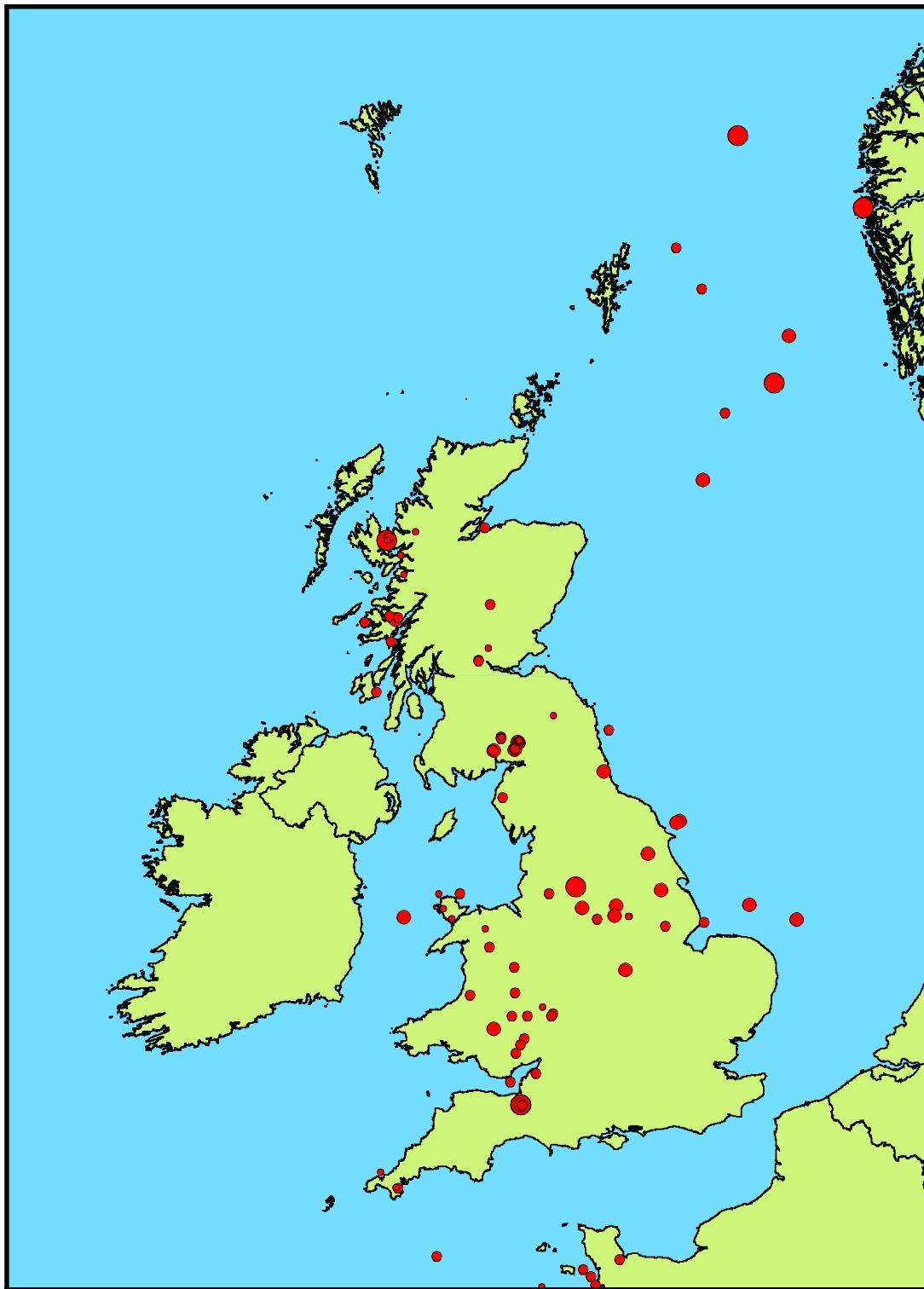




British Geological Survey

BULLETIN OF BRITISH EARTHQUAKES 2004



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BRITISH GEOLOGICAL SURVEY

REPORT IR/05/087

Bulletin of British Earthquakes 2004

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BRITISH GEOLOGICAL SURVEY

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FIGURES

Figure 1. Epicentre map of earthquakes in 2004 that are listed in Table 1.

Figure 2. Seismograph network operational in December 2004. Red triangles indicate BGS stations; black triangles indicate stations operated by the Dublin Institute of Advanced Studies (DIAS).

Figure 3. Earthquake detection capability in December 2004. Contour values are for Richter local magnitude (ML) calculated for average background noise conditions (4 nm) where the detection criterion is that the signal has to exceed 4 nm at 10 Hz on 4 stations.

Figure 4. Epicentres of earthquakes with magnitudes of 2.5 ML and above, in the period 1979 to 2004.

Figure 5. Epicentres of earthquakes with magnitudes of 3.5 ML and above, in the period 1970 to 2004.

Figure 6. Seismograms of the Aberfoyle earthquake of 20 June 2003. 06:44 UTC, 3.2 ML, recorded on the LOWNET and Paisley sub-networks.

Figure 7. Lower hemisphere equal area projection of the focal mechanism obtained for the Aberfoyle earthquake of 20 June 2003. 06:44 UTC, 3.2 ML.

TABLES

Table 1. Catalogue of events in chronological order: 2004.

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

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

1 Introduction

The British Geological Survey's (BGS) Seismic Monitoring and Information Service operates a nationwide network of seismograph stations in the United Kingdom (UK). The whole of the UK, including coastal waters, is covered within the limits of the detection capabilities of the seismograph network. Location accuracy is extended in offshore areas through data exchange with neighbouring countries. Seismic phase data, location details and magnitudes are presented in this Bulletin for all earthquakes detected and located by BGS during 2004 in Tables 1 and 2, together with maps showing the larger magnitude events since 1979 ($ML > 2.5$) and since 1970 ($ML > 3.5$). 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 origins are included. Coalfield events are also included. These are small events occurring near coal workings that are believed to be caused by the redistribution of stress as the coal is extracted and, in some cases by collapse in old workings. They are indicated by C/F in the comments column of Tables 1, 2.

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 local people. 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 Summary of 2004 Seismicity

There were 131 earthquakes located by the monitoring network during the year (Figure 1), with 30 of them having magnitudes of 2.0 ML or greater and 8 having magnitudes of 3.0 ML or greater. Ten events with a magnitude of 2.0 ML or greater were reported felt, together with a further 10 smaller ones, bringing the total to 20 felt earthquakes in 2004.

The largest onshore earthquake had a magnitude of 3.3 ML and occurred offshore the Island of Raasay on 16 September 2004, at a depth of 5.3 km. No felt reports were received for this earthquake, this could be due to the remote location of the earthquake. A further 2 events were located in this area during 2004, with magnitudes of 1.7 and 0.4 ML, respectively.

The largest offshore earthquake occurred in the Northern North Sea on 13 May 2004, with a magnitude of 3.5 ML. It was located approximately 270 km northeast of Lerwick,

Shetland Islands. A further 9 events occurred in the North Sea and surrounding waters during the year, with magnitudes ranging between 1.1 and 3.1 ML.

An earthquake with a magnitude of 0.2 ML occurred in the Blackford area on 23 January. The BGS received one report for this event from a resident of Glendevon, who described, "felt a slight shudder" indicating an intensity of 2 EMS. This is an area that has continued to be active in recent years; 50 events occurred in 1997, of which five were felt by local residents; 10 events occurred in 1998, of which 2 were felt by local residents, 3 events occurred in 1999, 4 events occurred in 2000, of which 3 were felt, 4 events occurred in 2001, of which 3 were felt, 4 events occurred in 2002, of which one was felt and 9 events occurred in 2003, of which 4 were felt. These are all in the same general area as the magnitude 3.2 ML Ochil Hills earthquake in 1979, which had a maximum intensity of 5 EMS.

Four events occurred on 29 January, in the Bridgwater area of Somerset with magnitudes between 2.7 and 3.1 ML. Felt reports were received from residents throughout Taunton, Wedmore, Ilminster and surrounding areas. The reports described, "the floor moved and there was a deep rumble", "the floor was shaking" and "the whole house shook", indicating intensities of 3 and 4 EMS. The events were located approximately 12 km northeast of Taunton and approximately 5 km south of Bridgwater. The four events were located within 200 metres from each other and the events occurred at a shallow depth of approximately 6.5 km.

An earthquake with a magnitude of 3.1 ML occurred on 29 February, near Oldham, Greater Manchester. The BGS received a number of reports from the Oldham area, which described "the wardrobe shook and I heard a rumble" and "the house shook violently", indicating an intensity of 4 EMS.

A magnitude 2.1 ML earthquake occurred on 15 April, with a location near Ardtornish, Highland. The BGS received one report for this event from Morvern, describing, "the furniture rattled and I heard a loud roar", indicating an intensity of 3 EMS.

Near Dumfries, Dumfries and Galloway, an earthquake with a magnitude of 2.3 ML, occurred on 7 August. The BGS received several reports from residents in the Dumfries area which described, "rumbling and a very loud banging", "felt like coming to a halt in a car", "the building shook" and "very noticeable shudder in our house", indicating an intensity of 3 EMS. A magnitude 1.5 ML earthquake also occurred in the area earlier in the year on 7 February.

Between 13 October and 30 December, a swarm of small earthquakes were detected in an area between Eskdalemuir, in the Borders, and Langholm, in Dumfries and Galloway. The BGS detected these events on nearby seismic stations. A total of 38 earthquakes have occurred since 13 October. These events occurred approximately 8km SSE of Eskdalemuir, at an average depth of 4.5km and with magnitudes ranging between -0.4 and 2.9 ML. The largest event, with a magnitude of 2.9 ML, occurred on 28 November and was felt near Lockerbie, Langholm and Eskdalemuir. Residents reported "the whole house shook", "felt a shudder for 4 to 5 seconds", "heard a booming noise like a gas explosion which woke me up", "all the china in the kitchen nearly fell off the wall" and "heavy bed jumped as well". Initial analysis suggested that the spatial extent of the earthquake source region was less than a few kilometres. A cross-correlation technique was applied, which identified three groups of similar events consisting of thirteen, three and two events. Timing of phases as well as amplitude ratios was nearly identical within the groups. The

main group contained the two largest earthquakes, suggesting that these two events had a similar hypocentre location and source mechanism. The focal mechanisms for the two largest events show normal faulting with the two nodal planes striking in a N to NNW direction and dipping either west or east.

Accurate and consistent phase arrivals were determined for events of the largest group using the cross-correlation technique. The resulting phase arrivals were input, together with the manually picked arrivals for the other events, to a joint location procedure. The majority of the earthquakes originate from an area about 2.5 km in north-south and 1 km in east-west direction.

The distribution of epicentres is clustered and shows no clear linear trend that may indicate a fault plane. The larger faults in the region are oriented southwest northeast, perpendicular to the nodal planes of the two largest events in the sequence. The event distribution and tectonic information, therefore, cannot be used to identify one of the nodal planes as causative fault.

Similar swarms of small earthquakes have been seen in the UK before, such as Manchester (2002), Comrie (1788-1801, 1839-46), Glenalmond (1970-72), Doune (1997), Blackford (1997-98, 2000-01), Constantine (1981, 1986, 1992-4), Johnstonebridge (mid1980s) and Dumfries (1991,1999).

Four events occurred in the Johnstonebridge area of Dumfries and Galloway during 2004 with magnitudes ranging from 0.4 to 1.2 ML, another 4 events occurred in the Dumfries and Galloway region during the year, this time near Lockerbie, with magnitudes ranging from 1.1 to 2.0 ML.

The coalfield areas of South Yorkshire, Nottinghamshire, Greater Manchester, Derbyshire and Gwent continued to experience shallow earthquake activity that is believed to be mining induced. Some, 6 coalfield events, with magnitudes ranging between 0.6 and 2.3 ML, were detected during the year. Local residents reported three of these events to be felt.

3 The BGS UK Seismograph Network

Operational seismograph stations in December 2004 are shown in Figure 2. 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 with 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 from Edinburgh several times a day through Internet or dial-up modems. Once transferred, the events are analysed to provide rapid response for 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. A number of broadband seismic stations provide data with a larger dynamic range and over a wider frequency band.

The detection capabilities of a network depend upon station distribution, instrument sensitivity and background noise levels. Figure 3 shows the magnitude detection thresholds for seismograph stations operational in December 2004. The contours illustrate the lower threshold magnitude for an earthquake to significantly exceed 4 nanometers of noise (average) at 10 Hz on at least four seismographs. These detection levels hold true only if all stations are continuously monitored. Small events in unmonitored areas may go undetected unless they are felt and reported to BGS by local inhabitants, but detection capabilities by 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, waves, traffic and livestock vary considerably with time (typically 0.5 to 15 nanometers, 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 4 shows only earthquakes with magnitude 2.5 ML or greater, in the period 1979 to 2004. The data set is considered complete for these magnitudes in all localities onshore. Seismicity for the period 1970 to 2004 is shown in Figure 5 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 dataset is likely to be complete for such magnitudes.

4 Hypocentre Parameters and Their Errors

4.1 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 HYOPCENTRE (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 velocity through the earth can be modelled.

4.2 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. Constraints on the depth can usually

only be imposed when a station is very near the epicentre and even then the accuracy depends on the velocity model.

The best depth determinations have been obtained when an earthquake or earthquake series occurred almost beneath a network. For events at larger distances, and where the error columns (ERH and ERZ), in the tables, are blank, the depth errors can be up to tens of kilometres. The quality factor of the event, as listed in the tables (SQD), is an indication of the depth error. As a general guide only, A*A, A*B, B*A and possibly B*B class events, have reliable depths.

4.3 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 by the earthquake 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 out 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 world-wide today. The ML magnitudes in this bulletin have been calculated according to Richter by 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 was not possible, the mean of the magnitudes from a number of verticals has been used. Ground motion registered at a seismograph varies with site conditions, 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.

4.4 INTENSITY

Intensity is a measure of the effect of the shaking 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, on the European Macroseismic Scale (EMS), (Grünthal, 1998).

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

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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, negative longitude indicates west.
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.
DM	Epicentral distance in kilometres to the closest station.
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.
SQD	S is quality factor ascribed to RMS, D is quality ascribed to number and distribution of stations.

Locality abbreviations

Sonic	Sonic boom	N Yorkshire	North Yorkshire
Expl	Explosion	Notts	Nottinghamshire
D & G	Dumfries and Galloway	Lincs	Lincolnshire
Gtr	Greater	N'umberlnd	Northumberland
Her & Worcs	Hereford and Worcester	Staffs	Staffordshire
S'Clyde	Strathclyde	Leics	Leicestershire
S Yorkshire	South Yorkshire	W Mids	West Midlands
New-U-Lyme	Newcastle-Under-Lyme	Salop	Shropshire
Penin	Peninsula		

Comments abbreviations

Sonic	Sonic boom
Expl	Explosion
C/F	Coalfield type event
...	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.
Quality	Solution quality of hypocentre averaged from QS and QD. A, excellent; B, good; C, fair; D, poor
RMS	Root Mean Square of the travel time residuals in seconds.
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.
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

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.

Appendix 4 Significant earthquakes in 2004

THE ESKDALEMUIR EARTHQUAKES 2004

Between 13 October and 30 December, a swarm of small earthquakes were detected in an area between Eskdalemuir, in the Borders, and Langholm, in Dumfries and Galloway. The BGS detected these events on nearby seismic stations. A total of 39 earthquakes have occurred since 13 October. These events occurred approximately 8km SSE of Eskdalemuir, at an average depth of 4.5km and with magnitudes ranging between -0.4 and 2.9 ML. The largest event, with a magnitude of 2.9 ML, occurred on 28 November and was felt near Lockerbie, Langholm and Eskdalemuir. Residents reported "the whole house shook", "felt a shudder for 4 to 5 seconds", "heard a booming noise like a gas explosion which woke me up", "all the china in the kitchen nearly fell off the wall" and "heavy bed jumped as well". Initial analysis suggested that the spatial extent of the earthquake source region was less than a few kilometres. A cross-correlation technique was applied, which identified three groups of similar events consisting of thirteen, three and two events. Timing of phases as well as amplitude ratios was nearly identical within the groups. The main group contained the two largest earthquakes, suggesting that these two events had a similar hypocentre location and source mechanism. The focal mechanisms for the two largest events show normal faulting with the two nodal planes striking in a N to NNW direction and dipping either west or east. Accurate and consistent phase arrivals were determined for events of the largest group using the cross-correlation technique. The resulting phase arrivals were input, together with the manually picked arrivals for the other events, to a joint location procedure. The majority of the earthquakes originate from an area about 2.5 km in north-south and 1 km in east-west direction. The distribution of epicentres is clustered and shows no clear linear trend that may indicate a fault plane. The larger faults in the region are oriented southwest northeast, perpendicular to the nodal planes of the two largest events in the sequence. The event distribution and tectonic information, therefore, cannot be used to identify one of the nodal planes as causative fault.

Similar swarms of small earthquakes have been seen in the UK before, such as Manchester (2002), Comrie (1788-1801, 1839-46), Glenalmond (1970-72), Doune (1997), Blackford (1997-98, 2000-01), Constantine (1981, 1986, 1992-4), Johnstonbridge (mid1980s) and Dumfries (1991, 1999).

KEY

MAGNITUDE (ML)

- | | |
|---|------------|
|  | ≥ 5.0 |
|  | 4.0 – 4.9 |
|  | 3.0 – 3.9 |
|  | 2.0 – 2.9 |
|  | 1.0 – 1.9 |
|  | < 1.0 |

KEY TO EPICENTRE MAPS

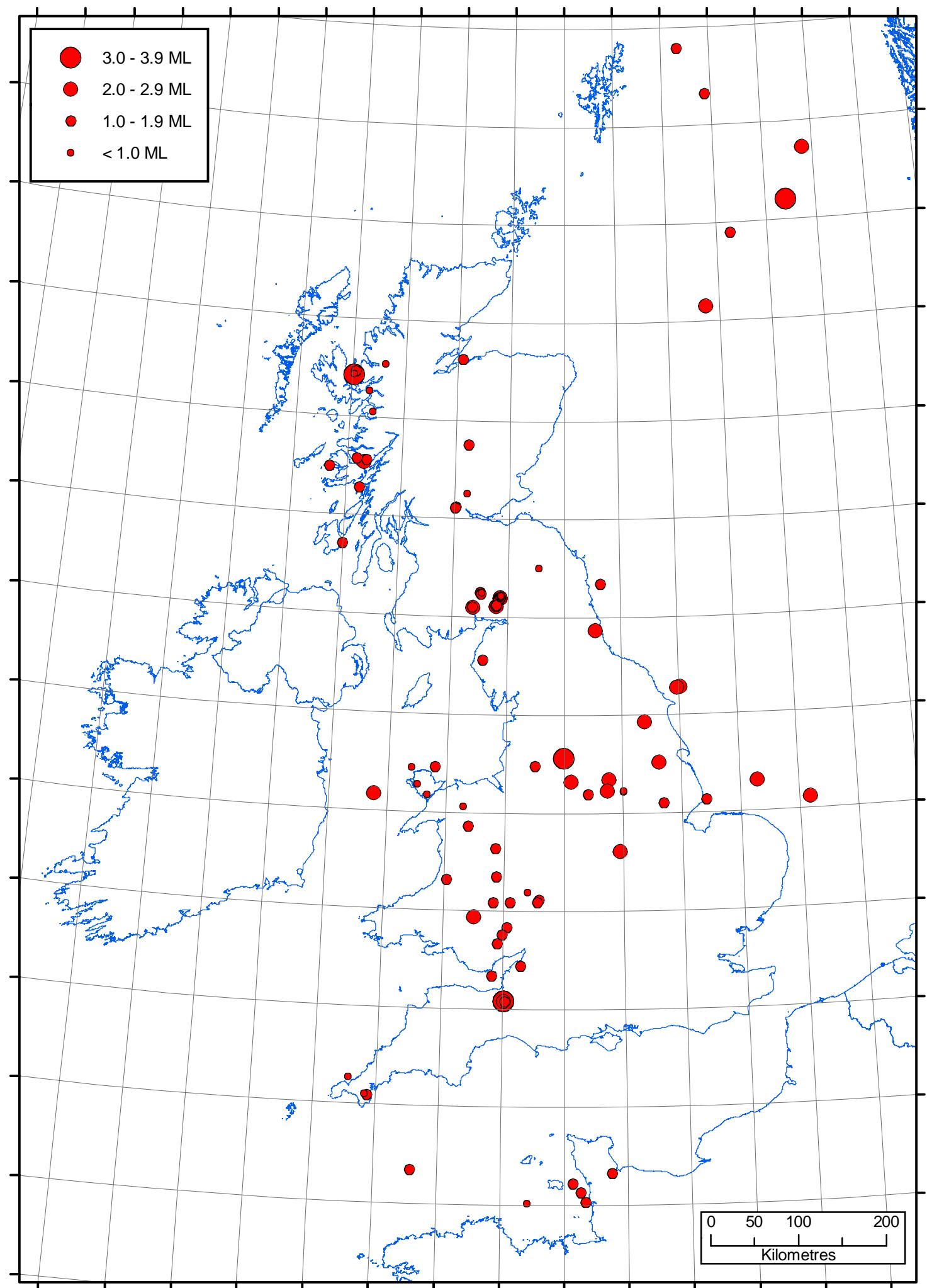


Figure 1. Epicentres of all UK earthquakes located in 2004.

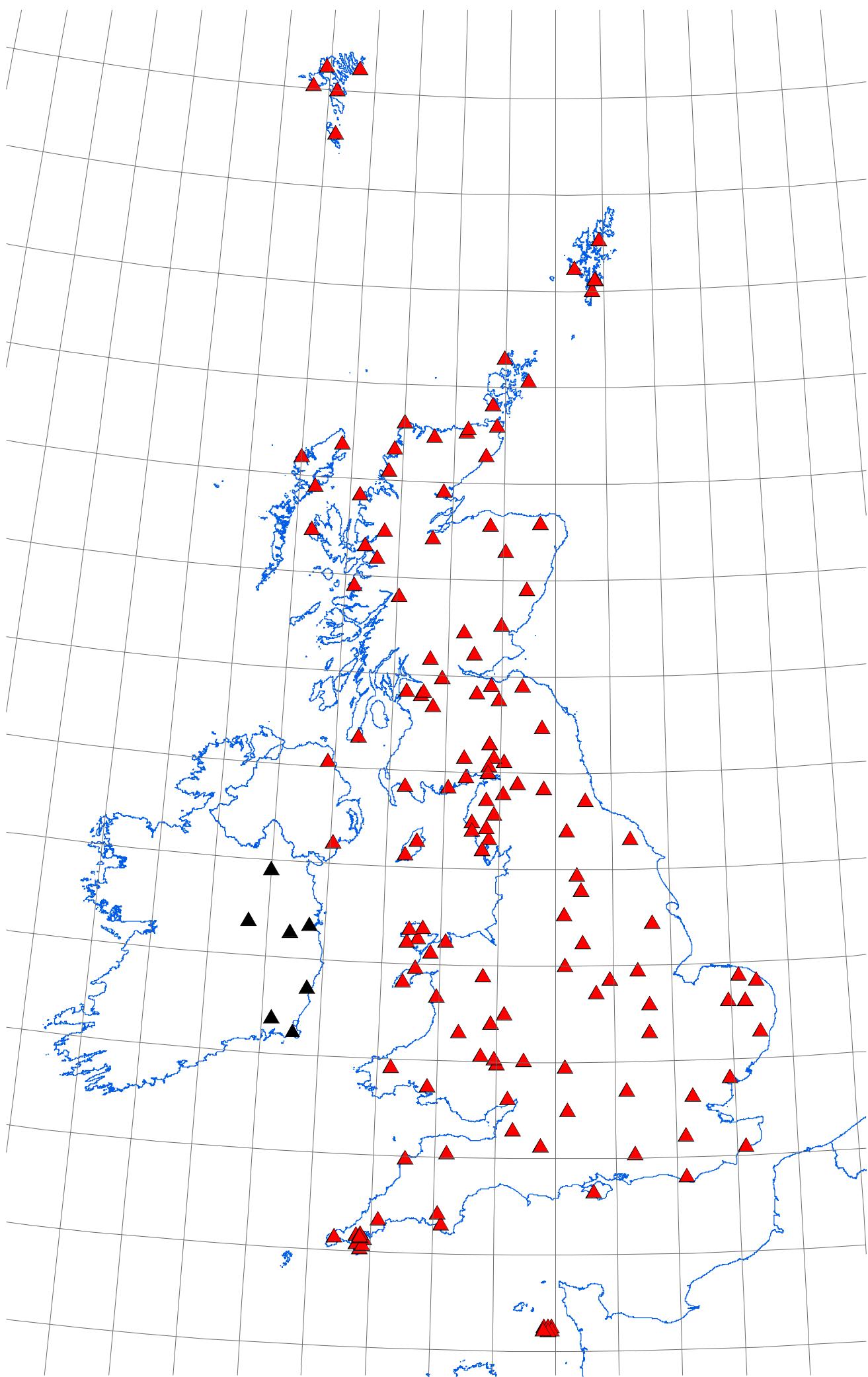


Figure 2. Seismograph network operational in December 2004. Colour coding shows the rapid access stations (red) and DIAS stations (black).

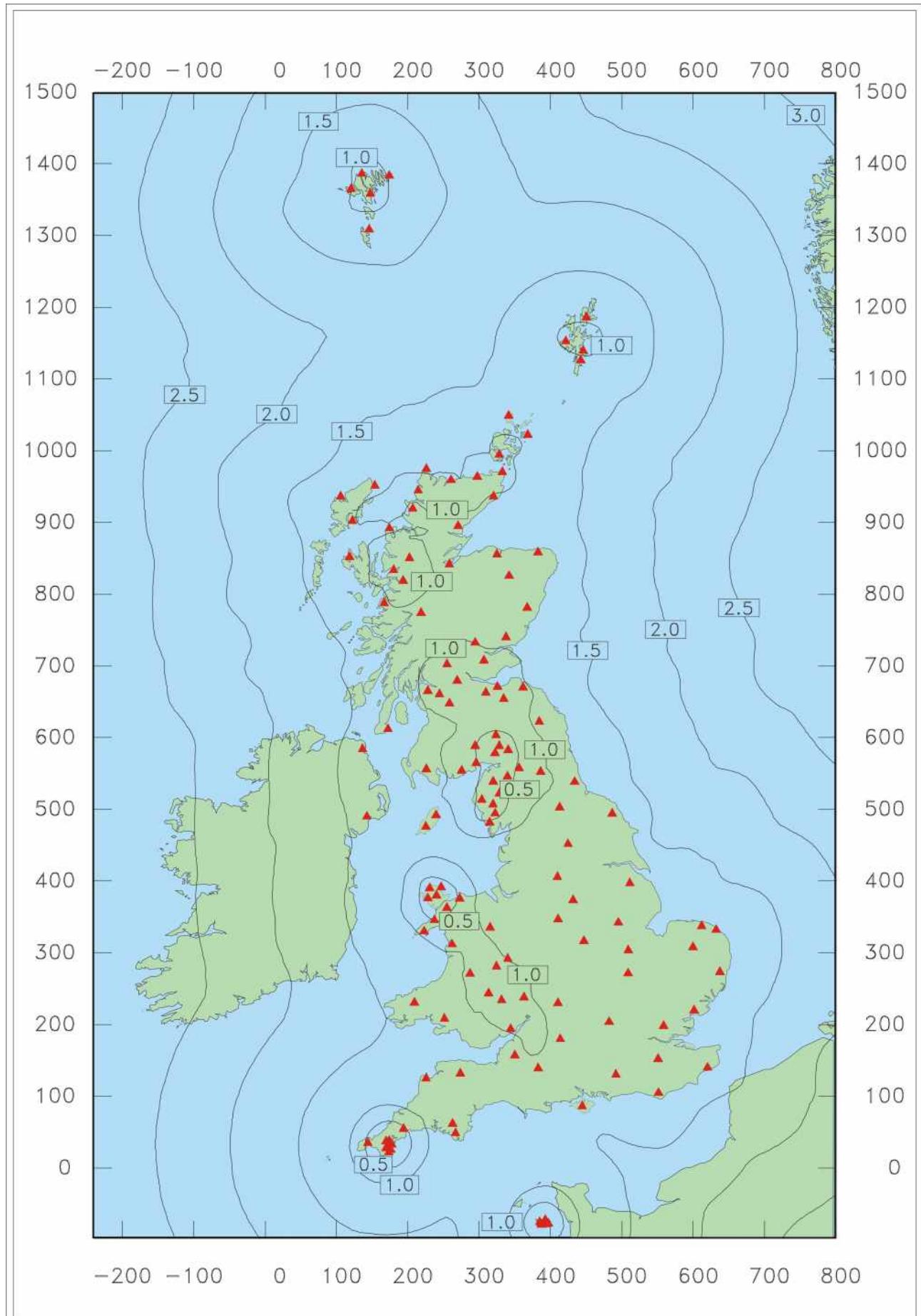


Figure 3. Earthquake detection capability in December 2004. Contour values are Richter local magnitude (ML) for 4 nanometres of noise (average) and S-wave amplitude twice that at the fourth nearest station.

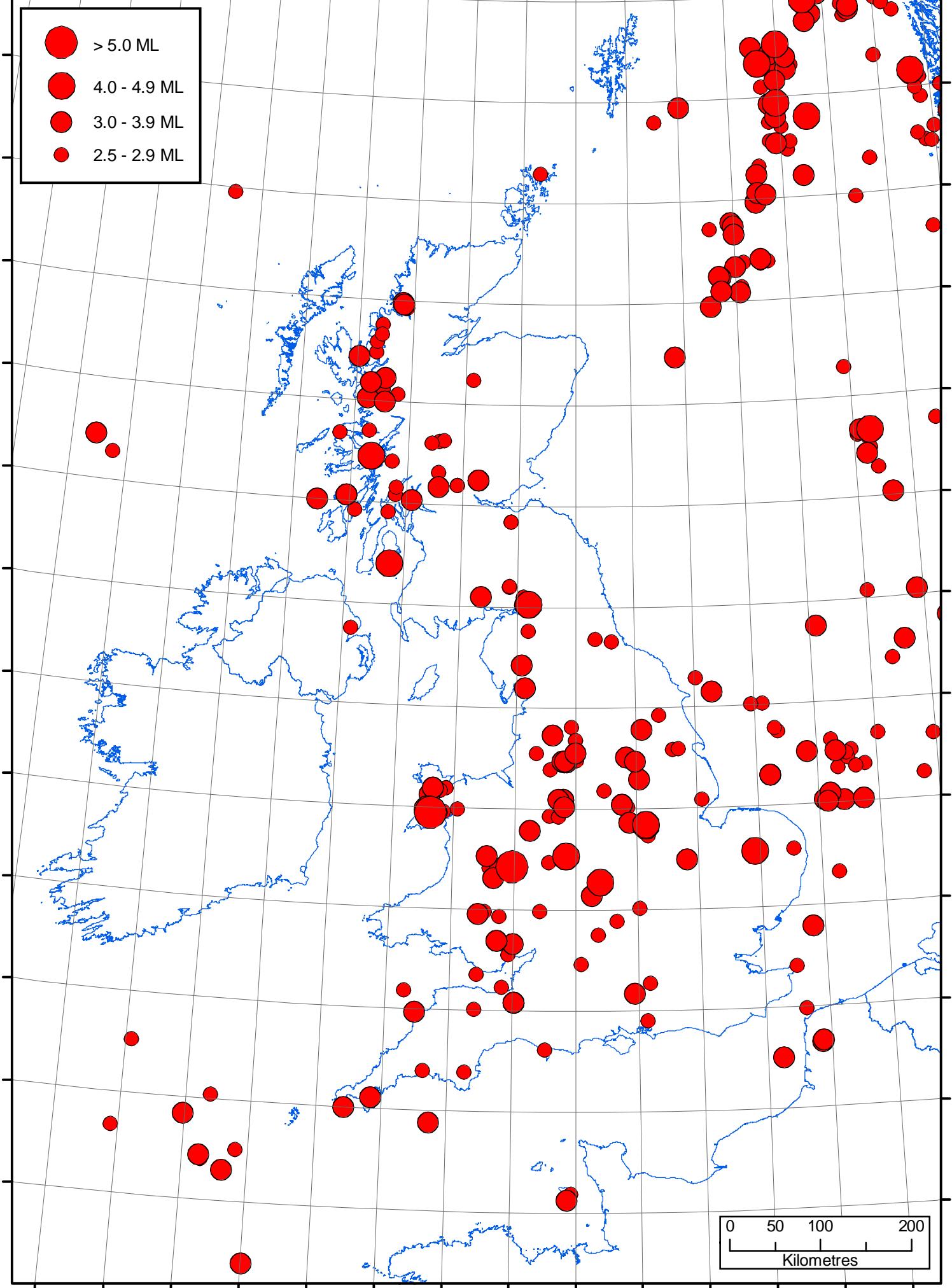


Figure 4. Epicentres of earthquakes with magnitudes 2.5 ML or greater, for the period 1979 - 2004.

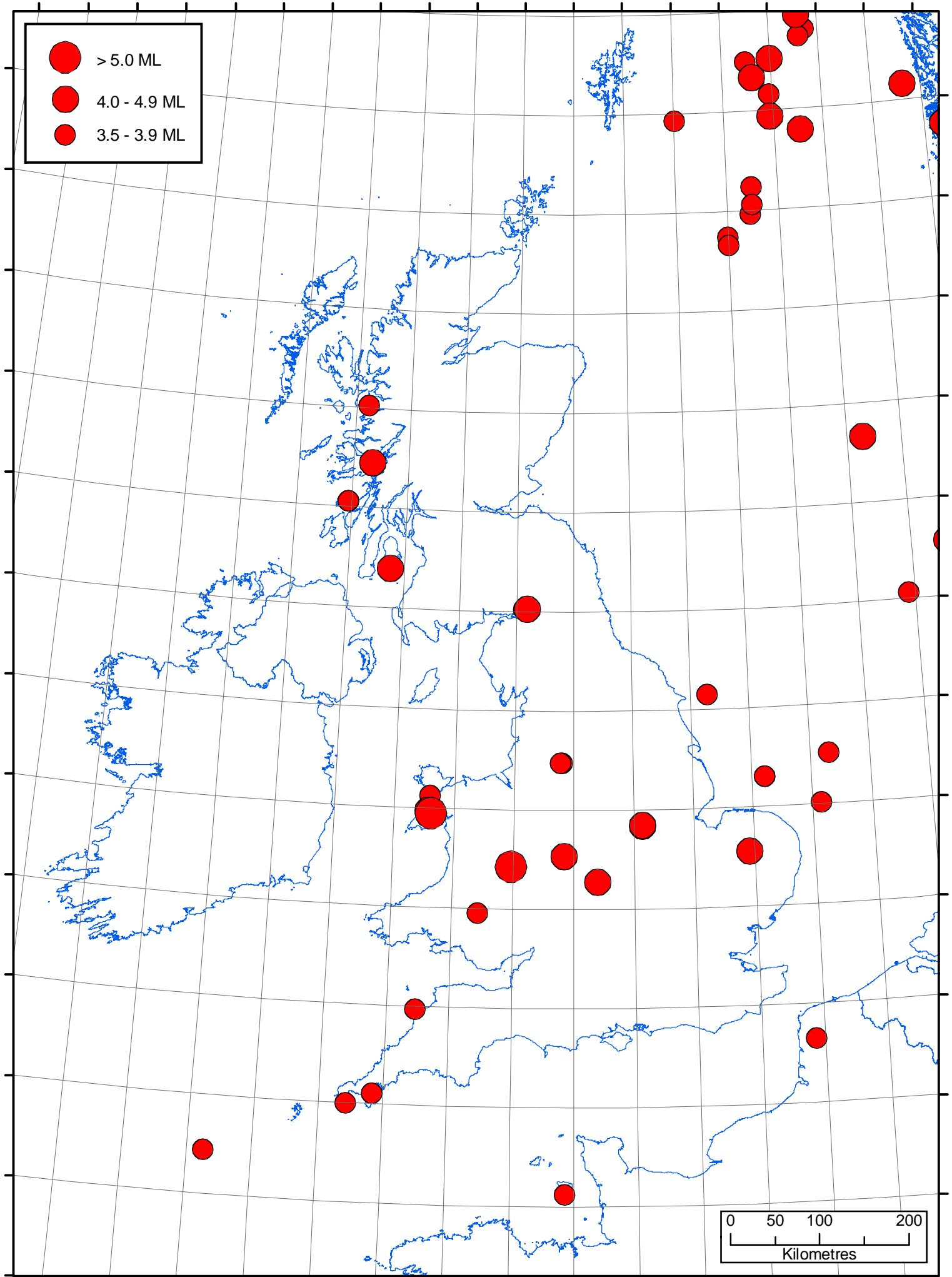


Figure 5. Epicentres of earthquakes with magnitudes 3.5 ML or greater, for the period 1979 - 2004.

Eskdalemuir, D & G 28 November 2004 08:11 UTC 2.9 ML

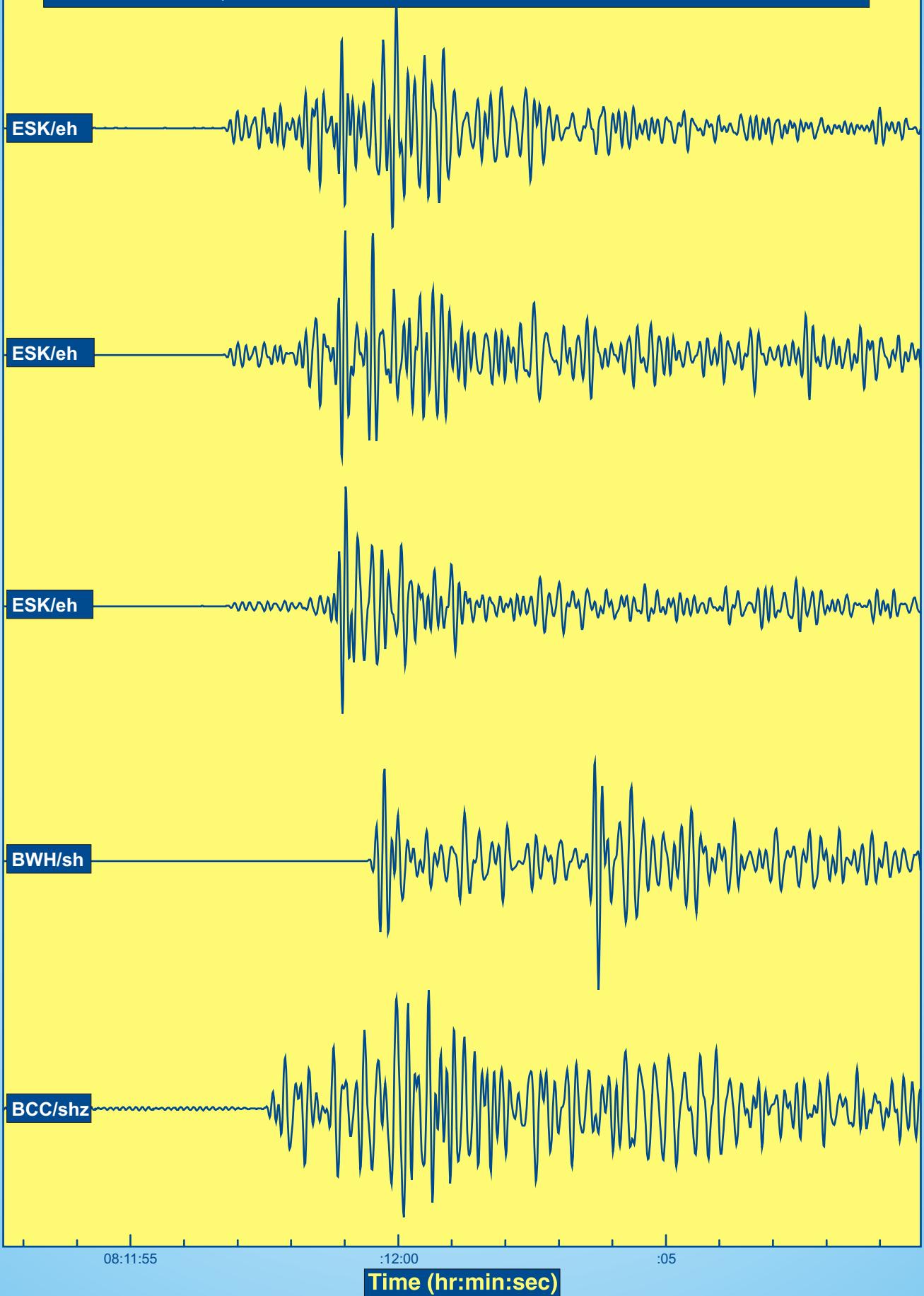
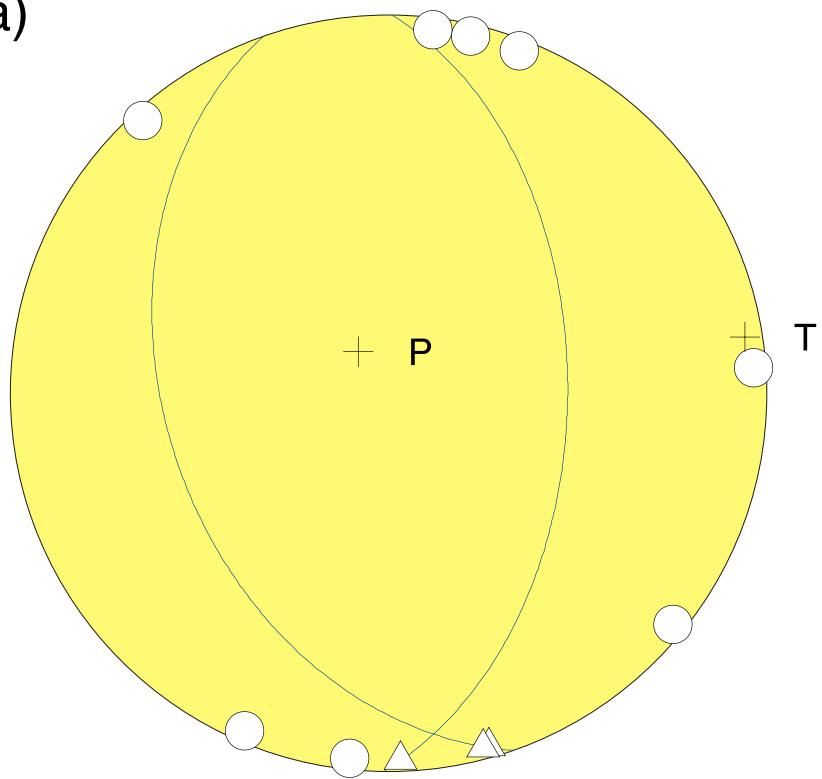


Figure 6. Seismograms of the Eskdalemuir earthquake of 28 November 2004 08:11 UTC 2.9 ML recorded on the Eskdalemuir and Borders seismic networks.

FAULT PLANE SOLUTION : ABERFOYLE EARTHQUAKE OF 20 JUNE 2003

(a)



(b)

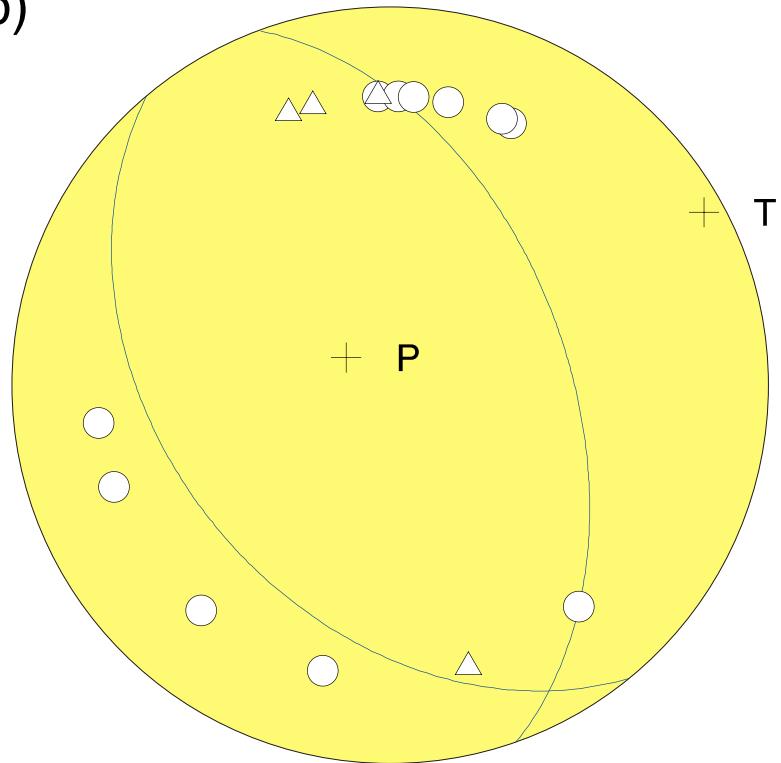


Figure 7. Equal area projection of the upper lower hemisphere for the Aberfoyle earthquake 20 June 2003 06:44 UTC 3.2 ML. The axes of maximum and minimum compressive stress are denoted by P and T respectively.

TABLE 1: CATALOGUE OF EVENTS LISTED CHRONOLOGICALLY: 2004

Year	Mo	Dy	Hr	Mn	Secs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	Gap	RMS	ERH	ERZ	Comments
2004	01	16	21	38	29.9	54.30	0.01	530.8	491.0	32.9	2.6	OFF SCARBOROUGH, N YORKS	9	256	0.40	11.60	3.80	25KM OFFSHORE	
			17	04	49.0	54.29	-0.10	489.9	28.3	17.0	0.9	OFF ST IVEY, CORNWALL	3	311	0.20	18.00	2.20	22KM OFFSHORE	
2004	01	18	03	54	00.3	50.27	-5.45	154.1	47.1	0.7	0.2	BLACKFORD, CENTRAL	2	5	148	0.10	2.94	3.60 FELT GLENDEVON	
			20	10	0.5	56.25	-3.77	290.5	707.9	2.0	1.2	WYR FIRTH, HIGHLAND	8	121	0.20	4.30	4.50	3 KM N OF NAIRN	
2004	01	23	02	01	06.5	57.62	-3.91	860.6	860.6	2.6	2.8	BRIDGWATER, SOMERSET	3	12	105	0.30	3.44	0.00 FELT SOMERSET...	
			03	26	36.4	57.62	-2.98	331.7	133.4	6.5	3.2	BRIDGWATER, SOMERSET	3	13	105	0.30	3.22	0.00 FELT SOMERSET...	
2004	01	29	10	56	01.6	51.09	-2.98	331.5	133.4	6.5	3.1	BRIDGWATER, SOMERSET	4	14	107	0.40	5.69	0.00 FELT SOMERSET...	
			12	09	10.0	51.09	-2.96	332.8	131.0	6.5	3.1	BRIDGWATER, SOMERSET	4	14	107	0.40	5.69	0.00 FELT SOMERSET...	
2004	01	29	20	23	35.3	51.07	-2.96	332.0	131.6	6.5	3.1	BRIDGWATER, SOMERSET	4	13	135	0.20	3.62	0.00 FELT SOMERSET...	
			22	42	2.2	51.08	-2.52	365.6	399.4	1.6	1.6	LEIGH, GTR MANCHESTER	3	13	72	0.50	4.69	7.00 C/F, FELT LEIGH	
2004	02	03	22	11	11.3	53.49	-3.18	319.4	244.3	6.6	1.0	HAY-ON-WYE, HER & WOR	5	109	0.10	2.33	4.00	C/F, FELT CONINGSBY, LINCS	
			07	29	8.8	53.12	-0.35	510.7	359.7	7.5	1.8	CONINGSBY, LINCS	6	220	0.30	13.06	24.20	8KM W OF CONINGSBY	
2004	02	07	22	05	14.2	55.11	-3.65	295.1	580.4	8.9	1.5	UMFRRIES, D & G	6	140	0.30	6.39	13.40		
			09	50	30.1	51.08	-2.96	332.4	131.8	8.1	1.5	BRIDGWATER, SOMERSET	4	10	184	0.20	5.02	6.00	
2004	02	09	09	47	06.4	56.57	-5.67	174.4	748.0	7.4	1.8	LOCHALINE, HIGHLAND	10	151	0.30	9.94	12.90		
			17	06	4.4	52.12	-2.40	372.3	246.8	16.4	1.6	GREAT MALVERN, HER & WOR	11	205	0.30	7.21	2.20	7KM SW OF SUNDERLAND	
2004	02	23	06	59	37.8	54.86	-1.44	435.9	552.3	17.0	2.0	SUNDERLAND, TYNE & WEAR	1	109	0.10	2.33	4.00		
			22	05	1.9	52.09	-3.18	319.4	244.3	6.6	1.0	NORWEGIAN SEA	17	110	1.70	48.39	15.60		
2004	02	27	18	21	204.0	61.14	4.85	768.3	1269.8	30.0	3.2	MATLOCK, DERBYSHIRE	5	113	0.20	4.11	4.30	6 KM N OF MATLOCK	
			20	24	0.0	53.19	-1.58	428.1	3666.0	8.7	1.0	OLDHAM, GTR MANCHESTER	4	20	110	0.30	4.74	9.00 FELT OLDHAM...	
2004	02	28	03	51	34.9	53.19	-1.58	428.1	3666.0	8.7	1.0	MATLOCK, DERBYSHIRE	7	173	0.20	4.62	4.80	4 KM OFFSHORE	
			22	29	0.2	53.56	-1.91	400.6	407.2	12.4	3.1	SKINNESS, LINCS	4	125	0.10	2.42	3.80	12 KM W OF HEREFORD	
2004	03	01	03	40	10.6	53.15	0.44	563.3	364.4	25.2	1.9	HEREFORD, HER & WOR	9	121	2.60	40.75	62.00	C/F	
			07	30	3.8	52.09	-2.90	338.3	244.1	13.4	1.3	NEWBRIDGE, GWENT	11	116	0.30	4.70	6.90	FELT SCARBOROUGH...	
2004	03	09	07	02	657.6	52.09	-2.94	335.5	244.5	0.4	0.7	CHAPEL-EN-LE-FRITH	3	1					
			16	16	5.9	53.34	-1.88	408.3	382.2	2.6	2.3	SONIC-SCARBOROUGH	3						
2004	03	25	22	23	0.0														
2004	03	27	01	48	00.1	56.48	-6.36	131.4	740.3	8.2	1.0	ISLE OF MULL	6	225	0.20	13.99	0.00		
			12	00	1.1	52.87	-3.62	291.2	331.2	11.4	1.1	BALI, GYNEDD	13	103	0.10	1.36	1.70		
2004	04	03	09	05	152.9	52.87	-1.31	590.6	1002.3	27.6	1.7	NORTHERN NORTH SEA	4	347	0.10	787.64			
			13	31	3.0	58.87	-2.95	334.7	214.6	17.6	1.3	ABERGAVENNY, GWENT	8	97	0.10	3.02	1.80	5 KM E OF ABERGAVENNY	
2004	04	04	09	05	04057.6	60.28	0.90	560.5	1158.8	20.9	1.1	NORTHERN NORTH SEA	4	331	0.40	656.06	446.40		
			17	24	3.6	49.21	-1.71	419.3	484.4	8.5	1.2	CHERBOURG PENINSULA	5	345	0.00	1.98	10.23	KM SE OF JERSEY	
2004	04	11	22	04	3.6	60.74	0.38	529.8	1208.7	16.7	1.9	NORTHERN NORTH SEA	4	333	0.20	17.22	6.90		
			20	04	21.5	56.56	-5.71	172.2	746.7	8.4	2.1	ARDTORNISH, HIGHLAND	3	12	140	0.40	8.68	0.00 FELT MORVEN	
2004	04	15	05	2523.4	56.56	-5.62	165.2	742.0	11.4	1.1	LOCALLINE, HIGHLAND	4	221	0.20	27.31	70.30			
			20	25	134.9	56.54	-1.07	463.2	302.8	4.0	2.1	LEICESTER, LEICESTERSHIRE	11	186	0.20	3.48	4.30		
2004	04	17	20	1257.2	52.62	-1.87	409.5	-75.4	11.6	1.5	JERSEY, CHANNEL ISLES	5	339	0.00	1.13	0.80	12 KM E OF JERSEY		
			22	04	0.8	49.22	-1.87	560.7	926.0	21.2	2.2	NORTHERN NORTH SEA	22	150	0.60	10.32	9.10		
2004	04	20	02	21	604.8	58.19	0.73	317.2	161.6	6.5	1.5	BRISTOL CHANNEL	13	209	0.50	12.14	14.40	12 KM OFFSHORE	
			21	33	4.1	55.33	-1.24	455.1	604.5	12.7	1.8	AMBLE, N UMBERLAND	6	223	0.30	21.05	6.90		
2004	04	30	22	23	837.7	56.57	-5.85	163.6	748.4	15.9	1.0	MORVERN, HIGHLAND	5	112	0.10	3.11	3.00		
			07	09	35.0	57.27	-5.16	179.2	826.4	2.7	0.5	KYLE OF LOCHALSH, HIGHLAND	7	197	0.20	3.14	2.60		
2004	05	02	07	09	35.0	57.27	-5.16	179.2	826.4	2.7	0.5	KYLE OF LOCHALSH, HIGHLAND	19	160	0.60	20.73	26.70		
			14	23	1.0	55.25	-3.49	305.2	596.2	4.3	1.0	JOHNSTONEBRIDGE, D & G	10	156	0.20	5.38	5.60		
2004	05	03	10	3802.7	51.34	-3.19	317.2	161.6	6.5	1.5	JOHNSTONEBRIDGE, D & G	6	251	0.20	9.26	11.30	FELT N WALES, MERSEYSIDE...		
			23	23	17.0	62.06	-1.88	602.4	1359.7	15.4	3.5	NORTHERN NORTH SEA	1						
2004	05	13	11	1514.8	56.75	-3.77	291.5	763.8	1.6	1.1	BLAIR ATHOLL, TAYSIDE	8	143	0.10	3.89	2.10			
			12	04	146.1	55.72	-6.04	146.1	654.8	7.5	1.5	ISLAY, STRATHCLYDE	5	354	0.00	768.85			
2004	05	24	19	5002.0	55.64	-3.14	323.0	305.2	12.6	1.3	WELSHPOOL, POWYS	6	195	0.10	4.21	20.20	60 KM E OF JERSEY		
			25	29	10.1748.5	52.64	-1.24	455.1	-62.8	7.5	1.8	CHERBOURG PENINSULA	12	112	0.90	70.40	21.40	9 KM E OF LEOMINSTER	
2004	06	04	11	23	104.0	52.20	-2.61	358.6	256.2	6.5	0.7	LOCKERBLE, D & G	5	348	0.00	3.39	0.80	30 KM SE OF LOCKERBLE	
			06	21	004400.5	54.99	-2.96	338.7	567.1	4.5	1.7	OFF CHERBOURG PENINSULA	5	223	0.10	6.76	4.70	5 KM NE OF CLEATOR MOOR	
2004	06	21	06	0526.2	49.03	-1.66	425.1	-96.1	5.3	1.4	CLEATOR MOOR, CUMBRIA	6	302	0.30	36.76	55.10			
			12	04	152225.3	54.57	-3.42	307.9	520.3	5.8	1.1	SOUTHERN NORTH SEA	3						
2004	06	22	15	4252.1	53.12	-2.18	679.6	366.5	4.3	2.4	SOUTHERN NORTH SEA	1							

TABLE 1: CATALOGUE OF EVENTS LISTED CHRONOLOGICALLY: 2004

20040629 003438.8	55.12	-3.21	322.7	581.0	4.5	2.0	LOCKERBIE, D & G	11	95	0.10	3.45	2.50	9KM E OF LOCKERBIE
20040629 061329.6	51.95	-3.50	297.0	228.7	16.6	2.2	SENNENBRIDGE, POWYS	11	119	0.20	2.62	4.70	5KM E OF SENNYBRIDGE
20040705 221731.0	53.94	-0.60	491.8	449.8	9.5	2.6	DRIFFIELD, HUMBERSIDE	19	140	0.30	4.16	10.10	10KM SW OF DRIFFIELD
20040711 054719.9	57.44	-5.96	162.2	845.7	5.4	2.6	THE ISLAND OF RAASAY	4	206	0.00	4.00	1.00	OFFSHORE LOCATION
20040712 191740.1	57.45	-5.39	197.4	855.6	8.0	0.9	KINLOCHewe, HIGHLAND	6	137	0.30	7.96	465.80	8KM SW OF KINLOCHewe
20040720 211028.3	53.52	-5.57	183.5	802.1	3.4	0.4	KNOYDART, HIGHLAND	3	197	0.20	6.10	133.80	
20040720 044249.0	57.06	-2.58	357.9	-97.7	5.6	0.8	OFF JERSEY, CHANNEL ISLANDS	4	348	0.00	204.34	333.10	30KM SW OF JERSEY
20040719 032904.8	49.02	-3.71	285.7	354.4	8.1	0.8	BETWS-Y-COED, GWYNEDD	6	155	0.20	4.19	9.00	
20040719 075345.8	53.07	-0.98	468.2	370.3	2.6	0.6	WALESBY, NOTTS	2	5	196	0.20	19.85	24.40 C/F, FELT WALESBY
20040719 171344.3	53.23	-0.99	467.3	371.2	1.0	0.7	WALESBY, NOTTS	2	5	196	0.50	25.79	0.00 C/F, FELT WALESBY
20040720 165418.7	53.23	-0.99	467.3	404.1	31.2	2.4	SCUNTHORPE, HUMBERSIDE	1	181	0.40	8.65	4.60	15KM SE OF SCUNTHORPE
20040720 211028.3	53.52	-5.94	163.5	848.0	6.4	1.7	ISLAND OF RAASAY	11	98	0.20	2.15	2.70	OFFSHORE LOCATION
20040805 151153.4	57.46	-3.62	296.8	580.5	8.0	2.3	DUMFRIES, D & G	3	31	0.30	5.10	9.60	FELT DUMFRIES
20040807 045404.4	55.11	-4.60	227.1	399.0	12.9	0.5	IRISH SEA	4	294	0.00	1.77	0.90	8KM OFFSHORE ANGLESEY
20040808 050625.5	53.46	-2.81	670.0	1104.0	25.5	2.2	NORTHERN NORTH SEA	18	144	0.90	12.24	30.30	HORDA PLATFORM REGION
20040820 022537.7	59.73	-3.97	277.4	693.3	5.9	1.4	STIRLING, CENTRAL	7	184	0.10	1.44	1.60	
20040823 001923.6	56.12	-3.98	276.7	692.9	7.1	1.0	STIRLING, CENTRAL	7	182	0.10	2.39	1.80	
20040824 090829.6	56.11	-5.45	371.8	624.1	1.9	0.8	JEDBURGH, BORDERS	9	206	0.20	6.12	5.20	7KM ENE OF JEDBURGH
20040906 033605.1	55.51	-5.97	162.0	845.2	5.3	3.3	ISLAND OF RAASAY	15	147	0.00	1.20	1.40	
20040916 081743.2	57.44	-	-	-	-	-	SONIC-NORTH WALES	3	-	-	-	-	FELT NORTH WALES
20040921 165500.0	-	-	-	-	-	-	-	6	348	0.30	1193.27	-	-
20040924 191001.7	49.35	-4.43	223.7	-58.1	2.7	1.7	ENGLISH CHANNEL	2	34	0.10	1.43	0.30	FELT GRANGE FIELD
20041013 184118.3	55.20	-3.14	327.3	589.9	4.3	1.7	ESKDALEMUIR, D & G	2	34	0.10	1.43	0.30	FELT GRANGE FIELD
20041026 043519.7	53.18	-4.34	243.8	367.7	11.6	0.9	ANGLESEY, NORTH WALES	7	101	0.00	0.45	0.90	
20041026 112159.9	53.31	-1.30	619.6	384.9	25.0	2.4	SOUTHERN NORTH SEA	10	250	0.10	5.72	5.00	
20041027 041633.4	55.20	-3.14	327.5	589.9	4.5	0.1	ESKDALEMUIR, D & G	2	34	0.10	1.87	1.90	FELT LOCKERBIE
20041027 235818.6	55.23	-3.12	328.7	593.9	2.3	-0.1	ESKDALEMUIR, D & G	21	305	0.20	2.51	0.60	
20041030 184251.4	52.36	-3.13	322.8	273.9	18.6	1.3	KNIGHTON, POWYS	5	176	0.10	5.82	3.60	6KM W OF KNIGHTON
20041102 141031.5	55.21	-3.12	329.0	591.5	6.1	0.2	ESKDALEMUIR, D & G	2	21	315	0.00	0.81	1.50
20041103 134511.8	55.20	-3.14	327.3	590.0	4.6	2.7	ESKDALEMUIR, D & G	3	42	115	0.20	2.28	18.40
20041103 140616.2	55.20	-3.16	326.0	590.3	4.3	1.5	ESKDALEMUIR, D & G	2	27	109	0.20	2.47	57.70
20041103 140617.6	55.20	-3.14	327.2	590.1	4.2	1.8	ESKDALEMUIR, D & G	2	24	144	0.10	2.50	76.80
20041103 141044.4	55.20	-3.14	327.6	591.9	4.6	1.6	ESKDALEMUIR, D & G	2	30	116	0.20	2.60	20.80
20041103 142236.3	55.22	-3.12	329.1	591.9	6.1	-0.3	ESKDALEMUIR, D & G	2	21	314	0.10	1.39	2.40
20041103 142749.6	55.03	-5.37	184.9	575.3	0.0	2.9	EXP - NORTH CHANNEL	14	74	0.20	1.80	0.00	CONFIRMED EXPLOSION
20041103 145204.3	55.20	-3.15	327.1	590.4	4.3	1.3	ESKDALEMUIR, D & G	2	27	114	0.10	2.09	71.00
20041104 015929.4	55.20	-3.14	327.3	590.3	4.3	1.2	ESKDALEMUIR, D & G	2	27	115	0.10	1.80	63.50
20041104 020036.5	55.22	-3.12	328.8	591.9	6.2	-0.1	ESKDALEMUIR, D & G	2	21	314	0.00	0.58	1.00
20041104 193024.9	55.22	-3.12	329.0	591.8	6.2	0.0	ESKDALEMUIR, D & G	2	21	314	0.00	0.58	0.90
20041104 203850.8	55.22	-3.12	328.8	591.9	5.9	0.5	ESKDALEMUIR, D & G	2	21	314	0.00	0.50	1.00
20041104 215054.4	55.22	-3.12	329.1	592.1	5.2	0.0	ESKDALEMUIR, D & G	2	21	314	0.00	1.08	3.00
20041105 093604.9	55.20	-3.12	329.0	592.1	6.6	0.0	ESKDALEMUIR, D & G	2	21	313	0.00	0.58	3.00
20041105 094042.0	55.20	-3.14	327.4	590.1	4.2	1.9	ESKDALEMUIR, D & G	3	27	140	0.10	2.47	1.10
20041105 1033608.0	55.22	-3.12	328.9	591.8	6.0	-0.2	ESKDALEMUIR, D & G	2	21	314	0.00	0.58	1.20
20041105 170956.7	55.20	-3.14	327.7	590.1	4.2	0.9	ESKDALEMUIR, D & G	2	26	98	0.10	1.90	34.70
20041105 183919.8	55.20	-3.13	327.8	590.6	4.2	0.8	ESKDALEMUIR, D & G	2	26	117	0.10	2.25	67.90
20041107 205436.1	55.20	-3.14	327.5	590.5	4.3	0.9	ESKDALEMUIR, D & G	2	26	115	0.10	1.68	1.00
20041110 233515.2	53.18	-5.24	183.4	369.3	7.5	2.1	IRISH SEA	17	109	0.30	3.52	7.10	45KM WSW HOLYHEAD
20041111 005853.6	55.25	-3.49	305.2	596.2	4.5	1.1	JOHNSTONEBRIDGE, D & G	7	197	0.20	4.27	184.30	
20041112 00126.9	55.24	-3.49	305.5	595.2	4.1	1.0	JOHNSTONEBRIDGE, D & G	3	190	0.20	3.26	8.60	
20041113 112956.0	50.11	-5.17	173.0	28.0	7.3	0.8	CONSTANTINE, CORNWALL	5	127	0.00	0.82	0.60	
20041113 113101.0	50.11	-5.18	172.9	28.1	7.2	0.5	CONSTANTINE, CORNWALL	5	125	0.00	0.95	0.70	
20041110 2041115 003413.0	55.12	-3.21	322.7	581.1	4.1	1.2	LOCKERBIE, D & G	6	143	0.20	3.76	1.50	8KM E OF LOCKERBIE
20041115 074924.6	55.19	-3.16	326.0	588.8	4.2	1.0	ESKDALEMUIR, D & G	3	209	0.10	3.98	55.90	
20041116 025208.8	52.32	-3.96	266.5	270.9	3.9	1.1	ABERYSTWYTH, DYFED	9	104	0.20	3.56	3.50	10KM SE OF ABERYSTWYTH

TABLE 1: CATALOGUE OF EVENTS LISTED CHRONOLOGICALLY: 2004

20041119	025323.8	55.22	-3.12	328.9	592.0	6.2	0.1	ESKDALEMUIR, D & G	18	314	0.00	0.58	1.00
20041119	130623.9	53.29	-4.50	233.1	380.0	11.2	0.2	HOLYHEAD, ANGLESEY	6	116	0.10	1.26	1.40
20041121	154251.8	55.22	-3.12	329.0	591.8	4.1	-0.3	ESKDALEMUIR, D & G	14	315	0.10	1.50	49.00
20041128	081153.6	55.21	-3.14	327.4	591.2	5.2	2.9	ESKDALEMUIR, D & G	4	114	0.30	5.91	190.40
20041128	081624.8	55.21	-3.13	327.8	591.1	4.3	0.5	ESKDALEMUIR, D & G	25	116	0.10	1.75	2.60
20041128	190216.5	55.23	-3.12	329.1	593.2	3.0	-0.3	ESKDALEMUIR, D & G	21	309	0.20	4.83	4.40
20041129	220702.7	55.22	-3.11	329.3	592.4	7.2	-0.1	ESKDALEMUIR, D & G	20	312	0.10	3.30	4.10
20041130	043119.5	53.35	-1.23	451.2	384.3	2.6	2.2	ANSTON, S, YORKSHIRE	7	149	0.40	20.65	19.20
20041130	183907.7	55.24	-3.12	328.5	594.1	2.2	-0.4	ESKDALEMUIR, D & G	21	303	0.20	2.42	0.60
20041130	211052.8	55.22	-3.11	329.3	592.3	6.8	-0.3	ESKDALEMUIR, D & G	21	313	0.10	1.66	2.30
20041201	053554.6	51.76	-3.02	329.8	207.7	22.9	1.9	BLAENAVON, Gwent	10	87	0.10	1.57	1.90
20041202	201710.2	59.21	2.41	651.9	1044.4	30.9	3.0	NORTHERN, NORTH SEA	16	292	0.20	101.21	92.50
20041208	161337.0	52.09	-2.45	369.4	244.1	12.4	1.9	GT MALVERN, HER & WOR	12	177	0.20	4.65	4.10
20041209	034844.6	55.22	-3.11	329.4	592.3	6.8	-0.2	ESKDALEMUIR, D & G	19	313	0.10	1.78	2.80
20041209	235326.8	55.22	-3.11	329.3	592.4	4.1	-0.3	ESKDALEMUIR, D & G	21	313	0.10	7.23	15.50
20041213	235901.6	55.22	-3.12	329.1	592.0	5.4	-0.4	ESKDALEMUIR, D & G	21	314	0.00	1.08	2.90
20041216	022632.9	53.47	-4.21	253.3	399.2	14.8	1.1	OFF ANGLESEY, GWYNEDD	29	104	0.10	2.62	2.30
20041220	064333.7	50.09	-5.14	175.7	26.4	6.2	1.0	FALMOUTH, CORNWALL	6	169	0.00	1.04	1.00
20041220	191110.7	53.23	-1.23	451.4	370.9	1.0	2.3	BOLSOVER, DERBYSHIRE	8	258	0.30	35.52	0.00
20041221	120111.3							SONIC-IRISH SEA	3				
20041221	120900.0							SONIC-IRISH SEA	3				
20041221	122000.0							SONIC-IRISH SEA	3				
20041221	123000.0							SONIC-IRISH SEA	3				
20041221	222151.4	55.22	-3.12	329.0	592.3	6.4	-0.2	ESKDALEMUIR, D & G	20	313	0.00	1.22	2.00
20041224	204647.5	55.25	-3.46	307.0	596.5	12.0	0.4	JOHNSTONEBRIDGE, D & G	21	341	0.00	0.94	1.00
20041225	101903.3	55.22	-3.11	329.3	592.2	6.5	0.2	ESKDALEMUIR, D & G	21	313	0.00	1.08	1.70
20041226	072749.3	55.22	-3.12	328.9	592.1	6.2	0.3	ESKDALEMUIR, D & G	21	313	0.00	0.58	1.00
20041227	040132.6	55.20	-3.14	327.5	590.3	4.3	1.0	ESKDALEMUIR, D & G	24	115	0.20	2.53	52.60
20041229	045226.1	55.13	-3.21	323.1	582.3	4.3	1.1	LOCKERBLE, D & G	25	102	0.10	2.60	2.80
20041230	151944.0	55.22	-3.12	328.8	592.6	6.4	-0.3	ESKDALEMUIR, D & G	20	312	0.00	0.72	1.10
20041231	075644.5	51.44	-2.72	350.0	171.7	18.8	1.2	BRISTOL, AVON	6	198	0.10	6.80	1.20

TABLE 2: PHASE DATA 2004

January 16 2004										Time: 21:38 29.9 UTC		Magnitude: 2.6 ML															
Lat: 54.298N										Lon: 0.010W		Depth: 32.9 km															
Grid Ref: 530.79 kmE										491.03 kmN		RMS: 0.40 secs															
Locality: OFF SCARBOROUGH, N YORKS										Comment: 25KM OFFSHORE																	
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI																		
LWH	SZ	44.6	IP	C	21:38	38.67				SMD	SZ	29.9	IP	C	10:56	06.80											
LMK	SZ	96.2	EP	2	21:38	45.47				SMD	SZ	29.9	ES	3	10:56	10.79											
LCP	SZ	108.0	EP	2	21:38	46.71				SWK	SZ	51.4	EP	2	10:56	10.26											
HPK	SZ	113.0	EP	2	21:38	47.66				HEX	SZ	58.0	IP	C	10:56	11.41											
HPK	SE	113.0	ES	2	21:39	00.31				SWN	SZ	94.3	EP	1	C	10:56	17.34										
HPK	SN	113.0	AML		21:39	01.74	157	0.16		SWN	SN	94.3	ES	2	10:56	29.29											
HPK	SE	113.0	AML		21:39	02.06	172	0.14		SWN	SN	94.3	AML		10:56	30.19	291	0.22									
LHO	SZ	148.0	EP	2	21:38	50.74				SWN	SE	94.3	AML		10:56	30.56	198	0.25									
KSY	SZ	154.0	EP	2	21:38	52.02				DYA	SZ	99.6	IP	C	10:56	18.18											
KBI	SZ	154.0	EP	3	21:38	51.75				DYA	SE	99.6	ES	2	10:56	29.62											
KWE	SZ	188.0	EP	2	21:38	55.99				MCH	BZ	100.0	IP	D	10:56	18.09											
CWF	SZ	194.0	EP	3	21:38	56.72				MCH	BN	100.0	ES	2	10:56	30.04											
January 17 2004										Time: 17:20 49.0 UTC		Magnitude: 2.2 ML															
Lat: 54.290N										Lon: -0.099W		Depth: 28.3 km															
Grid Ref: 523.72 kmE										489.95 kmN		RMS: 0.20 secs															
Locality: OFF SCARBOROUGH, N YORK										Comment: 22KM OFFSHORE																	
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI																		
LWH	SZ	37.6	IP	C	17:20	56.61				DCO	SZ	107.0	EP	2	10:56	19.00											
LWH	SZ	37.6	ES	3	17:21	01.75				HSA	SZ	110.0	IP	C	10:56	19.95											
LMK	SZ	93.9	EP	4	17:21	04.12				SIW	SZ	122.0	EP	2	10:56	21.52											
LCP	SZ	102.0	EP	3	17:21	05.37				HPE	SZ	156.0	EP	2	10:56	26.24											
HPK	SZ	106.0	EP	2	17:21	05.79				SKP	SZ	166.0	EP	2	10:56	27.30											
HPK	SE	106.0	ES	3	17:21	18.74				January 29 2004										Time: 10:56 53.0 UTC		Magnitude: 3.2 ML					
HPK	SE	106.0	AML		17:21	19.50	69	0.23		Lat: 51.095N										Depth: 6.5 km							
HPK	SN	106.0	AML		17:21	19.74	73	0.18		Grid Ref: 331.45 kmE										RMS: 0.30 secs							
Locality: OFF SCARBOROUGH, N YORK										Locality: BRIDGWATER, SOMERSET										Comment: FELT SOMERSET...		Intensity: 3					
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI																		
LWH	SZ	37.6	IP	C	17:20	56.61				STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI								
LWH	SZ	37.6	ES	3	17:21	01.75				SMD	SZ	30.0	IP	C	10:56	58.18											
LMK	SZ	93.9	EP	4	17:21	04.12				SMD	SZ	30.0	ES	3	10:57	02.07											
LCP	SZ	102.0	EP	3	17:21	05.37				SWK	SZ	51.6	EP	2	10:57	01.65											
HPK	SZ	106.0	EP	2	17:21	05.79				DYA	SZ	57.8	IP	C	10:57	02.76											
HPK	SE	106.0	ES	3	17:21	18.74				SWN	SZ	94.4	IP	C	10:57	08.69											
HPK	SE	106.0	AML		17:21	19.74	73	0.18		SWN	SN	94.4	ES	2	10:57	20.66											
Locality: OFF ST IVES, CORNWALL										SWN	SN	94.4	AML		10:57	21.56	545	0.24									
Comment: 7KM N OF ST IVES										DYA	SZ	99.5	IP	C	10:57	09.53											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	DYA	SE	99.5	ES	2	10:57	20.85											
CPZ	SZ	15.9	IP	C	03:54	03.12				MCH	BZ	100.0	IP	D	10:57	09.46											
CCA	SZ	18.5	IP	D	03:54	03.63				MCH	BN	100.0	ES	2	10:57	21.34											
CST	SZ	22.2	IP	D	03:54	04.18				MCH	BE	100.0	AML		10:57	21.89	981	0.35									
CR2	SZ	23.3	IP	D	03:54	04.42	30	0.05		MCH	BN	100.0	AML		10:57	22.00	1204	0.18									
CR2	SE	23.3	AML		03:54	04.53	25	0.07		HTL	SZ	106.0	EP	2	10:57	10.25											
CR2	SN	23.3	AML		03:54	04.54	25	0.07		HTL	SN	106.0	ES	2	10:57	22.81											
CMA	SZ	31.3	IP	D	03:54	05.89				HTL	SE	106.0	AML		10:57	26.32	434	0.64									
CGH	SZ	32.0	IP	D	03:54	06.08				HTL	SN	106.0	AML		10:57	26.44	808	0.35									
January 23 2004										Time: 02:01 06.5 UTC		Magnitude: 0.2 ML															
Lat: 56.251N										Lon: -3.767W		Depth: 2.0 km															
Grid Ref: 290.53 kmE										707.89 kmN		RMS: 0.10 secs															
Locality: BLACKFORD, CENTRAL										Comment: FELT GLENDEVON		Intensity: 2															
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI																		
ELO	SZ	24.6	EP	1	C	02:01	11.34			STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI								
ELO	SZ	24.6	ES	3	02:01	14.84				SMD	SZ	31.1	IP	C	20:23	40.42											
ELO	SZ	24.6	AML		02:01	15.46	5	0.09		SWK	SZ	50.5	EP		20:23	43.96											
PCO	SZ	35.9	IP	C	02:01	13.14				SWN	SZ	94.4	EP		20:23	51.01											
EAB	SZ	36.1	EP	1	C	02:01	13.32			DYA	SZ	98.7	IP	C	20:23	51.77											
EAB	SZ	36.1	ES	3	02:01	18.20				MCH	BZ	103.0	IP	D	20:23	52.73											
EAB	SZ	36.1	AML		02:01	18.46	4	0.41		MCH	BE	103.0	ES	2	20:24	04.69											

TABLE 2: PHASE DATA 2004

MCH	BZ	102.0	EP	2	20:23	59.24		SSP	SE	149.0	AML	05:51	13.16	6	0.15		
MCH	BN	102.0	ES	2	20:24	11.13		SSP	SN	149.0	AML	05:51	13.32	8	0.31		
MCH	BE	102.0	AML		20:24	11.61	687 0.34										
MCH	BN	102.0	AML		20:24	11.71	803 0.16										
DCO	SZ	106.0	EP	3	20:23	59.16											
SIW	SZ	121.0	EP	3	20:24	01.89											
SKP	SZ	167.0	EP	3	20:24	07.90											
February 3 2004				Time: 22:11 11.3 UTC		Magnitude: 1.6 ML											
Lat: 53.490N				Lon: -2.518W		Depth: 0.1 km											
Grid Ref: 365.64 kmE 399.41 kmN				RMS: 0.50 secs													
Locality: LEIGH, GTR MANCHESTER				Comment: C/F, FELT LEIGH		Intensity: 3											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI								
LHO	SZ	44.4	EP	2	22:11	19.30		KAR	SZ	40.0	IP	D	09:47	13.25			
KWE	SZ	69.5	EP	2	22:11	23.87		KSB	SZ	72.8	IP	D	09:47	18.51			
HPK	SZ	78.7	EP	3	22:11	25.08		KPL	SZ	85.6	IP	D	09:47	20.72			
HPK	SE	78.7	ES	3	22:11	35.48		KPL	SN	85.6	AML		09:47	35.03	34 0.29		
HPK	SE	78.7	AML		22:11	37.24	58 0.39	EAB	SZ	92.8	IP	C	09:47	21.69			
HPK	SN	78.7	AML		22:11	37.27	56 0.21	EAB	SZ	92.8	ES	3	09:47	32.39			
SBD	SZ	81.7	EP	2	22:11	25.27		PMS	SZ	99.1	EP	2	09:47	22.66			
WPM	SZ	95.8	EP	2	22:11	27.80		PMS	SZ	99.1	ES	3	09:47	33.90			
HLM	SZ	111.0	EP	2	22:11	30.32		PCO	SZ	117.0	EP	2	09:47	25.84			
HLM	SZ	111.0	ES	3	22:11	44.15		PCO	SZ	117.0	ES	3	09:47	39.53			
CWF	SZ	117.0	EP	2	22:11	31.30		KSK	SZ	118.0	EP	2	09:47	26.33			
CWF	SN	117.0	ES	3	22:11	46.38		ELO	SZ	121.0	EP	2	09:47	26.26			
CWF	SE	117.0	AML		22:11	49.00	12 0.26	PCA	SZ	131.0	IP	2	09:47	27.78			
CWF	SN	117.0	AML		22:11	49.48	10 0.32	GMK	SZ	136.0	EP	2	09:47	27.71			
February 22 2004				Time: 18:28 44.4 UTC		Magnitude: 1.6 ML											
Lat: 52.118N				Lon: -2.404W		Depth: 16.4 km											
Grid Ref: 372.34 kmE 246.75 kmN				RMS: 0.10 secs													
Locality: GREAT MALVERIN, HER & WOR								STAT	CO	DIST	PHAS	WT	P	HrMn	SECS		
								HAE	SZ	13.2	IP	C	18:28	47.97			
								MCH	SZ	42.9	IP	C	18:28	52.03			
								MCH	SN	42.9	ES	2	18:28	57.72			
								MCH	SN	42.9	AML		18:28	57.87	46 0.09		
								MCH	SE	42.9	AML		18:28	57.93	64 0.18		
								SSP	SZ	58.7	EP	2	18:28	54.67			
								HTR	SZ	59.4	EP	2	18:28	54.36			
								HGH	SZ	60.2	EP	2	18:28	54.83			
								CWF	SZ	102.0	EP	2	18:29	00.51			
								KWE	SZ	107.0	EP	2	18:29	01.60			
February 7 2004				Time: 00:37 29.8 UTC		Magnitude: 1.8 ML											
Lat: 53.123N				Lon: -0.346W		Depth: 7.5 km											
Grid Ref: 510.67 kmE 359.74 kmN				RMS: 0.30 secs													
Locality: CONINGSBY, LINCS																	
Comment: 8KM W OF CONINGSBY																	
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI								
KSY	SZ	23.9	IP	C	00:37	34.35		LCP	SZ	14.4	IP	D	06:59	41.73			
LMK	SZ	37.2	IP	D	00:37	36.37		LCP	SZ	14.4	ES	3	06:59	43.95			
CWF	SZ	77.5	IP	C	00:37	42.55		LWH	SZ	77.2	EP	1	C	06:59	50.59		
CWF	SE	77.5	ES	2	00:37	51.79		LWH	SZ	77.2	ES	3	07:00	00.43			
CWF	SN	77.5	AML		00:37	52.49	18 0.08	BTA	SZ	80.0	IP	C	06:59	51.05			
CWF	SE	77.5	AML		00:37	55.19	20 0.12	BTA	SE	80.0	ES	3	07:00	00.94			
KBI	SZ	80.3	EP	3	00:37	43.97		BTA	SN	80.0	AML		07:00	02.31	96 0.23		
KWE	SZ	101.0	IP	C	00:37	46.72		BTA	SE	80.0	AML		07:00	02.46	88 0.21		
HPK	SZ	126.0	EP	2	00:37	50.76		BDL	SZ	96.5	EP	1	C	06:59	53.57		
HPK	SN	126.0	AML		00:38	08.68	45 0.21	BBH	SZ	99.9	EP	3	06:59	53.59			
HPK	SE	126.0	AML		00:38	09.51	31 0.30	ECK	SZ	114.0	EP	3	06:59	55.74			
February 7 2004				Time: 22:05 14.2 UTC		Magnitude: 1.5 ML											
Lat: 55.107N				Lon: -3.645W		Depth: 8.9 km											
Grid Ref: 295.07 kmE 580.42 kmN				RMS: 0.30 secs													
Locality: DUMFRIES, D & G								BHH	SN	117.0	AML		07:00	11.51	54 0.20		
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI								
BWH	SZ	7.7	IP	C	22:05	16.61		BHH	SE	117.0	AML		07:00	12.86	86 0.34		
BWH	SZ	7.7	ES	3	22:05	17.70		BWH	SE	117.0	AML		07:00	12.15	45 0.33		
BHH	SZ	27.3	IP	D	22:05	19.22		ECK	SZ	123.0	EP	3	06:59	55.74			
BHH	SN	27.3	ES	2	22:05	22.50		ECK	SN	123.0	ES	3	07:00	11.78			
BHH	SN	27.3	AML		22:05	22.68	146 0.12	ECK	SN	123.0	AML		07:00	13.04	17 0.26		
BHH	SE	27.3	AML		22:05	24.01	241 0.21	ECK	SE	123.0	AML		07:00	13.90	20 0.15		
BCC	SZ	29.0	IP	D	22:05	19.65		CSF	SZ	125.0	EP	1	C	06:59	57.67		
BCC	AN	29.0	ES	2	22:05	23.17		LHO	SZ	149.0	EP	3	07:00	00.20			
GCD	SZ	33.1	IP	C	22:05	19.99											
BBO	SZ	48.5	IP	D	22:05	22.98											
BBO	SN	48.5	ES	2	22:05	29.11											
BBO	SE	48.5	AML		22:05	29.44	18 0.31										
BBO	SN	48.5	AML		22:05	30.18	22 0.21										
BDL	SZ	56.5	EP	2	22:05	24.55											
February 9 2004				Time: 05:50 30.1 UTC		Magnitude: 1.5 ML											
Lat: 51.081N				Lon: -2.965W		Depth: 8.1 km											
Grid Ref: 332.41 kmE 131.80 kmN				RMS: 0.20 secs													
Locality: BRIDGWATER, SOMERSET																	

TABLE 2: PHASE DATA 2004

SUE	SN	10.0	ES	2	18:12	15.34	CWF	SE	126.0	AML	03:40	46.61	19	0.09	
SUE	SN	10.0	AML		18:12	16.88	3690	0.17	KBI	SZ	132.0	EP	2	03:40	30.54
SUE	SE	10.0	AML		18:12	17.09	3031	0.16	KWE	SZ	154.0	EP	2	03:40	33.63
FOO	SZ	52.4	IP	D	18:12	11.83									
FOO	SE	52.4	ES	2	18:12	21.73									
FOO	SN	52.4	AML		18:12	22.83	1535	0.11							
FOO	SE	52.4	AML		18:12	23.14	1533	0.24							
ASK	SZ	76.1	IP	C	18:12	16.47									
BER	SZ	88.0	EP	3	18:12	17.66									
EGD	SZ	98.6	EP	2	18:12	18.62									
ODD1	SZ	168.0	EP	2	18:12	28.23									
BLS5	SZ	211.0	IP	C	18:12	34.31									
BLS5	SE	211.0	ES	3	18:12	59.31									
MOL	SZ	214.0	EP	2	18:12	35.85									
MOL	SE	214.0	ES	4	18:13	01.79									
MOL	SN	214.0	AML		18:13	09.79	297	0.15	HAE	SZ	25.2	EP	2	04:50	42.70
MOL	SE	214.0	AML		18:13	10.61	571	0.18	HTR	SZ	25.3	IP	C	04:50	42.77
KMY	SZ	216.0	IP	C	18:12	31.36			SSP	SZ	39.1	EP	2	04:50	44.91
KMY	SE	216.0	ES	3	18:12	54.90									
YEL	SZ	329.0	EP	2	18:12	49.08									
LRW	SZ	348.0	EP	3	18:12	51.26									
LRW	SE	348.0	ES	3	18:13	21.15									
LRW	SE	348.0	AML		18:13	25.22	29	0.30							
LRW	SN	348.0	AML		18:13	27.77	19	0.22							
SAN	SZ	356.0	EP	2	18:12	52.80									
WAL	SZ	366.0	EP	2	18:12	53.73									
February 28 2004 Time: 03:51 34.9 UTC			Magnitude: 1.0 ML												
Lat: 53.190N Lon: -1.580W			Depth: 8.7 km			RMS: 0.20 secs									
Grid Ref: 428.06 kmE 365.99 kmN															
Locality: MATLOCK, DERBYSHIRE															
Comment: 6KM N OF MATLOCK															
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI						
KBI	SZ	8.0	IP	C	03:51	37.26									
KBI	SZ	8.0	ES	3	03:51	38.85									
KWE	SZ	26.1	IP	C	03:51	39.94									
LHO	SZ	43.6	IP	D	03:51	42.54									
CWF	SZ	53.4	EP	1	D	03:51	44.24								
CWF	SN	53.4	ES	2		03:51	50.34								
CWF	SE	53.4	AML		03:51	52.25	15	0.12							
CWF	SN	53.4	AML		03:51	52.76	8	0.09							
KSY	SZ	71.1	EP	2		03:51	47.10								
February 29 2004 Time: 05:08 05.2 UTC			Magnitude: 3.1 ML												
Lat: 53.561N Lon: -1.991W			Depth: 12.4 km			RMS: 0.30 secs									
Grid Ref: 400.60 kmE 407.18 kmN															
Locality: OLDHAM, GTR MANCHESTER															
Comment: FELT OLDHAM...						Intensity: 4									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI						
LHO	SZ	9.2	IP	D	05:08	08.43									
LDU	SZ	39.7	IP	C	05:08	12.24									
KBI	SZ	46.0	IP	D	05:08	13.03									
KBI	SZ	46.0	ES	3	05:08	18.19									
HPK	SZ	50.4	IP	D	05:08	13.93									
HPK	SN	50.4	ES	2	05:08	20.08									
KWE	SZ	61.4	IP	D	05:08	15.65									
KEY	SZ	97.5	EP	2	05:08	21.63									
CWF	SZ	102.0	IP	D	05:08	21.72									
CWF	SN	102.0	ES	2	05:08	34.26									
LMK	SZ	111.0	IP	C	05:08	23.33									
SBD	SZ	112.0	EP	2	05:08	23.28									
KSY	SZ	115.0	EP	2	05:08	23.77									
LWH	SZ	122.0	EP	2	05:08	25.05									
HLM	SZ	130.0	IP	D	05:08	26.29									
WPM	SZ	132.0	EP	2	05:08	25.99									
LCP	SZ	135.0	EP	2	05:08	26.47									
SSP	SZ	148.0	EP	2	05:08	28.78									
SSP	SN	148.0	AML		05:08	47.56	231	0.15							
SSP	SE	148.0	AML		05:08	47.58	440	0.47							
WME	SZ	155.0	EP	2	05:08	28.67									
WCB	SZ	171.0	EP	2	05:08	30.79									
WCB	SE	171.0	AML		05:08	52.66	116	0.16							
WCB	SN	171.0	AML		05:08	54.62	119	0.49							
KTG	SZ	174.0	EP	2	05:08	32.22									
MCH	SE	187.0	AML		05:08	57.79	244	0.15							
MCH	SN	187.0	AML		05:08	57.80	418	0.24							
SWN	SZ	228.0	EP	3	05:08	39.08									
SWN	SE	228.0	AML		05:09	13.51	146	0.13							
SWN	SN	228.0	AML		05:09	17.69	181	0.54							
March 1 2004 Time: 03:40 10.6 UTC			Magnitude: 1.9 ML												
Lat: 53.151N Lon: 0.442W			Depth: 25.2 km			RMS: 0.20 secs									
Grid Ref: 563.28 kmE 364.36 kmN															
Locality: OFF SKEGNESS, LINCS															
Comment: 4KM OFFSHORE															
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI						
LMK	SZ	61.5	IP	C	03:40	21.27									
LMK	SZ	61.5	ES	3	03:40	28.58									
KSY	SZ	72.1	IP	C	03:40	22.70									
AWI	SZ	76.2	EP	2	03:40	23.49									
AEU	SZ	79.6	EP	2	03:40	23.69									
AEU	SN	79.6	ES	2	03:40	33.19									
AEU	SE	79.6	AML		03:40	33.85	92	0.11							
AEU	SN	79.6	AML		03:40	33.98	59	0.21							
CWF	SZ	126.0	EP	2	03:40	30.13									
CWF	SE	126.0	ES	2	03:40	45.10									
CWF	SN	126.0	AML		03:40	45.77	18	0.16							
March 5 2004 Time: 04:50 37.8 UTC			Magnitude: 1.3 ML												
Lat: 52.091N Lon: -2.900W			Depth: 13.4 km			RMS: 0.10 secs									
Grid Ref:															

TABLE 2: PHASE DATA 2004

WME	SZ	74.7	EP	2	01:52	05.24	KSB	SZ	74.7	IP	D	05:25	35.62													
WCB	SZ	84.3	IP	1	D	01:52	06.63	KPL	SZ	87.1	IP	D	05:25	37.85												
WCB	SE	84.3	ES	2		01:52	16.48	KPL	SZ	87.1	EPg	4	05:25	39.52												
WCB	SN	84.3	AML			01:52	16.75	KPL	SE	87.1	ES	2	05:25	48.66												
WCB	SE	84.3	AML			01:52	16.79	KPL	SN	87.1	AML		05:25	51.99												
HTR	SZ	90.9	EP	2		01:52	07.88	KPL	SE	87.1	AML		05:25	52.32												
MCH	SZ	106.0	EP	3		01:52	09.84	EAB	SZ	94.1	EP	2	05:25	38.73												
MCH	SN	106.0	ES	2		01:52	22.32	PMS	SZ	99.2	EP	1	D	05:25												
MCH	SE	106.0	AML			01:52	24.40	PCO	SZ	118.0	EP	2	05:25	42.73												
MCH	SN	106.0	AML			01:52	25.69	KSK	SZ	118.0	EP	2	05:25	43.31												
HAE	SZ	118.0	EP	2		01:52	11.93	ELO	SZ	123.0	EP	2	05:25	43.35												
								PCA	SZ	131.0	EP	2	05:25	44.67												
								GMK	SZ	135.0	EP	2	05:25	44.82												
								GCL	SZ	167.0	EP	2	05:25	48.72												
								EDI	SZ	171.0	EP	2	05:25	51.09												
								EDI	SN	171.0	ES	3	05:26	10.39												
April 5 2004		Time: 05:11 33.0 UTC				Magnitude: 1.7 ML																				
Lat: 58.866N		Lon: 1.306W				Depth: 27.6 km																				
Grid Ref: 590.61 kmE		1002.29 kmN				RMS: 0.10 secs																				
Locality: NORTHERN NORTH SEA																										
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI																	
SAN	SZ	193.0	EP	2		05:11	59.84																			
SAN	SZ	193.0	ES	3		05:12	19.70																			
LRW	SZ	200.0	EP	3		05:12	00.77																			
LRW	SE	200.0	ES	3		05:12	21.06																			
LRW	SN	200.0	AML			05:12	28.93	7	0.28																	
LRW	SE	200.0	AML			05:12	29.48	8	0.23																	
WAL	SZ	226.0	EP	2		05:12	04.31																			
YEL	SZ	231.0	EP	2		05:12	04.66																			
April 8 2004		Time: 20:53 42.1 UTC				Magnitude: 1.3 ML																				
Lat: 51.826N		Lon: -2.947W				Depth: 17.6 km																				
Grid Ref: 334.74 kmE		214.63 kmN				RMS: 0.10 secs																				
Locality: ABERGAVENNY, Gwent																										
Comment: 5KM E OF ABERGAVENNY																										
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI																	
MCH	SZ	19.4	IP		D	20:53	46.67																			
MCH	SN	19.4	ES	2		20:53	50.14																			
MCH	SE	19.4	AML			20:53	50.29	157	0.08																	
MCH	SN	19.4	AML			20:53	50.34	47	0.04																	
HTR	SZ	35.7	IP		D	20:53	48.70																			
HAE	SZ	36.3	IP	C		20:53	48.84																			
SMD	SZ	59.8	EP	2		20:53	52.65																			
SSP	SZ	66.8	IP	C		20:53	53.47																			
SSP	SN	66.8	ES	2		20:54	01.89																			
SSP	SE	66.8	AML			20:54	02.10	11	0.20																	
SSP	SN	66.8	AML			20:54	02.67	9	0.11																	
HSA	SZ	83.6	IP	C		20:53	55.83																			
SWK	SZ	89.7	EP	2		20:53	56.59																			
HEX	SZ	103.0	EP	1	C	20:53	58.96																			
April 9 2004		Time: 05:40 57.6 UTC				Magnitude: 1.1 ML																				
Lat: 60.282N		Lon: 0.903W				Depth: 20.9 km																				
Grid Ref: 560.49 kmE		1158.78 kmN				RMS: 0.40 secs																				
Locality: NORTHERN NORTH SEA																										
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI																	
YEL	SZ	113.0	EP	2		05:41	15.07																			
LRW	SZ	116.0	EP	2		05:41	15.21																			
LRW	SE	116.0	ES	2		05:41	28.71																			
LRW	SE	116.0	AML			05:41	29.86	4	0.26																	
LRW	SN	116.0	AML			05:41	29.97	5	0.15																	
SAN	SZ	123.0	EP	2		05:41	16.38																			
WAL	SZ	140.0	EP	2		05:41	19.25																			
April 11 2004		Time: 22:20 43.6 UTC				Magnitude: 1.2 ML																				
Lat: 49.140N		Lon: -1.731W				Depth: 8.5 km																				
Grid Ref: 419.62 kmE		-84.40 kmN				RMS: 0.00 secs																				
Locality: CHERBOURG PENINSULA																										
Comment: 23KM SE OF JERSEY																										
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI																	
JQE	SZ	23.4	IP		D	22:20	48.11																			
JRS	SZ	27.0	IP		D	22:20	48.66																			
JRS	SN	27.0	ES	2		22:20	52.32																			
JRS	SN	27.0	AML			22:20	52.67	59	0.09																	
JRS	SE	27.0	AML			22:20	52.96	34	0.10																	
JLP	SZ	29.8	IP		D	22:20	49.09																			
JLP	SZ	29.8	ES	3		22:20	53.18																			
JSA	SZ	32.6	IP		D	22:20	49.52																			
JVM	SZ	35.7	IP		D	22:20	50.04																			
April 12 2004		Time: 07:08 47.5 UTC				Magnitude: 1.9 ML																				
Lat: 60.741N		Lon: 0.381W				Depth: 16.7 km																				
Grid Ref: 529.79 kmE		1208.72 kmN				RMS: 0.20 secs																				
Locality: NORTHERN NORTH SEA																										
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI																	
YEL	SZ	82.8	IP		D	07:09	00.87																			
YEL	SZ	82.8	ES	3		07:09	10.20																			
LRW	SZ	109.0	EP	2		07:09	04.53																			
LRW	SE	109.0	ES	2		07:09	17.84																			
LRW	SE	109.0	AML			07:09	18.73	36	0.19																	
LRW	SN	109.0	AML			07:09	19.43	32	0.10																	
SAN	SZ	120.0	EP	2		07:09	06.33																			
SAN	SZ	120.0	ES	3		07:09	19.64																			
WAL	SZ	122.0	EP	2		07:09	06.87																			
April 15 2004		Time: 05:25 23.4 UTC				Magnitude: 2.1 ML																				
Lat: 56.557N		Lon: -5.707W				Depth: 8.4 km																				
Grid Ref: 172.22 kmE		746.7																								

TABLE 2: PHASE DATA 2004

Grid Ref: 305.23 kmE 596.22 kmN												RMS: 0.20 secs	
Locality: JOHNSTONEBRIDGE, D & G													
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI				
BWH	SZ	13.4	IP	C		23:23	19.88						
BWH	SZ	13.4	ES	2		23:23	21.53						
ESK	BE	19.5	IP			23:23	20.87						
ESK	SZ	19.5	IP			23:23	20.98						
ESK	BN	19.5	ES	2		23:23	23.43						
ESK	SN	19.5	ES	2		23:23	23.48						
ESK	SE	19.5	AML			23:23	23.69	28	0.11				
ESK	SN	19.5	AML			23:23	24.73	24	0.21				
EKB1	SZ	21.0	EP			23:23	21.20						
EKB1	SZ	21.0	ES			23:23	23.93						
BHH	SZ	24.7	IP			23:23	21.76						
BHH	SN	24.7	ES	2		23:23	24.66						
BHH	SE	24.7	AML			23:23	24.89	42	0.13				
BHH	SN	24.7	AML			23:23	24.93	54	0.18				
BBH	SZ	38.1	IP			23:23	23.96						
BDL	SZ	61.1	EP	2		23:23	27.93						
BTA	SZ	64.3	EP	2		23:23	28.84						
May 3 2004 Time: 10:38 02.7 UTC												Magnitude: 1.5 ML	
Lat: 51.342N Lon: -3.189W												Depth: 6.6 km	
Grid Ref: 317.19 kmE 161.05 kmN												RMS: 0.20 secs	
Locality: BRISTOL CHANNEL													
Comment: 5KM OFF BARRY													
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI				
SWK	SZ	69.2	IP			10:38	14.42						
MCH	SZ	74.1	EP	2		10:38	15.04						
MCH	SN	74.1	ES	2		10:38	24.27						
MCH	SE	74.1	AML			10:38	27.03	9	0.27				
MCH	SN	74.1	AML			10:38	30.95	10	0.09				
April 25 2004 Time: 11:25 42.4 UTC												Magnitude: 1.8 ML	
Lat: 55.333N Lon: -1.348W												Depth: 12.7 km	
Grid Ref: 441.36 kmE 604.52 kmN												RMS: 0.50 secs	
Locality: OFF AMBLE, N'UMBERLAND													
Comment: 12KM OFFSHORE													
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI				
LCP	SZ	66.8	IP	C		11:25	53.68						
BTA	SZ	97.6	EP	2		11:25	58.02						
BTA	SN	97.6	ES	2		11:26	10.60						
BTA	SE	97.6	AML			11:26	11.92	21	0.34				
BTA	SN	97.6	AML			11:26	13.38	17	0.21				
ESY	SZ	103.0	EP	2		11:25	59.88						
BHH	SZ	103.0	EP	1	C	11:25	58.96						
LRN	SZ	106.0	EP	3		11:25	59.49						
BDL	SZ	118.0	EP	2		11:26	00.50						
EBL	SZ	118.0	EP	2		11:26	01.30						
ESK	SZ	118.0	EP	2		11:26	00.81						
ESK	SN	118.0	AML			11:26	16.18	12	0.22				
ESK	SE	118.0	AML			11:26	16.88	8	0.15				
LWH	SZ	119.0	EP	2		11:26	01.80						
BHH	SZ	122.0	EP	2		11:26	01.18						
BHH	SN	122.0	ES	2		11:26	16.74						
BHH	SE	122.0	AML			11:26	20.08	20	0.25				
BHH	SN	122.0	AML			11:26	20.68	20	0.32				
BBO	SZ	138.0	IP	C		11:26	02.85						
BBO	SN	138.0	ES	2		11:26	21.15						
BBO	SN	138.0	AML			11:26	22.31	21	0.29				
BBO	SE	138.0	AML			11:26	22.40	20	0.25				
BWH	SZ	148.0	EP	2		11:26	04.51						
HPK	SZ	154.0	EP	3		11:26	06.63						
HPK	SN	154.0	ES	2		11:26	24.71						
HPK	SE	154.0	AML			11:26	25.93	68	0.23				
HPK	SN	154.0	AML			11:26	27.52	45	0.26				
April 30 2004 Time: 22:38 37.7 UTC												Magnitude: 1.0 ML	
Lat: 56.568N Lon: -5.848W												Depth: 15.9 km	
Grid Ref: 163.63 kmE 748.40 kmN												RMS: 0.30 secs	
Locality: MORVERN, HIGHLAND													
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI				
KAR	SZ	39.1	EP	2		22:38	45.09						
KAR	SZ	39.1	ES	3		22:38	49.62						
KSB	SZ	76.1	EP	2		22:38	50.80						
KPL	SZ	86.7	EP	2		22:38	51.74						
KPL	SN	86.7	AML			22:39	06.31	6	0.13				
KPL	SE	86.7	AML			22:39	06.35	6	0.25				
EAB	SZ	102.0	EP	2		22:38	54.10						
PMS	SZ	106.0	IP	C		22:38	54.70						
PMS	SZ	106.0	ES	3		22:39	07.81						
PCO	SZ	126.0	EP	3		22:38	57.83						
May 2 2004 Time: 07:09 35.0 UTC												Magnitude: 0.5 ML	
Lat: 57.275N Lon: -5.663W												Depth: 2.7 km	
Grid Ref: 179.21 kmE 826.40 kmN												RMS: 0.10 secs	
Locality: KYLE OF LOCHALSH, HIGHLAND													
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI				
KPL	SZ	7.1	IP	D		07:09	36.74						
KPL	SN	7.1	ES	2		07:09	37.85						
KPL	SN	7.1	AML			07:09	37.95	33	0.07				
KPL	SE	7.1	AML			07:09	38.02	53	0.11				
KSB	SZ	16.3	IP	C		07:09	38.39						
KSB	SZ	16.3	ES	2	D	07:09	40.66						
KAR	SZ	41.0	IP	C		07:09	42.45						
RRR	SZ	65.4	EP	2		07:09	47.40						
KSK	SZ	65.9	EP	3		07:09	46.17						
May 2 2004 Time: 23:23 17.0 UTC												Magnitude: 1.0 ML	
Lat: 55.251N Lon: -3.491W												Depth: 4.3 km	
Grid Ref: 305.23 kmE 596.22 kmN												RMS: 0.20 secs	
Locality: JOHNSTONEBRIDGE, D & G													
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI				
BWH	SZ	13.4	IP	C		23:23	19.88						
BWH	SZ	13.4	ES	2		23:23	21.53						
ESK	BE	19.5	IP			23:23	20.87						
ESK	SZ	19.5	IP			23:23	20.98						
ESK	BN	19.5	ES	2		23:23	23.43						
ESK	SN	19.5	ES	2		23:23	23.48						
ESK	SE	19.5	AML			23:23	23.69	28	0.11				
ESK	SN	19.5	AML			23:23	24.73	24	0.21				
EKB1	SZ	21.0	EP			23:23	21.20						
BHH	SZ	24.7	IP			23:23	21.76						
BHH	SN	24.7	ES	2		23:23	24.66						
BHH	SE	24.7	AML			23:23	24.89	42	0.13				
BHH	SN	24.7	AML			23:23	24.93	54	0.18				
EKB1	SZ	21.0	ES			23:23	23.93						
May 3 2004 Time: 10:38 02.7 UTC												Magnitude: 1.5 ML	
Lat: 51.342N Lon: -3.189W												Depth: 6.6 km	
Grid Ref: 317.19 kmE 161.05 kmN												RMS: 0.20 secs	
Locality: BRISTOL CHANNEL													
Comment: 5KM OFF BARRY													

TABLE 2: PHASE DATA 2004

MDO	SZ	84.5	ES	3	11:15	39.51	BHH	SZ	19.9	IP	D	00:44	38.92		
PCO	SZ	87.6	EP	2	11:15	29.92	BHH	SN	19.9	ES	2	00:44	39.60		
MCD	SZ	97.6	EP	2	11:15	31.58	BHH	SE	19.9	AML		00:44	39.83		
MCD	SE	97.6	ES	3	11:15	43.49	BHH	SN	19.9	AML		00:44	39.87		
MCD	SN	97.6	AML		11:15	47.65	8	0.44	BTA	SZ	20.2	IP	D	00:44	45.34
MCD	SE	97.6	AML		11:15	47.78	9	0.43	BTA	SN	20.2	ES		00:44	50.71
KSB	SZ	112.0	EP	3	11:15	33.53	BTA	SN	20.2	AML		00:44	51.41		
PMS	SZ	118.0	EP	2	11:15	34.37	BTA	SE	20.2	AML		00:44	56.83		
PCA	SZ	121.0	IP	1	C	11:15	35.18	BDL	SZ	21.4	EP	2	00:44	44.95	
KAR	SZ	127.0	EP	3	11:15	36.29	BBO	SZ	34.1	IP	C	00:44	45.39		
KPL	SZ	131.0	EP	3	11:15	36.79	BBO	SN	34.1	ES	2	00:44	50.89		
KPL	SE	131.0	ES		11:15	52.51	BBO	SE	34.1	AML		00:44	53.31		
KPL	SN	131.0	AML		11:15	53.71	2	0.33	BBO	SN	34.1	AML		00:44	53.72
KPL	SE	131.0	AML		11:15	55.10	3	0.45	ESK	SZ	39.1	IP	C	00:44	41.98
May 13 2004 Time: 11:20 44.4 UTC Magnitude: 1.5 ML															
Lat: 55.720N Lon: -6.043W Depth: 7.5 km RMS: 0.20 secs															
Locality: ISLAY, STRATHCLYDE															
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI						
GMK	SZ	50.4	IP	1	C	11:20	53.08								
GCL	SZ	71.7	EP	1	C	11:20	56.37								
GCL	SZ	71.7	ES	3		11:21	05.40								
PMS	SZ	82.6	EP	2		11:20	57.98								
PMS	SZ	82.6	ES	3		11:21	08.01								
PCA	SZ	112.0	EP	1	C	11:21	02.91								
PCA	SZ	112.0	ES	3		11:21	15.86								
PCO	SZ	125.0	EP	2		11:21	04.77								
GAL	SZ	127.0	EP	2		11:21	05.52								
GAL	SE	127.0	ES	3		11:21	19.63								
GAL	SN	127.0	AML			11:21	24.13	7	0.20						
GAL	SE	127.0	AML			11:21	24.96	16	0.28						
May 29 2004 Time: 10:17 48.5 UTC Magnitude: 1.3 ML															
Lat: 52.639N Lon: -3.138W Depth: 12.6 km RMS: 0.10 secs															
Locality: WELSHPOOL, POWYS															
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI						
HLM	SZ	22.0	IP		D	10:17	52.95								
SSP	SZ	24.7	IP		D	10:17	53.34								
SSP	SN	24.7	ES	2		10:17	56.75								
SSP	SE	24.7	AML			10:17	57.34	75	0.13						
SSP	SN	24.7	AML			10:17	57.36	45	0.21						
SBD	SZ	30.7	IP		D	10:17	54.07								
HTR	SZ	63.0	EP	2		10:17	59.32								
MCH	SZ	72.1	EP	2		10:18	00.83								
MCH	SE	72.1	ES	2		10:18	09.32								
MCH	SN	72.1	AML			10:18	09.58	18	0.16						
MCH	SE	72.1	AML			10:18	09.96	16	0.17						
HAE	SZ	78.3	EP	2		10:18	01.89								
WPM	SZ	86.0	EP	2		10:18	03.06								
YRE	SZ	94.8	IP		C	10:18	04.26								
June 4 2004 Time: 11:49 36.4 UTC Magnitude: 1.8 ML															
Lat: 49.332N Lon: -1.242W Depth: 7.5 km RMS: 0.00 secs															
Locality: CHERBOURG PENINSULA Comment: 60KM E OF JERSEY															
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI						
JQE	SZ	59.8	EP	2		11:49	46.59								
JLP	SZ	63.4	EP	2		11:49	47.08								
JLP	SZ	63.4	ES	3		11:49	54.92								
JRS	SZ	63.8	EP	2		11:49	47.16								
JRS	SE	63.8	ES	2		11:49	54.95								
JRS	SE	63.8	AML			11:49	55.52	59	0.24						
JSA	SZ	69.6	EP	2		11:49	48.06								
JVM	SZ	71.4	EP	2		11:49	48.27								
JVM	SZ	71.4	ES	2		11:49	57.08								
June 11 2004 Time: 23:01 04.0 UTC Magnitude: 0.7 ML															
Lat: 52.202N Lon: -2.606W Depth: 6.5 km RMS: 0.10 secs															
Locality: LEOMINSTER, HER & WOR Comment: 8KM ESE OF LEOMINSTER															
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI						
HAE	SZ	18.9	IP		D	23:01	07.57								
HAE	SZ	18.9	ES	3		23:01	09.51								
MCH	SZ	35.2	IP		C	23:01	10.20								
MCH	SE	35.2	ES	2		23:01	14.78								
MCH	SN	35.2	AML			23:01	15.09	24	0.21						
MCH	SE	35.2	AML			23:01	15.11	16	0.10						
HLM	SZ	39.8	IP		D	23:01	10.90								
SSP	SZ	42.0	IP		D	23:01	11.46								
SSP	SN	42.0	AML			23:01	17.27	4	0.09						
SSP	SE	42.0	AML			23:01	17.38	4	0.17						
HTR	SZ	47.3	IP		D	23:01	12.06								
HGH	SZ	64.3	EP	2		23:01	15.07								
June 21 2004 Time: 00:44 00.5 UTC Magnitude: 1.7 ML															
Lat: 54.995N Lon: -2.959W Depth: 4.5 km RMS: secs															
Locality: LOCKERBIE, D & G Comment: 9KM E OF LOCKERBIE															
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI						
BBH	SZ	15.5	IP		D	00:44	41.15								
BCC	AZ	16.9	IP		C	00:44	40.14								
BCC	AN	16.9	ES	2		00:44	41.64								
BCC	AE	16.9	AML			00:44	41.98	406	0.19						
BCC	AN	16.9	AML			00:44	42.25	238	0.32						
June 21 2004 Time: 00:44 00.5 UTC Magnitude: 1.7 ML															
Lat: 53.122N Lon: 2.180W Depth: 4.3 km RMS: 0.30 secs															
Locality: SOUTHERN NORTH SEA															
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI						
AWI	SZ	58.9	EP	2											
ABA	SZ	74.2	IP		C										
ABA	SZ	74.2	ES	3											
AEU	SZ	84.7	IP		C										
AEU	SE	84.7	AML												
AEU	SE	84.7	AML												
AWH	SZ	99.3	EP	2											
APA	SZ	103.0	EP	2											
KSY	SZ	186.0	EP	2											
June 22 2004 Time: 15:42 52.1 UTC Magnitude: 2.4 ML															
Lat: 53.122N Lon: 2.180W Depth: 4.3 km RMS: 0.30 secs															
Locality: SOUTHERN NORTH SEA															

TABLE 2: PHASE DATA 2004

Locality: KINLOCHEWE, HIGHLAND											
Comment: 8KM SW OF KINLOCHEWE											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI		
KPL	SZ	28.7	EP	2		19:17		45.50			
KPL	SN	28.7	ES	2		19:17		49.10			
KPL	SN	28.7	AML			19:17		50.37	6	0.12	
KPL	SE	28.7	AML			19:17		50.50	6	0.15	
KSB	SZ	38.3	IP		D	19:17		46.99			
KSB	SZ	38.3	ES	3		19:17		51.39			
RRR	SZ	42.1	EP	1	C	19:17		47.60			
RRR	SE	42.1	ES	2		19:17		52.57			
RRR	SE	42.1	AML			19:17		53.23	15	0.30	
RRR	SN	42.1	AML			19:17		53.30	10	0.15	
MDO	SZ	62.6	EP	2		19:17		50.75			
MDO	SZ	62.6	ES	3		19:17		57.80			
KAR	SZ	75.6	EP	2		19:17		53.03			
MCD	SE	128.0	ES	2		19:18		16.54			
MCD	SE	128.0	AML			19:18		17.89	10	0.19	
MCD	SN	128.0	AML			19:18		18.17	10	0.30	
July 13 2004 Time: 04:42 49.0 UTC											
Magnitude: 0.4 ML											
Lat: 57.059N	Lon: -5.571W	Depth: 3.4 km	Grid Ref: 183.49 KmE	802.08 KmN	RMS: 0.20 secs						
Locality: KNOYDART, HIGHLAND											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI		
KSB	SZ	19.0	IP		D	04:42		52.77			
KAR	SZ	22.1	IP		D	04:42		53.33			
KAR	SZ	22.1	ES	3		04:42		55.79			
KPL	SZ	31.5	EP	2		04:42		55.10			
KPL	SN	31.5	AML			04:42		55.34	7	0.10	
KPL	SE	31.5	ES	2		04:42		58.92			
KPL	SE	31.5	AML			04:42		59.39	5	0.26	
July 19 2004 Time: 03:29 04.8 UTC											
Magnitude: 0.8 ML											
Lat: 49.019N	Lon: -2.576W	Depth: 5.6 km	Grid Ref: 357.89 KmE	97.73 KmN	RMS: 0.00 secs						
Locality: OFF JERSEY, CHANNEL ISLANDS											
Comment: 30KM SW OF JERSEY											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI		
JVM	SZ	34.8	IP		C	03:29		11.17			
JVM	SZ	34.8	ES	3		03:29		15.72			
JVM	SZ	34.8	AML			03:29		15.98	10	0.21	
JRS	SZ	40.2	EP	2		03:29		11.95			
JRS	SE	40.2	ES	2		03:29		17.23			
JRS	SE	40.2	AML			03:29		17.57	7	0.16	
JLP	SZ	42.9	IP		C	03:29		12.41			
JQE	SZ	44.1	IP		C	03:29		12.57			
JQE	SZ	44.1	ES	3		03:29		18.47			
JQE	SZ	44.1	AML			03:29		19.00	14	0.05	
July 19 2004 Time: 07:53 45.8 UTC											
Magnitude: 0.8 ML											
Lat: 53.074N	Lon: -3.706W	Depth: 8.1 km	Grid Ref: 285.72 KmE	354.37 KmN	RMS: 0.20 secs						
Locality: BETWS-Y-COED, GWYNEDD											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI		
WPM	SZ	24.5	IP		D	07:53		50.25			
WPM	SZ	24.5	ES	3		07:53		53.07			
WPM	SZ	24.5	AML			07:53		53.59	29	0.25	
YLL	SZ	32.0	EP	2		07:53		51.48			
SBD	SZ	35.4	EP	2		07:53		51.81			
YRE	SZ	49.4	IP		C	07:53		54.16			
YRE	SZ	49.4	AML			07:53		54.32	17	0.15	
YRE	SZ	49.4	ES	3		07:54		00.08			
WME	SZ	53.7	EP	2		07:53		54.63			
WME	SZ	53.7	ES	3		07:54		00.70			
WME	SZ	53.7	AML			07:54		01.55	5	0.18	
SSP	SZ	83.3	EP	2		07:54		00.22			
SSP	SE	83.3	ES	2		07:54		09.62			
SSP	SE	83.3	AML			07:54		10.92	3	0.16	
SSP	SN	83.3	AML			07:54		11.27	3	0.14	
July 19 2004 Time: 17:13 44.3 UTC											
Magnitude: 0.6 ML											
Lat: 53.225N	Lon: -0.978W	Depth: 2.6 km	Grid Ref: 468.22 KmE	370.29 KmN	RMS: 0.20 secs						
Locality: WALESBY, NOTTS											
Comment: C/F, FELT WALESBY											
Intensity: 2											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI		
KBI	SZ	36.8	EP	2		17:13		50.68			
KSY	SZ	39.1	ES	3		17:13		56.15			
CWF	HZ	58.5	EP	2		17:13		54.55			
CWF	HZ	58.5	ES	4		17:14		01.70			
CWF	HE	58.5	AML			17:14		06.37	5	0.23	
CWF	HN	58.5	AML			17:14		06.80	4	0.37	
KWE	SZ	62.3	EP	2		17:13		54.97			
LHO	SZ	68.3	EP	2		17:13		56.25			
July 20 2004 Time: 16:54 18.7 UTC											
Magnitude: 0.7 ML											
Lat: 53.233N	Lon: -0.991W	Depth: 1.0 km	Grid Ref: 467.34 KmE	371.17 KmN	RMS: 0.50 secs						
Locality: WALESBY, NOTTS											
Comment: C/F, FELT WALESBY											
Intensity: 2											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI		
KBI	SZ	35.9	EP	3		16:54		24.95			
KSY	SZ	40.3	ES	3		16:54		31.76			
CWF	HZ	59.0	EP	4		16:54		29.86			
CWF	HE	59.0	ES	4		16:54		37.49			
CWF	HE	59.0	AML			16:54		44.59	4	0.60	

TABLE 2: PHASE DATA 2004

CWF	HN	59.0	AML	16:54	46.07	5	0.32		EDI	SZ	94.8	IP	C	04:54	21.03		
KWE	SZ	61.8	EP	3	16:54	30.54			POB	SZ	96.9	EP	2	04:54	21.27		
LHO	SZ	67.2	EP	3	16:54	31.25			POB	SZ	96.9	ES	2	04:54	33.04		
									PCO	SZ	103.0	EP	2	04:54	22.34		
July 20 2004				Time: 21:10 28.3 UTC		Magnitude: 2.4 ML			PCO	SZ	103.0	ES	3	04:54	35.05		
Lat:	53.522N			Lon: -0.367W		Depth: 31.2 km			PMS	SZ	109.0	IP	1	D	04:54	22.83	
Grid Ref:	508.25 kmE			404.08 kmN		RMS: 0.40 secs			PMS	SZ	109.0	ES	3		04:54	36.99	
Locality:	SCUNTHORPE, HUMBERSIDE								WIM	SZ	127.0	EP	3		04:54	25.16	
Comment:	15KM SE OF SCUNTHORPE								WIM	SZ	127.0	ES	3		04:54	39.87	
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	GMK	SZ	128.0	EP	2		04:54	25.56
KSY	SZ	63.8	EP	1	C	21:10	39.43			LCP	SZ	143.0	EP	2		04:54	28.76
KBI	SZ	82.8	EP	1	C	21:10	42.03			GCL	SZ	160.0	EP	2		04:54	29.38
KBI	SZ	82.8	ES	3		21:10	52.75			GMM	SZ	179.0	EP	2		04:54	31.70
HPK	SZ	96.1	EP	2		21:10	43.98			WME	SZ	196.0	EP	3		04:54	33.74
HPK	SE	96.1	ES	3		21:10	55.93			WCB	SZ	202.0	EP	3		04:54	34.36
HPK	SN	96.1	AML			21:10	57.08	380	0.19	WCB	SE	202.0	AML			04:55	02.31
HPK	SE	96.1	AML			21:10	57.29	452	0.19	WCB	SN	202.0	AML			04:55	04.36
LHO	SZ	98.7	EP	1	C	21:10	43.92			WPM	SZ	207.0	EP	3		04:54	35.01
CWF	HZ	108.0	EP	1	C	21:10	45.09			LHO	SZ	208.0	EP	3		04:54	36.99
CWF	HE	108.0	ES	3		21:10	58.31			WLF	SZ	209.0	EP	3		04:54	35.19
CWF	HN	108.0	AML			21:11	00.42	26	0.24	YRC	SZ	216.0	EP	3		04:54	35.98
WAE	SZ	113.0	EP	1	C	21:10	45.82			YRE	SZ	243.0	EP	3		04:54	39.78
ABA	SZ	123.0	EP	3		21:10	46.99			MCD	SZ	277.0	EP	3		04:54	44.72
ABA	SZ	123.0	ES	4		21:11	01.43			MCD	SN	277.0	AML			04:55	14.69
AWH	SZ	133.0	EP	2		21:10	48.24			MCD	SE	277.0	AML			04:55	21.07
AWH	SZ	133.0	ES	3		21:11	03.47			MCD	SE	277.0	AML			04:55	26.045
AWI	SZ	144.0	ES	3		21:11	06.39										
AEU	SN	147.0	ES	4		21:11	06.81										
AEU	SE	147.0	AML			21:11	08.48	85	0.24								
AEU	SN	147.0	AML			21:11	09.24	69	0.10								
APA	SZ	184.0	EP	3		21:10	55.46										
CDU	SZ	207.0	EP	3		21:10	59.05										
CSF	SZ	215.0	EP	3		21:11	00.52										
August 5 2004				Time: 15:11 53.4 UTC		Magnitude: 1.7 ML											
Lat:	57.461N			Lon: -5.944W		Depth: 6.4 km											
Grid Ref:	163.48 kmE			848.03 kmN		RMS: 0.20 secs											
Locality:	ISLAND OF RAASAY																
Comment:	OFFSHORE LOCATION																
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI								
KPL	SZ	22.2	IP		C	15:11	57.66										
KPL	SN	22.2	ES	2		15:12	00.65										
KSB	SZ	42.1	IP		C	15:12	00.96										
RRR	SZ	44.9	IP	1	D	15:12	01.31										
RRR	SE	44.9	ES	2		15:12	06.73										
RRR	SE	44.9	AML			15:12	07.05	49	0.26								
RRR	SN	44.9	AML			15:12	07.18	33	0.42								
JKS	SZ	45.4	IP		C	15:12	01.42										
KAR	SZ	60.8	EP	1	C	15:12	03.55										
RRH	SZ	67.6	EP	2		15:12	04.65										
REB	SZ	83.2	EP	3		15:12	07.41										
REB	SZ	83.2	ES	3		15:12	17.17										
MDO	SZ	94.9	EP	3		15:12	09.27										
RTD	SZ	103.0	EP	3		15:12	10.53										
MVH	SZ	117.0	EP	3		15:12	12.78										
MCD	SZ	162.0	EP	3		15:12	20.12										
MCD	SE	162.0	ES	3		15:12	38.27										
MCD	SE	162.0	AML			15:12	40.73	31	0.24								
MCD	SN	162.0	AML			15:12	40.76	16	0.22								
August 7 2004				Time: 04:54 04.4 UTC		Magnitude: 2.3 ML											
Lat:	55.108N			Lon: -3.618W		Depth: 8.0 km											
Grid Ref:	296.79 kmE			580.49 kmN		RMS: 0.30 secs											
Locality:	DUMFRIES, D & G																
Comment:	FELT DUMFRIES																
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI								
BWH	SZ	8.0	IP		C	04:54	06.73										
BHH	SZ	25.6	IP		D	04:54	09.19										
BHH	SE	25.6	ES	2		04:54	12.41										
BHH	SN	25.6	AML			04:54	12.67	870	0.29								
BHH	SE	25.6	AML			04:54	12.87	1464	0.11								
BCC	AZ	27.4	IP		D	04:54	09.59										
BCC	AN	27.4	ES	2		04:54	13.05										
BCC	AE	27.4	AML			04:54	13.39	348	0.26								
BCC	AN	27.4	AML			04:54	13.60	507	0.19								
ESK	SZ	35.1	IP		C	04:54	10.67										
ESK	SE	35.1	ES	2		04:54	15.14										
ESK	SE	35.1	AML			04:54	16.11	429	0.19								
ESK	SN	35.1	AML			04:54	16.11	348	0.15								
BBH	SZ	44.0	IP		D	04:54	12.10										
BBO	SZ	47.7	IP		D	04:54	12.86										
BBO	SN	47.7	ES	2		04:54	18.78										
BDL	SZ	55.2	IP		D	04:54	14.31										
BTA	SZ	63.8	IP		D	04:54	15.81										
BTA	SE	63.8	ES	2		04:54	24.35										
BTA	SN	63.8	AML			04:54	27.64	162	0.49								
BTA	SE	63.8	AML			04:54	29.48	150	0.38								
CKE	SZ	66.6	IP		D	04:54	15.85										
GAL	SZ	75.0	EP	1	C	04:54	16.60										
GAL	SN	75.0	ES	2		04:54	25.16										
GAL	SE	75.0	AML			04:54	29.25	150	0.17								
GAL	SN	75.0	AML			04:54	29.55	290	0.12								
CSF	SZ	77.3	EP	2		04:54	17.53										
PCA	SZ	77.4	IP		D	04:54	18.10										
PCA	SZ	77.4	ES	2		04:54	27.69										
EAU	SZ	82.8	IP		C	04:54	19.15										
CDU	SZ	90.1	IP		C	04:54	19.51										
EDI	SZ	94.8	IP														
POB	SZ	96.9	EP														
POB	SZ	96.9	ES														
POB	SZ	103.0	EP														
WIM	SZ	127.0	EP														
WIM	SZ	127.0	ES														
WIM	SZ	128.0	EP														
GMK	SZ	143.0	EP														

TABLE 2: PHASE DATA 2004

EDI	HE	53.5	AML	00:19	39.97	31	0.28	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
PMS	SZ	56.9	EP	2	00:19	33.32		EKB1	SZ	12.5	EP			18:41	21.19		
EBL	SZ	69.5	EP	2	00:19	35.31		EKB1	SZ	12.5	ES			18:41	23.00		
August 24 2004				Time: 09:08 29.6 UTC		Magnitude: 1.0 ML		BHH	SZ	12.7	IP			18:41	20.90		
Lat: 56.113N	Lon:	-3.983W				Depth: 7.1 km		BHH	SN	12.7	ES	2		18:41	22.36		
Grid Ref: 276.71 kmE	692.90 kmN				RMS: 0.10 secs		BHH	SN	12.7	AML			18:41	22.65	1336	0.13	
Locality: STIRLING, CENTRAL							BHH	SE	12.7	AML			18:41	22.74	1506	0.21	
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI								
PCO	SZ	15.7	IP	C	09:08	32.94		EKB2	SZ	13.3	ES			18:41	21.32		
PCO	SZ	15.7	ES	3	09:08	34.91		EKR9	SZ	13.5	EP			18:41	21.29		
EAB	SZ	23.6	IP	C	09:08	34.21		EKR10	SZ	13.5	EP			18:41	21.24		
EAB	SZ	23.6	ES	3	09:08	37.23		EKR10	SZ	13.5	ES			18:41	23.09		
EAU	SZ	44.7	EP	2	09:08	37.56		EKR9	SZ	13.5	ES			18:41	23.17		
PCA	SZ	48.9	EP	1	D	09:08	38.14	EKR8	SZ	13.6	EP			18:41	21.30		
EDI	SZ	53.9	EP	3	09:08	38.70		EKR8	SZ	13.6	ES			18:41	23.19		
EDI	SZ	53.9	ES	3	09:08	45.37		ESK	SN	13.7	AML			18:41	23.66	70	0.24
EDI	HN	53.9	AML		09:08	45.85	11 0.44	EKR7	SZ	13.7	EP			18:41	21.32		
PMS	SZ	56.1	EP	2	09:08	39.35		EKR7	SZ	13.7	ES			18:41	23.22		
EBL	SZ	69.8	EP	3	09:08	41.38		ESK	SZ	13.7	IP	2		18:41	21.42		
September 6 2004				Time: 03:36 05.1 UTC		Magnitude: 0.8 ML		ESK	SE	13.7	ES			18:41	23.03		
Lat: 55.510N	Lon:	-2.447W			Depth: 1.9 km		EKR6	SZ	13.9	EP			18:41	23.67	140	0.21	
Grid Ref: 371.77 kmE	624.12 kmN				RMS: 0.20 secs		EKR6	SZ	13.9	ES			18:41	21.37			
Locality: JEDBURGH, BORDERS							EKB3	SZ	14.1	EP			18:41	23.28			
Comment: 7KM ENE OF JEDBURGH							EKB3	SZ	14.1	ES			18:41	21.46			
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI								
ESY	SZ	46.6	EP	1	D	03:36	13.56	EKR5	SZ	14.2	EP			18:41	21.41		
EBL	SZ	47.6	IP	1	D	03:36	14.10	EKR5	SZ	14.2	ES			18:41	23.34		
BBH	SZ	51.9	IP	C	03:36	14.54		EKR4	SZ	14.5	EP			18:41	21.49		
ESK	SZ	52.6	IP	1	C	03:36	14.53	EKR4	SZ	14.5	ES			18:41	23.46		
ESK	SN	52.6	ES	3	03:36	21.30		EKR3	SZ	14.8	EP			18:41	21.54		
ESK	SN	52.6	AML		03:36	22.08	6 0.28	EKR3	SZ	14.8	ES			18:41	23.55		
ESK	SE	52.6	AML		03:36	24.87	3 0.14	EKB4	SZ	14.9	EP			18:41	21.57		
BBH	SZ	67.5	EP	1	C	03:36	16.90	EKB4	SZ	14.9	ES			18:41	23.61		
BBH	SN	67.5	ES	3	03:36	25.71		EKR2	SZ	15.2	EP			18:41	21.64		
BBH	SE	67.5	AML		03:36	28.82	7 0.21	EKR2	SZ	15.2	ES			18:41	23.74		
BBH	SN	67.5	AML		03:36	28.87	8 0.40	EKR1	SZ	15.6	IP	2		18:41	21.46		
BTA	SZ	68.9	EP	3	03:36	17.23		EKR1	SZ	15.6	ES			18:41	21.69		
BTA	SN	68.9	ES	3	03:36	25.55		EKB5	SZ	15.7	EP			18:41	23.86		
BTA	SE	68.9	AML		03:36	26.72	4 0.32	EKB5	SZ	15.7	ES			18:41	21.69		
BTA	SN	68.9	AML		03:36	27.27	5 0.61	EKB6	SZ	16.5	EP			18:41	21.81		
BDL	SZ	84.7	IP	C	03:36	19.98		EKB6	SZ	16.5	ES			18:41	24.02		
BWH	SZ	85.2	EP	3	03:36	19.78		EKB7	SZ	17.3	EP			18:41	21.97		
BBO	SZ	100.0	EP	2	03:36	22.30		EKB7	SZ	17.3	ES			18:41	24.27		
BBO	SE	100.0	ES	3	03:36	34.88		EKB8	SZ	18.3	EP			18:41	22.09		
BBO	SE	100.0	AML		03:36	36.22	6 0.40	EKB8	SZ	18.3	ES			18:41	24.47		
BBO	SN	100.0	AML		03:36	36.48	4 0.24	EKB9	SZ	19.0	EP			18:41	22.22		
September 16 2004				Time: 08:17 43.2 UTC		Magnitude: 3.3 ML		EKB9	SZ	19.0	ES			18:41	24.69		
Lat: 57.435N	Lon:	-5.966W			Depth: 5.3 km		EKB10	SZ	19.8	EP			18:41	22.37			
Grid Ref: 162.00 kmE	845.22 kmN				RMS: 0.00 secs		EKB10	SZ	19.8	ES			18:41	24.89			
Locality: ISLAND OF RAASAY							BCC	AZ	21.0	IP	2		18:41	22.31			
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI								
KPL	SZ	21.6	IP	C	08:17	47.33		BCC	AE	21.0	AML			18:41	25.31	208	0.22
KPL	EZ	21.6	IP	C	08:17	47.34		BCC	AN	21.0	AML			18:41	25.80	164	0.45
KSZ	SZ	41.3	IP	C	08:17	50.62		BWH	SZ	32.7	IP	2		18:41	24.21		
KSZ	SZ	44.2	IP	C	08:17	51.07		BWH	SZ	32.7	ES	3		18:41	28.11		
KSZ	SZ	44.2	ES	3	08:17	56.75		BTA	SZ	43.8	EP	2		18:41	26.31		
KAR	SZ	58.0	IP	C	08:17	53.21		BTA	SN	43.8	ES	2		18:41	31.92		
MDO	SZ	96.3	IP	C	08:17	59.21		BTA	SE	43.8	AML			18:41	34.46	47	0.43
MVH	SZ	120.0	EP	2	08:18	02.57		BTA	SN	43.8	AML			18:41	36.02	57	0.50
MCD	SZ	163.0	EP	3	08:18	09.12		BDL	SZ	45.9	EP	2		18:41	26.73		
MCD	SN	163.0	ES	3	08:18	27.57		BBO	SZ	51.8	IP	2		18:41	27.42		
MCD	SE	163.0	AML		08:18	30.55	711 0.30	BBO	SE	51.8	ES	2		18:41	33.92		
MCD	SN	163.0	AML		08:18	33.02	393 0.46	CKE	SZ	68.0	EP	2		18:41	30.48		
EAB	SZ	171.0	EP	3	08:18	10.85		CSF	SZ	83.8	IP	2		18:41	32.53		
ORE	SZ	180.0	IP	C	08:18	09.99		CSF	SZ	83.8	ES	3		18:41	42.99		
ORE	SN	180.0	ES	2	08:18	32.54		CDU	SZ	96.0	IP	2		18:41	34.73		
ORE	SN	180.0	AML		08:18	33.79	292 0.37	CDU	SZ	96.0	ES	3		18:41	46.51		
ORE	SE	180.0	AML		08:18	33.85	308 0.18	GAL	SZ	107.0	EP	2		18:41	35.86		
MME	SZ	181.0	EP	2	08:18	12.12		GAL	SN	107.0	ES	2		18:41	48.61		
MLA	SZ	182.0	EP	2	08:18	09.91		GAL	SN	107.0	AML			18:41	50.16	52	0.33
OBR	SZ	211.0	EP	2	08:18	13.96		GAL	SE	107.0	AML			18:41	51.08	18	0.21
OHO	SZ	223.0	EP	2	08:18	15.20		LCP	SZ	119.0	EP	2		18:41	38.84		
ESY	SZ	266.0	EP	3	08:18	23.79		GMK	SZ	157.0	EP	2		18:41	44.14		
OST	SZ	272.0	EP	2	08:18	21.13											
September 24 2004				Time: 19:10 01.7 UTC		Magnitude: 1.1 ML		October 26 2004									
Lat: 49.351N	Lon:	-4.428W			Depth: 2.7 km		Time: 04:35 19.7 UTC										
Grid Ref: 223.69 kmE	-58.15 kmN				RMS: 0.30 secs		Magnitude: 0.9 ML										
Locality: ENGLISH CHANNEL																	
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI								
CGH	SZ	94.2	EP	2	19:10	18.36		YLL	SZ	12.2	IP	C	04:35	22.57			
CGH	SZ	94.2	ES	3	19:10	30.14		WLF	SZ	12.4	IP	D	04:35	22.57			
CMA	SZ	95.7	EP	3	19:10	17.93		WLF	SZ	12.4	ES	3	04:35	24.49			
CGW	SZ	101.0	EP	2	19:10	18.68		YRC	SZ	17.5	IP	D	04:35	23.25			
CR2	SZ	105.0	EP	2	19:10	19.38		YRC	SZ	17.5	ES	3	04:35	25.56			
CR2	SN	105.0	ES	3	19:10	33.75		YRE	SZ	23.2	IP	C	04:35	24.07			
CR2	SN	105.0	AML		19:10	34.93	6 0.09										

TABLE 2: PHASE DATA 2004

Grid Ref:	328.65 kmE	593.89 kmN	RMS:	0.20 secs
Locality: ESKDALEMUIR,D & G				
STAT	CO	DIST	PHAS	WT P HrMn SECS AMPL PERI
EKB1	SZ	9.0	EP	23:58 20.82
EKB1	SZ	9.0	ES	23:58 22.62
EKR9	SZ	9.4	EP	23:58 20.87
EKR9	SZ	9.4	ES	23:58 22.74
EKR10	SZ	9.4	EP	23:58 20.82
EKR10	SZ	9.4	ES	23:58 22.66
EKR8	SZ	9.4	EP	23:58 20.89
EKR8	SZ	9.4	ES	23:58 22.77
EKR7	SZ	9.6	EP	23:58 20.91
EKR7	SZ	9.6	ES	23:58 22.78
EKR2	SZ	9.7	EP	23:58 20.95
EKR2	SZ	9.7	ES	23:58 22.82
EKR6	SZ	9.8	EP	23:58 20.91
EKR6	SZ	9.8	ES	23:58 22.82
EKR5	SZ	10.1	EP	23:58 20.99
EKR5	SZ	10.1	ES	23:58 22.95
EKR4	SZ	10.5	EP	23:58 21.06
EKR4	SZ	10.5	ES	23:58 22.99
EKB3	SZ	10.5	EP	23:58 21.07
EKB3	SZ	10.5	ES	23:58 22.93
ESK	EZ	10.6	EP	1 23:58 20.95
ESK	EE	10.6	ES	3 23:58 22.98
ESK	EE	10.6	AML	23:58 24.08 12 0.50
ESK	EN	10.6	AML	23:58 24.44 3 0.16
EKR3	SZ	11.0	EP	23:58 21.19
EKR3	SZ	11.0	ES	23:58 23.12
EKB4	SZ	11.1	EP	23:58 21.21
EKB4	SZ	11.1	ES	23:58 23.19
EKR2	SZ	11.4	EP	23:58 21.41
EKR2	SZ	11.4	ES	23:58 23.34
EKB5	SZ	11.9	EP	23:58 21.36
EKB5	SZ	11.9	ES	23:58 23.37
EKR1	SZ	12.0	EP	23:58 21.32
EKR1	SZ	12.0	ES	23:58 23.39
EKB6	SZ	12.6	EP	23:58 21.61
EKB6	SZ	12.6	ES	23:58 23.51
EKB7	SZ	13.4	EP	23:58 22.07
EKB7	SZ	13.4	ES	23:58 23.83
EKB8	SZ	14.3	EP	23:58 22.36
EKB8	SZ	14.3	ES	23:58 24.04
EKB9	SZ	15.0	EP	23:58 22.64
EKB9	SZ	15.0	ES	23:58 24.30
EKB10	SZ	15.8	EP	23:58 22.09
EKB10	SZ	15.8	ES	23:58 24.47
October 27 2004 Time: 04:16 33.4 UTC Magnitude: 1.3 ML				
Lat: 55.198N	Lon: -3.139W	Depth: 4.5 km	RMS: 0.10 secs	
Grid Ref: 327.51 kmE	589.90 kmN			
Locality: ESKDALEMUIR,D & G				
Comment: FELT LOCKERBIE		Intensity: 2		
STAT	CO	DIST	PHAS	WT P HrMn SECS AMPL PERI
EKB2	SZ	12.6	EP	04:16 36.27
EKB1	SZ	12.6	ES	04:16 38.15
BHH	SZ	12.7	IP	C 04:16 36.01
BHH	SE	12.7	ES	2 04:16 37.58
BHH	SN	12.7	AML	04:16 37.66 646 0.16
BHH	SE	12.7	AML	04:16 37.83 665 0.16
EKB2	SZ	13.4	EP	04:16 36.39
EKB2	SZ	13.4	ES	04:16 38.34
EKR9	SZ	13.5	ES	04:16 38.24
EKR10	SZ	13.5	ES	04:16 38.17
EKR9	SZ	13.5	EP	04:16 36.37
EKR10	SZ	13.5	EP	04:16 36.32
EKR8	SZ	13.6	EP	04:16 36.40
EKR8	SZ	13.6	ES	04:16 38.27
EKR7	SZ	13.7	EP	04:16 36.40
EKR7	SZ	13.7	ES	04:16 38.30
ESK	SZ	13.8	IP	C 04:16 36.49
ESK	SE	13.8	ES	C 04:16 38.47
ESK	SN	13.8	AML	04:16 38.66 27 0.22
ESK	SE	13.8	AML	04:16 38.68 51 0.16
EKR6	SZ	13.9	EP	04:16 36.45
EKR6	SZ	13.9	ES	04:16 38.37
EKR5	SZ	14.2	EP	04:16 36.50
EKB3	SZ	14.2	EP	04:16 36.55
EKB3	SZ	14.2	ES	04:16 38.55
EKR5	SZ	14.2	ES	04:16 38.45
EKR4	SZ	14.5	EP	04:16 36.57
EKR4	SZ	14.5	ES	04:16 38.53
EKR3	SZ	14.8	EP	04:16 36.62
EKR3	SZ	14.8	ES	04:16 38.67
EKB4	SZ	14.9	EP	04:16 36.65
EKB4	SZ	14.9	ES	04:16 38.72
BHH	SZ	15.1	IP	C 04:16 36.54
EKR2	SZ	15.2	EP	04:16 36.72
EKR2	SZ	15.2	ES	04:16 38.82
EKR1	SZ	15.7	EP	04:16 36.79
EKR1	SZ	15.7	ES	04:16 38.97
EKB5	SZ	15.7	EP	04:16 36.79
EKB5	SZ	15.7	ES	04:16 38.92
EKB6	SZ	16.5	EP	04:16 36.92
EKB6	SZ	16.5	ES	04:16 39.12
EKB7	SZ	17.4	EP	04:16 37.05
EKB7	SZ	17.4	ES	04:16 39.37
EKB8	SZ	18.3	EP	04:16 37.17
EKB8	SZ	18.3	ES	04:16 39.57
EKB9	SZ	19.0	EP	04:16 37.32
EKB9	SZ	19.0	ES	04:16 39.79
EKB10	SZ	19.8	EP	04:16 37.44
EKB10	SZ	19.8	ES	04:16 39.99
BCC	SZ	21.0	EP	04:16 37.41
BCC	AN	21.0	ES	2 04:16 39.89
BCC	AE	21.0	AML	04:16 40.44 76 0.27
BCC	AN	21.0	AML	04:16 41.86 67 0.28
BWH	SZ	33.0	IP	C 04:16 39.32
BTB	SZ	43.6	EP	2 04:16 41.38
BTB	SE	43.6	AML	04:16 49.68 19 0.27
BTB	SN	43.6	AML	04:16 51.11 27 0.52
BDL	SZ	45.8	EP	2 04:16 41.91
BBO	SZ	51.8	EP	2 04:16 42.55
BBO	SN	51.8	ES	3 04:16 48.89
BBO	SE	51.8	AML	04:16 51.48 31 0.45
BBO	SN	51.8	AML	04:16 53.07 8 0.40
EAU	SZ	74.6	EP	2 04:16 46.92
EDI	SZ	80.8	EP	3 04:16 47.95
ESY	SZ	86.7	EP	3 04:16 48.78
GAL	SZ	107.0	EP	2 04:16 51.03
GAL	SN	107.0	ES	3 04:17 03.72
GAL	SN	107.0	AML	04:17 06.81 23 0.22
GAL	SE	107.0	AML	04:17 08.09 6 0.24
EAB	SZ	134.0	EP	3 04:16 56.10
October 27 2004 Time: 23:58 18.6 UTC Magnitude: -				
Lat: 55.234N	Lon: -3.122W	Depth: 2.3 km	EKR3	SZ 13.3 ES 14:10 36.55
0.1 ML			EKB4	SZ 13.4 EP 14:10 34.44
			EKB4	SZ 13.4 ES 14:10 36.55
Grid Ref: 328.65 kmE 593.89 kmN Locality: ESKDALEMUIR,D & G				
STAT	CO	DIST	PHAS	WT P HrMn SECS AMPL PERI
EKB1	SZ	9.0	EP	23:58 20.82
EKB1	SZ	9.0	ES	23:58 22.62
EKR9	SZ	9.4	EP	23:58 20.87
EKR9	SZ	9.4	ES	23:58 22.74
EKR10	SZ	9.4	EP	23:58 20.82
EKR10	SZ	9.4	ES	23:58 22.66
EKR8	SZ	9.4	EP	23:58 20.89
EKR8	SZ	9.4	ES	23:58 22.77
EKR7	SZ	9.6	EP	23:58 20.91
EKR7	SZ	9.6	ES	23:58 22.78
EKR2	SZ	9.7	EP	23:58 20.95
EKR2	SZ	9.7	ES	23:58 22.82
EKR6	SZ	9.8	EP	23:58 20.91
EKR6	SZ	9.8	ES	23:58 22.82
EKR5	SZ	10.1	EP	23:58 20.99
EKR5	SZ	10.1	ES	23:58 22.95
EKR4	SZ	10.5	EP	23:58 21.06
EKR4	SZ	10.5	ES	23:58 22.99
EKB3	SZ	10.5	EP	23:58 21.07
EKB3	SZ	10.5	ES	23:58 22.93
ESK	EZ	10.6	EP	1 23:58 20.95
ESK	EE	10.6	ES	3 23:58 22.98
ESK	EE	10.6	AML	23:58 24.08 12 0.50
ESK	EN	10.6	AML	23:58 24.44 3 0.16
EKR3	SZ	11.0	EP	23:58 21.19
EKR3	SZ	11.0	ES	23:58 23.12
EKB4	SZ	11.1	EP	23:58 21.21
EKB4	SZ	11.1	ES	23:58 23.19
EKR2	SZ	11.4	EP	23:58 21.41
EKR2	SZ	11.4	ES	23:58 23.34
EKB5	SZ	11.9	EP	23:58 21.36
EKB5	SZ	11.9	ES	23:58 23.37
EKR1	SZ	12.0	EP	23:58 21.32
EKR1	SZ	12.0	ES	23:58 23.39
EKB6	SZ	12.6	EP	23:58 21.61
EKB6	SZ	12.6	ES	23:58 23.51
EKB7	SZ	13.4	EP	23:58 22.07
EKB7	SZ	13.4	ES	23:58 23.83
EKB8	SZ	14.3	EP	23:58 22.36
EKB8	SZ	14.3	ES	23:58 24.04
EKB9	SZ	15.0	EP	23:58 22.64
EKB9	SZ	15.0	ES	23:58 24.30
EKB10	SZ	15.8	EP	23:58 22.09
EKB10	SZ	15.8	ES	23:58 24.47
October 30 2004 Time: 18:42 51.4 UTC Magnitude: 1.3 ML				
Lat: 52.357N	Lon: -3.133W	Depth: 18.6 km	RMS: 0.10 secs	
Grid Ref: 322.85 kmE	273.86 kmN			
Locality: KNIGHTON, POWYS				
Comment: 6KM W OF KNIGHTON				
STAT	CO	DIST	PHAS	WT P HrMn SECS AMPL PERI
SSP	SZ	6.9	IP	D 18:42 54.82
SSP	SN	6.9	ES	2 18:42 57.20
SSP	SN	6.9	AML	18:42 57.38 48 0.09
SSP	SE	6.9	AML	18:42 57.48 51 0.08
HLM	SZ	24.8	EP	2 18:42 56.33
HTR	SZ	32.3	EP	2 18:42 57.51
MCH	SZ	41.1	IP	C 18:42 58.89
MCH	SE	41.1	ES	2 18:43 04.07
MCH	SN	41.1	AML	18:43 04.23 47 0.13
MCH	SE	41.1	AML	18:43 04.31 47 0.17
HAE	SZ	53.8	IP	D 18:43 00.82
November 2 2004 Time: 14:10 31.5 UTC Magnitude: 0.2 ML				
Lat: 55.213N	Lon: -3.116W	Depth: 6.1 km	RMS: 0.00 secs	
Grid Ref: 329.00 kmE	591.55 kmN			
Locality: ESKDALEMUIR,D & G				
STAT	CO	DIST	PHAS	WT P HrMn SECS AMPL PERI
EKB1	SZ	11.3	EP	14:10 34.04
EKB1	SZ	11.3	ES	14:10 35.91
EKR10	SZ	11.4	EP	14:10 34.10
EKR10	SZ	11.4	ES	14:10 35.95
EKR9	SZ	11.5	EP	14:10 34.14
EKR9	SZ	11.5	ES	14:10 36.03
EKR8	SZ	11.6	EP	14:10 34.13
EKR8	SZ	11.6	ES	14:10 36.06
EKR7	SZ	11.8	EP	14:10 34.19
EKR7	SZ	11.8	ES	14:10 36.05
EKB2	SZ	12.0	EP	14:10 34.18
EKB2	SZ	12.0	ES	14:10 36.14
EKR6	SZ	12.1	EP	14:10 34.24
EKR6	SZ	12.1	ES	14:10 36.14
EKR5	SZ	12.5	EP	14:10 34.27
EKR5	SZ	12.5	ES	14:10 36.22
EKR8	EN	12.8	ES	14:10 36.24
EKR8	EE	12.8	AML	14:10 36.57 10 0.05
EKR8	EN	12.8	AML	14:10 36.57 9 0.06
EKR3	SZ	12.8	EP	14:10 34.31
EKR3	SZ	12.8	ES	14:10 36.41
EKR4	SZ	12.9	EP	14:10 34.34
EKR4	SZ	12.9	ES	14:10 36.33
EKR3	SZ	13.3	EP	14:10 34.42
EKR3	SZ	13.3	ES	14:10 36.55
EKR4	SZ	13.4	EP	14:10 34.44
EKR4	SZ	13.4	ES	14:10 36.55

TABLE 2: PHASE DATA 2004

EKR2	SZ	13.8	EP	14:10	34.50	LMI	SE	109.0	AML	13:35	26.09	130	0.28				
EKR2	SZ	13.8	ES	14:10	36.62	EBH	SZ	119.0	IP	1	C	13:35	12.33				
EKB5	SZ	14.2	EP	14:10	34.57	LCP	SZ	119.0	EP	3		13:35	12.06				
EKB5	SZ	14.2	ES	14:10	36.69	GIM	SZ	132.0	EP	2		13:35	12.93				
EKR1	SZ	14.3	EP	14:10	34.64	GIM	SE	132.0	ES	3		13:35	28.86				
EKR1	SZ	14.3	ES	14:10	36.73	GIM	SN	132.0	AML			13:35	31.08				
EKB6	SZ	15.0	EP	14:10	34.69	GIM	SE	132.0	AML			13:35	32.44				
EKB6	SZ	15.0	ES	14:10	36.88	EAB	SZ	133.0	EP	2		13:35	14.01				
EKB7	SZ	15.8	EP	14:10	34.81	GMM	SZ	210.0	EP	3		13:35	22.98				
EKB7	SZ	15.8	ES	14:10	37.14	November 3 2004 Time: 14:06 16.2 UTC											
EKB8	SZ	16.7	EP	14:10	34.97	Lat: 55.201N Lon: -3.162W											
EKB8	SZ	16.7	ES	14:10	37.34	Grid Ref: 326.05 kmE 590.26 kmN											
EKB9	SZ	17.3	EP	14:10	35.09	Locality: ESKDALEMUIR,D & G											
EKB9	SZ	17.3	ES	14:10	37.56	Comment: FELT GRANGE FELL											
EKB10	SZ	18.1	EP	14:10	35.24	Intensity: 2											
EKB10	SZ	18.1	ES	14:10	37.78	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI		
November 3 2004 Time: 13:34 51.8 UTC														Magnitude: 2.7 ML			
Lat: 55.199N Lon: -3.142W														Depth: 4.6 km			
Grid Ref: 327.32 kmE 590.02 kmN														RMS: 0.20 secs			
Locality: ESKDALEMUIR,D & G														Intensity: 3			
Comment: FELT LANGHOLM...																	
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI								
EKB1	SZ	12.4	EP			13:34	54.59	EKB1	SZ	12.1	EP	14:06	18.97				
EKB1	SZ	12.4	ES			13:34	56.41	EKB1	SZ	12.1	ES	14:06	20.82				
BHH	SZ	12.8	IP			13:34	54.33	BHH	SZ	12.5	IP	14:06	18.74				
BHH	SN	12.8	ES			13:34	55.74	BHH	SN	12.5	ES	2	14:06	20.22			
BHH	SN	12.8	AML			13:34	56.19	BHH	SN	12.5	AML	14:06	20.43	384	0.13		
BHH	SE	12.8	AML			13:34	56.57	BHH	SE	12.5	AML	14:06	20.58	496	0.14		
EKB2	SZ	13.2	EP			13:34	54.73	EKB2	SZ	12.9	EP	14:06	19.09				
EKB2	SZ	13.2	ES			13:34	56.64	EKB2	SZ	12.9	ES	14:06	21.02				
EKR9	SZ	13.4	EP			13:34	54.69	ESK	SZ	13.2	EP	14:06	19.19				
EKR10	SZ	13.4	ES			13:34	56.46	ESK	SN	13.2	AML	14:06	21.21	255	0.05		
EKR9	SZ	13.4	ES			13:34	56.55	ESK	SE	13.2	AML	14:06	21.36	63	0.17		
EKR10	SZ	13.4	EP			13:34	54.64	EKR9	SZ	13.8	EP	14:06	19.07				
EKR8	SZ	13.5	EP			13:34	54.72	EKB3	SZ	13.8	EP	14:06	19.25				
EKR8	SZ	13.5	ES			13:34	56.60	EKB3	SZ	13.8	ES	14:06	21.25				
ESK	SZ	13.6	IP			13:34	54.82	EKR7	SZ	13.8	EP	14:06	19.11				
ESK	SN	13.6	ES			13:34	56.81	EKR8	SZ	13.8	EP	14:06	19.09				
EKR7	SZ	13.6	EP			13:34	54.73	EKR10	SZ	13.8	EP	14:06	19.02				
EKR7	SZ	13.6	ES			13:34	56.61	EKR6	SZ	13.9	EP	14:06	19.14				
EKR6	SZ	13.8	EP			13:34	54.79	EKR5	SZ	14.1	EP	14:06	19.19				
EKR6	SZ	13.8	ES			13:34	56.70	EKR4	SZ	14.3	EP	14:06	19.27				
EKB3	SZ	14.0	EP			13:34	54.88	EKR3	SZ	14.5	EP	14:06	19.33				
EKB3	SZ	14.0	ES			13:34	56.85	EKB4	SZ	14.6	EP	14:06	19.37				
EKR5	SZ	14.1	EP			13:34	54.82	EKB4	SZ	14.6	ES	14:06	21.36				
EKR5	SZ	14.1	ES			13:34	56.76	EKR2	SZ	14.9	EP	14:06	19.42				
EKR4	SZ	14.4	EP			13:34	54.90	EKR1	SZ	15.2	EP	14:06	19.49				
EKR4	SZ	14.4	ES			13:34	56.87	EKR1	SZ	15.2	ES	14:06	21.60				
EKR3	SZ	14.7	EP			13:34	54.95	BCC	AZ	21.0	IP	14:06	20.15				
EKR3	SZ	14.7	ES			13:34	56.97	BCC	AN	21.0	ES	3	14:06	22.70			
EKB4	SZ	14.8	EP			13:34	55.00	BCC	AN	21.0	AML		14:06	23.31	91	0.44	
EKB4	SZ	14.8	ES			13:34	57.01	BCC	AE	21.0	AML		14:06	23.34	31	0.17	
EKR4	SZ	14.8	ES			13:34	57.01	BWH	SZ	31.5	IP	14:06	22.04				
EKR2	SZ	15.1	EP			13:34	55.05	BTA	SZ	44.8	EP	14:06	24.40				
EKR2	SZ	15.1	ES			13:34	57.17	BTA	SN	44.8	ES	2	14:06	29.81			
EKR1	SZ	15.5	EP			13:34	55.12	BDL	SZ	46.5	EP	3	14:06	24.80			
EKR1	SZ	15.5	ES			13:34	57.29	BBO	SZ	51.9	EP	3	14:06	25.32			
EKB5	SZ	15.6	EP			13:34	55.11	BBO	SE	51.9	ES	3	14:06	33.24			
EKB5	SZ	15.6	ES			13:34	57.22	BBO	SE	51.9	AML	14:06	35.63	83	0.20		
EKB6	SZ	16.4	EP			13:34	55.25	BBO	SN	51.9	AML	14:06	36.22	29	0.12		
EKB6	SZ	16.4	ES			13:34	57.44	EBL	SZ	64.1	EP	14:06	20.45				
EKB7	SZ	17.2	EP			13:34	55.39	CKE	SZ	68.1	EP	14:06	22.30				
EKB7	SZ	17.2	ES			13:34	57.55	EAU	SZ	74.5	IP	14:06	20.59				
EKB8	SZ	18.2	EP			13:34	55.51	XDE	SZ	80.4	EP	14:06	21.78				
EKB8	SZ	18.2	ES			13:34	57.83	EDI	SZ	80.6	IP	14:06	21.97	1745	0.18		
EKB9	SZ	18.9	EP			13:34	55.65	CSF	SZ	83.9	EP	14:06	22.30				
EKB9	SZ	18.9	ES			13:34	58.12	ESY	SZ	86.6	IP	14:06	20.57				
EKB10	SZ	19.7	EP			13:34	55.77	CDU	SZ	96.1	EP	14:06	22.49				
BCC	AZ	21.1	IP			13:34	55.72	CKE	SZ	63	EP	14:06	20.54				
BCC	AE	21.1	ES			13:34	57.88	EAU	SZ	74.5	IP	14:06	22.41				
BCC	AE	21.1	AML			13:34	58.63	XDE	SZ	80.4	EP	14:06	20.70				
BCC	AN	21.1	AML			13:34	59.36	EDI	SZ	80.6	IP	14:06	22.66				
BWH	SZ	32.8	IP			13:34	57.62	CSF	SZ	83.9	EP	14:06	22.35				
BWH	SZ	32.8	ES			13:35	01.49	EKR8	SZ	13.5	EP	14:06	20.56				
BTA	SZ	43.8	IP			13:34	59.69	EKR8	SZ	13.5	ES	14:06	22.41				
BTA	SN	43.8	ES			13:35	05.05	ESK	SZ	13.6	EP	14:06	20.70				
BTA	SE	43.8	AML			13:35	08.03	ESK	SN	13.6	ES	2	14:06	22.66			
BTA	SN	43.8	AML			13:35	08.47	EKR9	SZ	13.4	EP	14:06	20.54				
BDL	SZ	46.0	EP			13:35	00.07	EKR9	SZ	13.4	ES	14:06	22.49				
BBO	SZ	51.9	IP			13:35	00.83	ESK	SE	13.6	EP	14:06	20.54				
BBO	SN	51.9	ES			13:35	07.69	EKR9	SZ	13.4	ES	14:06	22.35				
BBO	SE	51.9	AML			13:35	09.83	EKR8	SZ	13.5	EP	14:06	20.56				
BBO	SN	51.9	AML			13:35	10.37	EKR8	SZ	13.5	ES	14:06	22.41				
EBL	SZ	64.1	EP	1	C	13:35	03.13	ESK	SZ	13.6	EP	14:06	20.70				
CKE	SZ	68.1	EP	3		13:35	03.39	ESK	SN	13.6	ES	2	14:06	22.66			
EAU	SZ	74.5	IP		D	13:35	05.23	ESK	SE	13.6	AML	14:06	22.80	125	0.20		
XDE	SZ	80.4	EP	3		13:35	05.37	ESK	SN	13.6	AML	14:06	22.80	81	0.21		
EDI	SZ	80.6	IP	1	D	13:35	06.20	EKR7	SZ	13.6	EP	14:06	20.56				
CSF	SZ	83.9	EP	1	C	13:35	05.82	EKR7	SZ	13.6	ES	14:06	22.44				
ESY	SZ	86.6	IP	1	C	13:35	06.59	EKR6	SZ	13.8	EP	14:06	20.61				
CDU	SZ	96.1	EP	2		13:35	07.79	EKR6	SZ	13.8	ES	14:06	22.51				
GAL	SZ	107.0	EP	2		13:35	09.19	EKR4	SZ	14.0	EP	14:06	20.72				
GAL	SN	107.0	ES			13:35	21.43	EKR3	SZ	14.0	ES	14:06	22.44				
GAL	SE	107.0	AML			13:35	24.44</										

TABLE 2: PHASE DATA 2004

EKR4	SZ	14.3	ES	14:06	22.67		BBO	SE	52.0	AML	14:11	02.50	172	0.37	
EKB4	SZ	14.7	EP	14:06	20.82		BBO	SN	52.0	AML	14:11	03.07	64	0.35	
EKB4	SZ	14.7	ES	14:06	22.86		LMI	SZ	110.0	EP	2	14:11	03.00		
EKR3	SZ	14.7	EP	14:06	20.79		LMI	SE	110.0	ES	3	14:11	15.53		
EKR3	SZ	14.7	ES	14:06	22.79		LMI	SN	110.0	AML		14:11	17.48	66	0.44
EKR2	SZ	15.0	EP	14:06	20.89		LMI	SE	110.0	AML		14:11	18.46	60	0.60
EKR2	SZ	15.0	ES	14:06	23.00		GIM	SZ	132.0	EP	2	14:11	05.74		
EKB5	SZ	15.5	EP	14:06	20.96		GIM	SE	132.0	ES	3	14:11	22.04		
EKB5	SZ	15.5	ES	14:06	23.07		GIM	SE	132.0	AML		14:11	23.77	79	0.18
EKR1	SZ	15.5	EP	14:06	20.96		GIM	SN	132.0	AML		14:11	25.42	35	0.18
EKR1	SZ	15.5	ES	14:06	23.10										
EKB6	SZ	16.4	EP	14:06	21.08										
EKB6	SZ	16.4	ES	14:06	23.27										
EKB7	SZ	17.2	EP	14:06	21.21										
EKB7	SZ	17.2	ES	14:06	23.52										
EKB8	SZ	18.1	EP	14:06	21.34										
EKB8	SZ	18.1	ES	14:06	23.71										
EKB9	SZ	18.9	EP	14:06	21.49										
EKB9	SZ	18.9	ES	14:06	23.94										
EKB10	SZ	19.7	EP	14:06	21.62										
EKB10	SZ	19.7	ES	14:06	24.14										
BCC	AZ	21.1	EP	2	14:06	21.58									
BCC	AN	21.1	ES	3	14:06	24.12									
BCC	AE	21.1	AML		14:06	24.63	230	0.23							
BCC	AN	21.1	AML		14:06	25.22	160	0.24							
BWH	SZ	32.7	IP	C	14:06	23.49									
BWH	SZ	32.7	ES	3	14:06	27.37									
BDL	SZ	46.1	EP	3	14:06	26.04									
November 3 2004 Time: 14:10 44.4 UTC					Magnitude: 2.1 ML										
Lat: 55.200N Lon: -3.138W					Depth: 4.6 km										
Grid Ref: 327.58 kmE 590.12 kmN					RMS: 0.20 secs										
Locality: ESKDALEMUIR,D & G															
Comment: FELT LOCKERBIE					Intensity: 2										
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI						
ESK24	SN		AML			14:10	49.63	137	0.12						
ESK24	SE		AML			14:10	49.64	187	0.12						
EKB1	SZ	12.4	EP			14:10	47.25								
EKB1	SZ	12.4	ES			14:10	49.09								
BHH	SZ	12.9	IP	C		14:10	46.98								
BHH	SE	12.9	ES	2		14:10	48.55								
BHH	SN	12.9	AML			14:10	48.76	3479	0.17						
BHH	SE	12.9	AML			14:10	49.24	3816	0.20						
EKB2	SZ	13.2	EP			14:10	47.37								
EKB2	SZ	13.2	ES			14:10	49.30								
EKR9	SZ	13.3	EP			14:10	47.35								
EKR9	SZ	13.3	ES			14:10	49.17								
EKR10	SZ	13.3	EP			14:10	47.30								
EKR10	SZ	13.3	ES			14:10	49.14								
EKR8	SZ	13.4	EP			14:10	47.37								
EKR8	SZ	13.4	ES			14:10	49.22								
EKR7	SZ	13.6	EP			14:10	47.40								
EKR7	SZ	13.6	ES			14:10	49.27								
EKR1	SZ	13.7	IP	C		14:10	47.48								
EKR1	SE	13.7	EP			14:10	47.90								
EKR1	SN	13.7	ES	2		14:10	49.41								
EKR1	SE	13.7	AML			14:10	49.70	241	0.19						
EKR1	SN	13.7	AML			14:10	49.72	150	0.22						
EKR6	SZ	13.8	EP			14:10	47.42								
EKR6	SZ	13.8	ES			14:10	49.34								
EKR5	SZ	14.0	EP			14:10	47.47								
EKB3	SZ	14.0	EP			14:10	47.52								
EKB3	SZ	14.0	ES			14:10	49.54								
EKR5	SZ	14.0	ES			14:10	49.39								
EKR4	SZ	14.3	EP			14:10	47.54								
EKR4	SZ	14.3	ES			14:10	49.51								
EKR3	SZ	14.7	EP			14:10	47.59								
EKR3	SZ	14.7	ES			14:10	49.60								
EKB4	SZ	14.8	EP			14:10	47.64								
EKB4	SZ	14.8	ES			14:10	49.69								
EKR2	SZ	15.1	EP			14:10	47.70								
EKR2	SZ	15.1	ES			14:10	49.79								
EKR1	SZ	15.5	EP			14:10	47.77								
EKR1	SZ	15.5	ES			14:10	49.92								
EKB5	SZ	15.6	EP			14:10	47.77								
EKB5	SZ	15.6	ES			14:10	49.87								
EKB6	SZ	16.4	EP			14:10	47.90								
EKB6	SZ	16.4	ES			14:10	50.09								
EKB7	SZ	17.2	EP			14:10	48.04								
EKB7	SZ	17.2	ES			14:10	50.32								
EKB8	SZ	18.2	EP			14:10	48.15								
EKB8	SZ	18.2	ES			14:10	50.52								
EKB9	SZ	18.9	EP			14:10	48.29								
EKB9	SZ	18.9	ES			14:10	50.75								
EKB10	SZ	19.7	EP			14:10	48.41								
EKB10	SZ	19.7	ES			14:10	50.95								
BCC	AZ	21.2	IP	1	C	14:10	48.35								
BCC	AE	21.2	ES	3		14:10	50.92								
BCC	AE	21.2	AML			14:10	51.47	420	0.30						
BCC	AN	21.2	AML			14:10	51.91	355	0.46						
BWH	SZ	33.0	IP	C		14:10	50.29								
BTA	SZ	43.7	IP	1	C	14:10	52.37								
BTA	SE	43.7	ES	3		14:10	57.58								
BTA	SE	43.7	AML			14:11	00.51	114	0.38						
BTA	SE	43.7	AML			14:11	01.16	148	0.66						
BDL	SZ	45.9	IP	1	C	14:10	52.96								
BBO	SZ	52.0	IP	1	C	14:10	53.51								
BBO	SE	52.0	ES	2		14:11	00.04								
November 3 2004 Time: 14:22 36.3 UTC					Magnitude: 0.3 ML										
Lat: 55.216N Lon: -3.115W					Depth: 6.1 km										
Grid Ref: 329.07 kmE 590.12 kmN					RMS: 0.10 secs										
Locality: ESKDALEMUIR,D & G															
Comment: FELT LOCKERBIE															
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI						
EKR10	SZ														

TABLE 2: PHASE DATA 2004

EKB2	SZ	12.9	EP	14:52	07.17		EKB5	SZ	15.3	ES	01:59	34.80	
EKB2	SZ	12.9	ES	14:52	09.10		EKB6	SZ	16.1	EP	01:59	32.82	
BHH	SZ	12.9	IP	14:52	06.81		EKB6	SZ	16.1	ES	01:59	35.00	
BHH	SE	12.9	ES	14:52	08.24	2	EKB7	SZ	16.9	EP	01:59	32.98	
BHH	SN	12.9	AML	14:52	08.59	431 0.17	EKB7	SZ	16.9	ES	01:59	35.25	
BHH	SE	12.9	AML	14:52	09.07	528 0.23	EKB8	SZ	17.9	EP	01:59	33.10	
EKR8	SZ	13.3	EP	14:52	07.16		EKB8	SZ	17.9	ES	01:59	35.45	
EKR8	SZ	13.3	ES	14:52	09.02		EKB9	SZ	18.6	EP	01:59	33.22	
EKR9	SZ	13.3	EP	14:52	07.15		EKB9	SZ	18.6	ES	01:59	35.67	
EKR9	SZ	13.3	ES	14:52	08.98		EKB10	SZ	19.4	EP	01:59	33.36	
EKR10	SZ	13.3	EP	14:52	07.09		EKB10	SZ	19.4	ES	01:59	35.87	
ESK	SZ	13.3	EP	14:52	07.24	2	BCC	SZ	21.4	EP	2	01:59	33.38
ESK	SN	13.3	ES	14:52	09.17	2	BWH	SZ	32.8	IP	C	01:59	35.26
ESK	SN	13.3	AML	14:52	09.47	36 0.15	BWH	SZ	32.8	ES	3	01:59	39.20
ESK	SE	13.3	AML	14:52	09.51	72 0.21	BTA	SZ	44.1	EP	2	01:59	37.39
EKR10	SZ	13.3	ES	14:52	08.92		BTA	SE	44.1	ES	2	01:59	42.94
EKR7	SZ	13.4	EP	14:52	07.17		BTA	SE	44.1	AML	01:59	44.15	14 0.42
EKR7	SZ	13.4	ES	14:52	09.04		BTA	SN	44.1	AML	01:59	46.12	21 0.64
EKR6	SZ	13.6	EP	14:52	07.22		BDL	SZ	46.3	EP	2	01:59	37.88
EKR6	SZ	13.6	ES	14:52	09.12								
EKB3	SZ	13.7	EP	14:52	07.33								
EKB3	SZ	13.7	ES	14:52	09.31								
EKR5	SZ	13.8	EP	14:52	07.27								
EKR5	SZ	13.8	ES	14:52	09.19								
EKR4	SZ	14.1	EP	14:52	07.34								
EKR4	SZ	14.1	ES	14:52	09.30								
EKR3	SZ	14.4	EP	14:52	07.41								
EKR3	SZ	14.4	ES	14:52	09.42								
EKB4	SZ	14.5	EP	14:52	07.45								
EKB4	SZ	14.5	ES	14:52	09.46								
EKR2	SZ	14.8	EP	14:52	07.51								
EKR2	SZ	14.8	ES	14:52	09.54								
EKR1	SZ	15.2	EP	14:52	07.57								
EKR1	SZ	15.2	ES	14:52	09.69								
EKB5	SZ	15.3	EP	14:52	07.57								
EKB5	SZ	15.3	ES	14:52	09.68								
EKB6	SZ	16.1	EP	14:52	07.69								
EKB6	SZ	16.1	ES	14:52	09.87								
EKB7	SZ	17.0	EP	14:52	07.82								
EKB7	SZ	17.0	ES	14:52	10.12								
EKB8	SZ	17.9	EP	14:52	07.94								
EKB8	SZ	17.9	ES	14:52	10.32								
EKB9	SZ	18.6	EP	14:52	08.10								
EKB9	SZ	18.6	ES	14:52	10.54								
EKB10	SZ	19.5	EP	14:52	08.22								
EKB10	SZ	19.5	ES	14:52	10.75								
BCC	AZ	21.3	EP	2	14:52	08.22							
BWH	SZ	32.6	IP	C	14:52	10.10							
BWH	SZ	32.6	ES	3	14:52	14.00							
BTA	SZ	44.2	EP	2	14:52	12.45							
BDL	SZ	46.3	EP	2	14:52	12.75							
BBO	SZ	52.2	EP	2	14:52	13.37							
BBO	SE	52.2	ES	2	14:52	19.89							
BBO	SN	52.2	AML	14:52	21.16	11 0.23							
BBO	SE	52.2	AML	14:52	22.26	22 0.25							
November 4 2004 Time: 01:59 29.4 UTC Magnitude: 1.2 ML													
Lat: 55.202N	Lon: -3.142W	Depth: 4.3 km	RMS: 0.10 secs										
Grid Ref: 327.32 kmE	590.35 kmN	Locality: ESKDALEMUIR,D & G											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI				
ESK24	SZ	EP		02:00	39.21								
EKB1	SZ	12.1	EP	01:59	32.19								
EKB1	SZ	12.1	ES	01:59	34.02								
EKB2	SZ	12.9	EP	01:59	32.29								
EKB2	SZ	12.9	ES	01:59	34.23								
BHH	SZ	13.1	IP	C	01:59	31.97							
BHH	SN	13.1	ES	2	01:59	33.62							
BHH	SN	13.1	AML	01:59	33.74	391 0.14							
BHH	SE	13.1	AML	01:59	33.83	437 0.17							
EKR10	SZ	13.1	EP	01:59	32.22								
EKR9	SZ	13.1	EP	01:59	32.27								
EKR9	SZ	13.1	ES	01:59	34.15								
EKR10	SZ	13.1	ES	01:59	34.07								
EKR8	SZ	13.2	EP	01:59	32.30								
EKR8	SZ	13.2	ES	01:59	34.17								
ESK	SZ	13.3	IP	C	01:59	32.42							
EKR7	SZ	13.3	EP	01:59	32.32								
EKR7	SZ	13.3	ES	01:59	34.17								
ESK	SN	13.3	ES	2	01:59	34.36							
ESK	SE	13.3	AML	01:59	34.63	32 0.21							
ESK	SN	13.3	AML	01:59	34.63	25 0.21							
EKR6	SZ	13.5	EP	01:59	32.37								
EKR6	SZ	13.5	ES	01:59	34.25								
EKB3	SZ	13.7	EP	01:59	32.45								
EKR5	SZ	13.7	EP	01:59	32.39								
EKR5	SZ	13.7	ES	01:59	34.32								
EKB3	SZ	13.7	ES	01:59	34.45								
EKR4	SZ	14.0	EP	01:59	32.47								
EKR4	SZ	14.0	ES	01:59	34.44								
EKR3	SZ	14.4	EP	01:59	32.54								
EKR3	SZ	14.4	ES	01:59	34.52								
EKB4	SZ	14.5	EP	01:59	32.57								
EKB4	SZ	14.5	ES	01:59	34.59								
EKR2	SZ	14.8	EP	01:59	32.62								
EKR2	SZ	14.8	ES	01:59	34.72								
EKR1	SZ	15.2	EP	01:59	32.70								
EKR1	SZ	15.2	ES	01:59	34.85								
EKB5	SZ	15.3	EP	01:59	32.70								
November 4 2004 Time: 02:00 36.5 UTC Magnitude: -0.1 ML													
Lat: 55.216N	Lon: -3.116W	Depth: 6.2 km	RMS: 0.00 secs										
Grid Ref: 329.00 kmE	591.77 kmN	Locality: ESKDALEMUIR,D & G											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI				
EKB1	SZ	11.1	EP		19:30	27.42							
EKB1	SZ	11.1	ES		19:30	29.27							
EKR9	SZ	11.2	EP		19:30	27.52							
EKR9	SZ	11.2	ES		19:30	29.37							
EKR10	SZ	11.2	EP		19:30	27.47							
EKR8	SZ	11.4	EP		19:30	29.30							
EKR8	SZ	11.4	ES		19:30	29.40							
EKR7	SZ	11.6	EP		19:30	27.55							
EKR7	SZ	11.6	ES		19:30	29.42							
EKB2	SZ	11.8	EP		19:30	27.55							
EKB2	SZ	11.8	ES		19:30	29.47							
EKR6	SZ	11.9	EP		19:30	27.60							
EKR6	SZ	11.9	ES		19:30	29.50							
EKR5	SZ	12.2	EP		19:30	27.61							
EKR5	SZ	12.2	ES		19:30	29.57							
EKB3	SZ	12.6	EP		19:30	27.70							
EKB3	SZ	12.6	ES	3	19:30	29.60							
ESK	EE	12.6	AML		19:30	29.87							
EKB3	SZ	12.6	ES	D	19:30	29.72							
ESK	EZ	12.6	EP	1	C	19:30	27.63						
ESK	EN	12.6	AML		19:30								

TABLE 2: PHASE DATA 2004

TABLE 2: PHASE DATA 2004

Locality: ESKDALEMUIR, D & G												
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI			
ESK	SN	13.6	AML	09:40	47.15	107	0.18					
ESK	SE	13.6	AML	09:40	47.17	180	0.14					
EKR6	SZ	13.7	EP	09:40	44.97			EKB1	SZ	10.8	EP	
EKR6	SZ	13.7	ES	09:40	46.87			EKB1	SZ	10.8	ES	
EKR5	SZ	14.0	ES	09:40	46.95			EKR9	SZ	11.0	EP	
EKB3	SZ	14.0	EP	09:40	45.07			EKR10	SZ	11.0	EP	
EKB3	SZ	14.0	ES	09:40	47.05			EKR10	SZ	11.0	ES	
EKR5	SZ	14.0	EP	09:40	45.02			EKR9	SZ	11.0	ES	
EKR4	SZ	14.3	EP	09:40	45.10			EKR8	SZ	11.2	EP	
EKR4	SZ	14.3	ES	09:40	47.05			EKR8	SZ	11.2	ES	
EKR3	SZ	14.6	EP	09:40	45.15			EKR7	SZ	11.4	EP	
EKR3	SZ	14.6	ES	09:40	47.17			EKR7	SZ	11.4	ES	
EKB4	SZ	14.7	EP	09:40	45.18			EKB2	SZ	11.5	EP	
EKB4	SZ	14.7	ES	09:40	47.22			EKB2	SZ	11.5	ES	
EKR2	SZ	15.0	EP	09:40	45.25			EKR6	SZ	11.7	EP	
EKR2	SZ	15.0	ES	09:40	47.34			EKR6	SZ	11.7	ES	
EKR1	SZ	15.4	EP	09:40	45.32			EKR5	SZ	12.0	EP	
EKR1	SZ	15.4	ES	09:40	47.47			EKR5	SZ	12.0	ES	
EKB5	SZ	15.5	EP	09:40	45.32			EKB3	SZ	12.3	EP	
EKB5	SZ	15.5	ES	09:40	47.42			EKB3	SZ	12.3	ES	
EKB6	SZ	16.3	EP	09:40	45.45			ESK	EZ	12.3	IP	
EKB6	SZ	16.3	ES	09:40	47.62		1 C	ESK	EE	12.3	ES	
EKB7	SZ	17.2	EP	09:40	45.57			ESK	EE	12.3	AML	
EKB7	SZ	17.2	ES	09:40	47.87			ESK	EN	12.3	AML	
EKB8	SZ	18.1	EP	09:40	45.70			EKR4	SZ	12.4	EP	
EKB8	SZ	18.1	ES	09:40	48.05			EKR4	SZ	12.4	ES	
EKB9	SZ	18.8	EP	09:40	45.85			EKR3	SZ	12.8	EP	
EKB9	SZ	18.8	ES	09:40	48.30			EKR3	SZ	12.8	ES	
EKB10	SZ	19.6	EP	09:40	45.97			EKB4	SZ	13.0	EP	
EKB10	SZ	19.6	ES	09:40	48.49			EKB4	SZ	13.0	ES	
BCC	AZ	21.2	IP	1 C	09:40	46.00			EKR2	SZ	13.3	EP
BCC	AE	21.2	ES	2	09:40	48.50			EKR2	SZ	13.3	ES
BCC	AE	21.2	AML		09:40	49.02	200 0.23		EKB5	SZ	13.7	EP
BCC	AN	21.2	AML		09:40	49.62	168 0.14		EKB5	SZ	13.7	ES
BTA	SZ	43.9	EP	1 C	09:40	49.99			EKR1	SZ	13.9	EP
BTA	SN	43.9	EP	2	09:40	50.06			EKR1	SZ	13.9	ES
BTA	SE	43.9	EP	2	09:40	50.10			EKB6	SZ	14.5	EP
CKE	SZ	68.2	EP	2	09:40	53.63			EKB6	SZ	14.5	ES
LMI	SZ	110.0	EP	2	09:41	00.65			EKB7	SZ	15.3	EP
LMI	SE	110.0	ES	3	09:41	13.42			EKB7	SZ	15.3	ES
LMI	SN	110.0	AML		09:41	15.09	52 0.46		EKB8	SZ	16.2	EP
LMI	SE	110.0	AML		09:41	16.07	47 0.46		EKB8	SZ	16.2	ES
GIM	SZ	132.0	EP	2	09:41	03.70			EKB9	SZ	16.9	EP
									EKB9	SZ	16.9	ES
									EKB10	SZ	17.7	EP
									EKB10	SZ	17.7	ES

November 5 2004 Time: 10:38 28.6 UTC Magnitude: -

0.2 ML

Lat: 55.215N Lon: -3.118W Depth: 6.0 km

Grid Ref: 328.87 kmE 591.77 kmN RMS: 0.00 secs

Locality: ESKDALEMUIR, D & G

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI		
EKB1	SZ	11.1	EP		10:38	31.04					
EKB1	SZ	11.1	ES		10:38	32.87					
EKR10	SZ	11.2	EP		10:38	31.09					
EKR10	SZ	11.2	ES		10:38	32.92					
EKR9	SZ	11.3	EP		10:38	31.14					
EKR9	SZ	11.3	ES		10:38	32.99					
EKR8	SZ	11.4	EP		10:38	31.16					
EKR8	SZ	11.4	ES		10:38	33.02					
EKR7	SZ	11.6	EP		10:38	31.19					
EKR7	SZ	11.6	ES		10:38	33.04					
EKB2	SZ	11.7	EP		10:38	31.18					
EKB2	SZ	11.7	ES		10:38	33.07					
EKR6	SZ	11.9	EP		10:38	31.21					
EKR6	SZ	11.9	ES		10:38	33.11					
EKR5	SZ	12.2	EP		10:38	31.27					
EKR5	SZ	12.2	ES		10:38	33.19					
EKB3	SZ	12.5	EP		10:38	31.27					
EKB3	SZ	12.5	ES		10:38	33.32					
ESK	EZ	12.5	EP	1 C	10:38	31.16					
ESK	EE	12.5	ES	2	10:38	33.25					
ESK	EN	12.5	AML		10:38	33.48	3 0.14				
ESK	EE	12.5	AML		10:38	33.49	7 0.15				
EKR4	SZ	12.6	EP		10:38	31.34					
EKR4	SZ	12.6	ES		10:38	33.29					
EKR3	SZ	13.1	EP		10:38	31.39					
EKR3	SZ	13.1	ES		10:38	33.42					
EKB4	SZ	13.2	EP		10:38	31.44					
EKB4	SZ	13.2	ES		10:38	33.47					
EKR2	SZ	13.5	EP		10:38	31.50					
EKR2	SZ	13.5	ES		10:38	33.58					
EKB5	SZ	14.0	EP		10:38	31.56					
EKB5	SZ	14.0	ES		10:38	33.67					
EKR1	SZ	14.1	EP		10:38	31.57					
EKR1	SZ	14.1	ES		10:38	33.72					
EKB6	SZ	14.7	EP		10:38	31.69					
EKB6	SZ	14.7	ES		10:38	33.87					
EKB7	SZ	15.5	EP		10:38	31.82					
EKB7	SZ	15.5	ES		10:38	34.09					
EKB8	SZ	16.4	EP		10:38	31.95					
EKB8	SZ	16.4	ES		10:38	34.30					
EKB9	SZ	17.1	EP		10:38	32.09					
EKB9	SZ	17.1	ES		10:38	34.54					
EKB10	SZ	17.9	EP		10:38	32.22					
EKB10	SZ	17.9	ES		10:38	34.73					

November 5 2004 Time: 13:36 08.0 UTC Magnitude: -

0.1 ML

Lat: 55.218N Lon: -3.118W Depth: 6.3 km

Grid Ref: 328.88 kmE 592.10 kmN RMS: 0.00 secs

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI		
EKB8	SZ	18.1	EP		17:10	00.45					
EKB8	SZ	18.1	ES		17:10	02.82					
EKB9	SZ	18.8	EP		17:10	00.60					
EKB9	SZ	18.8	ES		17:10	03.05					

Locality: ESKDALEMUIR, D & G											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI		
EKB1	SZ	12.4	EP		17:09	59.55					
EKB1	SZ	12.4	ES		17:10	01.39					
BHH	SZ	13.0	IP		17:09	59.29					
BHH	SE	13.0	ES	2	17:10	00.73					
EKB2	SZ	13.2	EP		17:09	59.80					
EKB2	SZ	13.2	ES		17:10	01.61					
EKR9	SZ	13.2	ES		17:10	01.52					
EKR10	SZ	13.2	EP		17:09	59.60					
EKR10	SZ	13.2	ES		17:10	01.42					
EKR9	SZ	13.2	EP		17:09	59.65					
EKR6	SZ	13.7	EP		17:09	59.72					
EKR6	SZ	13.7	ES		17:10	01.65					
EKR6	SZ	13.7	EP	2	17:09	59.78					
EKR6	SE	13.7	AML		17:						

TABLE 2: PHASE DATA 2004

EKB10	SZ	19.6	EP	17:10	00.72		EKR3	SZ	14.3	ES	20:54	41.19															
EKB10	SZ	19.6	ES	17:10	03.25		EKR4	SZ	14.4	EP	20:54	39.20															
BWH	SZ	33.1	IP	C	17:10	02.61	EKB4	SZ	14.4	ES	20:54	41.23															
BTA	SZ	43.7	EP	2	17:10	04.69	EKR2	SZ	14.7	EP	20:54	39.27															
BTA	SN	43.7	ES	2	17:10	10.07	EKR2	SZ	14.7	ES	20:54	41.34															
BTA	SN	43.7	AML		17:10	12.72	10	0.36	EKR1	SZ	15.2	EP	20:54	39.33													
BTA	SE	43.7	AML		17:10	12.99	9	0.29	EKR1	SZ	15.2	ES	20:54	41.46													
BBO	SZ	52.1	EP	2	17:10	06.29	EKB5	SZ	15.2	EP	20:54	39.35															
November 7 2004 Time: 18:39 19.8 UTC Magnitude: 0.8 ML																											
Lat: 55.204N Lon: -3.134W Depth: 4.2 km RMS: 0.10 secs																											
Locality: ESKDALEMUIR,D & G																											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI																		
EKB1	SZ	12.0	EP			18:39	22.54	EKB8	SZ	17.8	EP	20:54	39.73														
EKB1	SZ	12.0	ES			18:39	24.37	EKB8	SZ	17.8	ES	20:54	42.07														
EKR9	SZ	12.8	ES			18:39	24.47	EKB9	SZ	18.5	EP	20:54	39.88														
EKR10	SZ	12.8	EP			18:39	22.54	EKB9	SZ	18.5	ES	20:54	42.31														
EKR9	SZ	12.8	EP			18:39	22.60	EKB10	SZ	19.4	EP	20:54	39.99														
EKR10	SZ	12.8	ES			18:39	24.40	EKB10	SZ	19.4	ES	20:54	42.50														
EKB2	SZ	12.8	EP			18:39	22.69	BCC	SZ	21.4	EP	2	20:54	40.04													
EKB2	SZ	12.8	ES			18:39	24.57	BWH	SZ	32.9	IP	C	20:54	41.91													
EKR8	SZ	12.9	EP			18:39	22.62	BTA	SZ	44.1	IP	C	20:54	44.00													
EKR8	SZ	12.9	ES			18:39	24.49	BTA	SE	44.1	ES	2	20:54	49.54													
EKR7	SZ	13.1	EP			18:39	22.65	BDL	SZ	46.3	EP	2	20:54	44.49													
EKR7	SZ	13.1	ES			18:39	24.52	November 10 2004 Time: 23:35 15.2 UTC Magnitude: 2.1 ML																			
EKR6	SZ	13.3	EP			18:39	22.69	Lat: 53.176N Lon: -5.241W Depth: 7.5 km RMS: 0.30 secs																			
EKR6	SZ	13.3	ES			18:39	24.60	Locality: IRISH SEA Comment: 45KM WSW HOLYHEAD																			
ESK	SZ	13.3	EP	2		18:39	22.74	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI										
ESK	SE	13.3	AML			18:39	24.82	10	0.08	YRC	SZ	45.2	IP	C	23:35	23.10											
ESK	SN	13.3	AML			18:39	26.61	7	0.20	YRC	SZ	45.2	ES	3	23:35	28.12											
BHH	SZ	13.4	IP	C		18:39	22.27			WCB	SZ	51.5	IP	C	23:35	24.09											
BHH	SN	13.4	AML			18:39	24.00	164	0.13	WCB	SN	51.5	ES	2	23:35	29.90											
BHH	SE	13.4	AML			18:39	24.09	183	0.17	WCB	SE	51.5	AML		23:35	30.53	83	0.21									
EKR5	SZ	13.5	EP			18:39	22.72			WCB	SN	51.5	AML		23:35	30.65	146	0.18									
EKR5	SZ	13.5	ES			18:39	24.67			WLF	SZ	57.8	EP	1	C	23:35	25.02										
EKB3	SZ	13.6	EP			18:39	22.85			YRE	SZ	58.8	EP	1	D	23:35	25.06										
EKB3	SZ	13.6	ES			18:39	24.80			WME	SZ	67.2	IP	C	23:35	26.53											
EKR4	SZ	13.9	EP			18:39	22.80			YLL	SZ	71.7	EP	2	23:35	27.26											
EKR4	SZ	13.9	ES			18:39	24.78			DSB	BZ	76.2	EP	2	23:35	28.08											
EKR3	SZ	14.2	EP			18:39	22.92			DSB	BN	76.2	ES	2	23:35	36.52											
EKR3	SZ	14.2	ES			18:39	24.89			DSB	BN	76.2	AML		23:35	37.82	89	0.25									
EKB4	SZ	14.3	EP			18:39	23.02			DSB	BE	76.2	AML		23:35	39.19	39	0.32									
EKB4	SZ	14.3	ES			18:39	24.95			WPM	SZ	89.7	EP	2	23:35	30.28											
EKR2	SZ	14.7	EP			18:39	22.99			WIM	SZ	114.0	EP	2	23:35	34.21											
EKR2	SZ	14.7	ES			18:39	25.07			GMM	SZ	127.0	EP	2	23:35	36.18											
EKR1	SZ	15.1	EP			18:39	23.07			GIM	SZ	134.0	EP	1	C	23:35	36.94										
EKR1	SZ	15.1	ES			18:39	25.18			GIM	SN	134.0	ES	3	23:35	53.09											
EKB5	SZ	15.1	EP			18:39	23.10			GIM	SE	134.0	AML		23:35	54.99	71	0.16									
EKB5	SZ	15.1	ES			18:39	25.14			GIM	SN	134.0	AML		23:35	55.58	130	0.14									
EKB6	SZ	15.9	EP			18:39	23.22			SBD	SZ	136.0	EP	2	23:35	36.92											
EKB6	SZ	15.9	ES			18:39	25.35			HPE	SZ	141.0	EP	2	23:35	37.97											
EKB7	SZ	16.8	EP			18:39	23.29			SSP	SZ	167.0	IP	C	23:35	41.43											
EKB7	SZ	16.8	ES			18:39	25.60			SSP	SE	167.0	ES	2	23:36	0.80											
EKB8	SZ	17.7	EP			18:39	23.55			SSP	SE	167.0	AML		23:36	01.46	17	0.26									
EKB8	SZ	17.7	ES			18:39	25.80			SSP	SN	167.0	AML		23:36	02.49	18	0.17									
EKB9	SZ	18.4	EP			18:39	23.74			SSP	SE	167.0	AML		23:36	02.49	18	0.17									
EKB9	SZ	18.4	ES			18:39	26.02			SSP	SN	167.0	AML		23:36	09.38	10	0.15									
EKB10	SZ	19.2	EP			18:39	23.82			HTR	SZ	181.0	EP	2	23:35	43.35											
EKB10	SZ	19.2	ES			18:39	26.19			GAL	SZ	191.0	EP	2	23:35	44.05											
BWH	SZ	33.3	IP	C		18:39	25.55			GAL	SN	191.0	AML		23:36	09.38	10	0.15									
BTA	SE	43.9	EP	2		18:39	27.55			GAL	SE	191.0	AML		23:36	13.78	14	0.33									
BTA	SN	43.9	ES	2		18:39	33.04			MCH	SZ	201.0	EP		23:36	45.74											
BBO	SZ	52.5	EP	2		18:39	29.39			MCH	SN	201.0	AML		23:36	09.90	22	0.24									
November 7 2004 Time: 20:54 36.1 UTC Magnitude: 0.9 ML														November 11 2004 Time: 00:58 53.6 UTC Magnitude: 1.1 ML													
Lat: 55.203N Lon: -3.140W Depth: 4.3 km RMS: 0.10 secs														Lat: 55.251N Lon: -3.492W Depth: 4.5 km RMS: 0.20 secs													
Locality: ESKDALEMUIR,D & G Locality: JOHNSTONEBRIDGE,D & G														Locality: JOHNSTONEBRIDGE,D & G													
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI																		
EKB1	SZ	12.1	EP			20:54	38.92			BWH	SZ	13.3	IP	C	00:58	56.36											
EKB1	SZ	12.1	ES			20:54	40.67			ESK	SZ	19.7	IP	C	00:58	57.49											
EKB2	SZ	12.9	EP			20:54	38.94			ESK	SE	19.7	ES	2	00:58	59.97											
EKB2	SZ	12.9	ES			20:54	40.87			BHH	SZ	24.8	IP	C	00:58	58.22											
BHH	SN	13.1	ES	2		20:54	40.15																				

TABLE 2: PHASE DATA 2004

ESK	SZ	19.7	IP	C	00:11	30.81			HTL	HZ	152.0	EP	2	02:52	33.42											
ESK	SN	19.7	ES	2	00:11	33.29			HTL	HN	152.0	ES	2	02:52	51.73											
ESK	SE	19.7	AML		00:11	33.52	20	0.09	HTL	HN	152.0	AML		02:52	53.63	5	0.71									
ESK	SN	19.7	AML		00:11	33.94	27	0.38	HTL	HE	152.0	AML		02:52	53.97	4	0.64									
BHH	SZ	23.9	EP	1	00:11	31.57																				
BHH	SE	23.9	ES	2	00:11	34.51																				
BHH	SE	23.9	AML		00:11	34.63	51	0.16																		
BHH	SN	23.9	AML		00:11	34.72	61	0.18																		
November 13 2004				Time: 11:29 56.0 UTC			Magnitude: 0.8 ML			November 19 2004				Time: 02:53 23.8 UTC			Magnitude: 0.1 ML									
Lat: 50.108N				Lon: -5.175W			Depth: 7.3 km			Lat: 55.217N				Lon: -3.117W			Depth: 6.2 km									
Grid Ref: 173.01 kmE				28.00 kmN			RMS: 0.00 secs			Grid Ref: 328.94 kmE				591.99 kmN			RMS: 0.00 secs									
Locality: CONSTANTINE, CORNWALL				STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI			
CGW	SZ	3.5	IP		D	11:29	57.45			EKB1	SZ	10.9	EP		EKB1	SZ	10.9	EP		02:53	26.27					
CGW	SZ	3.5	ES	3		11:29	58.45			EKB1	SZ	10.9	ES		EKB1	SZ	10.9	ES		02:53	28.09					
CMA	SZ	4.5	EP	1	C	11:29	57.51			EKR10	SZ	11.0	EP		EKR10	SZ	11.0	EP		02:53	26.32					
CGH	SZ	6.5	IP		D	11:29	57.71			EKR9	SZ	11.1	EP		EKR9	SZ	11.1	EP		02:53	26.37					
CGH	SZ	6.5	ES	3		11:29	59.05			EKR8	SZ	11.2	EP		EKR8	SZ	11.2	ES		02:53	26.37					
CR2	SZ	6.5	IP		C	11:29	57.76			EKR8	SZ	11.2	ES		EKR8	SZ	11.2	ES		02:53	28.24					
CR2	SN	6.5	ES	1		11:29	59.05			EKR7	SZ	11.5	EP		EKR7	SZ	11.5	EP		02:53	26.39					
CR2	SN	6.5	AML			11:29	59.15	75	0.07	EKR7	SZ	11.5	EP		EKR7	SZ	11.5	EP		02:53	28.25					
CR2	SE	6.5	AML			11:29	59.19	50	0.06	EKR6	SZ	11.7	EP		EKR6	SZ	11.7	ES		02:53	26.45					
CCA	SZ	9.5	IP		C	11:29	58.10			EKR6	SZ	11.7	ES		EKR6	SZ	11.7	ES		02:53	28.32					
November 13 2004				Time: 11:31 01.0 UTC			Magnitude: 0.5 ML			EKR5				EKR5			Time: 02:53 28.39			Magnitude: 0.1 ML						
Lat: 50.109N				Lon: -5.177W			Depth: 7.2 km			Lat: 50.109N				Lon: -5.177W			Depth: 7.2 km			RMS: 0.00 secs						
Grid Ref: 172.87 kmE				28.12 kmN			RMS: 0.00 secs			Grid Ref: 172.87 kmE				RMS: 0.00 secs			RMS: 0.00 secs			RMS: 0.00 secs						
Locality: CONSTANTINE, CORNWALL				STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI			
CGW	SZ	3.4	IP		C	11:31	02.39			EKR9	SZ	11.1	EP		EKR9	SZ	11.1	EP		02:53	26.37					
CGW	SZ	3.4	ES	3		11:31	03.41			EKR9	SZ	11.1	ES		EKR9	SZ	11.1	ES		02:53	28.22					
CMA	SZ	4.6	IP		D	11:31	02.47			EKR8	SZ	11.2	EP		EKR8	SZ	11.2	EP		02:53	26.37					
CR2	SZ	6.5	IP		C	11:31	02.70			EKR8	SZ	11.2	ES		EKR8	SZ	11.2	ES		02:53	28.24					
CR2	SN	6.5	ES	1		11:31	03.98			EKR7	SZ	11.5	EP		EKR7	SZ	11.5	EP		02:53	26.39					
CR2	SN	6.5	AML			11:31	04.09	26	0.07	EKR7	SZ	11.5	EP		EKR7	SZ	11.5	EP		02:53	28.25					
CR2	SE	6.5	AML			11:31	04.14	36	0.07	EKR6	SZ	11.7	EP		EKR6	SZ	11.7	EP		02:53	28.31					
CGH	SZ	6.5	IP		D	11:31	02.66			EKR6	SZ	11.7	ES		EKR6	SZ	11.7	ES		02:53	26.45					
CGH	SZ	6.5	ES	3		11:31	03.96			EKR5	SZ	12.1	EP		EKR5	SZ	12.1	EP		02:53	28.32					
CCA	SZ	9.4	IP		D	11:31	03.04			EKR5	SZ	12.1	EP		EKR5	SZ	12.1	EP		02:53	26.50					
CCA	SZ	9.4	ES	3		11:31	04.49			EKR5	SZ	12.1	ES		EKR5	SZ	12.1	ES		02:53	28.39					
November 15 2004				Time: 00:34 13.0 UTC			Magnitude: 1.2 ML			EKR5				EKR5			Time: 02:53 26.48			Magnitude: 0.1 ML						
Lat: 55.118N				Lon: -3.212W			Depth: 4.1 km			Lat: 55.118N				Lon: -3.212W			Depth: 4.1 km			RMS: 0.20 secs						
Grid Ref: 322.71 kmE				581.08 kmN			RMS: 0.20 secs			Grid Ref: 322.71 kmE				581.08 kmN			RMS: 0.20 secs			RMS: 0.20 secs						
Locality: LOCKERBIE, D & G				Comment:	8KM E OF LOCKERBIE												November 19 2004				Time: 13:06 23.9 UTC			Magnitude: 0.2 ML		
BHH	SZ	2.8	IP		D	00:34	14.21			EKB1	SZ	6.4	IP	C	EKB1	SZ	6.4	IP	C	13:06	26.06					
BHH	SN	2.8	ES	1		00:34	14.87			WLF	SZ	7.2	EP	2	WLF	SZ	7.2	EP	2	13:06	26.16					
BHH	SE	2.8	AML			00:34	15.12	644	0.22	WCB	SZ	10.2	IP		WCB	SZ	10.2	IP		13:06	26.47					
BCC	AZ	11.4	EP	2		00:34	15.43			WCB	SN	10.2	ES	1	WCB	SN	10.2	ES	1	13:06	28.23					
BCC	AE	11.4	ES	2		00:34	16.98			WCB	SE	10.2	AML		WCB	SE	10.2	AML		13:06	28.34	6	0.13			
ESK	SZ	22.1	IP		C	00:34	17.28			WCB	SN	10.2	AML		WCB	SN	10.2	AML		13:06	28.42	13	0.14			
ESK	SN	22.1	ES	2		00:34	20.01			WME	SZ	17.9	IP	D	WME	SZ	17.9	IP	D	13:06	27.46					
ESK	SE	22.1	AML			00:34	20.30	35	0.21	YLL	SZ	27.8	EP	2	YLL	SZ	27.8	EP	2	13:06	28.93					
BWH	SZ	28.9	IP		D	00:34	18.38			YRE	SZ	34.7	EP	2	YRE	SZ	34.7	EP	2	13:06	30.45					
EKB10	SZ	29.2	IP		C	00:34	18.42																			
EKB10	SN	29.2	ES	3		00:34	21.93																			
EKB10	SE	39.2	EP	2		00:34	20.73																			
November 15 2004				Time: 07:49 24.6 UTC			Magnitude: 1.0 ML			November 19 2004				Time: 13:06 23.9 UTC			Magnitude: 0.2 ML			RMS: 0.10 secs						
Lat: 55.188N				Lon: -3.163W			Depth: 4.2 km			Lat: 55.188N				Lon: -3.163W			Depth: 4.2 km			RMS: 0.10 secs						
Grid Ref: 325.96 kmE				588.81 kmN			RMS: 0.10 secs			Grid Ref: 325.96 kmE				RMS: 0.10 secs			RMS: 0.10 secs			RMS: 0.10 secs						
Locality: ESKDALEMUIR,D & G				STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI			
BHH	SZ	11.1	IP		C	07:49	27.08			EKR10	SZ	11.2	EP		EKR10	SZ	11.2	EP		15:42	54.32					
BHH	SE	11.1	ES	1		07:49	28.68			EKR9	SZ	11.3	EP		EKR9	SZ	11.3	EP	</td							

TABLE 2: PHASE DATA 2004

Lat: 55.210N Lon: -3.141W Grid Ref: 327.40 kmE 591.24 kmN Locality: ESKDALEMUIR,D & G Comment: FELT LANGHOLM...										Depth: 5.2 km RMS: 0.30 secs Intensity: 4									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	EKR7	SZ	12.5	ES	08:16	29.42				
EKB1	SZ	11.2	EP			08:11	56.42			EKR6	SZ	12.7	EP	08:16	27.60				
EKB1	SZ	11.2	ES			08:11	57.91			EKR6	SZ	12.7	ES	08:16	29.47				
EKB2	SZ	12.0	EP			08:11	56.55			EKR6	EZ	12.8	IP	08:16	27.62	D			
EKB2	SZ	12.0	ES			08:11	58.32			EKR6	SE	12.8	ES	08:16	29.58				
EKR9	SZ	12.2	EP			08:11	56.47			EKR5	SZ	13.0	EP	08:16	27.64				
EKR9	SZ	12.2	ES			08:11	57.94			EKR5	SZ	13.0	ES	08:16	29.57				
EKR10	SZ	12.3	EP			08:11	56.42			EKR5	SZ	13.1	EP	08:16	27.70				
EKR8	SZ	12.3	EP			08:11	56.50			EKR3	SZ	13.1	ES	08:16	29.65				
EKR7	SZ	12.4	EP			08:11	56.52			EKR4	SZ	13.3	EP	08:16	27.72				
EKR7	SZ	12.4	ES			08:11	57.95			EKR3	SZ	13.7	EP	08:16	27.77				
ESK	EZ	12.5	IP			08:11	56.59			EKR3	SZ	13.7	ES	08:16	29.80				
ESK	EN	12.5	ES	2		08:11	58.58			EKR4	SZ	13.8	EP	08:16	27.79				
ESK	EN	12.5	AML			08:11	58.79	1320	0.11	EKR4	SZ	13.8	ES	08:16	29.85				
ESK	EE	12.5	AML			08:11	58.80	1771	0.11	EKR4	SZ	14.1	EP	08:16	27.87				
EKR6	SZ	12.6	EP			08:11	56.57			EKR2	SZ	14.1	ES	08:16	29.95				
EKR6	SZ	12.6	ES			08:11	58.04			EKR2	SZ	14.6	EP	08:16	27.95				
EKB3	SZ	12.8	EP			08:11	56.70			EKR5	SZ	14.6	ES	08:16	30.04				
EKB3	SZ	12.8	ES			08:11	58.22			EKR1	SZ	14.6	EP	08:16	28.04				
EKR5	SZ	12.8	EP			08:11	56.62			EKR1	SZ	14.6	ES	08:16	30.07				
EKR4	SZ	13.1	EP			08:11	56.70			EKB	BZ	14.6	EP	08:16	28.00				
EKR4	SZ	13.1	ES			08:11	58.65			EKB	BE	14.6	ES	08:16	29.92				
EKB4	SZ	13.5	EP			08:11	56.80			EKB6	SZ	15.4	EP	08:16	28.07				
EKB4	SZ	13.5	ES			08:11	58.36			EKB6	SZ	15.4	ES	08:16	30.25				
EKR3	SZ	13.5	EP			08:11	56.72			EKB7	SZ	16.2	EP	08:16	28.20				
EKR2	SZ	13.9	EP			08:11	56.85			EKB7	SZ	16.2	ES	08:16	30.47				
EKR2	SZ	13.9	ES			08:11	58.42			EKB8	SZ	17.1	EP	08:16	28.32				
EKB5	SZ	14.3	ES			08:11	58.52			EKB8	SZ	17.1	ES	08:16	30.67				
EKR1	SZ	14.3	EP			08:11	56.92			EKB9	SZ	17.8	EP	08:16	28.47				
EKB5	SZ	14.3	EP			08:11	56.92			EKB9	SZ	17.8	ES	08:16	30.92				
EKR1	SZ	14.3	ES			08:11	58.47			EKB10	SZ	18.7	EP	08:16	28.60				
EKB	BE	14.3	EP			08:11	56.87			EKB10	SZ	18.7	ES	08:16	31.10				
EKB	BZ	14.3	ES			08:11	58.32			BWH	SZ	33.3	IP	C	08:16	30.49			
EKB6	SZ	15.2	EP			08:11	57.05			BTA	SZ	44.3	EP	2	08:16	32.74			
EKB6	SZ	15.2	ES			08:11	58.67			BTA	SE	44.3	ES	3	08:16	38.05			
EKB7	SZ	16.0	EP			08:11	57.20			BTA	SN	44.3	AML		08:16	38.55	4	0.26	
EKB7	SZ	16.0	ES			08:11	58.84			BTA	SE	44.3	AML		08:16	40.26	3	0.23	
EKB8	SZ	16.9	EP			08:11	57.32			EKL	SZ	46.9	EP	2	08:16	33.16			
EKB8	SZ	16.9	ES			08:11	58.97												
EKB9	SZ	17.6	EP			08:11	57.44												
EKB9	SZ	17.6	ES			08:11	59.11												
EKB10	SZ	18.5	EP			08:11	57.60												
BCC	AZ	22.3	IP			08:11	57.50												
BCC	AE	22.3	ES	2		08:11	59.84												
BCC	AE	22.3	AML			08:12	00.67	3103	0.42										
BCC	AN	22.3	AML			08:12	01.22	2387	0.38										
BWH	SZ	32.9	IP			C	08:11	59.42											
BTA	SZ	44.8	IP			C	08:12	01.47											
BDL	SZ	47.2	EP	1	D	08:12	01.85												
EBL	SZ	62.8	EP			08:12	04.95												
CKE	SZ	69.4	EP	2		08:12	05.12												
EAU	SZ	73.3	EP			D	08:12	07.01											
EDI	SZ	79.4	EP				08:12	08.02											
EDI	HE	79.4	ES				08:12	17.63											
EDI	HE	79.4	AML				08:12	17.83	597	0.21									
EDI	HN	79.4	AML				08:12	18.66	495	0.21									
CSF	SZ	85.1	EP	1	C	08:12	07.64												
ESY	SZ	85.4	EP			C	08:12	08.35											
CDU	SZ	97.4	EP	3		08:12	09.72												
GAL	SZ	107.0	EP	1	C	08:12	11.04												
GAL	SN	107.0	ES	3		08:12	23.75												
LMI	SZ	111.0	EP	1	C	08:12	11.93												
LMI	SN	111.0	ES	3		08:12	24.71												
LMI	SN	111.0	AML			08:12	26.62	317	0.42										
LMI	SE	111.0	AML			08:12	27.91	490	0.66										
EBH	SZ	118.0	EP			08:12	14.19												
LCP	SZ	119.0	EP			08:12	13.97												
EAB	SZ	132.0	EP			08:12	15.91												
GIM	SZ	133.0	EP	1	C	08:12	14.90												
GIM	SE	133.0	ES	2		08:12	30.98												
GIM	SE	133.0	AML			08:12	34.26	293	0.22										
GIM	SN	133.0	AML			08:12	35.66	129	0.18										
HPK	SZ	170.0	EP			08:12	22.16												
HPK	SE	170.0	ES			08:12	40.83												
HPK	SE	170.0	AML			08:12	45.38	557	0.48										
HPK	SN	170.0	AML			08:12	45.68	369	0.44										
LWH	SZ	186.0	EP			08:12	25.00												
November 28 2004 Time: 08:16 24.8 UTC Lat: 55.209N Lon: -3.135W Depth: 4.3 km Grid Ref: 327.78 kmE 591.12 kmN RMS: 0.10 secs Locality: ESKDALEMUIR,D & G										Magnitude: 0.5 ML Depth: 4.3 km RMS: 0.10 secs									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	EKB6	SZ	13.3	ES	19:02	21.40				
EKB1	SZ	11.5	EP			08:16	27.52			EKB7	SZ	14.1	EP	19:02	19.97				
EKB1	SZ	11.5	ES			08:16	29.27			EKB7	SZ	14.1	ES	19:02	21.67				
EKB2	SZ	12.2	EP			08:16	27.54			EKB8	SZ	15.0	EP	19:02	20.17				
EKB2	SZ	12.2	ES			08:16	29.45			EKB8	SZ	15.0	ES	19:02	21.84				
EKR9	SZ	12.3	ES			08:16	29.37			EKB9	SZ	15.7	ES	19:02	22.09				
EKR10	SZ	12.3	EP	</td															

TABLE 2: PHASE DATA 2004

TABLE 2: PHASE DATA 2004

Lat:	52.094N	Lon:	-2.447W	Depth:	12.4 km			
Grid Ref:	369.38 kmE	244.10 kmN		RMS:	0.20 secs			
Locality: GT MALVERN, HER & WOR								
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL PERI
HAE	SZ	9.2	IP	C	16:13	39.74		
MCH	SZ	39.3	IP	C	16:13	44.00		
MCH	HZ	39.3	IP	4	C	16:13	45.02	
MCH	SE	39.3	ES	1		16:13	49.10	
MCH	HE	39.3	ES	4		16:13	50.10	
MCH	HN	39.3	AML			16:13	50.37	227 0.16
MCH	HE	39.3	AML			16:13	50.43	116 0.16
HLM	SZ	55.7	IP	D	16:13	46.50		
HTR	SZ	56.3	IP	D	16:13	46.65		
HGH	SZ	56.5	EP	1	C	16:13	46.49	
SSP	SZ	57.9	IP	D	16:13	47.16		
SSP	SE	57.9	ES	2		16:13	54.45	
SSP	SN	57.9	AML			16:13	55.14	27 0.22
SSP	SE	57.9	AML			16:13	57.76	28 0.20
SWN	SZ	78.5	IP	D	16:13	50.33		
SWN	SN	78.5	ES	2		16:14	00.38	
SWN	SN	78.5	AML			16:14	01.08	78 0.11
SWN	SE	78.5	AML			16:14	01.28	82 0.15
SWK	SZ	106.0	EP	2		16:13	54.97	
SBD	SZ	106.0	EP	2		16:13	54.55	
HEX	SZ	148.0	EP	2		16:14	00.95	
HPE	SZ	161.0	EP	2		16:14	02.82	
HTL	HZ	187.0	EP	2		16:14	05.99	
HTL	HN	187.0	ES	2		16:14	26.80	
HTL	HN	187.0	AML			16:14	30.47	13 0.24
HTL	HE	187.0	AML			16:14	30.96	16 0.32
December 9 2004 Time: 03:48 44.6 UTC Magnitude: - 0.2 ML								
Lat: 55.220N Lon: -3.110W Depth: 6.8 km Grid Ref: 329.39 kmE 592.32 kmN RMS: 0.10 secs Locality: ESKDALEMUIR,D & G								
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL PERI
EKR10	SZ	10.5	EP			03:48	47.12	
EKR10	SZ	10.5	ES			03:48	48.94	
EKR9	SZ	10.6	EP			03:48	47.17	
EKR9	SZ	10.6	ES			03:48	49.02	
EKB1	SZ	10.7	EP			03:48	47.12	
EKB1	SZ	10.7	ES			03:48	49.00	
EKR8	SZ	10.8	EP			03:48	47.17	
EKR8	SZ	10.8	ES			03:48	49.05	
EKR7	SZ	11.1	ES			03:48	49.04	
EKR6	SZ	11.4	EP			03:48	47.15	
EKR6	SZ	11.4	ES			03:48	49.09	
EKB2	SZ	11.4	ES			03:48	49.21	
EKR5	SZ	11.7	ES			03:48	49.17	
EKB3	SZ	12.2	EP			03:48	47.35	
EKR4	SZ	12.2	EP			03:48	47.62	
EKR4	SZ	12.2	ES			03:48	49.32	
EKB3	SZ	12.2	ES			03:48	49.40	
EKS	EZ	12.3	EP			03:48	47.29	
EKS	EN	12.3	ES			03:48	49.22	
EKS	EE	12.3	AML			03:48	49.37	10 0.49
EKS	EN	12.3	AML			03:48	49.43	2 0.09
EKR3	SZ	12.6	EP			03:48	47.49	
EKR3	SZ	12.6	ES			03:48	49.42	
EKB4	SZ	12.8	ES			03:48	49.44	
EKR2	SZ	13.2	EP			03:48	47.66	
EKR2	SZ	13.2	ES			03:48	49.70	
EKR1	SZ	13.7	EP			03:48	47.65	
EKR1	SZ	13.7	ES			03:48	49.82	
EKB6	SZ	14.3	ES			03:48	49.89	
EKB7	SZ	15.1	ES			03:48	50.12	
EKB8	SZ	16.0	ES			03:48	50.32	
EKB10	SZ	17.4	ES			03:48	50.74	
December 13 2004 Time: 23:53 26.8 UTC Magnitude: - 0.3 ML								
Lat: 55.219N Lon: -3.112W Depth: 4.1 km Grid Ref: 329.26 kmE 592.21 kmN RMS: 0.10 secs Locality: ESKDALEMUIR,D & G								
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL PERI
EKR10	SZ	10.7	EP			23:53	29.09	
EKR9	SZ	10.7	EP			23:53	29.14	
EKR9	SZ	10.7	ES			23:53	31.03	
EKR10	SZ	10.7	ES			23:53	30.97	
EKB1	SZ	10.8	ES			23:53	30.99	
EKR8	SZ	10.9	EP			23:53	29.17	
EKR8	SZ	10.9	ES			23:53	31.07	
EKR7	SZ	11.1	EP			23:53	29.16	
EKR7	SZ	11.1	ES			23:53	31.10	
EKB2	SZ	11.4	ES			23:53	31.14	
EKR6	SZ	11.4	EP			23:53	29.20	
EKR6	SZ	11.4	ES			23:53	31.15	
EKR5	SZ	11.8	ES			23:53	31.24	
EKB3	SZ	12.2	ES			23:53	31.37	
EKR4	SZ	12.2	ES			23:53	31.31	
EKS	EZ	12.3	EP			23:53	29.43	
EKS	EE	12.3	ES			23:53	31.24	
EKS	EN	12.3	AML			23:53	31.74	2 0.28
EKS	EE	12.3	AML			23:53	31.89	6 0.34
EKR3	SZ	12.7	EP			23:53	29.54	
EKR3	SZ	12.7	ES			23:53	31.59	
EKB4	SZ	12.8	EP			23:53	29.62	
EKB4	SZ	12.8	ES			23:53	31.50	
December 13 2004 Time: 23:53 01.6 UTC Magnitude: - 0.4 ML								
Lat: 55.217N Lon: -3.115W Depth: 5.4 km Grid Ref: 329.07 kmE 591.99 kmN RMS: 0.00 secs Locality: ESKDALEMUIR,D & G								
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL PERI
EKR2	SZ	13.2	ES					23:53 31.62
EKB5	SZ	13.6	ES					23:53 31.69
EKR1	SZ	13.8	ES					23:53 31.76
EKB6	SZ	14.4	ES					23:53 31.92
EKB7	SZ	15.1	EP					23:53 30.24
EKB7	SZ	15.1	ES					23:53 32.15
EKB8	SZ	16.0	ES					23:53 32.34
EKB9	SZ	16.7	ES					23:53 32.57
EKB10	SZ	17.5	EP					23:53 30.47
EKB10	SZ	17.5	ES					23:53 32.77
December 13 2004 Time: 23:59 01.6 UTC Magnitude: - 0.4 ML								
Lat: 55.217N Lon: -3.115W Depth: 5.4 km Grid Ref: 329.07 kmE 591.99 kmN RMS: 0.00 secs Locality: ESKDALEMUIR,D & G								
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL PERI
EKR10	SZ	10.9	ES					23:59 05.79
EKR10	SZ	10.9	EP					23:59 03.97
EKR9	SZ	11.0	EP					23:59 05.84
EKR9	SZ	11.0	ES					23:59 04.02
EKR9	SZ	11.0	ES					23:59 05.92
EKR8	SZ	11.2	EP					23:59 04.02
EKR8	SZ	11.2	ES					23:59 05.94
EKR7	SZ	11.4	ES					23:59 05.97
EKB2	SZ	11.6	EP					23:59 04.17
EKB2	SZ	11.6	ES					23:59 05.99
EKR6	SZ	11.7	ES					23:59 06.04
EKR5	SZ	12.0	ES					23:59 06.06
EKS	EN	12.4	AML					23:59 06.26
EKS	EE	12.4	AML					23:59 06.35
EKB3	SZ	12.4	EP					1 0.08
EKS	EN	12.4	ES					6 0.19
December 16 2004 Time: 02:26 32.9 UTC Magnitude: 1.1 ML								
Lat: 53.469N Lon: -4.211W Depth: 14.8 km Grid Ref: 253.26 kmE 399.22 kmN RMS: 0.10 secs Locality: OFF ANGLESEY,GWYNEDD Comment: 7KM NE OF ANGLESEY								
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL PERI
WME	SZ	10.1	IP	C		02:26	35.99	
WLF	SZ	23.5	IP	C		02:26	37.57	
WCB	SZ	24.5	IP	C		02:26	37.64	
WCB	SN	24.5	ES	1		02:26	40.87	
WCB	SE	24.5	AML			02:26	41.10	19 0.17
WCB	SN	24.5	AML			02:26	41.81	25 0.26
WPM	SZ	31.1	EP	1	C	02:26	38.54	
YRC	SZ	34.3	EP	2		02:26	39.01	
YLL	SZ	36.7	EP	2		02:26	39.47	
YRE	SZ	56.1	IP	D		02:26	42.55	
WIM	SZ	81.4	EP	2		02:26	46.61	
LMI	SZ	103.0	EP	2		02:26	48.94	
LMI	SE	103.0	ES	2		02:27	01.61	
LMI	SN	103.0	AML			02:27	02.49	8 0.27
LMI	SE	103.0	AML			02:27	02.87	8 0.20
December 20 2004 Time: 06:43 33.7 UTC Magnitude: 1.0 ML								
Lat: 50.095N Lon: -5.137W Depth: 6.2 km Grid Ref: 175.66 kmE 26.44 kmN Locality: FALMOUTH,CORNWALL Comment: 7KM SW OF FALMOUTH								
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL PERI
CMA	SZ	1.6	IP	D		06:43	34.87	
CGH	SZ	5.3	IP	D		06:43	35.14	
CGW	SZ	6.2	IP	D		06:43	35.27	
CR2	SZ	8.3	IP	C		06:43	35.55	
CR2	SE	8.3	ES	2		06:43	36.91	
CR2	SN	8.3	AML			06:43	37.11	91 0.13
CR2	SE	8.3	AML			06:43	37.30	105 0.16
CCA	SZ	12.1	IP	C		06:43	36.11	
CSA	SZ	33.6	EP	2		06:43	39.42	
December 20 2004 Time: 19:11 10.7 UTC Magnitude: 2.3 ML								
Lat: 53.232N Lon: -1.230W Depth: 1.0 km Grid Ref: 451.39 kmE 370.86 kmN Locality: BOLSOVER,DERBYSHIRE Comment: C/F								
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL PERI
KBI	SZ	20.0	EP	2		19:11	14.59	
KWE	SZ	47.4	EP	2		19:11	19.77	
LHO	SZ	54.3	IP	D		19:11	20.77	
HPK	SZ	85.0	EP	2		19:11	24.51	

TABLE 2: PHASE DATA 2004

HPK	SE	85.0	AML	19:11	35.92	170	0.25
HPK	SN	85.0	AML	19:11	38.39	225	0.17
LWH	SZ	128.0	EP	3	19:11	31.32	
SSP	SZ	156.0	EP	2	19:11	41.80	
SSP	SN	156.0	AML	19:12	04.06	32	0.49
SSP	SE	156.0	AML	19:12	04.71	37	0.28
LCP	SZ	168.0	EP	3	19:11	36.27	
LMI	SZ	176.0	EP	3	19:11	40.44	

December 25 2004 Time: 10:19 03.3 UTC Magnitude: 0.2 ML
 Lat: 55.219N Lon: -3.112W Depth: 6.5 km
 Grid Ref: 329.26 kmE 592.21 kmN RMS: 0.00 secs

Locality: ESKDALEMUIR,D & G

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
EKR10	SZ	10.7	EP	22:21		53.90			
EKR10	SZ	10.7	ES	22:21		55.69			
EKR9	SZ	10.8	EP	22:21		53.94			
EKR9	SZ	10.8	ES	22:21		55.77			
EKR8	SZ	10.9	EP	22:21		53.95			
EKR8	SZ	10.9	ES	22:21		55.79			
EKR7	SZ	11.1	EP	22:21		53.96			
EKR7	SZ	11.1	ES	22:21		55.79			
EKB2	SZ	11.3	ES	22:21		55.88			
EKR6	SZ	11.4	ES	22:21		55.86			
EKR5	SZ	11.8	ES	22:21		55.93			
EKB3	SZ	12.1	EP	22:21		54.14			
EKB3	SZ	12.1	ES	22:21		56.11			
EKR4	SZ	12.2	ES	22:21		56.04			
ESK	SZ	12.2	IP	C	22:21	54.03			
ESK	SE	12.2	ES		22:21	55.95			
ESK	SN	12.2	AML		22:21	56.00	2	0.46	
ESK	SE	12.2	AML		22:21	56.08	7	0.16	
EKR3	SZ	12.6	ES		22:21	56.17			
EKB4	SZ	12.8	ES		22:21	56.22			
EKR2	SZ	13.1	ES		22:21	56.32			
EKB5	SZ	13.5	EP		22:21	54.42			
EKB5	SZ	13.5	ES		22:21	56.42			
EKR1	SZ	13.7	ES		22:21	56.62			
EKB6	SZ	14.3	ES		22:21	56.62			
EKB7	SZ	15.1	ES		22:21	56.86			
EKB8	SZ	16.0	ES		22:21	57.04			
EKB9	SZ	16.7	EP		22:21	54.87			
EKB9	SZ	16.7	ES		22:21	57.29			
EKB10	SZ	17.5	ES		22:21	57.49			

December 24 2004 Time: 20:46 47.5 UTC Magnitude: 0.4 ML
 Lat: 55.254N Lon: -3.464W Depth: 12.0 km
 Grid Ref: 306.96 kmE 596.52 kmN RMS: 0.00 secs

Locality: JOHNSTONEBRIDGE,D & G

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
ESK	EZ	17.9	IP	C	20:46	51.44			
ESK	SZ	17.9	IP	C	20:46	51.44			
ESK	EN	17.9	ES	2	20:46	54.20			
ESK	SE	17.9	ES	2	20:46	54.22			
ESK	SN	17.9	AML		20:46	54.32	8	0.06	
ESK	EE	17.9	AML		20:46	54.33	9	0.10	
ESK	EN	17.9	AML		20:46	54.33	8	0.18	
ESK	SE	17.9	AML		20:46	54.35	10	0.07	
EKB1	SZ	19.3	EP		20:46	51.67			
EKB1	SZ	19.3	ES		20:46	54.67			
EKB2	SZ	19.9	EP		20:46	51.77			
EKB2	SZ	19.9	ES		20:46	54.77			
EKR1	SZ	20.4	EP		20:46	51.84			
EKR1	SZ	20.4	ES		20:46	54.89			
EKB3	SZ	20.4	EP		20:46	51.85			
EKB3	SZ	20.4	ES		20:46	54.92			
EKR2	SZ	21.0	EP		20:46	51.94			
EKR2	SZ	21.0	ES		20:46	55.07			
EKB4	SZ	21.2	EP		20:46	51.95			
EKB4	SZ	21.2	ES		20:46	55.09			
EKR3	SZ	21.7	EP		20:46	52.02			
EKR3	SZ	21.7	ES		20:46	55.20			
EKB5	SZ	21.8	EP		20:46	52.04			
EKB5	SZ	21.8	ES		20:46	55.27			
EKR4	SZ	22.3	EP		20:46	52.13			
EKR4	SZ	22.3	ES		20:46	55.41			
EKB6	SZ	22.5	EP		20:46	52.17			
EKB6	SZ	22.5	ES		20:46	55.45			
EKR5	SZ	23.0	EP		20:46	52.24			
EKR5	SZ	23.0	ES		20:46	55.54			
EKR7	SZ	23.2	EP		20:46	52.27			
EKB7	SZ	23.2	ES		20:46	55.62			
EKR6	SZ	23.6	EP		20:46	52.34			
EKR6	SZ	23.6	ES		20:46	55.80			
EKB8	SZ	24.0	EP		20:46	52.38			
EKB8	SZ	24.0	ES		20:46	55.80			
EKR7	SZ	24.3	EP		20:46	52.44			
EKR7	SZ	24.3	ES		20:46	55.92			
EKB9	SZ	24.6	EP		20:46	52.50			
EKB9	SZ	24.6	ES		20:46	55.97			
EKR8	SZ	25.0	EP		20:46	52.55			
EKR8	SZ	25.0	ES		20:46	56.10			
EKR7	SZ	25.3	EP		20:46	52.59			
EKB10	SZ	25.3	ES		20:46	56.17			
EKR9	SZ	25.7	EP		20:46	52.65			
EKR9	SZ	25.7	ES		20:46	56.30			
EKR10	SZ	26.5	EP		20:46	52.73			
EKR10	SZ	26.5	ES		20:46	56.42			

December 26 2004 Time: 07:27 49.3 UTC Magnitude: 0.3 ML
 Lat: 55.218N Lon: -3.118W Depth: 6.2 km
 Grid Ref: 328.88 kmE 592.10 kmN RMS: 0.00 secs

Locality: ESKDALEMUIR,D & G

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
EKB1	SZ	10.8	EP			07:27	51.72		
EKB1	SZ	10.8	ES			07:27	53.55		
EKR10	SZ	10.9	EP			07:27	51.77		
EKR10	SZ	10.9	ES			07:27	53.57		
EKR9	SZ	11.0	EP			07:27	51.83		
EKR9	SZ	11.0	ES			07:27	53.65		
EKR8	SZ	11.1	EP			07:27	51.83		
EKR8	SZ	11.1	ES			07:27	53.66		
EKR7	SZ	11.3	EP			07:27	51.85		
EKR7	SZ	11.3	ES			07:27	53.70		
EKB2	SZ	11.5	EP			07:27	51.84		
EKB2	SZ	11.5	ES			07:27	53.75		
EKR6	SZ	11.6	EP			07:27	51.90		
EKR6	SZ	11.6	ES			07:27	53.77		
EKR5	SZ	11.9	EP			07:27	51.95		
EKR5	SZ	11.9	ES			07:27	53.84		
EKB3	SZ	12.2	EP			07:27	51.99		
EKB3	SZ	12.2	ES			07:27	53.97		
EKR3	SZ	12.3	IP	C			2	07:27	51.92
EKR7	SZ	12.3	EP			07:27	51.95		
EKR7	SZ	12.3	ES			07:27	53.86		
EKR7	SZ	12.3	ES			07:27	53.86		
EKR8	SZ	12.3	AML			07:27	54.14	11	0.19
ESK	EN	12.3	AML			07:27	54.14	9	0.18
ESK	SE	12.3	AML			07:27	54.14	16	0.16
ESK	EE	12.3	AML			07:27	54.15	16	0.16
EKR4	SZ	12.3	EP			07:27	52.01		
EKR4	SZ	12.3	ES			07:27	53.95		
EKR3	SZ	12.8	EP			07:27	52.07		
EKR3	SZ	12.8	ES			07:27	54.07		
EKR3	SZ	12.8	ES			07:27	52.09		
EKB4	SZ	12.9	EP			07:27	52.09		
EKB4	SZ	12.9	ES			07:27	54.12		
EKR2	SZ	13.3	EP			07:27	52.17		
EKR2	SZ	13.3	ES			07:27	54.22		
EKB7	SZ	13.7	EP			07:27	52.22		
EKB5	SZ	13.7	ES			07:27	54.32		
EKR1	SZ	13.8	ES			07:27	54.30		
EKB8	SZ	14.4	EP			07:27	52.37		
EKB6	SZ	14.4	ES			07:27	54.52		
EKB7	SZ	15.2	EP			07:27	52.49		
EKB7	SZ	15.2	ES			07:27	54.75		
EKB8	SZ	16.1	EP			07:27	52.62		
EKB8	SZ	16.1	ES			07:27	54.94		
EKB9	SZ	16.8	EP			07:27	52.77		
EKB9	SZ	16.8	ES			07:27	55.19		
EKB10	SZ	17.6	EP			07:27	52.90		
EKB10	SZ	17.6	ES			07:27	55.39		

TABLE 2: PHASE DATA 2004

TABLE 3

GEOGRAPHIC COORDINATES OF SEISMOGRAPH STATIONS, 2004

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	GEEK	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	3RMLG
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	3RMLG
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	3MLG
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: continued

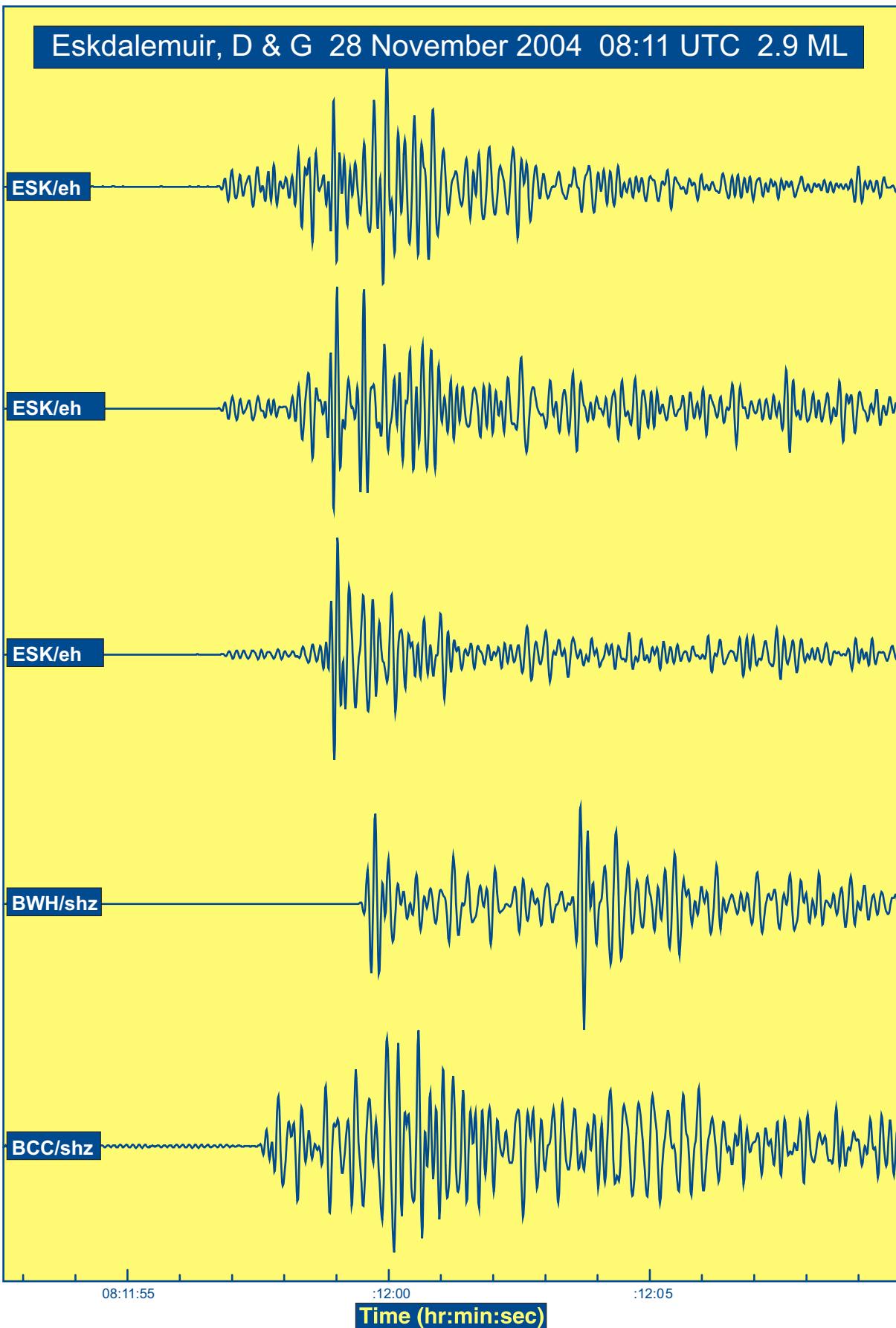
Code	Name	Lat	Lon	KmE (km)	KmN (km)	Ht (m)	Comp
HGH	GRAY HILL	51.6379	-2.8057	344.25	193.59	223	1R
HLM	LONG MYND	52.5184	-2.8807	340.25	291.57	429	1
HPE	PEMBROKE	51.9372	-4.7746	209.29	230.21	349	1R
HPK	HAVERAH PARK	53.9581	-1.6241	424.66	451.42	233	3R
HSA	SWANSEA	51.7500	-4.1532	251.38	207.94	293	1R
HTL	HARTLAND	50.9943	-4.4849	225.64	124.66	86	3RMLGSMBB
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	3RLGSM
KSB	SHIEL BRIDGE	57.2099	-5.4214	193.40	818.40	417	1R
KSX	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	3RMLG
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	BBSM
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	3
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
SAN	SANDWICK	60.0179	-1.2392	442.41	1126.08	150	1

TABLE 3: continued

Code	Name	Lat	Lon	KmE (km)	KmN (km)	Ht (m)	Comp
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	3MLGSM
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	ALLEDALLE	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



Seismograms of the Eskdalemuir earthquake of 28 November 2004 08:11 UTC 2.9 ML recorded on the Eskdalemuir and Borders seismic networks.