

Bulletin of British Earthquakes 2013

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Contents

Contents.....	1
1 Introduction	3
2 The BGS UK Seismograph Network	3
3 Earthquake Parameters and Their Errors	4
Hypocentre Location	4
Magnitude	4
Intensity	5
4 Summary of 2013 Seismicity	5
Acknowledgements.....	9
References	10
Figures	11
Tables.....	19
Appendix 1 Key to Bulletin Encoding	52
Appendix 2 Key to Phase Data Encoding.....	53
Appendix 3 The European Macroseismic Scale (EMS 98).....	54

FIGURES

Figure 1. Epicentre map of earthquakes in 2013 as listed in Table 1.

Figure 2. Seismograph stations operated by BGS during 2013 (red) along with station operated by other agencies in the British Isles and used for automatic detection (blue). 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 2013.

Figure 4. Epicentres of earthquakes with magnitudes of 3.5 ML and above, in the period 1970 to 2013.

Figure 5. Seismograms of the ground displacement from the Lleyn Peninsula earthquake, 29 May 2013, recorded by BGS and DIAS seismograph stations.

Figure 6. Seismograms of the ground displacement from Northern North Sea earthquake, 1 December 2013, recorded by BGS seismograph stations.

Figure 7. Seismograms of the ground displacement from the Irish Sea earthquake, 25 August 2013, recorded by BGS seismograph stations.

Figure 8. Seismograms of the ground displacement from the Loughborough, Leicestershire earthquake, 18 January 2013, recorded by BGS seismograph stations.

TABLES

Table 1. Catalogue of events in chronological order: 2013.

Table 2. Phase data of the earthquakes in Table 1.

Table 3. Geographic coordinates and instrumentation of BGS seismograph stations.

Table 4. Depth / crustal velocity models used in earthquake locations.

1 Introduction

The British Geological Survey's (BGS) Seismic Monitoring and Information Service operate a nationwide network of seismograph stations in the United Kingdom (UK). Earthquakes in the UK and coastal waters are detected within limits dependent on the distribution of seismograph stations. Location accuracy is improved in offshore areas through data exchange with neighbouring countries. This bulletin contains locations, magnitudes and phase data for all earthquakes detected and located by the BGS during 2013, listed in Tables 1 and 2. Maps showing seismic activity in 2013 (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°W to 6°E and 47°N to 65°N).

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

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

2 The BGS UK Seismograph Network

The UK seismograph network consists of just over 100 stations with broadband, short period and/or strong motion accelerometers. Some 39 sites are equipped with broadband seismometers and 29 have strong motion accelerometers, 22 of which are co-located with broadband sensors. The remaining sites are equipped with short period seismometers. Data from nearly all stations are transferred in near real-time to the BGS offices in Edinburgh for automatic processing, analysis and archival. Seismic events are detected using automatic processing algorithms, but can also be extracted manually from our archive of continuous data, then analysed to determine event types, locations and magnitudes. Operational BGS seismograph stations are shown in Figure 2.

The detection capabilities of a network depend upon station distribution, instrument sensitivity and background noise levels. Figure 2 also shows the magnitude detection thresholds for the seismograph stations operational in December 2013. 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 greater, in the period 1979 to 2013. The data set is considered complete for these magnitudes in all localities onshore. Seismicity for the period 1970 to 2013 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, 1993).

4 Summary of 2013 Seismicity

There were 158 earthquakes located by the BGS seismic monitoring network during the year, with 36 having magnitudes of 2.0 ML or greater and seven having magnitudes of 3.0 ML or greater. Nineteen events with a magnitude of 2.0 ML or greater were reported felt, together with a further 30 smaller ones, bringing the total to 49 felt earthquakes in 2013.

The largest offshore earthquake of the year occurred on the Norwegian Coast on 22 March, with a magnitude of 3.7 ML. It was located approximately 340 km ENE of Lerwick, Shetland Islands. A further nine events occurred in the North Sea and surrounding waters during the year with magnitudes ranging between 1.6 and 3.5 ML. The BGS received no felt reports for any of these events.

The largest 'onshore' earthquake, with a magnitude of 3.8 ML, occurred on 29 May at 03:16 UTC and located approximately 2 km off the northern coast of the Lleyn Peninsula, Gwynedd, approximately 21 km WSW of the magnitude 5.4 ML Lleyn earthquake that occurred on 19 July 1984, the biggest ever recorded onshore in the UK. The estimated area over which an earthquake with a magnitude of 3.8 ML, and depth of 10 km, would be felt (at intensity 2 EMS) was calculated to be a distance of up to 150 km from the epicentre. Analysis of the results from an automatic online questionnaire survey agrees with this. Over 480 reports were received, the majority of which came from within a 50 km radius of the epicentre, from Abersoch, Caernarfon, Bangor, Holyhead and their surrounding hamlets. A little further afield, reports were received from Conwy and Rhyl areas (75-100 km to the northeast of the epicentre), whilst a scattering of reports were received from near Cardigan and Fishguard (85-100 km to the south), from Liverpool, Southport, Blackpool and Oldham (100-140 km to the northeast), from the Isle of Man (150 km to the north), from near Newry, Northern Ireland (170 km to the northwest) and from towns down the east coast of Ireland from Dublin to Gorey, Co. Wexford (110-120 km to the west). Most people described having been awoken from their sleep by the moderate shaking strength of the earthquake, which had a trembling effect. The sound strength was also described as moderate. Reports received described "windows and crockery rattled", "the bed was shaking, too scared to look at anything else", "loud rumbling sound woke me, then we noticed sound of mirror rattling on bedside cabinet", "gradually grew louder like the classic underground train passing sensation" and "woke the household and many neighbours". Three aftershocks were recorded on 29, 30 and 31 May, with magnitudes of 1.7, 0.8 and 1.4 ML respectively, all of which were reported as having been felt by a few residents in Bryncroes and Aberdaron, Gwynedd.

A further seven earthquakes occurred in and around the Lleyn Peninsula during the year. Three of them occurred on 26 June, at 22:28:01s, 22:28:29s and 22:30 UTC with magnitudes of 2.7, 2.4 and 1.2 ML, respectively. The first two of these events, around 28 seconds apart, were felt throughout north Gwynedd, in Pwllheli, Caernarfon, Bangor, Menai Bridge, Blaenau Ffestiniog, Bodorgan and Holyhead and the third was felt by a single resident in Bryncroes, Gwynedd. The other four events occurred on 22 March (magnitude 2.2 ML, not reported felt), on 31 March (magnitude 0.5 ML, not reported felt), on 1 July (magnitude 0.6 ML, reported felt by a single resident in Aberdaron, Gwynedd) and 6 December (magnitude 0.8 ML, not reported felt).

On 18 January, at 05:20 UTC, a magnitude 2.9 ML earthquake occurred near Loughborough, Leicestershire, at a depth of 14 km. The BGS received several reports from residents in the Loughborough and surrounding areas which described, “a rumble and a loud bang”, “bed rattled and the books fell off the shelf”, “sounded like a train or lorry crashing into the house” and “the windows vibrated and rattled”. Data from some 240 questionnaires, collected online, were used to determine how widely the earthquake was felt. Of these 240 reports, the majority came from an area within a 25 km radius of the epicentre, namely from the towns of Loughborough, Derby, Leicester and Nottingham. Several other reports were received from beyond this area with the furthest afield being from near Buxton (60 km to the NNW), from near Warwick (55 km to the southeast) and from Corby (50 km to the SSE). The felt area was elongated in a NNW-SSE direction, with the long axis being about 120 km and the short axis being about 65 km. A further three events were detected in the same region during the following weeks, one on 21 January (magnitude 1.4 ML) and two on 4 February (magnitudes 1.6 ML and 2.4 ML). The 21 January event and the larger event on 4 February were both felt by a few residents in the Loughborough area. These four events locate approximately 20 km WSW of the magnitude 4.1 ML Melton Mowbray earthquake, which occurred on 28 October 2001 and was felt throughout Leicestershire, Lincolnshire, Warwickshire, Yorkshire, Shropshire and Nottinghamshire with a maximum intensity of 5 EMS.

An earthquake with a magnitude of 2.4 ML occurred on 31 January, near Laig, Highland. A single report was received for this event, from a resident in Eriboll, describing “felt like a distant rumble with a faint sound”, indicating an intensity of 2 EMS.

On 7 February, at 22:41 UTC, an earthquake, with a magnitude of 2.3 ML, was detected in the Caernarfon Bay, Gwynedd area. Data from over 200 questionnaires, collected online, were used to determine the felt area. The majority of the reports came from populated areas up to 30 km northeast of the epicentre, particularly from the towns of Caernarfon and Bangor and their surrounding hamlets. Further afield, several reports were received from the Isle of Anglesey to the north, from the Lleyn Peninsula to the south, from Blaenau Ffestiniog to the east and from Porthmadog to the southeast. Reports described “just heard loud rumbling”, “at first I thought it was thunder”, “roar didn’t last very long but it was loud” and “shaking came from underneath my feet”. Three minutes later (at 22:44 UTC) another event, with a magnitude of 1.9 ML, occurred in the same region and was felt over the same general area. Both these events were assigned an intensity of 3 EMS.

A magnitude 2.5 ML earthquake occurred on 27 February, with a location near Cotgrave, Nottinghamshire. The BGS received reports from residents in Nottingham, West Bridgford, Long Eaton, Ruddington, Ravenshead, Keyworth, Beeston, Cropwell Bishop and Besthorpe (Nottinghamshire), from Loughborough, Queniborough, Quorn, Thorpe Satchville, Sileby, Markfield, Mountsorrel, Shepshed and Ashby Folville (Leicestershire) and from Derby (Derbyshire) that typically described “a roaring noise, followed by the house shaking and the windows rattling”, indicating an intensity of at least 3 EMS. An aftershock, with a magnitude of 1.3 ML, was recorded the following day. These events are located approximately 18 km southwest of the magnitude 5.3 ML Derby earthquake which occurred on 11 February 1957 and caused widespread damage to chimneys and roofs in the Derby, Nottingham and Loughborough areas and was felt over the whole of the English Midlands with a maximum intensity of 6 EMS.

Four earthquakes occurred near Gairloch, Highland during the year. They occurred on 24 March (magnitude 2.0 ML), on 15 May (magnitude 2.8 ML) and on 16 July at 04:04 UTC and 06:35 UTC (magnitudes 2.8 ML and 0.7 ML, respectively). All four were reported felt. The magnitude 2.8 ML events and the magnitude 2.0 ML event were reported felt by several residents in Gairloch and Poolewe and their surrounding hamlets, with intensities of 3 EMS. The magnitude 0.7 ML event was felt by residents in Gairloch only. Reports described “a strong reverberation through the floor of the house”, “long subsonic rumble lasting a few seconds”, “the wooden floor shook beneath my feet”, “the glasses, jars, crockery on the shelves all rattled” and “my dog rushed to the door, quite perturbed”.

An earthquake with a magnitude of 2.9 ML, occurred on 18 May, with a location approximately 4 km northeast of Acharacle, Highland. Data from some 70 questionnaires, collected online, were used to determine how widely the earthquake was felt. The majority of these reports were from Acharacle and Strontian and their surrounding villages and hamlets, up to 15 km to the north and northwest of the epicentre. A cluster of reports were also received from the Kilchoan area (25 km to the WSW) and some single reports were received from Glenfinnan (20 km to the northeast) and from the Island of Lismore (30 km to the SSW). Reports described “large, deep, very, very loud explosive bang”, “we thought it was an aeroplane crashing, it was stronger than thunder”, “floor trembled and we felt the vibration through the sofa on which we were sitting”, “started with a loud crack followed by rumbling” and “thought it was a military jet passing over”, indicating an intensity of at least 3 EMS. This event locates approximately 6 km southeast of the magnitude 3.5 ML Glenug, Highland earthquake on 23 January 2011 and approximately 12 km WSW of the magnitude 3.5 ML Glenfinnan, Highland earthquake on 10 October 2008, which were both felt in the epicentral area with intensities of at least 4 EMS.

On 25 August (09:58 UTC), an earthquake with a magnitude of 3.3 ML, occurred in the Irish Sea, approximately 25 km WNW of Fleetwood, Lancashire. The felt area of this event was derived from over 60 reports received from an online questionnaire survey. Almost all the reports came from within a distance of up to 40 km from the epicentre, namely from the coastal towns of Fleetwood, Blackpool, Poulton-Le-Fylde and Thornton-Cleveleys (Lancashire) and from Barrow-in-Furness (Cumbria). Further single reports were received from the Isle of Man (80 km to the northwest), from Anglesey (80 km to the southwest) and from near Liverpool (50km to the SSE). Reports described “sat at the computer and the desk moved”, “the sofa shook and keys were swinging in the door”, “felt a vibration through my chair” and “a pair of heavy wood and glass doors rattled”, indicating an intensity of at least 3 EMS. This event was preceded, on the same day, by a magnitude 2.5 ML event at 05:37 UTC and a magnitude 0.9 ML event at 07:13 UTC and followed a week later (on 31 August) by a magnitude 2.6 ML event. Both the magnitude 2.5 ML event and the magnitude 2.6 ML event were felt, in Fleetwood, Blackpool and Thornton-Cleveleys with intensities of at least 3 EMS. Historically, the largest event to have occurred in this area was the magnitude 5.0 ML Irish Sea earthquake on 17 March 1843, which was felt throughout most of Northern England, in Southern Scotland, in North Wales and along the east coast of Ireland from Belfast to Dublin. The only damage reported was from Castletown in the Isle of Man, where ceilings were damaged. It was quite strongly felt in Lancashire and along the east coast of Cumbria; there are reports of objects falling, furniture moving, considerable alarm, but no damage. It was also felt on board ships in the Irish Sea.

An earthquake with a magnitude of 2.7 ML occurred on 27 August, with a location in Glen Lyon, Perth and Kinross, approximately 20 km north of Killin. The BGS received several reports from residents in Glenlyon, Bridge of Balgie, Dall, Camghouran, Lawers and Inverar, which described “a loud bang and a rumbling noise”, “we felt the house shaking” and “we all heard the windows rattling quite loudly”, indicating an intensity of at least 3 EMS. This is the largest event in the region since the magnitude 2.7 ML Killin earthquake in January 2005, some 17 km to the SSW, which was felt throughout the region with a maximum intensity of 4 EMS.

On 4 October, an earthquake with a magnitude of 2.4 ML occurred close to the village of Drumnadrochit, Highland. It was felt by many residents in Drumnadrochit, Dores, Westhill, Errogie, Brinmore, Farr, Scaniport, Culduthel, Torness and Inverfarigaig. Reports received described “a loud rumble for a few seconds”, “sounded like a really strong gust of wind”, “was like something heavy falling on the ceiling or a gas bottle exploding” and “it was best described by the whole family as being like an explosion”. This is an area which has experienced a number of earthquakes in the historical past. In particular between 1768 and 1901 when a number of earthquakes occurred near Inverness, with magnitudes between 3.1 and 5.1 ML. The magnitude 5.1 event, on 13 August 1816, was the largest and severest of the known Inverness earthquakes. It caused considerable damage in Inverness, and could have caused many injuries but for the time of day, when the streets were empty. The epicentre was probably southwest of Inverness itself. The felt area covers almost all of Scotland; but no damage was reported from anywhere other than Inverness.

A magnitude 2.3 ML earthquake occurred on 4 December, with an epicentre in the Celtic Sea, approximately 60 km SSW of Cork, Ireland and 275 km northwest of St Ives, Cornwall. The BGS received a few reports from residents in Timoleague, Courtmacsherry and Clonakilty, Co. Cork, Ireland describing, “we were outside in the farmyard when we heard a loud noise and the shed creaked” and “all the windows shook”. An intensity of 3 EMS was assigned to this event. This is an area that has experienced little seismicity in both the historical and instrumental periods, with only one event located, since 1970, within a 100 km radius of this event.

The coalfield areas of Nottinghamshire and North and South Yorkshire continued to experience shallow earthquake activity that is believed to be mining induced. The largest coalfield event, with a magnitude of 2.1 ML and a depth of 1.4 km, occurred near Hensall, North Yorkshire on 19 February. The BGS received reports from several residents in Hensall who described “all the doors and windows rattled and the ceiling creaked”, “we thought that it was a heavy lorry crashing into the side of our house” and “it felt like a large explosion from underground”, indicating an intensity of at least 3 EMS. In South Yorkshire, two coalfield events on 26 June and 26 September, with magnitudes of 1.9 ML and 1.7 ML, respectively, occurred near Doncaster. The magnitude 1.9 ML event was felt (intensity 2 EMS) by a single resident in Fosterhouses who described “a slight tremor”. In Nottinghamshire, some, eighteen events, with magnitudes between 0.9 and 1.8 ML, were recorded in the New Ollerton area, during the year. The BGS received reports, for nine of these events, via residents in New Ollerton, typically describing “the sofa started shaking”, “we experienced a definite side to side motion”, “the house started to shake” and “we heard a faint rumbling”.

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Figure 1. Epicentre map of earthquakes in 2013 as listed in Table 1.

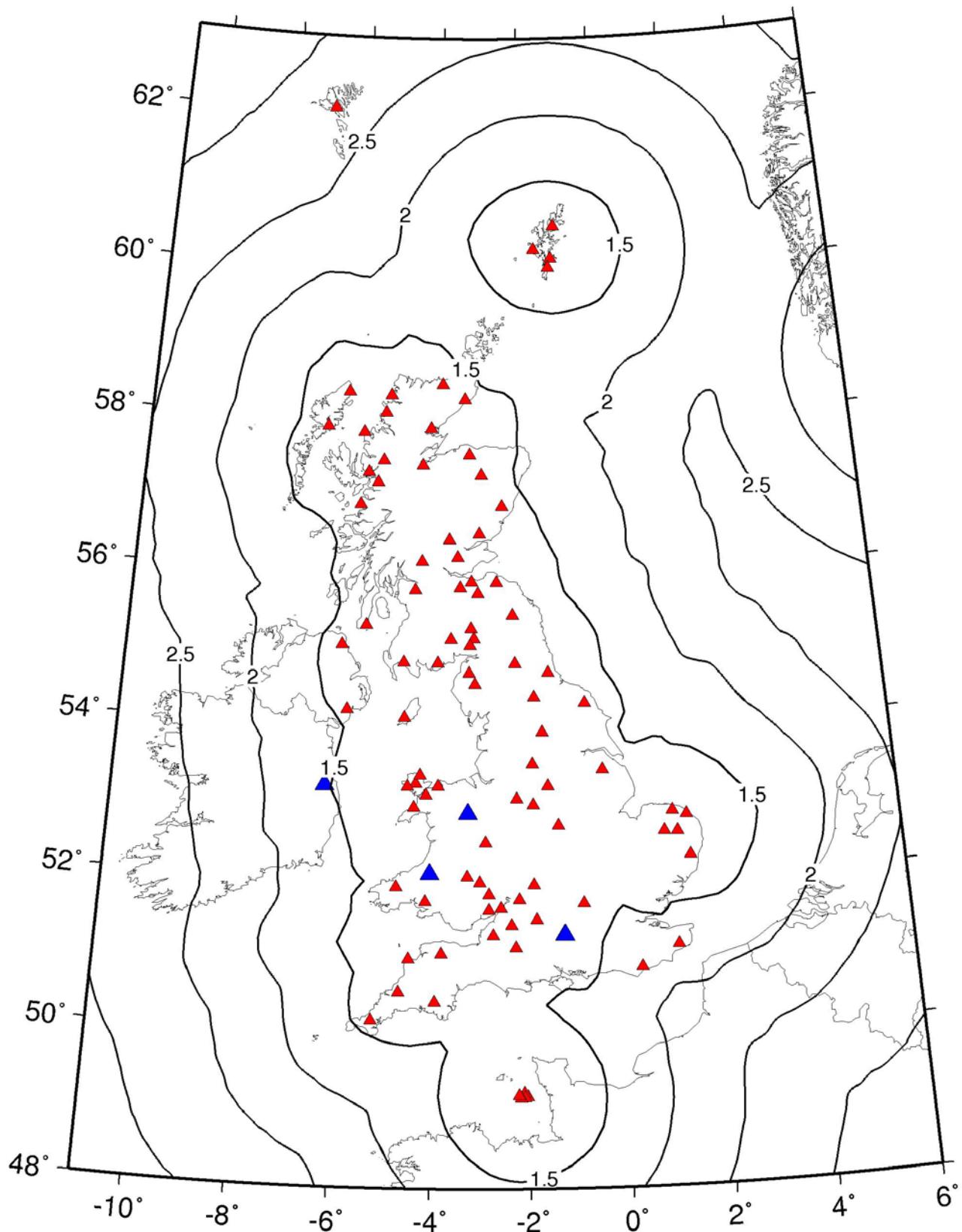


Figure 2. Seismograph stations operated by BGS during 2013 (red) along with station operated by other agencies in the British Isles and used for automatic detection (blue). The contours show earthquake detection capability in terms of Richter local magnitude (ML) calculated for average background noise conditions (4nm) where the detection criterion is that the signal has to exceed 4nm at 10Hz at 4 stations.

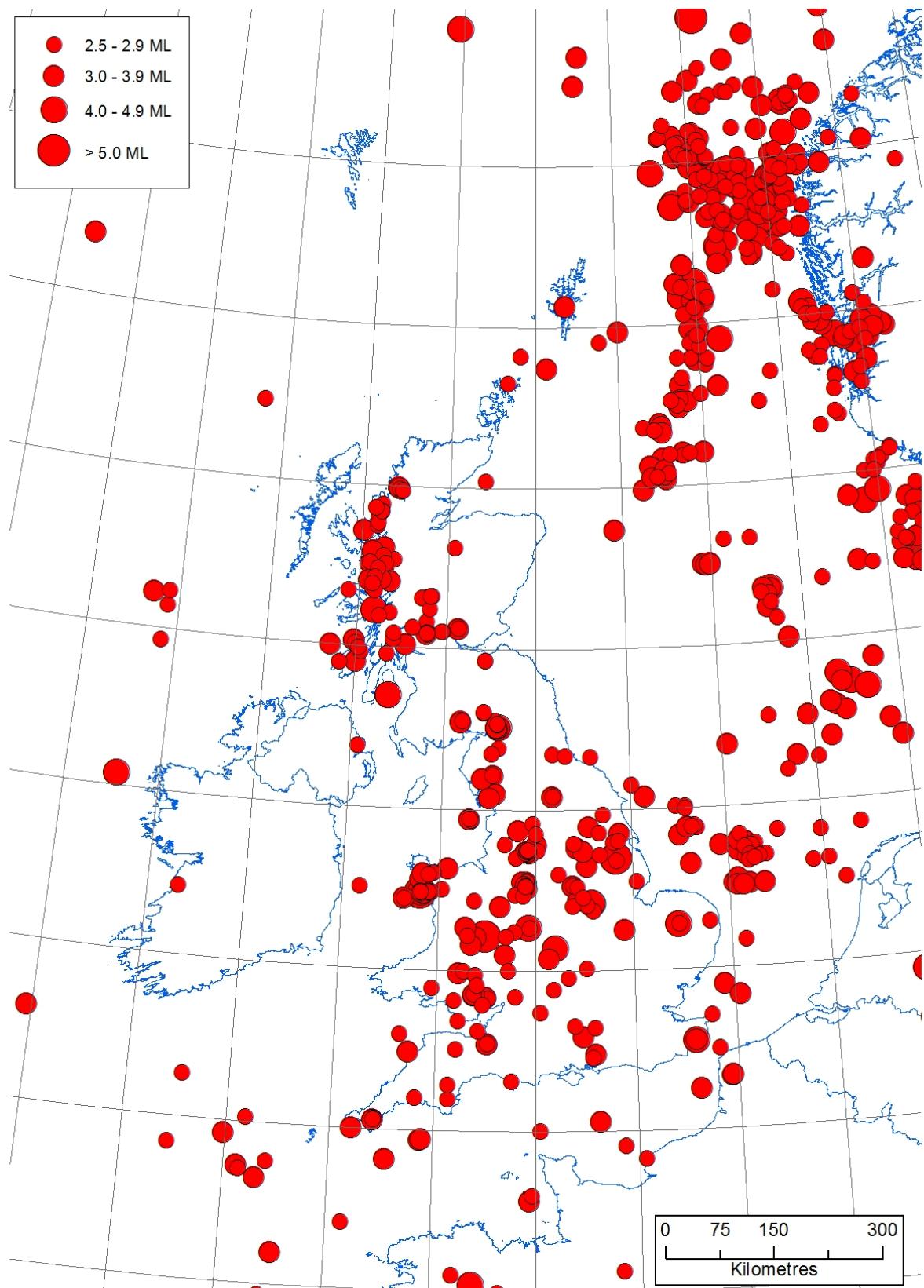


Figure 3. Epicentres of earthquakes with magnitudes of 2.5 ML and above, in the period 1979 to 2013.



Figure 4. Epicentres of earthquakes with magnitudes of 3.5 ML and above, in the period 1970 - 2013.

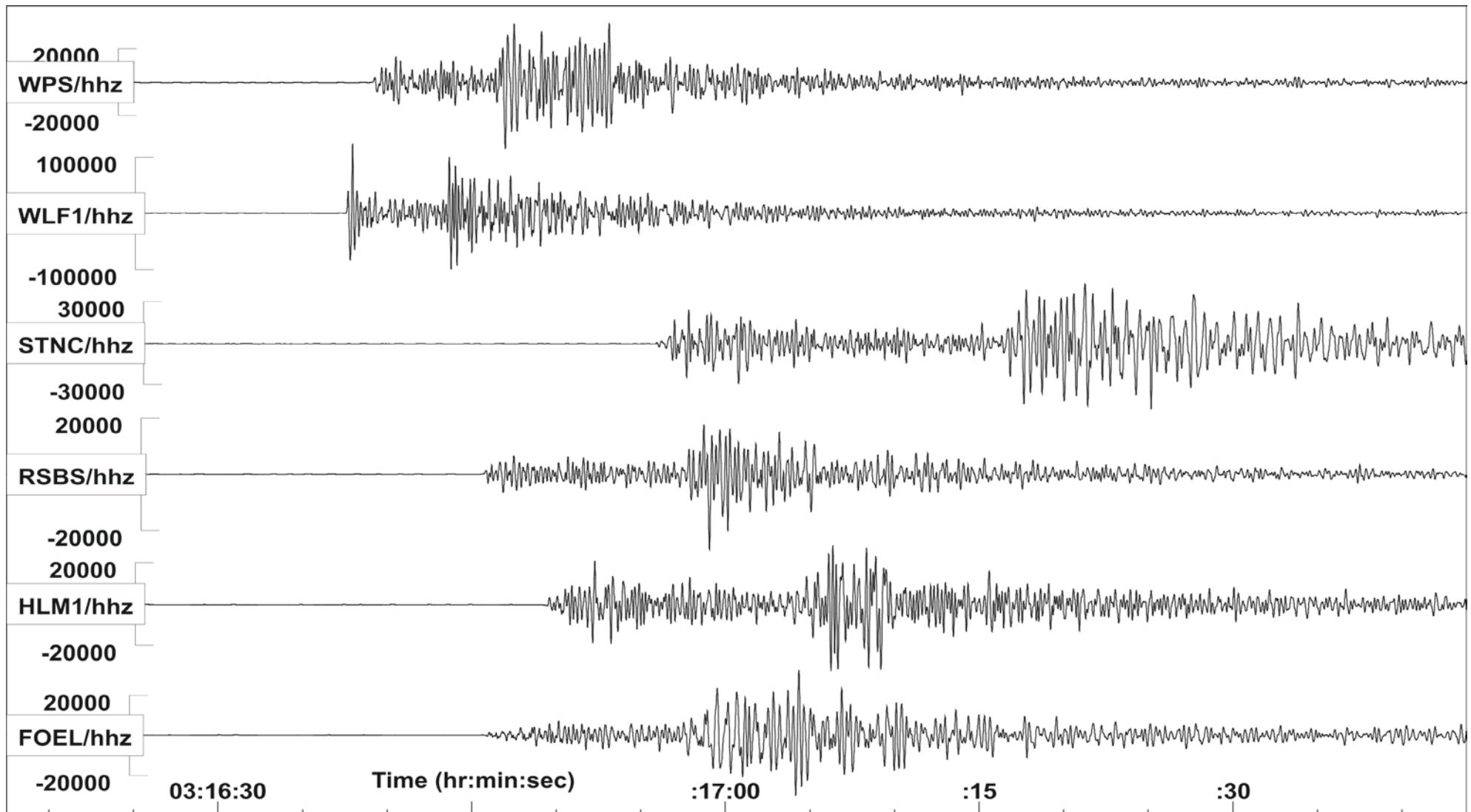


Figure 5. Seismograms of the ground displacement from the magnitude 3.8 ML Lleyn Peninsula earthquake, 29 May 2013, recorded by BGS seismograph stations.

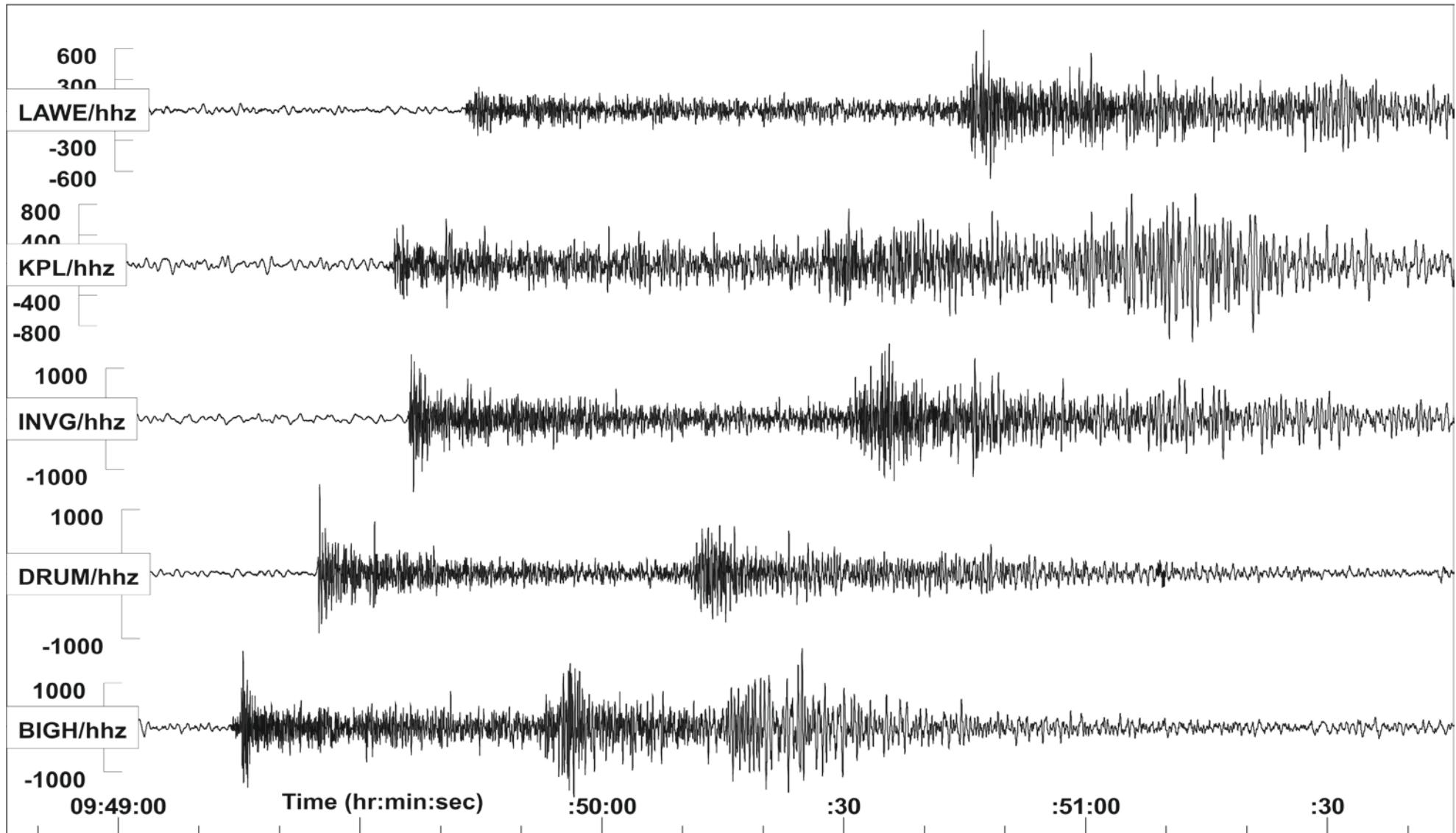


Figure 6. Seismograms of the ground displacement from the magnitude 3.4 ML Northern North Sea earthquake, 1 December 2013, recorded by BGS seismograph stations.

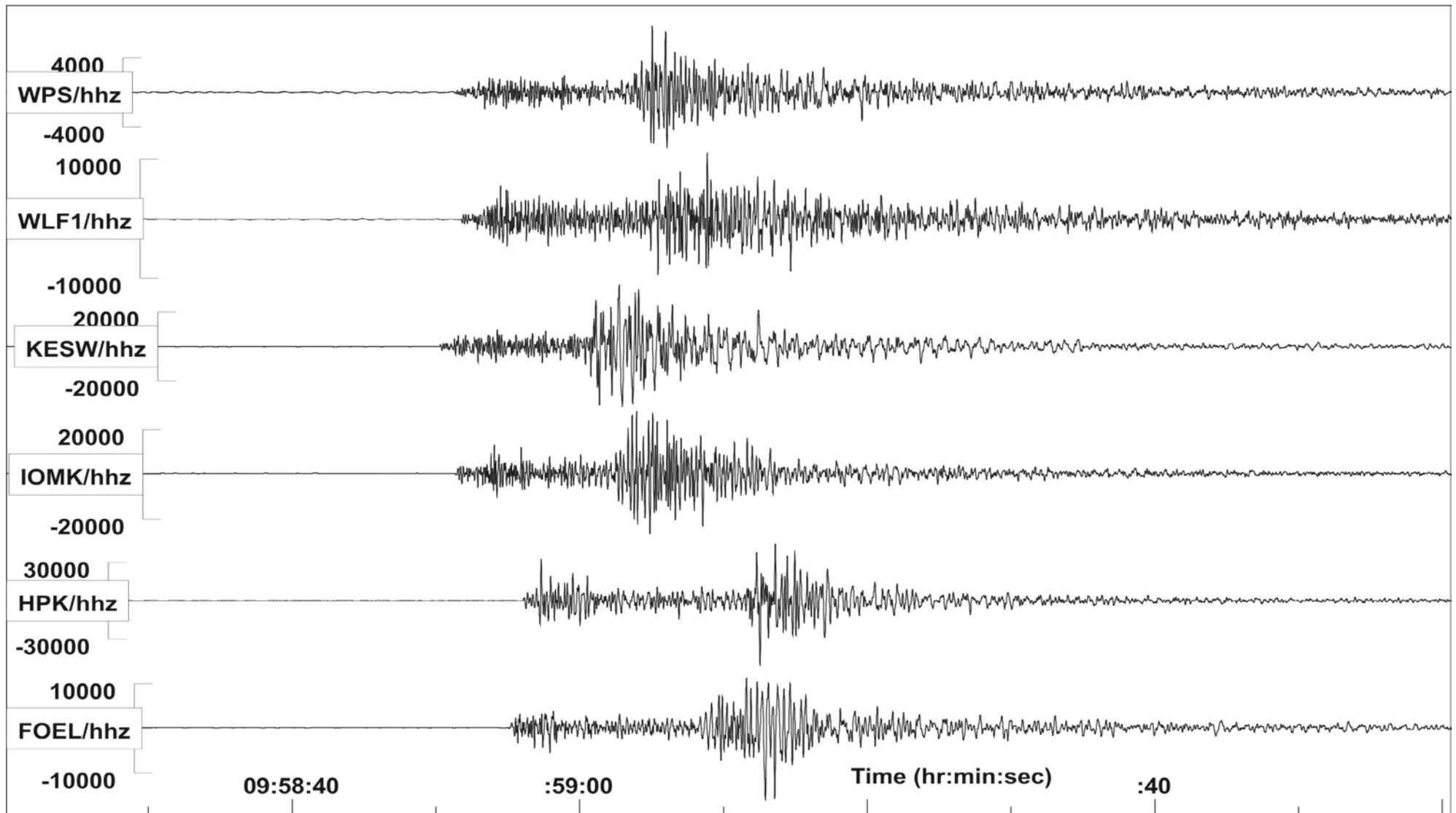


Figure 7. Seismograms of the ground displacement from the magnitude 3.3 ML Irish Sea earthquake, 25 August 2013, recorded by BGS seismograph stations.

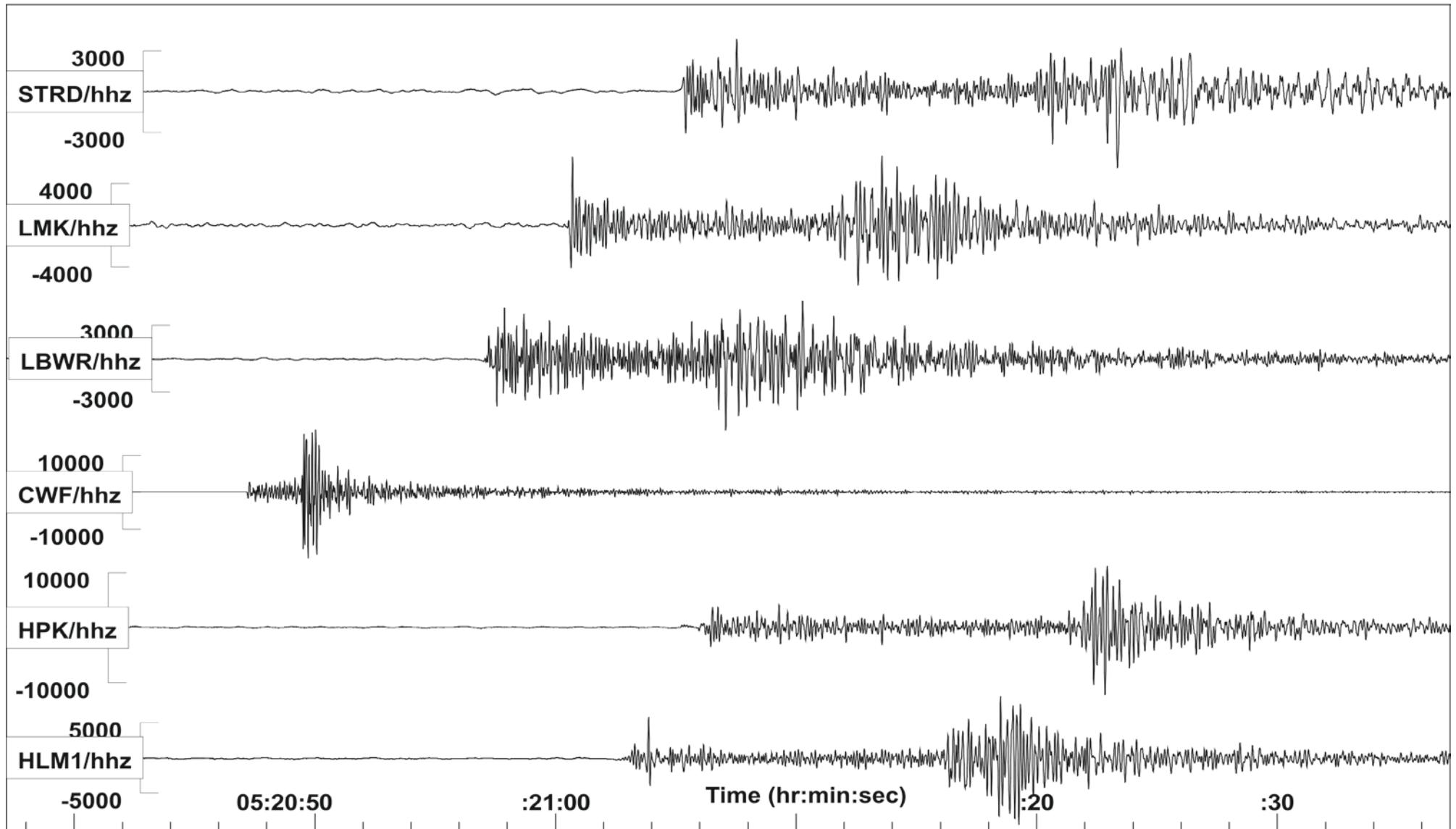


Figure 8. Seismograms of the ground displacement from the magnitude 2.9 ML Loughborough, Leicestershire earthquake, 18 January 2013, recorded by BGS seismograph stations.

TABLE 1 : CATALOGUE OF EVENTS : 2013

Year	Mo	Dy	Hr	Mn	Secs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	Gap	RMS	ERH	ERZ	Comments
2013	01	01	08	27	09.9	56.05	-4.29	257.6	686.4	7.3	0.7	BALFRON, STIRLING		4	172	0.20	2.46	0.00	
2013	01	05	23	15	00.2	53.02	4.41	830.0	366.1	5.0	2.7	SOUTHERN NORTH SEA		7	320	0.40	9.93	0.00	
2013	01	12	03	59	03.1	53.20	-1.02	465.3	367.7	1.1	1.4	NEW OLLERTON, NOTTS	3	8	219	0.50	6.38	0.00	C/F, FELT N OLLERTON
2013	01	14	10	09	02.9	53.19	-1.03	465.1	366.7	1.1	1.8	NEW OLLERTON, NOTTS	3	8	219	0.60	1.53	0.00	C/F, FELT N OLLERTON
2013	01	14	13	51	24.3	49.96	-1.19	458.0	6.8	5.0	1.9	ENGLISH CHANNEL		5	290	0.10	3.45	0.00	70KM SOUTH OF I.O.W
2013	01	18	05	20	44.4	52.80	-1.25	450.6	322.9	13.5	2.9	LOUGHBOROUGH, LEICS	4	19	102	0.20	2.47	1.80	FELT LEICESTERSHIRE...
2013	01	19	14	59	07.6	53.13	-4.33	244.5	361.4	11.8	0.7	CAERNARFON, GWYNEDD		5	201	0.10	5.45	6.60	
2013	01	21	11	40	04.1	52.80	-1.26	450.1	322.8	11.2	1.4	LOUGHBOROUGH, LEICS	2	5	113	0.30	3.88	3.20	FELT LOUGHBOROUGH
2013	01	31	04	16	07.8	58.47	-4.75	239.8	956.2	2.1	2.4	LAIG, HIGHLAND	3	9	202	0.50	3.52	6.10	FELT ERIBOLL
2013	01	31	09	38	09.8	53.23	-1.69	421.0	370.3	12.2	1.6	BAKEWELL, DERBYSHIRE		5	152	0.10	2.66	1.40	
2013	02	04	10	51	56.8	52.75	-1.04	464.5	317.2	2.8	1.6	LOUGHBOROUGH, LEICS		6	294	0.60	3.84	0.00	
2013	02	04	10	51	59.0	52.75	-1.04	464.5	317.2	2.8	2.4	LOUGHBOROUGH, LEICS	2	9	122	0.30	3.41	3.80	FELT LOUGHBOROUGH
2013	02	07	22	41	04.1	53.06	-4.37	240.9	353.8	16.7	2.3	CAERNARFON BAY, GWYNEDD	3	19	159	0.20	2.77	3.00	FELT GWYNEDD
2013	02	07	22	44	54.5	53.05	-4.37	241.3	352.6	14.0	1.9	CAERNARFON BAY, GWYNEDD	3	15	160	0.20	2.95	1.90	FELT GWYNEDD
2013	02	08	18	04	22.7	51.68	-3.66	285.0	199.4	3.1	1.1	MAESTEG, BRIDGEND		6	144	0.40	4.33	3.30	8KM NORTH OF MAESTEG
2013	02	09	20	13	55.6	53.51	-2.44	371.1	401.0	12.2	1.7	LEIGH, GTR MANCHESTER	12	74	0.20	1.80	2.70		
2013	02	09	21	50	56.8	51.15	-3.25	312.9	139.5	7.9	1.1	WATCHET, SOMERSET		7	219	0.20	3.92	8.30	6KM SE OF WATCHET
2013	02	09	21	51	20.5	51.16	-3.27	311.1	141.5	4.0	1.1	WATCHET, SOMERSET		6	216	0.30	6.74	9.30	6KM SE OF WATCHET
2013	02	12	19	19	07.9	52.77	-3.58	293.3	319.8	20.3	0.9	LLANWDDYN, POWYS		7	93	0.10	1.84	1.70	8KM WNW OF LLANWDDYN
2013	02	13	10	37	35.8	53.20	-1.02	465.3	367.9	1.2	1.5	NEW OLLERTON, NOTTS	3	5	226	0.10	1.12	0.00	C/F, FELT N OLLERTON
2013	02	14	17	40	19.9	55.14	-5.45	180.3	587.8	7.5	0.9	NORTH CHANNEL		5	179	0.40	5.96	1.40	30KM WNW BALLANTRAE
2013	02	15	12	35	35.2	48.33	-0.76	492.3	-173.5	5.7	2.2	NORTHWEST FRANCE		5	356	0.40	4.34	0.00	140KM SE OF JERSEY
2013	02	16	06	45	42.9	52.56	0.75	586.2	299.9	9.1	1.4	WATTON, NORFOLK		3	303	0.20	1.37	3.90	5KM WEST OF WATTON
2013	02	16	07	02	50.8	56.05	-5.63	174.1	689.9	3.6	0.8	TAYVALLICH, ARGYLL/BUTE		6	250	0.20	4.05	0.00	
2013	02	17	02	29	6.5	53.24	-2.86	342.8	371.7	11.3	1.0	ELLESMORE PORT, CHESHIRE		5	135	0.10	4.12	5.30	
2013	02	19	03	52	39.4	53.68	-1.11	458.5	421.2	1.3	2.1	HENSALL, N YORKSHIRE	3	8	163	0.40	3.89	0.00	C/F, FELT HENSALL
2013	02	20	11	41	55.4	48.37	-1.96	403.0	-170.0	4.1	2.4	NORTHWEST FRANCE		5	354	0.10	9.69	0.00	90KM SOUTH OF JERSEY
2013	02	22	07	37	17.8	52.39	-3.70	284.3	278.1	5.8	1.4	LLANGURIG, POWYS		9	102	0.10	1.30	3.30	
2013	02	22	10	13	31.4	55.37	-3.00	336.4	609.0	4.3	1.7	HAWICK, BORDERS	2	18	110	0.40	4.27	0.00	FELT HAWICK
2013	02	22	23	57	01.9	52.90	-1.04	464.7	334.1	7.9	2.5	COTGRAVE, NOTTS	3	15	100	0.30	1.94	4.00	FELT NOTTS...
2013	02	22	00	05	22.9	52.90	-1.06	463.0	333.8	8.5	1.3	COTGRAVE, NOTTS		4	240	0.20	5.90	3.00	
2013	03	04	03	26	04.5	64.51	-4.21		10.0	3.5	NORWEGIAN SEA		15	313	0.30	2.45	0.00	300KM NE OF TORSHAVN	
2013	03	06	13	16	13.7	48.41	-4.11	243.6	-164.0	8.2	2.2	NORTHWEST FRANCE		4	304	0.40	5.01	0.00	165KM SW OF JERSEY
2013	03	08	23	51	16.0	56.20	-4.25	260.4	703.5	5.1	0.5	CALLANDER, STIRLING		4	171	0.10	2.33	2.00	
2013	03	10	21	18	29.3	57.00	-5.79	169.5	795.8	7.5	1.8	MALLAIG, HIGHLAND	2	12	187	0.60	6.14	7.20	FELT MALLAIG
2013	03	15	10	43	51.0	57.01	1.97	640.9	798.4	14.2	3.1	CENTRAL NORTH SEA		22	274	0.30	8.12	3.20	250KM EAST ABERDEEN
2013	03	16	07	03	25.3	52.54	0.79	589.1	297.7	4.9	2.1	WATTON, NORFOLK		4	199	0.10	8.98	5.40	4KM SW OF WATTON
2013	03	19	01	00	46.3	52.88	-2.29	380.2	331.6	9.9	0.9	STONE, STAFFORDSHIRE		5	149	0.10	1.34	2.50	
2013	03	21	04	13	48.1	54.54	-2.88	342.9	516.2	3.0	1.2	GLENRIDDING, CUMBRIA	2	10	102	0.30	3.83	6.60	FELT GLENRIDDING
2013	03	22	10	32	43.4	61.58	4.47	743.2	1317.3	15.0	3.7	NORWEGIAN COAST		10	170	0.70	2.30	3.20	340KM ENE OF LERWICK

TABLE 1 : CATALOGUE OF EVENTS : 2013

Year	Mo	Dy	Hr	Mn	Secs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	Gap	RMS	ERH	ERZ	Comments	
2013	03	22	12	57	59.9	52.97	-4.46	235.0	343.9	12.9	2.2	LLEYN PENINSULA		11	156	0.30	3.42	3.20	5KM NE OF NEFYN	
2013	03	22	13	52	21.5	61.62	4.47	742.9	1320.9	6.3	3.5	NORWEGIAN COAST		6	171	0.40	6.67	7.60	345KM ENE OF LERWICK	
2013	03	24	22	02	33.7	57.72	-5.55	188.8	875.0	7.5	2.0	GAIRLOCH, HIGHLAND	3	10	219	0.40	9.77	7.20	FELT GAIRLOCH...	
2013	03	28	00	05	53.3	54.57	-4.42	243.7	521.9	10.1	0.4	IRISH SEA		3	243	0.30	8.25	3.30		
2013	03	28	20	25	34.3	52.75	-2.12	391.6	317.1	7.5	1.6	PENKRIDGE, STAFFS		10	90	0.30	2.33	6.20		
2013	03	31	08	00	17.1	52.98	-4.39	239.7	345.3	10.9	0.5	LLEYN PENINSULA		4	298	0.20	3.17	2.80		
2013	04	02	07	34	40.1	55.37	-3.40	311.4	609.0	4.1	0.8	MOFFAT, D & G		3	307	0.00	1.88	2.00	4KM NE OF MOFFAT	
2013	04	04	18	39	51.1	54.51	-2.09	394.3	512.4	8.5	1.1	BOWES, COUNTY DURHAM		3	266	0.40	3.76	2.80		
2013	04	05	23	49	50.5	55.87	-4.47	245.4	666.3	7.0	0.5	PAISLEY, RENFREWSHIRE		5	165	0.10	2.83	2.10		
2013	04	06	17	50	43.1	55.37	-3.38	312.7	609.5	4.7	0.3	MOFFAT, D & G		3	311	0.10	3.38	0.00	5KM NE OF MOFFAT	
2013	04	07	08	01	21.1	51.69	-3.77	277.9	200.7	9.2	1.2	NEATH, NEATH PORT TALBOT		6	109	0.30	3.32	4.50		
2013	04	10	01	58	49.7	52.27	-2.77	347.3	263.8	2.5	1.0	YARPOLE, HEREFORDSHIRE		4	197	0.20	6.05	2.60		
2013	04	19	18	21	00.0	54.43	-2.89	342.5	504.6	4.9	0.7	KENTMERE, CUMBRIA		3	217	0.10	1.22	0.00		
2013	04	20	11	32	08.6	52.56	-1.89	407.5	296.3	8.0	1.3	WALSALL, WEST MIDLANDS		7	129	0.50	6.50	3.90		
2013	04	25	21	40	09.0	53.45	-4.25	250.6	397.6	17.4	0.6	ANGLESEY, NORTH WALES		5	228	0.00	1.75	1.20	OFFSHORE LOCATION	
2013	04	26	19	42	12.0	56.36	-4.17	265.6	720.9	2.7	1.1	COMRIE, PERTH/KINROSS		5	160	0.20	5.08	1.40	10KM WEST OF COMRIE	
2013	04	28	02	54	24.1	55.23	-3.42	309.4	594.4	3.5	0.7	JOHNSTONEBRIDGE, D & G		3	231	0.20	3.77	0.00		
2013	04	28	17	56	10.9	55.24	-3.43	309.3	594.8	4.1	1.1	JOHNSTONEBRIDGE, D & G		6	207	0.10	2.16	0.00		
2013	04	29	05	33	24.9	52.74	-2.56	362.5	316.3	3.1	1.0	TELFORD, SHROPSHIRE		4	228	0.30	2.24	7.90	9KM NW OF TELFORD	
2013	05	01	05	19	51.8	52.08	-2.81	344.6	242.3	7.7	1.0	HEREFORD, HEREFORDSHIRE		4	185	0.10	4.42	4.40	5KM WNW OF HEREFORD	
2013	05	05	16	07	45.1	50.39	-4.62	213.9	58.0	4.5	1.8	LOSTWITHIEL, CORNWALL	2	4	158	0.30	4.42	6.70	FELT PAR & ST NEOT	
2013	05	08	00	58	42.9	51.91	-4.13	253.3	226.3	12.9	0.9	BRECHFA, CARMARTHENSHIRE		4	196	0.30	2.09	3.20		
2013	05	09	20	05	54.1	57.58	-5.41	196.3	859.5	2.4	1.3	TORRIDON, HIGHLAND		7	192	0.30	5.46	3.20	7KM NE OF TORRIDON	
2013	05	12	02	26	24.6	54.50	-3.11	328.4	512.5	9.8	0.7	GRASMERE, CUMBRIA		3	293	0.10	4.40	2.60	7KM NW OF GRASMERE	
2013	05	15	06	43	00.7	57.27	-4.76	233.7	823.2	7.5	1.4	CANNICH, HIGHLAND		7	103	0.40	5.33	2.60	8KM SOUTH OF CANNICH	
2013	05	15	17	43	48.6	57.67	-5.58	186.5	869.8	7.7	2.8	GAIRLOCH, HIGHLAND	3	18	107	0.20	2.79	4.40	FELT GAIRLOCH...	
2013	05	18	06	57	53.0	56.78	-5.61	179.2	771.1	8.5	1.4	ACHARACLE, HIGHLAND		9	166	0.30	7.11	5.40	11KM ENE ACHARACLE	
2013	05	18	19	18	02.8	56.78	-5.71	173.1	771.1	10.4	2.9	ACHARACLE, HIGHLAND		3	20	124	0.30	5.63	3.60	FELT ACHARACLE...
2013	05	27	16	04	34.2	51.88	-2.37	374.3	220.3	3.6	1.1	HUNTLEY, GLOUCESTERSHIRE		5	133	0.30	7.13	4.90		
2013	05	29	03	16	28.9	52.88	-4.72	217.0	335.2	10.5	3.8	LLEYN PENINSULA	4	30	159	0.40	4.12	3.10	FELT GWYNEDD...	
2013	05	29	03	20	39.5	52.88	-4.71	218.0	334.7	9.9	1.7	LLEYN PENINSULA	2	13	179	0.20	3.94	4.70	FELT BRYNCROES...	
2013	05	29	17	49	27.8	57.58	-5.43	194.8	859.4	2.5	1.5	TORRIDON, HIGHLAND		11	91	0.40	4.90	4.90	7KM EAST OF TORRIDON	
2013	05	29	18	33	43.4	57.57	-5.42	195.6	858.3	2.5	1.4	TORRIDON, HIGHLAND		11	89	0.50	4.83	4.80	7KM EAST OF TORRIDON	
2013	05	30	22	06	28.2	52.89	-4.73	216.6	336.2	11.4	0.8	LLEYN PENINSULA		2	9	193	0.20	2.69	2.60	FELT BRYNCROES...
2013	05	31	06	22	26.8	52.88	-4.71	217.7	335.0	9.5	1.4	LLEYN PENINSULA		2	11	180	0.20	2.56	3.30	FELT BRYNCROES...
2013	05	31	18	34	32.0	48.77	-0.74	492.7	-125.4	3.2	1.7	NORTHWEST FRANCE		6	345	0.10	3.80	2.50	100KM SE OF JERSEY	
2013	06	02	02	56	57.2	56.12	-6.13	143.2	699.2	7.9	1.5	COLONSAY, ARGYLL/BUTE	2	8	193	0.30	4.55	6.30	FELT SCALASAIG	
2013	06	10	03	12	13.3	59.93	0.20	522.7	1117.8	7.5	2.0	NORTHERN NORTH SEA		5	279	0.50	6.48	0.00	80KM ESE OF LERWICK	
2013	06	10	03	13	15.8	59.93	0.20	522.7	1117.8	7.5	1.6	NORTHERN NORTH SEA		5	279	0.50	6.25	0.00	80KM ESE OF LERWICK	
2013	06	14	20	21	39.7	56.99	-5.85	166.3	795.1	6.7	1.3	MALLAIG, HIGHLAND		6	216	0.20	1.05	1.30		

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Year	Mo	Dy	Hr	Mn	Secs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	Gap	RMS	ERH	ERZ	Comments
2013	06	16	22	58	30.5	53.22	-1.06	462.7	369.8	1.2	1.2	NEW OLLERTON, NOTTS	4	221	0.20	5.41	0.00	C/F	
2013	06	23	12	08	07.7	56.01	-6.07	146.2	687.0	8.6	1.8	JURA, ARGYLL/BUTE	8	188	0.40	9.02	2.10		
2013	06	26	03	51	53.8	53.53	-1.01	465.3	404.5	1.1	1.9	DONCASTER, S YORKSHIRE	2	7	144	0.50	4.77	0.00	C/F, FELT FOSTERHOUSES
2013	06	26	19	59	38.2	51.71	-3.14	321.4	201.7	12.5	0.9	BRYNITHHEL, BLAENAU GWENT	5	201	0.10	1.50	2.40		
2013	06	26	22	28	01.5	52.88	-4.72	217.1	334.8	8.6	2.7	LLEYN PENINSULA	3	17	70	0.30	2.36	3.30	FELT GWYNEDD
2013	06	26	22	28	29.3	52.88	-4.70	218.4	334.5	8.4	2.4	LLEYN PENINSULA	3	11	179	0.40	4.34	5.70	FELT GWYNEDD
2013	06	26	22	30	28.1	52.88	-4.71	218.0	334.7	7.9	1.2	LLEYN PENINSULA	2	11	179	0.30	3.54	5.00	FELT BRYNCROES
2013	06	29	14	35	29.6	53.25	-4.35	243.2	375.6	13.5	1.0	LLANGEFNI, ANGLESEY	7	133	0.10	2.33	1.80		
2013	06	30	12	13	07.0	49.69	-4.56	215.2	-20.6	8.4	1.8	ENGLISH CHANNEL	6	213	0.50	9.51	3.30	60KM SE OF FALMOUTH	
2013	07	01	23	58	35.4	52.88	-4.73	216.1	334.9	8.2	0.6	LLEYN PENINSULA	2	7	184	0.20	2.40	0.00	FELT ABERDARON
2013	07	02	21	44	15.3	50.13	-5.14	175.9	30.9	2.7	1.3	FALMOUTH, CORNWALL	3	3	243	0.30	9.70	4.50	FELT FALMOUTH...
2013	07	03	21	37	01.0	48.54	-1.89	408.3	-151.6	7.7	2.0	NORTHWEST FRANCE	6	179	0.40	7.86	5.70	75KM SSE OF JERSEY	
2013	07	06	14	03	12.7	48.84	-2.98	328.1	-117.5	7.5	2.2	NORTHWEST FRANCE	11	180	0.40	5.25	0.00	65KM SW OF JERSEY	
2013	07	13	16	18	35.9	55.35	-3.07	332.0	607.0	3.1	0.8	ETTRICK, BORDERS	6	174	0.10	2.38	2.30	8KM SSE OF ETTRICK	
2013	07	15	21	31	20.4	53.16	-3.73	284.3	364.1	4.3	1.4	LLANRWST, CONWY	2	13	129	0.20	2.44	3.40	FELT LLANLLECHID
2013	07	16	04	04	00.9	57.72	-5.72	178.5	875.7	5.5	2.8	GAIRLOCH, HIGHLAND	3	15	117	0.20	3.13	3.30	FELT GAIRLOCH...
2013	07	16	06	35	50.7	57.71	-5.76	176.2	875.1	5.2	0.7	GAIRLOCH, HIGHLAND	2	4	179	0.20	5.39	0.00	FELT GAIRLOCH
2013	07	18	00	10	50.2	53.41	-4.46	236.8	393.1	10.9	0.8	ANGLESEY, NORTH WALES	6	104	0.10	1.90	0.70		
2013	07	29	10	50	31.7	53.39	-4.78	215.4	392.1	8.0	1.2	ANGLESEY, NORTH WALES	8	225	0.10	2.56	1.80	OFFSHORE LOCATION	
2013	07	31	19	45	55.5	48.68	-2.45	366.7	-135.8	7.4	1.2	NORTHWEST FRANCE	5	349	0.00	7.71	0.00	60KM SSW OF JERSEY	
2013	07	31	22	09	25.5	55.80	-6.38	125.2	664.7	11.3	1.7	ISLAY, ARGYLL/BUTE	3	9	153	0.20	3.53	3.70	FELT ISLAY
2013	08	11	06	05	06.2	53.27	-2.32	378.5	374.9	10.4	2.1	KNUTSFORD, CHESHIRE	10	89	0.30	3.22	4.40		
2013	08	12	10	52	18.1	55.43	-5.14	201.5	619.6	7.7	1.3	ARRAN, NORTH AYRSHIRE	5	152	0.50	6.53	2.80		
2013	08	25	05	37	48.3	53.86	-3.38	309.3	441.7	4.2	2.5	IRISH SEA	3	16	201	0.20	3.92	3.40	FELT FLEETWOOD...
2013	08	25	07	13	24.2	53.89	-3.34	311.7	444.7	5.4	0.9	IRISH SEA	9	164	0.30	5.24	5.40		
2013	08	25	09	58	36.5	53.88	-3.39	308.4	443.8	5.3	3.3	IRISH SEA	3	26	56	0.50	3.62	7.60	FELT FLEETWOOD...
2013	08	27	10	06	06.0	56.64	-4.37	254.4	752.4	2.8	2.7	GLEN LYON, PERTH/KINROSS	3	19	79	0.40	4.83	6.20	FELT GLENLYON...
2013	08	28	14	27	46.3	52.29	-3.36	307.4	267.1	3.7	1.3	LLANDRINDOD WELLS, POWYS	8	134	0.30	4.46	6.50		
2013	08	31	01	11	41.9	55.62	-3.13	328.5	636.9	4.7	1.8	PEEBLES, BORDERS	3	12	135	0.30	4.34	4.20	FELT PEEBLES...
2013	08	31	06	36	11.4	53.89	-3.40	307.8	444.2	10.6	2.6	IRISH SEA	3	23	88	0.40	5.61	8.30	FELT FLEETWOOD...
2013	09	01	16	07	15.0	57.37	-5.49	190.0	835.9	4.3	0.7	LOCHCARRON, HIGHLAND	3	145	0.10	5.94	0.00		
2013	09	01	19	28	48.9	57.14	-5.80	169.8	811.9	6.8	1.1	SKYE, HIGHLAND	4	217	0.30	2.01	1.40		
2013	09	01	21	28	47.7	52.32	-3.60	290.9	269.9	10.8	1.1	RHAYADER, POWYS	7	113	0.20	2.62	3.30		
2013	09	03	06	44	36.2	56.36	-4.85	223.8	722.2	3.8	1.7	DALMALLY, ARGYLL/BUTE	12	84	0.20	4.34	6.80	8KM SE OF DALMALLY	
2013	09	06	17	21	06.7	52.96	-4.36	241.2	342.9	19.1	0.8	PWLLHELI, GWYNEDD	5	241	0.10	3.11	4.80	10KM NE OF PWLLHELI	
2013	09	09	20	51	48.8	56.37	-4.81	226.6	723.6	7.1	1.6	TYNDRUM, STIRLING	9	89	0.60	6.21	1.50	10KM SW OF TYNDRUM	
2013	09	13	09	05	52.1	55.55	-3.67	294.8	629.7	4.9	1.1	ABINGTON, S LANARKSHIRE	4	264	0.10	4.85	0.00	6KM NNE OF ABINGTON	
2013	09	17	03	22	19.9	51.87	-5.03	191.4	223.0	10.3	1.0	ROCH, PEMBROKESHIRE	4	285	0.20	5.16	1.70		
2013	09	22	23	06	02.1	51.76	-4.25	244.6	209.6	2.7	1.4	LLANNON, CARMARTHENSHIRE	4	268	0.10	2.83	2.10	9KM WEST OF LLANNON	
2013	09	26	06	21	12.3	53.64	-1.00	465.8	416.3	1.1	1.7	DONCASTER, S YORKSHIRE	5	163	0.40	4.94	0.00	C/F	

TABLE 1 : CATALOGUE OF EVENTS : 2013

Year	Mo	Dy	Hr	Mn	Secs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	Gap	RMS	ERH	ERZ	Comments	
2013	09	27	03	32	9.9	55.35	-3.22	322.8	607.1	3.2	0.6	ESKDALEMUIR, D & G		4	155	0.30	1.38	0.00		
2013	09	29	08	54	08.8	59.58	1.46	595.4	1081.6	17.1	2.8	NORTHERN NORTH SEA		19	137	0.30	4.33	7.70		
2013	09	30	08	32	18.4	53.27	-2.43	371.1	374.7	13.0	0.7	WINCHAM, CHESHIRE		5	161	0.20	3.18	3.70		
2013	10	04	20	49	13.8	57.34	-4.44	253.0	830.1	2.6	2.4	DRUMNADROCHIT, HIGHLAND	3	13	165	0.40	7.78	2.70	FELT DRUMNADROCHIT...	
2013	10	05	02	22	25.2	54.50	-3.01	334.9	511.8	4.3	1.8	GRASMERE, CUMBRIA		9	267	0.00	5.59	3.40		
2013	10	07	07	25	09.7	57.41	-5.27	203.6	840.5	5.3	1.1	STRATHCARRON, HIGHLAND		5	155	0.30	3.89	2.20		
2013	10	13	20	54	01.2	53.21	-3.89	273.7	369.5	7.2	1.0	DOLGARROG, CONWY	3	9	179	0.10	2.72	2.90	FELT DOLGARROG...	
2013	10	15	11	44	52.7	51.92	-2.78	346.1	224.9	19.6	1.0	ORCOP, HEREFORDSHIRE		4	116	0.10	3.94	3.10		
2013	10	20	17	06	44.6	53.55	-2.61	359.6	406.7	8.3	1.5	WIGAN, GTR MANCHESTER		9	82	0.20	2.80	6.90		
2013	10	25	01	28	20.8	57.59	-5.45	194.1	861.0	2.6	1.4	TORRIDON, HIGHLAND		7	198	0.50	8.86	7.40		
2013	10	26	09	45	13.8	55.26	-6.31	126.0	604.8	3.5	1.3	BALLINTOY, CO ANTRIM		3	240	0.20	8.81	3.30	OFFSHORE LOCATION	
2013	10	28	11	09	19.6	57.30	2.31	659.6	831.9	9.5	2.8	CENTRAL NORTH SEA		13	257	0.30	8.55	2.60	265KM EAST ABERDEEN	
2013	11	03	23	34	12.1	52.11	-0.86	477.8	246.8	9.7	1.2	MILTON KEYNES, BUCKS		5	169	0.20	5.87	9.90		
2013	11	12	11	00	16.8	52.41	-3.16	321.1	279.7	6.3	0.7	CLUN, SHROPSHIRE		5	169	0.10	2.40	5.20	8KM WEST OF CLUN	
2013	12	01	09	48	20.6	60.73	1.69	601.0	1210.8	23.9	3.4	NORTHERN NORTH SEA		17	172	0.30	3.96	6.00	170KM ENE OF LERWICK	
2013	12	01	20	45	36.5	55.08	-1.76	415.3	576.4	4.1	0.9	MORPETH, NORTHUMBERLAND		5	214	0.30	4.13	4.50	10KM SSW OF MORPETH	
2013	12	02	10	53	02.4	57.41	-5.48	191.2	840.3	2.6	1.3	LOCHCARRON, HIGHLAND	2	6	170	0.30	2.00	2.60	FELT LOCHCARRON	
2013	12	04	07	57	29.9	51.45	-8.92	-80.8	195.3	14.4	2.3	CELTIC SEA	3	6	184	0.30	5.39	1.00	FELT COUNTY CORK	
2013	12	06	05	21	26.2	52.94	-4.52	230.8	341.3	8.8	0.8	LLEYN PENINSULA		4	261	0.30	5.54	0.00		
2013	12	10	07	57	08.8	53.21	-1.01	466.3	368.6	1.1	1.4	NEW OLLERTON, NOTTS		6	143	0.60	5.14	0.00	C/F	
2013	12	10	19	12	16.3	53.21	-1.02	465.3	368.2	1.1	0.9	NEW OLLERTON, NOTTS		4	226	0.20	5.00	0.00	C/F	
2013	12	12	03	01	12.1	53.21	-1.04	464.0	368.1	1.2	1.5	NEW OLLERTON, NOTTS	3	8	193	0.60	2.18	0.00	C/F, FELT N OLLERTON	
2013	12	12	20	06	24.9	53.21	-1.06	462.6	368.4	1.1	1.6	NEW OLLERTON, NOTTS	3	8	108	0.30	4.75	0.00	C/F, FELT N OLLERTON	
2013	12	13	21	24	09.1	53.21	-1.04	464.0	368.6	1.2	1.2	NEW OLLERTON, NOTTS		6	106	0.50	9.19	0.00	C/F	
2013	12	16	02	31	59.5	53.21	-1.04	464.2	368.3	1.1	1.7	NEW OLLERTON, NOTTS		3	8	187	0.40	3.32	0.00	C/F, FELT N OLLERTON
2013	12	17	15	06	39.3	53.22	-1.04	463.8	369.5	1.2	1.5	NEW OLLERTON, NOTTS	3	5	223	0.50	1.79	0.00	C/F, FELT N OLLERTON	
2013	12	18	16	35	15.0	53.21	-1.05	463.4	368.7	1.2	1.2	NEW OLLERTON, NOTTS	3	5	263	0.20	4.62	0.00	C/F, FELT N OLLERTON	
2013	12	19	09	30	25.0	52.05	-3.66	286.3	239.9	4.5	1.9	LLANWRTHYD WELLS, POWYS		9	144	0.30	2.28	1.20		
2013	12	19	10	27	21.8	53.22	-1.02	465.2	369.5	1.2	1.3	NEW OLLERTON, NOTTS		6	225	0.20	1.53	0.00	C/F	
2013	12	20	21	23	17.2	53.20	-1.03	464.8	367.6	1.2	1.4	NEW OLLERTON, NOTTS		4	225	0.60	1.59	0.00	C/F	
2013	12	21	10	37	37.7	53.15	-5.38	173.7	366.8	12.2	1.0	IRISH SEA		5	323	0.30	9.86	7.90	50KM WSW OF HOLYHEAD	
2013	12	22	10	19	28.4	53.21	-1.00	466.4	368.5	1.1	1.1	NEW OLLERTON, NOTTS		3	267	0.40	1.46	0.00	C/F	
2013	12	22	01	24	32.7	52.89	-3.75	282.5	334.2	11.8	0.9	BALA, GWYNEDD		8	124	0.30	4.26	1.90	10KM WSW OF BALA	
2013	12	22	01	37	35.4	49.20	-2.07	394.8	-78.2	7.3	1.8	JERSEY, CHANNEL ISLANDS	3	8	127	0.10	0.85	0.60	FELT JERSEY	
2013	12	22	23	45	56.9	53.19	-1.05	463.6	366.2	1.2	1.5	NEW OLLERTON, NOTTS	3	5	193	0.50	8.35	0.00	C/F, FELT N OLLERTON	
2013	12	22	15	12	38.9	52.62	-2.92	337.9	302.9	11.5	0.9	PONTESBURY, SHROPSHIRE		5	200	0.10	4.04	1.40		
2013	12	23	00	20	34.9	53.22	-1.01	466.1	369.6	1.0	1.2	NEW OLLERTON, NOTTS		4	227	0.50	1.34	0.00	C/F	
2013	12	23	21	53	25.3	53.22	-1.00	466.7	369.8	1.1	0.9	NEW OLLERTON, NOTTS		3	268	0.30	1.35	0.00	C/F	

TABLE 2 : PHASE DATA

January 1 2013	Time: 08:27 09.9 UTC	Magnitude: 0.7 ML	LBWR	HE	52.0	ES	10:09	18.75	-0.42
Lat: 56.049N	Lon: -4.286W	Depth: 7.3 km	LBWR	HN	52.0	IAML	10:09	20.18	88 0.36
Grid Ref: 257.64 kmE	686.37 kmN	RMS: 0.20 secs	LBWR	HE	52.0	IAML	10:09	20.42	96 0.18
Locality: BALFRON, STIRLING			CWF	HZ	54.0	EP	10:09	12.50	-0.08
Velocity model: Lownet	Xnear: 100.0 Xfar: 200.0		CWF	HE	54.0	ES	10:09	19.59	-0.05
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			CWF	HN	54.0	IAML	10:09	21.53	11 0.18
EAB EZ 15.8 EP 08:27 13.21		-0.01	CWF	HE	54.0	IAML	10:09	22.78	17 0.16
INVG HZ 44.7 EP 08:27 17.73		0.02	HPK	HZ	93.9	EP	10:09	18.45	-0.33
INVG HE 44.7 ES 08:27 23.36		-0.08	HPK	HN	93.9	ES	10:09	31.24	0.88
INVG HE 44.7 IAML 08:27 23.65	3 0.21		HPK	HE	93.9	IAML	10:09	34.50	44 0.18
INVG HN 44.7 IAML 08:27 24.45	4 0.23		HPK	HN	93.9	IAML	10:09	35.32	72 0.30
LAWE HZ 73.0 EP 08:27 22.39		0.31	HLM1	HZ	146.0	EP	10:09	27.55	0.85
LAWE HN 73.0 ES 08:27 30.81		-0.18	HLM1	HE	146.0	IAML	10:09	47.72	19 0.36
LAWE HN 73.0 IAML 08:27 34.35	7 0.20		HLM1	HN	146.0	IAML	10:09	48.27	3 0.14
LAWE HE 73.0 IAML 08:27 34.59	12 0.12		FOEL	HZ	150.0	EP	10:09	28.04	0.78
GALL HZ 134.0 EP 08:27 31.58		0.11	FOEL	HE	150.0	IAML	10:09	48.01	11 0.40
GALL HN 134.0 ES 08:27 46.99		-0.24	FOEL	HN	150.0	IAML	10:09	49.91	24 0.30
GALL HE 134.0 IAML 08:27 48.54	1 0.18		MCH1	HZ	189.0	EP	10:09	33.67	1.17
GALL HN 134.0 IAML 08:27 48.64	1 0.23		MCH1	HE	189.0	IAML	10:09	57.00	13 0.42
MCH1 HN 189.0 IAML 08:27			MCH1	HN	189.0	IAML	10:09	58.89	12 0.30
January 5 2013	Time: 23:15 00.2 UTC	Magnitude: 2.7 ML	EDMD	HZ	192.0	EP	10:09	34.14	1.21
Lat: 53.019N	Lon: 4.414W	Depth: 5.0 km	EDMD	HE	192.0	IAML	10:09	58.05	17 0.18
Grid Ref: 829.97 kmE	366.15 kmN	RMS: 0.40 secs	EDMD	HN	192.0	IAML	10:09	59.55	14 0.18
Locality: SOUTHERN NORTH SEA			MONM	HZ	193.0	EP	10:09	34.58	1.54
Velocity model: North Sea	Xnear: 400.0 Xfar: 600.0		MONM	HE	193.0	IAML	10:10	00.64	15 0.34
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			MONM	HN	193.0	IAML	10:10	02.13	15 0.21
WACR HZ 257.0 EP 23:15 37.36		0.20	January 14 2013	Time: 13:51 24.3 UTC	Magnitude: 1.9 ML				
WACR HN 257.0 ES 23:16 04.24		0.11	Lat: 49.958N	Lon: -1.191W	Depth: 5.0 km				
WACR HN 257.0 IAML 23:16 09.53	40 0.38		Grid Ref: 458.02 kmE	6.81 kmN	RMS: 0.10 secs				
WACR HE 257.0 IAML 23:16 10.64	33 0.28		Locality: ENGLISH CHANNEL						
CWF HZ 386.0 EP 23:15 53.27		0.02	Velocity model: Lownet	Xnear: 500.0 Xfar: 1000.0					
CWF HN 386.0 IAML 23:16 49.86	7 0.36		Comment: 70KM SOUTH OF I.O.W						
CWF HE 386.0 IAML 23:16 53.66	5 0.30		STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES						
HPK HZ 414.0 EP 23:15 56.58		-0.11	JDC EZ 105.0 EP 13:51 41.61						
HPK HE 414.0 IAML 23:17 04.24	19 0.62		JDG EZ 105.0 EP 13:51 41.56						
HPK HN 414.0 IAML 23:17 12.82	17 0.40		JDC EE 105.0 ES 13:51 54.42						
EDMD HZ 465.0 EP 23:16 03.23		0.27	JDG EN 105.0 ES 13:51 54.31						
EDMD HN 465.0 ES 23:16 48.64		-0.11	JRS EZ 107.0 EP 13:51 41.92						
EDMD HN 465.0 IAML 23:16 52.15	13 0.18		JRS EE 107.0 ES 13:51 54.75						
EDMD HE 465.0 IAML 23:16 52.42	12 0.18		JSA HZ 111.0 EP 13:51 42.45						
MCH1 HZ 516.0 EP 23:16 08.01		-1.31	JSA HN 111.0 ES 13:51 55.62						
MCH1 HN 516.0 ES 23:16 59.38		-0.38	JSA HE 111.0 IAML 13:51 57.04	26 0.16					
MCH1 HE 516.0 IAML 23:17 00.36	14 0.74		JSA HN 111.0 IAML 13:51 57.24	26 0.32					
MCH1 HE 516.0 IAML 23:17 01.14	8 0.32		DYA HN 203.0 ES 13:52 17.92						
WPM1 EZ 557.0 EP 23:16 14.41		-0.06	DYA HN 203.0 IAML 13:52 29.44	14 0.36					
ESK HZ 559.0 EP 23:16 14.39		-0.32	DYA HE 203.0 IAML 13:52 33.42	9 0.62					
January 12 2013	Time: 03:59 03.1 UTC	Magnitude: 1.4 ML	January 18 2013	Time: 05:20 44.4 UTC	Magnitude: 2.9 ML				
Lat: 53.202N	Lon: -1.022W	Depth: 1.1 km	Lat: 52.801N	Lon: -1.250W	Depth: 13.5 km				
Grid Ref: 465.32 kmE	367.69 kmN	RMS: 0.50 secs	Grid Ref: 450.56 kmE	322.91 kmN	RMS: 0.20 secs				
Locality: NEW OLLERTON, NOTTS			Locality: LOUGHBOROUGH, LEICS						
Velocity model: Lownet	Xnear: 100.0 Xfar: 200.0		Velocity model: Lownet	Xnear: 100.0 Xfar: 200.0					
Comment: C/F,FELT N OLLERTON		Intensity: 3	Comment: FELT LEICESTERSHIRE...		Intensity: 4				
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES						
LBWR HZ 51.8 EP 03:59 12.46		-0.04	CWF HZ 8.0 EP 05:20 47.15						
LBWR HE 51.8 ES 03:59 18.93		-0.45	CWF HE 8.0 ES 05:20 49.41						
LBWR HE 51.8 IAML 03:59 20.54	45 0.46		CWF HN 8.0 IAML 05:20 49.46	4164 0.10					
LBWR HN 51.8 IAML 03:59 20.55	60 0.34		CWF HE 8.0 IAML 05:20 49.59	4502 0.10					
CWF HZ 55.0 EP 03:59 12.90		-0.07	STNC HZ 72.0 IP D 05:20 56.63						
CWF HE 55.0 ES 03:59 19.86		-0.33	STNC HN 72.0 ES 05:21 05.03						
CWF HN 55.0 IAML 03:59 25.69	6 0.12		STNC HE 72.0 IAML 05:21 06.25	541 0.32					
CWF HE 55.0 IAML 03:59 27.04	9 0.30		STNC HE 72.0 IAML 05:21 06.64	433 0.28					
HPK HZ 93.1 EP 03:59 19.05		0.17	LBWR HZ 74.0 IP D 05:20 56.80						
HPK HE 93.1 ES 03:59 30.39		-0.03	LBWR HE 74.0 ES 05:21 06.02						
HPK HE 93.1 IAML 03:59 33.77	30 0.20		LBWR HN 74.0 IAML 05:21 06.69	391 0.37					
HPK HN 93.1 IAML 03:59 35.79	49 0.22		LBWR HE 74.0 IAML 05:21 08.37	683 0.32					
HLM1 HZ 146.0 EP 03:59 28.06		1.03	LMK HZ 95.7 EP 05:21 00.30						
HLM1 HE 146.0 ES 03:59 45.14		0.62	LMK HN 95.7 ES 05:21 11.64						
HLM1 HE 146.0 IAML 03:59 49.68	10 0.26		LMK HE 95.7 IAML 05:21 13.43	619 0.28					
HLM1 HN 146.0 IAML 03:59 50.02	1 0.32		LMK HN 95.7 IAML 05:21 13.47	647 0.23					
FOEL HN 150.0 ES 03:59 46.21		0.78	HLM1 HZ 115.0 EP 05:21 02.55						
LLW BZ 182.0 EP 03:59 32.52		0.67	WACR HZ 127.0 EP 05:21 04.58						
LLW BN 182.0 ES 03:59 54.17		1.31	WACR HN 127.0 ES 05:21 18.75						
MCH1 HZ 189.0 EP 03:59 34.24		1.39	WACR HE 127.0 IAML 05:21 20.54	254 0.17					
MCH1 HN 189.0 ES 03:59 55.59		1.01	WACR HN 127.0 IAML 05:21 22.62	235 0.14					
MCH1 HE 189.0 IAML 03:59 58.39	8 0.24		STRD HZ 130.0 IP C 05:21 05.13						
MCH1 HN 189.0 IAML 03:59 59.66	6 0.52		STRD HE 131.0 IP D 05:21 05.07						
EDMD HN 192.0 ES 03:59 56.24		1.30	FOEL HZ 132.0 EP 05:21 05.92						
EDMD HN 192.0 IAML 03:59 59.62	8 0.38		SWN1 HZ 148.0 IP C 05:21 08.05						
EDMD HE 192.0 IAML 04:00 00.00	7 0.20		MCH1 HZ 149.0 IP C 05:21 07.73						
January 14 2013	Time: 10:09 02.9 UTC	Magnitude: 1.8 ML	MONM HZ 151.0 IP C 05:21 08.02						
Lat: 53.193N	Lon: -1.026W	Depth: 1.1 km	OLDB HZ 155.0 EP 05:21 08.53						
Grid Ref: 465.07 kmE	366.69 kmN	RMS: 0.60 secs	GDLE HZ 183.0 EP 05:21 11.66						
Locality: NEW OLLERTON, NOTTS			WLF1 HZ 218.0 EP 05:21 16.34						
Velocity model: Lownet	Xnear: 100.0 Xfar: 200.0		WPS HZ 228.0 EP 05:21 17.66						
Comment: C/F,FELT N OLLERTON		Intensity: 3	EDMD HZ 231.0 EP 05:21 17.06						
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			KESW HZ 234.0 EP 05:21 17.85						
LBWR HZ 52.0 EP 10:09 11.83		-0.47	HTL HZ 300.0 EP 05:21 26.08						

TABLE 2 : PHASE DATA

January 19 2013	Time: 14:59 07.6 UTC	Magnitude: 0.7 ML	CWF	HN	60.1	IAML	09:38	28.57	14	0.14
Lat: 53.127N	Lon: -4.325W	Depth: 11.8 km	HPK	HZ	81.3	EP	09:38	23.49		0.24
Grid Ref: 244.45	kME	361.43 kmN	HPK	HN	81.3	ES	09:38	32.81		-0.24
Locality: CAERNARFON,GWYNEDD		RMS: 0.10 secs	HPK	HE	81.3	IAML	09:38	35.26	146	0.16
Velocity model: Llwyn	Xnear: 80.0	Xfar: 200.0	HPK	HN	81.3	IAML	09:38	35.49	81	0.17
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			HLM1	HZ	113.0	EP	09:38	27.99		0.19
WLF1 HZ 18.7 EP 09:59 11.25		-0.09	HLM1	HE	113.0	ES	09:38	40.90		-0.01
WLF1 HE 18.7 ES 09:59 13.99		0.11	HLM1	HN	113.0	IAML	09:38	42.42	8	0.26
WLF1 HN 18.7 IAML 09:59 14.16	22	0.12	HLM1	HN	113.0	IAML	09:38	42.53	5	0.34
WLF1 HE 18.7 IAML 09:59 14.22	41	0.07								
YRC EZ 21.7 EP 09:59 11.75		-0.01								
WME EZ 30.1 EP 09:59 12.87		-0.18								
WPS HZ 32.6 EP 09:59 13.55		0.12								
WPS HN 32.6 IAML 09:59 17.36	5	0.14								
WPS HE 32.6 IAML 09:59 17.90	5	0.09								
FOEL HE 80.0 ES 09:59 29.98		0.04								
FOEL HE 80.0 IAML 09:59 30.36	4	0.13								
FOEL HN 80.0 IAML 09:59 31.17	4	0.13								
January 21 2013	Time: 11:40 04.1 UTC	Magnitude: 1.4 ML	February 4 2013	Time: 10:51 56.8 UTC	Magnitude: 1.6 ML					
Lat: 52.800N	Lon: -1.257W	Depth: 11.2 km	Lat: 52.748N	Lon: -1.044W	Depth: 2.8 km					
Grid Ref: 450.09	kME	RMS: 0.30 secs	Grid Ref: 464.52	kmE	317.17 kmN					
Locality: LOUGHBOROUGH,LEICS			Locality: LOUGHBOROUGH,LEICS							
Velocity model: Lownet	Xnear: 100.0	Xfar: 200.0	Velocity model: Lownet	Xnear: 100.0	Xfar: 200.0					
Comment: FELT LOUGHBOROUGH		Intensity: 2	Comment: FELT LOUGHBOROUGH		Intensity: 2					
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							
CWF HZ 7.7 EP 11:40 06.37		-0.22	CWF HZ 17.8 EP 10:52 00.67		0.39					
CWF HE 7.7 ES 11:40 08.58		0.16	CWF HN 17.8 ES 10:52 03.30		0.44					
CWF HN 7.7 IAML 11:40 08.72	146	0.08	CWF HE 17.8 IAML 10:52 03.42	156	0.08					
CWF HE 7.7 IAML 11:40 08.81	150	0.07	CWF HN 17.8 IAML 10:52 03.54	195	0.08					
LBWR HZ 73.9 EP 11:40 16.33		-0.12	STNC HZ 87.0 EP 10:52 10.58		-0.88					
LBWR HN 73.9 ES 11:40 25.18		-0.30	HLM1 HN 127.0 ES 10:52 32.70		-0.27					
LBWR HN 73.9 IAML 11:40 26.03	11	0.19	FOEL HZ 146.0 EP 10:52 19.83		-0.68					
LBWR HE 73.9 IAML 11:40 26.07	16	0.25	MCH1 HZ 157.0 EP 10:52 22.45		0.43					
LMK HZ 96.0 EP 11:40 19.69		-0.15	MCH1 HN 157.0 ES 10:52 40.49		0.02					
LMK HE 96.0 ES 11:40 31.86		0.51	MONM HZ 157.0 EP 10:52 22.84		0.85					
WACR HZ 128.0 EP 11:40 24.09		-0.33	MONM HN 157.0 ES 10:52 41.21		0.80					
WACR HE 128.0 ES 11:40 39.09		-0.19								
FOEL HZ 131.0 EP 11:40 25.72		0.69								
FOEL HE 131.0 ES 11:40 40.47		0.14								
FOEL HE 131.0 IAML 11:40 41.89	8	0.27								
FOEL HN 131.0 IAML 11:40 41.89	10	0.52								
January 31 2013	Time: 04:16 07.8 UTC	Magnitude: 2.4 ML	February 4 2013	Time: 10:51 59.0 UTC	Magnitude: 2.4 ML					
Lat: 58.465N	Lon: -4.746W	Depth: 2.1 km	Lat: 52.748N	Lon: -1.044W	Depth: 2.8 km					
Grid Ref: 239.84	kME	RMS: 0.50 secs	Grid Ref: 464.52	kmE	317.17 kmN					
Locality: LAIG,HIGHLAND			Locality: LOUGHBOROUGH,LEICS							
Velocity model: Lownet	Xnear: 200.0	Xfar: 400.0	Velocity model: Lownet	Xnear: 150.0	Xfar: 300.0					
Comment: FELT ERIBOL		Intensity: 3	Comment: FELT LOUGHBOROUGH		Intensity: 2					
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							
BIGH HZ 48.9 IP D 04:16 17.16		0.55	CWF HZ 17.8 EP 10:52 02.49		-0.04					
BIGH HN 48.9 ES 04:16 22.32		-0.74	CWF HN 17.8 ES 10:52 05.07		-0.03					
BIGH HE 48.9 IAML 04:16 22.62	386	0.12	CWF HE 17.8 IAML 10:52 05.30	699	0.46					
BIGH HN 48.9 IAML 04:16 22.71	539	0.13	CWF HN 17.8 IAML 10:52 05.42	1195	0.22					
KAC EZ 112.0 IP D 04:16 26.73		0.22	LBWR HZ 85.9 EP 10:52 13.60		0.04					
MDO EZ 116.0 IP D 04:16 27.33		0.18	LBWR HN 85.9 ES 10:52 24.16		-0.02					
MCD EZ 132.0 IP C 04:16 29.85		0.29	LBWR HN 85.9 IAML 10:52 27.49	165	0.22					
KPL HZ 136.0 EP 04:16 30.63		0.48	LBWR HE 85.9 IAML 10:52 28.00	185	0.24					
KPL HN 136.0 ES 04:16 45.77		-0.71	STNC HZ 87.0 EP 10:52 13.76		0.05					
KPL HN 136.0 IAML 04:16 48.13	66	0.23	STNC HE 87.0 ES 10:52 24.51		0.07					
KPL HE 136.0 IAML 04:16 48.60	83	0.22	STNC HN 87.0 IAML 10:52 25.03	267	0.32					
MME1 EZ 166.0 IP C 04:16 34.09		-0.38	STNC HE 87.0 IAML 10:52 25.64	157	0.36					
DRUM HZ 219.0 EP 9 04:16 42.55		1.36	WACR HZ 113.0 EP 10:52 17.34		-0.36					
DRUM HE 219.0 ES 04:17 08.27		1.32	WACR HN 113.0 IAML 10:52 31.13	122	0.20					
DRUM HE 219.0 IAML 04:17 09.63	26	0.12	WACR HE 113.0 IAML 10:52 35.52	87	0.22					
DRUM HN 219.0 IAML 04:17 10.24	24	0.12								
LWR HZ 276.0 EP 04:16 48.07		-0.15								
LWR HN 276.0 ES 04:17 18.36		0.61								
LWR HN 276.0 IAML 04:17 29.63	11	0.30								
LWR HE 276.0 IAML 04:17 32.18	14	0.55								
ESY EZ 312.0 EP 04:16 52.42		-0.35								
January 31 2013	Time: 09:38 09.8 UTC	Magnitude: 1.6 ML	February 7 2013	Time: 22:41 04.1 UTC	Magnitude: 2.3 ML					
Lat: 53.229N	Lon: -1.685W	Depth: 12.2 km	Lat: 53.057N	Lon: -4.374W	Depth: 16.7 km					
Grid Ref: 421.03	kME	RMS: 0.10 secs	Grid Ref: 240.92	kmE	353.75 kmN					
Locality: BAKEWELL,DERBYSHIRE			Locality: CAERNARFON BAY,GWYNEDD							
Velocity model: Lownet	Xnear: 100.0	Xfar: 200.0	Velocity model: Mid Wales	Xnear: 80.0	Xfar: 200.0					
Comment: FELT GWYNEDD		Intensity: 3	Comment: FELT GWYNEDD		Intensity: 3					
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							
YLL EZ 16.5 EP C 22:41 08.27			YLL EZ 25.4 IP D 22:41 09.19							
YRC EZ 25.4 IP D 22:41 09.19			WLF1 HZ 25.9 IP C 22:41 09.31							
WLF1 HZ 25.9 IP C 22:41 09.31			WLF1 HZ 25.9 AMPG 22:41 09.36	5457	0.06					
WLF1 HZ 25.9 ES 22:41 12.91			WLF1 HZ 25.9 AMSG 22:41 13.08	35013	0.06					
WLF1 HZ 25.9 IAML 22:41 13.15	3113	0.10	WLF1 HZ 25.9 IAML 22:41 13.17	1707	0.10					
WLF1 HZ 25.9 IAML 22:41 13.17			WME EZ 38.1 EP C 22:41 11.09		0.02					
WME EZ 38.1 AMSG 22:41 11.22	1262	0.09	WME EZ 38.1 AMPG 22:41 16.30	2675	0.06					
WME EZ 38.1 AMPG 22:41 16.30			WPS HZ 39.1 EP C 22:41 11.37		0.16					

TABLE 2 : PHASE DATA

WPS	HE	39.1	ES	22:41	16.10	-0.23	MCH1	HE	149.0	IAML	22:45	37.82	12	0.14							
WPS	HE	39.1	IAML	22:41	16.90	164 0.30	MCH1	HN	149.0	IAML	22:45	37.87	14	0.24							
WPS	HN	39.1	IAML	22:41	17.05	106 0.20	MONM	HZ	171.0	EP	C	22:45	21.38	0.36							
LLW	BZ	53.0	EP	D	22:41	13.21	-0.09	LBWR	HZ	181.0	EP		22:45	22.50	0.27						
LLW	BE	53.0	ES		22:41	19.84	-0.08	KESW	HZ	191.0	EP		22:45	23.03	-0.42						
FOEL	HZ	81.0	EP	C	22:41	17.55	0.00	February 8 2013 Time: 18:04 22.7 UTC Magnitude: 1.1 ML													
FOEL	HZ	81.0	AMPG		22:41	17.60	67 0.06	Lat: 51.681N Lon: -3.664W Depth: 3.1 km													
FOEL	HE	81.0	ES		22:41	26.98	-0.25	Grid Ref: 284.97 kmE 199.39 kmN RMS: 0.40 secs													
FOEL	HZ	81.0	AMSG		22:41	27.55	821 0.06	Locality: MAESTEG,BRIDGEND													
FOEL	HE	81.0	IAML		22:41	28.30	117 0.56	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0													
FOEL	HN	81.0	IAML		22:41	30.42	75 0.48	Comment: 8KM NORTH OF MAESTEG													
LPW	BZ	107.0	EP	D	22:41	21.24	-0.17	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES				
LPW	BE	107.0	ES		22:41	33.80	-0.07	LPW	BZ	55.6	EP		18:04	32.62				0.18			
LPW	BE	107.0	IAML		22:41	34.12	112 0.15	LPW	BN	55.6	ES		18:04	40.41				0.83			
LPW	BN	107.0	IAML		22:41	36.97	106 0.15	LPW	BE	55.6	IAML		18:04	40.51	13	0.25					
HLM1	HZ	117.0	EP	D	22:41	23.14	0.15	LPW	BN	55.6	IAML		18:04	40.65	8	0.25					
HLM1	HN	117.0	ES		22:41	37.15	0.56	MCH1	HZ	57.8	EP		18:04	32.62				-0.19			
HLM1	HN	117.0	IAML		22:41	39.09	52 0.18	MCH1	HN	57.8	ES		18:04	40.05				-0.17			
HLM1	HE	117.0	IAML		22:41	39.75	28 0.12	MCH1	HE	57.8	IAML		18:04	40.41	17	0.24					
RSBS	HN	125.0	IAML		22:41	40.89	21 0.16	MCH1	HN	57.8	IAML		18:04	40.49	14	0.16					
RSBS	HE	125.0	IAML		22:41	41.00	29 0.10	RSBS	HZ	80.4	EP		18:04	35.91				-0.42			
IOMK	HZ	135.0	EP		22:41	25.77	0.21	RSBS	HE	80.4	ES		18:04	45.49				-0.82			
IOMK	HE	135.0	ES		22:41	41.43	0.41	MONM	HZ	61.9	EP		18:04	43.59	7	0.30		-0.13			
IOMK	HE	135.0	IAML		22:41	42.61	36 0.12	MONM	HN	61.9	IAML		18:04	43.90	7	0.28		-0.06			
IOMK	HN	135.0	IAML		22:41	43.74	28 0.24	RSBS	HZ	80.4	EP		18:04	45.70	5	0.16					
STNC	HN	145.0	IAML		22:41	46.41	110 0.34	RSBS	HE	80.4	IAML		18:04	45.77	6	0.10					
STNC	HE	145.0	IAML		22:41	47.47	102 0.21	HLM1	HZ	108.0	EP		18:04	40.87							
MCH1	HZ	150.0	EP	C	22:41	27.91	0.16	RSBS	HN	80.4	IAML		18:04	45.26							
MCH1	HN	150.0	ES		22:41	44.88	0.10	RSBS	HE	80.4	IAML		18:04	45.77							
MCH1	HN	150.0	IAML		22:41	47.01	27 0.36	HTL	HZ	95.4	EP		18:04	38.93				0.31			
MCH1	HE	150.0	IAML		22:41	47.30	28 0.52	HTL	HE	95.4	ES		18:04	50.50				0.22			
SPK	EZ	164.0	EP		22:41	28.89	-0.54	HTL	HN	95.4	IAML		18:04	52.19	10	0.40					
SPK	EE	164.0	ES		22:41	47.71	0.05	HTL	HE	95.4	IAML		18:04	52.26	6	0.28					
SPK	EN	164.0	IAML		22:41	51.14	49 0.30	HLM1	HZ	108.0	EP		18:04	40.87				0.31			
SPK	EE	164.0	IAML		22:41	51.22	77 0.24	HLM1	HN	108.0	IAML		18:04	59.16	10	0.22					
HPK	HN	208.0	IAML		22:42	05.12	32 0.22	HLM1	HE	108.0	IAML		18:04	59.18	12	0.14					
HPK	HE	208.0	IAML		22:42	06.88	37 0.16	February 9 2013 Time: 20:13 55.6 UTC Magnitude: 1.7 ML													
CWF	HZ	209.0	EP		22:41	34.98	-0.14	Lat: 53.505N Lon: -2.436W Depth: 12.2 km													
CWF	HN	209.0	ES		22:41	58.05	0.60	Grid Ref: 371.09 kmE 401.04 kmN RMS: 0.20 secs													
CWF	HN	209.0	IAML		22:42	01.20	40 0.28	Locality: LEIGH,GTR MANCHESTER													
EDMD	HZ	253.0	EP		22:41	40.07	-0.49	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0													
EDMD	HN	253.0	ES		22:42	07.33	0.52	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES				
EDMD	HE	253.0	IAML		22:42	16.83	22 0.16	LBWR	HZ	48.6	EP		20:14	04.11				-0.01			
EDMD	HN	253.0	IAML		22:42	20.40	23 0.22	LBWR	HN	48.6	ES		20:14	10.32				0.00			
ESK	HZ	263.0	EP		22:41	41.49	-0.32	LBWR	HE	48.6	IAML		20:14	10.82	45	0.08					
GDLE	HZ	280.0	EP		22:41	43.99	0.09	LBWR	HN	48.6	IAML		20:14	11.19	80	0.22					
GDLE	HN	280.0	ES		22:42	13.26	0.70	HPK	HZ	73.5	EP		20:14	08.11				0.16			
GDLE	HN	280.0	IAML		22:42	14.32	28 0.24	HPK	HN	73.5	ES		20:14	16.82				-0.11			
GDLE	HE	280.0	IAML		22:42	14.56	18 0.26	HPK	HN	73.5	IAML		20:14	17.24	48	0.24					
February 7 2013 Time: 22:44 54.5 UTC Magnitude: 1.9 ML																					
Lat: 53.047N Lon: -4.368W Depth: 14.0 km																					
Grid Ref: 241.28 kmE 352.63 kmN RMS: 0.20 secs																					
Locality: CAERNARFON BAY,Gwynedd																					
Velocity model: Mid Wales Xnear: 80.0 Xfar: 200.0																					
Comment: FELT GWYNEDD Intensity: 3																					
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES	CWF	HE	114.0	IAML	20:14	29.00	15	0.12				
YLL	EZ	16.8	EP	C	22:44	58.62	0.40	CWF	HN	114.0	IAML	20:14	29.37	10	0.17						
YRC	EZ	26.6	EP	D	22:44	59.55	-0.04	HLM1	HZ	114.0	EP	20:14	13.97				-0.07				
WLF1	HZ	27.0	EP	C	22:44	59.65	-0.01	HLM1	HN	114.0	ES	20:14	27.38				-0.11				
WLF1	HN	27.0	ES		22:45	03.18	-0.20	HLM1	HN	114.0	IAML	20:14	28.77	22	0.34						
WLF1	HN	27.0	IAML		22:45	03.42	312 0.12	HLM1	HE	114.0	IAML	20:14	29.00	28	0.28						
WLF1	HE	27.0	IAML		22:45	03.49	1119 0.10	WME	EZ	125.0	EP	20:14	15.85				0.32				
WME	EZ	39.1	EP	C	22:45	01.42	-0.12	KESW	HZ	128.0	EP	20:14	16.37				0.29				
WME	EZ	39.1	AMPG		22:45	01.59	387 0.14	WLF1	HZ	133.0	EP	20:14	16.68				0.02				
WME	EZ	39.1	AMSG		22:45	06.51	1131 0.09	WLF1	HN	133.0	ES	20:14	32.01				0.00				
WPS	HZ	40.3	EP		22:45	01.71	0.00	WPS	HZ	138.0	EP	20:14	17.42				0.07				
WPS	HN	40.3	IAML		22:45	06.74	47 0.20	WPS	HN	138.0	ES	20:14	33.30								
WPS	HE	40.3	IAML		22:45	07.23	82 0.26	YRC	EZ	145.0	EP	20:14	18.20				-0.24				
LLW	BZ	52.1	EP	D	22																

TABLE 2 : PHASE DATA

MONM	HZ	82.8	EP	21:51	10.65	0.16	HPK	HN	92.9	ES	10:38	02.53	0.02
MONM	HN	82.8	ES	21:51	20.43	-0.07	HPK	HE	92.9	IAML	10:38	06.10	26 0.18
MONM	HN	82.8	IAML	21:51	20.88	11 0.24	HPK	HN	92.9	IAML	10:38	07.20	49 0.22
MONM	HE	82.8	IAML	21:51	21.66	7 0.30	MCH1	HZ	190.0	EP	10:38	05.24	0.13
HTL	HZ	88.5	EP	21:51	11.45	0.10	MCH1	HE	190.0	IAML	10:38	30.91	7 0.38
HTL	HE	88.5	ES	21:51	21.71	-0.28	MCH1	HN	190.0	IAML	10:38	32.05	6 0.50
HTL	HE	88.5	IAML	21:51	24.58	7 0.21	MONM	HZ	194.0	EP	10:38	06.29	0.63
HTL	HN	88.5	IAML	21:51	25.54	8 0.24	MONM	HN	194.0	ES	10:38	28.18	0.72
MCH1	HZ	96.1	EP	21:51	12.47	-0.09	MONM	HN	194.0	IAML	10:38	32.09	7 0.26
MCH1	HN	96.1	ES	21:51	23.68	-0.39	MONM	HE	194.0	IAML	10:38	32.41	11 0.32
MCH1	HE	96.1	IAML	21:51	23.91	5 0.14							
MCH1	HN	96.1	IAML	21:51	23.94	6 0.18	February 14 2013						
LPW	BZ	122.0	EP	21:51	16.91	0.42	Time: 17:40 19.9 UTC						
LPW	BN	122.0	ES	21:51	31.31	0.43	Lat: 55.136N						
LPW	BN	122.0	IAML	21:51	31.98	4 0.16	Lon: -5.447W						
LPW	BE	122.0	IAML	21:51	32.17	3 0.21	Grid Ref: 180.31 kmE 587.84 kmN						
RSBS	HZ	137.0	EP	21:51	18.78	0.02	Locality: NORTH CHANNEL						
HLM1	HZ	155.0	EP	21:51	21.42	0.15	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0						
HLM1	HE	155.0	ES	21:51	38.91	-0.24	Comment: 30KM WNW BALLANTRAE						
HLM1	HN	155.0	IAML	21:51	40.93	2 0.32	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES						
HLM1	HE	155.0	IAML	21:51	41.19	3 0.16	CLGH HZ 42.8 EP 17:40 27.55 0.09						
February 9 2013							CLGH HE 42.8 ES 17:40 32.77 -0.18						
Lat: 51.165N							CLGH HN 42.8 IAML 17:40 32.86 0.06						
Grid Ref: 311.14 kmE 141.47 kmN							CLGH HE 42.8 IAML 17:40 33.03 0.07						
Locality: WATCHET,SOMERSET													
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0													
Comment: 6KM SE OF WATCHET													
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES													
OLDB HZ 74.5 EP 21:51 32.99 -0.11													
OLDB HN 74.5 ES 21:51 42.24 -0.09													
MONM HZ 81.7 EP 21:51 34.48 0.24													
MONM HN 81.7 ES 21:51 44.27 -0.04													
MONM HN 81.7 IAML 21:51 44.73 13 0.24													
MONM HE 81.7 IAML 21:51 44.82 7 0.24													
HTL HE 87.1 ES 21:51 45.54 -0.20													
HTL HE 87.1 IAML 21:51 48.11 8 0.40													
HTL HN 87.1 IAML 21:51 48.33 6 0.24													
MCH1 HZ 94.6 EP 21:51 36.38 0.14							February 15 2013						
MCH1 HN 94.6 ES 21:51 47.45 -0.32							Time: 12:35 35.2 UTC						
MCH1 HE 94.6 IAML 21:51 47.70 4 0.12							Lat: 48.332N						
MCH1 HN 94.6 IAML 21:51 47.81 5 0.14							Lon: -0.755W						
LPW BZ 119.0 EP 21:51 40.70 0.67							Grid Ref: 492.26 kmE -173.50 kmN						
HLM1 HE 153.0 ES 21:52 02.78 -0.25							Locality: NORTHWEST FRANCE						
HLM1 HE 153.0 IAML 21:52 05.03 3 0.20							Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0						
HLM1 HN 153.0 IAML 21:52 05.77 2 0.19							Comment: 140KM SE OF JERSEY						
February 12 2013							STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES						
Lat: 52.765N							JDC EZ 135.0 EP 12:35 56.84 -0.13						
Grid Ref: 293.34 kmE 319.81 kmN							JDC EE 135.0 ES 12:36 12.63 -0.26						
Locality: LLANWDDYN,POWYS							JDG EZ 135.0 EP 12:35 56.78 -0.18						
Velocity model: Mid Wales Xnear: 80.0 Xfar: 200.0							JRS EZ 137.0 EP 12:35 57.02 -0.26						
Comment: 8KM WNW OF LLANWDDYN							JRS EE 137.0 ES 12:36 14.01 0.58						
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							JSA HZ 141.0 EP 12:35 57.53 -0.31						
LLW BZ 10.9 EP 19:19 11.97 0.19							JSA HN 141.0 ES 12:36 14.52 0.12						
LLW BN 10.9 ES 19:19 14.47 -0.08							JSA HN 141.0 IAML 12:36 20.31 44 0.36						
FOEL HZ 29.1 EP 19:19 14.03 0.18							JSA HE 141.0 IAML 12:36 20.51 34 0.32						
FOEL HN 29.1 ES 19:19 17.97 -0.13							DYA HZ 328.0 EP 12:36 22.57 0.76						
FOEL HN 29.1 IAML 19:19 18.31 17 0.14							DYA HE 328.0 IAML 12:37 12.35 7 0.56						
FOEL HE 29.1 IAML 19:19 18.50 16 0.24							DYA HN 328.0 IAML 12:37 12.56 11 0.26						
WLF1 HZ 80.0 EP 19:19 21.17 -0.05							February 16 2013						
WLF1 HN 80.0 ES 19:19 30.66 -0.13							Time: 06:45 42.9 UTC						
WLF1 HN 80.0 IAML 19:19 31.05 4 0.38							Lat: 52.565N						
WLF1 HE 80.0 IAML 19:19 31.66 5 0.33							Lon: 0.747W						
YRC EZ 85.9 EP 19:19 22.22 0.12							Grid Ref: 586.16 kmE 299.94 kmN						
WPS HZ 93.7 EP 19:19 23.33 0.05							Locality: WATTON,NORFOLK						
WPS HE 93.7 ES 19:19 34.32 0.00							Velocity model: Lownet Xnear: 100.0 Xfar: 200.0						
MCH1 HZ 94.2 ES 19:19 34.42 -0.06							Comment: 5KM WEST OF WATTON						
MCH1 HE 94.2 IAML 19:19 35.46 4 0.24							STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES						
MCH1 HN 94.2 IAML 19:19 37.02 4 0.12							WACR HZ 19.5 EP 06:45 46.62 -0.15						
RSBS HZ 120.0 EP 19:19 26.99 -0.30							WACR HN 19.5 ES 06:45 49.71 0.09						
RSBS HE 120.0 ES 19:19 41.36 0.14							WACR HE 19.5 IAML 06:45 50.19 64 0.12						
February 13 2013							WACR HN 19.5 IAML 06:45 50.39 74 0.18						
Lat: 53.204N							LMK HN 123.0 ES 06:46 17.12 0.00						
Grid Ref: 465.25 kmE 367.91 kmN							LMK HE 123.0 IAML 06:46 22.68 18 0.30						
Locality: NEW OLLERTON,NOTTS							LMK HE 123.0 IAML 06:46 23.19 24 0.22						
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0							CWF HZ 140.0 EP 06:46 05.66 0.44						
Comment: C/F,FELT N OLLERTON							CWF HE 140.0 ES 06:46 21.28 -0.25						
Intensity: 3							CWF HE 140.0 IAML 06:46 23.96 5 0.24						
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							CWF HE 140.0 IAML 06:46 24.08 5 0.20						
LBWR HZ 51.7 EP 10:37 44.93 0.05							February 16 2013						
LBWR HN 51.7 ES 10:37 51.47 -0.03							Time: 07:02 50.8 UTC						
LBWR HN 51.7 IAML 10:37 52.97 62 0.34							Lat: 56.049N						
LBWR HE 51.7 IAML 10:37 54.21 35 0.24							Lon: -5.628W						
CWF HZ 55.2 EP 10:37 45.38 -0.02							Grid Ref: 174.09 kmE 689.94 kmN						
CWF HN 55.2 ES 10:37 52.40 0.00							Locality: TAYVALICH,ARGYLL/BUTE						
CWF HN 55.2 IAML 10:37 58.51 8 0.30							Velocity model: Lownet Xnear: 100.0 Xfar: 200.0						
CWF HE 55.2 IAML 10:37 59.38 10 0.32							STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES						
HPK HZ 92.9 EP 10:37 51.21 -0.03							LAWE HZ 27.4 EP 07:02 55.56 -0.34						
PGB1 HZ 76.3 EP 07:03 13.34 0.14							LAWE HN 27.4 ES 07:02 59.63 -0.02						
PGB1 HN 76.3 ES 07:03 13.34 0.14							LAWE HE 27.4 IAML 07:03 00.02 9 0.20						
							LAWE HE 27.4 IAML 07:03 01.19 9 0.10						
							PGB1 HZ 76.3 EP 07:03 03.58 -0.15						
							PGB1 HN 76.3 ES 07:03 13.34 0.14						

TABLE 2 : PHASE DATA

PGB1	HN	76.3	IAML	07:03	14.92	6	0.42		HLM1	HN	57.6	IAML	07:37	34.95	54	0.24		
PGB1	HE	76.3	IAML	07:03	15.10	4	0.19		HLM1	HE	57.6	IAML	07:37	35.30	16	0.18		
EAB	EZ	81.8	EP	07:03	04.64		0.04		MCH1	HZ	64.7	EP	07:37	28.95		0.10		
INVG	HZ	107.0	EP	07:03	08.58		0.09		MCH1	HE	64.7	ES	07:37	36.67		-0.13		
INVG	HN	107.0	ES	07:03	21.45		0.01		MCH1	HN	64.7	IAML	07:37	36.74	34	0.20		
INVG	HE	107.0	IAML	07:03	22.20	3	0.20		MCH1	HE	64.7	IAML	07:37	36.87	33	0.12		
INVG	HN	107.0	IAML	07:03	23.21	3	0.12		FOEL	HZ	65.3	EP	07:37	29.04		0.07		
KPL	HZ	144.0	EP	07:03	14.12		0.15		FOEL	HE	65.3	ES	07:37	36.94		-0.07		
KPL	HE	144.0	ES	07:03	31.44		0.51		FOEL	HN	65.3	IAML	07:37	37.20	8	0.18		
KPL	HE	144.0	IAML	07:03	32.36	3	0.25		FOEL	HE	65.3	IAML	07:37	38.19	7	0.15		
KPL	HN	144.0	IAML	07:03	33.51	2	0.30		RSBS	HZ	86.3	EP	07:37	32.40		-0.02		
KAC	EZ	163.0	EP	07:03	16.97		0.24		RSBS	HN	86.3	ES	07:37	42.86		-0.07		
February 17 2013			Time: 02:29 26.5 UTC			Magnitude: 1.0 ML			MONM	HZ	86.6	EP	07:37	32.59		0.14		
Lat: 53.239N			Lon: -2.857W			Depth: 11.3 km			YRC	EZ	113.0	EP	07:37	36.36		-0.28		
Grid Ref: 342.81 kme			371.70 kmN			RMS: 0.10 secs			WME	EZ	119.0	EP	07:37	37.69		0.03		
Locality: ELLESMORE PORT,CHESTER									WPS	HZ	125.0	EP	07:37	38.75		0.28		
Velocity model: Lownet			Xnear: 100.0 Xfar: 200.0						CWF	HZ	167.0	EP	07:37	44.85		0.18		
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	CWF	HN	167.0	IAML	07:38	04.82	12	0.13
FOEL	HZ	45.1	EP			02:29	34.69		0.12		CWF	HE	167.0	IAML	07:38	05.05	12	0.10
FOEL	HN	45.1	ES			02:29	40.39		-0.08									
FOEL	HE	45.1	IAML			02:29	41.86	6	0.36									
FOEL	HN	45.1	IAML			02:29	42.23	6	0.27									
LBWR	HZ	77.6	EP			02:29	39.56		0.05									
WME	EZ	98.0	EP			02:29	42.33		-0.05									
WLF1	HZ	103.0	EP			02:29	42.96		-0.11									
WLF1	HE	103.0	ES			02:29	55.28		0.11									
WLF1	HN	103.0	IAML			02:29	56.27	8	0.12									
WLF1	HE	103.0	IAML			02:29	57.07	7	0.28									
HPK	HZ	114.0	EP			02:29	44.69		-0.05									
HPK	HN	114.0	ES			02:29	58.05		0.00									
HPK	HE	114.0	IAML			02:29	59.11	11	0.18									
HPK	HN	114.0	IAML			02:29	59.91	14	0.14									
February 19 2013			Time: 03:52 39.4 UTC			Magnitude: 2.1 ML												
Lat: 53.684N			Lon: -1.114W			Depth: 1.3 km												
Grid Ref: 458.51 kme			421.23 kmN			RMS: 0.40 secs												
Locality: HENSALL,N YORKSHIRE																		
Velocity model: Lownet			Xnear: 100.0 Xfar: 200.0															
Comment: C/F,FELT HENSALL						Intensity: 3												
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	EDI	HN	62.6	IAML	10:13	43.20	157	0.28
HPK	HZ	45.4	EP			03:52	47.27		-0.63		EDI	HE	62.6	IAML	10:13	55.77	17	0.18
HPK	HN	45.4	ES			03:52	54.50		0.41		ESY	EZ	65.6	EP	10:13	41.88		-0.83
HPK	HE	45.4	IAML			03:52	59.08	187	0.30		BBO1	SZ	72.3	EP	10:13	43.95		0.24
HPK	HN	45.4	IAML			03:52	59.58	131	0.29		BBO1	SN	72.3	ES	10:13	52.68		-0.02
LBWR	HZ	51.2	EP			03:52	48.92		0.01		BBO1	SE	72.3	IAML	10:13	55.82	44	0.28
LBWR	HE	51.2	ES			03:52	55.73		-0.12		BBO1	SN	72.3	IAML	10:13	55.84	37	0.22
LBWR	HN	51.2	IAML			03:52	56.97	155	0.28		KESW	HZ	87.3	EP	10:13	46.14		0.08
LBWR	HE	51.2	IAML			03:52	57.58	97	0.25		KESW	HN	87.3	ES	10:13	56.79		0.04
LMK	HZ	58.0	EP			03:52	50.02		0.10		KESW	HE	87.3	IAML	10:13	59.22	24	0.27
STNC	HZ	98.1	EP			03:52	56.40		0.24		KESW	HN	87.3	IAML	10:13	59.80	24	0.22
WACR	HZ	158.0	EP			03:53	04.90		-0.21		EDMD	HZ	89.6	EP	10:13	46.61		0.25
KESW	HN	165.0	EP			03:53	06.75		0.66		EDMD	HN	89.6	ES	10:13	57.31		0.03
KESW	HN	165.0	ES			03:53	25.13		-0.44		EDMD	HE	89.6	IAML	10:13	59.70	110	0.14
KESW	HN	165.0	IAML			03:53	28.24	21	0.34		PGB1	HZ	105.0	EP	10:13	49.38		0.53
KESW	HE	165.0	IAML			03:53	31.13	21	0.41		PGB1	HN	105.0	IAML	10:14	02.05		0.46
WME	EZ	214.0	EP			03:53	12.65		0.26		PGB1	HE	105.0	ES	10:14	03.91	52	0.54
MCH1	HZ	227.0	EP			03:53	14.12		0.11		PGB1	HE	105.0	IAML	10:14	03.93	32	0.22
MCH1	HN	227.0	ES			03:53	39.26		0.01		SPK	EZ	109.0	EP	10:13	49.74		0.39
MCH1	HN	227.0	IAML			03:53	43.87	25	0.38		SPK	EN	109.0	ES	10:14	02.67		0.21
MCH1	HE	227.0	IAML			03:53	44.23	22	0.42		GAL1	HZ	123.0	EP	10:13	51.38		-0.11
February 20 2013			Time: 11:41 55.4 UTC			Magnitude: 2.4 ML												
Lat: 48.370N			Lon: -1.960W			Depth: 4.1 km												
Grid Ref: 402.96 km			-170.02 kmN			RMS: 0.10 secs												
Locality: NORTHWEST FRANCE																		
Velocity model: Lownet			Xnear: 200.0 Xfar: 500.0															
Comment: 90KM SOUTH OF JERSEY																		
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	GAL1	HN	123.0	IAML	10:14	09.53	16	0.26
JDC	EZ	91.9	EP			11:42	10.79		0.02		GAL1	HE	123.0	IAML	10:14	09.77	11	0.30
JRS	EE	91.9	ES			11:42	21.86		-0.11		EAB	EZ	124.0	EP	10:13	52.14		0.44
JDG	EZ	91.9	EP			11:42	10.80		0.04		INVG	HZ	134.0	EP	10:13	53.78		0.47
JDG	EE	91.9	ES			11:42	22.00		0.05		INVG	HE	134.0	IAML	10:14	10.52	7	0.20
JRS	EZ	91.9	EP			11:42	10.70		-0.07		INVG	HN	134.0	IAML	10:14	10.61	9	0.86
JSA	HZ	92.3	EP			11:42	10.92		0.10		WIM	EZ	173.0	EP	10:13	58.14		-0.72
JSA	HE	92.3	ES			11:42	22.03		-0.02		DRUM	HZ	175.0	EP	10:13	59.62		0.65
JSA	HN	92.3	IAML			11:42	25.49	325	0.16		DRUM	HE	175.0	ES	10:14	18.87		-0.22
JSA	HE	92.3	IAML			11:42	25.53	228	0.36		DRUM	HE	175.0	IAML	10:14	20.18	12	0.23
DYA	HZ	271.0	IAML			11:43	12.80	10	0.58		LAWE	HZ	180.0	EP	10:14	00.15		0.55
DYA	HN	271.0	IAML			11:43	15.75	13	0.18		LAWE	HE	180.0	ES	10:14	20.84		0.66
February 25 2013			Time: 07:37 17.8 UTC			Magnitude: 1.4 ML												
Lat: 52.388N			Lon: -3.701W			Depth: 5.8 km												
Grid Ref: 284.25 km			E 278.07 kmN			RMS: 0.10 secs												
Locality: LLANGURIG,POWYS																		

TABLE 2 : PHASE DATA

LWBR	HZ	72.2	IP	D	23:57	13.83	-0.21	JSA	HN	167.0	IAML	13:17	08.47	43	0.36		
LWBR	HE	72.2	ES		23:57	23.03	0.15	JSA	HE	167.0	IAML	13:17	10.64	33	0.38		
LWBR	HE	72.2	IAML		23:57	26.03	206 0.44	JRS	EZ	172.0	EP	13:16	40.57		0.05		
LWBR	HN	72.2	IAML		23:57	26.14	143 0.11	JRS	EE	172.0	ES	13:17	00.34		0.25		
STINC	HZ	81.2	EP		23:57	15.63	0.22	JDC	EZ	175.0	EP	13:16	41.08		0.19		
STINC	HN	81.2	ES		23:57	25.06	-0.19	JDC	EN	175.0	ES	13:16	59.92		-0.81		
STINC	HN	81.2	IAML		23:57	28.58	336 0.32	DYA	HZ	226.0	EP	13:16	47.27		-0.02		
STINC	HE	81.2	IAML		23:57	29.21	253 0.25	DYA	HE	226.0	IAML	13:17	14.43	14	0.36		
WACR	HZ	114.0	EP		23:57	20.58	0.11	DYA	HN	226.0	IAML	13:17	15.35	21	0.22		
WACR	HE	114.0	ES		23:57	33.88	-0.13										
WACR	HE	114.0	IAML		23:57	36.34	100 0.24	March 8 2013				Time: 23:51 16.0 UTC				Magnitude: 0.5 ML	
WACR	HN	114.0	IAML		23:57	36.76	133 0.22	Lat: 56.204N				Lon: -4.251W				Depth: 5.1 km	
HPK	HZ	124.0	IP	D	23:57	22.17	0.16	Grid Ref: 260.38 kmE 703.54 kmN				RMS: 0.10 secs					
HPK	HE	124.0	ES		23:57	36.75	0.08	Locality: CALLANDER, STIRLING									
HPK	HE	124.0	IAML		23:57	38.11	187 0.20	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0									
HPK	HN	124.0	IAML		23:57	38.74	205 0.33	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL PERI RES		
HLM1	HZ	132.0	EP		23:57	22.85	-0.28	EAB	EZ	5.6	IP	C	23:51	17.63	0.01		
FOEL	HZ	145.0	EP		23:57	25.25	0.13	INVG	HZ	28.0	EP		23:51	21.41	0.12		
STRD	HZ	147.0	IP	C	23:57	25.47	0.22	INVG	HE	28.0	ES		23:51	25.10	-0.05		
SWN1	HZ	163.0	EP		23:57	28.31	0.75	INVG	HE	28.0	IAML		23:51	25.36	4 0.14		
MCH1	HZ	167.0	EP		23:57	27.91	-0.21	INVG	HN	28.0	IAML		23:51	25.88	3 0.51		
MONM	HZ	169.0	EP		23:57	28.44	0.13	PGB1	HZ	46.0	EP		23:51	23.93	-0.26		
GDLE	HZ	170.0	EP		23:57	27.38	-1.13	PGB1	HN	46.0	ES		23:51	30.33	0.16		
WPM1	EZ	196.0	EP		23:57	32.92	1.11	LAWE	HZ	71.5	EP		23:51	28.19	0.06		
LPW	BZ	224.0	EP		23:57	35.92	0.75	LAWE	HN	71.5	ES		23:51	36.93	-0.04		
KESW	HN	232.0	EP		23:57	34.81	-1.48	LAWE	HN	71.5	IAML		23:51	40.92	4 0.11		
								LAWE	HE	71.5	IAML		23:51	41.11	8 0.19		
February 28 2013				Time: 00:52 29.3 UTC				Magnitude: 1.3 ML									
Lat: 52.898N				Lon: -1.063W				Depth: 8.5 km									
Grid Ref: 463.02 kmE 333.84 kmN				RMS: 0.20 secs													
Locality: COTGRAVE, NOTTS								March 10 2013				Time: 21:18 29.3 UTC				Magnitude: 1.8 ML	
								Lat: 56.996N				Lon: -5.795W				Depth: 7.5 km	
								Grid Ref: 169.53 kmE 795.81 kmN				RMS: 0.60 secs					
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0				Locality: MALLAIG, HIGHLAND				Velocity model: Lownet Xnear: 150.0 Xfar: 300.0				Intensity: 2					
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES	KPL	HZ	39.2	IP	D	21:18	36.15	-0.05
CWF	HZ	24.2	EP		00:52	33.87	-0.08	KPL	HE	39.2	ES		21:18	41.18	-0.08		
CWF	HE	24.2	ES		00:52	37.47	0.12	KPL	HN	39.2	IAML		21:18	41.50	44 0.20		
CWF	HN	24.2	IAML		00:52	37.66	51 0.10	KAC	EZ	63.5	IP	D	21:18	40.05	0.04		
CWF	HE	24.2	IAML		00:52	37.74	52 0.07	LAWE	HZ	85.5	EP		21:18	43.14	-0.26		
LBWR	HZ	71.4	EP		00:52	41.07	-0.20	LAWE	HN	85.5	ES		21:18	52.90	-0.81		
LBWR	HE	71.4	ES		00:52	50.09	0.07	LAWE	HE	85.5	IAML		21:18	53.10	47 0.12		
LBWR	HE	71.4	IAML		00:52	52.83	15 0.10	LAWE	HN	85.5	IAML		21:18	53.45	40 0.36		
LBWR	HN	71.4	IAML		00:52	53.27	14 0.09	MDO	EZ	99.7	EP		21:18	45.74	0.08		
HPK	HE	124.0	ES		00:53	03.88	0.14	INVG	HZ	125.0	EP		21:18	49.72	0.24		
HPK	HE	124.0	IAML		00:53	05.04	14 0.20	INVG	HN	125.0	ES		21:19	04.24	0.02		
HPK	HN	124.0	IAML		00:53	05.57	16 0.30	INVG	HN	125.0	IAML		21:19	05.18	24 0.40		
HLM1	HZ	130.0	EP		00:52	50.37	0.26	INVG	HE	125.0	IAML		21:19	08.13	24 0.14		
HLM1	HE	130.0	ES		00:53	05.06	-0.25	EAB	EZ	127.0	EP		21:18	50.27	0.46		
HLM1	HE	130.0	IAML		00:53	05.93	3 0.12	MCD	EZ	167.0	EP		21:18	55.34	-0.14		
HLM1	HN	130.0	IAML		00:53	06.98	4 0.33	MCD	EN	167.0	ES		21:19	14.54	-0.07		
								MCD	EN	167.0	IAML		21:19	17.01	15 0.13		
March 4 2013				Time: 03:26 04.5 UTC				MCD				MCD EE 167.0 IAML					
Lat: 64.514N				Lon: -4.213W				MCD EE 167.0 IAML				MCD EE 167.0 IAML					
Grid Ref:				RMS: 0.30 secs				EDU EZ 177.0 EP				EDU EZ 177.0 EP				1.33	
Locality: NORWEGIAN SEA				Velocity model: North Sea Xnear: 400.0 Xfar: 600.0				EDU EZ 177.0 EP				EDU EZ 177.0 EP					
Comment: 300KM NE OF TORSHAVN				Velocity model: North Sea Xnear: 400.0 Xfar: 600.0				EDI HN 200.0 IAML				EDI HN 200.0 IAML					
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES	DRUM	HZ	271.0	EP	10:44	29.34	0.52	
SOFL	HZ	306.0	EP		03:26	46.79	-0.13	DRUM	HN	271.0	ES		10:44	56.43	0.02		
SOFL	HE	306.0	ES		03:27	17.99	0.08	DRUM	HN	271.0	IAML		10:45	12.96	78 0.42		
SOFL	HE	306.0	IAML		03:27	19.39	198 0.55	DRUM	HE	271.0	IAML		10:45	13.18	78 0.44		
SOFL	HN	306.0	IAML		03:27	21.37	147 0.45	ESY	EZ	308.0	EP		10:44	33.27	-0.09		
LRW	HZ	512.0	EP		03:27	13.36	0.71	ESY	HN	308.0	IAML		10:44	33.78	0.28		
LRW	HE	512.0	ES		03:28	02.00	-0.41	EDU	EZ	309.0	EP		10:44	34.21	96 0.72		
LRW	HN	512.0	IAML		03:28	04.49	56 0.20	MCD	EE	321.0	IAML		10:45	24.24	94 0.48		
LRW	HE	512.0	IAML		03:28	04.51	43 0.29	MCD	EN	321.0	IAML		10:45	34.21	96 0.72		
BIGH	HZ	671.0	EP		03:27	31.97	-0.37	GDLE	HZ	337.0	EP		10:44	37.25	0.20		
BIGH	HN	671.0	IAML		03:28	38.30	16 0.26	GDLE	HN	337.0	IAML		10:45	35.72	90 0.34		
BIGH	HE	671.0	IAML		03:28	42.43	12 0.29	GDLE	HE	337.0	IAML		10:45	36.87	228 0.38		
MCD	EZ	774.0	EP		03:27	45.51	0.37	GDLE	HN	337.0	IAML		10:45	37.13	-0.13		
KAC	EZ	784.0	EP		03:27	45.95	-0.40	GDLE	HE	337.0	IAML		10:44	37.26	-0.11		
MDO	EZ	788.0	EP		03:27	46.37	-0.54	GDLE	HN	337.0	IAML		10:45	11.44	0.23		
KPL	HZ	803.0	EP		03:27	48.03	-0.71	EDU	HN	340.0	EP		10:44	29.34	0.52		
DRUM	HZ	852.0	EP		03:27	54.56	-0.27	EDU	HE	340.0	ES		10:45	56.43	0.02		
INVG	HZ	901.0	EP		03:28	00.52	-0.39	EDU	HN	340.0	IAML		10:45	12.96	78 0.42		
LAWE	HZ	922.0	EP		03:28	02.99	-0.50	EDU	HE	340.0	IAML		10:45	13.18	78 0.44		
EAB	EZ	927.0	EP		03:28	04.07	-0.14	EDU	EZ	309							

TABLE 2 : PHASE DATA

EAU	EZ	358.0	EP	10:44	39.42	-0.25	Grid Ref:	342.87 kmE	516.23 kmN	RMS: 0.30 secs									
ESK	HZ	373.0	EP	10:44	40.83	-0.60	Locality:	GLENRIDDING, CUMBRIA											
ESK	HE	373.0	ES	10:45	18.85	0.61	Velocity model:	Lownet Xnear: 100.0	Xfar: 200.0										
ESK	HN	373.0	IAML	10:45	40.19	41 0.36	Comment:	FELT GLENRIDDING	Intensity: 2										
ESK	HE	373.0	IAML	10:45	42.34	44 0.36	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES		
INVG	HZ	374.0	EP	10:44	41.58	0.02	KESW	HZ	15.4	EP	04:13	51.16						-0.10	
INVG	HE	374.0	IAML	10:45	42.40	23 0.66	KESW	HE	15.4	IAML	04:13	53.52						-0.02	
INVG	HN	374.0	IAML	10:45	53.43	20 0.68	KESW	HE	15.4	IAML	04:13	53.78	87	0.11					
MDO	EZ	385.0	EP	10:44	43.34	0.33	KESW	HN	15.4	IAML	04:13	53.83	102	0.13					
BIGH	HZ	387.0	EP	10:44	43.10	-0.05	BHH	SZ	65.4	EP	04:13	59.51						0.04	
BIGH	HE	387.0	ES	10:45	21.12	-0.09	BHH	SE	65.4	ES	04:14	07.63						-0.12	
BIGH	HN	387.0	IAML	10:45	21.44	25 0.44	BHH	SN	65.4	IAML	04:14	10.79	15	0.18					
BIGH	HE	387.0	IAML	10:45	21.73	22 0.27	BHH	SE	65.4	IAML	04:14	11.62	14	0.14					
EAB	EZ	398.0	EP	10:44	44.65	0.09	EDMD	HZ	67.8	EP	04:13	59.71						-0.08	
HPK	HZ	409.0	EP	10:44	45.82	-0.11	EDMD	HE	67.8	ES	04:14	07.83						-0.47	
HPK	HE	409.0	ES	10:45	25.77	-0.24	EDMD	HN	67.8	IAML	04:14	08.01	38	0.14					
HPK	HE	409.0	IAML	10:45	28.49	152 0.26	EDMD	HE	67.8	IAML	04:14	08.58	29	0.11					
HPK	HN	409.0	IAML	10:45	28.58	124 0.22	ESK	HZ	89.1	IP	D	04:14	03.47					0.32	
PGB1	HZ	420.0	EP	10:44	47.09	-0.21	ESK	HN	89.1	ES	04:14	14.37						0.27	
PGB1	HN	420.0	ES	10:45	28.06	-0.33	ESK	HN	89.1	IAML	04:14	16.30	4	0.17					
PGB1	HN	420.0	IAML	10:45	30.27	21 0.22	ESK	HE	89.1	IAML	04:14	17.02	6	0.32					
PGB1	HE	420.0	IAML	10:45	54.98	39 0.44	HPK	HZ	104.0	EP	04:14	05.88						0.36	
KAC	EZ	442.0	EP	10:44	50.10	0.10	IOMK	HZ	114.0	EP	04:14	06.53						-0.40	
KSB	EZ	448.0	EP	10:44	51.01	0.20	GAL1	HZ	123.0	EP	04:14	08.27						-0.17	
LAWE	HZ	460.0	EP	10:44	52.84	0.63	WIM	EZ	124.0	EP	04:14	08.55						-0.08	
LAWE	HN	460.0	ES	10:45	36.55	-0.34	LBWR	HZ	148.0	EP	04:14	12.57						0.52	
LAWE	HN	460.0	IAML	10:46	06.24	23 0.42	ESY	EZ	155.0	EP	04:14	13.71						0.68	
KPL	HZ	462.0	EP	10:44	52.72	0.20	March 22 2013												
KPL	HN	462.0	ES	10:45	36.56	-0.86	Time:	10:32	43.4	UTC									
KPL	HN	462.0	IAML	10:46	07.73	22 0.40	Lat:	61.584N											
KPL	HE	462.0	IAML	10:46	20.04	15 0.40	Grid Ref:	743.22 kmE	1317.33 kmN										
LBWR	HZ	466.0	EP	10:44	52.95	-0.04	Locality:	NORWEGIAN COAST											
LBWR	HN	466.0	ES	10:45	38.88	0.65	Velocity model:	Lownet Xnear: 500.0	Xfar: 1000.0										
LBWR	HE	466.0	IAML	10:46	14.18	48 0.30	Comment:	340KM ENE OF LERWICK											
LBWR	HN	466.0	IAML	10:46	14.77	49 0.40	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES		
GAL1	HZ	481.0	EP	10:44	54.46	-0.38	BER	HZ	142.0	EP	10:33	05.73							
GAL1	HN	481.0	IAML	10:45	43.34	12 0.32	BER	HE	142.0	ES	10:33	22.01							
GAL1	HE	481.0	IAML	10:46	20.53	9 0.68	MOL	HZ	195.0	EP	10:33	12.35						-0.08	
March 16 2013							MOL	HN	195.0	ES	10:33	33.40						-0.19	
March 16 2013							LRW	HZ	347.0	EP	10:33	31.58						0.15	
Lat:	52.544N						LRW	HN	347.0	ES	10:34	07.72						1.25	
Grid Ref:	589.10 kmE						LRW	HN	347.0	IAML	10:34	13.68	27	0.30					
Locality:	WATTON, NORFOLK						LRW	HE	347.0	IAML	10:34	15.50	34	0.40					
Velocity model:	Lownet Xnear: 100.0						BIGH	HZ	580.0	EP	10:34	00.20						-0.34	
Comment:	4KM SW OF WATTON						BIGH	HE	580.0	ES	10:34	57.24						0.41	
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES									
WACR	HZ	22.8	IP	D	07:03	29.72		BIGH	HN	580.0	IAML	10:35	00.97	31	0.45				
WACR	HN	22.8	ES		07:03	32.79		BIGH	HE	580.0	IP	10:35	03.44	26	0.42				
WACR	HE	22.8	IAML		07:03	33.27	312 0.12	MCD	EE	623.0	ES	10:35	05.70						-0.61
WACR	HN	22.8	IAML		07:03	33.37	381 0.16	MCD	EE	623.0	IAML	10:35	09.91	30	0.34				
CWF	HZ	144.0	EP		07:03	48.15		MCD	EN	623.0	IAML	10:35	12.14	38	0.50				
CWF	HE	144.0	ES		07:04	05.43		DRUM	HZ	654.0	EP	10:34	08.76						-1.08
CWF	HN	144.0	IAML		07:04	07.04		DRUM	HN	654.0	ES	10:35	11.91						-1.00
CWF	HE	144.0	IAML		07:04	07.16	27 0.24	DRUM	HN	654.0	IAML	10:35	16.19	91	0.38				
CWF	HN	144.0	IAML		07:04	21.96	14 0.26	DRUM	HE	654.0	IAML	10:35	16.42	54	0.40				
ELSH	HZ	157.0	EP		07:03	50.40		MDO	EZ	680.0	EP	10:34	13.81						0.70
ELSH	HE	157.0	ES		07:04	08.55		INVG	HZ	753.0	EP	10:34	21.71						-0.59
ELSH	HN	157.0	IAML		07:04	09.79	42 0.36	INVG	HE	753.0	IAML	10:35	38.65	14	0.66				
ELSH	HN	157.0	IAML		07:04	11.70	34 0.32	INVG	HN	753.0	IAML	10:35	47.17	11	0.72				
LBWR	HZ	194.0	EP		07:03	55.88		EDI	HE	770.0	ES	10:35	36.88						-1.06
LBWR	HE	194.0	IAML		07:04	21.96		EDI	HE	770.0	IAML	10:35	41.30	40	0.40				
LBWR	HN	194.0	IAML		07:04	23.24		EDI	HN	770.0	IAML	10:35	41.83	48	0.48				
March 19 2013							ESK	HE	828.0	IAML	10:35	52.66						22 0.66	
March 19 2013							ESK	HN	828.0	IAML	10:35	53.86	18	0.46					
Lat:	52.881N						March 22 2013												
Grid Ref:	380.22 kmE						Time:	12:57	59.9	UTC									
Locality:	STONE, STAFFORDSHIRE						Lat:	52.967N											
Velocity model:	Lownet Xnear: 100.0						Grid Ref:	235.01 kmE	343.93 kmN										
STNC	HN	24.1	EP		01:00	51.01		Locality:	LLEYN PENINSULA										
STNC	HN	24.1	ES		01:00	54.36		Velocity model:	Lleyne Xnear: 80.0	Xfar: 200.0									
STNC	HN	24.1	IAML		01:00	54.57	34 0.19	Comment:	5KM NE OF NEFYN										
STNC	HE	24.1	IAML		01:00	54.75	33 0.42	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	
HLM1	HZ	56.6	EP		01:00	56.03		YLL	EZ	27.2	EP	12:58	05.23						0.24
HLM1	HE	56.6	ES		01:01	02.91		YRC	EZ	32.6	IP	D	12:58	05.90				0.11	
HLM1	HN	56.6	IAML		01:01	03.57	5 0.25	WLF1	HZ	36.1	EP	12:58	06.21					-0.14	
HLM1	HN	56.6	IAML		01:01	05.85	3 0.19	WLF1	HE	36.1	ES	12:58	11.01					0.28	
CWF	HN	68.4	ES		01:01	06.12		WLF1	HN	36.1	IAML	12:58	11.20	646	0.09				
CWF	HN	68.4	IAML		01:01	06.50	3 0.26	WPS	HZ	48.4	EP	12:58	11.31	993	0.11				
CWF	HE	68.4	IAML		01:01	06.62	2 0.18	WPS	HE	48.4	ES	12:58	08.22					0.00	
MCH1	HN	109.0	ES		01:01	17.33		WPS	HE	48.4	IAML	12:58	13.92					0.04	
MCH1	HN	109.0	IAML		01:01	17.76	4 0.18	WPS	HN	48.4	IP	12:58	15.15	181	0.10				
MCH1	HN	109.0</																	

TABLE 2 : PHASE DATA

LPW	BZ	98.5	EP	12:58	15.85	-0.09	KESW	HE	84.9	IAML	00:06	19.06	3	0.55
LPW	BN	98.5	ES	12:58	27.43	0.58	ESK	HZ	114.0	EP	00:06	11.50		-0.34
LPW	BN	98.5	IAML	12:58	28.89	79 0.20	ESK	HN	114.0	ES	00:06	25.63		0.26
LPW	BE	98.5	IAML	12:58	29.57	96 0.15	ESK	HN	114.0	IAML	00:06	27.10	1	0.07
RSBS	HZ	115.0	EP	12:58	18.49	0.06	ESK	HE	114.0	IAML	00:06	27.40	2	0.19
RSBS	HN	115.0	ES	12:58	30.64	-0.38								
RSBS	HE	115.0	IAML	12:58	33.76	22 0.22	March 28 2013				Time: 20:25 34.3 UTC		Magnitude: 1.6 ML	
RSBS	HN	115.0	IAML	12:58	34.09	29 0.10	Lat: 52.751N Lon: -2.124W				Depth: 7.5 km			
MCH1	HZ	146.0	EP	12:58	22.65	-0.61	Grid Ref: 391.63 kmE 317.09 kmN				RMS: 0.30 secs			
MCH1	HE	146.0	ES	12:58	40.11	0.97	Locality: PENKRIDGE,STAFFS							
MCH1	HN	146.0	IAML	12:58	40.71	29 0.14	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0							
MCH1	HE	146.0	IAML	12:58	41.88	32 0.13	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL PERI RES
MONM	HZ	168.0	EP	12:58	26.08	0.08	STNC	HZ	38.3	EP	20:25	41.20		0.11
MONM	HE	168.0	IAML	12:58	48.13	27 0.12	STNC	HE	38.3		20:25	46.06		-0.01
MONM	HN	168.0	IAML	12:58	48.97	44 0.15	STNC	HE	38.3	IAML	20:25	46.57	175 0.14	
MONM	HN	168.0	IAML	12:58	48.97	44 0.15	STNC	HN	38.3	IAML	20:25	46.64	114 0.21	
March 22 2013			Time: 13:52 21.5 UTC		Magnitude: 3.5 ML		CWF HZ 55.2 EP 20:25 43.64				-0.06			
Lat: 61.616N			Lon: 4.473W		Depth: 6.3 km		CWF HE 55.2 ES 20:25 50.06				-0.53			
Grid Ref: 742.86 kmE 1320.89 kmN			RMS: 0.40 secs				CWF HN 55.2 IAML 20:25 50.28				36 0.12			
Locality: NORWEGIAN COAST							CWF HE 55.2 IAML 20:25 50.34				18 0.13			
Velocity model: Lownet Xnear: 500.0 Xfar: 1000.0							HLM1 HZ 57.4 EP 20:25 43.85				-0.24			
Comment: 345KM ENE OF LERWICK							HLM1 HN 57.4 ES 20:25 51.03				-0.22			
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES					
BER	HZ	145.0	EP	13:52	44.88	0.20	HLM1	HE	57.4	IAML	20:25	52.06	16 0.13	
BER	HE	145.0	ES	13:53	01.62	0.02	HLM1	HN	57.4	IAML	20:25	52.91	12 0.09	
MOL	HZ	193.0	EP	13:52	51.20	0.15	FOEL	HZ	74.1	EP	20:25	46.93		0.24
MOL	HN	193.0	ES	13:53	12.52	-0.11	FOEL	HE	74.1	ES	20:25	55.50		-0.26
LRW	HZ	348.0	EP	13:53	10.43	-0.08	FOEL	HN	74.1	IAML	20:25	56.83	10 0.38	
LRW	HE	348.0	ES	13:53	47.12	0.82	LBWR	HZ	77.2	EP	20:25	59.31	11 0.24	
BIGH	HZ	582.0	EP	13:53	39.34	-0.34	LBWR	HE	77.2	ES	20:25	56.49		-0.06
BIGH	HE	582.0	ES	13:54	36.35	-0.40	LBWR	HE	77.2	IAML	20:25	57.15	34 0.10	
BIGH	HE	582.0	IAML	13:54	41.31	15 0.60	LBWR	HN	77.2	IAML	20:25	57.79	30 0.26	
MCD	EE	626.0	ES	13:54	45.50	-0.82	MCH1	HZ	103.0	EP	20:25	50.90		-0.19
MCD	EE	626.0	IAML	13:54	47.37	13 0.35	MCH1	HE	103.0	ES	20:26	03.00		-0.37
MCD	EN	626.0	ES	13:54	56.03	25 0.82	MCH1	HN	103.0	IAML	20:26	03.18	17 0.16	
DRUM	HZ	657.0	EP	13:53	48.83	-0.24	STRD	HZ	109.0	EP	20:25	52.26		0.29
DRUM	HE	657.0	ES	13:54	53.18	0.19	STRD	HE	109.0	ES	20:26	05.25		0.36
DRUM	HN	657.0	IAML	13:54	55.22	34 0.38	STRD	HN	109.0	IAML	20:26	06.19	26 0.17	
DRUM	HE	657.0	IAML	13:54	56.71	22 0.56	STRD	HE	109.0	IAML	20:26	07.26	27 0.22	
March 24 2013			Time: 22:02 33.7 UTC		Magnitude: 2.0 ML		MONM HZ 112.0 EP 20:25 52.73				0.30			
Lat: 57.715N			Lon: -5.547W		Depth: 7.5 km		MONM HN 112.0 IAML 20:26 06.03				0.34			
Grid Ref: 188.75 kmE 874.97 kmN			RMS: 0.40 secs				MONM HN 112.0 IAML 20:26 06.61				18 0.32			
Locality: GAIRLOCH,HIGHLAND							MONM HN 112.0 IAML 20:26 09.56				14 0.12			
Velocity model: Lownet Xnear: 100.0 Xfar: 300.0							HPK HZ 138.0 EP 20:25 56.79				0.36			
Comment: FELT GAIRLOCH...			Intensity: 3				HPK HE 138.0 IAML 20:26 14.39				46 0.18			
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES					
KAC	EZ	28.2	EP	22:02	39.00	0.05	HPK	HE	138.0	IAML	20:26	14.43	45 0.40	
KPL	HZ	42.3	EP	22:02	40.88	-0.22	WLF1	HZ	164.0	EP	20:26	00.40		0.37
KPL	HE	42.3	ES	22:02	46.01	-0.49	WLF1	HN	164.0	ES	20:26	18.72		-0.11
KPL	HN	42.3	IAML	22:02	46.51	42 0.09	WLF1	HN	164.0	IAML	20:26	20.05	11 0.10	
KPL	HE	42.3	IAML	22:02	46.68	83 0.34	WLF1	HE	164.0	IAML	20:26	20.45	8 0.11	
MDO	EZ	77.1	EP	22:02	46.82	0.25								
BIGH	HZ	130.0	EP	22:02	54.90	0.32	March 31 2013 Time: 08:00 17.1 UTC				Magnitude: 0.5 ML			
BIGH	HE	130.0	ES	22:03	09.63	-0.19	Lat: 52.981N Lon: -4.388W				Depth: 10.9 km			
BIGH	HN	130.0	IAML	22:03	11.55	98 0.15	Grid Ref: 239.70 kmE 345.33 kmN				RMS: 0.20 secs			
BIGH	HE	130.0	IAML	22:03	11.67	56 0.20	Locality: LLEYN PENINSULA							
MCD	EZ	138.0	EP	22:02	55.64	-0.12	Velocity model: Lleyen Xnear: 80.0 Xfar: 200.0							
MCD	EE	138.0	ES	22:03	11.75	-0.12	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL PERI RES
MCD	EN	138.0	IAML	22:03	13.85	27 0.30	YLL	EZ	22.9	EP	08:00	21.45		0.07
MCD	EE	138.0	IAML	22:03	14.24	35 0.18	YRC	EZ	32.5	ES	08:00	26.91		0.13
MME1	EZ	161.0	EP	22:02	58.50	-0.63	WLF1	HZ	34.3	EP	08:00	22.74		-0.40
LAWE	HZ	162.0	EP	22:02	59.21	-0.03	WLF1	HN	34.3	ES	08:00	27.17		-0.08
LAWE	HN	162.0	ES	22:03	18.09	0.20	WLF1	HE	34.3	IAML	08:00	27.50	7 0.11	
LAWE	HN	162.0	IAML	22:03	20.75	49 0.14	WLF1	HN	34.3	IAML	08:00	27.57	5 0.10	
LAWE	HE	162.0	IAML	22:03	21.02	44 0.19	WME	EZ	46.6	EP	08:00	25.41		0.29
INVG	HZ	170.0	EP	22:03	01.17	0.87								
INVG	HN	170.0	ES	22:03	19.86	0.13	April 2 2013 Time: 07:34 40.1 UTC				Magnitude: 0.8 ML			
INVG	HE	170.0	IAML	22:03	23.02	13 0.14	Lat: 55.367N Lon: -3.398W				Depth: 4.1 km			
INVG	HN	170.0	IAML	22:03	23.14	10 0.19	Grid Ref: 311.40 kmE 609.00 kmN				RMS: 0.00 secs			
EAB	EZ	185.0	EP	22:03	03.11	0.90	Locality: MOFFAT,D & G							
DRUM	HZ	205.0	EP	22:03	04.58	-0.08	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0				Comment: 4KM NE OF MOFFAT			
DRUM	HN	205.0	IAML	22:03	33.27	11 0.17	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL PERI RES
DRUM	HE	205.0	IAML	22:03	33.61	14 0.19	ESK	HN	13.5	ES	07:34	45.01		0.03
March 28 2013														

TABLE 2 : PHASE DATA

Locality: BOWES,COUNTY DURHAM	MCH1	HZ	34.0	EP	01:58	56.17	0.16
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	MCH1	HE	34.0	ES	01:59	00.38	-0.21
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	MCH1	HE	34.0	IAML	01:59	00.57	32 0.19
EDMD HZ 37.0 EP 18:39 58.11 0.46	MCH1	HN	34.0	IAML	01:59	00.63	25 0.07
EDMD HN 37.0 ES 18:40 01.98 -0.48	MONM	HZ	47.9	EP	01:58	58.56	0.20
EDMD HN 37.0 IAML 18:40 02.13 25 0.14	MONM	HE	47.9	ES	01:59	04.54	-0.11
EDMD HE 37.0 IAML 18:40 02.21 25 0.12	MONM	HE	47.9	IAML	01:59	04.63	31 0.24
KESW HZ 66.4 EP 18:40 01.94 -0.33	MONM	HN	47.9	IAML	01:59	04.89	11 0.12
ESK HZ 115.0 EP 18:40 10.10 0.28	RSBS	HZ	140.0	EP	01:59	12.91	0.36
ESK HN 115.0 ES 18:40 23.71 0.21	RSBS	HN	140.0	IAML	01:59	31.08	3 0.18
ESK HE 115.0 IAML 18:40 24.90 5 0.36	RSBS	HE	140.0	IAML	01:59	31.14	2 0.12
ESK HN 115.0 IAML 18:40 25.03 4 0.12							
April 5 2013 Time: 23:49 50.5 UTC Magnitude: 0.5 ML	April 19 2013 Time: 18:21 00.0 UTC Magnitude: 0.7 ML						
Lat: 55.865N Lon: -4.471W Depth: 7.0 km	Lat: 54.433N Lon: -2.887W Depth: 4.9 km						
Grid Ref: 245.39 kmE 666.29 kmN RMS: 0.10 secs	Grid Ref: 342.47 kmE 504.55 kmN RMS: 0.10 secs						
Locality: PAISLEY,RENFREWSHIRE	Locality: KENTMERE,CUMBRIA						
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						
PGB1 HZ 6.1 EP 23:49 52.37 -0.02	KESW HZ 22.3 EP 18:21 05.47 -0.03						
PGB1 HN 6.1 ES 23:49 53.71 -0.04	KESW HN 22.3 ES 18:21 09.59 0.05						
PGB1 HE 6.1 IAML 23:49 53.83 68 0.14	KESW HE 22.3 IAML 18:21 09.98 9 0.20						
PGB1 HN 6.1 IAML 23:49 53.84 83 0.12	KESW HN 22.3 IAML 18:21 10.02 5 0.23						
EAB EZ 36.9 EP 23:49 57.34 0.14	SPK EZ 39.0 EP 18:21 07.33 -0.12						
INVG HZ 68.0 EP 23:50 02.00 -0.01	SPK EN 39.0 ES 18:21 12.94 0.02						
INVG HE 68.0 ES 23:50 10.26 -0.12	EDMD HZ 74.4 EP 18:21 12.59 0.27						
INVG HE 68.0 IAML 23:50 10.50 2 0.18	EDMD HN 74.4 ES 18:21 21.15 -0.19						
INVG HN 68.0 IAML 23:50 10.94 1 0.06	EDMD HE 74.4 IAML 18:21 22.39 11 0.12						
LAWE HZ 72.6 EP 23:50 02.97 0.27	EDMD HN 74.4 IAML 18:21 22.40 8 0.16						
LAWE HE 72.6 ES 23:50 11.39 -0.19							
LAWE HN 72.6 IAML 23:50 11.77 3 0.18							
LAWE HE 72.6 IAML 23:50 11.91 3 0.15							
GAL1 HZ 112.0 EP 23:50 08.81 -0.04							
April 6 2013 Time: 17:50 43.1 UTC Magnitude: 0.3 ML	April 20 2013 Time: 11:32 08.6 UTC Magnitude: 1.3 ML						
Lat: 55.372N Lon: -3.377W Depth: 4.7 km	Lat: 52.564N Lon: -1.889W Depth: 8.0 km						
Grid Ref: 312.74 kmE 609.53 kmN RMS: 0.10 secs	Grid Ref: 407.52 kmE 296.29 kmN RMS: 0.50 secs						
Locality: MOFFAT,D & G	Locality: WALSHALL,WEST MIDLANDS						
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	Velocity model: Lownet Xnear: 75.0 Xfar: 150.0						
Comment: 5KM NE OF MOFFAT	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES						
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	CWF HZ 43.9 EP 11:32 16.35 0.04						
ESK HZ 12.5 EP 17:50 45.70 -0.10	CWF HE 43.9 ES 11:32 21.13 -0.79						
ESK HN 12.5 ES 17:50 47.83 0.08	CWF HN 43.9 IAML 11:32 21.67 15 0.13						
ESK HE 12.5 IAML 17:50 48.00 24 0.16	CWF HE 43.9 IAML 11:32 21.77 10 0.08						
BHH SZ 32.7 EP 17:50 49.03 -0.15	HLM1 HZ 67.5 EP 11:32 19.55 -0.46						
BHH SE 32.7 ES 17:50 53.56 -0.04	HLM1 HE 67.5 ES 11:32 27.72 -0.60						
KESW HZ 88.9 EP 17:50 58.22 0.21	HLM1 HE 67.5 IAML 11:32 28.06 24 0.12						
KESW HE 88.9 IAML 17:51 10.78 1 0.22	HLM1 HE 67.5 IAML 11:32 28.13 27 0.14						
KESW HN 88.9 IAML 17:51 11.25 1 0.27	STRD HZ 89.6 EP 11:32 23.74 0.34						
	STRD HN 89.6 ES 11:32 34.30 0.11						
April 7 2013 Time: 08:08 12.1 UTC Magnitude: 1.2 ML	STRD HE 89.6 IAML 11:32 34.81 15 0.10						
Lat: 51.691N Lon: -3.766W Depth: 9.2 km	STRD HE 89.6 IAML 11:32 35.01 20 0.14						
Grid Ref: 277.95 kmE 200.67 kmN RMS: 0.30 secs	LBWR HZ 93.9 EP 11:32 24.98 0.89						
Locality: NEATH,NEATH PORT TALBOT	LBWR HN 93.9 ES 11:32 36.23 0.85						
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	LBWR HE 93.9 IAML 11:32 37.27 13 0.10						
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	LBWR HE 93.9 IAML 11:32 39.96 13 0.12						
MCH1 HZ 62.9 EP 08:08 22.84 -0.02	MCH1 HZ 98.5 EP 11:32 24.92 0.14						
MCH1 HE 62.9 ES 08:08 30.69 -0.01	MCH1 HE 98.5 ES 11:32 36.46 -0.11						
MCH1 HN 62.9 IAML 08:08 31.06 19 0.22	MCH1 HN 98.5 IAML 11:32 40.12 13 0.12						
MCH1 HE 62.9 IAML 08:08 31.42 16 0.15	MCH1 HE 98.5 IAML 11:32 41.14 13 0.10						
MONM HZ 68.4 EP 08:08 23.65 -0.04	MONM HZ 102.0 EP 11:32 25.65 0.33						
MONM HE 68.4 ES 08:08 32.20 0.07	MONM HN 102.0 ES 11:32 38.28 0.78						
MONM HN 68.4 IAML 08:08 32.60 17 0.29	MONM HE 102.0 IAML 11:32 40.83 10 0.12						
MONM HE 68.4 IAML 08:08 32.77 15 0.12	MONM HN 102.0 IAML 11:32 41.57 10 0.23						
RSBS HZ 73.5 EP 08:08 24.75 0.25	OLDB HZ 110.0 EP 11:32 26.88 0.32						
RSBS HN 73.5 ES 08:08 33.35 -0.18							
RSBS HN 73.5 IAML 08:08 33.76 6 0.16	April 25 2013 Time: 21:40 09.0 UTC Magnitude: 0.6 ML						
RSBS HE 73.5 IAML 08:08 33.76 9 0.20	Lat: 53.454N Lon: -4.250W Depth: 17.4 km						
HTL HZ 92.3 EP 08:08 27.44 0.22	Grid Ref: 250.62 kmE 397.63 kmN RMS: 0.00 secs						
HLM1 HZ 110.0 EP 08:08 29.20 -0.65	Locality: ANGLESEY,NORTH WALES						
HLM1 HE 110.0 ES 08:08 43.15 0.37	Velocity model: Lleyn Xnear: 80.0 Xfar: 200.0						
HLM1 HN 110.0 IAML 08:08 45.13 11 0.20	Comment: OFFSHORE LOCATION						
HLM1 HE 110.0 IAMR 08:08 45.14 10 0.26	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES						
DYA HZ 140.0 EP 08:08 34.46 0.36	WME EZ 7.3 EP 21:40 12.20 0.03						
DYA HN 140.0 ES 08:08 49.59 -0.55	WPS HZ 17.6 EP 21:40 13.18 0.07						
DYA HE 140.0 IAML 08:08 50.88 7 0.14	WPS HN 17.6 ES 21:40 15.88 0.00						
DYA HN 140.0 IAMR 08:08 51.14 15 0.12	WPS HE 17.6 IAML 21:40 16.31 5 0.10						
	WPS HE 17.6 IAML 21:40 16.31 6 0.09						
April 10 2013 Time: 01:58 49.7 UTC Magnitude: 1.0 ML	WLF1 HZ 20.8 EP 21:40 13.48 -0.02						
Lat: 52.269N Lon: -2.773W Depth: 2.5 km	WLF1 HN 20.8 ES 21:40 16.48 -0.06						
Grid Ref: 347.26 kmE 263.75 kmN RMS: 0.20 secs	WLF1 HE 20.8 IAML 21:40 16.80 23 0.09						
Locality: YARPOLE,HEREFORDSHIRE	WLF1 HE 20.8 IAML 21:40 17.07 23 0.15						
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	YRC EZ 31.3 EP 21:40 14.94 0.02						
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	WIM EZ 82.0 ES 21:40 31.79 -0.03						
HLM1 HZ 28.6 EP 01:58 55.04 -0.11							
HLM1 HE 28.6 ES 01:58 59.03 -0.06							
HLM1 HE 28.6 IAML 01:58 59.26 14 0.14							
HLM1 HE 28.6 IAMR 01:58 59.33 14 0.10							
April 26 2013 Time: 19:42 12.0 UTC Magnitude: 1.1 ML							
Lat: 56.361N Lon: -4.175W Depth: 2.7 km							
Grid Ref: 265.64 kmE 720.86 kmN RMS: 0.20 secs							
Locality: COMRIE,PERTH/KINROSS							
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0							
Comment: 10KM WEST OF COMRIE							
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							
INVG HZ 10.9 IP C 19:42 14.49 0.08							
INVG HE 10.9 ES 19:42 15.96 -0.18							

TABLE 2 : PHASE DATA

INVG HE 10.9 IAML 19:42 16.05 77 0.16	MONM HE 26.3 IAML 05:20 00.35 26 0.11
INVG HN 10.9 IAML 19:42 16.27 49 0.12	HLM1 HZ 49.5 EP 05:20 00.19 -0.17
EAB EZ 21.7 EP 19:42 16.50 0.26	HLM1 HE 49.5 ES 05:20 06.70 0.07
EAB EZ 21.7 ES 19:42 19.24 -0.06	HLM1 HE 49.5 IAML 05:20 06.96 8 0.24
LAWE HZ 76.6 EP 19:42 24.90 -0.22	HLM1 HN 49.5 IAML 05:20 08.04 4 0.12
LAWE HN 76.6 ES 19:42 34.53 -0.13	RSBS HZ 134.0 EP 05:20 13.50 0.26
LAWE HN 76.6 IAML 19:42 37.63 8 0.17	RSBS HN 134.0 ES 05:20 28.21 -0.70
LAWE HE 76.6 IAML 19:42 37.69 10 0.14	RSBS HN 134.0 IAML 05:20 31.04 3 0.07
KPL HZ 141.0 EP 19:42 35.02 0.00	RSBS HE 134.0 IAML 05:20 31.04 4 0.07
KPL HE 141.0 ES 19:42 52.09 0.30	
KPL HE 141.0 IAML 19:42 52.98 7 0.39	
KPL HN 141.0 IAML 19:42 54.02 3 0.25	
KAC EZ 144.0 EP 19:42 35.92 0.49	
April 28 2013 Time: 02:54 24.1 UTC Magnitude: 0.7 ML	May 5 2013 Time: 16:07 45.1 UTC Magnitude: 1.8 ML
Lat: 55.235N Lon: -3.425W Depth: 3.5 km	Lat: 50.392N Lon: -4.618W Depth: 4.5 km
Grid Ref: 309.39 kmE 594.35 kmN RMS: 0.20 secs	Grid Ref: 213.94 kmE 58.02 kmN RMS: 0.30 secs
Locality: JOHNSTONEBRIDGE,D & G	Locality: LOSTWITHIEL,CORNWALL
Velocity model: Lownet Xnear: 50.0 Xfar: 100.0	Velocity model: Lownet Xnear: 150.0 Xfar: 200.0
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	Comment: FELT PAR & ST NEOT Intensity: 2
ESK HZ 16.6 IP C 02:54 27.36 -0.10	SBD BZ 19.9 EP 16:07 49.05 0.05
ESK HE 16.6 ES 02:54 29.89 -0.01	SBD BN 19.9 ES 16:07 51.45 -0.39
ESK HE 16.6 IAML 02:54 30.04 23 0.24	SBD BE 19.9 IAML 16:07 51.54 1072 0.10
ESK HN 16.6 IAML 02:54 30.66 11 0.21	SBD BN 19.9 IAML 16:07 51.59 586 0.19
BHH SZ 20.6 EP 02:54 28.03 -0.09	DYA HZ 49.0 EP 16:07 53.92 0.10
BHH SE 20.6 ES 02:54 31.16 0.11	DYA HN 49.0 ES 16:07 59.83 -0.34
BHH SE 20.6 IAML 02:54 31.28 27 0.17	DYA HN 49.0 IAML 16:08 00.07 72 0.16
BHH SN 20.6 IAML 02:54 31.30 25 0.14	DYA HE 49.0 IAML 16:08 00.11 43 0.12
EDI HE 78.0 IAML 02:54 47.46 2 0.22	CCA1 HZ 49.1 IP C 16:07 54.18 0.36
EDI HN 78.0 ES 02:54 47.48 0.45	CCA1 HN 49.1 ES 16:07 59.80 -0.37
EDI HN 78.0 IAML 02:54 48.01 5 0.33	CCA1 HE 49.1 IAML 16:08 00.81 61 0.05
	CCA1 HN 49.1 IAML 16:08 01.02 56 0.11
	HTL HZ 67.6 IP C 16:07 57.25 0.59
	HTL HE 67.6 ES 16:08 05.10 0.00
	HTL HN 67.6 IAML 16:08 05.98 51 0.16
	HTL HE 67.6 IAML 16:08 06.47 36 0.11
April 28 2013 Time: 17:56 10.9 UTC Magnitude: 1.1 ML	May 8 2013 Time: 00:58 42.9 UTC Magnitude: 0.9 ML
Lat: 55.239N Lon: -3.426W Depth: 4.1 km	Lat: 51.915N Lon: -4.133W Depth: 12.9 km
Grid Ref: 309.34 kmE 594.80 kmN RMS: 0.10 secs	Grid Ref: 253.31 kmE 226.25 kmN RMS: 0.30 secs
Locality: JOHNSTONEBRIDGE,D & G	Locality: BRECHFA,CARMARTHENSHIRE
Velocity model: Lownet 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 16.5 IP C 17:56 14.15 -0.07	MCH1 HZ 78.5 EP 00:58 55.71 -0.27
ESK HN 16.5 ES 17:56 16.64 0.00	MCH1 HE 78.5 ES 00:59 05.03 -0.51
ESK HE 16.5 IAML 17:56 16.78 42 0.10	MCH1 HE 78.5 IAML 00:59 05.51 5 0.10
ESK HN 16.5 IAML 17:56 17.46 21 0.22	MCH1 HN 78.5 IAML 00:59 05.63 6 0.22
BHH SZ 20.9 EP 17:56 15.00 0.03	MONM HZ 91.9 EP 00:58 58.34 0.31
BHH SN 20.9 ES 17:56 17.97 0.04	MONM HE 91.9 ES 00:59 09.53 0.44
BHH SE 20.9 IAML 17:56 18.07 46 0.18	MONM HN 91.9 IAML 00:59 10.65 7 0.21
BHH SN 20.9 IAML 17:56 18.11 48 0.12	MONM HE 91.9 IAML 00:59 11.88 5 0.36
EBL EZ 64.1 EP 17:56 21.91 -0.09	HTL HZ 105.0 EP 00:59 00.04 0.07
KESW HZ 75.3 EP 17:56 23.58 -0.12	HTL HE 105.0 ES 00:59 12.28 -0.15
EDI HN 77.6 ES 17:56 34.03 0.40	HTL HE 105.0 IAML 00:59 14.08 4 0.19
EDI HN 77.6 IAML 17:56 34.58 6 0.18	HTL HN 105.0 IAML 00:59 15.44 4 0.28
EDI HE 77.6 IAML 17:56 34.66 4 0.17	FOEL HZ 126.0 EP 00:59 03.15 0.19
EDMD HE 104.0 ES 17:56 41.81 1.15	
EDMD HE 104.0 IAML 17:56 43.20 24 0.14	
EDMD HE 104.0 IAML 17:56 43.51 24 0.20	
April 29 2013 Time: 05:33 24.9 UTC Magnitude: 1.0 ML	May 9 2013 Time: 20:05 54.1 UTC Magnitude: 1.3 ML
Lat: 52.743N Lon: -2.555W Depth: 3.1 km	Lat: 57.580N Lon: -5.408W Depth: 2.4 km
Grid Ref: 362.54 kmE 316.33 kmN RMS: 0.30 secs	Grid Ref: 196.27 kmE 859.53 kmN RMS: 0.30 secs
Locality: TELFORD,SHROPSHIRE	Locality: TORRIDON,HIGHLAND
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0
Comment: 9KM NW OF TELFORD	Comment: 7KM NE OF TORRIDON
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES
HLM1 HZ 33.3 EP 05:33 30.97 -0.08	KAC EZ 11.1 IP C 20:05 56.54 -0.02
HLM1 HE 33.3 ES 05:33 35.47 -0.10	KPL HZ 30.6 EP 20:05 59.91 0.10
HLM1 HE 33.3 IAML 05:33 36.19 24 0.32	KPL HE 30.6 ES 20:06 03.67 -0.35
HLM1 HN 33.3 IAML 05:33 36.44 125 0.03	KPL HN 30.6 IAML 20:06 03.74 17 0.26
CWF HN 84.2 ES 05:33 49.39 -0.12	KPL HE 30.6 IAML 20:06 03.87 33 0.24
MCH1 HZ 88.3 EP 05:33 40.19 0.45	MDO EZ 64.5 EP 20:06 05.24 -0.20
MCH1 HN 88.3 ES 05:33 50.15 -0.44	MCD EZ 129.0 EP 20:06 15.81 0.42
MCH1 HN 88.3 IAML 05:33 51.08 5 0.22	MCD EE 129.0 ES 20:06 30.78 -0.19
MCH1 HE 88.3 IAML 05:33 52.42 3 0.20	MCD EE 129.0 IAML 20:06 32.69 21 0.28
MONM HE 102.0 ES 05:33 54.55 0.31	MCD EN 129.0 IAML 20:06 32.77 17 0.34
MONM HE 102.0 IAML 05:33 55.91 3 0.33	BIGH HZ 135.0 EP 20:06 16.77 0.52
MONM HN 102.0 IAML 05:33 56.58 4 0.63	BIGH HE 135.0 ES 20:06 32.01 -0.44
May 1 2013 Time: 05:19 51.8 UTC Magnitude: 1.0 ML	BIGH HE 135.0 IAML 20:06 34.20 9 0.20
Lat: 52.076N Lon: -2.809W Depth: 7.7 km	BIGH HE 135.0 IAML 20:06 34.21 11 0.12
Grid Ref: 344.56 kmE 242.31 kmN RMS: 0.10 secs	LAWE HZ 147.0 EP 20:06 18.41 0.41
Locality: HEREFORD,HEREFORDSHIRE	LAWE HE 147.0 ES 20:06 35.71 0.23
Velocity model: Lownet Xnear: 50.0 Xfar: 100.0	LAWE HE 147.0 IAML 20:06 38.19 7 0.22
Comment: 5KM WNW OF HEREFORD	LAWE HN 147.0 IAML 20:06 39.01 7 0.22
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES	INVG HZ 153.0 EP 20:06 19.35 0.49
MCH1 HZ 15.7 IP D 05:19 55.22 0.14	INVG HN 153.0 ES 20:06 37.10 0.13
MCH1 HN 15.7 ES 05:19 57.42 -0.08	INVG HN 153.0 IAML 20:06 37.91 2 0.12
MCH1 HE 15.7 IAML 05:19 57.46 48 0.10	INVG HE 153.0 IAML 20:06 39.06 2 0.28
MCH1 HN 15.7 IAML 05:19 57.47 141 0.10	
MONM HZ 26.3 IP C 05:19 56.85 0.13	
MONM HE 26.3 ES 05:20 00.23 -0.10	
MONM HN 26.3 IAML 05:20 00.33 34 0.22	
May 12 2013 Time: 02:26 24.6 UTC Magnitude: 0.7 ML	
Lat: 54.503N Lon: -3.106W Depth: 9.8 km	
Grid Ref: 328.39 kmE 512.54 kmN RMS: 0.10 secs	
Locality: GRASMERE,CUMBRIA	
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	

TABLE 2 : PHASE DATA

Comment: 7KM NW OF GRASMERE										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	9.6	IP	D	02:26	26.94		-0.22			LAWE	HZ	59.3	EP	06:58	03.10		0.04					
KESW	HE	9.6	ES		02:26	29.18		0.13			LAWE	HE	59.3	ES	06:58	09.86		-0.55					
KESW	HE	9.6	IAML		02:26	29.38	31	0.32			LAWE	HE	59.3	IAML	06:58	10.07	27	0.22					
KESW	HN	9.6	IAML		02:26	29.44	18	0.23			LAWE	HN	59.3	IAML	06:58	10.26	23	0.10					
EDMD	HZ	82.4	EP		02:26	38.21		0.02			KPL	HZ	62.4	EP	06:58	03.68		0.15					
EDMD	HN	82.4	ES		02:26	48.12		-0.01			KPL	HE	62.4	ES	06:58	10.84		-0.37					
EDMD	HN	82.4	IAML		02:26	48.73	5	0.12			KPL	HN	62.4	IAML	06:58	14.65	25	0.16					
EDMD	HE	82.4	IAML		02:26	48.80	5	0.44			KPL	HE	62.4	IAML	06:58	14.81	23	0.16					
EJK	HZ	90.8	EP		02:26	39.76		0.21			KAC	EZ	82.4	EP	06:58	06.86		0.20					
EJK	HN	90.8	ES		02:26	50.37		-0.12			EAB	EZ	103.0	EP	06:58	10.17		0.38					
EJK	HE	90.8	IAML		02:26	51.35	3	0.30			INVG	HZ	104.0	EP	06:58	09.96		-0.08					
EJK	HN	90.8	IAML		02:26	52.35	2	0.15			INVG	HN	104.0	ES	06:58	22.27		-0.21					
May 15 2013			Time: 06:43 00.7 UTC			Magnitude: 1.4 ML			Lat: 57.269N Lon: -4.758W Depth: 7.5 km			Grid Ref: 233.71 kmE 823.16 kmN RMS: 0.40 secs			INVG HE 104.0 IAML 06:58 24.14 7 0.11			INVG HN 104.0 IAML 06:58 24.32 12 0.10					
Locality: CANNICH,HIGHLAND			Velocity model: Lownet Xnear: 100.0 Xfar: 200.0			Comment: 8KM SOUTH OF CANNICH			MDO EZ 106.0 EP 06:58 10.34			RRR SE 121.0 ES 06:58 26.72			0.02			PGB1 HZ 128.0 EP 06:58 14.59			0.85		
Comment: 8KM SOUTH OF CANNICH									RRH SZ 143.0 EP 06:58 15.96						0.23								
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES		
MDO	EZ	30.5	EP		06:43	06.25		-0.11			May 18 2013	Time: 19:18 02.8 UTC			Magnitude: 2.9 ML								
KAC	EZ	41.4	EP		06:43	08.11		0.11			Lat: 56.776N Lon: -5.715W Depth: 10.4 km	Grid Ref: 173.05 kmE 771.08 kmN RMS: 0.30 secs			Locality: ACHARACLE,HIGHLAND			Velocity model: Lownet Xnear: 100.0 Xfar: 225.0					
KAC	EZ	41.4	ES		06:43	13.27		-0.06			Comment: FELT ACHARACLE...	Intensity: 3											
KPL	HZ	54.5	EP		06:43	10.14		0.14			STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES		
KPL	HN	54.5	ES		06:43	16.45		-0.33			LAWE	HZ	60.6	EP	19:18	13.29		0.23					
KPL	HN	54.5	IAML		06:43	17.12	16	0.27			LAWE	HN	60.6	ES	19:18	20.38		-0.18					
KPL	HE	54.5	IAML		06:43	22.14	7	0.13			LAWE	HE	60.6	IAML	19:18	20.73	980	0.27					
INVG	HZ	103.0	EP		06:43	17.44		-0.19			LAWE	HN	60.6	IAML	19:18	21.25	609	0.17					
INVG	HE	103.0	ES		06:43	29.22		-0.76			KPL	HZ	62.9	EP	19:18	13.35		-0.03					
INVG	HN	103.0	IAML		06:43	32.62	11	0.28			KPL	HE	62.9	ES	19:18	20.78		-0.34					
INVG	HE	103.0	IAML		06:43	32.72	13	0.18			KPL	HN	62.9	IAML	19:18	24.79	376	0.09					
LAWE	HZ	119.0	EP		06:43	19.83		-0.20			KPL	HE	62.9	IAML	19:18	24.90	503	0.11					
LAWE	HN	119.0	ES		06:43	34.83		0.70			KAC	EZ	84.4	EP	19:18	16.76		0.01					
LAWE	HE	119.0	IAML		06:43	37.40	10	0.16			EAB	EZ	107.0	EP	19:18	20.22		-0.07					
LAWE	HN	119.0	IAML		06:43	38.19	9	0.27			INVG	HZ	110.0	IP	C	19:18	20.92		0.23				
EAB	EZ	123.0	EP		06:43	21.47		0.79			INVG	HN	110.0	ES	19:18	33.98		0.22					
DRUM	HZ	143.0	EP		06:43	24.10		0.54			INVG	HE	110.0	IAML	19:18	36.41	357	0.13					
DRUM	HE	143.0	ES		06:43	40.77		0.52			INVG	HN	110.0	IAML	19:18	35.67	387	0.14					
DRUM	HE	143.0	IAML		06:43	43.73	9	0.23			PGB1	HE	132.0	IAML	19:18	42.73	452	0.39					
DRUM	HN	143.0	IAML		06:43	43.93	20	0.34			PGB1	HN	132.0	IAML	19:18	42.76	269	0.55					
May 15 2013			Time: 17:43 48.6 UTC			Magnitude: 2.8 ML			Lat: 57.668N Lon: -5.581W Depth: 7.7 km			MDO EZ 110.0 EP 19:18 20.78			-0.04								
Locality: GAIRLOCH,HIGHLAND			Velocity model: Lownet Xnear: 100.0 Xfar: 200.0			Comment: FELT GAIRLOCH...			RRR SZ 121.0 EP 19:18 22.42			RRR SE 121.0 ES 19:18 36.36			0.22								
Comment: FELT GAIRLOCH...									PGB1 HZ 132.0 IP C 19:18 24.22			PGB1 HE 132.0 ES 19:18 38.36			-0.79								
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	RRH	SZ	140.0	EP	19:18	25.43		0.43					
RRR	SE	25.0	ES		17:43	56.54		-0.26			MCD	EZ	174.0	EP	19:18	29.03		-0.60					
KAC	EZ	25.3	EP		17:43	53.63		0.20			RSC	SZ	178.0	EP	19:18	29.96		-0.16					
KAC	EZ	25.3	ES		17:43	56.73		-0.21			EDI	HZ	183.0	EP	19:18	30.56		-0.16					
KPL	HZ	36.9	EP		17:43	55.21		0.03			EDI	HN	183.0	ES	19:18	51.86		0.75					
KPL	HN	36.9	ES		17:43	59.79		-0.18			EDI	HZ	183.0	IAML	19:18	55.05	146	0.31					
KPL	HN	36.9	IAML		17:44	00.53	428	0.15			EDI	HE	183.0	IAML	19:18	55.50	138	0.28					
KPL	HE	36.9	IAML		17:44	00.55	872	0.49			CLGH	HZ	190.0	EP	19:18	31.50		-0.15					
RRH	SZ	71.5	IP	C	17:44	00.71		0.14			CLGH	HN	190.0	ES	19:18	51.83		-0.89					
MDO	EZ	77.2	IP	C	17:44	01.78		0.27			CLGH	HN	190.0	IAML	19:18	58.16	88	0.16					
RSC	SZ	79.6	IP	D	17:44	01.78		-0.03			CLGH	HE	190.0	IAML	19:18	59.04	94	0.29					
MCD	EZ	139.0	IP	C	17:44	10.93		0.01			DRUM	HZ	198.0	EP	19:18	33.44		0.86					
MCD	EE	139.0	ES		17:44	26.71		-0.48			DRUM	HE	198.0	ES	19:18	54.05		-0.29					
MCD	EN	139.0	IAML		17:44	29.34	136	0.20			DRUM	HN	198.0	IAML	19:18	59.45	226	0.23					
MCD	EE	139.0	IAML		17:44	29.66	245	0.20			DRUM	HE	198.0	IAML	19:19	02.35	205	0.40					
LAWE	HZ	157.0	EP		17:44	13.43		-0.01			ESY	EZ	214.0	EP	19:18	34.80		0.12					
LAWE	HE	157.0	ES		17:44	31.54		-0.01			IDGL	BZ	221.0	EP	19:18	35.64		0.21					
LAWE	HN	157.0	IAML		17:44	35.05	386	0.22			IDGL	BE	221.0	IAML	19:19	07.99	40	0.30					
LAWE	HE	157.0	IAML		17:44	35.19	279	0.17			IDGL	BN	221.0	IAML	19:19	08.14	41	0.41					
INVG	HZ	167.0	EP		17:44	14.80		-0.02			GAL1	HZ	222.0	EP	19:18	35.67		0.10					
INVG	HN	167.0	ES		17:44	34.49		0.55			ESK	HZ	226.0	EP	19:18	35.94		-0.14					
INVG	HE	167.0	IAML		17:44	37.40	244	0.49			KESW	HZ	294.0	EP	19:18	44.74		0.14					
INVG	HN	167.0	IAML		17:44	38.05	161	0.31			MONM	EZ	300.0	EP	19:18	45.77		0.37					
EAB	EZ	181.0	EP		17:44	17.51		0.87			MONM	HN	30.1	ES	16:04	44.14		0.23					
DRUM	HZ	205.0	EP		17:44	19.27		-0.27			MONM	HN	30.1	IAML	16:04	44.22	66	0.12					
DRUM	HE	205.0	IAML		17:44	47.38	66	0.32			MONM	HE	30.1	IAML	16:04	44.24	23	0.10					
DRUM	HN	205.0	IAML		17:44	47.57	72	0.31			MONM	HZ	30.1	EP	16:04	42.22		-0.15					
PGB1	HZ	217.0	EP		17:44	21.53		0.40			MCH1	HZ	44.9	EP	16:04	42.22		-0.06					
ESK	HZ																						

TABLE 2 : PHASE DATA

MCH1	HE	44.9	ES	16:04	48.44	0.14	Locality: LLEYN PENINSULA
MCH1	HE	44.9	IAML	16:04	48.59	23 0.16	Velocity model: Lleyn Xnear: 80.0 Xfar: 200.0
MCH1	HN	44.9	IAML	16:04	48.61	29 0.12	Comment: FELT BRYNCROES... Intensity: 2
HLM1	HZ	79.0	EP	16:04	47.25	-0.45	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES
HLM1	HN	79.0	ES	16:04	57.45	-0.07	YRC EZ 42.3 EP C 03:20 46.84 0.06
HLM1	HE	79.0	IAML	16:04	57.90	6 0.13	YRC EZ 42.3 ES C 03:20 51.80 0.06
HLM1	HN	79.0	IAML	16:04	58.43	5 0.12	YLL EZ 46.2 EP C 03:20 47.49 0.08
CWF	HZ	120.0	EP	16:04	54.55	0.55	WLF1 HZ 50.1 EP C 03:20 48.01 -0.04
CWF	HN	120.0	IAML	16:05	09.95	3 0.17	WLF1 HZ 50.1 AMPG 03:20 48.14 780 0.11
CWF	HE	120.0	IAML	16:05	09.98	4 0.12	WLF1 HN 50.1 ES 03:20 53.64 -0.24
							WLF1 HZ 50.1 AMSG 03:20 53.76 713 0.15
May 29 2013				Time: 03:16 28.9 UTC	Magnitude: 3.8 ML		WLF1 HE 50.1 IAML 03:20 54.28 51 0.20
Lat: 52.883N				Lat: -4.720W	Depth: 10.5 km		WLF1 HN 50.1 IAML 03:20 58.51 54 0.17
Grid Ref:				217.00 kmE	335.23 kmN	RMS: 0.40 secs	WPS HZ 59.7 EP C 03:20 49.85 0.25
Locality: LLEYN PENINSULA							WPS HZ 59.7 AMPG 03:20 49.95 68 0.10
Velocity model: Lleyn Xnear: 250.0 Xfar: 300.0							WPS HZ 59.7 AMSG 03:20 56.75 269 0.07
Comment: FELT GWYNEDD...							WPS HZ 59.7 IAML 03:20 58.19 20 0.24
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							WPS HN 59.7 IAML 03:20 59.31 29 0.19
YRC EZ 42.1 IP C 03:16 36.39							WPS HN 59.7 AMPG 03:20 50.08 -0.18
YLL EZ 46.7 IP C 03:16 37.24							WME EZ 63.6 IP C 03:20 51.47 0.15
WLF1 HZ 50.1 IP C 03:16 37.53							LLW BZ 70.1 EP D 03:20 59.99 64 0.36
WLF1 HE 50.1 ES 03:16 43.10							LLW BE 70.1 IAML 03:20 00.17 76 0.18
WLF1 HN 50.1 IAML 03:16 43.70							FOEL HZ 101.0 EP D 03:20 56.24 0.08
WLF1 HE 50.1 IAML 03:16 47.92							FOEL HZ 101.0 AMPG 03:20 56.42 42 0.15
WPS HZ 59.5 IP C 03:16 39.07							FOEL HZ 101.0 ES 03:21 07.57 0.07
WPS HZ 59.5 AMPG 03:16 39.31							FOEL HZ 101.0 AMSG 03:21 07.72 144 0.08
WPS HE 59.5 ES 03:16 46.51							FOEL HE 101.0 IAML 03:21 08.68 23 0.22
WPS HZ 59.5 AMSG 03:16 46.66							FOEL HN 101.0 IAML 03:21 09.16 22 0.10
WME EZ 63.6 IP C 03:16 39.58							RSBS HZ 103.0 EP C 03:20 56.14 -0.27
LLW BZ 71.1 EP D 03:16 41.02							RSBS HZ 103.0 AMPG 03:20 56.37 86 0.12
LLW BN 71.1 ES 03:16 49.14							RSBS HN 103.0 ES 03:21 08.03 0.10
LLW BN 71.1 IAML 03:16 49.78							RSBS HZ 103.0 AMSG 03:21 08.38 286 0.06
LLW BE 71.1 IAML 03:16 50.03							HLM1 HZ 130.0 EP D 03:20 59.82 -0.70
FOEL HZ 102.0 IP D 03:16 45.80							HLM1 HE 130.0 AMSG 03:21 00.66 82 0.10
FOEL HZ 102.0 AMPG 03:16 45.97							HLM1 HE 130.0 AMSG 03:21 00.66 76 0.11
FOEL HN 102.0 ES 03:16 56.95							WIM EZ 141.0 EP C 03:21 02.42 0.12
FOEL HZ 102.0 AMSG 03:16 57.47							WIM EZ 141.0 EP C 03:21 04.12 0.29
FOEL HT 102.0 AMSG 03:16 57.62							MCH1 HZ 152.0 EP D 03:21 22.33 540 0.09
FOEL HE 102.0 AMSG 03:16 57.62							MCH1 HE 152.0 IAML 03:21 23.36 18 0.17
FOEL HE 102.0 AMSG 03:16 57.84							MCH1 HN 152.0 IAML 03:21 24.42 26 0.16
FOEL HE 102.0 IAML 03:16 58.86							MONM HZ 174.0 EP D 03:21 07.39 0.86
FOEL HN 102.0 IAML 03:16 59.81							KESW HZ 218.0 EP C 03:21 11.98 -0.07
RSBS HZ 104.0 IP C 03:16 45.67							
RSBS HZ 104.0 AMPG 03:16 45.91							May 29 2013 Time: 17:49 27.8 UTC Magnitude: 1.5 ML
RSBS HB 104.0 ES 03:16 57.53							Lat: 57.578N Lon: -5.433W Depth: 2.5 km
RSBS HZ 104.0 AMSG 03:16 57.80							Grid Ref: 194.77 kmE 859.38 kmN RMS: 0.40 secs
RSBS HN 104.0 IAML 03:16 59.83							Locality: TORRIDON,HIGHLAND
RSBS HE 104.0 IAML 03:17 02.13							Velocity model: Lownet Xnear: 100.0 Xfar: 200.0
HLM1 HZ 131.0 EP D 03:16 49.35							Comment: 7KM EAST OF TORRIDON
HLM1 HN 131.0 ES 03:17 04.22							STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES
HLM1 HN 131.0 IAML 03:17 06.63							KAC EZ 11.9 EP 17:49 30.05 -0.27
HLM1 HE 131.0 IAML 03:17 07.89							KPL HZ 29.7 EP 17:49 33.61 0.31
WIM EZ 141.0 IP C 03:16 51.68							KPL HN 29.7 ES 17:49 36.91 -0.41
MCH1 HZ 153.0 IP D 03:16 53.46							KPL HN 29.7 IAML 17:49 37.47 18 0.07
MCH1 HN 153.0 IAML 03:17 13.02							KPL HE 29.7 IAML 17:49 37.51 24 0.10
MCH1 HE 153.0 IAML 03:17 14.96							RRR SZ 38.3 EP 17:49 34.93 0.16
STNC HZ 170.0 IP C 03:16 55.80							RRR SN 38.3 ES 17:49 39.47 -0.39
MONM HZ 175.0 EP 03:16 56.82							RRR SE 38.3 IAML 17:49 40.61 43 0.30
LBWR HZ 209.0 EP C 03:17 00.64							RRR SN 38.3 IAML 17:49 40.71 47 0.28
LBWR HE 209.0 IAML 03:17 29.64							MDO EZ 65.9 EP 17:49 38.80 -0.48
LBWR HN 209.0 IAML 03:17 30.38							RRH SZ 83.9 EP 17:49 42.34 0.33
HTL HZ 211.0 IP C 03:17 00.72							RSC SZ 87.2 EP 17:49 42.51 -0.01
HTL HN 211.0 IAML 03:17 31.31							MCD EZ 130.0 EP 17:49 49.43 0.18
HTL HE 211.0 IAML 03:17 32.12							BIGH HZ 136.0 EP 17:49 50.79 0.76
STRD HZ 213.0 EP 03:17 01.56							LAWE HZ 147.0 EP 17:49 51.85 0.25
KESW HZ 218.0 IP C 03:17 01.00							LAWE HN 147.0 ES 17:50 09.69 0.72
KESW HN 218.0 ES 03:17 23.91							LAWE HN 147.0 IAML 17:50 11.49 19 0.28
KESW HN 218.0 IAML 03:17 33.14							LAWE HE 147.0 IAML 17:50 11.68 25 0.24
KESW HE 218.0 IAML 03:17 42.40							INVG HZ 153.0 EP 17:49 52.93 0.36
GALL HZ 221.0 EP 03:17 01.34							INVG HE 153.0 ES 17:50 10.39 -0.27
HPK HZ 238.0 EP C 03:17 03.85							INVG HE 153.0 IAML 17:50 11.74 12 0.33
CLGH HZ 261.0 IP C 03:17 06.12							INVG HN 153.0 IAML 17:50 12.45 7 0.15
CLGH HE 261.0 ES 03:17 33.07							EAB EZ 168.0 EP 17:49 55.39 0.66
CLGH HN 261.0 IAML 03:17 42.05							
CLGH HE 261.0 IAML 03:17 43.21							May 29 2013 Time: 18:33 43.4 UTC Magnitude: 1.4 ML
DYA HZ 278.0 EP 03:17 08.41							Lat: 57.569N Lon: -5.418W Depth: 2.5 km
EDMD HZ 283.0 EP 03:17 08.94							Grid Ref: 195.61 kmE 858.34 kmN RMS: 0.50 secs
ESK HZ 288.0 IP C 03:17 09.66							Locality: TORRIDON,HIGHLAND
GDLE HZ 310.0 IP C 03:17 12.50							Velocity model: Lownet Xnear: 100.0 Xfar: 200.0
PGB1 HZ 326.0 EP 03:17 14.75							Comment: 7KM EAST OF TORRIDON
EDI HZ 353.0 EP 03:17 17.83							STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES
WACR HZ 361.0 EP 03:17 19.51							KAC EZ 10.6 EP 18:33 45.64 -0.03
ESY EZ 364.0 EP 03:17 19.37							KAC EZ 10.6 ES 18:33 46.88 -0.47
LAWE HZ 379.0 EP 03:17 20.69							KPL HZ 29.2 EP 18:33 49.23 0.44
KAC EZ 515.0 EP 03:17 37.84							KPL HN 29.2 ES 18:33 52.14 -0.60
May 29 2013 Time: 03:20 39.5 UTC Magnitude: 1.7 ML							KPL HE 29.2 IAML 18:33 53.20 23 0.10
Lat: 52.879N Lon: -4.705W Depth: 9.9 km							KPL HN 29.2 IAML 18:33 53.58 16 0.18
Grid Ref: 218.00 kmE 334.74 kmN RMS: 0.20 secs							RRR SZ 39.6 EP 18:33 50.59 0.01
							RRR SN 39.6 ES 18:33 55.37 -0.46

TABLE 2 : PHASE DATA

RRR	SN	39.6	IAML	18:33	56.17	46	0.18	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES
RRR	SE	39.6	IAML	18:33	56.27	46	0.26	JQE	EZ	107.0	EP		18:34	49.85		0.05	
MDO	EZ	64.8	EP	18:33	54.43		-0.27	JRS	EZ	110.0	EP		18:34	50.29		0.00	
RRH	SZ	85.1	EP	18:33	58.12		0.34	JRS	EN	110.0	ES		18:35	03.61		-0.03	
RSC	SZ	88.1	EP	18:33	58.21		-0.03	JLP	EZ	113.0	EP		18:34	50.89		0.04	
MCD	EZ	129.0	IP	C	18:34	05.11	0.41	JSA	HZ	115.0	EP		18:34	51.21		0.14	
BIGH	HZ	136.0	EP	18:34	06.04		0.39	JSA	HN	115.0	ES		18:35	05.03		0.03	
LAWE	HZ	146.0	EP	18:34	07.91		0.88	JSA	HN	115.0	IAML		18:35	06.94	11	0.16	
LAWE	HE	146.0	ES	18:34	25.08		0.79	JSA	HE	115.0	IAML		18:35	08.32	10	0.26	
LAWE	HN	146.0	IAML	18:34	27.19	18	0.30	JVM	EZ	119.0	EP		18:34	51.42		-0.22	
LAWE	HE	146.0	IAML	18:34	27.37	24	0.24	DYA	HN	296.0	ES		18:35	46.47		0.00	
INVG	HZ	152.0	EP	18:34	08.51		0.55	DYA	HN	296.0	IAML		18:35	58.45	5	0.32	
INVG	HN	152.0	ES	18:34	25.86		-0.05	DYA	HE	296.0	IAML		18:35	59.11	7	0.92	
EAB	EZ	167.0	EP	18:34	11.06		0.94										
May 30 2013		Time: 22:06 28.2 UTC			Magnitude: 0.8 ML			June 2 2013 Time: 02:56 57.2 UTC Magnitude: 1.5 ML									
Lat:	52.892N	Lon:	-4.726W		Depth:	11.4 km		Lat:	56.116N	Lon:	-6.132W		Depth:	7.9 km			
Grid Ref:	216.64 kmE	336.24 kmN			RMS:	0.20 secs		Grid Ref:	143.18 kmE	699.16 kmN			RMS:	0.30 secs			
Locality: LLEYN PENINSULA																	
Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0																	
Comment: FELT BRYNCROES... Intensity: 2																	
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES							
YRC	EZ	41.1	EP		22:06	35.54		0.17	LAWE	HZ	48.3	EP	02:57	05.28		-0.25	
YLL	EZ	46.4	EP		22:06	36.37		0.14	LAWE	HN	48.3	ES	02:57	11.19		-0.44	
WLF1	HZ	49.4	EP		22:06	36.63		-0.07	PGB1	HZ	108.0	EP	02:57	15.30		0.44	
WLF1	HE	49.4	ES		22:06	42.22		-0.26	PGB1	HE	108.0	ES	02:57	27.97		0.20	
WLF1	HE	49.4	IAML		22:06	44.64	8	0.08	PGB1	HN	108.0	IAML	02:57	30.26	16	0.12	
WLF1	HN	49.4	IAML		22:06	46.94	8	0.20	PGB1	HE	108.0	IAML	02:57	30.32	20	0.32	
WPS	HZ	58.6	EP		22:06	38.47		0.28	EAB	EZ	112.0	EP	02:57	15.64		0.23	
WPS	HN	58.6	ES		22:06	44.89		-0.09	CLGH	HZ	115.0	EP	02:57	16.10		0.21	
WME	EZ	62.9	EP		22:06	38.84		-0.03	CLGH	HE	115.0	ES	02:57	29.29		-0.27	
LLW	BZ	71.6	EP		22:06	40.33		0.11	CLGH	HN	115.0	IAML	02:57	30.96	27	0.14	
LLW	BE	71.6	ES		22:06	48.42		0.04	CLGH	HE	115.0	IAML	02:57	31.37	24	0.14	
FOEL	HZ	103.0	EP		22:06	45.11		0.08	INVG	HZ	134.0	EP	02:57	18.53		-0.18	
FOEL	HE	103.0	ES		22:06	56.45		-0.02	INVG	HN	134.0	ES	02:57	34.54		0.11	
RSBS	HZ	105.0	EP		22:06	45.00		-0.29	INVG	HE	134.0	IAML	02:57	36.50	14	0.14	
RSBS	HN	105.0	ES		22:06	57.04		0.13	KPL	HZ	139.0	EP	02:57	36.96	18	0.16	
HLM1	HZ	132.0	EP		22:06	48.99		-0.47	KPL	HE	139.0	ES	02:57	19.68		0.25	
HLM1	HN	132.0	ES		22:07	03.98		0.07	KPL	HE	139.0	IAML	02:57	35.91		0.23	
HLM1	HN	132.0	IAML		22:07	06.06	3	0.42	KPL	HN	139.0	IAML	02:57	38.28	8	0.20	
HLM1	HE	132.0	IAML		22:07	07.21	2	0.35	KAC	EZ	162.0	EP	02:57	22.27		-0.47	
									GAL1	HN	166.0	ES	02:57	22.93		-0.26	
May 31 2013		Time: 06:22 26.8 UTC			Magnitude: 1.4 ML			June 10 2013 Time: 03:12 13.3 UTC Magnitude: 2.0 ML									
Lat:	52.881N	Lon:	-4.710W		Depth:	9.5 km		Lat:	59.927N	Lon:	0.195W		Depth:	7.5 km			
Grid Ref:	217.67 kmE	334.98 kmN			RMS:	0.20 secs		Grid Ref:	522.67 kmE	1117.75 kmN			RMS:	0.50 secs			
Locality: LLEYN PENINSULA																	
Velocity model: Lleyn Xnear: 100.0 Xfar: 200.0																	
Comment: FELT BRYNCROES... Intensity: 2								Locality: NORTHERN NORTH SEA									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES							
YRC	EZ	42.1	EP		06:22	34.12		0.07	LRW	HZ	80.0	IP	D	03:12	26.64		0.06
YLL	EZ	46.2	EP		06:22	34.97		0.23	LRW	HE	80.0	ES		03:12	36.13		-0.14
WLF1	HZ	50.0	EP	C	06:22	35.26		-0.08	LRW	HE	80.0	IAML		03:12	38.32	69	0.11
WLF1	HZ	50.0	AMPG		06:22	35.39	137	0.12	LRW	HN	80.0	IAML		03:12	38.91	52	0.13
WLF1	HE	50.0	ES		06:22	40.81		-0.34	BIGH	HZ	284.0	EP		03:12	54.32		0.20
WLF1	HZ	50.0	AMSG		06:22	41.12	692	0.07	MCD	EZ	329.0	EP		03:13	00.78		1.00
WLF1	HE	50.0	AMSG		06:22	41.14	422	0.07	DRUM	HZ	370.0	EP		03:13	04.61		-0.39
WLF1	HT	50.0	AMSG		06:22	41.15	426	0.06	INVG	HZ	463.0	EP		03:13	15.79		-0.73
WLF1	HE	50.0	IAML		06:22	41.60	30	0.18									
WLF1	HN	50.0	IAML		06:22	45.41	29	0.12									
WPS	HZ	59.5	EP	D	06:22	37.18		0.30									
WPS	HE	59.5	ES		06:22	43.76		0.02									
WME	EZ	63.5	EP		06:22	37.33		-0.22									
LLW	BZ	70.4	EP	C	06:22	38.87		0.17									
LLW	BN	70.4	ES		06:22	46.75		-0.04									
FOEL	HZ	102.0	EP	D	06:22	43.64		0.07									
FOEL	HE	102.0	ES		06:22	55.02		0.05									
FOEL	HE	102.0	IAML		06:22	56.50	14	0.36									
FOEL	HN	102.0	IAML		06:22	57.44	12	0.30									
RSBS	HZ	103.0	EP	C	06:22	43.55		-0.26									
RSBS	HN	103.0	ES		06:22	55.44		0.06									
RSBS	HN	103.0	IAML		06:22	59.22	6	0.08									
RSBS	HE	103.0	IAML		06:23	00.08	9	0.06									
HLM1	HZ	130.0	EP	D	06:22	47.79		-0.15									
HLM1	HN	130.0	ES		06:23	02.16		-0.15									
HLM1	HE	130.0	IAML		06:23	04.49	6	0.09									
HLM1	HN	130.0	IAML		06:23	04.54	11	0.36									
WIM	EZ	141.0	EP		06:22	49.84		0.24									
MCH1	HZ	152.0	EP	C	06:22	51.39		0.12									
MCH1	HE	152.0	IAML		06:23	10.23	5	0.14									
MCH1	HN	152.0	IAML		06:23	10.56	6	0.19									
May 31 2013		Time: 18:34 32.0 UTC			Magnitude: 1.7 ML			Locality: MALLAIG,HIGHLAND Velocity model: Lownet Xnear: 100.0 Xfar: 200.0									
Lat:	48.765N	Lon:	-0.739W		Depth:	3.2 km		Lat:	56.988N	Lon:	-5.848W		Depth:	6.7 km			
Grid Ref:	492.66 kmE	-125.35 kmN			RMS:	0.10 secs		Grid Ref:	166.26 kmE	795.10 kmN			RMS:	0.20 secs			
Locality: NORTHWEST FRANCE Velocity model: Lownet Xnear: 500.0 Xfar																	

TABLE 2 : PHASE DATA

KPL	HE	40.9	IAML	20:21	52.31	23	0.24		KESW	HN	180.0	IAML	03:52	44.25	16	0.40
KAC	EZ	65.9	IP	D	20:21	50.86		0.05	KESW	HE	180.0	IAML	03:52	44.75	16	0.42
LAWE	HZ	85.6	EP		20:21	53.98		0.13	MONM	HN	224.0	IAML	03:52	59.53	15	0.32
LAWE	HN	85.6	ES		20:22	03.86		-0.32								
LAWE	HE	85.6	IAML		20:22	03.93	24	0.12	June 26 2013				Time: 19:59 38.2 UTC	Magnitude: 0.9 ML		
LAWE	HN	85.6	IAML		20:22	04.46	19	0.12	Lat: 51.708N				Lat: -3.137W	Depth: 12.5 km		
INVG	HZ	127.0	EP		20:22	00.46		0.21	Grid Ref: 321.45 kmE				Grid Ref: 201.69 kmN	RMS: 0.10 secs		
INVG	HN	127.0	ES		20:22	15.20		-0.04	Locality: BRYNITHEL,BLAENAU GWENT							
INVG	HE	127.0	IAML		20:22	16.03	8	0.11	Velocity model: Mid Wales	Xnear: 80.0	Xfar: 200.0					
EAB	EZ	129.0	EP		20:22	00.88		0.39	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							
EDU	EZ	180.0	EP		20:22	07.69		0.03	MONM HZ 27.2 IP C 19:59 43.65							0.02
June 16 2013									MONM HE 27.2 ES 19:59 47.61							0.07
Lat: 53.221N									MONM HE 27.2 IAML 19:59 47.76	23	0.14					
Grid Ref: 462.69 kmE									MONM HE 27.2 IAML 19:59 47.82	20	0.36					
Locality: NEW OLLERTON,NOTTS									MCH1 HZ 33.6 IP C 19:59 44.42							-0.12
Velocity model: Lownet									MCH1 HE 33.6 ES 19:59 49.05							-0.06
Comment: C/F									MCH1 HN 33.6 IAML 19:59 49.09	14	0.10					
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES									MCH1 HE 33.6 IAML 19:59 49.13	20	0.10					
LBWR	HZ	48.6	EP		22:58	38.98		-0.23	STRD HZ 67.7 EP 19:59 49.59							-0.04
LBWR	HE	48.6	ES		22:58	45.57		0.01	STRD HZ 67.7 EP 19:59 53.39							0.11
LBWR	HN	48.6	IAML		22:58	47.17	18	0.28	HLM1 HZ 91.8 EP 19:59 53.39							0.03
LBWR	HE	48.6	IAML		22:58	48.18	17	0.30	HLM1 HE 91.8 ES 20:00 04.17							
CWF	HZ	56.2	EP		22:58	40.41		0.05	HLM1 HE 91.8 IAML 20:00 04.45	4	0.18					
CWF	HE	56.2	ES		22:58	47.44		-0.12	HLM1 HE 91.8 IAML 20:00 06.92	3	0.14					
CWF	HE	56.2	IAML		22:58	49.88	4	0.14	RSBS HN 114.0 ES 20:00 09.91							0.04
CWF	HN	56.2	IAML		22:58	54.83	4	0.46	RSBS HN 114.0 IAML 20:00 10.97	2	0.14					
HPK	HZ	90.1	EP		22:58	45.87		0.25	RSBS HN 114.0 IAML 20:00 11.98	3	0.10					
HPK	HN	90.1	ES		22:58	56.53		-0.13								
HPK	HE	90.1	IAML		22:59	01.12	23	0.24	June 26 2013				Time: 22:28 01.5 UTC	Magnitude: 2.7 ML		
HPK	HN	90.1	IAML		22:59	01.37	29	0.17	Lat: 52.879N				Lat: -4.719W	Depth: 8.6 km		
HLM1	HZ	145.0	EP		22:58	54.47		0.42	Grid Ref: 217.05 kmE				Grid Ref: 334.78 kmN	RMS: 0.30 secs		
HLM1	HE	145.0	ES		22:59	11.44		0.19	Locality: LLEYN PENINSULA							
HLM1	HN	145.0	IAML		22:59	14.30	6	0.28	Velocity model: Lleyn	Xnear: 80.0	Xfar: 200.0					
HLM1	HE	145.0	IAML		22:59	14.69	8	0.24	Comment: FELT GWYNEDD				Intensity: 3			
June 23 2013									STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							
Lat: 56.009N									YRC EZ 42.5 IP C 22:28 09.04							0.21
Grid Ref: 146.20 kmE									YRC EZ 46.9 IP C 22:28 09.86							0.30
Locality: JURA,ARGYLL/BUTE									YLL EZ 50.5 IP C 22:28 10.23							0.09
Velocity model: Lownet									WLF1 HZ 50.5 ES 22:28 15.77							-0.22
Comment: C/F,FELT FOSTERHOUSES									WLF1 HN 50.5 IAML 22:28 20.34	581	0.12					
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES									WLF1 HE 50.5 IAML 22:28 21.11	465	0.32					
LAWE	HZ	50.3	IP	C	12:08	16.07		-0.31	WME EZ 64.0 IP C 22:28 12.20							-0.16
LAWE	HE	50.3	ES		12:08	22.24		-0.46	LLW BZ 71.0 EP D 22:28 13.57							0.05
LAWE	HE	50.3	IAML		12:08	22.96	83	0.17	LLW BN 71.0 ES 22:28 21.63							-0.04
LAWE	HN	50.3	IAML		12:08	22.97	78	0.17	FOEL HZ 102.0 EP D 22:28 18.41							-0.05
PGB1	HZ	102.0	EP		12:08	25.04		0.68	FOEL HN 102.0 ES 22:28 29.73							-0.23
PGB1	HE	102.0	ES		12:08	36.73		0.21	FOEL HE 102.0 IAML 22:28 31.15	302	0.56					
PGB1	HE	102.0	IAML		12:08	38.50	32	0.17	RSBS HZ 103.0 EP C 22:28 32.21	249	0.34					
PGB1	HN	102.0	IAML		12:08	38.57	32	0.22	RSBS HN 103.0 ES 22:28 32.41	107	0.24					
CLGH	HZ	103.0	IP	D	12:08	24.94		0.35	RSBS HE 103.0 IAML 22:28 32.79	118	0.21					
CLGH	HE	103.0	ES		12:08	36.44		-0.47	DSB BZ 118.0 EP D 22:28 20.94							0.05
CLGH	HN	103.0	IAML		12:08	38.57	53	0.14	DSB BN 118.0 ES 22:28 34.14							0.10
CLGH	HE	103.0	IAML		12:08	39.13	33	0.19	HLM1 HZ 131.0 EP 22:28 22.88							0.07
FAB	EZ	110.0	EP		12:08	25.76		0.14	HLM1 HN 131.0 IAML 22:28 40.44	218	0.36					
INVG	HZ	134.0	EP		12:08	28.76		-0.45	HLM1 HE 131.0 IAML 22:28 40.47	118	0.16					
KPL	HZ	150.0	EP		12:08	31.84		0.38	WIM EZ 141.0 EP 22:28 24.32							-0.13
KPL	HE	150.0	ES		12:08	49.19		0.39	IWEX BZ 150.0 EP 22:28 25.06							-0.74
KPL	HN	150.0	IAML		12:08	52.60	6	0.24	IWEX BN 150.0 ES 22:28 42.42							0.13
KPL	HE	150.0	IAML		12:08	54.27	10	0.33	MCH1 HZ 153.0 EP 22:28 26.00							-0.15
GALL	HZ	154.0	EP		12:08	31.60		-0.36	MCH1 HN 153.0 ES 22:28 43.93							1.05
ESK	HZ	196.0	EP		12:08	36.95		-0.56	MCH1 HE 153.0 IAML 22:28 45.45	111	0.26					
June 26 2013									MCH1 HE 153.0 IAML 22:28 45.98	151	0.44					
Lat: 53.533N									IOMK HZ 154.0 EP 22:28 26.16							-0.16
Grid Ref: 465.35 kmE									STNC HZ 170.0 EP D 22:28 28.84							0.48
Locality: DONCASTER,S YORKSHIRE									MONM HZ 174.0 EP C 22:28 29.49							0.65
Velocity model: Lownet									MONM HE 174.0 IAML 22:28 51.60	211	0.34					
Comment: C/F,FELT FOSTERHOUSES									MONM HE 174.0 IAML 22:28 51.69	220	0.46					
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES									STRD HZ 213.0 EP C 22:28 34.14							0.44
LMK	HZ	46.4	EP		03:52	02.29		-0.14	STRD HZ 213.0 ES 22:28 57.26							1.69
LMK	HN	46.4	ES		03:52	08.77		0.05	STRD HN 213.0 IAML 22:29 05.06	74	0.28					
LMK	HE	46.4	IAML		03:52	42.01	114	0.72	STRD HN 213.0 IAML 22:29 09.33	150	0.50					
LMK	HN	46.4	IAML		03:52	50.88	158	0.76	WACR HZ 361.0 EP D 22:28 52.77							
LBWR	HZ	49.4	EP		03:52	03.04		0.05	June 26 2013				Time: 22:28 29.3 UTC	Magnitude: 2.4 ML		
LBWR	HN	49.4	ES		03:52	09.28		-0.39	Lat: 52.877N				Lat: -4.699W	Depth: 8.4 km		
LBWR	HE	49.4	IAML		03:52	10.44	50	0.38	Grid Ref: 218.39 kmE				Grid Ref: 334.51 kmN	RMS: 0.40 secs		
LBWR	HN	49.4	IAML		03:52	10.89	67	0.33	Locality: LLEYN PENINSULA							
GDLE	HZ	99.8	EP		03:52	10.94		0.15	Velocity model: Lleyn	Xnear: 80.0	Xfar: 200.0					
EDMD	HZ	157.0	EP		03:52	19.05		-0.31	Comment: FELT GWYNEDD				Intensity: 3			
EDMD	HE	157.0	IAML		03:52	37.67	16	0.24	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							
EDMD	HN	157.0	IAML		03:52	38.51	19	0.22	YRC EZ 42.4 EP 22:28 36.41							-0.11
FOEL	HZ	163.0	EP		03:52	21.49		1.25	YRC EZ 42.4 ES 22:28 41.44							0.02
FOEL	HN	163.0	ES		03:52	40.96		1.44	YLL EZ 46.0 EP 22:28 37.13							0.00
FOEL	HE	163.0	IAML		03:52	43.00	22	0.42	YLL EZ 46.0 ES 22:28 42.74							0.30
FOEL	HN	163.0	IAML		03:52	45.70	13	0.36	WLF1 HZ 50.1 EP 22:28 37.32							-0.48
KESW	HZ	180.0	EP		03:52	22.62		0.00	WLF1 HN 50.1 ES 22:28 43.48							-0.08
KESW	HN	180.0	ES		03:52	42.89		-0.76	WLF1 HE 50.1							

TABLE 2 : PHASE DATA

WME	EZ	63.6	EP	22:28	40.23	0.21	DYA	HN	94.8	IAML	12:13	36.05	33	0.21	
LLW	BZ	69.7	EP	22:28	41.05	0.01	SBD	BZ	98.2	EP	12:13	23.87		0.72	
LLW	BN	69.7	ES	22:28	48.89	-0.12	SBD	BZ	98.2	ES	12:13	34.83		-0.07	
FOEL	HZ	101.0	EP	22:28	46.42	0.21	HTL	HZ	146.0	EP	12:13	31.04		0.89	
FOEL	HE	101.0	ES	22:28	57.10	-0.60	JSA	HZ	182.0	EP	12:13	35.25		0.21	
FOEL	HE	101.0	IAML	22:28	58.04	147 0.20	JSA	HE	182.0	ES	12:13	54.87		-0.61	
FOEL	HN	101.0	IAML	22:28	59.61	178 0.37	JSA	HN	182.0	IAML	12:13	56.81	15	0.21	
RSBS	HZ	103.0	EP	22:28	47.13	0.63	JSA	HE	182.0	IAML	12:13	57.27	14	0.14	
RSBS	HN	103.0	ES	22:28	57.65	-0.54	JLP	EZ	185.0	EP	12:13	35.01		-0.39	
RSBS	HN	103.0	IAML	22:28	58.89	71 0.13									
RSBS	HE	103.0	IAML	22:28	59.99	87 0.17	July 1 2013								
HLM1	HZ	129.0	EP	22:28	51.00	0.43	Time:	23:58	35.4	UTC	Magnitude:	0.6	ML		
HLM1	HN	129.0	ES	22:29	05.56	0.54	Lat:	52.880N			Depth:	8.2	km		
HLM1	HE	129.0	IAML	22:29	07.59	81 0.31	Grid Ref:	216.12 kmE	334.93 kmN		RMS:	0.20	secs		
HLM1	HN	129.0	IAML	22:29	07.89	105 0.21	Locality:	LLEYN PENINSULA							
WIM	EZ	141.0	ES	22:29	08.77	0.63	Velocity model:	Lleyn	Xnear:	80.0	Xfar:	200.0			
MCH1	HN	152.0	ES	22:29	11.07	0.33	Comment:	FELT ABERDARON			Intensity:	2			
MCH1	HB	152.0	IAML	22:29	12.30	92 0.17	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL PERI RES	
MCH1	HN	152.0	IAML	22:29	12.68	115 0.27	YRC	EZ	42.6	EP	23:58	42.75		0.07	
IOMK	HZ	154.0	EP	22:28	53.95	-0.43	YRC	EZ	42.6	ES	23:58	47.67		0.03	
IOMK	HE	154.0	ES	22:29	11.26	-0.16	WLF1	HZ	50.8	EP	23:58	43.99		-0.04	
							WLF1	HE	50.8	ES	23:58	49.76		-0.15	
June 26 2013							WLF1	HE	50.8	IAML	23:58	50.11	5	0.14	
Time:	22:30	28.1	UTC				WLF1	HN	50.8	IAML	23:58	52.91	4	0.10	
Lat:	52.879N		Lon:	-4.705W			LLW	BZ	72.0	EP	23:58	47.56		0.05	
Grid Ref:	218.00 kmE			334.74 kmN			LLW	BN	72.0	ES	23:58	55.65		-0.11	
Locality:	LLEYN PENINSULA						RSBS	HZ	103.0	EP	23:58	52.27		-0.17	
Velocity model:	Lleyn	Xnear:	80.0	Xfar:	200.0		RSBS	HN	103.0	ES	23:59	03.96		-0.08	
Comment:	FELT BRYNCROES						RSBS	HN	103.0	IAML	23:59	06.22	1	0.07	
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	RSBS	HE	103.0	IAML	23:59	06.85	2	0.08	
YRC	EZ	42.3	EP	22:30	35.40	0.08	HLM1	HZ	131.0	EP	23:58	57.50		0.68	
YRC	EZ	42.3	ES	22:30	40.46	0.26	MCH1	HZ	153.0	EP	23:59	00.42		0.29	
WLF1	HZ	50.1	EP	22:30	36.47	-0.14	IOMK	Hz	154.0	EP	23:59	00.53		0.33	
WLF1	HE	50.1	ES	22:30	42.37	-0.01									
WLF1	HE	50.1	IAML	22:30	42.89	20 0.23	July 2 2013								
WLF1	HN	50.1	IAML	22:30	44.36	13 0.11	Time:	21:44	15.3	UTC	Magnitude:	1.3	ML		
WME	EZ	63.6	EP	22:30	38.63	-0.21	Lat:	50.135N		Lon:	-5.137W		Depth:	2.7 km	
LLW	BZ	70.1	EP	22:30	39.95	0.04	Grid Ref:	175.85 kmE	30.89 kmN		RMS:	0.30	secs		
LLW	BN	70.1	ES	22:30	47.85	-0.08	Locality:	FALMOUTH,CORNWALL							
FOEL	HZ	101.0	EP	22:30	44.91	-0.15	Velocity model:	Lownet	Xnear:	500.0	Xfar:	1000.0			
FOEL	HE	101.0	ES	22:30	56.15	-0.42	Comment:	FELT FALMOUTH...			Intensity:	3			
FOEL	HE	101.0	IAML	22:30	57.64	8 0.39	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL PERI RES	
FOEL	HN	101.0	IAML	22:30	58.32	15 0.81	CCA1	HZ	8.6	IP	C	21:44	17.21	-0.08	
RSBS	HZ	103.0	EP	22:30	45.28	-0.03	CCA1	HE	8.6	ES	21:44	18.60		-0.13	
RSBS	HN	103.0	ES	22:30	56.92	-0.08	CCA1	HN	8.6	IAML	21:44	18.94	147	0.10	
HLM1	HZ	130.0	EP	22:30	50.21	0.79	CCA1	HE	8.6	IAML	21:44	19.00	308	0.07	
HLM1	HN	130.0	ES	22:31	04.68	0.78	DYA	HZ	92.2	EP	21:44	30.96		0.10	
HLM1	HE	130.0	IAML	22:31	06.70	4 0.16	DYA	HN	92.2	ES	21:44	41.86		-0.33	
HLM1	HN	130.0	IAML	22:31	07.01	5 0.31	DYA	HN	92.2	IAML	21:44	43.48	25	0.22	
WIM	EZ	141.0	EP	22:30	51.04	-0.15	DYA	HE	92.2	IAML	21:44	43.87	8	0.11	
MCH1	HZ	152.0	EP	22:30	52.59	-0.23	HTL	HZ	106.0	EP	21:44	33.42		0.44	
MCH1	HN	152.0	ES	22:31	09.91	0.29	HTL	HE	106.0	IAML	21:44	48.21	8	0.16	
MCH1	HN	152.0	IAML	22:31	11.49	3 0.13	HTL	HN	106.0	IAML	21:44	48.55	8	0.29	
MCH1	HE	152.0	IAML	22:31	11.83	4 0.20									
IOMK	HZ	154.0	EP	22:30	53.07	-0.07	July 3 2013								
MONM	HZ	174.0	EP	22:30	55.97	0.34	Time:	21:37	01.0	UTC	Magnitude:	2.0	ML		
							Lat:	48.536N		Lon:	-1.888W		Depth:	7.7 km	
June 29 2013							Grid Ref:	408.27 kmE							
Time:	14:35	29.6	UTC				Locality:	NORTHWEST FRANCE							
Lat:	53.254N		Lon:	-4.350W			Velocity model:	Lownet	Xnear:	100.0	Xfar:	200.0			
Grid Ref:	243.25 kmE			375.61 kmN			Comment:	75KM SSE OF JERSEY							
Locality:	LLANGEFNI,ANGLESEY						STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL PERI RES	
Velocity model:	Lleyn	Xnear:	80.0	Xfar:	200.0		RENF	BZ	61.7	EP	21:37	11.90		0.52	
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	RENF	BE	61.7	ES	21:37	18.30		-0.68	
WLF1	HZ	5.0	IP	C	14:35	32.10	JRS	EN	74.5	EP	21:37	13.68		0.31	
WLF1	HE	5.0	ES		14:35	33.71	JRS	EE	74.5	ES	21:37	21.80		-0.62	
WLF1	HE	5.0	IAML		14:35	33.79	JRS	EN	74.5	IAML	21:37	22.07	114	0.16	
WLF1	HN	5.0	IAML		14:35	33.86	JQE	EZ	74.7	EP	21:37	13.68		0.29	
YRC	EZ	15.0	EP		14:35	33.00	JSA	HZ	75.4	EP	21:37	13.73		0.22	
YRC	EZ	15.0	ES		14:35	35.32	JSA	HE	75.4	ES	21:37	22.10		-0.56	
WME	EZ	16.2	EP		14:35	33.11	JSA	HE	75.4	IAML	21:37	24.52	41	0.19	
YLL	EZ	17.4	EP		14:35	33.36	JSA	HN	75.4	IAML	21:37	25.35	76	0.18	
LLW	BZ	64.3	EP		14:35	40.25	JVM	EZ	79.2	EP	21:37	14.35		0.25	
LLW	BE	64.3	ES		14:35	47.95	JLP	EZ	80.8	EP	21:37	14.63		0.27	
FOEL	HZ	87.1	EP		14:35	43.80									
IOMK	HZ	113.0	EP		14:35	48.14									
June 30 2013							July 6 2013								
Time:	12:13	07.0	UTC				Time:	14:03	12.7	UTC	Magnitude:	2.2	ML		
Lat:	49.686N		Lon:	-4.563W			Lat:	48.838N		Lon:	-2.980W		Depth:	7.5 km	
Grid Ref:	215.15 kmE			-20.59 kmN			Grid Ref:	328.10 kmE			-117.54 kmN		RMS:	0.40 secs	
Locality:	ENGLISH CHANNEL						Locality:	NORTHWEST FRANCE							
Velocity model:	Lownet	Xnear:	100.0	Xfar:	200.0		Velocity model:	Lownet	Xnear:	500.0	Xfar:	1000.0			
Comment:	60KM SE OF FALMOUTH						Comment:	65KM SW OF JERSEY							
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL PERI RES	
CCA1	HZ	73.3	EP		12:13	18.64	JSA	HZ	70.8	EP	14:03	24.11		-0.39	
CCA1	HN	73.3	ES		12:13	28.28	JSA	HE	70.8	ES	14:03	33.25		0.12	
CCA1	HE	73.3	IAML		12:13	29.69	JSA	HE	70.8	IAML	14:03	36.83	131	0.26	
CCA1	HN	73.3	IAML		12:13	29.93	JSA	EN	75.9	EP	14:03	37.00	192	0.20	
DYA	HZ	94.8	EP		12:13	22.77	JRS	EE	75.9	ES	14:03	25.05		-0.26	
DYA	HN	94.8	ES		12:13	33.62	JRS	EN	75.9	IAML	14:03	34.90		0.38	
DYA	HE	94.8	IAML		12:13	35.70	JRS	EE	75.9	IAML	14:03	38.34	131	0.12	

TABLE 2 : PHASE DATA

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WPS	HE	18.5	IAML	10:50	38.09	33	0.07		FOEL	HN	72.5	IAML	06:05	30.44	46	0.20
YRC	EZ	20.7	EP	10:50	35.51		0.01		HPK	HZ	89.4	EP	06:05	21.18		0.24
YRC	EZ	20.7	IP	D	10:50	35.55	0.05		HPK	HE	89.4	ES	06:05	31.95		0.24
YRC	EZ	20.7	AMPG		10:50	35.63	29	0.05	HPK	HN	89.4	IAML	06:05	33.73	145	0.14
YRC	EZ	20.7	AMSG		10:50	38.38	95	0.14	HPK	HE	89.4	IAML	06:05	35.07	132	0.18
WLF1	HZ	27.8	EP	C	10:50	36.66		0.03	HLM1	HZ	91.7	EP	06:05	21.11		-0.23
WLF1	HZ	27.8	AMPG		10:50	36.72	5	0.07	HLM1	HN	91.7	ES	06:05	31.76		-0.64
WLF1	HE	27.8	ES		10:50	39.86		-0.09	HLM1	HN	91.7	IAML	06:05	35.51	77	0.15
WLF1	HN	27.8	IAML		10:50	40.07	52	0.09	HLM1	HE	91.7	IAML	06:05	36.09	69	0.22
WLF1	HZ	27.8	AMSG		10:50	40.07	107	0.08	WLF1	HZ	138.0	EP	06:05	28.16		0.02
WLF1	HE	27.8	IAML		10:50	40.13	39	0.10	WLF1	HN	138.0	ES	06:05	44.17		0.01
WME	EZ	31.5	EP		10:50	37.16		-0.07	WLF1	HN	138.0	IAML	06:05	44.76	62	0.29
WME	EZ	31.5	IP	C	10:50	37.20	6	0.07	WLF1	HE	138.0	IAML	06:05	46.43	38	0.07
WME	EZ	31.5	AMPG		10:50	37.24	15	0.08	WPS	HZ	146.0	EP	06:05	29.19		0.01
WME	EZ	31.5	AMSG		10:50	41.16			WPS	HE	146.0	ES	06:05	46.07		0.11
YLL	EZ	49.2	EP		10:50	40.08		-0.05	WPS	HN	146.0	ES	06:05	46.21		
WIM	EZ	84.3	EP		10:50	46.00		0.09	MCH1	HZ	149.0	EP	06:05	29.77		0.11
IOMK	HZ	97.6	EP		10:50	47.63		-0.32	MCH1	HN	149.0	ES	06:05	47.05		0.25
IOMK	HE	97.6	ES		10:50	59.09		0.12	MCH1	HE	149.0	IAML	06:05	48.56	49	0.13
FOEL	HZ	119.0	EP		10:50	51.65		0.31	MCH1	HN	149.0	IAML	06:05	48.74	91	0.21
FOEL	HE	119.0	ES		10:51	04.63		-0.03	KESW	HZ	156.0	EP	06:05	30.53		-0.09
FOEL	HE	119.0	IAML		10:51	07.16	10	0.13	KESW	HE	156.0	IAML	06:05	51.24	35	0.25
FOEL	HN	119.0	IAML		10:51	07.24	8	0.18	KESW	HN	156.0	IAML	06:05	51.63	26	0.23
July 31 2013									IOMK	HZ	185.0	EP	06:05	33.95		-0.39
Lat: 48.677N									IOMK	HN	185.0	IAML	06:05	58.38	19	0.20
Lon: -2.453W									IOMK	HE	185.0	IAML	06:05	58.98	18	0.23
Grid Ref: 366.66 kmE -135.80 kmN																
Locality: NORTHWEST FRANCE																
Velocity model: Lownet Xnear: 100.0 Xfar: 300.0																
Comment: 60KM SSW OF JERSEY																
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES						
JSA	HZ	60.4	EP			19:46	05.69			-0.01						
JSA	HE	60.4	ES			19:46	13.16			0.00						
JSA	HN	60.4	IAML			19:46	16.09	12	0.13							
JSA	HE	60.4	IAML			19:46	18.01	7	0.18							
JVM	EZ	62.6	EP			19:46	06.02			-0.03						
JRS	EN	63.0	ES			19:46	13.87			0.00						
JRS	EE	63.0	IAML			19:46	16.82	19	0.06							
JRS	EN	63.0	IAML			19:46	17.10	10	0.09							
JQE	EZ	65.6	EP			19:46	06.48			-0.02						
JLP	EZ	68.5	EP			19:46	07.03			0.06						
July 31 2013																
Lat: 55.797N																
Lon: -6.385W																
Grid Ref: 125.21 kmE 664.67 kmN																
Locality: ISLAY, ARGYLL/BUTE																
Comment: FELT ISLAY																
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES						
LAWE	HE	80.2	EP			22:09	38.67			-0.14						
LAWE	HZ	80.2	ES			22:09	48.56			0.03						
CLGH	HZ	81.4	EP			22:09	38.91			-0.11						
CLGH	HN	81.4	ES			22:09	49.18			0.28						
CLGH	HN	81.4	IAML			22:09	50.09	69	0.12							
CLGH	HE	81.4	IAML			22:09	50.36	64	0.12							
IDGL	BZ	108.0	EP			22:09	43.19			0.15						
IDGL	BN	108.0	ES			22:09	55.70			-0.15						
IDGL	BN	108.0	IAML			22:09	56.38	16	0.22							
IDGL	BE	108.0	IAML			22:09	56.64	20	0.41							
PGB1	HZ	119.0	EP			22:09	44.62			-0.06						
PGB1	HZ	119.0	ES			22:09	58.98			0.29						
PGB1	HE	119.0	IAML			22:10	00.38	17	0.14							
PGB1	HN	119.0	IAML			22:10	00.66	18	0.16							
EAB	EZ	135.0	EP			22:09	46.69			-0.26						
GAL1	HZ	148.0	EP			22:09	48.80			-0.03						
GAL1	HN	148.0	IAML			22:10	07.43	8	0.12							
GAL1	HE	148.0	IAML			22:10	07.45	12	0.15							
KPL	HZ	177.0	EP			22:09	52.98			0.33						
KPL	HE	177.0	IAML			22:10	16.43	14	0.42							
KPL	HN	177.0	IAML			22:10	16.53	6	0.14							
KAC	EZ	201.0	EP			22:09	55.69			0.08						
ESK	HZ	208.0	EP			22:09	56.05			-0.42						
August 11 2013																
Lat: 53.270N																
Lon: -2.322W																
Grid Ref: 378.53 kmE 374.86 kmN																
RMS: 0.30 secs																
Locality: KNUTSFORD, CHESHIRE																
Velocity model: Lownet Xnear: 150.0 Xfar: 300.0																
Comment: FELT FLEETWOOD...																
Intensity: 3																
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES						
SPK	EZ	63.9	EP			05:37	59.02			-0.02						
SPK	EN	63.9	ES			05:38	06.68			0.00						
SPK	EN	63.9	IAML			05:38	10.09	316	0.25							
SPK	EE	63.9	IAML			05:38	10.42	411	0.21							
WME	EZ	80.2	EP			05:38	01.43			-0.09						
KESW	HZ	82.7	EP			05:38	01.90			-0.04						
KESW	HE	82.7	ES			05:38	11.75			0.11						
KESW	HE	82.7	IAML			05:38	12.88	175	0.46							
KESW	HN	82.7	IAML			05:38	14.51	122	0.42							
IOMK	HZ	89.3	EP			05:38	03.08			0.15						
IOMK	HE	89.3	ES			05:38	16.21	158	0.32							
IOMK	HN	89.3	IAML			05:38	16.80	164	0.14							
WPS	HZ	90.2	EP			05:38	03.12			0.10						
WPS	HN	90.2	IAML			05:38	16.76	64	0.16							
WPS	HE	90.2	IAML			05:38	20.14	44	0.36							
WIM	EZ	90.5	EP			05:38	03.21			0.07						
WLF1	HZ	92.8	EP			05:38	03.38			-0.05						
WLF1	HN	92.8	IAML			05:38	19.34	78	0.12							
WLF1	HE	92.8	IAML			05:38	20.98	97	0.28							
YLL	EZ	96.1	EP			05:38	04.93			0.99						
YRC	EZ	105.														

TABLE 2 : PHASE DATA

STNC	HE	116.0	IAML	05:38	26.96	189	0.36	MCH1	HZ	211.0	EP	09:59	09.06	0.54	
STNC	HN	116.0	IAML	05:38	27.36	208	0.40	CLGH	HZ	221.0	EP	09:59	09.51	-0.21	
GAL1	HZ	141.0	EP	05:38	10.72		0.60	PGB1	HZ	226.0	EP	09:59	10.32	0.00	
GAL1	HN	141.0	IAML	05:38	28.69	21	0.18	EDI	HZ	228.0	EP	09:59	10.41	-0.11	
GAL1	HE	141.0	IAML	05:38	30.24	18	0.18	ESY	EZ	232.0	EP	09:59	10.82	-0.30	
EDMD	HZ	142.0	EP	05:38	11.27		1.11	STRD	HZ	249.0	EP	09:59	13.60	0.44	
EDMD	HN	142.0	ES	05:38	28.78		3.07	LAWE	HZ	294.0	EP	09:59	18.36	-0.47	
EDMD	HN	142.0	IAML	05:38	30.32	310	0.20	KPL	HZ	410.0	EP	09:59	33.34	0.00	
EDMD	HE	142.0	IAML	05:38	33.05	198	0.54	KAC	EZ	420.0	EP	09:59	34.24	-0.36	
MCH1	HZ	209.0	EP	05:38	20.72		2.08								
MCH1	HE	209.0	IAML	05:38	48.13	33	0.44								
MCH1	HN	209.0	IAML	05:38	48.72	40	0.42								
August 25 2013			Time: 07:13 24.2 UTC			Magnitude: 0.9 ML			August 27 2013			Time: 10:06 06.0 UTC			Magnitude: 2.7 ML
Lat: 53.891N			Lon: -3.344W			Depth: 5.4 km			Lat: 56.641N			Locality: GLEN LYON, PERTH/KINROSS			Depth: 2.8 km
Grid Ref: 311.68 kmE			444.73 kmN			RMS: 0.30 secs			Grid Ref: 254.43 kmE			Velocity model: Lownet			Xnear: 150.0 Xfar: 300.0
Locality: IRISH SEA			Comment: FELT GLENLYON...			Intensity: 3			Locality: GLEN LYON, PERTH/KINROSS			Comment: FELT GLENLYON...			Intensity: 3
Velocity model: Lownet Xnear: 100.0 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			STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES
KESW	HZ	79.2	EP	07:13	37.49		0.13	INVG	HZ	31.3	IP	C	10:06	11.52	-0.31
KESW	HE	79.2	ES	07:13	46.87		-0.12	INVG	HN	31.3	ES		10:06	15.06	-1.02
KESW	HE	79.2	IAML	07:13	48.74	6	0.58	INVG	HN	31.3	IAML		10:06	15.32	239 0.11
KESW	HN	79.2	IAML	07:13	49.84	4	0.44	INVG	HE	31.3	IAML		10:06	15.62	266 0.18
WME	EZ	83.9	EP	07:13	37.55		-0.52	ELO	EZ	45.0	IP	C	10:06	13.91	-0.29
IOMK	HZ	89.9	EP	07:13	39.05		0.04	EAB	EZ	50.4	EP		10:06	14.97	-0.09
IOMK	HN	89.9	ES	07:13	49.74		-0.10	LAWE	HZ	76.1	EP		10:06	18.78	-0.24
IOMK	HN	89.9	IAML	07:13	52.00	4	0.18	LAWE	HN	76.1	IAML		10:06	32.16	1228 0.24
IOMK	HE	89.9	IAML	07:13	52.28	6	0.20	EDU	EZ	84.4	EP		10:06	20.60	0.24
WPS	HZ	93.8	EP	07:13	39.91		0.33	PGB1	HZ	92.6	EP		10:06	22.15	0.56
WLF1	HZ	96.6	EP	07:13	40.27		0.25	PGB1	HE	92.6	IAML		10:06	33.97	75 0.30
YRC	EZ	108.0	EP	07:13	41.89		0.07	PGB1	HN	92.6	IAML		10:06	36.60	68 0.18
FOEL	HZ	112.0	EP	07:13	42.29		-0.17	EAU	EZ	106.0	EP		10:06	23.94	0.31
GALL	HZ	140.0	EP	07:13	47.75		1.15	EDI	HZ	109.0	EP		10:06	24.06	0.01
ESK	HN	159.0	EP	07:13	51.15		1.86	EDI	HN	109.0	IAML		10:06	37.48	0.27
ESK	HE	159.0	EP	07:13	51.15			EDI	HN	109.0	IAML		10:06	40.82	137 0.46
ESK	HE	159.0	EP	07:13	51.15			EDI	HE	109.0	IAML		10:06	41.37	167 0.22
August 25 2013			Time: 09:58 36.5 UTC			Magnitude: 3.3 ML			KPL			KPL			0.49
Lat: 53.882N			Lon: -3.394W			Depth: 5.3 km			KPL			KPL			0.24
Grid Ref: 308.38 kmE			443.79 kmN			RMS: 0.50 secs			KPL			KPL			0.26
Locality: IRISH SEA			Comment: Borders			Xnear: 100.0 Xfar: 200.0			KAC			KAC			0.17
Velocity model: Borders Xnear: 100.0 Xfar: 200.0			Comment: FELT FLEETWOOD...			Intensity: 3			DRUM			DRUM			0.19
Comment: FELT FLEETWOOD...			STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			DRUM			DRUM			-0.05
SPK	EZ	61.7	IP	D	09:58	47.30		DRUM	HN	119.0	IAML		10:06	24.73	
SPK	EN	61.7	ES	09:58	54.92		0.14	DRUM	HN	119.0	IAML		10:06	39.53	361 0.24
SPK	EE	61.7	IAML	09:58	55.78	3976	0.28	DRUM	HE	119.0	IAML		10:06	39.53	292 0.26
SPK	EN	61.7	IAML	09:58	55.94	2334	0.24	DRUM	HN	119.0	ES		10:06	40.07	
WME	EZ	80.8	IP	C	09:58	49.69		RRR	SE	161.0	IAML		10:06	43.37	334 0.20
WME	EZ	80.8	ES	09:59	00.80		-0.59	RRR	SN	161.0	IAML		10:06	44.36	254 0.12
KESW	HZ	80.9	IP	C	09:58	50.20		RRR	EZ	127.0	EP		10:06	27.42	0.43
KESW	HE	80.9	ES	09:59	00.11		-0.12	RRR	HN	136.0	IP		10:06	28.49	0.25
KESW	HE	80.9	IAML	09:59	01.41	1643	0.49	RRR	SZ	161.0	EP		10:06	31.51	-0.27
IOMK	HZ	87.5	IP	D	09:58	51.28		RRR	SE	161.0	IAML		10:06	53.64	95 0.34
IOMK	HE	87.5	ES	09:59	02.43		-0.10	RRR	SN	161.0	IAML		10:06	54.00	93 0.20
IOMK	HN	87.5	IAML	09:59	04.47	1021	0.25	RRR	HN	165.0	EP		10:06	32.91	0.55
IOMK	HE	87.5	IAML	09:59	05.52	1217	0.23	RRR	HN	165.0	ES		10:06	51.52	-0.07
WIM	EZ	88.9	IP	D	09:58	51.50		RRR	HE	165.0	IAML		10:06	54.05	88 0.22
WIM	EZ	88.9	ES	09:59	02.04		-0.15	RRR	HN	165.0	IAML		10:06	54.54	86 0.22
WPS	HZ	90.6	EP	09:58	51.31		-0.37	RSC	SZ	196.0	EP		10:06	36.08	-0.33
WPS	HN	90.6	ES	09:59	03.47		-0.54	RSC	HN	196.0	IAML		10:06	36.24	-0.60
WPS	HN	90.6	IAML	09:59	05.20	321	0.16	RRH	SZ	199.0	EP		10:06	36.73	-0.80
WPS	HE	90.6	IAML	09:59	07.57	193	0.19	CLGH	HZ	205.0	EP		10:06	36.73	-0.80
WLF1	HZ	93.6	EP	09:58	51.65		-0.70	CLGH	HN	205.0	IAML		10:07	05.88	41 0.18
WLF1	HN	93.6	ES	09:59	04.53		0.92	CLGH	HE	205.0	IAML		10:07	10.37	34 0.30
WLF1	HE	93.6	IAML	09:59	05.39	478	0.33	BIGH	HZ	208.0	EP		10:06	36.99	-0.94
WLF1	HN	93.6	IAML	09:59	09.13	430	0.23	BIGH	HN	208.0	IAML		10:07	05.63	30 0.16
YRC	EZ	105.0	IP	D	09:58	53.52		BIGH	HE	208.0	IAML		10:07	06.25	38 0.12
FOEL	HZ	111.0	EP	09:58	54.76		-0.52	August 28 2013							Magnitude: 1.3 ML
FOEL	HE	111.0	ES	09:59	08.26		-0.37	Lat: 52.294N							Depth: 3.7 km
FOEL	HN	111.0	IAML	09:59	11.75	528	0.33	Grid Ref: 307.40 kmE							RMS: 0.30 secs
FOEL	HE	111.0	IAML	09:59	13.69	936	0.43	Locality: LLANDRINDOD WELLS, POWYS							Velocity model: Mid Wales
HPK	HZ	117.0	IP	C	09:58	56.02		Velocity model: Mid Wales Xnear: 80.0 Xfar: 200.0							Velocity model: Mid Wales Xnear: 80.0 Xfar: 200.0
HPK	HE	117.0	ES	09:59	10.87		0.82	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES
HPK	HN	117.0	IAML	09:59	12.67	2305	0.18	MCH1	HZ	41.2	IP	D	14:27	53.37	-0.05
HPK	HE	117.0	IAML	09:59	13.52	2615	0.48	MCH1	HE	41.2	ES		14:27	58.46	-0.11
STNC	HZ	118.0	EP	09:58	56.90		0.53	MCH1	HN	41.2	IAML		14:27	58.83	14 0.20
STNC	HE	118.0	ES	09:59	10.61		0.12	MCH1	HE	41.2	IAML		14:27	58.97	22 0.10
STNC	HN	118.0	IAML	09:59	12.81	1111	0.33	MONM	HZ	63.3	IP	D	14:27	57.22	0.15
STNC	HE	118.0	IAML	09:59	15.31	1118	0.28	MONM	HE	63.3	ES		14:28	04.92	0.08
GALL	HZ	139.0	EP	09:58	58.61		-0.84	MONM	HE	63.3	IAML		14:28	05.08	18 0.14
GALL	HN	139.0	ES	09:59	16.16		0.41	MONM	HN	63.3	IAML		14:28	05.15	14 0.28
GALL	HE	139.0	IAML	09:59	21.18		0.87	LLW	BZ	65.2	EP		14:27	57.54	0.15
ESK	HZ	160.0	EP	09:59	01.45		-0.67	LLW	BE	65.2	ES		14:28	05.27	-0.12
ESK	HN	160.0	ES	09:59	21.18		0.87	LLW	BN	65.2	IAML		14:28	05.48	9 0.25
ESK	HE	160.0	IAML	09:59	23.81	643	0.30	LLW	BE	65.2	IAML		14:28	05.51	11 0.20
ESK	HN	160.0	IAML	09:59	24.11	696	0.32	FOEL	HZ	67.1	EP		14:27	58.00	0.27
ESK	HE	160.0	IAML	09:59	45.52		0.07	FOEL	HN	67.1	IAML		14:28	05.63	-0.35
GDLE	HZ	179.0	EP	09:59	04.52		0.37	FOEL	HE	67.1	IAML		14:28	05.63	-0.35
CWF	HZ	189.0	EP	09:59	06.03		0.38	FOEL	HN	67.1	ES		14:28	24.63	0.96
LMK	HZ	208.0	EP	09:59	11.47		3.37	FOEL	HE	67.1	IAML		14:28	24.79	12 0.

TABLE 2 : PHASE DATA

WLF1	HN	131.0	IAML	14:28	24.87	9	0.15		HTL	HZ	330.0	EP	06:37	00.26	2.58				
YRC	EZ	135.0	EP	14:28	08.58		0.05		KAC	EZ	420.0	EP	06:37	09.08	0.18				
WME	EZ	138.0	EP	14:28	09.01		-0.10												
August	31	2013	Time:	01:19	41.9	UTC	Magnitude:	1.8	ML	September	1	2013	Time:	16:07	15.0	UTC			
Lat:	55.620N	Lon:	-3.135W				Depth:	4.7	km	Lat:	57.365N	Lon:	-5.493W	Depth:	4.3	km			
Grid Ref:	328.53 kmE	636.85 kmN					RMS:	0.30	secs	Grid Ref:	189.96 kmE	835.87 kmN		RMS:	0.10	secs			
Locality:	PEEBLES,BORDERS						Locality:	LOCHCARRON,HIGHLAND											
Velocity model:	Lownet	Xnear:	100.0	Xfar:	200.0		Velocity model:	Lownet	Xnear:	100.0	Xfar:	200.0							
Comment:	FELT PEEBLES...					Intensity:	3	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES									
EBL	EZ	17.9	IP	D	01:19	45.69		0.17	KPL	HZ	10.0	IP	C	16:07	17.20		0.01		
EBL	EZ	17.9	ES		01:19	48.02		-0.13	KPL	HN	10.0	ES		16:07	18.77		-0.02		
EAU	EZ	31.9	EP		01:19	48.03		0.17	KPL	HE	10.0	IAML		16:07	18.95	18	0.18		
EDI	HZ	33.9	IP	D	01:19	48.25		0.08	KAC	EZ	18.9	EP		16:07	18.96	27	0.22		
EDI	HE	33.9	ES		01:19	52.62		-0.11	KAC	HN	18.9	ES		16:07	21.35		-0.07		
EDI	HN	33.9	IAML		01:19	52.87	271	0.13	LAWE	HN	123.0	ES		16:07	49.90		-0.02		
EDI	HE	33.9	IAML		01:19	52.92	118	0.19	LAWE	HN	123.0	IAML		16:07	50.72	5	0.14		
ESK	BZ	34.1	IP	D	01:19	48.27		0.05	LAWE	HE	123.0	IAML		16:07	50.91	2	0.15		
ESK	BE	34.1	ES		01:19	52.31		-0.51											
ESK	BN	34.1	IAML		01:19	52.81	157	0.07											
ESK	BE	34.1	IAML		01:19	53.31	124	0.09											
ESY	EZ	46.5	EP		01:19	50.06		-0.17											
PGB1	HZ	87.4	EP		01:19	56.81		0.27											
PGB1	HN	87.4	ES		01:20	07.07		-0.15											
PGB1	HN	87.4	IAML		01:20	09.80	114	0.19											
PGB1	HE	87.4	IAML		01:20	10.26	99	0.23											
EAB	EZ	98.3	EP		01:19	58.43		0.18											
INVG	HZ	106.0	EP		01:19	59.60		0.12											
INVG	HN	106.0	ES		01:20	11.82		-0.49											
INVG	HN	106.0	IAML		01:20	12.77	13	0.26											
INVG	HE	106.0	IAML		01:20	15.03	10	0.30											
KESW	HZ	115.0	IP	D	01:20	01.42		0.61											
KESW	HN	115.0	IAML		01:20	17.52	19	0.32											
KESW	HZ	115.0	IAML		01:20	17.70	17	0.25											
KESW	HE	115.0	IAML		01:20	17.87	20	0.30											
GALL	HZ	131.0	EP		01:20	03.16		-0.06											
LAWE	HZ	158.0	EP		01:20	07.77		0.59											
IOMK	HZ	177.0	EP		01:20	08.78		-0.94											
August	31	2013	Time:	06:36	11.4	UTC	Magnitude:	2.6	ML	September	1	2013	Time:	21:28	47.7	UTC	Magnitude:	1.1	ML
Lat:	53.886N	Lon:	-3.403W				Depth:	10.6	km	Lat:	52.316N	Lon:	-3.600W	Depth:	10.8	km			
Grid Ref:	307.79 kmE	444.25 kmN					RMS:	0.40	secs	Grid Ref:	290.95 kmE	269.90 kmN		RMS:	0.20	secs			
Locality:	IRISH SEA						Locality:	RHAYADER,POWYS											
Velocity model:	Borders	Xnear:	100.0	Xfar:	200.0		Velocity model:	Mid Wales	Xnear:	80.0	Xfar:	200.0							
Comment:	FELT FLEETWOOD...					Intensity:	3	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES									
SPK	EZ	61.2	EP		06:36	22.21		0.15	MCH1	HZ	54.3	IP	D	21:28	57.08		0.02		
SPK	EN	61.2	ES		06:36	29.87		0.24	MCH1	HE	54.3	ES		21:29	03.69		-0.14		
SPK	EE	61.2	IAML		06:36	30.64	667	0.27	MCH1	HN	54.3	IAML		21:29	03.86	70	0.10		
SPK	EN	61.2	IAML		06:36	30.78	425	0.21	MCH1	HE	54.3	IAML		21:29	03.87	50	0.10		
KESW	HZ	80.6	IP	C	06:36	25.10		-0.14	LLW	BZ	59.5	EP		21:28	58.11		0.20		
KESW	HE	80.6	ES		06:36	34.82		-0.24	LLW	BN	59.5	ES		21:29	05.24		-0.04		
KESW	HE	80.6	IAML		06:36	36.51	235	0.50	LLW	BN	59.5	IAML		21:29	05.87	5	0.09		
KESW	HN	80.6	IAML		06:36	37.87	160	0.41	LLW	BE	59.5	IAML		21:29	05.91	8	0.10		
WME	EZ	80.7	IP	D	06:36	24.86		-0.36	FOEL	HZ	69.4	EP		21:28	59.64		0.09		
IOMK	HZ	86.8	EP		06:36	26.33		0.10	FOEL	HN	69.4	ES		21:29	07.92		-0.18		
IOMK	HN	86.8	ES		06:36	36.94		0.19	FOEL	HN	69.4	IAML		21:29	08.98	7	0.48		
IOMK	HN	86.8	IAML		06:36	39.39	179	0.17	MONM	HZ	76.1	EP		21:29	09.73	7	0.56		
IOMK	HE	86.8	IAML		06:36	40.43	233	0.25	MONM	HN	76.1	ES		21:29	00.73		0.11		
WIM	EZ	88.2	EP		06:36	26.38		-0.12	MONM	HN	76.1	IAML		21:29	00.73		-0.04		
WPS	HZ	90.4	EP		06:36	26.40		-0.38	MONM	HE	76.1	IAML		21:29	10.14	11	0.28		
WPS	HE	90.4	ES		06:36	38.11		0.42	MONM	HE	76.1	EP		21:29	10.44	10	0.30		
WPS	HE	90.4	IAML		06:36	40.09	75	0.26	RSBS	HZ	88.2	EP		21:29	02.30		-0.19		
WPS	HN	90.4	IAML		06:36	40.36	66	0.29	RSBS	HE	88.2	IAML		21:29	14.77	4	0.10		
WLF1	HZ	93.5	EP		06:36	26.75		-0.54	RSBS	HN	88.2	IAML		21:29	15.42	4	0.07		
WLF1	HN	93.5	ES		06:36	39.51		0.95	STRD	HZ	115.0	EP		21:29	06.95		0.37		
WLF1	HE	93.5	IAML		06:36	41.65	110	0.14	CWF	HZ	163.0	EP		21:29	13.22		-0.22		
WLF1	HN	93.5	IAML		06:36	41.98	112	0.19	CWF	HN	163.0	ES		21:29	31.74		-0.27		
YRC	EZ	105.0	EP		06:36	28.60		-0.54	CWF	HN	163.0	IAML		21:29	32.22	4	0.30		
FOEL	HZ	112.0	EP		06:36	29.52		-0.72	CWF	HE	163.0	IAML		21:29	32.24	3	0.19		
FOEL	HE	112.0	ES		06:36	43.89		0.29	FOEL	HZ	121.0	IP		21:29	36.2		1.7		
FOEL	HE	112.0	IAML		06:36	46.47	160	0.27	FOEL	HN	121.0	EP		21:29	45.00		0.20		
FOEL	HN	112.0	IAML		06:36	46.56	149	0.17	FOEL	HE	121.0	IAML		21:29	45.00		0.20		
HPK	HZ	117.0	EP		06:36	30.95		-0.07	HPK	HZ	212.0	EP		21:29	45.00		0.20		
HPK	HE	117.0	ES		06:36	45.77		0.83	HPK	HN	212.0	IP		21:29	45.00		0.20		
HPK	HN	117.0	IAML		06:36	47.57	594	0.14	HPK	HE	212.0	IAML		21:29	45.00		0.20		
HPK	HE	117.0	IAML		06:36	48.20	456	0.19	HPK	HN	212.0	EP		21:29	45.00		0.20		
GALL	HZ	138.0	EP		06:36	33.67		-0.06	LAWE	HZ	35.5	IP	C	06:44	42.57		-0.10		
EDMD	HZ	141.0	EP		06:36	34.21		0.19	LAWE	HE	35.5	ES		06:44	47.23		-0.19		
ESK	HZ	160.0	EP		06:36	36.33		-0.11	LAWE	HN	35.5	IAML		06:44	47.51	115	0.18		
MCH1	HZ	212.0	EP		06:36	44.03		1.09	LAWE	HE	35.5	IAML		06:44	47.53	55	0.19		
PGB1	HZ	225.0	EP		06:36	45.11		0.49	EAB	HZ	37.1	IP	C	06:44	42.72		-0.25		
MONM	HZ	231.0	EP		06:36	46.74		1.39	INVG	HZ	50.6	EP	9	06:44	44.11		-1.11		
ESY	EZ	232.0	EP		06:36	45.76		0.31	INVG	HN	50.6	IAML		06:44	49.91		-0.81		
RSBS	HZ	233.0	EP		06:36	46.71		1.09	INVG	HE	50.6	IAML		06:44	50.20	45	0.20		
EAB	EZ	263.0	EP		06:36	49.76		0.39	INVG	HE	50.6	IAML		06:44	50.29	16	0.14		
INVG	HZ	286.0	EP		06:36														

TABLE 2 : PHASE DATA

EDI	HN	114.0	IAML	06:45	11.62	20	0.26		Grid Ref: 191.41 kmE	222.99 kmN	RMS: 0.20 secs	
EDI	HE	114.0	IAML	06:45	11.70	28	0.36		Locality: ROCH, PEMBROKESHIRE			
KPL	HZ	120.0	EP	06:44	55.89		0.02		Velocity model: Mid Wales	Xnear: 150.0	Xfar: 300.0	
KPL	HE	120.0	ES	06:45	10.27		0.01		STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES			
KPL	HN	120.0	IAML	06:45	13.11	37	0.22		RSBS HZ 21.9 EP 03:22 24.29		0.20	
KPL	HE	120.0	IAML	06:45	13.24	37	0.32		RSBS HE 21.9 ES 03:22 26.99		-0.11	
EBL	EZ	130.0	EP	06:44	57.69		0.09		RSBS HE 21.9 IAML 03:22 27.07	47	0.07	
KAC	EZ	130.0	EP	06:44	57.68		0.18		RSBS HN 21.9 IAML 03:22 27.17	15	0.06	
ESK	HZ	155.0	EP	06:45	01.63		0.46		MCH1 HZ 140.0 EP 03:22 42.32		-0.31	
ESK	HN	155.0	ES	06:45	19.75		0.31		MCH1 HE 140.0 ES 03:22 59.10		0.11	
ESK	HE	155.0	IAML	06:45	22.75	11	0.24		MCH1 HE 140.0 IAML 03:22 59.39	3	0.18	
ESK	HN	155.0	IAML	06:45	23.95	11	0.26		MCH1 HN 140.0 IAML 03:22 59.47	5	0.24	
DRUM	HZ	158.0	EP	06:45	01.48		-0.04		MONM HZ 153.0 EP 03:22 44.67		0.11	
DRUM	HN	158.0	ES	06:45	19.79		-0.24		MONM HE 153.0 ES 03:23 02.32		0.01	
DRUM	HZ	158.0	IAML	06:45	22.22	28	0.40		MONM HE 153.0 IAML 03:23 03.13	3	0.50	
DRUM	HE	158.0	IAML	06:45	22.82	15	0.11		MONM HN 153.0 IAML 03:23 03.58	3	0.24	
CLGH	HZ	163.0	EP	06:45	01.82		-0.38		WLF1 HE 164.0 ES 03:23 04.67		0.01	
CLGH	HN	163.0	IAML	06:45	25.19	14	0.38					
CLGH	HE	163.0	IAML	06:45	26.51	18	0.36					
September 6 2013 Time: 17:21 06.7 UTC Magnitude: 0.8 ML												
Lat: 52.960N Lon: -4.364W Depth: 19.1 km RMS: 0.10 secs												
Grid Ref: 241.23 kme 342.94 kmN Locality: PWLLHELI,GWYNEDD												
Velocity model: Lleyn Xnear: 50.0 Xfar: 100.0												
Comment: 10KM NE OF PWLLHELI												
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES		
YRC	EZ	35.3	EP	17:21	13.23		0.01		MCH1 HZ 90.2 EP 23:06 17.33		-0.08	
YRC	EZ	35.3	ES	17:21	17.75		0.08		MCH1 HN 90.2 ES 23:06 28.42		-0.03	
WLF1	HZ	36.7	EP	17:21	13.32		-0.10		MONM HZ 100.0 EP 23:06 19.05		-0.01	
WLF1	HN	36.7	ES	17:21	17.91		-0.10		MONM HN 100.0 ES 23:06 31.43		0.14	
WLF1	HE	36.7	IAML	17:21	18.26	26	0.11		MONM HE 100.0 IAML 23:06 31.67	12	0.30	
WLF1	HN	36.7	IAML	17:21	18.39	9	0.09		MONM HN 100.0 IAML 23:06 31.77	15	0.12	
WME	EZ	48.8	EP	17:21	15.05		-0.14		STRD HZ 144.0 EP 23:06 25.99		0.07	
WME	EZ	48.8	ES	17:21	21.06		0.07		STRD HE 144.0 ES 23:06 42.99		-0.10	
WPS	HZ	49.8	EP	17:21	15.44		0.10		STRD HN 144.0 IAML 23:06 44.60	7	0.20	
WPS	HE	49.8	ES	17:21	21.26		0.03		STRD HE 144.0 IAML 23:06 45.41	7	0.16	
WPS	HN	49.8	IAML	17:21	22.16	5	0.68		WLF1 HE 170.0 ES 23:06 49.61		0.02	
WPS	HE	49.8	IAML	17:21	22.17	4	0.10		WLF1 HE 170.0 IAML 23:06 51.49	8	0.14	
FOEL	HZ	78.6	EP	17:21	19.75		0.01		WLF1 HN 170.0 IAML 23:06 51.50	4	0.25	
FOEL	HN	78.6	ES	17:21	28.85		0.21					
September 9 2013 Time: 20:51 48.8 UTC Magnitude: 1.6 ML												
Lat: 56.373N Lon: -4.808W Depth: 7.1 km RMS: 0.60 secs												
Grid Ref: 226.61 kme 723.61 kmN Locality: TYNDRUM,STIRLING												
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0												
Comment: 10KM SW OF TYNDRUM												
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES		
EAB	EZ	35.7	EP	20:51	54.97		-0.32		LMK HZ 49.3 EP 06:21 20.48		-0.35	
LAWE	HZ	38.7	IP	C	20:51	55.28		-0.44		LMK HE 49.3 ES 06:21 26.86		-0.23
LAWE	HZ	38.7	ES		20:52	00.08	-0.67		LMK HE 49.3 IAML 06:21 30.32	81	0.45	
INVG	HE	47.6	IP	C	20:51	56.78	-0.35		LMK HN 49.3 IAML 06:21 30.63	120	0.25	
INVG	HN	47.6	ES		20:52	02.32	-0.87		HPK HZ 54.1 EP 06:21 21.90		0.31	
PGB1	HZ	65.7	EP	20:52	00.70		0.77		HPK HN 54.1 IAML 06:21 29.11	50	0.29	
PGB1	HE	65.7	ES		20:52	08.24	0.20		HPK HE 54.1 IAML 06:21 30.60	50	0.32	
PGB1	HE	65.7	IAML	20:52	09.56	13	0.21		LBWR HZ 54.6 EP 06:21 21.32		-0.37	
PGB1	HN	65.7	IAML	20:52	09.63	11	0.39		LBWR HE 54.6 ES 06:21 28.01		-0.56	
EDI	HZ	113.0	EP	20:52	07.82		0.65		LBWR HE 54.6 IAML 06:21 28.68	47	0.37	
EDI	HN	113.0	IAML	20:52	24.47	16	0.28		LBWR HN 54.6 IAML 06:21 29.14	66	0.36	
EDI	HE	113.0	IAML	20:52	24.59	21	0.27		CWF HZ 102.0 EP 06:21 29.33		0.28	
KPL	HZ	119.0	EP	20:52	08.62		0.43		CWF HN 102.0 ES 06:21 41.86		0.56	
KPL	HN	119.0	ES	20:52	22.66		0.34		CWF HE 102.0 IAML 06:21 44.74	14	0.23	
KPL	HN	119.0	IAML	20:52	26.04	29	0.21		CWF HE 102.0 IAML 06:21 45.03	13	0.13	
KPL	HE	119.0	IAML	20:52	26.11	29	0.32		WACR HZ 149.0 EP 06:21 36.95		0.94	
September 13 2013 Time: 09:05 52.1 UTC Magnitude: 1.1 ML												
Lat: 55.550N Lon: -3.667W Depth: 4.9 km RMS: 0.10 secs												
Grid Ref: 294.84 kme 629.74 kmN Locality: ABINGTON,S LANARKSHIRE												
Velocity model: Lownet Xnear: 50.0 Xfar: 100.0												
Comment: 6KM NNE OF ABINGTON												
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES		
ESK	HZ	39.1	EP	09:05	59.32		0.12		ESK HZ 4.0 EP 03:03 30.99		-0.17	
ESK	HN	39.1	ES	09:06	04.38		-0.03		ESK HN 4.0 ES 03:03 31.97		-0.09	
ESK	HN	39.1	IAML	09:06	04.45	34	0.14		ESK HN 4.0 IAML 03:03 32.29	119	0.10	
ESK	HE	39.1	IAML	09:06	04.94	23	0.10		ESK HE 4.0 IAML 03:03 32.34	71	0.10	
EBL	EZ	46.4	EP	09:06	00.20		-0.16		KESW HZ 85.3 EP 03:03 38.56		0.08	
EDI	HZ	51.4	EP	09:06	01.05		-0.02		KESW HE 85.3 ES 03:03 44.26		-0.24	
EDI	HE	51.4	ES	09:06	07.77		0.12		KESW HE 85.3 IAML 03:03 55.57		0.70	
EDI	HE	51.4	IAML	09:06	08.45	12	0.22		KESW HE 85.3 IAML 03:03 56.91	2	0.25	
EDI	HN	51.4	IAML	09:06	11.15	10	0.20		KESW HN 85.3 IAML 03:03 57.60	2	0.26	
ESY	EZ	77.8	EP	09:06	05.13		-0.08		GAL1 HZ 110.0 EP 03:03 48.30		-0.12	
September 17 2013 Time: 03:22 19.9 UTC Magnitude: 1.0 ML												
Lat: 51.866N Lon: -5.030W Depth: 10.3 km RMS: 0.10 secs												
Grid Ref: 289.84 kme 629.74 kmN Locality: NORTHERN NORTH SEA												
Velocity model: North Sea Xnear: 400.0 Xfar: 600.0												
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES		

TABLE 2 : PHASE DATA

LRW	HZ	161.0	EP	08:54	31.80	0.05	RSC	SZ	120.0	EP	20:49	33.38	-0.26					
LRW	HN	161.0	ES	08:54	48.38	-0.14	LAWE	HZ	134.0	EP	20:49	35.42	-0.25					
LRW	HN	161.0	IAML	08:54	53.11	134 0.22	LAWE	HE	134.0	ES	20:49	51.92	0.27					
LRW	HE	161.0	IAML	08:54	54.70	96 0.22	LAWE	HE	134.0	IAML	20:49	55.18	170 0.18					
WAL1	EZ	188.0	EP	9	08:54	41.96	6.77	LAWE	HN	134.0	IAML	20:49	55.34	85 0.29				
BER	HZ	234.0	EP	08:54	40.75	-0.16	RRH	SZ	149.0	EP	20:49	37.75	-0.11					
BER	HE	234.0	ES	08:55	04.11	-0.27	PGB1	HZ	170.0	EP	20:49	41.13	0.24					
BER	HN	234.0	IAML	08:55	05.07	19 0.40	PGB1	HN	170.0	IAML	20:50	03.81	43 0.22					
BER	HE	234.0	IAML	08:55	05.44	18 0.42	PGB1	HE	170.0	IAML	20:50	04.25	62 0.32					
FOO	HZ	299.0	EP	08:54	48.68	-0.24	EDI	HZ	175.0	EP	20:49	42.06	0.46					
FOO	HN	299.0	ES	08:55	18.74	0.52	EAU	EZ	177.0	EP	20:49	42.38	0.51					
FOO	HE	299.0	IAML	08:55	19.55	22 0.14	ESY	EZ	194.0	EP	20:49	44.91	0.95					
FOO	HN	299.0	IAML	08:55	19.57	21 0.16	ESK	HZ	238.0	EP	20:49	49.12	-0.30					
BIGH	HZ	331.0	EP	08:54	53.06	0.15	CLGH	HZ	272.0	EP	20:49	52.45	-1.20					
BIGH	HE	331.0	IAML	08:55	46.47	29 0.34	CLGH	HN	272.0	IAML	20:50	33.07	29 0.26					
BIGH	HN	331.0	IAML	08:55	52.96	28 0.50	CLGH	HE	272.0	IAML	20:50	36.67	34 0.34					
DRUM	HZ	376.0	EP	08:54	58.58	0.03	October 5 2013 Time: 02:22 25.2 UTC Magnitude: 1.8 ML											
DRUM	HE	376.0	ES	08:55	35.13	0.25	Lat: 54.497N Lon: -3.006W Grid Ref: 334.85 kmE 511.78 kmN Locality: GRASMERE,CUMBRIA Velocity model: Borders Xnear: 50.0 Xfar: 100.0	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES
DRUM	HE	376.0	IAML	08:55	37.56	34 0.18	KESW	HZ	12.0	IP	D	02:22	27.79	0.00				
DRUM	HN	376.0	IAML	08:55	38.79	43 0.30	KESW	HN	12.0	IAML		02:22	27.82	272 0.12				
RSC	SZ	405.0	EP	08:55	02.28	0.18	KESW	HE	12.0	ES		02:22	29.65	-0.01				
KAC	EZ	456.0	EP	08:55	08.09	-0.40	KESW	HE	12.0	IAML		02:22	29.77	149 0.16				
RRR	SZ	462.0	EP	08:55	08.95	-0.26	EDMD	HZ	76.9	EP		02:22	38.33	0.03				
RRR	SN	462.0	ES	08:55	53.11	-0.23	EDMD	HE	76.9	ES		02:22	47.61	-0.02				
RRR	SE	462.0	IAML	08:56	22.34	12 0.32	EDMD	HE	76.9	IAML		02:22	50.83	54 0.16				
RRR	SN	462.0	IAML	08:56	26.70	16 0.52	EDMD	HN	76.9	IAML		02:22	51.00	68 0.12				
ESY	EZ	474.0	EP	08:55	11.45	0.76	ESK	HZ	92.1	EP		02:22	41.00	0.19				
INVG	HZ	478.0	EP	08:55	11.25	0.05	ESK	HE	92.1	ES		02:22	51.99	0.07				
INVG	HN	478.0	ES	08:55	56.24	-0.54	ESK	HN	92.1	IAML		02:22	53.57	14 0.12				
INVG	HE	478.0	IAML	08:56	24.20	11 0.24	ESK	HE	92.1	IAML		02:22	54.05	18 0.16				
INVG	HN	478.0	IAML	08:56	30.04	12 0.58	IOMK	HZ	105.0	EP		02:22	42.51	-0.34				
KPL	HZ	484.0	EP	08:55	11.63	-0.26	IOMK	HN	105.0	ES		02:22	54.58	-0.83				
KPL	HE	484.0	IAML	08:56	00.19	9 0.44	IOMK	HN	105.0	IAML		02:22	55.53	44 0.16				
KPL	HN	484.0	IAML	08:56	00.44	8 0.42	IOMK	HE	105.0	IAML		02:22	56.60	18 0.14				
EDI	HE	492.0	IAML	08:56	03.07	12 0.46	WIM	EZ	115.0	EP		02:22	44.04	-0.56				
EDI	HN	492.0	IAML	08:56	03.08	17 0.58	GAL1	HZ	117.0	EP		02:22	44.69	-0.21				
RHH	SZ	506.0	EP	08:55	15.41	0.74	GAL1	HN	117.0	ES		02:22	57.71	-1.20				
EAB	EZ	510.0	EP	08:55	15.17	-0.01	GAL1	HE	117.0	IAML		02:22	59.06	8 0.13				
PGB1	HE	548.0	IAML	08:56	16.40	9 0.48	GAL1	HN	117.0	IAML		02:22	59.26	31 0.18				
PGB1	HN	548.0	IAML	08:56	21.06	8 0.56	EBL	EZ	142.0	EP		02:22	49.27	0.62				
LAWE	HZ	549.0	EP	08:55	19.34	-0.62	GDLE	HN	142.0	ES		02:23	06.57	1.23				
LAWE	HN	549.0	ES	08:56	11.06	-0.87	GDLE	HN	142.0	IAML		02:23	08.10	90 0.28				
LAWE	HN	549.0	IAML	08:56	12.46	14 0.20	GDLE	HE	142.0	IAML		02:23	08.91	28 0.18				
LAWE	HE	549.0	IAML	08:56	12.59	17 0.20	FOEL	HZ	179.0	EP		02:22	52.89	-0.45				
EDMD	HZ	567.0	EP	08:55	21.68	-0.56	FOEL	HN	179.0	ES		02:23	12.31	-1.03				
EDMD	HE	567.0	IAML	08:56	21.16	10 0.30	FOEL	HE	179.0	IAML		02:23	16.27	14 0.42				
EDMD	HN	567.0	IAML	08:56	22.70	11 0.30	FOEL	HN	179.0	IAML		02:23	19.48	13 0.43				
KESW	HZ	620.0	EP	08:55	28.46	-0.38	September 30 2013 Time: 08:32 18.4 UTC Magnitude: 0.7 ML Lat: 53.268N Lon: -2.434W Depth: 13.0 km Grid Ref: 371.06 kmE 374.68 kmN Locality: WINCHAM,CHESHIRE Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES
LBWR	HZ	715.0	EP	08:55	40.30	-0.29	October 7 2013 Time: 07:25 09.7 UTC Magnitude: 1.1 ML Lat: 57.413N Lon: -5.270W Depth: 5.3 km Grid Ref: 203.62 kmE 840.55 kmN Locality: STRATHCARRON,HIGHLAND Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	KAC	EZ	9.7	EP	07:25	12.06	0.13				
FOEL	HZ	66.4	EP	08:32	29.65	-0.06	KAC	HE	9.7	ES	07:25	13.40	-0.16					
FOEL	HE	66.4	ES	08:32	38.06	0.13	KPL	HZ	24.4	EP	07:25	14.48	0.15					
HLM1	HZ	88.6	EP	08:32	33.25	0.11	KPL	HN	24.4	ES	07:25	17.49	-0.22					
HLM1	HN	88.6	ES	08:32	43.67	-0.20	KPL	HE	24.4	IAML	07:25	18.02	14 0.09					
HLM1	HN	88.6	IAML	08:32	44.53	2 0.12	KPL	HN	24.4	IAML	07:25	18.02	26 0.11					
HLM1	HE	88.6	IAML	08:32	45.88	2 0.15	LAWE	HZ	129.0	EP	07:25	31.20	0.56					
HPK	HN	93.7	ES	08:32	45.13	-0.03	LAWE	HN	129.0	IAML	07:25	47.88	7 0.12					
WLF1	HZ	131.0	EP	08:32	39.45	0.27	LAWE	HE	129.0	IAML	07:25	48.44	7 0.11					
WLF1	HN	131.0	ES	08:32	54.03	-0.28	INVG	HZ	133.0	EP	07:25	31.26	0.01					
MCH1	HN	146.0	ES	08:32	58.38	0.19	INVG	HN	133.0	ES	07:25	46.30	-0.70					
MCH1	HE	146.0	IAML	08:33	00.21	2 0.35	INVG	HN	133.0	IAML	07:25	48.39	4 0.17					
MCH1	HN	146.0	IAML	08:33	01.05	2 0.33	INVG	HE	133.0	IAML	07:25	48.79	4 0.12					
October 4 2013 Time: 20:49 13.8 UTC Magnitude: 2.4 ML Lat: 57.338N Lon: -4.442W Depth: 2.6 km Grid Ref: 253.03 kmE 830.11 kmN Locality: DRUMNADROCHIT,HIGHLAND Velocity model: Lownet Xnear: 150.0 Xfar: 300.0 Comment: FELT DRUMNADROCHIT... Intensity: 3	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES							
WLF1	HZ	148.0	EP	07:25	33.85	0.45	October 13 2013 Time: 20:54 01.2 UTC Magnitude: 1.0 ML Lat: 53.207N Lon: -3.892W Depth: 7.2 km Grid Ref: 273.65 kmE 369.47 kmN Locality: DOLGARROG,CONWY Velocity model: Llynen Xnear: 80.0 Xfar: 200.0 Comment: FELT DOLGARROG... Intensity: 3	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES
WLF1	HN	148.0	ES	07:25	40.1	0.05	YLL	EZ	20.1	IP	C	20:54	04.93	0.05				
WLF1	HE	148.0	IAML	07:25	34.6	0.08	WME	EZ	34.6	IP	D	20:54	07.30	0.08				
WLF1	HN	148.0	IAML	07:25	34.9	0.07	WLF1	HZ	34.9	EP		20:54	07.25	-0.01				
WLF1	HE	148.0	IAML	07:25	34.9	0.07	WLF1	HN	34.9	ES		20:54	11.25	-0.10				
WLF1	HN	148.0	EP	07:25	30.74	-0.44	WLF1	HN	34.9	IAML		20:54	11.46	40 0.13				
WLF1	HE	148.0	ES	07:25	43.11	-0.77	WLF1	HE	34.9	IAML		20:54	12.18	27 0.15				
WLF1	HN	148.0	IAML	07:25	45.87	159 0.24	LLW	BZ	42.6	IP	D	20:54	08.27	-0.26				
WLF1	HE	148.0	IAML	07:25	46.46	120 0.23	LLW	BE	42.6	ES		20:54	13.60	0 0.12				

TABLE 2 : PHASE DATA

WPS	HZ	45.8	EP	20:54	09.03	-0.01	Velocity model: Lownet Xnear: 150.0 Xfar: 300.0				
WPS	HN	45.8	ES	20:54	14.46	0.11	Comment: OFFSHORE LOCATION				
WPS	HN	45.8	IAML	20:54	14.66	10 0.22	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES				
WPS	HE	45.8	IAML	20:54	14.83	13 0.13	CLGH HZ 23.6 EP 09:45 18.35 0.06				
YRC	EZ	45.9	EP	20:54	09.08	0.02	CLGH HN 23.6 ES 09:45 21.41 -0.19				
FOEL	HZ	58.3	EP	20:54	11.01	-0.12	CLGH HE 23.6 IAML 09:45 21.78 35 0.11				
FOEL	HE	58.3	ES	20:54	17.98	0.13	CLGH HN 23.6 IAML 09:45 21.89 43 0.12				
FOEL	HE	58.3	IAML	20:54	18.24	7 0.13	LAWE HZ 125.0 EP 09:45 34.19 -0.14				
FOEL	HN	58.3	IAML	20:54	19.17	11 0.22	LAWE HN 125.0 ES 09:45 49.14 -0.19				
HLM1	HZ	103.0	EP	20:54	18.12	-0.16	LAWE HE 125.0 IAML 09:45 49.17 6 0.23				
HLM1	HE	103.0	ES	20:54	30.09	0.23	LAWE HN 125.0 IAML 09:45 49.27 4 0.18				
HLM1	HE	103.0	IAML	20:54	30.43	4 0.22	PGB1 HZ 131.0 EP 09:45 35.71 0.50				
HLM1	HN	103.0	IAML	20:54	33.45	4 0.10	PGB1 HE 131.0 ES 09:45 50.81 -0.04				
MCH1	HZ	148.0	EP	20:54	24.91	-0.28	PGB1 HE 131.0 IAML 09:45 52.43 21 0.36				
MCH1	HZ	148.0	EP	20:54	24.91	-0.28	PGB1 HN 131.0 IAML 09:45 52.48 12 0.22				
October 15 2013 Time: 11:44 52.7 UTC				Magnitude: 1.0 ML							
Lat: 51.920N Lon: -2.784W				Depth: 19.6 km							
Grid Ref: 346.09 kmE 224.95 kmN				RMS: 0.10 secs							
Locality: ORCOP,HEREFORDSHIRE											
Velocity model: Lownet Xnear: 50.0 Xfar: 100.0											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	
MONM	HZ	9.1	EP			11:44	56.58			0.16	
MONM	HE	9.1	ES			11:44	59.13			0.00	
MONM	HE	9.1	IAML			11:44	59.54	40	0.16		
MONM	HN	9.1	IAML			11:44	59.63	59	0.18		
MCH1	HZ	17.0	IP	D		11:44	57.11			-0.04	
MCH1	HE	17.0	ES			11:45	00.31			-0.09	
MCH1	HE	17.0	IAML			11:45	00.51	49	0.10		
MCH1	HN	17.0	IAML			11:45	00.55	28	0.10		
STRD	HZ	45.7	EP			11:45	00.88			-0.06	
STRD	HN	45.7	ES			11:45	06.93			-0.03	
STRD	HN	45.7	IAML			11:45	07.13	16	0.11		
STRD	HE	45.7	IAML			11:45	07.41	13	0.14		
HLM1	HN	66.9	ES			11:45	12.41			0.15	
HLM1	HE	66.9	IAML			11:45	12.70	4	0.12		
HLM1	HN	66.9	IAML			11:45	13.00	4	0.14		
October 20 2013 Time: 17:06 44.6 UTC				Magnitude: 1.5 ML							
Lat: 53.555N Lon: -2.610W				Depth: 8.3 km							
Grid Ref: 359.59 kmE 406.69 kmN				RMS: 0.20 secs							
Locality: WIGAN,GTR MANCHESTER											
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	
LBWR	HZ	61.2	EP			17:06	55.17			0.13	
LBWR	HN	61.2	ES			17:07	02.60			-0.03	
LBWR	HN	61.2	IAML			17:07	03.40	24	0.20		
LBWR	HE	61.2	IAML			17:07	03.64	35	0.28		
HPK	HZ	79.0	IP	C		17:06	57.89			0.12	
HPK	HE	79.0	ES			17:07	07.02			-0.33	
HPK	HN	79.0	IAML			17:07	08.43	35	0.18		
HPK	HE	79.0	IAML			17:07	09.78	30	0.19		
FOEL	HZ	83.9	EP			17:06	58.89			0.32	
FOEL	HN	83.9	ES			17:07	08.45			-0.29	
FOEL	HN	83.9	IAML			17:07	10.80	25	0.41		
FOEL	HE	83.9	IAML			17:07	11.57	10	0.18		
WME	EZ	114.0	EP			17:07	03.13			-0.01	
HLM1	HZ	117.0	EP			17:07	03.70			0.03	
KESW	HZ	120.0	EP			17:07	04.32			0.26	
WLF1	HZ	122.0	EP			17:07	04.20			-0.23	
CWF	HZ	126.0	EP			17:07	05.12			0.17	
WPS	HZ	127.0	EP			17:07	04.92			-0.10	
October 25 2013 Time: 01:28 20.8 UTC				Magnitude: 1.4 ML							
Lat: 57.592N Lon: -5.446W				Depth: 2.6 km							
Grid Ref: 194.07 kmE 860.98 kmN				RMS: 0.50 secs							
Locality: TORRIDON,HIGHLAND											
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	
KAC	EZ	13.6	IP	C		01:28	23.46			-0.18	
KPL	HZ	30.8	EP			01:28	26.72			0.21	
KPL	HE	30.8	ES			01:28	30.35			-0.32	
KPL	HE	30.8	IAML			01:28	30.88	57	0.18		
KPL	HN	30.8	IAML			01:28	30.89	36	0.13		
BIGH	HZ	135.0	EP			01:28	43.20			0.25	
BIGH	HE	135.0	ES			01:28	58.65			-0.45	
BIGH	HE	135.0	IAML			01:29	00.76	11	0.18		
BIGH	HN	135.0	IAML			01:29	01.44	12	0.17		
LAWE	HZ	148.0	EP			01:28	45.75			0.91	
INVG	HZ	155.0	EP			01:28	46.36			0.52	
INVG	HN	155.0	ES			01:29	03.82			-0.28	
INVG	HE	155.0	IAML			01:29	05.14	4	0.22		
INVG	HN	155.0	IAML			01:29	06.55	7	0.14		
EAB	EZ	170.0	EP			01:28	48.82			0.82	
DRUM	HZ	194.0	EP			01:28	52.56			1.57	
October 26 2013 Time: 09:45 13.8 UTC				Magnitude: 1.3 ML							
Lat: 55.261N Lon: -6.314W				Depth: 3.5 km							
Grid Ref: 125.95 kmE 604.80 kmN				RMS: 0.20 secs							
Locality: BALLINTOY,CO ANTRIM											
November 3 2013 Time: 23:34 12.1 UTC				Magnitude: 1.2 ML							
Lat: 52.114N Lon: -0.863W				Depth: 9.7 km							
Grid Ref: 477.85 kmE 246.84 kmN				RMS: 0.20 secs							
Locality: MILTON KEYNES,BUCKS											
Velocity model: Lownet Xnear: 80.0 Xfar: 160.0											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	
CWF	HZ	75.8	EP			23:34	24.99			0.21	
CWF	HN	75.8	ES			23:34	33.89			-0.12	
CWF	HE	75.8	IAML			23:34	34.54	13	0.12		
CWF	HN	75.8	IAML			23:34	34.67	6	0.22		
SWN1	HZ	93.0	EP			23:34	27.04			-0.41	
SWN1	HE	93.0	ES			23:34	38.86			0.25	
SWN1	HE	93.0	IAML			23:34	41.37	9	0.14		
SWN1	HN	93.0	IAML			23:34	41.57	10	0.20		
WACR	HZ	122.0	EP			23:34	31.97			0.16	
WACR	HE	122.0	ES			23:34	46.10			-0.07	
HLM1	HN	145.0	ES			23:34	51.71			-0.20	
HLM1	HE	145.0	IAML			23:34	53.03	5	0.16		
HLM1	HN	145.0	IAML			23:34	54.04	4	0.13		
MCH1	HZ	147.0	EP			23:34	35.64			0.23	
MCH1	HE	147.0	ES			23:34	52.37			-0.03	
MCH1	HE	147.0	IAML			23:34	52.97	5	0.18		
MCH1	HN	147.0	IAML			23:34	53.37	5	0.17		
November 23 2013 Time: 11:00 16.8 UTC				Magnitude: 0.7 ML							
Lat: 52.409N Lon: -3.160W				Depth: 6.3 km							
Grid Ref: 321.10 kmE 279.67 kmN				RMS: 0.10 secs							

TABLE 2 : PHASE DATA

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HLM1	HZ	148.0	EP	07:57	34.39	1.28	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES								
HLM1	HE	148.0	ES	07:57	51.51	0.66	LBWR	HZ	47.8	EP	21:24	17.39			-0.29									
HLM1	HN	148.0	IAML	07:57	55.53	13 0.26	LBWR	HN	47.8	ES	21:24	23.94			0.02									
HLM1	HE	148.0	IAML	07:57	55.82	18 0.26	LBWR	HN	47.8	IAML	21:24	26.08	30	0.27										
December 10 2013				Time: 19:12 16.3 UTC				Magnitude: 0.9 ML				Lat: 53.207N Lon: -1.022W				Depth: 1.1 km								
												Grid Ref: 465.31 kmE 368.25 kmN				RMS: 0.20 secs								
												Locality: NEW OLLERTON,NOTTS												
				Velocity model: Lownet Xnear: 100.0 Xfar: 150.0												Comment: C/F								
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES																								
LBWR	HZ	51.6	EP	19:12	25.34	-0.22	HPK	HZ	91.7	IAML	21:24	40.21	19	0.22										
LBWR	HE	51.6	ES	19:12	32.41	0.07	WACR	HZ	127.0	EP	21:24	29.42			-0.52									
LBWR	HN	51.6	IAML	19:12	33.93	20 0.29	GDLE	HE	138.0	ES	21:24	48.63			0.82									
LBWR	HE	51.6	IAML	19:12	33.96	10 0.25	GDLE	HN	138.0	IAML	21:24	49.98	7	0.31										
CWF	HZ	55.6	EP	19:12	26.22	0.07	GDLE	HE	138.0	IAML	21:24	51.55	7	0.18										
CWF	HN	55.6	ES	19:12	33.32	-0.04	FOEL	HZ	145.0	EP	21:24	34.04			1.42									
CWF	HE	55.6	IAML	19:12	35.10	4 0.40	December 16 2013 Time: 02:31 59.5 UTC Magnitude: 1.7 ML																	
CWF	HN	55.6	IAML	19:12	36.01	6 0.27	Lat: 53.208N Lon: -1.038W Depth: 1.1 km																	
HPK	HZ	92.6	EP	19:12	32.01	0.12	Grid Ref: 464.24 kmE 368.34 kmN RMS: 0.40 secs																	
HLM1	HZ	147.0	EP	19:12	41.21	1.05	Locality: NEW OLLERTON,NOTTS																	
December 12 2013 Time: 03:01 12.1 UTC				Magnitude: 1.5 ML				Velocity model: Lownet Xnear: 100.0 Xfar: 150.0				Comment: C/F,FELT N OLLERTON				Intensity: 3								
Lat: 53.206N Lon: -1.041W Grid Ref: 464.05 kmE 368.12 kmN RMS: 0.60 secs																								
Locality: NEW OLLERTON,NOTTS				Velocity model: Lownet Xnear: 100.0 Xfar: 200.0				Comment: C/F,FELT N OLLERTON				Intensity: 3												
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES													
LBWR	HZ	50.5	EP	03:01	20.70	-0.46	LBWR	HZ	46.8	EP	02:32	08.01			0.07									
LBWR	HN	50.5	ES	03:01	28.00	0.22	LBWR	HN	46.8	ES	02:32	14.14			0.05									
LBWR	HN	50.5	IAML	03:01	29.49	62 0.25	LBWR	HN	46.8	IAML	02:32	16.67	70	0.25										
LBWR	HE	50.5	IAML	03:01	29.63	37 0.20	CWF	HZ	53.1	EP	02:32	08.71			-0.17									
CWF	HZ	55.0	IP	D	03:01	21.68	CWF	HN	53.1	ES	02:32	15.77			0.04									
CWF	HE	55.0	ES	03:01	28.66	-0.29	CWF	HN	53.1	IAML	02:32	16.35	14	0.12										
CWF	HN	55.0	IAML	03:01	29.19	12 0.13	CWF	HE	53.1	IAML	02:32	19.77	13	0.23										
CWF	HE	55.0	IAML	03:01	29.50	12 0.40	HPK	HZ	91.0	EP	02:32	14.86			0.09									
HPK	HZ	92.2	EP	03:01	27.51	-0.08	HPK	HN	91.0	ES	02:32	25.66			-0.25									
HPK	HE	92.2	ES	03:01	38.53	-0.39	GDLE	HZ	137.0	EP	02:32	22.69			0.83									
HPK	HN	92.2	IAML	03:01	43.30	59 0.19	GDLE	HN	137.0	IAML	02:32	30.47	72	0.21										
HPK	HE	92.2	IAML	03:01	44.38	41 0.22	GDLE	HE	137.0	IAML	02:32	31.56	48	0.25										
GDLE	HZ	136.0	EP	03:01	35.36	1.00	HLM1	HZ	141.0	EP	02:32	23.77			1.27									
HLM1	HZ	146.0	EP	03:01	37.09	1.32	HLM1	HN	141.0	IAML	02:32	45.35	28	0.24										
FOEL	HZ	149.0	EP	03:01	37.56	1.31	HLM1	HE	141.0	IAML	02:32	45.79	35	0.27										
MCH1	HZ	189.0	EP	03:01	42.87	1.25	FOEL	HZ	144.0	EP	02:32	24.70			1.77									
MCH1	HZ	194.0	EP	03:01	43.82	1.64	FOEL	HN	144.0	IAML	02:32	44.96	24	0.34										
December 12 2013 Time: 20:06 24.9 UTC				Magnitude: 1.6 ML				MCH1 HZ 185.0 EP 02:32 29.73				1.26												
Lat: 53.209N Lon: -1.062W Grid Ref: 462.64 kmE 368.43 kmN RMS: 0.30 secs																	EDMD HZ 190.0 EP 02:32 30.56				1.55			
Locality: NEW OLLERTON,NOTTS				Velocity model: Lownet Xnear: 100.0 Xfar: 200.0				Comment: C/F,FELT N OLLERTON				Intensity: 3				December 17 2013 Time: 15:06 39.3 UTC Magnitude: 1.5 ML								
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	LBWR	HZ	49.7	EP	15:06	48.07			-0.16					
LBWR	HN	49.7	ES	15:06	33.37	-0.23	LBWR	HN	49.7	ES	15:06	54.42			-0.35									
LBWR	HE	49.1	IAML	15:06	40.07	0.16	LBWR	HE	49.7	IAML	15:06	56.31	26	0.20										
LBWR	HN	49.1	IP	21	41.65	39 0.34	CWF	HZ	56.2	EP	15:06	48.98			-0.24									
LBWR	HE	49.1	IAML	21	41.98	27 0.42	CWF	HN	56.2	ES	15:06	56.18			-0.30									
CWF	HZ	54.9	EP	21	34.29	-0.18	CWF	HN	56.2	IAML	15:06	57.53	11	0.36										
CWF	HN	54.9	ES	21	41.50	0.08	CWF	HE	56.2	IAML	15:06	59.27	9	0.21										
CWF	HN	54.9	IAML	21	41.78	9 0.38	HPK	HZ	90.9	EP	15:06	54.90			0.31									
HPK	HZ	91.3	EP	21	40.50	-0.38	HPK	HN	90.9	IAML	15:07	10.38	43	0.20										
HPK	HN	91.3	IAML	21	55.66	36 0.20	HPK	HE	90.9	IAML	15:07	11.46	28	0.24										
HPK	HE	91.3	IAML	21	56.73																			

TABLE 2 : PHASE DATA

CWF	HZ	55.3	EP	16:35	25.07	0.15	HLM1	HE	146.0	IAML	21:24	03.57	22	0.26		
CWF	HN	55.3	ES	16:35	32.03	-0.12										
CWF	HN	55.3	IAML	16:35	32.52	10 0.14	December 21 2013						Magnitude:	1.0 ML		
CWF	HE	55.3	IAML	16:35	35.89	8 0.21	Lat: 53.150N						Depth:	12.2 km		
HLM1	HZ	145.0	EP	16:35	39.68	0.91	Grid Ref: 173.68 kmE 366.81 kmN						RMS:	0.30 secs		
FOEL	HZ	148.0	EP	16:35	40.82	1.60	Locality: IRISH SEA									
MCH1	HZ	189.0	EP	16:35	46.59	1.93	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0									
							Comment: 50KM WSW OF HOLYHEAD									
December 19 2013				Time: 09:30	25.0 UTC	Magnitude: 1.9 ML	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES
						Depth: 4.5 km	WLF1	HZ	67.8	EP		10:37	48.79		-0.25	
						RMS: 0.30 secs	WLF1	HE	67.8	ES		10:37	57.29		-0.05	
						Locality: LLANWRTYD WELLS, POWYS	WLF1	HE	67.8	IAML		10:37	57.82	7	0.61	
						Velocity model: Mid Wales Xnear: 100.0 Xfar: 200.0	WLF1	HN	67.8	IAML		10:37	59.11	9	0.32	
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES							
MCH1	HZ	45.6	EP	09:30	33.15		WME	EZ	77.2	EP		10:37	50.57		0.17	
MCH1	HE	45.6	ES	09:30	38.62		YLL	EZ	81.3	EP		10:37	51.25		0.26	
MCH1	HE	45.6	IAML	09:30	38.77	216 0.10	LLW	BE	120.0	ES		10:38	10.23		-0.10	
MCH1	HN	45.6	IAML	09:30	38.85	251 0.20	FOEL	HZ	150.0	EP		10:38	0.09		-0.55	
HLM1	HZ	74.7	EP	09:30	37.86		FOEL	HN	150.0	ES		10:38	17.73		0.32	
HLM1	HE	74.7	ES	09:30	46.40	-0.46										
HLM1	HN	74.7	IAML	09:30	47.45	40 0.38	December 22 2013						Magnitude:	1.1 ML		
HLM1	HE	74.7	IAML	09:30	47.66	28 0.26	Lat: 53.209N						Depth:	1.1 km		
RSBS	HZ	75.3	EP	09:30	37.69		Grid Ref: 466.44 kmE 368.49 kmN						RMS:	0.40 secs		
RSBS	HE	75.3	ES	09:30	46.89	-0.13	Locality: NEW OLLERTON, NOTTS									
RSBS	HN	75.3	IAML	09:30	48.41	16 0.24	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0									
RSBS	HE	75.3	IAML	09:30	52.08	14 0.18	Comment: C/F									
OLDB	HZ	87.5	EP	09:30	39.87		STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES
OLDB	HN	87.5	ES	09:30	50.20	-0.25	LBWR	HZ	52.6	EP		10:19	38.37		0.02	
OLDB	HN	87.5	IAML	09:30	50.80	241 0.36	LBWR	HE	52.6	ES		10:19	45.39		-0.18	
OLDB	HE	87.5	IAML	09:30	53.17	126 0.36	LBWR	HN	52.6	IAML		10:19	46.65	24	0.38	
FOEL	HZ	98.9	EP	09:30	42.18		LBWR	HE	52.6	IAML		10:19	46.81	15	0.37	
FOEL	HE	98.9	ES	09:30	53.64	-0.11	CWF	HZ	56.2	EP		10:19	39.08		0.21	
FOEL	HE	98.9	IAML	09:30	57.12	77 0.36	CWF	HN	56.2	ES		10:19	46.14		-0.34	
FOEL	HN	98.9	IAML	09:30	57.30	47 0.36	CWF	HN	56.2	IAML		10:19	46.52	5	0.12	
WLF1	HE	147.0	ES	09:31	06.54		CWF	HE	56.2	IAML		10:19	50.90	5	0.24	
WLF1	HN	147.0	IAML	09:31	07.53	29 0.18	HLM1	HE	148.0	ES		10:20	11.98		1.10	
WLF1	HE	147.0	IAML	09:31	07.68	24 0.16	HLM1	HE	148.0	IAML		10:20	14.16	10	0.34	
WME	EZ	157.0	EP	09:30	50.88		HLM1	HN	148.0	IAML		10:20	15.47	8	0.28	
WPS	HZ	161.0	EP	09:30	51.26											
CWF	HZ	178.0	EP	09:30	52.78	-0.58	December 26 2013						Magnitude:	0.9 ML		
CWF	HE	178.0	IAML	09:31	14.59	9 0.12	Lat: 52.892N						Depth:	11.8 km		
CWF	HN	178.0	IAML	09:31	14.63	13 0.16	Grid Ref: 282.48 kmE 334.19 kmN						RMS:	0.30 secs		
							Locality: BALA, GWYNEDD									
December 19 2013				Time: 10:27	21.8 UTC	Magnitude: 1.3 ML	Velocity model: Lleywn Xnear: 80.0 Xfar: 200.0									
						Comment: 10KM WSW OF BALA										
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES
LBWR	HZ	51.0	EP	10:27	30.91		LLW	BZ	7.3	EP		01:24	35.27		0.18	
LBWR	HE	51.0	ES	10:27	37.63		LLW	BN	7.3	ES		01:24	36.79		0.09	
LBWR	HN	51.0	IAML	10:27	39.48	37 0.25	LLW	BN	7.3	IAML		01:24	37.09	45	0.15	
LBWR	HE	51.0	IAML	10:27	39.52	18 0.35	LLW	BE	7.3	IAML		01:24	37.09	49	0.10	
CWF	HZ	56.6	EP	10:27	31.80		FOEL	HZ	36.8	IP	C	01:24	39.21		-0.04	
CWF	HE	56.6	ES	10:27	39.06		FOEL	HN	36.8	ES		01:24	43.33		-0.36	
CWF	HN	56.6	IAML	10:27	41.29	8 0.28	FOEL	HN	36.8	IAML		01:24	44.04	13	0.10	
CWF	HE	56.6	IAML	10:27	42.08	6 0.20	FOEL	HE	36.8	IAML		01:24	44.11	32	0.19	
HPK	HN	91.5	ES	10:27	48.44		YLL	EZ	39.6	EP		01:24	39.73		0.06	
HPK	HN	91.5	IAML	10:27	53.29	34 0.20	WLF1	HZ	62.0	EP		01:24	43.24		0.02	
HPK	HE	91.5	IAML	10:27	54.27	25 0.24	WLF1	HE	62.0	ES		01:24	50.46		0.10	
HLM1	HZ	147.0	EP	10:27	47.22		WLF1	HN	62.0	IAML		01:24	51.08	8	0.06	
HLM1	HN	147.0	ES	10:28	04.33		WLF1	HE	62.0	IAML		01:24	51.17	8	0.14	
HLM1	HN	147.0	IAML	10:28	08.31	12 0.29	WME	EZ	67.4	EP		01:24	44.20		0.15	
HLM1	HE	147.0	IAML	10:28	08.49	17 0.26	HLM1	HZ	71.8	EP		01:24	44.87		0.10	
FOEL	HZ	150.0	EP	10:27	47.54		HLM1	HN	71.8	ES		01:24	53.22		0.27	
FOEL	HN	150.0	IAML	10:28	07.80	11 0.32	HLM1	HE	71.8	IAML		01:24	53.51	3	0.18	
FOEL	HE	150.0	IAML	10:28	08.08	10 0.33	HLM1	HN	71.8	IAML		01:24	53.83	4	0.11	
MCH1	HZ	191.0	EP	10:27	53.34		WPS	HZ	75.7	EP		01:24	45.12		-0.20	
							RSBS	HZ	125.0	EP		01:24	51.98		-0.90	
December 20 2013				Time: 21:23	17.2 UTC	Magnitude: 1.4 ML										
						Comment: FELT JERSEY							Intensity:	3		
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	JRS	EZ	1.6	EP		01:37	36.88		0.04	
LBWR	HZ	51.4	EP	21:23	26.40		JRS	EN	1.6	ES		01:37	38.02		0.10	
LBWR	HN	51.4	ES	21:23	32.62		JRS	EE	1.6	IAML		01:37	38.30	393	0.11	
LBWR	HN	51.4	IAML	21:23	34.47	47 0.26	JRS	EN	1.6	IAML		01:37	38.32	358	0.10	
LBWR	HE	51.4	IAML	21:23	34.65	27 0.44	JDC	EZ	1.8	EP		01:37	36.81		-0.04	
CWF	HZ	54.7	EP	21:23	26.78		JDC	EZ	1.8	EP	C	01:37	36.88		-0.01	
CWF	HN	54.7	ES	21:23	33.64		JDC	EZ	1.8	EP	D	01:37	36.79		-0.05	
CWF	HN	54.7	IAML	21:23	34.21	9 0.12	JDG	EN	1.8	ES		01:37	37.86		-0.06	
CWF	HE	54.7	IAML	21:23	34.40	9 0.38	JDC	EN	1.8	ES		01:37	37.96		0.03	
HPK	HN	93.0	ES	21:23	44.32		JQE	EZ	2.5	IP	C	01:37	36.88		-0.01	
HLM1	HZ	146.0	EP	21:23	42.34	1.44	JLP	EZ	6.3	IP	D	01:37	37.29		0.03	
HLM1	HN	146.0	ES	21:23	59.43	1.23	JLP	EZ	6.3	ES		01:37	38.67		0.02	
HLM1	HN	146.0	IAML	21:24	03.28	16 0.28	JSA	HZ	7.3	IP	C	01:37	37.39		0.01	
							JSA	HN	7.3	ES		01:37	38.81		-0.04	
							JSA	HE	7.3	IAML		01:37	38.93	1541	0.14	
							JSA	HZ	7.3	IAML		01:37	39.06	780	0.10	
							JSA	HN	7.3	IAML		01:37	39.52	396	0.12	

TABLE 2 : PHASE DATA

JVM	EZ	10.1	IP	D	01:37	37.76	-0.01	Locality: NEW OLLERTON,NOTTS	
JVM	EZ	10.1	ES		01:37	39.47	-0.05	Velocity model: Lownet Xnear: 100.0 Xfar: 200.0	
ROSF	BZ	130.0	EP		01:37	56.62	0.24	Comment: C/F	
ROSF	BN	130.0	ES		01:38	12.10	0.38		
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES
LBWR	HZ	51.8	EP		00:20	44.57			0.04
LBWR	HN	51.8	ES		00:20	51.24			-0.28
LBWR	HN	51.8	IAML		00:20	53.00	22	0.24	
LBWR	HE	51.8	IAML		00:20	53.14	13	0.29	
CWF	HZ	57.0	EP		00:20	45.31			0.00
CWF	HN	57.0	ES		00:20	52.51			-0.37
CWF	HN	57.0	IAML		00:20	52.80	4	0.12	
CWF	HE	57.0	IAML		00:20	52.98	3	0.13	
HPK	HN	91.8	ES		00:21	02.19			-0.02
HPK	HN	91.8	IAML		00:21	06.30	19	0.23	
HPK	HE	91.8	IAML		00:21	06.40	12	0.31	
HLM1	HZ	148.0	EP		00:21	00.70			1.39
HLM1	HE	148.0	ES		00:21	18.07			0.98
HLM1	HE	148.0	IAML		00:21	20.68	9	0.33	
HLM1	HN	148.0	IAML		00:21	21.71	8	0.26	
December 28 2013	Time: 23:45	56.9	UTC	Magnitude: 1.5 ML					
Lat: 53.189N	Lon: -1.048W		Depth: 1.2 km						
Grid Ref: 463.60 kmE	366.22 kmN		RMS: 0.50 secs						
Locality: NEW OLLERTON,NOTTS									
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0									
Comment: C/F,FELT N OLLERTON			Intensity: 3						
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES
LBWR	HZ	50.9	EP	23:46	05.85	-0.39			
LBWR	HE	50.9	ES	23:46	12.52	-0.56			
LBWR	HE	50.9	IAML	23:46	14.02	27	0.18		
LBWR	HN	50.9	IAML	23:46	14.28	45	0.26		
CWF	HZ	53.1	EP	23:46	06.61	0.06			
CWF	HN	53.1	ES	23:46	13.77	0.16			
CWF	HN	53.1	IAML	23:46	14.08	8	0.15		
CWF	HE	53.1	IAML	23:46	15.58	8	0.44		
HPK	HZ	93.7	EP	23:46	12.89	0.04			
HPK	HN	93.7	IAML	23:46	27.48	36	0.20		
HPK	HE	93.7	IAML	23:46	29.17	24	0.24		
GDL	HN	138.0	ES	23:46	37.27	0.95			
GDL	HN	138.0	IAML	23:46	38.27	25	0.24		
GDL	HE	138.0	IAML	23:46	39.47	9	0.25		
FOEL	HZ	148.0	EP	23:46	22.37	1.21			
FOEL	HE	148.0	IAML	23:46	42.80	13	0.36		
FOEL	HN	148.0	IAML	23:46	44.26	14	0.34		
December 29 2013	Time: 15:12	38.9	UTC	Magnitude: 0.9 ML					
Lat: 52.620N	Lon: -2.917W		Depth: 11.5 km						
Grid Ref: 337.93 kmE	302.90 kmN		RMS: 0.10 secs						
Locality: PONTESBURY, SHROPSHIRE									
Velocity model: Mid Wales Xnear: 80.0 Xfar: 200.0									
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES
HLM1	HZ	11.5	EP	15:12	41.66	-0.06			
HLM1	HN	11.5	ES	15:12	43.82	0.04			
HLM1	HN	11.5	IAML	15:12	43.90	43	0.10		
HLM1	HE	11.5	IAML	15:12	44.38	37	0.17		
FOEL	HZ	35.6	EP	15:12	45.25	-0.01			
MCH1	HZ	69.5	EP	15:12	50.76	0.01			
MCH1	HN	69.5	ES	15:12	59.31	-0.01			
MCH1	HN	69.5	IAML	15:12	59.68	7	0.19		
MCH1	HE	69.5	IAML	15:12	59.87	7	0.22		
WLF1	HZ	124.0	EP	15:12	59.18	0.15			
WLF1	HN	124.0	ES	15:13	13.50	-0.06			
WPS	HZ	137.0	EP	15:13	00.98	0.01			
December 30 2013	Time: 00:20	34.9	UTC	Magnitude: 1.2 ML					
Lat: 53.219N	Lon: -1.010W		Depth: 1.0 km						
Grid Ref: 466.10 kmE	369.59 kmN		RMS: 0.50 secs						
STAT	CO	DIST	PHAS	WT P	HrMn	SECS	AMPL	PERI	RES
LBWR	HZ	52.2	EP		21:53	35.01			0.14
LBWR	HN	52.2	ES		21:53	41.64			-0.21
LBWR	HN	52.2	IAML		21:53	42.93	15	0.34	
LBWR	HE	52.2	IAML		21:53	44.12	11	0.22	
CWF	HZ	57.5	EP		21:53	35.68			0.02
CWF	HN	57.5	IAML		21:53	36.00	2	0.10	
CWF	HE	57.5	ES		21:53	43.03			-0.18
CWF	HE	57.5	IAML		21:53	43.20	2	0.19	
HLM1	HE	149.0	ES		21:54	08.29			0.85
HLM1	HN	149.0	IAML		21:54	12.20	6	0.21	
HLM1	HE	149.0	IAML		21:54	12.52	8	0.25	

TABLE 3

GEOGRAPHIC COORDINATES OF SEISMOGRAPH STATIONS, 2013

Code	Name	Lat	Lon	E (km)	N (km)	Ht (m)	Comp
ABA1	BACONSTHORPE	52.8884	1.1453	611.58	337.00	74	1R
AEU	EAST ANGLIA	52.6202	1.2347	618.93	307.45	28	3SMLGmR
APAE	PACKWAY	52.3006	1.4782	637.12	272.68	58	1R
AWH	WHINBURGH	52.6297	0.9507	599.67	307.68	64	1R
AWI	WITTON	52.8319	1.4471	632.17	331.65	46	1R
BATH	BATH	51.4429	-2.3292	377.22	171.60	131	BBR
BBH	BRUNTSHEIL	55.1333	-2.9299	340.72	582.50	216	1R
BBO1	BOTHEL	54.7367	-3.2464	319.76	538.69	209	3R
BCC1	CHAPELCROSS	55.0153	-3.2201	321.99	569.66	138	1SMmR
BDL	DOBCROSS HALL	54.8030	-2.9385	339.68	545.76	157	1R
BHH	HOWATS HILL	55.0931	-3.2181	322.27	578.31	216	3R
BIGH	UPPER BIGHOUSE	58.4932	-3.9102	288.75	957.69	70	BBSMR
BTA	TALKIN	54.9057	-2.6844	356.12	557.00	279	3R
BWH	WARDLAW	55.1758	-3.6549	294.62	588.09	269	1R
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	BBR
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
EBH	BLACK HILL	56.2476	-3.5084	306.54	707.13	375	1R
EBL	BROAD LAW	55.7723	-3.0445	334.48	653.71	436	1R
ECK	CAULDKAINE HILL	55.1810	-3.1292	328.10	588.00	351	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	BBSMR
EDU	DUNDEE	56.5477	-3.0110	337.85	739.97	421	1R
ELO	LOGIEALMOND	56.4703	-3.7112	294.59	732.21	523	1R
ELSH	ELHAM	51.1482	1.1345	619.32	143.44	126	BBSMR
ESK	ESKDALEMUIR	55.3165	-3.2052	323.52	603.16	261	BBmR
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	BB3LGmR
GCD	CASTLE DOUGLAS	54.8630	-3.9403	275.48	553.76	184	1R
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
HEX	EXMOOR	51.0664	-3.8026	273.71	131.28	230	1R
HGH	GRAY HILL	51.6379	-2.8057	344.25	193.59	223	1R
HLM1	LONG MYND	52.5184	-2.8807	340.25	291.57	429	BBR
HMX	HERSTMONCEUX	50.8674	0.3363	564.49	110.15	26	BBR
HTR	TREWERN HILL	52.0785	-3.2679	313.12	243.04	337	1R
HPE	PEMBROKE	51.9372	-4.7746	209.29	230.21	349	1R
HPK	HAVERAH PARK	53.9581	-1.6241	424.66	451.42	233	BBSMR
HSA	SWANSEA	51.7500	-4.1532	251.38	207.94	293	1R
HTL	HARTLAND	50.9943	-4.4849	225.64	124.66	86	BBSMmR
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	3LGmR
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
KB11	BIRLEY GRANGE	53.2543	-1.5279	431.49	373.17	272	1R
KESW	KESWICK	54.5886	-3.1048	328.70	522.05	282	BBSMR
KEY2	KEYWORTH	52.8790	-1.0770	462.13	331.73	76	SMR

TABLE 3

GEOGRAPHIC COORDINATES OF SEISMOGRAPH STATIONS, 2013

Code	Name	Lat	Lon	E (km)	N (km)	Ht (m)	Comp
KPL	PLOCKTON	57.3391	-5.6527	180.21	833.50	13	BBSMLGR
KS _B	SHIEL BRIDGE	57.2099	-5.4214	193.40	818.40	417	1R
KSY	SYSTON	52.9642	-0.5872	494.88	341.73	121	1R
KTG1	TILBROOK GRNGE	52.3264	-0.4019	508.90	271.06	83	1R
KUF	UFFORD	52.6170	-0.3907	508.94	303.39	38	1R
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
LHO	HOLMEFIRTH	53.5453	-1.8548	409.62	405.44	462	1R
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	3SMLGmR
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
OLDB	OLDBURY	51.6609	-2.5514	361.95	195.94	6	BBSMR
PCO1	CORRIE	55.9880	-4.1002	269.00	679.21	267	1R
PGB1	GLENIFFERBRAES	55.8115	-4.4837	244.38	660.37	199	BBR
REB	EISG-BRACHAIDH	58.1194	-5.2802	206.82	919.16	100	1R
RRH	RHENIGIDALE	57.9197	-6.6881	122.43	901.86	103	1R
RRR	RUBHA REIDH	57.8577	-5.8067	174.19	891.68	61	3SMLGmR
RSBS	ROSEBUSH	51.9530	-4.7448	211.48	231.84	278	BBR
RSC	SCOURIE	58.3485	-5.1683	214.61	944.33	60	1R
RTO	TOLSTA	58.3778	-6.2092	153.95	950.93	74	1R
SAN1	SANDWICK	60.0179	-1.2392	442.41	1126.08	150	1R
SKP1	KOPHILL	51.7218	-0.8096	482.22	203.29	212	1R
SMD	MENDIPS	51.3083	-2.7170	350.03	156.88	310	1R
SOFL	SORNFELLI	62.0689	-6.9658			721	BBR
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	BB3SMLGmR
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 (South)	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
XAL	ALLENDALE	54.8617	-2.2147	386.22	551.91	458	1R
XSO	SOURHOPE	55.4924	-2.2510	384.14	622.10	516	1R
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
- M Low-frequency microphone
- LG Single low-gain vertical seismometer
- SM Strong motion seismometers
- BB Broadband Instrument
- R Station coordinates registered with the International Seismological Centre (ISC), England and the National Earthquake Information Centre (NEIC), USA

TABLE 4
Depth / crustal velocity models used in earthquake locations

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

Appendix 1 Key to Bulletin 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 eg: C/F, see below under comments abbreviations.

The following abbreviations are extracted from the output of the location program HYPO71 (Lee and Lahr, 1975)

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

Locality and Comments abbreviations

C/F	Coalfield Type
Leics	Leicestershire
D & G	Dumfries and Galloway
Notts	Nottinghamshire
Bucks	Buckinghamshire
Co	County
I.O.W	Isle of Wight
...	and felt elsewhere
N,S,E,W	North, South, East, West

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+ indicates felt, no macroseismic details. 3+, 4+ etc indicates felt at 3 or 4, but no survey carried out. 3, 4, 5 etc describes the maximum EMS intensity produced by the event.
Comments	Additional comments about the event eg: C/F see list of comments abbreviations below.
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 eg P, S, PG and PN. AML
WT	Hypo 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 eg; 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: Grunthal, G., (Ed) 1998. European Macroseismic scale 1998. Cahiers du Centre European de Geodynamique et de Seismologie. Vol 15.