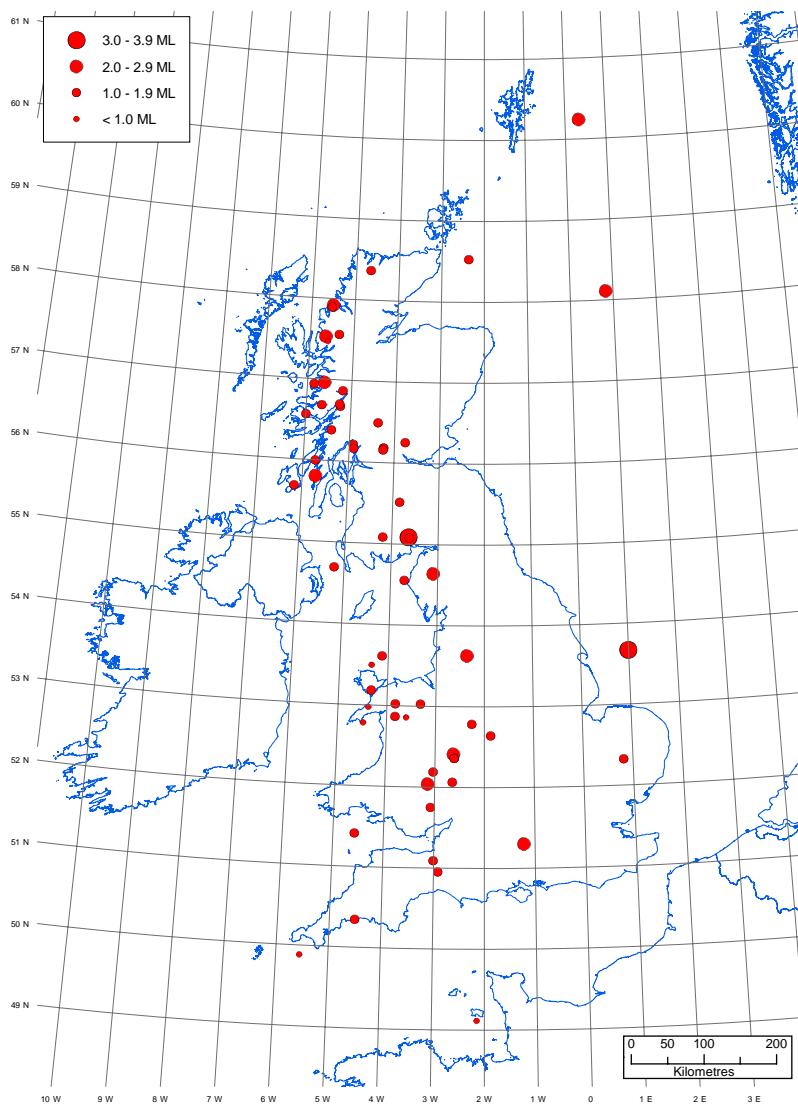


Bulletin of British Earthquakes 2006

B.A. Simpson (Editor)

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1 Introduction

The British Geological Survey's (BGS) Seismic Monitoring and Information Service operate a nationwide network of seismograph stations in the United Kingdom (UK). Earthquakes in the UK, and coastal waters, are detected within limits dependent on the distribution of seismograph stations. Location accuracy is improved in offshore areas through data exchange with neighbouring countries. This bulletin contains locations, magnitudes and phase data for all earthquakes detected and located by the BGS during 2006, listed in Tables 1 and 2. Maps showing seismic activity in 2006 (Figure 8), 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 to 800 kmE and 1500 kmN.

All events believed to be of true tectonic origin are included. No coalfield events were detected during the year. Acoustic disturbances, such as sonic booms from supersonic aircraft, are included when they are felt. The air-borne 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 a number of sub-networks, which, in turn, consist of up to ten 'outstation' vertical seismometers radio-linked over distances of up to 100 km to a central site. Here, the data, along with that from a local 3-component set of two horizontal and one vertical seismometer, are recorded digitally by SDAS or the SEISLOG data acquisition system (Utheim and Havskov, 1993). The system records data continuously, but also creates event-triggered files. The sub-networks are accessed for data transfer to Edinburgh several times a day through Internet or dial-up modems. Once transferred, the events are analysed to determine location and magnitude. At a number of sites, low-gain vertical seismometers are installed to extend the dynamic range of the system (by 34 dB) to stronger motions, and low frequency microphones are used to aid the discrimination of sonic booms. In addition, strong motion accelerometers have been installed at locations throughout the country and record accelerations up to 0.1g. At present the seismic network is undergoing an upgrade with the installation of broadband seismometers that record with a larger dynamic range and over a wider frequency band. Data from these together with some short-period data is transmitted and processed at the central recording site in Edinburgh in real time. Operational seismograph stations in December 2006 are shown in Figure 9.

The detection capabilities of a network depend upon station distribution, instrument sensitivity and background noise levels. Figure 10 shows the magnitude detection thresholds for the

seismograph stations operational in December 2006. 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. Small events may go undetected unless they are felt and reported to BGS by local inhabitants, so the detection capabilities of this process are 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 11 shows only earthquakes with magnitude 2.5 ML or greater, in the period 1979 to 2006. The data set is considered complete for these magnitudes in all localities onshore. Seismicity for the period 1970 to 2006 is shown in Figure 12 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

EPICENTRE 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.

DEPTH DETERMINATION

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. Where the depth error, ERZ in Table 1, is 0.0, this indicates that the depth has been fixed in the hypocentre calculation. This is the case for explosions, which are known to occur at the surface, and for events at larger distances, where depth control is poor.

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 2006 Seismicity

There were 64 earthquakes located by the monitoring network during the year, with 15 having magnitudes of 2.0 ML or greater and four having magnitudes of 3.0 ML or greater. Three events with a magnitude of 2.0 ML or greater were reported felt, together with a further four smaller ones, bringing the total to seven felt earthquakes in 2006.

The largest onshore earthquake of the year with a magnitude of 3.5 ML occurred approximately 8 km north-north-west of Dumfries on 26 December at 10:40 UTC, at a depth of 8 km. BGS received a number of reports via the media, Dumfries Police and from a number of residents in the Dumfries area of Dumfries & Galloway. The reports described "people came out into the street to see what was going on", "the whole experience was really scary", "the roof slates and timbers rattled and shook" and "I was awoken by a noise and the shaking and swaying of the house". This earthquake was followed by an event with a magnitude of 1.7 ML with a similar location, on 30 December. A macroseismic survey was launched on the BGS 'Earthquakes' web site, which yielded over 300 replies and the resulting map of felt effects is shown in Figure 3. The most distant felt reports were from the southern Glasgow area approximately 100 km away and from the Stranraer area approximately 95 km to the west. The earthquake was felt over an area of 3,600 sq km for isoseismals 3-5. The highest observed intensity was 5 EMS which was observed over an area of approximately 230 sq km. This event locates in a similar location to the magnitude 3.0 ML Dumfries earthquake of 13 May 2001, which was also felt with intensities of 5 EMS.

Dumfries, D & G, 26 December

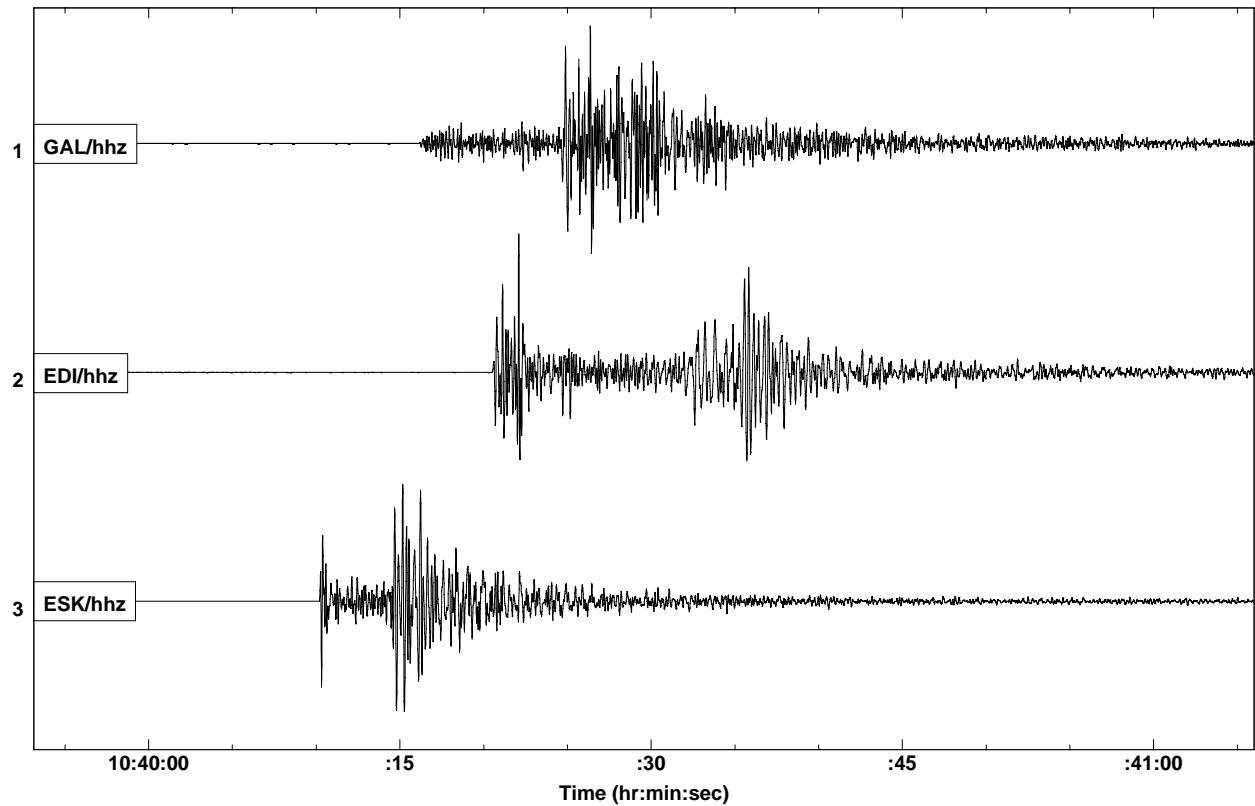


Figure 1. Seismograms of the ground displacement from the Dumfries earthquake, 26 December 2006, recorded by BGS seismograph stations.

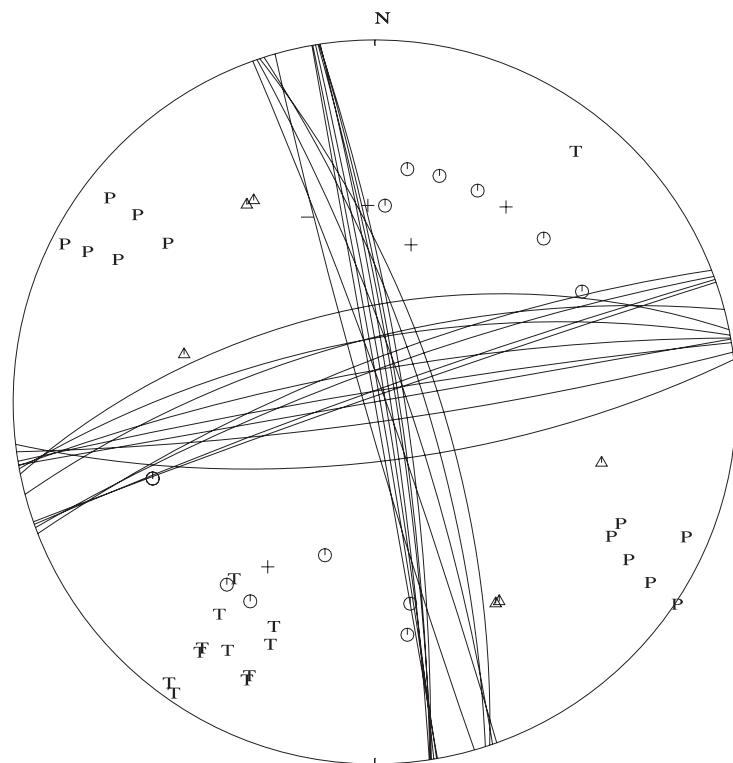


Figure 2. Focal mechanism for the Dumfries earthquake.

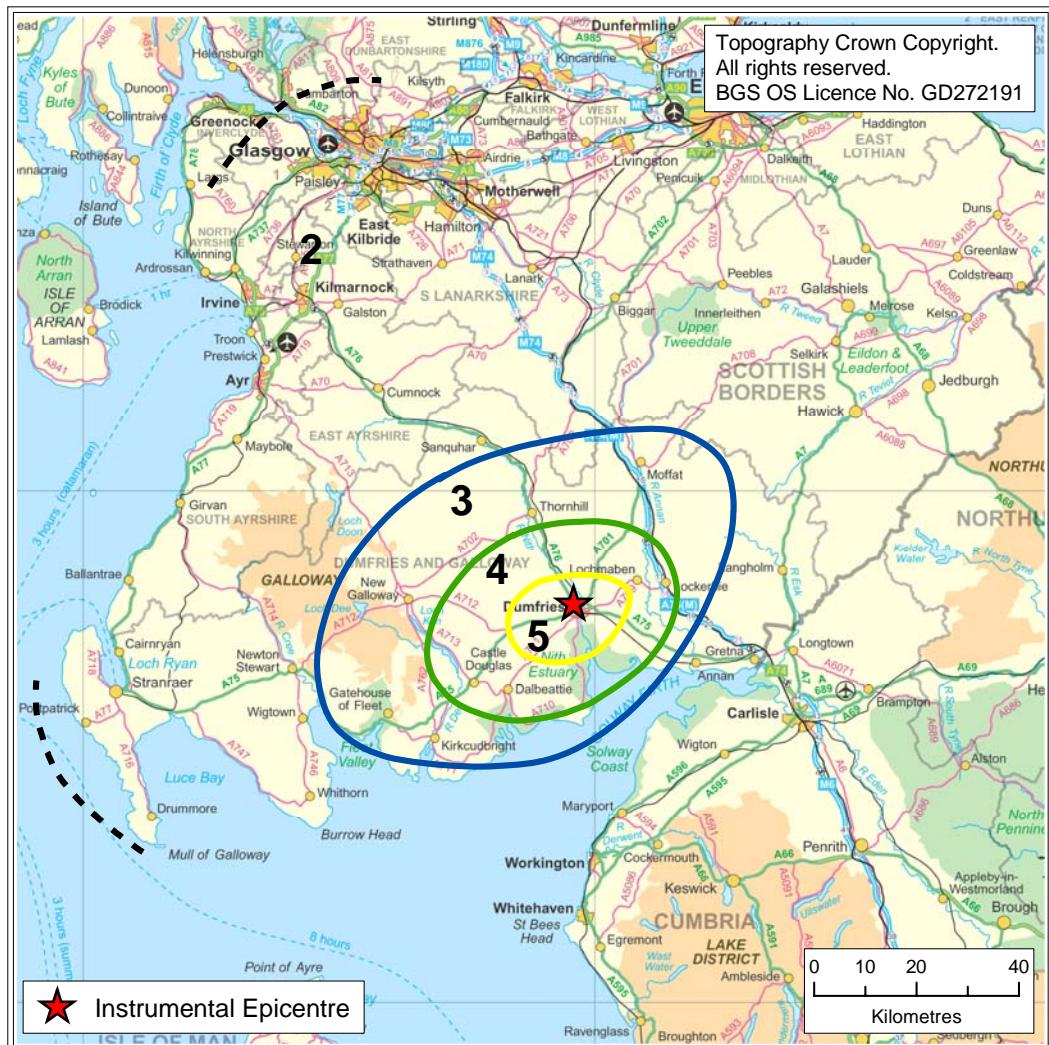


Figure 3. Isoseismal map for the Dumfries earthquake.

A source mechanism for the earthquake was determined. The solution shows a strike slip mechanism. Left lateral faulting on a north-northwest south-southeast or right lateral faulting on an east-northeast west southwest fault. Both possible orientations are consistent with previous mechanisms obtained for earthquakes in this area and with observed fault strikes and offsets.

The largest offshore earthquake occurred in the Norwegian Sea on 18 August, with a magnitude of 3.8 ML. It was located approximately 360 km north of Lerwick, Shetland Islands. A further four events occurred in the North Sea and surrounding waters during the year, with magnitudes ranging between 2.3 and 3.3 ML.

On 12 January an earthquake with magnitude of 2.6 ML, occurred near Basingstoke, Hampshire. This earthquake is located in an area where only two other earthquakes have been recorded within 25 km of the epicentre. One with a magnitude of 3.0 ML, which occurred on 19 July 1982, was felt with an intensity of at least 4 EMS. The other event with a magnitude of 2.1 ML occurred on 27 July 1985.

An earthquake with a magnitude of 2.8 ML occurred on 19 January, with a location approximately 10 km east of Mallaig, Highland. The BGS received reports from residents in Mallaig and from Glenfinnan, which described a “loud bang followed by a loud rumbling noise”, indicating an intensity of at least 3 EMS. This event locates approximately 27 km northwest of the magnitude 3.0 ML Fort William earthquake on 10 December 2005, which had a maximum intensity of 4 EMS.

Mallaig, Highland, 19 January 2006

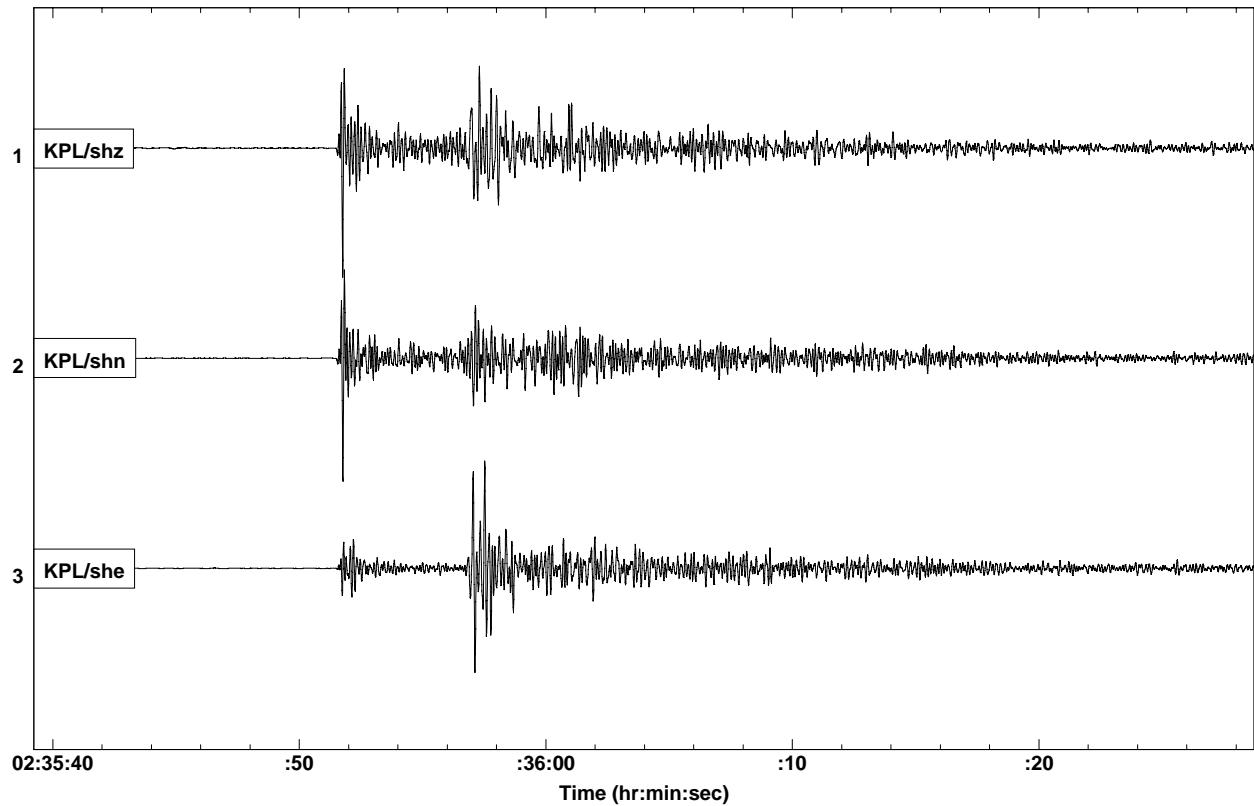


Figure 4. Seismograms of the ground displacement from the Mallaig earthquake, 19 January 2006, recorded by BGS seismograph stations.

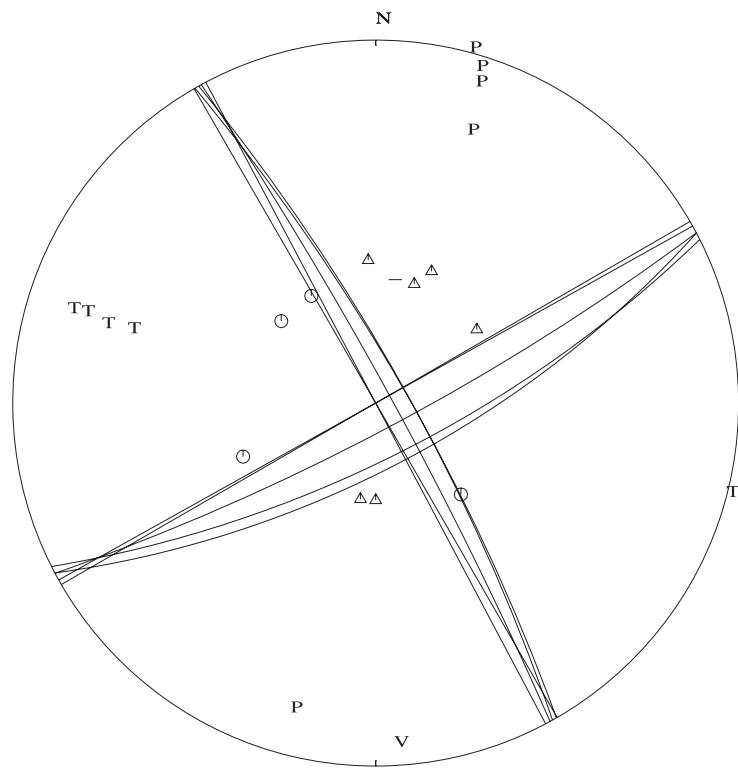


Figure 5. Focal mechanism for the Mallaig earthquake.

The focal mechanism obtained for this event shows a strike slip mechanism, with right lateral faulting on a north-northwest south-southeast or left lateral faulting on an east-northeast west southwest fault.

A magnitude 1.9 ML earthquake occurred on 20 April, with an epicentre close to Ballachulish, Highland. The BGS received a single report from a resident of Ballachulish describing, "it sounded like a blast going off and a rumble", indicating an intensity of 3 EMS. The earthquake was the largest in the general area since a magnitude 3.0 ML event on 10 December 2005, which was felt with intensities of at least 4 EMS in the epicentral area. A second event was felt in the Ballachulish area on 13 October, and was also reported felt by a resident of Ballachulish, who described, "I felt a slight shaking", indicating an intensity of 2 EMS.

An earthquake with a magnitude of 1.5 ML occurred near Anglesey, North Wales, on 23 May. The BGS received reports via BBC North Wales stating that several residents in the south Anglesey area "felt a slight vibration", indicating an intensity of 2 EMS.

On 8 June, a magnitude 2.9 ML earthquake occurred near Shieldaig, Highland. The BGS received a number of reports from people in Gairloch, Achnasheen, Stromeferry and Ardaneaskan, Highland region. Reports described, "the whole floor vibrated", "the whole house shook", and "we thought the chimney had fallen down", indicating an intensity of at least 4 EMS. A magnitude 0.4 ML earthquake also occurred in the Shieldaig area on 29 June.

Shieldaig, Highland, 8 June

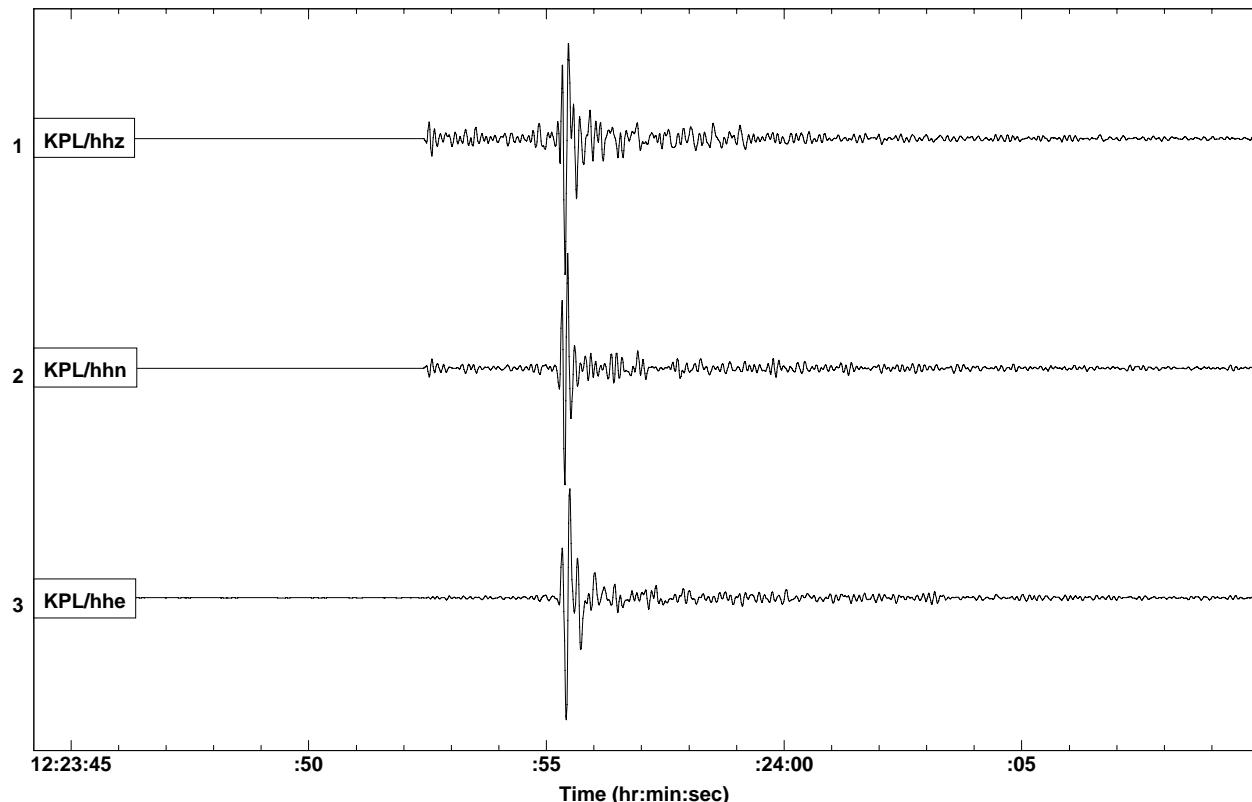


Figure 6. Seismograms of the ground displacement from the Shieldaig earthquake, 8 June January 2006, recorded by BGS seismograph stations.

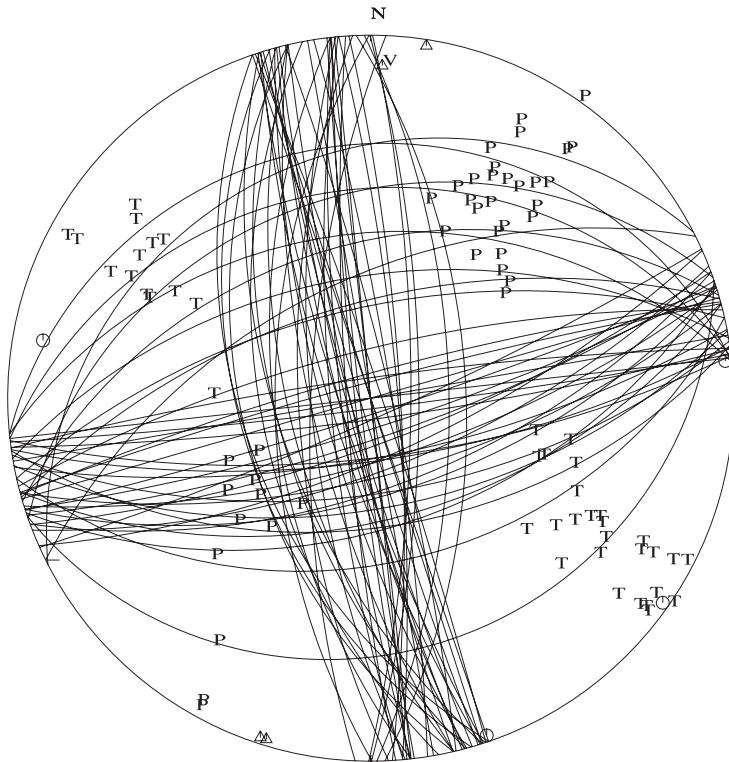


Figure 7. Focal mechanism for the Shieldaig earthquake.

The focal mechanism obtained for the Shieldaig earthquake was a poorly constrained strike slip mechanism, with right lateral motion on a north-northwest south-southeast sub-vertical fault or left lateral faulting on an east-northeast west southwest fault whose dip is poorly constrained.

An earthquake with a magnitude of 1.8 ML occurred on 19 December near Looe, Cornwall. BGS received reports of the earthquake being felt by residents in Carludden, St Austell and Herodsfoot. The reports described “thought it was thunder,” “it only lasted about a second” and “the whole house really shook”. Historically, the largest event in the region with a magnitude of 3.4 ML, occurred on 12 August 1852 near Callington, Cornwall and was felt with intensities of approximately 4 EMS.

In the Gruinard Bay area of the Highland region, two earthquakes with magnitudes of 2.0 and 1.6 ML occurred on 6 February and 2 April.

Two earthquakes, both with magnitudes of 1.1 ML, occurred in the Ludlow area of Shropshire 8 minutes apart, on 23 March. Another event in the same area, with a magnitude of 2.0 ML, occurred on 5 November.

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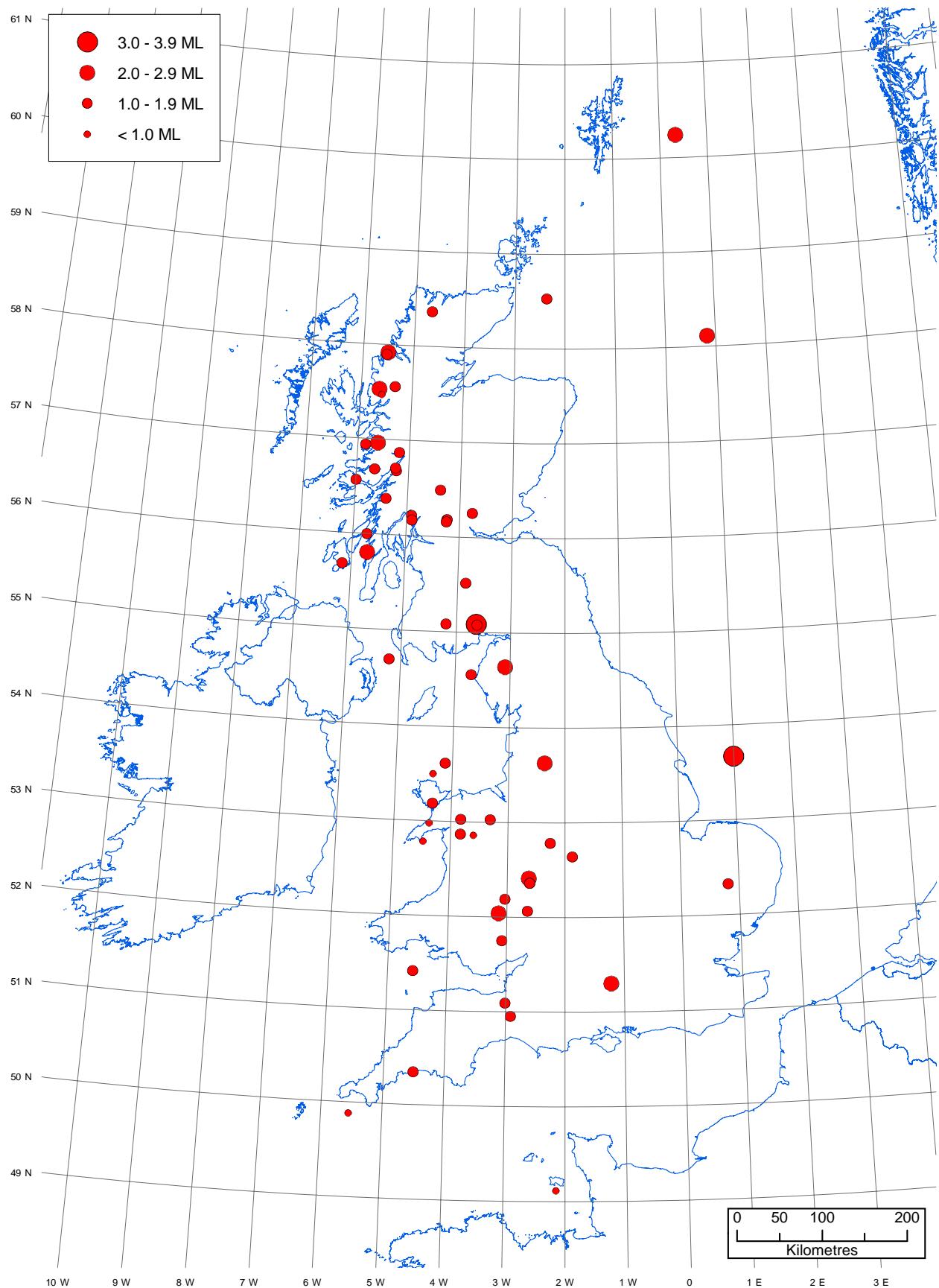


Figure 8. Epicentre map of earthquakes in 2006 as listed in Table 1.

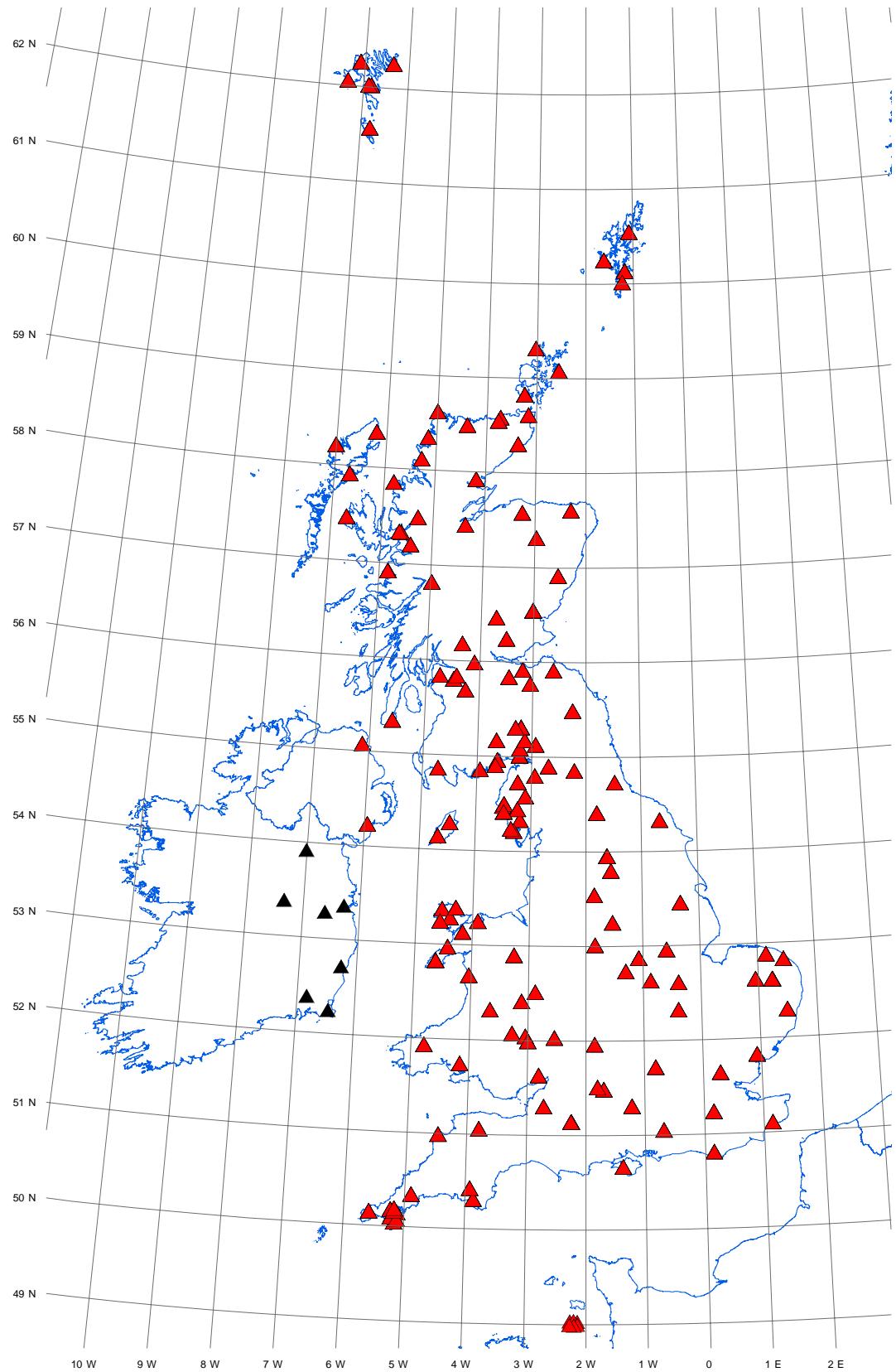


Figure 9. Seismograph network operational in December 2006. Red triangles indicate BGS stations; black triangles indicate stations operated by the Dublin Institute of Advanced Studies (DIAS).

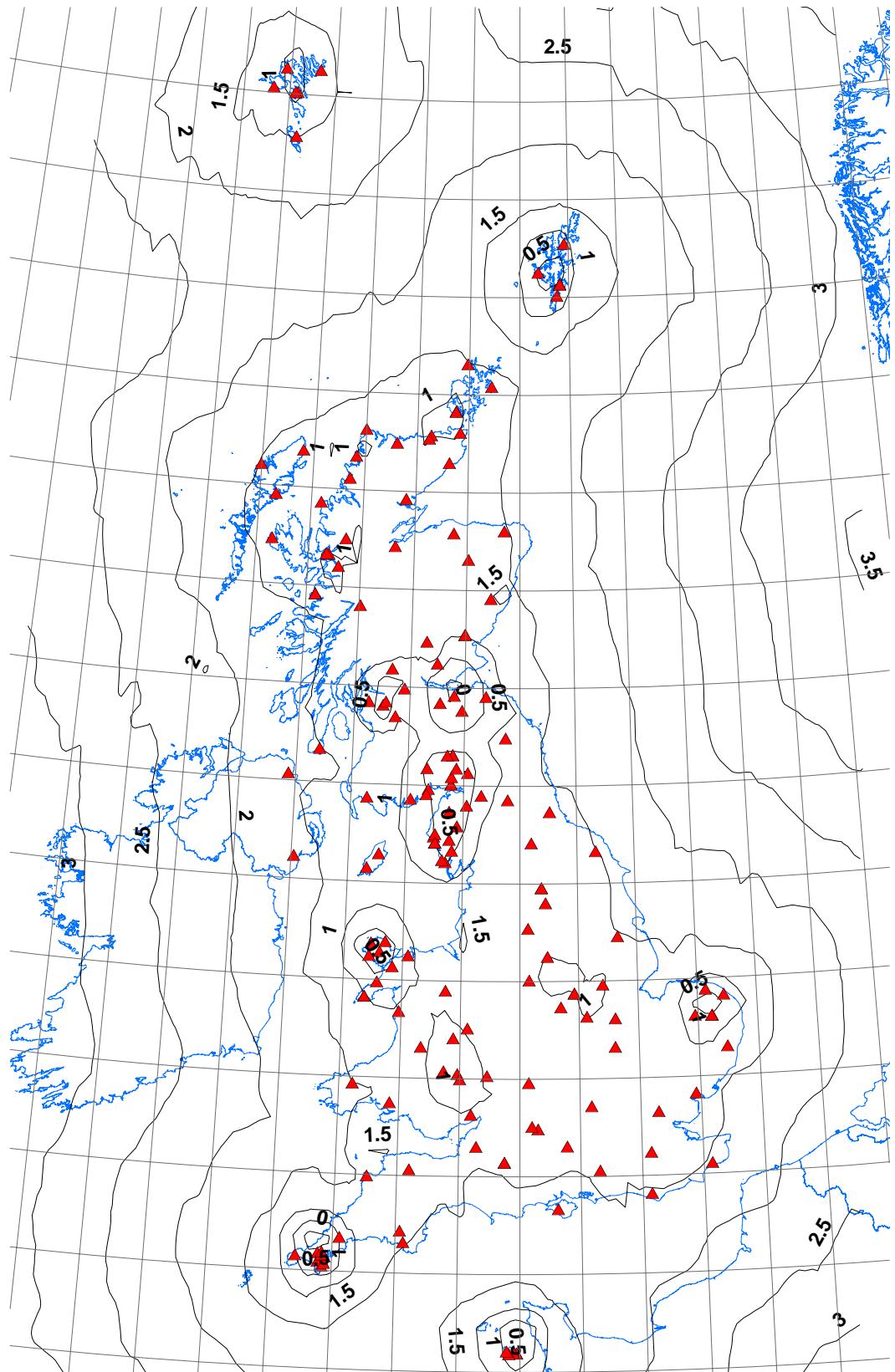


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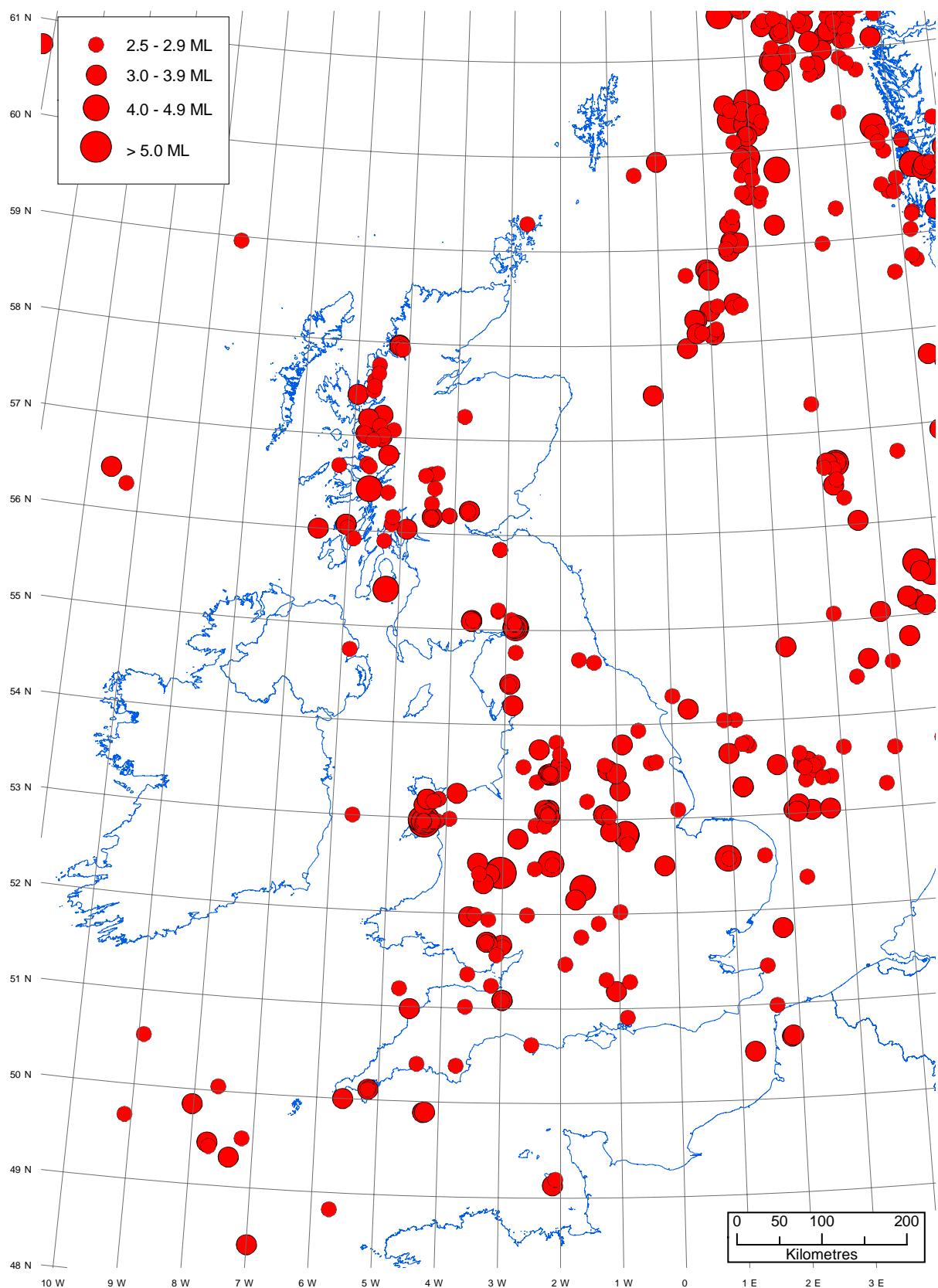


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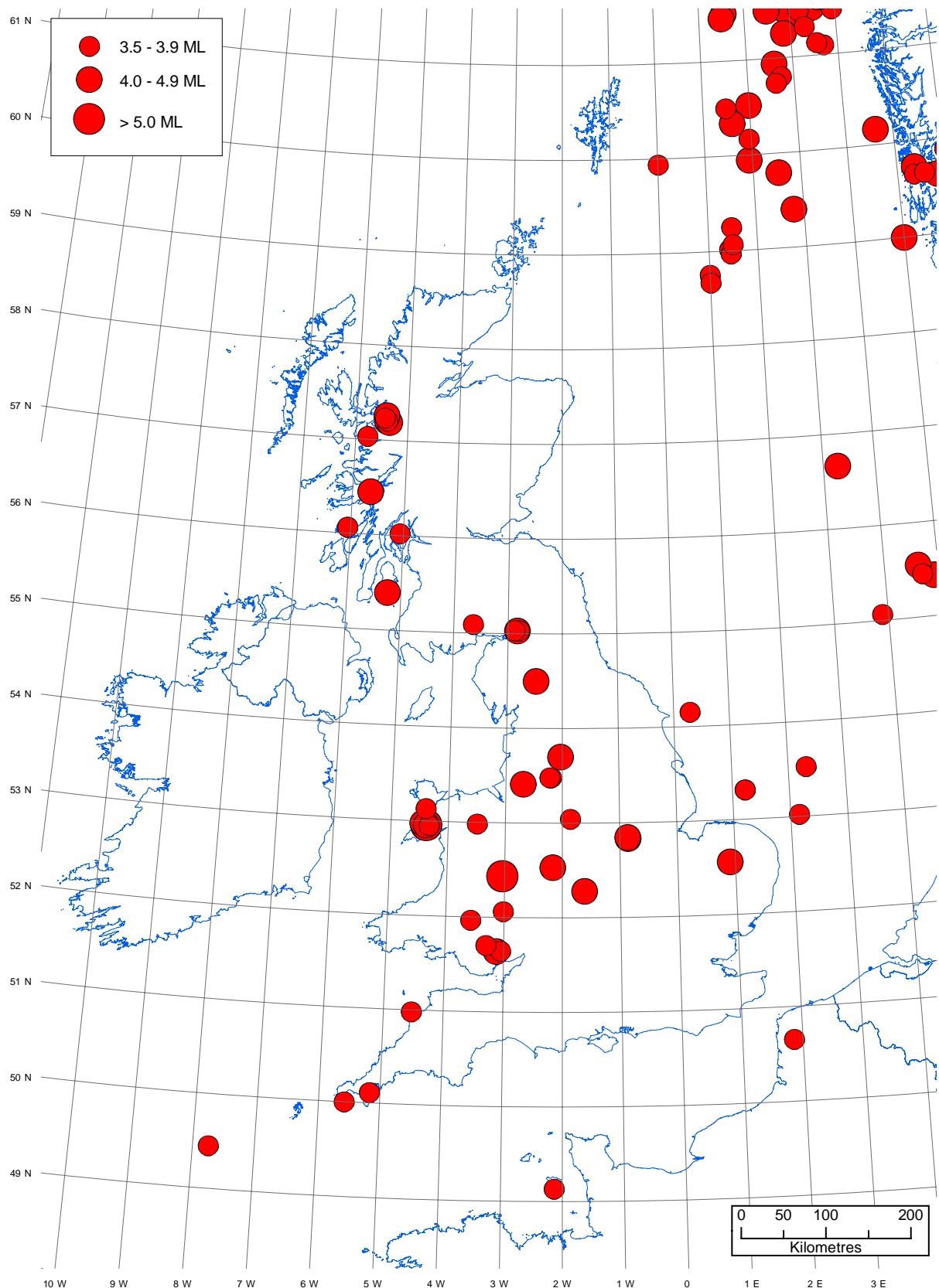


Figure 12. Epicentres of earthquakes with magnitudes of 3.5 ML and above, in the period 1970 - 2006.

TABLE 1 : CATALOGUE OF EVENTS : 2006

Year	MoDY	HrMnSecs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	Gap	RMS	ERH	ERZ	Comments
20060107	185428.1	57.56	-5.34	200.3	857.1	5.0	1.1	KINLOCHEWE, HIGHLAND		10	96	0.60	9.53	9.20		
20060112	190352.1	51.30	-1.22	454.4	156.6	14.8	2.6	BASINGSTOKE, HAMPSHIRE		16	95	0.30	7.46	5.00	5KM NW OF BASINGSTOKE	
20060113	035535.1	52.33	0.81	591.5	273.5	18.5	1.5	BURY ST EDMUNDS, SUFFOLK		6	204	0.10	4.24	2.20	8KM NE OF BURY ST EDMUNDS	
20060119	023544.4	56.96	-5.61	180.4	791.6	2.6	2.8	NR MALLAIG, HIGHLAND	3	10	226	0.10	9.35	7.90	FELT MALLAIG, GLENFINNAN...	
20060120	000710.0	58.37	-4.66	244.4	944.9	6.3	1.8	NR TONGUE, HIGHLAND		10	224	0.20	7.22	31.30	20KM SW OF TONGUE	
20060125	161911.5	52.19	-3.03	329.5	255.3	2.3	1.1	KINTON, HEREFORDSHIRE		5	178	0.00	2.02	1.50		
20060202	043505.1	58.53	-2.37	378.7	959.9	16.2	1.9	MORAY FIRTH REGION		14	118	0.50	18.96	48.00	43KM EAST OF WICK	
20060206	184319.7	57.92	-5.50	192.6	897.9	6.1	2.0	GRUINARD BAY, HIGHLAND		12	61	0.20	3.85	4.00		
20060207	215905.3	55.67	-6.17	138.0	650.3	2.7	1.5	ISLAY, INNER HEBRIDES		5	245	0.40	19.71	56.70		
20060211	202553.9	56.56	-6.00	154.6	748.4	5.0	1.8	ISLE OF MULL, HIGHLAND		6	253	0.20	20.20	0.00		
20060214	014555.8	56.26	-3.76	291.2	708.4	4.1	1.6	BLACKFORD, TAYSIDE		9	114	0.10	3.12	3.30		
20060218	161054.2	52.98	-4.38	240.4	344.8	19.2	0.6	PWLLHELI, GWYNEDD		6	234	0.10	6.44	7.10	8KM N OF PWLLHELI	
20060304	044915.4	50.96	-2.92	335.5	117.9	2.6	1.1	ILMINSTER, SOMERSET		8	166	0.30	6.04	12.50		
20060304	121422.9	55.81	-5.71	167.5	663.2	2.6	2.2	SOUND OF JURA		11	158	0.30	6.18	11.20		
20060306	190332.1	49.88	-5.55	145.2	4.4	5.0	0.1	ENGLISH CHANNEL		5	299	0.10	6.52	0.00	25KM WSW OF LIZARD POINT	
20060311	152723.5	53.02	-3.83	277.3	349.1	20.4	1.1	BETWS-Y-COED, GWYNEDD		11	120	0.10	2.48	4.70	6KM SSW OF BETWS-Y-COED	
20060322	031131.8	56.18	-4.24	261.2	700.5	4.1	1.0	THORNHILL, CENTRAL		4	191	0.10	136.31	19.20		
20060322	031249.5	56.18	-4.23	261.3	700.9	2.6	1.1	THORNHILL, CENTRAL		4	196	0.10	216.59	28.20	5KM W OF THORNHILL	
20060323	075459.0	52.36	-2.61	358.4	274.0	15.4	1.1	LUDLOW, SHROPSHIRE		5	219	0.10	4.34	2.70	5KM SE OF LUDLOW	
20060323	080254.2	52.36	-2.61	358.4	273.9	15.4	1.1	LUDLOW, SHROPSHIRE		5	218	0.10	3.45	10.40	5KM SE OF LUDLOW	
20060323	185629.2	51.75	-3.08	325.7	206.5	14.3	1.8	ABERTILLERY, GWENT		12	75	0.20	2.55	1.90		
20060402	212724.2	57.90	-5.53	191.1	895.0	4.3	1.6	GRUINARD BAY, HIGHLAND		11	66	0.20	3.85	5.00		
20060414	205627.4	62.01	2.41	630.6	1355.7	15.0	3.3	NORWEGIAN SEA		13	346	0.30	51.85	0.00		
20060420	014550.7	56.68	-5.23	202.0	758.5	7.5	1.9	BALLACHULISH, HIGHLAND		3	17	132	0.20	10.28	15.20	FELT BALLACHULISH
20060425	134400.0							SONIC-FELT LANCASHIRE								
20060425	135400.0							SONIC-FELT LANCASHIRE								
20060523	140000.0							ANGLESEY, GWYNEDD		2	14	78	0.10	2.92	2.70	FELT SOUTHERN ANGLESEY
20060525	032241.9	53.19	-4.33	244.2	367.9	9.5	1.5	SONIC-NW ENGLAND		7	150	0.10	3.42	3.10	9KM NORTH OF ANGLESEY	
20060530	144613.4	53.50	-4.34	245.1	402.9	14.3	0.7	OFF ANGLESEY, GWYNEDD		4	22	82	0.20	6.62	58.90	FELT STROMNESS, ROUSAY
20060607	111000.0		57.53	-5.64	182.0	854.8	8.3	2.9	SHIELDAIG, HIGHLAND		14	113	0.40	5.41	20.10	5KM N OF LOCHGOILHEAD
20060608	122348.1	55.08	-4.19	260.1	578.6	7.5	1.1	NEW GALLOWAY, D & G		12	90	0.50	8.09	19.60	FELT NORTHUMBERLAND	
20060619	140314.1	55.08	-4.91	219.6	706.0	2.2	1.9	LOCHGOILHEAD, S' CLYDE		12	112	0.20	7.24	8.40	FELT NORTHUMBERLAND	
20060622	042335.7	56.21	-5.19	205.6	779.8	3.5	1.5	LOCH EIL, HIGHLAND								
20060627	131000.0							POSSIBLE SONIC-THAMES								
20060629	143058.2	57.47	-5.58	185.1	848.1	2.9	0.4	SHIELDAIG, HIGHLAND		2	245	0.30	3.64	293.80		
20060629	212233.2	56.00	-5.74	167.1	684.6	6.0	1.6	SOUND OF JURA, S' CLYDE		10	247	0.40	18.15	0.00		
20060703	145248.6	52.64	-1.88	408.3	305.0	7.5	1.5	WALSALL, WEST MIDLANDS		11	191	0.30	9.30	13.20		
20060703	151740.5	56.87	-4.91	219.6	706.0	2.2	1.9	LOCH EIL, HIGHLAND		12	112	0.20				
20060709	210500.0							OBAN, STRATHCLYDE		6	207	0.00	2.31	3.10		
20060720	231511.9	56.38	-5.41	189.4	726.1	4.6	1.1	ABINGTON, STRATHCLYDE		11	170	0.40	10.63	12.80		
20060804	092608.9	55.52	-3.85	283.3	626.2	4.3	1.1	BRIDGWATER, SOMERSET		12	139	0.30	4.00	16.80		
20060814	164045.7	51.09	-3.01	329.3	133.1	6.0	1.9	IRISH SEA		7	190	0.00	1.21	1.20		
20060815	055905.0	53.61	-4.13	259.2	415.2	9.5	1.0	NORWEGIAN SEA		10	293	0.20	19.34	0.00		
20060818	204544.3	63.36	-0.88	456.3	1498.1	20.0	3.8									

TABLE 1 : CATALOGUE OF EVENTS : 2006

Year	MoDY	HrMnSecs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	Gap	RMS	ERH	ERZ	Comments
20060829	160500	.7	56.49	-4.38	253.8	735.4	11.9	1.9	KILLIN, CENTRAL KESWICK, CUMBRIA	1.1	146	0.30	11.08	10.40		
20060904	154716	.7	54.64	-3.08	330.0	527.9	6.3	2.2	IRISH SEA	1.4	100	0.20	2.28	1.40		
20060924	222445	.6	54.55	-3.71	289.7	519.0	5.0	1.1	HAY-ON-WYE, HER & WORC HEREFORD, HER & WORC	1.4	115	0.50	5.13	0.00	OFFSHORE WHITEHAVEN	
20060926	193436	.6	52.04	-3.14	321.8	238.7	19.2	2.1	NORTH CHANNEL	1.9	56	0.20	3.28	2.30		
20060926	212035	.0	52.06	-2.65	355.8	240.9	9.7	1.3	ARISAIG, HIGHLAND	8	211	0.10	3.07	2.60		
20061006	120655	.0	54.69	-5.21	193.0	537.3	5.6	1.2	BALLACHULISH, HIGHLAND	1.1	83	0.30	4.24	7.70		
20061011	180747	.4	56.94	-5.85	165.9	790.0	4.8	1.2	BALA, GWYNEDD	1.2	164	0.20	4.66	5.70	FELT BALLACHULISH	
20061013	042103	.8	56.70	-5.25	201.0	761.7	6.8	1.4	LOCH SUNART, HIGHLAND	2	7	150	0.40	11.48	15.60	
20061015	043518	.7	52.86	-3.60	292.5	330.2	14.9	0.9	OFFSHORE SHETLAND	1.0	119	0.30	5.42	6.60		
20061015	110445	.7	56.68	-5.66	176.2	760.6	5.3	1.3	CENTRAL NORTH SEA	8	159	0.20	13.96	7.60		
20061017	064748	.8	60.24	0.34	529.8	1153.1	13.9	2.3	THORNHILL, CENTRAL EXPL-SWANSEA BAY	13	156	6.00	89.77	0.00	90KM EAST OF LERWICK	
20061024	230001	.0	58.11	0.84	567.2	917.4	11.5	2.5	LUDLOW, SHROPSHIRE	1.4	246	0.50	25.55	15.30		
20061025	041400	.7	56.16	-4.25	260.3	698.2	1.0	1.2	TRAWSFYNNYDD, GWYNEDD	9	142	0.30	3.38	0.00		
20061028	110740	.6	51.61	-3.94	265.5	192.0	0.0	1.4	RUTHIN, CLWYD	2	12	167	0.40	7.29	0.00	
20061105	223539	.7	52.41	-2.62	357.7	279.8	3.3	2.2	PWLLHELI, GWYNEDD	16	83	0.30	5.01	15.60	FELT SWANSEA	
20061128	233040	.2	52.87	-3.83	276.9	331.7	9.3	1.0	NEWPORT, SHROPSHIRE	9	131	0.20	5.59	10.10	5KM SE TRAWSFYNNYDD	
20061129	054502	.0	53.02	-3.31	312.1	348.4	13.3	1.3	BRISTOL CHANNEL	4	334	0.10	4.75	1.50		
20061130	215109	.1	51.41	-4.58	220.7	171.2	6.2	1.6	JERSEY, CHANNEL ISLANDS	8	219	0.20	9.84	12.60		
20061209	112204	.9	49.12	-2.15	389.3	-87.2	7.6	0.0	LOOE, CORNWALL	3	314	0.70	26.57	0.00	OFFSHORE LOCATION	
20061216	160852	.4	53.63	-2.36	376.1	414.9	9.8	2.1	BOLTON, GTR MANCHESTER	30	36	0.50	5.28	7.10		
20061219	022055	.0	50.35	-4.51	221.3	52.7	8.0	1.8	PWLLHELI, GWYNEDD	3	7	171	0.30	4.31	16.50	
20061223	011929	.6	52.78	-4.48	233.0	323.6	12.6	0.8	NEWPORT, SHROPSHIRE	4	317	0.00	1.35	0.30	1.2KM OFFSHORE	
20061226	104004	.1	55.09	-3.64	295.6	578.1	11.8	1.5	DUMFRIES, D & G	5	39	43	0.40	2.62	2.80	
20061230	091543	.0	53.67	1.00	598.0	423.0	8.0	3.1	SOUTHERN NORTH SEA	1.2	217	0.30	3.80	5.60	FELT DUMFRIES . .	
20061230	162213	.2	55.08	-3.62	296.5	577.3	5.6	1.7	DUMFRIES, D & G	1.8	64	0.30	3.67	8.80	75KM EAST OF HULL	

TABLE 2 : PHASE DATA

January 7 2006	Time: 18:54 28.1 UTC	Magnitude: 1.1 ML	PGB	HN	ES	02:36	23.61
Lat: 57.560N	Lon: -5.339W	Depth: 5.0 km					
Grid Ref: 200.29 kmE	857.10 kmN	RMS: 0.60 secs					
Locality: KINLOCHEWE, HIGHLAND							
Velocity model: Lownet	Xnear: 50.0	Xfar: 100.0					
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							
KAC SZ 7.2 IP C 18:54 30.10 0.47							
KPL SZ 31.0 EP 18:54 33.34 -0.20							
KPL SN 31.0 ES 2 18:54 36.88 -0.85							
KPL SN 31.0 AML 18:54 37.15 38 0.14							
KPL SE 31.0 AML 18:54 37.15 35 0.13							
KSB SZ 39.3 IP C 18:54 34.84 -0.15							
RRR SZ 43.3 IP C 18:54 35.81 -0.03							
RRR SE 43.3 ES 3 18:54 41.13 -0.36							
RRR SE 43.3 AML 18:54 41.64 17 0.27							
RRR SN 43.3 AML 18:54 41.79 13 0.31							
MDO SZ 59.9 EP 18:54 38.30 -0.19							
REB SZ 62.4 EP 18:54 38.78 -0.02							
KSK SZ 82.3 EP 18:54 43.83 2.21							
RSC SZ 88.4 EP 18:54 42.84 0.01							
RRH SZ 89.8 EP 18:54 43.16 0.10							
RTO SZ 105.0 EP 18:54 45.50 0.15							
January 12 2006	Time: 19:03 52.1 UTC	Magnitude: 2.6 ML					
Lat: 51.305N	Lon: -1.219W	Depth: 14.8 km					
Grid Ref: 454.44 kmE	156.55 kmN	RMS: 0.30 secs					
Locality: BASINGSTOKE, HAMPSHIRE							
Velocity model: Lownet	Xnear: 100.0	Xfar: 100.0					
Comment: 5KM NW OF BASINGSTOKE							
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							
WOL BZ 0.9 EP 19:03 54.85 0.07							
WOL BN 0.9 ES 2 19:03 57.03 0.31							
SWN SZ 46.6 EP 19:04 00.38 0.03							
SWN SE 46.6 ES 2 19:04 06.99 0.64							
SWN SE 46.6 AML 19:04 07.67 633 0.24							
SWN SN 46.6 AML 19:04 07.72 755 0.28							
SKP SZ 54.3 IP C 19:04 01.09 -0.44							
SIW SZ 71.4 IP C 19:04 03.92 -0.21							
SWK SZ 73.9 IP C 19:04 04.45 -0.09							
SSW SZ 85.6 EP 19:04 06.31 0.00							
TSA SZ 96.2 IP D 19:04 08.20 0.40							
SMD SZ 104.0 EP 19:04 09.36 0.35							
HGH SZ 116.0 EP 19:04 10.81 0.13							
MCH SZ 145.0 EP 19:04 14.77 -0.05							
MCH SN 145.0 ES 2 19:04 31.43 0.04							
MCH SE 145.0 AML 19:04 32.75 103 0.15							
MCH SN 145.0 AML 19:04 32.90 102 0.23							
HTR SZ 166.0 EP 19:04 17.38 -0.18							
HLM SZ 177.0 EP 19:04 18.63 -0.34							
SSP SZ 180.0 EP 19:04 19.13 -0.20							
SSP SN 180.0 ES 2 19:04 39.89 0.69							
SSP SN 180.0 AML 19:04 41.34 47 0.42							
SSP SE 180.0 AML 19:04 41.50 45 0.29							
KWE SZ 195.0 EP 19:04 21.95 0.73							
KBI SZ 218.0 EP 19:04 24.64 0.58							
January 13 2006	Time: 03:55 35.1 UTC	Magnitude: 1.5 ML					
Lat: 52.326N	Lon: 0.811W	Depth: 18.5 km					
Grid Ref: 591.53 kmE	273.53 kmN	RMS: 0.10 secs					
Locality: BURY ST EDMUND, SUFFOLK							
Velocity model: Lownet	Xnear: 100.0	Xfar: 200.0					
Comment: 8KM NE OF BURY ST EDMUND							
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							
AWH SZ 35.0 IP C 03:55 41.84 0.04							
AEU SZ 43.6 IP C 03:55 42.98 -0.05							
AEU SE 43.6 ES 03:55 48.85 0.07							
AEU SE 43.6 AML 2 03:55 48.98 43 0.11							
AEU SN 43.6 AML 03:55 49.21 43 0.13							
APA SZ 45.6 EP 03:55 43.25 -0.09							
TCR SZ 55.2 EP 03:55 44.78 0.05							
ABA SZ 66.5 EP 03:55 46.19 -0.15							
AWI SZ 70.9 IP D 03:55 47.09 0.13							
January 19 2006	Time: 02:35 44.4 UTC	Magnitude: 2.8 ML					
Lat: 56.964N	Lon: -5.612W	Depth: 2.6 km					
Grid Ref: 180.45 kmE	791.65 kmN	RMS: 0.10 secs					
Locality: NR MALLAIG, HIGHLAND							
Velocity model: Lownet	Xnear: 50.0	Xfar: 100.0					
Comment: FEELT MALLAIG, GLENFINNAN...		Intensity: 3					
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							
KSB SZ 29.7 IP D 02:35 49.41 -0.06							
RRR SZ EP 9 02:36 00.76							
REB SZ EP 02:36 05.20							
EAU SZ 183.0 EP 4 02:37 04.46 51.50							
RSC SZ EP 02:36 08.66							
RRR SN ES 2 02:36 12.78							
GAL SN 240.0 AML 02:36 52.00 43 0.17							
RRH SZ IP C 02:36 04.41							
EBL SZ 207.0 EP 4 02:37 07.40 51.40							
GAL SE 240.0 AML 02:36 51.77 66 0.27							
EDI HZ 189.0 EP 4 02:36 12.75 -0.97							
KPL SE 41.8 ES 2 02:35 56.73 -0.07							
MCD SZ 158.0 EP 02:36 08.36 -1.25							
MDO SZ 92.3 IP 4 D 02:35 59.32 -0.43							
RTO SZ EP 02:36 08.99							
GCL SZ 212.0 IP D 02:36 14.56 -2.09							
MCD SN 158.0 AML 02:36 30.45 124 0.27							
MCD SN 158.0 ES 2 02:36 26.68 -1.31							
KSK SZ 86.3 IP C 02:35 58.91 0.42							
KAC SZ 62.5 IP D 02:35 54.94 0.15							
EAB SZ 117.0 IP C 02:36 55.69 52.20							
MCD SE 158.0 AML 02:36 31.82 151 0.19							
GAL SZ 240.0 EP 02:36 18.39 -1.71							
GMK SZ 180.0 IP D 02:36 10.73 -1.87							
KAR SZ 14.1 IP C 02:35 46.76 -0.02							
KPL SZ 41.8 IP D 02:35 51.44 -0.01							
PGB HZ EP 02:36 07.75							
January 22 2006	Time: 00:07 10.0 UTC	Magnitude: 1.8 ML					
Lat: 58.365N	Lon: -4.661W	Depth: 6.3 km					
Grid Ref: 244.35 kmE	944.88 kmN	RMS: 0.20 secs					
Locality: NR TONGUE, HIGHLAND							
Velocity model: Lownet	Xnear: 75.0	Xfar: 150.0					
Comment: 20KM SW OF TONGUE							
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							
RSC SZ 29.7 IP C 00:07 15.63 0.07							
REB SZ 45.5 IP D 00:07 17.84 -0.17							
MVH SZ 56.5 EP 00:07 19.56 -0.18							
RRR SZ 88.0 EP 00:07 24.68 0.08							
RRR SE 88.0 AML 00:07 38.83 27 0.20							
RRR SN 88.0 AML 00:07 39.21 27 0.16							
RTO SZ 90.6 EP 00:07 24.92 -0.07							
MDO SZ 104.0 EP 00:07 27.37 0.16							
KAC SZ 104.0 EP 00:07 26.93 0.19							
MCD SZ 121.0 IP C 00:07 30.28 0.60							
MCD SE 121.0 ES 2 00:07 43.90 -0.13							
MCD SN 121.0 AML 00:07 45.13 26 0.29							
MCD SE 121.0 AML 00:07 45.31 22 0.09							
RHH SZ 129.0 EP 00:07 31.33 0.38							
KPL SZ 129.0 AML 00:07 30.74 0.21							
KPL SN 129.0 AML 00:07 47.97 38 0.34							
KPL SE 129.0 AML 00:07 48.30 26 0.17							
January 25 2006	Time: 16:19 11.5 UTC	Magnitude: 1.1 ML					
Lat: 52.191N	Lon: -3.032W	Depth: 2.3 km					
Grid Ref: 329.46 kmE	255.30 kmN	RMS: 0.00 secs					
Locality: KINGTON, HEREFORDSHIRE							
Velocity model: Mid Wales	Xnear: 80.0	Xfar: 200.0					
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							
HTR SZ 20.4 IP C 16:19 15.29 0.00							
MCH SZ 21.7 IP C 16:19 15.54 0.03							
MCH SN 21.7 ES 2 16:19 18.43 0.01							
MCH SN 21.7 AML 16:19 18.77 48 0.09							
MCH SE 21.7 AML 16:19 18.81 69 0.11							
SSP SZ 25.8 IP D 16:19 16.19 -0.02							
SSP SN 25.8 ES 2 16:19 19.68 0.06							
SSP SE 25.8 AML 16:19 19.82 24 0.13							
SSP SN 25.8 AML 16:19 20.10 46.49 0.16							
HEX SZ 136.0 EP 16:19 34.10 -0.02							
February 2 2006	Time: 04:35 05.1 UTC	Magnitude: 1.9 ML					
Lat: 58.527N	Lon: -2.366W	Depth: 16.2 km					
Grid Ref: 378.69 kmE	959.89 kmN	RMS: 0.50 secs					
Locality: MORAY FIRTH REGION							
Velocity model: North Sea	Xnear: 200.0	Xfar: 450.0					
Comment: 43KM EAST OF WICK							
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							
MCD SZ 118.0 IP C 04:35 23.71 0.10							
MCD SN 118.0 ES 2 04:35 37.14 0.00							
MCD SN 118.0 AML 04:35 45.57 32 0.15							
MCD SE 118.0 AML 04:35 46.49 33 0.26							
MME SZ 140.0 EP 04:35 26.81 0.44							
RSC SZ 165.0 EP 04:35 30.39 0.93							
MDO SZ 169.0 EP 04:35 29.49 -0.54							
REB SZ 177.0 EP 04:35 30.38 -0.56							
LRW HZ 192.0 EP 04:35 32.33 -0.46							
LRW HN 192.0 AML 04:36 03.97 5 0.24							
LRW HE 192.0 AML 04:36 04.10 8 0.34							
WAL SZ 197.0 EP 04:35 33.87 0.37							
RRR SZ 216.0 EP 04:35 35.24 -0.53							
RRR SE 216.0 AML 04:36 10.15 14 0.21							
RRR SN 216.0 AML 04:36 10.45 23 0.30							
RTO SZ 225.0 EP 04:35 37.16 0.23							
RRH SZ 263.0 EP 04:35 41.69 0.06							
EAB SZ 286.0 EP 04:35 44.45 -0.10							
KMY SZ 445.0 EP 04:36 02.76 2 0.46 -1.55							
KMY SN 445.0 ES 4 04:36 45.00 -2.56				</			

TABLE 2 : PHASE DATA

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	ED1	EN	158.0	AML	12:15	08.47	42	0.44			
GMK	SZ	51.5	EP		C	21:59	14.24	-0.27			ED1	EE	158.0	AML	12:15	08.93	28	0.29			
GCL	SZ	66.4	EP			21:59	16.84	0.00			KPL	SZ	171.0	EP	12:14	49.91		0.11			
EAB	SZ	128.0	EP			21:59	26.37	-0.01			KPL	SE	171.0	AML	12:15	13.80	34	0.60			
GAL	SZ	129.0	EP			21:59	27.34	0.81			KPL	SN	171.0	AML	12:15	13.98	22	0.36			
GAL	SN	129.0				21:59	41.94	-0.07			GMM	SZ	175.0	EP	12:14	51.04		0.61			
GAL	SE	129.0	AML			21:59	43.22	14	0.18		GAL	SZ	122.0	EP	12:14	43.12		0.33			
GMM	SZ	161.0	EP	2		21:59	32.30		1.23												
February 11 2006 Time: 20:25 53.9 UTC Magnitude: 1.8 ML																					
Lat:	56.563N	Lon:	-5.995W								Lat:	49.885N	Lon:	-5.548W							
Grid Ref:	154.58 kmE	748.36 kmN									Depth:	5.0 km									
Locality:	ISLE OF MULL, HIGHLAND										Grid Ref:	145.17 kmE	4.42 kmN								
Velocity model:	Lownet	Xnear: 100.0	Xfar: 150.0								Locality:	ENGLISH CHANNEL									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	March 6 2006				Time: 19:03 32.1 UTC		Magnitude: 0.1 ML				
KAR	SZ	40.9	EP			20:26	01.38	0.05			Lat:	49.885N	Lon:	-5.548W							
KPL	SZ	88.9	EP			20:26	08.80	0.06			Depth:	5.0 km									
KPL	SN	88.9	ES	2		20:26	19.72	0.18			Grid Ref:	145.17 kmE	4.42 kmN								
KPL	SN	88.9	AML			20:26	21.98	40	0.28		Locality:	CORNWALL	Xnear: 50.0	Xfar: 100.0							
KPL	SE	88.9	AML			20:26	22.30	48	0.22		Comment:	25KM WSW OF LIZARD POINT									
EAB	SZ	111.0	EP			20:26	12.21	0.05			STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES
KAC	SZ	112.0	IP	C		20:26	12.09	-0.34			CPZ	SZ	30.4	EP		19:03	37.51			0.00	
RRR	SZ	145.0	EP			20:26	18.24	1.05			CPZ	SZ	30.4	ES	3	19:03	41.36			-0.28	
RRR	SE	145.0	AML			20:26	35.19	13	0.26		CPZ	SZ	30.4			19:03	41.93	4	0.10		
RRR	SN	145.0	AML			20:26	36.28	18	0.22		CGH	SZ	33.1	EP		19:03	37.95			-0.02	
EDI	HZ	188.0	EP			20:26	24.91		1.82		CGW	SZ	33.4	EP		19:03	38.14			0.11	
EDI	HE	188.0	AML			20:26	46.61	9	0.23		CMA	SZ	37.3	EP		19:03	38.58			-0.11	
EDI	HN	188.0	AML			20:26	46.95	12	0.28		CCA	SZ	40.7	EP		19:03	39.33			0.05	
February 14 2006 Time: 01:45 55.8 UTC Magnitude: 1.6 ML																					
Lat:	56.256N	Lon:	-3.757W								March 11 2006				Time: 15:27 23.5 UTC		Magnitude: 1.1 ML				
Grid Ref:	291.16 kmE	708.43 kmN									Lat:	53.025N	Lon:	-3.830W							
Locality:	BLACKFORD, TAYSIDE										Depth:	20.4 km									
Velocity model:	Lownet	Xnear: 70.0	Xfar: 140.0								Grid Ref:	277.28 kmE	349.12 kmN								
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	Locality:	BETWS-Y-COED, GWYNEDD									
PCO	SZ	36.7	EP			01:46	02.54	0.00			Velocity model:	Lleyn	Xnear: 50.0	Xfar: 100.0							
EAB	SZ	36.7	IP	C		01:46	02.52	-0.03			Comment:	6KM SSW OF BETWS-Y-COED									
EDI	EZ	51.3	EP			01:46	04.95	0.09			STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES
EDI	EE	51.3	ES	2		01:46	11.28	-0.18			YLL	SZ	26.2	IP		15:27	28.81			-0.09	
EDI	EN	51.3	AML			01:46	11.62	19	0.36		WPM	SZ	26.4	IP		15:27	29.06			0.10	
EDI	EE	51.3	AML			01:46	13.55	19	0.32		YRE	SZ	40.3	IP		15:27	30.91			0.09	
PCA	SZ	69.2	EP			01:46	07.77	0.10			SBD	SZ	40.6	EP		15:27	30.83			-0.08	
EBL	SZ	69.8	EP			01:46	07.72	-0.07			WLF	SZ	48.0	EP		15:27	31.86			-0.07	
PMS	SZ	76.6	EP			01:46	08.77	-0.06			WME	SZ	52.1	IP	D	15:27	32.60			0.06	
MME	SZ	127.0	EP			01:46	17.01	0.27			YRC	SZ	55.9	EP		15:27	33.01			-0.08	
MDO	SZ	137.0	EP			01:46	18.13	0.01			WCB	SZ	62.0	EP		15:27	33.98			-0.04	
MCD	SZ	151.0	EP			01:46	20.35	0.27			WCB	SE	62.0	ES	2	15:27	41.35			0.16	
MCD	SN	151.0	ES	3		01:46	37.62	-0.18			WCB	SE	62.0	AML		15:27	41.51	5	0.16		
MCD	SN	151.0	AML			01:46	40.42	20	0.12		WCB	SN	62.0	AML		15:27	46.47	6	0.14		
MCD	SE	151.0	AML			01:46	42.81	20	0.54		SSP	SZ	83.2	IP	D	15:27	37.58			0.31	
March 3 2006 Time: 16:10 54.2 UTC Magnitude: 0.6 ML																					
Lat:	52.976N	Lon:	-4.377W								March 22 2006				Time: 03:11 31.8 UTC		Magnitude: 1.0 ML				
Grid Ref:	240.42 kmE	344.75 kmN									Lat:	56.177N	Lon:	-4.236W							
Locality:	PWLLHELI, GWYNEDD										Depth:	4.1 km									
Velocity model:	Lleyn	Xnear: 50.0	Xfar: 100.0								Grid Ref:	261.21 kmE	700.50 kmN								
Comment:	8KM N OF PWLLHELI										Locality:	THORNHILL, CENTRAL									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	Velocity model:	Lownet	Xnear: 50.0	Xfar: 100.0							
WCB	SN	46.1	AML			16:11	08.75	5	0.10		Comment:	5KM W OF THORNHILL									
WCB	SE	46.1	AML			16:11	08.57	6	0.10		STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES
WCB	SE	46.1	ES	2		16:11	07.93	0.09			EBL	SZ	86.9	EP		03:11	46.65			0.19	
WCB	SZ	46.1	IP			16:11	02.53	0.22			EDI	EN	71.1	AML		03:11	53.04	8	0.23		
YLL	SZ	22.9	IP	C		16:10	59.10	0.03			EAB	SZ	6.5	IP	C	03:11	33.46			-0.02	
WPM	SZ	44.5	EP			16:11	02.07	-0.02			EDI	EE	71.1	AML		03:11	52.84	8	0.14		
WLF	SZ	34.8	EP			16:11	00.57	-0.10			EDI	EN	71.1	ES	2	03:11	52.55			-0.26	
YRC	SZ	33.3	IP	D		16:11	00.26	-0.18			EDI	EZ	71.1	EP		03:11	44.02			0.07	
YRE	SZ	3.3	IP	D		16:10	57.43	0.03			EAU	SZ	61.5	EP		03:11	42.50			0.00	
March 4 2006 Time: 04:49 15.4 UTC Magnitude: 1.1 ML																					
Lat:	50.956N	Lon:	-2.918W								March 22 2006				Time: 03:12 12.49.5 UTC		Magnitude: 1.1 ML				
Grid Ref:	335.53 kmE	117.86 kmN									Lat:	56.181N	Lon:	-4.234W							
Locality:	ILMINSTER, SOMERSET										Depth:	2.6 km									
Velocity model:	Lownet	Xnear: 75.0	Xfar: 150.0								Grid Ref:	261.35 kmE	700.95 kmN								
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES	Locality:	THORNHILL, CENTRAL									
SMD	SZ	41.7	EP			04:49	22.56	-0.23			Velocity model:	Mid Wales	Xnear: 50.0	Xfar: 100.0							
HEX	SZ	63.3	EP			04:49	25.95	-0.29			Comment:	5KM SE OF LUDLOW									
DYA	EZ	92.1	EP			04:49	30.78	0.07			STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES
HTL	HZ	110.0	EP			04:49	34.10	0.63			HLM	SZ	25.3	IP	C	07:55	03.96			-0.13	
HTL	HE	110.0	ES	2		04:49	46.59	-0.04			SSP	SZ	34.7	IP	C	07:55	05.62			0.14	
HTL	HE	110.0	AML			04:49	49.12	3	0.32		SSP	SN	34.7	ES	2	07:55	10.20			0.05	
HTL	HN	110.0	AML			04:49	49.53	3	0.22		SSP	SE	34.7	AML		07:55	10.32	18	0.14		

TABLE 2 : PHASE DATA

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YRE	SZ	58.0	EP	14:46	23.41	0.24	EDI	HZ	112.0	EP	04:23	54.43	0.09
WIM	SZ	75.4	EP	14:46	26.00	0.13	EDI	HN	112.0	AML	04:24	10.18	46 0.19
June 7 2006		Time: 11:10 00.0 UTC				Depth:	KPL	HZ	133.0	EP	04:23	57.99	23 0.25
Lat:		Lon:				RMS:	KPL	HN	133.0	AML	04:24	17.54	0.35
Grid Ref:						Intensity: 2	KAC	SZ	145.0	EP	04:23	58.92	-0.44
Locality: SONIC-ORKNEY ISLANDS							ESY	SZ	147.0	EP	04:23	59.75	-0.15
Comment: FELT STROMNESS, ROUSAY							GCL	SZ	148.0	EP	04:23	59.05	-0.67
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES			
OTO	SZ		EP			11:15	36.60						
OBR	SZ		EP			11:14	28.04						
ORE	SZ		EP			11:14	41.24						
ORE	M		EP			11:14	40.26						
June 8 2006		Time: 12:23 48.1 UTC				Magnitude: 2.9 ML	KAC	SZ	145.0	EP	04:23	58.92	-0.44
Lat:		Lon:				Depth: 8.3 km	ESY	SZ	147.0	EP	04:23	59.75	-0.15
Grid Ref: 182.00 kmE		854.81 kmN				RMS: 0.20 secs	GAL	SN	150.0	AML	04:24	18.61	17 0.28
Locality: SHIELDAIG, HIGHLAND							GAL	SE	150.0	AML	04:24	19.03	21 0.31
Velocity model: Lownet		Xnear: 100.0 Xfar: 100.0					MCD	SZ	183.0	EP	04:24	03.17	-1.43
Comment: FELT GAIRLOCH...						Intensity: 4	MCD	SN	183.0	ES	2	04:24	27.48
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES			
PGB	HN	204.0	AML			12:24	52.06	72	0.40				
PGB	HE	204.0	AML			12:24	47.67	86	0.40				
MLA	SZ	160.0	EPg			12:24	13.85		-0.01				
PGB	HZ	204.0	EP			12:24	19.33		0.37				
OBR	SZ	190.0	EP			12:24	15.28		-1.82				
EAB	SZ	169.0	EP			12:24	14.69		0.08				
MME	SZ	163.0	EP			12:24	12.72		-1.04				
GAL	SE	302.0	AML			12:25	15.65	91	0.33				
EDI	EN	234.0	AML			12:24	59.38	54	0.32				
KPL	HZ	21.4	IP		D	12:23	52.36		0.06				
GMK	SZ	243.0	EP			12:24	22.72		-1.12				
GAL	SZ	302.0	EP			12:24	30.61		-0.58				
BHH	SN	310.0	AML			12:25	15.22	19	0.44				
BHH	SE	310.0	AML			12:25	15.86	28	0.38				
KAR	SZ	69.1	IP		D	12:23	59.53		-0.20				
MCD	SN	143.0	ES			12:24	27.77		0.20				
RRR	SZ	37.6	EP			12:23	54.80		-0.02				
ORE	SE	159.0	ES	2		12:24	31.45		0.12				
MVH	SZ	97.4	EP			12:24	04.15		0.04				
RSC	SZ	95.2	IP		D	12:24	03.71		-0.04				
RRH	SZ	75.8	IP	C		12:24	00.55		-0.21				
REB	SZ	68.9	IP		D	12:23	59.68		0.00				
KPL	HE	21.4	ES			12:23	55.18		-0.17				
KSK	SZ	63.9	IP	C		12:23	59.37		0.44				
RRR	SE	37.6	ES	2		12:23	59.43		-0.27				
KPL	HE	21.4	AML			12:23	55.40	7551	0.22				
KPL	HN	21.4	AML			12:23	55.30	5191	0.12				
ORE	SZ	159.0	EP	C		12:24	11.80		-1.31				
RTO	SZ	100.0	IP	C		12:24	04.50		0.00				
OTO	SZ	130.0	EP			12:24	08.96		-0.15				
MCD	SZ	143.0	EP			12:24	10.52		-0.41				
MCD	SZ	143.0	EPg			12:24	11.76		0.55				
ORE	SN	159.0	AML			12:24	33.56	171	0.20				
ORE	SE	159.0	AML			12:24	34.23	171	0.18				
MLA	SZ	160.0	EP			12:24	11.38		-1.98				
MME	SZ	163.0	EPg			12:24	14.67		0.38				
BHH	SN	310.0	EP			12:24	32.10		-0.09				
EDI	EE	234.0	AML			12:24	56.89	74	0.34				
KAC	SZ	20.9	IP	C		12:23	52.42		0.16				
June 19 2006		Time: 14:03 14.1 UTC				Magnitude: 1.1 ML	KPL	HN	112.0	EP	04:23	54.43	0.09
Lat:		Lon:				Depth: 7.5 km	EDI	HN	112.0	AML	04:24	10.18	46 0.19
Grid Ref: 55.082N		-4.192W				RMS: 0.50 secs	KPL	HE	112.0	AML	04:24	17.54	16 0.29
Locality: NEW GALLOWAY,D & G							KAC	SZ	145.0	EP	04:23	58.92	-0.44
Velocity model: Lownet		Xnear: 75.0 Xfar: 100.0					ESY	SZ	147.0	EP	04:23	59.75	-0.15
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES			
PMS	SZ	91.9	EP			14:03	30.03		0.75				
PGB	HN	83.2	EP			14:03	28.50		0.60				
PGB	HN	83.2	ES	2		14:03	38.12		0.15				
PGB	HN	83.2	AML			14:03	40.64	6	0.16				
PGB	HE	83.2	AML			14:03	39.81	7	0.18				
XDE	SZ	78.5	EP			14:03	27.77		0.59				
CKE	SZ	88.9	EP			14:03	29.66		0.86				
CDU	SZ	105.0	EP			14:03	32.21		0.90				
BHH	SZ	62.2	EP			14:03	24.77		0.13				
BWH	SZ	35.8	IP	C		14:03	20.60		0.04				
GAL	SN	41.0	ES			14:03	26.16		-0.46				
GAL	SN	41.0	AML			14:03	26.93	34	0.20				
GAL	SE	41.0	AML			14:03	27.64	15	0.38				
GMM	SZ	147.0	EP			14:03	38.40		0.86				
GCL	SZ	124.0	EP			14:03	35.14		0.97				
GMK	SZ	93.9	EP			14:03	30.68		1.13				
ESK	HN	68.0	EP			14:03	25.57		0.02				
ESK	HN	68.0	ES			14:03	33.22		-0.68				
ESK	HN	68.0	AML			14:03	34.85	17	0.26				
ESK	HE	68.0	AML			14:03	38.70	10	0.12				
GAL	SZ	41.0	IP	C		14:03	21.29		-0.06				
June 22 2006		Time: 04:23 35.7 UTC				Magnitude: 1.9 ML	KPL	HN	112.0	EP	04:23	54.43	0.09
Lat: 56.212N		Lon: -4.910W				Depth: 2.2 km	EDI	HN	112.0	AML	04:24	10.18	46 0.19
Grid Ref: 219.55 kmE		705.96 kmN				RMS: 0.40 secs	KPL	HE	112.0	AML	04:24	17.54	16 0.29
Locality: LOCHGOILHEAD,S'CLYDE							KAC	SZ	145.0	EP	04:23	58.92	-0.44
Velocity model: Lownet		Xnear: 100.0 Xfar: 200.0					ESY	SZ	147.0	EP	04:23	59.75	-0.15
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES			
EAB	SZ	35.6	IP	C		04:23	42.14		-0.18				
PMS	SZ	42.1	IP	D		04:23	43.74		0.31				
PGB	HN	51.9	EP			04:23	45.28		0.23				
PGB	HN	51.9	ES	2		04:23	51.20		-0.67				
PGB	HN	51.9	AML			04:23	53.76	49	0.30				
PGB	HN	51.9	IP	C		04:23	55.82	31	0.45				
PCO	SZ	56.2	IP	C		04:23	45.74		0.01				
KAR	SZ	96.9	EP			04:23	52.00		-0.01				
EAU	SZ	99.9	IP	C		04:23	52.42		-0.10				
GMK	SZ	106.0	EP			04:23	53.32		-0.03				
June 29 2006		Time: 14:30 58.2 UTC				Magnitude: 0.4 ML	KPL	HN	112.0	EP	04:23	54.43	0.09
Lat: 57.472N		Lon: -5.585W				Depth: 2.9 km	EDI	HN	112.0	AML	04:24	10.18	46 0.19
Grid Ref: 185.06 kmE		848.06 kmN				RMS: 0.30 secs	KPL	HE	112.0	AML	04:24	17.54	16 0.29
Locality: SHIELDAIG, HIGHLAND							KAC	SZ	145.0	EP	04:23	58.92	-0.44
Velocity model: Lownet		Xnear: 100.0 Xfar: 200.0					ESY	SZ	147.0	EP	04:23	59.75	-0.15
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES			
KPL	HN	15.3	IP	D		14:31	01.55						
KPL	HN	15.3	E			14:31	01.56						
KPL	HN	15.3	ES			14:31	03.23						
KPL	HN	15.3	AML			14:31	03.50		9	0.14			
KPL	HN	15.3	AML			14:31	03.56		19	0.20			
KAC	SZ	17.4	IP	C		14:31	01.97						
KAC	SZ	17.4	ES			14:31	03.79						
June 29 2006		Time: 21:22 33.2 UTC				Magnitude: 1.6 ML	KPL	HN	112.0	EP	04:23	54.43	0.09
Lat: 55.998N		Lon: -5.735W				Depth: 6.0 km	EDI	HN	112.0	AML	04:24	10.18</td	

TABLE 2 : PHASE DATA

EBL	SZ	180.0	EP	15:18	09.31	0.39	August 15 2006	Time: 05:59 05.0 UTC	Magnitude: 1.0 ML
July 9 2006				Time: 21:05 00.0 UTC			Lat: 53.614N	Lon: -4.128W	Depth: 9.5 km
Lat:	Lon:						Grid Ref: 259.25 kmE	415.18 kmN	RMS: 0.00 secs
Grid Ref:				Depth:			Locality: IRISH SEA		
Locality: POSSIBLE SONIC-THAMES				RMS:			Velocity model: Lownet	Xnear: 50.0	Xfar: 100.0
Comment: FELT CANTERBURY...							STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES		
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES							WCB SZ 38.2 AML 05:59 16.95 18 0.08		
KPL HN 139.0 AML 21:10 30.23 12 0.21							WLF SZ 40.3 IP D 05:59 12.17		0.01
EAB SZ 35.1 IP C 21:09 55.92 -0.19							WPM SZ 42.3 EP 05:59 12.52		0.00
EDI HN 110.0 ES 2 21:10 21.62 0.23							YRC SZ 50.2 EP 05:59 13.71		0.03
EBL SZ 124.0 EP 21:10 10.09 -0.02							YLL SZ 52.8 EP 05:59 14.12		0.01
EAU SZ 97.3 EP 21:10 06.16 0.17							WIM SZ 69.4 EP 05:59 16.74		0.01
EDI HN 110.0 AML 21:10 25.23 36 0.25							YRE SZ 73.2 EP 05:59 17.23		-0.04
KAR SZ 102.0 EP 21:10 06.75 0.10							WCB SZ 38.2 EP C 05:59 11.85		0.00
KAC SZ 151.0 EP 21:10 13.35 -0.69							WCB SN 38.2 ES 2 05:59 16.69		-0.13
ESK HN 142.0 ES 2 21:10 30.49 0.62							WCB SN 38.2 AML 05:59 17.11	20	0.10
PGB HZ 46.9 IP C 21:09 58.18 0.08									
KPL HZ 139.0 EP 21:10 11.71 -0.59									
ESK HZ 142.0 EP 21:10 13.25 0.43									
EDI HZ 110.0 EP 21:10 08.23 0.31									
PGB HE 46.9 ES 2 21:10 04.28 -0.11									
PGB HE 46.9 AML 21:10 05.09 17 0.21									
KPL HE 139.0 ES 2 21:10 27.69 -1.28									
KPL HE 139.0 AML 21:10 28.43 14 0.23									
ESK HE 142.0 AML 21:10 32.10 13 0.18									
EDI HE 110.0 AML 21:10 24.72 16 0.31									
PGB HN 46.9 AML 21:10 04.64 22 0.25									
PMS SZ 36.5 IP D 21:09 56.25 -0.11									
PCO SZ 53.5 IP C 21:09 59.32 0.14									
July 20 2006				Time: 23:15 11.9 UTC			Magnitude: 1.1 ML		
Lat: 56.380N	Lon: -5.412W			Depth: 4.6 km					
Grid Ref: 189.36 kmE	726.07 kmN			RMS: 0.00 secs					
Locality: OBAN,STRATHCLYDE									
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0									
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES									
EAB SZ 69.8 EP 23:15 23.83 -0.01									
PMS SZ 72.5 IP D 23:15 24.27 0.01									
PCO SZ 92.4 EP D 23:15 27.33 0.00									
KPL HZ 108.0 EP 23:15 29.64 -0.04									
KPL HE 108.0 ES 23:15 42.65 0.00									
KPL HE 108.0 AML 23:15 46.27 2 0.20									
KPL HE 108.0 AML 23:15 48.24 4 0.22									
KAC SZ 125.0 EP 23:15 32.42 0.07									
MCD SN 188.0 AML 23:16 06.74 3 0.40									
MCD SE 188.0 AML 23:16 07.14 4 0.46									
August 4 2006				Time: 09:26 08.9 UTC			Magnitude: 1.1 ML		
Lat: 55.516N	Lon: -3.849W			Depth: 4.3 km					
Grid Ref: 283.26 kmE	626.25 kmN			RMS: 0.40 secs					
Locality: ABINGTON,STRATHCLYDE									
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0									
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES									
BWH SZ 39.8 EP 09:26 16.05 -0.49									
EAU SZ 44.5 EP 09:26 17.16 -0.19									
ESK HZ 46.4 IP C 09:26 17.40 -0.25									
ESK HN 46.4 ES 09:26 23.97 -0.09									
ESK HN 46.4 AML 09:26 25.16 14 0.54									
ESK HE 46.4 AML 09:26 30.05 21 0.56									
PCO SZ 54.9 EP 09:26 19.33 0.29									
EBL SZ 58.1 EP 09:26 18.81 -0.77									
EDI HZ 61.5 EP 09:26 20.89 0.84									
BHH SZ 61.8 EP 09:26 20.36 0.25									
BBH SZ 72.2 EP 09:26 22.12 0.39									
EAB SZ 80.9 EP 09:26 22.62 -0.46									
ESY SZ 89.5 EP 09:26 24.61 0.17									
XDE SZ 115.0 EP 09:26 28.77 0.43									
August 14 2006				Time: 16:40 45.7 UTC			Magnitude: 1.9 ML		
Lat: 51.092N	Lon: -3.009W			Depth: 6.0 km					
Grid Ref: 329.35 kmE	133.06 kmN			RMS: 0.30 secs					
Locality: BRIDGWATER,SOMERSET									
Velocity model: default (Lownet) Xnear: 100.0 Xfar: 200.0									
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES									
MCH SE 101.0 AML 16:41 14.92 68 0.34									
MCH SN 101.0 ES 16:41 14.51 -0.34									
DYA EN 97.8 ES 16:41 13.50 -0.57									
DYA EZ 97.8 EP C 16:41 02.82 0.53									
SWN SN 96.4 AML 16:41 15.84 38 0.40									
HEX SZ 55.7 EP 16:40 55.93 0.50									
SWN SN 96.4 ES 16:41 13.76 0.11									
SWN SZ 96.4 EP 16:41 02.00 -0.05									
SWK SZ 53.7 IP C 16:40 54.85 -0.27									
SSW SZ 126.0 EP 16:41 06.99 0.08									
SKP SZ 168.0 EP 16:41 12.03 -0.23									
MCH SN 101.0 AML 16:41 15.09 109 0.14									
MCH SZ 101.0 EP 16:41 02.76 0.02									
SWN SE 96.4 AML 16:41 19.41 45 0.74									
HLM SZ 159.0 EP 16:41 11.28 0.14									
HTR SZ 111.0 EP 16:41 04.32 -0.15									
HSA SZ 108.0 EP 16:41 04.12 0.16									
HTL HN 104.0 AML 16:41 19.48 21 0.28									
HTL HE 104.0 AML 16:41 18.71 17 0.40									
HTL HE 104.0 ES 16:41 15.39 -0.35									
HTL EN 104.0 ES 16:41 15.39 -0.35									
HTL EZ 104.0 EP 16:41 03.46 0.19									
HTL HZ 104.0 EP 16:41 03.46 0.15									
HGH SZ 62.3 EP 16:40 56.66									
September 4 2006				Time: 15:47 16.7 UTC			Magnitude: 2.2 ML		
Lat: 54.641N	Lon: -3.085W			Depth: 6.3 km					
Grid Ref: 329.98 kmE	527.87 kmN			RMS: 0.20 secs					
Locality: KESWICK,CUMBRIA									
Velocity model: Lownet Xnear: 75.0 Xfar: 150.0									
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES									
CKE SZ 6.1 IP D 15:47 18.79									0.29
BBO SZ 14.9 EP 15:47 19.74									-0.07
BBO SN 14.9 ES 15:47 22.06									-0.03
BDL SZ 20.4 IP C 15:47 20.60									-0.11
XDE SZ 30.2 EP 15:47 22.30									-0.06
CDU SZ 34.6 IP D 15:47 22.83									-0.23
BHH SZ 51.1 IP D 15:47 25.59									0.01
BHH SE 51.1 ES 2 15:47 32.25									0.18
BBH SZ 55.7 EP 15:47 26.24									-0.06
BWH SZ 69.9 EP 15:47 28.62									0.11
GIM SZ 97.6 EP 15:47 32.91									0.09
GIM SN 97.6 ES 15:47 44.64									0.04
GIM SN 97.6 AML 15:47 46.32								139	0.56
GAL SN 108.0 AML 15:47 47.05								107	0.34
GAL SN 108.0 EP 15:47 47.04									
GAL SE 108.0 AML 15:47 34.49									
GAL SE 108.0 ES 15:47 48.35								49	-0.17
GAL SN 117.0 EP 15:47 35.82									0.00
HPK SN 122.0 ES 2 15:47 51.62									0.59
EBL SZ 126.0 EP 15:47 37.55									0.31
WCB SE 170.0 AML 15:48 05.84								20	0.30

TABLE 2 : PHASE DATA

WCB	SN	170.0	AML	15:48	05.90	25	0.46		RRR	SE	102.0	ES	18:08	16.50	-0.36	
September 24 2006				Time: 22:24	45.6 UTC			Magnitude: 1.1 ML	RRR	SE	102.0	AML	18:08	16.87	11 0.26	
Lat: 54.554N				Lon: -3.705W		Depth: 5.0 km			RRR	SN	102.0	AML	18:08	16.91	7 0.14	
Grid Ref: 289.74				kM	518.99 kmN	RMS: 0.50 secs			EAB	SZ	125.0	EP	18:08	08.18	-0.26	
Locality: IRISH SEA									REB	SZ	135.0	EP	18:08	10.31	0.35	
Velocity model: Lownet	Xnear:	100.0	Xfar:	200.0					PMS	SZ	140.0	EP	18:08	10.44	-0.12	
Comment: OFFSHORE WHITEHAVEN									PGB	HZ	152.0	EP	18:08	11.68	-0.31	
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES									PGB	HN	152.0	ES	3	18:08	28.58	
BHH SZ 67.7 EP 22:24 56.90 -0.27									PGB	HE	152.0	AML	18:08	31.70	4 0.32	
BHH SN 67.7 ES 22:25 05.65 0.05									PGB	HN	152.0	AML	18:08	33.15	4 0.56	
BHH SN 67.7 AML 22:25 09.59 3 0.15									MCD	SZ	172.0	EP	18:08	14.32	-0.26	
BHH SE 67.7 AML 22:25 10.64 2 0.17									MCD	SE	172.0	ES	3	18:08	34.07	
BWH SZ 69.3 EP 22:24 57.46 0.03									GAL	SN	242.0	ES	3	18:08	47.94	
GAL HE 73.6 EP 22:24 57.85 -0.21																
GAL HN 73.6 ES 22:25 07.32 0.18																
GAL HZ 73.6 AML 22:25 09.27 6 0.17																
GAL HN 73.6 AML 22:25 09.32 8 0.17																
WIM SZ 77.5 EP 22:24 58.49 -0.24																
ECK SZ 79.0 EP 22:24 58.24 -0.71																
ESK HZ 90.7 EP 22:25 00.43 -0.32																
ESK HN 90.7 ES 22:25 12.40 0.61																
ESK HN 90.7 AML 22:25 14.63 29 0.19										KAR	SZ	42.6	EP	04:21	11.57	0.26
ESK HE 90.7 AML 22:25 14.78 41 0.28										KSB	SZ	57.2	EP	04:21	13.24	-0.38
XAL SZ 102.0 EP 22:25 03.06 0.52										KPL	HZ	74.7	EP	04:21	16.44	0.18
XSO SZ 140.0 EP 22:25 08.27 -0.01										KPL	HE	74.7	ES	04:21	24.96	-0.41
WCB SZ 142.0 EP 22:25 08.87 0.36										KPL	HN	74.7	AML	04:21	29.19	14 0.34
WCB SE 142.0 ES 22:25 26.14 0.91										EAB	SZ	80.5	EP	04:21	16.94	-0.26
EBL SZ 142.0 EP 22:25 09.00 0.43										KAC	SZ	88.5	EP	04:21	18.71	0.28
WPM SZ 145.0 EP 22:25 08.82 -0.13										PGB	HZ	110.0	EP	04:21	22.35	0.55
EAU SZ 145.0 EP 22:25 09.71 0.78										PGB	HN	110.0	ES	04:21	34.64	-0.32
PGB HZ 149.0 IP C 22:25 10.36 0.91										PGB	HE	110.0	ES	04:21	34.82	
PGB HN 149.0 ES 22:25 27.94 1.10										MCD	SZ	155.0	EP	04:21	28.56	0.10
PGB HN 149.0 AML 22:25 30.10 5 0.57										MCD	SE	155.0	ES	04:21	47.14	0.66
PGB HE 149.0 AML 22:25 31.18 2 0.36										MCD	SN	155.0	AML	04:21	48.67	8 0.14
ESY SZ 167.0 EP 22:25 12.37 0.27										MCD	SE	155.0	AML	04:21	49.42	8 0.18
September 26 2006				Time: 19:34	36.6 UTC			Magnitude: 2.1 ML								
Lat: 52.041N				Lon: -3.140W		Depth: 19.2 km										
Grid Ref: 321.82 kM				kM	238.73 kmN	RMS: 0.20 secs										
Locality: HAY-ON-WYE, HER & WORC																
Velocity model: Mid Wales	Xnear:	100.0	Xfar:	150.0												
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES																
HTR SZ 9.7 IP D 19:34 40.50 0.27																
MCH HZ 10.9 IP C 19:34 40.20 -0.10																
MCH HE 10.9 ES 19:34 42.92 -0.05																
MCH HE 10.9 AML 19:34 43.08 509 0.10																
MCH HN 10.9 AML 19:34 43.12 227 0.13																
HGH SZ 50.4 IP D 19:34 45.11 -0.36																
HLM SZ 56.0 EP 19:34 46.07 -0.25																
HSA SZ 76.9 EP 19:34 49.36 -0.07																
SSW SZ 89.0 EP 19:34 51.35 0.11																
SBD SZ 96.5 EP 19:34 52.48 0.08																
SWN SZ 110.0 EP 19:34 54.53 0.21																
SWN SN 110.0 ES 19:35 07.26 0.18																
SWK SZ 117.0 EP 19:34 55.60 0.15																
HEX SZ 118.0 EP 19:34 55.70 0.14																
YRE SZ 136.0 EP 19:34 58.37 0.10																
KWE SZ 140.0 EP 19:34 58.49 -0.25																
WPM SZ 145.0 EP 19:34 59.57 0.18																
HTL HZ 149.0 EP 19:34 59.60 -0.28																
HTL HE 149.0 ES 2 19:35 16.55 -0.10																
HTL HE 149.0 AML 19:35 18.10 46 0.31																
HTL HN 149.0 AML 19:35 18.53 49 0.26																
WLF SZ 163.0 EP 19:35 01.86 0.28																
SKP SZ 164.0 EP 19:35 01.66 -0.13																
YRC SZ 166.0 EP 19:35 01.79 -0.18																
KBI SZ 174.0 EP 19:35 03.03 0.08																
WCB SZ 177.0 EP 19:35 04.20 0.89																
WCB SE 177.0 ES 2 19:35 24.65 2.11																
WCB SE 177.0 AML 19:35 25.44 19 0.19																
WCB SN 177.0 AML 19:35 25.71 22 0.24																
September 26 2006				Time: 21:20	35.0 UTC			Magnitude: 1.3 ML								
Lat: 52.064N				Lon: -2.645W		Depth: 9.7 km										
Grid Ref: 355.79 kM				kM	240.87 kmN	RMS: 0.10 secs										
Locality: HEREFORD, HER & WORC																
Velocity model: Mid Wales	Xnear:	100.0	Xfar:	200.0												
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES																
MCH HZ 25.3 IP C 21:20 39.80 0.12																
MCH HE 25.3 ES 21:20 43.09 0.04																
MCH HE 25.3 AML 21:20 43.36 46 0.06																
MCH HN 25.3 AML 21:20 43.39 186 0.08																
HTR SZ 42.7 IP C 21:20 42.28 -0.20																
HGH SZ 48.7 EP 21:20 43.42 -0.04																
HLM SZ 53.0 EP 21:20 44.19 0.01																
SBD SZ 102.0 EP 21:20 52.10 0.04																
HEX SZ 137.0 EP 21:20 57.31 0.08																
WPM SZ 158.0 EP 21:21 00.35 0.03																
HTL HZ 175.0 EP 21:21 02.16 -0.21																
HTL HE 175.0 AML 21:21 23.29 2 0.42																
HTL HE 175.0 AML 21:21 24.45 3 0.48																
October 11 2006				Time: 18:07	47.4 UTC			Magnitude: 1.2 ML								
Lat: 56.942N				Lon: -5.849W		Depth: 4.8 km										
Grid Ref: 165.91 kM				kM	789.99 kmN	RMS: 0.20 secs										
Locality: ARISAIG, HIGHLAND																
Velocity model: default (Lownet)	Xnear:	75.0	Xfar:	150.0												
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES																
KAR SZ 2.9 IP D 18:07 48.66 0.01																
KSB SZ 39.5 EP 18:07 54.48 -0.05																
KPL HZ 45.8 EP 18:07 55.61 0.13																
KPL HE 45.8 ES 3 18:08 01.41 0.20																
KPL HE 45.8 AML 18:08 02.12 18 0.14																
KPL HE 45.8 AML 18:08 02.44 12 0.34																
KAC SZ 70.3 EP 18:07 59.56 0.05																
KAC SZ 77.8 EP 18:08 00.73 0.01																
October 13 2006				Time: 04:21	03.8 UTC			Magnitude: 1.4 ML								
Lat: 56.705N				Lon: -5.251W		Depth: 6.8 km</td										

TABLE 2 : PHASE DATA

HYA	SZ	335.0	EP	06:48	32.93	-1.62	MCH	HN	78.1	AML	11:08	06.52	12	0.16			
HYA	SN	335.0	ES	06:49	05.78	-2.17	MCH	HE	78.1	AML	11:08	04.70	10	0.20			
HYA	SN	335.0	AML	06:49	09.36	10 0.36	MCH	SE	78.1	AML	11:07	55.63	27	0.36			
HYA	SE	335.0	AML	06:49	10.69	11 0.44	MCH	HZ	78.1	EP	11:07	54.24		-0.16			
ODD1	SZ	352.0	EP	06:48	33.47		HTR	SZ	69.8	EP	11:07	53.08		-0.06			
ODD1	SN	352.0	ES	06:49	08.61	-3.19	HEX	SZ	61.2	EP	11:07	51.37		-0.42			
ODD1	SE	352.0	AML	06:49	13.52	6 0.16											
ODD1	SN	352.0	AML	06:49	15.51	7 0.28											
BLS5	SZ	355.0	EP	06:48	36.15	-0.86											
BLS5	SN	355.0	ES	06:49	10.38	-1.83											
BLS5	SE	355.0	AML	06:49	13.23	8 0.12											
BLS5	SN	355.0	AML	06:49	13.47	8 0.16											
MCD	SN	361.0	ES	06:49	13.83	0.18											
MCD	SE	361.0	AML	06:49	16.89	10 0.26											
MCD	SN	361.0	AML	06:49	31.33	11 0.70											
RRR	SE	441.0	ES	06:49	29.88	-0.92											
RRR	SE	441.0	AML	06:49	31.21	7 0.52											
RRR	SN	441.0	AML	06:49	31.56	6 0.44											
KPL	HE	474.0	ES	06:49	37.25	-0.49											
KPL	HE	474.0	AML	06:49	38.86	4 0.44											
KPL	HN	474.0	AML	06:49	38.99	5 0.32											
NOA	SZ	601.0	EP	06:49	05.30	-2.31											
NOA	SN	601.0	ES	06:50	03.20	-1.95											
October 24 2006				Time: 23:00 01.0 UTC				Magnitude: 2.5 ML									
Lat:	58.114N	Lon: 0.839W				Depth: 11.5 km				Grid Ref: 567.23 kME 917.38 kmN				RMS: 0.50 secs			
Locality: CENTRAL NORTH SEA																	
Velocity model: North Sea				Xnear: 400.0 Xfar: 600.0													
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES							
MME	SZ	244.0	EP			23:00	35.63										
MCD	SZ	250.0	EP			23:00	36.64										
MCD	SN	250.0	ES	2		23:01	02.50										
MCD	SN	250.0	AML			23:01	05.06	28	0.11								
MCD	SE	250.0	AML			23:01	05.16	26	0.11								
LRW	HZ	253.0	EP			23:00	37.16										
LRW	HE	253.0	ES			23:01	02.40										
LRW	SE	253.0	AML			23:01	04.79	13	0.16								
LRW	SN	253.0	AML			23:01	05.49	10	0.32								
ORE	SZ	274.0	EP			23:00	39.64										
ORE	SN	274.0	ES			23:01	07.22										
ORE	SE	274.0	AML			23:01	08.62	36	0.17								
ORE	SN	274.0	AML			23:01	09.43	40	0.17								
WAL	SZ	277.0	EP			23:00	40.27										
ESY	SZ	322.0	EP			23:00	44.94										
EDI	HZ	345.0	EP			23:00	49.14										
EDI	HN	345.0	ES			23:01	23.67										
EDI	HN	345.0	AML			23:01	25.55	24	0.17								
EDI	HE	345.0	AML			23:01	25.83	27	0.28								
EBL	SZ	352.0	EP			23:00	48.53										
EAU	SZ	363.0	EP			23:00	50.33										
KAC	SZ	371.0	EP			23:00	50.97										
EAB	SZ	379.0	EP			23:00	52.97										
KPL	HZ	396.0	EP			23:00	54.03										
ESK	HZ	398.0	EP			23:00	54.16										
ESK	HN	398.0	ES			23:01	33.61										
KAR	SZ	421.0	EP			23:00	57.26										
October 25 2006				Time: 04:14 00.7 UTC				Magnitude: 1.2 ML									
Lat:	56.156N	Lon: -4.249W				Depth: 1.0 km				Grid Ref: 260.33 kME 698.19 kmN				RMS: 0.30 secs			
Locality: THORNHILL,CENTRAL																	
Velocity model: Lownet				Xnear: 100.0 Xfar: 200.0													
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES							
EAB	SZ	6.6	IP	C	04:14	02.28											
EAB	SZ	6.6	ES	2	04:14	03.33											
PGB	HZ	41.0	IP	D	04:14	08.58											
PGB	HN	41.0	AML		04:14	09.00	5	0.21									
PGB	HE	41.0	ES		04:14	14.15											
PGB	HE	41.0	AML		04:14	16.94	6	0.27									
EAU	SZ	60.8	EP		04:14	11.27											
EDI	HZ	71.0	EP		04:14	13.73											
EDI	HE	71.0	ES		04:14	22.38											
EDI	HE	71.0	AML	2	04:14	22.69	9	0.20									
EDI	HN	71.0	AML		04:14	22.85	10	0.22									
EGL	SZ	86.5	EP		04:14	15.45											
ESK	HZ	114.0	EP		04:14	20.02											
ESK	HN	114.0	AML		04:14	36.34	29	0.31									
ESK	HE	114.0	AML		04:14	36.51	14	0.33									
KAR	SZ	129.0	EP		04:14	22.45											
KSB	SZ	138.0	EP		04:14	23.83											
KPL	HZ	157.0	EP		04:14	27.13											
KPL	HE	157.0	ES	2	04:14	44.79											
KPL	HE	157.0	AML		04:14	46.16	8	0.33									
KPL	HN	157.0	AML		04:14	46.44	6	0.63									
October 28 2006				Time: 11:07 40.6 UTC				Magnitude: 1.4 ML									
Lat:	51.610N	Lon: -3.942W				Depth: 0.0 km				Grid Ref: 265.54 kME 191.97 kmN				RMS: 0.40 secs			
Locality: EXPL-SWANSEA BAY																	
Velocity model: Lownet				Xnear: 100.0 Xfar: 200.0				Intensity: 2									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES							
MCH	SZ	78.1	EP		11:07	54.33											
CR2	SZ	182.0	EP		11:08	10.19											
CCA	SZ	182.0	EP		11:08	10.42											
CSA	SZ	155.0	EP		11:08	06.71											
SBD	SZ	152.0	EP		11:08	05.64											
SSW	SZ	150.0	EP		11:08	06.55											
DYA	EZ	131.0	EP		11:08	02.57											
HLM	SZ	125.0	EP		11:08	01.47											
HGH	SZ	78.7	EP		11:07	54.71											
HTL	HE	78.2	AML		11:08	07.94	14	0.14									
HTL	EZ	78.2	EP		11:07	54.43											
HTL	HN	78.2	AML		11:07	56.69	15	0.20									
HTL	HZ	78.2	EP		11:07	54.49											
MCH	SN	78.1	AML		11:08	06.55	25	0.16	</								

TABLE 2 : PHASE DATA

Grid Ref: 389.35 kmE -87.21 kmN	RMS: 0.70 secs	WCB SE 66.3 ES 3 01:19 48.22 -0.05
Locality: JERSEY, CHANNEL ISLANDS		WCB SE 66.3 AML 01:19 49.94 6 0.08
Velocity model: Lownet Xnear: 100.0 Xfar: 200.0		WCB SN 66.3 AML 01:19 50.07 6 0.20
Comment: OFFSHORE LOCATION		
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES		
JSA SZ 8.3 IP D 11:22 07.50 -0.34		
JSA SZ 8.3 ES 1 11:22 09.93 -0.08		
JSA SZ 8.3 AML 11:22 10.23 6 0.06		
JRS SZ 9.5 EP 11:22 07.48 -0.47		
JRS SE 9.5 ES 11:22 09.89 -0.32		
JRS SE 9.5 EP 1 11:22 09.89 1.94		
JRS SZ 9.5 AML 11:22 10.03 12 0.07		
JVM SZ 12.2 IP D 11:22 08.04 -0.21		
JVM SZ 12.2 ES 11:22 11.00 0.28		
JVM SZ 12.2 AML 11:22 11.06 5 0.08		
December 16 2006 Time: 16:08 52.4 UTC Magnitude: 2.1 ML		
Lat: 53.630N Lon: -2.361W Depth: 9.8 km		
Grid Ref: 376.13 kmE 414.92 kmN RMS: 0.50 secs		
Locality: BOLTON, GTR MANCHESTER		
Velocity model: Lownet Xnear: 150.0 Xfar: 300.0		
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES		
LHO SZ 34.8 IP C 16:08 58.43 -0.28		
LDU SZ 56.7 EP 16:09 01.72 -0.30		
HPK SN 60.7 EP 16:09 02.45 -0.22		
HPK SN 60.7 ES 2 16:09 09.49 -0.70		
KBI SZ 69.4 EP D 16:09 03.82 -0.20		
KWE SZ 76.6 IP D 16:09 05.36 0.21		
LRN SZ 94.9 EP D 16:09 08.23 0.25		
CDU SZ 95.7 EP 16:09 08.62 0.50		
SBD SZ 100.0 IP C 16:09 09.17 0.29		
WPM SZ 111.0 EP 16:09 10.70 0.28		
CKE SZ 117.0 EP 16:09 11.56 0.20		
XDE SZ 122.0 EP 16:09 12.11 0.01		
HLM SZ 129.0 EP 16:09 13.33 0.31		
LWH SZ 136.0 EP 16:09 13.97 -0.03		
XAL SZ 137.0 EP 16:09 14.26 -0.02		
WCB SZ 148.0 EP C 16:09 15.21 -0.49		
WCB SE 148.0 ES 3 16:09 31.86 -0.87		
WCB SE 148.0 AML 16:09 33.21 25 0.20		
WCB SN 148.0 AML 16:09 34.85 26 0.16		
YRC SZ 153.0 EP 16:09 16.13 -0.31		
YRE SZ 155.0 EP 16:09 16.38 -0.43		
WIM SZ 163.0 EP 16:09 16.98 -0.89		
BBH SZ 171.0 EP 16:09 19.83 0.90		
GCD SZ 172.0 EP 16:09 19.21 0.26		
BHH SZ 172.0 EP 16:09 20.12 1.10		
HTR SZ 183.0 EP 16:09 20.94 0.50		
MCH HZ 187.0 EP 16:09 20.97 0.11		
MCH HE 187.0 ES 3 16:09 41.92 0.26		
MCH HN 187.0 AML 16:09 44.76 33 0.18		
MCH HE 187.0 AML 16:09 46.25 38 0.18		
ESK HZ 196.0 EP 16:09 21.13 -0.83		
ESK HE 196.0 AML 16:09 51.04 22 0.34		
ESK HN 196.0 AML 16:09 52.99 16 0.38		
GAL HZ 206.0 EP 16:09 22.39 -0.84		
GAL HE 206.0 ES 3 16:09 43.14 -2.62		
GAL HE 206.0 AML 16:09 50.77 14 0.26		
GAL HN 206.0 AML 16:09 54.33 20 0.34		
HGH SZ 224.0 EP 16:09 25.82 0.34		
GMM SZ 245.0 EP 16:09 26.96 -1.19		
PGB HZ 279.0 EP 16:09 32.09 -0.25		
GMK SZ 283.0 EP 16:09 31.99 -0.94		
GCL SZ 293.0 EP 16:09 33.58 -0.58		
December 19 2006 Time: 02:20 55.0 UTC Magnitude: 1.8 ML		
Lat: 50.346N Lon: -4.512W Depth: 8.0 km		
Grid Ref: 221.30 kmE 52.65 kmN RMS: 0.30 secs		
Locality: LOOE, CORNWALL		
Velocity model: Lownet Xnear: 50.0 Xfar: 300.0		
Comment: FELT HERODSFOOT... Intensity: 3		
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES		
DYA EN 42.5 AML 02:21 07.87 157 0.10		
CR2 SZ 50.9 IP C 02:21 03.83 0.11		
CSA SZ 27.0 IP D 02:20 60.00 -0.02		
DYA EZ 42.5 IP C 02:21 02.52 0.07		
DYA EE 42.5 ES 2 02:21 07.50 -0.41		
DYA EE 42.5 AML 02:21 09.56 87 0.07		
CCA SZ 54.0 IP C 02:21 04.32 0.10		
HTL HZ 72.1 IP C 02:21 07.28 0.28		
HEX SZ 94.5 EP 02:21 10.88 0.38		
CR2 SN 50.9 ES 02:21 09.51 -0.61		
HTL HE 72.1 ES 02:21 15.51 -0.28		
HTL HN 72.1 AML 02:21 16.27 53 0.17		
HTL HE 72.1 AML 02:21 16.71 38 0.13		
MCH HZ 212.0 EP 02:21 26.65 -0.13		
MCH HE 212.0 AML 02:21 54.19 6 0.21		
MCH HN 212.0 AML 02:21 56.27 6 0.27		
WOL BN ESG 02:22 05.62		
WOL BN AML 02:22 08.62 9 0.67		
WOL BE AML 02:22 11.46 11 0.43		
SWN HN ESG 02:21 59.45		
SWN HN AML 02:22 04.98 16 0.62		
SWN HE AML 02:22 04.64 15 0.75		
December 23 2006 Time: 01:19 29.6 UTC Magnitude: 0.8 ML		
Lat: 52.784N Lon: -4.476W Depth: 12.6 km		
Grid Ref: 233.04 kmE 323.62 kmN RMS: 0.00 secs		
Locality: PWLLHELLI, GWYNEDD		
Velocity model: Lleyn Xnear: 80.0 Xfar: 200.0		
Comment: 12KM OFFSHORE		
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES		
YRE SZ 22.2 EP 01:19 33.91 -0.01		
YRE SZ 22.2 ES 3 01:19 36.91 0.06		
YRC SZ 52.4 ES 3 01:19 44.64 -0.01		
WPM SZ 65.2 EP 01:19 40.57 0.00		
WCB SZ 66.3 EP 01:19 40.72 0.01		
December 23 2006 Time: 12:19 32.2 UTC Magnitude: 1.5 ML		
Lat: 52.785N Lon: -2.256W Depth: 11.8 km		
Grid Ref: 382.74 kmE 320.89 kmN RMS: 0.10 secs		
Locality: NEWPORT, SHROPSHIRE		
Velocity model: Mid Wales Xnear: 80.0 Xfar: 200.0		
Comment: 7KM EAST OF NEWPORT		
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES		
WCB SE 66.3 AML 01:19 49.94 6 0.08		
WCB SN 66.3 AML 01:19 50.07 6 0.20		
December 23 2006 Time: 12:19 32.2 UTC Magnitude: 1.5 ML		
Lat: 52.785N Lon: -2.256W Depth: 11.8 km		
Grid Ref: 382.74 kmE 320.89 kmN RMS: 0.10 secs		
Locality: NEWPORT, SHROPSHIRE		
Velocity model: Mid Wales Xnear: 80.0 Xfar: 200.0		
Comment: 7KM EAST OF NEWPORT		
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES		
WCB SZ 38.0 IP C 12:19 39.01 -0.01		
HLM SZ 51.6 EP 12:19 41.26 0.03		
HLM SZ 51.6 ES 3 12:19 47.64 0.07		
SBD SZ 68.8 EP 12:19 44.02 0.02		
MCH SZ 101.0 EP 12:19 48.74 0.19		
MCH SN 101.0 ES 2 12:20 00.94 0.01		
MCH SN 101.0 AML 12:20 01.72 16 0.20		
HTR SZ 104.0 EP 12:19 49.46 0.02		
HGH SZ 133.0 EP 12:19 54.00 0.28		
YRE SZ 148.0 EP 12:19 56.07 0.16		
December 26 2006 Time: 10:40 04.1 UTC Magnitude: 3.5 ML		
Lat: 55.086N Lon: -3.636W Depth: 7.4 km		
Grid Ref: 295.59 kmE 578.07 kmN RMS: 0.40 secs		
Locality: DUMFRIES, D & G		
Velocity model: Lownet Xnear: 100.0 Xfar: 300.0		
Comment: FELT DUMFRIES... Intensity: 5		
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES		
BWH SZ 10.0 IP C 10:40 06.23 -0.28		
BCC AZ 27.7 EP 10:40 09.14 -0.08		
BCC AN 27.7 ES 3 10:40 12.46 -0.54		
GCD SZ 31.6 IP C 10:40 09.41 -0.42		
ESK HZ 37.5 IP C 10:40 10.14 -0.63		
ESK HE 37.5 ES 1 10:40 14.53 3985 0.25 -1.15		
BBO SZ 46.2 IP D 10:40 12.48 0.37		
CKE SZ 65.1 IP D 10:40 15.28 0.23		
XDE SZ 65.3 IP C 10:40 15.23 0.15		
GAL HZ 73.1 EP C 10:40 16.04 -0.21		
GAL HN 73.1 ES 10:40 24.64 -0.52		
GAL HN 73.1 AML 10:40 26.39 1067 0.26		
PGB HE 96.9 IP D 10:40 20.33 0.36		
PGB HE 96.9 ES 1 10:40 31.80 0.21		
PGB HN 96.9 EP 10:40 34.82 1861 0.31		
PGB HN 96.9 AML 10:40 34.83 2112 0.35		
EDI HZ 97.4 IP C 10:40 20.43 0.40		
EDI HE 97.4 ES 2 10:40 31.46 -0.23		
EDI HE 97.4 AML 10:40 35.61 4670 0.39		
EDI HE 97.4 AML 10:40 35.67 2575 0.55		
XSO SZ 98.9 IP C 10:40 19.99 -0.35		
GIM SZ 103.0 IP C 10:40 21.22 0.23		
GIM SZ 103.0 ES 1 10:40 33.84 0.48		
ESY SZ 113.0 EP C 10:40 22.42 -0.04		
WIM SZ 124.0 EP 10:40 24.30 0.08		
TOA AZ 125.0 EP 10:40 24.96 0.64		
GMK SZ 128.0 IP D 10:40 25.03 0.32		
GMK SZ 128.0 ES 2 10:40 39.71 -0.08		
EBH SZ 130.0 EP C 10:40 25.44 0.45		
EAB SZ 130.0 EP D 10:40 25.41 0.31		
ELO SZ 154.0 EP C 10:40 28.60 0.06		
GCL SZ 159.0 EP 10:40 28.79 -0.39		
EDU SZ 167.0 EP 10:40 30.12 -0.27		
GMM SZ 177.0 EP 10:40 30.93 -0.57		
LDU SZ 196.0 EP 10:40 34.89 0.95		
LDU SZ 196.0 ES 4 10:40 58.62 2.87		
WCB SZ 196.0 AML 10:41 05.49 597 0.41		
WCB SZ 199.0 EP 10:40 33.64 -0.66		
LHO SZ 207.0 EP C 10:40 35.12 -0.23		
YRC SZ 213.0 EP 10:40 35.43 -0.61		
YRE SZ 240.0 EP 10:40 38.90 -0.51		
KAR SZ 246.0 EP 10:40 39.90 -0.23		
KPL HZ 280.0 EP 10:40 44.44 0.02		
KPL HE 280.0 AML 10:41 13.09 -0.81		
KPL HE 280.0 EP 10:41 22.17 347 0.64		
KPL HN 280.0 AML 10:41 28.97 274 0.55		
KAC SZ 288.0 EP 10:40 45.01 -0.38		
HLM SZ 290.0 EP 10:40 45.35 -0.38		
HTR SZ 336.0 EP 10:40 51.51 0.11		
MCH SZ 346.0 EP 10:40 52.68 -0.04		
MCH HZ 346.0 EP 10:40 52.80 0.08		
MCH HN 346.0 AML 10:41 43.81 62 0.24		
MCH HE 346.0 EP 10:41 46.03 60 0.57		
WOL BZ 450.0 EP 10:41 05.74 0.11		
HTL HZ 459.0 EP 10:41 06.75 0.00		
LRW HZ 581.0 EP 10:41 19.52 -2.54		
December 30 2006 Time: 09:15 43.0 UTC Magnitude: 3.1 ML		
Lat: 53.666N Lon: 0.998W Depth: 8.0 km		
Grid Ref: 598.04 kmE 423.04 kmN RMS: 0.30 secs		
Locality: SOUTHERN NORTH SEA		
Velocity model: North Sea Xnear: 400.0 Xfar: 600.0		
Comment: 75KM EAST OF HULL		
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI RES		
ABA SZ 87.1 EP 09:15 57.19 0.07		
ABA SZ 87.1 ES 3 09:16 07.57 0.15		
AWI SZ 97.5 EP 09:15 58.61 -0.19		
AWI SZ 97.5 ES 3 09:16 10.04 -0.28		
AEU SZ 117.0 EP 09:16 01.69 -0.17		
AEU SE 117.0 ES 2 09:16 16.08 0.47		
AEU SN 117.0 AML 09:16 19.27 366 0.24		

TABLE 2 : PHASE DATA

AEE	SE	117.0	AML	09:16	19.80	524	0.22		ESK	HE	37.4	AML	16:22	24.62	79	0.18
LWH	SZ	132.0	EP	09:16	04.56		0.39		ESK	HN	37.4	AML	16:22	24.72	56	0.34
KBI	SZ	174.0	EP	09:16	09.11		-0.24		CKE	SZ	64.0	EP	16:22	24.43		0.28
LHO	SZ	189.0	EP	09:16	10.70		-0.59		GAL	SZ	73.7	EP	16:22	25.23		-0.39
KWE	SZ	202.0	EP	09:16	12.93		0.03		GAL	HZ	73.7	EP	16:22	25.25		
SKP	SZ	248.0	EP	09:16	19.14		0.54		GAL	HN	73.7	ES	3	16:22	33.81	-0.86
SSW	SZ	269.0	EP	09:16	21.00		-0.22		GAL	HN	73.7	AML	16:22	34.94	35	0.50
WOL	BZ	302.0	EP	4	09:16	27.62	2.35		GAL	HE	73.7	AML	16:22	35.31	21	0.46
WOL	BN	302.0	AML	09:17	15.32	51	0.55		EBL	SZ	85.4	EP	16:22	27.38		-0.12
WOL	BE	302.0	AML	09:17	18.32	92	0.50		EAU	SZ	86.0	EP	16:22	27.80		0.22
SWN	HE	305.0	AML	09:17	15.79	105	0.48		XAL	SZ	93.3	EP	16:22	28.82		0.09
SWN	HN	305.0	AML	09:17	16.88	112	0.40		EDI	HZ	97.9	EP	16:22	29.56		0.18
MCH	HZ	327.0	EP	09:16	28.63		0.26		EDI	HN	97.9	ES	3	16:22	41.06	-0.11
MCH	HE	327.0	AML	09:17	17.84	39	0.46		EDI	HN	97.9	AML	16:22	44.50	37	0.36
MCH	HN	327.0	AML	09:17	19.59	45	0.42		EDI	HE	97.9	AML	16:22	44.53	59	0.42
December 30 2006 Time: 16:22 13.2 UTC Magnitude: 1.7 ML																
Lat: 55.079N Lon: -3.622W Depth: 5.6 km																
Grid Ref: 296.46 KmE 577.27 KmN RMS: 0.30 secs																
Locality: DUMFRIES,D & G																
Velocity model: Lownet Xnear: 100.0 Xfar: 300.0																
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	RES						
EWH	SZ	11.0	EP			16:22	15.46			0.08						
BHH	SZ	25.8	IP	C	16:22	17.94				0.06						
BHH	SE	25.8	ES	2	16:22	21.18				-0.10						
GCD	SZ	31.5	EP		16:22	18.53				-0.32						
ESK	HZ	37.4	IP	C	16:22	19.28				-0.58						
ESK	HN	37.4	ES	3	16:22	23.81				-0.89						

TABLE 3

GEOGRAPHIC COORDINATES OF SEISMOGRAPH STATIONS, 2006

Code	Name	Lat	Lon	KmE (km)	KmN (km)	Ht (m)	Comp
ABA	BACONSTHORPE	52.8884	1.1453	611.58	337.00	74	1
AEA	EAST ANGLIA UNIV	52.6208	1.2403	619.30	307.53	45	3M
AEU	EAST ANGLIA	52.6202	1.2347	618.93	307.45	28	SM
APA	PACKWAY	52.3006	1.4782	637.12	272.68	58	1
AWH	WHINBURGH	52.6297	0.9507	599.67	307.68	64	1R
AWI	WITTON	52.8319	1.4471	632.17	331.65	46	1
BBH	BRUNTSHEIL	55.1333	-2.9299	340.72	582.50	216	1
BBO	BOTHEL	54.7367	-3.2464	319.76	538.69	209	3
BCC	CHAPELCROSS	55.0153	-3.2201	321.99	569.66	138	1SM
BCM	CHAPELCROSS MIC	55.0151	-3.2212	321.92	569.64	78	M
BDL	DOBCROSS HALL	54.8030	-2.9385	339.68	545.76	157	1
BHH	HOWATS HILL	55.0931	-3.2181	322.27	578.31	216	3
BNA	NEW ABBEY	54.9658	-3.6242	296.03	564.68	28	1
BTA	TALKIN	54.9057	-2.6844	356.12	557.00	279	3
BWH	WARDLAW	55.1758	-3.6549	294.62	588.09	269	1
CBW	BUDOCK WATER	50.1482	-5.1144	177.53	32.29	94	1
CCA	CARNMENELLIS	50.1866	-5.2277	169.62	36.90	210	1
CCO	CONSTANTINE	50.1357	-5.1957	171.66	31.14	168	1
CDU	DUNNERDALE	54.3362	-3.1952	322.30	494.08	355	1
CGH	GOONHILLY	50.0507	-5.1649	173.46	21.60	97	1
CGW	GWEEK	50.1006	-5.2228	169.56	27.32	9	1
CKE	KESWICK	54.5877	-3.1059	328.54	521.96	304	1
CMA	MANACCAN	50.0821	-5.1274	176.29	24.98	42	1
CPZ	PENZANCE	50.1566	-5.5828	144.12	34.72	199	1R
CR2	ROSEMANOWES 2	50.1667	-5.1687	173.74	34.51	143	3
CRQ	ROSEMANOWES	50.1672	-5.1726	173.46	34.57	156	SM
CSA	ST AUSTELL	50.3527	-4.8919	194.30	54.38	112	1
CSF	SCAFELL	54.4478	-3.2430	319.41	506.55	540	1
CSM	SELLAFIELD MIC	54.4183	-3.4913	303.24	503.58	50	M
CST	STITHIANS	50.1952	-5.1635	174.24	37.66	141	1
CWF	CHARNWOOD FST	52.7385	-1.3076	446.74	315.91	203	3BB
DCO	COMBE FARM	50.3201	-3.8721	266.74	48.43	117	1R
DYA	YADSWORTHY	50.4353	-3.9310	262.88	61.34	292	3BB
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	3BB
EDR	DRUMTOCHTY	56.9190	-2.5393	367.17	780.97	401	1R
EDU	DUNDEE	56.5477	-3.0110	337.85	739.97	421	1R
ELO	LOGIEALMOND	56.4703	-3.7112	294.59	732.21	523	1R
ESK	ESKDALEMUIR	55.3165	-3.2052	323.52	603.16	261	3BB
ESY	STONEYPATH	55.9175	-2.6141	361.62	669.55	337	1R
FHV	HALDARSVIK	62.2597	-7.0984	135.46	1385.95	380	1R
FSD	SUDUROY	61.5701	-6.7884	145.86	1308.06	480	1R
FSV	SVINOY	62.2598	-6.3550	173.99	1383.14	430	1R
FTO	TORSHAVN	62.0199	-6.8274	147.51	1358.21	325	3R
FVA	VAGAR	62.0575	-7.3520	120.46	1364.55	430	1R
GAL	GALLOWAY	54.8664	-4.7114	226.02	555.78	117	3BB
GCD	CASTLE DOUGLAS	54.8630	-3.9403	275.48	553.76	184	1R
GCL	CUSHENDALL	55.0783	-6.1264	136.66	583.77	278	1R
GIM	ISLE OF MAN (North)	54.2923	-4.4672	239.44	491.35	346	3R
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
HAE	ALDERS END	52.0368	-2.5434	362.73	237.79	260	1R
HBL2	BONNYLANDS	52.0508	-3.0384	328.80	239.71	437	SM
HCG	CRAIG GOCH	52.3231	-3.6570	287.08	270.78	533	1R
HEX	EXMOOR	51.0664	-3.8026	273.71	131.28	230	1R

TABLE 3

GEOGRAPHIC COORDINATES OF SEISMOGRAPH STATIONS, 2006

Code	Name	Lat	Lon	KmE (km)	KmN (km)	Ht (m)	Comp
HGH	GRAY HILL	51.6379	-2.8057	344.25	193.59	223	1R
HLM	LONG MYND	52.5184	-2.8807	340.25	291.57	429	1
HPE	PEMBROKE	51.9372	-4.7746	209.29	230.21	349	1R
HPK	HAVERAH PARK	53.9581	-1.6241	424.66	451.42	233	3R
HSA	SWANSEA	51.7500	-4.1532	251.38	207.94	293	1R
HTL	HARTLAND	50.9943	-4.4849	225.64	124.66	86	3BB
HTR	TREWERN HILL	52.0785	-3.2679	313.12	243.04	337	1R
JDC	DAM (CREST)	49.1947	-2.0469			39	SM
JDG	DAM (GALLERY)	49.1947	-2.0469			7	SM
JRS	MAISON ST LOUIS	49.1922	-2.0922			56	3RLG
JSA	ST AUBINS	49.1878	-2.1717			39	1R
JVM	VALLE D.L.MARE	49.2169	-2.2067			64	1R
KAC	ACHNASHELLACH	57.4989	-5.2988	202.36	850.19	206	1R
KAR	ARISAIG	56.9188	-5.8290	166.98	787.34	186	1
KBI	BIRLEY GRANGE	53.2543	-1.5279	431.49	373.17	272	1
KEY	KEYWORTH	52.8779	-1.0757	462.20	331.59	59	LG
KEY2	KEYWORTH (SM)	52.8790	-1.0770	462.13	331.73	76	SM
KNR	NEVIS RANGE	56.8219	-4.9714	218.68	773.97	1147	1R
KPL	PLOCKTON	57.3391	-5.6527	180.21	833.50	13	3BB
KSB	SHIEL BRIDGE	57.2099	-5.4214	193.40	818.40	417	1R
KSK	SCOVAL	57.4659	-6.7002	118.21	851.46	265	1R
KSY	SYSTON	52.9642	-0.5872	494.88	341.73	121	1R
KTG	TILBROOK GRNGE	52.3264	-0.4019	508.90	271.06	83	1
KUF	UFFORD	52.6170	-0.3907	508.94	303.39	38	1R
KWE	WEAVER FARM	53.0164	-1.8412	410.65	346.61	328	1R
LCP	CASSOP	54.7370	-1.4744	433.84	538.14	185	1R
LDU	LEEDS	53.8058	-1.5540	429.37	434.51	74	MLGSM
LHO	HOLMEFIRTH	53.5453	-1.8548	409.62	405.44	462	1R
LMI	MILLOM	54.2206	-3.3070	314.79	481.35	129	3R
LMK	MARKET RASEN	53.4569	-0.3260	511.14	396.90	146	1R
LRN	RICHMOND	54.4165	-1.8007	412.93	502.37	313	1R
LRW	LERWICK	60.1360	-1.1779	445.66	1139.27	98	3BB
LWH	WHINNY NAB	54.3338	-0.6717	486.36	493.97	277	1R
MCD	COLEBURN DISTIL	57.5828	-3.2541	325.02	855.42	293	3RMLGSM
MCH	MICHAELCHURCH	51.9974	-2.9983	331.47	233.74	219	3BB
MDO	DOCHFOUR	57.4409	-4.3633	258.17	841.39	415	1R
MFI	FISHRIE	57.6119	-2.2956	382.34	858.00	232	1R
MLA	LATHERON	58.3055	-3.3627	320.15	935.98	188	1
MME	MEIKLE CAIRN	57.3149	-2.9647	341.90	825.32	475	1
MVH	ACHVAICH	57.9250	-4.1825	270.75	894.90	185	1
OBR	BRABSTER	58.6142	-3.1626	332.47	970.13	89	1R
ODR	DOUNREAY	58.5822	-3.7256	299.68	967.27	100	SM
OHO	HOY	58.8322	-3.2465	328.05	994.48	172	1R
ORE	REAY	58.5480	-3.7622	297.45	963.52	100	3RMLG
OST	STRONSAY	59.0860	-2.5516	368.39	1022.20	21	1R
OTO	TONGUE	58.4953	-4.3939	260.49	958.79	338	1R
OWE	WESTRAY	59.3180	-3.0289	341.44	1048.36	87	1R
PCA	CARROT	55.7007	-4.2550	258.30	647.55	302	1
PCO	CORRIE	55.9880	-4.1002	269.00	679.21	267	1
PGB	GLENIFFERBRAES	55.8115	-4.4837	244.38	660.37	199	3BB
PMS	MUIRSHIEL	55.8459	-4.7452	228.15	664.82	351	1
POB	OBSERVATORY	55.8458	-44299	247.88	664.06	34	MLG
RCR	CAPE WRATH	58.6245	-4.9987	225.90	974.58	100	1R
REB	EISG-BRACHAIDH	58.1194	-5.2802	206.82	919.16	100	1R
RFO	FORSNAVAL	58.2133	-7.0052	106.10	935.83	195	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	3RMLGSM
RSC	SCOURIE	58.3485	-5.1683	214.61	944.33	60	1R
RTO	TOLSTA	58.3778	-6.2092	153.95	950.93	74	1R

TABLE 3

GEOGRAPHIC COORDINATES OF SEISMOGRAPH STATIONS, 2006

Code	Name	Lat	Lon	KmE (km)	KmN (km)	Ht (m)	Comp
SAN	SANDWICK	60.0179	-1.2392	442.41	1126.08	150	1
SBD	BRYN DU	52.9055	-3.2585	315.37	335.01	489	1
SFH	HASELMERE	51.0604	-0.6912	491.71	129.88	260	1
SHSD	LERWICK	60.1360	-1.1779	445.66	1139.27	98	BBSM
SIW	ISLE OF WHITE	50.6711	-1.3747	444.18	85.97	162	1
SKP	KOPHILL	51.7218	-0.8096	482.22	203.29	212	1
SMD	MENDIPS	51.3083	-2.7170	350.03	156.88	310	1
SSP	STONEY POUND	52.4177	-3.1119	324.39	280.59	428	3
SSW	STOW-ON-WOLD	51.9667	-1.8499	410.31	229.86	291	1
SWK	WARMINSTER	51.1483	-2.2471	382.72	138.87	266	1
SWN	SWINDON	51.5137	-1.8007	413.83	179.49	192	3BB
TBW	BRENTWOOD	51.6549	0.2913	558.48	197.66	89	1R
TCR	COLCHESTER	51.8347	0.9212	601.24	219.20	45	1R
TEB	EASTBOURNE	50.8187	0.1457	551.13	104.39	68	1R
TFO	FOLKESTONE	51.1135	1.1409	619.81	139.66	202	3MLGSM
TSA	SEVENOAKS	51.2426	0.1561	550.48	151.53	177	1
WAL	WALLS	60.2564	-1.6173	421.18	1152.46	167	1
WCB	CHURCH BAY	53.3782	-4.5467	230.62	389.87	139	3MSM
WFB	FAIRBOURNE	52.6831	-4.0383	262.23	311.48	316	1R
WIM	ISLE OF MAN(South)	54.1475	-4.6738	225.39	475.73	386	1R
WLF	LLYNFAES	53.2894	-4.3966	240.27	379.65	58	1
WME	MYNDD EILIAN	53.3969	-4.3032	246.88	391.40	129	1R
WPM	PENMAENMAWR	53.2581	-3.9048	272.95	375.18	353	1R
XAL	ALLENDALE	54.8617	-2.2147	386.22	551.91	458	1R
XDE	DENT	54.5056	-3.4902	303.52	513.29	301	1R
XSO	SOURHOPE	55.4924	-2.2510	384.14	622.10	516	1R
YEL	YELL	60.5509	-1.0830	450.29	1185.55	203	1
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	52.9811	-4.4254	237.19	345.43	193	1R
YRH	RHIW	52.8336	-4.6288	222.94	329.51	286	1R

Component Codes:

- 1 Single vertical seismometer
 3 Orthogonal set of 3 seismometers
 M Low-frequency microphone
 R Station coordinates registered with the International Seismological Centre (ISC), England and the National Earthquake Information Centre (NEIC), USA
 LG Single low-gain vertical seismometer
 SM Strong motion seismometers
 BB Broadband Instrument

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 eest.
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+ 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 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 abbreviations

Sonic	Sonic boom	N Yorkshire	North Yorkshire
Expl	Explosion	Staffs	Staffordshire
D & G	Dumfries and Galloway	W Midlands	West Midlands
Gtr	Greater	Salop	Shropshire
S Yorkshire	South Yorkshire	W Sussex	West Sussex

Comments abbreviations

... and felt elsewhere

Appendix 2 Key to Phase Data Encoding

Time	Time of occurrence of event in hours, mins and secs, (UTC).
Lat	Latitude of the event, N indicates North.
Lon	Longitude of the event, W indicates West, E indicates East.
Depth	Depth of the hypocentre in kilometres.
Grid Ref	UK National Grid Reference in kilometres east (kmE) and kilometres north (kmN) of grid origin.
RMS	Root Mean Square of the travel time residuals in seconds.
Velocity Model	Velocity model used in location.
Magnitude	Richter local magnitude of the event.
Locality	A geographical indication of the epicentral area, usually the nearest town followed by the region.
Intensity	Maximum EMS intensity. 2+ 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	Station component S=short period 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.