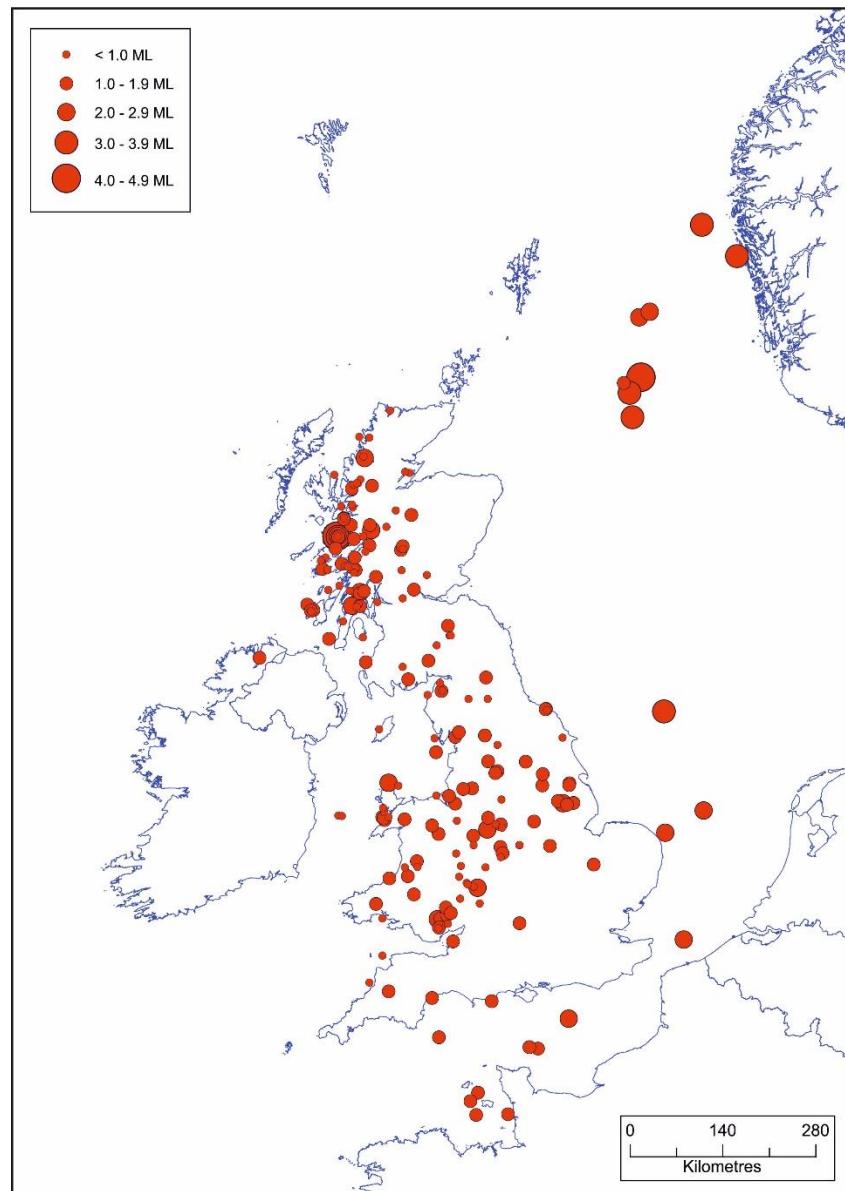


# Bulletin of British Earthquakes 2017

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# 1 Introduction

The British Geological Survey's (BGS) Seismic Monitoring and Information Service operates 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 2017, listed in Tables 1 and 2. Maps showing seismic activity in 2017 (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 ( $11^{\circ}\text{W}$  to  $6^{\circ}\text{E}$  and  $48^{\circ}\text{N}$  to  $64^{\circ}\text{N}$ ).

All events believed to be of 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 the locality 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 110 (78 permanent and 32 temporary) stations with broadband, short period and strong motion accelerometers. Of the permanent sites, some 44 are equipped with broadband seismometers and 29 have strong motion accelerometers, 23 of which are co-located with broadband sensors. The remaining 28 sites are equipped with short period seismometers. 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 during 2017. 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 2017. The data set is considered complete for these magnitudes in all localities onshore. Seismicity for the period 1970 to 2017 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 is 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 Snook *et al.* (1984) is used to determine the best-fitting fault plane solutions.

## 4 Summary of 2017 Seismicity

There were 224 earthquakes located by the BGS seismic monitoring network during the year, with 24 having magnitudes of 2.0 ML or above, eight having magnitudes of 3.0 ML or above and two having magnitudes of 4.0 ML or above. Some 14 events with a magnitude of 2.0 ML or above were reported felt, together with a further 14 smaller ones, bringing the total to 28 felt earthquakes in 2017.

The largest onshore earthquake of the year, with a magnitude of 4.0 ML and a focal depth of around 12 km, occurred on 4 August at 14:43 UTC and located on Moidart, Highland, approximately 50 km west of Fort William, 50 km NNW of Oban and 145 km northwest of Glasgow (Figure 5). It was the largest event to occur in Scotland since the magnitude 4.0 ML Arran earthquake on 4 March 1999, which was felt over an area of around 18,500 km<sup>2</sup>, with a maximum intensity of 4 EMS. The focal mechanism obtained for this event shows either right-lateral slip on a fault that strikes north-northwest south-southeast and dips at 57° to the west-southwest, or left-lateral slip on a fault that strikes approximately east-west and dips north at 65° (Figure 6). This is in good agreement with focal mechanisms calculated for other earthquakes across the region, which all show similar solutions. Data from over 350 questionnaires (Figure 7), collected online, were used to determine how widely the earthquake was felt. Analysis of these reports, received from members of the public, shows that it was felt widely across the region, from Inverness to the northeast, to Glasgow in the south and Islay to the west. Typical reports described "all our windows and doors rattled", "our whole house shook", "cups and saucers on the table all rattled", "a loud bang followed by a rumble, enough for us to go outside to see what had happened" and "everyone in the shop and people in surrounding shops noticed it". A maximum intensity of 5 EMS was assigned for this earthquake. It was followed two minutes later, at 14:45 UTC, by a

magnitude 3.4 ML earthquake, in the same location, which was also felt throughout the region with a maximum intensity of 4 EMS. A further three aftershocks were detected, all on 4 August, at 15:20 UTC, 16:07 UTC and 17:35 UTC, with magnitudes of 1.1 ML, 1.2 ML and 2.2 ML, respectively. The magnitude 2.2 ML event was felt by several residents on Moidart, with intensities of at least 3 EMS (Baptie et al, 2017).

The largest offshore earthquake of the year occurred in the Central North Sea, at 13:33 UTC on 30 June, with a magnitude of 4.7 ML and a focal depth of around 8 km (Figure 8). It located approximately 215 km southeast of Lerwick, Shetland Islands and 310 km northeast of Aberdeen. It was felt in Lerwick, Sumburgh and Fair Isle (Shetland Islands), in Sanday and Kirkwall (Orkney Islands), in Wick and Thurso (Highland), in Fraserburgh (Aberdeenshire) and in a few locations in western Norway. Reports described “we were sleeping on sofa and the rumbling noise awoke both of us”, “it felt like a heavy lorry drove by just outside our house”, “the windows rattled for a few seconds” and “the sliding doors vibrated”, indicating an intensity of at least 3 EMS. The epicentre of this earthquake is approximately 100 km southwest of the magnitude 5.7 event that occurred in the Viking Graben region of the North Sea on 24 January 1927, and which was felt throughout western Norway and down most of the east coast of Scotland. Another two earthquakes, with magnitudes greater than 3.0 ML, occurred in the same general region of the Central North Sea during the year. The first, with a magnitude of 3.6 ML, occurred at 01:42 UTC on 7 July and the second, with a magnitude of 3.3 ML, occurred at 08:14 UTC on 14 September. On 3 January, at 18:52 UTC, an earthquake with a magnitude of 3.8 ML was felt in Scarborough, with intensities of 2 EMS. It occurred in the Southern North Sea region, approximately 155 km east of Scarborough, North Yorkshire (Figure 9). A further nine events occurred in the North Sea during the year, with magnitudes ranging between 1.5 ML and 3.7 ML.

On 15 January, at 22:58 UTC, an earthquake with a magnitude of 1.0 ML, occurred near Beddgelert, Gwynedd. It was felt, with a maximum intensity of 3 EMS, by residents in Llanberis, Minffordd, Tremadog, Waunfawr, Pentir, Garndolbenmaen, Tregarth, Caernarfon, Penrhyndeudraeth, Blaenau Ffestiniog and Myndd Llandyai, Gwynedd.

A magnitude 1.2 ML earthquake occurred at 16:00 UTC on 21 January, near Kilmore, Argyll & Bute, approximately 8 km southeast of Oban. A single report was received from a resident in the nearby hamlet of North Connel, which described, “sounded like a goods train going past”, indicating an intensity of 2 EMS.

On 24 January, at 16:35 UTC, an earthquake with a magnitude of 2.4 ML, occurred near Lephinmore, Argyll & Bute. It was felt by a number of residents in the hamlets, villages and towns of Lochgilphead, Lochgair, Kilmory, Minard, Otter Ferry, Leckuary, Ardrishaig, Castleton, Ardfern, Ardtaraig, Tayvallich, Clachan of Glendaruel, Tighnabruaich, Kilfinan, Dunoon, Cairnbaan, Tarbert, Stronachullin, Kilmelford, Melldalloch and Colintraive, Argyll & Bute. Typical reports described “a thump followed by a rumble lasting at least two or three seconds”, “loud bang followed by a deep rumbling and slight shaking”, “whole house shook as if something had exploded nearby” and “it sounded very similar to rocks being tipped from a lorry”, indicating a maximum intensity of 3 EMS. It locates approximately 50 km southeast of the magnitude 4.1 ML Oban earthquake of 29 September 1986, which was felt over an area of around 30,000 km<sup>2</sup> with a maximum intensity of 5 EMS. It also locates approximately 14 km SSE 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. The following day, on 25 January at 16:32 UTC, an earthquake with a magnitude of magnitude 1.4 ML, occurred in the same region, near Lephinmore, and was felt by a single resident in Kilmory, Argyll & Bute.

An earthquake, with a magnitude of 2.6 ML, occurred on 3 March, at 09:28 UTC, near the market town of Stone, Staffordshire (Figure 10). It was felt by a single resident in the nearby village of Oakamoor. Earthquakes of this size are usually felt more when they occur onshore but enquiries to local Police stations and Post Offices revealed that no further felt reports were received. The

depth (13.1 km) may have contributed to the lack of felt effects. Historically, the largest earthquake to have occurred nearby, approximately 7 km to the SSW, was the magnitude 4.6 ML Stafford event that occurred on 14 January 1916. It was felt throughout the region from Lancaster in the north to Bristol in the south, and from Cardiff in the west to Norwich in the east and caused considerable damage to many buildings in and around Stafford.

Near Hinderwell, North Yorkshire, three events occurred on 20 March at 02:06 UTC, 02:16 UTC and 04:24 UTC, with magnitudes of 1.3 ML, 1.3 ML and 0.8 ML, respectively. Both the magnitude 1.3 ML events were felt, by several residents, in the villages of Hinderwell and Staithes, with intensities of 3 EMS. The magnitude 0.8 ML event was felt, by a single resident, in the village of Staithes.

On 19 May at 23:14 UTC, an earthquake with a magnitude of 1.8 ML, occurred on the Knoydart peninsula in the Scottish Highlands. It was felt by several residents from Inverie, the main village on the peninsula, who described, “the kitchen window rattled” and “there was a single big boom, like an explosion”, indicating an intensity of around 3 EMS. A further two events were detected in the region in the following days, at 03:51 UTC on 20 May and at 21:57 UTC on 22 May, with magnitudes of 0.6 ML and 1.1 ML, respectively.

A magnitude 2.0 ML earthquake occurred at 20:08 UTC on 2 June near Spean Bridge, Highland Region. It was felt in Spean Bridge and by several residents in the surrounding villages of Gairlochy, Roybridge and Banavie, who described “was like a rock blast” and “sounded like an explosion with a rumble to match”, indicating an intensity of 3 EMS.

On 5 June at 13:17 UTC, a magnitude 2.1 ML earthquake occurred approximately 5 km northeast of Lincoln, Lincolnshire. It was felt in Reepham, Stainton by Langworth, Grantham, Grimsby and Sutton-on-Sea. One report described “thought it was rumbling from neighbouring washing machine, but much louder”. An intensity of 3 EMS was assigned to this earthquake. It is the largest event detected in the general area (within 25 km) since the magnitude 2.7 ML Gainsborough earthquake on 19 June 2010. It is also located approximately 17 km SSW of the magnitude 5.2 ML Market Rasen earthquake which occurred on 27 February 2008 and was felt throughout England with a maximum intensity of 6 EMS.

An earthquake, with a magnitude of 2.4 ML, and a depth of around 7 km, occurred at 23:05 UTC on 10 June, with a location near the spa town of Malvern, Worcestershire. It was felt by three residents in Malvern who described “small items on my dressing table fell over”, “very deep rumble, like the start of some thunder” and “an unusual sound, like a large object briefly brushing the house”, indicating an intensity of 3 EMS. Historically, the largest event to have occurred in this area was the magnitude 5.3 ML Hereford earthquake on 17 December 1896, which was felt throughout most of England and Wales. Significant damage was caused in Hereford and surrounding villages, where over 200 chimneys were damaged or twisted.

A magnitude 2.1 ML earthquake occurred at 10:28 UTC on 16 July, with an epicentre near the town of Bargoed, Caerphilly. No felt reports were received for this event. This is an area that has experienced many seismic events in the past. The event in 2017 locates in the same area as events on 10 October 2001, 18 October 2001 and 12 February 2002 with magnitudes of 3.1 ML, 2.5 ML and 3.0 ML, respectively, that were all felt with intensities of 4 EMS.

On 17 July, the BGS received several reports from residents in Jersey and Guernsey, Channel Islands of a possible event sometime around 21:00 UTC. Reports described “all doors in the house were shaking”, “we felt a faint rumble” and “the rattling of windows in their frames and a slight vibration, felt by person lying on floor”. Data from the BGS seismic networks in the region were examined and signals consistent with a possible sonic origin were recorded between 21:00:00s and 21:00:40s UTC, on several stations (namely JVM, JSA, JRS, JQE and JDC) on the BGS seismic network in Jersey.

At 07:58 UTC on 23 July, an earthquake, with a magnitude of 2.3 ML, occurred near the village of Badrallach, Highland. It was felt by residents in Badrallach and also by residents in the

surrounding towns and villages of Ullapool, Dundonnell, Acheninver, Achiltibuie, Ardessie, Lochbroom, Loggie, Camusnagaul and Gruinard, who described “it felt like lorries passing the house”, “the walls visibly shook”, “the whole house shook and the windows rattled” and “the mirror rattled which is lying next to the wall”. An intensity of 3 EMS was assigned to this earthquake.

On 2 August, an earthquake with a magnitude of 1.4 ML, occurred approximately 2 km WNW of the seaside village of Rathmullan, County Donegal. The BGS received information from the local Media that it was felt by several residents in the Milford area on the Fanad peninsula, County Donegal.

An earthquake, with a magnitude of 1.5 ML, and a depth of around 7 km, occurred at 02:19 UTC on 4 August, with a location approximately 7 km NNW of Kingussie, Highland. It was felt by a couple of residents in the town of Kingussie and by another, single resident in the village of Kincraig. Reports described “felt like something impacting the house”, “the windows rattled”, “thought it might be burglars trying to break the door” and “felt like a heavy train passing by”, indicating an intensity of about 3 EMS.

An earthquake, with a magnitude of 2.0 ML, occurred on 9 August at 04:41 UTC with a location in the Irish Sea, approximately 12 km NNW of Amlwch, Anglesey and 12 km NNE of Wylfa Nuclear Power Station (Figure 11). It was felt, by a single resident, in Amlwch who described “a slight shaking and a faint rumble”.

An earthquake, with a magnitude of 2.0 ML, occurred at 15:34 UTC on 9 August in the English Channel region, approximately 55 km SSW of Brighton, East Sussex. Four other earthquakes occurred in the English Channel region during the year, with magnitudes ranging between 0.9 ML and 1.9 ML.

On 8 September at 20:47 UTC, a magnitude 1.3 ML earthquake occurred near the village of Langham, Rutland. It was felt by several residents in Langham, Oakham, Ashwell, Market Overton, Barleythorpe, Edith Weston, Cottesmore, Whissendine and Burley, who described “a very loud rumble”, “we thought it was thunder”, “there was a loud bang and the crockery shook in the cupboard”, “it sounded like a truck crashing” and “the curtains moved”, indicating an intensity of at least 3 EMS.

A magnitude 1.2 ML earthquake occurred at 01:37 UTC on 27 September, with an epicentre approximately 3 km NNE of the village of Ringford, Dumfries and Galloway. It was felt by a single resident in Dalbeattie, who described feeling a “slight tremor”.

On 4 October, the BGS received several reports (via Media sources in Suffolk and Norfolk) of a possible event felt by residents in several towns and villages across Suffolk, Norfolk and Essex, sometime around 07:30 UTC. Reports described “the whole house shook”, “the windows rattled and all the birds outside went crazy”, “we thought it was an explosion” and “there was a loud bang”. Data from the BGS seismic networks in the region were examined and a signal consistent with a possible sonic origin was recorded at 07:37 UTC on the BGS seismic station near Elmsett, Suffolk.

On 8 October, at 22:55 UTC, a magnitude 1.4 ML earthquake occurred around 2 km SSE of Oban, Argyll and Bute. It was felt by a single resident in Croggan, Isle of Mull, approximately 15 km west of the epicentre, who described “loud roar like a plane overhead but with no build up or fade away”.

An earthquake, with a magnitude of 2.6 ML, occurred at 20:59 UTC on 1 November, near the village of Tarbert, Argyll and Bute (Figure 12). It was felt by several residents in Tarbert, Tighnabruaich, Kilfinnan, Ardrishaig, Inverneill and Ormsary, Argyll and Bute. Reports described “there was a rumbling and a bang which was longer and louder than thunder and it frightened me”, “the windows rattled”, “the shaking lasted around 3 or 4 seconds” and “we thought it was a very large and heavy vehicle on the road outside”, indicating an intensity of at least 3 EMS.

Three earthquakes, within 15 minutes of each other, were detected on 13 December on the island of Islay, Argyll and Bute. They occurred at 02:01:29, 02:01:49 UTC, and 02:16 UTC with magnitudes of 0.9 ML, 0.8 ML and 1.1 ML, respectively. None were reported felt.

On 20 December at 08:15 UTC, an earthquake, with a magnitude of 1.5 ML, occurred on the Morvern peninsula in the Scottish Highlands. It was felt in Kilchoan, Highland, in Gruline, on the Island of Mull and in Clachan and Achnacroish, on the Island of Lismore, Argyll and Bute. An intensity of 3 EMS was assigned for this earthquake.

An earthquake, with a magnitude of 1.7 ML, occurred on 26 December at 22:40 UTC, on the Island of Mull, Argyll & Bute. It was felt by several residents on the islands of Mull and Lismore, Argyll & Bute and it was also felt on the mainland, in the township of Acharacle, Highland. Reports described, “a long extended rumble”, “sounded like a nearby quarry blast, but too unusual a date and time for this”, “loud roar for a few seconds, like previous earthquakes we have experienced” and “a noticeable rumbling for a few seconds”, indicating an intensity of at least 3 EMS. A further six events occurred on the Island of Mull during the year, with magnitudes ranging between 0.5 ML and 1.1 ML, of which none were reported felt.

## 5 UK Seismicity Statistics

In Figure 13, the histogram of earthquakes above magnitude 2.0 detected per year in different magnitude ranges, shows significant variation across the 48 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 13 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 Lleyn 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).
- The year 2016 is quite remarkable for producing the fewest earthquakes in the whole 48 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.
- The largest earthquake in Scotland for 18 years, with a magnitude of 4.0 ML, occurred on Moidart, Highland in 2017 (4 August). Only five other earthquakes of this size or greater have been observed in Scotland, in the period of instrumental recording from 1970.

Figures 14 and 15 show the statistics for all earthquakes known to be felt from 1979 to 2017, including those below magnitude 2.0 ML. As might be expected, Figure 14 shows three of the same peaks as for the event occurrences seen in Figure 13; 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 15 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 39 years (1979 - 2017), largely mirrors the distribution of smaller events (2.0 ML or less) in Figure 14. 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 3-20 km. 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.

# Acknowledgements

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The work was supported in part by:

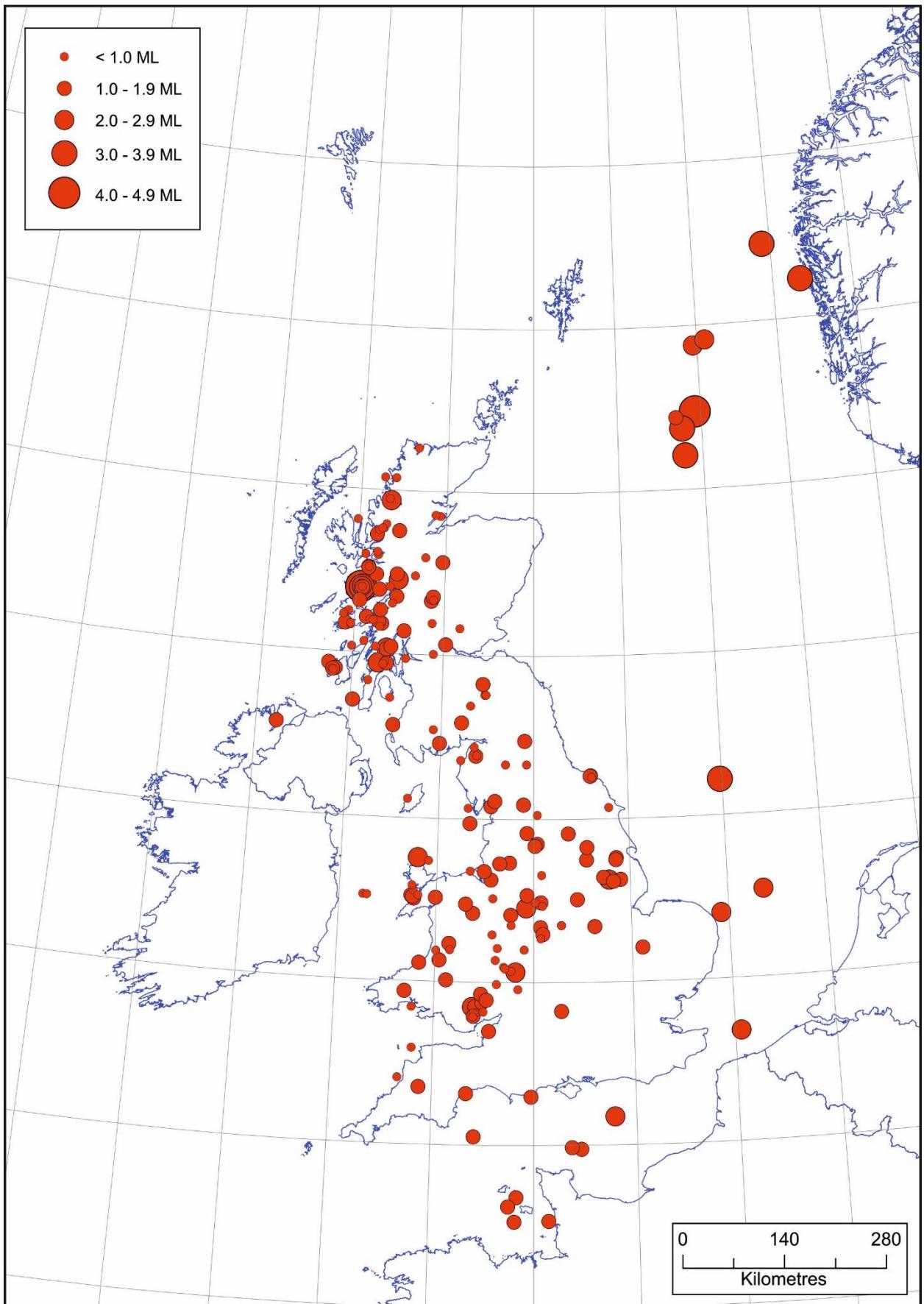
Office for Nuclear Regulation  
Department for Communities and Local Government  
Magnox Ltd  
EDF Energy  
Horizon Nuclear Power  
Sellafield Ltd  
Jersey Water  
Scottish & Southern Energy plc  
Scottish Power  
Scottish Water  
Natural Environment Research Council

Interchange of data with UK and European agencies, has contributed to the accuracy of location of some of these events and to the determination of their magnitudes. They include:

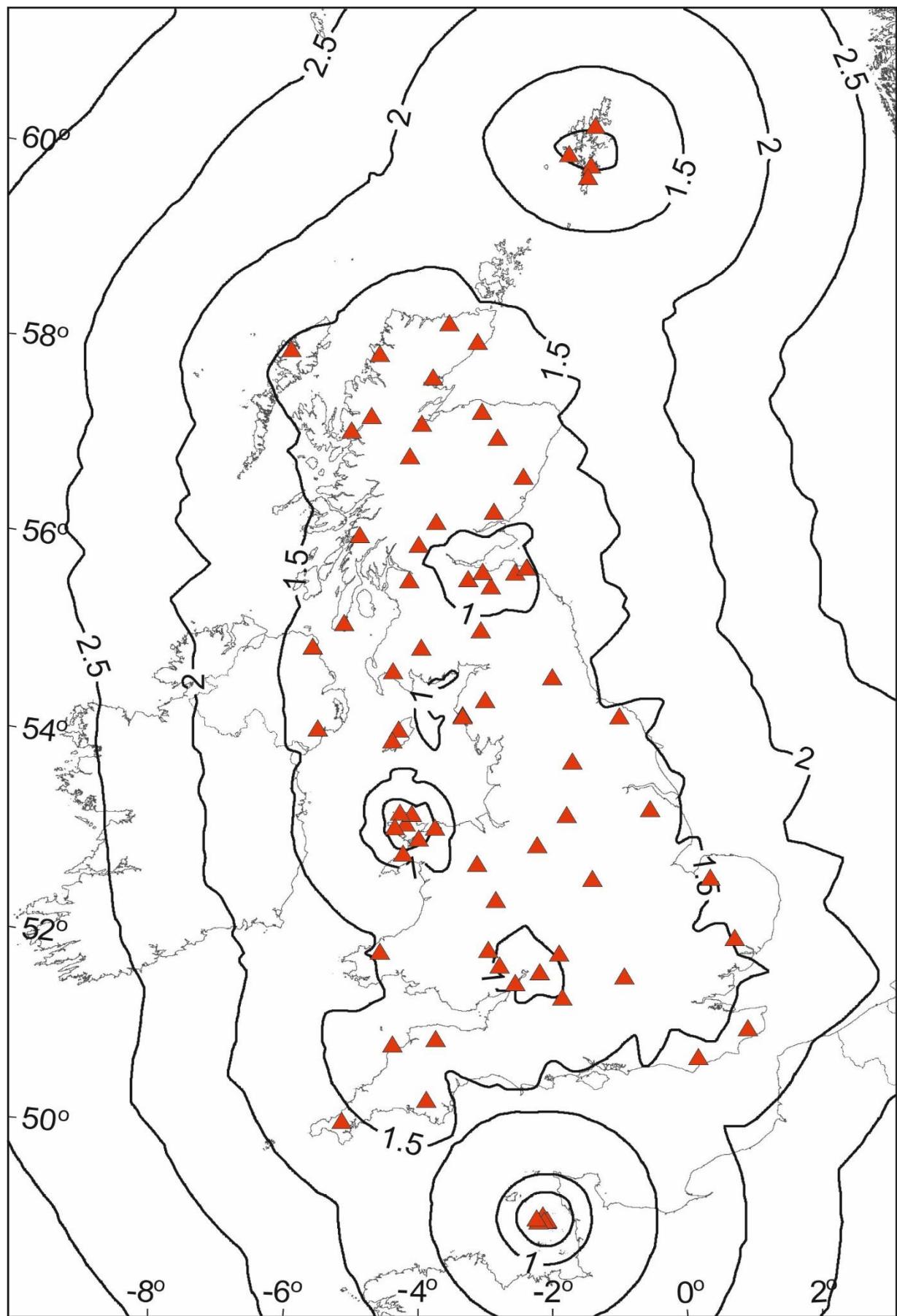
Atomic Weapons Establishment (Blacknest, UK)  
Centre Seismologique Euro-Mediterranean (Bruyères-le-Châtel, France)  
Dublin Institute for Advanced Studies (Dublin, Ireland)  
GEUS (Geological Survey of Denmark and Greenland)  
Institute de Physique du Globe (Paris, France)  
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NORSAR (Oslo, Norway)  
University of Bergen (Bergen, Norway)  
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## References

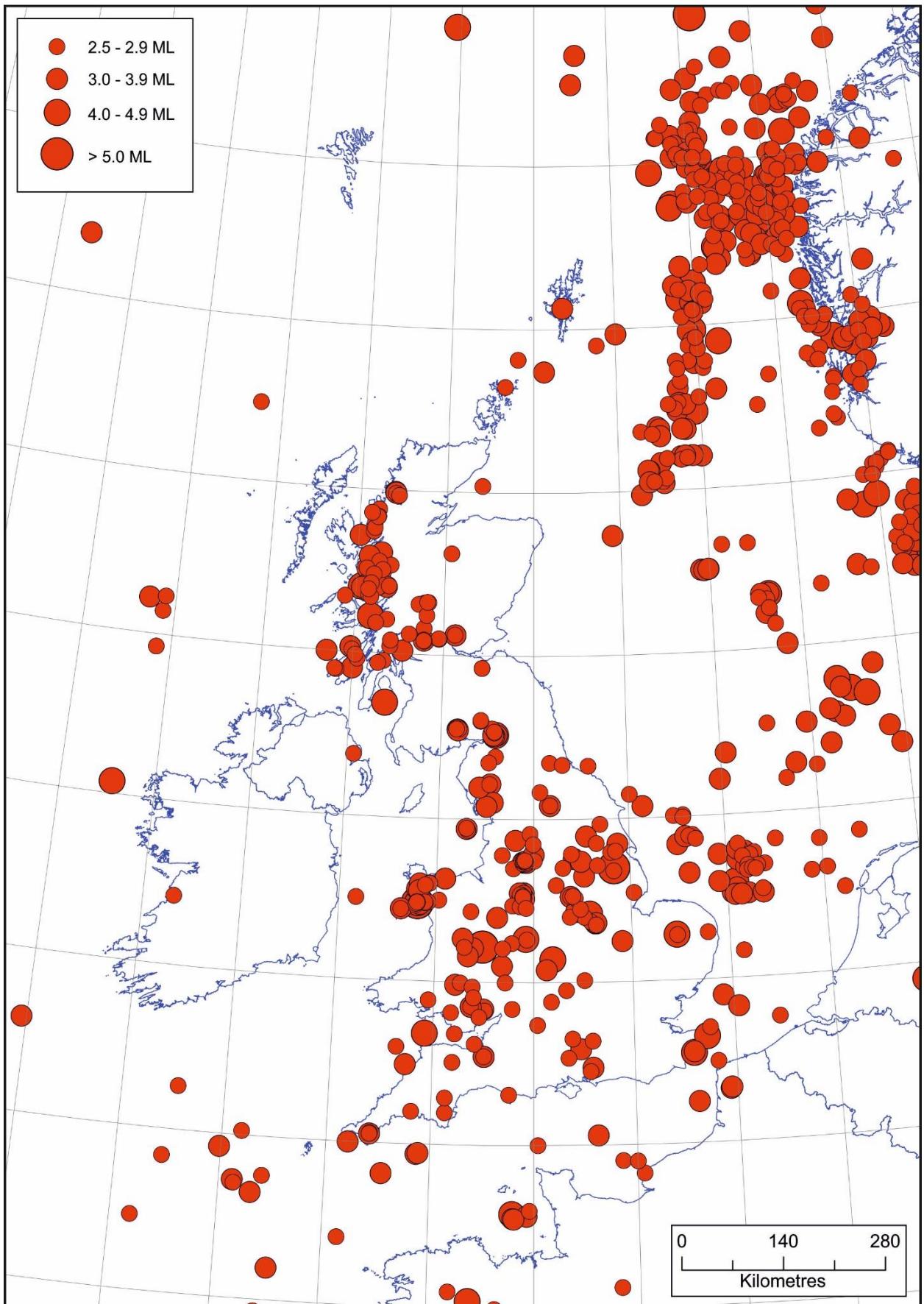
- Baptie, B., Ford, G. and Galloway, D., 2017. The Moidart Earthquakes of 4 August 2017. *British Geological Survey Open Report*, OR/17/062 25pp.
- Grünthal, G., (Ed) 1998. European Macroseismic scale 1998. Cahiers du Centre European de Geodynamique et de Seismologie. **Vol 15**.
- Lienert, B.R.E. and Havskov, J., 1995. A computer program for locating earthquakes both locally and globally, *Seis. Res. Lett.*, **66**, 26-36.
- Richter, C., 1935. An instrumental earthquake magnitude scale, *Bull.Seism. Soc.Am.*, **25**, 1-32.
- Snoke, J. A., Munsey, J.W., Teague, A.C. and Bollinger, G.A. 1984. A program for focal mechanism determination by combined use of polarity and SV –P amplitude ratio data, *Earthquake Notes*, **55**, **3**, **15**.



**Figure 1. Epicentre map of earthquakes in 2017 as listed in Table 1.**



**Figure 2.** Seismograph stations operated by BGS during 2017. 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 2017.**



**Figure 4. Epicentres of earthquakes with magnitudes of 3.5 ML and above, in the period 1970 – 2017.**

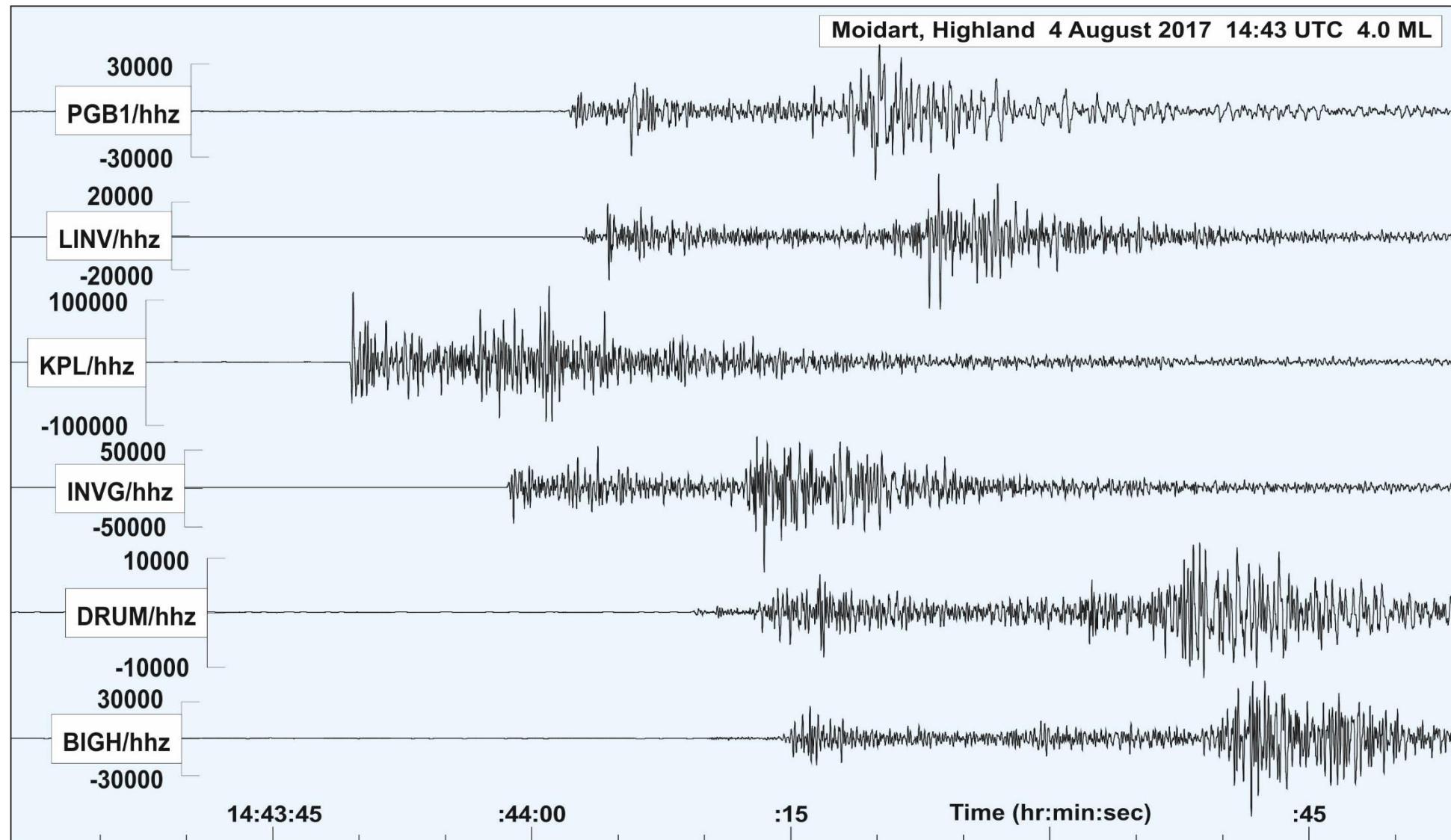
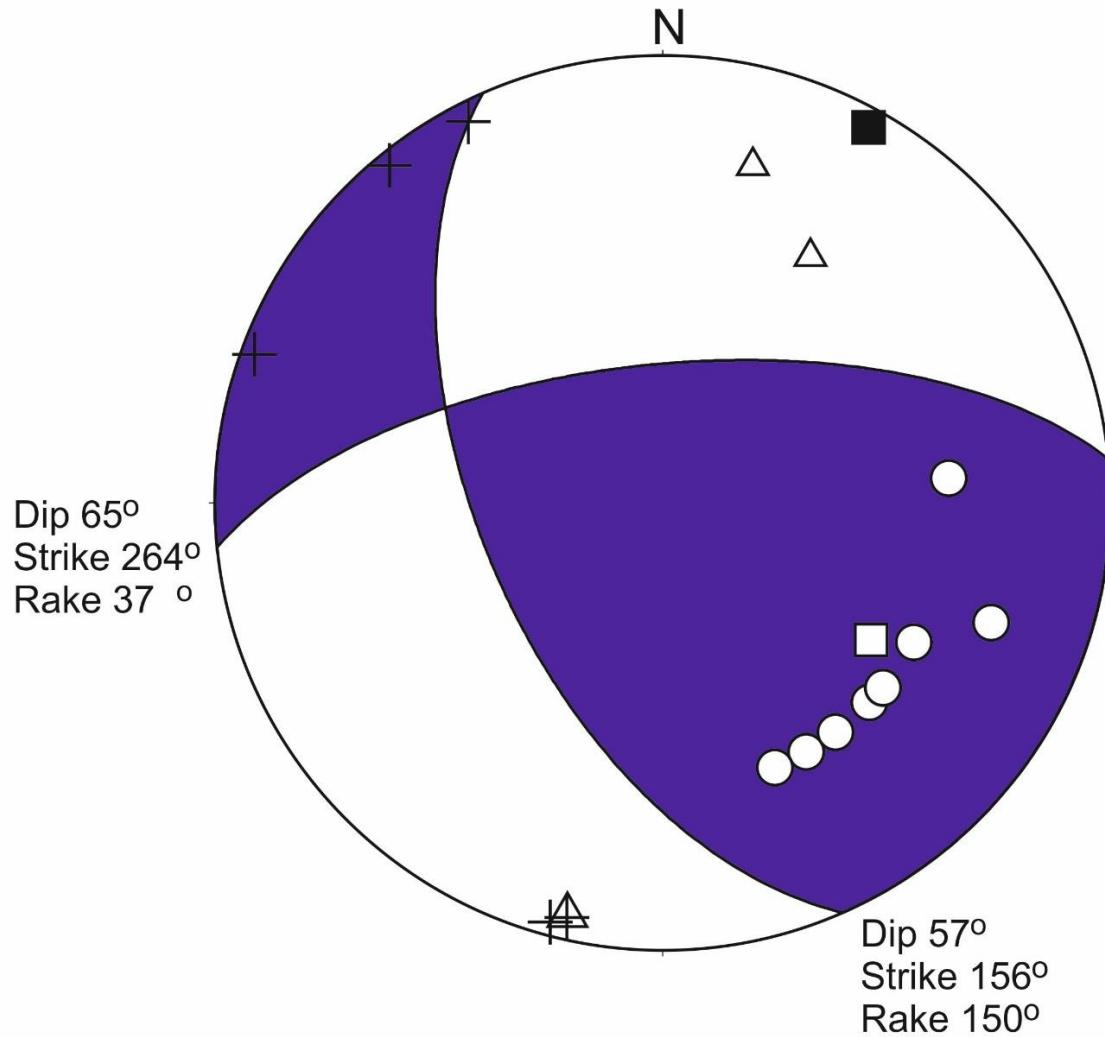


Figure 5. Seismograms of the ground displacement from the magnitude 4.0 ML Moidart earthquake, 4 August 2017, recorded by BGS seismograph stations.



**Figure 6.** Lower hemisphere, equal projection of the focal mechanism for the Moidart earthquake on 4 August 2017. The blue shaded areas show areas of compressional first motion. The white circles and triangles show measured compressional and dilatational first motions, respectively. Black crosses show SH/V amplitude ratios. The black and white squares show the orientations of the axes of maximum (P) and minimum (T) compression, respectively (Snoke et al., 1984).

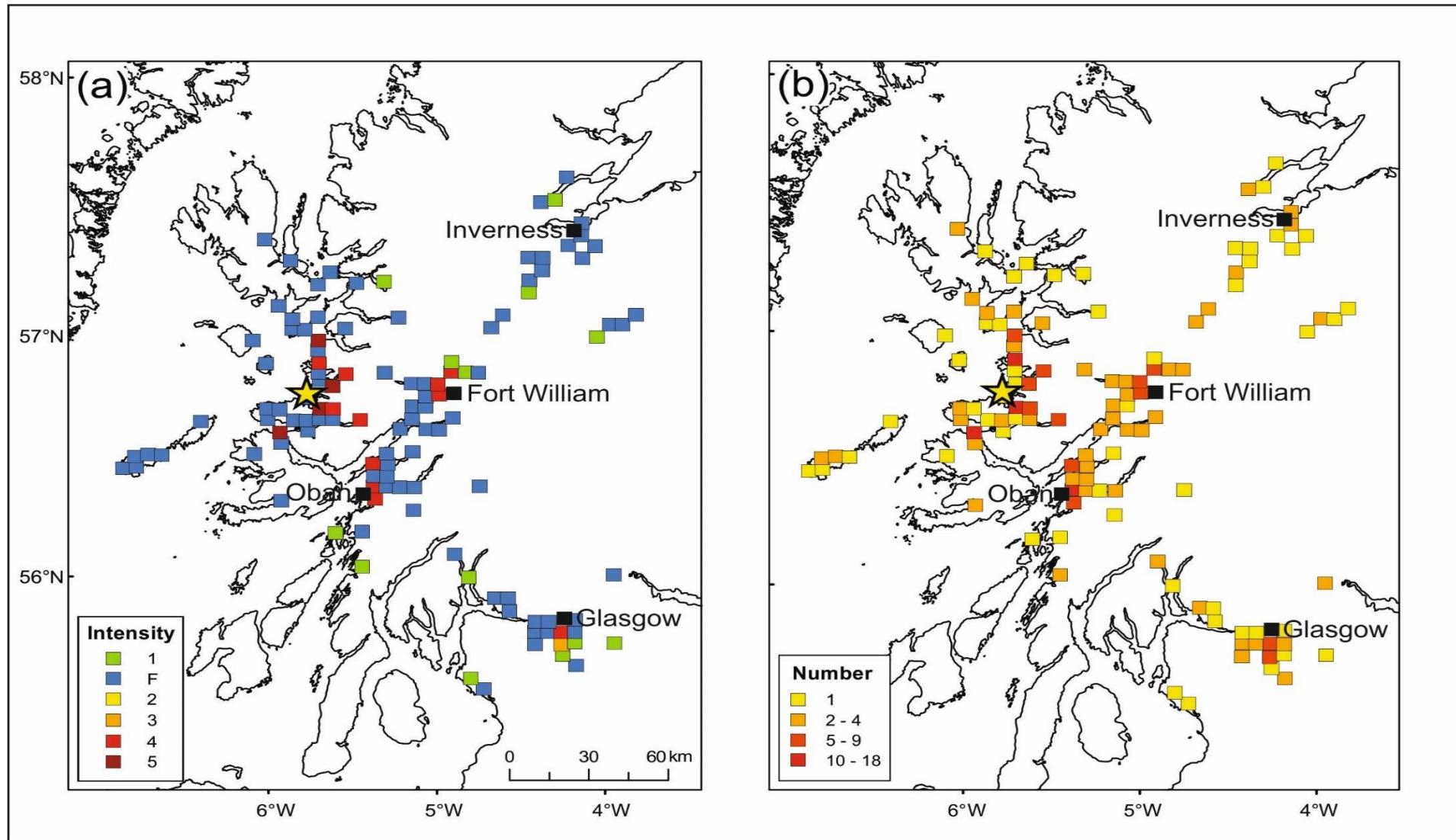
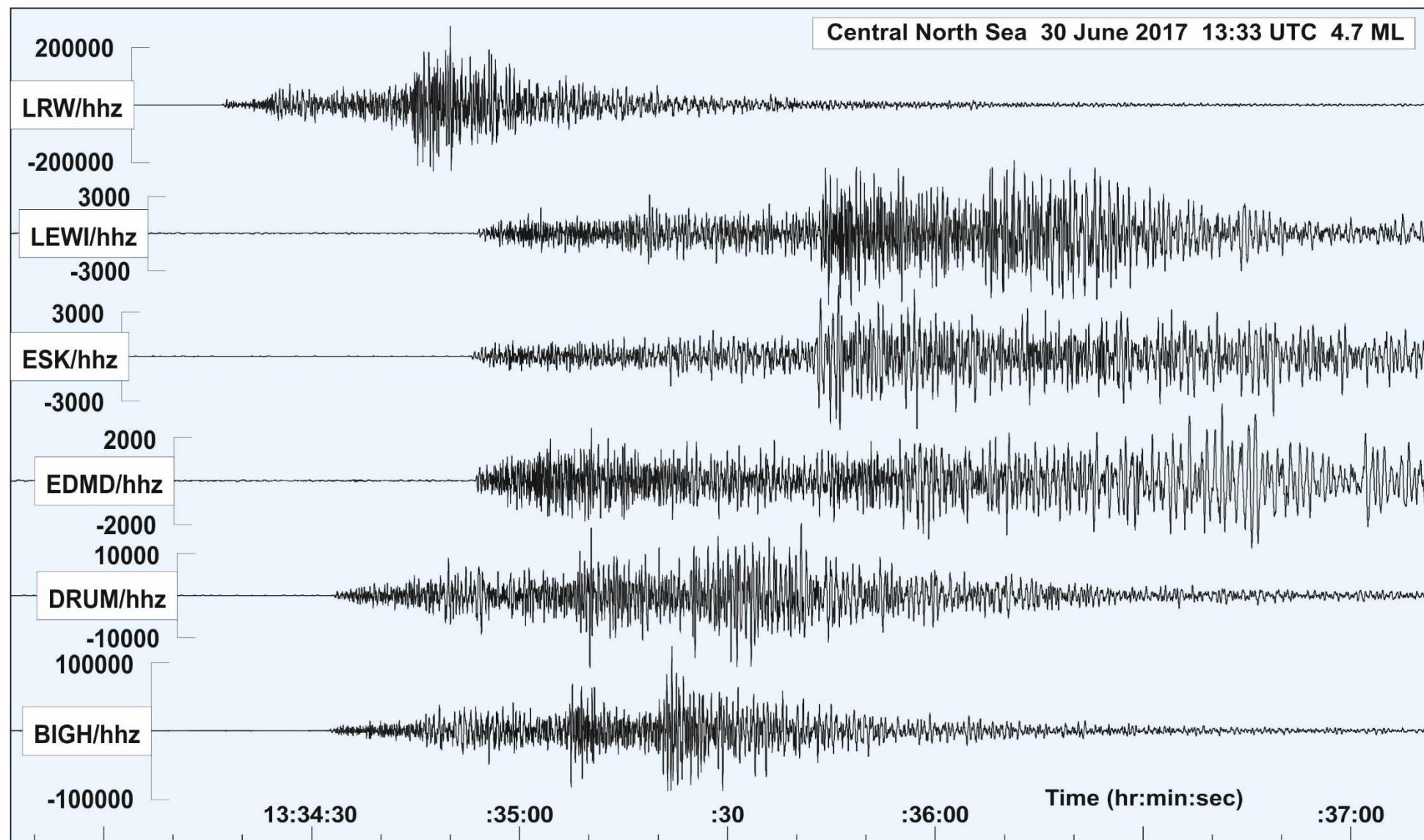
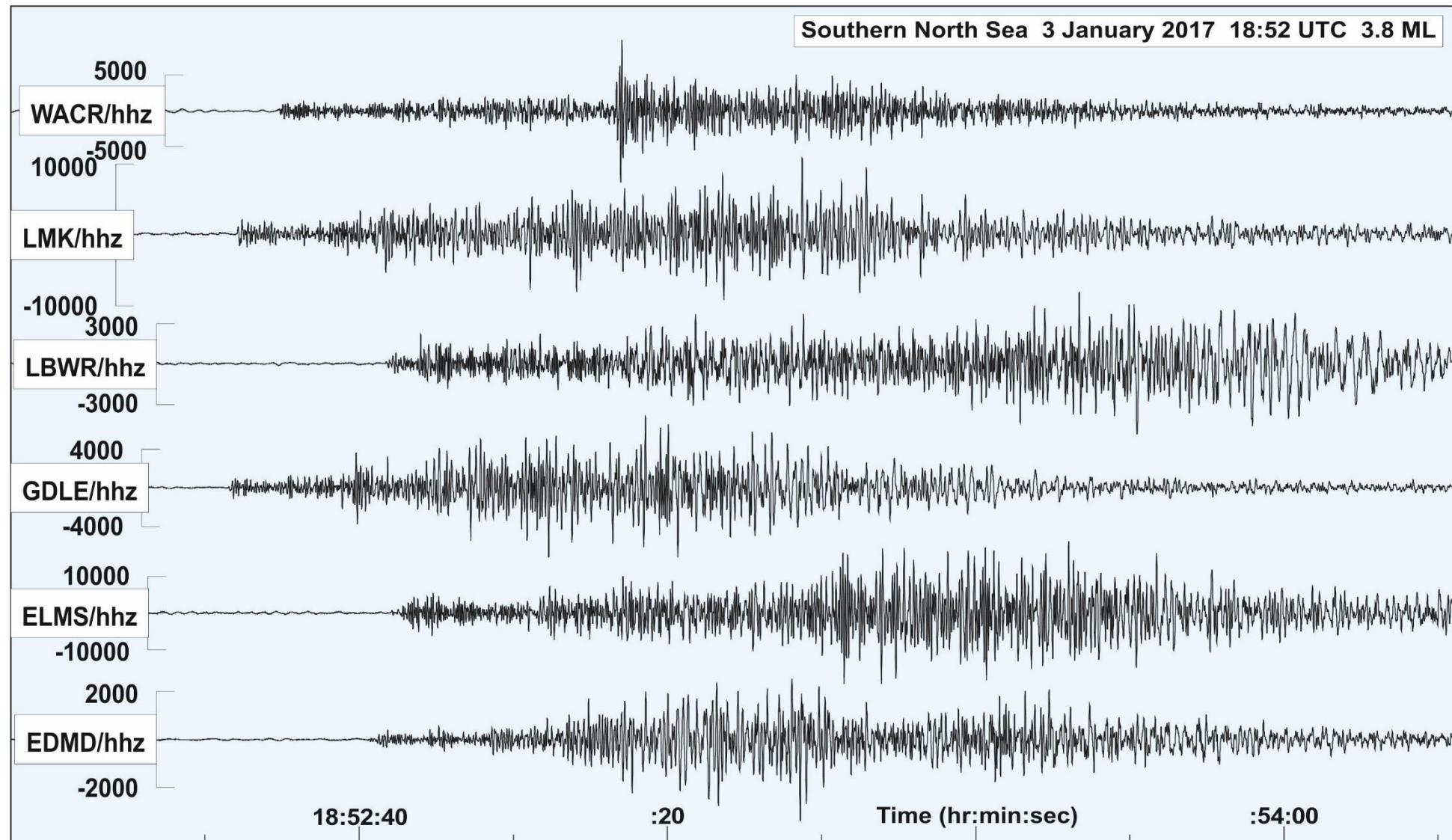


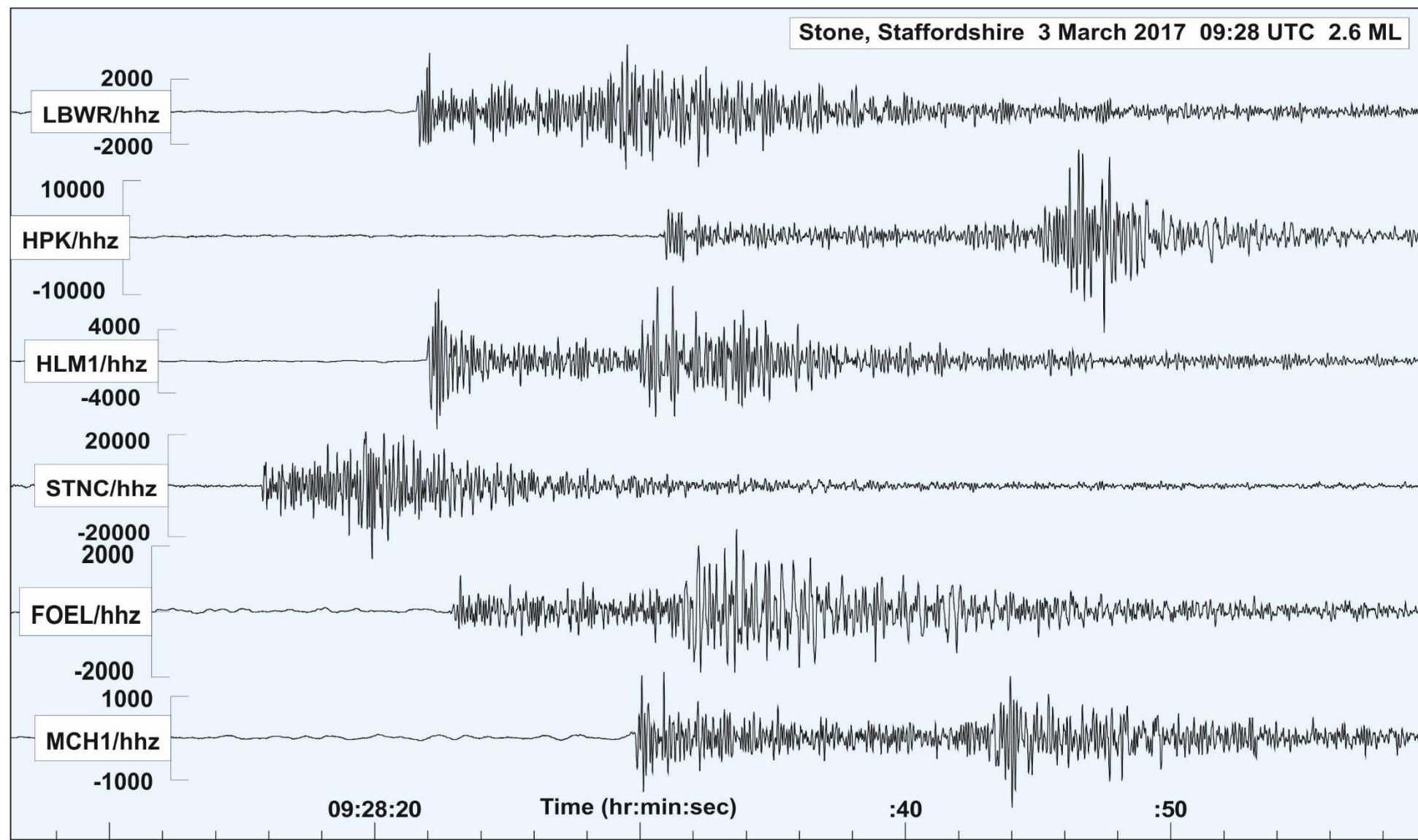
Figure 7. (a) Macroseismic intensities for the Moidart earthquake on 4 August 2017 calculated in 5 km grid squares. A minimum of five observations are required to calculate an intensity value. Squares are coloured by intensity. (b) Shows the number of observations to determine each intensity value.



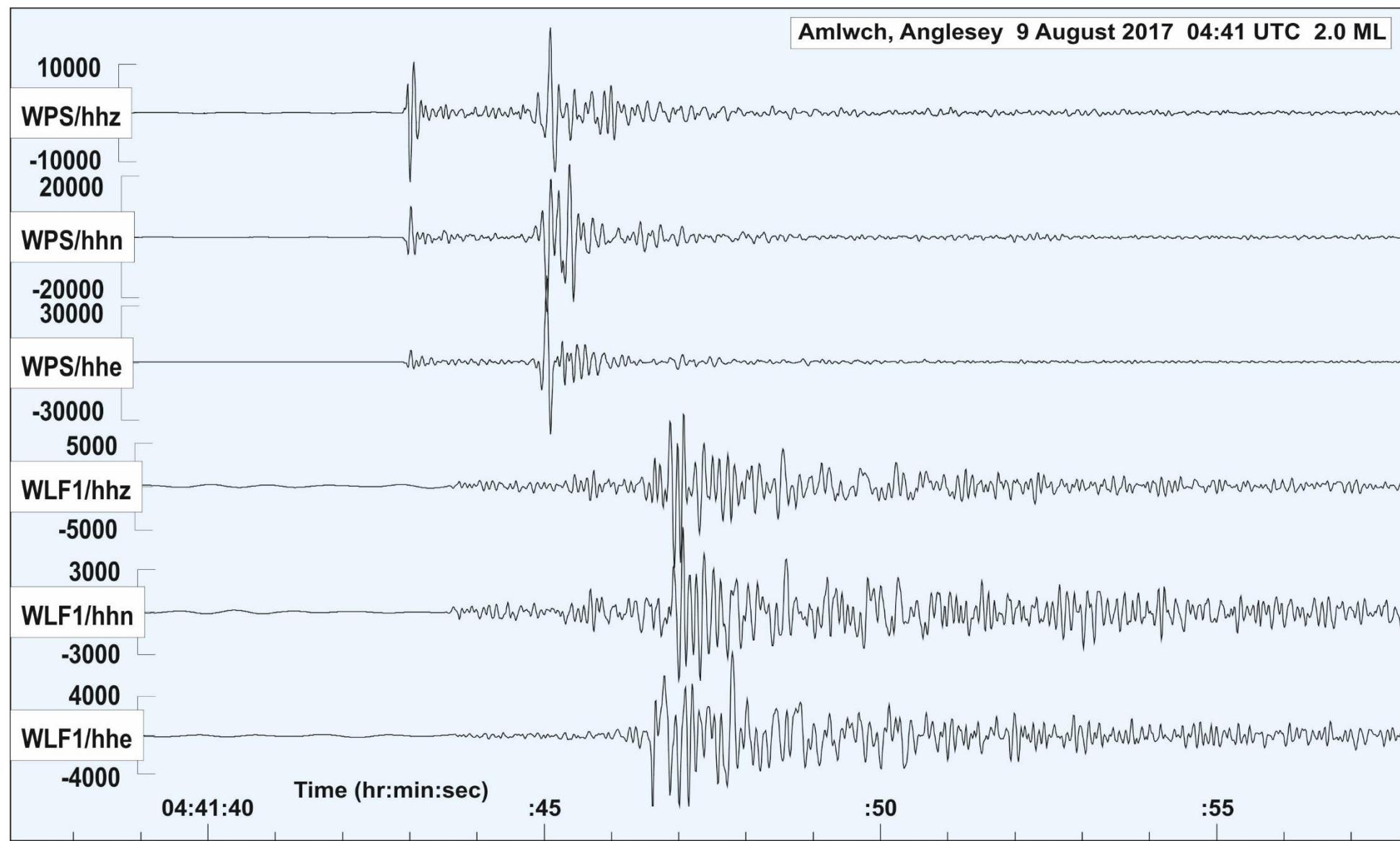
**Figure 8.** Seismograms of the ground displacement from the magnitude 4.7 ML Central North Sea earthquake, 30 June 2017, recorded by BGS seismograph stations.



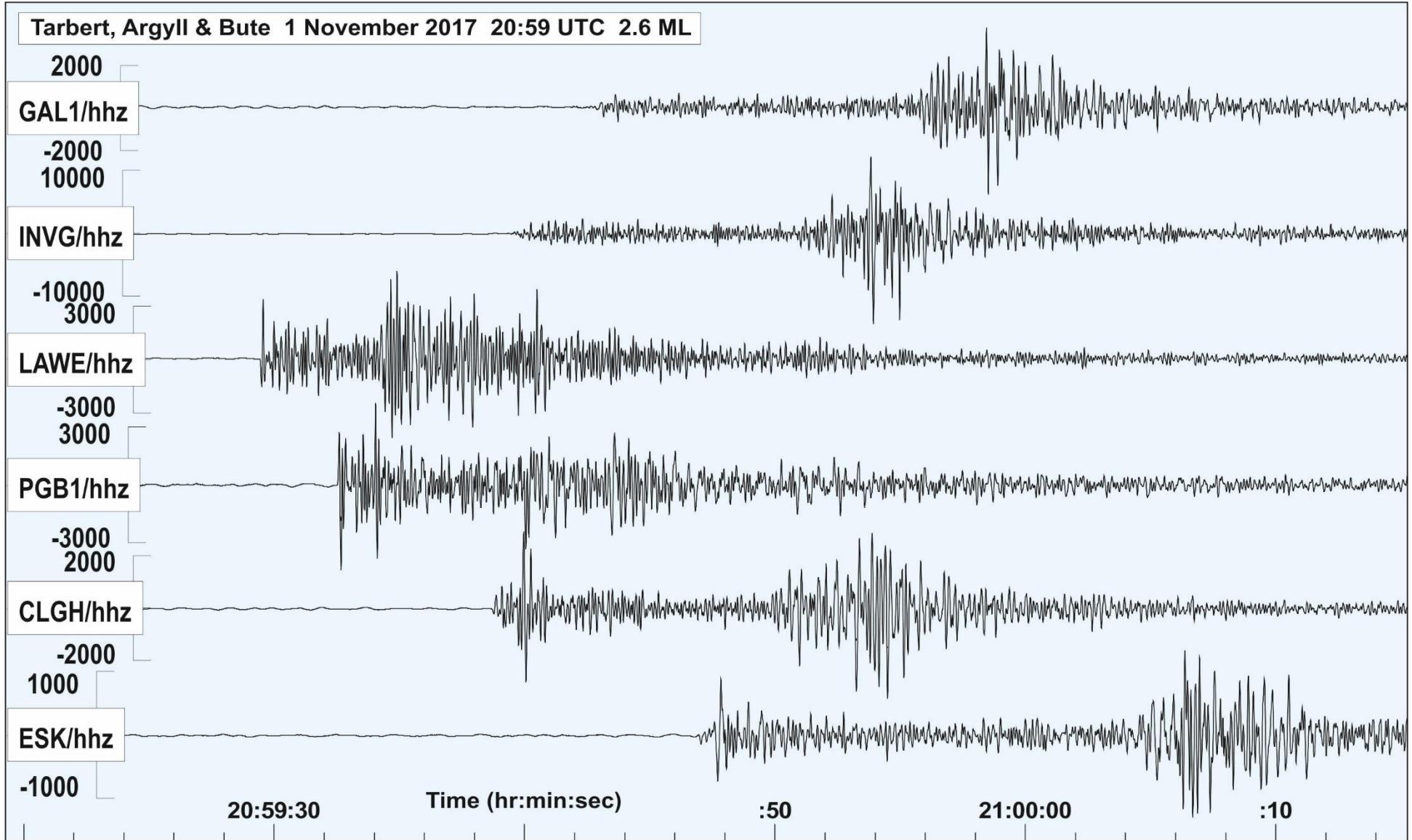
**Figure 9.** Seismograms of the ground displacement from the magnitude 3.8 ML Southern North Sea earthquake, 3 January 2017, recorded by BGS seismograph stations.



**Figure 10. Seismograms of the ground displacement from the magnitude 2.6 ML Stone, Staffordshire earthquake, 3 March 2017, recorded by BGS seismograph stations.**



**Figure 11.** Seismograms of the ground displacement from the magnitude 2.0 ML Amlwch, Anglesey earthquake, 9 August 2017, recorded by BGS seismograph stations.



**Figure 12.** Seismograms of the ground displacement from the magnitude 2.6 ML Tarbert, Argyll & Bute earthquake, 1 November 2017, recorded by BGS seismograph stations.

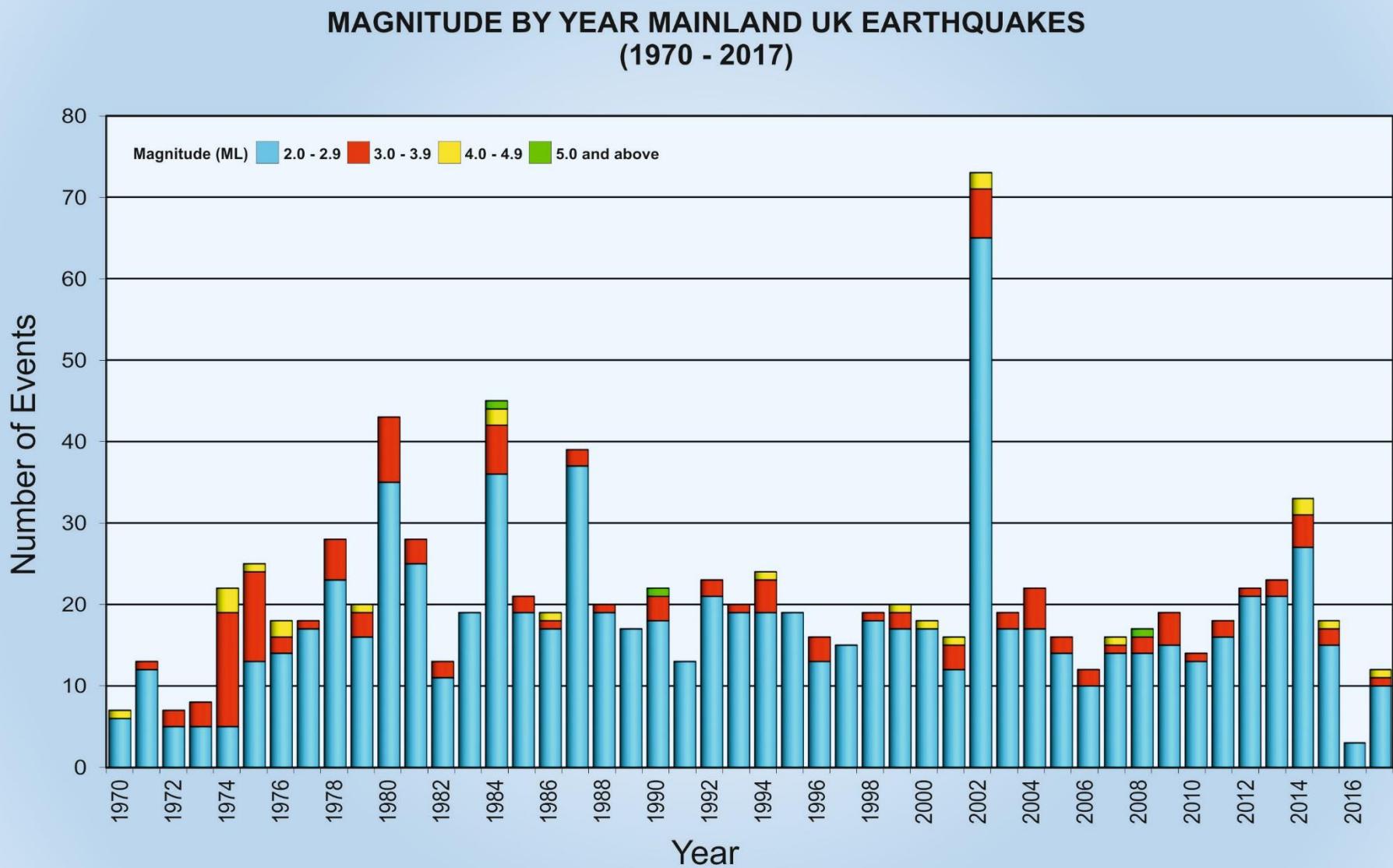


Figure 13. Histogram showing the number of events, magnitude 2.0 ML or greater, detected 1970-2017.

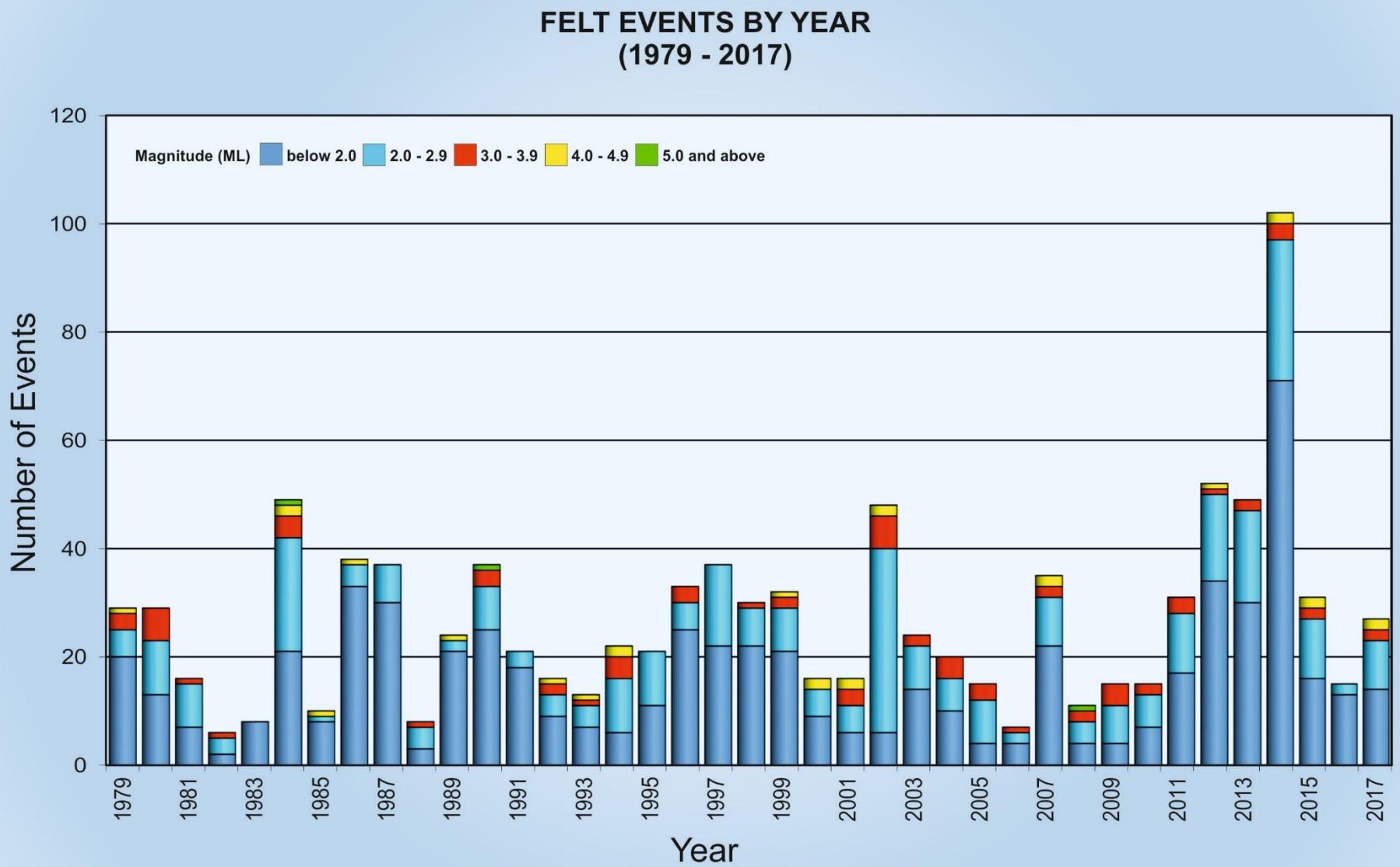


Figure 14. Histogram showing the number of felt events, 1979-2017.

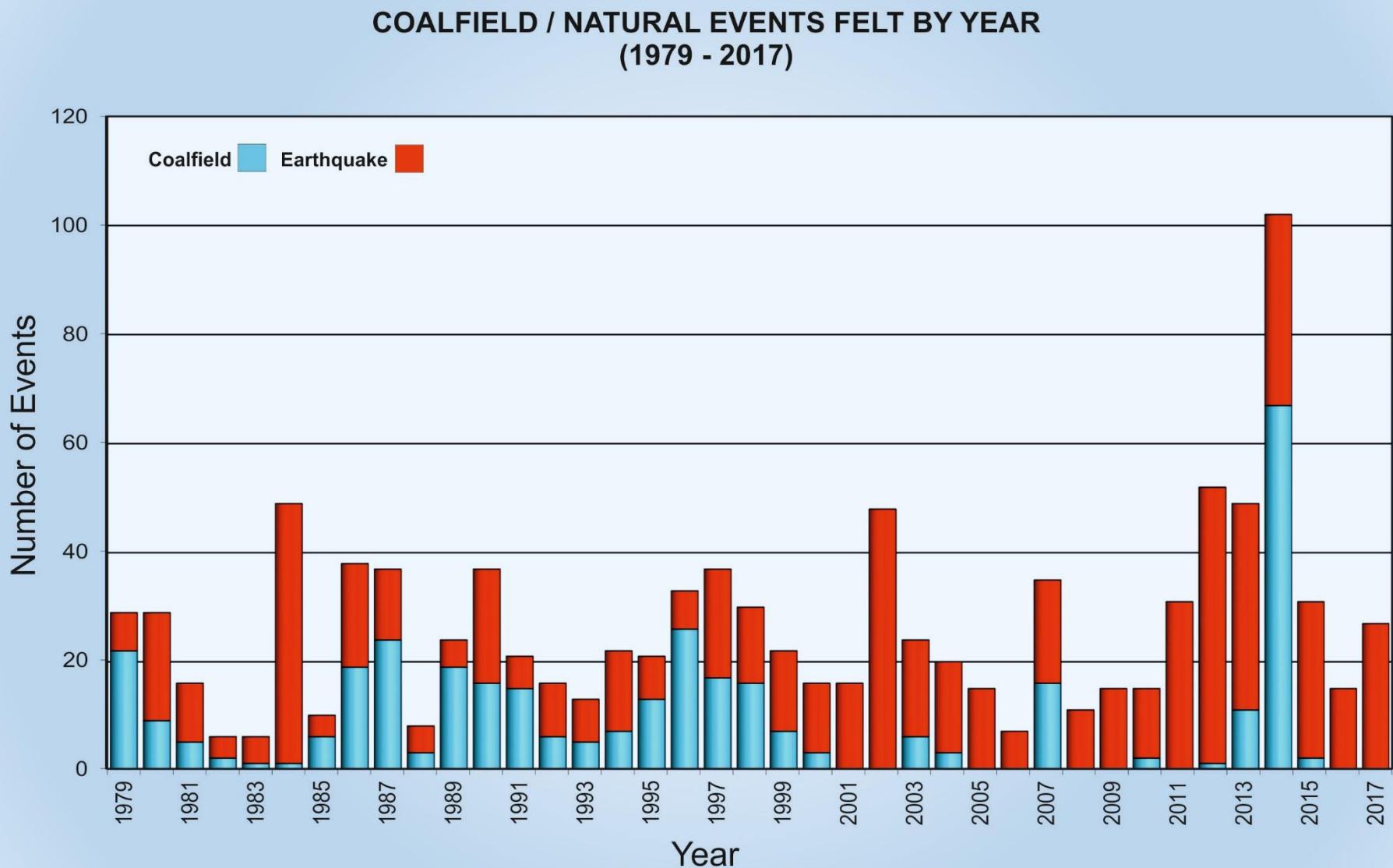


Figure 15. Histogram showing the split between the number of felt events in coalfield areas and those which are natural earthquakes, 1979-2017.

**TABLE 1 : CATALOGUE OF EVENTS : 2017**

Year	Mo	Dy	Hr	Mn	Secs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	Gap	RMS	ERH	ERZ	Comments
2017	01	01	06	32	05.4	52.41	-2.23	384.2	278.7	5.0	0.6	BLAKEDOWN, WORCS		4	212	0.10	5.10	7.30	
2017	01	02	19	40	07.7	54.88	-3.27	318.2	554.9	7.7	0.9	KIRKBRIDE, CUMBRIA		8	74	0.30	3.00	3.30	
2017	01	03	18	52	24.8	54.44	1.96	656.8	512.0	18.7	3.8	SOUTHERN NORTH SEA	2	24	96	0.30	7.41	1.90	FELT SCARBOROUGH
2017	01	06	16	33	34.3	57.20	-5.83	168.8	819.2	9.9	0.8	SKYE, HIGHLAND		4	202	0.10	4.25	3.30	
2017	01	06	23	09	01.7	51.62	-3.16	319.8	192.2	11.7	0.9	YNYSDDU, CAERPHILLY		9	106	0.30	3.58	5.20	
2017	01	08	10	26	45.1	51.65	-1.45	438.3	194.6	16.6	0.9	CHARNEY BASSETT, OXON		5	153	0.20	3.26	4.10	
2017	01	12	13	51	43.8	56.35	-6.20	140.8	725.7	7.2	1.1	MULL, ARGYLL & BUTE		4	166	0.10	1.96	1.30	OFFSHORE LOCATION
2017	01	13	20	15	08.1	54.67	-2.15	390.4	530.6	4.6	0.9	NEWBIGGIN, CO DURHAM		5	123	0.20	3.18	5.10	
2017	01	13	22	51	43.4	52.14	-2.45	369.2	249.1	8.5	0.8	CRADLEY, HEREFORDSHIRE		6	188	0.20	3.75	8.80	
2017	01	15	22	58	59.8	53.03	-4.01	265.0	350.1	7.7	1.0	BEDDGELERT, GWYNEDD	3	8	155	0.30	8.60	1.50	FELT LLANBERIS...
2017	01	17	01	16	23.1	51.63	-3.01	330.2	193.4	6.3	0.5	CWMBRAN, TORFAEN		6	174	0.30	8.79	5.50	
2017	01	20	20	09	30.8	54.71	-3.56	299.8	536.5	3.4	0.4	MARYPORT, CUMBRIA		6	118	0.30	2.98	6.20	
2017	01	21	16	00	47.3	56.36	-5.38	190.9	724.0	3.6	1.2	KILMORE, ARGYLL & BUTE	2	6	154	0.40	6.20	4.80	FELT NORTH CONNEL
2017	01	21	21	57	56.8	51.70	-3.17	318.9	201.0	22.7	1.1	BARGOED, CAERPHILLY		4	290	0.00	1.03	0.80	
2017	01	22	14	31	17.3	51.19	-4.41	231.3	145.9	13.9	0.6	BRISTOL CHANNEL		5	137	0.10	2.82	1.80	15KM WEST WOOLACOMBE
2017	01	22	22	33	06.5	53.70	-1.92	405.3	422.6	4.4	1.0	HALIFAX, WEST YORKSHIRE		9	105	0.20	3.20	2.70	
2017	01	24	05	27	47.3	55.86	-6.52	117.5	672.1	8.4	1.0	ISLAY, ARGYLL & BUTE		4	298	0.40	4.31	6.80	OFFSHORE LOCATION
2017	01	24	16	35	28.9	56.07	-5.25	197.7	690.7	11.0	2.4	LEPHINMORE, ARGYLL/BUTE	3	17	171	0.40	5.73	6.60	FELT LOCHGILPHEAD...
2017	01	25	16	32	15.4	56.05	-5.26	197.1	689.1	9.3	1.4	LEPHINMORE, ARGYLL/BUTE	2	9	133	0.50	0.88	4.40	FELT KILMORY
2017	01	28	02	31	09.1	55.46	-5.13	201.9	623.3	9.9	0.6	ARRAN, NORTH AYRSHIRE		6	113	0.40	4.79	2.40	
2017	01	28	03	21	50.0	56.96	-5.58	182.7	791.5	7.4	1.5	LOCH MORAR, HIGHLAND		9	158	0.70	7.85	4.90	
2017	01	28	03	43	51.0	55.38	-3.37	313.2	610.7	4.6	0.4	BODESBECK, D & G		4	243	0.10	8.46	2.30	
2017	01	28	07	50	51.9	50.81	-4.67	211.7	105.1	2.6	0.4	BUDE, CORNWALL		5	148	0.30	4.78	5.10	8KM WEST BUDE
2017	01	29	00	40	35.9	53.07	-2.13	391.0	352.2	7.5	1.1	ENDON, STAFFORDSHIRE		8	124	0.30	2.30	7.10	
2017	01	31	05	01	59.3	58.15	-5.20	211.6	922.7	14.1	0.5	LOCHINVER, HIGHLAND		4	153	0.10	2.16	1.00	
2017	02	04	01	24	57.9	53.67	-1.98	401.7	419.4	7.5	1.3	RISHWORTH, W YORKSHIRE		8	137	0.40	7.81	4.90	
2017	02	09	09	21	41.3	51.62	-3.20	316.9	192.1	7.5	0.7	YNYSDDU, CAERPHILLY		6	183	0.20	3.26	5.60	
2017	02	10	02	13	46.3	52.42	-2.73	350.1	280.2	7.7	0.3	LUDLOW, SHROPSHIRE		6	132	0.20	2.30	8.10	5KM NNW LUDLOW
2017	02	10	06	09	29.7	56.96	-4.68	237.2	788.5	12.6	0.5	GLEN ROY, HIGHLAND		4	159	0.10	1.66	3.20	
2017	02	10	21	55	06.5	57.70	-4.14	272.5	869.4	6.4	0.6	INVERGORDON, HIGHLAND		5	144	0.20	2.22	4.30	
2017	02	14	23	00	06.0	51.88	-4.59	221.5	223.4	8.1	1.4	LLANBOIDY, CARMARTHS	13	132	0.30	2.69	2.60		
2017	02	16	02	38	32.6	57.63	-6.04	158.7	866.7	7.4	0.2	SOUTH RONA, HIGHLAND		4	176	0.30	4.48	7.50	
2017	02	17	05	32	57.6	53.52	-0.28	514.1	404.6	16.3	1.5	CAISTOR, LINCOLNSHIRE		15	156	0.30	3.77	2.90	
2017	02	17	05	39	29.1	53.50	-0.29	513.2	401.6	17.7	1.3	CAISTOR, LINCOLNSHIRE		12	154	0.20	4.09	2.50	
2017	02	17	21	16	26.8	53.48	-4.18	255.3	400.3	7.4	0.9	AMLWCH, ANGLESEY		8	151	0.30	3.97	4.40	13KM NE AMLWCH
2017	02	17	23	41	13.8	56.82	-5.24	202.3	774.3	11.2	0.6	DUISKY, HIGHLAND		4	148	0.30	4.59	9.70	
2017	02	18	00	48	37.5	52.84	-3.25	315.8	328.3	11.1	1.3	LLANSILIN, POWYS		12	87	0.30	2.98	1.90	
2017	02	18	02	36	52.3	56.28	-4.88	221.5	713.6	4.6	1.7	CAIRNDOW, ARGYLL & BUTE		11	104	0.30	5.46	1.40	
2017	02	18	13	19	51.5	52.19	-2.60	358.6	254.7	6.6	0.6	PENCOMBE, HEREFORDSHIRE		7	173	0.10	1.39	3.30	
2017	02	20	19	41	03.9	53.12	-4.48	234.0	360.9	10.0	0.4	CAERNARFON BAY		7	239	0.30	0.58	3.90	8KM SSW ABERFFRAW
2017	02	22	21	20	23.0	55.90	-5.28	195.1	672.7	18.3	0.4	KAMES, ARGYLL & BUTE		6	139	0.30	5.41	5.40	
2017	02	23	18	09	04.3	57.51	-5.55	187.6	852.3	4.3	0.9	TORRIDON, HIGHLAND		6	114	0.20	3.64	3.80	

**TABLE 1 : CATALOGUE OF EVENTS : 2017**

<b>Year</b>	<b>Mo</b>	<b>Dy</b>	<b>Hr</b>	<b>Mn</b>	<b>Secs</b>	<b>Lat</b>	<b>Lon</b>	<b>kmE</b>	<b>kmN</b>	<b>Dep</b>	<b>Mag</b>	<b>Locality</b>	<b>Int</b>	<b>No</b>	<b>Gap</b>	<b>RMS</b>	<b>ERH</b>	<b>ERZ</b>	<b>Comments</b>
2017	02	23	23	38	42.4	56.70	-5.08	211.6	760.9	4.5	1.0	GLENCOE, HIGHLAND		6	132	0.30	4.22	3.50	
2017	02	24	08	48	08.8	54.67	-2.59	361.7	530.6	7.9	0.5	CULGAITH, CUMBRIA		5	185	0.20	3.18	3.90	
2017	03	03	09	28	11.0	52.91	-2.15	390.0	334.8	13.1	2.6	STONE, STAFFORDSHIRE	2	21	72	0.40	3.47	4.10	FELT OAKAMOOR
2017	03	04	05	44	41.2	58.15	-5.46	196.6	923.5	2.7	0.8	LOCHINVER, HIGHLAND		4	157	0.20	5.28	6.80	12KM WEST LOCHINVER
2017	03	04	19	54	18.8	53.26	-0.20	520.2	375.1	15.5	1.7	HORNCASTLE, LINCOLNSHIRE		13	147	0.10	1.57	1.30	
2017	03	09	05	48	43.3	54.23	-4.67	226.2	484.9	2.0	0.4	ISLE OF MAN		4	203	0.10	2.77	1.30	
2017	03	09	10	47	34.7	52.70	-2.46	369.1	311.5	4.7	0.3	TELFORD, SHROPSHIRE		4	261	0.10	3.54	2.10	
2017	03	10	05	06	26.8	53.05	-5.51	165.0	356.0	9.2	0.6	IRISH SEA		7	134	0.40	5.50	1.70	
2017	03	12	22	07	54.8	56.61	-5.17	205.4	751.4	8.6	0.6	GLENCOE, HIGHLAND		4	141	0.30	2.95	9.20	
2017	03	13	03	07	12.5	49.95	-1.07	466.6	6.1	5.0	1.6	ENGLISH CHANNEL		9	176	0.20	6.22	0.00	75KM SSE VENTNOR
2017	03	16	06	25	20.3	56.38	-4.26	260.2	723.4	2.4	0.8	LOCHEARNHEAD, STIRLING		4	161	0.40	5.12	9.70	
2017	03	20	02	06	45.8	54.53	-0.79	478.4	516.0	1.8	1.3	HINDERWELL, N YORKSHIRE	3	17	214	0.30	4.56	0.00	FELT HINDERWELL...
2017	03	20	02	16	06.2	54.53	-0.79	478.1	515.5	1.9	1.3	HINDERWELL, N YORKSHIRE	3	15	219	0.40	7.51	0.00	FELT HINDERWELL...
2017	03	20	04	24	27.4	54.51	-0.77	479.8	513.5	1.7	0.8	HINDERWELL, N YORKSHIRE	2	5	293	0.20	7.61	0.00	FELT STAITHES
2017	03	23	02	47	36.4	51.91	-2.31	378.4	224.1	2.3	0.7	HIGHLEADON, GLOS		6	131	0.40	3.69	3.80	
2017	03	28	06	12	05.2	51.97	-2.74	348.9	230.9	3.9	0.8	HEREFORD, HEREFORDSHIRE		6	127	0.20	2.39	3.20	8KM SSW HEREFORD
2017	03	28	09	16	35.4	53.28	-0.56	496.3	377.3	17.1	1.7	SCAMPTON, LINCOLNSHIRE		11	92	0.10	1.57	2.60	
2017	03	31	22	24	43.8	59.75	1.90	619.3	1102.8	11.5	2.4	NORTHERN NORTH SEA		11	136	0.40	7.00	7.10	175KM ESE LERWICK
2017	04	01	21	15	34.8	57.35	-5.86	167.6	835.6	6.5	0.4	APPLECROSS, HIGHLAND		5	160	0.20	2.94	2.10	
2017	04	02	20	43	23.6	57.29	-5.66	179.5	827.9	3.0	0.6	BALMACARA, HIGHLAND		5	151	0.20	3.86	3.10	
2017	04	05	15	51	03.5	53.86	-3.68	289.5	441.9	1.9	0.9	IRISH SEA		7	139	0.20	2.12	1.80	40KM WEST BLACKPOOL
2017	04	07	10	04	58.9	53.07	2.73	717.0	363.4	10.0	2.7	SOUTHERN NORTH SEA		4	284	0.60	6.48	0.00	90KM NE LOWESTOFT
2017	04	09	03	16	46.0	56.47	-5.38	192.0	735.8	7.7	0.6	ACHNACAIRN, ARGYLL/BUTE		3	167	0.10	4.13	8.10	
2017	04	10	04	49	57.7	49.97	-1.25	453.6	8.3	5.0	1.4	ENGLISH CHANNEL		6	288	0.10	5.81	3.50	70KM SSW VENTNOR
2017	04	10	18	20	31.7	57.76	-5.72	179.0	880.3	7.5	0.8	GAIRLOCH, HIGHLAND		4	127	0.20	3.14	7.50	3KM NNW GAIRLOCH
2017	04	11	03	19	05.7	57.75	-5.70	179.7	879.8	7.5	0.7	GAIRLOCH, HIGHLAND		5	126	0.30	3.68	7.80	3KM NNW GAIRLOCH
2017	04	11	16	01	20.1	53.23	0.34	556.2	372.4	13.6	1.7	SKEGNESS, LINCOLNSHIRE		6	218	0.30	6.40	4.10	8KM NORTH SKEGNESS
2017	04	14	00	23	19.6	55.11	-3.65	294.8	581.2	4.3	0.6	DUMFRIES, D & G		5	140	0.30	6.49	5.10	
2017	04	14	03	03	29.8	49.07	-1.71	421.0	-91.8	7.0	1.2	JERSEY, CHANNEL ISLANDS		8	291	0.10	8.78	4.70	25KM SE JERSEY
2017	04	16	14	38	36.4	58.88	1.40	595.9	1004.6	10.2	1.7	CENTRAL NORTH SEA		5	174	0.40	0.30	2.80	200KM SE LERWICK
2017	04	19	12	27	52.9	57.13	-5.68	177.5	810.9	2.5	0.8	LOCH HOURN, HIGHLAND		5	158	0.30	7.89	6.10	7KM WEST ARNISDALE
2017	04	20	02	28	20.2	53.36	-0.62	491.6	385.6	2.2	0.8	SCAMPTON, LINCOLNSHIRE		5	153	0.20	2.42	1.60	13KM NNW LINCOLN
2017	04	22	07	34	12.9	52.34	-1.80	413.9	271.8	7.7	1.0	NUTHURST, WARWICKSHIRE		4	208	0.20	3.98	7.70	
2017	04	27	10	38	32.7	54.77	-3.24	320.4	542.7	4.1	1.7	ASPATRIA, CUMBRIA		9	83	0.20	1.92	5.20	6KM EAST ASPATRIA
2017	04	28	13	26	54.4	52.96	-3.39	306.4	341.1	7.1	1.3	CYNWYD, DENBIGHSHIRE		11	97	0.30	5.37	4.40	
2017	05	03	21	26	42.7	52.54	-1.85	410.2	293.3	7.7	0.7	ERDINGTON, WEST MIDLAND		6	136	0.20	2.47	2.90	
2017	05	07	04	47	41.3	52.98	-1.96	402.7	342.8	11.7	0.5	CHEADLE, STAFFORDSHIRE		6	103	0.10	1.64	2.70	
2017	05	10	10	22	43.3	51.35	2.12	686.8	169.7	6.5	2.0	SOUTHERN NORTH SEA		8	136	0.50	1.11	4.30	50KM EAST RAMSGATE
2017	05	12	17	36	12.3	53.18	-4.51	232.4	367.3	10.7	0.9	ABERFFRAW, ANGLESEY		9	145	0.40	6.26	4.60	
2017	05	15	12	04	30.1	54.78	-3.22	321.5	543.0	4.5	0.9	ASPATRIA, CUMBRIA		5	84	0.20	1.61	0.00	7KM EAST ASPATRIA
2017	05	16	04	30	39.7	53.83	-1.27	448.1	436.8	6.0	1.9	SAXTON, NORTH YORKSHIRE		14	90	0.10	1.39	1.70	
2017	05	17	19	44	27.4	49.67	-2.38	372.7	-25.6	9.0	1.0	ALDERNEY, CHANNEL ISLES		3	206	0.20	2.78	0.00	10KM WSW ALDERNEY

**TABLE 1 : CATALOGUE OF EVENTS : 2017**

<b>Year</b>	<b>Mo</b>	<b>Dy</b>	<b>Hr</b>	<b>Mn</b>	<b>Secs</b>	<b>Lat</b>	<b>Lon</b>	<b>kmE</b>	<b>kmN</b>	<b>Dep</b>	<b>Mag</b>	<b>Locality</b>	<b>Int</b>	<b>No</b>	<b>Gap</b>	<b>RMS</b>	<b>ERH</b>	<b>ERZ</b>	<b>Comments</b>
2017	05	18	00	14	06.8	56.34	-6.07	148.4	723.8	6.2	0.6	MULL, ARGYLL & BUTE		4	192	0.20	4.33	4.60	
2017	05	18	23	04	14.6	53.04	-5.43	170.1	354.9	13.9	0.9	IRISH SEA		8	223	0.30	9.18	7.50	40KM ENE WICKLOW
2017	05	19	23	14	23.5	57.05	-5.74	173.1	801.6	7.5	1.8	KNOYDART, HIGHLAND	3	10	145	0.30	6.57	7.70	FELT KNOYDART...
2017	05	20	03	51	58.1	57.05	-5.74	173.3	801.7	7.5	0.6	KNOYDART, HIGHLAND		5	165	0.30	8.42	9.70	
2017	05	22	15	33	31.6	53.50	-0.90	473.0	401.3	4.8	1.7	HAXEY, NORTH LINCS		12	101	0.30	2.55	6.30	
2017	05	22	21	57	52.6	57.04	-5.74	172.9	800.5	7.7	1.1	KNOYDART, HIGHLAND		10	166	0.40	8.08	6.50	
2017	05	25	02	09	54.7	52.67	-1.86	409.5	308.4	3.0	1.2	LICHFIELD, STAFFORDSHIRE		9	128	0.40	5.41	1.30	
2017	05	26	21	26	06.3	50.63	-3.32	306.4	82.2	8.4	1.2	EXMOUTH, DEVON		6	235	0.30	7.93	8.70	
2017	05	26	21	59	25.8	56.08	-6.03	149.6	694.3	2.5	0.7	JURA, ARGYLL & BUTE		3	239	0.20	0.85	2.20	OFFSHORE LOCATION
2017	05	29	01	11	002.9	53.01	-4.46	234.8	349.2	4.6	1.3	CAERNARFON BAY		9	155	0.40	4.62	5.10	
2017	05	30	22	15	35.9	56.40	-5.66	174.4	729.4	3.5	0.5	MULL, ARGYLL & BUTE		4	225	0.30	1.57	6.80	OFFSHORE LOCATION
2017	05	31	06	25	10.6	49.02	-1.70	422.1	-97.6	7.7	1.0	JERSEY, CHANNEL ISLANDS		3	343	0.00	1.92	0.40	30KM SE JERSEY
2017	06	02	20	08	46.1	56.91	-5.05	214.5	783.5	7.5	2.0	SPEAN BRIDGE, HIGHLAND	3	11	125	0.60	7.26	3.60	FELT SPEAN BRIDGE...
2017	06	03	20	44	50.7	53.36	-3.31	312.9	385.5	15.3	0.5	TALACRE, FLINTSHIRE		7	126	0.30	4.94	6.50	
2017	06	05	13	17	54.7	53.26	-0.44	504.1	374.4	2.7	2.1	LINCOLN, LINCOLNSHIRE	3	10	110	0.10	3.04	7.10	FELT REEPHAM...
2017	06	06	00	05	43.1	56.13	-3.94	279.1	694.5	7.5	1.0	STIRLING, STIRLING		10	70	0.50	4.75	4.10	
2017	06	06	18	48	8.8	52.47	-3.72	283.4	287.4	5.6	1.1	LLANGURIG, POWYS		10	103	0.30	2.01	9.40	10KM NW LLANGURIG
2017	06	10	12	46	39.8	51.40	-2.90	337.7	167.3	12.0	1.3	CLEVEDON, NORTH SOMERSET		9	134	0.10	1.57	1.60	
2017	06	10	14	37	18.2	57.53	-5.43	194.6	854.3	4.9	0.5	TORRIDON, HIGHLAND		5	106	0.10	1.90	1.70	
2017	06	10	23	05	06.7	52.12	-2.36	375.3	247.5	6.5	2.4	MALVERN, WORCESTERSHIRE	3	20	93	0.30	2.82	3.10	FELT MALVERN
2017	06	17	06	09	29.6	53.02	-1.10	460.4	346.8	9.6	1.0	ARNOLD, NOTTINGHAMSHIRE		6	223	0.10	2.73	1.90	
2017	06	17	10	47	51.6	57.45	-5.59	184.8	846.2	4.1	1.0	LOCHCARRON, HIGHLAND		6	119	0.20	3.38	3.40	8KM NW LOCHCARRON
2017	06	25	11	53	08.8	54.15	-2.90	341.3	473.5	5.0	1.7	KENTS BANK, CUMBRIA		20	47	0.20	1.80	4.40	
2017	06	28	14	48	47.1	53.26	-2.88	341.2	373.8	6.8	1.1	ELLESMORE PORT, CHESHIRE		6	106	0.20	1.86	3.70	
2017	06	30	13	33	45.2	58.95	1.87	622.3	1013.6	7.4	4.7	CENTRAL NORTH SEA	3	37	80	0.50	5.64	8.70	FELT LERWICK...
2017	07	06	02	09	20.7	50.00	-2.60	356.6	11.6	5.0	0.9	ENGLISH CHANNEL		5	218	0.70	3.53	0.00	80KM SE DARTMOUTH
2017	07	07	01	42	41.6	58.42	1.58	609.1	953.3	10.7	3.6	CENTRAL NORTH SEA		33	73	0.30	5.19	9.10	220KM ENE PETERHEAD
2017	07	11	01	23	57.7	51.75	-3.03	328.9	206.7	16.4	1.3	LLANOVER, MONMOUTHSHIRE		9	194	0.20	2.08	1.30	
2017	07	11	04	35	55.2	51.58	-3.20	316.9	187.6	12.6	1.1	BEDWAS, CAERPHILLY		7	219	0.20	3.56	3.30	
2017	07	16	10	28	48.7	51.70	-3.23	315.0	200.4	7.5	2.1	BARGOED, CAERPHILLY		12	117	0.20	2.00	5.10	
2017	07	17	21	00	00.0							SONIC-CHANNEL ISLANDS	3						FELT JERSEY/GUERNSEY
2017	07	19	18	46	39.7	52.23	-4.32	241.5	261.7	15.6	1.0	ABERAERON, CEREDIGION		8	131	0.40	4.29	2.00	5KM WEST ABERAERON
2017	07	23	07	58	48.2	57.88	-5.29	204.7	892.2	7.7	2.3	BADRALLACH, HIGHLAND	3	7	105	0.30	3.85	4.40	FELT BADRALLACH...
2017	07	24	21	59	02.5	51.57	-3.21	316.1	186.8	11.1	0.7	CAERPHILLY, CAERPHILLY		7	159	0.20	4.16	3.70	
2017	07	26	20	00	29.4	52.39	-3.70	284.6	278.7	4.3	0.5	LLANGURIG, POWYS		5	126	0.10	0.72	1.90	6KM WEST LLANGURIG
2017	07	27	19	55	26.9	53.03	-2.84	343.9	348.2	12.2	0.8	SHOCKLACK, CHESHIRE		6	134	0.30	3.14	4.30	
2017	07	28	20	14	11.2	54.05	-1.92	405.2	462.0	9.2	0.7	HEBDEN, NORTH YORKSHIRE		6	86	0.20	2.24	3.30	
2017	07	28	17	17	22.8	56.33	-3.64	298.6	716.5	12.1	0.9	ABERTHVEN, PERTH/KINROSS		6	119	0.40	5.10	7.00	
2017	07	29	03	54	05.1	55.88	-5.24	197.3	670.3	10.0	1.1	KAMES, ARGYLL & BUTE		7	135	0.30	4.11	0.80	
2017	07	29	20	51	52.7	52.27	-3.91	269.4	264.9	7.5	1.4	TREGARON, CEREDIGION		11	99	0.50	4.32	4.90	
2017	08	02	02	15	34.3	60.94	3.80	713.8	1242.1	13.9	3.1	NORTHERN NORTH SEA		7	217	0.40	5.96	3.80	285KM ENE LERWICK
2017	08	02	05	46	12.9	55.10	-7.56	45.5	592.3	2.0	1.4	CO DONEGAL, IRELAND	2	6	260	0.60	2.68	0.00	FELT MILFORD

**TABLE 1 : CATALOGUE OF EVENTS : 2017**

Year	Mo	Dy	Hr	Mn	Secs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	Gap	RMS	ERH	ERZ	Comments
2017	08	02	17	43	52.4	56.98	-5.09	212.3	791.6	7.5	1.4	GAIRLOCHY, HIGHLAND		7	126	0.30	3.99	8.70	
2017	08	04	02	19	47.6	57.14	-4.07	274.9	806.9	6.6	1.5	KINGUSSIE, HIGHLAND	3	7	100	0.50	5.22	1.90	FELT KINGUSSIE...
2017	08	04	14	43	38.7	56.80	-5.89	162.7	774.9	12.2	4.0	MOIDART, HIGHLAND	5	26	153	0.40	6.60	4.50	FELT MOIDART...
2017	08	04	14	45	34.1	56.80	-5.87	163.8	774.0	10.6	3.4	MOIDART, HIGHLAND	4	11	178	0.30	6.89	4.70	FELT MOIDART...
2017	08	04	15	20	24.0	56.80	-5.87	163.7	774.7	8.8	1.1	MOIDART, HIGHLAND		5	181	0.30	4.57	3.60	
2017	08	04	16	07	26.5	56.79	-5.89	162.3	773.7	8.2	1.2	MOIDART, HIGHLAND		4	221	0.20	6.42	8.50	
2017	08	04	17	35	06.3	56.81	-5.87	163.5	775.1	10.1	2.2	MOIDART, HIGHLAND	3	11	178	0.30	8.54	5.90	FELT MOIDART...
2017	08	05	00	49	53.1	49.36	-2.34	375.5	-59.7	11.0	1.1	JERSEY, CHANNEL ISLANDS		3	191	0.10	8.56	8.00	10KM NW JERSEY
2017	08	05	21	05	02.8	52.27	-2.77	347.4	263.9	7.7	0.8	YARPOLE, HEREFORDSHIRE		7	145	0.30	2.86	3.20	
2017	08	06	02	08	23.7	54.02	0.86	587.4	461.8	10.0	1.5	SOUTHERN NORTH SEA		13	249	0.40	6.40	0.00	
2017	08	09	04	41	39.1	53.51	-4.40	240.7	404.4	9.5	2.0	AMLWCH, ANGLESEY	2	12	138	0.40	8.10	8.90	FELT AMLWCH
2017	08	09	15	34	32.0	50.35	-0.41	512.8	51.4	5.0	2.0	ENGLISH CHANNEL		6	173	0.20	7.05	0.00	55KM SSW BRIGHTON
2017	08	10	12	48	44.6	53.95	-3.34	312.1	450.7	2.5	1.7	IRISH SEA		16	62	0.30	2.50	2.90	20KM WNW FLEETWOOD
2017	08	11	03	44	08.7	53.23	-0.35	510.1	372.1	2.4	1.4	BARDNEY, LINCOLNSHIRE		7	226	0.40	4.52	7.60	
2017	08	14	00	43	35.2	49.25	-2.49	364.2	-72.3	10.1	1.6	JERSEY, CHANNEL ISLANDS		4	138	0.20	8.14	2.80	15KM WEST JERSEY
2017	08	15	10	20	17.5	56.40	-5.59	178.6	729.2	13.1	0.8	KERRERA, ARGYLL & BUTE		5	165	0.10	2.47	1.40	OFFSHORE LOCATION
2017	08	16	02	27	31.7	53.05	-4.52	231.0	353.4	3.0	1.0	CAERNARFON BAY		12	93	0.40	3.99	6.00	
2017	08	20	01	42	42.2	55.66	-5.63	171.5	647.3	12.2	0.7	TAYINLOAN, ARGYLL/BUTE		7	167	0.30	5.79	7.00	
2017	08	25	20	56	52.9	57.20	-5.53	186.7	817.6	4.5	0.6	GLENELG, HIGHLAND		5	148	0.10	2.89	1.70	
2017	08	26	23	47	41.3	59.82	2.20	635.3	1111.4	10.0	2.0	NORTHERN NORTH SEA		6	300	0.20	6.80	0.00	190KM ESE LERWICK
2017	08	29	18	10	41.2	55.79	-6.36	127.0	663.8	8.4	1.3	ISLAY, ARGYLL & BUTE		5	240	0.30	5.57	7.70	
2017	08	30	02	43	47.3	55.13	-5.04	206.0	585.6	7.5	1.1	BALLANTRAE, AYRSHIRE		8	104	0.40	3.74	8.40	OFFSHORE LOCATION
2017	08	02	10	57	30.0	56.08	-5.16	203.3	692.3	11.7	1.0	DUNANS, ARGYLL & BUTE		7	115	0.20	1.94	3.30	
2017	08	07	12	08	41.9	56.78	-5.47	188.1	770.8	11.6	1.3	GLENFINNAN, HIGHLAND		5	156	0.20	4.40	2.40	
2017	08	08	20	47	09.8	52.69	-0.75	484.7	310.5	2.7	1.3	LANGHAM, RUTLAND	3	7	150	0.40	3.86	4.90	FELT OAKHAM...
2017	08	09	03	06	11.1	56.08	-5.50	182.0	693.0	12.7	0.5	CAIRNBAAN, ARGYLL/BUTE		6	157	0.30	4.81	3.00	
2017	08	10	05	40	54.1	56.51	-6.14	145.4	742.7	12.4	0.9	MULL, ARGYLL & BUTE		5	226	0.40	7.62	8.30	
2017	08	10	09	52	45.4	51.69	-4.44	231.4	201.6	8.1	0.6	CARMARTHEN BAY		4	142	0.40	2.47	3.00	
2017	08	11	20	55	59.6	53.31	-1.83	411.3	379.8	1.1	0.7	TIDESWELL, DERBYSHIRE		4	171	0.10	2.77	1.60	COLLAPSE TYPE
2017	08	13	01	09	00.6	57.58	-5.38	197.7	859.9	4.5	0.5	KINLOCHEWE, HIGHLAND		6	107	0.40	6.17	4.40	5KM WSW KINLOCHEWE
2017	08	13	01	16	41.1	53.65	-0.89	473.4	417.8	8.0	1.3	THORNE, SOUTH YORKSHIRE		5	117	0.30	2.95	8.80	6KM NE THORNE
2017	08	13	06	50	40.5	56.14	-5.77	166.0	700.9	4.3	0.5	SCARBA, ARGYLL & BUTE		4	172	0.30	4.92	0.00	OFFSHORE LOCATION
2017	08	14	08	14	46.2	58.75	1.54	604.9	989.7	18.0	3.3	CENTRAL NORTH SEA		23	84	0.50	5.64	0.00	220KM SE LERWICK
2017	08	18	12	26	16.8	56.80	-5.86	164.5	774.1	8.3	1.1	MOIDART, HIGHLAND		5	184	0.30	7.82	2.10	
2017	08	20	04	32	23.3	55.95	-4.83	223.4	676.3	11.6	0.4	GREENOCK, INVERCLYDE		4	157	0.30	3.64	5.70	
2017	08	22	01	19	48.9	49.06	-2.37	372.8	-93.4	6.9	1.9	JERSEY, CHANNEL ISLANDS		6	162	0.20	2.84	2.20	15KM SW JERSEY
2017	08	23	02	04	51.1	52.70	-1.43	438.8	311.5	2.8	0.8	IBSTOCK, LEICESTERSHIRE		7	137	0.30	4.70	7.30	
2017	08	24	01	48	20.1	57.71	-4.25	265.9	871.3	13.8	0.7	ALNESS, HIGHLAND		5	116	0.20	2.51	3.80	
2017	08	24	23	42	20.6	55.87	-5.32	192.6	668.7	14.2	0.4	PORTAVADIE, ARGYLL/BUTE		5	143	0.20	5.67	9.60	
2017	08	25	15	56	20.3	52.70	-1.43	438.4	311.6	2.5	0.8	IBSTOCK, LEICESTERSHIRE		5	162	0.30	3.20	0.00	
2017	08	25	19	17	11.9	52.70	-1.43	438.8	311.5	2.5	0.6	IBSTOCK, LEICESTERSHIRE		5	164	0.30	4.16	4.00	
2017	08	26	01	18	42.1	52.70	-1.43	438.6	311.2	2.6	0.7	IBSTOCK, LEICESTERSHIRE		6	137	0.20	3.76	6.20	

**TABLE 1 : CATALOGUE OF EVENTS : 2017**

<b>Year</b>	<b>Mo</b>	<b>Dy</b>	<b>Hr</b>	<b>Mn</b>	<b>Secs</b>	<b>Lat</b>	<b>Lon</b>	<b>kmE</b>	<b>kmN</b>	<b>Dep</b>	<b>Mag</b>	<b>Locality</b>	<b>Int</b>	<b>No</b>	<b>Gap</b>	<b>RMS</b>	<b>ERH</b>	<b>ERZ</b>	<b>Comments</b>
2017	09	26	04	35	36.4	55.52	-3.06	333.1	625.5	3.5	0.7	ETTRICKBRIDGE, BORDERS		8	147	0.20	2.88	3.40	5KM NW ETTRICKBRIDGE
2017	09	26	13	40	15.5	55.52	-3.06	333.2	626.0	4.2	0.8	ETTRICKBRIDGE, BORDERS		7	148	0.20	2.69	4.00	5KM NW ETTRICKBRIDGE
2017	09	27	01	37	52.6	54.92	-4.02	270.4	559.9	7.5	1.2	RINGFORD, D & G	2	10	80	0.50	4.52	4.30	FELT DALBEATTIE
2017	09	28	01	04	0.4	52.17	-2.58	360.5	252.2	2.5	0.5	PENCOMBE, HEREFORDSHIRE		6	150	0.20	2.10	2.10	
2017	09	28	22	18	48.9	57.24	-5.55	185.6	821.9	5.9	0.7	GLENELG, HIGHLAND		5	148	0.20	4.37	1.90	
2017	09	28	23	21	16.3	52.59	-2.85	342.6	299.0	11.9	0.5	CHURCH STRETTON, SALOP		7	115	0.20	2.10	1.80	
2017	09	29	18	42	15.8	55.52	-3.04	334.7	625.8	3.5	0.9	ETTRICKBRIDGE, BORDERS		8	150	0.20	3.57	3.90	4KM NW ETTRICKBRIDGE
2017	10	04	07	35	00.0							SONIC-SUFFOLK	3	1					FELT SUFFOLK...
2017	10	05	13	33	05.0	58.53	-4.70	242.6	963.3	8.2	0.9	DURNESS, HIGHLAND		4	203	0.60	8.67	4.00	
2017	10	05	17	58	33.3	54.22	-2.82	346.5	480.9	7.2	1.2	ARNSIDE, CUMBRIA		8	102	0.30	2.47	6.30	
2017	10	08	22	55	36.4	56.39	-5.46	186.7	727.2	2.5	1.4	OBAN, ARGYLL & BUTE	2	10	158	0.30	5.41	6.50	FELT MULL
2017	10	09	17	36	47.5	50.60	-2.05	396.7	77.7	6.7	1.9	WORTH MATRAVERS, DORSET		8	253	0.30	8.03	0.00	
2017	10	12	12	32	36.2	55.42	-5.94	150.5	621.1	7.9	1.0	KINTYRE, ARGYLL & BUTE		5	184	0.80	6.79	1.20	OFFSHORE LOCATION
2017	10	13	10	15	43.3	51.85	-3.06	327.1	218.0	14.6	1.0	GOVILON, MONMOUTHSHIRE		3	261	0.10	5.28	2.50	
2017	10	15	13	24	26.0	56.80	-5.86	164.4	774.3	7.7	0.7	MOIDART, HIGHLAND		4	184	0.30	9.08	8.60	
2017	10	18	04	21	25.5	53.06	-4.38	240.5	353.7	12.1	0.8	LLANDWROG, GWYNEDD		7	209	0.30	8.56	6.30	5KM SW LLANDWROG
2017	10	20	09	14	28.5	53.36	-3.02	332.1	385.0	15.7	1.4	BIRKENHEAD, MERSEYSIDE		9	67	0.30	3.19	4.20	
2017	10	22	01	05	53.7	52.98	-1.85	410.3	342.5	7.5	1.6	ELLASTONE, STAFFORDSHIRE	10	64	0.30	3.22	5.70		
2017	10	23	01	30	18.3	55.08	-4.17	261.7	578.8	11.7	0.2	NEW GALLOWAY, D & G		5	129	0.30	9.00	6.80	
2017	10	26	22	45	34.3	57.90	-5.33	203.0	894.4	11.2	0.4	CARNACH, HIGHLAND		4	147	0.30	5.29	7.10	
2017	10	29	23	02	200.9	56.67	-4.25	262.4	755.3	3.0	0.6	RANNOCH, PERTH/KINROSS		4	204	0.10	9.10	1.70	10KM ESE FINNART
2017	10	29	23	02	208.7	56.66	-4.29	259.5	754.2	3.8	1.2	RANNOCH, PERTH/KINROSS		6	122	0.20	2.64	4.10	8KM ESE FINNART
2017	10	30	20	41	47.7	54.96	-2.19	387.8	563.0	3.8	1.2	HEXHAM, NORTHUMBERLAND		5	193	0.20	4.44	5.90	
2017	10	31	15	56	14.8	56.71	-4.25	262.0	760.0	2.7	1.1	RANNOCH, PERTH/KINROSS		7	97	0.40	3.30	5.70	10KM ENE FINNART
2017	10	31	20	50	34.0	52.38	-3.98	265.2	278.1	7.9	0.8	ABERYSTWYTH, CEREDIGION	5	155	0.20	2.78	2.50	7KM EAST ABERYSTWYTH	
2017	11	01	20	59	22.0	55.88	-5.43	185.6	670.9	7.5	2.6	TARBERT, ARGYLL & BUTE	3	14	149	0.40	4.90	1.70	FELT TARBERT...
2017	11	03	21	03	11.2	54.14	-0.41	503.9	472.4	17.6	0.8	WOLD NEWTON, E YORKSHIRE		9	282	0.20	3.94	1.60	
2017	11	05	05	55	131.1	52.83	-2.46	368.8	325.5	7.5	1.0	HINSTOCK, SHROPSHIRE		8	105	0.40	3.33	8.80	
2017	11	05	15	40	16.2	53.47	-2.50	366.7	396.7	3.3	1.4	GLAZEBURY, CHESHIRE		10	57	0.30	3.05	8.60	
2017	11	07	08	46	35.7	60.47	4.69	767.2	1194.7	11.3	3.7	NORWEGIAN COAST	3	12	126	0.30	6.55	4.80	FELT HORDALAND
2017	11	07	14	33	56.0	53.04	-4.49	232.8	352.1	15.5	1.4	CAERNARFON BAY		10	93	0.20	2.06	5.40	7KM NW TREFOR
2017	11	07	19	23	29.7	57.53	-5.46	192.6	854.0	7.5	0.9	TORRIDON, HIGHLAND		6	104	0.40	5.32	9.80	
2017	11	09	06	46	07.0	50.71	-4.25	240.9	92.1	5.6	1.1	ASHWATER, DEVON		3	169	0.20	1.84	0.00	
2017	11	11	14	40	43.1	55.66	-3.11	330.0	640.7	5.8	1.5	PEEBLES, BORDERS		10	126	0.30	3.23	3.20	5KM EAST PEEBLES
2017	11	11	19	04	807.2	52.93	-1.82	412.3	337.5	6.5	0.6	WALDLEY, DERBYSHIRE		4	116	0.10	0.72	2.30	
2017	11	12	05	55	407.2	56.01	-4.22	261.8	681.8	7.5	0.8	LENNOXTOWN, E DUNBARTON		9	74	0.20	1.79	4.10	
2017	11	12	08	49	31.6	54.13	-3.38	310.0	471.5	5.3	0.7	WALNEY, CUMBRIA		6	155	0.20	2.64	4.70	OFFSHORE LOCATION
2017	11	12	07	55	331.0	53.83	-2.13	391.2	436.9	12.5	1.0	TRAWDEN, LANCASHIRE		6	109	0.10	3.06	3.80	
2017	11	12	08	00	3110.3	55.18	-3.56	300.9	588.0	2.5	1.1	PARKGATE, D & G	11	90	0.40	3.72	4.40		
2017	11	20	09	48	34.6	56.53	-5.43	189.3	742.9	5.9	1.3	BENDERLOD, ARGYLL/BUTE		4	175	0.40	3.65	2.70	4KM NNW BENDERLOD
2017	12	10	01	00	45.8	56.46	-6.25	138.3	738.2	6.6	0.5	MULL, ARGYLL & BUTE		3	267	0.20	7.53	7.90	OFFSHORE LOCATION
2017	12	12	02	25	142.6	51.78	-2.95	334.5	209.7	13.8	1.4	LLANOVER, MONMOUTHSHIRE		7	236	0.30	8.73	3.90	

**TABLE 1 : CATALOGUE OF EVENTS : 2017**

Year	Mo	Dy	Hr	Mn	Secs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	Gap	RMS	ERH	ERZ	Comments
2017	12	12	10	0.0	54.18	-2.21	386.0	476.1	4.0	1.4	LITTON, NORTH YORKSHIRE	16	130	0.30	1.58	4.30			
2017	12	13	02	0.7	55.78	-6.42	122.8	662.7	6.0	0.9	ISLAY, ARGYLL & BUTE	6	209	0.10	3.64	5.50			
2017	12	13	02	0.9	55.77	-6.41	123.5	661.9	6.4	0.8	ISLAY, ARGYLL & BUTE	5	209	0.20	3.98	0.00			
2017	12	13	02	12	55.78	-6.42	123.0	663.0	7.9	1.1	ISLAY, ARGYLL & BUTE	7	209	0.40	8.86	7.20			
2017	12	15	04	28	12.1	57.51	-5.08	215.3	850.5	7.4	1.0	ACHNASHEEN, HIGHLAND	4	203	0.30	8.36	1.50		
2017	12	18	02	59	19.1	56.35	-6.07	148.3	724.8	7.5	0.9	MULL, ARGYLL & BUTE	6	192	0.40	7.12	0.50		
2017	12	19	19	21	52.6	52.42	0.22	550.8	282.4	4.5	1.0	ELY, CAMBRIDGESHIRE	6	135	0.40	3.68	3.90		
2017	12	20	08	15	46.3	56.64	-5.91	160.5	756.6	7.7	1.5	MORVERN, HIGHLAND	3	7	183	0.30	7.64	7.10	FELT LISMORE...
2017	12	22	01	39	46.7	57.19	-4.46	251.5	813.3	7.5	0.5	WHITEBRIDGE, HIGHLAND	6	91	0.30	4.39	9.50		
2017	12	26	06	25	43.9	56.33	-5.43	187.9	720.0	4.4	0.6	KILMORE, ARGYLL & BUTE	5	156	0.20	5.06	1.80	9KM SSE OBAN	
2017	12	26	15	04	07.8	52.59	-1.81	412.9	299.3	8.1	1.0	SUTTON, WEST MIDLANDS	6	167	0.20	2.14	4.60	SUTTON COLDFIELD	
2017	12	26	22	40	05.8	56.44	-5.74	169.4	733.6	8.8	1.7	MULL, ARGYLL & BUTE	3	7	174	0.20	7.76	6.50	FELT MULL...
2017	12	26	23	29	37.8	53.45	-2.70	353.4	395.6	7.5	1.0	ST HELENS, MERSEYSIDE	10	109	0.30	2.22	6.20		
2017	12	27	11	54	14.0	52.80	1.84	658.7	329.8	5.0	2.1	SOUTHERN NORTH SEA	4	279	0.40	7.28	0.00	11KM OFF NORFOLK	
2017	12	29	02	03	02.3	52.02	-3.76	279.1	237.8	7.4	1.0	LLANDOVERY, CARMARTHENS	6	240	0.10	4.17	3.40		
2017	12	31	08	56	40.5	50.10	-3.17	316.4	23.0	7.3	1.9	ENGLISH CHANNEL	10	183	0.50	6.45	5.80	40KM SE DARTMOUTH	

**TABLE 2 : PHASE DATA**

January 1 2017	Time: 06:32 05.4 UTC	Magnitude: 0.6 ML	MCD	EZ	478.0	EP	18:53	27.70	-0.18
Lat: 52.406N	Lon: -2.233W	Depth: 5.0 km	HGN	BZ	489.0	EP	18:53	29.22	-0.09
Grid Ref: 384.15 kmE	278.73 kmN	RMS: 0.10 secs	MUD	HZ	508.0	EP	18:53	31.63	-0.05
Locality: BLAKEDOWN,WORCS			MDO	EZ	517.0	EP	18:53	32.57	-0.24
Velocity model: Lownet	Xnear: 100.0 Xfar: 2005.0		RSBS	HZ	526.0	EP	18:53	33.06	-0.85
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			MLA1	EZ	542.0	EP	18:53	35.27	-0.54
HLM1 HZ 45.7 EP 06:32 13.54		-0.07	KPL	HZ	575.0	EP	18:53	39.91	-0.04
HLM1 HN 45.7 ES 06:32 19.54		-0.04	KPL	HE	575.0	IAML	18:54	36.73	45 0.18
HLM1 HE 45.7 IAML 06:32 19.70	7 0.32		KPL	HE	575.0	IAML	18:54	38.01	57 0.22
HLM1 HN 45.7 IAML 06:32 19.78	8 0.07		LINV	HZ	605.0	EP	18:53	43.12	-0.58
MCH1 HZ 69.3 EP 06:32 17.07		-0.15	LINV	HE	605.0	IAML	18:54	42.95	24 0.20
MCH1 HN 69.3 ES 06:32 25.81		-0.03	LINV	HN	605.0	IAML	18:54	45.26	30 0.16
MCH1 HN 69.3 IAML 06:32 27.42	3 0.27		LEWI	HZ	684.0	EP	18:53	52.65	-0.88
MCH1 HE 69.3 IAML 06:32 29.52	3 0.21		LEWI	HN	684.0	IAML	18:54	58.03	35 0.22
LBWR HZ 116.0 EP 06:32 24.45		-0.02	LEWI	HE	684.0	IAML	18:54	59.95	33 0.66
LPW HZ 129.0 EP 06:32 26.82		0.32							
January 2 2017	Time: 19:40 07.7 UTC	Magnitude: 0.9 ML	January 6 2017	Time: 16:33 34.3 UTC	Magnitude: 0.8 ML				
Lat: 54.882N	Lon: -3.275W	Depth: 7.7 km	Lat: 57.205N	Lon: -5.829W	Depth: 9.9 km				
Grid Ref: 318.21 kmE	554.89 kmN	RMS: 0.30 secs	Grid Ref: 168.77 kmE	819.17 kmN	RMS: 0.10 secs				
Locality: KIRKBRIDE,CUMBRIA			Locality: SKYE,HIGHLAND						
Velocity model: Lownet	Xnear: 100.0 Xfar: 200.0		Velocity model: Lownet	Xnear: 100.0 Xfar: 200.0					
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES						
KESW HZ 34.5 EP 19:40 13.78		-0.17	KPL HZ 18.3 IP D 16:33 37.95		-0.05				
KESW HN 34.5 IAML 19:40 18.61	8 0.18		KPL HE 18.3 ES 16:33 40.59		-0.14				
KESW HE 34.5 IAML 19:40 18.78	7 0.20		KPL HN 18.3 IAML 16:33 40.76	11 0.10					
ESK HZ 48.6 EP 19:40 16.16		0.03	KPL HN 18.3 IAML 16:33 40.96	12 0.33					
ESK HN 48.6 ES 19:40 21.87		-0.41	LINV HZ 111.0 EP 16:33 52.58		0.19				
ESK HE 48.6 IAML 19:40 21.93	9 0.10		LINV HE 111.0 ES 16:34 05.75		0.13				
ESK HN 48.6 IAML 19:40 21.98	8 0.12		LINV HE 111.0 IAML 16:34 08.09	5 0.10					
NEWG HZ 66.5 EP 19:40 19.09		0.20	LINV HN 111.0 IAML 16:34 08.29	4 0.25					
NEWG HE 66.5 ES 19:40 26.86		-0.18	LEWI HZ 122.0 EP 16:33 53.91		0.03				
NEWG HN 66.5 IAML 19:40 27.15	4 0.11		LEWI HN 122.0 ES 16:34 08.08		-0.13				
NEWG HE 66.5 IAML 19:40 29.33	5 0.16		LEWI HE 122.0 IAML 16:34 08.46	2 0.30					
EDMD HZ 84.5 EP 19:40 22.05		0.40	LEWI HE 122.0 IAML 16:34 09.72	3 0.21					
EDMD HN 84.5 ES 19:40 31.41		-0.42	INVG HZ 139.0 EP 16:33 56.50		0.09				
EDMD HN 84.5 IAML 19:40 32.02	34 0.14		INVG HE 139.0 ES 16:34 12.49		-0.09				
EDMD HE 84.5 IAML 19:40 32.15	26 0.14		INVG HE 139.0 IAML 16:34 13.54	2 0.13					
GALL HZ 92.2 EP 19:40 22.91		0.04	INVG HN 139.0 IAML 16:34 14.16	2 0.19					
GALL HE 92.2 ES 19:40 33.72		-0.22							
GALL HN 92.2 IAML 19:40 34.05	6 0.14								
GALL HE 92.2 IAML 19:40 35.64	3 0.10								
EBL EZ 100.0 EP 19:40 24.62		0.45	January 6 2017	Time: 23:09 01.7 UTC	Magnitude: 0.9 ML				
IMOK HZ 108.0 EP 19:40 25.54		0.14	Lat: 51.622N	Lon: -3.159W	Depth: 11.7 km				
ESY EZ 123.0 EP 19:40 27.88		0.25	Grid Ref: 319.77 kmE	192.15 kmN	RMS: 0.30 secs				
January 3 2017	Time: 18:52 24.8 UTC	Magnitude: 3.8 ML	Locality: YNYSDUO,CAERPHILLY						
Lat: 54.438N	Lon: 1.960W	Depth: 18.7 km	Velocity model: Lownet	Xnear: 100.0 Xfar: 200.0					
Grid Ref: 656.75 kmE	511.97 kmN	RMS: 0.30 secs	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES						
Locality: SOUTHERN NORTH SEA			MCH1 HZ 43.2 EP 23:09 09.22		-0.14				
Velocity model: North Sea	Xnear: 400.0 Xfar: 600.0	Intensity: 2	MCH1 HE 43.2 ES 23:09 14.97		0.05				
Comment: FELT SCARBOROUGH			MCH1 HN 43.2 IAML 23:09 15.06	6 0.09					
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			MCH1 HE 43.2 IAML 23:09 15.09	11 0.11					
GDLE HZ 180.0 EP 18:52 51.53		0.62	LPW HE 83.1 ES 23:09 25.92		0.37				
GDLE HE 180.0 IAML 18:53 21.67	1524 0.36		LPW HE 83.1 IAML 23:09 26.11	1 0.12					
GDLE HN 180.0 IAML 18:53 21.74	2667 0.30		LPW HN 83.1 IAML 23:09 26.26	1 0.32					
LMK HZ 186.0 EP 18:52 52.01		0.43	SWN1 HZ 95.0 EP 23:09 17.52		0.16				
LMK HE 186.0 IAML 18:53 23.15	1210 0.30		SWN1 HE 95.0 IAML 23:09 30.39	8 0.22					
LMK HN 186.0 IAML 18:53 30.15	968 0.34		SWN1 HN 95.0 IAML 23:09 30.40	20 0.25					
WACR HZ 210.0 EP 18:52 54.68		0.06	HLM1 HZ 102.0 EP 23:09 18.14		-0.28				
WACR HN 210.0 ES 18:53 16.37		-0.00	HLM1 HE 102.0 ES 23:09 30.40		-0.19				
WACR HN 210.0 IAML 18:53 17.94	897 0.20		HLM1 HE 102.0 IAML 23:09 33.05	4 0.24					
WACR HE 210.0 IAML 18:53 23.50	440 0.18		HLM1 HN 102.0 IAML 23:09 33.29	4 0.26					
EDMD HZ 257.0 EP 18:53 00.55		0.12	RSBS HZ 115.0 EP 23:09 20.19		-0.19				
EDMD HN 257.0 IAML 18:53 28.73	670 0.20		RSBS HE 115.0 ES 23:09 33.54		-0.45				
EDMD HE 257.0 IAML 18:53 28.81	798 0.20		RSBS HE 115.0 IAML 23:09 35.50	3 0.06					
ELMS HZ 269.0 EP 18:53 02.00		0.08	RSBS HE 115.0 IAML 23:09 36.32	4 0.08					
ELMS HN 269.0 IAML 18:53 46.13	682 0.30								
ELMS HE 269.0 IAML 18:53 51.46	971 0.46								
ESK HZ 346.0 EP 18:53 11.45		-0.02	DYA HE 143.0 EP 23:09 24.46		0.18				
FOEL HZ 382.0 EP 18:53 15.80		-0.21	DYA HE 143.0 ES 23:09 40.69		-0.05				
FOEL HE 382.0 IAML 18:54 27.24	236 0.52		DYA HE 143.0 IAML 23:09 41.32	3 0.20					
EDU EZ 392.0 EP 18:53 17.42		0.15	DYA HN 143.0 IAML 23:09 42.34	2 0.10					
NEWG HZ 405.0 EP 18:53 18.79		-0.08	January 8 2017	Time: 10:26 45.1 UTC	Magnitude: 0.9 ML				
STRD HZ 405.0 EP 18:53 18.60		-0.22	Lat: 51.648N	Lon: -1.446W	Depth: 16.6 km				
STRD HN 405.0 IAML 18:54 36.99	253 0.54		Grid Ref: 438.33 kmE	194.55 kmN	RMS: 0.20 secs				
STRD HE 405.0 IAML 18:54 39.53	304 0.68		Locality: CHARNEY BASSETT,OXON						
SWN1 HZ 412.0 EP 18:53 19.89		0.20	Velocity model: Lownet	Xnear: 100.0 Xfar: 200.0					
SWN1 HN 412.0 IAML 18:54 40.12	182 0.82		STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES						
SWN1 HE 412.0 IAML 18:54 45.64	214 0.72		SWN1 HZ 28.7 EP 10:26 50.44		-0.28				
LLW BZ 412.0 EP 18:53 19.41		-0.26	SWN1 HN 28.7 ES 10:26 55.01		0.15				
IOMK HZ 425.0 EP 18:53 20.75		-0.53	SWN1 HE 28.7 IAML 10:26 55.20	76 0.13					
MCH1 HZ 428.0 EP 18:53 21.42		-0.30	SWN1 HE 28.7 IAML 10:26 55.28	27 0.18					
MCH1 HE 428.0 IAML 18:54 04.52	116 0.20		WOL BN 40.3 ES 10:26 57.77						
MCH1 HN 428.0 IAML 18:54 04.90	140 0.24		WOL BE 40.3 IAML 10:26 58.98	6 0.25					
WPS HZ 440.0 EP 18:53 23.19		0.07	WOL BN 40.3 IAML 10:26 59.08	6 0.30					
WPS HE 440.0 IAML 18:54 09.61	38 0.25		MCH1 HZ 114.0 EP 10:27 03.15		-0.01				
WPS HN 440.0 IAML 18:54 10.70	50 0.33		MCH1 HE 114.0 ES 10:27 16.33		-0.05				
			MCH1 HE 114.0 IAML 10:27 16.72	3 0.17					
			MCH1 HN 114.0 IAML 10:27 16.72	3 0.27					
			CWF HZ 122.0 EP 10:27 04.56		0.28				

# TABLE 2 : PHASE DATA

CWF	HE	122.0	ES	10:27	18.13	-0.19		YRC	EZ	44.8	EP		22:59	06.82	-0.77	
CWF	HE	122.0	IAML	10:27	19.59	3 0.17		WME	EZ	45.1	IP	D	22:59	07.45	-0.20	
CWF	HN	122.0	IAML	10:27	20.75	2 0.12		WME	EZ	45.1	ES		22:59	13.13	-0.25	
HLM1	HZ	138.0	EP	10:27	06.89	0.23		WPS	HZ	52.3	EP		22:59	09.33	0.58	
HLM1	HN	138.0	ES	10:27	22.46	0.03		WPS	HN	52.3	ES		22:59	15.39	0.10	
HLM1	HN	138.0	IAML	10:27	23.73	2 0.11		WPS	HN	52.3	IAML		22:59	15.76	6 0.17	
HLM1	HE	138.0	IAML	10:27	23.77	2 0.16		WPS	HE	52.3	IAML		22:59	15.87	6 0.14	
FOEL	HZ	56.9	EP					FOEL	HE	56.9	ES		22:59	09.64	0.09	
FOEL	HE	56.9	IAML					FOEL	HN	56.9	IAML		22:59	16.55	-0.12	
January 12 2017	Time:	13:51	43.8	UTC	Magnitude:	1.1	ML									
Lat: 56.353N	Lon: -6.196W				Depth:	7.2	km									
Grid Ref: 140.81 kmE	725.75 kmN				RMS:	0.10	secs									
Locality: MULL, ARGYLL & BUTE																
Velocity model: Lownet	Xnear:	100.0	Xfar:	200.0												
Comment: OFFSHORE LOCATION																
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES								HLM1	HE	95.4	IAML		22:59	30.99	7 0.19	
KPL HZ 115.0 EP		13:52	03.16		-0.09			HLM1	HE	95.4	IAML		22:59	30.99	4 0.14	
KPL HE 115.0 ES		13:52	17.53		0.07			MCH1	HZ	134.0	EP		22:59	21.34	0.02	
KPL HE 115.0 IAML		13:52	18.18	6	0.40			MCH1	HE	134.0	ES		22:59	36.86	-0.18	
KPL HN 115.0 IAML		13:52	19.24	4	0.21			MCH1	HN	134.0	IAML		22:59	38.47	5 0.17	
INVG HZ 133.0 EP		13:52	06.16		-0.01			MCH1	HE	134.0	IAML		22:59	38.99	8 0.13	
INVG HN 133.0 ES		13:52	22.48		-0.02			MONM	HZ	156.0	EP		22:59	24.74	0.29	
INVG HE 133.0 IAML		13:52	23.55	3	0.07		January 17 2017	Time:	01:16	23.1	UTC	Magnitude:	0.5	ML		
INVG HN 133.0 IAML		13:52	23.70	4	0.10		Lat: 51.635N	Lon: -3.008W				Depth:	6.3	km		
CLGH HZ 142.0 EP		13:52	07.54		0.18		Grid Ref: 330.25 kmE	193.44 kmN				RMS:	0.30	secs		
CLGH HE 142.0 ES		13:52	24.55		-0.02		Locality: CWMBRAN,TORFAEN									
CLGH HE 142.0 IAML		13:52	25.76	6	0.28		Velocity model: Lownet	Xnear:	100.0	Xfar:	200.0					
CLGH HN 142.0 IAML		13:52	26.58	7	0.19		STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES									
IDGL BZ 165.0 EP		13:52	10.48		-0.21		MONM HZ 26.7 EP	01:16	27.96			-0.22				
January 13 2017	Time:	20:15	08.1	UTC	Magnitude:	0.9	ML	MONM HE 26.7 ES	01:16	32.10			0.22			
Lat: 54.670N	Lon: -2.149W				Depth:	4.6	km	MCH1 HZ 40.3 EP	01:16	29.89			-0.44			
Grid Ref: 390.39 kmE	530.57 kmN				RMS:	0.20	secs	MCH1 HE 40.3 ES	01:16	35.55			-0.05			
Locality: NEWBIGGIN,CO DURHAM					Velocity model:	Lownet	Xnear:	100.0	Xfar:	200.0						
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES					HCH1 HE 40.3 IAML	01:16	35.75	8	0.28							
EDMD HZ 21.6 IP	C	20:15	12.20		-0.01	HCH1 HE 40.3 IAML	01:16	35.78	5	0.18						
EDMD HE 21.6 ES		20:15	15.12		-0.12	HCH1 HZ 98.6 EP	01:16	39.79			0.37					
EDMD HN 21.6 IAML		20:15	15.25	21	0.12	HCH1 HZ 98.6 ES	01:16	51.35			0.03					
EDMD HE 21.6 IAML		20:15	15.38	122	0.22	HCH1 HN 98.6 IAML	01:16	56.00	1	0.22						
KESW HZ 62.4 EP		20:15	18.93		0.10	HCH1 HE 98.6 IAML	01:16	56.08	1	0.21						
KESW HE 62.4 ES		20:15	26.46		-0.24	HCH1 HN 148.0 EP	01:16	43.57			0.10					
KESW HE 62.4 IAML		20:15	27.03	5	0.25	RSBS HZ 125.0 EP	01:16	43.57			0.11					
KESW HN 62.4 IAML		20:15	27.08	5	0.16	DYA HZ 148.0 EP	01:16	46.46			-0.36					
HPK HN 86.2 ES		20:15	33.06		-0.01	DYA HE 148.0 ES	01:17	04.41			0.28					
HPK HE 86.2 IAML		20:15	33.44	8	0.17	DYA HN 148.0 ES	01:17	04.45								
HPK HN 86.2 IAML		20:15	33.71	9	0.34	January 20 2017	Time:	20:09	30.8	UTC	Magnitude:	0.4	ML			
EJK HZ 98.8 EP		20:15	24.80		0.33	Lat: 54.713N	Lon: -3.555W				Depth:	3.4	km			
EJK HE 98.8 ES		20:15	36.38		-0.07	Grid Ref: 299.83 kmE	536.45 kmN				RMS:	0.30	secs			
EJK HN 98.8 IAML		20:15	37.26	2	0.14	Locality: MARYPORT,CUMBRIA										
EJK HE 98.8 IAML		20:15	37.71	1	0.18	Velocity model: Lownet	Xnear:	100.0	Xfar:	200.0						
IOMK HE 163.0 ES		20:15	53.10		0.12	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES										
January 13 2017	Time:	22:51	43.4	UTC	Magnitude:	0.8	ML	KESW HZ 32.2 EP	20:09	36.58			-0.16			
Lat: 52.139N	Lon: -2.450W				Depth:	8.5	km	KESW HN 32.2 ES	20:09	40.84			-0.26			
Grid Ref: 369.21 kmE	249.11 kmN				RMS:	0.20	secs	KESW HE 32.2 IAML	20:09	40.92	3	0.16				
Locality: CRADLEY,HEREFORDSHIRE					Velocity model:	Lownet	Xnear:	100.0	Xfar:	200.0						
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES					NEWG HZ 62.4 EP	20:09	41.91									
MCH1 HZ 40.8 EP		22:51	50.53		-0.13	NEWG HN 62.4 ES	20:09	49.46			-0.31					
MCH1 HE 40.8 ES		22:51	55.76		-0.16	NEWG HE 62.4 IAML	20:09	50.35	1	0.06						
MCH1 HN 40.8 IAML		22:51	56.01	10	0.14	NEWG HE 62.4 IAML	20:09	50.49	2	0.29						
MCH1 HE 40.8 IAML		22:51	56.07	6	0.34	ESK HZ 70.8 EP	20:09	43.03			0.11					
MONM HZ 41.3 EP		22:51	50.81		0.09	ESK HE 70.8 ES	20:09	51.51			-0.28					
MONM HE 41.3 ES		22:51	56.09		0.06	ESK HE 70.8 IAML	20:09	52.16	2	0.17						
MONM HE 41.3 IAML		22:51	56.39	14	0.32	GAL1 HZ 76.3 EP	20:09	44.01			0.26					
MONM HN 41.3 IAML		22:51	56.47	12	0.14	GAL1 HN 76.3 ES	20:09	52.81			-0.42					
STRD HZ 44.9 EP		22:51	51.13		-0.17	IOMK HZ 82.7 EP	20:09	44.62			-0.13					
STRD HE 44.9 ES		22:51	57.08		0.06	EDMD HZ 103.0 EP	20:09	48.46			0.55					
STRD HN 44.9 IAML		22:51	57.41	8	0.13	EDMD HN 103.0 ES	20:10	00.42			-0.01					
STRD HE 44.9 IAML		22:51	57.49	12	0.11	EDMD HE 103.0 IAML	20:10	01.25	7	0.14						
HLM1 HZ 51.5 EP		22:51	52.26		-0.09	EDMD HE 103.0 IAML	20:10	01.88	7	0.17						
HLM1 HE 51.5 ES		22:51	58.68		-0.17	January 21 2017	Time:	16:00	47.3	UTC	Magnitude:	1.2	ML			
HLM1 HN 51.5 IAML		22:51	58.97	6	0.28	Lat: 56.362N	Lon: -5.385W				Depth:	3.6	km			
HLM1 HE 51.5 IAML		22:51	58.97	10	0.34	Grid Ref: 190.93 kmE	723.99 kmN				RMS:	0.40	secs			
LLW BZ 114.0 EP		22:52	02.52		0.48	Locality: KILMORE,ARGYLL & BUTE										
LLW BN 114.0 ES		22:52	15.68		0.06	Velocity model: Lownet	Xnear:	75.0	Xfar:	150.0						
RSBS HZ 159.0 EP		22:52	09.15		0.67	Comment: FELT NORTH CONNEL										
January 15 2017	Time:	22:58	59.8	UTC	Magnitude:	1.0	ML	Intensity: 2								
Lat: 53.031N	Lon: -4.014W				Depth:	7.7	km	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES								
Grid Ref: 264.96 kmE	350.12 kmN				RMS:	0.30	secs	LAWE HZ 11.4 IP	16:00	49.82			-0.03			
Locality: BEDDGELERT,GWYNEDD					Velocity model:	Lownet	Xnear:	500.0	Xfar:	1000.0						
Comment: FELT LLANBERIS...					Intensity: 3	LAWE HN 11.4 ES	16:00	51.44			-0.30					
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES					LAWE HE 11.4 IAML	16:00	51.58	117	0.10							
WLF1 HZ 38.5 IP	D	22:59	07.01		0.40	LAWE HE 11.4 IAML	16:00	51.64	121	0.14						
WLF1 HE 38.5 ES		22:59	11.61		0.02	PGB1 HZ 83.1 EP	16:01	02.15			0.61					
WLF1 HN 38.5 IAML		22:59	11.81	30	0.10	PGB1 HE 83.1 ES	16:01	12.34			0.37					
WLF1 HE 38.5 IAML		22:59	11.92	22	0.06	PGB1 HE 83.1 IAML	16:01	13.79	5	0.40						
WLF1 HZ 159.0 EP		22:59	09.15		0.67	PGB1 HN 83.1 IAML	16:01	14.10	8	0.12						
INVG HZ 83.1 EP						INVG HZ 83.1 EP	16:01	00.97			-0.59					
INVG HE 83.1 ES						INVG HN 83.1 ES	16:01	11.84			-0.16					

TABLE 2 : PHASE DATA

INVG HE 83.1 IAML 16:01 13.73 10 0.10	HLM1 HN 146.0 IAML 22:33 48.78 1 0.24
INVG HN 83.1 IAML 16:01 13.95 20 0.10	HLM1 HE 146.0 IAML 22:33 49.91 1 0.18
KPL HZ 110.0 EP 16:01 05.86 0.18	January 24 2017 Time: 05:27 47.3 UTC Magnitude: 1.0 ML
KPL HE 110.0 ES 16:01 19.43 0.31	Lat: 55.859N Lon: -6.516W Depth: 8.4 km
KPL HN 110.0 IAML 16:01 21.29 4 0.21	Grid Ref: 117.46 kmE 672.09 kmN RMS: 0.40 secs
KPL HE 110.0 IAML 16:01 21.46 9 0.22	Locality: ISLAY,ARGYLL & BUTE
MDO EZ 135.0 EP 16:01 09.87 0.22	Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0
CLGH HZ 150.0 EP 16:01 11.46 -0.19	Comment: OFFSHORE LOCATION
CLGH HN 150.0 IAML 16:01 30.75 4 0.22	
CLGH HE 150.0 IAML 16:01 31.18 4 0.25	
January 21 2017 Time: 21:57 56.8 UTC Magnitude: 1.1 ML	
Lat: 51.701N Lon: -3.174W Depth: 22.7 km	
Grid Ref: 318.88 kmE 200.95 kmN RMS: 0.00 secs	
Locality: BARGOED,CAERPHILLY Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	
MONM HZ 29.8 EP 21:58 03.03 0.03	
MONM HE 29.8 ES 21:58 07.50 -0.02	
MONM HE 29.8 IAML 21:58 07.66 17 0.28	
MONM HN 29.8 IAML 21:58 08.00 24 0.14	
MCH1 HZ 35.1 EP 21:58 03.70 -0.01	
MCH1 HE 35.1 ES 21:58 08.74 0.01	
MCH1 HE 35.1 IAML 21:58 08.93 13 0.20	
MCH1 HN 35.1 IAML 21:58 09.11 13 0.06	
STRD HZ 70.3 EP 21:58 08.55 -0.05	
STRD HN 70.3 ES 21:58 17.23 0.03	
STRD HN 70.3 IAML 21:58 17.37 14 0.16	
STRD HE 70.3 IAML 21:58 17.40 18 0.12	
HLM1 HZ 93.2 EP 21:58 11.93 0.03	
HLM1 HE 93.2 ES 21:58 22.88 -0.02	
HLM1 HE 93.2 IAML 21:58 23.13 6 0.22	
HLM1 HN 93.2 IAML 21:58 24.87 4 0.24	
January 24 2017 Time: 16:35 28.9 UTC Magnitude: 2.4 ML	
Lat: 56.066N Lon: -5.250W Depth: 11.0 km	
Grid Ref: 197.71 kmE 690.66 kmN RMS: 0.40 secs	
Locality: LEPHINMORE,ARGYLL/BUTE Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	
Comment: FELT LOCHGILPHEAD.. Intensity: 3	
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	
LAWE HZ 23.5 IP D 16:35 33.48 -0.06	
LAWE HN 23.5 ES 16:35 36.76 -0.14	
LAWE HE 23.5 IAML 16:35 37.13 840 0.14	
LAWE HN 23.5 IAML 16:35 37.21 394 0.17	
PGB1 HZ 55.6 IP C 16:35 39.14 0.67	
PGB1 HE 55.6 ES 16:35 45.28 -0.14	
PGB1 HN 55.6 IAML 16:35 45.72 265 0.11	
PGB1 HE 55.6 IAML 16:35 46.19 199 0.09	
INVG HZ 84.9 IP C 16:35 43.18 0.16	
INVG HE 84.9 ES 16:35 52.97 -0.33	
INVG HE 84.9 IAML 16:35 56.41 168 0.20	
INVG HN 84.9 IAML 16:35 56.66 258 0.25	
NEWG HZ 124.0 IP D 16:35 48.15 -0.62	
EDI HZ 130.0 EP 16:35 49.96 0.33	
EDI HE 130.0 IAML 16:36 07.77 68 0.33	
EDI HN 130.0 IAML 16:36 07.83 92 0.26	
GAL1 HZ 138.0 IP C 16:35 50.22 -0.56	
GAL1 HN 138.0 IAML 16:36 07.77 106 0.11	
GAL1 HE 138.0 IAML 16:36 08.39 110 0.18	
EBL EZ 142.0 EP 16:35 51.61 0.20	
KPL HZ 144.0 EP 16:35 52.42 0.78	
ESK HZ 153.0 EP 16:35 52.88 -0.14	
MDO EZ 162.0 EP 16:35 53.99 -0.35	
ESY EZ 165.0 EP 16:35 54.90 0.22	
DRUM HZ 195.0 EP 16:35 58.62 0.31	
IOMK HZ 206.0 EP 16:35 59.65 -0.03	
MCD EZ 208.0 IP C 16:35 59.76 -0.28	
LINV HZ 232.0 EP 16:36 03.09 0.16	
EDMD HZ 249.0 EP 16:36 04.64 -0.46	
LEWI HZ 251.0 EP 16:36 05.58 0.15	
January 22 2017 Time: 22:33 06.5 UTC Magnitude: 1.0 ML	
Lat: 53.700N Lon: -1.919W Depth: 4.4 km	
Grid Ref: 405.35 kmE 422.65 kmN RMS: 0.20 secs	
Locality: HALIFAX,WEST YORKSHIRE Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	
HTL HZ 22.0 EP 14:31 21.91 0.04	
HTL HN 22.0 ES 14:31 25.17 -0.00	
HTL HN 22.0 IAML 14:31 25.37 10 0.22	
HTL HE 22.0 IAML 14:31 25.91 13 0.17	
RSBS HZ 88.2 EP 14:31 31.71 -0.25	
RSBS HE 88.2 ES 14:31 42.84 0.21	
RSBS HE 88.2 IAML 14:31 43.95 1 0.07	
RSBS HN 88.2 IAML 14:31 44.00 1 0.08	
DYA HZ 90.3 EP 14:31 32.17 -0.08	
DYA HN 90.3 ES 14:31 43.25 0.11	
DYA HE 90.3 IAML 14:31 43.39 2 0.14	
DYA HN 90.3 IAML 14:31 44.28 2 0.18	
CCA1 HE 125.0 ES 14:31 51.70 -0.05	
CCA1 HE 125.0 IAML 14:31 51.83 2 0.22	
CCA1 HN 125.0 IAML 14:31 52.41 2 0.41	
MCH1 HE 133.0 ES 14:31 53.70 -0.03	
MCH1 HE 133.0 IAML 14:31 54.77 1 0.16	
MCH1 HE 133.0 IAML 14:31 55.54 2 0.17	
January 25 2017 Time: 16:32 15.4 UTC Magnitude: 1.4 ML	
Lat: 56.052N Lon: -5.258W Depth: 9.3 km	
Grid Ref: 197.14 kmE 689.13 kmN RMS: 0.50 secs	
Locality: LEPHINMORE,ARGYLL/BUTE Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	
Comment: FELT KILMORY Intensity: 2	
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	
LAWE HZ 24.7 IP D 16:32 20.16 0.00	
LAWE HE 24.7 ES 16:32 23.43 -0.19	
LAWE HE 24.7 IAML 16:32 23.81 77 0.10	
LAWE HN 24.7 IAML 16:32 23.88 41 0.16	
PGB1 HZ 55.3 IP C 16:32 25.83 0.86	
PGB1 HE 55.3 ES 16:32 31.81 -0.13	
PGB1 HN 55.3 IAML 16:32 32.42 27 0.15	
PGB1 HE 55.3 IAML 16:32 32.55 15 0.11	
INVG HZ 86.1 IP C 16:32 29.89 0.13	
INVG HE 86.1 ES 16:32 39.70 -0.52	
INVG HE 86.1 IAML 16:32 43.26 28 0.24	
INVG HE 86.1 IAML 16:32 43.38 18 0.18	
CLGH HZ 121.0 EP 16:32 34.70 -0.39	
NEWG HZ 123.0 EP 16:32 34.85 -0.54	
GAL1 HZ 136.0 EP 16:32 36.96 -0.44	
GAL1 HE 136.0 IAML 16:32 54.50 11 0.32	
GAL1 HN 136.0 IAML 16:32 54.51 8 0.24	
KPL HZ 145.0 EP 16:32 39.70 1.05	
ESK HZ 153.0 EP 16:32 40.35 0.57	
MDO EZ 164.0 EP 16:32 42.66 1.26	

**TABLE 2 : PHASE DATA**

January 28 2017	Time: 02:31 09.1 UTC	Magnitude: 0.6 ML	SBD	BN	27.7	ES	07:51	00.50	-0.36
Lat: 55.463N	Lon: -5.134W	Depth: 9.9 km	SBD	BN	27.7	IAML	07:51	00.75	19 0.10
Grid Ref: 201.89 kmE	623.26 kmN	RMS: 0.40 secs	SBD	BE	27.7	IAML	07:51	00.75	15 0.11
Locality: ARRAN,NORTH AYRSHIRE			DYA	HZ	67.3	EP	07:51	03.88	0.35
Velocity model: Lownet	Xnear: 100.0 Xfar: 200.0		DYA	HZ	67.3	ES	07:51	12.07	0.02
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			DYA	HZ	67.3	IAML	07:51	12.62	1 0.08
PGB1 HE 56.4 ES 02:31 25.95		-0.01	DYA	HE	67.3	IAML	07:51	13.20	2 0.15
PGB1 HN 56.4 IAML 02:31 26.52	6 0.14		CCA1	HZ	80.1	EP	07:51	06.02	0.52
PGB1 HE 56.4 IAML 02:31 26.54	2 0.13		CCA1	HE	80.1	ES	07:51	15.20	-0.26
NEWG HZ 69.2 EP 02:31 20.59		-0.05	CCA1	HE	80.1	IAML	07:51	15.84	2 0.08
NEWG HE 69.2 ES 02:31 28.60		-0.49	CCA1	HN	80.1	IAML	07:51	16.69	2 0.11
NEWG HN 69.2 IAML 02:31 28.82	3 0.23		RSBS	HE	127.0	ES	07:51	27.97	-0.02
NEWG HE 69.2 IAML 02:31 29.03	3 0.25								
GALL HZ 71.7 EP 02:31 21.11		0.11	January 29 2017	Time: 00:40 35.9 UTC	Magnitude: 1.1 ML				
GALL HE 71.7 ES 02:31 29.36		-0.35	Lat: 53.067N	Lon: -2.134W	Depth: 7.5 km				
GALL HE 71.7 IAML 02:31 29.61	2 0.13		Grid Ref: 391.02 kmE	352.24 kmN	RMS: 0.30 secs				
GALL HN 71.7 IAML 02:31 30.14	2 0.29		Locality: ENDON,STAFFORDSHIRE						
CLGH HZ 75.1 EP 02:31 22.07		0.56	Velocity model: Lownet	Xnear: 100.0 Xfar: 200.0					
CLGH HN 75.1 ES 02:31 30.39		-0.21	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES						
CLGH HE 75.1 IAML 02:31 31.05	4 0.10		LBWR	HZ	46.2	EP	00:40	43.96	0.00
CLGH HN 75.1 IAML 02:31 31.11	6 0.21		LBWR	HE	46.2	ES	00:40	49.76	-0.09
LAWE HE 90.2 ES 02:31 34.00		-0.29	LBWR	HN	46.2	IAML	00:40	50.08	15 0.17
LAWE HN 90.2 IAML 02:31 36.15	2 0.28		LBWR	HE	46.2	IAML	00:40	50.22	17 0.10
LAWE HE 90.2 IAML 02:31 36.23	3 0.36		CWF	HZ	66.5	EP	00:40	47.14	0.05
INVG HZ 127.0 EP 02:31 30.07		1.12	CWF	HN	66.5	ES	00:40	55.04	-0.22
INVG HE 127.0 ES 02:31 43.73		0.27	CWF	HN	66.5	IAML	00:40	55.87	23 0.21
INVG HN 127.0 IAML 02:31 45.85	1 0.17		CWF	HE	66.5	IAML	00:40	55.97	14 0.18
INVG HE 127.0 IAML 02:31 46.26	1 0.20		FOEL	HZ	74.3	EP	00:40	48.11	-0.23
			FOEL	HN	74.3	ES	00:40	57.44	0.02
January 28 2017	Time: 03:21 50.0 UTC	Magnitude: 1.5 ML	FOEL	HE	74.3	IAML	00:40	59.03	6 0.27
Lat: 56.964N	Lon: -5.575W	Depth: 7.4 km	FOEL	HN	74.3	IAML	00:40	59.30	4 0.17
Grid Ref: 182.69 kmE	791.53 kmN	RMS: 0.70 secs	HLM1	HZ	79.1	EP	00:40	48.96	-0.13
Locality: LOCH MORAR,HIGHLAND			HLM1	HN	79.1	ES	00:40	58.65	-0.07
Velocity model: Lownet	Xnear: 100.0 Xfar: 200.0		HLM1	HE	79.1	IAML	00:40	59.83	16 0.24
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			HLM1	HN	79.1	IAML	00:41	00.14	7 0.15
KPL HZ 42.0 EP 03:21 57.44		0.04	HPK	HZ	105.0	EP	00:40	53.22	0.19
KPL HE 42.0 ES 03:22 02.40		-0.37	MCH1	HZ	133.0	EP	00:40	57.37	0.14
KPL HE 42.0 IAML 03:22 02.60	49 0.16		MONM	HZ	144.0	EP	00:40	59.52	0.68
KPL HN 42.0 IAML 03:22 03.67	8 0.26		STRD	HZ	144.0	EP	00:40	59.46	0.66
LAWE HZ 79.2 EP 03:22 03.32		0.13							
LAWE HE 79.2 ES 03:22 12.23		-0.55	January 31 2017	Time: 05:01 59.3 UTC	Magnitude: 0.5 ML				
LAWE HE 79.2 IAML 03:22 17.04	36 0.32		Lat: 58.153N	Lon: -5.202W	Depth: 14.1 km				
LAWE HN 79.2 IAML 03:22 17.27	46 0.24		Grid Ref: 211.60 kmE	922.67 kmN	RMS: 0.10 secs				
MDO EZ 90.4 EP 03:22 04.90		-0.09	Locality: LOCHINVER,HIGHLAND						
INVG HZ 111.0 EP 03:22 07.97		-0.22	Velocity model: Lownet	Xnear: 100.0 Xfar: 200.0					
INVG HE 111.0 IAML 03:22 22.84	10 0.14		STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES						
INVG HN 111.0 IAML 03:22 22.86	16 0.14		LINV	HZ	0.7	EP	05:02	01.85	0.03
LINV HZ 134.0 EP 03:22 12.00		0.51	LINV	HN	0.7	ES	05:02	03.62	-0.04
LINV HN 134.0 IAML 03:22 28.61	6 0.40		LINV	HE	0.7	IAML	05:02	03.71	31 0.08
LINV HE 134.0 IAML 03:22 28.62	13 0.40		LINV	HN	0.7	IAML	05:02	03.80	22 0.08
PGB1 HZ 145.0 EP 03:22 15.34		2.20	BIGH	HZ	84.7	EP	05:02	13.52	0.19
PGB1 HN 145.0 IAML 03:22 33.55	8 0.52		BIGH	HE	84.7	ES	05:02	23.40	-0.17
PGB1 HE 145.0 IAML 03:22 33.78	6 0.22		BIGH	HN	84.7	IAML	05:02	23.94	3 0.12
LEWI HZ 153.0 EP 03:22 14.80		0.56	BIGH	HE	84.7	IAML	05:02	26.00	3 0.19
LEWI HN 153.0 IAML 03:22 33.81	7 0.24		KPL	HZ	94.5	EP	05:02	14.88	0.13
LEWI HE 153.0 IAML 03:22 33.90	7 0.33		KPL	HN	94.5	ES	05:02	25.92	-0.10
CLGH HZ 212.0 EP 03:22 21.87		-0.06	KPL	HN	94.5	IAML	05:02	26.16	1 0.13
CLGH HE 212.0 IAML 03:22 52.46	6 0.21		KPL	HE	94.5	IAML	05:02	26.87	1 0.32
CLGH HN 212.0 IAML 03:22 52.81	7 0.29		LEWI	HE	98.2	ES	05:02	26.98	-0.05
GALL HZ 240.0 EP 03:22 25.61		0.26							
January 28 2017	Time: 03:43 51.0 UTC	Magnitude: 0.4 ML	February 4 2017	Time: 01:24 57.9 UTC	Magnitude: 1.3 ML				
Lat: 55.383N	Lon: -3.370W	Depth: 4.6 km	Lat: 53.671N	Lon: -1.975W	Depth: 7.5 km				
Grid Ref: 313.21 kmE	610.75 kmN	RMS: 0.10 secs	Grid Ref: 401.65 kmE	419.42 kmN	RMS: 0.40 secs				
Locality: BODESBECK,D & G			Locality: RISHWORTH,W YORKSHIRE						
Velocity model: Borders	Xnear: 50.0 Xfar: 100.0		Velocity model: Lownet	Xnear: 100.0 Xfar: 200.0					
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES						
ESK HZ 12.8 EP 03:43 53.85		0.06	LBWR	HZ	34.2	IP	01:25	03.99	-0.10
ESK HE 12.8 ES 03:43 55.71		-0.05	LBWR	HE	34.2	ES	01:25	08.63	0.00
ESK HN 12.8 IAML 03:43 55.85	14 0.14		LBWR	HE	34.2	IAML	01:25	09.73	38 0.26
ESK HE 12.8 IAML 03:43 55.96	23 0.07		LBWR	HZ	34.2	IAML	01:25	09.96	41 0.21
NEWG HZ 62.2 EP 03:44 01.73		-0.06	HPK	HZ	39.4	EP	01:25	04.44	-0.43
NEWG HN 62.2 ES 03:44 09.47		0.03	HPK	HN	39.4	ES	01:25	09.76	-0.23
KESW HZ 90.1 EP 03:44 06.56		0.21	HPK	HE	39.4	IAML	01:25	10.27	121 0.15
GALL HZ 103.0 EP 03:44 08.46		0.02	STNC	HZ	66.3	EP	01:25	09.38	0.35
GALL HE 103.0 ES 03:44 20.98		0.17	GDLE	HZ	113.0	EP	01:25	16.84	0.58
			CWF	HZ	113.0	EP	01:25	16.59	0.33
January 28 2017	Time: 07:50 51.9 UTC	Magnitude: 0.4 ML	CWF	HN	113.0	ES	01:25	29.55	-0.13
Lat: 50.814N	Lon: -4.673W	Depth: 2.6 km	CWF	HE	113.0	IAML	01:25	31.77	3 0.22
Grid Ref: 211.72 kmE	105.07 kmN	RMS: 0.30 secs	CWF	HN	113.0	IAML	01:25	34.08	2 0.10
Locality: BUDE,CORNWALL			FOEL	HZ	119.0	EP	01:25	16.75	-0.55
Velocity model: Lownet	Xnear: 50.0 Xfar: 150.0		EDMD	HZ	129.0	EP	01:25	19.17	0.50
Comment: 8KM WEST BUDE			HLM1	HZ	142.0	EP	01:25	20.33	-0.24
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES									
HTL HZ 24.0 EP 07:50 56.47		0.06							
HTL HE 24.0 ES 07:50 59.49		-0.24							
HTL HE 24.0 IAML 07:51 00.00	3 0.14								
HTL HN 24.0 IAML 07:51 00.62	6 0.20								
SBD BZ 27.7 EP 07:50 57.23		0.17							
			February 9 2017	Time: 09:21 41.3 UTC	Magnitude: 0.7 ML				
			Lat: 51.621N	Lon: -3.201W	Depth: 7.5 km				
			Grid Ref: 316.87 kmE	192.09 kmN	RMS: 0.20 secs				
			Locality: YNYSDDU,CAERPHILLY						
			Velocity model: Lownet	Xnear: 100.0 Xfar: 200.0					

**TABLE 2 : PHASE DATA**

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	RSBS	HZ	13.2	IP	D	23:00	08.68	-0.08									
MCH1	HZ	44.1	EP			09:21	48.97			-0.05	RSBS	HE	13.2	ES		23:00	10.73	0.00									
MCH1	HE	44.1	ES			09:21	54.73			0.07	RSBS	HN	13.2	IAML		23:00	10.87	0.08									
MCH1	HE	44.1	IAML			09:21	54.85	6	0.12		RSBS	HE	13.2	IAML		23:00	10.90	0.04									
MCH1	HN	44.1	IAML			09:21	55.14	3	0.08		LPW	HZ	44.4	EP		23:00	13.67	-0.08									
HLM1	HN	102.0	ES			09:22	10.15			-0.16	LPW	HN	44.4	ES		23:00	19.39	0.09									
HLM1	HN	102.0	IAML			09:22	11.58	2	0.20		HTL	HZ	98.8	EP		23:00	22.73	0.10									
HLM1	HE	102.0	IAML			09:22	11.68	3	0.28		HTL	HE	98.8	ES		23:00	34.67	0.09									
RSBS	HZ	113.0	EP			09:21	59.60			-0.07	HTL	HN	98.8	IAML		23:00	35.26	14 0.17									
RSBS	HN	113.0	ES			09:22	12.94			-0.14	HTL	HE	98.8	IAML		23:00	35.94	17 0.24									
RSBS	HN	113.0	IAML			09:22	14.83	2	0.13		MCH1	HZ	110.0	EP		23:00	24.34	-0.05									
RSBS	HE	113.0	IAML			09:22	14.58	3	0.14		MCH1	HE	110.0	ES		23:00	37.45	-0.16									
HTL	HZ	113.0	EP			09:22	00.02			0.28	MCH1	HN	110.0	IAML		23:00	41.80	11 0.10									
LLW	BN	140.0	ES			09:22	20.52			0.45	MCH1	HE	110.0	IAML		23:00	42.22	10 0.10									
DYA	HE	142.0	ES			09:22	20.17			-0.25	MONM	HZ	123.0	EP		23:00	26.63	0.31									
											MONM	HN	123.0	ES		23:00	41.39	0.47									
February 10 2017		Time: 02:13 46.3 UTC		Magnitude: 0.3 ML													Lat: 52.417N Lon: -2.734W										
																	Depth: 7.7 km										
																		Grid Ref: 350.09 kmE 280.18 kmN									
																		RMS: 0.20 secs									
																	Locality: LUDLOW,SHROPSHIRE										
																	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0										
																	Comment: 5KM NNW LUDLOW										
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	HLM1	HN	137.0	IAML		23:00	46.34	13 0.28									
HLM1	HZ	15.0	EP			02:13	49.72			0.21	HLM1	HE	137.0	IAML		23:00	42.29	8 0.14									
HLM1	HN	15.0	ES			02:13	52.01			0.13	HLM1	HN	123.0	IAML		23:00	43.94	9 0.21									
HLM1	HN	15.0	IAML			02:13	52.08	15	0.12		FOEL	HZ	147.0	EP		23:00	29.64	-0.27									
HLM1	HZ	15.0	IAML			02:13	52.17	6	0.20		YRC	EZ	153.0	EP		23:00	30.16	-0.54									
MCH1	HZ	50.1	EP			02:13	55.01			0.10	WLF1	HZ	157.0	EP		23:00	31.56	0.13									
MCH1	HN	50.1	ES			02:14	01.14			-0.08	WLF1	HE	157.0	ES		23:00	49.93	0.21									
MCH1	HE	50.1	IAML			02:14	01.17	3	0.28		WLF1	HE	157.0	IAML		23:00	51.84	13 0.20									
MCH1	HN	50.1	IAML			02:14	01.51	3	0.16		DYA	HZ	167.0	EP		23:00	32.47	-0.24									
LLW	BN	79.2	ES			02:14	08.72			-0.30	DYA	HN	167.0	IAML		23:00	52.50	4 0.13									
LLW	BN	79.2	IAML			02:14	08.96	1	0.10		DYA	HE	167.0	IAML		23:00	52.98	4 0.20									
LLW	BE	79.2	IAML			02:14	09.01	1	0.12		WPS	HZ	169.0	EP		23:00	33.57	0.64									
LPW	HE	97.1	ES			02:14	13.56			-0.23	WPS	HN	169.0	ES		23:00	53.07	0.77									
CWF	HZ	103.0	EP			02:14	03.32			0.20	WPS	HN	169.0	IAML		23:00	54.34	6 0.22									
CWF	HN	103.0	ES			02:14	15.15			-0.28	WPS	HE	169.0	IAML		23:00	54.44	4 0.51									
CWF	HE	103.0	IAML			02:14	16.98	2	0.25		WME	EZ	170.0	EP		23:00	33.14	0.12									
RSBS	HZ	147.0	EP			02:14	10.10			0.47	February 16 2017 Time: 02:38 32.6 UTC Magnitude: 0.2 ML																
RSBS	HN	147.0	ES			02:14	27.04			0.35	Lat: 57.626N Lon: -6.042W Depth: 7.4 km																
February 10 2017 Time: 06:09 29.7 UTC		Magnitude: 0.5 ML														Locality: SOUTH RONA,HIGHLAND											
Lat: 56.959N Lon: -4.678W		Depth: 12.6 km														Velocity model: Lownet Xnear: 100.0 Xfar: 200.0											
Grid Ref: 237.18 kmE 788.48 kmN		RMS: 0.10 secs														Locality: GLEN ROY,HIGHLAND											
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0		Comment: 5KM SW GLEN ROY														Velocity model: Lownet Xnear: 100.0 Xfar: 200.0											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	KPL	HZ	39.6	EP	C	02:38	39.75	0.14									
INVG	HZ	70.8	EP			06:09	41.66			0.04	KPL	HE	39.6	ES		02:38	44.57	-0.13									
INVG	HE	70.8	ES			06:09	50.24			-0.07	KPL	HN	39.6	IAML		02:38	44.87	3 0.26									
INVG	HN	70.8	IAML			06:09	53.64	3	0.18		LEWI	HZ	75.8	EP		02:38	47.15	2 0.41									
INVG	HE	70.8	IAML			06:09	54.16	3	0.17		LEWI	HE	75.8	ES		02:38	45.34	0.07									
KPL	HZ	72.6	EP			06:09	42.00			0.15	LEWI	HE	75.8	IAML		02:38	54.44	-0.07									
KPL	HN	72.6	ES			06:09	50.59			-0.12	LEWI	HE	75.8	IAML		02:38	57.48	2 0.22									
KPL	HN	72.6	IAML			06:09	50.98	2	0.12		LEWI	HN	75.8	IAML		02:38	57.96	2 0.10									
KPL	HE	72.6	IAML			06:09	51.09	2	0.27		LINV	HZ	76.7	EP		02:38	45.17	-0.20									
LAWE	HZ	89.5	EP			06:09	44.49			0.01	BIGH	HZ	159.0	EP		02:38	58.55	0.90									
LAWE	HE	89.5	ES			06:09	55.27			0.00	BIGH	HN	159.0	ES		02:39	16.12	0.20									
LAWE	HE	89.5	IAML			06:09	56.12	2	0.28		February 17 2017 Time: 05:32 57.6 UTC Magnitude: 1.5 ML																
LAWE	HN	89.5	IAML			06:09	57.42	3	0.10		Lat: 53.525N Lon: -0.279W Depth: 16.3 km																
LINV	HE	136.0	ES			06:10	06.82			-0.04	Grid Ref: 514.08 kmE 404.55 kmN RMS: 0.30 secs																
February 10 2017 Time: 21:55 06.5 UTC		Magnitude: 0.6 ML														Locality: INVERGORDON,HIGHLAND											
Lat: 57.697N Lon: -4.139W		Depth: 6.4 km														Velocity model: Lownet Xnear: 150.0 Xfar: 300.0											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	AU05	HZ	54.2	EP		05:33	01.55	-0.20									
MCD	EZ	54.3	EP			21:55	15.83			-0.08	AU05	HN	54.2	ES		05:33	13.55	-0.46									
MCD	EN	54.3	ES			21:55	22.68			-0.09	AU05	HE	54.2	IAML		05:33	14.41	79 0.50									
LINV	HZ	80.3	EP			21:55	19.78			-0.10	AU05	HN	54.2	IAML		05:33	14.54	72 0.14									
LINV	HN	80.3	ES			21:55	29.36			-0.29	AU08	HZ	71.2	EP		05:33	09.60	0.05									
LINV	HN	80.3	IAML			21:55	31.92	4	0.14		AU08	HE	71.2	ES		05:33	18.52	0.28									
LINV	HE	80.3	IAML			21:55	31.96	4	0.18		AU08	HN	71.2	IAML		05:33	20.19	15 0.16									
BIGH	HZ	89.7	EP			21:55	21.63			0.28	AU08	HE	71.2	IAML		05:33	20.47	12 0.25									
BIGH	HE	89.7	ES			21:55	32.25			0.07	AV06	HZ	72.3	EP		05:33	2										

**TABLE 2 : PHASE DATA**

HPK	HE	101.0	ES	05:33	25.46	-0.13	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES	
HPK	HN	101.0	IAML	05:33	26.69	17 0.20	LAWE	HZ	62.8	EP		23:41	24.31			-0.10	
HPK	HE	101.0	IAML	05:33	27.55	20 0.19	LAWE	HN	62.8	ES		23:41	32.14			-0.03	
GDL	HZ	106.0	EP	05:33	13.94	-0.54	LAWE	HE	62.8	IAML		23:41	32.73	2	0.21		
GDL	HN	106.0	IAML	05:33	28.17	16 0.26	LAWE	HN	62.8	IAML		23:41	35.19	2	0.24		
GDL	HE	106.0	IAML	05:33	28.85	9 0.28	KPL	HZ	63.2	EP		23:41	24.67			0.23	
WACR	HZ	108.0	EP	05:33	14.36	-0.37	KPL	HE	63.2	ES		23:41	32.02			-0.21	
WACR	HN	108.0	ES	05:33	27.32	0.11	KPL	HE	63.2	IAML		23:41	32.55	4	0.22		
WACR	HE	108.0	IAML	05:33	27.55	8 0.20	KPL	HN	63.2	IAML		23:41	35.58	3	0.14		
CWF	HZ	111.0	EP	05:33	15.40	0.14	INVG	HE	85.3	EP		23:41	28.18			0.27	
CWF	HE	111.0	ES	05:33	28.55	0.42	INVG	HN	85.3	IAML		23:41	38.03			-0.20	
CWF	HN	111.0	IAML	05:33	29.99	8 0.10	INVG	HZ	85.3	IAML		23:41	40.52	3	0.10		
CWF	HE	111.0	IAML	05:33	30.88	14 0.10	LINV	HZ	148.0	EP		23:41	40.70	3	0.18		
AT10	HZ	111.0	EP	05:33	15.43	0.19	LINV	HE	148.0	ES		23:41	37.83			0.76	
AT10	HN	111.0	IAML	05:33	32.56	8 0.34										-0.58	
AT10	HE	111.0	IAML	05:33	31.03	8 0.32											
February 18 2017 Time: 00:48 37.5 UTC Magnitude: 1.3 ML Lat: 52.845N Lon: -3.250W Depth: 11.1 km Grid Ref: 315.82 kmE 328.27 kmN RMS: 0.30 secs Locality: LLANSILIN, POWYS Velocity model: Lleyen Xnear: 100.0 Xfar: 200.0																	
February 17 2017 Time: 05:39 29.1 UTC Magnitude: 1.3 ML Lat: 53.499N Lon: -0.293W Depth: 17.7 km Grid Ref: 513.22 kmE 401.64 kmN RMS: 0.20 secs Locality: CAISTOR, LINCOLNSHIRE Velocity model: Lownet Xnear: 100.0 Xfar: 200.0																	
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES	FOEL	HZ	6.0	IP	C	00:48	39.70	
LMK	HZ	5.2	IP	C	05:39	33.24			-0.21	FOEL	HE	6.0	ES		00:48	41.37	
LMK	HE	5.2	ES		05:39	36.79			0.18	FOEL	HE	6.0	IAML		00:48	41.73	
LMK	HE	5.2	IAML		05:39	37.04	58	0.24		FOEL	HN	6.0	IAML		00:48	41.76	
LMK	HN	5.2	IAML		05:39	37.09	48	0.14		LLW	BZ	27.9	IP	C	00:48	42.34	
AU05	HZ	55.6	EP		05:39	38.62			-0.24	LLW	BN	27.9	ES		00:48	45.69	
AU05	HE	55.6	ES		05:39	45.60			-0.38	LLW	BN	27.9	IAML		00:48	46.02	
AU05	HN	55.6	IAML		05:39	46.04	43	0.26		LLW	BE	27.9	IAML		00:48	46.07	
AU05	HE	55.6	IAML		05:39	46.30	31	0.25		HLM1	HN	44.1	IAML		00:48	46.07	
AU08	HZ	73.7	EP		05:39	41.34			-0.09	HLM1	HE	44.1	ES		00:48	50.82	
AU08	HE	73.7	ES		05:39	50.58			0.17	HLM1	HE	44.1	IAML		00:48	51.09	
AV06	HZ	75.0	EP		05:39	41.36			-0.25	STNC	HZ	75.3	EP		00:48	49.58	
AV06	HE	75.0	IAML		05:39	52.06	10	0.32		WLF1	HZ	91.4	EP		00:48	52.66	
AV06	HN	75.0	IAML		05:39	52.22	8	0.24		WLF1	HE	91.4	ES		00:49	52.84	
AU09	HZ	82.0	EP		05:39	42.75			0.16	WLF1	HN	91.4	IAML		00:49	53.12	
AU14	HN	86.0	ES		05:39	53.51			0.14	WLF1	HE	91.4	IAML		00:49	53.28	
AU14	HN	86.0	IAML		05:39	54.00	13	0.24		LPW	HZ	98.5	EP		00:48	53.49	
AU14	HE	86.0	IAML		05:39	54.75	17	0.22		WPS	HN	104.0	EP		00:48	54.78	
AU11	HZ	88.4	EP		05:39	43.61			0.13	WPS	HE	104.0	ES		00:49	56.53	
AT08	HE	94.6	ES		05:39	55.83			0.35	WPS	HN	104.0	IAML		00:49	57.77	
AT08	HE	94.6	IAML		05:39	56.40	18	0.22		WPS	HE	104.0	IAML		00:49	57.95	
AT08	HN	94.6	IAML		05:39	56.46	32	0.22		LBWR	HZ	119.0	EP		00:48	56.43	
LBWR	HZ	95.7	EP		05:39	44.63			0.05	LBWR	HZ	132.0	EP		00:48	58.59	
LBWR	HN	95.7	IAML		05:39	58.56	5	0.15		CWF	HN	132.0	ES		00:49	58.64	
LBWR	HE	95.7	IAML		05:39	58.67	8	0.12		CWF	HN	132.0	IAML		00:49	58.64	
HPK	HE	102.0	ES		05:39	57.15			-0.13	CWF	HE	132.0	IAML		00:49	58.64	
HPK	HN	102.0	IAML		05:39	58.29	8	0.20		STRD	HZ	140.0	EP		00:49	59.29	
HPK	HE	102.0	IAML		05:39	58.44	8	0.20		RSBS	HZ	142.0	EP		00:48	59.84	
WACR	HZ	106.0	EP		05:39	46.01			0.03	HPK	HN	164.0	EP		00:49	03.75	
CWF	HZ	109.0	EP		05:39	46.47			0.10	HPK	HN	164.0	IAML		00:49	22.31	
CWF	HN	109.0	IAML		05:40	00.81	4	0.15		HPK	HE	164.0	IAML		00:49	23.44	
CWF	HE	109.0	IAML		05:40	02.58	6	0.10		HPK	HE	164.0	IAML		00:49	16.16	
February 18 2017 Time: 02:36 52.3 UTC Magnitude: 1.7 ML Lat: 56.281N Lon: -4.884W Depth: 4.6 km Grid Ref: 221.48 kmE 713.57 kmN RMS: 0.30 secs Locality: CAIRNDOW, ARGYLL & BUTE Velocity model: Lownet Xnear: 100.0 Xfar: 200.0																	
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES	LAWE	HZ	32.0	IP	C	02:36	58.26	
WME	EZ	12.2	EP		21:16	29.53			-0.03	LAWE	HE	32.0	ES		02:37	02.20	
WPS	HZ	22.9	IP		21:16	31.67			0.46	LAWE	HE	32.0	IAML		02:37	02.25	
WPS	HN	22.9	ES		21:16	34.41			-0.01	LAWE	HE	32.0	IAML		02:37	02.70	
WPS	HE	22.9	IAML		21:16	31.74	11	0.31		INVG	HZ	54.4	IP	C	02:37	02.04	
WPS	HN	22.9	IAML		21:16	34.64	17	0.21		INVG	HN	54.4	ES		02:37	08.41	
WLF1	HZ	25.5	IP	D	21:16	31.98			0.36	INVG	HE	54.4	IAML		02:37	08.93	
WLF1	HE	25.5	ES		21:16	35.08			-0.06	PGB1	HZ	57.9	EP		02:37	02.32	
WLF1	HN	25.5	IAML		21:16	35.15	30	0.10		PGB1	HN	57.9	ES		02:37	10.16	
WLF1	Hz	25.5	IAML		21:16	35.16	41	0.10		PGB1	HE	57.9	IAML		02:37	10.37	
YRC	EZ	36.5	EP		21:16	32.69			-0.63	PGB1	HN	57.9	IAML		02:37	10.40	
LLW	HZ	78.1	EP		21:16	39.57			-0.22	EAU	EZ	102.0	EP		02:37	09.51	
IMOK	HZ	90.6	EP		21:16	41.60			-0.14	ED1	HE	113.0	EP		02:37	11.19	
FOEL	HZ	92.7	EP		21:16	42.42			0.31	ED1	HN	113.0	IAML		02:37	26.73	
FOEL	HE	92.7	ES		21:16	53.12			-0.16	ED1	HE	113.0	IAML		02:37	28.00	
FOEL	HE	92.7	IAML		21:16	53.92	4	0.30		EDU	EZ	119.0	EP		02:37	12.31	
FOEL	HN	92.7	IAML		21:16	55.48	5	0.40		KPL	HZ	127.0	EP		02:37	13.54	
HLM1	HZ	138.0	EP		21:16	49.15			0.20	KPL	HE	127.0	IAML		02:37	31.19	
HLM1	HE	138.0	ES		21:17	05.28			0.16	KPL	HN	127.0	IAML		02:37	31.22	
HLM1	HE	138.0	IAML		21:17	06.54	3	0.32		EGL	EZ	128.0	EP		02:37	13.25	
HLM1	HN	138.0	IAML		21:17	07.05	4	0.34		MDO	EZ	133.0	EP		02:37	14.78	
February 17 2017	Time: 23:41 13.8 UTC	Magnitude: 0.6 ML	Lat: 56.818N	Lon: -5.240W	Depth: 11.2 km		Grid Ref: 202.28 kmE 774.28 kmN	RMS: 0.30 secs	Locality: DUISKY, HIGHLAND	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	ESK	HZ	150.0	EP		02:37	16.06
February 18 2017	Time: 13:19 51.5 UTC	Magnitude: 0.6 ML								ESK	HN	150.0	IAML		02:37	35.97	
										ESK	HE	150.0	IAML		02:37	36.70	
																12 0.23	
																17 0.38	

**TABLE 2 : PHASE DATA**

Lat: 52.189N Lon: -2.605W	Depth: 6.6 km	LEWI	HZ	106.0	EP	18:09	21.86	0.04	
Grid Ref: 358.65 kmE 254.75 kmN	RMS: 0.10 secs	LEWI	HN	106.0	ES	18:09	34.74	0.11	
Locality: PENCOMBE, HEREFORDSHIRE		LEWI	HE	106.0	IAML	18:09	35.86	2 0.11	
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0		LEWI	HN	106.0	IAML	18:09	36.72	2 0.52	
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES		LAWE	HE	140.0	ES	18:09	43.49	-0.05	
MCH1 HZ 34.4 IP C 13:19 57.78	-0.02	LAWE	HE	140.0	IAML	18:09	45.35	4 0.28	
MCH1 HN 34.4 ES	13:20 02.28	LAWE	HN	140.0	IAML	18:09	45.35	4 0.32	
MCH1 HE 34.4 IAML	13:20 02.41 7 0.06	BIGH	HZ	146.0	EP	18:09	28.11	0.24	
MCH1 HN 34.4 IAML	13:20 02.51 21 0.19	BIGH	HE	146.0	ES	18:09	45.36	0.26	
HLM1 HZ 41.1 EP	13:19 58.91	INVG	HZ	151.0	EP	18:09	28.97	0.29	
HLM1 HE 41.1 ES	13:20 04.20	INVG	HE	151.0	ES	18:09	46.30	-0.20	
HLM1 HN 41.1 IAML	13:20 04.29 5 0.11	INVG	HN	151.0	IAML	18:09	46.45	2 0.22	
HLM1 HE 41.1 IAML	13:20 04.45 6 0.10	INVG	HE	151.0	IAML	18:09	48.54	2 0.22	
MONM HZ 41.3 EP	13:19 58.93	February 23 2017 Time: 23:38 42.4 UTC	Magnitude: 1.0 ML						
MONM HE 41.3 ES	13:20 04.33	Lat: 56.702N Lon: -5.078W	Depth: 4.5 km						
MONM HN 41.3 IAML	13:20 04.49 9 0.26	Grid Ref: 211.58 kmE 760.92 kmN	RMS: 0.30 secs						
MONM HE 41.3 IAML	13:20 04.75 4 0.11	Locality: GLENCOE,HIGHLAND	Velocity model: Lownet Xnear: 100.0 Xfar: 1000.0						
STRD HN 55.1 ES	13:20 07.85	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							
STRD HN 55.1 IAML	13:20 08.47 7 0.17	LAWE HZ 53.1 EP	23:38	52.01	0.20				
STRD HE 55.1 IAML	13:20 08.75 5 0.20	LAWE HN 53.1 ES	23:38	58.69	-0.02				
FOEL HE 87.7 ES	13:20 16.86	LAWE HE 53.1 IAML	23:38	59.10	15 0.15				
LPW HN 100.0 ES	13:20 19.96	LAWE HN 53.1 IAML	23:38	59.19	12 0.20				
LPW HE 100.0 IAML	13:20 20.31 2 0.17	INVG HZ 70.6 EP	23:38	54.00	-0.56				
LPW HN 100.0 IAML	13:20 22.92 2 0.10	INVG HN 70.6 IAML	23:39	03.46	3 0.09				
RSBS HZ 149.0 EP	13:20 15.18	INVG HE 70.6 IAML	23:39	05.74	9 0.12				
RSBS HN 149.0 ES	13:20 32.99	February 20 2017 Time: 19:41 03.9 UTC	Magnitude: 0.4 ML						
		Lat: 53.119N Lon: -4.481W	Depth: 10.0 km						
		Grid Ref: 233.99 kmE 360.89 kmN	RMS: 0.30 secs						
		Locality: CAERNARFON BAY	Velocity model: Lleyn Xnear: 80.0 Xfar: 200.0						
		Comment: 8KM SSW ABERFFRAW	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES						
			WLF1 HZ 19.7 EP	19:41 07.86	0.23	EDIE HN 146.0 IAML	23:39	24.34	4 0.39
			WLF1 HN 19.7 ES	19:41 10.30	0.13	EDIE HE 146.0 IAML	23:39	25.70	4 0.24
			WLF1 HE 19.7 IAML	19:41 10.63 17 0.07	MCD EZ 148.0 EP	23:39	06.73	0.40	
			WLF1 HE 19.7 IAML	19:41 10.69 26 0.09	MCD EE 148.0 ES	23:39	24.01	0.19	
			YLL EZ 20.9 EP	19:41 07.73	-0.09	February 24 2017 Time: 08:48 08.8 UTC	Magnitude: 0.5 ML		
			WPS HZ 31.3 EP	19:41 09.88	0.46	Lat: 54.669N Lon: -2.594W	Depth: 7.9 km		
			WPS HE 31.3 ES	19:41 13.13	-0.06	Grid Ref: 361.69 kmE 530.61 kmN	RMS: 0.20 secs		
			WPS HN 31.3 IAML	19:41 13.53 2 0.06	Locality: CULGAITH,CUMBRIA	Velocity model: default (Lownet) Xnear: 500.0 Xfar: 1000.0			
			WPS HE 31.3 IAML	19:41 14.47 3 0.36	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES				
			WME EZ 33.1 EP	19:41 08.97	-0.74	KESW HZ 34.2 EP	08:48	15.03	0.00
			LLW BZ 62.5 EP	19:41 14.31	-0.18	KESW HN 34.2 ES	08:48	19.19	-0.36
			LLW BE 62.5 ES	19:41 21.87	0.17	KESW HE 34.2 IAML	08:48	20.15	3 0.54
			FOEL HZ 89.7 EP	19:41 18.67	-0.13	KESW HE 34.2 IAML	08:48	21.08	5 0.60
			FOEL HE 89.7 ES	19:41 29.12	0.19	EDMD HZ 44.5 EP	08:48	16.72	0.14
			IOMK HZ 127.0 EP	19:41 24.59	0.06	EDMD HN 44.5 ES	08:48	21.94	-0.29
			IOMK HE 127.0 ES	19:41 38.58	0.02	EDMD HN 44.5 IAML	08:48	22.03	7 0.10
			February 22 2017 Time: 21:20 23.0 UTC	Magnitude: 0.4 ML	EDMD HE 44.5 IAML	08:48	22.21	6 0.09	
			Lat: 55.904N Lon: -5.278W	Depth: 18.3 km	ESK HZ 82.0 EP	08:48	22.75	0.31	
			Grid Ref: 195.11 kmE 672.73 kmN	RMS: 0.30 secs	ESK HE 82.0 ES	08:48	32.33	-0.04	
			Locality: KAMES,ARGYLL & BUTE	Velocity model: Lownet Xnear: 150.0 Xfar: 300.0	NEWG HZ 116.0 ES	08:48	41.44	-0.07	
			Velocity model: Llownet Xnear: 150.0 Xfar: 300.0	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	NEWG HN 116.0 IAML	08:48	42.22	1 0.15	
			STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	LAWE HZ 40.3 EP	21:20 30.44	NEWG HE 116.0 IAML	08:48	42.24	1 0.26
			LAWE HE 40.3 ES	21:20 35.43	-0.44	IOMK HN 136.0 ES	08:48	46.78	0.32
			LAWE HN 40.3 IAML	21:20 35.65 2 0.14	March 3 2017 Time: 09:28 11.0 UTC	Magnitude: 2.6 ML			
			LAWE HE 40.3 IAML	21:20 35.70 4 0.18	Lat: 52.910N Lon: -2.148W	Depth: 13.1 km			
			PGB1 HZ 50.8 EP	21:20 32.46	0.44	Grid Ref: 390.05 kmE 334.78 kmN	RMS: 0.40 secs		
			INVG HZ 96.3 EP	21:20 38.79	0.25	Locality: STONE,STAFFORDSHIRE	Velocity model: Lownet Xnear: 150.0 Xfar: 300.0		
			INVG HE 96.3 ES	21:20 49.90	0.05	Comment: FELT OAKAMOOR Intensity: 2			
			INVG HE 96.3 IAML	21:20 53.28 1 0.09	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES				
			INVG HN 96.3 IAML	21:20 53.55 1 0.22	STNC HZ 20.5 IP D	09:28	15.70	0.36	
			CLGH HZ 106.0 EP	21:20 40.26	0.41	STNC HE 20.5 ES	09:28	19.29	0.82
			CLGH HE 106.0 ES	21:20 52.19	0.07	STNC HN 20.5 IAML	09:28	19.45	1080 0.17
			NEWG HN 110.0 ES	21:20 52.77	-0.39	STNC HE 20.5 IAML	09:28	19.58	1660 0.12
			NEWG HE 110.0 IAML	21:20 55.40	1 0.25	CWF HZ 59.8 IP D	09:28	20.98	-0.26
			NEWG HE 110.0 IAML	21:20 55.51	2 0.18	CWF HE 59.8 ES	09:28	27.94	-0.75
			GALL HE 121.0 ES	21:20 55.54	-0.37	CWF HE 59.8 IAML	09:28	28.43	470 0.21
			GALL HE 121.0 IAML	21:20 55.84	1 0.15	CWF HE 59.8 IAML	09:28	28.85	346 0.16
			GALL HE 121.0 IAML	21:20 58.69	1 0.14	LBWR HZ 61.5 IP C	09:28	21.51	-0.04
			February 23 2017 Time: 18:09 04.3 UTC	Magnitude: 0.9 ML	LBWR HE 61.5 ES	09:28	29.11	-0.10	
			Lat: 57.511N Lon: -5.547W	Depth: 4.3 km	LBWR HE 61.5 IAML	09:28	29.29	228 0.16	
			Grid Ref: 187.57 kmE 852.28 kmN	RMS: 0.20 secs	LBWR HE 61.5 IAML	09:28	29.61	291 0.12	
			Locality: TORRIDON,HIGHLAND	Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0	HLM1 HZ 66.0 IP C	09:28	21.92	-0.33	
			HLM1 HE 66.0 IAML	09:28	30.79	120 0.12			
			HLM1 HE 66.0 IAML	09:28	32.70	162 0.22			
			FOEL HZ 70.8 EP	09:28	22.80	-0.19			
			FOEL HE 70.8 ES	09:28	31.35	-0.37			
			FOEL HE 70.8 IAML	09:28	33.21	150 0.24			
			FOEL HE 70.8 IAML	09:28	33.27	119 0.33			
			LLW BZ 102.0 EP	09:28	27.66	-0.05			
			LLW BN 102.0 ES	09:28	39.50	-0.37			
			LLW BE 102.0 IAML	09:28	40.40	52 0.35			
			LLW BN 102.0 IAML	09:28	40.54	75 0.30			

**TABLE 2 : PHASE DATA**

MCH1	HZ	117.0	EP	09:28	29.75	-0.05	LBWR	HN	103.0	IAML	19:54	48.98	40	0.21																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
MCH1	HN	117.0	ES	09:28	43.10	-0.38	LBWR	HE	103.0	IAML	19:54	49.47	38	0.15																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
MCH1	HN	117.0	IAML	09:28	43.77	210 0.14	AU09	HZ	109.0	EP	19:54	36.30		0.07																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
MCH1	HE	117.0	IAML	09:28	44.85	184 0.28	AU11	HZ	115.0	EP	19:54	37.25		0.13																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
HPK	HZ	122.0	EP	09:28	30.67	0.18	AT08	HZ	119.0	EP	19:54	37.60		-0.06																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
HPK	HE	122.0	IAML	09:28	46.39	432 0.20	AT08	HE	119.0	IAML	19:54	52.68	22	0.28																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
HPK	HN	122.0	IAML	09:28	46.50	615 0.14	AT08	HN	119.0	IAML	19:54	53.17	30	0.14																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
STRD	HZ	126.0	EP	09:28	31.51	0.38	AU20	HZ	121.0	EP	19:54	37.98		-0.04																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
STRD	HN	126.0	ES	09:28	46.34	0.55	HPK	HZ	122.0	EP	19:54	38.17		-0.02																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
STRD	HE	126.0	IAML	09:28	47.47	305 0.28	HPK	HE	122.0	ES	19:54	52.26		-0.08																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
STRD	HN	126.0	IAML	09:28	49.88	274 0.40	HPK	HE	122.0	IAML	19:54	52.90	32	0.18																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
MONM	HZ	127.0	EP	09:28	31.50	0.23	HPK	HN	122.0	IAML	19:54	53.74	33	0.26																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
MONM	HE	127.0	ES	09:28	46.59	0.56	GDLE	HZ	136.0	EP	19:54	40.19		0.10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
MONM	HN	127.0	IAML	09:28	47.95	196 0.66	GDLE	HN	136.0	IAML	19:54	56.47	15	0.38																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
MONM	HE	127.0	IAML	09:28	48.14	211 0.48	GDLE	HE	136.0	IAML	19:54	56.83	10	0.24																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
LMK	HZ	136.0	EP	09:28	32.67	0.14	ELMS	HZ	153.0	EP	19:54	42.47		0.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
LMK	HN	136.0	IAML	09:28	50.21	219 0.24	ELMS	HE	153.0	ES	19:54	59.95		0.21																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
LMK	HE	136.0	IAML	09:28	50.51	248 0.38	ELMS	HN	153.0	IAML	19:55	02.22	15	0.19																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
YLL	EZ	138.0	EP	09:28	32.43	-0.38	ELMS	HE	153.0	IAML	19:55	02.29	20	0.25																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
WME	EZ	154.0	EP	09:28	34.52	-0.56																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
WLF1	HZ	156.0	EP	09:28	35.77	0.36	March 9 2017																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
WLF1	HN	156.0	ES	09:28	53.50	0.30	Time:	05:48	43.3	UTC	Magnitude:	0.4	ML																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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							Velocity model:	Lownet	Xnear:	100.0	Xfar:	200.0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	RSBS	HZ	133.0	EP	05:06	47.84		-0.18																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
DSB	BZ	62.1	EP		05:06	37.50	RSBS	HN	133.0	ES	05:07	03.34		-0.18																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
WPS	BE	62.1	ES		05:06	44.51																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
WPS	HZ	77.8	EP		05:06	40.39	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL PERI RES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
WPS	HE	77.8	ES		05:06	48.64	WLF1	HZ	78.9	EP	05:06	40.39		0.51																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
WPS	HN	77.8	IAML		05:06	49.48	WLF1	HN	78.9	ES	05:06	49.03		-0.40																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
WPS	HE	77.8	IAML		05:06	49.59	WLF1	HE	78.9	IAML	05:06	49.68	3	0.11																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
WLF1	HZ	78.9	EP		05:06	50.85	WLF1	HE	78.9	IAML	05:06	50.85	4	0.26																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
RSBS	HZ	133.0	EP		05:06	47.84	WLF1	HN	78.9	ES	05:07	07.70		0.27																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
RSBS	HN	133.0	ES		05:07	03.34	WLF1	HE	78.9	EP	05:07	09.82	3	0.37																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
WLF1	HZ	78.9	ES		05:07	07.70	FOEL	HZ	148.0	ES	05:07	07.70		0.30																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
FOEL	HN	156.0	EP		05:06	51.71	FOEL	HN	156.0	IAML	05:07	09.82	3	0.37																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
FOEL	HE	156.0	ES		05:07	09.09	FOEL	HE	156.0	IAML	05:07	09.82	3	0.37																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
WLF1	HN	187.0	ES		05:07	16.47	HLM1	HN	187.0	IAML	05:07	17.90	1	0.09																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
HLM1	HE	187.0	IAML		05:07	18.00	HLM1	HN	187.0	IAML	05:07	18.00	1	0.29																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
HLM1	HN	187.0	EP		05:07																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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							Time:	22:07	54.8	UTC	Magnitude:	0.6	ML																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
AU08	HZ	101.0	EP		19:54	35.11	Lat:	56.614N			Depth:	8.6	km																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
AU08	HN	101.0	IAML		19:54	47.99	Grid Ref:	205.38	kmE	751.39 kmN	RMS:	0.30	secs																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
AU08	HE	101.0	IAML		19:54	48.27	Locality:	GLENCOE, HIGHLAND																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
AV06	HZ	102.0	EP		19:54	35.20	Velocity model:	Lownet	Xnear:	100.0	Xfar:	200.0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
LBWR	HN	103.0	EP		19:54	35.49	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL PERI RES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													









**TABLE 2 : PHASE DATA**

WPS	HN	88.7	IAML	13:27	20.14	9	0.30	Grid Ref: 232.40 kmE 367.29 kmN Locality: ABERFRAW,ANGLESEY Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	RMS: 0.40 secs	
WPS	HE	88.7	IAML	13:27	21.01	5	0.40	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES		
MCH1	HN	110.0	ES	13:27	25.50		-0.03	YRC EZ 9.5 EP 17:36 14.38	-0.53	
MCH1	HN	110.0	IAML	13:27	25.80	9	0.24	WLF1 HZ 14.6 EP 17:36 16.06	0.48	
MCH1	HE	110.0	IAML	13:27	26.40	4	0.14	WLF1 HN 14.6 ES 17:36 18.31	0.34	
LWWR	HZ	122.0	EP	13:27	14.13		-0.10	WLF1 HE 14.6 IAML 17:36 18.69	38 0.13	
MONM	HZ	131.0	EP	13:27	15.73		0.25	WLF1 HN 14.6 IAML 17:36 18.72	41 0.09	
RSBS	HZ	145.0	EP	13:27	17.52		0.03	WPS HZ 25.0 EP 17:36 17.64	0.56	
RSBS	HN	145.0	IAML	13:27	36.53	12	0.20	WPS HN 25.0 IAML 17:36 20.85	27 0.08	
RSBS	HE	145.0	IAML	13:27	37.16	8	0.10	WPS HE 25.0 IAML 17:36 21.04	10 0.12	
HPK	HZ	162.0	EP	13:27	19.98		0.06			
May 3 2017				Time: 21:26	42.7 UTC	Magnitude: 0.7 ML		WME EZ 28.1 EP 17:36 17.08	-0.50	
Lat: 52.537N				Lat: -1.850W		Depth: 7.7 km		LLW BZ 67.2 EP 17:36 23.50	-0.12	
Grid Ref: 410.17 kmE				293.29 kmN		RMS: 0.20 secs		LLW BN 67.2 ES 17:36 31.62	-0.26	
Locality: ERDINGTON,WEST MIDLAND								LLW BE 67.2 IAML 17:36 32.25	5 0.40	
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0								LLW BN 67.2 IAML 17:36 32.26	2 0.30	
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES								FOEL HZ 93.3 EP 17:36 27.65	-0.07	
CWF HZ 43.0 EP					21:26	50.34	0.08	FOEL HE 93.3 ES 17:36 38.71	-0.25	
CWF HE 43.0 ES					21:26	55.49	-0.27	FOEL HN 93.3 IAML 17:36 40.45	6 0.28	
CWF HN 43.0 IAML					21:27	01.91	2 0.06	FOEL HE 93.3 IAML 17:36 41.64	6 0.34	
CWF HE 43.0 IAML					21:27	02.28	2 0.10	IOMK HZ 121.0 EP 17:36 31.78	0.04	
HLM1 HZ 70.0 EP					21:26	54.61	0.12	IOMK HE 121.0 ES 17:36 45.39	-0.54	
HLM1 HE 70.0 ES					21:27	02.86	-0.23	IOMK HE 121.0 IAML 17:36 46.86	10 0.23	
HLM1 HE 70.0 IAML					21:27	03.14	10 0.12	IOMK HN 121.0 IAML 17:36 47.02	6 0.19	
HLM1 HN 70.0 IAML					21:27	03.19	13 0.16	HLM1 HZ 132.0 EP 17:36 33.79	0.42	
STRD HZ 87.4 EP					21:26	57.41	0.26	HLM1 HN 132.0 ES 17:36 49.34	0.59	
LWWR HE 96.5 ES					21:27	10.28	0.10	HLM1 HN 132.0 IAML 17:36 51.30	4 0.22	
LWWR HE 96.5 IAML					21:27	10.53	6 0.46	HLM1 HE 132.0 IAML 17:36 51.40	2 0.20	
LWWR HN 96.5 IAML					21:27	10.77	4 0.20	RSBS HZ 137.0 EP 17:36 34.51	0.41	
MCH1 HZ 98.8 EP					21:26	58.93	0.01	RSBS HE 137.0 ES 17:36 50.09	0.09	
MCH1 HE 98.8 ES					21:27	10.54	-0.20	RSBS HE 137.0 IAML 17:36 52.36	2 0.12	
MCH1 HN 98.8 IAML					21:27	10.85	2 0.34	RSBS HN 137.0 IAML 17:36 53.06	2 0.08	
MCH1 HE 98.8 IAML					21:27	11.74	2 0.23			
FOEL HE 99.3 ES					21:27	11.08	0.12			
May 15 2017				Time: 12:04	30.1 UTC	Magnitude: 0.9 ML				
Lat: 54.776N				Lat: -3.220W		Depth: 4.5 km				
Grid Ref: 321.53 kmE				543.04 kmN		RMS: 0.20 secs				
Locality: ASPATRIA,CUMBRIA										
Velocity model: Borders Xnear: 75.0 Xfar: 200.0										
Comment: 7KM EAST ASPATRIA										
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES										
KESW HZ 20.5 EP					04:47	45.52	0.05	KESW HZ 22.2 EP 12:04 34.27	-0.07	
KESW HE 20.5 ES					04:47	48.78	0.24	KESW HE 22.2 ES 12:04 37.52	0.13	
KESW HN 20.5 IAML					04:47	48.99	24 0.16	KESW HN 22.2 IAML 12:04 37.69	8 0.15	
KESW HE 20.5 IAML					04:47	49.01	34 0.26	KESW HE 22.2 IAML 12:04 37.80	9 0.13	
LBWR HZ 49.2 EP					04:47	49.83	-0.02	ESK HZ 60.1 EP 12:04 40.72	0.21	
LBWR HE 49.2 ES					04:47	56.00	-0.11	ESK HE 60.1 ES 12:04 47.83	-0.10	
LBWR HE 49.2 IAML					04:47	56.48	7 0.12	ESK HN 60.1 IAML 12:04 48.39	5 0.18	
LBWR HN 49.2 IAML					04:47	56.55	4 0.23	ESK HE 60.1 IAML 12:04 48.47	7 0.12	
CWF HZ 51.7 EP					04:47	50.32	0.12	NEWG HZ 75.0 EP 12:04 43.17	0.26	
CWF HE 51.7 ES					04:47	56.71	-0.00	NEWG HN 75.0 ES 12:04 51.89	-0.15	
CWF HE 51.7 IAML					04:47	57.26	2 0.25	NEWG HE 75.0 IAML 12:04 52.69	4 0.13	
CWF HE 51.7 IAML					04:47	57.74	3 0.19	NEWG HN 75.0 IAML 12:04 52.98	7 0.10	
HLM1 HZ 80.8 EP					04:47	54.60	-0.14	EDMD HZ 81.1 EP 12:04 44.05	0.17	
HLM1 HE 80.8 ES					04:48	04.44	-0.14	EDMD HE 81.1 ES 12:04 53.42	-0.27	
HLM1 HE 80.8 IAML					04:48	05.76	1 0.30	EDMD HN 81.1 IAML 12:04 55.59	38 0.35	
HLM1 HE 80.8 IAML					04:48	07.52	1 0.26	EDMD HE 81.1 IAML 12:04 55.91	23 0.21	
FOEL HE 84.0 EP					04:47	55.05	-0.19	IOMK HZ 104.0 EP 12:04 47.51	-0.18	
MCH1 HZ 130.0 EP					04:48	02.01	-0.01	IOMK HE 104.0 ES 12:05 00.08	-0.13	
MCH1 HN 130.0 ES					04:48	17.37	0.20	May 16 2017	Time: 04:30 39.7 UTC	Magnitude: 1.9 ML
MCH1 HN 130.0 IAML					04:48	17.67	1 0.21	Lat: 53.825N	Lon: -1.269W	Depth: 6.0 km
MCH1 HE 130.0 IAML					04:48	19.06	2 0.44	Grid Ref: 448.11 kmE 436.80 kmN		RMS: 0.10 secs
May 10 2017				Time: 10:22	43.3 UTC	Magnitude: 2.0 ML		Locality: SAXTON,NORTH YORKSHIRE		
Lat: 51.353N				Lat: 2.120W		Depth: 6.5 km		Velocity model: Lownet Xnear: 100.0 Xfar: 200.0		
Grid Ref: 686.82 kmE				169.66 kmN		RMS: 0.50 secs		STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES		
Locality: SOUTHERN NORTH SEA								AU05 HZ 26.3 IP C 04:30 44.74	0.07	
Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0								AU05 HZ 26.3 ES 04:30 47.97	-0.32	
Comment: 50KM EAST RAMSGATE								AU05 HE 26.3 IAML 04:30 49.04	188 0.33	
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES								AU05 HE 26.3 IAML 04:30 49.53	220 0.26	
ELSH HZ 72.4 EP					10:22	55.10	-0.68	HPK HZ 27.7 IP D 04:30 44.97	0.02	
ELSH HE 72.4 IAML					10:22	57.98	37 0.10	HPK HE 27.7 IAML 04:30 49.00	0.23	
ELSH HE 72.4 IAML					10:23	17.86	40 0.60	HPK HN 27.7 IAML 04:30 49.68	172 0.25	
ELMS HZ 113.0 EP					10:23	01.77	-0.36	AU07 HZ 37.8 EP 04:30 46.43	-0.10	
ELMS HE 113.0 ES					10:23	15.33	-0.52	AU07 HE 37.8 ES 04:30 51.57	0.05	
ELMS HE 113.0 IAML					10:23	21.53	32 0.22	AU07 HE 37.8 IAML 04:30 52.28	178 0.27	
ELMS HE 113.0 IAML					10:23	24.78	42 0.49	AU07 HN 37.8 IAML 04:30 52.32	154 0.27	
HMNX HZ 136.0 EP					10:23	06.03	0.45	AU09 HZ 43.4 EP 04:30 47.35	-0.05	
WACR HZ 184.0 EP					10:23	12.76	0.56	AU09 HE 43.4 ES 04:30 53.13	0.11	
WACR HN 184.0 IAML					10:23	39.75	31 0.54	AU09 HE 43.4 IAML 04:30 53.89	101 0.17	
WACR HE 184.0 IAML					10:23	43.30	28 0.38	AU09 HN 43.4 IAML 04:30 53.94	108 0.37	
DOU HZ 224.0 EP					10:23	16.55	-0.69	AU11 HZ 46.9 EP 04:30 47.98	0.05	
HGN BZ 275.0 EP					10:23	23.98	0.33	AU11 HE 46.9 ES 04:30 53.94	0.00	
MCH1 HZ 361.0 EP					10:23	35.04	0.63	AU11 HE 46.9 IAML 04:30 54.71	27 0.11	
HLM1 HZ 367.0 EP					10:23	35.53	0.28	AU11 HE 46.9 IAML 04:30 54.83	41 0.21	
AU14 EZ 50.9 IP D 04:30 48.62										0.08
May 12 2017				Time: 17:36	12.3 UTC	Magnitude: 0.9 ML		AU08 HZ 51.9 IP C 04:30 48.79		0.06
Lat: 53.176N				Lat: -4.508W		Depth: 10.7 km		AU13 HZ 52.0 IP C 04:30 48.78		0.06

**TABLE 2 : PHASE DATA**

LWBR	HZ	55.9	IP	C	04:30	49.30	-0.09	Velocity model: Lownet Xnear: 100.0 Xfar: 250.0
LWBR	HE	55.9	ES		04:30	56.26	-0.20	Comment: FELT KNOYDART... Intensity: 3
LWBR	HE	55.9	IAML		04:30	56.69	166 0.10	KPL HZ 32.7 EP 23:14 29.45 0.04
LWBR	HN	55.9	IAML		04:30	57.32	157 0.16	KPL HE 32.7 ES 23:14 33.38 -0.34
AU20	HZ	60.7	IP	C	04:30	50.13	0.04	KPL HN 32.7 IAML 23:14 33.80 30 0.23
GDL	HZ	72.7	IP	D	04:30	51.97	0.00	KPL HE 32.7 IAML 23:14 33.91 107 0.23
GDL	HN	72.7	ES		04:31	00.69	-0.23	KPL HE 32.7 IAML 23:14 38.47 0.09
GDL	HE	72.7	IAML		04:31	02.79	111 0.26	KPL HE 90.4 IP C 23:14 48.83 -0.42
GDL	HN	72.7	IAML		04:31	02.82	199 0.25	KPL HE 90.4 ES 23:14 53.68 47 0.18
LMK	HZ	74.6	IP	D	04:30	52.41	0.17	LAWE HZ 90.4 IAML 23:14 49.48 38 0.25
LMK	HN	74.6	ES		04:31	01.65	0.25	LAWE HN 90.4 IAML 23:14 53.68 47 0.18
LMK	HN	74.6	IAML		04:31	02.24	78 0.33	INVG HZ 125.0 EP 23:14 44.05 0.31
LMK	HE	74.6	IAML		04:31	03.73	68 0.35	INVG HN 125.0 ES 23:14 58.35 -0.16
EDMD	HZ	121.0	IP	C	04:30	59.10	-0.27	INVG HN 125.0 IAML 23:14 59.78 27 0.09
KESW	HZ	147.0	EP		04:31	03.17	-0.06	INVG HE 125.0 IAML 23:15 01.24 29 0.13
								LINV HZ 126.0 EP 23:14 44.22 0.30
May 17 2017					Time: 19:44	27.4 UTC	Magnitude: 1.0 ML	LINV HE 126.0 IAML 23:15 00.95 21 0.11
					Lat: 49.669N	Lon: -2.379W	Depth: 9.0 km	LINV HN 126.0 IAML 23:15 01.17 14 0.17
					Grid Ref: 372.65 kmE	-25.56 kmN	RMS: 0.20 secs	LEWI HZ 139.0 IP C 23:14 45.87 0.07
					Locality: ALDERNEY, CHANNEL ISLES			LEWI HE 139.0 ES 23:15 02.05 -0.03
					Velocity model: Lownet	Xnear: 500.0	Xfar: 1000.0	LEWI HN 139.0 IAML 23:15 03.01 17 0.27
					Comment: 10KM WSW ALDERNEY			LEWI HE 139.0 IAML 23:15 03.03 26 0.29
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL PERI RES
JSA	HZ	55.6	EP			19:44	36.81	-0.21
JSA	HE	55.6	ES			19:44	44.17	0.13
JSA	HE	55.6	IAML			19:44	45.00	6 0.22
JSA	HN	55.6	IAML			19:44	46.15	5 0.12
JQE	EZ	57.7	EP			19:44	37.20	-0.13
JQE	EZ	57.7	ES			19:44	44.63	0.06
DYA	HZ	140.0	EP			19:44	49.51	0.36
DYA	HN	140.0	ES			19:45	04.81	-0.21
DYA	HN	140.0	IAML			19:45	06.21	7 0.22
DYA	HE	140.0	IAML			19:45	06.90	4 0.22
May 18 2017					Time: 00:14	06.8 UTC	Magnitude: 0.6 ML	May 20 2017 Time: 03:51 58.1 UTC Magnitude: 0.6 ML
					Lat: 56.340N	Lon: -6.072W	Depth: 6.2 km	Lat: 57.051N Lon: -5.738W Depth: 7.5 km
					Grid Ref: 148.38 kmE	723.84 kmN	RMS: 0.20 secs	Grid Ref: 173.32 kmE 801.74 kmN RMS: 0.30 secs
					Locality: MULL, ARGYLL & BUTE			Locality: KNOYDART, HIGHLAND
					Velocity model: Lownet	Xnear: 500.0	Xfar: 1000.0	Velocity model: Lownet Xnear: 100.0 Xfar: 250.0
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL PERI RES
LAWE	HZ	42.6	IP	C	00:14	14.36	-0.04	KPL HZ 32.5 EP 03:52 03.87 -0.11
LAWE	HN	42.6	ES		00:14	19.52	-0.40	KPL HN 32.5 ES 03:52 08.00 -0.27
LAWE	HN	42.6	IAML		00:14	19.68	6 0.22	KPL HE 32.5 IAML 03:52 08.30 8 0.22
LAWE	HE	42.6	IAML		00:14	20.17	4 0.08	KPL HN 32.5 IAML 03:52 08.32 2 0.24
KPL	HZ	114.0	EP		00:14	25.36	-0.11	LAWE HZ 90.5 EP 03:52 13.47 0.47
KPL	HE	114.0	ES		00:14	38.97	-0.11	LAWE HE 90.5 ES 03:52 23.42 -0.46
KPL	HE	114.0	IAML		00:14	41.89	2 0.16	LAWE HE 90.5 IAML 03:52 23.86 2 0.19
KPL	HN	114.0	IAML		00:14	42.78	1 0.18	LAWE HN 90.5 IAML 03:52 24.86 2 0.12
INVG	HZ	126.0	EP		00:14	27.67	0.37	INVG HZ 125.0 EP 03:52 18.65 0.32
INVG	HE	126.0	ES		00:14	42.52	0.28	INVG HE 125.0 ES 03:52 32.90 -0.19
INVG	HE	126.0	IAML		00:14	44.26	1 0.07	INVG HE 125.0 IAML 03:52 34.29 2 0.10
INVG	HN	126.0	IAML		00:14	44.77	1 0.13	INVG HN 125.0 EP 03:52 35.76 2 0.12
CLGH	HZ	140.0	EP		00:14	29.46	0.13	LINV HZ 126.0 EP 03:52 19.04 0.55
CLGH	HN	140.0	ES		00:14	45.64	-0.12	LINV HE 126.0 IAML 03:52 35.44 1 0.13
CLGH	HN	140.0	IAML		00:14	47.42	2 0.22	LINV HN 126.0 IAML 03:52 36.87 1 0.18
CLGH	HE	140.0	IAML		00:14	47.43	2 0.36	LEWI HZ 139.0 EP 03:52 20.41 0.01
May 18 2017					Time: 23:04	14.6 UTC	Magnitude: 0.9 ML	LEWI HE 139.0 ES 03:52 36.50 -0.18
					Lat: 53.042N	Lon: -5.430W	Depth: 13.9 km	LEWI HE 139.0 IAML 03:52 37.96 2 0.28
					Grid Ref: 170.10 kmE	354.95 kmN	RMS: 0.30 secs	LEWI HN 139.0 IAML 03:52 38.11 3 0.57
					Locality: IRISH SEA			May 22 2017 Time: 15:33 31.6 UTC Magnitude: 1.7 ML
					Velocity model: Lownet	Xnear: 500.0	Xfar: 1000.0	Lat: 53.503N Lon: -0.899W Depth: 4.8 km
					Comment: 40KM ENE WICKLOW			Grid Ref: 473.02 kmE 401.29 kmN RMS: 0.30 secs
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL PERI RES
WPS	HZ	73.9	EP			23:04	27.54	0.54
WPS	HN	73.9	ES			23:04	35.86	-0.16
WPS	HN	73.9	IAML			23:04	36.67	2 0.18
WPS	HE	73.9	IAML			23:04	38.72	1 0.34
WLF1	HZ	74.4	EP			23:04	27.49	0.41
WLF1	HN	74.4	ES			23:04	35.91	-0.25
WLF1	HN	74.4	IAML			23:04	38.94	6 0.10
WLF1	HE	74.4	IAML			23:04	39.83	4 0.10
WME	EZ	85.0	EP			23:04	28.35	-0.38
LLW	BZ	121.0	EP			23:04	34.00	0.14
RSBS	HZ	130.0	EP			23:04	34.83	-0.38
WIM	EZ	133.0	EP			23:04	35.14	-0.53
IOMK	HZ	147.0	EP			23:04	37.74	0.07
IOMK	HN	147.0	ES			23:04	54.73	0.25
IOMK	HE	147.0	IAML			23:04	55.66	4 0.18
IOMK	HN	147.0	IAML			23:04	56.28	3 0.10
FOEL	HZ	151.0	EP			23:04	38.18	-0.06
FOEL	HN	151.0	ES			23:04	55.91	0.45
FOEL	HE	151.0	IAML			23:04	57.32	7 0.52
FOEL	HN	151.0	IAML			23:04	58.29	4 0.42
May 19 2017					Time: 23:14	23.5 UTC	Magnitude: 1.8 ML	AU06 HZ 78.4 EP 15:33 45.00 0.13
					Lat: 57.050N	Lon: -5.742W	Depth: 7.5 km	AU06 HE 78.4 IAML 15:33 55.56 24 0.26
					Grid Ref: 173.07 kmE	801.64 kmN	RMS: 0.30 secs	AU06 HN 78.4 IAML 15:33 55.71 21 0.20
					Locality: KNOYDART, HIGHLAND			CWF HZ 89.4 EP 15:33 46.26 -0.31

### TABLE 2 : PHASE DATA

CWF	HN	89.4	ES	15:33	57.08	-0.39		May 26 2017	Time: 21:26 06.3 UTC	Magnitude: 1.2 ML	
CWF	HN	89.4	IAML	15:33	58.20	18 0.11		Lat: 50.631N	Lon: -3.324W	Depth: 8.4 km	
CWF	HE	89.4	IAML	15:33	58.24	29 0.10		Grid Ref: 306.37 kmE 82.16 kmN		RMS: 0.30 secs	
AT10	HZ	98.2	EP	15:33	47.72	-0.24		Locality: EXMOOUTH, DEVON			
AT10	HE	98.2	ES	15:33	59.64	-0.23		Velocity model: Lownet Xnear: 100.0 Xfar: 200.0			
GDL	HZ	102.0	EP	15:33	48.41	-0.18	STAT	CO DIST PHAS WT P HrMn SECS AMPL PERI RES			
GDL	HE	102.0	ES	15:34	00.75	-0.22	DYA	HZ 48.2 IP D 21:26 14.33	-0.36		
GDL	HE	102.0	IAML	15:34	01.58	22 0.28	DYA	HN 48.2 ES	-0.01		
GDL	HN	102.0	IAML	15:34	01.74	33 0.38	DYA	HN 48.2 IAML			
							DYA	HN 48.2 IAML	5 0.07		
May 22 2017				Time: 21:57 52.6 UTC		Magnitude: 1.1 ML	DYA	HE 48.2 IAML	21:26 21.83	4 0.18	
				Lat: 57.040N	Lon: -5.744W	Depth: 7.7 km	HTL	HZ 91.3 EP	21:26 21.93	0.60	
				Grid Ref: 172.89 kmE 800.53 kmN		RMS: 0.40 secs	HTL	HE 91.3 ES	21:26 31.98	-0.30	
				Locality: KNOYDART, HIGHLAND			HTL	HN 91.3 IAML	21:26 34.87	13 0.11	
				Velocity model: Lownet Xnear: 1500.0 Xfar: 200.0			HTL	HE 91.3 IAML	21:26 35.63	15 0.25	
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	
KPL	HZ	33.7	EP	21:57	58.55	-0.14	CCA1	HZ 144.0 EP	21:26 29.19	-0.04	
KPL	HE	33.7	ES	21:58	02.47	-0.65	CCA1	HN 144.0 ES	21:26 46.45	0.49	
KPL	HE	33.7	IAML	21:58	03.01	28 0.21	CCA1	HN 144.0 IAML	21:26 48.19	5 0.12	
KPL	HN	33.7	IAML	21:58	03.02	7 0.23	CCA1	HE 144.0 IAML	21:26 48.34	4 0.13	
LAWE	HZ	89.4	EP	21:58	07.62	0.26	MCH1	HZ 154.0 EP	21:26 30.59	-0.03	
LAWE	HE	89.4	ES	21:58	17.93	-0.18	MCH1	HE 154.0 ES	21:26 48.21	-0.15	
LAWE	HN	89.4	IAML	21:58	22.79	9 0.17	MCH1	HN 154.0 IAML	21:26 50.04	7 0.24	
LAWE	HE	89.4	IAML	21:58	22.89	8 0.26	MCH1	HE 154.0 IAML	21:26 50.22	5 0.15	
INVG	HZ	124.0	IP	C	21:58	13.07	0.28	RSBS	HZ 177.0 EP	21:26 33.45	-0.34
INVG	HN	124.0	ES		21:58	27.43	-0.09	RSBS	HE 177.0 ES	21:26 53.46	-0.38
INVG	HN	124.0	IAML	21:58	28.89	5 0.09	RSBS	HN 177.0 IAML	21:26 56.74	1 0.20	
INVG	HE	124.0	IAML	21:58	30.37	5 0.15	RSBS	HE 177.0 IAML	21:26 58.38	2 0.10	
LINV	HZ	128.0	EP	21:58	13.94	0.76	HLM1	HZ 212.0 EP	21:26 39.18	1.00	
LINV	HE	128.0	ES	21:58	28.83	0.64	HLM1	HN 212.0 ES	21:27 02.55	1.11	
LINV	HE	128.0	IAML	21:58	30.03	4 0.10	HLM1	HN 212.0 IAML	21:27 04.53	3 0.28	
LINV	HN	128.0	IAML	21:58	30.28	3 0.17	HLM1	HE 212.0 IAML	21:27 05.00	4 0.29	
LEWI	HZ	140.0	EP	21:58	14.96	-0.07		May 26 2017	Time: 21:59 25.8 UTC	Magnitude: 0.7 ML	
LEWI	HN	140.0	ES	21:58	31.05	-0.34		Lat: 56.076N	Lon: -6.025W	Depth: 2.5 km	
LEWI	HE	140.0	IAML	21:58	32.11	6 0.26		Grid Ref: 149.56 kmE 694.32 kmN		RMS: 0.20 secs	
LEWI	HN	140.0	IAML	21:58	33.05	4 0.14		Locality: JURA, ARGYLL & BUTE			
PGB1	HE	157.0	ES	21:58	35.57	-0.06		Velocity model: Lownet Xnear: 100.0 Xfar: 150.0			
DRUM	HN	199.0	ES	21:58	44.42	-0.40		Comment: OFFSHORE LOCATION			
DRUM	HE	199.0	IAML	21:58	49.73	4 0.25	STAT	CO DIST PHAS WT P HrMn SECS AMPL PERI RES			
DRUM	HN	199.0	IAML	21:58	50.99	6 0.47	LAWE	HZ 43.9 EP	21:59 33.58	-0.20	
CLGH	HZ	219.0	EP	21:58	25.53	0.16	LAWE	HE 43.9 ES	21:59 39.58	0.01	
CLGH	HN	219.0	ES	21:58	48.62	-0.65	LAWE	HN 43.9 IAML	21:59 39.98	5 0.27	
CLGH	HN	219.0	IAML	21:58	50.01	1 0.20	LAWE	HE 43.9 IAML	21:59 40.11	3 0.15	
CLGH	HE	219.0	IAML	21:58	53.51	1 0.21	CLGH	HZ 111.0 EP	21:59 44.52	0.28	
NEWG	HZ	234.0	EP	21:58	27.55	0.35	CLGH	HN 111.0 ES	21:59 57.49	-0.19	
NEWG	HE	234.0	ES	21:58	52.34	-0.10	CLGH	HE 111.0 IAML	21:59 59.11	4 0.50	
NEWG	HN	234.0	IAML	21:58	59.50	2 0.33	CLGH	HN 111.0 IAML	21:59 59.25	4 0.18	
NEWG	HE	234.0	IAML	21:58	60.00	2 0.23	INVG	HZ 129.0 EP	21:59 47.55	0.49	
ESK	HZ	248.0	EP	21:58	29.86	0.83	INVG	HN 129.0 ES	22:00 02.82	0.27	
ESK	HN	248.0	ES	21:58	55.57	-0.03	INVG	HE 129.0 IAML	22:00 05.00	2 0.26	
INVG	HN	248.0	IAML	21:58	55.57		INVG	HN 129.0 IAML	22:00 05.04	2 0.10	
May 25 2017				Time: 02:09 54.7 UTC		Magnitude: 1.2 ML					
				Lat: 52.673N	Lon: -1.860W	Depth: 3.0 km	May 29 2017				
				Grid Ref: 409.47 kmE 308.41 kmN		RMS: 0.40 secs					
				Locality: LICHFIELD, STAFFORDSHIRE							
				Velocity model: Lownet Xnear: 100.0 Xfar: 200.0							
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	
CWF	HZ	38.0	IP	C	02:10	01.64	0.01		LAWE	HZ 43.9 EP	
CWF	HE	38.0	ES		02:10	05.93	-0.77		LAWE	HE 43.9 ES	
CWF	HE	38.0	IAML	02:10	01.75	20 0.22		LAWE	HN 43.9 IAML		
CWF	HN	38.0	IAML	02:10	06.13	16 0.10		LAWE	HE 43.9 IAML		
STNC	HZ	52.1	EP	02:10	04.04	0.09	WLF1	HZ 31.0 EP	01:10 07.57	-0.43	
STNC	HE	52.1	ES	02:10	10.80	0.08	WLF1	HE 31.0 ES	01:10 08.99	0.38	
STNC	HE	52.1	IAML	02:10	11.17	28 0.20	WLF1	HN 31.0 EP	01:10 12.77	-0.03	
STNC	HN	52.1	IAML	02:10	11.21	19 0.10	WPS	HZ 43.1 EP	01:10 10.97	0.37	
HLM1	HZ	71.3	EP	02:10	06.85	-0.12	WPS	HE 43.1 ES	01:10 16.17	-0.07	
HLM1	HN	71.3	ES	02:10	15.38	-0.56	WPS	HN 43.1 IAML	01:10 16.86	14 0.32	
HLM1	HN	71.3	IAML	02:10	15.55	7 0.10	FOEL	HZ 86.0 EP	01:10 17.29	14 0.24	
HLM1	HE	71.3	IAML	02:10	15.61	4 0.10	FOEL	HE 86.0 ES	01:10 27.52	-0.38	
LBWR	HZ	81.6	EP	02:10	08.84	0.29	FOEL	HN 86.0 IAML	01:10 28.52	12 0.22	
LBWR	HN	81.6	IAML	02:10	19.43	20 0.18	FOEL	HE 86.0 IAML	01:10 29.18	19 0.38	
LBWR	HE	81.6	IAML	02:10	19.88	18 0.24	RSBS	HZ 120.0 EP	01:10 22.48	-0.03	
FOEL	HZ	93.6	EP	02:10	11.03	0.60	RSBS	HE 120.0 ES	01:10 36.59	-0.26	
FOEL	HE	93.6	ES	02:10	21.56	-0.36	RSBS	HN 120.0 IAML	01:10 38.69	6 0.16	
FOEL	HN	93.6	IAML	02:10	22.75	5 0.16	RSBS	HE 120.0 IAML	01:10 38.97	6 0.06	
FOEL	HE	93.6	IAML	02:10	23.70	5 0.38	HLM1	HZ 120.0 EP	01:10 22.94	0.30	
MCH1	HZ	108.0	EP	02:10	12.73	0.10	HLM1	HN 120.0 IAML	01:10 39.25	5 0.12	
MCH1	HN	108.0	ES	02:10	25.28	-0.44	HLM1	HE 120.0 IAML	01:10 39.31	6 0.14	
MCH1	HE	108.0	IAML	02:10	26.60	9 0.24	IOMK	HZ 139.0 EP	01:10 25.05	-0.32	
MCH1	HN	108.0	IAML	02:10	29.48	8 0.12	MCH1	Hz 151.0 EP	01:10 27.28	0.24	
MONM	HZ	113.0	EP	02:10	13.98	0.60	MCH1	HN 151.0 ES	01:10 45.73	1.04	
MONM	HN	113.0	ES	02:10	27.37	0.35	MCH1	HN 151.0 IAML	01:10 47.00	6 0.15	
MONM	HE	113.0	IAML	02:10	30.03	13 0.14	MCH1	HE 151.0 IAML	01:10 47.07	8 0.14	
MONM	HN	113.0	IAML	02:10	30.13	16 0.12	MONM	HZ 173.0 EP	01:10 30.57	0.43	
LMK	HZ	135.0	EP	02:10	17.20	0.47					
WACR	HZ	168.0	EP	02:10	22.14	0.65	May 30 2017				
WACR	HE	168.0	ES	02:10	41.57	0.50					
WACR	HN	168.0	IAML	02:10	42.44	7 0.16					
WACR	HE	168.0	IAML	02:10	43.13	5 0.18					

TABLE 2 : PHASE DATA

Velocity model: Lownet Xnear: 100.0 Xfar: 150.0 Comment: OFFSHORE LOCATION	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	IOMK HN 130.0 IAML 20:45 26.88 2 0.19
LAWE HZ 22.6 IP C 22:15 40.43 0.01 LAWE HE 22.6 ES 22:15 43.23 -0.48 LAWE HN 22.6 IAML 22:15 43.74 9 0.08 LAWE HE 22.6 IAML 22:15 43.82 6 0.24 PGB1 HE 98.4 ES 22:16 05.24 0.48 PGB1 HN 98.4 IAML 22:16 06.74 2 0.15 PGB1 HE 98.4 IAML 22:16 06.95 2 0.20 INVG HZ 99.6 EP 22:15 52.93 0.13 INVG HE 99.6 ES 22:16 05.05 -0.07 INVG HE 99.6 IAML 22:16 06.16 2 0.10 INVG HN 99.6 IAML 22:16 06.75 2 0.22 KPL HZ 104.0 EP 22:15 53.36 -0.09	IOMK HE 130.0 IAML 20:45 27.25 3 0.20	
June 5 2017 Time: 13:17 54.7 UTC Magnitude: 2.1 ML Lat: 53.256N Lon: -0.440W Depth: 2.7 km Grid Ref: 504.06 kmE 374.39 kmN RMS: 0.10 secs Locality: LINCOLN,LINCOLNSHIRE	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	
Velocity model: Lownet Xnear: 100.0 Xfar: 120.0 Comment: FELT REEPHAM... Intensity: 3	LMK HZ 23.6 EP 13:17 59.16 -0.05 LMK HE 23.6 ES 13:18 02.40 -0.09 LMK HE 23.6 IAML 13:18 09.51 1064 0.38 LMK HN 23.6 IAML 13:18 13.53 756 0.42	
May 31 2017 Time: 06:25 10.6 UTC Magnitude: 1.0 ML Lat: 49.021N Lon: -1.698W Depth: 7.7 km Grid Ref: 422.08 kmE -97.62 kmN RMS: 0.00 secs Locality: JERSEY, CHANNEL ISLANDS	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	CWF HZ 81.9 EP 13:18 08.67 0.05 CWF HN 81.9 ES 13:18 18.55 -0.23
Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0 Comment: 30KM SE JERSEY	WACR HZ 92.9 EP 13:18 10.46 0.15 WACR HN 92.9 IAML 13:18 22.41 27 0.34 WACR HE 92.9 IAML 13:18 23.51 24 0.10 LBWR HZ 87.1 EP 13:18 09.43 -0.03 LBWR HE 87.1 ES 13:18 20.41 0.18 LBWR HN 87.1 IAML 13:18 24.70 78 0.24 LBWR HE 87.1 IAML 13:18 24.89 93 0.22	
JQE EZ 31.8 EP 06:25 16.61 0.03 JQE EZ 31.8 ES 06:25 20.93 -0.02 JSA HZ 39.2 EP 06:25 17.65 -0.03 JSA HN 39.2 ES 06:25 22.86 0.02 JSA HN 39.2 IAML 06:25 23.23 15 0.11 JSA HE 39.2 IAML 06:25 23.28 14 0.13 DYA HN 225.0 ES 06:26 07.44 0.00	EDMD HZ 202.0 EP 13:18 27.52 1.72 STRD HZ 202.0 EP 13:18 28.38 2.51 STRD HE 202.0 IAML 13:18 55.06 47 0.44 STRD HN 202.0 IAML 13:18 56.88 48 0.48 MCH1 HZ 223.0 EP 13:18 30.13 1.66 MCH1 HN 223.0 IAML 13:18 58.73 15 0.22 MCH1 HE 223.0 IAML 13:18 59.55 13 0.62	
June 2 2017 Time: 20:08 46.1 UTC Magnitude: 2.0 ML Lat: 56.906N Lon: -5.046W Depth: 7.5 km Grid Ref: 214.55 kmE 783.52 kmN RMS: 0.60 secs Locality: SPEAN BRIDGE, HIGHLAND	GDLE HZ 132.0 EP 13:18 17.31 0.89 GDLE HE 132.0 IAML 13:18 35.01 37 0.16 GDLE HN 132.0 IAML 13:18 38.63 57 0.36	
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0 Comment: FELT SPEAN BRIDGE... Intensity: 3	HLM1 HZ 184.0 EP 13:18 24.18 0.55 HLM1 HE 184.0 IAML 13:18 49.24 26 0.22 HLM1 HN 184.0 IAML 13:18 49.37 20 0.26	
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	EDMD HZ 202.0 EP 13:18 27.52 1.72 STRD HZ 202.0 EP 13:18 28.38 2.51 STRD HE 202.0 IAML 13:18 55.06 47 0.44 STRD HN 202.0 IAML 13:18 56.88 48 0.48 MCH1 HZ 223.0 EP 13:18 30.13 1.66 MCH1 HN 223.0 IAML 13:18 58.73 15 0.22 MCH1 HE 223.0 IAML 13:18 59.55 13 0.62	
KPL HZ 60.6 EP 20:08 56.53 0.20 KPL HN 60.6 ES 20:09 03.49 -0.32 KPL HN 60.6 IAML 20:09 07.54 66 0.12 KPL HE 60.6 IAML 20:09 07.62 71 0.15	LAWE HZ 75.2 IP D 20:08 58.54 -0.08 LAWE HE 75.2 ES 20:09 07.55 -0.21 LAWE HE 75.2 IAML 20:09 08.42 27 0.15 LAWE HN 75.2 IAML 20:09 10.72 42 0.14	June 6 2017 Time: 00:05 43.1 UTC Magnitude: 1.0 ML Lat: 56.128N Lon: -3.945W Depth: 7.5 km Grid Ref: 279.12 kmE 694.50 kmN RMS: 0.50 secs Locality: STIRLING, STIRLING
INVG HZ 81.4 IP C 20:08 59.63 0.02 INVG HN 81.4 ES 20:09 08.73 -0.74 INVG HN 81.4 IAML 20:09 12.37 63 0.14 INVG HE 81.4 IAML 20:09 12.42 66 0.11 PGB1 HZ 127.0 EP 20:09 07.32 0.73 PGB1 HE 127.0 ES 20:09 22.20 0.65 PGB1 HE 127.0 IAML 20:09 22.90 50 0.40 PGB1 HN 127.0 IAML 20:09 23.65 81 0.32 DRUM HZ 156.0 IP D 20:09 11.90 1.15 DRUM HN 156.0 IAML 20:09 31.98 28 0.25 DRUM HE 156.0 IAML 20:09 32.15 23 0.10 EDI HZ 159.0 EP 20:09 12.21 1.10 LEWI HZ 176.0 EP 20:09 12.71 -0.75 BIGH HZ 189.0 EP 20:09 16.30 1.22 NEWG HZ 206.0 EP 20:09 16.99 -0.15 ESK HZ 211.0 EP 20:09 18.39 0.57 GAL1 HZ 228.0 EP 20:09 19.62 -0.33	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0 STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	
June 3 2017 Time: 20:44 50.7 UTC Magnitude: 0.5 ML Lat: 53.359N Lon: -3.309W Depth: 15.3 km Grid Ref: 312.89 kmE 385.51 kmN RMS: 0.30 secs Locality: TALACRE, FLINTSHIRE	INVG HZ 33.8 IP C 00:05 49.21 -0.07 INVG HN 33.8 ES 00:05 53.60 -0.16	
Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0	INVG HE 33.8 IAML 00:05 53.72 13 0.10 INVG HN 33.8 IAML 00:05 54.57 15 0.29	
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	PGB1 HZ 48.8 EP 00:05 51.40 -0.18 PGB1 HE 48.8 ES 00:05 57.50 -0.24	
FOEL HZ 52.7 EP 20:44 59.45 -0.47 FOEL HE 52.7 ES 20:45 06.73 0.08 LLW BZ 61.5 EP 20:45 00.90 -0.31 LLW BE 61.5 ES 20:45 08.80 -0.08 LLW BE 61.5 IAML 20:45 09.40 1 0.15 LLW BN 61.5 IAML 20:45 09.45 1 0.12 WLF1 HZ 72.9 EP 20:45 03.03 0.10 WLF1 HN 72.9 ES 20:45 11.80 -0.05 WLF1 HN 72.9 IAML 20:45 13.26 2 0.10 WLF1 HE 72.9 IAML 20:45 15.38 2 0.02 WPS HZ 79.3 EP 20:45 04.34 0.43 WPS HN 79.3 ES 20:45 14.12 0.57 HLM1 HZ 97.9 EP 20:45 06.66 0.02 HLM1 HN 97.9 ES 20:45 18.32 0.04 HLM1 HN 97.9 IAML 20:45 21.80 1 0.11 HLM1 HE 97.9 IAML 20:45 21.97 2 0.20 LBWR HZ 106.0 EP 20:45 07.53 -0.19 LBWR HE 106.0 ES 20:45 20.63 0.48 IOMK HE 130.0 ES 20:45 25.54 -0.62	June 6 2017 Time: 18:48 48.8 UTC Magnitude: 1.1 ML Lat: 52.472N Lon: -3.717W Depth: 5.6 km Grid Ref: 283.39 kmE 287.43 kmN RMS: 0.30 secs Locality: LLANGURIG, POWYS	
Velocity model: Mid Wales Xnear: 80.0 Xfar: 200.0 Comment: 10KM NW LLANGURIG	Velocity model: Mid Wales Xnear: 80.0 Xfar: 200.0 Comment: 10KM NW LLANGURIG	
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	Velocity model: Mid Wales Xnear: 80.0 Xfar: 200.0 Comment: 10KM NW LLANGURIG	
ESK HZ 102.0 EP 00:06 00.21 0.42 NEWG HZ 114.0 EP 00:06 01.49 -0.19 DRUM HZ 125.0 EP 00:06 03.37 -0.04 GAL1 HZ 149.0 EP 00:06 07.06 0.32 KPL HZ 171.0 EP 00:06 09.96 0.18 CLGH HZ 179.0 EP 00:06 12.74 1.81	Velocity model: Mid Wales Xnear: 80.0 Xfar: 200.0 Comment: 10KM NW LLANGURIG	
June 6 2017 Time: 18:48 48.8 UTC Magnitude: 1.1 ML Lat: 52.472N Lon: -3.717W Depth: 5.6 km Grid Ref: 283.39 kmE 287.43 kmN RMS: 0.30 secs Locality: LLANGURIG, POWYS	Velocity model: Mid Wales Xnear: 80.0 Xfar: 200.0 Comment: 10KM NW LLANGURIG	
LLW BZ 42.2 EP 18:48 56.23 0.12 LLW BE 42.2 ES 18:49 01.28 -0.09	LLW BN 42.2 IAML 18:49 01.94 14 0.15 LLW HE 42.2 IAML 18:49 02.32 8 0.30	
LPW HZ 46.4 EP 18:48 56.63 -0.18 LPW HE 46.4 ES 18:49 02.65 0.07	LPW HZ 46.4 EP 18:48 56.63 -0.18 LPW HE 46.4 IAML 18:49 03.62 12 0.10	
LPW HN 46.4 IAML 18:49 03.77 8 0.10	LPW HN 46.4 IAML 18:49 03.77 8 0.10	
HLM1 HZ 57.0 EP 18:48 58.76 0.17 HLM1 HN 57.0 ES 18:49 05.55 -0.09	HLM1 HN 57.0 IAML 18:49 05.89 16 0.14	

**TABLE 2 : PHASE DATA**

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES		
HL1	HE	57.0	IAML	18:49	05.96	12	0.26					
FOEL	HZ	58.2	EP	18:48	58.78		-0.00	STRD	HZ	41.1		
FOEL	HN	58.2	ES	18:49	06.11		0.14	STRD	HN	41.1		
FOEL	HN	58.2	IAML	18:49	06.60	5	0.30	STRD	HN	41.1		
FOEL	HE	58.2	IAML	18:49	07.74	6	0.24	STRD	HE	41.1		
MCH1	HZ	72.1	EP	18:49	01.15		0.09	MONM	HZ	44.0		
MCH1	HN	72.1	ES	18:49	09.58		-0.30	MONM	HN	44.0		
MCH1	HN	72.1	IAML	18:49	09.76	12	0.14	MONM	HE	44.0		
MCH1	HE	72.1	IAML	18:49	10.19	7	0.12	MONM	HN	44.0		
YLL	EZ	80.4	ES	18:49	11.70		-0.55	MCH1	HZ	46.0		
RSBS	HZ	90.9	EP	18:49	04.06		-0.12	MCH1	HE	46.0		
RSBS	HN	90.9	ES	18:49	15.38		0.14	MCH1	HE	46.0		
RSBS	HE	90.9	IAML	18:49	15.81	9	0.07	MCH1	HN	46.0		
RSBS	HN	90.9	IAML	18:49	17.04	8	0.10	HLM1	HZ	56.3		
MONM	HZ	94.1	EP	18:49	04.80		0.11	HLM1	HN	56.3		
MONM	HN	94.1	IAML	18:49	16.24	7	0.24	HLM1	HN	56.3		
MONM	HE	94.1	IAML	18:49	16.36	7	0.34	HLM1	HE	56.3		
WLF1	HZ	102.0	EP	18:49	06.67		0.71	SWN1	HZ	78.2		
WLF1	HE	102.0	ES	18:49	18.37		0.05	SWN1	HN	78.2		
WLF1	HE	102.0	IAML	18:49	19.00	8	0.19	SWN1	HN	78.2		
WLF1	HN	102.0	IAML	18:49	19.02	9	0.23	SWN1	HE	78.2		
CWF	HZ	166.0	EP	18:49	15.87		0.31	CWF	HZ	99.0		
CWF	HE	166.0	ES	18:49	34.59		-0.24	CWF	HN	99.0		
CWF	HE	166.0	IAML	18:49	35.20	7	0.12	CWF	HN	99.0		
CWF	HN	166.0	IAML	18:49	35.29	12	0.14	FOEL	HZ	102.0		
June 10 2017 Time: 12:46 39.8 UTC				Magnitude: 1.3 ML								
Lat: 51.401N	Lon: -2.895W			Depth: 12.0 km								
Grid Ref: 337.75 kmE	167.32 kmN			RMS: 0.10 secs								
Locality: CLEVEDON,NORTH SOMERSET												
Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0												
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES		
MONM	HZ	49.1	EP	12:46	48.39		0.11	LBWR	HZ	148.0		
MONM	HE	49.1	ES	12:46	54.73		0.22	RSBS	HZ	165.0		
MONM	HE	49.1	IAML	12:46	55.22	45	0.26	HTL	HZ	194.0		
MONM	HN	49.1	IAML	12:46	56.60	16	0.12	WPS	HZ	202.0		
STRD	HZ	65.7	EP	12:46	50.67		-0.18	AR05	HZ	209.0		
STRD	HN	65.7	ES	12:46	58.90		-0.04	HPK	HZ	210.0		
STRD	HN	65.7	IAML	12:46	59.05	15	0.19	WACR	HZ	214.0		
STRD	HE	65.7	IAML	12:46	59.54	16	0.17	DYA	HZ	218.0		
MCH1	HZ	66.7	EP	12:46	50.92		-0.09	ELMS	HZ	230.0		
MCH1	HE	66.7	ES	12:46	59.20		-0.02	SBD	BZ	237.0		
MCH1	HN	66.7	IAML	12:46	59.36	37	0.11	EDMD	HZ	302.0		
MCH1	HE	66.7	IAML	12:46	59.39	17	0.07	June 17 2017 Time: 06:09 29.6 UTC				
SWN1	HZ	77.1	EP	12:46	52.72		0.11	Magnitude: 1.0 ML				
HTL	HZ	120.0	EP	12:46	59.08		0.09	Lat: 53.015N	Lon: -1.100W	Depth: 9.6 km		
HTL	HN	124.0	EP	12:46	59.44		-0.23	Grid Ref: 460.37 kmE	346.82 kmN	RMS: 0.10 secs		
HLM1	HN	124.0	ES	12:47	14.10		-0.11	Locality: ARNOLD,NOTTINGHAMSHIRE				
HLM1	HN	124.0	IAML	12:47	15.37	5	0.14	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0				
HLM1	HE	124.0	IAML	12:47	16.06	4	0.12	STAT	CO	DIST		
DYA	HZ	130.0	EP	12:47	00.48		0.05	CWF	HZ	33.8		
DYA	HN	130.0	ES	12:47	15.49		-0.04	CWF	HN	33.8		
DYA	HE	130.0	IAML	12:47	17.25	8	0.11	CWF	HE	33.8		
DYA	HN	130.0	IAML	12:47	17.32	9	0.17	LBWR	HZ	59.9		
RSBS	HZ	142.0	EP	12:47	02.04		-0.12	LBWR	HN	59.9		
RSBS	HN	142.0	ES	12:47	18.60		0.09	LBWR	HE	59.9		
RSBS	HE	142.0	IAML	12:47	19.51	7	0.11	LBWR	HN	59.9		
RSBS	HN	142.0	IAML	12:47	20.74	6	0.15	HPK	HN	111.0		
CWF	HN	184.0	ES	12:47	28.33		0.15	HPK	HE	111.0		
CWF	HE	184.0	IAML	12:47	28.95	4	0.22	HPK	HN	111.0		
CWF	HN	184.0	IAML	12:47	29.70	3	0.20	HLM1	HZ	132.0		
June 10 2017 Time: 14:37 18.2 UTC				Magnitude: 0.5 ML								
Lat: 57.532N	Lon: -5.431W			Depth: 4.9 km								
Grid Ref: 194.63 kmE	854.26 kmN			RMS: 0.10 secs								
Locality: TORRIDON,HIGHLAND												
Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0												
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES		
KPL	HZ	25.3	EP	14:37	23.05		0.03	FOEL	HZ	142.0		
KPL	HE	25.3	ES	14:37	26.43		-0.08	FOEL	HN	172.0		
KPL	HN	25.3	IAML	14:37	26.57	3	0.20	MCH1	HN	172.0		
KPL	HE	25.3	IAML	14:37	26.73	8	0.14	MCH1	HE	172.0		
LEWI	HN	109.0	EP	14:37	36.30		0.04	June 17 2017 Time: 10:47 51.6 UTC				
LEWI	HZ	109.0	ES	14:37	49.35		-0.06	Magnitude: 1.0 ML				
BIGH	HZ	140.0	EP	14:37	40.81		0.00	Lat: 57.455N	Lon: -5.587W	Depth: 4.1 km		
BIGH	HN	140.0	IAML	14:37	57.44	2	0.20	Grid Ref: 184.84 kmE	846.18 kmN	RMS: 0.20 secs		
BIGH	HE	140.0	IAML	14:37	57.76	2	0.14	Locality: LOCHCARRON,HIGHLAND				
LAWE	HE	142.0	ES	14:37	57.91		0.14	Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0				
INVG	HZ	149.0	EP	14:37	42.31		0.11	Comment: 8KM NW LOCHCARRON				
INVG	HN	149.0	ES	14:37	59.49		-0.19	STAT	CO	DIST		
INVG	HN	149.0	IAML	14:38	00.31	1	0.44	KPL	HZ	13.5		
INVG	HE	149.0	IAML	14:38	01.25	1	0.24	KPL	HN	13.5		
June 10 2017 Time: 23:05 06.7 UTC				Magnitude: 2.4 ML								
Lat: 52.125N	Lon: -2.361W			Depth: 6.5 km								
Grid Ref: 375.29 kmE	247.52 kmN			RMS: 0.30 secs								
Locality: MALVERN,WORCESTERSHIRE												
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0												
Comment: FELT MALVERN				Intensity: 3								
LEWI	HN	108.0	IAML	14:48	04.90		0.04	LINV	HZ	80.5		
LEWI	HZ	108.0	ES	14:48	17.30		3	LINV	HE	80.5		
LEWI	HN	108.0	IAML	14:48	18.71		2	LINV	HN	80.5		
LEWI	HN	108.0	IAML	14:48	22.51		-0.05	KPL	HN	13.5		
LEWI	HE	108.0	IAML	14:48	23.99		6	KPL	HE	13.5		
LEWI	HN	108.0	IAML	14:48	24.22		0.11	KPL	HE	13.5		

**TABLE 2 : PHASE DATA**

LAWE	HZ	134.0	EP	10:48	13.64	0.29	HLM1	HZ	82.3	EP	14:49	01.04	0.21									
INVG	HZ	148.0	EP	10:48	15.53	0.08	HLM1	HE	82.3	ES	14:49	10.97	0.12									
INVG	HN	148.0	ES	10:48	32.61	-0.26	HLM1	HE	82.3	IAML	14:49	11.37	20 0.20									
INVG	HE	148.0	IAML	10:48	34.02	4 0.22	HLM1	HN	82.3	IAML	14:49	11.51	9 0.10									
INVG	HN	148.0	IAML	10:48	34.83	2 0.08	WLF1	HE	101.0	ES	14:49	15.74	-0.03									
BIGH	HZ	152.0	EP	10:48	16.06	0.04	WLF1	HN	101.0	IAML	14:49	17.77	10 0.14									
BIGH	HE	152.0	ES	10:48	34.02	0.16	WLF1	HE	101.0	IAML	14:49	18.53	9 0.10									
BIGH	HE	152.0	IAML	10:48	35.39	5 0.18	EDMD	HN	185.0	ES	14:49	36.63	0.16									
BIGH	HN	152.0	IAML	10:48	35.61	4 0.14																
June 25 2017 Time: 11:53 08.8 UTC Magnitude: 1.7 ML																						
Lat: 54.154N			Lon: -2.899W			Depth: 5.0 km																
Grid Ref: 341.30 kmE			473.52 kmN			RMS: 0.20 secs																
Locality: KENTS BANK, CUMBRIA																						
Velocity model: Borders Xnear: 75.0 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	
AQ10	HZ	27.0	EP			11:53	13.68			-0.14	LRW	HZ	217.0	IP	C	13:34	17.09					0.18
AQ10	HE	27.0	IAML			11:53	18.30	87	0.20		LRW	HN	217.0	ES		13:34	40.35					0.29
AQ10	HN	27.0	IAML			11:53	19.71	117	0.38		LRW	HE	217.0	IAML		13:34	47.08	5096	0.30			
AQ07	HZ	37.9	EP			11:53	15.48			-0.13	LRW	HN	217.0	IAML		13:34	47.09	6475	0.26			
AQ04	Hz	42.3	EP			11:53	16.33			0.03	BER	HZ	252.0	IP	C	13:34	21.57					0.27
AQ04	HN	42.3	ES			11:53	21.65			0.02	BER	HE	252.0	ES		13:34	47.36					-0.30
AQ04	HN	42.3	IAML			11:53	22.05	162	0.26		BER	HN	252.0	IAML		13:35	06.92	613	0.34			
AQ04	HE	42.3	IAML			11:53	22.50	242	0.18		BER	HE	252.0	IAML		13:35	09.66	1092	0.82			
SPK	EE	49.4	EP			11:53	17.64			0.17	BIGH	HZ	338.0	EP		13:34	32.23					0.22
KESW	HZ	50.2	EP			11:53	17.48			-0.15	BIGH	HE	338.0	IAML		13:35	29.02	2362	0.50			
KESW	HN	50.2	IAML			11:53	25.44	18	0.29		BIGH	HN	338.0	IAML		13:35	30.67	2441	0.34			
KESW	HE	50.2	IAML			11:53	25.48	22	0.34		FOO	HZ	343.0	EP		13:34	32.18					-0.40
AQ02	HZ	51.6	EP			11:53	17.89			0.08	FOO	HE	343.0	ES		13:35	06.27					-0.90
AQ02	HN	51.6	IAML			11:53	26.54	116	0.22		FOO	HN	343.0	IAML		13:34	54.64	483	0.70			
AQ02	HE	51.6	IAML			11:53	26.57	84	0.20		FOO	HE	343.0	IAML		13:35	35.97	517	0.54			
EDMD	HZ	96.8	EP			11:53	25.36			0.21	DRUM	HZ	344.0	EP		13:34	33.14					0.49
EDMD	HN	96.8	ES			11:53	36.62			-0.15	DRUM	HE	344.0	ES		13:35	08.08					0.78
EDMD	HE	96.8	IAML			11:53	37.86	74	0.16		DRUM	HN	344.0	IAML		13:35	31.43	3341	0.54			
EDMD	HN	96.8	IAML			11:53	39.68	96	0.22		DRUM	HE	344.0	IAML		13:35	36.90	2472	0.52			
IOMK	HZ	109.0	EP			11:53	27.16			-0.09	LINV	HZ	421.0	EP		13:34	42.22					-0.01
IOMK	HN	109.0	IAML			11:53	41.57	31	0.18		LINV	HN	421.0	IAML		13:35	43.51	1801	0.43			
IOMK	HE	109.0	IAML			11:53	41.95	18	0.18		LINV	HE	421.0	IAML		13:35	56.84	1411	0.87			
LBWR	HZ	114.0	EP			11:53	28.07			0.05	KONO	BZ	447.0	EP		13:34	46.50					0.99
LBWR	HN	114.0	IAML			11:53	43.08	22	0.28		INVG	HZ	451.0	EP		13:34	46.04					0.08
LBWR	HE	114.0	IAML			11:53	44.20	34	0.11		INVG	HN	451.0	IAML		13:35	54.82	808	0.34			
AT10	HZ	115.0	EP			11:53	28.37			0.23	INVG	HE	451.0	IAML		13:36	07.91	1202	0.54			
AT10	HE	115.0	IAML			11:53	44.95	17	0.36		EDI	HZ	453.0	EP		13:34	46.61					0.31
AT10	HN	115.0	IAML			11:53	46.08	24	0.26		EDI	HE	453.0	IAML		13:35	32.65	1683	0.48			
WIM	EZ	116.0	EP			11:53	28.31			-0.04	EDI	HN	453.0	IAML		13:35	34.15	1736	0.56			
AU11	HZ	128.0	EP			11:53	30.88			0.56	KPL	HZ	478.0	EP		13:34	49.02					-0.26
AU11	HN	128.0	IAML			11:53	48.64	12	0.16		KPL	HN	478.0	IAML		13:36	10.11	1041	0.48			
AU11	HE	128.0	IAML			11:53	49.62	13	0.34		KPL	HE	478.0	IAML		13:36	12.08	998	0.52			
ESK	HZ	131.0	EP			11:53	30.38			-0.37	MOL	HZ	508.0	EP		13:34	53.55					0.47
ESK	HN	131.0	IAML			11:53	48.56	7	0.18		MOL	HE	508.0	IAML		13:36	15.30	626	0.62			
ESK	HE	131.0	IAML			11:53	48.76	12	0.22		MOL	HN	508.0	IAML		13:36	19.09	550	0.88			
AU09	HZ	131.0	EP			11:53	31.30			0.53	ESK	HZ	508.0	EP		13:34	52.92					-0.15
AU09	HN	131.0	IAML			11:53	50.32	49	0.28		ESK	HN	508.0	IAML		13:35	47.20	590	0.44			
AU09	HE	131.0	IAML			11:53	50.43	33	0.40		ESK	HE	508.0	IAML		13:36	23.12	618	0.80			
WPS	HZ	135.0	EP			11:53	31.25			0.03	EDMD	HZ	515.0	EP		13:34	53.69					-0.19
WPS	HE	135.0	ES			11:53	47.23			0.08	EDMD	HE	515.0	IAML		13:36	44.57	675	0.78			
WPS	HN	135.0	IAML			11:53	48.34	7	0.38		EDMD	HN	515.0	IAML		13:36	45.01	565	0.80			
WPS	HE	135.0	IAML			11:53	48.36	9	0.42		LEWI	HZ	516.0	EP		13:34	53.83					-0.27
NEWG	HZ	137.0	EP			11:53	31.60			0.01	LEWI	HN	516.0	IAML		13:36	14.10	1000	0.70			
NEWG	HN	137.0	ES			11:53	47.03			-0.74	LEWI	HE	516.0	IAML		13:36	18.28	571	0.58			
NEWG	HE	137.0	IAML			11:53	48.06	9	0.34		MUD	HZ	516.0	EP		13:34	54.73					0.68
NEWG	HE	137.0	IAML			11:53	48.23	12	0.36		MUD	HE	516.0	IAML		13:36	27.68	1037	0.68			
WLF1	HZ	138.0	EP			11:53	31.76			0.13	MUD	HN	516.0	IAML		13:36	27.95	1334	0.72			
WLF1	HE	138.0	IAML			11:53	49.03	15	0.30		PGB1	HZ	517.0	EP		13:34	54.73					0.47
WLF1	HN	138.0	IAML			11:53	49.22	14	0.36		PGB1	HE	517.0	IAML		13:36	19.02	592	0.42			
GDLE	HZ	139.0	EP			11:53	32.38			0.60	PGB1	HN	517.0	IAML		13:36	30.85	850	0.70			
GDLE	HE	139.0	IAML			11:53	50.15	22	0.46		LAWE	HZ	527.0	EP		13:34	54.70					-0.77
GDLE	HN	139.0	IAML			11:53	50.39	34	0.20		LAWE	HE	527.0	IAML		13:36	19.74	967	0.36			
GALL	HZ	142.0	EP			11:53	32.04			-0.07	LAWE	HN	527.0	IAML		13:36	23.30	1502	0.44			
GALL	HE	142.0	IAML			11:53	50.20	6	0.11		GDLE	HZ	530.0	EP		13:34	55.60					-0.27
GALL	HN	142.0	IAML			11:53	50.36	12	0.20		GDLE	HE	530.0	IAML		13:36	28.81	1196	0.44			
AU08	HZ	146.0	EP			11:53	34.34			1.64	GDLE	HN	530.0	IAML		13:36	51.03	728	0.50			
NEWG	HN</																					

TABLE 2 : PHASE DATA

IOMK	HE	654.0	IAML	13:37	16.22	252	0.48		PGB1	HN	468.0	IAML	01:44	33.76	98	0.40			
LBWR	HZ	657.0	EP	13:35	11.05		-0.52		PGB1	HE	468.0	IAML	01:45	23.77	54	0.54			
LBWR	HN	657.0	IAML	13:37	18.85	654	1.14		KONO	BZ	480.0	EP	01:43	46.11		0.33			
LBWR	HE	657.0	IAML	13:37	19.37	477	0.42		LAWE	HZ	484.0	EP	01:43	45.66		-0.58			
WIM	EZ	669.0	EP	13:35	12.75		-0.31		LAWE	HE	484.0	IAML	01:44	41.31	71	0.26			
WACR	HZ	698.0	EP	13:35	16.37		-0.25		LAWE	HN	484.0	IAML	01:45	08.53	86	0.50			
WACR	HN	698.0	IAML	13:36	53.61	289	0.84		LEWI	HZ	496.0	EP	01:43	47.58		-0.23			
WACR	HE	698.0	IAML	13:36	55.58	257	0.56		LEWI	HE	496.0	IAML	01:44	40.66	61	0.28			
WPS	HZ	733.0	EP	13:35	21.29		0.28		LEWI	HN	496.0	IAML	01:44	42.02	57	0.58			
WPS	HN	733.0	IAML	13:37	26.46	120	0.56		MUD	HE	505.0	IAML	01:45	11.77	108	0.46			
WPS	HE	733.0	IAML	13:37	39.18	88	0.61		MUD	HN	505.0	IAML	01:45	21.95	92	0.58			
WLF1	HZ	740.0	EP	13:35	20.97		-0.96		NEWG	HZ	511.0	EP	01:43	49.49		-0.11			
WLF1	HE	740.0	IAML	13:37	32.08	189	0.74		NEWG	HN	511.0	IAML	01:44	41.55	56	0.70			
YLL	EZ	748.0	EP	13:35	22.26		-0.60		NEWG	HE	511.0	IAML	01:44	41.94	41	0.32			
YRC	EZ	750.0	EP	13:35	22.78		-0.34		KESW	HZ	515.0	EP	01:43	49.86		-0.21			
HLM1	HZ	775.0	EP	13:35	25.79		-0.52		KESW	HN	515.0	IAML	01:44	46.56	42	0.32			
HLM1	HN	775.0	IAML	13:37	07.71	110	0.60		KESW	HE	515.0	IAML	01:45	36.45	44	0.58			
HLM1	HE	775.0	IAML	13:37	29.27	120	0.56		HPK	HZ	535.0	EP	01:43	52.75		0.18			
MCH1	HZ	832.0	EP	13:35	32.46		-0.93		GAL1	HZ	552.0	EP	01:43	54.30		-0.43			
MONM	HZ	845.0	EP	13:35	34.30		-0.60		GAL1	HE	552.0	IAML	01:44	51.36	52	0.30			
BSD	HZ	898.0	EP	13:35	40.98		-0.54		GAL1	HN	552.0	IAML	01:44	51.87	63	0.28			
HGN	BZ	948.0	EP	13:35	47.37		-0.30		MOL	HZ	567.0	EP	01:43	56.44		-0.10			
DOU	HZ	1001.0	EP	13:35	53.64		-0.69		MOL	HE	567.0	IAML	01:45	66.73	37	0.32			
MOL	HN	567.0	IAML						MOL	HN	567.0	IAML	01:45	09.34	47	0.30			
July 6 2017	Time:	02:09	20.7	UTC	Magnitude:	0.9	ML		LBWR	HZ	595.0	EP	01:43	59.87		-0.24			
Lat:	50.002N	Lon:	-2.605W		Depth:	5.0	km		IOMK	HN	598.0	EP	01:44	00.21		-0.27			
Grid Ref:	356.65 kmE	11.56 kmN		RMS:	0.70	secs		IOMK	HE	598.0	IAML	01:45	52.77	31	0.66				
Locality:	ENGLISH CHANNEL							IOMK	HE	598.0	IAML	01:46	03.19	26	0.60				
Velocity model:	Lownet	Xnear:	100.0	Xfar:	500.0				CLGH	HZ	599.0	EP	01:44	00.20		-0.33			
Comment:	80KM SE DARTMOUTH								WIM	EZ	613.0	EP	01:44	01.81		-0.47			
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES						0.08			
JSA	HZ	95.8	EP			02:09	36.59				WACR	HN	637.0	IAML	01:45	10.03	77	0.22	
JSA	HN	95.8	ES			02:09	47.71				WACR	HE	637.0	IAML	01:45	10.47	48	0.26	
JSA	HN	95.8	IAML			02:09	50.55	4	0.48		WPS	HZ	675.0	EP	01:44	30.74	10	0.27	
JSA	HE	95.8	IAML			02:09	52.39	3	0.37		WPS	HN	675.0	IAML	01:45	50.65	7	0.36	
JQE	EZ	98.1	EP			02:09	37.05				WPS	HE	675.0	IAML	01:45	30.74	10	0.27	
JQE	EZ	98.1	ES			02:09	49.00				WPS	HE	675.0	IAML	01:45	50.65	7	0.36	
DYA	HZ	106.0	EP			02:09	38.06				WLF1	HZ	682.0	EP	01:44	11.02		0.16	
DYA	HN	106.0	ES			02:09	49.82				WLF1	HN	682.0	IAML	01:45	19.63	36	0.40	
DYA	HN	106.0	IAML			02:09	52.81	4	0.14		WLF1	HE	682.0	IAML	01:45	21.72	37	0.64	
DYB	HN	106.0	IAML			02:09	52.97	5	0.10		HLM1	HN	714.0	IAML	01:45	27.12	23	0.48	
SBD	BZ	161.0	EP			02:09	47.36				HLM1	HE	714.0	IAML	01:45	27.69	28	0.38	
SBD	BE	161.0	ES			02:10	05.60				MCH1	HZ	771.0	EP	01:44	21.38		-0.59	
SBD	BE	161.0	IAML			02:10	08.27	1	0.12		STRD	HZ	777.0	EP	01:44	22.99		0.37	
SBD	BN	161.0	IAML			02:10	09.48	2	0.10		MONM	HZ	783.0	EP	01:44	23.79		0.33	
CCA1	HN	189.0	ES			02:10	12.22				RSBS	HZ	824.0	EP	01:44	28.55		0.05	
July 7 2017	Time:	01:42	41.6	UTC	Magnitude:	3.6	ML												
Lat:	58.418N	Lon:	1.581W		Depth:	10.7	km												
Grid Ref:	609.12 kmE	953.27 kmN		RMS:	0.30	secs													
Locality:	CENTRAL NORTH SEA																		
Velocity model:	North Sea	Xnear:	500.0	Xfar:	1000.0														
Comment:	220KM ENE PETERHEAD																		
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES									
LRW	HZ	248.0	EP			01:43	17.64				MONM	HZ	18.2	IP	C	01:24	01.91	-0.06	
LRW	HN	248.0	ES			01:43	42.50				MONM	HN	18.2	ES		01:24	05.18	0.11	
LRW	HN	248.0	IAML			01:43	55.76	280	0.36		MONM	HE	18.2	IAML		01:24	05.37	44	0.14
LRW	HE	248.0	IAML			01:43	58.05	300	0.54		MONM	HN	18.2	IAML		01:24	05.59	45	0.30
DRUM	HZ	295.0	EP			01:43	23.42				MCH1	HZ	27.1	IP	C	01:24	03.01	-0.15	
DRUM	HN	295.0	IAML			01:44	10.46	200	0.28		MCH1	HE	27.1	IAML		01:24	07.16	0.02	
DRUM	HE	295.0	IAML			01:44	13.56	188	0.46		MCH1	HN	27.1	IP		01:24	07.23	44	0.10
BER	HZ	306.0	EP			01:43	23.95				STRD	HZ	59.9	EP		01:24	08.03		0.01
BER	HN	306.0	IAML			01:44	11.84	81	0.30		STRD	HE	59.9	IAML		01:24	16.49	17	0.24
BER	HE	306.0	IAML			01:44	15.60	74	0.24		STRD	HN	59.9	IAML		01:24	16.65	21	0.14
BIGH	HZ	321.0	EP			01:43	26.41				LPW	HZ	81.9	EP		01:24	11.19		-0.05
BIGH	HE	321.0	IAML			01:44	00.36	176	0.24		LPW	HN	81.9	ES		01:24	21.19		0.08
BIGH	HN	321.0	IAML			01:44	18.82	219	0.44		LPW	HE	81.9	IAML		01:24	21.34	6	0.24
LINV	HZ	399.0	EP			01:43	35.53				LPW	HN	81.9	IAML		01:24	21.68	9	0.12
LINV	HN	399.0	IAML			01:44	16.66	120	0.26		HLM1	HZ	85.6	EP		01:24	11.82		-0.03
LINV	HE	399.0	IAML			01:44	19.03	108	0.26		HLM1	HN	85.6	ES		01:24	22.12		-0.05
EDI	HZ	400.0	EP			01:43	35.99				HLM1	HE	85.6	IAML		01:24	22.60	15	0.20
EDI	HN	400.0	ES			01:44	15.61				HLM1	HN	85.6	IAML		01:24	22.69	11	0.12
FOO	HZ	403.0	EP			01:43	35.67				FOEL	HN	127.0	EP		01:24	16.82		0.06
FOO	HE	403.0	IAML			01:44	18.05	35	0.26		FOEL	HE	127.0	IAML		01:24	32.69	8	0.09
FOO	HN	403.0	IAML			01:44	43.76	27	0.32		FOEL	HN	127.0	IAML		01:24	33.18	12	0.24
INVG	HZ	404.0	EP			01:43	36.53				FOEL	HE	127.0	EP		01:24	18.33		0.58
INVG	HN	404.0	IAML			01:44	21.57	78	0.24		FOEL	HN	127.0	IAML		01:24	35.20	5	0.24
INVG	HE	404.0	IAML			01:44	54.30	70	0.42		FOEL	HE	127.0	IAML		01:24	35.90	4	0.52
KPL	HZ	445.0	EP			01:43	41.32				LLW	BZ	129.0	EP		01:24	18.55		0.51
KPL	HN	445.0	IAML			01:44	39.34	62	0.42		CWF	HZ	161.0	EP		01:24	22.65		0.29
KPL	HE	445.0	IAML			01:44	57.64	54	0.42		CWF	HE	161.0	IAML		01:24	42.85	4	0.12
ESK	HZ	452.0	EP			01:43	42.09				CWF	HN	1						

TABLE 2 : PHASE DATA

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HLM1	HE	57.1	ES	20:00	46.27	-0.00	Locality: KAMES, ARGYLL & BUTE
HLM1	HN	57.1	IAML	20:00	46.43	17 0.22	Velocity model: Lownet Xnear: 100.0 Xfar: 150.0
HLM1	HE	57.1	IAML	20:00	46.86	6 0.17	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES
MCH1	HZ	65.0	EP	20:00	40.54	0.03	LAWE HZ 43.1 IP D 03:54 12.83 0.19
MCH1	HN	65.0	ES	20:00	48.40	-0.08	LAWE HN 43.1 ES 03:54 17.81 -0.35
MCH1	HE	65.0	IAML	20:00	48.48	3 0.12	LAWE HN 43.1 IAML 03:54 17.99 10 0.12
MCH1	HN	65.0	IAML	20:00	48.50	6 0.12	LAWE HE 43.1 IAML 03:54 18.14 23 0.21
RSBS	HZ	86.9	EP	20:00	44.22	0.08	PGB1 HZ 48.1 IP C 03:54 13.80 0.38
							PGB1 HE 48.1 IAML 03:54 13.88 8 0.08
July 27 2017				Time: 19:55 26.9 UTC	Magnitude: 0.8 ML		
					Depth: 12.2 km		
					RMS: 0.30 secs		
						PGB1 HN 48.1 ES 03:54 19.54 0.02	
						PGB1 HN 48.1 IAML 03:54 19.91 5 0.18	
						INVG HZ 96.0 EP 03:54 20.97 0.12	
						INVG HE 96.0 ES 03:54 32.16 -0.22	
						INVG HE 96.0 IAML 03:54 35.62 6 0.08	
						INVG HN 96.0 IAML 03:54 35.75 5 0.14	
						CLGH HZ 105.0 EP 03:54 22.51 0.34	
						CLGH HN 105.0 ES 03:54 34.37 -0.29	
						CLGH HN 105.0 IAML 03:54 37.30 6 0.12	
						CLGH HE 105.0 IAML 03:54 37.32 9 0.19	
						NEWG HZ 107.0 EP 03:54 22.91 0.46	
						NEWG HE 107.0 ES 03:54 34.45 -0.70	
						NEWG HE 107.0 IAML 03:54 37.90 10 0.15	
						NEWG HN 107.0 IAML 03:54 38.00 6 0.14	
						GAL1 HZ 118.0 EP 03:54 24.52 0.37	
						GAL1 HE 118.0 ES 03:54 37.74 -0.33	
						GAL1 HE 118.0 IAML 03:54 40.15 6 0.31	
						GAL1 HN 118.0 IAML 03:54 41.13 7 0.28	
						KPL HZ 164.0 EP 03:54 32.52 1.84	
						July 29 2017 Time: 20:51 52.7 UTC Magnitude: 1.4 ML	
						Lat: 52.266N Lon: -3.914W Depth: 7.5 km	
						Grid Ref: 269.40 kmE 264.86 kmN RMS: 0.50 secs	
						Locality: TREGARON,CEREDIGION	
						Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	
						STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	
						RSBS HZ 66.7 EP 20:52 03.57 -0.33	
						RSBS HN 66.7 ES 20:52 11.89 -0.21	
						RSBS HN 66.7 IAML 20:52 13.61 17 0.14	
						RSBS HE 66.7 IAML 20:52 13.83 29 0.20	
						MCH1 HN 69.5 ES 20:52 12.60 -0.22	
						MCH1 HN 69.5 IAML 20:52 12.96 27 0.34	
						MCH1 HE 69.5 IAML 20:52 13.03 28 0.13	
						HLM1 HZ 75.8 EP 20:52 05.30 -0.03	
						HLM1 HE 75.8 ES 20:52 14.15 -0.43	
						HLM1 HE 75.8 IAML 20:52 14.62 9 0.15	
						HLM1 HN 75.8 IAML 20:52 14.72 17 0.18	
						FOEL HZ 84.6 EP 20:52 06.70 -0.01	
						FOEL HE 84.6 IAML 20:52 21.60 11 0.48	
						FOEL HE 84.6 IAML 20:52 21.78 9 0.70	
						MONM HZ 89.7 EP 20:52 07.81 0.37	
						MONM HZ 89.7 ES 20:52 18.50 0.27	
						MONM HE 89.7 IAML 20:52 18.85 20 0.28	
						MONM HE 89.7 IAML 20:52 18.99 32 0.30	
						WLF1 HZ 118.0 EP 20:52 11.63 -0.25	
						WLF1 HE 118.0 IAML 20:52 26.13 9 0.15	
						WLF1 HE 118.0 IAML 20:52 28.00 6 0.16	
						YRC EZ 118.0 EP 20:52 11.68 -0.17	
						WPS HZ 132.0 EP 20:52 15.30 1.40	
						July 28 2017 Time: 01:41 16.2 UTC Magnitude: 0.7 ML	
						Lat: 54.054N Lon: -1.920W Depth: 9.2 km	
						Grid Ref: 405.24 kmE 462.03 kmN RMS: 0.20 secs	
						Locality: HEBDEN,NORTH YORKSHIRE	
						Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0	
						STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	
						RSBS HZ 66.7 EP 20:52 03.57 -0.33	
						RSBS HN 66.7 ES 20:52 11.89 -0.21	
						RSBS HN 66.7 IAML 20:52 13.61 17 0.14	
						RSBS HE 66.7 IAML 20:52 13.83 29 0.20	
						MCH1 HN 69.5 ES 20:52 12.60 -0.22	
						MCH1 HN 69.5 IAML 20:52 12.96 27 0.34	
						MCH1 HE 69.5 IAML 20:52 13.03 28 0.13	
						HLM1 HZ 75.8 EP 20:52 05.30 -0.03	
						HLM1 HE 75.8 ES 20:52 14.15 -0.43	
						HLM1 HE 75.8 IAML 20:52 14.62 9 0.15	
						HLM1 HN 75.8 IAML 20:52 14.72 17 0.18	
						FOEL HZ 84.6 EP 20:52 06.70 -0.01	
						FOEL HE 84.6 IAML 20:52 21.60 11 0.48	
						FOEL HE 84.6 IAML 20:52 21.78 9 0.70	
						MONM HZ 89.7 EP 20:52 07.81 0.37	
						MONM HZ 89.7 ES 20:52 18.50 0.27	
						MONM HE 89.7 IAML 20:52 18.85 20 0.28	
						MONM HE 89.7 IAML 20:52 18.99 32 0.30	
						WLF1 HZ 118.0 EP 20:52 11.63 -0.25	
						WLF1 HE 118.0 IAML 20:52 26.13 9 0.15	
						WLF1 HE 118.0 IAML 20:52 28.00 6 0.16	
						YRC EZ 118.0 EP 20:52 11.68 -0.17	
						WPS HZ 132.0 EP 20:52 15.30 1.40	
						July 28 2017 Time: 17:17 22.8 UTC Magnitude: 0.9 ML	
						Lat: 56.330N Lon: -3.640W Depth: 12.1 km	
						Grid Ref: 298.61 kmE 716.49 kmN RMS: 0.40 secs	
						Locality: ABERTHWEN,PERTH/KINROSS	
						Velocity model: Lownet Xnear: 100.0 Xfar: 150.0	
						STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	
						RSBS HZ 66.7 EP 20:52 03.57 -0.33	
						RSBS HN 66.7 ES 20:52 11.89 -0.21	
						RSBS HN 66.7 IAML 20:52 13.61 17 0.14	
						RSBS HE 66.7 IAML 20:52 13.83 29 0.20	
						MCH1 HN 69.5 ES 20:52 12.60 -0.22	
						MCH1 HN 69.5 IAML 20:52 12.96 27 0.34	
						MCH1 HE 69.5 IAML 20:52 13.03 28 0.13	
						HLM1 HZ 75.8 EP 20:52 05.30 -0.03	
						HLM1 HE 75.8 ES 20:52 14.15 -0.43	
						HLM1 HE 75.8 IAML 20:52 14.62 9 0.15	
						HLM1 HN 75.8 IAML 20:52 14.72 17 0.18	
						FOEL HZ 84.6 EP 20:52 06.70 -0.01	
						FOEL HE 84.6 IAML 20:52 21.60 11 0.48	
						FOEL HE 84.6 IAML 20:52 21.78 9 0.70	
						MONM HZ 89.7 EP 20:52 07.81 0.37	
						MONM HZ 89.7 ES 20:52 18.50 0.27	
						MONM HE 89.7 IAML 20:52 18.85 20 0.28	
						MONM HE 89.7 IAML 20:52 18.99 32 0.30	
						WLF1 HZ 118.0 EP 20:52 11.63 -0.25	
						WLF1 HE 118.0 IAML 20:52 26.13 9 0.15	
						WLF1 HE 118.0 IAML 20:52 28.00 6 0.16	
						YRC EZ 118.0 EP 20:52 11.68 -0.17	
						WPS HZ 132.0 EP 20:52 15.30 1.40	
						August 2 2017 Time: 02:15 34.3 UTC Magnitude: 3.1 ML	
						Lat: 60.937N Lon: 3.797W Depth: 13.9 km	
						Grid Ref: 713.84 kmE 1242.09 kmN RMS: 0.40 secs	
						Locality: NORTHERN NORTH SEA	
						Velocity model: North Sea Xnear: 750.0 Xfar: 1500.0	
						Comment: 285KM ENE LERWICK	
						STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	
						LRW HZ 287.0 EP 02:16 14.58 0.47	
						LRW HN 287.0 ES 02:16 43.19 0.01	
						LRW HN 287.0 IAML 02:16 47.66 26 0.60	
						LRW HE 287.0 IAML 02:16 50.99 35 0.22	
						KONO BZ 351.0 EP 02:16 22.07 -0.02	
						BIGH HZ 512.0 EP 02:16 42.31 0.32	
						BIGH HZ 512.0 ES 02:17 31.62 0.22	
						BIGH HE 512.0 IAML 02:17 34.38 24 0.20	
						BIGH HE 512.0 IAML 02:17 36.39 24 0.22	
						LINV HZ 595.0 EP 02:16 52.06 -0.34	
						LINV HZ 595.0 ES 02:17 49.31 0.10	
						LINV HZ 595.0 IAML 02:17 53.91 9 0.20	
						LINV HE 595.0 IAML 02:17 54.15 8 0.14	
						KPL HZ 672.0 EP 02:17 01.34 -0.59	
						KPL HZ 672.0 ES 02:18 05.25 -0.64	
						KPL HE 672.0 IAML 02:18 10.17 5 0.22	
						KPL HE 672.0 IAML 02:18 16.47 6 0.66	
						INVG HZ 677.0 EP 02:17 02.72 0.21	
						INVG HZ 677.0 EP 02:17 02.72 0.21	

**TABLE 2 : PHASE DATA**

INVG	HN	677.0	IAML	02:18	12.92	6	0.32	August 4 2017	Time: 14:43 38.7 UTC	Magnitude: 4.0 ML
INVG	HE	677.0	IAML	02:18	24.76	8	0.52	Lat: 56.805N	Lon: -5.888W	Depth: 12.2 km
LAWE	HZ	745.0	EP	02:17	10.96		-0.05	Grid Ref: 162.67 kmE 774.89 kmN		RMS: 0.40 secs
LAWE	HN	745.0	ES	02:18	22.11		0.51	Locality: MOIDART,HIGHLAND		
LAWE	HN	745.0	IAML	02:18	25.32	10	0.31	Velocity model: Lownet	Xnear: 300.0	Xfar: 600.0
LAWE	HE	745.0	IAML	02:18	25.96	9	0.30	Comment: FELT MOIDART...		Intensity: 5
August 2 2017				Time: 05:46 12.9 UTC	Magnitude: 1.4 ML	STAT	CO	DIST	PHAS	WT P
Lat: 55.098N				Lon: -7.559W	Depth: 2.0 km	KPL	HZ	61.2	IP	D 14:43 49.41
Grid Ref: 45.49 kmE 592.30 kmN				RMS: 0.60 secs		KPL	HE	61.2	ES	14:43 56.77
Locality: CO DONEGAL,IRELAND						KPL	HE	61.2	IAML	14:43 57.03 4900 0.26
Velocity model: Lownet Xnear: 500.0				Xfar: 1000.0		KPL	HN	61.2	IAML	14:44 00.41 3691 0.22
Comment: FELT MILFORD				Intensity: 2		LAWE	HZ	67.7	EP	14:43 50.26
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES	LAWE HE 67.7 ES 14:43 57.88 -0.53
CLGH	HZ	92.5	EP		05:46	27.54	-0.77	LAWE HN 67.7 IAML 14:43 58.11 9154 0.28		
CLGH	HN	92.5	ES		05:46	38.63	-0.93	LAWE HE 67.7 IAML 14:43 58.14 18491 0.24		
CLGH	HN	92.5	IAML		05:46	40.82	23 0.19	INVG HZ 121.0 EP 14:43 58.52		
CLGH	HE	92.5	IAML		05:46	41.10	26 0.18	INVG HE 121.0 ES 14:44 12.16 -0.05		
ILTH	BZ	143.0	EP		05:46	35.90	-0.01	INVG HE 121.0 IAML 14:44 13.48 1640 0.20		
ILTH	BE	143.0	ES		05:46	52.60	-0.11	INVG HN 121.0 IAML 14:44 18.08 2530 0.40		
GALL	HZ	184.0	EP		05:46	41.84	0.29	PGB1 HZ 141.0 EP 14:44 01.12 0.22		
GALL	HE	184.0	ES		05:47	02.69	0.22	PGB1 HE 141.0 ES 14:44 17.84 0.74		
LAWE	HZ	188.0	EP		05:46	41.44	-0.55	PGB1 HN 141.0 IAML 14:44 19.92 3030 0.64		
LAWE	HE	188.0	ES		05:47	03.85	0.62	PGB1 HE 141.0 IAML 14:44 20.02 2670 0.38		
LAWE	HN	188.0	IAML		05:47	06.20	2 0.18	LINV HZ 155.0 EP 14:44 02.92 -0.02		
LAWE	HE	188.0	IAML		05:47	06.83	2 0.42	LINV HN 155.0 ES 14:44 20.74 0.11		
NEWG	HE	212.0	ES		05:47	09.12	0.51	LINV HE 155.0 IAML 14:44 26.15 1842 0.50		
NEWG	HE	212.0	IAML		05:47	14.21	1 0.21	LINV HN 155.0 IAML 14:44 27.59 802 0.38		
NEWG	HN	212.0	IAML		05:47	14.48	3 0.24	LEWI HZ 160.0 EP 14:44 04.01 0.31		
IOMK	HE	214.0	ES		05:47	09.76	0.73	LEWI HE 160.0 ES 14:44 22.20 0.25		
August 2 2017				Time: 17:43 52.4 UTC	Magnitude: 1.4 ML	LEWI HN 160.0 IAML 14:44 24.98 1269 0.14				
Lat: 56.978N				Lon: -5.089W	Depth: 7.5 km	LEWI HE 160.0 IAML 14:44 25.02 2502 0.24				
Grid Ref: 212.29 kmE 791.65 kmN				RMS: 0.30 secs		EDI HZ 194.0 EP 14:44 07.70 -0.11				
Locality: GAIRLOCHY,HIGHLAND						EDI HN 194.0 IAML 14:44 33.01 1090 0.24				
Velocity model: Lownet Xnear: 100.0				Xfar: 200.0		EDI HE 194.0 IAML 14:44 36.15 872 0.26				
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES	DRUM HZ 208.0 EP 14:44 09.23 -0.38
KPL	HZ	52.7	EP		17:44	01.40	-0.05	DRUM HE 208.0 IAML 14:44 38.11 1996 0.28		
KPL	HN	52.7	ES		17:44	07.85	-0.19	DRUM HN 208.0 IAML 14:44 41.42 2803 0.74		
KPL	HN	52.7	IAML		17:44	09.57	9 0.32	NEWG HZ 214.0 EP 14:44 10.63 0.20		
KPL	HE	52.7	IAML		17:44	11.43	10 0.15	NEWG HN 214.0 IAML 14:44 38.59 1061 0.26		
LAWE	HZ	82.2	EP		17:44	06.26	0.22	NEWG HE 214.0 IAML 14:44 38.74 1799 0.32		
LAWE	HN	82.2	ES		17:44	15.94	-0.04	BIGH HZ 222.0 EP 14:44 10.10 -1.26		
LAWE	HE	82.2	IAML		17:44	19.61	18 0.22	BIGH HE 222.0 IAML 14:44 41.06 1186 0.20		
LAWE	HN	82.2	IAML		17:44	19.64	12 0.20	BIGH HE 222.0 IAML 14:44 41.94 1585 0.16		
INVG	HZ	88.6	EP		17:44	07.17	0.10	GAL1 HZ 228.0 EP 14:44 12.41 0.29		
INVG	HN	88.6	ES		17:44	17.42	-0.34	GAL1 HE 228.0 IAML 14:44 43.42 573 0.30		
INVG	HE	88.6	IAML		17:44	21.85	30 0.11	GAL1 HE 228.0 IAML 14:44 44.94 1138 0.50		
INVG	HN	88.6	IAML		17:44	21.97	18 0.09	ESK HZ 235.0 EP 14:44 13.06 0.00		
LINV	HZ	130.0	EP		17:44	13.61	0.20	ESK HN 235.0 IAML 14:44 44.45 1010 0.26		
LINV	HE	130.0	IAML		17:44	31.41	10 0.24	ESK HE 235.0 IAML 14:44 45.26 1036 0.36		
LINV	HN	130.0	IAML		17:44	32.01	5 0.22	IOMK HZ 295.0 EP 14:44 20.27 -0.26		
DRUM	HZ	159.0	EP		17:44	18.47	1.00	IOMK HE 295.0 IAML 14:45 02.91 607 0.42		
DRUM	HN	159.0	IAML		17:44	38.58	16 0.13	IOMK HN 295.0 IAML 14:45 07.18 969 0.60		
DRUM	HE	159.0	IAML		17:44	39.99	20 0.12	KESW HZ 302.0 EP 14:44 21.50 0.05		
LEWI	HZ	168.0	EP		17:44	19.04	0.23	KESW HE 302.0 IAML 14:45 10.21 438 0.62		
LEWI	HE	168.0	IAML		17:44	41.31	5 0.05	KESW HE 302.0 IAML 14:45 12.44 350 1.14		
LEWI	HN	168.0	IAML		17:44	45.16	4 0.40	WIM EZ 306.0 EP 14:44 21.68 -0.19		
BIGH	HZ	183.0	EP		17:44	21.21	0.60	ILTH BZ 310.0 EP 14:44 21.95 -0.44		
BIGH	HN	183.0	IAML		17:44	44.67	4 0.20	WPS HZ 389.0 EP 14:44 32.85 0.61		
BIGH	HE	183.0	IAML		17:44	50.17	7 0.32	WPS HE 389.0 IAML 14:45 14.81 163 0.24		
August 4 2017				Time: 02:19 47.6 UTC	Magnitude: 1.5 ML	WPS HN 389.0 IAML 14:45 31.19 184 0.50				
Lat: 57.136N				Lon: -4.068W	Depth: 6.6 km	WLF1 HZ 403.0 EP 14:44 33.43 -0.51				
Grid Ref: 274.86 kmE 806.89 kmN				RMS: 0.50 secs		WLF1 HE 403.0 IAML 14:45 42.77 420 0.44				
Locality: KINGUSSIE,HIGHLAND						WLF1 HN 403.0 IAML 14:45 37.94 220 0.66				
Velocity model: Lownet Xnear: 100.0				Xfar: 200.0		GDLE HZ 415.0 EP 14:44 35.74 0.21				
Comment: FELT KINGUSSIE...				Intensity: 3		GDLE HN 415.0 IAML 14:45 41.50 556 0.44				
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES	GDLE HE 415.0 IAML 14:45 41.87 372 0.36
INVG	HZ	79.0	EP		02:20	00.61	-0.17	HPK HZ 416.0 EP 14:44 35.93 0.25		
INVG	HE	79.0	ES		02:20	09.64	-0.78	HPK HE 416.0 IAML 14:45 42.57 403 0.50		
INVG	HE	79.0	IAML		02:20	15.18	17 0.16	LRW HZ 462.0 EP 14:44 40.55 -0.76		
INVG	HN	79.0	IAML		02:20	15.77	12 0.09	LRW HE 462.0 IAML 14:45 51.10 130 0.34		
KPL	HZ	98.3	EP		02:20	04.02	0.30	FOEL HZ 469.0 EP 14:44 41.84 -0.43		
KPL	HN	98.3	ES		02:20	15.04	-0.47	FOEL HE 469.0 IAML 14:45 55.47 289 0.52		
KPL	HN	98.3	IAML		02:20	18.44	19 0.10	FOEL HE 469.0 IAML 14:46 03.38 248 0.54		
KPL	HE	98.3	IAML		02:20	19.30	19 0.14	HLM1 HZ 515.0 EP 14:44 47.51 -0.53		
DRUM	HZ	99.2	IP	C	02:20	04.03	0.12	HLM1 HE 515.0 IAML 14:46 07.24 106 0.54		
DRUM	HE	99.2	ES		02:20	15.84	0.01	HLM1 HE 515.0 IAML 14:46 11.41 134 0.68		
DRUM	HE	99.2	IAML		02:20	19.57	42 0.15	RSBS HZ 545.0 EP 14:44 51.61 -0.17		
DRUM	HN	99.2	IAML		02:20	20.26	46 0.38	RSBS HE 545.0 IAML 14:45 49.06 49 0.36		
LAWE	HZ	127.0	EP		02:20	08.62	0.42	RSBS HE 545.0 IAML 14:46 26.38 31 0.84		
LAWE	HN	127.0	ES		02:20	24.18	0.93	MCH1 HZ 567.0 EP 14:44 54.73 0.24		
LINV	HZ	131.0	EP		02:20	08.86	0.10	MCH1 HE 567.0 IAML 14:46 21.42 73 0.62		
LINV	HE	131.0	ES		02:20	24.05	-0.17	MCH1 HE 567.0 IAML 14:46 29.82 62 0.58		
LINV	HE	131.0	IAML		02:20	24.39	6 0.13	MONM HZ 588.0 EP 14:44 57.64 0.55		
LINV	HN	131.0	IAML		02:20	25.46	4 0.13	MONM HE 588.0 IAML 14:46 27.48 153 0.60		
EDI	HZ	146.0	EP		02:20	11.65	0.83	MONM HN 588.0 IAML 14:46 30.46 163 0.56		
BIGH	HZ	151.0	EP		02:20	11.93	0.28			

**TABLE 2 : PHASE DATA**

August 4 2017		Time: 14:45 34.1 UTC	Magnitude: 3.4 ML	Grid Ref: 163.54 kmE 775.06 kmN	RMS: 0.30 secs										
Lat: 56.798N		Lon: -5.869W	Depth: 10.6 km	Locality: MOIDART,HIGHLAND											
Grid Ref: 163.79 kmE 774.05 kmN			RMS: 0.30 secs	Velocity model: Lownet Xnear: 300.0 Xfar: 600.0											
Locality: MOIDART,HIGHLAND				Comment: FELT MOIDART...	Intensity: 3										
Velocity model: Lownet Xnear: 300.0 Xfar: 600.0				STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES											
Comment: FELT MOIDART...			Intensity: 4	KPL HZ 61.7 IP D 14:45 44.66 0.15	0.36										
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES					
KPL	HZ	61.7	IP	D	14:45	44.66	0.15	KPL	HE	60.8	ES	17:35	24.19	0.07	
KPL	HE	61.7	ES		14:45	52.00	-0.11	KPL	HE	60.8	IAML	17:35	24.44	148 0.26	
KPL	HE	61.7	IAML		14:45	52.22	2660 0.26	KPL	HN	60.8	IAML	17:35	27.94	102 0.26	
KPL	HN	61.7	IAML		14:45	55.67	1345 0.24	LAWE	HZ	67.5	EP	17:35	17.75	0.07	
LAWE	HZ	66.5	EP		14:45	45.53	0.25	LAWE	HE	67.5	ES	17:35	25.43	-0.54	
LAWE	HE	66.5	ES		14:45	53.16	-0.29	LAWE	HE	67.5	IAML	17:35	25.79	258 0.14	
LAWE	HN	66.5	IAML		14:45	53.44	3868 0.15	INVG	HZ	120.0	EP	17:35	26.09	0.36	
LAWE	HE	66.5	IAML		14:45	53.47	4481 0.16	INVG	HN	120.0	IAML	17:35	40.22	0.34	
INVG	HZ	119.0	EP		14:45	53.89	0.46	INVG	HE	120.0	IAML	17:35	40.47	37 0.22	
INVG	HE	119.0	ES		14:46	07.58	0.03	INVG	HE	120.0	IAML	17:35	41.94	40 0.07	
INVG	HN	119.0	IAML		14:46	13.01	802 0.52	PGB1	HZ	140.0	EP	17:35	28.73	0.12	
INVG	HE	119.0	IAML		14:46	14.51	465 0.38	PGB1	HE	140.0	IAML	17:35	46.81	49 0.32	
LINV	HZ	156.0	EP		14:45	58.20	-0.35	PGB1	HN	140.0	IAML	17:35	47.43	38 0.34	
LINV	HE	156.0	IAML		14:46	19.18	668 0.13	LINV	HZ	155.0	EP	17:35	30.45	-0.18	
LINV	HN	156.0	IAML		14:46	19.23	286 0.16	LINV	HN	155.0	IAML	17:35	50.38	26 0.18	
LEWI	HZ	162.0	EP		14:45	59.44	-0.01	LINV	HE	155.0	IAML	17:35	51.47	43 0.16	
LEWI	HE	162.0	IAML		14:46	20.26	777 0.22	LEWI	HZ	160.0	EP	17:35	31.53	0.02	
LEWI	HN	162.0	IAML		14:46	20.32	445 0.31	LEWI	HE	160.0	IAML	17:35	52.50	42 0.24	
EDI	HZ	192.0	EP		14:46	03.46	0.18	LEWI	HN	160.0	IAML	17:35	52.52	23 0.22	
EDI	HN	192.0	IAML		14:46	30.06	255 0.32	DRUM	HZ	207.0	EP	17:35	36.88	-0.45	
EDI	HE	192.0	IAML		14:46	34.79	221 0.34	DRUM	HN	207.0	IAML	17:36	05.39	50 0.20	
DRUM	HZ	207.0	EP		14:46	04.56	-0.55	DRUM	HE	207.0	IAML	17:36	05.51	40 0.28	
DRUM	HN	207.0	IAML		14:46	33.13	1021 0.20	NEWG	HZ	214.0	EP	17:35	38.16	-0.07	
DRUM	HE	207.0	IAML		14:46	33.29	765 0.24	NEWG	HE	214.0	IAML	17:36	06.20	30 0.32	
NEWG	HZ	213.0	EP		14:46	05.90	-0.02	NEWG	HN	214.0	IAML	17:36	06.22	24 0.28	
NEWG	HE	213.0	IAML		14:46	33.97	603 0.34	BIGH	HZ	221.0	EP	17:35	38.58	-0.53	
NEWG	HN	213.0	IAML		14:46	33.97	435 0.34	BIGH	HN	221.0	IAML	17:36	10.77	20 0.22	
BIGH	HZ	222.0	EP		14:46	07.45	0.45	BIGH	HE	221.0	IAML	17:36	13.10	18 0.48	
BIGH	HE	222.0	IAML		14:46	37.11	295 0.20	GAL1	HZ	228.0	EP	17:35	40.60	0.66	
BIGH	HN	222.0	IAML		14:46	37.73	268 0.20	GAL1	HE	228.0	IAML	17:36	12.68	22 0.30	
GAL1	HZ	227.0	EP		14:46	07.64	0.02	GAL1	HN	228.0	IAML	17:36	13.00	13 0.34	
GAL1	HN	227.0	IAML		14:46	37.86	213 0.26	ESK	HZ	235.0	EP	17:35	40.60	-0.23	
GAL1	HE	227.0	IAML		14:46	40.44	426 0.30	ESK	HE	235.0	IAML	17:36	11.68	14 0.30	
ESK	HZ	234.0	EP		14:46	08.32	-0.20	ESK	HN	235.0	IAML	17:36	11.86	16 0.23	
ESK	HN	234.0	IAML		14:46	39.62	364 0.36								
ESK	HE	234.0	IAML		14:46	40.49	326 0.36	August 5 2017		Time: 00:49 53.1 UTC	Magnitude: 1.1 ML				
August 4 2017		Time: 15:20 24.0 UTC	Magnitude: 1.1 ML	Lat: 49.362N	Lon: -2.338W	Depth: 11.0 km									
Lat: 56.804N		Lon: -5.871W	Depth: 8.8 km	Grid Ref: 375.46 kmE -59.71 kmN	RMS: 0.10 secs	Locality: JERSEY,CHANNEL ISLANDS	Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0	Comment: 10KM NW JERSEY	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES						
Locality: MOIDART,HIGHLAND									JSA	HZ	22.8	EP	00:49	57.44	-0.09
Velocity model: Lownet Xnear: 300.0 Xfar: 600.0								JSA	HE	22.8	ES	00:50	0.85	0.05	
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	JSA	HN	22.8	IAML	00:50	01.09	26 0.10	
KPL	HZ	60.5	EP	15:20	34.28	0.02	JSA	HE	22.8	IAML	00:50	01.10	41 0.20		
KPL	HE	60.5	ES	15:20	41.57	-0.15	ROSF	HZ	133.0	EP	00:50	14.37	0.10		
KPL	HE	60.5	IAML	15:20	41.82	13 0.26	ROSF	HZ	133.0	ES	00:50	29.69	-0.06		
KPL	HN	60.5	IAML	15:20	45.30	8 0.10	DYA	HZ	165.0	EP	00:50	18.78	-0.01		
LAWE	HZ	65.9	EP	15:20	35.30	0.18	DYA	HN	165.0	ES	00:50	37.58	0.01		
LAWE	HN	65.9	ES	15:20	42.78	-0.43	DYA	HN	165.0	IAML	00:50	38.14	3 0.20		
LAWE	HN	65.9	IAML	15:20	43.14	27 0.10	DYA	HE	165.0	IAML	00:50	42.30	3 0.18		
LAWE	HE	65.9	IAML	15:20	43.30	21 0.29									
INVG	HZ	117.0	EP	15:20	43.53	0.48	August 5 2017		Time: 21:05 02.8 UTC	Magnitude: 0.8 ML					
INVG	HN	117.0	IAML	15:21	00.65	3 0.03	Lat: 52.270N	Lon: -2.771W	Depth: 7.7 km						
INVG	HE	117.0	IAML	15:21	01.63	3 0.10	Grid Ref: 347.39 kmE 263.86 kmN	RMS: 0.30 secs	Locality: YARPOLE,HEREFORDSHIRE	Velocity model: Lownet Xnear: 100.0 Xfar: 150.0					
LINV	HZ	154.0	EP	15:20	47.96	-0.38	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES								
LINV	HN	154.0	IAML	15:21	07.84	2 0.19	HLM1	HZ	28.6	EP	21:05	08.31	0.12		
LINV	HE	154.0	IAML	15:21	08.74	4 0.29	HLM1	HN	28.6	ES	21:05	11.89	-0.22		
LEWI	HZ	162.0	EP	15:20	49.78	0.28	HLM1	HE	28.6	IAML	21:05	12.06	15 0.08		
							HLM1	HE	28.6	IAML	21:05	12.22	20 0.11		
August 4 2017		Time: 16:07 26.5 UTC	Magnitude: 1.2 ML	MCH1	HZ	34.1	IP	C	21:05	08.90					
Lat: 56.794N		Lon: -5.893W	Depth: 8.2 km	MCH1	HN	34.1	ES		21:05	13.35	-0.15				
Grid Ref: 162.30 kmE 773.68 kmN		RMS: 0.20 secs	FOEL	HZ	74.8	EP		21:05	13.55	29 0.08					
Locality: MOIDART,HIGHLAND			FOEL	HE	74.8	ES		21:05	13.57	15 0.09					
Velocity model: Lownet Xnear: 300.0 Xfar: 600.0			FOEL	HN	74.8	IAML		21:05	15.67	0.31					
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	FOEL	HE	74.8	IAML	21:05	24.56	0.06	
KPL	HZ	62.4	EP	16:07	37.16	0.15	LLW	BE	88.5	ES	21:05	24.93	3 0.16		
KPL	HE	62.4	ES	16:07	44.46	-0.23	LLW	BE	88.5	IAML	21:05	27.81	-0.26		
KPL	HE	62.4	IAML	16:07	44.64	16 0.30	LLW	BE	88.5	IAML	21:05	28.06	1 0.20		
KPL	HN	62.4	IAML	16:07	48.17	10 0.26	LLW	BN	88.5	IAML	21:05	28.07	1 0.20		
LAWE	HZ	66.8	EP	16:07	37.90	0.18	LPW	HZ	90.4	EP	21:05	18.07	0.37		
LAWE	HE	66.8	ES	16:07	45.57	-0.35	LPW	HE	90.4	ES	21:05	28.42	-0.13		
LAWE	HE	66.8	IAML	16:07	45.74	22 0.30	LPW	HN	90.4	IAML	21:05	29.06	3 0.13		
LAWE	HN	66.8	IAML	16:07	46.01	13 0.12	LPW	HE	90.4	IAML	21:05	29.08	3 0.13		
INVG	HZ	121.0	EP	16:07	46.40	0.30	CWF	HZ	112.0	EP	21:05	21.48	0.37		
INVG	HE	121.0	IAML	16:08	01.11	4 0.10	CWF	HE	112.0	ES	21:05	34.03	-0.42		
INVG	HN	121.0	IAML	16:08	02.13	6 0.09	CWF	HN	112.0	IAML	21:05	38.33	4 0.09		
LINV	HZ	156.0	EP	16:07	51.09	-0.05									
LINV	HN	156.0	IAML	16:08	10.73	3 0.13									
LINV	HE	156.0	IAML	16:08	11.78	4 0.16									
August 4 2017		Time: 17:35 06.3 UTC	Magnitude: 2.2 ML	CWF	HE	112.0	IAML		21:05	35.85	2 0.12				
Lat: 56.807N		Lon: -5.874W	Depth: 10.1 km	CWF	HN	112.0	IAML		21:05	38.33	4 0.09				

**TABLE 2 : PHASE DATA**

RSBS	HZ	140.0	EP	21:05	25.61	0.43	JSA	HZ	181.0	EP	15:35	00.60	0.35
RSBS	HE	140.0	ES	21:05	41.88	0.39	JSA	HE	181.0	IAML	15:35	22.93	14 0.34
RSBS	HE	140.0	IAML	21:05	43.03	2 0.13	JSA	HN	181.0	IAML	15:35	23.97	10 0.17
RSBS	HN	140.0	IAML	21:05	43.79	3 0.10	DYA	HZ	250.0	EP	15:35	08.94	-0.02
							DYA	HN	250.0	IAML	15:35	51.32	10 0.46
							DYA	HE	250.0	IAML	15:35	54.40	8 0.38
August 6 2017			Time: 02:08 23.7 UTC		Magnitude: 1.5 ML		August 10 2017			Time: 12:48 44.6 UTC		Magnitude: 1.7 ML	
Lat: 54.018N			Lat: 0.861W		Depth: 10.0 km		Lat: 53.945N			Lat: -3.339W		Depth: 2.5 km	
Grid Ref: 587.41 kmE 461.81 kmN			RMS: 0.40 secs				Grid Ref: 312.12 kmE 450.73 kmN					RMS: 0.30 secs	
Locality: SOUTHERN NORTH SEA							Locality: IRISH SEA						
Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0							Velocity model: Lownet Xnear: 100.0 Xfar: 200.0						
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							Comment: 20KM WNW FLEETWOOD						
AU08 HZ 100.0 EP 02:08 40.30							STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES						
LMK HZ 100.0 EP 02:08 40.03							AQ09 HZ 29.3 EP 12:48 49.93						
LMK HE 100.0 ES 02:08 51.73							AQ09 HN 29.3 ES 12:48 54.17						
LMK HN 100.0 IAML 02:08 53.94				33	0.22		AQ04 HZ 30.8 EP 12:48 50.10						
LMK HE 100.0 IAML 02:08 54.26				36	0.24		AQ04 HN 30.8 ES 12:48 54.50						
AU18 HZ 106.0 EP 02:08 41.06							AQ10 HZ 33.8 EP 12:48 50.66						
AU13 HZ 110.0 EP 02:08 41.77							AQ10 HN 33.8 ES 12:48 57.28						
AU10 EZ 112.0 EP 02:08 41.92							KESW HZ 73.3 EP 12:49 06.30						
AU20 HZ 112.0 EP 02:08 41.90							KESW HE 73.3 ES 12:49 07.37	40	0.54				
AU15 HZ 116.0 EP 02:08 42.52							KESW HN 73.3 IAML 12:49 10.11	21	0.24				
GDLE HZ 118.0 EP 02:08 43.04							IOMK HZ 87.6 EP 12:48 59.59						
GDLE HN 118.0 IAML 02:08 59.20				28	0.38		IOMK HN 87.6 ES 12:49 09.72						
GDLE HE 118.0 IAML 02:09 00.71				14	0.32		WPS HZ 97.7 EP 12:49 01.11						
AU07 HZ 120.0 EP 02:08 43.07							WPS HN 97.7 ES 12:49 13.33						
AT10 HZ 139.0 EP 02:08 46.00							WPS HE 97.7 IAML 12:49 15.46	13	0.22				
WACR HZ 145.0 EP 02:08 46.51							EDMD HZ 101.0 EP 12:49 16.28	15	0.19				
CWF HZ 203.0 EP 02:08 54.61							EDMD HE 101.0 IAML 12:49 16.41	21	0.20				
CWF HE 203.0 IAML 02:09 19.42				2	0.28		FOEL HZ 118.0 EP 12:49 03.85						
CWF HN 203.0 IAML 02:09 20.25				3	0.18		FOEL HE 118.0 IAML 12:49 20.08	16	0.32				
EDMD HZ 204.0 EP 02:08 53.09							FOEL HE 118.0 ES 12:49 21.80	22	0.26				
EDMD HE 204.0 IAML 02:09 22.02				2	0.16		LBWR HZ 123.0 EP 12:49 05.49						
EDMD HN 204.0 IAML 02:09 24.22				2	0.34		LBWR HE 123.0 IAML 12:49 21.38	44	0.34				
August 9 2017			Time: 04:41 39.1 UTC		Magnitude: 2.0 ML		LBWR HN 123.0 IAML 12:49 22.29	56	0.36				
Lat: 53.512N			Lat: -4.402W		Depth: 9.5 km		LLW BZ 124.0 EP 12:49 04.63						
Grid Ref: 240.74 kmE 404.41 kmN			RMS: 0.40 secs				LLW BE 124.0 IAML 12:49 23.76	8	0.45				
Locality: AMLWCH,ANGLESEY							LLW BN 124.0 IAML 12:49 23.80	8	0.40				
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0							EDMD HZ 133.0 EP 12:49 07.12						
Comment: FEEL AMLWCH			Intensity: 2				EDMD HE 133.0 IAML 12:49 09.85						
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							GAL1 HZ 136.0 EP 12:49 19.36	45	0.24				
WPS HZ 14.0 IP C 04:41 42.88							GAL1 HN 136.0 IAML 12:49 19.45	59	0.26				
WPS HN 14.0 ES 04:41 44.78							GAL1 HE 136.0 ES 12:49 20.08						
WPS HE 14.0 IAML 04:41 45.04				1136	0.11		FOEL HZ 118.0 EP 12:49 03.85						
WPS HN 14.0 IAML 04:41 45.08				622	0.11		FOEL HE 118.0 IAML 12:49 20.08	16	0.32				
WLF1 HZ 24.8 IP C 04:41 43.53							FOEL HE 118.0 ES 12:49 21.80	22	0.26				
WLF1 HE 24.8 ES 04:41 46.53							LBWR HZ 123.0 EP 12:49 05.49						
WLF1 HE 24.8 IAML 04:41 46.86				258	0.17		LBWR HE 123.0 IAML 12:49 21.38	44	0.34				
WLF1 HN 24.8 IAML 04:41 47.07				134	0.17		LBWR HN 123.0 IAML 12:49 22.29	56	0.36				
YRC EZ 31.3 IP C 04:41 44.65							LLW BZ 124.0 EP 12:49 04.63						
WIM EZ 72.9 IP D 04:41 51.22							LLW BE 124.0 IAML 12:49 23.76	8	0.45				
IOMK HZ 84.0 EP 04:41 52.94							LLW BN 124.0 IAML 12:49 23.80	8	0.40				
IOMK HN 84.0 IAML 04:42 04.34				64	0.15		EDMD HZ 133.0 EP 12:49 07.12						
IOMK HE 84.0 IAML 04:42 05.35				110	0.24		EDMD HE 133.0 IAML 12:49 09.85						
LLW BZ 88.7 IP D 04:41 53.70							GAL1 HZ 136.0 EP 12:49 19.36	45	0.24				
FOEL HZ 106.0 EP 04:41 56.39							GAL1 HE 136.0 IAML 12:49 19.45	59	0.26				
FOEL HN 106.0 ES 04:42 09.65							GAL1 HN 136.0 ES 12:49 20.08	22	0.26				
FOEL HE 106.0 IAML 04:42 12.46				25	0.60		FOEL HN 136.0 IAML 12:49 21.80	22	0.26				
FOEL HN 106.0 IAML 04:42 12.71				27	0.38		LBWR HZ 123.0 EP 12:49 05.49						
HLM1 HZ 151.0 EP 04:42 03.66							LBWR HE 123.0 IAML 12:49 21.38	44	0.34				
HLM1 HE 151.0 IAML 04:42 22.54				25	0.21		LBWR HN 123.0 IAML 12:49 22.29	56	0.36				
HLM1 HN 151.0 IAML 04:42 22.67				19	0.19		LLW BZ 124.0 EP 12:49 04.63						
GAL1 HZ 152.0 EP 04:42 03.33							LLW BE 124.0 IAML 12:49 23.76	8	0.45				
GAL1 HN 152.0 IAML 04:42 21.00				13	0.72		LLW BN 124.0 IAML 12:49 23.80	8	0.40				
GAL1 HE 152.0 IAML 04:42 21.21				19	0.39		EDMD HZ 133.0 EP 12:49 07.12						
LPW HZ 157.0 EP 04:42 04.08							EDMD HE 133.0 IAML 12:49 09.85						
RSBS HZ 175.0 EP 04:42 06.96							GAL1 HZ 136.0 EP 12:49 19.36	45	0.24				
RSBS HN 175.0 IAML 04:42 29.61				28	0.24		GAL1 HE 136.0 IAML 12:49 19.45	59	0.26				
RSBS HE 175.0 IAML 04:42 30.48				18	0.18		GAL1 HN 136.0 ES 12:49 20.08	22	0.26				
NEWG HZ 179.0 EP 04:42 06.39							FOEL HZ 118.0 EP 12:49 03.85						
NEWG HN 179.0 IAML 04:42 29.53				12	0.12		FOEL HE 118.0 IAML 12:49 20.08	16	0.32				
NEWG HE 179.0 IAML 04:42 29.81				17	0.28		FOEL HN 118.0 ES 12:49 21.80	22	0.26				
August 9 2017			Time: 15:34 32.0 UTC		Magnitude: 2.0 ML		LBWR HZ 93.5 EP 03:44 24.67						
Lat: 50.351N			Lat: -0.414W		Depth: 5.0 km		LBWR HE 93.5 IAML 03:44 39.57	22	0.24				
Grid Ref: 512.82 kmE 51.39 kmN			RMS: 0.20 secs				LBWR HN 93.5 EP 03:44 39.75	24	0.24				
Locality: ENGLISH CHANNEL							HPK HZ 117.0 EP 03:44 28.42						
Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0							HPK HN 117.0 IAML 03:44 45.75	12	0.15				
Comment: 55KM SSW BRIGHTON							HPK HE 117.0 IAML 03:44 45.92	10	0.30				
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							STNC HZ 125.0 IAML 03:44 50.45	7	0.44				
HMNX HZ 78.3 EP 15:34 44.98							GDLE HZ 136.0 EP 03:44 32.15						
HMNX HE 78.3 ES 15:34 54.92							GDLE HE 136.0 IAML 03:44 48.36						
HMNX HE 78.3 IAML 15:34 55.39				75	0.18		GDLE HN 136.0 EP 03:44 51.41	8	0.60				
HMNX HN 78.3 IAML 15:34 58.57				66	0.18		GDLE HE 136.0 IAML 03:44 53.52	13	0.40				
ELSH HZ 141.0 EP 15:34 54.72							AT10 HZ 138.0 EP 03:44 32.45						
ELSH HE 141.0 IAML 15:35 14.63				23	0.36		AT10 HE 138.0 IAML 03:44 49.17	16	0.32				
ELSH HN 141.0 IAML 15:35 14.92				40	0.58		AT10 HN 138.0 IAML 03:44 49.82	13	0.28				
JDG EZ 174.0 EP 15:34 59.02							August 14 2017			Time: 00:43 35.2 UTC		Magnitude: 1.6 ML	
JRS EE 177.0 EP 15:34 59.82							Lat: 49.248N			Lat: -2.492W		Depth: 10.1 km	
							Grid Ref: 364.20 kmE			Grid Ref: -72.32 kmN		RMS: 0.20 secs	

**TABLE 2 : PHASE DATA**

Locality: JERSEY, CHANNEL ISLANDS	August 20 2017	Time: 01:42 42.2 UTC	Magnitude: 0.7 ML
Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
Comment: 15KM WEST JERSEY	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	Locality: TAYINLOAN, ARGYLL/BUTE		
JDC EZ 33.0 EP 00:43 41.04	Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0		
JDC EN 33.0 ES 00:43 45.65	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
JDC EN 33.0 IAML 00:43 46.11 181 0.14	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
JDC EE 33.0 IAML 00:43 46.92 186 0.18	Locality: TAYINLOAN, ARGYLL/BUTE		
JDG EZ 33.0 EP 00:43 40.98	Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0		
JDG EN 33.0 ES 00:43 45.66	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
JDG EN 33.0 IAML 00:43 46.14 38 0.40	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
JDG EE 33.0 IAML 00:43 46.25 44 0.26	Locality: TAYINLOAN, ARGYLL/BUTE		
ROSF BZ 116.0 EP 00:43 54.08	Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0		
ROSF BN 116.0 IAML 00:44 09.44 11 0.20	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
ROSF BE 116.0 IAML 00:44 10.84 11 0.20	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
DYA HZ 168.0 EP 00:44 01.66	Locality: TAYINLOAN, ARGYLL/BUTE		
DYA HN 168.0 ES 00:44 20.17	Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0		
DYA HN 168.0 IAML 00:44 22.12 9 0.12	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
DYA HE 168.0 IAML 00:44 23.05 5 0.42	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
August 15 2017 Time: 10:20 17.5 UTC Magnitude: 0.8 ML	Locality: TAYINLOAN, ARGYLL/BUTE		
Lat: 56.403N Lon: -5.588W Depth: 13.1 km	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0		
Grid Ref: 178.64 kmE 729.18 kmN RMS: 0.10 secs	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
Locality: KERRERA, ARGYLL & BUTE	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	Locality: TAYINLOAN, ARGYLL/BUTE		
Comment: OFFSHORE LOCATION	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0		
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
LAWE HZ 19.7 IP C 10:20 21.59	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
LAWE HE 19.7 ES 10:20 24.79	Locality: TAYINLOAN, ARGYLL/BUTE		
LAWE HN 19.7 IAML 10:20 24.92 28 0.11	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0		
LAWE HE 19.7 IAML 10:20 25.30 27 0.32	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
PGB1 HZ 95.2 EP 10:20 33.11	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
PGB1 HN 95.2 ES 10:20 44.67	Locality: TAYINLOAN, ARGYLL/BUTE		
INVG HZ 95.4 EP 10:20 33.01	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0		
INVG HE 95.4 ES 10:20 44.61	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
INVG HE 95.4 IAML 10:20 45.52 3 0.13	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
INVG HN 95.4 IAML 10:20 46.07 3 0.12	Locality: TAYINLOAN, ARGYLL/BUTE		
KPL HZ 104.0 EP 10:20 34.30	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0		
KPL HE 104.0 ES 10:20 46.93	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
KPL HN 104.0 IAML 10:20 47.85 3 0.17	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
KPL HE 104.0 IAML 10:20 47.86 4 0.20	Locality: TAYINLOAN, ARGYLL/BUTE		
CLGH HN 151.0 ES 10:20 58.18	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0		
August 15 2017 Time: 10:20 17.5 UTC Magnitude: 0.8 ML	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
Lat: 56.403N Lon: -5.588W Depth: 13.1 km	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
Grid Ref: 178.64 kmE 729.18 kmN RMS: 0.10 secs	Locality: TAYINLOAN, ARGYLL/BUTE		
Locality: KERRERA, ARGYLL & BUTE	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0		
Comment: OFFSHORE LOCATION	Locality: TAYINLOAN, ARGYLL/BUTE		
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	Locality: TAYINLOAN, ARGYLL/BUTE		
LAWE HZ 19.7 IP C 10:20 21.59	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0		
LAWE HE 19.7 ES 10:20 24.79	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
LAWE HN 19.7 IAML 10:20 24.92 28 0.11	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
LAWE HE 19.7 IAML 10:20 25.30 27 0.32	Locality: TAYINLOAN, ARGYLL/BUTE		
PGB1 HZ 95.2 EP 10:20 33.11	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0		
PGB1 HN 95.2 ES 10:20 44.67	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
INVG HZ 95.4 EP 10:20 33.01	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
INVG HE 95.4 ES 10:20 44.61	Locality: TAYINLOAN, ARGYLL/BUTE		
INVG HE 95.4 IAML 10:20 45.52 3 0.13	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0		
INVG HN 95.4 IAML 10:20 46.07 3 0.12	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
KPL HZ 104.0 EP 10:20 34.30	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
KPL HE 104.0 ES 10:20 46.93	Locality: TAYINLOAN, ARGYLL/BUTE		
KPL HN 104.0 IAML 10:20 47.85 3 0.17	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0		
KPL HE 104.0 IAML 10:20 47.86 4 0.20	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
CLGH HN 151.0 ES 10:20 58.18	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
August 16 2017 Time: 02:27 31.7 UTC Magnitude: 1.0 ML	Locality: TAYINLOAN, ARGYLL/BUTE		
Lat: 53.051N Lon: -4.521W Depth: 3.0 km	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0		
Grid Ref: 231.05 kmE 353.42 kmN RMS: 0.40 secs	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
Locality: CAERNARFON BAY	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0	Locality: TAYINLOAN, ARGYLL/BUTE		
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0		
YRC EZ 22.6 EP 02:27 35.43	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
WLF1 HZ 27.8 EP 02:27 36.17	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
WLF1 HN 27.8 ES 02:27 39.55	Locality: TAYINLOAN, ARGYLL/BUTE		
WLF1 HE 27.8 IAML 02:27 39.64 88 0.10	Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0		
WLF1 HN 27.8 IAML 02:27 39.74 52 0.18	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
WPS HZ 38.9 EP 02:27 39.02	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
WPS HE 38.9 ES 02:27 43.41	Locality: TAYINLOAN, ARGYLL/BUTE		
WPS HN 38.9 IAML 02:27 44.01 6 0.57	Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0		
WPS HE 38.9 IAML 02:27 45.14 4 0.22	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
LLW BZ 61.8 EP 02:27 42.15	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
LLW BN 61.8 ES 02:27 49.34	Locality: TAYINLOAN, ARGYLL/BUTE		
LLW BN 61.8 IAML 02:27 49.62 6 0.35	Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0		
LLW BE 61.8 IAML 02:27 50.14 3 0.20	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
FOEL HZ 90.6 EP 02:27 46.42	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
FOEL HE 90.6 ES 02:27 56.91	Locality: TAYINLOAN, ARGYLL/BUTE		
FOEL HN 90.6 IAML 02:27 58.06 6 0.70	Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0		
FOEL HE 90.6 IAML 02:27 58.94 6 0.26	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
LWP HZ 109.0 EP 02:27 49.89	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
LWP HE 109.0 ES 02:28 02.60	Locality: TAYINLOAN, ARGYLL/BUTE		
RSBS HZ 123.0 EP 02:27 52.26	Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0		
RSBS HE 123.0 ES 02:28 06.25	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
RSBS HE 123.0 IAML 02:28 08.84 2 0.05	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
RSBS HN 123.0 IAML 02:28 09.06 2 0.09	Locality: TAYINLOAN, ARGYLL/BUTE		
DSB BZ 126.0 ES 02:28 06.06	Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0		
HLM1 HZ 126.0 EP 02:27 52.33	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
HLM1 HE 126.0 ES 02:28 06.78	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
HLM1 HN 126.0 IAML 02:28 09.23 4 0.11	Locality: TAYINLOAN, ARGYLL/BUTE		
HLM1 HE 126.0 IAML 02:28 09.85 3 0.15	Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0		
IOMK HZ 135.0 EP 02:27 53.52	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
IOMK HE 135.0 ES 02:28 09.11	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
IOMK HE 135.0 IAML 02:28 09.97 7 0.21	Locality: TAYINLOAN, ARGYLL/BUTE		
IOMK HN 135.0 IAML 02:28 10.08 5 0.13	Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0		
MCH1 HZ 156.0 EP 02:27 56.76	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
MCH1 HN 156.0 ES 02:28 15.33	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
MCH1 HE 156.0 IAML 02:28 16.79 4 0.24	Locality: TAYINLOAN, ARGYLL/BUTE		
MCH1 HE 156.0 IAML 02:28 16.91 4 0.14	Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0		
MONM HE 178.0 ES 02:28 20.66	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
MONM HE 178.0 IAML 02:28 22.61 4 0.17	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
MONM HE 178.0 IAML 02:28 22.66 6 0.21	Locality: TAYINLOAN, ARGYLL/BUTE		
August 16 2017 Time: 02:27 31.7 UTC Magnitude: 1.0 ML	Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0		
Lat: 53.051N Lon: -4.521W Depth: 3.0 km	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
Grid Ref: 231.05 kmE 353.42 kmN RMS: 0.40 secs	Locality: TAYINLOAN, ARGYLL/BUTE		
Locality: CAERNARFON BAY	Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0		
Comment: OFFSHORE LOCATION	Locality: TAYINLOAN, ARGYLL/BUTE		
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	Locality: TAYINLOAN, ARGYLL/BUTE		
LAWE HZ 192.0 EP 23:48 09.61	Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0		
LAWE HN 192.0 ES 23:48 30.44	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
LAWE HN 192.0 IAML 23:48 41.75 6 0.30	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
LRW HZ 192.0 EP 23:48 42.52 6 0.34	Locality: TAYINLOAN, ARGYLL/BUTE		
LRW HE 192.0 IAML 23:48 42.52 6 0.34	Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0		
BIGH HZ 379.0 EP 23:48 33.08	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
BIGH HN 379.0 ES 23:49 10.41	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
BIGH HE 379.0 IAML 23:49 12.19 3 0.21	Locality: TAYINLOAN, ARGYLL/BUTE		
BIGH HE 379.0 IAML 23:49 13.25 3 0.17	Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0		
DRUM HZ 424.0 EP 23:48 38.54	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
DRUM HN 424.0 ES 23:49 20.48	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
DRUM HE 424.0 IAML 23:49 22.26 4 0.36	Locality: TAYINLOAN, ARGYLL/BUTE		
DRUM HE 424.0 IAML 23:49 23.37 5 0.48	Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0		
LINV HZ 464.0 EP 23:48 42.97	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
LINV HE 464.0 ES 23:48 42.97	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
LINV HE 464.0 IAML 23:48 42.97	Locality: TAYINLOAN, ARGYLL/BUTE		
LEWI HZ 553.0 EP 23:48 54.53	Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0		
LEWI HZ 553.0 EP 23:48 54.53	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
LEWI HE 553.0 ES 23:48 54.53	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
August 17 2017 Time: 18:10 41.2 UTC Magnitude: 1.3 ML	Locality: TAYINLOAN, ARGYLL/BUTE		
Lat: 55.790N Lon: -6.355W Depth: 8.4 km	Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0		
Grid Ref: 127.04 kmE 663.77 kmN RMS: 0.30 secs	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
IOMK HZ 135.0 EP 23:48 54.12	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
IOMK HE 135.0 ES 23:48 03.72	Locality: TAYINLOAN, ARGYLL/BUTE		
IOMK HE 135.0 IAML 23:48 03.72	Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0		
CLGH HZ 79.3 EP 18:11 54.88	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
CLGH HE 79.3 IAML 18:11 06.76	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
CLGH HE 79.3 IAML 18:11 07.10	Locality: TAYINLOAN, ARGYLL/BUTE		
CLGH HE 79.3 IAML 18:11 07.10	Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0		
CLGH HZ 80.2 EP 18:10 54.88	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
CLGH HN 80.2 ES 18:11 03.91	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs
CLGH HN 80.2 ES 18:11 03.91	Locality: TAYINLOAN, ARGYLL/BUTE		
CLGH HE 80.2 IAML 18:11 06.25	Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0		
CLGH HE 80.2 IAML 18:11 06.68	Lat: 55.665N	Lon: -5.634W	Depth: 12.2 km
CLGH HE 80.2 IAML 18:11 06.68	Grid Ref: 171.48 kmE 647.26 kmN		RMS: 0.30 secs

**TABLE 2 : PHASE DATA**

PGB1	HZ	117.0	EP	18:11	00.94	0.64	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES	
PGB1	HE	117.0	ES	18:11	14.48	0.25	LAWE	HZ	58.1	IP	D	12:08	52.05		0.20		
PGB1	HN	117.0	IAML	18:11	15.55	10 0.29	LAWE	HE	58.1	ES		12:08	58.82		-0.27		
PGB1	HE	117.0	IAML	18:11	16.07	8 0.24	LAWE	HN	58.1	IAML		12:08	59.24	8	0.14		
NEWG	HZ	154.0	EP	18:11	05.46	-0.07	LAWE	HE	58.1	IAML		12:08	59.69	9	0.12		
NEWG	HN	154.0	ES	18:11	23.23	-0.05	KPL	HZ	63.2	EP		12:08	52.89		0.28		
NEWG	HN	154.0	IAML	18:11	24.04	4 0.15	KPL	HE	63.2	ES		12:09	00.10		-0.30		
NEWG	HE	154.0	IAML	18:11	24.05	2 0.18	KPL	HN	63.2	IAML		12:09	03.97	12	0.24		
INVG	HZ	160.0	EP	18:11	06.62	0.14	KPL	HE	63.2	IAML		12:09	04.10	11	0.15		
INVG	HE	160.0	IAML	18:11	28.79	3 0.16	INVG	HZ	95.9	EP		12:08	57.99		0.26		
INVG	HN	160.0	IAML	18:11	29.01	3 0.28	INVG	HE	95.9	ES		12:09	09.10		-0.15		
INVG	HE	95.9	IAML				INVG	HE	95.9	IAML		12:09	11.60	32	0.11		
August 30 2017				Time: 02:43	47.3 UTC	Magnitude: 1.1 ML	INVG	HN	95.9	IAML		12:09	11.71	30	0.11		
Lat: 55.127N				Lat: -5.043W		Depth: 7.5 km	LINV	HZ	153.0	EP		12:09	06.11		0.19		
Grid Ref: 206.01 kmE				Grid Ref: 585.64 kmN		RMS: 0.40 secs	LINV	HE	153.0	ES		12:09	23.08		-0.33		
Locality: BALLANTRAE, AYRSHIRE							LINV	HE	153.0	IAML		12:09	26.40	4	0.10		
Velocity model: Lownet Xnear: 100.0 Xfar: 300.0							LINV	HN	153.0	IAML		12:09	27.05	3	0.14		
Comment: OFFSHORE LOCATION							LEWI	HZ	174.0	EP		12:09	08.89		0.25		
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES								
NEWG	HZ	51.9	IP	C	02:43	55.97		-0.22		LEWI	HE	174.0	ES		12:09	28.07	-0.06
NEWG	HN	51.9	ES		02:44	02.04		-0.66		LEWI	HE	174.0	IAML		12:09	30.16	5 0.20
NEWG	HN	51.9	IAML		02:44	02.93	8 0.10		LEWI	HN	174.0	IAML		12:09	31.33	3 0.26	
NEWG	HE	51.9	IAML		02:44	03.46	9 0.15										
CLGH	HZ	68.3	EP		02:43	58.84		0.09									
CLGH	HN	68.3	ES		02:44	06.87		-0.25									
CLGH	HN	68.3	IAML		02:44	10.07	6 0.08										
CLGH	HE	68.3	IAML		02:44	10.21	7 0.16										
PGB1	HZ	84.0	IP	C	02:44	01.38		0.20									
PGB1	HE	84.0	ES		02:44	11.27		-0.06									
PGB1	HE	84.0	IAML		02:44	14.74	10 0.14										
PGB1	HN	84.0	IAML		02:44	15.52	10 0.10										
IOMK	HZ	101.0	EP		02:44	04.23		0.38									
IOMK	HE	101.0	ES		02:44	15.63		-0.32									
IOMK	HN	101.0	IAML		02:44	16.85	13 0.11										
IOMK	HE	101.0	IAML		02:44	16.89	12 0.17										
ESK	HZ	119.0	EP		02:44	06.84		0.25									
ESK	HN	119.0	ES		02:44	20.89		0.19									
ESK	HN	119.0	IAML		02:44	22.31	9 0.22										
ESK	HE	119.0	IAML		02:44	22.86	5 0.15										
LAWE	HZ	128.0	EP		02:44	08.34		0.40									
LAWE	HE	128.0	ES		02:44	22.32		-0.71									
LAWE	HE	128.0	IAML		02:44	23.62	3 0.21										
LAWE	HN	128.0	IAML		02:44	24.22	3 0.23										
KESW	HZ	138.0	EP		02:44	10.08		0.67									
KESW	HN	138.0	IAML		02:44	26.80	4 0.31										
KESW	HE	138.0	IAML		02:44	27.04	5 0.31										
INVG	HZ	158.0	EP		02:44	12.39		0.18									
INVG	HE	158.0	ES		02:44	30.75		0.34									
INVG	HE	158.0	IAML		02:44	33.72	3 0.18										
INVG	HN	158.0	IAML		02:44	34.99	2 0.05										
September 2 2017				Time: 10:57	30.0 UTC	Magnitude: 1.0 ML	MONM	HE	169.0	ES		20:47	56.25		-0.23		
Lat: 56.083N				Lat: -5.162W		Depth: 11.7 km	MONM	HE	169.0	IAML		20:47	58.92	6 0.15			
Grid Ref: 203.27 kmE				Grid Ref: 692.30 kmN		RMS: 0.20 secs	MONM	HN	169.0	IAML		20:47	58.93	8 0.14			
Locality: DUNANS, ARGYLL & BUTE																	
Velocity model: Lownet Xnear: 100.0 Xfar: 150.0																	
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES								
LAWE	HZ	24.5	IP	C	10:57	34.77		0.04									
LAWE	HN	24.5	ES		10:57	38.12		-0.10									
LAWE	HN	24.5	IAML		10:57	38.29	26 0.12										
LAWE	HE	24.5	IAML		10:57	38.45	35 0.18										
PGB1	HZ	52.1	IP	C	10:57	39.11		0.17									
PGB1	HE	52.1	ES		10:57	45.46		-0.05									
PGB1	HN	52.1	IAML		10:57	45.96	4 0.17										
PGB1	HE	52.1	IAML		10:57	48.30	8 0.09										
INVG	HZ	79.2	EP		10:57	43.29		0.14									
INVG	HE	79.2	ES		10:57	52.65		-0.13									
INVG	HN	79.2	IAML		10:57	55.15	7 0.09										
INVG	HE	79.2	IAML		10:57	55.99	8 0.10										
NEWG	HZ	123.0	EP		10:57	49.47		-0.12									
NEWG	HE	123.0	ES		10:58	03.75		-0.17									
NEWG	HN	123.0	IAML		10:58	05.31	3 0.10										
NEWG	HE	123.0	IAML		10:58	05.46	5 0.17										
CLGH	HZ	126.0	EP		10:57	50.05		-0.11									
CLGH	HE	126.0	IAML		10:58	05.69	3 0.10										
CLGH	HN	126.0	IAML		10:58	06.01	4 0.12										
KPL	HZ	143.0	EP		10:57	53.46		0.98									
KPL	HE	143.0	ES		10:58	10.19		1.26									
KPL	HN	143.0	IAML		10:58	10.88	4 0.23										
KPL	HN	143.0	IAML		10:58	11.59	2 0.19										
ESK	HZ	150.0	EP		10:57	53.48		-0.02									
ESK	HN	150.0	IAML		10:58	13.31	2 0.18										
ESK	HE	150.0	IAML		10:58	13.62	2 0.32										
September 7 2017				Time: 12:08	41.9 UTC	Magnitude: 1.3 ML											
Lat: 56.781N				Lat: -5.469W		Depth: 11.6 km											
Grid Ref: 188.10 kmE				Grid Ref: 770.85 kmN		RMS: 0.20 secs											
Locality: GLENFINNAN, HIGHLAND																	
Velocity model: Lownet Xnear: 100.0 Xfar: 175.0																	
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES								
LAWE	HZ	53.3	EP		05:41	03.41											
LAWE	HN	53.3	ES		05:41	09.42											
LAWE	HE	53.3	IAML		05:41	09.62	7 0.17										
September 9 2017				Time: 03:06	11.1 UTC	Magnitude: 0.5 ML											
Lat: 56.080N				Lat: -5.503W		Depth: 12.7 km											
Grid Ref: 182.05 kmE				Grid Ref: 692.99 kmN		RMS: 0.30 secs											
Locality: CAIRNBAAN, ARGYLL/BUTE																	
Velocity model: Lownet Xnear: 100.0 Xfar: 150.0																	
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES								
LAWE	HZ	21.0	IP	D	03:06	15.36											
LAWE	HE	21.0	ES		03:06	18.53											
LAWE	HN	21.0	I														

TABLE 2 : PHASE DATA

LAWE	HN	53.3	IAML	05:41	09.84	6	0.12		Velocity model: Lownet	Xnear: 100.0	Xfar: 150.0
KPL	HZ	97.3	EP	05:41	10.00		-0.01	Comment: 6KM NE THORNE			
KPL	HE	97.3	IAML	05:41	23.37	2	0.20	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			
KPL	HN	97.3	IAML	05:41	24.47	3	0.12	LMK HZ 43.1 EP 01:16 48.39 -0.22			
INVG	HZ	129.0	EP	05:41	15.48		0.83	LMK HE 43.1 IAML 01:16 54.12 -0.01			
INVG	HN	129.0	ES	05:41	29.45		-0.23	LMK HE 43.1 EP 01:16 54.73 62 0.45			
INVG	HE	129.0	IAML	05:41	31.24	5	0.10	LMK HZ 43.1 IAML 01:16 54.78 59 0.27			
INVG	HN	129.0	IAML	05:41	31.27	3	0.11	HPK HZ 59.2 EP 01:16 51.45 0.32			
LEWI	HE	188.0	ES	05:41	42.72		-0.45	HPK HE 59.2 ES 01:16 58.10 -0.38			
LINV	HE	191.0	ES	05:41	44.07		0.20	HPK HN 59.2 IAML 01:16 58.93 12 0.23			
LINV	HN	191.0	IAML	05:41	47.70	1	0.24	HPK HN 59.2 IAML 01:17 00.04 15 0.22			
LINV	HE	191.0	IAML	05:41	47.73	2	0.32	LBWR HZ 61.9 EP 01:16 51.55 -0.02			
								LBWR HE 61.9 ES 01:16 59.32 0.08			
September 10 2017			Time: 09:52 45.4 UTC			Magnitude: 0.6 ML			LBWR HE 61.9 IAML 01:16 59.74 13 0.23		
Lat: 51.687N			Lon: -4.440W			Depth: 8.1 km			LBWR HN 61.9 IAML 01:17 00.83 11 0.13		
Grid Ref: 231.35 kmE			201.56 kmN			RMS: 0.40 secs			GDLE HZ 85.9 EP 01:16 55.65 0.39		
Locality: CARMARTHEN BAY									GDLE HE 85.9 ES 01:17 05.42 -0.21		
Velocity model: Lownet			Xnear: 100.0 Xfar: 150.0						GDLE HE 85.9 IAML 01:17 08.25 21 0.18		
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	
RSBS	HZ	36.3	EP			09:52	52.60		0.69		
RSBS	HE	36.3	ES			09:52	56.15		-0.52		
RSBS	HN	36.3	IAML			09:52	57.78	5	0.04		
RSBS	HE	36.3	IAML			09:52	57.87	5	0.05		
LPW	HZ	53.9	EP			09:52	54.57		-0.04		
LPW	HE	53.9	ES			09:53	01.23		-0.11		
LPW	HE	53.9	IAML			09:53	01.40	1	0.08		
LPW	HN	53.9	IAML			09:53	01.41	1	0.15		
HTL	HZ	77.1	EP			09:52	58.52		0.31		
HTL	HN	77.1	ES			09:53	07.24		-0.33		
HTL	HN	77.1	IAML			09:53	08.12	7	0.13		
HTL	HE	77.1	IAML			09:53	08.93	4	0.20		
HLM1	HE	141.0	ES			09:53	24.49		0.03		
HLM1	HE	141.0	IAML			09:53	26.03	2	0.18		
HLM1	HN	141.0	IAML			09:53	26.33	3	0.21		
September 11 2017			Time: 20:15 59.6 UTC			Magnitude: 0.7 ML			September 13 2017 Time: 06:50 40.5 UTC Magnitude: 0.5 ML		
Lat: 53.315N			Lon: -1.831W			Depth: 1.1 km			Lat: 56.143N Lon: -5.767W Depth: 4.3 km		
Grid Ref: 411.26 kmE			379.83 kmN			RMS: 0.10 secs			Grid Ref: 166.02 kmE 700.86 kmN RMS: 0.30 secs		
Locality: TIDESWELL,DERBYSHIRE									Locality: SCARBA,ARGYLL & BUTE		
Velocity model: Lownet			Xnear: 100.0 Xfar: 200.0			Velocity model: Lownet			Xnear: 500.0 Xfar: 1000.0		
Comment: COLLAPSE TYPE									Comment: OFFSHORE LOCATION		
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	
LBWR	HZ	12.0	EP			20:16	02.40		0.19		
LBWR	HN	12.0	ES			20:16	03.96		-0.12		
LBWR	HE	12.0	IAML			20:16	05.08	16	0.08		
LBWR	HZ	12.0	IAML			20:16	05.61	13	0.22		
STNC	HZ	35.3	EP			20:16	06.06		-0.08		
STNC	HE	35.3	ES			20:16	10.91		0.04		
STNC	HE	35.3	IAML			20:16	11.23	17	0.22		
STNC	HN	35.3	IAML			20:16	11.77	17	0.33		
CWF	HZ	73.1	EP			20:16	12.21		0.00		
HLM1	HZ	113.0	EP			20:16	18.37		-0.11		
HLM1	HE	113.0	ES			20:16	32.30		0.07		
HLM1	HE	113.0	IAML			20:16	33.33	3	0.27		
HLM1	HN	113.0	IAML			20:16	36.22	2	0.28		
September 13 2017			Time: 01:09 00.6 UTC			Magnitude: 0.5 ML			September 14 2017 Time: 08:14 46.2 UTC Magnitude: 3.3 ML		
Lat: 57.584N			Lon: -5.384W			Depth: 4.5 km			Lat: 58.747N Lon: 1.542W Depth: 18.0 km		
Grid Ref: 197.73 kmE			859.90 kmN			RMS: 0.40 secs			Grid Ref: 604.91 kmE 989.75 kmN RMS: 0.50 secs		
Locality: KINLOCHWEH, HIGHLAND									Locality: CENTRAL NORTH SEA		
Velocity model: Lownet			Xnear: 100.0 Xfar: 175.0			Velocity model: North Sea			Xnear: 400.0 Xfar: 800.0		
Comment: 5KM WSW KINLOCHWEH									Comment: 220KM SE LERWICK		
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	
KPL	HZ	31.7	EP			01:09	06.57		0.15		
KPL	HN	31.7	ES			01:09	10.14		-0.54		
KPL	HN	31.7	IAML			01:09	10.61	4	0.19		
KPL	HE	31.7	IAML			01:09	10.61	7	0.18		
LINV	HZ	63.7	EP			01:09	11.70		0.04		
LINV	HN	63.7	ES			01:09	19.36		-0.38		
LINV	HE	63.7	IAML			01:09	19.73	2	0.27		
LEWI	HZ	108.0	EP			01:09	19.18		0.61		
LEWI	HN	108.0	ES			01:09	31.66		-0.04		
LEWI	HN	108.0	IAML			01:09	33.01	1	0.13		
LEWI	HE	108.0	IAML			01:09	33.53	1	0.15		
BIGH	HE	134.0	ES			01:09	38.36		-0.10		
LAWE	HZ	147.0	EP			01:09	25.37		0.89		
LAWE	HE	147.0	ES			01:09	42.49		0.57		
LAWE	HN	147.0	IAML			01:09	44.42	2	0.21		
LAWE	HE	147.0	IAML			01:09	44.63	3	0.25		
INVG	HZ	152.0	EP			01:09	25.91		0.69		
INVG	HE	152.0	ES			01:09	43.66		0.47		
INVG	HN	152.0	IAML			01:09	44.14	1	0.29		
INVG	HE	152.0	IAML			01:09	44.18	1	0.24		
PGB1	HZ	489.0	EP								
September 13 2017			Time: 01:16 41.1 UTC			Magnitude: 1.3 ML			PGB1 HN 489.0 IAML 08:16 40.39 53 0.24		
Lat: 53.651N			Lon: -0.890W			Depth: 8.0 km			PGB1 HE 489.0 IAML 08:16 40.55 49 0.40		
Grid Ref: 473.36 kmE			417.76 kmN			RMS: 0.30 secs			LEWI HZ 495.0 EP 08:15 51.83 0.27		
Locality: THORNE,SOUTH YORKSHIRE									LEWI HN 495.0 ES 08:16 38.02 -1.23		

**TABLE 2 : PHASE DATA**

LEWI	HN	495.0	IAML	08:16	44.55	23	0.40		JDG	EZ	28.2	EP	01:19	54.36	0.07			
LEWI	HE	495.0	IAML	08:16	45.85	16	0.52	-0.13	JDG	EN	28.2	ES	01:19	58.21	0.01			
LAWE	HZ	499.0	EP	08:15	51.92				JDG	EN	28.2	IAML	01:19	58.55	94 0.14			
LAWE	HN	499.0	IAML	08:16	43.10	57	0.34		JDG	EE	28.2	IAML	01:19	58.48	105 0.16			
LAWE	HE	499.0	IAML	08:16	43.59	75	0.22		JDC	EZ	28.2	EP	01:19	54.38	0.09			
AS10	HZ	511.0	EP	08:15	53.22			-0.23	JDC	EN	28.2	IAML	01:19	58.89	858 0.14			
AT10	HZ	515.0	EP	08:15	53.93			-0.09	JDC	EE	28.2	IAML	01:19	58.53	567 0.20			
MUD	HZ	522.0	EP	08:15	54.36			-0.47	ROSF	BZ	104.0	EP	01:20	06.37	-0.07			
NEWG	HZ	535.0	EP	08:15	57.05			0.56	ROSF	BE	104.0	ES	01:20	19.25	0.02			
NEWG	HN	535.0	ES	08:16	47.47			-0.31	ROSF	BE	104.0	IAML	01:20	21.01	44 0.20			
NEWG	HE	535.0	IAML	08:16	49.62	24	0.46		ROSF	BN	104.0	IAML	01:20	21.03	48 0.20			
NEWG	HN	535.0	IAML	08:16	53.09	33	0.24		DYA	HZ	190.0	EP	01:20	18.33	-0.41			
MOL	HZ	538.0	EP	08:15	56.99			0.21	DYA	HN	190.0	ES	01:20	40.79	0.28			
KESW	HZ	543.0	EP	08:15	57.46			-0.06	DYA	HE	190.0	IAML	01:20	43.86	17 0.36			
KESW	HN	543.0	IAML	08:16	53.70	26	0.46		DYA	HN	190.0	IAML	01:20	44.44	17 0.31			
KESW	HE	543.0	IAML	08:16	54.13	27	0.46											
HPK	HZ	568.0	EP	08:16	00.44			-0.12	September	23	2017	Time: 02:04 51.1 UTC	Magnitude: 0.8 ML					
HPK	HE	568.0	IAML	08:16	59.39	49	0.40					Lat: 52.699N	Lon: -1.426W	Depth: 2.8 km				
HPK	HN	568.0	IAML	08:16	59.73	58	0.44					Grid Ref: 438.78 kmE 311.45 kmN		RMS: 0.30 secs				
GALL	HZ	576.0	EP	08:16	01.69			0.10				Locality: IBSTOCK, LEICESTERSHIRE						
GALL	HE	576.0	ES	08:16	55.82			-0.78				Velocity model: Lownet Xnear: 100.0 Xfar: 200.0						
GALL	HE	576.0	IAML	08:16	58.58	38	0.30		STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES
GALL	HN	576.0	IAML	08:16	58.68	35	0.26		CWF	HZ	9.1	EP	02:04		53.08			-0.05
LBWR	HZ	629.0	EP	08:16	08.04			-0.10	CWF	HE	9.1	ES	02:04		54.39			-0.24
LBWR	HE	629.0	IAML	08:17	11.44	44	0.36		CWF	HN	9.1	IAML	02:04		54.54	102	0.10	
LBWR	HN	629.0	IAML	08:17	14.23	55	0.32		CWF	HE	9.1	IAML	02:04		54.56	64	0.07	
YRC	EZ	721.0	EP	08:16	18.87			-0.63	LBWR	HZ	80.7	EP	02:05		05.10			0.27
									LBWR	HE	80.7	ES	02:05		14.79			-0.07
September	18	2017	Time: 12:26 16.8 UTC	Magnitude: 1.1 ML														
			Lat: 56.799N	Lon: -5.858W	Depth: 8.3 km													
			Grid Ref: 164.47 kmE 774.12 kmN	RMS: 0.30 secs														
			Locality: MOIDART, HIGHLAND															
			Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0															
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES	HLM1	HN	101.0	EP	02:05		07.79		
KPL	HZ	61.4	EP	12:26	27.36			0.09	HLM1	HE	101.0	ES	02:05		19.82			-0.14
KPL	HE	61.4	ES	12:26	34.59			-0.31	HLM1	HN	101.0	IAML	02:05		23.03	1	0.19	-0.40
KPL	HE	61.4	IAML	12:26	34.85	12	0.26		HLM1	HE	101.0	IAML	02:05		23.40	1	0.20	
KPL	HN	61.4	IAML	12:26	38.34	7	0.26											
LAWE	HZ	66.3	EP	12:26	28.22			0.16										
LAWE	HN	66.3	ES	12:26	35.85			-0.42										
LAWE	HE	66.3	IAML	12:26	36.12	27	0.12											
LAWE	HE	66.3	IAML	12:26	36.28	22	0.20											
INVG	HZ	119.0	EP	12:26	36.55			0.32										
INVG	HN	119.0	ES	12:26	50.62			0.23										
INVG	HN	119.0	IAML	12:26	53.31	2	0.16											
INVG	HE	119.0	IAML	12:26	53.65	4	0.16											
LINV	HZ	155.0	EP	12:26	41.00			-0.47	September	24	2017	Time: 01:48 20.1 UTC	Magnitude: 0.7 ML					
LEWI	HN	162.0	ES	12:27	01.51			0.40										
LEWI	HE	162.0	IAML	12:27	02.91	3	0.22											
LEWI	HN	162.0	IAML	12:27	03.21	2	0.20											
September	20	2017	Time: 04:32 32.3 UTC	Magnitude: 0.4 ML														
			Lat: 55.947N	Lon: -4.828W	Depth: 11.6 km													
			Grid Ref: 223.43 kmE 676.27 kmN	RMS: 0.30 secs														
			Locality: GREENOCK, INVERCLYDE															
			Velocity model: Lownet Xnear: 60.0 Xfar: 120.0															
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES	BIGH	HZ	74.1	EP	01:48		32.46		-0.03
PGB1	HZ	26.3	EP	04:32	37.34			0.01	BIGH	HN	89.3	EP	01:48		41.44		-0.09	
PGB1	HE	26.3	ES	04:32	41.05			0.04	BIGH	HN	89.3	ES	01:48		34.96		0.13	
PGB1	HN	26.3	IAML	04:32	41.20	6	0.11		BIGH	HN	89.3	IAML	01:48		45.56		-0.03	
PGB1	HE	26.3	IAML	04:32	41.60	5	0.31											
LAWE	HZ	49.8	EP	04:32	41.13			0.22										
LAWE	HE	49.8	ES	04:32	47.03			-0.17										
LAWE	HE	49.8	IAML	04:32	47.29	4	0.13											
LAWE	HN	49.8	IAML	04:32	47.31	4	0.25											
INVG	HZ	72.4	EP	04:32	44.56			0.14										
INVG	HE	72.4	ES	04:32	53.12			-0.16										
INVG	HN	72.4	IAML	04:32	55.09	2	0.15											
INVG	HN	72.4	IAML	04:32	55.37	2	0.08											
NEWG	HN	99.7	EP	04:32	49.06			0.42										
NEWG	HE	99.7	ES	04:32	59.52			-1.05										
NEWG	HE	99.7	IAML	04:33	01.37	2	0.14											
NEWG	HZ	99.7	IAML	04:33	01.39	2	0.14											
September	22	2017	Time: 01:19 48.9 UTC	Magnitude: 1.9 ML														
			Lat: 49.059N	Lon: -2.373W	Depth: 6.9 km													
			Grid Ref: 372.75 kmE -93.37 kmN	RMS: 0.20 secs														
			Locality: JERSEY, CHANNEL ISLANDS															
			Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0															
			Comment: 15KM SW JERSEY															
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES	LAWE	HZ	44.1	EP	23:42		28.43		0.01
JSA	HZ	20.5	EP	01:19	53.18			0.19	LAWE	HE	44.1	ES	23:42		34.03		-0.09	
JSA	HE	20.5	ES	01:19	55.67			-0.29	LAWE	HN	44.1	IAML	23:42		34.96	1	0.33	
JSA	HE	20.5	IAML	01:19	56.17	277	0.18		LAWE	HE	44.1	IAML	23:42		35.57	1	0.10	
JSA	HN	20.5	IAML	01:19	56.23	272	0.24											
JRS	EN	25.3	EP	01:19	53.95			0.15	PGB1	HZ	52.5	EP	23:42		29.81		0.10	
JRS	EN	25.3	ES	01:19	57.34			-0.03	PGB1	HN	52.5	ES	23:42		36.18		-0.18	
JRS	EE	25.3	IAML	01:19	57.50	106	0.09		PGB1	HN	52.5	IAML	23:42		37.76	2	0.40	
JRS	EN	25.3	IAML	01:19	57.76	106	0.16		PGB1	HE	52.5	IAML	23:42		38.38	1	0.51	
									CLGH	HZ	101.0	EP	23:42		37.43		0.43	
									CLGH	HN	101.0	ES	23:42		48.52		-0.43	
									CLGH	HN	101.0	IAML	23:42		52.18	3	0.24	
									CLGH	HE	101.0	IAML	23:42		52.41	3	0.34	
				</td														

**TABLE 2 : PHASE DATA**

NEWG	HE	108.0	IAML	23:42	53.52	2	0.14		Comment: 5KM NW ETTRICKBRIDGE	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES
NEWG	HN	108.0	IAML	23:42	53.62	2	0.10		ESK	HZ	24.4	EP			04:35	41.00			-0.04
GALL	HZ	118.0	EP	23:42	39.67			0.26	ESK	HE	24.4	ES			04:35	44.34			-0.09
GALL	HE	118.0	ES	23:42	53.11			-0.02	ESK	HE	24.4	IAML			04:35	44.56	16	0.20	
GALL	HE	118.0	IAML	23:42	55.80	1	0.13		ESK	HN	24.4	IAML			04:35	44.97	13	0.11	
GALL	HN	118.0	IAML	23:42	56.23	1	0.17		EDI	HZ	45.8	EP			04:35	44.68			0.03
September 25 2017				Time: 15:56	20.3 UTC			Magnitude: 0.8 ML	EDI	HZ	45.8	ES			04:35	50.44			-0.22
				Lat: 52.700N	Lon: -1.432W			Depth: 2.5 km	NEWG	HZ	86.8	EP			04:35	51.11			0.04
				Grid Ref: 438.38 kmE	311.56 kmN			RMS: 0.30 secs	NEWG	HN	86.8	ES			04:36	01.43			-0.35
				Locality: IBSTOCK, LEICESTERSHIRE					NEWG	HE	86.8	IAML			04:36	03.38	1	0.09	
				Velocity model: Lownet Xnear: 100.0 Xfar: 200.0					NEWG	HN	86.8	IAML			04:36	03.63	2	0.09	
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES									0.41
CWF	HZ	9.4	EP		15:56	22.64		0.08	PGB1	HE	95.4	ES			04:36	04.53			
CWF	HE	9.4	ES		15:56	23.93		-0.25	PGB1	HE	95.4	IAML			04:36	05.04	2	0.14	
CWF	HE	9.4	IAML		15:56	24.04	77	0.12	PGB1	HN	95.4	IAML			04:36	05.29	2	0.26	
CWF	HN	9.4	IAML		15:56	24.20	42	0.19	EDMD	HE	104.0	ES			04:36	06.17			-0.08
LBWR	HZ	80.5	EP		15:56	34.52		0.32	EDMD	HN	104.0	IAML			04:36	06.92	3	0.18	
LBWR	HE	80.5	ES		15:56	44.33		0.01	EDMD	HE	104.0	IAML			04:36	07.08	4	0.13	
LBWR	HE	80.5	IAML		15:56	45.56	8	0.26	KESW	HZ	104.0	EP			04:35	54.09			0.39
LBWR	HN	80.5	IAML		15:56	45.62	7	0.26	INVG	HZ	118.0	EP			04:35	56.21			0.21
HLM1	HE	100.0	ES		15:56	49.20		-0.43	INVG	HE	118.0	ES			04:36	10.04			-0.26
HLM1	HN	100.0	IAML		15:56	49.53	1	0.11	GAL1	HE	128.0	EP			04:35	57.49			0.05
HLM1	HE	100.0	IAML		15:56	49.64	1	0.09	GAL1	HE	128.0	ES			04:36	12.69			-0.11
MCH1	HN	132.0	ES		15:56	58.16		-0.01	September 26 2017										
MCH1	HN	132.0	IAML		15:56	58.40	2	0.17	Time: 13:40	15.5 UTC									
MCH1	HE	132.0	IAML		15:56	58.83	2	0.16	Magnitude: 0.8 ML										
MONM	HN	134.0	ES		15:56	59.18		0.61	Lat: 55.523N	Lon: -3.058W									
MONM	HN	134.0	IAML		15:57	00.70	4	0.16	Grid Ref: 333.21 kmE	625.98 kmN									
MONM	HE	134.0	IAML		15:57	00.90	3	0.20	Locality: ETTRICKBRIDGE, BORDERS										
September 25 2017				Time: 19:17	11.9 UTC			Magnitude: 0.6 ML	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0										
				Lat: 52.699N	Lon: -1.426W			Depth: 2.5 km	Comment: 5KM NW ETTRICKBRIDGE										
				Grid Ref: 438.78 kmE	311.45 kmN			RMS: 0.30 secs	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES
				Locality: IBSTOCK, LEICESTERSHIRE					ESK	HZ	24.8	EP			13:40	20.06			-0.19
				Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0					ESK	HE	24.8	IAML			13:40	23.50	24	0.10	
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES									
CWF	HZ	9.2	EP		19:17	13.94		-0.04	NEWG	HZ	87.1	EP			13:40	30.06			-0.05
CWF	HE	9.2	ES		19:17	15.26		-0.22	NEWG	HE	87.1	IAML			13:40	40.57			-0.19
CWF	HN	9.2	IAML		19:17	15.37	62	0.10	NEWG	HN	87.1	ES			13:40	42.22	2	0.10	
CWF	HE	9.2	IAML		19:17	15.41	40	0.06	NEWG	HN	87.1	IAML			13:40	42.66	3	0.09	
LBWR	HZ	80.7	EP		19:17	26.20		0.50	KESW	HZ	104.0	EP			13:40	33.14			0.37
LBWR	HE	80.7	ES		19:17	35.69		-0.06	EDMD	HN	104.0	IAML			13:40	45.09			-0.15
LBWR	HE	80.7	IAML		19:17	36.88	5	0.22	EDMD	HE	104.0	ES			13:40	45.87	5	0.18	
LBWR	HN	80.7	IAML		19:17	36.92	4	0.23	EDMD	HE	104.0	IAML			13:40	46.07	6	0.12	
HLM1	HZ	101.0	EP		19:17	28.85		0.06	INVG	HZ	118.0	EP			13:40	35.15			0.22
HLM1	HE	101.0	ES		19:17	40.62		-0.48	INVG	HN	118.0	ES			13:40	48.93			-0.17
HLM1	HE	101.0	IAML		19:17	40.91	1	0.15	GAL1	HE	128.0	EP			13:40	36.60			0.12
HLM1	HN	101.0	IAML		19:17	44.46	1	0.21	GAL1	HE	128.0	ES			13:40	52.07			0.28
MCH1	HE	133.0	ES		19:17	49.48		-0.13	September 27 2017										
MCH1	HE	133.0	IAML		19:17	50.22	1	0.13	Time: 01:37	52.6 UTC									
MCH1	HN	133.0	IAML		19:17	50.45	1	0.32	Magnitude: 1.2 ML										
MONM	HN	134.0	ES		19:17	50.36		0.38	Lat: 54.917N	Lon: -4.022W									
MONM	HE	134.0	IAML		19:17	51.40	2	0.22	Grid Ref: 270.41 kmE	559.91 kmN									
MONM	HN	134.0	IAML		19:17	51.86	2	0.19	Locality: RINGFORD, D & G										
September 26 2017				Time: 01:18	42.1 UTC			Magnitude: 0.7 ML	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0										
				Lat: 52.697N	Lon: -1.429W			Depth: 2.6 km	Comment: FELT DALBEATTIE										
				Grid Ref: 438.58 kmE	311.23 kmN			RMS: 0.20 secs	Intensity: 2										
				Locality: IBSTOCK, LEICESTERSHIRE					STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES
				Velocity model: Lownet Xnear: 100.0 Xfar: 200.0					NEWG	HZ	25.9	IP	D	01:37		57.55			0.06
CWF	HZ	9.4	EP		01:18	44.16		-0.08	NEWG	HE	25.9	IAML		01:38		01.04	24	0.12	
CWF	HE	9.4	ES		01:18	45.58		-0.19	NEWG	HN	25.9	IAML		01:38		01.09	26	0.11	
CWF	HN	9.4	IAML		01:18	45.70	100	0.10	GAL1	HE	44.6	EP		01:38		00.23			-0.15
CWF	HE	9.4	IAML		01:18	45.73	70	0.06	GAL1	HE	44.6	IAML		01:38		05.83	20	0.07	
LBWR	HZ	80.9	EP		01:18	56.29		0.35	GAL1	HN	44.6	IAML		01:38		06.18	39	0.16	
LBWR	HE	80.9	ES		01:19	05.98		-0.02	KESW	HZ	68.5	EP		01:38		03.76			-0.35
LBWR	HN	80.9	IAML		01:19	07.14	5	0.22	KESW	HE	68.5	ES		01:38		11.82			-0.69
LBWR	HE	80.9	IAML		01:19	07.20	7	0.22	ESK	HN	68.5	IAML		01:38		14.31	14	0.11	
HLM1	HZ	100.0	EP		01:18	58.98		0.01	ESK	HE	68.5	EP		01:38		14.44	13	0.20	
HLM1	HN	100.0	ES		01:19	10.90		-0.34	KESW	HN	69.5	EP		01:38		04.37			0.11
HLM1	HN	100.0	IAML		01:19	13.21	1	0.17	KESW	HN	69.5	ES		01:38		12.53			-0.25
HLM1	HE	100.0	IAML		01:19	13.38	1	0.17	ESK	HE	69.5	IAML		01:38		15.69	16	0.09	
MCH1	HZ	132.0	EP		01:19	04.09		0.22	KESW	HE	69.5	IAML		01:38		15.89	15	0.28	
MCH1	HN	132.0	ES		01:19	19.52		-0.21	ESK	HN	81.1	EP		01:38		06.12			0.06
MCH1	HN	132.0	IAML		01:19	20.00	1	0.14	PGB1	HZ	104.0	IP	C	01:38		10.45			0.88
MCH1	HE	132.0	IAML		01:19	20.57	1	0.14	EDI	HE	124.0	EP		01:38		13.20			0.54
MONM	HN	134.0	EP		01:19	04.32		0.23	AR09	HZ	128.0	EP		01:38		13.77			0.44
MONM	HN	134.0	ES		01:19	20.29		0.18	EDMD	HZ	133.0	EP		01:38		14.72			0.84
MONM	HN	134.0	IAML		01:19	22.28	2	0.20	INVG	HN	168.0	EP		01:38		19.96			0.97
WACR																			

**TABLE 2 : PHASE DATA**

MONM	HE	39.5	ES	01:00	52.79	-0.01	PGB1	HE	96.7	IAML	18:42	45.08	5	0.35
MONM	HE	39.5	IAML	01:00	52.94	12 0.36	EDMD	HE	103.0	ES	18:42	45.38		-0.04
MONM	HN	39.5	IAML	01:00	53.09	7 0.14	EDMD	HN	103.0	IAML	18:42	46.40	6	0.18
HLM1	HZ	44.3	EP	01:00	48.56	0.13	EDMD	HE	103.0	IAML	18:42	46.50	9	0.14
HLM1	HN	44.3	ES	01:00	54.21	-0.11	KESW	HZ	104.0	EP	18:42	33.59		0.45
HLM1	HN	44.3	IAML	01:00	54.45	3 0.10	INVG	HE	119.0	ES	18:42	49.39		-0.43
HLM1	HE	44.3	IAML	01:00	54.48	3 0.30	GAL1	HZ	129.0	EP	18:42	37.01		-0.03
CWF	HZ	107.0	EP	01:00	57.88	-0.36								
CWF	HE	107.0	ES	01:01	11.47	0.19	October 5 2017							
CWF	HE	107.0	IAML	01:01	13.58	2 0.07	Time: 13:33 05.0 UTC							
CWF	HN	107.0	IAML	01:01	15.01	2 0.08	Lat: 58.530N							
RSBS	HZ	150.0	EP	01:01	04.86	0.13	Lon: -4.703W							
RSBS	HE	150.0	ES	01:01	22.86	0.35	Grid Ref: 242.64 kmE 963.34 kmN							
WLF1	HN	175.0	ES	01:01	29.01	0.51	Locality: DURNESS, HIGHLAND							
							Velocity model: Lownet Xnear: 100.0 Xfar: 200.0							
	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES				
BIGH	HZ	46.4	IP			C	13:33	13.19						
BIGH	HN	46.4	ES				13:33	18.51						
BIGH	HN	46.4	IAML				13:33	19.14	16	0.12				
BIGH	HE	46.4	IAML				13:33	19.54	11	0.16				
LINV	HZ	51.6	IP			D	13:33	13.91						
LINV	HE	51.6	ES				13:33	19.97						
LINV	HN	51.6	IAML				13:33	20.26	3	0.07				
LINV	HE	51.6	IAML				13:33	20.31	4	0.21				
LEWI	HZ	134.0	EP				13:33	26.69						
LEWI	HN	134.0	ES				13:33	41.53						
LEWI	HN	134.0	IAML				13:33	42.97	4	0.27				
LEWI	HE	134.0	IAML				13:33	44.11	4	0.16				
KPL	HZ	144.0	EP				13:33	29.44						1.60
	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES				
	KESW	HZ	44.9	EP			17:58	40.94						
	KESW	HE	44.9	ES			17:58	46.86						
	KESW	HE	44.9	IAML			17:58	47.40	12	0.19				
	KESW	HN	44.9	IAML			17:58	47.70	9	0.16				
	EDMD	HZ	87.8	EP			17:58	47.87						
	EDMD	HE	87.8	ES			17:58	58.13						
	EDMD	HN	87.8	IAML			17:58	59.87	20	0.10				
	EDMD	HE	87.8	IAML			17:59	01.26	21	0.22				
	IOMK	HZ	114.0	EP			17:58	52.04						
	IOMK	HN	114.0	ES			17:59	05.10						
	IOMK	HN	114.0	IAML			17:59	06.05	12	0.18				
	IOMK	HE	114.0	IAML			17:59	06.19	8	0.03				
	LBWR	HZ	116.0	EP			17:58	52.46						
	LBWR	HE	116.0	ES			17:59	05.87						
	LBWR	HE	116.0	IAML			17:59	08.08	26	0.23				
	LBWR	HN	116.0	IAML			17:59	11.13	19	0.28				
	ESK	HZ	124.0	EP			17:58	53.69						
	ESK	HE	124.0	ES			17:59	08.77						
	ESK	HN	124.0	IAML			17:59	11.19	2	0.11				
	ESK	HE	124.0	IAML			17:59	12.19	4	0.26				
	NEWG	HZ	135.0	EP			17:58	55.79						
	NEWG	HE	135.0	IAML			17:59	12.66	3	0.17				
	NEWG	HN	135.0	IAML			17:59	12.69	3	0.12				
	GAL1	HZ	142.0	EP			17:58	56.85						
	GAL1	HE	142.0	ES			17:59	12.18						
	GAL1	HE	142.0	IAML			17:59	14.05	2	0.14				
	GAL1	HN	142.0	IAML			17:59	14.37	4	0.23				
	WLF1	HZ	147.0	EP			17:58	56.16						
	WLF1	HE	147.0	ES			17:59	13.60						
	WLF1	HN	147.0	IAML			17:59	15.15	4	0.44				
	WLF1	HE	147.0	IAML			17:59	16.55	6	0.21				
	October 8 2017						Time: 22:55 36.4 UTC							
							Locality: OBAN, ARGYLL & BUTE							
							Velocity model: Lownet Xnear: 100.0 Xfar: 200.0							
							Comment: FELT MULL							
		STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES			
		LAWE	HZ	14.8	IP		22:55	39.27						
		LAWE	HE	14.8	ES		22:55	41.09						
		LAWE	HN	14.8	IAML		22:55	41.38	186	0.11				
		LAWE	HE	14.8	IAML		22:55	41.39	151	0.11				
		INVG	HZ	87.3	EP		22:55	51.29						
		INVG	HN	87.3	ES		22:56	01.66						
		INVG	HE	87.3	IAML		22:56	04.88	12	0.18				
		INVG	HE	87.3	IAML		22:56	05.08	12	0.08				
		PGB1	HZ	88.3	EP		22:55	51.70						
		PGB1	HE	88.3	ES		22:56	02.33						
		PGB1	HE	88.3	IAML		22:56	07.33	9	0.38				
		PGB1	HN	88.3	IAML		22:56	07.34	8	0.38				
		KPL	HZ	106.0	EP		22:55	54.18						
		KPL	HE	106.0	ES		22:56	06.78						
		KPL	HN	106.0	IAML		22:56	09.54	8	0.27				
		KPL	HE	106.0	IAML		22:56	09.65	18	0.34				

**TABLE 2 : PHASE DATA**

CLGH	HZ	151.0	EP	22:56	01.33	0.53	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES
CLGH	HN	151.0	IAML	22:56	20.48	7 0.11	KPL	HZ	61.3	EP	13:24	36.56			0.17	
CLGH	HE	151.0	IAML	22:56	22.09	8 0.22	KPL	HE	61.3	ES	13:24	43.61			-0.32	
NEWG	HZ	161.0	EP	22:56	02.24	0.03	KPL	HE	61.3	IAML	13:24	44.15	4	0.26		
GALL	HZ	176.0	EP	22:56	04.67	0.41	KPL	HN	61.3	IAML	13:24	44.20	2	0.23		
ESK	HZ	185.0	EP	22:56	04.60	-0.80	LAWE	HZ	66.6	EP	13:24	37.51			0.28	
MCD	HZ	189.0	EP	22:56	04.75	-1.15	LAWE	HE	66.6	ES	13:24	44.96			-0.44	
LINV	HZ	196.0	EP	22:56	06.22	-0.60	LAWE	HN	66.6	IAML	13:24	45.33	9	0.10		
							LAWE	HE	66.6	IAML	13:24	45.39	9	0.19		
October 9 2017				Time: 17:36	47.5 UTC	Magnitude: 1.9 ML	INVG	HZ	119.0	EP	13:24	45.75			0.36	
Lat: 50.598N				Lat: -2.047W		Depth: 6.7 km	INVG	HN	119.0	ES	13:24	59.61			0.10	
Grid Ref: 396.67				kmE	77.65 kmN	RMS: 0.30 secs	INVG	HN	119.0	IAML	13:24	59.91	1	0.10		
Locality: WORTH MATRAVERS,DORSET							INVG	HE	119.0	IAML	13:25	01.47	1	0.08		
Velocity model: Lownet	Xnear:	100.0	Xfar:	200.0			LEWI	HE	161.0	ES	13:25	10.12			0.05	
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES							
SWN1	HZ	103.0	EP	17:37	04.27		-0.14									
SWN1	HE	103.0	ES	17:37	17.02		0.28									
SWN1	HE	103.0	IAML	17:37	18.41	72 0.20										
SWN1	HN	103.0	IAML	17:37	19.81	50 0.34										
DYA	HZ	135.0	EP	17:37	09.25		0.13									
DYA	HE	135.0	ES	17:37	24.67		-0.21									
DYA	HE	135.0	IAML	17:37	26.05	24 0.14										
DYA	HN	135.0	IAML	17:37	26.29	23 0.18										
MONM	HZ	148.0	EP	17:37	10.70		-0.25									
MONM	HE	148.0	IAML	17:37	29.14	24 0.23										
MONM	HN	148.0	IAML	17:37	29.42	22 0.27										
MCH1	HZ	169.0	EP	17:37	13.41		-0.52									
MCH1	HE	169.0	IAML	17:37	33.62	37 0.28										
MCH1	HN	169.0	IAML	17:37	33.89	23 0.26										
HTL	HZ	177.0	EP	17:37	15.01		0.08									
HTL	HE	177.0	IAML	17:37	41.98	13 0.48										
HTL	HN	177.0	IAML	17:37	43.48	16 0.58										
SBD	BZ	187.0	EP	17:37	16.83		0.69									
HLM1	HZ	221.0	EP	17:37	20.82		0.33									
HLM1	HN	221.0	IAML	17:37	48.41	9 0.36										
HLM1	HE	221.0	IAML	17:37	49.43	12 0.46										
CCA1	HZ	231.0	EP	17:37	20.68		-0.94									
CCA1	HN	231.0	IAML	17:37	54.56	5 0.26										
CCA1	HE	231.0	IAML	17:37	55.33	5 0.50										
October 12 2017				Time: 12:32	36.2 UTC	Magnitude: 1.0 ML										
Lat: 55.420N				Lat: -5.943W		Depth: 7.9 km										
Grid Ref: 150.51				kmE	621.08 kmN	RMS: 0.80 secs										
Locality: KINTYRE,ARGYLL & BUTE				Velocity model: Lownet	Xnear:	100.0 Xfar:	200.0									
Comment: OFFSHORE LOCATION																
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES							
CLGH	HZ	39.0	EP	12:32	42.82		-0.36									
CLGH	HN	39.0	ES	12:32	47.66		-0.59									
LAWE	HZ	99.5	EP	12:32	54.00		1.46									
LAWE	HE	99.5	ES	12:33	03.61		-0.83									
LAWE	HE	99.5	IAML	12:33	06.40	2 0.24										
LAWE	HN	99.5	IAML	12:33	06.80	2 0.25										
GALL	HZ	99.8	EP	12:32	53.84		1.25									
GALL	HN	99.8	ES	12:33	04.58		0.06									
GALL	HN	99.8	IAML	12:33	06.90	9 0.25										
GALL	HE	99.8	IAML	12:33	07.13	5 0.19										
PGB1	HN	102.0	ES	12:33	04.24		-0.81									
PGB1	HE	102.0	IAML	12:33	07.16	6 0.17										
PGB1	HN	102.0	IAML	12:33	07.50	6 0.25										
NEWG	HZ	114.0	EP	12:32	54.56		-0.23									
NEWG	HN	114.0	ES	12:33	08.25		-0.07									
NEWG	HE	114.0	IAML	12:33	10.69	4 0.13										
NEWG	HN	114.0	IAML	12:33	11.20	3 0.14										
October 13 2017				Time: 10:15	43.3 UTC	Magnitude: 1.0 ML										
Lat: 51.855N				Lat: -3.059W		Depth: 14.6 km										
Grid Ref: 327.07				kmE	217.96 kmN	RMS: 0.10 secs										
Locality: GOVILON,MONMOUTHSHIRE				Velocity model: Lownet	Xnear:	100.0 Xfar:	150.0									
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES							
MCH1	HZ	16.3	IP	C	10:15	47.08		-0.04								
MCH1	HN	16.3	ES		10:15	49.95		0.02								
MCH1	HN	16.3	IAML		10:15	50.55	35	0.08								
MCH1	HE	16.3	IAML		10:15	50.58	40	0.11								
HLM1	HZ	74.8	EP		10:15	55.75		-0.09								
HLM1	HE	74.8	ES		10:16	05.07		0.05								
HLM1	HE	74.8	IAML		10:16	05.55	7	0.21								
HLM1	HN	74.8	IAML		10:16	05.68	4	0.26								
RSBS	HZ	117.0	EP		10:16	02.16		0.28								
RSBS	HN	117.0	ES		10:16	15.31		-0.16								
RSBS	HE	117.0	IAML		10:16	17.48	7	0.14								
RSBS	HN	117.0	IAML		10:16	17.65	6	0.15								
October 15 2017				Time: 13:24	26.0 UTC	Magnitude: 0.7 ML										
Lat: 56.801N				Lat: -5.860W		Depth: 7.7 km										
Grid Ref: 164.36				kmE	774.35 kmN	RMS: 0.30 secs										
Locality: MOIDART,HIGHLAND				Velocity model: Lownet	Xnear:	100.0 Xfar:	200.0									
Comment: Lownet	Xnear:	100.0	Xfar:	200.0												
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES							
STNC	HZ	27.2	EP		01:05	58.87		0.08								

**TABLE 2 : PHASE DATA**

STNC	HE	27.2	ES	01:06	02.88	0.36	Locality: RANNOCH, PERTH/KINROSS Velocity model: Lownet Xnear: 100.0 Xfar: 200.0 Comment: 8KM ESE FINNART												
STNC	HE	27.2	IAML	01:06	03.24	193 0.25	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES			
STNC	HN	27.2	IAML	01:06	03.32	149 0.40	INVG	HZ	30.0	EP		23:02	14.37		0.11				
CWF	HZ	45.0	EP	01:06	01.65	0.10	INVG	HE	30.0	ES		23:02	17.98		-0.37				
CWF	HN	45.0	ES	01:06	06.96	-0.33	INVG	HN	30.0	IAML		23:02	18.17	52	0.06				
CWF	HE	45.0	IAML	01:06	07.54	18 0.08	INVG	HE	30.0	IAML		23:02	18.62	38	0.11				
CWF	HN	45.0	IAML	01:06	07.95	17 0.11	LAWE	HZ	81.3	EP		23:02	22.50		0.10				
LBWR	HZ	47.7	IP	C	01:06	02.07	0.08	LAWE	HE	81.3	ES		23:02	32.37		-0.05			
LBWR	HE	47.7	ES		01:06	07.88	-0.18	LAWE	HE	81.3	IAML		23:02	35.06	13	0.08			
LBWR	HN	47.7	IAML		01:06	08.63	174 0.18	LAWE	HN	81.3	IAML		23:02	35.36	15	0.22			
AS02	HZ	64.7	EP		01:06	04.46	-0.15	PGB1	HZ	95.0	EP		23:02	24.83		0.30			
AS02	HN	64.7	ES		01:06	12.02	-0.57	PGB1	HE	95.0	ES		23:02	36.16		0.04			
AS02	HE	64.7	IAML		01:06	12.99	31 0.19	PGB1	HN	95.0	IAML		23:02	38.07	5	0.17			
HLM1	HZ	86.7	EP		01:06	07.97	-0.08	PGB1	HE	95.0	IAML		23:02	38.40	4	0.23			
HLM1	HE	86.7	ES		01:06	18.37	-0.16	KPL	HZ	112.0	EP		23:02	27.13		-0.02			
HLM1	HN	86.7	IAML		01:06	20.21	12 0.13	KPL	HN	112.0	ES		23:02	40.36		-0.28			
HLM1	HE	86.7	IAML		01:06	21.71	12 0.09	KPL	HN	112.0	IAML		23:02	41.41	8	0.17			
FOEL	HZ	91.6	EP		01:06	08.75	-0.06	KPL	HE	112.0	IAML		23:02	41.51	7	0.15			
HPK	HZ	110.0	EP		01:06	12.05	0.43	DRUM	HZ	114.0	EP		23:02	27.80		0.33			
LMK	HZ	115.0	EP		01:06	13.08	0.75	DRUM	HE	114.0	ES		23:02	41.11		-0.09			
MCH1	HZ	134.0	EP		01:06	14.92	-0.35	DRUM	HE	114.0	IAML		23:02	42.77	11	0.25			
STRD	HZ	136.0	EP		01:06	15.89	0.45	ESK	HN	114.0	IAML		23:02	43.07	15	0.20			
October 23 2017 Time: 01:30 18.3 UTC Magnitude: 0.2 ML Lat: 55.084N Lon: -4.167W Depth: 11.7 km Grid Ref: 261.69 kmE 578.77 kmN RMS: 0.30 secs																			
Locality: NEW GALLOWAY,D & G Velocity model: Lownet Xnear: 50.0 Xfar: 100.0																			
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES	October 30 2017 Time: 20:41 47.7 UTC Magnitude: 1.2 ML Lat: 54.961N Lon: -2.190W Depth: 3.8 km Grid Ref: 387.84 kmE 562.95 kmN RMS: 0.20 secs									
NEWG	HZ	5.5	EP		01:30	21.10	0.40	EDMD	HZ	20.5	IP	D	20:41	51.66		-0.01			
NEWG	HN	5.5	ES		01:30	22.22	-0.21	EDMD	HE	20.5	ES		20:41	54.38		-0.17			
NEWG	HN	5.5	IAML		01:30	22.29	10 0.06	EDMD	HN	20.5	IAML		20:41	54.63	110	0.12			
NEWG	HE	5.5	IAML		01:30	22.31	19 0.09	KESW	HZ	72.0	EP		20:42	00.00		-0.03			
GAL1	HZ	42.5	IP	C	01:30	26.02	0.21	KESW	HN	72.0	ES		20:42	09.01		0.00			
GAL1	HE	42.5	ES		01:30	30.99	-0.30	KESW	HN	72.0	IAML		20:42	09.41	4	0.22			
GAL1	HN	42.5	IAML		01:30	31.58	2 0.19	KESW	HE	72.0	IAML		20:42	09.61	3	0.11			
GAL1	HE	42.5	IAML		01:30	31.58	2 0.16	ESK	HZ	75.9	EP		20:42	00.85		0.22			
ESK	HZ	66.4	EP		01:30	29.63	0.09	ESK	HN	75.9	ES		20:42	09.86		-0.20			
ESK	HE	66.4	ES		01:30	37.39	-0.34	ESK	HN	75.9	IAML		20:42	10.25	13	0.16			
ESK	HE	66.4	IAML		01:30	38.77	1 0.09	ESK	HN	75.9	IAML		20:42	11.15	16	0.19			
PGB1	HE	83.4	ES		01:30	42.28	0.04	HPK	HZ	117.0	EP		20:42	07.57		0.50			
PGB1	HN	83.4	IAML		01:30	44.75	1 0.10	HPK	HE	117.0	ES		20:42	21.16		-0.04			
IOMK	HZ	95.2	EP		01:30	34.76	0.78	October 26 2017 Time: 22:45 34.3 UTC Magnitude: 0.4 ML Lat: 57.896N Lon: -5.325W Depth: 11.2 km Grid Ref: 202.96 kmE 894.43 kmN RMS: 0.30 secs											
Locality: CARNACH,HIGHLAND Velocity model: Lownet Xnear: 100.0 Xfar: 150.0																			
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES	HPK	HE	117.0	IAML		20:42	21.88	19	0.22	
LINV	HZ	29.0	IP	D	22:45	39.81	0.14	HPK	HN	117.0	IAML		20:42	22.58	14	0.19			
LINV	HE	29.0	ES		22:45	43.42	-0.20	NEWG	HZ	132.0	EP		20:42	09.52		0.29			
LINV	HN	29.0	IAML		22:45	43.62	7 0.14	NEWG	HN	132.0	ES		20:42	24.65		-0.28			
KPL	HZ	65.0	EP		22:45	45.56	0.35	NEWG	HN	132.0	IAML		20:42	25.84	5	0.25			
KPL	HN	65.0	ES		22:45	52.80	-0.40	NEWG	HE	132.0	IAML		20:42	26.02	4	0.22			
KPL	HN	65.0	IAML		22:45	53.54	1 0.14	October 31 2017 Time: 15:56 14.8 UTC Magnitude: 1.1 ML Lat: 56.711N Lon: -4.254W Depth: 2.7 km Grid Ref: 262.04 kmE 759.95 kmN RMS: 0.40 secs											
KPL	HE	65.0	IAML		22:45	57.16	1 0.27	INVG	HZ	34.1	IP	C	15:56	21.26		0.18			
LEWI	HZ	95.3	EP		22:45	50.21	0.26	INVG	HE	34.1	ES		15:56	25.32		-0.36			
LEWI	HN	95.3	ES		22:46	01.21	-0.20	INVG	HE	34.1	IAML		15:56	25.45	21	0.10			
LEWI	HN	95.3	IAML		22:46	02.41	1 0.14	INVG	HN	34.1	IAML		15:56	25.60	30	0.11			
BIGH	HZ	107.0	EP		22:46	52.11	0.48	LAWE	HZ	86.6	EP		15:56	29.47		0.06			
BIGH	HE	107.0	ES		22:46	03.88	-0.42	LAWE	HE	86.6	ES		15:56	40.00		-0.08			
BIGH	HN	107.0	IAML		22:46	06.48	6 0.11	LAWE	HE	86.6	IAML		15:56	43.16	10	0.20			
BIGH	HN	107.0	IAML		22:46	06.52	4 0.13	DRUM	HZ	110.0	EP		15:56	33.42		0.33			
October 29 2017 Time: 23:02 00.9 UTC Magnitude: 0.6 ML Lat: 56.669N Lon: -4.245W Depth: 3.0 km Grid Ref: 262.44 kmE 755.26 kmN RMS: 0.10 secs																			
Locality: RANNOCH, PERTH/KINROSS Velocity model: Lownet Xnear: 100.0 Xfar: 200.0 Comment: 10KM ESE FINNART																			
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES	KPL	HE	110.0	IAML		15:56	47.44	3	0.23	
INVG	HZ	29.7	EP		23:02	06.62	0.19	ESK	HZ	168.0	EP		15:56	42.81		1.12			
INVG	HN	29.7	ES		23:02	10.30	-0.18	ESK	HN	168.0	ES		15:57	02.51		1.19			
INVG	HN	29.7	IAML		23:02	10.49	13 0.09	ESK	HN	168.0	IAML		15:57	04.24	2	0.12			
INVG	HE	29.7	IAML		23:02	10.92	10 0.06	ESK	HE	168.0	IAML		15:57	05.95	3	0.17			
LAWE	HZ	84.5	EP		23:02	15.14	-0.02	LINV	HZ	170.0	EP		15:56	42.18		0.37			
PGB1	HZ	96.7	EP		23:02	17.15	0.09	LINV	HE	170.0	ES		15:57	01.34		-0.20			
KPL	HZ	113.0	EP		23:02	19.53	-0.10	LINV	HN	170.0	IAML		15:57	02.22	1	0.11			
October 29 2017 Time: 23:02 08.7 UTC Magnitude: 1.2 ML Lat: 56.659N Lon: -4.293W Depth: 3.8 km Grid Ref: 259.46 kmE 754.25 kmN RMS: 0.20 secs																			
Locality: RANNOCH, PERTH/KINROSS Velocity model: Lownet Xnear: 100.0 Xfar: 200.0 Comment: 10KM ESE FINNART																			
NEWG	HE	177.0	ES		23:02	03.45	0.15	NEWG	HE	177.0	IAML		15:57	03.45		0.09			
NEWG	HN	177.0	IAML		23:02	05.77	1	0.21		NEWG	HN	177.0	IAML		15:57	05.77	1	0.21	
NEWG	HE	177.0	IAML		23:02	06.34	3	0.41		NEWG	HE	177.0	IAML		15:57	06.34	3	0.41	

**TABLE 2 : PHASE DATA**

October 31 2017	Time: 20:50 34.0 UTC	Magnitude: 0.8 ML	AU20	HN	30.0	IAML	21:03	22.02	15	0.12	
Lat: 52.384N	Lon: -3.981W	Depth: 7.9 km	AU09	HZ	31.4	EP	21:03	17.08		-0.18	
Grid Ref: 265.19 kmE	278.11 kmN	RMS: 0.20 secs	AU09	HE	31.4	ES	21:03	21.78		0.08	
Locality: ABERYSTWYTH,CEREDIGION			AU09	HE	31.4	IAML	21:03	22.03	8	0.15	
Velocity model: Lownet	Xnear: 1000.0	Xfar: 1500.0	AU09	HN	31.4	IAML	21:03	22.11	6	0.13	
Comment: 7KM EAST ABERYSTWYTH			AU11	HZ	34.8	EP	21:03	17.64		-0.08	
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			AU07	HZ	36.0	EP	21:03	17.74		-0.16	
LLW BZ 56.0 EP	20:50	43.66	0.12	AT10	HZ	56.3	EP	21:03	20.90		-0.07
LLW BN 56.0 ES	20:50	50.12	-0.40	AT10	HN	56.3	ES	21:03	28.23		0.10
LLW BE 56.0 IAML	20:50	51.06	5 0.09	AT10	HN	56.3	IAML	21:03	28.40	15	0.30
LLW BN 56.0 IAML	20:50	51.15	4 0.11	AT10	HE	56.3	IAML	21:03	28.46	11	0.18
RSBS HZ 71.0 EP	20:50	45.78	-0.11	LBWR	HZ	119.0	EP	21:03	30.16		0.16
RSBS HN 71.0 ES	20:50	54.55	-0.02	LBWR	HE	119.0	ES	21:03	43.90		0.15
RSBS HE 71.0 IAML	20:50	55.27	10 0.07	LBWR	HE	119.0	IAML	21:03	45.23	12	0.24
RSBS HN 71.0 IAML	20:50	56.04	7 0.07	LBWR	HE	119.0	IAML	21:03	45.54	8	0.27
HLM1 HZ 76.2 EP	20:50	47.02	0.28	November 5 2017	Time: 05:51 31.1 UTC	Magnitude: 1.0 ML					
HLM1 HE 76.2 ES	20:50	55.83	-0.21	Lat: 52.826N	Lon: -2.463W	Depth: 7.5 km					
HLM1 HE 76.2 IAML	20:50	56.28	5 0.21	Grid Ref: 368.81 kmE	325.52 kmN	RMS: 0.40 secs					
HLM1 HN 76.2 IAML	20:50	56.37	4 0.12	Locality: HINSTOCK,SHROPSHIRE							
FOEL HZ 77.2 EP	20:50	47.11	0.23	Velocity model: Lownet	Xnear: 100.0	Xfar: 200.0					
FOEL HN 77.2 ES	20:50	56.43	0.13	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							
FOEL HE 77.2 IAML	20:50	57.46	6 0.29	STNC HZ 34.2 IP C 05:51 37.10						-0.18	
FOEL HN 77.2 IAML	20:50	57.56	3 0.24	STNC HE 34.2 ES 05:51 41.71						-0.09	
MCH1 HZ 79.8 IP D	20:50	47.44	0.20	STNC HE 34.2 IAML 05:51 41.97	17	0.15					
MCH1 HE 79.8 ES	20:50	56.70	-0.22	STNC HN 34.2 IAML 05:51 43.26	14	0.17					
MCH1 HE 79.8 IAML	20:50	57.33	4 0.41	HLM1 HZ 44.4 EP 05:51 38.78						-0.13	
MCH1 HN 79.8 IAML	20:50	59.04	4 0.29	HLM1 HE 44.4 ES 05:51 44.53						-0.08	
November 1 2017	Time: 20:59 22.0 UTC	Magnitude: 2.6 ML	HLM1 HE 44.4 IAML 05:51 45.10	6	0.13						
Lat: 55.883N	Lon: -5.429W	Depth: 7.5 km	FOEL HZ 50.2 EP 05:51 39.86							0.06	
Grid Ref: 185.56 kmE	670.85 kmN	RMS: 0.40 secs	FOEL HN 50.2 ES 05:51 45.84							-0.32	
Locality: TARBERT,ARGYLL & BUTE			FOEL HE 50.2 IAML 05:51 46.17	6	0.39						
Velocity model: Lownet	Xnear: 100.0	Xfar: 250.0	FOEL HE 50.2 IAML 05:51 46.80	9	0.26						
Comment: FELT TARBERT...		Intensity: 3	CWF HZ 78.5 EP 05:51 44.27							0.12	
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			CWF HE 78.5 ES 05:51 53.09							-0.59	
LAWE HZ 42.0 IP D 20:59 29.45		0.06	CWF HE 78.5 IAML 05:51 53.50	4	0.11						
LAWE HE 42.0 ES	20:59	34.24	-0.54	CWF HE 78.5 IAML 05:51 55.52	2	0.04					
LAWE HN 42.0 IAML	20:59	34.96	221 0.12	LBWR HZ 80.9 EP 05:51 44.53						-0.02	
LAWE HE 42.0 IAML	20:59	35.27	454 0.15	LBWR HN 80.9 IAML 05:51 55.92	4	0.18					
PGB1 HZ 59.7 IP C 20:59 32.51		0.37	LBWR HE 80.9 IAML 05:51 58.98	7	0.34						
PGB1 HN 59.7 ES	20:59	39.44	-0.10	MCH1 HZ 99.2 EP 05:51 47.62						0.26	
PGB1 HN 59.7 IAML	20:59	40.15	229 0.31	MCH1 HN 99.2 ES 05:51 59.54						0.32	
PGB1 HE 59.7 IAML	20:59	40.99	163 0.30	MCH1 HE 99.2 IAML 05:52 00.59	7	0.14					
CLGH HZ 98.9 EP	20:59	38.70	0.47	MCH1 HE 99.2 IAML 05:52 04.18	7	0.20					
CLGH HE 98.9 ES	20:59	49.51	-0.56	HPK HZ 138.0 EP 05:51 54.40						1.23	
CLGH HE 98.9 IAML	20:59	53.06	310 0.20	HPK HN 138.0 ES 05:52 09.97						0.69	
CLGH HZ 98.9 IAML	20:59	53.37	248 0.26	HPK HE 138.0 IAML 05:52 11.31	12	0.16					
INVG HZ 105.0 EP	20:59	39.31	0.09	HPK HN 138.0 IAML 05:52 11.62	11	0.18					
INVG HE 105.0 ES	20:59	51.31	-0.48	WLF1 HZ 140.0 EP 05:51 53.61						0.22	
INVG HE 105.0 IAML	20:59	54.45	238 0.23	WLF1 HN 140.0 ES 05:52 09.19						-0.47	
INVG HN 105.0 IAML	20:59	54.64	353 0.33								
NEWG HZ 114.0 EP	20:59	40.92	0.37	November 5 2017	Time: 15:40 16.2 UTC	Magnitude: 1.4 ML					
NEWG HN 114.0 ES	20:59	53.74	-0.35	Lat: 53.466N	Lon: -2.501W	Depth: 3.3 km					
NEWG HE 114.0 IAML	20:59	56.28	268 0.23	Grid Ref: 366.74 kmE	396.73 kmN	RMS: 0.30 secs					
NEWG HN 114.0 IAML	20:59	57.01	248 0.13	Locality: GLAZEBURY,CHESHIRE							
GALL HZ 122.0 EP	20:59	41.97	0.20	Velocity model: Lownet	Xnear: 100.0	Xfar: 200.0					
GALL HE 122.0 ES	20:59	55.56	-0.64	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							
GALL HE 122.0 IAML	20:59	58.40	225 0.17	LBWR HZ 52.1 EP 15:40 25.35						-0.15	
GALL HE 122.0 IAML	20:59	58.95	169 0.13	LBWR HN 52.1 ES 15:40 32.52						0.25	
EDI HZ 140.0 EP	20:59	45.13	0.72	LBWR HN 52.1 IAML 15:40 33.56	33	0.21					
ESK HZ 154.0 EP	20:59	46.83	0.48	LBWR HE 52.1 IAML 15:40 34.24	48	0.23					
KPL HZ 163.0 EP	20:59	48.33	0.73	FOEL HZ 79.4 EP 15:40 29.51						-0.23	
IOMK HZ 189.0 EP	20:59	51.44	0.48	FOEL HE 79.4 ES 15:40 39.53						-0.08	
KESW HZ 206.0 EP	20:59	53.77	0.59	FOEL HE 79.4 IAML 15:40 41.41	11	0.51					
DRUM HZ 215.0 EP	20:59	54.46	0.24	FOEL HE 79.4 IAML 15:40 42.09	7	0.24					
MCD HZ 231.0 EP	20:59	55.97	-0.34	HPK HE 79.7 ES 15:40 39.12						-0.51	
LINV HZ 253.0 EP	20:59	59.01	0.11	HPK HN 79.7 IAML 15:40 42.42	18	0.33					
				HPK HE 79.7 IAML 15:40 43.12	12	0.16					
November 3 2017	Time: 21:03 11.2 UTC	Magnitude: 0.8 ML									
Lat: 54.137N	Lon: -0.410W	Depth: 17.6 km	HLM1 HZ 109.0 EP 15:40 34.30							0.04	
Grid Ref: 503.87 kmE	472.43 kmN	RMS: 0.20 secs	HLM1 HZ 109.0 ES 15:40 47.20							-0.22	
Locality: WOLD NEWTON,E YORKSHIRE			HLM1 HN 109.0 IAML 15:40 48.07	10	0.18						
Velocity model: Lownet	Xnear: 500.0	Xfar: 1000.0	HLM1 HE 109.0 IAML 15:40 48.16	10	0.21						
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			CWF HZ 114.0 EP 15:40 35.60							0.57	
AV06 HZ 5.5 EP	21:03	14.31	-0.07	CWF HE 114.0 IAML 15:40 52.41	9	0.18					
AV06 HE 5.5 ES	21:03	17.08	0.35	CWF HN 114.0 IAML 15:40 52.96	6	0.20					
AV06 HE 5.5 IAML	21:03	17.65	15 0.21	WLF1 HN 128.0 ES 15:40 52.53						0.10	
AV06 HN 5.5 IAML	21:03	17.73	14 0.14	WLF1 HE 128.0 IAML 15:40 53.51	11	0.11					
AU08 HZ 16.5 EP	21:03	15.11	-0.21	KESW HZ 131.0 EP 15:40 38.17						0.45	
AU08 HN 16.5 ES	21:03	18.17	-0.19	KESW HE 131.0 ES 15:40 53.75						0.33	
AU08 HE 16.5 IAML	21:03	18.88	10 0.13	KESW HE 131.0 IAML 15:40 55.75	4	0.14					
AU08 HN 16.5 IAML	21:03	18.93	12 0.21	KESW HE 131.0 IAML 15:40 56.11	7	0.21					
AU18 HZ 23.1 EP	21:03	16.23	0.11	EDMD HN 156.0 ES 15:40 59.65						0.17	
AU18 HE 23.1 ES	21:03	19.84	0.10	EDMD HE 156.0 IAML 15:41 01.16	14	0.27					
AU18 HN 23.1 IAML	21:03	20.40	17 0.27	EDMD HZ 156.0 IAML 15:41 01.58	4	0.39					
AU18 HE 23.1 IAML	21:03	20.60	15 0.22	IOMK HZ 162.0 EP 15:40 41.61						-0.53	
AU20 HZ 30.0 EP	21:03	16.98	-0.08	IOMK HE 162.0 IAML 15:41 01.46	6	0.26					
AU20 HE 30.0 IAML	21:03	21.82	7 0.15	IOMK HN 162.0 IAML 15:41 01.89	6	0.22					

**TABLE 2 : PHASE DATA**

MCH1	HE	167.0	ES	15:41	02.90		0.65	KPL	HE	24.0	IAML	19:23	37.62	17	0.11				
MCH1	HE	167.0	IAML	15:41	04.54	9	0.27	KPL	HN	24.0	IAML	19:23	37.77	10	0.13				
MCH1	HN	167.0	IAML	15:41	05.14	7	0.22	LINV	HZ	70.6	EP	19:23	41.63		0.07				
								LINV	HE	70.6	ES	19:23	49.65		-0.53				
November 7 2017				Time: 08:46	35.7	UTC		Magnitude: 3.7	ML										
Lat: 60.469N				Lon: 4.686W				Depth: 11.3	km	LINV	HN	70.6	IAML	19:23	49.99	2	0.06		
Grid Ref: 767.17				kmE	1194.74	kmN		RMS: 0.30	secs	LEWI	HZ	108.0	EP	19:23	47.70		0.31		
Locality: NORWEGIAN COAST								LEWI	HN	108.0	ES	19:24	00.31		0.04				
Velocity model: North Sea				Xnear: 500.0				LEWI	HE	108.0	IAML	19:24	01.45	2	0.12				
Comment: FELT HORDALAND							Intensity: 3	LEWI	HN	108.0	IAML	19:24	02.38	3	0.18				
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES									
BER	HZ	37.0	IP	D	08:46	42.04		0.10	BIGH	HZ	141.0	EP	19:23	53.09		0.79			
BER	HE	37.0	ES		08:46	46.27		-0.23	BIGH	HE	141.0	IAML	19:24	10.32	3	0.08			
BER	HE	37.0	IAML		08:46	46.70	4294	0.28	BIGH	HN	141.0	IAML	19:24	10.67	5	0.36			
BER	HN	37.0	IAML		08:46	46.84	5985	0.52	LAWE	HZ	141.0	EP	19:23	52.88		0.56			
MOL	HZ	279.0	EP		08:47	14.48		-0.30	LAWE	HE	141.0	IAML	19:24	10.66	4	0.18			
MOL	HN	279.0	IAML		08:47	50.62	1169	0.30	LAWE	HN	141.0	IAML	19:24	10.79	6	0.16			
MOL	HE	279.0	IAML		08:47	50.80	949	0.36	INVG	HZ	150.0	EP	19:23	53.82		0.24			
KONO	BZ	288.0	EP		08:47	16.34		0.43	INVG	HN	150.0	ES	19:24	10.70		-0.28			
LRW	HZ	326.0	EP		08:47	20.69		0.09	INVG	HE	150.0	IAML	19:24	12.72	2	0.13			
LRW	HE	326.0	IAML		08:48	11.87	70	0.62	INVG	HN	150.0	IAML	19:24	12.74	2	0.13			
LRW	HN	326.0	IAML		08:48	32.52	56	0.40											
BIGH	HZ	534.0	EP		08:47	46.51		0.10	November 9 2017										
BIGH	HN	534.0	ES		08:48	37.86		-0.18	Time: 06:46	07.0	UTC		Magnitude:	1.1	ML				
BIGH	HN	534.0	IAML		08:48	42.24	46	0.56	Lat: 50.706N				Depth:	5.6	km				
BIGH	HE	534.0	IAML		08:48	48.82	39	0.24	Grid Ref: 240.86	kmE	92.08	kmN	RMS:	0.20	secs				
MCD	HZ	557.0	EP		08:47	49.51		0.18	Locality: ASHWATER, DEVON										
MCD	HE	557.0	IAML		08:48	47.52	44	0.42	Velocity model: Lownet	Xnear:	500.0	Xfar:	1000.0						
MCD	HN	557.0	IAML		08:48	47.79	54	0.36	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES
DRUM	HZ	574.0	EP		08:47	51.74		0.38	SBD	BZ	34.3	IP	C	06:46	13.25		-0.13		
DRUM	HN	574.0	ES		08:48	46.46		-0.13	SBD	BE	34.3	ES		06:46	18.10		0.09		
DRUM	HE	574.0	IAML		08:48	50.50	66	0.22	HTL	HZ	36.0	EP		06:46	13.45		-0.19		
DRUM	HN	574.0	IAML		08:48	59.50	94	0.54	HTL	HE	36.0	ES		06:46	18.65		0.20		
INVG	HZ	679.0	EP		08:48	04.71		0.26	HTL	HE	36.0	IAML		06:46	18.94	28	0.14		
ESK	HZ	739.0	EP		08:48	11.85		-0.09	HTL	HN	36.0	IAML		06:46	20.37	15	0.16		
EDMD	HZ	742.0	EP		08:48	11.32		-0.91	DYA	HZ	37.8	IP	D	06:46	13.83		-0.15		
EDMD	HN	742.0	ES		08:49	22.26		-0.43	DYA	HN	37.8	ES		06:46	19.23		0.19		
EDMD	HE	742.0	IAML		08:49	25.04	49	0.54	DYA	HE	37.8	IAML		06:46	19.37	14	0.08		
EDMD	HN	742.0	IAML		08:49	25.25	44	0.48	DYA	HN	37.8	IAML		06:46	19.67	41	0.08		
AT10	HZ	764.0	EP		08:48	14.96		-0.08	November 14 2017										
LBWR	HN	877.0	EP		08:48	28.23		-0.86	Time: 14:04	34.1	UTC		Magnitude:	1.5	ML				
November 7 2017				Time: 14:33	56.0	UTC		Magnitude:	1.4	ML									
Lat: 53.040N				Lon: -4.494W				Depth:	15.5	km									
Grid Ref: 232.81				kmE	352.13	kmN		RMS:	0.20	secs									
Locality: CAERNARFON BAY								Locality: PEEBLES, BORDERS											
Velocity model: Mid Wales				Xnear: 80.0				Velocity model: Borders	Xnear:	100.0	Xfar:	200.0							
Comment: 7KM NW TREFOR								Comment: 5KM EAST PEEBLES											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES									
YRC	EZ	24.0	IP	C	14:34	00.33		0.01	EDI	HZ	30.2	EP		14:04	39.70		0.02		
YLL	EZ	24.4	IP	C	14:34	00.39		0.00	EDI	HE	30.2	ES		14:04	43.71		0.08		
WLF1	HZ	28.5	IP	C	14:34	00.86		-0.13	ESK	HZ	38.2	EP		14:04	40.91		-0.09		
WLF1	HE	28.5	ES		14:34	04.58		-0.02	ESK	HE	38.2	ES		14:04	45.46		-0.43		
WLF1	HE	28.5	IAML		14:34	04.94	114	0.08	ESK	HE	38.2	IAML		14:04	46.03	43	0.10		
WLF1	HN	28.5	IAML		14:34	05.18	54	0.09	ESK	HN	38.2	IAML		14:04	46.11	27	0.08		
WPS	HZ	40.1	EP		14:34	02.73		-0.01	PGB1	HZ	87.9	EP		14:04	49.28		0.21		
WPS	HE	40.1	ES		14:34	07.50		-0.10	PGB1	HN	87.9	IAML		14:05	59.65		-0.05		
WPS	HE	40.1	IAML		14:34	08.78	19	0.24	PGB1	HE	87.9	IAML		14:05	02.29	39	0.22		
WPS	HN	40.1	IAML		14:34	09.05	17	0.08	PGB1	HE	87.9	IAML		14:05	02.30	43	0.24		
LLW	BZ	59.7	EP		14:34	05.70		0.00	NEWG	HZ	92.8	EP		14:04	49.55		-0.31		
LLW	BE	59.7	ES		14:34	12.57		-0.12	NEWG	HE	92.8	ES		14:05	01.44		0.40		
LLW	BE	59.7	IAML		14:34	13.19	22	0.25	NEWG	HE	92.8	IAML		14:05	03.89	32	0.34		
LLW	BN	59.7	IAML		14:34	13.25	15	0.18	NEWG	HN	92.8	IAML		14:05	03.94	32	0.26		
FOEL	HZ	88.6	EP		14:34	10.03		-0.04	INVG	HZ	104.0	EP		14:04	51.82		0.16		
FOEL	HN	88.6	ES		14:34	20.25		0.03	INVG	HE	104.0	ES		14:05	03.73		-0.39		
FOEL	HN	88.6	IAML		14:34	21.16	16	0.24	INVG	HN	104.0	IAML		14:05	05.77	7	0.15		
FOEL	HE	88.6	IAML		14:34	21.75	28	0.38	INVG	HE	104.0	IAML		14:05	05.84	7	0.14		
RSBS	HZ	122.0	EP		14:34	15.12		0.01	EDMD	HZ	117.0	EP		14:04	53.98		0.16		
RSBS	HE	122.0	ES		14:34	28.83		-0.06	EDMD	HN	117.0	IAML		14:05	09.30	14	0.19		
RSBS	HN	122.0	IAML		14:34	31.45	8	0.18	EDMD	HE	117.0	IAML		14:05	09.33	18	0.24		
RSBS	HE	122.0	IAML		14:34	32.08	8	0.07	KESW	HZ	119.0	EP		14:04	54.08		-0.02		
HLM1	HZ	123.0	EP		14:34	15.59		0.28	KESW	HN	119.0	ES		14:05	08.73	8	0.32		
HLM1	HN	123.0	ES		14:34	29.46		0.23	KESW	HE	119.0	IAML		14:05	10.53	12	0.18		
HLM1	HN	123.0	IAML		14:34	32.52	5	0.09	GAL1	HZ	134.0	EP		14:04	56.14		-0.30		
HLM1	HE	123.0	IAML		14:34	33.69	5	0.21	GAL1	HN	134.0	ES		14:05	12.10		-0.19		
DSB	BN	128.0	ES		14:34	30.00		-0.32	GAL1	HN	134.0	IAML		14:05	13.57	19	0.13		
IOMK	HZ	136.0	EP		14:34	17.53		0.38	GAL1	HE	134.0	IAML		14:05	15.55	10	0.15		
IOMK	HN	136.0	ES		14:34	33.11		0.72	DRUM	HZ	145.0	EP		14:04	57.96		0.15		
IOMK	HE	136.0	IAML		14:34	35.08	27	0.21	DRUM	HN	145.0	ES		14:05	14.54		-0.10		
IOMK	HN	136.0	IAML		14:34	35.24	20	0.13	DRUM	HE	145.0	IAML		14:05	16.26	15	0.23		
									DRUM	HE	145.0	IAML		14:05	16.99	15	0.11		
November 7 2017				Time: 19:23	29.7	UTC		Magnitude:	0.9	ML									
Lat: 57.529N				Lon: -5.464W				Depth:	7.5	km									
Grid Ref: 192.64				kmE	854.03	kmN		RMS:	0.40	secs									
Locality: TORRIDON, HIGHLAND								Locality: PEEBLES, BORDERS											
Velocity model: Lownet				Xnear:	100.0	Xfar:	200.0	Velocity model: Borders	Xnear:	100.0</									

**TABLE 2 : PHASE DATA**

Locality: WALDLEY, DERBYSHIRE												LBWR HE 54.6 ES 07:53 47.07 -0.17											
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0												LBWR HE 54.6 IAML 07:53 48.02 10 0.18											
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	LBWR HZ 54.6 IAML 07:53 49.29 7 0.27																						
STNC HZ 31.4 EP 00:48 13.04 -0.03	KESW HZ 106.0 EP 07:53 48.06 -0.10																						
STNC HE 31.4 ES 00:48 17.43 0.10	KESW HE 106.0 ES 07:54 0.074 0.01																						
STNC HN 31.4 IAML 00:48 20.42 12 0.10	EDMD HN 112.0 ES 07:54 0.215 -0.07																						
STNC HE 31.4 IAML 00:48 20.44 9 0.12	EDMD HE 112.0 IAML 07:54 0.275 8 0.15																						
CWF HZ 40.6 EP 00:48 14.55 0.06	EDMD HN 112.0 IAML 07:54 0.316 8 0.15																						
CWF HE 40.6 ES 00:48 19.78 0.00	FOEL HN 126.0 ES 07:54 0.605 0.20																						
CWF HN 40.6 IAML 00:48 20.52 4 0.10	HLM1 HE 154.0 ES 07:54 12.75 0.04																						
CWF HE 40.6 IAML 00:48 20.76 4 0.18	HLM1 HE 154.0 IAML 07:54 13.21 4 0.22																						
LBWR HZ 52.3 EP 00:48 16.38 0.05	HLM1 HN 154.0 IAML 07:54 13.92 2 0.16																						
LBWR HE 52.3 ES 00:48 22.89 -0.09																							
LBWR HE 52.3 IAML 00:48 23.34 8 0.18	November 28 2017 Time: 00:31 10.3 UTC Magnitude: 1.1 ML																						
LBWR HN 52.3 IAML 00:48 23.44 8 0.20	Lat: 55.176N Lon: -3.556W Depth: 2.5 km																						
HLM1 HZ 85.5 EP 00:48 21.41 -0.08	Grid Ref: 300.91 kmE 587.97 kmN RMS: 0.40 secs																						
HLM1 HE 85.5 ES 00:48 31.88 -0.01	Locality: PARKGATE, D & G																						
HLM1 HE 85.5 IAML 00:48 32.78 3 0.34	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0																						
HLM1 HN 85.5 IAML 00:48 33.14 2 0.15	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES																						
November 21 2017 Time: 05:54 07.2 UTC Magnitude: 0.8 ML	ESK HZ 27.2 IP C 00:31 15.16 -0.23																						
Lat: 56.009N Lon: -4.217W Depth: 7.5 km	ESK HN 27.2 ES 00:31 18.37 -0.77																						
Grid Ref: 261.79 kmE 681.77 kmN RMS: 0.20 secs	ESK HE 27.2 IAML 00:31 18.54 42 0.08																						
Locality: LENNOXTOWN, E DUNBARTON	ESK HE 27.2 IAML 00:31 18.62 55 0.08																						
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	NEWG HZ 43.4 IP C 00:31 18.23 0.12																						
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	NEWG HN 43.4 ES 00:31 23.34 -0.51																						
PGB1 HZ 27.6 IP C 05:54 12.32 -0.09	NEWG HE 43.4 IAML 00:31 23.73 20 0.09																						
PGB1 HN 27.6 ES 05:54 16.00 -0.18	NEWG HN 43.4 IAML 00:31 24.04 18 0.15																						
PGB1 HE 27.6 IAML 05:54 16.14 10 0.13	KESW HZ 71.5 EP 00:31 22.57 -0.02																						
PGB1 HN 27.6 IAML 05:54 16.16 15 0.20	KESW HE 71.5 ES 00:31 31.41 -0.19																						
INVG HZ 47.7 EP 05:54 15.51 -0.03	KESW HE 71.5 IAML 00:31 34.08 7 0.14																						
INVG HE 47.7 ES 05:54 21.37 -0.23	KESW HE 71.5 IAML 00:31 34.42 7 0.17																						
INVG HE 47.7 IAML 05:54 21.60 6 0.40	GAL1 HZ 81.5 EP 00:31 24.02 -0.09																						
INVG HN 47.7 IAML 05:54 22.60 4 0.30	GAL1 HN 81.5 ES 00:31 34.04 -0.18																						
EDI HN 65.0 ES 05:54 26.23 0.06	GAL1 HE 81.5 IAML 00:31 36.86 7 0.06																						
EDI HE 65.0 ES 05:54 26.39	GAL1 HN 81.5 IAML 00:31 36.90 13 0.11																						
EDI HE 65.0 IAML 05:54 29.38 5 0.27	EDI HZ 86.4 IP C 00:31 25.33 0.47																						
EDI HN 65.0 IAML 05:54 31.00 4 0.14	PGB1 HZ 91.8 EP 00:31 26.29 0.57																						
LAWE HZ 78.6 EP 05:54 20.62 0.32	AQ12 HZ 97.2 EP 00:31 26.71 0.12																						
LAWE HN 78.6 ES 05:54 29.84 0.01	EDMD HZ 109.0 IP D 00:31 28.62 0.28																						
LAWE HE 78.6 IAML 05:54 33.82 7 0.11	AR09 HZ 128.0 EP 00:31 31.91 0.54																						
LAWE HN 78.6 IAML 05:54 34.63 6 0.24	INVG HZ 143.0 EP 00:31 33.52 0.03																						
NEWG HN 99.3 ES 05:54 35.30 -0.09	AS07 HZ 146.0 EP 00:31 34.72 0.67																						
NEWG HE 99.3 IAML 05:54 38.14 4 0.10	December 7 2017 Time: 09:48 34.6 UTC Magnitude: 1.3 ML																						
NEWG HN 99.3 IAML 05:54 38.18 4 0.24	Lat: 56.531N Lon: -5.426W Depth: 5.9 km																						
ESK HZ 100.0 EP 05:54 23.88 0.24	Grid Ref: 189.34 kmE 742.91 kmN RMS: 0.40 secs																						
ESK HE 100.0 IAML 05:54 38.10 4 0.18	Locality: BENDERLOD, ARGYLL/BUTE																						
ESK HN 100.0 IAML 05:54 38.48 4 0.28	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0																						
GALL HN 131.0 ES 05:54 43.67 -0.06	Comment: 4KM NNW BENDERLOCH																						
GALL HN 131.0 IAML 05:54 45.22 2 0.28	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES																						
GALL HE 131.0 IAML 05:54 47.46 3 0.26	LAWE HZ 30.2 EP 09:48 40.15 -0.05																						
DRUM HE 147.0 ES 05:54 47.54 -0.06	LAWE HE 30.2 ES 09:48 43.92 -0.38																						
KPL HE 172.0 ES 05:54 53.98 0.29	LAWE HE 30.2 IAML 09:48 44.00 42 0.18																						
November 25 2017 Time: 08:49 31.6 UTC Magnitude: 0.7 ML	LAWE HE 30.2 IAML 09:48 44.04 30 0.12																						
Lat: 54.131N Lon: -3.377W Depth: 5.3 km	INVG HZ 86.0 EP 09:48 49.46 0.34																						
Grid Ref: 310.03 kmE 471.47 kmN RMS: 0.20 secs	INVG HN 86.0 ES 09:48 59.31 -0.42																						
Locality: WALNEY, CUMBRIA	INVG HN 86.0 IAML 09:49 03.02 30 0.24																						
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	INVG HE 86.0 IAML 09:49 03.26 19 0.10																						
Comment: OFFSHORE LOCATION	KPL HZ 91.0 EP 09:48 49.88 0.03																						
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	KPL HE 91.0 ES 09:49 00.82 -0.18																						
KESW HZ 53.9 EP 08:49 40.83 -0.19	KPL HE 91.0 IAML 09:49 04.39 10 0.20																						
KESW HN 53.9 IAML 08:49 49.48 3 0.33	KPL HN 91.0 IAML 09:49 04.71 8 0.16																						
KESW HE 53.9 IAML 08:49 49.71 6 0.49	PGB1 HZ 99.2 EP 09:48 51.82 0.66																						
IOMK HZ 79.0 EP 08:49 45.04 0.16	PGB1 HE 99.2 IAML 09:49 06.72 8 0.23																						
IOMK HN 79.0 ES 08:49 54.39 -0.18	PGB1 HN 99.2 IAML 09:49 06.92 14 0.22																						
IOMK HN 79.0 IAML 08:49 56.09 4 0.12	December 10 2017 Time: 01:00 45.8 UTC Magnitude: 0.5 ML																						
IOMK HE 79.0 IAML 08:49 56.26 5 0.15	Lat: 56.463N Lon: -6.249W Depth: 6.6 km																						
GALL HZ 119.0 EP 08:49 51.01 -0.08	Grid Ref: 138.29 kmE 738.18 kmN RMS: 0.20 secs																						
GALL HN 119.0 ES 08:50 50.40 0.09	Locality: MULL, ARGYLL & BUTE																						
NEWG HZ 123.0 EP 08:49 51.61 -0.07	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0																						
NEWG HE 123.0 ES 08:50 06.59 0.25	Comment: OFFSHORE LOCATION																						
ESK HZ 132.0 EP 08:49 53.49 0.36	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES																						
ESK HE 132.0 ES 08:50 08.65 -0.19	LAWE HZ 57.2 EP 01:00 55.90 0.04																						
ESK HE 132.0 IAML 08:50 10.43 3 0.28	LAWE HN 57.2 ES 01:01 02.96 -0.25																						
ESK HN 132.0 IAML 08:50 11.11 2 0.31	LAWE HN 57.2 IAML 01:01 03.12 2 0.15																						
LBWR HE 136.0 ES 08:50 09.79 0.07	LAWE HE 57.2 IAML 01:01 03.13 1 0.13																						
November 27 2017 Time: 07:53 31.0 UTC Magnitude: 1.0 ML	KPL HZ 104.0 EP 01:01 03.02 -0.10																						
Lat: 53.828N Lon: -2.133W Depth: 12.5 km	KPL HE 104.0 ES 01:01 15.73 -0.04																						
Grid Ref: 391.25 kmE 436.89 kmN RMS: 0.10 secs	KPL HN 104.0 IAML 01:01 17.77 1 0.21																						
Locality: TRAWDEN, LANCASHIRE	KPL HE 104.0 IAML 01:01 17.88 2 0.16																						
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	INVG HZ 136.0 EP 01:01 08.54 0.46																						
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	INVG HE 136.0 ES 01:01 24.70 0.36																						
HPK HZ 36.5 EP 07:53 37.61 0.04	INVG HE 136.0 IAML 01:01 25.98 2 0.18																						
HPK HE 36.5 ES 07:53 42.50 0.10	INVG HE 136.0 IAML 01:01 26.45 1 0.13																						
HPK HN 36.5 IAML 07:53 42.74 12 0.18	December 12 2017 Time: 02:51 42.6 UTC Magnitude: 1.4 ML																						
HPK HE 36.5 IAML 07:53 43.47 16 0.18	Lat: 51.782N Lon: -2.950W Depth: 13.8 km																						
LBWR HZ 54.6 EP 07:53 40.42 0.05	Grid Ref: 334.47 kmE 209.74 kmN RMS: 0.30 secs																						

**TABLE 2 : PHASE DATA**

Locality: LLANOVER, MONMOUTHSHIRE												LAWE	HE	83.3	ES	02:01	53.77	0.00			
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0												LAWE	HE	83.3	IAML	02:01	56.94	8 0.24			
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES		LAWE	HN	83.3	IAML	02:01	57.17	5 0.17			
MCH1	HZ	24.1	EP			02:51	47.36		-0.08			PGB1	HE	122.0	ES	02:02	04.20	0.14			
MCH1	HN	24.1	ES			02:51	51.30		0.32			PGB1	HN	122.0	IAML	02:02	05.37	4 0.44			
MCH1	HN	24.1	IAML			02:51	51.66	100	0.16			PGB1	HE	122.0	IAML	02:02	06.37	4 0.25			
MCH1	HE	24.1	IAML			02:51	51.68	82	0.14			NEWG	HZ	157.0	EP	02:01	54.90	0.23			
OLDB	HZ	30.8	EP			02:51	48.08		-0.28			NEWG	HN	157.0	ES	02:02	12.77	-0.11			
OLDB	HN	30.8	ES			02:51	52.64		0.07			INVG	HE	165.0	ES	02:02	14.78	-0.05			
OLDB	HN	30.8	IAML			02:51	53.41	107	0.36			INVG	HN	165.0	IAML	02:02	19.34	1 0.29			
OLDB	HE	30.8	IAML			02:51	55.61	49	0.38			INVG	HE	165.0	IAML	02:02	20.64	1 0.25			
STRD	HZ	54.4	EP			02:51	52.01			0.04		KPL	HZ	180.0	EP	02:01	57.86	0.12			
STRD	HN	54.4	IAML			02:51	59.88	16	0.18												
STRD	HE	54.4	IAML			02:51	59.91	16	0.09												
HLM1	HZ	82.0	EP			02:51	55.83		-0.45												
HLM1	HN	82.0	ES			02:52	06.13		-0.14												
HLM1	HE	82.0	IAML			02:52	06.67	16	0.12												
HLM1	HN	82.0	IAML			02:52	06.82	12	0.22												
SWN1	HZ	85.0	EP			02:51	57.07		0.38												
SWN1	HE	85.0	IAML			02:52	08.45	11	0.36												
SWN1	HN	85.0	IAML			02:52	09.19	18	0.39												
FOEL	HZ	124.0	EP			02:52	02.53			0.12											
FOEL	HN	124.0	ES			02:52	17.26			0.37											
FOEL	HE	124.0	IAML			02:52	17.94	8	0.24												
FOEL	HN	124.0	IAML			02:52	18.67	9	0.20												
CWF	HZ	155.0	EP			02:52	06.05			-0.63											
CWF	HE	155.0	ES			02:52	24.24			-0.03											
CWF	HN	155.0	IAML			02:52	25.79	4	0.10												
CWF	HE	155.0	IAML			02:52	25.84	4	0.13												
December 12 2017 Time: 10:06 10.0 UTC Magnitude: 1.4 ML												December 13 2017	Time: 02:01 49.0 UTC	Magnitude: 0.8 ML							
Lat: 54.180N	Lon: -2.215W											Lat: 55.771N	Lon: -6.409W	Depth: 6.4 km							
Grid Ref: 385.97 kmE	476.06 kmN											Grid Ref: 123.52 kmE	661.87 kmN	RMS: 0.20 secs							
Locality: LITTON, NORTH YORKSHIRE												Locality: ISLAY, ARGYLL & BUTE									
Velocity model: Borders Xnear: 50.0 Xfar: 100.0												Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES		STAT	CO	DIST	PHAS	WT	HrMn	SECS	AMPL	PERI	RES
AR09	HZ	15.6	EP			10:06	13.31			0.04		CLGH	HE	78.9	ES	02:02	11.87				0.00
AR09	HN	15.6	ES			10:06	15.34			-0.23		CLGH	HE	78.9	IAML	02:02	14.18	4	0.13		
AS07	HZ	19.8	IP	C		10:06	13.61			-0.33		CLGH	HN	78.9	IAML	02:02	16.15	5	0.25		
AR05	HZ	24.7	EP			10:06	14.79			0.07		LAWE	HZ	83.3	EP	02:02	03.26				0.37
AR05	HN	24.7	ES			10:06	18.18			0.13		LAWE	HE	83.3	ES	02:02	12.97				-0.05
AQ12	HZ	45.1	EP			10:06	18.07			0.01		LAWE	HN	83.3	IAML	02:02	16.22	4	0.20		
AQ12	HN	45.1	IAML			10:06	23.51	10	0.24			LAWE	HE	83.3	IAML	02:02	16.24	7	0.22		
AQ12	HE	45.1	IAML			10:06	25.13	9	0.25			PGB1	HE	121.0	ES	02:02	23.02				-0.10
HPK	HZ	45.9	EP			10:06	18.18			0.02		INVG	HN	164.0	IAML	02:02	18.62	1	0.27		
HPK	HN	45.9	ES			10:06	23.73			-0.21		INVG	HN	164.0	IAML	02:02	19.49	2	0.25		
HPK	HE	45.9	IAML			10:06	24.05	34	0.20			KPL	HZ	181.0	EP	02:02	16.86				-0.23
HPK	HN	45.9	IAML			10:06	24.65	28	0.20												
AS10	HN	48.3	ES			10:06	24.71			0.13											
AS10	HE	48.3	IAML			10:06	24.90	53	0.24												
AS10	HN	48.3	IAML			10:06	24.98	24	0.22												
AT08	HZ	59.8	EP			10:06	20.43			0.05											
AT08	HN	59.8	ES			10:06	27.64			-0.09											
AT08	HE	59.8	IAML			10:06	27.91	55	0.16												
AT08	HN	59.8	IAML			10:06	28.21	68	0.16												
KESW	HZ	73.5	EP			10:06	23.05			0.39											
KESW	HN	73.5	ES			10:06	31.85			0.22											
KESW	HE	73.5	IAML			10:06	36.07	6	0.24												
KESW	HN	73.5	IAML			10:06	36.16	13	0.28												
EDMD	HZ	74.3	EP			10:06	23.18			0.45											
EDMD	HN	74.3	ES			10:06	31.52			-0.23											
EDMD	HE	74.3	IAML			10:06	31.66	20	0.14												
EDMD	HN	74.3	IAML			10:06	31.74	20	0.24												
AU11	HZ	83.7	EP			10:06	24.95			0.68											
AU09	HN	86.6	EP			10:06	25.47			0.73											
LBWR	HZ	92.5	EP			10:06	26.09			0.33											
LBWR	HN	92.5	ES			10:06	37.46			0.53											
LBWR	HE	92.5	IAML			10:06	40.30	18	0.20												
LBWR	HN	92.5	IAML			10:06	40.38	18	0.24												
AU20	HZ	93.9	EP			10:06	26.53			0.58											
AU20	HN	93.9	ES			10:06	37.45			0.18											
AU20	HE	93.9	IAML			10:06	39.92	22	0.18												
AU20	HN	93.9	IAML			10:06	40.22	19	0.18												
GDLE	HZ	95.0	EP			10:06	26.70			0.56											
AU18	HN	98.5	EP			10:06	27.29			0.61											
AU18	HE	98.5	ES			10:06	38.94			0.43											
AU18	HN	98.5	IAML			10:06	39.51	27	0.32												
AU18	HE	98.5	IAML			10:06	42.46	21	0.25												
December 13 2017 Time: 02:01 29.7 UTC Magnitude: 0.9 ML												December 13 2017	Time: 02:01 49.0 UTC	Magnitude: 0.8 ML							
Lat: 55.778N	Lon: -6.422W											Lat: 55.781N	Lon: -6.418W	Depth: 7.9 km							
Grid Ref: 122.76 kmE	662.70 kmN											Grid Ref: 123.03 kmE	663.02 kmN	RMS: 0.40 secs							
Locality: ISLAY, ARGYLL & BUTE												Locality: ISLAY, ARGYLL & BUTE									
Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0												Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0									

**TABLE 2 : PHASE DATA**

Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	LINV HE 116.0 ES	01:40 18.97	-0.28
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	LAWE HZ 118.0 EP	01:40 06.23	0.29
LAWE HZ 43.0 EP 02:59 26.40 -0.25	LAWE HE 118.0 ES	01:40 20.48	0.53
LAWE HE 43.0 IAML 02:59 26.54 11 0.20	LAWE HN 118.0 IAML	01:40 21.03	1 0.31
LAWE HN 43.0 ES 02:59 31.57 -0.58	LAWE HE 118.0 IAML	01:40 23.50	1 0.42
LAWE HN 43.0 IAML 02:59 31.74 12 0.20	DRUM HZ 123.0 EP	01:40 07.22	0.45
KPL HZ 113.0 EP 02:59 37.38 -0.15	DRUM HE 123.0 ES	01:40 21.40	0.02
KPL HE 113.0 ES 02:59 51.04 0.08	DRUM HN 123.0 IAML	01:40 22.03	2 0.18
KPL HN 113.0 IAML 02:59 53.40 2 0.12	DRUM HE 123.0 IAML	01:40 22.13	1 0.12
KPL HE 113.0 IAML 02:59 54.33 3 0.17	BIGH HZ 149.0 ES	01:40 27.96	0.29
PGB1 HZ 116.0 EP 02:59 38.65 0.70			
PGB1 HE 116.0 ES 02:59 52.13 0.44	December 26 2017 Time: 06:25 43.9 UTC	Magnitude: 0.6 ML	
PGB1 HN 116.0 IAML 02:59 54.19 2 0.43	Lat: 56.325N Lon: -5.430W	Depth: 4.4 km	
PGB1 HE 116.0 IAML 02:59 55.01 2 0.22	Grid Ref: 187.95 kmE 720.01 kmN	RMS: 0.20 secs	
INVG HZ 126.0 EP 02:59 39.65 0.16	Locality: KILMORE, ARGYLL & BUTE		
INVG HN 126.0 ES 02:59 54.62 0.27	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0		
INVG HE 126.0 IAML 02:59 56.31 2 0.08	Comment: 9KM SSE OBAN		
INVG HN 126.0 IAML 02:59 56.66 2 0.20	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES		
CLGH HZ 141.0 EP 02:59 41.46 -0.20	LAWE HZ 7.5 IP C	06:25 45.72	-0.06
CLGH HN 141.0 ES 02:59 57.82 -0.29	LAWE HN 7.5 ES	06:25 47.06	-0.12
CLGH HE 141.0 IAML 02:59 59.48 6 0.36	LAWE HE 7.5 IAML	06:25 47.14	88 0.10
CLGH HN 141.0 IAML 03:00 01.20 4 0.15	LAWE HN 7.5 IAML	06:25 47.18	98 0.26
GALL HZ 186.0 EP 02:59 47.76 0.04	PGB1 HZ 82.1 EP	06:25 58.35	0.31
	PGB1 HE 82.1 ES	06:26 08.43	0.04
December 19 2017 Time: 19:21 52.6 UTC Magnitude: 1.0 ML	PGB1 HE 82.1 IAML	06:26 10.61	3 0.48
Lat: 52.418N Lon: 0.218W	PGB1 HN 82.1 IAML	06:26 11.35	2 0.53
Grid Ref: 550.82 kmE 282.36 kmN	INVG HZ 86.4 EP	06:25 59.09	0.36
Locality: ELY, CAMBRIDGESHIRE	INVG HN 86.4 ES	06:26 09.24	-0.33
Velocity model: Lownet Xnear: 150.0 Xfar: 300.0	INVG HN 86.4 IAML	06:26 12.40	3 0.16
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	INVG HE 86.4 IAML	06:26 12.76	2 0.17
WACR HZ 44.0 EP 19:22 00.53 -0.01	KPL HZ 114.0 EP	06:26 02.69	-0.22
WACR HE 44.0 ES 19:22 06.37 0.04	CLGH HN 145.0 ES	06:26 24.85	-0.12
WACR HE 44.0 IAML 19:22 08.40 6 0.19			
WACR HN 44.0 IAML 19:22 08.44 8 0.31	December 26 2017 Time: 15:04 07.8 UTC	Magnitude: 1.0 ML	
ELMS HZ 63.9 EP 19:22 03.60 -0.11	Lat: 52.591N Lon: -1.809W	Depth: 8.1 km	
ELMS HE 63.9 ES 19:22 11.75 -0.06	Grid Ref: 412.94 kmE 299.30 kmN	RMS: 0.20 secs	
ELMS HE 63.9 IAML 19:22 12.74 14 0.60	Locality: SUTTON, WEST MIDLANDS		
ELMS HN 63.9 IAML 19:22 15.46 12 0.68	Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0		
CWF HZ 109.0 EP 19:22 10.70 -0.09	Comment: SUTTON COLDFIELD		
CWF HE 109.0 ES 19:22 23.52 -0.55	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES		
LBWR HZ 170.0 EP 19:22 20.27 0.44	CWF HZ 37.6 EP	15:04 14.52	0.04
HLM1 HE 211.0 ES 19:22 49.30 0.74	CWF HN 37.6 ES	15:04 19.13	-0.26
HLM1 HE 211.0 IAML 19:22 50.59 3 0.34	CWF HE 37.6 IAML	15:04 19.30	8 0.12
HLM1 HN 211.0 IAML 19:22 51.30 2 0.25	CWF HN 37.6 IAML	15:04 19.38	9 0.10
MCH1 HN 225.0 ES 19:22 52.22 0.74	HLM1 HZ 73.2 EP	15:04 20.07	0.04
	HLM1 HE 73.2 ES	15:04 28.81	-0.17
December 20 2017 Time: 08:15 46.3 UTC Magnitude: 1.5 ML			
Lat: 56.640N Lon: -5.906W	HLM1 HN 73.2 IAML	15:04 28.96	10 0.16
Grid Ref: 160.53 kmE 756.61 kmN	HLM1 HE 73.2 IAML	15:04 29.06	11 0.22
Locality: MORVERN, HIGHLAND	LBWR HZ 90.4 EP	15:04 23.06	0.38
Velocity model: Lownet Xnear: 150.0 Xfar: 300.0	LBWR HE 90.4 ES	15:04 33.54	-0.04
Comment: FELT LISMORE... Intensity: 3	LBWR HE 90.4 IAML	15:04 34.28	12 0.15
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	LBWR HN 90.4 IAML	15:04 34.46	7 0.17
LAWE HZ 52.6 IP C 08:15 55.53 0.23	FOEL HE 99.7 ES	15:04 35.99	-0.11
LAWE HN 52.6 ES 08:16 01.89 0.00	MCH1 HZ 105.0 EP	15:04 24.98	0.11
LAWE HN 52.6 IAML 08:16 02.64 38 0.13	MCH1 HE 105.0 ES	15:04 37.38	0.02
LAWE HE 52.6 IAML 08:16 02.79 35 0.10	MCH1 HN 105.0 IAML	15:04 38.35	3 0.18
KPL HZ 79.3 EP 08:15 59.25 -0.17	MCH1 HE 105.0 IAML	15:04 40.75	3 0.14
KPL HE 79.3 ES 08:16 08.91 -0.10	LLW BN 129.0 ES	15:04 43.60	-0.02
KPL HE 79.3 IAML 08:16 11.08 34 0.12	December 26 2017 Time: 22:40 05.8 UTC	Magnitude: 1.7 ML	
KPL HN 79.3 IAML 08:16 11.16 27 0.32	Lat: 56.438N Lon: -5.741W	Depth: 8.8 km	
INVG HZ 117.0 EP 08:16 05.44 0.13	Grid Ref: 169.41 kmE 733.58 kmN	RMS: 0.20 secs	
INVG HN 117.0 ES 08:16 19.07 -0.13	Locality: MULL, ARGYLL & BUTE		
INVG HN 117.0 IAML 08:16 20.11 9 0.11	Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0		
INVG HE 117.0 IAML 08:16 20.15 12 0.12	Comment: FELT MULL... Intensity: 3		
LINV HZ 173.0 EP 08:16 13.82 0.59	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES		
LINV HN 173.0 IAML 08:16 34.57 8 0.44	LAWE HZ 29.0 IP C	22:40 11.20	-0.01
LINV HE 173.0 IAML 08:16 34.75 16 0.36	LAWE HE 29.0 ES	22:40 14.78	-0.35
LEWI HZ 177.0 EP 08:16 13.68 -0.11	LAWE HE 29.0 IAML	22:40 15.01	111 0.18
LEWI HE 177.0 IAML 08:16 34.97 4 0.19	LAWE HN 29.0 IAML	22:40 15.25	123 0.10
LEWI HN 177.0 IAML 08:16 35.28 4 0.21	KPL HZ 100.0 IP D	22:40 22.08	-0.18
NEWG HZ 199.0 EP 08:16 16.49 -0.04	KPL HE 100.0 ES	22:40 34.35	0.10
GAL1 HZ 211.0 EP 08:16 17.17 -0.83	KPL HE 100.0 IAML	22:40 35.99	26 0.48
	KPL HE 100.0 IAML	22:40 36.08	18 0.20
December 22 2017 Time: 01:39 46.7 UTC Magnitude: 0.5 ML	PGB1 HZ 105.0 EP	22:40 23.54	0.57
Lat: 57.187N Lon: -4.458W	INVG HZ 105.0 EP	22:40 22.81	-0.16
Grid Ref: 251.46 kmE 813.34 kmN	INVG HE 105.0 IAML	22:40 35.96	16 0.12
Locality: WHITEBRIDGE, HIGHLAND	INVG HN 105.0 IAML	22:40 36.85	29 0.30
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	PGB1 HE 105.0 ES	22:40 35.58	0.11
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	PGB1 HE 105.0 IAML	22:40 37.05	29 0.32
KPL HZ 74.1 EP 01:39 59.33 0.25	PGB1 HN 105.0 IAML	22:40 37.54	31 0.48
KPL HE 74.1 ES 01:40 07.80 -0.28	CLGH HZ 153.0 EP	22:40 29.96	0.00
KPL HE 74.1 IAML 01:40 08.20 2 0.32	CLGH HE 153.0 IAML	22:40 51.41	10 0.16
KPL HE 74.1 IAML 01:40 11.69 2 0.14	CLGH HN 153.0 IAML	22:40 51.73	11 0.22
INVG HZ 88.3 EP 01:40 01.32 -0.01	GAL1 HZ 187.0 EP	22:40 34.16	-0.23
INVG HE 88.3 ES 01:40 11.34 -0.63	ESK HZ 202.0 EP	22:40 36.49	0.16
INVG HN 88.3 IAML 01:40 14.05 2 0.20	ESK HN 202.0 IAML	22:41 02.45	9 0.24
INVG HE 88.3 IAML 01:40 14.11 1 0.17	ESK HE 202.0 IAML	22:41 03.11	6 0.26
LINV HZ 116.0 EP 01:40 05.48 -0.05			

**TABLE 2 : PHASE DATA**

December 26 2017	Time: 23:29 37.8 UTC	Magnitude: 1.0 ML	December 31 2017	Time: 08:56 40.5 UTC	Magnitude: 1.9 ML
Lat: 53.455N	Lon: -2.702W	Depth: 7.5 km	Lat: 50.101N	Lon: -3.169W	Depth: 7.3 km
Grid Ref: 353.39 kmE	395.62 kmN	RMS: 0.30 secs	Grid Ref: 316.41 kmE	23.05 kmN	RMS: 0.50 secs
Locality: ST HELENS, MERSEYSIDE			Locality: ENGLISH CHANNEL		
Velocity model: Lownet	Xnear: 500.0	Xfar: 1000.0	Velocity model: Lownet	Xnear: 125.0	Xfar: 250.0
Comment: 40KM SE DARTMOUTH					
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES		
LWBR HZ 65.2 EP 23:29 48.63	-0.23	DYB HZ 65.8 EP 08:56 51.22	-0.41		
LWBR HN 65.2 ES 23:29 57.09	0.18	DYB HN 65.8 ES 08:56 58.80	-0.95		
LWBR HE 65.2 IAML 23:29 57.49	9 0.22	SBD BZ 120.0 EP 08:57 00.27	0.30		
LWBR HN 65.2 IAML 23:29 58.68	9 0.18	SBD BE 120.0 ES 08:57 14.11	-0.06		
FOEL HZ 71.2 EP 23:29 49.77	-0.03	JLP EZ 122.0 EP 08:57 00.12	-0.21		
FOEL HE 71.2 ES 23:29 58.94	0.40	JSA HZ 125.0 EP 08:57 00.51	-0.17		
HPK HZ 90.6 EP 23:29 52.73	-0.04	JSA HN 125.0 ES 08:57 15.09	-0.31		
HPK HE 90.6 ES 23:30 03.36	-0.30				
HPK HE 90.6 IAML 23:30 04.14	10 0.22	JSA HN 125.0 IAML 08:57 16.26	26 0.28		
HPK HN 90.6 IAML 23:30 04.35	15 0.22	JSA HE 125.0 IAML 08:57 16.80	36 0.20		
LLW BZ 93.2 EP 23:29 53.39	0.22	JRS EE 128.0 EP 08:57 01.47	0.35		
LLW BE 93.2 ES 23:30 03.96	-0.40	JDC EZ 129.0 EP 08:57 01.35	-0.02		
LLW BN 93.2 IAML 23:30 05.79	3 0.10	JDG EZ 129.0 EP 08:57 01.50	0.13		
LLW BE 93.2 IAML 23:30 05.97	2 0.16	HTL HZ 136.0 EP 08:57 03.30	0.94		
HLM1 HE 105.0 ES 23:30 07.29	-0.29	HTL HN 136.0 IAML 08:57 22.59	21 0.15		
HLM1 HE 105.0 IAML 23:30 08.40	4 0.39	HTL HE 136.0 IAML 08:57 23.85	22 0.28		
HLM1 HN 105.0 IAML 23:30 08.98	3 0.15	CCA1 HZ 147.0 EP 08:57 04.90	0.91		
WLF1 HZ 114.0 EP 23:29 56.45	0.04	CCA1 HN 147.0 ES 08:57 21.32	0.20		
WLF1 HN 114.0 ES 23:30 09.69	-0.28	CCA1 HE 147.0 IAML 08:57 22.67	15 0.14		
WLF1 HE 114.0 IAML 23:30 11.07	5 0.12	CCA1 HN 147.0 IAML 08:57 22.88	25 0.13		
WLF1 HN 114.0 IAML 23:30 11.62	8 0.18	ROSF BZ 196.0 EP 08:57 09.69	-0.78		
WPS HZ 120.0 EP 23:29 57.53	0.31				
WPS HN 120.0 ES 23:30 11.25	-0.13				
WPS HE 120.0 IAML 23:30 11.47	3 0.30				
WPS HN 120.0 IAML 23:30 12.10	3 0.25				
CWF HN 123.0 ES 23:30 12.43	0.13				
CWF HN 123.0 IAML 23:30 13.99	3 0.11				
CWF HE 123.0 IAML 23:30 14.04	4 0.10				
YRC EZ 127.0 EP 23:29 58.62	0.32				
EDMD HZ 161.0 EP 23:30 02.90	-0.23				
EDMD HE 161.0 ES 23:30 21.90	0.31				
December 27 2017	Time: 11:54 14.0 UTC	Magnitude: 2.1 ML			
Lat: 52.803N	Lon: 1.839W	Depth: 5.0 km			
Grid Ref: 658.73 kmE	329.77 kmN	RMS: 0.40 secs			
Locality: SOUTHERN NORTH SEA					
Velocity model: Lownet	Xnear: 500.0	Xfar: 1000.0			
Comment: 11KM OFF NORFOLK					
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES					
WACR HZ 82.2 EP 11:54 27.52	-0.28				
WACR HN 82.2 ES 11:54 37.36	-0.48				
WACR HE 82.2 IAML 11:54 38.87	44 0.10				
WACR HN 82.2 IAML 11:54 38.87	43 0.26				
ELMS HZ 97.8 EP 11:54 30.58	0.35				
ELMS HE 97.8 ES 11:54 41.94	-0.11				
ELMS HN 97.8 IAML 11:54 43.62	125 0.28				
ELMS HE 97.8 IAML 11:54 45.19	130 0.22				
LMK HZ 162.0 EP 11:54 39.60	-0.20				
LMK HE 162.0 ES 11:54 58.77	0.17				
LMK HE 162.0 IAML 11:54 58.95	89 0.38				
LMK HN 162.0 IAML 11:55 02.24	110 0.28				
CWF HZ 212.0 EP 11:54 45.94	-0.30				
CWF HN 212.0 ES 11:55 10.59	0.84				
CWF HN 212.0 IAML 11:55 13.07	15 0.14				
CWF HE 212.0 IAML 11:55 14.01	8 0.14				
December 29 2017	Time: 02:03 02.3 UTC	Magnitude: 1.0 ML			
Lat: 52.025N	Lon: -3.763W	Depth: 7.4 km			
Grid Ref: 279.05 kmE	237.80 kmN	RMS: 0.10 secs			
Locality: LLANDOVERY, CARMARTHES					
Velocity model: Lownet	Xnear: 500.0	Xfar: 1000.0			
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES					
MCH1 HZ 52.6 EP 02:03 11.28	-0.07				
MCH1 HN 52.6 ES 02:03 17.77	-0.19				
MCH1 HN 52.6 IAML 02:03 17.98	17 0.15				
MCH1 HE 52.6 IAML 02:03 18.05	9 0.16				
LLW BZ 91.9 EP 02:03 17.70	0.26				
LLW BE 91.9 ES 02:03 28.40	-0.10				
LLW BE 91.9 IAML 02:03 30.44	2 0.15				
LLW BN 91.9 IAML 02:03 30.64	1 0.28				
FOEL HZ 104.0 EP 02:03 19.23	-0.07				
FOEL HN 104.0 ES 02:03 31.74	0.04				
STRD HE 114.0 ES 02:03 34.30	-0.01				
STRD HN 114.0 IAML 02:03 35.19	5 0.16				
STRD HE 114.0 IAML 02:03 35.36	8 0.46				
WLF1 HN 147.0 ES 02:03 42.57	-0.18				
WLF1 HN 147.0 IAML 02:03 43.41	4 0.26				
WLF1 HE 147.0 IAML 02:03 43.49	8 0.16				
CWF HZ 185.0 EP 02:03 30.96	0.15				
CWF HN 185.0 ES 02:03 51.80	0.17				
CWF HE 185.0 IAML 02:03 52.36	1 0.10				
CWF HN 185.0 IAML 02:03 52.53	1 0.14				

TABLE 3

## GEOGRAPHIC COORDINATES OF SEISMOGRAPH STATIONS, 2017

Code	Name	Lat	Lon	E (km)	N (km)	Ht (m)	Comp
AQ01	HOSCAR	53.6068	-2.7944	347.53	412.54	24	BB
AQ02	BANKS	53.6905	-2.8967	340.88	421.94	17	BB
AQ03	WARTON	53.7595	-2.8866	341.65	429.61	23	BB
AQ04	BALLAM	53.7760	-2.9690	336.24	431.51	11	BB
AQ06	THISTLETON	53.8250	-2.9110	340.13	436.91	28	BB
AQ07	GOOSNARGH	53.8420	-2.6660	356.28	438.62	90	BB
AQ09	RAWCLIFFE	53.8846	-2.9048	340.62	443.54	7	BB
AQ10	GARSTANG	53.9150	-2.8270	345.78	446.86	22	BB
AQ12	SELSIDE	54.4370	-2.7520	351.32	504.88	389	BB
AR01	HASLINGDEN	53.7022	-2.3450	377.32	422.92	256	BB
AR05	SKIPTON	53.9910	-2.0190	398.85	454.99	259	BB
AR09	INGLETON	54.2260	-2.4410	371.35	481.23	481	BB
AS02	UPPERMILL	53.5542	-1.9856	401.05	406.40	287	BB
AS03	WAINSTALLS	53.7674	-1.9563	402.98	430.12	376	BB
AS07	CARLTON	54.2540	-1.9380	404.14	484.26	411	BB
AS10	WINSTON	54.5520	-1.8320	410.96	517.43	156	BB
AT08	MYTON-ON-SWALE	54.0985	-1.3110	445.16	467.18	19	BB
AT10	SNILESWORTH	54.3700	-1.1760	453.63	497.48	333	BB
AT12	BISHOPTON	54.5770	-1.4480	435.78	520.34	62	BB
AU05	LAYTHAM	53.8599	-0.8741	474.15	441.00	3	BB
AU07	BIRKDALE	54.1120	-0.9590	468.15	468.96	102	BB
AU08	SOUTH WOLD	54.1238	-0.6613	487.59	470.60	175	BB
AU09	BARTON-LE-STREET	54.1460	-0.8910	472.54	472.81	103	BB
AU10	KIRBY MISPERTON 1	54.1960	-0.8180	477.21	478.45	20	BB
AU11	EAST NESS	54.1974	-0.9325	469.74	478.49	34	BB
AU13	KIRBY MISPERTON 2	54.1993	-0.7941	478.77	478.84	25	BB
AU14	KIRBY MISPERTON 3	54.2030	-0.8320	476.29	479.21	23	BB
AU15	NORMANBY	54.2285	-0.8794	473.15	482.00	60	BB
AU16	KIRBY MISPERTON 4	54.2385	-0.8125	477.49	483.18	21	BB
AU18	THORNTON DALE	54.2482	-0.7095	484.18	484.38	83	BB
AU20	PICKERING	54.2940	-0.7870	479.05	489.39	151	BB
AV06	GANTON	54.1630	-0.4820	499.21	475.20	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	EDMUND BYERS	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
HMXN	HERSTMONCEUX	50.8674	0.3363	564.49	110.15	26	BBSMR
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

TABLE 3

## GEOGRAPHIC COORDINATES OF SEISMOGRAPH STATIONS, 2017

Code	Name	Lat	Lon	E (km)	N (km)	Ht (m)	Comp
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
LAWE	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
MCD	COLEBURN DISTIL	57.5828	-3.2541	325.02	855.42	293	BBR
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
YRE	YR EIFL	52.9810	-4.4254	237.19	345.42	197	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**

<b>Structural area</b>	<b>Depth to top of layer (km)</b>	<b>P-wave velocity (km/sec)</b>	<b>Vp/Vs</b>
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

Sonic	Sonic event
Worcs	Worcestershire
Oxon	Oxfordshire
Co	County
D & G	Dumfries & Galloway
Carmarths	Carmarthenshire
Glos	Gloucestershire
Lincs	Lincolnshire
Salop	Shropshire
E Dunbarton	East Dunbartonshire
...	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

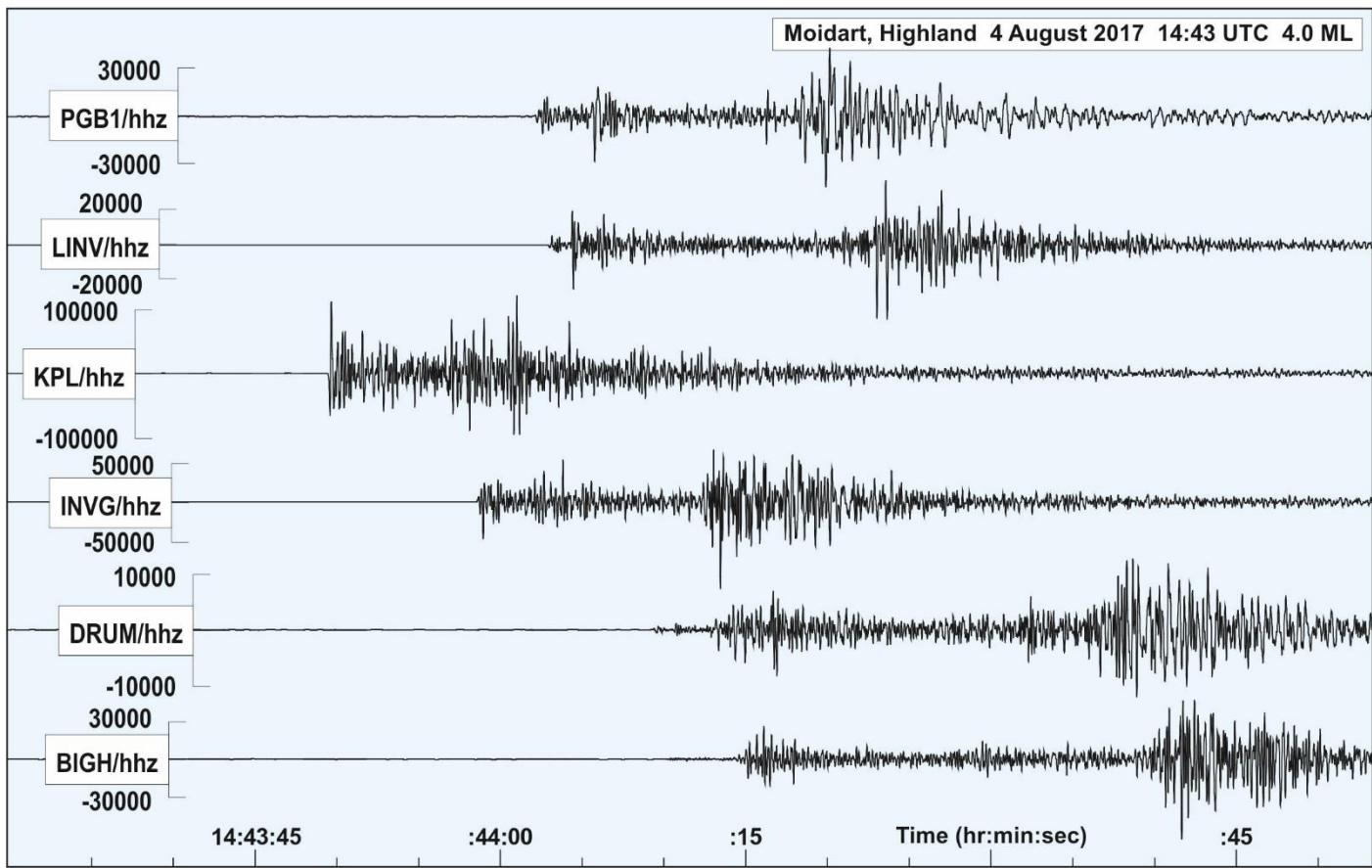
Most ordinary buildings collapse.

### 12 - Completely devastating

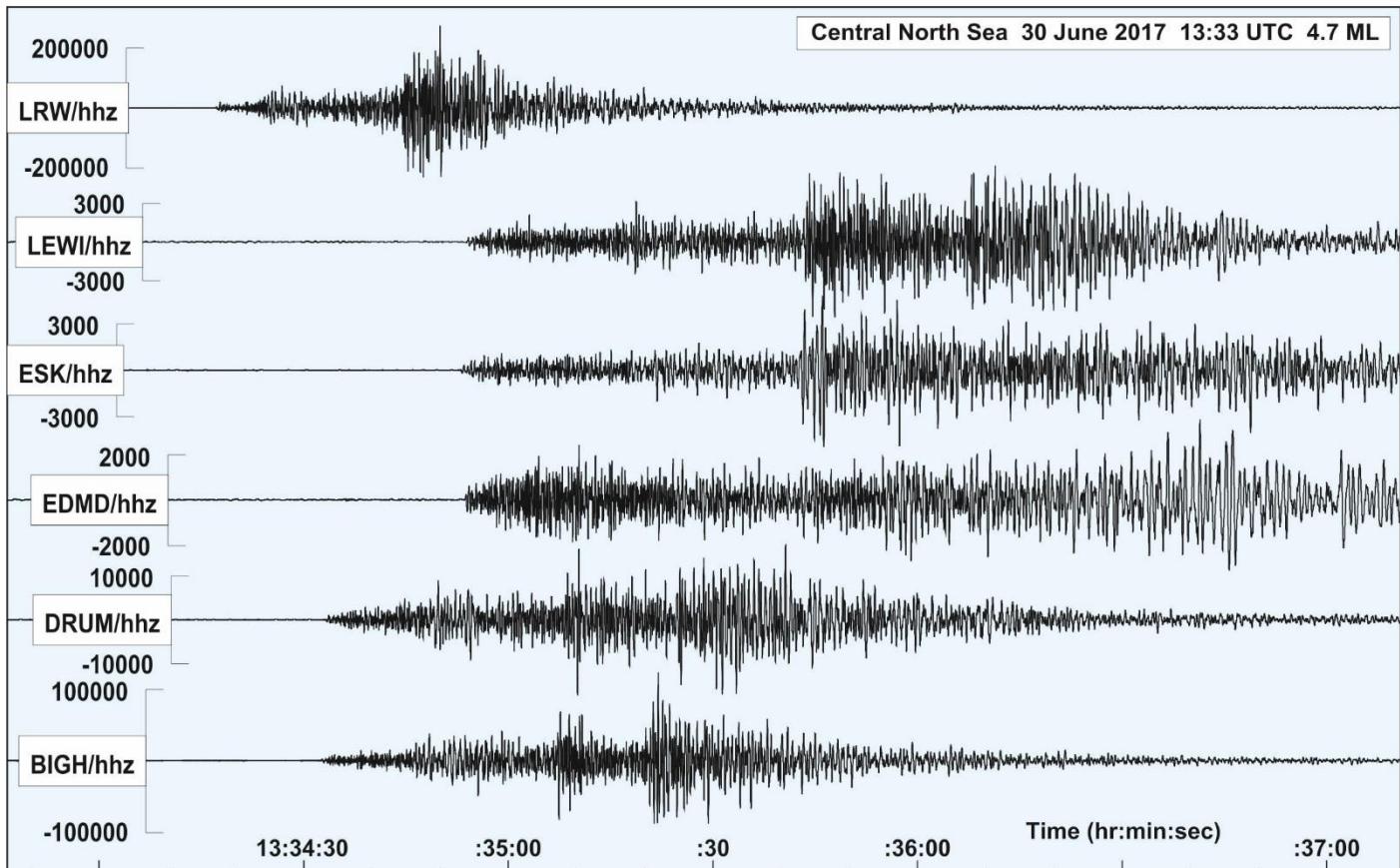
Practically all structures above and below ground are heavily damaged or destroyed.

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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 4.0 ML Moidart earthquake on 4 August 2017.



Seismograms of the ground displacement from the magnitude 4.7 ML Central North Sea earthquake on 30 June 2017.