North Sea earthquake on 26 July 1977. The 3 November event (Figure 5) was located approximately 280 km northeast of Aberdeen and is the largest earthquake in the general region (within 100 km) since a magnitude 4.7 ML on 23 March 1971. A further 20 events occurred in the North Sea and surrounding waters during the year, with magnitudes ranging between 1.5 ML and 3.8 ML. None were reported felt.

One of the largest onshore earthquakes during the year, with a magnitude of 2.3 ML, occurred on 27 October, at 02:08 UTC, and located approximately 9 km northwest of Liskeard, Cornwall (Figure 6). The BGS received some 45 reports from residents of Liskeard and the surrounding towns and villages who reported feeling the earthquake. Analysis of these reports shows that most of them came from within a 25 km radius of the epicentre. Typical reports described "the house shook slightly under my feet", "the noise woke us up, then we felt the house tremble and the windows rattle", "felt slight vibrations through my bed", "it sounded like an underground train", "the bedroom door creaked" and "it felt and sounded like an huge articulated lorry going over a

speed bump outside the house”, indicating an intensity of 3 EMS. This is the largest event to occur in this region of Cornwall since the magnitude 2.7 ML earthquake on 12 June 1981, which was felt, mostly between Liskeard and Plymouth, with a maximum intensity of 4 EMS. Historically, the largest earthquakes to have occurred nearby, within 20 km, were the magnitude 4.2 ML Launceston event that occurred on 25 June 1883, which was felt throughout Cornwall and Devon and the magnitude 3.4 ML Callington event that occurred on 12 August 1852, which was felt over most of east Cornwall. Minor damage, mainly damage to plaster, was reported for both these events indicating a maximum intensity of between 5 and 6 EMS.

Another earthquake with a magnitude of 2.3 ML occurred during the year, at 23:12 UTC on 6 March with an epicentre approximately 4 km southeast of Thame, Oxfordshire (Figure 7). The BGS received several felt reports from residents in the villages of Chinnor and Watlington (Oxfordshire) and from Bledlow, Bledlow Ridge, Princes Risborough, Monks Risborough and Aylesbury (Buckinghamshire). Reports received described, “thought our son had fallen out of bed”, “felt like a bus or a lorry had hit the house with a thud”, “sounded like distant thunder” and “it was if something heavy had fallen over upstairs”. An intensity of 3 EMS was assigned for this earthquake. This is the largest event detected in the general area since a magnitude 2.6 ML Basingstoke earthquake on 12 January 2006, some 48 km to the SSW. Historically, the largest event to have occurred in this area was the magnitude 3.4 ML Oxford earthquake on 6 November 1764, which was felt in Oxfordshire, Berkshire, Hampshire and Wiltshire, with a maximum intensity of 5 EMS.

On 27 January, at 23:28 UTC, an earthquake with a magnitude of 0.8 ML, occurred near Penryn, Cornwall. A single felt report was received from a resident in the village of Rame, some 5 km to the west of the epicentre, who described “initially thought it was the quarry but it was a different sort of rumble” and “felt a weak vibration”, indicating an intensity of 2 EMS.

Two earthquakes, on 11 and 14 March, both with magnitudes of 1.0 ML, occurred near Oakham, Rutland, in the same area and at similar depths as the magnitude 3.8 ML Oakham event of 28 January 2015, which was felt throughout the region with a maximum intensity of 4 EMS. The 11 March event, at 20:30 UTC, was felt by several residents in Oakham, Langham, Burley, Barleythorpe and Cottsmore who described “there was a rumbling noise lasting for a couple of seconds”, “it was loud enough to hear over the television”, “sounded like a passing truck”, “very weak compared to previous earthquakes in the area” and “we thought it was a clap of thunder”, indicating an intensity of 3 EMS. The 14 March event, at 18:06 UTC, was felt by a few residents in Oakham, who described “felt a slight vibration through my feet” and “the kitchen window rattled”, indicating an intensity of 2 EMS.

On 13 April, at 13:11 UTC, an earthquake with a magnitude of 1.6 ML, occurred offshore the parish of St Martin, Guernsey, Channel Islands, around 6 km SSE of the capital, St Peter Port. The BGS received a few reports from residents of Guernsey which described, “a rattle, a rumble and then a thud” and “there was a rumbling noise, louder and deeper than our normal running machinery”, indicating an intensity of 2 EMS. It locates approximately 6 km NNW of the magnitude 4.3 ML Jersey earthquake on 11 July 2014, which was felt throughout the Channel Islands and was also felt in Devon, Dorset and in France, with a maximum intensity of 4 EMS. Historically, larger events have been known to occur in the area, the largest being a magnitude 4.4 ML earthquake on 22 December 1843, which caused a considerable amount of damage to buildings on Guernsey and caused panic among the inhabitants.

An earthquake with a magnitude of 1.7 ML occurred 9 km SSW of Hereford, Herefordshire, at 20:49 UTC, on 18 April. The BGS received two felt reports, from residents in the villages of Little Dewchurch and Much Dewchurch, who both described a slight shaking, indicating an intensity of 2 EMS. This event locates 5 km southwest of the magnitude 5.2 ML Hereford earthquake on 6 October 1863, which was felt throughout most of England and Wales, and caused minor damage

in Hereford, Ross-on-Wye, Hay-on-Wye, Monmouth and Abergavenny. It also locates approximately 14 km WSW of the magnitude 5.3 ML Hereford earthquake which occurred on 17 December 1896, which was also felt throughout England and Wales and caused significant damage in Hereford and its surrounding villages, where over 200 chimneys were damaged or twisted.

A magnitude of 1.3 ML earthquake occurred at 11:25 UTC on 9 May, near Finnart, Perth and Kinross. A single report was received from a resident in the nearby village of Dall, which described, “the windows rattled and we felt a slight shudder”, indicating an intensity of 2 EMS.

On 17 May, at 15:56 UTC, a magnitude 1.9 ML earthquake occurred near Loch Goil, Argyll and Bute. The BGS received a single felt report, from the village of Lochgoilhead, which described, “felt a distinct vibration and heard a noise like thunder”, indicating an intensity of 2 EMS.

A magnitude 1.9 ML earthquake occurred, at 23:00 UTC, on 18 May, with an epicentre 2 km SSW of Oban, Argyll & Bute (Figure 8). Some 25 reports were received from residents of Oban and surrounding villages who felt the event, describing, “house vibrated slightly and ceiling creaked”, “slight shaking for a few seconds”, “badly fitted doors rattled”, “felt like a tube train went under the house” and “it was like a short rumble of thunder”, indicating an intensity of at least 3 EMS. It locates approximately 12 km southeast of the magnitude 4.1 ML Oban earthquake of 29 September 1986, which was felt over an area of around 30,000 km² with a maximum intensity of 5 EMS. It also locates approximately 25 km NNW of the magnitude 5.2 ML Argyll earthquake on 28 November 1880, the largest of all recorded Scottish earthquakes, which was felt all along the west coast of Scotland, east as far as Perthshire, throughout the Inner and Outer Hebrides and extensively in Northern Ireland.

An earthquake with a magnitude of 1.3 ML, occurred at 04:10 UTC on 30 May, with a location near the village of Shieldaig, Highland. A single felt report was received from a resident of Charlestown, a small hamlet some 4 km NNW of the epicentre, who described, “the bed trembled”, indicating an intensity of 2 EMS.

On 13 June, at 21:40 UTC, a magnitude 1.9 ML earthquake occurred approximately 5 km south of the town and seaside resort of Colwyn Bay, Conwy (Figure 9). Some 48 reports were received from residents in Conwy, Gwynedd and Anglesey who reported feeling the event. The reports described, “a closed door rattled in its frame”, “low rumbling noise which lasted a few seconds”, “sounded like a jet with afterburners engaged”, “felt and sounded like a lorry going up the lane” and “thought the quarry had started blasting later than normal”, indicating an intensity of at least 3 EMS. This event locates approximately 10 km ENE of the magnitude 3.9 ML Llanrwst earthquake, on 29 August 1780, which was felt over more or less all of North Wales with maximum intensities of 5 EMS. It also locates approximately 50 km northeast of the magnitude 5.4 ML Llyn Peninsula earthquake, on 19 July 1984, which was felt throughout England and Wales and into Scotland and Ireland, with a maximum intensity of 6 EMS. Historically, larger earthquakes have also been known to occur in the area, the largest being a magnitude 5.3 ML earthquake that occurred on 9 November 1852 and a magnitude 5.2 ML earthquake that occurred on 7 October 1690, which were both felt at intensities of 6 EMS.

On 29 June, at 20:58 UTC, an earthquake with a magnitude of 1.4 ML occurred near the town of Middleton, Greater Manchester. The BGS received two felt reports from residents of Middleton, who described “both me and my husband felt the sofa shake” and “we felt quite a weak rumble”, indicating an intensity of 2 EMS.

Nine earthquakes, with magnitudes ranging between 0.9 ML and 1.9 ML, occurred on the Island of Mull, Argyll and Bute during the year. Two were reported felt. The largest occurred at 13:38 UTC on 19 August (Figure 10) and was felt in the hamlets of Lochbuie, Kinlochspelve, Killiechronan, Aros, Croggan, Craignure, Tiroran, Pennyghael and Gruline on the island. Reports described “sounded like thunder”, “we were mildly alarmed”, “there was a slight shaking at floor

level” and “the windows rattled and there was a rumble through the kitchen floor”, indicating an intensity of at least 3 EMS. The other felt earthquake, with a magnitude of 1.2 ML, occurred, at 17:26 UTC, on 22 June, and was felt by a single resident in the hamlet of Tiroran, Mull, who described, “a faint vibration through the floor”. An intensity of 2 EMS was assigned to this event.

An earthquake, with a magnitude of 2.0 ML, occurred at 03:51 UTC on 2 November in the English Channel region, approximately 75 km southeast of Lizard Point, Cornwall. Three other offshore earthquakes occurred in the English Channel region during the year, with magnitudes of 1.2 ML, 1.6 ML and 1.9 ML. None were reported felt.

On 14 November, at 07:20 UTC, a magnitude 2.1 ML earthquake occurred approximately 4 km NNW of the town of Crickhowell, Powys. No felt reports were received for this event.

5 UK Seismicity Statistics

In Figure 11, the histogram of earthquakes above magnitude 2.0 detected per year in different magnitude ranges, shows significant variation across the 47 years of modern instrumental monitoring. In the early years, the 1970s, instrumental coverage across the UK was sparse, and that influences the picture, although it was improving in the second half of the decade. The annual catalogues are thought to be complete at magnitude 3.5 ML or greater for 1970 to 1978, and for magnitude 2.5 ML and greater from 1979. Almost all of the earthquakes above 2.5 ML would be felt by people. Some of the peaks seen in Figure 11 have obvious explanations:

- In 1980, there was a continuing long aftershock sequence of the Carlisle earthquake of 26 December 1979 (4.7 ML). The largest two (both 3.8 ML) occurred in January and December 1980, the latter almost one year later than the mainshock. A local, temporary station was installed in a Longtown church three days after the mainshock, followed by three more distant stations in 1980.
- The largest onshore earthquake known in the UK’s history occurred on the Llyn Peninsula, Gwynedd in 1984 (19 July) with a magnitude of 5.4 ML. A multi-station monitoring network was installed, shortly afterwards, across North Wales. The aftershock sequence continued for more than a year and confirmed that the activity was relatively deep for UK earthquakes, at around 20 km.
- The high peak in 2002 is dominated by an earthquake sequence near Manchester, which started on 19 October 2002 and continued until January 2003. Some 53 events above magnitude 2.0 ML were recorded and 37 were felt, the largest with a magnitude of 3.9 ML. Temporary stations were deployed to record the smaller events.
- The peak in 2014, is the result of an extended coal-mining induced series of earthquakes near New Ollerton, Nottinghamshire, which were studied with a temporary mobile network of monitoring stations. Some 65 events were felt, of which ten were magnitude 2.0 ML or greater.

In 1974-75, there are clear peaks in earthquakes with magnitudes of 3.0 ML and greater during this period; around half of them were centred near Kintail, NW Scotland. There were few monitoring stations in the UK at this time, so it is not known whether they were accompanied by many or a few smaller magnitude events.

- The Bishops Castle, Shropshire, earthquake in April 1990 (5.1 ML) and the Market Rasen, Lincolnshire earthquake in February 2008 (5.2 ML), both showed very limited aftershock sequences despite being well monitored. The former had seven aftershocks (all less than or equal to 1.5 ML and none felt) and the latter had eleven aftershocks, with magnitudes ranging between 0.6 ML and 2.8 ML, (the largest felt locally).

- Finally, the year 2016 is remarkable for producing the fewest earthquakes in the whole 47 year series, in all magnitude ranges above 2.0 ML, with a total of only three events in the 2.0 ML - 2.9 ML range and none above that.

Figures 12 and 13 show the statistics for all earthquakes known to be felt from 1979 to 2016, including those below magnitude 2.0 ML. As might be expected, Figure 12 shows three of the same peaks as for the event occurrences seen in Figure 11; namely the 1984 Lleyn, 2002 Manchester and 2014 New Ollerton events. However, there were many events felt with magnitudes below 2.0 ML, and these were mainly related to coal mining.

Figure 13 shows the split between the number of felt events in coalfield areas (most of them mining-induced) and those which are natural earthquakes. It can be seen that the coalfield event distribution across the 38 years (1979 - 2016), largely mirrors the distribution of smaller events (2.0 ML or less) in Figure 12. As UK mining-induced events almost always occur within one km of the surface, they are felt at low magnitudes as they are close to the communities exposed. Natural earthquakes in the UK are generally in the depth range 3 - 20km. By the year 2000, deep coal mining across the UK was tailing off and the upsurge in the mining-induced events in 2014 was associated with the Thoresby mine at New Ollerton, Nottinghamshire, which closed in 2015. The lack of mining events in 1984 is caused by the general miners' strike that year.

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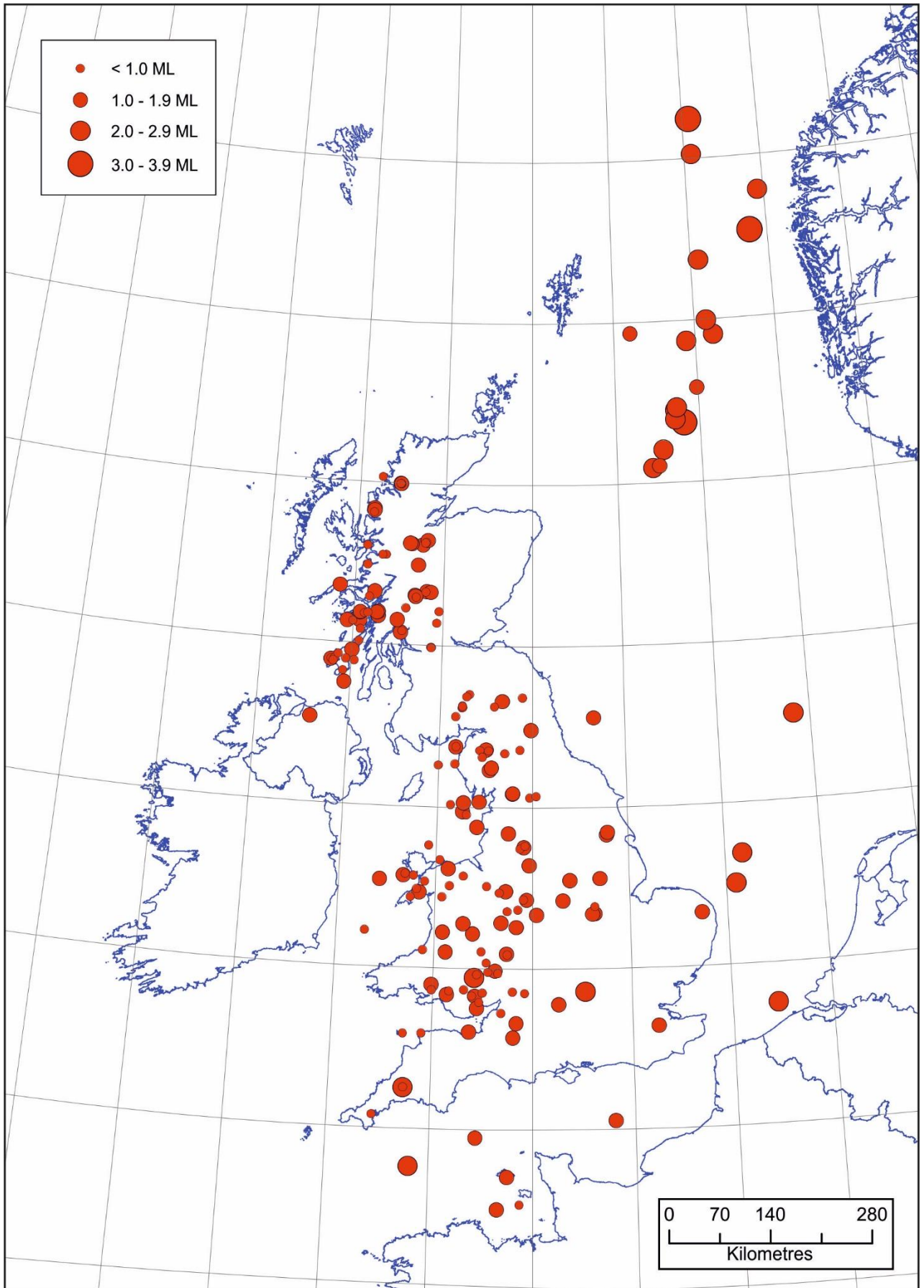


Figure 1. Epicentre map of earthquakes in 2016 as listed in Table 1.

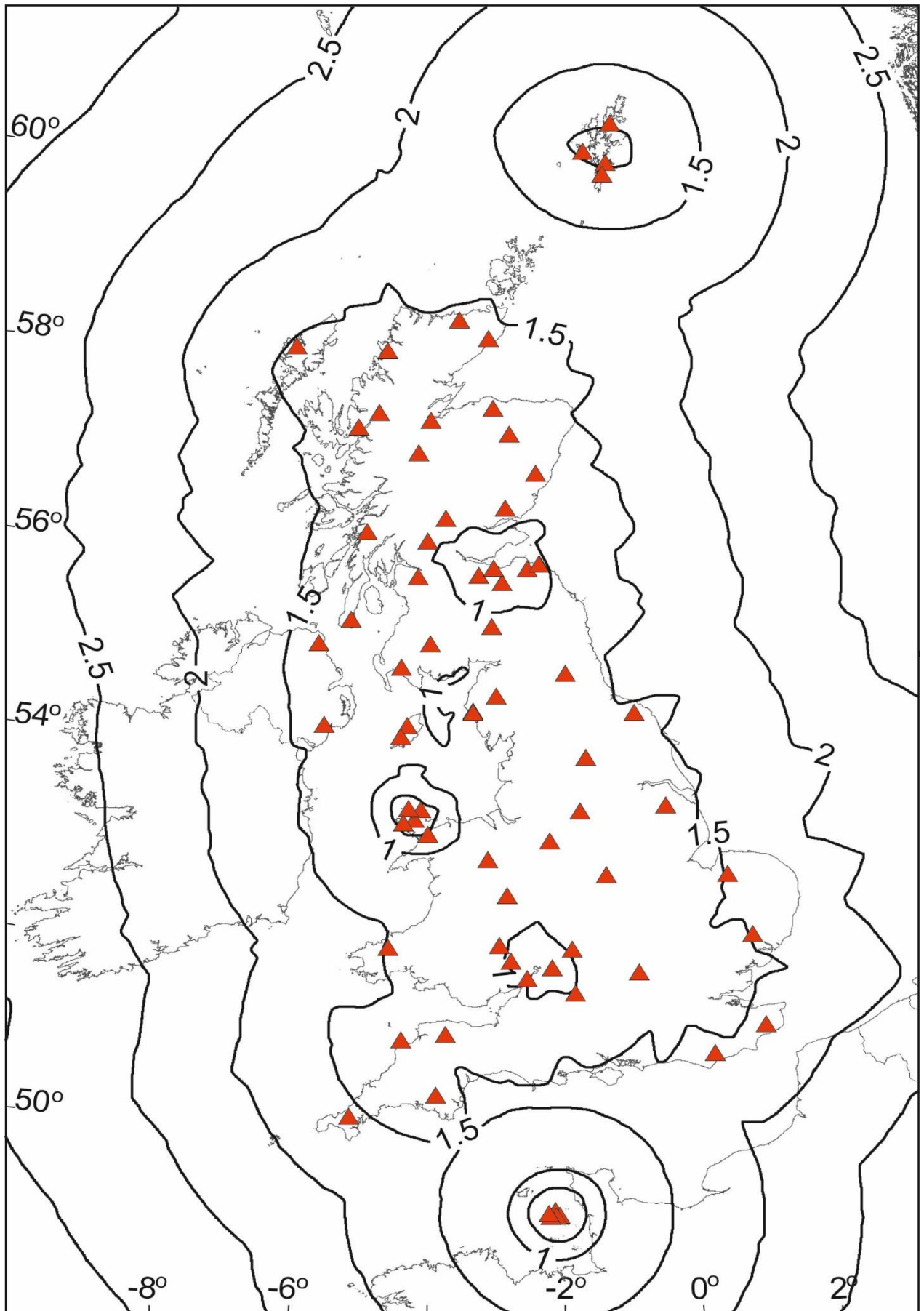


Figure 2. Seismograph stations operated by BGS during 2016. The contours show earthquake detection capability in terms of Richter local magnitude (ML) calculated for average background noise conditions (4nm) where the detection criterion is that the signal has to exceed 4nm at 10Hz at 4 stations.

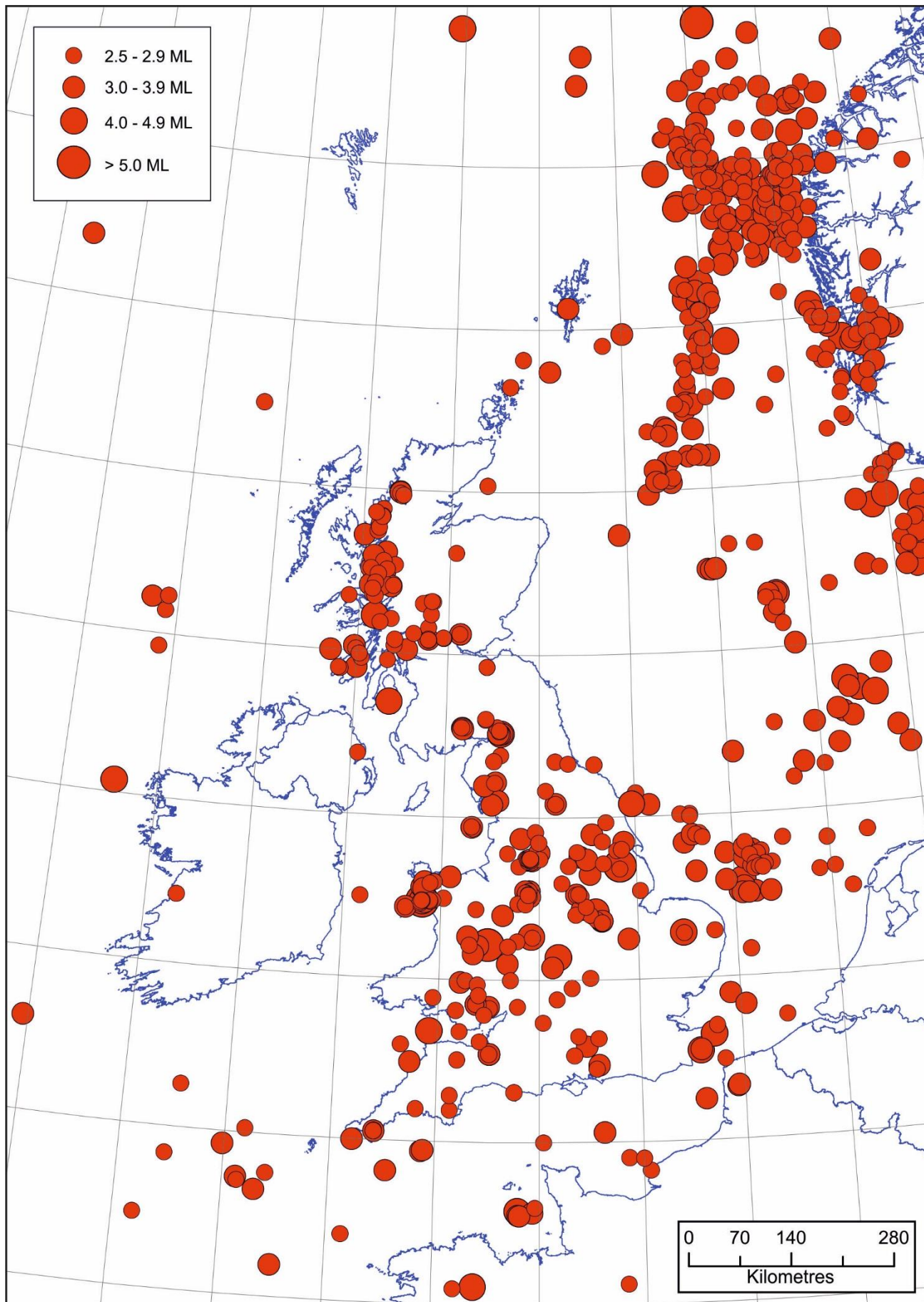


Figure 3. Epicentres of earthquakes with magnitudes of 2.5 ML and above, in the period 1979 to 2016.



Figure 4. Epicentres of earthquakes with magnitudes of 3.5 ML and above, in the period 1970 – 2016.

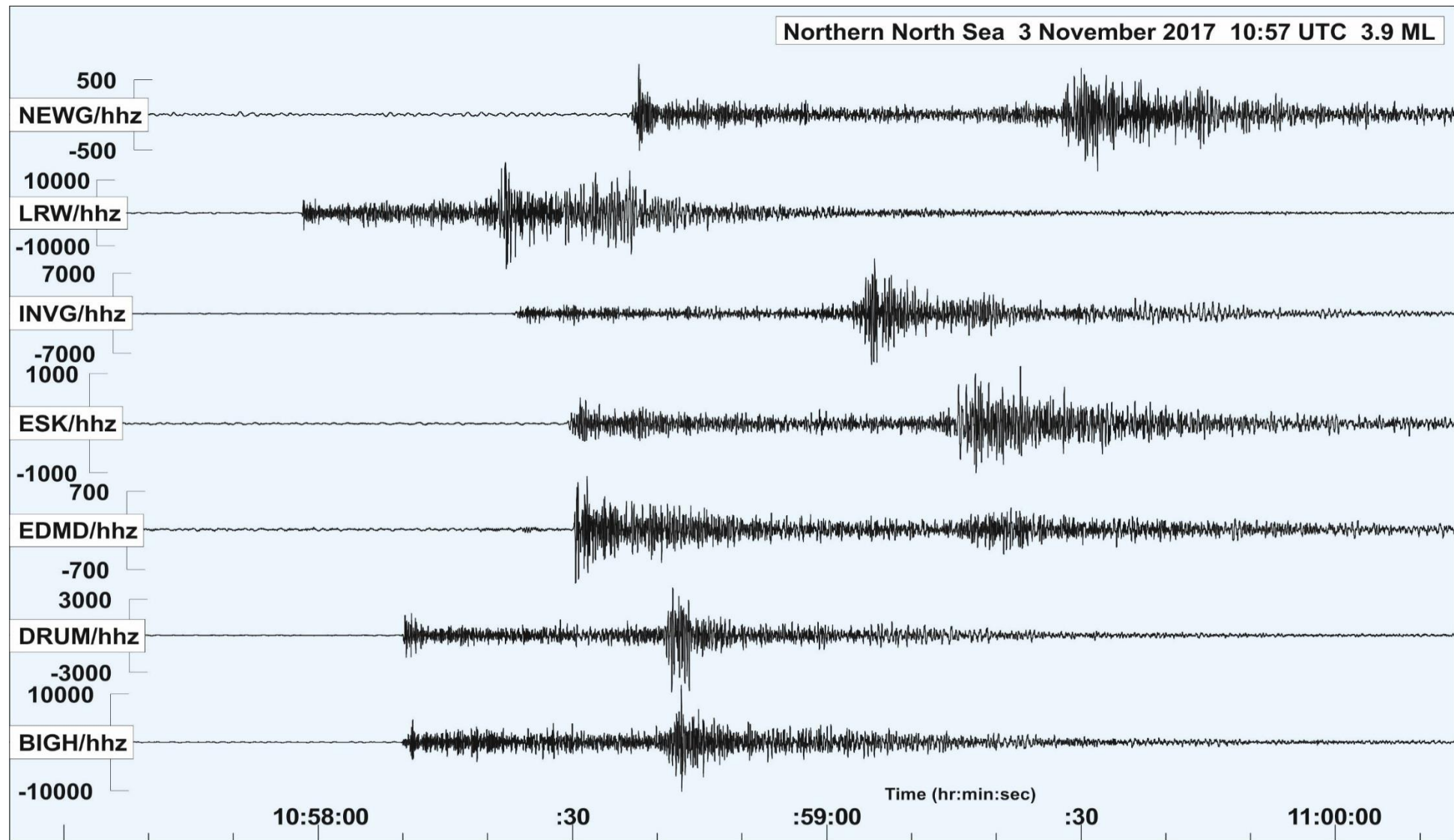


Figure 5. Seismograms of the ground displacement from the magnitude 3.9 ML Northern North Sea earthquake, 3 November 2016, recorded by BGS seismograph stations.

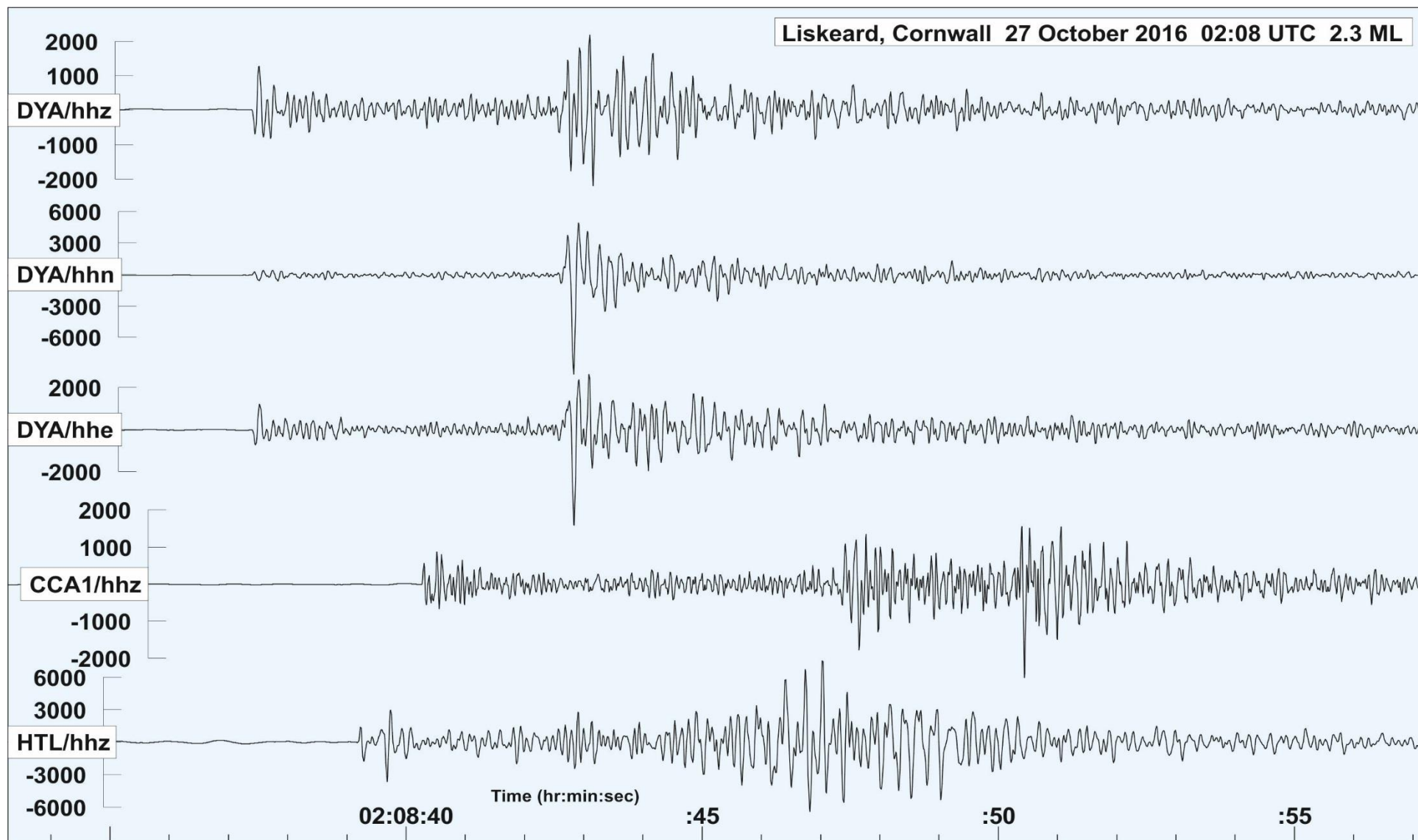


Figure 6. Seismograms of the ground displacement from the magnitude 2.3 ML Liskeard earthquake, 27 October 2016, recorded by BGS seismograph stations.

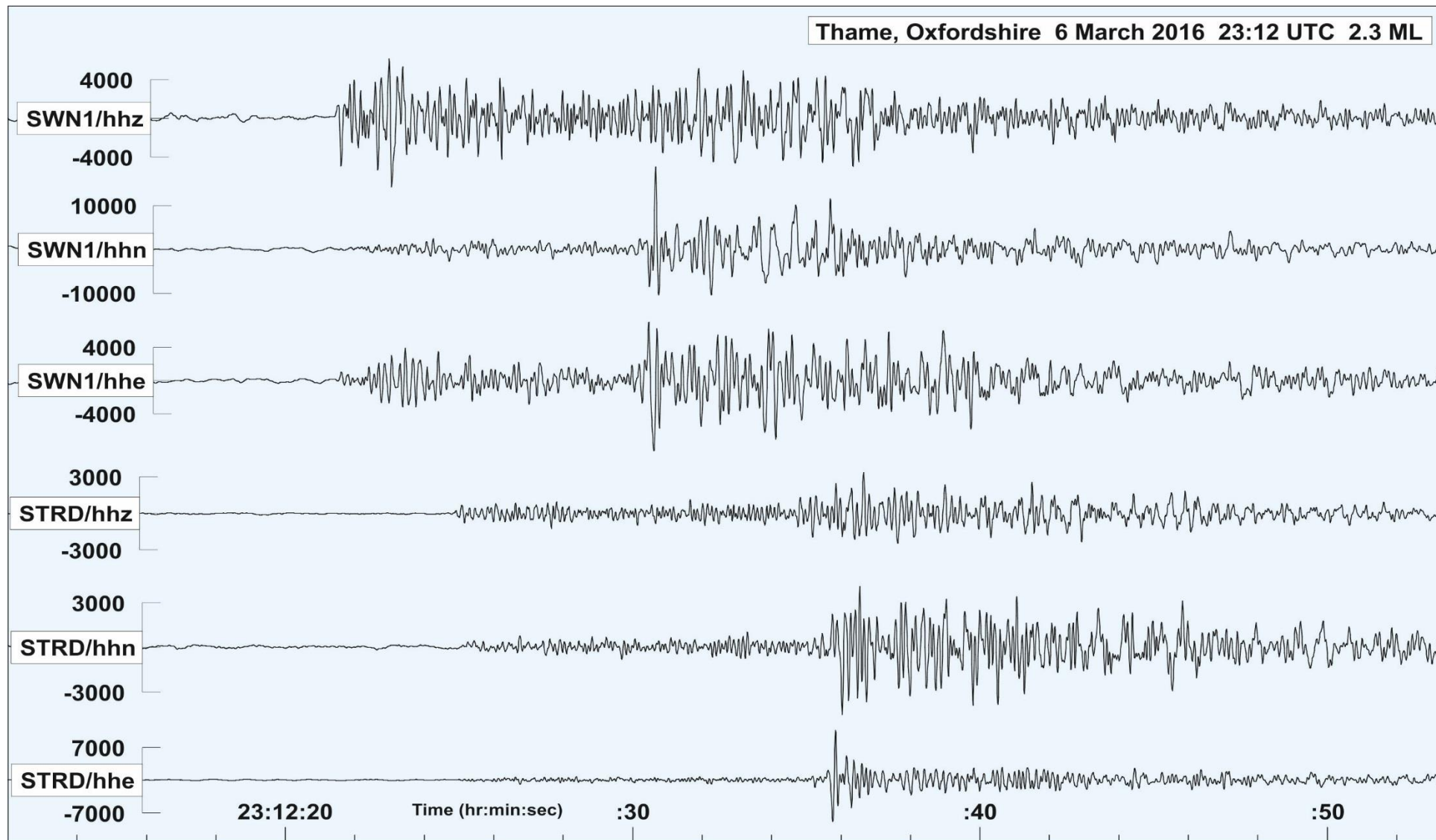


Figure 7. Seismograms of the ground displacement from the magnitude 2.3 ML Thame earthquake, 6 March 2016, recorded by BGS seismograph stations.

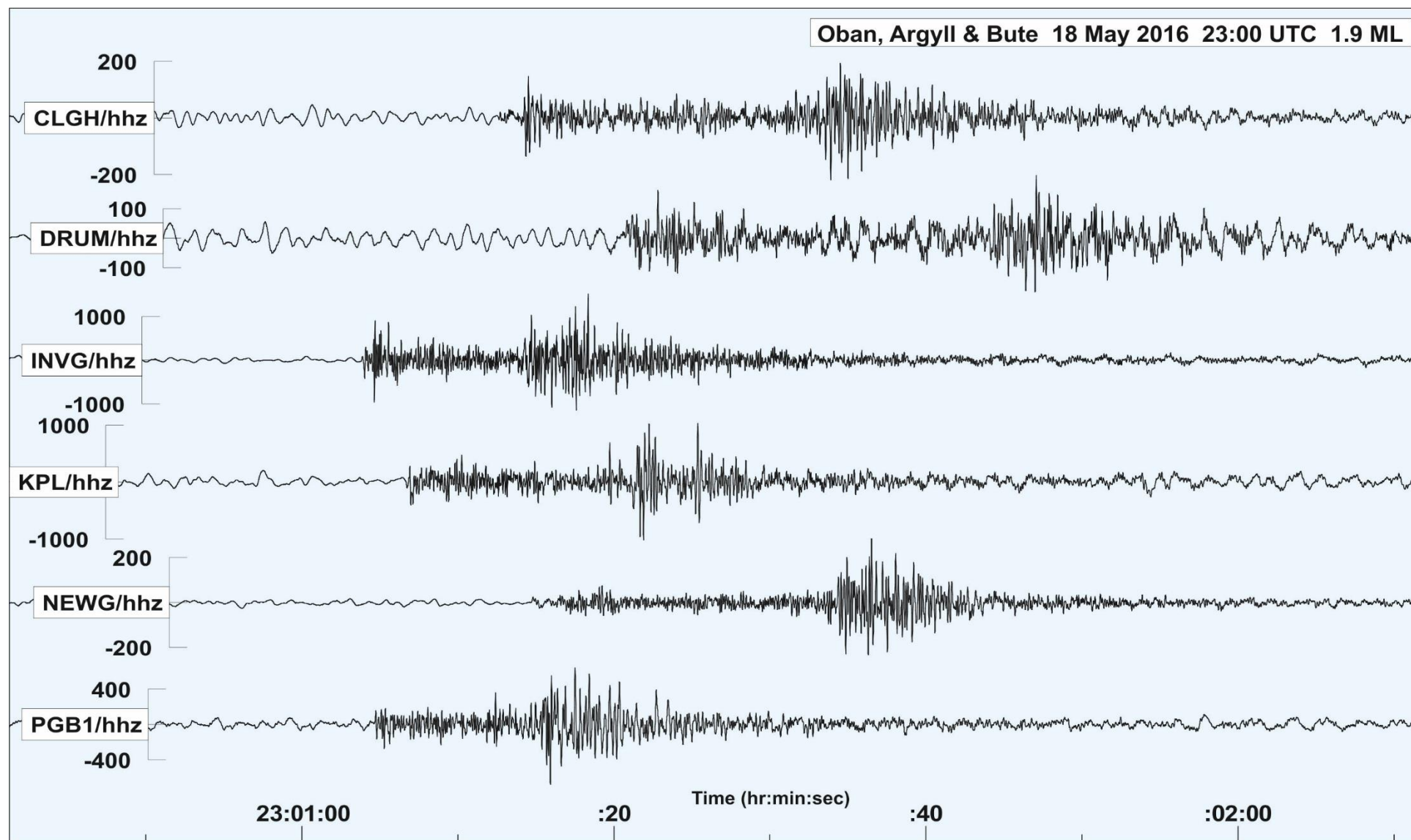


Figure 8. Seismograms of the ground displacement from the magnitude 1.9 ML Oban earthquake, 18 May 2016, recorded by BGS seismograph stations.

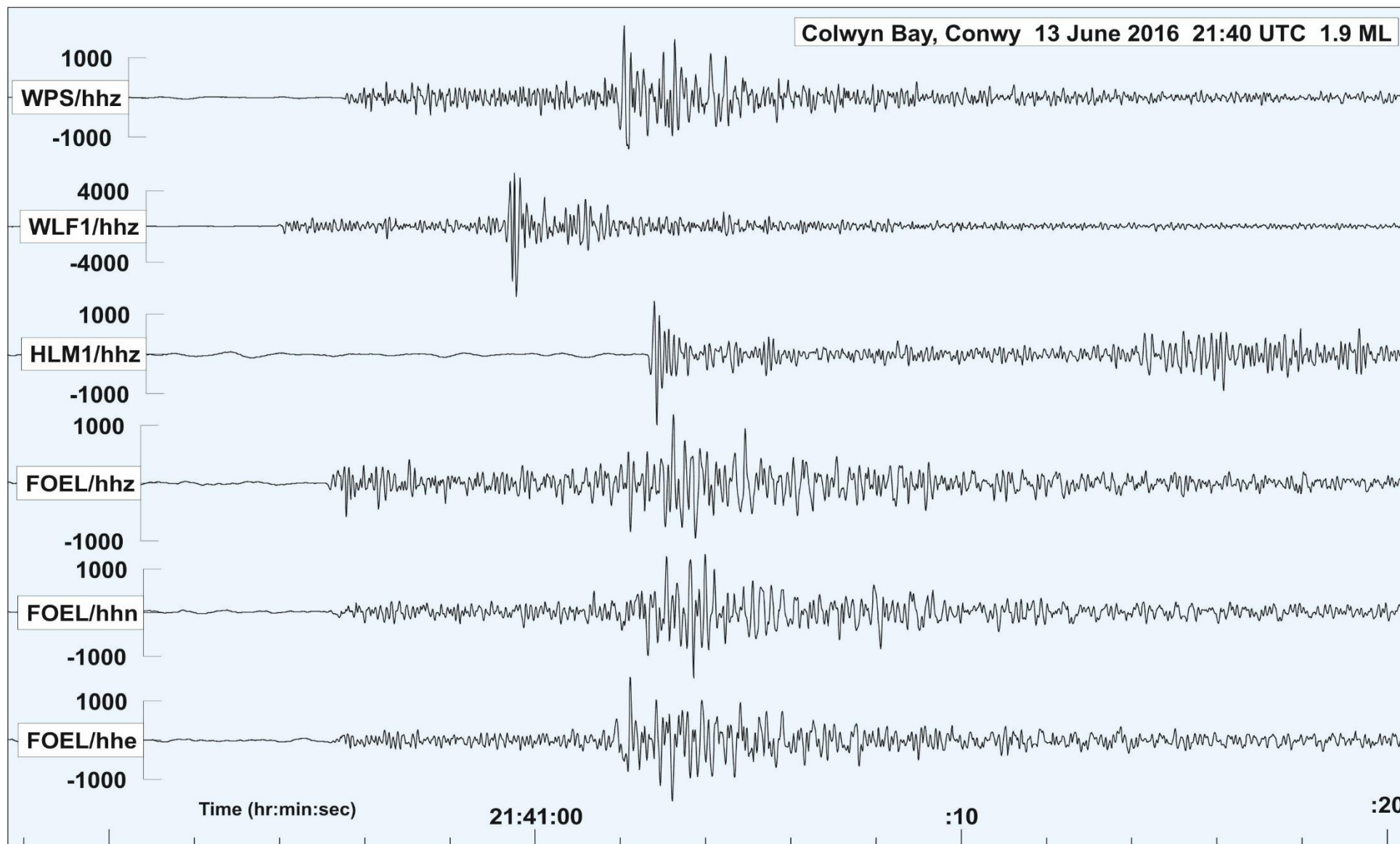


Figure 9. Seismograms of the ground displacement from the magnitude 1.9 ML Colwyn Bay earthquake, 13 June 2016, recorded by BGS seismograph stations.

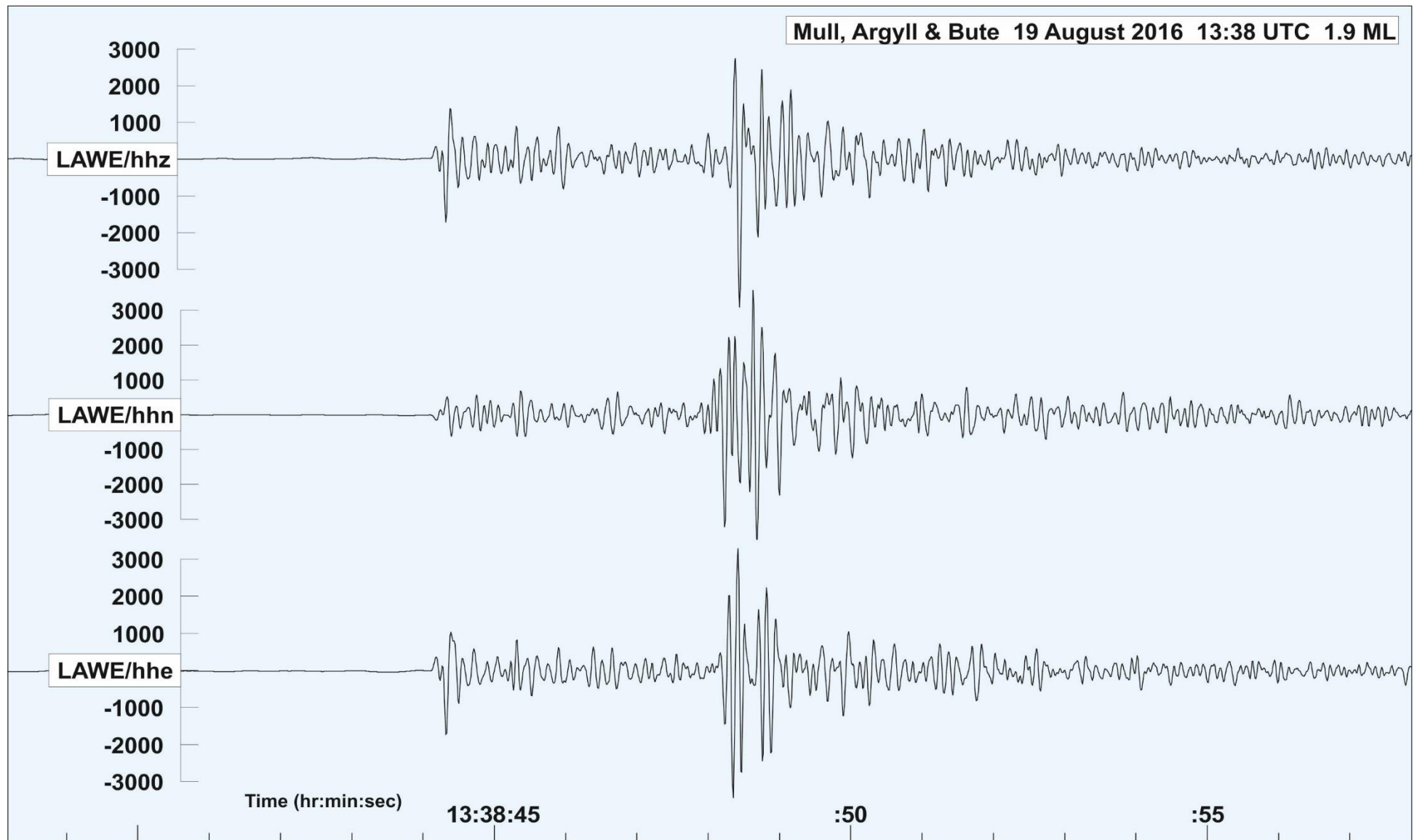


Figure 10. Seismograms of the ground displacement from the magnitude 1.9 ML Mull earthquake, 19 August 2016, recorded by BGS seismograph stations.

MAGNITUDE BY YEAR MAINLAND UK EARTHQUAKES (1970 - 2016)

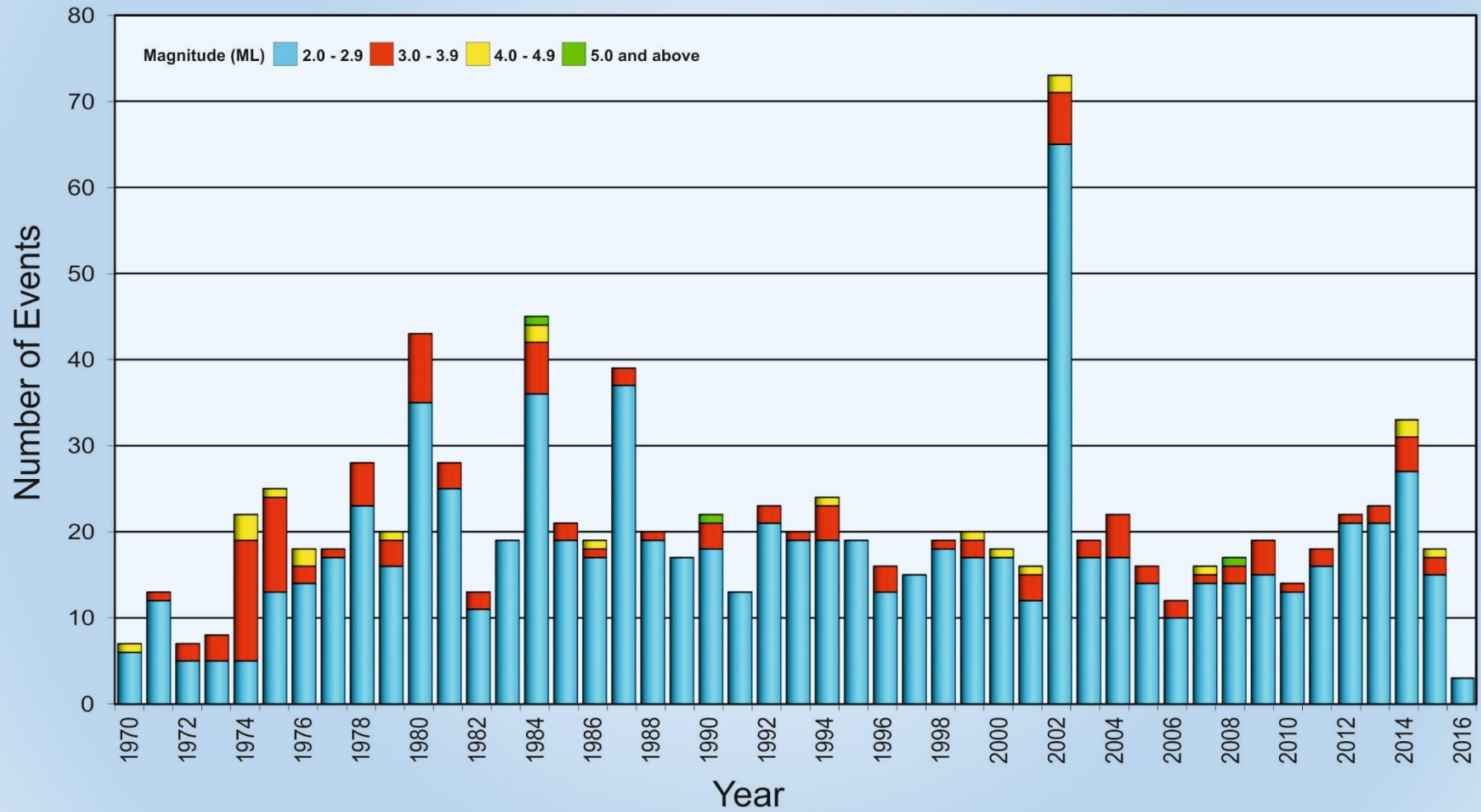


Figure 11. Histogram showing the number of events, magnitude 2.0 ML or greater, detected 1970-2016.

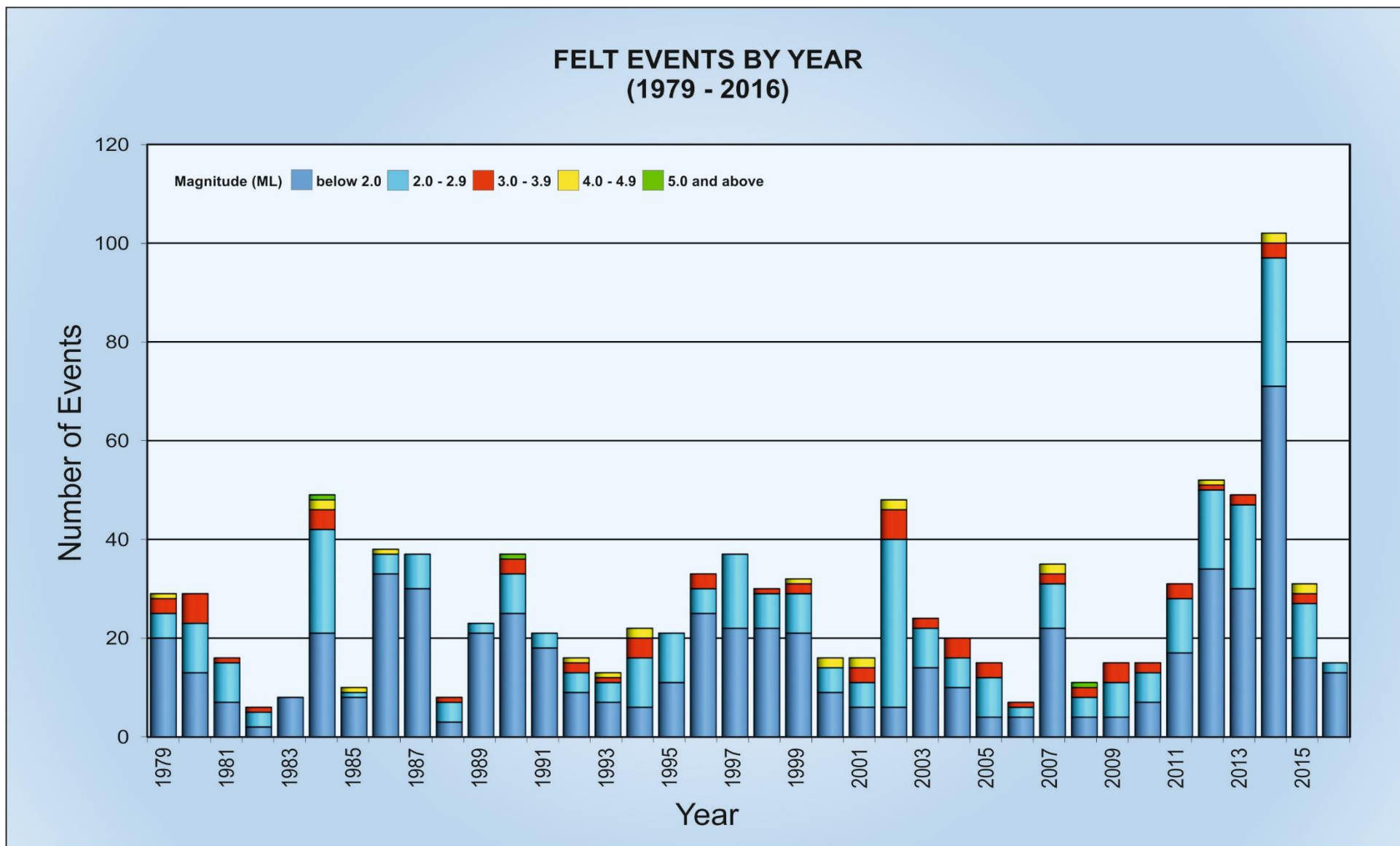


Figure 12. Histogram showing the number of felt events, 1979 -2016.

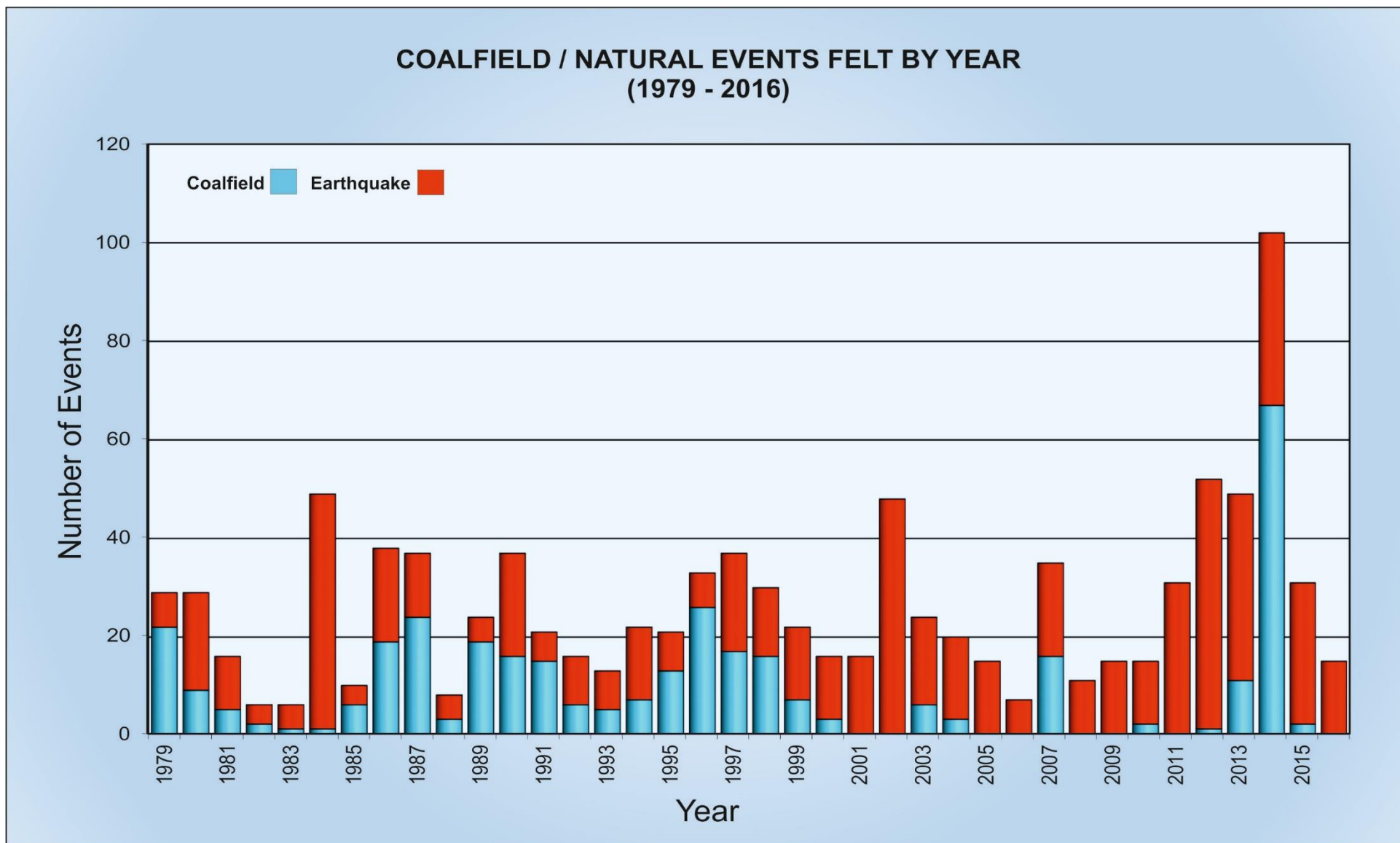


Figure 13. Histogram showing the split between the number of felt events in coalfield areas and those which are natural earthquakes, 1979 - 2016.

TABLE 1 : CATALOGUE OF EVENTS : 2016

YearMoDy	HrMnSecs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	Gap	RMS	ERH	ERZ	Comments	
20160101	043032.9	53.15	-3.43	304.4	362.1	9.6	0.8	DENBIGH, DENBIGHSHIRE		5	151	0.30	4.75	8.90		
20160101	223221.3	51.66	-3.16	319.6	196.8	7.9	1.2	NEWBRIDGE, CAERPHILLY		6	156	0.50	9.93	2.60		
20160107	185225.5	53.09	-5.15	188.9	359.7	11.5	1.8	IRISH SEA		11	140	0.20	2.69	3.00	40KM SW HOLYHEAD	
20160107	214721.1	55.36	-2.23	385.7	607.1	7.7	0.9	BYRNNESS, NORTHUMBERLAND		4	258	0.30	7.44	3.00		
20160107	220348.6	51.28	0.51	575.2	156.5	3.5	1.6	MAIDSTONE, KENT		7	89	0.40	3.28	3.90		
20160108	184658.4	52.22	-3.04	329.2	258.1	4.8	0.8	KINGTON, HEREFORDSHIRE		5	121	0.10	2.72	3.40		
20160109	162039.6	55.25	-2.82	347.9	595.5	8.0	0.6	NEWCASTLETON, BORDERS		5	204	0.20	4.38	5.60		
20160110	143420.2	58.00	-5.07	218.6	905.0	7.0	1.1	DRUMRUNIE, HIGHLAND		5	130	0.20	4.44	4.80		
20160112	000034.3	57.99	-5.06	219.1	904.5	7.7	1.1	DRUMRUNIE, HIGHLAND		6	130	0.10	1.89	4.40		
20160114	072445.2	56.30	-5.91	157.9	719.2	12.4	1.4	MULL, ARGYLL & BUTE		7	182	0.10	1.80	4.00	OFFSHORE LOCATION	
20160115	144441.4	57.99	-5.06	219.3	904.6	7.0	1.1	DRUMRUNIE, HIGHLAND		4	130	0.20	2.00	0.00		
20160118	144349.9	56.28	-6.13	144.6	717.2	8.3	1.5	MULL, ARGYLL & BUTE		7	169	0.10	2.21	2.90	OFFSHORE LOCATION	
20160120	064147.7	49.07	-2.25	381.9	-92.0	7.4	0.4	JERSEY, CHANNEL ISLES		5	324	0.10	2.28	1.20	10KM SSW JERSEY	
20160120	185920.8	58.89	1.42	597.2	1005.7	8.8	2.3	NORTHERN NORTH SEA		4	196	0.30	8.59	8.90	200KM SE LERWICK	
20160121	000033.9	57.99	-5.06	219.0	904.7	7.9	0.7	DRUMRUNIE, HIGHLAND		3	156	0.10	2.02	5.20		
20160121	185105.5	59.17	1.97	627.1	1038.0	12.2	1.9	NORTHERN NORTH SEA		5	155	0.20	7.22	8.00	205KM SE LERWICK	
20160123	004632.7	52.85	-2.12	392.3	328.7	6.8	1.0	STAFFORD, STAFFORDSHIRE		7	104	0.20	2.47	5.40		
20160125	170830.7	55.41	-3.37	313.5	613.3	3.7	0.6	BODESBECK, D & G		5	146	0.20	8.13	5.00		
20160127	232848.5	50.16	-5.12	177.2	34.1	1.5	0.8	PENRYN, CORNWALL	2	3	254	0.10	3.16	1.70	FELT RAME	
20160131	060239.6	51.59	-3.07	326.2	188.1	10.8	0.9	ROGERSTONE, NEWPORT		6	271	0.20	5.78	0.30		
20160202	215530.2	54.18	-2.42	372.4	475.7	4.7	1.1	INGLETON, N YORKSHIRE		6	116	0.20	2.91	4.90		
20160203	052824.8	55.51	-6.12	139.6	631.8	7.0	1.0	ISLAY, ARGYLL & BUTE		4	252	0.30	9.86	2.40	OFFSHORE LOCATION	
20160203	203419.6	57.99	-5.05	219.7	904.0	7.8	0.8	DRUMRUNIE, HIGHLAND		4	146	0.40	5.55	4.70		
20160204	020115.5	56.99	-4.59	242.6	791.8	11.4	1.1	MELGARVE, HIGHLAND		6	158	0.00	0.72	0.80		
20160214	003414.3	56.98	-5.74	172.6	793.7	7.5	0.5	MALLAIG, HIGHLAND		3	203	0.20	9.68	3.00		
20160215	231209.7	49.90	-3.11	320.4	0.4	5.0	1.6	ENGLISH CHANNEL		8	173	0.30	6.00	2.00	60KM NW GUERNSEY	
20160218	025442.7	52.94	-4.33	243.3	341.1	14.3	1.0	LLEYN PENINSULA		10	140	0.10	1.34	1.20		
20160218	061000.2	53.95	-3.47	303.7	451.5	8.2	1.0	IRISH SEA		4	180	0.30	9.63	4.80	30KM WEST FLEETWOOD	
20160218	141200.0	53.66	-0.45	502.7	419.9	6.9	1.2	BARTON, NORTH Lincs		4	177	0.30	9.56	1.30		
20160223	020301.0	52.94	-2.68	354.5	338.7	11.5	0.2	WHITCHURCH, SHROPSHIRE		6	122	0.10	1.14	1.70		
20160223	112253.0	52.52	-2.33	377.7	291.4	4.4	1.5	CLAVERLEY, SHROPSHIRE		10	102	0.40	3.49	5.90		
20160225	122613.2	51.50	2.90	740.2	189.5	9.7	2.7	SOUTHERN NORTH SEA		26	146	0.50	7.50	3.30	100KM ENE RAMSGATE	
20160225	220831.3	58.78	1.42	597.5	993.4	10.3	2.4	NORTHERN NORTH SEA		7	282	0.30	7.14	4.50	210KM SE LERWICK	
20160229	184400.0							SONIC-NE SCOTLAND		1					FELT ANGUS	
20160304	074533.7	51.72	-2.40	372.5	201.9	13.7	0.7	BREADSTONE, GLOS		6	162	0.20	3.69	2.80		
20160305	041659.6	53.37	2.36	690.2	395.0	5.0	2.4	SOUTHERN NORTH SEA		4	300	0.20	7.34	0.00	105KM NE NORWICH	
20160306	231209.5	51.72	-0.94	473.6	202.7	3.9	2.3	THAME, OXFORDSHIRE		3	15	91	0.40	5.28	6.10	FELT BUCKS...
20160307	054033.9	61.56	3.84	710.0	1311.3	10.0	2.9	NORTHERN NORTH SEA		5	336	0.60	8.36	8.00	310KM ENE LERWICK	
20160307	201154.8	58.41	1.11	581.4	951.1	6.2	2.4	CENTRAL NORTH SEA		14	240	0.40	5.52	8.40	240KM NE ABERDEEN	
20160311	203033.5	52.69	-0.72	486.4	310.5	3.9	1.0	OAKHAM, RUTLAND	3	4	158	0.80	7.87	1.60	FELT OAKHAM	
20160313	015229.7	55.13	-3.66	294.2	582.7	3.1	0.6	LOCHARBRIGGS, D & G		5	120	0.40	6.96	1.20		
20160314	180659.9	52.67	-0.76	483.6	309.3	3.7	1.0	OAKHAM, RUTLAND	2	4	158	0.30	5.52	4.50	FELT OAKHAM	

TABLE 1 : CATALOGUE OF EVENTS : 2016

YearMoDy	HrMnSecs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	Gap	RMS	ERH	ERZ	Comments
20160317	043400.5	53.15	-4.67	221.4	364.7	9.2	1.0	OFFSHORE ANGLESEY		6	254	0.10	4.49	3.00	15KM SSW HOLYHEAD
20160317	193336.7	53.08	-4.22	251.2	355.9	8.5	0.2	Y FRON,GWYNEDD		4	318	0.00	1.80	3.80	
20160318	083054.7	52.19	-2.52	364.2	254.4	4.9	1.4	BROMYARD,HEREFORDSHIRE		6	130	0.10	2.25	3.40	
20160320	203702.5	53.03	-3.71	285.4	349.3	9.4	0.6	PENTREFOELAS,CONWY		8	158	0.20	5.66	5.40	
20160321	220451.8	53.35	-3.92	272.5	385.4	5.6	0.4	OFFSHORE ANGLESEY		6	215	0.10	1.86	2.90	7KM ENE LLANDUDNO
20160321	231521.6	51.66	-3.22	315.8	196.7	3.3	0.9	NEWBRIDGE,CAERPHILLY		9	121	0.30	2.64	5.50	
20160324	000704.1	54.03	-3.73	287.0	461.1	21.1	0.7	IRISH SEA		5	175	0.10	2.38	5.60	45KM WNW FLEETWOOD
20160325	160404.0	53.17	-4.63	224.1	366.5	11.3	0.7	CAERNARFON BAY		7	244	0.10	3.10	1.90	10KM SW RHOSNEIGR
20160325	162204.2	56.27	-6.00	152.1	715.8	7.7	0.9	MULL,ARGYLL & BUTE		8	187	0.30	4.52	7.40	OFFSHORE LOCATION
20160327	071357.1	52.88	-4.50	231.5	334.5	7.3	0.7	LLEYN PENINSULA		9	164	0.20	2.01	1.00	
20160327	190709.4	54.52	-4.00	270.2	515.7	6.9	0.4	IRISH SEA		5	150	0.20	2.16	6.30	27KM WSW WHITEHAVEN
20160405	060129.4	53.69	-0.43	503.7	422.9	6.5	1.5	BARTON,NORTH Lincs		14	169	0.30	3.48	2.30	
20160405	184359.1	56.28	-4.13	268.1	711.6	5.0	0.7	CALLANDER,STIRLING		7	109	0.30	3.77	5.60	
20160410	211138.9	55.79	-6.46	120.6	664.6	7.0	0.9	ISLAY,ARGYLL & BUTE		4	247	0.30	7.25	1.00	
20160411	130442.0	54.47	-2.91	340.9	508.1	6.6	1.1	AMBLESIDE,CUMBRIA		7	203	0.30	4.11	4.00	5KM NE AMBLESIDE
20160413	131131.0	49.41	-2.50	364.0	-53.8	9.3	1.6	GUERNSEY,CHANNEL ISLES	2	7	182	0.10	5.70	5.90	FELT GUERNSEY
20160413	215034.4	54.75	-3.64	294.6	540.8	7.9	0.8	SOLWAY FIRTH		7	111	0.40	5.69	2.70	10KM NW MARYPORT
20160413	220105.0	54.75	-3.64	294.4	540.8	6.2	1.7	SOLWAY FIRTH		15	73	0.40	2.84	5.50	10KM NW MARYPORT
20160414	165828.4	56.02	-5.85	160.3	688.0	8.1	0.9	JURA,ARGYLL & BUTE		6	218	0.30	6.86	6.00	
20160415	182617.0	62.05	2.19	618.7	1359.6	10.0	2.8	NORTHERN NORTH SEA		11	244	0.30	7.64	8.00	275KM NE LERWICK
20160418	204937.0	51.97	-2.75	348.3	230.9	4.0	1.7	HEREFORD,HEREFORDSHIRE	2	15	79	0.40	6.35	9.60	FELT MUCH DEWCHURCH
20160420	163934.9	51.22	-3.26	311.9	147.0	7.4	1.1	BRISTOL CHANNEL		6	197	0.20	4.56	4.60	6KM NE WATCHET
20160421	012229.8	58.93	1.46	599.3	1009.8	18.3	2.1	NORTHERN NORTH SEA		10	154	0.50	8.90	8.40	200KM SE LERWICK
20160422	093010.5	54.18	-2.42	372.9	475.9	5.9	1.4	CHAPEL-LE-DALE,N YORKS		8	74	0.40	3.45	8.30	
20160425	012529.6	59.87	0.41	534.9	1111.3	5.1	1.8	NORTHERN NORTH SEA		5	164	0.80	5.99	8.90	95KM ESE LERWICK
20160426	144922.2	56.35	-5.44	187.3	722.5	3.8	1.4	KILMORE,ARGYLL & BUTE		8	157	0.10	1.49	1.40	7KM SSE OBAN
20160430	172225.5	55.78	-6.44	121.5	663.5	7.7	1.1	ISLAY,ARGYLL & BUTE		6	246	0.20	1.02	7.50	
20160430	200219.3	53.12	-0.61	493.2	358.8	7.2	1.3	LINCOLN,LINCONSHIRE		9	111	0.20	2.28	6.00	10KM SSW LINCOLN
20160502	205100.0							SONIC-WEST YORKSHIRE		1					FELT YORKSHIRE
20160503	224946.4	51.96	-2.90	338.2	229.5	8.7	0.8	PONTRILAS,HEREFORDSHIRE		8	61	0.30	3.14	2.90	
20160508	113747.4	54.06	-3.45	304.8	463.3	7.7	1.0	IRISH SEA		10	74	0.20	2.75	3.60	37KM NW BLACKPOOL
20160509	081853.1	55.98	-4.24	260.3	678.3	8.6	0.9	LENNOXTOWN,E DUNBARTON		6	166	0.20	3.16	8.80	
20160509	112507.7	56.67	-4.38	254.4	755.4	2.7	1.3	FINNART,PERTH & KINROSS	2	8	107	0.40	5.10	4.70	FELT DALL
20160511	025203.1	52.89	-3.86	274.9	333.9	12.5	0.1	TRAWSFYNYDD,GWYNEDD		6	117	0.10	2.72	2.60	
20160513	212904.6	55.98	-4.25	259.8	678.1	7.7	0.4	LENNOXTOWN,E DUNBARTON		3	205	0.20	5.02	7.30	
20160514	115123.5	56.40	-5.45	187.3	728.7	2.8	1.3	OBAN,ARGYLL & BUTE		10	157	0.30	5.38	6.30	
20160514	131751.7	57.24	-4.49	249.6	819.8	3.3	1.2	FOYERS,HIGHLAND		8	100	0.40	4.17	7.80	
20160515	173107.2	59.81	2.45	649.6	1111.4	10.0	2.3	NORTHERN NORTH SEA		17	150	0.60	9.94	4.00	200KM ESE LERWICK
20160515	181641.1	55.80	-6.36	127.1	664.5	5.8	0.8	ISLAY,ARGYLL & BUTE		4	275	0.60	1.15	4.50	
20160516	152109.7	54.72	-2.98	336.6	536.9	2.9	1.3	MILLHOUSE,CUMBRIA		10	81	0.40	4.24	9.20	
20160516	203318.8	56.66	-4.39	253.5	754.9	2.7	0.8	FINNART,PERTH & KINROSS		5	94	0.50	6.63	2.40	
20160517	081552.4	52.45	-3.83	275.5	285.2	7.2	1.1	PONTERWYD,CEREDIGION		10	102	0.20	2.51	6.90	

TABLE 1 : CATALOGUE OF EVENTS : 2016

YearMoDy	HrMnSecs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	Gap	RMS	ERH	ERZ	Comments
20160517	155626.2	56.16	-4.93	217.8	699.8	9.0	1.9	LOCH GOIL, ARGYLL/BUTE	2	15	80	0.40	3.47	8.30	FELT LOCHGOILHEAD
20160518	230049.1	56.39	-5.48	185.5	727.7	4.2	1.9	OBAN, ARGYLL & BUTE	3	18	159	0.30	4.55	4.10	FELT OBAN...
20160521	153813.6	57.99	-5.06	219.2	904.0	5.2	0.6	DRUMRUNIE, HIGHLAND		4	145	0.10	2.30	2.80	
20160524	030559.4	53.49	-2.26	382.6	399.5	3.4	0.8	MANCHESTER, GTR MCH		6	120	0.20	2.66	2.70	
20160524	080819.6	51.73	-4.02	260.4	205.2	6.7	0.7	PONTARDDULAIS, SWANSEA		6	121	0.20	1.56	4.30	
20160530	041020.9	57.68	-5.65	182.6	871.2	7.5	1.3	SHIELDAIG, HIGHLAND	2	8	126	0.20	2.15	4.60	FELT CHARLESTOWN
20160601	034408.6	55.37	-3.43	309.6	609.7	12.0	0.3	MOFFAT, D & G		4	168	0.20	4.90	9.70	4KM NNE MOFFAT
20160601	175940.1	54.07	-3.13	326.3	464.3	1.2	1.3	RAMPSIDE, CUMBRIA		8	141	0.30	3.05	2.60	
20160603	181452.4	57.22	-5.76	172.8	820.5	7.5	0.5	SKYE, HIGHLAND		6	160	0.30	5.51	8.50	9KM ESE BROADFORD
20160603	233402.6	57.22	-5.77	172.7	820.4	7.5	0.7	SKYE, HIGHLAND		6	160	0.20	5.65	5.10	9KM ESE BROADFORD
20160604	132207.6	60.74	2.20	628.9	1213.7	19.3	2.8	NORTHERN NORTH SEA		12	165	0.40	7.37	8.40	195KM ENE LERWICK
20160605	035547.6	55.97	-4.24	260.3	677.9	7.9	0.6	LENNOXTOWN, E DUNBARTON		8	125	0.20	2.47	8.40	
20160605	072337.1	56.66	-4.29	259.7	754.5	2.9	1.0	FINNART, PERTH & KINROSS		5	108	0.20	2.08	0.00	
20160609	025638.7	53.10	-1.23	451.5	356.1	2.5	1.0	MANSFIELD, NOTTS		10	172	0.40	8.27	9.20	C/F
20160611	111507.5	57.99	-5.06	219.0	904.4	6.8	0.6	DRUMRUNIE, HIGHLAND		4	144	0.20	2.58	2.70	
20160613	165513.0	53.29	-2.07	395.2	376.6	4.9	1.0	BOLLINGTON, CHESHIRE		5	122	0.20	2.13	3.80	
20160613	214046.4	53.24	-3.74	283.7	372.6	8.8	1.9	COLWYN BAY, CONWY	3	19	90	0.30	3.94	5.80	FELT COLWYN BAY...
20160615	214312.6	57.11	-5.33	198.5	806.7	4.8	0.7	KINLOCH HOURN, HIGHLAND		5	189	0.30	8.25	5.70	
20160616	023317.7	57.10	-5.41	193.7	806.7	3.8	0.7	KINLOCH HOURN, HIGHLAND		5	192	0.20	6.33	4.10	
20160621	075116.8	56.36	-5.85	162.1	725.7	2.8	1.0	MULL, ARGYLL & BUTE		6	180	0.30	6.37	6.80	
20160622	172611.2	56.29	-5.86	161.4	717.1	2.5	1.2	MULL, ARGYLL & BUTE	2	6	179	0.20	7.07	5.60	FELT MULL
20160623	185821.6	51.56	-1.48	436.4	184.5	9.7	1.2	WANTAGE, OXFORDSHIRE		6	142	0.20	4.05	2.40	
20160624	222245.9	59.75	1.78	612.2	1101.6	10.0	2.3	NORTHERN NORTH SEA		11	135	0.50	6.16	4.00	170KM ESE LERWICK
20160626	191618.9	55.78	-5.93	153.5	661.1	5.3	0.5	JURA, ARGYLL & BUTE		5	159	0.30	5.66	9.60	OFFSHORE LOCATION
20160628	003948.8	52.45	-5.42	167.7	289.1	7.3	0.9	ST GEORGE'S CHANNEL		6	125	0.10	1.03	2.80	72KM ENE WEXFORD
20160628	015628.6	57.28	-4.41	254.5	823.2	4.3	0.8	ERROGIE, HIGHLAND		6	134	0.50	8.15	7.50	
20160629	205804.9	53.51	-2.17	388.4	401.9	3.0	1.4	MIDDLETON, GTR MCH	2	9	79	0.40	3.96	1.00	FELT MIDDLETON
20160630	170720.3	55.77	-6.39	124.5	661.5	7.3	0.7	ISLAY, ARGYLL & BUTE		4	185	0.30	4.66	8.90	
20160701	014000.0	52.67	-1.92	405.5	308.0	6.5	1.2	BURNTWOOD, STAFFORDSHIRE		8	110	0.30	4.31	7.30	
20160702	213210.9	53.76	-3.17	322.7	429.6	1.0	1.2	OFFSHORE BLACKPOOL		15	61	0.30	2.30	0.00	10KM SW BLACKPOOL
20160705	025137.5	56.61	-4.62	239.0	749.2	7.8	1.0	ACHALLADER, ARGYLL/BUTE		8	138	0.60	4.37	2.10	8KM NE ACHALLADER
20160705	042934.0	56.62	-4.64	237.8	750.2	7.5	1.1	ACHALLADER, ARGYLL/BUTE		13	93	0.70	7.74	2.20	8KM NE ACHALLADER
20160705	121211.6	49.01	-2.69	349.8	-98.7	8.2	1.2	ENGLISH CHANNEL		4	352	0.00	4.90	6.70	40KM SW JERSEY
20160706	081301.0	56.60	-4.62	239.3	748.0	7.0	0.9	ACHALLADER, ARGYLL/BUTE		7	96	0.40	4.94	0.00	8KM NE ACHALLADER
20160706	140910.9	56.60	-4.62	238.9	748.6	7.5	1.4	ACHALLADER, ARGYLL/BUTE		10	91	0.30	3.76	0.10	8KM NE ACHALLADER
20160708	021645.1	56.58	-5.67	174.9	749.3	7.7	0.6	MORVERN, HIGHLAND		4	183	0.10	2.91	7.00	
20160716	191717.5	57.63	-5.65	182.2	866.0	4.3	0.7	SHIELDAIG, HIGHLAND		5	128	0.30	8.51	6.80	6KM SSE SHIELDAIG
20160722	003820.4	51.93	-3.12	323.1	226.2	16.3	0.6	CRICKHOWELL, POWYS		6	168	0.20	2.36	2.10	
20160724	193942.9	51.19	-4.20	246.0	145.8	7.7	0.6	WOOLACOMBE, DEVON		4	191	0.20	8.93	5.60	
20160724	235334.2	57.27	-4.45	252.6	822.3	10.6	0.8	ERROGIE, HIGHLAND		5	132	0.30	2.53	6.60	
20160725	030805.0	51.95	-2.70	352.0	227.7	6.9	0.6	ORCOP, HEREFORDSHIRE		6	128	0.20	1.72	2.80	5KM ENE ORCOP
20160725	052528.2	56.38	-5.86	161.7	727.6	11.4	1.0	MULL, ARGYLL & BUTE		4	180	0.10	4.44	5.70	

TABLE 1 : CATALOGUE OF EVENTS : 2016

YearMoDy	HrMnSecs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	Gap	RMS	ERH	ERZ	Comments
20160727	044852.0	55.32	-2.65	358.7	603.2	2.5	1.1	SAUGHTREE, BORDERS		10	139	0.30	3.89	3.60	6KM NNE SAUGHTREE
20160729	023607.5	52.66	1.47	634.7	312.8	10.8	1.3	BLOFIELD, NORFOLK		4	261	0.30	7.28	5.80	
20160801	182231.6	54.71	-3.13	327.3	535.6	7.3	0.4	ULDALE, CUMBRIA		5	107	0.20	2.64	4.00	
20160802	194654.4	52.98	-4.38	240.2	345.4	21.1	0.5	LLEYN PENINSULA		7	144	0.30	5.55	4.50	
20160815	042556.8	52.85	-1.37	442.2	327.8	4.7	1.0	CASTLE DONINGTON, LEICS		6	167	0.10	1.49	2.20	
20160815	101405.8	52.96	-2.55	362.9	340.8	7.3	1.0	WILKESLEY, CHESHIRE		8	129	0.50	5.22	1.60	
20160819	133838.5	56.39	-5.85	162.4	728.3	2.5	1.9	MULL, ARGYLL & BUTE	3	15	180	0.40	2.40	5.00	FELT MULL...
20160820	140816.0	56.45	-4.83	225.6	732.7	2.5	0.5	DALMALLY, ARGYLL & BUTE		6	120	0.40	5.10	5.60	10KM NE DALMALLY
20160823	052110.4	54.70	-2.94	339.4	534.9	6.9	0.5	SKELTON, CUMBRIA		4	143	0.10	1.72	2.10	
20160824	061021.7	56.42	-4.09	271.3	727.6	1.9	0.9	COMRIE, PERTH & KINROSS		6	103	0.20	3.16	1.30	7KM NW COMRIE
20160824	111537.7	54.50	-2.87	343.5	511.7	5.4	1.4	HARTSOP, CUMBRIA		6	247	0.10	9.88	9.50	
20160825	145916.7	52.57	-2.64	356.4	297.1	7.5	1.7	HUGHLEY, SHROPSHIRE		7	154	0.40	5.85	1.20	
20160826	014149.3	52.74	-2.29	380.1	315.5	8.3	0.4	MORETON, STAFFORDSHIRE		5	130	0.20	2.33	6.60	
20160826	014914.2	52.86	-2.18	387.9	329.7	7.7	0.3	STONE, STAFFORDSHIRE		4	125	0.10	4.03	8.60	4KM SW STONE
20160828	201521.8	53.68	-2.50	367.1	420.5	6.6	1.0	DARWEN, LANCASHIRE		7	123	0.20	2.66	4.70	
20160828	225850.9	52.20	-3.76	279.7	257.6	11.5	1.2	TREGARON, CEREDIGION		8	117	0.30	2.44	7.30	12KM ESE TREGARON
20160831	193800.9	50.12	-0.38	515.6	25.2	7.7	1.9	ENGLISH CHANNEL		3	199	0.00	2.44	1.20	80KM SSW BRIGHTON
20160902	220555.0	56.65	-5.54	182.9	756.2	7.8	1.4	STRONTIAN, HIGHLAND		10	187	0.50	0.50	9.40	
20160903	033406.6	51.32	-2.32	377.4	158.3	3.8	1.2	BATH, BATH & NE SOMERSET		7	170	0.20	4.96	4.90	
20160907	022729.3	52.72	-2.51	365.5	313.3	8.4	0.3	WELLINGTON, SHROPSHIRE		5	155	0.30	3.12	6.50	
20160909	120621.9	55.80	-6.11	142.3	664.0	7.7	0.9	ISLAY, ARGYLL & BUTE		4	221	0.40	6.69	7.10	
20160909	220041.7	61.07	3.57	700.1	1256.1	10.0	3.9	NORTHERN NORTH SEA		15	160	0.80	3.48	0.00	275KM ENE LERWICK
20160910	150556.3	57.65	-5.64	182.6	868.5	3.7	1.2	SHIELDSAIG, HIGHLAND		8	127	0.40	5.80	8.50	
20160911	205358.8	55.11	-0.68	484.4	580.8	10.0	1.5	CENTRAL NORTH SEA		4	268	0.40	7.77	0.00	50KM ENE SUNDERLAND
20160921	022308.7	56.17	-5.83	162.6	704.6	3.8	0.9	SCARBA, ARGYLL & BUTE		8	176	0.20	3.31	3.90	OFFSHORE LOCATION
20160921	082801.7	56.17	-4.90	219.8	701.0	8.1	0.9	LOCH GOIL, ARGYLL/BUTE		4	132	0.30	3.42	4.70	
20161001	054448.0	52.43	-3.22	317.0	282.2	7.7	1.3	ANCHOR, SHROPSHIRE		9	89	0.50	4.18	2.30	
20161003	110706.0	56.71	-6.34	134.4	765.9	5.4	1.6	COLL, ARGYLL & BUTE		7	260	0.30	4.79	6.00	OFFSHORE LOCATION
20161007	101726.6	52.23	-4.22	248.1	261.2	8.1	0.6	ABERAERON, CEREDIGION		7	123	0.30	4.12	7.50	
20161008	131126.3	55.07	-6.82	92.7	585.6	7.0	1.0	RINGSSEND, COLERAINE		5	177	0.70	9.27	1.50	
20161009	124826.1	62.49	2.18	615.2	1407.9	28.1	3.8	NORTHERN NORTH SEA		20	214	0.70	5.34	5.50	310KM NE LERWICK
20161009	172710.2	57.30	-4.39	256.1	825.8	7.2	1.2	ERROGIE, HIGHLAND		9	73	0.40	3.94	4.50	
20161009	185641.0	53.91	-3.39	308.8	446.9	3.7	0.6	IRISH SEA		10	126	0.40	5.19	3.80	25KM NW BLACKPOOL
20161010	135710.5	58.07	-5.49	194.3	914.4	7.9	0.8	REIFF, HIGHLAND		4	146	0.30	3.67	1.00	OFFSHORE LOCATION
20161012	052318.7	52.18	-2.51	365.3	253.5	4.1	0.4	BROMYARD, HEREFORDSHIRE		5	242	0.10	2.96	1.90	
20161013	180911.7	51.74	-3.37	305.4	205.4	11.6	0.7	MERTHYR TYDFIL, MERTHYR		7	109	0.10	1.35	3.60	
20161015	000901.7	51.15	-2.39	372.9	138.8	3.4	1.0	UPTON NOBLE, SOMERSET		7	158	0.20	3.85	2.70	
20161015	114151.7	56.31	-5.02	213.2	717.3	2.5	1.0	INVERARAY, ARGYL & BUTE		8	85	0.30	3.50	3.80	9KM NNE INVERARAY
20161015	213341.5	54.97	-2.03	398.1	563.6	5.5	1.9	HEXHAM, NORTHUMBERLAND		9	146	0.20	2.61	3.00	
20161017	224928.2	52.56	-3.42	303.9	296.6	14.7	1.0	CAERSWS, POWYS		11	81	0.30	3.44	5.40	
20161021	173137.4	51.45	-2.62	356.8	172.8	11.8	0.5	BRISTOL, CITY OF BRISTOL		6	250	0.20	4.22	3.00	
20161025	205349.4	55.65	-6.17	137.6	647.4	9.5	0.6	ISLAY, ARGYLL & BUTE		4	219	0.20	5.57	7.40	

TABLE 1 : CATALOGUE OF EVENTS : 2016

YearMoDy	HrMnSecs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	Gap	RMS	ERH	ERZ	Comments
20161027	020829.5	50.51	-4.53	220.4	70.9	11.1	2.3	LISKEARD,CORNWALL	3	10	133	0.30	2.72	3.70	FELT CORNWALL...
20161027	045654.9	50.52	-4.52	221.2	71.6	8.5	0.2	LISKEARD,CORNWALL		4	132	0.10	1.00	2.70	
20161029	014353.2	54.67	-2.59	362.0	531.1	4.8	0.3	CULGAITH,CUMBRIA		6	185	0.30	3.75	4.20	
20161029	020235.0	51.67	-3.72	281.2	198.7	9.0	1.0	NEATH,NEATH PORT TALBOT		8	103	0.20	1.84	3.00	
20161029	192049.7	59.99	2.30	639.9	1130.8	10.0	2.4	NORTHERN NORTH SEA		12	152	0.70	2.10	0.00	190KM EAST LERWICK
20161030	133925.8	53.03	-2.94	337.0	348.3	5.1	0.5	MARCHWIEL,WREXHAM		8	173	0.30	4.56	5.70	
20161102	035145.2	49.53	-4.38	227.4	-38.1	4.7	2.0	ENGLISH CHANNEL		7	218	0.40	8.35	9.70	75KM SE LIZARD PT
20161103	105727.0	58.74	1.63	609.9	989.1	23.8	3.9	NORTHERN NORTH SEA		34	74	0.40	6.13	1.50	220KM SE LERWICK
20161103	141942.7	57.26	-4.75	234.1	821.7	4.8	1.7	INVERMORISTON,HIGHLAND		9	80	0.40	4.70	7.90	
20161105	173132.8	54.12	-2.06	396.4	469.7	0.0	0.9	CONISTONE,N YORKSHIRE		3	185	0.30	5.39	1.00	
20161105	182823.7	55.24	-3.53	303.0	594.7	4.4	0.4	JOHNSTONEBRIDGE,D & G		5	220	0.10	2.42	7.50	
20161107	020256.1	53.01	2.20	681.9	353.7	10.0	2.1	SOUTHERN NORTH SEA		4	292	0.40	1.50	0.00	60KM ENE CROMER
20161108	000341.0	56.37	-5.75	168.6	726.1	11.9	0.8	MULL,ARGYLL & BUTE		6	174	0.30	6.46	4.70	
20161108	001826.6	55.24	-3.51	303.8	594.9	4.5	0.6	JOHNSTONEBRIDGE,D & G		9	121	0.30	4.48	4.00	
20161108	094210.8	55.26	-3.52	303.5	597.4	4.3	0.4	JOHNSTONEBRIDGE,D & G		4	182	0.20	4.36	3.40	
20161108	192447.5	55.26	-3.52	303.7	596.8	4.5	0.3	JOHNSTONEBRIDGE,D & G		6	179	0.20	4.88	9.30	
20161109	161253.5	54.14	-1.92	405.0	472.0	3.7	0.9	LOFTHOUSE,N YORKSHIRE		5	167	0.20	3.19	3.10	
20161109	224105.3	51.70	-2.16	389.2	200.1	9.9	0.8	CHALFORD,GLOS		4	263	0.20	5.66	2.90	
20161111	132033.3	57.26	-4.79	232.0	822.7	4.4	1.2	INVERMORISTON,HIGHLAND		7	84	0.30	4.08	6.90	
20161111	135422.9	51.70	-3.00	330.7	201.1	14.9	0.8	PONTYPOOL,TORFAEN		8	107	0.30	3.26	2.10	
20161113	052135.5	52.07	-2.93	336.5	242.2	11.6	0.4	MOCCAS,HEREFORDSHIRE		4	107	0.10	1.03	0.90	
20161114	072009.1	51.89	-3.17	319.5	221.7	4.9	2.1	CRICKHOWELL,POWYS		13	85	0.50	3.86	6.30	
20161118	083243.5	51.18	-4.57	220.3	145.7	10.6	0.6	BRISTOL CHANNEL		5	159	0.00	0.71	0.70	6KM EAST LUNDY
20161203	095010.1	53.52	-4.16	257.0	405.3	18.8	0.6	OFFSHORE ANGLESEY		6	174	0.10	4.27	2.30	22KM NE AMLWCH
20161210	012217.7	51.80	-4.03	260.0	212.8	11.8	1.9	SARON,CARMARTHENSHIRE		8	114	0.30	2.50	4.30	
20161210	184152.2	52.77	-0.72	486.4	320.0	2.7	0.8	WYMONDHAM,LEICS		4	167	0.40	4.81	2.90	
20161213	020607.4	55.06	3.65	760.6	588.1	12.5	2.1	CENTRAL NORTH SEA		11	268	0.50	7.04	7.70	320KM EAST SUNDERLAND
20161213	145826.5	58.19	0.84	566.9	925.9	14.8	2.4	CENTRAL NORTH SEA		10	233	0.30	9.65	9.60	210KM NE ABERDEEN
20161218	151636.4	54.63	-3.07	331.0	526.2	8.8	0.9	THRELKELD,CUMBRIA		6	137	0.20	2.94	2.60	
20161221	171002.0	58.22	0.99	575.7	929.0	11.4	1.8	CENTRAL NORTH SEA		6	236	0.30	4.07	7.40	220KM NE ABERDEEN
20161222	041658.0	55.85	-6.29	131.9	670.4	10.4	0.8	ISLAY,ARGYLL & BUTE		5	238	0.20	7.45	4.70	
20161223	015648.9	56.38	-5.68	173.1	726.8	9.2	0.8	MULL,ARGYLL & BUTE		5	170	0.20	3.20	2.60	
20161227	001827.2	54.54	-3.65	293.2	517.5	4.3	0.6	WHITEHAVEN,CUMBRIA		5	162	0.20	2.76	3.10	3KM OFF WHITEHAVEN
20161227	184521.3	51.51	-3.11	322.7	179.4	13.0	0.9	RUMNEY,CARDIFF		9	140	0.20	2.79	3.80	
20161228	123056.7	53.15	-4.46	235.7	363.9	3.5	0.7	CAERNARFON BAY		6	187	0.20	4.72	4.00	
20161229	061240.7	53.53	-2.15	389.8	403.3	4.4	0.7	OLDHAM,GTR MANCHESTER		5	140	0.20	2.69	3.10	
20161229	202910.2	55.91	-6.00	150.2	675.9	7.5	1.0	JURA,ARGYLL & BUTE		5	198	0.40	7.12	7.80	
20161230	215748.3	51.72	-3.68	284.2	203.7	7.5	0.4	GLYNNEATH,NP TALBOT		6	101	0.20	2.77	8.10	
20161231	074614.7	54.72	-2.27	382.9	536.0	2.9	0.9	HARWOOD,COUNTY DURHAM		7	143	0.30	4.34	3.90	

TABLE 2 : PHASE DATA

January 1 2016 Time: 04:30 32.9 UTC Magnitude: 0.8 ML Lat: 53.147N Lon: -3.430W Depth: 9.6 km Grid Ref: 304.37 kmE 362.08 kmN RMS: 0.30 secs Locality: DENBIGH, DENBIGHSHIRE Velocity model: Lownet Xnear: 100.0 Xfar: 200.0										January 7 2016 Time: 22:03 48.6 UTC Magnitude: 1.6 ML Lat: 51.280N Lon: 0.512W Depth: 3.5 km Grid Ref: 575.17 kmE 156.48 kmN RMS: 0.40 secs Locality: MAIDSTONE, KENT Velocity model: Lownet Xnear: 100.0 Xfar: 300.0											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES
LLW	BZ	36.7	EP			04:30	39.71			0.22	ELSH	HZ	45.9	EP			22:03	56.69			-0.21
LLW	BN	36.7	ES			04:30	44.43			0.14	ELSH	HN	45.9	ES			22:04	02.84			-0.10
WLF1	HZ	66.5	EP			04:30	44.51			0.43	ELSH	HN	45.9	IAML			22:04	03.91	29	0.16	
WLF1	HE	66.5	ES			04:30	51.70			-0.53	ELSH	HE	45.9	IAML			22:04	04.26	26	0.10	
WLF1	HN	66.5	IAML			04:30	52.25	8	0.29		HMNX	HZ	47.5	EP			22:03	57.26			0.11
WLF1	HE	66.5	IAML			04:30	52.54	6	0.22		HMNX	HN	47.5	ES			22:04	03.54			0.17
HLM1	HZ	79.2	EP			04:30	46.12			0.00	HMNX	HN	47.5	IAML			22:04	04.94	37	0.45	
HLM1	HN	79.2	ES			04:30	55.41			-0.34	HMNX	HE	47.5	IAML			22:04	06.48	36	0.31	
HLM1	HN	79.2	IAML			04:30	55.90	2	0.06		ELMS	HZ	96.3	EP			22:04	05.15			0.39
HLM1	HE	79.2	IAML			04:30	56.03	2	0.14		ELMS	HE	96.3	ES			22:04	16.06			-0.48
LBWR	HZ	117.0	EP			04:30	52.22			0.26	ELMS	HN	96.3	IAML			22:04	18.21	24	0.13	
LBWR	HE	117.0	ES			04:31	05.71			-0.14	ELMS	HE	96.3	IAML			22:04	20.12	21	0.20	
LBWR	HE	117.0	IAML			04:31	07.24	4	0.22		WOL	BZ	121.0	EP			22:04	08.61			0.00
LBWR	HN	117.0	IAML			04:31	07.76	4	0.29		WOL	BE	121.0	ES			22:04	22.55			-0.65
MCH1	HN	131.0	ES			04:31	09.26			0.00	WOL	BN	121.0	IAML			22:04	23.55	16	0.29	
MCH1	HN	131.0	IAML			04:31	09.58	3	0.21		WOL	BE	121.0	IAML			22:04	25.18	7	0.13	
MCH1	HE	131.0	IAML			04:31	11.97	2	0.20		WACR	HZ	161.0	EP			22:04	14.54			0.11
January 1 2016 Time: 22:32 21.3 UTC Magnitude: 1.2 ML Lat: 51.664N Lon: -3.162W Depth: 7.9 km Grid Ref: 319.64 kmE 196.83 kmN RMS: 0.50 secs Locality: NEWBRIDGE, CAERPHILLY Velocity model: Lownet Xnear: 100.0 Xfar: 200.0										January 8 2016 Time: 18:46 58.4 UTC Magnitude: 0.8 ML Lat: 52.216N Lon: -3.037W Depth: 4.8 km Grid Ref: 329.16 kmE 258.08 kmN RMS: 0.10 secs Locality: KINGTON, HEREFORDSHIRE Velocity model: Lownet Xnear: 50.0 Xfar: 150.0											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES
MCH1	HZ	38.8	EP			22:32	27.65			-0.53	MCH1	HZ	24.4	IP			18:47	03.11			0.06
MCH1	HN	38.8	ES			22:32	32.92			-0.30	MCH1	HN	24.4	ES			18:47	06.42			-0.04
MCH1	HE	38.8	IAML			22:32	33.27	36	0.17		MCH1	HN	24.4	IAML			18:47	06.82	29	0.07	
MCH1	HN	38.8	IAML			22:32	33.51	27	0.16		MCH1	HE	24.4	IAML			18:47	06.82	38	0.05	
HLM1	HE	97.0	ES			22:32	49.47			0.57	HLM1	HZ	35.3	EP			18:47	04.93			0.00
RSBS	HZ	114.0	EP			22:32	40.58			0.76	HLM1	HE	35.3	ES			18:47	09.70			-0.01
RSBS	HE	114.0	ES			22:32	52.84			-0.52	HLM1	HE	35.3	IAML			18:47	10.69	6	0.11	
RSBS	HN	114.0	IAML			22:32	53.80	5	0.21		HLM1	HN	35.3	IAML			18:47	10.69	7	0.16	
RSBS	HE	114.0	IAML			22:32	57.93	6	0.11		RSBS	HZ	121.0	EP			18:47	18.00			-0.18
HTL	HZ	119.0	EP			22:32	40.67			0.16	RSBS	HE	121.0	ES			18:47	32.69			0.06
DYA	HZ	147.0	EP			22:32	44.61			-0.03	RSBS	HN	121.0	IAML			18:47	34.37	2	0.13	
DYA	HE	147.0	ES			22:33	01.49			-0.21	RSBS	HE	121.0	IAML			18:47	34.51	2	0.09	
DYA	HN	147.0	IAML			22:33	03.22	5	0.21		CFW	HZ	131.0	EP			18:47	19.76			0.01
DYA	HE	147.0	IAML			22:33	04.15	5	0.17		WLF1	HZ	151.0	EP			18:47	22.61			0.09
CWF	HE	174.0	EP			22:32	49.02			0.63	January 9 2016 Time: 16:20 39.6 UTC Magnitude: 0.6 ML Lat: 55.251N Lon: -2.819W Depth: 8.0 km Grid Ref: 347.94 kmE 595.51 kmN RMS: 0.20 secs Locality: NEWCASTLETON, BORDERS Velocity model: Lownet Xnear: 100.0 Xfar: 200.0										
January 7 2016 Time: 18:52 25.5 UTC Magnitude: 1.8 ML Lat: 53.092N Lon: -5.153W Depth: 11.5 km Grid Ref: 188.90 kmE 359.66 kmN RMS: 0.20 secs Locality: IRISH SEA Velocity model: Lownet Xnear: 100.0 Xfar: 200.0 Comment: 40KM SW HOLYHEAD										January 10 2016 Time: 14:34 20.2 UTC Magnitude: 1.1 ML											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES
YRC	EZ	42.5	EP			18:52	33.23			0.29	ESK	HZ	25.6	EP			16:20	44.61			0.17
WLF1	HZ	55.1	EP			18:52	34.98			0.08	ESK	HN	25.6	ES			16:20	47.89			-0.10
WLF1	HN	55.1	ES			18:52	41.35			-0.43	ESK	HE	25.6	IAML			16:20	48.25	4	0.18	
WLF1	HE	55.1	IAML			18:52	42.15	86	0.27		ESK	HN	25.6	IAML			16:20	48.25	13	0.11	
WLF1	HN	55.1	IAML			18:52	42.35	146	0.08		EDMD	HE	72.0	ES			16:21	00.16			-0.20
YLL	EZ	66.0	EP			18:52	36.69			0.09	EDMD	HN	72.0	IAML			16:21	02.83	6	0.13	
WME	EZ	66.1	EP			18:52	36.71			0.10	EDMD	HE	72.0	IAML			16:21	03.00	13	0.19	
LLW	BZ	104.0	EP			18:52	42.40			-0.01	KESW	HZ	76.0	EP			16:20	52.54			0.28
LLW	BE	104.0	ES			18:52	54.85			0.08	NEWG	HZ	91.1	EP			16:20	54.63			0.05
WIM	EZ	122.0	EP			18:52	45.00			-0.03	NEWG	HN	91.1	ES			16:21	05.30			-0.22
RSBS	HZ	130.0	EP			18:52	46.08			-0.09	NEWG	HE	91.1	IAML			16:21	06.95	1	0.52	
RSBS	HN	130.0	ES			18:53	01.01			-0.27	NEWG	HN	91.1	IAML			16:21	06.98	2	0.25	
RSBS	HE	130.0	IAML			18:53	03.73	14	0.14		GALL	HZ	128.0	EP			16:21	00.31			0.06
RSBS	HN	130.0	IAML			18:53	04.03	12	0.12		GALL	HE	128.0	ES			16:21	15.29			-0.04
IWEX	BZ	136.0	EP			18:52	46.69			-0.29	January 7 2016 Time: 21:47 21.1 UTC Magnitude: 0.9 ML Lat: 55.358N Lon: -2.225W Depth: 7.7 km Grid Ref: 385.74 kmE 607.14 kmN RMS: 0.30 secs Locality: BYRNESS, NORTHUMBERLAND Velocity model: Lownet Xnear: 100.0 Xfar: 150.0										
IWEX	BN	136.0	ES			18:53	02.81			0.13											
IWEX	BE	136.0	IAML			18:53	04.01	18	0.20												
IOMK	HZ	136.0	EP			18:52	47.01			0.01											
IOMK	HN	136.0	ES			18:53	02.59			-0.12											
IOMK	HN	136.0	IAML			18:53	03.86	17	0.14												
IOMK	HE	136.0	IAML			18:53	05.38	29	0.08												
HLM1	HZ	166.0	EP			18:52	51.56			0.29											
HLM1	HN	166.0	ES			18:53	10.68			0.58											
HLM1	HE	166.0	IAML			18:53	12.43	6	0.30												
HLM1	HN	166.0	IAML			18:53	12.46	8	0.12												
MCH1	HZ	190.0	EP			18:52	54.53			0.28											
MCH1	HN	190.0	ES			18:53	16.11			0.84											
MCH1	HE	190.0	IAML			18:53	17.30	14	0.40												
MCH1	HN	190.0	IAML			18:53	17.43	12	0.22												

TABLE 2 : PHASE DATA

Lat: 57.997N Lon: -5.070W Grid Ref: 218.58 kmE 904.96 kmN Locality: DRUMRUNIE, HIGHLAND Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0	Depth: 7.0 km RMS: 0.20 secs	LEWI HN 108.0 IAML 14:45 12.13 2 0.10 LEWI HE 108.0 IAML 14:45 15.02 4 0.32
January 18 2016 Time: 14:43 49.9 UTC Magnitude: 1.5 ML Lat: 56.278N Lon: -6.127W Depth: 8.3 km Grid Ref: 144.57 kmE 717.15 kmN RMS: 0.10 secs Locality: MULL, ARGYLL & BUTE Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0 Comment: OFFSHORE LOCATION	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES LINV HZ 18.3 EP 14:34 23.98 0.10 LINV HE 18.3 ES 14:34 26.47 -0.10 LINV HE 18.3 IAML 14:34 26.70 52 0.14 LINV HN 18.3 IAML 14:34 27.09 14 0.08 KAC EZ 57.1 EP 14:34 29.67 -0.30 KPL HZ 81.1 EP 14:34 33.90 0.25 KPL HE 81.1 ES 14:34 43.47 0.00 KPL HE 81.1 IAML 14:34 46.83 4 0.32 KPL HN 81.1 IAML 14:34 49.25 4 0.16 BIGH HZ 87.7 EP 14:34 34.80 0.11 BIGH HE 87.7 ES 14:34 45.20 -0.06 BIGH HN 87.7 IAML 14:34 48.14 23 0.19 BIGH HE 87.7 IAML 14:34 48.82 20 0.26 MCD EZ 117.0 EP 14:34 39.34 0.00	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES PGB1 HZ 115.0 EP 14:44 08.60 0.04 PGB1 HE 115.0 ES 14:44 22.20 0.00 PGB1 HE 115.0 IAML 14:44 23.30 13 0.26 PGB1 HN 115.0 IAML 14:44 25.57 8 0.39 KPL HZ 122.0 EP 14:44 09.49 -0.07 KPL HN 122.0 ES 14:44 24.06 0.13 KPL HE 122.0 IAML 14:44 26.86 13 0.20 KPL HN 122.0 IAML 14:44 28.58 7 0.31 INVG HZ 130.0 EP 14:44 10.56 -0.22 INVG HN 130.0 ES 14:44 26.06 0.01 INVG HN 130.0 IAML 14:44 27.69 11 0.14 INVG HE 130.0 IAML 14:44 28.07 13 0.34 KAC EZ 145.0 EP 14:44 13.12 0.18 MDO EZ 168.0 EP 14:44 16.30 0.04 LEWI HZ 213.0 EP 14:44 21.57 -0.20 CLGH HZ 133.0 EP 14:44 11.27 0.05 CLGH HN 133.0 ES 14:44 26.85 0.04 CLGH HE 133.0 IAML 14:44 30.88 11 0.28 CLGH HN 133.0 IAML 14:44 30.65 10 0.22
January 12 2016 Time: 00:00 34.3 UTC Magnitude: 1.1 ML Lat: 57.993N Lon: -5.060W Depth: 7.7 km Grid Ref: 219.15 kmE 904.48 kmN RMS: 0.10 secs Locality: DRUMRUNIE, HIGHLAND Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES MDO EZ 74.1 EP 00:00 46.52 -0.20 KPL HZ 80.9 EP 00:00 47.77 0.08 KPL HE 80.9 ES 00:00 57.41 -0.05 KPL HE 80.9 IAML 00:00 58.79 4 0.21 KPL HN 80.9 IAML 00:01 03.28 4 0.14 BIGH HZ 87.6 EP 00:00 48.77 0.04 BIGH HN 87.6 ES 00:00 59.17 -0.10 BIGH HN 87.6 IAML 00:01 02.16 27 0.22 BIGH HE 87.6 IAML 00:01 02.82 24 0.23 LEWI HZ 108.0 EP 00:00 52.20 0.24 LEWI HN 108.0 ES 00:01 04.66 -0.18 LEWI HN 108.0 IAML 00:01 05.05 3 0.09 LEWI HE 108.0 IAML 00:01 07.79 3 0.17 MCD EZ 117.0 EP 00:00 53.44 0.15 INVG HZ 185.0 EP 00:01 02.78 0.02 INVG HN 185.0 IAML 00:01 26.44 3 0.17 INVG HE 185.0 IAML 00:01 27.48 3 0.61	January 20 2016 Time: 06:41 47.7 UTC Magnitude: 0.4 ML Lat: 49.072N Lon: -2.248W Depth: 7.4 km Grid Ref: 381.89 kmE -91.97 kmN RMS: 0.10 secs Locality: JERSEY, CHANNEL ISLES Velocity model: Lownet Xnear: 50.0 Xfar: 100.0 Comment: 10KM SSW JERSEY
January 14 2016 Time: 07:24 45.2 UTC Magnitude: 1.4 ML Lat: 56.303N Lon: -5.914W Depth: 12.4 km Grid Ref: 157.90 kmE 719.16 kmN RMS: 0.10 secs Locality: MULL, ARGYLL & BUTE Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0 Comment: OFFSHORE LOCATION	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES PGB1 HZ 105.0 EP 07:25 02.37 0.11 PGB1 HN 105.0 ES 07:25 14.65 -0.04 PGB1 HN 105.0 IAML 07:25 15.46 10 0.60 PGB1 HE 105.0 IAML 07:25 16.14 14 0.26 INVG HZ 116.0 EP 07:25 03.87 -0.10 INVG HE 116.0 ES 07:25 17.69 0.05 INVG HN 116.0 IAML 07:25 19.01 15 0.36 INVG HE 116.0 IAML 07:25 21.87 9 0.38 KPL HZ 116.0 EP 07:25 03.91 -0.01 KPL HE 116.0 ES 07:25 17.51 -0.05 KPL HE 116.0 IAML 07:25 19.67 4 0.30 KPL HN 116.0 IAML 07:25 20.65 4 0.15 CLGH HZ 136.0 EP 07:25 06.74 -0.09 CLGH HN 136.0 ES 07:25 22.71 0.13 CLGH HN 136.0 IAML 07:25 25.56 11 0.18 CLGH HE 136.0 IAML 07:25 27.76 12 0.70 MDO EZ 158.0 EP 07:25 10.12 0.17 NEWG HZ 169.0 EP 07:25 11.14 -0.15 NEWG HN 169.0 IAML 07:25 34.14 6 0.28 NEWG HE 169.0 IAML 07:25 34.42 5 0.27 GALL HZ 177.0 EP 07:25 12.24 -0.02 GALL HN 177.0 IAML 07:25 35.09 3 0.38 GALL HE 177.0 IAML 07:25 36.60 3 0.21	JSA HZ 14.1 EP 06:41 50.72 0.00 JSA HN 14.1 ES 06:41 52.84 -0.08 JSA HE 14.1 IAML 06:41 53.28 16 0.16 JSA HN 14.1 IAML 06:41 53.41 16 0.27 JVM EZ 16.4 EP 06:41 51.08 -0.01 JVM EZ 16.4 ES 06:41 53.63 0.05 JRS EZ 17.6 EP 06:41 51.38 0.10 JRS EE 17.6 ES 06:41 53.92 0.03 JRS EN 17.6 IAML 06:41 54.32 5 0.10 JRS EE 17.6 IAML 06:41 54.36 11 0.09 JQE EZ 20.9 EP 06:41 51.73 -0.07 JLP EZ 22.3 EP 06:41 52.00 -0.03
January 15 2016 Time: 14:44 41.4 UTC Magnitude: 1.1 ML Lat: 57.994N Lon: -5.057W Depth: 7.0 km Grid Ref: 219.33 kmE 904.59 kmN RMS: 0.20 secs Locality: DRUMRUNIE, HIGHLAND Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES MDO EZ 74.2 EP 14:44 53.66 -0.18 KPL HZ 81.2 EP 14:44 54.97 0.14 BIGH HZ 87.3 EP 14:44 55.90 0.10 BIGH HN 87.3 ES 14:45 06.27 -0.06 BIGH HE 87.3 IAML 14:45 08.70 16 0.41 BIGH HN 87.3 IAML 14:45 09.24 16 0.21 LEWI HZ 108.0 EP 14:44 59.28 0.20 LEWI HE 108.0 ES 14:45 11.80 -0.21	January 20 2016 Time: 18:59 20.8 UTC Magnitude: 2.3 ML Lat: 58.894N Lon: 1.423W Depth: 8.8 km Grid Ref: 597.19 kmE 1005.74 kmN RMS: 0.30 secs Locality: NORTHERN NORTH SEA Velocity model: North Sea Xnear: 400.0 Xfar: 600.0 Comment: 200KM SE LERWICK
January 21 2016 Time: 00:00 33.9 UTC Magnitude: 0.7 ML Lat: 57.995N Lon: -5.062W Depth: 7.9 km Grid Ref: 219.04 kmE 904.71 kmN RMS: 0.10 secs Locality: DRUMRUNIE, HIGHLAND Velocity model: Lownet Xnear: 150.0 Xfar: 300.0	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES KPL HZ 81.1 EP 00:00 47.29 0.00 KPL HE 81.1 ES 00:00 57.04 -0.05 KPL HE 81.1 IAML 00:00 58.20 2 0.61 KPL HN 81.1 IAML 00:01 02.65 2 0.51 BIGH HZ 87.5 EP 00:00 48.34 0.06 BIGH HE 87.5 ES 00:00 58.71 -0.09 BIGH HE 87.5 IAML 00:01 01.14 4 0.12 BIGH HN 87.5 IAML 00:01 01.73 4 0.11 LEWI HZ 108.0 EP 00:00 51.73 0.24 LEWI HN 108.0 ES 00:01 04.20 -0.16 LEWI HE 108.0 IAML 00:01 06.93 2 0.60 LEWI HN 108.0 IAML 00:01 07.30 3 0.57	LRW HZ 202.0 EP 18:59 50.86 0.37 LRW HN 202.0 ES 19:00 12.33 0.13 LRW HE 202.0 IAML 19:00 15.80 43 0.32 LRW HN 202.0 IAML 19:00 15.82 44 0.26 BIGH HZ 312.0 EP 19:00 04.15 -0.04 BIGH HN 312.0 ES 19:00 35.39 -0.51 BIGH HN 312.0 IAML 19:00 36.83 10 0.22 BIGH HE 312.0 IAML 19:00 36.89 10 0.14 DRUM HZ 320.0 EP 19:00 04.82 -0.33 DRUM HN 320.0 ES 19:00 38.04 0.49 DRUM HE 320.0 IAML 19:00 39.07 6 0.22 DRUM HN 320.0 IAML 19:00 41.52 6 0.28 FOO HE 362.0 ES 19:00 46.39 -0.11

TABLE 2 : PHASE DATA

SWN1 HE 64.1 ES 23:12 30.14 0.50		Locality: OAKHAM,RUTLAND
SWN1 HE 64.1 IAML 23:12 30.71 139 0.18		Velocity model: Lownet Xnear: 100.0 Xfar: 200.0
SWN1 HN 64.1 IAML 23:12 30.78 221 0.23		Comment: FELT OAKHAM Intensity: 3
STRD HZ 85.0 EP 23:12 24.67 0.29		STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES
STRD HE 85.0 ES 23:12 35.07 -0.18		CWF HZ 40.1 EP 20:30 42.03 1.19
STRD HE 85.0 IAML 23:12 35.85 348 0.16		CWF HE 40.1 ES 20:30 44.93 -1.24
STRD HN 85.0 IAML 23:12 36.13 155 0.20		CWF HE 40.1 IAML 20:30 45.34 8 0.06
OLDB HZ 112.0 EP 23:12 28.92 0.41		CWF HN 40.1 IAML 20:30 45.34 14 0.08
CWF HZ 116.0 IP D 23:12 28.73 -0.52		WACR HZ 91.3 EP 20:30 49.21 0.41
MONM HZ 130.0 EP 23:12 31.39 0.09		WACR HE 91.3 ES 20:30 59.30 -0.64
MCH1 HZ 146.0 IP D 23:12 33.58 -0.05		WACR HN 91.3 IAML 20:31 01.20 8 0.15
WACR HZ 155.0 EP 23:12 34.58 -0.34		WACR HE 91.3 IAML 20:31 01.31 5 0.31
ELSH HZ 157.0 EP 23:12 36.09 0.79		LBWR HZ 104.0 EP 20:30 50.80 -0.07
HLMI HZ 160.0 EP 23:12 35.86 0.07		LBWR HE 104.0 ES 20:31 03.78 0.25
STNC HZ 176.0 EP 23:12 38.18 0.26		MCH1 HZ 173.0 EP 20:31 01.76 0.81
LBWR HZ 195.0 EP 23:12 40.21 -0.14		MCH1 HN 173.0 ES 20:31 21.81 0.86
FOEL HZ 202.0 EP 23:12 41.61 0.33		MCH1 HN 173.0 IAML 20:31 22.28 3 0.22
RSBS HZ 264.0 EP 23:12 48.50 -0.46		MCH1 HE 173.0 IAML 20:31 23.56 2 0.16
SBD BZ 292.0 EP 23:12 51.95 -0.52		
March 7 2016 Time: 05:40 33.9 UTC Magnitude: 2.9 ML	Lat: 61.558N Lon: 3.840W Depth: 10.0 km	March 13 2016 Time: 01:52 29.7 UTC Magnitude: 0.6 ML
Grid Ref: 709.98 kmE 1311.27 kmN RMS: 0.60 secs	Locality: NORTHERN NORTH SEA	Lat: 55.127N Lon: -3.659W Depth: 3.1 km
Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0	Comment: 310KM ENE LERWICK	Grid Ref: 294.23 kmE 582.67 kmN RMS: 0.40 secs
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	Velocity model: Lownet Xnear: 60.0 Xfar: 100.0	Locality: LOCHARBRIGGS,D & G
LRW HZ 315.0 EP 05:41 18.82 0.43	ESK HZ 35.8 EP 01:52 36.30 0.07	
LRW HE 315.0 ES 05:41 50.72 -0.18	ESK HE 35.8 ES 01:52 40.73 -0.31	
LRW HN 315.0 IAML 05:41 53.24 6 0.28	ESK HE 35.8 IAML 01:52 41.64 11 0.16	
LRW HE 315.0 IAML 05:41 57.54 8 0.47	ESK HN 35.8 IAML 01:52 41.71 6 0.17	
BIGH HZ 550.0 EP 05:41 47.59 -0.14	NEWG HZ 36.4 EP 01:52 36.73 0.41	
BIGH HE 550.0 ES 05:42 42.06 0.40	NEWG HN 36.4 ES 01:52 40.94 -0.25	
BIGH HE 550.0 IAML 05:42 42.27 15 0.22	NEWG HN 36.4 IAML 01:52 41.17 14 0.22	
BIGH HN 550.0 IAML 05:42 43.58 14 0.50	NEWG HE 36.4 IAML 01:52 41.28 11 0.20	
DRUM HE 630.0 ES 05:42 59.35 0.29	KESW HZ 69.7 EP 01:52 41.70 0.03	
DRUM HN 630.0 IAML 05:43 03.94 14 0.40	KESW HE 69.7 IAML 01:52 52.40 2 0.22	
DRUM HE 630.0 IAML 05:43 04.99 16 0.32	KESW HN 69.7 IAML 01:52 53.36 2 0.48	
LINV HZ 632.0 EP 05:41 57.40 -0.60	GALL HZ 73.3 EP 01:52 42.43 0.24	
LAW E HE 793.0 ES 05:43 32.54 -1.73	GALL HN 73.3 ES 01:52 50.82 -0.52	
	GALL HN 73.3 IAML 01:52 53.01 3 0.16	
	GALL HE 73.3 IAML 01:52 54.90 3 0.28	
	EBL EZ 81.7 EP 01:52 44.48 0.93	
March 7 2016 Time: 20:11 54.8 UTC Magnitude: 2.4 ML	Lat: 58.411N Lon: 1.106W Depth: 6.2 km	March 14 2016 Time: 18:06 59.9 UTC Magnitude: 1.0 ML
Grid Ref: 581.43 kmE 951.11 kmN RMS: 0.40 secs	Locality: CENTRAL NORTH SEA	Lat: 52.675N Lon: -0.764W Depth: 3.7 km
Velocity model: North Sea Xnear: 400.0 Xfar: 600.0	Comment: 240KM NE ABERDEEN	Grid Ref: 483.56 kmE 309.34 kmN RMS: 0.30 secs
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	Locality: OAKHAM,RUTLAND
LRW HZ 232.0 EP 20:12 28.50 -0.03	Comment: FELT OAKHAM Intensity: 2	
LRW HE 232.0 ES 20:12 53.34 0.18	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	
LRW HE 232.0 IAML 20:13 02.01 7 0.22	CWF HZ 37.4 EP 18:07 06.61 -0.01	
LRW HN 232.0 IAML 20:13 02.40 10 0.14	CWF HE 37.4 ES 18:07 11.21 -0.29	
DRUM HZ 272.0 EP 20:12 34.23 0.77	CWF HE 37.4 IAML 18:07 11.52 7 0.10	
DRUM HN 272.0 IAML 20:13 04.38 13 0.34	CWF HN 37.4 IAML 18:07 11.59 13 0.10	
DRUM HE 272.0 IAML 20:13 05.12 21 0.48	WACR HZ 94.3 EP 18:07 15.83 0.43	
MCD EZ 274.0 EP 20:12 34.20 0.47	WACR HN 94.3 ES 18:07 26.26 -0.43	
BIGH HZ 293.0 EP 20:12 36.03 -0.06	LBWR HZ 103.0 EP 18:07 17.27 0.40	
BIGH HE 293.0 ES 20:13 05.82 -0.41	LBWR HE 103.0 ES 18:07 29.12 -0.11	
BIGH HN 293.0 IAML 20:13 06.99 19 0.19	LBWR HE 103.0 IAML 18:07 35.47 6 0.42	
BIGH HE 293.0 IAML 20:13 07.18 15 0.22	LBWR HN 103.0 IAML 18:07 35.51 6 0.33	
MDO EZ 341.0 EP 20:12 42.58 0.43	MCH1 HZ 170.0 EP 18:07 26.75 0.22	
ESY EZ 357.0 EP 20:12 43.96 -0.15	MCH1 HE 170.0 ES 18:07 46.06 0.12	
LINV HZ 371.0 EP 20:12 45.41 -0.35	MCH1 HN 170.0 IAML 18:07 51.12 2 0.18	
LINV HE 371.0 IAML 20:13 24.01 6 0.16	MCH1 HE 170.0 IAML 18:07 51.84 3 0.20	
LINV HN 371.0 IAML 20:13 24.03 6 0.40		
EDI HZ 380.0 EP 20:12 46.80 -0.06	March 17 2016 Time: 04:34 00.5 UTC Magnitude: 1.0 ML	
EDI HN 380.0 ES 20:13 25.41 0.55	Lat: 53.149N Lon: -4.671W Depth: 9.2 km	
EDI HN 380.0 IAML 20:13 26.94 9 0.56	Grid Ref: 221.40 kmE 364.68 kmN RMS: 0.10 secs	
EDI HE 380.0 IAML 20:13 27.01 8 0.22	Locality: OFFSHORE ANGLESEY	
KAC EZ 392.0 EP 20:12 48.25 -0.21	Velocity model: Lleyn Xnear: 80.0 Xfar: 200.0	
KPL HZ 418.0 EP 20:12 51.57 -0.07	Comment: 15KM SSW HOLYHEAD	
ESK HZ 433.0 EP 20:12 53.25 -0.29	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	
ESK HE 433.0 ES 20:13 36.34 -0.08	YRC EZ 13.0 IP C 04:34 03.30 0.09	
ESK HN 433.0 IAML 20:13 38.88 4 0.28	WLF1 HZ 24.1 IP C 04:34 04.78 -0.08	
ESK HE 433.0 IAML 20:13 40.62 4 0.42	WLF1 HN 24.1 ES 04:34 08.06 0.23	
EDMD HZ 441.0 EP 20:12 54.15 -0.29	WLF1 HE 24.1 IAML 04:34 08.40 26 0.19	
EDMD HE 441.0 ES 20:13 37.55 -0.43	WLF1 HN 24.1 IAML 04:34 08.41 34 0.06	
EDMD HN 441.0 IAML 20:13 39.08 5 0.40	WPS HZ 30.3 IP 04:34 05.80 -0.04	
EDMD HE 441.0 IAML 20:13 39.56 10 0.40	WPS HE 30.3 ES 04:34 09.28 -0.18	
LAW E HZ 459.0 EP 20:12 56.05 -0.66	WPS HE 30.3 IAML 04:34 09.64 24 0.18	
LAW E HE 459.0 IAML 20:13 44.17 10 0.14	WPS HN 30.3 IAML 04:34 10.28 13 0.19	
LAW E HN 459.0 IAML 20:13 44.63 10 0.26	WME EZ 36.9 EP 04:34 06.79 -0.13	
GALL HZ 532.0 EP 20:13 05.41 -0.35	FOEL HZ 103.0 EP 04:34 17.47 -0.01	
GALL HE 532.0 IAML 20:13 58.62 3 0.40	FOEL HE 103.0 ES 04:34 28.98 -0.04	
GALL HN 532.0 IAML 20:13 59.49 3 0.21	FOEL HN 103.0 IAML 04:34 29.96 4 0.25	
	FOEL HE 103.0 IAML 04:34 30.40 6 0.29	
	WIM EZ 111.0 EP 04:34 19.01 0.26	
March 11 2016 Time: 20:30 33.5 UTC Magnitude: 1.0 ML	Lat: 52.685N Lon: -0.721W Depth: 3.9 km	March 17 2016 Time: 19:33 36.7 UTC Magnitude: 0.2 ML
Grid Ref: 486.45 kmE 310.51 kmN RMS: 0.80 secs		Lat: 53.079N Lon: -4.222W Depth: 8.5 km

TABLE 2 : PHASE DATA

BIGH HZ 290.0 EP 01:26 12.62 1.14	WACR HE 93.9 ES 20:02 45.73 -0.27
BIGH HN 290.0 ES 01:26 41.69 -0.38	WACR HN 93.9 IAML 20:02 47.78 8 0.26
BIGH HE 290.0 IAML 01:26 46.55 19 0.55	WACR HE 93.9 IAML 20:02 48.39 13 0.18
BIGH HN 290.0 IAML 01:26 46.72 24 0.43	AU08 HZ 112.0 EP 20:02 37.38 -0.18
FOO HZ 318.0 EP 01:26 14.51 -0.40	AU08 HE 112.0 ES 20:02 50.92 0.03
FOO HE 318.0 ES 01:26 49.64 1.64	HPK HZ 115.0 EP 20:02 37.76 -0.31
FOO HE 318.0 IAML 01:26 51.47 1 0.04	HPK HE 115.0 ES 20:02 51.45 -0.33
FOO HN 318.0 IAML 01:26 53.68 1 0.28	HPK HE 115.0 IAML 20:02 53.04 8 0.20
LINV HZ 375.0 EP 01:26 22.58 0.58	HPK HN 115.0 IAML 20:02 53.12 7 0.26
<p>April 26 2016 Time: 14:49 22.2 UTC Magnitude: 1.4 ML Lat: 56.347N Lon: -5.442W Depth: 3.8 km Grid Ref: 187.33 kmE 722.49 kmN RMS: 0.10 secs Locality: KILMORE, ARGYLL & BUTE Velocity model: Lownet Xnear: 100.0 Xfar: 200.0 Comment: 7KM SSE OBAN</p>	
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	<p>May 3 2016 Time: 22:49 46.4 UTC Magnitude: 0.8 ML Lat: 51.960N Lon: -2.899W Depth: 8.7 km Grid Ref: 338.23 kmE 229.49 kmN RMS: 0.30 secs Locality: PONTRILAS, HEREFORDSHIRE Velocity model: Lownet Xnear: 100.0 Xfar: 200.0</p>
LAW E HZ 10.1 EP 14:49 24.38 -0.03	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES
LAW E HE 10.1 ES 14:49 26.03 0.00	MCH1 HZ 7.9 IP D 22:49 48.69 0.03
LAW E HE 10.1 IAML 14:49 26.07 414 0.10	MCH1 HE 7.9 ES 22:49 50.57 0.26
LAW E HN 10.1 IAML 14:49 26.08 530 0.10	MCH1 HE 7.9 IAML 22:49 50.63 154 0.10
EAB EZ 70.7 EP 14:49 34.35 0.04	MCH1 HN 7.9 IAML 22:49 50.69 71 0.18
PGB1 HZ 84.4 EP 14:49 36.61 0.20	MONM HZ 15.0 IP C 22:49 49.44 -0.18
PGB1 HN 84.4 ES 14:49 46.79 0.00	MONM HE 15.0 ES 22:49 51.93 -0.04
PGB1 HE 84.4 IAML 14:49 48.43 10 0.28	MONM HN 15.0 IAML 22:49 52.27 14 0.26
PGB1 HN 84.4 IAML 14:49 48.55 7 0.22	MONM HE 15.0 IAML 22:49 52.37 19 0.36
INVG HZ 86.8 EP 14:49 36.73 -0.08	STRD HE 54.7 ES 22:50 02.53 -0.08
INVG HN 86.8 ES 14:49 47.40 -0.07	STRD HE 54.7 IAML 22:50 02.92 5 0.48
INVG HE 86.8 IAML 14:49 49.91 15 0.10	STRD HN 54.7 IAML 22:50 02.93 5 0.29
INVG HN 86.8 IAML 14:49 50.01 15 0.22	HLM1 HZ 62.1 EP 22:49 57.24 0.29
KPL HZ 111.0 EP 14:49 40.45 -0.08	HLM1 HE 62.1 ES 22:50 04.04 -0.61
KPL HE 111.0 ES 14:49 54.00 0.08	HLM1 HE 62.1 IAML 22:50 04.29 3 0.24
KPL HN 111.0 IAML 14:49 55.58 9 0.32	HLM1 HN 62.1 IAML 22:50 04.50 2 0.28
KPL HE 111.0 IAML 14:49 55.67 12 0.22	RSBS HZ 127.0 EP 22:50 06.79 -0.06
KAC EZ 129.0 EP 14:49 43.29 0.03	RSBS HN 127.0 ES 22:50 21.62 -0.16
CLGH HZ 147.0 EP 14:49 45.70 -0.21	RSBS HN 127.0 IAML 22:50 23.90 2 0.20
CLGH HE 147.0 ES 14:50 03.13 -0.10	RSBS HE 127.0 IAML 22:50 24.89 3 0.09
NEWG HE 157.0 ES 14:50 05.71 0.10	CWF HZ 139.0 EP 22:50 08.80 0.26
NEWG HE 157.0 IAML 14:50 05.82 4 0.44	CWF HN 139.0 ES 22:50 25.51 0.81
NEWG HN 157.0 IAML 14:50 06.80 3 0.14	CWF HE 139.0 IAML 22:50 26.38 2 0.14
<p>April 30 2016 Time: 17:22 25.5 UTC Magnitude: 1.1 ML Lat: 55.784N Lon: -6.442W Depth: 7.7 km Grid Ref: 121.55 kmE 663.45 kmN RMS: 0.20 secs Locality: ISLAY, ARGYLL & BUTE Velocity model: Lownet Xnear: 100.0 Xfar: 300.0</p>	
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	<p>May 8 2016 Time: 11:37 47.4 UTC Magnitude: 1.0 ML Lat: 54.057N Lon: -3.454W Depth: 7.7 km Grid Ref: 304.83 kmE 463.34 kmN RMS: 0.20 secs Locality: IRISH SEA Velocity model: Lownet Xnear: 100.0 Xfar: 200.0 Comment: 37KM NW BLACKPOOL</p>
CLGH HZ 80.8 EP 17:22 39.30 0.41	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES
CLGH HE 80.8 ES 17:22 48.26 -0.43	KESW HZ 63.4 EP 11:37 58.32 0.14
CLGH HN 80.8 IAML 17:22 50.68 9 0.12	KESW HE 63.4 ES 11:38 05.87 -0.21
CLGH HE 80.8 IAML 17:22 50.78 12 0.14	KESW HE 63.4 IAML 11:38 06.05 8 0.14
LAW E HZ 83.9 EP 17:22 39.22 -0.13	KESW HN 63.4 IAML 11:38 07.07 8 0.26
LAW E HE 83.9 ES 17:22 49.44 -0.04	IOMK HZ 76.1 EP 11:38 00.37 0.25
LAW E HE 83.9 IAML 17:22 52.94 12 0.22	IOMK HN 76.1 ES 11:38 09.40 -0.03
LAW E HN 83.9 IAML 17:22 53.12 7 0.14	IOMK HE 76.1 IAML 11:38 09.94 8 0.18
PGB1 HE 123.0 ES 17:23 00.08 0.13	IOMK HN 76.1 IAML 11:38 10.31 14 0.10
PGB1 HN 123.0 IAML 17:23 01.15 7 0.46	WME EZ 92.4 EP 11:38 02.46 0.02
PGB1 HE 123.0 IAML 17:23 02.03 8 0.44	WPS HZ 100.0 EP 11:38 03.34 -0.23
GALL HE 150.0 ES 17:23 06.63 0.00	WPS HE 100.0 ES 11:38 15.46 0.06
GALL HE 150.0 IAML 17:23 09.59 2 0.20	WPS HN 100.0 IAML 11:38 16.03 5 0.21
GALL HN 150.0 IAML 17:23 10.02 2 0.22	WPS HE 100.0 IAML 11:38 16.52 4 0.24
NEWG HE 158.0 EP 17:22 50.62 0.15	WLF1 HZ 106.0 EP 11:38 04.34 0.01
NEWG HZ 158.0 ES 17:23 08.95 0.23	WLF1 HE 106.0 ES 11:38 16.66 -0.06
NEWG HN 158.0 IAML 17:23 11.82 2 0.10	WLF1 HE 106.0 IAML 11:38 17.80 5 0.15
NEWG HZ 158.0 IAML 17:23 12.01 2 0.32	WLF1 HN 106.0 IAML 11:38 18.80 3 0.14
INVG HZ 166.0 EP 17:22 51.53 0.01	GALL HZ 122.0 EP 11:38 06.54 -0.05
INVG HE 166.0 ES 17:23 10.29 -0.23	EDMD HZ 130.0 EP 11:38 08.04 0.32
INVG HE 166.0 IAML 17:23 14.68 2 0.24	EDMD HE 130.0 ES 11:38 22.24 -0.34
INVG HN 166.0 IAML 17:23 16.02 2 0.17	EDMD HN 130.0 ES 11:38 22.39
<p>April 30 2016 Time: 20:02 19.3 UTC Magnitude: 1.3 ML Lat: 53.118N Lon: -0.607W Depth: 7.2 km Grid Ref: 493.22 kmE 358.81 kmN RMS: 0.20 secs Locality: LINCOLN, LINCONSHIRE Velocity model: Lownet Xnear: 100.0 Xfar: 200.0 Comment: 10KM SSW LINCOLN</p>	
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	<p>May 9 2016 Time: 08:18 53.1 UTC Magnitude: 0.9 ML Lat: 55.977N Lon: -4.239W Depth: 8.6 km Grid Ref: 260.30 kmE 678.26 kmN RMS: 0.20 secs Locality: LENNOXTOWN, E DUNBARTON</p>
LMK HZ 42.1 EP 20:02 26.85 0.14	EDMD HN 130.0 IAML 11:38 23.20 8 0.12
LMK HE 42.1 ES 20:02 32.21 0.07	EDMD HE 130.0 IAML 11:38 24.34 7 0.44
LMK HN 42.1 IAML 20:02 32.73 30 0.24	FOEL HZ 131.0 EP 11:38 07.68 -0.34
LMK HE 42.1 IAML 20:02 32.86 25 0.28	LBWR HE 135.0 ES 11:38 24.55 0.39
CWF HZ 63.2 EP 20:02 30.17 0.17	ESK HN 141.0 ES 11:38 25.76 0.23
CWF HE 63.2 ES 20:02 37.99 0.18	ESK HN 141.0 IAML 11:38 28.55 2 0.15
CWF HE 63.2 IAML 20:02 38.63 9 0.09	ESK HE 141.0 IAML 11:38 28.78 2 0.22
CWF HN 63.2 IAML 20:02 39.02 9 0.10	
LBWR HZ 81.0 EP 20:02 32.94 0.17	
LBWR HN 81.0 ES 20:02 42.32 -0.30	
LBWR HN 81.0 IAML 20:02 43.54 28 0.32	
LBWR HE 81.0 IAML 20:02 43.93 25 0.12	

TABLE 2 : PHASE DATA

<p>ESY EZ 527.0 EP 17:32 17.21 -0.08</p> <p>INVG HZ 537.0 EP 17:32 18.44 -0.01</p> <p>INVG HE 537.0 IAML 17:33 12.12 4 0.24</p> <p>INVG HN 537.0 IAML 17:33 13.16 4 0.24</p> <p>KPL HZ 546.0 EP 17:32 19.29 -0.21</p> <p>KPL HN 546.0 IAML 17:33 14.54 3 0.56</p> <p>KPL HE 546.0 IAML 17:33 50.67 2 0.34</p> <p>LEWI HZ 567.0 EP 17:32 22.24 0.08</p> <p>LEWI HN 567.0 IAML 17:33 16.66 3 0.32</p> <p>LEWI HE 567.0 IAML 17:33 44.45 3 0.84</p> <p>EAB EZ 569.0 EP 17:32 23.49 1.09</p> <p>ESK HZ 604.0 EP 17:32 26.48 -0.30</p> <p>LAWH HZ 609.0 EP 17:32 26.60 -0.78</p> <p>LAWH HN 609.0 IAML 17:33 26.54 6 0.32</p> <p>LAWH HE 609.0 IAML 17:33 26.68 7 0.40</p> <p>EDMD HZ 615.0 EP 17:32 27.44 -0.66</p> <p>NEWG HZ 658.0 EP 17:32 33.29 -0.22</p>	<p style="text-align: center;">MAY 17 2016 Time: 08:15 52.4 UTC Magnitude: 1.1 ML</p> <p style="text-align: center;">Lat: 52.450N Lon: -3.832W Depth: 7.2 km</p> <p style="text-align: center;">Grid Ref: 275.51 kmE 285.18 kmN RMS: 0.20 secs</p> <p style="text-align: center;">Locality: PONTERWYD, CEREDIGION</p> <p style="text-align: center;">Velocity model: Lownet Xnear: 100.0 Xfar: 200.0</p> <p>STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES</p> <p>LLW BN 45.8 EP 08:16 00.10 -0.34</p> <p>LLW BE 45.8 IAML 08:16 06.68 15 0.14</p> <p>LLW BN 45.8 IAML 08:16 06.71 11 0.22</p> <p>FOEL HZ 64.9 EP 08:16 03.51 0.05</p> <p>FOEL HE 64.9 IAML 08:16 16.22 7 0.42</p> <p>FOEL HN 64.9 IAML 08:16 16.94 8 0.26</p> <p>HLM1 HZ 65.0 EP 08:16 03.79 0.31</p> <p>HLM1 HN 65.0 ES 08:16 11.40 -0.13</p> <p>HLM1 HE 65.0 IAML 08:16 11.99 22 0.12</p> <p>HLM1 HN 65.0 IAML 08:16 12.00 30 0.14</p> <p>MCH1 HZ 76.0 EP 08:16 05.19 0.05</p> <p>MCH1 HN 76.0 ES 08:16 14.22 -0.19</p> <p>MCH1 HN 76.0 IAML 08:16 14.40 10 0.12</p> <p>MCH1 HE 76.0 IAML 08:16 14.75 14 0.26</p> <p>RSBS HZ 83.4 EP 08:16 05.93 -0.37</p> <p>RSBS HN 83.4 ES 08:16 16.32 -0.09</p> <p>RSBS HE 83.4 IAML 08:16 17.55 15 0.07</p> <p>RSBS HN 83.4 IAML 08:16 17.96 9 0.09</p> <p>MONM HZ 97.8 EP 08:16 08.82 0.32</p> <p>MONM HE 97.8 IAML 08:16 24.62 4 0.26</p> <p>MONM HN 97.8 IAML 08:16 25.27 7 0.14</p> <p>WLF1 HZ 101.0 EP 08:16 09.27 0.32</p> <p>WLF1 HN 101.0 ES 08:16 20.82 -0.18</p> <p>WLF1 HN 101.0 IAML 08:16 22.40 7 0.25</p> <p>WLF1 HE 101.0 IAML 08:16 22.52 9 0.14</p> <p>YRC EZ 102.0 EP 08:16 09.44 0.28</p> <p>WME EZ 110.0 EP 08:16 10.49 0.10</p> <p>WPS HZ 115.0 EP 08:16 11.46 0.34</p> <p>WPS HE 115.0 ES 08:16 24.77 0.02</p> <p>WPS HN 115.0 IAML 08:16 25.88 3 0.14</p> <p>WPS HE 115.0 IAML 08:16 27.30 4 0.30</p>
<p>May 15 2016 Time: 18:16 41.1 UTC Magnitude: 0.8 ML</p> <p style="text-align: center;">Lat: 55.797N Lon: -6.355W Depth: 5.8 km</p> <p style="text-align: center;">Grid Ref: 127.09 kmE 664.55 kmN RMS: 0.60 secs</p> <p style="text-align: center;">Locality: ISLAY, ARGYLL & BUTE</p> <p style="text-align: center;">Velocity model: Lownet Xnear: 100.0 Xfar: 200.0</p> <p>STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES</p> <p>LAWH HZ 78.8 EP 18:16 53.87 -0.43</p> <p>LAWH HE 78.8 ES 18:17 04.22 0.27</p> <p>LAWH HN 78.8 IAML 18:17 07.55 5 0.10</p> <p>LAWH HE 78.8 IAML 18:17 07.55 6 0.23</p> <p>PGB1 HE 117.0 ES 18:17 14.30 0.00</p> <p>PGB1 HE 117.0 IAML 18:17 16.17 4 0.35</p> <p>PGB1 HN 117.0 IAML 18:17 16.23 3 0.29</p> <p>GAL1 HZ 147.0 EP 18:17 05.73 1.11</p> <p>GAL1 HN 147.0 ES 18:17 21.17 -0.62</p> <p>GAL1 HN 147.0 IAML 18:17 24.22 1 0.23</p> <p>GAL1 HE 147.0 IAML 18:17 24.31 2 0.34</p> <p>INVG HZ 160.0 EP 18:17 07.22 0.71</p> <p>INVG HN 160.0 ES 18:17 24.55 -0.52</p> <p>INVG HE 160.0 IAML 18:17 30.30 2 0.14</p> <p>INVG HN 160.0 IAML 18:17 30.52 1 0.18</p>	<p style="text-align: center;">MAY 17 2016 Time: 15:56 26.2 UTC Magnitude: 1.9 ML</p> <p style="text-align: center;">Lat: 56.156N Lon: -4.934W Depth: 9.0 km</p> <p style="text-align: center;">Grid Ref: 217.80 kmE 699.79 kmN RMS: 0.40 secs</p> <p style="text-align: center;">Locality: LOCH GOIL, ARGYLL/BUTE</p> <p style="text-align: center;">Velocity model: Lownet Xnear: 100.0 Xfar: 150.0</p> <p style="text-align: center;">Comment: FELT LOCHGOILHEAD Intensity: 2</p> <p>STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES</p> <p>LAWH HZ 31.0 IP C 15:56 32.02 0.09</p> <p>LAWH HN 31.0 ES 15:56 35.90 -0.18</p> <p>LAWH HN 31.0 IAML 15:56 36.12 171 0.13</p> <p>LAWH HE 31.0 IAML 15:56 36.13 165 0.09</p> <p>EAB EZ 37.3 IP C 15:56 33.17 0.26</p> <p>EAB EZ 37.3 ES 15:56 37.92 0.13</p> <p>PGB1 HZ 47.6 IP C 15:56 34.85 0.35</p> <p>PGB1 HE 47.6 ES 15:56 39.99 -0.54</p> <p>PGB1 HE 47.6 IAML 15:56 41.40 38 0.17</p> <p>PGB1 HN 47.6 IAML 15:56 42.01 47 0.22</p> <p>INVG HZ 62.9 IP C 15:56 36.97 0.09</p> <p>INVG HE 62.9 ES 15:56 44.02 -0.63</p> <p>INVG HE 62.9 IAML 15:56 45.69 74 0.10</p> <p>INVG HN 62.9 IAML 15:56 45.74 70 0.08</p> <p>EDI HZ 112.0 EP 15:56 45.13 0.68</p> <p>EDI HE 112.0 ES 15:56 57.77 0.02</p> <p>EDI HN 112.0 IAML 15:57 00.85 64 0.19</p> <p>EDI HE 112.0 IAML 15:57 00.87 46 0.21</p> <p>NEWG HZ 124.0 EP 15:56 46.49 0.27</p> <p>NEWG HE 124.0 ES 15:57 00.40 -0.40</p> <p>NEWG HE 124.0 IAML 15:57 02.17 20 0.11</p> <p>NEWG HN 124.0 IAML 15:57 03.28 16 0.21</p> <p>EBL EZ 126.0 IP D 15:56 46.80 0.29</p> <p>EBL EZ 126.0 ES 15:57 01.51 0.20</p> <p>KPL HZ 139.0 EP 15:56 48.43 0.10</p> <p>CLGH HZ 141.0 EP 15:56 47.79 -0.84</p> <p>CLGH HE 141.0 ES 15:57 03.85 -1.12</p> <p>CLGH HN 141.0 IAML 15:57 06.63 33 0.30</p> <p>CLGH HE 141.0 IAML 15:57 06.73 36 0.12</p> <p>ESK HZ 143.0 EP 15:56 49.01 -0.01</p> <p>ESY EZ 147.0 EP 15:56 50.25 0.69</p> <p>KAC EZ 151.0 EP 15:56 49.86 -0.26</p> <p>DRUM HZ 173.0 EP 15:56 52.65 -0.38</p> <p>MCD EZ 189.0 EP 15:56 54.36 -0.75</p> <p>LINV HZ 222.0 EP 15:56 58.29 -0.92</p>
<p>May 16 2016 Time: 20:33 18.8 UTC Magnitude: 0.8 ML</p> <p style="text-align: center;">Lat: 56.663N Lon: -4.391W Depth: 2.7 km</p> <p style="text-align: center;">Grid Ref: 253.47 kmE 754.90 kmN RMS: 0.50 secs</p> <p style="text-align: center;">Locality: FINNART, PERTH & KINROSS</p> <p style="text-align: center;">Velocity model: Lownet Xnear: 100.0 Xfar: 200.0</p> <p>STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES</p> <p>INVG HZ 33.8 EP 20:33 25.04 0.04</p> <p>INVG HE 33.8 ES 20:33 28.96 -0.60</p> <p>INVG HE 33.8 IAML 20:33 29.28 6 0.11</p> <p>INVG HN 33.8 IAML 20:33 29.53 5 0.07</p> <p>LAWH HZ 76.6 EP 20:33 32.08 0.24</p> <p>LAWH HN 76.6 ES 20:33 41.67 0.28</p> <p>LAWH HE 76.6 IAML 20:33 45.25 8 0.14</p> <p>LAWH HN 76.6 IAML 20:33 45.42 7 0.19</p> <p>KPL HZ 108.0 EP 20:33 36.98 0.38</p> <p>KPL HN 108.0 ES 20:33 48.73 -0.90</p> <p>DRUM HN 120.0 ES 20:33 53.53 0.57</p> <p>DRUM HN 120.0 IAML 20:33 55.44 5 0.19</p> <p>DRUM HE 120.0 IAML 20:33 56.02 2 0.10</p> <p>LINV HZ 172.0 EP 20:33 47.01 0.84</p>	<p style="text-align: center;">MAY 18 2016 Time: 23:00 49.1 UTC Magnitude: 1.9 ML</p> <p style="text-align: center;">Lat: 56.393N Lon: -5.476W Depth: 4.2 km</p> <p style="text-align: center;">Grid Ref: 185.49 kmE 727.72 kmN RMS: 0.30 secs</p> <p style="text-align: center;">Locality: OBAN, ARGYLL & BUTE</p> <p style="text-align: center;">Velocity model: Lownet Xnear: 100.0 Xfar: 200.0</p>

TABLE 2 : PHASE DATA

LEWI HN 217.0 ES	04:30 30.70	0.62	KPL HE 84.4 ES	02:17 09.14	-0.05	
LEWI HE 217.0 IAML	04:30 34.24	4 0.62	KPL HN 84.4 IAML	02:17 11.20	3 0.34	
LEWI HN 217.0 IAML	04:30 34.82	2 0.24	KPL HE 84.4 IAML	02:17 11.74	3 0.16	
July 5 2016 Time: 12:12 11.6 UTC Magnitude: 1.2 ML			INVG HZ 101.0 EP 02:17 01.99 0.27			
Lat: 49.010N Lon: -2.686W Depth: 8.2 km			INVG HE 101.0 ES 02:17 13.71 -0.13			
Grid Ref: 349.84 kmE -98.66 kmN RMS: 0.00 secs			INVG HN 101.0 IAML 02:17 16.02 2 0.06			
Locality: ENGLISH CHANNEL			INVG HE 101.0 IAML 02:17 16.10 1 0.10			
Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0			LEWI HN 189.0 ES 02:17 35.16 0.01			
Comment: 40KM SW JERSEY			July 16 2016 Time: 19:17 17.5 UTC Magnitude: 0.7 ML			
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	Lat: 57.631N Lon: -5.649W Depth: 4.3 km			Grid Ref: 182.18 kmE 865.95 kmN RMS: 0.30 secs		
JVM EZ 41.9 IP C 12:12 18.95 -0.03	Locality: SHIELDAIG, HIGHLAND			Velocity model: Lownet Xnear: 50.0 Xfar: 150.0		
JVM EZ 41.9 ES 12:12 24.34 0.00	Comment: 6KM SSE SHIELDAIG			STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES		
JSA HZ 42.5 EP 12:12 19.05 -0.02	KAC EZ 25.6 IP C 19:17 21.92 -0.38			KPL HZ 32.5 EP 19:17 23.58 0.14		
JSA HN 42.5 ES 12:12 24.50 0.01	KPL HE 32.5 ES 19:17 27.79 -0.02			KPL HE 32.5 IAML 19:17 27.98 13 0.22		
JSA HN 42.5 IAML 12:12 24.85 25 0.16	KPL HN 32.5 IAML 19:17 28.03 6 0.14			MDO EZ 79.9 EP 19:17 31.71 0.60		
JSA HE 42.5 IAML 12:12 25.36 18 0.10	LEWI HN 92.2 ES 19:17 44.23 -0.11			LEWI HN 92.2 IAML 19:17 45.98 5 0.23		
JRS EE 47.9 EP 12:12 19.90 -0.01	LEWI HZ 92.2 IAML 19:17 46.26 3 0.20			BIGH HZ 141.0 EP 19:17 40.14 -0.21		
JRS EE 47.9 IAML 12:12 26.42 21 0.20	July 22 2016 Time: 00:38 20.4 UTC Magnitude: 0.6 ML			Lat: 51.929N Lon: -3.118W Depth: 16.3 km		
JRS EN 47.9 IAML 12:12 26.51 23 0.48	Grid Ref: 323.14 kmE 226.25 kmN RMS: 0.20 secs			Locality: CRICKHOWELL, POWYS		
JLP EZ 50.1 EP 12:12 20.32 0.05	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0			Comment: 8KM NE ACHALLADER		
July 6 2016 Time: 08:13 01.0 UTC Magnitude: 0.9 ML			STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			
Lat: 56.596N Lon: -4.617W Depth: 7.0 km			MCH1 HZ 11.2 EP 00:38 25.02 -0.09			
Grid Ref: 239.34 kmE 747.95 kmN RMS: 0.40 secs			MCH1 HN 11.2 ES 00:38 28.56 0.01			
Locality: ACHALLADER, ARGYLL/BUTE			MCH1 HN 11.2 IAML 00:38 28.73 7 0.15			
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0			MCH1 HE 11.2 IAML 00:38 28.77 14 0.15			
Comment: 8KM NE ACHALLADER			HLM1 HZ 67.5 EP 00:38 31.86 -0.04			
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	HLM1 HE 67.5 ES 00:38 40.38 0.07			HLM1 HN 67.5 IAML 00:38 42.61 2 0.29		
INVG HZ 40.0 EP 08:13 08.00 -0.12	HLM1 HE 67.5 IAML 00:38 42.76 3 0.15			STRD HE 68.0 ES 00:38 40.44 0.10		
INVG HN 40.0 ES 08:13 12.81 -0.52	FOEL HZ 107.0 EP 00:38 37.11 -0.37			FOEL HN 107.0 ES 00:38 50.16 0.20		
INVG HN 40.0 IAML 08:13 13.28 4 0.36	FOEL HN 107.0 IAML 00:38 51.22 2 0.13			FOEL HE 107.0 IAML 00:38 51.45 1 0.16		
INVG HE 40.0 IAML 08:13 13.84 4 0.20	RSBS HZ 112.0 EP 00:38 38.07 -0.07			RSBS HN 112.0 ES 00:38 51.30 0.20		
EAB EZ 48.5 EP 08:13 09.83 0.38	RSBS HE 112.0 IAML 00:38 52.31 2 0.12			RSBS HN 112.0 IAML 00:38 52.55 3 0.11		
LAW E HZ 61.0 EP 08:13 11.35 -0.01	DYA HE 176.0 ES 00:39 04.51 -0.46			July 24 2016 Time: 19:39 42.9 UTC Magnitude: 0.6 ML		
KPL HZ 104.0 EP 08:13 18.27 0.27	Lat: 51.190N Lon: -4.204W Depth: 7.7 km			Grid Ref: 246.00 kmE 145.79 kmN RMS: 0.20 secs		
KPL HE 104.0 ES 08:13 30.05 -0.36	Locality: WOOLACOMBE, DEVON			Velocity model: Lownet Xnear: 100.0 Xfar: 150.0		
KPL HN 104.0 IAML 08:13 30.25 2 0.28	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			HTL HZ 29.4 IP C 19:39 48.54 0.25		
KPL HE 104.0 IAML 08:13 33.28 5 0.44	HTL HZ 29.4 ES 19:39 52.01 -0.23			HTL HE 29.4 IAML 19:39 52.38 7 0.10		
KAC EZ 109.0 EP 08:13 18.74 -0.03	HTL HN 29.4 IAML 19:39 52.51 8 0.10			DYA HN 86.1 EP 19:39 57.26 0.13		
DRUM HN 135.0 ES 08:13 39.44 0.87	DYA HZ 86.1 ES 19:40 07.34 -0.19			DYA HE 86.1 IAML 19:40 08.76 3 0.14		
DRUM HE 135.0 IAML 08:13 43.55 4 0.16	DYA HZ 86.1 IAML 19:40 08.98 4 0.18			RSBS HZ 92.8 EP 19:39 58.45 0.29		
DRUM HN 135.0 IAML 08:13 44.41 5 0.36	RSBS HE 92.8 ES 19:40 09.04 -0.27			RSBS HN 92.8 IAML 19:40 11.22 1 0.05		
LEWI HZ 219.0 EP 08:13 33.89 0.05	RSBS HE 92.8 IAML 19:40 11.23 2 0.07			CCAI HN 133.0 EP 19:40 04.66 0.40		
LEWI HE 219.0 IAML 08:14 02.53 2 0.55	CCAI HE 133.0 ES 19:40 19.64 -0.23			CCAI HE 133.0 IAML 19:40 20.47 2 0.21		
LEWI HN 219.0 IAML 08:14 03.90 2 0.38	CCAI HZ 133.0 IAML 19:40 21.04 2 0.20			July 24 2016 Time: 23:53 34.2 UTC Magnitude: 0.8 ML		
July 6 2016 Time: 14:09 10.9 UTC Magnitude: 1.4 ML			Lat: 57.268N Lon: -4.445W Depth: 10.6 km			
Lat: 56.602N Lon: -4.624W Depth: 7.5 km			Grid Ref: 252.57 kmE 822.33 kmN RMS: 0.30 secs			
Grid Ref: 238.94 kmE 748.63 kmN RMS: 0.30 secs			Locality: ERROGIE, HIGHLAND			
Locality: ACHALLADER, ARGYLL/BUTE			Velocity model: Lownet Xnear: 100.0 Xfar: 200.0			
Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0			Comment: 8KM NE ACHALLADER			
Comment: 8KM NE ACHALLADER			STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	KAC EZ 57.4 EP 23:53 43.78 -0.23			KPL HZ 73.2 EP 23:53 46.53 0.11		
INVG HZ 40.7 EP 14:09 18.10 0.04	KPL HN 73.2 ES 23:53 55.24 -0.09			KPL HN 73.2 IAML 23:53 59.51 3 0.20		
INVG HN 40.7 ES 14:09 22.83 -0.48	KPL HE 73.2 IAML 23:53 59.61 5 0.16			INVG HZ 96.7 EP 23:53 50.69 0.59		
INVG HN 40.7 IAML 14:09 23.14 16 0.14	INVG HE 96.7 ES 23:54 01.46 -0.25			INVG HE 96.7 IAML 23:54 04.81 7 0.32		
INVG HE 40.7 IAML 14:09 23.55 10 0.29						
EAB EZ 49.3 EP 14:09 19.89 0.49						
LAW E HZ 61.1 EP 14:09 21.28 0.08						
LAW E HN 61.1 ES 14:09 28.43 -0.32						
LAW E HE 61.1 IAML 14:09 34.23 22 0.18						
LAW E HN 61.1 IAML 14:09 34.40 34 0.14						
MDO EZ 94.7 EP 14:09 26.17 -0.29						
KPL HZ 103.0 EP 14:09 27.90 0.20						
KPL HN 103.0 ES 14:09 39.71 -0.28						
KPL HN 103.0 IAML 14:09 42.03 10 0.24						
KPL HE 103.0 IAML 14:09 43.68 12 0.24						
KAC EZ 108.0 EP 14:09 28.56 0.09						
DRUM HZ 135.0 EP 14:09 32.53 -0.03						
DRUM HN 135.0 IAML 14:09 53.66 16 0.38						
DRUM HE 135.0 IAML 14:09 53.71 11 0.20						
MCD EZ 137.0 EP 14:09 33.32 0.47						
BIGH HZ 215.0 EP 14:09 42.77 -0.27						
BIGH HE 215.0 IAML 14:10 11.18 10 0.54						
BIGH HN 215.0 IAML 14:10 11.42 5 0.38						
LEWI HZ 218.0 EP 14:09 43.83 0.29						
July 8 2016 Time: 02:16 45.1 UTC Magnitude: 0.6 ML			Lat: 56.582N Lon: -5.666W Depth: 7.7 km			
Lat: 56.582N Lon: -5.666W Depth: 7.7 km			Grid Ref: 174.89 kmE 749.34 kmN RMS: 0.10 secs			
Grid Ref: 174.89 kmE 749.34 kmN RMS: 0.10 secs			Locality: MORVERN, HIGHLAND			
Locality: MORVERN, HIGHLAND			Velocity model: Lownet Xnear: 100.0 Xfar: 200.0			
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0			Comment: 8KM NE ACHALLADER			
Comment: 8KM NE ACHALLADER			STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	LAW E HZ 39.4 EP 02:16 52.10 0.01			LAW E HE 39.4 ES 02:16 57.10 -0.08		
LAW E HZ 39.4 EP 02:16 52.10 0.01	LAW E HE 39.4 IAML 02:16 57.25 8 0.22			LAW E HN 39.4 IAML 02:16 57.36 8 0.10		
LAW E HE 39.4 ES 02:16 57.10 -0.08	KPL HZ 84.4 EP 02:16 59.01 -0.02					
LAW E HE 39.4 IAML 02:16 57.25 8 0.22						
LAW E HN 39.4 IAML 02:16 57.36 8 0.10						
KPL HZ 84.4 EP 02:16 59.01 -0.02						

TABLE 2 : PHASE DATA

<p> HLMI HN 108.0 ES 04:26 27.92 -0.11 HLMI HE 108.0 IAML 04:26 29.79 2 0.20 HLMI HN 108.0 IAML 04:26 32.12 2 0.29 FOEL HZ 123.0 EP 04:26 17.23 0.06 FOEL HE 123.0 ES 04:26 32.01 -0.01 FOEL HN 123.0 IAML 04:26 32.69 3 0.48 FOEL HE 123.0 IAML 04:26 33.42 3 0.22 HPK HN 125.0 ES 04:26 32.45 0.02 HPK HN 125.0 IAML 04:26 33.95 7 0.40 HPK HE 125.0 IAML 04:26 34.50 9 0.26 MCH1 HE 145.0 ES 04:26 37.67 0.02 MCH1 HN 145.0 IAML 04:26 38.71 3 0.14 MCH1 HE 145.0 IAML 04:26 41.06 3 0.05 </p>	<p> Grid Ref: 225.56 kmE 732.68 kmN RMS: 0.40 secs Locality: DALMALLY, ARGYLL & BUTE Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0 Comment: 10KM NE DALMALLY </p> <table border="0" style="width: 100%;"> <thead> <tr> <th>STAT</th> <th>CO</th> <th>DIST</th> <th>PHAS</th> <th>WT</th> <th>P</th> <th>HrMn</th> <th>SECS</th> <th>AMPL</th> <th>PERI</th> <th>RES</th> </tr> </thead> <tbody> <tr><td>LAW</td><td>EZ</td><td>41.2</td><td>EP</td><td></td><td></td><td>14:08</td><td>23.41</td><td></td><td></td><td>-0.08</td></tr> <tr><td>LAW</td><td>HN</td><td>41.2</td><td>ES</td><td></td><td></td><td>14:08</td><td>28.33</td><td></td><td></td><td>-0.62</td></tr> <tr><td>LAW</td><td>HE</td><td>41.2</td><td>IAML</td><td></td><td></td><td>14:08</td><td>28.87</td><td>5</td><td>0.13</td><td></td></tr> <tr><td>LAW</td><td>HN</td><td>41.2</td><td>IAML</td><td></td><td></td><td>14:08</td><td>29.29</td><td>3</td><td>0.12</td><td></td></tr> <tr><td>EAB</td><td>EZ</td><td>42.5</td><td>EP</td><td></td><td></td><td>14:08</td><td>24.08</td><td></td><td></td><td>0.35</td></tr> <tr><td>INVG</td><td>HZ</td><td>48.6</td><td>EP</td><td></td><td></td><td>14:08</td><td>24.75</td><td></td><td></td><td>-0.02</td></tr> <tr><td>INVG</td><td>HN</td><td>48.6</td><td>ES</td><td></td><td></td><td>14:08</td><td>30.36</td><td></td><td></td><td>-0.81</td></tr> <tr><td>INVG</td><td>HE</td><td>48.6</td><td>IAML</td><td></td><td></td><td>14:08</td><td>30.62</td><td>4</td><td>0.20</td><td></td></tr> <tr><td>INVG</td><td>HN</td><td>48.6</td><td>IAML</td><td></td><td></td><td>14:08</td><td>30.81</td><td>3</td><td>0.10</td><td></td></tr> <tr><td>PGB1</td><td>HE</td><td>74.8</td><td>ES</td><td></td><td></td><td>14:08</td><td>38.59</td><td></td><td></td><td>0.41</td></tr> <tr><td>KPL</td><td>HE</td><td>111.0</td><td>ES</td><td></td><td></td><td>14:08</td><td>48.12</td><td></td><td></td><td>0.41</td></tr> <tr><td>KPL</td><td>HE</td><td>111.0</td><td>IAML</td><td></td><td></td><td>14:08</td><td>50.41</td><td>3</td><td>0.42</td><td></td></tr> <tr><td>KPL</td><td>HN</td><td>111.0</td><td>IAML</td><td></td><td></td><td>14:08</td><td>51.10</td><td>2</td><td>0.28</td><td></td></tr> <tr><td>ESK</td><td>HN</td><td>162.0</td><td>ES</td><td></td><td></td><td>14:09</td><td>01.44</td><td></td><td></td><td>0.34</td></tr> </tbody> </table> <p> August 15 2016 Time: 10:14 05.8 UTC Magnitude: 1.0 ML Lat: 52.963N Lon: -2.553W Depth: 7.3 km Grid Ref: 362.86 kmE 340.80 kmN RMS: 0.50 secs Locality: WILKESLEY, CHESHIRE Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0 </p> <table border="0" style="width: 100%;"> <thead> <tr> <th>STAT</th> <th>CO</th> <th>DIST</th> <th>PHAS</th> <th>WT</th> <th>P</th> <th>HrMn</th> <th>SECS</th> <th>AMPL</th> <th>PERI</th> <th>RES</th> </tr> </thead> <tbody> <tr><td>STNC</td><td>HZ</td><td>27.3</td><td>EP</td><td></td><td></td><td>10:14</td><td>11.25</td><td></td><td></td><td>0.31</td></tr> <tr><td>FOEL</td><td>HZ</td><td>44.3</td><td>IP</td><td></td><td>C</td><td>10:14</td><td>13.04</td><td></td><td></td><td>-0.58</td></tr> <tr><td>FOEL</td><td>HE</td><td>44.3</td><td>ES</td><td></td><td></td><td>10:14</td><td>18.55</td><td></td><td></td><td>-0.77</td></tr> <tr><td>FOEL</td><td>HE</td><td>44.3</td><td>IAML</td><td></td><td></td><td>10:14</td><td>20.02</td><td>7</td><td>0.12</td><td></td></tr> <tr><td>FOEL</td><td>HN</td><td>44.3</td><td>IAML</td><td></td><td></td><td>10:14</td><td>20.84</td><td>8</td><td>0.19</td><td></td></tr> <tr><td>HLMI</td><td>HZ</td><td>54.2</td><td>EP</td><td></td><td></td><td>10:14</td><td>15.48</td><td></td><td></td><td>0.33</td></tr> <tr><td>HLMI</td><td>HN</td><td>54.2</td><td>ES</td><td></td><td></td><td>10:14</td><td>22.12</td><td></td><td></td><td>0.15</td></tr> <tr><td>HLMI</td><td>HE</td><td>54.2</td><td>IAML</td><td></td><td></td><td>10:14</td><td>22.90</td><td>10</td><td>0.19</td><td></td></tr> <tr><td>HLMI</td><td>HN</td><td>54.2</td><td>IAML</td><td></td><td></td><td>10:14</td><td>23.60</td><td>6</td><td>0.09</td><td></td></tr> <tr><td>LBWR</td><td>HZ</td><td>73.8</td><td>EP</td><td></td><td></td><td>10:14</td><td>18.39</td><td></td><td></td><td>0.21</td></tr> <tr><td>LBWR</td><td>HE</td><td>73.8</td><td>ES</td><td></td><td></td><td>10:14</td><td>27.18</td><td></td><td></td><td>-0.03</td></tr> <tr><td>LBWR</td><td>HE</td><td>73.8</td><td>IAML</td><td></td><td></td><td>10:14</td><td>28.95</td><td>5</td><td>0.11</td><td></td></tr> <tr><td>LBWR</td><td>HN</td><td>73.8</td><td>IAML</td><td></td><td></td><td>10:14</td><td>30.17</td><td>5</td><td>0.20</td><td></td></tr> <tr><td>CFW</td><td>HZ</td><td>87.5</td><td>EP</td><td></td><td></td><td>10:14</td><td>20.05</td><td></td><td></td><td>-0.22</td></tr> <tr><td>CFW</td><td>HE</td><td>87.5</td><td>ES</td><td></td><td></td><td>10:14</td><td>29.92</td><td></td><td></td><td>-0.91</td></tr> <tr><td>CFW</td><td>HE</td><td>87.5</td><td>IAML</td><td></td><td></td><td>10:14</td><td>30.61</td><td>5</td><td>0.20</td><td></td></tr> <tr><td>CFW</td><td>HN</td><td>87.5</td><td>IAML</td><td></td><td></td><td>10:14</td><td>31.71</td><td>8</td><td>0.16</td><td></td></tr> <tr><td>MCH1</td><td>HZ</td><td>112.0</td><td>EP</td><td></td><td></td><td>10:14</td><td>24.45</td><td></td><td></td><td>0.44</td></tr> <tr><td>MCH1</td><td>HN</td><td>112.0</td><td>ES</td><td></td><td></td><td>10:14</td><td>37.51</td><td></td><td></td><td>0.21</td></tr> <tr><td>MCH1</td><td>HN</td><td>112.0</td><td>IAML</td><td></td><td></td><td>10:14</td><td>37.83</td><td>7</td><td>0.24</td><td></td></tr> <tr><td>MCH1</td><td>HE</td><td>112.0</td><td>IAML</td><td></td><td></td><td>10:14</td><td>40.62</td><td>4</td><td>0.13</td><td></td></tr> <tr><td>HPK</td><td>HE</td><td>127.0</td><td>ES</td><td></td><td></td><td>10:14</td><td>41.65</td><td></td><td></td><td>0.33</td></tr> <tr><td>HPK</td><td>HE</td><td>127.0</td><td>IAML</td><td></td><td></td><td>10:14</td><td>43.04</td><td>15</td><td>0.25</td><td></td></tr> <tr><td>HPK</td><td>HN</td><td>127.0</td><td>IAML</td><td></td><td></td><td>10:14</td><td>43.67</td><td>15</td><td>0.18</td><td></td></tr> <tr><td>RSBS</td><td>HZ</td><td>187.0</td><td>EP</td><td></td><td></td><td>10:14</td><td>35.07</td><td></td><td></td><td>0.53</td></tr> <tr><td>RSBS</td><td>HN</td><td>187.0</td><td>IAML</td><td></td><td></td><td>10:14</td><td>58.91</td><td>2</td><td>0.13</td><td></td></tr> <tr><td>RSBS</td><td>HE</td><td>187.0</td><td>IAML</td><td></td><td></td><td>10:14</td><td>59.41</td><td>1</td><td>0.08</td><td></td></tr> </tbody> </table> <p> August 19 2016 Time: 13:38 38.5 UTC Magnitude: 1.9 ML Lat: 56.387N Lon: -5.849W Depth: 2.5 km Grid Ref: 162.44 kmE 728.27 kmN RMS: 0.40 secs Locality: MULL, ARGYLL & BUTE Velocity model: Lownet Xnear: 100.0 Xfar: 150.0 Comment: FELT MULL... Intensity: 3 </p> <table border="0" style="width: 100%;"> <thead> <tr> <th>STAT</th> <th>CO</th> <th>DIST</th> <th>PHAS</th> <th>WT</th> <th>P</th> <th>HrMn</th> <th>SECS</th> <th>AMPL</th> <th>PERI</th> <th>RES</th> </tr> </thead> <tbody> <tr><td>LAW</td><td>HZ</td><td>31.2</td><td>IP</td><td></td><td>C</td><td>13:38</td><td>44.12</td><td></td><td></td><td>-0.21</td></tr> <tr><td>LAW</td><td>HN</td><td>31.2</td><td>ES</td><td></td><td></td><td>13:38</td><td>47.93</td><td></td><td></td><td>-0.62</td></tr> <tr><td>LAW</td><td>HE</td><td>31.2</td><td>IAML</td><td></td><td></td><td>13:38</td><td>48.42</td><td>184</td><td>0.14</td><td></td></tr> <tr><td>LAW</td><td>HN</td><td>31.2</td><td>IAML</td><td></td><td></td><td>13:38</td><td>48.68</td><td>190</td><td>0.11</td><td></td></tr> <tr><td>EAB</td><td>EZ</td><td>96.2</td><td>EP</td><td></td><td></td><td>13:38</td><td>54.80</td><td></td><td></td><td>0.11</td></tr> <tr><td>PGB1</td><td>HZ</td><td>106.0</td><td>EP</td><td></td><td></td><td>13:38</td><td>56.73</td><td></td><td></td><td>0.46</td></tr> <tr><td>PGB1</td><td>HN</td><td>106.0</td><td>ES</td><td></td><td></td><td>13:39</td><td>09.45</td><td></td><td></td><td>0.24</td></tr> <tr><td>PGB1</td><td>HE</td><td>106.0</td><td>IAML</td><td></td><td></td><td>13:39</td><td>11.15</td><td>30</td><td>0.27</td><td></td></tr> <tr><td>PGB1</td><td>HN</td><td>106.0</td><td>IAML</td><td></td><td></td><td>13:39</td><td>11.36</td><td>26</td><td>0.42</td><td></td></tr> <tr><td>KPL</td><td>HZ</td><td>107.0</td><td>EP</td><td></td><td></td><td>13:38</td><td>56.10</td><td></td><td></td><td>-0.17</td></tr> <tr><td>KPL</td><td>HE</td><td>107.0</td><td>ES</td><td></td><td></td><td>13:39</td><td>09.11</td><td></td><td></td><td>-0.10</td></tr> <tr><td>KPL</td><td>HN</td><td>107.0</td><td>IAML</td><td></td><td></td><td>13:39</td><td>12.16</td><td>48</td><td>0.15</td><td></td></tr> <tr><td>KPL</td><td>HE</td><td>107.0</td><td>IAML</td><td></td><td></td><td>13:39</td><td>12.43</td><td>82</td><td>0.27</td><td></td></tr> <tr><td>INVG</td><td>HZ</td><td>112.0</td><td>IP</td><td></td><td>D</td><td>13:38</td><td>57.24</td><td></td><td></td><td>0.17</td></tr> <tr><td>INVG</td><td>HN</td><td>112.0</td><td>ES</td><td></td><td></td><td>13:39</td><td>11.13</td><td></td><td></td><td>0.53</td></tr> <tr><td>INVG</td><td>HN</td><td>112.0</td><td>IAML</td><td></td><td></td><td>13:39</td><td>12.96</td><td>34</td><td>0.11</td><td></td></tr> <tr><td>INVG</td><td>HE</td><td>112.0</td><td>IAML</td><td></td><td></td><td>13:39</td><td>13.13</td><td>39</td><td>0.10</td><td></td></tr> <tr><td>KAC</td><td>EZ</td><td>128.0</td><td>EP</td><td></td><td></td><td>13:38</td><td>59.65</td><td></td><td></td><td>0.00</td></tr> <tr><td>CLGH</td><td>HZ</td><td>146.0</td><td>EP</td><td></td><td></td><td>13:39</td><td>01.48</td><td></td><td></td><td>-0.79</td></tr> <tr><td>CLGH</td><td>HN</td><td>146.0</td><td>ES</td><td></td><td></td><td>13:39</td><td>18.11</td><td></td><td></td><td>-1.49</td></tr> <tr><td>CLGH</td><td>HN</td><td>146.0</td><td>IAML</td><td></td><td></td><td>13:39</td><td>20.63</td><td>25</td><td>0.16</td><td></td></tr> <tr><td>CLGH</td><td>HE</td><td>146.0</td><td>IAML</td><td></td><td></td><td>13:39</td><td>22.09</td><td>25</td><td>0.28</td><td></td></tr> <tr><td>MDO</td><td>EZ</td><td>148.0</td><td>EP</td><td></td><td></td><td>13:39</td><td>02.86</td><td></td><td></td><td>0.27</td></tr> <tr><td>NEWG</td><td>HZ</td><td>174.0</td><td>EP</td><td></td><td></td><td>13:39</td><td>05.35</td><td></td><td></td><td>-0.88</td></tr> <tr><td>GAL1</td><td>HZ</td><td>184.0</td><td>EP</td><td></td><td></td><td>13:39</td><td>06.80</td><td></td><td></td><td>-0.64</td></tr> <tr><td>GAL1</td><td>HN</td><td>184.0</td><td>ES</td><td></td><td></td><td>13:39</td><td>27.04</td><td></td><td></td><td>-1.50</td></tr> <tr><td>GAL1</td><td>HN</td><td>184.0</td><td>IAML</td><td></td><td></td><td>13:39</td><td>31.65</td><td>8</td><td>0.19</td><td></td></tr> <tr><td>GAL1</td><td>HE</td><td>184.0</td><td>IAML</td><td></td><td></td><td>13:39</td><td>32.45</td><td>10</td><td>0.19</td><td></td></tr> <tr><td>EBL</td><td>EZ</td><td>188.0</td><td>EP</td><td></td><td></td><td>13:39</td><td>09.09</td><td></td><td></td><td>1.12</td></tr> <tr><td>ESK</td><td>HZ</td><td>204.0</td><td>EP</td><td></td><td></td><td>13:39</td><td>10.20</td><td></td><td></td><td>0.21</td></tr> <tr><td>MCD</td><td>EZ</td><td>206.0</td><td>EP</td><td></td><td></td><td>13:39</td><td>09.31</td><td></td><td></td><td>-0.99</td></tr> </tbody> </table> <p> August 20 2016 Time: 14:08 16.0 UTC Magnitude: 0.5 ML Lat: 56.454N Lon: -4.831W Depth: 2.5 km </p> <table border="0" style="width: 100%;"> <thead> <tr> <th>STAT</th> <th>CO</th> <th>DIST</th> <th>PHAS</th> <th>WT</th> <th>P</th> <th>HrMn</th> <th>SECS</th> <th>AMPL</th> <th>PERI</th> <th>RES</th> </tr> </thead> <tbody> <tr><td>KESW</td><td>HZ</td><td>18.2</td><td>IP</td><td></td><td>D</td><td>11:15</td><td>41.32</td><td></td><td></td><td>-0.05</td></tr> <tr><td>KESW</td><td>HE</td><td>18.2</td><td>ES</td><td></td><td></td><td>11:15</td><td>43.99</td><td></td><td></td><td>0.03</td></tr> <tr><td>KESW</td><td>HN</td><td>18.2</td><td>IAML</td><td></td><td></td><td>11:15</td><td>44.16</td><td>74</td><td>0.24</td><td></td></tr> <tr><td>KESW</td><td>HE</td><td>18.2</td><td>IAML</td><td></td><td></td><td>11:15</td><td>44.41</td><td>77</td><td>0.10</td><td></td></tr> <tr><td>EDMD</td><td>HZ</td><td>69.5</td><td>EP</td><td></td><td></td><td>11:15</td><td>49.79</td><td></td><td></td><td>0.14</td></tr> <tr><td>EDMD</td><td>HE</td><td>69.5</td><td>ES</td><td></td><td></td><td>11:15</td><td>58.03</td><td></td><td></td><td>-0.09</td></tr> <tr><td>EDMD</td><td>HE</td><td>69.5</td><td>IAML</td><td></td><td></td><td>11:15</td><td>58.97</td><td>23</td><td>0.12</td><td></td></tr> <tr><td>EDMD</td><td>HN</td><td>69.5</td><td>IAML</td><td></td><td></td><td>11:16</td><td>01.31</td><td>33</td><td>0.14</td><td></td></tr> <tr><td>ESK</td><td>HZ</td><td>93.7</td><td>EP</td><td></td><td></td><td>11:15</td><td>54.10</td><td></td><td></td><td>0.47</td></tr> <tr><td>ESK</td><td>HE</td><td>93.7</td><td>IAML</td><td></td><td></td><td>11:16</td><td>06.12</td><td>8</td><td>0.26</td><td></td></tr> <tr><td>ESK</td><td>HN</td><td>93.7</td><td>IAML</td><td></td><td></td><td>11:16</td><td>08.15</td><td>10</td><td>0.32</td><td></td></tr> <tr><td>NEWG</td><td>HZ</td><td>111.0</td><td>EP</td><td></td><td></td><td>11:15</td><td>56.40</td><td></td><td></td><td>-0.08</td></tr> <tr><td>NEWG</td><td>HE</td><td>111.0</td><td>ES</td><td></td><td></td><td>11:16</td><td>09.56</td><td></td><td></td><td>-0.24</td></tr> <tr><td>NEWG</td><td>HN</td><td>111.0</td><td>IAML</td><td></td><td></td><td>11:16</td><td>10.82</td><td>5</td><td>0.10</td><td></td></tr> <tr><td>NEWG</td><td>HE</td><td>111.0</td><td>IAML</td><td></td><td></td><td>11:16</td><td>10.88</td><td>5</td><td>0.18</td><td></td></tr> </tbody> </table>	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	LAW	EZ	41.2	EP			14:08	23.41			-0.08	LAW	HN	41.2	ES			14:08	28.33			-0.62	LAW	HE	41.2	IAML			14:08	28.87	5	0.13		LAW	HN	41.2	IAML			14:08	29.29	3	0.12		EAB	EZ	42.5	EP			14:08	24.08			0.35	INVG	HZ	48.6	EP			14:08	24.75			-0.02	INVG	HN	48.6	ES			14:08	30.36			-0.81	INVG	HE	48.6	IAML			14:08	30.62	4	0.20		INVG	HN	48.6	IAML			14:08	30.81	3	0.10		PGB1	HE	74.8	ES			14:08	38.59			0.41	KPL	HE	111.0	ES			14:08	48.12			0.41	KPL	HE	111.0	IAML			14:08	50.41	3	0.42		KPL	HN	111.0	IAML			14:08	51.10	2	0.28		ESK	HN	162.0	ES			14:09	01.44			0.34	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	STNC	HZ	27.3	EP			10:14	11.25			0.31	FOEL	HZ	44.3	IP		C	10:14	13.04			-0.58	FOEL	HE	44.3	ES			10:14	18.55			-0.77	FOEL	HE	44.3	IAML			10:14	20.02	7	0.12		FOEL	HN	44.3	IAML			10:14	20.84	8	0.19		HLMI	HZ	54.2	EP			10:14	15.48			0.33	HLMI	HN	54.2	ES			10:14	22.12			0.15	HLMI	HE	54.2	IAML			10:14	22.90	10	0.19		HLMI	HN	54.2	IAML			10:14	23.60	6	0.09		LBWR	HZ	73.8	EP			10:14	18.39			0.21	LBWR	HE	73.8	ES			10:14	27.18			-0.03	LBWR	HE	73.8	IAML			10:14	28.95	5	0.11		LBWR	HN	73.8	IAML			10:14	30.17	5	0.20		CFW	HZ	87.5	EP			10:14	20.05			-0.22	CFW	HE	87.5	ES			10:14	29.92			-0.91	CFW	HE	87.5	IAML			10:14	30.61	5	0.20		CFW	HN	87.5	IAML			10:14	31.71	8	0.16		MCH1	HZ	112.0	EP			10:14	24.45			0.44	MCH1	HN	112.0	ES			10:14	37.51			0.21	MCH1	HN	112.0	IAML			10:14	37.83	7	0.24		MCH1	HE	112.0	IAML			10:14	40.62	4	0.13		HPK	HE	127.0	ES			10:14	41.65			0.33	HPK	HE	127.0	IAML			10:14	43.04	15	0.25		HPK	HN	127.0	IAML			10:14	43.67	15	0.18		RSBS	HZ	187.0	EP			10:14	35.07			0.53	RSBS	HN	187.0	IAML			10:14	58.91	2	0.13		RSBS	HE	187.0	IAML			10:14	59.41	1	0.08		STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	LAW	HZ	31.2	IP		C	13:38	44.12			-0.21	LAW	HN	31.2	ES			13:38	47.93			-0.62	LAW	HE	31.2	IAML			13:38	48.42	184	0.14		LAW	HN	31.2	IAML			13:38	48.68	190	0.11		EAB	EZ	96.2	EP			13:38	54.80			0.11	PGB1	HZ	106.0	EP			13:38	56.73			0.46	PGB1	HN	106.0	ES			13:39	09.45			0.24	PGB1	HE	106.0	IAML			13:39	11.15	30	0.27		PGB1	HN	106.0	IAML			13:39	11.36	26	0.42		KPL	HZ	107.0	EP			13:38	56.10			-0.17	KPL	HE	107.0	ES			13:39	09.11			-0.10	KPL	HN	107.0	IAML			13:39	12.16	48	0.15		KPL	HE	107.0	IAML			13:39	12.43	82	0.27		INVG	HZ	112.0	IP		D	13:38	57.24			0.17	INVG	HN	112.0	ES			13:39	11.13			0.53	INVG	HN	112.0	IAML			13:39	12.96	34	0.11		INVG	HE	112.0	IAML			13:39	13.13	39	0.10		KAC	EZ	128.0	EP			13:38	59.65			0.00	CLGH	HZ	146.0	EP			13:39	01.48			-0.79	CLGH	HN	146.0	ES			13:39	18.11			-1.49	CLGH	HN	146.0	IAML			13:39	20.63	25	0.16		CLGH	HE	146.0	IAML			13:39	22.09	25	0.28		MDO	EZ	148.0	EP			13:39	02.86			0.27	NEWG	HZ	174.0	EP			13:39	05.35			-0.88	GAL1	HZ	184.0	EP			13:39	06.80			-0.64	GAL1	HN	184.0	ES			13:39	27.04			-1.50	GAL1	HN	184.0	IAML			13:39	31.65	8	0.19		GAL1	HE	184.0	IAML			13:39	32.45	10	0.19		EBL	EZ	188.0	EP			13:39	09.09			1.12	ESK	HZ	204.0	EP			13:39	10.20			0.21	MCD	EZ	206.0	EP			13:39	09.31			-0.99	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	KESW	HZ	18.2	IP		D	11:15	41.32			-0.05	KESW	HE	18.2	ES			11:15	43.99			0.03	KESW	HN	18.2	IAML			11:15	44.16	74	0.24		KESW	HE	18.2	IAML			11:15	44.41	77	0.10		EDMD	HZ	69.5	EP			11:15	49.79			0.14	EDMD	HE	69.5	ES			11:15	58.03			-0.09	EDMD	HE	69.5	IAML			11:15	58.97	23	0.12		EDMD	HN	69.5	IAML			11:16	01.31	33	0.14		ESK	HZ	93.7	EP			11:15	54.10			0.47	ESK	HE	93.7	IAML			11:16	06.12	8	0.26		ESK	HN	93.7	IAML			11:16	08.15	10	0.32		NEWG	HZ	111.0	EP			11:15	56.40			-0.08	NEWG	HE	111.0	ES			11:16	09.56			-0.24	NEWG	HN	111.0	IAML			11:16	10.82	5	0.10		NEWG	HE	111.0	IAML			11:16	10.88	5	0.18	
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CLGH	HN	146.0	IAML			13:39	20.63	25	0.16																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
CLGH	HE	146.0	IAML			13:39	22.09	25	0.28																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
MDO	EZ	148.0	EP			13:39	02.86			0.27																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
NEWG	HZ	174.0	EP			13:39	05.35			-0.88																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
GAL1	HZ	184.0	EP			13:39	06.80			-0.64																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
GAL1	HN	184.0	ES			13:39	27.04			-1.50																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
GAL1	HN	184.0	IAML			13:39	31.65	8	0.19																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
GAL1	HE	184.0	IAML			13:39	32.45	10	0.19																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
EBL	EZ	188.0	EP			13:39	09.09			1.12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
ESK	HZ	204.0	EP			13:39	10.20			0.21																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
MCD	EZ	206.0	EP			13:39	09.31			-0.99																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
KESW	HZ	18.2	IP		D	11:15	41.32			-0.05																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
KESW	HE	18.2	ES			11:15	43.99			0.03																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
KESW	HN	18.2	IAML			11:15	44.16	74	0.24																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
KESW	HE	18.2	IAML			11:15	44.41	77	0.10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
EDMD	HZ	69.5	EP			11:15	49.79			0.14																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
EDMD	HE	69.5	ES			11:15	58.03			-0.09																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
EDMD	HE	69.5	IAML			11:15	58.97	23	0.12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
EDMD	HN	69.5	IAML			11:16	01.31	33	0.14																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
ESK	HZ	93.7	EP			11:15	54.10			0.47																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
ESK	HE	93.7	IAML			11:16	06.12	8	0.26																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
ESK	HN	93.7	IAML			11:16	08.15	10	0.32																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
NEWG	HZ	111.0	EP			11:15	56.40			-0.08																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
NEWG	HE	111.0	ES			11:16	09.56			-0.24																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
NEWG	HN	111.0	IAML			11:16	10.82	5	0.10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
NEWG	HE	111.0	IAML			11:16	10.88	5	0.18																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	

TABLE 2 : PHASE DATA

IOMK HZ 113.0 EP	11:15	56.37		-0.42	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0
IOMK HN 113.0 IAML	11:16	10.45	22	0.10	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES
IOMK HE 113.0 IAML	11:16	10.85	11	0.09	LBWR HZ 59.9 EP 20:15 32.34 0.23
LBWR HZ 143.0 EP	11:16	01.25		0.00	LBWR HE 59.9 ES 20:15 39.55 -0.05
LBWR HN 143.0 IAML	11:16	19.83	13	0.18	LBWR HE 59.9 IAML 20:15 40.66 9 0.17
LBWR HE 143.0 IAML	11:16	20.46	14	0.38	LBWR HN 59.9 IAML 20:15 40.69 14 0.15
August 25 2016 Time: 14:59 16.7 UTC Magnitude: 1.7 ML					
Lat: 52.570N Lon: -2.643W		Depth: 7.5 km		FOEL HZ 65.3 EP 20:15 33.06 0.13	
Grid Ref: 356.42 kmE 297.14 kmN		RMS: 0.40 secs		FOEL HZ 99.7 EP 20:15 38.02 -0.28	
Locality: HUGHLEY, SHROPSHIRE					
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0					
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES					
HLM1 HZ 17.1 IP C	14:59	20.49			0.20
HLM1 HN 17.1 ES	14:59	23.17			0.27
HLM1 HN 17.1 IAML	14:59	23.36	521	0.10	
HLM1 HE 17.1 IAML	14:59	23.38	500	0.10	
FOEL HZ 51.8 EP	14:59	25.20			-0.46
FOEL HN 51.8 ES	14:59	31.81			-0.39
FOEL HE 51.8 IAML	14:59	32.02	22	0.46	
FOEL HN 51.8 IAML	14:59	32.49	14	0.36	
MCH1 HZ 68.1 EP	14:59	28.02			-0.14
MCH1 HN 68.1 ES	14:59	36.22			-0.30
MCH1 HE 68.1 IAML	14:59	36.39	41	0.32	
MCH1 HN 68.1 IAML	14:59	36.55	32	0.41	
MONM HZ 82.0 EP	14:59	30.39			0.09
MONM HE 82.0 ES	14:59	40.18			-0.04
MONM HE 82.0 IAML	14:59	40.57	30	0.52	
MONM HN 82.0 IAML	14:59	40.65	23	0.16	
LBWR HZ 111.0 EP	14:59	35.14			0.28
LBWR HE 111.0 IAML	14:59	50.26	15	0.50	
LBWR HN 111.0 IAML	14:59	51.87	20	0.30	
WLF1 HZ 143.0 EP	14:59	40.17			0.74
WLF1 HE 143.0 ES	14:59	56.61			0.60
WLF1 HN 143.0 IAML	14:59	57.03	20	0.26	
WLF1 HE 143.0 IAML	14:59	58.30	14	0.31	
RSBS HZ 159.0 EP	14:59	42.44			0.61
RSBS HN 159.0 IAML	15:00	02.59	18	0.26	
RSBS HE 159.0 IAML	15:00	03.75	12	0.10	
August 26 2016 Time: 01:41 49.3 UTC Magnitude: 0.4 ML					
Lat: 52.736N Lon: -2.295W		Depth: 8.3 km		LLW BZ 72.2 EP 22:59 03.35 0.38	
Grid Ref: 380.08 kmE 315.45 kmN		RMS: 0.20 secs		LLW BE 72.2 ES 22:59 11.83 0.15	
Locality: MORETON, STAFFORDSHIRE					
Velocity model: Lownet Xnear: 75.0 Xfar: 150.0					
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES					
STNC HZ 40.0 EP	01:41	56.44			0.05
STNC HN 40.0 ES	01:42	01.44			-0.13
STNC HE 40.0 IAML	01:42	01.68	23	0.18	
STNC HN 40.0 IAML	01:42	01.69	6	0.15	
HLM1 HZ 46.4 EP	01:41	57.34			-0.08
HLM1 HE 46.4 ES	01:42	03.13			-0.22
HLM1 HE 46.4 IAML	01:42	03.81	2	0.12	
HLM1 HN 46.4 IAML	01:42	04.18	1	0.24	
CFW HE 66.7 EP	01:42	00.49			-0.03
CFW HN 66.7 ES	01:42	08.56			-0.16
CFW HN 66.7 IAML	01:42	08.65	2	0.22	
CFW HZ 66.7 IAML	01:42	09.01	0	0.18	
LBWR HE 83.4 ES	01:42	13.54			0.30
MCH1 HZ 95.1 EP	01:42	05.15			0.23
MCH1 HE 95.1 ES	01:42	16.71			0.38
MCH1 HN 95.1 IAML	01:42	17.22	2	0.14	
MCH1 HE 95.1 IAML	01:42	17.86	2	0.21	
August 26 2016 Time: 01:49 14.2 UTC Magnitude: 0.3 ML					
Lat: 52.864N Lon: -2.180W		Depth: 7.7 km		RSBS HZ 73.0 EP 22:59 03.14 0.04	
Grid Ref: 387.88 kmE 329.66 kmN		RMS: 0.10 secs		RSBS HE 73.0 ES 22:59 11.76 -0.14	
Locality: STONE, STAFFORDSHIRE					
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0					
Comment: 4KM SW STONE					
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES					
STNC HZ 25.4 EP	01:49	19.10			0.13
STNC HN 25.4 ES	01:49	22.44			-0.05
STNC HN 25.4 IAML	01:49	22.58	8	0.14	
STNC HE 25.4 IAML	01:49	22.74	11	0.36	
CFW HZ 60.4 EP	01:49	24.42			0.02
CFW HN 60.4 ES	01:49	31.81			-0.07
HLM1 HZ 61.0 EP	01:49	24.55			0.01
HLM1 HE 61.0 ES	01:49	31.90			-0.22
HLM1 HE 61.0 IAML	01:49	32.64	1	0.22	
HLM1 HN 61.0 IAML	01:49	33.21	1	0.39	
MCH1 HN 111.0 ES	01:49	45.77			0.23
MCH1 HE 111.0 IAML	01:49	46.35	1	0.20	
MCH1 HN 111.0 IAML	01:49	46.38	1	0.18	
August 28 2016 Time: 20:15 21.8 UTC Magnitude: 1.0 ML					
Lat: 53.680N Lon: -2.498W		Depth: 6.6 km		STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	
Grid Ref: 367.11 kmE 420.53 kmN		RMS: 0.20 secs		LAW E HZ 43.9 IP C 22:06 02.39 -0.33	
Locality: DARWEN, LANCASHIRE					
Velocity model: Lownet Xnear: 100.0 Xfar: 150.0					
Comment: 80KM SSW BRIGHTON					
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES					
HMN X HZ 98.0 EP	19:38	17.43			0.02
HMN X HE 98.0 ES	19:38	29.49			-0.01
HMN X HN 98.0 IAML	19:38	32.95	48	0.26	
HMN X HE 98.0 IAML	19:38	32.98	44	0.34	
JQE EZ 157.0 EP	19:38	26.28			0.02
JQE EZ 157.0 ES	19:38	44.80			-0.01
JSA HZ 165.0 EP	19:38	27.41			-0.03
JSA HE 165.0 ES	19:38	46.88			0.02
JSA HN 165.0 IAML	19:38	47.18	12	0.28	
JSA HE 165.0 IAML	19:38	47.18	12	0.30	
September 2 2016 Time: 22:05 55.0 UTC Magnitude: 1.4 ML					
Lat: 56.647N Lon: -5.541W		Depth: 7.8 km		STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	
Grid Ref: 182.93 kmE 756.17 kmN		RMS: 0.50 secs		LAW E HZ 43.9 ES 22:06 07.64 -0.69	
Locality: STRONTIAN, HIGHLAND					
Velocity model: Lownet Xnear: 100.0 Xfar: 150.0					
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES					
LAW E HZ 43.9 IP C	22:06	02.39			-0.33
LAW E HN 43.9 ES	22:06	07.64			-0.69
LAW E HE 43.9 IAML	22:06	07.96	22	0.13	

TABLE 2 : PHASE DATA

<p>LAWE HN 43.9 IAML 22:06 08.07 22 0.18 KPL HZ 77.4 IP D 22:06 07.74 -0.14 KPL HE 77.4 ES 22:06 17.04 -0.22 KPL HN 77.4 IAML 22:06 20.31 16 0.24 KPL HE 77.4 IAML 22:06 20.73 29 0.27 INVG HZ 95.3 EP 22:06 11.15 0.44 INVG HN 95.3 ES 22:06 21.94 -0.20 INVG HE 95.3 IAML 22:06 25.21 27 0.13 INVG HN 95.3 IAML 22:06 25.42 22 0.15 KAC EZ 96.0 IP C 22:06 10.98 0.17 PGB1 HE 114.0 ES 22:06 28.00 0.92 PGB1 HN 114.0 IAML 22:06 29.05 5 0.22 PGB1 HE 114.0 IAML 22:06 29.51 6 0.33 MDO EZ 114.0 EP 22:06 13.80 0.21 PGB1 HZ 114.0 EP 22:06 14.28 0.72 LINV HZ 168.0 EP 22:06 20.79 -0.60 CLGH HZ 178.0 EP 22:06 22.70 0.10 LEWI HZ 185.0 EP 22:06 22.67 -0.84 DRUM HZ 189.0 EP 22:06 24.64 0.64</p>	<p>INVG HZ 146.0 EP 12:06 46.00 0.79 INVG HN 146.0 IAML 12:07 06.21 2 0.22 INVG HE 146.0 IAML 12:07 06.74 1 0.11</p> <p>September 9 2016 Time: 22:00 41.7 UTC Magnitude: 3.9 ML Lat: 61.073N Lon: 3.566W Depth: 10.0 km Grid Ref: 700.07 kmE 1256.11 kmN RMS: 0.80 secs Locality: NORTHERN NORTH SEA Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0 Comment: 275KM ENE LERWICK</p> <table border="0" style="width: 100%;"> <thead> <tr> <th>STAT</th><th>CO</th><th>DIST</th><th>PHAS</th><th>WT</th><th>P</th><th>HrMn</th><th>SECS</th><th>AMPL</th><th>PERI</th><th>RES</th></tr> </thead> <tbody> <tr><td>FOO</td><td>HZ</td><td>98.3</td><td>EP</td><td></td><td></td><td>22:00</td><td>57.85</td><td></td><td></td><td>0.07</td></tr> <tr><td>FOO</td><td>HE</td><td>98.3</td><td>ES</td><td></td><td></td><td>22:01</td><td>08.87</td><td></td><td></td><td>-0.65</td></tr> <tr><td>FOO</td><td>HE</td><td>98.3</td><td>IAML</td><td></td><td></td><td>22:01</td><td>10.00</td><td>1154</td><td>0.36</td><td></td></tr> <tr><td>FOO</td><td>HN</td><td>98.3</td><td>IAML</td><td></td><td></td><td>22:01</td><td>11.15</td><td>1172</td><td>0.42</td><td></td></tr> <tr><td>BER</td><td>HZ</td><td>123.0</td><td>EP</td><td></td><td></td><td>22:01</td><td>02.35</td><td></td><td></td><td>0.83</td></tr> <tr><td>BER</td><td>HE</td><td>123.0</td><td>IAML</td><td></td><td></td><td>22:01</td><td>19.38</td><td>1112</td><td>0.56</td><td></td></tr> <tr><td>BER</td><td>HN</td><td>123.0</td><td>IAML</td><td></td><td></td><td>22:01</td><td>19.65</td><td>791</td><td>0.62</td><td></td></tr> <tr><td>MOL</td><td>HZ</td><td>268.0</td><td>EP</td><td></td><td></td><td>22:01</td><td>19.83</td><td></td><td></td><td>-0.48</td></tr> <tr><td>MOL</td><td>HN</td><td>268.0</td><td>IAML</td><td></td><td></td><td>22:01</td><td>54.57</td><td>1821</td><td>0.38</td><td></td></tr> <tr><td>MOL</td><td>HE</td><td>268.0</td><td>IAML</td><td></td><td></td><td>22:01</td><td>59.91</td><td>570</td><td>0.56</td><td></td></tr> <tr><td>LRW</td><td>HZ</td><td>280.0</td><td>EP</td><td></td><td></td><td>22:01</td><td>22.72</td><td></td><td></td><td>0.92</td></tr> <tr><td>LRW</td><td>HN</td><td>280.0</td><td>ES</td><td></td><td></td><td>22:01</td><td>51.90</td><td></td><td></td><td>0.82</td></tr> <tr><td>LRW</td><td>HN</td><td>280.0</td><td>IAML</td><td></td><td></td><td>22:01</td><td>52.41</td><td>170</td><td>0.44</td><td></td></tr> <tr><td>LRW</td><td>HE</td><td>280.0</td><td>IAML</td><td></td><td></td><td>22:01</td><td>53.16</td><td>218</td><td>0.70</td><td></td></tr> <tr><td>MLA1</td><td>EZ</td><td>497.0</td><td>EP</td><td></td><td></td><td>22:01</td><td>49.72</td><td></td><td></td><td>0.78</td></tr> <tr><td>BIGH</td><td>HZ</td><td>508.0</td><td>EP</td><td></td><td></td><td>22:01</td><td>51.03</td><td></td><td></td><td>0.69</td></tr> <tr><td>BIGH</td><td>HN</td><td>508.0</td><td>ES</td><td></td><td></td><td>22:02</td><td>39.41</td><td></td><td></td><td>-1.05</td></tr> <tr><td>BIGH</td><td>HN</td><td>508.0</td><td>IAML</td><td></td><td></td><td>22:02</td><td>41.48</td><td>174</td><td>0.28</td><td></td></tr> <tr><td>BIGH</td><td>HE</td><td>508.0</td><td>IAML</td><td></td><td></td><td>22:02</td><td>43.03</td><td>152</td><td>0.22</td><td></td></tr> <tr><td>MCD</td><td>EZ</td><td>549.0</td><td>EP</td><td></td><td></td><td>22:01</td><td>55.57</td><td></td><td></td><td>0.11</td></tr> <tr><td>MCD</td><td>EE</td><td>549.0</td><td>ES</td><td></td><td></td><td>22:02</td><td>48.67</td><td></td><td></td><td>-0.64</td></tr> <tr><td>DRUM</td><td>HZ</td><td>579.0</td><td>EP</td><td></td><td></td><td>22:01</td><td>59.82</td><td></td><td></td><td>0.62</td></tr> <tr><td>DRUM</td><td>HN</td><td>579.0</td><td>ES</td><td></td><td></td><td>22:02</td><td>55.14</td><td></td><td></td><td>-0.64</td></tr> <tr><td>DRUM</td><td>HE</td><td>579.0</td><td>IAML</td><td></td><td></td><td>22:02</td><td>56.17</td><td>224</td><td>0.52</td><td></td></tr> <tr><td>DRUM</td><td>HN</td><td>579.0</td><td>IAML</td><td></td><td></td><td>22:03</td><td>00.16</td><td>410</td><td>0.42</td><td></td></tr> <tr><td>MDO</td><td>EZ</td><td>606.0</td><td>EP</td><td></td><td></td><td>22:02</td><td>02.66</td><td></td><td></td><td>0.02</td></tr> <tr><td>KAC</td><td>EZ</td><td>642.0</td><td>EP</td><td></td><td></td><td>22:02</td><td>06.49</td><td></td><td></td><td>-0.63</td></tr> <tr><td>KPL</td><td>HZ</td><td>670.0</td><td>EP</td><td></td><td></td><td>22:02</td><td>10.05</td><td></td><td></td><td>-0.49</td></tr> <tr><td>KPL</td><td>HN</td><td>670.0</td><td>IAML</td><td></td><td></td><td>22:03</td><td>17.31</td><td>53</td><td>0.24</td><td></td></tr> <tr><td>KPL</td><td>HE</td><td>670.0</td><td>IAML</td><td></td><td></td><td>22:03</td><td>18.11</td><td>43</td><td>0.54</td><td></td></tr> <tr><td>LEWI</td><td>HZ</td><td>672.0</td><td>EP</td><td></td><td></td><td>22:02</td><td>10.03</td><td></td><td></td><td>-0.86</td></tr> <tr><td>LEWI</td><td>HE</td><td>672.0</td><td>IAML</td><td></td><td></td><td>22:03</td><td>15.00</td><td>24</td><td>0.28</td><td></td></tr> <tr><td>LEWI</td><td>HN</td><td>672.0</td><td>IAML</td><td></td><td></td><td>22:03</td><td>16.29</td><td>52</td><td>0.32</td><td></td></tr> <tr><td>INVG</td><td>HZ</td><td>679.0</td><td>EP</td><td></td><td></td><td>22:02</td><td>11.52</td><td></td><td></td><td>-0.16</td></tr> <tr><td>INVG</td><td>HE</td><td>679.0</td><td>ES</td><td></td><td></td><td>22:03</td><td>16.13</td><td></td><td></td><td>-1.24</td></tr> <tr><td>INVG</td><td>HE</td><td>679.0</td><td>IAML</td><td></td><td></td><td>22:03</td><td>18.13</td><td>71</td><td>0.54</td><td></td></tr> <tr><td>INVG</td><td>HN</td><td>679.0</td><td>IAML</td><td></td><td></td><td>22:03</td><td>19.70</td><td>69</td><td>0.32</td><td></td></tr> <tr><td>EDI</td><td>HZ</td><td>695.0</td><td>EP</td><td></td><td></td><td>22:02</td><td>14.40</td><td></td><td></td><td>0.72</td></tr> <tr><td>EDI</td><td>HN</td><td>695.0</td><td>ES</td><td></td><td></td><td>22:03</td><td>18.96</td><td></td><td></td><td>-1.86</td></tr> <tr><td>EDI</td><td>HE</td><td>695.0</td><td>IAML</td><td></td><td></td><td>22:03</td><td>21.74</td><td>88</td><td>0.64</td><td></td></tr> <tr><td>EDI</td><td>HN</td><td>695.0</td><td>IAML</td><td></td><td></td><td>22:03</td><td>24.97</td><td>120</td><td>0.50</td><td></td></tr> <tr><td>EBL</td><td>EZ</td><td>705.0</td><td>EP</td><td></td><td></td><td>22:02</td><td>16.05</td><td></td><td></td><td>1.08</td></tr> </tbody> </table>	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	FOO	HZ	98.3	EP			22:00	57.85			0.07	FOO	HE	98.3	ES			22:01	08.87			-0.65	FOO	HE	98.3	IAML			22:01	10.00	1154	0.36		FOO	HN	98.3	IAML			22:01	11.15	1172	0.42		BER	HZ	123.0	EP			22:01	02.35			0.83	BER	HE	123.0	IAML			22:01	19.38	1112	0.56		BER	HN	123.0	IAML			22:01	19.65	791	0.62		MOL	HZ	268.0	EP			22:01	19.83			-0.48	MOL	HN	268.0	IAML			22:01	54.57	1821	0.38		MOL	HE	268.0	IAML			22:01	59.91	570	0.56		LRW	HZ	280.0	EP			22:01	22.72			0.92	LRW	HN	280.0	ES			22:01	51.90			0.82	LRW	HN	280.0	IAML			22:01	52.41	170	0.44		LRW	HE	280.0	IAML			22:01	53.16	218	0.70		MLA1	EZ	497.0	EP			22:01	49.72			0.78	BIGH	HZ	508.0	EP			22:01	51.03			0.69	BIGH	HN	508.0	ES			22:02	39.41			-1.05	BIGH	HN	508.0	IAML			22:02	41.48	174	0.28		BIGH	HE	508.0	IAML			22:02	43.03	152	0.22		MCD	EZ	549.0	EP			22:01	55.57			0.11	MCD	EE	549.0	ES			22:02	48.67			-0.64	DRUM	HZ	579.0	EP			22:01	59.82			0.62	DRUM	HN	579.0	ES			22:02	55.14			-0.64	DRUM	HE	579.0	IAML			22:02	56.17	224	0.52		DRUM	HN	579.0	IAML			22:03	00.16	410	0.42		MDO	EZ	606.0	EP			22:02	02.66			0.02	KAC	EZ	642.0	EP			22:02	06.49			-0.63	KPL	HZ	670.0	EP			22:02	10.05			-0.49	KPL	HN	670.0	IAML			22:03	17.31	53	0.24		KPL	HE	670.0	IAML			22:03	18.11	43	0.54		LEWI	HZ	672.0	EP			22:02	10.03			-0.86	LEWI	HE	672.0	IAML			22:03	15.00	24	0.28		LEWI	HN	672.0	IAML			22:03	16.29	52	0.32		INVG	HZ	679.0	EP			22:02	11.52			-0.16	INVG	HE	679.0	ES			22:03	16.13			-1.24	INVG	HE	679.0	IAML			22:03	18.13	71	0.54		INVG	HN	679.0	IAML			22:03	19.70	69	0.32		EDI	HZ	695.0	EP			22:02	14.40			0.72	EDI	HN	695.0	ES			22:03	18.96			-1.86	EDI	HE	695.0	IAML			22:03	21.74	88	0.64		EDI	HN	695.0	IAML			22:03	24.97	120	0.50		EBL	EZ	705.0	EP			22:02	16.05			1.08																																																																		
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<p>September 3 2016 Time: 03:34 06.6 UTC Magnitude: 1.2 ML Lat: 51.323N Lon: -2.324W Depth: 3.8 km Grid Ref: 377.43 kmE 158.32 kmN RMS: 0.20 secs Locality: BATH, BATH & NE SOMERSET Velocity model: Lownet Xnear: 150.0 Xfar: 200.0</p> <table border="0" style="width: 100%;"> <thead> <tr> <th>STAT</th><th>CO</th><th>DIST</th><th>PHAS</th><th>WT</th><th>P</th><th>HrMn</th><th>SECS</th><th>AMPL</th><th>PERI</th><th>RES</th></tr> </thead> <tbody> <tr><td>OLDB</td><td>HZ</td><td>40.7</td><td>IP</td><td></td><td>D</td><td>03:34</td><td>13.89</td><td></td><td></td><td>-0.13</td></tr> <tr><td>OLDB</td><td>HE</td><td>40.7</td><td>ES</td><td></td><td></td><td>03:34</td><td>19.62</td><td></td><td></td><td>0.22</td></tr> <tr><td>OLDB</td><td>HN</td><td>40.7</td><td>IAML</td><td></td><td></td><td>03:34</td><td>21.29</td><td>89</td><td>0.36</td><td></td></tr> <tr><td>OLDB</td><td>HE</td><td>40.7</td><td>IAML</td><td></td><td></td><td>03:34</td><td>21.62</td><td>101</td><td>0.38</td><td></td></tr> <tr><td>SWN1</td><td>HZ</td><td>42.1</td><td>EP</td><td></td><td></td><td>03:34</td><td>14.43</td><td></td><td></td><td>0.15</td></tr> <tr><td>SWN1</td><td>HN</td><td>42.1</td><td>IAML</td><td></td><td></td><td>03:34</td><td>24.06</td><td>22</td><td>0.28</td><td></td></tr> <tr><td>SWN1</td><td>HE</td><td>42.1</td><td>IAML</td><td></td><td></td><td>03:34</td><td>24.48</td><td>24</td><td>0.24</td><td></td></tr> <tr><td>MONM</td><td>HZ</td><td>66.4</td><td>EP</td><td></td><td></td><td>03:34</td><td>18.00</td><td></td><td></td><td>-0.06</td></tr> <tr><td>MONM</td><td>HE</td><td>66.4</td><td>ES</td><td></td><td></td><td>03:34</td><td>26.52</td><td></td><td></td><td>0.13</td></tr> <tr><td>MONM</td><td>HN</td><td>66.4</td><td>IAML</td><td></td><td></td><td>03:34</td><td>26.71</td><td>6</td><td>0.26</td><td></td></tr> <tr><td>MONM</td><td>HE</td><td>66.4</td><td>IAML</td><td></td><td></td><td>03:34</td><td>27.25</td><td>4</td><td>0.24</td><td></td></tr> <tr><td>MCH1</td><td>HN</td><td>88.4</td><td>ES</td><td></td><td></td><td>03:34</td><td>32.09</td><td></td><td></td><td>-0.22</td></tr> <tr><td>MCH1</td><td>HN</td><td>88.4</td><td>IAML</td><td></td><td></td><td>03:34</td><td>33.07</td><td>3</td><td>0.22</td><td></td></tr> <tr><td>MCH1</td><td>HE</td><td>88.4</td><td>IAML</td><td></td><td></td><td>03:34</td><td>33.12</td><td>3</td><td>0.17</td><td></td></tr> <tr><td>HLM1</td><td>HZ</td><td>138.0</td><td>EP</td><td></td><td></td><td>03:34</td><td>29.14</td><td></td><td></td><td>-0.04</td></tr> <tr><td>HLM1</td><td>HE</td><td>138.0</td><td>IAML</td><td></td><td></td><td>03:34</td><td>51.63</td><td>5</td><td>0.38</td><td></td></tr> <tr><td>HLM1</td><td>HN</td><td>138.0</td><td>IAML</td><td></td><td></td><td>03:34</td><td>51.76</td><td>4</td><td>0.30</td><td></td></tr> <tr><td>DYA</td><td>HZ</td><td>150.0</td><td>EP</td><td></td><td></td><td>03:34</td><td>30.37</td><td></td><td></td><td>-0.46</td></tr> <tr><td>DYA</td><td>HN</td><td>150.0</td><td>ES</td><td></td><td></td><td>03:34</td><td>48.87</td><td></td><td></td><td>0.38</td></tr> <tr><td>DYA</td><td>HE</td><td>150.0</td><td>IAML</td><td></td><td></td><td>03:34</td><td>51.57</td><td>4</td><td>0.16</td><td></td></tr> <tr><td>DYA</td><td>HN</td><td>150.0</td><td>IAML</td><td></td><td></td><td>03:34</td><td>51.84</td><td>4</td><td>0.13</td><td></td></tr> <tr><td>RSBS</td><td>HZ</td><td>182.0</td><td>EP</td><td></td><td></td><td>03:34</td><td>35.39</td><td></td><td></td><td>0.24</td></tr> <tr><td>RSBS</td><td>HE</td><td>182.0</td><td>IAML</td><td></td><td></td><td>03:34</td><td>58.77</td><td>4</td><td>0.13</td><td></td></tr> <tr><td>RSBS</td><td>HN</td><td>182.0</td><td>IAML</td><td></td><td></td><td>03:34</td><td>59.23</td><td>4</td><td>0.39</td><td></td></tr> </tbody> </table>	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	OLDB	HZ	40.7	IP		D	03:34	13.89			-0.13	OLDB	HE	40.7	ES			03:34	19.62			0.22	OLDB	HN	40.7	IAML			03:34	21.29	89	0.36		OLDB	HE	40.7	IAML			03:34	21.62	101	0.38		SWN1	HZ	42.1	EP			03:34	14.43			0.15	SWN1	HN	42.1	IAML			03:34	24.06	22	0.28		SWN1	HE	42.1	IAML			03:34	24.48	24	0.24		MONM	HZ	66.4	EP			03:34	18.00			-0.06	MONM	HE	66.4	ES			03:34	26.52			0.13	MONM	HN	66.4	IAML			03:34	26.71	6	0.26		MONM	HE	66.4	IAML			03:34	27.25	4	0.24		MCH1	HN	88.4	ES			03:34	32.09			-0.22	MCH1	HN	88.4	IAML			03:34	33.07	3	0.22		MCH1	HE	88.4	IAML			03:34	33.12	3	0.17		HLM1	HZ	138.0	EP			03:34	29.14			-0.04	HLM1	HE	138.0	IAML			03:34	51.63	5	0.38		HLM1	HN	138.0	IAML			03:34	51.76	4	0.30		DYA	HZ	150.0	EP			03:34	30.37			-0.46	DYA	HN	150.0	ES			03:34	48.87			0.38	DYA	HE	150.0	IAML			03:34	51.57	4	0.16		DYA	HN	150.0	IAML			03:34	51.84	4	0.13		RSBS	HZ	182.0	EP			03:34	35.39			0.24	RSBS	HE	182.0	IAML			03:34	58.77	4	0.13		RSBS	HN	182.0	IAML			03:34	59.23	4	0.39		<p>September 10 2016 Time: 15:05 56.3 UTC Magnitude: 1.2 ML Lat: 57.654N Lon: -5.645W Depth: 3.7 km Grid Ref: 182.56 kmE 868.50 kmN RMS: 0.40 secs Locality: SHIELDAIG, HIGHLAND Velocity model: Lownet Xnear: 100.0 Xfar: 200.0</p> <table border="0" style="width: 100%;"> <thead> <tr> <th>STAT</th><th>CO</th><th>DIST</th><th>PHAS</th><th>WT</th><th>P</th><th>HrMn</th><th>SECS</th><th>AMPL</th><th>PERI</th><th>RES</th></tr> </thead> <tbody> <tr><td>KAC</td><td>EZ</td><td>27.0</td><td>IP</td><td></td><td>C</td><td>15:06</td><td>01.44</td><td></td><td></td><td>0.09</td></tr> <tr><td>KAC</td><td>EZ</td><td>27.0</td><td>ES</td><td></td><td></td><td>15:06</td><td>04.42</td><td></td><td></td><td>-0.64</td></tr> <tr><td>KPL</td><td>HZ</td><td>35.1</td><td>EP</td><td></td><td></td><td>15:06</td><td>03.48</td><td></td><td></td><td>0.79</td></tr> <tr><td>KPL</td><td>HE</td><td>35.1</td><td>ES</td><td></td><td></td><td>15:06</td><td>07.04</td><td></td><td></td><td>-0.33</td></tr> <tr><td>KPL</td><td>HE</td><td>35.1</td><td>IAML</td><td></td><td></td><td>15:06</td><td>08.05</td><td>15</td><td>0.20</td><td></td></tr> <tr><td>KPL</td><td>HN</td><td>35.1</td><td>IAML</td><td></td><td></td><td>15:06</td><td>08.19</td><td>10</td><td>0.18</td><td></td></tr> <tr><td>MDO</td><td>EZ</td><td>80.3</td><td>EP</td><td></td><td></td><td>15:06</td><td>10.17</td><td></td><td></td><td>0.26</td></tr> <tr><td>LEWI</td><td>HZ</td><td>90.8</td><td>EP</td><td></td><td></td><td>15:06</td><td>11.40</td><td></td><td></td><td>-0.11</td></tr> <tr><td>LEWI</td><td>HE</td><td>90.8</td><td>ES</td><td></td><td></td><td>15:06</td><td>22.35</td><td></td><td></td><td>-0.28</td></tr> <tr><td>LEWI</td><td>HN</td><td>90.8</td><td>IAML</td><td></td><td></td><td>15:06</td><td>24.63</td><td>5</td><td>0.13</td><td></td></tr> <tr><td>LEWI</td><td>HE</td><td>90.8</td><td>IAML</td><td></td><td></td><td>15:06</td><td>25.23</td><td>6</td><td>0.18</td><td></td></tr> <tr><td>BIGH</td><td>HZ</td><td>139.0</td><td>EP</td><td></td><td></td><td>15:06</td><td>18.86</td><td></td><td></td><td>0.09</td></tr> <tr><td>BIGH</td><td>HN</td><td>139.0</td><td>ES</td><td></td><td></td><td>15:06</td><td>35.14</td><td></td><td></td><td>-0.06</td></tr> <tr><td>BIGH</td><td>HE</td><td>139.0</td><td>IAML</td><td></td><td></td><td>15:06</td><td>35.73</td><td>8</td><td>0.30</td><td></td></tr> <tr><td>BIGH</td><td>HN</td><td>139.0</td><td>IAML</td><td></td><td></td><td>15:06</td><td>35.74</td><td>12</td><td>0.38</td><td></td></tr> <tr><td>MCD</td><td>EZ</td><td>143.0</td><td>EP</td><td></td><td></td><td>15:06</td><td>19.76</td><td></td><td></td><td>0.30</td></tr> <tr><td>LAWE</td><td>HZ</td><td>156.0</td><td>EP</td><td></td><td></td><td>15:06</td><td>21.81</td><td></td><td></td><td>0.54</td></tr> <tr><td>LAWE</td><td>HN</td><td>156.0</td><td>ES</td><td></td><td></td><td>15:06</td><td>39.05</td><td></td><td></td><td>-0.47</td></tr> <tr><td>LAWE</td><td>HN</td><td>156.0</td><td>IAML</td><td></td><td></td><td>15:06</td><td>42.96</td><td>5</td><td>0.20</td><td></td></tr> <tr><td>LAWE</td><td>HE</td><td>156.0</td><td>IAML</td><td></td><td></td><td>15:06</td><td>43.36</td><td>4</td><td>0.19</td><td></td></tr> <tr><td>INVG</td><td>HZ</td><td>168.0</td><td>EP</td><td></td><td></td><td>15:06</td><td>23.91</td><td></td><td></td><td>0.94</td></tr> <tr><td>INVG</td><td>HE</td><td>168.0</td><td>IAML</td><td></td><td></td><td>15:06</td><td>44.26</td><td>3</td><td>0.28</td><td></td></tr> <tr><td>INVG</td><td>HN</td><td>168.0</td><td>IAML</td><td></td><td></td><td>15:06</td><td>44.97</td><td>3</td><td>0.16</td><td></td></tr> </tbody> </table>	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	KAC	EZ	27.0	IP		C	15:06	01.44			0.09	KAC	EZ	27.0	ES			15:06	04.42			-0.64	KPL	HZ	35.1	EP			15:06	03.48			0.79	KPL	HE	35.1	ES			15:06	07.04			-0.33	KPL	HE	35.1	IAML			15:06	08.05	15	0.20		KPL	HN	35.1	IAML			15:06	08.19	10	0.18		MDO	EZ	80.3	EP			15:06	10.17			0.26	LEWI	HZ	90.8	EP			15:06	11.40			-0.11	LEWI	HE	90.8	ES			15:06	22.35			-0.28	LEWI	HN	90.8	IAML			15:06	24.63	5	0.13		LEWI	HE	90.8	IAML			15:06	25.23	6	0.18		BIGH	HZ	139.0	EP			15:06	18.86			0.09	BIGH	HN	139.0	ES			15:06	35.14			-0.06	BIGH	HE	139.0	IAML			15:06	35.73	8	0.30		BIGH	HN	139.0	IAML			15:06	35.74	12	0.38		MCD	EZ	143.0	EP			15:06	19.76			0.30	LAWE	HZ	156.0	EP			15:06	21.81			0.54	LAWE	HN	156.0	ES			15:06	39.05			-0.47	LAWE	HN	156.0	IAML			15:06	42.96	5	0.20		LAWE	HE	156.0	IAML			15:06	43.36	4	0.19		INVG	HZ	168.0	EP			15:06	23.91			0.94	INVG	HE	168.0	IAML			15:06	44.26	3	0.28		INVG	HN	168.0	IAML			15:06	44.97	3	0.16	
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DYA	HN	150.0	ES			03:34	48.87			0.38																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
DYA	HE	150.0	IAML			03:34	51.57	4	0.16																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
DYA	HN	150.0	IAML			03:34	51.84	4	0.13																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
RSBS	HZ	182.0	EP			03:34	35.39			0.24																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
RSBS	HE	182.0	IAML			03:34	58.77	4	0.13																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
RSBS	HN	182.0	IAML			03:34	59.23	4	0.39																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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KAC	EZ	27.0	IP		C	15:06	01.44			0.09																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
KAC	EZ	27.0	ES			15:06	04.42			-0.64																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
KPL	HZ	35.1	EP			15:06	03.48			0.79																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
KPL	HE	35.1	ES			15:06	07.04			-0.33																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
KPL	HE	35.1	IAML			15:06	08.05	15	0.20																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
KPL	HN	35.1	IAML			15:06	08.19	10	0.18																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
MDO	EZ	80.3	EP			15:06	10.17			0.26																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
LEWI	HZ	90.8	EP			15:06	11.40			-0.11																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
LEWI	HE	90.8	ES			15:06	22.35			-0.28																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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LEWI	HE	90.8	IAML			15:06	25.23	6	0.18																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
BIGH	HZ	139.0	EP			15:06	18.86			0.09																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
BIGH	HN	139.0	ES			15:06	35.14			-0.06																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
BIGH	HE	139.0	IAML			15:06	35.73	8	0.30																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
BIGH	HN	139.0	IAML			15:06	35.74	12	0.38																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
MCD	EZ	143.0	EP			15:06	19.76			0.30																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
LAWE	HZ	156.0	EP			15:06	21.81			0.54																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
LAWE	HN	156.0	ES			15:06	39.05			-0.47																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
LAWE	HN	156.0	IAML			15:06	42.96	5	0.20																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
LAWE	HE	156.0	IAML			15:06	43.36	4	0.19																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
INVG	HZ	168.0	EP			15:06	23.91			0.94																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
INVG	HE	168.0	IAML			15:06	44.26	3	0.28																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
INVG	HN	168.0	IAML			15:06	44.97	3	0.16																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
<p>September 9 2016 Time: 12:06 21.9 UTC Magnitude: 0.9 ML Lat: 55.800N Lon: -6.113W Depth: 7.7 km Grid Ref: 142.26 kmE 663.95 kmN RMS: 0.40 secs Locality: ISLAY, ARGYLL & BUTE Velocity model: Lownet Xnear: 100.0 Xfar: 200.0</p> <table border="0" style="width: 100%;"> <thead> <tr> <th>STAT</th><th>CO</th><th>DIST</th><th>PHAS</th><th>WT</th><th>P</th><th>HrMn</th><th>SECS</th><th>AMPL</th><th>PERI</th><th>RES</th></tr> </thead> <tbody> <tr><td>LAWE</td><td>HZ</td><td>67.8</td><td>EP</td><td></td><td></td><td>12:06</td><td>33.16</td><td></td><td></td><td>-0.13</td></tr> <tr><td>LAWE</td><td>HN</td><td>67.8</td><td>ES</td><td></td><td></td><td>12:06</td><td>41.43</td><td></td><td></td><td>-0.17</td></tr> <tr><td>LAWE</td><td>HE</td><td>67.8</td><td>IAML</td><td></td><td></td><td>12:06</td><td>42.34</td><td>4</td><td>0.36</td><td></td></tr> <tr><td>LAWE</td><td>HN</td><td>67.8</td><td>IAML</td><td></td><td></td><td>12:06</td><td>42.69</td><td>5</td><td>0.12</td><td></td></tr> <tr><td>CLGH</td><td>HZ</td><td>79.9</td><td>EP</td><td></td><td></td><td>12:06</td><td>35.40</td><td></td><td></td><td>0.23</td></tr> <tr><td>CLGH</td><td>HN</td><td>79.9</td><td>ES</td><td></td><td></td><td>12:06</td><td>44.58</td><td></td><td></td><td>-0.28</td></tr> <tr><td>CLGH</td><td>HN</td><td>79.9</td><td>IAML</td><td></td><td></td><td>12:06</td><td>46.75</td><td>12</td><td>0.32</td><td></td></tr> <tr><td>CLGH</td><td>HE</td><td>79.9</td><td>IAML</td><td></td><td></td><td>12:06</td><td>47.24</td><td>8</td><td>0.23</td><td></td></tr> <tr><td>NEWG</td><td>HZ</td><td>141.0</td><td>EP</td><td></td><td></td><td>12:06</td><td>45.01</td><td></td><td></td><td>0.55</td></tr> <tr><td>NEWG</td><td>HN</td><td>141.0</td><td>ES</td><td></td><td></td><td>12:07</td><td>00.72</td><td></td><td></td><td>-0.20</td></tr> <tr><td>NEWG</td><td>HN</td><td>141.0</td><td>IAML</td><td></td><td></td><td>12:07</td><td>01.40</td><td>2</td><td>0.22</td><td></td></tr> <tr><td>NEWG</td><td>HE</td><td>141.0</td><td>IAML</td><td></td><td></td><td>12:07</td><td>04.19</td><td>3</td><td>0.40</td><td></td></tr> </tbody> </table>	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	LAWE	HZ	67.8	EP			12:06	33.16			-0.13	LAWE	HN	67.8	ES			12:06	41.43			-0.17	LAWE	HE	67.8	IAML			12:06	42.34	4	0.36		LAWE	HN	67.8	IAML			12:06	42.69	5	0.12		CLGH	HZ	79.9	EP			12:06	35.40			0.23	CLGH	HN	79.9	ES			12:06	44.58			-0.28	CLGH	HN	79.9	IAML			12:06	46.75	12	0.32		CLGH	HE	79.9	IAML			12:06	47.24	8	0.23		NEWG	HZ	141.0	EP			12:06	45.01			0.55	NEWG	HN	141.0	ES			12:07	00.72			-0.20	NEWG	HN	141.0	IAML			12:07	01.40	2	0.22		NEWG	HE	141.0	IAML			12:07	04.19	3	0.40		<p>September 11 2016 Time: 20:53 58.8 UTC Magnitude: 1.5 ML Lat: 55.114N Lon: -0.677W Depth: 10.0 km Grid Ref: 484.38 kmE 580.76 kmN RMS: 0.40 secs Locality: CENTRAL NORTH SEA Velocity model: Lownet Xnear: 100.0 Xfar: 200.0</p>																																																																																																																																																																																																																																																																																																																																																																																																												
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TABLE 2 : PHASE DATA

KPL HE 107.0 IAML	01:57 20.92	4 0.22		Lat: 53.526N	Lon: -2.154W	Depth: 4.4 km
KPL HN 107.0 IAML	01:57 21.19	3 0.54		Grid Ref: 389.79 kmE	403.30 kmN	RMS: 0.20 secs
CLGH HZ 147.0 EP	01:57 12.27		0.20	Locality: OLDDHAM,GTR MANCHESTER		
NEWG HN 167.0 ES	01:57 33.65		-0.20	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0		
NEWG HE 167.0 IAML	01:57 37.44	2 0.14		STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES		
NEWG HN 167.0 IAML	01:57 37.46	2 0.17		LBWR HZ 31.7 EP	06:12 46.60	-0.10
				LBWR HE 31.7 ES	06:12 51.23	0.12
December 27 2016 Time: 00:18 27.2 UTC Magnitude: 0.6 ML				LBWR HN 31.7 IAML	06:12 51.89	6 0.12
Lat: 54.541N Lon: -3.651W Depth: 4.3 km				LBWR HN 31.7 IAML	06:12 51.92	14 0.42
Grid Ref: 293.20 kmE 517.46 kmN RMS: 0.20 secs				HPK HN 59.5 ES	06:12 58.80	-0.21
Locality: WHITEHAVEN,CUMBRIA				HPK HN 59.5 IAML	06:12 59.63	4 0.22
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0				HPK HE 59.5 IAML	06:13 03.76	4 0.21
Comment: 3KM OFF WHITEHAVEN				FOEL HE 99.5 ES	06:13 09.69	-0.11
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES				HLM1 HZ 122.0 EP	06:13 01.23	0.20
KESW HZ 35.7 EP	00:18 34.08		0.06	HLM1 HE 122.0 ES	06:13 15.90	0.00
KESW HN 35.7 ES	00:18 38.81		-0.17	HLM1 HN 122.0 IAML	06:13 17.67	2 0.28
IOMK HZ 67.1 EP	00:18 39.32		0.22	HLM1 HE 122.0 IAML	06:13 18.64	2 0.33
NEWG HZ 74.2 EP	00:18 40.20		0.01	EDMD HN 146.0 ES	06:13 22.47	0.65
NEWG HN 74.2 ES	00:18 49.57		-0.08	December 29 2016 Time: 20:29 10.2 UTC Magnitude: 1.0 ML		
NEWG HN 74.2 IAML	00:18 50.96	1 0.33		Lat: 55.911N Lon: -5.998W Depth: 7.5 km		
NEWG HE 74.2 IAML	00:18 52.92	1 0.08		Grid Ref: 150.18 kmE 675.87 kmN RMS: 0.40 secs		
GALL HZ 77.4 EP	00:18 40.38		-0.29	Locality: JURAJURAJ,ARGYLL & BUTE		
ESK HZ 91.0 EP	00:18 42.82		0.01	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0		
ESK HN 91.0 ES	00:18 54.41		0.23	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES		
ESK HN 91.0 IAML	00:18 56.93	4 0.22		CLGH HZ 92.4 EP	20:29 25.68	0.23
ESK HE 91.0 IAML	00:18 57.05	6 0.22		CLGH HN 92.4 ES	20:29 36.11	-0.45
				CLGH HN 92.4 IAML	20:29 38.56	5 0.22
December 27 2016 Time: 18:45 21.3 UTC Magnitude: 0.9 ML				CLGH HE 92.4 IAML	20:29 39.72	6 0.26
Lat: 51.508N Lon: -3.114W Depth: 13.0 km				INVG HZ 134.0 EP	20:29 31.63	-0.20
Grid Ref: 322.70 kmE 179.43 kmN RMS: 0.20 secs				INVG HN 134.0 ES	20:29 47.27	-0.32
Locality: RUMNEY,CARDIFF				INVG HE 134.0 IAML	20:29 49.29	4 0.10
Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0				INVG HN 134.0 IAML	20:29 50.51	3 0.12
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES				NEWG HZ 142.0 EP	20:29 33.22	0.27
MONM HZ 42.6 EP	18:45 28.86		0.03	NEWG HN 142.0 ES	20:29 49.39	-0.14
MONM HE 42.6 ES	18:45 34.52		0.17	NEWG HN 142.0 IAML	20:29 51.71	2 0.20
MONM HE 42.6 IAML	18:45 34.77	11 0.11		NEWG HE 142.0 IAML	20:29 52.77	3 0.20
MONM HN 42.6 IAML	18:45 34.86	13 0.22		GALL HZ 142.0 EP	20:29 33.57	0.68
OLDB HZ 42.6 EP	18:45 28.69		-0.11	GALL HN 142.0 ES	20:29 49.87	0.44
OLDB HE 42.6 ES	18:45 34.48		0.19	GALL HE 142.0 IAML	20:29 50.90	4 0.20
MCH1 HZ 55.0 EP	18:45 30.54		-0.21	GALL HN 142.0 IAML	20:29 51.11	3 0.16
MCH1 HN 55.0 ES	18:45 37.49		-0.17	IDGL BE 134.0 ES	20:29 47.47	0.08
MCH1 HN 55.0 IAML	18:45 37.59	11 0.14		December 30 2016 Time: 21:57 48.3 UTC Magnitude: 0.4 ML		
MCH1 HE 55.0 IAML	18:45 37.70	13 0.14		Lat: 51.720N Lon: -3.676W Depth: 7.5 km		
STRD HZ 72.3 EP	18:45 33.35		-0.06	Grid Ref: 284.24 kmE 203.74 kmN RMS: 0.20 secs		
LPW HZ 94.2 EP	18:45 37.14		0.36	Locality: GLYNNEATH,NP TALBOT		
HTL HZ 111.0 EP	18:45 39.17		-0.08	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0		
HTL HE 111.0 ES	18:45 52.47		0.11	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES		
HLM1 HZ 114.0 EP	18:45 39.63		0.02	MCH1 HZ 56.0 EP	21:57 57.81	-0.09
HLM1 HE 114.0 ES	18:45 52.87		-0.11	MCH1 HE 56.0 ES	21:58 04.51	-0.37
HLM1 HN 114.0 IAML	18:45 54.85	3 0.18		MCH1 HE 56.0 IAML	21:58 05.13	1 0.32
HLM1 HE 114.0 IAML	18:45 55.32	4 0.28		MCH1 HN 56.0 IAML	21:58 06.37	1 0.46
RSBS HZ 123.0 EP	18:45 41.22		0.28	RSBS HZ 78.1 EP	21:58 01.38	0.04
RSBS HE 123.0 ES	18:45 55.10		-0.19	RSBS HE 78.1 ES	21:58 10.91	0.07
RSBS HE 123.0 IAML	18:45 56.52	3 0.12		HTL HZ 98.4 EP	21:58 04.81	0.35
RSBS HN 123.0 IAML	18:45 56.69	2 0.15		HTL HE 98.4 ES	21:58 15.81	-0.42
DYA HZ 132.0 EP	18:45 42.00		-0.28	HTL HN 98.4 IAML	21:58 15.77	5 0.76
DYA HN 132.0 ES	18:45 57.65		0.05	HTL HE 98.4 IAML	21:58 16.14	2 0.14
DYA HN 132.0 IAML	18:45 58.61	3 0.11		HLM1 HZ 104.0 EP	21:58 05.54	0.12
DYA HE 132.0 IAML	18:45 58.65	2 0.23		HLM1 HE 104.0 IAML	21:58 22.55	1 0.27
				HLM1 HN 104.0 IAML	21:58 22.63	1 0.14
December 28 2016 Time: 12:30 56.7 UTC Magnitude: 0.7 ML				STRD HN 105.0 ES	21:58 18.22	0.28
Lat: 53.147N Lon: -4.457W Depth: 3.5 km				DYA HZ 144.0 EP	21:58 11.46	0.14
Grid Ref: 235.70 kmE 363.95 kmN RMS: 0.20 secs				DYA HN 144.0 ES	21:58 28.12	0.03
Locality: CAERNARFON BAY				December 31 2016 Time: 07:46 14.7 UTC Magnitude: 0.9 ML		
Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0				Lat: 54.719N Lon: -2.266W Depth: 2.9 km		
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES				Grid Ref: 382.87 kmE 536.04 kmN RMS: 0.30 secs		
WPS HZ 28.4 EP	12:31 01.63		0.04	Locality: HARWOOD,COUNTY DURHAM		
WPS HE 28.4 ES	12:31 05.03		0.13	Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0		
WPS HE 28.4 IAML	12:31 05.10	5 0.10		STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES		
WPS HN 28.4 IAML	12:31 05.34	4 0.12		EDMD HZ 23.2 IP	07:46 19.05	-0.14
LLW BZ 62.6 EP	12:31 07.19		-0.07	EDMD HN 23.2 ES	07:46 22.18	-0.31
LLW BE 62.6 ES	12:31 14.83		0.40	EDMD HN 23.2 IAML	07:46 22.34	57 0.09
LLW BE 62.6 IAML	12:31 14.99	4 0.15		EDMD HE 23.2 IAML	07:46 22.35	91 0.12
LLW BN 62.6 IAML	12:31 14.99	1 0.20		KESW HZ 56.0 EP	07:46 23.95	-0.78
FOEL HZ 89.1 EP	12:31 11.33		-0.33	KESW HE 56.0 IAML	07:46 31.12	3 0.23
FOEL HE 89.1 ES	12:31 21.61		-0.20	KESW HN 56.0 IAML	07:46 31.41	2 0.16
FOEL HE 89.1 IAML	12:31 22.05	3 0.15		ESK HZ 89.6 EP	07:46 30.15	0.22
FOEL HN 89.1 IAML	12:31 22.67	7 0.46		ESK HN 89.6 ES	07:46 41.14	0.08
LPW HE 118.0 ES	12:31 29.61		-0.03	ESK HN 89.6 IAML	07:46 41.44	3 0.43
IOMK HZ 124.0 EP	12:31 17.24		-0.05	ESK HE 89.6 IAML	07:46 43.26	2 0.22
IOMK HE 124.0 ES	12:31 31.22		-0.06	GDLE HE 99.5 ES	07:46 44.03	0.33
IOMK HN 124.0 IAML	12:31 32.74	8 0.22		GDLE HZ 99.5 IAML	07:46 45.10	5 0.10
IOMK HE 124.0 IAML	12:31 33.13	7 0.14		GDLE HN 99.5 IAML	07:46 45.81	14 0.24
HLM1 HZ 127.0 EP	12:31 17.84		0.06	NEWG HZ 133.0 EP	07:46 37.14	0.43
HLM1 HN 127.0 ES	12:31 32.27		0.17	NEWG HE 133.0 ES	07:46 52.58	-0.21
HLM1 HN 127.0 IAML	12:31 33.74	1 0.27		NEWG HN 133.0 IAML	07:46 53.17	3 0.31
HLM1 HE 127.0 IAML	12:31 34.63	2 0.27				
December 29 2016 Time: 06:12 40.7 UTC Magnitude: 0.7 ML						

TABLE 2 : PHASE DATA

NEWG	HE	133.0	IAML	07:46	53.59	2	0.37	
IOMK	HZ	158.0	EP	07:46	40.04			-0.11
IOMK	HN	158.0	IAML	07:46	59.92	3	0.14	
IOMK	HE	158.0	IAML	07:47	00.96	2	0.17	
GAL1	HZ	158.0	EP	07:46	40.68			0.46
GAL1	HN	158.0	ES	07:46	58.88			0.02
GAL1	HE	158.0	IAML	07:46	59.76	1	0.26	
GAL1	HN	158.0	IAML	07:47	00.07	3	0.31	

TABLE 3

GEOGRAPHIC COORDINATES OF SEISMOGRAPH STATIONS, 2016

Code	Name	Lat	Lon	E (km)	N (km)	Ht (m)	Comp
AQ02	BANKS	53.6905	-2.8967	340.79	421.96	17	BB
AQ03	WARTON	53.7595	-2.8866	341.55	429.62	23	BB
AQ04	BALLAM	53.7760	-2.9690	336.15	431.53	11	BB
AT08	MYTON-ON-SWALE	54.0985	-1.3110	445.05	467.19	19	BB
AU05	LAYTHAM	53.8599	-0.8741	474.04	441.01	3	BB
AU07	BIRKDALE	54.1120	-0.9590	468.04	468.97	102	BB
AU08	SOUTH WOLD	54.1238	-0.6613	487.48	470.62	175	BB
AU09	BARTON-LE-STREET	54.1460	-0.8910	472.43	472.82	103	BB
AU11	EAST NESS	54.1974	-0.9325	469.63	478.51	34	BB
AU13	KIRBY MISPERTON2	54.1993	-0.7941	478.66	478.86	25	BB
AU15	NORMANBY	54.2285	-0.8794	473.04	482.20	60	BB
AU18	THORNTON DALE	54.2482	-0.7095	484.07	484.39	83	BB
AU20	PICKERING	54.2940	-0.7870	478.94	489.40	151	BB
AV06	GANTON	54.1630	-0.4820	499.10	475.21	173	BB
BIGH	UPPER BIGHOUSE	58.4932	-3.9102	288.75	957.69	70	BBSMR
CCA1	CARNMENELLIS	50.1866	-5.2277	169.62	36.90	210	BBSMR
CLGH	CUSHENDALL	55.0828	-6.1106	137.76	584.21	239	BBR
CWF	CHARNWOOD FST	52.7385	-1.3076	446.74	315.91	203	BBSMR
DRUM	DRUMTOCHTY	56.9123	-2.4865	370.48	780.23	208	BBSMR
DYA	YADSWORTHY	50.4353	-3.9310	262.88	61.34	292	BBR
EAB	ABERFOYLE	56.1887	-4.3373	254.97	702.02	279	1R
EAU	AUCHINOON	55.8454	-3.4474	309.38	662.30	359	1R
EBL	BROAD LAW	55.7723	-3.0445	334.48	653.71	436	1R
EDI	EDINBURGH	55.9233	-3.1875	325.80	670.66	125	BBR
EDMD	EDMUNDBYERS	54.8312	-1.9636	402.43	548.48	337	BBR
EDU	DUNDEE	56.5477	-3.0110	337.85	739.97	421	1R
ELMS	ELMSETT	52.0934	0.9895	604.88	248.11	75	BBSMR
ELSH	ELHAM	51.1482	1.1345	619.32	143.44	126	BBSMR
ESK	ESKDALEMUIR	55.3165	-3.2052	323.52	603.16	261	BBR
ESY	STONEYPATH	55.9175	-2.6141	361.62	669.55	337	1R
FOEL	FOEL WYLFA	52.8898	-3.2012	319.27	333.15	449	BBSMR
GAL1	GALLOWAY	54.8664	-4.7114	226.02	555.78	117	BBR
GDLE	GLAISDALE	54.4218	-0.8157	476.94	503.57	228	BBSMR
GMK	MULL OF KINTYRE	55.3458	-5.5934	172.19	611.64	164	1R
GMM	MTNS OF MOURNE	54.2377	-5.9498	142.66	489.67	155	1R
GVIE	GLENDOE VIEW	57.1010	-4.5590	245.04	804.04	663	BB
HEX	EXMOOR	51.0664	-3.8026	273.71	131.28	230	1R
HLM1	LONG MYND	52.5184	-2.8807	340.25	291.57	429	BBR
HMNX	HERSTMONCEUX	50.8674	0.3363	564.49	110.15	26	BBR
HPK	HAVERAH PARK	53.9581	-1.6241	424.66	451.42	233	BBSMR
HTL	HARTLAND	50.9943	-4.4849	225.64	124.66	86	BBSMR
INVG	INVERGELDIE	56.4273	-4.0452	273.96	727.99	279	BBSMR
IOMK	KIRK MICHAEL	54.2605	-4.5662	232.95	488.02	188	BBR
JDC	DAM (CREST)	49.1947	-2.0469			39	SMR
JDG	DAM (GALLERY)	49.1947	-2.0469			7	SMR
JLP	LES PLATONS	49.2486	-2.1039			129	1R
JQE	QUEENS EAST	49.2000	-2.0383			58	1R
JRS	MAISON ST LOUIS	49.1922	-2.0922			56	3R
JSA	ST AUBINS	49.1878	-2.1717			39	BBR
JVM	VALLE DE LA MARE	49.2169	-2.2067			64	1R
KAC	ACHNASHELLACH	57.4989	-5.2988	202.36	850.19	206	1R
KESW	KESWICK	54.5886	-3.1048	328.70	522.05	282	BBSMR
KPL	PLOCKTON	57.3391	-5.6527	180.21	833.50	13	BBSMR
LAW	LOCH AWE	56.2601	-5.3990	189.58	712.71	137	BBSMR
LBWR	LADYBOWER	53.4016	-1.7248	418.40	389.45	353	BBSMR
LEWI	LEWIS	58.1446	-6.8696	113.57	927.65	69	BBR
LINV	LOCH INVER	58.1470	-5.1970	211.94	922.03	57	BBR
LMK	MARKET RASEN	53.4573	-0.3274	511.15	396.92	133	BBSMR
LRW	LERWICK	60.1360	-1.1779	445.66	1139.27	98	BBSMR

TABLE 3

GEOGRAPHIC COORDINATES OF SEISMOGRAPH STATIONS, 2016

Code	Name	Lat	Lon	E (km)	N (km)	Ht (m)	Comp
MCD	COLEBURN DISTIL	57.5828	-3.2541	325.02	855.42	293	3SMR
MCH1	MICHAELCHURCH	51.9974	-2.9983	331.47	233.74	219	BBSMR
MDO	DOCHFOUR	57.4409	-4.3633	258.17	841.39	415	1R
MLA1	LATHERON	58.3055	-3.3627	320.15	935.98	188	1R
MME1	MEIKLE CAIRN	57.3149	-2.9647	341.90	825.32	475	1R
MONM	MONMOUTH	51.8396	-2.8054	344.61	215.98	145	BBR
MVH1	ACHVAICH	57.9250	-4.1825	270.75	894.90	185	1R
NEWG	NEW GALLOWAY	55.1173	-4.2299	257.88	582.59	151	BBR
OLDB	OLDBURY	51.6609	-2.5514	361.95	195.94	6	BBSMR
PGB1	GLENIFFERBRAES	55.8115	-4.4837	244.38	660.37	199	BBR
RSBS	ROSEBUSH	51.9530	-4.7448	211.48	231.84	278	BBR
SAN1	SANDWICK	60.0179	-1.2392	442.41	1126.08	150	1R
SKP1	KOPHILL	51.7218	-0.8096	482.22	203.29	212	1R
SOFL	SORNFELLI	62.0689	-6.9658			721	BBR
SPK	SELLA PARK	54.4183	-3.4913	303.24	503.58	50	SM
SSW	STOW-ON-WOLD	51.9667	-1.8499	410.31	229.86	291	1R
STNC	STOKE	53.0913	-2.2062	354.95	386.19	234	BBR
STRD	STROUD	51.7763	-2.1643	388.77	208.64	200	BBR
SWN1	SWINDON	51.5137	-1.8007	413.83	179.49	192	BBSMR
TOA	TORNESS A	55.9692	-2.4037	374.80	675.20	5	SM
TOB	TORNESS B	55.9673	-2.4085	374.50	674.99	5	SM
THP	THORPE	54.4183	-3.4913	303.24	503.58	50	SM
WACR	WEST ACRE	52.7247	0.6267	577.48	317.35	66	BBSMR
WAL1	WALLS	60.2564	-1.6173	421.18	1152.46	167	1R
WIM	ISLE OF MAN	54.1475	-4.6738	225.39	475.73	386	1R
WLF1	LLYNFAES	53.2894	-4.3966	240.27	379.65	58	BBSMR
WME	MYNDD EILIAN	53.3969	-4.3032	246.88	391.40	129	1R
WPM1	PENMAENMAWR	53.2581	-3.9048	272.95	375.18	353	1R
WPS	CAMAES, ANGLESEY	53.4004	-4.4986	233.98	392.19	16	BBSMR
YEL1	YELL	60.5509	-1.0830	450.29	1185.55	203	1R
YLL	LLANBERIS	53.1402	-4.1704	254.84	362.57	159	1R
YRC	RHOSCOLYN	53.2508	-4.5753	228.21	375.77	22	1R

Component Codes:

- 1 Single vertical seismometer
- 3 Orthogonal set of 3 seismometers
- SM Strong motion seismometers
- BB Broadband Instruments
- R Station coordinates registered with the International Seismological Centre (ISC), England and the National Earthquake Information Centre (NEIC), USA

TABLE 4**Depth / crustal velocity models used in earthquake locations**

Structural area	Depth to top of layer (km)	P-wave velocity (km/sec)	Vp/Vs
North Sea	0.00	6.20	1.73
	12.00	6.50	
	23.00	7.10	
	31.00	8.05	
Lownet and general UK	0.00	4.00	1.73
	2.52	5.90	
	7.55	6.45	
	18.87	7.00	
	34.15	8.00	
Borders	0.00	4.10	1.71
	3.00	5.60	
	4.10	6.15	
	17.00	6.60	
	30.00	8.00	
North Wales (Lleyn)	0.00	5.40	1.68
	2.00	6.05	
	13.00	6.50	
	25.00	6.80	
	34.00	8.00	
Mid Wales	0.00	5.40	1.72
	3.80	6.05	
	15.50	6.65	
	34.30	8.00	
Cornwall	0.00	5.50	1.77
	0.30	5.76	
	15.00	6.90	
	30.00	8.00	

Appendix 1 Key to Catalogue Encoding

YearMoDy	Year, month and day of event.
HrMn Secs	Time of occurrence of event in hours, mins and secs, (UTC).
Lat	Latitude of the event, positive latitude indicates North.
Lon	Longitude of the event, positive longitude indicates East.
kmE	UK National Grid Reference in kilometres east of grid origin.
kmN	UK National Grid Reference in kilometres north of grid origin.
Dep	Depth of the hypocentre in kilometres.
Mag	Richter local magnitude of the event.
Locality	A geographical indication of the epicentral area, usually the nearest town followed by the region. A key to the abbreviations used in the locality column are given below.
Int	Maximum EMS intensity. 2, 3, 4, 5 etc. describes the maximum EMS intensity produced by the event.
Comments	Additional comments about the event e.g.: C/F, see below under comments abbreviations.

The following abbreviations are extracted from the output of the location program HYPOCENTER (Leinart and Havskov, 1995)

No	Total number of P and S readings used in the event location.
Gap	Largest azimuthal separation in degrees between stations.
RMS	Root Mean Square of the travel time residuals in seconds.
ERH	Standard error of the epicentre in kilometres. When this column is blank, the error is large and indeterminate.
ERZ	Standard error of the focal depth in kilometres. When this column is blank, the error is large and indeterminate.

Locality and Comments abbreviations

C/F	Coalfield Type
Sonic	Sonic event
D & G	Dumfries and Galloway
Lincs	Lincolnshire
Glos	Gloucestershire
Yorks	Yorkshire
Gtr Mch	Greater Manchester
Notts	Nottinghamshire
Leics	Leicestershire
NP Talbot	Neath Port Talbot
...	and felt elsewhere

Appendix 2 Key to Phase Data Encoding

Time	Time of occurrence of event in hours, mins and secs, (UTC).
Lat	Latitude of the event, N indicates North.
Lon	Longitude of the event, W indicates West, E indicates East.
Depth	Depth of the hypocentre in kilometres.
Grid Ref	UK National Grid Reference in kilometres east (kmE) and kilometres north (kmN) of grid origin.
RMS	Root Mean Square of the travel time residuals in seconds.
Velocity Model	Velocity model used in location.
Magnitude	Richter local magnitude of the event.
Locality	A geographical indication of the epicentral area, usually the nearest town followed by the region.
Intensity	Maximum EMS intensity. 2, 3, 4, 5 etc. describes the maximum EMS intensity produced by the event.
Comments	Additional comments about the event e.g.: C/F see list of comments and abbreviations in Appendix 1.
STAT	Station name
CO	Z=vertical N=north south E=east west
DIST	Distance from earthquake to station (km)
PHAS	Phase identifier; the first letter characterizes onset E=emergent I=impulsive, the second indicates the phase e.g. P, S, PG, PN, IAML
WT	Weighting factor to arrival. 0 or blank=full weighting to 4=zero weighting (ignore). 9=use P S interval only for this line.
P	Polarity C=Compression/up D=Dilatation/down
HrMn	Hour, Minute of event
SECS	Seconds of event
AMPL	Amplitude centre to peak in nanometres (nm)
PERI	Period in seconds
RES	Station residual

Appendix 3 The European Macroseismic Scale (EMS 98)

1 - **Not felt**

Not felt, even under the most favourable circumstances.

2 - **Scarcely felt**

Vibration is felt only by individual people at rest in houses, especially on upper floors of buildings.

3 - **Weak**

The vibration is weak and is felt indoors by a few people. People at rest feel a swaying or light trembling.

4 - **Largely observed**

The earthquake is felt indoors by many people, outdoors by very few. A few people are awakened. The level of vibration is not frightening. Windows, doors and dishes rattle. Hanging objects swing.

5 - **Strong**

The earthquake is felt indoors by most, outdoors by few. Many sleeping people awake. A few run outdoors. Buildings tremble throughout. Hanging objects swing considerably. China and glasses clatter together. The vibration is strong. Top heavy objects topple over. Doors and windows swing open or shut.

6 - **Slightly damaging**

Felt by most indoors and by many outdoors. Many people in buildings are frightened and run outdoors. Small objects fall. Slight damage to many ordinary buildings e.g.; fine cracks in plaster and small pieces of plaster fall.

7 - **Damaging**

Most people are frightened and run outdoors. Furniture is shifted and objects fall from shelves in large numbers. Many ordinary buildings suffer moderate damage: small cracks in walls; partial collapse of chimneys.

8 - **Heavily damaging**

Furniture may be overturned. Many ordinary buildings suffer damage: chimneys fall; large cracks appear in walls and a few buildings may partially collapse.

9 - **Destructive**

Monuments and columns fall or are twisted. Many ordinary buildings partially collapse and a few collapse completely.

10 - **Very destructive**

Many ordinary buildings collapse.

11 - **Devastating**

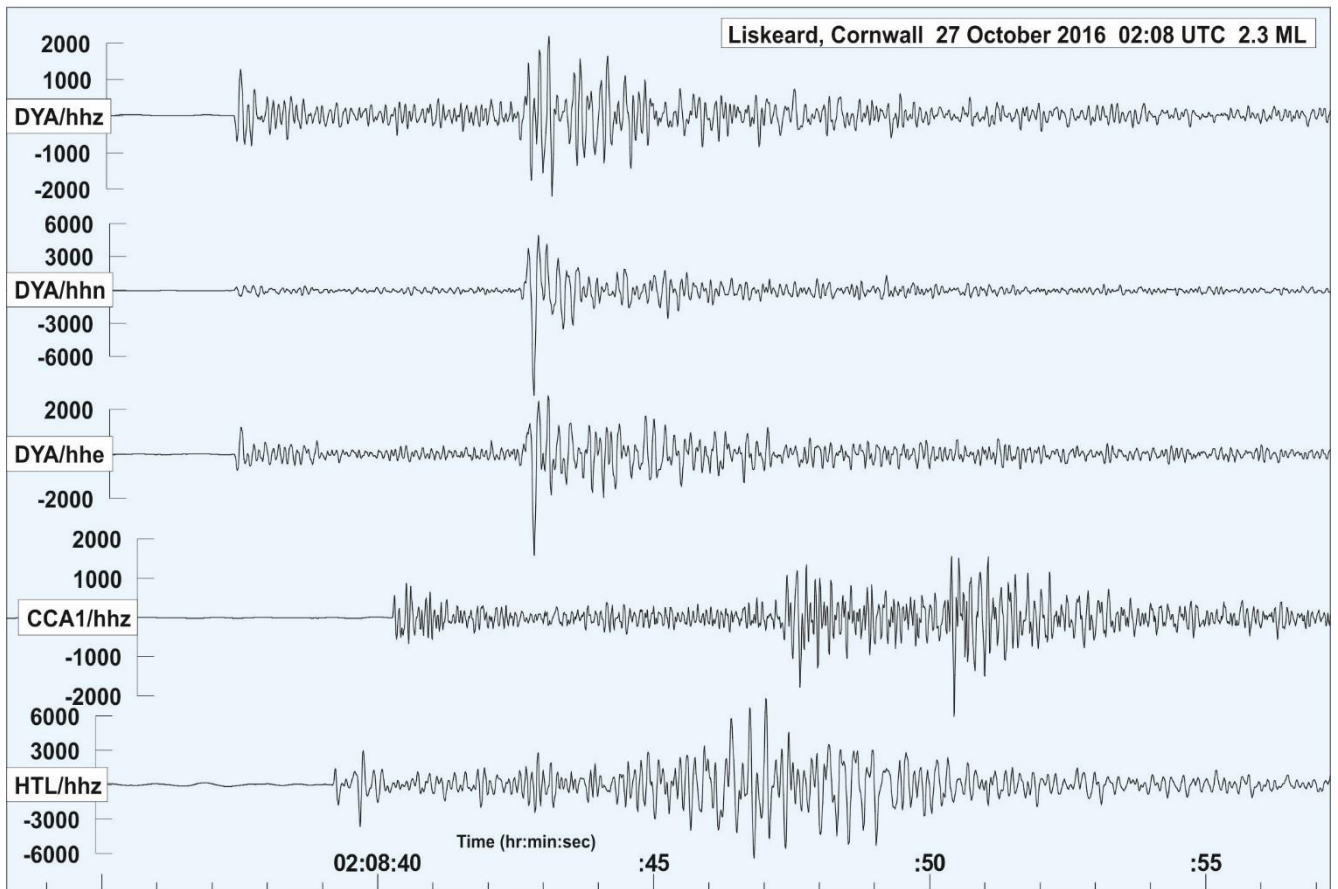
Most ordinary buildings collapse.

12 - **Completely devastating**

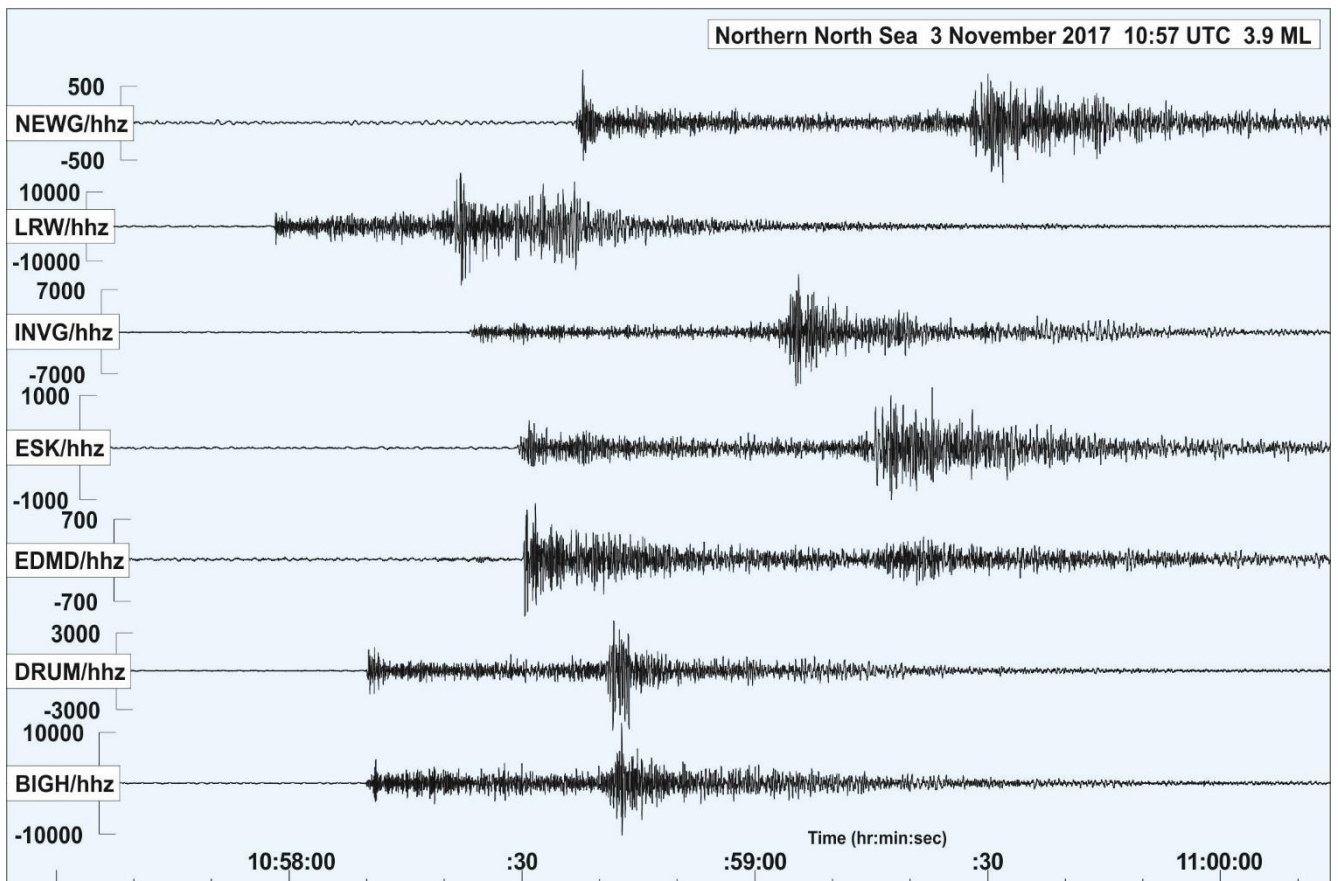
Practically all structures above and below ground are heavily damaged or destroyed.

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A complete description of the EMS-98 scale is given in: Grünthal, G., (Ed) 1998. European Macroseismic scale 1998. Cahiers du Centre European de Geodynamique et de Seismologie. Vol 15.



Seismograms of the ground displacement from the magnitude 2.3 ML Liskeard earthquake on 27 October 2016



Seismograms of the ground displacement from the magnitude 3.9 ML Northern North Sea earthquake on 3 November 2016