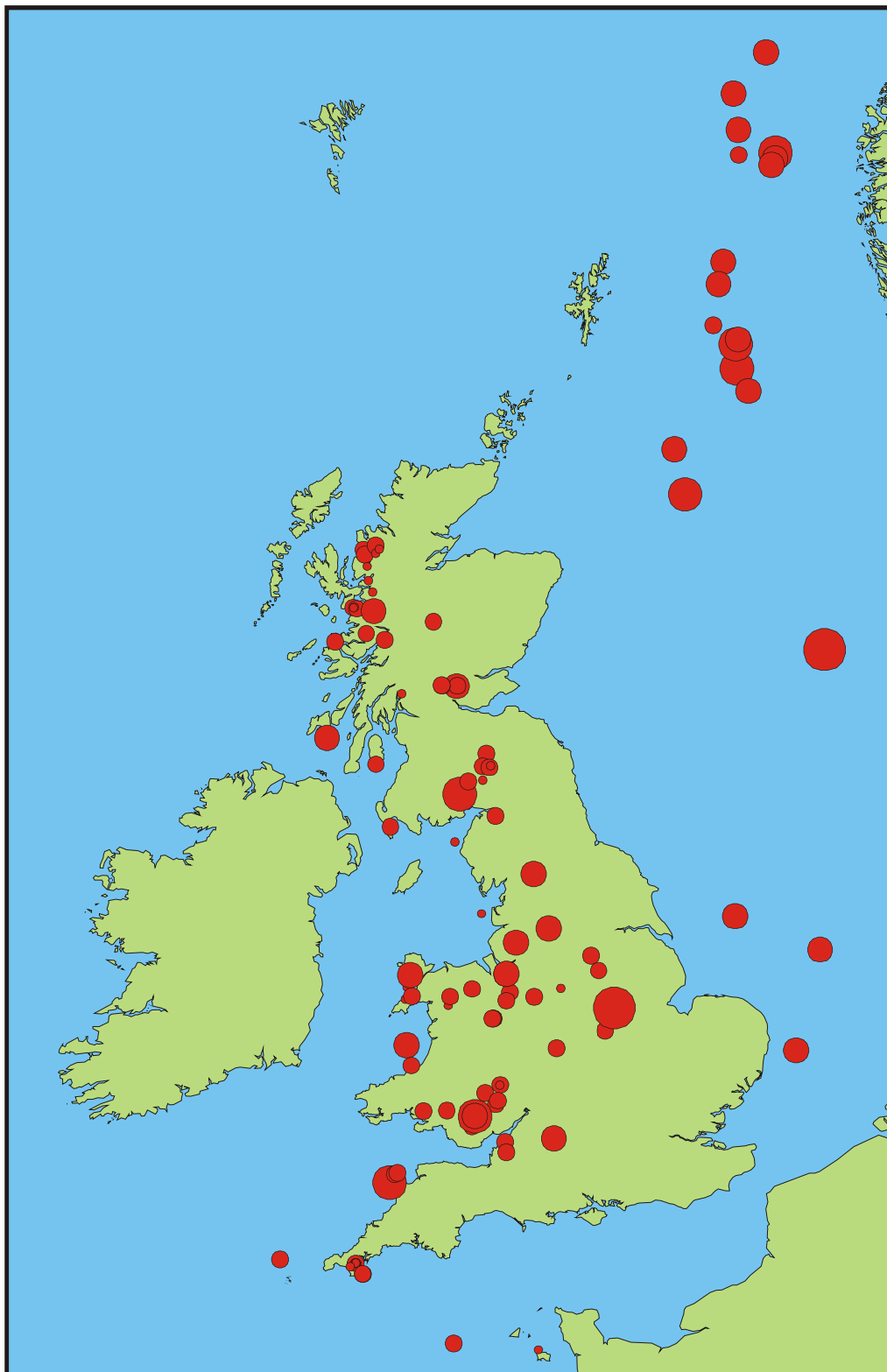




British Geological Survey

BULLETIN OF BRITISH EARTHQUAKES 2001



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Global Seismology and Geomagnetism

Bulletin of British earthquakes 2001

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BRITISH GEOLOGICAL SURVEY

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1. INTRODUCTION

1.1 The Bulletin

The British Geological Survey's Seismic Monitoring and Information Service operates a nationwide network of seismograph stations in the United Kingdom. The whole of the UK, including coastal waters, is covered within the limits of the detection capabilities of the seismograph network, and accuracy is extended through data exchange with neighbouring countries. Seismic phase data, location details and magnitudes are presented in the Bulletin for all earthquakes detected and located by BGS during 2001 together with maps showing the larger magnitude events since 1979 ($ML \geq 2.5$) and since 1970 ($ML \geq 3.5$). All felt areas are quoted in km^2 , and are for the area enclosed within isoseismal 3 EMS (European Macroseismic Scale, [Appendix C](#)).

1.2 Summary of 2001 Seismicity

There have been 135 earthquakes located by the monitoring network during the year, with 37 of them having magnitudes of 2.0 ML or greater. Of these, 10 are known to have been felt, together with a further 6 smaller ones, bringing the total to 16 felt earthquakes in 2001.

The largest onshore earthquake, with a magnitude of 4.1 ML, occurred near Melton Mowbray, Leicestershire on 28 October ([Appendix A5](#)). BGS initiated a macroseismic survey and earthquake questionnaires were distributed through local and national newspapers. Approximately 1800 emailed responses were received, the most received for any UK earthquake so far, together with an estimated 4200 paper questionnaires, giving a total of 6000 responses in all. Many media interviews were conducted and a large number of enquiries were received. The earthquake was felt throughout Lincolnshire, Leicestershire, Warwickshire, Yorkshire, Shropshire and Nottinghamshire. The most distant reports were from the following places: in the west, the earthquake was felt near Chester. In the east, the earthquake was reported felt in King's Lynn, Norfolk. In the north, the limit of observation was marked by Knaresborough. In the south, the shock was felt as far as Oxford, with also a single very distant observation from Salisbury. There were reports of damage to chimneys in the Melton Mowbray area, indicating an intensity of 6 EMS. Felt reports described "we ran into the streets", "the whole house shook", "the table moved" and "we were very frightened". A maximum acceleration of 0.02g was measured at the strong motion station at Keyworth, some 15 km from the earthquake. The focal mechanism for the Melton Mowbray earthquake also shows oblique normal faulting along either a near N-S fault plane dipping at 51° or along a near E-W fault plane dipping at 58° . The average maximum compressive stress direction has an azimuth of 140° and dip of 55° and the minimum stress direction strikes at 44° and dips at 4° .

The largest offshore earthquake occurred in the Central North Sea on 7 May. It had a magnitude of 5.0 Mw ([Appendix A1](#)) and was located approximately 410 km east of Edinburgh. It was felt on three nearby oil platforms in the Ekofisk field, The Ekofisk Hotel platform control tower described "a swaying lasting 2 minutes which left us feeling dizzy", they also confirmed that the Albuskjell platform some 15 km to the north and the Eldfisk platform, some 26 km to the south reported similar felt effects. The focal mechanism obtained for the earthquake shows normal faulting with north-south trending nodal planes. A further 22 events occurred in the North Sea and surrounding waters during the year, with magnitudes ranging between 1.2 and 3.9 ML, and were located using both the BGS and Norwegian networks.

An earthquake with a magnitude 3.0 ML, occurred on 13 May ([Appendix A2](#)), with a location near Dumfries. BGS received many felt reports, from the Police, the media, Dumfries Council and residents of the Dumfries area. Felt reports described “the entire house shook”, “the neighbours felt a shaking and ran into their back gardens”, “the floor moved” and “felt like an explosion”. A macroseismic survey was conducted and over 590 replies were received, indicating a maximum intensity of 5 EMS. This event was followed by four aftershocks on the same day with magnitudes ranging between 0.5 and 1.3 ML, the largest event was felt with intensities of at least 3 EMS. The focal mechanism obtained for the Dumfries earthquake shows predominantly strike-slip faulting along near vertical fault planes striking approximately NNW-SSE and ENE-WSW respectively. The near horizontal, NW-SE orientation for the principal stress direction (P-axis) is in ground agreement with the expected regional stress tensor.

An earthquake, with a magnitude of 3.6 ML, occurred off Hartland Point, Devon, on 31 May ([Appendix A3](#)). BGS received many felt reports from residents of Cornwall and Devon, who described “I ran outside alarmed”, “I thought a nuclear explosion had gone off” and “the whole house shook”. A macroseismic survey was conducted and over 520 replies were received, indicating a maximum intensity of 5 EMS.

Near Mallaig, Highland an earthquake with a magnitude of 1.7 ML, occurred on 20 June. Felt reports were received from the village of Mallaig, where intensities reached 3 EMS. Felt reports described “I felt a shudder through my feet” and “sounded like a large explosion”.

Fifteen events occurred in Constantine, Cornwall throughout June, with magnitudes ranging between 0.0 and 1.1 ML. This is an area that has experienced similar swarm activity in the past.

An earthquake with a magnitude of 2.2 ML, occurred on 27 June, with a location near Sedbergh, Cumbria. A single felt report was received from a resident of Cowgill, some 9 km to the west of the epicentre, who described the following “the whole house shook, I was woken from sleep and I heard a bang”, indicating an intensity of at least 4 EMS.

On 21 July, an earthquake with a magnitude of 1.9 ML occurred at the northern end of the Isle of Mull, western Scotland. BGS received one felt report from a resident of Salen, approximately 15 km southeast of the epicenter, who described “the whole house shook” and “quite a weak rumble”, indicating an intensity of 3 EMS.

On 1 September, an earthquake with a magnitude of 1.8 ML occurred near Blackford, Tayside. BGS received felt reports from residents of Glendevon, which described “the whole house shook”. A further two earthquakes with magnitudes of 2.1 and 1.3 ML, occurred in the Blackford area, with intensities of 3 EMS, respectively, on 19 December. Felt reports were received from the Blackford and Glendevon areas of Tayside and described “we heard a loud rumble”, “the house shook” and “the radiators rattled”. This is an area that has continued to be active in recent years; 49 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 and 4 events occurred in 2000, of which 3 were felt. In the same general area in 1979, a magnitude 3.2 ML Ochil Hills earthquake was felt with a maximum intensity of 5 EMS.

An earthquake with a magnitude 3.1 ML, occurred on 10 October ([Appendix A4](#)), with a location near Bargoed, Mid-Glamorgan. BGS received felt reports from residents of the Bargoed area. Felt reports described “the bed was shaking”, “the entire house shook” and “I was woken from sleep”. A macroseismic survey was conducted and approximately 120 replies were received, indicating a maximum intensity of 4 EMS. This event was followed by three aftershocks with magnitudes of 1.6, 1.6 and 2.5 ML, the largest event (2.5 ML) on 18 October was felt with intensities of 4 EMS. The Bargoed focal mechanism shows oblique normal faulting along either a NW-SE striking fault plane dipping at 38° or a NNE-SSW striking fault plane dipping at 63°. The average maximum compressive stress direction has an azimuth of 142° and dip of 61° and the minimum stress direction strikes at 258° and dips at 14°.

Near Swindon, Wiltshire, an earthquake with a magnitude of 2.7 ML occurred on 18 March. Earthquakes of this size are usually felt when they occur onshore but enquiries to local Police stations and post offices revealed that no felt reports were received. This is an area that has experienced little seismicity in both the historical and instrumental periods, with only one event located since 1970 within a 20 km radius of this event.

Near Chester, Cheshire, three events occurred on 17 October, with magnitudes of 2.4, 2.1 and 1.5 ML, BGS received no felt reports for these earthquakes.

An earthquake with a magnitude of 2.3 ML, occurred near Anglesey, Gwynedd on 5 November. BGS received a single felt report for this earthquake which described “a bang, then a rumbling” indicating an intensity of at least 2 EMS.

An earthquake with a magnitude of 1.5 ML, occurred on 1 December with a location near Ballachulish, Highland. BGS received a number of felt reports from residents of Glenachulish, Ballachulish and Onich. Felt reports described “we heard a loud rumble”, “we felt a vibration” and “we ran outside”, indicating an intensity of 4 EMS.

On 16 December, an earthquake with a magnitude of 2.6 ML, occurred approximately 6 km southwest of Halifax, West Yorkshire. BGS received felt reports from residents of Halifax and Todmorden which described “we heard a loud rumble”, the “whole house shook” and “we ran outside”, indicating an intensity of 4 EMS. This event locates approximately 3 km southeast of the magnitude 4.0 ML Todmorden earthquake, on 7 March 1972, that was felt with intensities of 5 EMS.

In North Wales, two events on 6 and 11 December with magnitudes of 1.2 ML and 0.7 ML respectively, occurred on the Llyn Peninsula, in the same area and at similar depths (20 km) as the magnitude 5.4 ML Llyn earthquake of 19 July 1984, which was felt throughout England and Wales and into Scotland and Ireland.

The coalfield areas of Yorkshire, Staffordshire, Nottinghamshire and Derbyshire continued to experience shallow earthquake activity that is believed to be mining induced. Some 4 coalfield events, with magnitudes ranging between 0.8 and 1.8 ML, were detected during the year.

2. BULLETIN FORMAT

2.1 Tables

Data on the earthquakes and seismograph stations operated in 2001 are arranged as follows:

TABLE 1: This is a chronological listing of all earthquakes in and near the UK for which a reliable epicentral location could be obtained together with felt sonic events and other significant non-natural events.

TABLE 2: This is a listing of earthquakes arranged in order of decreasing latitude to facilitate identification of earthquakes in selected regions.

TABLE 3: This is a chronological listing of felt sonic events and significant non-natural events detected by the seismograph network. These events are included in Table 1 but not Table 2.

TABLES 4: This is an alphabetical listing of the geographical co-ordinates of seismograph stations operated in 2001 by BGS, DIAS (the Dublin Institute of Advanced Studies) and KUN (Keele University). [Table 4a](#) lists the short period instruments; [Table 4b](#) the BGS low gain stations and [Table 4c](#) the BGS strong motion instruments.

TABLE 5: This lists the arrival times of phases for the events in Table 2 at each station, together with amplitude information used for magnitude calculation.

TABLE 6: This shows the crustal seismic velocity models used for event location.

2.2 Figures

FIGURE 1: Seismograph network operational in December 2001.

FIGURE 2: Detection threshold of the seismograph stations operational in December 2001 for average background noise conditions where the detection criterion is that the signal has to exceed 4 nanometers at 10 Hz on 4 stations.

FIGURE 3: Epicentral location map of all the events in 2001 that are listed in Table 2. It is estimated that the dataset is complete for the land area.

FIGURE 4: Locations of earthquakes in the UK of magnitude 2.5 ML and above in the period 1979 to 2001. It is estimated that the dataset is complete for the land area.

FIGURE 5: Locations of earthquakes in the UK of magnitude 3.5 ML and above in the period 1970 to 2001.

3. THE BGS UK SEISMOGRAPH NETWORK

3.1 Instrumentation

A standard seismic network consists 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 seismometers, are recorded onto a digital event-triggered recorder (SEISLOG). It is designed to trigger on events and write to a computer disk which is accessed from Edinburgh via a modem. Four times a day, data is transferred automatically to the Edinburgh central computer and the events are analysed during that day providing a rapid response for location and magnitude determinations. All of the recording centres in the UK have been upgraded to provide a SEISLOG system (Figs 1 and 2). At some centres, a continuous back-up facility is provided by the traditional magnetic tape Geostore recorders, and tapes are dispatched weekly to Edinburgh for analysis. SEISLOGS have the advantage over the Geostore system by providing digital data, of wider dynamic range (72 db), a bandwidth of up to 40 Hz and the capacity for 32 seismic channels. The system also has the facility to auto-reboot in the event of mains power failure and this normally takes three minutes once power has recovered.

At some locations, on-line paper chart recorders display three channels to enable local operators to view earthquake data. At other stations, low-gain vertical seismometers 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 digitally recorded broad-band station (Guralp) located in Edinburgh, provides an assessment of surface-wave (Richter magnitude) for large Global earthquakes.

Recent developments in geographic coverage of the UK are described in Walker (2002, in press) and details of the SEISLOG system, which has been jointly developed by Bergen university and BGS are given in Uthman and Havskov (1993).

3.2 Detection Threshold

The detection capabilities of a network depend upon station distribution, instrument sensitivity and background noise levels. For the BGS UK network, the lower limit of sensitivity is governed by the background noise level. The contours in Figure 2 illustrate the lower threshold magnitude for an earthquake to significantly exceed 4 nanometers of noise (average) at 10 Hz on at least four seismographs. 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.

The detection contours in Figure 2 hold true only if all stations are continuously monitored. Small events in unmonitored areas may then go undetected unless they are felt and reported to BGS by local inhabitants. The detection capabilities by this process are strongly dependent on population density.

3.3 Environmental Monitoring

The infrastructure provided by the UK nationwide seismic monitoring network, comprising remote sensing stations linked to computers, is ideal for expansion into a full-spectrum environmental monitoring network (including pollution, radioactivity and climate). The remote sites required for seismic stations (in order to escape 'cultural' vibration noise from industry, towns, roads etc) are ideal for establishing environmental baselines, long-term trends, the effects of sudden release incidents and the long-range impacts of power stations, traffic and city emissions. The data-rate for seismics, at 100 samples per second per channel, is very high compared to the normal requirements of an environmental monitoring station. It has, therefore, proved to be relatively simple to provide for the transmission of 16 channels of environmental data, at 1 minute intervals, alongside the seismics. To demonstrate this, BGS has established several remote environmental stations, recording Ultra Violet-B, a full set of meteorological parameters, radioactivity, NO_x, SO₂ and O₃ gases. At Eskdalemuir Observatory, in the Scottish Borders, a comprehensive system for environmental monitoring has been installed to prove this capability through an INTERNET connection with the wider community.

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 which satisfies the observed pattern of arrivals. Instrumental locations in the bulletin were obtained using the computer program HYPO71 (Lee and Lahr, 1975) which 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.

The velocity models used for the location of events in 2001 are given in Table 6 and were derived from a series of refraction profiles traversing Britain, LISP (Bamford et al, 1976; Bamford et al, 1978; Assumpção and Bamford, 1978 and Bott et al., 1985).

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 Seismicity Distribution

Owing to variability in the earthquake detection threshold, which is governed by ambient noise conditions and the geometry of the observing network (see 3.2), the bulletin is biased towards certain localities. In order to present a consistent picture of UK seismic activity, earthquakes with magnitude 2.5 ML or greater, in the period 1979 to 2001, have been plotted in Figure 4. The data set is considered complete for these magnitudes in all localities of the onshore area. Seismicity for the period 1970 to 2001 is shown in Figure 5 with a threshold magnitude of 3.5 ML. This is the period covered by BGS instrumentation which 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.

4.4 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 A₀ is that for a 'standard' magnitude zero earthquake at the same distance. The A₀ 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, A₀, 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.

4.5 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).

5. BULLETIN CONTENT AND COMPLETENESS

5.1 The Geographical Area

The bulletin covers all of the UK land mass and its coastal waters including the North Sea to 800 kmE and 1500 kmN.

5.2 Events Included

All events believed to be of true tectonic origins have been included, that is, events caused by natural stresses within the earth.

Coalfield events are also included. These are small events occurring near coal workings which 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 and 5](#).

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 reported by local people as small earthquakes. They are indicated by 'SONIC' in both the locality and comments column of [Tables 1 and 3](#). There were five felt sonic events reported during the year.

Significant non-natural events which received media attention or were greater than magnitude 2.5 ML and felt explosions are also included in [Tables 1 and 3](#). The felt explosions are indicated by 'EXPL' in both the locality and comments column.

5.3 Events Excluded

Events that are known, or suspected to be of explosive origin, are excluded from the bulletin. Explosions due to quarrying, mining, weapon testing or disposal, naval exercises, geophysical prospecting and civil engineering are all excluded where possible, unless they are greater than 2.5 ML or reported to be felt. Unfortunately, identification by record character, location and time of occurrence is not always conclusive and some man-made events may have been included in the bulletin or, more rarely, a small natural event may have been excluded.

5.4 Completeness

The contours of detection threshold in [Figure 2](#) show that 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. High noise levels may cause this 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.

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Laboratoire de Detection et de Geophysique (Bruyeres-de-Chatel, France)
Laboratoire Souterrain de Geodynamique (Walferdange, Luxembourg)
NORSAR (Oslo, Norway)
Observatoire Royal de Belgique (Brussels, Belgium)
Powys Observatory (Knighton, UK)
University of Bergen (Bergen, Norway)
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University of Liverpool (Liverpool, UK)

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UK Earthquake Monitoring Annual Reports

YEAR	AUTHOR(S)	BGS REPORT NO.
89/90	Browitt, CWA and Turbitt, T	WL/90/13
90/91	Browitt, CWA and Turbitt T	WL/91/26
91/92	Browitt, CWA and Turbitt T	WL/92/11
92/93	Browitt, CWA and Walker, AB	WL/93/08
93/94	Walker, AB and Browitt, CWA	WL/94/10
94/95	Walker, AB and Browitt, CWA	WL/95/10
95/96	Walker, AB and Browitt, CWA	WL/96/06
96/97	Walker, AB	WL/97/16
97/98	Walker, AB	WL/98/03
98/99	Walker, AB	WL/99/03
99/00	Walker, AB	WL/00/03
00/01	Walker, AB	IR/01/46

TABLE 1

CATALOGUE OF EVENTS LISTED CHRONOLOGICALLY: 2001

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, neg ative 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

TABLE 1: CATALOGUE OF EVENTS LISTED CHRONOLOGICALLY: 2001

YearMoDy	HrMnSecs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	DM	Gap	RMS	ERH	ERZ	SQD	Comments
20010101	182707.9	55.63	-6.14	139.3	645.6	9.0	2.1	ISLAY,INNER HEBRIDES		6	47	256	0.08	2.2	3.7	B*D	
20010103	065848.7	59.85	1.97	622.5	1114.1	15.0	2.6	NORTHERN NORTH SEA		9	179	140	0.47	5.4	17.8	D*D	
20010104	213117.1	59.80	1.92	619.7	1108.3	19.2	3.1	NORTHERN NORTH SEA		9	177	143	0.15	2.0	6.2	C*D	
20010105	003116.2	49.29	-3.53	288.5	-66.3	7.1	1.6	ENGLISH CHANNEL		8	97	251	0.31	16.0	14.2	D*D	
20010105	005152.0	55.39	-3.10	330.0	611.1	8.5	1.0	HAWICK,BORDERS		10	10	148	0.06	0.8	1.5	A*C	20KM WSW OF HAWICK
20010105	210026.5	56.24	-3.76	291.1	706.4	3.9	0.5	BLACKFORD,TAYSIDE		6	15	152	0.03	0.4	0.6	A*C	
20010109	192611.0	60.02	1.47	593.3	1130.9	5.0	1.2	NORTHERN NORTH SEA		5	148	337	0.35			D*D	
20010113	170853.3	52.86	-3.76	281.6	331.0	11.9	0.3	BALA,GWYNEDD		8	27	141	0.05	0.3	1.1	A*C	10KM SE OF BALA
20010116	142416.4	54.73	-4.89	213.9	541.1	3.9	1.1	LUCE BAY,D & G		9	19	81	0.23	1.6	4.3	B*C	
20010117	161225.0	59.55	1.91	621.1	1079.8	10.0	3.0	NORTHERN NORTH SEA		10	185	157	0.50	4.7	12.5	D*D	
20010121	010425.0	52.43	-1.86	409.4	281.0	8.9	1.0	BIRMINGHAM,W MIDLANDS		6	51	132	0.17	2.6		C*D	
20010130	201006.5	55.38	-5.21	196.9	614.7	8.1	1.3	SOUTH OF ISLE OF ARRAN		8	25	129	0.10	0.9		C*C	
20010209	214522.1	62.84	3.15	661.9	1450.3	15.0	2.9	NORWEGIAN SEA		6	339	314	0.34			D*D	
20010212	111948.4	52.33	2.27	690.8	278.4	15.4	2.7	SOUTHERN NORTH SEA		6	54	312	0.08	2.3	2.2	B*D	
20010214	225133.8	51.87	-2.87	340.0	219.3	13.0	1.2	ABERGAVENNY,GWENT		7	17	120	0.07	0.7	1.0	A*B	
20010217	002950.7	52.42	-4.46	232.4	283.5	5.6	1.5	CARDIGAN BAY,WALES		11	41	191	0.14	0.8	2.8	B*D	25KM WEST OF ABERYSTWYTH
20010219	124521.5	59.39	6.08	858.0	1083.4	15.0	3.0	NORWEGIAN COAST		5	416	352	0.29			D*D	
20010220	093646.0							SONIC-MONTROSE,TAYSIDE	3+								SONIC-FELT MORPHIE
20010220	150400.0							PROBABLE SONIC-N'HANTS	3+								SONIC-FELT N'HANTS...
20010221	112259.0							SONIC-YORKS/HUMBERSIDE	3+								SONIC-FELT SCARBOROUGH...
20010225	123938.4	53.54	-2.58	361.4	405.1	10.4	2.2	WIGAN,GTR MANCHESTER		15	77	126	0.09	0.5	1.2	A*D	
20010225	215309.2	53.53	-2.57	362.2	404.2	10.9	1.6	WIGAN,GTR MANCHESTER		9	75	87	0.09	0.6	1.7	A*D	
20010228	004236.9	54.88	-2.98	337.4	553.9	9.6	1.1	CARLISLE,CUMBRIA		11	8	83	0.15	0.7	1.9	B*A	
20010301	201306.0	52.92	-4.51	231.3	338.6	16.6	0.6	PWLLHELI,GWYNEDD		8	34	224	0.06	1.1	4.4	B*D	5KM NW OF PWLLHELI
20010304	223630.9	52.43	-4.46	232.9	284.6	8.9	2.0	CARDIGAN BAY,WALES		12	40	190	0.08	0.5	0.7	A*D	25KM WEST OF ABERYSTWYTH
20010310	092934.0	52.93	-2.74	350.1	336.8	4.2	1.1	WHITCHURCH,SHROPSHIRE		9	35	145	0.08	0.8	1.7	A*C	5KM SW OF WHITCHURCH
20010314	222043.3	58.25	0.69	558.1	932.4	19.5	3.4	CENTRAL NORTH SEA		28	210	239	0.19	1.7	3.2	B*D	
20010315	004937.3	52.97	-2.25	383.0	341.3	2.3	1.2	NEWCASTLE-U-LYME,STAFF		7	28	193	0.17	2.3	2.4	B*D	C/F
20010315	130534.2	53.02	-2.68	354.6	346.7	9.9	1.7	WHITCHURCH,SHROPSHIRE		8	41	178	0.09	0.9		C*C	4KM NORTH OF WHITCHURCH
20010318	014349.0	51.47	-1.91	406.0	175.1	8.5	2.7	SWINDON,WILTSHIRE		12	64	203	0.22	2.4	3.6	B*D	
20010324	003342.9	57.69	-5.41	196.5	871.9	9.6	1.2	KINLOCHEWE,HIGHLAND		10	22	151	0.05	0.3	2.1	B*C	10KM NW OF KINLOCHEWE
20010324	103325.1	57.01	-5.71	174.7	797.5	11.6	1.0	LOCH NEVIS,HIGHLAND		5	13	175	0.07	0.2	0.8	A*D	
20010327	235259.0	52.61	-1.02	466.3	301.3	5.3	1.6	LEICESTER,LEICS		8	24	179	0.07	0.7	1.3	A*C	
20010415	045548.5	50.07	-5.26	166.7	24.1	10.1	0.3	HELSTON,CORNWALL		8	4	262	0.06	1.1	0.8	B*D	4KM SOUTH OF HELSTON
20010421	143554.2	51.59	-3.30	309.9	189.3	16.9	1.9	PONTYPRIDD,GWENT		8	35	83	0.06	0.5	1.2	A*C	
20010423	181828.0	56.14	-4.78	227.0	697.5	4.1	0.6	LOCH LONG,STRATHCLYDE		7	28	263	0.09	1.4	1.3	B*D	
20010426	002638.6	57.32	-5.52	187.9	830.5	9.7	0.8	LOCHCARRON,HIGHLAND		5	8	136	0.17	5.2	10.4	D*D	10KM SOUTH OF LOCHCARRON
20010428	174108.2	55.40	-3.23	322.2	612.2	3.7	1.4	ETTRICK,BORDERS		19	34	117	0.18	0.7	3.4	B*C	
20010507	094334.0	56.54	3.19	718.9	750.7	5.0	5.0Mw	EKOFISK	4+	10	297	231	0.84	14.8		D*D	FELT EKOFISK FIELD

TABLE 1: CATALOGUE OF EVENTS LISTED CHRONOLOGICALLY: 2001

YearMoDy	HrMnSecs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	DM	Gap	RMS	ERH	ERZ	SQD	Comments
20010509	163826.5	53.77	1.32	619.0	436.1	8.3	2.6	SOUTHERN NORTH SEA		13	99	238	0.50	6.4	5.7	D*D	
20010509	233117.4	51.75	-3.74	280.2	207.4	21.0	1.2	YSTRADGYNLAIS,POWYS		10	29	104	0.07	0.5	1.6	A*B	
20010512	011317.6	55.41	-3.08	331.4	612.9	7.5	0.7	HAWICK,BORDERS		13	13	205	0.12	0.8	2.1	B*D	20KM WEST OF HAWICK
20010513	082659.4	55.10	-3.64	295.5	579.6	11.5	3.0	DUMFRIES,D & G	5	12	9	136	0.11	0.8	1.7	A*C	FELT DUMFRIES...
20010513	084951.0	55.09	-3.63	296.0	578.9	10.8	0.7	DUMFRIES,D & G		8	9	133	0.08	0.9	2.1	B*B	
20010513	095816.3	55.09	-3.63	296.3	579.1	9.7	0.5	DUMFRIES,D & G		7	9	130	0.07	0.9	2.3	B*B	
20010513	112109.2	55.09	-3.63	296.1	578.9	9.6	0.8	DUMFRIES,D & G		9	9	131	0.07	0.7	1.8	A*B	
20010513	112629.3	55.10	-3.63	295.9	579.2	10.8	1.3	DUMFRIES,D & G	3+	9	9	133	0.07	0.8	1.8	A*B	FELT DUMFRIES...
20010514	042857.0	54.60	-3.71	289.8	523.6	13.8	0.5	SOLWAY FIRTH		11	17	89	0.11	0.6	2.5	B*B	9KM WEST OF WHITEHAVEN
20010514	055039.4	62.44	2.21	617.0	1403.1	13.8	2.2	NORTHERN NORTH SEA		5	274	354	0.10			D*D	
20010515	071933.0	59.30	2.12	634.7	1053.4	23.7	2.4	NORTHERN NORTH SEA		5	205	345	0.28			D*D	
20010531	181929.6	53.40	-1.25	449.9	389.7	0.0	1.6	ROTHERHAM,SOUTH YORKS		4	25	314	0.06			A*D	C/F,6KM SE OF ROTHERHAM
20010531	234259.1	50.98	-4.53	215.6	127.2	26.4	3.6	OFF HARTLAND PT,DEVON	5	10	10	180	0.07	0.9	0.3	A*D	FELT CORNWALL & DEVON
20010601	061807.0	61.79	3.06	666.4	1333.6	15.9	3.7	NORTHERN NORTH SEA		13	107	223	0.13	5.8	3.7	D*D	
20010601	062251.4	61.66	2.94	661.6	1319.1	9.7	2.8	NORTHERN NORTH SEA		8	182	227	0.20	4.8		C*D	
20010601	062620.2	61.73	3.04	666.0	1327.2	10.1	2.3	NORTHERN NORTH SEA		11	107	219	0.30	3.7	4.8	C*D	
20010602	004457.2	56.81	6.80	936.4	803.3	15.0	3.9	NORWEGIAN-DANISH BASIN		15	569	300	0.38	16.2		D*D	
20010605	083955.3	50.11	-5.17	173.4	28.3	5.6	0.1	CONSTANTINE,CORNWALL		8	3	149	0.06	0.7	1.0	A*C	
20010605	084343.7	50.11	-5.18	173.0	28.1	6.2	0.2	CONSTANTINE,CORNWALL		9	3	86	0.01	0.1	0.2	A*A	
20010605	090409.9	50.11	-5.17	173.6	28.1	6.6	0.2	CONSTANTINE,CORNWALL		8	4	137	0.03	0.3	0.8	A*C	
20010605	102104.9	51.43	-2.74	348.9	170.5	5.1	1.2	BRISTOL,AVON		6	24	230	0.05	1.3	0.8	B*D	8KM EAST OF BRISTOL
20010605	115047.6	50.11	-5.17	173.0	28.2	6.8	0.8	CONSTANTINE,CORNWALL		10	3	87	0.03	0.2	0.4	A*A	
20010605	120427.5	50.11	-5.18	172.8	28.2	6.7	0.8	CONSTANTINE,CORNWALL		10	3	83	0.03	0.2	0.4	A*A	
20010605	120431.5	50.11	-5.18	172.4	28.8	8.0	0.6	CONSTANTINE,CORNWALL		9	2	98	0.07	0.7	1.3	A*B	
20010605	120738.8	50.11	-5.17	173.5	28.2	5.9	0.2	CONSTANTINE,CORNWALL		8	3	94	0.02	0.2	0.4	A*B	
20010605	153004.0	50.11	-5.17	173.1	28.1	6.0	0.7	CONSTANTINE,CORNWALL		9	3	88	0.02	0.1	0.3	A*A	
20010605	155946.3	50.11	-5.17	173.0	28.1	6.2	1.1	CONSTANTINE,CORNWALL		9	3	86	0.01	0.1	0.2	A*A	
20010605	160128.5	50.11	-5.15	174.8	27.6	5.5	0.0	CONSTANTINE,CORNWALL		6	3	126	0.05	0.8	1.9	A*B	
20010605	160654.2	50.11	-5.17	173.0	28.1	6.3	0.4	CONSTANTINE,CORNWALL		8	3	159	0.01	0.2	0.3	A*C	
20010605	162320.8	50.11	-5.17	173.1	28.2	6.3	0.9	CONSTANTINE,CORNWALL		9	3	88	0.01	0.1	0.2	A*A	
20010605	164832.5	50.11	-5.17	173.4	28.3	6.7	0.4	CONSTANTINE,CORNWALL		9	3	92	0.02	0.2	0.4	A*B	
20010609	004928.4	50.11	-5.18	173.0	28.1	6.3	0.2	CONSTANTINE,CORNWALL		9	3	86	0.02	0.2	0.4	A*A	
20010612	063955.9	50.11	-5.18	173.0	28.2	6.1	0.6	CONSTANTINE,CORNWALL		8	3	128	0.01	0.1	0.2	A*B	
20010617	235112.2	60.43	1.87	613.1	1177.9	15.0	3.0	NORTHERN NORTH SEA		6	163	340	0.24			D*D	
20010620	114514.6	51.95	-3.09	325.1	228.3	28.8	1.8	TALGARTH,POWYS		8	8	103	0.04	0.5	0.5	A*B	10KM SE OF TALGARTH
20010620	213338.7	57.02	-5.79	170.0	798.9	5.6	1.7	MALLAIG,HIGHLAND	3+	10	30	197	0.07	0.6	0.7	A*D	FELT MALLAIG
20010627	030619.8	54.27	-2.27	382.1	485.8	7.2	2.2	SEDBERGH,CUMBRIA	4+	12	35	204	0.10	0.2	4.2	B*D	FELT COWGILL
20010711	201647.5	53.05	-4.48	233.8	352.8	10.1	0.4	CAERNARVON BAY,GWYNEDD		8	8	191	0.06	1.5	3.5	B*D	
20010713	011713.6	55.53	-3.16	326.8	627.4	8.6	1.0	PEEBLES,BORDERS		12	27	118	0.12	0.8	16.9	C*C	15KM SOUTH OF PEEBLES

TABLE 1: CATALOGUE OF EVENTS LISTED CHRONOLOGICALLY: 2001

YearMoDy	HrMnSecs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	DM	Gap	RMS	ERH	ERZ	SQD	Comments
20010717	213624.4	51.64	-3.07	325.7	193.6	4.3	0.7	CWMBRAN,GWENT		4	19	278	0.11				A*D
20010721	004330.7	56.65	-6.10	149.0	758.8	4.3	1.9	MULL,STRATHCLYDE	3+	10	71	242	0.06	1.0	1.5		B*D FELT SALEN
20010724	041204.6	56.76	-5.51	185.6	768.4	12.4	1.4	FORT WILLIAM,HIGHLAND		5	34	274	0.09	6.6			D*D 25KM SW OF FORT WILLIAM
20010724	212910.1	57.59	-5.61	184.0	861.4	4.1	1.2	TORRIDON,HIGHLAND		4	22	294	0.02				A*D 7KM NORTHWEST OF TORRIDON
20010725	232104.0	57.47	-5.56	186.4	847.3	14.0	0.8	LOCHCARRON,HIGHLAND		4	15	236	0.02				A*D
20010726	031114.4	53.06	-1.79	414.4	351.3	0.1	0.8	ASHBOURNE,DERBYSHIRE		5	6	180	0.24	13.1	14.7		D*D C/F
20010731	135636.4	52.22	-4.36	238.6	260.6	8.1	1.5	NEW QUAY,DYFED		7	42	135	0.09	0.9			C*C
20010809	012532.4	55.25	-3.22	322.5	595.7	14.6	0.4	ESKDALEMUIR,D & G		6	17	232	0.02	0.6	0.7		A*D
20010813	095658.5	60.48	2.02	620.8	1184.0	15.0	2.0	NORTHERN NORTH SEA		5	171	341	0.08				D*D
20010816	003459.7	49.24	-2.16	388.1	-73.5	9.6	0.1	JERSEY,CHANNEL ISLANDS		6	5	301	0.01	0.4	0.2		A*D
20010825	031013.6	52.03	-2.84	342.6	237.5	18.5	0.4	HEREFORD,HER & WOR		6	12	112	0.04	0.4	1.0		A*B
20010830	014458.5	53.84	-3.20	321.0	439.1	8.0	0.9	IRISH SEA		8	43	211	0.31	5.4			D*D 10KM WEST OF BLACKPOOL
20010831	223224.4	51.83	-2.91	337.6	215.0	12.8	1.0	ABERGAVENNY,GWENT		9	20	102	0.08	0.5	0.5		A*B
20010901	120952.0	56.24	-3.74	291.9	706.3	4.2	1.8	BLACKFORD,TAYSIDE	3+	8	36	151	0.05	0.6	1.6		A*C FELT GLENDEVON
20010902	052950.6	57.64	-5.65	182.2	867.0	4.1	1.3	GAIRLOCH,HIGHLAND		8	26	116	0.09	0.8	1.4		A*C 10KM SOUTH OF GAIRLOCH
20010903	220629.9	57.02	-5.78	170.6	798.8	4.0	0.5	MALLAIG,HIGHLAND		5	30	258	0.08	5.2	4.9		D*D
20010905	034821.4	52.74	-2.96	335.2	316.0	10.4	1.1	SHREWSBURY,SHROPSHIRE		10	27	207	0.07	0.9	0.7		A*D 15KM WEST OF SHREWSBURY
20010913	234534.3	52.04	-2.83	343.0	237.9	20.7	1.0	HEREFORD,HER & WOR		7	12	114	0.04	0.4	0.5		A*B
20010914	193334.1	57.65	-5.34	200.7	867.4	5.2	0.8	KINLOCHEWE,HIGHLAND		5	17	222	0.08	0.9	1.0		A*D 5KM SE OF KINLOCHEWE
20010916	024431.4	51.74	-4.13	252.7	207.0	13.5	1.8	LLANELLI,DYFED		9	2	114	0.07	0.5	0.5		A*B
20010918	055842.4	62.19	2.32	624.5	1375.1	15.0	2.9	NORTHERN NORTH SEA		5	257	354	0.05				D*D
20011005	224903.5	55.24	-3.49	305.2	595.5	6.0	0.5	JOHNSTONEBRIDGE,D & G		7	13	193	0.08	0.3	2.6		B*D
20011008	103314.1	51.08	-4.54	222.3	134.2	22.1	1.5	OFF HARTLAND PT,DEVON		6	10	191	0.18	2.3	2.4		B*D 6KM NORTH OF HARTLAND POINT
20011010	025225.3	51.70	-3.25	313.3	200.7	6.5	3.1	BARGOED,MID GLAMORGAN	4	8	32	83	0.09	0.6	4.4		B*C FELT BARGOED...
20011010	050148.0	51.70	-3.25	313.4	200.9	5.3	1.6	BARGOED,MID GLAMORGAN		7	32	106	0.07	0.8	1.7		A*C
20011014	101732.6	53.37	2.79	718.8	397.0	15.0	2.7	SOUTHERN NORTH SEA		8	108	324	0.45		18.7		D*D
20011017	230311.1	53.21	-2.75	350.2	368.2	8.7	2.4	CHESTER,CHESHIRE		13	17	87	0.05	0.3	1.7		A*B
20011017	230559.2	53.21	-2.73	351.4	368.2	9.2	1.5	CHESTER,CHESHIRE		11	16	87	0.12	0.8	1.8		A*B
20011017	232108.7	61.79	2.35	629.5	1330.7	13.5	1.8	NORTHERN NORTH SEA		5	231	351	0.22				D*D
20011017	232135.2	53.21	-2.75	349.8	368.0	6.9	2.1	CHESTER,CHESHIRE		11	17	86	0.05	0.5	0.8		A*C
20011018	035013.6	51.70	-3.26	313.3	201.3	7.9	2.5	BARGOED,MID GLAMORGAN	4+	8	32	92	0.10	0.7			C*C FELT BARGOED...
20011021	003129.0	56.89	7.43	973.5	817.3	15.0	3.7	NORWEGIAN-DANISH BASIN		19	608	321	0.56				D*D
20011022	151648.3	51.70	-3.25	313.4	201.1	7.6	1.6	BARGOED,MID GLAMORGAN		6	32	113	0.10	0.9			C*C
20011028	162525.1	52.85	-0.86	477.0	328.3	11.6	4.1	MELTON MOWBRAY,LEICS	5	11	15	77	0.14	1.2	1.6		B*B FELT MELTON MOWBRAY...
20011101	015611.4	51.07	-4.58	218.9	133.2	26.9	1.1	OFF HARTLAND PT,DEVON		5	11	212	0.02	0.9	0.6		A*D
20011102	042514.0	53.05	-3.35	309.7	351.1	10.5	1.4	RUTHIN,CLWYD		9	17	218	0.07	0.8	1.0		A*D 7KM SOUTH OF RUTHIN
20011102	195918.0	50.00	-5.05	181.3	15.5	23.8	1.5	OFF LIZARD PT,CORNWALL		10	10	310	0.03	0.8	0.6		A*D 10KM EAST OF LIZARD POINT
20011102	200100.1	50.00	-5.05	181.4	15.3	24.1	1.2	OFF LIZARD PT,CORNWALL		10	10	310	0.03	0.7	0.5		A*D 10KM EAST OF LIZARD POINT
20011105	025218.9	53.17	-4.44	237.1	366.9	7.5	2.3	ANGLESEY,GWYNEDD	2+	13	63	86	0.18	0.8	2.5		B*D FELT ANGLESEY

TABLE 1: CATALOGUE OF EVENTS LISTED CHRONOLOGICALLY: 2001

YearMoDy	HrMnSecs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	DM	Gap	RMS	ERH	ERZ	SQD	Comments
20011107	042311.7	57.03	-5.77	171.5	799.6	6.8	0.6	MALLAIG,HIGHLAND		5	29	325	0.17	3.3	7.1	C*D	
20011113	170202.0	57.00	-5.39	194.2	794.8	6.0	2.2	FORT WILLIAM,HIGHLAND		6	24	252	0.10	3.1	1.6	C*D	27KM NW OF FORT WILLIAM
20011113	205844.0							SONIC-BERWICKSHIRE	3+								SONIC-FELT EYEMOUTH...
20011115	063554.0	51.32	-2.71	350.2	158.7	16.9	1.8	BRISTOL,AVON		10	2	96	0.08	0.7	0.4	A*B	14KM SOUTH OF BRISTOL
20011116	101229.0							SONIC-FELT NE ENGLAND	3+								SONIC-FELT SUNDERLAND...
20011125	210919.1	52.73	-2.98	333.9	315.8	12.1	1.4	SHREWSBURY,SHROPSHIRE		7	27	113	0.04	0.4	0.5	A*C	15KM WEST OF SHREWSBURY
20011127	175116.1	52.96	-3.73	284.1	341.6	12.2	1.5	BALA,GWYNEDD		9	32	121	0.05	0.4	1.1	A*C	10KM NW OF BALA
20011129	061541.1	56.91	-4.23	264.5	782.1	9.0	1.4	DALWHINNIE,HIGHLAND		12	47	73	0.22	0.6		C*C	7KM SOUTH OF DALWHINNIE
20011130	024614.9	50.11	-6.42	84.0	32.6	5.1	1.9	NW OF SCILLY ISLES		5	60	357	0.19		16.9	D*D	
20011201	211424.9	56.70	-5.15	207.1	760.7	7.8	1.5	BALLACHULISH,HIGHLAND	4+	11	59	172	0.16	1.4	6.9	C*D	FELT BALLACHULISH...
20011205	182412.2	57.20	-5.42	193.2	817.2	12.0	0.1	GLEN SHEIL,HIGHLAND		3	1	313	0.22			B*D	
20011206	064253.0	52.95	-4.39	239.3	341.8	24.9	1.2	LLEYN PENINSULA		8	4	187	0.03	0.6	0.7	A*D	
20011208	174705.5	57.61	-5.40	196.8	862.3	5.4	0.6	KINLOCHEWE,HIGHLAND		4	13	160	0.08			A*D	
20011210	040551.5	53.24	-1.12	458.6	372.2	0.3	1.8	WORKSOP,NOTTS		7	27	176	0.13	1.1	1.6	B*C	C/F,7KM S OF WORKSOP
20011211	063106.4	56.24	-4.03	274.3	707.4	5.5	1.7	DUNBLANE,CENTRAL		12	20	145	0.08	0.4	0.8	A*C	6KM NW OF DUNBLANE
20011211	075059.7	56.24	-4.03	274.5	707.1	5.2	1.5	DUNBLANE,CENTRAL		10	20	144	0.08	0.4	0.9	A*C	6KM NW OF DUNBLANE
20011211	214746.4	52.96	-4.38	240.2	342.8	21.9	0.7	LLEYN PENINSULA		10	4	99	0.05	0.4	1.0	A*B	
20011216	132520.0	53.69	-2.00	399.9	421.8	9.8	2.6	HALIFAX,WEST YORKSHIRE	4+	17	19	81	0.12	0.6	1.5	A*B	FELT HALIFAX...
20011219	151325.7	55.23	-3.49	305.2	594.3	7.0	1.3	JOHNSTONEBRIDGE,D & G		13	12	147	0.08	0.3	1.4	A*C	
20011219	205845.1	56.24	-3.74	292.0	706.5	4.8	2.1	BLACKFORD,TAYSIDE	3+	10	15	129	0.06	0.4	0.7	A*C	FELT GLENDEVON...
20011219	213035.0	56.24	-3.73	292.8	707.1	5.8	1.3	BLACKFORD,TAYSIDE	3+	8	14	128	0.06	0.6	1.3	A*C	FELT GLENDEVON...
20011220	035633.3	52.73	-2.97	334.5	315.6	7.7	1.4	WELSHPOOL,POWYS		8	25	205	0.07	0.9		C*D	
20011221	093456.9	58.73	0.55	547.6	984.8	18.1	2.7	NORTHERN NORTH SEA		5	176	349	0.12			D*D	

TABLE 2

**CATALOGUE OF EARTHQUAKES LISTED IN
ORDER OF DECREASING LATITUDE: 2001**

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, neg ative 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

TABLE 2: CATALOGUE OF EARTHQUAKES LISTED IN ORDER OF DECREASING LATITUDE: 2001

YearMoDy	HrMnSecs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	DM	Gap	RMS	ERH	ERZ	SQD	Comments
20010209	214522.1	62.84	3.15	661.9	1450.3	15.0	2.9	NORWEGIAN SEA		6	339	314	0.34				D*D
20010514	055039.4	62.44	2.21	617.0	1403.1	13.8	2.2	NORTHERN NORTH SEA		5	274	354	0.10				D*D
20010918	055842.4	62.19	2.32	624.5	1375.1	15.0	2.9	NORTHERN NORTH SEA		5	257	354	0.05				D*D
20010601	061807.0	61.79	3.06	666.4	1333.6	15.9	3.7	NORTHERN NORTH SEA		13	107	223	0.13	5.8	3.7		D*D
20011017	232108.7	61.79	2.35	629.5	1330.7	13.5	1.8	NORTHERN NORTH SEA		5	231	351	0.22				D*D
20010601	062620.2	61.73	3.04	666.0	1327.2	10.1	2.3	NORTHERN NORTH SEA		11	107	219	0.30	3.7	4.8		C*D
20010601	062251.4	61.66	2.94	661.6	1319.1	9.7	2.8	NORTHERN NORTH SEA		8	182	227	0.20	4.8			C*D
20010813	095658.5	60.48	2.02	620.8	1184.0	15.0	2.0	NORTHERN NORTH SEA		5	171	341	0.08				D*D
20010617	235112.2	60.43	1.87	613.1	1177.9	15.0	3.0	NORTHERN NORTH SEA		6	163	340	0.24				D*D
20010109	192611.0	60.02	1.47	593.3	1130.9	5.0	1.2	NORTHERN NORTH SEA		5	148	337	0.35				D*D
20010103	065848.7	59.85	1.97	622.5	1114.1	15.0	2.6	NORTHERN NORTH SEA		9	179	140	0.47	5.4	17.8		D*D
20010104	213117.1	59.80	1.92	619.7	1108.3	19.2	3.1	NORTHERN NORTH SEA		9	177	143	0.15	2.0	6.2		C*D
20010117	161225.0	59.55	1.91	621.1	1079.8	10.0	3.0	NORTHERN NORTH SEA		10	185	157	0.50	4.7	12.5		D*D
20010219	124521.5	59.39	6.08	858.0	1083.4	15.0	3.0	NORWEGIAN COAST		5	416	352	0.29				D*D
20010515	071933.0	59.30	2.12	634.7	1053.4	23.7	2.4	NORTHERN NORTH SEA		5	205	345	0.28				D*D
20011221	093456.9	58.73	0.55	547.6	984.8	18.1	2.7	NORTHERN NORTH SEA		5	176	349	0.12				D*D
20010314	222043.3	58.25	0.69	558.1	932.4	19.5	3.4	CENTRAL NORTH SEA		28	210	239	0.19	1.7	3.2		B*D
20010324	003342.9	57.69	-5.41	196.5	871.9	9.6	1.2	KINLOCHEWE,HIGHLAND		10	22	151	0.05	0.3	2.1		B*C 10KM NW OF KINLOCHEWE
20010914	193334.1	57.65	-5.34	200.7	867.4	5.2	0.8	KINLOCHEWE,HIGHLAND		5	17	222	0.08	0.9	1.0		A*D 5KM SE OF KINLOCHEWE
20010902	052950.6	57.64	-5.65	182.2	867.0	4.1	1.3	GAIRLOCH,HIGHAND		8	26	116	0.09	0.8	1.4		A*C 10KM SOUTH OF GAIRLOCH
20011208	174705.5	57.61	-5.40	196.8	862.3	5.4	0.6	KINLOCHEWE,HIGHLAND		4	13	160	0.08				A*D
20010724	212910.1	57.59	-5.61	184.0	861.4	4.1	1.2	TORRIDON,HIGHLAND		4	22	294	0.02				A*D 7KM NORTHWEST OF TORRIDON
20010725	232104.0	57.47	-5.56	186.4	847.3	14.0	0.8	LOCHCARRON,HIGHLAND		4	15	236	0.02				A*D
20010426	002638.6	57.32	-5.52	187.9	830.5	9.7	0.8	LOCHCARRON,HIGHLAND		5	8	136	0.17	5.2	10.4		D*D 10KM SOUTH OF LOCHCARRON
20011205	182412.2	57.20	-5.42	193.2	817.2	12.0	0.1	GLEN SHEIL,HIGHLAND		3	1	313	0.22				B*D
20011107	042311.7	57.03	-5.77	171.5	799.6	6.8	0.6	MALLAIG,HIGHLAND		5	29	325	0.17	3.3	7.1		C*D
20010620	213338.7	57.02	-5.79	170.0	798.9	5.6	1.7	MALLAIG,HIGHLAND	3+	10	30	197	0.07	0.6	0.7		A*D FELT MALLAIG
20010903	220629.9	57.02	-5.78	170.6	798.8	4.0	0.5	MALLAIG,HIGHLAND		5	30	258	0.08	5.2	4.9		D*D
20010324	103325.1	57.01	-5.71	174.7	797.5	11.6	1.0	LOCH NEVIS,HIGHLAND		5	13	175	0.07	0.2	0.8		A*D
20011113	170202.0	57.00	-5.39	194.2	794.8	6.0	2.2	FORT WILLIAM,HIGHLAND		6	24	252	0.10	3.1	1.6		C*D 27KM NW OF FORT WILLIAM
20011129	061541.1	56.91	-4.23	264.5	782.1	9.0	1.4	DALWHINNIE,HIGHLAND		12	47	73	0.22	0.6			C*C 7KM SOUTH OF DALWHINNIE
20011021	003129.0	56.89	7.43	973.5	817.3	15.0	3.7	NORWEGIAN-DANISH BASIN		19	608	321	0.56				D*D
20010602	004457.2	56.81	6.80	936.4	803.3	15.0	3.9	NORWEGIAN-DANISH BASIN		15	569	300	0.38	16.2			D*D
20010507	094334.0	56.54	3.19	718.9	750.7	5.0	5.0Mw	EKOFISK	4+	10	297	231	0.84	14.8			D*D FELT EKOFISK FIELD
20010724	041204.6	56.76	-5.51	185.6	768.4	12.4	1.4	FORT WILLIAM,HIGHLAND		5	34	274	0.09	6.6			D*D 25KM SW OF FORT WILLIAM
20011201	211424.9	56.70	-5.15	207.1	760.7	7.8	1.5	BALLACHULISH,HIGHLAND	4+	11	59	172	0.16	1.4	6.9		C*D FELT BALLACHULISH...
20010721	004330.7	56.65	-6.10	149.0	758.8	4.3	1.9	MULL,STRATHCLYDE	3+	10	71	242	0.06	1.0	1.5		B*D FELT SALEN
20010105	210026.5	56.24	-3.76	291.1	706.4	3.9	0.5	BLACKFORD,TAYSIDE		6	15	152	0.03	0.4	0.6		A*C
20010901	120952.0	56.24	-3.74	291.9	706.3	4.2	1.8	BLACKFORD,TAYSIDE	3+	8	36	151	0.05	0.6	1.6		A*C FELT GLENDEVON

TABLE 2: CATALOGUE OF EARTHQUAKES LISTED IN ORDER OF DECREASING LATITUDE: 2001

YearMoDy	HrMnSecs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	DM	Gap	RMS	ERH	ERZ	SQD	Comments
20011211	063106.4	56.24	-4.03	274.3	707.4	5.5	1.7	DUNBLANE,CENTRAL		12	20	145	0.08	0.4	0.8	A*C	6KM NW OF DUNBLANE
20011211	075059.7	56.24	-4.03	274.5	707.1	5.2	1.5	DUNBLANE,CENTRAL		10	20	144	0.08	0.4	0.9	A*C	6KM NW OF DUNBLANE
20011219	205845.1	56.24	-3.74	292.0	706.5	4.8	2.1	BLACKFORD,TAYSIDE	3+	10	15	129	0.06	0.4	0.7	A*C	FELT GLENDEVON...
20011219	213035.0	56.24	-3.73	292.8	707.1	5.8	1.3	BLACKFORD,TAYSIDE	3+	8	14	128	0.06	0.6	1.3	A*C	FELT GLENDEVON...
20010423	181828.0	56.14	-4.78	227.0	697.5	4.1	0.6	LOCH LONG,STRATHCLYDE		7	28	263	0.09	1.4	1.3	B*D	
20010101	182707.9	55.63	-6.14	139.3	645.6	9.0	2.1	ISLAY,INNER HEBRIDES		6	47	256	0.08	2.2	3.7	B*D	
20010713	011713.6	55.53	-3.16	326.8	627.4	8.6	1.0	PEEBLES,BORDERS		12	27	118	0.12	0.8	16.9	C*C	15KM SOUTH OF PEEBLES
20010512	011317.6	55.41	-3.08	331.4	612.9	7.5	0.7	HAWICK,BORDERS		13	13	205	0.12	0.8	2.1	B*D	20KM WEST OF HAWICK
20010428	174108.2	55.40	-3.23	322.2	612.2	3.7	1.4	ETTRICK,BORDERS		19	34	117	0.18	0.7	3.4	B*C	
20010105	005152.0	55.39	-3.10	330.0	611.1	8.5	1.0	HAWICK,BORDERS		10	10	148	0.06	0.8	1.5	A*C	20KM WSW OF HAWICK
20010130	201006.5	55.38	-5.21	196.9	614.7	8.1	1.3	SOUTH OF ISLE OF ARRAN		8	25	129	0.10	0.9		C*C	
20010809	012532.4	55.25	-3.22	322.5	595.7	14.6	0.4	ESKDALEMUIR,D & G		6	17	232	0.02	0.6	0.7	A*D	
20011005	224903.5	55.24	-3.49	305.2	595.5	6.0	0.5	JOHNSTONEBRIDGE,D & G		7	13	193	0.08	0.3	2.6	B*D	
20011219	151325.7	55.23	-3.49	305.2	594.3	7.0	1.3	JOHNSTONEBRIDGE,D & G		13	12	147	0.08	0.3	1.4	A*C	
20010513	082659.4	55.10	-3.64	295.5	579.6	11.5	3.0	DUMFRIES,D & G	5	12	9	136	0.11	0.8	1.7	A*C	FELT DUMFRIES...
20010513	112629.3	55.10	-3.63	295.9	579.2	10.8	1.3	DUMFRIES,D & G	3+	9	9	133	0.07	0.8	1.8	A*B	FELT DUMFRIES...
20010513	084951.0	55.09	-3.63	296.0	578.9	10.8	0.7	DUMFRIES,D & G		8	9	133	0.08	0.9	2.1	B*B	
20010513	095816.3	55.09	-3.63	296.3	579.1	9.7	0.5	DUMFRIES,D & G		7	9	130	0.07	0.9	2.3	B*B	
20010513	112109.2	55.09	-3.63	296.1	578.9	9.6	0.8	DUMFRIES,D & G		9	9	131	0.07	0.7	1.8	A*B	
20010228	004236.9	54.88	-2.98	337.4	553.9	9.6	1.1	CARLISLE,CUMBRIA		11	8	83	0.15	0.7	1.9	B*A	
20010116	142416.4	54.73	-4.89	213.9	541.1	3.9	1.1	LUCE BAY,D & G		9	19	81	0.23	1.6	4.3	B*C	
20010514	042857.0	54.60	-3.71	289.8	523.6	13.8	0.5	SOLWAY FIRTH		11	17	89	0.11	0.6	2.5	B*B	9KM WEST OF WHITEHAVEN
20010627	030619.8	54.27	-2.27	382.1	485.8	7.2	2.2	SEDBERGH,CUMBRIA	4+	12	35	204	0.10	0.2	4.2	B*D	FELT COWGILL
20010830	014458.5	53.84	-3.20	321.0	439.1	8.0	0.9	IRISH SEA		8	43	211	0.31	5.4		D*D	10KM WEST OF BLACKPOOL
20010509	163826.5	53.77	1.32	619.0	436.1	8.3	2.6	SOUTHERN NORTH SEA		13	99	238	0.50	6.4	5.7	D*D	
20011216	132520.0	53.69	-2.00	399.9	421.8	9.8	2.6	HALIFAX,WEST YORKSHIRE	4+	17	19	81	0.12	0.6	1.5	A*B	FELT HALIFAX...
20010225	123938.4	53.54	-2.58	361.4	405.1	10.4	2.2	WIGAN,GTR MANCHESTER		15	77	126	0.09	0.5	1.2	A*D	
20010225	215309.2	53.53	-2.57	362.2	404.2	10.9	1.6	WIGAN,GTR MANCHESTER		9	75	87	0.09	0.6	1.7	A*D	
20010531	181929.6	53.40	-1.25	449.9	389.7	0.0	1.6	ROTHERHAM,SOUTH YORKS		4	25	314	0.06			A*D	C/F,6KM SE OF ROTHERHAM
20011014	101732.6	53.37	2.79	718.8	397.0	15.0	2.7	SOUTHERN NORTH SEA		8	108	324	0.45		18.7	D*D	
20011210	040551.5	53.24	-1.12	458.6	372.2	0.3	1.8	WORKSOP,NOTTS		7	27	176	0.13	1.1	1.6	B*C	C/F,7KM S OF WORKSOP
20011017	230311.1	53.21	-2.75	350.2	368.2	8.7	2.4	CHESTER,CHESHIRE		13	17	87	0.05	0.3	1.7	A*B	
20011017	230559.2	53.21	-2.73	351.4	368.2	9.2	1.5	CHESTER,CHESHIRE		11	16	87	0.12	0.8	1.8	A*B	
20011017	232135.2	53.21	-2.75	349.8	368.0	6.9	2.1	CHESTER,CHESHIRE		11	17	86	0.05	0.5	0.8	A*C	
20011105	025218.9	53.17	-4.44	237.1	366.9	7.5	2.3	ANGLESEY,GWYNEDD	2+	13	63	86	0.18	0.8	2.5	B*D	FELT ANGLESEY
20010726	031114.4	53.06	-1.79	414.4	351.3	0.1	0.8	ASHBOURNE,DERBYSHIRE		5	6	180	0.24	13.1	14.7	D*D	C/F
20010711	201647.5	53.05	-4.48	233.8	352.8	10.1	0.4	CAERNARVON BAY,GWYNEDD		8	8	191	0.06	1.5	3.5	B*D	
20011102	042514.0	53.05	-3.35	309.7	351.1	10.5	1.4	RUTHIN,CLWYD		9	17	218	0.07	0.8	1.0	A*D	7KM SOUTH OF RUTHIN
20010315	130534.2	53.02	-2.68	354.6	346.7	9.9	1.7	WHITCHURCH,SHROPSHIRE		8	41	178	0.09	0.9		C*C	4KM NORTH OF WHITCHURCH

TABLE 2: CATALOGUE OF EARTHQUAKES LISTED IN ORDER OF DECREASING LATITUDE: 2001

YearMoDy	HrMnSecs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	DM	Gap	RMS	ERH	ERZ	SQD	Comments
20010315	004937.3	52.97	-2.25	383.0	341.3	2.3	1.2	NEWCASTLE-U-LYME,STAFF		7	28	193	0.17	2.3	2.4	B*D	C/F
20011127	175116.1	52.96	-3.73	284.1	341.6	12.2	1.5	BALA,GWYNEDD		9	32	121	0.05	0.4	1.1	A*C	10KM NW OF BALA
20011211	214746.4	52.96	-4.38	240.2	342.8	21.9	0.7	LLEYN PENINSULA		10	4	99	0.05	0.4	1.0	A*B	
20011206	064253.0	52.95	-4.39	239.3	341.8	24.9	1.2	LLEYN PENINSULA		8	4	187	0.03	0.6	0.7	A*D	
20010310	092934.0	52.93	-2.74	350.1	336.8	4.2	1.1	WHITCHURCH,SHROPSHIRE		9	35	145	0.08	0.8	1.7	A*C	5KM SW OF WHITCHURCH
20010301	201306.0	52.92	-4.51	231.3	338.6	16.6	0.6	PWLLHELI,GWYNEDD		8	34	224	0.06	1.1	4.4	B*D	5KM NW OF PWLLHELI
20010113	170853.3	52.86	-3.76	281.6	331.0	11.9	0.3	BALA,GWYNEDD		8	27	141	0.05	0.3	1.1	A*C	10KM SE OF BALA
20011028	162525.1	52.85	-0.86	477.0	328.3	11.6	4.1	MELTON MOWBRAY,LEICS	5	11	15	77	0.14	1.2	1.6	B*B	FELT MELTON MOWBRAY...
20010905	034821.4	52.74	-2.96	335.2	316.0	10.4	1.1	SHREWSBURY,SHROPSHIRE		10	27	207	0.07	0.9	0.7	A*D	15KM WEST OF SHREWSBURY
20011125	210919.1	52.73	-2.98	333.9	315.8	12.1	1.4	SHREWSBURY,SHROPSHIRE		7	27	113	0.04	0.4	0.5	A*C	15KM WEST OF SHREWSBURY
20011220	035633.3	52.73	-2.97	334.5	315.6	7.7	1.4	WELSHPOOL,POWYS		8	25	205	0.07	0.9		C*D	
20010327	235259.0	52.61	-1.02	466.3	301.3	5.3	1.6	LEICESTER,LEICS		8	24	179	0.07	0.7	1.3	A*C	
20010121	010425.0	52.43	-1.86	409.4	281.0	8.9	1.0	BIRMINGHAM,W MIDLANDS		6	51	132	0.17	2.6		C*D	
20010304	223630.9	52.43	-4.46	232.9	284.6	8.9	2.0	CARDIGAN BAY,WALES		12	40	190	0.08	0.5	0.7	A*D	25KM WEST OF ABERYSTWYTH
20010217	002950.7	52.42	-4.46	232.4	283.5	5.6	1.5	CARDIGAN BAY,WALES		11	41	191	0.14	0.8	2.8	B*D	25KM WEST OF ABERYSTWYTH
20010212	111948.4	52.33	2.27	690.8	278.4	15.4	2.7	SOUTHERN NORTH SEA		6	54	312	0.08	2.3	2.2	B*D	
20010731	135636.4	52.22	-4.36	238.6	260.6	8.1	1.5	NEW QUAY,DYFED		7	42	135	0.09	0.9		C*C	
20010913	234534.3	52.04	-2.83	343.0	237.9	20.7	1.0	HEREFORD,HER & WOR		7	12	114	0.04	0.4	0.5	A*B	
20010825	031013.6	52.03	-2.84	342.6	237.5	18.5	0.4	HEREFORD,HER & WOR		6	12	112	0.04	0.4	1.0	A*B	
20010620	114514.6	51.95	-3.09	325.1	228.3	28.8	1.8	TALGARTH,POWYS		8	8	103	0.04	0.5	0.5	A*B	10KM SE OF TALGARTH
20010214	225133.8	51.87	-2.87	340.0	219.3	13.0	1.2	ABERGAVENNY,GWENT		7	17	120	0.07	0.7	1.0	A*B	
20010831	223224.4	51.83	-2.91	337.6	215.0	12.8	1.0	ABERGAVENNY,GWENT		9	20	102	0.08	0.5	0.5	A*B	
20010509	233117.4	51.75	-3.74	280.2	207.4	21.0	1.2	YSTRADGYNLAIS,POWYS		10	29	104	0.07	0.5	1.6	A*B	
20010916	024431.4	51.74	-4.13	252.7	207.0	13.5	1.8	LLANELLI,DYFED		9	2	114	0.07	0.5	0.5	A*B	
20011010	025225.3	51.70	-3.25	313.3	200.7	6.5	3.1	BARGOED,MID GLAMORGAN	4	8	32	83	0.09	0.6	4.4	B*C	FELT BARGOED...
20011010	050148.0	51.70	-3.25	313.4	200.9	5.3	1.6	BARGOED,MID GLAMORGAN		7	32	106	0.07	0.8	1.7	A*C	
20011018	035013.6	51.70	-3.26	313.3	201.3	7.9	2.5	BARGOED,MID GLAMORGAN	4+	8	32	92	0.10	0.7		C*C	FELT BARGOED...
20011022	151648.3	51.70	-3.25	313.4	201.1	7.6	1.6	BARGOED,MID GLAMORGAN		6	32	113	0.10	0.9		C*C	
20010717	213624.4	51.64	-3.07	325.7	193.6	4.3	0.7	CWMBRAN,GWENT		4	19	278	0.11			A*D	
20010421	143554.2	51.59	-3.30	309.9	189.3	16.9	1.9	PONTYPRIDD,GWENT		8	35	83	0.06	0.5	1.2	A*C	
20010318	014349.0	51.47	-1.91	406.0	175.1	8.5	2.7	SWINDON,WILTSHIRE		12	64	203	0.22	2.4	3.6	B*D	
20010605	102104.9	51.43	-2.74	348.9	170.5	5.1	1.2	BRISTOL,AVON		6	24	230	0.05	1.3	0.8	B*D	8KM EAST OF BRISTOL
20011115	063554.0	51.32	-2.71	350.2	158.7	16.9	1.8	BRISTOL,AVON		10	2	96	0.08	0.7	0.4	A*B	14KM SOUTH OF BRISTOL
20011008	103314.1	51.08	-4.54	222.3	134.2	22.1	1.5	OFF HARTLAND PT,DEVON		6	10	191	0.18	2.3	2.4	B*D	6KM NORTH OF HARTLAND POINT
20011101	015611.4	51.07	-4.58	218.9	133.2	26.9	1.1	OFF HARTLAND PT,DEVON		5	11	212	0.02	0.9	0.6	A*D	
20010531	234259.1	50.98	-4.53	215.6	127.2	26.4	3.6	OFF HARTLAND PT,DEVON	5	10	10	180	0.07	0.9	0.3	A*D	FELT CORNWALL & DEVON
20010605	083955.3	50.11	-5.17	173.4	28.3	5.6	0.1	CONSTANTINE,CORNWALL		8	3	149	0.06	0.7	1.0	A*C	
20010605	084343.7	50.11	-5.18	173.0	28.1	6.2	0.2	CONSTANTINE,CORNWALL		9	3	86	0.01	0.1	0.2	A*A	
20010605	090409.9	50.11	-5.17	173.6	28.1	6.6	0.2	CONSTANTINE,CORNWALL		8	4	137	0.03	0.3	0.8	A*C	

TABLE 2: CATALOGUE OF EARTHQUAKES LISTED IN ORDER OF DECREASING LATITUDE: 2001

YearMoDy	HrMnSecs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	DM	Gap	RMS	ERH	ERZ	SQD	Comments
20010605	115047.6	50.11	-5.17	173.0	28.2	6.8	0.8	CONSTANTINE,CORNWALL		10	3	87	0.03	0.2	0.4	A*A	
20010605	120427.5	50.11	-5.18	172.8	28.2	6.7	0.8	CONSTANTINE,CORNWALL		10	3	83	0.03	0.2	0.4	A*A	
20010605	120431.5	50.11	-5.18	172.4	28.8	8.0	0.6	CONSTANTINE,CORNWALL		9	2	98	0.07	0.7	1.3	A*B	
20010605	120738.8	50.11	-5.17	173.5	28.2	5.9	0.2	CONSTANTINE,CORNWALL		8	3	94	0.02	0.2	0.4	A*B	
20010605	153004.0	50.11	-5.17	173.1	28.1	6.0	0.7	CONSTANTINE,CORNWALL		9	3	88	0.02	0.1	0.3	A*A	
20010605	155946.3	50.11	-5.17	173.0	28.1	6.2	1.1	CONSTANTINE,CORNWALL		9	3	86	0.01	0.1	0.2	A*A	
20010605	160128.5	50.11	-5.15	174.8	27.6	5.5	0.0	CONSTANTINE,CORNWALL		6	3	126	0.05	0.8	1.9	A*B	
20010605	160654.2	50.11	-5.17	173.0	28.1	6.3	0.4	CONSTANTINE,CORNWALL		8	3	159	0.01	0.2	0.3	A*C	
20010605	162320.8	50.11	-5.17	173.1	28.2	6.3	0.9	CONSTANTINE,CORNWALL		9	3	88	0.01	0.1	0.2	A*A	
20010605	164832.5	50.11	-5.17	173.4	28.3	6.7	0.4	CONSTANTINE,CORNWALL		9	3	92	0.02	0.2	0.4	A*B	
20010609	004928.4	50.11	-5.18	173.0	28.1	6.3	0.2	CONSTANTINE,CORNWALL		9	3	86	0.02	0.2	0.4	A*A	
20010612	063955.9	50.11	-5.18	173.0	28.2	6.1	0.6	CONSTANTINE,CORNWALL		8	3	128	0.01	0.1	0.2	A*B	
20011130	024614.9	50.11	-6.42	84.0	32.6	5.1	1.9	NW OF SCILLY ISLES		5	60	357	0.19		16.9	D*D	
20010415	045548.5	50.07	-5.26	166.7	24.1	10.1	0.3	HELSTON,CORNWALL		8	4	262	0.06	1.1	0.8	B*D	4KM SOUTH OF HELSTON
20011102	195918.0	50.00	-5.05	181.3	15.5	23.8	1.5	OFF LIZARD PT,CORNWALL		10	10	310	0.03	0.8	0.6	A*D	10KM EAST OF LIZARD POINT
20011102	200100.1	50.00	-5.05	181.4	15.3	24.1	1.2	OFF LIZARD PT,CORNWALL		10	10	310	0.03	0.7	0.5	A*D	10KM EAST OF LIZARD POINT
20010105	003116.2	49.29	-3.53	288.5	-66.3	7.1	1.6	ENGLISH CHANNEL		8	97	251	0.31	16.0	14.2	D*D	
20010816	003459.7	49.24	-2.16	388.1	-73.5	9.6	0.1	JERSEY,CHANNEL ISLANDS		6	5	301	0.01	0.4	0.2	A*D	

TABLE 3

CATALOGUE OF NON-NATURAL EVENTS LISTED CHRONOLOGICALLY: 2001

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

TABLE 3: CATALOGUE OF NON-NATURAL EVENTS LISTED CHRONOLOGICALLY: 2001

YearMoDy	HrMnSecs	Lat	Lon	kmE	kmN	Dep	Mag	Locality	Int	No	DM	Gap	RMS	ERH	ERZ	SQD	Comments
20010220	093646.0							SONIC-MONTROSE,TAYSIDE	3+								SONIC-FELT MORPHIE
20010220	150400.0							PROBABLE SONIC-N'HANTS	3+								SONIC-FELT N'HANTS...
20010221	112259.0							SONIC-YORKS/HUMBERSIDE	3+								SONIC-FELT SCARBOROUGH...
20011113	205844.0							SONIC-BERWICKSHIRE	3+								SONIC-FELT EYEMOUTH...
20011116	101229.0							SONIC-FELT NE ENGLAND	3+								SONIC-FELT SUNDERLAND...

TABLES 4

GEOGRAPHICAL COORDINATES OF SEISMOGRAPH STATIONS: DECEMBER 2001

Table 4a: Geographic Coordinates of Seismographic Stations, December 2001

Table 4b: Geographic Coordinates of Low Gain Stations, December 2001

Table 4c: Geographic Coordinates of Strong Motion Stations, December 2001

TABLE 4a

GEOGRAPHIC COORDINATES OF SEISMOGRAPH STATIONS, DECEMBER 2001

Code	Name	Lat	Lon	KmE (km)	KmN (km)	Ht (m)	Yrs open	Comp	Agency
ABA	BACONSTHORPE	52.8884	1.1453	611.58	337.00	74	82-	1	BGS
AEU	EAST ANGLIA UNIV	52.6208	1.2403	619.30	307.53	45	00-	3M	BGS
APA	PACKWAY	52.3006	1.4782	637.12	272.68	58	84-	1	BGS
AWH	WHINBURGH	52.6297	0.9507	599.67	307.68	64	80-	1R	BGS
AWI	WITTON	52.8319	1.4471	632.17	331.65	46	83-	1	BGS
BBH	BRUNTSHEIL	55.1333	-2.9299	340.72	582.50	216	92-	1	BGS
BBO	BOTHEL	54.7367	-3.2464	319.76	538.69	209	92-	3	BGS
BCM	CHAPELCROSS MIC	55.0151	-3.2212	321.92	569.64	78	92-	M	BGS
BDL	DOBCROSS HALL	54.8030	-2.9385	339.68	545.76	157	92-	1	BGS
BHH	HOWATS HILL	55.0931	-3.2181	322.27	578.31	216	92-	3	BGS
BNA	NEW ABBEY	54.9658	-3.6242	296.03	564.68	28	92-	1	BGS
BTA	TALKIN	54.9057	-2.6844	356.12	557.00	279	92-	3	BGS
BWH	WARDLAW	55.1758	-3.6549	294.62	588.09	269	92-	1	BGS
CBW	BUDOCK WATER	50.1482	-5.1144	177.53	32.29	94	81-	1	BGS
CCA	CARNMENELLIS	50.1866	-5.2277	169.62	36.90	210	81-	1	BGS
CCO	CONSTANTINE	50.1357	-5.1957	171.66	31.14	168	81-	1	BGS
CDU	DUNNERDALE	54.3362	-3.1952	322.30	494.08	355	92-	1	BGS
CGH	GOONHILLY	50.0507	-5.1649	173.46	21.60	97	81-	1	BGS
CGW	GWEEK	50.1006	-5.2228	169.56	27.32	9	93-	1	BGS
CKE	KESWICK	54.5877	-3.1059	328.54	521.96	304	92-	1	BGS
CMA	MANACCAN	50.0821	-5.1274	176.29	24.98	42	93-	1	BGS
CPZ	PENZANCE	50.1566	-5.5828	144.12	34.72	199	81-	1R	BGS
CR2	ROSEMANOWES 2	50.1667	-5.1687	173.74	34.51	143	81-	3	BGS
CSA	ST AUSTELL	50.3527	-4.8919	194.30	54.38	112	81-	1	BGS
CSF	SCAFELL	54.4478	-3.2430	319.41	506.55	540	92-	1	BGS
CSM	SELLAFIELD MIC	54.4183	-3.4913	303.24	503.58	50	92-	M	BGS
CST	STITHIANS	50.1952	-5.1635	174.24	37.66	141	81-	1	BGS
CWF	CHARNWOOD FST	52.7385	-1.3076	446.74	315.91	203	75-	3R	BGS
DCO	COMBE FARM	50.3201	-3.8721	266.74	48.43	117	82-	1R	BGS
DYA	YADSWORTHY	50.4353	-3.9310	262.88	61.34	292	82-	3R	BGS
EAB	ABERFOYLE	56.1887	-4.3373	254.97	702.02	279	69-	1R	BGS
EAU	AUCHINOON	55.8454	-3.4474	309.38	662.30	359	69-	1R	BGS
EBH	BLACK HILL	56.2476	-3.5084	306.54	707.13	375	69-	1R	BGS
EBL	BROAD LAW	55.7723	-3.0445	334.48	653.71	436	69-	1R	BGS
ECK	CAULDKAINE HILL	55.1810	-3.1292	328.10	588.00	351	81-	1R	BGS
EDI	EDINBURGH	55.9233	-3.1875	325.80	670.66	125	69-	3R	BGS
EDR	DRUMTOCHTY	56.9190	-2.5393	367.17	780.97	401	89-	1R	BGS
EDU	DUNDEE	56.5477	-3.0110	337.85	739.97	421	69-	1R	BGS
ELO	LOGIEALMOND	56.4703	-3.7112	294.59	732.21	523	69-	1R	BGS
ESK	ESKDALEMUIR	55.3165	-3.2052	323.52	603.16	261	65-	3R	BGS
ESY	STONEYPATH	55.9175	-2.6141	361.62	669.55	337	81-	1R	BGS
FHV	HALDARSVIK	62.2597	-7.0984	135.46	1385.95	380	99-	1R	BGS
FSD	SUDUROY	61.5701	-6.7884	145.86	1308.06	480	99-	1R	BGS
FSV	SVINOY	62.2598	-6.3550	173.99	1383.14	430	99-	1R	BGS
FTO	TORSHAVN	62.0199	-6.8274	147.51	1358.21	325	99-	3R	BGS
FVA	VAGAR	62.0575	-7.3520	120.46	1364.55	430	99-	1R	BGS
GAL	GALLOWAY	54.8664	-4.7114	226.02	555.78	117	89-	3M	BGS
GCD	CASTLE DOUGLAS	54.8630	-3.9403	275.48	553.76	184	89-	1R	BGS
GCL	CUSHENDALL	55.0783	-6.1264	136.66	583.77	278	89-	1R	BGS
GIM	ISLE OF MAN (North)	54.2923	-4.4672	239.44	491.35	346	89-	3R	BGS
GMK	MULL OF KINTYRE	55.3458	-5.5934	172.19	611.64	164	89-	1R	BGS
GMM	MTNS OF MOURNE	54.2377	-5.9498	142.66	489.67	155	89-	1R	BGS
HAE	ALDERS END	52.0368	-2.5434	362.73	237.79	260	82-	1R	BGS
HCG	CRAIG GOCH	52.3231	-3.6570	287.08	270.78	533	80-	1R	BGS
HEX	EXMOOR	51.0664	-3.8026	273.71	131.28	230	91-	1R	BGS
HGH	GRAY HILL	51.6379	-2.8057	344.25	193.59	223	80-	1R	BGS
HLM	LONG MYND	52.5184	-2.8807	340.25	291.57	429	84-	1	BGS

TABLE 4a: continued

Code	Name	Lat	Lon	KmE (km)	KmN (km)	Ht (m)	Yrs open	Comp	Agency
HPE	PEMBROKE	51.9372	-4.7746	209.29	230.21	349	90-	1R	BGS
HPK	HAVERAH PARK	53.9581	-1.6241	424.66	451.42	233	78-	3R	BGS
HSA	SWANSEA	51.7500	-4.1532	251.38	207.94	293	87-	1R	BGS
HTL	HARTLAND	50.9943	-4.4849	225.64	124.66	86	81-	3RM	BGS
HTR	TREWERN HILL	52.0785	-3.2679	313.12	243.04	337	82-	1R	BGS
JLP	LES PLATONS	49.2486	-2.1039			129	81-	1R	BGS
JQE	QUEENS EAST	49.2000	-2.0383			58	91-	1	BGS
JRS	MAISON ST LOUIS	49.1922	-2.0922			56	81-	3R	BGS
JSA	ST AUBINS	49.1878	-2.1717			39	81-	1R	BGS
JVM	VALLE D.L.MARE	49.2169	-2.2067			64	81	1R	BGS
KAC	ACHNASHELLACH	57.4989	-5.2988	202.36	850.19	206	83-	1R	BGS
KAR	ARISAIG	56.9188	-5.8290	166.98	787.34	186	83-	1	BGS
KBI	BIRLEY GRANGE	53.2543	-1.5279	431.49	373.17	272	88-	1	BGS
KLE	KEELE UNIVERSITY	53.0038	-2.2657	382.17	345.23	203		1	KUN
KLE3	NEWCHAPEL	53.0928	-2.2047	386.29	355.12	200		1	KUN
KNR	NEVIS RANGE	56.8219	-4.9714	218.68	773.97	1147	91-	1R	BGS
KPL	PLOCKTON	57.3391	-5.6527	180.21	833.50	13	86-	3R	BGS
KSB	SHIEL BRIDGE	57.2099	-5.4214	193.40	818.40	417	83-	1R	BGS
KSK	SCOVAL	57.4659	-6.7002	118.21	851.46	265	89-	1R	BGS
KSY	SYSTON	52.9642	-0.5872	494.88	341.73	121	88-	1R	BGS
KTG	TILBROOK GRNGE	52.3264	-0.4019	508.90	271.06	83	88-	1	BGS
KUF	UFFORD	52.6170	-0.3907	508.94	303.39	38	88-	1R	BGS
KWE	WEAVER FARM	53.0164	-1.8412	410.65	346.61	328	88-	1R	BGS
LCP	CASSOP	54.7370	-1.4744	433.84	538.14	185	91-	1R	BGS
LDU	LEEDS	53.8058	-1.5540	429.37	434.51	74	83-	M	BGS
LHO	HOLMEFIRTH	53.5453	-1.8548	409.62	405.44	462	91-	1R	BGS
LMI	MILLOM	54.2206	-3.3070	314.79	481.35	129	89-	3R	BGS
LMK	MARKET RASEN	53.4569	-0.3260	511.14	396.90	146	91-	1R	BGS
LRN	RICHMOND	54.4165	-1.8007	412.93	502.37	313	91-	1R	BGS
LRW	LERWICK	60.1360	-1.1779	445.66	1139.27	98	78-	3R	BGS
LWH	WHINNY NAB	54.3338	-0.6717	486.36	493.97	277	91-	1R	BGS
MCD	COLEBURN DISTIL	57.5828	-3.2541	325.02	855.42	293	81-	3RM	BGS
MCH	MICHAELCHURCH	51.9974	-2.9983	331.47	233.74	219	78-	3	BGS
MDO	DOCHFOUR	57.4409	-4.3633	258.17	841.39	415	81-	1R	BGS
MFI	FISHRIE	57.6119	-2.2956	382.34	858.00	232	88-	1R	BGS
MLA	LATHERON	58.3055	-3.3627	320.15	935.98	188	81-	1	BGS
MME	MEIKLE CAIRN	57.3149	-2.9647	341.90	825.32	475	81-	1	BGS
MVH	ACHVAICH	57.9250	-4.1825	270.75	894.90	185	84-	1	BGS
OBR	BRABSTER	58.6142	-3.1626	332.47	970.13	89	95-	1R	BGS
OHO	HOY	58.8322	-3.2465	328.05	994.48	172	95-	1R	BGS
ORE	REAY	58.5480	-3.7622	297.45	963.52	100	95-	3RM	BGS
OST	STRONSAY	59.0860	-2.5516	368.39	1022.20	21	95-	1R	BGS
OTO	TONGUE	58.4953	-4.3939	260.49	958.79	338	95-	1R	BGS
OWE	WESTRAY	59.3180	-3.0289	341.44	1048.36	87	95-	1R	BGS
PCA	CARROT	55.7007	-4.2550	258.30	647.55	302	83-	1	BGS
PCO	CORRIE	55.9880	-4.1002	269.00	679.21	267	83-	1	BGS
PGB	GLENIFFERBRAES	55.8115	-4.4837	244.38	660.37	199	84-	3	BGS
PMS	MUIRSHIEL	55.8459	-4.7452	228.15	664.82	351	83-	1	BGS
RCR	CAPE WRATH	58.6245	-4.9987	225.90	974.58	100	95-	1R	BGS
REB	EISG-BRACHAIDH	58.1194	-5.2802	206.82	919.16	100	95-	1R	BGS
RFO	FORSNAVAL	58.2133	-7.0052	106.10	935.83	195	95-	1R	BGS
RRH	RHENIGIDALE	57.9197	-6.6881	122.43	901.86	103	95-	1R	BGS
RRR	RUBHA REIDH	57.8577	-5.8067	174.19	891.68	61	95-	3RM	BGS
RSC	SCOURIE	58.3485	-5.1683	214.61	944.33	60	95-	1R	BGS
RTO	TOLSTA	58.3778	-6.2092	153.95	950.93	74	95-	1R	BGS
SAN	SANDWICK	60.0179	-1.2392	442.41	1126.08	150	85-	1	BGS
SBD	BRYN DU	52.9055	-3.2585	315.37	335.01	489	80-	1	BGS
SFH	HASELMERE	51.0604	-0.6912	491.71	129.88	260	93-	1	BGS

TABLE 4a: continued

Code	Name	Lat	Lon	KmE (km)	KmN (km)	Ht (m)	Yrs open	Comp	Agency
SIW	ISLE OF WHITE	50.6711	-1.3747	444.18	85.97	162	93-	1	BGS
SKP	KOPHILL	51.7218	-0.8096	482.22	203.29	212	93-	1	BGS
SMD	MENDIPS	51.3083	-2.7170	350.03	156.88	310	93-	1	BGS
SSP	STONEYPOND	52.4177	-3.1119	324.39	280.59	428	90-	3	BGS
SSW	STOW-ON-WOLD	51.9667	-1.8499	410.31	229.86	291	93-	1	BGS
SWK	WARMINSTER	51.1483	-2.2471	382.72	138.87	266	93-	1	BGS
SWN	SWINDON	51.5137	-1.8007	413.83	179.49	192	93-	3	BGS
TBW	BRENTWOOD	51.6549	0.2913	558.48	197.66	89	89-	1R	BGS
TCR	COLCHESTER	51.8347	0.9212	601.24	219.20	45	89-	1R	BGS
TEB	EASTBOURNE	50.8187	0.1457	551.13	104.39	68	89-	1R	BGS
TFO	FOLKESTONE	51.1135	1.1409	619.81	139.66	202	89-	3	BGS
TSA	SEVENOAKS	51.2426	0.1561	550.48	151.53	177	89-	1	BGS
WAL	WALLS	60.2564	-1.6173	421.18	1152.46	167	80-	1	BGS
WCB	CHURCH BAY	53.3782	-4.5467	230.62	389.87	139	85-	3M	BGS
WFB	FAIRBOURNE	52.6831	-4.0383	262.23	311.48	316	85-	1R	BGS
WIM	ISLE OF MAN(South)	54.1475	-4.6738	225.39	475.73	386	85-	1R	BGS
WLF	LLYNFAES	53.2894	-4.3966	240.27	379.65	58	85-	1	BGS
WME	MYNDD EILIAN	53.3969	-4.3032	246.88	391.40	129	85-	1R	BGS
WPM	PENMAENMAWR	53.2581	-3.9048	272.95	375.18	353	85-	1R	BGS
XAL	ALLENDALE	54.8617	-2.2147	386.22	551.91	458	83-	1R	BGS
XDE	DENT	54.5056	-3.4902	303.52	513.29	301	83-	1R	BGS
XSO	SOURHOPE	55.4924	-2.2510	384.14	622.10	516	83-	1R	BGS
YEL	YELL	60.5509	-1.0830	450.29	1185.55	203	79-	1	BGS
YLL	LLANBERIS	53.1402	-4.1704	254.84	362.57	159	84-	1R	BGS
YRC	RHOSCOLYN	53.2508	-4.5753	228.21	375.77	22	84-	1R	BGS
YRE	YR EIFL	52.9811	-4.4254	237.19	345.43	193	84-	1R	BGS
YRH	RHIW	52.8336	-4.6288	222.94	329.51	286	84-	1R	BGS
DCN	CROGHAN	53.3439	-7.2767			150	77-	1R	DIAS
DLF	LYONS FARM	53.2958	-6.5314			96	91-	3	DIAS
ASK	ASKOY	60.4830	5.1950			50	83-	1	BER
BER	BERGEN	60.3838	5.3339			50		1	BER
EGD	ESPEGREND	60.2712	5.2257			20	91-	1	BER
FOO	FLORO	61.5980	5.0440			50		1	BER
KMY	KARMOY	59.2120	5.2470			58	84-	1	BER
MOL	MOLDE	62.5700	7.5480			98	87-	1	BER
ODD1	ODDA	59.9120	6.6280			684	87-	1	BER
SUE	SULEN	61.0570	4.7610			10	84-	1	BER

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

Agency Codes:

BGS	British Geological Survey
DIAS	Dublin Institute of Advanced Studies
KUN	Keele University
BER	University of Bergen

TABLE 4b

GEOGRAPHIC COORDINATES OF LOW GAIN STATIONS, DECEMBER 2001

Code	Name	Lat	Lon	KmE (km)	KmN (km)	Ht (m)	Yrs open	Comp	Agency
AEU	EAST ANGLIA	52.6202	1.2347	618.93	307.45	28	94-	L	BGS
BCC	CHAPELCROSS	55.0153	-3.2201	321.99	569.66	138	92-	L	BGS
CRQ	ROSEMANOWES	50.1672	-5.1726	173.46	34.57	156	81-	L	BGS
DYA	YADSWORTHY	50.4353	-3.9310	262.88	61.34	292	82-	LR	BGS
EDI	EDINBURGH	55.9233	-3.1875	325.80	670.66	125	89-	LR	BGS
ESK	ESKDALEMUIR	55.3165	-3.2052	323.52	603.16	261	86-	LR	BGS
GAL	GALLOWAY	54.8664	-4.7114	226.02	555.78	117	89-	L	BGS
HBL2	BONNYLANDS	52.0508	-3.0384	328.80	239.71	437	91-	LR	BGS
HTL	HARTLAND	50.9943	-4.4849	225.64	124.66	86	87-	LR	BGS
JRS	MAISON ST LOUIS	49.1922	-2.0922			56	81-	LR	BGS
KEY	KEYWORTH	52.8779	-1.0757	462.20	331.59	59	88-	L	BGS
KPL	PLOCKTON	57.3391	-5.6527	180.21	833.50	13	86-	LR	BGS
LDU	LEEDS	53.8058	-1.5540	429.37	434.51	74	94-	L	BGS
LRW	LERWICK	60.1360	-1.1779	445.66	1139.27	98	78-	LR	BGS
MCH	MICHAELCHURCH	51.9974	-2.9983	331.47	233.74	219	78-	L	BGS
MCD	COLEBURN DISTIL	57.5828	-3.2541	325.02	855.42	293	81-	LR	BGS
ORE	REAY	58.5480	-3.7622	297.45	963.52	100	95-	LR	BGS
POB	OBSERVATORY	55.8458	-4.4299	247.88	664.06	34	92-	L	BGS
RRR	RUBHA REIDH	57.8577	-5.8067	174.19	891.68	61	95-	LR	BGS
SWN	SWINDON	51.5131	-1.8004	413.85	179.42	192	93-	L	BGS
TFO	FOLKESTONE	51.1135	1.1409	619.81	139.66	202	89-	L	BGS
WCB	CHURCH BAY	53.3782	-4.5467	230.62	389.87	139	85-	L	BGS

Component Codes:

- L Single low-gain vertical seismometer
R Station coordinates registered with the International Seismological Centre (ISC), England and the National Earthquake Information Centre (NEIC), USA

Agency Codes:

- BGS British Geological Survey

TABLE 4c

GEOGRAPHIC COORDINATES OF STRONG MOTION STATIONS, DECEMBER 2001

Code	Name	Lat	Lon	KmE (km)	KmN (km)	Ht (m)	Yrs open	Comp	Agency
AEU	EAST ANGLIA	52.6202	1.2347	618.93	307.45	28	82-95	S	BGS
BCC	CHAPELCROSS	55.0153	-3.2201	321.99	569.66	138	92-	S	BGS
CRQ	ROSEMANOWES	50.1672	-5.1726	173.46	34.57	156	87-	SR	BGS
JDC	DAM (CREST)	49.1947	-2.0469			39	92-	1	BGS
JDG	DAM (GALLERY)	49.1947	-2.0469			7	92-	S	BGS
HUA	HUNTERSTON A	55.7190	-4.8970	218.06	651.09	10	90-	S	BGS
HUB	HUNTERSTON B	55.7210	-4.8890	218.57	651.29	10	90-	S	BGS
KEY2	KEYWORTH	52.8790	-1.0770	462.13	331.73	76	97-	S	BGS
KPL	PLOCKTON	57.3391	-5.6527	180.21	833.50	13	94-	SR	BGS
HBL2	BONNYLANDS	52.0509	-3.0365	328.93	239.72	437	94-	SR	BGS
LDU	LEEDS	53.8058	-1.5540	429.00	435.00	74	98-	S	BGS
LRWS	LERWICK	60.1397	-1.1831	445.37	1139.69	80	96-	S	BGS
MCD	COLEBURN DISTIL	57.5828	-3.2541	325.02	855.42	293	98-	S	BGS
ODR	DOUNREAY	58.5825	-3.7241	299.77	967.30	100	00-	S	BGS
RRR	RUBHA REIDH	57.8577	-5.8067	174.19	891.68	61	95-	SR	BGS
SWN	SWINDON	51.5137	-1.8007	413.83	179.49	192	95-	S	BGS
TFO	FOLKESTONE	51.1135	1.1409	619.81	139.66	202	94-	S	BGS
TOA	TORNESS A	55.9692	-2.4037	374.80	675.20	5	94-	S	BGS
TOB	TORNESS B	55.9673	-2.4085	374.50	674.99	5	94-	S	BGS
WCB	CHURCH BAY	53.3782	-4.5467	230.62	389.87	139	98-	S	BGS

Component Codes:

S	Orthogonal set of 3 strong motion seismometers
1	Single strong motion seismometer – aligned NS
R	Station coordinates registered with the International Seismological Centre (ISC), England and the National Earthquake Information Centre (NEIC), USA

Agency Codes:

BGS	British Geological Survey
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TABLE 5

PHASE DATA: 2001

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

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

PHASE DATA : 2001

January 1 2001										Time: 18:27 07.9 UTC			Magnitude: 2.1 ML			EBH SZ 16 IP U 21:00 29.57					
Lat: 55.634N										Lon: -6.143W			Depth: 9.0 km			EBH SZ 16 ES 3 21:00 31.76					
Grid Ref: 139.29 kmE										645.61 kmE			RMS: 0.08 secs			EAB SZ 36 IP U 21:00 33.11					
Locality: ISLAY, INNER HEBRIDES													Quality: C			EAU SZ 48 EP 2 21:00 35.75					
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI				EDI SZ 50 EP 2 21:00 35.38								
GMK	SZ	47	IP		U	18:27	16.09						EDI SN 50 ES 2 21:00 41.64								
GCL	SZ	62	IP	1	U	18:27	18.29						EDI SN 50 21:00 42.00			4	0.38				
PMS	SZ	91	EP	2		18:27	22.80						EDI SE 50 21:00 42.07			2	0.19				
PGB	SZ	106	EP	2		18:27	25.42						EDU SZ 58 EP 2 21:00 36.49								
PGB	SE	106	ES	2		18:27	37.66														
PGB	SN	106				18:27	39.99	62	0.19												
PGB	SE	106				18:27	39.45	72	0.20												
PCA	SZ	119	IP	1	U	18:27	27.18														
GAL	SZ	125	EP	3		18:27	29.06														
GAL	SN	125				18:27	48.04	22	0.16												
GAL	SE	125				18:27	46.16	26	0.13												
January 3 2001										Time: 06:58 48.7 UTC			Magnitude: 2.6 ML								
Lat: 59.852N										Lon: 1.974W			Depth: 15.0 km								
Grid Ref: 622.55 kmE										1114.10 kmE			RMS: 0.47 secs								
Locality: NORTHERN NORTH SEA													Quality: D								
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI												
LRW	SZ	179	EP	2		06:59	16.04														
LRW	SE	179	ES	3		06:59	34.17														
LRW	SN	179				06:59	38.86	53	0.09												
LRW	SE	179				06:59	39.64	56	0.26												
SAN	SZ	181	EP	3		06:59	14.90														
EGD	SZ	187	EP	2		06:59	16.75														
YEL	SZ	187	EP	2		06:59	16.58														
ASK	SZ	192	EP	3		06:59	17.54														
KMY	SZ	199	EP	3		06:59	17.78														
WAL	SZ	205	EP	2		06:59	18.38														
OST	SZ	270	EP	2		06:59	27.88														
OHO	SZ	318	EP	2		06:59	32.87														
January 4 2001										Time: 21:31 17.1 UTC			Magnitude: 3.1 ML								
Lat: 59.802N										Lon: 1.917W			Depth: 19.2 km								
Grid Ref: 619.71 kmE										1108.26 kmE			RMS: 0.15 secs								
Locality: NORTHERN NORTH SEA													Quality: D								
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI												
LRW	SZ	177	EP	2		21:31	43.38														
LRW	SN	177	ES	2		21:32	02.67														
LRW	SN	177				21:32	06.44	143	0.14												
LRW	SE	177				21:32	07.99	193	0.23												
SAN	SZ	178	EP	2		21:31	43.22														
YEL	SZ	186	EP	2		21:31	44.97														
EGD	SZ	192	EP	1		21:31	45.27														
ASK	SZ	198	EP	1		21:31	46.10														
KMY	SZ	200	EP	2		21:31	46.38														
WAL	SZ	204	IP	1	U	21:31	46.91														
OST	SZ	266	EP	2		21:31	55.73														
OWE	SZ	285	EP	2		21:31	58.07														
OHO	SZ	313	IP	1	D	21:32	01.31														
January 5 2001										Time: 00:31 16.2 UTC			Magnitude: 1.6 ML								
Lat: 49.293N										Lon: -3.534W			Depth: 7.1 km								
Grid Ref: 288.47 kmE										-66.26 kmE			RMS: 0.31 secs								
Locality: ENGLISH CHANNEL													Quality: D								
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI												
JVM	SZ	97	EP	2		00:31	31.74														
JSA	SZ	100	EP	2		00:31	32.30														
JLP	SZ	104	EP	2		00:31	32.94														
JRS	SZ	106	EP	2		00:31	33.62														
JRS	SN	106	ES	2		00:31	46.59														
DCO	SZ	117	EP	2		00:31	35.41														
DYA	SZ	130	EP	2		00:31	37.46														
DYA	SN	130	ES	2		00:31	52.18														
DYA	SN	130				00:31	54.47	8	0.18												
DYA	SE	130				00:31	53.92	9	0.16												
January 5 2001										Time: 00:51 52.0 UTC			Magnitude: 1.0 ML								
Lat: 55.389N										Lon: -3.105W			Depth: 8.5 km								
Grid Ref: 330.01 kmE										611.10 kmE			RMS: 0.06 secs								
Locality: HAWICK, BORDERS													Quality: B								
Comment: 20KM WSW OF HAWICK																					
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI												
ESK	SZ	10	IP		U	00:51	54.59														
ESK	SE	10	ES	2		00:51	56.35														
ESK	SN	10				00:51	56.79	46	0.11												
ESK	SE	10				00:51	56.80	122	0.14												
ECK	SZ	23	IP		U	00:51	56.48														
BBH	SZ	31	IP		U	00:51	57.71														
BHH	SZ	34	IP		U	00:51	58.20														
BHH	SN	34	ES	2		00:52	02.51														
BHH	SN	34				00:52	02.74	20	0.37												
BHH	SE	34				00:52	04.01	21	0.30												
EBL	SZ	43	IP		U	00:51	59.65														
EAU	SZ	55	EP	2		00:52	02.14														
BTA	SZ	60	IP		D	00:52	02.60														
BTA	SN	60	ES	2		00:52	09.80														
BTA	SN	60				00:52	09.92	14	0.21												
BTA	SE	60				00:52	10.35	10	0.34												
BBO	SZ	73	IP	1	U	00:52	04.75														
January 5 2001										Time: 21:00 26.5 UTC			Magnitude: 0.5 ML								
Lat: 56.237N										Lon: -3.757W			Depth: 3.9 km								
Grid Ref: 291.11 kmE										706.38 kmE			RMS: 0.03 secs								
Locality: BLACKFORD, TAYSIDE													Quality: B								
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI												
EBH	SZ	16	IP		U	21:00	29.57														
EBH	SZ	16	ES	3		21:00	31.76														
EAB	SZ	36	IP		U	21:00	33.11														
EAU	SZ	48	EP	2		21:00	35.75														
EDI	SZ	50	EP	2		21:00	35.38														
EDI	SN	50	ES	2		21:00	41.64														
EDI	SN	50				21:00	42.00														
EDI	SE	50				21:00	42.07														
EDU	SZ	58	EP	2		21:00	36.49														
January 9 2001										Time: 19:26 11.0 UTC			Magnitude: 1.2 ML								
Lat: 60.018N										Lon: 1.469W			Depth: 5.0 km								
Grid Ref: 593.30 kmE										1130.90 kmE			RMS: 0.35 secs								
Locality: NORTHERN NORTH SEA													Quality: D								
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI												
LRW	SZ	148	EP	2		19:26	33.97														
LRW	SE	148	ES	2		19:26	51.92														
LRW	SN	148				19:26	57.76	3	0.15												
LRW	SE	148				19:26	54.70	3	0.17												
SAN	SZ	151	EP	2		19:26	35.41														
YEL	SZ	153	EP	2		19:26	35.44														
WAL	SZ	174	EP	2		19:26	39.12														
January 13 2001										Time: 17:08 53.3 UTC			Magnitude: 0.3 ML								
Lat: 52.863N										Lon: -3.759W			Depth: 11.9 km								
Grid Ref: 281.61 kmE										330.99 kmE			RMS: 0.05 secs								
Locality: BALA, GWYNEDD													Quality: B								
Comment: 10KM SE OF BALA																					
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI												
WFB	SZ	28	IP	1	U	17:08	58.31														
SBD	SZ	34	EP	2		17:08	59.29														
YLL	SZ	41	EP	2		17:09	00.33														
YLL	SZ	41	ES	3		17:09	05.42														
WPM	SZ	45	EP	2		17:09	01.11														
YRE	SZ	47	EP	2		17:09	01.37														
WCB	SZ	78	EP	3		17:09	06.12														
WCB	SE	78	ES	3		17:09	14.94														
WCB	SN	78				17:09	15.53														
WCB	SE	78				17:09	19.02	1	0.15												
								1	0.05												
January 16 2001										Time: 14:24 16.4 UTC			Magnitude: 1.1 ML								
Lat: 54.730N										Lon: -4.891W			Depth: 3.9 km								
Grid Ref: 213.85 kmE										541.09 kmE			RMS: 0.23 secs								
Locality: LUCE BAY, D & G													Quality: C								
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI												
GAL	SZ	19	IP		U	14:24	20.19														
GAL	SE																				

PHASE DATA : 2001

Grid Ref: 196.88 kmE 614.67 kmE Locality: SOUTH OF ISLE OF ARRAN										RMS: 0.10 secs Quality: C		WAL SZ 443 EP 3 12:46 20.51									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	February 25 2001 Lat: 53.541N Lon: -2.583W Grid Ref: 361.38 kmE 405.11 kmE Locality: WIGAN, GTR MANCHESTER		Time: 12:39 38.4 UTC Magnitude: 2.2 ML Depth: 10.4 km RMS: 0.09 secs Quality: C									
GMK	SZ	25	EP	1	D	20:10	11.17			STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI		
PMS	SZ	59	EP	2		20:10	16.57			KWE	SZ	77	EP	2		12:39	51.11				
PGB	SZ	66	EP	2		20:10	17.36			KBI	SZ	77	EP	2		12:39	51.12				
PGB	SE	66	ES	3		20:10	25.12			SBD	SZ	84	EP	1	U	12:39	52.32				
PGB	SN	66				20:10	25.51	12	0.06	WPM	SZ	93	IP	1	U	12:39	53.82				
PGB	SE	66				20:10	25.51	12	0.13	LRN	SZ	110	EP	1	D	12:39	56.34				
GAL	SZ	66	EP	2		20:10	17.74			YLL	SZ	115	EP	2		12:39	56.69				
GAL	SE	66	ES			20:10	25.49			WME	SZ	115	EP	3		12:39	56.59				
GAL	SN	66				20:10	28.81	8	0.14	HLM	SZ	116	EP	3		12:39	56.99				
GAL	SE	66		3		20:10	28.12	15	0.06	CWF	SZ	124	EP	1	U	12:39	58.33				
GCL	SZ	68	EP	3		20:10	17.66			CWF	SE	124	ES	3		12:40	13.16				
PCA	SZ	70	EP	1	U	20:10	18.12			CWF	SN	124				12:40	14.16	47	0.13		
February 9 2001 Lat: 62.837N Lon: 3.147W Grid Ref: 661.92 kmE 1450.31 kmE Locality: NORWEGIAN SEA										Time: 21:45 22.1 UTC Magnitude: 2.9 ML Depth: 15.0 km RMS: 0.34 secs Quality: D		CWF									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	CWF	SE	124				12:40	15.29	28	0.10		
YEL	SZ	339	EP	2		21:46	08.68			WLF	SZ	124	EP	3		12:39	58.13				
LRW	SZ	379	EP	2		21:46	14.80			SSP	SZ	130	EP	2		12:39	59.41				
LRW	SN	379	ES	2		21:46	52.12			SSP	SE	130	ES	3		12:40	15.14				
LRW	SN	379				21:46	56.48	10	0.19	SSP	SN	130				12:40	16.22	28	0.15		
LRW	SE	379				21:46	57.08	16	0.30	SSP	SE	130				12:40	16.59	37	0.15		
WAL	SZ	384	EP	2		21:46	14.62			WCB	SZ	132	EP	3		12:39	59.05				
SAN	SZ	392	EP	2		21:46	15.68			YRC	SZ	136	EP	3		12:39	59.65				
FSV	SZ	494	EP	2		21:46	28.63			WFB	SZ	137	EP	3		12:39	59.76				
February 12 2001 Lat: 52.326N Lon: 2.268W Grid Ref: 690.78 kmE 278.39 kmE Locality: SOUTHERN NORTH SEA										Time: 11:19 48.4 UTC Magnitude: 2.7 ML Depth: 15.4 km RMS: 0.08 secs Quality: C		WIM									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	HAE	SZ	167	EP	3		12:40	04.65				
APA	SZ	54	IP		U	11:19	57.71			MCH	SZ	174	EP	4		12:40	05.17				
APA	SZ	54	ES	3		11:20	04.83			MCH	SN	174				12:40	26.70	35	0.24		
AEU	SZ	77	EP	2		11:20	01.35			MCH	SE	174				12:40	28.71	25	0.17		
AEU	SE	77	ES	3		11:20	10.65			KUF	SZ	179	EP	3		12:40	03.08				
AEU	SN	77				11:20	11.13	240	0.18	February 25 2001 Lat: 53.533N Lon: -2.571W Grid Ref: 362.17 kmE 404.20 kmE Locality: WIGAN, GTR MANCHESTER										Time: 21:53 09.2 UTC Magnitude: 1.6 ML Depth: 10.9 km RMS: 0.09 secs Quality: C	
AEU	SE	77				11:20	11.82	221	0.20	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI		
AWI	SZ	79	EP	2		11:20	01.66			KWE	SZ	75	IP	1	U	21:53	21.81				
AWH	SZ	96	EP	2		11:20	03.90			KBI	SZ	76	EP	2		21:53	21.68				
February 14 2001 Lat: 51.869N Lon: -2.871W Grid Ref: 340.03 kmE 219.34 kmE Locality: ABERGAVENNY, GWENT										Time: 22:51 33.8 UTC Magnitude: 1.2 ML Depth: 13.0 km RMS: 0.07 secs Quality: B		SBD									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	LMI	SZ	91	EP	2		21:53	23.01				
MCH	SZ	17	IP		D	22:51	37.61			LMI	SN	91	ES	3		21:53	24.16				
MCH	SE	17	ES	2		22:51	40.58			LMI	SE	91				21:53	35.02				
MCH	SN	17				22:51	40.63	179	0.11	LMI	SN	91				21:53	36.15	12	0.14		
MCH	SE	17				22:51	40.64	263	0.11	LMI	SE	91				21:53	36.23	14	0.20		
HGH	SZ	26	EP	1	U	22:51	38.84			WPM	SZ	94	EP	2		21:53	24.53				
HAE	SZ	29	IP		U	22:51	39.27			CDU	SZ	98	EP	2		21:53	25.09				
HTR	SZ	36	IP		D	22:51	40.21			LRN	SZ	111	EP	2		21:53	27.14				
SSP	SZ	63	IP		D	22:51	44.76			HLM	SZ	115	EP	2		21:53	27.67				
SSP	SN	63	ES	2		22:51	52.78			WME	SZ	116	EP	2		21:53	27.43				
SSP	SN	63				22:51	52.96	5	0.03	CWF	SZ	122	EP	2		21:53	29.06				
SSP	SE	63				22:51	54.17	8	0.13	CWF	SN	122	ES	2		21:53	43.96				
HSA	SZ	89	EP	2		22:51	48.51			CWF	SN	122				21:53	45.24	10	0.27		
February 17 2001 Lat: 52.423N Lon: -4.465W Grid Ref: 232.43 kmE 283.51 kmE Locality: CARDIGAN BAY, WALES Comment: 25KM WEST OF ABERYSTWYTH										Time: 00:42 36.9 UTC Magnitude: 1.1 ML Depth: 9.6 km RMS: 0.15 secs Quality: B		CWF									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	CWF	SE	122				21:53	44.72	8	0.11		
WFB	SZ	41	EP	2		00:29	57.60			SSP	SZ	129	EP	2		21:53	30.07				
HSA	SZ	78	EP	2		00:30	03.90			SSP	SN	129				21:53	46.41	10	0.12		
YLL	SZ	82	EP	2		00:30	04.63			SSP	SE	129				21:53	47.19	14	0.22		
HTR	SZ	90	EP	2		00:30	06.04			February 28 2001 Lat: 54.876N Lon: -2.976W Grid Ref: 337.38 kmE 553.88 kmE Locality: CARLISLE, CUMBRIA										Time: 00:42 36.9 UTC Magnitude: 1.1 ML Depth: 9.6 km RMS: 0.15 secs Quality: B	
YRC	SZ	92	EP	2		00:30	06.65			STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI		
SSP	SZ	92	EP	2		00:30	06.42			BDL	SZ	8	IP		D	00:42	38.95				
SSP	SE	92	ES	2		00:30	17.61			BDL	SZ	8	ES	3		00:42	41.11				
SSP	SN	92				00:30	18.23	25	0.22	BTA	SZ	19	IP	1	U	00:42	40.83				
SSP	SE	92				00:30	18.71	17	0.17	BTA	SN	19	ES	2		00:42	43.72				
SBD	SZ	98	EP	2		00:30	07.01			BTA	SN	19				00:42	44.65	33	0.26		
WCB	SZ	106	EP	2		00:30	08.56			BTA	SE	19				00:42	45.81	70	0.44		
WCB	SE	106	ES	2		00:30	21.71			BBO	SZ	23	IP		U	00:42	41.39				
WCB	SN	106				00:30	25.18	4	0.21	BBO	SN	23	ES	2		00:42	44.90				
WCB	SE	106				00:30	23.63	4	0.30	BBO	SE	23				00:42	45.36	95	0.25		
HLM	SZ	108	EP	2		00:30	08.87			BBO	SN	23				00:42	45.30	97	0.22		
MCH	SZ	111	EP	2		00:30	09.22			BHH	SZ	29	IP	1	D	00:42	42.27				
MCH	SN	111	ES	2		00:30	22.25			BHH	SN	29	ES	2		00:42	46.18				
MCH	SN	111				00:30	25.59	12	0.17	BHH	SE	29				00:42	46.87	78	0.30		
MCH	SE	111				00:30	24.62	10	0.24	BHH	SE	29				00:42	48.87	68	0.26		
February 19 2001 Lat: 59.387N Lon: 6.077W Grid Ref: 858.02 kmE 1083.44 kmE Locality: NORWEGIAN COAST										Time: 12:45 21.5 UTC Magnitude: 3.0 ML Depth: 15.0 km RMS: 0.29 secs Quality: D		BBH									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	BBH	SZ	29	EP	2		00:42	42.23				
LRW	SZ	416	EP	3		12:46	17.91			CKE	SZ	33	EP	2		00:42	43.08				
LRW	SE	416	ES	3		12:46	57.54			GCD	SZ	62	EP	2		00:42	47.69				
LRW	SN	416				12:46	59.09			March 1 2001 Lat: 52.918N Lon: -4.510W Grid Ref: 231.30 kmE 338.62 kmE Locality: PWLLHELI, GWYNEDD Comment: 5KM NW OF PWLLHELI										Time: 20:13 06.0 UTC Magnitude: 0.6 ML Depth: 16.6 km RMS: 0.06 secs Quality: C	
LRW	SE	416				12:47	02.17	10	0.19	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI		
SAN																					

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March 4 2001 Time: 22:36 30.9 UTC Magnitude: 2.0 ML Lat: 52.433N Lon: -4.459W Depth: 8.9 km Grid Ref: 232.88 kmE 284.59 kmE RMS: 0.08 secs Locality: CARDIGAN BAY, WALES Quality: C Comment: 25KM WEST OF ABERYSTWYTH									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
WFB	SZ	40	IP	1	U	22:36	37.83		
HSA	SZ	79	EP	2		22:36	44.17		
YLL	SZ	81	EP	2		22:36	44.67		
HTR	SZ	90	IP	1	U	22:36	46.25		
YRC	SZ	91	EP	2		22:36	46.39		
SSP	SZ	92	EP	2		22:36	46.40		
SSP	SN	92	ES	2		22:36	57.39		
SSP	SN	92				22:36	58.09	38	0.17
SSP	SE	92				22:37	02.52	35	0.14
WLF	SZ	95	EP	2		22:36	46.76		
SBD	SZ	97	EP	2		22:36	47.04		
WPM	SZ	99	EP	1	U	22:36	47.35		
HLM	SZ	108	EP	2		22:36	48.87		
WME	SZ	108	EP	2		22:36	48.81		
MCH	SZ	111	EP	2		22:36	49.34		
MCH	SN	111	ES	2		22:37	02.30		
MCH	SN	111				22:37	05.72	29	0.19
MCH	SE	111				22:37	06.10	29	0.19
HTL	SZ	160	EP	2		22:36	57.27		
HTL	SN	160				22:37	17.02	27	0.18
HTL	SE	160				22:37	17.13	23	0.23
March 10 2001 Time: 09:29 34.0 UTC Magnitude: 1.1 ML Lat: 52.926N Lon: -2.743W Depth: 4.2 km Grid Ref: 350.09 kmE 336.84 kmE RMS: 0.08 secs Locality: WHITCHURCH, SHROPSHIRE Quality: B Comment: 5KM SW OF WHITCHURCH									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
SBD	SZ	35	IP		U	09:29	40.36		
HLM	SZ	46	EP	2		09:29	42.31		
KWE	SZ	61	EP	2		09:29	44.60		
SSP	SZ	62	EP	2		09:29	44.67		
SSP	SE	62	ES	2		09:29	52.50		
SSP	SN	62				09:29	53.52	9	0.14
SSP	SE	62				09:29	53.03	6	0.15
WPM	SZ	86	EP	2		09:29	48.64		
WFB	SZ	92	EP	2		09:29	48.98		
YLL	SZ	99	EP	2		09:29	50.04		
CWF	SZ	99	EP	3		09:29	51.42		
CWF	SN	99	ES	2		09:30	01.79		
CWF	SN	99				09:30	03.93	6	0.37
CWF	SE	99				09:30	02.81	4	0.23
March 14 2001 Time: 22:20 43.3 UTC Magnitude: 3.4 ML Lat: 58.252N Lon: 0.695W Depth: 19.5 km Grid Ref: 558.13 kmE 332.71 kmE RMS: 0.19 secs Locality: CENTRAL NORTH SEA Quality: C									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
OST	SZ	210	IP	1	D	22:21	13.64		
SAN	SZ	226	EP	3		22:21	15.75		
OBR	SZ	229	EP	3		22:21	16.10		
LRW	SZ	236	EP	3		22:21	17.05		
LRW	SE	236	ES	3		22:21	41.33		
LRW	SN	236				22:21	43.70	126	0.18
LRW	SE	236				22:21	49.42	133	0.12
MLA	SZ	238	EP	2		22:21	17.63		
OHO	SZ	239	EP	2		22:21	17.56		
MME	SZ	241	EP	2		22:21	17.73		
OWE	SZ	246	EP	3		22:21	18.33		
MCD	SZ	246	EP	2		22:21	18.37		
MCD	SE	246	ES	3		22:21	44.30		
MCD	SN	246				22:21	57.34	153	0.34
MCD	SE	246				22:21	57.82	115	0.39
WAL	SZ	259	EP	3		22:21	19.98		
ORE	SZ	263	EP	2		22:21	20.22		
ORE	SE	263	ES	3		22:21	46.35		
ORE	SN	263				22:21	48.07	393	0.18
ORE	SE	263				22:21	48.68	264	0.27
YEL	SZ	275	EP	3		22:21	22.16		
EDU	SZ	293	EP	3		22:21	23.99		
OTO	SZ	299	EP	2		22:21	24.60		
MDO	SZ	314	EP	3		22:21	26.78		
ESY	SZ	328	EP	2		22:21	28.28		
ELO	SZ	331	EP	3		22:21	28.71		
EBH	SZ	338	EP	3		22:21	29.72		
EDI	SZ	350	EP	2		22:21	31.21		
EDI	SN	350	ES	3		22:22	06.25		
EDI	SN	350				22:22	09.13	63	0.38
EDI	SE	350				22:22	07.99	48	0.17
EBL	SZ	358	EP	3		22:21	32.33		
KAC	SZ	365	EP	3		22:21	32.55		
EAU	SZ	368	EP	3		22:21	33.44		
KSB	SZ	383	EP	3		22:21	34.58		
KPL	SZ	391	EP	3		22:21	35.86		
KPL	SE	391	ES	4		22:22	14.11		
KPL	SN	391				22:22	17.54	28	0.15
KPL	SE	391				22:22	15.80	34	0.17
March 15 2001 Time: 00:49 37.3 UTC Magnitude: 1.2 ML Lat: 52.968N Lon: -2.253W Depth: 2.3 km Grid Ref: 383.00 kmE 341.28 kmE RMS: 0.17 secs Locality: NEWCASTLE-U-LYME, STAFF Quality: C Comment: C/F									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
KAR	SZ	13	IP		D	10:33	28.16		
KSB	SZ	28	IP		D	10:33	30.30		
KPL	SZ	36	EP	3		10:33	31.99		
KPL	SE	36	ES	3		10:33	36.39		
March 15 2001 Time: 13:05 34.2 UTC Magnitude: 1.7 ML Lat: 53.015N Lon: -2.677W Depth: 9.9 km Grid Ref: 354.56 kmE 346.66 kmE RMS: 0.09 secs Locality: WHITCHURCH, SHROPSHIRE Quality: C Comment: 4KM NORTH OF WHITCHURCH									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
SBD	SZ	41	IP		U	13:05	41.33		
KWE	SZ	56	IP		U	13:05	43.69		
HLM	SZ	57	IP	1	U	13:05	43.89		
SSP	SZ	73	IP		D	13:05	46.32		
SSP	SN	73	ES	2		13:05	55.04		
SSP	SN	73				13:05	57.14	18	0.13
SSP	SE	73				13:05	57.02	17	0.11
KBI	SZ	82	EP	2		13:05	47.76		
CWF	SZ	97	EP	2		13:05	50.84		
CWF	SN	97	ES	2		13:06	00.94		
CWF	SN	97				13:06	01.92	14	0.13
CWF	SE	97				13:06	04.22	17	0.12
MCH	SZ	115	EP	2		13:05	53.06		
MCH	SN	115	ES	2		13:06	06.51		
MCH	SN	115				13:06	06.82	29	0.25
MCH	SE	115				13:06	09.16	15	0.13
March 18 2001 Time: 01:43 49.0 UTC Magnitude: 2.7 ML Lat: 51.474N Lon: -1.914W Depth: 8.5 km Grid Ref: 405.97 kmE 175.12 kmE RMS: 0.22 secs Locality: SWINDON, WILTSHIRE Quality: C									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
HGH	SZ	64	IP		D	01:43	59.90		
HAE	SZ	76	EP	2		01:44	01.94		
MCH	SZ	95	IP	1	D	01:44	04.31		
MCH	SE	95	ES	2		01:44	15.72		
MCH	SN	95				01:44	16.54	188	0.16
MCH	SE	95				01:44	15.93	112	0.20
HTR	SZ	115	EP	2		01:44	07.30		
SSP	SZ	134	EP	2		01:44	10.28		
SSP	SN	134	ES	2		01:44	26.27		
SSP	SN	134				01:44	26.97	116	0.23
SSP	SE	134				01:44	27.26	159	0.42
HLM	SZ	134	EP	2		01:44	10.20		
HEX	SZ	139	EP	2		01:44	10.38		
KTG	SZ	141	EP	2		01:44	11.30		
CWF	SZ	147	EP	2		01:44	11.70		
CWF	SE	147	ES	2		01:44	28.46		
CWF	SN	147				01:44	29.49	134	0.15
CWF	SE	147				01:44	29.19	229	0.18
HTL	SZ	188	EP	2		01:44	16.05		
HTL	SN	188				01:44	39.72	58	0.15
HTL	SE	188				01:44	38.90	61	0.23
March 24 2001 Time: 00:33 42.9 UTC Magnitude: 1.2 ML Lat: 57.691N Lon: -5.415W Depth: 9.6 km Grid Ref: 196.49 kmE 871.90 kmE RMS: 0.05 secs Locality: KINLOCHEWE, HIGHLAND Quality: C Comment: 10KM NW OF KINLOCHEWE									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
KAC	SZ	23	IP		U	00:33	47.28		
RRR	SZ	30	IP		U	00:33	48.45		
RRR	SE	30	ES	3		00:33	52.25		
RRR	SN	30				00:33	53.97	30	0.07
RRR	SE	30				00:33	52.53	17	0.07
KPL	SZ	42	EP	2		00:33	50.12		
KPL	SE	42	ES	3		00:33	54.91		
KPL	SN	42				00:33	55.31	32	0.11
KPL	SE	42				00:33	55.31	37	0.13
REB	SZ	48	EP	2		00:33	51.23		
KSB	SZ	54	IP	1	D	00:33	52.05		
RSC	SZ	75	EP	2		00:33	55.34		
RRH	SZ	80	EP	1	U	00:33	56.17		
KAR	SZ	90	EP	3		00:33	57.73		
RFO	SZ	111	EP	2		00:34	01.04		
March 24 2001 Time: 10:33 25.1 UTC Magnitude: 1.0 ML Lat: 57.014N Lon: -5.712W Depth: 11.6 km Grid Ref: 174.67 kmE 797.48 kmE RMS: 0.07 secs Locality: LOCH NEVIS, HIGHLAND Quality: C									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
KAR	SZ	13	IP		D	10:33	28.16		
KSB	SZ	28	IP		D	10:33	30.30		
KPL	SZ	36	EP	3		10:33	31.99		
KPL	SE	36	ES	3		10:33	36.39		

PHASE DATA : 2001

KPL SN 36 10:33 36.81 14 0.13
 KPL SE 36 10:33 36.79 20 0.13
 KAC SZ 60 EP 2 10:33 35.58

March 27 2001 Time: 23:52 59.0 UTC Magnitude: 1.6 ML
 Lat: 52.605N Lon: -1.020W Depth: 5.3 km
 Grid Ref: 466.32 kmE 301.31 kmE RMS: 0.07 secs
 Locality: LEICESTER, LEICS Quality: B

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
CWF	SZ	24	IP		D	23:53	03.59		
CWF	SN	24	ES	2		23:53	06.95		
CWF	SN	24				23:53	07.28	161	0.14
CWF	SE	24				23:53	07.26	116	0.15
KEY	SZ	31	EP	2		23:53	04.64		
KWE	SZ	72	IP	1	U	23:53	11.09		
SSW	SZ	91	EP	2		23:53	14.37		
SKP	SZ	99	EP	2		23:53	15.33		
HAE	SZ	122	EP	1	U	23:53	18.71		
HLM	SZ	126	EP	2		23:53	19.32		
SSP	SZ	144	EP	2		23:53	22.56		
SSP	SN	144	ES	2		23:53	38.77		
SSP	SN	144				23:53	38.96	10	0.22
SSP	SE	144				23:53	39.24	11	0.27
MCH	SZ	151	EP	2		23:53	23.06		
MCH	SN	151	ES	2		23:53	40.59		
MCH	SN	151				23:53	40.91	13	0.23
MCH	SE	151				23:53	41.10	10	0.13

April 15 2001 Time: 04:55 48.5 UTC Magnitude: 0.3 ML
 Lat: 50.071N Lon: -5.260W Depth: 10.1 km
 Grid Ref: 166.73 kmE 24.11 kmE RMS: 0.06 secs
 Locality: HELSTON, CORNWALL Quality: C
 Comment: 4KM SOUTH OF HELSTON

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
CGW	SZ	4	IP	1	U	04:55	50.56		
CGW	SZ	4	ES	2		04:55	52.08		
CGW	SZ	4				04:55	52.10	4	0.06
CGH	SZ	7	EP	3		04:55	50.82		
CR2	SZ	13	EP	2		04:55	51.42		
CR2	SN	13	ES	1		04:55	53.59		
CCA	SZ	13	EP	2		04:55	51.47		
CBW	SZ	14	ES	3		04:55	53.85		
CBW	SZ	14				04:55	53.91	5	0.06
CST	SZ	16	EP	3		04:55	52.17		
CST	SZ	16				04:55	54.34	8	0.04

April 21 2001 Time: 14:35 54.2 UTC Magnitude: 1.9 ML
 Lat: 51.594N Lon: -3.301W Depth: 16.9 km
 Grid Ref: 309.91 kmE 189.26 kmE RMS: 0.06 secs
 Locality: PONTYPRIDD, GWENT Quality: B

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
HGH	SZ	35	IP		U	14:36	00.78		
MCH	SZ	49	EP	2		14:36	02.57		
MCH	SE	49	ES	2		14:36	09.11		
MCH	SN	49				14:36	09.60	38	0.09
MCH	SE	49				14:36	09.26	81	0.14
SMD	SZ	52	IP		D	14:36	03.14		
HTR	SZ	54	IP		U	14:36	03.59		
HSA	SZ	61	IP	1	U	14:36	04.71		
HEX	SZ	68	IP		U	14:36	05.74		
HAE	SZ	72	EP	2		14:36	06.38		
SSP	SZ	93	EP	2		14:36	09.37		
SSP	SE	93	ES	2		14:36	20.69		
SSP	SN	93				14:36	22.66	22	0.13
SSP	SE	93				14:36	22.02	35	0.14
SWN	SZ	104	EP	2		14:36	12.02		
SWN	SN	104				14:36	25.80	52	0.22
SWN	SE	104				14:36	25.66	35	0.18
HTL	SZ	106	IP	1	U	14:36	11.58		
HTL	SN	106	ES	2		14:36	24.01		
HTL	SN	106				14:36	25.62	15	0.16
HTL	SE	106				14:36	24.88	23	0.13

April 23 2001 Time: 18:18 28.0 UTC Magnitude: 0.6 ML
 Lat: 56.139N Lon: -4.784W Depth: 4.1 km
 Grid Ref: 227.04 kmE 697.48 kmE RMS: 0.09 secs
 Locality: LOCH LONG, STRATHCLYDE Quality: C

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
EAB	SZ	28	EP	2		18:18	33.23		
EAB	SZ	28				18:18	37.66	8	0.16
PMS	SZ	33	IP		U	18:18	33.97		
PMS	SZ	33	ES	3		18:18	38.36		
PMS	SZ	33				18:18	38.61	13	0.06
PGB	SZ	41	EP	2		18:18	35.69		
PGB	SN	41	ES	2		18:18	40.82		
PCO	SZ	46	IP		U	18:18	36.23		
PCA	SZ	59	EP	2		18:18	38.20		

April 26 2001 Time: 00:26 38.6 UTC Magnitude: 0.8 ML
 Lat: 57.316N Lon: -5.523W Depth: 9.7 km
 Grid Ref: 187.90 kmE 830.50 kmE RMS: 0.17 secs
 Locality: LOCHCARRON, HIGHLAND Quality: D
 Comment: 10KM SOUTH OF LOCHCARRON

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
KPL	SZ	8	IP		U	00:26	41.23		
KPL	SN	8	ES	2		00:26	42.57		
KPL	SN	8				00:26	42.68	62	0.09
KPL	SE	8				00:26	42.72	88	0.14
KSB	SZ	13	IP		U	00:26	41.57		

KAC SZ 24 EP 2 00:26 43.05
 MDO SZ 71 EP 1 U 00:26 50.69

April 28 2001 Time: 17:41 08.2 UTC Magnitude: 1.4 ML
 Lat: 55.397N Lon: -3.229W Depth: 3.7 km
 Grid Ref: 322.17 kmE 612.18 kmE RMS: 0.18 secs
 Locality: ETTRICK, BORDERS Quality: C

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
BHH	SZ	34	IP		D	17:41	14.48		
BHH	SN	34	ES	2		17:41	18.58		
BHH	SN	34				17:41	18.88	65	0.22
BHH	SE	34				17:41	19.68	56	0.25
BBH	SZ	35	EP	2		17:41	14.57		
BWH	SZ	37	EP	1	U	17:41	14.76		
EBL	SZ	43	EP	2		17:41	16.00		
EAU	SZ	52	IP	1	D	17:41	17.62		
EDI	SZ	59	EP	3		17:41	18.67		
EDI	SN	59	ES	3		17:41	25.56		
EDI	SN	59				17:41	25.87	11	0.19
EDI	SE	59				17:41	26.17	13	0.21
BTA	SZ	65	EP	1	D	17:41	19.59		
BTA	SN	65	ES	3		17:41	27.66		
BDL	SZ	69	EP	2		17:41	20.34		
ESY	SZ	70	EP	2		17:41	19.98		
BBO	SZ	74	EP	1	D	17:41	20.95		
BBO	SE	74	ES	3		17:41	29.63		
BBO	SN	74				17:41	32.24	10	0.27
BBO	SE	74				17:41	32.09	13	0.27
GCD	SZ	75	EP	3		17:41	20.78		
CKE	SZ	91	EP	2		17:41	23.63		
EBH	SZ	96	EP	3		17:41	24.71		
XDE	SZ	101	EP	3		17:41	25.55		
CDU	SZ	118	EP	3		17:41	28.04		

May 7 2001 Time: 09:43 34.0 UTC Magnitude: 5.0 Mw
 Lat: 56.540N Lon: 3.190W Depth: 5.0 km
 Grid Ref: 718.90 kmE 750.70 kmE RMS: 0.84 secs
 Locality: EKOFISK Quality: D
 Comment: FELT EKOFISK FIELD Intensity: 4+

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
KMY	SZ	297	EP	3		09:44	16.08		
EDR	SZ	351	EP	3		09:44	21.43		
ESY	SZ	373	EP	3		09:44	25.68		
EDU	SZ	382	EP	3		09:44	27.10		
EDI	SZ	407	EP	3		09:44	30.95		
EDI	SN	407	ES	4		09:45	15.14		
EDI	SN	407				09:45	49.02	634	1.23
EDI	SE	407				09:45	55.87	437	1.24
EGD	SZ	408	EP	4		09:44	32.00		
EBH	SZ	418	EP	3		09:44	30.66		
BER	SZ	422	EP	4		09:44	36.83		
EAU	SZ	424	EP	3		09:44	32.04		
ASK	SZ	429	EP	4		09:44	34.45		
OBR	SZ	432	EP	3		09:44	28.67		
ORE	SZ	460	EP	3		09:44	32.37		
ORE	SN	460	ES	3		09:45	22.88		
KONO	BZ	494	EP	4		09:44	41.50		
KONO	BZ	494	ES	4		09:45	30.00		
NRA0	SZ	654	EP	4		09:45	01.49		
MUD	HZ		EP	4		09:44	25.79		
MUD	HZ		ES	4		09:45	00.32		
RUND	BZ		EP	4		09:44	36.21		
RUND	BZ		ES	4		09:45	22.29		
NAO01	BZ		EP	4		09:45	00.44		
NAO01	BZ		ES	4		09:46	00.81		
ARE0	BZ		EP	4		09:47	17.08		
JMI	BZ		E	4		09:53	14.86	74	19.40
KBS	LZ		E	4		09:58	05.51	20	17.60

May 9 2001 Time: 16:38 26.5 UTC Magnitude: 2.6 ML
 Lat: 53.775N Lon: 1.324W Depth: 8.3 km
 Grid Ref: 619.00 kmE 436.10 kmE RMS: 0.50 secs
 Locality: SOUTHERN NORTH SEA Quality: D

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
ABA	SZ	99	EP	2		16:38	42.68		
ABA	SZ	99	ES	3		16:38	54.48		
AWI	SZ	105	EP	2		16:38	44.03		
AEU	SZ	129	EP	3		16:38	47.68		
AEU	SN	129	ES	2		16:39	02.08		
AWH	SZ	130	ES	3		16:39	02.46		
KUF	SZ	172	EP	2		16:38	52.86		
KBI	SZ	198	EP	2		16:38	55.35		
CWF	SZ	210	EP	2		16:38	58.64		
CWF	SE	210	ES	2		16:39	21.46		
CWF	SN	210				16:39	23.06	37	0.24
CWF	SE	210				16:39	24.73	25	0.21
KWE	SZ	227	EP	2		16:38	59.84		
XAL	SZ	260	EP	2		16:39	04.70		
CDU	SZ	302	EP	3		16:39	09.86		
CSF	SZ	308	EP	3		16:39	10.54		
SSP	SZ	333	EP	3		16:39	13.30		
SSP	SE	333	ES	3		16:39	46.39		
SSP	SN	333				16:40	03.85	8	0.15
SSP	SE	333				16:40	03.62	11	0.42

May 9 2001 Time: 23:31 17.4 UTC Magnitude: 1.2 ML
 Lat: 51.752N Lon: -3.735W Depth: 21.0 km
 Grid Ref: 280.23 kmE 207.42 kmE RMS: 0.07 secs
 Locality: YSTRADGYNLAIS, POWYS Quality: B

PHASE DATA : 2001

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
HSA	SZ	29	IP		U	23:31	23.23		
HTR	SZ	49	EP	2		23:31	26.09		
MCH	SZ	58	EP	2		23:31	27.29		
MCH	SE	58	ES	2		23:31	34.44		
MCH	SN	58				23:31	37.71	6	0.14
MCH	SE	58				23:31	34.67	13	0.14
HGH	SZ	66	EP	1	U	23:31	28.47		
HPE	SZ	75	EP	2		23:31	29.75		
HEX	SZ	76	EP	2		23:31	30.24		
SSP	SZ	86	EP	2		23:31	31.70		
SSP	SN	86	ES	2		23:31	42.28		
SSP	SN	86				23:31	45.32	4	0.17
SSP	SE	86				23:31	42.53	9	0.16
HTL	SZ	99	EP	2		23:31	33.78		
HTL	SE	99	ES	3		23:31	45.19		
HTL	SN	99				23:31	46.00	7	0.18
HTL	SE	99				23:31	46.40	8	0.13

May 12 2001 Time: 01:13 17.6 UTC Magnitude: 0.7 ML
Lat: 55.405N Lon: -3.083W Depth: 7.5 km
Grid Ref: 331.40 kmE 612.88 kmE RMS: 0.12 secs
Locality: HAWICK, BORDERS Quality: C
Comment: 20KM WEST OF HAWICK

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
ESK	SZ	13	IP		U	01:13	20.49		
ESK	SE	13	ES	2		01:13	22.25		
ESK	SN	13				01:13	22.69	52	0.10
ESK	SE	13				01:13	22.70	44	0.12
ECK	SZ	25	IP		U	01:13	22.38		
BBH	SZ	32	EP	2		01:13	23.59		
BHH	SZ	36	IP		U	01:13	24.12		
BHH	SN	36	ES	2		01:13	28.52		
BHH	SN	36				01:13	28.48	7	0.26
BHH	SE	36				01:13	29.90	6	0.32
BWH	SZ	44	EP	2		01:13	25.36		
XSO	SZ	54	EP	2		01:13	26.85		
BTA	SZ	61	EP	2		01:13	28.48		
BTA	SN	61	ES	2		01:13	35.65		
BTA	SN	61				01:13	35.79	6	0.25
BTA	SE	61				01:13	36.88	2	0.22
BBO	SZ	75	EP	2		01:13	30.45		
BBO	SE	75	ES	2		01:13	40.12		
XAL	SZ	82	EP	2		01:13	31.66		

May 13 2001 Time: 08:26 59.4 UTC Magnitude: 3.0 ML
Lat: 55.099N Lon: -3.638W Depth: 11.5 km
Grid Ref: 295.49 kmE 579.57 kmE RMS: 0.11 secs
Locality: DUMFRIES, D & G Quality: B
Comment: FELT DUMFRIES... Intensity: 5

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
BWH	SZ	9	IP		C	08:27	02.05		
BHH	SZ	27	IP		D	08:27	04.62		
BHH	SN	27	ES	2		08:27	07.91		
BHH	SN	27				08:27	08.05	870	0.21
BHH	SE	27				08:27	09.26	765	0.30
BCC	AZ	28	IP		D	08:27	05.11		
BCC	AN	28	ES	2		08:27	08.57		
BCC	AN	28				08:27	09.09	209	0.32
BCC	AE	28				08:27	08.79	300	0.32
GCD	SZ	33	IP		C	08:27	05.45		
ECK	SZ	34	IP		C	08:27	05.60		
ESK	SZ	37	IP		C	08:27	06.09		
ESK	SE	37	ES	2		08:27	10.48		
BBH	SZ	45	IP	1	D	08:27	07.51		
BBO	SZ	48	IP	1	D	08:27	08.33		
BBO	SN	48	ES	2		08:27	14.23		
BBO	SN	48				08:27	15.30	778	0.21
BBO	SE	48				08:27	19.24	814	0.57
BDL	SZ	56	IP		D	08:27	09.77		
BTA	SZ	65	IP		D	08:27	11.26		
BTA	SN	65	ES	2		08:27	19.96		
BTA	SN	65				08:27	23.02	910	0.43
BTA	SE	65				08:27	24.74	852	0.42
CKE	SZ	67	IP	1	D	08:27	11.39		
XDE	SZ	67	IP		C	08:27	11.36		
GAL	SZ	73	IP		C	08:27	12.08		
CSF	SZ	77	IP		D	08:27	12.88		
PCA	SZ	78	IP		D	08:27	13.46		
EAU	SZ	84	IP		C	08:27	14.52		
EBL	SZ	84	IP		C	08:27	14.12		
CDU	SZ	90	IP		D	08:27	15.03		
XAL	SZ	95	IP	1	D	08:27	15.68		
EDI	SZ	96	IP		C	08:27	16.35		
GIM	SZ	105	IP	1	C	08:27	17.24		
GIM	SN	105	ES	2		08:27	30.32		
PMS	SZ	109	IP		D	08:27	18.22		
GMK	SZ	128	IP		D	08:27	20.97		

May 13 2001 Time: 08:49 51.0 UTC Magnitude: 0.7 ML
Lat: 55.093N Lon: -3.630W Depth: 10.8 km
Grid Ref: 295.97 kmE 578.88 kmE RMS: 0.08 secs
Locality: DUMFRIES, D & G Quality: B

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
BWH	SZ	9	EP	1	U	08:49	53.64		
BHH	SZ	26	IP	1	D	08:49	56.27		
BHH	SE	26	ES	2		08:49	59.54		
BHH	SN	26				08:49	59.68	28	0.17
BHH	SE	26				08:50	00.87	39	0.21

GCD	SZ	32	EP	2		08:49	57.01		
ECK	SZ	33	EP	2		08:49	57.18		
ESK	SZ	37	IP		U	08:49	57.72		
ESK	SE	37	ES	2		08:50	02.19		
ESK	SN	37				08:50	03.11	8	0.21
ESK	SE	37				08:50	03.10	9	0.23
BBH	SZ	45	EP	2		08:49	59.28		
BBO	SZ	47	EP	2		08:49	59.99		
BBO	SN	47				08:50	06.96	3	0.22
BBO	SE	47				08:50	06.88	2	0.12
BDL	SZ	55	EP	2		08:50	01.61		
BTA	SZ	64	EP	2		08:50	03.19		

May 13 2001 Time: 09:58 16.3 UTC Magnitude: 0.5 ML
Lat: 55.095N Lon: -3.626W Depth: 9.7 km
Grid Ref: 296.27 kmE 579.05 kmE RMS: 0.07 secs
Locality: DUMFRIES, D & G Quality: B

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
BWH	SZ	9	IP		U	09:58	18.83		
BHH	SZ	26	IP		D	09:58	21.46		
BHH	SN	26	ES	2		09:58	24.69		
BHH	SN	26				09:58	24.87	20	0.22
BHH	SE	26				09:58	26.06	23	0.22
ECK	SZ	33	EP	2		09:58	22.50		
GCD	SZ	33	EP	2		09:58	22.34		
ESK	SZ	36	IP		U	09:58	22.90		
ESK	SE	36	ES	2		09:58	27.30		
ESK	SN	36				09:58	28.27	7	0.20
ESK	SE	36				09:58	28.27	8	0.22
BBO	SZ	47	EP	2		09:58	25.12		
BBO	SN	47				09:58	31.83	2	0.17
BBO	SE	47				09:58	31.35	2	0.19

May 13 2001 Time: 11:21 09.2 UTC Magnitude: 0.8 ML
Lat: 55.093N Lon: -3.628W Depth: 9.6 km
Grid Ref: 296.14 kmE 578.87 kmE RMS: 0.07 secs
Locality: DUMFRIES, D & G Quality: B

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
BWH	SZ	9	IP	1	U	11:21	11.74		
BHH	SZ	26	IP		D	11:21	14.37		
BHH	SN	26	ES	2		11:21	17.64		
BHH	SN	26				11:21	17.78	29	0.21
BHH	SE	26				11:21	18.98	36	0.21
ECK	SZ	33	EP	2		11:21	15.36		
GCD	SZ	33	IP		U	11:21	15.21		
ESK	SZ	37	IP		U	11:21	15.81		
ESK	SE	37	ES	2		11:21	20.39		
ESK	SN	37				11:21	21.19	10	0.19
ESK	SE	37				11:21	21.18	12	0.20
BBH	SZ	45	EP	2		11:21	17.32		
BBO	SZ	47	EP	2		11:21	18.11		
BBO	SE	47	ES	2		11:21	24.29		
BBO	SN	47				11:21	25.08	4	0.24
BBO	SE	47				11:21	26.52	4	0.29

May 13 2001 Time: 11:26 29.3 UTC Magnitude: 1.3 ML
Lat: 55.096N Lon: -3.631W Depth: 10.8 km
Grid Ref: 295.93 kmE 579.21 kmE RMS: 0.07 secs
Locality: DUMFRIES, D & G Quality: B
Comment: FELT DUMFRIES... Intensity: 3+

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
BWH	SZ	9	IP		U	11:26	31.92		
BHH	SZ	26	IP		D	11:26	34.54		
BHH	SE	26	ES	2		11:26	37.81		
BHH	SN	26				11:26	37.96	101	0.20
BHH	SE	26				11:26	39.16	126	0.22
ECK	SZ	33	EP	2		11:26	35.48		
GCD	SZ	33	IP		U	11:26	35.36		
ESK	SZ	37	IP		U	11:26	36.01		
ESK	SE	37	ES	2		11:26	40.51		
ESK	SN	37				11:26	41.38	35	0.17
ESK	SE	37				11:26	41.38	41	0.20
BBH	SZ	45	IP		U	11:26	37.56		
BBO	SZ	47	IP		D	11:26	38.30		
BBO	SN	47	ES	2		11:26	44.44		
BBO	SN	47				11:26	45.25	12	0.24
BBO	SE	47				11:26	44.82	10	0.30
BDL	SZ	55	EP	2		11:26	39.88		
BTA	SZ	64	EP	2		11:26	41.32		
BTA	SN	64	ES	2		11:26	50.08		
BTA	SN	64				11:26	52.91	17	0.44
BTA	SE	64				11:26	54.65	14	0.33

May 14 2001 Time: 04:28 57.0 UTC Magnitude: 0.5 ML
Lat: 54.595N Lon: -3.705W Depth: 13.8 km
Grid Ref: 289.84 kmE 523.59 kmE RMS: 0.11 secs
Locality: SOLWAY FIRTH Quality: B
Comment: 9KM WEST OF WHITEHAVEN

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
XDE	SZ	17	IP		D	04:29	00.90		
GCD	SZ	33	IP		D	04:29	03.39		
BBO	SZ	34	EP	2		04:29	03.14		
BBO	SN	34	ES	2		04:29	07.97		
BBO	SN	34				04:29	08.14	2	0.08
BBO	SE	34				04:29	08.66	3	0.20

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LMI	SN	49	ES	2	04:29	12.95
LMI	SN	49			04:29	14.66
LMI	SE	49			04:29	14.02
GIM	SZ	60	EP	2	04:29	07.54
GIM	SN	60			04:29	18.41
GIM	SE	60			04:29	18.43
GAL	SZ	72	EP	2	04:29	09.70
GAL	SN	72	ES	2	04:29	17.94
GAL	SN	72			04:29	18.46
GAL	SE	72			04:29	19.92

May 14 2001		Time: 05:50 39.4 UTC				Magnitude: 2.2 ML			
Lat: 62.444N		Lon: 2.207W				Depth: 13.8 km			
Grid Ref: 617.02 kmE		1403.09 kmE				RMS: 0.10 secs			
Locality: NORTHERN NORTH SEA						Quality: D			
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
YEL	SZ	274	EP	2		05:51	17.61		
LRW	SZ	315	EP	3		05:51	22.97		
LRW	SN	315	ES	3		05:51	54.21		
LRW	SN	315				05:51	56.24	4	0.25
LRW	SE	315				05:51	57.78	6	0.11
WAL	SZ	318	EP	3		05:51	23.09		
SAN	SZ	328	EP	3		05:51	24.08		

May 15 2001		Time: 07:19 33.0 UTC				Magnitude: 2.4 ML			
Lat: 59.302N		Lon: 2.124W				Depth: 23.7 km			
Grid Ref: 634.73 kmE		1053.43 kmE				RMS: 0.28 secs			
Locality: NORTHERN NORTH SEA						Quality: D			
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
SAN	SZ	206	EP	2		07:20	01.76		
LRW	SZ	208	EP	3		07:20	02.38		
LRW	SN	208	ES	2		07:20	22.51		
LRW	SN	208				07:20	24.28	26	0.22
LRW	SE	208				07:20	25.58	18	0.14
YEL	SZ	227	EP	2		07:20	04.56		
WAL	SZ	235	EP	3		07:20	05.60		

May 31 2001		Time: 18:19 29.6 UTC		Magnitude: 1.6 ML			
Lat: 53.401N		Lon: -1.249W		Depth: 0.0 km			
Grid Ref: 449.90 km		389.68 km E		RMS: 0.06 secs			
Locality: ROTHERHAM, SOUTH YORKS				Quality: C			
Comment: C/F, 6KM SE OF ROTHERHAM							
STAT	CO	DIST	PHAS	WT P	HrMn SECS	AMPL	PERI
KBI	SZ	25	EP	3	18:19 34.70		
KWE	SZ	58	EP	3	18:19 40.47		
CWF	SZ	74	EP	2	18:19 42.77		
CWF	SE	74	ES	2	18:19 52.38		
CWF	SN	74			18:19 53.79	19	0.24
CWF	SE	74			18:19 53.99	21	0.18

May 31 2001	Time: 23:42 59.1 UTC	Magnitude: 3.6 ML
Lat: 50.977N	Lon: -4.531W	Depth: 26.4 km
Grid Ref: 215.55 kmE	127.16 kmE	RMS: 0.07 secs
Locality: OFF HARTLAND PT, DEVON		Quality: C
Comment: FELT CORNWALL & DEVON		Intensity: 5

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
STB	SZ		EP		C	23:43	07.34		
STB	SZ		AMPP			23:43	07.80	79	0.41
STB	SZ		ES			23:43	13.91		
STB	SZ		AMPS			23:43	14.29	1	0.40
HEX	SZ		EP		C	23:43	08.39		
DYA	SZ		EP		D	23:43	11.17		
DYA	SZ		I			23:43	11.93		
DCO	SZ		EP		D	23:43	12.79		
HSA	SZ		EP		C	23:43	12.18		
CRQ	SZ		EP	9	C	23:43	06.80		
CRQ	SZ		ES			23:43	19.52		
CRQ	AE					23:43	19.77	503	0.32
CRQ	AN					23:43	24.21	454	0.44
CR2	SZ		EP		C	23:43	06.83		
CRQ	SZ		AMPP			23:43	06.79	36	0.14
CRQ	SZ		AMPS			23:43	19.70	71	0.10
WFB	SZ		EP			23:43	25.33		
WFB	SZ		I			23:43	31.84		
LLW	BZ		EP	2		23:43	29.40		
LLW	BZ		ES			23:43	56.06		
YRE	SZ		EP			23:43	29.30		
YRC	SZ		EP			23:43	33.15		
YRC	SZ		I			23:43	39.58		
JVM	SZ		EP			23:43	33.79		
WPM	SZ		EP		C	23:43	33.55		
WPM	SZ		I			23:43	39.81		
JLP	SZ		EP		C	23:43	34.16		
JSA	SZ		EP			23:43	34.43		
JRS	SZ		EP			23:43	34.90		
JQE	SZ		EP			23:43	35.08		
WCB	SZ		EP			23:43	34.63		
WCB	SZ		E			23:43	35.19		
WCB	SN					23:44	11.11	135	0.21
WCB	SE					23:44	14.57	277	0.82
WME	SZ		EP			23:43	35.48		
DSB	BZ		EP			23:43	35.47		
DSB	BZ		E			23:43	35.77		
KWE	SZ		EP			23:43	37.92		
CWF	SZ		EP		C	23:43	38.16		
CWF	SN					23:44	25.42	115	0.28
CWF	SE					23:44	28.95	86	0.32
TEB	SZ		EP			23:43	43.31		
WIM	SZ		EP			23:43	45.54		

GAL	SZ	EP	23:43	54.87			
BTA	SZ	EP	23:43	57.84			
BHH	SZ	EP	23:43	58.91			
HTL	SZ	EP	23:43	03.46			
HTL	SZ	I	23:43	03.47			
HTL	SZ	AMPP	23:43	03.48	58	0.11	
HTL	SZ	ES	23:43	06.39			
HTL	SZ	AMPS	23:43	06.53	30	0.06	

June 1 2001 Time: 06:18 07.0 UTC Magnitude: 3.7 ML
Lat: 61.790N Lon: 3.057W Depth: 15.9 km
Grid Ref: 666.45 kmE 1333.59 kmE RMS: 0.13 secs
Locality: NORTHERN NORTH SEA Quality: D

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
F00	SZ	107	EP	2		06:18	24.09		
F00	SN	107	ES	2		06:18	36.67		
SUE	SZ	122	EP	2		06:18	26.14		
SUE	SN	122	ES	2		06:18	40.08		
YEL	SZ	262	IP	1	D	06:18	43.47		
LRW	SZ	294	IP		U	06:18	47.68		
LRW	SN	294	ES	2		06:19	17.92		
LRW	SN	294				06:19	24.19	46	0.15
LRW	SE	294				06:19	28.12	34	0.18
WAL	SZ	305	EP	2		06:18	48.79		
SAN	SZ	306	EP	2		06:18	48.74		
OST	SZ	432	EP	2		06:19	04.82		
OWE	SZ	433	EP	2		06:19	04.21		
OHO	SZ	480	EP	3		06:19	10.19		
OBR	SZ	494	EP	3		06:19	12.13		
ORE	SZ	523	EP	2		06:19	15.45		
ORE	SN	523	ES	3		06:20	06.19		
ORE	SN	523				06:20	08.53	91	0.27
ORE	SE	523				06:20	08.41	72	0.27
MCD	SZ	588	EP	3		06:19	23.53		
MCD	SE	588	ES	2		06:20	19.22		
MCD	SN	588				06:20	22.40	55	0.29
MCD	SE	588				06:20	22.08	29	0.15

June 1 2001 Time: 06:22 51.4 UTC Magnitude: 2.8 ML
Lat: 61.664N Lon: 2.943W Depth: 9.7 km
Grid Ref: 661.57 kmE 1319.09 kmE RMS: 0.20 secs
Locality: NORTHERN NORTH SEA Quality: D

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
HYA	SZ	182	EP	2		06:23	18.50		
BER	SZ	193	EP	2		06:23	20.07		
EGD	SZ	198	EP	2		06:23	20.23		
YEL	SZ	250	IP	1	D	06:23	26.85		
LRW	SZ	281	EP	2		06:23	31.08		
LRW	SE	281	ES	3		06:24	00.76		
LRW	SN	281				06:24	01.52	28	0.10
LRW	SE	281				06:24	01.71	33	0.16
SAN	SZ	292	EP	2		06:23	32.35		
WAL	SZ	292	EP	2		06:23	32.21		

June 1 2001 Time: 06:26 20.2 UTC Magnitude: 2.3 ML
Lat: 61.733N Lon: 3.038W Depth: 10.1 km
Grid Ref: 665.97 kmE 1327.22 kmE RMS: 0.30 secs
Locality: NORTHERN NORTH SEA Quality: D

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
F00	SZ	107	EP	2		06:26	37.17		
F00	SZ	107	ES	3		06:26	49.75		
SUE	SZ	119	EP	2		06:26	39.27		
SUE	SZ	119	ES	3		06:26	52.47		
HYA	SZ	180	EP	2		06:26	48.16		
EGD	SZ	201	EP	2		06:26	49.91		
YEL	SZ	258	EP	2		06:26	56.52		
LRW	SZ	290	EP	2		06:27	00.84		
LRW	SE	290	ES	2		06:27	30.55		
LRW	SN	290				06:27	35.55	6	0.04
LRW	SE	290				06:27	31.35	8	0.19
SAN	SZ	301	EP	2		06:27	02.07		
WAL	SZ	301	EP	2		06:27	01.94		

June 2 2001	Time: 00:44 57.2 UTC	Magnitude: 3.9 ML
Lat: 56.810N	Lon: 6.800W	Depth: 15.0 km
Grid Ref: 936.42 kmE	803.27 kmE	RMS: 0.38 secs
Locality: NORWEGIAN-DANISH BASIN		Quality: D

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
EDR	SZ	569	EP	2		00:46	12.12		
ESY	SZ	590	EP	2		00:46	14.60		
LRW	SZ	595	EP	3		00:46	15.45		
MME	SZ	595	EP	2		00:46	14.79		
XAL	SZ	606	EP	2		00:46	15.96		
OST	SZ	610	EP	2		00:46	17.36		
EBL	SZ	620	EP	3		00:46	17.79		
EDI	SZ	625	EP	3		00:46	18.89		
EDI	SN	625	ES	3		00:47	24.12		
EDI	SN	625				00:47	29.10	21	0.38
EDI	SE	625				00:47	31.33	16	0.42
OBR	SZ	627	EP	2		00:46	19.04		
BTA	SZ	630	EP	2		00:46	18.84		
BTA	SN	630				00:47	28.63	48	0.29
BTA	SE	630				00:47	27.10	48	0.34
MLA	SZ	630	EP	3		00:46	20.12		
BBH	SZ	635	EP	2		00:46	19.75		
OHO	SZ	639	EP	3		00:46	19.34		
EAU	SZ	644	EP	3		00:46	21.13		
ESK	SZ	645	EP	2		00:46	21.08		
ESK	SE	645	ES	3		00:47	27.00		

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ESK	SN	645				00:47	30.69	16	0.19
ESK	SE	645				00:47	30.16	16	0.17
BDL	SZ	650	EP	2		00:46	21.30		
BHH	SZ	654	EP	2		00:46	21.90		
BHH	SN	654				00:47	32.66	46	0.40
BHH	SE	654				00:47	33.11	43	0.25
ORE	SZ	659	EP	3		00:46	22.33		
ORE	SN	659	ES	3		00:47	26.43		
ORE	SN	659				00:47	33.81	35	0.43
ORE	SE	659				00:47	35.06	24	0.26
BB0	SZ	671	EP	2		00:46	23.76		
BWH	SZ	677	EP	2		00:46	24.63		
EAB	SZ	689	EP	3		00:46	27.33		

June 5 2001 Time: 08:39 55.3 UTC Magnitude: 0.1 ML
Lat: 50.111N Lon: -5.170W Depth: 5.6 km
Grid Ref: 173.37 kmE 28.34 kmE RMS: 0.06 secs
Locality: CONSTANTINE,CORNWALL Quality: B

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
CC0	SZ	3	EP	2		08:39	56.35		
CMA	SZ	4	IP	1	D	08:39	56.57		
CR2	SZ	6	EP	2		08:39	56.76		
CR2	SN	6	ES	2	U	08:39	57.93		
CR2	SN	6				08:39	57.95	15	0.04
CR2	SE	6				08:39	57.97	24	0.04
CBW	SZ	6	EP	2		08:39	56.60		
CGH	SZ	7	EP	3		08:39	56.77		
CCA	SZ	9	EP	2		08:39	57.29		
CST	SZ	9	EP	1	D	08:39	57.17		

June 5 2001 Time: 08:43 43.7 UTC Magnitude: 0.2 ML
Lat: 50.109N Lon: -5.176W Depth: 6.2 km
Grid Ref: 173.97 kmE 28.13 kmE RMS: 0.01 secs
Locality: CONSTANTINE,CORNWALL Quality: A

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
CC0	SZ	3	EP	1	U	08:43	44.90		
CGW	SZ	4	IP	D		08:43	44.90		
CMA	SZ	5	EP	2		08:43	45.02		
CBW	SZ	6	IP	U		08:43	45.17		
CR2	SZ	6	IP	U		08:43	45.22		
CR2	SN	6	ES	2		08:43	46.38		
CR2	SN	6				08:43	46.41	37	0.06
CR2	SE	6				08:43	46.43	15	0.04
CGH	SZ	7	EP	2		08:43	45.21		
CCA	SZ	9	IP	U		08:43	45.61		
CST	SZ	10	IP	U		08:43	45.66		

June 5 2001 Time: 09:04 09.9 UTC Magnitude: 0.2 ML
Lat: 50.109N Lon: -5.167W Depth: 6.6 km
Grid Ref: 173.56 kmE 28.12 kmE RMS: 0.03 secs
Locality: CONSTANTINE,CORNWALL Quality: B

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
CC0	SZ	4	EP	2		09:04	11.18		
CGW	SZ	4	IP	1	D	09:04	11.30		
CR2	SZ	6	IP	1	U	09:04	11.51		
CR2	SN	6	ES	2		09:04	12.67		
CR2	SN	6				09:04	12.68	16	0.07
CR2	SE	6				09:04	12.70	27	0.05
CBW	SZ	6	IP	U		09:04	11.46		
CGH	SZ	7	IP	U		09:04	11.52		
CCA	SZ	10	EP	2		09:04	11.87		
CST	SZ	10	EP	1	U	09:04	11.94		

June 5 2001 Time: 10:21 04.9 UTC Magnitude: 1.2 ML
Lat: 51.431N Lon: -2.736W Depth: 5.1 km
Grid Ref: 348.88 kmE 170.53 kmE RMS: 0.05 secs
Locality: BRISTOL,AVON
Comment: 8KM EAST OF BRISTOL Quality: C

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
HGH	SZ	24	IP	D		10:21	09.36		
MCH	SZ	66	EP	1	D	10:21	16.04		
MCH	SE	66	ES	2		10:21	24.27		
MCH	SN	66				10:21	31.68	6	0.24
MCH	SE	66				10:21	26.72	8	0.17
HAE	SZ	69	EP	2		10:21	16.56		
HTR	SZ	81	EP	2		10:21	18.23		
HEX	SZ	85	EP	2		10:21	19.05		
SSP	SZ	113	EP	2		10:21	23.50		
SSP	SN	113	ES	2		10:21	37.39		
SSP	SN	113				10:21	40.56	7	0.19
SSP	SE	113				10:21	40.66	4	0.21

June 5 2001 Time: 11:50 47.6 UTC Magnitude: 0.8 ML
Lat: 50.110N Lon: -5.175W Depth: 6.8 km
Grid Ref: 173.02 kmE 28.22 kmE RMS: 0.03 secs
Locality: CONSTANTINE,CORNWALL Quality: A

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
CC0	SZ	3	EP	1	U	11:50	48.90		
CGW	SZ	4	IP	U		11:50	48.93		
CMA	SZ	5	IP	D		11:50	49.00		
CR2	SZ	6	IP	U		11:50	49.21		
CR2	SN	6	ES	1		11:50	50.38		
CR2	SN	6				11:50	50.40	64	0.05
CR2	SE	6				11:50	50.42	93	0.06
CBW	SZ	6	EP	2		11:50	49.13		
CGH	SZ	7	IP	U		11:50	49.22		
CCA	SZ	9	IP	1	U	11:50	49.60		
CST	SZ	10	IP	U		11:50	49.65		
CPZ	SZ	30	EP	2		11:50	52.73		

June 5 2001 Time: 12:04 27.5 UTC Magnitude: 0.8 ML
Lat: 50.110N Lon: -5.179W Depth: 6.7 km
Grid Ref: 172.75 kmE 28.20 kmE RMS: 0.03 secs
Locality: CONSTANTINE,CORNWALL Quality: A

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
CC0	SZ	3	IP	1	U	12:04	28.78		
CGW	SZ	3	IP	1	D	12:04	28.77		
CMA	SZ	5	IP	D		12:04	28.87		
CR2	SZ	6	IP	U		12:04	29.09		
CR2	SN	6	ES	1		12:04	30.25		
CR2	SN	6				12:04	30.27	60	0.04
CR2	SE	6				12:04	30.29	97	0.05
CBW	SZ	6	IP	U		12:04	29.04		
CGH	SZ	7	IP	U		12:04	29.09		
CCA	SZ	9	EP	2		12:04	29.49		
CST	SZ	10	IP	U		12:04	29.51		
CPZ	SZ	29	EP	1	D	12:04	32.61		

June 5 2001 Time: 12:04 31.5 UTC Magnitude: 0.6 ML
Lat: 50.115N Lon: -5.184W Depth: 8.0 km
Grid Ref: 172.36 kmE 28.77 kmE RMS: 0.07 secs
Locality: CONSTANTINE,CORNWALL Quality: B

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
CC0	SZ	3	EP	2		12:04	33.01		
CGW	SZ	3	IP	1	U	12:04	33.07		
CR2	SZ	6	IP	U		12:04	33.38		
CR2	SN	6	ES	2		12:04	34.54		
CR2	SN	6				12:04	34.56	41	0.05
CR2	SE	6				12:04	34.58	73	0.06
CBW	SZ	6	IP	U		12:04	33.33		
CMA	SZ	6	EP	2		12:04	33.15		
CGH	SZ	7	EP	2		12:04	33.38		
CCA	SZ	9	EP	2		12:04	33.34		
CST	SZ	9	EP	2		12:04	33.68		

June 5 2001 Time: 12:07 38.8 UTC Magnitude: 0.2 ML
Lat: 50.110N Lon: -5.168W Depth: 5.9 km
Grid Ref: 173.48 kmE 28.16 kmE RMS: 0.02 secs
Locality: CONSTANTINE,CORNWALL Quality: B

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
CC0	SZ	4	EP	2		12:07	40.04		
CGW	SZ	4	EP	1	D	12:07	40.07		
CMA	SZ	4	EP	1	D	12:07	40.11		
CR2	SZ	6	IP	1	U	12:07	40.33		
CR2	SN	6	ES	1		12:07	41.47		
CR2	SN	6				12:07	41.50	21	0.06
CR2	SE	6				12:07	41.52	24	0.04
CBW	SZ	6	IP	1	D	12:07	40.27		
CGH	SZ	7	EP	1	U	12:07	40.33		
CST	SZ	10	EP	2		12:07	40.75		

June 5 2001 Time: 15:30 04.0 UTC Magnitude: 0.7 ML
Lat: 50.109N Lon: -5.174W Depth: 6.0 km
Grid Ref: 173.09 kmE 28.13 kmE RMS: 0.02 secs
Locality: CONSTANTINE,CORNWALL Quality: A

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
CC0	SZ	3	IP	1	U	15:30	05.20		
CGW	SZ	4	EP	1	D	15:30	05.18		
CMA	SZ	5	IP	D		15:30	05.29		
CR2	SZ	6	IP	U		15:30	05.50		
CR2	SN	6	ES	2		15:30	06.65		
CR2	SN	6				15:30	06.67	48	0.06
CR2	SE	6				15:30	06.69	83	0.06
CBW	SZ	6	IP	1	U	15:30	05.45		
CGH	SZ	7	EP	1	U	15:30	05.51		
CCA	SZ	9	IP	1	D	15:30	05.92		
CST	SZ	10	IP	1	U	15:30	05.92		

June 5 2001 Time: 15:59 46.3 UTC Magnitude: 1.1 ML
Lat: 50.109N Lon: -5.175W Depth: 6.2 km
Grid Ref: 173.03 kmE 28.15 kmE RMS: 0.01 secs
Locality: CONSTANTINE,CORNWALL Quality: A

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
CC0	SZ	3	IP	1	D	15:59	47.55		
CGW	SZ	4	IP	D		15:59	47.57		
CMA	SZ	5	IP	D		15:59	47.67		
CR2	SZ	6	IP	U		15:59	47.88		
CR2	SN	6	ES	1		15:59	49.04		
CR2	SN	6				15:59	49.06	152	0.06
CR2	SE	6				15:59	49.11	180	0.06
CBW	SZ	6	IP	U		15:59	47.83		
CGH	SZ	7	IP	U		15:59	47.88		
CCA	SZ	9	IP	1	D	15:59	48.26		
CST	SZ	10	IP	U		15:59	48.31		

June 5 2001 Time: 16:01 28.5 UTC Magnitude: 0.0 ML
Lat: 50.105N Lon: -5.150W Depth: 5.5 km
Grid Ref: 174.77 kmE 27.63 kmE RMS: 0.05 secs
Locality: CONSTANTINE,CORNWALL Quality: B

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
CMA	SZ	3	EP	2		16:01	29.57		
CBW	SZ	5	IP	1	U	16:01	29.82		
CC0	SZ	5	EP	2		16:01	29.76		
CGH	SZ	6	EP	2		16:01	29.88		
CR2	SZ	7	EP	3		16:01	29.87		
CR2	SE	7	ES	3		16:01	31.06		
CR2	SN	7				16:01	31.05	11	0.05
CR2	SE	7				16:01	31.07	16	0.06

PHASE DATA : 2001

June 5 2001 Time: 16:06 54.2 UTC
 Lat: 50.109N Lon: -5.175W
 Grid Ref: 173.04 kmE 28.15 kmE
 Locality: CONSTANTINE, CORNWALL
 Magnitude: 0.4 ML
 Depth: 6.3 km
 RMS: 0.01 secs
 Quality: B
 AMPL PERI

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS
CCO	SZ	3	IP	1	D	16:06	55.46
CMA	SZ	5	EP	1	D	16:06	55.56
CR2	SZ	6	IP	U		16:06	55.76
CR2	SN	6	ES	1		16:06	56.93
CR2	SN	6				16:06	56.95
CR2	SE	6				16:06	56.97
CBW	SZ	6	IP		U	16:06	55.71
CGH	SZ	7	IP		U	16:06	55.77
CCA	SZ	9	IP	1	D	16:06	56.16
CST	SZ	10	IP		U	16:06	56.20

30 0.04
33 0.05

June 5 2001 Time: 16:23 20.8 UTC
 Lat: 50.110N Lon: -5.174W
 Grid Ref: 173.10 kmE 28.22 kmE
 Locality: CONSTANTINE, CORNWALL
 Magnitude: 0.9 ML
 Depth: 6.3 km
 RMS: 0.01 secs
 Quality: A
 AMPL PERI

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS
CCO	SZ	3	IP	1	U	16:23	21.99
CGW	SZ	4	EP	3		16:23	22.01
CMA	SZ	5	IP		D	16:23	22.10
CR2	SZ	6	IP		U	16:23	22.31
CR2	SN	6	ES	1		16:23	23.46
CR2	SN	6				16:23	23.49
CR2	SE	6				16:23	23.51
CBW	SZ	6	IP		U	16:23	22.26
CGH	SZ	7	IP		U	16:23	22.32
CCA	SZ	9	IP		U	16:23	22.70
CST	SZ	10	IP		U	16:23	22.72

102 0.05
121 0.05

June 5 2001 Time: 16:48 32.5 UTC
 Lat: 50.111N Lon: -5.170W
 Grid Ref: 173.38 kmE 28.28 kmE
 Locality: CONSTANTINE, CORNWALL
 Magnitude: 0.4 ML
 Depth: 6.7 km
 RMS: 0.02 secs
 Quality: B
 AMPL PERI

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS
CCO	SZ	3	IP	1	U	16:48	33.84
CGW	SZ	4	EP	2		16:48	33.91
CMA	SZ	4	IP		D	16:48	33.93
CR2	SZ	6	IP	1	U	16:48	34.14
CR2	SN	6	ES	2		16:48	35.30
CR2	SN	6				16:48	35.32
CR2	SE	6				16:48	35.34
CBW	SZ	6	IP		U	16:48	34.09
CGH	SZ	7	EP	1	U	16:48	34.15
CST	SZ	9	IP		U	16:48	34.57
CCA	SZ	9	IP	1	D	16:48	34.51

20 0.06
55 0.06

June 9 2001 Time: 00:49 28.4 UTC
 Lat: 50.109N Lon: -5.176W
 Grid Ref: 172.98 kmE 28.15 kmE
 Locality: CONSTANTINE, CORNWALL
 Magnitude: 0.2 ML
 Depth: 6.3 km
 RMS: 0.02 secs
 Quality: A
 AMPL PERI

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS
CCO	SZ	3	EP	1	U	00:49	29.69
CGW	SZ	4	EP	2		00:49	29.65
CMA	SZ	5	IP	1	D	00:49	29.78
CR2	SZ	6	IP		U	00:49	29.98
CR2	SN	6	ES	2		00:49	31.14
CR2	SN	6				00:49	31.15
CR2	SE	6				00:49	31.18
CBW	SZ	6	IP		U	00:49	29.93
CGH	SZ	7	EP	2		00:49	29.99
CCA	SZ	9	EP	2		00:49	30.36
CST	SZ	10	IP		U	00:49	30.40

14 0.04
28 0.06

June 12 2001 Time: 06:39 55.9 UTC
 Lat: 50.110N Lon: -5.175W
 Grid Ref: 173.01 kmE 28.22 kmE
 Locality: CONSTANTINE, CORNWALL
 Magnitude: 0.6 ML
 Depth: 6.1 km
 RMS: 0.01 secs
 Quality: B
 AMPL PERI

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS
CCO	SZ	3	EP	2		06:39	57.16
CGW	SZ	4	EP	2		06:39	57.18
CR2	SZ	6	IP		U	06:39	57.48
CR2	SN	6	ES	1		06:39	58.63
CR2	SN	6				06:39	58.66
CR2	SE	6				06:39	58.68
CBW	SZ	6	IP		U	06:39	57.44
CGH	SZ	7	IP	1	U	06:39	57.50
CCA	SZ	9	IP	1	D	06:39	57.86
CST	SZ	10	IP		U	06:39	57.91

40 0.05
68 0.04

June 17 2001 Time: 23:51 12.2 UTC
 Lat: 60.429N Lon: 1.872W
 Grid Ref: 613.05 kmE 1177.90 kmE
 Locality: NORTHERN NORTH SEA
 Magnitude: 3.0 ML
 Depth: 15.0 km
 RMS: 0.24 secs
 Quality: D
 AMPL PERI

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS
YEL	SZ	163	IP	1	U	23:51	36.30
YEL	SZ	163	ES	3		23:51	54.50
LRW	SZ	172	IP		U	23:51	37.63
LRW	SN	172	ES	3		23:51	55.40
LRW	SN	172				23:51	57.05
LRW	SE	172				23:51	59.56
SAN	SZ	179	EP	2		23:51	38.47
WAL	SZ	194	EP	2		23:51	40.81
ORE	SZ	382	EP	3		23:52	02.95
ORE	SN	382				23:52	57.41

84 0.11
83 0.21
21 0.29

ORE SE 382 23:52 57.56 29 0.40
 June 20 2001 Time: 11:45 14.6 UTC
 Lat: 51.948N Lon: -3.090W
 Grid Ref: 325.13 kmE 228.35 kmE
 Locality: TALGARTH, POWYS
 Comment: 10KM SE OF TALGARTH
 Magnitude: 1.8 ML
 Depth: 28.8 km
 RMS: 0.04 secs
 Quality: B
 AMPL PERI

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS
MCH	SZ	8	IP		D	11:45	19.39
MCH	SN	8	ES	2		11:45	22.89
HTR	SZ	19	IP		D	11:45	20.12
HAE	SZ	39	IP		U	11:45	22.28
HGH	SZ	40	IP		D	11:45	22.47
SSP	SZ	52	IP		D	11:45	24.15
SSP	SN	52	ES	2		11:45	31.09
SSP	SN	52				11:45	31.37
SSP	SE	52				11:45	31.22
HSA	SZ	77	EP	2		11:45	27.41

58 0.14
38 0.27

June 20 2001 Time: 21:33 38.7 UTC
 Lat: 57.024N Lon: -5.790W
 Grid Ref: 169.99 kmE 798.95 kmE
 Locality: MALLAIG, HIGHLAND
 Comment: FELT MALLAIG
 Magnitude: 1.7 ML
 Depth: 5.6 km
 RMS: 0.07 secs
 Quality: C
 Intensity: 3+
 AMPL PERI

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS
KSB	SZ	31	IP		U	21:33	44.34
KPL	SZ	36	IP	1	U	21:33	45.28
KPL	SN	36	ES	3		21:33	49.92
KPL	SN	36				21:33	50.03
KPL	SE	36				21:33	50.60
KNR	SZ	55	EP	2		21:33	48.16
KAC	SZ	61	EP	2		21:33	49.15
KSK	SZ	74	EP	2		21:33	51.25
RRR	SZ	93	EP	2		21:33	54.04
RRR	SN	93	ES	3		21:34	04.99
RRR	SN	93				21:34	08.08
RRR	SE	93				21:34	08.48
RRH	SZ	113	IP	1	U	21:33	57.05
REB	SZ	126	EP	2		21:33	59.55
RFO	SZ	151	EP	1	U	21:34	02.29

38 0.16
36 0.18
57 0.12
28 0.12

June 27 2001 Time: 03:06 19.8 UTC
 Lat: 54.267N Lon: -2.275W
 Grid Ref: 382.10 kmE 485.79 kmE
 Locality: SEDBERGH, CUMBRIA
 Comment: FELT COWGILL
 Magnitude: 2.2 ML
 Depth: 7.2 km
 RMS: 0.10 secs
 Quality: C
 Intensity: 4+
 AMPL PERI

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS
LRN	SZ	35	IP		U	03:06	26.12
CDU	SZ	60	EP	2		03:06	30.34
CKE	SZ	65	EP	2		03:06	30.99
CSF	SZ	66	EP	2		03:06	31.19
LMI	SZ	68	IP		U	03:06	31.52
LMI	SE	68	ES	2		03:06	39.37
LMI	SN	68				03:06	40.49
LMI	SE	68				03:06	40.33
BDL	SZ	74	EP	2		03:06	32.49
BTA	SZ	76	IP		U	03:06	32.92
BTA	SN	76	ES	2		03:06	41.83
BTA	SE	76				03:06	42.35
BBO	SZ	82	EP	2		03:06	33.80
BBO	SE	82	ES	2		03:06	43.35
BBO	SN	82				03:06	46.41
BBO	SE	82				03:06	46.25
XDE	SZ	83	IP		U	03:06	34.04
BBH	SZ	105	IP	1	U	03:06	37.87
BHH	SZ	110	EP	2		03:06	38.74
BHH	SE	110	ES	2		03:06	51.59
BHH	SN	110				03:06	52.63
BHH	SE	110				03:06	53.79
GIM	SN					03:07	01.43

45 0.21
61 0.18
66 0.24
51 0.33
135 0.25
97 0.23
174 0.28
65 0.25
58 0.17

July 11 2001 Time: 20:16 47.5 UTC
 Lat: 53.046N Lon: -4.480W
 Grid Ref: 233.80 kmE 352.77 kmE
 Locality: CAERNARVON BAY, GWYNEDD
 Comment: 15KM SOUTH OF PEEBLES
 Magnitude: 0.4 ML
 Depth: 10.1 km
 RMS: 0.06 secs
 Quality: C
 AMPL PERI

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS
YRE	SZ	8	EP	2		20:16	49.65
YLL	SZ	23	EP	2		20:16	51.80
YRC	SZ	24	EP	1	U	20:16	51.85
WLF	SZ	28	EP	2		20:16	52.36
WCB	SZ	37	EP	3		20:16	54.18
WCB	SN	37	ES	3		20:16	58.29
WCB	SN	37				20:16	58.47
WCB	SE	37				20:16	59.45
WME	SZ	41	EP	1	D	20:16	54.39
WPM	SZ	45	EP	2		20:16	55.15

4 0.09
4 0.16

July 13 2001 Time: 01:17 13.6 UTC
 Lat: 55.535N Lon: -3.159W
 Grid Ref: 326.85 kmE 627.38 kmE
 Locality: PEEBLES, BORDERS
 Comment: 15KM SOUTH OF PEEBLES
 Magnitude: 1.0 ML
 Depth: 8.6 km
 RMS: 0.12 secs
 Quality: C
 AMPL PERI

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS
EBL	SZ	27	IP		D	01:17	18.67
EAU	SZ	39	IP	1	D	01:17	20.67
EDI	SZ	43	EP	2		01:17	21.14
EDI	SN	43	ES	3		01:17	26.70
EDI	SN	43				01:17	26.84

8 0.16

PHASE DATA : 2001

EDI	SE	43			01:17	27.05	4	0.17		CWF	SE	48			03:11	30.52	6	0.22	
BBH	SZ	47	EP	2	01:17	22.04													
BHH	SZ	49	IP	1	01:17	22.26													
BHH	SE	49	ES	3	01:17	27.93													
BHH	SN	49			01:17	28.53	7	0.13											
BHH	SE	49			01:17	28.70	19	0.22											
BWH	SZ	51	EP	2	01:17	22.28													
ESY	SZ	55	EP	2	01:17	22.91													
BTA	SZ	76	EP	3	01:17	26.85													
BTA	SN	76	EP	2	01:17	26.86													
BDL	SZ	83	EP	2	01:17	27.97													
BBO	SZ	89	EP	2	01:17	28.91													
BBO	SN	89			01:17	40.92	5	0.26											
BBO	SE	89			01:17	40.39	5	0.20											
July 17 2001					Time: 21:36 24.4 UTC					Magnitude: 0.7 ML									
Lat: 51.636N					Lon: -3.074W					Depth: 4.3 km					ML				
Grid Ref: 325.66 kmE					193.62 kmE					RMS: 0.11 secs					RMS: 0.09 secs				
Locality: CWMBRAN,GWENT					Quality: C					Quality: C									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI										
HGH	SZ	19	IP	1	U	21:36	28.03												
MCH	SZ	41	EP	2		21:36	31.59												
MCH	SE	41	ES	3		21:36	37.83												
MCH	SN	41				21:36	38.02	8	0.10										
MCH	SE	41				21:36	38.03	5	0.18										
HAE	SZ	58	EP	2		21:36	34.47												
July 21 2001					Time: 00:43 30.7 UTC					Magnitude: 1.9 ML									
Lat: 56.653N					Lon: -6.096W					Depth: 4.3 km					ML				
Grid Ref: 149.01 kmE					758.77 kmE					RMS: 0.06 secs					RMS: 0.02 secs				
Locality: MULL,STRATHCLYDE					Quality: C					Quality: C									
Comment: FELT SALEN					Intensity: 3+					Quality: C									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI										
KNR	SZ	71	IP	1	U	00:43	42.83												
KSB	SZ	74	EP	1	D	00:43	43.24												
KPL	SZ	81	IP	1	D	00:43	44.31												
KPL	SN	81	ES	3		00:43	54.17												
KPL	SN	81				00:43	57.34	43	0.12										
KPL	SE	81				00:43	57.25	41	0.10										
KAC	SZ	106	EP	2		00:43	48.26												
PMS	SZ	123	EP	1	U	00:43	50.76												
PGB	SE	137	EP	2		00:43	53.04												
PGB	SE	137	ES	3		00:44	09.20												
PGB	SN	137				00:44	11.26	13	0.27										
PGB	SE	137				00:44	10.08	22	0.23										
MDO	SZ	137	EP	2		00:43	53.09												
PCO	SZ	144	EP	2		00:43	54.04												
July 24 2001					Time: 04:12 04.6 UTC					Magnitude: 1.4 ML									
Lat: 56.758N					Lon: -5.508W					Depth: 12.4 km					ML				
Grid Ref: 185.60 kmE					768.41 kmE					RMS: 0.09 secs					RMS: 0.08 secs				
Locality: FORT WILLIAM,HIGHLAND					Quality: D					Quality: D									
Comment: 25KM SW OF FORT WILLIAM																			
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI										
KNR	SZ	34	IP	1	U	04:12	10.74												
KSB	SZ	51	EP	2		04:12	13.20												
KPL	SZ	65	EP	2		04:12	15.64												
KPL	SE	65	ES	3		04:12	23.63												
KPL	SN	65				04:12	26.70	17	0.12										
KPL	SE	65				04:12	23.81	10	0.19										
KAC	SZ	84	EP	2		04:12	18.69												
July 24 2001					Time: 21:29 10.1 UTC					Magnitude: 1.2 ML									
Lat: 57.591N					Lon: -5.614W					Depth: 4.1 km					ML				
Grid Ref: 184.03 kmE					861.41 kmE					RMS: 0.02 secs					RMS: 0.01 secs				
Locality: TORRIDON,HIGHLAND					Quality: C					Quality: C									
Comment: 7KM NORTHWEST OF TORRIDON																			
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI										
KAC	SZ	22	IP	1	U	21:29	14.19												
KPL	SZ	28	EP	1	U	21:29	15.32												
KPL	SE	28	ES	2		21:29	19.09												
KPL	SN	28				21:29	19.32	48	0.13										
KPL	SE	28				21:29	19.69	56	0.12										
KSB	SZ	44	IP	1	U	21:29	17.94												
July 25 2001					Time: 23:21 04.0 UTC					Magnitude: 0.8 ML									
Lat: 57.466N					Lon: -5.563W					Depth: 14.0 km					ML				
Grid Ref: 186.37 kmE					847.33 kmE					RMS: 0.02 secs					RMS: 0.04 secs				
Locality: LOCHCARRON,HIGHLAND					Quality: C					Quality: B									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI										
KPL	SZ	15	IP		U	23:21	07.60												
KPL	SN	15	ES	3		23:21	10.31												
KPL	SN	15				23:21	10.76	48	0.13										
KPL	SE	15				23:21	10.80	56	0.18										
KAC	SZ	16	IP	1	U	23:21	07.78												
KSB	SZ	30	IP	1	U	23:21	09.68												
July 26 2001					Time: 03:11 14.4 UTC					Magnitude: 0.8 ML									
Lat: 53.059N					Lon: -1.785W					Depth: 0.1 km					ML				
Grid Ref: 414.38 kmE					351.32 kmE					RMS: 0.24 secs					RMS: 0.31 secs				
Locality: ASHBOURNE,DERBYSHIRE					Quality: D					Quality: D									
Comment: C/F																			
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI										
KWE	SZ	6	IP		U	03:11	15.76												
KWE	SZ	6	ES	3		03:11	18.32												
KBI	SZ	28	EP	2		03:11	20.12												
CWF	SZ	48	EP	3		03:11	23.86												
CWF	SE	48	ES	2		03:11	29.93												
CWF	SN	48				03:11	30.78	8	0.24										
July 31 2001					Time: 13:56 36.4 UTC					Magnitude: 1.5 ML									
Lat: 52.219N					Lon: -4.364W					Depth: 8.1 km					ML				
Grid Ref: 238.55 kmE					260.58 kmE					RMS: 0.09 secs					RMS: 0.02 secs				
Locality: NEW QUAY,DYFED					Quality: C					Quality: C									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI										
HPE	SZ	42	IP		U	13:56	43.76												
HSA	SZ	54	EP	2		13:56	45.67												
WFB	SZ	56	IP		U	13:56	45.77												
HTR	SZ	77	EP	2		13:56	49.11												
YRE	SZ	85	EP	2		13:56	50.70												
SSP	SZ	88	EP	2		13:56	50.81												
SSP	SN	88	ES	2		13:57	00.76												
SSP	SN	88				13:57	01.80	11	0.17										
SSP	SE	88				13:57	02.73	21	0.13										
MCH	SZ	97	EP	2		13:56	52.06												
MCH	SN	97	ES	2		13:57	03.06												
MCH	SN	97				13:57	03.58	17	0.15										
MCH	SE	97				13:57	03.67	11	0.18										
WCB	SZ	130	EP	2		13:56	57.38												
WCB	SN	130				13:57	13.86	7	0.27										
WCB	SE	130				13:57	13.60	6	0.18										
August 9 2001					Time: 01:25 32.4 UTC					Magnitude: 0.4 ML									
Lat: 55.250N					Lon: -3.220W					Depth: 14.6 km					ML				
Grid Ref: 322.46 kmE					595.74 kmE					RMS: 0.02 secs					RMS: 0.02 secs				
Locality: ESKDALEMUIR, D & G					Quality: C					Quality: C									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI										
BHH	SZ	17	IP		D	01:25	36.45												
BHH	SN	17	ES	2		01:25	39.30												
BHH	SN	17				01:25	39.48	3	0.02										
BHH	SE	17				01:25	39.43	18	0.21										
BBH	SZ	23	EP	2		01:25	37.08												
BWH	SZ	29	IP		U	01:25	38.06												
BTA	SZ	51	EP	2		01:25	41.60												
BTA	SE	51	ES	2		01:25	47.36												
BTA	SN	51				01:25	48.30	9	0.24										
BTA	SE	51				01:25	48.26	5	0.17										
BDL	SZ	53	EP	2		01:25	41.78												
August 13 2001					Time: 09:56 58.5 UTC					Magnitude: 2.0 ML									
Lat: 60.480N					Lon: 2.019W					Depth: 15.0 km					ML				
Grid Ref: 620.82 kmE					1184.03 kmE					RMS: 0.08 secs					RMS: 0.08 secs				
Locality: NORTHERN NORTH SEA					Quality: D					Quality: D									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI										
YEL	SZ	171	EP	2		09:57	23.68												
LRW	SZ	181	EP	2		09:57	24.90												
LRW	SE	181	ES	3		09:57	44.30												
LRW	SN	181				09:57	47.42	14	0.16										
LRW	SE	181				09:57	47.53	13	0.14										
SAN	SZ	188	EP	3		09:57	25.97												
WAL	SZ	202	EP	3		09:57	28.78												
August 16 2001					Time: 00:34 59.7 UTC					Magnitude: 0.1 ML									
Lat: 49.238N					Lon: -2.164W					Depth: 9.6 km					ML				
Grid Ref: 388.06 kmE					-73.55 kmE					RMS: 0.01 secs					RMS: 0.01 secs				
Locality: JERSEY,CHANNEL ISLANDS					Quality: C					Quality: C									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI										
JLP	SZ	5	IP	1	U	00:35	01.68												
JLP	SZ	5	ES	2		00:35	03.13												
JRS	SZ	7	IP		D	00:35	01.93												
JRS	SE	7	ES	2		00:35	03.58												
JRS	SN	7				00:35	03.62	9	0.08										
JRS	SE	7				00:35	03.62	29	0.10										
JQE	SZ	10	IP		D	00:35	02.29												
JQE	SZ	10	ES	3		00:35	04.11												
August 25 2001					Time: 03:10 13.6 UTC					Magnitude: 0.4 ML									
Lat: 52.032N					Lon: -2.837W					Depth: 18.5 km					ML				
Grid Ref: 342.60 kmE					237.48 kmE					RMS: 0.04 secs					RMS: 0.04 secs				
Locality: HEREFORD,HER & WOR					Quality: B					Quality: B									
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI										
MCH	SZ	12	EP	2		03:10	17.37												
MCH	SN	12	ES	2		03:10	20.33												
MCH	SN	12				03:10	20.38	32	0.13										
MCH	SE	12				03:10	20.41	25	0.12										
HAE	SZ	20	IP		U	03:10	18.19												
HTR	SZ	30	IP		U	03:10	19.45												
HGH	SZ	44	IP	1	D	03:10	21.53												
SSP	SZ	47	IP		D	03:10	21.90												
SSP	SN	47	ES	2		03:10	28.00												
SSP	SN	47				03:10	28.07	3	0.05										
SSP																			

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WME SZ 88 EP 2 01:45 13.44
 GIM SN 97 ES 3 01:45 26.05
 GIM SN 97 01:45 27.27 3 0.21
 GIM SE 97 01:45 27.51 3 0.18
 WCB SZ 103 EP 2 01:45 14.47
 WCB SN 103 ES 2 01:45 27.29
 WCB SN 103 01:45 28.54 4 0.16
 WCB SE 103 01:45 28.70 5 0.11

August 31 2001 Time: 22:32 24.4 UTC Magnitude: 1.0 ML
Lat: 51.830N Lon: -2.906W Depth: 12.8 km
Grid Ref: 337.57 kmE 215.00 kmE RMS: 0.08 secs
Locality: ABERGAVENNY, GWENT Quality: B

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
MCH	SZ	20	EP	2		22:32	28.53		
MCH	SN	20	ES	2		22:32	31.28		
MCH	SN	20				22:32	31.86	49	0.12
MCH	SE	20				22:32	31.89	136	0.17
HGH	SZ	23	IP	1	D	22:32	28.82		
HAE	SZ	34	EP	2		22:32	30.49		
HTR	SZ	37	IP		U	22:32	31.03		
SSP	SZ	67	EP	2		22:32	36.14		
SSP	SN	67	ES	2		22:32	44.18		
SSP	SN	67				22:32	45.72	6	0.18
SSP	SE	67				22:32	46.29	3	0.16
SSW	SZ	74	EP	2		22:32	36.95		
HSA	SZ	87	EP	2		22:32	38.69		

September 1 2001 Time: 12:09 52.0 UTC Magnitude: 1.8 ML
Lat: 56.237N Lon: -3.744W Depth: 4.2 km
Grid Ref: 291.94 kmE 706.30 kmE RMS: 0.05 secs
Locality: BLACKFORD, TAYSIDE Quality: B
Comment: FELT GLENDEVON Intensity: 3+

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
PCO	SZ	36	EP	2		12:09	58.59		
EAB	SZ	37	IP		U	12:09	58.80		
EAU	SZ	47	EP	2		12:10	00.50		
EDI	SZ	49	EP	2		12:10	00.78		
EDI	SN	49	ES	2		12:10	06.96		
EDI	SN	49				12:10	07.04	48	0.19
EDI	SE	49				12:10	07.24	61	0.27
EDU	SZ	57	EP	2		12:10	01.94		
PGB	SE	66	ES	2		12:10	12.27		
PGB	SN	66				12:10	14.47	32	0.31
PGB	SE	66				12:10	14.64	43	0.17
PCA	SZ	68	EP	2		12:10	03.69		
PMS	SZ	76	EP	2		12:10	04.82		

September 2 2001 Time: 05:29 50.6 UTC Magnitude: 1.3 ML
Lat: 57.641N Lon: -5.650W Depth: 4.1 km
Grid Ref: 182.20 kmE 867.03 kmE RMS: 0.09 secs
Locality: GAIRLOCH, HIGHLAND Quality: B
Comment: 10KM SOUTH OF GAIRLOCH

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
RRR	SZ	26	EP	2		05:29	55.42		
RRR	SN	26	ES	2		05:29	58.95		
RRR	SN	26				05:29	59.77	46	0.16
RRR	SE	26				05:29	59.67	75	0.16
KAC	SZ	26	IP		U	05:29	55.56		
KPL	SZ	34	IP	1	U	05:29	56.70		
KPL	SN	34	ES	2		05:30	00.38		
KPL	SN	34				05:30	00.65	64	0.12
KPL	SE	34				05:30	01.01	71	0.18
KSB	SZ	50	IP		U	05:29	59.31		
REB	SZ	58	EP	2		05:30	00.43		
RRH	SZ	69	EP	2		05:30	02.51		
KNR	SZ	100	IP		U	05:30	07.40		

September 3 2001 Time: 22:06 29.9 UTC Magnitude: 0.5 ML
Lat: 57.023N Lon: -5.780W Depth: 4.0 km
Grid Ref: 170.60 kmE 798.78 kmE RMS: 0.08 secs
Locality: MALLAIG, HIGHLAND Quality: D

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
KSB	SZ	30	EP	2		22:06	35.56		
KPL	SZ	36	EP	3		22:06	36.45		
KPL	SE	36	ES	3		22:06	41.00		
KPL	SN	36				22:06	41.19	4	0.17
KPL	SE	36				22:06	41.42	6	0.13
KNR	SZ	54	EP	2		22:06	39.37		
KAC	SZ	60	EP	3		22:06	40.53		

September 5 2001 Time: 03:48 21.4 UTC Magnitude: 1.1 ML
Lat: 52.738N Lon: -2.960W Depth: 10.4 km
Grid Ref: 335.17 kmE 316.05 kmE RMS: 0.07 secs
Locality: SHREWSBURY, SHROPSHIRE Quality: C
Comment: 15KM WEST OF SHREWSBURY

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
SBD	SZ	27	IP		D	03:48	26.37		
SSP	SZ	37	IP		D	03:48	27.96		
SSP	SN	37	ES	2		03:48	32.59		
SSP	SN	37				03:48	33.26	24	0.17
SSP	SE	37				03:48	33.54	33	0.19
WFB	SZ	73	EP	2		03:48	33.88		
HTR	SZ	76	EP	2		03:48	34.42		
MCH	SZ	82	EP	3		03:48	35.58		
MCH	SE	82	ES	2		03:48	45.23		
MCH	SN	82				03:48	45.61	3	0.12
MCH	SE	82				03:48	45.62	6	0.19
HAE	SZ	83	EP	2		03:48	35.40		

WPM SZ 86 EP 2 03:48 35.75
 YLL SZ 93 EP 2 03:48 37.10

September 13 2001 Time: 23:45 34.3 UTC Magnitude: 1.0 ML
Lat: 52.036N Lon: -2.832W Depth: 20.7 km
Grid Ref: 342.97 kmE 237.87 kmE RMS: 0.04 secs
Locality: HEREFORD, HER & WOR Quality: B

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
MCH	SZ	12	IP		U	23:45	38.28		
MCH	SN	12	ES	2		23:45	41.22		
MCH	SN	12				23:45	41.27	114	0.13
MCH	SE	12				23:45	41.29	95	0.13
HAE	SZ	20	IP	1	U	23:45	39.06		
HTR	SZ	30	IP		U	23:45	40.33		
HGH	SZ	44	IP		D	23:45	42.40		
SSP	SZ	47	IP		D	23:45	42.79		
SSP	SE	47	ES	2		23:45	48.76		
SSP	SN	47				23:45	48.97	11	0.13
SSP	SE	47				23:45	49.10	14	0.16

September 14 2001 Time: 19:33 34.1 UTC Magnitude: 0.8 ML
Lat: 57.653N Lon: -5.341W Depth: 5.2 km
Grid Ref: 200.69 kmE 867.39 kmE RMS: 0.08 secs
Locality: KINLOCHEWE, HIGHLAND Quality: C
Comment: 5KM SE OF KINLOCHEWE

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
KAC	SZ	17	IP	1	U	19:33	37.51		
RRR	SZ	36	IP	1	U	19:33	40.74		
RRR	SN	36	ES	3		19:33	45.35		
RRR	SN	36				19:33	45.51	17	0.12
RRR	SE	36				19:33	45.43	15	0.14
KPL	SZ	40	EP	3		19:33	41.40		
KPL	SE	40	ES	3		19:33	46.44		
KPL	SN	40				19:33	46.81	5	0.10
KPL	SE	40				19:33	46.74	9	0.16

September 16 2001 Time: 02:44 31.4 UTC Magnitude: 1.8 ML
Lat: 51.742N Lon: -4.134W Depth: 13.5 km
Grid Ref: 252.68 kmE 207.02 kmE RMS: 0.07 secs
Locality: LLANELLI, DYFED Quality: B

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
HSA	SZ	2	IP		U	02:44	33.77		
HPE	SZ	49	IP	1	D	02:44	39.89		
HTR	SZ	70	EP	2		02:44	43.17		
HEX	SZ	79	EP	2		02:44	44.42		
MCH	SZ	83	EP	2		02:44	45.08		
MCH	SN	83	ES	2		02:44	55.10		
MCH	SN	83				02:44	55.84	16	0.13
MCH	SE	83				02:44	57.11	15	0.14
HTL	SZ	87	IP	1	U	02:44	46.02		
HTL	SN	87	ES	2		02:44	55.83		
HTL	SE	87				02:44	57.75	34	0.14
HGH	SZ	93	EP	2		02:44	46.65	45	0.16
SSP	SZ	103	EP	2		02:44	48.41		
SSP	SN	103				02:45	04.94	37	0.20
SSP	SE	103				02:45	05.22	35	0.24

September 18 2001 Time: 05:58 42.4 UTC Magnitude: 2.9 ML
Lat: 62.189N Lon: 2.316W Depth: 15.0 km
Grid Ref: 624.51 kmE 1375.10 kmE RMS: 0.05 secs
Locality: NORTHERN NORTH SEA Quality: D

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
YEL	SZ	258	IP	1	U	05:59	18.42		
LRW	SZ	296	IP	1	D	05:59	23.26		
LRW	SE	296	ES	3		05:59	52.97		
LRW	SN	296				05:59	56.59	28	0.15
LRW	SE	296				05:59	57.30	27	0.09
WAL	SZ	302	EP	2		05:59	23.88		
SAN	SZ	309	EP	2		05:59	24.67		
OST	SZ	437	EP	3		05:59	40.29		
OBR	SZ	500	EP	3		05:59	47.61		
ORE	SZ	526	EP	3		05:59	51.36		
ORE	SE	526	ES	3		06:00	41.11		

October 5 2001 Time: 22:49 03.5 UTC Magnitude: 0.5 ML
Lat: 55.245N Lon: -3.490W Depth: 6.0 km
Grid Ref: 305.25 kmE 595.53 kmE RMS: 0.08 secs
Locality: JOHNSTONEBRIDGE, D & G Quality: C

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
BWH	SZ	13	IP		U	22:49	06.31		
ESK	SZ	20	IP		U	22:49	07.50		
ESK	SN	20	ES	2		22:49	10.01		
ESK	SN	20				22:49	11.17	11	0.17
ESK	SE	20				22:49	10.10	16	0.16
BHH	SZ	24	IP		D	22:49	08.19		
BHH	SN	24	ES	2		22:49	11.13		
BHH	SN	24				22:49	11.18	29	0.17
BHH	SE	24				22:49	11.18	38	0.20
ECK	SZ	24	IP		U	22:49	08.17		
BBH	SZ	38	IP		U	22:49	10.37		

October 8 2001 Time: 10:33 14.1 UTC Magnitude: 1.5 ML
Lat: 51.079N Lon: -4.537W Depth: 22.1 km
Grid Ref: 222.35 kmE 134.23 kmE RMS: 0.18 secs
Locality: OFF HARTLAND PT, DEVON Quality: C
Comment: 6KM NORTH OF HARTLAND PT

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
HTL	SZ	10	IP		D	10:33	18.11		

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HTL	SN	10	ES	2	10:33	21.53				WCB	SE	122			23:03	46.35	55	0.19											
HTL	SN	10			10:33	22.01	91	0.11		MCH	SZ	136	EP	2	23:03	33.34													
HTL	SE	10			10:33	21.99	67	0.08		MCH	SN	136	ES	2	23:03	49.09													
HEX	SZ	51	EP	2	10:33	23.07				MCH	SN	136			23:03	51.38	125	0.21											
HEX	SZ	51	ES	3	10:33	29.55				MCH	SE	136			23:03	51.94	104	0.21											
HSA	SZ	79	EP	2	10:33	26.98				October 17 2001									Time: 23:05 59.2 UTC		Magnitude: 1.5 ML								
HPE	SZ	97	EP	3	10:33	29.18				Lat: 53.208N									Lon: -2.728W		Depth: 9.2 km								
MCH	SZ	148	EP	2	10:33	35.66				Grid Ref: 351.42 kmE									368.18 kmE		RMS: 0.12 secs								
MCH	SE	148	ES	2	10:33	52.58				Locality: CHESTER, CHESHIRE											Quality: B								
MCH	SN	148			10:33	57.28	13	0.13		STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI										
MCH	SE	148			10:33	54.12	15	0.12		B203	SZ	16	IP			23:06	02.49												
SSP	SZ	179	EP	2	10:33	39.66				B203	SZ	16	ES	2		23:06	04.89												
SSP	SN	179			10:34	05.97	7	0.16		B204	SZ	16	IP			23:06	02.49												
SSP	SE	179			10:34	02.85	6	0.26		B204	SZ	16	ES	2		23:06	04.89												
October 10 2001										Time: 02:52 25.3 UTC										Magnitude: 3.1 ML									
Lat: 51.698N										Lon: -3.255W										Depth: 6.5 km									
Grid Ref: 313.30 kmE										200.73 kmE										RMS: 0.09 secs									
Locality: BARGOED, MID GLAMORGAN										Quality: C																			
Comment: FELT BARGOED...										Intensity: 4																			
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	SBD	SZ	49	EP	2		23:06	07.36												
HGH	SZ	32	IP		U	02:52	31.10			KWE	SZ	63	EP	2		23:06	09.83												
MCH	SZ	38	IP		U	02:52	31.96			WPM	SZ	79	EP	2		23:06	12.43												
MCH	SN	38	ES	2		02:52	36.94			SSP	SZ	92	EP	3		23:06	14.84												
HTR	SZ	42	IP		U	02:52	32.71			SSP	SE	92	ES	3		23:06	25.40												
SMD	SZ	57	IP		D	02:52	35.02			SSP	SN	92				23:06	27.13	6	0.18										
HAE	SZ	62	IP		U	02:52	35.96			SSP	SE	92				23:06	25.67	11	0.24										
HSA	SZ	62	IP		U	02:52	35.87			LMI	SZ	119	EP	2		23:06	18.44												
HEX	SZ	80	IP		U	02:52	38.89			LMI	SN	119	ES	2		23:06	32.34												
SSW	SZ	101	IP		U	02:52	42.81			LMI	SN	119				23:06	32.62	8	0.23										
HPE	SZ	108	EP	2		02:52	42.79			LMI	SE	119				23:06	33.24	21	0.98										
HTL	SZ	116	IP		U	02:52	45.03			WCB	SN	123	ES	2		23:06	33.14												
CWF	SZ	176	EP	2		02:52	53.42			WCB	SN	123				23:06	34.22	8	0.29										
CWF	SN	176				02:53	16.14	342	0.23	WCB	SE	123				23:06	34.13	11	0.17										
CWF	SE	176				02:53	16.13	254	0.24	October 17 2001									Time: 23:21 08.7 UTC		Magnitude: 1.8 ML								
CR2	SZ	217	EP	2		02:52	57.28			Lat: 61.788N									Lon: 2.354W		Depth: 13.5 km								
CR2	SN	217				02:53	29.17	53	0.18	Grid Ref: 629.47 kmE									1330.71 kmE		RMS: 0.22 secs								
CR2	SE	217				02:53	27.34	53	0.19	Locality: NORTHERN NORTH SEA									Quality: D										
October 10 2001										Time: 05:01 48.0 UTC										Magnitude: 1.6 ML									
Lat: 51.700N										Lon: -3.253W										Depth: 5.3 km									
Grid Ref: 313.39 kmE										200.88 kmE										RMS: 0.07 secs									
Locality: BARGOED, MID GLAMORGAN										Quality: B																			
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI										
HGH	SZ	32	IP		U	05:01	53.85			YEL	SZ	231	EP	2		23:21	41.50												
MCH	SZ	38	IP		U	05:01	54.72			LRW	SZ	265	EP	3	D	23:21	46.16												
MCH	SN	38	ES	2		05:01	59.72	70	0.16	LRW	SE	265	ES	3		23:22	12.40												
MCH	SN	38				05:01	59.88	42	0.13	LRW	SN	265				23:22	13.38	4	0.12										
MCH	SE	38				05:01	59.97			LRW	SE	265				23:22	13.25	3	0.17										
HTR	SZ	42	EP	2		05:01	55.41			WAL	SZ	274	EP	3		23:21	47.02												
HAE	SZ	62	EP	2		05:01	58.79			SAN	SZ	277	EP	3		23:21	47.07												
HSA	SZ	63	EP	2		05:01	58.67			October 17 2001									Time: 23:21 35.2 UTC		Magnitude: 2.1 ML								
HEX	SZ	80	EP	2		05:02	01.44			Lat: 53.206N									Lon: -2.751W		Depth: 6.9 km								
HTL	SZ	116	EP	2		05:02	08.12			Grid Ref: 349.83 kmE									368.01 kmE		RMS: 0.05 secs								
HTL	SN	116				05:02	22.77	13	0.32	Locality: CHESTER, CHESHIRE									Quality: B										
HTL	SE	116				05:02	22.90	12	0.20	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI										
October 14 2001										Time: 10:17 32.6 UTC										Magnitude: 2.7 ML									
Lat: 53.373N										Lon: 2.794W										Depth: 15.0 km									
Grid Ref: 718.82 kmE										396.96 kmE										RMS: 0.45 secs									
Locality: SOUTHERN NORTH SEA										Quality: D																			
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	B203	SZ	17	IP			23:21	38.81												
AWI	SZ	109	IP	1	U	10:17	49.68			B203	SZ	17	ES	2		23:21	41.23												
ABA	SZ	123	EP	2		10:17	51.63			B207	SZ	18	IP			23:21	38.82												
AEU	SZ	134	EP	3		10:17	54.43			B207	SZ	18	ES	2		23:21	41.24												
AEU	SN	134	ES	3		10:18	08.80			SBD	SZ	48	EP	1	U	23:21	43.55												
AEU	SN	134				10:18	10.08	174	0.37	KWE	SZ	65	IP		D	23:21	46.11												
AEU	SE	134				10:18	10.21	187	0.33	WPM	SZ	77	EP	2		23:21	48.09												
AWH	SZ	149	EP	3		10:17	56.30			SSP	SZ	91	EP	2		23:21	50.30												
CWF	SZ	284	EP	3		10:18	13.22			SSP	SN	91	ES	2		23:22	01.08												
CWF	SE	284	ES	3		10:18	42.83			SSP	SN	91				23:22	03.55	34	0.08										
CWF	SN	284				10:18	50.55	21	0.27	SSP	SE	91				23:22	02.13	55	0.23										
CWF	SE	284				10:18	45.08	8	0.30	LMI	SZ	119	EP	2		23:21	54.45												
KBI	SZ	289	EP	3		10:18	13.37			LMI	SE	119	ES	2		23:22	08.42												
October 17 2001										Time: 23:03 11.1 UTC										Magnitude: 2.4 ML									
Lat: 53.209N										Lon: -2.745W										Depth: 8.7 km									
Grid Ref: 350.22 kmE										368.25 kmE										RMS: 0.05 secs									
Locality: CHESTER, CHESHIRE										Quality: B																			
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	LMI	SN	119				23:22	09.42	21	0.40										
B203	SZ	17	IP			23:03	14.63			LMI	SE	119				23:22	09.88	31	0.20										
B203	SZ	17	ES	2		23:03	17.00			WCB	SZ	121	EP	2		23:21	55.15												
B204	SZ	17	IP			23:03	14.64			WCB	SE	121	ES	2		23:22	08.81												
B204	SZ	17	ES	2		23:03	17.06			WCB	SN	121				23:22	10.76	29	0.24										
B101	SZ	17	IP			23:03	14.68			WCB	SE	121				23:22	10.51	40	0.14										
B101	SZ	17	ES	2		23:03	17.11			MCH	SZ	136	EP	2		23:21	57.63												
SBD	SZ	48	IP		U	23:03	19.38			MCH	SN	136				23:22	15.91	53	0.22										
KWE	SZ	64	EP	2		23:03	21.85			MCH	SE	136				23:22	15.09	42	0.14										
WPM	SZ	78	IP		U	23:03	23.99			October 18 2001									Time: 03:50 13.6 UTC		Magnitude: 2.5 ML								
SSP	SZ	91	IP		U	23:03	26.17			Lat: 51.703N									Lon: -3.255W		Depth: 7.9 km								
SSP	SN	91	ES	2		23:03	37.05			Grid Ref: 313.26 kmE									201.31 kmE		RMS: 0.10 secs								
SSP	SN	91				23:03	39.40	64	0.16	Locality: BARGOED, MID GLAMORGAN									Quality: C										
SSP	SE	91				23:03	37.97	127	0.25	Comment: FELT BARGOED...									Intensity: 4+										
LMI	SZ	119	EP	2		23:03	30.41			STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI										
LMI	SN	119	ES	2		23:03	43.89			HGH	SZ	32	IP		U	03:50	19.30												
LMI	SN	119				23:03	45.40			MCH	SZ	37	IP		U	03:50	20.15												
LMI	SE	119				23:03	45.70	109	0.24	MCH	SN	37	ES	2		03:50	25.12												
WCB	SE	122	ES	2		23:03	44.70			SMD	SZ	58	EP	3		03:50	23.38												
WCB	SN	122				23:03	46.20	33	0.25	HAE	SZ	62	IP		U	03:50	24.17												
October 21 2001										Time: 00:31 29.0 UTC										Magnitude: 3.7 ML									
Lat: 56.890N										Lon: 7.431W										Depth: 15.0 km									
Grid Ref: 973.50 kmE										817.27 kmE										RMS: 0.56 secs									

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Locality: NORWEGIAN-DANISH BASIN								Quality: D		STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS			HTL	SZ	11	IP		D	01:56	16.13		
EDR	SZ	608	EP	2		00:32	48.84			HTL	SN	11	ES	2		01:56	19.55		
ESY	SZ	630	EP	2		00:32	50.80			HTL	SN	11				01:56	20.04	134	0.06
MME	SZ	632	EP	2		00:32	51.88			HTL	SE	11				01:56	19.64	122	0.10
EDU	SZ	641	EP	3		00:32	52.95			HEX	SZ	55	EP	2		01:56	21.08		
MCD	SZ	651	EP	4		00:32	55.37			HSA	SZ	82	EP	2		01:56	24.82		
MCD	SN	651	ES	3		00:33	55.28			HPE	SZ	98	EP	2		01:56	26.92		
MCD	SN	651				00:33	59.44	12	0.41										
MCD	SE	651				00:33	59.52	14	0.59										
OBR	SZ	659	EP	3		00:32	56.15												
EBL	SZ	660	EP	2		00:32	54.49												
EDI	SZ	665	EP	3		00:32	55.27												
EDI	SN	665	ES	3		00:33	59.41												
EDI	SN	665				00:34	06.92	8	0.19										
EDI	SE	665				00:34	12.33	9	0.39										
OH0	SZ	669	EP	3		00:32	56.52												
BTA	SZ	670	EP	2		00:32	55.06												
BTA	SE	670	ES	2		00:33	59.87												
BTA	SN	670				00:34	03.17	30	0.21										
BTA	SE	670				00:34	03.89	26	0.37										
BBH	SZ	675	EP	2		00:32	55.89												
EAU	SZ	682	EP	3		00:32	57.74												
BDL	SZ	691	EP	3		00:32	57.57												
ORE	SZ	693	EP	2		00:32	59.17												
ORE	SN	693	ES	3		00:34	03.44												
ORE	SN	693				00:34	07.91	17	0.29										
ORE	SE	693				00:34	11.88	15	0.15										
BHH	SZ	694	EP	2		00:32	58.26												
BHH	SE	694	ES	3		00:34	03.73												
BHH	SN	694				00:34	10.07	39	0.38										
BHH	SE	694				00:34	20.74	41	0.43										
BBO	SZ	711	EP	2		00:32	59.99												
October 22 2001								Time: 15:16 48.3 UTC		Magnitude: 1.6 ML									
Lat: 51.702N								Lon: -3.254W		Depth: 7.6 km									
Grid Ref: 313.37 kmE								201.12 kmE		RMS: 0.10 secs									
Locality: BARGOED,MID GLAMORGAN								Quality: C											
Comment: 10KM EAST OF LIZARD PT																			
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
HGH	SZ	32	EP	2		15:16	53.99			CGH	SZ	10	IP		D	19:59	22.18		
MCH	SZ	37	IP		U	15:16	54.85			CMA	SZ	11	IP		D	19:59	22.20		
MCH	SN	37	ES	2		15:16	59.85			CBW	SZ	17	IP		D	19:59	22.72		
MCH	SN	37				15:17	00.18	82	0.16	CGW	SZ	17	IP		D	19:59	22.62		
MCH	SE	37				15:16	59.98	60	0.12	CCO	SZ	18	IP		D	19:59	22.86		
HSA	SZ	62	IP		U	15:16	58.77			CR2	SZ	21	IP		D	19:59	23.06		
HAE	SZ	62	EP	2		15:16	58.99			CR2	SE	21	ES	2		19:59	27.00		
HEX	SZ	80	EP	2		15:17	01.81			CST	SZ	23	IP	1	D	19:59	23.35		
HTL	SZ	117	EP	2		15:17	08.11			CCA	SZ	24	IP	1	D	19:59	23.51		
HTL	SE	117	ES	2		15:17	21.47			CPZ	SZ	42	IP		D	19:59	25.72		
HTL	SN	117				15:17	23.14	15	0.26	HTL	SZ	118	EP	2		19:59	37.02		
HTL	SE	117				15:17	23.08	11	0.18	HTL	SN	118				19:59	52.43	11	0.11
										HTL	SE	118				19:59	52.66	9	0.13
October 28 2001								Time: 16:25 25.1 UTC		Magnitude: 4.1 ML									
Lat: 52.846N								Lon: -0.856W		Depth: 11.6 km									
Grid Ref: 477.05 kmE								328.28 kmE		RMS: 0.14 secs									
Locality: MELTON MOWBRAY,LEICS								Quality: B											
Comment: FELT MELTON MOWBRAY...								Intensity: 5											
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
KEY	SZ	15	EP	2		16:25	28.82			CGH	SZ	10	IP		D	20:01	04.35		
KEY2	AZ	15	EP	2		16:25	28.85			CMA	SZ	11	IP	1	D	20:01	04.36		
KEY2	AE	15	ES	2		16:25	31.19			CBW	SZ	17	IP		D	20:01	04.90		
KSY	SZ	22	IP		U	16:25	29.47			CGW	SZ	17	IP	1	D	20:01	04.79		
CWF	SZ	33	IP		D	16:25	30.94			CCO	SZ	19	EP	2		20:01	05.00		
KBT	SZ	64	IP		D	16:25	35.72			CR2	SZ	21	IP		D	20:01	05.24		
KWE	SZ	69	IP		D	16:25	36.48			CR2	SN	21	ES	2		20:01	09.20		
LMK	SZ	77	IP		U	16:25	37.94			CR2	SN	21				20:01	09.32	91	0.10
LDU	AN	117	ES	4		16:25	58.06			CR2	SE	21				20:01	09.34	125	0.06
LDU	AN	117				16:25	58.87	317	0.38	CST	SZ	24	IP		D	20:01	05.53		
LDU	AE	117				16:25	58.55	163	0.56	CCA	SZ	25	IP		D	20:01	05.69		
SSW	SZ	119	EP	1	U	16:25	44.58			CPZ	SZ	42	IP		D	20:01	07.88		
AWH	SZ	125	EP	2		16:25	45.01												
SKP	SZ	125	IP	1	D	16:25	45.35												
AEU	SZ	144	EP	2		16:25	48.13												
AEU	AZ	144	EP	2		16:25	48.90												
AEU	SN	144	ES	2		16:26	04.56												
AEU	AN	144				16:26	06.10	241	0.43										
AEU	AE	144				16:26	08.11	915	0.64										
HAE	SZ	146	IP		U	16:25	48.31												
SSP	SZ	160	EP	2		16:25	50.01												
SSP	SE	160	ES	2		16:26	08.66												
SWN	SZ	162	EP	2		16:25	50.93												
SWN	SN	162	ES	2		16:26	10.51												
MCH	SZ	174	IP		U	16:25	51.72												
MCH	SN	174	ES	2		16:26	12.17												
TFO	SZ	237	EP	2		16:26	00.31												
TFO	SN	237				16:26	39.76	545	0.31										
TFO	SE	237				16:26	36.89	463	0.21										
WCB	SZ	254	EP	2		16:26	01.09												
WCB	SN	254				16:26	35.94	344	0.31										
WCB	SE	254				16:26	36.15	294	0.28										
BBO	SZ	263	EP	2		16:26	01.77												
GIM	SZ	288	EP	2		16:26	04.57												
GIM	SN	288				16:26	45.61	402	0.25										
GIM	SE	288				16:26	49.56	340	0.22										
November 1 2001								Time: 01:56 11.4 UTC		Magnitude: 1.1 ML									
Lat: 51.069N								Lon: -4.585W		Depth: 26.9 km									
Grid Ref: 218.94 kmE								133.18 kmE		RMS: 0.02 secs									
Locality: OFF HARTLAND PT,DEVON								Quality: C											
Comment: 7KM SOUTH OF RUTHIN																			
November 2 2001								Time: 04:25 14.0 UTC		Magnitude: 1.4 ML									
Lat: 53.049N								Lon: -3.348W		Depth: 10.5 km									
Grid Ref: 309.68 kmE								351.11 kmE		RMS: 0.07 secs									
Locality: RUTHIN,CLWYD								Quality: C											
Comment: 7KM SOUTH OF RUTHIN																			
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
SBD	SZ	17	IP		D	04:25	17.34			SBD	SZ	17	ES	3		04:25	19.81		
SBD	SZ	17	ES	3		04:25	19.81			WPM	SZ	44	IP		D	04:25	21.55		
WPM	SZ	44	IP		D	04:25	21.55			WFB	SZ	62	IP		U	04:25	24.45		
WFB	SZ	62	IP		U	04:25	24.45			YRE	SZ	73	IP	1	U	04:25	26.21		
YRE	SZ	73	IP	1	U	04:25	26.21			WLF	SZ	75	EP	2		04:25	26.45		
WLF	SZ	75	EP	2		04:25	26.45			YRC	SZ	85	EP	2		04:25	28.02		
YRC	SZ	85	EP	2		04:25	28.02			WCB	SZ	88	EP	2		04:25	28.74		
WCB	SZ	88	EP	2		04:25	28.74			WCB	SN	88	ES	2		04:25	38.75		
WCB	SN	88	ES	2		04:25	38.75			WCB	SN	88				04:25	40.50	7	0.08
WCB	SE	88				04:25	39.17			WCB	SE	88				04:25	39.17	7	0.21
MCH	SZ	120	EP	2		04:25	33.36			MCH	SZ	120	EP	2		04:25	33.36		
MCH	SN	120				04:25	49.41			MCH	SN	120				04:25	49.41	9	0.27
MCH	SE	120				04:25	49.58			MCH	SE	120				04:25	49.58	13	0.32
November 2 2001								Time: 19:5											

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November 7 2001 Time: 04:23 11.7 UTC Lat: 57.031N Lon: -5.766W Grid Ref: 171.50 kmE 799.62 kmE Locality: MALLAIG,HIGHLAND										Magnitude: 0.6 ML Depth: 6.8 km RMS: 0.17 secs Quality: D										<table><tr><th>STAT</th><th>CO</th><th>DIST</th><th>PHAS</th><th>WT</th><th>P</th><th>HrMn</th><th>SECS</th><th>AMPL</th><th>PERI</th></tr><tr><td>KSB</td><td>SZ</td><td>29</td><td>EP</td><td>3</td><td></td><td>04:23</td><td>17.06</td><td></td><td></td></tr><tr><td>KSB</td><td>SZ</td><td>29</td><td>ES</td><td>3</td><td></td><td>04:23</td><td>21.00</td><td></td><td></td></tr><tr><td>KPL</td><td>SZ</td><td>35</td><td>EP</td><td>2</td><td></td><td>04:23</td><td>18.02</td><td></td><td></td></tr><tr><td>KPL</td><td>SE</td><td>35</td><td>ES</td><td>3</td><td></td><td>04:23</td><td>22.59</td><td></td><td></td></tr><tr><td>KPL</td><td>SN</td><td>35</td><td></td><td></td><td></td><td>04:23</td><td>22.96</td><td>7</td><td>0.11</td></tr><tr><td>KPL</td><td>SE</td><td>35</td><td></td><td></td><td></td><td>04:23</td><td>22.99</td><td>6</td><td>0.12</td></tr><tr><td>KAC</td><td>SZ</td><td>59</td><td>EP</td><td>3</td><td></td><td>04:23</td><td>22.95</td><td></td><td></td></tr></table>										STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	KSB	SZ	29	EP	3		04:23	17.06			KSB	SZ	29	ES	3		04:23	21.00			KPL	SZ	35	EP	2		04:23	18.02			KPL	SE	35	ES	3		04:23	22.59			KPL	SN	35				04:23	22.96	7	0.11	KPL	SE	35				04:23	22.99	6	0.12	KAC	SZ	59	EP	3		04:23	22.95																																																																																																																																																																																																
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI																																																																																																																																																																																																																																																																																																		
KSB	SZ	29	EP	3		04:23	17.06																																																																																																																																																																																																																																																																																																				
KSB	SZ	29	ES	3		04:23	21.00																																																																																																																																																																																																																																																																																																				
KPL	SZ	35	EP	2		04:23	18.02																																																																																																																																																																																																																																																																																																				
KPL	SE	35	ES	3		04:23	22.59																																																																																																																																																																																																																																																																																																				
KPL	SN	35				04:23	22.96	7	0.11																																																																																																																																																																																																																																																																																																		
KPL	SE	35				04:23	22.99	6	0.12																																																																																																																																																																																																																																																																																																		
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November 13 2001 Time: 17:02 02.0 UTC Lat: 56.998N Lon: -5.389W Grid Ref: 194.21 kmE 794.79 kmE Locality: FORT WILLIAM,HIGHLAND Comment: 27KM NW OF FORT WILLIAM										Magnitude: 2.2 ML Depth: 6.0 km RMS: 0.10 secs Quality: D										<table><tr><th>STAT</th><th>CO</th><th>DIST</th><th>PHAS</th><th>WT</th><th>P</th><th>HrMn</th><th>SECS</th><th>AMPL</th><th>PERI</th></tr><tr><td>KSB</td><td>SZ</td><td>24</td><td>IP</td><td>1</td><td>U</td><td>17:02</td><td>06.48</td><td></td><td></td></tr><tr><td>KPL</td><td>SZ</td><td>41</td><td>IP</td><td></td><td>U</td><td>17:02</td><td>09.34</td><td></td><td></td></tr><tr><td>KPL</td><td>SE</td><td>41</td><td>ES</td><td>3</td><td></td><td>17:02</td><td>14.51</td><td>37</td><td>0.10</td></tr><tr><td>KPL</td><td>SN</td><td>41</td><td></td><td></td><td></td><td>17:02</td><td>15.78</td><td>90</td><td>0.12</td></tr><tr><td>KPL</td><td>SE</td><td>41</td><td></td><td></td><td></td><td>17:02</td><td>15.36</td><td></td><td></td></tr><tr><td>KAC</td><td>SZ</td><td>56</td><td>EP</td><td>2</td><td></td><td>17:02</td><td>11.80</td><td></td><td></td></tr><tr><td>MDO</td><td>SZ</td><td>79</td><td>EP</td><td>2</td><td></td><td>17:02</td><td>15.10</td><td></td><td></td></tr><tr><td>KSK</td><td>SZ</td><td>95</td><td>EP</td><td>2</td><td></td><td>17:02</td><td>17.49</td><td></td><td></td></tr><tr><td>RRR</td><td>SN</td><td>99</td><td>ES</td><td>4</td><td></td><td>17:02</td><td>30.78</td><td></td><td></td></tr><tr><td>RRR</td><td>SN</td><td>99</td><td></td><td></td><td></td><td>17:02</td><td>33.74</td><td>200</td><td>0.15</td></tr><tr><td>RRR</td><td>SE</td><td>99</td><td></td><td></td><td></td><td>17:02</td><td>34.13</td><td>86</td><td>0.17</td></tr><tr><td>REB</td><td>SZ</td><td>125</td><td>EP</td><td>3</td><td></td><td>17:02</td><td>22.08</td><td></td><td></td></tr><tr><td>RRH</td><td>SZ</td><td>129</td><td>EP</td><td>2</td><td></td><td>17:02</td><td>22.57</td><td></td><td></td></tr><tr><td>PGB</td><td>SN</td><td>144</td><td>EP</td><td>3</td><td></td><td>17:02</td><td>24.20</td><td></td><td></td></tr><tr><td>PGB</td><td>SE</td><td>144</td><td>ES</td><td>3</td><td></td><td>17:02</td><td>40.44</td><td></td><td></td></tr><tr><td>PGB</td><td>SN</td><td>144</td><td></td><td></td><td></td><td>17:02</td><td>41.68</td><td>55</td><td>0.28</td></tr><tr><td>PGB</td><td>SE</td><td>144</td><td></td><td></td><td></td><td>17:02</td><td>41.81</td><td>43</td><td>0.20</td></tr><tr><td>MCD</td><td>SZ</td><td>144</td><td>EP</td><td>2</td><td></td><td>17:02</td><td>25.50</td><td></td><td></td></tr><tr><td>MCD</td><td>SE</td><td>144</td><td>ES</td><td>3</td><td></td><td>17:02</td><td>42.75</td><td></td><td></td></tr><tr><td>MCD</td><td>SN</td><td>144</td><td></td><td></td><td></td><td>17:02</td><td>43.67</td><td>41</td><td>0.30</td></tr><tr><td>MCD</td><td>SE</td><td>144</td><td></td><td></td><td></td><td>17:02</td><td>43.39</td><td>34</td><td>0.13</td></tr><tr><td>RSC</td><td>SZ</td><td>151</td><td>EP</td><td>3</td><td></td><td>17:02</td><td>25.54</td><td></td><td></td></tr><tr><td>PCA</td><td>SZ</td><td>161</td><td>EP</td><td>2</td><td></td><td>17:02</td><td>25.69</td><td></td><td></td></tr><tr><td>EDI</td><td>SE</td><td>181</td><td>ES</td><td>4</td><td></td><td>17:02</td><td>50.99</td><td></td><td></td></tr><tr><td>EDI</td><td>SN</td><td>181</td><td></td><td></td><td></td><td>17:02</td><td>52.40</td><td>44</td><td>0.39</td></tr><tr><td>EDI</td><td>SE</td><td>181</td><td></td><td></td><td></td><td>17:02</td><td>51.93</td><td>25</td><td>0.21</td></tr></table>										STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	KSB	SZ	24	IP	1	U	17:02	06.48			KPL	SZ	41	IP		U	17:02	09.34			KPL	SE	41	ES	3		17:02	14.51	37	0.10	KPL	SN	41				17:02	15.78	90	0.12	KPL	SE	41				17:02	15.36			KAC	SZ	56	EP	2		17:02	11.80			MDO	SZ	79	EP	2		17:02	15.10			KSK	SZ	95	EP	2		17:02	17.49			RRR	SN	99	ES	4		17:02	30.78			RRR	SN	99				17:02	33.74	200	0.15	RRR	SE	99				17:02	34.13	86	0.17	REB	SZ	125	EP	3		17:02	22.08			RRH	SZ	129	EP	2		17:02	22.57			PGB	SN	144	EP	3		17:02	24.20			PGB	SE	144	ES	3		17:02	40.44			PGB	SN	144				17:02	41.68	55	0.28	PGB	SE	144				17:02	41.81	43	0.20	MCD	SZ	144	EP	2		17:02	25.50			MCD	SE	144	ES	3		17:02	42.75			MCD	SN	144				17:02	43.67	41	0.30	MCD	SE	144				17:02	43.39	34	0.13	RSC	SZ	151	EP	3		17:02	25.54			PCA	SZ	161	EP	2		17:02	25.69			EDI	SE	181	ES	4		17:02	50.99			EDI	SN	181				17:02	52.40	44	0.39	EDI	SE	181				17:02	51.93	25	0.21
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November 15 2001 Time: 06:35 54.0 UTC Lat: 51.325N Lon: -2.715W Grid Ref: 350.22 kmE 158.68 kmE Locality: BRISTOL,AVON Comment: 14KM SOUTH OF BRISTOL										Magnitude: 1.8 ML Depth: 16.9 km RMS: 0.08 secs Quality: B										<table><tr><th>STAT</th><th>CO</th><th>DIST</th><th>PHAS</th><th>WT</th><th>P</th><th>HrMn</th><th>SECS</th><th>AMPL</th><th>PERI</th></tr><tr><td>SMD</td><td>SZ</td><td>2</td><td>IP</td><td></td><td>D</td><td>06:35</td><td>56.95</td><td></td><td></td></tr><tr><td>HGH</td><td>SZ</td><td>35</td><td>EP</td><td>2</td><td></td><td>06:36</td><td>00.45</td><td></td><td></td></tr><tr><td>SWK</td><td>SZ</td><td>38</td><td>IP</td><td></td><td>D</td><td>06:36</td><td>00.87</td><td></td><td></td></tr><tr><td>SWN</td><td>SZ</td><td>67</td><td>EP</td><td>3</td><td></td><td>06:36</td><td>05.29</td><td></td><td></td></tr><tr><td>SWN</td><td>SE</td><td>67</td><td>ES</td><td>3</td><td></td><td>06:36</td><td>13.90</td><td></td><td></td></tr><tr><td>SWN</td><td>SN</td><td>67</td><td></td><td></td><td></td><td>06:36</td><td>14.76</td><td>43</td><td>0.28</td></tr><tr><td>SWN</td><td>SE</td><td>67</td><td></td><td></td><td></td><td>06:36</td><td>14.58</td><td>38</td><td>0.11</td></tr><tr><td>MCH</td><td>SZ</td><td>77</td><td>EP</td><td>2</td><td></td><td>06:36</td><td>06.80</td><td></td><td></td></tr><tr><td>MCH</td><td>SE</td><td>77</td><td>ES</td><td>3</td><td></td><td>06:36</td><td>16.05</td><td></td><td></td></tr><tr><td>MCH</td><td>SN</td><td>77</td><td></td><td></td><td></td><td>06:36</td><td>16.30</td><td>26</td><td>0.17</td></tr><tr><td>MCH</td><td>SE</td><td>77</td><td></td><td></td><td></td><td>06:36</td><td>16.51</td><td>42</td><td>0.15</td></tr><tr><td>HAE</td><td>SZ</td><td>80</td><td>EP</td><td>2</td><td></td><td>06:36</td><td>07.29</td><td></td><td></td></tr><tr><td>HEX</td><td>SZ</td><td>81</td><td>EP</td><td>2</td><td></td><td>06:36</td><td>07.40</td><td></td><td></td></tr><tr><td>SSW</td><td>SZ</td><td>93</td><td>EP</td><td>3</td><td></td><td>06:36</td><td>09.55</td><td></td><td></td></tr><tr><td>HSA</td><td>SZ</td><td>111</td><td>EP</td><td>2</td><td></td><td>06:36</td><td>12.35</td><td></td><td></td></tr><tr><td>HTL</td><td>SZ</td><td>129</td><td>EP</td><td>3</td><td></td><td>06:36</td><td>14.62</td><td></td><td></td></tr><tr><td>HTL</td><td>SN</td><td>129</td><td>ES</td><td>3</td><td></td><td>06:36</td><td>29.36</td><td></td><td></td></tr><tr><td>HTL</td><td>SN</td><td>129</td><td></td><td></td><td></td><td>06:36</td><td>30.99</td><td>11</td><td>0.22</td></tr><tr><td>HTL</td><td>SE</td><td>129</td><td></td><td></td><td></td><td>06:36</td><td>30.86</td><td>24</td><td>0.16</td></tr><tr><td>SKP</td><td>SZ</td><td>140</td><td>EP</td><td>1</td><td>U</td><td>06:36</td><td>16.11</td><td></td><td></td></tr></table>										STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	SMD	SZ	2	IP		D	06:35	56.95			HGH	SZ	35	EP	2		06:36	00.45			SWK	SZ	38	IP		D	06:36	00.87			SWN	SZ	67	EP	3		06:36	05.29			SWN	SE	67	ES	3		06:36	13.90			SWN	SN	67				06:36	14.76	43	0.28	SWN	SE	67				06:36	14.58	38	0.11	MCH	SZ	77	EP	2		06:36	06.80			MCH	SE	77	ES	3		06:36	16.05			MCH	SN	77				06:36	16.30	26	0.17	MCH	SE	77				06:36	16.51	42	0.15	HAE	SZ	80	EP	2		06:36	07.29			HEX	SZ	81	EP	2		06:36	07.40			SSW	SZ	93	EP	3		06:36	09.55			HSA	SZ	111	EP	2		06:36	12.35			HTL	SZ	129	EP	3		06:36	14.62			HTL	SN	129	ES	3		06:36	29.36			HTL	SN	129				06:36	30.99	11	0.22	HTL	SE	129				06:36	30.86	24	0.16	SKP	SZ	140	EP	1	U	06:36	16.11																																																														
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November 25 2001 Time: 21:09 19.1 UTC Lat: 52.735N Lon: -2.979W Grid Ref: 333.88 kmE 315.75 kmE Locality: SHREWSBURY,SHROPSHIRE Comment: 15KM WEST OF SHREWSBURY										Magnitude: 1.4 ML Depth: 12.1 km RMS: 0.04 secs Quality: B										<table><tr><th>STAT</th><th>CO</th><th>DIST</th><th>PHAS</th><th>WT</th><th>P</th><th>HrMn</th><th>SECS</th><th>AMPL</th><th>PERI</th></tr><tr><td>SBD</td><td>SZ</td><td>27</td><td>IP</td><td></td><td>D</td><td>21:09</td><td>24.15</td><td></td><td></td></tr><tr><td>SSP</td><td>SZ</td><td>36</td><td>EP</td><td>2</td><td></td><td>21:09</td><td>25.66</td><td></td><td></td></tr><tr><td>SSP</td><td>SN</td><td>36</td><td>ES</td><td>2</td><td></td><td>21:09</td><td>30.35</td><td></td><td></td></tr><tr><td>SSP</td><td>SN</td><td>36</td><td></td><td></td><td></td><td>21:09</td><td>31.09</td><td>32</td><td>0.21</td></tr><tr><td>SSP</td><td>SE</td><td>36</td><td></td><td></td><td></td><td>21:09</td><td>31.27</td><td>45</td><td>0.25</td></tr><tr><td>WFB</td><td>SZ</td><td>72</td><td>EP</td><td>2</td><td></td><td>21:09</td><td>31.28</td><td></td><td></td></tr><tr><td>MCH</td><td>SZ</td><td>82</td><td>EP</td><td>2</td><td></td><td>21:09</td><td>33.67</td><td></td><td></td></tr><tr><td>MCH</td><td>SE</td><td>82</td><td>ES</td><td>2</td><td></td><td>21:09</td><td>42.98</td><td></td><td></td></tr><tr><td>HAE</td><td>SZ</td><td>83</td><td>EP</td><td>2</td><td></td><td>21:09</td><td>33.14</td><td></td><td></td></tr><tr><td>KWE</td><td>SZ</td><td>83</td><td>EP</td><td>2</td><td></td><td>21:09</td><td>33.01</td><td></td><td></td></tr><tr><td>CWF</td><td>SZ</td><td>113</td><td>EP</td><td>2</td><td></td><td>21:09</td><td>38.45</td><td></td><td></td></tr><tr><td>CWF</td><td>SE</td><td>113</td><td>ES</td><td>2</td><td></td><td>21:09</td><td>52.13</td><td></td><td></td></tr><tr><td>CWF</td><td>SN</td><td>113</td><td></td><td></td><td></td><td>21:09</td><td>54.87</td><td>8</td><td>0.09</td></tr><tr><td>CWF</td><td>SE</td><td>113</td><td></td><td></td><td></td><td>21:09</td><td>53.73</td><td>6</td><td>0.14</td></tr></table>										STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	SBD	SZ	27	IP		D	21:09	24.15			SSP	SZ	36	EP	2		21:09	25.66			SSP	SN	36	ES	2		21:09	30.35			SSP	SN	36				21:09	31.09	32	0.21	SSP	SE	36				21:09	31.27	45	0.25	WFB	SZ	72	EP	2		21:09	31.28			MCH	SZ	82	EP	2		21:09	33.67			MCH	SE	82	ES	2		21:09	42.98			HAE	SZ	83	EP	2		21:09	33.14			KWE	SZ	83	EP	2		21:09	33.01			CWF	SZ	113	EP	2		21:09	38.45			CWF	SE	113	ES	2		21:09	52.13			CWF	SN	113				21:09	54.87	8	0.09	CWF	SE	113				21:09	53.73	6	0.14																																																																																																																								
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November 27 2001 Time: 17:51 16.1 UTC Lat: 52.959N Lon: -3.726W Grid Ref: 284.07 kmE 341.65 kmE Locality: BALA,GWYNEDD Comment: 10KM NW OF BALA										Magnitude: 1.5 ML Depth: 12.2 km RMS: 0.05 secs Quality: B																																																																																																																																																																																																																																																																																																	
November 29 2001 Time: 06:15 41.1 UTC Lat: 56.910N Lon: -4.225W Grid Ref: 264.52 kmE 782.06 kmE Locality: DALWHINNIE,HIGHLAND Comment: 7KM SOUTH OF DALWHINNIE										Magnitude: 1.4 ML Depth: 9.0 km RMS: 0.22 secs Quality: C											<table><tr><th>STAT</th><th>CO</th><th>DIST</th><th>PHAS</th><th>WT</th><th>P</th><th>HrMn</th><th>SECS</th><th>AMPL</th><th>PERI</th></tr><tr><td>KNR</td><td>SZ</td><td>47</td><td>IP</td><td>1</td><td>U</td><td>06:15</td><td>49.07</td><td></td><td></td></tr><tr><td>ELO</td><td>SZ</td><td>58</td><td>IP</td><td>1</td><td>U</td><td>06:15</td><td>50.88</td><td></td><td></td></tr><tr><td>MDO</td><td>SZ</td><td>60</td><td>EP</td><td>2</td><td></td><td>06:15</td><td>51.19</td><td></td><td></td></tr><tr><td>MDO</td><td>SZ</td><td>60</td><td>ES</td><td>3</td><td></td><td>06:15</td><td>58.33</td><td></td><td></td></tr><tr><td>KSB</td><td>SZ</td><td>80</td><td>EP</td><td>2</td><td></td><td>06:15</td><td>54.66</td><td></td><td></td></tr><tr><td>EAB</td><td>SZ</td><td>81</td><td>EP</td><td>3</td><td></td><td>06:15</td><td>54.87</td><td></td><td></td></tr><tr><td>EDU</td><td>SZ</td><td>85</td><td>EP</td><td>3</td><td></td><td>06:15</td><td>55.46</td><td></td><td></td></tr><tr><td>EBH</td><td>SZ</td><td>86</td><td>EP</td><td>2</td><td></td><td>06:15</td><td>55.80</td><td></td><td></td></tr><tr><td>MME</td><td>SZ</td><td>89</td><td>EP</td><td>3</td><td></td><td>06:15</td><td>55.87</td><td></td><td></td></tr><tr><td>KAC</td><td>SZ</td><td>92</td><td>EP</td><td>2</td><td></td><td>06:15</td><td>56.67</td><td></td><td></td></tr><tr><td>MCD</td><td>SZ</td><td>95</td><td>EP</td><td>2</td><td></td><td>06:15</td><td>57.53</td><td></td><td></td></tr><tr><td>KPL</td><td>SZ</td><td>99</td><td>IP</td><td>1</td><td>U</td><td>06:15</td><td>57.83</td><td></td><td></td></tr><tr><td>KPL</td><td>SE</td><td>99</td><td>ES</td><td>3</td><td></td><td>06:16</td><td>09.51</td><td></td><td></td></tr><tr><td>KPL</td><td>SN</td><td>99</td><td></td><td></td><td></td><td>06:16</td><td>12.59</td><td>6</td><td>0.07</td></tr><tr><td>KPL</td><td>SE</td><td>99</td><td></td><td></td><td></td><td>06:16</td><td>12.80</td><td>14</td><td>0.17</td></tr><tr><td>EDR</td><td>SZ</td><td>103</td><td>EP</td><td>2</td><td></td><td>06:15</td><td>58.47</td><td></td><td></td></tr><tr><td>EBL</td><td>SZ</td><td>146</td><td>EP</td><td>3</td><td></td><td>06:16</td><td>05.50</td><td></td><td></td></tr></table>										STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	KNR	SZ	47	IP	1	U	06:15	49.07			ELO	SZ	58	IP	1	U	06:15	50.88			MDO	SZ	60	EP	2		06:15	51.19			MDO	SZ	60	ES	3		06:15	58.33			KSB	SZ	80	EP	2		06:15	54.66			EAB	SZ	81	EP	3		06:15	54.87			EDU	SZ	85	EP	3		06:15	55.46			EBH	SZ	86	EP	2		06:15	55.80			MME	SZ	89	EP	3		06:15	55.87			KAC	SZ	92	EP	2		06:15	56.67			MCD	SZ	95	EP	2		06:15	57.53			KPL	SZ	99	IP	1	U	06:15	57.83			KPL	SE	99	ES	3		06:16	09.51			KPL	SN	99				06:16	12.59	6	0.07	KPL	SE	99				06:16	12.80	14	0.17	EDR	SZ	103	EP	2		06:15	58.47			EBL	SZ	146	EP	3		06:16	05.50																																																																																											
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November 30 2001 Time: 02:46 14.9 UTC Lat: 50.108N Lon: -6.420W Grid Ref: 84.02 kmE 32.57 kmE Locality: NW OF SCILLY ISLES										Magnitude: 1.9 ML Depth: 5.1 km RMS: 0.19 secs Quality: D											<table><tr><th>STAT</th><th>CO</th><th>DIST</th><th>PHAS</th><th>WT</th><th>P</th><th>HrMn</th><th>SECS</th><th>AMPL</th><th>PERI</th></tr><tr><td>CPZ</td><td>SZ</td><td>60</td><td>EP</td><td>2</td><td></td><td>02:46</td><td>24.92</td><td></td><td></td></tr><tr><td>CR2</td><td>SZ</td><td>90</td><td>IP</td><td>1</td><td>D</td><td>02:46</td><td>29.95</td><td></td><td></td></tr><tr><td>CR2</td><td>SN</td><td>90</td><td>ES</td><td>3</td><td></td><td>02:46</td><td>40.72</td><td></td><td></td></tr><tr><td>CR2</td><td>SN</td><td>90</td><td></td><td></td><td></td><td>02:46</td><td>43.82</td><td>23</td><td>0.08</td></tr><tr><td>CR2</td><td>SE</td><td>90</td><td></td><td></td><td></td><td>02:46</td><td>43.57</td><td>33</td><td>0.07</td></tr><tr><td>CST</td><td>SZ</td><td>90</td><td>EP</td><td>2</td><td></td><td>02:46</td><td>30.09</td><td></td><td></td></tr><tr><td>CBW</td><td>SZ</td><td>94</td><td>EP</td><td>1</td><td>U</td><td>02:46</td><td>30.47</td><td></td><td></td></tr></table>										STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	CPZ	SZ	60	EP	2		02:46	24.92			CR2	SZ	90	IP	1	D	02:46	29.95			CR2	SN	90	ES	3		02:46	40.72			CR2	SN	90				02:46	43.82	23	0.08	CR2	SE	90				02:46	43.57	33	0.07	CST	SZ	90	EP	2		02:46	30.09			CBW	SZ	94	EP	1	U	02:46	30.47																																																																																																																																																																																															
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December 1 2001 Time: 21:14 24.9 UTC Lat: 56.698N Lon: -5.150W Grid Ref: 207.13 kmE 760.71 kmE Locality: BALLACHULISH,HIGHLAND Comment: FELT BALLACHULISH...										Magnitude: 1.5 ML Depth: 7.8 km RMS: 0.16 secs Quality: D Intensity: 4+											<table><tr><th>STAT</th><th>CO</th><th>DIST</th><th>PHAS</th><th>WT</th><th>P</th><th>HrMn</th><th>SECS</th><th>AMPL</th><th>PERI</th></tr><tr><td>KSB</td><td>SZ</td><td>59</td><td>IP</td><td>1</td><td>U</td><td>21:14</td><td>34.77</td><td></td><td></td></tr><tr><td>EAB</td><td>SZ</td><td>76</td><td>EP</td><td>2</td><td></td><td>21:14</td><td>37.26</td><td></td><td></td></tr><tr><td>KPL</td><td>SZ</td><td>78</td><td>EP</td><td>1</td><td>U</td><td>21:14</td><td>37.88</td><td></td><td></td></tr><tr><td>KPL</td><td>SE</td><td>78</td><td>ES</td><td>3</td><td></td><td>21:14</td><td>47.00</td><td></td><td></td></tr><tr><td>KPL</td><td>SN</td><td>78</td><td></td><td></td><td></td><td>21:14</td><td>50.82</td><td>13</td><td>0.11</td></tr><tr><td>KPL</td><td>SE</td><td>78</td><td></td><td></td><td></td><td>21:14</td><td>51.57</td><td>16</td><td>0.18</td></tr><tr><td>ELO</td><td>SZ</td><td>92</td><td>EP</td><td>2</td><td></td><td>21:14</td><td>39.80</td><td></td><td></td></tr><tr><td>MDO</td><td>SZ</td><td>96</td><td>EP</td><td>3</td><td></td><td>21:14</td><td>40.84</td><td></td><td></td></tr><tr><td>PMS</td><td>SZ</td><td>98</td><td>EP</td><td>3</td><td></td><td>21:14</td><td>41.00</td><td></td><td></td></tr><tr><td>PCO</td><td>SZ</td><td>102</td><td>EP</td><td>3</td><td></td><td>21:14</td><td>41.69</td><td></td><td></td></tr><tr><td>PGB</td><td>SN</td><td>107</td><td>ES</td><td>3</td><td></td><td>21:14</td><td>54.72</td><td></td><td></td></tr><tr><td>PGB</td><td>SN</td><td>107</td><td></td><td></td><td></td><td>21:14</td><td>54.96</td><td>14</td><td>0.27</td></tr><tr><td>PGB</td><td>SE</td><td>107</td><td></td><td></td><td></td><td>21:14</td><td>54.89</td><td>10</td><td>0.19</td></tr><tr><td>EBH</td><td>SZ</td><td>113</td><td>EP</td><td>3</td><td></td><td>21:14</td><td>43.48</td><td></td><td></td></tr><tr><td>PCA</td><td>SZ</td><td>124</td><td>EP</td><td>3</td><td></td><td>21:14</td><td>45.07</td><td></td><td></td></tr></table>										STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	KSB	SZ	59	IP	1	U	21:14	34.77			EAB	SZ	76	EP	2		21:14	37.26			KPL	SZ	78	EP	1	U	21:14	37.88			KPL	SE	78	ES	3		21:14	47.00			KPL	SN	78				21:14	50.82	13	0.11	KPL	SE	78				21:14	51.57	16	0.18	ELO	SZ	92	EP	2		21:14	39.80			MDO	SZ	96	EP	3		21:14	40.84			PMS	SZ	98	EP	3		21:14	41.00			PCO	SZ	102	EP	3		21:14	41.69			PGB	SN	107	ES	3		21:14	54.72			PGB	SN	107				21:14	54.96	14	0.27	PGB	SE	107				21:14	54.89	10	0.19	EBH	SZ	113	EP	3		21:14	43.48			PCA	SZ	124	EP	3		21:14	45.07																																																																																																															
STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI																																																																																																																																																																																																																																																																																																		
KSB	SZ	59	IP	1	U	21:14	34.77																																																																																																																																																																																																																																																																																																				
EAB	SZ	76	EP	2		21:14	37.26																																																																																																																																																																																																																																																																																																				
KPL	SZ	78	EP	1	U	21:14	37.88																																																																																																																																																																																																																																																																																																				
KPL	SE	78	ES	3		21:14	47.00																																																																																																																																																																																																																																																																																																				
KPL	SN	78				21:14	50.82	13	0.11																																																																																																																																																																																																																																																																																																		
KPL	SE	78				21:14	51.57	16	0.18																																																																																																																																																																																																																																																																																																		
ELO	SZ	92	EP	2		21:14	39.80																																																																																																																																																																																																																																																																																																				
MDO	SZ	96	EP	3		21:14	40.84																																																																																																																																																																																																																																																																																																				
PMS	SZ	98	EP	3		21:14	41.00																																																																																																																																																																																																																																																																																																				
PCO	SZ	102	EP	3		21:14	41.69																																																																																																																																																																																																																																																																																																				
PGB	SN	107	ES	3		21:14	54.72																																																																																																																																																																																																																																																																																																				
PGB	SN	107				21:14	54.96	14	0.27																																																																																																																																																																																																																																																																																																		
PGB	SE	107				21:14	54.89	10	0.19																																																																																																																																																																																																																																																																																																		
EBH	SZ	113	EP	3		21:14	43.48																																																																																																																																																																																																																																																																																																				
PCA	SZ	124	EP	3		21:14	45.07																																																																																																																																																																																																																																																																																																				
December 5 2001 Time: 18:24 12.2 UTC Lat: 57.199N Lon: -5.423W Grid Ref: 193.24 kmE 817.23 kmE Locality: GLEN SHEIL,HIGHLAND										Magnitude: 0.1 ML Depth: 12.0 km RMS: 0.22 secs Quality: C											<table><tr><th>STAT</th><th>CO</th><th>DIST</th><th>PHAS</th><th>WT</th><th>P</th><th>HrMn</th><th>SECS</th><th>AMPL</th><th>PERI</th></tr><tr><td>KSB</td><td>SZ</td><td>1</td><td>EP</td><td>1</td><td>U</td><td>18:24</td><td>14.33</td><td></td><td></td></tr><tr><td>KPL</td><td>SZ</td><td>21</td><td>EP</td><td>3</td><td></td><td>18:24</td><td>16.89</td><td></td><td></td></tr><tr><td>KPL</td><td>SN</td><td>21</td><td>ES</td><td>3</td><td></td><td>18:24</td><td>19.30</td><td></td><td></td></tr><tr><td>KPL</td><td>SN</td><td>21</td><td></td><td></td><td></td><td>18:24</td><td>19.51</td><td>7</td><td>0.24</td></tr><tr><td>KPL</td><td>SE</td><td>21</td><td></td><td></td><td></td><td>18:24</td><td>19.42</td><td>10</td><td>0.14</td></tr></table>										STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	KSB	SZ	1	EP	1	U	18:24	14.33			KPL	SZ	21	EP	3		18:24	16.89			KPL	SN	21	ES	3		18:24	19.30			KPL	SN	21				18:24	19.51	7	0.24	KPL	SE	21				18:24	19.42	10	0.14																																																																																																																																																																																																																	
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KPL	SN	21	ES	3		18:24	19.30																																																																																																																																																																																																																																																																																																				
KPL	SN	21				18:24	19.51	7	0.24																																																																																																																																																																																																																																																																																																		
KPL	SE	21				18:24	19.42	10	0.14																																																																																																																																																																																																																																																																																																		
December 6 2001 Time: 06:42 53.0 UTC Lat: 52.949N Lon: -4.391W Grid Ref: 239.34 kmE 341.76 kmE Locality: LLEYN PENINSULA										Magnitude: 1.2 ML Depth: 24.9 km RMS: 0.03 secs Quality: C											<table><tr><th>STAT</th><th>CO</th><th>DIST</th><th>PHAS</th><th>WT</th><th>P</th><th>HrMn</th><th>SECS</th><th>AMPL</th><th>PERI</th></tr><tr><td>YRE</td><td>SZ</td><td>4</td><td>IP</td><td>1</td><td>D</td><td>06:42</td><td>57.12</td><td></td><td></td></tr><tr><td>YLL</td><td>SZ</td><td>26</td><td>IP</td><td>1</td><td>U</td><td>06:42</td><td>58.85</td><td></td><td></td></tr><tr><td>YRC</td><td>SZ</td><td>36</td><td>IP</td><td>1</td><td>D</td><td>06:43</td><td>00.09</td><td></td><td></td></tr><tr><td>WLF</td><td>SZ</td><td>38</td><td>IP</td><td>1</td><td>D</td><td>06:43</td><td>00.26</td><td></td><td></td></tr><tr><td>WFB</td><td>SZ</td><td>38</td><td>EP</td><td>1</td><td>D</td><td>06:43</td><td>00.35</td><td></td><td></td></tr><tr><td>WPM</td><td>SZ</td><td>47</td><td>IP</td><td>1</td><td>U</td><td>06:43</td><td>01.72</td><td></td><td></td></tr><tr><td>WCB</td><td>SZ</td><td>49</td><td>EP</td><td>1</td><td>U</td><td>06:43</td><td>02.09</td><td></td><td></td></tr><tr><td>WCB</td><td>SE</td><td>49</td><td>ES</td><td>3</td><td></td><td>06:43</td><td>07.90</td><td></td><td></td></tr></table>										STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI	YRE	SZ	4	IP	1	D	06:42	57.12			YLL	SZ	26	IP	1	U	06:42	58.85			YRC	SZ	36	IP	1	D	06:43	00.09			WLF	SZ	38	IP	1	D	06:43	00.26			WFB	SZ	38	EP	1	D	06:43	00.35			WPM	SZ	47	IP	1	U	06:43	01.72			WCB	SZ	49	EP	1	U	06:43	02.09			WCB	SE	49	ES	3		06:43	07.90																																																																																																																																																																																					
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PHASE DATA : 2001

WCB SN 49 06:43 08.67 11 0.09
WCB SE 49 06:43 08.59 17 0.08
WME SZ 50 EP 3 06:43 02.14

December 8 2001 Time: 17:47 05.5 UTC Magnitude: 0.6 ML
Lat: 57.605N Lon: -5.402W Depth: 5.4 km
Grid Ref: 196.79 kmE 862.31 kmE RMS: 0.08 secs
Locality: KINLOCHEWE, HIGHLAND Quality: C
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI
KAC SZ 13 IP D 17:47 08.27
KPL SZ 33 EP 1 D 17:47 11.71
KPL SE 33 ES 3 17:47 15.86
KPL SN 33 17:47 16.26
KPL SE 33 17:47 16.27
REB SZ 58 EP 3 17:47 15.36

December 10 2001 Time: 04:05 51.5 UTC Magnitude: 1.8 ML
Lat: 53.243N Lon: -1.123W Depth: 0.3 km
Grid Ref: 458.55 kmE 372.22 kmE RMS: 0.13 secs
Locality: WORKSOP, NOTTS Quality: C
Comment: C/F, 7KM S OF WORKSOP
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI
KBI SZ 27 EP 2 04:05 56.94
KWE SZ 54 EP 1 D 04:06 01.55
KWE SZ 54 ES 3 04:06 09.32
LMK SZ 58 EP 3 04:06 02.15
LHO SZ 59 EP 2 04:06 02.14
HPK SZ 86 EP 2 04:06 06.70
HPK SE 86 ES 3 04:06 17.46
SSP SN 163 ES 4 04:06 39.42
SSP SN 163 04:06 41.27
SSP SE 163 04:06 41.53
MCH SZ 188 EP 4 04:06 22.92

December 11 2001 Time: 06:31 06.4 UTC Magnitude: 1.7 ML
Lat: 56.243N Lon: -4.028W Depth: 5.5 km
Grid Ref: 274.33 kmE 707.41 kmE RMS: 0.08 secs
Locality: DUNBLANE, CENTRAL Quality: B
Comment: 6KM NW OF DUNBLANE
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI
EAB SZ 20 IP U 06:31 10.32
PCO SZ 29 IP D 06:31 11.81
EBH SZ 32 IP U 06:31 12.35
ELO SZ 32 IP 1 U 06:31 12.34
PGB SN 56 EP 2 06:31 16.12
PGB SE 56 ES 3 06:31 22.92
PGB SN 56 06:31 23.81
PGB SE 56 06:31 23.50
PCA SZ 62 IP 1 D 06:31 16.95
PMS SZ 63 EP 2 06:31 17.42
EDI SZ 63 EP 2 06:31 17.34
EDI SE 63 ES 06:31 25.00
EDI SN 63 06:31 25.20
EDI SE 63 06:31 25.21
EBL SZ 81 EP 3 06:31 20.20
ESY SZ 95 EP 3 06:31 22.35

December 11 2001 Time: 07:50 59.7 UTC Magnitude: 1.5 ML
Lat: 56.240N Lon: -4.026W Depth: 5.2 km
Grid Ref: 274.47 kmE 707.13 kmE RMS: 0.08 secs
Locality: DUNBLANE, CENTRAL Quality: B
Comment: 6KM NW OF DUNBLANE
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI
EAB SZ 20 IP U 07:51 03.59
PCO SZ 29 EP 1 D 07:51 05.07
PCO SZ 29 ES 3 07:51 08.84
EBH SZ 32 IP U 07:51 05.62
ELO SZ 32 EP 1 U 07:51 05.61
PGB SE 56 ES 3 07:51 16.11
PGB SN 56 07:51 17.07
PGB SE 56 07:51 16.75
PCA SZ 62 EP 2 07:51 10.19
EDI SZ 63 EP 3 07:51 10.61
EDI SE 63 ES 3 07:51 18.17
EDI SN 63 07:51 18.44
EDI SE 63 07:51 18.45
PMS SZ 63 EP 2 07:51 10.69

December 11 2001 Time: 21:47 46.4 UTC Magnitude: 0.7 ML
Lat: 52.958N Lon: -4.380W Depth: 21.9 km
Grid Ref: 240.16 kmE 342.75 kmE RMS: 0.05 secs
Locality: LLEYN PENINSULA Quality: B
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI
YRE SZ 4 IP 1 D 21:47 49.96
YRH SZ 22 IP 1 U 21:47 51.39
YLL SZ 25 IP 1 U 21:47 51.73
YRC SZ 35 EP 2 21:47 53.06
WLF SZ 37 EP 1 U 21:47 53.26
WFB SZ 38 EP 2 21:47 53.50
WPM SZ 46 EP 1 U 21:47 54.69
WCB SZ 48 EP 3 21:47 55.12
WCB SE 48 ES 3 21:48 00.78
WCB SN 48 21:48 05.68
WCB SE 48 21:48 05.62
WME SZ 49 EP 2 21:47 54.94

December 16 2001 Time: 13:25 20.0 UTC Magnitude: 2.6 ML
Lat: 53.692N Lon: -2.002W Depth: 9.8 km
Grid Ref: 399.86 kmE 421.77 kmE RMS: 0.12 secs

Locality: HALIFAX, WEST YORKSHIRE
Comment: FELT HALIFAX...
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI
LHO SZ 19 IP D 13:25 23.74
LDU SZ 32 IP U 13:25 25.91
LDU SZ 32 ES 2 13:25 29.92
LDU SZ 32 13:25 30.91
HPK SZ 39 IP D 13:25 26.79
HPK SN 39 ES 2 13:25 31.87
KBI SZ 58 IP U 13:25 29.80
KWE SZ 76 EP 2 13:25 32.81
LMI SZ 104 EP 2 13:25 36.94
LMI SN 104 13:25 50.72
LMI SE 104 13:25 50.74
KEY SZ 110 EP 2 13:25 38.38
LMK SZ 114 EP 2 13:25 39.07
CWF SZ 116 EP 2 13:25 38.77
CWF SE 116 ES 3 13:25 52.10
CWF SN 116 13:25 54.17
CWF SE 116 13:25 54.60
CSF SZ 117 EP 2 13:25 38.85
LCP SZ 121 EP 2 13:25 40.49
SBD SZ 121 EP 3 13:25 39.16
CKE SZ 123 EP 2 13:25 39.80
XDE SZ 133 EP 2 13:25 40.72
WPM SZ 135 EP 3 13:25 40.77
BDL SZ 138 EP 3 13:25 41.87
BBO SZ 142 EP 3 13:25 42.11
BBO SE 142 ES 2 13:25 58.72
BBO SN 142 13:25 59.86
BBO SE 142 13:25 59.38
BTA SN 142 ES 4 13:25 58.99
BTA SN 142 13:26 00.55
BTA SE 142 13:26 05.77
HLM SZ 143 EP 3 13:25 42.41
WME SZ 156 EP 2 13:25 43.12
YLL SZ 157 EP 3 13:25 43.34
SSP SZ 160 EP 3 13:25 44.74
SSP SN 160 13:26 04.95
SSP SE 160 13:26 05.38
WLF SZ 165 EP 2 13:25 44.30
BBH SZ 171 EP 3 13:25 45.54
WCB SZ 172 EP 3 13:25 45.10
WCB SN 172 13:26 06.79
WCB SE 172 13:26 04.64
GIM SZ 175 EP 2 13:25 45.64
GIM SN 175 13:26 08.39
YRC SZ 178 EP 3 13:25 46.25
YRE SZ 180 EP 2 13:25 46.37
GCD SZ 181 EP 3 13:25 46.75
WIM SZ 183 EP 3 13:25 47.03
KTG SZ 186 EP 2 13:25 49.87
HAE SZ 188 EP 3 13:25 48.42
BWH SZ 197 EP 3 13:25 48.59
HTR SZ 199 EP 3 13:25 49.46
YRH SZ 200 EP 2 13:25 49.01
HGH SZ 235 EP 3 13:25 54.39
BHH SN 13:26 10.14
BHH SE 13:26 10.40
GIM SE 13:26 09.37
MCH SZ 200 EP 13:25 49.83
MCH SN 200 13:26 15.18
MCH SE 200 ES 4 13:26 12.35

December 19 2001 Time: 15:13 25.7 UTC Magnitude: 1.3 ML
Lat: 55.234N Lon: -3.490W Depth: 7.0 km
Grid Ref: 305.23 kmE 594.35 kmE RMS: 0.08 secs
Locality: JOHNSTONEBRIDGE, D & G Quality: B
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI
BWH SZ 12 IP U 15:13 28.35
ESK SZ 20 IP U 15:13 29.56
ESK SE 20 ES 3 15:13 32.03
ESK SN 20 15:13 33.22
ESK SE 20 15:13 32.15
BHH SZ 23 IP D 15:13 30.21
BHH SE 23 ES 1 15:13 33.18
BHH SN 23 15:13 33.24
BHH SE 23 15:13 33.22
ECK SZ 24 IP U 15:13 30.22
BBH SZ 37 IP U 15:13 32.42
BBO SZ 58 EP 1 D 15:13 35.77
BBO SN 58 ES 3 15:13 43.33
BBO SN 58 15:13 46.22
BBO SE 58 15:13 45.00
BTA SZ 63 EP 3 15:13 37.10
BTA SN 63 ES 3 15:13 44.38
EBL SZ 66 EP 3 15:13 37.33
XDE SZ 81 EP 3 15:13 39.43
ESY SZ 94 EP 3 15:13 41.89
LMI SZ 113 EP 2 15:13 44.83
LMI SN 113 15:13 59.13
LMI SE 113 15:14 00.14

December 19 2001 Time: 20:58 45.1 UTC Magnitude: 2.1 ML
Lat: 56.239N Lon: -3.742W Depth: 4.8 km
Grid Ref: 292.03 kmE 706.48 kmE RMS: 0.06 secs
Locality: BLACKFORD, TAYSIDE Quality: B
Comment: FELT GLENDEVON...
STAT CO DIST PHAS WT P HrMn SECS AMPL PERI

PHASE DATA : 2001

EBH	SZ	15	IP		U	20:58	48.02		
ELO	SZ	26	IP		U	20:58	49.92		
PCO	SZ	36	IP		U	20:58	51.62		
EDI	SZ	49	EP	1	D	20:58	53.74		
EDI	SN	49	ES	2		20:58	59.86		
EDI	SN	49				20:58	59.95	104	0.18
EDI	SE	49				20:59	02.31	91	0.33
EDU	SZ	57	EP	2		20:58	54.97		
PGB	SE	66	ES	3		20:59	03.96		
PGB	SN	66				20:59	07.48	90	0.47
PGB	SE	66				20:59	07.62	102	0.20
PCA	SZ	68	EP	1	U	20:58	56.70		
EBL	SZ	68	EP	2		20:58	57.04		
PMS	SZ	76	EP	2		20:58	57.79		
ESY	SZ	79	EP	2		20:58	58.43		
EDR	SZ	106	EP	3		20:59	02.37		

December 19 2001 Time: 21:30 35.0 UTC Magnitude: 1.3 ML
 Lat: 56.245N Lon: -3.730W Depth: 5.8 km
 Grid Ref: 292.80 kmE 707.11 kmE RMS: 0.06 secs
 Locality: BLACKFORD,TAYSIDE Quality: B
 Comment: FELT GLENDEVON... Intensity: 3+

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
EBH	SZ	14	IP		U	21:30	37.87		
EBH	SZ	14	ES	1		21:30	39.93		
EBH	SZ	14				21:30	39.98	256	0.07
ELO	SZ	25	IP		U	21:30	39.79		
ELO	SZ	25	ES	2		21:30	43.20		
ELO	SZ	25				21:30	43.33	50	0.14
PCO	SZ	37	IP	1	U	21:30	41.53		
EDU	SZ	56	EP	2		21:30	44.59		
EDU	SZ	56				21:30	53.63	25	0.04
PCA	SZ	69	EP	2		21:30	46.74		
PMS	SZ	77	EP	2		21:30	48.00		
EDR	SZ	105	EP	3		21:30	52.36		

December 20 2001 Time: 03:56 33.3 UTC Magnitude: 1.4 ML
 Lat: 52.734N Lon: -2.971W Depth: 7.7 km
 Grid Ref: 334.45 kmE 315.61 kmE RMS: 0.07 secs
 Locality: WELSHPOOL,POWYS Quality: D

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
HLM	SZ	25	IP		D	03:56	37.97		
SBD	SZ	27	IP	1	D	03:56	38.32		
SSP	SZ	37	EP	2		03:56	39.82		
SSP	SN	37	ES	2		03:56	44.45		
SSP	SN	37				03:56	45.16	42	0.25
SSP	SE	37				03:56	45.53	77	0.26
WFB	SZ	72	EP	3		03:56	45.53		
MCH	SZ	82	EP	3		03:56	47.05		
MCH	SN	82	ES	3		03:56	56.56		
MCH	SN	82				03:56	58.08	9	0.26
MCH	SE	82				03:56	57.49	10	0.16
HAE	SZ	83	IP	1	D	03:56	47.35		
YRE	SZ	102	EP	3		03:56	50.45		
YRH	SZ	112	EP	3		03:56	52.03		

December 21 2001 Time: 09:34 56.9 UTC Magnitude: 2.7 ML
 Lat: 58.726N Lon: 0.550W Depth: 18.1 km
 Grid Ref: 547.64 kmE 984.78 kmE RMS: 0.12 secs
 Locality: NORTHERN NORTH SEA Quality: D

STAT	CO	DIST	PHAS	WT	P	HrMn	SECS	AMPL	PERI
SAN	SZ	176	EP	3		09:35	22.42		
LRW	SZ	185	EP	3		09:35	24.03		
LRW	SN	185	ES	3		09:35	43.18		
LRW	SN	185				09:35	44.46	77	0.17
LRW	SE	185				09:35	44.04	58	0.17
WAL	SZ	210	EP	3		09:35	26.75		
YEL	SZ	223	EP	3		09:35	28.36		

TABLE 6

DEPTH/CRUSTAL VELOCITY MODELS

TABLE 6

Depth / crustal velocity models used in earthquake locations

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

FIGURES 1 TO 5



KEY TO EPICENTRE MAPS, FIGURES 3 TO 5

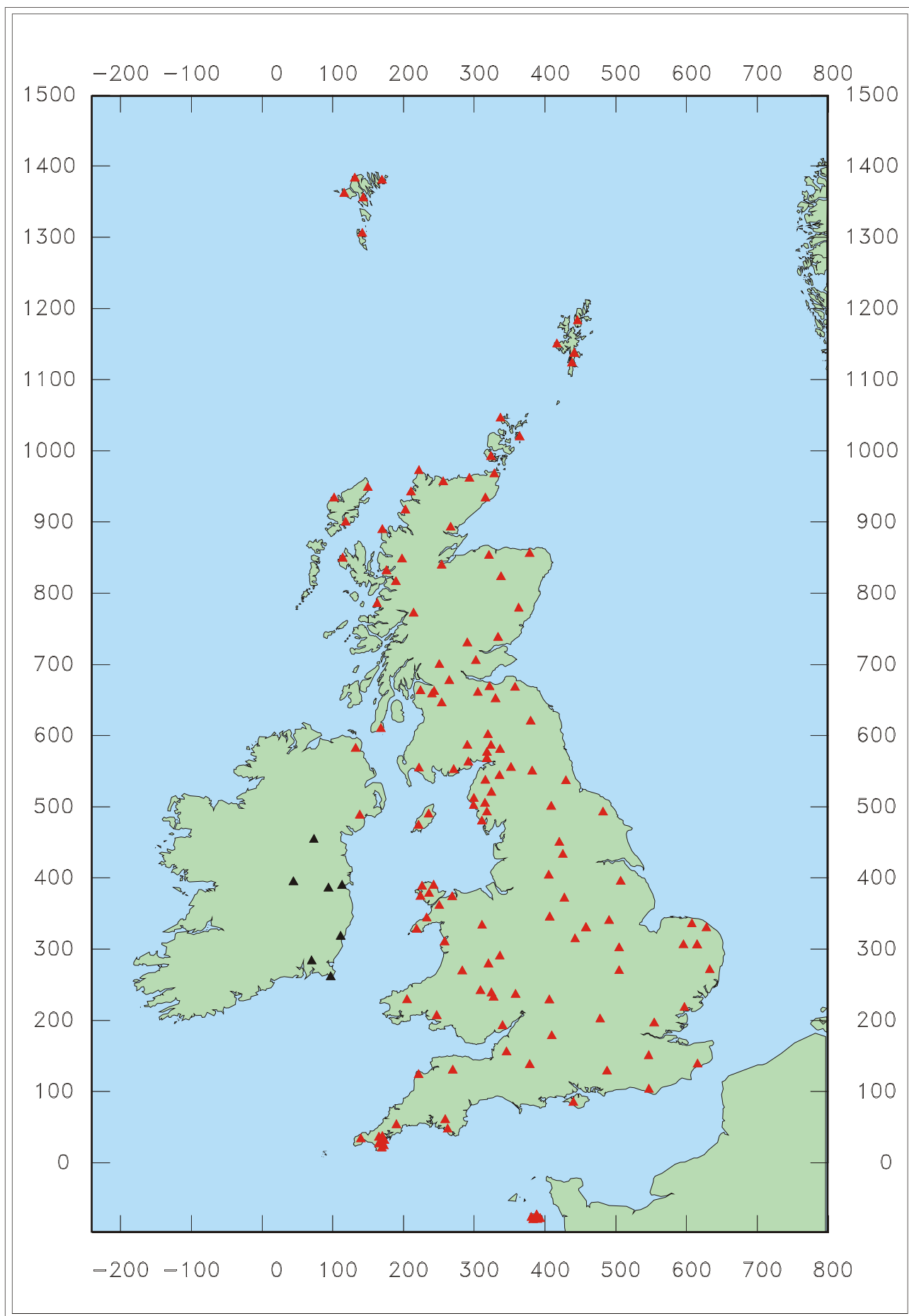


Figure 1. Seismograph network operational in December 2001. Colour coding shows the rapid access stations (red) and DIAS stations (black).

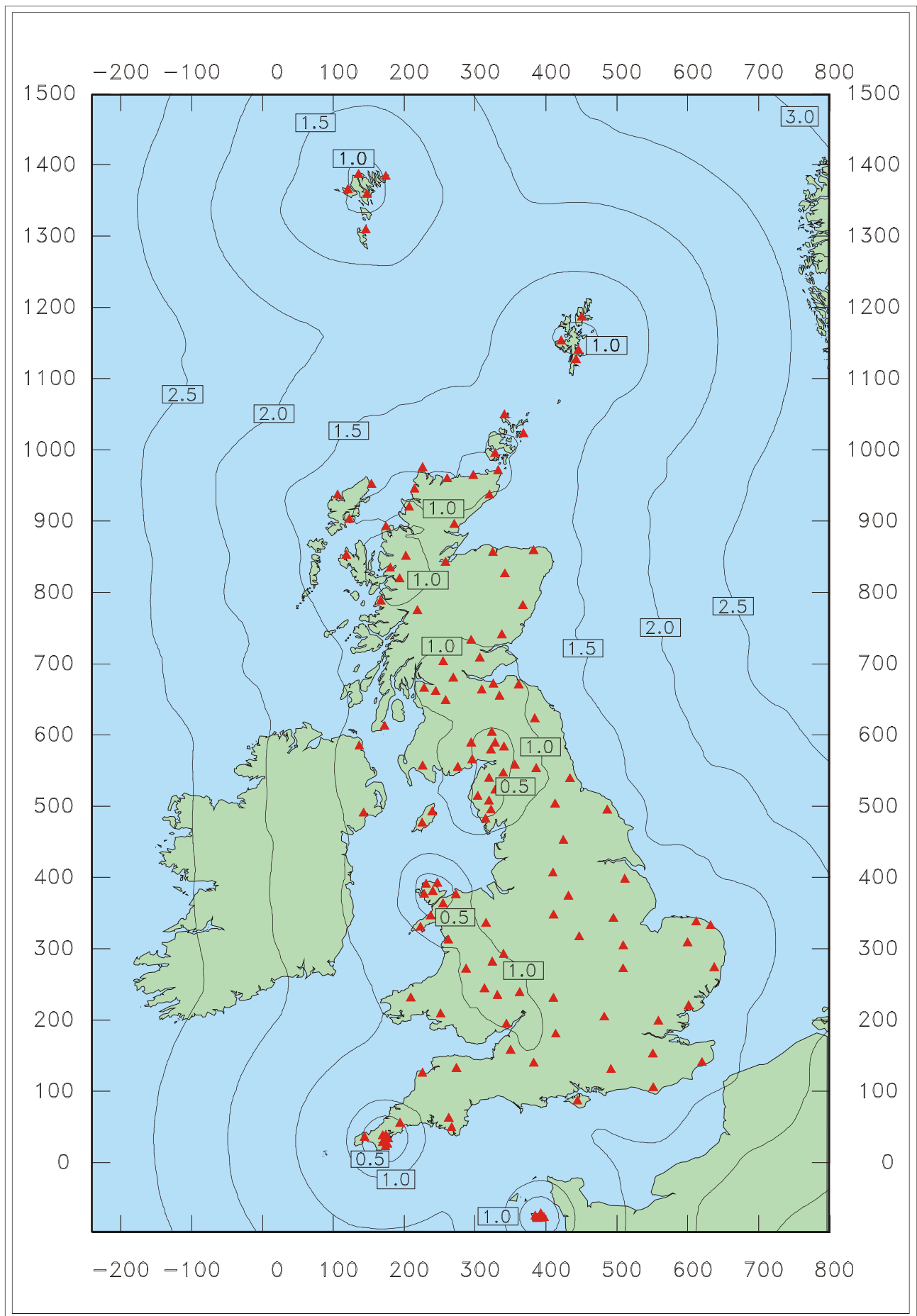


Figure 2. Earthquake detection capability in December 2001. Contour values are Richter local magnitude (ML) for 4 nanometres of noise (average) and S-wave amplitude twice that at the fourth nearest station.

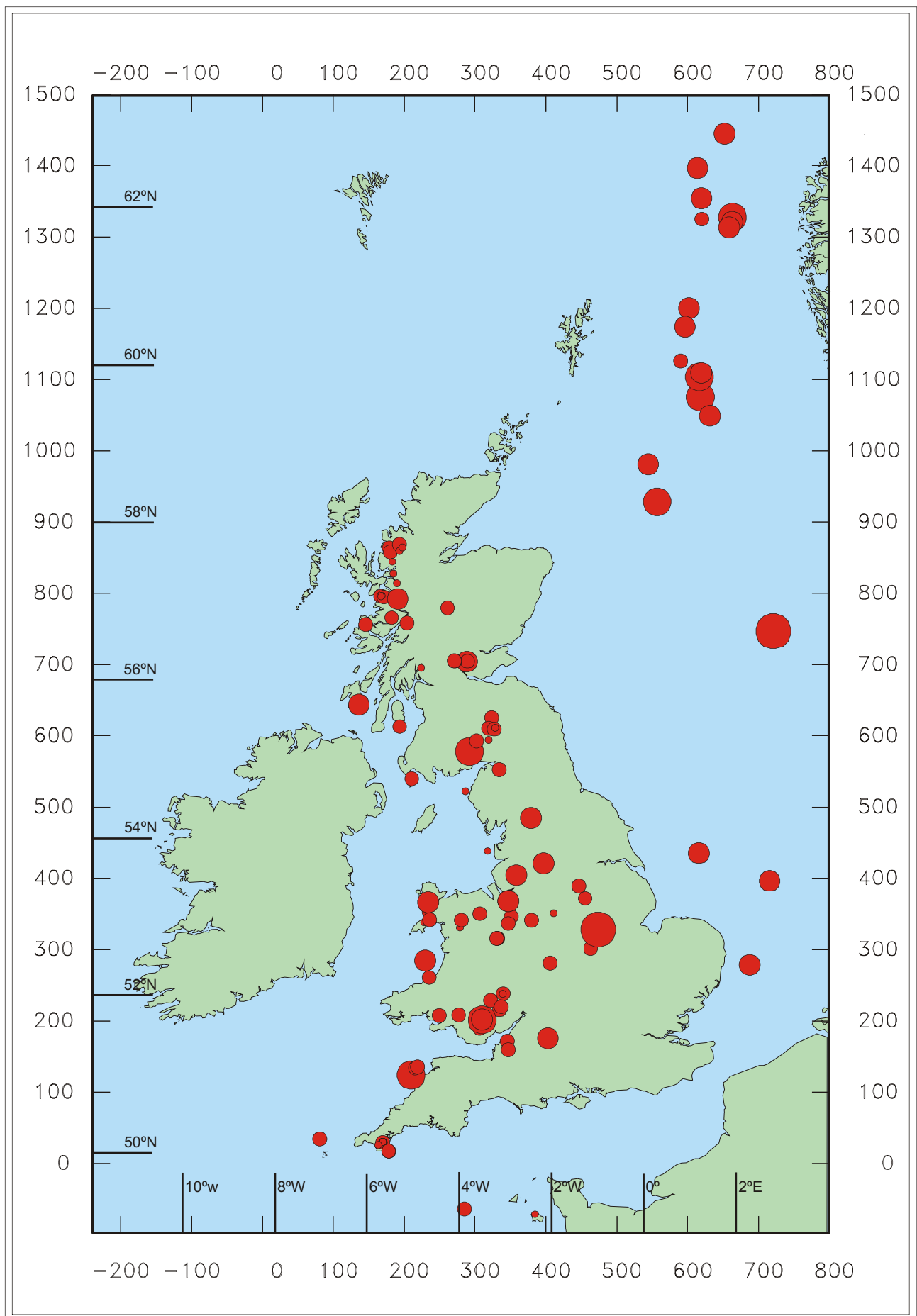


Figure 3. Epicentres of all UK earthquakes located in 2001.

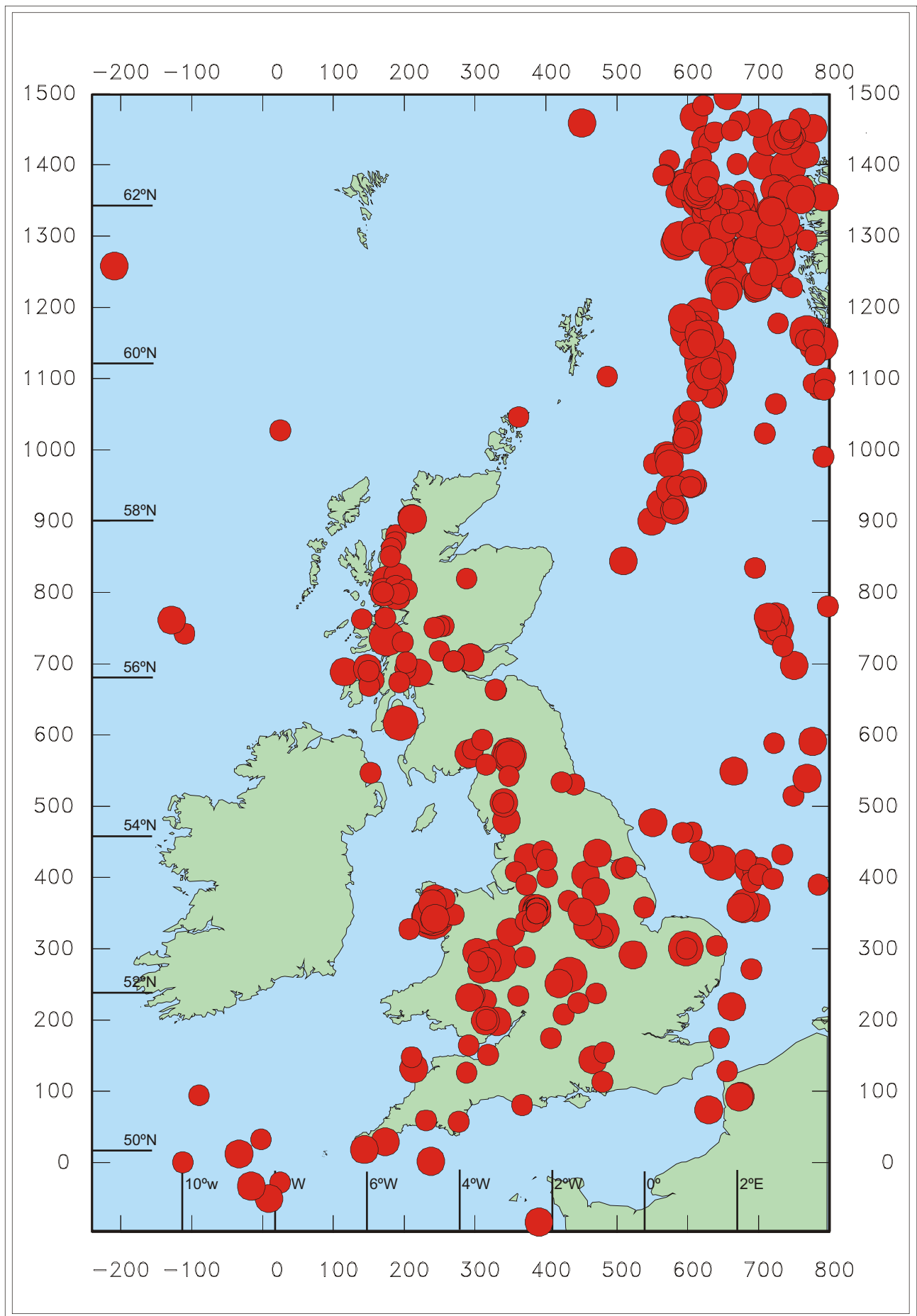


Figure 4. Epicentres of earthquakes with magnitudes 2.5 ML or greater, for the period 1979 to 2001.

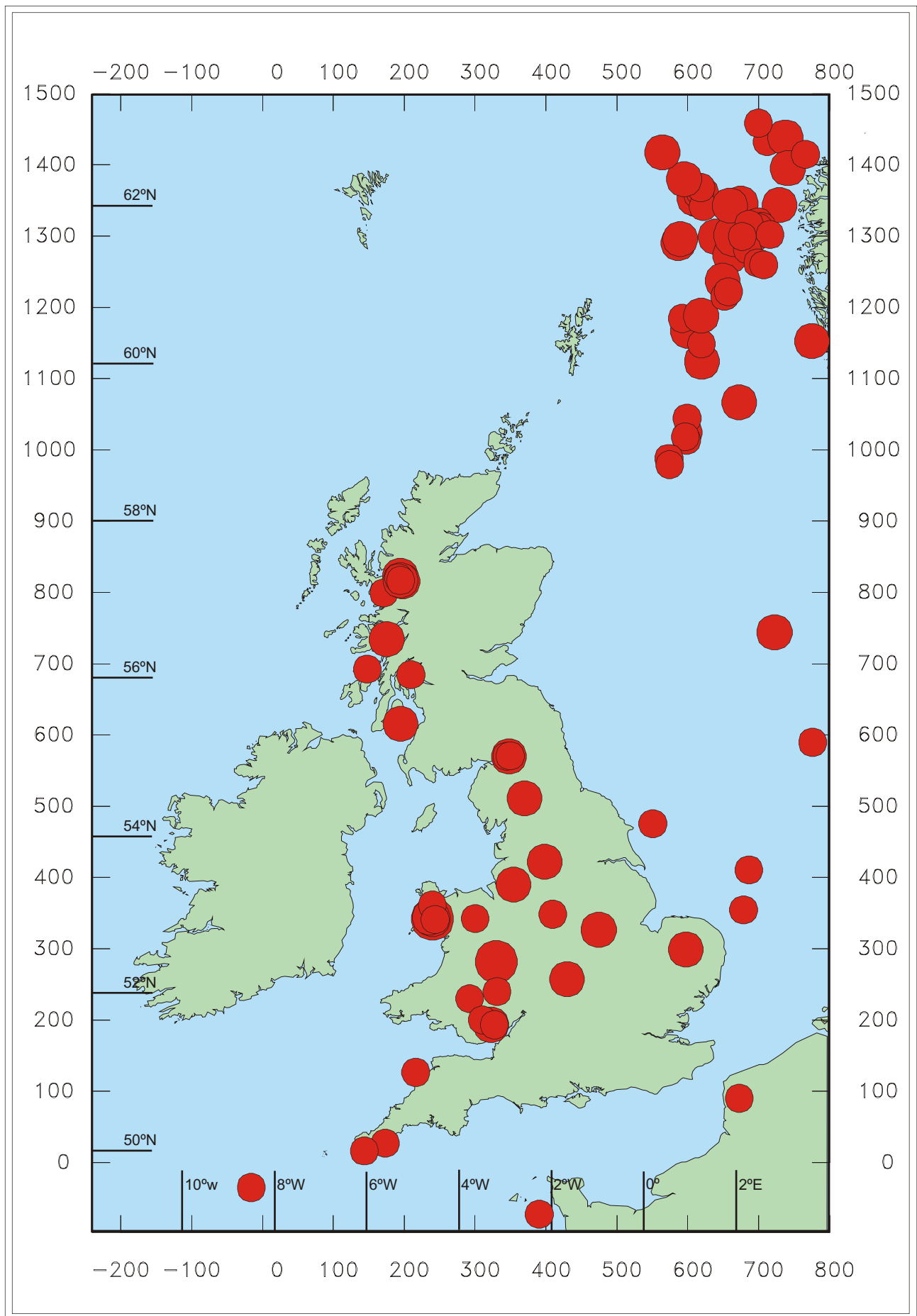


Figure 5. Epicentres of earthquakes with magnitudes 3.5 ML or greater, for the period 1970 to 2001.

APPENDIX A
SIGNIFICANT EARTHQUAKES IN 2001

[Appendix A1](#) Ekofisk Earthquake 7 May 2001

[Appendix A2](#) Dumfries Earthquake 13 May 2001

[Appendix A3](#) Off Hartland Point Earthquake 31 May 2001

[Appendix A4](#) Bargoed Earthquake 10 October 2001

[Appendix A5](#) Melton Mowbray Earthquake 28 October 2001

APPENDIX A1

EKOFISK EARTHQUAKE, 7 MAY 2001

PARAMETERS

Date:	7 May 2001
Origin Time:	09:43 34.0 UTC
Latitude and longitude:	56.54.° N 3.19° E
Grid Reference:	718.9 km E 750.7 km N
Depth:	5.0 km
Magnitude:	5.0 Mw
Hypo Solution Quality:	D (D*D)
Epicentral Error (1 std. dev.):	5.0 km
Depth Error (1 std. dev.):	10.0 km

Discussion

The largest offshore earthquake occurred in the Central North Sea on 7 May 2001. It had a magnitude of 5.0 Mw and was located approximately 410 km east of Edinburgh. It was felt on three nearby oil platforms in the Ekofisk field, The Ekofisk Hotel platform control tower described “a swaying lasting 2 minutes which left us feeling dizzy”, they also confirmed that the Albuskjell platform some 15 km to the north and the Eldfisk platform, some 26 km to the south reported similar felt effects. The focal mechanism obtained for the earthquake shows normal faulting with north-south trending nodal planes.

Seismograms recorded by the broadband instruments at Edinburgh are shown in [Figure A1.1](#), the focal mechanism is shown in [Figure A1.2](#) and the observed and synthetic seismograms for azimuthally selected stations is shown in [Figure A1.3](#).

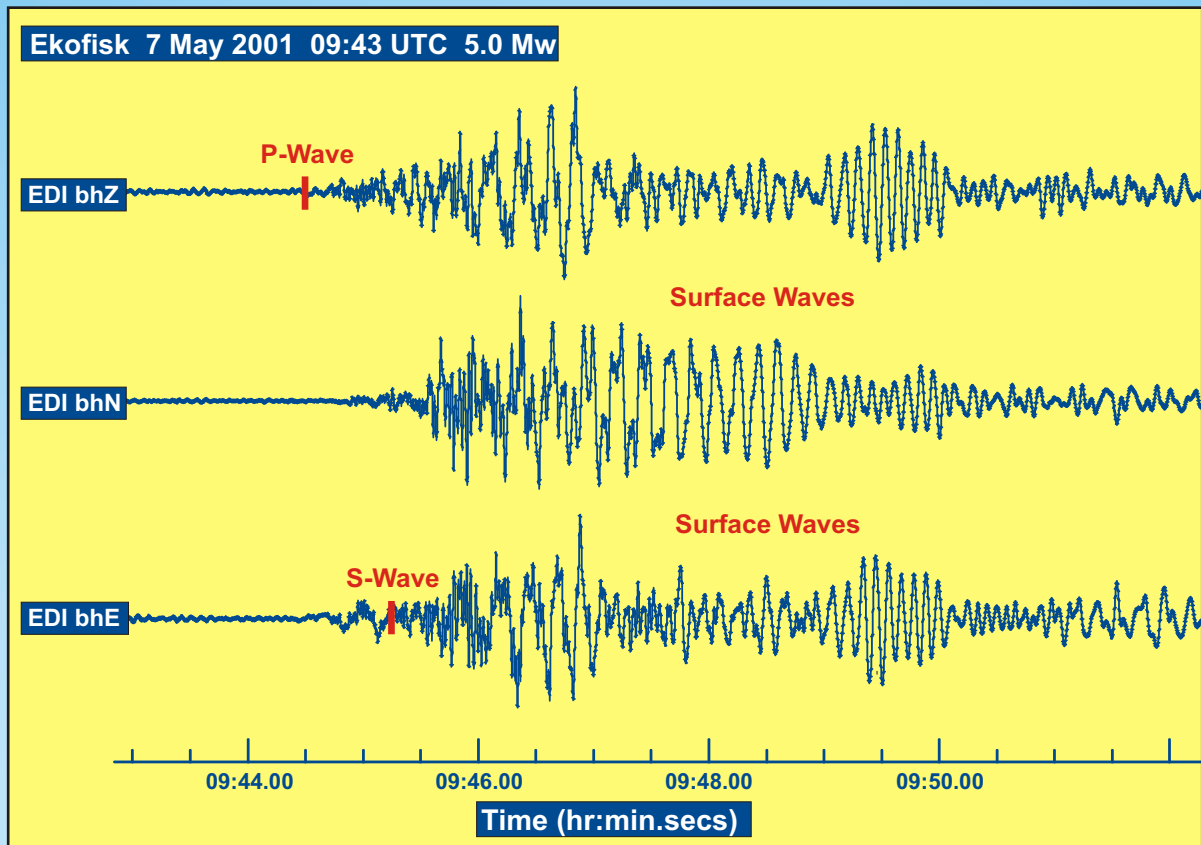


Figure A1.1. Seismograms of the Ekofisk earthquake of 7 May 2001 09:43 UTC 5.0 Mw recorded on the broadband instruments at Edinburgh.

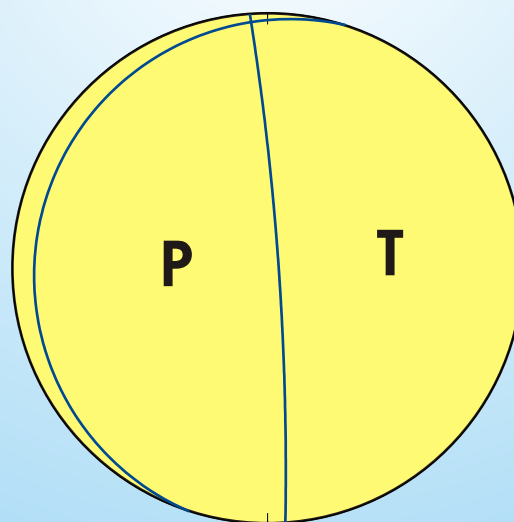


Figure A1.2. Equal area projection of the upper lower hemisphere for the Ekofisk earthquake 7 May 2001 09:43 UTC 5.0 Mw. The axes of maximum and minimum compressive stress are denoted by P and T respectively.

Ekofisk 7 May 2001 09:43 UTC 5.0 Mw

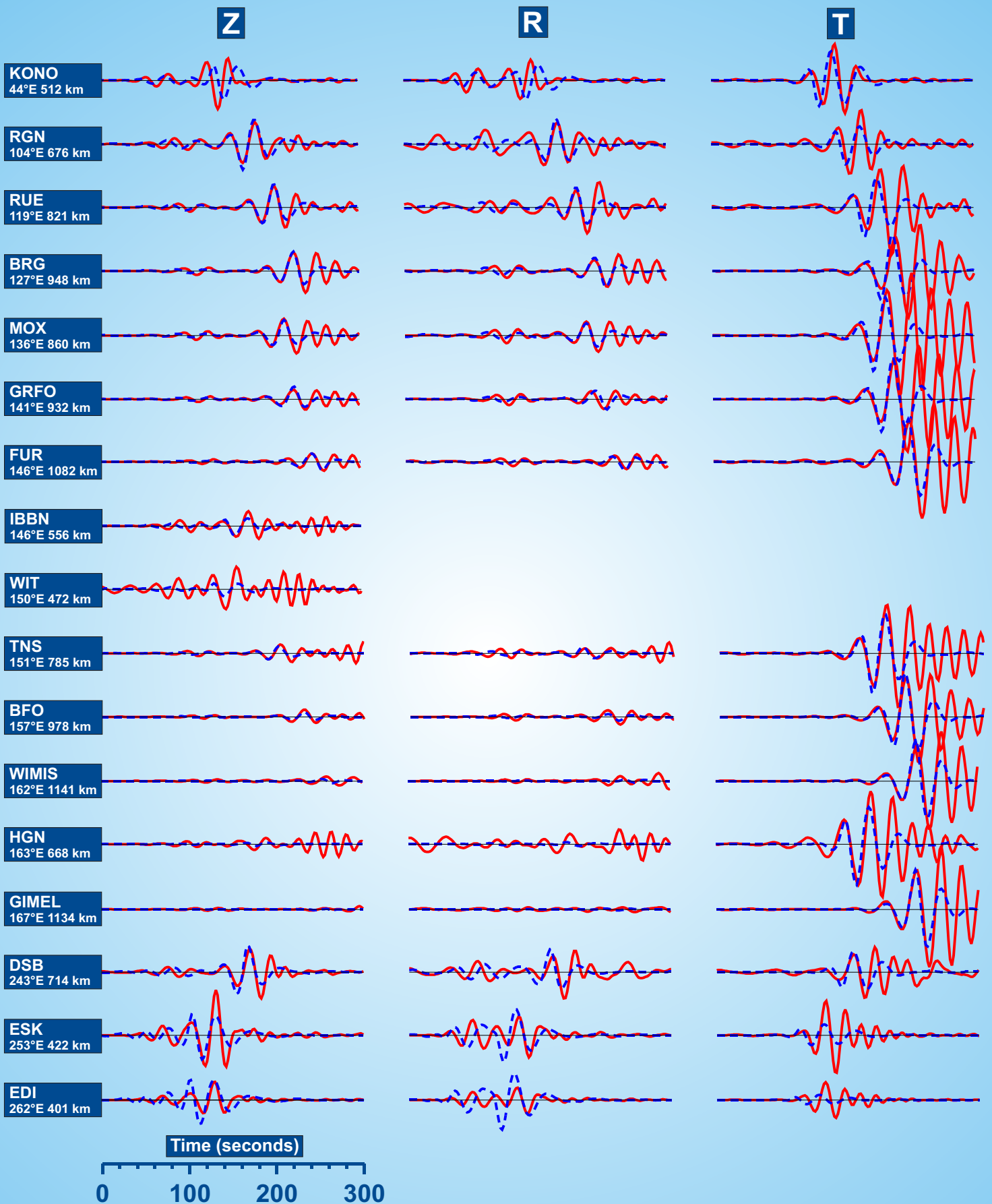


Figure A1.3. Observed (red solid) and synthetic (blue dashed) seismograms for azimuthally selected stations in the 30-50s pass-band for stations at epicentral distances of less than 1200 km. Z, R, and T are the vertical, radial, and transverse components. Stations are listed in azimuthal order; numbers beneath the station codes are event-station azimuth and distance. Seismogram amplitudes are normalized to the same epicentral distance assuming cylindrical spreading (from Braunmiller et al., 2001).

APPENDIX A2

DUMFRIES EARTHQUAKE, 13 MAY 2001

PARAMETERS

Date:	13 May 2001
Origin Time:	08:26 59.4 UTC
Latitude and longitude:	55.10° N 3.64° W
Grid Reference:	295.5 km E 579.6 km N
Depth:	11.5 km
Magnitude:	3.0 ML
Hypo Solution Quality:	C (B*C)
Epicentral Error (1 std. dev.):	1.5 km
Depth Error (1 std. dev.):	3.3 km

Discussion

An earthquake with a magnitude 3.0 ML, occurred on 13 May, with a location near Dumfries. BGS received many felt reports, from the Police, the media, Dumfries Council and residents of the Dumfries area. Felt reports described “the entire house shook”, “the neighbours felt a shaking and ran into their back gardens”, “the floor moved” and “felt like an explosion”. A macroseismic survey was conducted and over 590 replies were received, indicating a maximum intensity of 5 EMS. This event was followed by four aftershocks on the same day with magnitudes ranging between 0.5 and 1.3 ML, the largest event (1.3 ML) was felt with intensities of at least 3 EMS. The focal mechanism obtained for the Dumfries earthquake shows predominantly strike-slip faulting along near-vertical fault planes striking approximately NNW-SSE and ENE-WSW respectively. The near horizontal, NW-SE orientation for the principal stress direction (P-axis) is in ground agreement with the expected regional stress tensor.

Seismograms recorded on the strong motion instruments at Chapelcross (BCC) and by the BGS network around Edinburgh are shown in [Figure A2.1](#) and [Figure A2.2](#), the focal mechanism is shown in [Figure A2.3](#) and an isoseismal map is shown in [Figure A2.4](#).

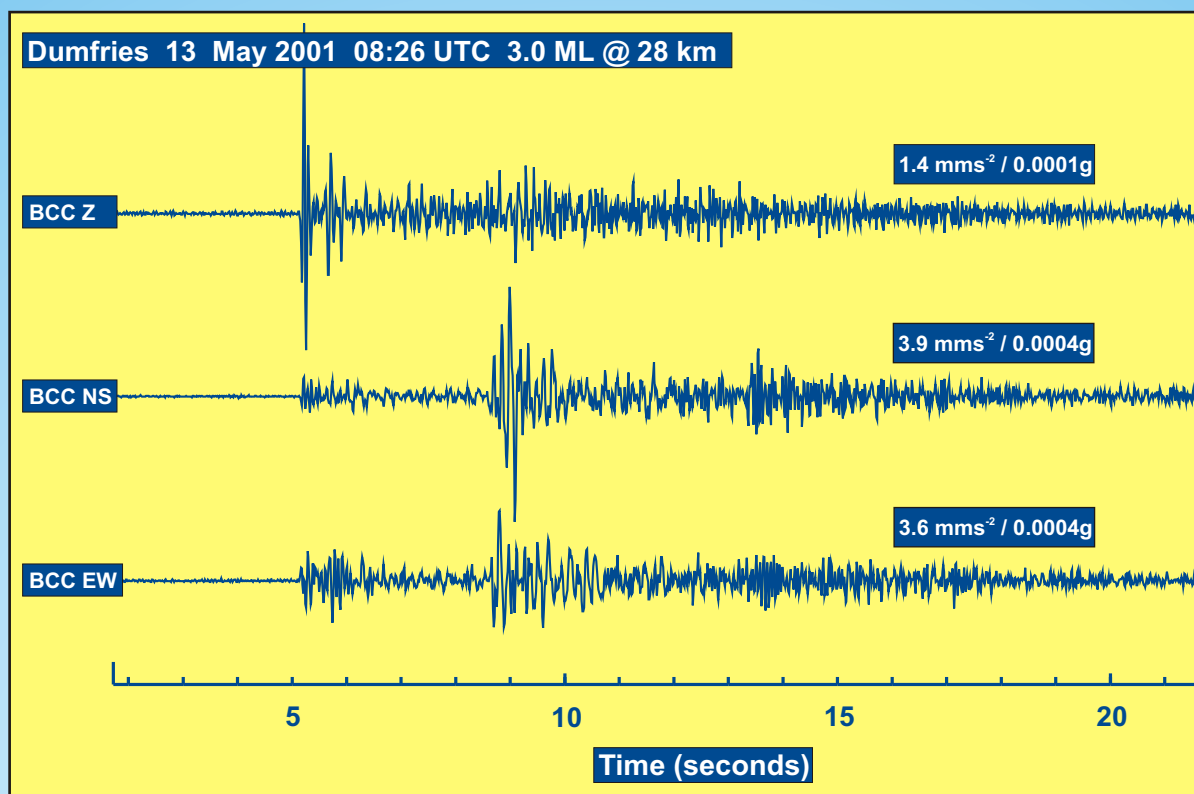


Figure A2.1. Seismograms of the Dumfries earthquake of 13 May 2001 08:26 UTC 3.0 ML recorded on the strong motion instruments at Chapelcross.

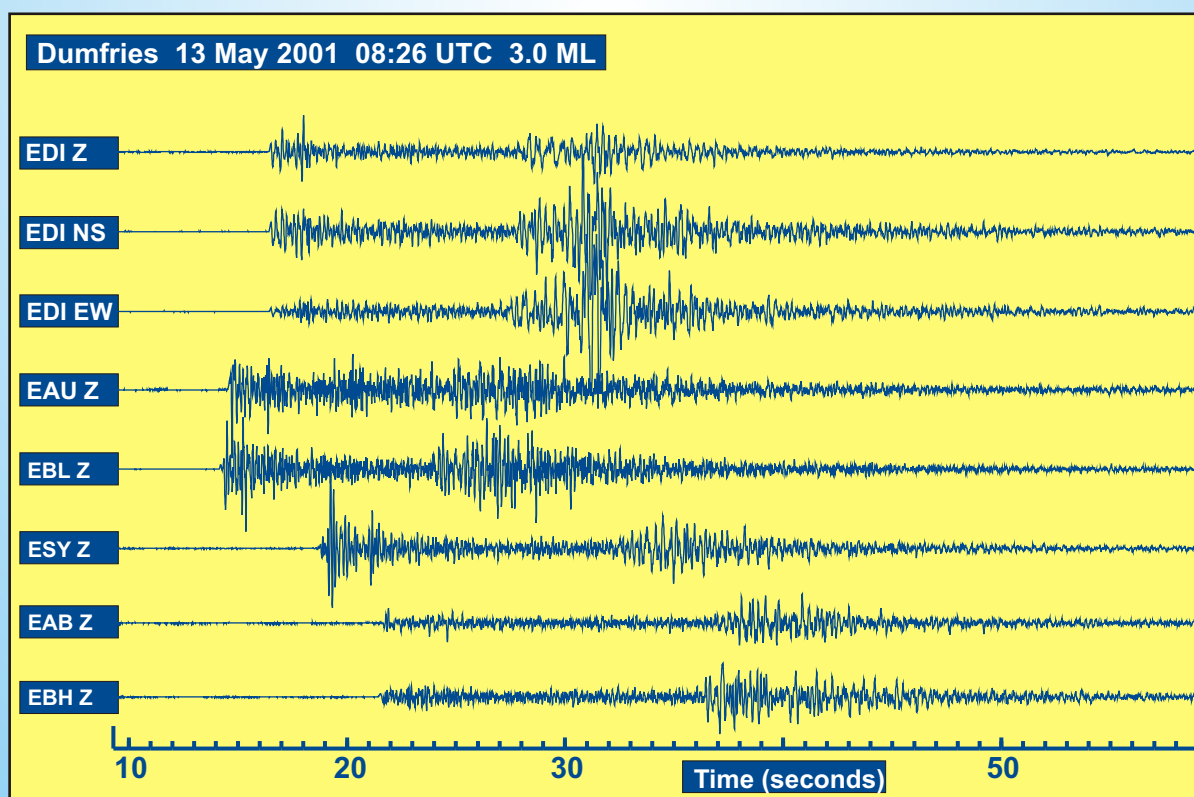


Figure A2.2. Seismograms of the Dumfries earthquake of 13 May 2001 08:26 UTC 3.0 ML recorded on the LOWNET network.

FAULT PLANE SOLUTION : DUMFRIES EARTHQUAKE OF 13 MAY 2001

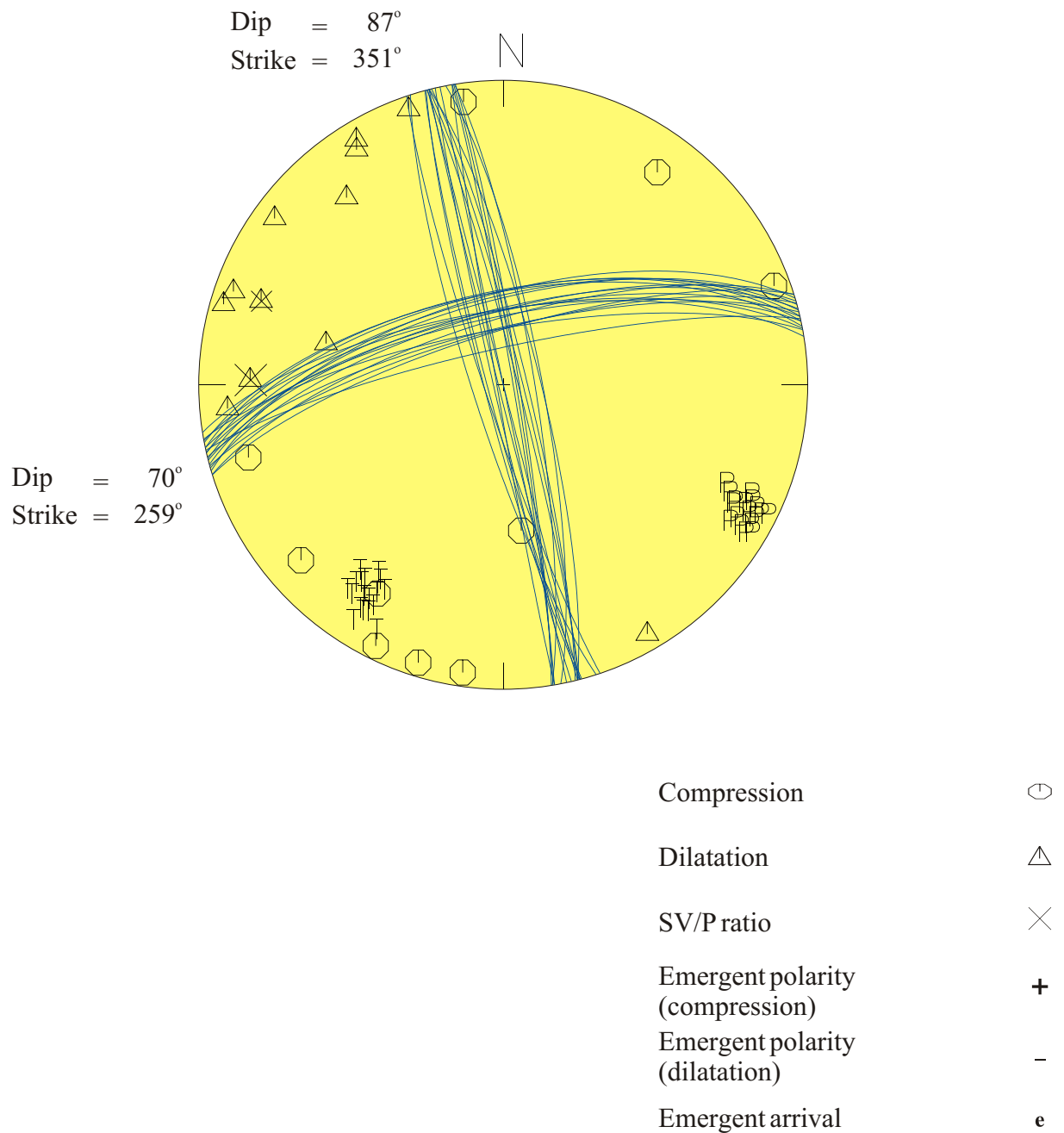


Figure A2.3. Equal area projection of the upper lower hemisphere for the Dumfries earthquake 13 May 2001 08:26 UTC 3.0 ML. The axes of maximum and minimum compressive stress are denoted by P and T respectively.

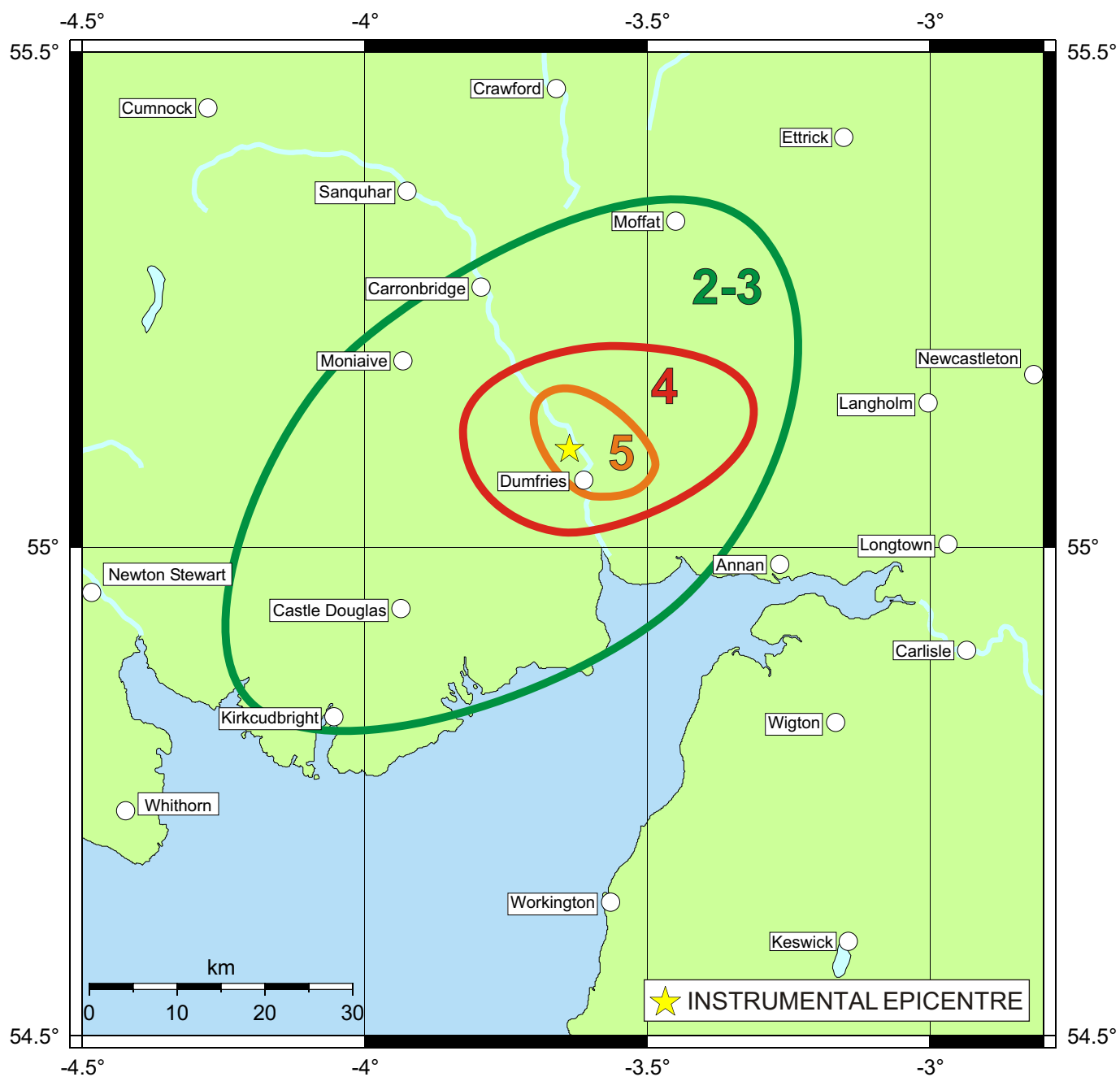


Figure A2.4. Dumfries Earthquake 13 May 2001, 08:26 UTC (3.0 ML) - EMS Intensities

APPENDIX A3

OFF HARTLAND POINT EARTHQUAKE, 31 MAY 2001

PARAMETERS

Date:	31 May 2001
Origin Time:	23:42 57.8 UTC
Latitude and longitude:	50.98° N 4.53° W
Grid Reference:	215.6 km E 127.2 km N
Depth:	26.4 km
Magnitude:	3.6 ML
Hypo Solution Quality:	C (A*D)
Epicentral Error (1 std. dev.):	3.0 km
Depth Error (1 std. dev.):	4.0 km

Discussion

An earthquake, with a magnitude of 3.6 ML, occurred off Hartland Point, Devon, on 31 May. BGS received many felt reports from residents of Cornwall and Devon, who described “I ran outside alarmed”, “I thought a nuclear explosion had gone off” and “the whole house shook”. A macroseismic survey was conducted and over 520 replies were received, indicating a maximum intensity of 5 EMS.

Seismograms recorded by the BGS networks around North Wales and Jersey are shown in [Figure A3.1](#) an isoseismal map is shown in [Figure A3.2](#).

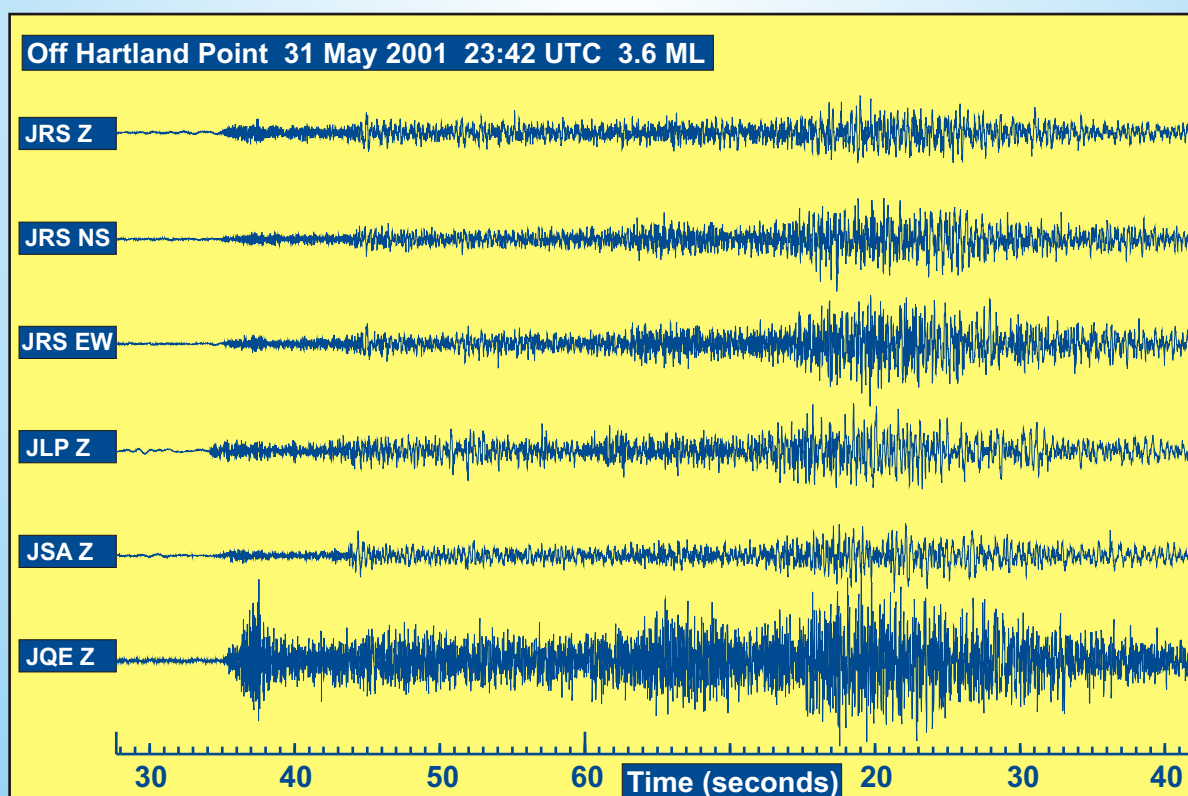
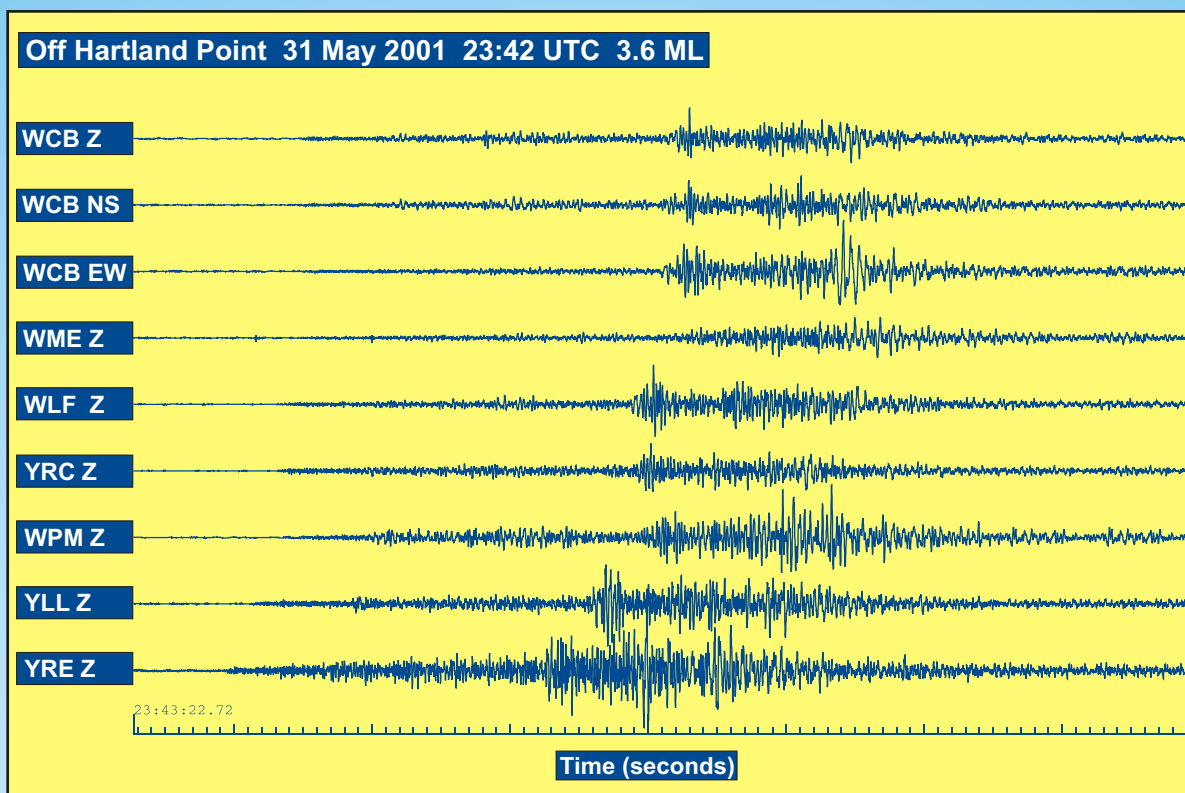


Figure A3.1. Seismograms of the earthquake off Hartland Point of 31 May 2001 23:42 UTC 3.6 ML recorded on the North Wales and Jersey networks.

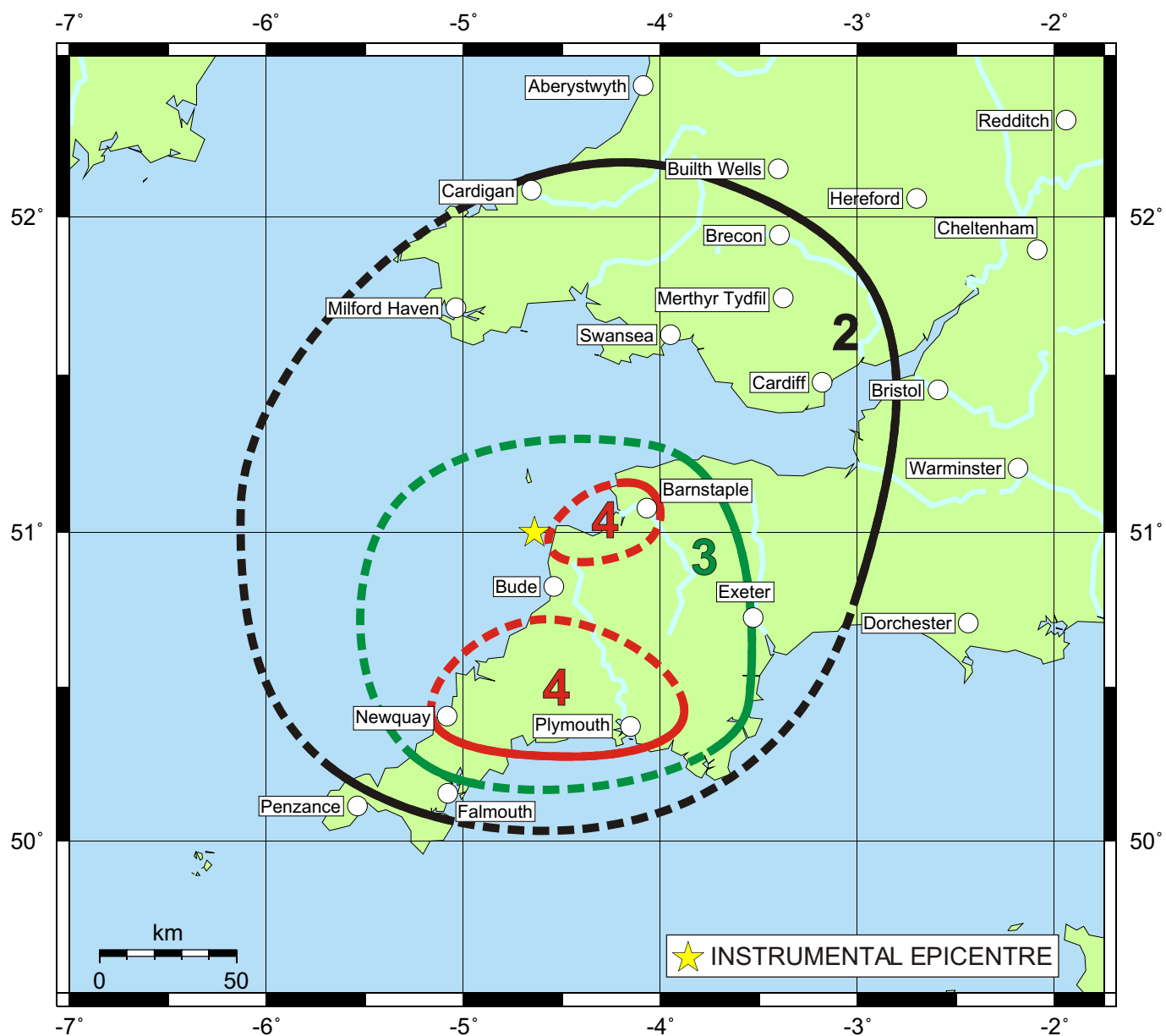


Figure A3.2. Off Hartland Point Earthquake 31 May 2001, 23:42 UTC (3.6 ML) - EMS Intensities

APPENDIX A4

BARGOED EARTHQUAKE, 10 OCTOBER 2001

PARAMETERS

Date:	10 October 2001
Origin Time:	02:52 25.3 UTC
Latitude and longitude:	51.70° N 3.26° W
Grid Reference:	313.3 km E 200.7 km N
Depth:	6.5 km
Magnitude:	3.1 ML
Hypo Solution Quality:	B (A*B)
Epicentral Error (1 std. dev.):	0.8 km
Depth Error (1 std. dev.):	2.8 km

Discussion

An earthquake with a magnitude 3.1 ML, occurred on 10 October, with a location near Bargoed, Mid-Glamorgan. BGS received felt reports from residents of the Bargoed area. Felt reports described “the bed was shaking”, “the entire house shook” and “I was woken from sleep”. A macroseismic survey was conducted and approximately 120 replies were received, indicating a maximum intensity of 4 EMS. This event was followed by three aftershocks with magnitudes of 1.6, 1.6 and 2.5 ML, the largest event (2.5 ML) on 18 October was felt with intensities of 4 EMS. The Bargoed focal mechanism shows oblique normal faulting along either a NW-SE striking fault plane dipping at 38° or a NNE-SSW striking fault plane dipping at 63°. The average maximum compressive stress direction has an azimuth of 142° and dip of 61° and the minimum stress direction strikes at 258° and dips at 14°.

Seismograms recorded by the BGS networks around Hereford and Keyworth are shown in [Figure A4.1](#), the focal mechanism is shown in [Figure A4.2](#) and an isoseismal map is shown in [Figure A4.3](#).

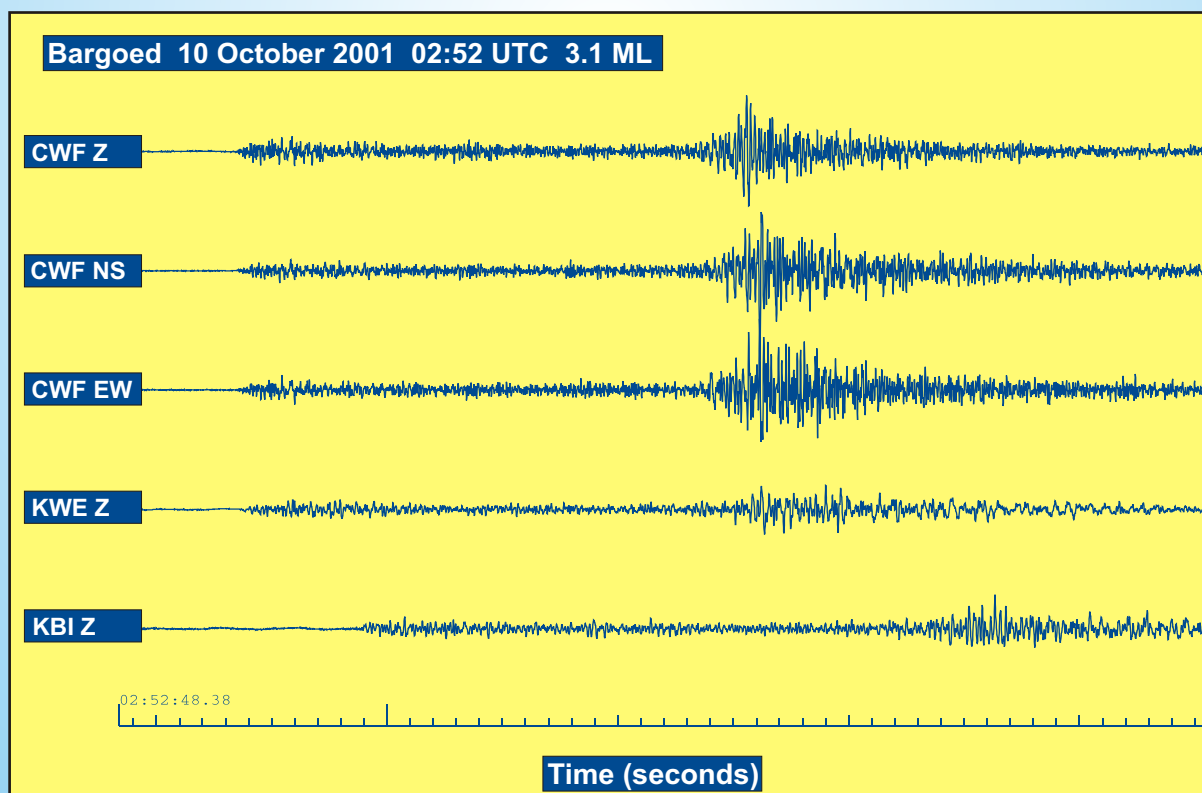
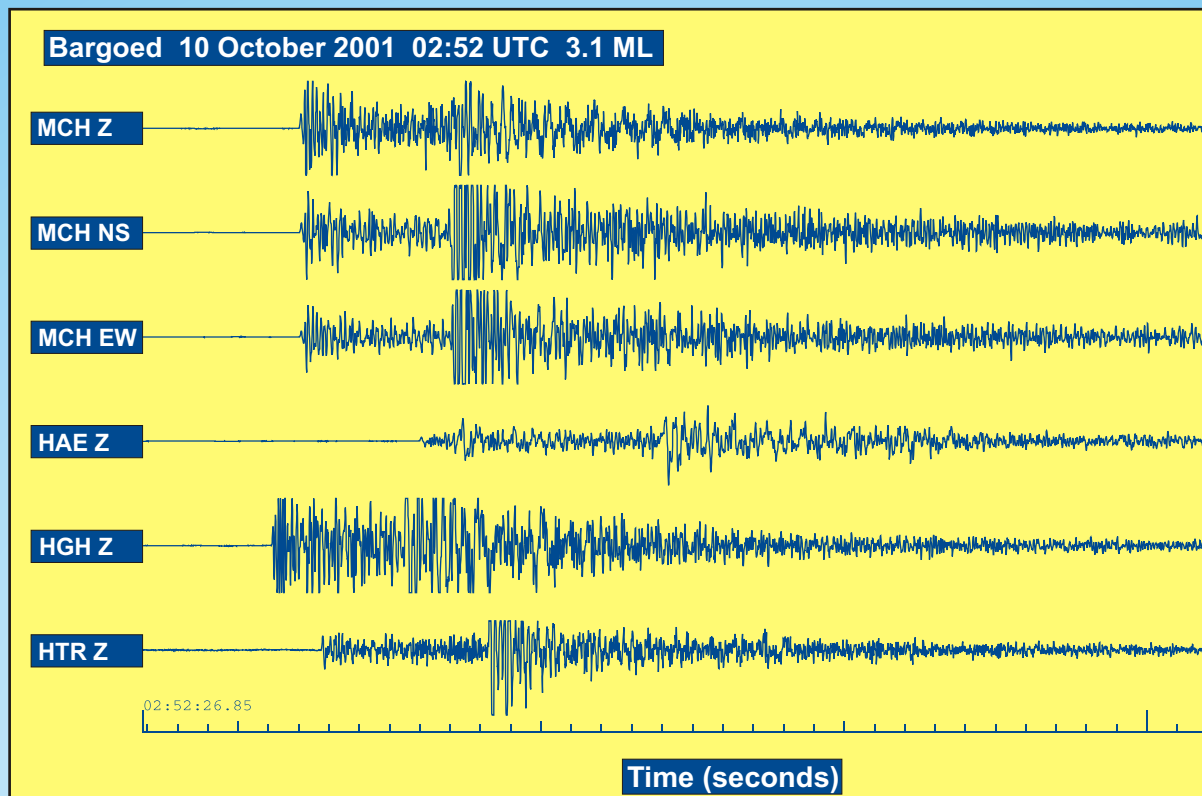


Figure A4.1. Seismograms of the Bargoed earthquake of 10 October 2001 02:52 UTC 3.1 ML recorded on the Hereford and Keyworth networks.

FAULT PLANE SOLUTION : BARGOED EARTHQUAKE OF 10 OCTOBER 2001

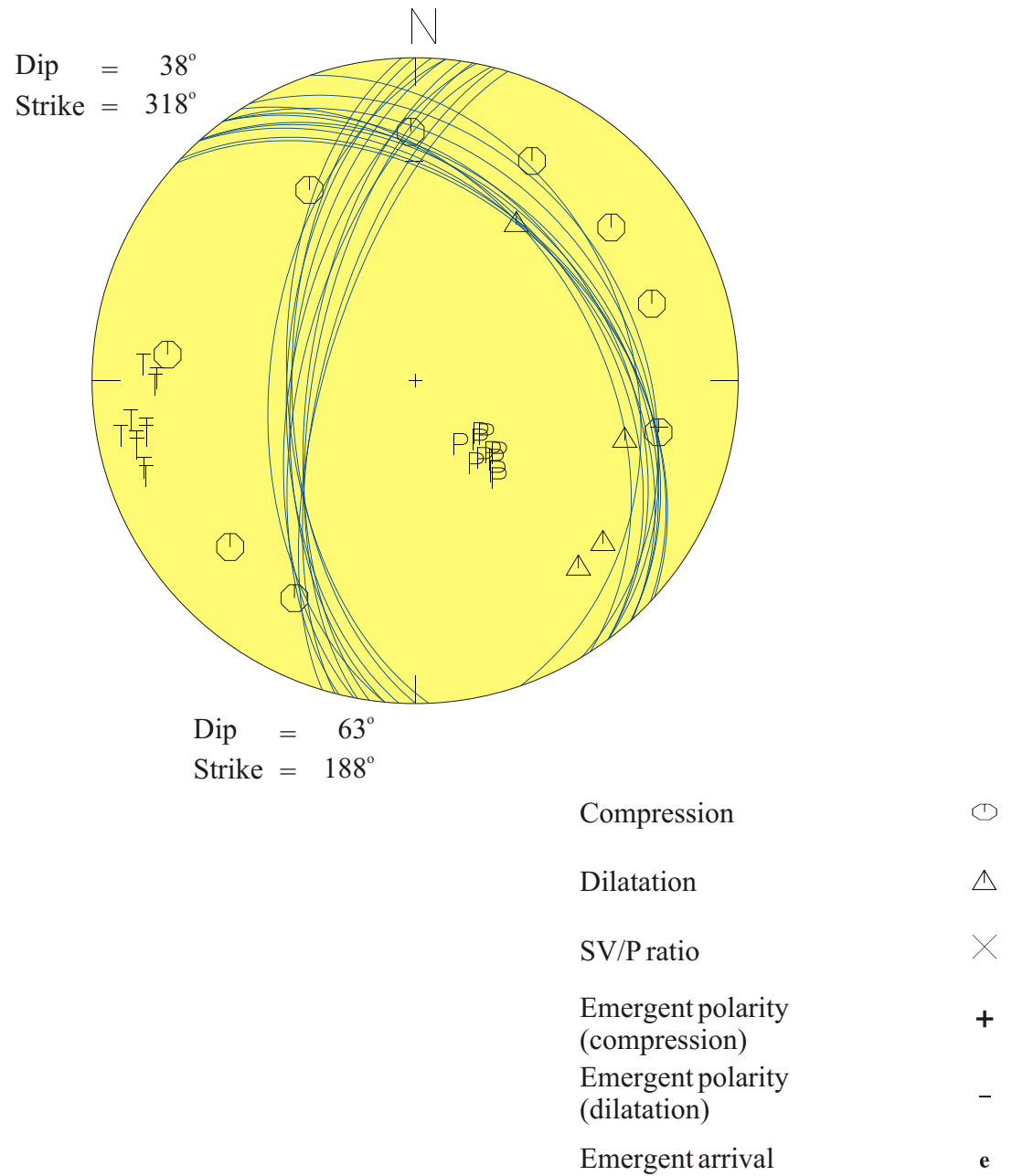


Figure A4.2. Equal area projection of the upper lower hemisphere for the Bargoed earthquake 10 October 2001 02:52 UTC 3.1 ML. The axes of maximum and minimum compressive stress are denoted by P and T respectively.

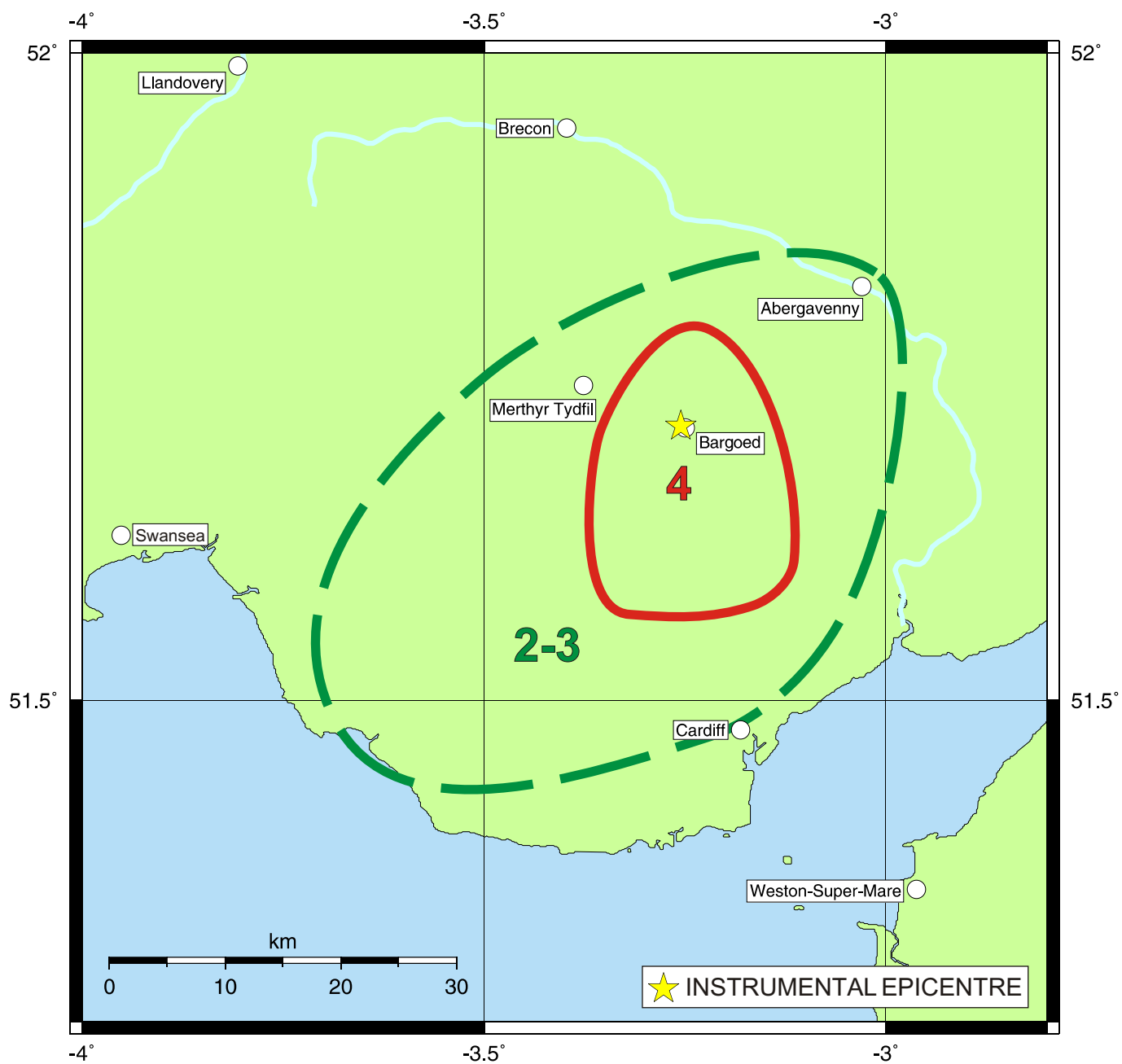


Figure A4.3. Bargoed Earthquake 10 October 2001, 02:52 UTC (3.1 ML) - EMS Intensities

APPENDIX A5

MELTON MOWBRAY EARTHQUAKE, 28 OCTOBER 2001

PARAMETERS

Date:	28 October 2001
Origin Time:	16:25 25.1 UTC
Latitude and longitude:	52.85° N 0.86° W
Grid Reference:	477.1 km E 328.3 km N
Depth:	11.6 km
Magnitude:	4.1 ML
Hypo Solution Quality:	B (B*B)
Epicentral Error (1 std. dev.):	0.8 km
Depth Error (1 std. dev.):	4.1 km

Discussion

The largest onshore earthquake, with a magnitude of 4.1 ML, occurred near Melton Mowbray, Leicestershire on 28 October 2001. BGS initiated a macroseismic survey and earthquake questionnaires were distributed through local and national newspapers. Approximately 1800 emailed responses were received, the most received for any UK earthquake so far, together with an estimated 4200 paper questionnaires, giving a total of 6000 responses in all. Many media interviews were conducted and a large number of enquiries were received. The earthquake was felt throughout Lincolnshire, Leicestershire, Warwickshire, Yorkshire, Shropshire and Nottinghamshire. The most distant reports were from the following places: in the west, the earthquake was felt near Chester. In the east, the earthquake was reported felt in King's Lynn, Norfolk. In the north, the limit of observation was marked by Knaresborough. In the south, the shock was felt as far as Oxford, with also a single very distant observation from Salisbury. There were reports of damage to chimneys in the Melton Mowbray area, indicating an intensity of 6 EMS. Felt reports described "we ran into the streets", "the whole house shook", "the table moved" and "we were very frightened". A maximum acceleration of 0.02g was measured at the strong motion station at Keyworth, some 15 km from the earthquake. The focal mechanism for the Melton Mowbray earthquake also shows oblique normal faulting along either a near N-S fault plane dipping at 51° or along a near E-W fault plane dipping at 58°. The average maximum compressive stress direction has an azimuth of 140° and dip of 55° and the minimum stress direction strikes at 44° and dips at 4°.

Seismograms recorded on the strong motion instruments at Keyworth (KEY2) and by the BGS network around Hartland are shown in [Figure A5.1](#) and [A5.2](#), the focal mechanism is shown in [figure A5.3](#) and an isoseismal map is shown in [Figure A5.4](#).

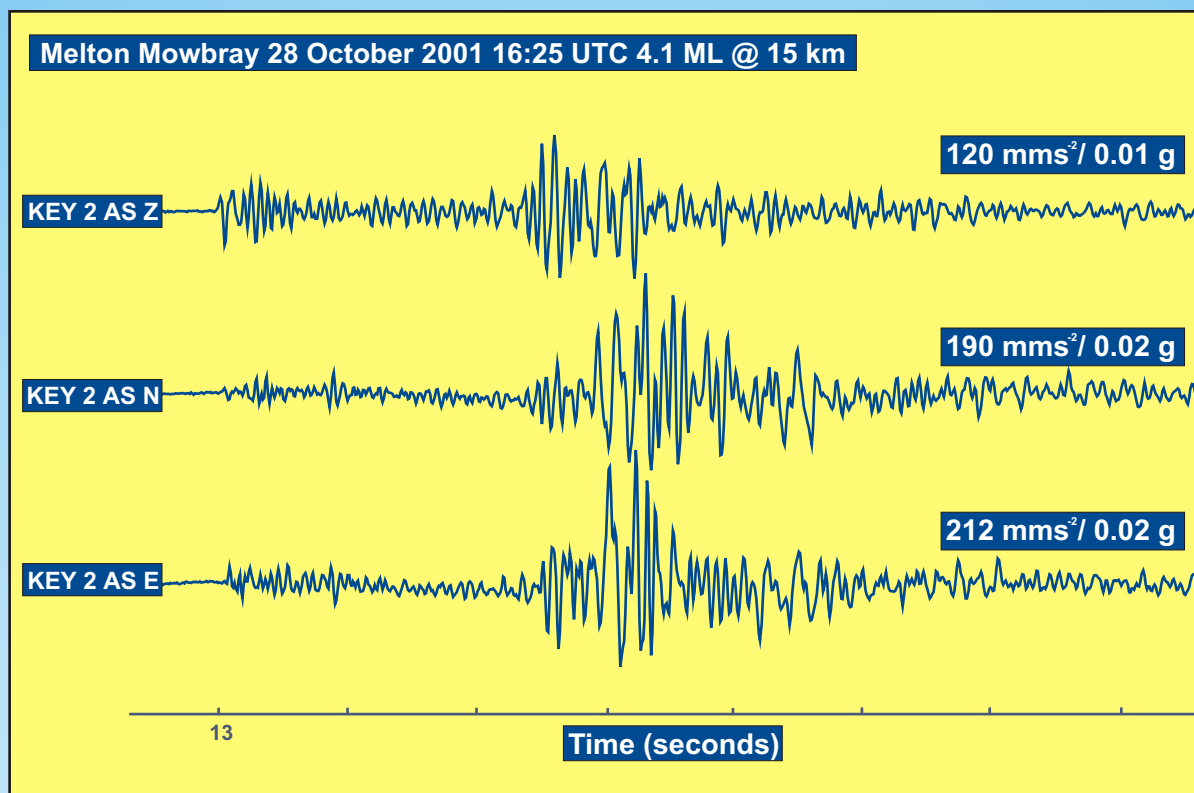


Figure A5.1. Seismograms of the Melton Mowbray earthquake of 28 October 2001 16:25 UTC 4.1 ML recorded on the strong motion instruments at Keyworth (KEY2).

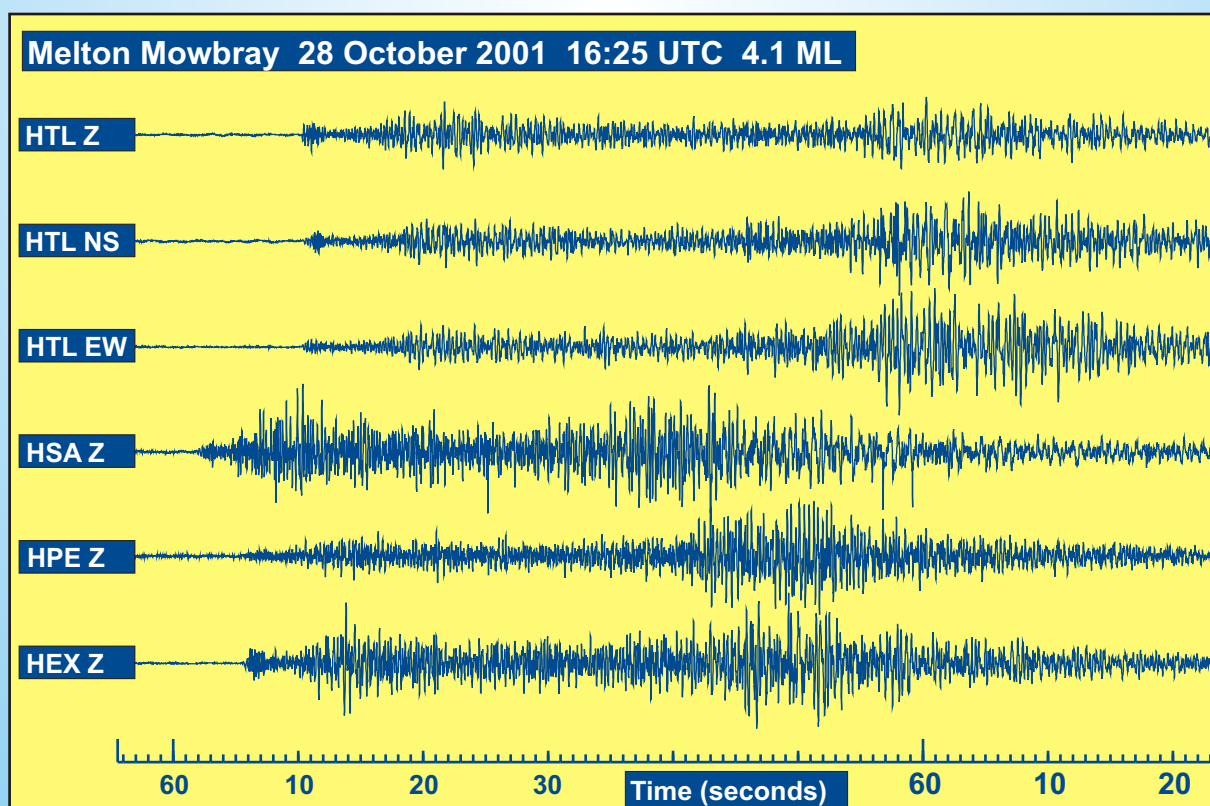


Figure A5.2. Seismograms of the Melton Mowbray earthquake of 28 October 2001 16:25 UTC 4.1 ML recorded on the Hartland network.

FAULT PLANE SOLUTION : MELTON MOWBRAY EARTHQUAKE OF 28 OCTOBER 2001

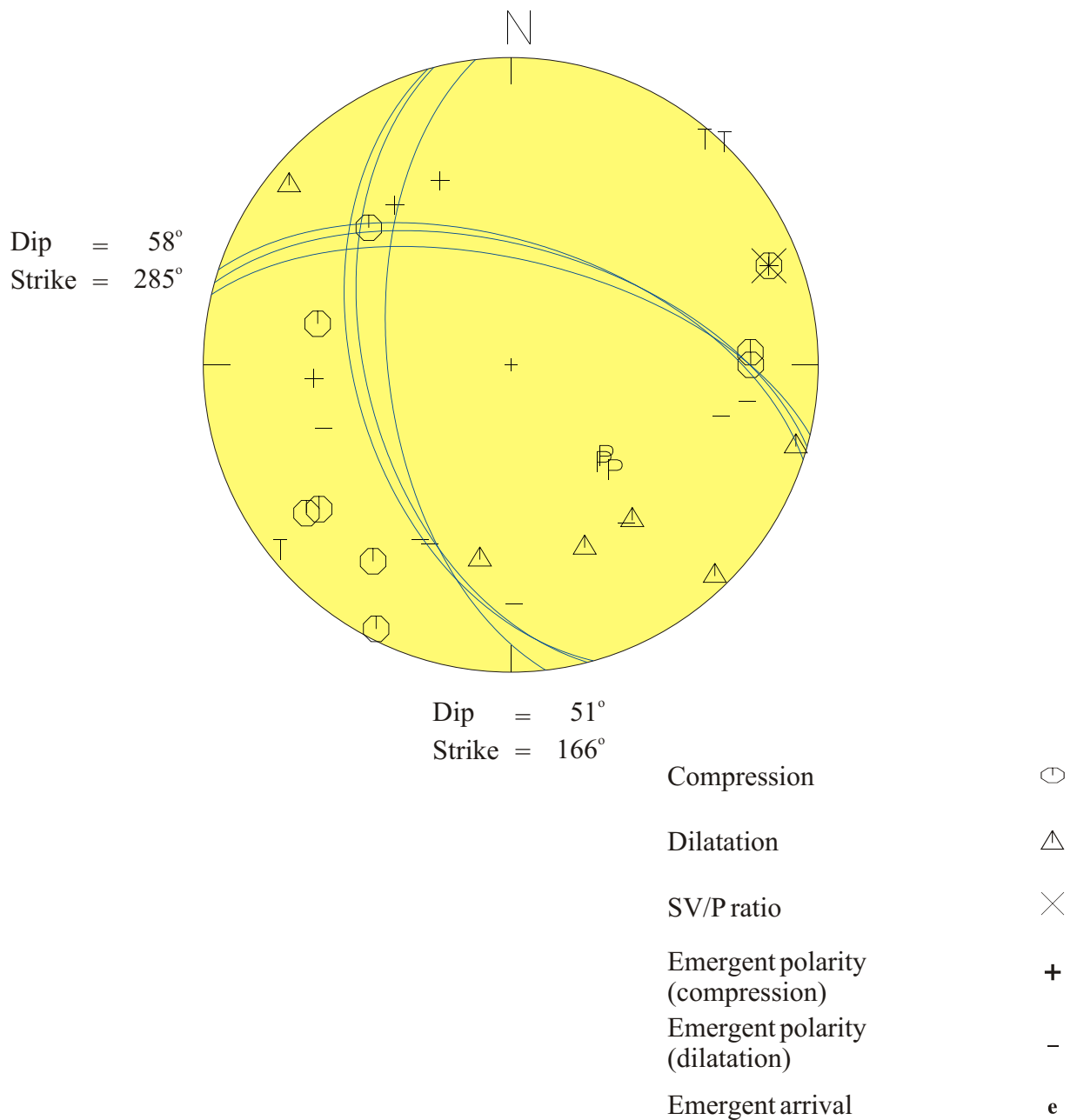


Figure A5.3. Equal area projection of the upper lower hemisphere for the Melton Mowbray earthquake 28 October 2001 16:25 UTC 4.1 ML. The axes of maximum and minimum compressive stress are denoted by P and T respectively.

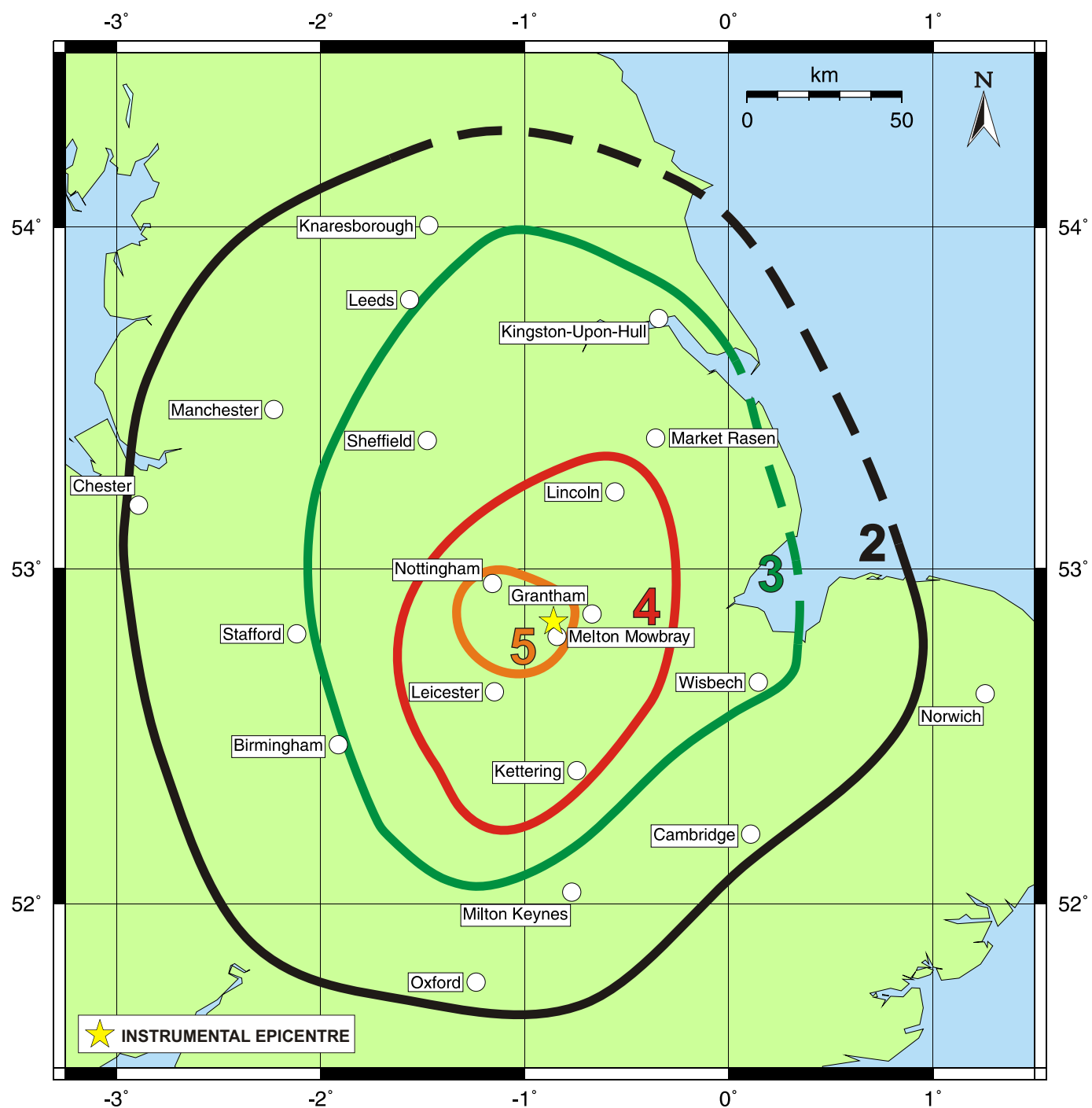


Figure A5.4. Melton Mowbray earthquake 28 October 2001, 16:25 UTC, (4.1 ML) - EMS Intensities

APPENDIX B

EARTHQUAKE INFORMATION CHARGES

APPENDIX B

SUMMARY OF CHARGES FOR DATABASE ENQUIRIES	COST (£)
A search of the instrumental database producing a catalogue list, a map of the seismicity, a key to the abbreviations and a covering letter.	£150.00 + VAT
A search of the historical database producing a catalogue list, a map of the seismicity, a key to the abbreviations and a covering letter.	£150.00 + VAT
A combined search of both the historical and instrumental database providing the above for both the historical and instrumental seismicity.	£275.00 + VAT
An enquiry involving searching data tapes for specific events. £80.00 for first hour and £40.00 for each additional ½ hour. Note: charges can be waived for the public, media and schools.	£80.00 + VAT
A search and interpretation of raw macroseismic data (felt reports) for a specific region for an individual earthquake.	£120.00 + VAT

For more information on the above and other services available please contact Mr Glenn D Ford, (g.ford@bgs.ac.uk) or Mr Bennett Simpson, (b.simpson@bgs.ac.uk) at the Global Seismology and Geomagnetism Group, Murchison House, West Mains Road, Edinburgh, EH9 3LA.

BULLETIN OF BRITISH EARTHQUAKES: PRICE LIST

Burton, P.W. and Neilson, G., 1980. Annual catalogues of British earthquakes recorded on LOWNET (1967-1978). Inst.Geol.Sci. Seismological Bulletin No.7.	£3 + pp
Turbitt, T., et al., 1984. Catalogue of British earthquakes recorded by the BGS seismograph network 1979, 1980, 1981. BGS Global Seismology Report No. 210.	£11 + pp
Turbitt, T., et al., 1985. Catalogue of British Earthquakes recorded by the BGS Seismograph Network 1982, 1983, 1984. BGS Global Seismology Report No. 260.	£15 + pp
Turbitt, T., et al., 1987. Bulletin of British Earthquakes 1985. BGS Global Seismology Report No. 303.	£10 + pp
Turbitt, T., et al., 1988. Bulletin of British Earthquakes 1986. BGS Global Seismology Report No. WL/88/11.	£10 + pp
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Turbitt, T., et al., 1990. Bulletin of British Earthquakes 1988. BGS Global Seismology Report No. WL/90/03	£10 + pp

BULLETIN OF BRITISH EARTHQUAKES: PRICE LIST	COST (£)
Turbitt, T., et al., 1990. Bulletin of British Earthquakes 1989. BGS Global Seismology Report No. WL/90/49	£12.50 + pp
Turbitt, T., et al., 1991. Bulletin of British Earthquakes 1990. BGS Global Seismology Report No. WL/91/34.	£12.50 + pp
Turbitt, T., et al., 1992. Bulletin of British Earthquakes 1991. BGS Global Seismology Report No. WL/92/29.	£12.50 + pp
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Musson, R.M.W., 1994. A Catalogue of British earthquakes. BGS Global Seismology Report No. WL/94/04.	£15.00 + pp
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Walker, A.B., et al., 1999. Bulletin of British Earthquakes 1998. BGS Global Seismology Report No. WL/99/01.	£12.50 + pp
Walker, A.B., et al., 2000. Bulletin of British Earthquakes 1999. BGS Global Seismology Report No. WL/00/01.	£12.50 + pp
Simpson, B A, et al., 2001. Bulletin of British Earthquakes 2000. BGS Global Seismology Report No. IR/01/281.	£12.50 + pp

A complete list of Seismology group publications can be obtained by writing to the secretary at the Global Seismology and Geomagnetism Group, Murchison House, West Mains Road, Edinburgh, EH9 3LA.

APPENDIX C

EUROPEAN MACROSEISMIC SCALE (EMS 98)

APPENDIX C

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**

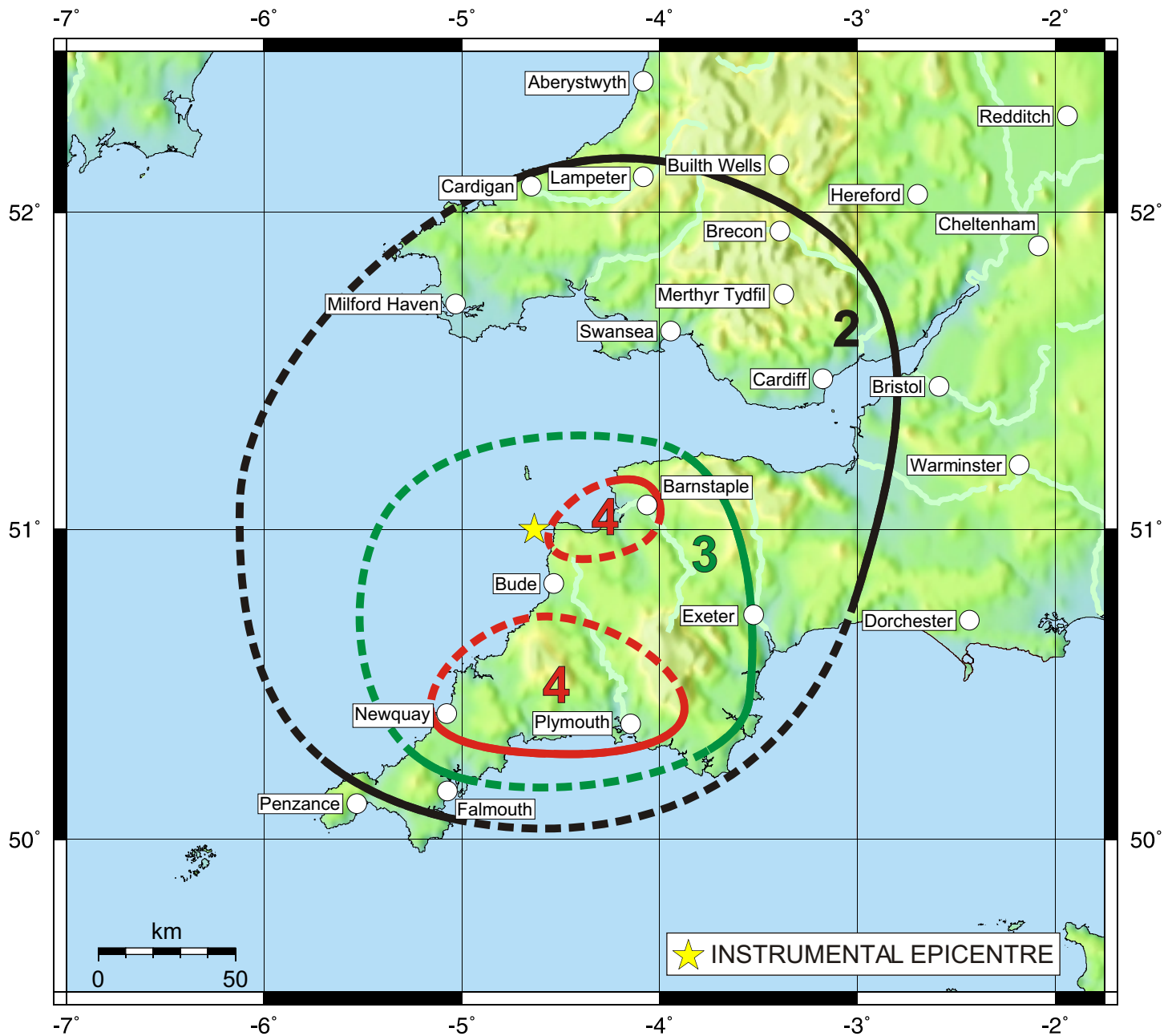
Most ordinary buildings collapse.

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.



Hartland Point Earthquake 31 May 2001, 23:42 UTC (3.6 ML) - EMS Intensities